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OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

VOL. 236 - 237

MARCH - APRIL

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VOLUME CCXXXVI.

MARCH,

1917.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1917.

10537

ERRATA.

1,218,880, page 389, first claim, line 10, after the word "lever" insert the words *against said stop means;* same claim, line 11, after the word lever insert a period, and lines 11-12, strike out the words "against said stop means."

1,219,562, page 628, first claim, line 10, for the word "strap" read *strip*.

1,219,932, page 778, second claim, line 3, strike out the word "being."

1,220,079, page 830, strike out all after number—heading, drawing, and claims—and insert the word WITHDRAWN.

1,220,227, page 918, in heading, assignment, after the word "assignor" insert the words *of one-half*.

1,220,499, page 1168, should read *1,220,949*.

1,220,836, page 1132, first claim, line 5, strike out the word "said;" same claim, line 6, for the words "the edge of said button" read *said rod*.

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THE OFFICIAL GAZETTE

OF THE

United States Patent Office.

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Trade-Marks	119—No.	115,714 to No. 115,832, inclusive.
Labels	18—No.	19,941 to No. 19,958, inclusive.
Prints	4—No.	4,639 to No. 4,642, inclusive.
Reissues	2—No.	14,266 to No. 14,267, inclusive.
Total	892	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	4	.....	North Carolina	6	2
Arizona	3	.....	North Dakota	2	.....
Arkansas	3	.....	Ohio	58	7
California	33	9	Oklahoma	5	.....
Colorado	10	.....	Oregon	8	3
Connecticut	24	4	Pennsylvania	60	8
Delaware	2	.....	Rhode Island	7	.....
Florida	3	.....	South Carolina	3	.....
Georgia	2	.....	South Dakota	2	.....
Idaho	4	.....	Tennessee	5	5
Illinois	64	8	Texas	13	3
Indiana	25	4	Utah	3	.....
Iowa	3	.....	Vermont	3	.....
Kansas	10	.....	Virginia	8	.....
Kentucky	4	.....	Washington	12	1
Louisiana	1	.....	West Virginia	7	.....
Maine	1	3	Wisconsin	15	5
Maryland	4	3	Wyoming	2	.....
Massachusetts	47	1			
Michigan	26	10	Alaska Territory	.....	.....
Minnesota	12	.....	Canal Zone	.....	.....
Mississippi	1	.....	District of Columbia	8	.....
Missouri	16	4	Hawaii Territory	.....	.....
Montana	4	.....	Philippine Islands	.....	.....
Nebraska	7	1	Porto Rico	.....	.....
Nevada	.....	1	U. S. Army	.....	.....
New Hampshire	6	.....	U. S. Navy	.....	.....
New Jersey	30	.....			
New Mexico	2	.....	Total to residents of the United States	662	134
New York	114	33			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentine	.....	.....	Natal	.....	.....
Austria-Hungary	.....	2	Netherlands	.....	.....
Belgium	.....	.....	New South Wales	.....	.....
British India	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	17	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	3	.....	South Australia	.....	.....
England	11	2	Spain	.....	.....
Finland	.....	.....	Sweden	1	.....
France	4	.....	Switzerland	2	1
Germany	13	1	Turkey	.....	.....
Guatemala	1	.....	Victoria	.....	.....
India	.....	.....	Western Australia	.....	.....
Ireland	1	1			
Italy	2	.....	Total to residents of foreign countries	56	7
Luxemburg	.....	.....			
Mexico	.....	.....			

Notice—Assistant Examiner Examination.

The Civil Service Commission has announced an open competitive examination for the position of Assistant Examiner in the Patent Office on March 14, 15, and 16, 1917. Qualified persons are urged to enter this examination. Entrance salary, $1,500 per annum.

Application blanks and information as to where the examination will be held may be obtained from the Civil Service Commission, Washington, D. C.

Amendments.

RULE 73. In every amendment the exact word or words to be stricken out or inserted in the application must be specified and the precise point indicated where the erasure or insertion is to be made. All such amendments must be on sheets of paper separate from the papers previously filed, and written on but one side of the paper. Erasures, additions, insertions, or mutilations of the papers and records must not be made by the applicant.

Amendments and papers requiring the signature of the applicant must also, in case of assignment of an undivided part of the invention, be signed by the assignee. (Rules 6, 107.)

Amendments to Amendments.

RULE 74. When an amendatory clause is amended, it must be wholly rewritten, so that no interlineation or erasure shall appear in the clause, as finally amended, when the application is passed to issue. If the number or nature of the amendments shall render it otherwise difficult to consider the case or to arrange the papers for printing or copying, the Examiner or Commissioner may require the entire specification to be rewritten.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 2, 1917.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 27	Jan. 8	314
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Sept. 20	Jan. 10	547
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Feb. 14	Jan. 13	120
234	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Nov. 24	Jan. 24	265
167	5. Bookbinding; Harvesters; Jewelry; Music	Nov. 6	Feb. 5	272
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Oct. 30	Jan. 4	296
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Oct. 18	Nov. 24	675
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Aug. 9	Dec. 29	1087
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Aug. 24	Feb. 4	568
235	10. Carriages and Wagons; Spring Devices	Sept. 14	Jan. 26	890
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Jan. 30	Feb. 20	83
324	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Nov. 22	Feb. 9	570
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Nov. 8	Jan. 31	547
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Nov. 1	Dec. 29	291
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Feb. 3	Feb. 15	222
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Oct. 25	Jan. 8	608
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Dec. 1	Feb. 2	217
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Jan. 22	Jan. 25	213
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Aug. 22	Nov. 24	442
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 8	Feb. 8	186
182	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Nov. 6	Jan. 18	303
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 5	Dec. 29	516
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Sept. 5	July 25	380
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Nov. 9	Jan. 20	346
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Jan. 23	Jan. 22	160
105	26. Electricity, Generation; Motive Power	July 1	Dec. 14	603
375	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Jan. 19	Jan. 22	245
60	28. Internal-Combustion Engines	Oct. 21	Nov. 18	520
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Oct. 10	Dec. 9	377
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Nov. 18	Feb. 5	435
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Oct. 19	Dec. 20	280
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Aug. 2	Jan. 24	917
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Oct. 16	Jan. 24	362
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Aug. 25	Dec. 21	312
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Sept. 20	Feb. 19	631
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Oct. 23	Feb. 12	649
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	July 20	Dec. 29	819
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Walls	Feb. 9	Feb. 10	132
221	39. Water Distribution	Sept. 27	Jan. 16	332
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Nov. 3	Feb. 2	617
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Nov. 13	Jan. 10	418
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	Aug. 2	Jan. 26	397
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Dec. 21	Jan. 31	138

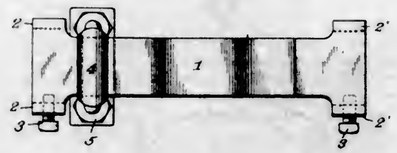
Oldest new case, July 1; oldest amended, July 25.
Total number of applications awaiting action 18,200

168	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 15	Feb. 16	905
	Designs	Dec. 19	Jan. 30	260
	Labels and Prints	Feb. 20	Feb. 23	55

PATENTS

GRANTED MARCH 6, 1917.

1,217,894. EMERGENCY DEVICE FOR AUTOMOBILE-SPRINGS. JAMES E. ALLONBY, Stamford, Conn. Filed May 12, 1916. Serial No. 96,995. (Cl. 267—27.)

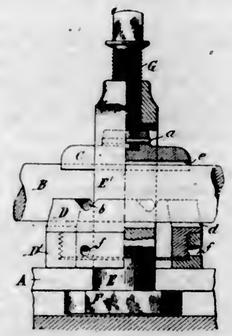


1. A repair for laminated vehicle springs comprising a body adapted to span a break longitudinally of the spring and provided with two pairs of depending lugs or ears, one pair at each end, one of the ears of each pair being provided with a set screw adapted to engage one edge of the spring while the opposite ear of said pair has an engaging surface bearing against the opposite edge.

2. A repair for laminated vehicle springs consisting of a plate having at each end a pair of depending lugs and adapted to embrace the edges of the spring, one of said lugs at each end carrying a set screw while the other is provided with a biting face engaging the edge of the laminations.

3. A repair for laminated vehicle springs comprising a body adapted for application to the top of the spring to span a break therein and having at each end a pair of depending lugs adapted to embrace the edges of the spring, one of said lugs being provided with a clamping set screw and the other being provided with serrations upon its engaging face and extending transversely of the leaves of the spring.

1,217,895. BORING-TOOL HOLDER. GEORGE AMBORN, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed Dec. 10, 1915. Serial No. 66,066. (Cl. 82—37.)



1. A boring tool holder comprising upper and lower clamping jaws and clamping means for forcing them together, the upper jaw being non-rotatable and having a single notch and the lower jaw having multiple angular notches of different sizes, each notch adapted to receive different sizes of boring bars, and rotatable to bring either notch into coincidence with the upper jaw.

2. A boring tool holder comprising upper and lower clamping jaws and clamping means for forcing them together, the upper jaw being non-rotatable and having a single notch and the lower jaw having multiple angular notches of different sizes, each notch adapted to receive different sizes of boring bars, and rotatable to bring either notch into coincidence with the upper jaw, and means for raising or lowering the lower jaw.

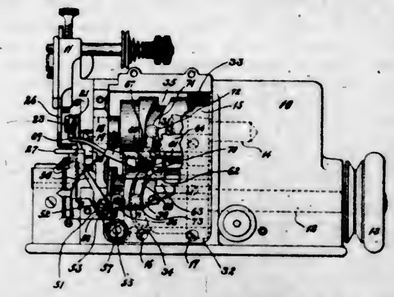
3. A boring tool holder comprising a central post having a slot for receiving the boring bar, an upper clamping jaw confined within said slot and projecting beyond the post, and a lower clamping jaw inclosing and rotatable around said post and having a plurality of angular notches of different sizes, and clamping means for forcing said jaws together.

4. A boring tool holder comprising a central post having a bottom head for engaging the T-slot in a slide rest, and having a slot for receiving the boring bar, an upper clamping jaw confined within said slot and a lower clamping jaw inclosing and rotatable around said post and having multiple angular notches of different sizes, and a clamping screw engaging said post and the upper jaw for forcing the jaws together.

5. A boring tool holder comprising a central post having a slot for receiving the boring bar, an upper clamping jaw movable within said slot, projecting beyond said slot at both ends, and having an angular engaging face, and a lower clamping jaw, inclosing and rotatable around said post, and having a plurality of angular notches of different sizes, said notches adapted to receive and firmly seat either a round or polygonal bar, with means for raising or lowering the lower clamping jaw, and clamping means engaging said post and the upper jaw for forcing the latter down.

[Claim 6 not printed in the Gazette.]

1,217,896. OVERSEAMING-MACHINE. SAMUEL W. AVIS, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 12, 1914. Serial No. 876,917. (Cl. 112—24.)



1. In an overseaming machine and in combination with a reciprocating needle, a needle plate and feeding mechanism; a looper and a carrier therefor supported to oscillate and to reciprocate bodily in a right line, a pair of grooved cam cylinders for actuating said looper and its carrier, a second looper with its carrier pivotally supported and actuated by an irregular groove in one of said cam cylinders whereby the needle and the two loopers coöperate to form overedge stitches.

2. In an overseaming machine and in combination with a reciprocating needle, and means for supporting and feeding the material, a lower oscillating looper carrier, an upper looper carrier pivoted and supported to reciprocate bodily, in a straight line and also to oscillate, a pair of rotating cam cylinders arranged in proximity to each other, said cam cylinders being provided with two correlative grooves for actuating the upper looper and an irregular groove for actuating the lower looper whereby the path of the lower looper intersects the paths of the needle and of the upper looper, and the path of the upper looper intersects the paths of the lower looper and of the needle, to carry thread to produce overedge stitches.

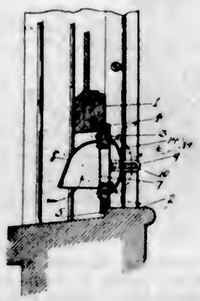
3. In an overseaming machine including a reciprocating eye pointed needle and in combination, a lower looper with its carrier pivotally supported, an upper looper with its carrier pivotally and slidably supported, a pair of cam cylinders supported in proximity with each other and geared to rotate in unison, a cam groove in each of said cylinders engaging corresponding studs upon the upper looper carrier; and a second groove irregular in form in one of said cam cylinders engaging a stud upon the lower looper carrier whereby the loopers coöperate with each other and with the needle.

4. In an overseaming machine including a reciprocating eye pointed needle and means for supporting and feeding the fabric and in combination therewith; a pair of cam cylinders provided with intermeshing gear teeth, and three correlated cam grooves, an upper looper with its carrier pivotally and slidably supported, and supplied with studs and rolls to engage two of said cam grooves, a lower looper with its carrier pivotally supported and provided with a stud with a roll adapted to engage one of the grooves in one of the said cam cylinders whereby the lower looper is intermittently moved to co-act with the needle and upper looper and the upper looper coacts with the lower looper and the needle in transferring loops of thread to produce overedge stitches upon the edge of the material.

5. In an overedge sewing machine including a needle, and means for supporting and feeding the fabric and in combination therewith, a frame cap secured to the frame of the machine, two loopers and means to actuate them to coöperate with each other and with the needle, both of said loopers being independently supported upon said frame cap, whereby the loopers together with their supports may be removed from the frame of the machine for inspection and adjustment.

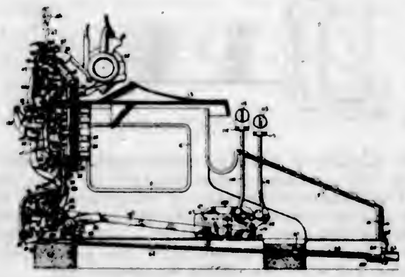
[Claims 6 and 7 not printed in the Gazette.]

1,217,897. VENTILATOR FOR WINDOWS. WARREN W. BAIRD, Pittsburgh, Pa. Filed Mar. 6, 1916. Serial No. 82,302. (Cl. 98—31.)



A ventilator for window use, comprising a rectangular body portion having a longitudinal opening, means comprising a tongue formed along the top edge of said body portion for engaging with the lower rail of a window sash, and similar means for engaging with the window sill formed along the length of the bottom edge of said body-portion, whereby said body may be held in a vertical position, slotted brackets arranged at either end of said opening, a cover adapted to close said opening, threaded pins attached to either end of said cover, said pins projecting through said slots, and suitable thumb nuts operating upon said pins to clamp said cover at varying positions.

1,217,898. TYPE-WRITING MACHINE. JOHN H. BARR, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Apr. 20, 1916. Serial No. 92,429. (Cl. 197—179.)



1. In a typewriting machine and in tabulating mechanism, the combination with a carriage and a series of settable stops, of a lever up-standing at the back of the machine and extending into the base of the machine, keys in the keyboard of the machine for swinging said lever in two directions from normal position, means operated by said lever when swung in one of said directions for setting one of said stops, and restoring means operated by said lever when swung in the other direction.

2. In a typewriting machine and in tabulating mechanism, the combination with a carriage and a series of settable column stops, of an upstanding lever of the first order extending into the base of the machine, a link connected with the lower end of said lever and extending to the key-board of the machine, two keys in said keyboard for moving said link in opposite directions from a normal position, means whereby said lever when swung in one direction sets one of said stops, and means whereby said lever when swung in the other direction can restore said stops.

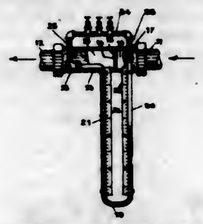
3. In a typewriting machine and in tabulating mechanism, the combination with a carriage and a series of settable column stops, of a lever, means whereby said lever when swung in one direction from normal position can set one of said stops, restoring means operated by said lever when swung in the other direction, two keys in the key-board, a lever having two arms to which said keys are respectively connected so that one of said keys swings said lever in one direction, and the other in the other, and connections from the said key-operated lever to the first mentioned lever.

4. In a typewriting machine and in tabulating mechanism, the combination with a carriage and a series of settable column stops, of one or more key operated stops for coöperation with said column stops, a movable guide for said coöperating stop or stops, means for moving said guide, and a column-stop-restoring device operated by said guide.

5. In a typewriting machine and in tabulating mechanism, the combination with a carriage and a series of settable column stops, of one or more key-operated stops for coöperation with said column stops, a movable guide for said coöperating stop or stops, means for moving said guide, a column-stop-setting device operated by said guide, and a column-stop-restoring device operated by said guide.

[Claims 6 to 14 not printed in the Gazette.]

1,217,899. METER FOR STEAM, AIR, OR OTHER GASES. GEORGE HALE BARRUS, Brookline, Mass. Filed Dec. 21, 1914. Serial No. 878,225. (Cl. 73—167.)



1. A meter for gases comprising a chamber, a diaphragm with a permanently open orifice therein in said chamber through which the gases pass, a differential pressure gage having connections to the said chamber on each side of the said diaphragm, and a shortcircuiting passage of predetermined effect between the said connections adapted to be open in parallel with the passage through said chamber during the operation of the meter.

2. A meter for gases comprising a chamber, a diaphragm in said chamber, a permanently open orifice in said diaphragm through which the gases pass, a differential pressure gage having connections to the said chamber on each side of the said diaphragm, and a shortcircuiting passage of predetermined effect between the said connections adapted to be open in parallel with the passage through said chamber during the operation of the meter exterior to the said chamber.

3. A meter for gases comprising a chamber, an orifice therein smaller than the said chamber and through which the gases pass, a differential pressure gage having connections to the said chamber near to and on each side of the said orifice, a shortcircuiting passage of predetermined effect between the said connections adapted to be open in parallel with the passage through said chamber during the operation of the meter and means for varying by predetermined degrees the shortcircuiting effect of said shortcircuiting passage.

4. A meter for gases comprising a chamber, a permanently open orifice therein smaller than the said chamber and through which the gases pass, a differential pressure gage having connections to the said chamber near to and on each side of the said orifice, and a shortcircuiting passage of predetermined effect between the said connections with means operatable during the action of said meter for opening and closing the said shortcircuiting passage.

5. A meter for gases comprising a chamber, an orifice therein smaller than the said chamber and through which the gases pass, a differential pressure gage having connections to said chamber on each side of the said orifice, a short-circuiting passage of predetermined effect between the opposite sides of said chamber, and means for opening and closing the said short-circuiting passage and varying in predetermined degrees the short-circuiting effect of said passage.

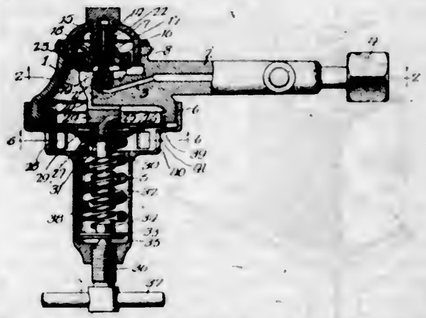
[Claims 6 to 9 not printed in the Gazette.]

1,217,900. SELF-FILLING FOUNTAIN-PEN. HENRY C. BARTLETT, Jr., Owensboro, Ky. Filed Aug. 2, 1916. Serial No. 112,873. (Cl. 120—46.)



In a self-filling fountain pen, the combination of a pen barrel and an ink bag or sack contained therein, of a spring strip having one end secured on the interior of the wall at one end of the barrel and having a sliding connection at its other end near the opposite end of the barrel, a bowed strip connected to the first strip substantially midway between its ends and having its ends relatively closer to said ink-bag than the arched portion of the bow, and means carried by the barrel and acting against the first strip to depress the bowed strip on the bag so that its ends will engage the bag previous to its body, whereby as said means is released the bag expands and draws ink thereinto, said barrel having an elongated slot provided with a shoulder at one end, said spring strip having a notch, said means comprising a lever pivoted in the slot adapted to cam against the spring strip and engage said notch to depress the strip, said lever when closed engaging the shoulder of the slot.

1,217,901. FLUID-PRESSURE-REGULATING VALVE. CHARLES L. BASTIAN, Chicago, Ill. Filed June 22, 1916. Serial No. 105,129. (Cl. 50—23.)



1. In a pressure regulating valve, the combination of a casing providing a chamber, pressure sensitive means forming a wall of said chamber, an inlet to and an outlet from said chamber, means connected to said pressure sensitive means for controlling said inlet, a bonnet connected to said casing, resilient means of different strengths arranged one within the other within said bonnet and adapted to apply pressure to said pressure sensitive means, the outer and stronger resilient means being of greater cross-sectional area and shorter than the inner and weaker resilient means, and means for simultaneously tensioning said inner resilient means and causing said outer resilient means to become effective.

2. In a pressure regulating valve, the combination of a casing providing a chamber, pressure sensitive means forming a wall of said chamber, an inlet to and an outlet from said chamber, means connected to said pressure sensitive means for controlling said inlet, a bonnet connected to said casing, and resilient means of different strengths arranged one within the other within said bonnet and adapted to apply pressure to said pressure sensitive means, the inner and weaker resilient means comprising two springs of different strengths arranged in tandem and the outer and stronger resilient means being shorter than the combined length of said springs, whereby said pressure sensitive means is first subjected to the pressure of the latter.

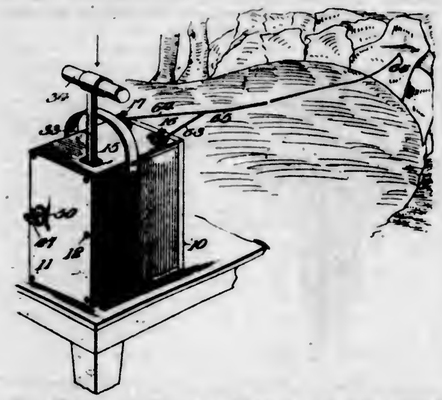
3. In a pressure regulating valve, the combination of a casing providing a chamber, an inlet to and an outlet from said chamber, pressure sensitive means comprising a pair of superposed diaphragms forming a wall of said chamber, means connected to one of said diaphragms for controlling said inlet, and resilient means adapted to apply pressure separately to said diaphragms.

4. In a pressure regulating valve, the combination of a casing providing a chamber, an inlet to and an outlet from said chamber, pressure sensitive means comprising a pair of superposed diaphragms forming a wall of said chamber, means connected to one of said diaphragms for controlling said inlet, springs adapted to apply pressure separately to said diaphragms, and means for regulating the tension of said springs.

5. In a pressure regulating valve, the combination of a casing providing a chamber, an inlet to and an outlet from said chamber, pressure sensitive means comprising a pair of superposed diaphragms forming a wall of said chamber, means connected to one of said diaphragms for controlling said inlet, means adapted to apply pressure separately to said diaphragms comprising an outer heavy spring and an inner lighter spring, and means for regulating the tension of said springs.

[Claims 6 to 14 not printed in the Gazette.]

1,217,902. MINER'S BLASTING-BOX. JOSEPH S. BRENNECK, Nanticoke, Pa. Filed Dec. 31, 1915. Serial No. 69,703. (Cl. 175—116.)



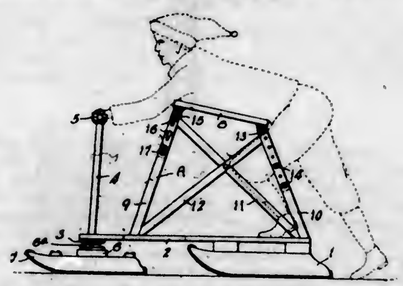
1. A blasting box including a casing, a dynamo mounted in the casing, a plunger reciprocally mounted through one wall of the casing, operative connection between the plunger and dynamo, whereby reciprocation of the plunger will actuate the dynamo, a circuit breaker adapted to be opened by movement of the plunger to one limit of its movement, a key operated circuit closer, a local circuit including the dynamo, circuit breaker and circuit closer, and a firing circuit including the dynamo and circuit closer.

2. A blasting box including a casing, a dynamo mounted in the casing, a plunger reciprocally mounted through one wall of the casing, operative connection between the plunger and dynamo, whereby reciprocation of the plunger will actuate the dynamo, a circuit breaker adapted to be opened by movement of the plunger to one limit of its movement, a key operated circuit closer, a local circuit including the dynamo, circuit breaker and circuit closer, and a firing circuit including the dynamo and circuit closer, the relative resistances of the circuits being such that substantially all current generated by the dynamo will pass through the local circuit when both circuits are closed.

3. A blasting box including a casing, a dynamo having an armature shaft mounted in the casing, a pinion having ratchet connection with the armature shaft whereby rotation of the pinion in one direction will rotate the armature shaft and whereby the armature shaft may continue to rotate after the pinion stops turning, a rack bar reciprocally mounted through one wall of the casing and engaging the pinion, a circuit breaker including a movable member projecting in the path of movement of the rack bar, a key controlled circuit closer, a local circuit including the dynamo, circuit breaker and circuit closer, and a firing circuit including the dynamo and circuit closer.

1,217,903. SLED. HENRI LEON BERGERON, Walstonburg, N. C. Filed June 21, 1916. Serial No. 104,892. (Cl. 21—94.)

1. A sled including rear runners, a top attached thereto and projecting in advance of the rear runners, front runners pivotally mounted under the forwardly projecting end of the top, a skeleton frame projecting upwardly from the top, a board carried by the skeleton frame for supporting the chest and abdomen of an operator in a partially standing position with one foot on the top of the sled, an upright steering shaft rigid with the front runners, and a steering handle applied to the steering shaft and arranged in advance of the body supporting board.



2. A sled including rear runners, a top attached to the rear runners and projecting in advance thereof, front runners pivotally mounted under the forwardly projecting end of the top, converging standards projecting upwardly from the top, a rearwardly inclined body supporting board carried by the standards, said body supporting board being designed to receive the chest and abdomen of an operator in a partially standing position with one foot on the top of the sled, an upright steering shaft rigid with the front runners, and a steering handle applied to the steering shaft and arranged in advance of the body supporting board.

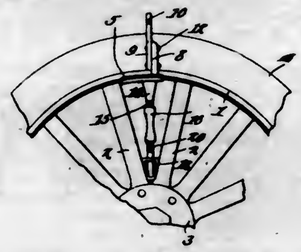
3. A sled including rear runners, a top applied to the rear runners and projecting in advance thereof, front runners pivotally mounted under the forwardly projecting end of the top, a skeleton frame projecting upwardly from the top, a body supporting board carried by the skeleton frame and adapted to receive the chest and abdomen of an operator in a partially standing position with one foot on the top of the sled, means for setting the body supporting board at different elevations, an upright steering shaft rigid with the front runners, and a steering handle applied to the steering shaft and arranged in advance of the body supporting board so as to be grasped by the hands of the operator.

4. A sled including rear runners, a top applied to the rear runners and projecting in advance thereof, front runners pivotally mounted under the forwardly projecting end of the top, a skeleton frame projecting upwardly from the top, a body supporting board carried by the skeleton frame and adapted to receive the chest and abdomen of an operator in a partially standing position with one foot on the top of the sled, means for setting the body supporting board at different elevations, means for adjusting the inclination of the body supporting board, an upright steering shaft rigid with the front runners, and a handle applied to the upright steering shaft and arranged in advance of the body supporting board so as to be grasped by the hands of the operator.

5. A sled including rear runners, a top applied to the rear runners and projecting in advance thereof, front runners pivotally mounted under the forwardly projecting end of the top, a skeleton frame projecting upwardly from the top, a body supporting board carried by the skeleton frame and adapted to receive the chest and abdomen of an operator in a partially standing position with one foot on the top of the sled, extensions adjustably mounted upon one side of the skeleton frame and engaging one end of the body supporting board, said extensions providing a means for adjusting the elevation of the body supporting board, a pair of brace members carried by the opposite end of the body supporting board and adjustably engaging the skeleton frame to hold the body supporting board at different inclinations, a steering shaft rigid with the front runners and projecting upwardly therefrom, and a handle applied to the upright steering shaft and arranged in advance of the body supporting board so as to be grasped by the hands of the operator.

[Claim 6 not printed in the Gazette.]

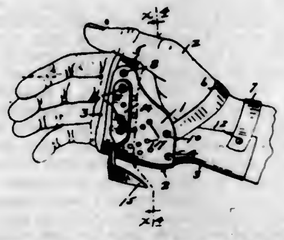
1,217,904. MUD-LUG FOR PROPELLING AUTOS. ELZA P. BEARY, Sedalia, Mo., assignor of one-half to James M. De Jarnette, Sedalia, Mo. Filed Aug. 28, 1916. Serial No. 117,266. (Cl. 21—215.)



1. In a device of the class described, a rim-engaging body; a spoke-engaging head; a longitudinally extensible connection uniting the body and the head; standards carried by the body at the sides thereof; spuds mounted on the standards for adjustment longitudinally of the standards, toward and away from the head; and means for holding the spuds on the standards in adjusted positions.

2. In a device of the class described, a body provided intermediate its longitudinal edges with a rim-receiving seat, and provided along its longitudinal edges with laterally projecting side arms; standards projecting from the side arms; spuds mounted on the standards and extended longitudinally thereof; slot and clamping device connections between the spuds and the standards, whereby the spuds may be adjusted longitudinally of the standards; a wedge-shaped spoke-engaging head; a stem carried by the body; a stem carried by the head; and a nut threaded in opposite directions on to both stems.

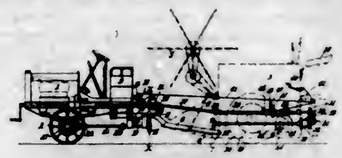
1,217,905. CORN-HUSKING DEVICE. WILLIAM T. BOICE, Foley, Minn. Filed June 15, 1916. Serial No. 103,718. (Cl. 130—4.)



1. A husking device comprising an anchoring plate fitting the palm of an operator's hand and having at its lower edge a laterally projecting flange arranged to extend under the lower portion of the hand, said plate having a contracted upper end extending between the thumb and index finger, buckle-equipped straps for attaching the anchoring plate to the hand, and a husking peg rigidly secured with respect to the anchoring plate and provided with a hook-like point offset from and below said flange and projecting in a rearward direction.

2. A husking device comprising a rigid anchoring plate fitting the palm of an operator's hand and having a flange extending under the lower portion thereof, means for attaching the anchoring plate to the operator's hand, and a husking peg secured to said flange.

1,217,906. AUTOMOTOR HARVESTING-MACHINE. ERNEST HENRI NARCISSE BONNET, Nonancourt, France. Filed July 8, 1915. Serial No. 38,832. (Cl. 21—114.)



1. An auto-motor harvesting machine comprising a front tractor and a rear trailer, the tractor comprising motor driven and controlling means, and the trailer comprising the harvester, combined with connections for transmitting rotary motion from the motor to the trailer and control mechanism on the trailer for controlling the application of power to the harvester.

2. An auto-motor harvesting machine comprising a front tractor and a rear trailer, the tractor comprising motor driven and controlling means, and the trailer comprising the harvester, combined with means for communicating rotary motion from the motor to the trailer, and control means on the tractor and trailer respectively, comprising clutches and operating means whereby the operator can uncouple at will the transmission to the driving means or to the harvester.

3. In an auto-motor harvesting machine comprising a tractor and trailer, the tractor comprising in combination a motor, traction wheels hung on vertical pivots, a bridge connecting them, a differential gear carried by said bridge, a divided axle communicating movement from the differential to the traction wheels, and comprising universal joints coinciding with the vertical pivots of said wheels, and transmitting mechanism for communicating rotation from the motor to said differential gear.

4. In an auto-motor harvesting machine comprising a tractor and trailer, the tractor comprising in combination a motor, traction wheels hung on vertical pivots, a bridge connecting them, a differential gear carried by said bridge, a divided axle communicating movement from the differential to the traction wheels and comprising universal joints coinciding with the vertical pivots of said wheels, and transmitting mechanism comprising a shaft driven by the motor having connections extending to the harvester and a shaft driven therefrom and extending forwardly to the differential gear.

5. In an auto-motor harvesting machine comprising a tractor and trailer, with a longitudinal shaft for communicating rotation from the motor to the trailer, the combination therewith of means under control of the operator on the trailer for disconnecting the driving connection from the tractor wheels.

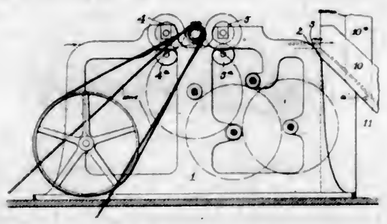
[Claims 6 to 8 not printed in the Gazette.]

1,217,907. MACHINE FOR MANUFACTURING TRUNK SLATS, STRIPS, AND MOLDINGS. EBEN T. BRADBURY, St. Louis, Mo. Filed Jan. 24, 1914. Serial No. 814,210. (Cl. 144—2.)

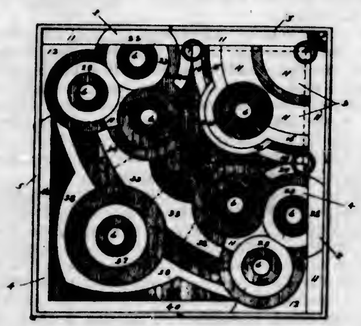
1. In a machine of the class described, a bed having a plurality of longitudinally disposed ribs extending throughout its length and forming channels or guide ways within which the blanks are adapted to travel, a rotary cutter head having cutters corresponding to each guideway and shaped to dress the top and sides of the blanks, feed rollers for moving the blanks across the bed, a transversely disposed chip breaker located in advance of said cutter head and a corresponding presser bar located in rear of said cutter head provided at its forward end with integral fingers projecting slightly upward between the several cutters, substantially as described.

2. In a machine of the class described, a bed having a plurality of longitudinally disposed ribs extending throughout its length forming channels or guideways within which the blanks are adapted to travel, rotary cutter

means provided with cutters corresponding to each guide-way, feeding means for the blanks, a chip breaker located in advance of the cutter means, a presser bar located in rear of the cutter means, a hopper having a bottom inclining downwardly from the delivery end of the bed and provided with partitions forming compartments alining with the said channels or guide-ways and a hold-down bar over the guide-ways, substantially as described.



1,217,908. GAME APPARATUS. CHARLES B. BREWER, Hyattsville, Md., and HARVEY E. HANES, Herndon, Va. Filed Feb. 21, 1914. Serial No. 820,265. (Cl. 46—61.)



1. A game apparatus comprising a playing surface marked to indicate a base-ball "field" divided into zones; spaced apart upstanding elements disposed upon said playing surface; and means, adapted to be associated with said upstanding elements for varying the size of the zones.

2. A game apparatus comprising a playing surface marked to indicate a base-ball "field" divided into zones; spaced apart upstanding elements disposed upon said playing surface; and means, comprising members adapted to be mounted on said upstanding elements, for varying the surface area of the zones.

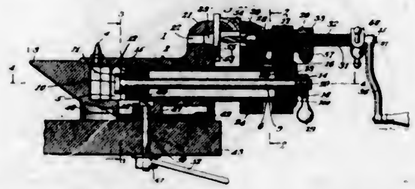
3. A game apparatus comprising a playing surface marked to indicate a base-ball "field" divided into zones; spaced apart upstanding elements disposed upon said playing surface; and means, comprising ring members having a rebounding surface and adapted to be mounted on said upstanding elements to vary the space between said upstanding members and accessibility to said zones.

4. A game apparatus comprising a playing surface marked to indicate a base-ball "field" divided into zones, and having a fixed point therein from which a movable playing-member may be projected into said zones; upstanding deflecting elements disposed on said playing surface between said fixed point and certain of said zones; and means associated with said deflecting elements for varying the accessibility of said playing member to said zones.

5. A game apparatus comprising a playing surface marked to indicate a base-ball "field" divided into zones, and having a fixed point therein from which a movable playing-member may be projected into said zones; upstanding deflecting elements disposed on said playing surface between said fixed point and certain of said zones; and means associated with said deflecting elements for varying the accessibility of said playing member to said zones; and an upstanding rebounding edge surrounding said playing surface and against which said playing member may impinge.

[Claims 6 to 11 not printed in the Gazette.]

1,217,909. COMBINATION VISE, ANVIL, AND DRILL, AND PARTS THEREOF. HARRY C. BROWN, Westwood, N. J., assignor to Henry B. Newhall, Littleton, N. H. Filed Sept. 20, 1913. Serial No. 790,945. (Cl. 29—32.)



1. In a combined vise and drill the combination of a hollow body member having a fixed jaw, a supporting member supported in the hollow body member, means to obtain a rough preliminary adjustment of the supporting member in the hollow body member, a movable jaw carried by the supporting member, means to operate the movable jaw, a drill operating through the movable jaw, and means to feed the drill independently of the means to operate the movable jaw.

2. In a combined vise and drill the combination of a hollow body member having a fixed jaw, a supporting member supported in the hollow body member, means to obtain a rough preliminary adjustment of the supporting member in the hollow body member, a movable jaw carried by the supporting member, a drill operating through the movable jaw and a plurality of screws adapted to feed the drill, at least one of which also operates the movable jaw.

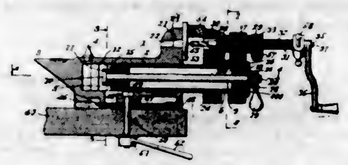
3. In a combined vise and drill, the combination of a fixed jaw, a movable jaw, a drill operating through the movable jaw and a plurality of screws adapted to feed the drill, at least one of which also operates the movable jaw of the vise.

4. In a combined vise and drill the combination of a hollow body member having a fixed jaw, a supporting member supported in the hollow body member, means to obtain a rough preliminary adjustment of the supporting member in the hollow body member, a movable jaw carried by the supporting member, a drill operating through the movable jaw and a plurality of screws adapted to feed the drill, at least one of which also operates the movable jaw, said screw being provided with additional means to retract the movable jaw, and means carried by the movable jaw to coöperate with said means.

5. The combination in a vise, anvil and drill of a hollow body member having a fixed jaw and a non-circular opening and pockets, a hollow non-circular supporting member snugly fitting the opening in the vise, flanged nipples located in the ends of the hollow supporting member and provided with openings for the reception of a locking bolt, a movable jaw mounted upon the hollow supporting member, a removable standard mounted upon the hollow supporting member and coöperating with the flange of one of the nipples and provided with interior wedge surfaces, a hollow screw mounted upon the standard and provided with exterior wedge surfaces to coöperate with those carried by the removable standard, and a drill mounted within the hollow screw, a locking head upon one end of the locking bolt and an operating handle upon the other end.

[Claims 6 to 10 not printed in the Gazette.]

1,217,910. VISE. HARRY C. BROWN, Westwood, N. J., assignor to Henry B. Newhall, Littleton, N. H. Original application filed Sept. 20, 1913, Serial No. 790,945. Divided and this application filed July 3, 1914. Serial No. 848,749. (Cl. 81—33.)



1. The combination in a vise of a hollow body member having a fixed jaw and a non-circular opening and pockets, a hollow non-circular supporting member snugly fitting the opening in the vise, flanged nipples located in the ends of the hollow supporting member and provided with openings for the reception of a locking bolt, a movable jaw mounted upon the hollow supporting member, a removable standard mounted upon the hollow supporting member and coöperating with the flange of one of the nipples, means for operating the movable jaw mounted upon the standard, a locking head upon one end of the locking bolt and an operating handle upon the other end.

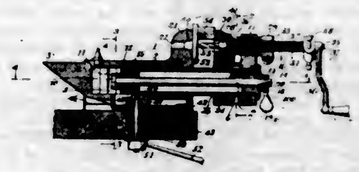
2. The combination in a vise of a hollow body member having a fixed jaw and a non-circular opening and pockets, a hollow non-circular supporting member snugly fitting the opening in the vise, flanged nipples located in the ends of the hollow supporting member and provided with openings for the reception of a locking bolt, a movable jaw mounted upon the hollow supporting member, a removable standard mounted upon the hollow supporting member and having an inwardly extending flange overlapping the end of the supporting member and coöperating with the flange of one of the nipples, means for operating the movable jaw mounted upon the standard, a locking head upon one end of the locking bolt and an operating handle upon the other end.

3. The combination in a vise of a hollow body member, an anvil forming a part of the hollow body member, said hollow body member provided with a non-circular opening and with one or more laterally extending pockets extending from the non-circular opening, a hollow non-circular supporting member snugly fitting within the non-circular opening in the body member, a rod mounted in the said member and provided with a locking member to detachably engage the pockets and with a handle to operate it, a movable jaw mounted on the supporting member and adapted to slide thereon, a standard mounted on the supporting member, and a screw directly coöperating with the movable jaw and with the standard and adapted to move the movable jaw positively in both directions on the supporting member.

4. The combination in a vise of a hollow body member, an anvil forming a part of the hollow body member, said hollow body member provided with a non-circular opening and with one or more laterally extending pockets extending from the non-circular opening, a hollow non-circular supporting member snugly fitting within the non-circular opening in the body member, a rod mounted in the said member and provided with a rigid locking head to directly and detachably engage the pockets and with a weighted handle to operate it, a movable jaw mounted on the supporting member and adapted to slide thereon, a standard mounted on the supporting member, and a screw directly coöperating with the movable jaw and with the standard and adapted to move the movable jaw positively in both directions on the supporting member.

1,217,911. DRILL MECHANISM. HARRY C. BROWN, Westwood, N. J., assignor to Henry B. Newhall, Littleton, N. H. Original application filed Sept. 20, 1913, Serial No. 790,945. Divided and this application filed July 3, 1914. Serial No. 848,750. (Cl. 77—32.)

1. In a drill the combination of a plurality of hollow nested screws, a support provided with a screw threaded opening, a drill operating member extending through the screws, a removable drill head detachably engaged with said member at one end thereof and coöperating with the operating member and of less diameter than the outer screw to permit it to be drawn within the screw, and means to operate the drill operating member.



2. In a drill, the combination of a plurality of hollow nested screws, a support provided with a screw threaded opening, a drill operating member extending through the screw and at one end provided with a drill head, said drill head and one of the feed screws being provided with means adapted to automatically feed the drill head to the work.

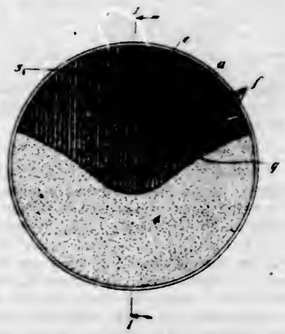
3. In a drill the combination of a plurality of hollow nested screws, a support provided with a screw threaded opening coöperating with one of the nested screws, means to quickly adjust the support with its nested screws to and from the work, means to adjust the nested screws with relation to the support to obtain the final adjustment to the work, and a drill operating member extending through the nested screws and adapted to be operated independently of them.

4. In a drill the combination of a plurality of hollow nested screws, a support provided with a screw threaded opening coöperating with one of the nested screws, means to quickly adjust the support with its nested screws to and from the work, means to adjust the nested screws with relation to the support to obtain the final adjustment to the work, and a drill operating member extending through the nested screws provided with means to detachably engage a drill head, a drill head of less diameter than the outer screw to permit it to be drawn within said screw, and means to operate the drill operating member.

5. In a drill the combination of a plurality of hollow nested screws, a support provided with screw threads to coöperate with one of the nested screws, a drill operating member extending through the nested screws and provided with a drill head, said drill head and one of the nested screws being provided with means adapted to automatically feed the drill head to the work.

[Claims 6 and 7 not printed in the Gazette.]

1,217,912. NO-GLARE HEADLIGHT. EDWARD BRUNS, Portland, Oreg. Filed Aug. 14, 1916. Serial No. 114,904. (Cl. 240—48.4.)



1. In a headlight, the combination of a lamp, a hood therefor including a parabolic reflector and a lens covering

the front of such hood, said lens having a portion of its surface translucent and the entire remaining portion of its surface covered with narrow, contiguous, parallel ribs of prismatic cross-section and arranged perpendicular to an imaginary diameter dividing said translucent portion from said rib portion of the lens.

2. A convex-concave lens for a headlight having a portion of its surface translucent and the entire remaining portion of its surface covered with narrow, contiguous, parallel ribs of prismatic cross-section and arranged perpendicular to an imaginary diameter dividing said translucent portion from said rib portion of the lens.

3. A lens made with an approximately flat middle portion, being convex from such portion, a portion of the lens being covered with narrow, contiguous parallel ribs of prismatic cross section, said ribbed portion of the lens extending V form below the center of the lens.

4. A lens made with an approximately flat middle portion, being convex from such portion, a portion of the lens being covered with narrow, contiguous parallel ribs of prismatic cross section, said ribbed portion of the lens extending V form below the center of the lens, and the remaining portion of the lens being translucent.

5. A lens made with an approximately flat middle portion, being convex from such portion, and reversely curved at its margin, a portion of the lens being covered with narrow, contiguous parallel ribs of prismatic cross section, and the remaining portion of the lens being translucent.

[Claims 6 to 8 not printed in the Gazette.]

1,217,913. PRODUCTION OF TUNGSTEN FROM SCHEELITE. JOHN COPE BUTTERFIELD, Balham, London, England, assignor of one-half to Arthur Ashworth, Bury, England. Filed Dec. 8, 1915. Serial No. 65,672. (Cl. 75—17.)

1. A reduction process for the production of tungsten from scheelite, comprising reducing the scheelite and separating the metallic tungsten from the reduced mass of scheelite by a process of mechanical gravity substantially as described.

2. A reduction process for the production of tungsten from scheelite, comprising reducing the scheelite and subjecting the reduction mixture to a process of mechanical separation by the combined action of a flow of water and gravity to separate the metallic tungsten, substantially as described.

3. A reduction process for the production of tungsten from scheelite, comprising reducing the scheelite and subjecting the reduction mixture to a process of mechanical separation by the combined action of a flow of water, vibration and gravity to separate the metallic tungsten therefrom, substantially as described.

4. A reduction process for the production of tungsten from scheelite, comprising reducing the scheelite and subjecting the reduction mixture to mechanical separation on a wet vibrating dressing table or concentrator, to separate the metallic tungsten, substantially as described.

5. A reduction process for the production of tungsten from scheelite, comprising reducing the scheelite, subjecting the reduction mixture to mechanical gravity separation to separate the metallic tungsten from the reduced mass of scheelite, treating the separated tungsten with dilute acid and washing the tungsten free from acid, substantially as described.

1,217,914. EXTRACTION OF TUNGSTEN FROM TUNGSTEN ORES. JOHN COPE BUTTERFIELD, Balham, London, England, assignor of one-half to Arthur Ashworth, Bury, England. Filed Dec. 23, 1915. Serial No. 68,323. (Cl. 75—17.)

1. Process for the treatment of tungsten ores of iron or manganese, or both, comprising treating the ore with dilute sulfuric acid to dissolve out a portion of the oxid of iron or manganese, or both, contained therein; and treating the residue with sodium chlorid, and sulfuric acid to complete substantially the removal of said oxid or oxids.

2. Process for the treatment of tungsten ores of iron or manganese, or both, comprising treating the ore with dilute sulfuric acid to dissolve out a portion of the oxid of iron or manganese, or both, contained therein, and treating the residue with sodium chlorid, sulfuric acid and sodium nitrate to complete substantially the removal of said oxid or oxids.



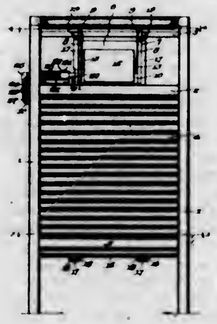
3. Process for the treatment of tungsten ores of iron or manganese, or both, comprising treating the ore with dilute sulfuric acid to dissolve out a portion of the oxid of iron or manganese, or both, contained therein, and liberating hydrochloric acid in the residue and thereby subjecting the residue to the action of hydrochloric acid, liberated *in situ* for the purpose specified.

4. Process for the treatment of tungsten ores of iron or manganese, or both, comprising treating the ore with dilute sulfuric acid to dissolve out a portion of the oxid of iron or manganese, or both, contained therein, and liberating hydrochloric acid in the residue and thereby subjecting the residue to the action of hydrochloric acid and chloro-nitrous gases liberated *in situ*, for the purpose specified.

5. Process for the treatment of tungsten ores of iron or manganese, or both, comprising treating the ore with dilute sulfuric acid to dissolve out a portion of the oxid of iron or manganese, or both, contained therein, and treating the residue with sodium chlorid and sulfuric acid to complete substantially the removal of said oxid or oxids, briqueting the residue wet, drying the briqueted product and heating the same in presence of a reducing gas to produce metallic tungsten.

[Claims 6 to 8 not printed in the Gazette.]

1,217,915. WASHBOARD. CHARLES L. CARTWRIGHT, New Decatur, Ala. Filed June 23, 1916. Serial No. 105,451. (Cl. 68—29.)



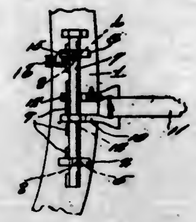
1. In combination with a wash board, a pivotally mounted soap holder, a roller having a rock arm, a rod connecting said rock arm to the soap holder to cause the soap holder to be adjusted when the roller is partly turned, and means to hold the soap holder in adjusted position.

2. In combination with a wash board, a pivotally mounted soap holder, a roller having a rock arm, a rod connecting said rock arm to the soap holder to cause the soap holder to be adjusted when the roller is partly turned, and means to hold the soap holder in adjusted position, and coacting with said rod, and means to disengage said rod holding means.

3. In combination with a wash board, a pivotally mounted soap holder, a roller having a rock arm, a rod connecting said rock arm to the soap holder to cause the soap holder to be adjusted when the roller is partly turned, means to hold the soap holder in adjusted position and coacting with said rod, means to disengage said rod holding means, and comprising a revoluble element adapted to be partly turned by a rubbing movement on the board.

4. In combination with a wash board, a pivotally mounted soap holder, a roller adapted to be turned by rubbing movement on the board, an operating rod for the soap holder connected to and actuated by said roller and provided with ratchet teeth, a spring pressed locking bolt normally engaging one of the ratchet teeth and provided with a cam head, and a revolubly mounted trip element having cams to coact with the cam head of the bolt and cause the latter to be disconnected from the rod, when the said trip element is partly turned.

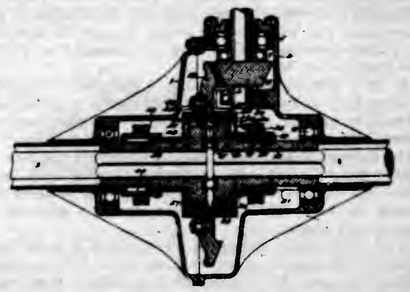
1,217,916. HAME-HOOK. ISAAC D. CONN, Wellington, Tex. Filed Sept. 27, 1916. Serial No. 122,407. (Cl. 54—31.)



1. In a hame and trace connector, the combination of a hame having a pair of lugs extending therefrom provided with apertures and spaced one above the other, and a U-shaped hame hook, the arms of which have apertures provided with recesses, of an elongated bolt or rod passing through the apertures of the lugs and the apertures of the arms of the trace hook, said bolt or rod having alined elongated spaced ribs to pass through the recesses of said arms when the trace hook is being adjusted vertically, said ribs being out of alinement with the recesses of the arms when adjusting the bolt or rod, whereby the arms of the hook may engage the spaces between the adjacent ribs, said apertures of the lugs having recesses to admit of the passage of said ribs when inserting the bolt or rod, and means for locking the rod or bolt against being raised and partially rotated.

2. In a hame and trace connector, the combination of a hame having a pair of lugs extending therefrom provided with apertures and spaced one above the other and a U-shaped hame hook, the arms of which have apertures provided with recesses, of an elongated bolt or rod passing through the apertures of the lugs and the apertures of the arms of the trace hook, said bolt or rod having alined elongated spaced ribs to pass through the recesses of said arms when the trace hook is being adjusted vertically, said ribs being out of alinement with the recesses of the arms when adjusting the bolt or rod, whereby the arms of the hook may engage the spaces between the adjacent ribs, said apertures of the lugs having recesses to permit the passage of said ribs when inserting the bolt or rod, and means for locking the rod or bolt against being raised and partially rotated, said means comprising a projection on one of the lugs, said lug with the projection having a depression adjacent its aperture into which one of the ribs of the bolt extends to prevent rotating the rod or bolt, and a screw threaded in the projection to lie in the path of one of the ribs to prevent the rod or bolt from being raised.

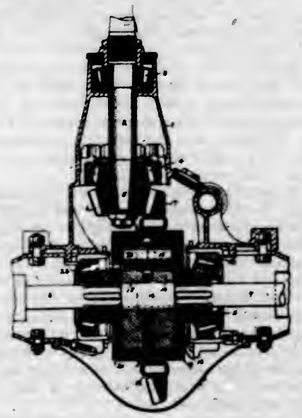
1,217,917. DIFFERENTIAL MECHANISM FOR AUTOMOBILES. HARRY W. CONNELL, Newark, N. J. Filed Nov. 28, 1911. Serial No. 662,849. (Cl. 74—7.)



1. In a differential for automobiles, a drum, a bevel gear detachably secured to the periphery of said drum, a plurality of rings secured to the inner face of said drum, an inwardly extending lug separating said rings, a plurality of disks each having a portion of its periphery flattened and rotatable within said rings, a roller between the flattened edges of each disk and a ring adjacent thereto and adapted to force the periphery of said disk into engagement with said ring and a cage for adjusting the position of said roll upon the edge of said disk.

2. A differential mechanism having a plurality of shafts in alinement, a disk secured upon the adjacent end of each said shaft, each of said disks having a single flattened portion in its periphery, and an anti-friction device between said disks, a drum surrounding both of said disks, and a roller upon the flattened surface of each said disks, and adapted to engage said disk with said drum for the purpose set forth.

1,217,918. DIFFERENTIAL MECHANISM. HARRY W. CONNELL, Bloomfield, N. J. Filed Mar. 14, 1913. Serial No. 754,228. (Cl. 74—7.)



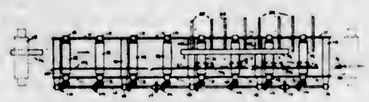
1. A differential mechanism having a plurality of disks rotatable simultaneously and means for rotating them, each said disk having a part removed to provide a flattened surface, a cupped member receiving each of said disks, a roller between the flattened surface of each disk and the adjacent cupped member, said rollers being arranged upon a common shaft a projection from each end of said shaft, a link extending from each said projection and a bar connecting said links, said bar being adapted to bear upon the inner periphery of each said cupped member as and for the purpose set forth.

2. A differential mechanism having a plurality of disks, a portion of the outer edge of which is removed, a cupped shaped member receiving each said disk, and upon the inner periphery of which the circular portion of the disk is adapted to bear, rollers arranged in alinement with each other and adapted to forcibly engage the periphery of a disk with its adjacent cup all arranged as and for the purpose set forth.

3. In a differential mechanism a plurality of shafts a driving gear secured to one of said shafts, a driven gear secured to another said shaft, said driven gear being provided with an aperture therethrough, and a plurality of disks secured to said shaft, rollers upon said disks having their ends adjacent and projecting through said driven gear and flanged members adapted to be differentially driven by said rollers as herein specified and for the purpose set forth.

4. A differential having in combination a plurality of disks each having approximately one third of its periphery removed to provide a single flat face, flanged members receiving each said disk and a roller between each said flattened surface and the adjacent flanged member, said rollers being adapted to forcibly engage each said disk with its adjacent flanged member by the rotation of both disks or both flanged members and to disengage either said disk from its flanged member by an increase of speed in either of said flanged members.

1,217,919. METAL-HANDLING APPARATUS FOR ROLLING-MILLS. WILLIAM C. CORYELL, Youngstown, Ohio. Filed Dec. 17, 1914. Serial No. 877,672. (Cl. 80—48.)



1. Metal handling apparatus for rolling mills comprising a plurality of substantially parallel rollers operative to receive the pieces of metal being put through the mill, a work-engaging face on one of said rollers and work-engaging means coöperating with said face to change the position of any such piece on said rollers, the work-engaging face on said roller extending above the surface of the roller and having its highest work-engaging points extending around said roller, the distance of said points from the axis of said roller varying gradually from a minimum to a maximum and the distance of said points from a plane at right angles to said axis likewise varying gradually from a minimum to a maximum.

2. Metal handling apparatus for rolling mills comprising a plurality of substantially parallel rollers operative to receive the pieces of metal being put through the mill, a work-engaging face on one of said rollers and work-engaging means coöperating with said face to change the position of any such piece on said rollers, the work-engaging face on said roller extending above the surface of the roller and having its highest work-engaging points varying gradually from point to point in their distances from the axis of said roller and from a plane at right angles to that axis, the point nearest said axis being farthest from said plane and the point farthest from said axis being nearest to said plane.

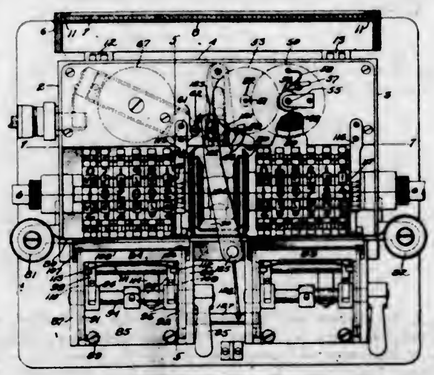
3. Metal handling apparatus for rolling mills comprising a plurality of substantially parallel rollers operative to receive the pieces of metal being put through the mill, a work-engaging face on one of said rollers and work-engaging means coöperating with the first to change the position of any such piece on said rollers, said work-engaging face on said roller comprising a cam portion gradually rising from the surface of said roller and approaching said work-engaging means and then gradually receding to the surface of said roller.

4. Metal handling apparatus for rolling mills comprising a plurality of substantially parallel rollers operative to receive the pieces of metal being put through the mill, two work-engaging cam portions on one of said rollers extending above the normal surface of said roller and forming a space between them for receiving any such piece, said cam portions being shaped so as to change the position of any such piece by a gradual movement as said roller rotates.

5. Metal handling apparatus for rolling mills comprising a plurality of substantially parallel rollers operative to receive the pieces of metal being put through the mill, two work-engaging cam portions on one of said rollers extending above the normal surface of said roller and forming a space between them for receiving any such piece, said cam portions being shaped so as to rotate any such piece through a definite angle upon a definite rotation of said roller.

[Claims 6 to 19 not printed in the Gazette.]

1,217,920. REVOLUTION-COUNTER. HENRY H. CUMMINGS, Boston, Mass. Filed June 7, 1913. Serial No. 772,359. (Cl. 235—91.)



1. In an apparatus of the class described, an indicator comprising two revolution counters to register the total number of revolutions of an engine shaft when operated together or separately, in combination with means to connect said counters to an engine shaft.

2. In an apparatus of the class described, an indicator comprising two revolution counters to register the total number of revolutions of an engine shaft when operated alternately or together, in combination with means to connect one of said counters with the engine shaft at a predetermined rate of speed, or both of said counters with the engine shaft at a lower rate of speed proportioned for registration by both counters for the same total indications as the same counter acting independently.

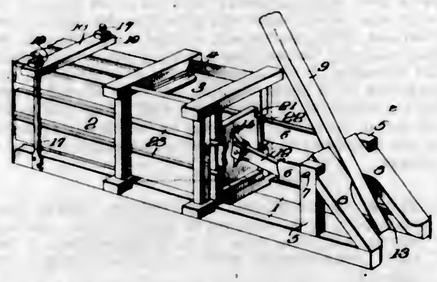
3. In an apparatus of the class described, an indicator comprising a plurality of revolution counters adapted to register the total number of revolutions of a shaft, either when operating jointly, or separately, or alternately in combination with means to connect all said counters at one rate of speed with the shaft, while permitting disconnection of one counter and simultaneously connecting the other counter or counters with said shaft at different rates of speed, proportioned to register constantly the total number of revolutions of the shaft at all times, irrespective of how many counters are operating.

4. In an apparatus of the class described, an indicator comprising two revolution counters capable of being operated together to jointly show the total number of revolutions of an engine shaft, each of said counters being capable of registering the revolutions of an engine shaft while the other counter is disconnected and at rest, means to operate both or either of said counters at will, said means actuating both counters at half the rate of speed of the rotating shaft connected therewith, and actuating either counter at the full rate of speed of said shaft.

5. In an apparatus of the class described, a revolution counter comprising two indicators operable together or separately to register the total number of revolutions of a shaft, printing devices coöperating with each counter to register an impression therefrom, in combination with means to automatically lock the printing device of one counter while said counter is in rotation, and to automatically unlock said device when its corresponding counter is at rest, thereby permitting the printing device to be actuated and a record to be obtained.

[Claims 6 to 9 not printed in the Gazette.]

1,217,921. BALING-PRESS. WILLIAM E. DUKE, Collins, Miss. Filed Feb. 7, 1916. Serial No. 76,703. (Cl. 100—4.)



1. In a baling press, the combination of a supporting frame, a baling box thereon, a plunger working in the baling box, a lever fulcrumed upon the supporting frame, a pitman connecting the lever with the plunger, and stops adjacent the connection between the lever and the pitman to arrest the movement of the parts in either direction.

2. In a baling press, the combination of a supporting frame, a baling box thereon, a plunger moving in the baling box, a lever fulcrumed upon the supporting frame and having a beveled extremity, a pitman pivoted at one end to the plunger and at its opposite end to the lever near the beveled extremity thereof, and stops on the pitman adapted to be engaged by the beveled extremity of the lever.

3. In a baling press, the combination of a supporting frame, a baling box thereon, a plunger working in the baling box, a lever fulcrumed upon the supporting frame and having a beveled extremity, and a pitman pivoted at its inner end to the plunger and having its outer end bifurcated and fitted around and pivoted to the lever, the inner end wall of the bifurcation being tapered to be engaged by the beveled end of the lever and thereby limit the movement of the parts in both directions.

4. In a baling press, the combination of sills, a baling box mounted thereon, standards erected on the sills, beams connecting the upper ends of the standards with the baling box, a plunger working in the baling box, a pivot inserted through the upper ends of the standards, braces secured to the sills and fitting around the pivot between the standards, a lever fulcrumed on said pivot between said braces, and a pitman connecting the lever with the plunger.

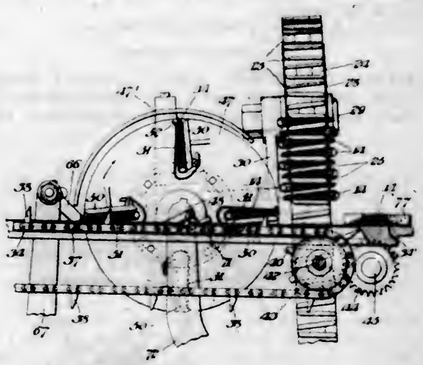
1,217,922. SCRAPING-TOOL. JOHN DONNELLY, Branford, Conn. Filed Mar. 14, 1916. Serial No. 84,078. (Cl. 145—47.)

1. In a cabinet scraping tool, a handle, top and bottom clamping plates, means for securing the plates to the handle, whereby the plates may be adjusted and held at various angles to the axis of the handle, the top clamping plate having an integral flange on one edge extending substantially at right angles to the plate, and constituting a hand or scraped surface engaging member, and a clamping blade clamped between the plates and provided with an enlarged rectangular opening, to permit the blade to be adjusted, whereby the flange may be used as a hand rest or may engage the surface to be scraped, when the tool is inverted.



2. In a cabinet scraping tool, a handle, clamping plates, means for securing the plates to the handle at an angle to the axis of the handle, a scraping blade clamped between the plates, and provided with an enlarged rectangular opening, whereby the blade can be adjusted and more firmly clamped by the plates, with their greatest clamping action adjacent and conforming to the edges of the rectangular opening.

1,217,923. MACHINE FOR PACKING MATCH-BOOKS, &c. JOSEPH C. DONNELLY, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed June 3, 1916. Serial No. 101,473. (Cl. 100—59.)



1. In a machine for assembling match books and the like, the combination of a support for the articles, means for impelling said articles in flat position in adjacent rows along said support, means for reversing the articles of one row, an article holder, means for inserting the articles thus reversed into said holder, and means for shifting the successive books flatwise and unreversed from the other row and inserting them in that position into the holder.

2. In a machine for assembling match books and the like, the combination of a support for the articles, means for impelling said articles in flat position in adjacent rows along said support, means for reversing the articles of one row, an article holder, means for inserting the articles thus reversed into said holder, and means for shifting the successive books flatwise and unreversed from the other row and inserting them in that position into the holder simultaneously with the insertion of the reversed books.

3. In a machine for assembling match-books, and the like, the combination of a support for the articles, means for impelling said articles in flat position in adjacent rows along said support, means for reversing the articles of one row, a carrier having article receiving portions arranged to travel adjacent the path of the reversed books, means for inserting the reversed books successively into the receiving portions of the carrier presented thereto,

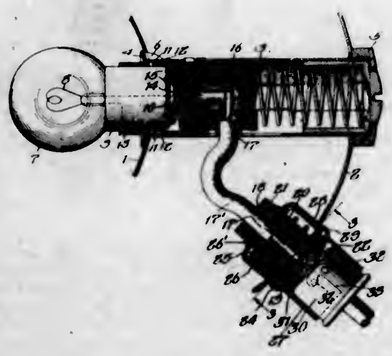
and means for shifting the successive books flatwise and unreversed from the other row and inserting them in that position into receiving portions of the carrier presented thereto.

4. In a machine for assembling match-books, and the like, the combination of a support for the articles, means for impelling said articles in flat position in adjacent rows along said support, means for reversing the articles of one row, a carrier having article receiving portions arranged to travel adjacent the path of the reversed books, means for inserting the reversed books successively into the receiving portions of the carrier presented thereto, and means for shifting the successive books flatwise and unreversed from the other row and inserting them in that position into the receiving portions of the carrier presented thereto simultaneously with the insertion of the reversed books.

5. In a machine for assembling match books and the like, the combination of a support for the articles, means for impelling said articles in flat position in adjacent rows along said support, a rotary element having individual article holders in spaced relation to each other, means for actuating said element whereby the holders thereof are presented at intervals to diametrically-opposite receiving and discharging regions, a carrier arranged to travel adjacent the discharging region, means for inserting successive articles of one row into the holders at the receiving region, whereby said articles are endwise reversed when they are carried to the discharging region, means for placing the reversed articles on the carrier, and means for shifting the successive articles flatwise and unreversed from the other row and placing them in that position on the carrier.

[Claims 6 to 9 not printed in the Gazette.]

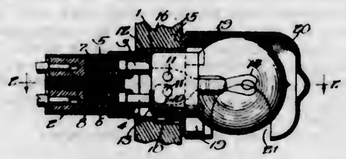
1,217,924. CONNECTOR. HARRY A. DOUGLAS, Bronson, Mich., assignor to Douglas & Rudd Manufacturing Company, Bronson, Mich., a Corporation of Michigan. Filed



May 22, 1914. Serial No. 840,151. (Cl. 173—324.)

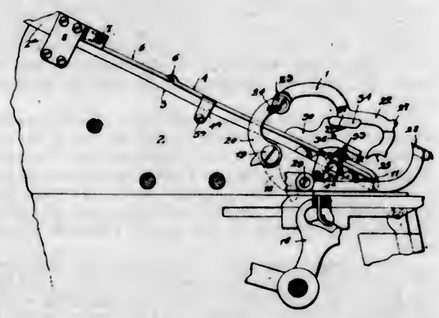
The combination with a mounting provided with a shell receiving opening; of a shell having one of its ends exteriorly threaded and the other of its ends constructed for the reception of and interengagement with a contact carrying plug and having a shoulder at an intermediate portion in engagement with one side of said mounting adjacent the aforesaid opening; an annular cap in threaded engagement with the threaded end of the shell and engaging the other side of said mounting adjacent the aforesaid opening, whereby the shell and mounting are assembled; a contact carrier extending through said cap and into the bore of said shell and movable longitudinally of the shell, this contact carrier having an outer and an inner shoulder; and a coil spring interposed between the inner shoulder and the inner side of the cap and operating to press the outer shoulder inwardly toward the cap.

1,217,925. COWL-LAMP. HARRY A. DOUGLAS, Bronson, Mich., assignor to Douglas & Rudd Mfg. Co., Bronson, Mich., a Corporation of Michigan. Filed Mar. 27, 1916. Serial No. 86,866. (Cl. 240—7.)



A lamp socket including a shell having a contact carrying plug in one end thereof and having integrally formed therewith at its other end a flange, a fastening lug formation projecting from the flange and laterally of the shell, and a hood receiving tubular extension of the flange at the outer edge of the flange and projecting forwardly therefrom and being substantially co-axial with the shell, the hood receiving tubular extension being discontinued where the fastening lug formation projects from the flange substantially to an extent equaling the width of such fastening lug formation; in combination with a lamp held within the socket and a hood supported by the tubular extension of the flange and having a light transmitting opening or passage.

1,217,926. BUTTON-FEEDING DEVICE. BORIS DUBI, Bridgeport, Conn., assignor to Rapid Button Attaching Machine Co., New York, N. Y., a Corporation of New York. Filed Sept. 2, 1916. Serial No. 118,165. (Cl. 218—12.)



1. In a machine of the class described, a button container, a chute leading therefrom, a cover mounted above said chute, and a hinged trap in said cover intermediate its ends, to permit buttons to be placed in the chute independently of the container, said trap having a slotted free end and a spring on its hinge.

2. In a machine of the class described, a button chute with a cover thereon, and a trap pivotally mounted in the cover and slotted in its lower end so as to permit a button to be placed true in the chute.

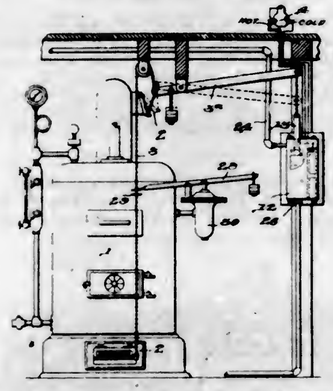
3. In a machine of the class described, a button chute, a button feeding device adapted to engage a button in said chute, means for causing said device to force a button positively in the direction of movement and hold the same, an arm on said button-moving means, a roller on said means, and means for engaging said roller and arm to elevate the button-moving means and hold the same clear of the button on its return movement.

4. In a machine of the class described, a button chute having a gate at its lower end, said gate being provided with slots in its end, a finger adapted to enter said slots and means for shifting said finger so as to force a button under said gate and a pivoted arm on said finger adapted to raise said finger on its return movement.

5. In a machine of the class described, a button chute with a cover, a cam on said cover with a pin projecting therefrom, a finger adapted to shift buttons and a pivoted arm mounted on said finger and adapted to engage said pin and raise said finger on its return movement, but not otherwise.

[Claims 6 to 11 not printed in the Gazette.]

1,217,927. DAMPER AND DRAFT CONTROLLING DEVICE. CARLETON ULA EDWARDS, Fort Hunt, Va. Filed Dec. 7, 1915. Serial No. 65,556. (Cl. 236—1.)



1. In a temperature-controlling apparatus of the character described, the combination of a fluid pressure motor for actuating dampers comprising a unitary actuating member pivoted adjacent its center of gravity to oscillate on its horizontal axis in a substantially vertical plane, a main receptacle centrally located in said actuating member, a separate and independent balance receptacle in said unitary actuating member on either side of the horizontal axis of the same, and an intermediate delivery device adapted to deliver a fluid to either balance receptacle at will, one balance receptacle being in its receiving position when the other balance receptacle and main receptacle are in their discharge positions.

2. In a temperature-controlling apparatus of the character described, the combination of a fluid pressure motor for actuating dampers comprising a unitary actuating member pivoted adjacent its center of gravity to oscillate on its horizontal axis in a substantially vertical plane, a main receptacle centrally located in said actuating member, a separate and independent balance receptacle in said unitary actuating member on either side of the horizontal axis of the same, an intermediate delivery device mounted to deliver fluid to either balance receptacle at will, and means to vary position of said intermediate delivery device, one balance receptacle being in its receiving position when the other balance receptacle and main receptacle are in their discharge positions.

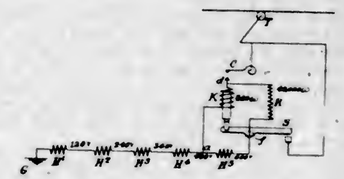
3. In a temperature-controlling apparatus of the character described, the combination of a fluid pressure motor for actuating dampers comprising a unitary actuating member pivoted adjacent its center of gravity to oscillate on its horizontal axis in a substantially vertical plane, a main receptacle centrally located in said actuating member, a separate and independent balance receptacle in said unitary actuating member on either side of the horizontal axis of the same, an intermediate delivery device mounted to deliver fluid to either balance receptacle at will, connecting means between the dampers and said motor, and a movable supplemental weight on said unitary actuating member arranged to accelerate the movement of the latter as the member turns on its horizontal axis, one balance receptacle being in its receiving position when the other balance receptacle and main receptacle are in their discharge positions.

4. In a temperature-controlling apparatus of the character described, the combination of a fluid pressure motor for actuating dampers comprising a unitary actuating member p... l adjacent its center of gravity to oscillate on its horizontal axis in a substantially vertical plane, a main receptacle centrally located in said actuating member, a separate and independent balance receptacle in said unitary actuating member on either side of the horizontal axis of the same, an intermediate delivery device mounted to deliver fluid to either balance receptacle at will, connecting means between the dampers and said motor, one balance receptacle being in its receiving position when the other balance receptacle and main receptacle are in their discharge positions, whereby the weight of the unitary actuating member and its contents operate to move the dampers.

5. In an apparatus of the character described, a fluid pressure motor comprising a unitary actuating member pivoted adjacent its center of gravity to oscillate on its horizontal axis in a substantially vertical plane, a main receptacle centrally located in said actuating member, and separate and independent balance receptacles in said unitary actuating member on either side of its horizontal axis.

[Claim 6 not printed in the Gazette.]

1,217,928. GOVERNOR-MAGNET. THOMAS FARMER, Jr., New York, N. Y., assignor to Consolidated Car-Heating Company, Albany, N. Y., a Corporation of West Virginia. Filed Sept. 5, 1913. Serial No. 788,240. (Cl. 219—20.)



1. The combination with a resistance and a source of current, of a switch interposed between the source of current and said resistance, a governor magnet for operating said switch, said magnet being interposed between the source of current and said resistance and grounded through the latter at an intermediate point, and contacts between said magnet and the source of current and operable to close the circuit directly to the magnet.

2. A governor-magnet and contacts therefor combined with a switch controlled by the magnet, a resistance controlled by the switch, a connection between the magnet coil and an intermediate point in said resistance, and a high resistance shunting said magnet.

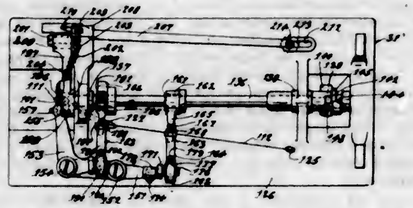
3. A governor magnet and contacts therefor in combination with a resistance, a switch controlling the supply of current to said resistance, said switch being opened and closed by said magnet, and connections between one terminal of the magnet and one of said contacts, a portion of said resistance being interposed between the other terminal of said magnet and the ground.

4. A governor magnet and contacts therefor combined with a switch having a movable member controlled by said magnet, a connection between one terminal of the magnet and one of said contacts, a resistance between the other terminal of the magnet and the ground, and a resistance having one terminal connected with the movable member of said switch and the other terminal grounded through the first resistance at the point of connection of the magnet therewith.

5. A governor-magnet and contacts therefor, combined with a switch controlled by said magnet, a connection between one magnet terminal and one of said contacts, a resistance between the opposite magnet terminal and the switch, a high resistance shunting said magnet and said resistance, and a resistance between the last mentioned magnet terminal and the ground.

[Claim 6 not printed in the Gazette.]

1,217,929. SEWING-MACHINE. HENRY H. FEFELL, Cincinnati, Ohio, assignor of one-half to Benjamin T. String, Norwood, Ohio. Filed Apr. 1, 1913. Serial No. 758,184. (Cl. 112—5.)



1. In a sewing machine employing a reciprocating needle, the combination of a looper, a lever on which said looper is located, a lever on which said last-named lever is pivoted, eccentric means for rocking said levers, the power end of said last-named lever being adjustable in length.

2. In a sewing machine employing a reciprocating needle, the combination of a looper, a lever on which said looper is located, a lever on which said last-named lever is pivoted, means for rocking said levers, and means whereby the power end of said second-named lever is adjustable in length for adjusting the position of the path of movement of said looper.

3. In a sewing machine employing a reciprocating needle, a looper coacting with the needle of said machine, an angle-lever on which said looper is located, a second lever on which said last-named lever is pivoted, a crank-arm for operating said levers, and a slot-and-pin drive-connection for operating said crank-arm and thereby qualifying the speed of movement of said looper relative to the speed of movement of the needle.

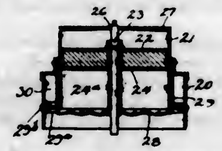
4. In a two-thread sewing machine of the character described employing a reciprocating needle having a thread-eye adjacent its goods-penetrating end, of a loop-taking looper having a thread-eye adjacent its loop-piercing end, an angle-lever on which said looper is located, a second lever on which said angle-lever is pivoted, eccentric mechanisms for moving said levers for causing said thread-eye of said looper to describe a closed path of movement about the longitudinal projection of the goods-penetrating portion of the needle which is substantially elliptical in form, the sides of said path of movement being closely adjacent to said longitudinal projection, and means for driving said eccentric mechanisms comprising a variable-motion device for qualifying the speed of movement of said looper adjacent to one end of the path thereof with relation to its speed adjacent to the other end of its path.

5. In a two-thread sewing machine of the character described employing a reciprocating needle having a thread-eye adjacent to its piercing end, of a loop-taking looper having a thread-eye adjacent its loop-piercing end, a lever on which said looper is located, a second lever on which said looper-lever is pivoted, means for reciprocating said levers for causing movement of said thread-eye of said looper in a closed path which is substantially elliptical, one side of which is more nearly parallel to the major axis of said substantially elliptical path than the other side thereof, said side so more parallel being the needle-thread loop-piercing movement of said looper, and means for retarding the movement of said looper adjacent one of the limits of reciprocating movement of said needle with relation to its speed adjacent to the other end of its path.

[Claims 6 to 9 not printed in the Gazette.]

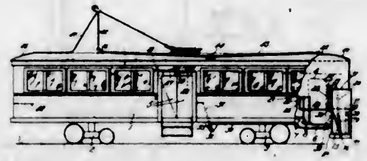
1,217,930. PULVERIZING-MACHINE. FRANK C. FERRY, East Cambridge, Mass. Filed July 10, 1916. Serial No. 108,258. (Cl. 83—11.)

1. In combination, in a pulverizing machine, a housing with perforated bottom and perforated circumferential wall, agitating mechanism within said housing, comprising a reciprocating disk with openings therein and depending radial blades, and means for rocking said agitating mechanism with a reciprocating movement.



2. In combination, in a pulverizing machine, a housing comprising two sections of relatively different diameters, a perforated bottom fixed in the larger of said sections, said bottom being formed with an upwardly extending perforated rim, agitating mechanism, in said housing, comprising a reciprocating perforated disk, radial blades, carried by said disk, and a plurality of agitator blades 27.

1,217,931. PASSENGER-CAR CONSTRUCTION. LOUIS E. FISCHER, St. Louis, Mo., and GEORGE W. BURTON, Peoria, Ill. Filed Oct. 21, 1911. Serial No. 656,000. (Cl. 105—205.)



1. A passenger car in which the ingress passage, conductor's platform and operator's section are on different horizontal planes.

2. A passenger car having an operator's section and a conductor's section contiguous to each other transversely of the car.

3. A passenger car having an operator's section and a conductor's section each in contact with the front of the car.

4. In a single deck type of passenger car, the combination of an inclosed main section and an operator's section having a roof constituting a platform inside of the main section.

5. In a passenger car, the combination of a single main section and an operator's section having a roof inside of said main section, said roof serving as a platform for the conductor in adjusting the trolley pole.

[Claims 6 to 13 not printed in the Gazette.]

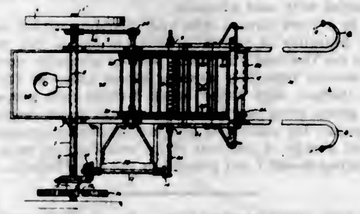
1,217,932. TABLE-COVER. JOHN J. FITZGERALD, Brooklyn, N. Y. Filed Dec. 21, 1915. Serial No. 68,018. (Cl. 65—53.)



1. A detachable table covering, comprising a fabric sheet in the edge portion of which is secured an annular frame or rim portion, said frame or rim portion being composed of four similar parts hinged together, whereby said covering may be first folded centrally and transversely and the folded parts again folded in the plane of the frame or rim portion to form a compact package.

2. In a device of the class described, an annular frame divided up into four similar arc-shaped parts hinged together whereby said frame may be first folded into two parts and again folded at right angles to said first fold to bring the folded parts together, and a fabric sheet, the edges of which are connected with the inner faces of said frame or the separate arc-shaped parts thereof.

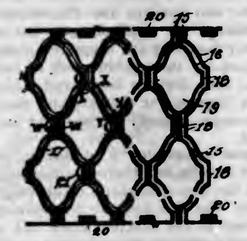
1,217,933. GRAIN-HEADING MACHINE. CULLEN CURLEE FORBES, Jr., Corpus Christi, Tex. Filed Aug. 9, 1915. Serial No. 44,894. (Cl. 56—131.)



1. In a machine of the character described, a frame work, a cutter bar operating transversely of the frame work and supported thereby, a shaft and sprockets arranged at the front end of the frame work, a second shaft and sprockets arranged in the frame work above the first shaft and sprockets and to the rear of the cutter bar, chains driven by said sprockets, and cross slats conecting said chains to form an endless slotted apron, a means for driving the apron so that its under face travels rearwardly in the frame work toward the cutter bar, and an inclined board arranged above the under face of the apron and extending from the front of the machine to the cutter bar.

2. In a machine of the character described, a frame-work, an endless, slotted apron arranged to revolve in an inclined position in the frame work, the under face of the apron traveling to the rear and upward in the machine, a cutter bar reciprocating in the frame work below the under face of the apron and intermediate of its ends, a deflector board extending from a point above the cutter bar to the front end of the apron, said board extending within the apron above its under face, and a fender and guide partly inclosing the forward end of said apron.

1,217,934. RADIATOR. JOHN B. GABRIELSON, Jamestown, N. Y. Filed Oct. 23, 1915. Serial No. 57,457. (Cl. 257—130.)



1. In a radiator an inner pair of plates having top, bottom and intermediate flat contacting surfaces and shaped to conjointly form air flues between said surfaces, said top, bottom and intermediate surfaces having intergenging concavo-convex teats, said teats being snugly nested one within the other respectively, and an outer pair of plates having top, bottom and intermediate flat surfaces registering with the corresponding surfaces of the inner plates and forming water passages with the latter, said flat surfaces of the outer plates having concavo-convex teats registering with the corresponding teats of the inner plates, the convex faces of the teats of one outer plate being shaped and engaged in the concavities of the teats of the adjacent inner plate so as to space said last named plates, and the convex faces of the teats of the other inner plate being shaped and engaged in the concavities of the teats of the other outer plate so as to space said last named plates.

2. In a radiator, inner and outer spaced pairs of plates shaped to provide inner air flues and outer water passages, the inner pair of plates having flat contacting surfaces formed with concavo-convex teats snugly nested one within the other, the outer pair of plates having flat surfaces disposed opposite the respective flat surfaces of the inner plates, and concavo-convex teats formed on the flat surfaces of the outer plates and registering with the corresponding teats of the inner plates, the convex faces of the teats of one outer plate being engaged in the concavities of the teats of one of the inner plates and shaped to space said last named plates and the convex faces of the teats of the other inner plate being engaged in the concavities of the teats of the other outer plate and shaped to space said last named plates.

3. In a radiator, an inner pair of plates having top, bottom and intermediate flat contacting surfaces, and substantially S-shaped connecting surfaces between the successive flat surfaces, an outer pair of plates having top, bottom and intermediate flat surfaces registering with the corresponding flat surfaces of the inner plates and substantially S-shaped connecting surfaces between the successive flat surfaces of the outer plates which last named S-shaped parts register with the first named S-shaped parts to form water passages in conjunction therewith which water passages cause a retarded and serpentine flow of the water, the contacting surfaces of the inner pair of plates having teats snugly nested one within the other, and teats on the flat surfaces of the outer plates co-operating with the teats of the inner plates to maintain the outer plates in their said spaced relation to the inner pair of plates.

1,217,935. SPRING-MOTOR-DRIVEN VEHICLE. ANNA E. GEPHART, Mansfield, Ohio. Filed Sept. 6, 1916. Serial No. 118,725. (Cl. 21—90.)



1. In a spring motor vehicle, the combination of an axle to be driven and a chain of gears for rotating the axle, of a casing secured to the body of the vehicle, a pair of shafts mounted in the casing each having a multiplicity of spring-driven drums provided with beveled gears, and means having connections with said chain of gears and to be shifted from engagement with one set of gears in engagement with the opposite set of gears, whereby motion is imparted to said chain of gears.

2. In a spring motor vehicle, the combination of an axle to be driven and a chain of gears for rotatiug the axle, of a casing secured to the body of the vehicle, a pair of shafts mounted in the casing each having a multiplicity of spring-driven drums provided with beveled gears, the bevels of one set extending in a direction opposite to the bevels of the other set, a shaft mounted in the casing, a sleeve rotatable with and slidable on the last-named shaft and having three sets of beveled gears cobperating with first one set and then the other of the first gears to transfer power from the spring-driven drum to the chain of gears.

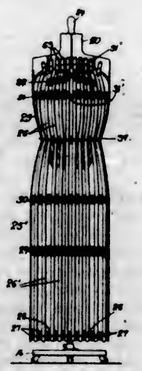
3. In a spring motor vehicle, the combination of an axle to be driven and a chain of gears for rotating the axle, of a casing secured to the body of the vehicle, a pair of shafts mounted in the casing each having a multiplicity of spring-driven drums provided with beveled gears, the bevels of one set extending in a direction opposite to the bevels of the other set, a shaft mounted in the casing, a sleeve rotatable with and slidable on the last-named shaft and having three sets of beveled gears coöperating with first one set and then the other of the first gears to transfer power from the spring-driven drum to the chain of gears, and means for shifting said sleeve.

4. In a spring motor vehicle, the combination of an axle to be driven and a chain of gears for rotating the axle, of a casing secured to the body of the vehicle, a pair of shafts mounted in the casing each having a multiplicity of spring-driven drums provided with beveled gears, the bevels of one set extending in a direction opposite to the bevels of the other set, a shaft mounted in the casing, a sleeve rotatable with and slidable on the last-named shaft and having three sets of beveled gears coöperating with first one set and then the other of the first gears to transfer power from the spring-driven drum to the chain of gears, means for shifting said sleeve, and means for preventing the spring-operated drums from retrograde movement.

5. In a spring motor vehicle, the combination of an axle to be driven and a chain of gears for rotating the axle, of a casing secured to the body of the vehicle, a pair of shafts mounted in the casing each having a multiplicity of spring-driven drums provided with beveled gears, the bevels of one set extending in a direction opposite to the bevels of the other set, a shaft mounted in the casing, a sleeve rotatable with and slidable on the last-named shaft and having three sets of beveled gears coöperating with first one set and then the other of the first gears to transfer power from the spring-driven drum to the chain of gears, means for shifting said sleeve, and a device to coöperate with one of the gears of the chain of gears to hold the last-mentioned shaft against operation.

[Claim 6 not printed in the Gazette.]

1,217,936. DRESS FORM. FRANK B. GRANGER, New York, N. Y. Filed Nov. 18, 1912. Serial No. 731,948. (Cl. 223—18.)



1. In a dress form, a plurality of flat, resilient strips for the skirt portion, a plurality of lazy tongs disposed adjacent the upper ends of said strips for circumferentially adjusting said strips, loops pivoted to said lazy tongs, and a plurality of flat resilient strips for the waist portion respectively passing at their lower ends through said loops.

2. In a dress form a distender comprising horizontally extending arms, brackets pivoted to said arms and forming slide bar looped guides, toothed slide bars supported in said guides, a pawl pivoted on each of said brackets and adapted to engage the teeth on the slide, vertically extending flat resilient strips forming a waist and a skirt portion, lazy tongs extenders secured to said strips and brackets for connecting said lazy tongs to the said toothed slide bars.

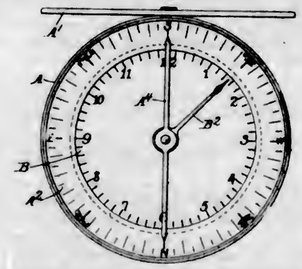
3. In a dress form, a neck and shoulder portion comprising a plurality of relatively movable pieces in combination with a plurality of flat resilient strips for the waist and bust portion pivotally carried by said several relatively movable pieces adjacent the lower edges thereof, said strips being divided into groups and each group being carried by one of said pieces respectively.

4. In a dress form, a neck and shoulder portion comprising a plurality of relatively movable pieces, brackets secured in groups to each of said pieces respectively and flat resilient strips for the bust and waist portion pivotally connected with said brackets.

5. In a dress form, a neck and shoulder portion comprising a plurality of relatively movable pieces, flat resilient strips for the bust and waist portion pivotally carried by said several relatively movable pieces adjacent the lower edge thereof, said strips being divided into groups and each group being carried by one of said pieces respectively and means for separately and independently adjusting the several groups of resilient strips relatively to each other.

[Claims 6 and 7 not printed in the Gazette.]

1,217,937. COMPASS-CLOCK. FRANK R. GREENE, Chicago, Ill. Filed Jan. 22, 1916. Serial No. 73,533. (Cl. 33—62.)



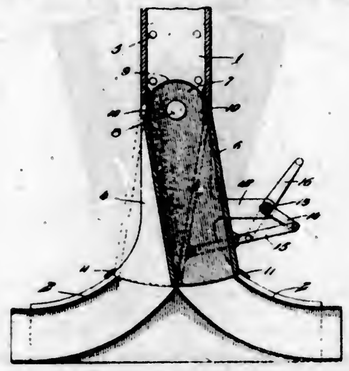
1. Time telling means comprising a compass having a dial and magnetic needle, an hour dial concentric with and mounted for rotation with respect to the compass dial, an hour hand mounted for rotation concentric with the magnetic needle, and means controlled by the operator for separately rotating the hour hand and dial.

2. A compass comprising a cylindrical box, a transparent closure for one side thereof, a compass dial fixed in the bottom of the box, a magnetic needle mounted for rotation above the dial beneath the transparent closure, an hour dial mounted for rotation upon the magnetic dial about the pivot center of the magnetic needle, and means extending outwardly through the wall of the box for manipulating the hour dial, an hour hand mounted for rotation upon the transparent closure, and means projecting through the closure whereby the operator may manipulate the hour hand.

3. A compass comprising a cylindrical box, a transparent closure for one side thereof, a compass dial fixed in the bottom of the box, a magnetic needle mounted for rotation above the dial beneath the transparent closure, an hour dial mounted for rotation upon the magnetic dial about the pivot center of the magnetic needle, and means extending outwardly through the wall of the box for manipulating the hour dial, an hour hand mounted for rotation upon the transparent closure, and means projecting through the closure whereby the operator may manipulate the hour hand, and a cover hinged upon the housing.

4. The combination with a fixed compass dial and magnetic needle of a rotatably mounted hour dial superimposed upon the compass dial, an hour hand mounted for rotation concentric with the hour dial, and means for manipulating both the hour hand and then the hour dial in coördination with the compass needle and compass dial to tell time.

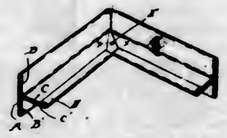
1,217,938. VALVE. BENGAMEN R. GUICE, Grapeland, Tex. Filed Oct. 7, 1916. Serial No. 124,840. (Cl. 137—26.)



1. A structure of the character described embodying a conduit, a plurality of branch conduits, spaced side plates between which the branch conduits are secured, said side plates having extensions overlapping and secured to the first mentioned conduit, a valve between said extensions, opposite sides of the valve having rounded portions at one end pivoted to said extensions adjacent to the first mentioned conduit, opposite sides of the first mentioned conduit having rounded recesses snugly receiving said portions, the free end of the valve being registrable with the branch conduits, and means for closing the slots between the other sides of the valve and first mentioned conduit.

2. A structure of the character described embodying a conduit, a plurality of branch conduits, spaced side plates between which the branch conduits are secured, said side plates having extensions overlapping and secured to the first mentioned conduit, a valve between said extensions, opposite sides of the valve having rounded portions at one end pivoted to said extensions adjacent to the first mentioned conduit, opposite sides of the first mentioned conduit having rounded recesses for snugly receiving said portions, the free end of the valve being registrable with the branch conduits, cross strips carried by said plates for limiting the movement of the valve, and means for swinging said valve embodying a lever and a link connecting the lever and valve.

1,217,939. STOVE-FRAME. EVAN HARTER, Detroit, Mich., assignor to Detroit Stove Works, Detroit, Mich., a Corporation of Michigan. Filed June 10, 1916. Serial No. 102,844. (Cl. 126—305.)



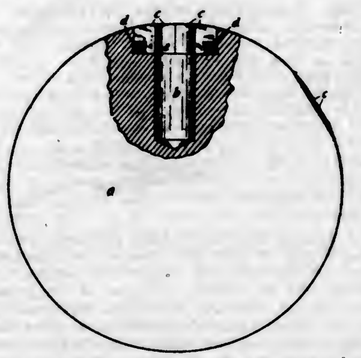
1. In a stove, a supporting frame comprising a bar of structural shape, formed of folded plies of sheet metal, the laterally extending portion of said bar being cut at the corners and the plies thereof overlapped.

2. In a stove, a supporting frame comprising a T-bar formed of folded plies of sheet-metal, the head portion of the T extending in a vertical plane and the stem portion extending laterally, said stem portion being cut at the corners of the frame and having the plies thereof overlapped.

3. In a stove, a supporting frame comprising a T-bar formed of folded plies of sheet-metal, the head portion of the T being arranged in a vertical plane and the stem portion extending laterally, said stem portion being cut to form a corner, with the plies thereof overlapped, and securing means for said overlapping plies.

4. In a stove, a supporting frame comprising a T-bar formed of folded plies of sheet-metal, the head portion of the T being arranged in a vertical plane and being formed from a center of the blank which is returnbent at opposite edges thereof, and the stem portion of the T extending laterally and formed by parallel portions of the blank, seamed together at their outer edges, said stem portion being cut to permit of folding the head to form a corner, and the plies of the web being interengaged to form an overlap, and means for securing said plies to each other.

1,217,940. BUSHING FOR BOWLING-BALLS. JAMES H. HILL, Portland, Oreg., assignor of one-fourth to Brice Wilson and one-fourth to John A. Stuart, Portland, Oreg. Filed June 30, 1916. Serial No. 106,988. (Cl. 46—4.)



1. The combination with a bowling ball having a counter-bored finger-hole, of a bushing for said hole, said bushing comprising a plurality of complementary segmental sections, and means for clamping said sections together.

2. The combination with a bowling ball having a counter-bored finger-hole, of a bushing for said hole, said bushing comprising a plurality of complementary segmental sections, and a clamping ring for holding said sections together.

3. The combination with a bowling ball having a counter-bored finger-hole, of a bushing for said hole, said bushing comprising a plurality of complementary segmental sections of laminated material, and means for clamping said sections together.

4. The combination with a bowling ball having a counter-bored finger-hole, of a bushing for said hole, said bushing comprising a plurality of complementary segmental sections of laminated material, and a clamping ring for holding said sections together.

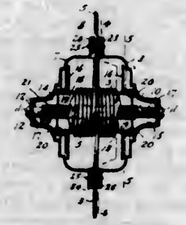
5. The combination with a bowling ball having a counter-bored finger-hole, of a bushing for said hole, said bushing comprising a plurality of complementary segmental sections of laminated material, the laminations being arranged perpendicularly to the base of the bushing, and means for clamping said sections together.

[Claim 6 not printed in the Gazette.]

1,217,941. SUSPENSION DEVICE FOR BILLIARD-CHALK. FRANCIS C. HOBBS, New York, N. Y., assignor to Brunswick-Balke-Collender Company, a Corporation of New York. Filed May 1, 1913. Serial No. 764,789. (Cl. 242—109.)

A hanger for billiard chalk having in combination a cord, a chalk block holder attached thereto, a spring actuated drum on which the cord is wound, a cord secured

to a support and wound on the drum and supporting the same, a stationary spindle for the drum, grooves in the drum, side plates provided with cord holding flanges and



having projections fitting in the grooves of the drum, said side plates being extended outward to take bearing on the spindle, and a two-part casing inclosing said plates and the drum.

1,217,942. HEADLIGHT-OPERATING SYSTEM. HARRY F. HOFFMAN, Allentown, Pa. Original application filed Feb. 15, 1916, Serial No. 78,504. Divided and this application filed May 6, 1916. Serial No. 95,855. (Cl. 240—61.)



1. A dirigible headlight system for motor vehicles including a pair of headlights adapted to be mounted for limited turning movement about their vertical axes at either side of the vehicle, a source of compressed air, pipes leading from points adjacent the lights and each in double and independent communication with the source of air supply, hand operated valves controlling one communication between the air supply and the pipes, foot controlled valves controlling the other communication between the source of air supply and the pipes, pistons slidably mounted in the pipes, and operative connections between the pistons and lights.

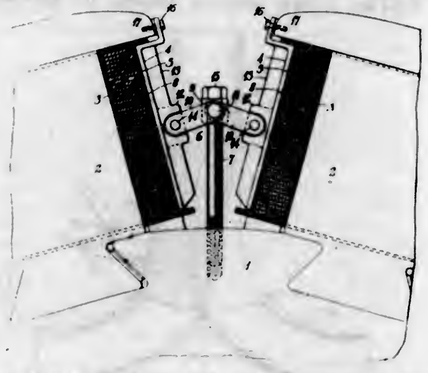
2. A dirigible headlight for vehicles including a headlight mounted for turning movement, a source of compressed fluid supply, a pipe disposed with one end adjacent the headlight, a piston mounted in such end of the pipe and operatively connected to the headlight, a hand operated valve, a foot operated valve, pipes leading one from each of the valves to the first mentioned pipe, a pipe leading from the source of compressed fluid supply to one of the valves, and a branch pipe leading from the last named pipe to the other valve.

1,217,943. COIL-SUPPORT. OLE M. HOLST, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 28, 1912. Serial No. 739,115. (Cl. 171—252.)

1. In a dynamo-electric machine, the combination with a rotatable member having a plurality of polar projections, field coils severally disposed thereon, and bracing plates severally engaging said field coils, of a plurality of members pivotally connected to said bracing plates, and operative means associated with said members for securing said field coils in position.

2. In a dynamo-electric machine, the combination with a rotatable member having a plurality of polar projections, field coils severally disposed thereon, and bracing plates severally engaging said field coils, of a plurality of members pivotally connected to said bracing plates, and radially operative means associated with said members to effect lateral movement of said bracing plates.

3. In a dynamo-electric machine, the combination with a rotatable member having a plurality of polar projections, field coils severally disposed thereon, and bracing plates severally engaging said field coils, of a plurality of linkage members severally engaging said bracing plates, and radially disposed and operative means coöperating with said devices for forcing said bracing plates into intimate engagement with said field coils.



4. In a dynamo-electric machine, the combination with a rotatable member having a plurality of polar projections, field coils severally disposed thereon and bracing plates severally engaging said field coils, of a linkage mechanism embodying a toggle joint device, and radially disposed and operative means associated therewith and coöperating with said bracing plates for supporting said field coils rigidly in position.

5. In a dynamo-electric machine, the combination with a rotatable member having a plurality of polar projections, field coils severally disposed thereon, and bracing plates severally engaging said field coils, of a plurality of toggle joint members, and radially disposed and operative means coöperating with said device and said rotatable member and coöperating with said bracing plates for supporting said field coils rigidly in position.

[Claims 6 to 9 not printed in the Gazette.]

1,217,944. TAG-HOLDER. ROBERT C. HOWELL, Scranton, Pa. Filed Jan. 26, 1916. Serial No. 74,405. (Cl. 40—22.)

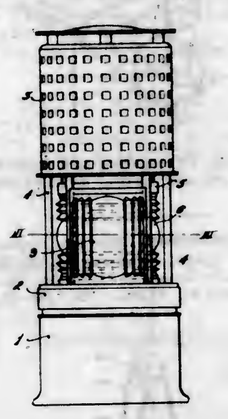


1. A device of the class described including a shank arranged at one end to hold a tag or the like, and including spaced portions formed by bending the shank upon itself, the shank at the said bend being provided with an entering point and one of the said portions being pliable.

2. A device of the class described including a shank arranged at one end to hold a tag or the like and being curved adjacent its other end and bent upon itself to form spaced portions, the bend in the shank being acute and pointed whereby to be readily insertible through a sheet of material.

3. A device of the class described including a shank arranged at one end to hold a tag or the like and being curved adjacent its other end and bent upon itself to form spaced portions, the bend in the shank being acute and pointed whereby to be readily insertible through a sheet of material, one of the said spaced portions having a pliable terminal.

1,217,945. LAMP. HARRY S. HOWER, Pittsburgh, Pa., assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 17, 1914. Serial No. 877,632. (Cl. 240—106.)



1. In combination in a lamp, a source of light, a cylindrical glass surrounding such source and provided with circumferential refracting ridges for bringing the rays of light into horizontal planes, and separate second glass located outside the first glass and in substantial parallelism therewith and provided with vertical refracting ridges, such second glass extending around only a fraction of the circumference of the cylindrical glass.

2. In combination in a lamp, a source of light, a cylindrical lens surrounding such source of light, a pair of spaced vertical rods located outside the first lens, a second lens between said rods, and yielding spring clips embracing said rods and the edges of the second lens and slidable along the rods, whereby it is retained releasably and adjustably in position.

3. In combination in a lamp having upper and lower metallic portions connected by spaced vertical rods, an inner cylindrical lens lying inside the rods, and a second lens supported between the two adjacent rods and adjustable vertically along such rods.

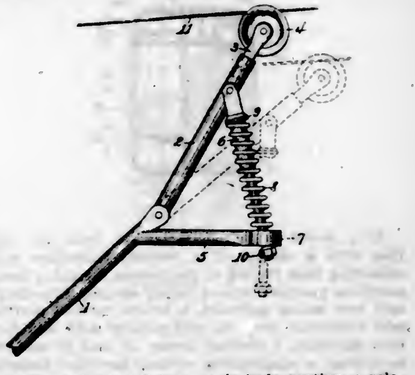
4. In combination in a lamp having upper and lower metallic portions connected by spaced vertical rods, an inner cylindrical lens lying inside the rods, and a second lens lying between a pair of adjacent rods and mounted for sliding adjustment therealong.

5. In combination in a lamp having upper and lower metallic portions connected by spaced vertical rods, an inner cylindrical lens lying inside the rods, a second lens lying between a pair of adjacent rods, and holding clips between the vertical edges of the second glass and the pair of rods, the said clips partially embracing the said rods and being of spring material whereby the second lens is releasably and adjustably supported.

[Claim 6 not printed in the Gazette.]

1,217,946. TROLLEY-POLE. CHARLES P. LAMB and JULIAN A. RAMSEY, Washington, Pa. Filed July 15, 1916. Serial No. 109,427. (Cl. 64—68.)

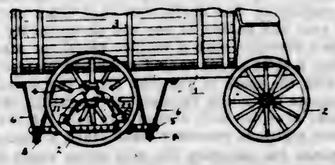
1. A trolley pole comprising a main body portion, a relatively short pole section pivotally connected at one end to the upper end of said body portion, an arm carried by said body portion adjacent to the upper end of the latter and extending rearward therefrom, a spiral spring interposed between said arm and said short pole section whereby the latter is yieldingly supported, and a stem encircled by said spring, said stem being pivotally connected to said pole section and being movable in a substantially vertical direction with respect to said arm.



2. A trolley pole comprising a main body portion, a relatively short pole section pivotally connected at one end to the upper end of said body portion, an arm carried by said body portion adjacent to the upper end of the latter and extending rearward therefrom, a rod-like stem having its upper end pivotally connected to the upper pole section adjacent to the upper end of the latter and having its lower end freely movable through the outer end of said arm, and a spiral spring encircling said stem and yieldingly supporting said upper pole section.

3. A trolley pole comprising a main body portion, a relatively short pole section pivotally connected at one end to the upper end of said body portion, an arm carried by said body portion adjacent to the upper end of the latter and extending rearward therefrom, a rod-like stem having its upper end pivotally connected to the upper pole section adjacent to the upper end of the latter and having its lower end freely movable through the outer end of said arm, an adjusting nut threaded upon the lower end of said stem for limiting the extent of elevation of said upper pole section, and a spiral spring encircling said stem, said spring being disposed to yieldingly support said upper pole section in elevated position with respect to said arm.

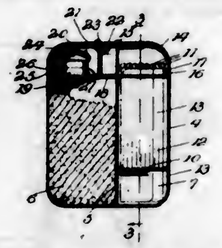
1,217,947. STREET-FLUSHING MACHINE. WILLIAM C. INGRAM, Grand Rapids, Mich. Filed June 10, 1914. Serial No. 844,123. (Cl. 137—63.)



1. In a traveling street-flushing machine, a tank, a horizontal pipe having flushing vents, a tube leading from the tank to the pipe, brackets adapted to support the pipe near its ends relatively to the tank, and springs adapted to press the pipe into its supported position on the brackets.

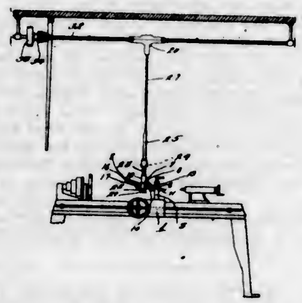
2. In a traveling street-flushing machine, a tank, a horizontal pipe having flushing vents, a tube leading from the tank to the pipe, brackets adapted to support the pipe near its ends relatively to the tank, and springs adapted to press the pipe into its supported position on the brackets, and screws adapted to adjust the tension of the springs.

1,217,948. RECEPTACLE. HORATIO NELSON JACKSON, Burlington, Vt. Filed May 5, 1916. Serial No. 95,651. (Cl. 206—38.)



In a device of the character set forth the combination with a casing, of a vertical transverse partition extending from the top to the bottom thereof, a horizontal partition provided with a filling opening extending from said first named partition, a second vertical partition on said horizontal partition and parallel with said first vertical partition, a pivoted closure on each of said vertical partitions, a longitudinal vertical partition extending at right angles to said first vertical partition and a second horizontal partition connecting said third vertical partition and the wall of the casing.

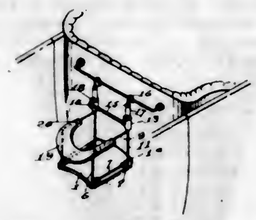
1,217,949. MILLING ATTACHMENT FOR LATHES. HERMAN W. JAY, Ainsworth, Nebr. Filed Feb. 16, 1915. Serial No. 8,464. (Cl. 90—15.)



In combination with a movable lathe carriage, a holder secured adjustably in the tool post of the carriage, said holder comprising two parts, one part being carried by the tool post and having at one end an upwardly extending portion provided with a toothed plate, the other part comprising a split sleeve having a toothed plate to interengage with the teeth of the first plate, the second plate having means extending through the upwardly extending portion and provided with elements to hold the two plates in adjusted positions relative to each other, a casing in the sleeve, means for clamping the split sleeve about the casing, a shaft revoluble in the casing and having a cutter at its lower end, and a driving mechanism having universal, vertical and transversely movable connections with the other end of the shaft.

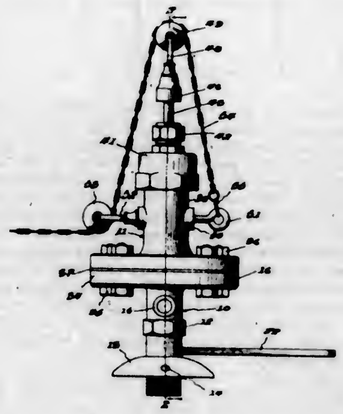
1,217,950. FOLDABLE HANGING SEAT. GEORGE C. JOHNSTON, Cuba, Ill. Filed Nov. 10, 1915. Serial No. 60,710. (Cl. 155—26.)

A foldable hanging chair comprising a seat having a concaved front edge and a convexed rear edge, a pair of sides frames mounted on the seat, said frames having a vertically extending member and a short upturned member abutting against the vertical member, a fixed coupling inclosing the short member and having an aperture through which the vertical member extends, a strap loop projecting from the coupling, a tray having inwardly projecting arms extending over the top portion of the side frames, a plate secured lengthwise the arms and having a



hook-shaped flange for engaging said frames, and means connected with the said vertical members for suspending the chair.

1,217,951. LUBRICATOR. EDWARD ALBERT JONES and JOHN ELMER JONES, Scranton, Pa., assignors to Engineers Specialty Company, Scranton, Pa. Filed Apr. 27, 1916. Serial No. 93,941. (Cl. 184—38.)



1. A lubricator including a tubular body member formed with a duct for the lubricant, a housing formed at the upper end of the body member, a cutting device mounted for oscillation within the housing and including radial cutting edges, means for holding a stick of graphite against the cutting device and in alinement with the tubular body member, and means for oscillating the cutting device.

2. A lubricator including a tubular body member forming a duct for the lubricant, a housing formed at the upper end of the body member, a cutting member including a disk-shaped body cut-away to provide a hub, rim and radial connecting blades between the hub and rim, means for holding a stick of graphite in engagement with the upper face of the cutting member, and means for oscillating the cutting member.

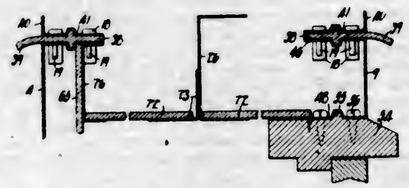
3. A lubricator including a body providing alined graphite holding and graphite feeding passages, a cutting member interposed between the passages, and adjustable means controllable from a distance for holding a stick of graphite in engagement with the cutting member.

4. A lubricator including a body providing alined graphite holding and graphite feeding passages, a cutting member interposed between the passages, and adjustable means for holding a stick of graphite in engagement with the cutting member, said means including a follower adapted to engage the graphite and projecting beyond the lubricator body, and a flexible element operatively engaging the follower whereby downward pressure may be exerted against the follower.

5. A lubricator including a body providing alined graphite holding and graphite feeding passages, a cutting member interposed between the passages, and adjustable means for holding a stick of graphite in engagement with the cutting member, said means including a follower adapted to engage the graphite and projecting beyond the lubricator body, a pulley carried by the free end of the follower, and a flexible element fixed at one end and passed over the pulley.

[Claim 6 not printed in the Gazette.]

1,217,952. CEILING. THOMAS H. KANE, Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich., a Corporation of Michigan. Original application filed Dec. 30, 1915, Serial No. 69,330. Divided and this application filed Aug. 28, 1916. Serial No. 117,225. (Cl. 189—2.)



1. A building comprising a plurality of roof trusses having sheet metal lower chords arranged in substantially the same plane, said chords being of channel cross section, sheet metal plates welded to the lower portions of the chord and projecting therefrom on the sides opposite the flanges of the channels, and ceiling plates extending across between the trusses and resting directly on the plates and the lower flanges of the chords.

2. A building comprising a plurality of roof trusses having sheet metal lower chords arranged in substantially the same plane, said chords each including a vertical web and a horizontal flange along the lower edge of the web, sheet metal plates welded to the flange and projecting beyond the webs, and ceiling plates extending across between the trusses and resting directly on the plates and flanges.

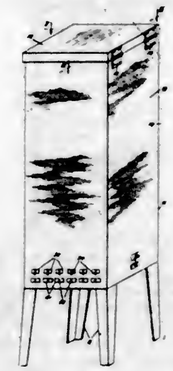
3. A building comprising a roof truss and an end, said truss including a lower chord having a horizontal flange, said end including a plurality of sheet metal panels, a door frame of less height than the panels, a horizontal stiffening bar extending across the upper edges of the panels and above the door frame, a sheet metal filler detachably secured to the bar and to the door frame, and a ceiling plate extending across between the flange of the truss and the door frame.

4. A building comprising a roof truss and an end, said truss including a lower chord having a horizontal flange, said end including a plurality of sheet metal panels, having their upper ends extending above the level of the flange on the lower chord, a horizontal stiffening bar extending across the upper edges of the panels, a sheet metal hanger plate secured to the bar, said plate having a flange substantially in the plane of the flange of the truss chord, and a ceiling plate extending across between the flanges and resting thereon.

5. A building comprising a plurality of roof trusses having sheet metal lower chords arranged in substantially the same plane, said chords including vertical webs and horizontal flanges, sheet metal plates welded to the lower portions of the chords and projecting therefrom on the sides opposite to the flanges, and ceiling plates extending across between the trusses and supported on the plates and flanges.

[Claims 6 to 9 not printed in the Gazette.]

1,217,953. BUTTER-DISPENSING APPARATUS. NICKLAUS KAVGAS, New York, N. Y., assignor, by direct and mesne assignments, to Products Dispensing Company, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 18, 1916. Serial No. 85,153. (Cl. 31—65.)



1. In a butter dispensing apparatus, a chamber, a plurality of containers in the chamber, each having an inlet and an outlet for reception and discharge of the butter, and a cutter, on the chamber, operable for slicing the butter when discharged from the containers.

2. In a butter dispensing apparatus, a chamber, a plurality of containers in the chamber, each having an inlet and an outlet for reception and discharge of the butter, and a plurality of cutters on the chamber, each separately operable for slicing the butter when discharged from each of the containers.

3. In a butter dispensing apparatus, a chamber, a container in the chamber, having an inlet and an outlet for reception and discharge of the butter, a cutter on the chamber, operable for slicing the butter when discharged from the container, and a regulator on the chamber, operable in unison with the cutter whereby a portion of butter of a predetermined size may be sliced with each operation of the cutter.

4. In a butter dispensing apparatus, a chamber, a plurality of containers in the chamber, each having an inlet and an outlet for reception and discharge of the butter, a plurality of cutters on the chamber, each separably operable for slicing the butter when discharged from each of the containers, and a plurality of regulators on the chamber, each operable in unison with each of the cutters, whereby a portion of butter of a predetermined size may be sliced with each operation of one of the cutters.

5. In a butter dispensing apparatus, a chamber, a plurality of containers in the chamber, each having an inlet and an outlet for reception and discharge of the butter, and a plurality of spring actuated cutters on the chamber, each manually operable for slicing the butter when discharged from each of the containers.

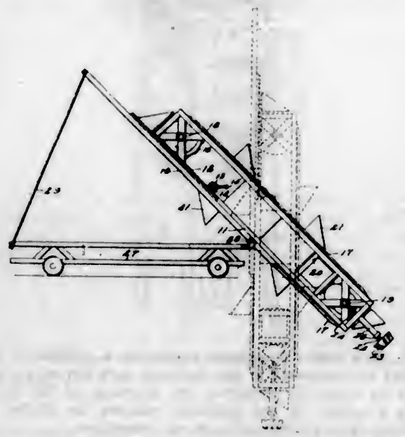
[Claims 6 to 11 not printed in the Gazette.]

1,217,954. SHOVELING OR DIGGING DEVICE. WILLIAM J. KEATING, Escanaba, Mich. Filed May 17, 1915. Serial No. 28,593. (Cl. 37—24.)

1. A shoveler comprising a support; a base pivotally mounted on the support; a frame slidable longitudinally on the base, manually operated means for controlling the slidable movement of the frame on the base; a plurality of shovelers carried by the frame for engagement with the material to be shoveled; cutters on the frame and a motor on the frame having pivotal and longitudinal movement therewith and having connection with the shovelers to continuously operate the same.

2. A shoveler or digging device comprising a base; a rack on the base; a frame slidable longitudinally of the

base; a plurality of shovels carried on the frame; means on the frame for continuously operating said shovels; a pinion carried by the frame engaging the rack; a handle connected to the pinion for turning the same to yieldingly advance the frame against the material being shoveled during the operation of said shovels and cutters supported on the frame for loosening the material for the shovels.



3. A shoveling or digging device comprising a base, means for adjustably supporting the base at various angles with respect to the material to be dug, a frame adjustable longitudinally on the base, an endless belt carried upon the frame, spaced apart buckets on the belt adapted to dig into the material, cutters supported on the frame for loosening the material for the shovels, a motor on the frame having pivotal and longitudinal movement therewith and being connected to said endless belt for actuating the same, manually controlled means between the frame and base for advancing and retracting the frame with the cutters and shovels to and from the material being operated upon and during the operation of said shovels and cutters.

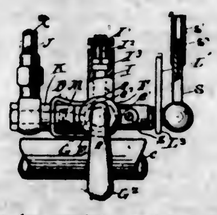
4. A shoveling or digging device comprising a base, a frame on the base, a plurality of shovels mounted on the frame for engaging and picking up the material, operating means for the shovels, a pair of supports in direct line with the frame and fastened thereto, cutters mounted on the forward end of the frame immediately in front of the shovels adapted to loosen the material to be picked up by the shovels, and means for revolving said cutters in opposite directions.

5. A shoveling or digging device comprising a base, a frame on the base, an endless carrier mounted on the frame, a plurality of buckets mounted on the carrier and adapted to project beyond one end of the frame for digging into and picking up the material to be dug, a pair of supports extending beyond and immediately in front of the frame, a pair of cutters carried by the support immediately in advance of the projecting buckets, and means for operating the cutters simultaneously with the buckets.

[Claim 6 not printed in the Gazette.]

1,217,955. AUTOMATIC VALVE. WALTER J. KENNEDY, Cleveland, Ohio, assignor to The Fuel Economizer Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed July 30, 1913, Serial No. 782,112. Divided and this application filed Jan. 14, 1914. Serial No. 812,009. (Cl. 137—7.)

1. In a fuel economising device for a stove burner, a valve casing having a main passage for gas, a tubular main valve rotatable within the casing and an auxiliary valve rotatable within the tubular valve, said main and auxiliary valve having openings registering with the main passage in the casing, said casing provided with a separate reduced outlet passage, said main and auxiliary valves provided with passages adapted to register with each other and with said separate reduced outlet passage in the casing when the auxiliary valve is turned to close said main passage, and a device for operating the auxiliary valve independently of the main valve, said device engaging points upon said main valve.



2. In a valve for supplying gas to a burner and to a separate pilot tube, in combination with a casing having a main passage leading therethrough and also having a separate reduced outlet passage through its wall, a main tubular valve rotatable in said casing, an auxiliary valve rotatable in said main valve, said valves having passages registering with each other and with said main passage in said casing when open, and said valves having reduced passages communicating with each other and with said reduced passage through the wall when said main passage is closed, said reduced passages in the valves communicating also with the main passage through said auxiliary valve.

3. In a valve for controlling the supply of gas to a burner and pilot tube, a casing provided with main inlet and outlet passages for gas and with a reduced outlet passage for gas, a main valve rotatable in said casing, and an auxiliary valve rotatable in said main valve, said valves having main passages communicating with each other and with said main passage in said casing when said main valve is open, and said main and auxiliary valves having reduced passages therein communicating with said reduced passage in the casing and with the main passages in each valve, said reduced passages being controlled by the movement of the auxiliary valve.

4. The combination with a valve casing, said casing having main inlet and outlet ports, and a separate reduced port, of a main rotary valve therein, said valve having corresponding main and a separate reduced port opening, and an auxiliary valve rotatable within said main rotary valve and provided with a main port opening and with marginal reduced openings, and adapted to control the main and reduced port openings in said main valve, a handle for operating said auxiliary valve, and a lever pivoted in said casing for operating said main valve.

5. In a valve for a gas burner, a casing having main inlet and outlet port openings, and a reduced separate outlet opening, a main valve rotatable in said casing and provided with corresponding main and reduced port openings, an auxiliary valve rotatable within said main valve and provided with a corresponding main opening and with reduced marginal port openings, said auxiliary valve adapted to control said main and reduced openings in said main valve, means whereby said auxiliary valve may be rotated within and secured in predetermined positions in said main valve, and a lever pivoted in said casing for operating said main valve.

1,217,956. POT FOR THE MANUFACTURE OF PLATE-GLASS, AND THE METHOD OF MAKING THE SAME. CHARLES H. KERR, Tarentum, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 8, 1914. Serial No. 837,138. Renewed Nov. 18, 1916. Serial No. 132,204. (Cl. 106—11.)

1. The process of making refractory walls for contact with molten glass which consists in mixing uniformly through ordinary pot clay a quantity of finely divided silica equal to from 8 to 30% of the total mixture and forming such mixture into walls of the desired configuration.

2. The process of making refractory walls for contact with molten glass which consists in mixing uniformly through ordinary pot clay a quantity of finely divided silica equal to from 8 to 30% of the total mixture and forming such mixture into walls of the desired configuration, the silica being of such fineness that the major portion of it will consist of grains less than .05 of an inch in diameter.

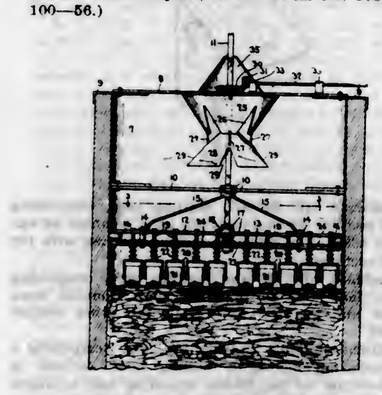
3. The process of making receptacles for use in the manufacture of glass which consists in mixing uniformly through ordinary pot clay a quantity of finely divided silica equal to from 8 to 30% of the total mixture, and forming such mixture into receptacles.

4. The process of making receptacles for use in the manufacture of glass which consists in mixing uniformly through ordinary pot clay a quantity of fine grained substantially pure silica sand equal to from 8 to 30% of the total mixture, and forming such mixture into receptacles.

5. The process of making receptacles for use in the manufacture of glass which consists in mixing uniformly through ordinary pot clay a quantity of fine grained substantially pure silica sand equal to from 8 to 30% of the total mixture, and forming such mixture into pots, the sand being of such fineness that the major portion of the grains will be less than .05 inch in diameter.

[Claims 6 to 8 not printed in the Gazette.]

1,217,957. SILO-PACKER. HIRAM S. KEYS, Edgecomb, Wash. Filed July 12, 1916. Serial No. 108,939. (Cl. 100—56.)



1. In silo packing apparatus, the combination with a rotatable carrier, of means for rotating the same, and sets of spaced packer rollers journaled on the carrier, the rollers of one set operating in the spaces between the tracks of the rollers of the other set.

2. In silo packing apparatus, the combination with a vertically movable and rotatable shaft, of radially disposed carrier arms movable with the shaft, and sets of spaced packer rollers journaled on the arms, the tracks of the rollers of one set including the spaces between the tracks of the rollers of the other set.

3. In a silo packing apparatus, the combination with a rotatable carrier, of packing rollers journaled on the carrier and capable of independent vertical movement.

4. In silo packing apparatus, the combination with a rotatable carrier, of packing rollers journaled on the carrier and capable of independent vertical movement, and means for yieldingly urging the rollers downwardly.

5. In silo packing apparatus, the combination with a rotatable carrier, of packing rollers, upstanding pintles for the rollers journaled on the carrier, and springs for yieldingly urging the rollers downwardly.

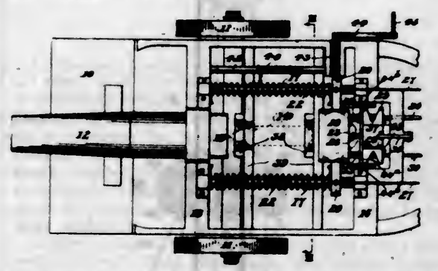
[Claims 6 to 12 not printed in the Gazette.]

1,217,958. WATER SYSTEM. GUSTAV KLAHER, Chicago, Ill. Original application filed Aug. 16, 1913, Serial No. 785,152. Divided and this application filed Apr. 29, 1915. Serial No. 24,781. (Cl. 103—89.)



In a system for supplying buildings with water, the combination, with a street main, of a pump, said pump being connected to said street main, said pump having a discharge pipe leading into said building, the upper end of said discharge pipe being capped, there being in said discharge pipe fixtures from which water can be drawn therefrom, a branch pipe leading from said discharge pipe to the other end of said pump cylinder, a relief valve located in said branch pipe, said relief valve being adjustable for hydrostatic pressure, whereby water forced by said pump into said discharge pipe when the latter is already under its limit of hydrostatic pressure, will be returned to the pump under a pressure equal to that in the discharge pipe.

1,217,959. BREECH-LOADING ORDNANCE. FRANCISZEK KLAPUT, Woodlawn, Pa. Filed June 15, 1916. Serial No. 103,894. (Cl. 89—17.)



1. A piece of ordnance comprising a carriage, a cannon mounted thereon, a shiftable breech block resiliently attached to the said carriage in normal contact with the breech portion of the cannon, a shiftable firing block resiliently connected to the said breech block and releasable retaining means for the firing block when in its set position.

2. A piece of ordnance comprising a carriage, a cannon mounted thereon and having a rearwardly arranged breech portion, guide rods upon the said carriage, a breech block slidably arranged upon said guide rods, a firing pin centrally positioned through the said block in axial alinement with the said cannon, resilient connections between the said breech block and carriage whereby the said block is normally maintained in resilient contact with the said breech portion, and firing means for the said pin.

3. A piece of ordnance comprising a carriage, a cannon mounted thereon and having a rearwardly arranged breech portion, guide rods upon the said carriage, a breech block slidably arranged upon said guide rods, a firing pin centrally positioned through the said block in axial alinement with the said cannon, resilient connections between the said breech block and carriage whereby the said block is normally maintained in resilient contact with the said breech portion, rearwardly arranged guide wires carried by the said block slidably positioned through the said car-

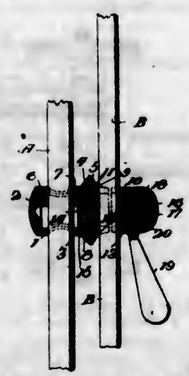
riage, a firing block slidably mounted upon the said wires rearwardly of the breech block and firing pin, retractile springs connecting the said firing block and breech block, and a releasable latch for the said firing block.

4. A piece of ordnance comprising a carriage, a cannon mounted thereon and having a rearwardly arranged breech portion, guide rods upon the said carriage, a breech block slidably arranged upon said guide rods, a firing pin centrally positioned through the said block in axial alinement with the said cannon, resilient connections between the said breech block and carriage whereby the said block is normally maintained in resilient contact with the said breech portion, rearwardly arranged guide wires carried by the said block slidably positioned through the said carriage, a firing block slidably mounted upon the said wires rearwardly of the breech block and firing pin, retractile springs connecting the said firing block and breech block, the said carriage having a rearwardly extending U-shaped central frame, within which the said firing block is arranged when in its retracted set position, an upright lug upon the said firing block, and a spring pressed trigger latch carried by the said frame in engagement with the said lug when the device is set.

5. A piece of ordnance comprising a carriage, a cannon mounted thereon, a retractile breech block shiftably mounted upon the said carriage, a projectile elevating means arranged laterally of the said cannon and coöperative connections between the said breech block and elevating means whereby the breech block is retracted during the operation of the said means.

[Claim 6 not printed in the Gazette.]

1,217,960. FLEXIBLE CLAMP-JOINT. CHARLES P. KLOREK, East Conemaugh, Pa., assignor of two-thirds to Joseph E. Zang, Johnstown, Pa. Filed Oct. 12, 1915. Serial No. 55,491. (Cl. 248—8.)



In a joint of the class described, an outer member perforated for the passage of a supporting element and provided at one end with a flare providing a conical bearing surface, an inner member slidably fitted within the outer member and correspondingly perforated for the passage of said supporting element, a bolt having swivel engagement with the inner member, an annular clamping member through which the said bolt passes, the said clamping member being provided with an exteriorly tapered end provided with a conical bearing surface, the said end of the clamping member being fitted snugly and frictionally within the flare of the said outer member, an annular clamping member coacting with the first mentioned clamping member, and a nut engaging the threaded end of the bolt and arranged when tightened to engage the last mentioned clamping member whereby to force the annular clamping member toward each other and shift the inner clamping member with relation to the outer clamping member and simultaneously to force the tapered end of the first mentioned annular clamping member into the flare of the said outer member.

1,217,961. PROCESS FOR PREPARING A MOLDING-POWDER FROM COAL OR LIGNITE. ALFONS KÖRTING, Berlin-Südende, Germany. Filed May 29, 1914. Serial No. 841,902. Renewed July 31, 1916. Serial No. 112,456. (Cl. 22—217.)

1. A process for preparing a molding powder which is not hygrometric, by means of coal and more especially by means of lignite, consisting in grinding the coal, in drying same, in submitting the resulting powder to high pressure, in order that by the heat developed by such pressure, the bituminous substances contained in the coal become uniformly distributed throughout the mass and in grinding the compressed agglomerated mass thus produced.

2. A process for preparing a molding powder which is not hygrometric, by means of coal and more especially by means of lignite, consisting in grinding the coal, in drying same, in submitting the resulting powder to high pressure and also to heat, in order that the bituminous substances contained in the coal become uniformly distributed throughout the mass and in grinding the compressed agglomerated mass thus produced.

1,217,962. COMBINED BILL-FILE AND MAILING-CARD. CONRAD J. KORTZ, Cleveland, Ohio. Filed May 20, 1916. Serial No. 98,722. (Cl. 129—21.)



1. A combined bill file and mailing card, comprising superposed sections and an impaling hook mounted on one section and adapted to fold into locking relation with the superposed sections.

2. A combined bill file and mailing card, comprising foldable sections and an impaling hook mounted upon one section and adapted to overlap the other section when folded.

3. A combined bill file and mailing card, comprising a foldable mounting having a folding hook secured in clamping relation to the folded mounting and arranged to impale papers when unfolded.

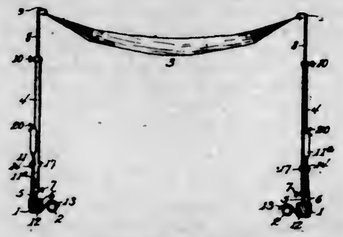
4. A combined bill file and mailing card, comprising a foldable card having a filing hook pivotally mounted thereon and adapted to bear upon the outer surfaces of the card when folded.

5. A combined bill file and mailing card, comprising a folder having a pointed bill filing hook secured to fold thereupon and provided with a pocket to seat the point of the hook when the parts are folded.

[Claims 6 to 9 not printed in the Gazette.]

1,217,963. HAMMOCK-SUPPORT. SELBY A. LAING, Moundsville, W. Va. Filed Feb. 3, 1916. Serial No. 75,965. (Cl. 5—41.)

1. A sling for a child's hammock, comprising a pair of upright supports designed for mounting upon opposite sides of a bed, each support comprising an upright body member, a yoke carried by the lower end of said member and designed to seat upon the side-rail of the bed, a brace mounted upon and vertically adjustable with respect to said member, means for maintaining said brace in adjusted position, and arms carried by said brace having portions for seating in underlying relation to said side-rails and having terminal portions for overlying the side member of a spring frame.



2. A sling for a child's hammock, comprising a pair of upright supports designed for mounting upon opposite sides of a bed, each support comprising an upright body member, means carried by said member for seating upon the side-rail of the bed, and a brace adjustably connected to said member having portions designed to underlie said side-rail and to overlie the side member of a spring frame.

3. A sling for a child's hammock, comprising a pair of upright supports designed for mounting upon opposite sides of a bed, each support comprising an upright body member, a yoke adjustably mounted on said member and adapted to seat upon a side-rail of the bed, and a brace carried by said member, said brace having a substantially vertical member located at each side of said body member, each vertical member being bent inward to form a portion for underlying said side-rail and a terminal portion for overlying the side member of a spring frame.

4. A sling for a child's hammock, comprising a pair of upright supports designed for mounting upon opposite sides of a bed, each support comprising an upright body member, a yoke adjustably mounted on said member and adapted to seat upon a side-rail of the bed, a brace carried by said member, said brace having a substantially vertical member located at each side of said body member, each vertical member being bent inward to form a portion for underlying said side-rail and a terminal portion for overlying the side member of a spring frame, said brace being vertically movable with respect to said body member, and means for holding said brace in adjusted position.

5. A sling for a child's hammock, comprising a pair of upright supports designed for mounting upon opposite sides of a bed, each support comprising an upright tubular member, a yoke for seating upon a side-rail of the bed, said yoke having a stem adjustably received within said tube, and a substantially U-shaped brace adjustably mounted on said tube, the substantially parallel members of said brace being disposed at opposite sides of said tube and having their lower ends bent to form portions for underlying said side-rails and adjacent portions for overlying the side-member of a spring frame.

1,217,964. ELECTRICAL CONTACT DEVICE. JOSEPH FREDERICK LAMB, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn. Filed June 23, 1916. Serial No. 105,386. (Cl. 173—328.)

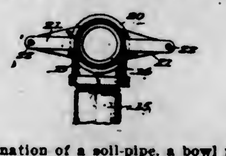


1. A socket for a plug connection formed from a blank of sheet metal, bent into tubular form, comprising in combination a main member in the form of a flat spring suitable for extending along one side of the plug, and being extended longitudinally to provide means for receiving a terminal connection, a plurality of fingers opposed to the said main member, serving as holding members for holding the said main member in contact with the plug, the said fingers extending continuously over the face of the said main member, being bent to form the other two sides of the said socket, being each connected by one end to one edge of the said main member, and the other ends of the said holding members being opposed to the other edge of the said main member and separated therefrom by an open space.

2. A blank for a contact socket made of sheet metal of approximately rectangular form, comprising a continuous strip along one side, and having fingers extending laterally from one edge of the said strip toward the other side, one of the said fingers being at one end and of suitable length to be turned back by a return bend against the said strip to reinforce the same, and the others of the said fingers comprising a set of similar fingers of suitable length to be bent individually transversely and to be positioned by a bend at the junction with the said strip to form with the said strip a contact socket of triangular cross-section.

3. A socket connecting member for a plug connection made of sheet material, comprising a socket portion composed of a base and a plurality of contact fingers connected to the said base, an extension of the said base serving as a terminal portion, the said extension being reinforced by a superimposed layer of material connected by a return bend, the said layer and extension being provided with a threaded hole for a terminal screw, and the material of the said layer and extension forming the border of the said hole being extended axially so as to interlock the said layer and extension and to extend the screw threaded wall below the face of the said extension.

1,217,965. FASTENING MEANS FOR WATER-CLOSETS AND THE LIKE. WILLIAM H. LLOYD, Chicago, Ill. Filed Aug. 23, 1910. Serial No. 578,532. (Cl. 137—94.)



1. The combination of a soil-pipe, a bowl provided with a vertical rear face having a discharge-opening therein, a cylindrical member adapted to have screw-threaded engagement with the soil-pipe and having a flared end adapted to surround the discharge-opening in the bowl, said member being provided with integral arms disposed radially, means intermediate of the arms and the bowl for securing the latter in place, with means adjustably secured about the soil-pipe and said member for effecting a water-tight connection.

2. The combination of a soil-pipe provided with a lateral connection externally threaded, a bowl provided with a vertical rear face having a discharge-opening therein, said discharge-opening being surrounded by a counter-sunk portion, a cylindrical member adapted to screw onto the lateral connection of the soil-pipe and provided with a flared end adapted to extend into the counter-sunk portion of the bowl and to receive fluid-tight forming means in said flared end, said member being provided with integral arms disposed radially, a gasket-compressing member adapted to screw onto the soil-pipe end of said cylindrical member so as to effect a water-tight connection between the cylindrical member and the soil-pipe, with means intermediate of the arms of said member and the bowl for securing the latter in place.

1,217,966. CARTRIDGE-HOLDER. PAUL H. LOGAN, El Paso, Tex., assignor of one-half to Frederic H. Logan, El Paso, Tex. Filed May 25, 1916. Serial No. 99,264. (Cl. 224—23.)

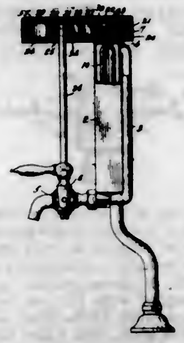
1. A cartridge belt provided with lines of openings extended longitudinally of the belt, the lines of openings being spaced apart transversely of the belt; a flexible element threaded in a single length through the openings of the lines to form eyes which extend transversely of the belt; means for securing the ends of the flexible element to the belt; a strap threaded through the eyes to form cartridge-holding loops; and means for securing the ends of the strap to the belt.

2. A cartridge belt fashioned from a single piece of material folded longitudinally on itself to form inner and outer walls; a flexible element threaded through the outer wall in a continuous length to form transverse eyes, portions of the flexible element lying between the walls, and the inner wall constituting a cover for said portions of the flexible element; and a strap threaded through the eyes and coöperating with the outer wall to form cartridge-holding loops.



3. A cartridge belt fashioned from a single piece of material folded longitudinally upon itself to form inner and outer walls; eyes carried by the outer wall; and a strap threaded through the eyes and coöperating with the outer wall to form cartridge holding loops, the ends of the strap being extended toward each other and lying between the said walls.

1,217,967. WATER-HEATER. ANTONIO LONGORIA, Cleveland, Ohio, assignor to The Sterling Corporation, Cleveland, Ohio, a Corporation of Ohio. Filed July 15, 1915. Serial No. 39,994. (Cl. 219—39.)



1. A self-contained water heater comprising a water supply pipe, a heater casing in communication therewith, a discharge pipe, valve mechanism in the discharge and having two positions of discharge, an electrical heating element within the heater casing having connections leading to the outside, switch mechanism connected to the heating element, and connections between the switch mechanism and the spigot, said switch mechanism in said connections being arranged so that when the spigot is in one discharge position, the circuit will be closed and when in the other, the circuit will be open.

2. A self-contained water heater comprising a supply pipe, a heater casing in communication therewith, an electrical heating element within said casing, a discharge leading from said casing, valve mechanism in said discharge and having two positions of discharge, a switch comprising a housing secured to the heater casing, a pair of contacts connected in the circuit with the heating element and normally out of contact, a switch member having a circuit closing portion, and a stem connected to the valve mechanism and to the switch member, said switch member and contacts being arranged so that the circuit is closed when the discharge valve mechanism is in one discharge position and the circuit is open when the discharge valve is in the other discharge position.

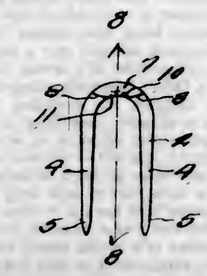
3. A water heater, comprising a heater casing, a supply connected to the bottom thereof, a discharge leading from the top, a valve in the discharge, a hollow sheet metal heating element bent upon itself in U-shape in cross section with the crotch of the U toward the top of the casing, means for supporting the element within the heater casing, tubes extending from the crotch of the U to the outside of the casing, suitable electrical connections leading from the heating element through said tubes to the outside of the heater casing, and switch mechanism in circuit with the heating element.

4. A water heater, comprising an outer casing, a water supply, a discharge member, a discharge valve in the discharge member, a heating element in said casing comprising a flat hollow sheet metal casing bent upon itself to form a U-shape in cross section, resistance wire in said element casing, a tube connected to said element casing and passing out through the heater casing and inclosing the leads for the resistance wire, and switch mechanism supported by the heater casing and in circuit with the resistance wire.

5. A water heater, comprising a hollow casing connected to a source of water supply, a rotary valve at the bottom of said casing and controlling the flow of water therefrom, a shaft rotatable with said valve and extending from the bottom to the top of said casing, electrical heating means in said casing, and switch devices controlling the flow of current through said electrical heating means and operated by said shaft.

[Claim 6 not printed in the Gazette.]

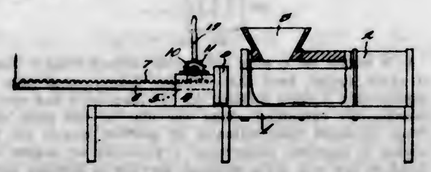
1,217,968. STAPLE. JAMES O. LOTZ and JESSE L. SANDERS, Eunice, La., assignors of one-half to C. J. Sanders, Eunice, La. Filed July 6, 1916. Serial No. 107,836. (Cl. 85—49.)



1. A fence wire anchoring staple constructed from a single piece of metal bent to form an arch and a pair of prongs disposed in parallelism, said arch having a pair of oppositely disposed laterally extending shoulders curved to correspond with the curvature or contour of the extracting claws of a hammer pole, the under face of the arch being rectangular in cross section and having an obliquely disposed recess to receive a fence wire causing a bend or kink in the wire to prevent longitudinal displacement of the wire when once stretched.

2. A fence wire anchoring staple, comprising a pair of prongs and an arch connecting said prongs, the under curvature of the arch having an obliquely disposed recess to cause a bend or kink in the fence wire, to prevent longitudinal displacement of the wire when once stretched.

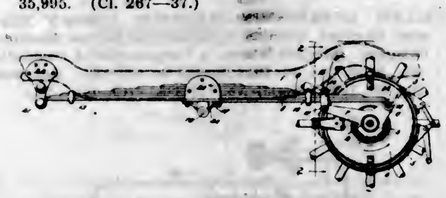
1,217,969. CHEESE-PRESS. GEORGE EDWARD MCCANN, Ridgeway, Wis. Filed Jan. 11, 1916. Serial No. 71,523. (Cl. 100—7.)



In a cheese press, the combination of a frame and a cheese presser cylinder thereon at one end and provided with a hopper, of a combined bearing and abutment block on said frame adjacent the entrance end of said cylinder

and provided with an opening rectangular in cross section and axially alined with the center of said cylinder, a shaft mounted on said block transversely thereof, bearings therefor, a gear keyed on said shaft centrally between its ends, the top of the block having an opening through which the gear operates whereby its teeth extend into the first opening, a plunger bar guided in the first opening and having teeth to be engaged by the teeth of the gear, said first opening acting as means to prevent twisting and oscillatory movement of said bar, one end of the plunger bar having a plunger head operable into said cylinder to compress the cheese therein, said block having a transverse groove at one end, a ratchet keyed on one end of the shaft and extending into said grove, a spring tensioned detent lever pivoted in the groove to engage said ratchet, a lever pivoted on said shaft and provided with means to automatically engage and disengage said ratchet to impart an intermittent motion to the same and said shaft when an intermittent motion is imparted to said lever, to feed the plunger head into the cylinder, and spring means on said shaft put under tension when feeding the head into the cylinder, to impart a reverse movement to said shaft, when the detent lever is disengaged from the ratchet, whereby the head may be returned to its initial position and abut against said block.

1,217,970. VEHICLE-SPRING. MICHAEL M. MCINTYRE, Cleveland, Ohio, assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 24, 1915. Serial No. 35,995. (Cl. 267—37.)



1. The combination, with a vehicle frame and axle, of a brake member rotatably mounted upon the axle and having a pair of longitudinally spaced connecting portions, a spring, means for connecting one of the plates of said spring to one of said connecting portions, and means for connecting the body of the spring to the other connecting portion.

2. The combination, with a vehicle frame and axle, of a brake member rotatably mounted upon the axle and having a pair of longitudinally spaced connecting portions, a spring, means for connecting one of the plates of said spring to one of said connecting portions, and a swinging-link connection between the body portion of the spring and the other connecting portion of said member.

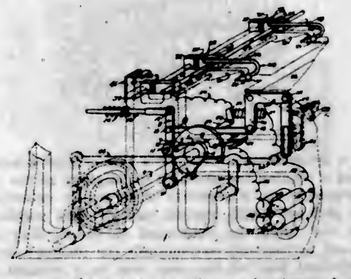
3. The combination, with a vehicle frame and axle, of a brake member rotatably mounted upon the axle and having a pair of longitudinally spaced connecting portions, a spring, means for connecting one end of said spring to one of said connecting portions, and a connection between the body portion of the spring and the other connecting portion of said member.

4. The combination, with a vehicle frame and axle, of a brake member rotatably mounted upon the axle and having a pair of longitudinally spaced connecting portions, a spring, means for connecting one of the plates of said spring to one of said connecting portions, means connecting the body of the spring to the other connecting portion, means pivotally connecting the central portion of the spring to the frame, and means for connecting to the frame the end of the spring which is opposite the axle.

5. The combination, with a vehicle frame and axle, of a brake member rotatably mounted upon the axle and having a pair of longitudinally spaced connecting portions, a spring, means for connecting one of the plates of said spring to one of said connecting portions, means for connecting the body of the spring to the other connecting portion of said member, means pivotally connecting the central portion of the spring to the frame, and means for connecting to the frame the end of the spring which is opposite the axle.

[Claims 6 to 21 not printed in the Gazette.]

1,217,971. AUTOMATIC PRESS-TRIP. JOHN L. MCKINDLEY and SAMUEL B. KINDY, Toronto, Canada. Filed Jan. 21. 1915. Serial No. 3,603. (Cl. 101—36.)



1. In a printing press, a trip mechanism, electrical means for actuating said mechanism including tongue and feeler terminals for closing said circuit when in engagement and opening said circuit when a sheet is fed therebetween, said feelers being independently movable with respect to each other toward and away from said tongues, substantially as described.

2. In a printing press, trip mechanism actuating means including a live rod movable toward and from feed positions, and feelers mounted for independent movement with respect to each other and with respect to said rod and extending across the latter to be shifted thereby, substantially as described.

3. In a printing press, trip mechanism actuating means including a circuit having tongue and feeler terminals for controlling said circuit by a fed sheet, and mounting means for said feelers comprising a drop shaft, drop and feeler blocks on said shaft, said feelers being pivotally mounted in said feeler blocks, and a live rod journaled in said blocks and disposed across said feelers and at one side of the points of pivotal mounting of the latter, substantially as described.

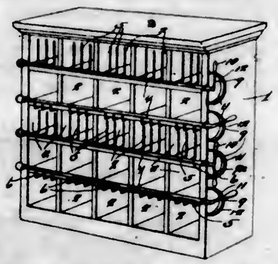
4. In a printing press, trip mechanism actuating means including a circuit having tongue and feeler terminals for controlling said circuit by a fed sheet, and mounting means for said feelers comprising pivotally mounted blocks pivotally connected with said feelers, and a live rod mounted in said blocks and disposed across said feelers and at one side of the points of pivotal connection of the latter with said blocks, substantially as described.

5. In a printing press, trip mechanism including a spring actuated member, a cam loose on said shaft for controlling said member, a detent normally holding said trip mechanism against operation, a ratchet fixed on said shaft, a ratchet pawl on said cam for engagement with said ratchet to drive said cam, a timer contact on said cam, a circuit grounded through the press and including sheet actuated terminals for opening and closing said circuit, a magnet in said circuit for operating said detent to release said mechanism, and a fixed timer contact in said circuit and insulated from the press for engagement with said cam contact to close said circuit and render said sheet controlled terminals operative at feeding periods, substantially as described.

1,217,972. STEEL-MAKING PROCESS. GEORGE G. MCMURTRY, New York, N. Y., assignor to United States Steel Corporation, Hoboken, N. J., a Corporation of New Jersey. Filed Jan. 27, 1915. Serial No. 4,578. (Cl. 75—46.)

In the making of steel, the process which consists in treating it first with a basic slag and then with an acid slag in the same furnace having a lining of zirconia.

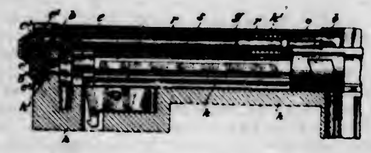
1,217,973. MAIL-SEPARATING DEVICE FOR PIGEON-HOLES. WILLIAM MANN, Bayonne, N. J. Filed May 3, 1916. Serial No. 95,207. (Cl. 211—36.)



1. A subdividing device for a row of pigeon-holes, comprising a rocking rod mounted in bearings on the frame of the pigeon-holes, a plurality of upwardly extending wire arms each of which has an angular bent portion at its lower end integrally connected to the rocking rod and designed to partially extend into the pigeon-hole to hold the vertical part of the wire arm in a vertical position partly within the pigeon-hole, said rocking rod adapted to be rotated whereby said bent portions are designed to extend downwardly adjacent the front edge of the bottom of each pigeon-hole, to cause said arms to extend into the pigeon-hole below and adjacent the under face of the bottom.

2. A subdividing device for a row of pigeon-holes, comprising a rocking rod mounted in bearings on the frame of the pigeon-holes, a plurality of upwardly extending wire arms each of which has an angular bent portion at its lower end integrally connected to the rocking rod and designed to partially extend into the pigeon-hole to hold the vertical part of the wire arm in a vertical position partly within the pigeon-hole, said rocking rod adapted to be rotated whereby said bent portions are designed to extend downwardly adjacent the front edge of the bottom of each pigeon-hole, to cause said arms to extend into the pigeon-hole below and adjacent the under face of the bottom, one end of the rocking rod having a spring lever arm, and a curved plate on one end of the cabinet having teeth to be engaged by the lever arm to hold the rocking rod in different adjusted positions, to hold the wire arms vertically, or outwardly from the pigeon-holes, or under the bottom of the pigeon-holes.

1,217,974. FIREARM. PAUL MAUSER, deceased, Oberndorf-on-the-Neckar, Germany, by Friedrich Eichhorn, administrator, Oberndorf-on-the-Neckar, Germany, assignor to Waffenfabrik Mauser Aktiengesellschaft, Oberndorf-on-the-Neckar, Germany, a Corporation of Germany. Filed Aug. 20, 1915. Serial No. 46,582. (Cl. 42—3.)



1. A fire arm comprising, a frame, a barrel, a breech piece, a closing spring therefor, said frame having a chamber in which said breech piece slides, and an immobile lid over said chamber and separable from the barrel, frame, and breech piece, said lid having means for fixing said closing spring thereto, whereby it may be removed with said lid.

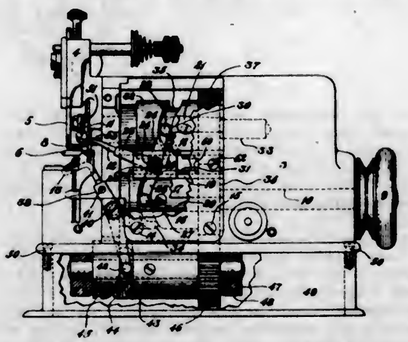
2. A fire arm comprising a frame, a barrel, a breech piece, a closing spring therefor, said frame having a chamber in which said breech piece slides, an immobile lid over said chamber and separable from the barrel, frame, and breech piece, a telescoping rod in said spring, said rod having means for limiting the extension of said spring and means on the cover for fixing said rod thereto.

3. A fire arm comprising a frame, a barrel, a breech piece, a closing spring therefor, said frame having a chamber in which said breech piece slides, and an immobile lid over said chamber and separable from the barrel, frame, and breech piece, said lid having a bolt adapted to fix said closing spring thereto and for fixing said lid to the frame.

4. A fire arm comprising a frame, a barrel, a breech piece, a closing spring therefor, said frame having a chamber in which said breech piece slides, an immobile lid over said chamber, a telescoping rod in said spring, said rod having means for limiting the extension of said spring, and a bolt *c* pivotally mounted on said lid, and having means for engaging said rod and means for locking said lid to the frame.

5. A fire arm comprising a frame, a barrel, a breech piece, a closing spring therefor, said frame having a chamber in which said breech piece slides, an immobile lid over said chamber, a telescoping rod in said spring, said rod having means for limiting the extension of said spring, and a bolt *c* pivotally mounted on said lid, and having means for engaging said rod and means for locking said lid to the frame, said means for engaging said rod being inoperative when said means for locking the lid to the frame are operative, and being operative to engage said rod when the means for locking the lid are in unlocking position.

1,217,975. OVERSEAMING-MACHINE. JOSEPH M. MERROW, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 26, 1914, Serial No. 879,188. Renewed Aug. 28, 1916. Serial No. 117,385. (Cl. 112—24.)



1. In an overseaming machine, in combination, a reciprocatory needle, a bodily reciprocatory looper, a pair of cam cylinders provided with means for actuating said looper, a second looper, and a third cam cylinder provided with an irregular groove for actuating said second looper.

2. In an overseaming machine, in combination, a reciprocatory needle, a looper coöperative with the needle, a second looper coöperative with the needle and with the first mentioned looper, means including two cam cylinders for actuating one of said loopers and means including a third cam cylinder provided with an irregular groove for actuating the other looper.

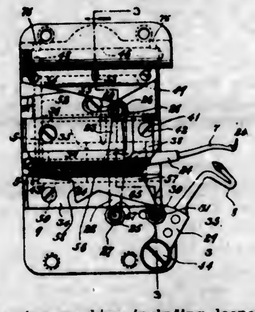
3. In an overseaming machine, in combination, a reciprocatory needle, a looper coöperative with the needle, a second looper coöperative with the needle and with the first mentioned looper, a cap supported by and removable from the machine frame, supporting means for one of said loopers mounted on said cap, a pair of cam cylinders provided with means for actuating the cap supported looper, and a third cam cylinder provided with an irregular groove for actuating the other looper.

4. In an overseaming machine, including a reciprocatory needle and in combination therewith, a looper carrier pivotally and slidably mounted, a pair of cam cylinders provided with means for actuating said looper carrier, a second looper carrier pivoted intermediate its ends, and a third cam cylinder provided with an irregular groove for actuating said second looper carrier.

5. In an overseaming machine, including a reciprocatory needle and in combination therewith, a pair of loopers each movable to cross the path of the other and to cross the path of the needle and three cam cylinders geared to rotate in unison, two of said cam cylinders being provided with means for actuating one of said loopers and the third cam cylinder being provided with an irregular groove to actuate the other looper.

[Claims 6 to 18 not printed in the Gazette.]

1,217,976 LUBRICATING MEANS FOR SEWING-MACHINES. JOSEPH M. MERROW, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed May 19, 1915. Serial No. 29,231. (Cl. 112—29.)



1. In a sewing machine including looper mechanism, and in combination therewith a lubricator for said looper mechanism comprising a lubricant reservoir located above said looper mechanism, fins having depending points adjacent respectively to paths traversed by certain parts of the looper mechanism and ducts leading from said lubricant reservoir to said fins.

2. In a sewing machine including looper mechanism, and in combination a support for said looper mechanism comprising a frame cap having a lubricant reservoir, fins secured to said frame cap having depending points adjacent respectively to paths traversed by certain parts of the looper mechanism and ducts leading from said lubricant reservoir to said fins.

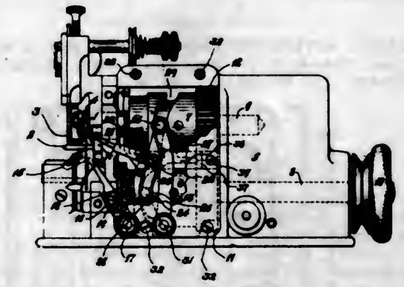
3. In a sewing machine the combination with a frame cap having a lubricant reservoir, of looper carriers movably mounted on said frame cap, devices on said carriers whereby they may be actuated, fins secured to the frame cap and having depending points adjacent respectively to paths traversed by said devices on the looper carriers and ducts leading from the lubricant reservoir to said fins.

4. In a sewing machine in combination, a looper, a support, a carrier for the looper movable on said support, means including a roller supported by the carrier whereby the latter may be actuated to move in a predetermined path, means extending adjacent to said path for conveying lubricant to a point therein, and means on the carrier for directing the lubricant from said point into communication with bearing surfaces of the roller.

5. In a sewing machine in combination, a looper, a support, a carrier for the looper movable on said support, means including a projection on the carrier whereby the latter may be actuated, a lubricant reservoir, and a conveyer or fin connected to said reservoir by a duct and depending to a point approached by the projection on the carrier whereby said projection will be supplied with lubricant.

[Claims 6 to 11 not printed in the Gazette.]

1,217,977. OVERSEAMING-MACHINE. JOSEPH M. MERROW, Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a Corporation of Connecticut. Filed June 21, 1915. Serial No. 35,389. (Cl. 112—24.)



1. In a sewing machine, looper mechanism including in combination, an oscillatory arm, a looper carried by and movable with respect to said arm, and a pair of cam cylinders rotating in unison and having correlated cam grooves adapted to move said arm and looper in substantially parallel planes.

2. In a sewing machine, looper mechanism including in combination, a frame cap supported by and removable from the machine frame, a pair of cams adjacent to said frame cap, an arm pivoted to the frame cap, a looper movably carried by the arm and operable by the pair of cams; and supporting means attached to the frame cap and having opposed surfaces in contact with said looper.

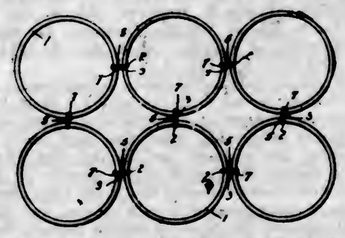
3. In a sewing machine, looper mechanism including in combination, a pair of cam cylinders, a pivotally mounted looper, a pivotally mounted arm, and a second looper movably carried by said arm, the first mentioned looper being operable by a cam groove in one of the cam cylinders and the other looper being operable by correlated cam grooves in the cam cylinders.

4. In a sewing machine, looper mechanism including in combination, a frame cap supported by and removable from the machine frame, a pair of cams adjacent to said frame cap, an arm pivoted to the frame cap, and a looper movably carried by the arm and operable by the pair of cams.

5. In a sewing machine, looper mechanism including in combination, a frame cap, supported by and removable from the machine frame, a pair of cams adjacent to said frame cap, an arm pivoted to the frame cap, a looper movably carried by the arm and operable by the pair of cams, and means for securing the frame cap to the machine frame, said means being disposed on opposite sides of the looper mechanism supported by said cap.

[Claim 6 not printed in the Gazette.]

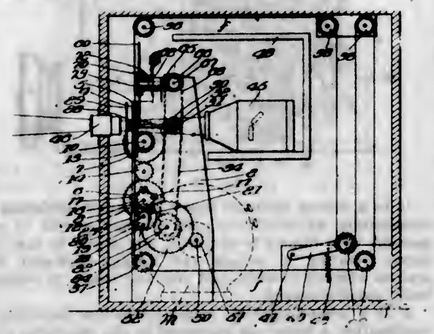
1,217,978. FISH-SEINE FABRIC. FERNANDO G. MILLER, Fort Myers, Fla. Filed July 24, 1913. Serial No. 781,017. (Cl. 245—9.)



A net comprising a plurality of circular bands or rings, a plurality of elongated oval connecting links, the body of the rings being movable in the links to increase the

flexibility of the net when assembled, each of said rings being movable independently of the net of the adjacent rings through the oval connecting links, and the ends of the oval connecting links being rigidly secured to the body thereof to prevent accidental displacement of the rings therefrom.

1,217,979. ADVERTISING DEVICE. JOHN ROSCOE MILLWARD, Newark, N. J. Filed Apr. 8, 1914. Serial No. 830,412. (Cl. 88—24.)



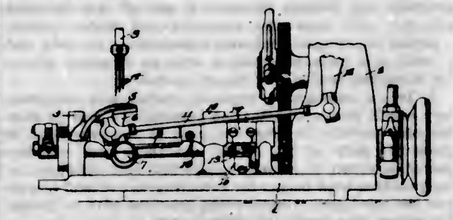
1. A device of the character described having in combination, a cinematograph projecting machine, a continuous film carried thereby, a series of photographs thereon of a subject having natural substantially recurrent movement and said photographs being arranged to agree in continuous progression, means for continuously operating the projecting machine to produce a continued realistic display and advertising matter associated with the display so produced.

2. An advertising device of the character described having in combination, a cinematograph projecting machine, a continuous film carried thereby, a series of photographs thereon of a subject having natural substantially recurrent movement and said photographs being arranged to agree in continuous progression, means for continuously operating the projecting machine to produce a continued realistic display and advertising matter arranged simultaneously to be displayed by the rays from the projecting machine.

3. An advertising device of the character described having in combination, a cinematograph projecting machine, a continuous film carried thereby, a series of photographs thereon of a subject having natural substantially recurrent movement and said photographs being arranged to agree in continuous progression, means for continuously operating the projecting machine, an advertising plate extended into the field of the projecting rays for displaying advertising thereon and said film being provided with blank portions positioned to coincide with the advertising matter when in projecting position.

1,217,980. LOOPER MECHANISM FOR SEWING-MACHINES. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 9, 1914. Serial No. 823,402. (Cl. 112—5.)

1. A sewing machine including in combination, a shaft, a sleeve fixed to said shaft and having a flange projecting outwardly therefrom, an eccentric surrounding said sleeve and having an opening larger than said sleeve, a flange carried by said eccentric, an opening conjointly formed in said flanges, the section of the opening in the flange on the sleeve being threaded and in the other flange being smooth, a screw located in said opening and having its thread engaging the threaded section thereof, the smooth section of the opening terminating in a recess extending transversely thereof, said screw having a head thereon engaging said recess whereby said eccentric will be shifted radially relative to the axis of the shaft upon manipulation of the screw.



2. A looper mechanism for sewing machines, comprising a looper, means for oscillating the looper into and out of the needle thread loop, a shaft, and means for moving the looper laterally including a sleeve fixed to said shaft, said sleeve having a flange projecting outwardly therefrom, an eccentric, a flange carried by said eccentric and engaging the flange on the sleeve, means for locking said flanges together, an opening formed between the flanges, the sections of the opening in one of said flanges being threaded and in the other flange being smooth, a screw located in said opening and having its thread engaging the threaded flange section, the section of the opening in the flange which is smooth terminating in a recess extending transversely thereof, said screw having a head thereon engaging said recess, whereby said screw is held from endwise movement on said flange having said smooth section of the opening.

1,217,981. BLADE-SHARPENER. BENJAMIN J. NASIFF, Brooklyn, N. Y., assignor of one-half to Arthur H. Hotte, Morris Park, N. Y. Filed Feb. 28, 1916. Serial No. 80,949. (Cl. 51—16.)



1. A blade sharpening apparatus comprising a sharpening element, a blade holder, one of said elements being movable in an endless path, and mechanism interposed between the sharpening element and the blade-holder normally tending to move one toward the other, said mechanism operating on the reversal of the normal movement to separate the blade-holder and the sharpening element and to rotate the blade-holder about an axis transverse to the edge of a blade held in said blade-holder.

2. A blade sharpening apparatus, comprising a blade sharpening element, a blade-holder, one of said elements being movable in an endless path, an oscillatory member on which the blade-holder is mounted to rotate, and mechanism operating between said oscillatory member and the blade sharpening element whereby the oscillatory member is moved to carry the blade away from the sharpening element when the direction of movement between the latter and the blade-holder is reversed.

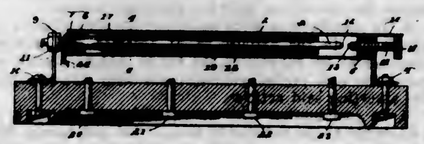
3. A blade sharpening apparatus, comprising a blade sharpening element, a blade-holder, one of said elements being movable in an endless path, an oscillatory member on which the blade-holder is mounted to rotate, a member frictionally bearing against the blade sharpening element and operating upon the oscillatory member to cause the latter to carry the blade-holder away from the sharpening element when the direction of movement between the sharpening element and the blade-holder is reversed.

4. A blade sharpening apparatus comprising a blade sharpening element, a blade-holder, one of said elements being movable in an endless path, an oscillatory member on which the blade-holder is mounted to rotate, mechanism operating between said oscillatory member and the blade sharpening element whereby the blade-holder is caused to move away from the blade sharpening element when the direction of movement between the sharpening element and the blade-holder is reversed, and a device arranged to rotate the blade-holder on the oscillatory member when the blade-holder moves away from the sharpening element.

5. A blade sharpening apparatus, comprising a blade sharpening element, a blade-holder, one of said elements being movable in an endless path, an oscillatory member on which the blade-holder is mounted to rotate, a roller bearing against the blade sharpening element and connected to the oscillatory member to move the blade-holder away from the sharpening element when the direction of movement between the blade-holder and the sharpening element is reversed, and a device arranged to rotate the blade-holder on the oscillatory member when the blade-holder is moved away from the sharpening element.

[Claim 6 not printed in the Gazette.]

1,217,982. ELECTRIC-CIRCUIT CONTROLLER. WILL C. NEAHR, Denver, Colo., assignor to The Protective Signal Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Oct. 21, 1915. Serial No. 57,165. (Cl. 175—324.)



1. In apparatus of the character set forth, the combination with a tubular member, of a rod member mounted longitudinally therein, coacting contact elements located in one end of the tubular member, one being carried by the rod, an electric heating coil mounted on the rod, and a sleeve of insulating material surrounding the rod and coil within the tubular member.

2. In apparatus of the character set forth, the combination with coacting members having substantially equal coefficients of expansion, of coöperating contact elements carried thereby, yielding means to which said members are secured for supporting said members to permit their substantially equal expansion and contraction, and means for heating one of the members to a higher degree of temperature than the other.

3. In apparatus of the character set forth, the combination with coacting longitudinally expansible and contractile members having substantially equal coefficients of expansion, of coöperating contact elements carried thereby, yielding means secured to said members for supporting the same to permit their substantially equal longitudinal expansion and contraction, and means for heating one of the members to a higher degree than the other.

4. In apparatus of the character set forth, the combination with coacting longitudinally expansible and contractile members having substantially equal coefficients of expansion, of coöperating contact elements carried thereby, spaced supports to which said members are secured, one of said supports yielding toward and from the other support, to permit the substantially equal expansion and contraction of the members, and means for heating one of said members to a higher degree than the other.

5. In apparatus of the character set forth, the combination with a tubular member, of a rod member located longitudinally therein, said members having substantially equal coefficients of expansion, supports for said members secured to the ends thereof, one of said supports being yielding, contact elements respectively carried by the members, and means for heating one of said members to a higher degree of temperature than the other.

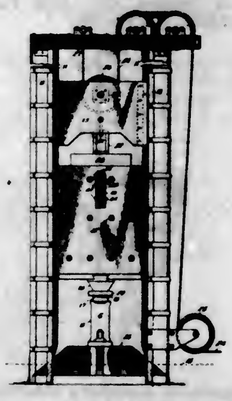
[Claims 6 and 7 not printed in the Gazette.]

1,217,983. CULTIVATOR-SHOVEL. LOUIS P. F. NIELSEN, Marquette, Nebr. Filed Aug. 31, 1916. Serial No. 117,890. (Cl. 97—11.)



A cultivator shovel comprising a body of elongated shape having substantially parallel opposite edges, which in front elevation extends substantially vertically, said body at its lower portion terminating in a V-shaped point and provided with a lateral wing extending upwardly and rearwardly and laterally and having an upper edge extending at an acute angle to one of the edges of the body, thereby forming a V-shaped recess, said lower V-shaped point of the shovel having concaved cutting edges merging into convexed cutting edges of the wing and one of the edges of the body, said body being curved on a plane at a slight acute angle to the upper edge of the wing, thereby tending to turn or throw the dirt through said recess.

1,217,984. MEANS FOR RECORDING ACTIONS OF RAILWAY DRAFT-GEARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 6, 1915. Serial No. 38,111. (Cl. 234—16.)



1. In mechanism of the character described, the combination with a drop weight adapted to strike on a yieldable cushioning mechanism, of means operated by said weight for recording the deceleration thereof during the blow delivered to the cushioning mechanism.

2. In mechanism of the character described, the combination with a drop hammer and automatically operated means for recording the movement of said hammer, of a gravity controlled timing device.

3. In mechanism of the character described, the combination with automatically operated recording means including a movable member for carrying a recording strip, of a gravity controlled timing device to indicate the speed of said movable member.

4. The combination with a recording mechanism including a movable member for carrying a recording strip, of a device for timing the movement of said member, said device including a falling body and means for registering

its rate of travel during a predetermined portion of its fall.

5. The combination with a movable strip, of a body adapted to be released and fall under the influence of gravity and a recording instrumentality associated with said body and arranged to operate with said record strip when said body is falling during a predetermined period of its fall, to thereby determine the speed of travel of said strip.

[Claims 6 to 27 not printed in the Gazette.]

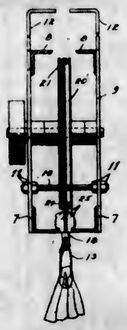
1,217,985. REINFORCED-CONCRETE FLOOR STRUCTURE. JOHN R. O'DONNELL, Brooklyn, N. Y. Filed June 23, 1916. Serial No. 105,881. (Cl. 72—66.)



1. A flat slab reinforced concrete floor comprising reinforced concrete beams with hollow blocks between the beams, said blocks having thickened heavy slab portions at one side of the central horizontal plane, the blocks in the central part of the span having their slab portions at the top and those near the supports being inverted with their slab portions at the bottom.

2. A composite floor composed of hollow blocks and reinforced concrete forming a flat slab, the blocks comprising an identical form having one thickened heavy slab portion, the said blocks being relatively inverted in different parts of the slab, those in the central portion having their thickened slab portions at the top and those over the supports having their slab portions at the bottom.

1,217,986. LAUNDRY-DISTRIBUTING SYSTEM. DONALD H. PARCH, Oakland, Cal. Filed June 24, 1914. Serial No. 847,016. (Cl. 83—92.)



1. Sorting apparatus, comprising identifying means attachable to the articles to be sorted, conveying means for moving said articles, and means for releasing said identifying means from said conveying means at predetermined points.

2. In an apparatus for distributing articles, a trackway, and means for segregating and identifying said articles, said means being attachable to said articles and movable along said trackway.

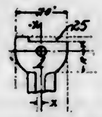
3. In a laundry sorting machine, a trackway having a slot of varying width and identifying means attachable to pieces of laundry and slidable in said slot.

4. In a laundry sorting machine, a trackway having a slot of varying width and identifying means attachable to pieces of laundry slidable in said slot, said slot arranged to drop said identifying means at predetermined points.

5. In a sorting apparatus a trackway having a slot of varying width, identifying means attachable to the articles to be sorted and slidable in said slot, said slot arranged to release said identifying means at predetermined points, and receptacles to catch said released means and articles.

[Claims 6 to 40 not printed in the Gazette.]

1,217,987. ASSORTING-TAG. DONALD H. PARCH, Oakland, Cal. Filed May 29, 1916. Serial No. 100,781. (Cl. 83—92.)



1. In combination with an assorting apparatus, a tag attachable to the articles to be assorted, said tag being provided with means for supporting the tag in said apparatus.

2. In combination with an assorting apparatus, a tag attachable to the articles to be assorted and means on said tag adapted to coact with said apparatus to assort said articles.

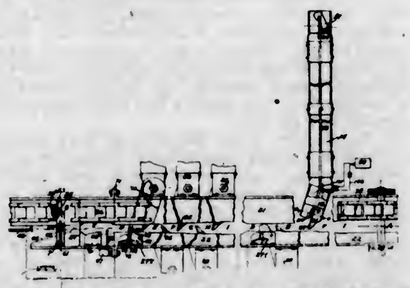
3. In combination with an assorting apparatus, a tag attachable to the articles to be assorted and provided with means for supporting the tag in said apparatus, and means for identifying said tag arranged thereon.

4. In combination with an assorting apparatus, a tag attachable to the articles to be assorted and provided with means for supporting the tag in said apparatus, and means on said tag adapted to coact with said apparatus for assorting said articles.

5. In combination with an assorting apparatus, a tag attachable to the articles to be assorted and having identification means arranged thereon, and means on said tag adapted to coact with said apparatus to assort said articles.

[Claims 6 to 19 not printed in the Gazette.]

1,217,988. ASSORTING APPARATUS. DONALD H. PARCH, Oakland, Cal. Filed May 29, 1916. Serial No. 100,732. (Cl. 83—92.)



1. In an assorting apparatus, supporting means attachable to the articles to be assorted, a carrier adapted to carry said supporting means and means for releasing the supporting means from the carrier at predetermined points.

2. In an assorting apparatus, supporting means attachable to the articles to be assorted, a carrier adapted to carry said supporting means and means operated by said supporting means for releasing the supporting means from the carrier.

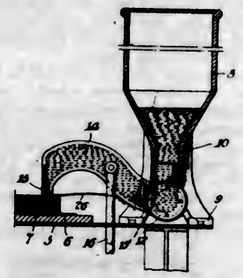
3. In an assorting apparatus, a track, a carrier movable along the track, supporting means attachable to the articles to be assorted adapted to be carried by the carrier, and means for releasing said supporting means from said carrier onto said track at predetermined points.

4. In an assorting apparatus, a track, a carrier movable along the track, supporting means attachable to the articles to be assorted adapted to be carried by the carrier, and means for transferring the weight of said supporting means from said carrier to said track at predetermined points.

5. In an assorting apparatus, a track, a carrier movable along the track, supporting means attachable to the articles to be assorted adapted to be carried by the carrier, and means operated by said supporting means for transferring the weight of said supporting means and attached article from the carrier to said track at predetermined points.

[Claims 6 to 62 not printed in the Gazette.]

1,217,989. MEANS FOR APPLYING ADHESIVE TO WRAPPING-PAPER. MICHAEL PARIDON and CLYDE R. HARRIS, Oswego, N. Y., assignors to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 16, 1915. Serial No. 21,631. (Cl. 91—47.)



1. In an apparatus of the character described, a wrapper support, an adhesive reservoir adjacent thereto having a contracted throat and a lateral tubular extension, said extension having an opening in its wall, a hollow neck body mounted to turn on said extension and communicating therewith through said opening, said body terminating in a nozzle overhanging the edge of the wrappers, and means for raising and lowering said body in respect to the plane of the wrappers.

2. In an apparatus of the character described, a table for the support of a pile of wrappers, a series of adhesive applying elements in spaced relation to each other having depending nozzles which overhang the edges of the wrappers, leaf springs secured to said elements so as to bear upon the wrappers at points adjacent the nozzles, and means for effecting relative movement between the wrappers and said elements.

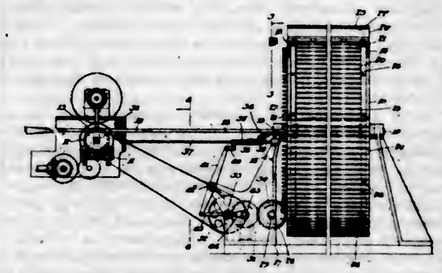
3. In an apparatus of the character described, a table for the support of a pile of wrappers, a series of oscillating adhesive applying elements in spaced relation to each other having depending nozzles which overhang the edge of the wrappers, a corresponding series of adhesive reservoirs having feed portions upon which the said elements are pivotally mounted, rods depending from the nozzles, a vertically movable frame with which the rods are connected, spring means for maintaining the frame normally raised, and means for depressing the frame against the action of the spring.

1,217,990. BOX-DRYING APPARATUS. MICHAEL PARIDON, Oswego, N. Y., assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed May 17, 1915. Serial No. 28,558. (Cl. 34—28.)

1. In an apparatus of the character described, an endless carrier having throughout its length a series of elongated parallel pockets for the reception of match box shucks, the walls of said pockets being shaped to provide spaces along the sides of the boxes within the pockets.

2. In an apparatus of the character described, an endless carrier including a continuous series of sections the contiguous edges of which are recessed to provide elongated pockets for the reception of match box shucks.

3. In an apparatus of the character described, an endless carrier having throughout its length a series of elongated parallel pockets for the reception of match box shucks, the walls of said pockets being shaped to provide spaces along the sides of the boxes within the pockets and also air vents leading from said spaces to the exterior of the carrier.

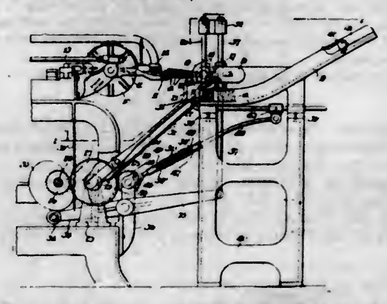


4. In an apparatus of the character described, the combination with a machine for coating match box shucks, said machine including a mandrel, of an endless carrier adjacent the free end of the mandrel having throughout its length a series of elongated shuck receiving pockets, means for intermittently moving said carrier to advance its pockets successively to the end of the mandrel, and means for feeding a series of shucks from the extension into each of the pockets.

5. In an apparatus of the character described, a drum structure having a circular series of circumferential pockets therein for the reception of match box shucks, the narrow edge walls of said pockets being shaped to provide spaces along the sides of the boxes within the pockets.

[Claims 6 to 10 not printed in the Gazette.]

1,217,991. MACHINE FOR ASSEMBLING MATCH-BOOKS, &c. MICHAEL PARIDON, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed May 5, 1916. Serial No. 95,713. (Cl. 100—59.)



1. In an assembling machine, the combination of an article-positioning member having intersecting chambers extending therethrough, means for oscillating said member whereby its chambers are successively shifted to horizontal and vertical planes, means for delivering articles to the successive chambers when they are in a horizontal plane, means for ejecting the articles from said chambers successively when they are in a vertical plane, a receptacle having a portion located beneath and adjacent to said member, whereby the articles are directly deposited side by side in said receptacle as they leave said member, and means for progressively advancing along said receptacle the articles delivered thereto.

2. In an assembling machine, the combination of an article-positioning member comprising a rotary body having intersecting chambers extending therethrough, a crank

member on said body, a positively-driven shaft, a cam thereon, a rod connected with said crank member and operatively engaged with the cam, whereby said body is oscillated to shift its chambers successively to horizontal and vertical planes, means for delivering articles to the successive chambers of said body when they are in a horizontal plane, means for ejecting the articles from said chambers successively when they are in a vertical plane, a receptacle having a portion located directly beneath and adjacent to said member to receive the articles side by side as they are successively ejected, and means for progressively advancing along said receptacle the articles delivered thereto.

3. In an assembling machine, the combination of an article-positioning member having intersecting chambers extending therethrough, means for oscillating said member to shift its chambers successively to horizontal and vertical planes, means for delivering articles to the successive chambers when they are in a horizontal plane, means for ejecting the articles from said chambers successively when they are in a vertical plane, a receptacle having a portion located directly beneath and adjacent to said member so as to receive the articles side by side as they are successively ejected, a plunger having a portion operative in said receptacle to advance the articles therealong, a positively-driven shaft, a crank member thereon, and a rod connecting said crank member and plunger.

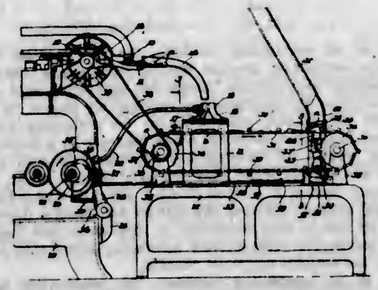
4. In an assembling machine, the combination of an article-positioning member having intersecting chambers extending therethrough, a positively-driven element, operative connection between said element and member, whereby said member is oscillated to shift its chambers successively to horizontal and vertical planes, means for delivering articles to the successive chambers of said member when they are in a horizontal plane, a plunger for ejecting the articles from said chambers when they are in a vertical plane, a second positively driven element, operative connection between said latter element and the plunger, a receptacle to which the articles are delivered by said member, a plunger having a portion operative in said receptacle to advance the articles therealong, a third positively-driven element, and operative connection between the same and the latter plunger.

5. In an assembling machine, the combination of an article positioning member, an ejector therefor, means for positively raising said ejector and for permitting it yieldingly to descend, a receptacle into which the articles are delivered, and means for advancing the articles along said receptacle.

[Claims 6 to 14 not printed in the Gazette.]

1,217,992. MACHINE FOR ASSEMBLING MATCH-BOOKS, &c. MICHAEL PARIDON, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed June 17, 1916. Serial No. 104,205. (Cl. 100—59.)

1. The combination with means for feeding a succession of flat articles in vertical position, of a horizontally-



reciprocative switch element having diverging guides, and means for reciprocating said element whereby its said guides are positioned to receive the articles in alternation.

2. The combination with a feed chute for diverting a succession of flat articles from a horizontal to a vertical position, of a horizontally-reciprocative switch element having diverging guides, and means for reciprocating said element whereby its guides are positioned to receive the vertically-disposed articles in alternation.

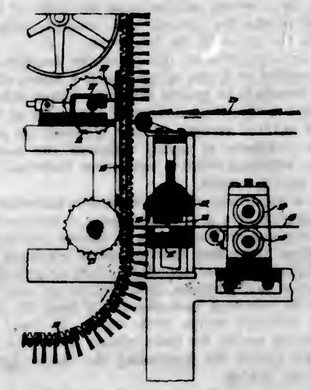
3. The combination with means for feeding a succession of flat articles in vertical position, of off-bearing means below the same, a switch element, and actuating means therefor, whereby the successive articles discharged from the first named means are directed in opposite directions and delivered flatwise upon the second named means.

4. The combination with means for feeding a succession of flat articles in vertical position, of underlying off-bearing means, a switch element interposed between said off-bearing and feeding means, and means for effecting a relative movement between said element and feeding means whereby the successive articles discharged from the latter are directed in opposite directions and delivered flatwise to the off-bearing means.

5. The combination with feeder means for diverting a succession of flat articles from a horizontal to a vertical position, of underlying off-bearing means, a switch element interposed between said off-bearing and feeder means, and means for effecting a relative movement between said element and feeder means, whereby the successive articles discharged from the latter are directed in opposite directions and delivered flatwise to the off-bearing means.

[Claims 6 to 13 not printed in the Gazette.]

1,217,993. MACHINE FOR MAKING CARD-MATCHES. MICHAEL PARIDON, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed July 18, 1916. Serial No. 109,160. (Cl. 144—65.)



1. The combination with a match card carrier comprising a rigid jaw bar, and a plurality of spring members arranged in spaced relation to each other so as to co-act with the inner face of the bar to clamp an interposed match card at different points, of punch mechanism, including punches arranged in pairs corresponding in number with the said spring members, each pair of punches being movable in paths adjacent to and out of contact with the respective edges of a spring member.

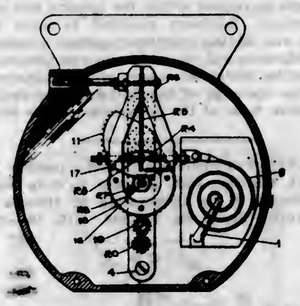
2. The combination with a match card carrier comprising rigidly connected parallel clamp bars, and a series of spring members supported in spaced relation to each other between said bars, said members having card-engaging portions which extend adjacent to the inner faces of the respective bars, of punch mechanism, including punches arranged in pairs corresponding in number with the card-engaging portions, each pair of punches being movable in paths embracing a card-engaging portion.

3. In a carrier for match cards each composed of a marginal portion and splints whereof alternate splints are deflected from the plane of the marginal portion, a clamp bar having an inclined bearing surface, and springs arranged to clamp the marginal portion of a match card against said surface.

4. In a carrier for match cards each composed of a marginal portion and splints whereof alternate splints are deflected from the plane of the marginal portion, rigidly separated parallel jaw bars having inclined inner surfaces, and a series of spring members extending adjacent to the inner surfaces of the respective bars.

5. A match-card carrier embodying hingedly connected link members, whereof each member comprises toothed end portions, spaced parallel bars connecting said portions, a plurality of spaced cross-pieces connecting the bars, posts on said cross-pieces extending between the bars, and U-shaped springs fastened to the outer ends of the posts so that the limbs of the springs extend adjacent to the inner sides of the respective bars.

1,217,994. THERMOSTAT FOR ELECTRIC HEATING AND COOKING APPARATUS. RODERICK J. M. PARKS and EDWARD D. BRAND, Toronto, Ontario, Canada. Filed Dec. 19, 1913. Serial No. 807,690. (Cl. 200—31.)



1. In a thermostatic apparatus the combination of a thermostatic element; a rocking frame; a rock shaft journaled in said frame; means whereby said thermostatic element rocks said shaft; means for rocking and adjusting said frame; a driven rock shaft geared to the rock shaft; a rocking arm journaled concentric with the driven rock shaft; a pair of contacts carried by said rocking arm; a contact finger carried by said rock arm adapted to contact with either contact and normally yieldingly held in contact with one of them; an arm fixed to the driven rock shaft adapted when the shaft is rocked to engage said contact finger to move it toward the second contact; and means for angularly adjusting the rocking arm.

2. In a thermostatic apparatus, the combination of a thermostatic element; a rocking frame; a driving rock shaft journaled in said frame; a gear segment secured thereto; a pivoted link connecting said thermostatic element with said gear; a driven rock shaft journaled in the frame; a pinion secured thereto meshing with the aforesaid gear segment; a rocking arm journaled concentric with the driven rock shaft; a pair of contacts carried by said rocking arm; a contact finger carried by said rock arm adapted to contact with either contact and normally yieldingly held in contact with one of them; an arm fixed to the driven rock shaft adapted when the shaft is rocked to engage said contact finger to move it toward the second contact; and means for angularly adjusting the rocking arm.

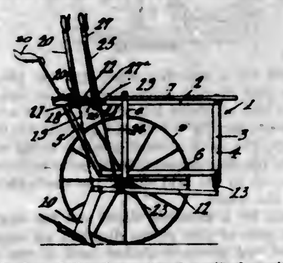
3. In a thermostatic apparatus the combination of a casing; a thermostatic element; a frame pivoted adjacent one end on the casing; a screw engaging the casing and frame adapted to rock the latter; a rock shaft journaled on the frame; means whereby said thermostat actuates said rock shaft; a rocking arm journaled concentric with the rock shaft; contact devices carried by said arm; a contact arm carried by the rock shaft and adapted to actuate the contact devices; and means for angularly adjusting the rocking arm.

4. In a thermostatic apparatus, the combination of a thermostatic element; a rocking frame; a driving rock shaft journaled in said frame; a gear segment secured thereon; a link pivoted to the thermostatic element and having a radially adjustable pivoted connection with the said gear segment; a driven rock shaft journaled in the frame; a pinion secured thereto meshing with the aforesaid gear segment; a rocking arm journaled concentric with the rock shaft; contact devices carried by said arms; a contact arm carried by the rock shaft and adapted to actuate the contact devices; and means for angularly adjusting the rocking arm.

5. In a thermostatic apparatus, the combination of a casing; a thermostatic element; a frame pivoted adjacent one end on the casing; a screw engaging the casing and frame adapted to rock the latter; a driving rock shaft journaled in said frame; a gear segment secured thereto; a link pivoted to the thermostatic element and having a radially adjustable pivoted connection with the said gear segment; a driven rock shaft journaled in the frame, a pinion secured thereto meshing with the aforesaid gear segment; a rocking arm journaled concentric with the rock shaft; contact devices carried by said arm; a contact arm carried by the rock shaft and adapted to actuate the contact devices; and means for angularly adjusting the rocking arm.

[Claim 6 not printed in the Gazette.]

1,217,995. RAISING AND LOWERING DEVICE FOR AGRICULTURAL IMPLEMENTS. JIM PARKER, Tecumseh, Okla. Original application filed Oct. 27, 1914, Serial No. 868,868. Divided and this application filed May 1, 1916. Serial No. 94,764. (Cl. 55—18.)



1. In a device of the character described, a riding frame, a beam loosely connected thereto and having a blade, a winding member carried by the frame, a thrust rod connected to the beam, and a flexible element connecting the thrust rod and winding member.

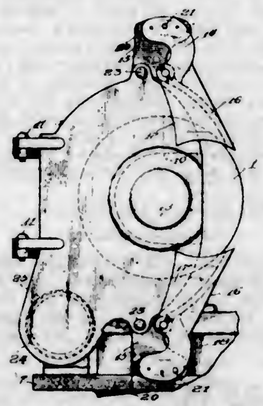
2. In a device of the character described, a riding frame, a beam loosely connected thereto and carrying a blade, a winding member carried by the frame, a thrust rod connected to said frame and projecting above said winding member, a flexible element connecting the upper end of said rod and winding member, a second winding member carried by the frame, and a flexible element connecting said beam and second winding member.

3. In a device of the character described, a riding frame, a longitudinal beam having its forward end loosely connected to the frame and having a blade at its rear end, a transverse winding shaft carried by the frame, a thrust rod pivotally connected with the beam adjacent the rear end thereof and projecting upwardly above said shaft, a flexible element connecting the upper end of said rod and shaft to be wound upon said shaft, a hand lever pivotally mounted upon said shaft, a ratchet wheel secured to said shaft, a pawl carried by said lever engageable with said

ratchet wheel, and a pawl carried by the frame engageable with said ratchet wheel.

4. In a device of the character described, a riding frame, a beam having its forward end loosely connected thereto and having a blade at its rear end, a pair of winding shafts carried by the frame transversely thereof, a thrust rod having its lower end pivotally connected with said beam adjacent the rear end thereof and projecting upwardly above one of said shafts, a flexible element connecting said shaft and upper end of said rod, a flexible element connecting the other shaft and beam adjacent the rear end thereof, a hand lever pivotally mounted upon each shaft, a ratchet wheel secured upon each shaft, a pawl carried by each hand lever and engageable with the respective ratchet wheel, and pawls carried by the frame and engageable with the ratchet wheels.

1,217,996. GUARD FOR GRINDING-MACHINES. EDWARD O. PARTRIDGE, Chicago, Ill. Filed July 21, 1915. Serial No. 41,081. (Cl. 51—7.)



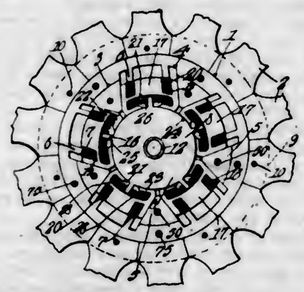
1. A guard for a grinding wheel and the shaft thereof, including a pair of side pieces disposed on opposite sides of the wheel and pivotally joined back of the wheel, one of said side pieces having a recessed portion housing an end of the shaft, the said pivotal joining being so disposed as to permit the last named side piece to be swung around to afford access to the said end of the shaft and to permit removal of the wheel.

2. A guard for a grinding wheel and the shaft thereof, including a pair of side pieces disposed on opposite sides of the wheel and pivotally joined back of the wheel, the said side pieces exposing a frontal portion of the wheel; and a pair of followers adjustably mounted on one of the side pieces at the front thereof and presenting tips directed toward each other and partially covering the said exposed frontal portion of the wheel, each of said followers having wings overlapping portions of the said side pieces.

3. A guard for a grinding wheel and the shaft thereof, including a pair of side pieces disposed on opposite sides of the wheel, one thereof rigidly mounted and the other movable laterally with respect to the wheel, the movable side piece having a recessed portion housing an end of said shaft.

4. A guard for a grinding wheel, including a pair of relatively movable side plates exposing a frontal portion of the wheel but otherwise extending radially beyond the periphery of the wheel, a back integral with one of the side plates and normally joining the edges of the said radially extending portions, a pair of followers pivoted upon the last named side plate and extending toward each other, and interlocking means associated respectively with the opposite ends of the followers and the last named side plate for latching the said followers in their operative positions.

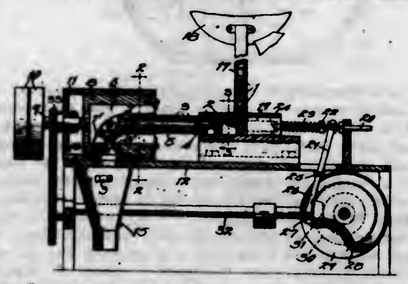
1,217,997. WHEEL. WILLIAM G. PASSMORE, Saratoga, Wyo. Filed June 26, 1916. Serial No. 106,044. (Cl. 152—45.)



1. In a spring wheel, a body having an opening; a hub having a limited movement within the opening; rigid followers mounted for radial movement in the body; springs interposed between the followers and the body and constituting means for limiting the radial movement of the followers; and a pair of opposed circumferential springs carried by each follower and engaged at their outer ends with said follower, the hub having means for engaging the inner ends of the last specified springs.

2. In a spring wheel, a body having an opening; a hub having limited movement within the opening and provided with projections; followers mounted to move radially in the body and having openings; springs interposed between the followers and the body and constituting means for limiting the radial movement of the followers; and springs in the openings of the followers, the springs engaging opposite faces of the projections of the hub.

1,217,998. NUT-TAPPING MACHINE. GEORGE H. RIDLON, South Whitley, Ind., assignor to Grip Nut Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 14, 1912. Serial No. 725,598. (Cl. 10—129.)



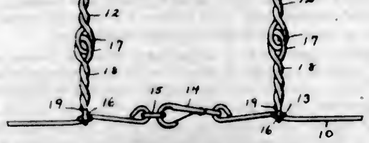
1. In a nut tapping machine, the combination of a rotatable chuck holder prbvided with a recess at one end, of a chuck adapted to detachably fit within the recess in the holder and provided with a passage extending through the same and bent at an angle from a straight line, and a coöperating tap bent in substantial uniformity to the passage of the chuck and adapted to be positioned therein, said chuck consisting of sections separable to permit the positioning of the said tap in the passage of the chuck, the sections of the chuck being held together and supported by the holder, and means coupling the chuck and chuck holder for rotation together.

2. In a nut tapping machine, the combination of a rotatable chuck holder provided with a recess at one end, of a chuck adapted to removably fit within the recess in the holder and provided with a passage extending through the same, the passage being bent at an angle from a straight line, and a tap bent in substantial uniformity to the passage and adapted to be positioned in the passage of the chuck, said chuck being divided longitudinally into separable sections to permit the positioning of the said tap in the passage of the chuck, the separable sections of the chuck being held together and supported by the holder, and a part of the chuck engaging a part on the chuck holder to couple the chuck and holder for rotation together.

3. In a nut tapping machine, the combination of a rotatable chuck holder provided with a recess at one end thereof, of a chuck adapted to be removably fitted within the recess of the holder and provided with a passage extending through the same and bent at an angle from a straight line, and a coöperating tap bent in substantial uniformity to the passage of the chuck and adapted to be positioned in the said passage, said chuck comprising a block divided longitudinally into two mating parts to permit the positioning of the tap in the passage of the chuck, the walls of the recess of the chuck holder being disposed at an angle to each other, and the chuck having angularly disposed outer faces engaging the angularly disposed walls of the said recess, the separable sections of the chuck being held together and supported by the holder.

4. A nut tapping machine including a suitable frame provided with a stationary head, said head being recessed to provide a cylindrical bearing extending inwardly from one end thereof, a chuck holder supported for rotation in the cylindrical bearing of the stationary head, a shaft extending through an opening in the other end of said stationary head and connected with the chuck holder, and a tap loosely positioned in the chuck and centered therein by nuts mounted on the tap.

1,217,999. ANTISKIDDING DEVICE. NAPOLEON RINFRETT, Southington, Conn., assignor of one-half to Albert R. Thomson, Plantsville, Conn. Filed May 25, 1916. Serial No. 99,718. (Cl. 152—14.)

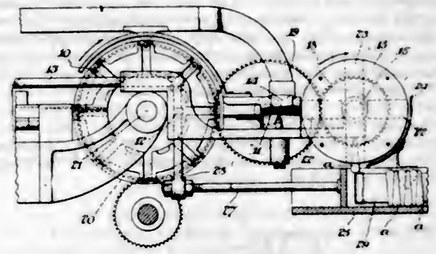


In an anti-skidding device for automobile tires comprising a pair of slide frames interconnected by a plurality of bridges, the said bridges being composed of a pair of similar parts, formed of wire, and each of the said parts comprising a loop at one end for engaging with the corresponding loop on the mating part and an eye at the other end for engaging with the said frame, and the portion intermediate the said ends being in the form of a shank, formed of two adjacent portions of the said wire, the said two adjacent portions being twisted together.

1,218,000. MACHINE FOR ASSEMBLING MATCH-BOOKS, &c. WILLIAM ROBERTS, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 1, 1916. Serial No. 88,324. (Cl. 100—59.)

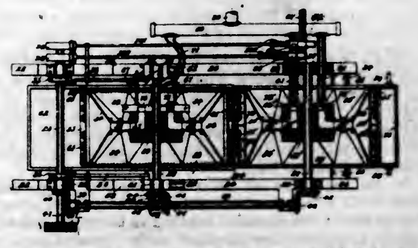
1. In a machine for assembling book-matches and the like, a rotary article positioning member having an article receiving passage extending diametrically therethrough and having also independent radial article receiving pockets in spaced relation to said passage.

2. In a machine for assembling book-matches and the like, the combination with a receptacle, of means for delivering articles thereto with their corresponding ends in opposite relation to each other, said means comprising a rotary member having radial pockets diametrically opposite to but separated from each other, and having also a longitudinal passage extending diametrically through said member in a plane at right angles to the said pockets, means for rotating said member, and means for progressively introducing articles to said pockets and to the respective ends of the passage.



3. In a machine for assembling book-matches and the like, the combination with an intermittently rotatable turret and means for ejecting articles therefrom, of a rotary article positioning member arranged to receive the articles ejected from the turret, and gearing between said turret and positioning member whereby the latter is rotated in one direction only, said member comprising a body having an article receiving passage extending diametrically therethrough, and having also independent radial article receiving pockets in spaced relation to said passage.

1,218,001. APPARATUS AND PROCESS FOR MAKING PULP ARTICLES. GEORGE H. RODWELL, Newark, N. Y., assignor to The U. S. Safety Egg Carrier Co. Inc., Newark, N. Y., a Corporation of New York. Filed Mar. 11, 1916. Serial No. 83,600. (Cl. 92—54.)



1. A pulp article forming machine, comprising a revoluble collecting unit, foraminous mold faces upon said unit, automatically controlled suction and atmospheric communicating means for said faces, simultaneously operable reciprocating means for said unit, and a receiving drying unit revolubly mounted adjacent said collecting unit.

2. A pulp article forming machine, comprising a frame, a pulp tank within said frame, and a reciprocating collecting unit revolubly journaled upon the said frame and projecting within said tank.

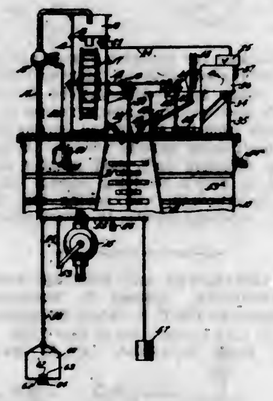
3. A pulp article forming machine, comprising a frame, a pulp tank within said frame, a reciprocating collecting unit revolubly journaled upon the said frame and projecting within said tank, foraminous mold faces upon said unit, a stationary valve disk, and connections between said disk and faces whereby suction is applied to said faces and the same is connected to the atmosphere at predetermined intervals.

4. A pulp article forming machine, comprising a frame, a pulp tank within said frame, a reciprocating collecting unit revolubly journaled upon the said frame and projecting within said tank, reciprocating means for said unit, and a receiving drying unit oppositely revoluble with respect to said collecting unit and journaled upon the said frame.

5. A pulp article forming machine, comprising a frame, a pulp tank within said frame, a collecting unit revolubly journaled upon the said frame and extending into said tank, foraminous mold faces upon said unit, a stationary valve disk, connections between said disk and faces whereby suction is applied to said faces and the same is connected to the atmosphere at predetermined intervals, reciprocating means for said unit, and a receiving drying unit oppositely revoluble with respect to said collecting unit and journaled upon the said frame.

[Claims 6 to 23 not printed in the Gazette.]

1,218,002. FEED CONTROL FOR LIQUIDS. WILLIAM T. RUNCIE, Maplewood, N. J. Filed June 16, 1916. Serial No. 103,934. (Cl. 210—19.)



1. An apparatus of the kind described comprising a main tank, a main water supply for the tank, a valve box, means for diverting a portion of the water supply to the valve box, a chemical box adapted to supply solution to the tank, and a water-driven apparatus operated by water from the valve box and arranged to control the discharge from the chemical box.

2. An apparatus of the kind described comprising a main tank, a main water supply for the tank, a chemical box to supply the chemical solution to the tank, and water driven apparatus operated by water diverted from the main supply and operatively connected with the discharge from the chemical box to control it.

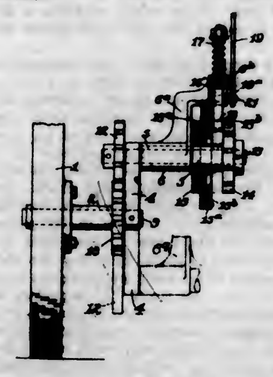
3. An apparatus of the kind described comprising a main tank, a main water supply for the tank, a chemical box, a movable feed pipe in the chemical box arranged to discharge chemical solution from the top of said solution, and water driven apparatus operated by water diverted from the main supply and connected with the feed pipe to control its height.

4. An apparatus of the kind described comprising a main tank, a main water supply for the tank, a chemical box to contain chemical solution having a discharge to supply the main tank, a swinging feed pipe in the chemical box connected with the discharge thereof, a water wheel, a connection between the water wheel and the feed pipe by which the movement of the water wheel lowers the pipe, and means for driving the water wheel from a supply diverted from the main water supply.

5. In an apparatus of the kind described, the combination with the chemical box adapted to contain a chemical solution, and a swinging member in said box controlling the discharge therefrom, of a water wheel, an operative connection between the water wheel and the swinging member in the chemical box, and means for supplying water to the water wheel.

[Claims 6 to 9 not printed in the Gazette.]

1,218,006. WHEEL-PLOW. NEWELL SANDERS, Chattanooga, Tenn. Filed Oct. 17, 1916. Serial No. 126,173. (Cl. 97—54.)



1. In a wheel plow, a supporting wheel, a frame carrying a furrow opener, a crank arm pivotally supported from said frame, said supporting wheel being rotatably connected with said crank arm, a gear concentric with said supporting wheel and connected to be driven thereby, a second gear supported from the frame and rotatable on an axis concentric with the pivotal axis of said arm and meshing with said first named gear, and means for locking either said crank arm or said second gear against movement.

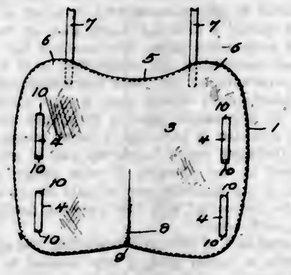
2. In a wheel plow, a supporting wheel, a frame carrying a furrow opener, a sleeve rotatably supported from said frame, a crank arm rigidly carried by one end of said sleeve, said supporting wheel being rotatably connected with said crank arm, a gear connected to be driven by said supporting wheel, a second gear rotatable about an axis coincident with the axis of said sleeve and meshing with said first named gear, and means for locking either said sleeve or said second gear against movement.

3. In a wheel plow, a supporting wheel, a frame carrying a furrow opener, a sleeve rotatably supported from said frame, a crank arm carried by one end of said sleeve, a supporting wheel journaled at the free end of said arm, a gear rigidly connected to said wheel concentric therewith, a shaft journaled in the sleeve and carrying a gear meshing with the first named gear, notched locking wheels on said shaft and sleeve and locking means for engaging the notches of either one of the locking wheels.

4. In a wheel plow, a supporting wheel, a frame carrying a furrow opener, a sleeve rotatably supported from said frame, a crank arm carried by one end of said sleeve, a supporting wheel journaled at the free end of said arm, a gear rigidly connected to said wheel concentric therewith, a shaft journaled in the sleeve and carrying a gear meshing with the first named gear, notched locking wheels on said shaft and sleeve and locking means adapted to lock either of said locking wheels, yielding means for normally holding said locking means in engagement with the locking wheel on the sleeve, and manually operated means for disengaging said locking means from the locking wheel on the sleeve and temporarily engaging it with the locking wheel on the shaft.

5. In a wheel plow, a supporting wheel, a frame carrying a furrow opener, a sleeve rotatably supported from said frame, a crank arm carried by one end of said sleeve, a supporting wheel journaled at the free end of said arm, a gear rigidly connected to said wheel concentric therewith, a shaft journaled in the sleeve and carrying a gear meshing with the first named gear, a locking wheel fast on the sleeve, a second locking wheel fast on the shaft, one of said elements having internal recesses and the other external recesses, a movable element having one or more projections to engage said notches, means for normally positioning said element to hold its projection in a recess of one locking wheel, and means for manually forcing it into position to engage its locking projection with a recess in the other locking wheel.

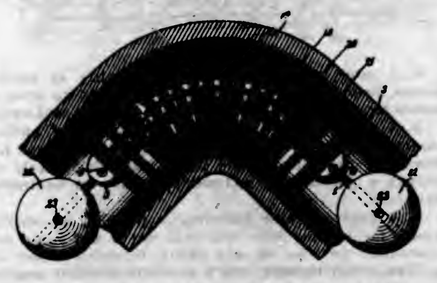
1,218,004. LAMB-BLANKET. HENRY SAYLES, Meeteetse, Wyo. Filed July 28, 1916. Serial No. 111,844. (Cl. 54—79.)



1. As an article of manufacture, a lamb blanket, comprising an outer water-proof covering and an inner woolen lining, cut back portions in the front and rear edges thereof adapted to expose parts of the animal, and to provide forwardly extending portions on both sides of the cut back portions of the front edge, elastic loops disposed at opposite sides and permanently secured at both of their ends to the inner surface of the blanket and adapted to be slipped over the legs of the animal, and tapes secured to the blanket a distance back from its front edge and adapted to cause an overlapping of the forwardly extending portions across the chest of the animal.

2. As an article of manufacture, a lamb blanket having tapes attached to its front ends adapted to be secured across the chest of the animal and four elastic one-piece loops permanently secured at both ends to the blanket and disposed to receive the legs of the animal.

1,218,005. CONDUIT-CLEANING DEVICE. GEORGE SCHLEMMER, New York, N. Y. Filed June 19, 1915. Serial No. 35,052. (Cl. 137—70.)



1. A hose or like conduit cleaning device comprising, a flexible spindle composed of a flexible core, a flexible tube sleeved on said core, a plurality of cleaning units strung upon said sleeve, and connecting heads fixed to said core and abutting against said sleeve and the endmost units to hold the latter in position, substantially as described.

2. A hose or like conduit cleaning device comprising, a flexible spindle composed of a flexible wire core, a flexible tubing sleeved on said core, a plurality of cleaning units strung upon said sleeve, metallic connecting heads, and devices for securing said heads to said core and in abutting relation with respect to said tubing and the endmost units, substantially as described.

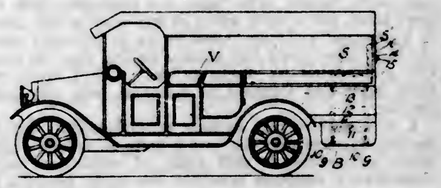
3. A hose or like conduit cleaning device comprising a flexible spindle composed of a flexible wire core and a coil spring sleeved on said core, a plurality of cleaning units threaded on said sleeve, and connecting heads anchored to said core in abutting relation with said resilient sleeve to hold the latter under compression and engage the endmost units, substantially as described.

4. A hose or like conduit cleaning device, comprising, a flexible spindle, circular bristle units strung on said spindle, and expansively acting spacing devices interposed between said units, substantially as described.

5. A hose or like conduit cleaning device comprising, a flexible spindle, a plurality of cleaning units disposed on said spindle, expansively acting spacing devices interposed between said units, and connecting heads secured to said spindle and holding said units thereon substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,218,006. COLLAPSIBLE SEAT FOR VEHICLES. JOSEPH J. SCHRAMM, St. Louis, Mo., assignor of one-half to Herman Kroemer, St. Louis, Mo. Filed May 8, 1916. Serial No. 96,202. (Cl. 21—43.)



In combination with a wagon body provided with a rear receptacle depressed below the plane of the floor of the wagon, said receptacle having its longitudinal axis disposed across the width of the wagon, toggle-links disposed on opposite sides of the respective axes of the receptacle and out of alinement transversely of the receptacle whereby fouling of the links is prevented in folding the same against the bottom of the receptacle, brace toggles connecting said toggle-links and foldable outwardly and downwardly through the bottom of the receptacle with a folding or collapse of the links aforesaid, complementary links coupled to the first mentioned links, a seat pivotally connected to the outer ends of the complementary links, a back hinged to said seat, and a transverse member for the support of the back when the parts are unfolded, the several parts being foldable into the receptacle as set forth.

1,218,007. CLOTH-CUTTING MACHINE. THOMAS SHINGLER, Detroit, Mich., assignor to Eastman Machine Company, Buffalo, N. Y. Filed Sept. 19, 1916. Serial No. 120,939. (Cl. 184—5.)



1. In a cloth cutting machine, the combination with an upright standard provided with a knife guide and a knife which reciprocates in said guide, of lubricating means comprising a lubricant reservoir supported at one side of the standard above the knife guide, and a feed passage leading from the reservoir and having its discharge end arranged

adjacent the upper end of the knife for lubricating the same.

2. In a cloth cutting machine, the combination with an upright standard provided with a knife guide and a knife which reciprocates in said guide, of lubricating means comprising a lubricant reservoir supported at an inclination above the knife guide, a feed passage leading from the reservoir and having its discharge end exposed at the front of the machine, and a guide arranged to receive the lubricant from the feed passage and direct it to the knife.

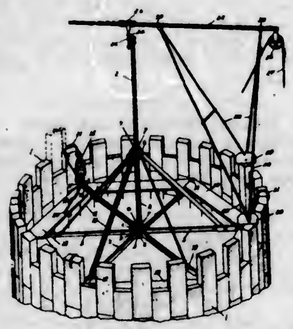
3. In a cloth cutting machine, the combination with an upright standard provided with a knife guide and a knife which reciprocates in said guide, of lubricating means comprising a lubricant reservoir supported at an inclination above the knife guide, a feed passage leading from the reservoir and having its discharge end exposed at the front of the machine, and a guide groove in the upper end of the standard arranged to receive the lubricant from the feed passage and connecting with the knife guide.

4. In a cloth cutting machine, the combination with an upright standard provided with a knife guide and a lubricant guide channel in its upper end connecting with the knife guide, and a knife which reciprocates in said guide, of a lubricant reservoir supported at an elevation above the knife guide, and a feed passage leading from the reservoir and having its discharge end exposed above the knife guide and arranged to discharge into said guide channel.

5. In a cloth cutting machine, the combination with an upright standard provided with a knife guide and a knife which reciprocates in said guide, of lubricating means comprising a lubricant reservoir detachably mounted on one side of the machine at an elevation above the knife guide, and a feed tube leading from the reservoir and arranged to discharge the lubricant to the knife guide, said reservoir and feed tube being detachable as a unit from the machine.

[Claim 6 not printed in the Gazette.]

1,218,008. DEVICE FOR USE IN ERECTING SILOS. HIRAM A. SMITH, Paw Paw, Mich. Filed Aug. 28, 1916. Serial No. 117,254. (Cl. 20—81.)



1. In a structure of the class described, the combination of a center post, collars secured to said post and provided with pivot ears, radiating arms pivoted to the ears of the lower collar, braces pivoted to the ears of the upper collar and detachably secured to said arms so that they may be detached therefrom and the arms and braces collapsed at the side of the post, platform members removably mounted on the outer ends of said arms, hoisting tackles secured to said arms, a hoisting boom, and struts for said boom adapted to rest on the wall and adjustable thereon.

2. In a structure of the class described, the combination of a center post, radiating arms pivotally mounted on said post, braces pivoted to said post and detachably secured to said arms so that they may be detached therefrom and the arms and braces collapsed at the side of the post, platform members removably mounted on the outer ends of said arms, hoisting tackles secured to said arms, a hoisting boom, and struts for said boom adapted to rest on the wall and adjustable thereon.

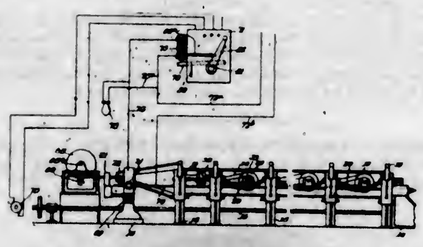
3. In a structure of the class described, the combination of a platform, a center post, a clip secured to the upper end of said center post having alined openings, a pivot pin having a U-shaped top mounted in said alined openings, a collar pivotally mounted on said U-shaped top, a boom, one end of which is slidably received in the opening of said collar, a hoisting mechanism at the opposite end of said boom, and struts intermediate the collar and the hoisting mechanism for supporting said boom.

4. In a structure of the class described, the combination of a platform, a center post, a clip secured to the upper end of said center post, a pivot pin having a U-shaped top mounted in said clip, a collar pivotally mounted on said U-shaped top, a boom, one end of which is slidably received in the opening of said collar, a hoisting mechanism at the opposite end of said boom, and struts intermediate the collar and the hoisting mechanism for supporting said boom.

5. In a structure of the class described, the combination of a platform, a center post, a clip secured to the upper end of said center post having alined openings, a pivot pin mounted in said clip, a collar pivotally mounted on said pin, a boom, one end of which is slidably received in the opening of said collar, and a hoisting mechanism at the opposite end of said boom.

[Claims 6 to 11 not printed in the Gazette.]

1,218,009. CABLE-WINDING MACHINE. WILLIAM E. SOMERVILLE, Coal City, Ill. Filed Dec. 26, 1914. Serial No. 879,010. (Cl. 28—21.)



1. A cable machine including a plurality of swifts, means for drawing wire from said swifts, and an electric motor for each swift for rewinding the wire on said swift.

2. A cable machine including a plurality of swifts, means for drawing wire from said swifts, and means for rewinding the wire on said swifts, including a pair of pulleys, a belt therefor, and yielding means for tensioning said belt.

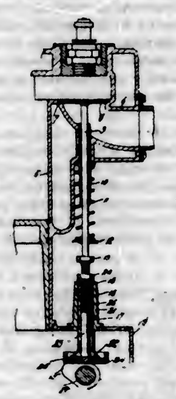
3. A cable machine including a plurality of swifts, means for drawing wire from said swifts, and means for rewinding the wire on said swifts, including a pair of pulleys, a belt therefor, and a pivotally mounted member on which one of said pulleys is rotatably mounted.

4. A cable machine including a plurality of swifts, means for drawing wire from said swifts, and means for rewinding the wire on said swifts, including a pair of pulleys, a belt therefor, and a pivotally mounted member on which one of said pulleys is rotatably mounted, and a spring connected to said pivotally mounted member for tensioning said belt.

5. A cable machine including a plurality of swifts and a rotatable wire guide, means for drawing wire from said swifts, and electrical means whereby when one of said wires breaks said drawing means will stop, including a conductor adjacent the path of the rotating wire whereby when the wire breaks it will come in contact with said conductor.

[Claims 6 to 9 not printed in the Gazette.]

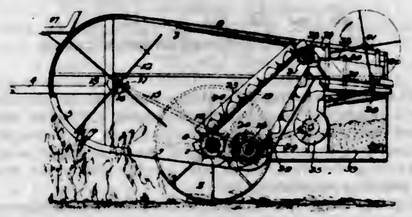
1,218,010. VALVE-OPERATING MECHANISM. ARTHUR SOSS, Seward, Nebr. Filed July 5, 1916. Serial No. 107,699. (Cl. 121—97.)



1. In a device of the class described, relatively slidable sections, means tending to separate the sections, a pocket carried by one of the sections for containing a cushioning fluid, and an impact receiving member of yieldable material arranged within the said pocket.

2. In a device of the class described, the combination with a valve and its stem, and an actuating member for the valve, of a push rod connection between the said stem and the said actuating member including relatively slidably connected sections, means tending to separate the sections, an adjustable abutment carried by one of the sections and engaging the said valve stem, an oil pocket carried by the other section, the under side of the said oil pocket engaging the said actuating member, the first mentioned member being provided with a head working in the oil pocket, and a cushioning disk arranged within the oil pocket and constituting an abutment for the said head.

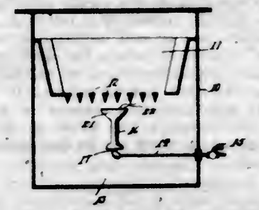
1,218,011. BEAN AND PEA HARVESTER AND SEPARATOR. ROBERT L. SPIKES, Farmville, N. C. Filed Feb. 7, 1916. Serial No. 76,637. (Cl. 56—1.)



1. In a harvester of the character set forth, the combination of gathering means, a longitudinally extending pan arranged to receive the product from the gathering means, a separator, an elevator arranged to convey the product from the pan to the separator, and a plate extending from and forming a prolongation of the bottom of the pan under the elevator to the separator.

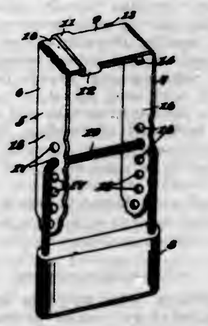
2. In a harvester of the character set forth, the combination of a frame having a cover provided with a downwardly curved front end, a pan disposed longitudinally of the frame at the bottom thereof and having an upwardly curved front end meeting the downwardly curved front end of the cover, a guide located centrally in the front end of the pan, a beater mounted within the frame above the guide and the front end of the pan and concentric with the curved front ends of the pan and the cover, and a conveyer at the rear of the pan, the pan having an upwardly extending prolongation arranged in proximity to the conveyer.

1,218,012. GAS-BURNER. HAMILTON C. STUART, St. Johnsbury, Vt. Filed Sept. 29, 1916. Serial No. 122,898. (Cl. 158—10.)



A stove including a fire box having a grate, a gas supply pipe entering the stove beneath the grate of the fire box and terminating in an upstanding nipple, and a burner mounted upon the nipple and including a tubular body having a bottom provided with a nipple receiving opening and air inlet openings positioned about the nipple receiving opening, the upper portion of the tubular body of the burner being formed into a flared head terminating in a transversely tapered upper portion having outlet openings at the upper edge and along the sloping sides of the head.

1,218,013. AUTOMOBILE-LOCK. CHARLES W. STUBB, Cincinnati, Ohio. Filed May 28, 1915. Serial No. 31,046. (Cl. 70—90.)



1. In a lock for automobiles the combination of a substantially U-shaped lock bar adapted to embrace the throttle and spark control levers and an arm of the steering wheel of the vehicle, and means adapted to lock the lock bar in position, said bar consisting of portions adapted to be adjusted relatively to one another to embrace control levers and steering wheel arms of varying dimensions.

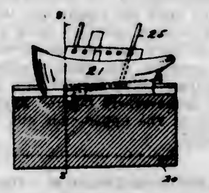
2. In combination in an automobile lock, a substantially U-shaped lock bar having a series of apertures in each of its legs, said bar consisting of portions adapted to be adjusted relatively to one another to embrace the spark and throttle control levers and an arm of the steering wheel of an automobile, and means adapted to engage the proper apertures to hold the spark and throttle levers against displacement.

3. A lock for automobiles comprising a substantially U-shaped lock bar adapted to engage the spark and throttle levers and an arm of the steering wheel of an automobile, said bar consisting of relatively adjustable members, each of said members having a portion adapted to coöperate with the corresponding portion of its coöperating member, means formed on said portions adapted to hold the por-

tions in sliding engagement and to prevent their displacement relatively to one another, the parts of the members forming the legs of the lock bar having a series of apertures formed therein, and a lock adapted to engage the proper apertures in the legs to prevent removal of the lock bar from the levers and the arm of the steering wheel.

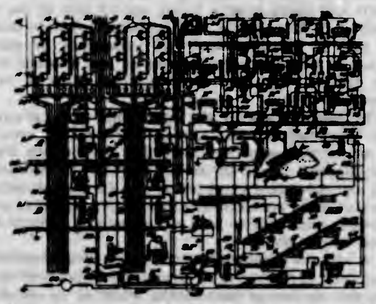
4. In a lock for automobiles the combination of a substantially U-shaped lock bar adapted to engage the spark and throttle levers and an arm of the steering wheel of an automobile, said bar consisting of relatively adjustable L-shaped members, one of said members having tongues formed thereon adapted to engage the other member and to permit relative sliding movement of the members, and lugs formed on the other member adapted to engage the tongues on the first mentioned member to prevent displacement of the members, the parts of the members forming the legs of the lock bar having means adapted to engage a lock.

1,218,014. PUZZLE. CHARLES H. SWARTWOOD, Everett, Mass. Filed May 10, 1915. Serial No. 26,965. (Cl. 46—41.)



A puzzle of the type described, including two elements slidably arranged with respect to each other, one having an undercut base receiving laterally extended base portions of the other, one of said elements having a longitudinal groove opening through its lower surface and terminating at one end in a lateral pocket, the other element having a notch opening through its upper surface and coincidently with said pocket, a shaft having attached thereto a plate intermediate said pocket and said notch, a lever fulcrumed intermediate the two first referred to members and having a lateral enlargement at one end arranged to be received by said notch, an endwise movable element arranged in one of said first-referred to elements and adapted to engage said lever, and a spherical member received within said pocket and adapted to be brought into a position over the enlargement of said lever.

1,218,015. METHOD AND SYSTEM OF SELECTIVE CHARACTER-DISPLAY. JOHN P. TARBOX, Washington, D. C. Filed Feb. 2, 1914. Serial No. 816,080. (Cl. 177—350.)



1. The method of selectively operating electric display boards which comprises selectively determining the characters to be displayed, operatively segregating individually from the remainder those characters it is desired to emphasize, and separately determining the quality of the display thereof independently of the determination of the quality of the remainder.

2. The method of selectively operating electric display boards which comprises selectively determining one by one the characters to be displayed, as they are selected, individually segregating operatively from the remainder those characters which it is desired to emphasize, and separately determining the quality of the display thereof independently of the determination of the quality of the remainder.

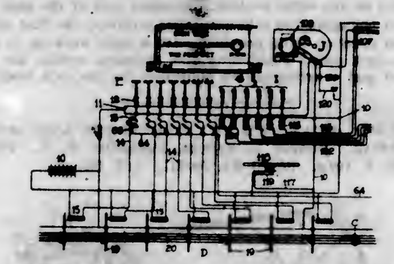
3. The method of character display from a number of consecutively arranged display positions which consists in selectively determining the characters to be displayed always in the same position, and thereafter progressively transferring the selected display from position to position in the order of succession of the same and producing new displays in the preceding positions.

4. The method of selective character display from a plurality of lines of display arranged in vertical succession which method consists in selectively determining the characters to be displayed always upon the bottommost line, and progressively transferring said display from line to line in order of vertical succession of the lines.

5. The method of selective character display from a plurality of display positions, which consists in initially selectively determining the characters to be displayed always in the same position, as they are selected, segregating from the remainder those characters it is desired to emphasize, determining the quality of display thereof independently of determination of quality of the remainder thereof, and thereafter progressively transferring the display from position to position in the order of succession thereof, and in the same quality as initially determined.

[Claims 6 to 31 not printed in the Gazette.]

1,218,016. DISPLAY-REGISTERING SYSTEM. JOHN P. TARBOX, Buffalo, N. Y. Filed Sept. 15, 1915. Serial No. 50,848. (Cl. 177—340.)



1. A character display system comprising in combination a display device, character selecting apparatus associated therewith and arranged to determine the characters displayed thereon, and a variable time controlled means controlling the duration of the display separately from the selecting apparatus.

2. A character display system comprising a display device, character selecting apparatus associated therewith and arranged to determine the characters displayed on said device, and automatic timing mechanism controlling the duration of the display independently of said selecting apparatus.

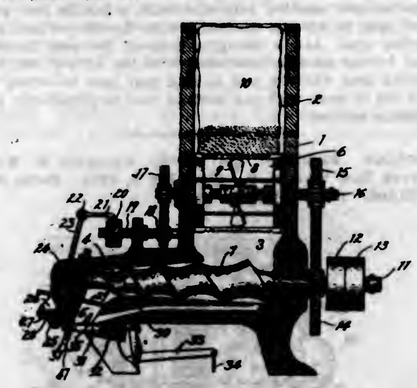
3. A character display system comprising in combination a display device, a character selecting apparatus associated therewith and arranged to determine the characters displayed thereon, a key-board for controlling the said character selecting apparatus, and timing mechanism controlling the duration of the selected display as a whole.

4. A character display system comprising a display device, power connections for the display device, a circuit breaker controlling said power connections, a timing element having various coördinate control connections with said circuit breaker, and variable switching means governing said control connections.

5. A character display system comprising display devices arranged in a plurality of lines spaced vertically apart, a character selecting apparatus connected therewith and arranged to determine the character of the display thereon line by line, together with a line writing typewriter mechanism and connected keyboard through which latter the character selecing apparatus is controlled, whereby the characters may be recorded in the precise line for line and space for space relation which they occupy in the display.

[Claims 6 to 40 not printed in the Gazette.]

1,218,017. APPARATUS FOR FILLING SHOE-BOTTOMS. ANDREW THOMA, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y., a Corporation of Maine. Filed Jan. 3, 1907. Serial No. 350,588. (Cl. 12—1.)



1. A machine for filling shoes, having in combination, a receptacle for filler, and means arranged to be controlled by a contour of the bottom of the shoe for causing said filler to be delivered to and confined within the bottom cavity within the welt thereof.

2. A machine for filling shoes, having in combination, a receptacle for filler, means for causing said filler to be delivered to a shoe within the shoe-bottom cavity thereof, and means governed with reference to the innersole rib for controlling the area to which said filler is delivered in such manner that said area always bears a fixed ratio to the width of the shoe-bottom cavity at each corresponding point throughout its length.

3. A machine for applying filler to the innersoles of shoes, having in combination, a receptacle for filler, and means arranged to be guided by the contour of the innersole cavity for controlling the area to which filler is delivered, said means arranged to become operative upon presentation of a shoe in operative relation to the machine.

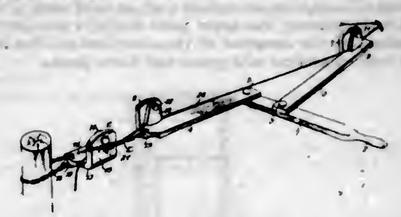
4. A machine for filling shoes, comprising mechanism for restricting the delivery of filler to the shoe bottom cavity, and including opposite controlling devices for engaging and following the rim of said cavity.

5. A machine for filling shoes, comprising a receptacle for filler having a delivery orifice, and width-gaging means operative in said orifice and arranged to be actuated by the portion of said shoe which is at said orifice at any given instant, as distinguished from portions of said shoe either forward or rearward from said orifice.

[Claims 6 to 15 not printed in the Gazette.]

1,218,018. WIRE-STRETCHER. MARTIN E. THOMAS, Guymon, Okla., assignor of one-fourth to John H. Lott and one-fourth to Ira A. Langston, Guymon, Okla. Filed Apr. 18, 1916. Serial No. 90,905. (Cl. 254—73.)

1. In a device of the class described, an operating lever, a pair of links extending therefrom and pivotally connected thereto, wire engaging means on the free ends of said links, a supplemental wire engaging means having flexible connection with one of said links, and means for attaching the same to a post or the like.



2. In a wire stretcher, a lever, a pair of links pivotally associated therewith, wire gripping means carried by the free ends of said links, a chain connected with the free ends of one of said links and having a clamping device associated therewith, said clamping device being adapted to engage a strand of wire adjacent its free end, and the gripping means carried by said links being adapted to alternately and intermittently engage a similar strand of wire when the lever is oscillated, whereby to cause said strands to overlap and facilitate splicing.

1,218,019. PIANO SOUNDING-BOARD. REINHOLD THOMAS, Brockport, N. Y. Filed Mar. 4, 1911. Serial No. 612,240. (Cl. 84—30.)



1. The method of constructing sounding boards which consists in supporting the flat board on a concave surface, positioning supporting ribs having straight engaging faces on top of the board with glue between said faces of the ribs and the board, applying pressure to the ribs and board to cause them to assume the curvature of the supporting surface, and maintaining the parts thus flexed until the glue hardens and the ribs are affixed to the board to retain the latter flexed when removed from the supporting surface.

2. The method of constructing sounding boards which consists in placing a plurality of flat ribs in contact with a flat board with glue between the board and ribs, arching the board and ribs, and holding the board and ribs in such arched position until the glue hardens.

3. The method of constructing sounding boards which consists in applying the board to a concave surface, positioning the ribs on the board with glue between, said ribs having their board-engaging faces non-concentric with the concave surface, applying pressure to the ribs and the board to force them into the concavity of said surface, and maintaining the parts thus flexed until the glue hardens and the ribs are affixed to the board.

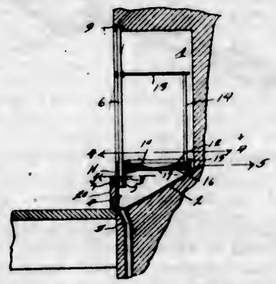
4. The method of constructing sounding boards which consists in placing a plurality of flat ribs in contact with a flat board, arching both the board and the ribs and securing the board and ribs together in such arched position.

5. The method of constructing sounding boards which consists in placing a plurality of ribs in contact with a board, arching both the board and the ribs, and securing the board and ribs together in such arched position.

1,218,020. UMBRELLA AND CANE HOLDER. SIDNEY CHAUNCEY WALLACE, Chicago, Ill. Filed June 1, 1916. Serial No. 101,113. (Cl. 45—88.)

1. In a holder for umbrellas and the like, the combination of a cavity semi-circular in cross section and formed in a side wall and a conical drain pan having a drain pipe secured in the bottom of the cavity, of a holder correspond-

ing in shape and fitting said cavity, and means for pivotally mounting the holder in the cavity, whereby the holder may be moved pivotally into and from the cavity, said holder comprising upper and lower plates, the lower plate having a conical upper surface and provided with a central drain opening, the upper plate having a plurality of openings for the reception of the umbrellas and the like, and rods connecting said upper and lower plates.



2. In a holder for umbrellas and the like, the combination of a cavity semi-circular in cross section and formed in a side wall and a conical drain pan having a drain pipe secured in the bottom of the cavity, of a holder corresponding in shape and fitting said cavity, and means for pivotally mounting the holder in the cavity, whereby the holder may be moved pivotally into and from the cavity, said holder comprising upper and lower plates, the lower plate having a conical upper surface and provided with a central drain opening, the upper plates having a plurality of openings for the reception of the umbrellas and the like, and rods connecting said upper and lower plates, said pivoting means for the holder comprising a vertical rod or shaft, bearings for said shaft, means for preventing axial downward movement of the shaft, said shaft extending through the front edges of the upper and lower plates and provided with means to prevent axial movement of the holder.

1,218,021. ADJUSTING AND LIFTING MEANS. JACOB WALTHER, Dayton, Ohio, assignor to The Dayton Steel Foundry Company, Dayton, Ohio, a Corporation of Ohio. Filed Dec. 1, 1916. Serial No. 134,240. (Cl. 74—27.)

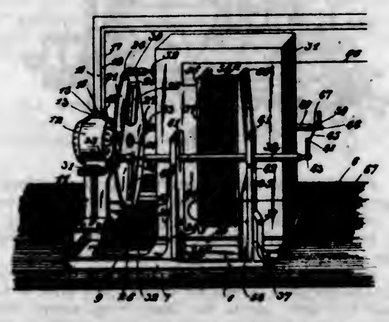


1. The combination with two members one of which is longitudinally adjustable relative to the other and provided with teeth in a side thereof, of an adjusting gear in mesh with said teeth and by means of which the distance between the ends of said members may be increased or decreased, a locking gear in permanent mesh with said adjusting gear and pivotally supported relative to said teeth of the adjustable member, said locking gear being adapted to disengage and engage said teeth of said adjustable member to permit adjustment thereof and to engage said teeth to lock the same in adjusted positions, substantially as specified.

2. The combination with two longitudinally adjustable members one of which is provided with transverse gear teeth, of an adjusting gear in mesh with said teeth, a locking gear pivotally supported adjacent to the adjusting gear and adapted to mesh or unmesh with said teeth, and a supporting member for said locking gear pivotally mounted upon the axis of the adjusting gear and whereby said locking gear may be swung out of mesh with the teeth of said adjustable member to permit adjustment thereof and swung into mesh with said teeth to lock said member in its adjusted position.

3. The combination with longitudinally adjustable members one of which is provided with transverse gear teeth, of an adjusting gear supported on the other of said members and meshing with said teeth, a locking gear pivoted upon an axis in alinement with the axis of said adjusting gear, and a swinging support for said locking gear having an axis coinciding with the axis of the adjusting gear whereby said locking gear may be swung in and out of mesh with the teeth of said longitudinally adjustable member.

1,218,022. ELECTRIC MACHINE. REINHOLD H. WAPPLER, New York, N. Y. Filed Jan. 4, 1916. Serial No. 70,103. (Cl. 175—364.)



1. In a device of the character described, the combination of a supporting frame provided with a base, a rectifying disk journaled upon said frame and having a general plane which extends vertically, a tank mounted upon said base and extending vertically upward therefrom, said tank containing an insulating material, and a transformer of longitudinal form resting upon said base and extending upwardly therefrom so as to be substantially parallel with said rectifying disk, said transformer being disposed partially within said tank, and located at the proximate level of said rectifying disk, and electrical connections extending from said transformer to said rectifying disk.

2. In a device of the character described, the combination of a supporting frame provided with a base, a rectifying disk journaled upon said frame and having a general plane extending vertically, a transformer supported by said base and extending vertically therefrom so as to be substantially parallel to said rectifying disk, said transformer being located at the proximate level of said rectifying disk, and electrical connections from said transformer to said rectifying disk.

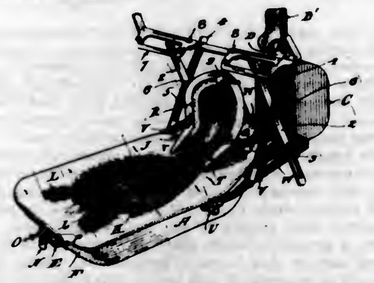
3. In a device of the character described the combination with a rectifying disk carrying contact sectors and connectors extending from one of said contact sectors to another, of brushes for engaging said contact sectors, a step-up transformer disposed adjacent said rectifying disk and having a secondary winding connected to said brushes, and wings carried by said disk for forcing a circulation of air adjacent said transformer, said brushes, said contact sectors and said connectors.

4. A device of the character described comprising a revoluble rectifying disk, a step-up transformer disposed adjacent said rectifying disk and having a secondary winding connected to said disk for the purpose of supplying thereto currents of high potential to be rectified, and mechanism controllable by movements of said disk for forcing a circulation of air against a portion of said transformer in order to prevent undue heating of said transformer while supplying said currents.

5. A device of the character described comprising a revoluble rectifying disk, a transformer located in proximity to said disk and electrically connected to said disk for the purpose of supplying thereto the currents to be rectified, a tank of insulating material in which a portion of said transformer is submerged so that another portion of said transformer is left exposed, said tank being disposed adjacent said disk, and mechanism controllable by movements of said rectifying disk for forcing a circulation of air against said tank and against the exposed portion of said transformer.

[Claims 6 and 7 not printed in the Gazette.]

1,218,023. BED-PAN. ARTHUR T. WEBSTER, Peoria, Ill. Filed Mar. 11, 1915. Serial No. 13,828. (Cl. 4—19.)



1. A device of the nature described including in its construction a pan terminating at one end in an enlargement extending perpendicularly to its plane and provided at its extremity remote from the pan with a communicating hollow extension having a concave extension at its end.

2. A device of the nature described comprising a pan terminating at one end in an enlargement extending perpendicularly to its plane adapted to receive the contents of the pan, and provided at its extremity remote from the latter with a tubular extension, the latter having a concave extension at its free end.

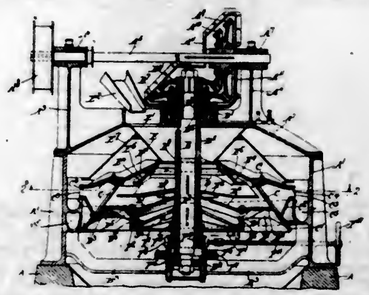
3. A device of the nature described including a broad flat pan having a communicating narrow neck at one end terminating in an enlargement extending perpendicularly to the plane of the pan and having a communicating tubular extension at its extremity farthest from said pan, said enlargement being otherwise closed and adapted to receive the contents of said pan.

4. A device of the nature described comprising a broad flat receptacle open at one of its broadest sides and contracted at one end into a narrow passage terminating in a communicating vessel extending in a direction perpendicular the plane of the receptacle, and a tubular extension connected into one of the walls of the vessel and communicating with that portion of said vessel lying most remote from the described passage, the axis of the opening through the wall for said extension being substantially perpendicular to the axis of said passage, said opening being nearest the wall of said vessel that lies nearest the receptacle.

5. A device of the nature described comprising a broad flat receptacle open at one of its broadest sides and contracted at one end into a narrow passage terminating in a communicating vessel extending in a direction perpendicular to the plane of the receptacle, and a tubular extension connected into one of the walls of the vessel and communicating with that portion of said vessel lying most remote from the described passage, the axis of the opening through the wall for said extension being substantially perpendicular to the axis of said passage, said opening being nearest the wall of said vessel that lies nearest the receptacle, the extremity of the tubular extension being open for a portion of its length at its side facing the receptacle.

[Claims 6 to 10 not printed in the Gazette.]

1,218,024. DRIER. CARL A. WENDELL, Joliet, Ill. Filed June 9, 1916. Serial No. 102,671. (Cl. 210—85.)



1. In a centrifugal drier, the combination of a frame, a pair of horizontal rotatable differentially geared members, one of said members being in the form of a delivery spout, the other of said members acting as a separating member whereby moisture is projected from the material by centrifugal action, a screen carried by said last named member, said screen being mounted at an angle to the vertical, and a trap mounted in said last named member, means for opening said trap whereby material forced against said screen by the centrifugal force is by the same force projected outwardly through said trap, and means independent of the rotation of the spout and receptacle for interrupting the operation of such trap opening means.

2. In a centrifugal drying machine the combination of a frame, a feed spout, a material receptacle containing a screen through which the water is expelled by centrifugal force and a normally closed discharge way, means for rotating the spout and the receptacle differentially, and means for intermittently opening the discharge way responsive to the relative rotation of the spout and receptacle, and means independent of the rotation of the spout and receptacle for interrupting the operation of the discharge way opening means.

3. In a centrifugal drying machine the combination of a frame, a feed spout, a material receptacle containing a screen through which the water is expelled by centrifugal force and a normally closed discharge way, means for continuously rotating the spout and the receptacle differentially, means for intermittenly opening the discharge way responsive to the relative rotation of spout and receptacle, and means independent of the rotation of the spout and receptacle for interrupting the operation of the discharge way opening means.

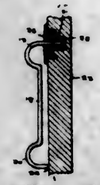
4. In a centrifugal drying machine the combination of a frame, a feed spout, a material receptacle containing a screen inclined at an angle to the axis of rotation and through which the water is expelled by centrifugal force and a normally closed discharge way, means for rotating the spout and the receptacle differentially, means for intermittently opening the discharge way responsive to the relative rotation of spout and receptacle, and means independent of the rotation of the spout and receptacle for interrupting the operation of the discharge way opening means.

5. In a centrifugal drying machine the combination of a frame, a feed spout, a material receptacle containing a

screen inclined at an angle to the axis of rotation and through which the water is expelled by centrifugal force and a normally closed discharge way, means for continuously rotating the spout and the receptacle differentially, means for intermittently opening the discharge way responsive to the relative rotation of spout and receptacle, and means independent of the rotation of the spout and receptacle for interrupting the operation of the discharge way opening means.

[Claims 6 to 13 not printed in the Gazette.]

1,218,025. COMBINED WINDOW LOCK AND SUPPORTER. DANIEL WIDMAYER, Los Angeles, Cal. Filed May 29, 1916. Serial No. 100,624. (Cl. 16—22.)



1. The combination with a window frame having a recess therein, and a sash mounted in the frame, of angle plates having openings therein carried by the sash, a latch having spring tension rotatably mounted on the window frame, and a hook formed on the opposite end of the latch for selective engagement with said angle plate openings and adapted to engage the frame recess through one of said angle plate openings to hold the sash in closed position.

2. The combination with a window frame having a recess therein, and a sash movably connected thereto, of a latch having a shank at one end and a hook at the opposite end, a retaining plate through which said shank extends, a bearing arranged on the shank end of the latch, means to attach said plate to the frame over the recess to retain the bearing in the said recess, and a plate carried by the sash having openings to selectively receive said hook, the hook being held in the openings by the spring tension of the latch.

1,218,026. X-RAY TUBE. FRED A. WIGGIN, Lawrence, Mass. Filed Oct. 5, 1916. Serial No. 123,943. (Cl. 250—35.)



1. An X-ray target, comprising a face of highly refractory metal, a backing metal of relatively high heat conductivity, and an intermediate metal or alloy having a co-efficient of expansion intermediate that of the refractory metal and said backing.

2. An X-ray target, comprising a face plate of highly refractory metal, a backing metal of relatively high heat conductivity, and an intermediate metal or alloy having a co-efficient of expansion intermediate that of the refractory metal and said backing, said intermediate metal constituting a binding medium between the refractory metal and said backing and being of sufficient extent to allow for the differences in expansion of the said refractory metal and said backing during use.

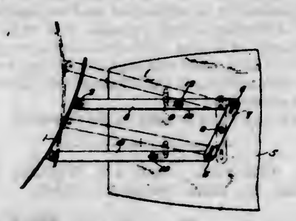
3. An X-ray target comprising a face plate of tungsten, a backing metal of relatively high heat conductivity, and an intermediate metal or alloy having a co-efficient of expansion intermediate that of the tungsten and said backing.

4. An X-ray target comprising a face plate of tungsten, a backing metal of relatively high heat conductivity, and an intermediate metal or alloy having a co-efficient of expansion intermediate that of the tungsten and said backing, said intermediate metal constituting a binding medium between the tungsten and said backing and being of sufficient extent to allow for the differences in expansion of the tungsten and said backing during use.

5. An X-ray target comprising a face plate of tungsten alloy, a backing metal of relatively high heat conductivity, and an intermediate metal or alloy having a co-efficient of expansion intermediate that of the tungsten alloy and said backing.

[Claims 6 to 8 not printed in the Gazette.]

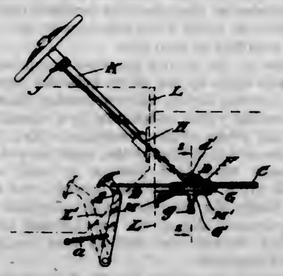
1,218,027. PROPELLING MECHANISM. WILLIAM P. WILKS, La Fayette, Ind. Filed May 19, 1916. Serial No. 98,607. (Cl. 115—31.)



1. The combination with a craft, of substantially parallel motion levers extending generally in a longitudinal direction with respect to the path of movement of the craft, a propelling blade pivotally connected to the outboard ends of said levers, a pivotal yoke connecting the inboard extremities of said levers, crank shafts journaled in the body of the craft and having their cranks operatively connected to said levers, and means for equally and simultaneously rotating said cranks in opposite directions.

2. The combination with a craft, of substantially parallel motion levers extending generally in a longitudinal direction with respect to the path of movement of the craft, a propelling blade pivotally connected to the outboard ends of said levers, a pivotal yoke connecting the inboard extremities of said levers, crank shafts journaled in the body of the craft and having their cranks operatively connected to said levers, means for equally and simultaneously rotating said cranks in opposite directions, means for equally and simultaneously rotating said crank shafts in opposite directions, said operating means comprising gears on said crank shafts, other gears interposed between and meshing with the first named gears, said gears for causing the latter to simultaneously rotate in opposite directions, and actuating means for one of said interposed gears.

1,218,028. AUTOMOBILE-SPEED-LOCKING DEVICE. VINCENT A. WILLIAMS, Saugatuck, Conn. Filed May 20, 1915. Serial No. 29,293. (Cl. 21—30.)



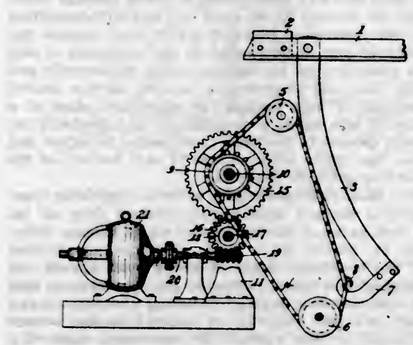
1. In an automobile, an accessory for improving the control, comprising a mechanism attachable to standard construction without modification, consisting of a bracket supported inside and protected by the hood and dash, a

ratchet and pawl supported on said bracket, links extending from said ratchet and pawl, the one attached to the speed control lever and the other supported on the steering pillar and having an operating lever, for the purpose described.

2. In an automobile, a supplementary speed control mechanism adapted to be attached to otherwise complete and standard construction, comprising pawl and ratchet mechanism, adjustable means for connecting the same to a support, and a support, all of said mechanism being inclosed within a protected part of said vehicle structure, links connecting said pawl and ratchet to parts outside of said protected mechanism, the one attached to the speed control lever and the other being secured to the steering pillar, and a lever for operating the latter, for the purpose described.

3. In an automobile, adjunct mechanism for supplementing the normal speed control lever, comprising a locking bar and a locking member, means for automatically disengaging the same, and a support therefor, all attached within a protecting inclosure, means extending from said mechanism through the dash and adjacent parts of a standard construction and connecting said mechanism respectively to the speed control lever and to a part in proximity to the steering wheel, and means on the latter member to cause actuation of said locking bar mechanism against the automatic release mechanism, for the purpose described.

1,218,029. MINE-CAR-DUMPING APPARATUS. WILLIAM A. WILLIAMS, Barton, Ohio. Filed Aug. 7, 1916. Serial No. 113,425. (Cl. 214—11.)

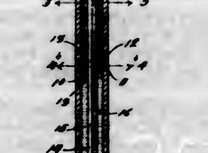


The combination with a dump platform having means whereby it is normally held in horizontal position, of a rigidly mounted brake-sword depending therefrom, an endless sprocket chain, suitably located pulleys over which said chain operates, a constantly driven shaft, a drive-sprocket loosely mounted on said shaft, a disk disposed in fixed relation to said sprocket, a shiftable friction clutch mounted on said shaft and rotatable therewith, means for shifting said clutch into and out of operative relation to said disk whereby rotation is communicated to said sprocket, and means connecting said brake-sword to said chain whereby when the latter is driven forward the former is elevated for moving said platform to inclined position.

1,218,030. CUSHION VALVE AND SEAT. ROY C. WITMER, Fitchburg, Mass. Filed Dec. 7, 1914. Serial No. 875,875. (Cl. 103—66.)

1. A check valve of the pulsating type comprising two members, to wit, a valve and its seat, one of said members being constructed with a substantially parallel-sided groove, in position to receive and retain fluid passing the valve, and the other of said members being constructed with an entering portion adapted to enter and trap fluid in said groove as the valve closes.

2. A check valve of the pulsating type comprising two members, to wit, a valve and its seat, one of said members being constructed with a substantially parallel-sided groove, in position to receive and retain fluid passing the valve, and the other of said members being constructed with an entering portion adapted to enter and trap fluid in said groove as the valve closes, said entering portion being also provided with parallel sides and being approximately of the same transverse dimensions as the groove.



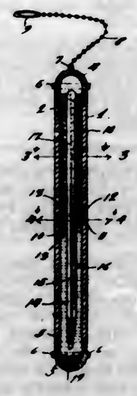
3. A check valve of the pulsating type comprising two members, to wit, a valve and its seat, one of said members being constructed with a substantially parallel-sided groove, in position to receive and retain fluid passing the valve, and the other of said members being constructed with an entering portion adapted to enter and trap fluid in said groove as the valve closes, said valve and seat being also constructed with seating faces on opposite sides of said cushioning means.

4. A check valve of the pulsating type comprising two members, to wit, a valve-seat having a hub and a rim, and a valve adapted thereto; said members being constructed with a two-part cushioning means comprising a groove and a flange entering said groove; one part of the cushioning means being located on the rim of the valve-seat, and the other part in a corresponding position upon the valve; said flange and groove being constructed to trap fluid between them as the valve closes.

5. A check valve of the pulsating type comprising two members, to wit, a valve-seat having a hub and a rim, and a valve adapted thereto; said members being constructed with a two-part cushioning means comprising a groove and a flange entering said groove; one part of the cushioning means being located on the rim of the valve-seat, and the other part in a corresponding position upon the valve; said valve and seat members being also provided with a two-part cushioning means located, the one part on the hub of the seat and the other part in a corresponding position on the valve.

[Claims 6 and 7 not printed in the Gazette.]

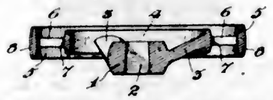
1,218,031. THERMOMETER-CASE. HARRY S. WRIGHT, Paris, Idaho. Filed Apr. 5, 1916. Serial No. 89,241. (Cl. 73—52.)



A case for a thermometer comprising a tubular body having closures at both ends and having an annular recess on the interior of the case substantially midway the

ends thereof, and an annular ring U-shaped in cross section fitting the annular recess and provided with a rubber washer in the U-shaped portion of the ring, through the opening of which washer the thermometer is inserted, a wad of sterilized or absorbent cotton on one side of the ring and on the interior of the case, and an antiseptic solution on the interior of the case upon the opposite side of the ring.

1,218,032. NON-HEATING VALVE HAND-WHEEL. DAVID ROBERT YARNALL, Philadelphia, Pa., assignor to Nelson Valve Company, Chestnut Hill, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 8, 1916. Serial No. 118,986. (Cl. 16—171.)



1. In a valve hand wheel, a valve wheel having two coaxial, radially-disposed annuli of different depth axially of the wheel, connected by an approximately central apertured web and that annulus which is of greater depth being also of larger diameter than the other, in combination with a hub and spokes connecting the hub and inner annulus.

2. In a valve hand-wheel, a hub, an annulus surrounding the hub, spokes connecting the hub and annulus extending at an angle to the radii of the annulus, a rim outside the annulus in radial line therewith having greater depth axially of the hub than the annulus and an apertured web connecting the annulus and rim.

3. In a valve hand wheel, a valve wheel having two coaxial annuli of different depth, axially of the wheel, connected by an apertured web to form a beam section, that annulus which is of greater depth being of the larger diameter and having its outer edge extending farther axially away from the valve than the annulus of lesser depth and diameter, in combination with a hub and spokes connecting the hub and inner annulus.

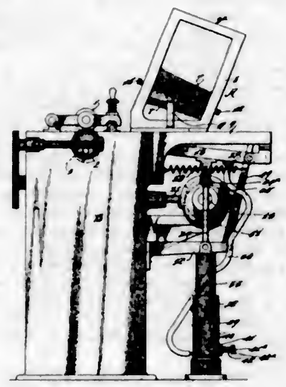
1,218,033. CONE-SHAPED REMOVABLE-BRIDGE SPLIT ATTACHMENT. JOHN YIRIKIAN, New York, N. Y. Filed Mar. 18, 1916. Serial No. 85,100. (Cl. 32—12.)



A cone shaped split attachment for attaching a removable bridge to an abutment in the mouth, comprising an abutment member having an opening in the inlay to receive the tubular split and of the interlocking connection extending from the bridge.

1,218,034. SHEET-FEEDING MACHINE. JOHN H. YOUNG, Randolph, N. Y., assignor to Borden's Condensed Milk Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 10, 1913. Serial No. 805,712. (Cl. 113—113.)

1. In a sheet-feeding machine, a chute comprising opposite parallel inclined sides having between them an inclined sheet-pathway dimensioned to admit passage therethrough by gravity of a stack of mutually-contacting sheets, the lowermost edges of which bear against the lowermost of said sides; carried by the uppermost of said sides at a therein medial location a deflector-stop having, projecting downwardly and inwardly into said pathway, an inclined surface shaped and disposed to bear against the uppermost edges of a plurality of said sheets simultaneously and gradually retard their descent in the chute; and, carried by the lowermost of said sides at a level lower than that of said deflector-stop, another deflector-stop having, projecting upwardly and inwardly into said pathway, a convex inclined surface shaped and disposed to bear against the lowermost edges of a plurality of said sheets simultaneously and gradually retard their descent in the chute.



2. In a sheet-feeding machine, a chute comprising opposite parallel inclined sides having between them an inclined sheet-pathway dimensioned to admit passage therethrough by gravity of a stack of mutually-contacting sheets, the lowermost edges of which bear against the lowermost of said sides; carried by the uppermost of said sides a deflector-stop having, projecting downwardly and inwardly into said pathway, an inclined surface shaped and disposed to bear against the uppermost edges of a plurality of said sheets simultaneously and gradually retard their descent in the chute; and means to adjust and maintain the degree of projection of said surface of the deflector-stop into the pathway.

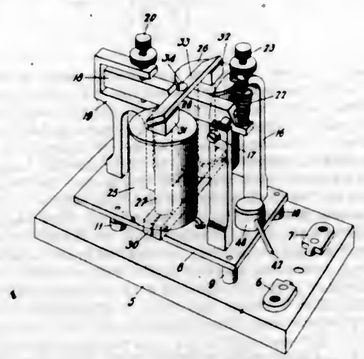
3. In a sheet-feeding machine, a chute comprising opposite parallel inclined sides having between them an inclined sheet-pathway dimensioned to admit passage therethrough by gravity of a stack of mutually-contacting sheets, the lowermost edges of which bear against the lowermost of said sides; carried by the uppermost of said sides a deflector-stop having, projecting downwardly and inwardly into said pathway, an inclined surface shaped and disposed to bear against the uppermost edges of a plurality of said sheets simultaneously and gradually retard their descent in the chute; carried by the lowermost of said sides at a level lower than that of said deflector-stop, another deflector-stop having, projecting upwardly and inwardly into said pathway, an inclined surface shaped and disposed to bear against the lowermost edges of a plurality of said sheets simultaneously and gradually retard their descent in the chute; and means to independently adjust and maintain the degree of projection of said surfaces of the deflector-stops relatively to each other in the pathway.

4. In a sheet-feeding machine, a chute comprising opposite parallel inclined sides having between them an inclined sheet-pathway dimensioned to admit passage therethrough by gravity of a stack of mutually-contacting sheets, the lowermost edges of which bear against the lowermost of said sides; carried by the lowermost of said sides adjacent the outlet of said chute a deflector-stop having, projecting upwardly and inwardly into said pathway an inclined surface shaped and disposed to bear against the lowermost edges of a plurality of said sheets simultaneously and gradually retard their descent in the chute; and, adjacent the outlet of said chute, a pair of fingers shaped and disposed to project oppositely to each other into said pathway and to bear against the opposite side-edges of said sheets at a level above that of the maximum projection of said surface of said deflector-stop into said pathway.

5. In a sheet-feeding machine, a chute comprising opposite parallel inclined sides having between them an inclined sheet-pathway dimensioned to admit passage therethrough by gravity of a stack of mutually-contacting sheets, the lowermost edges of which bear against the lowermost of said sides; carried by the lowermost of said sides adjacent the outlet of said chute a deflector-stop having, projecting upwardly and inwardly into said pathway an inclined surface shaped and disposed to bear against the lowermost edges of a plurality of said sheets simultaneously and gradually retard their descent in the chute; and, adjacent the outlet of said chute, a pair of yielding, resilient, fingers shaped and disposed to project oppositely to each other into said pathway and to bear against opposite side-edges of said sheets at a level above that of the maximum projection of said surface of said deflector-stop into said pathway.

[Claims 6 to 10 not printed in the Gazette.]

1,218,035. TELEGRAPH-SOUNDER. ROY M. ALLEN, East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 25, 1915. Serial No. 52,595. (Cl. 175—345.)

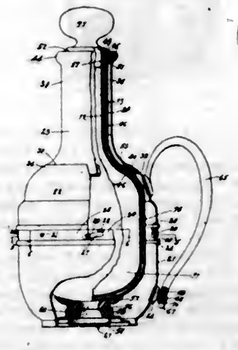


1. In a telegraph sounder, a pair of magnet coils, parallel cores therefor having pole pieces with faces lying in a plane inclined at an angle to the axes of said coils, a yoke upon which said cores and coils are vertically mounted, a pivotally supported sounder bar, an armature carried by said sounder bar coöperating with the faces of said pole pieces, a sliding plate to which said yoke is secured, and means coöperating with said sliding plate for moving the same whereby the air-gap between said pole pieces and said armature may be regulated.

2. In a telegraph sounder, a pair of magnet coils, parallel cores therefor having pole pieces with faces lying in a plane inclined at an angle to the axes of said coils, a yoke upon which said cores and coils are vertically mounted, a pivotally supported sounder bar, an armature carried by said sounder bar coöperating with the faces of said pole pieces, a sliding plate to which said yoke is secured, and a rotary stud carrying an eccentrically mounted screw which coöperates with a slot in said sliding plate for moving the latter, whereby the air-gap between the pole pieces and said armature may be regulated.

1,218,036. CARAFE AND CASING THEREFOR. GEORGE P. ALTENBERG, Cincinnati, Ohio, assignor to The Icy-Hot Bottle Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed Apr. 8, 1913. Serial No. 759,619. (Cl. 215—3.)

1. The combination with a frangible double-walled carafe vessel having a heat-insulating space between the walls thereof and comprising a wide body-portion, a long slender neck-portion and a breast between said last-named portions, a protecting casing for said carafe vessel comprising a wide body-portion and a long slender neck-portion, said body-portion composed of a plurality of wide body-sections, said wide-body sections comprising parts respectively at the top and bottom of said body-portion extending toward the longitudinal axis of said body-portion, a cushion between said breast and top-part, a cushion between the bottom of said carafe vessel and said bottom part, and a cushion between said long slender neck-portions of said carafe vessel and said casing, all said cushions being spaced from the longitudinal axis of said vessel and said first-named cushions located within the cylindrical projection of said body portion of said carafe vessel, said body-sections provided with means for drawing said body-sections toward one another whereby to compress said first-named cushions in the direction of said longitudinal axis and said last-named cushion perpendicular to said axis.



2. The combination with a double walled heat insulated carafe vessel, of a casing therefor comprising a plurality of wide body-members and a neck-member, said wide body-members comprising an upper body-member and a lower body-member having releasable connection therebetween, drawing said body-members toward each other lengthwise of the longitudinal axis of said carafe vessel, said upper body-member having an upper inwardly flaring end, said neck-member having a lower outwardly flaring end of greater diameter than said upper inwardly flaring end of said upper body-member and received under said inwardly flaring end of said body-member, and cushioning means between the said carafe vessel and said lower outwardly flaring end of said neck-member arranged to be compressed in directions lengthwise of said longitudinal axis by said releasable connection.

3. The combinations of a double-walled glass vessel having heat-insulating space between the walls of said vessel and formed with a wide body and a long neck, of a casing comprising a wide body-member and a long neck-portion, there being a joint between the upper end of said body-member and the lower end of said neck-portion, and an annularly arranged cushion between said casing and said carafe vessel approximately at said joint, the diameter of said annularly arranged cushion being less than the diameter of said wide body of said vessel, means acting on said joint for compressing said annularly arranged cushion in directions lengthwise of the longitudinal axis of said vessel, and an annularly arranged cushion between the mouth-ends of said neck-portion and said neck of said carafe vessel, said mouth-end of said neck of said carafe vessel received through said last-named annularly arranged cushion whereby said last-named annularly arranged cushion is compressed radially.

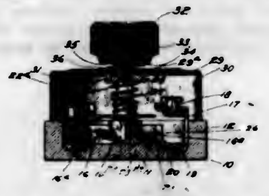
4. The combination with a carafe vessel of the character described having a wide body-portion and slender neck-portion, of a casing for said carafe vessel comprising an upper body-member and a lower body-member, releasable connecting means between said body-members, and a ham-

die connecting with both said body-members, said handle releasably connected to one of said body-members.

5. A casing for a carafe vessel of the character described comprising a plurality of body-members, a releasable connection therebetween, and a handle spanning said releasable connection and having connection with each of a pair of said body-members, said handle provided with a releasable connection for permitting separation of said last-named body-members.

[Claims 6 to 9 not printed in the Gazette.]

1,218,037. ELECTRIC SWITCH. HARRY N. ALTER, Chicago, Ill. Filed Mar. 13, 1914, Serial No. 824,515. Renewed Jan. 17, 1917. Serial No. 142,967. (Cl. 175—290.)

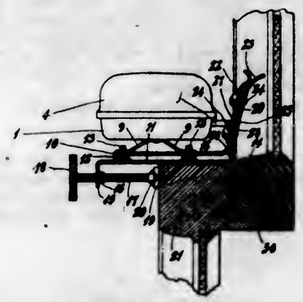


1. In a device of the class described, an insulating base having an annular shoulder extending transversely thereto at its outer edge, an integral central hub projecting from said base within said annular shoulder, said hub having a series of arcuate upwardly inclined surfaces formed thereon, each of said arcuate surfaces terminating in a shoulder adjacent the extremity of the adjacent arcuate surface, binding posts secured to said base and extending beyond said annular shoulder, contact plates formed integrally with said binding posts and seated upon alternate diametrically opposite arcuate surfaces of said hub, a shaft rotatably mounted in said hub concentric with said arcuate surfaces, a connecting plate reciprocably and non-rotatably mounted on said shaft and having flexible arcuate arms adapted to contact with said contact plates when the shaft is turned to proper position, a coiled spring mounted on said shaft and arranged to cause the connecting plate to engage said arcuate surfaces, and a cap engaging said shaft and seating upon said annular shoulder.

2. In a device of the class described, a circular insulating base having an integral annular shoulder extending upwardly therefrom at its outer edge, a central hub formed integrally with the base and projecting therefrom within said annular shoulder, whereby an annular channel is formed between the shoulder and hub, said hub having a series of arcuate upwardly inclined surfaces formed thereon each terminating in a shoulder at the extremity of the adjacent arcuate surface, said base having depressions formed in the lower wall of the channel, binding posts having terminals extending upwardly beyond said annular shoulder and having parts seating in said depressions to be engaged by screws passing through said base from the underside thereof, contact plates formed integral with the parts of the binding posts which seat in said depressions, said contact plates being arranged to seat upon alternate diametrically opposite arcuate surfaces, a connecting plate reciprocatingly and non-rotatably mounted on said shaft and having flexible arcuate arms adapted to contact with said contact plates when the shaft is turned to the proper position, a coiled spring mounted on said shaft and arranged to cause said connecting plate to engage said arcuate surfaces, and a cap engaging said shaft and seating upon the upper surface of said annular shoulder.

1,218,038. PORTABLE BURGLAR-ALARM. THOMAS P. AMBROSE, Cincinnati, Ohio. Filed Nov. 8, 1915. Serial No. 60,193. (Cl. 116—44.)

1. In a burglar alarm, in combination with a sound-producing device, operating means for the sound-producing device, motive means for the operating means, movable means to render the operating means inoperative, a mounting for the sound-producing device whereby it may be attached to one of two parts of a closure, engaging means to engage with and move the means that renders the operating means inoperative and thus render the operating means operative, an extension from this engaging means to extend, at a material angle to the direction of movement of said means that renders the operating means inoperative, between the two parts and to engage with the other part of the closure and hold the engaging means out of engaging position, and a movable support for said engaging means and said extension, on said mounting, adapted to automatically bring said engaging means into engaging position when said extension disengages from said other part of the closure.



2. In a burglar alarm, in combination with a sound-producing device, operating means for the sound producing device, motive means for the operating means, movable means to render the operating means inoperative, a mounting for the sound-producing device whereby it may be attached to one of two parts of a closure, engaging means to engage with and move the means that renders the operating means inoperative and thus render the operating means operative, an extension from said engaging means to extend, at a material angle to the direction of movement of said means that renders the operating means inoperative, between the two parts and to engage with the other part of the closure and hold the engaging means out of engaging position, and a movable support for said engaging means and said extension, on said mounting, adapted to automatically bring said engaging means into engaging position when said extension disengages from said other part of the closure, said engaging means being movable with respect to said extension, whereby it is adapted to be held out of position for engagement for rendering said operating means operative, so that when said engaging means is so held, said extension may disengage from said other part of the closure without rendering the operating means operative.

3. In a burglar alarm, in combination with a sound-producing device, operating means for the sound-producing device, motive means for the operating means, and means to render the operating means inoperative, a mounting for the sound-producing device whereby it may be attached to one part of a closure, engaging means to engage with the means that renders the operating means inoperative and thus render the operating means operative, an extension from this engaging means to engage with another part of the closure and hold the engaging means out of engaging position, means to automatically bring this engaging means into engaging position when said extension disengages from said other part of the closure, said engaging means being movable with respect to said extension, whereby it is adapted to be held out of position for engagement for rendering the operating means operative, so that, when said engaging means is so held, said extension may disengage from said other part of the closure without rendering the operating means operative, and means on said mounting, flanking said extension, to guard against moving of said movable engaging means by an instrument inserted between the parts of the closure.

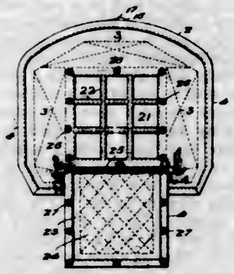
4. In a burglar alarm, in combination with a sound-producing device, operating means for the sound-produc-

ing device, motive means for the operating means, and movable means to render the operating means inoperative, a mounting for the sound-producing device whereby it may be attached to one part of a closure, engaging means to engage with and move the means that renders the operating means inoperative and thus render the operating means operative, an extension from this engaging means extending, at a material angle to the line of movement of said means that renders the operating means inoperative, alongside of and to engage with another part of the closure and hold the engaging means out of engaging position, and means to automatically bring this engaging means into engaging position when said extension disengages from said other part of the closure, said engaging means being remote from said extension and movable with respect thereto, whereby it is adapted to be held out of position for engagement for rendering the operating means operative, so that, when said engaging means is so held, said extension may disengage from said other part of the closure without rendering the operating means operative.

5. In a burglar alarm, in combination with a sound-producing device, operating means for the sound-producing device, motive means for the operating means, and movable means to render the operating means inoperative, a mounting for the sound-producing device whereby it may be attached to one part of a closure, engaging means to engage with and move the means that renders the operating means inoperative and thus render the operating means operative, an extension from this engaging means extending, at a material angle to the line of movement of said means that renders the operating means inoperative, alongside of and to engage with another part of the closure and hold the engaging means out of engaging position, means to automatically bring the disengaging means into engaging position when said extension disengages from said other part of the closure, said engaging means being remote from said extension and movable with respect thereto, whereby it is adapted to be held out of position for engagement for rendering the operating means operative, so that, when said engaging means is so held, said extension may disengage from said other part of the closure without rendering the operating means operative, and means on said mounting, flanking said extension, to guard against manipulation of said movable engaging means by an instrument inserted between the parts of the closure.

[Claims 6 to 11 not printed in the Gazette.]

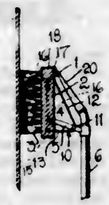
1,218,039. AUTOMOBILE HOOD AND RADIATOR COVER. CHARLES C. ANDERSON, Fargo, N. D. Filed Apr. 9, 1915. Serial No. 20,214. (Cl. 257—132.)



1. A cover for automobile radiators having an opening to expose the radiator, a flexible flap or lapel having a permanent, direct hinging connection with the cover section, and a plurality of fastenings disposed at different points on the flap or lapel and on the radiator cover section, whereby greater or lesser portions of the flap or lapel may be fastened to the cover section and utilized to cover greater or lesser portions of the aforesaid opening, said flap being free for flexing from its point of hinging to its free edge.

2. A cover for automobile radiators having an opening to expose the radiator, and a flexible flap or lapel having a permanent, direct hinging connection with the cover section, and equidistantly spaced fastenings on the cover section and on the flap, those on the flap being spaced apart the same distance as those on the cover section, whereby greater or lesser portions of the flap or lapel may be fastened to the cover section and utilized to cover greater or lesser portions of the aforesaid opening, said flap being free for flexing from its point of hinging to its free edge.

1,218,040. BRUSHING APPARATUS. IRA P. ARMSTRONG, Lock Haven, Pa. Filed Nov. 4, 1916. Serial No. 129,594. (Cl. 15—53.)



1. A device of the character described, comprising a brush, the back of which is provided with a socket, a handle having at its forward end a laterally extending stem adapted to be secured in said socket, a frame connected to the said stem, and embodying front and rear side bars, a relatively stationary cross bar, a hinged cross bar, each of said cross bars being formed with pins, and end binding strips secured to the back and formed with openings in which the pins are adapted to be inserted whereby the frame is detachably connected to the back of the brush.

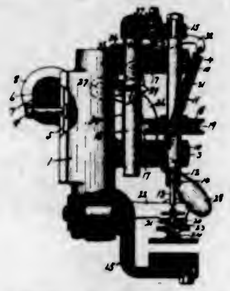
2. A device of the character described, comprising a handle provided at its forward end with a laterally extending stem, a brush, the back of which is formed with a socket engageable with said stem, a frame embodying front and rear side bars and cross bars, one of said cross bars being secured in fixed relation to corresponding ends of the front and rear side bars and the other cross bar having a hinged connection with the other end of one of said side bars and adapted to be secured to the corresponding end of the other side bar, said cross bars being formed with pins, and end binding strips secured to the back of the brush and formed with openings designed to receive said pins, said frame also embodying a ring to which the front and rear side bars are connected intermediate of their ends, the ring being adapted to be slipped over and upon the stem.

3. A device of the character described comprising a brush, a frame detachably connected therewith and embodying a ring, a handle detachably engaged with the brush, and a stem extending from the handle and insertible through the ring of the frame, the brush being provided with a socket to receive said stem.

1,218,041. LENS-DRILLING MACHINE. GUSTAV A. BADRA, Rochester, and CHAUNCEY W. HOWLAND, Geneva, N. Y., assignors to The Standard Optical Company, Geneva, N. Y., a Corporation of New York. Original application filed Sept. 12, 1912, Serial No. 719,950. Divided and this application filed Feb. 24, 1913. Serial No. 750,428. (Cl. 77—19.)

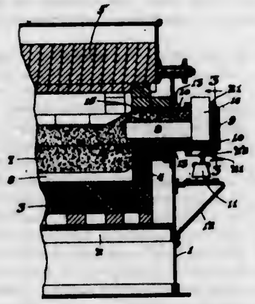
1. In a lens drilling machine, the combination with a frame, an axially movable drill spindle, a guide rod parallel therewith and a yoke connecting the spindle and rod to cause them to move endwise in unison, of coöperative stops mounted, respectively, on the frame and yoke for limiting the movement of the rod and spindle during the drilling operation, one of said members being a ring having stepped abutments within the planes of its opposite faces,

said ring being adjustable rotarily to register said abutments in sequence with the other member.



2. In a lens drilling machine, the combination with a frame, an axially movable drill spindle, a guide rod parallel therewith and a yoke connecting the spindle and rod to cause them to move endwise in unison, of coöperative stops mounted, respectively, on the frame and yoke for limiting the movement of the rod and spindle during the drilling operation, one of said members consisting of a rotarily adjustable disk having stepped abutments between its opposite end faces registrable one by one with the other member as the disk is rotated.

1,218,042. TERMINAL FOR ELECTRIC FURNACES. THADDEUS F. BAILY and FRANK T. COPE, Alliance, Ohio, assignors to The Electric Furnace Company, Alliance, Ohio, a Corporation of Ohio. Filed Apr. 27, 1915. Serial No. 24,233. (Cl. 204—64.)



1. A terminal for an electric furnace, comprising an electrode, a container surrounding said electrode, a loose refractory material located in said container and entirely surrounding said electrode and means for connecting the extremity of the electrode to supply mains.

2. A terminal for an electric furnace, comprising an electrode, a container surrounding said electrode, an oxidizable material located in said container and entirely surrounding said electrode, and means for connecting the extremity of the electrode to supply mains.

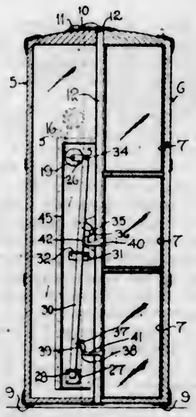
3. A terminal for an electric furnace, comprising an electrode, a container surrounding said electrode, a loose, refractory, oxidizable material contained in said container and entirely surrounding said electrode, laminated conductor strips connected to a supply main and means for clamping the laminated conductor strips to the extremity of the electrode.

4. A terminal for an electric furnace comprising an electrode, a container surrounding said electrode, means for supporting and insulating said container from the furnace, a loose, refractory, oxidizable material contained in the container and entirely surrounding the electrode, and means for connecting the extremity of the electrode to a supply main.

5. A terminal for an electric furnace comprising an electrode, a container surrounding said electrode, a loose, refractory, oxidizable material contained in said container and entirely surrounding said electrode, laminated conductor strips connected to a supply main, the extremities of said laminated conductor strips being located upon each side of the electrode, metal blocks located between each strip and the adjacent side of the container, a plate located upon each side of the container, adjacent the metal blocks, and means for drawing said plates toward each other.

[Claims 6 and 7 not printed in the Gazette.]

1,218,043. TRUNK-LOCK. CLEMENT DOUGLAS BARKSDALE, Petersburg, Va., assignor to Seward Trunk and Bag Company, Petersburg, Va., a Corporation of Virginia. Filed Sept. 27, 1916. Serial No. 122,459. (Cl. 70—115.)



1. The combination with a container having two relatively movable sections, of a keeper member fixed to one of said container sections, an exterior lock rotatably mounted upon the other container section, a movable locking element mounted upon the interior of the latter container section, and means operatively connecting said locking element to the exterior lock whereby in the rotation of said exterior lock, said locking element is longitudinally shifted and engaged with the keeper member on the other container section and then positively shifted in a lateral direction to exert a longitudinal pull upon the keeper member and move the container sections into tight engagement with each other.

2. In combination with two relatively movable trunk sections, a keeper fixed to one of the trunk sections, an exterior lock rotatably mounted upon the other trunk section, interior locking means on said trunk section including a shiftable bar carrying a locking element to co-act with the keeper, and a crank arm connecting said bar at one end to the rotatable lock whereby when said lock is rotated, the locking element on the bar is operatively engaged with the keeper to exert a positive longitudinal pull thereon and move the trunk sections into tight engagement with each other at their open sides, said crank arm being disposed in parallel relation to the shiftable bar when the trunk sections are locked.

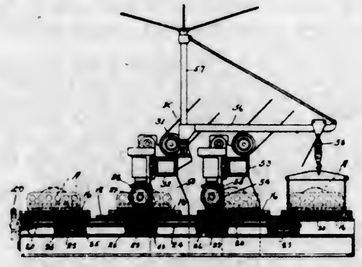
3. In combination with two relatively movable trunk sections, an exterior lock rotatably mounted upon one of said trunk sections, a crank arm connected to said lock and disposed within the trunk section, interior locking means including a bar rectilinearly shiftable in two directions upon said trunk section and operatively connected at one of its ends to said crank arm, spaced locking elements carried by said bar, guides for said bar, the bar coacting with one of said guides to limit the rotative movement of the exterior lock, and complementary fixed locking members secured within the other trunk section adapted to be engaged by the respective locking elements on the bar to positively force the two trunk sections into close abutting contact at their open sides in the movement of the exterior lock to its operative position.

4. In combination with two relatively movable trunk sections, an exterior lock rotatably mounted upon one of said trunk sections, a keeper fixed to the corresponding wall of the other section and projecting beyond the edge thereof, a laterally movable bar mounted within the first named trunk section, a guide for said bar fixed to the wall of the trunk section, a locking element carried by said bar, means operatively connecting the bar at one of its ends to the rotatable exterior lock whereby said bar is laterally moved in the guide and the locking element engaged with the keeper member to exert a positive lateral pull and force the trunk sections into close abutting contact at their open sides, one edge of the bar frictionally engaging the guide to limit the rotative movement of the exterior lock.

5. In combination with two relatively movable trunk sections, an exterior lock rotatably mounted upon one of said trunk sections, interior locking means including an actuator bar, a crank arm connected to the rotatable lock to which the upper end of said actuator bar is pivotally connected, a guide fixed to the trunk wall within which the other end of said bar has a rocking pivotal movement, a second guide for said bar, said latter guide constituting a stop to limit the lateral movement of the bar and the rotation of the exterior lock, spaced locking elements carried by said bar, and complementary fixed locking members on the other trunk section adapted to be engaged by said element when the exterior lock is rotated to positively force the two trunk sections into tight abutting contact at their open sides.

[Claims 6 to 8 not printed in the Gazette.]

1,218,044. MILLING-MACHINE. LORA ELMER BEAMAN, Cranston, R. I., assignor to The Beaman & Smith Co., Providence, R. I., a Corporation of Rhode Island. Filed Nov. 1, 1915. Serial No. 58,972. (Cl. 90—18.)



1. In a machine of the character described, a plurality of work tables, a plurality of rotatable driving elements arranged to successively engage each table to move them continuously in one direction along said support, said tables being disconnected except through said driving elements and each of said tables being at all times in engagement with at least one of said driving elements, and tools located along said support for operating upon the work carried on said tables.

2. In a machine of the character described, a plurality of tables, a plurality of spaced apart rotatable driving elements arranged at intervals along said support for successively engaging each table to pass each continuously in one direction along said support, said tables being disconnected except through said driving elements and each of said tables being at all times in engagement with at least one of said driving elements, and tools located along said support for operating upon the work carried on said tables.

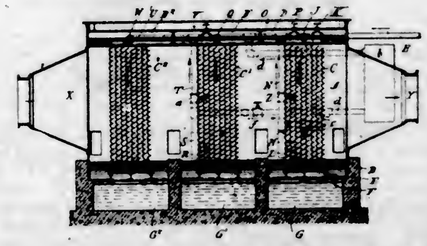
3. In a milling machine, a support, a plurality of work carrying tables movably mounted on said support, a driving shaft extending longitudinally along said support, a plurality of worms mounted at intervals along said shaft and a rack on each of said tables adapted to engage each worm successively to pass the tables along said support.

4. In a machine of the character described, a plurality of tables, a common support therefor, a plurality of spaced apart driving elements located at intervals along the support for successively engaging each table and passing it continuously along said support, the spaces between said elements being less than the length of one of said tables, and means for transferring said tables from the rear back to the front of said support.

5. In a milling machine, a bed, a plurality of tables set tandem on said bed, a plurality of spaced apart driving elements arranged at intervals along said support for successively engaging each table and passing it continuously along said support, the spaces between said elements being less than the length of said tables, and tools located along said support for operating upon the work carried by said tables.

[Claims 6 to 9 not printed in the Gazette.]

1,218,045. AIR-CONDITIONING APPARATUS. HARRY BENTZ, Montclair, N. J. Filed Sept. 4, 1914. Serial No. 860,166. (Cl. 261—114.)



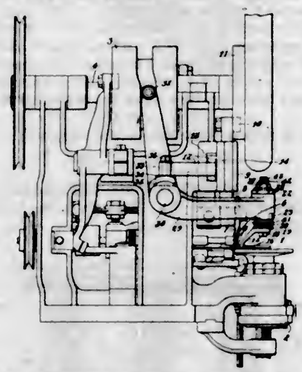
1. An air-conditioning apparatus including in combination a casing inclosing a single air chamber of uniform cross-section throughout substantially its entire length, means for passing a current of air horizontally therethrough, transverse contact plates arranged in a plurality of successive stages in said single chamber in the path of the air and means for flowing a body of water over said stages of plates in succession and in the reverse order of that in which they are engaged by the air current.

2. An air-conditioning apparatus including in combination a casing inclosing a single air chamber of uniform cross-section throughout substantially its entire length, means for passing a current of air horizontally therethrough, transverse contact plates arranged in a plurality of successive stages in said single chamber in the path of the air and means for flowing a body of water over said stages of plates in succession and in the reverse order of that in which they are engaged by the air current, the plates in each stage forming restricted passages for the air and the successive stages being separated from each other by a comparatively wide space, so that the velocity of the air is alternately increased in passing through a stage of plates and checked in passing from one stage to the next to precipitate free moisture therefrom.

3. An air-conditioning apparatus including in combination a casing inclosing a single air chamber of uniform cross-section throughout substantially its entire length, means for passing a current of air horizontally therethrough, transverse contact plates arranged in a plurality of successive stages in said single chamber in the path of the air and means for flowing a body of water over said stages of plates in succession and in the reverse order of that in which they are engaged by the air current, each stage of plates consisting of a group of sheds close together and each shed comprising a vertical column of plates with narrow spaces between them, so that the air

is subjected a number of times to the same water in passing through each stage of plates and is brought as nearly as practicable to the temperature of such water, the successive stages being separated from each other by a comparatively wide space, so that the velocity of the air is alternately increased in passing through a stage of plates and checked in passing from one stage to the next to precipitate free moisture therefrom.

1,218,046. INSOLE-REINFORCING MACHINE. FREDERIC E. BERTRAND, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 17, 1912. Serial No. 691,303. (Cl. 12—20.)



1. A machine for reinforcing insoles, having, in combination, a support for the insole, and means operating on opposite sides of the lip of the insole to form a bead or crimp in the reinforcing fabric and secure it to the insole comprising an inside former, movable toward and from the insole above the reinforcing fabric, and operating means therefor, and an oppositely disposed outside former, movable toward and from the insole above the reinforcing fabric, and operating means timed to actuate said outside former after the inside former has engaged and pressed the reinforcing fabric and while it remains in engagement therewith whereby the reinforcing fabric within the lip is held from displacement under the tension exerted on the fabric by the operation of the outside former, substantially as described.

2. A machine for reinforcing insoles, having, in combination, a support for the insole, means operating on opposite sides of the lip of the insole to form a bead or crimp in the reinforcing fabric and secure it to the insole comprising an inside former, movable toward and from the insole above the reinforcing fabric, and operating means therefor, and an oppositely disposed outside former, movable toward and from the insole above the reinforcing fabric, and operating means timed to actuate said outside former after the inside former has engaged and set the reinforcing fabric and while it remains in engagement therewith whereby the reinforcing fabric within the lip is held from displacement under the tension exerted on the fabric by the operation of the outside former, and means for advancing both formers while still in fabric-setting position to feed the insole, substantially as described.

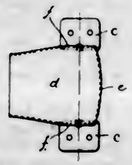
3. A machine for reinforcing insoles, having, in combination, a fixed outside former and a movable outside former above the reinforcing fabric for pressing said fabric to the insole, and an inside former arranged to overlap the movable outside former in the line of advance of the insole, substantially as described.

4. A machine for reinforcing insoles, having, in combination, an outside former, an inside former arranged to overlap the outside former in the line of advance of the insole, and means for varying the overlapping relation of the formers, substantially as described.

5. A machine for reinforcing insoles, having, in combination, an outside former, means to move said outside former into pressing engagement with the reinforcing fabric to secure it in the angle outside the lip, an inside former, and means to move said inside former into pressing engagement with the same portion of the reinforcing fabric to secure it in the angle inside the lip both before and after the operation of the outside former, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

1,218,047. ACCELERATOR FOOT-REST. HARRY L. BILL, Detroit, Mich. Filed Sept. 2, 1915. Serial No. 48,623. (Cl. 74—81.)



1. A foot rest for use in connection with foot controls, having in combination, a pivotal support, and a foot-supporting member having a foot supporting surface shaped to fit into the arch of one's shoe and having a concavity in its upper surface tending to prevent sidewise movement of the foot, said foot-supporting surface being supported materially above the pivotal support about which it rocks.

2. A foot rest for use in connection with foot controls, having in combination, a pivotal support, and a foot-supporting member for supporting one's shoe at the arch, the said foot-supporting member being rockingly supported on said pivotal support on an axis transverse to one's foot and the foot-supporting surface of the said foot-supporting member being materially removed radially from the swinging axis.

3. A foot rest for use in connection with foot controls, having in combination, a pair of upright brackets, and a foot-supporting member shaped to fit in the arch of one's shoe and pivotally supported on said brackets with the foot-supporting surface materially removed radially from the axis of pivoting.

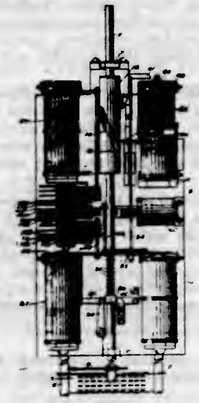
4. A foot rest for use in connection with foot controls, having in combination, a pair of upright brackets and a plate provided with turned-over sides pivotally secured to said bracket at points somewhat removed radially from the foot supporting surface of said plate, the said plate being arranged to fit into the arch of one's shoe and the pivoting being on an axis transverse of the foot.

5. A foot rest for use in connection with foot controls, having in combination, a pivotal support and a foot-supporting member, comprising a plate turned over at the sides and pivotally secured to the top of said brackets and turned over at the rear, the said foot-supporting member being arranged to fit into the arch of one's shoe and affording a foot-supporting member radially removed from the axis of pivoting which lies transversely of the foot.

1,218,048. AUTOMATIC SELECTING-SWITCH. JOHN G. BLESSING, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 29, 1912. Serial No. 687,044. (Cl. 179—27.5.)

1. In a telephone system, an automatic switch having downward and rotary selecting motions, both of said motions being past contacts, a relay having a pair of armatures having different time constants for controlling the operation and release of said switch, and an energizing circuit for said relay.

2. In a telephone system, an automatic switch having downward and rotary selecting motions, both of said motions being past contacts, a relay having a pair of armatures having different time constants for controlling the operation and release of said switch, and means for controlling said relay over a circuit including two sides of a line circuit in series.



3. In a telephone system, lines divided into groups, an automatic switch having contact arms, means for moving said arms downward in one plane to select groups and in a plane at right angles thereto to find a line in a selected group, step-by-step means for controlling the extent of operation of said arms, a relay having a pair of armatures having different time constants for controlling the operation and release of said switch, and an energizing circuit for said relay.

4. In a telephone system, an automatic switch having downward and rotary selecting motions, both of said motions being past contacts, a line relay for said switch, means for transmitting a plurality of impulses through said relay, a quick acting armature responsive to said impulses for controlling the operation of said switch, and a slow acting armature for said relay which is not responsive to said impulses for controlling the release of said switch.

5. In a telephone system, an automatic switch having downward and rotary motions, both of said motions being past contacts, a line relay for said switch, means for transmitting a plurality of impulses through said relay, a quick acting armature responsive to said impulses for controlling the operation of said switch, a slow acting armature for said relay which is not responsive to said impulses for controlling the release of said switch, and means for controlling said relay over a circuit including two sides of the line circuit in series.

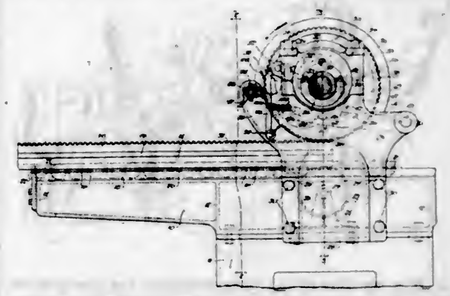
[Claims 6 to 17 not printed in the Gazette.]

1,218,049. PRINTING-PRESS. ABRAHAM T. H. BROWNE, Chicago, Ill. Filed Nov. 28, 1912. Serial No. 733,165. (Cl. 101—6.)

1. In a printing press, the combination with the frame, cylinder and reciprocating type bed, of eccentric bearings for said cylinder, shifters connected to said bearings to oscillate the same to raise and lower the cylinder, and a cam on said cylinder for operating said shifters at the ends of the movements of said bed, said cam coöperating with said shifters to hold the cylinder in raised position during the return movement of the bed.

2. In a printing press, the combination with a frame, cylinder and reciprocating type bed, of eccentric bearings for said cylinder, shifters for oscillating said bearings to raise the cylinder upon the return movement of the bed, and a double-path cam on said cylinder for operating said shifters, said cam having a controlling gate at the junction of the paths thereof.

3. In a printing press, the combination with the frame, cylinder and reciprocating type bed, of eccentric bearings for said cylinder, a pair of shift levers connected to said eccentric bearings, and a cam on said cylinder for operating said levers to thereby oscillate said bearings to raise the cylinder at the end of the forward movement and lower said cylinder at the end of the back movement.

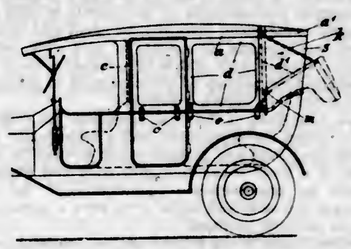


4. In a printing press, the combination with the frame, cylinder and reciprocating type bed, of eccentric bearings for said cylinder, a pair of shift levers connected together and to said eccentric bearings, and a double path cam on said cylinder for operating said levers, said cam having a controlling gate at the junction of the paths thereof.

5. In a printing press, the combination with the frame, of a type bed thereon, a cylinder geared to said bed to reciprocate the same as said cylinder is rotated in opposite directions, eccentric bearings for said cylinder, a double-path cam connected to rotate in opposite directions with said cylinder, and means operated by said cam for oscillating said bearings to lower and raise the cylinder at the ends of its movement.

[Claims 6 to 13 not printed in the Gazette.]

1,218,050. DETACHABLE COVER FOR OPEN MOTOR-CARS. HERMANN BRÜGGE, Hanover, Germany. Filed Sept. 23, 1915. Serial No. 52,213. (Cl. 21—14.)

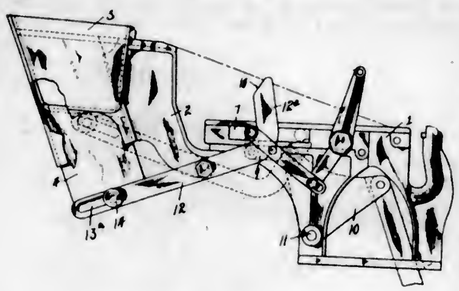


In combination with a motor car having a body, a top detachably mounted on said body, the forward portion of which is rigid and the rear portion having a pivoted connection at its lower end with the forward portion and adapted to fold backward, means connecting said rear portion and the forward portion for supporting the rear portion in its lowered position and locking means for holding the parts in closed position.

1,218,051. HOPPER-SLIDE-CONTROL MEANS FOR SHOE-BUTTON-FASTENING MACHINES. ALBERT BUEHLER, Toledo, Ohio, assignor, by mesne assignments, to The Toledo Button Machine Company, Toledo, Ohio, a Corporation of Ohio. Filed Jan. 10, 1916. Serial No. 71,330. (Cl. 218—8.)

1. In a button setting machine, the combination with a button elevating slide, and a reciprocally movable button setting plunger, said plunger and slide being movable in different planes, of a lever directly connecting said plunger and slide and operable by predetermined movements of

said plunger to elevate the slide and control its lowering movements.



2. In a machine of the class described, the combination with a button elevating slide, and a reciprocally movable plunger, of means connecting said slide and plunger and operable by predetermined movements of the plunger to elevate the slide and cause it to have a predetermined dwell in elevated position during a continued movement of the plunger.

3. In a machine of the class described, the combination with a button elevating slide, and a button setting mechanism having a plunger, said slide and plunger being reciprocally movable in different planes, of a lever connected at one end to said slide and having its other end angled substantially in L-form and in engagement with said plunger and operable by movements of said plunger in sliding engagement therewith to effect predetermined movements of said slide.

4. A machine of the class described having a button hopper, a button elevating slide reciprocally movable therein, a head frame, and a member reciprocally movable on said frame, in combination with a lever having one end in connection with said slide and its other end angled substantially in L-form and in sliding engagement with said member and operable by movements of said member in sliding engagement therewith to effect and control the raising and lowering movements of said slide, said lever having a surface with which said member coacts during a predetermined portion of its movement to maintain the slide at dwell in elevated position.

5. In a machine of the class described, the combination with a button elevating slide, and a reciprocally movable plunger, said slide and plunger being movable in different planes, of a lever connecting said slide and plunger and operable by predetermined movements of the plunger to elevate the slide and cause it to have a predetermined dwell in elevated position.

[Claims 6 and 7 not printed in the Gazette.]

1,218,052. METHOD OF TREATING THE FABRIC FOR POWER-TRANSMISSION BELTS. ERNEST L. BURRELL, Chicago, Ill. Filed Feb. 13, 1915. Serial No. 7,946. (Cl. 91—68.)



1. In the manufacture of power transmission belts from woven fiber belting material, the improved method of preparing the material which consists in subjecting it to the action of tannic acid, setting the tannin by means of a mordant, and then impregnating the same with a waterproofing compound.

2. In the manufacture of power transmission belts from woven fiber belting material, the improved method of preparing the material which consists in subjecting it to the action of tannic acid, setting the tannin by means of tartar emetic, and then impregnating the same with a waterproofing compound.

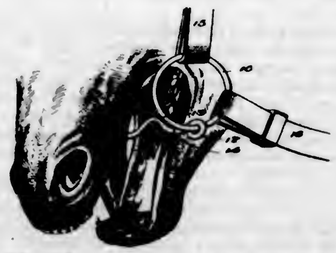
3. In the manufacture of power transmission belts from woven fiber belting material, the improved method of preparing the material which consists in subjecting it to the action of tannic acid and then impregnating the same with a heated water-proofing compound comprising substantially 66% wax tailings, 19% paraffin, and 15% lubricating oil.

4. In the manufacture of power transmission belts from woven fiber belting material, the improved method of preparing the material which consists in subjecting it to the action of tannic acid, impregnating the same with a waterproofing compound and then facing it with an asbestine dressing.

5. In the manufacture of power transmission belts from woven fiber belting material, the improved method of preparing the material which consists in subjecting it to the action of tannic acid, impregnating the same with a water-proofing compound and then facing it with an asbestine dressing compound containing a pigment.

[Claims 6 to 9 not printed in the Gazette.]

1,218,053. BIT. ANDREW J. CALHOUN, Rosalia, Wash. Filed Dec. 27, 1915. Serial No. 68,700. (Cl. 54—7.)



1. A bit of the character described comprising a bar having a lateral extension arranged to normally lie in parallelism with the mouth of the animal, and rings slidably connected to the ends of the bar and adapted normally to support the bar at their lower portions, said rings being arranged when drawn backwardly by the reins to slide said bar to the forward portions of the rings to turn the bar and project said extension downwardly between the gums of the lower jaw.

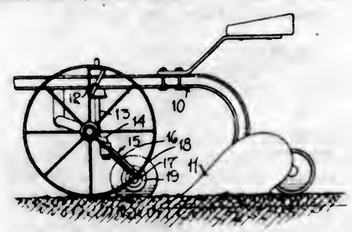
2. A bit comprising a pair of rings attached to the reins, and a bar free of said reins and slidably mounted on said rings, said bar being curved laterally at its middle portion to provide a wedge-shaped extension arranged to extend rearwardly toward the back of the horse's mouth and adapted for engagement between the gums of the lower jaw when pressure is exerted upon the reins.

3. A bit comprising a bar adapted to be either above or below the animal's tongue when lying loosely in the animal's mouth having a laterally offset portion intermediate its ends presenting diverging arms adapted to wedge in between the gums of the lower jaw, and means for turning said bar to move said bar beneath the animal's tongue and having said offset portion opposite the lower gums and for forcing the offset portion in between the gums.

4. A bit comprising a bar suspended from a pair of rings and adapted to rest loosely in the mouth of the animal above or below the tongue when no pressure on the reins is exerted, eyes upon the ends of the bar slidably mounted on the rings, and a laterally extending portion at the middle portion of said bar lying in the plane of the eyes and projecting toward the central axis of the rings, said bar being adapted to engage beneath the tongue when the reins are drawn taut.

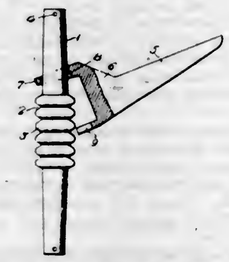
5. A bit comprising a pair of rings adapted to be suspended from cheek straps and attached to the reins, and a bar free of said straps and reins having eyes upon their ends mounted to slide upon the rings, said bar also having a lateral extension intermediate its ends for engagement with the gums of the horse's mouth and having forwardly curved portions at the ends of the bar to provide recesses to accommodate the cheeks of the animal, the said bar being adapted when the reins are drawn taut to slide upon the rings whereby to tilt said extension downwardly against the gums of the lower jaw of the animal.

1,218,054. DISK ATTACHMENT FOR PLOWS. IVAN CHAMBERS, Spencer, Ind. Filed Aug. 28, 1916. Serial No. 117,309. (Cl. 97—43.)



As a new article of manufacture, a colter supporting frame consisting of a tubular body and a plurality of pairs of rigid and substantially straight arms integrally connected with an end portion of the body and extending from the body in the same general direction and on an incline away from the body, the free ends of said rigid arms being spaced one from the other a predetermined distance and provided with alining openings, and a removable shaft inserted through the alined openings in the free extremities of the arms, said shaft being adapted to rotatably support a colter between each pair of arms.

1,218,055. SUPPORTING DEVICE. WILLIAM E. CLAYTON, Altoona, Kans. Filed Mar. 23, 1916. Serial No. 86,263. (Cl. 248—19.)

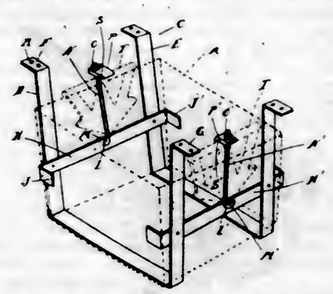


A device of the character described comprising a vertically disposed rod having an enlarged portion provided with a series of annular grooves forming a plurality of intervening annular locking shoulders, and a supporting member comprising a bracket bar having a horizontal upper supporting surface, said bar being enlarged vertically at one end to form a head provided with a pair of superposed arms at the upper and lower portions thereof, the upper arm being provided with an opening to receive and engage the rod, said opening being of greater diameter than the rod to permit the bracket bar to have pivotal motion in a vertical plane, and the lower arm being relatively shorter than the upper arm and bifurcated to form a fork to partially embrace the rod and interlock with any of said annular grooves between adjacent shoulders.

1,218,056. BATTERY-HOLDER. ROY E. COLE, Detroit, Mich., assignor to Liberty Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed May 20, 1916. Serial No. 98,859. (Cl. 105—267.)

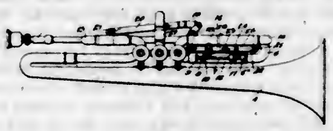
1. A battery holder, comprising a pair of spaced U-shaped strap members, and transversely-positioned strap members having offset flanges at their ends.

2. A battery holder, comprising spaced U-shaped strap members having outwardly-extending offset flanges at their upper ends, and cross-bars connecting said strap members and having inwardly-bent flanges.



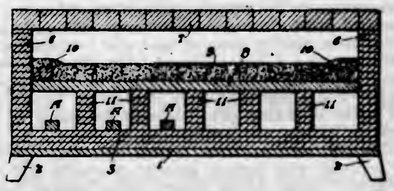
3. A battery holder, comprising a pair of supporting members having end uprights and connecting horizontal portions of a pair of strap members secured to the end uprights intermediate the ends thereof, said strap members having their ends bent at substantially right angles to form retaining flanges, and adjustable means engageable with the handle of the battery for locking same in position in said holder.

1,218,057. CORNET. CHARLES G. CONN, Elkhart, Ind. Filed Nov. 3, 1914. Serial No. 870,133. (Cl. 84—8.)



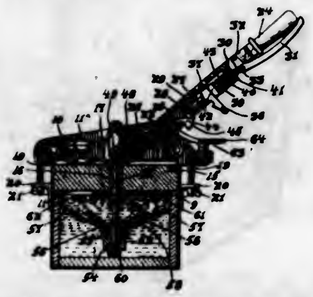
A cornet having two valve slides and a quick change or tuning slide, a rocker pivotally mounted on the fixed portion of the cornet, a link connecting one end of said rocker to one of said valve slides and a second link connecting the other end of said rocker to the second of said valve slides, lugs on one of said links, and means carried by the quick change or tuning slide adapted to contact alternately with said lugs, whereby the rocker is operated during part of the movement of the quick change or tuning slide to move the said valve slides, an adjustable stop being provided for the quick change or tuning slide to limit the movement thereof.

1,218,058. ELECTRIC FURNACE. FRANK T. COPE, Alliance, Ohio, assignor to The Electric Furnace Company, Alliance, Ohio, a Corporation of Ohio. Filed Apr. 27, 1915. Serial No. 24,232. (Cl. 204—64.)



In a resistance furnace, a refractory trough, a granular resistance material contained in said trough and spaced transversely disposed walls for supporting the refractory trough within the heating chamber of the furnace so that the trough is spaced upon all sides from the upper, lower and side walls of the furnace allowing circulation of air transversely around the refractory trough between said spaced walls.

1,218,059. SELECTIVE OIL-BREAK SWITCH. FRANK T. COPE, Alliance, Ohio, assignor to The Electric Furnace Company, Alliance, Ohio, a Corporation of Ohio. Filed May 13, 1915. Serial No. 27,793. (Cl. 175—282.)



1. In a switch of the character described, a contact strip, a plurality of contact plates located in alinement parallel with said contact strip, a movable bridge member arranged for selectively making contact between each pair of said contacts, means for automatically releasing said bridge member from contact before shifting said bridge member into the position to make contact with a different pair of contacts and means for preventing said bridge member from being moved until said contact is broken.

2. In a switch of the character described, an oil containing tank, a contact strip located in said tank, a plurality of contact plates located in alinement parallel to said strip, a rod mounted upon said tank, an operating handle slidably mounted upon said rod, an operating lever slidably mounted upon said rod, means for connecting said operating lever with said handle, means for disengaging said lever from said handle, and a short circuiting member carried by said lever and arranged to make selective contact with said contact strip and one of said contact plates.

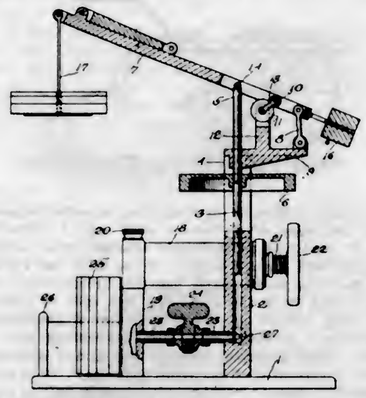
3. In a switch of the character described, an oil containing tank, a contact strip located in said tank, a plurality of contact plates located in alinement parallel to said strip, a rod mounted upon said tank, an operating handle provided with bifurcated arms, said bifurcated arms slidably mounted upon said rod, an operating lever slidably mounted upon said rod between said bifurcated arms, a spring pressed latch slidably mounted in said operating handle and arranged to engage one extremity of said operating lever, a hand grip pivotally mounted upon said hand lever and connected to said latch, and a short circuiting member carried by said lever and arranged to make selective contact with said contact strip and one of said contact plates.

4. In a switch of the character described, an oil containing receptacle, a contact strip located in said receptacle, a plurality of contact plates located in alinement parallel to said strip, a rod mounted upon said receptacle, an operating handle provided with bifurcated arms, said bifurcated arms slidably mounted upon said rod, an operating lever slidably mounted upon said rod between said bifurcated arms, a spring pressed latch slidably mounted in said operating handle and arranged to engage one extremity of said operating lever, a shoulder formed upon said latch, a locking pawl pivotally connected to said operating handle and adapted to be engaged by said shoulder, a notched strip carried by said receptacle and provided with notches adapted to receive said locking pawl, a loose spring pressed collar slidably mounted upon said latch, and adapted to engage said locking pawl, a hand grip pivotally connected to said hand lever and connected to said latch, and a short circuiting member carried by said lever and arranged to make selective contact with said contact strip and one of said contact plates.

5. In a switch of the character described, a plurality of pairs of contacts, a movable bridge member arranged for selectively making contact between each pair of said contacts and means for automatically releasing said bridge member from contact before shifting said bridging member into the position to make contact with a different pair of contacts.

[Claims 6 to 9 not printed in the Gazette.]

1,218,060. GAGE-TESTER. RICHARD C. COX, Boston, Mass., assignor to Crosby Steam Gage & Valve Company, Boston, Mass., a Corporation. Filed August 28, 1912. Serial No. 717,458. (Cl. 73—51.)



1. A pressure gage tester comprising in combination a cylinder; a piston therein; a lever engaging said piston and exerting a vertical pressure thereon; means for maintaining the direction of said pressure; means for connecting the interior of said cylinder with a pressure gage; and counterpoising means for said lever.

2. A pressure gage tester comprising in combination, a cylinder; a piston therein; a lever engaging said piston and fulcrumed on a link pivoted to said cylinder; said link; means for connecting the interior of said cylinder with a pressure gage; and counterpoising means for said lever.

3. A pressure gage tester comprising in combination, a cylinder, a piston therein; a lever engaging said piston and fulcrumed on a link pivoted to said cylinder; said link; a second counteracting link connecting said lever with said cylinder; means for connecting the interior of said cylinder with a pressure gage; and counterpoising means for said lever.

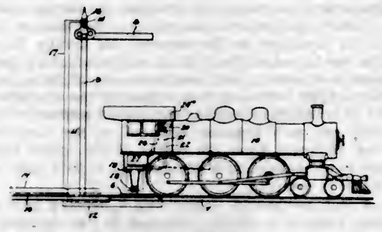
4. A pressure gage tester comprising in combination, a cylinder; a piston therein; a lever engaging said piston and fulcrumed on a link pivoted to said cylinder; said link; means for connecting the interior of said cylinder with a pressure gage; means for rotating said piston; and counterpoising means for said lever.

5. A pressure gage tester comprising in combination, a cylinder; a piston therein; a lever engaging said piston and fulcrumed on a link pivoted to said cylinder; said link; a second counteracting link connecting said lever with said cylinder; means for connecting the interior of said cylinder with a pressure gage; means for rotating said piston; and counterpoising means for said lever.

[Claims 6 to 9 not printed in the Gazette.]

1,218,061. AUTOMATIC SAFETY DEVICE. DAVID F. CRAWFORD, Pittsburgh, Pa. Filed Feb. 11, 1913. Serial No. 747,825. (Cl. 234—27.5.)

1. In railway service, a fluid actuated safety device of the character specified, a fluid actuated recording member, a connection from a source of fluid pressure, a valve for controlling said connection normally held in open position, a trip mechanism for releasably holding the valve in closed position, means for releasing said trip mechanism, and a movable member adapted to be marked by the recording member, said movable member being moved when the trip mechanism is reset.



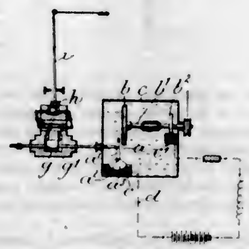
2. In combination in a safety device for locomotives, a signal, fluid pressure means for continuously operating the signal, a cut-off means therefor, means for holding the cut-off means in position to cut off the supply of fluid pressure, electrically operated means governed by the position of the locomotive for releasing the said means to supply fluid to the signal, a movable recording device for indicating the operation of the signal, and means whereby the resetting of the cut-off holding means advances the recording device in position for further recording.

3. In railway service, the combination with a signal device and a recording device, of means for simultaneously actuating the signal and the recording device to register the actuation of the signal upon a record, means for starting the actuation of the signal and recording devices, separate means for stopping the signal actuation, and separate means operated by such means for moving the record into another operative position.

4. In combination in a signal apparatus for railway service, a signal, a record, a means for perforating the record, means for simultaneously actuating the signal and the record perforating means, manually operable means for stopping the signal device adapted to move the record, and means for retracting the perforating means before the record moving means is actuated.

5. In a safety device, a signal, a recording mechanism for registering the operations of the signal, comprising a movable record, a recording member adapted to mark the record, fluid means for actuating the signal and recording member, a valve controlling the fluid, means for automatically opening such valve to operate the signal and the recording member, manually operable means for closing the valve and means actuated by the valve closing means for moving the record.

1,218,062. ELECTRIC SWITCH SUITABLE FOR USE IN TELEGRAPHY. FREDERICK GEORGE CREED, Croydon, England. Filed Aug. 24, 1914. Serial No. 858,260. (Cl. 175—282.)



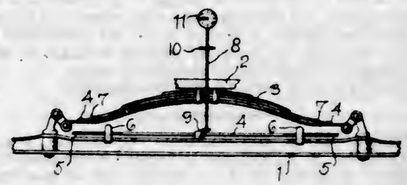
1. An electric switch comprising a rotary shaft, a disk carried thereby, means for rotating said shaft and disk, movable contacts adjacent to said disk and adapted to complete electrical connection therethrough, rods connected to said contacts, a cross head connected to said rods and insulated therefrom, and means for reciprocating said cross head whereby said contacts are moved into and out of engagement with the said rotary contact.

2. An electric switch comprising a rotary shaft, a disk carried thereby, means for rotating said shaft and disk, pivoted contacts adjacent to said disk and adapted to complete electrical connection therethrough, a reciprocating device, a cross head pivoted to said reciprocating device, links connecting said contacts to said cross head and means adapted to maintain said links and cross head substantially in the same relative position but capable of allowing of slight angular movement of said cross head in relation to said links.

3. An electric switch comprising a rotary shaft, a disk carried thereby, means for rotating said shaft and disk, pivoted contacts adjacent to said disk and adapted to complete electrical connection therethrough, a reciprocating device, a cross head pivoted to said reciprocating device, links connecting said contacts to said cross head, a spring blade fixed to said pivoted cross head and stops between which said blade can work.

4. An electric switch, comprising a rotary shaft, a drive means for said shaft, a disk carried by said shaft, pivoted contacts adjacent the disk on opposite sides and completing the contact through the disk, rods pivotally connected to the said contacts intermediate their pivoted ends and contact points, an insulated cross-head connected to said rods and means for moving said cross-head whereby the pivoted contacts are moved in and out of engagement with the said rotary contact.

1,218,063. SPRING. GEORGE E. CUTLER, Mount Vernon, N. Y. Filed Nov. 7, 1914, Serial No. 870,845. Renewed Aug. 23, 1916. Serial No. 116,533. (Cl. 21—50.)



1. The combination with a support, a load receiving body, and a spring interposed therebetween; of means for adjusting the tension of the spring in accordance with the load carried by the load receiving body, and means under control of the adjusting means for indicating the tension of the spring under the influence of the first named means.

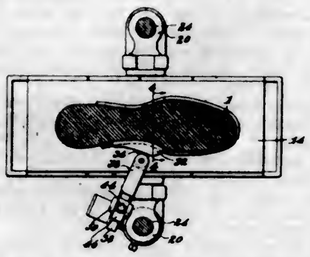
2. The combination with a support, a load receiving body, and a spring interposed therebetween and normally under a minimum of tension; of movable means coacting with the spring for increasing the tension thereof, mechanism for imparting movement to said means, and means under control of the operating mechanism for indicating the tension of the spring under the influence of the movable means.

1,218,064. SOLE-PRESSING MACHINE. HERMAN A. DAVENPORT, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 3, 1915. Serial No. 25,478. (Cl. 12—33.)

1. A sole laying machine, having in combination, a shoe supporting jack, a coöperating pressing pad, a sole edge support, and means for automatically moving the support from an inoperative position out of engagement with the shoe into an operative position in engagement with the shoe to support the edge of the sole prior to the engagement of the pressing pad with the outsole of the shoe.

2. A sole laying machine, having in combination, a shoe supporting jack, a coöperating pressing pad, a sole edge support, and means for automatically moving the support

from an inoperative position out of engagement with the shoe into an operative position in engagement with the shoe and for maintaining the support in operative position to support the edge of the sole prior to and during the engagement of the pressing pad with the outsole of the shoe.



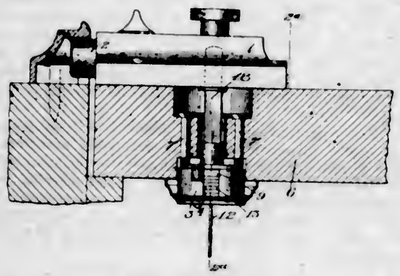
3. A sole laying machine, having in combination, a shoe supporting jack, a coöperating pressing pad, mechanism for actuating the pad, a sole edge support, and mechanism actuated by the movement of the pad for moving the support from an inoperative position out of engagement with the shoe into an operative position in engagement with the shoe prior to the engagement of the pressing pad with the sole.

4. A sole laying machine, having in combination, a shoe supporting jack, a coöperating pressing pad movable toward and from the jack, a sole edge support, and mechanism operatively connected with the pad for moving the support both into and out of operative position.

5. A sole laying machine, having in combination, a shoe supporting jack, a pressing pad, a slide supporting the pad, a sole edge support, a pivoted lever, and connections between the slide and lever for rocking the lever to move the support into and out of operative position.

[Claims 6 to 11 not printed in the Gazette.]

1,218,065. LOCK MECHANISM. WILLIAM F. DIESEL, Rochester, N. Y., assignor to Sargent & Greenleaf Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 11, 1915. Serial No. 55,141. (Cl. 70—46.)



1. A lock mechanism comprising a housing having an opening therein, a barrel arranged in the housing and provided with an opening normally in coincidence with the opening in the housing, an axially disposed post in the barrel, a plurality of tumblers having guiding openings coöperating with said post and slidable thereon radially of the barrel into and out of engagement with the opening in the housing, springs engaging the tumblers and acting to retain them normally in locked relation with the housing, and cam surfaces on the tumblers adapted to be engaged by a key to effect sliding of the tumblers, and a controlling member carried by the barrel.

2. A lock mechanism comprising a housing, a barrel rotatively arranged in the housing, a plurality of tumblers normally holding the housing and barrel in locked relation and movable to release the barrel and permit it to rotate, and cam surfaces disposed on the tumblers at varying distances from the center of the barrel adapted to be engaged by a key to effect sliding of the tumblers and springs acting to return the tumblers to normal position.

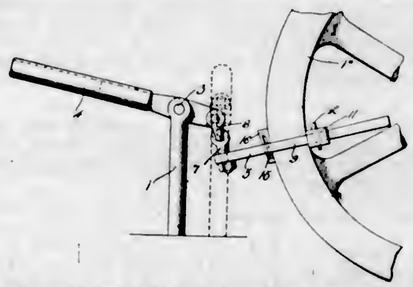
3. A lock mechanism comprising a housing, a barrel rotatively arranged in the housing, an axially disposed post in the barrel, a plurality of tumblers having guiding openings coöperating with said post and slidable thereon radially of the barrel, springs engaging the tumblers and acting to retain them normally in locked relation with the housing, and cam disposed surfaces on the tumblers at varying distances from the center of the barrel and arranged to be engaged by a key inserted in said post, when the latter is rotated.

4. A lock mechanism comprising a housing having an opening therein, a barrel arranged in the housing and provided with an opening normally in coincidence with the opening in the housing, a plurality of tumblers slidable radially of the barrel into and out of engagement with the opening in the housing, springs engaging the tumblers and acting to retain them normally in locked relation with the housing, and cam surfaces disposed on the tumblers at varying distances from the center of the barrel and arranged to be engaged by a key when inserted and rotated within the barrel to effect sliding of the tumblers.

5. A lock mechanism comprising a housing having oppositely disposed openings therein, a barrel arranged in the housing and provided with openings normally in coincidence with the openings in the housing, an axially disposed post in the barrel, a plurality of tumblers having guiding openings coöperating with said post and slidable thereon radially of the barrel into and out of engagement with the openings in the housing, springs engaging the tumblers and acting to retain them in locked relation with the housing, cam surfaces on the tumblers disposed at varying distances from the center of the barrel and adapted to be engaged by a key to effect sliding of the tumblers, and a controlling member carried by the barrel.

[Claim 6 not printed in the Gazette.]

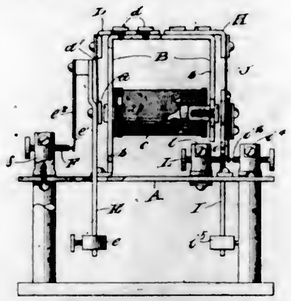
1,218,066. HOISTING-JACK FOR FLY-WHEELS. FRANCIS F. EMORY, Fitchburgh, Mass. Filed Feb. 16, 1916. Serial No. 78,717. (Cl. 105—132.)



1. A device as specified, including an arm engageable with the rim of a fly wheel, means adjustably mounted on said arm to engage one periphery of the rim, a shoe on said arm to engage the other periphery of the rim, said shoe conforming to the contour of the wheel and being loosely mounted to automatically snugly engage the rim when the arm is elevated, and mechanism to elevate said arm.

2. A device as specified, including a supporting standard, an arm comprising a heel portion having a portion of one of its ends extended to provide a bar, the inner face of which is corrugated, a member extended from said heel in parallelism with the bar, a shoe movably carried between said member and said bar, and adapted for engagement with the rim of a fly wheel, a block movably mounted upon said bar for engagement with the rim of a fly wheel for coöperation with said shoe, means mounted in said block and engaging any one of said corrugations, to rigidly engage the rim of the fly wheel with said bar, and a handle movably mounted upon said supporting structure and in connection with said arm for moving the latter, whereby motion is imparted to said fly wheel.

1,218,067. POLE-CHANGER. CHARLES J. ERICKSON, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 18, 1910. Serial No. 538,596. (Cl. 175—352.)



1. In a pole changer, an electromagnet, two independently operating armatures for said magnet, an interrupter operated by one of said armatures, contacts operated by the other armature, a pendulum carried by the armature which operates the interrupter, and a transformer comprising a primary circuit having a plurality of windings terminating in said other armature and its contact, means for controlling said other armature by means of a pendulum to maintain the induced currents in the secondary in synchronism with said first armature, and a secondary responsive to the operations of said armature to produce an alternating signaling current.

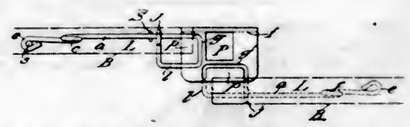
2. In a pole changer, a circuit, a transformer secondary in said circuit, a battery, an electromagnet, contacts operated by said magnet for interrupting the current-flow in the winding thereof, and means including two transformer primaries controlled alternately by said magnet for reversing the polarity or magnetic effect of the said transformer, whereby an alternating signaling current is induced in the said secondary, a pair of armatures for said magnet, one of said armatures controlled by a pendulum for the purpose of maintaining the induced currents in the secondary in synchronism with said other armature.

3. In a circuit controller, a magnet, an armature for said magnet, an interrupter for said magnet, a battery, an energizing circuit for said magnet, said interrupter in said circuit, another armature for said magnet, a primary circuit, an interrupter for said primary circuit, an interrupter for said primary circuit under the control of said other armature, a second circuit inductively related to said primary circuit, adjustable means for controlling said other armature to maintain the induced currents in the second circuit in synchronism with said first armature.

4. In a circuit controller, a magnet, an armature for said magnet, an adjustable pendulum for said armature to regulate the action of the armature, an interrupter for said magnet, a battery, an energizing circuit for said magnet, said interrupter in said circuit, another armature for said magnet, a primary circuit, an interrupter for said primary circuit under the control of said other armature, a second circuit inductively related to said primary circuit, an adjustable pendulum for controlling said other armature to maintain the induced currents in the second circuit in sychronism with said first armature.

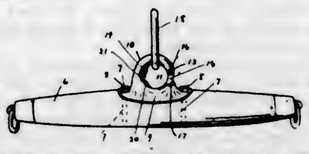
1,218,068. FASTENER FOR BLINDS OR SHUTTERS. SYLVANUS C. EVANS, Providence, R. I. Filed Oct. 21, 1916. Serial No. 126,890. (Cl. 16—28.)

1. In a fastener for window-blinds, shutters or the like, the combination of a substantially flat latch-plate formed with beveled edges with U-shaped grooves therein, and a wire spring-latch adapted to be fastened to the under side of the blind and provided with a rectangular loop having its side and end arranged to seat in the grooves of the latch-plate when the blind is in either open or closed position.



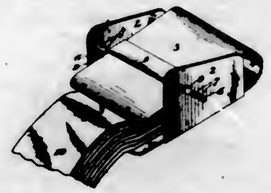
2. In a fastener for window-blinds, shutters or the like, the combination of a substantially flat latch-plate formed with U-shaped grooves on its upper face and provided with a flange for fastening it to the side of the building, and a wire spring-latch formed with an eye for fastening it to the under side of the blind and provided at its end with a rectangular loop adapted to slide across the face of the latch-plate and to seat in the grooves thereof to lock the blind in either open or closed position.

1,218,069. FASTENER FOR BREAST-YOKES AND THE LIKE. WILLIAM F. FERGUSON, Rome, N. Y. Filed June 29, 1914. Serial No. 847,880. (Cl. 21—77.)



A detachable fastener for breast yokes and the like, comprising a base portion adapted to be secured to the breast yoke and a C-shaped hook rigidly extending therefrom and having its opening at one side adjacent the base, having its main aperture extending farther from the base than the opening of the hook and having opening from the main aperture and opposite the hook opening a relatively small recess between the base and the outer portion of the main aperture, a latch hinged to the free end of the hook adapted to close the hook opening and to swing inwardly adjacent to and past said recess and a draw link adapted to be inserted through the opening of said hook and adapted to pass said latch and into the outward part of the main aperture, its normal working position, only by being first temporarily placed in said recess while said latch is swung back toward closed position, and able to be removed from the hook and out past said latch only by being again temporarily placed in said recess while the latch is swung past the draw link.

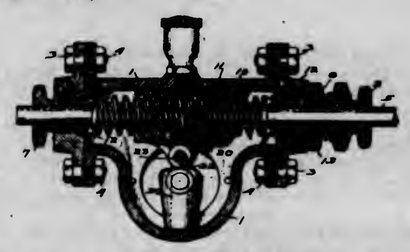
1,218,070. HOLDER FOR NECKTIES AND THE LIKE. FISCHEL FISCHLOWITZ, St. Louis, Mo. Filed Jan. 17, 1916. Serial No. 72,601. (Cl. 24—255.)



In a holder for ties and the like, an approximately flat base, a pair of spaced apart side walls upstanding from said base and provided with alining downwardly and rearwardly disposed rack-slots, said base being longitudinally extended rearwardly and doubled upon itself at its rear end to provide a spring-tongue, said tongue projecting forwardly between said side walls and above said base and being yieldable vertically at its free end relatively to the

base, a bar extending transversely between said side walls and across said tongue, and projections on said bar fitting in said slots and adapted to engage the racks thereof for adjustably securing said tongue against yieldable movement upwardly from the base, said bar with its said projections being slidably movable relatively to said tongue.

1,218,071. STEERING-GEAR. CHARLES L. FLORA, Toledo, Ohio, assignor of one-half to Fred N. Laubenthal, Toledo, Ohio. Filed July 5, 1916. Serial No. 107,536. (Cl. 74—79.)



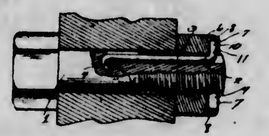
1. In a steering gear, the combination of a pivotally supported socket member, a pin located in the socket member, a block, a screw for shifting the block, one end of the pin secured in the block, and a spring for holding the pin against its bearings.

2. In a steering gear, the combination of a threaded block and a threaded member for shifting the block, a pin having a head extending transversely to the block and secured in the block, a socket member having a shaft, a casing for supporting the threaded member and the shaft, a spring for drawing the threaded member, the head and the shaft against their bearing parts, and the block against the threaded member.

3. In a steering gear, the combination of a threaded member, a block shifted by the threaded member and having a transverse opening extending therethrough, a pin having a head, the head of the pin having a length substantially the same as the width of the block and located in the opening, a socket member in which the pin is located, and a shaft for supporting the socket member.

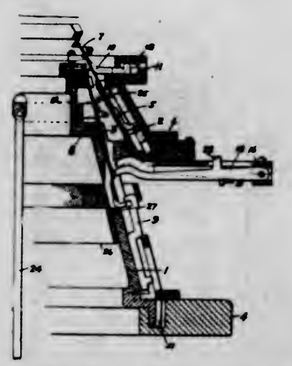
4. In a steering gear, the combination of a threaded member, a block shifted by the threaded member and having a transverse opening extending therethrough, a pin having a head, the head of the pin having a length substantially the same as the width of the block and located in the opening, a socket member in which the pin is located, a shaft for supporting the socket member, the socket member having a slot and a shoulder, a collar surrounding the socket member and secured to the pin, and a spring located intermediate the shoulder and the collar for drawing the head of the pin against the block.

1,218,072. NUT-LOCK. ORVAL B. FOSTER, Fort Smith, Ark., assignor of one-half to Fred W. Traylor, Fort Smith, Ark. Filed Oct. 9, 1916. Serial No. 124,530. (Cl. 151—5.)



In a nut lock, the combination of a bolt having an elongated key way extending longitudinally of its shank and a nut threaded on the shank provided upon one face with a plurality of substantially radial recesses, of an elongated wire key in said key-way, its outer end to be bent laterally of the shank of the bolt in side elevation and radially and tangentially in front elevation to engage one of said recesses of the nut, one wall of each recess being inclined to be engaged by the bent end of said key, the inner end of the key-way having a notch which extends partially toward the outer end of the bolt shank, the inner end of the key having a hook extending correspondingly to and engaging said notch.

1,218,073. KNITTING-MACHINE. EMIL J. FRANCK, Philadelphia, Pa. Filed July 3, 1916. Serial No. 107,253. (Cl. 66—23.)



1. In a knitting machine the combination of a revoluble needle cylinder having a circular set of inclined needle grooves and a segmental set of inclined needle grooves arranged at an inclination to and inside of the first set and extending below the latter, regular needles in the circular set of grooves, leg fashioning needles and their jacks in the segmental set of grooves, a sector-like radiating set of pivotal pressers revoluble with the needle cylinder and arranged below the circular set of needle grooves and adapted to connect and disconnect the leg fashioning needles and their jacks, a tappet device for positioning the pressers as they rotate with the cylinder, and means for operating said parts, substantially as described.

2. In a knitting machine a revoluble needle cylinder having a circular set of inclined needle grooves and a segmental set of inclined needle grooves arranged at an inclination to and inside of the first set and extending below the latter, regular needles in the circular set of grooves, leg fashioning needles and their jacks in the segmental set of grooves, a sector-like table revolving with the cylinder and provided with radiating slots of which one is opposite the lower portion of each groove of the segmental set, pivotal pressers in said notches adapted to be positioned for connecting and disconnecting the leg-needles and jacks, a tappet device for positioning the pressers as they are rotated with the cylinder, and means for actuating said parts, substantially as described.

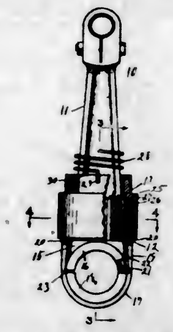
3. In a knitting machine, a revoluble needle cylinder having a segmental set of inclined needle grooves and a circular set of inclined needle grooves arranged at an inclination to and inside of the first set and extending below the latter, leg needles and their jacks in the segmental set of grooves, a knitting cam for the jacks, a cam for putting the jacks into and out of action, a set of radiating pressers revoluble with the cylinder and arranged below the circular set of needle grooves and adapted to progressively connect the needles and jacks, a tappet device for operating the pressers, and means for actuating said parts, substantially as described.

4. In a knitting machine the combination of a revoluble needle cylinder, leg-needles, jacks for the leg-needles, a radiating set of pressers carried by the cylinder and provided with projections terminating progressively from the ends toward the center of the set at points farther from the cylinder, a tappet device coöperating with said projection, and means for operating said parts.

5. In a knitting machine the combination of a revoluble needle cylinder, leg-needles and their jacks, a sector-like table carried by and projecting from the cylinder and provided with radiating slots, pressers pivotally mounted in said slots and projecting beyond the plane of the table, a tappet device coöperating with the projecting portions of the pressers, and means for actuating said parts.

[Claims 6 to 9 not printed in the Gazette.]

1,218,074. PISTON-ROD. JAMES R. FRENCH, Lomax, Ill. Filed Feb. 24, 1916. Serial No. 80,293. (Cl. 74—17.)



1. A piston rod comprising a stem, a strap having screw threaded wings embracing an end thereof, a screw-threaded sleeve disposed about said stem and engaged with the screw threads on the strap, said sleeve being provided with a plurality of radial slots, and a resilient element connected with the stem and adapted to be engaged in any one of said slots.

2. A piston rod, comprising a stem, or body, a strap embracing an end thereof, a sleeve disposed about said stem and engaged with said strap to draw the same up against the end of the rod, said sleeve being provided with a plurality of openings at the upper end thereof, and a resilient element connected with the stem and adapted to be engaged in any one of said openings.

3. A piston rod, comprising a stem, or body, a strap embracing an end thereof, a sleeve disposed about said stem and engaged with said strap to draw the same up against the end of the rod, said sleeve being provided with a plurality of openings at the upper end thereof, and a coil spring disposed about the stem and adapted to be engaged in any one of said openings.

4. A piston rod comprising a stem, or body, a strap having wings embracing an end thereof, a sleeve disposed about said stem and the wings of said strap, and engaged with the strap to draw the same against the end of the stem, and means adjustably engageable with the sleeve to exert forward pressure thereon.

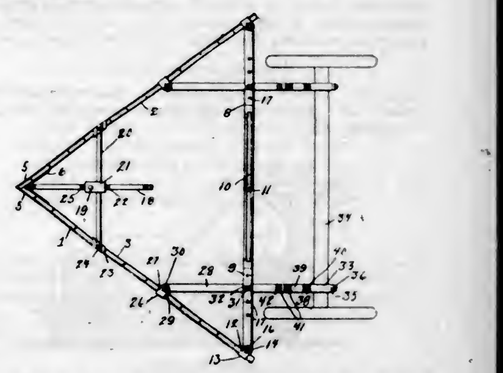
5. A piston rod comprising a stem, or body, a strap having screw threaded wings embracing an end thereof, and a screw threaded sleeve disposed about said stem and engaged with the screw threads on said strap.

[Claims 6 to 9 not printed in the Gazette.]

1,218,075. SNOW-PLOW. MORTIMER B. GANUNG, Forestville, Conn. Filed Oct. 12, 1916. Serial No. 125,236. (Cl. 37—5.)

1. A snow plow comprising side members connected together at one of their ends and extending at an angle relative to each other, means for mantaining the relative position of said members, a rod extending transversely of the plow and mounted on said side members, a block longitudinally adjustably mounted on said rod, a runner disposed between said side members, means for holding the block in adjusted positions, a vertical rod extending from the runner and having a vertically adjustable connection with said block.

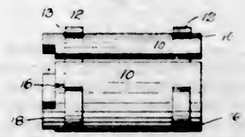
2. A snow plow including a pair of side members, means for pivotally connecting the members at their forward ends, adjustable connecting sections each having one of their ends adjustably connected to one of the rear ends of the members, bars slidably connected to the members, means for adjustably connecting the bars to the connecting sections, and means for clamping the bars to the front axle of a vehicle.



3. A snow plow including side members, means for pivotally connecting the members at their forward extremities, sections connected to the rear extremities of the members, means for adjustably connecting the sections to consequently hold the members in various adjusted positions relative to each other, means for supporting the forward ends of the members, bars slidably connected to the members and capable of pivotal movement, means for connecting said bars to the sections, and clamping means connected to the bars and adapted for engagement with the front end of a vehicle.

4. A snow plow comprising side members connected together at one of their ends and extending at an angle relative to each other, means for maintaining the relative position of said members, a rod extending transversely of the plow and mounted on said side members, a block rotatably and longitudinally adjustable on said rod, means for holding the block in adjusted positions, a runner disposed between said side members, a vertical rod extending from the runner and mounted in the block for connecting the runner thereto, said vertical rod having a rotary and vertical adjustment relative to the block, and means for securing said vertical rod rigidly in adjusted positions relative to the block.

1,218,076. COMMUTATOR. ALFRED C. GILBERT, New Haven, Conn., assignor to The A. C. Gilbert Company, New Haven, Conn., a Corporation of Connecticut. Filed June 23, 1916. Serial No. 105,406. (Cl. 200—12.)



1. In a commutator, the combination of a disk of insulating material having radial tongues and conductor segments having slots through which said tongues are inserted; substantially as described.

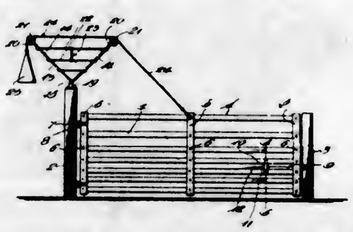
2. In a commutator, a pair of end disks having radial tongues, segments having slots fitting over said tongues, and means for preventing outward movement of the segments relatively to the tongues; substantially as described.

3. In a commutator, a plurality of partly cylindrical segments, each having a transverse slot adjacent one end

thereof, a pair of disks of insulating material having radial extending tongues, each segment having the slots thereof engaged by tongues of the respective disks, said tongues extending completely through said slots; substantially as described.

4. In a commutator, the combination of an insulating disk having a radial tongue, said tongue having a lateral notch, and a segment having a slot whereby it is fitted over said tongue, the metal of said segment being displaced longitudinally of the segment so as to extend into said notch and interlock therewith; substantially as described.

1,218,077. GATE ATTACHMENT. BERT C. GOFF, Denver, Ind. Filed Sept. 25, 1916. Serial No. 122,036. (Cl. 39—81.)



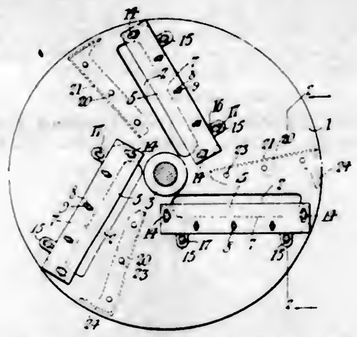
The combination with a gate post and a gate hinged thereto, of a supporting device comprising a V-shaped frame, the arms thereof being integrally united, the free ends of the arms being bifurcated, guide rollers pivoted between the furcations of said arms, a cylindrical shank depending from the apex of said frame and formed integrally therewith, a circular plate carried by the end of said shank, a second plate secured to the top of said post, the circular plate being disposed over the other plate, bearing members between said plates, a cap surrounding the circular plate and having a central circular aperture to receive said shank, said cap also having an annular attaching flange, a cable trained over said guide rollers and connected at one end with the free end portion of the gate, and a counter-balancing weight on the other end of said cable.

1,218,078. ARTIFICIAL TOOTH. ISIDORE GOLDMAN, Leeds, England. Filed Aug. 28, 1916. Serial No. 116,524. (Cl. 32—9.)



Means for securing an artificial tooth to a metallic denture, comprising a tooth having a porcelain facing a raised rectangular boss (having raised edges both at top and bottom and also at the sides) on the back of the porcelain facing, tapering toward the cutting edge of the tooth and having an undercut central socket hole therein, in combination with a metal backing having a corresponding rectangular recess adapted to receive said boss and having also a projecting undercut nipple, of substantially smaller diameter than the diameter of said socket hole, permanently attached to said backing and adapted to project loosely and be cemented into said socket hole in the facing by cement introduced into the annular space between said nipple and the walls of said socket hole, said metal backing being adapted for attachment to the denture in the ordinary manner.

1,218,079. ENSILAGE-CUTTER. WILLIAM S. GOUINLOCK, Warsaw, N. Y. Filed May 7, 1913. Serial No. 766,280. (Cl. 146—26.)



1. The combination of an integral disk having longitudinal slots arranged tangential to a small circle, said disk being provided with longitudinal ribs each disposed parallel to one of said slots and located in close proximity to the same, the disk being entirely closed between the slots by integral solid portions of the disk itself, and knife blades secured to said disk and each extending partially over one of said slots.

2. The combination with an integral wheel having slots therein arranged tangential to a small circle, knife blades extending in the same general direction as the slots and projecting across said slots, said wheel being entirely closed between said slots by integral solid portions of the wheel, an abutment located between the outer end of each slot and the adjacent edge of the wheel said abutment being integral with the wheel and extending the full width of the slot in order to reinforce the wheel, and a fan blade for each slot, said fan blade being secured to said wheel and provided with a portion engaging the adjacent abutment.

3. The combination with a knife wheel, of a plurality of knife blades for said wheel, a wedge for each of said blades for varying the relative position of the cutting edges of said blades with respect to said wheel, and means for maintaining the adjusted positions of said wedge independent of the attachment of said blades so that said blades can be moved while said wedges remain fixed.

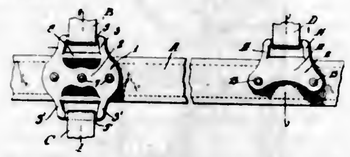
4. The combination with a knife wheel, of a plurality of knife blades for said wheel, a wedge individual to each of said blades to enable the individual adjustment of said blades to vary the position of the cutting edge of said blades with respect to said knife wheel, means for securing said blades and said wedges to said knife wheel, and means independent of said first mentioned means for securing said wedges individually to said knife wheel so as to admit of the movement of said blades while said wedges remain fixed.

5. The combination with a knife wheel, of a plurality of blades for said knife wheel, a wedge interposed between each of said blades and said knife wheel, means for securing said blades and said wedges to said knife wheel, each of said wedges having one or more lugs projecting therefrom beyond the range of said blades, and bolts extending through said lugs and secured to said knife wheel for securing said wedges to said knife wheel independent of the means for securing said knife blades to said knife wheel.

[Claims 6 to 9 not printed in the Gazette.]

1,218,080. TRACE-LOOP. GEORGE L. GRIGSBY, Waitsburg, Wash. Filed May 18, 1916. Serial No. 97,860. (Cl. 54—87.)

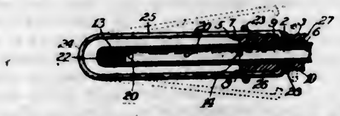
1. The combination with a harness trace, of a loop mounted upon the trace, the said loop consisting of a plate relatively wide along the line of the longitudinal center of the said trace, a plurality of arms extending from each edge of the plate, the said arms being so curved that their terminals are disposed directly over the center of the edge of the said trace, a laterally projecting flange having its terminals fixed to the said arms and extending from one edge of the plate, and a sleeve carried by each pair of said arms for receiving, respectively, the saddle strap and belly-band.



2. The combination with a harness trace, of a loop mounted upon the trace, the said loop consisting of a plate relatively wide along the line of the longitudinal center of the said trace, a plurality of arms extending from each edge of the plate, the said arms being so curved that their terminals are disposed directly over the center of the edge of the said trace, a sleeve carried by each pair of said arms for receiving, respectively, the saddle strap and belly-band, the terminals of each of the said arms being slightly curved and extended toward each other for bringing the ends of each pair in relatively close relationship, and a brace arm connecting the ends of each pair of arms where they join the said plate.

3. The combination with a harness trace, of a loop mounted upon the trace, the said loop consisting of a plate relatively wide along the line of the longitudinal center of the said trace, a plurality of arms extending from each edge of the plate, the said arms being so curved that their terminals are disposed directly over the center of the edge of the said trace, a sleeve carried by each pair of said arms for receiving, respectively, the saddle strap and belly-band, the terminals of each of the said arms being slightly curved and extended toward each other for bringing the ends of each pair in relatively close relationship, and a brace arm connecting the ends of each pair of arms where they join the said plate, one of the said brace arms carrying a laterally extending flange arranged to extend across the edge of the said trace.

1,218,081. SPONGE HOLDER AND MOISTENER. GEORGE W. HAHN, Indianapolis, Ind. Filed Jan. 21, 1916. Serial No. 73,449. (Cl. 15—51.)



1. An improved sponge-holder and moistener comprising a tube having apertures in its wall near one end of the tube, a plug secured in said end of the tube, a coupling device secured to the opposite end of the tube, a key pin secured in the wall of the tube intermediately of the ends thereof and extending from the wall, and a hollow handle on the tube between said key and said device and secured thereto, said plugged end of the tube being adapted to be forcibly inserted into the sponge.

2. An improved sponge-holder comprising a handle member having a handle portion and a cylindrical head portion that is less in diameter than the handle portion, the member having also a middle portion that is less in diameter than the head portion, the head portion having two longitudinally-extending grooves in its exterior and also two sockets extending transversely from the grooves respectively and inwardly adjacent to said middle portion; a yoke comprising an elastic crook and two rods having each a lug thereon, the rods extending in the grooves respectively, the lugs extending respectively into said sockets; and a spring ring embracing the two rods and removable therefrom to said middle portion of the handle member.

3. In a sponge-holder and moistener, the combination of a hollow handle member having a transverse keyway in one end thereof, a tube extending through the handle member and also outward beyond said end, the wall of the tube beyond said member being apertured, a plug secured in the outer end of said tube, a key pin secured in and extending transversely through the wall of said tube and seated in said keyway, and a coupling device secured to the opposite end of said tube and seated against the opposite end of said member, with a yoke extending about the outer plugged end of said tube and connected to said handle member.

4. In a sponge-holder and moistener, the combination with a natural sponge, of a core adapted to be forcibly inserted endwise into the sponge, a handle secured to the core, a yoke comprising an elastic crook and two rods extending from the crook to embrace and compress the sponge on the core, and means for securing the rods to the handle.

1,218,082. PLURAL-IMAGE DEVICE. EDWARD HALL, Rutherford, N. J., assignor to Jersey City Printing Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 1, 1915. Serial No. 31,879. (Cl. 88—1.)

1. In a device of the character described, a translucent flexible tape carrying superimposed separate images of contrasting colors thereon, and means for causing one of said images to become substantially invisible by projecting a light of the same color through said tape.

2. In a device of the character described, a translucent flexible tape carrying contrastingly colored separate images on opposite faces, and means for causing said images to become alternately visible by projecting a light therethrough and varying the character of said light to correspond with the distinctive color of each image in turn.

3. In a device of the character described, a transparent support, a colored image upon said support, an object behind said image, and means for causing said image to become substantially invisible by projecting a light of the same color through said support.

4. In a device of the character described, a transparent support, a colored image upon said support, an object behind said image, and means for causing said image to become substantially invisible by projecting a light of the same color through said support and simultaneously illuminating the object thereby.

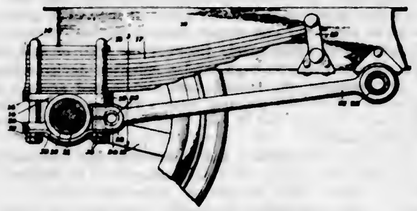
5. In a device of the character described, a translucent support, a colored image on said support, a second contrastingly colored image in juxtaposition to the first image, and means for causing a colored light of substantially the same tone as one of the images to shine through both of said images.

[Claims 6 to 11 not printed in the Gazette.]

1,218,083. MOTOR-VEHICLE. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 31, 1913. Serial No. 757,938. (Cl. 21—90.)

1. In a motor vehicle, the combination with the frame and the axle having a spring pad thereon, of a distance

rod connected at its forward end to the frame, a pair of separated blocks independently secured to said spring pad, and a connection between the rear end of said rod and said blocks.



2. In a motor vehicle, the combination with the frame and the axle having a spring pad thereon, of a distance rod connected at its forward end to the frame, a pair of separated blocks secured to said spring pad, and a pivot pin clamped in said blocks and extending through the rear end of said distance rod.

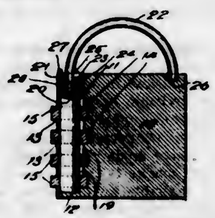
3. In a motor vehicle, the combination with the axle, the spring seated on the axle, and a clip securing said spring to the axle, of a distance rod, and a connection between said distance rod and said axle comprising a block secured to the axle by said spring clip.

4. In a motor vehicle, the combination with the axle, the spring seated thereon, and a U-shaped clip securing said spring to the axle, of a distance rod, a connection between said distance rod and said axle comprising a pair of blocks secured to the axle by said spring clip, and a pin passing through said blocks and said distance rod.

5. In a motor vehicle, the combination with the axle, the spring seated thereon, and a pair of spring clips securing said spring to the axle, one of said clips being arranged on either side of said axle, of a distance rod, and a connection between said distance rod and said axle comprising a block, a plate, means including said spring clips for securing said plate and block to the axle, and a pivot pin between said block and said distance rod.

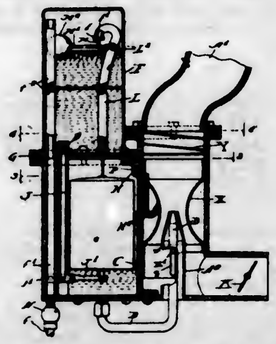
[Claims 6 to 9 not printed in the Gazette.]

1,218,084. PERMUTATION-PADLOCK. ALEXANDER S. HULDEN, Great Falls, Mont. Filed Aug. 23, 1915. Serial No. 46,903. (Cl. 70—113.)



In a permutation lock, a body structure having a cut-out, a plurality of permutation disks arranged in said cut-out, a portion of each of said disks projecting exteriorly of said body structure, said disks provided with vertically alined openings, a stud arranged in said openings, lugs on said stud normally preventing removal thereof, said disks provided with slots capable of permitting passage of said lugs, a block having a central opening arranged in said first mentioned cut-out, a shackle, one end of said shackle being connected with said stud, the adjacent portion of said shackle projecting through said block, a lug on said shackle, said block provided with a recess for the reception of said last mentioned lug, and said body structure provided with a recess for the reception of the free end of said shackle.

1,218,085. LIQUID-FUEL-FEEDING DEVICE FOR INTERNAL-COMBUSTION ENGINES. WEBB JAY, Chicago, Ill. Filed Mar. 9, 1916. Serial No. 83,062. (Cl. 158—36.)



1. In combination with a carbureter having an air passage; an air-controlling valve in the air passage; a liquid fuel delivery tube extending into said air passage for discharge therein at a point inwardly beyond the air-controlling valve; a liquid-level governing chamber from which said delivery tube leads; means therein for controlling the level of the liquid contents of said chamber; a main liquid fuel supply tank at a lower level; a supplementary liquid fuel reservoir at a higher level; a liquid conduit from said main tank to said reservoir; a liquid passage from said reservoir to said level-governing chamber; a duct from the upper part of said reservoir and from the upper part of said level-governing chamber communicating with the air passage proximately to the discharge of the liquid fuel delivery tube, and means in said supplemental liquid fuel reservoir for closing the opening of said duct therein at a predetermined level of liquid in such reservoir.

2. In combination with a carbureter having an air passage which is constricted for a short distance in the length of said passage; an air-controlling valve in the air passage back of said constriction; a liquid fuel delivery tube extending in the unconstricted portion of said air passage between the constriction and the air controlling valve and terminating for its discharge substantially at the transverse plane of said constriction; a liquid-level-governing chamber from which said delivery tube leads, and means therein for controlling the level of the liquid contents of said chamber; a main liquid fuel supply tank at a lower level; a supplemental liquid reservoir mounted upon and forming a unitary structure with the level-governing chamber; a conduit from the main tank which extends through the level-governing chamber sealed therefrom and further extends up into the supplemental reservoir; a liquid passage connecting the upper part of the liquid governing chamber with the lower part of said reservoir; the liquid-level-governing means comprising a valve which is adapted to close said passage at a pre-determined level of liquid in said chamber; a tube extending in said reservoir communicating at its lower end with the upper part of the liquid-governing chamber, and opening at its upper end in the upper part of said reservoir; a valve adapted to close the upper end opening of said tube, and means in said reservoir for operating said valve adapted to close it when the liquid level in said reservoir reaches a pre-determined height, and a duct leading from the upper part of the liquid-governing chamber into said air passage and opening into the latter substantially at the level of the constriction thereof.

3. In combination with a carbureter having an air passage which is constricted for a short distance in the length of said passage; an air-controlling valve in the air passage back of said constriction; a liquid fuel delivery tube extending in the unconstricted portion of said air passage between the constriction and the air controlling valve and terminating for its discharge substantially at the transverse plane of said constriction; a liquid-level-governing chamber from which said delivery tube leads, and means therein for controlling the level of the liquid contents of said chamber; a main liquid fuel supply tank at a lower level; a supplemental fuel reservoir mounted on the top of and forming a unitary structure with the liquid-level-governing chamber; a conduit from the lower part of the main fuel supply tank to said supplemental reservoir; a communicating passage from the upper part of the liquid-level-governing chamber into the lower part of said reservoir; a duct leading from the upper part of said liquid-governing chamber into said carbureter air passage and opening in the latter substantially at the level of said constriction, and another duct leading from the upper part of said liquid-governing chamber to the upper part of said supplemental reservoir, and means in said reservoir for closing the opening of said last mentioned duct therein at a pre-determined level of the liquid in said reservoir.

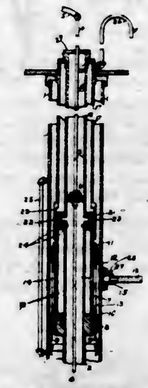
4. In combination with a carbureter having an air passage which is constricted for a short distance in the length of said passage; an air-controlling valve in the air passage back of said constriction; a liquid fuel delivery tube extending in the unconstricted portion of said air passage between the constriction and the air controlling valve and terminating for its discharge substantially at the transverse plane of said constriction; a liquid-level-governing chamber from which said delivery tube leads, and means therein for controlling the level of the liquid contents of said chamber; a main liquid fuel supply tank at a lower level; a supplementary liquid fuel reservoir at a higher level; said liquid-governing chamber being immediately adjacent to and rigid with said constricted air passage, said passage and chamber being provided with a duct leading from the constricted portion of the air passage to the upper part of the governing chamber; said reservoir being positioned immediately above and made rigid with the governing chamber; a diaphragm plate which forms the top of the governing chamber and the bottom of said reservoir, said plate having a liquid passage connecting the top of the governing chamber with the bottom of the reservoir and having a drain passage terminating in a drain cock at the edge of said plate and opening through the top of said plate for draining the reservoir; a suction pipe mounted in and extending down through said plate for communication with the top of the level-governing chamber, said pipe extending up in the reservoir and opening therein near the top thereof; a valve for closing the upper end opening of said pipe and a lever fulcrumed upon the pipe and carrying said valve, and a float carried by the lever in said reservoir.

5. In combination with a carbureter having an air passage which is constricted for a short distance in the length of said passage; an air-controlling valve in the air passage back of said constriction; a liquid fuel delivery tube extending in the unconstricted portion of said air passage between the constriction and the air controlling valve and terminating for its discharge substantially at the transverse plane of said constriction; a liquid-level-governing chamber from which said delivery tube leads, and means therein for controlling the level of the liquid contents of said chamber; a main liquid fuel supply tank at a lower level; a supplementary liquid fuel reservoir at a higher level; a liquid conduit from said main tank to said reservoir; a liquid passage from said reservoir to said level-governing chamber, ducts from the upper part of said reservoir and from the upper part of said level-governing chamber communicating with the air passage substantially at the constricted portion thereof, said ducts comprising a portion in common, and a valve in said portion for closing the communication through both of said ducts.

[Claims 6 to 8 not printed in the Gazette.]

1,218,086. PUMP. AUSTIN JOHNSON, Grand Ledge, Mich. Filed Apr. 3, 1916. Serial No. 88,734. (Cl. 103—56.)

1. The combination in a pump provided with upper and lower cylinders and adapted to be inserted in the casing of a drilled or bored well, and a pipe connecting said cylinders, of a water chamber surrounding said pipe and provided with screw threads at its extremities; a collar operatively mounted on each of said threaded extremities, the lower extremity thereof being provided with means for engaging with the inner side of the well casing so as to prevent revolution; packing rings mounted near the extremities of said water chamber and adapted to close the space between said chamber and said well casing; a perforated collar surrounding said water chamber between said packing rings and provided with wedging extremities adapted to force said ring into engagement with said well casing, and means for revolving said water chamber within said casing.



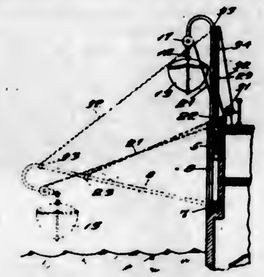
2. The combination in a pump provided with upper and lower cylinders and adapted to be inserted in the casing of a drilled or bored well, and a pipe connecting said cylinders, of a water chamber surrounding said pipe and provided with screw threads at its extremities; a collar operatively mounted on each of said threaded extremities, the lower extremity being provided with means for engaging with the inner side of the well casing so as to prevent revolution; packing rings mounted near the extremities of said water chamber and adapted to close the space between said chamber and said well casing; a perforated collar surrounding said water chamber between said packing rings and provided with wedging extremities adapted to force said rings into engagement with said well casing, and a pipe connecting said water chamber with the base of said pump.

3. The combination in a pump provided with upper and lower cylinders and adapted to be inserted in the casing of a drilled or bored well, and a pipe connecting said cylinders, of a water chamber surrounding said pipe and provided with screw threads at its extremities; a collar operatively mounted on each of said threaded extremities, the lower extremity being provided with means for engaging with the inner side of the well casing so as to prevent revolution; packing rings mounted near the extremities of said water chamber and adapted to close the space between said chamber and said well casing; a perforated collar surrounding said water chamber between said packing rings and provided with wedging extremities adapted to force said rings into engagement with said well casing, a pipe connecting said water chamber with the base of said pump; a valve seat on the upper extremity of said water chamber and said pipe therewithin; a second valve seat on the lower extremity of the pipe connecting said water chamber with said pump; a valve on the lower extremity of said upper cylinder, and means for bringing said valve into engagement with either of said seats.

1,218,087. SHIP-DAVIT. EDWARD S. JONES, Mobile, Ala., assignor of one-half to Martin Van Heuvel, Mobile, Ala. Filed May 11, 1916. Serial No. 96,925. (Cl. 9—22.)

1. The combination with a ship, of life-boat supporting davits pivotally mounted thereon, a windlass mounted

upon each of the davits, pulleys mounted on the ship, and flexible elements connected with the davits and windlasses and engaging the pulleys.



2. The combination with a ship, of life-boat supporting davits pivotally mounted thereon, an enlargement carried upon the free end of each of the davits, a windlass mounted upon each of the enlargements, pulleys mounted on the ship, and flexible elements connected with the davits and windlasses and engaging the pulleys.

1,218,088. REIN-SPUR. BENNETT E. JORDAN, Hugo, Okla., assignor of one-half to R. D. Wilbor, Hugo, Okla. Filed Dec. 20, 1916. Serial No. 138,084. (Cl. 54—83.)



1. A device of the character described comprising a plate having a toothed outer edge and a central opening therein to receive a rein, and clamping means projecting from the opposite side faces of the plate at right angles to the plane thereof for engagement upon the rein to retain the plate in an adjusted position.

2. A device of the character described comprising a plate having a toothed outer edge and an opening therein adapted to receive a rein, and spaced clamping plates projecting from opposite sides of the disk and adapted for clamping engagement upon the opposite sides of the rein to retain the toothed plate in an adjusted position.

3. A device of the character described comprising a disk having spur teeth on its perimeter and provided with a diametrically extending opening to receive a rein, and plates extending through the opening and secured to the opposite longitudinal edges thereof, the end portions of said plates projecting in parallel relation from the opposite side faces of the disk and in a plane at right angles thereto for clamping engagement upon the opposite sides of the rein to retain said disk in an adjusted position.

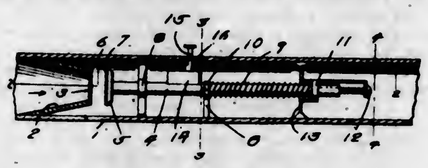
4. A rein spur consisting of a flat plate having pricking teeth on its outer edge, and means fixed to the plate and projecting from one side thereof for attaching the plate to a rein.

5. A rein spur consisting of a flat disk having pricking teeth formed upon its perimeter, and attaching means for the disk including spaced plates fixed to the disk and projecting from one side thereof for engagement against the opposite faces of a rein.

[Claim 6 not printed in the Gazette.]

1,218,089. AUTOMATIC GAS-SHUT-OFF VALVE. GROVER C. KAIL, Jewett, Ohio. Filed June 7, 1915. Serial No. 32,714. (Cl. 67—115.)

In an automatic gas shut off valve, the combination with a pipe having a partition therein in which a hole is formed, of a rod slidably mounted in said pipe and having a head on one end thereof for closing said hole, a coil spring encircling said rod, a stop to which the spring is secured at one of its ends, a collar adjustably mounted on said rod and having the other end of the spring secured thereto, braces formed on the collar and slidably engaged with the inner face of the pipe, means for adjusting the collar accessible from the end of the pipe and without removing the rod from said pipe, said means comprising an arm projecting from one side of the collar and having an end projecting over the end of the rod, a screw passing through the end of the arm and engaging in the end of the rod, and means for positively locking the head in engagement with the partition.



1,218,090. VEHICLE-BODY. FRANK E. KEHL, Connersville, Ind., assignor to The Dan Patch Novelty Company, Connersville, Ind., a Copartnership composed of E. W. Ansted, George W. Ansted, and Frank E. Kehl. Filed Dec. 6, 1916. Serial No. 135,357. (Cl. 21—191.)



A vehicle body comprising, a thin longitudinal body proper set vertically edgewise and provided with a kingbolt bearing at its front and with a steering-shaft bearing to the rear of the kingbolt bearing and with a top depression at the rear of the steering-shaft bearing, and a seat and seat back secured in said depression and extending sidewise of the body proper, combined substantially as set forth.

1,218,091. GOLF-CLUB. ALLAN E. LARD, Washington, D. C., assignor to The Metallic Shaft Company, Wilmington, Del., a Corporation of Delaware. Filed May 12, 1916. Serial No. 97,158. (Cl. 46—4.)



1. In a golf shaft the combination of a hollow metallic shaft provided with ribs and susceptible of torsion under impact; and a hollow metallic handle having a reduced lower portion adapted to coact with the ribs to assist in securing the parts together.

2. In a golf shaft the combination of a hollow metallic shaft provided with ribs and susceptible of torsion under impact; a hollow metallic handle having a reduced lower end; and means carried by said end adapted to coact with the ribs to prevent relative rotatory movement of the parts.

3. In a golf club, the combination of a hollow metallic shaft provided with ribs and susceptible of torsion under impact; and a hollow metallic handle having a reduced lower portion, said portion being fluted and adapted to embrace the ribs on the shaft.

4. In a golf club, the combination of a hollow metallic shaft; a metallic handle having an inwardly-tapering portion adjacent its lower end adapted to pass over the upper end of the shaft; and a bushing or thimble filling the space between said shaft and said tapering portion.

5. In a golf club, the combination of a hollow metallic shaft; a metallic handle having an inwardly tapering portion adjacent its lower end adapted to pass over the upper end of the shaft; a bushing or thimble filling the space between said reduced portion and shaft; and a washer encircling the upper end of the shaft and bearing against the inner wall of the handle.

[Claims 6 and 7 not printed in the Gazette.]

1,218,092. DISPENSING DEVICE. ARNOLD LARSEN, Cleveland, Ohio. Filed June 15, 1914. Serial No. 845,058. (Cl. 65—59.)



1. In a device of the kind described the combination with a receptacle having a spout at one side and an opening at the opposite side, said receptacle having inwardly projecting members upon its upper edge at definite points, of a ladle adapted to rest within said receptacle, the handle thereof extending through the opening in said receptacle, a transparent cover resting upon the top of said receptacle and fitting beneath the inwardly projecting members, and a detachable locking device connected with said receptacle and adapted to maintain said transparent cover in engagement with said projections.

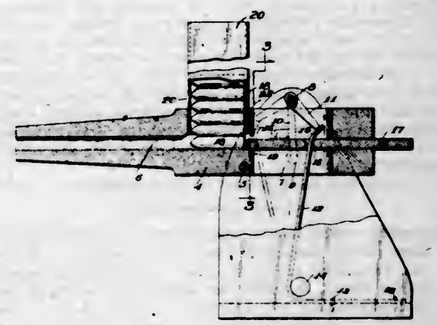
2. In a device of the kind described the combination with a receptacle having a discharge spout extending from one side thereof, said receptacle having an opening in the side substantially opposite the discharge spout thereof, a gravity closed valve at the outer end of said spout, said receptacle having inwardly projecting members upon its upper edge at definite points, a transparent cover resting upon said receptacle and beneath said inwardly projecting members, a detachable locking device adapted to be connected to said receptacle and also engage said transparent cover, and a ladle within the receptacle, the handle thereof extending through the opening in the side of said receptacle.

3. In a device of the kind described, the combination with a receptacle, of a spout discharging from said receptacle, a transparent cover for said receptacle, a gravity closed valve at the outer end of said spout, a strap to which said valve is connected, and a plurality of straps attached to said receptacle and adapted in connection with the valve carrying strap to position and secure said cover upon said receptacle, one of said straps being detachable from said receptacle.

4. In a device of the kind described, the combination with a receptacle, of a spout discharging from said receptacle, a transparent cover for said receptacle, a gravity closed valve at the outer end of said spout, a strap to which said valve is connected, a plurality of straps attached to said receptacle adapted in connection with the valve carrying strap to position and secure said cover upon said receptacle, one of said straps being detachable from said receptacle, and means for securing said detachable strap to the receptacle.

5. In a device of the kind described the combination with a receptacle having a discharge spout at one side thereof and an opening in the side of the receptacle substantially opposite the discharge spout, said receptacle having a plurality of spaced inwardly projecting members along the upper edge thereof, a transparent cover resting upon the top of said receptacle and beneath the inwardly projecting members, a locking device detachably connected to said receptacle and adapted to engage said cover and hold the same in connection with the inwardly projecting members, and a ladle within said receptacle, the handle of said ladle extending through said opening as set forth.

1,218,093. TOY CANNON. GEORGE C. LABARRE, Springfield, Mass. Filed July 7, 1916. Serial No. 107,927. (Cl. 124—13.)



1. In a device of the kind described, the combination with the supporting base, a barrel, said barrel having an opening in the rear portion thereof and opening into the bore of the barrel, a slide adapted for reciprocation in said opening, an L-shaped spring having one end secured to the lower part of the base and passing around and below a fixed member, its other arm projecting upwardly through an opening in the slide the ends of which are curved, a shaft mounted for rotation in the base and carrying a projection, said projection being designed to engage the upper or free end of the spring for the purpose of placing the same under stress, and for releasing the spring, the opening in the barrel permitting the spring to drive the slide forwardly into the bore of the barrel, and said barrel having a magazine containing projectiles to be discharged when the slide is released.

2. In a device of the kind described, comprising in combination with the base member thereof which is formed with upwardly projecting side plates spaced from each other, a barrel pivotally mounted between the plates and adapted for adjustment in a vertical plane, the rear portion of the barrel having an opening extending through the same and connecting with the bore of the barrel, means located in the opening for propelling the lowermost projectile, and means for operating said means, comprising an L-shaped spring one end of which is secured to the base portion and the angle part of the spring engaging a fixed stop, the other limb of the spring operatively connected to the said propelling means and means for engaging the

propelling means for discharging the projectiles in a continuous manner, as described.

3. In a device of the kind described the combination with a supporting base, of a barrel pivotally connected to the base and having a projectile receiving bore therein which terminates in an opening in the rear part of the barrel, a magazine for supporting a plurality of projectiles, the lower end of the magazine leading into said bore, a reciprocable device located in the opening in the rear part of the barrel for engaging the lowermost projectile, said device having an opening therethrough, an L-shaped spring secured to the supporting base and having one end or limb engaging and projecting through the opening in the reciprocable device, means engaging the projecting end of the spring for retracting the slide and for placing the spring under stress prior to its release for propelling a projectile.

4. In a toy cannon of the magazine type, the combination with a supporting base, a barrel pivotally connected thereto, a reciprocable slide for engaging and propelling the lowermost projectile, a spring for driving the slide forward, a shaft adapted for continuous rotation for placing the spring under stress and for permitting its release at a predetermined point in its travel for operating the slide, said spring having an antifriction connection with the slide and a curved end with which the engaging means of the shaft coöperates to effect the compression and release of the said spring.

5. In a toy cannon of the magazine type, the combination with a supporting base, a barrel pivotally connected thereto, a reciprocable slide for engaging and propelling the lowermost projectile, a spring for driving the slide forward, a shaft adapted for continuous rotation for placing the spring under stress and for permitting its release at a predetermined point in its travel for operating the slide, said spring having an antifriction connection with the slide and a curved end with which the engaging means of the shaft coöperates to effect the compression and release of the said spring, and means for preventing the reverse rotation of the shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,218,094. TEST-ROLL FOR MUSICAL INSTRUMENTS. JOHN A. LE CATO, New York, N. Y., assignor to Standard Pneumatic Action Co., New York, N. Y., a Corporation of New York. Filed Oct. 4, 1915. Serial No. 53,901. (Cl. 84—162.)



1. As an article of manufacture, a test music roll for automatic musical instruments having a tempo regulator, said roll having thereon a mark indicating a starting position and additional marks definitely spaced from said starting mark and each designated to show the distance from the starting mark and also the tempo rate at which said mark should pass a fixed point in a definite specified time after the starting mark passed said point.

2. As an article of manufacture, a test music roll for automatic musical instruments having a tempo regulator, said roll comprising a long strip of paper wound upon a headed spool and provided with an indication designating a starting position and with additional indications spaced at regular and predetermined distances from said starting indication and marked to show the correct travel of the note sheet during a given time interval, with the tempo regulator set at a given point in its scale.

1,218,095. BUTTON. ALFRED LEVY, Jersey City, N. J. Filed July 1, 1916. Serial No. 107,016. (Cl. 24—90.)



1. A button comprising two sections together forming the head and shank of the button, a pivotal connection for said sections, teeth or prongs upon the opposite interior sides of each section of the shank, and co-acting means upon the respective shank sections for holding them together.

2. A button comprising two sections together forming the head and shank of the button, one of said sections being provided with a curved slot in its top and inner surface, the other section having a tongue fitting into said slot, a pivot pin securing the tongue in said slot, each shank section having a transverse groove in its inner surface with teeth or prongs projecting at right angles from below said groove.

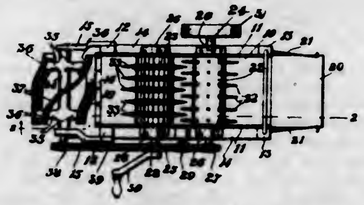
3. A button comprising two sections together forming the head and shank of the button, one of said sections being provided with a curved slot in its top and inner surface, the other section having a tongue fitting into said slot, a pivot pin securing the tongue in said slot, each shank section having a transverse groove in its inner surface with teeth or prongs projecting at right angles from below said groove, and co-acting means upon the respective shank sections for holding them together.

4. A button comprising two sections together forming the head and shank of the button, a pivotal connection for said sections, teeth or prongs upon the opposite interior sides of each section of the shank, and a cap fitting over the head of the button.

5. A button comprising two sections together forming the head and shank of the button, a pivotal connection for said sections, teeth or prongs upon the opposite interior sides of each section of the shank, co-acting means upon the respective shank sections for holding them together, and a cap fitting over the head of the button.

[Claims 6 and 7 not printed in the Gazette.]

1,218,096. MEAT-CUTTER. CLINTON LINDSEY, Salem, N. J., assignor of one-half to E. C. Waddington, Woodstown, N. J. Filed June 2, 1916. Serial No. 101,877. (Cl. 17—18.)



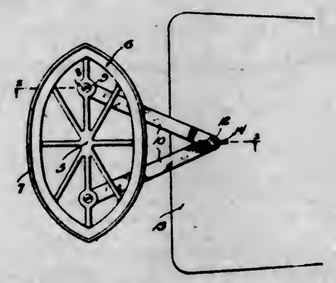
A meat slicing and cutting machine comprising a platform, a feeding drum rotatably mounted above said platform, a ledger bar extending transversely of the platform at the end thereof, a slicing drum rotatably mounted above said platform between said feeding drum and the ledger bar and provided with cutting disks for slicing meat passing along said platform, said feeding drum being provided with teeth positioned in spaced relation to the cutting disks of the slicing drum and engaging meat to feed the same along the platform, a shaft rotatably mounted beyond the end of said platform, arms extending from said shaft, cutting blades connected with said arms and curved to extend in operative relation to the ledger bar as said shaft rotates, and means for rotating said shaft, slicing drum and feeding drum.

1,218,097. HOLDER FOR TICKETS, CARDS, AND THE LIKE. HENRY SAMUEL MALINS, Toronto, Ontario, Canada, assignor of one-half to James Arthur Bowman, Toronto, Ontario, Canada. Filed July 8, 1916. Serial No. 108,235. (Cl. 206—40.)



A ticket holder comprising an outer rectangular frame having its end walls of less width than the side walls, an inner rectangular frame secured within the outer rectangular frame and of less length than the outer rectangular frame and having one end wall thereof bearing against an end wall of the outer rectangular frame and of the same width to form one side of the feed slot and the opposite end wall spaced apart from the corresponding end wall of the outer rectangular frame and provided with a central notched portion, longitudinal guideways formed at each side of the outer frame, slide plates held within such guideways and forming one end of the opposite side of the feed slot and having a longitudinal slot and against the inner face of which a stack of tickets held within the holder bear, resilient means for holding the stack of tickets against the slide plate, and a button having a shank extending through the longitudinal slot and provided with an inner head of the same thickness as a ticket.

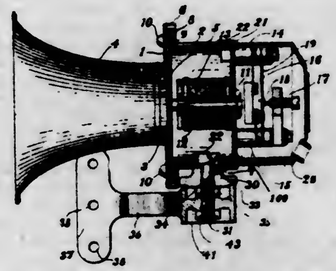
1,218,098. IRON-HOLDER. KATHERINE J. MANBY, Mukwonago, Wis. Filed Nov. 20, 1916. Serial No. 132,334. (Cl. 68—27.)



As an article of manufacture an iron holder comprising a body plate, a pair of links pivotally connected with the body at longitudinally spaced portions thereof, and a securing bolt passed through the other ends of the links and adapted to pass through a support.

1,218,099. SIGNALING DEVICE. RAY H. MANSON, Elyria, Ohio, assignor, by mesne assignments, to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Filed Aug. 14, 1911. Serial No. 643,829. (Cl. 177—7.)

1. In a signaling device, the combination of a sound producing device, a plurality of parts forming the walls of a chamber in which said sound producing device is mounted, one of said parts being cup-shaped and having the edge of said cup turned over to form an annular flange thereon, another of said parts having an opening therein for the passage of sound waves and having its edge folded back over the turned over edge of the first named part, means passing through the edge of the sound producing device for connecting said parts and device together, means to actuate said sound producing device mounted on the back of said cup-shaped member, operating means for said actuating means mounted in said chamber on the bottom of said cup-shaped part, controlling means for said operating means mounted on the outside of said cup-shaped part and a cover for said controlling means.



2. In a signaling device, the combination of a sonorous member, a plurality of parts of said device forming the walls of a chamber, one of said parts being a cup-shaped member with its edges turned outward to form an annular flange upon which said sonorous member is mounted, a second part perforated for the egress of sound waves having its edge folded back over the turned outward edge of the cup-shaped member, means passing through the edge of the sonorous member to connect said sororous member and parts together, controlling and actuating means for said member mounted on the outside of the bottom of said cup-shaped part and operating means for the actuating means mounted on the inside of the cup-shaped part and a cover for the mechanism mounted on the outside of said chamber.

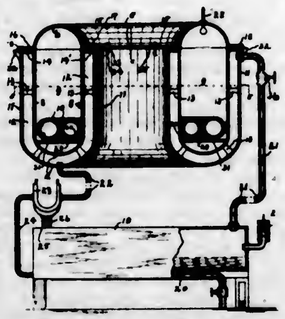
3. In an automobile horn, the combination of a sororous diaphragm, a maguet to operate said diaphragm, a cup shaped punching upon the bottom of which said magnet is mounted within the cup, an annular flange upon the outside edge of the mouth of said cup, connected to said sonorous diaphragm, means passing through the edge of the diaphragm for connecting said parts and diaphragm together, a second punching having its edge folded backward over the annular flange of the cup-shaped punching and being provided with an opening for the egress of sound waves, an anvil on said diaphragm extending through the bottom of said cup and projecting beyond, an armature on the bottom of said cup on the outside thereof, switch contacts mounted on the outside of the bottom of said cup and controlled by said armature and a second cup shaped punching covering said armature and said switch contacts.

4. In a device of the class described, the combination of a vibratile diaphragm, a plurality of parts of said device forming the walls of a chamber for said diaphragm, a cup shaped punching forming the rear and side walls of said chamber, the bottom of the cup being perforated and forming the rear wall of the chamber, the edge of the mouth of the cup being turned outward forming an annular flange thereon, a front wall of said chamber having a perforation therein for the passage of sound waves therethrough and having its edge folded backward over the annular flange, said diaphragm being clamped between said front and said flange leaving the central part of the diaphragm free to vibrate, means passing through the edge of the diaphragm for connecting said parts and diaphragm together, an anvil mounted on the center of said diaphragm and extending through the opening in the

bottom of the cup, electro-magnetic means for operating said diaphragm mounted insides aid cup and on the bottom thereof, an armature adapted to be vibrated by said magnetic means and when so vibrated, to strike said anvil, said armature being mounted on the bottom of said cup on the outside thereof, electric switch contacts mounted on the outside of the bottom of said cup and controlled by said armature and a second cup normally covering the apparatus mounted on the outside of the bottom of said cup.

5. In an automomible horn, the combination of a vibratile diaphragm, a plurality of parts forming a chamber for said diaphragm, one of said parts consisting of a cup-shaped punching having openings in the bottom and having the edge of its mouth turned outward to form an annular flange substantially at right angles to the walls of the cup, a second part having an opening therein to permit the egress of sound waves, said diaphragm being clamped between said two parts, means to space said diaphragm from said second part, means to clamp said two parts, said diaphragm and said spacing means together, the edge of said second part being bent rearward and extending over the edge of said flange, an electro-magnet mounted inside of said cup-shaped part and attached to the bottom thereof, an anvil on said diaphragm extending through an opening in the bottom of the cup-shaped part, a stud on the bottom of said cup mounted on the outside thereof, an armature adapted to be attracted by said magnet to strike said anvil, a spring connecting said armature to said stud, a spring connected at one end to said stud and resting at the other end against said armature, a contact carried by said spring, a second contact and a bridge mounted on the bottom of said cup-shaped part carrying the second contact.

1,218,100. STEAM-VULCANIZER. JOSEPH MATHE, Omaha, Nebr. Filed Aug. 28, 1916. Serial No. 117,125. (Cl. 18—6.)



1. In combination with an upright, endless casing of U-shape in cross-section, a second upright, endless casing of U-shape in cross-section provided at its top with opposed, inwardly projecting flanges, said second casing being disposed outwardly of and adjacent to the first named casing, its flanges engaging the sides at the top of said first named casing to provide an annular chamber below the flanges intermediate said casings, means for heating said annular chamber, and a plurality of lids of segmental form each having a hingeable connection with the second casing and adapted to make a closure of a part of the first named casing.

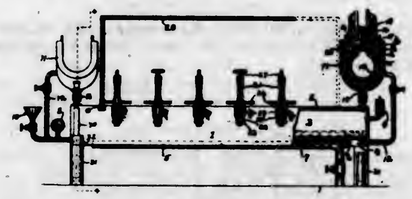
2. In combination with an upright, endless casing of U-shape in cross-section, a second upright, endless casing of U-shape in cross-section provided at its top with opposed, inwardly projecting flanges, said second casing being disposed outwardly of and adjacent to the first named casing, its flanges engaging the sides of said first named casing to provide an annular chamber intermediate said casings and below said flanges, means for heating said annular chamber, a plurality of lids of segmental form each having a wall curved longitudinally and transversely and provided at its sides with flanges, said lids being hingeably connected with the second casing at the junction of one of the inwardly projecting flanges thereof and adapted to have movements for engaging their flanges with the inwardly projecting flanges of said second casing.

3. In combination with an upright, endless casing of U-shape in cross-section, a second upright, endless casing of U-shape in cross-section provided at its top with opposed, inwardly projecting flanges and provided with outwardly projecting brackets, said second casing being disposed outwardly of and adjacent to the first named casing, its flanges engaging the sides of said first named casing to provide an annular chamber below the flanges intermediate said casings, means for heating said annular chamber, a plurality of lids of segmental form hingeably connected with the second casing and adapted to have swinging movements inwardly of the casings for covering the first-named casing and adapted to have outward swinging movements for uncovering said first named casing, each lid during its outward swinging movement being adapted to engage one of said brackets.

4. An apparatus for vulcanizing vehicle tires, comprising an upright endless casing of U-shape in cross-section for containing the tires, a second upright, endless casing of U-shape in cross-section disposed outwardly of and adjacent to the first named casing, one of said casings being provided at its top with transverse flanges and provided intermediate its top and bottom with spacing-lugs, means for heating the space between the second casing and first named casing, a plurality of lids of segmental shape hingeably connected with the outer side of the second casing, said outer casing being provided at its outer side with brackets for supporting the lids when swung in one direction.

5. In combination with an upright, hollow, annular casing of U-shape in cross-section, segmental lids mounted upon and arranged to swing from the top for covering or uncovering the casing, and means for heating the casing.

1,218,101. STEAM-VULCANIZER. JOSEPH MATHEY, Omaha, Nebr. Filed Aug. 7, 1916. Serial No. 113,639. (Cl. 18—18.)



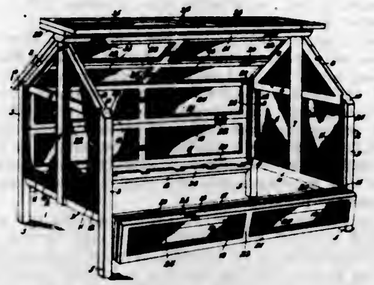
1. A vulcanizer, comprising, in combination with a casing having a flat top and provided on one of its sides with apertured projections and having a channel opening on its bottom, a perforated fuel pipe disposed in said channel, a plurality of pipes communicating with the container and disposed in said channel, curved arms each having a rectilinear part adapted to be moved vertically while disposed in an aperture of a projection and adapted to overhang the casing, a spring washer encircling the rectilinear part and normally resisting a vertical movement of a curved arm, a plurality of contact-plates above the casing, and a screw member carried by each curved arm for lowering or elevating the contact plates with reference to the top of the casing.

2. In a vulcanizer, a horizontally disposed, elongated casing rectangular in cross-section having a channel opening on its bottom and provided near its upper face with projections formed with vertical apertures, a perforated fuel pipe extending longitudinally of the casing within the channel, curved arms each having a rectilinear part adapted to be moved vertically while disposed in an aperture of a projection and adapted to have swinging movements to overhang the casing, keepers threaded in the rectilinear part of said arms, spring washers arranged for normally pressing the keepers outwardly of the projections of the casing for resisting a vertical movement of said curved arms, a plurality of contact-plates above the casing, and a plurality of screw-members threaded in the curved arms for lowering or elevating the contact-plates.

3. A vulcanizer comprising a metallic water container, means for heating the container, a plurality of curved arms each being resiliently mounted and adapted to have swinging movements to overhang the container, a plurality of contact-plates, and means connected with the curved arms and contact-plates for elevating or lowering said plates with reference to the container.

4. A vulcanizer comprising a metallic water receptacle rectangular in cross-section having a channel opening on its bottom and provided near its top with apertured projections, a perforated fuel pipe extending longitudinally of the receptacle within the channel, curved arms each having a rectilinear part adapted to be moved longitudinally while disposed in an aperture of a projection and adapted to have swinging movements to overhang the receptacle, keepers threaded in the rectilinear part of said arms, spring washers arranged for normally pressing the keepers outwardly of the projections of the receptacle for resisting the longitudinal movements of the rectilinear part of said curved arms, a plurality of contact-plates above the receptacle, means connected with the curved arms and contact plates for lowering or elevating said plates, a plurality of hollow molds substantially of U-shape in cross-section in communication with the water receptacle, a bearing-plate in each mold, a plurality of cross-bars each being removably mounted on a mold, and a plurality of screw-members, each being threaded in a cross-bar and engaging a bearing-plate for causing a vertical movement of said bearing-plate.

1,218,102. BED. FRANK ANDERSON MERSHON, Red Hill, Va. Filed Sept. 16, 1915. Serial No. 51,026. (Cl. 5—14.)



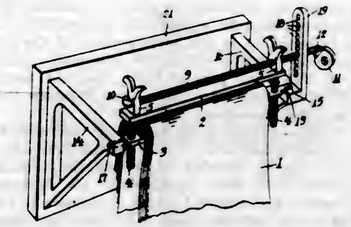
1. A screen bed comprising head and foot boards with gable upper ends, side bars joining the head and foot boards, a ridge bar joining the peaks of the gable ends, screen frames hinged together and to the side bars and foldable one upon the other and against the side bars, said screen frames when extended reaching from the tops of the side bars to the lower ends of the gable tops of the head and foot boards, and pairs of screen frames hinged together and to respective opposite edges of the ridge bar, each of the pairs of screen frames hinged to the ridge bar being foldable together and on to the top of the ridge bar and when unfolded reaching from said ridge bar to and over the upper edges of the unfolded upstanding side screens whereby either or both sides of the bed may be wholly exposed to access from the side bar to the ridge bar.

2. A screen bed comprising head and foot boards with gable upper ends, side bars joining the head and foot boards and readily removable therefrom, a ridge bar joining the peaks of the gable ends, pairs of screen frames with the frames of each pair hinged together and each pair hinged to a respective one of the opposite sides of the ridge bar, and the ridge bar and pairs of frames hinged thereto being readily applicable to and removable from the tops of the gable ends, and other pairs of screen frames with the frames of each pair hinged together and to a respective side bar, said last-named pairs of screen frames being foldable together and against the outer faces of the side bars and reaching when extended to the lower edges of the gable ends of the head and foot boards, the first-named pairs of screen frames when unfolded reaching from the ridge bar to the lower edges of the gable ends of the head and foot boards in overlying relation to the extended side frames.

3. In a screen bed provided with head and foot boards and side screens, a top structure comprising a ridge bar connecting the top of the head and foot boards, and foldable screen frames hinged to opposite sides of the ridge bar, each foldable screen frame having its parts foldable upon itself and on to the ridge bar to lie, when folded, on the opposite side of the ridge bar from the side of the latter to which it is hinged.

4. A screen bed provided with head and foot boards, sides each formed of screen frames foldable together and away from the top of the bed, and other foldable screen frames and a ridge bar constituting the top of the bed with the last-named screen frames foldable together and movable on to the ridge bar in a direction away from the sides of the bed, whereby either side of the bed may be completely opened to the ridge bar by a person either within or outside of the bed.

1,218,103. TOWEL-HOLDER. ALBERT S. MOFFAT, Belmont, Mass., assignor to Harvey C. Wheeler, Boston, Mass. Filed Dec. 18, 1915. Serial No. 67,527. (Cl. 45—32.)



1. A towel holder comprising two bars, thumb screws for clamping said bars together, the head of each screw having a transverse hole through it, a rod adapted to be passed through the holes in both screws, a stationary member having a socket receiving an end of one of said bars, a stationary member having a seat removably receiving the other end of the last-named bar, and means for locking in place the end of said rod above said seat, both to prevent the rod's withdrawal from the screws and the bar from the seat.

2. A towel holder comprising two bars, thumb screws for clamping the towels between them, the head of each screw having a hole transversely through it, a rod adapted to be passed through both of said holes, a stationary member having a socket receiving an end of one of said bars, a stationary member having a seat receiving the other end of the same bar, an ear rigid with the last-named member having a line of closely disposed holes fitted to receive the rod, and means for locking the rod in one of the last-named holes and also in the holes through the screw heads.

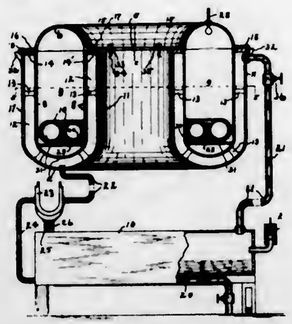
1,218,104. DIMMER DEVICE FOR AUTOMOBILE-HEADLIGHTS. REGINALD J. MORTON, Springfield, Mass. Filed Feb. 25, 1916. Serial No. 80,408. (Cl. 240—48.2.)

1. An attachment for headlights for the purpose of reducing the glare, and comprising an arc-shaped piece

bottom of the cup, electro-magnetic means for operating said diaphragm mounted insides aid cup and on the bottom thereof, an armature adapted to be vibrated by said magnetic means and when so vibrated, to strike said anvil, said armature being mounted on the bottom of said cup on the outside thereof, electric switch contacts mounted on the outside of the bottom of said cup and controlled by said armature and a second cup normally covering the apparatus mounted on the outside of the bottom of said cup.

5. In an automomible horn, the combination of a vibratile diaphragm, a plurality of parts forming a chamber for said diaphragm, one of said parts consisting of a cup-shaped punching having openings in the bottom and having the edge of its mouth turned outward to form an annular flange substantially at right angles to the walls of the cup, a second part having an opening therein to permit the egress of sound waves, said diaphragm being clamped between said two parts, means to space said diaphragm from said second part, means to clamp said two parts, said diaphragm and said spacing means together, the edge of said second part being bent rearward and extending over the edge of said flange, an electro-magnet mounted inside of said cup-shaped part and attached to the bottom thereof, an anvil on said diaphragm extending through an opening in the bottom of the cup-shaped part, a stud on the bottom of said cup mounted on the outside thereof, an armature adapted to be attracted by said magnet to strike said anvil, a spring connecting said armature to said stud, a spring connected at one end to said stud and resting at the other end against said armature, a contact carried by said spring, a second contact and a bridge mounted on the bottom of said cup-shaped part carrying the second contact.

1,218,100. STEAM-VULCANIZER. JOSEPH MATHE, Omaha, Nebr. Filed Aug. 28, 1916. Serial No. 117,125. (Cl. 18—6.)



1. In combination with an upright, endless casing of U-shape in cross-section, a second upright, endless casing of U-shape in cross-section provided at its top with opposed, inwardly projecting flanges, said second casing being disposed outwardly of and adjacent to the first named casing, its flanges engaging the sides at the top of said first named casing to provide an annular chamber below the flanges intermediate said casings, means for heating said annular chamber, and a plurality of lids of segmental form each having a hingeable connection with the second casing and adapted to make a closure of a part of the first named casing.

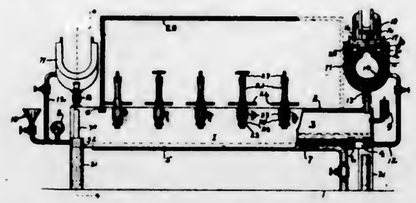
2. In combination with an upright, endless casing of U-shape in cross-section, a second upright, endless casing of U-shape in cross-section provided at its top with opposed, inwardly projecting flanges, said second casing being disposed outwardly of and adjacent to the first named casing, its flanges engaging the sides of said first named casing to provide an annular chamber intermediate said casings and below said flanges, means for heating said annular chamber, a plurality of lids of segmental form each having a wall curved longitudinally and transversely and provided at its sides with flanges, said lids being hingeably connected with the second casing at the junction of one of the inwardly projecting flanges thereof and adapted to have movements for engaging their flanges with the inwardly projecting flanges of said second casing.

3. In combination with an upright, endless casing of U-shape in cross-section, a second upright, endless casing of U-shape in crosa-section provided at its top with opposed, inwardly projecting flanges and provided with outwardly projecting brackets, said second casing being disposed outwardly of and adjacent to the first named casing, its flanges engaging the sides of said first named casing to provide an annular chamber below the flanges intermediate said casings, means for heating said annular chamber, a plurality of lids of segmental form hingeably connected with the second casing and adapted to have swinging movements inwardly of the casings for covering the first-named casing and adapted to have outward swinging movements for uncovering said first named casing, each lid during its outward swinging movement being adapted to engage one of said brackets.

4. An apparatus for vulcanizing vehicle tires, comprising an upright endless casing of U-shape in cross-section for containing the tires, a second upright, endless casing of U-shape in cross-section disposed outwardly of and adjacent to the first named casing, one of said casings being provided at its top with transverse flanges and provided intermediate its top and bottom with spacing-lugs, means for heating the space between the second casing and first named casing, a plurality of lids of segmental shape hingeably connected with the outer side of the second casing, said outer casing being provided at its outer side with brackets for supporting the lids when swung in one direction.

5. In combination with an upright, hollow, annular casing of U-shape in cross-section, segmental lids mounted upon and arranged to swing from the top for covering or uncovering the casing, and means for heating the casing.

1,218,101. STEAM-VULCANIZER. JOSEPH MATHEY, Omaha, Nebr. Filed Aug. 7, 1916. Serial No. 113,639. (Cl. 18—18.)



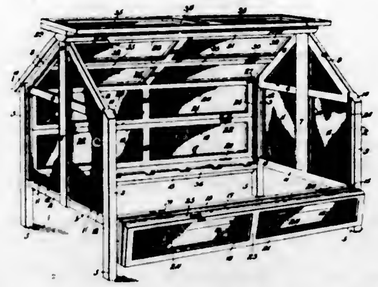
1. A vulcanizer, comprising, in combination with a casing having a flat top and provided on one of its sides with apertured projections and having a channel opening on its bottom, a perforated fuel pipe disposed in said channel, a plurality of pipes communicating with the container and disposed in said channel, curved arms each having a rectilinear part adapted to be moved vertically while disposed in an aperture of a projection and adapted to overhang the casing, a spring washer encircling the rectilinear part and normally resisting a vertical movement of a curved arm, a plurality of contact-plates above the casing, and a screw member carried by each curved arm for lowering or elevating the contact plates with reference to the top of the casing.

2. In a vulcanizer, a horizontally disposed, elongated casing rectangular in cross-section having a channel opening on its bottom and provided near its upper face with projections formed with vertical apertures, a perforated fuel pipe extending longitudinally of the casing within the channel, curved arms each having a rectilinear part adapted to be moved vertically while disposed in an aperture of a projection and adapted to have swinging movements to overhang the casing, keepers threaded in the rectilinear part of said arms, spring washers arranged for normally pressing the keepers outwardly of the projections of the casing for resisting a vertical movement of said curved arms, a plurality of contact-plates above the casing, and a plurality of screw-members threaded in the curved arms for lowering or elevating the contact-plates.

3. A vulcanizer comprising a metallic water container, means for heating the container, a plurality of curved arms each being resiliently mounted and adapted to have swinging movements to overhang the container, a plurality of contact-plates, and means connected with the curved arms and contact-plates for elevating or lowering said plates with reference to the container.

4. A vulcanizer comprising a metallic water receptacle rectangular in cross-section having a channel opening on its bottom and provided near its top with apertured projections, a perforated fuel pipe extending longitudinally of the receptacle within the channel, curved arms each having a rectilinear part adapted to be moved longitudinally while disposed in an aperture of a projection and adapted to have swinging movements to overhang the receptacle, keepers threaded in the rectilinear part of said arms, spring washers arranged for normally pressing the keepers outwardly of the projections of the receptacle for resisting the longitudinal movements of the rectilinear part of said curved arms, a plurality of contact-plates above the receptacle, means connected with the curved arms and contact plates for lowering or elevating said plates, a plurality of hollow molds substantially of U-shape in cross-section in communication with the water receptacle, a bearing-plate in each mold, a plurality of cross-bars each being removably mounted on a mold, and a plurality of screw-members, each being threaded in a cross-bar and engaging a bearing-plate for causing a vertical movement of said bearing-plate.

1,218,102. BED. FRANK ANDERSON MERSHON, Red Hill, Va. Filed Sept. 16, 1915. Serial No. 51,026. (Cl. 5—14.)



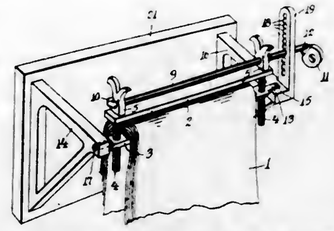
1. A screen bed comprising head and foot boards with gable upper ends, side bars joining the head and foot boards, a ridge bar joining the peaks of the gable ends, screen frames hinged together and to the side bars and foldable one upon the other and against the side bars, said screen frames when extended reaching from the tops of the side bars to the lower ends of the gable tops of the head and foot boards, and pairs of screen frames hinged together and to respective opposite edges of the ridge bar, each of the pairs of screen frames hinged to the ridge bar being foldable together and on to the top of the ridge bar and when unfolded reaching from said ridge bar to and over the upper edges of the unfolded upstanding side screens whereby either or both sides of the bed may be wholly exposed to access from the side bar to the ridge bar.

2. A screen bed comprising head and foot boards with gable upper ends, side bars joining the head and foot boards and readily removable therefrom, a ridge bar joining the peaks of the gable ends, pairs of screen frames with the frames of each pair hinged together and each pair hinged to a respective one of the opposite sides of the ridge bar, and the ridge bar and pairs of frames hinged thereto being readily applicable to and removable from the tops of the gable ends, and other pairs of screen frames with the frames of each pair hinged together and to a respective side bar, said last-named pairs of screen frames being foldable together and against the outer faces of the side bars and reaching when extended to the lower edges of the gable ends of the head and foot boards, the first-named pairs of screen frames when unfolded reaching from the ridge bar to the lower edges of the gable ends of the head and foot boards in overlying relation to the extended side frames.

3. In a screen bed provided with head and foot boards and side screens, a top structure comprising a ridge bar connecting the top of the head and foot boards, and foldable screen frames hinged to opposite sides of the ridge bar, each foldable screen frame having its parts foldable upon itself and on to the ridge bar to lie, when folded, on the opposite side of the ridge bar from the side of the latter to which it is hinged.

4. A screen bed provided with head and foot boards, sides each formed of screen frames foldable together and away from the top of the bed, and other foldable screen frames and a ridge bar constituting the top of the bed with the last-named screen frames foldable together and movable on to the ridge bar in a direction away from the sides of the bed, whereby either side of the bed may be completely opened to the ridge bar by a person either within or outside of the bed.

1,218,103. TOWEL-HOLDER. ALBERT S. MOFFAT, Belmont, Mass., assignor to Harvey C. Wheeler, Boston, Mass. Filed Dec. 18, 1915. Serial No. 67,527. (Cl. 45—32.)



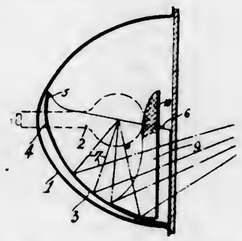
1. A towel holder comprising two bars, thumb screws for clamping said bars together, the head of each screw having a transverse hole through it, a rod adapted to be passed through the holes in both screws, a stationary member having a socket receiving an end of one of said bars, a stationary member having a seat removably receiving the other end of the last-named bar, and means for locking in place the end of said rod above said seat, both to prevent the rod's withdrawal from the screws and the bar from the seat.

2. A towel holder comprising two bars, thumb screws for clamping the towels between them, the head of each screw having a hole transversely through it, a rod adapted to be passed through both of said holes, a stationary member having a socket receiving an end of one of said bars, a stationary member having a seat receiving the other end of the same bar, an ear rigid with the last-named member having a line of closely disposed holes fitted to receive the rod, and means for locking the rod in one of the last-named holes and also in the holes through the screw heads.

1,218,104. DIMMER DEVICE FOR AUTOMOBILE-HEADLIGHTS. REGINALD J. MORTON, Springfield, Mass. Filed Feb. 25, 1916. Serial No. 80,408. (Cl. 240—48.2.)

1. An attachment for headlights for the purpose of reducing the glare, and comprising an arc-shaped piece

formed of elastic material of a translucent nature and dark color that is adapted to be inserted in the lower portion of the reflector of a headlight, the apex portion of the sector-shaped piece having an opening to receive the shank of the electric bulb and a slit communicating with the opening to permit the insertion of the member within the reflector of the headlight, and a shield secured to the sector shaped member for cutting off the direct rays of light from the lamp, as described.



2. A headlight dimmer, comprising an elastic member formed of material of a translucent nature and dark color and adapted to be easily bent and inserted into the reflector of a headlight, means for attaching the same to the lamp, and a curved shield connected to said member and extending upward and in front of the lamp when the dimmer is in place, whereby the direct rays of light are confined to the interior of the reflector, as described.

3. A device for subduing the glare or dazzling effect of an automobile headlight, comprising an insertible and foldable member adapted to be placed in the lower portion of the reflector of the headlight, and a shield attached to the member for cutting off the direct rays of light from the lamp.

4. A device for subduing the glare or dazzling effect of an automobile headlight, comprising an insertible member adapted to be placed in the lower portion of the reflector of the headlight and provided with slits, and a shield for cutting off the direct rays of light from the lamp, said shield being provided with means for engaging the slits in the insertible member.

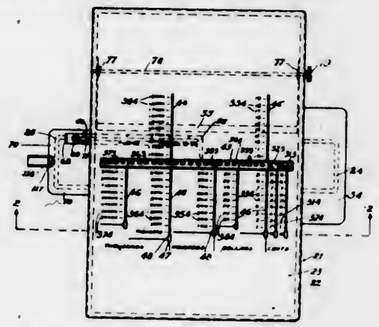
5. A member composed of an elastic material for insertion in the reflector of an automobile headlight, said member having an opening to receive the neck of the electric lamp, and slits or openings for securing the shield thereto, and a shield which is located in front of the lamp to cut off the direct rays from the lamp, the upper portion of said shield being rendered opaque and said shield being secured to said member by means of the slits.

[Claims 6 and 7 not printed in the Gazette.]

1,218,105. PRINTING MECHANISM. ARTHUR W. MUELLER, Cincinnati, Ohio. Filed Dec. 14, 1914. Serial No. 877,107. (Cl. 101—19.)

1. In a printing mechanism, in combination, a series of supports having printing lines at one side thereof and corresponding designating lines at the opposite side thereof, said supports arranged side by side and for relative longitudinal movement, guideways for said supports, and resiliently acting means between said guideways and supports located between said printing lines and designating lines which are on said opposite sides of said supports, said resiliently acting means acting resiliently in both directions of movement of said supports for causing cross alinement of the printing lines on said series of supports.

2. In a printing mechanism, the combination of a case provided with an exposure-slot, a printing means in said case, and a series of supports having printing lines at one side thereof for coaction with said printing means and designating lines at the opposite side thereof for coaction with said exposure-slot, said supports arranged side by side and for relative longitudinal movement, guide-ways for said supports, said exposure slot being of a width to expose solely a composite designating line composed of a designating line on each of said supports, and resilient means between said guideways and supports located between said printing lines and designating lines which are on said opposite sides of said support, said resilient means acting resiliently in both directions of movement on said supports for resiliently positioning said last-named designating lines in registry with said exposure slot.



3. In a printing mechanism, the combination of a case provided with an exposure-slot, slides in said case provided with printing lines presented downwardly and with corresponding designating lines presented upwardly, an indicating means comprising a pair of parts one of which consists of indicating lines and the other of which consists of indicating fingers, one of said parts having connection with said slides for movement thereof, an impressing device, means for causing relative cross-movement between said impressing device and said slides, and said slides arranged for relative longitudinal movement for presenting selective ones of said printing lines in cross-line coaction with said impressing device, corresponding selective ones of said designating means in registry with said exposure-slot and for denoting corresponding lines in said indicating means.

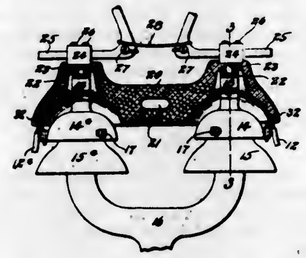
4. In a printing mechanism, the combination of a case, a series of slides therein provided with printing lines, a printing means for said slides, guide-rods on which said slides slide, and means for positioning said slides lengthwise of said guide-rods comprising springs secured to said slides, said springs and guide-rods provided with coacting means for locating said printing lines selectively in printing position, and means for causing cross-movement between said printing means and said series of slides for effecting the printing.

5. In a printing mechanism, the combination of a series of slides provided with printing lines and movable relatively longitudinally for cross-lining selective ones of said printing lines in printing position, a printing means comprising a rockable frame provided with an impressing means coacting with said printing lines and with an inking means coacting with said printing lines, means for rocking said rockable frame for causing selective coaction of said impressing means and said inking means with said printing lines, and means for causing cross-movement between said rockable frame and said series of slides.

[Claims 6 to 37 not printed in the Gazette.]

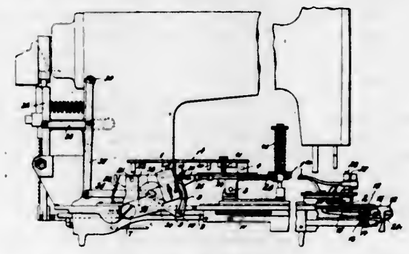
1,218,106. ELECTRICAL FUSE CONNECTION. JAMES J. MULLEN, St. Louis, Mo., assignor to Moloney Electric Company, St. Louis, Mo., a Corporation of New York. Filed Mar. 16, 1915. Serial No. 14,728. (Cl. 175—273.)

1. A fuse connection comprising in combination, a fuse wire, a pair of upwardly diverging terminals to which said fuse wire is connected, a pair of yielding contacts in electrical connection with said diverging terminals, an insulation block on which said parts are mounted, and a pair of spaced contacts for coöperating with said yielding contacts to support said insulation block; said insulation block and the parts carried thereby being bodily removable entirely from said spaced contacts to permit replacement of the fuse wire.



2. A fuse connection comprising the combination of a movable block of insulating material carrying a pair of electrical contact members spaced apart and insulated from each other, portions of said block being shaped to form housings for said contacts, a pair of arcing horns supported on said block exterior of said contact housing portions and having electrical connection respectively with the respective contacts, a fuse normally connecting said arcing horns to furnish a current path exterior of said insulating block and its housing portions, and a pair of supporting contacts with which said insulating block is removably associated and which are shaped for electrical connection with the contacts carried on said block.

1,218,107. THREAD-CUTTING DEVICE FOR BUTTON-HOLE-SEWING MACHINES. RICHARD MUNDLOS, Magdeburg, Germany, assignor to The Firm of H. Mundlos & Co., Magdeburg, Germany. Filed May 20, 1915. Serial No. 29,290. (Cl. 112—33.)



1. In a button-hole sewing machine, a presser member fulcrumed to the machine-plate, a device for cutting off the upper thread, a device for cutting off the lower thread, a rod, 24, adapted to actuate the former, and a rod, 8, adapted to actuate the latter, a lever, 5, in operative connection with the said rod, 8, and in engagement with the presser member, and a lever, 22, in engagement with the other rod, 24, and with the other lever, 5, to be moved simultaneously therewith.

2. In a button-hole sewing machine, a presser member fulcrumed to the machine-plate, a device for cutting off the upper thread, a device for cutting off the lower thread, a rod, 24, adapted to actuate the former and a rod, 8, adapted to actuate the latter, a lever, 5, in operative connection with the said rod, 8, and in engagement with the presser member, a lever 22 in engagement with the rod, 24, and the lever, 5, and an adjustable angular end piece, 25, on said lever, 22, adapted to bear against the cutter actuating rod, 24.

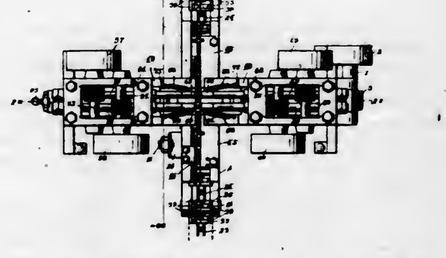
3. In a button-hole sewing machine, a presser member fulcrumed to the machine-plate, a device for cutting off the upper thread, a device for cutting off the lower thread, a rod, 24, adapted to actuate the former and a rod, 8, adapted to actuate the latter, a lever, 5, in operative connection with the said rod, 8, and in engagement with the presser member, a lever, 22, a cam lever, 33, a member, 32, for disengaging the machine drive, and intermediate means connecting said cam lever with the said member, 32, all the parts constructed and arranged so that the aforesaid levers, 5 and 22, are locked when the machine drive is engaged.

4. In a button-hole sewing machine, a presser member fulcrumed to the machine-plate, a device for cutting off the upper thread, a device for cutting off the lower thread, a rod, 24, adapted to actuate the former and a rod, 8, adapted to actuate the latter, a lever, 5, in operative connection with the said rod, 8, and in engagement with the presser member, a lever, 22, a cam lever, 33, so shaped or profiled as to prevent the machine from being engaged or coupled to start when the presser member is lifted or open, and to assist in lifting the lever 5, a member 32, for disengaging the machine drive, and intermediate means connecting said cam lever with the said member 32.

5. In a button-hole sewing machine, a presser member fulcrumed to the machine plate, a device for cutting off the upper thread, a device for cutting off the lower thread, a rod, 24, adapted to actuate the former, and a rod, 8, adapted to actuate the latter, a lever, 5, in operative connection with the said rod, 8, and in engagement with the presser member comprising two superposed parts of levers, the one, 1^a, being fulcrumed to the machine plate, the other 1^b, being fulcrumed on the former, so as to act, when actuated, first on the said lever, 5, alone, and thereafter on the part, 1^a, for the purpose of operating same.

[Claims 6 to 8 not printed in the Gazette.]

1,218,108. AUTOMATIC-FEEDING MACHINE-TOOL. ALBERT MUTSCHLER, Rochester, N. Y. Filed Dec. 8, 1915. Serial No. 65,866. (Cl. 90—14.)



1. In a machine tool the combination of an endless conveyer, a carrier attached thereto capable of holding stock therein, a stationary cam placed in the path of said carrier for operating and closing said carrier to lock the stock therein as it is advanced, means for intermittently advancing said carrier, means for clamping said stock independently of its carrier, and means for cutting said stock while it is so clamped.

2. In a machine tool a movable carrier for stock comprising a block having a slot therein, a slide mounted in said slot, a holder mounted on said block, said slide being mounted to move under said holder and engage the work therein.

3. In a machine tool a movable carrier for stock comprising a block having a slot therein, a slide mounted in said slot, a holder mounted on said block, said slide being mounted to move under said holder and a cam on said slide, a stationary cam engaging said cam on said slide by which it is moved under said holder to engage the work therein.

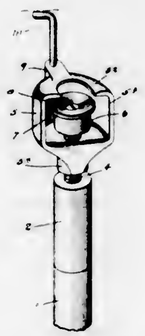
4. In a machine tool a movable carrier for stock having a holder mounted thereon having an opening therein, said holder having a shoulder in the bottom thereof partially closing said opening, said shoulder being adapted to en-

gage the stock and to hold it in position in the holder and permit it to extend below the holder.

5. In a machine tool the combination of a frame, a conveyer traveling thereon, carriers on said conveyer capable of holding stock therein, an auxiliary frame transverse thereto having a rotating shaft thereon, three cams mounted to rotate with said shaft, a pair of jaws mounted on the main frame, an eccentric for moving each jaw, a shaft for each eccentric, and cranks on the end of each shaft, said cams engaging with said cranks to close the jaws on the stock and hold it and then open the jaws and release said stock.

[Claims 6 to 9 not printed in the Gazette.]

1,218,109. DEVICE FOR MANIPULATING FUSE-BOXES. GEORGE SPENCER NEDLEY, St. Louis county, Mo., assignor of one-half to Thomas O. Moloney, St. Louis, Mo. Filed May 22, 1916. Serial No. 99,173. (Cl. 57—113.)



1. A device for manipulating electrical fuse plugs comprising a pole, a clamping member supported at one extremity of the pole and movable relative thereto, a cooperating clamping member mounted at said end of the pole and operable relative to the first mentioned clamping member by movement of the pole, and a stop member carried by the first mentioned clamping member and adapted to coöperate with a cut-out box to hold said clamping member against movement upon operation of the cooperating clamping member.

2. A device for manipulating fuse plugs of electrical cut-outs comprising a pole, a spindle projecting from one end thereof and revoluble therewith, a clamping member screw-mounted on said spindle and shaped to engage a fuse plug, and a coöperating clamping member mounted on said spindle and movable relative to the first mentioned clamping member by operation of the pole and adapted to engage a fuse block to clamp it against the first mentioned clamping member.

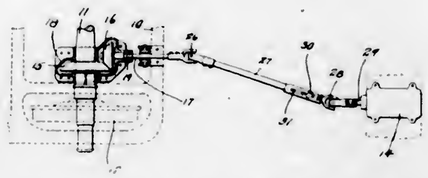
3. A device for manipulating electrical cut-outs including a pole, a spindle supported at one end thereof, a clamping member having a screw-thread engagement on the spindle whereby the two may be moved relatively in a direction longitudinally of the pole, said clamping member having a flange or lip portion of reëntrant marginal contour and extending in a direction transversely of the pole, and a coöperating clamping member carried on the spindle and movable toward and from said flange for clamping coöperation therewith.

4. A device of the class described comprising the combination of a pole, a spindle mounted thereon and projecting axially from one extremity thereof, a clamping member having screw-thread engagement with the spindle for movement longitudinally thereon, said clamping member having a transversely extending reëntrant clamping lip spaced apart from the extremity of said spindle, a cooperating clamping member mounted on the spindle and movable toward and from said clamping lip by operation of the pole, and a stop member projecting from the clamping member at one side of the axis thereof.

5. A device for manipulating fuse cut-outs comprising a pole, a spindle projecting at one extremity thereof, a clamping member having screw-thread engagement with said spindle for longitudinal movement thereon, said clamping member having a transversely directed clamping flange spaced apart from said spindle, and a coöperating clamping member revolubly mounted on the spindle and movable therewith toward and from said clamping flange.

[Claim 6 not printed in the Gazette.]

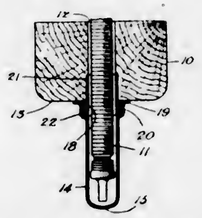
1,218,110. AXLE-DRIVEN GENERATOR FOR TRAIN-LIGHTING SYSTEMS. MAXIMILIAN P. NEUMAYER, St. Charles, and MAXIMILIAN J. NEUMAYER, St. Louis, Mo. Filed July 14, 1916. Serial No. 109,387. (Cl. 105—238.)



1. The combination with a truck frame and axle and the generator of a train lighting system, of a sectional driving shaft, one end of which is connected to the armature shaft of the generator, driving means between the axle and the other end of said sectional shaft, a bracket rigidly fixed to the truck frame, a bearing pivotally mounted in said bracket, one of the sections of the driving shaft being mounted for sliding movement through said bearing and one of the sections of said driving shaft being provided with an extensible joint.

2. The combination with a truck frame and axle and the generator of a train lighting system, which generator is carried directly by the car body, of a driving shaft formed in sections, the ends of which sections are connected by universal joints, one of said sections being connected to the armature shaft of the generator, one of the sections being provided with an extensible joint, means for driving said shaft directly from the axle, a bracket rigidly fixed on the truck frame, a bearing block in which one of the sections of the driving shaft is mounted for sliding movement, and trunnions on said bearing block, which trunnions are journaled in said brackets.

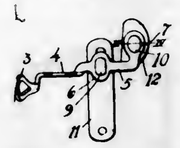
1,218,111. DUST-CAP. FREDERIK NIELSEN, Boston, Mass., assignor, by direct and mesne assignments, to A. Schrader's Son, Incorporated, Brooklyn, N. Y., a Corporation of New York. Filed Aug. 14, 1913. Serial No. 784,800. (Cl. 152—12.)



1. A cap for a tire valve, said cap having an endless series of flexible spring portions arranged to grip a holder inserted therein.

2. A cap for a tire valve, said cap having an endless series of flexible spring tongues arranged to grip a holder inserted therein, each of said tongues having an offset portion adjoining the body portion of the cap, the gripping portions of said tongues being set out from the center of the cap in consequence of said offset portions.

1,218,112. OPHTHALMIC MOUNTING. HAROLD K. PARSONS, Southbridge, Mass. Filed Oct. 30, 1916. Serial No. 128,476. (Cl. 88—50.)



1. A retaining device for an ophthalmic mounting, comprising a pair of members for engagement with each side of the nose, the members of each pair having a portion at least disposed in the same horizontal plane and both of said members being mounted for rocking movement relative to their supports.

2. The combination with an ophthalmic mounting, of a retaining device disposed at each side thereof, comprising supporting means, an elongated guard member fulcrumed for longitudinal rocking movement over the supporting means, and an inner shorter guard member mounted for longitudinal rocking movement over the supporting means.

3. In an ophthalmic mounting, the combination with the lens connections, of means for retaining the mounting in position, including supporting means carried by the lens connections at each side, an outer elongated guard member fulcrumed for longitudinal and transverse rocking movement over the supporting means at each side, and an additional inner guard member fulcrumed over the supporting means for universal rocking movement relative thereto.

4. In an ophthalmic mounting, the combination with a perforated supporting arm, of a guard member having a pin loosely received in the perforation of the arm, and a fulcrum washer on the pin intermediate the guard and arm to facilitate rocking movement of the guard over the arm.

5. A guard arm for an ophthalmic mounting, including a supporting arm having a non-circular perforation formed therein, a guard member having a non-circular pin loosely fitting within the aperture in the guard arm and headed to prevent withdrawal from the aperture and a fulcrum washer interposed on the pin between the guard and arm and having opposite faces bearing respectively against the guard and the arm to hold the parts in spaced relation and facilitate relative rocking movement thereof.

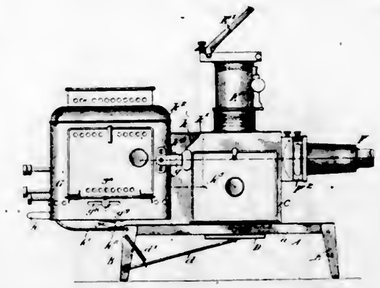
[Claims 6 to 9 not printed in the Gazette.]

1,218,113. PROJECTION APPARATUS. WILLIAM L. PATTERSON, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 21, 1914. Serial No. 862,737. (Cl. 88—26.)

1. In a projection apparatus, the combination with a frame and stationary casing, of means for supporting an object in visible relation to the stationary casing, an adjustable casing provided with a condenser, and an illuminator for the adjustable casing, the adjustable casing being provided with rigid walls that engage the stationary casing closely in any operative position to exclude exterior light.

2. In a projection apparatus, the combination with a frame and a stationary casing, of means for supporting an object in visible relation to the stationary casing, an adjustable casing, an illuminator for the adjustable casing, and rigid means mounted on one of the casings and serving to connect the casings closely in any operative position to exclude exterior light.

3. In a projection apparatus, the combination with a frame and a stationary casing, of means for supporting an object in visible relation to the stationary casing, an adjustable casing, an illuminator for the adjustable casing and a condenser arranged in the adjustable casing, a hood surrounding and extending beyond the condenser, and rigid walls on the stationary casing against which said hood and the adjustable casing engage to exclude exterior light in any operative position.

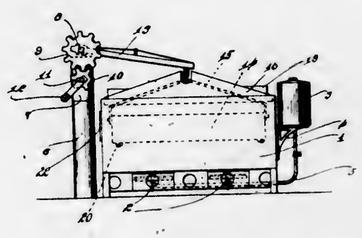


4. In a projection apparatus, the combination with a frame and a casing having an opening in one wall thereof, of a U-shaped support having its arms pivoted on the frame, an object holder mounted on the support and normally located adjacent said opening, and springs connecting the support and the frame.

5. A frame for projection apparatus consisting of a top portion having upper and lower sheet metal plates arranged in spaced relation to each other and overlapping to form side walls, of a casing, an object holder mounted in visible relation to the casing, a projector, and an illuminator coöperating with the casing.

[Claims 6 and 7 not printed in the Gazette.]

1,218,114. GRAIN-TREATING APPARATUS. MILES E. PEARSON, Pullman, Wash. Filed Mar. 28, 1916. Serial No. 87,223. (Cl. 83—28.)



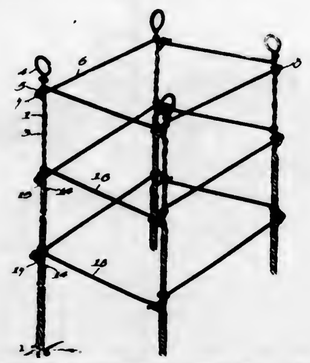
1. In a grain treating apparatus, a tank adapted to contain a liquid, a receiving hopper adjacent to said tank, a support adjacent to said tank, a rotatable section mounted on said support, gear shafts journaled in said section, gears carried by said shafts, an arm mounted upon one of said shafts, a grain pan carried by the said arm, and means for operating said gears.

2. In a grain treating apparatus, a tank adapted to contain a liquid, a receiving hopper adjacent to said tank, a support adjacent to said tank, a rotatable bifurcated section mounted on said support, a gear shaft journaled in said section transversely of the bifurcated portion thereof, an arm mounted upon the said shaft, a gear mounted on said shaft, and means for raising and lowering said arm by rotation of said gear.

3. In a grain treating apparatus, a tank adapted to contain a liquid, a receiving hopper adjacent to said tank, a support adjacent to said tank, a rotatable section

mounted on said support, gear shafts journaled in said section, gears carried by said shafts, an arm mounted upon one of said shafts, a tiltable grain pan carried by the said arm, a hinged closure for the said pan, and means for operating said gears.

1,218,115. SHRUB AND PLANT HOLDER. LOUIS FREDERICK PHILLIPPS, Columbus, Nebr. Filed Sept. 1, 1916. Serial No. 118,109. (Cl. 47—12.)

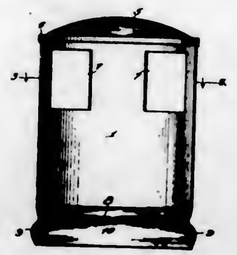


1. A plant holder comprising a plurality of detachable sections, each section consisting of a single piece of wire bent intermediate its ends and tightly twisted from said point a predetermined distance to form a standard, one end of said wire projecting from the termination of its twisted portion in alinement with the standard a short distance, the extremity of said end being bent to form a finger loop with its free end anchored around the adjacent straight portion of the end, the other end of said wire being bent at the termination of its twisted portion to form a laterally projecting U-shaped loop disposed lengthwise in a single plane with the standard, said end of the wire being then wrapped around the straight portion of the other end adjacent the anchored portion of said finger loop and extending outwardly from said straight portion oppositely from the loop to form a straight laterally projecting arm, and a spring hook having a contracted throat portion formed on the extremity of said arm adapted to engage the loop on the adjacent section.

2. A plant holder comprising a plurality of detachable sections, each section consisting of a single piece of wire bent intermediate its ends and tightly twisted from said point a predetermined distance to form a standard, one end of said wire projecting from the termination of its twisted portion in alinement with the standard a short distance, the extremity of said end being bent to form a finger loop with its free end anchored around the adjacent straight portion of the end, the other end of said wire being bent at the termination of its twisted portion to form a laterally projecting substantially U-shaped loop disposed lengthwise in a single plane with the standard, said end of the wire being then wrapped around the straight portion of the other end adjacent the anchored portion of said finger loop and extending outwardly from said straight portion oppositely from the loop to form a straight laterally projecting arm, an additional piece of wire bent intermediate its ends and tightly twisted in said standard, the ends of said additional wire having their twisted portions terminating in spaced relation along the standard, and then bent to form laterally projected substantially U-shaped loops disposed lengthwise in a single plane with the loop on the first mentioned wire, said ends being then looped around the standard and extending outwardly therefrom oppositely from the loops to form straight laterally projecting spaced arms, and spring hooks on the extremities of said arms having contracted throat portions adapted to engage the loops of adjacent sections.

1,218,116. LARD AND FLOUR MIXER. CLARENCE H. POST, Seattle, Wash. Filed Apr. 13, 1916. Serial No. 90,862. (Cl. 107—47.)

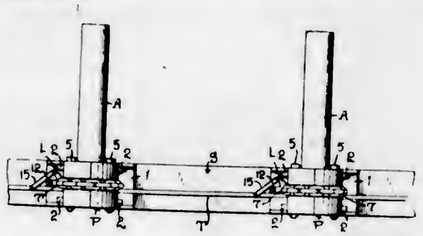
1. A culinary article for mixing lard and flour comprising a cylindrical hollow body portion, an annular ridge formed therewith and the lower end of said body portion being bent inwardly forming an annular chamber between said ridge and the extreme lower end of said body portion for the purpose set forth.



2. A culinary article of the character set forth comprising a cylindrical hollow body portion, a closure for one end of said body portion forming a handle therefor, an inwardly projecting ridge formed with said body portion, the lower end of said body portion being deflected outwardly and then inwardly to form an annular chamber between said ridge and the lower edge of said body portion and the upper end of said body portion having a plurality of openings therein substantially as and for the purpose set forth.

3. An article of manufacture for mixing lard and flour comprising a hollow body portion having its lower end open, a closure for the opposite end thereof forming a handle, an annular inwardly projecting ridge formed with the body portion adjacent its lower end, an annular outwardly projecting flange, formed with the body portion below said inwardly projecting flange to form an annular chamber within the body portion, the lower edge of the body portion projecting inwardly from said outwardly extending ridge and terminating in a sharp edge lying in a vertical plane contiguous with the body portion whereby when the latter is forced within lard and flour the lard will be caused to be deflected upwardly and outwardly by said annular ridges and chamber and subsequently the lard will be caused to mix with the flour.

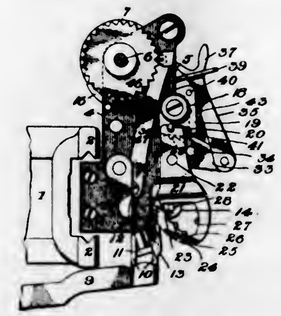
1,218,117. RELEASABLE POCKET FOR THE STAKES OF LOGGING-CARS. EARL C. POUNDSTONE, Mellen, Wis. Filed Aug. 12, 1916. Serial No. 114,592. (Cl. 105—173.)



1. In combination with a supporting structure, coacting stake receiving jaws pivotally engaged therewith, a flexible member anchored at one end and coacting with the jaws to maintain the same in closed relation, a pivotally supported hook member coacting with the flexible member for holding the same in operative engagement with the jaws, a tail piece carried by the hook member, a movable latch coacting with the tail piece for holding the hook member against movement, and means for operating the latch.

2. In combination with a supporting structure, coacting stake receiving jaws pivotally engaged therewith, a flexible member anchored at one end and coacting with the jaws to maintain the same in closed relation, a pivotally supported hook member coacting with the flexible member for holding the same in operative engagement with the jaws, a tail piece carried by the hook member, a movable latch coacting with the tail piece for holding the hook member against movement, a finger extending from the latch substantially at right angles to its pivot, a trip rod, and a link connection between the trip rod and the finger.

1,218,118. PAPER-FEEDING DEVICE. JOSEPH F. REIRDON, Kingston, Pa., assignor to The Adder Machine Company, Wilkes-Barre, Pa., a Corporation of Pennsylvania. Filed July 12, 1913. Serial No. 778,687. (Cl. 197—114.)



1. In a paper feeding device, the combination with a ratchet, and a platen turning therewith; of means to turn the ratchet in either direction, including an operating drive, having a stroke of constant length; a pawl adapted to be advanced by the drive to turn the ratchet in one direction, said pawl normally lying in advanced position; and a second pawl adapted to be advanced by said drive to turn the ratchet in the opposite direction, and normally lying in retracted position.

2. In a paper feeding device, the combination with a ratchet, and a platen turning therewith; of means to turn the ratchet in either direction, including an operating drive, having a stroke of constant length; a follower; yielding means connecting the follower and drive; means to arrest the follower at different points in its stroke; a pawl connected with the follower and normally lying in advanced position; and a pawl positively connected with the drive and normally lying in retracted position.

3. In a paper feed, the combination with a platen; of forward and backward line space feeding pawls; a ratchet common to both pawls; drive means likewise common to both pawls, and traversing a constant path; means to regulate the line space intervals when the platen is advanced; a separate means to regulate the line space intervals when the platen is reversed; and a controller common to both line space regulating means.

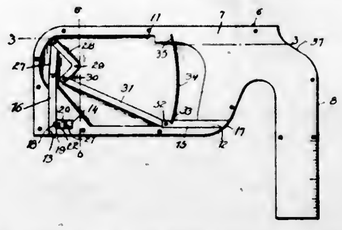
4. In a paper feed, the combination with a platen, a ratchet, of line space mechanism, including separate pawls, to advance or to reverse the paper step by step; and means contacted by the reverse feed pawl during its effective stroke, to disengage the pawl from the ratchet.

5. In a paper feed device, the combination with a platen and ratchet, and means to drive the ratchet and platen step by step in one direction; of a reversing pawl to engage the ratchet and reverse the platen step by step; a finger on the reversing pawl; and a displacing member in the path of the finger and engaged thereby, to withdraw the reversing pawl from engagement with the ratchet, at a predetermined point in its effective stroke.

[Claims 6 to 24 not printed in the Gazette.]

1,218,119. TIRE-GAGE. JOHN A. ROBERTSON, Richmond, Va., assignor of one-half to Wirt A. Martin, Richmond, Va. Filed May 22, 1913, Serial No. 769,264. Renewed July 22, 1916. Serial No. 110,803. (Cl. 33—203.)

1. In a device of the character described, a hollow main body portion, an arm extending at right angles from said body portion and forming a stop therefor, the body being formed with a recess adjacent the arm, the said recess being adapted to receive the flange of a car wheel, slidable pins mounted within the body portion, one of said pins extending parallel with the arm, the other of said pins extending adjacently to the arm and parallel to the body portion and means operably connecting the pins.



2. A device of the character described comprising a frame, plates secured to the sides of the frame, the frame having a recess near one end, an arm extending at right angles to the frame, and integral with the recessed end thereof, pins slidable within the frame, links connected to the pins, a bell crank operatively mounted between the plates, the arms of the bell crank connected to the links, and an indicator carried by one of said pins, there being graduations on the sides of the plates coöperating with the indicator.

3. In a device of the character described, a frame, an arm extending at right angles thereto and formed integral with one end thereof, said arm forming a stop to limit the movement of the frame, pins extending at right angles to each other, a bell crank pivotally mounted within the frame, and links connecting the arms of the bell crank respectively with the pins, whereby upon reciprocation of one of the pins the other of the pins will move proportionately to the first-mentioned pin.

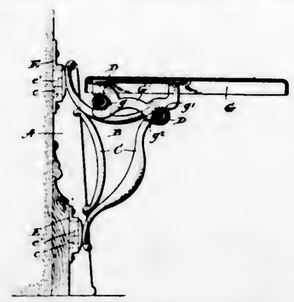
4. In a tire gage, a frame, an arm formed at one end of the frame and integral therewith, the same being provided with a flange-receiving recess near the arm, said frame also being provided with a second recess, plates secured to the frame to close the second recess, pins slidable in said second recess in the frame, resilient means to force the pins outwardly, a bell crank pivoted in the second recess, links connecting the arms of the bell crank with the pins, and means to lock the pins in their innermost position.

5. A tire gage comprising a hollow frame having a flange-receiving recess therein, an arm extending at right angles to the frame, said frame being provided with a groove adjacent to the arm and also having a groove near its opposite end, a pin slidable in the first-mentioned groove, a bell crank pivoted in the frame, a notched pin slidable in the second-mentioned groove, each of the pins being connected to the bell crank, side plates secured to the frame and adapted to support the bell crank, resilient means to force the pins outwardly, a latch slidable in the frame, and a lug on the latch adapted to engage in the notch in the second-mentioned pin to hold said pins in their innermost position.

1,218,120. FOOT-REST. JOHN H. ROBERTSON, Platteville, Wis. Filed June 27, 1912. Serial No. 706,266. (Cl. 155—9.)

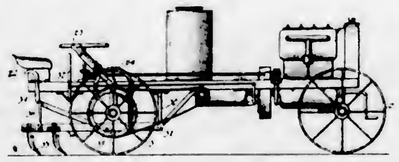
An attachment for hot air registers comprising a frame composed of spaced side pieces having cross bars arranged therebetween, means for supporting said side pieces adjacent the register, and a shelf having depending brackets.

each of which have oppositely opening recesses therein for engagement with the front and rear portions of the



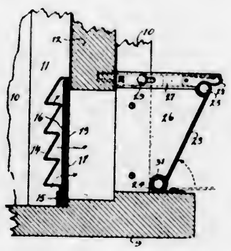
cross rods, whereby the shelf may be moved from the cross rods upon an upward and forward movement.

1,218,121. MOTOR-CULTIVATOR. FRIEDRICH ALBERT RUNGE, San Marcos, Tex. Filed Dec. 8, 1913. Serial No. 805,402. (Cl. 97—34.)



In a cultivator, a frame, flexible bars having their forward portions parallel and their rearward portions divergent from said forward portions, a pivotal support for the forward ends of said bars, a lever pivoted to one side of said frame and extending transversely of the same, connection between said lever and the said flexible bars, a second lever pivoted to the opposite side of said frame with relation to the aforesaid lever, connection between said levers; angular levers secured at their ends directly to said flexible bars whereby said bars may be moved laterally in a limited degree independently of said frame and cultivator blades carried by the rearward portions of said flexible bars.

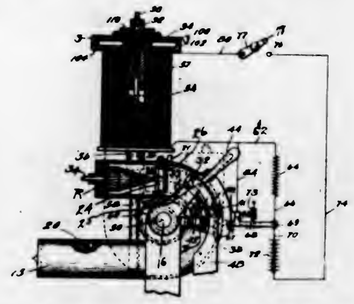
1,218,122. WINDOW-VENTILATOR. JOHN C. SCOTT, Lexington Pike, Kenton county, Ky. Filed Oct. 19, 1915. Serial No. 56,774. (Cl. 98—31.)



1. In a window ventilator adapted to occupy and close the open space below a partly raised sash, the combination of the ventilator consisting of two superposed members, flanges secured to the window-frame and locking slides contained between the superposed members of the ventilator at each end thereof and having an endwise sliding adjustment between these members for the purpose of engaging said flanges to lock the ventilator in position.

2. In a window ventilator adapted to occupy and close the open space below a partly raised sash, the combination of the ventilator consisting of two superposed members, flanges attached to the window frame and adapted to occupy the space between said superposed members at the ends of the ventilator to hold the same in position and locking slides provided between said superposed members of the ventilator at the ends thereof and adapted to engage said flanges to lock the ventilator in its position.

1,218,123. ELECTRIC SWITCHING DEVICE. MELVIN L. SEVERY, Arlington Heights, Mass., assignor to Severy Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed July 8, 1913. Serial No. 777,873. (Cl. 175—282.)



1. A switching device, comprising a receptacle containing a conducting liquid; a resistance contact having a varying resistivity in successive portions thereof; and means whereby said liquid and contact may be moved relatively to each other to vary the resistance in the circuit by the resulting conjoint variation of the area of contact and the resistivity.

2. A switching device comprising in combination a movably mounted receptacle; a resistance contact having a resistivity progressively varying throughout the body thereof mounted in said receptacle; a conductive fluid contained in said receptacle and adapted when flowed into contact with said resistance contact to complete an electric circuit; and means for shifting said receptacle to cause said liquid to flow progressively into contact with an increasing area of said resistance contact, the direction of such increase in area of contact coinciding generally with the direction of variation of resistivity of said contact.

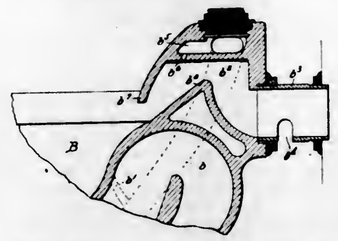
3. A switching device comprising in combination a movably mounted receptacle; a resistance contact having a resistivity progressively varying throughout the body thereof mounted in said receptacle; a conductive fluid contained in said receptacle and adapted when flowed into contact with said resistance contact to complete an electric circuit; means for shifting said receptacle to cause said liquid to flow progressively into contact with an increasing area of said resistance contact, the direction of such increase in area of contact coinciding generally with the direction of variation of resistivity of said contact; and means for retarding the circuit-closing flow of said liquid.

4. A switching device comprising in combination a receptacle formed with two chambers; a valve structure adapted to open freely to flow from the first to the second chamber and to close against reverse flow, but provided with a restricted by-pass to permit such reverse flow; a resistance contact having a varying resistivity in successive portions thereof, mounted in said first chamber; a conducting liquid contained in said receptacle and adapted when in said first chamber to complete an electric circuit with said resistance contact; and means for alternately shifting said receptacle to cause said liquid to flow from one chamber to the other.

5. A switching device, comprising a resistance contact of varying specific resistance and a liquid in which said contact may be immersed, said contact and liquid being arranged for relative movement so that as the superficial contact between said liquid and contact varies the specific resistance of the immersed portions varies.

[Claims 6 and 7 not printed in the Gazette.]

1,218,124. WATER-CLOSET. JOSEPH W. SHARP, Jr., Philadelphia, Pa., assignor to Haines, Jones & Cadbury, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 8, 1910. Serial No. 591,353. (Cl. 4—21.)



1. A water closet bowl having the usual supply and siphon passages and provided with a ventilating duct leading directly through the ware over the bend of the siphon passage to the outside of the ware and having its inlet and outlet below the level of the bowl, an overflow preventing dam formed integrally with and projecting from the siphon bend to a point above the top of the bowl, and means for flushing the dam.

2. A water closet bowl having the usual supply and siphon passages and provided with a ventilating duct leading through the ware over the bend of the siphon passage and directly out through the back of the ware, said duct having its inlet and outlet below the level of the bowl, an overflow-preventing dam formed integrally with and projecting from the siphon bend above the top of the bowl, and a venting and draining aperture in the wall of said duct on the outlet side of said dam.

3. A water closet having a ventilating duct, an overflow-preventing dam in said duct which extends above the level of the bowl, and flushing apertures in the wall of said duct which deliver to a wall of the overflow preventing dam.

4. A water closet having a ventilating duct, an overflow-preventing dam in said duct which extends above the level of the bowl, and flushing apertures in the wall of said duct which deliver to the sloping wall of the overflow dam on the bowl side of said dam.

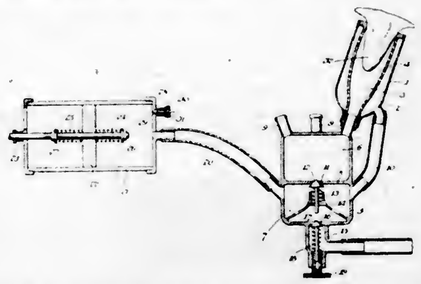
5. A water closet having a ventilating duct, an overflow-preventing dam in said duct which extends above the level of the bowl, a flushing chamber connected with a suitable supply, and flushing apertures delivering from said chamber to the sloping surface of said overflow dam on the bowl side thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,218,125. MILKING-MACHINE. DAVID TOWNSEND SHARPLES, West Chester, Pa. Filed May 8, 1916. Serial No. 96,005. (Cl. 31—100.)

1. In a milking machine, the combination of a teat cup having a suction chamber and a suction and pressure chamber, ducts connected with the respective chambers, means comprising a duct adapted to communicate with said ducts, means for varying the pressure in said duct so as to exhaust said chamber first named and to alternately exhaust and apply pressure in said chamber second named, and means for regulating said pressure.

2. In a milking machine, a chambered teat cup having a flexible diaphragm, a duct, a pump which varies the pneumatic pressure in said duct, means for regulating the variations in said pressure, and means for connecting said duct with the respective chambers of said cup so as to pulsate said diaphragm.



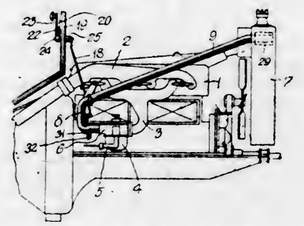
3. In a milking machine, a teat cup having a diaphragm providing two chambers therein, a pump, a duct connected with said pump, means for connecting said duct with the respective chambers so that said pump will simultaneously exhaust said chambers and alternately therewith apply pressure in one of said chambers, and means for limiting said pressure to a desired degree.

4. In a milking machine, a teat cup having a diaphragm providing a teat chamber and an auxiliary chamber, in combination with means connected with the respective chambers for exhausting said teat chamber and pulsating the pressure in said auxiliary chamber, said means comprising a duct through which said chambers are simultaneously exhausted and alternately therewith pressure is applied in said auxiliary chamber, and valve mechanism for regulating said pressure.

5. In a milking machine, a teat cup having a diaphragm providing separated chambers, a device having communicating chambers connected in communicating relation with the chambers of said teat cup, a valve for controlling communication between the chambers of said device, and pneumatic means connected with a chamber of said device for exhausting a chamber of said teat cup and for pulsating the pressure in the other chamber of said teat cup.

[Claims 6 to 9 not printed in the Gazette.]

1,218,126. INTERNAL-COMBUSTION-ENGINE APPLIANCE. GEORGE R. SMITH, Highland Park, Mich. Filed Mar. 25, 1916. Serial No. 86,658. (Cl. 123—25.)

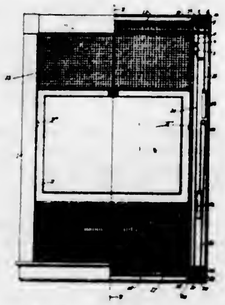


1. The combination with an internal combustion engine, having a carbureter and a radiator, of a conduit connecting the upper portion of said radiator to said carbureter, a by-path extension forming part of said conduit and constituting an air inlet thereto, valves in said by-path extension and said conduit, and means adapted for moving said valves in synchronism.

2. The combination with an internal combustion engine, having a carbureter and a radiator, of an elbow in communication with said carbureter, a conduit connecting said elbow to the upper portion of said radiator, a by-path extension carried by said elbow and constituting an air inlet therefor, valves in said by-path extension and said elbow, and means including rock shafts adapted for moving said valves in synchronism.

3. The combination with an internal combustion engine having a carbureter and a radiator, of a conduit connected to the upper portion of said radiator, a connection between said conduit and said carbureter, said connection having an air intake in proximity to the manifold of said engine, valves in said connection, and means adapted for moving said valves in synchronism.

1,218,127. WINDOW-SCREEN. ELWIN SWANSON, Jamestown, N. Y. Filed Jan. 15, 1915. Serial No. 2,419. (Cl. 156—39.)



1. The combination with a longitudinally grooved window jamb of a flexible upper screen secured to the upper sash, a flexible lower screen secured to the lower sash, roller shafts for said screens, sectional drums carried by said roller shafts, a weight flexibly connected to one section of each of said drums and flexible connection between the other drum section and one of said sashes.

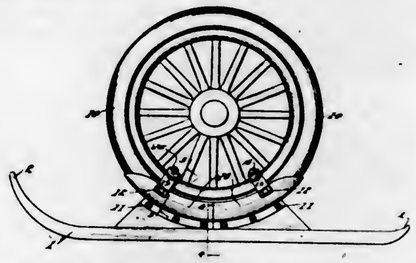
2. The combination with a longitudinally grooved window jamb, of a flexible upper screen detachably secured to the upper sash, a flexible lower screen detachably secured to the lower sash, roller shafts for said screens, sectional drums terminally carried by said shafts and adapted to be made fast thereto when said screens are in operative position, flexible connection between said drums and said sashes and means operatively associated with said drums when said screens are in operative position whereby said drums may be given a tension to permit the winding thereupon of said flexible screens.

3. The combination with a longitudinally grooved window jamb, of a flexible upper screen detachably secured to the upper sash, a flexible lower screen detachably secured to the lower sash, a socket formed in the upper and lower rails of the upper sash, a spring bolt carried by the upper rail of the lower sash for releasable locking engagement with either of said sockets, roller shafts for said screens, sectional drums carried by said roller shafts, a weight flexibly connected to one section of each of said drums and flexible connection between the other drum section and one of said sashes.

4. The combination with a longitudinally grooved window jamb, of a flexible upper screen detachably secured to the upper sash, a flexible screen detachably secured to the lower sash, roller shafts for said screens disposed in the window casing, means carried by each sash for releasable mutual engagement whereby the lower sash may be operated to open and close the upper sash, sectional drums carried by said roller shafts, a weight flexibly connected to one section of each of said drums and flexible connection between the other drum section and one of said sashes.

1,218,128. SLED-RUNNER ATTACHMENT FOR VEHICLE-WHEELS. GUST O. SWANSON, Leadore, Idaho. Filed Apr. 20, 1916. Serial No. 92,560. (Cl. 21—96.)

1. In a device of the class described, a runner having its upper flat face slotted longitudinally and separated from its base by a recess, shoes adapted for slidable engagement with the said upper face, locking means for retaining said shoes and runner face in adjusted position, shells carried by said shoes to receive a vehicle wheel and straps carried by said shells.



2. In a device of the class described, a runner having its upper flat face slotted longitudinally and separated from its base by a recess, shoes slidably arranged upon the upper face of said runner and formed with downwardly bent edges disposed in the slotted portion of said runner face, locking means partly disposed in the recessed portion of said runner and connecting the upper face thereof and said shoes, shells carried by said shoes to receive a vehicle wheel and straps carried by said shells.

1,218,129. LUBRICATING DEVICE. JAMES A. TEMPLEMAN, Anamosa, Iowa. Filed Feb. 23, 1916. Serial No. 80,065. (Cl. 64—27.)



1. In a lubricating device, the combination of a bearing having an internal bore and a lateral outlet, a moving member having an oscillating motion thereon, and a member mounted in said outlet, and moved back and forth by contact with said oscillating member.

2. In a lubricating device, the combination of a bearing having an internal bore and a lateral outlet, a circumferentially oscillating member mounted in said outlet, a similarly oscillating member mounted on the bearing and in contact with the member in the outlet, and means adapted to hold said members in contact.

3. In a lubricating device, a bearing internally bored and with a lateral outlet leading therefrom, a member mounted on said bearing, a vibratory member mounted in said outlet, and means mounted in the bore to impart end-thrust to said vibratory member.

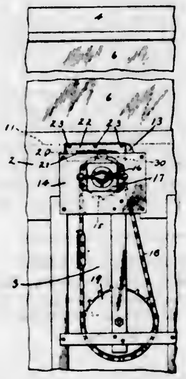
4. In a lubricating device, a bearing internally bored and with a lateral outlet leading therefrom, a member mounted on said bearing, a push-pin in said bore, a link connected with its inner end and adapted to turn outwardly into said outlet, and means adapted to impart end-thrust to the push pin.

5. Combined with a bearing having an internal bore and a lateral outlet therefrom, a divided push-pin mounted in the bore, a pair of links pivoted to each other and to the contiguous ends of the push-pin parts, and means for imparting end-thrust to the push-pin.

[Claims 6 to 8 not printed in the Gazette.]

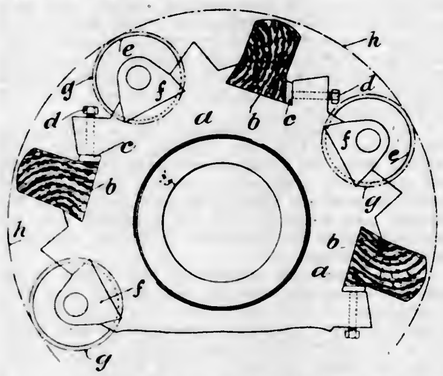
1,218,130. MECHANICALLY-OPERATED WINDOW. ALVAR K. TERNSTEDT, New York, N. Y., assignor to Perfect Window Regulator Company, New York, N. Y., a Corporation of Maine. Filed Dec. 12, 1914. Serial No. 876,790. (Cl. 20—52.1.)

1. In a window construction, the combination with a frame having a window opening therein, a plate of glass for closing said opening, said frame having a walled space below the opening into which the glass may be lowered as the window is opened, mechanical operating means located within said space for moving the glass, a member connected with the glass and devices detachably connecting the operating means with the said member, said devices being within the said space and inaccessible except when a portion of the wall inclosing said space is removed, said devices then being adapted for disconnection so that the glass may be removed without disturbing the operating means.



2. In a window construction, the combination with a frame having a window opening therein, a plate of glass for closing said opening, said frame having a walled space below the window opening into which the glass may be lowered as the window is opened, edge guides for the glass made in two sections, one section being in the said space and the other being detachably secured within the window opening, mechanical operating means within said space for moving the glass, a member connected with the glass and devices detachably connecting the operating means with the said member, said devices being within the said space and inaccessible except when a portion of the wall inclosing said space is removed, said device then being adapted for disconnection so that when said devices and the upper edge guide sections are disconnected the glass may be removed without disturbing the operating means.

1,218,131. MACHINE USED IN THE PRODUCTION OF SUEDE COTTON CLOTH. JOHN DANIA TOMLINSON, Rochdale, England. Filed July 1, 1915. Serial No. 37,448. (Cl. 26—2.)



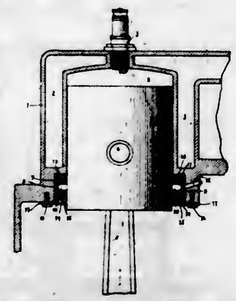
1. In a machine for producing a "Suede" effect upon the surface of fabric, an abrading roll having relatively spaced stationary lags provided with abrading surfaces, in combination with cloth expanding means carried by said roll and disposed in the spaces between the abrading lags.

2. In a machine for producing a "Suede" effect upon the surfaces of fabric, an abrading roll having relatively spaced stationary lags provided with abrading surfaces, in combination with cloth expanding members carried by the said roll and disposed in the spaces between the abrading lags, each expanding member being provided exteriorly with spiral corrugations which are arranged to wind in opposite directions from an intermediate point of said member.

3. In a machine for producing a "Suede" effect upon the surfaces of fabric, an abrading roll having relatively spaced stationary lags provided with abrading surfaces, in combination with rotatable cloth expanding members carried by the said roll and disposed in the spaces between the abrading lags, each expanding member being provided exteriorly with spiral corrugations which are arranged to wind in opposite directions from an intermediate point on said member.

4. In a machine for producing a "Suede" effect upon the surfaces of fabric, an abrading roll having relatively spaced stationary lags provided with abrading surfaces, in combination with rotatable cloth expanding members carried by the said roll and disposed in the spaces between the abrading lags, each expanding member being provided exteriorly with spiral corrugations which are arranged to wind in opposite directions from an intermediate point on said member, and means for rotating the said expanding members during operation of the abrading roll.

1,218,132. INTERNAL-COMBUSTION ENGINE. DANIEL TUHEY, Dayton, Ohio. Filed Sept. 25, 1916. Serial No. 121,912. (Cl. 184—18.)

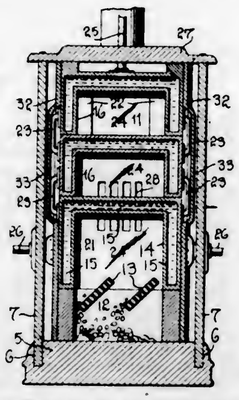


In an internal combustion engine, a piston movable therein, a stuffing box provided in the lower end of said cylinder by an enlargement of the bore thereof, a circumferential member in the stuffing box through which the piston passes, packing above and below said member within the stuffing box, a follower adjustably secured to the latter for compressing the packing about the circumferential member, and an annular chamber provided within said member to supply a lubricating fluid to the piston.

1,218,133. HOT-WATER FURNACE. FRANK FRANCIS TURNER, Little Falls, Minn. Filed Nov. 1, 1915. Serial No. 59,094. (Cl. 122—218.)

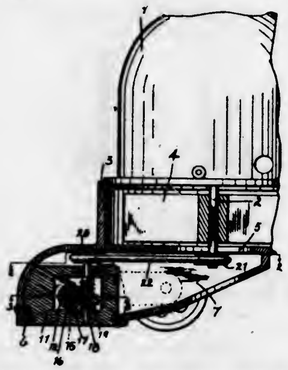
The combination with a furnace body including front and rear walls, a rear vertical outlet flue and clean-out openings in the front wall, of a vertical tier of superposed water chambers of inverted U-shaped form the side walls of which are unconnected at their ends and abut against the front and rear walls of the furnace body, conduits connecting each of the side walls of adjacent water chambers to each other at their opposite ends, the top walls of adjacent chambers being cut away at their relatively opposite ends between the side walls of the chamber to afford communication between the longitudinal flues

for the products of combustion, the rear wall of the furnace body being provided in its upper end with an opening affording communication between the cut-away portion of the uppermost water chamber and the outlet flue, said wall being also provided with a series of vertically disposed



openings extending above and below the horizontal wall of the lower water chamber and affording communication between the fire box and the next adjacent longitudinal flue and said outlet flue, and means for cutting off or establishing such communication with the outlet flue.

1,218,134. VACUUM-CLEANER. HUGH C. TYLER, Columbus, Ohio. Filed Oct. 28, 1915. Serial No. 58,314. (Cl. 15—60.)



1. In a vacuum sweeper, the combination with a motor, a suction chamber, and a nozzle communicating therewith, of a brush in said nozzle, a housing member in said nozzle, a shaft carried by said housing in driving relation with said brush, a worm wheel within said housing rigidly carried by said shaft, a worm shaft journaled in said housing, a worm on said worm shaft meshing with said worm wheel, a pulley on said worm shaft, an extension on the motor armature shaft, a pulley on the lower end of said extension, and a belt between said two pulleys.

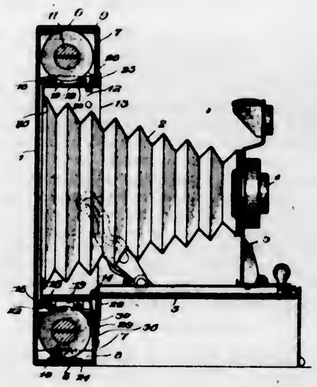
2. In a vacuum cleaner, the combination with a motor and suction chamber and a nozzle communicating therewith, of a pair of brush sections the adjacent brush ends being formed with polygonal sockets, a housing member in said nozzle, a stub shaft rotatably journaled in said member, said shaft having polygonal shaped ends to fit said sockets, and means for rotatably driving said shaft.

3. In a vacuum cleaner, the combination with a motor, a suction chamber, and a nozzle communicating therewith, of a brush rotatably journaled in said nozzle, said nozzle having an opening in one end wall large enough to accommodate the passage of such brush therethrough, and a removable bearing member in which the end of said brush is journaled removably secured in said opening.

4. In a vacuum cleaner, the combination with a motor, a suction chamber and a nozzle communicating therewith, of a housing member rigidly secured in said nozzle, driving gearing in said housing, a brush section located on each side of said member, and a detachable driving connection between each of said sections and said gearing.

5. In a vacuum cleaner, the combination with a motor, a suction chamber and a nozzle communicating therewith, of a pair of brush sections in said nozzle, a bearing support in said nozzle between the brush ends, a driving shaft journaled in said support, detachable driving connections between said shaft and the brush ends engaging the same, means for rotating said shaft, the ends of said nozzle being provided with openings large enough to accommodate the passage of the respective brush sections therethrough, and removable clearing members secured in said openings into which the ends of said brushes are supported.

1,218,135. PHOTOGRAPHIC CAMERA. ERNEST E. UNDERWOOD and FRANK H. REYNOLDS, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 23, 1915. Serial No. 52,161. (Cl. 95—32.)



1. In a camera, the combination with a body having film chambers at both ends, the back, end and front walls of which are relatively fixed, and a bellows and front, of a removable and replaceable intermediate element constituting the bellows chamber and forming the inner walls of the film chambers so that the latter are made accessible for the insertion of film by removing the said element in a forward direction.

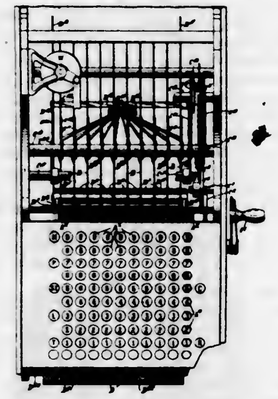
2. In a camera, the combination with a body having film chambers at both ends including front, rear, outer and end walls, and a bellows and front, of a removable and replaceable intermediate element constituting the bellows chamber and forming the inner walls of the film chamber, and means on said last mentioned walls for rotatably supporting film spools by contact with their peripheral surfaces.

3. In a camera, the combination with a body having film chambers at both ends, the back, end and front walls of which are relatively fixed, and a bellows and front, of a removable and replaceable intermediate element constituting the bellows chamber and forming the inner walls of the film chambers so that the latter are made accessible for the insertion of film by removing the said element, and cradles for the film spools on the said inner walls of the film chambers embodying parallel rollers arranged to engage the flanges of the spools.

4. In a camera, the combination with a body having film chambers at its ends each of which is formed rigidly in fixed relation to the back of the body by continuing the back wall of the latter forwardly and then inwardly, and a bellows and front, of a removable and replaceable intermediate frame carrying the bellows and front and constituting the bellows chamber and also the inner walls of the film chambers and having interlocking light-tight connections at its opposite ends with the inwardly turned front walls of the bellows chamber.

5. In a camera, the combination with a body having film chambers at its ends each of which is formed rigidly in fixed relation to the back of the body by continuing the back wall of the latter forwardly and then rearwardly, and a bellows and front, of a removable and replaceable intermediate frame constituting the bellows chamber and also the inner walls of the film chambers, one end of the frame being provided with a double lip adapted to be thrust over the edge of the front wall of one film chamber and the opposite end of the frame being arrranged to overlap the corresponding edge of the front wall of the other film chamber, and a catch for securing said last mentioned overlapping end in place.

1,218,136. CALCULATOR. JESSE G. VINCENT, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 8, 1911. Serial No. 607,282. (Cl. 235—60.)



1. In a machine of the character described, the combination of a reciprocating prime mover; register wheels; actuators therefor; and multiplicand and multiplier setting up devices controlling movement of said actuators, the latter adapted during the stroke of the prime mover in one direction to register units of the product and during the stroke of the prime mover in the opposite direction to register tens of the product; said setting up devices comprising multiplication indexing stops, means for selectively releasing them as determined by the multiplicand, and means for regulating the extent of their movement when released as determined by the multiplier.

2. In a machine of the character described, the combination of accumulator wheels denominationally arranged, manipulative amount determining devices, and duplex actuators alternately effective and arranged in pairs for adjacent wheels, the said amount determining devices including multiplication stops, means for selectively releasing them as determined by the multiplicand, and means for regulating the extent of their movement when released as determined by the multiplier.

3. In a machine of the character described, the combination of accumulator wheels denominationally arranged, manipulative amount determining devices, and two sets of actuators reversely related to the wheels and arranged in pairs for adjacent wheels, the said amount determining devices including multiplication stops, means for selectively releasing them as determined by the multiplicand, and means for regulating the extent of their movement when released as determined by the multiplier.

4. In a machine of the character described, the combination of a set of pinions denominationally arranged, rack bars with their racks on opposite sides of said pinions and arranged in pairs for adjacent pinions, means for engaging and disengaging racks and pinions and reciprocating the rack bars to advance a pinion by initial movement of a rack of a pair and advance the adjacent pinion by return movement of the other rack of said pair, and manipulative amount-determining means including multiplication indexing stops, means for selectively releasing them as determined by the multiplicand, and means for regulating the extent of their movement when released as determined by the multiplier.

5. In a machine of the character described, the combination of accumulator wheels denominationally arranged, and duplex actuators alternately effective and arranged in pairs for adjacent wheels, a set of multiplication indexing stops for each pair of actuators, a set of keys directly controlling said stops respectively whereby any one of them can be selected and released to represent a digit of a multiplicand, and a set of multiplier keys and connections for regulating the extent of movement of released stops whereby to measure movements of the actuators for the registering of the product.

[Claims 6 to 19 not printed in the Gazette.]

1,218,137. APPARATUS FOR CLEANING MOTION-PICTURE FILMS. JOHN R. VOSE, Ashland, and WALTER J. OWENS, Catlettsburg, Ky. Filed July 5, 1916. Serial No. 107,556. (Cl. 15—8.)



1. A film cleaning apparatus, including a reservoir divided into two separate liquid containing compartments, film guides located in each compartment and above the division wall therebetween, a plurality of pairs of brushes mounted in each compartment, one brush of one pair being adapted to be immersed.

2. A film cleaning apparatus including a tank divided transversely by a partition of lesser height than the walls of the tank into a cleaning and rinsing compartment, a guide roller journaled in each compartment at substantially the same level and below the upper edge of the partition, an intermediate guide roller journaled in the tank adjacent the upper edge of the partition, two pairs of brushes journaled in the tank adjacent the cleaning compartment one pair upon each side of the first mentioned guide roller, the lower brush of one of the pairs being adapted to be immersed, two pairs of rotary brushes journaled in the rinsing compartment adjacent the exit end thereof, the upper roller of one of the pairs being adapted to be immersed in the rinsing fluid, and two guiding rollers one adjacent the entrance end of the cleaning compartment and the other adjacent the exit end of the rinsing compartment.

1,218,138. BUTTON-STOP FOR CABLES. CHARLES L. WACHTER, New York, N. Y., assignor to Lidgerwood Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Nov. 11, 1911. Serial No. 659,722. (Cl. 24—136.)

1. A button stop comprising a button body having a longitudinal conical bore to receive a cable, and an annular cone clamping element adapted to be located wholly within the button body and to surround the cable between the same and the cone surface of said bore, said cone consist-

ing of a plurality of separate parts, and spring means for holding said parts together.

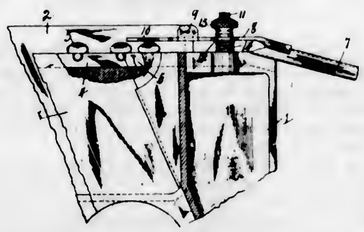


2. A button stop comprising a button body having a longitudinal conical bore to receive a cable, and an annular cone clamping element adapted to surround the cable between the same and the button within said bore, said cone clamping element consisting of a plurality of separate parts, and means for holding said parts together, said means comprising split spring rings surrounding said parts.

3. A button stop comprising a body having a longitudinal conical bore to receive a cable, a pin substantially equal in cross-section throughout its length and adapted to extend longitudinally of the interior of the cable, and an annular cone wedging element arranged within the body and adapted to surround the section of the cable in which the pin is embedded.

4. A button stop comprising a body having a longitudinal conical bore to receive a cable, a pin substantially equal in cross-section throughout its length and adapted to extend longitudinally of the interior of the cable, said pin having its outer surface shaped to conform to the relative positions of the strands of the cable contacting therewith, and an annular cone wedging element arranged within the body and adapted to surround the section of the cable in which the pin is embedded.

1,218,139. BUTTON-FEED CONTROL. FRANK G. WALTZ, Toledo, Ohio, assignor, by mesne assignments, to The Toledo Button Machine Company, Toledo, Ohio, a Corporation of Ohio. Filed Jan. 10, 1916. Serial No. 71,385. (Cl. 218—12.)



1. In a machine of the class described, the combination with a feed hopper having a button delivery way, of a member pivoted above said way, and means operable to adjust said member with respect to said way to place it in button feeding or button stop positions, said member having its rear end shaped to direct transversely from said way buttons which are not properly positioned thereon for feeding.

2. In a machine of the class described, the combination with a feed hopper having a button delivery way, and a chute leading from the forward end of said way, of a lever member pivotally mounted over said way and adapted to rest at its forward end on the rear end portion of said chute and adapted to be adjusted to control or stop the feed of buttons through said way and into said chute, and means operable to adjust said member.

3. In a machine of the class described, the combination with a hopper having a button delivery way, of a feed control member pivoted over said way for vertical oscillatory movements with respect thereto, a stud projecting from a part of said member, a nut threaded onto said stud over said member, and compression means disposed below said member in opposition to said nut.

1,218,140. MEANS FOR TAMPING BORE-HOLES CHARGED WITH BLASTING COMPOUNDS. WILHELM WEBER, Hayingen, Germany. Filed Oct. 1, 1915. Serial No. 53,480. (Cl. 102—11.)



1. In means for tamping bore-holes, a blasting cartridge, a superposed stopper of smaller diameter than the bore-hole to form a clearance therebetween, a plate spring on said stopper the length of said plate spring exceeding the diameter of the bore-hole, whereby said stopper is held in the bore-hole against expulsion owing to the ends of said plate spring engaging the wall of the bore-hole.

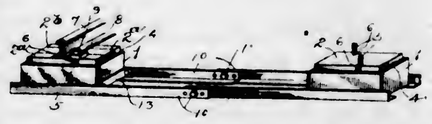
2. In means for tamping bore-holes, a blasting cartridge, a superposed stopper adapted to be introduced loosely into the bore-hole to form a clearance therebetween, and plate springs on said stopper, each of which plate springs exceeding in length the diameter of the bore-hole.

3. The combination with a tamping material for tamping bore-holes, of a stopper of smaller diameter than the bore-hole to form a clearance therebetween, said stopper being adapted to be placed on top of the tamping material, and plate springs exceeding in length the diameter of the bore-hole, said springs being fastened to said stopper so as to become bent round at their ends while said stopper is being inserted into the bore-hole.

4. The combination of a blasting charge with tamping material placed on top of said blasting charge, a stopper placed on top of said tamping material, and plate springs on said stopper having their ends bent toward the mouth of the bore-hole and engaging the wall of the bore-hole so as to prevent the tamping from being expelled.

5. In combination, a blasting charge containing liquid air, a tamping of smaller diameter than the bore-hole, a stopper adapted to fit loosely into the bore-hole to form a clearance therebetween, and plate springs on said stopper, said plate springs being adapted to engage the wall on the bore-hole so as to offer resistance against any expelling force acting on said stopper from within said blasting charge.

1,218,141. RAILWAY-TIE. RALPH J. WELLS, Dayton, Ohio. Filed May 24, 1915. Serial No. 30,096. (Cl. 238—5.)



1. In a railway tie, two independent metallic box-like receptacles spaced apart but detachably connected one with the other, a cushion body located within each of the receptacles, and a wooden sleeper block within each of the receptacles and resting on the cushion body.

2. In a device of the character described, a metallic box-like receptacle, a resilient bed of asphaltum or similar material capable of assuming a semi-fluid condition within the receptacle, and a wooden sleeper block fitted within the receptacle and resting upon the said resilient bed, the proportions of the block conforming to those of the receptacle sufficiently close to form a closure to prevent the escape of the material when in a semi-fluid condition.

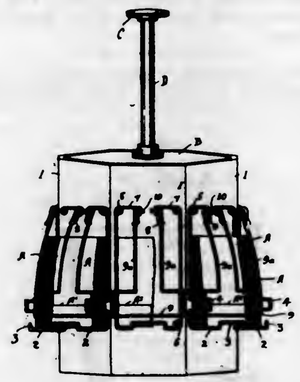
3. In a device of the character described, a receptacle, a yielding resilient cushion therein, a sleeper block within the receptacle resting upon the resilient bed and means for limiting the outward movement of the sleeper block in relation with the receptacle while permitting the inward movement thereof independent of said limiting means against the yielding resistance of the resilient cushion.

4. In a device of the character described, a receptacle, a resilient cushion in the receptacle, a sleeper block resting upon the cushion, and studs connected with the receptacle upon which the sleeper block is free to move against the tension of the cushion, and heads upon the studs limiting the outward movement of the sleeper block.

5. In a device of the character described, a receptacle, a body of material capable of assuming a semi-fluid condition within the receptacle and a sleeper block forming a closure for the receptacle to prevent the escape of the semi-fluid material from the receptacle.

[Claims 6 to 14 not printed in the Gazette.]

1,218,142. BAG-HOLDING DEVICE. JOHN N. WEYLAND, Muncie, Ind. Filed Jan. 27, 1916. Serial No. 74,572. (Cl. 211—2.)

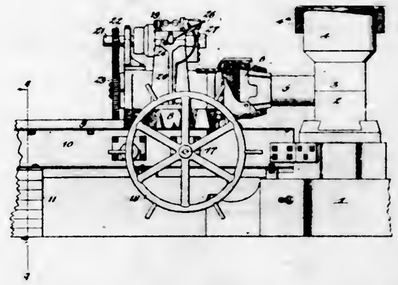


A bag holding device comprising a back plate, a frame member made of wire having its central lower portion bent outwardly to constitute a support arm and its upper ends being turned toward each other and coiled into spring form and having projecting ends, a clamping member made of wire having its central and lower portion bent to form an opening through which the bag may be withdrawn the upper ends of said wire being bent toward each other and disposed in the bores of the coils of said support frame member so that the projecting ends of the frame member exert an inward pressure against the upper portions of the clamping member.

1,218,143. MACHINE FOR FORMING PROJECTILE SHELLS. RODERICK J. WHELAN, Elyria, Ohio. Filed Nov. 15, 1916. Serial No. 131,540. (Cl. 29—1.2.)

1. In a machine of the character described, the combination of a pair of coöperating dies, a carriage movable toward and from said dies, a rotary spindle journaled in said carriage and carrying a shell-holder, means for feeding the carriage toward the dies, a rotary motor, gearing for transmitting rotary motion from said motor to said spindle, and separate controlling devices for said carriage-feeding means and said motor located in close proximity to each other.

2. In a machine of the character described, the combination of a pair of coöperating dies, a carriage movable toward and from said dies, a rotary spindle journaled in said carriage and carrying a shell-holder, means for feeding the carriage toward the dies, a rotary motor, gearing for transmitting rotary motion from said motor to said spindle, and separate controlling devices for said carriage-feeding means and said motor located in close proximity to each other.



3. In a machine of the character described, the combination of a pair of coöperating dies, a carriage movable toward and from said dies, a rotary spindle journaled in said carriage and carrying a shell-holder, means for feeding the carriage toward the dies, a rotary fluid motor, gearing for transmitting rotary motion from said motor to said spindle, a fluid supply pipe for said motor having a manual controlling valve, and manual controlling means for said carriage-feed mechanism, said valve and said controlling means being arranged in proximity to each other at the same side of the machine.

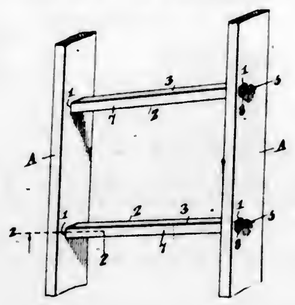
4. In a machine of the character described, the combination of a pair of coöperating dies, a carriage movable toward and from said dies, a rotary spindle journaled in said carriage and carrying a shell-holder, means for feeding the carriage toward the dies, a rotary motor mounted on said carriage above said spindle and having its driving shaft arranged lengthwise thereof, gearing connecting said shaft with said spindle, and means for controlling said motor.

5. In a machine of the character described, the combination of a power hammer including its stationary and movable dies, a horizontal carriage movable toward and from said dies, a rotary spindle journaled lengthwise in said carriage and provided at its front end with a shell-holder and at its rear end with a gear wheel, a rotary fluid-pressure motor arranged above said spindle and mounted on said carriage, the driving shaft of said motor having a pinion which meshes with the gear wheel of said spindle, a pressure supply-pipe leading to said motor and having a controlling valve, and means for feeding said carriage toward said dies, said means including a hand-wheel arranged at one side of the machine, said controlling valve being arranged at the same side of the machine as said hand wheel and in proximity thereto to be operated by one and the same operator.

1,218,144. LADDER-RUNG. DAVID E. WHITE, Winchester, Kans. Filed June 5, 1915. Serial No. 32,394. (Cl. 228—14.)

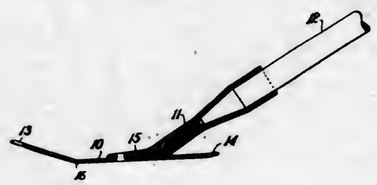
1. A ladder rung comprising a length of angle iron having a tread flange for engagement between the rails of a ladder, and provided with depending ears at its opposite

ends for securement against the inner sides of the ladder rails, and having a vertical reinforcing flange extending across the ladder rails and provided with longitudinally extended tongues engaging through the said rails and being overturned against the outer faces of the rails to hold the reinforcing flange from buckling.



2. A ladder rung comprising a length of angle iron having a horizontal tread flange, and a vertical reinforcing flange, each end of the tread flange being turned at right angles to provide flat attaching ears for engagement against the inner sides of the rails of a step-ladder, each end of the reinforcing flange being provided with a longitudinally extended tongue adapted for passage through the rails, and having lips on their outer ends turned over in offset relation to said attaching ears, and adapted to engage against the outer sides of the rails, said attaching ears and said lips extending in different directions from the ends of the angle iron to support the rung against swaying or sagging in any direction.

1,218,145. SHINGLE-STRIPPER. WILLIAM L. WHITTIER, Beverly, Mass. Filed Nov. 7, 1913. Serial No. 799,803. (Cl. 145—1.)



1. A stripping tool for shingles comprising the combination of a broad plate of sheet metal having a forward edge continuously adapted to engage nail heads, and a handle extending backward from the upper side of the plate far enough to make the tool as a whole suitable for swinging by both arms of the user, said handle extending at an acute angle with the plate; the under side of the plate having a formation adapted to serve as a fulcrum near said forward edge and another formation adapted to serve as a fulcrum relatively far from said forward edge; whereby the forward swing of the tool engages it under a plurality of shingles, and depression of the handle lifts the said forward edge with a preliminary powerful and a subsequent rapidly moving leverage.

2. A stripping tool for shingles comprising the combination of a relatively broad plate of sheet metal bent at an obtuse angle near its forward edge and relatively far from its rear edge, combined with a handle long enough to adapt the tool for swinging forward by both arms of the user, said handle extending backward from the top of the plate at a small angle with the plane of the rear portion thereof.

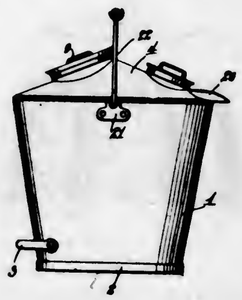
1,218,146. PRODUCTION OF ANHYDROUS PRODUCTS FROM PHENOL AND FORMALDEHYDE. FERDINAND G. WEICHMANN, New York, N. Y., assignor to Fenoform Corporation, Hastings-upon-Hudson, N. Y., a New York Corporation. Original application filed Jan. 30, 1912, Serial No. 674,243. Divided and this application filed Aug. 26, 1913. Serial No. 786,712. (Cl. 106—22.)

1. The process of producing composite bodies which comprises heating a mixture of substantially anhydrous phenol and formaldehyde in the presence of an agent promoting the formation of an anhydrous product until a thick viscous anhydrous and non-hygroscopic syrup has been formed insoluble in water, mixing with such anhydrous syrup a compounding material to form a product plastic at ordinary temperatures, and converting the same into a hard infusible condition by the action of heat.

2. The method of producing composite bodies which comprises heating a mixture of substantially anhydrous phenol and formaldehyde in the presence of an agent promoting the formation of an anhydrous product until a thick viscous anhydrous and non-hygroscopic syrup has been formed insoluble in water, mixing with such anhydrous syrup a vegetable albumen to form a product plastic at ordinary temperatures, and converting the same into a hard infusible condition by the action of heat.

3. As a new article of manufacture a hard and infusible molded body resulting from the action of heat on a mixture of a vegetable albumen and an anhydrous non-hygroscopic liquid reaction product of phenol and formaldehyde, said body being anhydrous and non-hygroscopic, insoluble in water and in most but not all solvents, and containing the vegetable albumen and the reaction product combined into a substantially homogeneous mass, and the reaction product having a chemical constitution representing that of a reaction product of anhydrous phenol and formaldehyde combined under the influence of heat and of a catalytic agent.

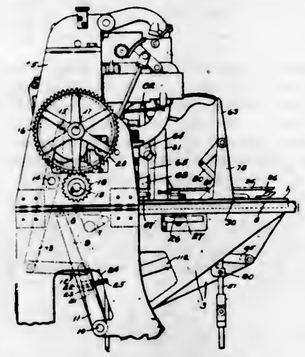
1,218,147. MILK-PAIL. HENRY WILSON, Meadows, Idaho. Filed Aug. 4, 1916. Serial No. 113,132. (Cl. 31—14.)



1. The combination with a pail, of a conical top mounted on the top of the pail and provided with a large and a small opening, annular flanges formed around the rim of each of said openings, one of the said flanges being provided with exterior screw threads, a closure for the said opening, the said closure having a flange adapted to fit within the flange of the said opening, a closure for the other of said openings, a strainer element mounted in the said last mentioned opening, a spout formed on the edge of the said conical top and arranged to receive the contents of the said pail as it is ejected from the said last mentioned opening, the said strainer comprising a portion of foraminous material covering the said opening, and a fastening wire extended around the said flange and secured for holding the said foraminous material in stretched position.

2. The combination with a pail, of a conical top integrally formed with the pail and having its vertex disposed centrally above the center of the pail, the said conical top having a large and a small opening for providing an intake and a discharge opening, annular flanges formed around the rim of each of said openings, one of said flanges being provided with an exterior screw thread, a closure for the intake opening provided with a depending flange adapted to fit within the flange of the said intake opening, a closure for the discharge opening provided with interior screw threads for engaging the said screw threads on the flange of the discharge opening, a strainer element for said discharge opening and a spout formed at the edge of said conical top and disposed adjacent the said discharge opening.

1,218,148. AUTOMATIC SHOE-MACHINE. ERASTUS E. WINKLEY, Lynn, Mass. Filed Sept. 21, 1912. Serial No. 721,593. (Cl. 12—67.)



1. A welt butting machine, having, in combination, welt butting means at a welt butting station, and automatic means for invariably presenting a similar portion of the bottoms of shoes of different sizes at the welt butting station for the operation of said means at a like point on all shoes, substantially as described.

2. A welt butting machine, having, in combination, welt butting means at a welt butting station, and automatic means for invariably presenting the welt crease, at a similar point in the length of shoes of different sizes in the plane of operation of said means, at the welt butting station, substantially as described.

3. An automatic shoe machine, having, in combination, an operating tool, and mechanism controlled by the length of the shoe operated upon operating automatically to determine the location of the shoe relatively to the operating tool, substantially as described.

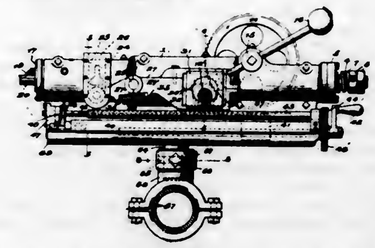
4. An automatic shoe machine, having, in combination, an operating tool, mechanism controlled by the length of the shoe operated upon operating automatically to determine the location of the shoe relatively to the operating tool, and means for causing a departure in the relative location of the shoe and tool determined by said mechanism, substantially as described.

5. A welt butting machine, having, in combination, welt butting means at a welt butting station, a shoe support normally at a shoe jacking station, mechanism adapted to actuate the shoe support to and fro between the stations, and independent means for varying the distance through which the shoe support travels in moving toward one of the stations under the influence of said mechanism, substantially as described.

[Claims 6 to 28 not printed in the Gazette.]

1,218,149. ROCK-DRILL. JAMES C. WRIGHT, Colorado Springs, Colo., assignor of one-half to T. L. Rippey, Dallas, Tex. Filed Mar. 8, 1916. Serial No. 82,984. Cl. 255—45.)

1. In a rock drill, the combination with a base, of a carriage arranged to slide upon the base, a threaded shaft engaging the carriage for feeding the carriage, a hammer, a bit movably supported by the carriage in the path of the hammer, means for operating the hammer, a telescopic shaft arranged parallel with the said threaded shaft, gearing connecting the said telescopic and threaded shafts at the rear of the base, a ratchet and pawl device arranged at the forward end of the base beyond the path of the body of the hammer for operating the telescopic shaft, and a member carried by the hammer and projecting from the hammer for operating the said ratchet and pawl device by the forward movement of the hammer.



2. In a rock drill, the combination with a base, of a carriage arranged to slide upon the base, a threaded shaft arranged longitudinally within the base below the carriage and engaging the carriage for feeding the carriage, a hammer, a bit movably supported by the carriage in the path of the hammer, means for operating the hammer, a telescopic shaft arranged upon one side of the base and parallel with the said threaded shaft, means for transmitting the rotary movement of the said telescopic shaft to the said threaded shaft, a ratchet upon the said telescopic shaft, a pawl engaging the said ratchet and arranged at the forward end of the base beyond the path of the hammer for rotating the said telescopic shaft, and a trip arm connected with the lower side of the hammer and projecting forwardly beyond the hammer, the said pawl having a portion arranged to engage the said trip arm whereby the said pawl and ratchet are operated and the said telescopic shaft is rotated.

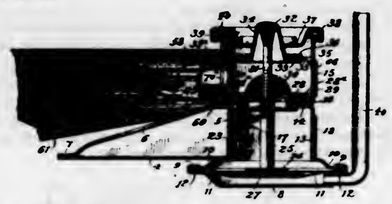
3. In a drill, a base, a threaded shaft journaled thereon, a second shaft journaled on the base and gearing with the first shaft, a carriage, a bit carried by the carriage, a hammer for actuating the bit, a shaft journaled on the carriage and slidably connected to the second shaft for rotating the latter, a ratchet fixed on the third shaft, a movable pawl engaged with the ratchet for intermittently rotating the same, and a trip carried by the hammer to move the pawl.

4. In a rock drill, the combination with a base, of a carriage sliding thereon, a longitudinally movable hammer upon the carriage, means for operating the hammer, a threaded carriage-feeding shaft and a telescopic shaft extending parallel with the axis of the hammer, the said threaded shaft engaging the carriage, means connecting the said shafts whereby the rotation of one is communicated to the other, shaft-rotating devices borne by the said base and the said telescopic shaft and arranged to act upon the said telescopic shaft, and a member moved by the hammer whereby the said shaft-rotating devices are engaged and operated.

1,218,150. PNEUMATIC ACTION FOR SELF-PLAYING MUSICAL INSTRUMENTS. MORRIS S. WRIGHT, Worcester, Mass. Filed July 25, 1914. Serial No. 852,987. (Cl. 84—178.)

1. In a pneumatic action for musical instruments, the combination of oppositely disposed metallic hollow headers having horizontally disposed tubular branches, of metallic vacuum chamber casings projecting between the headers with the ends thereof supported between adjacent branches of the headers, a primary pneumatic and valve casing supported on such vacuum chamber casing, and said vacuum chamber casings with the supported primary

pneumatic and valve casing being bodily removable from the headers.



2. In a pneumatic action for musical instruments, the combination of oppositely disposed metallic hollow headers having horizontally disposed tubular branches, of metallic vacuum chamber casings projecting between the headers with the ends thereof supported between adjacent branches of the headers, a valve casing supported upon the vacuum chamber casing, a primary pneumatic, and a motor pneumatic operatively associated with said valve casing and means for removably retaining said vacuum chamber casing in place whereby the same, with the valve casing and pneumatics, may be bodily removed from the headers.

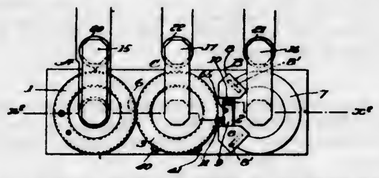
3. In a pneumatic action for musical instruments, the combination of oppositely disposed metallic hollow headers having horizontally disposed tubular branches, of metallic vacuum chamber casings projecting between the headers with the ends thereof supported between adjacent branches of the headers, and means for retaining the vacuum chamber casing in place comprising a retaining block interposed between the vacuum chamber casing and the adjacent wall of one of said branches.

4. In a pneumatic action for musical instruments, the combination of oppositely disposed metallic hollow headers having horizontally disposed tubular branches, of metallic vacuum chamber casings projecting between the headers with the ends thereof supported between adjacent branches of the headers, and means for retaining the vacuum chamber casing in place comprising a retaining wedge shaped block interposed between the vacuum chamber casing and the adjacent wall of one of said branches.

5. In a pneumatic action for musical instruments, the combination of oppositely disposed metallic hollow headers having horizontally disposed tubular branches of metallic vacuum chamber casings projecting between the headers with the ends thereof supported between adjacent branches of the headers, and means for retaining the vacuum chamber casing in place comprising a wedge shaped block interposed between one side of the vacuum chamber and the adjacent side of one of the header branches, the said sides being inclined in opposite directions.

[Claims 6 to 77 not printed in the Gazette.]

1,218,151. ELECTRIC INDUCTION-FURNACE. PARVIN WRIGHT, Vancouver, British Columbia, Canada. Filed May 11, 1914. Serial No. 837,773. (Cl. 204—64.)



1. An electric furnace comprising a core, winding for said core, and a secondary coil surrounding the core, said secondary coil having an element formed of copper and having electrodes and having a chambered element formed of cast iron closed at its ends by said electrodes.

2. An electric furnace comprising a core, winding for said core, and a secondary coil surrounding the core, said secondary coil having an element formed of relatively good electrical conducting material and having means to hold a body of melted metal between the ends of said good conducting element and in circuit with said element, said means being interposed between the ends of said good conducting element.

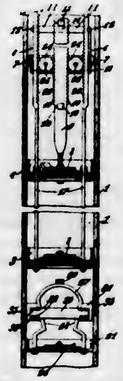
3. An electric furnace comprising a core, winding for said core, and a secondary coil surrounding the core, said secondary coil having an element formed of relatively good electrical conducting material and having enlarged terminal electrodes at the ends of said good conducting element and having means to hold a body of melted metal between said electrodes and in contact with said electrodes.

4. An electric furnace comprising a core, winding for said core, and a secondary coil surrounding the core, said secondary coil having an element formed of relatively good electrical conducting material and having enlarged terminal electrodes at the ends of said good conducting element and having a chambered resistor in circuit with said electrodes, said resistor being interposed between said electrodes.

5. An electric furnace comprising a core, winding for said core, and a secondary coil surrounding the core, said secondary coil having an element formed of relatively good electrical conducting material and having a cast iron chambered resistor in circuit with said good conducting element interposed between the ends thereof.

[Claims 6 to 12 not printed in the Gazette.]

1,218,152. LATCH FOR DOUBLE-ACTING PUMPS. HENRY CLAY WRISTEN and JAMES WILLIAM HENDERSON, Dexter, N. Mex. Filed Oct. 15, 1915. Serial No. 56,123. (Cl. 103—82.)



1. In a device of the class described, a tubing; a yoke adapted to be lowered into the tubing; a latch carried by the yoke and coacting with the tubing to hold the yoke in the tubing; a piston structure slidable in the yoke and co-acting with the tubing; and interengaging elements on the piston structure and the latch to move the latch into casing engaging position when the piston structure is moved a distance in excess of its normal movement.

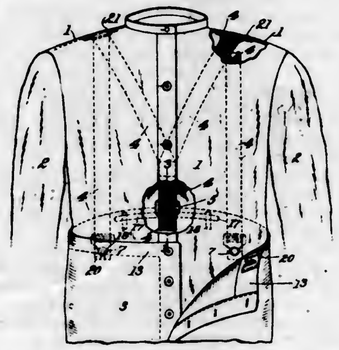
2. In a device of the class described, a tubing; a yoke adapted to be lowered into the tubing; a latch carried by the yoke and coacting with the tubing to hold the yoke in the tubing; a piston structure slidable in the yoke and coacting with the tubing; and interengaging elements on the piston structure and the latch to move the latch out of casing engaging position when the piston structure is moved a distance in excess of its normal movement.

3. In a device of the class described, a tubing; a yoke adapted to be lowered into the tubing; a latch carried by the yoke and coacting with the tubing to hold the yoke in the tubing; a piston structure slidable in the yoke and coacting with the tubing; and interengaging elements on the piston structure and on the latch coacting to move the latch into and out of casing engaging position when the piston structure is moved in opposite directions beyond its normal scope.

4. In a device of the class described, a tubing; a yoke adapted to be lowered into the tubing; a pair of latches pivotally carried by the yoke and coacting with the tubing to hold the yoke in the tubing; a flexible connection uniting the latches; a piston structure slidable in the yoke and coacting with the tubing; and projections on the piston structure, the projections being adapted to engage, respectively, with the upper and lower edges of the flexible connection.

5. In a device of the class described, a tubing; a yoke adapted to be lowered into the tubing; latches pivotally carried by the yoke and coacting with the tubing to hold the yoke in the tubing; a flexible connection uniting the latches; and a reciprocating element having spaced projections adapted to engage the upper and lower edges of the connection, respectively, at different times.

1,218,153. SUSPENDING DEVICE FOR GARMENTS. ALBERT F. YOUNG, Brooklyn, N. Y. Filed Sept. 23, 1916. Serial No. 121,704. (Cl. 241—25.)



1. The described garment suspending devices comprising suspender webbing, supporting devices attached to the webbing, each comprising a headed button having a threaded shank adapted to pass through the material of the upper garment and to thread into a part of the supporting device within the upper garment, and holding devices permanently attached to the upper edge of the garment to be supported, the head of the button being adapted to cooperatively engage said permanently attached holding devices outside of the upper garment.

2. The described garment suspending devices comprising suspender webbing, supporting devices adjustably attached to the webbing, each comprising a headed button having a threaded shank adapted to pass through the material of the upper garment and to thread into a part of the supporting device within the upper garment, and holding devices permanently attached to the upper edge of the garment to be supported, the head of the button being adapted to cooperatively engage said permanently attached holding devices outside of the upper garment.

3. The described garment suspending devices, comprising suspender webbing, supporting devices attached to the webbing, each embodying a threaded buckle, a headed button having a threaded shank adapted to engage with the threads in the buckle, the shank of the button being adapted to pass through the material of the upper garment, and holding devices on the upper edge of the garment to be supported, with which holding devices the head of the button engages.

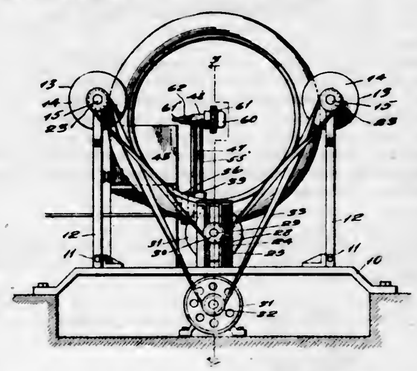
4. The described garment suspending devices comprising suspender webbing, supporting devices attached to the webbing, each comprising a headed button having a threaded shank adapted to pass through the material of the upper garment from the outside to the inside and to thread into a part of the supporting devices within the upper garment, holding devices on the upper edge of the garment to be supported adapted to engage with the head of the button outside of the upper garment, said holding devices embodying a horizontal bar connected at its ends to the upper edge of the garment to be supported and in its central portion with the rear headed button of the supporting devices.

1,218,154. METHOD OF TESTING FILTER-BODIES. EDWARD ZAHM, Buffalo, N. Y., assignor to Zahm Manufacturing Company, Buffalo, N. Y., a Corporation of New York. Filed Oct. 21, 1912, Serial No. 726,882. Renewed Jan. 26, 1917. Serial No. 144,765. (Cl. 73—51.)



The hereindescribed method of testing a porous filter body for determining the size of the pores therein comprising wetting said body so that the interstices are liquid sealed and then subjecting the same to gas pressure and determining the pressure at which the seal is broken.

1,218,155. MACHINE FOR PAINTING TIRE-CASINGS. JOHN F. ZIMMERMAN, Akron, Ohio. Filed Jan. 22, 1916. Serial No. 73,647. (Cl. 91—39.)



1. In a machine of the character described, a plurality of pulleys arranged to engage and support a tire casing, each pulley being grooved and longitudinally adjustable, and means for applying paint to the tire casing.

2. In a machine of the character described, a plurality of pulleys arranged to engage and support a tire casing, each pulley being grooved and longitudinally self-adjustable, means to drive one of the pulleys, and means to apply paint to the tire casing during its movement.

3. In a machine of the character described, a plurality of pulleys arranged to engage and support a tire casing, each pulley having end pulley members movable toward and away from each other and yielding means to move them toward each other, means to drive the pulleys, and

means for applying paint to the tire casing during its movement.

4. In a machine of the character described, a lower pulley, upper pulleys arranged above and upon opposite sides of the lower pulley, pivoted supporting means for the upper pulleys, means to drive the pulleys, and means to apply paint to the tire casing.

5. In a machine of the character described, a grooved pulley, pivoted arms arranged upon opposite sides of the grooved pulley and adapted to swing in substantially the plane of rotation thereof, upper grooved pulleys carried by the arms, driving pulleys connected with the grooved pulleys to move them, a prime mover having a driving pulley, a belt engaging all of the driving pulleys, and means to apply paint to the tire casing.

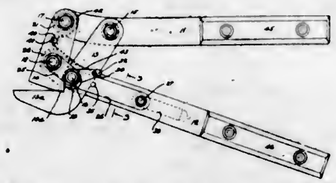
[Claims 6 to 10 not printed in the Gazette.]

1,218,156. KILN FOR DRYING VEGETABLE SUBSTANCES. EMIL WILLIAM ANDERSEN, Aarhus, Denmark. Filed Aug. 4, 1915. Serial No. 43,563. (Cl. 34—21.)



A kiln for drying vegetable material, comprising a fireplace wherein dried copra shells may be burned, a horizontal hearth arranged over the fireplace for supporting the material to be dried while protecting it from the products of combustion, the hearth being of the heat-storage type and adapted during its heat-radiation to radiate heat uniformly over its entire upper surface, a glazed roof spaced above the hearth to establish a drying chamber having substantially a triangular cross-section, and a plurality of adjustable ventilators, one located adjacent the uppermost and another adjacent the lowermost edge of the roof and both vertically suspended when closed, whereby a dehumidifying air current may traverse the drying chamber, and while continuously ascending adjacent to and parallel with the under surface of the glazed roof may thereby equalize the amount of solar heat delivered to the various portions of the material being dried.

1,218,157. SHEARING IMPLEMENT. AXEL ANDERSON, Clifton, N. J. Filed Apr. 18, 1916. Serial No. 92,013. (Cl. 81—199.)



1. A shearing implement comprising actuating members adapted to be moved toward or away from each other, a cutting element disposed transversely at or near one end of said members with its cutting edge projecting laterally therefrom, a second cutting element similarly transverse to the members and located inwardly thereon with relation to the first mentioned element, said second element having an edge extending beyond said first named edge so as to coact therewith, and pivotal connections separately joining the elements with each one of the members, said connections permitting one of the elements to move faster than the other.

2. A shearing implement comprising actuating members movable toward or away from each other, cutting elements with co-acting edges offset laterally from said members, and a quadruple pivotal connection joining the members with said elements, the pivots in said connection being spaced at progressive distances apart, commencing at a point adjacent to said edges and thence extending in a closed cycle from element to element and member to member.

3. A shearing implement comprising actuating members operable toward or away from each other, a pair of cutting elements disposed transversely of said members with converging edges at one side thereof, and a four-pivot connection between the members and said elements joining the same at unequal distances apart, the arrangement being such that the pivots spacing one element with regard to the members and the other element are closer together than the pivots spacing the same members and said other element from the first mentioned element, whereby a differential shearing action is produced between the pair of elements.

4. A shearing implement comprising separated actuating members movable laterally toward or away from each other, transversely disposed cutting elements on said members, said elements having convergent edges differently offset to one side of the latter, and pivots joining the elements to the members independently one of the other, the pivots for the element having the outer edge being spaced farther apart than the pivots for the element having the inner edge.

5. A shearing implement comprising actuating members arranged in juxtaposition so as to permit lateral movement thereof toward or away one from the other, cutting elements disposed transversely of said members with their edges converging exteriorly on one side of the latter, and pivotal connections at unequal distances apart between the members and said elements, the connections adjacent to said converging edges being at a less distance from each other than the connections remote therefrom.

[Claims 6 to 10 not printed in the Gazette.]

1,218,158. POLISHING-BODY FOR BURNISHING-BARRELS. JOSEPH C. ANDREWS, New Britain, Conn., assignor to American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 7, 1916. Serial No. 129,936. (Cl. 51—1.)



1. A metal polishing-body for tumbling-barrels, which has a spheroidal portion and a conoidal extension therefrom, said conoidal extension having a surface at its base, curved so as to abruptly flare outwardly to join the surface of the spheroidal portion.

2. A metal polishing-body for tumbling-barrels, which has a spheroidal portion and two conoidal extensions therefrom, each conoidal portion having a curved surface at its base, so as to abruptly flare outwardly to join the surface of the spheroidal portion and a substantially cylindrical portion between its end and said spheroidal portion.

3. A metal polishing-body for tumbling-barrels, which has a spheroidal portion and two conoidal extensions therefrom, each conoidal portion having a curved surface at its base, so as to abruptly flare outwardly to join the surface of the spheroidal portion, said conoidal extensions having rounded ends and substantially cylindrical body portions between said rounded ends and said spheroidal portion.

1,218,159. PLANTER. GUSTAVUS A. BAKER, Memphis, Tex. Filed Dec. 1, 1913. Serial No. 803,977. (Cl. 111—6.)



1. In a combined plow and planter, rearwardly extending spaced members secured rigidly adjacent the lower end of the plow beam, an angular bar pivoted between the two members adjacent the plow beam and having a subsoil plow on the lower end thereof and an upwardly extending arm having a plurality of notches in the end thereof, arcuate members pivotally mounted at their lower ends between the ends of the first mentioned members and having covering extensions on the ends adjacent the pivots, the said arcuate members being in slightly spaced relation and having a pin extending transversely therebetween, the said pin being arranged to engage in any one of the notches in the angular bar and a coil spring secured to the upper ends of the arcuate members to maintain the said pin in the said notch.

2. In a combined plow and planter, a pair of rearwardly extending spaced members secured to the plow beam, an angular bar pivoted between the said members having a sub-soil plow on the lower end thereof and an upwardly extending arm, a pair of spaced arcuate members pivoted at their lower ends to the first mentioned member, extensions on the said arcuate members, the said extensions forming coverers, the said arcuate members and the said arm being so connected that they may be adjusted with relation to each other to simultaneously adjust the sub-soil plow and the said extensions and resilient means for maintaining the said plow and extensions in their adjusted positions.

1,218,160. INK-PAD BOX. RICHARD O. BARLER, Chicago, Ill. Filed Nov. 3, 1916. Serial No. 129,284. (Cl. 220—12.)



1. In a device of the character described, the combination of a box-like container portion provided with a basal supporting portion formed with an open bottom, a hinged cover for said box, a releasable catch for said cover, and tension means disposed in said open bottom and operatively associated with said catch and cover.

2. An ink pad box comprising in combination, a box-like container portion provided with a basal supporting portion and formed with an open top and bottom, a hinged cover for said open top, a releasable catch for said cover, said cover and catch mounted on said basal portion and said cover having a hinge element extending into said open bottom, and actuating means for said catch and said hinge element.

3. An ink pad box comprising in combination, a box-like container portion provided with a basal walled portion marginally depending therefrom to support said first-mentioned portion, a hinged cover for said box, a releasable catch for said cover, said cover and catch mounted on said basal portion and formed with extensions leading oppositely and inwardly through the wall of said basal portion, and spring means disposed below said container portion and operatively connected with said extensions.

4. A device of the character described comprising a box having a basal supporting portion, said basal portion having an open bottom and an extension disposed outwardly of said box, a hinged cover for said box having a hinge element extending through said extension into said open bottom, a releasable catch on said basal portion for the cover, and spring means for operating said catch and said hinge element.

5. A device of the character described comprising a container box having a basal supporting portion, said basal portion provided with an open bottom and a rear extension formed integral with said box, a cover for said box hingedly mounted on said rear extension and having a depending hinge element, a releasable catch for said cover, and spring means disposed in said open bottom for operating said catch and said hinge element.

[Claims 6 and 7 not printed in the Gazette.]

1,218,161. PIGMENT AND PAINT. LOUIS E. BARTON, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Mar. 21, 1916. Serial No. 85,562. (Cl. 134—58.)

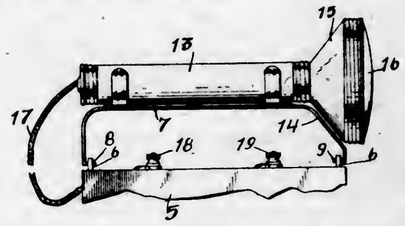
1. Paint containing a pigment comprising titanic oxid and a sulfate mixed with white lead.

2. Paint containing a pigment comprising particles of a sulfate base and thereto-adhering smaller particles of titanic oxid mixed with white lead.

3. As a new article a composite pigment comprising titanic oxid and a sulfate mixed with white lead.

4. As a new article a composite pigment comprising particles of a sulfate base and thereto-adhering smaller particles of titanic oxid mixed with white lead.

1,218,162. PORTABLE LIGHT. EDMUND B. BECKER, Washington, D. C. Filed May 29, 1916. Serial No. 100,635. (Cl. 240—8.5.)



A device of the class described comprising a case, opposite upright ears upon the said case having right-angular slots therein, a bail-like handle provided with inturned free ends shiftably arranged within the said slots provided with a grip portion arcuate in cross-section, arcuate spring clips transversely secured upon the said grip portion, and a cylindrical electrical lamp having electrical connections with the said case removably arranged within the said clips longitudinally of the grip portion of the handle, the said grip portion and lamp being adapted for grasping during the carrying of the case.

1,218,163. CLEANING AND POLISHING LIQUID FOR VARNISHED SURFACES AND PROCESS OF MAKING SAME. GEORGE DON BEYMER, Portland, Oreg., assignor to Gus F. Hupner, Omaha, Nebr. Filed Dec. 30, 1914. Serial No. 879,702. (Cl. 134—24.)

1. A cleaning and polishing composition comprising the reaction products of Venice turpentine, gum-arabic, gum-camphor, a vegetable oil, a mineral oil, hydrochloric acid and sulfuric acid in proportions substantially as set forth.

2. A cleaning and polishing composition comprising the reaction products of Venice turpentine, gum-arabic, gum-camphor, oil of sassafras, olive oil, hydrochloric acid, sulfuric acid, oil of sweet-almonds, cider vinegar, and coal oil in proportions substantially as set forth.

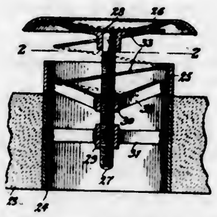
3. A cleaning and polishing composition comprising the reaction products of Venice turpentine, gum-arabic, gum-camphor, oil of sassafras, olive oil, hydrochloric acid, sulfuric acid, oil of sweet-almonds, cider vinegar, coal oil and spirits of turpentine, in proportions substantially as set forth.

4. A cleaning and polishing composition comprising the reaction products of Venice turpentine, gum-arabic, gum-camphor, oil of sassafras, olive oil, hydrochloric acid, sulfuric acid, oil of sweet-almonds, cider vinegar, coal oil, spirits of turpentine, and rotten stone in proportions substantially as set forth.

5. A liquid paste comprising the reaction products of Venice turpentine, gum-arabic, gum-camphor, vegetable oils, hydrochlorid acid, and sulfuric acid in proportions substantially as specified.

[Claims 6 to 10 not printed in the Gazette.]

1,218,164. VENTILATOR. CHARLES H. BICALKY, Buffalo, N. Y. Filed Apr. 11, 1913. Serial No. 760,357. (Cl. 98—27.)



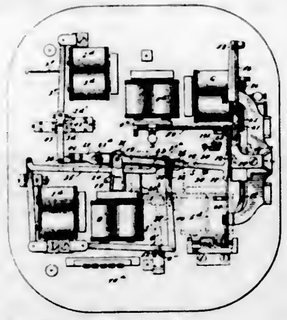
1. A ventilator comprising a body composed of a plurality of tubular sections one of which is adapted to be fixed in an opening of a wall or partition and the other adapted to movably engage said fixed section and to project above the wall, a cap arranged adjacent to the outlet end of said body, and means for adjustably connecting said cap and body comprising screw nuts mounted on the interior of said body sections and a screw upon which said cap is mounted and which engages with said screw nuts.

2. A ventilator comprising a tubular body having a fixed sleeve adapted to be secured in an opening in a wall or partition, a supporting ring secured in the inner end of said fixed sleeve, and a guard ring arranged at the inner ends of said fixed sleeve and supporting ring, a cap arranged at the inner end of said guard ring, and means for adjustably connecting said cap and body comprising screw nuts mounted on the interior of said guard ring and supporting ring and a screw engaging said screw nuts and carrying said cap.

1,218,165. TELEGRAPH TYPE-WRITER. ALLEN D. CARDWELL, Brooklyn, N. Y. Filed Apr. 10, 1915. Serial No. 20,386. (Cl. 178—23.)

1. In a telegraph typewriter, the combination of a type member, an arm pivotally supported relatively to said type member, means coactive between said type member and arm to rotate the former by the latter, means to retain said arm in a normal position, means to shift said arm and type member to a second position, means to retain said arm in said second normal position, means to operate said retaining means to release said arm, and means to move said arm progressively between said normal positions and beyond the second normal position, said means permitting said arm to be returned to and be retained in said second normal position.

2. In a telegraph typewriter, the combination of a type member, an arm pivotally supported relatively to said type member, means coactive between said type member and arm to rotate the former by the latter, means to retain said arm in a normal position, a magnet having an armature, means connecting said armature with said arm for shifting said arm to a second normal position, a stop to retain said arm in said position, a magnet to operate said stop to release said arm, and means to cause said arm to move said type member from either of said normal positions.



3. In a telegraph typewriter, the combination of a type member, an arm pivotally supported relatively to said type member, means coactive between said type member and arm to rotate the former by the latter, means to retain said arm in a normal position, means to shift said arm and type member to a second position, means to retain said arm in said normal position, means to operate said retaining means to release said arm, a second arm, means for pivotally supporting said arms for movement together and relatively one to another, means operatively located with respect to said arms for moving said arms together and for moving the first named arm relatively to the second named arm, and means for actuating the last named means to move the first named arm one or more spaces.

4. In a telegraph typewriter, the combination of a type member, an arm pivotally supported relatively to said type member, means to retain said arm in a normal position, means to shift said arm to a second normal position, means to retain said arm in said second normal position, means to operate said retaining means to release said arm, a second arm, means pivotally connecting said arms for movement together and relatively to one another, and for permitting said second named arm to move relatively to the first named arm, and means connecting said last named means with said type member for moving the latter by and with said arms.

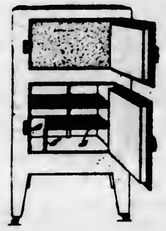
5. In a telegraph typewriter the combination of a pair of arms, means pivotally supporting said arms for separate articulation, means pivotally connecting said arms whereby longitudinal movement of one arm imparts lateral movement to the other arm, and vice versa, and means to separately operate said arms, a movable member, means connecting said member with the second named means for operation of said member by either of said arms or by the conjoint movement of said arms.

[Claims 6 to 41 not printed in the Gazette.]

1,218,166. ICE-CHEST SHELF. ISAC O. CARLSON, Chicago, Ill. Filed Aug. 17, 1914. Serial No. 857,197. (Cl. 45—71.)

1. An ice chest including the end walls equipped with shelf supporting means, in combination with a shelf of appreciably less length than the distance between said end walls, an extension on the rear of said shelf complementing the same to the full width between said walls and adapted to rest upon the adjacent supporting members, and a leg on the forward corner of the end provided with said extension, substantially as described.

2. An ice chest including the end walls equipped with shelf supporting means, in combination with a shelf comprising a frame of appreciably less length than the distance between said end walls and a body portion supported thereon, an extension on the rear of said shelf complementing the same to the full width between said walls and adapted to rest upon the adjacent supporting members, and a leg on the forward corner of the end provided with said extension, substantially as described.



3. An ice chest including the end walls equipped with shelf supporting means, in combination with a shelf comprising a frame of appreciably less length than the distance between said end walls and a body portion supported thereon, the rear member of said frame being extended to the full width and then bent forward to rest upon the adjacent supporting members, and a leg on the forward corner of the end provided with said extension, substantially as described.

4. A shelf for an ice chest comprising a substantially rectangular frame made from a single rod bent to form both sides, the rear and a portion of the front of said frame, but leaving a gap in the front of said frame adjacent one side thereof, the end of the rod at the inner corner of said gap being bent downwardly to form a supporting leg adapted to rest upon the bottom of an ice chest; a reinforcing rod connecting the front and rear portions of said frame at the side of said gap; and a wire mesh supported on said reinforcing rod and the corresponding portions of said frame, substantially as described.

1,218,167. THERMOSTAT. HAROLD J. CARMODY, Brooklyn, N. Y., assignor of one-third to Joseph M. Levine and one-third to Harry Ufland, New York, N. Y. Filed Nov. 16, 1915. Serial No. 61,850. (Cl. 200—31.)



In a thermostat the combination of a casing, indicating mechanism mounted within said casing, a steam-tight barrel secured to said casing and adapted to extend into a radiator so as to support said casing, a revoluble shaft connected to said indicating mechanism for the purpose of actuating the same, said shaft extending from said casing into said barrel, and a plurality of separate strips located within said barrel, each strip being connected at one of its ends to said shaft and at the other of its ends to said barrel, said strips being heat-controlled and spaced equidistant in order to equalize the effect of the heat at different points within said barrel.

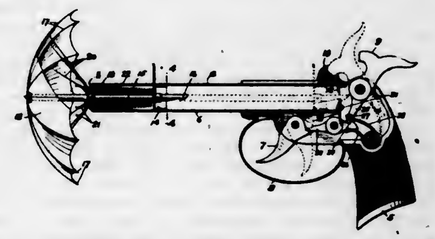
1,218,168. LOCK-NUT. JAMES H. CARY, Boston, Mass., assignor of one-half to William Henry Griffith, Narragansett Pier, R. I. Filed May 13, 1916. Serial No. 97,407. (Cl. 151—26.)



1. A nut adapted to engage the threaded end of a suitable bolt and provided with a groove across one face that is tangential to the central opening and of, substantially, uniform cross-section; a tapered pin with a V-shaped edge adapted to engage the thread on said bolt, said pin being adapted to enter said groove from one end and lock said nut in one direction only, and being further adapted to enter said groove from the other end and lock said nut in the other direction only; and a reversible spring adapted to removably clasp said nut and alternately retain said pin in said groove from the entering end.

2. A nut adapted to engage the threaded end of a suitable bolt and provided with a groove across one face that is tangential to the central opening and of, substantially, uniform cross-section; a tapered pin with a V-shaped edge adapted to engage the thread on said bolt, said pin being adapted to enter said groove from one end and lock said nut in one direction only, and being further adapted to enter said groove from the other end and lock said nut in the other direction only; and reversible means for elastically retaining said pin in said groove.

1,218,169. TOY GUN. SAMUEL CHALIKIAN, Philadelphia, Pa. Filed Feb. 23, 1916. Serial No. 79,997. (Cl. 46—37.)



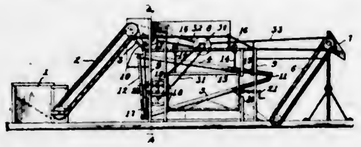
1. In combination with a gun provided with a longitudinally slotted barrel, a rod slidingly mounted in the barrel and provided with a handle projecting through the slot, said rod provided with a hook at its rear end and ribs extended from its front end, a collar slidably mounted on the rod, braces pivotally connecting the ribs with the collar, a spider provided with yieldable legs pressing against the braces, a catch adapted to engage the hook, a trigger adapted to actuate the catch to release the hook and means adapted to force the rod outwardly of the barrel when the hook is released.

2. In combination with a gun-barrel, an umbrella adapted to be invertedly telescoped therein, a rod pivotally connected with the umbrella-ribs and provided with a hook, a catch adapted to engage the hook when the umbrella is telescoped, a trigger adapted to actuate the catch to release the hook, means adapted to force the umbrella outwardly of the barrel, and means adapted to unfold the umbrella.

3. In combination with the barrel of a gun provided with a trigger, an umbrella adapted to be telescoped inside the barrel, means adapted to force the umbrella outwardly of the barrel, means adapted to unfold the umbrella, a catch adapted to restrain the ejecting means, said catch being adapted to be actuated by the trigger to release the ejecting means.

4. In combination with the barrel of a gun provided with a trigger, an umbrella provided with means for inverting it and to telescope it inside the barrel, means to eject the umbrella outwardly of the barrel, means to unfold the ejected umbrella, means to restrain the ejecting means, said restraining means being adapted to be actuated by the trigger to release the ejecting means.

1,218,170. ORE-SEPARATOR. WILLIAM P. CLIFFORD, Ottumwa, and JOHN C. COOK, Russell, Iowa. Filed Nov. 5, 1915. Serial No. 59,766. (Cl. 83—67.)



1. In an ore separator, a supporting structure, a table adjustable thereon and provided with a series of steps, each of which steps has a substantially vertical forward wall, relative to the direction of travel of the ore, and a comparatively long uninterrupted rear wall, cushioned vibratory means for the table adjustable to vary the vibration of the table relative to the degree of adjustment of the latter, and means for adjusting the table whereby the comparatively long rear walls of the steps may be moved to assume either an upward slope or a substantially horizontal position, part of the steps having cup-shaped mercury-holding recesses in their long walls.

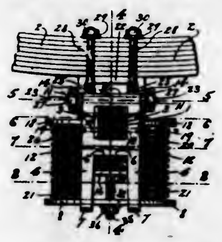
2. In an ore separator, an adjustably mounted ore table having step-like compartments and adjustable to vary the capacities of the latter, part of the compartments having cup-shaped mercury-holding recesses, and means for vibrating the table, said means being adjustable for varying the vibratory movement of the table in proportion to the capacity of the adjusted compartments.

3. In an ore separator, a supporting structure, having spaced upright members, a rectangular frame adjustably suspended from the structure between the upright members, a pair of converging ore tables hingedly connected at one end and adjustable on the frame, a vibratory means on the structure between the frame and one of the upright members for engaging with the frame intermediately of the spaced apart ends of the ore tables for vibrating the frame and tables, a regulating device carried on the specified upright member and adjustably engaging the adjacent end of the frame intermediately of the spaced apart ends of the tables to move the frame toward and from the vibrator means, and a cushioning member carried by the other of said upright members and engaging with the opposite end of the frame.

4. In an ore separator, an adjustably mounted ore table having step-like compartments and being adjustable to vary the capacities of the latter, part of the compartments having cup-shaped mercury-holding recesses, and means for vibrating the table.

1,218,171. SHOCK-ABSORBER. GIROLAMO CONCATO, Brooklyn, N. Y. Filed May 31, 1916. Serial No. 100,760. (Cl. 267—19.)

1. A shock-absorber comprising a plurality of hanger-irons adapted to be rigidly connected with an axle so as to depend therefrom, a horizontal base-plate supported by the lower ends of said hanger-irons, guide-portions providing slideways in connection with said hanger-irons, a pair of slide-plates mounted between the guide-portions of longitudinally opposite hanger-irons so as to be vertically movable upon opposite sides of said axle, a horizontal foot-plate rigidly interconnecting the lower ends of said slide-plates, horizontal buffer-lugs extending outwardly from each slide-plate, resilient buffer-members mounted between said buffer-lugs and said base-plate, and means for supporting the body of a vehicle in connection with the upper ends of said slide-plates.



2. A shock-absorber comprising a plurality of hanger-irons adapted to be rigidly connected with an axle so as to depend therefrom, a horizontal base-plate supported by the lower ends of said hanger-irons, guide-portions providing slideways in connection with said hanger-irons, a pair of slide-plates mounted between the guide-portions of longitudinally opposite hanger-irons so as to be vertically movable upon opposite sides of said axle, a horizontal foot-plate rigidly interconnecting the lower ends of said slide-plates, horizontal buffer-lugs extending outwardly from each slide-plate, resilient buffer-members mounted between said buffer-lugs and said base-plate, means for supporting the body of a vehicle in connection with the upper ends of said slide-plates, and a recoil buffer-means anchored to said base-plate and adapted to engage said foot-plate of the slide-plates to check sudden upward movements or recoils thereof.

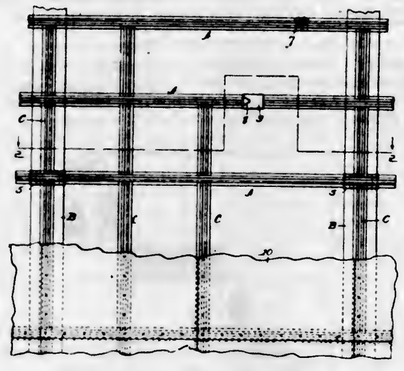
3. A shock-absorber comprising a plurality of hanger-irons adapted to be rigidly connected with an axle so as to depend therefrom, a horizontal base-plate supported by the lower ends of said hanger-irons, guide-portions providing slideways in connection with said hanger-irons, a pair of slide-plates mounted between the guide-portions of longitudinally opposite hanger-irons so as to be vertically movable upon opposite sides of said axle, a horizontal foot-plate rigidly interconnecting the lower ends of said slide-plates, horizontal buffer-lugs extending outwardly from each slide-plate, resilient buffer-members mounted between said buffer-lugs and said base-plate, means for supporting the body of a vehicle in connection with the upper ends of said slide-plates, a check-plate located above said horizontal foot-plate, a stem connected with said check-plate and extending downwardly through said foot-plate and said base-plate, an adjusting nut coöperating with the end of said stem beneath said base-plate, and a resilient recoil spring mounted between said check-plate and said foot-plate for the purposes described.

4. A shock-absorber comprising a series of hanger-irons adapted to be rigidly connected with an axle so as to depend therefrom, a horizontal base-plate supported by the lower ends of said hanger-irons, guide-portions providing slideways in connection with said hanger-irons, a pair of slide-plates mounted between the guide-portions of longitudinally opposite hanger-irons so as to be vertically movable upon opposite sides of said axle, a horizontal foot-plate rigidly interconnecting the lower ends of said slide-plates, horizontal buffer-lugs extending outwardly from each slide-plate, absorber springs mounted between each buffer-lug and said base-plate, means for retaining said absorber springs in position, and a cradle-member having side-arms pivotally connected with the upper ends of said slide-plates above said buffer-lugs, said cradle-member being adapted to be connected with and support the ordinary springs of a vehicle body.

5. A shock absorber comprising a series of hanger-irons adapted to be rigidly connected with an axle so as to depend therefrom, a horizontal base-plate supported by the lower ends of said hanger-irons, guide-portions providing slideways in connection with said hanger-irons, a pair of slide-plates mounted between the guide-portions of longitudinally opposite hanger-irons so as to be vertically movable upon opposite sides of said axle, a horizontal foot-plate rigidly interconnecting the lower ends of said slide-plates, horizontal buffer-lugs extending outwardly from each slide-plate, absorber springs mounter between each buffer-lug and said base-plate, means for retaining said absorber springs in position, a cradle-member having side-arms pivotally connected with the upper ends of said slide-plates above said buffer-lugs, said cradle-member being adapted to be connected with and to support the ordinary springs of a vehicle body, and a recoil buffer-means anchored to said base-plate and adapted to engage said foot-plate of the slide-plates to check sudden upward movements or recoils thereof.

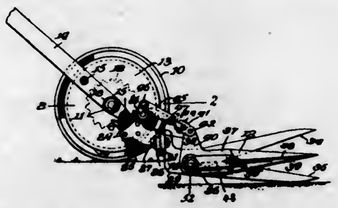
[Claim 6 not printed in the Gazette.]

1,218,172. METALLIC MOUNTING FOR METAL PLATES. EDGAR K. DAY, Wheeling, W. Va., assignor to Wheeling Corrugating Company, Wheeling, W. Va., a Corporation of West Virginia. Filed May 3, 1915. Serial No. 25,343. (Cl. 189—36.)



A mounting for plates and the like including a pair of approximately similar beams each having a head, a base, and a web connecting the head and base, said head and web being each composed of two thicknesses of metal, one of the beams having an end of the outer thickness of the two thicknesses of its head removed and the end of the other of the thickness of said head being received between the two thicknesses of the head of the other beam, the web of two thicknesses of the first-named beam being received between the two thicknesses of the web of the second named beam, and the bases of the beams being overlapped.

1,218,173. LAWN-TRIMMER. HAROLD L. ERICKSSON, Larchmont, N. Y. Filed July 6, 1916. Serial No. 107,796. (Cl. 56—19.)



1. In a lawn trimmer, a traction member including an annular rim having a web forming a closure to one side of the rim and open at the other side and having motion imparting means connected to the web, a hood device including a web and a rim extending into the traction member and inclosing the motion imparting means, a stud carried by said hood device and upon which said traction member is mounted for rotation, a combined gathering and stationary shearing member carried by said hood device and bifurcated with the free ends diverging, a movable cutting member mounted upon said gathering and stationary shearing member for moving over the bifurcated portion of the same and coöperating therewith to effect a cutting operation, a means for transmitting the motion of said traction member to said movable cutter.

2. In a lawn trimmer, a traction member including an annular rim having a web forming a closure to one side and open at the other side, said traction member having motion imparting means connected to its web, a hood device including a web and a rim extending into the traction member and inclosing the motion imparting means, a stud carried by said hood device and upon which said traction member is mounted for rotation, a combined gathering and stationary shearing member carried by said hood device, a movable cutting member mounted upon said combined gathering and stationary shearing member and coöperating therewith to effect a cutting operation, means for adjusting said gathering member relative to said hood, and means for transmitting the motion of said traction member to said movable cutter.

3. In a lawn trimmer, a traction member having a gear wheel rotative therewith, a pinion engaging said wheel and having a cranked axle, a combined gathering and stationary shearing member associated with said traction member, a cutter pivoted to said gathering member and having an arm extending therefrom, said cutting member coöperating with said gathering and shearing member to effect a cutting operation, a connecting member pivoted to said arm and to the crank of said axle, means for longitudinally adjusting said connecting member, and means for adjusting said gathering member relative to said traction member.

4. In a lawn trimmer, a traction member having motion imparting means, a hood device inclosing the motion imparting means, means for mounting said traction member for rotation relative to said hood, a bracket device carried by said hood device, a gathering member adjustably coupled to said bracket device, a movable cutting member mounted upon said gathering member and coöperating therewith to effect a cutting operation, and means for transmitting the motion of said traction member to said movable cutter.

5. In a lawn trimmer, a traction member having a motion imparting means, a holding means, means for preventing the rotation of said holding means, means for transmitting motion from said motion imparting means, a bracket device carried by said holding means, a combined gathering and stationary shearing member, means for adjustably coupling said combined gathering and stationary shearing member to said bracket device, a cutter member movably mounted upon said gathering member and coöperating therewith to effect a cutting operation, and means for transmitting the motion of said traction member to said movable cutter.

1,218,174. DEVICE FOR PLUCKING FOWLS. EDWARD FAINT, Okanagan Landing, British Columbia, Canada. Filed Sept. 11, 1915. Serial No. 50,190. (Cl. 17—30.)



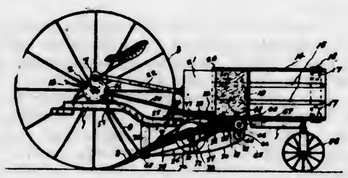
1. In a device for plucking fowls, the combination with an upper and a lower roller closely spaced together and means for revolving same, of a member substantially comb like in formation set vertically in front of the lower roller, the points of the teeth of said comb extending above and in front of the lower periphery of the upper roller set outwardly a short distance therefrom and forming an unrestricted passage between the upper edge of said comb and said upper roller.

2. In a device for plucking fowls, the combination with an upper and a lower roller closely spaced together and means for revolving same, of a comb like member having its teeth substantially triangular in cross section set vertically in front of the lower roller with the front surfaces of the teeth facing outwardly, the points of the teeth extending above the lower periphery of the upper roller and spaced therefrom so as to provide a passage between the upper edge of the comb and said roller.

3. In a device for plucking fowls, the combination with an upper and a lower roller closely spaced together and means for revolving same, of a comb like member having its teeth substantially triangular in cross section set vertically in front of the lower roller the apex of each tooth facing inwardly and having its outer face substantially concave in formation, the backs of said teeth toward the point being rounded outwardly and extended above the lower periphery of the upper roller and spaced outwardly therefrom so that a passageway is formed therebetween.

4. For use in a device of the class described, a comb like member adapted to be supported vertically in front of a pair of superposed rollers said member having its teeth substantially triangular in cross section, the apex of each tooth facing inwardly, and having its outwardly facing surface substantially concave in formation, the backs of said teeth toward the points being rounded outwardly whereby a passageway is formed between the upper edge of the comb and the uppermost roller.

1,218,175. MEANS FOR BALING HAY. EDWARD FAINT, Okanagan Landing, British Columbia, Canada. Filed Oct. 27, 1915. Serial No. 58,231. (Cl. 100—65.)

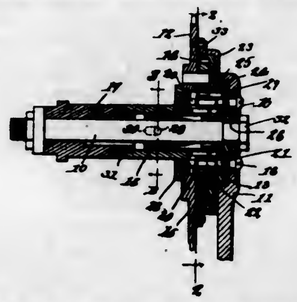


1. In a device of the class described, the combination with a wheeled frame and a hay rake carried thereby, of a bale forming receptacle mounted centrally and longitudinally on said frame, a reciprocating plunger fitting the mouth of said receptacle, independent parallel conveyers adapted to carry the hay from the intermediate portion of the rake to the mouth of the receptacle, and independent inwardly converging conveyers adapted to carry the hay from each end of the rake to the receptacle.

2. In a device of the class described, the combination with a wheeled frame and a hay rake carried thereby, of a bale forming receptacle mounted centrally and longitudinally on said frame, a reciprocating plunger fitting the mouth of said receptacle, independent parallel conveyers adapted to carry the hay from the intermediate portion of the rake to the receptacle, independent inwardly converging conveyers adapted to carry the hay from the ends of the rake to the receptacle, and a platform disposed between said rake and the mouth of said receptacle and extending underneath said conveyers, said platform having upwardly directed inwardly converging sides adjacent the outermost inwardly converging conveyers.

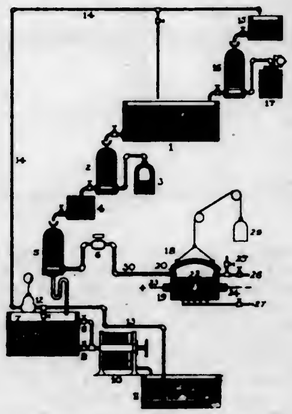
1,218,176. CHANGEABLE-SPEED GEAR. NATHANIEL C. GALLIHER, Bristol, Va. Filed July 5, 1916. Serial No. 107,634. (Cl. 74—34.)

A change speed gearing embodying a casing, a shaft therein having one end projecting therefrom, a sun gear slidable and rotatable upon one end of the casing and having an inner annular groove, a slide movable within the casing, a member carried by the slide engaging said groove, a driven member rotatable upon the casing, a planetary gear carried by the driven member and meshing with the sun gear, and a driving member upon said end



of the shaft having an internal gear meshing with the planetary gear, the casing and driving member having means for the alternate engagement of the sun gear.

1,218,177. METALLURGICAL PROCESS. WILLIAM E. GREENAWALT, Denver, Colo. Filed Nov. 23, 1912, Serial No. 733,201. Renewed Jan. 17, 1917. Serial No. 142,964. (Cl. 204—19.)



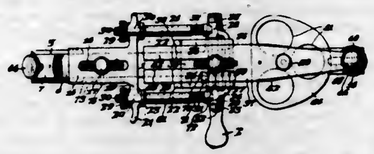
1. A metallurgical process which consists in fusing a sulfid precipitate, and then at an elevated temperature applying an electric current to separate the sulfur from the metal, and applying steam and reducing gases to the highly heated liberated sulfur to form hydrogen sulfid.

2. A metallurgical process which consists in fusing copper sulfid, and then at an elevated temperature applying an electric current to separate the sulfur from the metal, and applying steam in a reducing atmosphere to the highly heated sulfur to form hydrogen sulfid.

1,218,178. ARTICULATOR. RUPERT E. HALL, Philadelphia, Pa. Filed June 20, 1916. Serial No. 104,812. (Cl. 32—1.)

1. A dental articulator comprising a lower jaw model holder, an upper jaw model holder pivoted thereto, spaced means tending to yieldingly force said jaw model holders into registry, and means for relatively adjusting said jaw model holders substantially parallel with their longitudinal axes in opposition to said yielding means.

2. A dental articulator comprising a lower jaw model holder, an upper jaw model holder movable laterally with respect thereto, laterally disposed parallel supports movably carrying said upper jaw model holder, means tending to yieldingly force said jaw model holders into registry, and means for relatively adjusting said jaw model holders longitudinally in opposition to said yielding means.



3. A dental articulator comprising a lower jaw model holder, an upper jaw model holder movable laterally with respect thereto, springs disposed upon opposite sides of the medial plane tending to force said jaw model holders into registry in the direction of their longitudinal axes, and means acting in opposition to said springs adjustable to vary the longitudinal relation of said jaw model holders.

4. A dental articulator comprising a lower jaw model holder, an upper jaw model holder pivoted thereto on an axis extending oblique to the plane of occlusion of the jaws, means tending to yieldingly force said jaw model holders into registry, and means for relatively adjusting said jaw model holders substantially parallel with their longitudinal axes in opposition to said yielding means.

5. A dental articulator comprising a base, a lower jaw model holder carried by said base and adjustable longitudinally with respect thereto, a frame pivoted to said base upon an axis oblique to the plane of occlusion of said jaws and adjustable longitudinally, and an upper jaw model holder carried by said frame and adjustable with respect thereto, said frame and jaw model holders each having graduations for determining their relative adjustment.

[Claims 6 to 18 not printed in the Gazette.]

1,218,179. PAPER-ROLL PROTECTOR. LUCIUS B. HEARD, Los Angeles, Cal., assignor to Andrew J. Berry, Los Angeles, Cal. Filed May 8, 1915. Serial No. 26,731. (Cl. 206—59.)

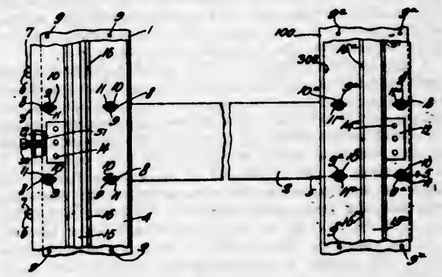


1. A paper roll binder, embodying a flexible strip of metal adapted to be secured around the end of a paper roll, projections on the inner face of said strip to engage the surface of the paper roll to prevent displacement of the binder, said projections being in the form of inwardly turned lips at the edge of apertures in the strip, and means to hold the strip about the paper roll comprising a member passing through two of said apertures in the overlapped ends of the strip.

2. A paper roll binder, embodying a flexible strip of metal adapted to be secured around the end of a paper roll, projections on the inner face of said strip to engage the surface of the paper roll to prevent displacement of the binder, said projections being in the form of lips at the edge of apertures through the strip spaced longitudinally thereon from end to end, a flange for the strip adapted to overhang the end of the roll, said flange being transversely crimped so that it may be turned down on the end of the roll, and means for holding the strip around the roll embodying a rivet passed through two registered apertures in the overlapped ends of the strip.

1,218,180. SAWMILL-CARRIAGE TRACK. WILLIAM C. HEARD, Hemphill, Tex. Filed Dec. 14, 1916. Serial No. 136,978. (Cl. 238—2.)

1. In a saw mill carriage track, a stringer; an angle member including a horizontal flange located on top of the stringer, and a vertical flange located at one side of the stringer; a rail carried by the horizontal flange; means coacting with the stringer and the vertical flange for moving the angle member transversely of the stringer; and means coacting with the horizontal flange and the stringer for holding the angle member in adjusted positions transversely of the stringer.



2. In a saw mill carriage track, a stringer; an angle member comprising a horizontal flange located on top of the stringer, and a vertical flange depending at one side of the stringer, the horizontal flange having a slot elongated transversely of the stringer; a track rail carried by the horizontal flange of the angle member; a bolt assembled with the stringer and operating in the slot; a nut on the bolt coacting with the horizontal flange of the angle member; a second bolt assembled with the stringer and passing through the vertical flange of the angle member; and a nut on the second bolt and coacting with the vertical flange of the angle member.

3. In a saw mill carriage track, a stringer; an angle member comprising a horizontal flange located on top of the stringer, and a vertical flange depending at one side of the stringer; a draw bolt connecting the vertical flange with the stringer; and a thrust-screw threaded into the vertical flange of the angle member and engaging the stringer; and a track rail carried by the horizontal flange of the angle member.

4. In a saw mill carriage track, a stringer; an angle member comprising a horizontal flange located on top of the stringer, and a vertical flange depending at one side of the stringer; a tension means connecting the vertical flange with the stringer; a thrust means carried by the vertical flange and coacting with the stringer; a connecting means uniting the horizontal flange with the stringer and having a limited lost motion connection with the horizontal flange, whereby the angle member may be moved in one direction by the tension means, and be moved in an opposite direction by the thrust means; and a rail carried by the horizontal flange and the angle member.

1,218,181. INSULATOR-KNOB. JOHN W. HOMER, Greencastle, Pa. Filed Feb. 24, 1915. Serial No. 10,313. (Cl. 173—314.)



1. An insulator formed of two members having alined bores, and the lowermost member having a recess in its lower end and radial webs within said recess with upwardly and inwardly inclined lower edges; combined with a fastening device passing through said bores, and a

washer on such device and resting on the edges of said webs.

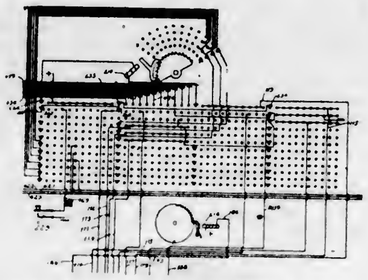
2. An insulator formed of two members having alined bores, and the lowermost member having a recess in its lower end and radial webs within said recess provided with shoulders in their lower edges equidistant from the axial line of this member; combined with a fastening device passing through said bores, and a disk-shaped washer on the shank of said device with its periphery resting in said shoulders, for the purpose set forth.

3. An insulator formed in two members having alined bores, and means on the contiguous faces of said members for holding said bores in registry; combined with a fastening device passing through and appreciably smaller than said bores and having a head at its upper end, means on the fastening device under its head for centering it with respect to the upper end of the bore, a disk on the shank of said fastening device, and means for centering said disk and device with respect to the lower end of the bore and for holding the disk against said lower member.

4. An insulator formed in two members having alined bores, and means on the contiguous faces of said members for holding said bores in registry; combined with a fastening device passing through and appreciably smaller than said bores and having a head at its upper end, a washer under said head, a disk on the shank of said fastening device, and means for centering said disk and device with respect to the lower end of the bore and for holding it against said lower member.

5. An insulator formed in two members having alined bores, and means on the contiguous faces of said members for holding said bores in registry; combined with a fastening device passing through and appreciably smaller than said bores and having a head at its upper end, and a washer under said head and reduced at its lower portion to enter the upper end of said bore, a disk on the shank of said fastening device, and means for centering said disk and device with respect to the lower end of the bore and for holding it against said lower member.

1,218,182. TELEPHONY. DAVID S. HULFISH, Toronto, Ontario, Canada, assignor to Canadian Independent Telephone Company, Limited, Toronto, Ontario, Canada, a Corporation of Canada. Filed May 13, 1912. Serial No. 696,902. Renewed Aug. 7, 1915. Serial No. 44,292. (Cl. 179—10.)



1. In an automatic telephone system, a pilot switch having a ringing stop position and a talking stop position and having contact points engaged by brushes intermediate of said two positions; a telephone line; a meter associated with said line; and a circuit for operating said meter and passing through said contact point.

2. In an automatic telephone system, a pilot switch having a ringing stop position and a talking stop position and having contact points engaged by brushes termediate of said two positions; two telephone lines connected through said pilot switch; a meter associated with each of said lines; and a circuit under control of one of said lines for operating the meter of the other line and passing through said contact points.

3. In an automatic telephone system, a station adapted to originate a call; a meter associated with said station; a switching device responsive to said call and normally operating said meter upon completion of a call; stations at which said call may terminate and means for controlling said switching device to defeat the operation of said meter; and other stations at which said call may terminate.

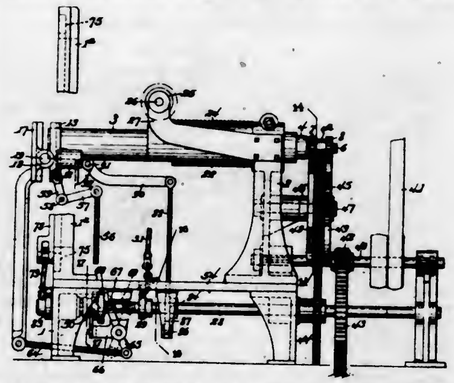
4. In an automatic telephone system, a station adapted to originate a call; a meter associated with said station; a switching device responsive to said call and normally operating said meter upon completion of said call; stations at which said call may terminate; a source of current at some of said stations; and means defeating registration of the call when a source of current at the terminating station is encountered.

5. In an automatic telephone system, lines; a meter associated with each; connective devices for connecting any two of said lines and having a predetermined position for conversation between the two said lines; a circuit in and through a connective device and the B-line of a counected pair of lines for placing said connective device in condition for conversation and for operating the meter of the A-line of the connected pair; and an additional circuit upon some of said lines for attaining the condition of conversation without operating the meter.

[Claims 6 to 9 not printed in the Gazette.]

1,218,183. ELBOW-FORMING MACHINE. MARTIN L. HUNKER, Wheeling, W. Va., assignor to Wheeling Corrugating Company, Wheeling, W. Va., a Corporation of West Virginia. Filed Mar. 4, 1916. Serial No. 82,040. (Cl. 153—69.5.)

1. In an elbow-forming machine, a mandrel, means for holding a blank on said mandrel, an eccentrically carried crimping disk located interiorly of the blank in front of



said mandrel and adapted for eccentric movement with respect to the latter, rotatable means for imparting said movement, means for folding the sides of the crimp one on the other and for inclining the fold rearwardly, and means for flattening the fold upon the body of the blank.

2. In an elbow forming machine, an eccentrically bored mandrel, an eccentrically bored sleeve rotatable within said mandrel, a shaft rotatable within said sleeve, an eccentrically disposed wrist formed on the free end of said shaft, a blank-crimping disk rotatable on said wrist, means for imparting rotary movement to said sleeve, means for imparting rotary movement to said shaft, means for closing the sides of a crimp to form a fold and for inclining said fold rearwardly, and means for flattening said fold upon the body of the blank.

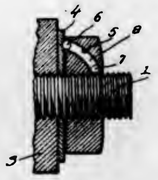
3. In an elbow forming machine, an eccentrically bored mandrel, an eccentrically bored sleeve rotatable within said mandrel, a shaft rotatable within said sleeve, an eccentrically disposed wrist formed on the free end of said shaft, a blank-crimping disk rotatable on said wrist, means for imparting rotary movement to said sleeve, means for imparting rotary movement to said shaft, shiftable jaws embracing said blank at opposite sides of the crimp, means for shifting the foremost jaw rearward for closing the sides of a crimp to form a fold and for inclining said fold rearward, means for shifting the rearmost jaw rearward, and means for flattening the inclined fold upon the body of the blank.

4. In an elbow forming machine, an eccentrically bored mandrel, an eccentrically bored sleeve rotatable within said mandrel, a shaft rotatable within said sleeve, an eccentrically disposed wrist formed on the free end of said shaft, a blank-crimping disk rotatable on said wrist, means for imparting rotary movement to said sleeve, means for imparting rotary movement to said shaft, shiftable jaws embracing said blank at opposite sides of the crimp, means for shifting the foremost jaw rearward for closing the sides of a crimp to form a fold, said foremost jaw carrying means whereby said fold is pushed back to a rearwardly inclined position, means for shifting the rearmost jaw rearward, and means for flattening the inclined fold upon the body of the blank.

5. In an elbow forming machine, an eccentrically bored mandrel, an eccentrically bored sleeve rotatable within said mandrel, a shaft rotatable within said sleeve, an eccentrically disposed wrist formed on the free end of said shaft, a blank-crimping disk rotatable on said wrist, means for imparting rotary movement to said sleeve, means for imparting rotary movement to said shaft, shiftable jaws embracing said blank at opposite sides of the crimp, means for shifting the foremost jaw rearward for closing the sides of a crimp to form a fold, said foremost jaw having a rib formed on its rear face for engaging and shifting said fold to an inclined position, and means for flattening the inclined fold upon the body of the blank.

[Claims 6 to 21 not printed in the Gazette.]

1,218,184. NUT-LOCK. LEWIS A. JAMES, Elk City, Kans. Filed Nov. 3, 1916. Serial No. 129,373. (Cl. 151—24.)



1. A nut lock comprising in combination a bolt, a nut and washer applied thereto, said nut having an aperture extending therethrough, and a locking pin having its ends beveled, and adapted to engage the threads of the bolt and the washer, to preclude relative movement of the nut and bolt, said beveled ends permitting rotation of the nut relative to the bolt when rotating the nut to clamp the same upon the work.

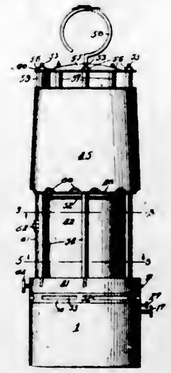
2. A nut lock comprising in combination a bolt, a nut and washer applied thereto, said nut having an arcuate passage extending therethrough, and an arcuate locking pin having its terminal sharpened, disposed in the opening and adapted to engage at its opposite end, the threads of the bolt, and the surface of the washer to preclude rotation of the nut relative to the bolt.

3. A nut lock comprising in combination a bolt, a nut and washer applied thereto, said nut having an arcuate passage therethrough, and extending from a point upon the threaded surface of the nut, to a point upon the rear face of the nut adjacent its outer edge, and a locking pin disposed in the recess and adapted to engage at its terminal the face of the washer, and the threads of the bolt to preclude rotation of the nut relative to the bolt.

4. A nut lock comprising in combination a bolt, a nut and washer applied thereto, said nut having an arcuate passage extending from a point upon the threaded surface thereof adjacent the front face, to a point upon the rear face of the nut adjacent its outer edge, and a locking pin disposed within the passage and having its opposite ends beveled, whereby to engage the threads of the bolt, and the surface of the washer to preclude rotation in one direction of the nut relative to the bolt, said beveled ends permitting rotation of the nut in an opposite direction.

5. A nut lock comprising in combination a bolt, a nut and washer applied thereto, the nut having a passage extending therethrough with one terminal of the passage widened, a locking element disposed in the passage and adapted to engage at opposite ends the face of the washer, and the threads of the bolt to preclude accidental rotation of the nut relative to the bolt in one direction, the elongated portion of the passage permitting movement of the locking element thereinto when the nut is forcibly rotated to remove the same from the bolt.

1,218,185. MINER'S LAMP. JOHN T. JONES, Ernest, Pa. Filed July 18, 1916. Serial No. 109,916. (Cl. 240—18.)



1. In a lamp of the character described, the combination of a hollow cylindrical base, a burner carried thereby and communicating with the interior of said base, a water tank mounted above the burner and concentric therewith, a ring secured on the base and provided with a plurality of air passages, said ring being provided with an arcuate groove in its upper face, a ring threaded on to the first said ring and provided with a duct communicating with the said arcuate recess, the first said ring being also provided with a duct communicating with the arcuate recess, and the cylindrical base also having an aperture in register with the said duct, a water tank mounted above the burner, a water tube communicating therewith and with the duct of the ring threaded on the first mentioned ring, means for controlling the flow of water through said duct, the said water tube being composed of two separable sections, a cylinder intermediate the water tank and the base, a gauze cylinder inclosed by the tank and secured between the same and the cylinder, a gauze cylinder mounted inside of the ring secured to the base and interposed between the air inlets and the burner, and means for detachably securing the tank and the base together and forcing them toward each other.

2. In a lamp of the character described, the combination of a hollow cylindrical base, a burner carried by said base, a water tank mounted above the burner and concentric therewith, a cylinder intermediate the tank and the base, a draft ring secured on the base and provided with a plurality of air inlets, a gauze ring interposed between the air inlets of said ring and the burner, a gauze cylinder inclosed by the tank and secured between the same and the upper end of the cylinder, the said tank being provided with a plurality of openings near its lower end, a chimney mounted above the burner, a gauze disk secured to the chimney and between the upper end of the shade and the tank, a conduit communicating with said tank and base and means for securing the tank and base together and forcing them toward each other.

1,218,186. ICE-CREAM-CONE DISPENSER. JAMES W. KENNEDY, Canton, Ohio. Filed Sept. 1, 1916. Serial No. 118,033. (Cl. 211—8.)



1. In a dispensing device of the class described, the combination of a magazine, a cone receiving cup detachably connected to said magazine, a series of spring cone retaining arms secured to the magazine and means carried by the cup adapted to pierce the body of the cone and means for holding the cone piercing means out of normal engagement.

2. In a dispensing device of the class described, the combination of a magazine, a cone receiving cup detachably connected to said magazine, and provided with cone guiding bars, a series of spring cone retaining arms secured to the magazine and means carried by the cup adapted to pierce the body of the cone and means for holding the cone piercing means out of normal engagement.

3. In a dispensing device of the character described, the combination of a magazine, a cone receiving cup detachably connected to said magazine, means carried by the magazine to support a column of cones, concentric bands secured to the magazine and spaced from each other, a bracket secured to the outer band, said bracket provided with a socket, a supporting arm located in the socket and means for normally holding the magazine in vertical position.

4. In a dispensing device of the character described, the combination of a magazine provided with a transparent opening, a cone receiving cup detachably connected to said magazine, spring arms connected to the magazine, said spring arms adapted for engagement with a cone and means for supporting the magazine.

5. In a dispensing device of the character described, the combination of a magazine, said magazine provided with means for supporting a column of cones, a cone receiving cup detachably connected to the magazine, a cover secured to the top or upper end of the magazine, said cover provided with spaced arms, a spring arm provided with a cross head, said spring arm adapted to be located between the spaced arms secured to the cover.

[Claims 6 and 7 not printed in the Gazette.]

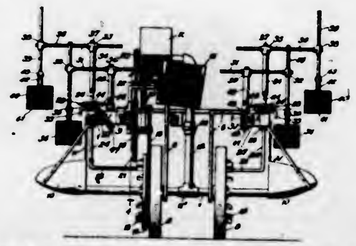
1,218,187. STEAM-PACKING VALVE. GUSTAVE KHUMBER and ALBERT A. WILLIAMS, Denver, Colo. Filed Oct. 26, 1914. Serial No. 868,760. (Cl. 137—4.)

A steam packing valve, comprising a union, a valve seat in said union, a sleeve threaded on said union, a collar threaded on the outer extremity of said sleeve, an annular shell member extending from said collar, a second annular shell member telescoping with said first named annular shell member, said annular shell members forming a housing, a valve piece operating member revoluble in said sleeve, said valve piece operating member having a threaded recess therein, a valve piece adapted to be engaged with said valve seat, a threaded valve stem carrying said valve piece, said threaded valve stem being received in said recess of said valve piece operating member, said valve stem having a longitudinal groove therein, a member secured to the inner extremity of said sleeve and having a projection received in said groove of said valve stem whereby said valve piece is prevented from revolving, said valve piece operating member having a



reduced part extending through said housing, a handle member connected with said reduced part on the exterior of said housing, an annular flange formed on said valve piece operating member at the inner limit of said reduced part, the said annular flange being engaged by said collar, and a spring surrounding said reduced parts of said valve piece operating member within said housing and acting to hold said annular flange in engagement with said collar.

1,218,188. INSECT-DESTROYER. PETER KOLB, Fort Deposit, Ala. Filed Oct. 5, 1916. Serial No. 123,970. (Cl. 43—1.)



1. In a machine for the purpose set forth, the combination of a main frame, a lever having a vertical pivot arm journaled in the frame, a bar connected with the upper end of the pivot arm of the lever, a spring having one end secured to the frame and its opposite end engaging said bar, a beater connected with the lever, and means for actuating said lever in opposition to said spring.

2. In a machine for the purpose set forth, the combination of a main frame, a lever having a vertical pivot arm journaled in the frame, stop collars on said arm above and below the frame, the upper stop collar being constructed with a finger adapted to impinge against the frame, a beater connected with said lever, and means for oscillating the lever.

3. In a machine for the purpose set forth, the combination with a main frame, of a lever having a pivot arm vertically mounted in the frame, a rock shaft mounted vertically in the frame adjacent the pivot arm of the lever, beaters carried by said rock shaft and said pivot arm, means for vibrating the lever, and connections between the lever and the rock shaft whereby to effect simultaneous operation of the beaters.

4. In a machine for the purpose set forth, the combination of a vertically disposed rocking arm, means for rocking said arm, a sleeve adjustably secured on the upper end of the arm, a rod secured upon the upper end of the sleeve and adjustable across the same, a second rod connected with one end of the first-mentioned rod and adjustable angularly with respect thereto, and a beater carried by the lower end of the last mentioned rod.

5. In a machine for the purpose set forth, the combination of a lever having a vertical arm pivoted within the main frame, a bar secured upon the upper end of said vertical arm, means actuing on the lever and said bar to vibrate the lever, a rock shaft journaled vertically in the main frame, an arm extending from said rock shaft, a link connecting said arm with said bar, and beaters carried by the rock shaft and by the lever.

[Claims 6 and 7 not printed in the Gazette.]

1,218,189. FASTENING DEVICE. CARL R. KOSITZKY, Bismarck, N. D. Filed Oct. 1, 1914. Serial No. 864,486. (Cl. 24—201.)



A fastening device for metallic knock-down shipping crates comprising an elongated plate, said plate being adapted to be secured upon a band, a substantially S-shaped resilient tongue formed upon one end of said plate and extending to one side thereof, said tongue comprising a rearwardly extending body terminating in a forwardly extending lip, said tongue being adapted to pass through an aperture of the band, whereby the body of said tongue will embrace the inner portions of the band for holding the band ends together, and said spring lip being adapted to bear upon the band for urging the body in one direction for holding said tongue from accidentally springing through the opening of the band.

1,218,190. CARBONATED BEVERAGE AND METHOD OF MAKING SAME. CHARLES G. KUMMERLANDER, Washington, D. C. Filed Dec. 22, 1916. Serial No. 138,456. (Cl. 99—11.)

1. The process of producing a strongly foaming beverage, which comprises adding to a liquid containing a a soluble albuminoid material a relatively small amount of an active proteiytic enzym, allowing said enzym to act upon the said albuminoid until a material proportion of the albuminoid has been hydrolyzed, thereafter precipitating and removing unhydrolyzed albuminoid substances and adding the resulting liquid to a carbonated beverage at any desired stage of its production.

2. A process of producing a beverage which comprises adding pepsin and acid to agitated egg liquid, maintaining at a temperature at which said pepsin is active, adding hops and diluting, boiling, cooling to about 32° F., filtering, adding to other constituents to produce a palatable carbonated beverage.

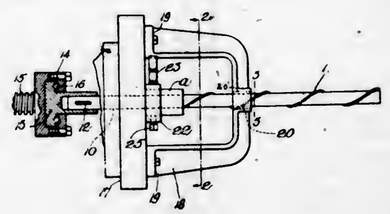
3. A process which comprises agitating the contents of eggs, adding ½ to ¾ gram pepsin, 25 cc. of water, .7 to 1 gram tartaric acid, 5 grams sodium chlorid dissolved in 40 cc. of water, digesting at 100° F. for about 1 hour, while agitating at intervals, diluting at 500 cc., adding Irish moss, and hop blossoms, boiling, straining, cooling to about 32° F., filtering; and thereafter adding to 2 to 4 gallons of non-alcoholic beverage, and carbonating; the quantities stated being for one egg.

4. A carbonated, clear, hop-flavored non-alcoholic beverage comprising as a foam-producing and foam-stabilizing agent, a hydrolized albumen of animal origin.

5. A non-alcoholic carbonated beverage having foaming properties and producing a foam as stable as that of an alcoholic beer, said beverage containing hydrolized egg-albumen.

[Claim 6 not printed in the Gazette.]

1,218,191. SPIRAL BROACHING APPLIANCE. RALPH R. LAPOINTE, Hudson, Mass., assignor to Lapointe Machine Tool Company, Hudson, Mass., a Corporation of Maine. Filed May 16, 1912. Serial No. 697,739. (Cl. 90—33.)



1. Apparatus of the kind described, comprising a broach provided with spiral cutting means and an operating mechanism for reciprocating the same, a swivel connection from the inner end of the broach to said operating mechanism, a machine frame work having a head equipped with means for holding a work piece against rotation, and means for effecting turning of the broach as it moves longitudinally, said latter means being formed and mounted to engage said spiral cutting means at the outer end portion of the broach outside of and adjacent the work piece.

2. Apparatus of the kind described, comprising a broach having a spiral cutting rib and operating mechanism for reciprocating the same, a swivel connection from said broach to said operating mechanism, means for mounting a work piece and holding it against rotation, and a fixed guide having a spiral channel adapted to engage and direct said spiral rib to effect a controlled rotary movement of the broach as it moves lengthwise, said guide being mounted in position to engage the broach outside of and relatively close to the work piece.

3. Apparatus of the kind described, comprising a broaching machine head, a broach mounted for reciprocation through said head and having a spiral cutting rib, a yoke formed for removable attachment to said machine head and having a guide passage for the outer end of said broach provided with a channel for receiving and fitting said rib whereby said broach is caused to turn as it moves endwise, and a clamping dog having a portion arranged to engage said yoke for holding a work piece against rotation on said broach as it is operated on thereby.

1,218,192. BELT-TIGHTENER FOR PUMPS. MAHLON E. LAYNE, Houston, Tex. Filed May 12, 1915. Serial No. 27,493. (Cl. 64—52.)

1. In a well mechanism, the combination of a pump shaft, a belt for driving said shaft, and a pump head carrying the shaft, said head being movable to adjust the tension on the belt.

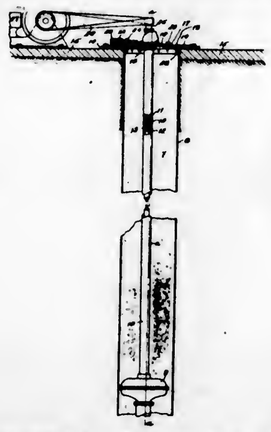
2. In well mechanism, the combination of a pump shaft, a belt for driving said shaft, a pump head carrying the shaft, and means for shifting the pump head to adjust the tension on the belt.

3. In well mechanism, the combination of a pump shaft, a belt for driving said shaft, an engine for driving the belt, and a pump head carrying the shaft slidably mounted for adjustment toward and from the engine to adjust the tension on the belt.

4. In well mechanism, the combination of a pump shaft, a relatively fixed engine, a driving belt, and means at the top of the well for shifting the vertical axis of the shaft to effect adjustment of the tension of the belt.

5. In well mechanism the combination of a pump shaft, an engine, a driving connection between the engine and

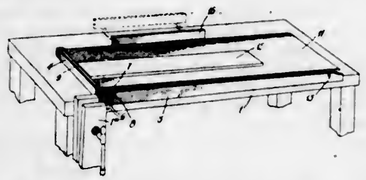
the shaft, a means for supporting the shaft from the top of the well, said means being shiftable toward and from



the engine to provide for adjustment of the driving connection.

[Claims 6 to 9 not printed in the Gazette.]

1,218,193. WORK-BENCH. HENRY W. LEWIS, Washington, D. C. Filed Apr. 6, 1916. Serial No. 89,433. (Cl. 144—286.)



1. In a device for the purpose set forth, a frame comprising side bars and cross bars connecting the same, the front side bar depending below the plane of the rear side bar whereby the frame may rest upon a bench with the front side bar abutting the front edge of the bench, a platform pivoted to the frame at one end thereof, and an adjustable support for the platform at the opposite end of the frame.

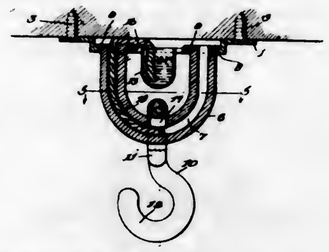
2. In a device for the purpose set forth, the combination of a frame, a platform pivoted to the said frame at one end thereof, a support for the free end of the platform adjustable upon the frame, and a stop on the frame adjacent said support and beyond the free end of the platform.

3. In a device for the purpose set forth, the combination of a frame, a platform pivoted at one end in the frame and adjustably supported thereon at its free end, a transverse stop on the frame adjacent and rising above the free end of the platform, and a longitudinal stop adjustable transversely of the frame and rising above the rear edge of the platform.

4. In a device for the purpose set forth, the combination of a frame comprising side bars provided with stepped notches in their upper edges adjacent one end, a gage bar adapted to seat freely in the said notches and provided at its ends with depending stops adapted to engage the outer faces of the side bars, whereby to be held against movement transversely of the frame, and a platform pivoted at one end to and between the side bars and having its free end extending over and resting upon said gage bar.

5. In a device for the purpose set forth, the combination of a frame, a platform pivotally supported at one end of the frame, an adjustable support for said platform at the opposite end of the frame, the frame being provided with notches in its rear side, transverse guides upon the frame, racks playing in said guides and engaging the bases of said notches, and a longitudinally disposed stop carried by the rear ends of said racks.

1,218,194. PORCH-SWING HANGER. LEROY V. LING, Johnstown, Pa. Filed May 20, 1916. Serial No. 98,843. (Cl. 155—35.)



1. In a device of the class described, an attaching member, a hanger bail supported thereby and having a bearing portion, a suspension element loosely fitting the said bearing portion of the bail, an oil reservoir, and means for conducting oil from the reservoir to the said bearing portion of the hanger member.

2. In a device of the class described, an attaching member, a hanger member supported by the attaching member and comprising a tubular bail having an opening in its bearing portion communicating with the bore of the bail, a lubricant container carried by the attaching member, and a length of wick fitting within the bore of the said hanger member and having one end terminating substantially at the said opening in the hanger member and its other end extending into the said lubricant container.

3. In a device of the class described, an attaching member, a hanger member supported by the attaching member and comprising a tubular bail having an opening in its bearing portion communicating with the bore of the bail, a lubricant container carried by the attaching member, and a length of wick fitting within the bore of the said hanger member and having one end terminating substantially at the said opening in the hanger member and its other end extending into the said lubricant container, the said lubricant container being detachably connected with the said attaching member.

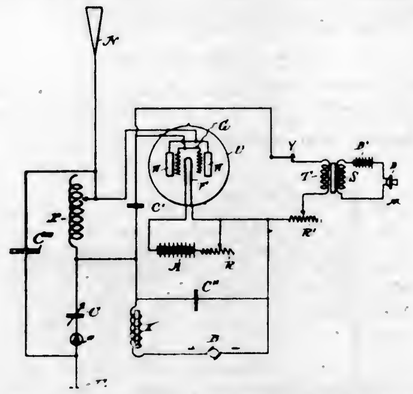
1,218,195. SYSTEM FOR TRANSMITTING COMMUNICATIONS. CHARLES V. LOGWOOD, New York, N. Y., assignor to De Forest Radio Telephone and Telegraph Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 22, 1916. Serial No. 73,641. (Cl. 250—6.)

1. Means for generating and transmitting electrical oscillations comprising an evacuated vessel containing two cold electrodes and a hot electrode, said cold electrodes being located at relatively different distances from said hot electrode, an inductance connected between said cold electrodes, and an electromagnetic wave radiating member conductively connected directly to one of said electrodes.

2. Means for generating and transmitting electrical oscillations comprising an evacuated vessel containing wing and grid and filament electrodes, an inductance connected between said wing and grid electrodes, and a radiating member conductively connected directly to said wing electrodes.

3. Means for generating and transmitting electrical oscillations comprising an evacuated vessel containing two cold electrodes and a hot electrode, said cold electrodes being located at relatively different distances from said hot electrode, an inductance connected between said cold electrodes, and an electromagnetic wave radiating member conductively connected directly to one of said electrodes,

and a capacity connected to the other of said electrodes through a condenser.

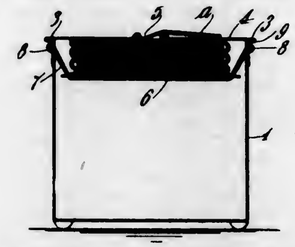


4. Means for generating and transmitting electrical oscillations comprising an evacuated vessel containing wing and grid and filament electrodes, an inductance connected between said wing and grid electrodes, and a radiating member conductively connected directly to said wing electrodes, and a capacity connected to said grid electrode through a condenser.

5. Means for generating and transmitting electrical oscillations comprising an evacuated vessel containing a hot and two cold electrodes, said cold electrodes being located at relatively different distances from said hot electrode, an inductance, connected between said cold electrodes, a radiating member conductively connected directly to one of said cold electrodes, a leak path connecting the other of said cold electrodes with said hot electrode.

[Claims 6 to 11 not printed in the Gazette.]

1,218,196. DISPENSING APPARATUS. WILLIAM McCORKINDALE, Holyoke, Mass., assignor of one-half to Kraig J. Yoerg, Holyoke, Mass., and one-half to Holyoke Paper Products Company, Holyoke, Mass., a Corporation of Massachusetts. Filed Sept. 7, 1915. Serial No. 49,407. (Cl. 211—33.)



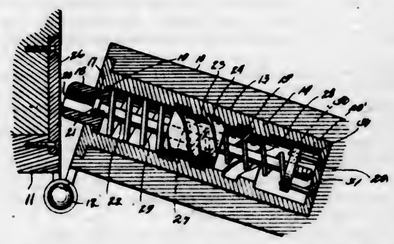
1. A dispensing apparatus, comprising a box provided with a horizontal flange around the open end thereof, a two part cover for the box having slots to engage said flange and adapted to slide into open or closed position, said cover being constructed to leave an open slot between adjacent edges when in closed position, a plate arranged to enter the box and adapted to support the package to be dispensed, an elastic member arranged to underlie and support said plate and means to support said member from opposite sides of the box near the top thereof, all constructed and arranged so that the elastic member forces the package upwardly against said cover.

2. A dispensing apparatus, comprising, a box open at the top and provided with horizontal flanges around the sides and ends thereof adjacent the open top, a plate within the box adapted to support a package of towels, elastic means suspended from the top of said box on either side thereof and engageable with said plate, whereby the latter may be constantly pulled upwardly, two cover members each having slots to engage said end flanges to slide into open or closed position, and another slot formed on each cover member adapted to engage with one of said side flanges to limit the inward movement of the covers, so that a delivery slot for the towels is left between the covers when in closed position.

3. A serving apparatus for sheet material, comprising, a container open at the top and arranged to receive and be substantially filled by said material in package form, covering means removably secured to said container to close the top thereof except for a central longitudinal outlet opening, through which a portion of the uppermost sheet protrudes, said sheets being interfolded one with another whereby, when one thereof is withdrawn through said outlet, a portion of the succeeding sheet is led therethrough, and resilient means to force said package against the under side of said covering means, said resilient means comprising an elastic band supported from and extending between the sides of said container transversely with respect to said opening, said band having a tendency to lie closely adjacent the under side of said covering means in parallel relation therewith and arranged to be stretched by the insertion of a package between the band and said covering means to lie contiguous with the bottom of the container, all constructed and arranged so that the entire space in the container may be utilized for the package.

4. A dispensing apparatus comprising a box provided with a horizontal flange around the open end thereof and with relatively small open ended vertical slots extending through the flange one from the upper edges of two opposite side faces of the box, a plate arranged to enter the box, two pins arranged to lie horizontally under said flange, an elastic supporting member arranged to underlie said plate and to hold said pins so that each spans one of said slots, and a two part cover for the box having slots to engage said flange to slide into open and closed position, said cover being constructed to leave an open slot between adjacent edges when in closed position.

1,218,197. DOOR-CHECK. EBEN H. MACKINLAY, Calgary, Alberta, Canada. Filed Apr. 14, 1916. Serial No. 91,200. (Cl. 16—77.)

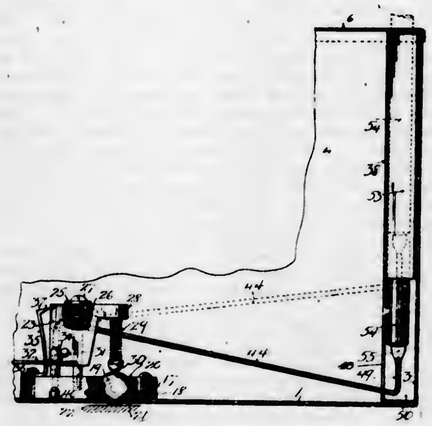


1. A door check comprising a cylinder disposed within the hinged edge of a door, a buffer head projecting from the outer end of the cylinder, the intermediate portion of the interior wall of the cylinder being grooved, a spirally ribbed member disposed within the cylinder and engaging in the groove, a pin disposed centrally through the ribbed member, a head formed on one end of the pin and slidable within the buffer head, a spring disposed between the ribbed member and the buffer head, and a weaker spring disposed between the ribbed member and the other end of the cylinder.

2. A door check comprising a cylinder, a buffer head projecting from the outer end of the cylinder, the intermediate portion of the interior walls of the cylinder being grooved, a spirally ribbed member disposed within the

cylinder and engaging in the grooves, a spring disposed between the ribbed member and the buffer head, and a weaker spring disposed between the ribbed member and the other end of the cylinder.

1,218,198. ALARM-BOX. CHARLES A. MAHLA, Jersey City, N. J., assignor to Park G. Hammar, New York, N. Y. Filed Apr. 15, 1915. Serial No. 21,560. (Cl. 177—316.)



1. A device of the class described, comprising a receptacle, an alarm device and means for initiating the operation thereof, comprising a ball mounted with facility of rising, falling and rolling, for the purpose set forth, a member having a definite reciprocating movement in relation to the ball, a flexible member having one end secured to the reciprocating member and having a free end coöperating with the ball whereby it may be flexed, said ball being adapted to hold up said flexible member, said alarm being operable upon downward movement of said flexible member, and a spring for holding said flexible member down.

2. A device of the class described, comprising a receptacle, an alarm device and means for initiating the operation thereof, comprising a ball movably mounted, for the purpose set forth, a reciprocating member, a flexible member having one end connected with the reciprocating member and having a free end coöperating with the ball whereby it may be flexed, said ball being adapted to hold up the flexible and reciprocating members, said alarm being operable by a downward movement of the reciprocating member and a spring for holding said reciprocating member down against upward pressure of the ball on the flexible member and adapted to permit the forcible raising of the reciprocating member.

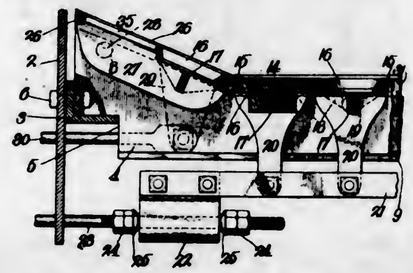
3. A device of the class described, comprising a receptacle, an alarm device and means for initiating its operation, comprising a ball movably mounted for the purpose set forth, a reciprocating member, a flexible member movable with said reciprocating member and having a free end coöperating with the ball, said ball being adapted to hold up the flexible and reciprocating members, said alarm being operable by the downward movement of the reciprocating member, and a latch member operating to hold down the reciprocating member.

4. A receptacle, having a cover, an alarm device, means for initiating the alarm device, means operated automatically by the closing of the cover for placing the initiating device in operative condition and adapted to throw said initiating means out of operative condition upon the opening of the cover.

5. A receptacle, having a cover, an alarm device, means for initiating the alarm device, including a movable ball, a centering device coöperating therewith, and means operated by the cover for setting said centering device.

[Claims 6 to 10 not printed in the Gazette.]

1,218,199. FURNACE-GRATE. WILLIAM JOHN MANHIRE, Denver, Colo., assignor to Combustion Specialty Co., Kansas City, Mo., a Corporation of Missouri. Filed Mar. 29, 1915. Serial No. 17,700. (Cl. 126—176.)



1. In a grate the combination of a series of transverse juxtaposed rocker bars provided with openings and twyer blocks fitting in said openings and in conjunction with the edges of the grate producing air passages through the rocker bars, and a transversely extending dumping section located forward of said rocker bars and sloping upwardly and forwardly with respect to said rocker bars and pivotally supported with its axis of pivotal movement paralleling the axes of pivotal movement of the rocker bars and disposed forward of the latter, and independent means for operating the rocker bars and said dumping section, extending forwardly and accessible forward of the grate.

2. A grate, comprising a pair of parallel longitudinally extending side bars, a longitudinal division bar disposed centrally between said side bars, means for supporting and holding said bars in fixed relation; said bars being formed with upwardly and forwardly inclined surfaces at their front ends, transversely alined dumping sections respectively pivoted near their front edges to the said division bar and the side bars, means for supporting said sections with their upper surfaces inclined to correspond with the inclined upper surfaces of said bars, and a plurality of transverse rocker bars between the division bar and the side bars and filling the space from the lower or rear edges of said dumping sections to the rear end of the furnace.

3. A grate, comprising a pair of parallel longitudinally extending side bars, a longitudinal division bar disposed centrally between said side bars, means for supporting and holding said bars in fixed relation; said bars being formed with upwardly and forwardly inclined surfaces at their front ends, transversely alined dumping sections respectively pivoted near their front edges to the said division bar and the side bars, means for supporting said sections with their upper surfaces inclined to correspond with the inclined upper surfaces of said bars, a plurality of transverse rocker bars between the division bar and the side bars and filling the space from the lower or rear edges of said dumping sections to the rear end of the furnace, and means connected to each set of rocker bars whereby the same may be operated.

4. A grate, comprising an inverted horizontal channeled bar extending longitudinally and having its surface inclined upwardly and forwardly from a point near the front end of the bar, a pair of side bars at opposite sides of and parallel with the division bar, and having their upper surfaces inclined upwardly and forwardly from a point approximately transversely alined with the point from which the inclined surface of the channeled bar starts upward, a series of transverse rocker bars arranged side by side between the channeled bar and the side bars and arranged with their upper surfaces flush with the upper horizontal surface of the channeled bar, a dumping section arranged between the channeled bar and each side bar and pivoted thereto near its front end, means for normally supporting said dumping sections with their upper surfaces inclined to correspond with the inclined upper surface of the channeled bar and substantially flush with said surface, and means for locking each set of rocker bars.

5. A grate, comprising an inverted horizontal channeled bar extending longitudinally and having its surface inclined upwardly and forwardly from a point near the front end of the bar, a pair of side bars at opposite sides of and parallel with the division bar, and having their upper surfaces inclined upwardly and forwardly from a point approximately transversely alined with the point from which the inclined surface of the channeled bar starts upward, a series of transverse rocker bars arranged side by side between the channeled bar and the side bars and arranged with their upper surfaces flush with the upper horizontal surface of the channeled bar, a dumping section arranged between the channeled bar and each side bar and pivoted thereto near its front end, means for normally supporting said dumping sections with their upper surfaces inclined to correspond with the inclined upper surfaces of the channeled bar and substantially flush with said surface, means for rocking each set of rocker bars, transverse bars interposed between the rearmost rocker bars and the rear wall of the furnace and arranged with their upper surfaces flush with the corresponding surfaces of said rocker bars, and compressible fireproof material interposed between the said side bars and the sides of the furnace.

[Claim 6 not printed in the Gazette.]

1,218,200. AMUSEMENT APPARATUS. HYLA FREDERICK MAYNES, Gaines, Pa. Filed Dec. 19, 1916. Serial No. 137,763. (Cl. 104—111.)



1. An amusement apparatus of the kind described, comprising a conveyer, a seat-member adjacent to the conveyer, a plurality of rollers mounted on the seat-member, and means operable to move the seat-member to cause a person seated thereon to slide over the rollers and off the seat-member toward the conveyer.

2. An amusement apparatus of the kind described, comprising a conveyer, a seat-member adjacent to the conveyer, a floor member associated with the seat-member, anti-friction members revolubly mounted on the seat-member and on the floor member, and means operable to move the seat-member to cause a person to slide by gravity over the anti-friction members off the seat-member onto the floor member and thence off the floor member onto the conveyer.

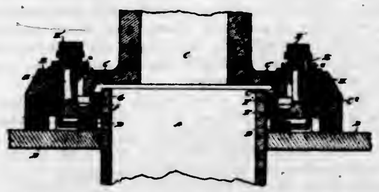
3. An amusement apparatus of the kind described, comprising a conveyer, a collapsible support adjacent to the conveyer and including a seat-member, a seat-riser and a floor member, and means for collapsing the support into an elongated slide inclined toward the conveyer, the seat-member, seat-riser and floor member being each formed of side frames and revolubly mounted parallel cylindrical members carried by the side frames to facilitate the ejection of a person toward the conveyer from the support when collapsed.

4. An amusement apparatus of the kind described, comprising a conveyer, a tiltable floor adjacent to the conveyer, a tiltable seat-member above the floor and pivotally connected thereto, and means for simultaneously tilting the floor and the seat-member to form an ejecting slide whereby a person on the seat-member is discharged by gravity onto the floor and thence onto the conveyer.

5. An amusement apparatus of the kind described, comprising a conveyer, a tiltable floor member adjacent to the conveyer, a tiltable seat-riser pivotally connected to the rear portion of the floor member, a tiltable seat-member pivotally connected to the upper portion of the riser, and means for simultaneously tilting all these tiltable parts to reform them into an ejecting slide directed toward the conveyer.

[Claims 6 to 18 not printed in the Gazette.]

1,218,201. SOIL-PIPE-SEALING DEVICE FOR CLOSET-BOWLS AND THE LIKE. CHARLES H. MUCKENHIRN, Detroit, Mich., assignor to The Standard Sanitary Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 2, 1915. Serial No. 64,758. (Cl. 137—94.)



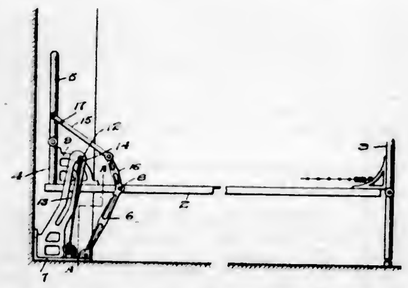
1. The combination with a support, of a bowl member having an outstanding reinforced flange part at its base provided with a depending marginal supporting rib, a portion of the reinforced part of the bowl flange adjacent the bowl formed with a relatively long inclined annular surface positioned laterally beyond the plane of the outlet of the bowl, a securing member fastened to the support, means for securing the flange part of the bowl to said member, and a nipple having a portion disposed within the space formed by the reinforcing flange, a ring shaped gasket surrounding the nipple and provided with a projecting rib, a sealing substance interposed between the relatively long inclined portion of the bowl flange, the projecting rib of the gasket and the nipple for tightly sealing the joint between the bowl and the nipple, and means for adjusting the gasket for forcing the sealing substance in position.

2. The combination with a support, of a bowl member having an outstanding flange at its base provided with a surrounding supporting rib and having intermediate the bowl and the rib an annular inclined surface arranged below the plane of the outlet of the bowl, a securing plate, means for locking the flange part of the bowl to the base, a nipple member entering the chamber formed by the flange and rib, a ring gasket located within the said chamber and having an upstanding rib part at its inner edge position adjacent the said inclined portion of the bowl flange, said upstanding rib having a depression in its edge, a packing member interposed between said inclined part and upstanding rib, and means on the ring for drawing the said upstanding rib part outwardly toward the inclined portion whereby the packing is pressed between the end of the nipple and the inclined portion for the purpose specified.

1,218,202. FOLDING BED. WILLIAM L. MURPHY, San Francisco, Cal., assignor to Murphy, Wall Bed Company, San Francisco, Cal., a Corporation of California. Filed Aug. 17, 1914. Serial No. 857,127. (Cl. 5—54.)

1. In a folding bed, a bed frame adapted to swing from a horizontal to a vertical position, a head frame pivotally mounted on said bed frame, supporting links for said bed

frame, pins on said bed frame journaled in said links, and means connecting one of said links with the head frame for maintaining the head frame in a substantially vertical position when the bed frame is in its vertical or horizontal position.



2. In a folding bed, a bed frame, a fixed head on said frame, a head frame pivoted to said fixed head, supporting links attached to said bed frame, and means connecting one of said links with the head frame for maintaining the head frame in a substantially vertical position as the bed frame is folded and unfolded.

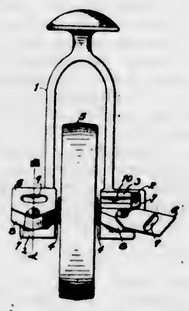
3. In a folding bed, a bed frame, a fixed head on said frame, a head frame pivoted to said fixed head, supporting links attached to said bed frame, and a link connecting one of said supporting links with the head frame, said link maintaining the head frame in substantially a vertical position as the bed frame is folded and unfolded.

4. In a folding bed, a bed frame, a fixed head on said frame, a head frame pivoted to said fixed head, supporting links attached to said bed frame, an extension on one of said links projecting above the plane of the bed frame when it is in a horizontal position, and a link connecting said extension and the head frame.

5. In a folding bed, a bed frame, a fixed head on said frame, a head frame pivoted to said fixed head, supporting links attached to said bed frame, a link connecting one of said supporting links with the head frame, and an abutment on said connecting link adapted to contact with the head frame when the bed frame is in a vertical position.

[Claims 6 and 7 not printed in the Gazette.]

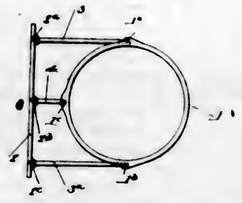
1,218,203. JOURNAL-BEARING. HARMON O. NELSON, Whitinsville, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Dec. 4, 1916. Serial No. 134,839. (Cl. 64—67.)



1. The combination of an idler pulley supported by journals, bearings in which the journals revolve, a hanger comprising two legs each containing a pocket holding a journal-bearing, a retaining cap for holding each bearing in its pocket, said cap being provided with a depressed part for engagment with a groove in top of bearing and a screw for securing the cap on the top of the pocket.

2. A retaining device for a journal-bearing comprising a journal-bearing member provided with a longitudinal groove in the top thereof and a retaining cap having a depressed part for engagement with said groove.

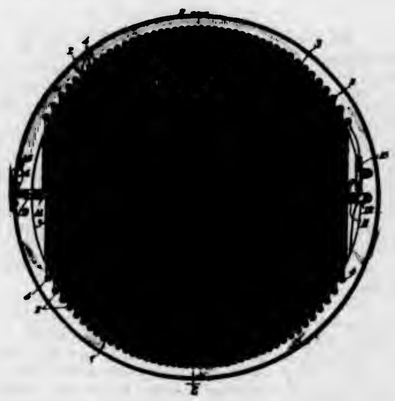
1,218,204. BASKET-BALL GOAL. HENRY C. OHLSON, Columbus, Ohio. Filed May 15, 1916. Serial No. 97,590. (Cl. 248—20.)



1. A basket ball goal of knockdown construction comprising a ring or basket member having its upper edge or face in a horizontal plane a bracket member adapted to be detachably secured to a wall or other supporting body, threaded protuberances provided on said bracket member and on said ring or basket member below the plane of the upper surface of the ring, and threaded supporting members for said ring or basket member adapted to be screwed into said protuberances, whereby a rigid structure is provided adapted for ready assembling and disassembling.

2. A basket ball goal of knockdown construction comprising a ring or basket member having its upper edge in a horizontal plane, a bracket member adapted to be detachably secured to a wall or other supporting body, and rigid supporting members adapted to be removably secured at one end to said bracket member and at the other end to said ring or basket member below the plane of the upper edge of said ring, whereby a rigid structure is provided adapted for ready disassembling.

1,218,205. ELECTRICAL RESISTANCE UNIT. HORACE N. PACKARD, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed July 29, 1913. Serial No. 781,733. (Cl. 219—68.)



1. A resistance thermometer unit comprising a frame adapted to be mounted in a conduit and a resistor mounted on said frame and disposed substantially uniformly over the area inclosed thereby, said resistor comprising a fine wire of a high ohmic resistance contained in and insulated from a flexible metallic casing.

2. A resistance thermometer unit comprising in combination a supporting frame and a resistor mounted on said frame and disposed substantially uniformly over the area inclosed thereby, said resistor comprising a flexible resistance wire contained in a flexible supporting and protecting casing, the wire being insulated from the casing so that the resistor may be mounted on the supporting frame without further insulating it therefrom.

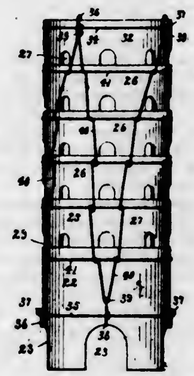
3. A resistance thermometer unit having a resistor comprising a flexible resistance wire of high ohmic resistance, an air-tight flexible metallic casing for said wire, insulating material filling the space between the wire and casing, a supporting frame adapted to be mounted in a meter housing or conduit and means on said frame over which the resistor is wound so that said resistor is distributed over substantially the entire area inclosed by said frame.

4. A resistance thermometer unit having a resistor comprising a flexible resistance wire, a flexible metallic casing therefor, insulating material filling the space between the wire and the casing, a supporting frame adapted to be mounted in a meter housing or conduit, means on said frame over which the resistor is wound so that said resistor is distributed over substantially the entire area inclosed by said frame, and a stuffing box carried by said frame for receiving said casing whereby the terminals of the resistance wire may be led to the exterior of the frame.

5. A resistance thermometer unit having a resistor comprising a flexible resistance wire, a flexible metallic casing therefor, insulating material filling the space between the wire and the casing, a supporting frame adapted to be mounted in a meter housing or conduit, means on said frame over which the resistor is wound so that said resistor is distributed over substantially the entire area inclosed by said frame, a stuffing box carried by said frame for receiving said casing whereby the terminals of the resistance wire may be led to the exterior of the frame, and a terminal box carried by said frame on the exterior thereof to provide means for connecting the resistance wire terminals to electrical conductors.

[Claims 6 to 17 not printed in the Gazette.]

1,218,206. GAS HEATER AND COOKER. JOHN S. PANASEVITCH, Northampton, Mass. Filed Sept. 1, 1915. Serial No. 48,442. (Cl. 126—90.)

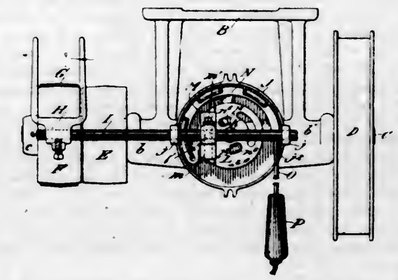


1. A gas heater comprising a casing, a burner mounted therein, a series of annular fire bricks mounted therein one upon the other, the top brick being wholly and the remaining bricks being partially covered, a wire encircling each brick, the wire of the top brick engaging the upper edge thereof and the wire of the bottom brick engaging the same, and longitudinal wires connecting the aforesaid encircling wires.

2. A gas heater comprising a casing, a burner mounted therein, a series of annular fire bricks mounted therein one above the other, the top brick being wholly covered and the remaining bricks being partially covered, a wire encircling each of said bricks, longitudinal wires connecting said encircling wires and connections on said longitudinal wires and on the encircling wires of the top and bottom bricks engaged with portions of said latter bricks for holding the series together.

3. A gas heater comprising a casing having perforated sides, top and bottom, a burner mounted therein, a series of annular fire bricks arranged one above the other within the casing, and having openings in their sides, a band encircling each of said bricks, the bands encircling the top and bottom bricks also securely engaged with the same respectively, and longitudinal bands connecting each of the aforesaid encircling bands to hold the same in place and to retain the series of bricks together.

1,218,207. BELT-SHIFTER. EDWARD F. PARKS, Providence, R. I., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 2, 1915. Serial No. 64,735. (Cl. 64—4.)



1. In a belt-shifter, the combination with a slidable shipper-rod, of a rotatable member connected to slide the rod in alternately opposite directions, a second member rotatable on the same axis and adapted to engage directly with the first member to impart rotation thereto and means to move one member axially in relation to the other member to carry them into engagement.

2. In a belt-shifter, the combination with a slidable shipper-rod, of a rotatable member connected to slide the rod in alternately opposite directions, a second member rotatable on the same axis and slidable longitudinally thereof to engage directly with the second member to impart rotation thereto, and means to maintain said members in engagement while the shipper-rod is moved from one extreme of traverse to the other.

3. In a belt-shifter, the combination with the belt-shipper means, of a rotatable member connected to move said shipper-means in alternately opposite directions, a second rotatable member adapted to engage directly with the first member to impart rotation thereto in one direction only, and resilient-means for pressing said members together longitudinally of their common axis to cause the first member to be rotated to move the shipper-means.

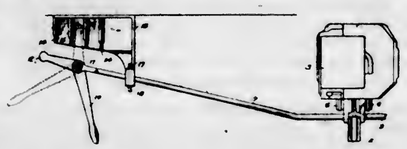
4. In a belt-shifter, the combination with belt shipper means, of a rotatable member connected to shift said shipper-means in alternately opposite directions and provided with ratchet-teeth, a second rotatable member also having ratchet-teeth adapted to engage directly with the teeth on the first member to rotate the latter in one direction only, and a spring for forcing one member axially toward the other member to maintain their teeth in engagement.

5. In a belt-shifting device, the combination with shipper-means for engaging the belt, of a rotatable member for imparting longitudinal movement to said shipper-

means in alternately opposite directions, a second rotatable member arranged adjacent the first member and adapted to be engaged directly therewith to transmit rotary movement thereto, and a spring operating to carry the two members into engagement and to return the second member to its initial position after the first member has been rotated thereby to shift the shipper-means.

[Claims 6 to 15 not printed in the Gazette.]

1,218,208. COUPLING-CENTERING MECHANISM. WILLIAM J. REGAN, Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 17, 1916. Serial No. 115,466. (Cl. 213—59.)



1. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally in either direction, said means involving a fulcrum member, a triangular lever movable into and out of engagement with said fulcrum member, and means extending transversely of the car for operatively connecting said lever with said coupler.

2. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of a locking device for maintaining the parts of the coupler in coupled relation, means extending toward the side of the car for shifting the coupler laterally in either direction and adapted to effect an unlocking movement of said locking device, and a triangular lever connected to said means and adapted to actuate the same.

3. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally in either direction, said means involving a fulcrum member affording a plurality of fulcra, and a triangular lever adapted to coöperate with said fulcra.

4. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally, said means involving a fulcrum member, a rod operatively connected to said coupler, and extending toward the side of the car, and a triangular lever movably connected between its ends to said rod and movable into and out of engagement with the fulcrum member.

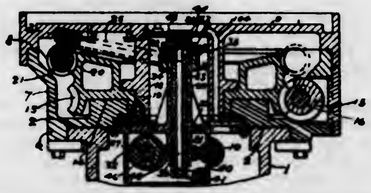
5. In mechanism of the character indicated, the combination with a coupler mounted on a railway car so as to be capable of moving laterally, of means for shifting said coupler laterally in either direction, said means involving a fulcrum member on the car, a triangular lever, means for connecting the triangular lever with the coupler, a support for said means on which it is movable, the triangular lever being movably connected with and supported by the means which connect it with the coupler, and adapted to be moved into and out of engagement with the fulcrum member.

1,218,209. NEW PHARMACEUTICAL PRODUCT. ERICH RIETZ, Elberfeld, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Oct. 6, 1914. Serial No. 865,291. (Cl. 167—7.)

1. The herein described new and therapeutically valuable products being chemically compounds of cholic acid and formic acid which are tasteless whitish powders soluble in alcohol, glacial acetic acid and benzene; containing from 15–25 per cent. formic acid, substantially as described.

2. The herein described new and therapeutically valuable product being chemically a compound of cholic acid and formic acid which is a whitish powder soluble in alcohol, glacial acetic acid and benzene, difficultly soluble in ether and insoluble in ligroin; melting at 193–195° C., substantially as described.

1,218,210. GEAR-CUTTING MACHINE. JAMES G. RIMMER, Quincy, Mass. Filed Feb. 11, 1913. Serial No. 747,757. (Cl. 90—4.)



1. A gear cutting machine, comprising work holding and tool holding means mounted in coöperative relation and having direct gear connections for rotating in definitely timed relation, one of said means having provision for receiving feed movement in a direction lengthwise of the axis of the work holding means, and other means arranged in a shunt relation to said direct gear connections and arranged to be interjected therein at will to modify the action of said connections for compensation of said feed movement.

2. A gear cutting machine, comprising work holding means, tool holding means, a main driving set of gear connections therebetween for effecting the rotation of tool and work in indefinitely timed relation, one of said means having provision for receiving rectilinear feed movement in a line substantially parallel to the axis of the work piece, and other gear connections arranged in a shunt relation to said main drive connections, and arranged to be interjected therein at will to modify the action of said connections for compensation of said feed movement.

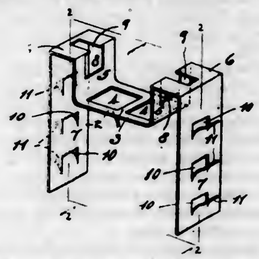
3. A gear cutting machine, comprising work holding means, tool holding means, a main driving set of gear connections therebetween for effecting the rotation of tool and work in definitely timed relation, one of said means having connections for imparting rectilinear feed movement thereto in a line substantially parallel to the axis of the work piece, and other gear connections arranged in a shunt relation to said main drive connections and consisting of a jack-in-the-box device arranged to be interjected in the driving train between the work holding means and the tool holding means at will, in a manner to modify the action of the main drive connections for compensating said feed movement.

4. A gear cutting machine, comprising a work table mounted for rotation, a hob spindle mounted for rotation and also for bodily movement across the periphery of the blank, means for effecting rotation of the table and hob spindle in definitely timed relation, and means normally occupying a shunt relation to the last named means and adapted to be interjected therein at will to effect compensation for the bodily movement of the hob spindle, said means consisting in a differential jack-in-the-box device adapted to be rendered inoperative or operative at will.

5. A gear cutting machine, comprising a hob spindle, a work table, a set of main gear connections for turning the hob spindle and the table in definitely timed relation, said connections having an assemblage composed of a central shaft, a gear carrier movable in an orbit thereabout with connections from said central shaft to the orbital gears, and a differential device adapted to automatically neutralize the effect of such orbital movement around the central shaft in the transmission.

[Claims 6 and 7 not printed in the Gazette.]

1,218,211. ANCHOR. ALVIN V. ROWE, Galesburg, Ill., assignor to Rowe Manufacturing Co., Galesburg, Ill., a Corporation of Illinois. Filed Apr. 6, 1916. Serial No. 89,327. (Cl. 72—105.)



1. A metallic anchor having a centrally arranged horizontal portion adapted to be embedded in concrete and having oppositely arranged floor-level portions connected thereto by perpendicular portions, the latter portions provided each with a relatively wide opening and the floor-level portions provided each with a relatively narrow slot-like opening communicating therewith.

2. The combination with a fresh concrete bed, of an anchor comprising a pair of relatively outer horizontally arranged top portions and a centrally arranged horizontal portion having an opening through which the soft concrete is adapted to pass, and having legs each of which is provided with a transversely arranged opening into which the concrete is adapted to flow, the upper portion of the anchor provided in each side with an opening formed partly in one of the said top portions and partly in a vertical portion adjacent it.

3. The combination with a concrete bed, of an anchor having a substantially U-shaped central portion embedded in the concrete, the terminals of said portion bent thence horizontally to constitute floor-level portions the ends of which are bent downward and embedded in the concrete, the limbs of the U-shaped portion and the adjacent floor-level portions provided each with an aperture formed by cutting away portions of both, said apertures adapted each for the passage of the stem and head of a bolt, and each floor-level portion restraining its coacting bolt.

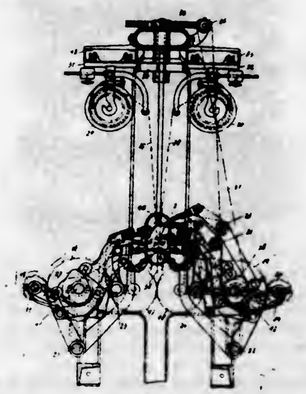
4. An anchor formed of a single strip of metal and comprising elongated parallel legs each of which is provided with a transverse aperture, the metal at the upper end of each leg directed horizontally inwardly and the middle portion bent to form a depending U, the angle at each of said inwardly directed portions and the U being cut away to permit the lateral sliding of a bolt-head through the vertical part thereof, the horizontal cutaway portion being narrower than the vertical cutaway portion.

5. An anchor formed of a single strip of metal and comprising elongated parallel legs, the metal at the upper end of each leg directed horizontally inwardly and the middle portion bent to form a depending U, the angle at each of said inwardly directed portions and the U being cut away to permit the lateral sliding of a bolt-head through the vertical part thereof, the horizontal cutaway portion being narrower than the vertical cutaway portion.

[Claims 6 to 11 not printed in the Gazette.]

1,218,212. FLAT-WARP-KNITTING FRAME. GEORG SAUPE, Limbach, Germany, assignor to, The Firm, Ernst Saupe, Limbach, Germany. Filed Dec. 18, 1914. Serial No. 877,968. (Cl. 66—33.)

1. In a warp knitting frame, the combination with two rows of frame needles disposed opposite each other, of means for supplying two sets of warp threads to the needles, means coöperating with the needles to form the loops, means for bringing the threads into positions for being operated upon alternately by the rows of frame needles, means for gradually passing the threads of both sets in opposite directions along the rows of needles, and means for transferring the threads arriving at the ends of the rows of frame needles respectively from their set to the opposite one.

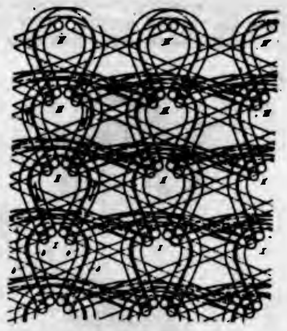


2. In a warp knitting frame, the combination with two rows of frame needles disposed opposite each other, of means for supplying two sets of warp threads to the needles, an elongated member parallel to the rows of frame needles and adapted to hold the sets of warp threads apart, means coöperating with the needles to form the loops, means for bringing the threads into positions for being operated upon alternately by the rows of frame needles, and means for gradually shifting the sets of warp threads around said elongated member and from one side to the other one.

3. In a warp knitting frame, the combination with two rows of frame needles disposed opposite each other, of means for supplying two sets of warp threads to the needles, sinker bars coöperating with the needles to form the loops, and for bringing the threads into positions for being operated upon alternately by the rows of frame needles, pairs of covering machines provided with needles and adapted to be shifted with their needles into positions between the warp threads and to be shifted longitudinally of the rows of frame needles for crossing the threads, means adapted to place the crossed threads on the frame needles, means for gradually passing the threads of both sets in opposite directions along the rows of needles, and means for transferring the threads arriving at the ends of the rows of frame needles respectively from their set to the opposite one.

4. In a warp knitting frame, the combination with two rows of frame needles disposed opposite each other, of means for supplying two sets of warp threads to the needles, sinker bars coöperating with the needles to form the loops, and for bringing the threads into positions for being operated upon alternately by the rows of frame needles, pairs of covering machines provided with needles and adapted to be shifted with their needles into positions between the warp threads and to be shifted longitudinally of the rows of frame needles for crossing the threads, two bayonet machines located on opposite sides of the rows of frame needles and adapted to place the crossed threads on the frame needles, said bayonet machines coöperating respectively with the row of frame needles which is located on the same side therewith, means for gradually passing the threads of both sets in opposite directions along the rows of needles, and means for transferring the threads arriving at the ends of the rows of frame needles respectively from their set to the opposite one.

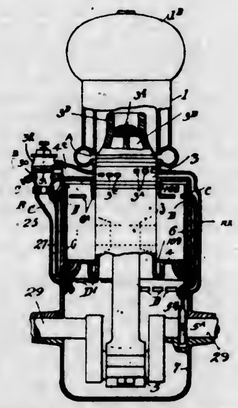
1,218,213. WARP-KNITTED FABRIC AND THE METHOD OF MAKING THE SAME. GEORG SAUPE, Limbach, Germany, assignor to, the firm, Ernst Saupe, Limbach, Germany. Filed Dec. 18, 1914. Serial No. 877,969. (Cl. 66—4.)



1. The herein described warp knitted fabric, which consists of loops located on opposite sides of the fabric and one behind the other, and consisting each of two warp threads, the threads running on each side of the fabric in opposite directions, and each thread running on each side of the fabric always in the same direction.

2. The herein described method of making a warp knitted fabric, which consists in producing loops from two sets of warp threads alternately on opposite sides of the fabric being formed, gradually passing the threads of each set from one end of the fabric to the opposite one and in opposite directions, and gradually transferring the threads arriving at the end of the fabric being formed respectively from their set to the other one.

1,218,214. EXPLOSIVE-ENGINE. WILLIAM HERMAN SCHILLINGER, Rock Island, Ill. Filed Dec. 15, 1913. Serial No. 806,785. (Cl. 123—47.)



1. In an explosive engine, a cylinder and piston, said piston having passages uniting in a common delivery opening into the cylinder, means for delivering air under pressure and an explosive charge in successive order through said passages and common delivery opening, and mechanically operated means for controlling said opening.

2. In an explosive engine, a cylinder and piston, said cylinder having exhaust ports at one end, said piston arranged to uncover said ports as it approaches the limit of its working stroke and having passages therethrough, said passages uniting in a common delivery opening in said piston, said common delivery opening delivering into said cylinder from the piston and means for supplying air under pressure at the same time said ports are opened and mechanically operated means for controlling said delivery.

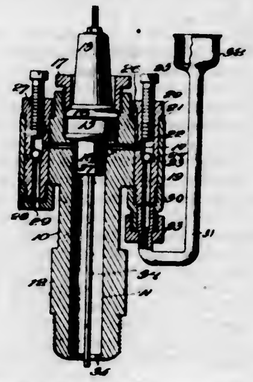
3. In an explosive engine, a cylinder and piston, said cylinder having exhaust ports at one end thereof said piston arranged to uncover said ports as it approaches the limit of its working stroke, and having passages uniting in a common delivery opening into the cylinder, a mechanically operated valve for controlling said opening and means for supplying air under pressure and an explosive charge to said respective passages in successive order the air under pressure being supplied simultaneously with the opening of said ports.

4. In an explosive engine, a cylinder and piston said cylinder having exhaust ports at one end thereof, said piston arranged to uncover said ports as it approaches the limit of its working stroke, and having passages uniting in a common delivery opening into the cylinder, a valve for controlling said opening, means for operating said valve, and means for supplying air under pressure and an explosive charge respectively to said passages in successive order the air under pressure being supplied simultaneously with the opening of said ports.

5. In an explosive engine, a cylinder and piston, said piston having an enlarged portion, a chamber in which said enlarged portion works, said chamber having air inlet and delivery ports, means for controlling said ports whereby air is drawn into said chamber, compressed therein and delivered therefrom, a storage chamber to which said delivery ports deliver, by-passes delivering from said storage chamber to the cylinder said port controlling means controlling said by-passes.

[Claims 6 to 16 not printed in the Gazette.]

1,218,215. SPARK-PLUG. CHRISTIAN H. SCHLUNDT, Huntingburg, Ind., assignor of one-half to Rufus Kirk and one-half to Harrison Alford, Huntingburg, Ind. Filed May 12, 1915. Serial No. 27,621. (Cl. 123—169.)



1. A spark plug including a hollow body portion provided with a sparking terminal, an electrode fitted within the body portion and adapted to coact with the said terminal, a hollow sleeve detachably connected to the body portion and formed with a valve seat, there being a passage communicating interiorly of the said sleeve and opening into the body of the plug, a valve freely mounted within the sleeve and adapted to engage said seat, and adjustable means carried by the sleeve for limiting the movement of the valve away from the seat.

2. A spark plug including a hollow body portion provided with a sparking terminal, an electrode fitted within the body portion and adapted to coöperate with the said terminal, an intake sleeve carried by the body portion, there being a passage leading from the said sleeve and opening into the body portion, a valve freely mounted within the sleeve and adapted for movement across one end of said passage, and means for adjustably limiting the valve in such movement.

3. A spark plug including a hollow body portion provided with a sparking terminal, an electrode fitted within the body portion and adapted to coöperate with the said terminal, a sleeve carried by the body portion and formed to receive a valve, there being a passage communicating interiorly of the sleeve and entering into the body of the plug, a valve freely mounted in said sleeve and adapted for movement across one end of said passage, and a set screw adjustable upon the sleeve for limiting the valve in such movement.

4. A spark plug including a hollow body portion provided with a sparking terminal, an electrode fitted within the body portion and adapted to coöperate with said terminal, a valve cage carried by the body portion and formed with a passage opening exteriorly of the body portion, there being a passage leading from within the cage and opening into the body portion, a valve freely mounted within the cage, the said valve being adapted to close said first mentioned passage and being adapted for movement across one end of said last mentioned passage, and means for limiting the valve in such movement.

5. A spark plug including a hollow body portion provided with a sparking terminal, an electrode fitted within the body portion and adapted to coöperate with said terminal, the body portion being formed with a passage leading from its interior to its exterior, a check valve mounted in said passage and adapted for movement to permit an inflowing current of air to pass therethrough, and means arranged to coöperate with the valve for regulating the volume of such inflowing current of air.

[Claims 6 to 13 not printed in the Gazette.]

1,218,216. CONNECTOR. RUDOLF SCHMID, Jr., West Allis, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed May 17, 1912. Serial No. 698,004. (Cl. 173—268.)

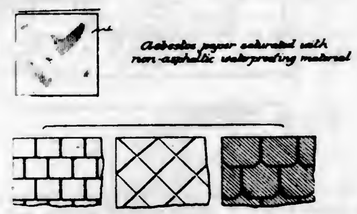


1. A coupling for electrical conductors comprising a sleeve having a portion of uniform bore and an opening from the outside to the bore, interchangeable terminal elements having similar contact portions within said sleeve portion of uniform bore, and means capable of acting independently of said sleeve for connecting said terminal elements together with the contact portions in engagement, said means coöperating with said sleeve to limit the axial movement of said terminal elements relative to said sleeve.

2. A coupling for electrical conductors comprising a sleeve having a portion of uniform bore and an opening from the outside to the bore, interchangeable terminal elements having similar contact portions within said sleeve portion of uniform bore, a screw capable of acting independently of said sleeve for connecting said terminal elements with the contact portions in engagement, said screw being insertible through the opening in said sleeve, and a portion of said screw projecting radially outside the bore of said sleeve whereby the connected terminal elements are restrained from axial movement relative to said sleeve through the engagement of said projecting portion of the screw with said sleeve.

3. A coupling for electrical conductors comprising a bored sleeve having an opening from the outside to the bore, interchangeable terminal elements having similar contact portions within the bore of said sleeve, instrumentalities for connecting said terminal elements together with the contact portions thereof in engagement and for securing said elements against longitudinal movement relative to said sleeve while said elements are connected together, said instrumentalities including a screw element insertible to operative position through the opening in said sleeve.

1,218,217. BUILDING MATERIAL. EDWARD J. SCHRODER, Chicago, Ill. Filed Jan. 21, 1914. Serial No. 813,304. (Cl. 91—68.)



1. An improved building material comprising a waterproof sheet of asbestos paper the fibers of which are bound together by an oxidized oil incorporated therein.

2. An improved building material comprising a sheet of asbestos paper waterproofed by saturation with a binder consisting of non-asphaltic oxidizable oil in a volatile solvent.

3. A sheet of asbestos paper waterproofed by saturation with a solution of an oxidizable oil and rubber.

4. An improved building material comprising a water proof sheet of asbestos paper the fibers of which are bound together by an oxidized oil incorporated therein, said sheet having a hard waterproof surface, provided with a design printed thereon.

1,218,218. ROADWAY AND PAVEMENT. AUGUST EDUARD SCHUTTE, Northboro, Mass. Filed Mar. 24, 1913. Serial No. 756,413. (Cl. 94—1.)

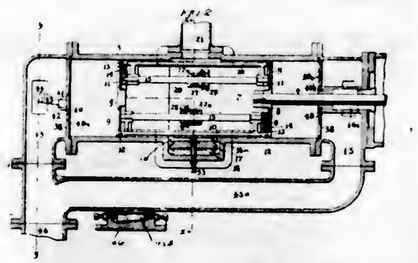
1. A method of constructing a roadway by mixing suitable mineral aggregate with bitumen, separating the mixture by means of non-adhesive powder such as talc, soapstone, serpentine or ground asbestos, into non-cohering groups and rendering these groups coherent by the addition of the solvent oil which permeates the talc and renders the whole capable of being rolled into an adherent durable roadway.

2. A method of constructing roadway by selecting a mineral aggregate, heating the same, adding a bituminous compound, and mixing until the bitumen has thoroughly permeated with the aggregate, then adding a non-adhesive powder such as talc, soap stone, serpentine, ground asbestos, or the like, which coats the particles and separates them into non-adhering groups, transporting such mixture to the place where it is to be used, there coating it with a "solvent oil" which penetrates through the non-adhesive coating, dissolves and softens the bituminous cement and produces an adherent and coherent mixture, which after rolling makes a water-tight, durable roadway.

1,218,219. STEAM-ENGINE. FRANK SHUMAN, Philadelphia, Pa. Filed Mar. 9, 1910, Serial No. 548,154. Renewed Aug. 12, 1916. Serial No. 114,626. (Cl. 121—45.)

1. In a steam engine, a fixed cylinder having a continually open steam inlet into it at its middle portion to fill the cylinder with live steam between the heads and exhaust chambers on each end separated from the cylinder space by heads each having a plurality of apertures in the line of movement of the piston, in combination with a piston having two steam tight heads secured together at a distance apart and between which the steam is supplied to fill the cylinder between said heads, valve devices within the piston and carried thereby for controlling the passage of steam through the piston heads into the cylinder

spaces beyond them, and exhaust valves each having a plurality of apertures for controlling the passage of steam through the plurality of apertures in the cylinder heads.



2. In a steam engine, a fixed cylinder having a steam inlet opening into it at its middle portion and exhaust chambers on each end separated from the cylinder space by apertured heads in the line of movement of the piston, in combination with a piston having two steam tight heads secured together at a distance apart and between which the live steam is supplied to fill the cylinder between said heads, rotary valve devices within the piston and carried thereby for controlling the passage of steam through the piston heads into the cylinder spaces beyond them, means to operate the valves extending through the side of the cylinder, and exhaust valves for controlling the passage of steam through the apertured cylinder heads.

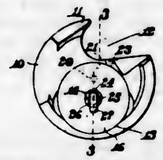
3. In a steam engine, a fixed cylinder having a steam inlet opening into it at its middle portion and exhaust chambers on each end separated from the cylinder space by heads each having a plurality of apertures in line with the movement of the piston, in combination with a piston having two steam tight heads secured together at a distance apart and between which the steam is supplied, valve devices within the piston and carried thereby for controlling the passage of steam through the piston heads into the cylinder spaces beyond them, and separate rotary exhaust valves in the cylinder head independent of the inlet valve devices within the piston for controlling the passage of steam through the apertures in the cylinder head.

4. In a steam engine, a fixed cylinder having a steam inlet opening into it at its middle portion and exhaust chambers on each end separated from the cylinder space by apertured heads in the line of movement of the piston, in combination with a piston having two steam tight heads secured together at a distance apart and between which the steam is supplied, valve devices within the piston and carried thereby for controlling the passage of steam through the piston heads into the cylinder spaces beyond them, separate exhaust valves supported independently of the piston for controlling the passage of steam through the apertured cylinder heads, and automatic devices for operating the steam and exhaust valves from the crank shaft.

5. In a steam engine, a fixed cylinder having a continuously open steam inlet opening into it at its middle portion to fill the cylinder between the piston heads with steam and exhaust chambers on each end separated from the cylinder space by apertured heads in the line of movement of the piston, in combination with a piston having two steam tight heads secured together at a distance apart and between which the steam is supplied to fill the cylinder between said heads, valve devices within the piston and carried thereby for controlling the passage of steam through the piston heads into the cylinder spaces beyond them, separate exhaust valves for controlling the passage of steam through the apertured cylinder heads, and mechanical connections extending through the cylinder and within the piston for operating and maintaining control of the steam valves in the heads thereof.

[Claims 6 to 18 not printed in the Gazette.]

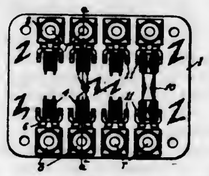
1,218,220. SHUTTLE FOR SEWING-MACHINES. PETER SJOSTROM, Maplewood, Mass., assignor to Victor Shoe Machinery Company, Lynn, Mass., a Corporation of Massachusetts. Filed Dec. 13, 1915. Serial No. 67,059. (Cl. 112—23.)



1. In a device of the class described, the combination of a shuttle case provided with a loop engaging hook and having a peripheral depression adapted to receive a projection from a shuttle carrier, an eccentrically disposed bobbin recess in one face, two radial thread passages between said recess and depression, and a central discharge passage from the bottom of said recess; and a thread carrying bobbin having its hub extending beyond the inner flange thereof and adapted to contact with the bottom wall of said recess.

2. In a device of the class described, the combination of a shuttle case provided with a loop engaging hook and having an eccentrically disposed bobbin recess in one face thereof, a peripheral depression adapted to receive a projection from a shuttle carrier, and a centrally disposed thread discharge outlet extending through said case from the bottom of said recess; a bobbin support centrally disposed in said recess and secured to said case at a point removed from said discharge outlet; a bobbin revolubly mounted on said support and having an annular hub extending beyond its inner flange with its end bearing against the bottom wall of said recess; means carried by said support for retaining said bobbin on said support, and means whereby the thread on said bobbin may be delivered through the cylindrical wall of the shuttle case to said peripheral depression and then returned through said case to the bobbin recess at a point between the bottom of said recess and the inner flange of the bobbin and finally delivered from said recess through the discharge outlet.

1,218,221. FUSE-BLOCK. CHARLES H. SMITH, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed July 21, 1913. Serial No. 780,145. (Cl. 175—273.)



1. A device of the character described in combination with a base plate, of a resilient fuse retaining element having opposed fingers adapted to grasp a fuse element between them mounted upon said base plate, and means mounted upon said base plate having extending arms normally out of engagement with the fingers of said fuse retaining element to limit the distance said fingers may be separated.

2. A device of the character described comprising a base provided with a rectangular recess, a U-shaped spring clip having its connected end projecting into said recess, a retaining device having a finger extending into engagement with the bridge end of the spring clip within the recess, a pair of forwardly extending members normally out of engagement with said spring clip for limiting the movement of the fingers of said U-shaped spring clip, and means for fastening said retainer to the base whereby said finger securely holds said clip upon the base.

3. A device of the character described comprising a base provided with a recess, a U-shaped spring clip having its connected end projecting into said recess, a retaining device having a finger extending into engagement with the bridge end of the spring clip within the recess, means also carried by said retainer for limiting the outward movement of the sides of the spring clip, and means for fastening said retainer to the base whereby said finger securely holds said clip upon the base.

4. A device of the character described comprising a mounting base provided with a recess, a U-shaped spring clip having its connected end projecting into said recess, ears formed integrally with said U-shaped spring clip for limiting the distance said clip projects within the recess, a retaining device having a finger extending into engagement with the bridge end of the spring clip within the recess, and means for fastening said retainer to the base whereby said finger securely holds said clip upon the base.

5. A device of the character described comprising a base provided with a recess, a spring containing clip having two sides projecting into said recess, integrally formed ears for said clip to limit the distance that said spring clip extends into said recess, a retaining device having a finger extending into engagement with the bridged end of said containing clip, means carried by said retaining device for limiting the movement of the side piece of said containing clip, and means for fastening said retainer to the base whereby said finger securely holds said clip within the recess.

[Claims 6 and 7 not printed in the Gazette.]

1,218,222. TOILET-CASE. MAY R. SMITH, Brooklyn, N. Y. Filed Mar. 27, 1914. Serial No. 827,692. (Cl. 223—53.



1. A toilet case such as described, comprising a box having a top and bottom, both of which are recessed internally, one of said recessed members provided with an internal compartment occupying a portion only of the width of that member and with a movable cover for that compartment, and a combined thread and thimble holder secured within the other member of said box and to one side of said internal compartment and occupying not only a portion of the recess of the member within which such combined thread and thimble holder is secured, but also a portion of the recess of the other member.

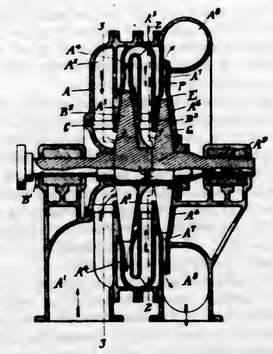
2. A toilet case such as described comprising a box having top and bottom both of which are recessed internally, one of said recessed members provided with an internal compartment occupying a portion only of the width of that member, and with a movable cover for that compartment, and a thread holder secured within the other member of said box and to one side of said internal compartment and occupying not only a portion of the recess of the member within which such combined thread and thimble holder is secured, but also a portion of the recess of the other member, to one side of the compartment of that other member.

3. A toilet case such as described, comprising a top and bottom, both of which are recessed internally, one of said recessed members provided with an internal compartment occupying a portion only of the width of that member, and with a movable cover, for that compartment, and a thimble holder located within the case and to one side of said internal compartment and occupying not only a portion of the recess of the member within which such combined thread and thimble holder is secured, but also a portion of the recess of the other member, to one side of the compartment of that other member.

4. A toilet case such as described, having a top and bottom, the former adapted to open with respect to the bottom, a thread carrier within said case, and a pin, hinged to one member of said case to which said thread carrier is screw threaded.

5. A toilet case such as described, having a top and bottom, the former adapted to open with respect to the bottom, a thread carrier within said case, and a pin, hinged to one member of said case to which said thread carrier is screw threaded, said thread carrier having near one end, thimble-holding means which serves to retain spools in place upon said thread carrier.

1,218,223. CENTRIFUGAL BLOWER. CHARLES H. SMOOT, New York, N. Y., assignor to Rateau, Battu, Smoot Company, New York, N. Y., a Corporation of New York. Filed Aug. 7, 1913. Serial No. 783,448. (Cl. 253—188.)



1. In a centrifugal blower, the combination with a rotary impeller having the spaces between adjacent blades open at the sides of the impeller, of a casing formed with an impeller chamber and a surrounding diffusion chamber opening from the periphery of the impeller chamber and of a thickness measured axially of the impeller substantially less than the width of the impeller blades at their outer ends.

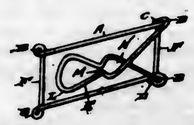
2. In a centrifugal blower, the combination with a rotary bladed impeller, of a casing formed with an impeller chamber having a lateral inlet opening across which the inner ends of the impeller blades project, a diffusion chamber into which the impeller chamber opens at its outer edge, an inlet passage opening to said impeller chamber through said inlet opening and a set of nozzles located in said inlet passage adjacent to but not contracting said inlet opening and adapted to reduce the pressure and increase the velocity of the fluid passing into the impeller chamber through said inlet opening and to give said fluid a rotational velocity in the direction of the impeller rotation.

3. In a centrifugal blower the combination with a rotary bladed impeller having radial blades, of a casing formed with an impeller chamber, a diffusion chamber into which the impeller chamber opens at its outer edge, an inlet chamber alongside of the impeller chamber and a central lateral opening, across which the inner ends of the impeller blades project, connecting said inlet and impeller chambers and a set of nozzles located in said inlet chamber and surrounding said opening, and adapted to reduce the pressure and increase the velocity of the fluid passing into the impeller chamber from said inlet chamber and to give said fluid a rotational velocity in the direction of the impeller rotation.

4. A rotary impeller adapted for operation at very high peripheral speeds comprising a shaft or body portion and unshrouded radial blades integral therewith and projecting radially therefrom.

5. A rotary impeller adapted for operation at very high peripheral speeds comprising a shaft or body portion and two sets of unshrouded radially extending blades integral therewith and projecting radially therefrom.

1,218,224. NECKTIE-FASTENER. THOMAS C. SPELLING, New York, N. Y. Filed Sept. 6, 1916. Serial No. 118,621. (Cl. 24—57.)



1. A tie fastener comprising a wire frame of quadrangular outline formed of a continuous length of wire, having said wire bent to form thread holes at the corners of said frame, said wire being bent from two of said corners to extend inside of the outlining frame, said wire being crossed to form gripping jaws for a collar button, and said crossed portions being arched from end to end, to properly dispose a collar button head with respect to a tie member carried by said fastener.

2. A necktie fastener comprising a single wire bent to form a quadrangular frame having four looped corners to form thread holes at the corners of said frame, said wire being bent from two of said corners to extend inside of the outlining frame, said wire being crossed to form gripping jaws for a collar button, said crossed portions being arched from end to end, to properly dispose a collar button head with respect to a tie member carried by said fastener, each side of the quadrangular frame being adapted to carry the end of a neckband.

3. A necktie fastener comprising a single wire bent to form a quadrangular frame having four looped corners to form thread-holes at the corners of said frame, said wire being bent from two of said corners to extend inside of the outlining frame, said wire being crossed to form gripping jaws for a collar-button, said crossed portions being arched from end to end, the extent of arching of the interior formation from the plane of the frame being gaged to produce frictional impingement of the collar-button head between said arched portion and a necktie member, as described.

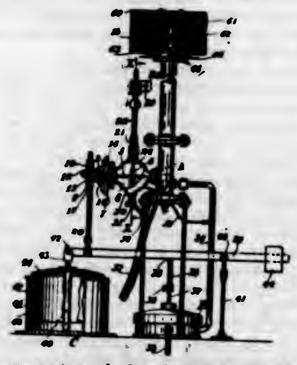
4. A necktie fastener comprising a wire bent to form a quadrangular frame having four looped corners to form threadholes, at the corners of said frame, said wire being bent from two of said corners to extend inside of the outlining frame, said wire being crossed to form gripping jaws for a collar-button, said jaws being arranged in a series, and said crossed portions being arched from end to end to properly dispose a collar-button head with respect to a tie member carried by said fastener.

5. A necktie fastener comprising a single wire bent to form a quadrangular frame having four looped corners to form thread holes at the corners of said frame, said wire being bent from two of said corners to extend inside of the outlining frame, said wire being crossed to form a series of gripping jaws for a collar-button, said crossed portions being arched from end to end, the extent of arching of the interior formation from the plane of the frame being gaged to produce frictional impingement of the collar-button head between said arched portion and the necktie member, as described.

1,218,225. SIGNALING APPARATUS. CHARLES ALEXANDER STEVENSON, Edinburgh, and JOHN MOYES, Glasgow, Scotland. Filed Dec. 13, 1913. Serial No. 806,450. (Cl. 116—13.)

1. An apparatus of the character stated, comprising, in combination, an explosion chamber, pulsating apparatus adapted to supply gas periodically thereto, means, operable from the pulsating apparatus, for supplying air periodically to the explosion chamber, an ignition device for effecting the ignition of the mixture in the explosion chamber, and means for periodically operating said ignition device from said pulsating apparatus.

2. An apparatus of the character stated, comprising, in combination, an explosion chamber, pulsating apparatus adapted to supply gas periodically thereto, a pump, operable from the pulsating apparatus, for supplying air periodically to the explosion chamber, an ignition device for effecting the ignition of the mixture in the explosion chamber and means for periodically operating said ignition device from said pulsating apparatus.



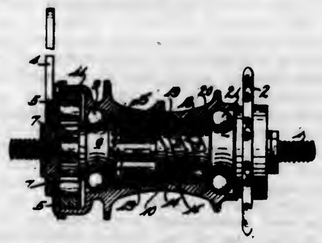
3. An apparatus of the character stated, comprising, in combination, an explosion chamber, pulsating apparatus adapted to supply gas periodically thereto, pump means, opegable from the pulsating apparatus, for supplying air periodically to the explosion chamber, an ignition device for effecting the ignition of the mixture in the explosion chamber and means for periodically operating said ignition device from said pulsating apparatus.

4. An apparatus of the character stated, comprising, in combination, an explosion chamber with sound intensifier thereon, pulsating apparatus adapted to supply gas periodically thereto, means, operable from the pulsating apparatus, for supplying air periodically to the explosion chamber, an ignition device for effecting the ignition of the mixture in the explosion chamber and means for periodically operating said ignition device from said pulsating apparatus.

5. In apparatus of the character stated, comprising, in combination, an explosion chamber with guards thereon, pulsating apparatus adapted to supply gas periodically thereto, means, operable from the pulsating apparatus, for supplying air periodically to the explosion chamber, an ignition device for effecting the ignition of the mixture in the explosion chamber and means for periodically operating said ignition device from said pulsating apparatus.

[Claims 6 to 8 not printed in the Gazette.]

1,218,226. COASTER-BRAKE. CHARLES WALFRID SVENSON, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Oct. 25, 1916. Serial No. 127,531. (Cl. 208—57.)



1. In a coaster brake the combination of a stationary axle; a sprocket having a cam extension projecting therefrom; a coupling having a cam surface engaging said cam extension; a hub shell surrounding said extension and coupling, and provided with a conical seat; and a separately formed driving abutment member having a conical exterior fitting said conical seat so as to be held from rotation relatively to said hub, said coupling member and driving abutment being provided with opposing teeth adjacent to the larger end of said abutment member.

2. In a coaster brake the combination of a stationary axle; a sprocket having a cam extension projecting therefrom; a coupling having a cam surface engaging said cam extension; a brake actuator; a brake; a hub shell surrounding said extension, coupling and brake actuator, and provided with a conical seat; a separately formed driving abutment member, having a conical exterior fitting said conical seat and held by said shell from rotation relatively thereto, said coupling member and driving abutment being provided with opposing rounded teeth adjacent to the larger end of said abutment member, and said coupling member and brake actuating member being also provided with rounded opposing teeth.

1,218,227. BELT-FASTENER. WALTER O. TALCOTT, Providence, R. I., assignor of one-half to Mancel W. Talcott, Providence, R. I. Filed July 27, 1916. Serial No. 111,549. (Cl. 24—33.)



1. A belt fastener comprising a pair of plates hinged together each being shaped to be passed between the belt layers, said plates being provided with one or more rivet holes for receiving fastenings passed through corresponding holes in the end of the belt, and a gage member raised above the plane of each of said plates adjacent the hinge and adapted to engage the belt ends and provide a positive stop whereby said gage member serves as a templet for first locating the points at which the rivet holes in the belt are to be punched, and then as a gage for positioning the plate between the layers to cause its rivet holes to register with those in the belt.

2. A belt fastener comprising a pair of thin plates each folded upon itself and provided with interlocking sections hinged together at the bend, each leaf of said double plates being shaped to be passed between the belt layers, said plates being provided with one or more rivet holes for receiving fastenings passed through corresponding holes in each end of the belt, and one or more gage members raised above the plane of each of said plates adjacent the hinge and adapted to engage the belt ends and provide a positive stop to serve as a templet for first locating the points at which the rivet holes in the belt are to be punched and then as a gage for positioning the plate between the layers, to cause its rivet holes to register with those in the belt.

1,218,228. PLANT-IRRIGATING DEVICE. CHARLES F. TILLMANN, Chicago, Ill. Filed May 15, 1916. Serial No. 97,602. (Cl. 47—19.)



1. In a plant irrigating device, the combination with an elongated container for holding a plurality of plants, of a horizontally disposed water conduit extending centrally and longitudinally across the bottom and having a plurality of water egress openings at points throughout its length for uniformly directing the water to the roots of the plants, means for conducting a supply of water to one end of said conduit, and a porous dirt shield disposed over said conduit.

2. In a plant irrigating device, the combination with a plant container including a flat bottom and a surrounding wall, of a horizontally disposed water conduit extending across the bottom and having a plurality of water egress openings at points throughout its length for uniformly directing the water to the roots of the plant and a vertically extending water conductor disposed within the container and communicating at its lower end with one end of said horizontally disposed conduit for conducting a supply of water thereto, said water conductor being removably secured to the wall of the container to permit another container being nested within said container.

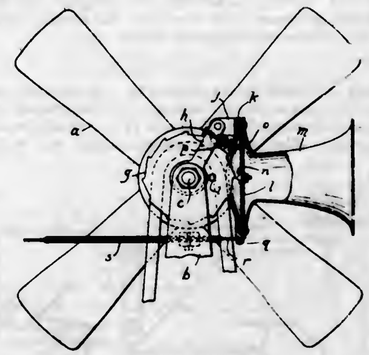
3. In a plant irrigating device, the combination with a commercial elongated plant box including a bottom and spaced side and end walls, of a water conduit extending along the bottom thereof from one end wall to the other, said conduit being formed from an elongated strip of wire mesh and arched upwardly transversely throughout its length, the longitudinal edges thereof being secured to the bottom of the container, and a water conductor for directing water into one end of said conduit, said water conductor being removably attached to one end wall of the container to permit another container being nested within said container.

4. In a plant irrigating device, the combination with an elongated plant container including a bottom and spaced side and end walls, of a perforated water conduit extending along the bottom thereof from one end wall to the other, a water conductor for directing water into said conduit, and a brace connecting the side walls of the container, said water conductor and brace being movably attached to the container to permit another container being nested within said container.

5. In a plant irrigating device, the combination with an elongated plant container including a bottom and spaced side and end walls, of a brace connecting the side walls of the container, said brace being formed from wire and having its body portion disposed below the top of the container, the ends of the wire being bent into hooks for respectively engaging the upper edges of said side walls.

[Claim 6 not printed in the Gazette.]

1,218,229. DIAPHRAGM-HORN. CHARLES G. TROBIEN, Pontiac, Mich., assignor of one-fourth to Mary E. Welch and one-fourth to Arthur Pack, Pontiac, Mich. Filed Dec. 9, 1915. Serial No. 66,009. (Cl. 116—1.)

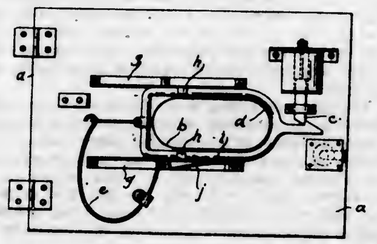


1. In a device of the character described, the combination of a fan support, a bearing carried thereby, a fan and fan pulley rotatably supported by said bearing, a diaphragm-carrying arm supported on said bearing, a diaphragm actuator secured to one of said rotating members so as to rotate therewith, a diaphragm-holding shell pivoted to the said diaphragm-carrying arm, a diaphragm carried thereby, a spring for spacing the diaphragm-holding shell between the diaphragm-carrying arm and the diaphragm-holding shell, and means for drawing the dia-

phragm into operative engagement with the actuator against the force of said spring.

2. In a device of the character described, the combination of a fan support, a bearing carried thereby, a fan and fan pulley rotatably mounted on said bearing, a diaphragm actuator secured to one of said rotating parts to rotate therewith, an arm secured to said bearing and extending in a general radial direction, a diaphragm-holding shell provided with a rearwardly extending lug pivoted to said arm, a diaphragm carried by said shell and normally tending away from said diaphragm-carrying arm and diaphragm actuator, and means for drawing the diaphragm into operative contact with the diaphragm actuator.

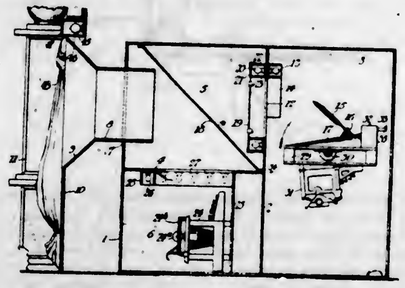
1,218,230. FIRE-ALARM BOX. ANTHONY C. VANADIA, Flint, Mich. Filed Aug. 11, 1916. Serial No. 114,322. (Cl. 177—379.)



1. In a fire-alarm box, the combination with a closure provided with a slot, a pair of angle bars on opposite sides of the slot, a yoke guided by the angle bars and provided with ratchet-teeth in one arm, a spring detent secured to one of the angle bars and engaging the ratchet-teeth, a latch for holding the yoke retracted, and a spring for throwing the yoke partially across the slot where it is locked by the spring detent.

2. In a fire-alarm box, the combination with a closure provided with a slot, a pair of bars on opposite sides of the slot, and provided with lips, a yoke guided by the bars and lips and provided with ratchet-teeth in one arm, a spring detent engaging said ratchet teeth, a hook on one end of the yoke, a latch for engaging said hook and holding the yoke retracted and a U spring normally contracted and exerting a pull on the opposite end of the yoke to throw it across the slot when the latch is released where it is locked by the spring detent.

1,218,231. EXHIBITION DEVICE. ALEXANDER WAYRICH, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 5, 1914. Serial No. 816,695. (Cl. 88—1.)



1. In a display apparatus to be viewed from a distance, the combination with a compartment comprising a window through which the articles in said compartment may be viewed, of means in said compartment for positioning a number of articles in succession to be viewed through said window, a second compartment for display articles, means for causing the articles in said second compartment to appear to be in the first-named compartment, means for alternately illuminating each of said compartments and dimming the other, and means for providing illumination in front of the window.

2. In a display apparatus, the combination of a transparent reflector, a compartment behind said reflector, a plurality of devices in said compartment to be displayed, means for moving said devices successively into position to be viewed through said reflector, an additional device in position to be reflected from said reflector so as to appear from the viewpoint to be in the display position of the first-named devices, means for lighting articles at both display positions, means to gradually increase the light for one position and reduce the light for the other, and means for illuminating the space behind the reflector and in front of said compartment.

3. In a display apparatus, the combination with a plurality of display compartments, of a plurality of articles to be displayed in one compartment, means in said compartment to move one of said display articles out of display position and move another into display position, a transparent reflector positioned to permit an article in one compartment to be reflected therein, and to permit an article in the other compartment to be seen therethrough, said articles appearing to the spectator to be substantially in the same position, illuminating means for said compartments comprising apparatus for gradually lighting one compartment and simultaneously reducing the light in the other compartment, and means for illuminating the space behind the reflector in front of the compartment behind said reflector.

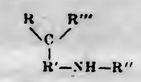
4. In a display apparatus, the combination of a rotary supporting device adapted to bring a plurality of articles thereon successively into display position, means for supporting another article in a second display position, lighting apparatus for alternately lighting articles in said display positions, and means for causing each article when brought into view to appear substantially in the same position as the preceding article.

5. In a display apparatus, the combination of a rotary supporting device adapted to bring a plurality of articles thereon successively into display position, means for supporting another article in a second display position, lighting apparatus for alternately lighting articles in said display positions, and a transparent mirror in position to reflect the light from the articles in one of said display positions and cause it to appear to the spectator to be in the other display position.

[Claims 6 to 18 not printed in the Gazette.]

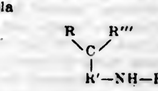
1,218,232. BLUE TRIPHENYLMETHANE DYE. MAX WEILER, Elberfeld, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Mar. 27, 1915. Serial No. 17,526. (Cl. 8—1.)

1. The new dyestuffs which can be obtained by heating an aromatic amin with an aminotriphenylmethane color which contains a sulfo group in para position to the carbinol carbon atom, the new dyestuffs having probably the general formula



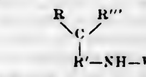
in which R and R''' represent the radicals of aromatic bases which may contain a sulfo group, R' means an arylene radical, and R'' means an aryl or aralkyl radical, which dyes are after being dried and pulverized dark powders soluble with difficulty in water generally with a violet to bluish coloration; dyeing wool violet to blue shades fast to light, substantially as described.

2. The new dyestuffs which can be obtained by heating an aromatic amin with a diaminotriphenylmethane color which contains a sulfo group in para position to the carbinol carbon atom, the new dyestuffs having probably the general formula



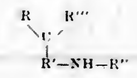
in which R represents an alkyl-aminoaryl radical which may contain a sulfo group, and R''' the radical of an aromatic base, R' means an arylene radical, and R'' means an aryl or aralkyl radical, which dyes are after being dried and pulverized dark powders soluble with difficulty in water generally with a violet to bluish coloration; dyeing wool violet to blue shades fast to light, substantially as described.

3. The new dyestuffs which can be obtained by heating an armoatic amin with a diaminotriphenylmethane color which contains a sulfo group in para position to the carbinol carbon atom, the new dyestuffs having probably the general formula



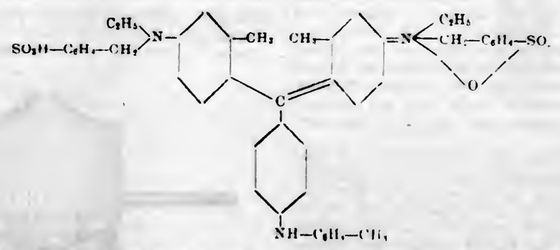
in which R represents a dialkylaminoaryl radical which may contain a sulfo group, and R''' the radical of an aromatic base, R' means a phenylene radical, and R'' means an aryl or aralkyl radical, which dyes are after being dried and pulverized dark powders soluble with difficulty in water generally with a violet to bluish coloration; dyeing wool violet to blue shades fast to light, substantially as described.

4. The new dyestuffs which can be obtained by heating an aromatic amin with an aminotriphenylmethane color which contains a sulfo group in para position to the carbinol carbon atom, the new dyestuffs having probably the general formula



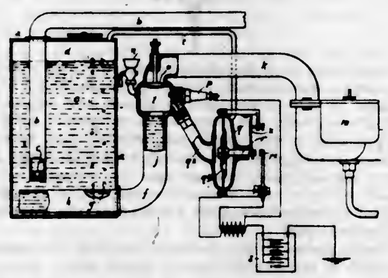
in which R and R''' represent the radicals of aromatic bases, one of said radicals containing a quinquivalent nitrogen atom, R' means an arylene radical, and R'' means an aryl or aralkyl radical, which dyes are after being dried and pulverized dark powders soluble with difficulty in water generally with a violet to bluish coloration; dyeing wool violet to blue shades to light, substantially as described.

5. The new dye having in a free state most probably the formula:



which is after being dried and pulverized a park powder soluble in water with a bluish coloration and dyeing wool pure greenish-blue shades fast to alkali, substantially as described.

1,218,233. PRESSURE-GENERATING DEVICE. FRED S. WELCH, Pontiac, Mich. Filed Aug. 25, 1915. Serial No. 47,322. (Cl. 60—28.)



1. In a sprayer, the combination of an air tight tank, liquid therein, a combustion chamber, said combustion chamber communicating with said tank below the liquid level therein, and means for causing explosions in said chamber whereby the gas is transferred under pressure from said combustion chamber to said tank.

2. In a sprayer, the combination of an air tight tank, spraying liquid therein, a combustion chamber, said combustion chamber communicating with said tank below the liquid level therein, means for automatically causing repeated explosions in said chamber whereby the gas is transferred under pressure from said combustion chamber to said tank.

3. In a sprayer, the combination of an air tight tank, a combustion chamber, a passage opening to said combustion chamber and to said tank below the level of the liquid therein, said passage being provided with an aperture through its wall opening to said tank, and means for causing an explosion in said combustion chamber whereby the gas from said explosion chamber is caused to pass through said aperture into said tank.

4. The combination of an air tight tank, an explosion chamber, a passage communicating with said explosion chamber and tank, a piston having inertia in said passage, means for producing an explosion in said chamber to propel said piston toward said tank, and means for putting said combustion chamber into communication with said tank so as to cause the gas to pass from the explosion chamber to the tank after the explosion has occurred in said chamber and means for retracting said piston.

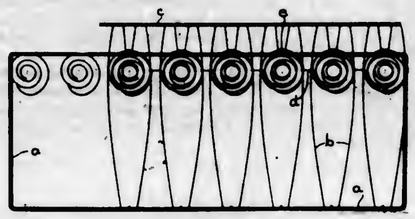
5. The combination of an air tight tank, an explosion chamber, a passage communicating with said explosion chamber and tank, a piston having inertia in said passage, means for producing an explosion in said chamber to propel said piston toward said tank, an aperture through the wall of said passage communicating with said tank and adapted to be uncovered by said piston in its stroke under the impetus of said explosion and means for retracting said piston.

[Claims 6 to 9 not printed in the Gazette.]

1,218,234. SEAT-BACK SPRING. LEONARD A. YOUNG, Highland Park, Mich. Filed Mar. 15, 1915. Serial No. 14,475. (Cl. 155—25.)

1. In a seat back spring, the combination of a base frame, a plurality of helical springs secured thereto, and a plurality of elongated heart-shaped loops secured to the bottom bar of the base frame extending upwardly over the helical springs and the lobe portions of each loop forming incomplete arches resulting in a free overhang above or

adjacent the trimming rail when the seat back spring is installed in the seat back.



2. In a seat back spring, the combination of a base frame, helical springs secured thereto, and a plurality of elongated heart-shaped loops secured to the lower bar of the base frame extending upwardly over the helical springs and the lobe portions of the loops forming incomplete arches that result in a free overhang above or adjacent the trimming rail when the seat back spring is installed in a seat back, and the meeting sides of the lobe portions extending to and secured to the helical springs.

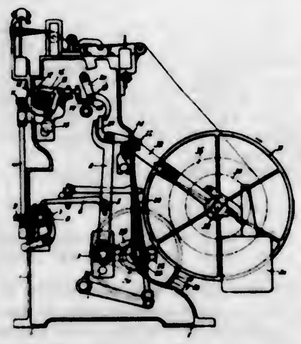
3. In a seat back spring, the combination of a base frame, helical springs secured thereto, a plurality of elongated heart-shaped loops secured to the bottom bar of the base frame extending upwardly over the helical springs and forming incomplete arches beyond the helical springs, the meeting sides of the lobe portions extending back to the helical springs to which they are secured, and a bar for securing together the tops of the lobe portions.

4. In a seat back spring, the combination of a base frame, helical springs supported thereby, and a plurality of spring elements secured to the bottom of said base frame, extending up over the helical springs and beyond the same to form incomplete spring arches which extend both materially beyond the helical springs and beyond the top of the base frame, and which are supported only by the said helical springs.

5. In a seat back spring, the combination of a base frame, a plurality of helical springs secured thereto, and incomplete spring arches extending from the outer coils of the helical springs upwardly and beyond the top of the base frame and which are supported only by the said helical springs.

[Claims 6 to 14 not printed in the Gazette.]

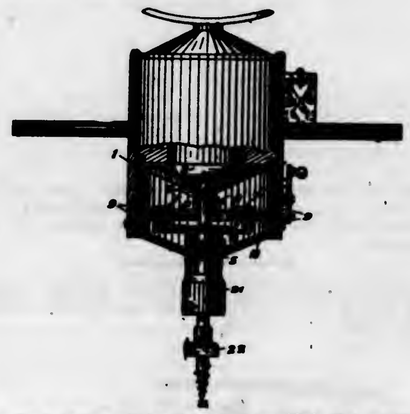
1,218,235. WARPING-MACHINE. LOUIS A. AUMANN, Chicopee, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed May 13, 1915. Serial No. 27,931. (Cl. 33—132.)



1. In a warping machine for winding warp yarn upon a beam, the combination of warp measuring means, a warp beam driving and supporting roll for sustaining and rotating the warp beam and its load and having a driving surface formed with portions to engage and sink into the yarn mass on the beam and insure that the beam load shall be driven at the same surface speed as that of the driving roll, and connections between the warp beam driving roll and measuring means for operating the latter from the former to insure that the measured length of yarn on the beam as indicated by the warp measuring means shall be the same as the actual length wound thereon.

2. In a warping machine for winding warp yarn upon a beam, the combination of warp measuring means, a warp beam driving and supporting roll for engaging the warp wound upon the warp beam and supporting the weight of the warp beam and its yarn load, said warp beam driving roll having a driving surface provided with rounded projecting portions to non-injuriously engage and sink into the yarn on the warp beam and prevent slip between the driving roll and warp beam load, connections between the warp beam driving and supporting roll and the warp measuring means for operating the latter from the former, and stopping means for stopping the machine when the predetermined length of yarn has been wound upon the beam.

1,218,236. POWER-DRIVEN TOOL. FRANK J. BACKSCHNEIDER, Cincinnati, Ohio. Filed Oct. 17, 1912. Serial No. 726,213. (Cl. 172—36.)



1. In a device of the character specified, the combination with a power shaft and a driven shaft, of a gear mounted on said power shaft, a planet gear mounted on said driven shaft and adapted to intermesh with the gear on said power shaft, an internal gear rotatably mounted and adapted to intermesh with said planet gear, means whereby said internal gear is normally secured against rotation, and means for controlling the power supplied to said power shaft actuated by the rotation of said internal gear.

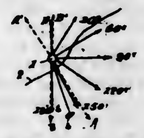
2. In a device of the character specified, the combination with a power shaft and a driven shaft, of a gear mounted on said power shaft, a planet gear mounted on said driven shaft and adapted to intermesh with the gear on said power shaft, an internal gear rotatably mounted and adapted to intermesh with said planet gear, a spring mounted stationary with reference to said internal gear, means whereby said spring is adapted normally to secure said internal gear against rotation, and means for controlling the power actuated by the rotation of said internal gear.

3. In a device of the character specified, the combination with a casing, a power shaft and a driven shaft, of a gear mounted on said power shaft, a planet gear mounted on said driven shaft and adapted to intermesh with the gear on said power shaft, an internal gear rotatably mounted and adapted to intermesh with said planet gear, a spring interposed between said casing and said internal gear, normally to secure said internal gear against rotation, means to adjust the tension of said spring, and means for controlling the power actuated by the rotation of said internal gear.

4. In a device of the character specified, the combination with a casing, a power shaft and a driven shaft, of a gear mounted on said power shaft, a planet gear mounted on said driven shaft and adapted to intermesh with the gear on said power shaft, an internal gear rotatably mounted and adapted to intermesh with said planet gear, a spring interposed between said casing and said internal gear normally to secure said internal gear against rotation, arms mounted on said internal gear, and means for controlling the power actuated by said arms upon the rotation of said internal gear.

5. In a device of the character specified, the combination with a casing, a power shaft and a driven shaft, of a gear mounted on said power shaft, a planet gear mounted on said driven shaft and adapted to intermesh with the gear on said power shaft, an internal gear rotatably mounted and adapted to intermesh with said planet gear, a spring interposed between said casing and said internal gear, normally to secure said internal gear against rotation, arms mounted on said internal gear, means to adjust the tension of said spring, and means for controlling the power actuated by said arms upon the rotation of said internal gear.

1,218,237. METHOD AND APPARATUS FOR DETERMINING THE DIRECTION OF A HERTZIAN LIGHTHOUSE. ANDRÉ BLONDEL, Paris, France. Filed Nov. 4, 1913. Serial No. 799,153. (Cl. 250—11.)



1. In an apparatus for indicating the position of a Hertzian lighthouse, the combination of a revolving device for sending out directed signal waves in different directions; a means for rotating said device an increment at a time; and automatic means for causing said device to send, between successive increments of movement, signals indicating the position of rotation of said device at the instant of each signal.

2. In an apparatus for indicating the position of a Hertzian lighthouse, the combination of a revolving device for sending out directed signal waves in different directions; a means for rotating said device an increment at a time; and automatic means for causing said device to send, between successive increments of movement, signals indicating the position of rotation of said device at the instant of each signal, said automatic means comprising a rotating commutator.

3. In an apparatus for indicating the position of a Hertzian lighthouse, the combination of a revolving device for sending out directed signal waves in different directions; a means for rotating said device an increment at a time; and means associated with said revolving device for automatically causing the device to emit short signals between successive increments of movement; and a continuously revolving motor for revolving said means at a constant speed.

4. In a method of indicating the direction of a Hertzian lighthouse, the step consisting in sending out directed signal waves; varying the direction of said waves by successive increments; and emitting in a fixed direction, between successive increments of variation, signals indicating direction.

5. In a method of indicating the direction of a Hertzian lighthouse, the step consisting in sending out directed signal waves; automatically varying the direction of said waves by successive increments of movement; and automatically emitting, in a constant direction, between successive increments of movement, signals indicating direction.

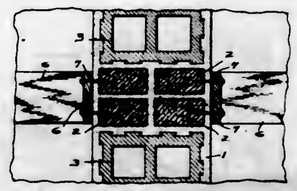
1,218,238. POST-ANCHOR. EVERETT CLARK, Economy, Ind. Filed Aug. 7, 1916. Serial No. 113,419. (Cl. 189—31.)



1. In combination with a V-shaped post having parallel flanges formed on the outer longitudinal edges, an anchor comprising a blade extending across said post and to both sides thereof, ears formed at one side of said blade, rivets pivotally connecting said blade with the exterior walls of said flanges, and a notch formed in the side of said blade intermediate said ears, the walls of said notch being adapted to contact the outer walls of said flanges to form a stop for the downward movement of the blade beyond a horizontal position.

2. In combination with a V-shaped post having parallel flanges formed on the outer longitudinal edges thereof, an anchor comprising a D-shaped blade extending across said post and to both sides thereof, spaced ears formed intermediate the curved portion of said D-shaped blade, rivets pivotally connecting said ears to the exterior walls of said flanges, and a rectangular shaped notch formed in the side of said blade intermediate said ears, the walls of said notch being adapted to contact the outer walls of both of said flanges to form a stop for the downward movement of the blade beyond a horizontal position.

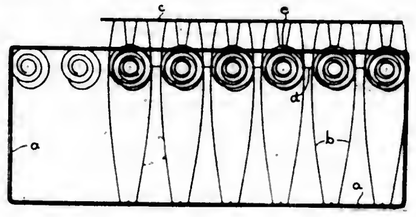
1,218,239. BRICK COMPOSITION. FRANK CORDERY, Monroe, Mich. Filed June 20, 1916. Serial No. 104,814. (Cl. 106—25.)



1. A composition for a fixing body for receiving and retaining nails and screws and the like, consisting of about three parts cinders, three parts clinkers, one part colored earth and one part cement, mixed together, and the said mixture mixed with acidulated water and allowed to set.

2. A brick composition consisting of three parts cinders, three parts clinkers, one part colored earth and one part

adjacent the trimming rail when the seat back spring is installed in the seat back.



2. In a seat back spring, the combination of a base frame, helical springs secured thereto, and a plurality of elongated heart-shaped loops secured to the lower bar of the base frame extending upwardly over the helical springs and the lobe portions of the loops forming incomplete arches that result in a free overhang above or adjacent the trimming rail when the seat back spring is installed in a seat back, and the meeting sides of the lobe portions extending to and secured to the helical springs.

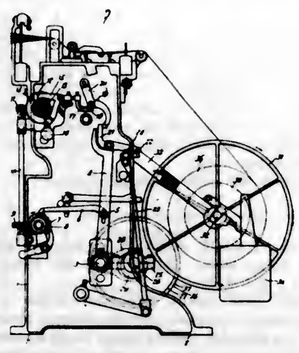
3. In a seat back spring, the combination of a base frame, helical springs secured thereto, a plurality of elongated heart-shaped loops secured to the bottom bar of the base frame extending upwardly over the helical springs and forming incomplete arches beyond the helical springs, the meeting sides of the lobe portions extending back to the helical springs to which they are secured, and a bar for securing together the tops of the lobe portions.

4. In a seat back spring, the combination of a base frame, helical springs supported thereby, and a plurality of spring elements secured to the bottom of said base frame, extending up over the helical springs and beyond the same to form incomplete spring arches which extend both materially beyond the helical springs and beyond the top of the base frame, and which are supported only by the said helical springs.

5. In a seat back spring, the combination of a base frame, a plurality of helical springs secured thereto, and incomplete spring arches extending from the outer coils of the helical springs upwardly and beyond the top of the base frame and which are supported only by the said helical springs.

[Claims 6 to 14 not printed in the Gazette.]

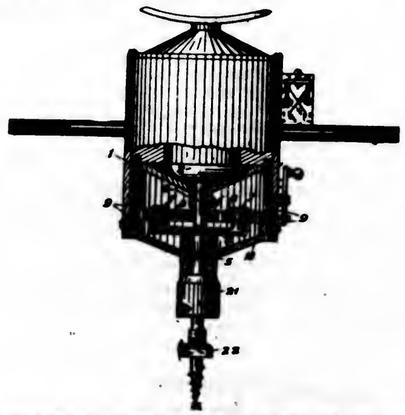
1,218,235. WARPING-MACHINE. LOUIS A. AUMANN, Chicopee, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed May 13, 1915. Serial No. 27,931. (Cl. 33—132.)



1. In a warping machine for winding warp yarn upon a beam, the combination of warp measuring means, a warp beam driving and supporting roll for sustaining and rotating the warp beam and its load and having a driving surface formed with portions to engage and sink into the yarn mass on the beam and insure that the beam load shall be driven at the same surface speed as that of the driving roll, and connections between the warp beam driving roll and measuring means for operating the latter from the former to insure that the measured length of yarn on the beam as indicated by the warp measuring means shall be the same as the actual length wound thereon.

2. In a warping machine for winding warp yarn upon a beam, the combination of warp measuring means, a warp beam driving and supporting roll for engaging the warp wound upon the warp beam and supporting the weight of the warp beam and its yarn load, said warp beam driving roll having a driving surface provided with rounded projecting portions to non-injuriously engage and sink into the yarn on the warp beam and prevent slip between the driving roll and warp beam load, connections between the warp beam driving and supporting roll and the warp measuring means for operating the latter from the former, and stopping means for stopping the machine when the predetermined length of yarn has been wound upon the beam.

1,218,236. POWER-DRIVEN TOOL. FRANK J. BACKSCHEIDER, Cincinnati, Ohio. Filed Oct. 17, 1912. Serial No. 726,213. (Cl. 172—36.)



1. In a device of the character specified, the combination with a power shaft and a driven shaft, of a gear mounted on said power shaft, a planet gear mounted on said driven shaft and adapted to intermesh with the gear on said power shaft, an internal gear rotatably mounted and adapted to intermesh with said planet gear, means whereby said internal gear is normally secured against rotation, and means for controlling the power supplied to said power shaft actuated by the rotation of said internal gear.

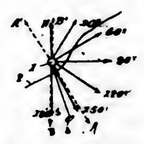
2. In a device of the character specified, the combination with a power shaft and a driven shaft, of a gear mounted on said power shaft, a planet gear mounted on said driven shaft and adapted to intermesh with the gear on said power shaft, an internal gear rotatably mounted and adapted to intermesh with said planet gear, a spring mounted stationary with reference to said internal gear, means whereby said spring is adapted normally to secure said internal gear against rotation, and means for controlling the power actuated by the rotation of said internal gear.

3. In a device of the character specified, the combination with a casing, a power shaft and a driven shaft, of a gear mounted on said power shaft, a planet gear mounted on said driven shaft and adapted to intermesh with the gear on said power shaft, an internal gear rotatably mounted and adapted to intermesh with said planet gear, a spring interposed between said casing and said internal gear, normally to secure said internal gear against rotation, means to adjust the tension of said spring, and means for controlling the power actuated by the rotation of said internal gear.

4. In a device of the character specified, the combination with a casing, a power shaft and a driven shaft, of a gear mounted on said power shaft, a planet gear mounted on said driven shaft and adapted to intermesh with the gear on said power shaft, an internal gear rotatably mounted and adapted to intermesh with said planet gear, a spring interposed between said casing and said internal gear normally to secure said internal gear against rotation, arms mounted on said internal gear, and means for controlling the power actuated by said arms upon the rotation of said internal gear.

5. In a device of the character specified, the combination with a casing, a power shaft and a driven shaft, of a gear mounted on said power shaft, a planet gear mounted on said driven shaft and adapted to intermesh with the gear on said power shaft, an internal gear rotatably mounted and adapted to intermesh with said planet gear, a spring interposed between said casing and said internal gear, normally to secure said internal gear against rotation, arms mounted on said internal gear, means to adjust the tension of said spring, and means for controlling the power actuated by said arms upon the rotation of said internal gear.

1,218,237. METHOD AND APPARATUS FOR DETERMINING THE DIRECTION OF A HERTZIAN LIGHTHOUSE. ANDRÉ BLONDEL, Paris, France. Filed Nov. 4, 1913. Serial No. 799,153. (Cl. 250—11.)



1. In an apparatus for indicating the position of a Hertzian lighthouse, the combination of a revolving device for sending out directed signal waves in different directions; a means for rotating said device an increment at a time; and automatic means for causing said device to send, between successive increments of movement, signals indicating the position of rotation of said device at the instant of each signal.

2. In an apparatus for indicating the position of a Hertzian lighthouse, the combination of a revolving device for sending out directed signal waves in different directions; a means for rotating said device an increment at a time; and automatic means for causing said device to send, between successive increments of movement, signals indicating the position of rotation of said device at the instant of each signal, said automatic means comprising a rotating commutator.

3. In an apparatus for indicating the position of a Hertzian lighthouse, the combination of a revolving device for sending out directed signal waves in different directions; a means for rotating said device an increment at a time; and means associated with said revolving device for automatically causing the device to emit short signals between successive increments of movement; and a continuously revolving motor for revolving said means at a constant speed.

4. In a method of indicating the direction of a Hertzian lighthouse, the step consisting in sending out directed signal waves; varying the direction of said waves by successive increments; and emitting in a fixed direction, between successive increments of variation, signals indicating direction.

5. In a method of indicating the direction of a Hertzian lighthouse, the step consisting in sending out directed signal waves; automatically varying the direction of said waves by successive increments of movement; and automatically emitting, in a constant direction, between successive increments of movement, signals indicating direction.

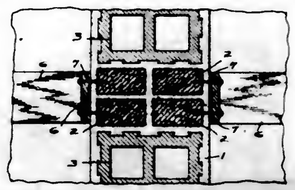
1,218,238. POST-ANCHOR. EVERETT CLARK, Economy, Ind. Filed Aug. 7, 1916. Serial No. 113,419. (Cl. 189—31.)



1. In combination with a V-shaped post having parallel flanges formed on the outer longitudinal edges, an anchor comprising a blade extending across said post and to both sides thereof, ears formed at one side of said blade, rivets pivotally connecting said blade with the exterior walls of said flanges, and a notch formed in the side of said blade intermediate said ears, the walls of said notch being adapted to contact the outer walls of said flanges to form a stop for the downward movement of the blade beyond a horizontal position.

2. In combination with a V-shaped post having parallel flanges formed on the outer longitudinal edges thereof, an anchor comprising a D-shaped blade extending across said post and to both sides thereof, spaced ears formed intermediate the curved portion of said D-shaped blade, rivets pivotally connecting said ears to the exterior walls of said flanges, and a rectangular shaped notch formed in the side of said blade intermediate said ears, the walls of said notch being adapted to contact the outer walls of both of said flanges to form a stop for the downward movement of the blade beyond a horizontal position.

1,218,239. BRICK COMPOSITION. FRANK CORDERY, Monroe, Mich. Filed June 20, 1916. Serial No. 104,814. (Cl. 106—25.)

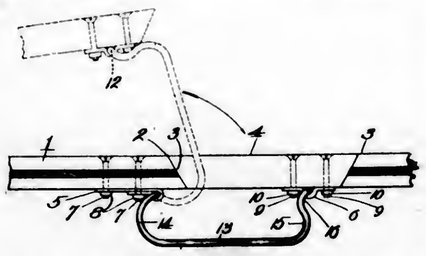


1. A composition for a fixing body for receiving and retaining nails and screws and the like, consisting of about three parts cinders, three parts clinkers, one part colored earth and one part cement, mixed together, and the said mixture mixed with acidulated water and allowed to set.

2. A brick composition consisting of three parts cinders, three parts clinkers, one part colored earth and one part

cement, and rendered plastic by water acidulated by adding one pint of muriatic acid to three gallons of water and allowed to set.

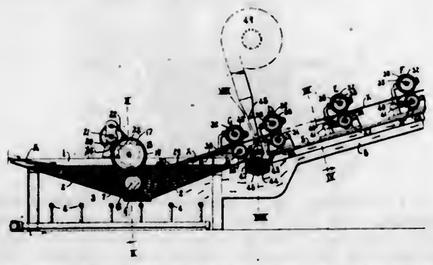
1,218,240. SILO. FREDERICK W. CRONEMEYER, Tonganoxie, Kans., assignor, by mesne assignments, to Tung-Lok Silo and Tank Company, a Corporation of South Dakota. Filed June 8, 1914. Serial No. 843,632. (Cl. 20—1.4.)



1. A silo provided with a door opening having outwardly converging side walls, a door fitting snugly in said opening, a pair of vertically alined hinge members secured to the outer side of the silo near one side of the door opening, a pair of vertically alined hinge members secured to the outer side of the door near the side of the same most remote from the first-named hinge members, and a pivot frame, comprising vertical pivots engaging the vertically alined hinge members and substantially U-shaped portions connecting the upper ends of said pivots together and the lower ends of said pivots together respectively; the arms or legs of the U-shaped portions connected to the pivot on the door being bowed outwardly to limit such pivotal movement of the door when being closed as would permit the edge of the door adjacent the hinge member carried thereby to swing clear through the door opening.

2. A silo provided with a door opening, a door, a pair of vertically alined hinge-members secured to the silo at one side of the said opening, a pair of vertically alined hinge-members secured to the door, and a continuous or unbroken frame or link connecting the hinge-members, comprising a pair of vertical pivots extending respectively through the vertically-alined hinge-members, and substantially U-shaped portions integrally formed with the pivots, one of the U-shaped portions connecting the upper extremities of the pivots and resting on the upper hinge members and the other U-shaped portion connecting the lower ends of the pivots below the lower hinge members.

1,218,241. COATING APPARATUS. GEORGE PARKER CRUMBAUGH, St. Louis, Mo., assignor of one-half to Edwin W. Grove, St. Louis, Mo. Filed Dec. 23, 1915. Serial No. 68,389. (Cl. 91—46.)



1. In an apparatus for coating units, a receptacle for the material to be applied to the units, a feeding device for feeding the units from said receptacle, and an inclined guide for directing the units in an upward direction while they are passing from said receptacle, said inclined guide including a series of bars separated from each other to permit the flow of excess material from said units to said receptacle, each of said bars being inclined so as to permit the units to pass freely in an upward direction, at the same time permitting excess material to flow downwardly from the upper faces of said bars.

2. In an apparatus for coating units, a receptacle for the material to be applied to the units, a pair of rotatable feed rolls for pushing the units from said receptacle, and an inclined guide frame for directing the units in an upward direction from said feed rolls, said inclined guide frame including a series of inclined bars located in different planes and separated from each other, the lower edge of each of said inclined bars being located in a plane below the path of the units so as to permit the units to pass freely in an upward direction, at the same time permitting excess material to flow downwardly from the upper faces of said bars.

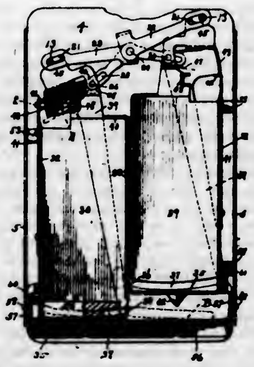
3. In an apparatus of the character described, a sectional roll comprising a series of annular roll sections and a support to which said annular roll sections are loosely fitted; and means for feeding material to said annular roll sections, said annular roll sections being adapted to rotate while in engagement with said material, and said roll sections being free to yield independently of each other to compensate for irregularities in the dimensions of the said material.

4. In a coating apparatus, a receptacle for the coating material, means for feeding articles from said receptacle, and a sectional roll comprising a series of annular roll sections adapted to engage the articles after they have passed from said receptacle and a support to which said annular roll sections are loosely fitted, said annular roll sections being free to yield independently of each other and independently of said support to compensate for irregularities in the dimensions of said articles.

5. In an apparatus of the character described, a pair of rotatable feed rolls, one of which is a sectional structure including a support and a series of annular roll sections loosely fitted to said support and adapted to rotate while in engagement with the material passing between said rolls, said annular roll sections being adapted to yield independently of each other to compensate for irregularities in the dimensions of said material.

[Claims 6 to 14 not printed in the Gazette.]

1,218,242. VENDING-MACHINE. CY H. DAVIS, Detroit, Mich. Filed Apr. 26, 1916. Serial No. 93,573. (Cl. 194—71.)



1. In a vending machine, the combination of a case, a plurality of receptacles mounted therein, means to move said receptacles simultaneously vertically relative to each other, and means to eject articles from said receptacles.

2. In a vending machine, the combination of a case, a plurality of receptacles mounted therein, means to move said receptacles simultaneously, one being moved up and the other down, and an ejector mounted on each receptacle to carry out of the receptacle the articles to be vended.

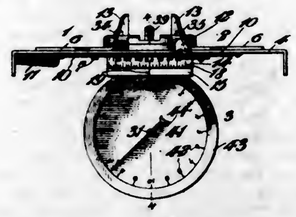
3. In a vending machine, the combination of a case, a plurality of receptacles slidably mounted therein, means to lift each receptacle independently of the other, and means mounted on each receptacle to eject the articles therein.

4. In a vending machine, the combination of a case, two receptacles slidable therein, manually operated means to move each receptacle independently of the other, and means mounted on each receptacle and actuated by said manually operated means to eject the articles therein.

5. In a vending machine, the combination of a case, two receptacles slidable therein and having discharge openings in the lower ends of adjacent sides, an ejector mounted on each receptacle, and manually operated means to actuate the ejector on the selected receptacle and to simultaneously lift the other receptacle to free the discharge opening of the selected receptacle.

[Claims 6 to 20 not printed in the Gazette.]

1,218,243. LENS-MEASURING DEVICE. HENRY L. DE ZENG, Maple Shade, N. J. Filed Nov. 19, 1912. Serial No. 732,198. (Cl. 33—174.)



1. In a lens measurer, members adapted to contact with the surface of a lens, indicating mechanism connected therewith, a lens support having means for engagement with said contacting members, means on said support for gripping a lens, said gripping means operating simultaneously with respect to a common center, and means for determining the relative angular position of a lens with respect to said contacting members.

2. In a lens measurer, members adapted to contact with the surface of a lens, indicating mechanism adapted to be actuated by said contacting members, a lens support having means for removable engagement with said contacting members and said indicating mechanism, means on said lens support for gripping a lens, said gripping means operating simultaneously with respect to a common center, and means for determining the relative angular position of said contacting members with respect to any meridian of said lens.

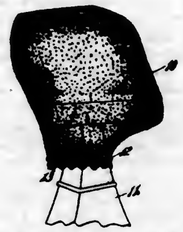
3. In a lens measurer, members adapted to contact with the surface of a lens, indicating mechanism connected therewith, a lens support rotatably mounted with respect to said contacting members, means on said lens support for gripping a lens, said gripping means operating simultaneously with respect to a common center, and means for determining the relative angular position of any required meridian of said lens with respect to the major axis of an elliptically shaped lens.

4. In a lens measurer, members adapted to contact with the surface of a lens, indicating mechanism connected therewith, a lens support detachably connected with said contacting members, means on said support for gripping a lens, said gripping means operating simultaneously with respect to a common center, and means for determining the relative angular position of the cylindrical axis of the lens with respect to the 180° meridian thereof.

5. In a lens measurer, two normally fixed contact points, a movable contact point in suitable relation therewith, an adjustably fixed segment arm upon which said movable contact point directly bears, indicating mechanism adapted to be suitably actuated by said segment arm, whereby the relative position of said movable contact point with respect to the said normally fixed contact points may be determined, and means for simultaneously adjusting said normally fixed contact points in a direction in the lines of their axes.

[Claim 6 not printed in the Gazette.]

1,218,244. MACHINE-PROTECTOR. JAMES E. DONAVAN, Racine, Wis. Filed May 3, 1916. Serial No. 95,049. (Cl. 150—52.)



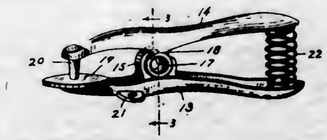
1. Means for preventing the unauthorized removal of parts of machines, comprising a covering of flexible metal fabric adapted to be thrown over the machine, means for drawing the edges of the fabric together around a part of the machine for reducing the diameter of the opening, and means for locking the edges of the covering in such contracted condition to prevent the removal of the covering.

2. A protective covering to prevent the unauthorized tampering with machine parts, comprising a flexible metal fabric bag of chain mesh material adapted to be thrown over the head of the machine, gathering means for contracting the mouth of the bag around the neck portion of the machine, and a lock for said contracting means preventing the removal of the covering.

3. A protective covering for preventing the unauthorized removal of machine parts, comprising a bag-shaped mantle of chain mesh construction adapted to be thrown over the head of a machine, rings secured to the mantle, a chain passing through the rings to contract the mantle around the pedestal of the machine, and a lock connecting the ends of the chain together.

4. A protective covering for preventing the unauthorized removal of machine parts, comprising a bag-shaped mantle of chain mesh construction adapted to be thrown over the head of a machine, rings secured to the mantle at a distance from the edge thereof, a chain passing through the rings to contract the mantle around the pedestal of the machine, and a lock connecting the ends of the chain together.

1,218,245. VULCANIZING-TOOL. EMIL R. DRAVER, Richmond, Ind. Filed Aug. 5, 1916. Serial No. 113,366. (Cl. 18—18.)



1. A vulcanizing device comprising a pair of coöperating clamping members, one thereof having a pan-like clamping abutment and the other having a coöperating finger-like presser foot alined with the central portion of said coöperating clamping abutment, the latter having marginal portions that project far beyond the coöperating end of said presser foot, and spring means yieldingly pressing the said clamping members, the one toward the other.

2. A vulcanizing device comprising a pair of pivotally connected levers, one of said levers having a pan-like

clamping abutment and the other having a coöpearting rigidly secured finger presser foot alined with the central portion of said coöperating clamping abutment, and spring means applied to said levers for yieldingly pressing said presser foot toward said clamping abutment.

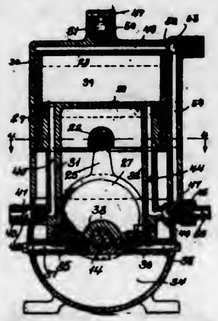
3. A vulcanizing device comprising a pair of pivotally connected levers, one of said levers having a pan-like clamping abutment and the other having a coöperating rigidly secured finger-like presser foot alined with the central portion of the said coöperating clamping abutment, and a spring compressed between the handle ends of said levers.

4. A vulcanizing device comprising a pair of pivotally connected levers, one of said levers having a pan-like clamping abutment and the other having a coöperating rigidly secured finger-like presser foot alined with the central portion of the said coöperating clamping abutment and three individual separable elements, to-wit, a pan, a vulcanizing patch and a solid combustible element temporarily held together by the said abutment and presser foot, with the said vulcanizing patch opposed to said abutment and said combustible element opposed to said presser foot, and with the said presser foot exerting its compressing force on the central portion of said pan.

5. A vulcanizing device comprising a pair of pivotally connected levers, one of said levers having a pan-like clamping abutment and the other having a coöperating rigidly secured finger-like presser foot alined with the central portion of the said coöperating clamping abutment and three individual separable elements to-wit, a pan, a vulcanizing patch and a solid combustible element temporarily held together by the said abutment and presser foot, with the said vulcanizing patch opposed to said abutment and said combustible element opposed to said presser foot, and with the said presser foot exerting its compressing force on the central portion of said pan, and the said pan having an inwardly bulged bottom and outwardly flaring rim, said rim projecting beyond the margin of said combustible element.

[Claim 6 not printed in the Gazette.]

1,218,246. PUMP. PAUL H. DUBUP, Boston, Mass. Filed Mar. 2, 1915. Serial No. 11,454. (Cl. 230—27.)



1. A double acting pump comprising an outer casing having an outer head, a trunk piston fitting slidingly in said casing, a shaft having a crank, a connecting rod joined at one end to said crank, a wrist pin mounted at its opposite ends in the side walls of the piston trunk, joined to the opposite end of said connecting rod, an inner head fitting the interior of the piston trunk, a base on which said crank shaft is supported, and supports for said inner head arranged on opposite sides of the axis of said wrist pin and mounted on said base; the chambers between the inner and outer head and the piston having ports for admission and exhaust of fluid.

2. A double acting pump comprising a cylinder having a head and inlet and exhaust ports adjacent to said head, automatic check valves controlling said ports, a trunk piston fitting said cylinder with its trunk extending away from the cylinder head, a fixed cylinder head fitting within the trunk of the piston at the opposite side of the piston from the first cylinder head and having admission and exhaust ports opening into the space within the trunk piston between the head of the latter and said fixed cylinder head, and automatic check valves arranged to control flow through said ports.

3. A double acting pump comprising a cylinder having inlet and exhaust means and a head, a trunk piston fitting said cylinder having an imperforate head and arranged with its trunk extending away from the head of said cylinder, a fixed cylinder head fitting within the trunk of the piston on the opposite side of the imperforate piston head from the first cylinder head, and having admission and exhaust means opening into the space within the trunk piston between the head of the latter and said fixed cylinder head, a wrist pin mounted at its opposite ends in the piston trunk at the opposite side of the second cylinder head from the piston head, two connecting rods pivoted on said wrist pin, a crank shaft, two eccentrics mounted on said crank shaft, and eccentric straps surrounding said eccentrics and joined to said connecting rods.

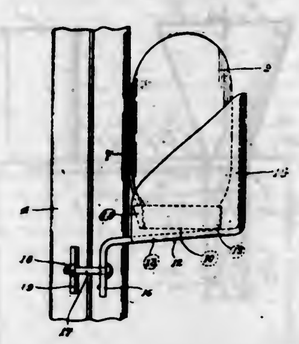
4. A pump comprising a crank case having bearings, a crank shaft mounted in said bearings, an outer cylinder supported on the crank case having an inlet and an outlet with check valves controlling the same, a piston fitting said cylinder, a wrist pin carried by the piston, a connecting rod between said wrist pin and the crank of the crank shaft, said piston having a trunk, an inner cylinder head fitting within the piston trunk and a frame supporting said inner cylinder head comprising side members on opposite sides of the wrist pin secured to the crank case and joined to the cylinder head, one of said side members having an admission passage and the other having an exhaust passage, opening through the cylinder head to the space between the latter and the head of the piston, said passages having openings external to the outer cylinder.

5. A pump comprising a crank case having bearings, a crank shaft mounted in said bearings, an outer cylinder supported on the crank case having an inlet and an outlet with check valves controlling the same, a piston fitting said cylinder, a wrist pin carried by the piston, a connecting rod between said wrist pin and the crank of the crank shaft, said piston having a trunk, an inner cylinder head fitting within the piston trunk, and a frame supporting said inner cylinder head comprising side members on opposite sides of the wrist pin secured to the crank case and joined to the cylinder head and a cross member overlying the crank shaft and forming an upper bearing for the same, one of said side members having an admission passage and the other having an exhaust passage, opening through the cylinder head to the space between the latter and the head of the piston, said passages having openings external to the outer cylinder.

[Claims 6 to 9 not printed in the Gazette.]

1,218,247. HUMIDIFIER. JOHN E. DUTCHER, Chicago, Ill., assignor of one-half to Herbert A. Durr, Chicago, Ill. Filed May 22, 1916. Serial No. 99,177. (Cl. 237—78.)

1. The combination with the end coil of a radiator, of a bracket secured thereto, said bracket having a floor sloping upwardly and away from the surface of the radiator coil, a water pan, an inverted water container having its lower end introduced into the pan, that portion of the pan lying adjacent to the radiator coil being of suitable contour to provide a clearance between the lower portion of the container and the pan, a wick having its exposed upper portion introduced between the radiator coil and the water container and having its lower portion entered through said clearance and into direct communication with the interior of the lower portion of the container, and a suitable connection between the pan and the container, the pan resting on the floor of the bracket with a single point of contact farther removed from the radiator coil in a horizontal direction than the center of gravity of the container and pan and contents, whereby the weight of the container and pan and contents tends to tilt the same toward the radiator coil, and thereby compress the exposed portion of the wick against the radiator coil.

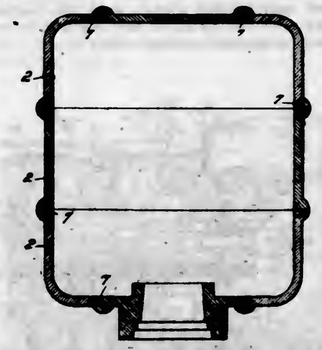


2. The combination with a radiator coil, of a bracket secured thereto, and having an outwardly extending supporting arm, a water pan carried by said arm, an inverted water container having its lower portion introduced into the pan, the periphery of the pan being of suitable contour to provide a clearance adjacent to the radiator coil between said periphery and the lower portion of the container, a wick having its exposed portion lying between the radiator coil and the water container, and having its lower portion introduced through said clearance and in direct communication with the interior of the lower portion of the water container, a suitable connection between the pan and water container, and a point of support for the water pan on the outwardly extending arm of the bracket, said point of support being farther removed from the radiator coil in a horizontal direction than the center of gravity of the water container and pan and contents, whereby the weight of the water container and pan and contents tends to cause said parts to move toward the radiator coil and thereby compress the exposed portion of the wick against the coil.

3. The combination with a radiator coil, of a water pan in close proximity thereto, an inverted water container having its lower portion introduced into the pan, the periphery of the pan adjacent to the radiator coil being suitably formed to provide a clearance between said periphery and the lower portion of the water container, a wick having its exposed portion between the radiator coil and the water container and having its lower portion extended through said clearance and into direct communication with the interior of the lower portion of the container, and means for supporting the pan with the center of gravity of the water container and pan and contents closer to the radiator coil measured in a horizontal direction than said support, whereby the weight of the water container and pan and contents tends to move said parts toward the radiator coil to thereby compress the wick against the radiator coil.

4. The combination with a radiator coil, of an inverted Mason jar and closure having a protruding lip in one portion of the said closure, said protruding lip serving to provide a clearance between said portion of the closure and the adjacent portion of the jar, a wick having an exposed portion lying between the jar and the radiator coil, and having its lower portion extended through said clearance and into direct communication with the interior of the lower portion of the jar, and means for supporting the Mason jar with its closure and contents at a point of support farther removed from the radiator coil in a horizontal direction than the center of gravity of the said parts, whereby the weight of said parts tends to move the Mason jar toward the radiator coil to thereby compress the exposed portion of the wick against the radiator coil.

1,218,248. SECTIONAL STEEL VAULT. SUMNER A. ELY, New York, N. Y. Filed Sept. 28, 1916. Serial No. 122,593. (Cl. 109—1.)



1. A vault comprising metal sections, a riveting flange on the meeting end of one section, the meeting end of the adjoining section being formed with a groove to receive said flange, the overlapped portions of the sections being apertured, fastening devices fitting in said apertures, enlargements formed on the exterior of the sections along the joint thereof, the meeting faces of said enlargements fitting closely together and the enlargement on one section covering one end of the fastening device, the other end of the fastening device being within the vault.

2. A vault comprising metal sections, a connecting flange on the meeting end of one section, the meeting end of the adjoining section being formed with a groove to receive said flange, said flange and the inner overlapping portion of the adjoining section being apertured, fastening devices fitting in said apertures, one end of each of said fastening devices being headed against outer wall of said groove, the other end of each of said fastening devices being within the vault.

3. A vault construction comprising metal sections, a connecting flange on the meeting end of one section, the meeting end of the adjoining section being formed with a groove to receive said flange, said flange and the inner overlapping portion of the adjoining section being apertured, fastening devices fitting in said apertures, one end of each of said fastening devices being concealed within the wall, the other end of each of said fastening devices being within the vault, whereby the fastening devices will not be exposed on the exterior of the vault.

4. A vault construction comprising metal sections, a connecting flange on the meeting end of one section, the meeting end of the adjoining section being formed with a groove to receive said flange, said flange and the inner overlapping portion of the adjoining section being apertured, rivets fitting in said apertures, one end of each of said rivets being upset and headed against one wall of said groove, the other end of each of said rivets being headed within the vault.

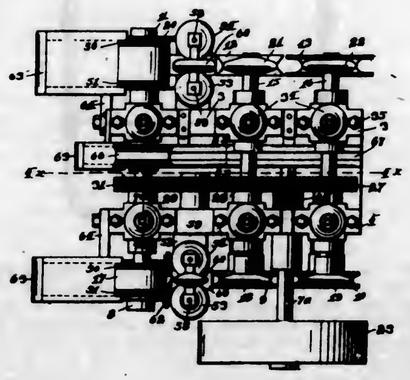
5. A vault construction comprising metal sections, a connecting flange on the meeting end of one section, the meeting end of the adjoining section being formed with a groove to receive said flange, said flange and the inner overlapping portion of the adjoining section being apertured, said apertures tapering from the inner side of the vault outwardly, tapered rivets fitting said apertures, one end of each of said rivets being upset and headed against one wall of said groove, the other end of each of said rivets being headed within the vault.

[Claims 6 and 7 not printed in the Gazette.]

1,218,249. MACHINE FOR BENDING AND PIERCING FIBER STRIPS OR SIMILAR MATERIAL. CHARLES ENGLERT, Rochester, N. Y. Filed Mar. 31, 1915. Serial No. 18,236. (Cl. 93—1.)

1. In a machine for bending fiber the combination of a feed table, a pair of feeding rollers between which said

feed table projects, a pair of bending rollers in line with said feeding rollers forming an angular space between them, idle rollers mounted to rotate between said feeding rollers and said bending rollers, said idle rollers being adapted to bend the strips of fiber sufficiently to allow the strips to enter said bending rollers.



2. In a machine for bending fiber the combination of a pair of feeding rollers, a pair of bending rollers in line with said feeding rollers, a pair of vertical conical rollers loosely mounted between said bending rollers and said feeding rollers, a horizontal roller mounted loosely between said vertical rollers, said vertical conical rollers and said horizontal roller being adapted to bend the strips of fiber sufficiently to allow the strips to enter said bending rollers.

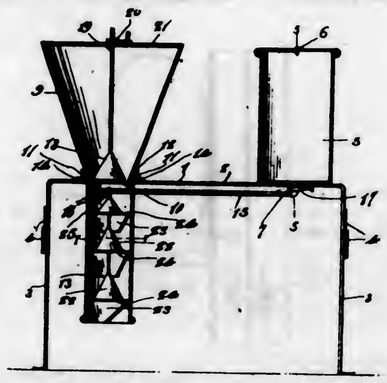
3. In a machine for bending fiber the combination of a pair of feeding rollers, a guide roller mounted loosely and parallel thereto behind said feed rollers to prevent the strips from buckling after leaving said feeding rollers, a pair of bending rollers in line with said feeding rollers, a pair of vertical conical rollers loosely mounted between said bending rollers and said feeding rollers, a horizontal roller mounted loosely between said vertical rollers, said vertical conical rollers and said horizontal roller being adapted to bend the strips of fiber sufficiently to allow the strips to enter said bending rollers.

4. In a machine for bending fiber the combination of a pair of feeding rollers, a guide roller mounted loosely and parallel thereto behind said feed rollers to prevent the strips from buckling after leaving said feeding rollers, a stripper mounted below said guide rollers to guide the strips of fiber after leaving said feed rollers, a pair of bending rollers in line with said feeding rollers, a pair of vertical conical rollers loosely mounted between said bending rollers and said feeding rollers, a horizontal roller mounted loosely between said vertical rollers, said vertical conical rollers and said horizontal roller being adapted to bend the strips of fiber sufficiently to allow the strips to enter said bending rollers.

5. In a machine for bending fiber the combination of a pair of feeding rollers, a piercing mechanism mounted on said feeding rollers to perforate the strips of fiber while passing therethrough, a guide roller mounted loosely and parallel thereto behind said feed rollers to prevent the strips from buckling after leaving said feeding rollers, a pair of bending rollers in line with said feeding rollers, a pair of vertical conical rollers loosely mounted between said bending rollers and said feeding rollers, a horizontal roller mounted loosely between said vertical rollers, said vertical conical rollers and said horizontal roller being adapted to bend the strips of fiber sufficiently to allow the strips to enter said bending rollers.

[Claims 6 to 8 not printed in the Gazette.]

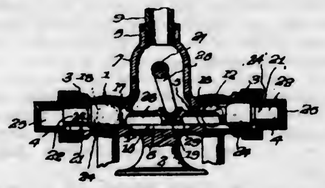
1,218,250. GRAIN-PICKLER. JOHN FOX, Wolseley, Saskatchewan, Canada. Filed July 3, 1915. Serial No. 38,038. (Cl. 83—28.)



1. A grain pickling apparatus including a spout, and a unit of mixing devices removably mounted in the spout, said unit comprising a vertical rod, a plurality of cones having their apices connected to said rod and arranged in superposed relation, a plurality of wires arranged upon the base of said cones and extending radially therefrom, frusto-conical concentrators having their larger ends secured to the radial wires, their lower ends positioned beneath the base of the cones and extending below the apex of one of the cones, and means for removably supporting the mixing devices in the spout.

2. A grain pickling apparatus including a hopper, a spout having one end flared and surrounding the mouth of the hopper, a valve vertically movable within the hopper closing the spout, a unit of mixing devices removably arranged in said spout, means extending through the upper end of the spout adjacent its point of connection with the hopper for removably supporting the mixing devices in the spout, said mixing devices comprising cones arranged in superposed relation and held at spaced distances apart and frusto-conical concentrators secured to the larger ends of the cones for thoroughly mixing the grain passing through the spout.

1,218,251. CLOSET-VALVE. HENRY GARDENIER, Paterson, N. J. Filed Oct. 4, 1915. Serial No. 54,020. (Cl. 137—69.)



In a valve of the class described, an open ended casing having a cylindrical bore throughout its length, the diameter of the bore being reduced at two spaced apart points within said casing to form cylindrical guides, the opposite ends of said casing being externally threaded, a housing formed integrally with said casing and rising therefrom between said reduced portions, a water pipe extending from said housing, a valve stem in said bore and slidable in said guides, the intermediate portions of said stem being grooved to permit water to enter said housing, the opposite ends of said stem being cupped and provided with threaded sockets, ball valves in said cupped ends, a valve seat formed in the outer side of each of said reduced portions for the reception of said ball valves, valve carrying members comprising threaded shanks extending through said valves and engaged with said threaded sockets, and undercut heads whereby the valves are clamped between the same and the ends of said stem, said heads being slotted, internally threaded caps on the threaded ends of said casing, guide sockets formed integrally with said caps to receive said slotted heads, said caps being readily removable to permit the removal of said ball valves and stem without dismounting said valve casing, an inlet port formed in the wall of said casing between one of the valve seats and the end thereof, an outlet port formed in the wall of the casing between the other valve seat and the opposite end thereof, said ports communicating with the bore of said casing and extending at right angles to the axis thereof, whereby water may readily enter said casing without interference with said valves, a rock shaft rotatable in said housing, a crank depending from said shaft within the housing, said valve stem having a seat to receive the end of said crank, an operating arm fixed to the outer end of said rock shaft and extending equal distances on each side thereof, and a normally stationary removable weight carried by one of said arms to normally retain one of said valves in engagement with its seat and hold the other open to permit water to flow into or out of said housing, said weight being movable to the other end of said arm in order to hold the other valve open, and thereby change the direction of flow of the water.

1,218,252. GAS-VALVE. JOSEPH WILLIAM GIBNEY, New Haven, Conn., assignor to The Sentinel Mfg. Co., New Haven, Conn., a Corporation. Filed Oct. 18, 1915. Serial No. 56,439. (Cl. 137—4.)



In a gas valve, the combination with a valve-body having a conical valve-seat, a gas-passage directly intersecting the said valve-seat at a right angle to the axis thereof, and a valve-stem passage formed with a sealing-chamber and arranged co-axially with the said valve-seat; of a valve co-acting with the said valve-seat, a spring for seating the said valve, and a valve-stem movable independently of the said valve and located in the said valve-stem passage in position to lift the valve from its seat and furnished with a concentric seal co-acting with the said sealing chamber.

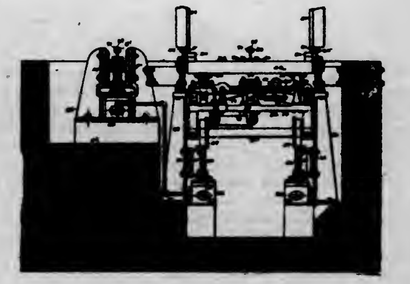
1,218,253. LOCOMOTIVE-SCALE. BYRON B. GORDON, Logansport, Ind. Filed Feb. 21, 1916. Serial No. 79,607. (Cl. 73—121.)

1. In combination, a single scale adapted to support the whole of a vehicle, and a vertically movable support by the side thereof for supporting a vehicle so that the latter may rest partly on each at the same time for ascertaining the weight on each axle of the vehicle and also the weight on each end thereof.

2. In combination, a vehicle support and a scale arranged side by side so that the vehicle may rest partly on each at the same time, and means for moving the support in a vertical plane whereby the vehicle may be tilted and weighed in its tilted position.

3. In combination, a vehicle support on which a part of a vehicle may rest, a scale on which another part of the vehicle may rest, and means for raising said support to tilt and weigh a vehicle and determine the center of gravity thereof.

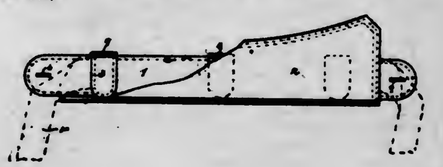
4. In combination, a vehicle support on which a part of a vehicle may rest, weighing means on which another part of the vehicle may rest, means for raising and lowering the support to tilt a vehicle and support the same in tilted position, and indicator mechanism contructed for coöperation with said support to determine the center of gravity of the vehicle.



5. In combination, a vehicle support on which a part of a vehicle may rest, weighing means on which another part of the vehicle may rest, means for raising and lowering the support to tilt a vehicle and support the same in tilted position, indicator mechanism constructed for coöperation with said support to determine the center of gravity of the vehicle, and means independent of said support for weighing the vehicle in its tilted position.

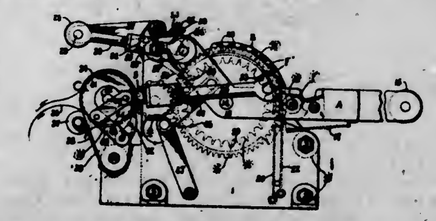
[Claims 6 to 30 not printed in the Gazette.]

1,218,254. COLLAR. JAMES P. GORMAN, New York, N. Y. Filed Sept. 17, 1914. Serial No. 862,134. (Cl. 2—67.)



A collar comprising a main inner securing flap, an outer turn down flap providing a tie space, means connected to the lower edge of the securing flap and foldable upwardly between the main and turn down flaps for the purpose of holding the tie from slipping downwardly, and a tap secured to the lower edge of the securing flap at the center and foldable rearwardly and upwardly between the tie and the securing flap to protect the tie from the collar button.

1,218,255. CALCULATING-MACHINE. EVERETT J. HARDGRAVE, San Angelo, Tex. Filed Aug. 14, 1916. Serial No. 114,750. (Cl. 235—61.)



1. An accumulator having total recording devices including an equalizing device arranged in advance of its

true registering position, transferring devices associated with said total recording devices, the transferring device associated with said equalizing device being arranged in advance of the true registering position, and operating means for actuating all of said devices, said equalizing device and its transferring device being adapted to remain in their advanced positions during the calculating operations so as to repeatedly register amounts higher than the true calculations.

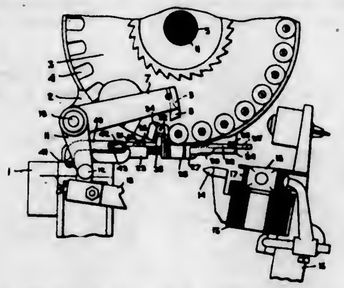
2. An accumulator having total registering devices for recording or registering units and decimals, said total registering devices including an equalising device located three points to the right of the decimal point and arranged five steps in advance of its true registering position, transferring devices associated with said total registering devices, the transferring device associated with said equalizing device being arranged five steps in advance of the true registering position, and operating means for actuating all of said devices, said equalizing device and its transferring device being adapted to remain in their advanced positions during the calculating operations, so as to repeatedly register decimals five-thousandths higher than the true calculations.

3. An accumulator comprising total recording devices including an equalizing device whereby minor amounts are calculated and transferred to a higher order, said equalizing device including a transferring element advanced five points higher than the normal transfer point, and said transferring element being retained in said advanced or abnormal position during the calculating operations so as to repeatedly perform its transferring operation at a point five steps in advance of the normal transfer point.

4. An accumulator having total wheels including an equalizing wheel having a transferring element arranged five steps in advance of the normal transfer position, each of said total wheels, excepting the equalizing wheel, being provided with type characters 0 to 9 inclusive for printing amounts registered by the accumulator, said equalizing wheel being arranged to the right of the other total wheels and provided with type for printing a distinguishing symbol when the "0" point on the advanced equalizing wheel occupies its printing position.

5. An accumulator comprising total registering and printing devices including an equalizing device having a transferring element arranged five points higher than the normal transferring point, said equalizing device being provided with means for printing a distinguishing symbol when its "0" point occupies the registering position, thus indicating that the character of next higher order is too high.

1,218,256. AUTOMATIC FILLING-REPLENISHING LOOM. UBALD HEBERT, Manchester, N. H., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Feb. 7, 1916. Serial No. 76,790. (Cl. 139—85.)



1. A filling replenishing loom comprising a hopper adapted to contain a plurality of filling carriers, a transferrer and means for actuating the same, and rearwardly and forwardly movable guiding means fixed against vertical bodily movement and acting to engage with and prevent rotation of a filling carrier during transfer, said guiding means being movable rearwardly into registry with the shuttle by the filling carrier during transfer whereby the filling carrier will be delivered to the shuttle in predetermined rotary position.

2. A filling replenishing loom comprising a hopper adapted to contain a plurality of filling carriers, a transferrer and means for actuating the same, a rearwardly and forwardly movable guide acting to engage with and prevent rotation of a filling carrier during transfer, and means for permitting rearward movement of said guide concurrently with the lay during transfer whereby the filling carrier will be delivered to the shuttle in predetermined rotary position.

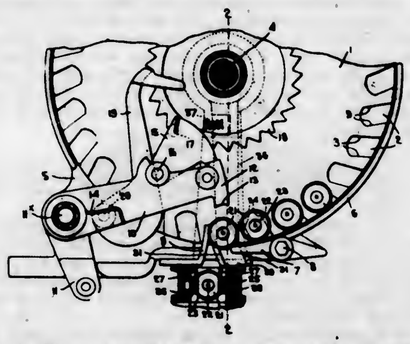
3. A filling replenishing loom comprising a hopper adapted to contain a plurality of filling carriers, a transferrer and means for actuating the same, a rearwardly and forwardly movable guide fixed against vertical bodily movement and acting to engage with and prevent rotation of a filling carrier during transfer, and means for permitting rearward movement of said guide concurrently with the lay during transfer whereby the filling carrier will be delivered to the shuttle in predetermined rotary position.

4. A filling replenishing loom comprising a hopper adapted to contain a plurality of filling carriers, a transferrer and means for actuating the same, a rearwardly and forwardly movable guide fixed against vertical bodily movement and acting to engage with and prevent rotation of a filling carrier during transfer, means for yieldingly maintaining said guide in forward position and permitting rearward movement of said guide concurrently with the lay during transfer whereby the filling carrier will be delivered to the shuttle in predetermined rotary position.

5. A filling replenishing loom comprising an intermittently rotatable hopper adapted to contain a plurality of filling carriers having butts provided with positioning means, a transferrer and means for actuating the same and a rearwardly and forwardly movable guiding means fixed against vertical bodily movement and acting to coöperate with said positioning means and thereby prevent rotation of a filling carrier during transfer whereby the filling carrier will be delivered to the shuttle in predetermined rotary position.

[Claims 6 to 15 not printed in the Gazette.]

1,218,257. AUTOMATIC FILLING-REPLENISHING LOOM. UBALD HEBERT, Manchester, N. H., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed July 3, 1916. Serial No. 107,247. (Cl. 139—85.)



1. A filling replenishing loom comprising a hopper adapted to contain a plurality of filling carriers, a transferrer and means for actuating the same to thrust a filling carrier into the shuttle, and rearwardly and forwardly movable guiding means fixed against vertical bodily movement and provided with a chute acting to receive and direct the filling carrier during its passage from the hopper to the shuttle, said guiding means being movable rearwardly into registry with the shuttle by the filling carrier as the latter is forced from the hopper into the shuttle by the transferrer.

2. A filling replenishing loom comprising a hopper adapted to contain a plurality of filling carriers, a transferrer and means for actuating the same to thrust a filling carrier into the shuttle, and yieldable means provided with inclined guiding instrumentalities located intermediate of said hopper and shuttle and normally maintained in communicative relation to said hopper and movable into registry with the shuttle by the filling carrier as the latter is forced from the hopper into the shuttle by the transferrer.

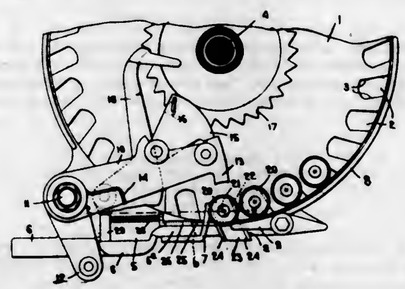
3. A filling replenishing loom comprising a hopper adapted to contain a plurality of filling carriers, a transferrer and means for actuating the same to thrust a filling carrier into the shuttle, pivotally mounted guiding means for said filling carriers located intermediate of said hopper and shuttle, resilient means for normally maintaining said guiding means in communicative relation with the hopper and acting to permit said guiding means to be moved rearwardly into registry with the shuttle by the filling carrier as the latter is forced from the hopper into the shuttle by the transferrer.

4. A filling replenishing loom comprising a rotatable hopper having peripheral recesses to support filling carriers, a transferrer and means for actuating the same to thrust the filling carrier into the shuttle, guiding means intermediate of said hopper and shuttle pivotally movable about the axis of said hopper, and means for normally maintaining said guiding means in communicative relation with a recess in said hopper and acting to permit said guiding means to be moved rearwardly into registry with the shuttle by the filling carrier as the latter is forced from the hopper into the shuttle.

5. A filling replenishing loom comprising an intermittently rotatable hopper provided with peripheral filling carrier seats inclined to the radii of the hopper, a transferrer and means for actuating the same to thrust a filling carrier from said hopper into the shuttle, and a conveyer intermediate of said hopper and shuttle having walls normally forming continuations of the walls of said filling carrier seats and acting to receive the filling carrier as it is moved from the hopper and to preserve the rotative position of said carrier unchanged as it is transferred to the shuttle.

[Claims 6 to 20 not printed in the Gazette.]

1,218,258. AUTOMATIC FILLING-REPLENISHING LOOM. UBALD HEBERT, Manchester, N. H., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed July 3, 1916. Serial No. 107,248. (Cl. 139—85.)



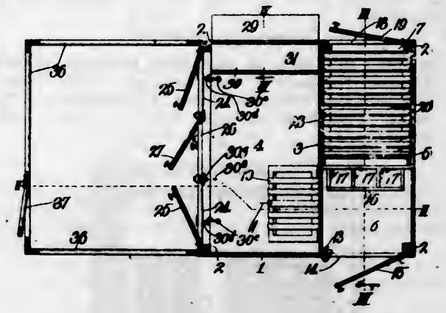
1. A filling replenishing loom comprising a hopper adapted to contain a plurality of filling carriers, a transferrer and means to actuate the same to thrust a filling carrier into the shuttle, a slidably mounted conveyer intermediate of said hopper and shuttle provided with guiding instrumentalities adapted to engage and position the filling carrier being transferred and so disposed as to cause said conveyer to be moved rearwardly into registry with the shuttle by the movement of the filling carrier under the influence of the thrust of the transferrer.

2. A filling replenishing loom comprising a rotatable hopper having a peripheral series of filling carrier seats inclined to the radii of the hopper, a transferrer and means for actuating the same to thrust a filling carrier into the shuttle and a slidably mounted conveyer intermediate of the hopper and shuttle having guiding instrumentalities adapted to receive a positioned filling carrier from the hopper and to maintain the filling carrier in the same rotative position during transfer, said conveyer being movable into registry with the shuttle by the movement of the filling carrier under the influence of the thrust of the transferrer.

3. A filling replenishing loom comprising a rotary hopper having a peripheral series of filling carrier seats, a hopper stand having a supporting bracket, a transferrer and means for actuating the same to thrust a filling carrier from said hopper into the shuttle, a conveyer intermediate of said hopper and shuttle slidably mounted upon said bracket and resilient means for normally maintaining said conveyer in communicative relation with a filling carrier seat in said hopper, guiding instrumentalities upon said conveyer adapted to receive a positioned filling carrier from the hopper and direct the same to the shuttle, said guiding means being positioned to cause said conveyer to be moved rearwardly into registry with the shuttle by the movement of the carrier under the influence of the thrust of the transferrer.

4. A filling replenishing loom comprising a rotary hopper having a peripheral series of filling carrier seats inclined to the radii of said hopper, a hopper stand having a supporting bracket, an abutment for guiding the filling carrier from the hopper to the shuttle supported by said bracket, a transferrer and means for actuating the same to thrust a filling carrier from said hopper into the shuttle, a conveyer intermediate of said hopper and shuttle, having guiding walls forming extensions of the walls of said filling carrier seats, said conveyer being slidably mounted upon said bracket and resilient means for normally maintaining said conveyer in communicative relation with a filling carrier seat in said hopper and adapted to permit said conveyer to be moved rearwardly into registry with the shuttle by the movement of the carrier under the influence of the thrust of the transferrer.

1,218,259. CHICKEN-HOUSE. WILLIAM HELLWIG, Kansas City, Kans. Filed May 17, 1915. Serial No. 28,778. (Cl. 119—21.)



1. A chicken house supported above the ground level and divided into a front chamber and two rear chambers communicating with the front chamber, one of the latter forming a nest chamber and the other a roosting chamber, means for closing communication between the front chamber and the nest chamber, a door controlled opening in one side wall of the house, a feed trough secured within the house in communication with said door opening and provided with an opening in its inner side through which

the chickens may thrust their heads for feeding and drinking purposes; the front wall of said front chamber being provided with an opening in its lower portion and a door controlling said opening and hinged at its lower edge so that when open it shall depend below the bottom of the said front chamber to assist in shading the space thereunder.

2. A chicken house partitioned to form a front chamber having a bottom and a roosting chamber having a bottom opening, the partition between said chambers having an opening in its upper outer half, a door controlled opening in the outer wall of the house communicating with the roosting chamber, an inclined skeleton perch secured in said roosting chamber and dividing the roosting chamber into an upper portion accessible through the said opening in said partition and a lower portion accessible through the opening in the bottom of said chamber, and a hinged bottom for said chamber extending from a point within the same below the upper portion of said perch, downwardly and outwardly through the opening in the bottom of the roosting chamber and preventing access to the upper portion of the latter, and adapted to swing to a pendant position to give access to the perch from below or to permit matter cleaned from the perch to drop through the opening in the bottom of the roosting chamber, to the ground.

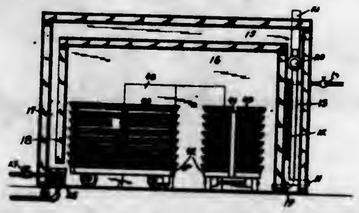
1,218,260. LACING-TIP. DANIEL HILL, Providence, R. I., assignor to International Braid Co., Providence, R. I., a Corporation of Massachusetts. Filed June 16, 1916. Serial No. 103,925. (Cl. 24—143.)



1. A lacing having a tip consisting of a wire attached to the lacing and provided with a longitudinally disposed strand, a portion of said wire being helically coiled around said strand, a plurality of the convolutions of the coil at the extremity thereof being soldered together and to said strand.

2. The combination with a lacing having its end skived off at an angle and folded longitudinally, of a tip consisting of a wire attached to the lacing and provided with a longitudinally disposed strand, a portion of said wire being coiled helically around said folded portion and said strand, and a plurality of the convolutions of the coil at the extremity of the tip being soldered together and to said strand.

1,218,261. PROCESS OF TREATING RUBBER. HARRY HUNTER, Indianapolis, Ind., assignor to The Hunter Dry Kiln Co., Indianapolis, Ind., a Corporation of Indiana. Filed Sept. 25, 1915. Serial No. 52,577. (Cl. 34—24.)



1. That improvement in the art of treating rubber, which consists in exposing to air the rubber to be treated, and maintaining such air at a relative humidity of between 20% and 75% and at a temperature higher than 110° F.

2. That improvement in the art of treating rubber, which consists in exposing to a current of air the rubber to be treated, and maintaining such current of air at a relative humidity of between 20% and 75% and at a temperature between 110° F. and 170° F.

3. That improvement in the art of treating rubber, which consists in exposing to air the rubber to be treated, and maintaining such air at a substantially constant relative humidity between 20% and 75% and at a substantially constant temperature greater than 110° F.

4. That improvement in the art of treating rubber, which consists in exposing to a current of air the rubber to be treated, maintaining such current of air at a relative humidity of between 20% and 75% and at a temperature higher than 110° F., and continually supplying fresh air from the atmosphere to such current of air.

5. That improvement in the art of treating rubber, which consists in exposing to a current of air the rubber to be treated, maintaining such current of air at a substantially constant relative humidity between 20% and 75% and at a substantially constant temperature greater than 110° F., and continually supplying fresh air from the atmosphere to such current of air.

1,218,262. BINDER AND TRANSFER DEVICE. GEORGE H. JENKINS, Oak Park, and MICHAEL N. MURPHY, La Grange, Ill. Filed July 11, 1914. Serial No. 850,897. (Cl. 129—12.)



1. A binder embodying in combination a pair of permanent covers, a stack of leaves therebetween, a temporary cover arranged adjacent and outside of one of said permanent covers, a connecting element between all of said covers and leaves for binding the same together, and means for effecting a disconnection of said element from said temporary cover without affecting the binding between said leaves, substantially as described.

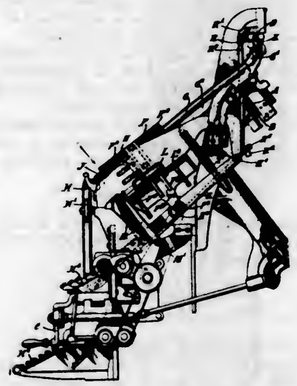
2. A binder embodying, in combination, a pair of permanent covers, a stack of leaves interposed therebetween, a temporary cover arranged adjacent to and outside of one of said permanent covers, a plurality of posts entered through said permanent covers and interposed leaves, base plates upon which said posts are mounted, and a detachable connection between said base plates and said temporary cover for permitting removal of the temporary cover without disarrangement of the leaves and permanent covers, substantially as described.

1,218,263. BOLT-ACTION SHOULDER-ARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Dec. 14, 1916. Serial No. 136,898. (Cl. 42—18.)



A bolt-action shoulder arm having its receiver formed at the rear end of its cartridge-charging and cartridge-ejecting opening, with a charger-guideway adapted to receive a charger formed with laterally projecting rim-receiving channels extending throughout its length, the left hand wall of the said guideway being flanked by a charger-retaining shoulder, and the right hand wall of the guideway opening directly into the said cartridge-charging and cartridge-ejecting opening of the receiver, whereby when the bolt is moved forward the charger is turned on its axis and so twisted out of the said guideway and ejected from the gun.

1,218,264. TYPOGRAPHICAL MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Mar. 17, 1915. Serial No. 14,893. (Cl. 199—16.)



1. In a typographical machine, the combination of a plurality of magazines, a supporting frame therefor movable to bring one or another of the magazines into operative position, and comprising two connected side members having projecting end portions, and the machine frame in which the supporting frame is mounted, the said machine frame being formed with grooves wherein the projecting end portions of the side members of the supporting frame slidably engage.

2. In a typographical machine, the combination of a plurality of magazines, a supporting frame therefor movable to bring one or another of the magazines into operative position, and comprising two connected side members, and the machine frame in which the supporting frame is mounted, the said machine frame being formed with grooves wherein the rear ends of the side members of the supporting frame slidably engage, and also provided with guiding rollers bearing against the side members of the supporting frame to prevent its forward displacement.

3. In a typographical machine, the combination of the machine frame formed with the grooves F^4 and provided with the rollers F^5, and the movable magazine supporting frame F comprising the side members F^1, the said members engaging at their rear ends in the grooves F^4 and being provided in their outer faces with the grooves F^3 wherein the rollers F^5 engage.

4. In a typographical machine, the combination of a plurality of magazines, a supporting frame therefor, and means for moving the supporting frame to bring one or another of the magazines into operative position, the said means including a hand lever pivoted to the machine frame and connected between its ends directly to the movable supporting frame by a pin-and-slot connection.

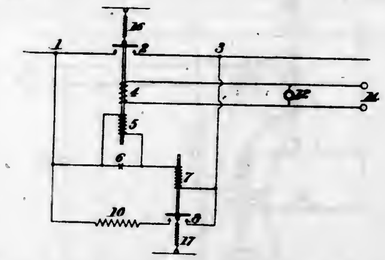
5. In a typographical machine, the combination of the movable magazine supporting frame F comprising the side members F^1 having the depending arms F^7 which are connected by the transverse rod F^6, and the hand lever K for moving the supporting frame, the said lever being pivoted at its rear end to the machine frame and formed with the elongated slot K^2 wherein the rod F^6 engages.

[Claims 6 to 42 not printed in the Gazette.]

1,218,265. ELECTRIC WELDING. OTIS ALLEN KENYON, New York, N. Y. Filed June 28, 1916. Serial No. 106,422. (Cl. 219—8.)

1. In electric welding, a series of regulated current welding arcs, in combination with means controlled by the voltage across each arc to short circuit said arc at a predetermined voltage.

2. In electric welding, a regulated current welding arc, in combination with means controlled by voltage across arc to short circuit the arc at a predetermined voltage, and means for uninterruptedly maintaining the short-circuit.



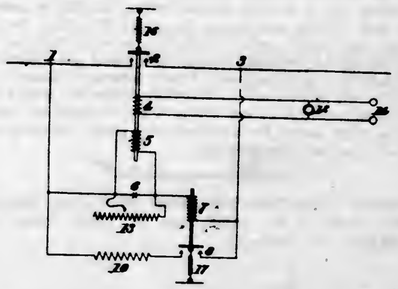
3. In electric welding, a series of regulated current welding arcs, a coil connected in parallel with each arc and carrying current proportionate to the voltage across each arc, and means controlled by the current in said coil to short circuit said arc at a predetermined voltage.

4. In electric welding, a regulated current welding arc, a coil connected in parallel therewith and carrying current proportionate to the voltage across the arc, and means controlled by the current in said coil to short circuit the arc at a predetermined voltage, and a second coil separately excited and constructed to hold the short circuit until released.

5. In electric welding, a regulated current welding arc, means for short circuiting said arc when the voltage across the arc reaches a certain predetermined limit, and means for adjusting this limit.

[Claim 6 not printed in the Gazette.]

1,218,266. ELECTRIC WELDING. OTIS ALLEN KENYON, New York, N. Y. Filed June 28, 1916. Serial No. 106,423. (Cl. 219—8.)



1. In electric welding, a regulated current welding arc, and means connected across said arc for varying the current in the arc in a predetermined ratio with the voltage across said arc.

2. In electric welding, a regulated current welding arc, and means for shunting current around the arc in direct ratio to the voltage across it.

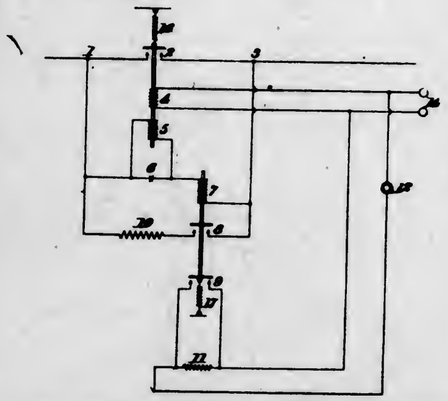
3. In electric welding, a regulated current welding arc, and electro-responsive means controlled by the voltage across the arc for varying the current in the arc.

4. In electric welding, a regulated current welding arc, and adjustable means controlled by the voltage across the arc for varying the current in the arc.

5. In electric welding, a regulated current welding arc, and a resistance connected in parallel around the arc and adapted to shunt current around the arc in direct ratio to the voltage across the arc.

[Claim 6 not printed in the Gazette.]

1,218,267. ELECTRIC WELDING. OTIS ALLEN KENYON. New York, N. Y. Filed June 28, 1916. Serial No. 106,424. (Cl. 219—8.)



1. In electric welding, a source of electricity, a welding circuit, and means under the control of the welder for passing current from said source through the arc circuit after the welding pencil is in contact or stopping the passage thereof, while the yielding operation is in progress.

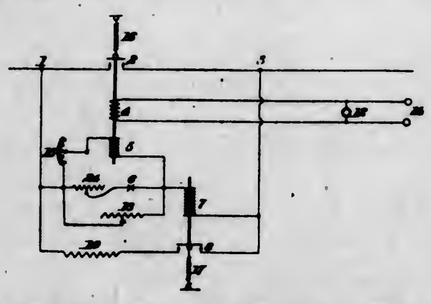
2. In electric welding, a source of electricity, a welding arc circuit, and means for passing current from said source through said circuit, in combination with electro-responsive means under the control of the welder for permitting or stopping the passage of current through the arc circuit.

3. In electric welding, a main circuit, and an arc circuit connected therein and constructed to maintain the conductance of the main circuit, in combination with controllable electro-responsive means for shunting current from the main circuit into and out of the arc circuit.

4. In an arc welding system, a welding arc circuit to be closed by a welding pencil before current is passed into said circuit, and means for short circuiting the arc at any time under control of the welder while welding.

5. In an arc welding system, a welding arc circuit to be closed by a welding pencil before current is passed into said circuit, and means for short circuiting the arc at any time under control of the welder while welding, in combination with means for automatically short circuiting the arc at a predetermined voltage.

1,218,268. ELECTRIC WELDING. OTIS ALLEN KENYON, New York, N. Y. Filed June 28, 1916. Serial No. 106,425. (Cl. 219—8.)



1. In electric welding, a regulated current welding arc, means for adjusting the current through said arc, and additional means for regulating the power and current variations in said arc.

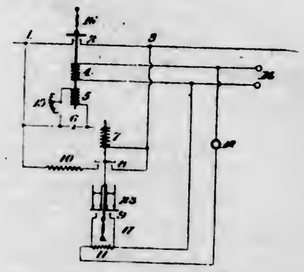
2. In electric welding, a regulated current welding arc, a shunt circuit around the arc to keep the regulation of the arc current and power within predetermined limits, and means for adjusting the current through the arc.

3. In electric welding, a regulated current welding arc, a shunt circuit around the arc to regulate fluctuations in power and current in the arc, and a resistance in series with the arc between the terminals of the shunt.

4. In electric welding, a regulated current welding arc, and a resistance in series therewith, in combination with a shunt circuit around said arc and said resistance, and an adjustable resistance in said shunt circuit.

5. In electric welding, a regulated current welding arc, an adjustable resistance in series therewith, in combination with a shunt circuit around said arc and said resistance.

1,218,269. ELECTRIC WELDING. OTIS ALLEN KENYON, New York, N. Y. Filed June 28, 1916. Serial No. 106,426. (Cl. 219—8.)



1. The method of arc welding consisting in starting the arc with a certain voltage limit and then decreasing this voltage limit during the welding operation.

2. The method of arc welding consisting in starting the arc with a certain voltage limit and then decreasing this voltage limit after a period of time has elapsed from the starting of the arc.

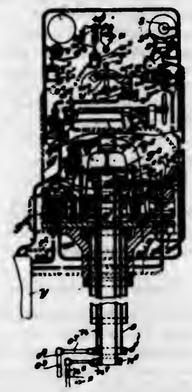
3. The method of arc welding consisting in starting an arc with a certain voltage limit and then automatically decreasing this voltage limit after a period of time has elapsed from the starting of the arc.

4. The method of arc welding consisting in starting an arc with a comparatively high voltage limit, lowering this voltage limit after a period of time has elapsed from the starting of the arc, and ending the operation by short circuiting the arc.

1,218,270. AUTOMATIC TRAIN AND THE LIKE CONTROL AND (OR) SIGNALING SYSTEM. ANDREW KEAN, Belfast, Ireland. Filed Feb. 19, 1914. Serial No. 819,636. (Cl. 246—59.)

1. An automatic train control system to be operated by atmospheric or fluid pressure and comprising, in combination, a signal on the engine, a laterally tapering ramp device on the track, fluid pressure cylinders on the engine, and controlling said signal, valves controlling the supply of fluid pressure to said cylinders, co-axial tubes linked to said valves and having depending rods at different heights above the rail level and which are deflected to right or left to operate said signal according to the state of the ramp device.

2. An automatic train control system adapted to be operated by atmospheric or fluid pressure and comprising, in combination, two signals on the engine, a laterally tapering ramp device on the track, means for setting the ramp device, fluid pressure cylinders on the engine, and controlling said signal, valves controlling the supply of fluid pressure to said cylinders, co-axial tubes linked to said valves and having depending rods at different heights above the rail level and which are deflected to right or left to operate said signal according to the state of the ramp device.



3. An automatic train control system adapted to be operated by atmospheric or fluid pressure and comprising, in combination, two signals on the engine, a laterally tapering ramp device on the track, means whereby said ramp device may be set from the signal cabin, means on the engine for operating said signals, fluid pressure cylinders on the engine, and controlling said signals, valves controlling the supply of fluid pressure to said cylinders, co-axial tubes linked to said valves and having depending rods at different heights above the rail level and which are deflected to right or left to operate said signals according to the state of the ramp device.

4. An automatic train control system adapted to be operated by atmospheric or fluid pressure and comprising, in combination, a danger signal on the engine, a laterally tapering ramp device on the track, fluid pressure cylinders on the engine, and controlling said signal, valves controlling the supply of fluid pressure to said cylinders, co-axial tubes linked to said valves and having depending rods at different heights above the rail level and which are deflected to right or left to operate said signal according to the state of the ramp device, and means whereby when said signal is operated the motive power is cut off from the engine driving mechanism.

5. An automatic train control system adapted to be operated by atmospheric or fluid pressure and comprising, in combination, a danger signal on the engine, a laterally tapering ramp device on the track, means on the engine adapted to be set in operation by the ramp device to operate said danger signal and means whereby when said signal is operated the motive power is cut off from the engine driving mechanism, and means operated by the movements of the engine reversing gear whereby the signal and engine stopping control apparatus on the engine is raised out of action when the engine is reversed.

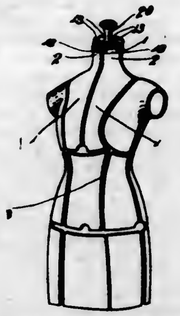
[Claims 6 to 9 not printed in the Gazette.]

1,218,271. TOP CONSTRUCTION FOR DRESS-FORMS. JACOB KERSTEN, Grand Rapids, Mich. Filed May 20, 1916. Serial No. 98,944. (Cl. 223—18.)

1. In combination, a bust and neck section for dress forms, a device secured to the upper end of the neck portion formed from wire and comprising a loop extending horizontally from the neck portion, and a second loop extending upwardly from said neck portion, substantially as described.

2. In a dress form, a plurality of bust and neck sections, each having a device secured at the upper end of the neck portion thereof, said device being formed of wire and comprising an inwardly extending horizontal loop, said horizontal loops on all the sections overlapping one another and means adjustably connecting said loops together at their inner ends.

3. In a dress form, a plurality of bust and neck sections, each having a device secured at the upper end of the neck portion thereof, said device being formed of wire and comprised of an inwardly extending horizontal loop and an upwardly extending vertical loop, said horizontal loops of the said devices overlapping one another and adjustably connected together, substantially as described.



4. In combination, a neck section for dress forms, and a wire having an end embedded in the upper end of the neck section and permanently secured thereto, said wire extending outwardly to the top of said section then bent to lie alongside the top of the section for a short distance, then formed into an elongated horizontal loop extending inwardly from the top of the section, the return wire of said loop passing under said first bend in the wire and then formed into a vertically portioned loop, the end of which is embedded in the neck section and permanently secured thereto, substantially as described.

5. In combination, a neck section for dress forms, and a wire device formed from a single piece of wire having its ends embedded in the upper end of said section and permanently secured thereto and having the wire fashioned into an inwardly extended elongated loop and an upwardly extended vertical loop having a length equal substantially to the width of the neck section at its upper end, substantially as described.

1,218,272. ADJUSTABLE DRESS-FORM CONNECTION. JACOB KERSTEN, Grand Rapids, Mich. Filed Oct. 30, 1916. Serial No. 128,591. (Cl. 223—18.)



1. In a dress form, a plurality of form sections, a member provided with a longitudinal slot fixed at one end to a section and extending over an adjacent section, a second member secured to said adjacent section, a screw threaded bolt attached to the second member and extending through the slot of the first member, a washer placed around the bolt and against the first member, a split ring lock washer placed around the bolt and against said first washer, a cap having a convex outer and concave inner surface placed around the bolt and against the split ring washer, said cap covering and concealing both washers, and a nut threaded on the bolt against said cap.

2. In a dress form, a plurality of form sections, an elongated sheet metal member provided with a longitudinal slot secured at one end to a section and extending over an adjacent section, a second sheet metal member fixed to said adjacent member, a screw threaded bolt attached to said second member and passing through the slot in said first member, a washer around the bolt and lying against said first member, a split ring lock washer around the bolt and lying against said first washer, a

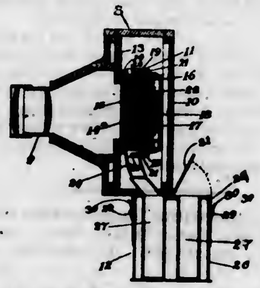
nut threaded onto the bolt, and a member between the nut and the lock washer, substantially as described.

3. In combination in a dress form, a plurality of sections, means for adjustably connecting said sections, said means including members secured to adjacent sections combined with means for yieldingly securing said members together against accidental movement yet permitting said members to move with respect to each other on application of sufficient force thereto, and a housing for said last mentioned means, substantially as described.

4. In combination, a dress form section, a member provided with a longitudinal slot secured to and projecting from said section, a second section lying adjacent the first section over which said member extends, a screw threaded bolt permanently secured to the second section, said bolt passing through the slot in said member, a nut threaded onto the bolt, a housing cap under the nut, and a yielding element under and covered by said cap interposed between the cap and said slotted member.

5. In combination, a dress form section, a member provided with a longitudinal slot secured to and projecting from said section, a second section lying adjacent the first section over which said member extends, a screw threaded bolt permanently secured to the second section and passing through the slot in said member, a nut threaded on to the bolt, a yielding element around the bolt, and a housing cap immediately under the nut having depending sides which on tightening the nut sufficiently engage with said member thereby locking the sections against movement with respect to each other.

1,218,273. CAMERA. ANDREAS KISS, Cincinnati, Ohio, assignor of one-half to Martin Rusz, Cincinnati, Ohio. Filed June 23, 1916. Serial No. 105,502. (Cl. 95—13.)

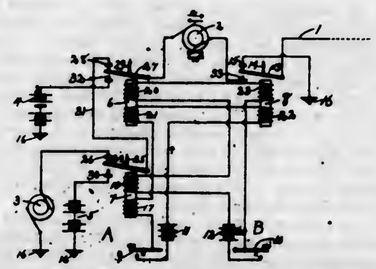


1. A camera comprising a body, a lens secured to the body, a shutter, a card pack holder located back of the shutter, a developing tank located adjacent to the pack holder, said shutter when withdrawn being adapted to expose the foremost card of the pack and to remove the exposed card from the pack and to permit it to drop into the developing tank when moved to its closed position, and means for maintaining the cards in position to be engaged by said shutter, said means consisting of a plate, a spring mounted on the plate, and hooks adapted to secure the plate to the holder, whereby the spring is maintained in normal engagement with the cards.

2. In a camera the combination of a body, a lens secured to the body, a shutter frame located in the body, a shutter reciprocally mounted therein, a card pack holder located adjacent to the shutter frame and adapted to receive a card pack, a spring adapted to advance the cards of a pack located in the holder, toward the shutter as the cards are removed from the pack after exposure thereof, said shutter being adapted to remove exposed cards from the pack upon each closure thereof, a developing tank located adjacent to the pack holder adapted to receive exposed cards discharged therefrom, a plate adapted to mount the spring, and a hook adapted to maintain the plate in engagement with the holder.

3. In combination in a camera, a body, a lens secured to the body, a shutter, a card pack holder located back of the shutter, a developing tank located adjacent to the pack holder, a chute adapted to direct cards from the holder to the tank, said shutter when opened being adapted to expose the foremost card of the pack and when moved to its closed position to remove the exposed card from the pack and deliver it to the chute, whereby it may drop into the developing tank, said tank having compartments adapted to receive separate packs of exposed cards and adapted to be moved to bring filled compartments into positions to render their contents accessible and empty compartments into position beneath the chute to receive exposed cards therefrom, and means for forcing the cards in said holder into position to be engaged by said shutter, said means consisting of a spring, a plate adapted to mount the spring, and hooks adapted to maintain the plate in engagement with the holder, whereby the spring will be maintained in engagement with the cards in the holder.

1,218,274. QUADRUPLEX TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed June 3, 1912. Serial No. 701,293. (Cl. 178—55.)



1. In a transmitting arrangement for quadruplex telegraphy, two generators of alternating current, two sources of direct current and two transmitting means, one of said generators adapted to be made operative through the operation of one or the other of said transmitting means, one of said sources of direct current adapted to be made operative through one of said transmitting means and the second of said sources adapted to be made operative through the second transmitting means and the second generator of alternating current adapted to be made operative through the simultaneous operation of both transmitting means.

2. In telegraphy, a line of transmission, two generators of alternating current of different electromotive force, transmitting means for one station adapted to connect one of said generators to the line of transmission, and means when two stations are simultaneously operated to connect both of said generators in series with each other and to the line of transmission.

3. In a telegraphic transmitting arrangement, a generator of alternating current and two sources of direct current and means to connect the generator with one source to denote one message and to connect the generator with the second source to denote a second message.

4. In a telegraphic transmitting arrangement, one generator of alternating current and two sources of direct current, means for one source of said direct current to be connected to one terminal of said generator with the positive pole and means for the second of said sources to be connected to one terminal of said generator with the negative pole.

5. In telegraphic transmitting apparatus, the combination of two electromagnets and transmitting means for each of said electromagnets, each of said electromagnets being provided with means whereby it becomes operative through the manipulation of its own transmitting means, each of said electromagnets being provided with means whereby the effect of its own transmitting means is neutralized by the simultaneous operation of the second transmitting means, and a third electromagnet operatively related to both transmitting means and provided with means whereby it becomes operative through the manipulation of both transmitting means.

[Claims 6 to 10 not printed in the Gazette.]

1,218,275. BALL-BEARING ROLLER. EMIL KLAHN, Weehawken, N. J. Filed Apr. 15, 1913. Serial No. 761,150. (Cl. 46—52.)



1. A wheel comprising two cupped members, the one fitting within the other, and each provided with a centrally disposed opening, said members having a substantially flat central portion; a sleeve passing through said opening and provided with a peripheral groove; two substantially flat plates within said wheel and held to the respective flat portions of the cup members and against rotation relatively thereto, said plates affording a raceway with said peripheral groove; and a set of balls confined between said plates in said raceway.

2. A wheel comprising two cupped members, the one fitting within the other; a sleeve passing therethrough; a ball separator or retainer about said sleeve; a set of balls retained thereby upon said sleeve; and two plates within said wheel, providing a raceway for said balls and held in the respective cup members.

3. A wheel comprising two cupped members, the one fitting within the other and each provided with a centrally disposed opening, and with slots in their faces, said members having a substantially flat central portion; a sleeve passing through the said openings; two substantially flat plates within said wheel, held to the respective flat portions of the cup members and having bent-over lips extending respectively through the said slots; and a set of balls confined between said plates and fitting about said sleeve.

4. A wheel comprising two centrally perforated cupped members, the one fitting within the other and the rim of one turned over the bottom of the other; a sleeve passing through said perforations and provided with a peripheral groove; a set of balls fitting said peripheral groove, and a ball separator or retainer about said sleeve to confine the balls; and two plates held by the respective cupped members upon their inner faces and each provided with a raceway for said balls.

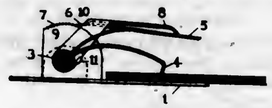
5. A wheel comprising two centrally perforated cupped members, the one fitting within the other and the rim of one turned over the bottom of the other; a sleeve passing through said perforations and provided with a peripheral groove; of a ball separator or retainer comprising an annular rounded shell of resilient material fitted about said sleeve and provided with a plurality of perforations and having slots extending into the perforations, the balls being confined between the said peripheral groove and the said shell; and two plates held by the respective cupped members upon their inner faces and each provided with a raceway for said balls.

[Claims 6 to 9 not printed in the Gazette.]

1,218,276. PAPER-CLIP. FRED J. KLEIN, New York, N. Y. Filed July 23, 1914. Serial No. 852,738. (Cl. 24—66.)

1. A clip comprising a pair of jaws hinged to each other, a handle of spring sheet metal having an elastic connection with one of the jaws, a pawl carried by the handle, and a ratchet carried by the other jaw, the pawl and ratchet being engageable to hold the clip in its clamping position, substantially as described.

2. A clip comprising a pair of jaws hinged to each other, a hinge pin, a handle of spring sheet metal folded around the hinge pin and forming an elastic connection between the handle and one of the jaws, a pawl carried by the handle, and a ratchet carried by the other jaw, the pawl and ratchet being engageable to hold the clip in its clamping position, substantially as described.

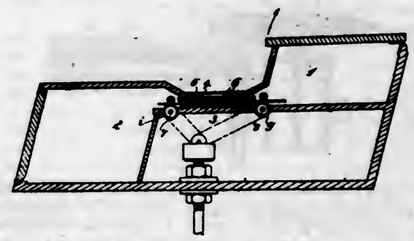


3. A clip comprising a base plate having a jaw, a hinge pin carried by the base plate, a strip of spring sheet metal folded around the hinge pin and forming a jaw and a handle therefor, a ratchet carried by the base plate, and a pawl carried by the handle, the pawl and ratchet being engageable to hold the clip in its clamping position, substantially as described.

4. A clip comprising a pair of jaws hinged to each other, a handle for one of the jaws elastically connected thereto, a pawl carried by the handle, a ratchet carried by the other jaw, and a thumb plate extending over the handle whereby when the jaws are pressed together by the thumb plate the pawl and ratchet are concurrently engaged, substantially as described.

5. A clip comprising a base plate having a jaw, a hinge pin carried by the base plate, a strip of spring sheet metal folded around the hinge pin and forming a jaw and a handle therefor, a ratchet carried by the base plate, a pawl carried by the handle, and a thumb plate extending over the handle whereby when the jaws are pressed together by the thumb plate the pawl and ratchet are concurrently engaged, substantially as described.

1,218,277. MAP-DISPLAYING APPARATUS. CARL KNAUF, Kronach, Germany. Filed July 12, 1913. Serial No. 778,773. (Cl. 40—41.)



1. In apparatus for indicating the route taken by road vehicles the combination of a casing, an aperture in said casing, a plurality of leaves constituting consecutive sections of a map and arranged in a pile in said casing, and means for feeding said leaves forward successively each leaf being moved continuously as it passes said aperture.

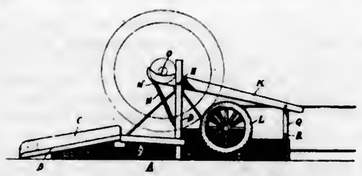
2. In apparatus for indicating the route taken by road vehicles the combination of a casing, an aperture in said casing, a plurality of leaves constituting consecutive sections of a map and arranged in a pile in said casing, means for feeding said leaves forward successively each leaf being moved continuously as it passes said aperture, and a stationary pointer arranged adjacent said aperture over the moving leaves.

3. In apparatus for indicating the route taken by road vehicles the combination of a casing, an aperture in said casing, a plurality of leaves constituting consecutive sections of a map and arranged in a pile in said casing, said leaves bearing on their undersides a reversed representation of the map which is on the top sides, and means for feeding said leaves forward successively each leaf being moved continuously as it passes said aperture.

4. In apparatus for indicating the route taken by road vehicles the combination of a casing having two chambers, an aperture in said casing arranged between said

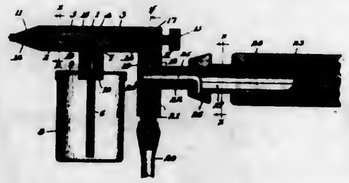
two chambers, a plurality of leaves constituting consecutive sections of a map and arranged in a pile in one of said chambers, and means for feeding said leaves forward successively from said latter chamber to the other chamber each leaf being moved continuously as it passes said aperture.

1,218,278. POWER-TRANSMITTING APPARATUS. JOHN J. KOGER, Morristown, Tenn. Filed Sept. 11, 1916. Serial No. 119,528. (Cl. 21—90.)



An automobile power transmitting apparatus comprising a frame having posts, levers pivotally mounted at one side of the longitudinal center upon said posts, springs fastened at their lower ends to the said posts and their upper ends to the short arms of the levers, bars pivotally connected to the long arms of the levers and provided with perforations, means adapted to engage the perforations to hold the levers in different positions, a shaft journaled in suitable bearings in the frame, friction wheels fixed to said shaft and adapted to be frictionally engaged by the driving wheels of a vehicle as the latter is raised by said lever.

1,218,279. AIR-BRUSH. AUGUST KOPINSKI, Chicago, Ill. Filed May 29, 1915. Serial No. 31,285. (Cl. 91—45.)



1. In an air brush, the combination of a pigment and an air nozzle; a pigment supply reservoir in communication with said pigment nozzle; a valve for controlling communication between said pigment reservoir and said pigment nozzle; an exteriorly positioned handle on said valve; a passage communicating with said air nozzle and disposed at right angles thereto for the supply of compressed air thereto; a handle piece projecting from said air passage at substantially right angles thereto and substantially parallel with the axes of said nozzles; means for controlling said air passage, said means comprising an elongated longitudinally slidable valve member mounted in said handle piece and having one end adapted to traverse said passage; a sleeve slidably mounted on said handle piece in close proximity with said before mentioned valve handle, said sleeve engaging with the opposite end of said valve member for manually retracting said valve member; and a spring engaging with said sleeve for normally holding said valve member in closing position, substantially as described.

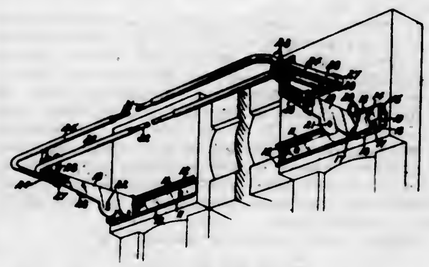
2. In an air brush, the combination of a pigment and an air nozzle; a pigment supply reservoir in communication with said pigment nozzle; a rotatable valve for controlling communication between said pigment reservoir and said pigment nozzle; an exteriorly positioned head on said valve for rotating the same; a passage communicating with said air nozzle and disposed at right angles thereto for the supply of compressed air thereto; a handle piece projecting from said passage at substantially right angles thereto and substantially parallel with the axes of said nozzles; a grip provided on the outer end of said handle piece; means for controlling said air passage, said means comprising an elongated longitudinally slidable valve member mounted in said handle piece and having one end adapted to traverse said passage; a sleeve shiftably mounted on said handle piece in close proximity with the inner end of said grip and said before mentioned valve actuating head for retracting said valve member; and a spring engaging against said sleeve for normally holding said valve member in closing position, substantially as described.

3. In an air brush, the combination of a pigment and an air nozzle; a pigment supply reservoir in communication with said pigment nozzle; means for supplying compressed air to said air nozzle; means for controlling the flow of the liquid from said pigment nozzle; a handle piece; a valve for controlling the flow of compressed air to said air nozzle; and a conical sleeve on said handle for actuating said valve, substantially as described.

4. In an air-brush, the combination of a pigment nozzle and an air nozzle, a source of pigment supply and a source of air supply communicating with said nozzles respectively, a handle, reciprocating means adjacent said handle for controlling the air supply, and rotary means adjacent said handle for controlling the pigment supply, said reciprocating means and said rotary means being operable independently by different fingers of the hand grasping said handle, and the axis of rotation of said rotary means being substantially parallel to the path of reciprocation of said reciprocating means, substantially as described.

5. In an air-brush, the combination of concentric pigment and air nozzles, a source of pigment supply and a source of air supply communicating with said nozzles respectively, a handle substantially parallel with the axis of said nozzles and in a plane below the same, rotary means for controlling the pigment supply and including a knurled member adjacent the forward end of said handle and slightly above the same, and reciprocating means on the said handle adjacent said knurled member, for controlling the air supply, whereby the pigment supply and the air supply may be controlled independently by fingers of the hand grasping said handle, substantially as described.

1,218,280. SHADE AND CURTAIN FIXTURE. ALEXANDER KOVACA, Harvey, Ill., assignor to W. L. Voss, Cook county, Ill., and Max Salon, Harvey, Ill. Filed June 22, 1916. Serial No. 105,106. (Cl. 156—23.)

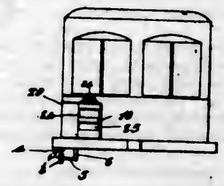


1. A window fixture including a base having means whereby to secure the same in position, and shade brackets slidable on said base; each bracket having a jaw member rigid therewith and engaging one longitudinal edge of the base, a jaw rockable on the bracket and embracing the opposite longitudinal edge of the base, and a screw having threaded engagement with the rockable jaw, said bracket having a fixed part disposed adjacent to the screw and against which the screw bears.

2. A window fixture including a base having means whereby to secure the same in position, and formed with forwardly disposed longitudinal flanges flaring in dovetail form, brackets slidable on said base, a fixed jaw on each bracket, a movable jaw rockably mounted on the said bracket, said jaws having terminals mating the dove-tail flanges of the base and presenting vertical members at the front of the base, and a screw having threaded engagement with one of said vertical members and bearing against the other member.

3. A window fixture including base sections having means whereby to secure the same in position, said sections being formed with longitudinal flanges flaring in dove-tail form, a bracket slidable on each base section, said brackets being formed with a laterally disposed foot, said foot having a fixed jaw mating the adjacent flange of the base section and formed with a forwardly disposed ear parallel with the body of the bracket, a clamp member having trunnions rockable in the body of the bracket and in said ear, said clamp terminating in a jaw mating the adjacent flange of the base, and a screw extending through and having threaded engagement with the said clamp and bearing against the face of the fixed foot on the bracket.

1,218,281. INDICATOR. MAX O. KUHN and HAROLD C. SHOOLBRED, Montreal, Quebec, Canada, assignors of one-third to Agnes M. Shoolbred, Montreal, Quebec, Canada. Filed Jan. 28, 1916. Serial No. 74,917. (Cl. 246—28.)



1. In an indicator structure, the combination, with a movable car body, a movable bar carried by the car body and adapted for movement under attraction of a magnet carried by a second car, a signal normally being in a non-signaling condition, and means operatively connected to said bar for operating said signal upon attracted movement of said bar.

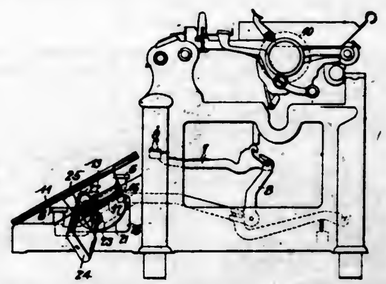
2. In an indicator structure, the combination with a movable car body, a movable bar carried by the car body and adapted for movement under attraction of a magnet carried by a second car, a signal carried by the car and normally being in a non-signaling position, means operatively connected to said bar for operating said signal upon attracted movement of said bar and means for automatically returning said bar to its normal position upon removal of magnetic attraction therefrom.

3. In an indicator structure, the combination with a movable car body, a movable bar carried by said car body and adapted for movement under attraction of a magnet carried by a second car, a signal carried by said car and normally being in a non-signaling condition, electrical means for operating said signal, and means for operating said electrical means upon attracted movement of said bar.

1,218,282. TYPE-WRITING MACHINE. ALFRED G. F. KUROWSKI, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 20, 1915. Serial No. 40,819. (Cl. 197—193.)

1. A keyboard cover for typewriters, arranged to directly overlie the keys, so as to render them inaccessible for operation, said cover having one of its ends detachably and pivotally engaged with the adjacent side member of the keyboard frame, to permit said cover to be swung directly into and out of effective position; and means for locking the opposite end of said cover to the other side of said keyboard frame, when said cover is in effective position.

2. A keyboard cover for typewriters, arranged to directly overlie the keys so as to render them inaccessible for operation, said cover having a hook at one end detachably and pivotally engaged with the adjacent side member of the keyboard frame, to permit said cover to be swung directly into and out of effective position; and means for locking the opposite end of said cover to the other side of said keyboard frame, when said cover is in effective position.



3. A keyboard cover for typewriters, arranged to directly overlie the keys, so as to render them inaccessible for operation, said cover having one end bent to hook around the adjacent side member of the keyboard frame, and having its other end bent to rest upon the opposite side member of said frame; and means for locking the second-named end and its associated frame member together.

4. A detachable keyboard cover for typewriters, arranged to directly overlie the keys, so as to render them inaccessible for operation, said cover provided at its opposite ends with devices for engagement with the adjacent side members of the keyboard frame to prevent endwise movement of the cover; and means coöperative with one of said devices for locking the cover against movement.

5. A detachable cover for typewriters, arranged to directly overlie the keys, so as to render them inaccessible for operation, said cover provided at its opposite ends with extensions or arms for engagement with the adjacent side members of the keyboard frame to prevent endwise movement of the cover, one of said arms loosely engaging its respective frame member, to permit a swinging movement of the cover about said member as a fulcrum into and out of effective position; and means engageable with the other arm, when said cover is in effective position, to lock said other arm to its associated frame member.

[Claims 6 to 14 not printed in the Gazette.]

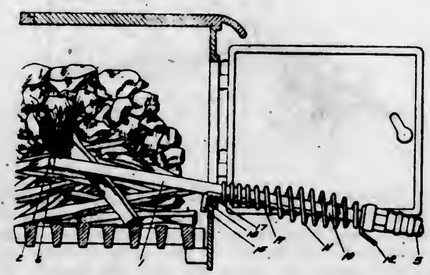
1,218,283. HANGER OR CLIP FOR STEEL FRAMEWORK CONSTRUCTION. WILLIAM F. LA MORTE, New York, N. Y., assignor to The Fireproof Contractors Corporation, a Corporation of New York. Filed Dec. 4, 1915. Serial No. 65,153. (Cl. 189—35.)



The combination in steel framework construction with superimposed contacting beams or bars, of a metal hanger, comprising a perpendicular body portion having a recessed portion at one side thereof and in the lower part thereof adapted to receive a beam or bar, a forwardly extending arm on the body portion at the other side than that having the recess, and having its upper face in line with the upper edge of the recess of the body portion, and adapted to receive a cross beam or bar contacting with the first

beam or bar in the recess, and having an upturned portion at the forward end of said arm adapted to non-embracingly engage the forward edge only of the received cross beam or bar, and a downwardly extending hooked portion at the upper part of the body portion, in a vertical line with said recessed portion, and substantially spaced therefrom, adapted to engage the upper edge and a portion of the front surface of the cross beam or bar received on the forwardly extending arm, and adapted to prevent outward movement thereof, at right angles to said body portion.

1,218,284. FIRE-KINDLER. ALFRED LEKBERG, Portland, Oreg. Filed May 27, 1916. Serial No. 100,198. (Cl. 158—10.)



1. A fire kindler comprising the combination of a tube provided at one end with a discharge aperture, means for securing the butt end of the tube to a source of gas supply, a cool grip surrounding the butt end of the tube, and an adjustable stop piece on the tube, consisting of a plate extending endwise of the tube and provided with a hook to hold the tube in place while in service.

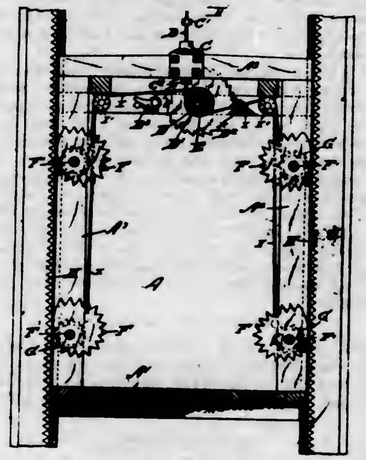
2. A fire kindler comprising the combination of a Bunsen burner tube provided at one end with a discharge aperture, means for securing the butt end of the tube to a source of gas supply, and a cool grip surrounding the butt end of the tube and affording a protective covering to the air supply aperture with which the Bunsen tube is provided.

3. A fire kindler comprising the combination of a Bunsen burner tube provided at one end with a discharge aperture, means for securing the butt end of the tube to a source of gas supply, and a cool grip surrounding the butt end of the tube and affording a protective covering to the air supply apertures with which the Bunsen tube is provided, said grip consisting of a coil of wire and a ring formed of a coil of the wire constituting the grip.

1,218,285. SAFETY ATTACHMENT FOR ELEVATORS. LEON LEWANDOWSKI, Detroit, Mich., assignor of one-half to Anthony S. Fijalkowski, Detroit, Mich. Filed Dec. 26, 1916. Serial No. 138,886. (Cl. 187—82.)

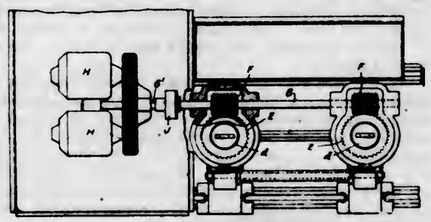
1. In an elevator, the combination with a car, its guide rails and hoisting cable, of rack bars secured to the guide rails, a plurality of eccentric mutilated gears journaled in said car and normally out of mesh with the rack bars, springs adapted for rotating the gears into mesh with the rack bars, a rotatable drum journaled in the car on which the end of the hoisting cable is wound and to which it is connected, a spring adapted to rotate said drum against the action of the cable upon the hoisting cable being broken, a fitting bolted to the car through which the hoisting cable is free to move, means secured to the cable on each side of the fitting to limit the movement of the cable through the fitting, other cables wound upon the drum and severally connected with the gears, whereby the latter may be maintained against the action of their respective controlling springs out of mesh with the teeth of the rack bar until released by the breaking of the hoisting cable.

2. In an elevator, the combination with the car, its guide rails, and hoisting cable, of rack bars secured to the guide rails, a plurality of eccentric gears journaled in the car and normally out of mesh with the rack bar, springs for forcing said gears in meshed binding relation with the rack bars, a spring actuated drum fitted with a ratchet



gear and journaled in the car to which the hoisting cable is connected, a dog to initially engage the gear against the action of the spring, and other cables wrapped upon said drum and connected with the gears, to maintain them out of mesh with the rack bars against the action of their controlling springs until released by the breaking of the hoisting cable.

1,218,286. ADJUSTING MECHANISM FOR ROLLING-MILLS. MALCOLM F. MCCONNELL, Steubenville, Ohio. Filed Sept. 22, 1916. Serial No. 121,619. (Cl. 80—56.)



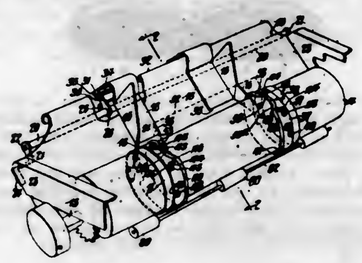
1. A rolling mill having a motor-operated roll-adjusting mechanism including a clutch between the motor and the roll, said clutch adapted to work positively in one direction and impositively in the other.

2. A rolling mill having a motor-operated screw-down mechanism including a clutch between the motor and the roll, said clutch adapted to work positively in lifting the roll and impositively in screwing it down.

3. A rolling mill having a motor-operated screw-down mechanism including worm gearing acting on the bearings of a roll, a shaft driven by the motor and actuating said worm gearing and a clutch in said shaft adapted to transmit the force of the motor positively in lifting the roll and impositively in forcing it down.

1,218,287. TYPE-WRITING MACHINE. JOHN C. MCLAUGHLIN, East Orange, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 31, 1915. Serial No. 42,886. (Cl. 197—135.)

1. A card-holding attachment for type-writing machines, comprising a ring adapted to surround and embrace the platen, and a series of rolling elements carried by the ring and encircling the platen to provide a frictionless, card-guiding interior surface for the ring.



2. A card-holding attachment for type-writing machines, comprising a ring adapted to surround and embrace the platen, a series of rolling elements carried by the ring and encircling the platen to provide a frictionless, card-guiding interior surface for the ring, and means for effecting a resilient inward pressure on the anti-friction elements.

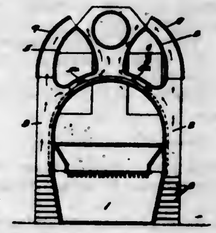
3. A card-holding attachment for type-writing machines, comprising a ring adapted to embrace the platen, an endless ball-race in said ring arranged to encircle the platen, and balls therein to provide a frictionless, card-guiding interior surface therefor.

4. A card-holding attachment for type-writing machines, comprising a contractile split spring ring adapted to embrace the platen, and rolling elements carried by the ring to provide a frictionless, card-guiding interior surface therefor, said ring operable by its contractility to press said rolling elements against the work on the platen.

5. A card-holding attachment for type-writing machines, comprising a ring adapted to surround and embrace the platen, and rolling elements carried by the ring to provide a frictionless, card-guiding interior surface therefor, said ring being cut or shaped at a part thereof to permit the side edge of a card to be led into the ring and around over the anti-friction elements therein.

[Claims 6 to 40 not printed in the Gazette.]

2,218,288. FURNACE. CHARLES J. MCPHERSON, Portland, Oreg. Filed Apr. 28, 1916. Serial No. 91,901. (Cl. 126—104.)



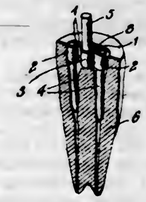
1. In a hot air furnace, in combination with the combustion chamber housing, smoke and heat pipes communicating with said combustion chamber and extending along the outside of said combustion chamber housing, and spaced therefrom, pipe deflectors adjacent said pipes for causing the air to contact with said pipes in its upward course, said pipes having their top sides tapering upwardly to an angle, whereby to increase the air contact therewith.

2. In a hot air furnace, in combination with a combustion chamber and the housing therefor, one or more pipes communicating with said combustion chamber and extended along the outside of said combustion chamber housing, said pipes having their sides next adjacent said housing conforming to the form of said housing and spaced therefrom, whereby to provide an air passageway between said housing and said pipes and having their top sides tapering to an angle in cross section, and pipe deflectors extended along the outside of said pipes at a space therefrom, substantially as and for the purpose described.

3. In a hot air furnace, in combination, a fire box, smoke and heat pipes communicating therewith and extended along the outside of said fire box, said pipes having their top sides formed into an upwardly pointing angle in cross section, and pipe deflectors extended along the outside and above said pipes at a space therefrom, whereby to increase air contact with said pipes, substantially as described.

4. In a hot air furnace, in combination, a fire box, smoke and heat pipes communicating therewith and extending along the outside of said fire box at a space therefrom, said pipes having their under surfaces formed in parallelism with the upper surface of said fire box, said pipes also having their upper surfaces forming an upwardly directed angle extending longitudinally thereof, whereby to avoid any flat, top surface, and spaced deflectors adjacent said pipes in substantial parallelism with their upper surfaces, substantially as and for the purpose described.

1,218,289. ARTIFICIAL DENTURE. JOHN A. MAKER, Duluth, Minn. Filed Apr. 25, 1916. Serial No. 93,476. (Cl. 32—9.)



1. The combination with the crown post and anchoring pins of an artificial denture, of a support for the said post and pins embodying means for yieldably supporting the pins.

2. As a new article of manufacture, a support for the crown post and anchoring pins of an artificial denture including sockets arranged to receive and frictionally grip the ends of the said crown post and anchoring pins.

3. As a new article of manufacture, a support for the crown post and anchoring pins of an artificial denture comprising a socket arranged to receive one end of the crown post and sockets located at opposite sides of the first mentioned socket and arranged to receive the ends of the anchoring pins and yieldably support the said pins.

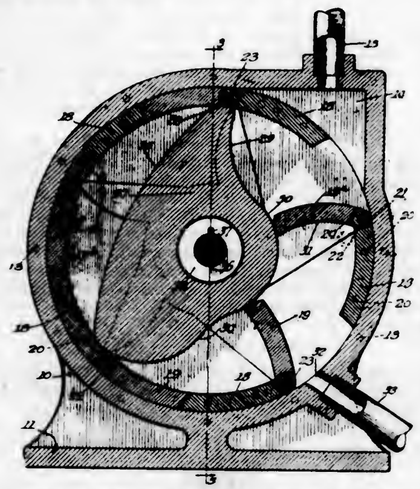
4. As a new article of manufacture, a support for the crown post and anchoring pins of an artificial denture comprising a socket arranged to receive one end of the crown post and yieldable expansible sockets arranged to receive and frictionally grip the ends of the anchoring pins and yieldably support the said pins.

5. As a new article of manufacture, a band of yieldable material having its opposite sides bent in at corresponding points to provide a plurality of sockets for the reception of the crown post and anchoring pin of an artificial denture.

1,218,290. ROTARY MOTOR. HENRY J. MATTERN, Chicago, Ill. Filed June 8, 1916. Serial No. 102,897. (Cl. 121—65.)

1. The combination in a rotary motor of a stationary casing having suitable inlet and exhaust ducts, a cage rotatable therein and comprising opposite spaced apart disks, webs joining the disks near their peripheries, blades pivotally mounted in the disks between the webs and adapted to form when in their outermost position with the webs a cylindrical surface coacting with the inner surface of the casing, a blade controlling cam within the rotor, a

shaft extending through the casing and upon which one of the disks is secured, a hub projecting from the cam through the casing and surrounding the shaft, and stationary means connected with the hub outside the casing for preventing rotary movement of the cam.



2. The combination in a rotary motor of a stationary casing having suitable inlet and exhaust ducts, a cage rotatable therein and comprising opposite spaced apart disks, webs joining the disks near their peripheries, blades pivotally mounted in the disks between the webs and adapted to form when in their outermost position with the webs a cylindrical surface coacting with the inner surface of the casing, a blade controlling cam within the rotor, a shaft extending through the casing and upon which one of the disks is secured, a hub projecting from the cam through the casing and surrounding the shaft, an arm projecting from said hub, a quadrant carried by the casing and a manually releasable latch member carried by the arm and arranged for engagement with the quadrant.

3. The combination in a rotary motor of a stationary casing having suitable inlet and exhaust ducts, a cage rotatable therein and comprising opposite spaced apart disks, webs joining the disks near their peripheries, blades pivotally mounted in the disks between the webs and adapted to form when in their outermost position with the webs a cylindrical surface coacting with the inner surface of the casing, a blade controlling cam within the rotor, a shaft extending through the casing and upon which one of the disks is secured, a hub projecting from the cam through the casing and surrounding the shaft, an arm projecting from said hub, a quadrant carried by the casing and a manually releasable latch member carried by the arm and arranged for engagement with the quadrant, the end of the quadrant in the direction of rotor movement being open to permit free movement of the lever therebeyond.

1,218,291. COMBINED AIR AND STUFFED CUSHION. CHRISTIAN W. MEINECKE, East Orange, N. J., assignor to Meinecke & Company, New York, N. Y., a Corporation of New Jersey. Filed June 29, 1916. Serial No. 106,549. (Cl. 5—1.)

1. A cushion comprising, in combination, an inclosure of air tight material, a valve for said inclosure which may be opened or closed at will so as to permit of a greater or lesser amount of air to be contained within said inclosure, stuffing material within said inclosure, and an independent covering material for said stuffing material the volume occupied by the stuffing material being less than the volume contained by the air tight inclosure when completely filled with air.



2. A cushion comprising, in combination, an inclosure of air tight material, a valve for said inclosure which may be opened or closed at will so as to permit of a greater or lesser amount of air to be contained within said inclosure, highly elastic stuffing material within said inclosure, and an independent air pervious covering material for said stuffing material the volume occupied by the stuffing material being less than the volume contained by the air tight inclosure when completely filled with air.

1,218,292. LIGHTING AND SIGNALING SYSTEM FOR VEHICLES. WILLIAMS GRANT MILLIGAN, Bartlesville, Okla. Filed Dec. 8, 1911. Serial No. 664,682. (Cl. 116—65.)



1. In a signaling system for a motor vehicle, front and rear signals, automatic means for controlling the same in a given sequence, and manual means for controlling the same collectively.

2. In a motor vehicle, a signal system comprising a "Halt" signal at the rear of the vehicle, a speed governor connected with the movable part of the vehicle and controlling said signal and a brake lever commonly connected to manually operate said signal and a brake.

3. In a motor vehicle, a "Slow" signal, together with an indicator of the speed of the vehicle and a brake lever, both said indicator and lever having common operative connection with said signal.

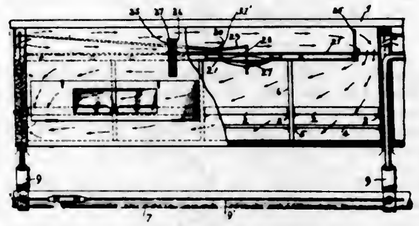
4. In a motor vehicle, a signal system comprising a "Slow" signal, a brake lever, a signal control lever carried by the brake lever, and operable independently thereof, an indicator of the speed of the vehicle, and operating connections between said control lever, indicator and signal whereby said signal is operated commonly by either said control lever or said indicator.

5. In a motor vehicle, a signal system comprising "Slow" and "Halt" signals, a speed governor commonly operating said "Slow" and "Halt" signals, and a brake lever also having operative connections with said "Slow" and "Halt" signals.

1,218,293. INCUBATOR. FRANK WARD MILLS, Little Falls, N. Y. Filed Nov. 17, 1915. Serial No. 61,961. (Cl. 119—42.)

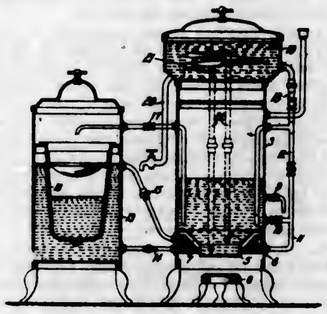
1. An incubator having an egg containing chamber with ventilating flues communicating between the egg containing chamber and the atmosphere, a valve casing having ports therein with heating pipes communicating therewith and through which the heating liquid is adapted to circulate, a heating circulating container positioned within the incubator and passing through said ventilating flues and communicating with said ports, and thermostatically-operated valves regulating the circulation of the heating fluid.

2. An incubator having compartments with a perforated partition between the same, egg trays in one compartment, said incubator being provided with ventilating flues, one of which communicates between the egg tray containing compartment and the atmosphere and the other between the latter and the other compartment of the incubator, a valve casing having ports therein with heating pipes communicating therewith and through which heating fluid is adapted to circulate, a heating circulating container positioned within the incubator and passing through said ventilating flues and communicating with said ports, and thermostatically-operated valves regulating the flow of heating fluid into the heat circulating container.



3. An incubator having an egg containing chamber with ventilating flues communicating between the egg containing chamber and the atmosphere, a valve casing having ports therein with heating pipes communicating therewith and through which the heating liquid is adapted to circulate, a heating circulating container positioned within the incubator and passing through said ventilating flues and communicating with said ports, and a thermostatically-operated valve regulating the circulation of the heating fluid and closing in a direction of the flow of the heating fluid.

1,218,294. COFFEE-MAKING APPARATUS. ALEX MINTZ, New York, N. Y. Filed Mar. 1, 1916. Serial No. 81,881. (Cl. 53—3.)



1. In a coffee-making apparatus, the combination of a boiler having a water-jacket at the bottom thereof, means for heating the bottom of the boiler and the jacket, a coffee-pot associated with the boiler, a conduit connecting the jacket to the bottom of the pot, a conduit connecting the pot to the jacket, a valve-controlled conduit from the jacket to the boiler to direct boiling water from the boiler into the jacket, a valve-controlled conduit connecting the bottom of the boiler to the jacket, a coffee-urn in said pot, and means for supplying water from the boiler to the urn.

2. In a coffee-making apparatus, the combination of a boiler having a water-jacket at the bottom thereof, means insulating the jacket from the bottom of the boiler, means for heating the bottom of the boiler and the jacket, a coffee-pot associated with the boiler, a conduit connecting the jacket to the bottom of the pot, a second conduit connecting the jacket to the pot above he first conduit, a valve-controlled conduit connecting the boiler to the jacket, a coffee-urn in said pot, and means for supplying water from the boiler to the urn.

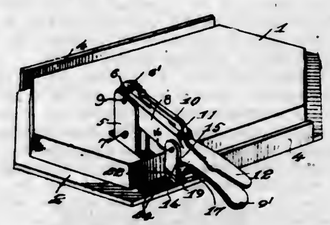
3. In a coffee-making apparatus, the combination of a boiler having a water-jacket at the bottom thereof, means insulating the jacket from the bottom of the boiler, means for heating the bottom of the boiler and the jacket, a coffee-pot associated with the boiler, a conduit connecting the jacket to the bottom of the pot, a second conduit connecting the jacket to the pot adjacent the top thereof, a valve-controlled conduit connecting the boiler to the jacket to supply the jacket with boiling water from the boiler, a valve-controlled conduit connecting the jacket with the boiler at the bottom thereof, a coffee-urn in said pot, and means for supplying boiling water from the boiler to the urn.

4. In a coffee-making apparatus, the combination of a boiler having an annular water-jacket at the bottom, a chamber between the jacket and the bottom of the boiler for insualting the jacket from the boiler, means for supplying heat to the bottom of the boiler and the jacket, a valve-controlled conduit from the boiler to the jacket to supply the same with boiling water, a valve-controlled conduit from the jacket to the boiler adjacent the bottom thereof, a coffee-pot, conduits from the jacket to the coffee-pot for causing a circulation of water therethrough, a coffee-urn in the pot, and means for supplying water from the boiler to the urn.

5. In a coffee-making apparatus, the combination of a boiler having a dished bottom, a water-jacket surrounding the dished bottom, a chamber spacing the water-jacket from the bottom, means for supplying heat to the bottom of the boiler and to the jacket, a valve-controlled conduit connecting the boiler to the jacket to supply the jacket with boiling water from the boiler, a valve-controlled conduit connecting the jacket to the boiler adjacent the bottom thereof, a coffee-pot, conduits connecting the jacket to the coffee-pot to cause a circulation of water therethrough, an urn in the coffee-pot, and means for supplying boiling water from the boiler to the urn.

[Claims 6 and 7 not printed in the Gazette.]

1,218,295. WIRE-HOLDER. HALSEY J. MITCHELL, Schenectady, N. Y. Filed Nov. 27, 1915. Serial No. 63,837. (Cl. 140—92.1.)



1. A wire holder for coil forms, including, in combination with a coil form comprising a body having a lateral marginal flange, a standard on said body, a lever pivoted on said standard, a locking pawl on said lever, a clamping jaw pivotally carried by said lever, and resilient means for maintaining said jaw in engagement with the walls of said body.

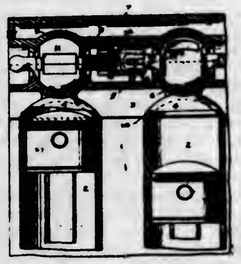
2. A wire holder for coil forms, including, in combination with a coil form comprising a body having a lateral marginal flange, a standard on said body, a lever pivoted on said standard, a clamping jaw pivoted on said lever, resilient means associated with said jaw, and a removable wearing surface on said jaw, as and for the purpose set forth.

3. A wire holder for coil forms, including, in combination with a coil form comprising a body having a lateral marginal flange, a standard on said body, a lever associated with said standard, locking means therefor, a clamping jaw on said lever, a wearing plate carried by said clamping jaw and detachably secured thereto, and a wedge plate interposed between said wearing plate and said clamping jaw, as and for the purpose set forth.

4. A wire holder for coil forms, including, in combination with a coil form, a standard arranged on said form,

a pivotal block having teeth arranged thereon removably carried by said standard, a lever pivotally connected with the pivot block and a locking pawl on said lever engageable with the teeth of said pivot block, a clamping jaw pivotally carried by the lever, and resilient means for maintaining said jaw in engagement with the coil form.

1,218,296. ROTARY VALVE. ALBERT E. MOORHEAD, Ukiah, Cal. Filed July 24, 1916. Serial No. 110,919. (Cl. 123—190.)



1. In combination with a globular casing, a rotary valve comprising a central section having a port therethrough, and a terminal section operatively connected to rotate together, the central section being approximately in the form of a sphere from which a segment has been cut off at opposite sides and the terminal section being in the form of said segment, and means for pressing the terminal section from the central section.

2. In combination with a globular casing, a rotary valve comprising a central section having a port therethrough, and a terminal section operatively connected to rotate together, the central section being approximately in the form of a sphere from which a segment has been cut off at opposite sides and the terminal section being in the form of said segment, and compressed springs interposed between the central and terminal sections for pressing the terminal section from the central section.

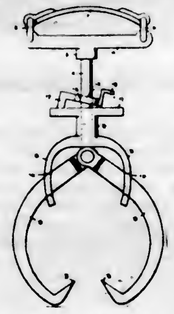
3. In combination with a globular casing, a rotary valve comprising a central section having a port therethrough, and a terminal section operatively connected to rotate together, the central section being approximately in the form of a sphere from which a segment has been cut off at opposite sides and the terminal section being in the form of said segment, means for pressing the terminal section from the central section, the terminal section having an extension with a rounded head, a loose joint for connecting said head with a rotary device to impart rotary motion to the terminal section, and means whereby the rotation of the terminal section rotates the main section.

4. In combination with a globular casing, a rotary valve comprising a central section having a port therethrough, and a terminal section operatively connected to rotate together, the central section being approximately in the form of a sphere from which a segment has been cut off at opposite sides and the terminal section being in the form of said segment, means for pressing the terminal section from the central section, the terminal section having an extension with a rounded head, a loose joint for connecting said head with a rotary device to impart rotary motion to the terminal section, the faces of said terminal and the main section having registering grooves, and a key in said grooves.

5. In combination with a globular casing, a rotary valve comprising a central section having a port therethrough, and a terminal section operatively connected to rotate together, the central section being approximately in the form of a sphere from which a segment has been cut off at opposite sides and the terminal section being in the form of said segment, means for pressing the terminal section from the central section, the terminal section having an extension with a rounded head, a loose joint for connecting said head with a rotary device to impart rotary motion to the terminal section, the faces of said terminal and the main section having registering grooves, a key in said grooves, said spring pressing against said key.

[Claim 6 not printed in the Gazette.]

1,218,297. TONGS. GEORGE N. MORROW, De Beque, Colo. Filed June 13, 1916. Serial No. 103,550. (Cl. 57—9.)



1. The herein described tong comprising a handle, a pair of jaws pivoted to one end of the handle, prongs on said jaws, a sleeve slidably mounted on the handle, a T-head at one end of the sleeve, a pair of curved arms at the opposite end of the sleeve having slots therethrough through which the jaws extend, and means to lock the sleeve against outward movement on the handle.

2. The herein described tongs comprising a handle, a pair of jaws pivotally attached to one end of the handle, prongs on said jaws, a sleeve slidably mounted on the handle, curved arms carried by the sleeve having slots adjacent their free ends through which the jaws extend, a T-head at the end of the sleeve opposite the arms, a ring surrounding the handle between the T-head and outer end of the handle, said ring having an opening greater in diameter than the diameter of the handle, and means to tilt the ring at an angle to the trend of the handle whereby said ring will frictionally engage the handle and prevent outward movement of the sleeve.

3. A tong of the class described, comprising the combination with a handle and a pair of jaws pivotally secured to said handle, of a sleeve slidably mounted on the handle, curved arms at one end of said sleeve, said arms having slots through which said jaws extend, and a T-head at the opposite end of the sleeve adapted to receive pressure whereby said jaws may be swung to open or closed position by the movement of the sleeve on the handle.

4. The herein described tong comprising the combination with a handle and a pair of jaws pivotally secured to one end of the handle, of a sleeve slidable on said handle, arms at one end of the handle having slots therethrough for the reception of said jaws, a T-head at the opposite end of said sleeve, a ring surrounding said handle, and an L-shaped dog carried by the ring adapted to tilt the ring to cause the edges thereof to grip the handle and prevent outward movement of the sleeve.

1,218,298. SPARK-PLUG. ARTHUR R. MOSLER, New York, N. Y., assignor to A. R. Mosler & Co., Yonkers, N. Y., a Corporation of New York. Filed Nov. 14, 1912. Serial No. 731,321. (Cl. 123—169.)

1. In a spark plug, a one piece insulating block provided with a longitudinal hole therethrough, a shoulder in the said hole, an electrode provided with an abutment, the said electrode being surrounded by cement for holding it securely in the hole in said block with its abutment substantially against the said shoulder, and a packing ring between the shoulder and the abutment.



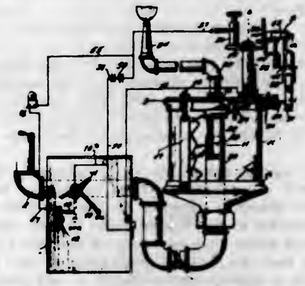
2. In a spark plug, a one piece insulating block provided with a longitudinal hole therethrough, one portion of said hole being of greater cross section than the remainder, an electrode located in said hole and having one portion of greater cross section than the remainder, its larger part and smaller part being of appreciably less cross section than the corresponding parts of the hole, and a layer of cement surrounding the electrode within the hole for securing the electrode in the block.

3. In a spark plug, an insulating block, an electrode therein, a cap for the block carrying a binding post, and comminuted metal adhesively secured between the cap and block for making electric connection between the binding post and electrode.

4. In a spark plug, an insulating block, an electrode therein, a cap for the block carrying a binding post, and comminuted metal cemented between the cap and block for making electric connection between the binding post and electrode.

5. In a spark plug, an insulating block, an electrode cemented therein, a cap for the block carrying a binding post, and a layer of cement between the cap and the block, the said layer being impregnated with comminuted metal for making electric connection between the electrode and binding post.

1,218,299. GAS-VALVE. MAXYMILIAN J. MYSZKER, Buffalo, N. Y. Filed Oct. 10, 1914. Serial No. 866,117. (Cl. 200—27.)



1. In a device of the class described, the combination of a gas supply pipe, a casing carried by said pipe, a burner pipe leading from said casing, a movable cap carried by said first-mentioned pipe, an arm extending from said cap, a shaft revolubly mounted upon said casing, a longitudinally slotted member carried by said shaft, said arm extending through said member, a contact plate fixed upon said shaft, said cap being adapted to be moved by gas pressure within said supply pipe, whereby said shaft will be rocked so as to swing said plate, and means carried by said casing, and cooperating with said plate for closing an electric circuit.

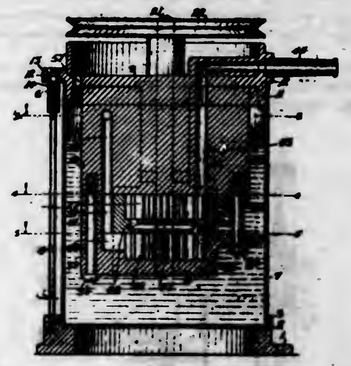
2. In a device of the class described, the combination of a gas chamber, a shaft carried by said chamber, means for turning said shaft when gas pressure within said chamber decreases, a plate carried by said shaft, a bracket carried upon and insulated from said chamber, a contact wire carried by said bracket, an insulated hanger bracket carried by said first mentioned bracket, means electrically connected to said chamber and said wire, a crank pivotally mounted upon said hanger bracket, a flap fixed upon said crank, said plate being adapted to swing into said flap as said shaft is rotated, whereby said crank will be turned into engagement with said wire for closing a circuit.

3. In a device of the class described, the combination of a gas chamber, a shaft carried by said chamber, means for turning said shaft when gas pressure within said chamber decreases, a plate carried by said shaft, a bracket carried by and insulated from said chamber, a bolt carried by said bracket, a wire carried by said bolt, an insulated hanger bracket carried by said bolt, said hanger bracket having an inverted U-shaped lower portion, a crank pivotally supported by said U-shaped portion, a flap carried by said crank within said U-shaped portion and depending therebelow, means electrically connected to said chamber and said wire, said plate being adapted to swing into engagement with said flap as said shaft is rotated, whereby said flap will swing said crank into engagement with said wire for closing a circuit.

4. In a device of the class described, the combination of a gas supply pipe, a casing carried by said pipe, a burner pipe leading from said casing, a movable cap carried by said first-mentioned pipe, an arm extending from said cap, a shaft revolubly mounted upon said casing, a longitudinally slotted member carried by said shaft, said arm extending through said member, a contact plate fixed upon said shaft, said cap being adapted to be moved by gas pressure within said supply pipe, whereby said shaft will be rocked so as to swing said plate; a bracket carried by and insulated from said casing, a bolt carried by said bracket, a wire carried by said bolt, an insulated hanger bracket carried by said bolt, said hanger bracket having an inverted U-shaped lower portion, a crank pivotally supported by said U-shaped portion, a flap carried by said crank within said U-shaped portion and depending therebelow, means electrically connected to said casing and said wire, said plate being adapted to swing into engagement with said flap as said shaft is rotated, whereby said flap will swing said crank into engagement with said wire for closing a circuit.

5. In a device of the class described, the combination of a gas chamber, a shaft carried thereby, means for turning said shaft, operated by fluid pressure within said chamber, and circuit closing means outside said chamber operated by said shaft.

1,218,300. VACUUM-PUMP. GEORGE F. NELSON, Berkeley, Cal. Filed Nov. 20, 1915. Serial No. 62,498. (Cl. 230—30.)



1. The combination of a liquid container, a pump secured therein comprising a pump head having exhaust and discharge conduits, a series of gear cases secured to said pump head, a pair of intermeshing gear wheels in each gear case, a fixed shaft carried by the pump head and on which a gear-wheel of each pair is loosely mounted, a rotary shaft having a bearing in the pump head and to which

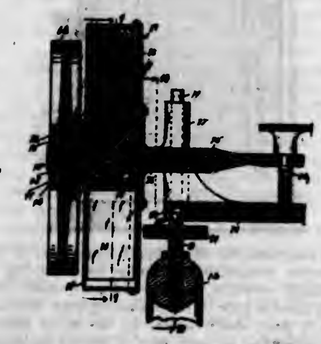
the other gear-wheel of each pair is secured, each gear case having a transverse conduit leading from the space between the gear-wheels on one side of the gear case to the space between the gear-wheels on the other side of the next lower gear case, the lowermost gear case having an entrance for liquid.

2. The combination of a liquid container, a pump secured therein comprising a pump head having exhaust and discharge conduits, a series of gear cases secured to said pump head, a pair of intermeshing gear-wheels in each gear case, a fixed shaft carried by the pump head and on which a gear-wheel of each pair is loosely mounted, a rotary shaft having a bearing in the pump head and to which the other gear-wheel of each pair is secured, each gear case having a transverse conduit leading from the space between the gear wheels on one side of the gear case to the space between the gear-wheels on the other side of the next lower gear case, the lowermost gear case having passages through its bottom for pumping up liquid, the pump head having an aperture therethrough for the escape of air from the container to the atmosphere.

3. The combination of a liquid container, a pump secured therein comprising a pump head having exhaust and discharge conduits, a series of gear cases secured to said pump head, a pair of intermeshing gear-wheels in each gear case, a fixed shaft carried by the pump head and on which a gear-wheel of each pair is loosely mounted, a rotary shaft having a bearing in the pump head and to which the other gear-wheel of each pair is secured, each gear case having a transverse conduit leading from the space between the gear-wheels on one side of the gear case to the space between the gear wheels on the other side of the next lower gear case, the lowermost gear case having a passage through its bottom for pumping up liquid, the pump head having a lubricating conduit from the interior of the container to the bearing for the rotary shaft in the pump head.

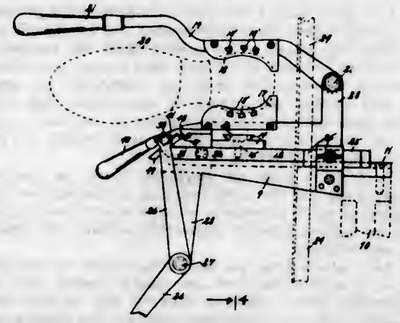
4. The combination of a liquid container, a pump secured therein comprising a pump head having exhaust and discharge conduits, a series of gear cases secured to said pump head, a pair of intermeshing gear-wheels in each gear case, a fixed shaft carried by the pump head and on which a gear-wheel of each pair is loosely mounted, a rotary shaft having a bearing in the pump head and to which the other gear-wheel of each pair is secured, each gear case having a transverse conduit leading from the space between the gear-wheels on one side of the gear case to the space between the gear-wheels on the other side of the next lower gear case, the lowermost gear case having a passage through its bottom for pumping up liquid, the pump head having a lubricating conduit from the interior of the container to the bearing for the rotary shaft in the pump head, and also having an aperture therethrough for the escape of air from the container to the atmosphere.

1,218,301. HEEL-CUTTING APPARATUS. WILLIAM J. NESBITT, Los Angeles, Cal. Filed Apr. 10, 1916. Serial No. 90,275. (Cl. 143—27.)



In heel cutting apparatus, the combination of a frame, guides thereon, an arm provided with a socket and having side extensions slidably fitted on said guides, adjustable pivots mounted on said side extensions, a shaft mounted on said pivots, a thumb-screw passing through the shaft and adjustably connected to said arm, and a threaded post provided with a handwheel, said post adjustably mounted on the frame and provided with a head rotatably fitted in said socket, substantially as and for the purpose set forth.

1,218,302. HEEL-CUTTING APPARATUS. WILLIAM J. NESBITT, Los Angeles, Cal. Filed Aug. 8, 1916. Serial No. 113,829. (Cl. 12—42.)



1. The combination of a shelf, a cutter, a platform movably mounted on the shelf, a pivot on the platform, an adjustable guide connected to said pivot, and shoe-heel clamping means adjustably mounted on said guide.

2. In heel cutting apparatus, the combination of a shelf, a cutter, a platform movably mounted on the shelf, a guide movably mounted on the platform so that it can be disposed at the desired angle to the cutter, and heel clamping means movably mounted on the guide so that the heel can be moved transversely into the plane of said cutter so that the heel will be cut by a subsequent movement of said platform.

3. In heel cutting apparatus, the combination of a support, a cutter, a movable platform carried by said support, a pivot on the platform, a guide adjustable horizontally on said pivot to dispose it at the desired angle to said cutter, and means on said guide adapted to move the heel transversely into the plane of said cutter so that the heel will be cut by a subsequent movement of said platform.

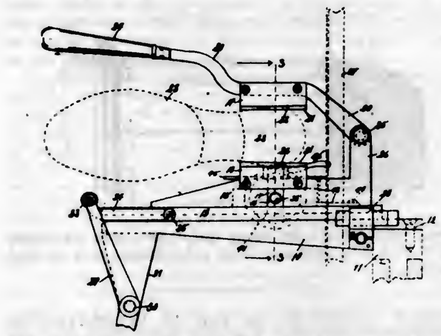
4. In heel cutting apparatus, the combination of a support, a cutter, a movable platform carried by said support, a guide pivotally mounted on the platform so that it can be disposed at the desired angle to said cutter, and means on said guide adapted to clamp and move the heel transversely into the plane of said cutter so that the heel will be cut by a subsequent movement of said platform.

5. In heel cutting apparatus, the combination of a movably mounted platform, a cutter, a guide adjustably mounted on the platform so that it can be disposed at the desired angle to said cutter, and means on said guide adapted to clamp and move the heel transversely into the plane of said cutter so that the heel will be cut by a subsequent movement of said platform.

1,218,303. HEEL-CUTTING APPARATUS. WILLIAM J. NESBITT, Los Angeles, Cal. Filed Sept. 16, 1916. Serial No. 120,567. (Cl. 12—42.)

1. In heel cutting apparatus, the combination of a movably mounted platform, a pivot on the platform, a table movably mounted on the platform, shoe-heel clamping means on the table, and means including a rotatable rod whereby said table is adjustably connected to said pivot.

2. In heel cutting apparatus, the combination of a movably mounted platform, a pivot on the platform, a table resting on the platform and provided with a slot through which the pivot extends, shoe-heel clamping means on the table, and means including a rod connecting the table adjustably to the pivot.

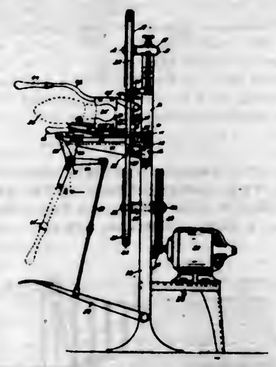


3. In heel cutting apparatus, the combination of a movably mounted platform, a pivot on the platform, a table resting on the platform and provided with a slot through which the pivot extends, shoe-heel clamping means on the table, a cutter, and means connecting the table to the pivot, so that the table can be moved toward or away from the cutter and also be disposed at the desired angle to the cutter.

4. In heel cutting apparatus, the combination of a movably mounted platform, a pivot on the platform, a table movably mounted on the platform, and provided with a slot through which the pivot extends, shoe-heel clamping means on the table, means including a rod whereby the table is adjustably connected to said pivot, and a clamping nut on said pivot for locking the table in adjusted position on said platform.

5. In heel cutting apparatus, the combination of a movably mounted platform, a pivot on the platform, a table resting on the platform and provided with a slot through which said pivot extends, shoe-heel clamping means on the table, a rod mounted on the table and having a screw connection with the pivot, and a clamping nut on the pivot for locking the table in adjusted position on the platform.

1,218,304. HEEL-CUTTING APPARATUS. WILLIAM J. NESBITT, Los Angeles, Cal. Filed Oct. 2, 1916. Serial No. 123,439. (Cl. 12—42.)



1. In heel cutting apparatus, the combination of a movably mounted platform, a guide adjustably mounted on the platform, a post on said guide, a sleeve fitted on said post, and heel clamping jaws carried by said sleeve.

2. In heel cutting apparatus, the combination of a movably mounted platform, an adjustable guide mounted on the platform, a post on said guide, a sleeve fitted on said post and provided with a bearing, a heel clamping jaw having an offset portion connected to said sleeve, a lever provided with a stub shaft mounted in said bearing, and a heel clamping jaw connected to said stub shaft.

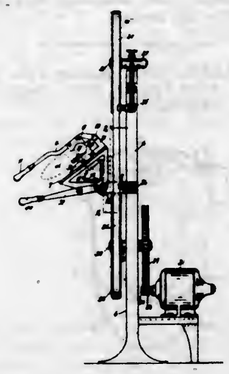
3. In heel cutting apparatus, the combination of a movably mounted platform, a guide adjustably mounted on the platform, a post on said guide, a sleeve fitted on said post, a heel clamping jaw adjustably connected to said sleeve, and a heel clamping jaw pivotally connected to said sleeve.

4. In heel cutting apparatus, the combination of a movably mounted platform, a post movably mounted on the platform, a sleeve pivotally mounted on said post, and heel clamping jaws mounted on said sleeve.

5. In heel cutting apparatus, the combination of a movably mounted platform, a post mounted on the platform and adjustable transversely to said platform, a sleeve pivotally mounted on said post and provided with a bearing, a heel clamping jaw provided with an offset portion adjustably connected to said sleeve, a lever provided with a stub-shaft fitted in said bearing, and a heel clamping jaw connected to said stub shaft.

[Claim 6 not printed in the Gazette.]

1,218,305. HEEL-CUTTING APPARATUS. WILLIAM J. NESBITT, Los Angeles, Cal. Filed Oct. 9, 1916. Serial No. 124,725. (Cl. 12—42.)



1. In heel cutting apparatus, the combination of a frame, an adjustable substantially horizontal pivot shaft mounted on said frame, a table mounted on said shaft, a pivot on said table, and a shoe holding device connected to said pivot.

2. In heel cutting apparatus, the combination of a frame, an adjustable shaft thereon, a frame pivotally mounted on the shaft, a table secured fast to the last mentioned frame, and an adjustable heel holding device mounted on said table.

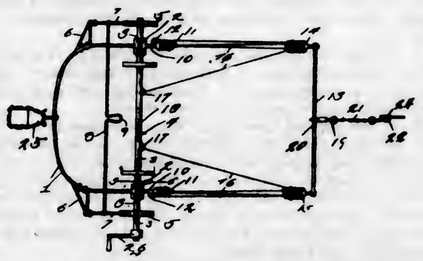
3. In heel cutting apparatus, the combination of a frame, a substantially horizontal threaded shaft mounted on said frame, a frame pivotally mounted on said shaft, a table secured fast to the last mentioned frame, and a heel holding device pivotally mounted on said table.

4. In heel cutting apparatus, the combination of a frame, an adjustable shaft mounted on said frame, a frame pivotally mounted on said shaft and having a table thereon, a heel holding device mounted on said table, and a finger on the first mentioned frame adapted to engage the second mentioned frame to limit the movement of the table.

5. In heel cutting apparatus, the combination of a frame, a substantially horizontal threaded shaft mounted on said frame, a frame pivotally mounted on said shaft, a table secured fast to the second mentioned frame, a heel holding device pivotally mounted on said table, and a

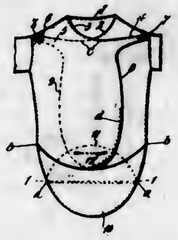
finger on the first mentioned frame adapted to engage the second mentioned frame to limit the movement of the table.

1,218,306. WIRE-STRETCHER. ALBERT ODENBACH, Bonesteel, S. D. Filed Sept. 8, 1916. Serial No. 119,088. (Cl. 54—65.)



A wire stretcher comprising a yoke, a drum engaged with the yoke, shanks carried by the yoke, said shanks having eyes formed therein, pulleys supported by the shanks, a pair of swivelly connected bars, pulleys carried by one of the bars, ropes trained around each of said pulleys and having one of their ends connected to the eyes and their other ends connected with the drum, as and for the purpose set forth.

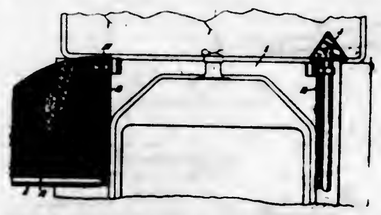
1,218,307. INFANT'S VEST. HATTIE JANE PAGE, Grand Rapids, Mich. Filed July 24, 1916. Serial No. 111,099. 119,088. (Cl. 254—65.)



In a child's vest, a closed back and an open double-breasted front, the outer fold of the front having a slot through it near the junction of the shoulder seam and the armscye seam, a strap extending from one breast fold under the other breast fold and through the slot and the free end securely connected with the shoulder at the point of connection of the shoulder seam and the armscye seam, a similar strap extending from the outer fold of the vest with the free end extending to, and securely connected with the opposite shoulder at the point of connection of the shoulder seam and the armscye seam.

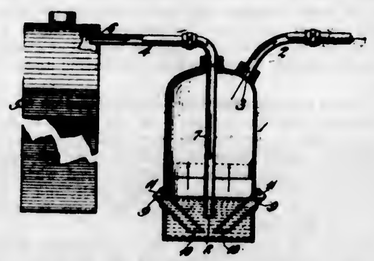
1,218,308. AUTOMOBILE SAFETY-SIGN. VARIKY PAVLOFF and ZVETKO ORIZAROFF, Harrisburg, Pa. Filed Mar. 9, 1916. Serial No. 83,134. (Cl. 116—31.)

In an automatic safety sign for automobiles, a pivotally mounted arm adapted to be swung from a vertical to a horizontal position, said arm having a bent end formed of sufficient length to extend through the dashboard of the automobile, a gear wheel secured to said arm on the part extending through said dashboard, said gear wheel being arranged on the opposite side of the dashboard to the remaining part of the arm, a rack on each side of the gear wheel meshing therewith, independent guides for said racks whereby when one of said racks is pressed downwardly the arm will be swung from a vertical to a horizontal position and the opposite rack elevated, and when said opposite rack is depressed the parts will be moved in the opposite direction and counterbalancing



means connected to the upper end of said arm for assisting in returning said arm from a horizontal to a vertical position.

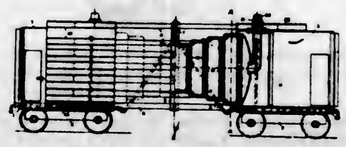
1,218,309. VAPOR-MIXER FOR AN INTERNAL-COMBUSTION ENGINE. RICHARD MANLY PELHAM and CHARLES A. KUENZEL, Jr., Denver, Colo. Filed May 31, 1916. Serial No. 100,927. (Cl. 261—16.)



1. A vapor mixer for an internal combustion engine embodying a casing adapted to contain water or other suitable liquid, a suction pipe connectible with the engine, a suction pipe connectible with a radiator adapted to enter said casing, and a member for supplying atmospheric air to the interior of said casing, the last-named suction pipe and said member communicating with said casing with their discharge openings below the surface of the liquid therein.

2. A vapor mixer for an internal combustion engine embodying a casing adapted to contain water or other suitable liquid, a suction pipe connectible with an engine and with said casing, a member communicating with the atmosphere and connected with the casing with its discharge opening below the surface of the liquid therein, and a suction pipe connectible with a radiator and entering said casing with its discharge opening below the surface of the liquid therein.

1,218,310. PNEUMATIC-DYNAMIC CAR FOR DIMINISHING THE DESTRUCTIVE EFFECTS OF RAILROAD COLLISIONS. PASQUALE PENZA, Bologna, Italy. Filed Dec. 4, 1914. Serial No. 875,417. (Cl. 213—39.)

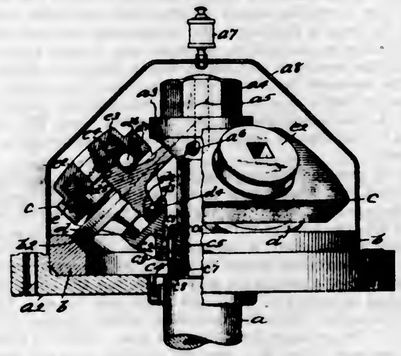


1. A car for absorbing shocks caused by a collision or the like comprising two relatively movable end car bodies, an air tank acting as an air cushion and composed of a double system of telescopic tubes the ends of which are connected to said car bodies, wheel trucks upon which said car bodies are mounted, beams surrounding the air tank, guides formed in the walls of the car bodies to receive the ends of said beams and means for controlling, in case of a collision, the escape of air from the air tank to the atmosphere.

2. A car for absorbing shocks caused by a collision or the like comprising two relatively movable end car bodies, wheel trucks upon which said car bodies are mounted, an air tank comprising a system of telescopic tubes the ends of which are connected to said car bodies, beams surrounding the air tank and slidingly engaging the walls of the said car bodies, valves for permitting, in the event of a collision, the escape of the air compressed in said air tank to the atmosphere at a desired pressure, an air brake pipe and means for also permitting compressed air to pass from the air atnk to said brake pipe.

3. A car for absorbing shocks caused by a collision or the like comprising two relatively movable end car bodies, wheel trucks upon which said car bodies are mounted, an air tank comprising a system of telescopic tubes the ends of which are connected to said car bodies, a lining of flexible material arranged within said tubes to render them airtight, means for maintaining said lining in position, beams surrounding the air tank and slidingly engaging the walls of the said car bodies, valves for permitting, in the event of a collision, the escape of the air compressed in said air tank to the atmosphere at a desired pressure, an air brake pipe, and means for also permitting compressed air to pass from the air tank to said brake pipe.

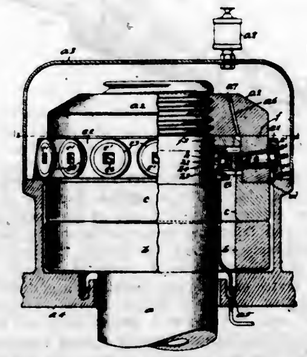
1,218,311. THRUST-BEARING. JULIUS A. PERKINS, New York, N. Y. Filed May 6, 1913. Serial No. 765,783. (Cl. 64—50.)



The combination with a rotating element of a curved bearing member carried thereby, a base, a curved bearing member carried by said base, a plurality of rollers interposed between said bearing members, a cage for said rollers, a cap on said cage on the axis of each roller, a bearing ring in each cap, a plurality of balls interposed between each roller and each bearing ring, and an equalizing plate interposed between each cap and the respective bearing ring, each face of said equalizing plate being outwardly curved at diametrically opposed points, and the curved portions on one face being at right angles to those on the other face.

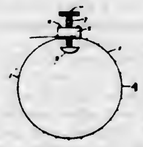
1,218,312. THRUST-BEARING. JULIUS A. PERKINS, New York, N. Y. Filed May 6, 1913. Serial No. 765,784. (Cl. 64—50.)

1. A bearing, comprising a support, a bearing member thereon, a shaft, a bearing member thereon, rollers interposed between said members, and a ring interposed between said support and the bearing member carried thereby, each face of which is provided with two diametrically opposed convex portions, the convex portions on one face being at right angles to those on the other face, whereby said ring may rock on said support and the bearing member may rock on said ring, said ring presenting upper and lower contact lines extending to the outer edge of said ring.



2. As an article of manufacture, for use in a bearing, a ring each face of which is provided with two diametrically opposed convex portions, the convex portions on one face being at right angles to those on the other face, whereby the direction of rock on one face is perpendicular to the direction of rock on the opposite face.

1,218,313. SURGICAL TOURNIQUET. HENRY W. PLUMMER, Augusta, Me. Filed Aug. 28, 1916. Serial No. 117,336. (Cl. 128—3.)



1. A tourniquet consisting of a block, a limb embracing compression band coacting with the block, a compression member disposed through said block and having unobstructed direct endwise movement in one direction, said member being operable independently of the band, and automatic means for holding said member against movement in an opposite direction.

2. A tourniquet consisting of a block, a limb embracing compression band coacting with the block, a compression member disposed through said block and having unobstructed direct endwise movement in one direction, said member being operable independently of the band.

3. A tourniquet consisting of a block, a limb embracing compression band coacting with the block, a compression member loosely disposed through said block and operable independently of the band, and means for retarding the movement of said compression member in one direction.

4. A tourniquet consisting of a block, a limb embracing compression band, a compression member disposed loosely through the block and provided with beveled threads, and a locking member carried by the block and including relatively movable members normally in engagement with said threads.

5. A tourniquet consisting of a block, a limb embracing compression band, a compression member loosely disposed through the block and provided with beveled threads, a locking member carried by the block and comprising relatively movable members normally in engagement with the threads, and yieldable means for maintaining the last named members in their normal positions.

[Claims 6 to 11 not printed in the Gazette.]

1,218,314. MACHINE FOR PLACING SPRINGS IN CASINGS. CHARLES PERCY READ, Chicago, Ill. Filed June 26, 1916. Serial No. 106,080. (Cl. 100—57.)



1. In a device of the class described, a spring retaining receptacle, an ejector for a spring, movable in said receptacle to drive the spring out of an opening in said receptacle, and frictional means adjacent to the opening in the receptacle adapted to control the action of the spring in the receptacle as it moves therefrom.

2. In a device of the class described, a cylindrical member adapted to receive a spring, means movable in the cylindrical member to eject a spring from one end thereof, flexible spring fingers extending from the said end of the cylinder forming normally a cone, but adapted to be expanded into a cylinder by said ejecting means.

3. In a device of the class described, a hollow cylinder open at one end, a piston and piston rod movable therein toward and from said open end of the cylinder, a plurality of relatively long spring fingers extending from the open end of the cylinder converging together at their outer end, and means for attaching the open end of a cloth pocket placed over said spring fingers to the end of the cylinder, for the purposes set forth.

4. In a device of the class described, a hollow cylinder open at one end, a piston and piston rod movable therein, and a cone made of a plurality of long and a plurality of intermediately placed short spring fingers attached to the open end of the cylinder, for the purposes set forth.

5. In a device of the class described, a hollow cylinder open at one end, a piston and piston rod movable therein, and a cone made of a plurality of long and a plurality of intermediately placed short spring fingers attached to the open end of the cylinder, and means for securing the open end of a pocket over said cone, for the purposes set forth.

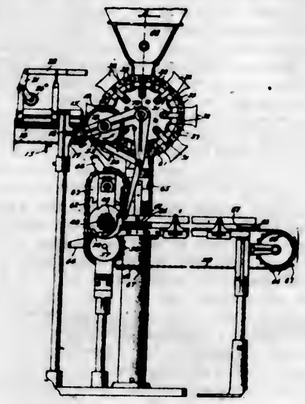
[Claims 6 and 7 not printed in the Gazette.]

1,218,315. FILLING-MACHINE. CHARLIE REDD, Chicago, Ill., assignor to Isaac Pieser and Charles G. Livingston, Chicago, Ill. Filed Nov. 29, 1915. Serial No. 64,123. (Cl. 226—9.)

1. In combination, package-conveying means moving in a closed curvilinear path in a vertical plane comprising package holders radial of the conveying means, means to feed empty packages into the holders with their open ends inward, means central of the path of the packages for filling the same, means to release the packages when in a vertical position, feed-out means below the conveying means, and means to lower the packages to and deposit them on the feed-out means when released.

2. In combination, package-conveying means moving in a closed curvilinear path in a vertical plane comprising holders radial of the conveying means, a horizontal feed-in device to hold packages with their open ends toward the conveying means and arranged to feed the packages into the holders while in a horizontal position, means central of the path of the packages for filling the same, means to release the packages when in a vertical position, feed-out means below the conveying means, and means to lower the packages to and deposit them on the feed-out means when released.

3. In combination, package-conveying means moving step by step in a closed curvilinear path in a vertical plane comprising holders radial of the conveying means, a horizontal feed-in device to hold packages with their open ends toward the conveyer, means to operate the feed-in device step by step while the conveying means is stationary to feed the packages into the holders, feed-out means below the conveying means, means to lower the packages to and deposit them on the feed-out means when released, and means to operate the feed-out and lowering means step by step while the conveying means is at rest.



4. In combination, package-conveying means moving in a closed curvilinear path in a vertical plane comprising package holders radial thereof, means to feed empty packages into the holders with their open ends inward, a constantly driven shaft, a Geneva gearing between the shaft and the conveying means to drive the conveying means step by step, a mutilated gear connecting the shaft with the feed-in means to drive the same step by step while the conveying means is stationary, means central of the path of the packages for filling the same, means to release the packages when in a vertical position, feed-out means below the conveying means, and means to lower the packages to and deposit them on the feed-out means when released.

5. In combination, package-conveying means moving in a closed curvilinear path in a vertical plane comprising package holders radial thereof, means to feed empty packages into the holders with their open ends inward, a constantly driven shaft, a Geneva gearing between the shaft and the conveying means to drive the conveying means step by step, a mutilated gear connecting the shaft with the feed-in means to drive the same step by step while the conveying means is stationary, means central of the path of the packages for filling the same, means to release the packages when in a vertical position, feed-out means below the conveying means, means to lower the packages to and deposit them on the feed-out means when released, a one-revolution clutch-device controlling the feed-out and package-lowering means, and a cam timed with a Geneva gearing to operate the clutch device to drive the feed-out and package-lowering means step by step when the conveying means is stationary.

[Claims 6 to 11 not printed in the Gazette.]

1,218,316. WRENCH. MARK A. RICH, Los Angeles, Cal. Filed Aug. 22, 1916. Serial No. 116,271. (Cl. 81—165.)

A wrench, comprising a stock provided with an opening therethrough, a fixed jaw thereon, a jaw movable therein, a rotating nut in said opening in operative engagement with said movable jaw, a screw held in said stock and passed through said nut, a spring contained within said nut, said nut being counterbored to receive the same and being slotted at the outer end, and a cap on said nut having a part thereof within said counterbore and a projection thereon held in said slot to prevent relative rotation, said spring forcing said nut and cap apart into



frictional engagement with said stock at opposite ends of said opening.

1,218,317. PUPPET-VALVE FOR INTERNAL-COMBUSTION ENGINES. GEORGE R. RICH, Oak Park, Ill., assignor to Rich Tool Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 17, 1913. Serial No. 801,392. (Cl. 137—32.)



A puppet valve of the character described, formed with a head portion having a tapered face, and having a thin, flanged, imperforate disk of "tungsten steel" covering its end and tapered face, and permanently secured thereto in close contact therewith.

1,218,318. COLLAR-BUTTON. SOLOMON RIPPS, Little Rock, Ark. Filed Oct. 27, 1916. Serial No. 128,023. (Cl. 24—90.)

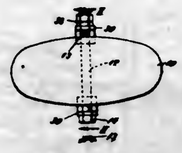


1. A button comprising an oblong frame, a roller mounted in the frame and on the line of its major axis, a yoke carried midway the ends of the frame and on its inner face, a button carried by the yoke, and prongs carried by said inner face of the frame.

2. A collar button comprising a rectangular frame, a roller arranged on the longitudinal axis of the frame, a yoke at right angles to and straddling said roller, and a button head carried by the yoke.

1,218,319. PEDAL-PAD. GEORGE H. RIVES, New York, N. Y. Filed June 14, 1916. Serial No. 103,662. (Cl. 74—81.)

1. In a device of the character described, a pad adapted to be applied on a pedal, a rigid member embedded in the pad with parts protruding from the pad, and a gripping element adjustable on each protruding part of the rigid member for engaging the pedal to releasably hold the pad thereon.



2. In a device of the character described, a pad adapted to be applied on a pedal, a rigid member embedded in the pad with parts protruding from the pad, a gripping element adjustable on each protruding part of the rigid member for engaging the pedal to releasably hold the pad thereon, and a locking element to prevent accidental movement of the gripping element.

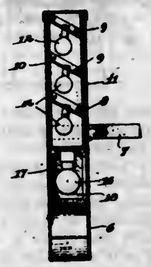
3. In a device of the character described, a pad adapted to be applied on a pedal, a plurality of rigid members protruding from spaced parts of the pad, and a plurality of gripping elements one adjustable on each of the rigid members for engaging the pedal to releasably hold the pad thereon.

4. In a device of the character described, a pad adapted to be applied on a pedal, a plurality of rigid members protruding from spaced parts of the pad, a gripping element adjustable on each member for engaging the pedal to releasably hold the pad thereon, and a locking element to prevent accidental movement of the gripping elements.

5. In a device of the character described, a pad adapted to be applied on a pedal, a rigid tubular member embedded in the pad, a bar movably disposed in the tubular member with its ends protruding from the pad, and a clip adjustable on each protruding end of the bar for engaging the pedal to releasably hold the pad thereon.

[Claims 6 to 8 not printed in the Gazette.]

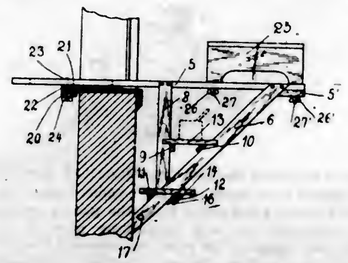
1,218,320. VEHICLE-SIGNAL. HARRY DE FOREST ROBBINS, Chicago, Ill., assignor of one-half to Eugene S. Robbins, Chicago, Ill. Filed Jan. 22, 1916. Serial No. 73,602. (Cl. 40—132.)



1. The combination of a casing arranged to be mounted at one side of a vehicle and visible both front and rear; horizontal forwardly and rearwardly inclined partitions in said casing dividing the same into compartments; lights in said compartments; means for controlling said lights; and translucent sign plates over the front and rear of said compartments, substantially as described.

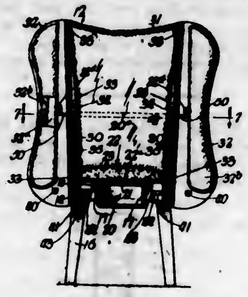
2. The combination of a casing arranged to be mounted at one side of a vehicle and visible both front and rear; horizontal forwardly and rearwardly inclined partitions in said casing dividing the same into compartments, there being three compartments opening at the rear and two at the front; lights in said compartments; means for controlling said lights; and translucent sign plates over the front and rear of said compartments, substantially as described.

1,218,321. WINDOW-STAND. FREDERICK ROTTI, Elizabethport, N. J. Filed May 28, 1915, Serial No. 30,999. Renewed Dec. 5, 1916. Serial No. 135,270. (Cl. 20—87.)



A window stand comprising a main working surface, a pair of inwardly inclined supports secured to and depending from the outer end of said surface, struts secured to said working surface and said supports, and gripping means secured to the opposite end of said working surface, said gripping means adapted to sustain the main working surface in horizontal position, transverse stripe secured to the supports and the struts and extending beyond the sides thereof and steps secured to and arranged transversely of the extended portions of said strips.

1,218,322. COMBINED CHAIR AND TABLE. JOHN P. SANDELL, Chicago, Ill. Filed June 9, 1916. Serial No. 102,622. (Cl. 155—6.)



1. A device of the kind described comprising a seat frame, a normally upright back member hinged to one end of said seat frame and adapted to be swung from its upright position into a horizontal position, said back member comprising a central main section and lateral wing sections hinged thereto, means locking said wing sections in a position substantially at right angles to said main section when said back member is in an upright position, means for releasing said wing sections from their locked position and means moving said wing sections outwardly about their hinged connection with said main sections substantially into the plane of said main back section.

2. A device of the kind described comprising a seat frame, a normally upright back member hinged to one end of said seat frame and adapted to be swung from its upright position into a horizontal position, said back member comprising a central main section and lateral wing sections hinged thereto, means locking said wing sections in a position substantially at right angles to said main section when said back member is in an upright position, means for releasing said wing sections from their locked position, means moving said wings outwardly about their hinged connection with said main section substantially into the plane of said main back section, and means operable upon the downward swinging movement of said back member, to move said wing sections fully into the plane of said main back section and to automatically lock said section in said last named position.

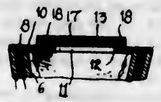
3. A device of the kind described comprising a seat frame, a normally upright back member hinged to one end of said seat frame and adapted to be swung from its upright position into a horizontal position, said back member comprising a central main section and lateral wing sections hinged thereto, means locking said wing sections in a position substantially at right angles to said main section when said back member is in an upright position, means for releasing said wing sections from their said locked position, means moving said wing sections outwardly about their hinged connection with said main section substantially into the plane of said main back section, means operable upon the downward swinging movement of said back member, for moving said wing sections fully into the plane of said back section, and for automatically locking said wing sections in said position and means locking said back member as a whole in said horizontal position.

4. A device of the kind described comprising a substantially horizontal seat frame having front, rear and side rails, a normally upright back member fulcrumed to said seat frame in a plane above said rear rail, and adapted to be swung from its upright position into a horizontal position, said back member consisting of a central main section and lateral wing sections hinged thereto, said wing sections normally extending in planes at right angles to said main section and embracing a part of said side rails, means automatically locking said wing sections in said last named position, means adjacent said front rail of said seat frame for releasing said wing locking means and means moving said wing sections substantially into the plane of said main back section after said wing locking means has been released.

5. A device of the kind described comprising a substantially horizontal seat frame having front, rear, and side rails, a normally upright back member fulcrumed to said seat frame in a plane above said rear rail, and adapted to be swung from its upright position into a horizontal position, said back member consisting of a central main section and lateral wing sections hinged thereto, said wing sections normally extending in planes at right angles to said main section and embracing a part of said side rails, latch devices mounted on said side rails, coacting devices carried by said wing sections and adapted for engagement with said latch devices to lock said wing sections in position, means for releasing said latch devices from locking engagement with said coacting devices on said wing sections and means for moving said wing sections substantially into the plane of said main back section after said latch devices have been released from engagement with their coacting devices on said wing sections.

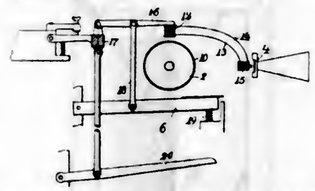
[Claims 6 to 11 not printed in the Gazette.]

1,218,323. BURIAL-CASKET. IDA SCHMIDT, Los Angeles, Cal. Filed Sept. 25, 1916. Serial No. 122,086. (Cl. 27—14.)



A burial casket including a body, a lid or cover therefor having a longitudinal opening, a channeled rubber strip extending along the longitudinal edges of said opening, a sliding glass cover plate for the opening engaged at its longitudinal edges in the channeled strip, and a metal cover plate for said transparent plate provided upon its opposite edges with a rubber friction strip for engagement with said rubber guide strip to retain the cover plate in position.

1,218,324. SOUND-PRODUCING DEVICE. MELVIN L. SEVERY, Arlington Heights, Mass. Continuation of application Serial No. 357,978, filed Feb. 18, 1907. This application filed Mar. 22, 1913. Serial No. 756,169. (Cl. 179—100.2.)



1. The combination of a plurality of acoustic timbre forms having smooth surfaces, each composed of magnetically attractive material of varying lateral extent; magnets having their poles within the influence of said forms; a telephonic receiver wired to said magnets; means controlling the circuits of said magnets for causing any one or more to affect said receiver; and means for producing relative travel of said forms past said magnets.

2. In an instrument for producing acoustic vibrations the combination of a rotatable member having a smooth surface of magnetic material whose lateral extent varies according to the sound vibrations to be produced; a magnet having a laterally extended pole piece presented to such surface; and a telephonic device connected with said magnet and actuated by the magnetic variations produced therein by the movement of said magnetic surface past said pole piece.

3. In a musical instrument the combination of a rotating cylinder having a superficially variable magnetically attractive surface; a wound magnet having a T-shaped pole piece presented to such surface; and a vibrating body affected by said magnet.

4. A rotating circularly arranged line of repetitions of magnetic variations; a plurality of magnets disposed to present the poles thereof at points about said line spaced to correspond with said repetitions; and a translating device actuated by all said magnets simultaneously.

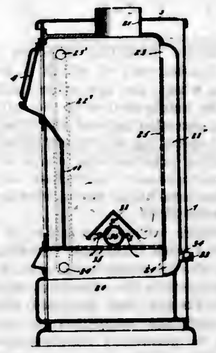
5. In a musical instrument the combination of a plurality of timbre forms each comprising a rotatable member having a smooth surface of magnetic material whose lateral extent varies according to sound vibrations to be produced by the respective forms; magnets having laterally extended pole pieces, corresponding to said timbre forms; a lever mechanism for moving all said magnets simultaneously toward or from said forms; a telephonic device associated with said magnets and operable thereby; and keys, one for each magnet, for causing said magnet to operate said telephonic device when said key is actuated.

[Claim 6 not printed in the Gazette.]

1,218,325. INCINERATING APPARATUS. OSCAR M. SHANNON, New York, N. Y., assignor, by mesne assignments, to E. C. Stearns & Company, Syracuse, N. Y., a Corporation of New York. Filed Jan. 17, 1912. Serial No. 671,684. (Cl. 110—18.)

1. In a crematory, a casing having a combustion chamber therein adapted to receive and hold the matter to be incinerated, said chamber having a grate in the bottom thereof, a burner adjacent said grate, a flue affording a passageway from the space beneath the grate to the chamber of the incinerator above the normal level of the mass of material in the chamber, said flue opening directly into said chamber so that the hot gases from the burner may effectually mix with the gaseous products of partial combustion before the latter emerge into the chimney, and an auxiliary flue for supplying a stream of air to the chamber above the normal level of the mass of material therein to insure the complete consumption of the gaseous products of partial consumption before the latter emerge into the chimney.

2. In a crematory, a combustion chamber adapted to receive matter to be incinerated, said chamber having a grated bottom and a flue leading to the chimney, a main flue communicating with said chamber and with the space beneath the grated bottom, an auxiliary flue delivering air into the said chamber at a point above the matter to be incinerated so that air delivered through said flue may mix with the gaseous products of partial combustion before the latter emerge from said chamber, a burner, shielding means opening downwardly for directing flames from said burner laterally with respect to the mass of material to be incinerated, said shielding means adapted to engage and support a portion of said matter while permitting flames passing therebeneath to impinge upon said matter, said main flue having vents in the sides thereof opening into said chamber.

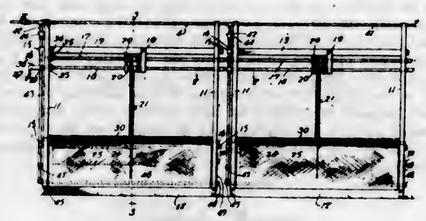


3. In a crematory, a combustion chamber adapted to receive matter to be incinerated, said chamber having a grated bottom and a flue leading to the chimney, a main flue communicating with said chamber and with the space beneath the grated bottom, an extended auxiliary flue adjacent a side wall of said chamber and delivering air into said chamber at a point above the matter to be incinerated so that air delivered through said flue may mix with the products of partial combustion before the latter emerge from said chamber, a burner, shielding means opening downwardly for directing flames from said burner laterally with respect to the mass of material to be incinerated, said shielding means adapted to engage and support a portion of said matter while permitting flames passing therebeneath to impinge upon said matter.

4. In a crematory, a combustion chamber adapted to receive and hold matter to be incinerated, said chamber having a grated bottom, a flue extending into the chimney, a burner adjacent said grated bottom, a main flue having its upper portion directed laterally into the chamber and having an opening adjacent the burner, a portion of the walls of the main flue being perforated at least one auxiliary flue adjacent the side wall of said chamber adapted to deliver air laterally into the chamber above the normal level of the material to be incinerated, so that the air from the main and auxiliary flues may effectually mix with the gaseous products of combustion in said chamber before the latter emerge from the chamber.

5. In a crematory, a combustion chamber adapted to receive and hold matter to be incinerated, said chamber having a grated bottom, a flue extending into the chimney, a burner adjacent said grated bottom, a main flue in communication with the chamber and having an opening adjacent the burner, a portion of the walls of the main flue being perforated, at least one auxiliary flue adjacent the side wall of said chamber adapted to deliver air into the chamber above the normal level of the material to be incinerated, said flues directing the air laterally into said chamber so that it may effectively mix with the gaseous products of combustion in said chamber before the latter emerge from the chamber, said auxiliary flue having means for drawing air from the exterior of the crematory.

1,218,326. PLANT PROTECTOR AND IRRIGATOR. THOMAS JOSEPH SHERIDAN, Charleston, S. C. Filed Oct. 28, 1916. Serial No. 128,172. (Cl. 47—22.)



1. A plant protector including a series of portable, laterally tiltable frames, each of which is provided with adjustable covering wings, and operating shafts connected to the wings for the manipulation of the latter, the operating shafts being extended beyond the frames, and couplings between the operating shafts of the several frames throughout the series, whereby the wings of the several frames may be simultaneously controlled and tilted, said couplings including detachable parts whereby the frame may be independently tilted.

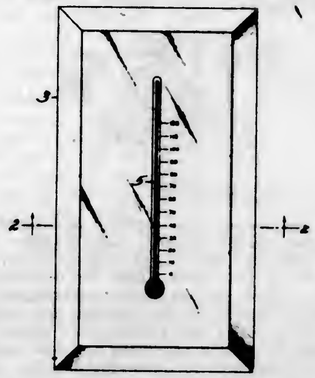
2. A plant protector including a series of frame, each of which is provided with adjustable covering wings, and portable operating shafts connected to the wings for the manipulation of the latter, the operating shafts being extended beyond the frames, and provided with apertured extremities, and couplings connecting the said shaft extremities whereby to permit of simultaneous control of the wings of the several frames of the series, said couplings including relatively shiftable parts whereby the frames may assume various angles with respect to one another.

3. A plant protector including a series of frames, each of which is provided with adjustable covering wings, and rotatable operating shafts connected to the wings for the manipulation of the latter, the operating shafts being extended beyond the frames and provided with apertured extremities, couplings connecting the said shaft extremities whereby to permit of simultaneous control of the wings of the several frames of the series and including tubular connecting members receiving the shaft extremities and provided with pins extending through the apertures of the shaft extremities, and opposed to one another, and a coupling member extending into the opposed ends of the connecting members and having pins projecting therethrough at its opposite ends, said coupling member being of reduced diameter as compared to the diameter of the connecting members, and having its pins extending therethrough at right angles to one another, all for the purpose described.

4. In a plant protector, end frames each consisting of a horizontal cross bar and an upright extending vertically from the center of the cross bar, longitudinal tie bars connecting the uprights, side bars connecting the ends of the said cross bar, and wings extending between said end frames having upper end trunnions journaled in the uprights above the said cross bars, each of said wings consisting of a covered frame curved outwardly and downwardly in the arc of a circle, and resting in closed position upon one of the said side bars.

5. In a plant protector, end frames each consisting of a horizontal cross bar and an upright extending vertically from the center of the cross bar, longitudinal tie bars connecting the uprights, tie bars connecting the ends of the said cross bar, and wings extending between said end frames having upper end trunnions journaled in the uprights above the said cross bars, each of said wings consisting of a covered frame curved outwardly and downwardly in the arc of a circle and resting, in closed position, upon one of the said tie bars, and means for elevating each of said wings and securing the same in selected adjustment.

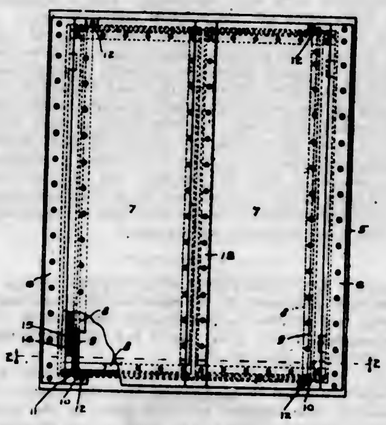
1,218,327. MIXING-SLAB. ARTHUR SHORROCK, North Adams, Mass. Filed Jan. 5, 1916. Serial No. 70,427. (Cl. 73—52.)



A dental mixing slab provided with a groove in the under side thereof of relatively small length and width and of relatively great depth whereby said slab will not be materially weakened by said groove, a mercury tube in said groove adjacent the upper surface of said slab, and means for sealing said tube in said groove, said slab being provided with a scale adjacent said tube to form a thermometer therewith.

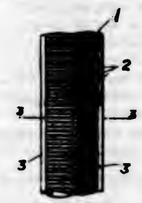
[Claims 6 to 8 not printed in the Gazette.]

1,218,328. COUNTERBALANCED CELLAR-DOOR. FRANK S. SMALLWOOD, Indianapolis, Ind. Filed Dec. 20, 1915. Serial No. 67,887. (Cl. 94—7.)



The combination with a cellar door-frame of angle iron with one flange laid horizontally and the other depending vertically therefrom, and an inside overhanging member, of a door comprising an outside plate and a frame of angle iron riveted to the inner side of said plate, a rod extending across the door through said last frame and having its ends journaled in the depending flange of said first frame, a pair of weight-suspending bars hinged to the door plate between said hinge rod and the adjacent edge of the door which is parallel with the rod, near the rod, and a weight connecting the two bars and removably secured thereto approximately counterbalancing the weight of the door.

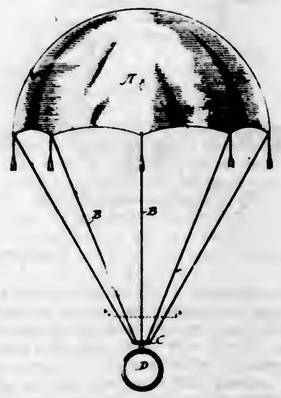
1,218,329. RETAINING ENVELOP OR COVER FOR STORAGE-BATTERY ELECTRODES. EDWARD W. SMITH and EDWARD G. STEINMETZ, Philadelphia, Pa. Filed July 1, 1911. Serial No. 636,469. (Cl. 204—29.)



1. An insulator and retainer for storage battery electrodes which comprises an independent smooth unitary wall of insulating material provided with minute slots formed by the removal of material of the wall and the openings of which are of such width that current and electrolyte may and disintegrated fine active material may not pass through and which openings are held open by the imperforate portion of the wall.

2. An insulator and retainer for storage battery electrodes which comprises an independent smooth unitary wall of insulating material provided with minute slots formed by the removal of material of the wall and the openings of which are of such width that current and electrolyte may and disintegrated fine active material may not pass through and which openings are held open by the imperforate portion of the wall, and axial ribs integral with the wall.

1,218,330. TOY PARACHUTE. JUSTUS M. SMITH, Oakhurst, N. J. Filed Mar. 22, 1916. Serial No. 85,797. (Cl. 244—21.)

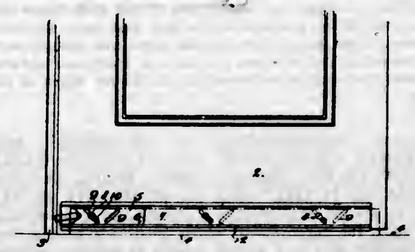


1. In a parachute, an umbrella shaped member having rigid suspension members fastened thereto, said rigid suspension members loosely connected to a ring, means for keeping the suspension members from slipping around said ring with respect to the relative position of each other member about said ring, a bar forming a diameter to said ring and a weight suspended from said bar.

2. In a parachute, an umbrella shaped member having rigid suspension members, means for flexibly connecting said suspension members to said umbrella shaped member, a ring pierced with holes, the lower ends of said suspension members being looped through said holes and about a circumference of said ring, and a weight integral with said ring.

3. In a parachute, an umbrella shaped member having rigid suspension members, a ring of relatively small diameter having holes therein through which the lower ends of said suspension members are passed so as to secure said ring and members together, and a weight suspended from said ring.

1,218,331. DRAFT-EXCLUDER. SQUIRE J. SMITH, Vancouver, British Columbia, Canada, assignor, by mesne assignments, to Patent Devices, Limited, Vancouver, British Columbia, Canada. Filed Mar. 16, 1916. Serial No. 84,630. (Cl. 20—38.)



1. A draft excluder for doors or the like, comprising a strip of metal having a strip of flexible material secured to its lower edge and extending substantially across the entire width of the door, said strip having slots for the screws by which it is connected to the door which slots are angled upward toward the hinge style, springs for normally maintaining the strip clear of the floor line, and a contact member, a body detachably connected to one end of the strip on which body said contact member is pivoted to project beyond the hinge style of the door to contact with the hinge style of the door frame when the door is adjacent the closed position to move the strip endwise and press it downward to the floor line against the resistance of its springs.

2. A draft excluder for doors or the like, comprising a strip of metal having a strip of flexible material secured to its lower edge and extending substantially across the entire width of the door, said strip having slots for the screws by which it is connected to the door which slots are angled upward toward the hinge style, springs for normally maintaining the strip clear of the floor line, and a contact member projecting beyond the hinge style of the door to contact with the hinge style of the door frame when the door is adjacent the closed position to move the strip endwise and press it downward to the floor line against the resistance of its springs, said contact member being pivotally mounted on the inner end of a body, said body being adapted to be removably connected to either end of the strip, and the slots of said strip being in pairs oppositely angled.

3. A draft excluder for doors or the like, comprising a strip of metal the upper and lower edges of which are folded over to form a groove along its upper and lower edge and to retain a strip of flexible material along its lower edge, said strip having oppositely angled slots by which the strip may be secured to the lower outer face of the door by headed screws in those slots which are angled upward toward the hinge style, springs normally maintaining the strip clear of the floor line, and a tongue pivotally mounted in the inner end of a member removably insertible in the grooves at the end of the strip adjacent the hinge style, said tongue carrying member being flanged outward to bear against the folded edges of the strip and slotted to permit the tongue to project through, and be vertically movable in it, the projecting end of said tongue adapted to engage the hinge style of the door frame adjacent the closed position of the door and move the strip endwise to press the lower flexible edge into contact with the floor line.

4. A draft excluder for doors or the like, comprising a strip of metal the upper and lower edges of which are folded over to form a groove along its upper and lower edge and to retain a strip of flexible material along its

lower edge, said strip having oppositely angled slots by which the strip may be secured to the lower outer face of the door by headed screws in those slots which are angled upward toward the hinge style, springs normally maintaining the strip clear of the floor line, a tongue pivotally mounted in the inner end of a member removably insertible in the grooves at the end of the strip adjacent the hinge style, said tongue carrying member being flanged outward to bear against the folded edges of the strip and slotted to permit the tongue to project through, and be vertically movable in it, the projecting end of said tongue adapted to engage the hinge style of the door frame adjacent the closed position of the door and move the strip endwise to press the lower flexible edge into contact with the floor line, and a casing the edges of which are endwise slidable in the grooves formed by the folded edges of the strip.

1,218,332. MANUFACTURE OF DIOLEFINS, (ISOPRENE,) CAOUTCHOUC, AND CAOUTCHOUC-LIKE SUBSTANCES. HERMANN STERN, Munich, Germany. Filed July 17, 1914. Serial No. 851,486. (Cl. 23—24.)

1. In the art of producing a diolefin and a caoutchouc-like body, the improvement which consists in adding fuming sulfuric acid to a ketone capable of yielding isoprene and caoutchouc and separating the products formed.

2. In the art of producing a diolefin and a caoutchouc-like body, the improvement which consists in adding fuming sulfuric acid to a ketone and an alcohol both capable of yielding isoprene and caoutchouc, and separating the products formed.

3. In the art of producing a diolefin and a caoutchouc-like body, the improvement which consists in adding fuming sulfuric acid to an aliphatic ketone and an alcohol both capable of yielding isoprene and caoutchouc and separating the products formed.

4. In the art of producing a diolefin and a caoutchouc-like body, the improvement which consists in adding fuming sulfuric acid to a mixture of an aliphatic ketone and an alcohol both capable of yielding isoprene and caoutchouc and separating the products formed.

1,218,333. ART OF TREE SURGERY. GEORGE E. STONE, Amherst, Mass. Filed Mar. 30, 1916. Serial No. 87,854. (Cl. 47—36.)



1. In tree surgery, a cavity closure comprising a plurality of cut wood blocks arranged with their cross-section surfaces abutting and with their radial surfaces abutting.

2. In tree surgery, a cavity closure comprising a plurality of cut wood blocks arranged with their cross-section surfaces abutting, and their radial surfaces abutting, and means to fasten said blocks to a tree.

3. In tree surgery, a plurality of transversely grooved blocks, rods receivable in the grooves in said blocks, brackets extending into said grooves and having arms which are adapted to be attached to the sides of a tree cavity, between such sides and adjacent parts of said blocks, and means to fasten said rods to said brackets within said grooves.

4. In tree surgery, a plurality of transversely grooved blocks, rods receivable in the grooves in said blocks and having their ends extended beyond such plurality of blocks and adapted to enter slots in the sides of a tree cavity, brackets having arms which are adapted to be attached to the sides of said cavity, between such sides and adjacent parts of said blocks, and means to fasten said rods to said brackets within said grooves.

5. In tree surgery, a cavity closure comprising a plurality of blocks arranged with their cross-section surfaces and their radial surfaces respectively in abutting relation, said blocks having grooves in their cross-section surfaces, which grooves extend between said radial surfaces of such blocks and form channels, and rods in such channels to support said blocks and lock them together.

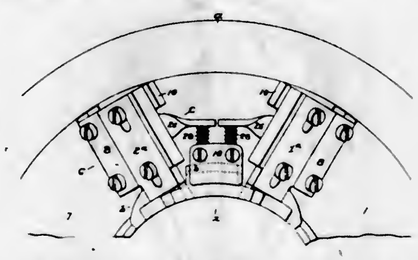
[Claims 6 to 8 not printed in the Gazette.]

1,218,334. BUCKLE. CHARLES A. SWANSON, Chicago, Ill. Filed Jan. 29, 1916. Serial No. 75,039. (Cl. 24—191.)



A buckle comprising a frame having a rear bar; a gripping member pivotally connected with said rear bar; a strap for coöperation with said buckle; a connecting member embracing said rear frame bar and having its ends bent back and fastened to one end of said strap for connecting said parts; and a keeper loop for coöperation with said strap, said loop having one side arranged between said ends of said connecting member and interposed between said rear frame bar and the adjacent end of said strap, substantially as described.

1,218,335. CAM MECHANISM FOR KNITTING-MACHINES. HARRY SWINGLEHURST, Roxbury, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed June 4, 1912. Serial No. 701,536. (Cl. 66—21.)



1. The combination, in a knitting machine, of a ledge for supporting the needles, said ledge having two relatively narrow gaps therein with intervening section of said ledge, a pair of stich cams occupying said gaps, and means, independent of the needles, for separately and independently moving said cams into and out of operative relation with the needles, whereby after stitches have been transferred to the projected needles, said stitches may, by the action of one cam upon the needles, be retracted to retaining position before the needles have, by the action of the other cam, been projected to clearing position.

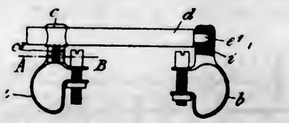
2. The combination, in a knitting machine, of a ledge for supporting the needles at the tuck point, said ledge having two relatively narrow gaps therein and an interposed section of said ledge, a pair of stitch cams occupying said gaps, and means, independent of the needles, for separately and independently moving said cams into and out of operative relation with the needles, whereby, after stitches have been transferred to the projected needles, said stitches may, by the action of one cam upon the needles, be retracted to retaining position before the needles have, by the action of the other cam, been projected to clearing position.

3. The combination, in a knitting machine, of a ledge for supporting the needles at the tuck point, said ledge having two relatively narrow gaps therein, and an interposed section of said ledge, a pair of stitch cams occupying said gaps and each constructed to depress needles approaching the face of the cam and raise needles approaching the back of the cam, and means independent of the needles for separately and independently moving said stitch cams into and out of operative relation with the needles, whereby after stitches have been transferred to the projected needles, said stitches may, by the action of one cam upon the needles, be retracted to retaining position before the needles have, by the action of the other cam, been projected to clearing position.

4. The combination, in a knitting machine, of a pair of separated stitch cams, an interposed cam movable so as to direct the needles to either of said stitch cams, a cam-carrying member, a downwardly projecting lip on the cam, an upwardly projecting lip on the cam carrying member, and means for retaining said lips in engagement with one another.

5. The combination, in a knitting machine, of a stitch cam, a cam coöperating therewith to form a channel for the passage of the needle butts, a guard cam entering the mouth of said channel and serving to bridge the same for the passage of needle butts from the coöperating cam to the stitch cam, said guard cam presenting an inclined face to the needle butts traversing the channel, and means for mounting said guard cam so that it can swing transversely into the channel, and can also swing transversely out of the same under the action of the needle butts on said inclined face of the cam.

1,218,336. LOCK FOR BICYCLES. JULIEN TARALLE, Geneva, Switzerland. Filed Oct. 7, 1916. Serial No. 124,255. (Cl. 70—90.)



1. A bicycle lock comprising a pair of collars adapted to be secured to the fork parts of a bicycle frame, a tube adjustably connected to and adapted to turn on one of said collars, a bolt movable longitudinally in said tube, and having a projecting end extending beyond the tube, a socket secured in the other collar and adapted to receive the projecting end of the bolt to lock the same and the tube in position, means for normally maintaining said bolt in position with its projecting end extending from the tube, and means separable from the tube for moving the said bolt to draw its projecting end within the tube.

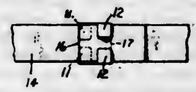
2. A bicycle lock comprising a pair of collars adapted to be secured to the fork parts of a bicycle frame, a tube adjustably connected to and adapted to turn on one of said collars, a bolt movable longitudinally in said tube, and having an end projecting beyond the same, means for normally maintaining the said bolt in position with its said end projecting beyond the tube, a socket secured to the other collar and adapted to receive the projecting end of the said bolt, and a key adapted to be inserted in the said tube to engage the said bolt to draw the projecting end thereof within the said tube.

3. A bicycle lock comprising a pair of collars adapted to be secured to the fork parts of a bicycle frame, a tube adjustably connected to and adapted to turn on one of said collars, a bolt movable longitudinally in said tube, and having an end projecting beyond the same, means for normally maintaining the said bolt in position with its said end projecting beyond the tube, a socket secured to the other collar and adapted to receive the projecting end of the said bolt, a key adapted to be inserted in the said tube to engage the said bolt to draw the projecting end thereof within the said tube, and means for maintaining the said tube and bolt in their inoperative position.

4. A bicycle lock comprising a pair of collars adapted to be secured to the fork parts of a bicycle frame, a stud revolubly connected to one of the said collars and having a flattened portion, a tube adjustably connected to the said stud, a bolt longitudinally movable within the said tube and having an end normally projecting beyond one end of the tube, means for normally maintaining the said bolt in position with its projecting end extending beyond the end of the tube, a socket connected to the other collar and adapted to receive the projecting end of the said bolt, means for engaging the flattened portion of the said stud to maintain the same with the tube and bolt in an inoperative position, and a key adapted to be inserted in the said tube to engage the bolt so as to move the same and withdraw their projecting end thereof into the tube.

5. A bicycle lock comprising a pair of collars adapted to be secured to the fork parts of a bicycle frame, a stud member swiveled in one of the said collars and provided with a flattened portion, a tube adjustably connected in the said stud member, a bolt longitudinally movable within said tube and having an end normally projecting beyond one end of the tube, a helical spring within the said tube for maintaining the said bolt in its normal position, a socket secured to the other collar and adapted to receive the projecting end of the said bolt, a key adapted to be inserted in the opposite end of the tube and to engage with the said bolt to move the same so as to withdraw its projecting end from the socket member, and a flat spring for engaging the flattened side of the said stud to maintain the same together with the tube and bolt in an inoperative position.

1,218,337. BAND-FASTENER. GEORGE H. TAYLOR, Richmond, Va. Filed July 27, 1916. Serial No. 111,690. (Cl. 24—23.)



1. As an article of manufacture, a band fastener comprising a separate plate over an entire face of which one end of a band may be folded and provided with a retaining projection extending at an angle from one side of said fastener, and clamping lugs extending at another angle in an opposite direction from said plate and disposed upon opposite sides of said fastener, said lugs being adapted to be folded toward the plate to retain the other end of a band thereon.

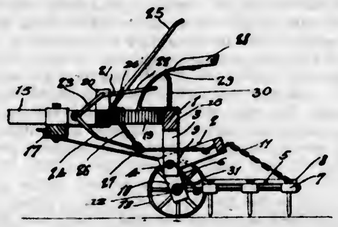
2. As an article of manufacture, a band fastener comprising a separate plate over which one end of a band may be folded and provided with retaining prongs extending at a right angle from each side of said plate, and clamping lugs extending at a right angle in an opposite direction from the side edges of said plate and disposed upon opposite sides of said prongs, said lugs being adapted to be folded toward the plate to retain the other end of a band thereon.

3. As an article of manufacture, a band fastener comprising a separate plate over which one end of a band may be folded and provided with retaining prongs extending from the opposite side edges of said plate, and clamping lugs extending from the opposite edges of said plate at the opposite sides of each prong, said prongs and lugs being adapted to be bent in opposite directions and at an angle to said plate.

1,218,338. HARROW. FREDERICK R. TENGLER, Schulenburg, Tex. Filed June 28, 1916. Serial No. 106,415. (Cl. 55—19.)

1. In a harrow structure, a substantially U-shaped supporting frame, an auxiliary frame pivotally connected to said supporting frame, depending arms formed upon said auxiliary frame, an axle carried by said depending arms,

supporting wheels mounted upon said axle, a rod for pivotally connecting said auxiliary frame to said U-shaped frame, a harrow structure including a plurality of harrow teeth carrying bars, said harrow structure being pivotally connected to said rod and means for pivotally moving said auxiliary frame for raising said harrow structure into or out of a land engaging position.



2. In a harrow structure, a substantially U-shaped supporting frame, an auxiliary frame pivotally connected to said supporting frame by means of a rod, depending arms formed upon said auxiliary frame, an axle carried by said depending arms, supporting wheels mounted upon said axle, a harrow structure including a plurality of harrow teeth carrying bars, rods connecting said harrow structure to said first named rod, flexible members connected to said auxiliary frame and said harrow structure for moving the harrow structure in unison with movement of the auxiliary frame.

3. In a harrow structure, a substantially U-shaped supporting frame, an auxiliary frame pivotally connected to said supporting frame by means of a rod, depending arms formed upon said auxiliary frame, an axle carried by said depending arms, supporting wheels mounted upon said axle, a harrow structure including a plurality of harrow teeth carrying bars, rods connecting said harrow structure to said first named rod, flexible members connected to said auxiliary frame and said harrow structure for moving the harrow structure in unison with movement of the auxiliary frame, a hand lever pivotally carried by said U-shaped supporting frame, rods connected to said hand lever and to said pivoted auxiliary frame for moving the auxiliary frame in an upward position for moving said harrow out of a land engaging position.

4. In a harrow structure, a substantially U-shaped supporting frame, an auxiliary frame pivotally connected to said supporting frame by means of a rod, depending arms formed upon said auxiliary frame, an axle carried by said depending arms, supporting wheels mounted upon said axle, a harrow structure including a plurality of harrow teeth carrying bars, rods connecting said harrow structure to said first named rod, flexible members connected to said auxiliary frame and said harrow structure for moving the harrow structure in unison with movement of the auxiliary frame, a hand lever pivotally carried by said U-shaped supporting frame, rods connected to said hand lever and to said pivoted auxiliary frame for moving the auxiliary frame in an upward position for moving said harrow out of a land engaging position, a foot lever pivotally carried by said supporting frame, said foot lever being connected to the rod which is connected to said hand lever and said pivoted frame, and means carried by said U-shaped frame for holding said foot lever in a depressed position for holding said harrow structure out of a land engaging position.

1,218,339. BUFFING-MACHINE. FREDRICK A. THURSTON, Lynn, Mass. Filed Dec. 21, 1914. Serial No. 878,271. (Cl. 51—17.)

1. A rotary feed member for buffing machines having a pad on its periphery consisting of a central portion of yielding material and an outer portion of relatively harder material surrounding said central portion.

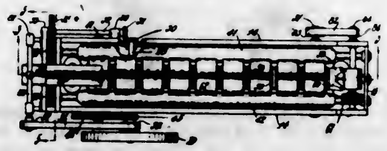
2. A rotary feed member for buffing machines having a pad on its periphery consisting of a central portion of soft rubber and an outer portion of hard rubber surrounding said central portion.



3. A pad for machines for buffing articles of sheet material consisting of a central portion of yielding material and an outer portion of relatively harder material surrounding said central portion, said central portion being of such size and contour as to be entirely covered by said article while the edges of said article project onto said surrounding harder portion.

4. A pad for machines for buffing articles of sheet material consisting of a central portion of yielding material and an outer portion of relatively harder material surrounding said central portion, said central portion being of such size and contour as to be entirely covered by said article while the edges of said article project onto said surrounding harder portion, said central portion being of substantially the contour but of less area than the area of the article to be buffed.

1,218,340. CANDY-TWISTING MACHINE. DOMENICO DELLA TORRE, Providence, R. I., assignor to The Anderson Candy Company, a Corporation of Rhode Island. Filed May 10, 1916. Serial No. 96,467. (Cl. 107—4.)



1. In a machine for forming stick candy, the combination of a series of twisting rollers arranged in pairs with their peripheries in parallelism with each other to form a peripheral trough adapted to receive a strip of candy, and means for imparting rotary motion in the same direction to all of the rollers.

2. In a machine for forming stick candy, the combination of pairs of twisting rollers arranged in series and rotatable in the same direction, traveling means for carrying the rollers, and means for feeding a strip of candy to the rollers.

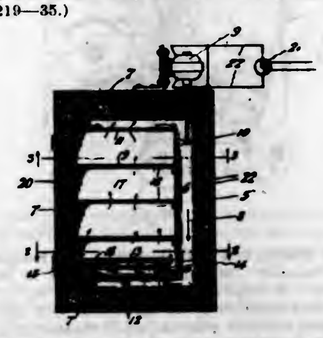
3. In a machine for forming stick candy, the combination of series of rollers arranged in pairs and rectilinearly movable transversely to the direction of their rotation, and driving rolls in frictional engagement with the peripheries of the rollers.

4. In a machine for forming stick candy, the combination of a conveyer, and means for driving the same, of a plurality of rollers mounted on the conveyer with their peripheries disposed lengthwise of the chain to form a peripheral trough, feed rolls adjacent the conveyer adapted to deliver a strip of candy to the rollers, friction rolls engaging the rollers, and means actuating the friction rolls for operating the feed rolls.

5. In a machine for forming stick candy, the combination of a conveyer, series of rollers on the conveyer arranged longitudinally thereof with their peripheries disposed to form a trough and adapted to support a strip of candy, a delivery guide adjacent one end of the member, a shoulder on the guide, a rotary blade adapted in its travel to coöperate with the shoulder to divide the strip, and means actuating the conveyer for operating the blade.

[Claims 6 to 9 not printed in the Gazette.]

1,218,341. ELECTRIC OVEN. CLARENCE TRUITT, Pomona, Cal. Filed July 11, 1914. Serial No. 850,501. (Cl. 219—35.)



1. The combination with an electrically heated oven, of an air duct disposed between the walls thereof, and substantially surrounded by a non-heat conductor, said duct being continuous and communicating with the upper and lower portions of the oven, a heating element disposed over an opening of said duct to retard the circulation, and means to produce a cyclic change of air or other medium within said oven, through said duct, and force the air into contact with said element to reheat the air.

2. The combination with an electrically heated oven, of a continuous air duct disposed within the walls thereof and communicating only with the two extremes of heat zones of said oven, a heating element in one of said zones and housed within a cover, said cover having an imperforate top and provided with foraminous side walls to produce an equal distribution of heated air or other medium within the oven, and means to assist the natural flow of the air through the oven, the duct, and into contact with said heating element.

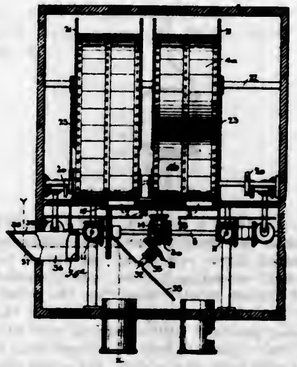
3. In an electrically heated oven the combination of a substantially continuous air duct disposed within the walls thereof and communicating with the extreme heat zones of the oven, a heating element in one of said zones and arranged at one end of the air duct, means associated with the heating element to retard the circulation over and through the heater and to distribute the heated air to one of the heat zones, and means to increase the circulation through the duct to the heater by exhausting air from the other heat zone.

4. In an electrically heated oven, the combination of a substantially continuous air duct disposed within the walls thereof and communicating with the extreme heat zones of the oven, a heating element in one of said zones and arranged at one end of the air duct, a foraminous cover for said heating element, and means to produce a lower air pressure in the lower heat zone and an increase of pressure in the higher heat zone adjacent to and within the cover inclosing the heating element.

1,218,342. FINDER FOR CAMERAS. MATHIAS J. VINIK, New York, N. Y. Filed Dec. 31, 1912. Serial No. 739,468. (Cl. 88—16.)

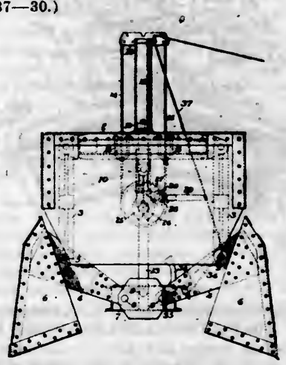
1. A moving picture machine comprising a casing, an objective, a film supporting and driving mechanism behind the objective, a rotary reflector interposed between the objective and said mechanism and adapted to periodically intercept the rays of light passing through the objective and reflecting them laterally, and means in the wall of the machine through which the reflected rays of light can be seen to ascertain the images being photographed by the machine.

2. A moving picture machine comprising a film supporting and intermittent driving mechanism, film covering and uncovering means for intermittently exposing successive portions of the film, a reflector movable into the path of the rays of light intermittently and simultaneously with the covering of the said film by the first-mentioned means, and a finder disposed in the path of the reflected rays.



3. A moving picture machine comprising an objective, film-holding and intermittent driving means, a shutter disposed between the objective and film to cover and uncover the latter, a reflector disposed between the shutter and objective and operatively connected with the shutter to move into the path of the rays of light passing through the objective while the shutter covers the film, and a finder arranged to receive the reflected rays of light.

1,218,343. GRAB-BUCKET. WILLIAM E. WATTERS, Maywood, Ill. Filed Jan. 10, 1912. Serial No. 670,442. (Cl. 37—30.)



1. Grab bucket mechanism comprising an upper frame, a lower frame movable vertically relative to the upper frame, bucket-carrying arms attached to the lower frame, links connecting the arms and the upper frame, a controlling mechanism mounted to move vertically on guides attached to one of said frames, said guides extending through the other of said frames, a cushioning mechanism carried by one of said frames and co-acting with the other of said frames to prevent shocks to the mechanism when the bucket opens.

2. In grab bucket mechanism, an upper frame, a lower frame movable vertically relative to the upper frame, bucket-carrying arms attached to the lower frame and having a supporting connection with the upper frame, guide rods attached to one of said frames and extending through the other of said frames, and air-cushioning de-

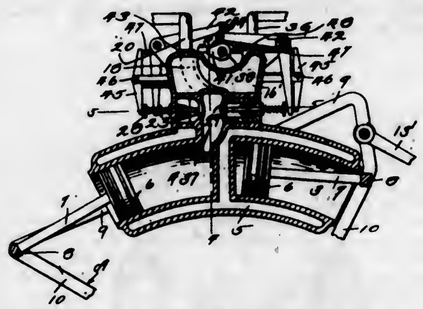
vices attached to the second mentioned frame and forming with the ends of the guide rods shock-absorbing mechanism for the mechanism of the bucket when said bucket unloads.

1,218,344. SCREEN. EDWARD A. WHEELER, Valier, Mont. Filed Feb. 7, 1916. Serial No. 76,718. (Cl. 43—22.)



A screen comprising a frame, a shelf supported by the vertical stiles of the frame adjacent the upper end thereof, a reticulated fabric carried by the frame below the shelf, said shelf extending beyond opposite sides of the fabric, a reticulated fabric connecting the outer margin of the shelf and closing the upper portion of the frame, said shelf being provided with elongated slots at opposite sides of the lower fabric, a trap positioned upon the shelf and coacting with both of the slots, the upper face of the shelf being depressed, the slots being in communication with the depressed portion, and a slide positioned within the depressed portion and adjustable transversely thereof whereby said slide may be moved to close either of the slots.

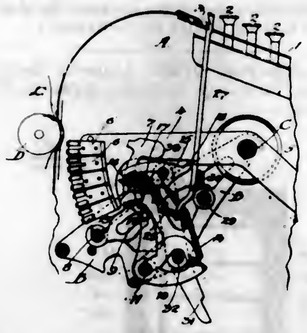
1,218,345. INTERNAL-COMBUSTION ENGINE. ROLLANS M. WILSON, Prairie Grove, Ark. Filed June 16, 1916. Serial No. 104,007. (Cl. 123—90.)



In an internal combustion engine, the combination with a plurality of cylinders, inlet and exhaust ports for said cylinders, valves for closing said ports, a cam shaft having cams thereon equal in number to the cylinders, rocker arms having rollers bearing against the cams and bearing at their other ends against certain of the valve rods, levers bearing at one end against the other of the valve rods and push rods engaging the opposite ends of the levers and riding upon the aforementioned cams.

1,218,346. PRINTING-RECORDER FOR CALCULATORS. WILLIAM W. WILSON, Chicago, Ill., assignor, by mesne assignments, to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 12, 1906. Serial No. 343,024. (Cl. 235—58.)

1. The combination with hammers and independently movable hammer-controlling members of a recording mechanism; of couplers movably mounted on certain of said members respectively for connection with and disconnection from adjacent members, and a manipulating device for each coupler.



2. The combination with hammers and independently movable hammer controlling members of a recording mechanism; of couplers pivotally mounted on certain of said members respectively for connection with and disconnection from adjacent members, and a manipulating device for each coupler.

3. In recording mechanism, the combination of hammers, independently movable hammer-controlling members, movable couplers normally connecting the members, and a series of independently operable keys and connections for displacing the couplers respectively.

4. The combination with hammers and independently movable hammer-controlling members of a recording mechanism; of couplers movably mounted on certain of said members respectively for connection with and disconnection from adjacent members, and a series of keys and connections for displacing the couplers respectively.

5. The combination with hammers and independently movable hammer-controlling members of a recording mechanism; of couplers pivotally mounted on certain of said members respectively for connection with and disconnection from adjacent members, and a series of keys and connections for displacing the couplers respectively.

[Claims 6 to 10 not printed in the Gazette.]

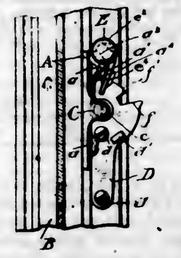
1,218,347. PROCESS OF MIXING CONCRETE AND THE LIKE. EDWIN C. WOODWARD, Dallas, Tex. Filed July 25, 1916. Serial No. 111,168. (Cl. 83—73.)



The process of forming concrete, consisting of first excluding the air from a receptacle adapted to contain the materials to be mixed by the introduction thereto of steam, then pouring into said volume of steam the materials to be mixed, and mixing said materials while at the same time maintaining the steam supply therein.

1,218,348. SASH-PIVOT. JOHN W. YATES, New York, N. Y. Filed June 20, 1916. Serial No. 104,648. (Cl. 16—142.)

1. A sash pivot embodying a pivot plate, provided with a portion having an inclined surface, and which pivot plate is adapted to be mounted on a sash, a horizontally positioned pivot pin fixed on said pivot plate, a stop plate adapted to be secured on a window frame and provided with an aperture into which a pivot pin extends, a shoulder on the stop plate and a latch pivotally mounted on the inclined surface of the pivot plate and adapted to engage with the shoulder on the stop plate, whereby said latch is pivoted for oscillation on an axis extending obliquely to the face of the sash on which the pivot plate is mounted.



2. A sash pivot embodying a pivot plate, provided with a portion having an inclined surface, and which pivot plate is adapted to be mounted on a sash, a horizontally positioned pivot pin fixed on said pivot plate, a stop plate adapted to be secured on a window frame and provided with an aperture into which the pivot pin extends, a shoulder on the stop plate and a latch pivotally mounted on the inclined surface of the pivot plate and adapted to engage with the shoulder on the stop plate, whereby said latch is pivoted for oscillation on an axis extending obliquely to the face of the sash on which the pivot plate is mounted, said latch being weighted whereby a portion thereof is maintained in engagement with the stop plate during the opening movement of the sash for the purpose of guiding said latch into engagement with said shoulder.

3. A sash pivot embodying a stop plate adapted to be mounted on a window frame and provided with an aperture, a shoulder on said stop plate, a pivot plate adapted to be mounted on the sash within the window frame, a pivot pin fixed on said pivot plate and extending into the aperture in the stop plate for pivotally mounting the sash relative to the window frame, a vertically inclined surface at the upper portion of said pivot plate, a latch pivoted to said surface with the axis of pivotal movement of said latch in oblique relation to the face of the sash, and means for maintaining a portion of the latch in engagement with the stop plate during the operation of tilting the sash, said means being also operable to shift the latch into coöperative relation with the shoulder of the stop plate after the sash has been tilted to a predetermined extent.

4. A sash pivot embodying a stop plate adapted to be mounted on a window frame and provided with an aperture, a shoulder on said stop plate, a pivot plate adapted to be mounted on the sash within the window frame, a pivot pin fixed on said pivot plate and extending into the aperture in the stop plate for pivotally mounting the sash relative to the window frame, a vertically inclined surface at the upper portion of said pivot plate, a latch pivoted intermediate its ends to said surface with the axis of pivotal movement of said latch in oblique relation to the face of the sash, and means, coöperating with one arm of the latch, for maintaining the other arm in engagement with the stop plate during the operation of tilting the sash, said means being also operable to shift the latch into coöperative relation with the shoulder of the stop plate after the sash has been tilted to a predetermined extent.

5. A sash pivot embodying a stop plate adapted to be mounted on a window frame and provided with an aperture, a shoulder on said stop plate, a pivot plate adapted to be mounted on the sash within the window frame, a pivot pin fixed on said pivot plate and extending into the aperture in the stop plate for pivotally mounting the sash relative to the window frame, a vertically inclined surface at the upper portion of said pivot plate, a latch pivoted to said surface with the axis of pivotal movement of said latch in oblique relation to the face of the sash, means for maintaining a portion of the latch in engagement with the stop plate during the operation of tilting the sash, said means being operable to shift the latch into coöperative relation with the shoulder of the stop plate after the sash has been tilted to a predetermined extent, and said latch being manually shiftable from a position wherein it is in engagement with the shoulder to allow of further pivotal movement of the sash, and means for limiting such further pivotal movement to a predetermined maximum.

[Claims 6 to 10 not printed in the Gazette.]

1,218,349. GUN. NIELS WALTERSEN AASEN, Copenhagen, Denmark. Filed Nov. 18, 1915. Serial No. 62,165. (Cl. 42—69.)



1. In guns having several cartridge chambers, a rotatable striker having a hammer, a fixed block having a plurality of recesses therein, said striker having a guide part adapted to register with any of the aforesaid recesses, the said recesses being so arranged that when the said guide part is placed so as to slide in one of them, a sliding of the striker causes the hammer to explode a cartridge in a given cartridge chamber.

2. In guns having several cartridge chambers, a rotatable striker having a hammer, a striking spring, a fixed block having a plurality of recesses therein, said block being adapted to act as a stop for the said striker, when the said striking spring has been compressed, said striker having a guide part adapted to register with any of the aforesaid recesses, the said recesses being so arranged that when the said guide part is placed so as to slide in one of them, the sliding of the striker causes the hammer to explode a cartridge in a given cartridge chamber.

1,218,350. METHOD OF IMPREGNATING WOVEN BELTS AND CONVEYING-BANDS. HANS WILLIAM ANDERSEN, Odense, Denmark. Filed Oct. 29, 1914. Serial No. 869,343. (Cl. 91—68.)

1. The herein described process of treating textile belting, consisting in first impregnating the web with a solution of asphalt and then coating the web with a layer of balata.

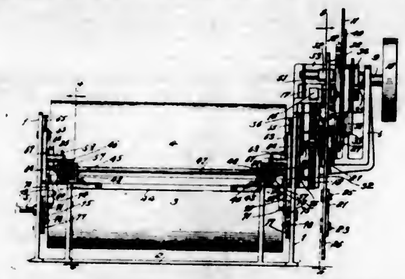
2. The herein described method of preparing textile belting consisting in treating the same with an asphalt solution and a rubberlike vegetable gum.

1,218,351. PLAITING-MACHINE. JULIUS ARANYOSSY, New York, N. Y. Filed Oct. 17, 1916. Serial No. 126,074. (Cl. 223—44.)

1. A plaiting machine, comprising a pair of plaiting rollers, means for imparting alternate rotation in opposite directions conjointly to said rollers, and a reciprocable blade adapted to be projected toward the rollers.

2. A plaiting machine, comprising a pair of plaiting rollers, that are adapted to be brought into frictional engagement, means for imparting intermittent rotation alternately in opposite directions to said rollers, means for heating one of said rollers, and a reciprocable blade adapted to be projected toward the rollers.

3. A plaiting machine, comprising a first plaiting roller, means for imparting intermittent rotation in opposite directions to said roller, means for varying the arc of forward rotation, and a second plaiting roller adapted to cooperate with the first named roller.



4. A plaiting machine, comprising a first plaiting roller, means for imparting intermittent rotation in opposite directions to said roller, means for varying the arc of rearward rotation, and a second plaiting roller adapted to coöperate with the first named roller.

5. A plaiting machine, comprising a first plaiting roller, means for imparting intermittent rotation in opposite directions to said roller, means for varying the arc of forward rotation, separate means for varying the arc of rearward rotation, and a second plaiting roller adapted to coöperate with the first named roller.

[Claims 6 to 19 not printed in the Gazette.]

1,218,352. MASK. CHARLES V. ARBOGAST and GEORGE WEANER, Pittsburgh, Pa. Filed Dec. 6, 1916. Serial No. 135,296. (Cl. 2—119.)



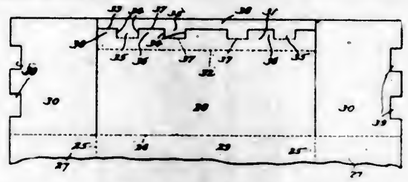
1. As a new article of manufacture a mask having its body provided with a pair of integral attaching arms, said arms extending rearwardly and having their free ends downwardly curved and said arms formed of the same material as the material of the body, and a stiffening member secured to the inner face of each of said arms.

2. As a new article of manufacture a mask having its body provided with a pair of integral attaching arms, said arms extending rearwardly and having their free ends downwardly curved and said arms formed of the same material as the material of the body, and a stiffening member secured to the inner face of each of said arms, said stiffening members conforming in contour to the shape of the arms and of a length to extend on to the inner face of said body.

1,218,353. BOX. SIEGMUND BACHMANN, Chicago, Ill. Filed Nov. 6, 1916. Serial No. 129,723. (Cl. 229—34.)

1. A box formed of a base, walls extending upwardly therefrom, corner-extensions connected with walls of the box and lying against adjacent box walls, and flaps on walls of the box overlying said extensions and provided with a plurality of sections connected together at their outer extremities and underlying said extensions.

2. A box formed of a base, walls extending upwardly therefrom, corner-extensions connected with walls of the box and lying against adjacent box walls, and flaps on walls of the box each provided with a plurality of sections connected together at their outer extremities and underlying said extensions and with sections overlying said extensions, for the purpose set forth.



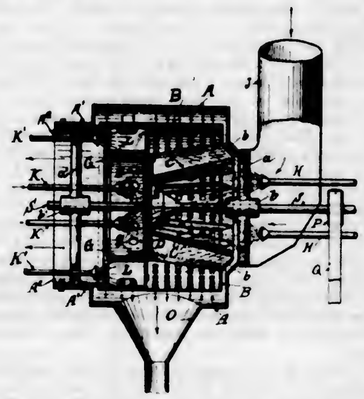
3. A box formed of a base, walls extending upwardly therefrom, corner-extensions connected with walls of the box and lying against adjacent box walls, and flaps on walls of the box each formed with a plurality of sections connected together at their outer extremities and underlying said extensions and with sections arranged alternately with relation to said first-named sections and overlying said extensions.

4. A box formed of a base, walls extending upwardly therefrom, corner-extensions connected with walls of the box and lying against adjacent box walls, and flaps on walls of the box each formed with a plurality of sections spaced apart but connected together at their extremities and underlying said extensions and with tongues disposed between said sections and overlying said extensions.

5. A box formed of a base, walls extending upwardly therefrom, corner-extensions connected with walls of the box and lying against adjacent box walls, and flaps hingedly connected with walls of the box, each formed with sections overlying said extensions and with an extension-underlying section hingedly connected with the body-portion of the flap intermediate the connection of the flap with the box wall carrying it and the extremities of said extension-overlying sections.

[Claims 6 to 16 not printed in the Gazette.]

1,218,354. PROCESS FOR THE SEPARATION OF DUST PARTICLES AND SMOKE FROM AIR AND GASES. WILLIAM J. BALDWIN, Brooklyn, N. Y. Filed Apr. 20, 1916. Serial No. 92,443. (Cl. 183—120.)

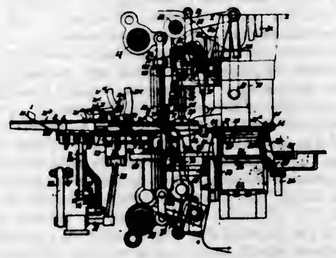


1. The process of removing dust from gas, which consists in revolving the gas containing the dust and projecting into the gas while so revolving liquid heated under pressure above the boiling point of the liquid at the pressure of said gas, so that a part of said liquid explodes into vapor on entering said gas breaking up and agglomerating the dust and the remainder of the liquid washes said agglomerates from the surfaces to which they adhere, substantially as described.

2. The process of removing dust from gas, which consists in revolving the gas containing the dust and projecting into the gas while so revolving liquid heated under pressure above its boiling point at the pressure of the gas so that when said liquid enters said gas a part of said liquid explodes into vapor breaking up and then agglomerating the dust and the remainder of the liquid washes said agglomerates from the surfaces to which they have adhered, and finally projecting the agglomerates which have separated from the gas in one direction and the gas from which said agglomerates have been separated in another direction, substantially as described.

3. The process of removing dust from gas consisting in revolving a body of gas containing dust within a rotary screen, projecting into said gas while it is revolving liquid heated under pressure above the boiling point of the liquid at the pressure of said gas, whereby a part of said liquid explodes in said gas comminuting and then agglomerating said dust and the remainder of said liquid washes said agglomerates from the machine surfaces to which they have adhered, projecting films of liquid against the flow of the gas from which the dust has been separated to further wash the gas, and finally removing the purified gas from the machine in one direction and the agglomerates in another direction whereby their readmixture is prevented, substantially as described.

1,218,355. SUGAR BREAKING AND PACKING MACHINE. JEAN BARBET, Paris, France. Filed June 24, 1914. Serial No. 847,010. (Cl. 100—59.)



1. A sugar breaking and packing machine comprising a series of breaking members, each breaking member having two blades and an upward and downward movement, an endless conveyer placed parallel to and in front of the series of breaking members to feed the ingots to be broken, a fixed abutment placed above the said conveyer to stop the ingots fed by the latter, a series of pushing members placed respectively in front of the breaking members and having a reciprocating motion with regard to the conveyer, the said pushing members being adapted to carry away from the row of ingots on the conveyer respective groups of ingots toward the breaking members, fixed abutment members placed in front of the intervals of the breaking members and of the intervals of the said pushing members and adapted to stop the intermediate ingots which the said groups of ingots would carry away by adherence when they are pushed away by the said pushing members, and means whereby to convey the pieces issuing from the breaking members.

2. A sugar breaking and packing machine comprising a series of breaking members, each breaking member having two blades and an upward and downward movement, a horizontal table, guides on such table to guide the ingots to be broken, such guides forming passage ways in front of the respective breaking members, an endless conveyer the top of which is placed underneath the table and extends in front of the series of breaking members and of the passage ways respectively, to feed the ingots to be broken, a fixed abutment to stop the ingots on the conveyer, an elevator having an upward and downward movement and the top of which moves up to the level of the table and down to the level of the conveyer, such elevator being adapted to lift from the conveyer all the row of ingots at the same time, a pusher having a horizontal reciprocatory movement across the conveyer and having fingers in front of the said passage ways, each finger being adapted to carry a group of ingots away into the said passage ways, and the said guides on the table being adapted to stop the ingots placed in front of the intervals of the said fingers, and means whereby to convey the pieces of sugar issuing from the breaking members.

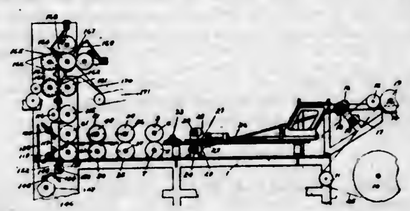
3. A sugar breaking and packing machine comprising a series of breaking members, each breaking member having two blades and an upward and downward movement, a table, guides on such table, forming passage ways in front of the respective breaking members, a conveyer placed parallel to and in front of the series of breaking members to feed the ingots to be broken, means whereby to push groups of ingots from the conveyer and into the respective passage ways up to the breaking members, a series of cages fixed in front of the respective breaking members, such cages being adapted to accommodate the sugar boxes, elevating means in the said cages to raise and lower the said boxes, conveying means having vertical and horizontal movements to convey the pieces of sugar from the breaking members and into such respective boxes, each of the said cages having at its upper part a rectangular opening for the insertion of the said conveying means, shutters jointed to the three sides of the said opening, a swinging support placed at the fourth side of the opening, springs pushing such support toward the opening, a shutter jointed to the said support, and means whereby to swing the four said shutters together.

4. In a sugar breaking and packing machine the combination of a series of endless belts placed parallel and extending horizontally, a fixed abutment, a series of bars each having a horizontal part and an inclined part and placed in the intervals of the said belts, and means whereby to raise and lower all such bars together, so that in the lower position the bars are entirely underneath the belts and that in the upper position the bars, save the bottom of their inclined part, are entirely above the belts, the lower part of the bars being placed at the incoming side of the belts and the said abutment being placed above the said belts and the said bars at the outgoing side of the belts.

5. A machine of the class described, comprising a support, a feed table, means for conveying articles by desired numbers intermittently therefrom, article breaking members, means for conveying said articles thereto in groups, packing box cages, and means for carrying said groups to corresponding cages and depositing said articles in the boxes therein.

[Claims 6 and 7 not printed in the Gazette.]

1,218,356. MACHINE FOR MAKING PAPER BAGS. JOHN H. BARTLETT, Baltimore, Md., assignor to Columbia Paper Bag Company, Baltimore, Md., a Corporation of Maryland. Filed Mar. 6, 1913. Serial No. 752,366. Renewed Aug. 5, 1916. Serial No. 113,384. (Cl. 93—15.)



1. In a machine for making square bottom bags, means for advancing the web, a central cutter having a blade extending transversely to the direction of the feed, means for actuating the same to make cuts at intervals in the web, means for forming the web into a bellows-fold tube,

cutters having blades extending longitudinally of the web, means for actuating the same to produce four longitudinal cuts in the web, an edge cutter having two blades extending transversely of the tube, means for actuating this cutter to sever the edges of the tube, an intermediate cutter in advance of the edge cutter having two transverse blades, each extending inward from a point longitudinally opposite the inner end of one blade of the edge cutter to a point longitudinally opposite the nearest end of the central cutter, means for actuating this cutter, means for opening the cut portion of the tube to form a diamond fold, and means for converting the diamond folded portion into a square bottom.

2. In a machine for making square-bottom bags, having means for advancing the web, and the following members arranged from rear to front of the machine in the order named: a central cutter having a blade extending transversely to the direction of the feed, means for actuating the same to make cuts at intervals in the web, means for forming the web into a bellows-fold tube, cutters having blades extending longitudinally of the web, means for actuating the same to produce four longitudinal cuts in the web, an edge cutter having two blades extending transversely of the tube, means for actuating this cutter to sever the edges of the tube, a cutter in advance of the edge cutter having two transverse blades, each extending inward from a point longitudinally opposite the inner end of one blade of the edge cutter to a point longitudinally opposite the outer end of the central cutter, means for actuating this cutter, means for opening the cut portion of the tube to form a diamond fold, and means for converting the diamond folded portion into a square bottom.

3. In a machine for making square-bottom bags, means for advancing the web, a central cutter having a blade extending transversely to the direction of the feed, means for actuating the same to make cuts at intervals in the web, means for forming the web into a bellows-fold tube, cutters having blades extending longitudinally of the web, means for actuating the same to produce four longitudinal cuts in the web, an edge cutter having two blades extending transversely of the tube, means for actuating this cutter to sever the edges of the tube, an intermediate cutter in advance of the edge cutter having two transverse blades, each extending inward from a point longitudinally opposite the inner end of one blade of the edge cutter to a point longitudinally opposite the nearest end of the central cutter, means for actuating this cutter to sever the tube, leaving an uncut central portion opposite the first transverse cut, means for opening the cut portion of the tube to form a diamond fold, means for severing the uncut portion, and means for converting the diamond folded portion into a square bottom.

4. In a machine for making bags from a bellow fold tube, a pair of cutter rolls and means for supporting the paper on both sides of such rolls consisting of horizontal plates, one in each bellows-fold, the plates occupying the inner portion of the folds in the rear of the cutter rolls and the outer portion of the folds in front of the cutter rolls.

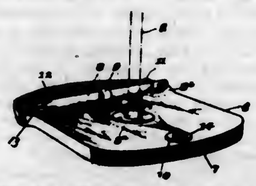
5. In a machine for making bellows-fold paper bags, a pair of cutter rolls, means for supporting the paper on both sides of such rolls consisting of horizontal plates, one in each bellows-fold, the plates occupying the inner portion of the folds in the rear of the cutter rolls and the outer portion of the folds in the front of the cutter rolls, the rolls being shouldered to accommodate the plates, and a bellows opener in the forward end of each plate.

[Claims 6 to 49 not printed in the Gazette.]

1,218,357. PORTABLE SEAT. CHARLES BAUER, Cleveland, Ohio. Filed Mar. 6, 1916. Serial No. 82,461. (Cl. 155—32.)

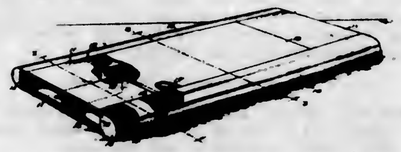
1. The combination of a seat and a detachable post, the latter having a notch in one end, a staple on the seat, engageable with one end of the post, and a pin on the seat, engageable in the notch.

2. The combination of a seat, a detachable post having a projecting pin, a spring staple on the under side of the



seat, to receive one end of the post, with said pin pressing against the staple, and a pin on the under side of the seat, with which the other end of the post is engageable.

1,218,358. FABRIC-BOLT BOARD. CLIFTON K. BAUMANN, New York, N. Y. Filed Apr. 15, 1915, Serial No. 21,537. Renewed Jan. 24, 1917. Serial No. 144,810. (Cl. 206—50.)



1. A fabric bolt board, comprising a plurality of boxes; and a plurality of rails fixedly attached to said boxes for forming the edges of the completed board.

2. A fabric bolt board, comprising a plurality of boxes; a plurality of rails fixedly attached to said boxes for forming the edges of the completed board; and removable means for closing the ends of said boxes.

3. A fabric bolt board, comprising a plurality of boxes; a plurality of rails fixedly attached to said boxes for forming the edges of the completed board; and a plurality of side panels uniting in service said boxes and said rails.

4. A fabric bolt board, comprising a plurality of boxes; a plurality of rails fixedly attached to said boxes for forming the edges of the completed board; and a plurality of covering panels fixedly attached in service to form a flush surface with said boxes and said rails.

5. A fabric bolt board, comprising a plurality of boxes; a plurality of rails fixedly attached to said boxes for forming the edges of the completed board; a plurality of covering panels fixedly attached in service to form a flush surface with said boxes and said rails; a plurality of name cards covering the end openings of said boxes; and means for removably holding said cards in service.

[Claim 6 not printed in the Gazette.]

1,218,359. QUICK-DETACHABLE COUPLING FOR DRILL-PIPES. EDWARD TROY BEATTY, Birmingham, Ala., assignor of one-half to Lee Wilson, Shreveport, La. Filed Sept. 8, 1915. Serial No. 49,614. (Cl. 255—31.)



The combination with adjacent tubular sections of well casing threaded at their ends, of a quick detachable coupling for the casing comprising two tubular coupling sections formed with quick detachable connecting non-tapering threaded portions having heavy square threads of coarse pitch, square shoulders offset at each end of said threaded portions and spaced to provide wide butt joints at each end of the joint in the assembled coupling and a threaded end on each coupling section having fine pitch threads adapted to couple to the casing sections, said non-tapering threaded portions of the coupling having therethrough a straight bore which does not substantially throttle the well casing.

1,218,360. VENTILATING-CHIMNEY. GEORGE THOMAS BELL, Columbus, Ohio, assignor of one-half to William K. Cooksey, Columbus, Ohio. Filed Dec. 2, 1915. Serial No. 64,691. (Cl. 98—30.)



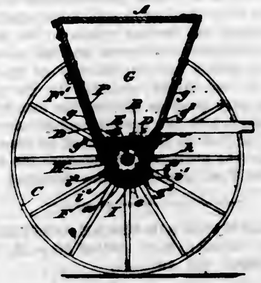
1. A chimney including inner and outer walls, spaced to form vertically ranging air chambers therebetween, and form a flue within the inner wall, the inner wall rising higher than the outer wall, the one wall having vertical ribs thereon facing the other wall, said ribs extending above the upper edge of the outer wall, and forming shoulders, and a cap resting on said shoulders and having a depending flange outward from the outer wall, forming outlet openings beneath said flange communicating with the said air chambers, there being inlets in the outer wall leading to the said air chambers.

2. A chimney including inner and outer walls forming a flue within the inner wall and vertical air passages between the walls, exterior ribs on the outer faces of the inner wall extending above the top of the outer wall, and a cap resting on the upper ends of said ribs and extending outwardly beyond the outer wall above the same to provide outlets from the said air passages, there being inlet openings in the outer wall leading to said air passages.

3. A chimney having a smoke flue, double walls forming an air space outside the said flue, there being members dividing the air space into separate vertical air passages at the separate sides of the chimney, one of said passages having inlets at different elevations to carry off foul air, others of the passages having air outlets to discharge air therefrom, the respective outlets being at different elevations, there being a transverse barrier in each passage having an outlet, the barrier being located above the said outlets, the members dividing the air space being interrupted near the base of the chimney establishing communication between the several flues having the outlets, and there being an air inlet adjacent to the said interruption in said members and communicating with the respective air passages.

1,218,361. FERTILIZER-DISTRIBUTER. WILLIAM W. BIRNSTOCK, York, Pa., assignor to Hench & Dromgold Company, York, Pa. Filed Nov. 16, 1916. Serial No. 131,758. (Cl. 259—35.)

1. In a fertilizer distributer of the character described, cast metal hopper-end-plates the sides and bottom of which are bordered by a flange curved as to its bottom portion to conform to the convexity of the hopper bottom, in combination with a metallic hopper bottom curved transversely of its length, fitted and secured in place in the seat provided by said flange and formed with feed openings, the flanged seat being omitted on the hopper-end-plates for that portion of the width of the hopper bottom wherein the feed openings are located, a sliding feed gate provided with corresponding openings, and applied to and fitted against the exterior of that portion of the curved bottom where the flanged seat is omitted, and end bearings for said sliding gate secured to the hopper end plates and adapted to hold the gate in close contact with the hopper bottom, substantially as and for the purposes hereinbefore set forth.



2. In a fertilizer distributer of the character described, cast metal hopper-end-plates the sides and bottom of which are bordered by a flange curved as to its bottom portion to conform to the convexity of the hopper bottom, in combination with a metallic hopper bottom curved transversely of its length, fitting and secured in place in the seat provided by said flange and provided with feed openings, the flanged seat being omitted on the hopper-end-plates for that portion of the width of the hopper bottom wherein the feed openings are located, a sliding feed gate provided with corresponding openings fitted against that portion of the curved bottom where the flanged seat is omitted, so that it may be brought up against said bottom, and bearings for said gate adjustably secured to the hopper-end-plates, substantially as and for the purposes hereinbefore set forth.

3. In a fertilizer distributer of the character described, cast metal hopper-end-plates, the sides and bottom of which are bordered by a flange curved as to its bottom portion to conform to the convexity of the hopper bottom, in combination with a metallic hopper bottom curved transversely of its length, fitted and secured in the seat provided by said flange, and formed with feed openings, the flanged seat being omitted on hopper-end-plates for that portion of the width of the bottom wherein the feed openings are located, and a slot of curvature corresponding to that of the bottom being formed in said portion of said hopper-end-plates; a sliding feed gate provided with corresponding openings, and applied to and fitted against the exterior of that portion of the bottom wherein the feed openings are formed, the ends of the feed gate projecting through the curved slots in the hopper-end-plates; and end bearing straps secured to the hopper-end-plates in proximity to the curved slots therein and adapted to support and hold the feed gate in close contact with the hopper bottom, substantially as and for the purposes hereinbefore set forth.

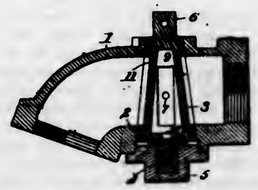
4. In a fertilizer distributer of the character described, a hopper having a metallic bottom curved transversely of its length and provided with feed openings in combination with a correspondingly curved feed gate fitted to and adapted to slide lengthwise upon the exterior of the hopper bottom and having openings adapted to register with those in the hopper bottom, and bearing straps for the ends of the feed gate formed with curved bearing faces on which the ends of the feed gate rest and can slide and shoulders between which the longer edges of the feed gate fit and by which the feed gate is restrained from other than longitudinal sliding movement, said bearing straps being secured to and vertically adjustable on the hopper-

end-plates, substantially as and for the purposes hereinbefore set forth.

5. In a fertilizer distributer of the character described, the combination with the hopper-end-plates, and the curved bottom formed with feed openings, and extending between and secured to said end plates; of bearing plates located upon the exterior opposite faces of the hopper-end-plates and provided upon their interior opposite faces with tubular spools or hubs the bore of which opens outwardly through the bearing plates, said spools or hubs extending through openings of relatively greater diameter in the hopper-end-plates into the interior of the hopper; an agitator shaft the ends of which pass through and are supported and take their bearing in said hubs; and means for adjustably securing the bearing plates to the hopper-end-plates to permit the bearing spools or hubs which project through the end plates into the interior of the hopper to be positioned in the larger openings in the end plates through which they pass to obtain the accurate adjustment, with reference to the curved hopper bottom, of the agitator shaft carried by and supported in them, substantially as and for the purposes hereinbefore set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,218,362. VALVE FOR AIR-BRAKE SYSTEMS. ENOCH P. BLACKLEY, Hamlet, N. C. Filed May 31, 1916. Serial No. 100,866. (Cl. 137—7.)

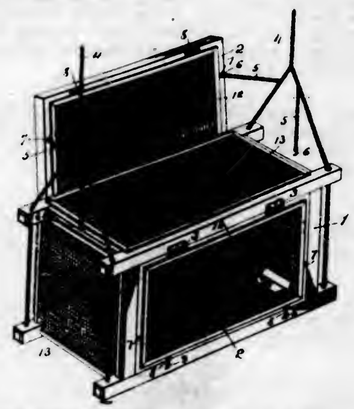


1. In an angle cock for air brake systems, a casting having a central bore therethrough and a port extending through the casting at right angles to the said bore and communicating with the atmosphere, a plug in said casting having a main bore therethrough and a port extending through said plug at right angles to the main bore and located at the top of the plug, whereby when the plug is closed to cut off communication through its main bore, the said main bore will register with the port in the casting and the port in the valve will register with the upper part of the bore of the casting, whereby air will be relieved from behind the said plug, but dust carried by said air will be dropped to the bottom of the bore of the plug and not escape to the atmosphere.

2. In an angle cock for air brake systems, a casting having a central bore therethrough and a port extending through the casting at right angles to the said bore and communicating with the atmosphere, a plug in said casting having a main bore extending therethrough, said bore terminating in an upper and lower chamber, the said plug having a port extending therethrough at right angles to the bore, and located at the top of the plug and communicating with the upper chamber, whereby when the plug is closed to cut off communication through its main bore the said main bore will register with the port in the casting and the port in the plug will register with the upper part of the bore of the casting, whereby air will be relieved from behind the said plug, but dust carried by said air will be dropped to the bottom of the plug and into the lower chamber therein and thereby not escape to the atmosphere.

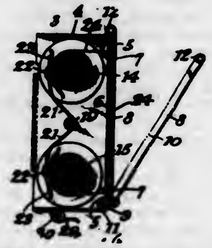
1,218,363. SWINGING CRIB. ABRAM C. BOICE, Kansas City, Mo. Filed Apr. 19, 1913. Serial No. 762,205. (Cl. 5—56.)

1. A crib comprising a frame having a side opening and a door hinged at its upper edge to the frame at the upper side of the side opening, swinging supports for said frame, and a member carried by one of said supports and having a hook for detachably engaging the door to hold it in the raised open position.



2. A crib comprising a frame having a side opening and a mattress support disposed horizontally with its upper surface in the plane of the lower side of said opening, a swinging support for said frame, a door hinged at its upper edge to said frame for closing said opening and adapted to be swung, when opened, to a substantially vertical position, and means attached to said support for releasably engaging said door to hold the door in the open position.

1,218,364. RECORDING DEVICE FOR AUTOMOBILES. CARL BORNMANN, Binghamton, N. Y. Filed Nov. 2, 1916. Serial No. 129,071. (Cl. 11—22.)



1. A registering device comprising an exterior frame all the sides whereof are closed and having an open back and front, two spools journaled in slots made in opposite sides of the frame, means to rotate the spools in either direction, a writing tablet somewhat smaller than the opening in the front of the frame, a drop cover hinged to the lower part of the frame and which entirely closes its front, protecting the record, and a spring pressure friction device engaging each spool.

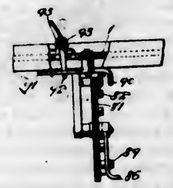
2. A registering device comprising an exterior frame all the sides whereof are closed and having an open back and front, two spools journaled in slots made in opposite sides of the frame, means to rotate the spools in either direction, a writing tablet somewhat smaller than the opening in the frame, a drop cover hinged to the lower part of the frame and which entirely closes its front, protecting the record, a spring pressure friction device engaging with each spool, and compression plates on the free ends of the springs.

3. A registering device comprising an exterior frame having an open front and back, two spools journaled on opposite sides of the frame, means to rotate the spools in either direction, a writing tablet somewhat smaller than the opening in the front of the frame and having rounded ends, a cover to close the front of the frame and act as a protector of the record, and spring pressure devices adapted to automatically rock on their support and thus equalize the tension on both spools as their diameters vary and compact the paper thereon.

4. A registering device comprising an exterior frame having an open front and back, two spools adapted to be inserted within and removed from and supported by opposite sides of the frame, means to rotate the spools in either direction, a writing tablet the opposite sides whereof are smoothly rounded and which is somewhat smaller than the opening in the front of the frame, a single solid cover hinged at its lower edge to and which closes the front of the frame and protects the record, and spring pressure devices adapted to automatically rock on their support and thus equalize the tension on both spools as their diameters vary and compact the paper thereon.

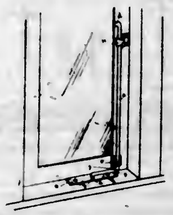
5. A registering device comprising an exterior frame, two spools journaled within the frame and suitably supported tension devices located between the spools and compression plates on the free ends of the tension devices which automatically oscillate on their supports as the respective diameters of the spools vary.

1,218,365. WARPING-MACHINE. EDWARD E. BRADLEY, Stonington, Conn., assignor to The Atwood Machine Company, Stonington, Conn., a Corporation of New Jersey. Original application filed June 6, 1913, Serial No. 772,141. Divided and this application filed Jan. 23, 1914. Serial No. 813,909. (Cl. 235—132.)



In a warping machine, a reel, a registering wheel driven by the reel, a finger carried by the registering wheel, a lever, a reel driving pulley mounted on the lever and movable with the lever toward and away from the reel, a spring actuated stop in position to lock the said lever and hence the driving pulley against movement toward the reel and a swinging latch under the control of the finger on the registering wheel for releasing the said spring actuated stop.

1,218,366. CASEMENT-WINDOW BRACING AND LOCKING DEVICE. JULIEN A. BRIED, Oakland, Cal. Filed Aug. 9, 1915. Serial No. 44,583. (Cl. 16—22.)



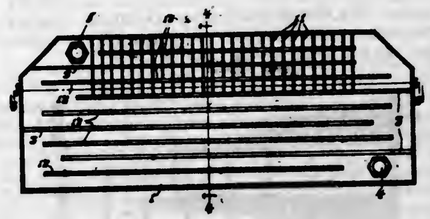
1. A bracing and locking bar for hinged windows or the like comprising a rod formed with two unequal length arms at an angle with each other, a sill plate adapted for bracing engagement with either arm, a socket for attaching to the sash through which the said rod may be swiveled at the juncture of its arms allowing either arm to be brought into bracing relation with the sill plate and also allowing the rod to slide bodily for engagement into the sill plate, with both arms swiveled into the plane of the sash.

2. A bracing and locking bar for hinged windows or the like comprising a rod formed with two unequal length arms at an angle with each other, a sill plate adapted for bracing engagement with either arm, a socket for attaching to the sash adapted to support the rod at the juncture of its arms and allow it to be swiveled so that the long arm may be brought into bracing relation with the sill plate with the sash open, also permitting the rod to turn and slide in said socket to allow the short arm to engage the sill plate when the sash is partially opened with the long arm swiveled to a vertical position and also to allow the rod to slide to engage the sill plate with the sash in an entirely closed position with both arms lying in the plane of the sash.

3. A bracing and locking bar for hinged windows comprising a rod formed with two unequal length arms at approximately right angles to each other, said rod being rounded at the juncture of its arms, a sill plate for attaching to the window sill adapted to engage either arm of said rod, an eyelet for attaching to the sash through which the said rod may swivel at the juncture of its arms to enable either arm to be brought into bracing relation with the said sill plate, the said rod being also slidable through said eyelet to bring the short arm of the rod into engagement with the sill plate to lock the sash in a closed position, with both arms swiveled approximately into the plane of the sash and the long arm in a vertical position.

4. A bracing and locking bar for hinged windows comprising a round rod bent at approximately a right angle to form a long and a short arm, a sill plate for attaching to the window sill adapted to engage either arm of said rod, an eyelet for attaching to the sash adapted to support the rod at the juncture of its arms and allow it to swivel and slide through the hole in the eyelet so that either arm may be brought into bracing engagement with the sill plate and also allow the rod to slide bodily through the eyelet to engage the short arm with the sill plate for holding the sash locked in closed position with both arms in the plane of the sash and the long arm in a vertical position, also a steadying bracket for attaching to the sash adapted to steady the upper end of the long arm when in such a vertical position.

1,218,367. HEATER FOR AUTOMOBILES AND THE LIKE. HAROLD A. BRUGGEMAN, Beaver Falls, Pa. Filed Jan. 8, 1916. Serial No. 70,951. (Cl. 257—158.)

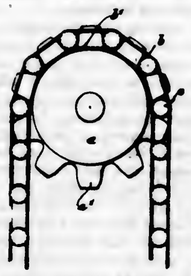


1. In a heater of the class described, the combination of a casing, said casing provided with inlet and outlet apertures, said apertures located at opposite sides and ends of the casing, a series of partitions located within the casing and spaced from each other, the ends of said partitions alternately spaced from the ends of the casing, a series of baffle plates extended inwardly from the top and bottom of the casing in staggered relationship and at substantially right angles to the partitions, the series of baffle plates spaced from the intake aperture and extended near the outlet aperture, all arranged substantially as shown.

2. In a heater of the class described, the combination of a casing, said casing provided with inlet and outlet apertures, said apertures located at opposite sides and ends of the casing, a series of partitions located within the casing and spaced from each other, the ends of said

partitions alternately spaced from the ends of the casing, a series of baffle plates extended inwardly from the top and bottom of the casing in staggered relationship and at substantially right angles to the partitions, the series of baffle plates spaced from the intake aperture and extended near the outlet aperture, and heat retaining material located between the partition plates in alternate relationship, all arranged substantially as shown.

1,218,368. DRIVE-CHAIN. JOHANN JOSEPH BUCHER, Zurich-Enge, Switzerland. Filed June 22, 1915. Serial No. 35,719. (Cl. 74—32.)

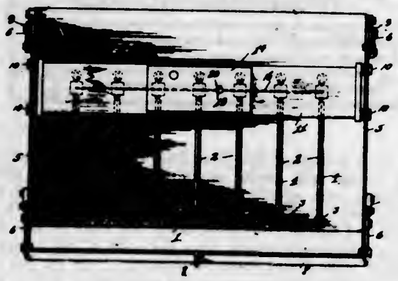


1. A drive chain consisting of a plurality of connected resilient elongated loops of flat spring metal, each loop adapted to conform automatically to the curvature of the wheels during contact therewith.

2. A drive chain consisting of a plurality of resilient elongated loops of flat spring metal having semi-cylindrical ends, each loop adapted to conform automatically to the curvature of the wheels during contact therewith, and connecting pivots provided near each of their ends with an annular neck portion to receive said semi-cylindrical ends of the loops arranged side by side.

3. A chain drive comprising a sprocket wheel having a toothed middle portion and an annular rim portion on each side thereof, resilient elongated loops, and connecting pivots each provided near its two ends with neck portions of reduced diameter adapted to receive the semi-cylindrical ends of two of said loops arranged side by side, flattened portions of said loops acting in a resilient manner on said rim portions.

1,218,369. LEATHER-CREASING MACHINE. JOHN P. BURASCHI, South Bend, Ind. Filed Dec. 1, 1916. Serial No. 134,471. (Cl. 69—2.)



1. A creasing machine, comprising a base having creasing-bars thereon, and a carriage movable longitudinally of the base, and carrying creasing-rolls to coöperate with the creasing-bars.

2. A creasing machine, comprising a base having creasing-bars thereon, a carriage having creasing-rolls to cooperate with said bars, and means movably supporting the carriage and adjustable with relation to the base, to move the carriage to and from the base.

3. A creasing machine, comprising a base having creasing-bars thereon, a carriage having creasing-rolls to cooperate with the bars, trackways for supporting the carriage, and means for moving the trackways to and from the base.

4. A creasing machine, comprising a base having creasing-bars thereon, a carriage having creasing-rolls to cooperate with said bars, trackways movably supporting the carriage, and links pivotally connecting the trackways and base, to permit movement of the trackways and supported carriage, to and from the base.

5. A creasing machine, having coöperating creasing-bars and creasing-rolls, and means for delivering a softening fluid to the creasing-rolls.

[Claim 6 not printed in the Gazette.]

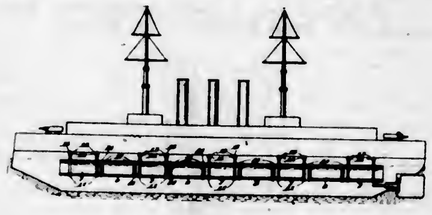
1,218,370. SHOCK-ABSORBER. JOHN T. BUSH, Evanston, Ill. Filed June 7, 1916. Serial No. 102,812. (Cl. 21—105.)



1. A shock absorber comprising a central housing; an oscillatory arm secured to one side of said housing; a central partition in said housing; a stem threaded in said partition and projecting from opposite sides thereof; friction members mounted on the projecting ends of said stem and contacting with opposite sides of said partition; and an oscillatory arm secured to the projecting end of said stem opposite to said other arm, substantially as described.

2. A shock absorber comprising a central housing; an oscillatory arm secured to one side of said housing; a central partition in said housing; a stem threaded in said partition and projecting from opposite sides thereof, the projecting ends of said stem being squared and threaded; friction members fitting over said squared ends and contacting with opposite sides of said partition; springs applying said friction members; nuts on said squared ends adjusting the tension of said springs; and an oscillatory arm secured to the projecting end of said stem opposite to said other arm, substantially as described.

1,218,371. TORPEDO-GUARD FOR SHIPS. ANDROV CARLSON and FRANK A. SWANSON, Chicago, Ill. Filed Nov. 11, 1915. Serial No. 60,920. (Cl. 114—240.)

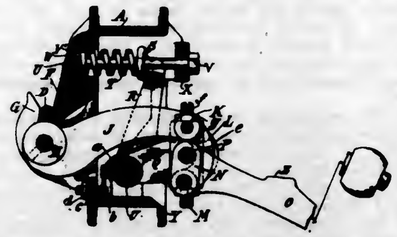


1. The combination with a ship, of a plurality of supports extending outwardly from the sides thereof; guard sections at the outer ends of said supports; and additional guard sections arranged between said first mentioned guard sections and detachably connected therewith, substantially as described.

2. The combination with a ship, of a plurality of supports extending outwardly from the sides thereof; a hollow buoyant sheet metal guard section arranged at the outer end of each of said supports; additional guard sections arranged between said first mentioned guard sections and detachably connected therewith; and means for withdrawing or projecting said supports, substantially as described.

3. The combination with a ship, of a plurality of hollow buoyant sheet metal guard sections therefor arranged at each side thereof and extending below the water a suitable distance to intercept an approaching torpedo; straps embracing every other one of said guard sections; hangers connected with said straps; rods detachably connected with said hangers and sliding through the side walls of the ship; detachable connections between the adjoining ends of the guard sections at each side of the ship; rack bars carried by said rods within the ship; an operating shaft arranged in operative relation with the rack bars at each side of the ship; gears frictionally mounted on said shafts and meshing with said rack bars; and a worm drive for each of said shafts, substantially as described.

1,218,372. GRIP FOR AERIAL TRAMWAYS. FREDERICK C. CARSTARPHEN, Trenton, N. J., assignor to The American Steel and Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed May 31, 1916. Serial No. 100,870. (Cl. 104—87.)



1. A grip for cable ways adapted to be inverted so as to act either as a top opening or a bottom opening grip, said grip including an operating lever which is adapted to be inverted with relation to the remaining parts, so that it may lie in the same direction for either the top opening or the bottom opening position of the grip.

2. A grip for cableways comprising a casing carrying gripping jaws and operating mechanism therefor, said casing being rotatable about a transverse axis, said mechanism including an operating lever which is adapted to be inverted with relation to the remaining parts so that it may lie in the same direction for either the upright or the inverted position of the casing.

3. A grip for cableways comprising a casing carrying gripping jaws and operating mechanism therefor, said casing being rotatable about a transverse axis, said mechanism including an arm connected to a movable one of said jaws, a link pivoted to the end of said arm, an operating lever pivoted to the opposite end of said link and pivotally mounted at another point so as to form with said link a toggle for operating said movable jaw, said operating lever and link being adapted to be inverted with relation to the remaining parts so that the link may lie in the same direction to grip the cable in either the upright or the inverted position of the casing.

4. A grip for cableways including in combination a movable jaw and an operating lever for said jaw, said operating lever being pivotally mounted on a floating pivot and being adapted to positively move said gripping jaw into and out of cable gripping position.

5. A grip for cableways including in combination a movable jaw, and an operating lever therefor mounted on a floating pivot, and a spring pressing said pivot in a direction to close the jaw.

[Claims 6 to 9 not printed in the Gazette.]

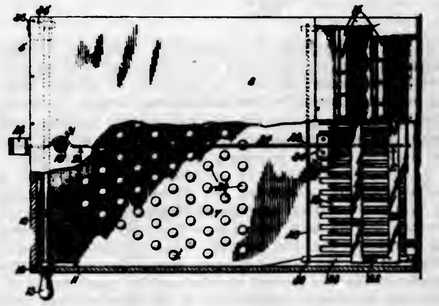
1,218,373. GAME. WILLIAM R. CHRISTIE, Brooklyn, N. Y. Filed Feb. 24, 1916. Serial No. 80,177. (Cl. 46—9.)

1. In a projecting device of the character described, a barrel, a bar loosely mounted in said barrel and extending beyond the ends thereof, said bar having notches therein, a casing or gripping portion connected with said barrel substantially midway the length thereof, said gripping portion being hollow, a substantially U-shaped catch pivotally mounted in said gripping portion arranged so that one arm of the U will engage the notches in said bar, a trigger engaging the opposite arm of said U, a spring engaging the first mentioned arm of the U for holding the trigger in a given position, and resilient means acting on said bar for forcing the same longitudinally of said barrel.



2. In a projecting device of the character described, a barrel, a bar loosely mounted in said barrel, said bar being formed with notches, resilient means for causing said bar to move longitudinally of said barrel, a hollow casing or grip connected with said barrel substantially midway between the ends thereof, and trigger mechanism arranged in said casing or grip arranged to engage said bar in said notches for normally preventing movement of said bar.

1,218,374. GAME APPARATUS. HARRY EDWARD COATES, Sacramento, Cal. Filed Aug. 4, 1916. Serial No. 113,082. (Cl. 46—61.)



1. In a game apparatus, a casing having an inclined table and a top with an opening through which a ball may be dropped to the table, a plurality of depending arms pivoted above the lower end of the table on a transverse axis, signal plates secured to the arms and disposed above the table, guideways at the sides of the casing, a frame disposed for moving in the guideways and having a transverse member for engaging the arms to return the latter to normal position, and means to operate the frame.

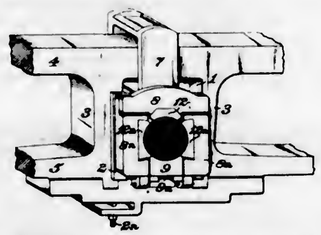
2. In a game apparatus, a casing having an inclined table, a plurality of depending arms pivoted above the lower end of the table on a transverse axis, signal plates secured to the arms and disposed above the table, guideways at the sides of the casing, a frame disposed for moving in the guideways and having a transverse member free from the arms for engaging the arms to return the latter to normal position, and means to operate the frame.

3. In a game apparatus, a casing having an inclined table, a plurality of depending arms pivoted to the lower end of the table on a transverse axis, signal plates secured to the arms and disposed above the table, guideways at the sides of the casing, a frame disposed for moving in the guideways and having a transverse member free from the arms for engaging the arms to return the latter to normal position, a spring for holding the frame in normal position, and an operating rod secured to the frame and extending to the other end of the table.

4. In a game apparatus, a casing having an inclined table and a top with an opening through which a ball may be dropped to the table, a plurality of depending arms pivoted above the lower end of the table on a transverse axis, signal plates secured to the arms and disposed above the table, and longitudinally extending guideways spaced apart at the lower end of the table for guiding the ball at the arms.

5. In a game apparatus, a table, a signal plate disposed above the table, the signal plate having two parts disposed at an angle to each other, there being a signal on one of the parts, pivoted means on which the other part is mounted, and an arm secured to the last mentioned part of the signal plate between the pivoted means and the angle formed by the said two parts, the arm normally depending from the signal plate for the purpose specified.

1,218,375. LOCOMOTIVE DRIVING-BOX. FRANCIS J. COLE, Schenectady, N. Y. Filed Mar. 6, 1916. Serial No. 82,290. (Cl. 105—113.)



1. The combination, in a locomotive engine, of a frame pedestal; a driving box fitted with the capacity of relative vertical movement therein; a plurality of journal bearing sections disposed in the driving box; means for transmitting weight to the top journal bearing section; and means for effecting independent adjustment of the journal bearing sections relatively to a common axial line.

2. The combination, in a locomotive engine, of a frame pedestal; a driving box fitted with the capacity of relative vertical movement therein; a top journal bearing section and two independent side journal bearing sections, the top section being vertically movable relatively to the side sections; means for transmitting weight to the top journal bearing section; and means for effecting horizontal adjustment of the side sections relatively to a common axial line.

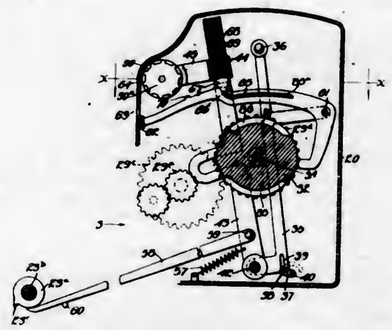
3. The combination, in a locomotive engine, of a frame pedestal; a driving box fitted with the capacity of relative vertical movement therein and comprising a top section and two independent side sections; journal bearing sections, each fitted in one of the driving box sections; means for transmitting weight to the top journal bearing section; and means for effecting independent adjustment of the journal bearing sections relatively to a common axial line.

4. The combination, in a locomotive engine, of a frame pedestal; a driving box fitted with the capacity of relative vertical movement therein and comprising a top section and two independent side sections; journal bearing sections, each fitted in one of the driving box sections; means for transmitting weight to the top journal bearing section; and an adjustable pedestal wedge fitted between one of the side sections and the adjacent pedestal jaw.

5. The combination, in a locomotive engine, of a frame pedestal; a driving box fitted therein and comprising a top section and two independent side sections; journal bearing sections, each fitted in one of the driving box sections; vertical liners interposed between the top driving box section and the side sections; and an adjustable pedestal wedge fitted between one of the side sections and the adjacent pedestal jaw.

[Claims 6 to 10 not printed in the Gazette.]

1,218,376. COMPUTING-MACHINE. JAMES R. COMBS, Dinsmore, Fla. Filed Oct. 5, 1915. Serial No. 54,165. (Cl. 235—58.)



1. The combination with a plurality of manipulative elements bearing the specific values of each digit of a number, of means including movable members having interrupted grooves arranged in a plurality of spaced lines for translating the value of a manipulation of any of said elements into the equivalent monetary denominations.

2. The combination with a plurality of manipulative elements bearing the specific values of each digit of a number, of means including movable members having interrupted grooves arranged in a plurality of spaced lines for translating the value of a manipulation of any of said elements into the fewest monetary denominations.

3. The combination with a plurality of manipulative elements bearing the specific values of each digit of a number, of a counter for each of a plurality of monetary denominations, and means including movable members having interrupted grooves arranged in a plurality of spaced lines for translating the value of a manipulation of any of said elements into the fewest monetary denominations on the respective counters.

4. The combination with a plurality of manipulative elements bearing the specific values of each digit of a number, of a counter for each of a plurality of monetary denominations, interposed grooved members movable into each of a plurality of definite positions by a manipulation of the respective elements, and means for operatively connecting said interposed grooved members and respective counters to translate the value of a manipulation of any of said elements into the fewest monetary denominations on the respective counters.

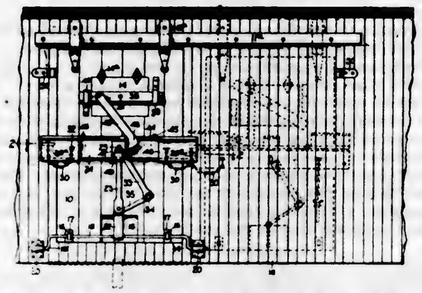
5. The combination with a plurality of manipulative elements individually marked to represent each value of each digit of a number, of means including movable members having interrupted grooves arranged in a plurality of spaced lines for translating the value of a manipulation of any of said elements into the fewest monetary denominations.

[Claims 6 to 22 not printed in the Gazette.]

1,218,377. CAR-DOOR. JOHN H. CRUMB, Platte, S. D. Filed Jan. 28, 1915. Serial No. 4,875. (Cl. 20—28.)

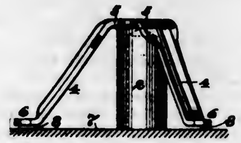
1. The combination with a car having a door-way, of a slidable door for said door-way, bolts on the door at each side adapted to engage the car, and a rockable element on the door, said element having plates adapted to overlie said bolts, and having a hasp, the said door having means to be engaged by said hasp.

2. The combination with a car having a door-way, of a door, slidably mounted door hangers, the door being connected with said hangers to swing transversely and to rise and fall in swinging, bolts on the door at each side, and nuts on the car to receive the said bolts, the said bolts and nuts at one side being lower than those at the opposite side so that the bolt at one side may engage the nut of the other bolt when the door is slid to the open position.



3. The combination with a car having a doorway, of a door mounted to slide and to have a vertical and transverse swinging movement relatively to the doorway, a cross bar on the door and projecting beyond the side edges thereof, the projecting ends having bolt holes, said ends overlapping the sides of the car when the door is in position in the doorway, timbers in the interior of the car at the doorway, nuts in said timbers, bolts adapted to be passed through the bolt holes in the bar to engage said nuts, the end portions of the bar being in a plane outward from the inner face of the door so that the said projecting ends have clearance to prevent contact with the car while the door is forced to a firm seat in the doorway by the engagement of the bolts and nuts, and co-acting means on the car and on the door at the bottom and operable to raise said door and position the same with the bolt holes of the bar in register with the said nuts.

1,218,378. CONCRETE-INSERT. HARRY DIPPEL, Philadelphia, Pa. Filed Feb. 9, 1916. Serial No. 77,118. (Cl. 72—105.)

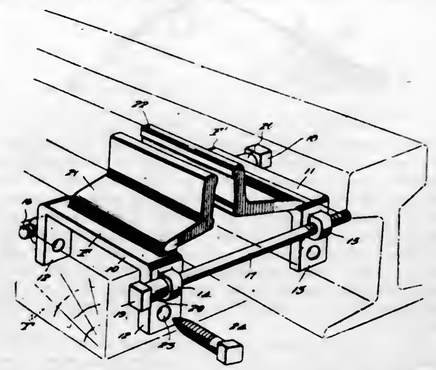


As an article of manufacture, an insert for concrete ceilings, etc., which consists of a central elongated body provided with three or more radiating arms extending from one end of said body and projecting obliquely outward away from the body and having their ends normally terminating in a plane slightly back of the plane of the other end of the body, said arms each terminating in a foot and said feet widely separated and arranged at a considerable distance from the body and movable relatively thereto, and in which further the union of the arms with the body is formed by flexible portions capable of bending without breaking, whereby the feet may be independently adjusted and sprung down when applying the insert to the false work and cause the body to press tightly upon such false work.

1,218,379. RAILWAY-RAIL FASTENER. TALMAGE E. DOUB, Rochelle, Ill. Filed Nov. 7, 1916. Serial No. 129,999. (Cl. 238—4.)

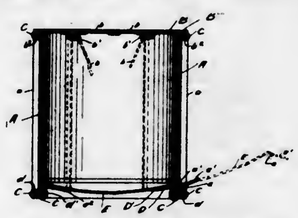
1. In a rail fastener, the combination of U-shaped tie engaging frames having oppositely disposed jaw members to engage a rail, said frames having lugs, screw clamping elements engageable through said lugs to clamp said frames against a rail, and means engageable with the tie through said frames.

2. In a rail fastener, the combination of U-shaped tie engaging frames having side portions, rail engaging jaws formed on said frames and oppositely disposed, said frames having lugs extending from the side portions thereof, screw clamping members engageable through certain of the lugs to draw said frames together, the side portions of said frames having apertures therein through which lag bolts may be engaged, said bolts serving to maintain the frames against movement on a tie.



3. In a device of the class described, the combination of U-shaped frames having rail engaging jaws formed thereon, the side portions of said frames being adapted to embrace a tie, said side portions being provided with lugs, certain of said lugs being provided with threaded apertures and certain other of the lugs being provided with non-threaded apertures, clamping rods engageable through the lugs, and said side portions being provided with apertures to accommodate means for engagement with the tie.

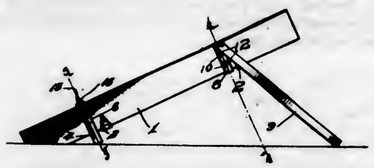
1,218,380. SELF-CLOSING CONTAINER. WILLIAM DOWIE, New York, N. Y. Filed May 1, 1915. Serial No. 25,158. (Cl. 220—115.)



1. In a container of the class described, an apertured head comprising an annular ledge, the said ledge surrounding the interior open portion of the head, reinforcing means to stiffen the said ledge to avoid flexure in use comprising annular vertical and horizontal means located adjacent to the said ledge and each having a U-shaped groove; and also additional reinforcing means comprising spaced vertically arranged devices to lie adjacent to the first named stiffening means; and a flexible medium contained in the said grooves to cushion the said ledge, in combination with a closure positioned at the aperture of the head.

2. In a container of the class described, an apertured head comprising an annular ledge, the said ledge surrounding the interior open portion of the head, reinforcing means to stiffen the said ledge to avoid flexure in use comprising annular horizontal means located adjacent to the said ledge and having a U-shaped groove; and also additional reinforcing means comprising spaced vertically arranged devices to lie adjacent to the first named stiffening means, in combination with a closure positioned at the aperture of the head.

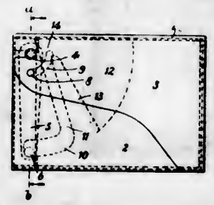
1,218,381. VACCINATING-TABLE. JAMES A. DRAGOO and DICKMAN D. DRAGOO, Connersville, Ind. Filed Apr. 4, 1916. Serial No. 88,928. (Cl. 119—103.)



1. A vaccinating table comprising a trough shaped member, means for supporting the same at an inclination, a transversely extending support at the lower end of the member having an aperture at either end adjacent the upper longitudinal edges of the member, a transversely extending rod above the trough member, adjacent the support to retain the head of an animal under said rod and having down-turned threaded ends which enter the openings, and nuts applied to the threaded ends above and below the support to retain the rod in any vertically adjusted position.

2. A vaccinating table comprising longitudinal members hingedly connected at one of the longitudinal edges, supports formed of strap iron and provided with V-shaped bends for supporting the longitudinal members in angular relation, and in an inclined position relative to the ground, the longitudinal members and the V-shaped bends of the supports having registerable openings, removable fastenings extending through the openings for securing together the members and the supports, a rod, having parallel threaded terminals for engagement in the support at the lower end of the members, and nuts engaging the threaded terminals and the supports for maintaining the rod in adjusted position.

1,218,382. METAL MATCH-BOX. ALFRED DUNHILL, London, England. Filed Oct. 30, 1916. Serial No. 128,490. (Cl. 206—83.)

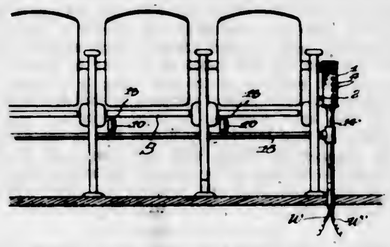


1. A match box, comprising a housing, a wind shield pivoted to the housing, a tray for the matches slidable in the housing, and lever mechanism operatively connecting the tray with the wind shield and engaging positively with the tray in one direction and operating to slide the tray outwardly when the wind shield is raised, said mechanism being automatically disengageable in the reverse direction to permit the tray to be pushed in without lowering the wind shield.

2. A match box, comprising a housing, a wind shield pivoted to the housing, a tray for the matches slidable in the housing and provided with an actuating device and an inclined portion arranged near one end thereof, a lever connected with the wind shield at one end and having a projection at its other end for engaging with the said device and inclined portion, said device operating to slide the tray outwardly while the wind shield is being raised, and said inclined portion operating to disengage the said lever to permit the tray to be pushed in without lowering the wind shield.

3. A metal box for holding matches, consisting of a tray, a housing surrounding said tray, an outer part, shaped to serve as a wind shield, snugly fitting and hingedly connected to said housing by means of a rivet, a lever loosely mounted on said rivet at a level below said tray, a pin connecting said lever to said outer part or wind shield, an arc-shaped slot formed in said housing for the travel of said pin, an upstanding pin at the outer end of said lever, and a cam groove of substantially L-shape, a recess in front of said cam groove separated from said cam groove by a wedge-shaped projection formed on its front with an incline in line with the outer part of said cam groove, and a gateway connecting the inner end of said cam groove to said recess, said cam groove, recess and gateway being provided on the bottom of the tray of the box and cooperating with the upstanding pin at the outer end of said lever, substantially as described.

1,218,383. VACANT-SEAT INDICATOR FOR THEATERS. CHARLES E. EGAN, Charleston, W. Va., assignor of one-third to Charles A. Sembower, Clarksburg, W. Va., and one-third to Eliet S. Baumgartner, Morgantown, W. Va. Filed Aug. 26, 1915. Serial No. 47,543. (Cl. 116—32.)



1. In a vacant chair indicator for buildings, the combination with a group of seats, of a casing having a light therein, and provided with a plurality of apertures corresponding to the seats in the group, a guard for closing each of said apertures, and pneumatically operated means connected with each seat for actuating a corresponding guard on the occupation of the seat for closing a corresponding aperture.

2. In a vacant chair indicator for buildings, the combination with a row of seats, of a casing arranged at one end of said row and having a light therein, said casing having a plurality of apertures therein corresponding to the seats in the row, a guard for closing each of said apertures, pneumatically operated means connected with each seat for actuating a corresponding guard on the occupation of the seat for closing a corresponding aperture, and automatic means for opening said apertures on the vacation of the seats.

3. In a vacant chair indicator for theaters and the like, the combination with a row of seats, a casing mounted at one end of said row and having a plurality of apertures therein corresponding with the seats in the row, a shield for each aperture mounted to reciprocate across the aperture for opening and closing it, a cylinder for each shield mounted in said casing and having a piston reciprocally mounted therein, a piston rod connecting each piston with its shield, and air supplying means for each cylinder operable on the occupation of the seat corresponding thereto for forcing its piston outwardly and thus closing the aperture, and spring actuated means for withdrawing the air from said cylinder to retract said shield and expose its opening.

4. In a vacant seat indicator for theaters and the like, the combination with a row of seats, a casing arranged at one end of said row, said casing having a plurality of longitudinally alined spaced apertures therein, a plurality of cylinders arranged transversely in said casing, one cylinder being arranged in alinement with each of said apertures, a piston mounted in each of said cylinders, a rod connected with each piston and extending through one end of its cylinder, a shield carried by the outer end of each rod and adapted to extend over the opening with which the cylinder is alined when the piston is projected and to be withdrawn therefrom on the retraction of the piston, a tube communicating with each cylinder in advance of its piston and extending to a point under a corresponding seat, a cylinder arranged under each of said seats with which tubes communicate, a spring projected piston mounted in each of said last mentioned cylinders and having a stem arranged in the path of the seat and adapted to be compressed on the occupation of the seat, whereby the air in the corresponding cylinder is compressed and forced through its tube into the cylinder communicating therewith in the casing whereby the piston in said last mentioned cylinder is projected and the shield positioned to close its corresponding aperture.

5. In a vacant seat indicator for theaters and the like, the combination with a row of seats, a casing arranged at one end of said row, said casing having a plurality of longitudinally alined spaced apertures therein, a plurality of cylinders arranged transversely in said casing, a cylinder being arranged in alinement with each aperture, a piston mounted in each of said cylinders, a rod connected with each piston and extending through one end of its cylinder, a shield carried by the outer end of each rod and adapted to extend over the opening with which the cylinder is alined when the piston is projected and to be withdrawn therefrom on the retraction of the piston, a tube communicating with each cylinder in advance of its piston and extending to a point under one of the seats, a cylinder arranged under each seat with which a tube communicates, a spring projected piston mounted in each of said last mentioned cylinders and having a stem arranged in the path of the seat and adapted to be compressed on the occupation of the seat, whereby the air in said cylinder is compressed and forced through said tube into the cylinder communicating therewith in the casing whereby the piston in said last mentioned cylinder is projected and the shield positioned to close its corresponding aperture, and a tubular extension leading from one end of said casing through which the air conducting tubes extend and by which they are protected.

1,218,384. THERMOSTATIC DEVICE. HENRY H. FEHRENSCHILD, Westwood, N. J. Filed Apr. 15, 1916. Serial No. 91,349. (Cl. 236—6.)

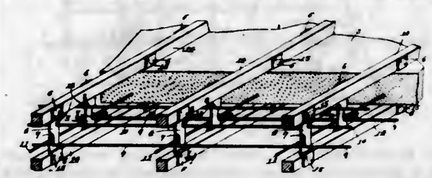


1. The combination in a thermostatic device of a single operating rod; a plurality of pivoted levers, each lever having its free end attached to the rod, and a thermostatic wafer applied to each lever.

2. The combination in a thermostatic device of a pair of cross-arms at right angles to one another, each provided at each of its ends with a pivoted pendant arm; a lever pivoted in the end of each of the pendant arms and provided with a projecting rod; a thermostatic wafer affixed to the under side of each end of each cross arm and above each lever; and an operating rod passing through an orifice in the two cross arms and provided with a plate adapted to receive the ends of each of the projecting rods from each of the levers.

1,218,385. BUILDING CONSTRUCTION. CHARLES W. FELLGREN, Chicago, Ill. Filed Feb. 20, 1914. Serial No. 819,928. (Cl. 72—71.)

A floor construction comprising a concrete body; metallic securing members extending through said body and projecting from both sides thereof, the projecting ends of said members being offset from the body portions thereof and said members being provided with downwardly extending notches in their sides within said body, said members being arranged in said body, in rows, the members in each row registering with the members in the other rows and the adjacent members in each row being oppositely positioned so that said projecting ends are adapted



to engage opposite sides of securing strips; transverse bars resting in said notches; bars arranged at right angles to said transverse bars and resting thereon, the edges of said notches being bent over said last mentioned bars; wooden strips secured to the projecting ends of said securing members; flooring boards secured to the upper strips; and a ceiling secured to the lower strips, substantially as described.

1,218,386. PROPELLER. PAUL E. FERRERO, Pittsburgh, Pa. Filed Sept. 17, 1915. Serial No. 51,167. (Cl. 170—159.)



1. A variable pitch screw propeller in which the area of the propeller is substantially equal to the area of the column of water engaged, the pitch of the leading face bearing a constant curve and surface ratio less than unity to that of the trailing face, the curvature of the leading face being reversed to that of the trailing face.

2. A variable pitch screw propeller in which the area of the propeller is substantially equal to the area of the column of water engaged, and in the blades of which the pitch of the trailing face is twice that of the leading face, the curvature of the leading face being reverse to that of the trailing face.

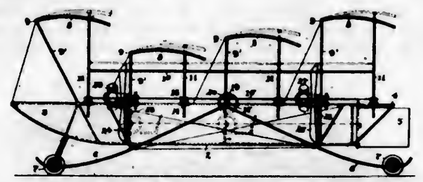
3. A disk screw propeller in which the area of the propeller is substantially equal to the area of the column of water engaged, the pitch of the leading face of each blade being one-half that of the trailing face, the curvature of the leading face being reverse to that of the trailing face.

4. In a screw propeller, a hub, blades mounted upon said hub, the area of said blades being equal substantially to that of the column of water engaged, each blade having a leading face portion slightly convex with respect to the water engaged, and the leading edge having a forward rake of 15°, a central face portion substantially flat and perpendicular, and a trailing face portion with a concave curvature raked at an angle rearwardly of 30° at the trailing edge, the ratio of the pitch of the trailing face to that of the leading face being two to one.

1,218,387. AEROPLANE. CHAUNCEY B. FORWARD, Jr., and LOUIS D. FORWARD, Urbana, Ohio. Filed May 1, 1916. Serial No. 94,582. (Cl. 244—14.)

1. In an aeroplane, a series of planes in tandem and the front and rear planes at the same elevation and the intermediate planes on a lower elevation and in stepped

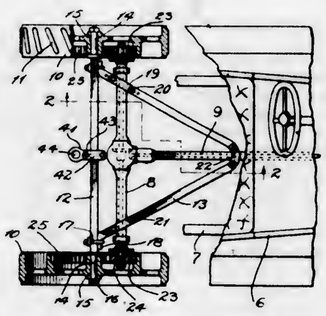
relation rearward, a rigid frame uniting said planes, and gear mechanism for raising and lowering said frame and planes simultaneously.



2. In an aeroplane, a main frame having vertical struts and a plurality of planes hinged thereto, in combination with a movable frame extending longitudinally of the main frame having a pair of uprights connected with the rear of each plane and said uprights having racks thereon, a set of shafts having pinions engaging said racks and a transverse shaft having worms in geared relations with said shafts.

3. In an aeroplane, a triangular frame having struts in pairs inclined laterally from a given point to V shape and a plane for each pair having a front bar hinged to said struts, in combination with a pair of vertical uprights pivotally connected to each plane and having racks on their lower ends, and means mounted upon said frame to movably support said uprights to change the angle of incidence of said plane comprising two shafts and pinions thereon engaging said racks and a single transverse shaft having a hand wheel to rotate the same and worms thereon operatively engaged with said shafts.

1,218,388. TRACTOR DEVICE. JAMES R. FOUCH, Los Angeles, Cal. Filed Feb. 7, 1916. Serial No. 76,551. (Cl. 21—114.)



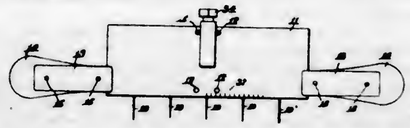
1 A propelling traction mechanism for vehicles comprising a frame adapted to be clamped upon the rear axle casing of a vehicle and having bracing portions engaging the casing of the power transmission shaft and tractor wheels carried by said frame and having broad ground engaging treads, whereby the vehicle will be adaptable for use on soft or broken ground.

2. A tractor attachment for motor vehicles comprising a frame adapted to be clamped upon the drive axle casing of the vehicle and adjustably engaging the casing of the transmission drive shaft, pinions adapted to take the place of the vehicle drive wheels, and to be driven by the drive axle of the vehicle, and gears upon the tractor wheels for receiving motion from said pinions.

3. A tractor attachment for motor vehicles comprising a yoke frame having means for adjustably securing it to the casing of a vehicle drive axle, and having means for bracing it with respect to the casing of the vehicle drive shaft, a draft beam held by said yoke, tractor wheels carried by said yoke frame having drive gears thereon and pinions adapted to mesh with said drive gears and to receive their motion from the drive axle of the vehicle.

4. A tractor attachment for motor vehicles or automobiles comprising a yoke adapted to be clamped upon the running gear of the vehicle, a transverse axle, an adjustable clevis member mounted upon said transverse axle for connecting mechanism and attachments to the tractor attachment and tractor wheels mounted upon said transverse axle, said tractor wheels supporting said yoke and the drive mechanism of the vehicle, whereby the vehicle may be converted into a tractor.

1,218,389. GANG-CUTTER. ANGUS FOUGERE, Cambridge, Mass. Filed Nov. 27, 1916. Serial No. 133,983. (Cl. 107—51.)



1. In a device of the class described, a casing; a fixed bar extending transversely thereof; a knife secured thereto and projecting from said casing; movable bars on opposite sides of said fixed bar; a knife projecting from each movable bar; and means for simultaneously moving said movable bars equal distances from said fixed bar and from each other.

2. In a device of the class described, a casing; a fixed bar extending transversely thereof; a knife secured thereto and projecting from said casing; movable bars on opposite sides of said fixed bar; a knife projecting from each movable bar; connectors pivotally connected to said bars and pivoted together in pairs; and means for varying the inclination of said connectors.

3. In a device of the class described, a casing; a fixed bar extending transversely thereof and having a slot in one end thereof; a knife secured thereto and projecting from said casing; movable bars on opposite sides of said fixed bar, each having a slot in one end thereof; a knife projecting from each movable bar; connectors pivoted together in pairs and each pivoted at one end to a knife bar; a member on the opposite end of each connector positioned in one of said slots; and means for varying the inclinations of said connectors.

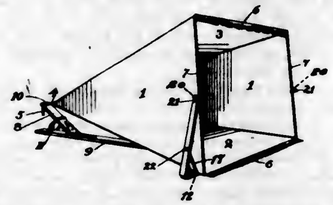
4. In a device of the class described, a casing; a fixed bar extending transversely thereof and having a slot in one end thereof; a knife secured thereto and projecting from said casing; movable bars on opposite sides of said fixed bar, each having a slot in one end thereof; a knife projecting from each movable bar; connectors pivoted together in pairs and each pivoted at one end to a knife bar; a member on the opposite end of each connector positioned in one of said slots; a block on one of said projecting members; and means coacting with said block for varying the inclinations of said connectors.

5. In a device of the class described, a casing; a fixed bar extending transversely thereof and having a slot in one end thereof; a knife secured thereto and projecting from said casing; movable bars on opposite sides of said fixed bar, each having a slot in one end thereof; a knife projecting from each movable bar; connectors pivoted together in pairs and each pivoted at one end to a knife bar; a member on the opposite end of each connector positioned in one of said slots; a nut on one of said projecting members; and a screw threaded to said nut and adapted to vary the inclinations of said connectors.

[Claims 6 and 7 not printed in the Gazette.]

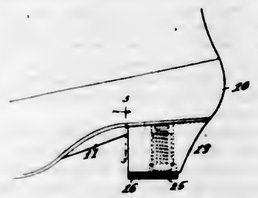
1,218,390. PRACTICE DEVICE FOR GOLF AND LIKE OUTDOOR GAMES. LEON S. GATES, Cincinnati, Ohio. Filed Oct. 5, 1916. Serial No. 123,893. (Cl. 46—4.)

1. A golf-practice device comprising a pyramidal-shaped collapsible sack or receptacle having a suitably stretched or expanding front end for the reception and automatic return of the practice-ball, and means for adjustably and removably supporting said receptacle in position for use so that one of the walls is forwardly and downwardly inclined.



2. A golf-practice device comprising a collapsible target sack or receptacle having an open-mouthed, suitably extended fore-end and a pointed rear-end or vertex, an attaching-cord extended from said vertex, a longitudinal base-member having at its rear-end a tilted pivotal-stake with which said attaching-cord is engaged and placed under straining-tension, a transverse base-member with which the fore-end of said longitudinal base-member is adapted to detachably-engage in use, upright pivotal-members at the opposite ends of said transverse base-member and having upper hook-extensions for engagement with the sides of the expanded open-mouthed fore-end of the receptacle, and pivotal-braces extending from said upright pivotal-members to support the latter in using position, all of said members, including the sack, being adapted to be collapsed and folded in small compass for storing, carrying and shipping.

1,218,391. SPRING-HEEL. ARTHUR STAFFORD GAY, Everett, Wash. Filed June 7, 1916. Serial No. 102,185. (Cl. 36—38.)

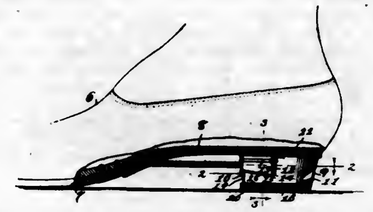


1. A shoe heel, comprising a rigid shell of heel shape, a lift carrier connected therewith, means for preventing upward movement of the forward portion of said carrier within said shell, and resilient means for yieldingly resisting upward movement of the rearward portion of said carrier and acting to prevent the lower rear edge of said shell from reaching the ground in walking.

2. A shoe heel, comprising a shell of heel shape and composed of rigid material, and cut away at the lower front portion thereof, horizontal guides in said shell above said cut away portion, a lift carrier composed of a horizontal member held in said guides, a front vertical member, and a horizontal lower member conforming to the shape of said shell, said carrier being composed of spring material, and means for limiting upward movement of the lift carrier within said shell.

1,218,392. SPRING-HEEL. ARTHUR S. GAY, Everett, Wash. Filed July 20, 1916. Serial No. 110,292. (Cl. 36—38.)

1. As an article of manufacture, for use on a shoe, a heel comprising a shell open at its bottom and having its breast side cut away at its bottom, a downwardly extending member provided with channels at its sides, and a lift carrier consisting of a vertical member held in said channels, a forwardly directed member, a downwardly directed member covering the cut away portion of said breast side, and a rearwardly directed horizontal member conforming to said shell, said carrier being composed of spring material.



2. As an article of manufacture, for use on a shoe, a heel comprising a shell open at its bottom and having its breast side cut away at its bottom, a downwardly extending member provided with channels at its sides, and a lift carrier consisting of a vertical member held in said channels, a forwardly directed member, a downwardly directed member covering the cut away portion of said breast side, and a rearwardly directed horizontal member conforming to said shell, and means for limiting inward movement of the free end of said horizontal member, said carrier being composed of spring material.

1,218,393. SHOE-SHINING DEVICE. THEODORE F. GENSMER, Minneapolis, Minn. Filed Feb. 21, 1916. Serial No. 79,581. (Cl. 15—46.)



1. A shoe shining device comprising a hollow handle adapted to contain a suitable paste, a tube forming a longitudinal continuation of said handle and through which the paste is fed, a dauber head having a socket extending therethrough to receive said tube, means mounted in the end of said tube and engaging said dauber head for holding it in place thereon, said head having bristles and said tube being provided with a branch extending into said bristles for delivering paste thereto.

2. A shining device comprising a handle adapted to contain a shining paste, a tube communicating with the interior of said handle and forming a longitudinal continuation thereof, a dauber head having a socket to receive said tube and fitting snugly against the end of said handle, a screw engaging said dauber head and tapped into said tube for locking said head and tube together, the removal of said screw allowing the separation of said head from said handle, bristles mounted in said head, and said tube having a discharge port therein leading to said bristles.

3. A shining device comprising a hollow handle having a dauber brush and a feed passage communicating with said handle, a paste magazine fitting within said handle, a feed screw for said paste magazine, a follower for said feed screw, means feeding said screw lengthwise initially to advance said follower and for revolving said screw and moving said follower on said screw when lengthwise movement of the screw has ceased.

4. A shining device comprising a hollow handle, a brush having bristles and a feed passage leading from said bristles to said handle, a removable cap for said handle, a paste magazine fitting within said handle, a feed screw mounted within said cap and a hand grip for feeding said screw lengthwise a predetermined distance, a follower mounted on said screw and having

means for advancing it into the paste through the revolution of said screw when its forward movement has ceased.

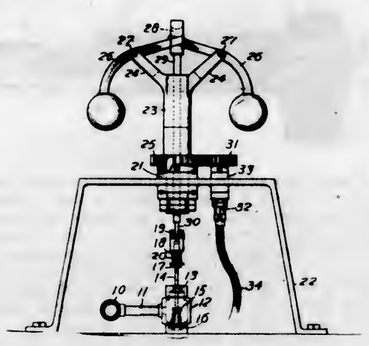
5. A shining device comprising a hollow handle, a dauber head having bristles and a feed passage communicating with said hollow handle, a cap for said hollow handle, a hub mounted thereon and a handle for said hub, a feed screw passing through said hub and having a limited longitudinal movement therein when said hub and handle are revolved, a follower mounted on said screw and advanced into said hollow handle by the longitudinal movement of said screw, the revolution of said hub and handle revolving said screw when its longitudinal movement has ceased and continuing the feeding movement of said follower in said handle.

1,218,394. COATING FOR MOLDS AND CORES. JOSEPH EMILE GERMELLE-DANLOY, Moulins, France. Filed Dec. 10, 1914. Serial No. 876,479. (Cl. 22—189.)

1. A composition for use in coating sand molds and cores, comprising in combination coke dust, charcoal, pipe clay and raw starch, together with dry starch paste to serve as an agglutinant substantially in the proportions herein set forth.

2. A composition for use in coating sand molds and cores comprising known carbonaceous mixtures previously employed for this purpose together with an agglutinant consisting of dry starch paste.

1,218,395. AUTOMATIC SPEED-CONTROLLER FOR RAILWAY-TRAINS. LELAND E. GLENN, Greensboro, N. C. Filed Apr. 22, 1916. Serial No. 92,883. (Cl. 188—72.)



1. In a train speed regulating apparatus, the combination with a train pipe having a vent, of a valve casing having an upper opening and a valve seat therein around the opening, a connection establishing communication between the interior of said casing and the vent of the train pipe, a valve within the casing seated upwardly against the said seat, a stem upon which the valve is secured having a portion depending within the valve casing and provided with an adjustable stop, a controlling spring coiled around the stem between the base of the casing and the said stop, a plug threaded upon and adjustable on the upper external portion of the valve stem, a head having a lower axial bore into which the upper end of the plug is movable, a spring coiled about the plug and bearing upwardly against the said head, a supporting bracket having adjacent bearings, a governor including a body disposed vertically and having its lower end mounted in one of the bearings of the said bracket and provided with an axial bore, a governor rod movable vertically in the bore and having a reduced lower end disposed in the upper axial bore of the said head, said governor rod having an upper apertured end and said governor also including governor arms intermediately fulcrumed upon the body and having their inner free ends disposed within the aperture of the said rod, a gear wheel secured upon the governor body, a stem journaled through the other bearing of said supporting bracket, a gear wheel secured upon the stem and in engagement with the gear wheel of the governor body, a flexible shaft secured at one end to the said gear stem, and gearing connecting the opposite end of the flexible shaft with one of the axles of the train whereby to transmit rotation thereof to the governor, said gearing including a worm secured upon the axle, a worm wheel in engagement with the worm, and a shaft upon which the worm wheel is mounted, connected to the respective end of the flexible shaft.

2. In a train speed regulating apparatus, the combination with a train pipe having a vent, of a valve casing having an upper opening and a valve seat therein around the opening, a connection establishing communication between the interior of said casing and the vent of the train pipe, a valve within the casing seated upwardly against the said seat, a stem upon which the valve is secured having a portion depending within the valve casing and provided with an adjustable stop, a controlling spring coiled around the stem between the base of the casing and the said stop, a plug threaded upon and adjustable on the upper external portion of the valve stem, a head having a lower axial bore into which the upper end of the plug is movable, a spring coiled about the plug and bearing upwardly against the said head, a supporting bracket having adjacent bearings, a governor including a body disposed vertically and having its lower end mounted in one of the bearings of the said bracket and provided with an axial bore, a governor rod movable vertically in the bore and having a reduced lower end disposed in the upper axial bore of the said head, said governor rod having an upper apertured end and said governor also including governor arms intermediately fulcrumed upon the body and having their inner free ends disposed within the aperture of the said rod, a gear wheel secured upon the governor body, a stem journaled through the other bearing of said supporting bracket, a gear wheel secured upon the stem and in engagement with the gear wheel of the governor body, a flexible shaft secured at one end to the said gear stem, and gearing connecting the opposite end of the flexible shaft with one of the axles of the train whereby to transmit rotation thereof to the governor, said gearing including a worm secured upon the axle, a worm wheel in engagement with the worm, and a shaft upon which the worm wheel is mounted, connected to the respective end of the flexible shaft.

3. In an automatic speed regulating device for trains, the combination with a train pipe having a vent, of a valve casing in communication with the vent of the train pipe and having an opening, a valve controlling the opening, a stem upon which the valve is secured having a portion extending within the valve casing and provided therein with an adjustable stop, a controlling spring between said stop and a portion of the valve casing to normally hold the valve in seated position, a head having a limited movement with respect to the outer end of the valve stem, a spring controlling relative movement of the said head and the valve stem, a governor including a rod rotatably engaged with the said head, and gearing connections between the said governor and a wheel axle of the train.

4. In an automatic speed regulating device for trains, the combination with a train pipe having a vent, of a valve casing in communication with the vent of the train pipe and having an opening, a valve controlling the opening, a stem upon which the valve is secured having a portion extending within the valve casing and provided therein with an adjustable stop, a controlling spring between said stop and a portion of the valve casing to normally hold the valve in seated position, a head having a limited movement with respect to the outer end of the valve stem, a spring controlling relative movement of the said head and the valve stem, a governor including a rod rotatably engaged with the said head, and gearing connections between the said governor and a wheel axle of the train, said connections including a sectional worm secured to the axle of the train, a worm wheel in engagement with the worm, and a flexible shaft connecting the worm wheel with the governor.

5. In an automatic speed regulator for trains, the combination with a train pipe having a vent, of a spring controlled valve normally seated to close the vent and having a projecting threaded stem, a plug threaded upon the said stem and adjustable thereon, a head having a limited movement with respect to the plug, a spring between the said plug and the said head, a governor including a governor rod one end of which is rotatably seated in the head, and gearing connections between the governor and a wheel axle of the train.

[Claim 6 not printed in the Gazette.]

1,218,396. WARDROBE ATTACHMENT FOR BEDS. FRANKLIN L. GROFF, Plainfield, and WILLIAM N. BUNCE, Jersey City, N. J., assignors to Mersereau Metal Bed Company, Jersey City, N. J., a Corporation of New Jersey. Filed Feb. 26, 1914. Serial No. 821,120. (Cl. 5—41.)



1. In a wardrobe attachment for beds, brackets having portions adapted to engage the rails and depending portions provided with apertures, tracks adapted to be inserted in said apertures, and means carried by the tracks and engaging the brackets for preventing the tracks from sliding relative to the brackets.

2. In a wardrobe attachment for beds, brackets having portions adapted to engage the rails and depending portions provided with apertures for tracks and slots leading from ends of the depending portions to such apertures for passage of hangers, tracks maintained in said brackets, hangers carried by said tracks and having ends adapted to pass through the slots in said brackets, and a box carried by said hangers.

3. In a wardrobe attachment for beds, brackets supported from the side rails and having slots in one portion thereof, tracks maintained in position by said brackets, hangers adapted to travel in said tracks and through the slots of said brackets, and a box supported by said hangers.

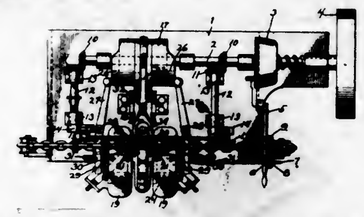
4. In a wardrobe attachment for beds, brackets adapted to be supported from the rails of the bed, said brackets having means to maintain tracks in position and means for engaging the rails of the bed to prevent swinging, tracks carried by said brackets, said tracks comprising hollow members having upper and lower bearing portions, and a slot in the lower bearing portion and being provided also with means for engaging the brackets, whereby such tracks are prevented from moving longitudinally, hangers adapted to ride in said tracks and comprising members having rolls on either end, the rolls toward one end bearing on the lower portions of said tracks and the rolls on the other end bearing on the upper bearing portions of said tracks, the part of said hangers immediately adjacent said rolls being adapted to pass through the slots in the lower bearing portions, and a box attached to said hangers.

5. In a wardrobe attachment for beds, brackets adapted to be supported from the rails and having means for supporting tracks and means to permit hangers to pass through the brackets, tracks maintained in position by said brackets, hangers swung in said tracks and adapted to be pulled past the tracks and through the brackets, and a box supported by said hangers.

[Claims 6 and 7 not printed in the Gazette.]

1,218,397. ELECTRIC CHAIN-WELDING MACHINE. JACOB ROAS GROVE, York, Pa. Filed July 12, 1916. Serial No. 108,821. (Cl. 219—4.)

1. In an electric chain welding machine, coöperating welding jaws and swaging hammers in operative relation therewith, whereby simultaneously a plurality of links proximate in the same axial plane of the chain may be heated and welded.



2. In an electric chain welding machine, a set of coöperating welding jaws, comprising a stationary median jaw and two lateral movable jaws, one on each side thereof whereby simultaneously two links proximate in the same axial plane of the chain may be heated and compressed.

3. In an electric chain welding machine, a set of coöperating welding jaws comprising a stationary median jaw and two movable jaws, one on each side thereof adapted to engage heat and compress two links proximate in the same axial plane of the chain simultaneously, one link between each of the movable lateral jaws and the median stationary jaw.

4. In an electric chain welding machine, a set of coöperating welding jaws comprising a stationary median jaw and two movable jaws, one on each side thereof, adapted to engage heat in electric series, and compress two links proximate in the same axial plane of the chain simultaneously, one link between each of the movable lateral jaws and the median stationary jaw.

5. In an electric chain welding machine, a set of coöperating welding jaws comprising a median jaw and two lateral jaws; each lateral jaw in operative electric connection with one side of the welding circuit, and in operative connection with the other side in series with the median jaw, and with a chain link between said lateral jaw and said median jaw, and with a chain link between the median jaw and the opposite lateral jaw.

[Claims 6 to 17 not printed in the Gazette.]

1,218,398. GAME DEVICE. MORRIS GURTOV, New York, N. Y. Filed Aug. 5, 1916. Serial No. 113,259. (Cl. 46—40.)

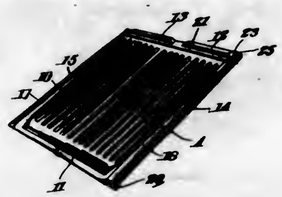


A device of the class described, comprising a body of unyielding material having a passage therethrough downwardly inclined from front to rear, and a covering of yielding material formed to represent an animal, said passage being for the reception and guidance of a thrown ball.

1,218,399. METALLIC SHINGLE. WILLIAM HERBERT HALL, Oshawa, Ontario, Canada, assignor to The Pedlar People Limited, Oshawa, Ontario, Canada. Filed Nov. 2, 1915. Serial No. 59,317. (Cl. 108—17.)

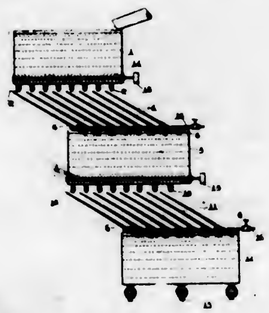
1. A metallic shingle having a trough shaped flange formed on one side with a ridge projecting upwardly above the surface of the shingle and having a tongue shaped

flange on the opposite side adapted to enter the trough shaped flange of a corresponding shingle, said tongue shaped flange having a recess therein to receive the ridge in the trough shaped flange and a water stop formed at the top of the trough shaped flange formed by turning upwardly a projecting portion of the flange.



2. A metallic shingle having side joints below the plane of the surface of the shingle, being also formed with interlocking top and bottom joints, the surface of the shingle being formed with a plurality of parallel fluting extending across the whole width of the same and from top to bottom thereof; the depth of said fluting being substantially equal to the depth of the side joints, whereby the lower surface of the fluting may rest on the roof or other support for the shingle and so support the face of the shingle therefrom.

1,218,400. APPARATUS FOR SEPARATING ORES BY FLOTATION. HERBERT E. T. HAULTAIN, Toronto, Ontario, Canada. Filed Apr. 19, 1915. Serial No. 22,425. (Cl. 83—85.)



1. In ore flotation apparatus, the combination of a feed receptacle for pulp; a plurality of substantially parallel relatively closely set and overlapping inclined plates on to each of which said receptacle discharges, and a second liquid containing receptacle to which the inclined plates discharge, said receptacle having an overflow discharge.

2. In ore flotation apparatus, the combination of a feed receptacle for pulp; a plurality of substantially parallel relatively closely set and overlapping inclined plates on to each of which said receptacle discharges, said plates being shaped to spread the pulp out in fan shape thereon; and a second liquid containing receptacle to which the inclined plates discharge, said receptacle having an overflow discharge.

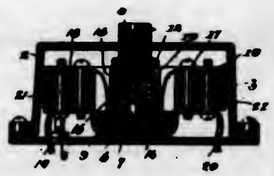
3. In ore flotation apparatus, the combination of a feed receptacle for pulp; a plurality of substantially parallel relatively closely set and overlapping inclined plates on to each of which said receptacle discharges, said plates being convexly curved in cross section to spread the pulp out in fan shape thereon; and a second liquid containing receptacle to which the inclined plates discharge, said receptacle having an overflow discharge.

4. In ore flotation apparatus, the combination of a feed receptacle for pulp; a plurality of substantially parallel relatively closely set and overlapping inclined substantially triangular plates on to each of which said receptacle discharges, said plates being shaped to spread the pulp out in fan shape thereon; and a second liquid containing receptacle to which the inclined plates discharge, said receptacle having an overflow discharge.

5. In ore flotation apparatus, the combination of a feed receptacle for pulp; a plurality of substantially parallel relatively closely set and overlapping inclined plates on to each of which said receptacle discharges, said plates being shaped to spread the pulp out in fan shape thereon; a second receptacle to which the inclined plates discharge; and a plurality of air nozzles adapted to discharge currents of air along the surface of the water in the second receptacle in front of the inclined plates.

[Claims 6 to 10 not printed in the Gazette.]

1,218,401. PUSH-SWITCH. HENRY G. HILLMAN, New York, N. Y., assignor to John Tefft Clarke, New York, N. Y. Filed May 11, 1912, Serial No. 696,595. Renewed Sept. 11, 1916. Serial No. 119,606. (Cl. 200—27.)



1. An electric push switch comprising a body block, oppositely arranged contact springs thereon, a movable bridging contact plate mounted between said springs and having edges in sliding engagement respectively with said contact springs, means for moving said bridging contact out of engagement with said springs, and a lateral extension of the body block formed on each side of said bridging contact to prevent the same from turning when moved below the body block.

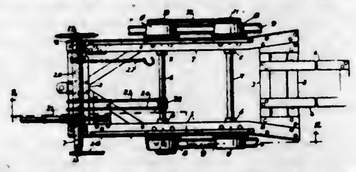
2. An electric push switch comprising a body block formed with a pair of apertures, oppositely arranged contact springs thereon extending into said apertures, a movable bridging contact plate mounted between said springs and having edges in sliding engagement respectively with said contact springs, means for moving said bridging contact out of engagement with said springs, and a lateral extension of the body block formed on each side of said bridging contact to prevent the same from turning when moved below the body block.

3. An electric push switch comprising a body block of insulating material, oppositely arranged contact springs thereon, a spring-mounted push rod between said springs and having a bridging contact plate provided with edges in sliding engagement respectively with said contact springs, and a lateral extension of and from said body block on each side of said bridging contact to prevent the same from turning and to form an arc shield.

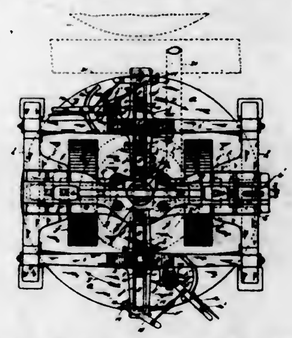
4. An electric push switch comprising a body block of insulating material, oppositely arranged contact springs thereon, a spring-mounted push rod having a bridging contact plate in sliding engagement with said contact springs, a lateral extension of and from said body block on each side of said bridging contact, a base plate upon which said lateral extensions rest, means for securing said body block to said base plate, and a cover through which said push rod extends inclosing said body block and secured to said base plate.

1,218,402. BRAKE FOR MINING-MACHINE TRUCKS. EDWARD L. HOPKINS, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed June 30, 1915. Serial No. 37,331. (Cl. 188—33.)

The herein-described brake for a mining machine truck mounted upon relatively low axles and constructed to have a vertically open space behind one of said axles and behind the mining machine when in position, comprising a flexible rope having both ends separately and detachably but rigidly secured to a holder rigidly stationary with the truck frame, said rope being coiled around the axle and having both end portions normally slack between the fixed fastening points and the axle, and a sustaining device for the slack portions of the rope which cause it to extend upward through the said opening where it is exposed to have either end independently of the other manually grasped to cause tension to be exerted on the fixed frame attachment point by the coils on the axle.



1,218,403. SAND-MILL. ANDREW F. HOWE, Granite City, Ill., assignor to Commonwealth Steel Company, St. Louis, Mo., a Corporation of New Jersey. Filed Feb. 7, 1916. Serial No. 76,724. (Cl. 83—45.)

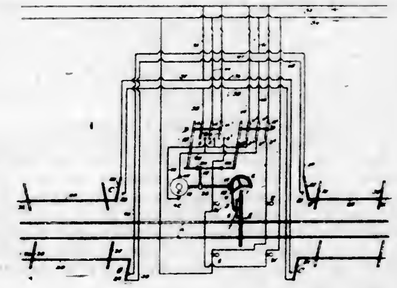


In a sand mill, the combination of a circular table pivotally supported and revoluble in a horizontal plane, a roller axially revoluble in a vertical plane and adapted to bear circumferentially on the table at right angles to a radius thereof, a pivotally mounted circular disk revoluble in a practically vertical plane at an inclination to a radius of the table, and approximately in contact circumferentially with the latter, means for varying the said inclination, a deflecting plate adapted to coöperate with the said disk, and means for rotating the table.

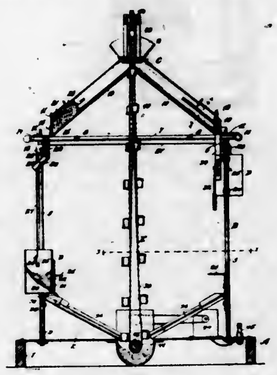
1,218,404. MINE-DOOR-OPERATING APPARATUS. WILLIAM MARTIN HUMMEL, Lewistown, Pa. Filed June 24, 1916. Serial No. 105,557. (Cl. 269—3.)

1. In a door operating mechanism, the combination of a swinging door, a motor, a transmission means between the motor and door, a pair of normally open separate opening and closing switches at each side of the door and suitably remote therefrom, reversing switches, one adapted to be in series circuit with the opening switches and the other in series circuit with the closing switches, one reversing switch being normally open and the other normally closed, and mechanical means separate from the door and driven by the motor and operatively connected with the reversing switches for opening one and closing the other when the door is fully opened or closed.

2. In a door opening and closing apparatus, the combination of a door, an electric motor, a transmission between the door and motor and including a yielding connection with the door, a screw operatively connected with the motor to be driven thereby, reversing switches for controlling the motor, means operatively connecting the switches together, whereby one will be open while the other is closed, a traveler movable by the screw, and means with which the traveler engages when the door is fully opened or fully closed to reverse the switches, normally open manually actuated opening switches at opposite sides of the door and adapted to be in series circuit with one of the first-mentioned switches, and normally open manually actuated closing switches at opposite sides of the door and adapted to be connected in circuit with the other of the first-mentioned switches.



1,218,405. TOY. THOMAS JAMES IRWIN, Trenton, N. J. Filed May 2, 1916. Serial No. 94,895. (Cl. 46—37.)



1. A toy of the class described comprising a supporting structure, a central hopper disposed at the upper part thereof, a well, an endless conveyer discharging material from the well to the hopper, oppositely moving cars connected together, means controlled by each car, whereby a load is delivered from the hopper to one car at a time, so that the descending car elevates the other car, and means for delivering the load of a descended car to the said well.

2. A toy of the class described comprising a supporting structure, a central hopper, chutes connected therewith and extending in opposite directions, valves normally closing the chutes, a car movable up and down in line with the lower end of each chute, means on the car for opening the valves, valves on the cars, means in the path of the cars for opening the valves thereof when the cars move downwardly to a predetermined position, means for delivering the contents of the cars to a common point, and means for delivering the material from such common point to the said hopper.

3. A toy of the class described comprising a supporting structure, a central hopper, a well under the hopper, outwardly diverging chutes connected with the hopper, cars movably mounted on the said structure vertically in line with the lower ends of the chute, valves controlled by the

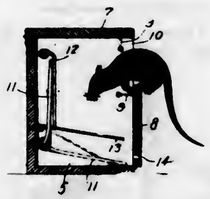
cars for supplying material from the chutes to the cars, means for connecting the cars together to move alternately, downwardly-converging chutes for directing material to the said well, means for discharging the material from the cars to the last-mentioned chutes, and means for transferring material from the well to the said hopper.

4. A toy of the class described including a chute, an adjustable spout at the lower end thereof, an open-top car movable vertically to and from the chute, a valve actuated by the car for controlling the discharge of material from the chute to the spout, and means for movably mounting the car.

5. A toy of the class described comprising a base, a frame supported thereon, vertically movable cars guided on the frame, means for connecting the cars together, whereby a filled car descends and causes the other car to ascend, a hopper device removably mounted on the top of the frame, at the center and between the cars, adjustable spouts at the discharge portions of the hopper device and adapted to extend into the cars when in their uppermost position, and valves controlling the flow of material from the hopper device.

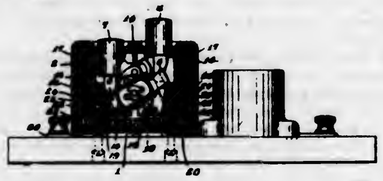
[Claims 6 to 10 not printed in the Gazette.]

1,218,406. MOUSE AND RAT TRAP. WILLIAM HARRIS JACKSON, Sterling, Kans. Filed Jan. 15, 1916. Serial No. 72,242. (Cl. 43—21.)



A trap including a compartment having an entrance opening defined in its upper portion, an animal killing apparatus arranged within the compartment including an actuating means arranged at a distance above the floor of the compartment, whereby a space is defined for receiving bait, and at a distance from the entrance opening, whereby the said actuating means will be operated only when an animal falls into the compartment through the entrance opening, and means for establishing atmospheric communication with the compartment below the said actuating means for allowing the odor of bait to pass out of the compartment.

1,218,407. ELECTRICAL APPLIANCE FOR PANEL-BOARDS. RALPH E. JONES, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed July 2, 1912. Serial No. 707,147. Renewed June 23, 1914. Serial No. 846,877. (Cl. 175—293.)



1. An electrical appliance comprising a base in the form of a box, terminals in the box, a switch arm for coacting with the terminals, a cap for the box having its sides skirting the sides of the box, a push button extending through the cap, and spring pressed interlocking means interposed between the sides of the cap skirting the box and the sides of said box, for holding the cap in position, substantially as and for the purpose set forth.

2. The combination with a support, of an electrical appliance comprising a base in the form of a box mounted on the support and having its top open, terminals in the box, a switch arm in the box for coacting with the terminals, means within the box for securing the same to the support, said means being removable through the open top of the box, a cap for the box having a top and sides, the sides of the cap skirting the sides of the box and having their lower edges resting on the support, and a push button connected to the switch arm for actuating the same, the push button extending beyond the top of the box and through the top of the cap, substantially as and for the purpose described.

3. The combination with a base and electrical conductors fixed thereon, of an electrical appliance comprising a base in the form of a box mounted on the electrical conductors and having its top open, terminals in the box, a switch arm in the box for coacting with the terminals, means within the box for securing the same to the electrical conductors, said means being removable through the open top of the box, a cap for the box having a top and sides, the sides of the cap skirting the sides of the box and having their lower edges resting on the first-mentioned base, and a push button connected to the switch arm for actuating the same, the push button extending beyond the top of the box and through the top of the cap, substantially as and for the purpose specified.

4. The combination with a support, of an electrical appliance comprising a base in the form of a box mounted on the support and having its top open, terminals in the box, a switch arm in the box for coacting with the terminals, means within the box for securing the same to the support, said means being removable through the open top of the box, a cap for the box having a top and sides, the sides of the cap skirting the sides of the box and having their lower edges resting on the support, a push button connected to the switch arm for actuating the same, the push button extending beyond the top of the box and through the top of the cap, and means for detachably securing the cap to a side of the box, substantially as and for the purpose set forth.

5. The combination with a base and conducting bars fixed thereon, of an electrical appliance comprising a base in the form of a box having its top open, a pair of terminals within the box having portions lying on the bottom of the box, switch means coacting with the terminals, and fastening members extending through said portions of the terminals and through the bottom of the box and engaging the conducting bars for mechanically connecting the box to the first-mentioned base and electrically connecting the terminals to the conducting bars, substantially as and for the purpose specified.

[Claims 6 to 15 not printed in the Gazette.]

1,218,408. REPEATING ATTACHMENT FOR SOUND-REPRODUCING INSTRUMENTS. ESKIL H. JOSEPHSON, Chicago, Ill. Filed June 10, 1916. Serial No. 102,965. (Cl. 274—15.)



1. The combination with a sound reproducing instrument comprising a rotating spindle, a record member on said spindle and a tone arm arranged to traverse said record member, of a bearing member for said tone arm located in operative relation therewith; a block adjustable on said bearing member and bearing an indicating finger registerably with the sound producing grooves in said record member; means for tilting said bearing member to an inclination to return said tone arm to initial position; and means on said block controlling said tilting means, substantially as described.

2. The combination with a sound reproducing instrument comprising a rotating spindle, a record member on said spindle and a tone arm arranged to traverse said record member, of a bearing member for said tone arm located in operative relation therewith; a block adjustable on said bearing member and bearing an indicating finger registerably with the sound producing grooves in said record member; means for tilting said bearing member at an inclination to return said tone arm to initial position; and a bell crank lever on said block operable by said tone arm and arranged to operate said tilting means, substantially as described.

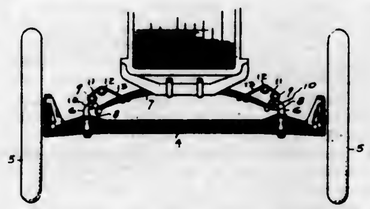
3. The combination with a sound reproducing instrument comprising a rotating spindle, a record disk on said spindle and a tone arm arranged to traverse said disk, of a bearing member for said tone arm located in operative relation with said disk; a spindle connected with said first mentioned spindle and provided with an elevating and a depressing thread; a dog on said bearing member arranged to engage said threads; and means operable by the motion of said tone arm for throwing said dog into engagement with said threads, substantially as described.

4. The combination with a sound reproducing instrument comprising a rotating spindle, a record disk on said spindle and a tone arm arranged to traverse said disk, of a bearing member for said tone arm located in operative relation with said disk; a spindle detachably connected with said first mentioned spindle and provided with an elevating and a depressing thread; a dog on said bearing member arranged to engage said threads; and means operable by the motion of said tone arm for throwing said dog into engagement with said threads, substantially as described.

5. The combination with a sound reproducing instrument comprising a rotating spindle, a record disk on said spindle and a tone arm arranged to traverse said disk, of a bearing member for said tone arm located in operative relation with said disk; a spindle connected with said first mentioned spindle and provided with an elevating and a depressing thread; a dog on said bearing member arranged to engage said threads; a bell crank on said bearing member set in the path of said tone arm; and an operative connection between said bell crank and said dog arranged to throw said dog into engagement with said threads when said tone arm reaches the inner limit of its movement, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,218,409. AUXILIARY SPRING FOR VEHICLES. FRANK F. KEELER, West Newton, Ind., assignor of one-half to Thaddeus R. Baker, Indianapolis, Ind. Filed July 20, 1916. Serial No. 110,389. (Cl. 267—17.)

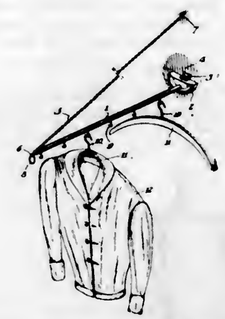


1. The combination with the leaf spring of a vehicle and spring-supporting perch, of a supplementary spring having coils which bear against the top of the perch, said coil having a downward hook extension hooking under the perch, an arm extension above the leaf spring and holding means on the end of said arm to engage the under side of the leaf spring when the arm is forced down for that purpose.

2. The combination with a leaf spring of a vehicle and spring-supporting perch, of a supplementary spring having coils bearing against the top of the perch and a downward hook extension hooking under the perch, an arm extension upwardly from the coil and above the leaf spring until sprained down, holding means on the end of said arm to engage the under side of the leaf spring when the arm is forced down for that purpose, and a coil in the arm between said first coil and said end-holding means.

3. A supplementary spring for vehicles formed out of spring wire bent in a plurality of convolutions forming a coil tangentially from which coil one end of the wire is extended and formed with a terminal perch-hook, and the other end of which is tangentially extended from the coil in a substantially opposite direction forming an arm the end of which is formed with a leaf-spring holding member, said arm also having a coil formed therein between said first coil and the other end of the arm.

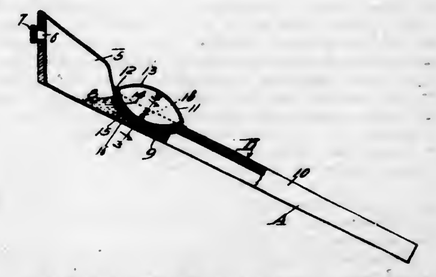
1,218,410. GARMENT-SUPPORT. ANITA H. KEIR, Philadelphia, Pa. Filed Nov. 20, 1915. Serial No. 62,480. (Cl. 211—15.)



1. A garment support comprising a block having a hinge connected with the top thereof and adapted to be fixed to a support, an arm fixed to said block, said arm being provided with devices fixed along its length and adapted for supporting hangers, said block being adapted to engage said support second named to limit the movement of said arm, and a tension member for supporting said arm in different angular positions.

2. A garment support comprising a block having a hinge connected with supporting means so as to have a limited turning movement, said block engaging said supporting means to limit its movement, an arm fixed to said block below said hinge, means fixed at intervals along said arm for supporting hangers, and means comprising a book and an adjustable tension member connected with the outer end of said arm for supporting it in different angular positions.

1,218,411. WASHBOARD. WILLIAM H. KELLY, Waltham, Mass. Filed Nov. 25, 1916. Serial No. 133,350. (Cl. 68—29.)



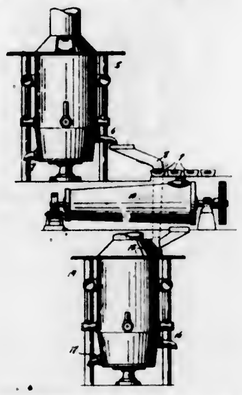
1. In a wash board having a seat between the rubbing bed and the head thereof, a liquid soap container within the head of said board and having an outlet communicat-

ing with the seat, depressible means movably held within the seat, and means operated by the depressible means for automatically controlling communication between the container and the seat.

2. In a wash board having a seat between the rubbing bed and the head thereof, a liquid soap container within the head of said board and having an outlet communicating with the seat, depressible means movably held within the seat, means operated by the depressible means for automatically controlling communication between the container and the seat, and means for normally holding the depressible means raised in the seat.

3. In a wash board, a rubbing bed, a soap container carried by the board and having an outlet, said board being formed with a channel between the soap container and the rubbing bed and communicating with the container outlet, a depressible cylinder located within the channel and swingingly supported, means for controlling the outlet from the container, connections between the cylinder and said means for operating the controlling means on displacement of the cylinder, and resilient means for normally holding the cylinder raised in the seat.

1,218,412. PROCESS FOR SEPARATING LEAD AND MOLYBDENUM FROM MINERAL WULFENITE. ALAN KISSOCK, Tucson, Ariz. Filed Dec. 14, 1915. Serial No. 66,723. (Cl. 75—17.)



1. The herein described process of separating lead and molybdenum from lead molybdate, consisting of mixing the latter with carbon and a suitable flux, subjecting said charge to sufficient heat to cause quiet fusion, whereby metallic lead and a slag containing molybdenum are produced, grinding the said slag to a suitable fineness, mixing the ground slag with carbon and a flux, and subjecting the charge to sufficient heat to again produce quiet fusion.

2. The herein described process of separating lead and molybdenum from lead molybdate, consisting in mixing the lead molybdate with carbon and a suitable flux, introducing said charge into a furnace, subjecting it to sufficient heat therein to cause quiet fusion, whereby metallic lead and a slag containing molybdenum are produced, withdrawing the said slag and metallic lead separately from the furnace, introducing the slag into a crusher where it is ground to a suitable fineness, withdrawing the slag therefrom and mixing it with carbon and a suitable flux, introducing the charge into a second furnace and subjecting it therein to sufficient heat to produce quiet fusion whereby metallic molybdenum and a slag are produced, and withdrawing the metallic molybdenum from the furnace separately from the slag.

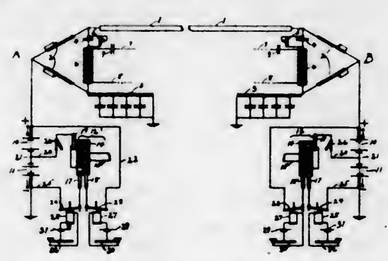
3. The herein described process of separating lead and molybdenum from lead molybdate, consisting in mixing the lead molybdate with carbon and soda ash, introducing the charge into a furnace, subjecting it to sufficient heat therein to cause quiet fusion whereby metallic lead and a slag containing sodium molybdate are produced, withdrawing the said slag and metallic lead separately from the furnace, introducing the slag into a crusher where it is ground to a suitable fineness, withdrawing the slag therefrom and mixing it with carbon and silica, introducing the charge into a second furnace and subjecting it therein to sufficient heat to produce quiet fusion whereby metallic molybdenum and a slag are produced, and withdrawing the metallic molybdenum from the furnace separately from the slag.

4. The herein described process of separating lead and molybdenum from lead molybdate, consisting in mixing the lead molybdate with carbon and a suitable flux, subjecting said charge to sufficient heat to cause quiet fusion whereby metallic lead and a slag containing molybdenum are produced, cooling and grinding the said slag to a suitable fineness, mixing the ground slag with carbon and another flux, and subjecting this charge to sufficient heat to again produce quiet fusion whereby metallic molybdenum and a slag are produced.

5. The herein described process of separating lead and molybdenum from lead molybdate, consisting in mixing the latter with carbon and a suitable flux, subjecting said charge to sufficient heat to cause quiet fusion whereby metallic lead and a slag containing molybdenum are produced, grinding the said slag to a suitable fineness, mixing the ground slag with carbon, a flux, and iron, and subjecting the charge to sufficient heat to again produce quiet fusion.

[Claims 6 and 7 not printed in the Gazette.]

1,218,413. QUADRUPLEX TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed Oct. 1, 1910, Serial No. 584,858. Renewed Dec. 30, 1916. Serial No. 139,961. (Cl. 178—55.)



1. The method of telegraphically quadruplexing lines with great capacity, which consists in normally impressing upon a line true reversals at both terminals of the line, depressing positive pulses to operate translating devices of one far off station, depressing negative pulses to operate translating devices of the second far off station and depressing both pulses to operate the translating devices at both far off stations simultaneously.

2. In telegraphy, the method of translating messages which consists in causing one of two normally active translators to remain silent when a positive pulse is received, causing the second of said two translators to remain silent when a negative pulse is received, causing both translators to become active during the time that no pulse is received, and causing each of said translators to retard the operation of said translators.

3. A telegraphic quadruplex system comprising for each terminal two stations, means for each terminal to impress upon the line true reversals, means for one station of each terminal to depress the positive pulse of said reversals, means for the second station of each terminal to depress the negative pulse of said reversals; a line relay for each station of each terminal, translating devices for said line relays and means for each of said translating devices to retard the operation of said translating device.

4. In quadruplex telegraphy, the method which consists in causing the translators of each of four stations to be normally active when no current is flowing over the line, causing any one only of said relays to become passive by suppression of polarities, and causing each of said relays when passive to render active a translating device.

5. A system of quadruplex telegraphy comprising the line of transmission, two stations for each terminal of the line, means at each terminal of the line to impress upon said line true reversals, said means common to both stations of each terminal, means for one station of each terminal to depress the positive pulses of said reversals, in accordance with the signals to be transmitted, means for the second station of each terminal to depress the negative pulses of said reversals in accordance with the signals to be transmitted, a polarized line-relay answering to positive pulses for one station of each terminal, a polarized line-relay answering to negative pulses for the second station of each terminal, a local circuit and translating devices for each line-relay and means operatively related to said translating devices to make operative said devices only during the time that the line-relays are inoperative.

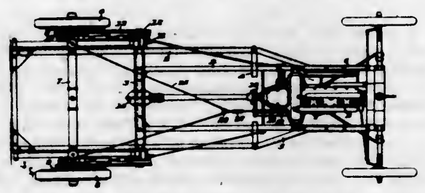
[Claims 6 to 8 not printed in the Gazette.]

1,218,414. COMBINATION FRONT AND BACK REDUCER. FANNY KLASS, San Francisco, Cal. Filed Oct. 31, 1916. Serial No. 128,700. (Cl. 2—73.)



A brassière including a pair of cup-shaped breast supporting sections, means to connect the inner ends of said sections, a back composed of upper and lower spaced and comparatively wide bands, and transverse steels connecting said bands and extending across the space therebetween, said steels being disposed at the centers and ends of the bands, and means between the end steels and the outer ends of the sections to removably connect said parts.

1,218,415. BRAKE-PEDAL MOUNTING. JOHN R. KONETSKY, San Francisco, Cal., assignor to Ralston Iron Works, San Francisco, Cal., a Corporation of California. Filed Feb. 7, 1916. Serial No. 76,595. (Cl. 21—8.)



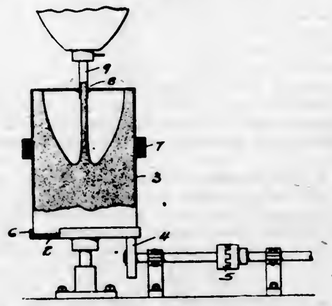
1. The combination with the flanged end of a propeller shaft tube, of a bracket member adapted to be secured to the flanged end of the tube, and a brake pedal pivotally mounted on the bracket.

2. The combination with the flanged end of a propeller shaft tube, of a bracket member adapted to be secured to the flanged end of the tube, a stud pin secured on the bracket member, and a brake pedal pivotally mounted on said pin.

3. The combination with the flanged end of a propeller shaft tube, of a bracket member adapted to be secured to the flanged end of the tube, a stud pin secured on the bracket member, a brake pedal pivotally mounted on said pin, and means for securing the pedal against endwise movement on the pin.

4. A brake pedal mounting comprising a bracket member adapted to be secured to the flanged end of an automobile propeller shaft tube, a stud-pin secured on the bracket member, a brake pedal pivotally mounted on said pin, and a brace rod adapted to be secured to the outer end of the pin at one end and at the opposite end some other suitable support to secure the pedal against endwise movement and to strengthen the bracket and pin as a whole.

1,218,416. METHOD OF PACKING PULVERULENT MATERIALS IN RECEPTACLES. CHRISTIAN KRARUP, Santa Cruz, Cal., assignor to Santa Cruz Portland Cement Company, a Corporation of California. Filed Jan. 11, 1916. Serial No. 71,507. (Cl. 100—56.)



1. The method of filling receptacles with pulverulent material which consists in subjecting the material in the receptacle to the action of centrifugal force.

2. The method of filling receptacles with pulverulent material, which consists in simultaneously feeding the material into the receptacle and subjecting it therein to the action of centrifugal force.

3. The method of filling receptacles with pulverulent material, mixed with air, which consists in feeding the mixture into the receptacle, subjecting it to the action of centrifugal force therein and permitting the displaced air to escape from the receptacle.

4. The method of filling receptacles with pulverulent material, which consists in subjecting the material in the receptacle to the action of centrifugal force and simultaneously shaking the receptacle.

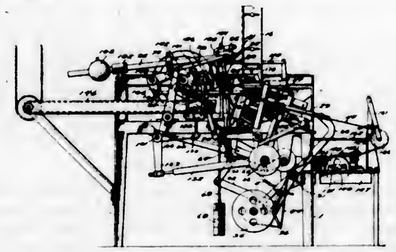
5. The method of filling receptacles with pulverulent material which consists in simultaneously feeding the material into the receptacle, shaking the receptacle in the direction of its longitudinal axis and subjecting the material therein to the action of centrifugal force.

1,218,417. SHELL-BOX-MAKING MACHINE. ALOYSIUS JOSEPH KUSTERER, Richmond, and CHARLES SANDERS, South Richmond, Va., assignors to The Randolph Paper Box Co., Richmond, Va., a Corporation of Virginia. Filed Aug. 15, 1914. Serial No. 856,991. (Cl. 93—40.)

1. In a shell making machine, a rotary separable mandrel; means to feed material to the mandrel; means to retain the material upon the mandrel as the mandrel rotates; a clamping jaw structure proportioned to clamp the material formed upon the mandrel; means to withdraw the sections of the mandrel from the material held by the clamping jaws; and means to strip the material from the jaws.

2. In a shell making machine, a rotary mandrel composed of separable sections; means to feed a cardboard blank and a paper cover simultaneously to the mandrel; means to wipe the combined material about the mandrel; a clamping member adapted to engage the formed material about the mandrel; means to withdraw the sections of the mandrel from the formed material; and means to

effect the release of the formed material from the clamping member.



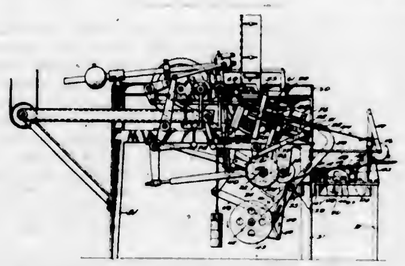
3. In a shell making machine, a mandrel; means to feed a cardboard blank and a strip of gummed paper to the mandrel simultaneously; means to wipe the combined material about the mandrel; means to grasp the formed material upon the mandrel and maintain it against movement; means to withdraw the mandrel from the formed material while so held; means to turn the extended ends of the gummed paper within the formed blank; and means to discharge the completed article from the grasping means.

4. In a shell making machine, a mandrel; means to wipe a combined cardboard blank and paper cover about the mandrel, said paper cover extending beyond the end of the cardboard blank; means to maintain the formed blank against movement and withdraw the mandrel therefrom; means to move the released formed blank and support the same in a new position; and jaws arranged to engage the extended end of the paper and fold it within the end of the formed blank.

5. In a shell making machine, a mandrel; means to wipe a combined cardboard blank and wider paper cover about the mandrel with the margin of the paper extending beyond the end of the formed blank; and an end lapper movable toward and from the formed blank and provided with jaws proportioned to engage upon the exterior of the extended end of the paper and insert such extended end within the cardboard blank; and means to expand the jaws to cause the paper to adhere to the interior of the formed blank.

[Claims 6 to 18 not printed in the Gazette.]

1,218,418. **FEEDING AND SEVERING MECHANISM.** ALOYSIUS JOSEPH KUSTERER, Richmond, and CHARLES SANDERS, South Richmond, Va., assignors to The Randolph Paper Box Company, Richmond, Va., a Corporation of Virginia. Original application filed Aug. 15, 1914, Serial No. 856,991. Divided and this application filed Nov. 14, 1914. Serial No. 872,268. (Cl. 164—48.)



1. In a paper working machine, a paper feed embodying gripping jaws; a shear comprising a bearing block; racks mounted within the block; a pinion mounted upon the racks and adapted when rotated to move the racks in opposite directions; and shear members carried by the racks adapted to be separated by the rotation of the pinion to permit the passage of the gripper jaws therethrough and to be closed in the rear of the gripper jaws.

2. In a paper working machine, a shear comprising a bearing block; racks mounted to move in opposite directions within the bearing block; means to simultaneously move the racks in opposite directions; and shear members extending laterally from the racks and retaining throughout their movement their initial parallel relation.

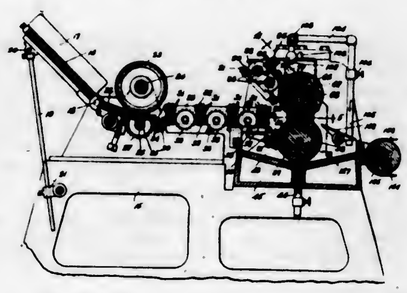
3. In a paper working machine, slidably mounted blocks; means to reciprocate the blocks simultaneously in opposite directions; shear members carried by the blocks and extending laterally therefrom; and means to adjust one of the shear members angularly about the path of reciprocation.

4. In a paper working machine, a reciprocating block; jaws carried by the block and extending laterally therefrom; means to open and close the jaws in timed relation to the reciprocation of the block; lugs carried by one of said blocks and provided in their extremity with concavities; and members carried by the other jaw having rounded extremities registering with and proportioned to fit into the concavities of the lugs.

5. In a paper working machine, vertically slidable blocks, means to simultaneously reciprocate the blocks in opposite directions, shear members carried by the blocks and extended laterally therefrom, a pair of pivoted jaws geared together whereby the same are simultaneously moved in opposite directions, resilient means normally maintaining said jaws closed, cam means for opening the jaws, said jaws being adapted to operate between the shear members.

[Claims 6 and 7 not printed in the Gazette.]

1,218,419. **MACHINE FOR COATING BLANKS.** ELIE W. LABOMBARDE, Nashua, N. H. Filed July 13, 1915. Serial No. 39,582. (Cl. 91—51.)



1. A machine for producing paraffined blanks with clear marginal surface portions, having a pair of directly coacting rolls for the passage of blanks between them, one of the rolls being adjustable in the direction of its length, means for supplying paraffin to the rolls, and means for keeping one end of each roll clear of paraffin.

2. A machine for producing paraffined blanks with clear marginal surface portions, having a pair of directly coacting rolls for the passage of blanks between them, and a pair of shafts, sleeves mounted on said shafts and having splined connection therewith, means for adjusting one of said sleeves in the direction of its length, means for supplying paraffin to the sleeves, and means for keeping one end of each sleeve clear of paraffin.

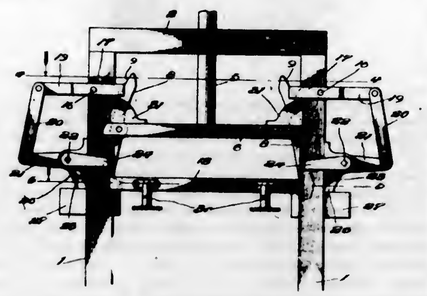
3. A machine for producing paraffined blanks with clear marginal surface portions, having a pair of directly coacting rolls for the passage of blanks between them, and a pair of shafts, sleeves mounted on said shafts and having splined connection therewith, means for adjusting one of said sleeves in the direction of its length, means for supplying paraffin to the sleeves, each sleeve having one end ribbed, and means for removing paraffin from the ribbed ends of the sleeves.

4. A machine for producing paraffined blanks with clear marginal surface portions, having a pair of directly coacting rolls for the passage of blanks between them, and a pair of shafts, sleeves mounted on said shafts and having splined connection therewith, means for adjusting one of said sleeves in the direction of its length, means for supplying paraffin to the sleeves, each sleeve having a ribbed end and an annular groove between the ribbed end and main portion, and means for removing paraffin from the ribbed portions and the annular groove.

5. In a blank paraffining machine having a pair of treating rolls, means for supplying paraffin to each of said rolls, means for preventing said rolls from operating in contact with each other, and a carrier for delivering blanks to the space between said rolls.

[Claims 6 to 21 not printed in the Gazette.]

1,218,420. **WORK-CLAMP.** JOHN A. LANDERS, Canton, Ohio. Filed Sept. 6, 1916. Serial No. 118,737. (Cl. 266—6.)



1. In a device for the purpose set forth, the combination of a work-engaging member, means connected with said member to effect movement of the same, a second work-engaging member, means carried by first-mentioned member to engage and support the second member, means for releasing said engaging and supporting means, and other means for supporting the second-mentioned work-engaging member after said engaging and supporting means is released.

2. In a device for the purpose set forth, the combination of work-engaging members, dogs mounted upon one of said members to engage the other member and lock it against the work, means acting upon said dogs during a portion of their travel to release them from the last-mentioned work-engaging member, and means for supporting said member when at rest and adapted to actuate the dogs during a portion of the travel of the same to engage said work-engaging members.

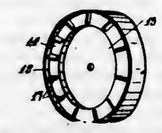
3. In a device for the purpose set forth, the combination of a pair of work-engaging members, dogs pivoted to one of said members and adapted to engage the other member, movable supports for the last-mentioned work engaging member when the same is at rest constructed to act upon the dogs and move them into engagement with said member, and means interposed in the path of movement of the dogs to release them from said work-engaging member.

4. In a device for the purpose set forth, the combination of a pair of work-engaging members, means connected with one of said members to reciprocate the same, dogs pivoted to the ends of said member and constructed to engage the other member, and means whereby upon movement of the members in one direction the dogs will be released and upon movement of the members in the opposite direction the dogs will be caused to engage and support the work-engaging member and cause the members to move in unison.

5. In a device for the purpose set forth, the combination of reciprocable work-engaging members, supports mounted to move across the path of movement of said work-engaging members to support one of said work-engaging members when it is at rest, dogs carried by the other of said work-engaging members and adapted to engage under the first-mentioned work-engaging member, and means whereby upon movement of the work-engaging members in one direction the said supports will be withdrawn and the dogs engaged and upon movement of the members in the opposite direction, the dogs will be released and the supports projected.

[Claims 6 to 9 not printed in the Gazette.]

1,218,421. **SEED-DRILL.** CARL HERMAN LARSSON, Tycklingen, near Vadstena, Sweden. Filed Nov. 7, 1913. Serial No. 799,656. (Cl. 111—9.)



In a seed drill, the combination of a drill box, and feed-wheels arranged to rotate in apertures in said drill box, each feed-wheel consisting of a flanged disk provided with slots and another disk provided with tongues cut out in the same and bent up in an angle to the disk which tongues are sliding in and projecting through said slots and forming pockets with the flange of the first-named disk, substantially as and for the purpose set forth.

1,218,422. **NAVIGATOR'S ALIDADE.** ADOLPH LIETZ, San Francisco, Cal. Filed Dec. 14, 1915. Serial No. 66,754. (Cl. 33—72.)



1. An alidade, arranged to be pivotally associated with a compass, pelorus, or other navigational instrument, and comprising a normally horizontal arm affording a shadow-surface having a line longitudinally thereof, a suitably supported normally horizontal reading-line, a suitbly supported normally vertical shadow-line, and a sight-vane having a sighting-slot, said shadow-surface line, reading-line, shadow-line, and sight-vane slot all lying in the same plane.

2. An alidade, arranged to be pivotally associated with a compass, pelorus, or other navigational instrument, and including at one side of the pivotal point an arm affording a shadow-surface having thereon a longitudinal line, at the other side of the pivotal point a suitably supported reading-line, a normally vertical shadow-line suitably supported coaxially of the instrument, and an upstanding sight-vane having a sighting-slot, said shadow-surface line, reading-line, shadow-line, and sight-vane slot all lying in the same plane.

3. An alidade, arranged to be pivotally associated with a compass, pelorus, or other navigational instrument, and comprising the combination of a center bearing, and rotatable thereon a variation-pointer and a member including at one side of the pivotal point an arm affording a shadow-surface having thereon a longitudinal line, at the other side of the pivotal point a suitably supported reading-line, a normally vertical shadow-line suitably supported co-

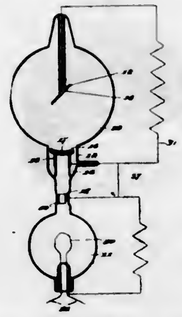
axially of the instrument, and an upstanding sight-vane having a sighting-slot, said shadow-surface line, reading-line, shadow-line, and a sight-vane slot all lying in the same plane.

4. An alidade, arranged to be pivotally associated with a compass, pelorus, or other navigational instrument, and including at one side of the pivotal point an arm affording a shadow-surface having thereon a longitudinal line, at the other side of the pivotal point two arms extending from said shadow-surface arm and having at their outer ends a connecting-piece, a member extending from said shadow-surface arm between said two arms, a reading-line connected to said connecting piece and to said member and held taut between said two arms, a normally vertical shadow-line suitably supported coaxially of the instrument, and an upstanding sight-vane having a sighting-slot, said shadow-surface line, reading-line, shadow-line, and sight-vane slot all lying in the same plane.

5. An alidade, arranged to be pivotally associated with a compass, pelorus, or other navigational instrument, and including at one side of the pivotal point an arm affording a shadow-surface having thereon a longitudinal line, at the other side of the pivotal point a suitably supported reading-line, two arms upstanding from said shadow-surface arm at the pivotal point and having a connecting-piece at their top, a shadow-line connected to said connecting-piece and fastened at its lower end and thereby held taut between said two arms coaxially of the instrument, and an upstanding sight-vane having a sighting-slot, said shadow-surface line, reading-line, shadow-line, and sight-vane slot all lying in the same plane.

[Claims 6 to 11 not printed in the Gazette.]

1,218,423. ROENTGEN-RAY TUBE. JULIUS EDGAR LILIENFELD, Leipzig, Germany. Filed Apr. 17, 1914, Serial No. 832,606. Renewed July 25, 1916. Serial No. 111,279. (Cl. 250—35.)



1. In a Roentgen ray tube, the combination of a high vacuum tube, with a cathode and its anticathode, and a third electrode electrostatically screened from the anticathode by means independent of the tube walls and possessing the property of producing a discharge in a high vacuum, the first mentioned cathode being arranged between the anticathode and the third electrode.

2. In a Roentgen ray tube, the combination of a high vacuum tube, with a cathode and its anticathode, and a third electrode electrostatically screened from the anticathode and possessing the property of producing a discharge in a high vacuum, the first mentioned cathode being arranged between the anticathode and third electrode and serving as a screen between the third electrode and the anticathode.

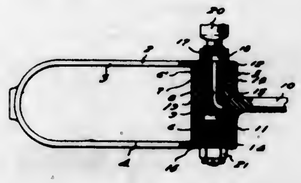
3. In a Roentgen ray tube, the combination of a high vacuum tube, with a cathode and its anticathode, and a glower cathode electrostatically screened from the anticathode and possessing the property of producing a discharge in a high vacuum, the first mentioned cathode being arranged between the anticathode and the glower cathode.

4. A Roentgen ray tube provided with a cathode, an anticathode, and a third electrode between the cathode and anticathode consisting of a disk and having a perforation therein.

5. A Roentgen ray tube provided with a glower cathode, an anticathode, and a third electrode constituting a combined anode and cathode located between the first and second electrodes and having a perforation therein.

[Claims 6 to 11 not printed in the Gazette.]

1,218,424. STEERING-ARM. EARL J. LINDSEY, Somerset, Ind. Filed Mar. 19, 1915. Serial No. 15,554. (Cl. 74—17.)



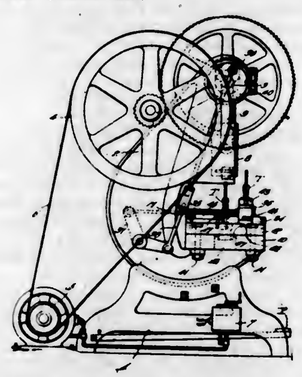
A device of the character described comprising a cross rod and a steering arm of a steering mechaniam, a substantially U-shaped resilient yoke secured to the cross rod, one of the arms of the yoke having a bearing formed on the inner surface of the outer end thereof and having a conical-shaped opening, the other arm of the yoke having a frusto-conical shaped bearing formed on the inner surface of the outer end thereof and having a screw-threaded opening therein, said steering arm having a head formed thereon and having a conical seat to receive the frusto conical-shaped bearing and having an opening, said head having a frusto conical-shaped end formed thereon and received by the conical-shaped opening, a pin extending through the head and bearing and having one of its ends reduced and screw-threaded within the conical-shaped bearing of the yoke, a nut on said pin, said pin having an opening in its outer end and extending through the pin on the side thereof and a grease cup threaded into the opening in the upper end of the pin for lubricating the bearing and head.

1,218,425. RAIL-BRACE. CARL F. LINDSTROM, Garrison, Kans. Filed Sept. 21, 1914. Serial No. 862,733. (Cl. 238—5.)



A rail brace comprising a pair of longitudinally alined sections, having their inner ends in abutting engagement, outer rail base clamping members formed on the outer ends of said sections, a plate for securing said sections together, said plate being formed from spring metal and located upon the upper sides of said section, bolts engaging said sections and plate, inner rail base spring clamping members forming integral extensions of the ends of said plate and extending upwardly and outwardly from said ends, bolts engaging said sections and inner clamping members to draw said members down into and hold them in engagement with the rail bases, and wedge shaped members mounted between said plates and the inner clamping members and between the last named bolts and the rail bases, said wedge shaped members being held in position by the inner clamping members and said last named bolts, and said wedge shaped members preventing the rails from having any inward movements with relation to each other.

1,218,426. BROACHING-PRESS. HARRY W. LOCKLEY, New Castle, Pa. Filed Aug. 11, 1916. Serial No. 114,444. (Cl. 90—33.)



1. In a broaching press, the combination of a work holder for retaining bushings in place while the broaching process is being performed, a non-rotating proceeding and receding feed member for feeding bushings to said holder, and a second work holder over the feed member for retaining the unfinished bushings in upright position on said feed member during the receding strokes thereof, said feed member and second work holder permitting said bushings to drop by gravity onto the proceeding path of the former at the completion of said receding strokes, said second holder being immovable when the machine is properly operating but being expansible transversely of the line of travel of the feed member to prevent injury to the bushings or machine in case one of the former should bind in said holder.

2. In a broaching press, the combination of a table, a work holder for retaining bushings in place while the broaching process is being performed, a non-rotating proceeding and receding feed member movable toward and away from said work holder for feeding the bushings thereto, and a second work holder above said feed member for retaining the unfinished bushings in upright position on said feed member upon the receding strokes of the latter, said member permitting the bushings to drop by gravity onto its proceeding path at the completion of its receding strokes; said second work holder consisting of a relatively fixed jaw adjacent one side of the feed member, a guide secured to said table at the other side of said member, a second jaw in said guide and slidable transversely of the line of movement of the feed member, and spring means for holding said second jaw in operative position, said second jaw being immovable when the machine is properly operating but being adapted to yield outwardly in case a bushing should bind in said second work holder.

3. A broaching press comprising a holder in which bushings or the like are adapted to be held while the broaching process is being performed, said holder comprising a horizontal support, a fixed horizontal bar extending along the upper side of said support, a movable horizontal bar parallel with and spaced horizontally from the fixed bar, and spring means for forcing the movable bar toward the fixed bar to grip the bushings while being and for a limited time after being broached, the inner opposed faces of said bars having seats to engage opposite portions of said bushings while the broaching process is being performed in combination with means for feeding the bushings into the holder.

4. A broaching press comprising a holder in which bushings or the like are adapted to be held while the broaching process is being performed, said holder comprising a horizontal support, a fixed bar extending along the upper side thereof, a relatively movable bar parallel with and spaced horizontally from said fixed bar, outwardly projecting flanges on the lower edge of said movable bar, a guide bar overlying said flanges and secured to the support, a second fixed bar spaced outwardly from said guide bar, and springs interposed between said second fixed bar and the movable bar for forcing the latter toward the first fixed bar to grip the bushings between the two while being and for a limited time after being broached: in combination with means for feeding the bushings into the space between the first-named fixed bar and the movable bar.

5. A broaching press comprising a work holder in which bushings or the like are adapted to be held while the broaching process is being performed, a non-rotating proceeding and receding feed member for feeding the bushings to said holder, said feed member having a flat straight upper side, and a horizontal table upon which said holder is mounted and adjacent the upper side of which said feed member operates; in combination with a second work holder comprising a pair of jaws secured to the aforesaid table on opposite sides of the feed member and extending to spaced points above said feed member, said jaws serving to loosely hold therebetween the bushings to permit them to rest on said flat side of the feed member during its receding strokes and to drop in advance of said feed member on the proceeding strokes thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,218,427. ROTARY-VALVE INTERNAL-COMBUSTION ENGINE. WILLIAM B. LOWE, Babylon, N. Y. Filed June 19, 1912. Serial No. 704,644. (Cl. 123—59.)



1. An internal combustion engine comprising cylinders and pistons, each cylinder being provided in its head with an intake port and with an exhaust port, a rotary valve at the cylinder heads, a casing for said rotary valve, said rotary valve being provided with exhaust ports arranged to register with the exhaust ports in the heads of said cylinders, the said rotary valve being provided intermediate of its ends with an opening for receiving within the said rotary valve a gaseous fuel, said rotary valve being provided with a longitudinal passage extending in both directions from said opening intermediate the ends of the valve to lead the gaseous fuel longitudinally of the valve in both directions, the said rotary valve being provided with ports arranged to register with the said intake ports in the cylinder heads to deliver the said gaseous fuel within the said rotary valve to the said cylinders, the said rotary valve being provided longitudinally thereof with a passage to receive cooling water to cool the said valve and to heat the said gaseous fuel within the said valve, substantially as described and for the purposes set forth.

2. An internal combustion engine comprising cylinders and pistons, the heads of said cylinders being provided with suitable intake ports and exhaust ports, a rotary valve arranged at the cylinder heads and extending longitudinally of said cylinders, said rotary valve being provided with exhaust ports to register with the exhaust ports of the said cylinders to exhaust the burnt gases therefrom, said valve being provided at a point intermediate its ends with means for receiving into said valve a gaseous fuel, said valve being provided with passages longitudinally thereof to lead the gaseous fuel longitudinally of the said valve, the said valve being provided with ports to register with the intake ports in said cylinder heads to deliver said gaseous fuel from the interior of said valve to the said cylinders, and means for leading a column of water longitudinally of said valve to cool the said valve and to heat the said gaseous fuel.

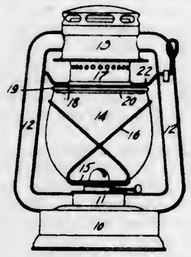
3. An internal combustion engine comprising cylinders and pistons, said cylinders being successively arranged and provided in their heads with exhaust ports and intake ports, a rotary valve arranged at the cylinder heads and provided with exhaust ports adapted to register with the exhaust ports in the cylinder heads, the said rotary valve being provided at a point intermediate the ends thereof with means for receiving internally of the said valve a gaseous fuel, said valve being also provided with means for leading said gaseous fuel internally and longitudinally of the said valve and provided with means for leading a column of water longitudinally of the said valve and within the same to cool the said valve and to heat the said gaseous fuel, the said valve being provided with ports arranged to register with the intake ports in the cylinder heads to deliver the gaseous fuel from the interior of said rotary valve to the said cylinders.

4. An internal combustion engine comprising cylinders and pistons, suitable intake and exhaust ports arranged in the heads of said cylinders, a rotary valve at the heads of said cylinders and extending longitudinally thereof, said rotary valve being provided with exhaust ports to register with the exhaust ports in said cylinder heads, said rotary valve being provided at a point intermediate the ends thereof with means for receiving internally of the said valve a gaseous fuel, said rotary valve being provided internally thereof with passages leading longitudinally of said valve to receive the gaseous fuel and also provided internally thereof and longitudinally of said valve with a passage to receive water to cool the said valve and to heat the said gaseous fuel within the same, said valve being provided with ports communicating with said passages containing the gaseous fuel which ports are arranged to register with the intake ports in the cylinder heads to deliver the gaseous fuel from the interior of the said valve to the cylinders.

5. An internal combustion engine comprising cylinders and pistons, suitable intake and exhaust ports arranged in the heads of said cylinders, a rotary valve on said cylinders, said valve being provided with exhaust ports to register with the exhaust ports of said cylinders and with additional ports adapted to register with the intake ports of said cylinders, means for leading longitudinally of the said valve and internally thereof a gaseous fuel, and means for leading longitudinally of said valve and internally thereof a column of water to cool the said valve and to heat the gaseous fuel within the same.

[Claim 6 not printed in the Gazette.]

1,218,428. TUBULAR LANTERN. WARREN MCARTHUR, Jr., Chicago, Ill., assignor to R. E. Dietz Company, a Corporation of New York. Filed Jan. 17, 1914. Serial No. 812,695. (Cl. 240—29.)



1. In a tubular lantern, the combination of a tubular lantern frame, a globe support, a globe resting thereon, a metallic chimney which is movable toward and from the globe and comprises a substantially flat base flange of yielding material to conform to the size and shape of the globe which bears with its marginal portion upon the globe, and a cranked transverse lifter shaft journaled in said frame, said shaft engaging the chimney above said base flange and having an operating handle at one side of the lantern.

2. The combination with a tubular lantern frame comprising an upper air chamber, a hinged globe support and a globe resting thereon, of a metallic chimney having the upper end thereof located within the air chamber, the said chimney being movable bodily in a substantially vertical direction toward and from the globe and relatively to the air chamber and being provided with means for arresting the upward movement of the chimney at the front side, leaving the rear portion of the chimney free to be raised by a slight tilting movement of the chimney.

3. The combination with a tubular lantern frame, a hinged globe support, and a globe resting thereon, of a metallic chimney which is movable in said frame toward and from the globe and which is higher at the front side than at the rear, and a stop in the frame which limits the upward movement of the chimney at the front side.

4. In a tubular lantern, the combination of a tubular lantern frame comprising an upper and a lower air chamber, a globe support, a globe resting thereon, a metallic chimney which is movable toward and from the globe and comprises a substantially flat base flange which bears with its marginal portion upon the globe and is made of yielding material whereby the base flange conforms to variations in size and form of globes, and a cranked transverse lifter shaft between said flange and the upper air chamber.

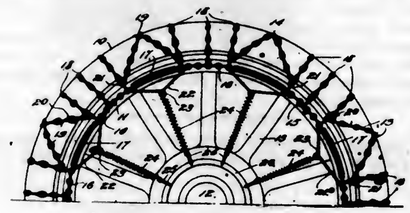
1,218,429. WOODWORKING-TOOL. JAMES T. MCCANN and WILLIAM H. ROBERTS, Tuolumne, Cal. Filed Oct. 5, 1916. Serial No. 123,858. (Cl. 145—1.)

1. A compound tool providing the essential elements of a draw knife, a saw frame and a bit brace and comprising a bar adapted to serve as the blade carrying member of the draw knife, as the back bar of the saw frame and the mid-crank portion of the brace, a pair of arms extending laterally in the same direction from the ends of said bar and adapted to form the ends of the saw frame, sleeves adapted to serve as hand holes secured detachably to said arms and forming therewith the handles for the draw knife, a brace handle, a brace chuck, and shanks extending laterally from said handle and chuck and secured detachably to the aforesaid hand holds, the latter, the aforesaid arms and the shanks forming the cranks of the bit brace.

2. A compound tool providing the essential elements of a draw knife, a saw frame and a bit brace and comprising a bar adapted to serve as the blade carrying member of the draw knife, as the back bar of the saw frame and as the mid-crank portion of the brace, a pair of arms extending laterally in the same direction from the ends of said bar and adapted to form the ends of the saw frame, said arms having openings to receive saw attaching pins, sleeves adapted to serve as hand holds and receiving said arms in one end, pins passable through said sleeves and said openings of the arms to connect said arms and sleeves to permit the latter to serve as handles for the draw knife, a brace handle, a brace chuck, shanks extending laterally from said handle and chuck and receivable in the other ends of said sleeves, and means detachably connecting said shanks and sleeves, whereby the latter, said shanks and the aforesaid arms may form the cranks for the brace.

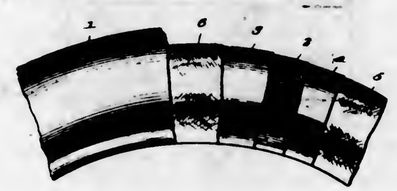
1,218,430. ANTISKID DEVICE. WILLIAM MCCLEARY, Wilmington, Del. Filed Sept. 3, 1915. Serial No. 48,825. (Cl. 152—14.)

In a device of the class described, in combination a hub, a rim, a tire on said rim, a circumferentially spaced apart series of coiled springs arranged at each side of the hub, a series of clips each formed of a coiled V-shaped single metallic strip bent so as to provide a central eye and two arms extending in opposite directions from the eye, integral hooks formed upon opposite ends of each clip and curving around toward the inner sides of said



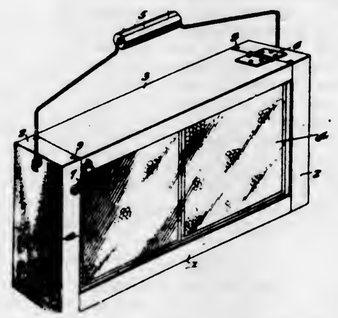
arms, said coiled springs being secured to the eyes of said clips at one end, means for securing the opposite ends of said springs upon said hub, a series of chain sections engaging the hooks of said clips, and a series of chain sections extending across said tire and connecting the first named chain sections.

1,218,431. ARMOR FOR PNEUMATIC TIRES. ALEXANDER V. MCCRIMMON, Beatrice, Nebr. Filed Dec. 15, 1914. Serial No. 877,411. (Cl. 152—18.)



Armor for pneumatic tires embodying in combination, outer and inner plies of rubber, and an interposed layer of quills which extend longitudinally of the tire and are arranged close together and parallel to each other, said quills being substantially round in cross section and laced together by threads interwoven therewith, the whole being vulcanized to form an armor sheet.

1,218,482. HONEY SAMPLE-CASE. AARON MCELVEEN, Stilson, Ga. Filed Mar. 17, 1916. Serial No. 84,941. (Cl. 224—45.)



1. A device of the character described, comprising bottom and end sections; a removable top section; and transparent side sections, the bottom section being provided with holes adapted to receive and hold bottles, said holes being spaced apart to hold the bottles out of contact with each other.

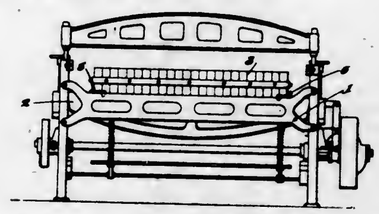
2. A device of the character described, comprising a bottom section; parallel end sections secured thereto; a removable top section provided with means for engaging the end sections; and removable parallel side sections formed of transparent material, said top and bottom sections being each provided with an equal number of holes, each hole on one section being in axial alinement with the corresponding hole on the other section, the holes in the bottom section being of a size to fit the bottoms of the bottles, and the holes in the top being of a size to receive the necks of the bottles, the holes being spaced from each other to hold the bottles against contacting with each other when the device is handled.

3. A device of the character described, comprising a comparatively narrow bottom section; parallel end sections of the same width secured thereto and extending at right angles therefrom, said sections being provided with means for removably engaging oppositely disposed side sections; parallel side sections formed of transparent material and received into said means, and also extending at right angles to the bottom section; and a removable top provided with means for engagement with the end sections and adapted to overlie the removable side sections and hold them in position on the bottom and end sections.

4. A device of the character described, comprising a bottom section and parallel end sections secured thereto and extending at right angles therefrom; a removable top section hinged at one of its ends to the top of one of the end sections and provided at its other end with means for removable engagement with the other end section, said bottom and end sections having grooves at their sides for receiving oppositely disposed side sections; and transparent side sections removably received into said grooves, said top section having grooves arranged to register with the grooves in the end sections and adapted to fit down over and receive the top edge of the side sections when the top section is closed down in operative position.

5. A device of the character described, comprising a bottom section; end sections secured thereto; a removable top section provided with means for engaging the end sections, the top and bottom sections being formed of comparatively thick material and provided with opposing bores on their inner opposing faces, said bores extending partly through said sections; and removable side sections formed of transparent material.

1,218,433. BLOCK-HOLDING ATTACHMENT FOR LEATHER-CUTTING MACHINES. JAMES C. MCGUIRE, Bridgewater, Mass. Filed May 27, 1916. Serial No. 100,275. (Cl. 164—23.)

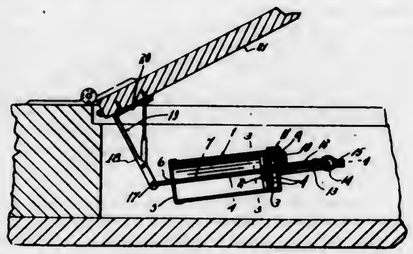


1. The combination with an ordinary leather cutting machine including a bed plate and a die block removably mounted upon said bed plate, of a substantially U-shaped bar mounted upon the upper surface of said bed plate and having the inner surfaces of its legs and bight portion engaging portions of the sides and end of said die block, and means for connecting said bar to said bed plate for preventing accidental movement of the die block upon the said plate.

2. The combination with an ordinary leather cutting machine including a bed plate having sockets formed

therein and a die block removably mounted upon said bed plate, of a substantially U-shaped member mounted upon the upper surface of said bed plate and having the inner surfaces of its legs engaging portions of the sides of said die block and the inner surfaces of the bight portion engaging a portion of the end of said die block, and wedge shaped blocks formed upon and depending from the under surfaces of the free ends of the legs of said member and seating in said sockets for preventing accidental movement of said member.

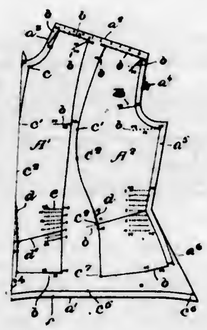
1,218,434. DOOR-CHECK. WALTER S. MCGUIRE, Shadyside, Ohio. Filed July 7, 1916. Serial No. 107,984. (Cl. 16—87.)



1. A door check comprising a cylinder, a piston head operated in the cylinder, a piston rod connected with the head, means for pivotally connecting one end of the rod to a door, a bar rigidly connected with one end of the cylinder, means for slidably and pivotally supporting the bar, said means having associated therewith means for regulating the sliding resistance of the bar.

2. A door check comprising a cylinder, a piston slidable in said cylinder and having a head, means for pivotally connecting one end of the piston to the door, a bar carried by the other end of the piston, means for slidably and pivotally connecting the bar to the door frame, said means having means associated therewith for regulating the sliding resistance of the bar, means for regulating the entrance of air to one side of the piston head, while the air on the other side of the piston head is being discharged and when the door is closing.

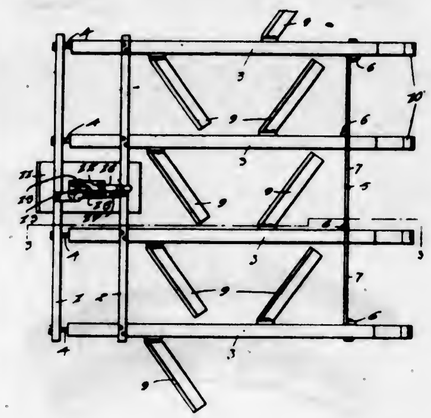
1,218,435. CHART OR MASTER-PATTERN. KATE C. MCLAREN, Washington, D. C. Filed Feb. 29, 1916. Serial No. 81,225. (Cl. 33—13.)



1. A chart or master pattern for use in laying out working patterns provided with a pattern outline, having indicating indicia and a protecting margin entirely beyond said pattern outline and indicating indicia adapted to be removed along the adjacent portion of the pattern outline wholly beyond said outline and indicia to adapt the pattern to be employed.

2. A chart or master pattern for use in laying out working patterns having a main outline of a garment section and outlines therein of one or more portions of such garment section, a length scale along a determined margin, lines of perforations at different points in the said outlines for indicating different bust measurements, other perforated lines for indicating variations for lengths and widths in patterns of the same size, and lines with perforations for indicating variations in the curves and lengths and widths of patterns of different sizes in the same style.

1,218,436. WEEDER. KEITH MCLEOD, Calgary, Alberta, Canada. Filed May 12, 1916. Serial No. 97,093. (Cl. 55—60.)



1. In a weeder structure, the combination, of a pair of forwardly positioned cross supporting bars, a plurality of runners connected to said bars, shoes attached to the under surfaces of said runners, a plurality of weed cutting blades attached to said runners and extending outwardly therefrom at angles obliquely to the runners, said blades arranged in a forward row and a rearward row, the blades in the forward row angling oppositely to the blades in the rearward row, and a rod being twisted intermediate of its ends and attached to each of said runners, the portions of said rod intermediate the runners and twisted portions being arched.

2. In a weeder structure, the combination, of a pair of forwardly positioned cross supporting bars, a plurality of runners connected to said bars, shoes attached to the under surfaces of said runners, a plurality of weed cutting blades attached to said runners and extending outwardly therefrom at angles obliquely to the runners, said blades arranged in a forward row and a rearward row, the blades in the forward row angling oppositely to the blades in the rearward row, an auxiliary runner, an upstanding arm connected to said auxiliary runner, and a lever pivotally supported by said front bars and operatively connected to said upstanding arm for moving said auxiliary runner into and out of a ground-engaging position.

1,218,437. PROCESS OF MOLDING. ALEXANDER MCNAUGHTON, Buffalo, N. Y. Filed Aug. 23, 1916. Serial No. 116,443. (Cl. 22—197.)

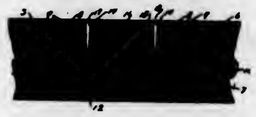
1. The herein described process, comprising the placing of a filler about the riser print of a pattern, then placing the gaggers in position with their ends adjacent to the filler, and then ramming sand into the mold.

2. The herein described process, comprising the placing of a filler, larger than the riser print, around about said



print, then placing the gaggers in position with their ends adjacent to the filler, and then ramming sand between the filler and the print and into the mold.

1,218,438. APPARATUS FOR RELEASING COPES AND RISERS. ALEXANDER MCNAUGHTON, Buffalo, N. Y. Filed Nov. 3, 1916. Serial No. 129,388. (Cl. 22—134.)



1. In an apparatus for releasing copes and risers, the combination with the bars of a molding flask of a filler comprising a plurality of sections and a plurality of gaggers positioned adjacent the outside periphery of the filler and supported by the flask bars, whereby the gaggers, being set back from the riser by the filler, are prevented from being fused with the sand surrounding the riser.

2. In an apparatus for releasing copes and risers, the combination with the bars of a molding flask of a filler comprising a plurality of sections, a plurality of gaggers positioned adjacent the outside periphery of the filler and supported by the flask bars, and a sand lining disposed between the filler and the riser opening, whereby the gaggers, being set back from the riser by the filler, are prevented from becoming fused with the sand surrounding the riser.

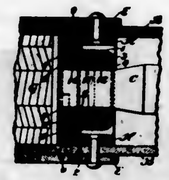
3. In an apparatus for releasing copes and risers, the combination with the bars of a molding flask of a filler comprising a plurality of hollow metal sections, a plurality of gaggers positioned adjacent the outside periphery of the filler and supported by the flask bars, and a sand lining disposed between the filler and the riser opening, whereby the gaggers, being set back from the riser by the filler, are prevented from becoming fused with the sand surrounding the riser.

4. In an apparatus for releasing copes and risers, the combination with the bars of a molding flask and a riser print of a filler comprising a plurality of filler casings, said filler being larger in diameter than the riser print, a plurality of gaggers positioned adjacent the outside periphery of the filler and supported by the flask bars, and a sand lining disposed between the filler and the print, whereby the gaggers, being set back from the riser by the filler, are prevented from becoming fused with the sand surrounding the riser.

5. In an apparatus for releasing copes and risers, the combination with the bars of a molding flask and a riser print of a filler comprising a plurality of filler casings, each of said casings being hollow and provided with means for lifting the same, said filler being larger in diameter than the riser print, a plurality of gaggers positioned adjacent the outside periphery of the filler and supported by the flask bars and a sand lining disposed between the filler and the print, whereby the gaggers, being set back from the riser by the filler, are prevented from becoming fused with the sand surrounding the riser.

1,218,439. GREASE-RETAINER. PHILIP S. MARTIN, Clayton, Mo. Filed July 27, 1916. Serial No. 111,645. (Cl. 137—115.)

1. In a grease-retainer of the class described, a cup-shaped member apertured in its end face, said member being provided with an outwardly-projecting annular flange, a tubular member also provided with an outwardly-projecting annular flange, and a grease-washer fitting on the tubular member and operatively disposed between said flanges.



2. In a grease-retainer of the class described, a cup-shaped member apertured in its end face, said member being provided with an outwardly-projecting annular flange, a tubular member also provided with an outwardly-projecting annular flange, an outer grease-washer fitting on the tubular member and operatively disposed between said flanges, the tubular member loosely fitting at its inner end within the cup-shaped member, and an inner grease-washer operatively disposed within said members.

3. In a grease-retainer of the class described, a cup-shaped member apertured in its end face, said member being provided with an outwardly-projecting annular flange, a tubular member also provided with an outwardly-projecting annular flange, an outer grease-washer fitting on the tubular member and operatively disposed between said flanges, the tubular member loosely fitting at its inner end within the cup-shaped member, a ring within the tubular member, and an inner grease-washer disposed within said members between said ring and the end-face of the cup-shaped member.

4. In a grease-retainer of the class described, a cup-shaped member apertured in its end face, said member being provided with an outwardly-projecting annular flange, a tubular member also provided with an outwardly-projecting annular flange, an outer grease-washer fitting on the tubular member and operatively disposed between said flanges, the tubular member loosely fitting at its inner end within the cup-shaped member, a ring loosely fitting within the tubular member, projections on the tubular member to hold said ring against movement through the outer end of said tubular member, and an inner grease-washer operatively disposed within said members between said ring and the end-face of the cup-shaped member.

5. In a grease-retainer of the class described, a tubular outer grease-washer supporting member, a washer-retaining ring disposed loosely within said member, and a plurality of inwardly projecting integral lips on said member adapted to hold the ring from outward movement through one end of the member.

[Claim 6 not printed in the Gazette.]

1,218,440. DEVICE TO FACILITATE THE PARTING OF HAIR. JAMES MAXWELL, Sr., New York, N. Y. Filed Sept. 12, 1916. Serial No. 119,789. (Cl. 132—3.)

1. A device to facilitate the parting of hair comprising in combination, two flat strips of material capable of being flexed longitudinally, and means for pivotally connecting said strips of material substantially midway of their ends, normally disposing the edge of one confronting the edge of the other, but permitting either strip to be swung with such edges out of confronting relation.

2. A device to facilitate the parting of hair comprising in combination, two flat strips of material capable of being arcuated longitudinally, a face of each strip beveled at its longitudinal edge, and means pivotally connecting said strips of material substantially midway of their ends normally disposing the longitudinal edge of the bevel of one strip confronting the longitudinal edge of the bevel of the other strip, but permitting either strip to be swung with such edges out of confronting relation.

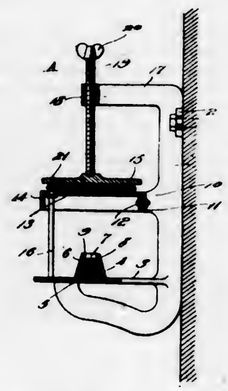
3. A device to facilitate the parting of hair comprising in combination, two flat strips of material capable of

being arcuated longitudinally, and a coupling pivotally connecting each of said strips with the points of connection between their longitudinal margins.



4. A device to facilitate the parting of hair comprising in combination, two flat strips of material capable of being arcuated longitudinally, a face of each strip beveled at a longitudinal edge, two hinge leaves, one secured at each of said strips at the beveled face thereof, a coupling member, and pintles extending longitudinally of said strips connecting said coupling member and leaves.

1,218,441. VULCANIZER. JOHN MICHEL, Philadelphia, Pa. Filed Nov. 15, 1916. Serial No. 131,528. (Cl. 18—18.)

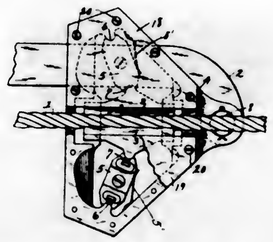


1. In a device of the class described, a frame, a shelf on said frame, a stud on said shelf, and a fuel holder supported by said shelf and having a socket in the bottom thereof receiving said stud.

2. In a device of the class described, a frame, a table thereon, a shelf on said frame underlying said table and spaced therefrom, a stud on said shelf alining with the center of said table, a fuel holder retained on said shelf by said stud, and a guard member serving as an auxiliary support for said table having connection therewith and with said shelf.

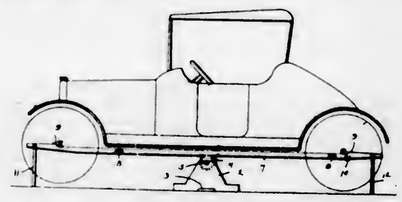
1,218,442. WIRE-CABLE-GRIPPING DEVICE. GERHARD MOE, Ladysmith, Wis. Filed Oct. 14, 1914. Serial No. 866,665. (Cl. 254—76.)

1. In a device of the described class, the combination of a pair of movable frames, a pair of reciprocating arms respectively pivotally connected with said frames, a pair of grip members located in each of said frames, a link having pivotal bearings at one end with one of said movable grip members and at its opposite end with one side of said frames, and means for retaining said links and grip members in said frames.



2. In a device of the described class, the combination of a pair of reciprocating arms, a pair of movable frames, a stationary grip member and a movable grip member in each of said frames, a link having pivotal bearings at one end with one of said movable grip members and at its opposite end with one of said frames, means for pivotally connecting one of said arms with one of said movable grip members, means for retaining said links and grip members in said frames, an arm pivotally connected at one end with one of said frames, provided at its opposite end with an aperture for the reception of said cable, said arms being adapted to engage the cable and prevent said frames from being moved forward by the friction of the grip members as the latter is brought into gripping engagement with said cable.

1,218,443. AUTOMOBILE-SWING. SAMUEL M. MOORE, Sumner, Ill. Filed Aug. 16, 1916. Serial No. 115,231. (Cl. 254—88.)

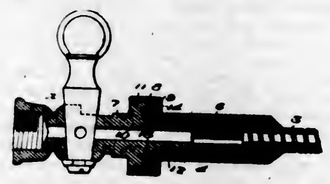


1. A device of the character set forth comprising a pair of blocks, means for securing said blocks together, rollers journaled on said blocks, a frame mounted on said rollers and supported in an inclined position, shoulders formed on said frame and adapted to be engaged by an automobile when driven upon the frame to cause said frame to move forwardly upon the rollers, and means for supporting each end of the frame.

2. A device of the character set forth comprising a base, rollers journaled on said base, a pair of parallel members mounted on said rollers, transversely extending bars connecting said parallel members together, said parallel members having cut out portions adjacent each end thereof to form shoulders, said shoulders adapted to be engaged by an automobile to cause the parallel members to move forwardly upon the rollers to elevate the automobile, and means for supporting the ends of the parallel members.

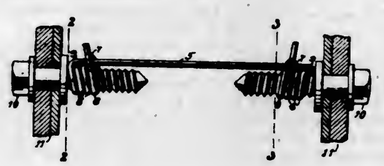
3. A device of the character set forth comprising a base, a frame slidably mounted on said base, shoulders formed on said frame and adapted to be engaged by an automobile when driven upon the frame to cause said frame to move forwardly upon the base into a horizontal position to elevate the automobile, and legs secured to the forward end of the frame and in engagement with the ground when in a horizontal position, and legs pivotally secured to the rear end of the frame and adapted to move downwardly as the frame is elevated to a horizontal position to support the rear end of the frame.

1,218,444. CONDUIT CONNECTION. FRANK X. MÜLLER and GEORGE J. WINTER, Buffalo, N. Y., assignors to The Republic Hose Coupler Corporation, Buffalo, N. Y. Filed Feb. 8, 1916. Serial No. 77,080. (Cl. 137—28.)



A coupling comprising a nipple having a comparatively large circular portion threaded on its perimeter and square at its inner side and also having a central teat extending inwardly from said circular portion, and a circumferential groove in said teat immediately adjacent to the face of the circular portion, the exterior of said teat being continuously smooth and tapered from said groove to the teat end; and an exteriorly-straight tubular rubber portion receiving the teat of the nipple and formed originally with a square end that is opposed to the circular portion of the nipple and also formed originally at said end with an exterior flange and an interior flange, the latter seated in the groove of the teat; and a collar mounted on the rubber portion and having an inwardly-directed flange bearing against the exterior flange of the rubber potrion and also having an inwardly threaded portion receiving and engaging the threaded perimeter of the nipple.

1,218,445. APPARATUS FOR CONSTRUCTING CONCRETE WALLS. GORDON SALTONSTALL MUMFORD, Garden City, N. Y. Filed Oct. 3, 1916. Serial No. 123,509. (Cl. 85—1.5.)



1. A tie member for use in concrete comprising an extended body portion having a helical coil at one end, said body portion extending along the outer side of said coil and connected therewith at the inner and outer ends thereof.

2. A tie member for use in concrete comprising an extended body portion having a helix at each end thereof, said helices each being connected at its inner and outer ends with the body portion.

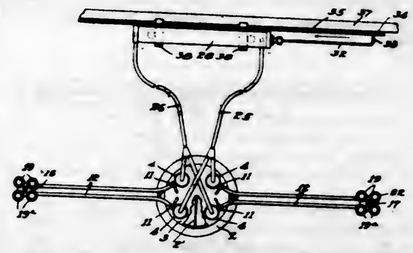
3. A tie member for use in concrete comprising an extended body portion having anchorage means at one end and a helical coil at the other, said body member extending along the side of said coil and being connected therewith at the inner and outer ends of said coil.

4. A tie member for use in concrete comprising an extended body portion having a helical coil at one end, said body portion extending along the outer side of said coil and connected therewith at the inner and outer ends thereof, in connection with a threaded member which said coil is adapted to receive.

5. A tie member for use in concrete comprising an extended body portion having a helix at each end thereof, said helices each being connected at its inner and outer ends with the body portion, in connection with threaded members which said helices are adapted to receive.

[Claims 6 to 10 not printed in the Gazette.]

1,218,446. MILKING-MACHINE. MARK J. MURPHY and HARRY H. BRANDRAU, St. Paul, Minn. Filed Mar. 7, 1916. Serial No. 82,535. (Cl. 31—98.)



1. A milking machine comprising a milk receptacle having separate compartments for the milk, milk receivers mounted on said receptacle for each compartment, teat cups arranged in groups, each milk receiver having a tube for connection with a pair of cups, the receivers communicating with the same compartment of the milk receptacle being connected with the pairs of cups of the same group, and a pump having suction tubes for connection with pairs of milk receivers.

2. In a milking machine, a milk receiver having means for mounting it upon a milk receptacle and provided with an open lower end for the discharge of the milk and also having a stop on its inner walls and a floating valve provided within the open lower end of said receiver and encircled by the walls thereof and positioned to engage said stop and close said receiver temporarily during the entrance of the milk therein.

3. A milking machine comprising a milk receptacle having separate compartments for the milk, milk receivers mounted on said receptacle for each compartment, teat cups arranged in groups, each milk receiver having a tube for connection with a pair of cups, the receivers communicating with the same compartment of the milk receptacle being connected with the pairs of cups of the same group, and a pump having suction tubes for connection with pairs of milk receivers, one receiver of each pair communicating with one compartment of said receptacle and the other receiver of the same pair with the other compartment of said receptacle.

4. In a milking machine, a milk receiver having means for mounting it on a milk receptacle and provided with a milk discharge opening and a valve seat, an extension for said milk receiver fitting therein and having notches in its upper end, a valve disk fitting loosely between said valve seat and the end of said extension, said valve at the limit of its upward movement closing said milk discharge opening and when released resting upon said extension and permitting the discharge of milk through said notches.

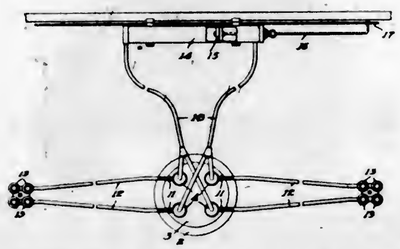
5. A milking machine comprising a milk receptacle and a plurality of milk receivers mounted thereon, teat cups having means for connection with said receivers, suction tubes connected with said receivers, a single cylinder pump having its ends connected with said suction tubes and provided with a double disk piston with reversely arranged packings thereon, the movement of said piston forcing the air through one suction tube into one pair of milk receivers and simultaneously exhausting the air from the other suction tube and the other pair of milk receivers.

[Claims 6 to 14 not printed in the Gazette.]

1,218,447. MILKING-MACHINE. MARK J. MURPHY and HARRY H. BRANDRAU, St. Paul, Minn. Filed Mar. 20, 1916. Serial No. 85,410. (Cl. 31—98.)

1. In combination, with a suction milking device, a means for establishing communication between the suction passage and the atmosphere for varying the relative degree of suction at the milking cups.

2. The combination, with a milking device having suction passages and means located near the milk receivers for opening communication between said passages and the atmosphere for varying the relative degree of suction in said passages, said means closing said communication automatically when pressure is applied to said passages.

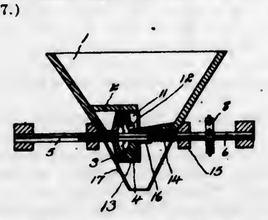


3. In combination, with a milking device comprising a pump, milk receivers and milk cups therefor and tubes having suction passages connecting said receivers and said cups with said pump, and a valve device communicating with one of said passages for regulating the degree of suction therein, and in the cups connected with said passage, for the purpose specified.

4. A milking machine comprising milk receivers, milk cups arranged in groups of four cups each, a tube connecting a pair of cups in each group with a milk receiver, a pump having tube connections with milk receivers for the pairs of cups of different groups and a valve provided in connection with each tube leading to a milk receiver for opening communication between the suction passages in said tubes and the atmosphere for varying the degree of suction at one pair of cups of a group with respect to the cups of the other pair.

5. The combination, with a milk receiver, of a pair of milk cups, a tube leading therefrom to said milk receiver, a valve mounted in said tube and having a passage therein communicating with the atmosphere, a cap for regulating the entrance of air to said passage, said valve having means operated when pressure is forced into said passage for closing said passage.

1,218,448. GRAIN-GRINDING MILL. MICHAEL MUTRO, Chester, Pa., assignor of one-tenth to John Rawliuk, Chester, Pa. Filed Sept. 26, 1916. Serial No. 122,245. (Cl. 83—7.)



1. A grinding mill embodying a pair of crushing disks, the opposed faces of which are serrated and dished to provide a chamber, the exterior of one of the disks being provided with a plurality of pockets and with openings communicating with the chamber.

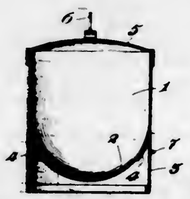
2. A grinding mill embodying a pair of crushing disks, the opposed faces of which are serrated and dished to provide a chamber, the exterior of one of the disks being provided with a plurality of pockets and with openings communicating with the chamber, and a shield or cover partially inclosing one of the disks and serving to catch and return grain escaping from the pockets.

3. A grinding mill embodying a pair of crushing disks, the opposed faces of which are serrated and dished to provide a chamber, the exterior of one of the disks being provided with a plurality of pockets and with openings communicating with the chamber, a shield or cover partially inclosing one of the disks and serving to catch and return grain escaping from the pockets, and means for imparting rotary motion to the pocketed disk.

4. A grinding mill embodying a pair of crushing disks, the opposed faces of which are serrated and dished to provide a chamber, the exterior of one of the disks being provided with a plurality of pockets and with openings communicating with the chamber, a shield or cover partially inclosing one of the disks and serving to catch and return grain escaping from the pockets, means for imparting rotary motion to the pocketed disk, and means for permitting the latter disk to yield to excess pressure.

5. In a grain grinding mill, a pair of initial crushing disks, one of which is stationary and the other revoluble and yieldable along its longitudinal axis, the latter disk being provided with pockets communicating with the space between the two disks, and means for collecting and returning to the pockets any grain escaping therefrom on the initial operation of the machine.

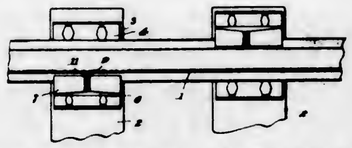
1,218,449. GARBAGE-CAN. EMMA NICKUM, South Bethlehem, Pa. Filed Sept. 22, 1916. Serial No. 121,669. (Cl. 220—137.)



1. A can comprising a body having a semi-spherical bottom, a cylindrical ring of the same diameter as the can, and having an inwardly and downwardly projecting flange at its upper end secured to the bottom of the can.

2. A can of the character described, comprising a body of general cylindrical form having a semi-spherical bottom, a cylindrical ring of the same diameter as the body of the can, said ring having at its upper end an inwardly and downwardly projecting flange secured to the bottom of the body, a removable cover on the can, a bail pivotally connected to the body of the can, and a handle secured to the ring.

1,218,450. TIE-PLATE. MICHAEL J. NUGENT, Scranton, Pa. Filed Jan. 7, 1915, Serial No. 982. Renewed Aug. 8, 1916. Serial No. 113,832. (Cl. 238—2.)



1. A rail plate, means for securing the plate upon the tie, a longitudinally arranged base flange receiving housing formed upon the plate, said housing including an upper wall which is inclined downwardly from its center to its ends, and a frusto-conical member arranged centrally within the housing and frictionally engaging the wall thereof and the base of the rail.

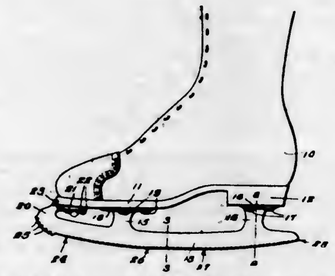
2. A rail plate, a longitudinally arranged base flange receiving housing formed upon the plate, said housing including an upper wall which is inclined downwardly from its center to its ends, and a frusto-conical member having longitudinally extending teeth arranged centrally within the housing and contacting therewith and with the base of the rail, means comprising spikes for securing the plate upon a tie and certain of said spikes contacting with the longitudinal edges of the rail opposite that receiving the housing.

3. A rail plate provided with a surface lying above the base flange of the rail and disposed in diverging relation thereto longitudinally, and a conical locking device interposed between said surface and the base of the rail and free to revolve over the base flange and over said surface.

4. A rail plate provided with a surface lying above the base flange of the rail and disposed in diverging relation thereto longitudinally, and a locking device of uniform configuration throughout its transverse diameter, said device being interposed between the base of the rail flange of the said surface of the plate and free to revolve thereover.

5. A rail plate having a rail receiving housing, said housing including an upper wall which is inclined downwardly from its center to its end and a conical friction member arranged within the central portion of the housing and projecting through the open face of the housing, said friction member being revoluble and contacting the walls of the housing and the base flange of the rail.

1,218,451. ICE-SKATE. WILHELM OELSCHLÄGEL, New York, N. Y. Filed Nov. 29, 1915. Serial No. 64,112. (Cl. 46—50.)



In an ice skate of the class described, a runner having the forward and rear ends curved slightly upwardly from a straight section, said runner being hollow ground for a major portion of its length, from the heel to near the toe, the forward end of said runner rising above the general line of said runner where it terminates in a plate forming wings to the opposite sides of said runner, a stop formed of said upturned end in advance of said plates, to contact with the forward end of the sole of a shoe supporting said skate, a standard rising from said runner under the ball of the foot of a wearer, said standard having wings formed thereon which extend from the sides of said standard, a second standard formed on said runner under the heel of a foot having wings formed thereon, fastening means passing through the several wings formed on said standards and the upturned end of the runner, and said runner having a reduced cross sectional dimension between the standards under the ball and heel of a foot to permit that portion of the runner so reduced in its cross sectional dimension to be relatively flexible.

1,218,452. SCREW-DRIVER. LLOYD R. OHL, Akron, Ohio. Filed Apr. 9, 1915. Serial No. 20,240. (Cl. 145—52.)



1. In a tool of the class described, a shank having a bit, a screw engaging member slidably disposed against the shank and movable to position its screw engaging portion in and out of coöperative relation to the bit of the shank, and means movable longitudinally of the shank and with relation to the screw engaging member to laterally adjust the screw engaging portion of the said member with relation to the bit of the shank.

2. In a tool of the class described, a shank having a bit, a resilient screw engaging member slidably disposed against the shank and movable to position its screw engaging portion in and out of coöperative relation to the bit of the shank, the said member having a portion inclined with relation to the shank, and means movable longitudinally of the shank to coöperate with the inclined portion of the screw engaging member to adjust the screw engaging portion of the said member with relation to the bit of the shank.

3. In a tool of the class described, a shank having a bit, a screw engaging member disposed against the shank and having a screw engaging portion movable into and out of coöperative relation to the bit of the shank, the said member being resilient and its said portion being inclined outwardly from the said shank and being gradually increased in width in the direction of its end, and a sleeve slidable upon the shank and arranged to coöperate at one end with the said screw engaging portion of the screw engaging member.

4. In a tool of the class described, a shank having a bit and provided with a flattened side, a screw engaging member having a portion disposed against the flattened side of the shank and having a portion inclined with relation to the first mentioned portion and having a tendency to spring laterally away from the shank, the first-mentioned portion of the screw engaging member having its upper side at its edges beveled, and a sleeve slidably fitted upon the shank and arranged to coöperate with the said inclined portion of the said member to adjust the screw engaging portion of the said member with relation to the bit of the shank.

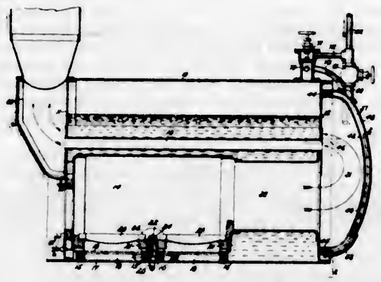
5. In a tool of the class described, a shank having a bit and provided with a flattened side, a resilient screw engaging member having a flat intermediate portion disposed against the flattened side of the said shank, the forward end portion of the said member being extended laterally at an angle with relation to the said shank and being provided with a terminal head notched for engagement with a screw to be held, the rear end portion of the said member being extended laterally and rearwardly at an angle with relation to the said shank and having an inwardly extending terminal portion provided with an opening through which the said shank extends, the said shank being provided with spaced notches selectively engageable by one wall of the opening whereby the said member may be held at the forward or rearward limit of its sliding movement with relation to the shank, and a sleeve slidably fitted upon the shank and embracing the said shank and the intermediate portion of the said member.

[Claim 6 not printed in the Gazette.]

1,218,453. BOILER. ROBERTO FRITZ EMIL OKRASSA, Antigua, Guatemala. Filed July 28, 1916. Serial No. 111,845. (Cl. 122—470.)

1. A boiler, comprising a shell, a fire box built in the shell, a flue leading from the rear of the fire box to the rear end of the shell, return flues above the fire box and extending from the rear end of the shell to the front end thereof, a combined hollow superheater and deflector concave on its inner face and comprising spaced plates secured at their edges to the rear end of the shell, the superheater and deflector forming with the said end of the shell a return compartment through which the products of combustion are directed from the said fire box tube to the said return flues, a valved water pipe connecting the water compartment of the shell with the interior of the said combined superheater and deflector at one side thereof to supply the latter with water, a valved outlet pipe leading from the top of said superheater and deflector at the central portion thereof, a valved outlet pipe leading from the top of said shell and having a valve chamber and valve, the valve chamber being connected

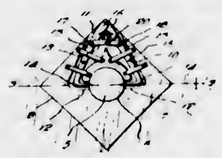
by a pipe with the outlet pipe leading from the superheater and deflector, and steam pipes connecting the outlet pipe leading from the top of the shell with the steam compartment of the superheater and deflector at opposite sides thereof, the bottom of the superheater and deflector being provided with a manhole for gaining access to the said return compartment.



2. A boiler comprising a shell, a fire box in the shell, a flue leading from the rear of the fire box to the rear end of the shell, return flues above the fire box and extending from the rear end of the shell to the front end thereof, a combined hollow superheater and deflector on the rear end of the shell and forming with the said end of the shell a return compartment for directing the products of combustion from the said fire box tube to the said return flues, a valved water pipe connecting the water compartment of the shell with the said combined superheater and deflector to supply the latter with water, a valved steam outlet pipe leading from the top of the superheater and deflector, an outlet pipe leading from the top of the shell and having a valve connected by a pipe with the said outlet pipe leading from the superheater and deflector, vertical baffle plates in the said superheater and deflector, and steam pipes connecting the outlet pipe leading from the top of the shell with the interior of the superheater and deflector at the outer sides of the outer baffle plates.

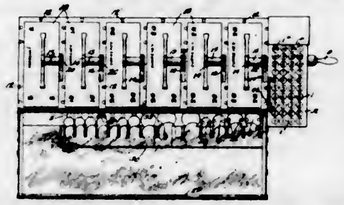
3. A boiler comprising a shell having an outwardly flanged head fitting within the rear end of the shell, a fire box built in the shell, a flue leading from the rear of the fire box to the rear end of the shell, return flues above the fire box and extending from the rear end of the shell to the front end thereof, and a combined hollow superheater and deflector consisting of spaced boiler plates and a frame for holding the plates spaced apart, the said superheater and deflector being concave on its inner face and the edges of the said plates and the said frame extending within the flange of the head and engaging the rear end of the shell, and fastening means extending through the shell and the flange of said head and engaging the superheater and deflector to secure the same in position on the shell.

1,218,454. NUT-LOCK. JOHN J. ORBICK, Hurley, Wis. Filed Aug. 22, 1916. Serial No. 116,372. (Cl. 151—5.)



The combination with a bolt having a plurality of longitudinally disposed ratchet grooves, of a nut having a threaded bore to receive the bolt and provided with a slot entering the bore at diametrically opposite points, two pawls pivoted intermediate of their ends and mounted in said groove, the hooked terminals thereof being disposed for projection into the bore, and a pair of toggle links pivotally connected to the outer terminals of the pawls and adapted to be extended and collapsed for placing the hooked terminals into and out of engagement with the grooves of the bolt.

1,218,455. MECHANICAL CASHIER. WILLIAM S. OVERLIN, Portland, Oreg., assignor, by mesne assignments, to International Money Machine Company, Terre Haute, Ind., a Corporation of Indiana. Filed Nov. 5, 1912. Serial No. 729,704. (Cl. 133—4.)



1. In a money handling machine, the combination of holders for bills of paper currency, a plurality of suction devices for removing the bills from said holders, and manual means to individually and collectively operate said devices.

2. In a money handling machine, the combination of a plurality of bill holders, a plurality of suction devices associated therewith and adapted to carry bills from said holders to a suitable point of delivery, and manual means to separately and simultaneously operate said devices.

3. In a money handling machine, the combination of a plurality of bill holders, a plurality of suction devices associated therewith and adapted to carry bills from said holders to a suitable point of delivery, selector mechanism for selecting a predetermined one of the suction devices for operation, and means for operating a selected suction device.

4. In a money handling machine, the combination of a plurality of bill holders, a plurality of suction devices associated therewith and adapted to carry bills from said holders to a suitable point of delivery, selector mechanism for selecting a predetermined one of the suction devices for operation, and means for individually or collectively actuating selected suction devices.

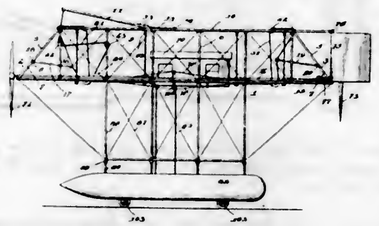
5. In a money handling machine, the combination of a bill holder, a movable suction device associated therewith to deliver a bill from the holder to a suitable point of deposit, manipulative means to initially render said suction device operative, and means to subsequently actuate the same.

[Claims 6 to 33 not printed in the Gazette.]

1,218,456. AIRSHIP. CHARLIE PETERSON, Florence, Wis., assignor of one-half to Harvey Bowman, Florence, Wis., and Charles Erickson, Commonwealth, Wis. Filed Jan. 17, 1916. Serial No. 72,521. (Cl. 244—14.)

1. In an air-ship, a main plane, adjustably mounted longitudinal side planes below and adapted to be arranged either parallel with or at an angle to the main plane, a pair of longitudinally arranged propeller shafts arranged end to end and each having a propeller, driving means for one of said shafts, means to couple said shafts together and to uncouple said shafts at will, gears to cause said shafts to revolve in reverse directions when desired, and means operated by one of said shafts to adjust said side planes.

2. In an air-ship, a main plane having an angularly movable member at its front end, front and rear planes below the main plane and adapted to be arranged parallel therewith or at an angle thereto, an endless cord connected to each of said front and rear planes, an operating drum and direction elements for each of said endless cords, shafts geared to said drums, a cord to operate the angularly movable member of the main plane, a drum and direction elements for said cord, a shaft geared to said last-named drum, and concentrically mounted shafts one for and geared to each of the first named shafts and provided with manually operated turning means.



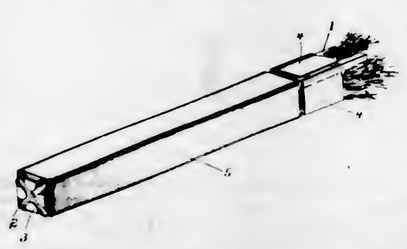
3. In an air-ship, a main plane having an angularly movable member at its front end, front and rear planes below the main plane and adapted to be arranged parallel therewith or at an angle thereto, an endless cord connected to each of said front and rear planes, an operating drum and direction elements for each of said endless cords, shafts geared to said drums, a cord to operate the angularly movable member of the main plane, a drum and direction elements for said cord, a shaft geared to said drum, and concentrically mounted shafts one for and geared to each of the first named shafts and provided with manually operated turning means, and means to lock and release each of said concentrically mounted shafts.

4. In an air-ship a frame having depending and downwardly diverging end and side members, a main plane on the frame, having an angularly movable member at its front end, front and rear planes below the main plane and adapted to be arranged at an angle to and to close against the end members of the frame and side planes also below the main plane and adapted to be arranged at an angle to and to close against the side members of the frame.

5. In an air-ship a main plane having an angularly movable member at its front end, front and rear planes below the main plane and adapted to be arranged parallel therewith or at an angle thereto, and longitudinally arranged side planes also below the main plane and adapted to be arranged parallel therewith or at an angle thereto.

[Claims 6 and 7 not printed in the Gazette.]

1,218,457. SKEIN-HOLDER. NELLIE KINSELLA PETERSON, Bisbee, Ariz. Filed Mar. 3, 1916. Serial No. 81,960. (Cl. 206—64.)

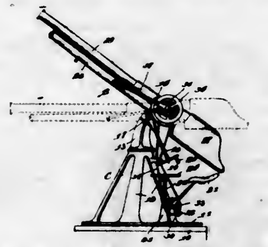


1. A skein holder comprising a bar having a number of sides, holding devices on the respective sides of said bar adjacent to one end thereof, and a holding device on the other end of said bar common to all of said first holding devices and coöperating therewith to hold skeins of silk on the respective sides of the bar.

2. A skein holder comprising a bar having a number of sides, a plate at one end of the bar conforming to the cross sectional shape of the bar, fingers on the respective edges of said plate, and gripping plates on the respective sides of the bar adjacent to the other end thereof cooperating with said fingers to hold skeins of silk on the bar.

3. A skein holder comprising a bar having a number of sides, a plate at one end of the bar conforming to the cross sectional shape of the bar, fingers on the respective edges of said plate, gripping plates on the respective sides of the bar adjacent to the other end thereof cooperating with said fingers to hold skeins of silk on the bar, and a sleeve for inclosing the bar and the skeins of silk thereon.

1,218,458. GUN. WILLIAM D. POLITE, Wilmington, N. C. Filed Sept. 29, 1916. Serial No. 122,909. (Cl. 89—11.)



1. A gun of the character described embodying a breech block, and a shell magazine capable of movement longitudinally of the barrel of the gun, a shell lifter pivotally mounted within said block and automatically operable to assume a position to receive a shell from the magazine upon adjustment of the block in one direction, yieldable means supporting said lifter and operating to elevate the latter within the block at a predetermined interval upon adjustment of the latter in a reverse direction, and means for limiting the upward movement of the lifter whereby said shell is properly positioned relative to the barrel of the gun.

2. A gun of the character described embodying a breech block, and a shell magazine capable of adjustment longitudinally of the barrel of the gun, a shell lifter pivotally mounted within said block, yieldable means supporting said lifter; said lifter being capable of assuming a position in line with said magazine upon adjustment of the block in one direction, means for automatically feeding the shells singly from said magazine onto said lifter, said yieldable means operating to elevate the lifter within the block at a predetermined interval when the block is adjusted in the reverse direction, and means for limiting the movement of the lifter in an upward direction.

3. A gun of the character described embodying a breech block, and a shell magazine capable of adjustment longitudinally of the barrel of the gun, a shell lifter yieldably supported within the block and capable of independent vertical and sliding movements, whereby said lifter is automatically adjusted to a position to receive a shell from the magazine upon movement of said block in one direction, and automatically elevated at a predetermined interval upon adjustment of the block in an opposite direction, and means for feeding said shells singly from said magazine onto the lifter.

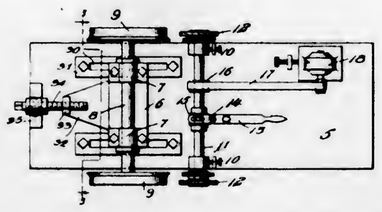
4. A gun of the character described embodying a breech block, and a shell magazine capable of adjustment as a unit longitudinally of the barrel of the gun, a shell lifter arranged within the block and capable of independent vertical and sliding movements, when said block is adjusted, yieldable means associated with said lifter to be placed under compression during the sliding movement of the latter and upon adjustment of the block in one di-

rection whereby said means operates to project said lifter at a predetermined interval during the continued movement of said block, to a position to receive a shell from said magazine, means for automatically feeding the shells singly from the magazine onto said lifter, and yieldable means supporting said lifter and operating to elevate the latter within the block at a predetermined interval during the adjustment of the latter in a reverse direction.

5. A gun of the character described embodying a breech block, and a shell magazine capable of adjustment as a unit longitudinally of the barrel of the gun, a shell lifter yieldably supported within the block, and automatically operable to assume a position upon adjustment of the block in one direction, to receive a shell from said magazine, means for automatically feeding said shells singly from said magazine onto said lifter, said yieldable means operating to elevate the lifter within the block at a predetermined interval during the adjustment of the block in a reverse direction, and cushioning means associated with the lifter for retarding the movement of the latter in an upward direction.

[Claims 6 to 8 not printed in the Gazette.]

1,218,459. TIRE GRINDING AND TRUING MACHINE. JOHN C. PRICE, Wevaco, W. Va. Filed May 3, 1916. Serial No. 95,243. (Cl. 51—4.)

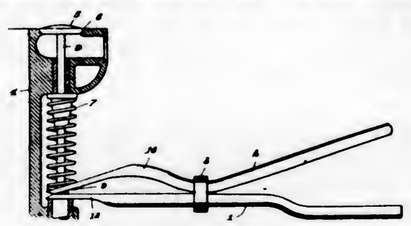


1. In a machine of the character described a supporting platform, channeled guide plates rigidly mounted longitudinally of the platform and in spaced parallel relation with each other, integrally formed spaced standards, ribs on the under surfaces of the standards for sliding engagement with the channeled guide plates, separable bearings on the upper surfaces of the standards for detachably receiving the journal for car wheels, an extension projecting from the standards and positioned between the guide plates, an eye on the outer end of the extension, an adjusting screw bar mounted in the eye, a lug carried by the platform and having the opposite end of the bar mounted therein whereby when the bar is adjusted the standards will be correspondingly adjusted, and abrading mechanism supported upon the platform and having abrading means for engagement with the treads and flanges of car wheels.

2. In a machine of the character described, a supporting platform, spaced stationary bearing standards carried by the platform, a shaft mounted for rotary and sliding movement in the bearing standards, abrading wheels carried by the projecting ends of the shaft, a collar carried by the shaft, pins projecting from the collar, a prime mover mounted on the platform and operatively connected to the shaft for rotating the shaft, a bracket carried by the platform, a hand lever pivoted to the bracket for horizontal swinging movement, and a slotted yoke formed on the inner end of the lever and engaged about the pins so as to move the shaft laterally of the platform when the lever is actuated.

1,218,460. VALVE-REMOVING TOOL. WILLIAM WEBSTER PRICE, Elm Grove, W. Va. Filed May 5, 1916. Serial No. 95,678. (Cl. 29—87.1.)

A tool of the class specified, comprising a base member having a slot in one end thereof, a lever member having a portion thereof offset so as to fulcrum on the base member and also provided with a slot in the end thereof, and a yoke ring slidable lengthwise of the base and lever members and adapted to hold the lever member in rocking



relation to the base member in one position, and to prevent rocking movement of the lever member when in another position.

1,218,461. PRINTING-BLOCK FOR BLOCK-PRINTING MACHINES. GEORGE PRIFOLD, Linwood, Pa., assignor to The Congoleum Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 28, 1916. Serial No. 80,878. (Cl. 101—395.)



1. A printing pin for a block printing machine having a printing face and having recessed sides serving as a carrier for the printing composition.

2. A printing pin for a block printing machine, said pin being substantially rectangular in cross-section and having a recess at each side serving as a carrier for the printing composition.

3. A printing pin for a block printing machine, said pin being cruciform in cross-section to provide recesses in the sides which serve as a carrier for the printing composition.

4. A printing pin for a block printing machine, said pin being cruciform in cross-section to provide recesses in the sides which serve as a carrier for the printing composition, said pin being tapered from the point to the butt.

5. A printing block for a block printing machine consisting of a plate having a series of integral pins spaced apart, each pin having recesses at the sides thereof serving as a carrier for the printing composition, substantially as herein described.

[Claims 6 and 7 not printed in the Gazette.]

1,218,462. IDENTIFICATION-COMB. PAUL R. QUADE, Wausau, Wis., assignor of one-third to Fred F. Graper, Brokaw, Wis., and one-third to Bernard F. Quade, Wausau, Wis. Filed July 17, 1916. Serial No. 109,744. (Cl. 40—10.)

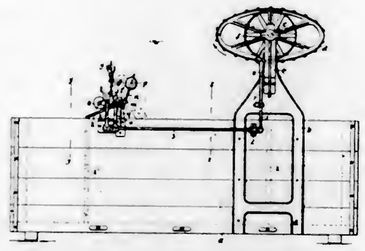


1. An article of the class described provided with a seating channel, a slide removably fitted within the said channel, the inner face of the slide being recessed, and identification means housed within the said recess.

2. In an article of the class described, provided with a channel having undercut walls, a slide having beveled edges, the said slide being removably fitted within the said channel, and identification means upon the inner face of the said slide.

3. In an article of the class described, provided with a channel having undercut walls, the channel opening at one end through one side of the said article, a slide having beveled edges, the said slide being removably fitted into the channel through the said end thereof, that face of the slide which is presented toward the inner wall of the channel being formed with a recess, and an identification strip disposed against the bottom wall of the recess in the slide, the recess being of a depth greater than the thickness of the said identification strip.

1,218,463. STOP-MOTION MECHANISM. CLIFFORD H. RAMSEY, Paterson, N. J., assignor to James L. Morrison Machine Co., Paterson, N. J., a Corporation of New Jersey. Filed May 22, 1916. Serial No. 99,203. (Cl. 8—19.)



1. In a machine for treating fabrics and similar materials with liquids, the combination of a supporting structure including a vat, means to advance the material through the vat, movable means for controlling the first means, and a material-actuated rake over which the material extends movable into impact with and thereupon adapted to actuate the second means.

2. In a machine for treating fabrics and similar materials with liquids, the combination of a supporting structure including a vat, means to advance the material through the vat, movable means for controlling the first means, and a pivoted material-actuated rake over which the material extends movable into impact with and thereupon adapted to actuate the second means.

3. In a machine for treating fabrics and similar materials with liquids, the combination of a supporting structure including a vat, means to advance the material through the vat, movable means for controlling the first means, a pivoted material-actuated rake over which the material extends movable against and thereupon adapted to move the second means and regulating means for the rake.

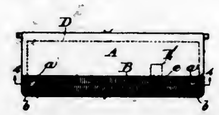
4. In a machine for treating fabrics and similar materials with liquids, the combination of a supporting structure including a vat, means to advance material through the vat, a tiltable rake over which the material extends normally resting with its center of gravity at one side of the perpendicular through its axis of tilting movement and adapted to be tilted by the material past said perpendicular, and means, arranged to be engaged by the rake after it tilts past the perpendicular, for controlling the first means.

5. In a machine for treating fabrics and similar materials with liquids, the combination of a supporting structure including a vat, means to advance material through the vat, means for controlling the first means having a locking member, and a rake over which the material extends movable against and adapted to release said member.

[Claims 6 to 13 not printed in the Gazette.]

1,218,464. CARD UNIT FOR INDEX SYSTEMS. JAMES H. RAND, Jr., North Tonawanda, N. Y. Filed Sept. 15, 1915, Serial No. 50,891. Renewed Jan. 4, 1917. Serial No. 140,576. (Cl. 129—16.7.)

1. A card for a card index system, and a sheath of transparent sheet material superposed on the face of the card, said card and sheath being provided with mutually engaging tongues and sockets by which the sheath is detachably secured to the card.



2. A card for a card index system, and a sheath of transparent sheet material superposed on the face of the card and detachably secured thereto, said sheath being open at one edge at least to form a pocket for an insert between the card and the sheath.

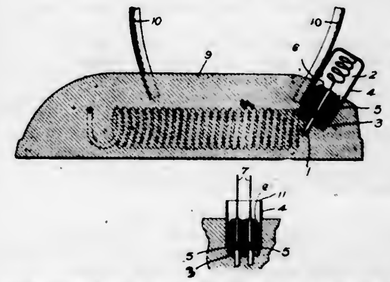
3. A card for a card index system, and a sheath of transparent sheet material superposed on the face of the card, said card and sheath being provided with mutually engaging tongues and sockets by which the sheath is detachably secured to the card, said sheath being open at one edge at least to form a pocket for an insert between the card and the sheath.

4. A card for a card system, and a sheath of transparent sheet material of smaller area than the card, superposed on the face of the card, covering part of the card and leaving part uncovered, said sheath being detachably secured to the card.

5. A card for a card system, and a sheath of transparent sheet material of smaller area than the card, superposed on the face of the card, covering part of the card and leaving part uncovered, said card and sheath being provided with mutually engaging tongues and sockets by which the sheath is detachably secured to the card.

[Claims 6 to 10 not printed in the Gazette.]

1,218,465. TERMINAL FOR RESISTANCE MEMBERS AND METHOD OF PRODUCING SAME. LUDWIG REICHOLD, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Dec. 5, 1914. Serial No. 875,641. (Cl. 219—64.)



1. The method of molecularly securing a terminal to the end of a resistance element, which consists in disposing the end of the terminal adjacent the end of the resistance element in the presence of other metal and without the use of a flux, inclosing them in substantially airtight housing, and applying heat to the housing sufficient to melt said metal.

2. The method of electrically connecting a terminal to the resistance element of sheathed wire, which consists in disposing the end of the terminal adjacent to the end of the resistance element in the presence of other metal and without the use of a flux, casting metal about the sheathed wire and utilizing the heat of the casting to melt said metal and thereby molecularly secure said terminal directly to the resistance element.

3. The method of electrically connecting a terminal to the resistance element of sheathed wire, which consists in placing a terminal adjacent the end of the resistance element, casting metal about the sheathed wire to form a heating member, excluding the atmosphere therefrom, and

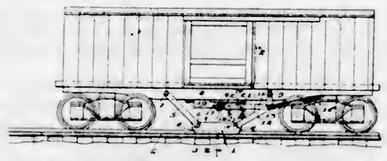
utilizing the heat of the casting to molecularly secure the terminal to said resistance element.

4. The method of making a heating device provided with sheathed wire and a metal body, which consists in placing the end of a terminal and the end of the resistance element of the sheathed wire adjacent each other in the presence of other metal, forming a substantially air-tight housing over the same, and casting metal about the sheathed wire and one end of the housing.

5. The method of making a heating device provided with sheathed wire and a metal body, which consists in placing the end of a terminal adjacent the end of the resistance element in the presence of other metal, inclosing the same in a substantially air-tight housing, casting metal about the sheathed wire and the end of the housing to form a heating body, and removing the other end of the housing to expose the terminal.

[Claims 6 to 8 not printed in the Gazette.]

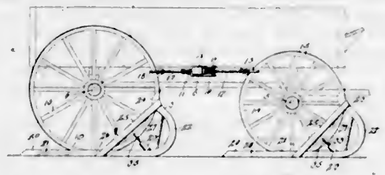
1,218,466. CAR-BRAKE. CLAIR P. RICE, Slayton, Minn. Filed July 14, 1916. Serial No. 109,352. (Cl. 188—47.)



1. In a car brake, a rock shaft mounted in bearings in car frame members and having rock arms and also provided with a lever arm, in combination with a brake lever connected to said lever arm to turn the rock shaft, a pair of track brake elements, links pivotally connected to the car frame members and also to said track brake elements, and links extending oppositely to the first named links and pivotally connected to said track brake elements and directly to the rock arms.

2. In a car brake, a rock shaft mounted in bearings in car frame members and having a rock arm in combination with means to turn the shaft in one direction, a track brake element, a pair of oppositely extending links pivotally connected to opposite ends of the said track brake element, one of said links having a fixed pivot connecting it to one of the car frame members and the other link being connected to the rock arm, and a spring to turn the rock shaft in the opposite direction and thereby cause the rock shaft and its rock arm to coact with the links and normally raise the track brake element.

1,218,467. SLEIGH-RUNNER ATTACHMENT FOR WAGONS. PERCY RICE, Wilsall, Mont. Filed July 5, 1916. Serial No. 107,626. (Cl. 21—96.)



1. In a sleigh runner attachment for wagons, the combination with a wagon, of a bar connected with the wagon body, runners for connection with the wheels of the wagon, means for connecting the runners with the wheels, and a connection between the wagon wheels and bar.

2. In a sleigh runner attachment for wagons, the combination with a wagon, of a bar connected with the wagon body, a flexible connection between the wagon wheels and bar, runners for connection with the wagon wheels, and clamps on the runners for connection with the fellies on the wagon wheels.

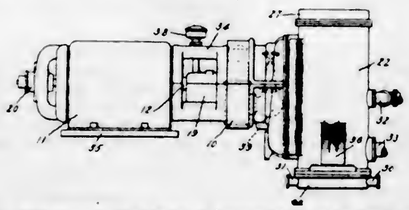
3. In a sleigh runner attachment for wagons, the combination with a wagon, runners for connection with the wheels of the wagon, means for connecting the runners with the wheels, a bar connected with the wagon body, flexible elements carried by said bar, and clamps on the ends of the flexible elements for connection with the fellies on the wagon wheels.

4. In a sleigh runner attachment for wagons, the combination with a wagon, of runners, means for connecting the runners with the wheels of the wagon, a bar connected with the bottom of the wagon bed, clamps detachably connected with said bar, flexible elements connected with the clamps, and means for connecting the ends of the flexible elements with the fellies of the wagon wheels.

5. In a sleigh runner attachment for wagons, the combination with a wagon, of a connection between the wagon body and the wagon wheels, runners having curved portions terminating in ends for contact with the rims of the wheels, gripping fingers on said ends, clamps connected with the runners and having spring pressed hooks engageable with the fellies of the wagon wheels.

[Claim 6 not printed in the Gazette.]

1,218,468. ELASTIC-FLUID TURBINE. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 11, 1916. Serial No. 124,976. (Cl. 121—58.)



1. The combination with a horizontal elastic fluid turbine having a casing, of a condenser therefor comprising two condenser sections fastened directly to the turbine casing, said condenser sections having vertically arranged cooling tubes and being located one on each side of the center line of the turbine.

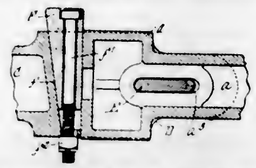
2. The combination with a horizontal elastic fluid turbine having a casing and a shaft, of a condenser therefor comprising two condenser sections fastened directly to the turbine casing, said condenser sections having vertically arranged cooling tubes and being located one on each side of the center line of the turbine, and a bearing for the turbine shaft located between said sections.

3. The combination with a horizontal elastic fluid turbine having a casing, of a condenser therefor comprising two condenser sections fastened directly to the turbine casing, said condenser sections having vertically arranged cooling tubes and being located one on each side of the center line of the turbine, and supporting feet carried by the condenser sections.

4. The combination with a horizontal elastic fluid turbine having a casing and a shaft, of a condenser therefor comprising two condenser sections fastened directly to the turbine casing, said condenser sections having vertically arranged cooling tubes and being located one on each side of the center line of the turbine, a bearing for the shaft carried by the turbine casing and located between the condenser sections, and supporting feet for the turbine and condenser carried by the condenser sections.

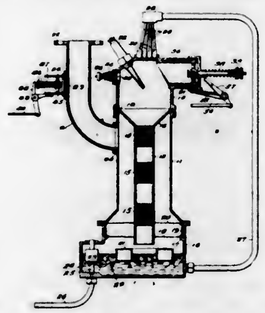
1,218,469. AUXILIARY SHANK AND CONNECTION FOR PASSENGER-CAR COUPLINGS. WILLARD F. RICHARDS, Depew, N. Y., assignor to Gould Coupler Company, New York, N. Y. Filed Jan. 13, 1913. Serial No. 741,614. (Cl. 213—42.)

1. The combination with a car coupler having a shank, of an auxiliary shank, a cross key passing through a hole in said coupler shank for connecting said auxiliary shank to said coupler shank, and a screw-actuated pressure device which reacts against one of said shanks and has an operative connection with the other shank for forcing said shanks lengthwise with regard to each other for taking up slack between said key and said shanks and rigidly holding the shanks against relative movement.



2. The combination with a car coupler having a shank, of an auxiliary shank, a cross key passing through registering holes in said shanks for connecting said auxiliary shank to said coupler shank, a wedge movable in a transverse hole in one of said shanks and engaging said other shank, and means for moving said wedge endwise for forcing said shanks lengthwise with regard to each other to take up slack between said cross key and said shanks.

1,218,470. PROCESS OF GAS GENERATION. HERBERT E. RIDER, Brooklyn, N. Y., assignor to Louis Levien, New York, N. Y. Filed Dec. 26, 1914. Serial No. 879,205. (Cl. 48—212.)

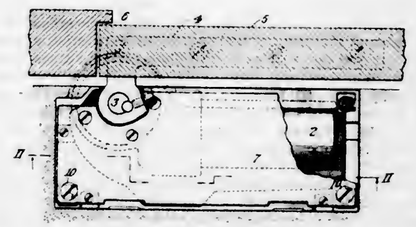


The process of gas generation comprising the use of suction formed by an engine to atomize oil by ingress of air currents through jets connected to a source of oil supply, mixing air with the finely divided particles of oil, ignition of the mixture of air and oil vapor, smothering the flame by passage of the partly consumed gas through a restricted passage, thoroughly mixing the gas by passage through fine passages and mixing chambers, between sets of individual passages, enriching said gas by impinging it against a static body of oil in which evaporation of particles of said oil occurs, and further mixing the enriched gas by passage through screens of fine mesh to break up individual currents, and the treatment of said gas by the admixture of air in proportions to vary the richness thereof.

1,218,471. MOUNTING FOR DOOR-CLOSERS. OSCAR C. RIXSON, New York, N. Y. Filed Apr. 15, 1914. Serial No. 832,066. (Cl. 16—88.)

1. A door-closing device, comprising a stationary socket-member, an actuating-member seated therein, rocking-nuts carried loosely yet securely by one of said members, and clamping-bolts passing through the other member and engaging said nuts.

2. A permanently embedded boxing having substantially vertical walls, a door-closing device seated in said boxing and comprising an arching plate adapted to rest upon said walls as a cover for said boxing and the upper edge of said walls of said boxing shaped to fit the plate aforesaid, and adjustable means for securing said plate and device to said boxing.



3. A door-closing device comprising a boxing adapted to be permanently embedded in the flooring, actuating-means adapted to be seated adjustably in said boxing, and angularly-tiltable bolts and nuts securing the same in place.

4. A door-closing device, comprising a boxing adapted to be permanently embedded in a concrete floor or the like to constitute a socket, an actuating-device adapted to be seated in said socket, and angularly-tiltable bolts for securing said device in said socket and permitting adjustment in any direction horizontally.

5. A door-closing device, comprising a boxing adapted to be permanently embedded in the flooring to form a socket, actuating-means adapted to be seated in said socket, and means for locking said actuating-means in any desired horizontal adjustment, either lateral or longitudinal or angular.

[Claims 6 to 10 not printed in the Gazette.]

1,218,472. GROWTH-CONTROLLING SUBSTANCE DERIVED FROM THE ANTERIOR LOBE OF THE PITUITARY GLAND AND PROCESS FOR PRODUCING THE SAME. THORBURN BRAILSFORD ROBERTSON, Berkeley, Cal. Filed Oct. 8, 1915. Serial No. 54,774. (Cl. 167—7.)

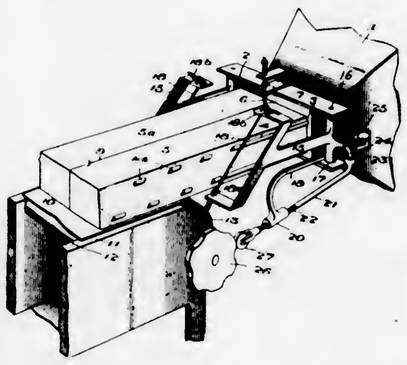
1. The process for the production of the herein described substance which consists in reducing to fragments and drying the anterior lobes of the pituitary glands of animals; then making an alcoholic extract of the same; then adding to said extract substantially one and one-half times its volume of anhydrous ethyl ether to form a precipitate; then separating said precipitate and washing the same in a mixture of one volume of anhydrous ethyl alcohol and one and a half volumes of anhydrous ethyl ether; and finally drying it.

2. The process for the production of the herein described substance which consists in reducing to fragments the anterior lobes of the pituitary glands of animals; then grinding said fragments with a mixture of anhydrous calcium and sodium sulfates; then drying the ground mixture by the application of heat until it is light colored and easily powdered; then powdering the same and making an extract thereof with anhydrous ethyl alcohol at or near the boiling point of said alcohol; then concentrating said extract by boiling under reduced pressure until solid material begins to separate out on cooling; then adding to said concentracted extract substantially one and one-half times its volume of anhydrous ethyl ether to form a precipitate; then separating said precipitate and washing the same in a mixture of one volume of anhydrous ethyl alcohol and one and a half volumes of anhydrous ethyl ether; and finally drying it at low temperature in the absence of of aqueous vapor.

3. As a new product, a substance derived from the anterior lobe of the pituitary gland of animals, said substance containing substantially one and four-tenths per cent. of phosphorus, and nitrogen in the proportion substantially of four atoms of nitrogen for every atom of phosphorus; yielding when treated with excess of sodium nitrite and acetic acid a volume of free nitrogen sub-

stantially equivalent to one half of the total nitrogen contained in said substance; yielding when decomposed by boiling in barium hydroxid solution followed by boiling in dilute sulfuric acid solution a product which resembles inosite; soluble in water, in ethyl alcohol, in ethyl ether, in chloroform and in carbon tetrachlorid; insoluble in a mixture of one part by volume of anhydrous ethyl alcohol and one and one half parts by volume of anhydrous ethyl ether; white or pale cream colored; and possessing the property when administered to animals in doses so small as to be of negligible nutritive valve, of definitely influencing their growth and nutrition and of influencing in a definite manner the functions related to or involving the growth or repair of multiplication or nutrition of living cells or tissues, such influence being evidenced in part by the retardation of the growth or multiplication of certain tissues or cells, and acceleration of the growth or multiplication of certain other tissues or cells.

1,218,473. BRICKMAKING-MACHINE. JOHN R. ROOT, Terre Haute, Ind. Filed Mar. 6, 1916. Serial No. 82,439. (Cl. 25—1.)



1. In a machine for making bricks, the combination with means for producing and advancing a bar having a plurality of ribs, of a cut-out device disposed in inclined relation to the length of the ribs produced on the bar and movable toward and away from said bar and adapted to enter the ribs and to simultaneously remove portions of said ribs to leave lugs having inclined ends the lugs of one rib being opposite the cut out parts of another rib.

2. In a machine for making bricks, the combination with means for producing and advancing a bar having a plurality of ribs, of a movably mounted cut-out device, and means for periodically moving said cut-out device into and out of penetrated engagement with the said plurality of ribs on the bar and to stationarily retain it in penetrated engagement with said plurality of ribs to thereby simultaneously produce lugs out of said ribs the lugs of one rib being opposite the cut out parts of another rib.

3. In a machine for making bricks, the combination with means for producing and advancing a bar having a plurality of ribs, of a movably mounted frame, a wire carried thereby which is inclined in relation to the ribs produced on the bar, and means for periodically moving the said frame and wire into and out of penetrated engagement with the said plurality of ribs on the bar and will be retained in penetrated engagement with said plurality of ribs to thereby produce lugs out of said ribs simultaneously.

4. In a machine for making bricks, the combination with means for producing and advancing a bar having a plurality of ribs, of a cutter for cutting out portions of said plurality of ribs which alternate on one rib in relation to those on another rib, thereby defining lugs out of each rib that are disposed opposite the cut-out portions on another rib.

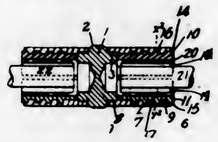
5. In a machine for making bricks, the combination with means for producing and advancing a bar having a plurality of ribs, of a movably mounted cutting device, and means for periodically moving said cutting device so that different portions thereof will come into and out of penetrated engagement with relatively off-set portions of the said plurality of ribs and to retain it in penetrated engagement with said ribs, thereby cutting portions out of said ribs which are relatively off-set and producing lugs from each rib which are arranged opposite the spaces formed by cutting portions from another rib.

1,218,474. PROCESS OF MAKING MOISTURE-RESISTANT WALL-PAPER. JAMES A. ROSS, Boston, Mass. Filed Mar. 29, 1915. Serial No. 17,694. (Cl. 91—68.)

1. The method of making moisture-resistant paper, consisting in coating it with clay, an adhesive, and a fatty emulsion in solution or suspension, drying the same, then coating it with a gum, and then calendering.

2. The method of making moisture-resistant paper, consisting in coating it with a mixture containing approximately 79 parts clay, 18 parts glue or its equivalent, and a fatty emulsion, then drying the same, then applying a coating of shellac or its equivalent, and then calendering.

1,218,475. ELECTRICAL-CONDUCTOR CONNECTOR. HUGH DOUGLAS ROTHWELL and GORDON KRIBS, Toronto, Ontario, Canada. Filed Mar. 25, 1916. Serial No. 86,631. (Cl. 173—303.)

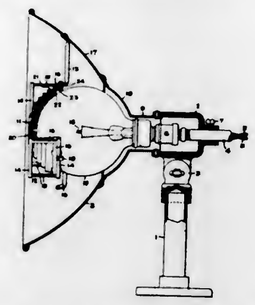


1. A terminal connector comprising a body member having a cylindrical portion diametrically slotted, free gripping jaws located within the slot and between which a terminal end is adapted to extend, and a surrounding member having a threaded engagement at one end to the body member and provided with continuous eccentric portions in engagement with the outer periphery of the jaw members.

2. A terminal connector comprising a body member having a cylindrical portion slotted diametrically from one end, a sleeve member surrounding such cylindrical portion and in turnable engagement with the body member, a pair of gripping jaws freely held within the slot and between which a terminal end is adapted to extend, and a plurality of annular ribs formed in the internal periphery of the sleeve with the base thereof eccentric to the sleeve member and extending ribs formed upon the outer portions of the jaw members in engagement with the ribs of the sleeve member but of greater curvature than the ribs of the body.

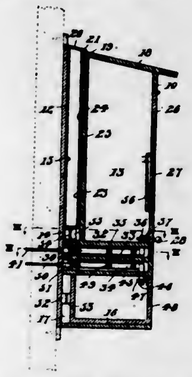
1,218,476. ILLUMINATING APPARATUS. WALTER D'A. RYAN, North Adams, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 19, 1914. Serial No. 872,904. (Cl. 240—41.)

1. A projector comprising a light source inclosed in a light-transmitting envelop; main reflector means adapted to direct the light from said source falling thereon forward in a parallel beam; lens means in front of said source for directing forward in a parallel beam the light therefrom that would otherwise escape divergently in front of said reflector means; and auxiliary reflector means behind said source for directing back therethrough to said means in front thereof the rest of the available light from the source, said lens means being concave and conforming as closely as possible to the adjacent surface of the envelop and being of the smallest size consistent with its receiving substantially all the light that would otherwise escape in front of said reflector means as aforesaid, and said auxiliary reflector means being of the smallest size consistent with its receiving substantially all the light that would not be properly directed by said main reflector means.



2. A projector comprising an incandescent filament electric lamp with a spherical bulb; a flaring reflector having the forward, outer portion of its reflecting surface parabolic with its focus in said light source and the rear, central portion of its reflecting surface spherical with its center of curvature in said source; and converging lens means of spherical form as close as possible in front of the lamp bulb, said lens means being of the smallest size consistent with its receiving substantially all the light from the filament that would otherwise escape divergently in front of said reflector, and said spherical reflecting surface being of substantially the same size as said lens means.

1,218,477. SAFETY MILK-BOTTLE AND MAIL RECEPTACLE. STANISLAW SALA, Detroit, Mich. Filed June 22, 1916. Serial No. 105,164. (Cl. 232—1.)



1. A device of the class described comprising a casing having a chamber therein open at the top of the casing, a mail receiving slide removably arranged within the said chamber having a contracted mail receiving slot in the upper end thereof and a mail exit in its forward wall, an ejecting spring for the said slide, and releasable locking means for the slide.

2. A device of the class described comprising a casing having a chamber therein open at the top of the casing, a mail receiving slide removably arranged within the said chamber having a contracted mail receiving slot in the upper end thereof and a mail exit in its forward wall, an ejecting spring for the said slide, a transparent window in the said casing adjacent the said exit, a mail receiving slide arranged in the bottom of the said casing having a path of movement at right angles to the vertically movable slide, locking means for the said slides, and a releasing means for the said locking means.

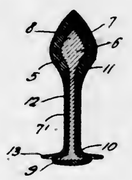
3. A mail receptacle comprising a casing having a vertically arranged chamber therein open at the top of the casing and a bottom chamber open at the front of the casing, mail receiving slides shiftably arranged within the said chambers, interlocking engageable locking levers pivoted within the said casing between the said chambers, keepers for the said locking levers carried by the said slides, and operating means for the said levers whereby the said slides are simultaneously released.

4. A mail receptacle comprising a casing having a vertically arranged chamber therein open at the top of the casing and a bottom chamber open at the front of the casing, mail receiving slides shiftably arranged within the said chambers, interlocking engageable locking levers pivoted within the said casing between the said chambers, keepers for the said locking levers carried by the said slides, operating means for the said levers whereby the said slides are simultaneously released, the said vertically movable slide having a forward opening therein, a swinging door provided for the front wall of the said casing, transparent windows within the said door and adjacent wall of the said vertical chamber forwardly of the said slide opening, locking levers for the said door, and releasing means for the said levers positioned adjacent the aforementioned releasing means.

5. A device of the class described comprising a casing, separate vertically and horizontally movable mail receiving slides carried by the said casing, ejecting springs for the said slides, retaining means for the said slides when retracted, and releasing means for the said retaining means operable at a distance rearwardly of the said casing.

[Claim 6 not printed in the Gazette.]

1,218,478. RECTAL APPLICATOR. CLIFFORD T. SAPPINGTON, Frederick, Md. Filed Jan. 24, 1917. Serial No. 144,153. (Cl. 128—46.)



1. A rectal applicator comprising a relatively soft pliable body having a shank, and a head upon each end, and an unguent carrying sheet of absorbent material removably surrounding said body.

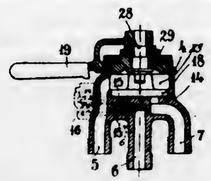
2. A rectal applicator comprising a relatively soft pliable body having a shank, and two heads, one upon each end, and an unguent carrying sheet of absorbent material surrounding one head and the shank, and having its edges flared outwardly by the other head.

3. A rectal applicator comprising a relatively soft pliable body having an integral shank, egg-shaped and disk shaped ends, and an unguent carrying sheet of absorbent material covering the egg-shaped end and the shank and having its edges flared outwardly by the disk-shaped end.

1,218,479. BRAKE. MICHELE SAVIO, Turin, Italy. Filed May 12, 1915. Serial No. 27,566. (Cl. 188—7.)

1. Compressed air brake comprising a main air reservoir, an auxiliary air reservoir, and a brake cylinder; pipes connecting said reservoirs and cylinder with a controlling valve; means in said valve for connecting directly either the main reservoir with the auxiliary reservoir, or the auxiliary reservoir with the brake cylinder, or the main reservoir with the brake cylinder.

2. Compressed air brake comprising a main air reservoir, an auxiliary reservoir and brake cylinder on the driving car; pipes connecting said reservoirs and cylinder with a controlling valve; a single piping on each trailer car connected with the pipe leading from the auxiliary reservoir to the controlling valve; a reservoir connected with said piping, a brake cylinder and an automatic valve on each trailer car, this valve controlling the connections of said reservoir with the piping and brake cylinder.



3. Compressed air brake comprising a main air reservoir, an auxiliary reservoir and brake cylinder on the driving car; pipes connecting said reservoirs and cylinder with a controlling valve casing, a deatributer rotatable in said casing and operated by a handle, means in said distributer coöperating with ports of the seat of the valve for connecting directly either the pipe leading from the main reservoir with the pipe leading to the auxiliary reservoir, or the pipe leading to the auxiliary reservoir with the pipe leading to the brake cylinder, or the pipe leading from the main reservoir with the pipe leading to brake cylinder; a single piping on each trailer car connected with the pipe leading from the auxiliary reservoir to the controlling valve; a reservoir connected with said piping, a brake cylinder connected with said reservoir and an automatic valve on each trailer car, this valve being operated by the pressure in said piping for controlling the connection of said reservoir with the brake cylinder.

4. Compressed air brake comprising a main air reservoir, an auxiliary reservoir and brake cylinder on the driving car, pipes connecting said reservoirs and cylinder with a controlling valve casing; a distributer rotatable in said casing and operated by a handle; holes in said distributer coöperating with ports of the valve seat for connecting the pipe leading from the main reservoir either with the pipe leading to the auxiliary reservoir or with the pipe leading to the brake cylinder; a recess in said distributer for connecting the pipe leading from the auxiliary reservoir with the pipe leading to the brake cylinder; a single piping on each trailer car connected with the pipe leading from the auxiliary reservoir to the controlling valve; a reservoir connected with said piping, a brake cylinder connected with said reservoir and an automatic valve on each trailer car, this valve being operated by the pressure in said piping for controlling the connection of said reservoir with the brake cylinder.

5. Compressed air brake comprising a main reservoir, an auxiliary reservoir and a brake cylinder on the driving car, pipes connecting said reservoirs and cylinder with a controlling valve casing, a distributer rotatable in said casing and operated by a handle, holes in said distributer coöperating with ports of the valve seat for connecting the pipe leading from the main reservoir either with the pipe leading to the auxiliary reservoir or with the pipe leading to the brake cylinder, a recess in said distributer for connecting the pipe leading to the brake cylinder either with the pipe leading from the auxiliary reservoir or with the atmosphere; a single piping on each trailer car connected with the pipe leading from the auxiliary reservoir to the controlling valve; a reservoir connected with said piping, a brake cylinder connected with said reservoir and an automatic valve on each trailer car, this valve being operated by pressure in said piping for controlling the connection of said reservoir with the brake cylinder.

1,218,480. INSULATOR. JOHN SAYER, Flagstaff, Ariz. Filed May 26, 1916. Serial No. 100,144. (Cl. (Cl. 173—28.)



1. In an insulator, a hollow metallic core extending throughout the length of the insulator, arms projecting outwardly from said core and embedded in the body portion of said insulator, and a conductor extending through said core, substantially as described.

2. In an insulator, a hollow metallic core extending throughout the length of the insulator, arms projecting outwardly from the said core and embedded in the body portion of said insulator, said arms being of a shape to prevent vertical or lateral movement of said core with relation to said insulator body, and a conductor extending through the core.

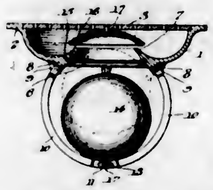
3. In an insulator, a hollow metallic core extending throughout the length of the insulator, arms projecting radially from said core, the arms being enlarged at the outer extremities thereof and embedded in the body portion of said insulator, and a conductor extending through said core.

1,218,481. EGG-TESTER. JOSEPH B. SCHAEFFER, Pine Forge, Pa. Filed Aug. 18, 1915. Serial No. 46,117. (Cl. 99—6.)



An egg tester comprising a substantially frusto-conical casing having its ends open and an opening in the bottom adjacent the smaller end thereof, a transverse wall in the small end of the casing having an opening at the bottom thereof, and a deflector plate extending in an inclined direction from said wall and the edge of the opening therein to the adjacent end of said casing.

1,218,482. DRAIN AND TRAP. OSCAR W. SCHLAG, Chicago, Ill. Filed Nov. 14, 1916. Serial No. 131,286. (Cl. 137—32.)



1. In a device for the purpose set forth, the combination with a bowl having its bottom formed with an inwardly extending centrally flared flange provided with a continuous gasket, said bowl at the bottom thereof and in a line with the flange having spaced ears, of a cage comprising curved arms, one of which being pivotally connected to each of the ears, a member centrally connecting the arms, and the said cage adapted to receive a spherical valve to retain the same below the referred to gasket.

2. In a device for the purpose set forth, the combination with a bowl having a centrally flared opening and the wall of the opening having a continuous gasket there

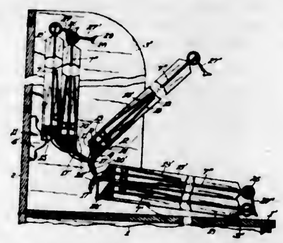
let in, and spaced ears on the bottom of the bowl and in a line with the opening therein, of curved arms each pivotally secured to one of the ears, each of said ears having its free end bifurcated, a cross having its arms received in the bifurcations of the first mentioned arms, pivot members connecting the curved arms to the arms of the cross, and a spherical member caged between the said curved arms to arrange the said spherical member in the path of engagement with the referred to gasket.

1,218,483. COLLAR-BUTTON. OTTO W. SCHULZ, Denver, Colo. Filed Apr. 14, 1916. Serial No. 91,230. (Cl. 24—101.)



The herein described collar button comprising a plate, and having a hook comprising an inner arm connected at one end to the plate and spaced from the plane of the plate, an outwardly extending shoulder at the opposite end of said inner arm, an arm at the outer side of said shoulder and opposite the inner arm and a lug which extends from the shoulder and which lies in the plane of said inner arm.

1,218,484. FILING APPLIANCE. ELLIS T. SILVIUS, Indianapolis, Ind., assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Dec. 23, 1910, Serial No. 598,991. Renewed Dec. 28, 1915. Serial No. 69,117. (Cl. 129—34.)



1. A filing appliance including a plurality of normally upright filing leaves provided with downwardly inflexible supporting means extending beyond one face thereof, the adjacent leaves being pivotally connected to the supporting means respectively to be bodily supported thereby.

2. A filing appliance including a plurality of filing leaves provided with connecting links, each link being inflexible and pivotally connected to two adjacent ones of the leaves, and means on one of each two adjacent leaves in normal upright position acting to hold the link in forward extended position for bodily supporting the other of the two leaves in upright position.

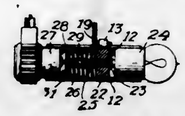
3. A filing appliance including a plurality of filing leaves normally arranged uprightly face to face, the lower portion of one face of each leaf having a pivot thereon, and a plurality of inflexible links for connecting the leaves together, each link being connected at one end to the pivot of one leaf and extending under, and to the farther face of, the next adjacent leaf and connected to the pivot thereof.

4. A filing appliance including a plurality of filing leaves normally arranged uprightly face to face, a plurality of connecting links pivoted to the lower ends of adjacent leaves, supporting means for the rearmost leaf of the series, and an abutment between each leaf and the link which connects said leaf with the next forward leaf, said abutment limiting the downward rotation of the link on the rearward leaf so that the link will normally support said forward leaf.

5. A filing appliance including a plurality of filing leaves normally arranged uprightly face to face, a plurality of connecting links pivoted to the lower ends of adjacent leaves, supporting means for the rearmost leaf of the series, and a finger on one of the parts forming an abutment between each leaf and the link which connects said leaf with the next forward leaf, said abutment limiting the downward rotation of the link on the rearward leaf so that the link will normally support said forward leaf.

[Claims 6 to 24 not printed in the Gazette.]

1,218,485. SOCKET-PIECE FOR ELECTRIC LAMPS. JASON C. STEARNS, Worcester, Mass. Filed June 19, 1916. Serial No. 104,496. (Cl. 173—328.)



1. As an article of manufacture, a socket piece for an electric lamp comprising a piece of sheet metal reduced to a cylindrical form and having its edges brought together so as to butt against each other, said edges being provided with parallel projecting members integral therewith, and a lug for supporting the socket piece having a perforation fitting said projections to positively hold them together and keep the socket piece in its cylindrical form.

2. As an article of manufacture, a socket piece having means for holding a base piece at one end, and an electric lamp at the other, formed of a piece of sheet metal having its edges brought together so as to butt against each other, said edges being provided with parallel projections engaging each other and extending outwardly from the surface of the socket piece, and a lug fitting over said projections and unyieldingly holding them together so as to permanently hold the socket piece in form.

3. As an article of manufacture, a socket piece having yielding means for holding a base piece at one end and an electric lamp at the other, formed of a piece of sheet metal having its edges brought together and reduced to cylindrical form, said edges being provided with projecting means for holding them together, and a lug for securing the socket piece to the lamp casing coöperating with said projecting means for permanently holding the edges.

4. As an article of manufacture, a socket piece of the class described having its two edges provided with substantially radial projections, a lug for use in holding the socket piece to a lamp casing, said lug having a perforation therethrough receiving and fitting said projections, whereby said lug and projections permanently secure the edges of the socket piece together.

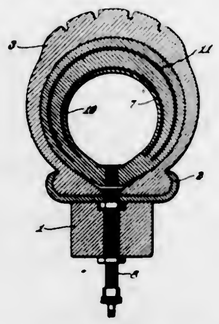
5. As an article of manufacture, a socket piece for holding a base piece at one end and an electric lamp at the other, a longitudinally movable insulating member of cylindrical form inside said socket piece, said insulating member having a spring-pressed plunger for receiving the base piece, whereby when the lamp is introduced into the casing it will force the insulating member back.

[Claims 6 to 8 not printed in the Gazette.]

1,218,486. VEHICLE-TIRE. EDWARD STEARNS, St. Louis, Mo., assignor to Efficiency Oil Corporation, Wilmington, Del., a Corporation of Delaware. Filed Aug. 2, 1916. Serial No. 112,690. (Cl. 152—13.)

1. In a vehicle tire, the employment of an inflatable inner tube of elastic material having combined therewith at the tread thereof layers of inelastic material disposed in axially spaced relation to confine the elastic material therebetween and adapted and arranged to permit trans-

verse expansion of the tube, but prevent expansion of the confined elastic material at the tread substantially as and for the purpose set forth.



2. In a vehicle tire, the employment of an inflatable inner tube of elastic material having combined therewith layers of inelastic material disposed in axially spaced relation at the tread to confine the elastic material therebetween, said inelastic layers extending from the tire rim transversely around the tread, adapted to permit transverse expansion of the tube, but prevent expansion of the confined elastic material at the tread substantially as and for the purpose set forth.

3. In a vehicle tire, the employment of an inflatable inner tube of elastic material having a thickened tread and having combined therewith layers of inelastic material disposed in axially spaced relation at the tread to confine the elastic material therebetween, said inelastic layers extending from the tire rim transversely around the tread, adapted to permit transverse expansion of the tube at the rim but prevent expansion of the confined elastic material at the tread, substantially as and for the purpose set forth.

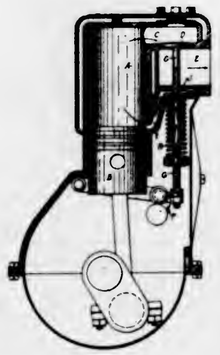
4. In a vehicle tire, the employment of an inflatable inner tube of elastic material having combined therewith layers of inelastic material extending transversely around the tube and disposed in axially spaced relation at the tread to confine the elastic material therebetween, said inelastic layers being interrupted at the rim and adapted to permit transverse expansion of the tube at the rim, substantially as and for the purpose set forth.

5. In a vehicle tire, the employment of an inflatable inner tube of rubber increasing in thickness from the tire rim to the tread and having embedded therein fabric strips extending transversely around the tube and disposed in axially spaced relation at the tread to confine the rubber therebetween, said fabric strips being interrupted at the rim and adapted to permit transverse expansion of the tube at the rim, substantially as and for the purpose set forth.

1,218,487. BALANCED EXHAUST-VALVE FOR EXPLOSIVE-ENGINES. OLE O. STORLE and GARFIELD STORLE, Tacoma, Wash. Filed May 21, 1915. Serial No. 29,553. (Cl. 123—75.)

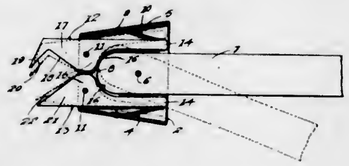
1. In an explosive engine, the combination with a piston cylinder having a main exhaust port and an auxiliary exhaust port leading from different points in the cylinder and communicating with an exhaust discharge, of a balanced controlling exhaust valve comprising a stem provided with spaced apart valves disposed to control communication between both exhaust ports and the exhaust discharge, substantially as described.

2. In an explosive engine, the combination with a piston cylinder having a main exhaust port and an auxiliary exhaust port leading from different points in the cylinder and communicating through separate valve openings into an exhaust discharge, of a balanced controlling exhaust valve comprising a stem provided with a valve for each opening into the exhaust discharge, the valve for the opening of the auxiliary port having a relatively thin peripheral edge and operating within said opening with its edge in proximity to the wall of the opening, substantially as described.



3. In an explosive engine, the combination with a piston cylinder having a main exhaust port at one end of the cylinder and an auxiliary exhaust port at a point toward the other end and both communicating through separate valve openings into an exhaust discharge, of a balanced controlling exhaust valve comprising a cam operated spring influenced stem provided with a valve for each opening into the exhaust discharge, the exhaust pressure on the main exhaust port valve being counterbalanced by the exhaust pressure through the auxiliary port on the valve provided for that port, substantially as described.

1,218,488. AUTOMATIC WRENCH. JOEL A. STROMBERG, New Norway, Alberta, Canada. Filed Mar. 17, 1915. Serial No. 14,999. (Cl. 81—91.)



A wrench including a tapering housing having opposite outwardly converging walls, a handle extending into the enlarged end of the housing and pivoted intermediate of its ends to the central portion of the housing and having its inner end rounded, a pair of jaws having enlarged body portions pivotally mounted in the housing at the reduced end thereof on opposite sides of and in advance of the rounded end of the handle, said body portions having concave inner faces at the rounded end of the handle and provided with reduced inwardly extending arms terminating at the enlarged end of the housing, said handle substantially fitting the entire space between the arms when the jaws are in their normal position, said body portions being provided at their outer terminals with inclined gripping faces and one of the jaws having an outer inclined portion arranged approximately at right angles to the adjacent inclined gripping face and longitudinal springs secured at their outer ends to the converging walls of the housing and converging inwardly and bearing at their inner ends against the outer sides of the arms for normally holding the gripping faces of the jaws open.

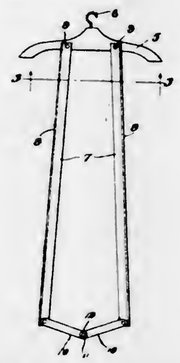
1,218,489. STEEL CAR-WHEEL. JOSEPH STUART, Wilmington, Del., assignor to Lobdell Car Wheel Company, Wilmington, Del., a Corporation of Delaware. Filed July 7, 1914. Serial No. 849,385. (Cl. 105—150.)



1. A cast steel car wheel having a tread and flange of integral steel, the tread having a continuous chilled surface, and the flange adjacent the tread being harder than the tread.

2. A steel car wheel having a tread and flange of integral steel, the flange having a continuous chilled surface, and a portion of the flange adjacent to the tread and a portion of the tread at the corner formed by the flange and tread being harder than the chilled surface of the tread.

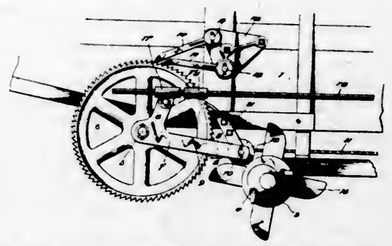
1,218,490. GARMENT-HANGER. PETER J. SWOFFORD, Wellington, Kans. Filed July 25, 1916. Serial No. 111,305. (Cl. 223—19.)



A garment hanger including a shaped member, two sets of arms depending therefrom, each set including a pair alined transversely of the member, the said arms being free of connection with each other except through the member, and links pivotally connected to each other and to the similar arms of each set on one side of the member, and disks arranged upon the pivots at the meeting ends of the links to frictionally engage the links to maintain them in any angular adjustment against the pressure of the trousers on the arms.

1,218,491. FEEDING MECHANISM. HENRY SYNCK and BRUCE B. ROLLMAN, Coldwater, Ohio, assignors to New Idea Spreader Co., Coldwater, Ohio. Filed Sept. 18, 1916. Serial No. 120,800. (Cl. 74—54.)

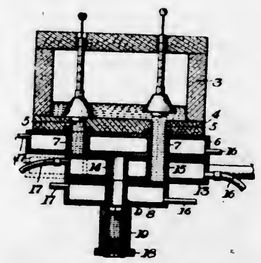
1. In a mechanism for the purpose set forth, the combination of a conveyer shaft, an axle disposed in advance of said shaft, a ratchet wheel secured on the shaft, an angle lever fulcrumed upon the shaft and having one arm extending in a general direction toward the axle, a pawl pivotally mounted at the forward end of the lever and engaging the ratchet wheel, a cam on the axle acting on the forward end of the lever to impart movement thereto and means acting upon the upper arm of the lever to regulate the throw.



2. In a mechanism for the purpose set forth, the combination of a conveyer shaft, a ratchet wheel secured on said shaft, an angle lever mounted loosely on the shaft and having one arm extending forwardly therefrom and another arm extending upwardly therefrom, an axle, a cam on the axle adapted to act upon the forward end of the lever, a pawl carried by the forward end of the lever and engaging the ratchet wheel, a sleeve mounted loosely upon the upper end of the upwardly extending arm of the lever, an adjusting rod extending through said sleeve, and a stop collar on said rod in advance of and adjacent the said sleeve.

3. In a mechanism for the purpose set forth, the combination of a conveyer shaft, an axle disposed in advance of said shaft, a ratchet wheel secured on the shaft, a lever fulcrumed on said shaft and extending forwardly therefrom, a pivot pin fitted in the forward end of the lever, a pawl mounted on said pin and engaging the ratchet wheel, a roller also mounted on said pin, and a cam secured upon the axle and arranged to move upwardly against said roller.

1,218,492. DEVICE FOR MEASURING GLASS. CHARLES ALBERT TATUM, New York, N. Y. Filed June 2, 1916. Serial No. 101,324. (Cl. 49—55.)



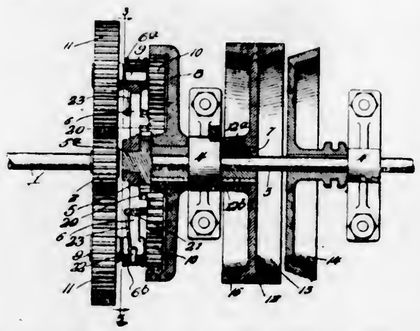
1. The combination of a furnace for melting glass having a plurality of openings through a portion of the bottom thereof, of a molten glass measuring and delivering device connected thereto, said measuring and delivering device comprising a stationary feed member having two openings therethrough communicating with openings through the bottom of the furnace, a stationary delivery member, and a reciprocating measuring member having a plurality of measuring cavities therein, said measuring member being movably mounted intermediate the feeding and discharge members, whereby its measuring cavities may be alternately brought into receiving and delivering relation to the openings in the feeding and discharge members; substantially as described.

2. The combination of a furnace for melting glass having a plurality of openings through a portion of the bottom thereof, of a molten glass measuring and delivering device connected thereto, said measuring and delivering device comprising a stationary feed member having two openings therethrough communicating with openings through the bottom of the furnace, a stationary delivery member having an opening therethrough intermediate the openings through the feed member, and a reciprocating measuring member having a plurality of measuring cavities therein, the distance between the measuring cavities being equal to one half the distance between the cavities in the feed member, said measuring member being movably mounted intermediate the feeding and discharging members, whereby one of its measuring cavities is in register with one of the openings through the feed member while the other is in register with the opening through the delivery member, so that the glass from one of said openings will be passing through the delivery opening while the other opening is being charged; substantially as described.

3. Means for measuring and delivering molten glass, comprising a stationary feeding member having a plurality of feed openings therethrough communicating with a source of supply of molten glass, a movable measuring member directly below the feeding member and having a plurality of measuring cavities therethrough, and a fixed delivery member immediately below the measuring member and having a single discharge opening, the openings in said members being arranged whereby as the measuring member is shifted one of its measuring openings will be brought into register with one of the feeding openings and another measuring opening will be brought into register with the delivery opening, substantially as described.

4. The combination of a furnace for melting glass having a plurality of openings through a portion of the bottom thereof, of a molten glass measuring and delivering device connected thereto, said measuring and delivering device comprising a stationary feed member having two openings therethrough communicating with openings through the bottom of the furnace, a stationary delivery member, a reciprocating measuring member having a plurality of measuring cavities therein, said measuring member being movably mounted intermediate the feeding and discharge members, whereby its measuring cavities may be alternately brought into receiving and delivering relation to the openings in the feeding and discharge members, and means for regulating the temperature of each of said members; substantially as described.

1,218,493. TRANSMISSION MECHANISM. PATILLO M. TAYLOR, Easley, S. C. Filed May 25, 1916. Serial No. 99,869. (Cl. 74—34.)



1. In a transmission mechanism, a drive shaft, a driven shaft, and an intermediate shaft, a gear on said drive shaft, means for locking the intermediate shaft against rotation, supporting means on the driven shaft, clutch mechanism mounted on said supporting means operable to clutch said supporting means to said driven shaft, motion transmitting means on said supporting means in engagement with the said gear, means operatively associated with said last mentioned means, mounted on the intermediate shaft, for transmitting motion from the drive shaft to the driven shaft, at a reduced ratio when said intermediate shaft is locked, and means for locking the intermediate and driven shafts together for rotation in unison, whereby, the transmitting means may be caused to rotate said intermediate and driven shafts at the speed of and by the drive shaft.

2. In a transmission mechanism a drive shaft, a driven shaft, and an intermediate shaft, means for locking the intermediate shaft against rotation, orbitally and rotatably movable gears, means on the driven shaft for supporting said gears, a gear on said intermediate shaft for transmitting motion from the drive shaft to the driven shaft at a reduced ratio when said intermediate shaft is locked, means for locking the intermediate and driven shafts together for simultaneous rotation and to permit orbital movement only of the gears whereby the intermediate and driven shafts are rotated at the speed of, and by the drive shaft.

3. In a transmission mechanism a drive shaft, a driven shaft, and an intermediate shaft, means for locking the intermediate shaft against rotation, orbitally and rotatably movable gears, means on the driven shaft for supporting said gears, a gear on said intermediate shaft for transmitting motion from the drive shaft to the driven shaft at a reduced ratio when said intermediate shaft is locked, means for locking the intermediate and driven shafts together for simultaneous rotation and to permit orbital movement only of the gears whereby the intermediate and driven shafts are rotated at the speed of, and by the drive shaft, and means for locking the gears against orbital movement to permit rotative movement thereof only, for imparting reverse movement to the intermediate and driven shafts subsequent to disengagement of the driven shaft from the gears.

4. In a transmission mechanism a drive shaft, a gear on the shaft, a driven shaft, an intermediate shaft, a gear on the intermediate shaft, an arm on the driven shaft, gears on the arm for meshing engagement with the drive shaft gear and a second set of gears on said arm for engagement with the intermediate shaft gear and being for transmitting motion from the drive shaft to the driven shaft at a reduced speed when said intermediate shaft is locked against rotation, means for locking said intermediate shaft against rotation, and means for locking the intermediate and driven shafts together for simultaneous rotation whereby the intermediate and driven shafts may be rotated at the speed of, and by the drive shaft.

5. In a transmission mechanism a drive shaft, a gear on said shaft, a driven shaft, an arm on said driven shaft, two sets of gears of different dimensions journaled for rotation on the arm, one set of said gears meshing with the drive shaft gear, an intermediate shaft, a gear on said intermediate shaft for meshing engagement with the other set of gears of the arm, means for holding the intermediate shaft against rotation to permit transmission of motion from the drive shaft to the driven shaft at a reduced ratio, and means for locking the intermediate and driven shafts together for simultaneous rotation whereby, relative rotation of the gears is precluded and direct drive of the driven shaft by the drive shaft permitted.

[Claims 6 to 10 not printed in the Gazette.]

1,218,494. ENVELOP-SEALING MEANS. THOMAS A. THOMPSON, Butte, Mont., assignor of one-half to P. J. Quinn, Butte, Mont. Filed Feb. 23, 1916. Serial No. 80,009. (Cl. 229—78.)

1. Securing means for envelops of the class described comprising a hollow stud, a locking member carried therein, a shell adapted to receive the stud, and holding means on said shell engageable with the locking member upon introduction of said stud into the shell.

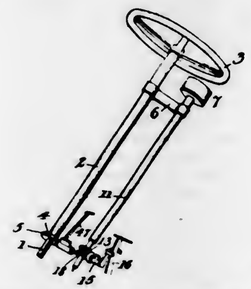
2. Securing means for envelops of the class described comprising a stud, a yieldable locking member wholly received in the stud and consisting of an open ring-shaped member, a shell into which said stud is adapted to be received, and projecting means on said shell adapted to interlock with the locking member upon introduction of said stud into the shell.



3. Securing means for envelops of the class described comprising a stud having an apertured head, a shell adapted to receive the head, and a locking member in said shell having a V-shaped locking member projecting out of the same adapted to be received in the apertured head of the stud for interlocking engagement therewith.

4. Securing means for envelops of the class described comprising a hollow stud, a locking spring seated in the head of said stud, the stud having an opening adjacent to which the locking member is disposed, a button or shell adapted to receive the stud, a locking member disposed in said button and formed with a notched projection engaging in the aperture of said stud and interlocking with the stud locking member aforesaid to hold the button and stud together.

1,218,495. AUTOMOBILE-LOCKING APPARATUS. WILLIAM G. VANCE, Brooklyn, N. Y., assignor of one-half to Robert L. Young, New York, N. Y. Filed Sept. 6, 1916. Serial No. 118,698. (Cl. 21—90.)



1. An automobile locking device, comprising an actuator parallel to, independent of and arranged at one side of the steering shaft, a permutation lock, means between said lock and said actuator for holding the latter against movement and adapted to permit the actuator to be operated when the lock is released, securing mechanism adjacent to the vehicle floor, and means controlled through the actuator for effecting adjustments of said mechanism.

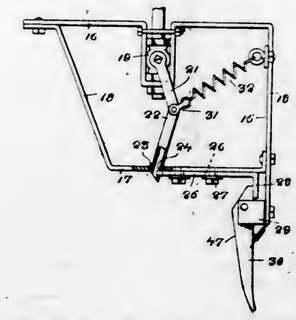
2. An automobile locking device; comprising an actuator parallel to, independent of and arranged at one side of the steering shaft; a permutation lock; means between said lock and said actuator for holding the latter against movement and adapted to permit the actuator to be operated when the lock is released; a disk shaped keeper fast on the steering shaft adjacent to the vehicle floor, a bolt adapted to engage said keeper, and means for transmitting motion from said actuator to said bolt.

3. An automobile locking device; comprising an actuator parallel to, independent of and arranged at one side of the steering shaft; a permutation lock for holding and releasing said actuator, and means controlled by said actuator for preventing movement of the clutch mechanism of the vehicle.

4. An automobile locking device; comprising an actuator parallel to, independent of and arranged at one side of the steering shaft; a permutation lock for holding and releasing said actuator; a cam fast on said actuator; means between said cam and lock for holding the actuator against movement when the lock is set, and means adjacent to the floor of the vehicle controlled by said actuator for locking one of the controlling members of the vehicle.

5. An automobile locking device; comprising an actuator parallel to, independent of and arranged at one side of the steering shaft; a permutator lock for holding and releasing said actuator; a cam fast on said actuator; means between said cam and lock for holding the actuator against movement when the lock is set; a circuit closer; and an interrupter for said circuit closer carried by the actuator.

1,218,496. AUTOMATIC TRAIN-STOP. JAMES L. WALKER, Summerville, S. C. Filed Dec. 4, 1915. Serial No. 65,084. (Cl. 246—59.)



1. In train stopping apparatus, the combination with the brake pipe, of a valve located in the brake pipe, a lever connected to the stem of said valve, a bracket disposed in juxtaposition to said valve, a bolt slidably mounted upon said bracket, a link having one end pivoted to said lever and the remaining end formed with an aperture to receive said bolt whereby the valve will be held in closed position, and means connected to said lever to swing the valve to open position upon the withdrawal of the bolt from the aperture in said link.

2. In train stopping apparatus, the combination with the brake pipe, of a valve located in the brake pipe, a lever connected to the stem of said valve, a bracket disposed in juxtaposition to said valve, a bolt slidably mounted upon said bracket, a link having one end pivoted to said lever and the remaining end formed with an aperture to receive said bolt whereby the valve will be held in closed position, and a spring connected to said lever to actuate the latter to open the valve upon the withdrawal of the bolt from the aperture in said link.

3. In train stopping apparatus, the combination with the brake pipe, of a valve located in the brake pipe, a lever connected to the stem of said valve, a bracket disposed in juxtaposition to said valve, a bolt slidably mounted upon said bracket, a link having one end pivoted to said lever and the remaining end formed with an aperture to receive said bolt whereby the valve will be held in closed position, means connected to said lever to swing the valve to open position upon the withdrawal of the bolt from the aperture in said link, and a trip lever pivoted upon said bracket and adapted to slide said bolt to release said link.

1,218,497. WELL-BUCKET. FRANKLIN D. WALPOLE, McKenzie, Tenn. Filed May 10, 1916. Serial No. 96,559. (Cl. 103—35.)

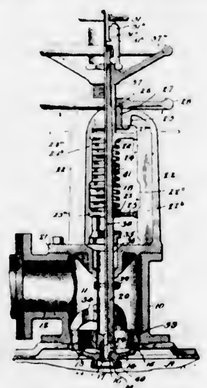
1. A bucket having an open lower end, an annular flange on the inner wall of the bucket at the lower end thereof, a support spanning said open end and having its central portion downwardly offset, a stem slidably mounted in the offset portion of said support, a flat circular valve adapted to seat upon said flange and close the open end of said bucket, said valve carried by said stem, and a spring interposed between said support and said valve to

normally maintain the valve in unseated position and the lower end of said bucket open.



2. A bucket having a bottom formed by the combination of an annular valve seat, with a flat valve adapted to seat thereon and close the open bottom of the bucket, a stem carrying said valve, a guide for said stem below said valve seat spanning the open bottom of the bucket and having its central portion downwardly offset in which said stem is slidably mounted, and a spring interposed between the offset portion of said guide and said valve whereby said valve is normally maintained in open, unseated position.

1,218,498. VALVE. JOHN Q. WALTON, Washington, D. C. Filed Sept. 23, 1910. Serial No. 583,448. (Cl. 137—4.)



1. Means for controlling communication between a source of steam supply and a steam connection, the said means comprising a main valve and an auxiliary valve, each having a stem, said valves severally controlling such communication, the auxiliary valve having means independent of the main valve stem whereby it is manually operated and being movable with and relatively to the main valve and adapted when fully open to admit steam to the connection in volume such as to cause a gradual increase in the temperature of and pressure within the latter, the main valve being arranged to be held to its seat until a predetermined pressure has been reached in the connection and adapted when fully opened to admit steam under full pressure to said connection and means having connection with the stem of the main valve and operable to open the same.

2. Means for controlling communication between a source of steam supply and a steam connection, the said means comprising a body having an inlet to the source of steam-supply and an outlet to the connection, a main valve and an auxiliary valve each having a stem, said valves severally controlling communication between the inlet and the outlet, the auxiliary valve being movable with and relatively to the main valve and having means independent of the main valve stem whereby it is manually moved from its seat and being adapted when fully open to admit steam to the outlet in a quantity such that the temperature of and pressure within the connection will be gradually raised, the main valve being subject to and held to its seat by the pressure of steam at the inlet side of the body until a predetermined pressure has been reached in the connection and adapted when fully opened to admit steam under full pressure to said connection, and means having connection with the stem of the main valve for automatically opening said valve when said predetermined pressure is reached.

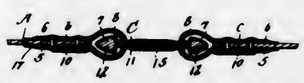
3. Means for controlling communication between a source of steam supply and a steam connection, the said means comprising a body having an inlet to the source of steam-supply and an outlet to the connection, a main valve and an auxiliary valve severally controlling communication between the inlet and the outlet, the auxiliary valve being movable with and relatively to the main valve and having means whereby it is manually moved from its seat and being adapted when fully open to admit steam to the outlet in quantity such that the temperature of and pressure within the connection will be gradually raised, the main valve being subject to and held to its seat by the pressure of steam at the inlet side of the body until a predetermined pressure has been reached in the connection and adapted when fully opened to admit steam under full pressure to said connection, and means co-operating with the pressure at the outlet side of the body for automatically opening the main valve when the two pressures have reached a predetermined relation.

4. Means for controlling communication between a source of supply and a connection, the said means comprising a main valve, and an auxiliary valve and their seats, severally controlling such communication, the seats of the valves having different areas, the port of the main valve-seat being of larger area than the auxiliary valve-seat, the auxiliary valve being movable with and relatively to the main valve and having means whereby it is manually operable and means for automatically opening the main valve when the pressure in the source of supply and connection have reached a predetermined relation.

5. A stop valve comprising a body having a steam inlet and a steam outlet, a main valve for controlling the flow of steam from the inlet to the outlet, means operable to open the main valve automatically when a predetermined pressure on the outlet side of said body has been obtained, and an auxiliary means including a valve arranged to be seated upon the main valve and movable relatively thereto adapted to permit this predetermined pressure to be gradually obtained.

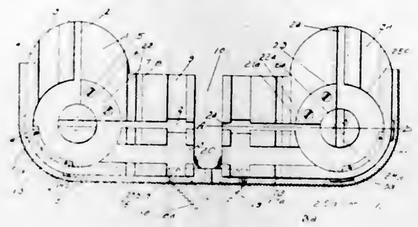
[Claims 6 to 36 not printed in the Gazette.]

1,218,499. GARMENT OR SHOE FASTENER. CHARLES R. WEEDE, Walton, Kans. Filed May 5, 1916. Serial No. 95,646. (Cl. 24—207.)



A fastener of the character described comprising a plurality of keepers, each formed from a single piece of material bent to provide outer and inner plates and a socket extension which protrudes inwardly, the plates being bulged at opposite sides of the socket for accommodating the same, alternate outer plates being formed with slots, tongues formed on the remaining outer plates and engaged in the slots for hingedly connecting the same, a slide runner including a series of plates, each formed with a knob correspondingly shaped to the socket and adapted for slidable engagement therein, and extensions on the last named plates for hinging the same to each other.

1,218,500. AUTOMATIC SEWING-MACHINE. OMAR A. WHEELER, Portland, Oreg., assignor, by direct and mesne assignments, to Wheeler Automatic Machine Co., Portland, Oreg., a Corporation of Oregon. Filed Sept. 10, 1912. Serial No. 719,656. (Cl. 112—24.)



1. In an automatic sewing machine, in combination, a two-part supporting base member provided with a guideway, means for automatically moving the parts of said base member to and from each other, a traveling sewing machine having a part adapted to move in said guideway, means for turning said sewing machine bodily around a corner of said supporting base, and operating connections between said sewing machine and said supporting base, whereby the operation of said sewing machine also operates to cause it to travel bodily around said supporting base.

2. In a device of the character described, a base, an angular track formed in the face thereof adapted to embrace upon two or more sides an article to be sewed, a sewing machine operating above the base, a guide member fixed to the base of the machine and moving in said track, means for causing the machine to reciprocate in said track, means for changing its direction at each angle of the track and means for varying its rate of movement along its course, for preserving a uniformity in the length of the stitch.

3. In a sewing machine, a base plate, a transverse track formed in the face thereof near each end, a longitudinal track communicating therewith, a sewing machine slidably mounted on the base plate, a guide bar adapted to move in said tracks and means for conveying the sewing machine from each transverse track to the longitudinal track.

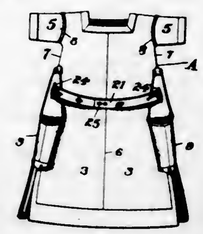
4. In a sewing machine, a base plate, a recess formed in the upper face at each end near the front side thereof, a turn-table having a central slideway in its face, located in each recess, a transverse slideway in the base leading to each recess, a longitudinal slideway connecting the recesses, a sewing machine operating above the base plate, a guide bar fixed to the base of the sewing machine and adapted to move in said slideways, and means for controlling the turntables for causing them to register with their respective communicating slideways.

5. In a sewing machine, a base plate, a turntable having a track in its upper face, located at each end thereof, a track leading from one edge of the plate to each turntable, a track leading from one turntable to the other, a sewing machine having a guide bar fixed in its base adapted to move in said track and means for operating the turntable whereby the sewing machine may be conveyed from one portion of the track to the other.

[Claims 6 to 40 not printed in the Gazette.]

1,218,501. COMBINATION-GARMENT. GWENDOLIN WHITTINGHAM, Saratoga, Cal. Filed July 18, 1916. Serial No. 109,957. (Cl. 2—145.)

1. A garment comprising a combination dress and bloomers, said dress comprising a front and a back, pocket members cut in one piece with the front and back, said front and back being sewed together and the pocket members of said front and said back being sewed together to form the pockets, and a pair of bloomers secured to the dress within the same.

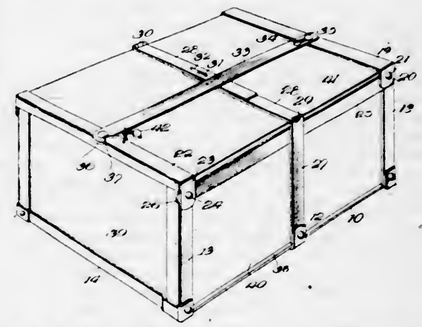


2. A dress comprising a front and a back, and pocket members cut in one piece with the front and back, said front and back being sewed together and the front and back pocket members being also sewed together to form pockets.

3. In a garment, a front and a back each having integral projections at each side thereof, said front and back being sewed together at their side edges and said projections being sewed together along their outer and lower sides to form pockets, said projections having upward extensions and the seams which join the front and back being formed with openings, which latter extend in part in said projections, and a belt passed through the openings.

4. A garment including a front composed of two parts, a back composed of two parts secured to the sides of the front parts, so as to leave the lower portions of the back parts separated from the front parts, bloomers the backs of which are secured to the front parts at points only along the separated portions of the front parts, said bloomers having a flap extending above said separated portions, said front and back having an integral pocket piece on each outer side thereof, said pieces being sewed together and formed with integral upward extensions, the seams which join the front and back being formed with openings which latter extend in part in said extensions, and a belt secured to said flap and passed through said openings.

1,218,502. COLLAPSIBLE BOX OR CRATE. MOSES WILPPONE, Aberdeen, Wash. Filed May 23, 1916. Serial No. 99,355. (Cl. 217—15.)



1. In a device of the character described, a supporting frame including retaining members, a brace member having coacting free extremities, and a locking element for holding the said retaining members in active position engaging with a wall of a receptacle received by the said frame with the said brace member extending around the body of the receptacle and with the said locking element

overlying the free ends of said brace member for maintaining the said ends of the brace member in engagement with each other.

2. In a device of the character described, a supporting frame including ends, side bars connecting the said ends and independent with respect to each other, a retaining member coöperating with said side bars for maintaining the said bars in active position, and a locking element for said retaining member.

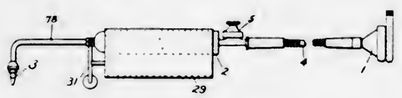
3. In a device of the character described, a supporting frame including ends, pivotally mounted side bars connecting the said ends, a retaining member overlying the free ends of said side bars, and a locking element for said retaining member.

4. In a device of the character described, a supporting frame including pivotally mounted ends, side bars connecting the said ends, a retaining member for the said side bars pivotally mounted upon one of the said ends, and a locking element for the said retaining member extending between the ends.

5. In a device of the character described, a supporting frame including pivotally mounted ends, side bars pivotally mounted upon one of said ends and engaging the other end for connecting the said ends, retaining members pivotally mounted upon the ends and arranged for engagement with a wall of a receptacle received by the frame for holding the said wall in position with one of the said retaining members overlying the free ends of said side bars to provide a lock for the said bars, and a locking bar extending between the said retaining members for holding the said members in active position.

[Claims 6 to 11 not printed in the Gazette.]

1,218,503. WELDING-TOOL. LINUS WOLF, Chicago Heights, Ill. Filed May 21, 1914. Serial No. 839,956. (Cl. 158—27.4.)



1. A device of the character described comprising a primary mixer, a main mixer, a flexible tubular connection between said mixers, a nozzle connected to receive gas from said main mixer, and a safety check valve positioned between said main mixer and said nozzle.

2. In a device of the character described a primary mixer comprising a circular chamber having tangentially entering gas inlets, a main mixer having a series of deflecting plates and means for dividing the flow of mixed gases into several small currents, a flexible tubular connection between said primary and main mixers, and a nozzle connected to said main mixer.

3. In a device of the class described, a gas-mixing element comprising an outer tubular member, an inner member presenting a plurality of chambers, deflecting plates interposed between the inner and outer members and dividing the space between them into compartments, each chamber having communication with two adjacent compartments whereby the gases are compelled to pass through the compartments and chambers alternately.

4. In a device of the character described, a mixer comprising an outer tubular member, heads at opposite ends thereof, an inner tubular member having a plurality of small holes near one end thereof to provide inlets and a plurality of small holes near the opposite end thereof to provide outlets, and a deflecting plate surrounding said inner tubular member and engaging said outer tubular member to cause all gases which pass through said outer tubular member to flow through the inlet holes into said inner tubular member and out through the outlet holes thereof.

5. In a device of the class described, a gas-mixing device comprising a chamber, a series of hollow elements within the chamber, each provided with a series of small inlet openings and a series of outlet openings, and deflecting plates interposed between said hollow elements and the walls of said chamber and constructed to cause the gases to pass successively through the hollow elements.

[Claims 6 to 10 not printed in the Gazette.]

1,218,504. ELECTRIC-BLASTING-CAP PROTECTOR. FORD ALEXANDER, Taft, Cal. Filed June 29, 1916. Serial No. 106,633. (Cl. 102—10.)



1. A detonating cap comprising a cylindrical body member of fragile material and having a pointed end, said member having a relatively small initial explosive chamber and a relatively large explosive chamber connected therewith, the walls of said chambers being coated with a water-proof layer, a screw plug closing said large chamber, a water-proof layer inclosing said body member, a water-proof wrapping incasing the said member, a second water-proof layer on the exterior of said wrapping, and electrically operated means for exploding the charge in said small chamber.

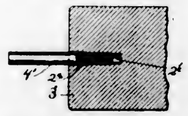
2. A detonating cap comprising a cylindrical body member of fragile material having a relatively small initial explosive chamber and a relatively large explosive chamber connected therewith, the walls of said chambers being coated with a water-proof composition, a plug closing said large chamber, a water-proof fabric forming a case for said member, said casing having a coating of water-proof varnish, and electrically operated means for exploding the charge in said small chamber.

3. A detonating cap comprising a one-piece cylindrical fragile shell member, said member having a tapered end and a pair of connected explosion chambers of different diameters in longitudinal alinement and axially disposed in said shell member, the smaller chamber being adjacent to the tapered end of said shell member, the larger chamber having its outer end open, whereby both chambers may be filled with explosive charges, a screw plug closing said open end of said larger chamber, means for initially exploding the charge in said smaller chamber, and a water-tight covering incasing said shell member.

4. A detonating cap comprising a one-piece cylindrical fragile shell member having a pair of connected explosion chambers of different diameters in longitudinal alinement axially disposed in said shell member, one of said chambers opening to the end of said shell member, a plug closing said open end of said chamber, means for initially exploding the charge in said smaller chamber, and a water-tight covering incasing said shell member.

5. A detonating cap comprising a cylindrical body member of fragile material and having a longitudinal explosive chamber therein, the walls of said chamber being coated with a water-proof layer, a removable closure for said chamber, said member being provided with a water-proof coating on its exterior, a water-proof fabric wrapped about the member and forming a casting therefor, said casing being provided with a water-proof coating on its exterior, and electrically operated means for exploding the charge in said chamber.

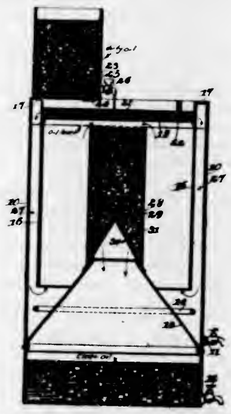
1,218,505. MINE-PULLEY. JAMES BOYD ANDERSON, Shickshinny, Pa. Filed June 2, 1916. Serial No. 101,429. (Cl. 64—41.)



1. A pulley or roller comprising a wooden body portion provided with recesses in opposite ends and gudgeons extending into said recesses, said gudgeons having main body portions of uniform diameter throughout which fit snugly within the recesses to brace the gudgeons against lateral pressures or strains, and anchoring portions which are embedded in the fibers of the wood.

2. A pulley or roller comprising a wooden body portion provided with recesses in opposite ends, and gudgeons extending into said recesses, said recesses having portions of different diameters, the outer portion having the larger diameter, said gudgeons having main body portions of uniform diameter throughout which fit snugly within the outer recess portions to brace the gudgeons against lateral pressures or strains, and anchoring portions which extend into the inner smaller recess portions and are embedded in the fibers of the wood.

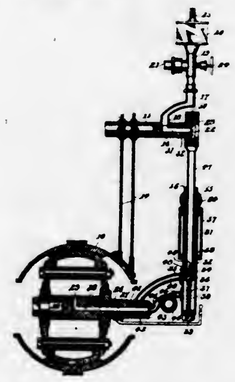
1,218,506. OIL-FILTER. FRANK JAROME ARMSTRONG, Canadian, Tex., assignor of one-half to Homer T. Broadus, Canadian, Tex. Filed Apr. 19, 1916. Serial No. 92,157. (Cl. 210—10.)



1. A filtering apparatus, comprising a tank having valve controlled outlets, a frusto-conical partition having its lower end secured to the inner face of the tank between the said outlets, said partition being open at the top and dividing the tank into two compartments, an inner casing provided with a horizontal partition below its upper end forming a chamber above the same and provided with openings in its side above said partition, said casing forming a closure for the tank and spaced from and projecting into the same to a point below the upper end of the conical partition, a filtering medium on the horizontal partition, a cylindrical chamber of greater diameter than the open end of the conical partition and mounted thereon, said chamber containing a filtering means and having an open upper end terminating a short distance from the partition of the casing, a conical filtering device supported upon the conical partition and projecting into said chamber, and a steam pipe surrounding the conical partition below the end of the said casing.

2. A filtering apparatus, comprising a tank, a frusto-conical partition in the tank and dividing it into upper and lower compartments, an open ended casing provided at its upper end with an outwardly extending flange resting upon the upper end of the tank and with a horizontal partition a short distance below its upper end and forming a chamber above the same, said casing being spaced from the tank and having its lower end surrounding the upper end of the conical partition, the casing forming a cover for the tank and provided above the partition with a plurality of openings, wire gauze on said partition, a cylindrical chamber mounted on the upper end of the conical partition with its upper end terminating a short distance below the partition of the casing, said chamber containing a filtering medium, a conical filtering device supported upon the upper end of the said conical partition and projecting into the said chamber, and a steam pipe surrounding the conical partition a short distance below the open end of the casing.

1,218,507. WRIST-PIN LUBRICATOR. STEVE BAKOS, Brainards, N. J. Filed June 8, 1916. Serial No. 102,502. (Cl. 184—9.)

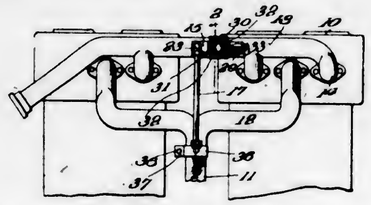


1. A lubricator comprising in combination with a support having a wrist pin reciprocatingly mounted upon the support, an upright post fixedly carried by the said support, an outwardly extending bar carried by the said post and arranged with an oil feed bore through the outer end thereof, a stub pipe fixed to the outer end of the said wrist pin in parallelism with the said bar, the said wrist pin and pipe being arranged with an oil conduit therethrough opening at one end at the periphery of the pin and at its opposite end centrally of the outer end of said pipe, a casing pivotally mounted upon the outer free end of the said stub pipe and having an oil chamber therein, a partition within the said casing having a valve seat opening therethrough, a valve for the said seat, tubular connections between the said stub pipe bore and the adjacent end of said casing, an oil feed piston reciprocatingly mounted within the said casing, and a cylindrical head upon the said piston pivotally attached to the said bar and communicating with the bore of said bar.

2. A lubricator comprising in combination with a support having a wrist pin reciprocatingly mounted upon the support, an upright post fixedly carried by the said support, an outwardly extending bar carried by the said post and arranged with an oil feed bore through the outer end thereof, a stub pipe fixed to the outer end of the said wrist pin in parallelism with the said bar, the said wrist pin and pipe being arranged with an oil conduit therethrough opening at one end at the periphery of the pin

and at its opposite end centrally of the outer end of said pipe, a casing pivotally mounted upon the outer free end of the said stub pipe and having an oil chamber therein, a partition within the said casing having a valve seat opening therethrough, a valve for the said seat, tubular connections between the said stub pipe bore and the adjacent end of said casing, an oil feed piston reciprocatingly mounted within the said casing, a cylindrical head upon the said piston pivotally attached to the said bar and communicating with the bore of said bar, an oil feed pipe carried by the said bar in communication with the bore thereof, a controlled oil supply means mounted upon the said pipe, and a fluid pressure pipe in communication with the said supply means.

1,218,508. HOT-AIR ATTACHMENT FOR MANIFOLDS. STEPHEN E. BARNWELL, Louisville, Ky., assignor to Hiro Manufacturing Company, Louisville, Ky. Filed Aug. 28, 1915. Serial No. 47,801. (Cl. 48—180.)



1. An attachment for internal combustion engines including a heating casing adapted for attachment to the exhaust manifold of an engine, a pipe leading from the casing and adapted to communicate with the intake manifold of an engine, and a thermostatically operated valve in the casing controlling the passage of air from the casing to the pipe and in turn governed by the temperature of the air which it controls.

2. An attachment for internal combustion engines including a body open at one side and divided through a greater portion of its length by a longitudinal partition wall, staggered baffle members projecting from the partition wall at one side and from an adjacent wall of the casing to provide a circuitous passage, the casing being formed with an inlet port at one end of the passage, and with an outlet port adjacent the other end of the passage, a thermostat mounted in the casing and normally closing the outlet port, and a pipe leading from the outlet port and adapted to communicate with the inlet manifold of an engine.

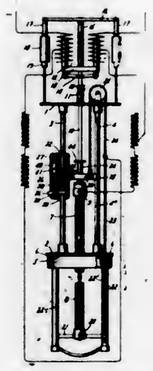
3. An attachment for internal combustion engines including a heating casing adapted for attachment to the exhaust manifold of a gas engine and having inlet and outlet ports, a valve controlling the passage of air through the outlet port, a pipe leading from the outlet port and having a threaded terminal adapted to be tapped into the inlet manifold of a gas engine, a split resilient clamping ring formed centrally with an opening to receive the threaded terminal and adapted to be clamped about the inlet manifold of an engine, and a lock nut threaded upon the terminal to engage the outer face of the inlet manifold when the pipe is in place and to in turn be engaged by the clamping ring.

4. An attachment for internal combustion engines including a body provided at its ends with inlet and outlet ports and with a tortuous passage communicating between the ports, a thermostat mounted in the casing and normally closing the outlet port, and a pipe lading from the outlet port and adapted to communicate with the inlet manifold of an engine.

5. An attachment for internal combustion engines including a body open at one side and provided throughout a greater portion of its length with a partition wall, baffle members forming with the partition wall and with the casing a circuitous passage, the body of the casing being formed with inlet and outlet ports at opposite ends of the passage, and heat governed means controlling the passage of air from the casing to the outlet port.

[Claims 6 and 7 not printed in the Gazette.]

1,218,509. ARC-LAMP. JOHN T. BEECHLYN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 8, 1912. Serial No. 695,831. (Cl. 176—55.)



1. In an arc lamp, a pair of electrodes, means for regulating the arc by the movement of a single electrode, and means for feeding together both electrodes.

2. In an arc lamp, a pair of vertically alined electrodes, means for moving the upper electrode away from the lower and independently of the lower to establish the arc and for freely regulating the same, and means responsive to a predetermined movement of the upper electrode toward the lower for causing both electrodes to approach each other.

3. In an arc lamp, a pair of vertically alined electrodes, means for moving the upper electrode away from the lower and independently of the lower to establish the arc and for freely regulating the same, a normally restrained counterweight for causing the electrodes to move together in step, and means responsive to the movement of the upper electrode toward the lower for releasing the counterweight.

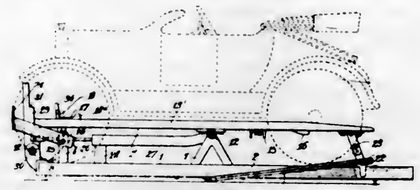
4. In an arc lamp, a pair of vertically alined electrodes, means for moving the upper electrode away from the lower and independently of the lower to establish the arc and for freely regulating the same, means comprising a counterweight for moving both electrodes toward each other, and a clutch normally restraining the movement of the counterweight which is adapted to be released by the movement of the upper electrode toward the lower.

5. In an arc lamp, a pair of vertically alined electrodes, means for moving the upper electrode away from the lower and independently of the lower to establish the arc and for freely regulating the same, a counterweight for moving both electrodes toward each other, a clutch associated with said counterweight to normally restrain the same, and a tripping device movable with the upper electrode for tripping said clutch after the upper electrode has moved toward the lower a predetermined distance.

[Claims 6 to 12 not printed in the Gazette.]

1,218,510. AUTOMOBILE-LIFT. BION S. BENNER, Mankato, and ERNEST L. BENNER, Bemidji, Minn. Filed Nov. 2, 1915. Serial No. 59,243. (Cl. 254—88.)

1. An automobile lift comprising a pivotally mounted rocker frame on which an automobile is adapted to be run, a prop to normally hold the rear end of the rocker frame in elevated position, a trip to disengage the prop and friction elements operated by the rocker frame to normally engage under the rear wheels of the automobile when they are raised by the tilting of the rocker frame.



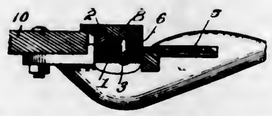
2. An automobile lift of the class described comprising a base frame, a rocker frame mounted thereon for longitudinal movement in a vertical plane, a support for the rear end of the rocker frame with the latter when raised, tripping means for disengaging the support for the rocker frame and arranged for operation by an automobile run over the frame, friction elements for application to the under sides of the automobile wheels, cranks on the base frame and connected to said friction elements, and pitmen connecting the cranks to the front end of the rocker frame.

3. An automobile lift comprising a pivotally mounted rocker frame on which an automobile is adapted to be run, a prop to normally hold the rear end of the rear frame in elevated position, a trip to disengage the prop, and means operated by the rocker frame to normally engage under the rear wheels of the automobile, when they are raised by the tilting of the rocker frame.

4. An automobile lift comprising a pivotally mounted rocker frame on which an automobile is adapted to be run, travelers arranged for longitudinal movement on said rocker frame and arranged for engagement by the front automobile axle, a prop to normally hold the rear end of the rocker frame in elevated position, a trip to disengage the prop, and means operated by the rocker frame to normally engage under the rear wheels of the automobile when they are raised by the tilting of the rocker frame.

5. An automobile lift comprising a pivotally mounted rocker frame on which an automobile is adapted to be run, a prop, spring actuated means to cause the prop to normally hold the rear end of the rocker frame in elevated position, a trip to disengage the prop, and means operated by the rocker frame to normally engage under the rear wheels of the automobile when they are raised by the tilting of the rocker frame.

1,218,511. MEANS FOR SECURING KNIFE-BLADES TO A KNIFE-BAR. HERMAN BERGLUND, Mahtowa, Minn., assignor of one-half to Lawrence Compagne, Duluth, Minn. Filed Apr. 21, 1916. Serial No. 92,689. (Cl. 56—44.)



1. In a cutting apparatus a knife bar provided at its rear edge with an upstanding flange, studs mounted upon the knife bar, knife blades having openings receiving the studs, a strip lying upon the knife blades and having openings which receive the studs, some of the studs having threaded portions extending above the strip, nuts screwed upon said extended portion and a bar hingedly connected with the flange at the upper rear edge thereof and having recesses which receive the said nuts.

2. In a cutting apparatus a knife bar having at its rear edge an upstanding flange, studs mounted upon the knife bar, knife blades having openings which receive the studs, a strip lying transversely across the knife blades and having openings which receive the studs, some of the said studs having threaded portions which extend above the upper surface of the strip, nuts mounted on said extended portion and a bar hingedly connected with the flange at the upper rear edge thereof and having recesses adapted to receive the nuts the last mentioned bar also having a portion disposed behind the rear surface of the flange and adapted to lie above the finger bar of the cutting apparatus.

1,218,512. FUSE-SPITTER. FRANK BERNARDI, Stockton, Cal., assignor to Patent Electric Fuse Spitter Co., Mokelumne Hill, Cal., a Corporation of California. Filed Apr. 17, 1916. Serial No. 91,833. (Cl. 102—9.)



1. As an article of manufacture, a fuse having a recess, a powder filling in said recess, and an intensifying explosive member comprising a stopper fitting in said recess and having an enlarged outer end forming a cap for the fuse.

2. As an article of manufacture, a fuse having a recess, a powder filling in said recess, and a hardened intensifying explosive member comprising a stopper portion fitting in said recess and having an enlarged outer end forming a cap portion for the fuse.

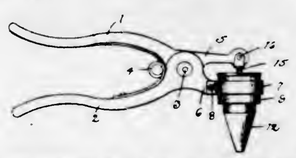
3. As an article of manufacture, a fuse having a recess, a powder filling in said recess, an intensifying explosive member comprising a stopper portion fitting in said recess and having an enlarged outer end forming a cap for the fuse, and means for holding said member in position.

4. As an article of manufacture, a fuse having a recess, a powder filling in said recess, an intensifying explosive member comprising a stopper portion fitting in said recess and having an enlarged outer end forming a cap for the fuse, and a waterproof covering for holding said member in position.

5. As an article of manufacture, a fuse having a recess, a powder filling in said recess, and an explosion intensifying member having a diameter greater than that of the recess to extend across the end thereof and form a closure for the recess.

[Claims 6 to 8 not printed in the Gazette.]

1,218,513. SURGICAL INSTRUMENT. GEORGE B. BIRON, Duluth, Minn. Filed Nov. 13, 1916. Serial No. 131,038. (Cl. 128—9.)



1. The combination with a cylinder and piston coöperatively mounted within a pair of fulcrumed handles, of an externally screw threaded member formed integral with the lower end of the cylinder and of considerably less diameter than the cylinder and a nozzle removably attached to the externally screw threaded member.

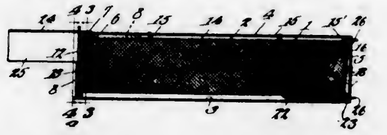
2. The combination with a cylinder and piston coöperatively mounted within a pair of fulcrumed handles, of a member formed integral with the lower end of the cylinder and of considerably less diameter and a nozzle attached to said member having a double walled skin engaging terminus, for the purpose described.

3. The combination with a vacuum forming device, of the character described, of a nozzle having a small skin engaging terminus and a circular cushioning member about

the nozzle terminus and spaced a distance therefrom, substantially as and for the purpose described.

4. The combination with a pair of pincer like members, fulcrumed in parallelism, one of the members carrying a cylinder and the other member carrying a piston operative within the cylinder, of a resilient encircling member formed integral with the cylinder carrying member and designed to surround the cylinder and means for tightly pinching the cylinder within said member.

1,218,514. ANIMAL-TRAP. ARCHIE BLAKESLEE, Tionesta, Pa. Filed Apr. 26, 1915. Serial No. 24,076. Renewed Jan. 3, 1917. Serial No. 140,470. (Cl. 43—19.)



1. An animal trap, including a captivity chamber open at one end, a trap door controlling said open end, said trap door being opened inwardly, a longitudinally slidable trigger rod suspended from the top of the chamber and extending to the rear end thereof, the forward end thereof being in the path to engage and hold the door open, a lever carrying a bait hook pivoted intermediate of its ends to the rear wall of the chamber, said lever having its upper end connected to the trigger rod, and a treadle mounted at the rear of the captivity chamber and having means for engaging the bait hook, whereby the depression of the treadle operates the lever to withdraw the rod and release the door.

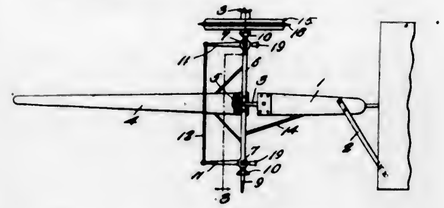
2. An animal trap, including a captivity chamber open at one end, a trap door controlling said open end, said trap door being opened inwardly, a longitudinally slidable trigger rod suspended from the top of the chamber and extending to the rear end thereof, the forward end thereof being in the path to engage and hold the door open, a lever carrying a bait hook pivoted intermediate of its ends to the rear wall of the chamber, said lever having its upper end connected to the trigger rod, and an auxiliary door provided with a rodent receiving opening mounted in the forward end of the chamber to control the area or passage way to the captivity chamber.

3. An animal trap, including a captivity chamber open at one end, an L-shaped rod having the short terminal thereof journaled transversely of and at the upper forward corner of the captivity chamber, with the long terminal extending upwardly and constituting a lever and signal member, a trap door connected to the rod for controlling said open end of the captivity chamber, a spring mounted upon the short terminal of the rod and controlling the door to hold the door closed, a longitudinally slidable trigger rod suspended from the top of the chamber and extending to the rear end thereof, the forward end of the rod being disposed in the path to engage the lower free end of the door when the door is opened, and a lever carrying a bait hook pivoted intermediate of its ends to the rear wall of the chamber and having its upper end connected to the trigger rod.

4. An animal trap, including a captivity chamber open at one end, an L-shaped rod having the short terminal thereof journaled transversely of and at the upper forward corner of the captivity chamber, with the long terminal extending upwardly and constituting a lever and signal member, a trap door connected to the rod for controlling said open end of the captivity chamber, a spring mounted upon the short terminal of the rod, and controlling the door to hold the door closed, a longitudinally slidable trigger rod suspended from the top of the chamber and extending to the rear end thereof, the forward end of the rod being disposed in the path to engage the lower free end of the door when the door is opened, a lever carrying a bait hook pivoted intermediate of its ends to the rear wall of the chamber and having its upper end connected to the trigger rod, and a treadle mounted at the rear of the captivity chamber and having means for engaging the bait hook, whereby the depression of the treadle will operate the lever to withdraw the rod and release the door.

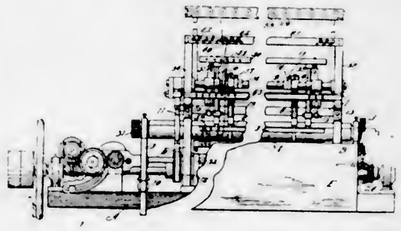
1,218,515. [WITHDRAWN.]

1,218,516. BINDER-TONGUE TRUCK. FREDRICK H. BOBIER, Mount Green, Saskatchewan, Canada. Filed June 13, 1916. Serial No. 103,563. (Cl. 21—139.)



The combination with the stub tongue of a binder, of an arm depending therefrom and having a ball and socket connection thereon, a main tongue connected to the arm by the ball and socket connection, a pair of bars secured to the main tongue and extending transversely thereof, bolts extending between the ends of the bars, wheel spindles having bearing members mounted on said bolts, the said spindles being adapted to turn in a horizontal plane, arms extending outwardly from said bearing members, a rod connecting said arms, one of said bearing members having an arm extending at right angles to the first mentioned arms and a rod connecting the last mentioned arms and the stub tongue.

1,218,517. QUILTING-MACHINE. GUSTAV A. BOETTCHER, Jersey City, N. J. Filed Nov. 10, 1913. Serial No. 800,178. (Cl. 112—14.)



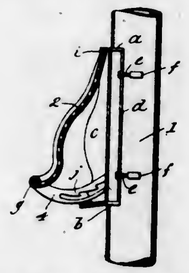
1. In a quilting machine, the combination of a bed, side frames mounted thereon, cross bars connecting said frames together, a rock shaft mounted on said frames, brackets supported by said cross bars, a needle bar, a presser foot beneath the needle bar, needles on the needle bar adapted to operate through the presser foot, guide rods extending upwardly from the needle bar and from the presser foot and mounted in the brackets aforesaid, means intermediate the rock shaft and said needle bar and presser foot for reciprocating the latter parts in timed relation to each other, levers, a take-up bar carried by said levers, and connections whereby the motion of said rock shaft is imparted to said levers for operating the take-up bar.

2. In a quilting machine, the combination of a bed, side frames mounted thereon, cross bars connecting said frames together, a rock shaft mounted on said frames, brackets supported by said cross bars, a needle bar, a presser foot beneath the needle bar, needles on the needle bar adapted to operate through the presser foot, guide rods extending upwardly from the needle bar and from the presser foot and mounted in the brackets aforesaid, means intermediate the rock shaft and said needle bar and presser foot for reciprocating the latter parts in timed relation to each other, levers, a take-up bar carried by said levers, connections intermediate said levers and the needle bar guide rods whereby motion is imparted to the take-up bar.

3. In a quilting machine, the combination of a bed, side frames mounted thereon, cross bars connecting said frames together, a rock shaft mounted on said frames, brackets supported by said cross bars, a needle bar, a presser foot beneath the needle bar, needles on the needle bar adapted to operate through the presser foot, guide rods extending upwardly from the needle bar and from the presser foot and mounted in the brackets aforesaid, means intermediate the rock shaft and said needle bar and presser foot for reciprocating the latter parts in timed relation to each other, levers, a take-up bar carried by said levers, connections whereby the motion of said rock shaft is imparted to said levers for operating the take-up bar, and adjustable fulcruming means for said levers enabling variation in the take-up action of the take-up bar.

4. In a quilting machine, the combination of a bed, side frames mounted thereon, cross bars connecting said frames together, a rock shaft mounted on said frames, brackets supported by said cross bars, a needle bar, a presser foot beneath the needle bar, needles on the needle bar adapted to operate through the presser foot, guide rods extending upwardly from the needle bar and from the presser foot and mounted in the brackets aforesaid, means intermediate the rock shaft and said needle bar and presser foot for reciprocating the latter parts in timed relation to each other, levers, a take-up bar carried by said levers, connections whereby the motion of said rock shaft is imparted to said levers for operating the take-up bar, another cross bar connecting the side frames, arms carried by said last mentioned cross bar and adjustable thereon, and fulcrums on said arms engaging the levers and relatively movable in respect to the latter.

1,218,518. FOOT-REST FOR RADIATORS. JOSEPH O. BOZMAN, Baltimore, Md. Filed May 21, 1915. Serial No. 29,521. (Cl. 155—9.)



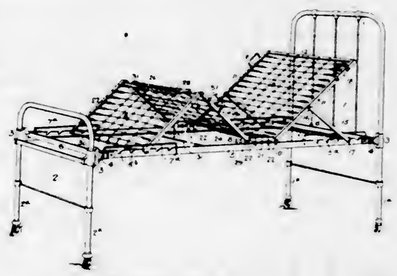
1. In combination with the columns of a radiator, a removable foot rest which comprises an open rectangular frame formed of two horizontal plates which are notched to fit the said column and two vertical plates which unite the horizontal plates and form the sides of the frame, a foot plate pivoted to the upper end of the frame the lower end of which is tubular and provided with a rotatable rod with a collar at one end and a crank handle at the other, a curved and interiorly toothed slotted link which is tight on the rotary rod, and a pin on the outer surface of the frame which projects through the slotted link and is adapted to engage the teeth of the same, so as to hold the foot plate in various angular positions with respect to the frame.

2. In combination with the columns of a radiator, a removable foot rest which comprises an open rectangular frame formed of two horizontal plates which are notched to fit the said columns and two vertical plates which unite the horizontal plates and form the sides of the frame, a foot plate pivoted to the upper end of the frame, a curved and toothed slotted link which is pivoted to the lower end of the foot plate, and a pin on the outer surface of the frame adapted to engage the teeth of the link, and thereby hold the foot plate in various angular positions with respect to the frame.

3. As an improved article of manufacture, a foot-rest bodily removable from and attachable to the columns of a radiator and comprising an open rectangular frame comprising upper and lower horizontal plates notched to fit the radiator columns, vertical end plates uniting the horizontal plates, intermediate vertical bars connecting the horizontal plates, attaching means carried by said intermediate bars, a swinging pendent plate pivotally mounted at its upper end between said vertical end plates to close between the same, and a curved slotted link carried by the lower end of said foot plate and provided with teeth from one wall of its slot, and a pin projecting from the adjacent vertical end plate to engage the teeth of said link.

4. As an improved article of manufacture, a foot-rest bodily removable from and attachable to the columns of a radiator, the same comprising upper and lower horizontal plates notched to fit the columns of the radiator, vertical end plates connecting said horizontal plates, intermediate certical bars connecting the horizontal plates, attaching means carried by said bars and engageable with the columns of the radiator, a swinging pendent foot plate pivotally mounted at its upper end between said end plates, the lower end of said foot plate being tubular, a rod passed loosely through said tubular portion and having a head at one end, a crank handle fastened on the other end of said rod, a curved slotted link on said rod intermediate said crank handle and head and provided with teeth, means on the adjacent end plate to engage said teeth, the crank handle having a notch in its under side, and a laterally extending pin on an end plate for engagement with said notch to hold the foot plate in its closed position.

1,218,519. BED-FRAME. JOHN H. BRADLEY, Philadelphia, Pa. Filed Dec. 15, 1913. Serial No. 806,900. (Cl. 5—12.)



A bed frame having side and end rails 5 and 6, respectively, and having a plurality of supplemental supporting frames provided with side bars 11, 26 and 27; said side rails 5 standing on edge and having notches 5^a in their upper surfaces, and said side bars 11 and 26 being pivotally secured at points 10 and 25 above the side rails; each bar 11, 26 and 27, lying in the vertical plane of a companion side rail 5 and adapted when in a substantially horizontal position to overlie the latter and the notches 5^a therein and to form a guard for said notches, a bed bottom 8 extending from end to end of said frames, elevated guards 7 and 7^a at the head and foot ends of the said side rails and disposed lengthwise of the same, one of said guards being disposed interiorly with respect to

the side rail and the other being disposed exteriorly of said side rail, and arms 15 pivoted to said bars 11; said arms 15 and the bars 27 having their free ends overlapping the side rails 5 and provided with means for engagement with the notches in said side rails.

1,218,520. HOSIERY-FINISHING APPARATUS. JOHN H. BRINE, Kenosha, Wis., assignor to Paramount Hosiery Form Drying Co., Chicago, Ill. Filed Sept. 11, 1916. Serial No. 119,519. (Cl. 223—17.)

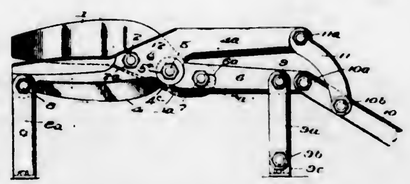


1. A hosiery drying and shaping form comprising sides bulged away from each other and converging toward each other and terminating at one portion in a relatively reduced crease-producing edge, the opposite portion being provided with a groove of which the walls converge toward the crease-producing edge.

2. A hosiery drying and shaping form, hollow to contain a heating medium and comprising two oppositely bulged hosiery-shaping surfaces which are beveled toward their edge-portions, one of said edge-portions being relatively reduced to effect a creasing action on the hosiery being dried thereon, the other edge being provided with a groove in approximate alinement with the crease-producingedge at the opposite portion of the form.

3. A hosiery drying and shaping form, hollow to contain a heating-medium and having its sides beveled and terminating in two edges, one of which is relatively reduced to produce a crease in the hosiery dried thereon, and the other edge provided with an elongated V-shaped seam-receiving groove arranged in approximate alinement with and opposite to the crease-producing edge.

1,218,521. SHEARS FOR SHEARING METAL. PETER BROADBROOKS, Batavia, N. Y. Filed Mar. 21, 1916. Serial No. 85,670. (Cl. 164—46.)

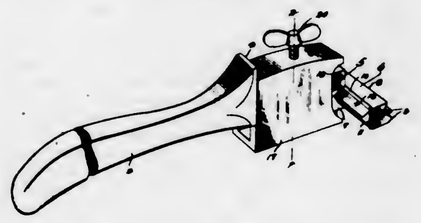


1. A shears for shearing metal consisting of a pair of main jaws and their actuating levers, a support pivotally connected to one of said jaws, a support pivotally connected to the actuating lever of the other of said jaws, one of said supports being pivoted to the base, whereby said shears are supported in operative position and the weight of the shears utilized in the shearing operation.

2. A shears comprising a pair of jaws pivotally connected together, and actuating levers connected with the respective jaws, a support pivotally connected to one of said jaws and fixed to a base, and a support pivotally connected to the actuating lever of the other jaw and to said base, whereby the shears are held in operative position and the weight of the shears utilized to assist in the shearing operation.

3. A shears comprising a pair of jaws pivotally connected together, a main lever rigidly connected to one of the jaws in rear of the pivot; and a support pivotally connected to the front end of said jaw; the other jaw having a shank extending in rear of the said pivot, an actuating lever pivotally connected to the main lever in rear of the jaw pivot, means slidably connecting the said shank to the actuating lever in rear of the pivotal connection of said lever to the main lever, a pivotal support for the rear end of said actuating lever, a third lever pivoted to the said actuating lever, and a link connection between the third lever and the main lever, substantially as described.

1,218,522. WRENCH. CHARLEY STANLEY BROWN, Kenedy, Tex. Filed Mar. 23, 1916. Serial No. 86,264. (Cl. 81—71.)



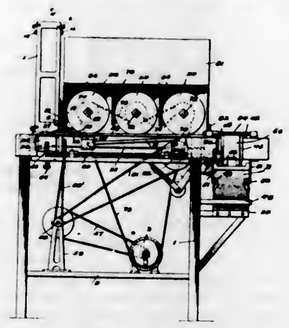
1. In a device for the purpose set forth, a wrench including a handle having a reduced extension providing a finger, a jaw having a right-angular shank at one of the ends thereof and the shank of the said jaw adapted to rest upon the finger of the handle, means enveloping the finger and shank and contacting with the finger to bind the shank thereagainst, the jaw having its outer face provided with teeth, and a gripping element associated with the inner face of the jaw and movable laterally over the said face of the jaw.

2. A wrench including a handle having one of its ends provided with a rectangular extension forming a finger, a jaw having its outer face rounded and formed with longitudinally extending teeth, said jaw including a right angular shank which is adapted to rest on the finger of the handle, means enveloping the said finger and said shank for sustaining these members one upon the other, and a laterally movable gripping member arranged upon the inner and smooth face of the jaw.

3. A wrench including a handle having a reduced extension providing a finger, a jaw having its outer face rounded and provided with longitudinally disposed teeth, guiding means upon the inner and straight face of the jaw, a gripping element which is substantially V-shaped in cross section arranged upon the said inner face of the jaw and co-acting with the guiding means thereof, said jaw including an angular shank which is adapted to rest upon the finger, a sleeve surrounding the shank and finger, a binding element upon the sleeve co-engaging with the finger to retain the shank in contact with the finger, and a stop member upon the finger for retaining the sleeve thereon.

4. In a wrench of the class described, a handle member having a reduced extension providing a finger, a jaw having its outer face rounded and provided with longitudinally extending teeth, said jaw having an angular shank at one of its ends which is adapted to rest on the finger of the handle, the straight and inner face of the jaw at the outer edge thereof having an inturned lip, the shank at its juncture with the said inner face of the jaw having a lateral groove disposed opposite the lip, a gripping member which is substantially V-shaped in cross-section, said gripping member having one of its ends formed with a tongue to engage in the groove of the jaw and its opposite end provided with a groove to receive the lip of the said jaw, a sleeve member arranged to receive the finger and the shank of the jaw, a binding element carried by the gripping member and co-engaging with the finger of the handle, and a removable stop-pin upon the finger for sustaining the sleeve in position.

1,218,523. MACHINE FOR CLEANING METAL PLATES. FRED W. CARRINGTON, Burlington, Vt., assignor of one-half to Guy O. Taylor, Topeka, Kans. Filed June 3, 1916. Serial No. 101,573. (Cl. 51—12.)



1. In a machine of the type set forth, in combination, a plate magazine, a plate guide extending longitudinally therefrom, a second plate guide extending transversely from said first guide, devices for moving the plates through said guides and cleaning means operating on the plates during their movement through the second guide.

2. In a machine of the type set forth, in combination, a plate magazine, a plate guide extending longitudinally therefrom, means for feeding the plates through said guide, means for effecting a movement of the plates from said guide in a direction transversely of the machine and cleaning means operating on the plates during their transverse movement.

3. In a machine of the type set forth, in combination, plate cleaning means, a guide comprising a pair of bars having channels to receive the edges of the plates and between which the plates are moved into relation to said cleaning means and a reciprocatory head having a plate engaging means and operable to effect a step-by-step movement of the plates through said guide.

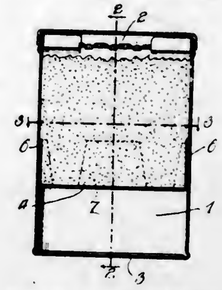
4. In a machine of the type set forth, in combination, a pair of longitudinally disposed guides, a plate magazine arranged adjacent the first guide, plate stacking means arranged adjacent the second guide, means for moving the plates from the magazine through the first guide, means for effecting movement of the plates transversely of the machine from the first guide to the second one, cleaning means operating on the plates during their transverse movement, and means for feeding the plates through the second guide to the plate-stacking means.

5. In a machine of the type set forth, in combination, a pair of longitudinally disposed guides, a plate magazine arranged adjacent the first guide, plate stacking means arranged adjacent the second guide, a transverse guide extending between and communicating with said longitudinal guides, devices for moving the plates through said guides and cleaning means operating on the plates during their movement through the transverse guide.

[Claims 6 to 26 not printed in the Gazette.]

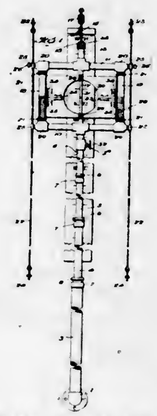
1,218,524. RECEPTACLE. NELS R. CLIFTON, Duluth, Minn. Filed Aug. 17, 1916. Serial No. 115,447. (Cl. 206—56.)

A device of the class described comprising a casing having open ends, an inwardly projecting flange on the lower edge of said casing, a movable bottom in said casing comprising a plate with its edges snugly engaging the inner wall of said casing, and upwardly projecting integral spring fingers on said edges at each end and on opposite sides of the plate, said fingers being of a width and height



to afford a sufficient flexible engagement between their outer faces and the inner wall of the casing to hold the plate normally stationary, said engagement being made continuous by the outward pressure exerted on the inner faces of the fingers by the closely pressed contents of the casing, whereby the plate may be longitudinally adjusted in the casing and will be prevented from tilting when moved.

1,218,525. SHIP'S DRAFT-GAGE. JOSEPH M. COLE, New York, N. Y. Filed Feb. 4, 1916. Serial No. 76,133. (Cl. 73—23.)



1. A ship's draft gage comprising a main draft scale, a pair of sight tubes adapted to be raised and lowered in relation to said scale for reading of the draft in connection with the water columns in the sight tubes, a difference scale movable with the sight tubes for reading in connection with the water column in the sight tubes, and a pipe or tube adapted to communicate with the water outside the ship for admitting water to the sight tubes, said sight tubes being spaced apart, whereby the difference in level of the water columns therein, in connection with the location of the tubes on the ship, will indicate the difference in draft at different points of the ship.

2. A ship's draft gage comprising a main draft scale, a pair of sight tubes adapted to be raised and lowered as a unit in relation to said scale for reading of the draft in connection with the water columns in said sight tubes, and a pipe or tube adapted to communicate with the water outside the ship for admitting water to the pair of sight tubes, said sight tubes being spaced apart, whereby the difference in level of the water columns therein, in connection with the location of the tubes on the ship, will

indicate the difference in draft at different points of the ship.

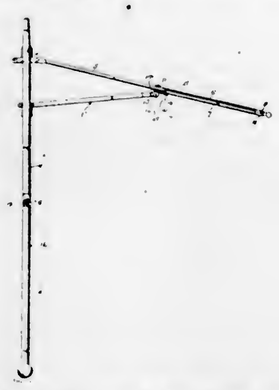
3. A ship's draft gage comprising a main draft scale, a pair of sight tubes adapted to be raised and lowered as a unit in relation to said scale for reading of the draft in connection with the water columns in said sight tubes, draft difference scales movable with the respective sight tubes for reading in connection with the water columns in said sight tubes, and a pipe or tube adapted to communicate with the water outside the ship for admitting water to the sight tubes, said sight tubes being spaced apart, whereby the difference in level of the water columns therein, in connection with the location of the tubes on the ship, will indicate the difference in draft at different points of the ship.

4. A ship's draft gage comprising a primary draft scale, a pair of sight tubes, upper and lower cross pipes or tubes connecting said sight tubes at their upper and lower parts, thus constituting a unit adapted to be raised and lowered in relation to the primary draft scale, draft difference scales respectively disposed adjacent the sight tubes and movable up and down with them for direct reading in connection with the water columns thereof, means carried by said unit adapted for direct reading on the primary scale aforesaid, and a pipe or tube adapted to communicate with the water outside the ship for admitting water to the pair of sight tubes, said sight tubes being spaced apart, whereby the difference in level of the water columns therein, in connection with the location of the tubes on the ship, will indicate the difference in draft at different points of the ship.

5. A ship's draft gage comprising a primary draft scale, a pair of sight tubes, upper and lower cross pipes or tubes connecting said sight tubes at their upper and lower parts, thus constituting a unit adapted to be raised and lowered in relation to the primary draft scale, an upright cross rod connecting the upper and lower cross tubes, an apertured disk carried by said unit, said cross rod and disk having "zero" markings for reading on the primary scale and the columns of water in the sight tubes, draft "difference" scales on the disk disposed adjacent the respective sight tubes for reading in connection with the water columns thereof, and a pipe or tube adapted to communicate with the water outside the ship, having a controlling valve, adapted for admitting water to the sight tubes, said sight tubes being spaced apart, whereby the difference in level of the water columns therein, in connection with the location of the tubes on the ship, will indicate the difference in draft at different points of the ship.

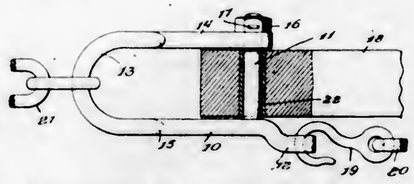
[Claim 6 not printed in the Gazette.]

1,218,526. UMBRELLA. BENJAMIN EUGENE CUNDIFF, Hallowell, Kans. Filed June 3, 1916. Serial No. 101,568. (Cl. 135—26.)



In combination, a rib comprising sections, one of said sections being hollow and formed with a longitudinally extending slot, the remaining section being slidably mounted within the first section, a stud formed on said remaining section and riding in said slot, a substantially U-shaped bracket secured to the inner end of the hollow section and partially encircling the same, the free ends of the bracket extending laterally from said section, a spring clip interposed between the bracket and the hollow section and having one end thereof overlying said slot and formed with an opening to receive said stud, and a stay having a bifurcated end pivotally mounted between the free ends of said bracket.

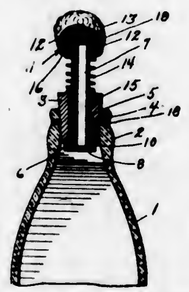
1,218,527. CLEVIS. MARTIN B. CUNNINGHAM, Uhrichsville, Ohio. Filed May 17, 1916. Serial No. 98,124. (Cl. 97—4.)



1. A clevis comprising a body having a hook at one end and a perforated outwardly directed offset at the other end, said body having a stud directed inwardly therefrom and adapted to extend through a draft beam, and an arm swinging at one end from the stud externally of the draft beam and provided with a hook coacting with the hook of the body, said perforated offset adapted to receive a drag chain operative without interfering with the draft beam.

2. The combination with a draft beam, of a body having a hook at one end and a perforated outwardly directed offset at the other end, said body having a stud directed inwardly therefrom and extending through the draft beam, and an arm swinging at one end from the stud externally of the draft beam and provided with a hook coacting with the hook of the body, said perforated offset adapted to receive a drag chain operative without interfering with the draft beam.

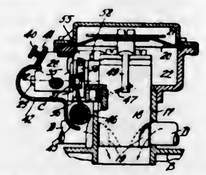
1,218,528. FOUNTAIN POLISH-DAUBER. ROCCO CURCIO, Richfield Springs, N. Y. Filed May 12, 1916. Serial No. 97,104. (Cl. 15—46.)



A device of the class described, the combination with a sleeve, means for removably connecting the sleeve with a bottle neck, a tube slidably mounted within the sleeve and having a head carried by its upper end, a dauber engaged with the head, and a tubular head carried by the upper end of the tube and arranged to conduct liquid from the tube to the ends of the dauber.

1,218,529. MILKING-MACHINE. CHARLES B. DALZELL, Little Falls, N. Y., assignor to D. H. Burrell & Company, Little Falls, N. Y. Filed Dec. 8, 1915. Serial No. 65,692. (Cl. 31—99.)

1. In a milking machine, the combination of a milk receptacle from which the air may be partially exhausted, a milk passage leading to said receptacle, a pulsator valve having one end exposed to suction in said receptacle and adapted to reciprocate to interrupt the suction in said passage, means for reciprocating said pulsator valve including a reversing valve, a spring connected with said reversing valve and placed under tension by the movements of the pulsator valve, a pallet mounted on said pulsator valve and holding said spring against movement in either direction until the pulsator valve reaches a predetermined position.



2. In a milking machine, the combination of a pulsator comprising a pulsator valve adapted to reciprocate, a valve controlling the flow of fluid for actuating said pulsator valve, a spring for actuating said controlling valve which is placed under tension by said pulsator valve when moving in either direction, and a pallet mounted on said pulsator valve and engaged by said spring for holding the spring to prevent actuation of said controlling valve until the pallet moves out of engagement with said spring.

3. In a milking machine, the combination of a pulsator valve for interrupting the suction on the teat cups, fluid pressure means for reciprocating said valve including a reversing valve, a spring connected to the pulsator valve and placed under tension by the movements thereof for actuating the reversing valve, and a pallet which reciprocates with the pulsator valve and coöperates directly with said spring for preventing the actuation of said reversing valve until the pulsator valve reaches a predetermined position.

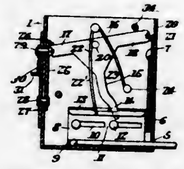
4. In a milking machine, the combination of a pulsator valve for interrupting the suction on the teat cups, fluid pressure means for reciprocating said valve including a reversing valve, a spring having arms connected to said valves and placed under tension by the movements of the pulsator valve for actuating the reversing valve, and a pallet which is fixed to the pulsator valve and engages the arm of the spring connected to the reversing valve for holding said arm from movement until the pallet moves out of engagement therewith.

5. In a milking machine, the combination of a milk receptacle from which the air may be partially exhausted, an upright cylinder mounted thereon, a milk passage leading to said receptacle, a pulsator valve arranged to reciprocate in said cylinder for interrupting the suction in said passage, fluid pressure means for reciprocating said valve including a reversing valve located above said milk passage, a spring connected to said valves and placed under tension by the movements of the pulsator valve for actuating the reversing valve, and a pallet which reciprocates with the pulsator valve and engages said spring for preventing the actuation of the reversing valve until the pallet moves out of engagement with the spring.

[Claims 6 to 12 not printed in the Gazette.]

1,218,530. MATCH-BOX. FREDERICK W. DECKER, Brunswick, Ga. Filed July 25, 1916. Serial No. 111,256. (Cl. 206—26.)

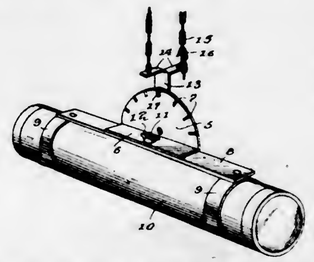
1. A match box comprising a casing having back, side and bottom walls, the bottom wall being bent upwardly to form a gutter and one of the said side walls being provided with a discharge outlet in line with said gutter, a cover for closing the top and front of the casing, a reciprocating cut-off governing the discharge of matches from the gutter through said outlet, a reciprocating ejector for discharging the matches from the gutter through the outlet, a spring for retracting said ejector, a T-shaped lever having one of its arms pivotally connected with the ejector and a second arm pivotally connected with the cut-off for operating the same in unison, and means connected with the third arm of the lever for imparting actuating motion thereto.



2. A single delivery match box comprising a casing having a lateral discharge outlet, a sliding ejector for discharging the matches through said outlet, a sliding cut-off controlling the outlet, a T-shaped lever having one of its arms engaging the ejector for operating the same, and another of its arms connected with the cut-off for actuating the same, an operating device connected with the third arm of the lever, and a spring arranged within the casing and operatively connected to hold the parts in normal position.

3. A single delivery match box comprising a casing having a lateral discharge outlet and a portion bent to form a gutter disposed in line with said outlet, said gutter being adapted to receive a series of single matches in superposed order, a sliding cut-off at one side of the box controlling the outlet, a sliding ejector having a projection disposed within the gutter to engage the lowermost match, a T-shaped lever having one of its arms connected with the ejector and another of its arms connected with the cut-off for operating the same in unison, a spring connected with the ejector for holding the parts in normal position, and an operating device connected with the third arm of the lever.

1,218,531. LAMP-HOLDER. FREDERICK G. DILTHEY, Kernville, Cal. Filed Oct. 28, 1916. Serial No. 128,273. (Cl. 240—52.)



1. A holder of the character described comprising a segmental shaped plate, a flash light clip adjustably connected with the plate, suspension means pivotally connected with the plate, and means on the suspension means for locking engagement with the plate.

2. A holder of the character described comprising a segmental shaped plate having an out-turned flange at right angles thereto, an arm pivotally connected with the plate, means on the arm for locking engagement with the plate to hold said arm in its adjusted position, a suspension chain connected with the arm, a hook on the arm for engagement in any one of the links of the chain, and a light or lamp clip adjustably connected with the flange.

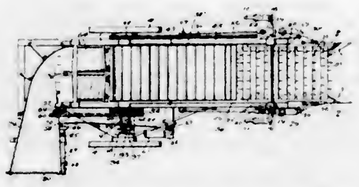
3. A holder of the character described embodying a plate, a flash light clip adjustably connected with said plate and suspension means connected with said plate.

4. A holder of the character set forth, a segmental plate provided with a series of notches, a flash light clip adjustably connected with said plate, suspension means connected with said plate, and means on the suspension

means for engagement in the notches of the plate to lock the clip in various adjusted positions.

5. A holder of the character set forth, a segmental plate provided with a series of notches, a flash light clip adjustably connected with said plate, suspension means connected with said plate, and a lip formed on the suspension means adapted to interlock in the notches of the plate for effecting the locking action of the clip in either a perpendicular or horizontal position.

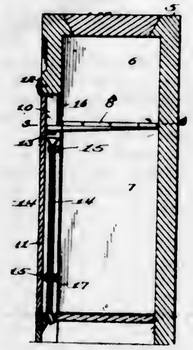
1,218,532. BEET-HARVESTING MACHINE. CHARLES I. DUNBLAZIER, Moline, Ill. Filed July 7, 1915. Serial No. 38,535. (Cl. 146—7.)



1. In a beet topping machine, topping mechanism including a pair of opposed endless conveyers, said conveyers being inclined toward each other with their adjacent ends lowermost to form a trough, said conveyers being also both inclined rearwardly and downwardly to receive the beets thereon, and direct them tops downward, and a cutter positioned at the lower ends of the conveyer and movable transversely thereof to sever the tops from the beets.

2. In a beet harvesting machine, topping mechanism including a pair of opposed endless conveyers, a frame for each conveyer, each frame having a stationary roller to support one end of the conveyer, a second roller for supporting the opposite end of the conveyer, means for permitting sliding movement of said second roller, resilient means acting upon said second roller to stretch the conveyer, the frame being inclined to direct the conveyers toward each other with their adjacent ends lowermost to form a trough, said frame being also inclined in the same degree downward and rearwardly to receive the beets and direct them top foremost and down, and a cutter positioned at the lower end of the conveyers and movable transversely thereof to sever the tops from the beets.

1,218,533. REFRIGERATOR. ALFONSO H. DUNLAP, Chattanooga, Tenn. Filed Apr. 13, 1916. Serial No. 90,897. (Cl. 62—46.)



1. A refrigerator having a chamber supplemental to the usual refrigerating chambers and exteriorly accessible, a removable closure for the said supplemental chamber, and a drain pipe removably mounted in the said supplemental chamber and having the lower end thereof in separable outlet coöperation with the bottom of the refrigerator, the supplemental chamber and closure therefor being of such length and width that the drain pipe practically as a whole is exposed for removal when the said closure is opened.

2. A refrigerator having the usual ice and storage chambers and an additional drain pipe receiving chamber separated from the remaining chambers and opening exteriorly through a portion of the wall of the refrigerator, an exteriorly located closure for the said additional chamber, a drip pan at the bottom of the ice chamber having drain means partially intersecting the additional chamber including an outlet device opening into the additional chamber, and a drain pipe mounted in the additional chamber and removable and replaceable through the exterior opening of said additional chamber and in separable outlet cooperation with the bottom of the refrigerator, the upper end of the drain pipe being normally under the drip pan outlet, the drain pipe being shiftable vertically in the additional chamber and the latter when opened exposing practically the entire drain pipe for removal and replacement thereof.

3. A refrigerator having an opening through a portion of the wall thereof in addition to the usual refrigerator openings, an exteriorly located closure for the said opening, and a drain pipe mounted in rear of the said closure and having the lower extremity thereof extending through the bottom of the refrigerator and removable and replaceable through the said opening which is normally closed by the said closure, said opening extending vertically at one side of the main refrigerator door and when cleared exposing practically the entire drain pipe which may be removed and reset as a whole relatively to the refrigerator.

4. A refrigerator having the usual ice and provision chambers and a supplemental drain pipe receiving chamber which is exposable from the exterior of the refrigerator and separated from the remaining refrigerator chambers, a drain pipe shiftable in and removable from said supplemental chamber, the supplemental chamber being of a length to expose the greater portion of and permit the drain pipe as a whole to be removed therefrom through the outer side portion of the refrigerator and also to be replaced as an entirety in the said supplemental chamber, and means for engaging and holding the drain pipe in normal position within the supplemental chamber.

1,218,534. FOUNTAIN-BRUSH. LEO H. DUNLAP and GUSTAV C. DUNLAP, Los Angeles, Cal. Filed Oct. 23, 1916. Serial No. 127,145. (Cl. 15—50.)



1. A shaving brush, comprising a handle, a brush affixed thereto, a longitudinal soap compartment formed within said handle, an annular measuring groove formed around the inner wall of said soap compartment, a valve seat within said compartment and adjacent said groove, and a valve fitting the inner walls of said compartment and adapted to be reciprocated within said compartment, whereby the reciprocation of said valve will act to emit a given quantity of soap from said compartment and discharge it within said brush.

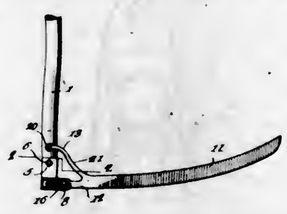
2. A shaving brush, comprising a handle, a brush affixed to the end thereof, a longitudinally extending soap compartment formed in said handle, an annular measuring groove formed in the inner wall of said compartment, a plunger valve for preventing the flow of soap from said compartment, means whereby said valve may be reciprocated to release a measured quantity of soap from the compartment and thereafter discharge it into the brush, and a spring tending to move said valve between said groove and the outlet orifice of said compartment.

3. A shaving brush, comprising a tubular handle, a brush affixed to one end thereof, a filling cap mounted upon the other end thereof and adapted to permit liquid soap to be placed within the tubular handle, a soap measuring recess in the inner wall of said tubular handle, a valve for normally preventing the flow of soap to said brush, means for raising said valve, and automatically acting means whereby the valve will be restored to its normal position and a given quantity of soap emitted from the handle and into the brush.

4. A shaving brush comprising a handle, a brush affixed to the end thereof, a longitudinal soap compartment in said handle having a measuring recess in the wall thereof, a tubular head slidably mounted on said handle, said head being provided with a filling aperture, a reciprocable plunger valve in said compartment and connected to said slidable head, and a closure cap detachably mounted on said head.

5. A shaving brush comprising a handle, a brush affixed to the end thereof, a cylindrical soap compartment in said handle having an annular measuring groove in the wall thereof, a tubular head provided with a filling aperture slidably mounted on the upper end of said handle, a reciprocable plunger valve connected to said head, a closure cap detachably mounted on said head, and a spring tending to move said plunger valve between the outlet orifice of said soap compartment and said measuring groove.

1,218,535. SCYTHE. CONNIE H. EASTBURG, Idaho Falls, Idaho. Filed Apr. 21, 1915. Serial No. 22,936. (Cl. 56—27.)



1. The combination with a snath and a housing carried by said snath, of a scythe blade having its rear end bifurcated, one of said bifurcations forming the connecting tang for said blade and extending rearwardly of the scythe blade proper, the other of said bifurcations curved upwardly from said slotted tang member and at a point adjacent the cutting edge of the blade, to provide bracing means therefor, said upwardly curved member having a sharpened edge forming a continuation of the cutting edge of the scythe blade, the free end of said bracing member being provided with an enlarged head for pivotal engagement with the scythe snath.

2. A scythe, including a snath having a reduced end portion, a tubular sleeve member fitted upon said reduced end and provided with a corrugated extension at its lowermost end, said corrugations continued to extend from said extension clear across the lower portion of said sleeve, a scythe blade, said blade having its rear end bifurcated to provide divergent arms, one of said arms being slotted and corrugated for engagement with the corrugations of said sleeve, the other arm being adapted to extend upwardly into engagement with said snath and pivoted thereto, said latter arm issuing into, and forming a continuation of, the cutting edge of said blade, and locking means carried by said extension and working in the slot of said first mentioned arm, whereby said blade may be locked in its adjusted position.

3. A scythe including a snath having its lowermost portion incased within the walls of a box-like housing, one side of which is partially extended to project forwardly of the snath and housing, a scythe blade having a slotted rear end for engagement with the projecting portion of the housing, one face of said slotted end having teeth provided thereon, adjacent the sides of the slot and corresponding with similar teeth carried by the projecting portion of the housing, adjustable fastening means carried by said projecting portion and passing through said slotted end, for securing the latter to the projecting portion, and bracing formed integral with said blade and extending upwardly and rearwardly above the slotted end of the blade and pivotally connecting said blade to said snath, said bracing means provided with a cutting edge issuing into the cutting edge proper of the scythe blade and forming a continuation thereof, as and for the purpose specified.

1,218,536. COCA EXTRACT AND PROCESS OF PRODUCING SAME. FRANK R. ELDRED, FRANCIS E. BIBBINS, and RAY N. REED, Indianapolis, Ind., assignors to The Eli Lilly and Company, Indianapolis, Ind., a Corporation of Indiana. Filed Dec. 11, 1916. Serial No. 136,309. (Cl. 99—11.)

1. As a new article of manufacture, an extract of coca leaves free from cocain and the other alkaloids present in coca.

2. As a new article of manufacture, an extract of coca leaves retaining the characteristic flavor or aroma and free from cocain and the other bases present in coca.

3. As a new article of manufacture, a liquid extract of coca leaves retaining the characteristic flavor or aroma and free from cocain and the other bases present in coca.

4. As a new article of manufacture, an extract of coca leaves free from cocain and ecgonin and benzoyl ecgonin originally present in the coca leaves.

5. As a new article of manufacturing, a liquid extract of coca leaves possessing the characteristic flavor or aroma of the original leaves and free from the cocain and the ecgonin and benzoyl ecgonin.

[Claims 6 to 16 not printed in the Gazette.]

1,218,537. PLASTIC TIE. LEWIS ESTELL, Manasquan, N. J. Filed June 13, 1916. Serial No. 103,502. (Cl. 238—3.)

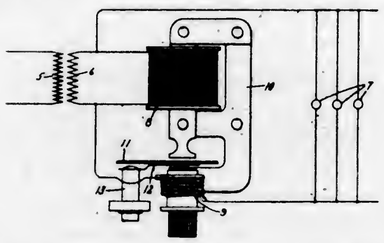


1. A plastic tie comprising two sections, one of said sections, at the meeting end from the top thereof being provided with a longitudinally extending knuckle including a laterally disposed head and a reduced neck connecting the head with the end of the section, the other section having its inner end from its upper face provided with a transverse pocket and having a channel communicating between the pocket and end of the section to receive the head and neck of the first mentioned section, metal reinforcements for the sections, and rail engaging hooks associated with the said reinforcements.

2. A plastic tie comprising two sections, one of said sections, at its inner end from its top face being formed with an outwardly extending substantially rectangular neck and with a laterally disposed head connecting the neck and projecting below the neck, the other section having adjacent its inner end and upon its upper face, a transverse pocket shaped to receive the head of the first

mentioned section, and the said second mentioned section being further provided with a longitudinal channel to receive the neck of the first mentioned section, metal plates between the meeting ends of the sections, and metal reinforcements for the sections including transverse members.

1,218,538. METERING DEVICE FOR ELECTRICAL DISTRIBUTING APPARATUS. EVAN EVANS, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 10, 1914. Serial No. 817,787. (Cl. 171—264.)



1. The combination with an electrical energy distributing apparatus of an electric meter operatively connected to the distributing side of the apparatus and having a rotatable element, means whereby said element is subjected to a torque having two components, one of the components of said torque being substantially proportional to the no-load losses of said apparatus and the other component of said torque being substantially proportional to the energy distributed by said apparatus.

2. The combination with an electrical energy distributing apparatus of an electric meter operatively connected to the distributing side of the apparatus and having a rotatable element, means for producing a constant torque substantially proportional to the no-load losses of said apparatus and tending to turn said element, and means whereby the torque tending to turn said element is increased substantially in proportion to the energy distributed when the apparatus carries a load.

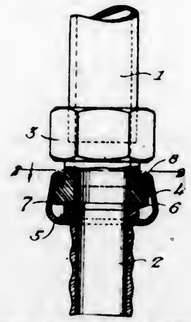
3. The combination with an electrical energy distributing apparatus of an electric meter operatively connected to the distributing side of the appuratus and having a rotatable element, means for imparting to said element a continuous rotation of such amount that the revolutions of the element are substantially proportional to the no-load losses of the apparatus, and means whereby the speed of rotation of said element is increased when the apparatus is distributing energy so that the revolutions of the element under such conditions are substantially proportional to the sum of the no-load losses of the apparatus and the energy distributed.

4. The combination with the secondary winding of a transformer of an electric meter connected thereto and comprising a rotatable element, and means for producing a torque having two components each tending to turn said element in the same direction, one component of said torque being constant and substantially proportional to the no-load losses of the transformer and the other component of said torque being substantially proportional to the load upon the transformer secondary.

5. The combination with the secondary winding of a transformer of an electric meter connected thereto and comprising a rotatable element, a torque producing means adapted to continuously rotate said element at a speed which is substantially a measure of the no-load losses of the transformer, and means whereby said torque is increased when the secondary winding is distributing energy so that the speed of rotation of the element under such conditions is substantially a measure of the sum of the no-load losses of the transformer and the energy distributed.

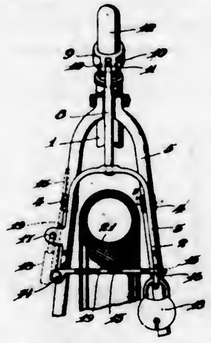
[Claim 6 not printed in the Gazette.]

1,218,539. HOSE-COUPLING. WILLIAM B. FARLOW, Burlingame, Cal. Filed Jan. 13, 1916. Serial No. 71,934. (Cl. 137—28.)



In a hose coupling, a pair of hose sections, one of which has a collar formed thereon, a gasket interposed between the meeting ends of the sections, a frusto-conical connection formed from a sheet of sheet metal and having its inner end bulged and engaged with the collar, rolled lugs formed upon the outer edge of the connection at diametrically opposite points, oppositely inclined cam lugs carried by the other section and defining spaces between their extremities to permit the rolled lugs to pass therein, where upon rotating the frusto-conical connection the hose sections will be locked together.

1,218,540. LOCK FOR BICYCLES. ELLWOOD R. FELL, Philadelphia, Pa. Filed June 12, 1916. Serial No. 103,098. (Cl. 70—90.)

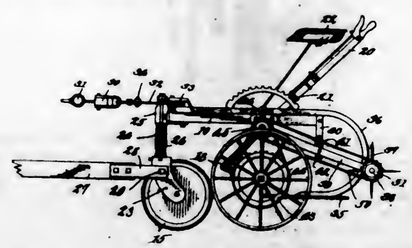


1. A device of the character described, comprising a bifurcated frame adapted to straddle the wheel, clamps on the members of said bifurcated frame adapted to secure the same to a support, a hasp hinged to one end of the frame, perforated lugs on both ends of the bifurcated frame, said hasp having slots therein adapted to receive the said lugs in accordance with the position of the hasp and a lock adapted to secure the hasp to either of said lugs.

2. The combination with a vehicle, having a rear fork, a wheel in the rear fork, and a seat post adjacent the upper end of the fork, of a bifurcated frame, a rod projecting upwardly from the frame, a collar pivotally secured to the rod and through which the seat post is positioned, a hasp carried by the frame and adapted to be positioned through the wheel, and a padlock adapted to secure the hasp against movement.

3. The combination with a vehicle, having a rear fork, a wheel in the rear fork, and a seat post adjacent the upper end of the fork, of a bifurcated frame, a rod projecting upwardly from the frame, a collar pivotally secured to the rod and through which the seat post is positioned, a hasp carried by the frame and adapted to be positioned through the wheel, clamps on the bifurcated frame secured to the members of the fork, lugs on the frame, and a padlock adapted to secure the hasp to either of said lugs, one of said lugs adapted to engage the hasp in its locked position and the other in its unlocked position.

1,218,541. COMBINED WEEDER AND CULTIVATOR. BYRON H. FLETCHER, Walla Walla, Wash. Filed June 26, 1916. Serial No. 105,955. (Cl. 55—85.)



1. In a cultivator, a supporting frame, drive wheels, axles carried by the sides of the frame and having downward crank bends on which the drive wheels are journaled, bearings on the frame in which the axles are rockably supported, means connected to the axles for rocking the same, countershafts carried by the frame in axial alinement with the axles, driving members on the countershafts having connections with the drive wheels, rotary earth-working elements carried by the frame, and driving connections between said elements and the aforesaid driving members.

2. In a cultivator, a supporting frame, drive wheels, axles carried by the sides of the frame and having downward crank bends on which the drive wheels are journaled, bearings on the frame in which the axles are rockably supported, means connected to the axles for rocking the same, countershafts carried by the frame and having offsets which are in axial alinement with the axles, driving members loosely mounted on the offset portions of the countershafts and having connections with the drive wheels, rotary earth-working elements carried by the frame, and driving connections between said elements and the aforesaid driving members.

3. In a cultivator, a supporting frame, drive wheels and their axles carrying said frame, a series of weed cutting blades set horizontally and extending in a transverse row, a transverse shaft, cultivator teeth extending radially from the shaft and working behind the blades, bearing brackets supporting the shaft and hung on the axles, vertically adjustable brace connections between the brackets and the frame, and driving means for the shaft.

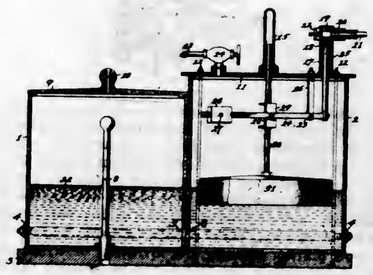
1,218,542. BUTTON. JACOB FOX, New York, N. Y. Filed Sept. 12, 1916. Serial No. 119,720. (Cl. 24—90.)



1. A button having a back in the form of a shell open at one side and provided at its opposite side with thread perforations, and a facing member secured to the edge of the button at the open side thereof and having an opening located opposite the said perforations.

2. A button having a back in the form of a shell open at one side and provided at its opposite side with thread perforations, and a facing member secured to the edge of the back at the open side thereof, the said facing member concealing the said edge and having an outer marginal contour substantially the same as the outline of the said edge, the facing member having an open middle portion located opposite the said thread perforations.

1,218,543. GAS-PRESSURE REGULATOR. BERNHARDT MATHIAS GATTERMEIR, California, Mo. Filed Apr. 25, 1916, Serial No. 93,481. Renewed Feb. 6, 1917. Serial No. 146,985. (Cl. 50—31.)



1. A device of the class described, comprising two tanks connected adjacent their bottoms, a strap for holding said tanks together, an air-tight cover for one of said tanks, a supply pipe leading therethrough, a service pipe leading therethrough, a float, a vertical rod carried thereby, a lever carrier adjustable on said rod, a lever pivoted to said carrier, and a needle-valve in said supply pipe in operative connection with said lever.

2. A device of the class described, comprising two tanks connected adjacent their bottoms, an air-tight cover for one of said tanks, a supply pipe leading therethrough, a service pipe leading therethrough, a float, a screw-threaded rod carried by said float, a carrier in threaded engagement with said rod, a lever pivoted to said carrier, and a needle-valve in operative connection with said lever for controlling said supply pipe.

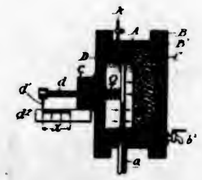
3. A device of the class described, comprising two tanks connected adjacent their bottoms, an air-tight cover for one of said tanks, a supply pipe, a service pipe, a float, a screw-threaded rod carried by said float and extended through said cover, a removable cap for said rod carried by said cover, a carrier in threaded engagement with said rod, a lever pivoted to said carrier, and a needle-valve in operative connection with said lever for controlling said supply pipe.

4. A device of the class described, comprising two tanks connected adjacent their bottoms, an air-tight cover for one of said tanks, a service pipe, a supply pipe, an internally threaded tube through said cover, a removable cover for the outer end of said tube, a valve seat block in threaded engagement with the interior of said tube, means for connecting said tube and supply pipe, a float, a rod carried thereby, a lever pivotally carried by said rod, and a needle-valve pivoted to said lever and arranged to cooperate with said seat block.

1,218,544. FILTERING-PROCESS. ALBERT LEGRAND GENTER, Salt Lake City, Utah. Filed Jan. 4, 1915. Serial No. 519. (Cl. 100—50.)

1. The process herein described of automatically compressing filter cakes and indicating the thickness thereof, said process consisting, essentially, in arranging a compression plate in a closed pressure chamber and at a desired distance from a filter surface, then producing an equalized hydraulic pressure on both sides of the compression plate during filtering operation and automatically disturbing the pressure by reason of the cake mass coming in contact with the compression plate, whereby the filtration or hydraulic pressure on one side of the plate will be lessened through the cake mass taking its place, and the

filtration or hydraulic pressure on the other or free side of the plate will automatically cause said plate to move inward toward the filtering surface and compactly compress the cake mass and indicate the cake thickness.



2. The process herein described of automatically compressing filter cakes and indicating their thickness, said process consisting, essentially, in arranging compression plates in a chamber at a desired distance from filter agencies, then producing an equalized hydraulic pressure on both sides of the compression plates during the filtering operation, and automatically disturbing the pressure by reason of the cake mass coming in contact with the compression plates, whereby the filtration or hydraulic pressure on one side of the plates will be lessened through the cake mass taking its place, and the filtration or hydraulic pressure on the other or free side of the plates will automatically cause said plates to move toward the opposed filtering agencies and compactly press the cake mass and indicate the cake thickness.

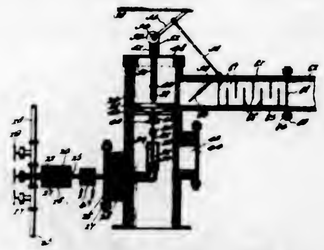
3. The process herein described of compressing filter cakes and indicating their thickness, said process consisting, essentially, in movably arranging filtering agencies and compression plates in a pressure chamber at desired distances from each other; then producing a hydraulically equalized pressure on both sides of the filtering agencies and plates during filtration, and then automatically disturbing said pressure by reason of the cake mass building up and wholly or partly filling the space between the plates and filtering agencies, whereby the filtration or hydraulic pressure on one side of the plates or filtering agencies will be lessened, and the filtration or hydraulic pressure on the free side of a plate or cake opposing the plate, will cause the plates and opposed filtering agencies to approach each other and compress therebetween the cake mass and indicate the cake thickness.

4. The process herein described of automatically compressing filter cakes and indicating their thickness said process consisting, essentially, in arranging filter compression plates in a chamber at a desired distance from other compression plates also designed to act as filtering agencies, then producing a hydraulically equalized pressure on both sides of the plates during filtration, and then automatically disturbing said pressure by reason of the cake masses building up and wholly or partially filling the space between the plates whereby the filtration or hydraulic pressure on one side of the plate-filtering agencies will be lessened and the filtration or hydraulic pressure on the free side of said plates or cakes opposing the plates will cause the plates to approach each other and press therebetween the cake masses and indicate the cake thickness.

5. The process herein described of compressing filter cakes and indicating their thickness, said process consisting, essentially, in arranging a filter agent and an indicating compression plate in opposed relation in a pressure chamber together with further compression plates and filter agents; then producing a hydraulically equalized pressure on both sides of the plate during filtering operation; then disturbing the equalized pressure on one side of the indicating plate by causing a filter cake to wholly occupy the space between one side of said plate and the opposed side of the filter agent; and continuing the hydraulic pressure on the opposite side of said plate to cause the latter to move toward the former and compress the interposed filter cake and indicate the cake thickness.

[Claims 6 to 8 not printed in the Gazette.]

1,218,545. COMBUSTIBLE-CHARGE-FORMING DEVICE. LA ROUX B. GIDDENS, Tampa, Fla. Filed Apr. 8, 1916. Serial No. 89,845. (Cl. 261—12.)



1. In a combustible charge forming device, the combination of a casing, a fuel supply in communication with said casing, an air supply also in communication with said casing, a carbureting chamber within said casing, a fuel cut-off valve located in said casing, a control valve above said carbureting chamber, means for connecting said control and cut-off valves including a swivel connection, and means for regulating the throw of said control valve, substantially as described.

2. In a combustible charge forming device, the combination of a casing providing a carbureting chamber, a fuel supply in communication with said chamber, an air supply also in communication with said chamber, a fuel cut-off valve in said casing, a control valve disposed in said casing, spring means for seating said cut-off and control valves, a swivel connection uniting said valves for simultaneous opening, and means for regulating the throw of said control valve, substantially as described.

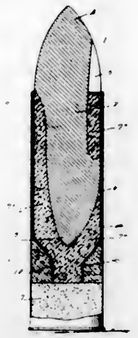
3. In a combustible charge forming device, the combination of a casing providing a carbureting chamber, fuel supplies arranged in communication with said carbureting chamber, an air supply also in communication with said chamber, a fuel cut-off valve in said casing, a stem for said valve, a control valve, a stem projecting from said control valve, a rod connected to said last-named stem, a swivel joining said rod and first-named valve stem, spring means for normally seating said valve, and means for regulating the throw of said control valve, substantially as described.

4. In an improved combustible charge forming device of the character described, the combination of a casing providing a carbureting chamber, a fuel supply in communication with said casing, an air supply also in communication with said chamber, a fuel cut-off valve in said chamber, a control valve associated with said cut-off valve, connections between said valves for actuating the cut-off valve to open when the control valve is moved from its seat, means for regulating the throw of said control valve including a stem on said control valve, a rod adjustable relatively to said stem, cam means for adjusting said rod, and spring means for maintaining said rod in contact with said cam, substantially as described.

5. In a combustible charge forming device of the character described, the combination of a casing, a carbureting chamber located within said casing, a fuel supply, means placing said fuel supply in communication with said chamber, an air supply also in communication with said chamber, a fuel cut-off valve, a stem on said valve, a control valve operable by the engine suction, stems projecting from said control valve, a rod coupled to one stem, a swivel uniting said rod and cut-off valve stem, a sleeve slidably receiving the other of said control valve stems, a rod movably mounted in said sleeve and adapted to engage the control valve stem and limit the movement of the control valve, a cam for adjusting said rod, and spring means for holding said rod in contact with said cam, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,218,546. SUBMARINE TORPEDO. WALTER R. GILLIS, Superior, Wis. Filed Sept. 25, 1915. Serial No. 52,667. (Cl. 102—26.)



1. The combination of a projectile having oppositely tapered terminal portions and provided with spiral grooves and intervening curved faces, packing material disposed in the grooves of the projectile at the base or inner end thereof and a flexible wrapping arranged around the projectile and the packing and adapted to be unwound by the rotary movement of the projectile.

2. The combination with a shell, of a spirally grooved projectile arranged in the shell and packing material disposed in the grooves of the projectile and around the base or inner end thereof and flexible wrapping surrounding the projectile and directed into the shell.

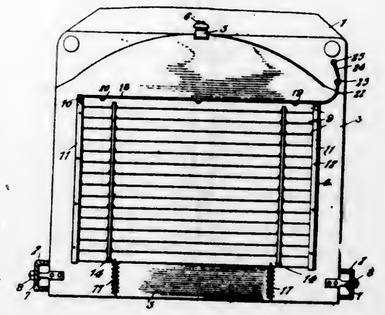
3. The combination of a projectile having curved peripheral faces to be engaged indirectly by the rifling of a gun for rotating the projectile, said projectile being also provided with grooves forming passages for water whereby the latter will operate to hold the projectile straight to its course and packing arranged in the grooves for preventing the escape of gas generated by an explosive and a flexible wrapping arranged around the projectile and the packing and adapted to be unwound by the rotary movement of the projectile.

4. The combination with a shell, of a projectile having a tapered rear or inner end and provided with grooves adapted to form passages for water, said projectile being provided between the grooves with spaces adapted to engage indirectly with the rifling of a gun barrel, packing arranged in the grooves and extending beyond the rear or inner end of the projectile, flexible wrapping extending around the projectile and the said packing, the rear terminal portions of the packing being of a diameter less than the shell and other packing surrounding the rear terminals of the first mentioned packing and interposed between the same and the shell.

1,218,547. RADIATOR-SHIELD. CHARLES GRANSTON, Watkins, N. Y. Filed Mar. 30, 1916. Serial No. 87,841. (Cl. 257—132.)

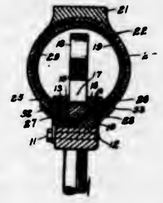
1. In a radiator shield, a body having an opening therein, a plurality of bearing strips, a closure for said opening comprising a plurality of sections hingedly mounted in said strips and adapted to lie in overlapping relation when in closed position, a rod, lugs formed on said rod for attaching the same to the uppermost section, manipulating means associated with said rod, means connecting all of said sections, spring means for returning the sections to closed position when opened by said manipulating means, and means for fastening said body in front of an automobile radiator.

2. The combination of an automobile chassis having openings in the front end thereof, of a radiator shield comprising, a body having an opening therein, a plurality of bearing strips, a closure for said opening comprising a plurality of sections hingedly mounted in said strips and adapted to lie in overlapping relation when in closed position, a rod, lugs formed on said rod for attaching the same to the uppermost section, the free end of said rod being offset to avoid the upper end of one of the bearing strips, a loop formed on the end of said offset portion, manipulating means associated with said lip, means for attaching



said body to the automobile radiator comprising, a pair of oppositely extending bolts adapted to engage the openings in said chassis, and a strap member formed on the upper ends thereof adapted to engage the filler cap of the radiator, spring means for returning the sections to closed position when opened by said manipulating means.

1,218,548. VEHICLE-TIRE. JESSE S. GREEN, Franklin, Pa. Filed June 28, 1916. Serial No. 106,479. (Cl. 152—8.)



1. A tire comprising an anchoring strip provided with undercut slots, a plurality of strips running diagonally of the anchoring strip and having their free ends bent back upon themselves to form hooks engaging the undercut portions of the slots, wedges in said slots, and an outer cover for said strips.

2. A tire comprising an anchoring strip having undercut slots in stepped relation, a pair of tubes each consisting of separate strips arranged edge to edge, and having hooked ends engaging the undercut portions of the slots, wedges in said slots and an outer covering.

3. In a tire, an anchoring strip formed with a slot a resilient strip having its end bent and positioned in the slot, a packing element filling the remaining space of said slot and a rim shaped to prevent the movement of the extremity of the strip out of the slot.

4. In a tire, an anchoring strip having a slot, one wall of which being bulged, a resilient strip having one end formed into a hook and a wedge element placed in said slot for forcing the hooked extremity into engagement with said bulged wall.

5. In combination, a rim, an anchoring strip bearing upon said rim and having annular slots spaced from the rim and resilient strips having their extremities arranged between the anchoring strip and the rim and engaging the walls of the slots.

[Claims 6 and 7 not printed in the Gazette.]

1,218,549. WELL-TUBING CATCHER. SAMUEL ALLEN GUIBERSON, Jr., San Francisco, Cal. Filed Mar. 1, 1916. Serial No. 81,386. (Cl. 103—65.)



1. A well-tubing catcher comprising a head secured upon the tubing, said head being circumferentially turned on a downward and inward taper; gripper slips having inner faces curved to a close fit on the functionally operative zone of the taper of the head; spring links connected with the base of said slips to yieldingly hold them to the head taper; a controlling ring fitted freely about the tubing and to which the lower ends of the spring links are connected; and a weight associated with and movable independently of the tubing, and adapted by its inertia when the tubing drops, to contact with the controlling ring and throw the slips into gripping contact with the well-casing.

2. A well-tubing catcher comprising a head secured upon the tubing, said head being circumferentially turned on a downward and inward taper; gripper slips having inner faces curved to a close fit on the functionally operative zone of the taper of the head; spring links connected with the base of said slips to yieldingly hold them to the head taper; a controlling ring fitted freely about the tubing and to which the lower ends of the spring links are connected; a weight associated with and movable independently of the tubing; and a spring supporting said weight and adapted by its expansion and the inertia of the weight, when the tubing drops, to cause said weight to contact with the controlling ring and throw the slips into gripping contact with the well-casing.

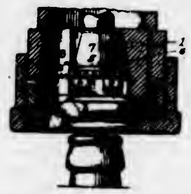
3. A well-tubing catcher comprising a head secured upon the tubing, said head being circumferentially turned on a downward and inward taper, to a shoulder the surface of which is inwardly and downwardly inclined; gripper slips having inner faces curved to a close fit on the functionally operative zone of the taper of the head, said slips having their bases beveled to correspond with the incline of the shoulder at the base of the head taper; spring links connected with the base of said slips to yieldingly hold them to the head taper; a controlling ring fitted freely about the tubing and to which the lower ends of the spring links are connected and a weight associated with and movable independently of the tubing, and adapted by its inertia when the tubing drops, to contact with the controlling ring and throw the slips into gripping contact with the well-casing.

4. A well-tubing catcher comprising a head secured upon the tubing, said head being circumferentially turned on a downward and inward taper, to a shoulder the surface of which is inwardly and downwardly inclined; gripper slips having inner faces curved to a close fit on the functionally operative zone of the taper of the head, said slips having their bases beveled to correspond with the incline of the shoulder at the base of the head taper; spring links connected with the base of said slips to yieldingly hold them to the head taper; a controlling ring fitted freely about the tubing and to which the lower ends of the spring links are connected; a weight associated with and movable independently of the tubing; and a spring supporting said weight and adapted by its expansion and the inertia of the weight, when the tubing drops, to cause said weight to contact with the controlling ring and throw the slips into gripping contact with the well-casing.

5. A well-tubing catcher comprising tube sections and a collar uniting them; a head cast upon the upper end of one of said tube sections and against the base of the uniting collar; gripper slips carried by the head and normally out of contact with the well-casing; links connected with said slips; a controlling ring common to all said links, to operate the slips in unison; and a weight associated with and movable independently of the tubing, and adapted by its inertia when the tubing drops, to contact with the controlling ring and throw the slips into gripping contact with the well-casing.

[Claims 6 to 12 not printed in the Gazette.]

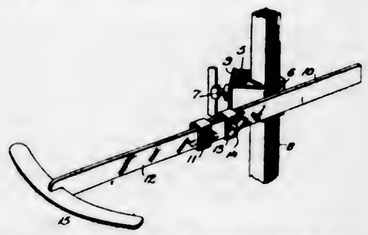
1,218,550. BOTTLE-CAPPING DEVICE. JOHN A. GWINNER, Philadelphia, Pa. Filed Aug. 12, 1916. Serial No. 114,567. (Cl. 113—2.)



1. In a device for bending flanged sealing caps having a laterally projecting tab into locking contact with the heads of bottles, the combination of a capping socket having a passage with a tapered wall, a longitudinally movable cap plunger in said socket, said socket having a clearance space at one side for the free reception of the laterally extended projection or tab of the cap, and provision for additionally crimping the flange of said cap adjacent its junction with the laterally extended projection or tab.

2. In a device for bending flanged sealing caps having a laterally projecting tab into locking contact with the head of a bottle, the combination of a capping socket having a passage with a tapered wall, a longitudinally movable cap plunger in said socket, said socket having a through space at one side of the tapered-wall passage for the free reception of the laterally extended projection or tab of the cap, and provision for additionally crimping said cap at the junction of the laterally extended projection or tab and the flange of the same.

1,218,551. GARMENT-MARKER. MAX GOLDBERG, New York, N. Y. Filed Sept. 10, 1915. Serial No. 49,918. (Cl. 33—9.)



1. In a garment marker, the combination with a rigid upright supporting a garment, of a bar adapted to be secured to the upright at any desired height, an adjustable extension to the arm, and a segmental backing piece carried at the outer end of the extension and adapted to reside within the garment.

2. In a garment marker, the combination with an upright adapted to support a garment, of a clamp adjustable on the upright, a bar secured to the clamp, an extension slidable on the bar, means for locking the extension at a desired point, and a backing segment at the end of the extension and adapted to be located within the garment on the upright.

1,218,552. SWITCHING DEVICE. EDWARD F. HAMILL, Chicago, Ill. Filed Mar. 18, 1915. Serial No. 15,377. (Cl. 175—281.)



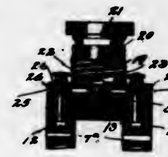
1. In a device of the character described the combination with a supporting plate, an electromagnet having a pair of coils projecting backwardly from said plate, a pivoted armature mounted backwardly of said electromagnet, one end of said armature overlying said electromagnet, a push button projecting through said plate and adapted to coöperate with the end of said armature overlying said electromagnet, said push button being unconnected to said armature, a rod carried by the opposite extremity of said armature and having a lost motion connection therewith, a contact barrel carried by said rod, a contact ring carried by said barrel, and long and short contact springs coöperating with said barrel, said springs by their frictional engagement with said barrel holding said barrel at either end of its throw, the springs of one length being adapted to control the circuit through said electromagnet and the springs of the other length being adapted to control signals.

2. In a device of the character described the combination with a supporting plate, an electromagnet having a pair of coils projecting backwardly from said plate, a pivoted armature mounted backwardly of said electromagnet, one end of said armature overlying said electromagnet, a push button projecting through said plate and adapted to coöperate with the end of said armature overlying said electromagnet, said push button being unconnected to said armature, a rod carried by the opposite extremity of said armature and having a lost motion connection therewith, said rod being slidably mounted in said plate, a contact barrel carried by said rod, a contact ring carried by said barrel, and long and short contact springs coöperating with said barrel, said springs by their frictional engagement with said barrel holding said barrel at either end of its throw, the springs of one length being adapted to control the circuit through said electromagnet and the springs of the other length being adapted to control signals.

3. In a device of the character described the combination with a supporting plate, an electromagnet having a pair of coils projecting backwardly from said plate, a pivoted armature mounted backwardly of said electromagnet, one end of said armature overlying said electromagnet, a push button projecting through said plate and adapted to coöperate with the end of said armature overlying said electromagnet, said push button being unconnected to said armature, a rod carried by the opposite extremity of said armature and having a lost motion connection therewith, a contact barrel carried by said rod, a contact ring carried by said barrel, long and short contact springs coöperating with said barrel, said springs by their frictional engagement with said barrel holding said barrel at either end of its throw, the springs of one length being adapted to control the circuit through said electromagnet and the springs of the other length being adapted to control signals, and contact springs carried by said plate adapted to receive a plug whereby energization of said electromagnet may be effected.

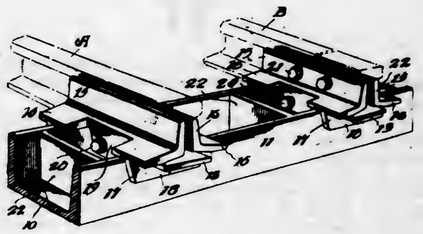
4. In a device of the character described the combination with a supporting plate, an electromagnet having a pair of coils projecting backwardly from said plate, a pivoted armature mounted backwardly of said electromagnet, one end of said armature overlying said electromagnet, a push button projecting through said plate and adapted to coöperate with the end of said armature overlying said electromagnet, said push button being unconnected to said armature, a rod carried by the opposite extremity of said armature and having a lost motion connection therewith, said rod being slidably mounted in said plate, a contact barrel carried by said rod, a contact ring carried by said barrel, long and short contact springs coöperating with said barrel, said springs by their frictional engagement with said barrel holding said barrel at either end of its throw, the springs of one length being adapted to control the circuit through said electromagnet and the springs of the other length being adapted to control signals, and contact springs carried by said plate adapted to receive a plug whereby energization of said electromagnet may be effected.

1,218,553. FUSE-CARRIER. WILLIAM A. HARVEY, Scranton, Pa. Filed Oct. 3, 1912. Serial No. 723,739. (Cl. 175—273.)



A fuse carrier for introducing electrical fuses between the terminals on existing electrical fixtures; said carrier being provided with contacts constructed to engage with the terminals of the existing fixture, and terminals adapted to receive the fuse to be introduced in electrical connection with said contacts; said carrier terminals comprising, respectively, a screw shell and a center contact, whereby they are adapted to receive a plug fuse; and an insulating plate for supporting said terminals above the body of the fuse carrier; the connection between one of said carrier terminals and its corresponding contact being located beneath the insulaitng plate, while the connection between the other terminal and its corresponding contact is located above said plate.

1,218,554. RAILWAY-TIE AND RAIL-FASTENING. JOHN F. HAWLEY, Chillicothe, Mo. Filed Dec. 4, 1916. Serial No. 134,975. (Cl. 238—5.)



1. In a device of the character described, a tie provided with chair flanges, rail clamping plates seating upon the tie, means carried by said plates and engaging opposite margins of said flanges for connecting the plates

with the tie with the said means confronting opposite sides of the tie for holding the plates against movement transversely with respect to the tie, and means connecting the said plates.

2. In a device of the character described, a tie provided with flanges, rail clamping plates seating upon the tie, means carried by said plates and engaging with said flanges for connecting the plates with the tie, and means connecting said plates and coöperating with said first mentioned means for holding the plates in position wedging the rail upon the tie.

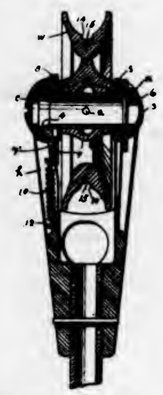
3. In a device of the character described, a tie, rail clamping plates seating upon the tie, means carried by said plates and operatively connecting the plates with the tie, and means adjustably connecting the said plates and operable for clamping the plates against the rail and shifting the said plates to wedge the rail upon the tie.

4. In a device of the character described, a tie provided with side walls having lateral chair flanges extending therefrom, rail clamping plates seated upon the said walls and provided with hooks engaging beneath said flanges from opposite sides thereof, and a clamping element extending between the plates for holding the plates in engagement with a rail seated upon said flanges.

5. In a device of the character described, a tie having the side walls thereof notched to provide rail seats, coacting clamping plates riding upon the upper edges of the side walls of the tie, means carried by said plates and operatively connecting the plates with the tie, and means extending between the plates for holding the said plates in engagement with a rail fitted in said seats and held thereby against movement longitudinally with respect to the tie.

[Claims 6 to 8 not printed in the Gazette.]

1,218,555. TROLLEY-WHEEL MOUNTING. HENRY HOLLAND, Cleveland, Ohio. Filed Jan. 11, 1915. Serial No. 1,507. (Cl. 191—61.)



1. A trolley wheel and mounting therefor having a wedge member interposed therebetween, said wedge member having reversely related wedging surfaces.

2. A trolley wheel and mounting, and a reversible gravity wedge in side contact relations with said wheel and mounting.

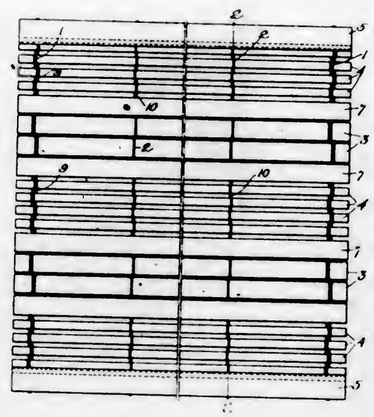
3. In trolley wheel mountings, a wheel and a shaft therefor and a wedge interposed between the said parts at right angles to said shaft and adapted to produce a close contact of the parts at the sides of the wheel and promote the flow of the electric current.

4. In trolley wheel mountings, a harp and a wheel having a hub with finished sides and a shaft through said wheel on which the harp is mounted and a wedge adapted to automatically take up any wear between said parts and to secure a close electrical contact therein, said wedge being transverse to said shaft.

5. A trolley wheel and a harp, a shaft supporting said wheel in said harp and a wedge divided by said shaft and adapted to produce a closed electrical contact between harp and wheel.

[Claims 6 to 10 not printed in the Gazette.]

1,218,556. SCREEN, SHADE, AND THE LIKE. AZEL CLARENCE HOUGH, Janesville, Wis., assignor to Hough Shade Corporation, Janesville, Wis., a Corporation of Connecticut. Filed Mar. 28, 1916. Serial No. 87,354. (Cl. 156—16.)



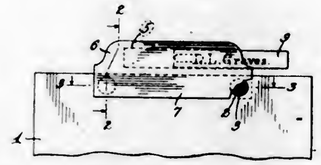
1. A woven screen of the kind described, having a ventilating portion and a non-ventilating portion, said non-ventilating portion comprising transverse slat members, warp strands woven tightly about said members, separating said slats only by the compressive thickness of the warp strands, said ventilating portion comprising a plurality of slats so woven by the warp strands as to be spaced apart a distance greater than the thickness of said warp strands, whereby a woven screen having a woven portion permitting the passage of air currents therethrough is provided.

2. A woven screen of the kind described, having a plurality of ventilating portions separated by a plurality of non-ventilating portions, each non-ventilating portion comprising transverse slat members, warp strands woven tightly about said members separating said slats only by the compressive thickness of the warp strands, each ventilating portion comprising a plurality of slats so woven by the warp strands as to be spaced apart a distance greater than the thickness of said warp strands, whereby a woven screen having woven portions permitting the passage of air currents therethrough is provided.

3. A woven screen of the kind described, comprising a ventilating portion and a non-ventilating portion, said non-ventilating portion consisting in slats held closely together by woven warp strands interlaced about said slats, said ventilating portion having the slats so woven by said warp strands as to be substantially spaced from each other and from the end slat of said non-ventilating portion, in combination with a retaining strip for the warp strands carried by said endmost slat in the non-ventilating portion.

4. A woven screen of the kind described, comprising a plurality of transverse slats held tightly together by warp-strands interlaced over the front and back of alternate slats, separating said slats only by the compressive thickness of the warp-strands, in combination with a plurality of slats held spaced apart by the warp-strands separating said slats by one or more turns constituting a spacing greater than the thickness of said warp strands.

1,218,557. TABBED SHEET. JOHN C. HUB, Jr., Cleveland, Ohio. Filed May 7, 1915. Serial No. 26,611. (Cl. 129—16.8.)



1. The combination with a sheet having an isolated opening therein, of celluloid plates on both sides thereof, and a celluloid bond united with the side plates and extending through the openings in the sheet.

2. A tabbed sheet structure comprising a sheet having an isolated opening within the tab edge, and a tab structure having a celluloid cover with a celluloid bond extending through the opening in the sheet.

3. In a tabbed sheet structure, a sheet having an isolated opening within the tab edge, a celluloid insert within said opening, and a tab structure having celluloid binder strips extending onto the sheet over said insert and amalgamated therewith.

4. In a tabbed sheet structure, a sheet having an isolated opening within the tab edge, an inner tab body extending beyond the tab edge, a celluloid side plate member having portions extending over the inner tab body and onto the sheet over the opening therein, and a celluloid bond within said opening between said side plate portions.

5. In a tabbed sheet structure, a sheet having an isolated opening within the tab edge, an inner tab body of celluloid extending beyond the tab edge, a celluloid side plate member having portions extending over the inner tab body and onto the sheet over the opening therein, and a celluloid bond within said opening between said side plate portions.

[Claim 6 not printed in the Gazette.]

1,218,558. TABBED-SHEET STRUCTURE. JOHN C. HUB, Jr., Cleveland, Ohio. Filed May 27, 1915. Serial No. 30,745. (Cl. 129—16.8.)

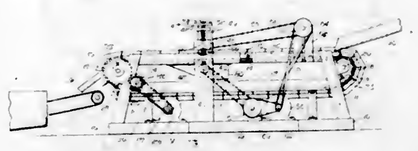


1. In a tabbed sheet structure, a sheet having a tab extending from the tab edge, and a celluloid casing and guide comprising a cover extending over the tab and the adjacent parts of the sheet, and an insert guide arranged between the cover and the tab of the sheet.

2. In a tabbed sheet structure, a sheet, a tab forming a part thereof and extending from the tab edge, and a tab structure comprising a casing extending over the tab of the sheet and onto the adjacent portions thereof, and an insert guide strip arranged between the casing and the tab, and forming spaced guides for an insert, the recess in said strip opening out at one end of the tab.

3. In a tabbed sheet structure, a sheet having an integral tab extending beyond one edge, and a celluloid tab structure arranged thereon comprising a casing of celluloid bent over the tab and onto the adjacent portions of the sheet, a guide strip of celluloid having a recess therein to form an insert pocket, said recess opening out at one end of the tab, and a backing strip of celluloid arranged between the guide strip and the tab of the card.

1,218,559. MACHINE FOR DRYING GARBAGE. ASHTON HULLINGER and BEN HULLINGER, Chicago, Ill., assignors to Vulcan Machinery and Reduction Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 4, 1914. Serial No. 829,574. (Cl. 100—37.)



1. In means for treating garbage and the like, for the purpose set forth, an endless traveling conveyer bed, a lower fixed supporting roll to support the bed, an upper yieldingly pressed roll, above the lower fixed roll to yieldingly press the material on the bed, and yielding means to hold the upper roll out of contact with the bed.

2. In means for treating garbage and the like, for the purpose set forth, an endless traveling conveyer bed, a lower fixed supporting roll to support the bed, and an upper pressing roll above the bed and the lower roll, with adjustable spring pressed means to press the upper roll toward said bed and a yielding abutment to hold the upper roll out of contact with said bed.

3. In means for treating garbage and the like, for the purpose set forth, an endless traveling conveyer bed, a lower fixed supporting roll to support the bed, an upper spring pressed roll to press the material upon said bed, and means to actuate said upper and lower rolls comprising means to impart to said upper roll a peripheral speed greater than the speed of said bed.

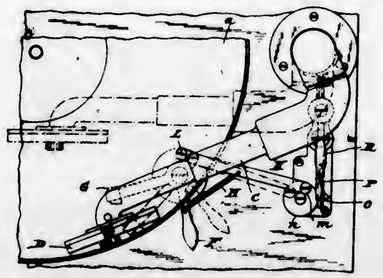
4. A machine for the purpose set forth, comprising a traveling carrier, having a straight treating or supporting surface from end to end of the machine and longitudinally and transversely flexible, said carrier being composed of narrow short links arranged closely side by side to constitute a continuous or unbroken supporting portion, said links having at their ends offset overlapped portions and hinged together at their overlapped portions by transverse hinge rods, said offset overlapped portions being shorter than the main wider bodies of the links, which latter are twice the width of the end offset portions and of substantially greater length than said offset portions, a lower bed-supporting roller, an upper coöperating squeezing roller and supporting and driving means for the rollers and carrier.

5. A machine for the purpose set forth comprising a traveling carrier, having a straight treating or supporting surface from end to end of the machine and longitudinally and transversely flexible, said carrier being composed of narrow short links arranged closely side by side to constitute a continuous or unbroken supporting portion, said links having at their ends offset overlapped portions and hinged together at their overlapped portions by transverse hinge rods, said offset overlapped portions being shorter than the main wider bodies of the links, and the offset portions at the ends of the links being of less length than that of the main bodies of the links, a lower bed-supporting roller with fixed bearings to sustain it, an upper squeezing roller and yielding means to sustain the latter roller and to normally support it out of contact with the carrier but to permit it to be displaced away from the carrier.

1,218,560. STOP DEVICE FOR PHONOGRAPH-DISKS. ARTIE F. IRETON, Richmond, Ind., assignor to The Starr Piano Company, Richmond, Ind., a Corporation of Indiana. Filed Mar. 7, 1916. Serial No. 82,584. (Cl. 74—46.)

1. An automatic brake for stopping the rotation of a phonograph disk comprising in combination a spring actuated brake lever, a rotary notched disk, rigidly connected therewith, a latch lever for engaging said disk when

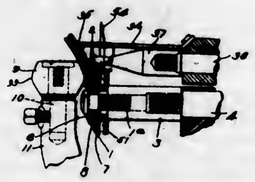
turned by the brake lever, a tripping lever in frictional engagement with the latch lever and a pin depending from the rotary vertical portion of the tone arm for engaging the tripping lever.



2. The combination with a phonograph disk or turntable, a brake lever for engagement therewith, a disk pivoted to the frame of the instrument, a connection between the brake lever and an eccentric pivotal point on said disk, a spring connection between the brake lever and said connection, means for latching the disk to set the brake and means for tripping the latch when the swinging tone arm has reached a given position.

3. The combination with a phonograph disk or turntable, a brake lever for engagement therewith, a disk pivoted to the frame of the instrument, a connection between the brake lever and an eccentric pivotal point on said disk, a spring connected to the brake lever and said connection, a latch for engaging and holding the disk in set position, a lever in frictional engagement therewith, and a pin depending from the vertical part of the swinging tone arm to engage with said lever in any position to which it may have been adjusted.

1,218,561. MACHINE FOR OPERATING ON SOLES. ALBERT E. JOHNSON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 7, 1913. Serial No. 752,565. (Cl. 12—20.)



1. A machine for operating on ribbed soles, having, in combination, inside and outside rib engaging rolls, shaped and coöperating to bend the rib inward at an inclination to the face of the sole, said outside roll being smooth and of relatively greater diameter than the inside roll and said inside roll being provided with teeth to feed the sole, and means for driving said rolls at the same rotational speed whereby the greater peripheral speed of the outside roll causes it to iron the rib from base to top and permanently set it in its inwardly inclined position, substantially as described.

2. A machine for operating on ribbed soles, having, in combination, a tool at the inside of the rib provided with teeth for feeding the sole, a tool at the outside of the rib having a smooth work engaging face, a sole positioning tool at the unribbed face of the sole opposite the rib, said tools being shaped and coöperating to bend the rib inward at an inclination to the face of the sole and to bend the feather away from the rib, and means for causing the outside tool to iron the rib and feather as the sole is fed to permanently set them in their bent positions, substantially as described.

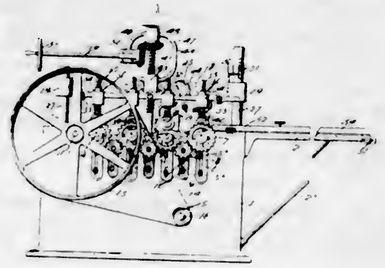
3. A machine for operating on reinforced soles, having, in combination, inside and outside rib engaging rolls shaped and coöperating to set the reinforcing fabric and bend the rib inward at an inclination to the face of the sole, means for driving the rib engaging surfaces of the rolls at differential speeds whereby the faster driven roll is caused to iron the rib and permanently set it inward, and means for maintaining the loose fabric adjacent the operating point normal to the tools to prevent creasing the fabric, substantially as described.

4. A machine for operating on reinforced soles, having, in combination, means for feeding the sole and for operating on its marginal portion including a roll arranged to operate within the rib, a roll arranged to operate outside the rib coöperating with the inside roll to set the reinforcing fabric and bend the rib inward at an inclination to the face of the sole, and means for differentially driving the rib engaging surfaces of the rolls to cause this portion of the outside roll to travel faster than the speed at which the sole is fed and thus rub over the rib and permanently set it inward, substantially as described.

5. A machine for operating upon reinforced soles, having, in combination, means for setting the reinforcing fabric against the rib, means for trimming the excess fabric, and means for securing control of and clearing the severed string of fabric from the machine, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

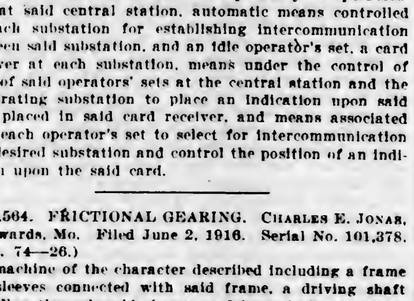
1,218,562. AUTOMATIC JOINTER. DAVID A. JOHNSON, Hammond, Ind. Filed May 11, 1916. Serial No. 96,856. (Cl. 144—118.)



A wood working machine comprising a frame, guiding means carried by the frame, a cutter carried by the frame, an upstanding screw secured rigidly to the frame, a presser framp having a sleeve between its ends slidable upon the screw, means for guiding the presser frame for vertical movement, spring depressed rollers carried by the presser frame above said guiding means, an upstanding yoke carried by said sleeve and having a vertical bearing above the sleeve and a second bearing, a nut rotatable within the first mentioned bearing and threaded upon said screw, said nut having a bevel at its lower end seating upwardly against the first mentioned bearing, a shaft journaled through the second mentioned bearing, and a bevel gear secured upon said shaft within the yoke and meshing with the aforesaid bevel gear.

1,218,563. SIGNALING SYSTEM. MORTON L. JOHNSON, Chicago, Ill. Filed Dec. 4, 1915. Serial No. 64,982. (Cl. 179—2.)

1. A system of the character described comprising a central station and substations, means controlled from the substation for establishing intercommunication between said central station and said substations, a card receiver at the various substations, means controlled at the central station and the coöperating substation to place an indication upon said card, and automatic means controlled at the central station to select for intercommunication any desired substation, said last aforesaid means having means to control the placing of an indication upon said card.



2. A system of the character described comprising a central station and substations, automatic means controlled from the substation for establishing intercommunication between said central station and said substations, a card receiver at the various substations, means controlled at the central station and the coöperating substation to place an indication upon said card, and automatic means controlled at the central station to select for intercommunication any desired substation, said last aforesaid means having means to control the placing of an indication upon said card.

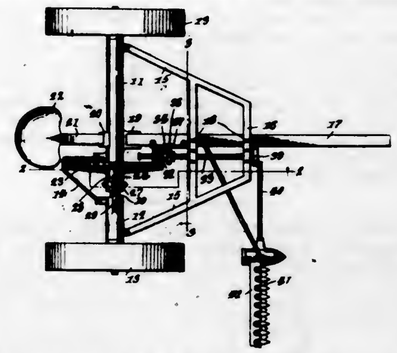
3. A system of the character described comprising a central station and substations, a plurality of operators' sets at said central station, means controlled from each substation for establishing intercommunication between said substation and an idle operator's position, a card receiver at the various substations, means controlled at the central station and the coöperating substation to place an indication upon a card inserted in said receiver, and automatic means controlled at the central station to select an idle operator of a selected group, said last aforesaid means to control the position of an indication upon said card.

4. A system of the character described comprising a central station and substations, a plurality of operators' sets at said central station, means controlled from each substation for establishing intercommunication between said substation and an idle operator's position, a card receiver at the various substations, means controlled at the central station and the coöperating substation to place an indication upon a card inserted in said receiver, and automatic means controlled at the central station to select for intercommunication any desired substation, said last aforesaid means having means to control the position of an indication upon said card.

5. A system of the character described comprising a central station and substations, a plurality of operators' sets at said central station, automatic means controlled at each substation for establishing intercommunication between said substation, and an idle operator's set, a card receiver at each substation, means under the control of each of said operators' sets at the central station and the coöperating substation to place an indication upon said card placed in said card receiver, and means associated with each operator's set to select for intercommunication any desired substation and control the position of an indication upon the said card.

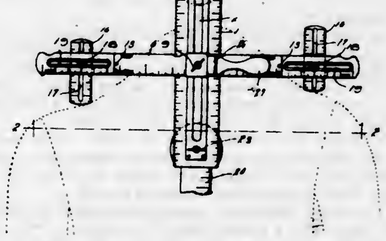
1,218,564. FRICTIONAL GEARING. CHARLES E. JONAS, Edwards, Mo. Filed June 2, 1916. Serial No. 101,378. (Cl. 74—26.)

A machine of the character described including a frame and sleeves connected with said frame, a driving shaft extending through said sleeves, a driven shaft carried by said frame, a gear carried by said driven shaft, a gear plate slidably mounted upon said driving shaft between said sleeves and provided with a hub having a key-way leading from one end and terminating intermediate the length of the hub, a key extending from said driving shaft into the key-way to prevent rotation of the gear plate upon the driving shaft and limit the longitudinal sliding movement of the gear plate in one direction, a guard



yoke connecting said sleeves and extending about said gear plate, a rack carried by one of said sleeves, and an adjusting lever carried by said rack and engaging said gear plate for adjusting the gear plate longitudinally of the driving shaft.

1,218,565. TAILOR'S MEASURING DEVICE. ROBERT KAESER, Milwaukee, Wis. Filed May 19, 1916. Serial No. 98,628. (Cl. 33—2.)



1. A measuring device comprising a supporting member, a laterally disposed member having graduations thereon vertically adjustable on said supporting member, and pieces having graduations thereon mounted to have lateral and vertical adjustment on said laterally disposed member, and foldable parallel therewith, substantially as set forth.

2. A measuring device comprising a supporting member, a laterally disposed member having graduations thereon vertically adjustable on said supporting member, the respective end portions of said laterally disposed member provided with horizontal slots, studs slidably mounted in said slots, and slotted pieces having graduations thereon vertically adjustable on said studs, said slotted pieces being foldable parallel with the laterally disposed member, substantially as set forth.

3. A measuring device comprising a supporting member, a laterally disposed member formed of spaced parts adjustably mounted on said member, side members hingedly mounted on said lateral member and foldable between the parts thereof, and end pieces having graduations thereon mounted to have vertical and lateral adjustment on said side members, substantially as set forth.

4. A measuring device comprising a supporting member, a laterally disposed member formed of spaced parts vertically adjustable on said member, side members formed of

spaced parts pivotally mounted on said lateral member and foldable between the parts thereof, and end pieces mounted to have vertical and lateral adjustment on said side members and foldable between the parts thereof, substantially as set forth.

5. A foldable measuring device comprising a slotted member having graduations thereon, a bolt adjustably mounted in said slotted member, a member comprising spaced parts pivotally mounted on said bolt, side members comprising spaced parts pivotally mounted on the respective ends of said pivoted member and foldable between the parts thereof, and end pieces adjustably mounted on said side member and foldable between the parts thereof, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,218,566. VEGETABLE-BALL CUTTER. TOMEGORO KAWAKUBO, Seattle, Wash. Filed Nov. 27, 1916. Serial No. 133,731. (Cl. 146—7.)



1. An apparatus for forming balls from vegetables, etc., comprising means for cutting into the vegetable including circular and flat knives rotatively connected, and means for rotating the circular knife.

2. A device for cutting portions from vegetables, etc., having a circular rotative knife, a flat curved edged knife in a plane of the diameter of the circular knife, the circular knife revolubly connected to the flat knife, a shank fixed to the circular knife with a handle, and a laterally projecting surface on the back of the flat knife.

3. A device for forming balls or other round solids from the interior of a potato, having means for cutting out a section of the potato, and means for dividing the portion of the potato above the round section.

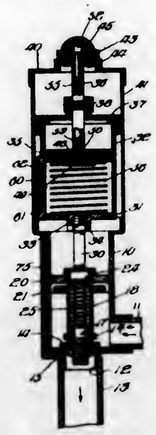
4. A culinary implement comprising an endless double-edged cutter with a radially projecting handle at one side whereby it may be rotated, and a stop connected to the cutter for rotation about the diameter thereof.

5. A culinary implement comprising an endless curvilinear double-edged cutter with a radially projecting handle at one side whereby it may be rotated, and a stop connected to the cutter for rotation about the diameter thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,218,567. AUTOMATIC VALVE DEVICE FOR DISTRIBUTING LIQUID UNDER PRESSURE. EDWARD L. KELLAN, Chicago, Ill. Filed Jan. 5, 1914. Serial No. 810,388. (Cl. 137—93.)

1. Pressure controlled means for intermittently and automatically supplying liquid from a source of liquid under pressure, embracing a cylinder provided with inlet and outlet passages, a valve between them provided with a solid stem, a check controlled motor piston therefor of larger diameter than the valve reciprocating in the cylinder and subject to the pressure of the liquid supply, packing between said piston and cylinder, a closed tubular member of smaller diameter than the piston connected to and depending from said piston and provided with an internal shoulder, and into which said stem loosely extends and against the end of which the valve is adapted to engage, a shoulder on the stem and a compression spring surrounding the stem and interposed between said shoulders on said stem and sleeve.



2. Pressure controlled means for intermittently and automatically supplying liquid from a source of liquid under pressure, embracing a cylinder provided with inlet and outlet passages, a valve between them provided with a stem, a check controlled motor piston therefor of larger diameter than the valve reciprocating in the cylinder and subject to the pressure of the liquid supply, packing between said piston and cylinder, a closed tubular member connected to and depending from said piston and provided with an internal shoulder, and into which said stem loosely extends, a shoulder on the stem, a compression spring surrounding the stem and interposed between said shoulders on said stem and sleeve and a cut-off sleeve movable with the motor piston loosely fitting within said cylinder with its open end so related to the inlet passage and said valve as to substantially cut off the flow of liquid through the valve prior to the seating of the valve.

3. A pressure controlled device for intermittently and automatically supplying liquid from a source under pressure embracing a cylinder 10 provided with inlet and outlet openings, a valve 14 to control the outlet opening having a solid stem 17, a check controlled motor piston 18, of larger diameter than the valve, in said cylinder subject to the pressure of the liquid supply and having a packing fit with the wall of said cylinder, a small centrally disposed tubular member 18 depending from said piston and out of communication with said outlet when the valve is closed, and upwardly into which the stem of said valve loosely extends and against the lower end of which the valve is adapted to be spring-held and provided at its lower end with a shoulder, a spring 25 interposed between said shoulder and a shoulder on the valve stem arranged to permit initial relative movement of the piston and valve and to quickly raise the valve away from its seat near the limit of movement of said piston, a checking device above said piston and a centrally disposed stem 30 connecting said checking device to said piston.

4. A pressure controlled device for intermittently and automatically supplying liquid from a source under pressure embracing a cylinder 10 provided with inlet and outlet openings, a valve 14 to control the outlet opening having a solid stem 17, a check controlled motor piston 18, of larger diameter than the valve, in said cylinder subject to the pressure of the liquid supply and having a packing fit with the wall of said cylinder, a centrally disposed tubular member 18 depending from said piston and out of communication with said outlet when the valve is closed, and upwardly into which the stem of said valve loosely extends and provided at its lower end with a shoulder, a spring 25 interposed between said shoulder and a shoulder on the valve stem arranged to permit initial relative movement of the piston and valve and to quickly raise the valve away from its seat near the limit of movement of said piston, a checking device above said piston, a centrally disposed stem 30 connecting said checking device to said piston, and a cut-off sleeve 86 connected to and movable with said motor piston loosely fitting within the cylinder and movable across the inlet opening, with its lower end so related to the inlet opening and valve seat as to cut off said inlet opening prior to the seating of the valve.

5. Pressure controlled means for intermittently and automatically supplying liquid from a source of liquid under pressure comprising a thoroughfare for the liquid embracing as a part thereof a valve seat; a valve engaging said seat to control said thoroughfare, motor means acted upon by the differential pressure of the liquid against the motor means and valve to open the valve, means connecting the motor means and valve to permit the motor means to initially move independently of the valve and thereafter quickly and fully open the valve and constructed to prevent the flow of water through said thoroughfare until the valve has thus been quickly lifted, combined with means connected to and movable with the motor means to substantially cut off the flow of liquid through the thoroughfare prior to the seating of the valve.

1,218,568. ARTICLE COMPOSED PARTLY OF RUBBER OR THE LIKE. WILLIAM OSCAR KENNINGTON, Anderson, Ind., assignor to Remy Electric Company, Anderson, Ind. Filed May 25, 1914. Serial No. 840,969. (Cl. 18—48.)



1. The method of forming an insulating article, comprising the separate placing in a mold of distinct bodies of unvulcanized rubber and other material capable of flowing and subsequently hardening under the action of heat and pressure, and the subjecting of the whole to heat and pressure.

2. The method of forming a contact member, comprising the separate placing in a mold of metal of a body of a phenolic condensation product adapted to become soft and plastic and then harden when subjected to heat, and a distinct mass of unvulcanized rubber, and the subjecting of the same to heat and pressure, whereby said phenolic condensation product and said rubber become plastic and subsequently hard.

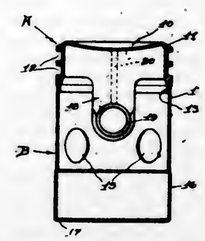
3. The method of forming an insulating article by placing separately in a mold a distinct body of rubber having metallic contacts embedded therein and together adapted to form a contact surface, and a distinct mass of phenolic condensation product and then subjecting the mold to heat, to mold and harden the condensation product into close association with the rubber and the metallic contacts.

4. The method of forming an insulating article, comprising the separate placing in a mold of a distinct body of rubber to form a contact surface, thereafter placing in the mold a distinct body of phenolic condensation product and thereafter subjecting the whole to heat and pressure to harden the condensation product and weld the said product securely together with the distinct rubber portion forming the contact surface.

5. The method of forming an insulating article, which comprises the separate placing in a mold of a distinct body of rubber to form a contact surface adapted to cooperate with a rotary distributer brush, thereafter placing in the mold a distinct mass of plastic phenolic condensation product, and thereafter subjecting the mold and the rubber and condensation product contained therein to the action of sufficient heat and pressure to cause the plastic condensation product to flow into the interstices of the mold and subsequently harden into close association with the rubber portion forming the contact surface.

[Claim 6 not printed in the Gazette.]

1,218,569. PISTON. ROY S. KERN, St. Paul, Minn., assignor of one-half to Leslie H. Blacklock, St. Paul, Minn. Filed Apr. 5, 1916. Serial No. 89,079. (Cl. 74—85.)



1. A piston comprising an inverted cup shaped head with opposed pendent ears thereon perforated at their lower ends, and a tubular metal body telescoped at one end over the lower edge of the head and welded thereto to form a unitary structure, said ears being adapted to form a wrist pin mounting.

2. A piston comprising a head having depending ears thereon, said ears forming a wrist pin mounting and a skirt rigidly and permanently secured on said ears.

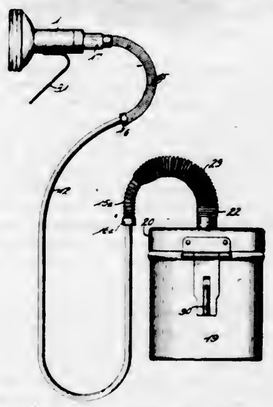
3. A piston comprising an inverted cup shaped head with opposed pendent ears thereon perforated at their lower ends, and a tubular metal body secured at one end to the lower edge of the head, said body having an inturned reinforcing flange at its lower end and said ears being adapted to form a wrist pin mounting.

4. A piston comprising a head having integral depending ears thereon said ears being perforated and supplied with wrist pin bushings welded thereto, and a skirt welded on said ears.

5. A piston comprising a cup shaped head with opposed pendent ears thereon perforated at their lower ends, a tubular metal body contracted at one end and telescoped over the open end of said head, bushings in said ears passing through the walls of said body, the overlapping portions of said head, body and bushings being welded together to form a rigid unitary structure.

[Claims 6 to 11 not printed in the Gazette.]

1,218,570. MINER'S SAFETY ELECTRIC LAMP. RICHARD KOCH, Pittsburgh, Pa., assignor to The Concordia Safety Lamp Company, Inc., Pittsburgh, Pa. Filed Aug. 17, 1916. Serial No. 115,525. (Cl. 240—17.5.)



1. In a miner's electric lamp, the combination comprising a tubular casing flared at one end, a protective sleeve disposed within the tubular portion of said casing, a spring mounting for a lamp bulb, carried by said sleeve,

a lamp bulb, and a glass face clamped to the flared end of the casing and arranged to normally hold said bulb upon its mounting against the pressure of the spring.

2. In a miner's electric lamp, the combination comprising a tubular casing flared at one end, a protective sleeve disposed within said casing, a flanged sleeve slidably mounted in said protective sleeve, a bulb disposed in said flanged sleeve, and projecting within the flared space of the casing, electrical contacts for said bulb, a spring mounting for said flanged sleeve tending to hold said bulb away from one of said contacts, a glass fitting the flared end of the casing and bearing against said bulb, and a clamp to hold said glass in place and press said bulb against its said electric contact.

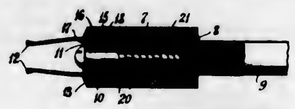
3. In a miner's electric lamp, the combination comprising a casing having a reduced portion and an interior shoulder, a bulb mounted within said casing, a cable carrying electricity to said bulb, a clamp disposed within said reduced portion of the casing and bearing against said shoulder, said clamp being accessible for adjustment from the interior of said casing only, and means for preventing rotation of said clamp within the casing.

4. In a miner's electric lamp, the combination comprising a casing having a reduced and flattened portion and an interior shoulder, a bulb mounted within said casing, a cable carrying electricity to said bulb, and a clamp disposed within said reduced portion of the casing and bearing against the said shoulder, said clamp being flattened to correspond with the flattened portion of the casing within which it fits, and being accessible for adjustment from the interior of the casing only.

5. In a miner's electric lamp, the combination comprising a casing, a lamp bulb mounted therein, a cable extending into said casing, a clamping sleeve disposed within said casing about said cable, said sleeve being slitted from one end to form prongs, means for pressing said prongs against said cable, means for preventing said clamping sleeve from being pulled from said casing, and means for preventing rotation of said clamping sleeve within the casing.

[Claims 6 to 9 not printed in the Gazette.]

1,218,571. WIRE-TERMINAL. BURTON L. LAWTON, Meriden, Conn., assignor to Connecticut Telephone & Electric Company, Inc., Meriden, Conn., a Corporation of Connecticut. Filed Feb. 25, 1916. Serial No. 80,344. (Cl. 173—269.)

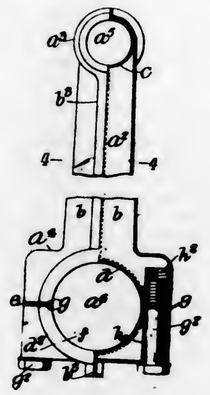


An electric terminal member comprising a tubular handle portion having a deep opening at one end to receive the end of an insulated stranded wire, said handle being provided with a relatively shallow recess in the other end, and having a central reduced passage extending from said recess into said opening in the other end, a terminal having a base arranged to be seated in said recess and held against turning by the wall thereof, said terminal having a passage in line with said central passage, and a tubular rivet extending through both passages and headed at each end to thereby rigidly and permanently secure said base in said angular recess.

1,218,572. CONNECTING-ROD. HEBRON B. LAYMAN, New York, N. Y., assignor to The Layman Pressed Rod Co., Inc., New York, N. Y., a Corporation of New York. Filed Aug. 9, 1915. Serial No. 44,438. (Cl. 74—17.)

1. A connecting rod composed of a plurality of parts connected in the plane of the axis of the crank and provided with a crank bearing, said rod being adapted to be separated through said bearing to form a cap, and said rod and cap being provided with bolt bosses which are formed therein.

2. A connecting rod device comprising a rod formed from sheet metal and a cap, the said rod having butting plates secured thereto.



3. A connecting rod composed of two substantially similar parts connected in the plane of the axis of the crank, the shank portion of the rod being provided with a T-shaped flange.

4. A connecting rod composed of two substantially similar parts connected in the plane of the axis of the crank, the shank portion of the rod being provided with a T-shaped flange which forms ribs around the crankshaft aperture.

5. A connecting rod composed of two substantially similar parts connected in the plane of the axis of the crank, the shank portion of the rod being provided with a T-shaped flange which forms ribs around the piston pin aperture.

[Claims 6 to 15 not printed in the Gazette.]

1,218,573. PROCESS OF CLEANING ANIMAL HAIR AND PRODUCING FERTILIZER. HIRAM Y. MCBRIDE, Artesia, N. Mex. Filed Oct. 6, 1915. Serial No. 54,390. (Cl. 71—6.)

1. The process of treating wool, consisting in applying to raw wool, a comminuted, grease-absorbing, earthy material, and then removing the material with its absorbed animal greases and other matter extraneous to the wool.

2. The process of treating wool, consisting in applying to raw wool a comminuted grease-absorbing, earthy material, removing the material with its absorbed animal greases and other matter extraneous to the wool, and then applying to the wool pulverized sodium bicarbonate to remove remains of the first-named material and bleach or soften the wool, and then removing the sodium bicarbonate.

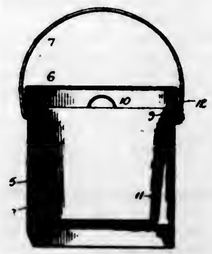
3. The process of treating wool, consisting in applying to the wool finely divided gypsum and then removing from the wool the gypsum, with its absorbed matter and other extraneous material.

4. The process of cleaning wool, consisting in applying to the wool granulated or pulverized gypsum, then removing the gypsum, with its absorbed material and other matter extraneous to the wool, then applying to the wool pulverized sodium bicarbonate and then freeing the wool therefrom.

5. The process of cleaning wool and concurrently producing a fertilizer component, consisting in applying to raw wool a finely divided, grease-absorbing, earthy material, and then discharging from the wool the extraneous material, comprising animal greases absorbed by the cleaning medium, manure, humus and the like.

[Claims 6 to 8 not printed in the Gazette.]

1,218,574. GARBAGE-PAIL. VICTORIA MORTON, New York, N. Y. Filed Aug. 26, 1916. Serial No. 117,020. (Cl. 220—115.)

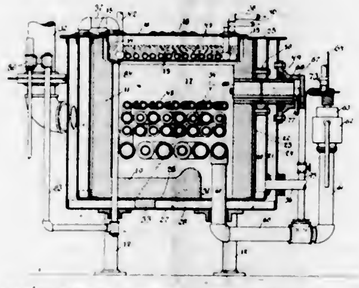


1. In a garbage pail, the combination with the pail, of a basket adapted to be contained therein, and a waterproof bag for the basket.

2. In a garbage pail, the combination with the pail, of a wire basket smaller than the pail and adapted to be contained therein, and a water-proof bag for the basket and adapted to contain the garbage.

3. In a garbage pail, the combination with a pail having a top and a handle, of a wire basket of less diameter than and adapted to be located within the pail, and a water-proof paper bag to fit within the basket.

1,218,575. OIL-GAS PRODUCER. CARL O. NORDENSSON, Chicago, Ill. Filed Jan. 2, 1913. Serial No. 739,646. (Cl. 48—95.)



1. An oil gas producer comprising a combustion chamber, a generator coil therein and its exit pipe, an injector discharging into said coil, a vaporizer, an oil supply pipe extending therethrough and discharging into the injector, an air supply pipe leading to said injector through said vaporizer for delivering heated air to the vaporizer and moistened heated air to said injector and means controlled by heat derived from the combustion chamber for supplying heat to the vaporizer.

2. In an oil gas producer, the combination with a generator, and its exit pipe, of means for supplying a preheated mixture of air and vapor to the generator and means controlled by the heat of the vapor producing medium for supplying preheated oil to the generator and for mixing it with the mixture of air and vapor.

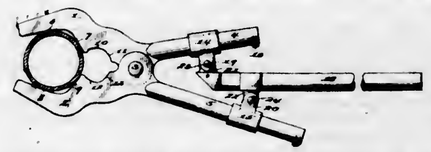
3. An oil gas producer comprising a combustion chamber, a generator therein and its exit pipe, a vaporizer heated from said combustion chamber and having means to supply water thereto, means for passing preheated air through the vaporizer and for supplying the air mixed with vapor to the generator, means for supplying oil to the generator and mixing it with air and vapor, and means for preheating the oil by its passage through the vaporizer.

4. An oil gas producer comprising a closed combustion chamber of refractory material, a generator therein and its exit pipe, an injector discharging into said generator, a vaporizer having means to supply water thereto, an air supply passage leading to the vaporizer with means for preheating the air therein prior to its admission to said vaporizer, and an oil supply pipe leading to said injector, having a portion thereof submerged in the water in said vaporizer whereby the oil is preheated and an air and vapor pipe leading from said vaporizer to said injector.

5. An oil gas producer comprising a closed combustion chamber of refractory material, a generator therein and its exit pipe, an injector discharging into said generator, a vaporizer having means to supply water thereto, an air supply passage leading to the vaporizer with means for preheating the air therein prior to its admission to said vaporizer, an oil supply pipe leading to said injector, having a portion thereof submerged in the water of the vaporizer whereby the oil is preheated, an air and vapor pipe leading from said vaporizer to said injector and means for maintaining supplemental combustion in said chamber comprising an auxiliary pipe leading from the generator exit pipe to the interior of said chamber, and a pipe for delivering air to said chamber.

[Claims 6 to 13 not printed in the Gazette.]

1,218,576. PIPE-WRENCH. HARRY G. NORWOOD, Stovall, N. C., assignor to Howard W. Hall, Richmond, Va. Filed May 6, 1916. Serial No. 95,869. (Cl. 81—91.)



1. An implement of the class described comprising coöperative jaws having actuating levers, an operating handle, and means pivotally connecting said handle to said actuating levers, said means being movable longitudinally on the respective levers.

2. An implement of the class described comprising coöperative jaws and levers for actuating them, an operating lever having leverage-increasing means operatively connecting it to said actuating levers, the operating handle being adjustable bodily in a direction longitudinally of the actuating levers.

3. An implement of the class described comprising coöperating jaws having actuating levers, an operating handle, and slides pivotally connected to said handle and adjustable longitudinally on the respective actuating levers.

4. An implement of the class described comprising jaw-actuating levers arranged in angular relation to one another, slides movable longitudinally on said levers, and an operating handle pivotally connected at different points in its length to the respective slides.

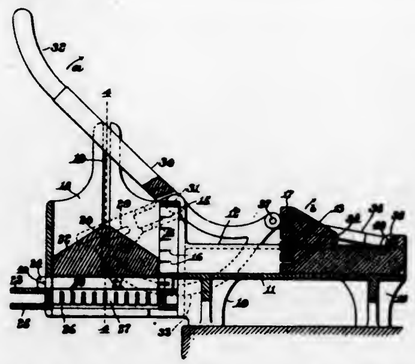
5. An implement of the class described comprising pivoted jaw-actuating levers arranged in angular relation to one another, slides adjustable longitudinally of the respective levers, and an operating handle having a portion arranged between said levers and connected at different points to the respective slides, the opposite end of the handle extending beyond said levers.

1,218,577. VEGETABLE-CUTTER. CHARLES P. NUTTER, Malden, Mass. Filed July 9, 1915. Serial No. 39,170. (Cl. 146—7.)

1. In a device of the class described, the combination of a frame having a bed plate and a bottomless chamber at one end thereof perpendicular to said bed plate; a plunger movable lengthwise of said bed plate; a plunger movable lengthwise of said chamber; a plurality of knives in the wall of said chamber between said plungers; a manually actuated lever for reciprocating both of said plungers; and means associated with said lever for effecting a standstill of said bed plate plunger at the end of its movement in each direction.

2. In a device of the character described, the combination of a bed plate; means for separating a vegetable sup-

ported on said bed plate into a plurality of slabs; means for subsequently dividing said slabs into strips; and a single oscillating member for operating said separating means and dividing means simultaneously during a part of each oscillation.



3. In a device of the character described, the combination of a bed plate; means for separating a vegetable supported on said bed plate into a plurality of slabs; means for subsequently dividing said slabs into cubes; and a single oscillating member for operating said separating means and dividing means simultaneously during a part of each oscillation.

4. In a device of the character described, the combination of a bed plate adapted to support a vegetable; a manually actuated oscillating operating member; means including a plunger operable by the movement of said member in one direction to separate said vegetable into slabs; and means including another plunger operable by the movement of said member in the opposite direction for dividing said slabs into smaller parts.

5. In a device of the character described, the combination of a frame having a bed plate and a bottomless chamber at one end, two opposite walls of which are provided with guide members below said bed plate; a rectangular frame slidably mounted in said frame at the side of said chamber and extending upwardly above the level of said bed plate; a plurality of horizontal knives in said frame parallel to said bed plate; means for forcing a vegetable against and beyond said knives into said chamber; a rectangular frame provided with flanged portions on two opposite sides slidably mounted on said guide members; a plurality of parallel knives mounted in said slidable bottom frame; and means for subsequently forcing the divided portions of said vegetable from the bottom of said chamber beyond the knives positioned therein.

[Claims 6 to 18 not printed in the Gazette.]

1,218,578. ANTIFRICTION DEVICE FOR VACUUM-HOSE. WILLARD A. OSLEY, Springfield, Mass., assignor to Vacuum Hose Protector Company, Springfield, Mass., a Corporation of Massachusetts. Filed Sept. 29, 1916. Serial No. 122,868. (Cl. 137—90.)



1. In a protecting device for a vacuum cleaner hose, a substantially spherical element formed with an opening therethrough to receive the hose and of such size as to permit the device to rotate freely about the axis of the hose.

2. An anti-friction device for the purpose described, comprising a member having a curved outer surface, means for attaching the same to the hose whereby it may rotate about the hose, and means for preventing endwise movement on the hose, as described.

3. An anti-friction device for a vacuum cleaner hose, the outer surface of which is curved and provided with projections having a curved outer surface and adapted to contact with the floor, and means for rotatably retaining said device in place on the hose.

4. In a device of the class described, the combination with a line of hose, of an inti-friction device loosely mounted thereon to permit of rotation on the hose, means for retaining the same in place to prevent longitudinal movement, and means comprising a cord wound about the hose to prevent the same from coming into contact with the floor should said hose sag between the points of support of the anti-friction devices.

5. A device of the class described, comprising, in combination with a line of hose, a substantially spherical member formed with an opening therethrough, the outer forward surface of said member having projections thereon for the purpose of reducing the point of contact of said member and means for loosely and rotatably retaining said spherical member in place.

[Claims 6 and 7 not printed in the Gazette.]

1,218,579. DRILL. ROSCOE E. OVERMAN, Los Angeles, Cal. Filed Oct. 18, 1915. Serial No. 56,641. (Cl. 255—64.)

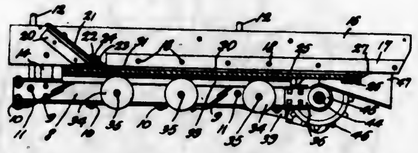


1. A drill, comprising a tubular body member formed with an outwardly flared cutting end having the end face thereof beveled inwardly from its outer edge and formed with diametrically opposed cut-away portions, the side walls of which converge into intersection with each other and intersect the beveled end face radially thereof, forming the cut-away portions of V-shaped cross section of gradually increasing width from the inner margin of the end face to its outer edge.

2. A drill, comprising a tubular body member formed with an outwardly flared cutting end having the end face thereof beveled inwardly from its outer edge and formed with diametrically opposed cut-away portions, the side walls of which converge into intersection with each other and intersect the beveled end face radially thereof, forming the cut-away portions of V-shaped cross section of gradually increasing width from the inner margin of the end face to its outer edge, the portions of the end face between the cut-away portions having arcuate edges projecting beyond the outer face of the body member.

3. A drill, comprising a body member having an unchanneled outer wall and formed with a central longitudinal bore and having an outwardly flared cutting end, the outer edge of which is concentric with the center of the body portion and beveled inwardly toward the bore, said cutting end formed with V-shaped cut-away portions of gradually increasing width from the inner to the outer edge of the body member, said cut-away portions forming radial inwardly inclined cutting edges at the ends of the beveled end faces.

1,218,580. AUTOMATIC LOADER. CHARLES A. PERFECT, Sunbury, Ohio, assignor to The Sunbury Mfg. Co., Sunbury, Ohio. Filed Oct. 20, 1916. Serial No. 126,739. (Cl. 193—11.)



1. In a device of the class described, a receiver comprising a bed frame; side plates connected with the bed frame; a feeder mounted to reciprocate beneath the side plates; an inclined end wall connecting the side plates; a foot plate coöperating with the feeder and slidable for adjustment on the inclined end wall; and means for connecting the foot plate adjustably with the end wall.

2. In a device of the class described, a bed frame; side plates assembled with the bed frame; a feeder mounted to reciprocate beneath the side plates; guide strips carried by the side plates and coacting with the feeder; and means for connecting the guide strips with the side plates adjustably, whereby the guide strips may be raised and lowered, to coöperate with the feeder.

3. In a device of the class described, a bed frame; side plates carried by the bed frame; a feeder mounted to reciprocate beneath the side plates; wear strips removably mounted on the upper face of the feeder; guide strips carried by the side plates and coacting with the wear strips; and means for connecting the guide strips with the side plates for vertical adjustment, whereby the guide strips may be made to coöperate with the wear strips.

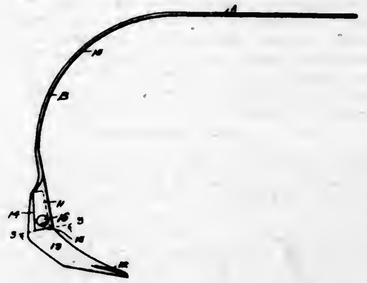
4. In a device of the class described, a bed frame; side plates carried by the bed frame; a feeder supported for sliding movement on the bed frame and operating beneath the side plates; an inclined end wall connecting the side plates; a foot plate slidable for adjustment along the wall; means for securing the foot plate to the wall in adjusted positions; a removable wear strip disposed below the foot plate; and means for securing the wear strip to the feeder.

5. In a device of the class described, a bed frame; side plates connected with the bed frame; a feeder mounted to reciprocate on the bed frame beneath the side plates; removable wear strips mounted on the upper face of the feeder; guide strips mounted on the side plates and coacting with the wear strips; means for connecting the guide strips with the side plates for raising and lowering, whereby the guide strips may be made to coöperate with the wear strips; an inclined wall connecting the side plates; a foot slidable for adjustment on the end wall; means for securing the foot in adjusted positions on the end wall; and a removable wear plate carried by the feeder and operating beneath the foot.

[Claim 6 not printed in the Gazette.]

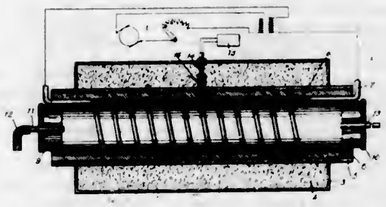
1,218,581. SPRING-TOOTH FOR CULTIVATORS. HILDING F. PETERSON, Marshalltown, Iowa, assignor to Light Draft Harrow Company, Marshalltown, Iowa. Filed May 15, 1916. Serial No. 97,757. (Cl. 55—97.)

1. In a device of the class described, the combination of a spring standard comprising a flat resilient metal bar having a horizontal portion at one end thereof, a downwardly curved portion, said latter portion having at its lower end a rearwardly opening channel with a detachable point having a cutting member, and an upwardly extending shank received in said channel, said point being provided with a horizontal shoulder at its forward edge, adapted to coact with the central portion of said channel and a bolt extended through the walls of said channel and said shank.



2. In a device of the class described, a spring standard comprising a flat resilient metal bar having a substantially horizontal portion, and a downwardly curved portion being bent at its lower end to form a rearwardly opening channel, a detachable point having a cutting portion, an upwardly and rearwardly curved portion, and an upwardly extending flat shank at the upper end of said last described portion, said shank being provided with a horizontal shoulder near the lower portion of its forward edge adapted to coact with the central portion of said channel when the parts are assembled, a bolt extended through the wall of said channel and through said shank, and a nut on said bolt, for holding the forward edge of the shank against the central portion of the channel and for causing the sides of the shank to be frictionally gripped between the walls of the channel.

1,218,582. ELECTRIC FURNACE. CARL A. PFANSTIEHL, Waukegan, Ill., assignor to Pfanstiehl Company, North Chicago, Ill., a Corporation of Delaware. Filed Apr. 15, 1915. Serial No. 21,559. (Cl. 219—36.)

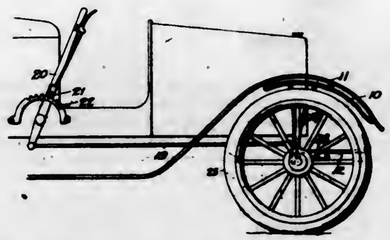


1. An electric furnace comprising, in combination, a hollow cylindrical tube of alundum having a gas-tight outer sheath, an electric current conducting wire helically coiled within said tube from end to end and substantially in contact with the inner walls of the tube, a refractory cement filling the interstices between the several convolutions of the said wire and presenting a smooth cylindrical inner surface, plugs of refractory material substantially filling the open ends of the tube, and piping for conveying a supply of hydrogen directly to and from the interior of said tube.

2. An electric furnace comprising, in combination, a hollow cylindrical tube of alundum having its outer surface provided with a glaze impervious to air or gas, an electric current conducting wire helically coiled within said tube from end to end and substantially in contact with the inner walls of the tube, a refractory cement filling the interstices between the several convolutions of the said wire and presenting a smooth cylindrical inner surface, plugs of refractory material substantially filling the open ends of the tube, and piping for conveying a supply of hydrogen directly to and from the interior of said tube.

3. An electric furnace of the class described comprising, in combination, a furnace chamber of electrically non-conducting material and having its outer surface provided with a glaze impervious to air or gas, a metallic resistance element laid in substantially mechanical contact with the inner walls of said chamber, a cement of refractory material in contact with the inner wall of the furnace chamber and in which the resistance element is substantially embedded, and means for conveying an inert gas to and from the interior of the chamber.

1,218,583. SAFETY-GUARD FOR VEHICLES. JACOB RUBENSTEIN, New York, N. Y. Filed Nov. 29, 1916. Serial No. 134,182. (Cl. 105—131.)



1. In safety guards for vehicles, the combination with the mud guards thereof, of safety guards adapted to lie between the mud guards and the front wheels, a bar journaled on the front axle, arms from the bar carrying the safety guards, and means for rotating the bar.

2. In safety guards for vehicles, the combination with a bar journaled on the front axle of the same, of arms pivoted on the bar, guards at the outer ends of the arms, means connected with the wheels for moving the guards as the wheels change their course, and means for swinging the bar and guard.

3. In safety guards for vehicles, the combination with the front axles and wheels, of a bar journaled on the axle and carrying a fender, arms pivoted on the bar, guards at the ends of the arms, mud guards protecting the same when inoperative, and means for rotating the bar and shifting the guard and fender.

4. In safety guards for vehicles, the combination with the front axles and wheels, of a bar journaled on the same, arms pivoted on the bar, guards at the outer ends of the bar, means for moving the arms in unison, and mud guards to protect the guards when elevated.

5. In safety guards for vehicles, the combination with the front axle thereof, of mud guards secured to the vehicle, safety guards normally located under the mud guards, arms carrying the safety guards, a rotating bar on the axle on which the arms are pivoted, means for rotating the bar, means for swinging the arms on their pivots, and a fender carried by the bar.

[Claims 6 and 7 not printed in the Gazette.]

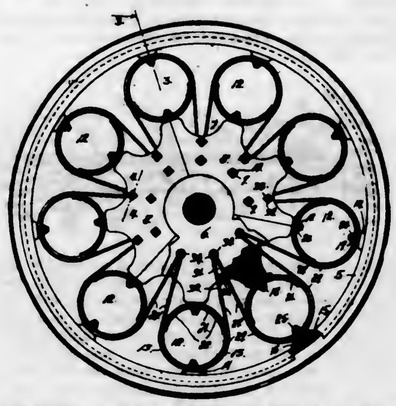
1,218,584. ELECTRODE FOR GENERATING PURE OXYGEN. JOHN F. SANDERS, Roseburg, Oreg., assignor to Oliver P. Coshow, Roseburg, Oreg. Filed Aug. 4, 1915. Serial No. 43,609. (Cl. 204—6.)

1. A compound electrode consisting of a hydrogen absorbing substance and a catalyst adapted to render said electrode capable of giving up its hydrogen when brought into contact with oxygen contained in solution.

2. A compound electrode consisting of hydrogen-absorbing palladium, and the catalyst rhodium adapted to render said palladium capable of giving up its hydrogen when brought into contact with oxygen contained in solution.

3. A compound electrode consisting of hydrogen-absorbing palladium in porous form, and the catalyst rhodium adapted to render said palladium capable of giving up its hydrogen when brought into contact with oxygen contained in solution.

1,218,585. SPRING-WHEEL FOR VEHICLES. CICERO G. SMITH, Palisade, Colo., assignor to Smith Spring Wheel Company, a Corporation of Arizona. Filed Feb. 28, 1912, Serial No. 680,480. Renewed July 31, 1916. Serial No. 112,460. (Cl. 152—50.)

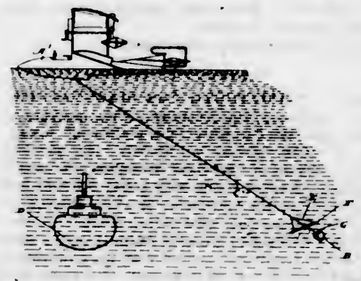


1. A spring wheel for vehicles comprising a rim, a hub, circle springs interposed between the rim and hub, each of said springs being composed of two semi-circular members connected in operative relation, the extremities of the circle spring members being respectively anchored in the hub and rim, a reinforcing spring member of concentric curvature embracing the inner portions of each pair of circle spring members and bridging the joint between them, suitable means for connecting the reinforcing spring member of the circle spring members and the hub of the vehicle, and spoke springs embracing the circle spring members on opposite sides and having their extremities anchored in the hub and the rim respectively, substantially as described.

2. A spring wheel for vehicles, comprising a rim, a hub, circle springs interposed between the rim and the hub, each of said springs being composed of two semi-circular members connected in operative relation, the extremities of the circle spring members being respectively anchored in the rim and hub, and a reinforcing spring member of concentric curvature embracing the inner portions of each pair of circle spring members and bridging the joint between them, substantially as described.

3. In a spring wheel comprising a hub and rim, curved springs interposed between the hub and rim, the extremities of said springs being anchored in the hub and rim, respectively, and a reinforcing spring member of concentric curvature embracing adjacent extremities of each pair of spring members bridging the joints between them.

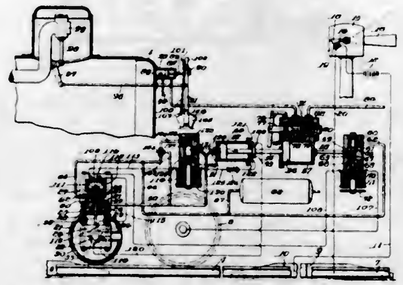
1,218,586. DESTRUCTION OF SUBMARINES. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed June 25, 1915. Serial No. 36,180. (Cl. 244—1.)



1. In apparatus of the class described, the combination with a flying boat of a bomb suspended at some distance below the boat by a suitable cable, and a forwardly and downwardly inclined open tube connected with the bomb and arranged to be pressed downward by the action of the water when it is drawn rapidly through the water.

2. For destroying submarine craft, the combination with a flying boat supported on the water, of a contact bomb suspended in the water at a predetermined distance below the boat, and a downwardly and forwardly inclined member carried by the cable in the vicinity of the bomb and adapted to resist the tendency of the bomb to rise when advancing at high speed.

1,218,587. STOPPING MECHANISM FOR RAILWAY-CARS. FRANK C. WILLIAMS, Philadelphia, Pa., assignor to The Safety Block Signal Company, a Corporation of Delaware. Filed Aug. 15, 1912. Serial No. 715,179. (Cl. 246—58.)



1. In a stop mechanism for a car, the combination with a train pipe, a valve to open said train pipe to actuate a brake mechanism, a valve operating mechanism, the full operation of which actuates said valve, actuating mechanism for starting the operation of said valve operating mechanism at every block, a sigpal, and opposing mechanism controlled by said signal to stop the operation of said valve operating mechanism before it operates said valve and to reset said valve operating mechanism to its normal original position, when said signal is at "safety set" and permitting said valve controlling mechanism to operate to its full extent and open said valve when said signal is "danger set."

2. In a stopping mechanism for a car or train, the combination of a train pipe, a valve to open said train pipe to apply the brakes, a valve controlling and actuating mechanism, the full operation of which will open said valve, a primary actuating mechanism for actuating said valve controlling mechanism and opposing mechanism to oppose the operation of said controlling mechanism, a track, a stationary member for operating said primary actuating mechanism, a signal, and an electric circuit connected to said track and said stationary member and closed by the train or car when the signal is "safety set," said circuit when closed including said stationary member, said actuating member, said opposing mechanism, said signal and said track, and operative when closed to cause said opposing mechanism to prevent the full operation of said controlling mechanism and to reset said controlling mechanism.

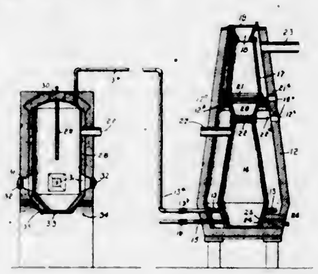
3. In stopping mechanism for a car, the combination of a valve to operate the brake mechanism, of controlling means operative to open said valve to apply the brakes, a normally closed electric circuit, actuating means cooperating with said normally closed circuit operative when broken to effect the actuation of said controlling means, a normally open electric signal circuit, a signal included in said normally open signal circuit, restraining means coöperating with said normally open signal circuit for opposing the operation of said controlling means when said normally open signal circuit is closed, and means arranged to consecutively and automatically open said normally closed circuit and to close said normally open signal circuit when said signal is in safety position.

4. In stopping mechanism for a car, the combination with a valve to apply the brakes, of controlling means operative to open said valve to apply the brakes, a normally closed electric circuit, actuating means coöperative with said normally closed circuit for effecting the actuation of said controlling means, a normally open electric signal circuit, a signal included in said normally open signal circuit, restraining means coöperating with said normally open signal circuit for opposing the operation of said controlling means, and means arranged to consecutively and automatically open said normally closed circuit and to close said normally open signal circuit when said signal is at "safety set," said controlling means being actuated as the result of the opening of said normally closed circuit regardless of the position of said signal and the actuation of said controlling means being opposed as a result of the closing of said normally open signal circuit by the car when said signal is "safety set."

5. In stopping mechanism for a car, the combination with a valve for operating the brake system, of controlling means arranged to actuate said valve, a normally closed electric circuit, a normally open electric signal circuit, a signal included in said normally open signal circuit, means coöperating with said closed circuit for actuating said controlling means, means coöperating with said normally open signal circuit for opposing the actuation of said controlling means, and means controlled by the movement of the car for automatically and consecutively opening said normally closed circuit and closing said normally open circuit when said signal is "safety set."

[Claims 6 to 18 not printed in the Gazette.]

1,218,588. ART OF PRODUCING ALUMINUM CHLORID. MAURICE BARNETT and LOUIS BURGESS, New York, N. Y., assignors to Alchlor Chemical Company, a Corporation of Delaware. Filed Aug. 14, 1916. Serial No. 114,813. (Cl. 23—18.)



1. The herein described process for producing aluminum chlorid consisting in treating aluminum carbid with hydrochloric acid gas in the presence of heat.

2. The herein described process for producing aluminum chlorid, consisting in treating aluminum carbid with hydrochloric acid gas in the presence of heat, and subsequently condensing the volatilized aluminum chlorid thus produced.

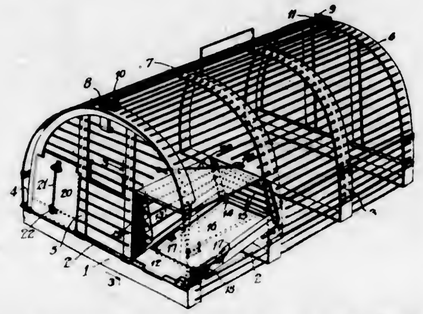
3. The herein described process of producing aluminum chlorid, consisting in treating aluminum carbid with hydrochloric acid gas in a heated retort within a furnace, thereby producing volatile aluminum chlorid, then condensing the volatilized chlorid and heating said furnace by conducting thereto and burning therein a combustible gas evolved in said process.

4. The herein described apparatus for use in producing aluminum chlorid, consisting of a furnace, a retort in said furnace, a charging receptacle in said furnace above said retort, a condenser to which the volatilized aluminum chlorid is conducted from said retort, a gas burner or burners for heating said furnace, and means for leading

a combustible gas, evolved during the production of the aluminum chlorid, from said condenser to said burner or burners.

5. The herein described apparatus for use in producing aluminum chlorid, consisting of a furnace, a retort in said furnace, a charging receptacle in said furnace above said retort, a condenser to which the volatilized aluminum chlorid is conducted from said retort, a hopper between said receptacle and retort, sliding gates at the bottoms of said receptacle and hopper, a gas burner or burners for heating said furnace, and means for leading a combustible gas, evolved during the production of the aluminum chlorid, from said condenser to said burner or burners.

1,218,589. ANIMAL-TRAP. FREDERICK BENOIT, Chicago, Ill. Filed May 1, 1916. Serial No. 94,701. (Cl. 43—24.)



1. An animal trap comprising a base, ends hinged to said base, sides hinged to said base, a top hinged to said sides, said top and sides being shaped and arranged to fold into compact form on said base and a collapsible entrance way in one of said ends and foldable therewith.

2. An animal trap comprising a base, ends hinged to said base, sides hinged to said base, a top hinged to said sides, said top and sides being shaped and arranged to fold into compact form on said base, and a substantially rectangular entrance way having a top, bottom, inner end and one side, said entrance way being located adjacent one of the sides of said trap so that the side of said trap serves as the other side of said entrance way.

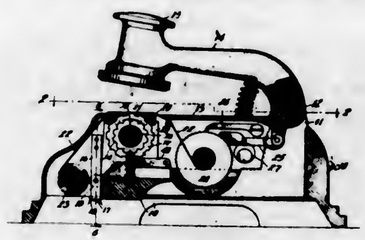
3. An animal trap comprising a base, ends hinged to said base, sides hinged to said base, a top hinged to said sides, said top and sides being shaped and arranged to fold into compact form on said base, a substantially rectangular entrance way having a top, bottom, inner end and one side, said entrance way being located adjacent one of the sides of said trap so that the side of said trap serves as the other side of said entrance way, a pivoted door at the bottom of said entrance way, and a counterweight for normally holding said door in closed position.

4. An animal trap comprising a base, ends hinged to said base, sides hinged to said base, a top hinged to said sides, said top and sides being shaped and arranged to fold into compact form on said base, a substantially rectangular entrance way having a top, bottom, inner end and one side, said entrance way being located adjacent one of the sides of said trap so that the side of said trap serves as the other side of said entrance way, a door pivoted intermediate its ends at the bottom of said entrance way, a counter-weight on one end of said door for normally holding it in a closed position, and a shield underneath said counterweight for preventing animals in said trap from lifting upward thereon and opening said door.

5. An animal trap comprising a base, side wall members hinged to said base, a flexible top hinged to said side members, end wall members hinged to said base and foldable inwardly thereon, an entrance way mounted on one of said end members, said entrance way being collapsible and foldable inwardly together with said end member, and a connection between said end member and entrance way for unfolding said entrance way when said end member is raised to its unfolded position.

[Claims 6 to 9 not printed in the Gazette.]

1,218,590. DATING-STAMP. EMIL C. BURHAMS, Chicago, Ill., assignor to Alexander S. Joslin, Chicago, Ill. Filed Jan. 20, 1913. Serial No. 742,993. (Cl. 101—96.)



1. A dating stamp comprising, in combination: a plurality of printing type-wheels, a multiple sleeve shaft to the parts of which said printing type-wheels are secured and by which said type-wheels are rotated, one part of said shaft being adapted to be rotated relatively to a type-wheel carried by and operable by it, substantially as specified.

2. A dating stamp comprising, in combination: a plurality of printing type-wheels, a multiple sleeve shaft, parts of which are independently rotatable, each of said parts carrying and adapted to rotate a type-wheel, one of said type-wheels being mounted on its part to permit independent relative movement of said part and type-wheel, and means for holding said type-wheel against movement with its part, substantially as specified.

3. A dating stamp comprising, in combination: a plurality of printing type-wheels; a multiple sleeve shaft, the members of which are independently rotatable and each member having secured thereto and rotatable therewith a type-wheel, one of the type-wheels being rotatably mounted on one portion of said shaft, said portion of said shaft also carrying a type-wheel fixed against rotation thereon; and means for preventing the rotation of the type-wheel which is rotatably mounted on the shaft when the type-wheel fixed against rotation on the shaft is rotated by the shaft; substantially as specified.

4. A dating stamp comprising a multiple sleeve shaft, a plurality of type-wheels secured to the members of said shaft, two of said type-wheels being secured to one of said members, one of said type-wheels being frictionally engaged therewith, and means for producing relative movement between said last-mentioned type-wheels, substantially as specified.

5. A dating stamp comprising, in combination: a plurality of type-wheels, a multiple sleeve shaft with parts two less than the number of type-wheels, each of said parts serving to operate one type-wheel and one of said parts three type-wheels, and means for producing relative movement between said three type-wheels, substantially as specified.

[Claim 6 not printed in the Gazette.]

1,218,591. AWNING-SUPPORT. FREDERICK W. BURCH, Pueblo, Colo. Filed Nov. 5, 1914. Serial No. 870,419. (Cl. 156—44.)

1. An awning support comprising a set of lazy tongs having means at the outer end for supporting an awning, and hinges connecting the parts of said support and the support to a building, one of said hinges being constructed to impart a sudden impulse to said support at a predetermined point in the opening thereof.

2. An awning support comprising a set of lazy tongs having means at the outer end for supporting an awning, and hinges for connecting the parts of said support and the support to a building, one of said hinges being constructed to permit of a slight dropping of said tongs as they approach a fully extended position.



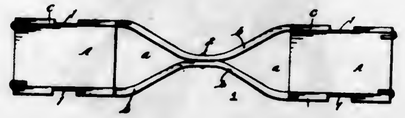
3. An awning support comprising a set of lazy tongs having means at the outer end for supporting an awning, and hinges for connecting the parts of said support and the support to a building, the set of hinges between the support and the building being provided with means for allowing the axes of said hinges to assume a position more inclined to the vertical as the tongs approach a fully extended position.

4. An awning support comprising a set of lazy tongs having means at the outer end for supporting an awning, and hinges for connecting the parts of the support, one of the sets of said hinges having adjustable means for controlling the degree of turning thereof.

5. An awning support comprising a pair of crossed elements, a pair of links connected to said crossed elements and to a bracket, a pair of links connected to the other end of said crossed elements and to pole holding means, hinges interposed between said crossed elements and both said pairs of links and between said first-mentioned links and said bracket, and adjustable means permitting one of the pairs of hinges connecting the crossed elements to the links to pass alinement but regulating the amount which said hinges may pass such alinement.

[Claims 6 to 9 not printed in the Gazette.]

1,218,592. RAIL-TIE. ARTHUR C. CANDLAND, Provo, Utah. Filed Mar. 3, 1916. Serial No. 82,011. (Cl. 238—5.)

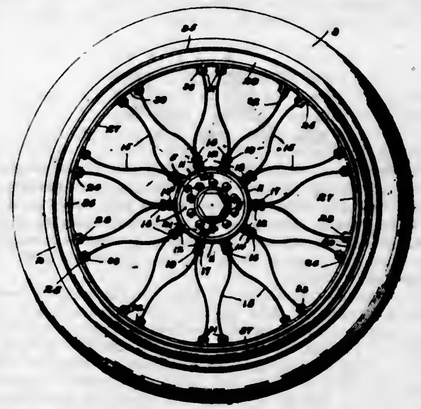


1. A rail tie cut from sheet metal and consisting of duplicate parts which when bent into shape will form two block-holding flanged members; and two opposed side members to retain said block-holding members longitudinally spaced apart and to form soil pockets between the said first mentioned parts.

2. A rail tie cut from sheet metal and consisting of two pairs of duplicate members which when bent into shape will form two block-holding flanged members, having open rail receiving cuts in the sides; and two opposed side members to retain said block-holding members longitudinally spaced apart.

1,218,593. WHEEL CONSTRUCTION. JOHN WORTH CARNAHAN, Washington, D. C., assignor to The Wishbone Steel Wheel Company of America, Washington, D. C., a Corporation of Delaware. Filed Mar. 26, 1915. Serial No. 17,134. (Cl. 152—50.)

1. In a wheel construction, the combination with a hub and felly having spoke receiving members thereon, of flat steel spokes arranged in pairs, each pair being in substantially wish bone formation, each spoke having elongated holes near the ends thereof, said ends terminating in feet, and locking means extending transversely through said spoke receiving members and interposed spokes, said locking means extending through said elongated holes whereby any longitudinal pull upon said spokes will be directed entirely against said spoke receiving members and feet.



2. In a wheel construction, the combination with an insert hub and felly, of flat spring spokes arranged in pairs, said spokes having lateral tongue portions at each end thereof, said tongues normally resting at an angle to the hub and felly, and securing means on the hub and felly having seats for the reception of said tongues, said securing means being arranged whereby when clamped into engagement with said tongues and against the faces of the spokes, said tongues will be forced into alinement with the face of the felly and hub and the spokes stretched lengthwise to tension the same.

3. In a wheel construction the combination with the flanges of the wheel hub, of an insert hub comprising a pair of disk like members adapted to be engaged between the flanges of the wheel hub, the portions of said members forming the insert hub being disposed apart near their inner edges and brought together at their outer edges to form a cavity, the side walls of the cavity having yielding action, the extreme inner edges of the sections being bent inwardly and abutted against each other and the outer edges thereof bent outwardly at right angles to form a flange.

4. In a wheel construction, an insert hub comprising a pair of disk like members having their inner edges bent inwardly and abutted against each other, said disk members being brought together adjacent their outer edges, the extreme outer edges of the disk members being extended at right angles to form a flange, strips of metal surrounding and secured to the flange, the ends of each strip being extended outwardly from the flange and formed into a semi-socket member, the semi-socket member of one strip coöperating with the semi-socket member of the abutting strip to form a circular socket beyond the periphery of said flange and ears on said semi-socket members.

5. In a wheel construction, the combination with a hub and felly, of flat spring spokes arranged in pairs, each spoke having a lateral extension at its ends adapted to engage the hub and felly respectively, said extensions initially resting at an angle to the faces of the hub and felly, securing means attached to the hub and felly having seats to receive said lateral extensions, said securing means initially resting at an angle to the faces of the spokes, means to draw the securing means into alinement with the faces of the spokes whereby said lateral extensions will be forced into alinement with the faces of the hub and felly and the spokes drawn lengthwise to tension the same,

said pairs of spokes being arranged in substantially wish bone formation, whereby any strain or shock to which the hub or felly may be subjected will be equally distributed throughout all of said spokes without changing the said wish bone formation.

[Claims 6 to 16 not printed in the Gazette.]

1,218,594. GRATE-BAR. GERALD S. CARRICK, Chicago, Ill., assignor to Carl Scholz, trustee, Chicago, Ill. Filed July 6, 1915. Serial No. 38,255. (Cl. 126—167.)



1. In a forced draft furnace, a plurality of hollow grate bars, having top, end and side walls, the upper portion of one of the side walls, adjacent the top wall, being beveled, a corresponding portion of the other wall being provided with an angular outwardly extending portion of lesser degree than the angle of the beveled portion on the adjacent grate bar.

2. A hollow grate bar for forced draft furnaces, with top, end and side walls, one of said side walls being beveled adjacent the top wall, the other having an outwardly extended portion, the lower surface of which is inclined.

3. A hollow grate bar for forced draft furnaces, with top, end and side walls, one side wall having an inclined portion adjacent the top wall, the other side wall having an outwardly extended portion, having an inclined lower surface of a different angle than the beveled portion.

1,218,595. INSECT-GUARD. EMIL CHALUPA, New York, and DAVID BROOKS and DAVID BROOKS, Jr., Brooklyn, N. Y. Filed May 13, 1915. Serial No. 27,758. (Cl. 45—15.)



1. In an insect guard, the combination with the leg of a piece of furniture having a socket at its end, of a stem adapted to fit the socket, a bulb with inturned upper edges and a bottom socket, and a caster with a stem adapted to fit the socket of the leg or the bulb.

2. In an insect guard, the combination with the leg of a piece of furniture having a socket, of a cup with a similar socket, and identical stems adapted to fit the sockets; one carrying the cup while the other is provided with a caster.

3. In an insect guard, the combination with a cup having inturned edges and a socket, of an upwardly extending integral stem adapted to be inserted in the socket of a piece of furniture, and an identical stem carrying a caster and adapted to fit either socket.

1,218,596. ARTICLE COMPOSED PARTLY OF RUBBER OR THE LIKE. OLIVER FRANCIS CONKLIN, Anderson, Ind., assignor to Remy Electric Company, Anderson, Ind., a Corporation of Indiana. Filed May 25, 1914. Serial No. 840,970. (Cl. 18—48.)

1. An ignition current distributer comprising a member having an insulating body portion of phenolic condensation product in combination with an insulating contact surface adapted to constitute a track for the travel of a distributer brush, said contact surface being constructed with suitable chemical and physical properties to permanently maintain its insulating characteristics under the continuous action of the brush.



2. An article of manufacture, comprising a member having a body composed of phenolic condensation product, and a contact surface composed of rubber and of conducting material.

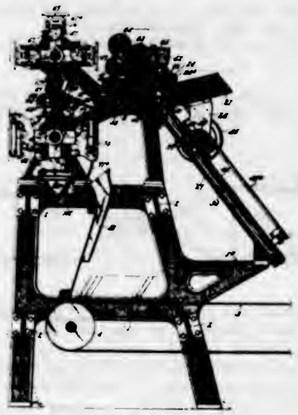
3. An article of manufacture comprising a contact member, having a body composed of bakelite and a contact surface composed of hard rubber and of conducting material.

4. An ignition current distributer comprising a body portion of phenolic condensation product, a contact surface of rubber and a plurality of metallic contact members embedded in the contact surface and in the phenolic body portion and rigidly securing said portions together.

5. An article of manufacture comprising a body composed of phenolic condensation product and a contact surface composed of rubber.

[Claims 6 to 8 not printed in the Gazette.]

1,218,597. MACHINE FOR MAKING ENVELOPS. ORPH W. COWGILL, St. Louis, Mo., assignor of twelve one-hundredths to Otto F. Stifel, twelve one-hundredths to L. H. Tiemann, twelve one-hundredths to A. G. Solari, and twelve one-hundredths to Jacob Bonguer, St. Louis, Mo., and twelve one-hundredths to The Envelope Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed May 18, 1909. Serial No. 496,706. (Cl. 93—62.)



1. In a machine for making envelops, complementary mechanisms revolving about different axes and coöperating with each other for the formation of envelops, one of said complementary mechanisms having a creasing frame which simultaneously acts upon the four sides of the envelop, and means for rocking said complementary mechanisms to compensate for varying arcs of travel.

2. In a machine for making envelops the combination of complementary mechanisms operating about different axes and coöperating with each other in the formation of envelops from blanks, fixed cams for operating the several parts of the forming mechanism, one of which parts is a creasing frame which simultaneously operates upon all four sides of an envelop, and means for rocking said creasing frame and its complementary part to compensate for the varying arcs of movement of said parts.

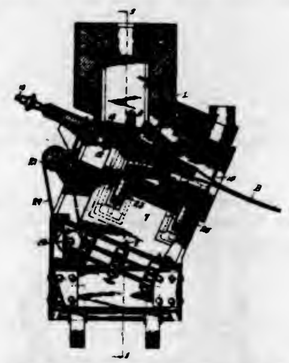
3. In a machine for making envelops the combination of gripping plates revolving about different centers, forming mechanism coöperating therewith, said forming mechanism including a creasing frame which is moved to simultaneously crease the four sides of the envelop, and means for rocking said gripping plates to hold them in parallelism while moving about their respective axes.

4. In a machine for making envelops the combination of gripping plates revolving about different centers, mechanism coöperating therewith to rock said plates and hold them close in parallelism, means for retracting one of said plates, and a creasing frame which coöperates with said gripping plates while they are closed to simultaneously crease the four sides of the envelop.

5. In a machine for making envelops, the combination with gripping plates revolving about different centers and adapted to close upon each other, and means for rocking said gripping plates in their respective mounts, and a creasing frame which coöperates with said gripping plates while they are closed to simultaneously crease the four sides of the envelop.

[Claims 6 to 43 not printed in the Gazette.]

1,218,598. PROCESS OF DRAWING MOLTEN MATERIAL IN CYLINDRICAL FORM. EDWARD DANNER, Toledo, Ohio, assignor to The Libbey Glass Company, Toledo, Ohio, a Corporation of Ohio. Filed Feb. 21, 1916. Serial No. 79,660. (Cl. 49—83.1.)



1. The method of continuously forming tubing from molten material, consisting in supplying molten material to the outer surface of a rotating member, drawing the material from said member in tubular form, and introducing fluid into the drawn tubing through said member.

2. The method of continuously forming tubing from molten matter, consisting in supplying matter in a fluid state to and evenly distributing it on the outer surface of a blow-pipe at the rear of its discharge end and at one side of its axis, drawing the matter from the discharge end of the blow-pipe in tubular form, the blow-pipe being inclined to facilitate such drawing, and introducing fluid into the tubing through the blow-pipe during the drawing operation.

3. The method of continuously forming tubing from molten matter, consisting in supplying matter in a fluid state to and evenly distributing it on the outer surface of a rotating blow-pipe at the rear of its discharge end, drawing the matter from the blow-pipe in tubular form, and introducing a constant stream of fluid of even pressure into the tubing through the blow-pipe during the drawing operation.

4. The method of forming tubing from molten matter, consisting in supplying matter in a fluid state to and evenly distributing it on the outer surface of an inclined rotating blow pipe at the rear of its discharge end, drawing the matter from the discharge end of the blow-pipe in tubular form, and introducing fluid into the tubing through the blow-pipe during the drawing operation.

5. The method of forming tubing from molten matter, consisting in supplying molten matter to and evenly distributing it on the outer surface of a blow-pipe at the rear of its discharge end, maintaining the matter in a highly heated atmosphere while on the blow-pipe, drawing the matter from the discharge end of the blow-pipe in tubular form, and introducing a fluid into the tubing through the blow-pipe during the drawing operation.

[Claims 6 to 39 not printed in the Gazette.]

1,218,599. PAPER AND FABRIC. ARMIN EICHLER, New York, N. Y. Filed June 28, 1916. Serial No. 106,346. (Cl. 91—68.)

1. A new article of manufacture consisting of a sheet of absorbent material impregnated with a mixture containing a vegetable oil and polymerized cumarone.

2. A new article of manufacture consisting of a sheet of absorbent material impregnated with a mixture containing a vegetable oil and the polymerization products of the cumarone and indene groups.

3. A new article of manufacture consisting of a flexible sheet of absorbent material, having applied thereto a mixture containing China wood oil and the polymerization products of the cumarone and indene groups.

4. A new article of manufacture consisting of a flexible sheet of absorbent material, having applied thereto a mixture containing a vegetable oil and the polymerization products of the cumarone and indene groups.

5. A new article of manufacture consisting of a fabric, having applied thereto a mixture containing China wood oil and the polymerization products of the cumarone and indene groups.

[Claims 6 to 16 not printed in the Gazette.]

1,218,600. STORAGE-TANK. CHARLES C. FARDON, Tulsa, Okla., assignor of three-fourths to Floyd A. Sanders and one-fourth to Della L. Sanders, Tulsa, Okla. Filed June 6, 1916. Serial No. 102,063. (Cl. 108—1.)

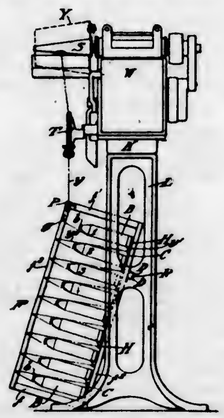


1. A storage tank having a roof including a metal covering therefor, an angle iron secured to the tank near its upper end, the said covering being extended to embrace the edge of a flange of the angle iron, means for securing the covering to the said angle iron, a metal member secured to the roof and embracing the angle iron and having its edge interposed between the said angle iron and the tank, and a filler between the metal member and the angle iron.

2. A storage tank having a roof including a metal covering therefor, an angle iron secured to the tank near its upper end, the said covering being extended to embrace the edge of the flange of the angle iron, means for securing the covering to the said angle iron, a metal member secured to the roof and embracing the angle iron and having its edge interposed between the said angle iron and the tank, a filler between the metal member and the angle iron, and a filler between the angle iron and the tank.

3. A storage tank having a roof including a metal covering therefor, an angle iron secured to the tank near its upper end, the said covering being extended to embrace the edge of the flange of the angle iron, means for securing the covering to the said angle iron, a metal member secured to the roof and embracing the angle iron and having its edge interposed between the said angle iron and the tank, and suitable insulation and crevice filling material associated with the tank, angle iron and metal member.

1,218,601. BOBBIN-MAGAZINE. GEORGE W. FOSTER, Providence, R. I., assignor to Universal Winding Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 18, 1915. Serial No. 67,623. (Cl. 242—131.)



1. In a supply-magazine for textile machines, the combination with means for supporting a plurality of bobbins arranged with their ends connected together in series to adapt the yarn to deliver continuously therefrom, of guiding-means for directing the last-delivering end from one bobbin to the first-delivering end of the next bobbin, and means for yieldingly holding the ends under tension where they lead from one bobbin to another throughout the series.

2. In a supply-magazine for textile machines, the combination with means for supporting a plurality of bobbins arranged with their ends connected together in series to adapt the yarn to deliver continuously therefrom, of a series of guiding-pins arranged in alinement with the axes of the individual bobbins to direct the last-delivering end from one bobbin to the first-delivering end of the next bobbin, and means for yieldingly holding the ends under tension where they lead from one bobbin to another.

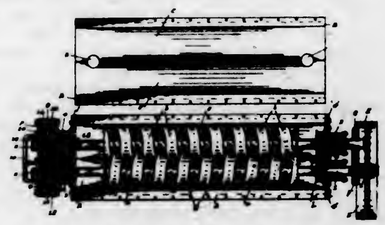
3. In a supply-magazine for textile machines, the combination with means for supporting a plurality of bobbins arranged with their ends connected together in series to adapt the yarn to deliver continuously therefrom, of means for guiding the last-delivering end from one bobbin to the first-delivering end of the next bobbin throughout the series, and spring-clips adapted to seize the ends leading between the bobbins to hold them under tension until the yarn starts to deliver from one bobbin to the next bobbin of the series.

4. In a supply-magazine for textile machines, the combination with a plurality of holders arranged to support a series of bobbins having their ends connected to adapt the yarn to unwind continuously therefrom, of a series of yarn-guides positioned in alinement with the holders to direct the yarn from the base of one bobbin to the nose of the next bobbin in the series, and a series of yarn-holding devices arranged adjacent the bobbin-holders and adapted to yieldingly hold the ends leading from the bases of the bobbins to prevent them from snarling or catching as the yarn draws from one bobbin to another.

5. In a supply-magazine for textile machines, the combination with a frame-like support, of a plurality of bobbin-holders spaced in parallel alinement along one side of the frame to support a series of bobbins arranged with their ends connected to adapt the yarn to deliver continuously from one bobbin to another, a series of yarn-guides on the opposite side of the frame positioned in spaced alinement with the bobbin-holders to direct the yarn from the base of one bobbin to the nose of the next bobbin, and a series of yarn-receiving clips spaced along the side of the frame on which the individual bobbin-holders are supported to hold the ends of the yarn leading from the bases of the bobbins to prevent them from snarling or catching as the yarn draws from one bobbin to another.

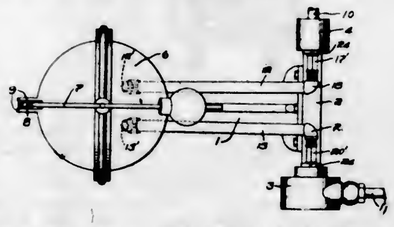
[Claim 6 not printed in the Gazette.]

1,218,602. PUMP. WILLIAM S. HOLDAWAY, Salt Lake City, Utah, assignor to Twin Screw Pump Co., Salt Lake City, Utah, a Corporation. Filed June 2, 1915. Serial No. 31,774. (Cl. 103—44.)



A pump comprising a separable casing having a bearing chamber in each end portion; roller bearings in said chambers; parallel shafts mounted on said bearings; intermeshing screws on said shafts and revoluble therewith and with their ends spaced from the ends of the interior of said casings to form an outlet chamber at one end and an inlet chamber at the other end intermeshing gears on said shafts; a suction pipe connected with the inlet chamber and an outlet pipe connected with the outlet chamber; another casing secured on the end of the first mentioned casing and provided with pressure chambers each of which is connected with said outlet pipe; pressure disks secured on said shafts and operable in said pressure chambers; and ball bearings carried in sockets in said pressure chambers against which the ends of said shafts may bear.

1,218,603. STEAM-TRAP. FRANK A. LITTLEFIELD, Nashua, N. H., assignor to Nashua Machine Co., Nashua, N. H., a Corporation of Maine. Filed Apr. 3, 1911. Serial No. 618,559. (Cl. 137—103.)



1. A steam trap provided with a yoke having opposed arms, a tilting receptacle, and pipes journaled in and communicating with said arms, said opposed arms and pipes having co-acting joint forming faces and being relatively movable in the direction of the axes of said pipes to establish a tight joint, said pipes having angular parts communicating with and supporting said receptacle, said pipes having provision inherent therein for maintaining said joint tight.

2. A steam trap comprising in combination a yoke having opposed arms, substantially horizontal pipes mounted for oscillation in and communicating with said arms, a tilting receptacle, and a pair of pipes in substantially the same plane communicating with said oscillatory pipes and with said receptacle said oscillatory pipes being drawn toward each other by said pair of pipes.

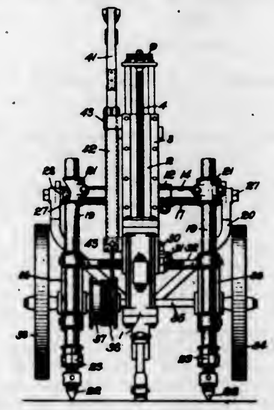
3. A steam trap comprising in combination a yoke having opposed arms, oscillatory pipes mounted in and communicating with said arms, said arms and pipes having co-acting joint forming faces, an outlet valve in one of said arms, a tilting receptacle, and pipes extending from said oscillatory pipes and supporting said receptacle, said latter pipes holding said arms and oscillatory pipes in joint forming relation.

4. A steam trap comprising in combination a yoke having opposed arms, a pair of oscillatory pipes mounted therein, said arms and pipes having co-acting joint forming faces, a tilting receptacle connected to said pipes, and means to draw said pipes axially toward each other, thereby to maintain a tight joint between the said faces of said pipes and said yoke arms.

5. A steam trap comprising in combination a yoke having opposed arms, a pair of oscillatory horizontal pipes mounted in and communicating with said arms, said arms and pipes having co-acting joint forming faces, a tilting receptacle supported by said pipes and communicating therewith, and means to draw said oscillatory pipes axially toward each other, thereby to maintain a tight joint.

[Claims 6 to 27 not printed in the Gazette.]

1,218,604. ROCK-DRILL SUPPORT. DANIEL J. O'ROURKE and FRED D. HOLDSWORTH, Claremont, N. H., assignors, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 21, 1911. Serial No. 650,602. (Cl. 255—51.)



1. The combination with a rock drill of a working support therefor, comprising oppositely inclined angularly adjustable legs on which the drill may be raised or lowered, and a wheeled support also connected to said drill and located to receive the weight of the drill when the latter is lowered by spreading the legs.

2. The combination with a rock drill of a support therefor comprising angularly adjustable inclined supporting legs, and a pair of rotatable supporting wheels upon an axle between the legs and adapted to be lowered to receive the weight of the drill when the legs are spread.

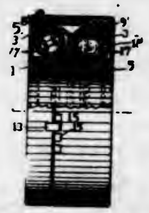
3. The combination with a rock drill of a tripod support comprising a pair of front legs and a back leg and a pair of rotatable supporting wheels upon an axis between the front and back legs, said wheels being normally off the ground when the drill is in operative position, but adapted to be lowered and receive the weight of the drill when the legs are spread.

4. The combination with a rock drill of a supporting shell therefor, a support about which said shell may be clamped to different positions of angular adjustment, angularly adjustable supporting legs for said shell support, and shell supporting wheels, said wheels being on a different axial line from said shell support and located normally to be above the ground but adapted to be dropped thereto and receive the weight of the drill when said legs are spread.

5. The combination with a rock drill of a leg support therefor, said support being adjustable to hold the drill at different inclinations, supporting wheels for said drill, a rigid frame securing said wheels to said leg support, and means for fixing said leg support to hold said wheels above the ground or for tipping the same to drop said wheels upon the ground to support the drill.

[Claims 6 to 16 not printed in the Gazette.]

1,218,605. ANTIFRICTION-BEARING. LOUIS H. SEUBERT, New York, N. Y.; Clara H. Seubert, administratrix of said Louis H. Seubert, deceased, assignor to Seubert Bearing Company, Inc., a Corporation of New York. Filed June 8, 1915. Serial No. 32,831. (Cl. 64—57.)



1. In an anti-friction bearing the combination of relatively movable runways, bearing rolling members between the runways, separating rolling members between the bearing rolling members, the axis of rotation of the separating rolling members being located to one side of a line joining the centers of the adjacent bearing rolling members, tracks for the separating rolling members located on the same side of the centers of the bearing rolling members as are the separating rolling members and connected with the runway on the opposite side of the said centers, and means by which the parts are maintained in a unitary construction independently of their permanent mounting, substantially as described.

2. In an anti-friction bearing the combination of relatively movable runways, one of said runways being formed in a plurality of parts, bearing rolling members between the runways, separating rolling members between the bearing rolling members, the axis of rotation of the separating rolling members being located to one side of a line joining the centers of the adjacent bearing rolling members, tracks for the separating rolling members located on the same side of the centers of the bearing rolling members as are the separating rollers and connected with the runway on the opposite side of the said centers, and means by which the parts are maintained in a unitary construction independently of their permanent mounting, substantially as described.

3. In an anti-friction bearing the combination of relatively movable runways, bearing rolling members between the runways, separating rolling members between the bearing rolling members, the axis of rotation of the separating rolling members being located to one side of a line joining the centers of the adjacent bearing rolling members, tracks for the separating rolling members located on the same side of the centers of the bearing rolling members as are the separating rolling members and connected with the runway on the opposite side of the said centers, and a sleeve by which the parts are maintained in a unitary construction independently of their permanent mounting, substantially as described.

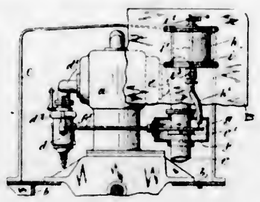
4. In an anti-friction bearing the combination of relatively movable runways, one of said runways being formed in a plurality of parts, bearing rolling members between the runways, separating rolling members between the bearing rolling members, the axis of rotation of the separating rolling members being located to one side of a line joining the centers of the adjacent bearing rolling members, tracks for the separating rolling members located on the same side of the centers of the bearing rolling members as are the separating rolling members and connected with the runway on the opposite side of the said centers, a sleeve comprising a plurality of

members by which the parts are maintained in a unitary construction independently of their permanent mounting and upon which is mounted the said multiple runway, means of variably connecting the sleeve members by which the parts of the said multiple runway may be moved toward one another, and means for locking the sleeve members together, substantially as described.

5. In an anti-friction bearing the combination of inner and outer runways, one of which is rotatable, bearing rolling members interposed between them, the runways being so arranged as to cause rotation of the interposed bearing rolling members upon axes inclined to the axis of rotation of the rotatable runway, separating rolling members arranged between the bearing rolling members, and tracks adapted to hold the separating rolling members in such position that the axes of the separating rolling members intersect the axis of the rotatable runway at the same point at which it is intersected by the axes of rotation of the bearing rolling members, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

1,218,606. STEAM-SUPPLY FOR INTERNAL-COMBUSTION ENGINES. CLARENCE B. STURGES, Fairfield, Conn., assignor to Weiss Engine Company, Wilmington, Del., a Corporation of Delaware. Filed June 28, 1916. Serial No. 106,296. (Cl. 123—25.)



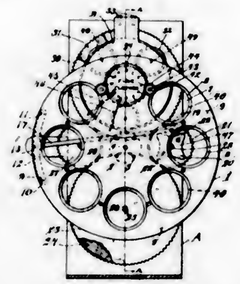
1. In an internal combustion engine in combination with the inlet and exhaust pipes, steam supply devices for the mixture comprising a steam chamber through which the exhaust pipe extends, a fin supported on the exhaust pipe within the chamber, a regulable supply of water for the steam chamber, means to deposit the water on the fin for vaporization, and a pipe to lead the steam from the chamber into the mixture in the inlet pipe.

2. In an internal combustion engine in combination with a carbureter having a high speed air supply chamber and the inlet and exhaust pipes, steam supply devices for the mixture comprising a steam chamber through which the exhaust pipe extends, a horizontally disposed annulus within the chamber encircling the exhaust pipe, a collar on the exhaust pipe to support the annulus, a supply tank for water for the steam chamber mounted on the dash, a sight opening to observe the rate of flow of the water from the tank, a manually adjustable valve carried on the tank for control of the rate of flow, a pipe to lead the water from the tank to the steam chamber, said pipe passing through the wall thereof and terminating above the annulus to deposit the water thereon for vaporization, and an independent pipe to lead the steam from the steam chamber into the high speed air chamber.

1,218,607. STEREOPTICON ADVERTISING-CLOCK. GEORGE WILLENS, Chicago, Ill., assignor to Kineto Machine Company, Chicago, Ill. Filed Feb. 10, 1916. Serial No. 77,456. (Cl. 88—27.)

1. In an apparatus of the class described, a slide wheel equipped with recessed circular openings spaced equi-distant from center of slide wheel and to each other, removable circular transparencies fitting into said openings, screws secured to said slide wheel between said openings, nuts screwed on said screws each to secure one side each of two adjacent transparencies.

2. In an apparatus of the class described, a rotatable slide wheel equipped with recessed circular openings spaced equi-distant from center of slide wheel and to each other, removable circular transparencies fitting into said openings, screws secured to said slide wheel between said openings, nuts screwed on said screws to removably secure said transparencies, each nut clamping the adjacent sides of two transparencies, dogs on one side equi-distant from center of slide wheel and at chordal distances subtending twice the angle of the chordal distance between adjacent circular openings, and a one piece gravity operated rocker escapement fitted with two guards to alternately intercept the dogs successively on said slide wheel.

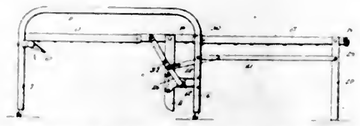


3. In an apparatus of the class described, a rotatable slide wheel equipped with recessed circular openings spaced equi-distant from center of slide wheel and to each other, removable circular transparencies fitting into said openings, screws secured to said slide wheel between said openings, nuts screwed on said screws to removably secure said transparencies, each nut clamping the adjacent sides of two transparencies, a flange riveted to or integral and central with said slide wheel, bored and tapped centrally, dogs on one side equi-distant from center of slide wheel, and at chordal distances subtending twice the angle of the chordal distance between adjacent circular openings and a one piece gravity operated rocker escapement fitted with two guards to alternately intercept the dogs successively on said slide wheel.

4. In an apparatus of the class described, a rotatable slide wheel equipped with recessed circular openings spaced equi-distant from center of slide wheel and to each other, removable transparencies fitting into said openings, screws secured to said slide wheel, nuts screwed on said screws to removably secure said transparencies, a flange integral and central with said slide wheel bored and tapped centrally, a motor driven rotatable shaft screwed into said flange, a collar 5 immovable on said shaft, against said flange, substantially as described, dogs on one side equi-distant from center of slide wheel and at chordal distances subtending twice the angle of chordal distance between adjacent circular openings, and a one piece gravity operated rocker escapement fitted with two guards to alternately intercept the dogs successively on said slide wheel.

5. In an apparatus of the class described, the combination of two gears mounted on and driven by the hour arbor and minute shaft respectively of a going clock movement, two rotatable concentric toothed rings internally supported by grooved rotatable rollers, transmission gears driven by the said mounted gears and driving said toothed rings, a cam removably secured on one of said transmission gears, a one piece gravity operated rocker escapement fitted with two guards to alternately interrupt the dogs successively on a motor driven slide wheel, in loose contact with and rocked by said cam, said slide wheel equipped with recessed circular openings spaced equi-distant from center of slide wheel and to each other, removable circular transparencies fitting into said openings, screws secured to said slide wheel between said openings, nuts screwed on said screws, each to secure one side each of two adjacent transparencies and dogs on one side equi-distant from center of the slide wheel and at chordal distances subtending twice the angle of the chordal distance between adjacent circular openings.

1,218,608. COUCH-BED. HARRY B. ARNOLD, New Britain, Conn., assignor to The National Spring Bed Company, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 14, 1914. Serial No. 812,030. (Cl. 5—49.)



1. A supporting frame and a folding frame, the latter including a body portion, an extensible portion, and a pivotally supported rocking portion, and a pivot for said rocking portion located inside of the supporting frame at a distance therefrom to receive the support of the folding frame and prevent collapse of the folding frame by weight thereon.

2. A supporting frame and a folding frame, the latter including a body portion, an extensible portion, and a rocking portion, a post to support said rocking portion, said post being located inside of said supporting frame in a direction crosswise thereof and spaced from the support of said supporting frame a distance to prevent collapse of the folding frame from weight thereon, and means to pivotally connect the portions of said folding frame.

3. A supporting frame and a folding frame, the latter including a body portion, an extensible portion, and a rocking portion all pivotally united, a bracket extending inwardly in a direction crosswise of the supporting frame from the side supports of said supporting frame at each end thereof, and posts rising from each of said brackets to support the rocking portion of the folding frame, said posts being spaced from the side supports of the supporting frame in a direction crosswise of the latter a distance sufficient to prevent collapse of the folding frame from a weight placed upon it.

4. A main frame and a folding frame supported thereby, said folding frame including a pivotally mounted connecting portion, a body portion pivotally attached thereto, an extensible portion also pivotally attached to the connecting portion, a link connection to control the position of the body portion, and a locking link to lock the link connection in position.

5. A main frame and a folding frame supported thereby, said folding frame including a pivotally mounted connecting portion, a body portion pivotally attached thereto, an extensible portion also pivotally attached to the connecting portion, a link connection to control the position of the connecting portion, and a locking link pivotally connected to the extensible portion to lock the link connection in position.

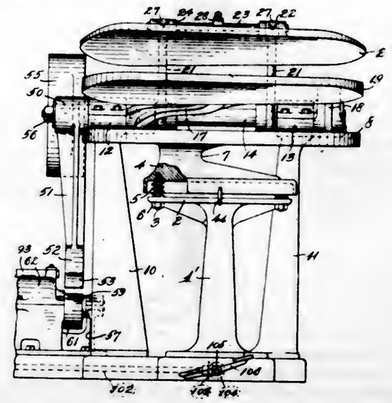
[Claims 6 to 10 not printed in the Gazette.]

1,218,609. CLOTHES-PRESSING MACHINE. DANA H. BENJAMIN, Cleveland, Ohio, assignor to The Guggenheim Laundry Machinery Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 8, 1915. Serial No. 12,954. (Cl. 68—9.)

1. In a pressing machine, a pair of spaced bucks, a movable buck coöperating with said spaced bucks, and freely movable into engagement with either, and pressure mechanism for forcing the movable buck into pressing engagement with either buck.

2. A pressing machine, a pair of spaced bucks yieldingly mounted, an intermediate buck for coöperation therewith and movable into engagement with either, and means for forcing the intermediate buck into pressing relationship with either of said spaced bucks.

3. In a pressing machine, a pair of spaced bucks each having an ironing surface, an intermediate buck having an ironing surface on both of its sides, said surfaces coöperating with the ironing surfaces of the spaced bucks, and pressure mechanism for forcing the intermediate buck into pressing relationship with respect to either of the spaced bucks.



4. In a pressing machine, a standard, a lower buck yieldingly mounted thereon and having an ironing surface upon its upper face, an upper buck support yieldingly mounted, an upper buck carried thereby, an intermediate buck coöperating with the upper and lower bucks, means for supporting said intermediate buck whereby it may be shifted from the upper to the lower buck, and means for forcing the intermediate buck into pressing relationship with either the upper or the lower buck.

5. In a pressing machine, a standard, a lower buck yieldingly mounted thereon and having an ironing surface upon its upper face, an upper buck support yieldingly mounted, an upper buck carried thereby, an intermediate buck coöperating with the upper and lower bucks, means for supporting said intermediate buck whereby it may be shifted from the upper to the lower buck, means for forcing the intermediate buck into pressing relationship with either the upper or lower buck, and means for permitting the equalization of the upper and lower bucks with respect to the intermediate buck so that there will be a uniform engagement of the ironing faces.

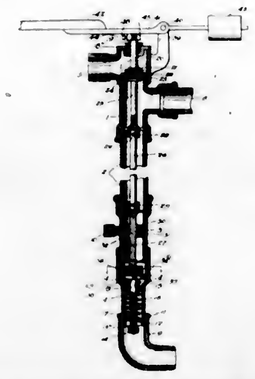
[Claims 6 to 11 not printed in the Gazette.]

1,218,610. FLUSHING MECHANISM FOR WATER-CLOSETS. CHARLES H. COLVIN, Chattanooga, Tenn., assignor to Elizabeth Ellis Colvin. Filed May 2, 1916. Serial No. 94,995. (Cl. 4—28.)

1. A flushing mechanism comprising in combination, a bowl, a movable seat therefor, a reservoir, a water supply pipe, a valving means comprising a valve controlling the flow of water from the supply pipe to the reservoir, and a flushing valve controlling the flow of water from said reservoir to said bowl, seat controlled means adapted to part-way open the flushing valve which is adapted to be completely opened by the water supply pressure, and automatic means acting on the water supply valve to retard the final opening movement of said flushing valve.

2. In a flushing mechanism, a bowl, a movable seat, a reservoir, a water supply pipe having upper and lower valving chambers, a valve stem having thereon a flushing valve in the upper chamber controlling the flow of water from said reservoir to said bowl and a piston valve in said lower chamber controlling the flow of water to said reservoir, there being an opening in said pipe through which said stem with both valves can be bodily withdrawn and reinserted, spring means controlled by the seat to part-way open the flushing valve and close the piston valve

which is adapted to be moved by water pressure to fully open the flushing valve, and means controlled by said stem to retard the accumulation of water pressure to move the piston.



3. In a flushing mechanism, in combination with a bowl and reservoir, a water supply pipe, a valve stem having a supply valve controlling the flow of water to said reservoir from said supply pipe, and a flushing valve controlling the flow of water from said reservoir to said bowl, and means unattached to but controlled by said valve stem for graduating the flow of water through said supply pipe to said supply valve as the valve stem is actuated to insure noiseless operation.

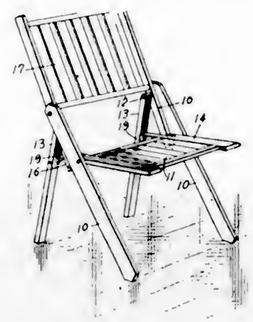
4. In a flushing mechanism, in combination with a bowl and reservoir, a water supply pipe having connections to both bowl and reservoir, a valve stem having a supply valve controlling the flow of water from the supply pipe to said reservoir, and a flushing valve controlling the flow of water from said reservoir to said bowl, a throttling means in said supply pipe in advance of said supply valve and comprising a seat and a valve, adapted to assume a throttling position in said seat responsive to the water pressure and having grooves which taper acutely in the direction of its opening movement relatively to said seat and which are adapted to graduate the flow through said supply pipe to said valves for the purposes described, said grooved valve being controlled in its movements by said first mentioned valve stem.

5. In a flushing mechanism, in combination with a bowl and a reservoir, a water supply pipe having connections to the bowl and reservoir, a valve stem having a flushing valve controlling the flow of water from said reservoir to said bowl and a piston valve to cut off the flow of water from said supply pipe to said reservoir at an intermediate point in its closing travel, and means to control the action on said piston valve of the water supply pressure which is adapted to complete its closing movement and to govern the full opening movement of the flushing valve, as and for the purposes described.

[Claims 6 to 11 not printed in the Gazette.]

1,218,611. FOLDING CHAIR. CLYDE L. CRAIG, Washington Court-House, Ohio, assignor to The Coffman Manufacturing Company, Washington Court-House, Ohio. Filed Apr. 13, 1916. Serial No. 90,874. (Cl. 155—8.)

1. A chair of the type described, comprising forward inclined supporting legs, a seat, the side rails of which are intermediately pivoted to said forward legs intermediate the ends of the latter and have rearward recessed extensions, a back inclined in a greater degree than the inclination of the forward legs, the side bars of which back are extended at their lower ends into the recesses of the seat rails, links pivotally connecting the lower ends of said back side bars to the seat, rear inclined supporting legs pivotally connected at their upper ends to the upper ends of said forward legs by pivot pins extending through said back side bars intermediate the ends of the latter, said rear legs having notches into which the rear extremities of said seat rails engage in operative position, and links pivotally connecting said seat side rails and said rear supporting rails.



2. A chair of the type described, comprising forward inclined supporting legs, a seat, the side rails of which are intermediately pivoted to said forward legs intermediate the ends of the latter, a back, the side bars of which extend below the seat and at the side thereof in operative position, links pivotally connecting the lower ends of the back side bars to the seat, rear supporting legs pivotally connected at their upper ends to the upper ends of the forward legs by means of pivot pins projecting through the back side bars intermediate the ends of the latter, said rear legs having means to receive and engage the rear extremities of the seat side rails in operative position, and links pivotally connecting the rear ends of the seat rails to the said rear legs.

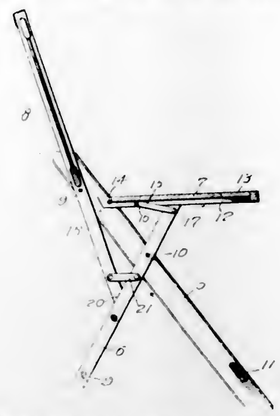
3. A chair of the type described, comprising inclined forward and rear supporting legs, a seat pivotally connected at its rear side portions to said forward legs, links pivotally connecting the rear portion of the seat to the rear legs, a back intermediately pivoted at its sides to the upper ends of the legs and inclined in operative position in a greater degree than the inclination of the forward supporting legs, with the lower ends thereof depending between the forward and rear legs, and links pivotally connecting the said lower ends of the back to the seat.

4. A chair of the type described, comprising inclined forward and rear supporting legs pivotally connected at their upper ends, a seat pivoted at its sides to the forward legs, links pivotally connecting the rear portion of the seat to the rear legs, a back intermediately pivoted at its sides to the upper ends of the supporting legs, and links pivotally connecting the lower side portions of the back to the seat.

5. A chair of the type described, comprising inclined forward and rear supporting legs pivotally connected at their upper ends, a seat pivoted at its sides to the forward legs, links pivotally connecting the rear portion of the seat to the rear legs, a back intermediately pivoted at its sides to the upper ends of the supporting legs, and links pivotally connecting the lower side portions of the back to the seat, said rear legs having means to receive and engage the rear extremities of the seat in operative position.

1,218,612. FOLDING CHAIR. CLYDE L. CRAIG, Washington Court-House, Ohio, assignor to The Coffman Manufacturing Company, Washington Court-House, Ohio. Filed Apr. 13, 1916. Serial No. 90,875. (Cl. 155—8.)

1. The herein described folding chair comprising a pair of spaced front legs, a pair of spaced rear legs crossing the front legs and pivoted thereto, a back including side rails pivotally connected to the front legs, said side rails arranged in coplanar relation with the respective rear legs and adapted to rest at their lower ends against the rear legs when the chair is in extended position, a seat pivoted to the front legs and resting when in extended position upon the upper ends of the rear legs, a pair of upper links pivotally connected at their forward ends to the rear legs and at their rear ends to the seat, and a pair of lower links pivotally connected at their ends to the side rails of the back and to the rear legs.



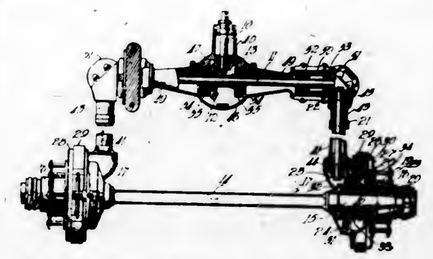
2. The herein described folding chair comprising a pair of front and rear legs crossing each other and pivotally connected together, a back pivotally connected to the front legs and resting, when the chair is in extended position, at its lower end against the rear legs, a seat pivotally connected with the front legs and resting, when the chair is in extended position, against the upper ends of the rear legs, a pair of upper links connected at their rear ends with the seat and at their forward ends with the rear legs near the upper ends of the latter, and a pair of lower links connected at their ends with the back and with the rear legs.

3. In a folding chair, the combination with a pair of rear and front legs crossed and pivotally connected together, a back pivotally connected to the front legs and resting when the chair is in extended position against the rear legs, and a seat pivotally connected to the front legs and resting when the chair is in extended position against the upper ends of the rear legs, a pair of upper links connecting the rear legs and the seat, and a pair of lower links connecting the rear legs and the back, said links operating when the chair seat is lifted to transmit motion to the rear legs and back for moving them into folded position.

4. In a folding chair, the combination of front and rear pivotally connected legs, a back pivotally connected with the front legs and adapted to rest against the rear legs when the chair is in extended position, a seat pivotally connected with the front legs, a pair of upper links connecting the seat with the rear legs, and a pair of lower links connecting the back with the rear legs.

1,218,613. AUTOMOBILE DRIVING MECHANISM. BROR A. ADLER, Chicago, Ill. Filed Aug. 12, 1915. Serial No. 45,164. (Cl. 21—90.)

1. In combination with a relatively stationary axle, of a wheel hub structure containing a bearing to receive the axle and a differential gearing immediately surrounding said bearing, comprising a hub casing upon which to mount the wheel to be driven; a driving member, independent of said axle; an intermediate member rotatable independently of said members and axle; a ratchet annulus carried by said hub casing; a double ended pawl carried by said intermediate member and means carried by the driving member to cause driving engagement of the driving member with the hub casing by movement of either end of said pawl into driving relation with said ratchet annulus according to direction of rotation of said driving member.



2. In combination with a relatively stationary wheel supporting member, of a wheel hub structure containing a bearing to receive the supporting member, and a differential gearing comprising a driving member independent of said supporting member, an intermediate member rotatable independently of the other members, a ratchet annulus connected with said wheel hub, a double ended pawl carried by the intermediate member and means carried by the driving member to cause driving engagement of the driving member with the wheel hub by movement of either end of said pawl into driving relation with said ratchet annulus according to direction of rotation of said driving member.

3. In combination with a relatively stationary axle, of a wheel hub structure containing a bearing to receive the axle and a differential gearing immediately surrounding said bearing, comprising a hub casing upon which to mount the wheel to be driven; a driving member independent of said axle and having notches formed in the periphery thereof, an intermediate member rotatable independently of said members and axle, a ratchet annulus carried by said hub casing, a plurality of double ended pawls having radially inwardly extending lugs formed thereon for engagement with the notches in the driving member, said double ended pawls being carried by the intermediate member, whereby either one or the other of the ends of said pawls are moved into driving relation with the said ratchet annulus according to the direction of rotation of said driving member.

REISSUES.

14,266. APPARATUS FOR SORTING HETEROGENEOUS MATERIAL. JOSEPH W. BRYAN, New York, N. Y., and DANIEL R. BRYAN, Chatham, N. J.; said Joseph W. Bryan assignor to said Daniel R. Bryan. Filed Mar. 25, 1916. Serial No. 86,696. Original No. 1,099,420, dated June 9, 1914, Serial No. 756,421, filed Mar. 24, 1913. (Cl. 83—54.)

1. In a machine of the class described, the combination of a hollow screen member having inlet and outlet openings, means for feeding material within said member, suction means for transversely withdrawing under-sized material through the walls of said screen, and suction means for simultaneously drawing over-sized material longitudinally of the screen member through said outlet.

2. In a machine of the class described, the combination of a tubular screen having inlet and outlet openings, means for feeding material within said screen, a discharge chute arranged at the outlet of the screen and in axial alinement with such screen, suction means for transversely withdrawing under-sized material through the walls of the screen, suction means connected with the discharge chute for simultaneously drawing over-sized material longitudinally of the screen and through the out-

which is adapted to be moved by water pressure to fully open the flushing valve, and means controlled by said stem to retard the accumulation of water pressure to move the piston.



3. In a flushing mechanism, in combination with a bowl and reservoir, a water supply pipe, a valve stem having a supply valve controlling the flow of water to said reservoir from said supply pipe, and a flushing valve controlling the flow of water from said reservoir to said bowl, and means unattached to but controlled by said valve stem for graduating the flow of water through said supply pipe to said supply valve as the valve stem is actuated to insure noiseless operation.

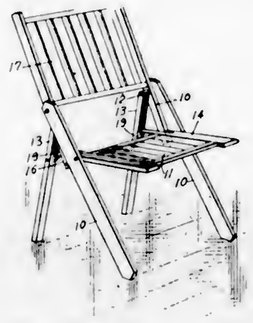
4. In a flushing mechanism, in combination with a bowl and reservoir, a water supply pipe having connections to both bowl and reservoir, a valve stem having a supply valve controlling the flow of water from the supply pipe to said reservoir, and a flushing valve controlling the flow of water from said reservoir to said bowl, a throttling means in said supply pipe in advance of said supply valve and comprising a seat and a valve, adapted to assume a throttling position in said seat responsive to the water pressure and having grooves which taper acutely in the direction of its opening movement relatively to said seat and which are adapted to graduate the flow through said supply pipe to said valves for the purposes described, said grooved valve being controlled in its movements by said first mentioned valve stem.

5. In a flushing mechanism, in combination with a bowl and a reservoir, a water supply pipe having connections to the bowl and reservoir, a valve stem having a flushing valve controlling the flow of water from said reservoir to said bowl and a piston valve to cut off the flow of water from said supply pipe to said reservoir at an intermediate point in its closing travel, and means to control the action on said piston valve of the water supply pressure which is adapted to complete its closing movement and to govern the full opening movement of the flushing valve, as and for the purposes described.

[Claims 6 to 11 not printed in the Gazette.]

1,218,611. FOLDING CHAIR. CLYDE L. CRAIG, Washington Court-House, Ohio, assignor to The Coffman Manufacturing Company, Washington Court-House, Ohio. Filed Apr. 13, 1916. Serial No. 90,874. (Cl. 155—8.)

1. A chair of the type described, comprising forward inclined supporting legs, a seat, the side rails of which are intermediately pivoted to said forward legs intermediate the ends of the latter and have rearward recessed extensions, a back inclined in a greater degree than the inclination of the forward legs, the side bars of which back are extended at their lower ends into the recesses of the seat rails, links pivotally connecting the lower ends of said back side bars to the seat, rear inclined supporting legs pivotally connected at their upper ends to the upper ends of said forward legs by pivot pins extending through said back side bars intermediate the ends of the latter, said rear legs having notches into which the rear extremities of said seat rails engage in operative position, and links pivotally connecting said seat side rails and said rear supporting rails.



2. A chair of the type described, comprising forward inclined supporting legs, a seat, the side rails of which are intermediately pivoted to said forward legs intermediate the ends of the latter, a back, the side bars of which extend below the seat and at the side thereof in operative position, links pivotally connecting the lower ends of the back side bars to the seat, rear supporting legs pivotally connected at their upper ends to the upper ends of the forward legs by means of pivot pins projecting through the back side bars intermediate the ends of the latter, said rear legs having means to receive and engage the rear extremities of the seat side rails in operative position, and links pivotally connecting the rear ends of the seat rails to the said rear legs.

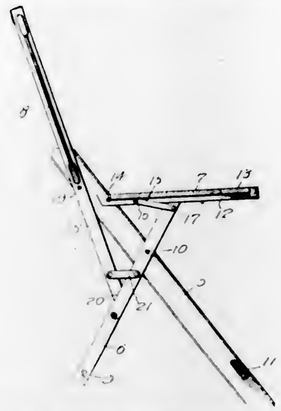
3. A chair of the type described, comprising inclined forward and rear supporting legs, a seat pivotally connected at its rear side portions to said forward legs, links pivotally connecting the rear portion of the seat to the rear legs, a back intermediately pivoted at its sides to the upper ends of the legs and inclined in operative position in a greater degree than the inclination of the forward supporting legs, with the lower ends thereof depending between the forward and rear legs, and links pivotally connecting the said lower ends of the back to the seat.

4. A chair of the type described, comprising inclined forward and rear supporting legs pivotally connected at their upper ends, a seat pivoted at its sides to the forward legs, links pivotally connecting the rear portion of the seat to the rear legs, a back intermediately pivoted at its sides to the upper ends of the supporting legs, and links pivotally connecting the lower side portions of the back to the seat.

5. A chair of the type described, comprising inclined forward and rear supporting legs pivotally connected at their upper ends, a seat pivoted at its sides to the forward legs, links pivotally connecting the rear portion of the seat to the rear legs, a back intermediately pivoted at its sides to the upper ends of the supporting legs, and links pivotally connecting the lower side portions of the back to the seat, said rear legs having means to receive and engage the rear extremities of the seat in operative position.

1,218,612. FOLDING CHAIR. CLYDE L. CRAIG, Washington Court-House, Ohio, assignor to The Coffman Manufacturing Company, Washington Court-House, Ohio. Filed Apr. 13, 1916. Serial No. 90,875. (Cl. 155—8.)

1. The herein described folding chair comprising a pair of spaced front legs, a pair of spaced rear legs crossing the front legs and pivoted thereto, a back including side rails pivotally connected to the front legs, said side rails arranged in coplanar relation with the respective rear legs and adapted to rest at their lower ends against the rear legs when the chair is in extended position, a seat pivoted to the front legs and resting when in extended position upon the upper ends of the rear legs, a pair of upper links pivotally connected at their forward ends to the rear legs and at their rear ends to the seat, and a pair of lower links pivotally connected at their ends to the side rails of the back and to the rear legs.



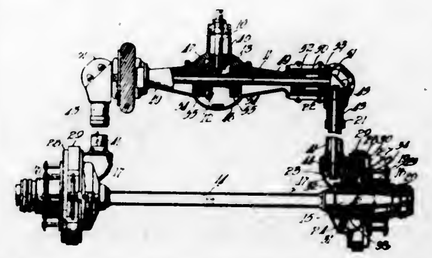
2. The herein described folding chair comprising a pair of front and rear legs crossing each other and pivotally connected together, a back pivotally connected to the front legs and resting, when the chair is in extended position, at its lower end against the rear legs, a seat pivotally connected with the front legs and resting, when the chair is in extended position, against the upper ends of the rear legs, a pair of upper links connected at their rear ends with the seat and at their forward ends with the rear legs near the upper ends of the latter, and a pair of lower links connected at their ends with the back and with the rear legs.

3. In a folding chair, the combination with a pair of rear and front legs crossed and pivotally connected together, a back pivotally connected to the front legs and resting when the chair is in extended position against the rear legs, and a seat pivotally connected to the front legs and resting when the chair is in extended position against the upper ends of the rear legs, a pair of upper links connecting the rear legs and the seat, and a pair of lower links connecting the rear legs and the back, said links operating when the chair seat is lifted to transmit motion to the rear legs and back for moving them into folded position.

4. In a folding chair, the combination of front and rear pivotally connected legs, a back pivotally connected with the front legs and adapted to rest against the rear legs when the chair is in extended position, a seat pivotally connected with the front legs, a pair of upper links connecting the seat with the rear legs, and a pair of lower links connecting the back with the rear legs.

1,218,613. AUTOMOBILE DRIVING MECHANISM. BROR A. ADLER, Chicago, Ill. Filed Aug. 12, 1915. Serial No. 45,164. (Cl. 21—90.)

1. In combination with a relatively stationary axle, of a wheel hub structure containing a bearing to receive the axle and a differential gearing immediately surrounding said bearing, comprising a hub casing upon which to mount the wheel to be driven; a driving member, independent of said axle; an intermediate member rotatable independently of said members and axle; a ratchet annulus carried by said hub casing; a double ended pawl carried by said intermediate member and means carried by the driving member to cause driving engagement of the driving member with the hub casing by movement of either end of said pawl into driving relation with said ratchet annulus according to direction of rotation of said driving member.



2. In combination with a relatively stationary wheel supporting member, of a wheel hub structure containing a bearing to receive the supporting member, and a differential gearing comprising a driving member independent of said supporting member, an intermediate member rotatable independently of the other members, a ratchet annulus connected with said wheel hub, a double ended pawl carried by the intermediate member and means carried by the driving member to cause driving engagement of the driving member with the wheel hub by movement of either end of said pawl into driving relation with said ratchet annulus according to direction of rotation of said driving member.

3. In combination with a relatively stationary axle, of a wheel hub structure containing a bearing to receive the axle and a differential gearing immediately surrounding said bearing, comprising a hub casing upon which to mount the wheel to be driven; a driving member independent of said axle and having notches formed in the periphery thereof, an intermediate member rotatable independently of said members and axle, a ratchet annulus carried by said hub casing, a plurality of double ended pawls having radially inwardly extending lugs formed thereon for engagement with the notches in the driving member, said double ended pawls being carried by the intermediate member, whereby either one or the other of the ends of said pawls are moved into driving relation with the said ratchet annulus according to the direction of rotation of said driving member.

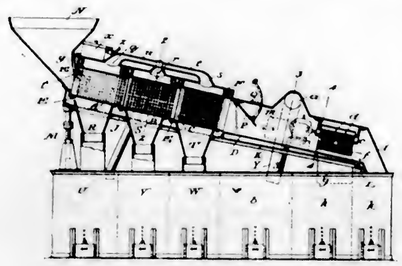
REISSUES.

14,266. APPARATUS FOR SORTING HETEROGENEOUS MATERIAL. JOSEPH W. BRYAN, New York, N. Y., and DANIEL R. BRYAN, Chatham, N. J.; said Joseph W. Bryan assignor to said Daniel R. Bryan. Filed Mar. 25, 1916. Serial No. 86,696. Original No. 1,099,420, dated June 9, 1914, Serial No. 756,421, filed Mar. 24, 1913. (Cl. 83—54.)

1. In a machine of the class described, the combination of a hollow screen member having inlet and outlet openings, means for feeding material within said member, suction means for transversely withdrawing under-sized material through the walls of said screen, and suction means for simultaneously drawing over-sized material longitudinally of the screen member through said outlet.

2. In a machine of the class described, the combination of a tubular screen having inlet and outlet openings, means for feeding material within said screen, a discharge chute arranged at the outlet of the screen and in axial alinement with such screen, suction means for transversely withdrawing under-sized material through the walls of the screen, suction means connected with the discharge chute for simultaneously drawing over-sized material longitudinally of the screen and through the out-

let thereof, and a device located between the outlet of the screen and the last-mentioned suction means for regulating the flow of material to the chute and to the last mentioned suction means.



3. In an apparatus for separating and recovering the ingredients of domestic refuse, the combination of means for preliminarily sizing material, said means including a screen for removing the heavy fine particles, and pneumatic means for removing the light fine particles, an extended supporting and transporting surface arranged to receive the oversized material from said preliminary sizing means and pneumatic means for drawing the oversized material from the preliminary sizing means and adapted to act on the material on the supporting and transporting surface for removing the larger lighter particles from the mass, and leave the residue as a substantially thin layer or stratum thereon, whereby the material is conditioned to have the metallic particles exposed for removal.

4. In an apparatus for separating and recovering the ingredients of domestic refuse, the combination of means for preliminarily sizing the material, said means including a screen for removing the heavy fine particles, and pneumatic means for removing the light fine particles, a support arranged to receive the oversized material from said preliminary sizing means, and pneumatic means for drawing the oversized material out of and away from the preliminary sizing means onto said support and adapted to remove the larger lighter particles from the mass, and leave the residue as a substantially thin layer or stratum thereon, whereby to condition the material to have the metallic particles exposed for removal.

5. In combination, means for preliminarily sizing material to be sorted, a support arranged to receive the oversized material from said means, and pneumatic means for simultaneously drawing the oversized material away from the preliminary sizing means onto said support and adapted to remove the larger lighter particles from the mass and leave the residue as a substantially thin layer or stratum thereon whereby to condition the material to have the metallic particles exposed for removal.

6. In combination, means for preliminarily sizing material to be sorted, an extended supporting and transporting surface arranged to receive the oversized material from said means, and pneumatic means for simultaneously drawing the oversized material from the preliminary sizing means and adapted to act on the material on the support, for removing the larger lighter particles from the mass, and leave the residue as a substantially thin layer or stratum, whereby to condition the material to have the metallic particles exposed for removal.

7. In combination, means for preliminarily sizing material to be sorted, a support arranged to receive the oversized material from said means, and means for creating a fluid current for simultaneously drawing the oversized material away from the preliminary sizing means onto said support and adapted to remove the larger lighter particles from the mass and leave the residue as a substantially thin layer or stratum thereon, whereby to condition the material to have the metallic particles exposed for removal.

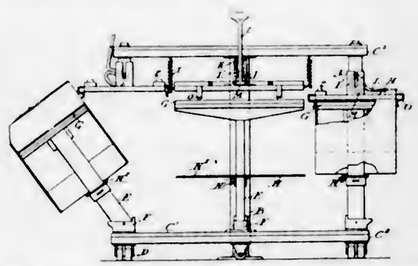
8. In combination, means for preliminarily sizing material to be sorted, a support arranged to receive the oversized material from said means and means for creating a fluid current to act on the moving material longitudinally of its line of movement for simultaneously drawing the oversized material away from the preliminary sizing means onto said support, and adapted to remove the larger lighter particles from the mass and leave the residue as a substantially thin layer or stratum, whereby to condition the material to have the metallic particles exposed for removal.

9. In a machine of the class described, the combination of a hollow screen member having inlet and outlet openings, means for withdrawing the dust from the screen, a support arranged to receive the oversized material from said screen, and means for simultaneously drawing oversized material longitudinally of the screen through said outlet onto said support and adapted to remove the larger lighter particles from the mass, whereby the coarser residue is left as a substantially thin layer or stratum thereon and the metallic particles therein exposed for removal.

10. In a machine of the class described, the combination of a hollow screen member having inlet and outlet openings, suction means for withdrawing the dust from the screen, a support arranged to receive the oversized material from said screen, and means for simultaneously drawing the oversized material longitudinally of the screen through the outlet onto the support and adapted to remove the larger lighter particles from the mass on the support, whereby the coarser residue is left as a substantially thin layer or stratum and the metallic particles therein exposed for removal.

11. In a machine of the class described, the combination of a hollow screen member having inlet and outlet openings, a support arranged to receive the oversized material from the screen, means for feeding material within the screen and penumatic means for drawing the oversized material longitudinally of the screen through said outlet onto the support and adapted to remove the larger lighter particles from the mass on the support whereby the coarser residue is left as a substantially thin layer or stratum and the metallic particles therein exposed for removal.

14,267. PACKAGE-SEALING MACHINE. LAWRENCE D. MORTON, Sandusky, Ohio, assignor to The Ilinde & Dauch Paper Company, Sandusky, Ohio, a Corporation of Ohio. Filed Aug. 5, 1916. Serial No. 113,415. Original No. 1,138,238, dated May 4, 1915, Serial No. 800,155, filed Nov. 10, 1913. (Cl. 93—36.)



1. The combination with a revoluble carrier of a series of clamping heads mounted thereon, a series of coöperating heads also mounted on said carrier, each being movable into and out of registration with its corresponding clamping head, guides for registering said heads with each other, and independent clamping means for the respective pairs of clamping heads.

2. The combination with a revoluble standard of a series of box holders mounted thereon, each provided with a head insertible within the box, against which the end flaps may be folded, adjustable supports secured to each standard for supporting the box, a series of clamping heads corresponding to said box-holders mounted on said carrier, means permitting the adjustment of each box-holder into registration with its clamping head, and independent actuating means for the respective clamping heads.

3. The combination with a revoluble carrier of a series of standards mounted thereon and adjustable from an inclined to a vertical position, a head mounted on each standard over which the box to be sealed may be sleeved in the inclined position of the standard, means for supporting the box upon the standard in position for the turning of its end flaps against said head, a series of clamping heads secured to said carrier and respectively in registration with said standards when in upright position, and clamping levers for depressing said clamping heads against the heads of said standards.

4. The combination with a revoluble carrier of upper and lower annular frames upon said carrier, a series of standards having hinged connection with said lower frame, permitting of adjustment from a vertical to an inclined position, a form on each standard insertible into a box to be sealed and forming a head against which the end flaps of said box may be folded, a support on said standard for holding the box in position for the folding of its flaps, clamping heads vertically, adjustably mounted on said upper annular frame in position for registration with said lower heads when the supporting standards thereof are in vertical position, and clamping levers for actuating said clamping heads.

5. The combination with a revoluble carrier of a series of clamping heads mounted thereon, a series of form supports mounted on said carrier and adjustable from vertical to inclined position, exchangeable forms mounted upon said form supports, adjustable guides upon said clamping heads for registering said forms therewith, levers for depressing said clamping heads against said forms, and resilient means for raising said heads when released by said levers.

6. The combination with a revolving carrier, comprising upper and lower frames, of a series of heads pivotally supported on the lower frame, of a series of clamping heads adjustably supported on the upper frame, said heads adapted to be brought into registration, and independent actuating cam levers carried by the upper frame for the respective clamping heads.

7. The combination with a revolving carrier, comprising upper and lower frames, a series of heads pivotally supported on the lower frame, guide members carried by the upper frame, a series of clamping heads provided with brackets, said brackets arranged to slide upon the guide members, said heads adapted to be brought into registration with each other, and coöperating means carried by the guide members and the brackets for clamping the heads together.

8. The combination with a revolving carrier, comprising upper and lower frames, a series of heads pivotally supported on the lower frame, guide members carried by the upper frame, a series of clamping heads provided with brackets, said brackets arranged to slide upon the guide members, said heads adapted to be brought into registration with each other, and cam levers carried by the guide members and rollers carried by the brackets constituting means for clamping the heads together.

9. In a device of the character described the combination with a pair of platens, means for bringing said platens into and out of parallel alined relation, a lever and cam mechanism for moving one of said platens relatively to the other when in their alined condition, a stem upon which one of said platens is mounted, said last aforesaid platen consisting of a rigid plate-like structure and having edges parallel substantially to the sides of a box structure so that the loose box end extremities may be folded upon said platen into their overlapping positions, and a support upon said stem adapted to hold the lower extending unfolded extremities of said box.

10. In a device of the character described the combination with a pair of platens, means for bringing said platens into and out of parallel alined relation, means for moving one of said platens relatively to the other when in their alined condition, a stem upon which one of said platens is mounted, said last aforesaid platen consisting of a rigid plate-like structure and having edges parallel substantially to the sides of a box structure so that the loose box end extremities may be folded upon said platen into their overlapping positions, a support upon said stem adapted to hold the lower extending unfolded extremities of said box, and a yielding mounting for one of said platens.

11. In a device of the character described the combination with a pair of platens, means for bringing said platens into and out of parallel alined relation, an adjustable stop to control said means, means for moving one of said platens relatively to the other when in their alined condition, and a stem upon which one of said platens is mounted, said last aforesaid platen consisting of a rigid plate-like structure and having edges parallel substantially to the sides of a box structure so that the loose box end extremities may be folded upon said platen into their overlapping positions, and a yielding mounting for one of said platens.

12. In a box end sealing machine the combination with a pair of relatively movable platens, a supporting structure therefor whereby relative motion may be imparted to the platens so that a box structure may be placed upon one of said platens without interference from the other platen, means for moving and locking one of said platens whereby said platens are adapted to seal the overlapping ends of a box structure placed therebetween by pressing the overlapping ends between them, and means whereby opposing box flaps may be pressed toward each other prior to sealing.

13. In a device of the character described the combination with a pair of platens, means for bringing said platens into and out of parallel alined relation, means for moving one of said platens relatively to the other when in their alined condition, a stem upon which one of said platens is mounted, and a support upon said stem adapted to hold the lower extending unfolded extremities of a box, said support forming an abutment substantially rectangularly arranged to said box extremities to counteract the thrust of said extremities by folding the extremities at the other box end.

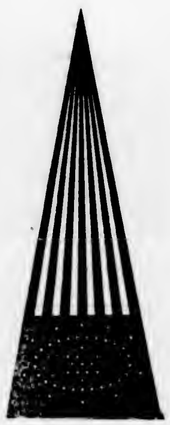
DESIGNS.

50,412. BUTTON, BADGE, OR SIMILAR ARTICLE. JOHN A. BERCHTOLD, Sigel, Ill. Filed Dec. 21, 1916. Serial No. 138,260. Term of patent 3½ years.



The ornamental design for a button, badge or similar article, as shown.

50,413. PENNANT. CHARLES L. CAMPBELL, Oaks, Pa., assignor to John C. Dettra & Company, Inc., Oaks, Pa., a Corporation of Pennsylvania. Filed Dec. 13, 1916. Serial No. 136,795. Term of patent 7 years.



The ornamental design for a pennant as shown.

50,414. SALT-CELLAR, BOTTLE, OR SIMILAR ARTICLE. THOMAS A. DE VILBISS, Toledo, Ohio, assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed June 16, 1916. Serial No. 104,114. Term of patent 14 years.





The ornamental design for a salt cellar, bottle or similar article, substantially as shown.

50,415. WRITING OR PRINTING PAPER. THOMAS N. GURNEY, Brooklyn, N. Y. Filed Dec. 6, 1916. Serial No. 135,498. Term of patent 14 years.



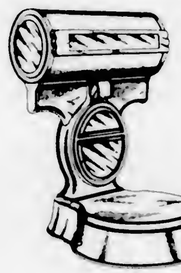
The ornamental design for writing or printing paper, as shown.

50,416. PIN, BROOCH, OR SIMILAR ARTICLE FOR PERSONAL WEAR. FRANK D. HEALY, Plattsburg, N. Y. Filed Dec. 1, 1916. Serial No. 134,532. Term of patent 14 years.



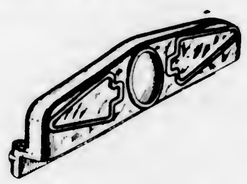
The ornamental design for a pin, brooch or similar article for personal wear, as shown.

50,417. SCALE-CASING. JOSEPH HOPKINSON, Dayton, Ohio, assignor to The Computing Scale Company, Dayton, Ohio, a Corporation of Ohio. Filed Oct. 30, 1916. Serial No. 128,624. Term of patent 14 years.



An ornamental design for a scale casing, substantially as shown.

50,418. AUTOMOBILE-INDICATOR. ALBERT H. HOUSE and OSMOND W. OLMSTED, Windsor, and WILLIAM L. GUMPRECHT, Hartford, Conn., assignors to The Auto Equipment Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 18, 1916. Serial No. 92,045. Term of patent 14 years.



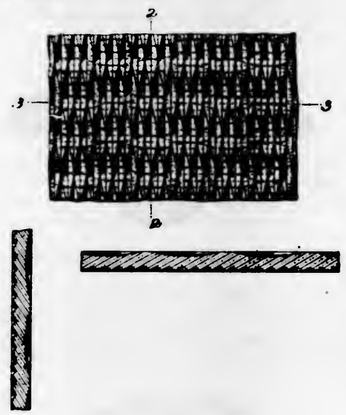
The ornamental design for an automobile indicator as shown.

50,419. COMBINED JARDINIÈRE AND GRAFANOLA STAND. FRED HOYT, Seattle, Wash., assignor to Universal High Power Telephone Co., King county, Wash. Filed Sept. 13, 1916. Serial No. 119,984. Term of patent 7 years.



The design for a combined jardinière and grafanola stand as shown.

50,420. PRISM-GLASS. EMIL GOTTFRIED JOHANSON, Chicago, Ill., assignor to David H. Roblin, Chicago, Ill. Filed Sept. 30, 1916. Serial No. 123,186. Term of patent 14 years.



The ornamental design for a prism glass as shown and described.

50,421. POISON-BOTTLE. JOHN E. JOHNSON, Lewisburg, W. Va. Filed Dec. 19, 1916. Serial No. 137,906. Term of patent 14 years.



The ornamental design for a poison bottle, as shown.

50,422. SPOON. ROBERT R. KINTZ, Meriden, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed Jan. 6, 1917. Serial No. 141,047. Term of patent 3½ years.



The ornamental design for a spoon, as shown.

50,423. PLATE OR SIMILAR ARTICLE. CHARLES JOHN NOKE, Stoke-upon-Trent, England, assignor to William S. Pitcairn Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 11, 1917. Serial No. 141,896. Term of patent 3½ years.



The ornamental design for a plate or similar article as shown.

50,424. PLATE OR SIMILAR ARTICLE. CHARLES JOHN NOKE, Stoke-upon-Trent, England, assignor to William S. Pitcairn Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 11, 1917. Serial No. 141,897. Term of patent 3½ years.



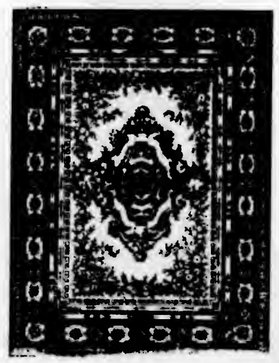
The ornamental design for a plate or similar article as shown.

50,425. CORNER-POST FOR CABINETS AND OTHER FURNITURE. SAMUEL E. OVERTON, South Haven, Mich. Filed Nov. 27, 1916. Serial No. 133,801. Term of patent 7 years.



The ornamental design for a corner post for cabinets and other furniture, as shown.

50,426. RUG. HENRY W. PARTON, Yonkers, N. Y., assignor to Alexander Smith & Sons Carpet Company, Yonkers, N. Y., a Corporation of New York. Filed Jan. 16, 1917. Serial No. 142,775. Term of patent 3½ years.



The ornamental design for a rug as shown and described.

50,427. NITROGEN-LAMP UNIT. HARRY PICKHARDT, New York, N. Y., assignor to The Phoenix Glass Company, Pittsburgh, Pa., a Corporation of West Virginia. Filed Nov. 11, 1916. Serial No. 130,915. Term of patent 7 years.

The ornamental design for a nitrogen lamp unit, as shown.

50,428. PLATE OR SIMILAR ARTICLE. ALFRED HARRY PIPER, Wolstanton, England, assignor to Edward B. Dickinson, New York, N. Y. Filed Jan. 8, 1917. Serial No. 141,330. Term of patent 3½ years.



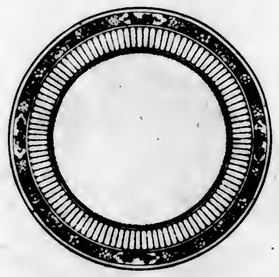
The ornamental design for a plate or similar article, as shown.

50,429. PLATE OR SIMILAR ARTICLE. ALFRED HARRY PIPER, Wolstanton, England, assignor to Edward B. Dickinson, New York, N. Y. Filed Jan. 8, 1917. Serial No. 141,331. Term of patent 3½ years.



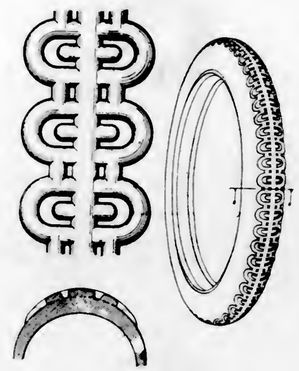
The ornamental design for a plate or similar article, as shown.

50,430. PLATE OR SIMILAR ARTICLE. ALFRED HARRY PIPER, Wolstanton, England, assignor to Edward B. Dickinson, New York, N. Y. Filed Jan. 8, 1917. Serial No. 141,332. Term of patent 3½ years.



The ornamental design for a plate or similar article, as shown.

50,431. TIRE-TREAD. DAVID SPENCE, Norwalk, Conn., assignor to The Norwalk Tire and Rubber Company, Norwalk, Conn., a Corporation of Connecticut. Filed Dec. 11, 1916. Serial No. 136,341. Term of patent 14 years.



The ornamental design for a tire tread as shown.

50,432. GROMET. EDWIN BALL STIMPSON, Brooklyn, N. Y. Filed June 8, 1914. Serial No. 843,884. Term of patent 3½ years.



The ornamental design for a gromet, as shown.

50,433. GROMET. EDWIN BALL STIMPSON, Brooklyn, N. Y. Filed June 8, 1914. Serial No. 843,885. Term of patent 3½ years.



The ornamental design for a gromet, as shown.

50,434. GROMET. EDWIN BALL STIMPSON, Brooklyn, N. Y. Filed June 8, 1914. Serial No. 843,886. Term of patent 3½ years.



The ornamental design for a gromet, as shown.

50,435. GROMET. EDWIN B. STIMPSON, Brooklyn, N. Y. Filed June 8, 1914. Serial No. 843,887. Term of patent 3½ years.



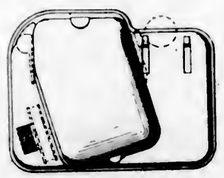
The ornamental design for a gromet, as shown.

50,436. PETTICOAT. NELLIE RUTH VIDAVER, New York, N. Y. Filed Dec. 19, 1916. Serial No. 137,909. Term of patent 3½ years.



The ornamental design for a petticoat, as shown.

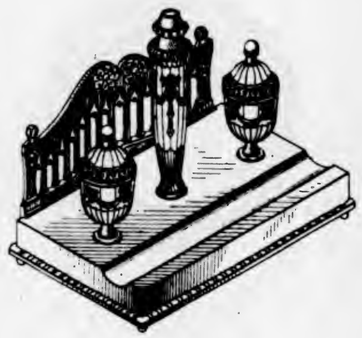
50,437. FRAME FOR A CHECK-WRITING MACHINE. JOHN WHITAKER, North Wales, Pa. Filed Nov. 29, 1916. Serial No. 134,214. Term of patent 14 years.





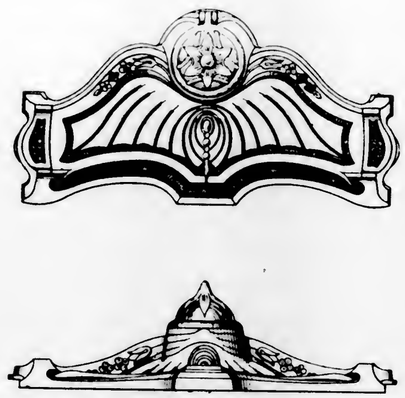
The ornamental design for a frame of a check writing machine, substantially as shown.

50,438. COMBINED LAMP-STANDARD AND DESK ARTICLE. FRANK YOKEL, Pittsburgh, Pa., assignor to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa. Filed Dec. 2, 1916. Serial No. 134,768. Term of patent 3½ years.



The ornamental design for a combined lamp-standard and desk article, as shown.

50,439. INKSTAND. FRANK YOKEL, Pittsburgh, Pa., assignor to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa. Filed Dec. 2, 1916. Serial No. 134,769. Term of patent 3½ years.



The ornamental design for an inkstand, as shown.

50,440. COMBINED DESK-LAMP AND INKSTAND. FRANK YOKEL, Pittsburgh, Pa., assignor to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa. Filed Dec. 2, 1916. Serial No. 134,770. Term of patent 3½ years.



The ornamental design for a combined desk-lamp and inkstand as shown.

TRADE-MARKS

PUBLISHED MARCH 6, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 19, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 69,759. (CLASS 32. FURNITURE AND UPHOLSTERY.) WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany. Filed Apr. 12, 1913.

Wanderer

Particular description of goods.—Adding-Machine Standards, Supporting-Carriages, Adding-Machine Bases, Adding-Machine Book-Stands, Cases for Adding-Machine Accessories, Type-Writer Bases, Wooden Type-Writer Protecting-Cases, Glass Plates for Type-Writers, Sound-Deadeners, Type-Writer Packings, Tables, Desks, Type-Writer Tables with Drop-Plates for the Type-Writer, Cabinets for Type-Writer Paper and Blanks, Type-Writer Supports, Type-Writer Tables, Type-Writer Desks, Document-Stands, Adding-Machine Supports, Adding-Machine Desks and Tables, Letter-Files, Wooden Covers for Type-Writers, Adding-Machines and Calculating-Machines, Stands for Adding-Machines and Calculating-Machines, Book-Shelves, Supports for Calculating-Machines, Check-Tills, Paying-Out Tills, and Parts of Any of the Above Devices.

Claims use since July, 1886.

Ser. No. 83,409. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) ELGIN AMERICAN MANUFACTURING CO., Elgin, Ill. Filed Dec. 19, 1914.

EAM

Particular description of goods.—Lockets, Cigarette-Cases, Vanity-Cases, Card-Cases, Match-Safes, and Powder-Boxes, All Formed of Precious Materials—Namely, Gold, Rolled-Gold Plate, or Silver.

Claims use since the month of February, 1912.

Ser. No. 89,296. (CLASS 39. CLOTHING.) THE MILBURY ATLANTIC MFG. CO., New York, N. Y. Filed Sept. 18, 1915.

THE MILBURY ATLANTIC MFG. CO
THE COMFORT

Particular description of goods.—Bathing and Gymnasium Shoes Made of Canvas, Sateen, Leather, or other Materials.

Claims use since the 1st day of January, 1912.

Ser. No. 90,786. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAMBERLAIN & COMPANY, INC., Boston, Mass. Filed Nov. 20, 1915.

Leadership

The word "Leadership."

Particular description of goods.—Cheese, Butter, Eggs, Oleomargarin, Boiled and Smoked Hams, Bacon, Meat-Loaf, Sliced Dried Beef, Corned Beef, Luncheon-Tongue, and Sausage.

Claims use since Sept. 1, 1914.

Ser. No. 91,220. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GENERAL ROOFING MANUFACTURING COMPANY, East St. Louis, Ill. Filed Dec. 6, 1915.

Certain-teed

Particular description of goods.—Wood-Preservatives and Creosote Shingle-Stains.

Claims use since Mar. 1, 1915.

Ser. No. 91,479. (CLASS 37. PAPER AND STATIONERY.) NATIONAL PAPETERIE COMPANY, Springfield, Mass. Filed Dec. 14, 1915.

National

Particular description of goods.—Printing and Writing Papers.
Claims use since Jan. 15, 1889.

Ser. No. 91,577. (CLASS 37. PAPER AND STATIONERY.) MID-WEST BOX COMPANY, Anderson and Kokomo, Ind. Filed Dec. 18, 1915.

MID- WEST

No claim is made to the map of the State of Indiana *per se*.
Particular description of goods.—Corrugated Board and Fiber Board Used in the Manufacture of Boxes and Products Made from Such Board.
Claims use since September, 1914.

Ser. No. 92,753. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) L. RAY LENICH, Union City, Ind. Filed Feb. 10, 1916.



Particular description of goods.—Rubber Bumpers for Closet-Seats, Rubber Stoppers for Lavatories, Sinks, and Bath, Rubber Screw and Tack Bumpers, and Closet-Seats.
Claims use since on or about May 1, 1915.

Ser. No. 93,288. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE C. B. WOODWORTH SONS CORPORATION, Rochester, N. Y. Filed Mar. 3, 1916.

GARDEN FRAGRANCE

Particular description of goods.—Perfumes, Sachet-Powders, Face-Powders, Talcum Powders, Toilet Waters and Creams.
Claims use since Jan. 10, 1916.

Ser. No. 93,878. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE ROBERTS SAFETY WATER TUBE BOILER CO., Red Bank, N. J. Filed Mar. 25, 1916.

Roberts

The trade-mark consists of a portion of the facsimile signature of E. Gerry Roberts, vice-president of the said corporation.
Particular description of goods.—Water-Tube Boilers.
Claims use since Jan. 1, 1908.

Ser. No. 95,336. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) IRELAND CHEMICAL CO., Chicago, Ill. Filed May 22, 1916.

RIDOVIT

Particular description of goods.—An Antiseptic, Astringent, Prophylactic, and Remedial Preparation for the Treatment of Diseases of the Respiratory Mucous Membranes.
Claims use since Sept. 1, 1913.

Ser. No. 95,358. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed May 23, 1916. Under ten-year proviso.



Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since Sept. 2, 1890.

Ser. No. 96,339. (CLASS 27. HOROLOGICAL INSTRUMENTS.) WESTERN CLOCK CO., Peru, Ill. Filed July 5, 1916.

BOM DIA

Particular description of goods.—Clocks and Watches
Claims use since Jan. 29, 1916.

Ser. No. 96,473. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBERT ROBART, Minerva, Ohio. Filed July 10, 1916.

CROWN



Particular description of goods.—A Preparation for the Treatment of Gravel, Bladder, Backache, and Kidney Trouble.
Claims use since July, 1913.

Ser. No. 96,833. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MANHATTAN RUBBER MFG. CO., New York, N. Y. Filed July 25, 1916.

WHIP CORD

Particular description of goods.—Hose Made Partly of Rubber and Partly of Cotton.
Claims use since February, 1908.

Ser. No. 96,860. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed July 26, 1916.

GRENADIER

Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since Jan. 10, 1898.

Ser. No. 97,140. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ENOCH MORGAN'S SONS COMPANY, New York, N. Y. Filed Aug. 7, 1916. Under ten-year proviso.



Consisting of a central band of blue color and two adjacent bands of silver color.
Particular description of goods.—A Cleansing or Scouring Cake or Powder.
Claims use since about the 3d day of June, 1869.

Ser. No. 97,171. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE "SALADA" TEA COMPANY, INCORPORATED, Portland, Me., and Boston, Mass. Filed Aug. 8, 1916. Under ten-year proviso.



Particular description of goods.—Tea.
Claims use since prior to Dec. 31, 1892.

Ser. No. 97,243. (CLASS 37. PAPER AND STATIONERY.) TATE ELECTROLYTIC WATERPROOFING COMPANY, INCORPORATED, New York, N. Y. Filed Aug. 10, 1916.

TATELEC

Particular description of goods.—Waterproofed Paper.
Claims use since the 17th day of April, 1916.

Ser. No. 97,498. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE CINCINNATI RUBBER MANUFACTURING COMPANY, Norwood, Ohio. Filed Aug. 21, 1916.

SANDOW

Particular description of goods.—Rubber Belting, Duck Belting, Rubber Hose, Duck Hose, Rubber Machinery Packing, Flax Machinery Packing, and Asbestos Machinery Packing.
Claims use since October, 1905.

Ser. No. 97,811. (CLASS 39. CLOTHING.) W. SHANHOUSE & SONS, Rockford, Ill. Filed Sept. 5, 1916.

KIDJAMAS

Which consists of the word "Kidjamas."
Particular description of goods.—Children's Sleeping-Garments.
Claims use since Apr. 30, 1915.

Ser. No. 97,874. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WILBERT B. JACOBS, Emlenton, Pa. Filed Sept. 9, 1916.

CRYSTAL

Particular description of goods.—Polishing-Oils.
Claims use since Aug. 17, 1916.

Ser. No. 97,878. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) MOCHA PIPE COMPANY, Newark, N. J. Filed Sept. 9, 1916.

Smoka-Mocha

Particular description of goods.—Smoking-Pipes.
Claims use since June 1, 1915.

Ser. No. 98,215. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) LOCOMOTIVE PULVERIZED FUEL COMPANY, New York, N. Y. Filed Sept. 25, 1916.



Particular description of goods.—Pulverized-Fuel Metallurgical Furnaces and Their Parts, Pulverized-Fuel Steam-Generating Boilers and Their Parts, Pulverized-Fuel Feed Devices for Furnaces or Boilers, and Pulverized-Fuel-Supply Containers for Furnaces or Boilers.
Claims use since May 17, 1915.

Ser. No. 98,262. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) P. MAX KUEHNRICH, Los Angeles, Cal. Filed Sept. 27, 1916.

SALT O' the EARTH

Particular description of goods.—Calcium Salts.
Claims use since June 17, 1916.

Ser. No. 98,264. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) P. MAX KUEHNRICH, Los Angeles, Cal. Filed Sept. 27, 1916.

SALT O'SALTS

Particular description of goods.—Calcium Salts.
Claims use since June 17, 1916.

Ser. No. 98,266. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) P. MAX KUEHNRICH, Los Angeles, Cal. Filed Sept. 27, 1916.

SALT O' LIFE

Particular description of goods.—Calcium Salts.
Claims use since June 17, 1916.

Ser. No. 98,305. (CLASS 32. FURNITURE AND UPHOLSTERY.) UNIVERSAL REGISTER CO., Chicago, Ill. Filed Sept. 28, 1916.

UNIVERSAL

Particular description of goods.—Board-Like Structures Formed with a Series of Pockets, Each of Which Pockets is Adapted to Receive Cards or Tags, Said Boards Having Been Manufactured for Use as Interchangeable-Card Racks, Hotel-Room Racks, Hospital Patients' Registers, Hospital Alphabetical Reference-Racks, Doctors In and Out Registers, Nurses In and Out Registers, Nurses On and Off Registers, Card Account-Racks, Operating-Room Bulletin-Boards, Building-Directories, Bulletins with Changeable Letters, Telephone-Registers, Church-Pew Registers, Announcement-Bulletins, Roster-Boards, Golf-Tournament Registers, Golf Match-Play Boards, Restaurant Menu-Boards, In and Out and Time-Return Registers, Class Schedule-Boards, Department-Store Directories, Route-Strips, Key-Racks, Appointment-Registers, and Floor-Directories.
Claims use since August, 1912.

Ser. No. 98,483. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RIDLEY'S, THE OLD CHAMBERS ST. CANDY MANUFACTORY, New York, N. Y. Filed Oct. 6, 1916. Under ten-year proviso.



Particular description of goods.—Candy.
Claims use since 1806.

Ser. No. 98,510. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AJAX PILE REMEDY COMPANY, Chicago, Ill. Filed Oct. 9, 1916.

AJAX

Particular description of goods.—A Certain Pile Remedy.
Claims use since July 1, 1916.

Ser. No. 98,663. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JUAN MARTI, Santa Coloma de Farnés, Spain. Filed Oct. 14, 1916.

ORION

Particular description of goods.—Mineral Water, Carbonic Water, and Table-Water.
Claims use since the 23d of October, 1915.

Ser. No. 98,832. (CLASS 39. CLOTHING.) AUGUST P. EIGENMANN, Evansville, Ind. Filed Oct. 23, 1916.

Cracker-Jack

Particular description of goods.—Work-Shirts.
Claims use since Aug. 1, 1914.

Ser. No. 99,245. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) IMPERIAL CANDY CO., Seattle, Wash. Filed Nov. 11, 1916.

BOB WHITE

Particular description of goods.—Confectionery—Namely, Bob-White Bar-Candy, Bob-White Pecan-Candy, Bob-White Walnut-Candy, and Bob-White Jelly-Candy.
Claims use since October, 1915.

Ser. No. 99,298. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) CHARLES J. MCKNIGHT, Greensburg, Pa. Filed Nov. 14, 1916.

Jim Dandy

Particular description of goods.—Toy Push-Cars.
Claims use since Nov. 1, 1916.

Ser. No. 99,302. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELMER R. RODGERS, St. Joseph, Mich. Filed Nov. 14, 1916.



Particular description of goods.—A Veterinary Remedy—to wit, a Preparation for the Treatment of Heaves in Horses and Mules.
Claims use since June 11, 1916.

Ser. No. 99,321. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JOHN CHATILLON & SONS, New York, N. Y. Filed Nov. 16, 1916. Under ten-year proviso.

CHATILLON

Particular description of goods.—Weighing-Scales.
Claims use since prior to Jan. 1, 1894.

Ser. No. 99,427. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ARMSTRONG CORK COMPANY, Pittsburgh, Pa. Filed Nov. 21, 1916.

KORXOLE

Particular description of goods.—Innersoling for Shoes.
Claims use since Nov. 15, 1916.

Ser. No. 99,478. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) SIMPLEX MAGNETO COMPANY, New York, N. Y. Filed Nov. 22, 1916.



Particular description of goods.—Magnetos and Generators.
Claims use since May 1, 1915.

Ser. No. 99,497. (CLASS 2. RECEPTACLES.) THE CINCINNATI GALVANIZING COMPANY, Cincinnati, Ohio. Filed Nov. 23, 1916.

KING

Particular description of goods.—Garbage-Pails, Garbage-Cans, and Cans Used in Making Artificial Ice.
Claims use since September, 1909.

Ser. No. 99,661. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. R. MILLER, Frederick, Md. Filed Dec. 1, 1916.



Particular description of goods.—An Ointment Especially Prepared for the Eye, Ear, and Nose, but Can be Used on Any Portion of the Body.
Claims use since Nov. 6, 1916.

Ser. No. 99,670. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMERICAN DRUG & PRESS ASSOCIATION, Decorah, Iowa. Filed Dec. 2, 1916.

Garden Bouquet

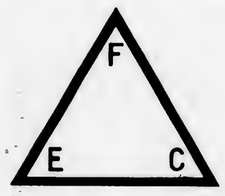
Particular description of goods.—Toilet Preparations, Such as Perfumes, Toilet Waters, Face-Powders, Talcum Powders, Cold-Creams, and Liquid Creams.
Claims use since December, 1913.

Ser. No. 99,673. (CLASS 47. WINES.) LUCIEN ABDIN, New York, N. Y. Filed Dec. 2, 1916.



Particular description of goods.—An Appetizer Made from Select Old Wines.
Claims use since Sept. 1, 1916.

Ser. No. 99,744. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) FEDERAL EXPORT CORPORATION, New York, N. Y. Filed Dec. 6, 1916.



Particular description of goods.—Steel and Iron Castings and Forgings, Steel and Iron Rods, Bars, Billets, Sheets, Beams, (Undrilled for Construction,) Shapes, Plates; Metal and Aluminum Compounds in the Form of Ingots, Castings, Rods, Plates, &c.; Babbitt Metal, Antifriction Metal, Chemically-Alloyed High-Speed Bearing Metals.
Claims use since Jan. 1, 1916.

Ser. No. 99,841. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) STANLEY DOGGETT, New York, N. Y. Filed Dec. 11, 1916.

FACAMOLD

Particular description of goods.—Foundry-Facings of All Sorts.
Claims use since Oct. 1, 1916.

Ser. No. 99,939. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE HYDRAGAS CORPORATION, New York, N. Y. Filed Dec. 14, 1916.

HYDRAGAS

Particular description of goods.—Apparatus Consisting of a Vaporizing Device Adapted for Use in Connection with a Liquid Composition Mixed with the Water of the Radiator of an Internal-Combustion Engine or Otherwise to Cause the Vapors Thereof to be Introduced Into the Combustion-Chamber of the Engine.
Claims use since Dec. 1, 1916.

Ser. No. 99,956. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) H. B. FITZPATRICK, Fort Wayne, Ind. Filed Dec. 15, 1916.

PUSSY-FOOT

Particular description of goods.—Games.
Claims use since Dec. 1, 1916.

Ser. No. 99,969. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROBERTS CONE MANUFACTURING COMPANY, St. Joseph, Mo. Filed Dec. 15, 1916.



The representation of an ice-cream cone in itself being hereby expressly disclaimed as a part of the mark sought to be registered.
Particular description of goods.—Ice-Cream Cones.
Claims use since Nov. 2, 1915.

Ser. No. 100,015. CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MARR AND COLTON ORGAN CO., Warsaw, N. Y. Filed Dec. 18, 1916.

NEW ERA

Comprising the words "New Era."
Particular description of goods.—Organs and Parts Thereof.
Claims use since Jan. 8, 1916.

Ser. No. 100,035. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JOHN CHATILLON & SONS, New York, N. Y. Filed Dec. 19, 1916. Under ten-year proviso.

John Chatillon & Sons.

Particular description of goods.—Weighing-Scales.
Claims use since prior to January, 1894.

Ser. No. 100,055. (CLASS 17. TOBACCO PRODUCTS.) JOSEPH G. DILL, INC., Richmond, Va. Filed Dec. 20, 1916.



Particular description of goods.—Chewing-Tobacco in Plug and other Forms and Smoking-Tobacco.
Claims use since 1870.

Ser. No. 100,097. (CLASS 12. CONSTRUCTION MATERIALS.) HARBISON-WALKER REFRACTORIES COMPANY, Pittsburgh, Pa. Filed Dec. 22, 1916. Under ten-year proviso.

WEBSTER

Particular description of goods.—Fire-Brick.
Claims use since 1886.

Ser. No. 100,165. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) HANLON & GOODMAN CO., New York, N. Y. Filed Dec. 26, 1916.

NEUTRAL

Particular description of goods.—Paint-Brushes.
Claims use since Dec. 15, 1915.

Ser. No. 100,192. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ATLANTIC DRIER & VARNISH CO., Philadelphia, Pa. Filed Dec. 27, 1916.

MONAD

Particular description of goods.—Varnishes, Japan-Colors, Japans, Driers, Oil-Stains, Wood-Fillers, Black Asphaltum Varnishes, Polishes for Furniture and Woodwork Generally, Paste Paints, Ready-Mixed Paints, Flat Washable Wall-Paints, Enamels, and Coach-Colors.
Claims use since about Dec. 15, 1916.

Ser. No. 100,193. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ATLANTIC DRIER & VARNISH CO., Philadelphia, Pa. Filed Dec. 27, 1916.



Particular description of goods.—Varnishes, Japan-Colors, Japans, Driers, Oil-Stains, Wood-Fillers, Black Asphaltum Varnishes, Polishes for Furniture and Woodwork Generally, Paste Paints, Ready-Mixed Paints, Flat Washable Wall-Paints, Enamels, and Coach-Colors.
Claims use since about Dec. 15, 1915.

Ser. No. 100,210. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) RITE SPECIALTY CO., New York, N. Y. Filed Dec. 27, 1916.

HAPPY RITE FAMILY

Particular description of goods.—Dolls.
Claims use since Dec. 19, 1916.

Ser. No. 100,213. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES FRANK WALLIS, Pleasantville, N. J. Filed Dec. 27, 1916.

RADIO-EL

Particular description of goods.—A Preparation for the Treatment of Cancer and for Charging Water with Radio-Active Therapeutic Properties.
Claims use since Aug. 5, 1915.

Ser. No. 100,241. (CLASS 38. PRINTS AND PUBLICATIONS.) FRANKLIN MACVEAGH & COMPANY, Chicago, Ill. Filed Dec. 29, 1916.

MacVeagh News

Particular description of goods.—A Periodical or Journal Published Monthly.
Claims use since December, 1915.

Ser. No. 100,252. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) FOLSOM ASPARAGUS GIN CO., San Francisco, Cal. Filed Dec. 30, 1916.

FAG-CO



Particular description of goods.—Asparagus Gin.
Claims use since Oct. 31, 1916.

Ser. No. 100,260. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ANDREW L. HATFIELD, Hillside, N. J. Filed Dec. 30, 1916.



Particular description of goods.—A Substitute for Leather and Rubber.
Claims use since Dec. 15, 1916.

Ser. No. 100,278. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BUCADYNE CHEMICAL COMPANY, San Francisco, Cal. Filed Jan. 2, 1917.

BUCADYNE

Particular description of goods.—Dentifrices.
Claims use since June 1, 1912.

Ser. No. 100,279. (CLASS 27. HOROLOGICAL INSTRUMENTS.) J. BULOVA COMPANY, New York, N. Y. Filed Jan. 2, 1917.

RUBAIYAT

Particular description of goods.—Watches.
Claims use since Nov. 1, 1916.

Ser. No. 100,292. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HILLERICH & BRADSBY COMPANY, Louisville, Ky. Filed Jan. 2, 1917.

H&B

Particular description of goods.—Golf Clubs and Irons, Golf-Bags, Golf-Balls, Bats, Tennis-Rackets, Bowling-Pins, Indian Clubs, and Dumb-Bells.
Claims use since Sept. 1, 1916.

Ser. No. 100,319. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) R. & H. SIMON COMPANY, Union Hill, N. J., and New York, N. Y. Filed Jan. 2, 1917.



Consisting of the picture of a regatta or its equivalent, the word "Regatta."
Particular description of goods.—Silk Fabrics and Mixed Silk, Cotton, Wool, and other Textile Fabrics, Including Silk Piece Goods, Ribbon, Veils, and Velvets.
Claims use since about Dec. 15, 1883.

Ser. No. 100,320. (CLASS 15. OILS AND GREASES.) SINCLAIR OIL & REFINING CORPORATION, Chicago, Ill. Filed Jan. 2, 1917.

SINCO

Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases Made from Petroleum.
Claims use since about Nov. 1, 1916.

Ser. No. 100,326. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) VICTOR F. J. TLACH, New York, N. Y. Filed Jan. 2, 1917.

ARA

Particular description of goods.—Metal Tools for Cutting, Forming, or Holding, Consisting of Punches, Reamers, Taps, Drills, Cutters, Dies, Draw-Plates, Blades, Milling-Cutters, Mandrels, Spindles, Rolls, and Centers.
Claims use since Dec. 15, 1916.

Ser. No. 100,340. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE SEAMLESS RUBBER COMPANY, New Haven, Conn. Filed Jan. 3, 1917.

MADERITE

Particular description of goods.—Water-Bottles, Fountain-Syringes, Combination-Syringes, Face-Bags, and Ice-Bags.
Claims use since about Jan. 1, 1911.

Ser. No. 100,365. (CLASS 32. FURNITURE AND UPHOLSTERY.) CHARLES W. BRENEMAN, Cincinnati, Ohio. Filed Jan. 5, 1917.

Wyltin

Particular description of goods.—Spring-Rollers for Window-Shades, Awnings, Sleeping-Porches, Maps, Cars, Autos, &c.
Claims use since Nov. 23, 1916.

Ser. No. 100,371. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE MONITOR STOVE & RANGE CO., Cincinnati, Ohio. Filed Jan. 5, 1917.



Particular description of goods.—Hot-Air Furnaces.
Claims use since Nov. 27, 1916.

Ser. No. 100,387. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) UNITED PHONOGRAPHS CORPORATION, Port Washington, Wis. Filed Jan. 5, 1917.

PURITAN

Particular description of goods.—Phonographs and Phonograph-Records.
Claims use since Oct. 1, 1916.

Ser. No. 100,402. (CLASS 38. PRINTS AND PUBLICATIONS.) PAUL PARNITZKY, New York, N. Y. Filed Jan. 6, 1917.

PARNOMAP

No claim being made to the word "Map" apart from the mark shown in the drawing.
Particular description of goods.—Geographical Maps.
Claims use since Sept. 11, 1916.

Ser. No. 100,428. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) HERO SNAP FASTENER COMPANY, New York, N. Y. Filed Jan. 8, 1917.



No claim is made to the words "Bronze," "Spring," "Rust," and "Proof" except as associated with the mark shown.
Particular description of goods.—Metal Snap-Fasteners or Snap-Fastening Buttons or Clasps.
Claims use since July 1, 1916.

Ser. No. 100,440. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY MESTAYER, New Orleans, La. Filed Jan. 8, 1917.

RIGGSOL



Particular description of goods.—Antiseptic, Germicide, and Disinfectant for Dental Use.
Claims use since the 1st day of June, 1916.

Ser. No. 100,447. (CLASS 38. PRINTS AND PUBLICATIONS.) THE PICTURE PRESS, INC., New York, N. Y. Filed Jan. 8, 1917.

THE PICTURE PRESS

Particular description of goods.—Newspaper-Supplements.
Claims use since June 11, 1916.

Ser. No. 100,450. (CLASS 39. CLOTHING.) QUABAUG RUBBER COMPANY, Brookfield and North Brookfield, Mass. Filed Jan. 8, 1917.



Particular description of goods.—Rubber Soles and Heels.
Claims use since Dec. 23, 1916.

Ser. No. 100,451. (CLASS 38. PRINTS AND PUBLICATIONS.) ROTOFOTOS, INC., New York, N. Y. Filed Jan. 8, 1917.

ROTOFOTOS

Particular description of goods.—Newspaper-Supplements.
Claims use since Nov. 21, 1916.

Ser. No. 100,466. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE BEAVER COMPANY, Buffalo, N. Y. Filed Jan. 9, 1917.

BEAVERBEASTS

Particular description of goods.—Toy Figures and Dolls.
Claims use since the 1st day of November, 1916.

Ser. No. 100,500. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDMUND MORSE POND, Rutland, Vt. Filed Jan. 9, 1917.

PON-TAM-PON

Particular description of goods.—Medicaments for Rectal and Vaginal Application.
Claims use since the 1st day of December, 1916.

Ser. No. 100,508. (CLASS 12. CONSTRUCTION MATERIALS.) BALTIMORE ROOFING & ASBESTOS MANUFACTURING CO., Wilmington, Del., and Asbestos, Md. Filed Jan. 10, 1917.

PATHFINDER

Particular description of goods.—Prepared Asphalt Roofing.
Claims use since the 6th day of January, 1917.

Ser. No. 100,543. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) E. A. BOWMAN CO., Detroit, Mich. Filed Jan. 12, 1917.

BLUE FLAME

Particular description of goods.—Spark-Plugs and Priming-Plugs.
Claims use since January, 1914.

Ser. No. 100,581. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE GOODWILL ELECTRIC COMPANY, Chicago, Ill. Filed Jan. 13, 1917.

-GOODWILL-

Particular description of goods.—Electrical Household Devices—Namely, Electric Heating-Pads.
Claims use since prior to Dec. 1, 1916.

Ser. No. 100,589. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) ELEANORE M. PETERS, Chicago, Ill. Filed Jan. 13, 1917.

CONCEAL'O

Particular description of goods.—A Cover and Hanger for Hot-Water Bags, &c.
Claims use since Apr. 1, 1916.

Ser. No. 100,605. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRED I. BARKER, Minneapolis, Minn. Filed Jan. 15, 1917.

Imperial Crown

Particular description of goods.—Capsules Containing Atropin, Strychnin, and Extract Cannabis Indica Used as a Home Liquor and Drug Treatment.
Claims use since about the 28th day of December, 1903.

Ser. No. 100,606. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) B. BROWN & BRO., New York, N. Y. Filed Jan. 15, 1917.



Particular description of goods.—Soda-Ash, Caustic Soda, Chlorate of Potash, and Bichromate of Soda.
Claims use since Oct. 1, 1916.

Ser. No. 100,624. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) INDIA RUBBER COMPANY, New Brunswick, N. J., and New York, N. Y. Filed Jan. 15, 1917.

62-B

Particular description of goods.—Hard-Rubber Acid-Conducting Pipes.
Claims use since Sept. 13, 1915.

Ser. No. 100,663. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOLGER V. CLAUSEN, New York, N. Y. Filed Jan. 17, 1917.

"GONOCIDA"



Particular description of goods.—Hair-Water for the Treatment of Dandruff and a Medicated Injection and Pills for the Treatment of Venereal Diseases.
Claims use since October, 1916.

Ser. No. 100,670. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE GRAIN CHEMICAL COMPANY, INC., New York, N. Y. Filed Jan. 17, 1917.

VITAPHOS

Particular description of goods.—Organic Phosphorus Compounds.
Claims use since Jan. 10, 1917.

Ser. No. 100,676. (CLASS 15. OILS AND GREASES.) MEXICAN PETROLEUM CORPORATION, Los Angeles, Cal. Filed Jan. 17, 1917.

MEXPET

Particular description of goods.—Fuel-Oils.
Claims use since Sept. 1, 1915.

Ser. No. 100,684. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STRUSS-ANDERSON LABORATORIES, New York, N. Y. Filed Jan. 17, 1917.



Particular description of goods.—Photographic Developers.
Claims use since Jan. 8, 1917.

Ser. No. 100,685. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STRUSS-ANDERSON LABORATORIES, New York, N. Y. Filed Jan. 17, 1917.

KALOGEN

Particular description of goods.—Photographic Developers.
Claims use since Jan. 8, 1917.

Ser. No. 100,698. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALPHONSE P. FOOSE, Dayton, Ohio. Filed Jan. 18, 1917.

TORIS

Particular description of goods.—A Remedy for Muscular Rheumatism.
Claims use since about July 1, 1907.

Ser. No. 100,712. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS W. KIRCHNER, Baltimore, Md. Filed Jan. 18, 1917.

MENTHO BRONK

Particular description of goods.—A Remedy for Coughs, Hoarseness, Sore Throat Arising from Colds, Whooping-Cough, Laryngitis, Catarrhal Croup, and Bronchial Asthma.
Claims use since the 1st day of September, 1911.

Ser. No. 100,723. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PENINSULAR CHEMICAL CO., Detroit, Mich. Filed Jan. 18, 1917.

GARDEN COURT

Particular description of goods.—Perfumes, Toilet Waters, Toilet Creams, and Toilet Powders.
Claims use since Jan. 8, 1917.

Ser. No. 100,739. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) DIECKERHOFF, RAFFLOER & CO., New York, N. Y. Filed Jan. 19, 1917.

MARS

Particular description of goods.—Crochet-Hooks.
Claims use since the 2d day of February, 1916.

Ser. No. 100,766. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) JOSEPH ZIFF, Detroit, Mich. Filed Jan. 19, 1917.

APOLLO

Particular description of goods.—Suspenders, Belts, and Garters.
Claims use since June, 1916.

Ser. No. 100,775. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE NORYZON COMPANY, INC., New York, N. Y. Filed Jan. 20, 1917.

NORYZON

Particular description of goods.—A Nasal Salve.
Claims use since Nov. 1, 1915.

Ser. No. 100,778. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PHILADELPHIA QUARTZ COMPANY, Philadelphia, Pa. Filed Jan. 20, 1917.

E

Particular description of goods.—Sodium Silicate.
Claims use since on or about Jan. 1, 1916.

Ser. No. 100,796. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) CHARLES CLUTHE, Sr., Cincinnati, Ohio. Filed Jan. 22, 1917.

CLUTHERNIA

Particular description of goods.—Trusses.
Claims use since Jan. 1, 1917.

Ser. No. 100,823. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SIGNODE SYSTEM, INC., Chicago, Ill. Filed Jan. 22, 1917.

SIGNODE

Particular description of goods.—A Stretching-Tool.
Claims use since prior to Aug. 15, 1916.

Ser. No. 100,824. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SIGNODE SYSTEM, INC., Chicago, Ill. Filed Jan. 22, 1917.

SIGNODE

Particular description of goods.—A Sealing-Tool.
Claims use since prior to Aug. 15, 1916.

Ser. No. 100,842. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) BEAR & GLICK, Chicago, Ill. Filed Jan. 23, 1917.

"PNEUMOMETER"

Particular description of goods.—Pressure-Indicating Devices.
Claims use since on or about Dec. 15, 1916.

Ser. No. 100,861. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY, Richmond, Cal. Filed Jan. 23, 1917.

REC-OIL-EZE

Particular description of goods.—Petroleum-Oils for Lubricating and Cushioning Purposes.
Claims use since the 6th of January, 1917.

Ser. No. 100,924. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBT. W. HESSER, Ennis, Tex. Filed Jan. 25, 1917.

"RIVER BOTTOM"

Particular description of goods.—A Laxative Chill-Tonic.
Claims use since Feb. 1, 1916.

Ser. No. 100,932. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SIDNEY C. MATHIS, Walton county, Ga. Filed Jan. 25, 1917. Under ten-year proviso.

MATHIS

Particular description of goods.—A Diphtheria Specific.
Claims use since about Jan. 15, 1880.

Ser. No. 100,968. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE S. S. NETTLES CO., Montgomery, Ala. Filed Jan. 26, 1917.

CALOMITE

Comprising the word "Calomite."
Particular description of goods.—A Laxative Tablet.
Claims use since Nov. 1, 1916.

Ser. No. 100,979. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) VAL. BLATZ BREWING CO., Milwaukee, Wis. Filed Jan. 26, 1917.

Barma

Particular description of goods.—A Non-Intoxicating Brewed Soft Drink.
Claims use since Dec. 21, 1916.

Ser. No. 100,994. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE LONGWOOD LABORATORIES, INCORPORATED, Kingston, N. Y. Filed Jan. 27, 1917.

DANGO

Particular description of goods.—Dandruff and Falling Hair.
Claims use since Jan. 11, 1917.

Ser. No. 101,005. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STEPHEN FARGO, Cleveland, Ohio. Filed Jan. 29, 1917.

RAPIDOL

Particular description of goods.—A Preparation for the Treatment of Catarrhal Colds, Influenza, Bronchitis, Flatulence, Headache, Rheumatic and Muscular Pains, Neuralgia, Cramps, Chilblains, Itchiness of the Skin, for Preserving the Teeth, and as a Gargle for Sore Throat.
Claims use since Jan. 20, 1917.

Ser. No. 101,007. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GOODRICH DRUG COMPANY, Omaha, Nebr. Filed Jan. 29, 1917.

Velvetina EGYPTA

Particular description of goods.—Toilet Water, Perfumes, and Nail-Polish.
Claims use since Mar. 1, 1914.

Ser. No. 101,010. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE WILLIAM S. MERRELL CHEMICAL COMPANY, Cincinnati, Ohio. Filed Jan. 29, 1917.

SOLUPIN

Particular description of goods.—A Pine-Oil Antiseptic.
Claims use since Sept. 1, 1916.

Ser. No. 101,017. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE NU-EX FIRE APPLIANCE CO., Columbus, Ohio. Filed Jan. 29, 1917.

Nuexolene

Particular description of goods.—Fire-Extinguishing Compound.
Claims use since about Nov. 1, 1916.

Ser. No. 101,024. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE STANDARD TIRE AND RUBBER MANUFACTURING COMPANY, Cleveland, Ohio. Filed Jan. 29, 1917.

WILLOW

Particular description of goods.—Inner Tubes.
Claims use since Jan. 20, 1917.

Ser. No. 101,025. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Jan. 29, 1917.

OKIDE

Particular description of goods.—Composition Insoles, Box-Toes, and Heel-Counters for Boots and Shoes.
Claims use since Dec. 30, 1916.

Ser. No. 101,026. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Jan. 29, 1917.

SOLEX

Particular description of goods.—Composition Insoles, Box-Toes, and Heel-Counters for Boots and Shoes.
Claims use since Dec. 30, 1916.

Ser. No. 101,045. (CLASS 39. CLOTHING.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Jan. 30, 1917.

IMPERATOR

Particular description of goods.—Leather Shoes.
Claims use since Aug. 8, 1916.

Ser. No. 101,063. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE FISK RUBBER COMPANY, Chicopee Falls, Mass. Filed Jan. 31, 1917.



Particular description of goods.—Rubber Tires.
Claims use since on or about June, 1909.

Ser. No. 101,065. (CLASS 39. CLOTHING.) THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio. Filed Jan. 31, 1917.

Neōlin

Particular description of goods.—Soles and Heels for Boots and Shoes Formed of an Artificial Composition.
Claims use since on or about the 1st day of December, 1915.

Ser. No. 101,073. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHIELDS DAVID LANCE, Troy, Ohio. Filed Jan. 31, 1917.

LANCE

Particular description of goods.—Powder Used as a Remedy for Piles.
Claims use since Jan. 25, 1917.

Ser. No. 101,089. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Feb. 1, 1917. Under ten-year proviso.



Particular description of goods.—Photographic Plates.
Claims use since 1886.

Ser. No. 101,090. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Feb. 1, 1917.



Particular description of goods.—Photographic Paper.
Claims use since August, 1906.

Ser. No. 101,098. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARIE KLABENES, Leigh, Nebr. Filed Feb. 1, 1917.



Particular description of goods.—A Remedy for Cholera Affecting Cattle and Fowl.
Claims use since Jan. 20, 1917.

Ser. No. 101,127. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES KERVAN, New York, N. Y. Filed Feb. 2, 1917.

KerVansene

Particular description of goods.—Odorless Kerosene Used as a Hair-Dressing and Dandruff-Remover.
Claims use since the 20th day of April, 1916.

Ser. No. 101,133. (CLASS 39. CLOTHING.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Feb. 2, 1917.

RESILIO

Particular description of goods.—Rubber Heels and Composition Soles.
Claims use since Oct. 20, 1916.

Ser. No. 101,136. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HORACE P. WILKINS, Chicago, Ill. Filed Feb. 2, 1917.

APHRO-PALMETTO

Particular description of goods.—A Medicinal Preparation or Tonic for Use in Cases of Lost Vitality, Lassitude, Loss of Energy, Neurasthenia, Sleeplessness, and General Depression.
Claims use since Jan. 20, 1917.

Ser. No. 101,161. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) UNIVERSAL OPTICAL CORPORATION, Providence, R. I. Filed Feb. 3, 1917.

SELF-RITE

Particular description of goods.—Eyeglasses and Spectacle and Eyeglass Mountings, Frames, Ends, Bridges, Straps, Springs, Eyes, Studs, Handles, Guards, Finger-Grips, Nuts, Temples, Screws, and Fronts.
Claims use since Jan. 1, 1917.

Ser. No. 101,167. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Feb. 5, 1917.

Kresko

Particular description of goods.—Photographic Paper.
Claims use since July, 1895.

Ser. No. 101,168. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Feb. 5, 1917. Under ten-year proviso.

STANDARD

Particular description of goods.—Photographic Plates.
Claims use since about 1884.

Ser. No. 101,258. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JOHN CHATILLON & SONS, New York, N. Y. Filed Feb. 9, 1917.

JUSTSO

Particular description of goods.—Weighing-Scales.
Claims use since Feb. 11, 1916.

Ser. No. 101,298. (CLASS 11. INKS AND INKING MATERIALS.) F. E. ORIE COMPANY, Philadelphia, Pa. Filed Feb. 10, 1917.



Particular description of goods.—Printing-Inks.
Claims use since Dec. 8, 1916.

TRADE-MARK REGISTRATIONS GRANTED

MARCH 6, 1917.

115,714. CANNED SALMON. ALASKA-PACIFIC FISHERIES, Portland, Oreg.
Filed December 1, 1916. Serial No. 99,642. PUBLISHED JANUARY 2, 1917.

115,715. CANNED SALMON. ALASKA-PACIFIC FISHERIES, Portland, Oreg.
Filed December 1, 1916. Serial No. 99,643. PUBLISHED JANUARY 2, 1917.

115,716. NECKTIES. B. ALTMAN & Co., New York, N. Y.
Filed September 18, 1916. Serial No. 98,039. PUBLISHED JANUARY 2, 1917.

115,717. WALL, FLOOR, AND CEILING TILES FOR INTERIOR AND EXTERIOR PURPOSES. AMERICAN ENCAUSTIC TILING CO. LTD., Zanesville, Ohio; Maurer, N. J., and New York, N. Y.
Filed November 3, 1916. Serial No. 99,054. PUBLISHED JANUARY 2, 1917.

115,718. HARD-RUBBER COMPOUND FOR ELECTRICAL PURPOSES. AMERICAN HARD RUBBER CO., New York, N. Y.
Filed November 14, 1916. Serial No. 99,291. PUBLISHED JANUARY 2, 1917.

115,719. DAIRY AND STOCK FEEDS. ARCADY FARMS MILLING COMPANY, Rondout, Ill.
Filed April 24, 1916. Serial No. 94,661. PUBLISHED SEPTEMBER 26, 1916.

115,720. MACARONI, PRESERVED FIGS, RIPE OLIVES. AUSTIN, NICHOLS & Co., INC., Brooklyn and New York, N. Y.
Filed September 19, 1916. Serial No. 98,072. PUBLISHED DECEMBER 26, 1916.

115,721. SNAP-FASTENERS. THE AUTOYRE CO., Oakville, Conn.
Filed November 22, 1916. Serial No. 99,455. PUBLISHED JANUARY 2, 1917.

115,722. SNAP-FASTENERS. THE AUTOYRE CO., Oakville, Conn.
Filed November 22, 1916. Serial No. 99,456. PUBLISHED JANUARY 2, 1917.

115,723. CERTAIN NAMED MEDICINES AND PHARMACEUTICAL PREPARATIONS. THE AVALON FARMS COMPANY, Chicago, Ill.
Filed November 4, 1916. Serial No. 99,075. PUBLISHED JANUARY 2, 1917.

115,724. LINIMENT TO BE USED FOR THE TREATMENT OF RHEUMATISM. BANKS ALEXANDER BENNIE, Nashville, Tenn.
Filed November 9, 1916. Serial No. 99,186. PUBLISHED JANUARY 2, 1917.

115,725. RICE. C. F. BLANKE TEA & COFFEE CO., St. Louis, Mo.
Filed November 6, 1916. Serial No. 99,117. PUBLISHED DECEMBER 19, 1916.

115,726. CIGARS. CHARLES CHESTER BOGART, Middletown, N. Y.
Filed November 3, 1916. Serial No. 99,058. PUBLISHED JANUARY 2, 1917.

115,727. SOLID ALCOHOL. GEORGE BORGFELDT & Co., New York, N. Y.
Filed September 18, 1916. Serial No. 98,041. PUBLISHED JANUARY 2, 1917.

115,728. AUTOMOBILE-TIRE PUMPS AND BICYCLE-TIRE PUMPS. BRIDGEPORT BRASS COMPANY, Bridgeport, Conn.
Filed November 6, 1916. Serial No. 99,116. PUBLISHED JANUARY 2, 1917.

115,729. TONIC FOOD. THE BRITISH MILK PRODUCTS COMPANY LIMITED, London, England.
Filed June 15, 1916. Serial No. 95,879. PUBLISHED DECEMBER 26, 1916.

115,730. POULTRY REMEDY. BURRELL-MILLER, Indianapolis, Ind.
Filed November 11, 1916. Serial No. 99,234. PUBLISHED JANUARY 2, 1917.

115,731. GLYCERIN SUBSTITUTES. W. J. BUSH & Co. INCORPORATED, New York, N. Y.
Filed November 17, 1916. Serial No. 99,334. PUBLISHED JANUARY 2, 1917.

115,732. MEDICAL SALVE OR OINTMENT. FRANK BUSS, St. Louis, Mo.
Filed November 6, 1916. Serial No. 99,115. PUBLISHED JANUARY 2, 1917.

115,733. POWDERED EGG. THE CABELL COMPANY, Baltimore, Md.
Filed November 22, 1916. Serial No. 99,463. PUBLISHED JANUARY 2, 1917.

115,734. BUTTER. THE CHADRON ICE & CREAMERY CO., Chadron, Nebr.
Filed October 27, 1915. Serial No. 90,135. PUBLISHED DECEMBER 12, 1916.

115,735. FEED-BAGS. GANDOLFO CIPRIANO, New York, N. Y.
Filed August 31, 1916. Serial No. 97,728. PUBLISHED JANUARY 2, 1917.

115,736. MONTHLY AERONAUTICAL JOURNAL. JOHN F. L. COLLINS, Brooklyn, N. Y.
Filed September 28, 1916. Serial No. 98,288. PUBLISHED JANUARY 2, 1917.

115,737. MEDICINAL TABLETS FOR THE TREATMENT OF ANEMIC CONDITIONS OF THE BLOOD. CONWAY & HALL, Sault Ste. Marie, Mich.
Filed September 12, 1916. Serial No. 97,948. PUBLISHED JANUARY 2, 1917.

115,738. COFFEE. EARL COWAN COMPANY, Los Angeles, Cal.
Filed December 1, 1916. Serial No. 99,648. PUBLISHED JANUARY 2, 1917.

115,739. SATINS IN THE PIECE. SAMUEL CRAMER, Philadelphia, Pa.
Filed November 24, 1916. Serial No. 99,516. PUBLISHED JANUARY 2, 1917.

115,740. CHOCOLATE. CLARENCE A. CRANE, Cleveland, Ohio.
Filed November 17, 1916. Serial No. 99,336. PUBLISHED DECEMBER 26, 1916.

115,741. CHECK-PROTECTORS. DEFIANCE CHECK WRITER CORPORATION, Rochester, N. Y.
Filed October 30, 1916. Serial No. 98,972. PUBLISHED JANUARY 2, 1917.

115,742. PASTE FOR TREATMENT OF SOFT BLEEDING GUMS. DEANE LABORATORIES, New York, N. Y.
Filed November 11, 1916. Serial No. 99,238. PUBLISHED JANUARY 2, 1917.

115,743. PHOTOGRAPHIC DEVELOPERS. EASTMAN KODAK CO., Rochester, N. Y.
Filed November 20, 1916. Serial No. 99,400. PUBLISHED JANUARY 2, 1917.

115,744. TOILET CREAM. THE ELCAYA CO., INC., New York, N. Y.
Filed November 14, 1916. Serial No. 99,293. PUBLISHED JANUARY 2, 1917.

115,745. OLIVE-OIL. ELYSÉE OLIVE OIL CO., New York, N. Y.
Filed November 18, 1916. Serial No. 99,372. PUBLISHED DECEMBER 26, 1916.

115,746. ANTISEPTIC AND HEALING LOTION. ENTOL PRODUCTS CO. INC., New York, N. Y.
Filed November 29, 1916. Serial No. 99,622. PUBLISHED JANUARY 2, 1917.

115,747. CHEMICAL COMPOUND HAVING BACTERICIDE ACTION, AND BEING PARTICULARLY USEFUL FOR THE TREATMENT OF GONORRHEA. FARBWERKE VORM. MEISTER LUCIUS & BRUNING, Höchst-on-the-Main, Germany.
Filed November 14, 1916. Serial No. 99,295. PUBLISHED JANUARY 2, 1917.

115,748. COTTON THREADS AND YARNS. MARSHALL FIELD & COMPANY, Chicago, Ill.
Filed August 1, 1916. Serial No. 97,020. PUBLISHED JANUARY 2, 1917.

115,749. ADHESIVELY-UNITED LAMINATED FABRICS FOR USE AS A SHOE-CLOTH. HENRY GITTERMAN & Co., New York, N. Y.
Filed March 29, 1916. Serial No. 93,956. PUBLISHED JANUARY 2, 1917.

115,750. MARMALADES AND JAMS. GLENCREST FOOD Co., Chicago, Ill.
Filed November 18, 1916. Serial No. 99,373. PUBLISHED DECEMBER 26, 1916.

115,751. CANNED SARDINES. GLOBE CANNING Co., Eastport, Me.
Filed October 31, 1916. Serial No. 98,999. PUBLISHED DECEMBER 26, 1916.

115,752. CANNED SARDINES. GLOBE CANNING Co., Eastport, Me.
Filed October 31, 1916. Serial No. 99,004. PUBLISHED DECEMBER 26, 1916.

115,753. CANNED SARDINES. GLOBE CANNING Co., Eastport, Me.
Filed October 31, 1916. Serial No. 99,005. PUBLISHED DECEMBER 26, 1916.

115,754. SUSPENDERS. THE GLUCKAUF COMPANY INC., New York, N. Y.
Filed August 17, 1916. Serial No. 97,401. PUBLISHED JANUARY 2, 1917.

115,755. DRESSES. GOLDMAN COSTUME COMPANY, New York, N. Y.
Filed October 5, 1916. Serial No. 98,434. PUBLISHED JANUARY 2, 1917.

115,756. CIGARS. W. K. GRESH & SONS, Norristown, Pa.
Filed October 21, 1916. Serial No. 98,807. PUBLISHED JANUARY 2, 1917.

115,757. PHARMACEUTICAL PREPARATION. GRIFFITH CHEMICAL COMPANY, Freeport, Ill.
Filed October 30, 1916. Serial No. 98,979. PUBLISHED JANUARY 2, 1917.

115,758. DESICCATED COCOANUT. HABICHT, BRAUN & Co., New York, N. Y.
Filed November 23, 1916. Serial No. 99,502. PUBLISHED JANUARY 2, 1917.

115,759. DEPILATORY POWDER. HALL & RUCKEL, New York, N. Y.
Filed November 20, 1916. Serial No. 99,409. PUBLISHED JANUARY 2, 1917.

115,760. BEER. GEORGE L. HARBAUER, New York, N. Y.
Filed November 28, 1916. Serial No. 99,612. PUBLISHED JANUARY 2, 1917.

115,761. GOGGLES AND EYE-PROTECTORS FOR USE BY X-RAY SPECIALISTS. F. A. HARDY & COMPANY, Chicago, Ill.
Filed November 6, 1916. Serial No. 99,123. PUBLISHED JANUARY 2, 1917.

115,762. MEN'S, WOMEN'S, AND CHILDREN'S HATS AND CAPS. HOLTITE-THISTLE COMPANY, INC., New York, N. Y.
Filed November 15, 1916. Serial No. 99,311. PUBLISHED JANUARY 2, 1917.

115,763. CANVAS BELTING, RUBBER BELTING, LEATHER BELTING, AND COMBINATION CANVAS AND RUBBER BELTING. HUDSON MECHANICAL RUBBER COMPANY, New York, N. Y.
Filed March 24, 1916. Serial No. 93,841. PUBLISHED JANUARY 2, 1917.

115,764. MEDICINAL PREPARATION OF OLIVE-OIL. THE JELOL COMPANY, New York, N. Y.
Filed November 2, 1916. Serial No. 99,053. PUBLISHED JANUARY 2, 1917.

115,765. GROATS. KEEN ROBINSON & COMPANY LIMITED, London, England.
Filed January 28, 1916. Serial No. 92,472. PUBLISHED JANUARY 2, 1917.

115,766. FRESH MEATS, CURED MEATS, COOKED MEATS, CANNED MEATS, SALTED MEATS, SAUSAGES, LARD, AND OLEOMARGARIN. KINGAN & COMPANY, LIMITED, Belfast, Ireland, and Indianapolis, Ind.
Filed June 30, 1916. Serial No. 96,253. PUBLISHED NOVEMBER 28, 1916.

115,767. CARBURETERS. ANDREW KIRKPATRICK, New York, N. Y.
Filed April 15, 1916. Serial No. 94,445. PUBLISHED JANUARY 2, 1917.

115,768. COFFEE, BUTTER, AND RICE. P. C. KNOWLTON CO., INC., successors to Baldwin, Knowlton & Lake, Memphis, Tenn.
Filed August 25, 1915. Serial No. 88,804. PUBLISHED FEBRUARY 29, 1916.

115,769. GROUND COFFEE AND WHOLE-BEAN COFFEE. C. H. KRONENBERGER & Co., Baltimore, Md.
Filed October 13, 1916. Serial No. 98,634. PUBLISHED NOVEMBER 14, 1916.

115,770. CERTAIN NAMED FOODS. P. MAX KUEHNRICH, Los Angeles, Cal.
Filed September 27, 1916. Serial No. 98,263. PUBLISHED DECEMBER 26, 1916.

115,771. CERTAIN NAMED FOODS. P. MAX KUEHNRICH, Los Angeles, Cal.
Filed September 27, 1916. Serial No. 98,265. PUBLISHED DECEMBER 26, 1916.

115,772. CERTAIN NAMED FOODS. P. MAX KUEHNRICH, Los Angeles, Cal.
Filed September 27, 1916. Serial No. 98,267. PUBLISHED DECEMBER 26, 1916.

115,773. HAIR-TONIC. LA GUARDIAS AND COMPANY, New York, N. Y.
Filed October 2, 1916. Serial No. 98,367. PUBLISHED JANUARY 2, 1917.

115,774. CANNED SARDINES. LA MANNA, AZEMA & FARNAN, New York, N. Y.
Filed November 29, 1916. Serial No. 99,626. PUBLISHED JANUARY 2, 1917.

115,775. DOLLS. ROBERT G. LINDSAY, New York, N. Y.
Filed October 27, 1916. Serial No. 98,927. PUBLISHED JANUARY 2, 1917.

115,776. SILK SHIRTINGS, ALL-WOOL FLANNELS AND WORSTEDS. ROBERT H. LINTON, New York, N. Y.
Filed September 20, 1916. Serial No. 98,115. PUBLISHED JANUARY 2, 1917.

115,777. CAKES OF THE KIND KNOWN AS COOKIES. LOOSE-WILES BISCUIT COMPANY, New York, N. Y., and Kansas City, Mo.
Filed September 25, 1916. Serial No. 98,214. PUBLISHED DECEMBER 26, 1916.

115,778. CERTAIN NAMED CANNED GOODS. R. H. MACY & Co., New York, N. Y.
Filed October 31, 1916. Serial No. 99,012. PUBLISHED DECEMBER 26, 1916.

115,779. SILK PIECE GOODS. H. R. MALLINSON & Co., New York, N. Y.
Filed December 13, 1915. Serial No. 91,488. PUBLISHED DECEMBER 26, 1916.

115,780. LADIES' ORNAMENTAL COLLARS. LARRY J. MARGULIES, New York, N. Y.
Filed November 1, 1916. Serial No. 99,028. PUBLISHED JANUARY 2, 1917.

115,781. FRICTION-TAPE. THE MECHANICAL RUBBER COMPANY, New York, N. Y.; Chicago, Ill., and Cleveland, Ohio.
Filed November 9, 1916. Serial No. 99,195. PUBLISHED JANUARY 2, 1917.

115,782. REMEDY FOR TRACHOMA AND OTHER AFFECTIONS OF THE EYES. MONAHAN MEDICINE Co., Asheville, N. C.
Filed December 9, 1916. Serial No. 99,823. PUBLISHED JANUARY 2, 1917.

115,783. WHEAT-FLOUR. MORRISTOWN FLOUR MILLS, Morristown, Tenn.
Filed August 6, 1914. Serial No. 80,367. PUBLISHED DECEMBER 15, 1914.

115,784. IRON AND BRASS WOOD-SCREWS. MULLER, MACLEAN & Co., INC., New York, N. Y.
Filed December 9, 1915. Serial No. 91,353. PUBLISHED FEBRUARY 15, 1916.

115,785. LEMONS. MURPHY OIL COMPANY, East Whittier, Cal.
Filed December 1, 1916. Serial No. 99,659. PUBLISHED JANUARY 2, 1917.

115,786. BLEACHING AND WATER-SOFTENING COMPOUND. NATIONAL MILLING AND CHEMICAL Co., Philadelphia, Pa.
Filed October 18, 1916. Serial No. 98,755. PUBLISHED JANUARY 2, 1917.

115,787. BLOOD-PURIFIER. NATSKI MEDICINE COMPANY, Mowequa, Ill.
Filed November 6, 1916. Serial No. 99,126. PUBLISHED JANUARY 2, 1917.

115,788. MACHINERY BELTING COMPOSED OF RUBBER AND FABRIC. NEW YORK BELTING AND PACKING COMPANY, New York, N. Y.
Filed July 3, 1916. Serial No. 96,309. PUBLISHED JANUARY 2, 1917.

115,789. MACHINERY BELTING COMPOSED OF RUBBER AND FABRIC. NEW YORK BELTING AND PACKING COMPANY, New York, N. Y.
Filed July 3, 1916. Serial No. 96,310. PUBLISHED JANUARY 2, 1917.

115,790. ANNUAL CATALOGUE OR ILLUSTRATED PRICE-LIST FOR THE JEWELERS' TRADE. THE NORRIS, ALISTER-BALL COMPANY, Chicago, Ill.
Filed November 6, 1916. Serial No. 99,127. PUBLISHED JANUARY 2, 1917.

115,791. SOLDERING COMPOUND. ARTHUR J. NYE, Walla Walla, Wash.
Filed November 27, 1916. Serial No. 99,579. PUBLISHED JANUARY 2, 1917.

115,792. NON-ALCOHOLIC BEVERAGES PREPARED FROM SELECTED BARLEY-MALT, RICE, AND HOPS. OBERMEYER & LIEBMANN, Brooklyn, N. Y.
Filed November 20, 1916. Serial No. 99,044. PUBLISHED JANUARY 2, 1917.

115,793. LOTIONS, POMADES, AND POWDERS FOR USE IN THE TREATMENT OF WOUNDS. ROBERT AUGUSTE ODIER, Geneva, Switzerland.
Filed July 6, 1916. Serial No. 96,362. PUBLISHED JANUARY 2, 1917.

115,794. CROCHET-HOOKS. PEERLESS NOVELTY MANUFACTURING COMPANY, Grand Haven, Mich.
Filed November 2, 1916. Serial No. 99,045. PUBLISHED JANUARY 2, 1917.

115,795. COMPRESSED SANITARY NAPKINS, SANITARY NAPKINS, SANITARY APRONS, SANITARY BLOOMERS, SANITARY BELTS, AND COMPRESSED ABSORBENT COTTON. PERFECT NOTION CO., INC., New York, N. Y.
Filed November 6, 1916. Serial No. 99,130. PUBLISHED JANUARY 2, 1917.

115,796. EYE-WASH. GEORGE A. PETTITT, Syracuse, N. Y.
Filed November 23, 1916. Serial No. 99,509. PUBLISHED JANUARY 2, 1917.

115,797. SOLUBLE LUBRICATING-OILS. THE PHOENIX OIL COMPANY, Cleveland, Ohio.
Filed July 31, 1915. Serial No. 88,337. PUBLISHED JANUARY 2, 1917.

115,798. BEER. PIEL BROS., Brooklyn, N. Y.
Filed November 17, 1916. Serial No. 99,357. PUBLISHED JANUARY 2, 1917.

115,799. CANNED OYSTERS. PLATT & Co., INC., Baltimore, Md.
Filed August 17, 1916. Serial No. 97,409. PUBLISHED DECEMBER 19, 1916.

115,800. REMEDY FOR EPILEPTIC FITS AND CONVULSIONS. POLAND & SAVAGE, Philadelphia, Pa.
Filed August 21, 1916. Serial No. 97,521. PUBLISHED JANUARY 2, 1917.

115,801. DECOLORIZING-POWDER. PORT MORRIS CHEMICAL WORKS, INC., New York, N. Y.
Filed November 20, 1916. Serial No. 99,423. PUBLISHED JANUARY 2, 1917.

115,802. CERTAIN NAMED CANNED FRUITS AND VEGETABLES. PRATT-LOW PRESERVING COMPANY, Santa Clara, Cal.
Filed November 18, 1916. Serial No. 99,382. PUBLISHED DECEMBER 26, 1916.

115,803. CIGARS, CIGARETTES, AND SMOKING-TOBACCO. RAUCH CIGAR COMPANY INC., Indianapolis, Ind.
Filed October 6, 1916. Serial No. 98,481. PUBLISHED JANUARY 2, 1917.

115,804. MONTHLY PERIODICALS. HOLLAND S. REAVIS, Houston, Tex.
Filed October 23, 1916. Serial No. 98,845. PUBLISHED JANUARY 2, 1917.

115,805. SPARK-PLUGS. THE REFLEX IGNITION CO., Cleveland, Ohio.
Filed November 27, 1916. Serial No. 99,584. PUBLISHED JANUARY 2, 1917.

115,806. CERTAIN NAMED HARDWARE. THE REPUBLIC METALWARE Co., Buffalo, N. Y.
Filed November 6, 1916. Serial No. 99,132. PUBLISHED JANUARY 2, 1917.

115,807. FINE COMBED YARNS. REX SPINNING Co., Gastonia, N. C.
Filed September 27, 1916. Serial No. 98,272. PUBLISHED JANUARY 2, 1917.

115,808. CANDY AND CONFECTIONS. GILBERT L. RIDEAN, Oakland, Cal., assignor to Puss'n Boots Confectionery Company, Seattle, Wash., a Corporation of Arizona.
Filed January 22, 1916. Serial No. 92,343. PUBLISHED SEPTEMBER 26, 1916.

115,809. SILK PIECE GOODS, SILK AND COTTON FABRICS, ALSO COTTON PIECE GOODS AND HANDKERCHIEFS. A. S. ROSENTHAL COMPANY, New York, N. Y.
Filed September 26, 1916. Serial No. 98,235. PUBLISHED JANUARY 2, 1917.

115,810. HAIR-REMOVER. DAVID A. SALTZ, New York, N. Y.
Filed September 6, 1916. Serial No. 97,823. PUBLISHED JANUARY 2, 1917.

115,811. LEATHER SHOES. SAMUELS SHOE COMPANY, St. Louis, Mo.
Filed July 31, 1916. Serial No. 97,002. PUBLISHED NOVEMBER 7, 1916.

115,812. CERTAIN NAMED CANNED FOODS. THE SEARS AND NICHOLS CANNING CO., Chillicothe, Ohio.
Filed November 17, 1916. Serial No. 99,361. PUBLISHED DECEMBER 26, 1916.

115,813. WHEAT-FLOUR. SHANE BROS. & WILSON COMPANY, Philadelphia, Pa.
Filed July 6, 1915. Serial No. 87,793. PUBLISHED DECEMBER 26, 1916.

115,814. LIQUID AND SOLID SUPERFLUOUS-HAIR REMOVER. LULAH M. SMIDT, Los Angeles, Cal.
Filed November 23, 1916. Serial No. 99,510. PUBLISHED JANUARY 2, 1917.

115,815. BLANKETS. SMITH, HOGG & CO., New York, N. Y.
Filed November 11, 1916. Serial No. 99,261. PUBLISHED JANUARY 2, 1917.

115,816. CORNMEAL, CREAM-MEAL, AND GRITS. SOUTH TEXAS GRAIN COMPANY, Houston, Tex.
Filed August 15, 1916. Serial No. 97,356. PUBLISHED DECEMBER 26, 1916.

115,817. CANDIES AND CONFECTIONS. EMIL SPITZER, Los Angeles, Cal.
Filed November 8, 1916. Serial No. 99,267. PUBLISHED DECEMBER 26, 1916.

115,818. RECONSTRUCTIVE TONIC. FREDERICK STEARNS & CO., Detroit, Mich.
Filed November 24, 1916. Serial No. 99,528. PUBLISHED JANUARY 2, 1917.

115,819. ROASTED COFFEE. STEINWENDER-STOFFREGEN COFFEE CO., St. Louis, Mo.
Filed November 18, 1916. Serial No. 99,385. PUBLISHED DECEMBER 26, 1916.

115,820. CIGARS. CHRISTOPHER J. STETTLER, Buffalo, N. Y.
Filed October 3, 1916. Serial No. 98,394. PUBLISHED JANUARY 2, 1917.

115,821. BREAD, CAKE, AND CRACKERS. TASTY BAKING COMPANY, Philadelphia, Pa.
Filed November 4, 1916. Serial No. 99,100. PUBLISHED DECEMBER 26, 1916.

115,822. REFINED PETROLEUM. TIDE WATER OIL CO., New York, N. Y.
Filed November 10, 1916. Serial No. 99,230. PUBLISHED JANUARY 2, 1917.

115,823. DESSERT-POWDER. THE WABASH CHEMICAL & BAKING POWDER COMPANY, Wabash, Ind.
Filed September 11, 1916. Serial No. 97,941. PUBLISHED NOVEMBER 28, 1916.

115,824. POWDER-PAPER. WALDES & CO., Prague-Wrschowitz, Austria-Hungary.
Filed November 22, 1916. Serial No. 99,488. PUBLISHED JANUARY 2, 1917.

115,825. POWDER-PAPER. WALDES & CO., Prague-Wrschowitz, Austria-Hungary.
Filed November 22, 1916. Serial No. 99,491. PUBLISHED JANUARY 2, 1917.

115,826. GOLF-BALLS. JOHN WANAMAKER, New York, New York, N. Y.
Filed November 4, 1916. Serial No. 99,104. PUBLISHED JANUARY 2, 1917.

115,827. GOLF-BALLS. JOHN WANAMAKER, New York, New York, N. Y.
Filed November 4, 1916. Serial No. 99,105. PUBLISHED JANUARY 2, 1917.

115,828. NATURAL SPRING-WATER USED AS A BEVERAGE. WHITE ROCK MINERAL SPRINGS COMPANY, Waukesha, Wis., and New York, N. Y.
Filed November 18, 1916. Serial No. 99,392. PUBLISHED JANUARY 2, 1917.

115,829. RUBBER BELTING, RUBBER HOSE, RUBBER PACKING, AND RUBBER TIRES. THE WIRTHLIN-MANN COMPANY, Cincinnati, Ohio.
Filed November 13, 1915. Serial No. 90,642. PUBLISHED JANUARY 2, 1917.

115,830. COUGH-SYRUP. EFAULA M. WILLIAMS, Terre Haute, Ind.
Filed September 29, 1916. Serial No. 98,320. PUBLISHED DECEMBER 5, 1916.

115,831. GOLF-BALLS. THE WORTHINGTON BALL COMPANY, Elyria, Ohio.
Filed August 28, 1916. Serial No. 97,676. PUBLISHED JANUARY 2, 1917.

1,158,832. TOOTH-PASTE. WRIGLEY & COMPANY, Philadelphia, Pa.
Filed February 17, 1915. Serial No. 84,592. PUBLISHED NOVEMBER 9, 1915.

LABELS

REGISTERED MARCH 6, 1917.

19,941.—*Title:* "SANITARY TOOTH PICKS." (For Toothpicks.) LUCY ALDEN, Saginaw, Mich. Filed February 12, 1917.

19,942.—*Title:* "ALLEN'S HERBAL HAIR HEALTH TONIC." (For Hair-Tonic.) JOHN ELLSWORTH ALLEN, El Paso, Tex. Filed February 12, 1917.

19,943.—*Title:* "SMOKEWELL." (For Cigars.) EMZE CIGAR CO., Philadelphia, Pa. Filed February 15, 1917.

19,944.—*Title:* "DIXIE HIGHWAY." (For Canned Tomatoes.) ARCH B. RITCHIE, New Tazewell, Tenn. Filed December 30, 1916.

19,945.—*Title:* "BOONE'S TRAIL." (For Canned Tomatoes.) RITCHIE CANNING CO., New Tazewell, Tenn. Filed December 30, 1916.

19,946.—*Title:* "JUSTRITE." (For Bread.) SANIWAX PAPER CO., Kalamazoo, Mich. Filed January 29, 1917.

19,947.—*Title:* "KLEANRAPT." (For Bread.) SANIWAX PAPER CO., Kalamazoo, Mich. Filed January 29, 1917.

19,948.—*Title:* "BITE O." (For Bread.) SANIWAX PAPER CO., Kalamazoo, Mich. Filed January 29, 1917.

19,949.—*Title:* "IT'S ALL." (For Bread.) SANIWAX PAPER CO., Kalamazoo, Mich. Filed January 29, 1917.

19,950.—*Title:* "EATSUM." (For Bread.) SANIWAX PAPER CO., Kalamazoo, Mich. Filed January 29, 1917.

19,951.—*Title:* "MEAT-O-WHEAT." (For Bread.) SANIWAX PAPER CO., Kalamazoo, Mich. Filed January 29, 1917.

19,952.—*Title:* "APROPO." (For Cigars.) RUY SUAREZ & CO., New York, N. Y. Filed June 2, 1916.

19,953.—*Title:* "CARDINAL." (For Non-Alcoholic Beverages.) HERMAN SCHREIER, Sheboygan, Wis. Filed January 25, 1917.

19,954.—*Title:* "CARAMEL." (For Non-Alcoholic Beverages.) HERMAN SCHREIER, Sheboygan, Wis. Filed January 25, 1917.

19,955.—*Title:* "IMPERIAL." (For Non-Alcoholic Beverages.) HERMAN SCHREIER, Sheboygan, Wis. Filed January 25, 1917.

19,956.—*Title:* "EMAZOL." (For Mouth and Throat Wash.) TOKALON, INC., New York, N. Y. Filed February 17, 1917.

19,957.—*Title:* "U-AR-DAS BATH TABLETS." (For Bath-Table(s.) WOODWARD, CLARKE & CO., Portland, Oreg. Filed January 4, 1917.

19,958.—*Title:* "NEVADA HONEY." (For Extracted Honey.) GILLMAN H. WRIGHT, Fallon, Nev. Filed January 2, 1917.

PRINTS

REGISTERED MARCH 6, 1917.

4,639.—*Title:* "JARDIN DE ROSE." (For Toilet Requisites.) AMERICAN TOILET GOODS CO., Boston, Mass. Filed January 10, 1917.

4,640.—*Title:* "NO. 8 CREAM CITY DWARF DISPLAY CUT-OUTS." (For Cream City Ware.) GEUDER, PAESCHKE & FREY CO., Milwaukee, Wis. Filed January 2, 1917.

4,641.—*Title:* "BOCABELLI." (For Soap.) ENOS F. JONES CHEM. CO., New York, N. Y. Filed October 26, 1916.

4,642.—*Title:* "MALLORY HATS." (For Hats.) E. A. MALLORY & SONS, INC., Danbury, Conn. Filed February 2, 1917.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISION OF THE EXAMINER OF INTERFERENCES.

STAR COMPANY v. FISHER.

Decided December 22, 1916.

TRADE-MARKS — PERSONAL MARKS — NOT TRANSFERABLE. "Mutt and Jeff" *Held* to be a personal trade-mark incapable of assignment because identified in the mind of the public with the genius and skill of a particular individual.

TRADE-MARK FOR CARTOONS.

Mr. John T. Sturdevant and *Mr. Bainbridge Colby* and *Mr. Morrison T. Hawkins* for the Star Company.

Mr. Charles E. Kelley and *Mr. Cornelius C. Billings* for Fisher.

STAUFFER, *Examiner of Interferences:*

This is an application of the Star Company for cancelation of the mark "Mutt and Jeff" registered March 9, 1915, by Harry C. Fisher as a trade-mark for a series of cartoons.

The substantial allegation of the petitioner is that this mark was unlawfully registered by the registrant because the petitioner is and always has been the owner thereof.

The important facts of this case are either admitted by the parties or are clearly shown by the evidence.

Harry C. Fisher, the registrant, was employed for sometime prior to November, 1907, by the *San Francisco Chronicle*, a newspaper published in San Francisco, California, as a cartoonist or comic artist. On November 15, 1907, there first appeared in that paper a comic strip or cartoon drawn by him in which the character "A Mutt" was the principal feature. Cartoons in which this character and others appeared were published by this paper up to and including December 10, 1907. On December 11, 1907, Fisher entered the employ of the *San Francisco Examiner*, a newspaper also published in San Francisco, Cal. Fisher had no written contract of employment with the *Chronicle* nor did he have with the *Examiner* until February, 1909. During this time he received a weekly salary, and he contends, and the officers of these companies do not deny, that he could have changed his employment at any time. After he entered the employ of the *Examiner*, cartoons drawn by him, in which the character "Mutt" usually appeared, were published in that paper. On May 5, 1908, the character "Jeff" first appeared in his cartoons.

On February 24, 1909, Fisher made a contract for three years' employment with the Examiner Printing Company, in which he agreed to devote his entire time and attention to the Examiner Printing Company or to publications in which William R. Hearst was interested. In May, 1909, Fisher went to New York, and his cartoons of Mutt and Jeff began to appear in the *New York American*, a newspaper published by the Star Company, the petitioner herein. On August 8, 1910, Fisher made a five-year contract with the Star Company. In this contract, paragraph 4, appears a statement to the effect that Fisher is the originator of the series of comic strips "Mutt and Jeff." Fisher continued to furnish cartoons for the Star Company, which were printed in the *American* and in many other papers under the control of the International News Company, which is the syndicating agent of the Star Company, with the titles to the cartoons printed exactly as he had written them. On December 11, 1914, the title of the cartoon as it appeared in the *American* was changed after it had been written by Fisher. No change was made in the title of this cartoon as it appeared in other papers receiving it. Fisher protested against this change, and he and the officers of the Star Company being unable to agree upon the subject of the titles to his cartoons he refused to furnish any cartoons to the Star Company after January, 1915, and the last "Mutt and Jeff" cartoon appeared in the *American* on January 29, 1915. Fisher made a contract with the Wheeler Syndicate on December 7, 1914, to draw his comic strips or cartoons for it after the expiration of the contract of August 8, 1910.

Fisher copyrighted in his own name the last cartoon which appeared in the *Chronicle* on December 10, 1907, and the first two which appeared in the *San Francisco Examiner* on December 11 and 12, 1907.

It is claimed by Fisher and not denied by the petitioner that all his cartoons, unless omitted by mistake, contained his name or the legend "By Bud Fisher," "Bud" being the name usually used instead of his proper Christian name.

It is shown that the words "Mutt and Jeff", "in collocation," as some of the witnesses express it.

first appeared in the cartoon published November 20, 1909, as follows:

Mutt and Jeff do a little ticket scalping at the big game—by Bud Fisher.

The cartoon of December 11, 1914, contained the title "Mutt and Jeff" with a dash after the word "Jeff," which was followed by the words "The little fellow also knows some law and proves it." These cartoons appearing in the *American* from January 19 to 29, 1915, contained the caption or heading "Mutt and Jeff" only, although Fisher protested against the use of these titles as a violation of the contract with him.

On September 22, 1910, Fisher published a book of cartoons which had previously appeared in the *New York American* and the other papers on which he had been employed. The title of this book is "The Mutt and Jeff Cartoons—by Bud Fisher," and a copyright in the book was taken out by him. The Star Company made no objection whatever to his publication of this book of cartoons. Mr. Carvalho, the general manager of the Hearst newspapers and the president of the Star Company, drawing the contract between Fisher and his publishers and making some suggestions to Fisher relative to the character of contract he should obtain.

Fisher testifies that Carvalho gave him his word that the Star Company would not appropriate the characters "Mutt and Jeff" at the expiration of his contract. (Star record, pp. 208, 333, 340.) None of the officers or employees of the Hearst papers who testify deny that Fisher originated and created the characters Mutt and Jeff. Mr. Lawson, publisher of the *Chicago Daily News*, who was acknowledged by both parties to be an expert newspaper man, testified that Fisher's comic strips are known by the name "Mutt and Jeff." (Fisher's record, p. 354.) When Fisher was introduced to Mr. Merrill, the vice-president of the Star Company and publisher of the *American*, it was as "Mutt and Jeff."

The testimony is held to show clearly that the registrant originated the characters whose names are Mutt and Jeff and that these names are identified with the article produced by the registrant. Although the Star Company had the exclusive right to Fisher's services under contracts with him, those contracts are not regarded as giving it any right to appropriate the characters or the names by which they are known. The conduct of Fisher clearly negatives any supposition that it was his intention to permit the Star Company to own these characters or the names when he ceased to be employed by it. The petitioner has not shown any use of the mark which it attempts to cancel until December, 1914, and against this use and subsequent uses of it by the petitioner, Fisher made the strongest protest. Such use is not regarded as giving it any interest in the mark entitling it to have it canceled under the provisions of the Trade-Mark Act.

The facts in this case are regarded as clearly distinguishing it from the case of *Herald* v. *Star Company*, (146 Fed., 204,) affirmed by the circuit court of appeals, (146 Fed., 1023.) It was shown in that case that the *Herald* published a supplement entitled "Buster Brown" for a number of years, and it was the first to use this caption as a trade-mark. (*The Star Company* v. *The Wheeler Syndicate, Inc.*, 6 T. M. Rep., 425; N. Y. Sup. Ct.)

While this controversy may be decided on the ground stated, which is substantially the same as that relied upon by the Supreme Court of New York in *Star Company* v. *The Wheeler Syndicate, Inc.*, *supra*, which held that the Star Company had no right to the trade-mark, it is believed the character of the registered trade-mark is an additional reason for holding that the petitioner has no right in it. If this mark is a personal mark, its use by any one but Fisher would be deceptive. Whether it is a personal mark and how such a mark may be used will now be considered.

Paul in his work on trade-marks divides marks into personal and impersonal and defines a personal trade-mark as follows:

Personal trade-marks are those which indicate to the public that some particular person has given his special skill to the production and selection of the articles to which they are applied. (Sec. 31.)

This definition describes the mark which the petitioner seeks to cancel. It is a mark which indicates the particular skill or genius of the registrant (*Brown on Trade-Marks*, 2d ed., p. 62.) In the English work of Sebastian (4th ed., p. 100) a personal trade-mark is discussed at some length, with a citation of authorities, and is referred to as a mark which identifies the article to which it is attached with the personal skill or supervision of an individual. Hesseltine on *The Law of Trade-Marks and Unfair Trade* (p. 233) lays down the rule that there can be no valid assignment of a trade-mark of a personal nature and cites a number of authorities in which a personal trade-mark is recognized as belonging to a particular individual. Such a trade-mark is defined in Cyc. (vol. 38, p. 68) as follows:

If a trade-mark or name means to the public that the personal care and skill of a particular individual were exercised in the manufacture, selection, or production of the goods upon which it is used, or in the conduct of the business, it cannot be assigned, because it can never be truthfully used by another.

Fisher's mark is regarded as of exactly this class. Its use by any one else than the individual whose skill and genius go to make up the particular article would be deceptive. See also *American and English Encyclopedia of Law*, (2d ed., vol. 28, p. 399,) *Hill* v. *Lockwood*, (32 Fed., 389-393,) *Manhattan Medicine Co.* v. *Wood*, (108 U. S., 218, 223.) *Leather Cloth Co.* v. *American Leather Cloth Co.*, (11 H. L. Cas., 523,) *Cox's American Trade-Mark cases*, (688,) *Pepper* v. *Labrot*, (8 Fed., 29, 41.) In the *Leather Cloth* case, which is referred to with approval in the decision in the *Manhattan Medicine Company* case by the Supreme Court, it was held:

If an artist or an artisan has acquired by his personal skill and ability a reputation which gives to his rights in the mark a higher value than those of other artists or artisans, he cannot give to any other person the right to affix his name or mark to other goods, because he cannot give to them the right to practise fraud upon the public.

In the *Pepper-Labrot* case the evidence showed that the complainant's predecessor adopted the name "Old Oscar Pepper Distillery" as the name of his distillery, that the distillery became the property

of the defendant by purchase from the complainant, that the complainant was using the mark "Old Oscar Pepper" and "O. O. P." on whisky not made at the "Old Oscar Pepper Distillery," that the defendant was using these marks on whisky made at that distillery, and that the public had been taught to believe by advertisements and other means that "Old Oscar Pepper" whisky or "O. O. P." was made at the "Old Oscar Pepper Distillery." The court held (Circuit Justice Matthews writing the decision) that the mark in controversy could not be used except upon whisky manufactured at this particular distillery with which it had become identified, as it pointed to the place of production of the goods. There is equally good reason for holding that "Mutt and Jeff" as a trade-mark for a series of cartoons may not be used except upon cartoons made by "Bud" Fisher, for the mark is shown clearly by the evidence to identify cartoons made by him.

The mark "Mutt and Jeff" is therefore held upon these authorities to be a personal mark which the petitioner could not use upon comic strips which are not made by the registrant, for the evidence shows that this mark identifies the product of his genius and skill.

The petition for cancelation is therefore dismissed on the grounds, first, that no use of the mark has been made by the petitioner, and, second, that it is a personal mark identified with the registrant, and it is hereby recommended that trade-mark registration No. 102,968, issued March 9, 1915, to Harry C. Fisher, should not be canceled.

Limit of appeal: January 11, 1917.

DECISION OF THE COURTS.

New York Supreme Court.

FISHER *v.* STAR CO. WHEELER SYNDICATE, INC., *v.* SAME.

Decided January 25, 1917.

GREENBAUM, *J.*:

The only question reserved by the court for determination was whether the defendant is to be enjoined from hereafter publishing cartoons drawn in imitation of Mr. Fisher's creations, "Mutt and Jeff." It seems to me that, viewing this question from a standpoint of unfair competition, there should be but one answer thereto, and that is that the publication of such cartoons would be calculated to deceive the public into believing that they were the genuine productions of Mr. Fisher. The cases that recognize these principles as applied to ordinary merchandise are fully stated in such cases as *Hanover Milling Co.* v. *Metcalf*, (240 U. S., 403,) *E. P. Dutton & Co.* v. *Cupples*, (117 App. Div., 172,) and *Yale & Towne Mfg. Co.* v. *Adler*, (154 Fed. Rep., 37.) I can find no difference in principle between that class of cases and the one under review excepting that it is here sought to protect an individual possessed of special skill in the production of cartoons of his own creation. My attention has been called to the opinion written by the Examiner of Interferences upon an application of the defendant for cancelation of the trade-mark "Mutt and Jeff," registered by the plaintiff Fisher as a trade-mark for a series of cartoons. The Examiner refers to recent works on trade-marks in which the distinction is observed between a personal and impersonal trade-mark. Special reference is made to *Paul on Trade-Marks* and the English work of Sebastian, (4th ed., p. 100,) concerning which the Examiner states that—

a personal trade mark is discussed at some length, with a citation of authorities, and is referred to as a mark which identifies the article to which it is attached with the personal skill or supervision of an individual.

I can see no reason on principle why such a trade-mark should not be recognized as the property of Fisher in this case. In passing upon the voluminous findings submitted by the defendant I desire to observe that because reference is made to certain copyrights in the plaintiff's findings there is no implication that this court is disposing of this case upon the theory that a copyright is involved. The facts with reference to the copyright are merely incidental in the determination of the ultimate questions presented. Findings passed upon. Decisions and judgments signed.

Changes in Classification.

(ORDER No. 2,301.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.
Washington, D. C., December 30, 1916.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 15, Brushing and Scrubbing, (Division XXVII,) establish subclasses—

71. **Razor-cleaners.**
72. **Powder-puffs.**

The patents contained in these subclasses have been taken, respectively, from class 132, Toilet, subclasses 29, Razor-cleaners, and 28, Powder-puffs, hereinafter abolished.

In class 45, Furniture, (Division VIII,) establish subclasses—

135. **Toilet racks or cabinets.**
Soap-holders—
136. **Shaving-cups.**

The patents contained in subclass 135, Toilet racks or cabinets, have been taken for the most part from class 132, Toilet, subclass 11, Toilet-cases, hereinafter abolished, and those contained in subclass 136, Soap-holders, Shaving-cups, have been taken from class 132, Toilet, subclass 15, Shaving-cups, hereinafter abolished.

In class 51, Grinding and Polishing, (Division XXVII,) establish subclass—

Abrading materials and tools—
19. Manicuring.

The patents contained in this subclass have been taken for the most part from class 30, Cutlery, subclass 23, Manicure implements.

In class 132, Toilet, (Division XXXV,) abolish subclasses—

27. **Pin-holders.**
28. **Powder-puffs.**
29. **Razor-cleaners.**
15. **Shaving-cups.**
11. **Toilet-cases.**

The patents formerly contained in these subclasses have been placed for the most part in the various new subclasses established in this order.

In same class establish subclasses—

32. **Toilet kits—**
35. Hair brush and comb,
36. Manicuring,
34. Powder box and puff,
33. Soap-holder and shaving-brush.

The patents contained in subclasses 32, 33, 34, and 35 have been taken for the most part from the subclasses hereinbefore abolished in this class, and those contained in subclass 36 have been taken for the most part from class 30, Cutlery, subclass 23, Manicure implements. Subclass 32 also contains some patents from class 30, Cutlery, subclass 23, Manicure implements; subclass 33 contains some patents from class 15, Brushing and Scrubbing, subclass 38, Brush heads and faces, Shaving-brushes, and subclass 35 contains some patents from class 132, Toilet, subclass 3, Combs, and class 15, Brushing and Scrubbing, subclass 29, Brush heads and faces, Hair-brushes.

In class 206, Special Receptacles and Packages, (Division XI.,) establish the following subclasses and definitions:

Receptacles—
15.1. Brush.
15.6. Toilet appliances.

15.1. RECEPTACLES, BRUSH. Casings peculiarly shaped to inclose a brush or brush-head and in some instances also a liquid or volatile substance to which the brush-head is exposed within the casing.

Search Classes—
167—MEDICINES, subclass 3, Disinfectants, and **248**, SUPPORTS, subclass 63, Brush and broom, Incasing.

15.6. RECEPTACLES, TOILET APPLIANCES. Containers only, peculiarly adapted by construction and interior arrangement to contain instruments used in toilet operations.

Note.—Compare this class, subclass 15.1, containing brush-cases only, and subclass 16, comprising cases for razors unaccompanied by other appliances. For mere compartment-cases or for features of general application, even though illustrated in a box designed to contain toilet appliances, see the appropriate receptacle classes.

Search Classes—
45—FURNITURE, subclass 135, Toilet racks or cabinets, for racks, stands, and cabinets or cases having a mirror adapted to be placed in position for use in toilet operations.
132—TOILET, subclass 32, Toilet kits, and the subclasses indented thereunder, for containers plus means whereby the entire assemblage, including the container, serves a function in toilet operations.

The patents contained in these subclasses have been taken for the most part from class 132, Toilet, subclass 11, Toilet-cases, hereinbefore abolished.

In class 211, Store Furniture, (Division VIII.,) establish subclass—

Cabinets—
Delivering—
44. Pin.

The patents contained in this subclass have been taken from class 132, Toilet, subclass 27, Pin-holders, hereinbefore abolished.

In class 223, Apparel Apparatus, (Division XXIV.,) abolish subclass—

35. **Needle-holders.**

The patents formerly contained in this subclass have been placed in subclass 60, Implement-holders, Needle or pin, hereinafter established in this class.

In same class establish subclass—

Implement-holders—
60. Needle or pin.

The patents contained in this subclass have been taken from subclass 35, Needle-holders, hereinbefore abolished in this class, and from class 132, Toilet, subclass 27, Pin-holders, hereinbefore abolished.

In class 248, Supports, (Division VIII.,) establish subclass—

Brush and broom—
63. Incasing.

The patents contained in this subclass have been taken for the most part from class 132, Toilet, subclasses 11, Toilet-cases, and 15, Shaving-cups, hereinbefore abolished, and class 91, Coating, subclass 63, Implements, Brush holders and cleaners.

THOMAS EWING,
Commissioner.

Changes in Classification

(ORDER No. 2,302.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 30, 1916.

The following change in the classification of inventions is hereby directed, to take effect immediately:

In class 91, Coating, (Division XV.,) abolish the following subclass, with its definition:

Implements—
64. Painters' hooks.

The patents formerly contained in this subclass have been placed in appropriate subclasses in classes 7, Compound Tools, and 248, Supports.

THOMAS EWING,
Commissioner.

Changes in Classification.

(ORDER No. 2,303.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 30, 1916.

The following corrections in the Manual of Classification, revised to January 1, 1916, are hereby directed:

On page 10, in list of Examiners in Charge of Examining Divisions, change the room-number for Examiner Wright, Division 20, from 182 to 170.

On page 62, class 119, Animal Husbandry, change the title of subclass 73, Watering devices, Temperature-controlled, to read:

Watering devices—
73. Temperature-controlling.

On page 81, class 181, Acoustics, change the number of subclass 5, Miscellaneous, to—

0.5 Miscellaneous.

On same page, same class, add to the list of subclasses the following subclass:

27. **Megaphones.**

THOMAS EWING,
Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 27, 1917.

Richard L. Hickson, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The American Agricultural Chemical Company, of No. 2 Rector street, New York, N. Y., for registration of a trade-mark and trade-mark registered June 9, 1885, No. 12,304, to Richard L. Hickson, Danville, Va., and a notice of such declaration sent by registered mail to said Richard L. Hickson at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Richard L. Hickson, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 27, 1917.

The Cereals Mfg. Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Annan-Burg Grain & Milling Company, of Chamber of Commerce Building, St. Louis, Mo., for registration of a trade-mark and trade-mark registered July 4, 1882, No. 9,506, to The Cereals Mfg. Co., of New York, N. Y., and a notice of such declaration sent by registered mail to said The Cereals Mfg. Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless The Cereals Mfg. Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

THE
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OF THE
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Patents	804	No. 1,218,614 to No. 1,219,417, inclusive.
Designs	16	No. 50,441 to No. 50,456, inclusive.
Trade-Marks	40	No. 115,833 to No. 115,872, inclusive.
Labels	None.	
Prints	None.	
Reissues	5	No. 14,268 to No. 14,272, inclusive.
Total	865	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	1	North Carolina	1	.....
Arizona	1	.....	North Dakota	4	.....
Arkansas	3	.....	Ohio	56	4
California	42	.....	Oklahoma	11	.....
Colorado	18	.....	Oregon	11	.....
Connecticut	30	1	Pennsylvania	47	3
Delaware	2	.....	Rhode Island	3	.....
Florida	1	.....	South Carolina	2	.....
Georgia	5	1	South Dakota	.....	.....
Idaho	8	.....	Tennessee	8	.....
Illinois	72	2	Texas	25	1
Indiana	17	.....	Utah	3	.....
Iowa	18	.....	Vermont	.....	.....
Kansas	10	.....	Virginia	9	.....
Kentucky	9	.....	Washington	17	.....
Louisiana	3	.....	West Virginia	5	.....
Maine	2	.....	Wisconsin	16	1
Maryland	6	.....	Wyoming	1	.....
Massachusetts	35	4			
Michigan	31	1	Alaska, District of	.....	.....
Minnesota	10	.....	Canal Zone	.....	.....
Mississippi	4	.....	District of Columbia	12	.....
Missouri	24	1	Hawaii Territory	.....	.....
Montana	5	.....	Philippine Islands	2	.....
Nebraska	6	.....	Porto Rico	1	.....
Nevada	.....	.....	U. S. Army	1	.....
New Hampshire	4	.....	U. S. Navy	.....	.....
New Jersey	36	1			
New Mexico	2	.....	Total to residents of the United States.	759	39
New York	118	18			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	.....	.....
Austria-Hungary	1	.....	New South Wales	3	.....
Barbados	1	.....	New Zealand	3	.....
British India	.....	.....	Norway	1	.....
British West Indies	.....	.....	Portugal	.....	.....
Canada	12	.....	Queensland	.....	.....
Cape Colony	.....	.....	Roumania	.....	.....
Chile	.....	.....	Russia	.....	.....
Costa Rica	.....	.....	Salvador	1	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	2	.....	South Australia	.....	.....
England	9	1	Spain	.....	.....
Finland	.....	.....	Sweden	1	.....
France	5	.....	Switzerland	1	.....
Germany	11	.....	Transvaal	.....	.....
Guatemala	.....	.....	Victoria	.....	.....
India	.....	.....	Wales	1	.....
Ireland	1	.....	Western Australia	1	.....
Italy	3	.....			
Japan	1	.....	Total to residents of foreign countries	59	1
Mexico	.....	.....			
Natal	.....	.....			

Adverse Decisions in Interference.

PATENT NO. 1,102,934.

On February 7, 1917, a decision was rendered that Mildred Lewless was not the first inventor of the subject-matter covered by claims 4 and 7 of her Patent No. 1,102,934, subject, "Portable radiator-heater," and no appeal having been taken within the time allowed such decision has become final.

The Official Gazette.

The OFFICIAL GAZETTE is published every Tuesday simultaneously with the weekly issue of patents. From January 1, 1872, (the commencement of its publication,) to June 30, 1883, it was published and bound in semi-annual volumes; from July 1, 1883, to December 31, 1902, in quarterly volumes; from January 1, 1903, to December 31, 1908, in bimonthly volumes; since January 1, 1909, in monthly volumes. Terms: Annual subscriptions, $5; monthly, 50 cents. For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more, as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. Single copies, 10 cents; if mailed to foreign countries, excepting Canada and Mexico, 10 cents additional for postage. *Payment in advance required. No club rates. No discount to newsdealers. No sample copies.* All subscriptions must commence with the beginning of a volume. None taken for less than an entire volume. All orders should be addressed to "The Superintendent of Documents, Government Printing Office, Washington, D. C."

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 9, 1917.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 8	Jan. 8	301
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Sept. 25	Jan. 10	539
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Feb. 14	Jan. 15	172
234	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Dec. 7	Feb. 15	264
167	5. Bookbinding; Harvesters; Jewelry; Music	Nov. 11	Feb. 5	269
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Nov. 11	Jan. 9	307
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Nov. 11	Nov. 24	684
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Aug. 24	Jan. 1	1083
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Aug. 25	Feb. 4	574
235	10. Carriages and Wagons; Spring Devices	Sept 25	Feb. 1	912
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Jan. 31	Mar. 3	83
324	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Dec. 1	Feb. 14	582
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Nov. 18	Feb. 7	529
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Nov. 1	Dec. 29	260
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Feb. 12	Feb. 15	222
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Oct. 25	Jan. 9	622
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Dec. 7	Feb. 19	222
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Feb. 2	Jan. 25	251
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels..	Aug. 24	Dec. 1	501
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 19	Feb. 6	199
182	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Nov. 13	Jan. 18	276
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 5	Dec. 29	518
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Sept. 11	July 25	374
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Nov. 9	Feb. 3	343
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Jan. 23	Feb. 1	166
105	26. Electricity, Generation; Motive Power	July 7	Dec. 16	612
375	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Jan. 25	Feb. 11	247
63	28. Internal-Combustion Engines	Sept. 20	Nov. 18	523
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Oct. 14	Dec. 9	374
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Nov. 23	Feb. 21	422
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Oct. 25	Dec. 20	277
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Aug. 7	Feb. 1	945
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Oct. 17	Jan. 26	373
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Aug. 25	Jan. 2	347
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet...	Sept. 20	Feb. 23	682
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Nov. 7	Feb. 12	668
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	July 20	Jan. 8	836
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Feb. 14	Feb. 10	160
321	39. Water Distribution	Oct. 13	Jan. 12	326
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Nov. 3	Feb. 10	564
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Nov. 15	Jan. 18	409
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	Aug. 7	Jan. 26	396
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Dec. 20	Jan. 31	155

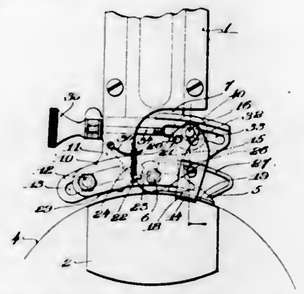
Oldest new case, July 7; oldest amended, July 25.
Total number of applications awaiting action 18,899

163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 17	Feb. 24	985
	Designs	Jan. 9	Jan. 30	365
	Labels and Prints	Feb. 20	Feb. 23	111

PATENTS

GRANTED MARCH 13, 1917.

1,218,614. SKIVING-MACHINE. ALEXANDER M. ALEXANDER, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 31, 1914. Serial No. 879,903. (Cl. 69—9.5.)



1. A skiving machine, having in combination, a rotary skiving knife, a feed roll located upon one side of the knife, a presser member located upon the opposite side of the knife and coöperating with the feed roll, and means for automatically adjusting the presser member to vary the angle of cut made by the knife in accordance with variations in the thickness of the work.

2. A skiving machine, having in combination, a rotary skiving knife, a feed roll located upon one side of the knife, a gage member located upon the opposite side of the knife and coöperating with the feed roll, and means for automatically varying the angular position of the gage member in accordance with variations in the thickness of the work.

3. A skiving machine, having in combination, a rotary skiving knife, a feed roll located upon one side of the knife, a presser foot located upon the opposite side of the knife and coöperating with the feed roll, a gage member arranged to be moved angularly by the work, and mechanism controlled by the presser foot for determining the angular position of the gage member.

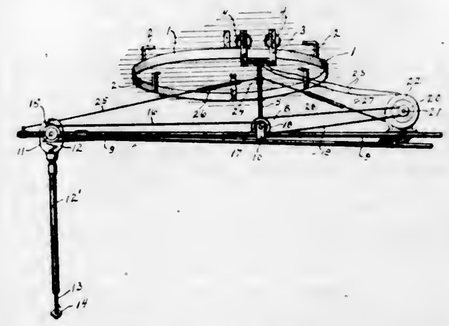
4. A skiving machine comprising a gage member arranged to bear upon the work, a presser foot arranged to bear upon the work in advance of the gage member, and operative connections between the presser foot and gage member for varying the position into which the gage member may be moved by the work in accordance with variations in the vertical position of the presser foot.

5. A skiving machine comprising a supporting head, a gage member pivoted to the head, a cam member for determining the angular position of the gage member, a presser foot, and connections between the presser foot and cam member for determining the position of the cam member.

[Claims 6 to 14 not printed in the Gazette.]

1,218,615. TAMPING DEVICE. GEORGE A. ANDERSON, Dixon, Ill. Filed Jan. 24, 1916. Serial No. 73,828. (Cl. 25—41.)

1. A device of the class described, comprising a circular track adapted to be secured to an overhead support; a carrier movable on said track; a hub pivotally supported from said carrier; a frame rockingly mounted on said hub; a tool carried by one end of said frame; a motor mounted on the opposite end of said frame; and means for imparting the movement of said motor to said tool to suitably operate the same.



2. A device of the class described comprising a support; a frame connected with said support so as to be capable of universal movements; a tool supported at one end of said frame; a motor mounted on the opposite end of said frame and acting as a counterbalance for said tool; and means for imparting the movement of said motor to said tool, to suitably operate the same.

3. In a device of the class described, the combination of a support; a frame connected therewith so as to be capable of universal movements; a tool carried by one end of said frame; a counterbalance on the opposite end of said frame; and means for yieldingly controlling the movement of said frame in its movement out of a horizontal plane.

4. A device of the class described, comprising an overhead support; a supporting member depending therefrom; a hub pivotally mounted on said supporting member; a frame rockingly mounted on said hub; a tool carried by one end of said frame; a motor mounted on the opposite end of said frame and acting as a counterbalance for said tool; means for imparting the movement of said motor to said tool, to suitably actuate the same; and means for yieldingly controlling the action of said frame in its rocking movement.

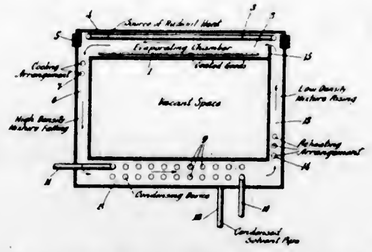
1,218,616. PROCESS OF RECOVERING SOLVENTS. THEODORE BAKER, Wilmington, Del., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Original application filed Oct. 7, 1912, Serial No. 724,309. Divided and this application filed Mar. 26, 1915. Serial No. 17,167. (Cl. 34—24.)

1. The process which comprises effecting the evaporation of volatile solvent from a coating containing the same by a gaseous current circulated by convection, said gaseous current falling directly from the coating.

2. The process which comprises effecting the evaporation of volatile solvent from a coating containing the same by a gaseous current circulated by convection, induced by condensing the volatile solvent from the gaseous current, which falls directly from the coating.

3. The process which comprises effecting the evaporation of volatile solvent from a coating containing the

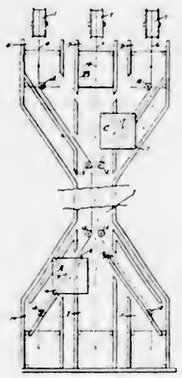
same by a gaseous current circulated by convection, induced by lowering the temperature of a current thereof descending directly from the coating.



4. The process which comprises effecting the evaporation of volatile solvent from a coating containing the same by a gaseous current circulated by convection, induced by condensing the volatile solvent from the gaseous current, by lowering the temperature of a current descending directly from the coating, and raising the temperature of an ascending current thereof.

5. The process which comprises effecting the evaporation of volatile solvent from a coated fabric containing the same by a gaseous current circulated by convection, said gaseous current falling directly from the coating.

1,218,617. MULTIPLE-CAR ELEVATOR SYSTEM. WILLIAM D. BALDWIN, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 17, 1913. Serial No. 742,530. (Cl. 187—16.)



1. In an elevator system, the combination of a main hatchway, branch hatchways radiating therefrom at both ends, and means for independently operating a plurality of suspended cars in said hatchways.

2. In an elevator system, the combination of a main hatchway, branch hatchways connected thereto, and means for independently operating a plurality of suspended cars in said hatchways.

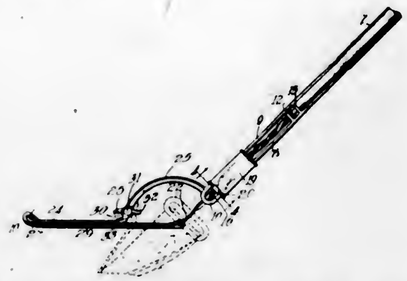
3. In an elevator system, the combination of a main hatchway, branch hatchways connected thereto, and means for operating a plurality of suspended cars in said hatchways.

4. In an elevator system, the combination of a main hatchway, branch hatchways connecting therewith, and means for operating a plurality of cars in said hatchways.

5. In an elevator system, the combination of a main hatchway, a branch hatchway connected thereto, and means for operating a car in both directions in said hatchways.

[Claims 6 to 19 not printed in the Gazette.]

1,218,618. COMBINED MOP AND WRINGER. WILLIAM J. BAUER, Chicago, Ill., assignor, by mesne assignments, to The Linway Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 2, 1915. Serial No. 43,133. (Cl. 15—43.)



1. A combined mop and wringer comprising, a handle, a shaft rotatably connected to said handle, a mop holding member connected to said shaft and adapted to rotate therewith, a sleeve slidably connected to said handle and shaft and adapted to impart a rotary movement to said shaft, a support connected to said handle, a presser member pivotally connected to said support, a mop holding member connected to said presser member and means for limiting the movement of said presser member relative to said support.

2. A combined mop and wringer comprising a handle, a shaft rotatably connected to said handle, a mop holding member connected to said shaft and adapted to rotate therewith, means slidably connected to said handle and shaft and adapted to impart a rotary movement to said shaft, means for varying the rotary movement of said shaft and a second mop holding member pivotally connected to said handle.

3. A combined mop and wringer comprising a handle, a spiral shaft rotatably connected to said handle, a mop-holding member connected to said shaft and adapted to rotate therewith, a sleeve surrounding and slidably connected to said handle and shaft and adapted to impart a rotary movement to said shaft, an arch shaped support connected to said handle, a presser member pivotally connected to said support and having a loop formed at its outer end to receive a mop, means on said loop for preventing the mop from slipping and means for limiting the pivotal movement of said presser member relative to said arch-shaped support.

1,218,619. IMPLEMENT OR DEVICE FOR KILLING OR DISABLING INSECTS, FLIES, OR THE LIKE. JOHN L. BENNETT, Decatur, Ill., assignor to United States Wire Mat Company, Decatur, Ill., a Corporation of Illinois. Filed Sept. 7, 1915. Serial No. 49,192. (Cl. 43—1.)

1. A device of the character described including a handle portion and a body portion, said body portion being composed of wire netting and having its side edges folded over to provide reinforced edge portions, a binding for the top edge secured to the body portion and having its ends folded within the folds of the side edges.

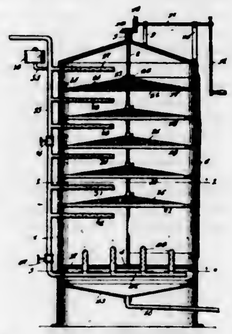
2. A device of the character described including a substantially rectangular body portion and a handle portion, the side edge portion being folded over a plurality of times to provide edge reinforcements, the lower corners of said body portion being folded over said body portion and each other so that the edges thereof extend obliquely whereby the obliquely extending portions of the edges provide stays or braces for the body portion in flexing, a binding for the top edge having its ends folded in with said side edges.

3. A device of the character described including a handle portion and a body portion, said body portion being composed of wire netting and having its side edges folded over a plurality of times to provide reinforced edge portions, a binding for the top edge secured to the body portion by stitching through meshes removed from the end



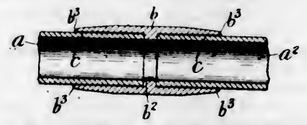
meshes and having its ends folded within the folds of the side edges, the folded end portions of the top edge of the body and the binding being pressed together.

1,218,620. DISH-WASHING MACHINE. LAWRENCE BENSON, Spokane, Wash. Filed Aug. 8, 1913. Serial No. 783,792. (Cl. 141—9.)



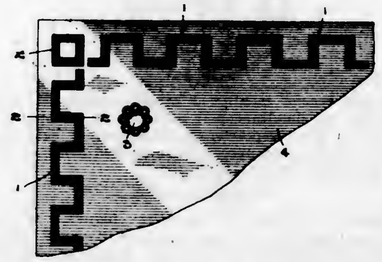
In a dish washing machine, a container, a foraminated rack removably arranged in said container, a bearing fixedly mounted centrally of said rack, a vertical shaft in the container having its lower end journaled in said bearing and its upper end journaled in the container top, a plurality of foraminated trays adjustably secured in superposed relation to said shaft, a manifold pipe having branches extending therefrom into proximity of the rack and trays, a detergent container affixed to and communicating with said manifold at a point adjacent the top of the container, cut-off means arranged in the manifold for controlling the passage of cleansing fluid through the same and to certain of said branches, and means intergeared with said shaft for rotating the same.

1,218,621. SLIP-COUPLING FOR ELECTRIC-CABLE CONDUITS. MAURICE BLUMENTHAL, Brooklyn, N. Y. Filed Feb. 1, 1915. Serial No. 5,424. (Cl. 247—10.)



A tubular slip coupling for conduit pipes comprising an elongated sleeve having the outer surface of its ends tapered inwardly to form inclined cutting edges to facilitate the driving of the same through a wall or partition, said coupling being provided centrally of its interior with a sharp cornered annular bead of a thickness slightly greater than that of the walls of the pipes to be coupled, whereby a substantially continuous smooth surface is provided between the inner wall of the bead and inner surfaces of the pipes.

1,218,622. METHOD OF LAYING MINERAL-COMPOSITION FLOORS. PAUL C. BOVINO, Philadelphia, Pa. Filed Dec. 31, 1914. Serial No. 879,857. (Cl. 72—18.)



1. The herein described method of laying mineral composition floors consisting in first molding ornamental units of the same material as that of which the floor is to be made, then securing by adhesive to the upper surface of said ornamental units paper coverings conforming in shape to the contour of said upper surface of the separate units, then laying the main portion of the floor, and while the latter is in a plastic condition, pressing the ornamental units into the same, and after the floor is set, removing the paper coverings from the ornamental units, substantially as described.

2. The herein described method of laying mineral composition floors consisting in first laying the main portion of the floor in plastic material and while the latter is in a plastic condition pressing into the surface thereof ornamental units, each unit having a covering sheet conforming in shape to the contour of the upper surface of the unit, substantially as described.

3. The herein described method of laying mineral composition floors consisting in first molding ornamental units, then pasting coverings of sheet material to the wear surfaces of said units, said coverings conforming to the exact contours of the wear surfaces of said units, then laying the main portion of the floor in a plastic state and then, while the said main portion is still in a plastic condition, pressing the ornamental units into it and after the floor is set, finally removing the sheet material coverings from said units, substantially as described.

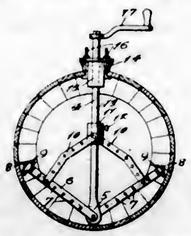
4. The herein described method of laying mineral composition floors consisting in first molding ornamental units, then pasting coverings of sheet material to the wear surfaces of said units, said coverings conforming to the exact contours of the wear surfaces of said units, then forming the main portion of the floor of plastic material and embedding the units therein with the covered surfaces uppermost and after the floor is set, finally removing said covering from the units, substantially as described.

1,218,623. MIXING APPARATUS. WILLIAM H. BRILLHART, Kendallville, Ind. Filed July 31, 1916. Serial No. 112,344. (Cl. 259—144.)

1. The combination with a receptacle, a mixing apparatus including a shaft mounted in the receptacle, agitating arms mounted on said shaft and in adjustable connection with the latter for holding said arms at an angle, conforming to the contour of the receptacle, and means mounted on said arms to engage the receptacle for facilitating movement of said arms.

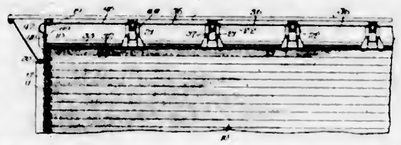
2. In combination with a receptacle, a mixing apparatus including a shaft mounted in the receptacle, agitating

arms, certain of which are in pivotal engagement with the inner end of said shaft, other of said arms being pivotally engaged with the first mentioned arms, a sleeve slidably mounted on said shaft and in pivotal engagement



with said second mentioned arm; whereby all of said arms may be simultaneously adjusted to conform to the contour of the receptacle, by movement of said sleeve, and rollers mounted upon certain of said arms, to facilitate movement of the latter.

1,218,624. CAR-ROOF. CHRISTY BROWN, Wilmette, Ill., assignor to American Car Roof Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 9, 1915. Serial No. 44,433. (Cl. 108—5.4.)

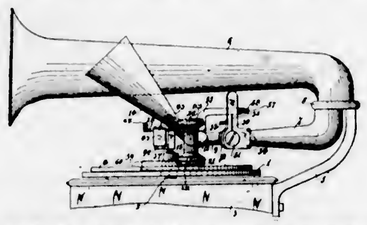


1. In a railway-car, the combination of a car-body, a car-roof including carlines, sheet-metal roof-plates, and carline braces substantially rigidly connected together without capability of substantial bodily movement relatively to one another, and loose connections between said carline braces and car-body permitting movement of the roof relative to the car-body, substantially as described.

2. A structure as specified in claim 1 in combination with carline cap-strips rigidly connected to said braces, substantially as described.

3. A structure as specified in claim 2 in which the braces are slotted in combination with bolts accommodated in said slots and securing the braces to the car-body, such slots and bolts permitting the movement specified between the roof and car-body, substantially as described.

1,218,625. SOUND RECORDING AND REPRODUCING MACHINE. HORACE H. BROWN, New York, N. Y., assignor of one-half to Gottfried Piel, New York, N. Y. Filed July 12, 1912, Serial No. 708,952. Renewed Jan. 29, 1917. Serial No. 145,311. (Cl. 274—13.)



1. In a sound recording and reproducing machine of the disk record type, a tubular support, a sound receiving horn secured to one end of the support, a sound transmitting horn secured to the other end of the support, a sound box rotatably mounted in the support, a recording stylus secured in one end of the sound box, a reproducing stylus secured in the other end of the sound box, said sound box having an orifice adapted to afford communication between the interior of the sound box and the horns when the styli are turned to contact with the disk record, and means for moving the sound box across the disk.

2. In a recording machine of the disk record type, a sound box supporting swinging arm, a longitudinally movable member for swinging the arm across the disk, operating means for the member, a universal joint connecting the member with the arm, and a rotatable joint connecting the member with the operating means to permit relative movement of the swinging arm and longitudinally movable member.

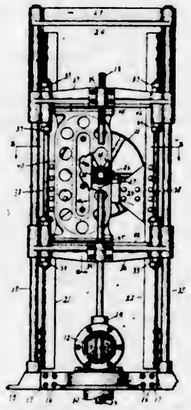
3. In a graphophone a tubular support having a pair of outlets, one adapted to lead to a reproducing horn and the other adapted to lead to a recording horn, and a sound box rotatably mounted in said support and adapted to bring opposite ends thereof into operative engagement with a disk, said box having an orifice positioned within the bore of said support adapted to control the communication between the engaged end of said box and one of said outlets.

4. In a disk graphophone the combination with a pair of horns, of a unitary member carrying a recording and a reproducing device immovable relatively to each other, said unitary member being rotatably mounted intermediate its length for bringing either device into engagement with a record disk and having means controlling a selective communication with said horns.

5. In a disk graphophone, a tube having a movement in a plane parallel to the disk, a U tube swiveled to one end of said first mentioned tube and having a leg thereof free to move in a plane perpendicular to the plane of the disk, a support detachably connected to said movable leg and a sound box having oppositely disposed styli revolubly mounted in said support whereby either stylus may be brought into operative relation to the disk.

[Claims 6 to 11 not printed in the Gazette.]

1,218,626. WORKING HEAD FOR DEEP-WELL PUMPS. JOHN T. S. BROWN, Jr., Prospect, Ky. Filed Nov. 4, 1916. Serial No. 129,431. (Cl. 74—27.)

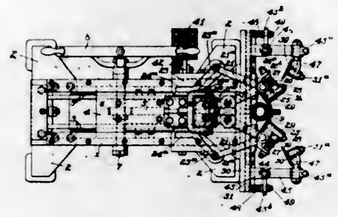


1. A frame, guide rods carried thereby, adjustably spaced cross heads positioned on said rods, a plate slidably mounted between said heads, a rack secured on said plate, a shaft rotatably mounted in said frame, a gear wheel on said shaft meshing with said rack and a pump rod connected with the cross heads.

2. A frame, guide rods carried thereby, adjustably spaced cross-heads positioned on said rods, a plate slidably mounted between said heads, a rack secured on said plate, a shaft rotatably mounted in said frame, a gear wheel on said shaft meshing with said rack, said plate having a runway conforming in outline with said rack, and an axial extension of the shaft entered in said runway and traveling therein.

3. A frame, guide rods carried thereby, cross heads slidably mounted thereon, rods connecting and maintaining said cross heads in adjustable spaced relationship, a plate slidably mounted between the heads, a rack secured on said plate, a shaft rotatably mounted in said frame, a gear wheel on said shaft and meshing with said rack, the plate having a runway which follows the contour of the rack, the shaft having a terminal reduced portion and an annular ball-bearing thereon, said ball-bearing entered in said runway and traveling therein.

1,218,627. TIRE-STITCHING MACHINE. FERDINAND FRANCIS BRUCKER, Akron, Ohio, assignor to The Miller Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Feb. 4, 1916. Serial No. 76,170. (Cl. 154—10.)



1. A machine of the character described comprising a revoluble core upon which a tire may be built, a pair of devices for forming material about the core, means for causing relative movement of said devices and core in a direction radially of the core, and cam controlled means for causing such forming means to follow the contour of the core during such radial movement.

2. A machine of the character described comprising a revoluble core upon which a tire may be built, a pair of devices for forming material about the core, means for causing relative movement of said devices and core in a direction radially of the core, and cam controlled means for causing such forming means to follow the contour of the core during such radial movement, and springs interposed between said cam controlled means and the forming means.

3. A machine of the character described comprising a revoluble core, devices for forming material about the core, means for moving said devices radially of the core and cam controlled means rendered effective by said radial movement for causing said devices to follow the contour of the core.

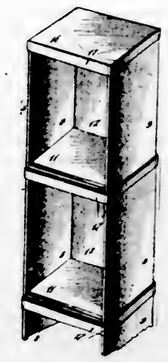
4. A machine of the character described comprising a revoluble core upon which a tire may be built, a pair of devices for forming material about the core, means for causing relative movement of said devices and core in a direction radially of the core, and cam controlled means for causing such forming means to follow the contour of the core during such radial movement, and means for changing the relation of said forming devices to said cam controlled means as successive plies of material are applied to said core.

5. A machine of the character described comprising a revoluble core, devices for forming material about the core, means for moving said devices radially of the core, and cam controlled means rendered effective by said radial movement for causing said devices to follow the contour of the core, and means for changing the relation of said forming devices to said cam controlled means as the successive layers of material are applied to the core.

[Claims 6 to 20 not printed in the Gazette.]

1,218,628. HAT-BOX. LEON COHEN, St. Louis, Mo. Filed Sept. 2, 1915. Serial No. 48,716. (Cl. 217—11.)

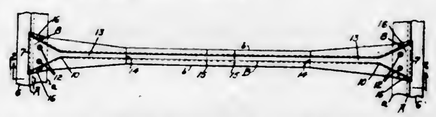
1. A box body having an open side and open top, a reinforcing frame secured in the box body at its open side, a removable side wall, flanges carried by the removable side wall to overlap the box body, and a removable lid overlapping certain of the flanges of the removable side wall.



2. In combination with a box having an open side and an open top, an open frame secured in the box adjacent the margins of the open side, a removable side wall, having a flange removably positioned between said frame and the box body, at the bottom of the box and a lid having flanges to overlap the said removable wall at the top of the box.

3. In combination with a box body, having an open side and an open end, an open frame secured in the box at its open side, one wall of the box being free from said frame, a removable side having a flap arranged to be inserted between the said frame and the wall and which is free therefrom, and a removable lid, having a flange arranged to overlie said removable side.

1,218,629. METAL CARLINE FOR CAR-ROOF FRAMES. JOSEPH A. COSTELLO, Cleveland, Ohio, assignor to Cleveland Car Specialty Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Sept. 25, 1915. Serial No. 52,693. (Cl. 108—5.6.)

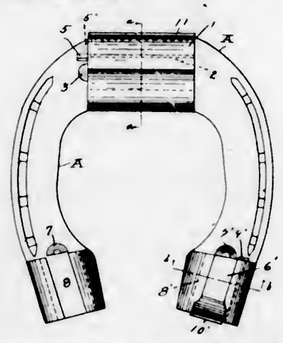


1. A metal carline comprising a trough having the end-portions thereof gradually enlarged in width toward their outer extremities, which trough is provided at the top with laterally and outwardly projecting flanges extending longitudinally and from end to end of the trough, each end-portion of each of said flanges sloping toward the outer extremity of the adjacent end-portion of the bottom of the trough, the said bottom being substantially horizontal from the outer extremity of each gradually widened end-portion of the trough to a point spaced inwardly from said portion of the trough and thence extending upwardly toward a point central between the ends of the carline, the aforesaid flanges being substantially uniform in width between said points and there being a gradual enlargement in the width of said flanges from the first-mentioned point toward and to the adjacent gradually widened end-portion of the trough, and said flanges being widest at the inner ends of the gradually widened end-portions of the trough.

2. The combination, with the two laterally spaced metal side plates of a car-roof-frame, said side plates being provided at the top with laterally and inwardly projecting flanges extending longitudinally of said side plates, of a metal carline comprising a trough which bridges the space between the side plates and extends over the aforesaid flange and has the bottom of each end-portion thereof en-

larged in width toward the outer extremity of said end-portion, said trough being provided at the top and externally with laterally and outwardly projecting flanges extending longitudinally and from end to end of the trough, each end-portion of each said flanges of the carline sloping downwardly toward and terminating at the outer extremity of the adjacent end-portion of the bottom of the trough, the width of said bottom at the lower ends of said end-portions of said flanges of the carline measuring more than the distance between the longitudinal edges of said flanges along the central portion of the trough, and the enlarged end-portions of said bottom being riveted to the aforesaid flanges of the side plates.

1,218,630. HORSESHOE WITH REMOVABLE CALKS. CALEB COTTEN, Salt Lake City, Utah, assignor of one-third to I. P. Duncan and one-third to W. S. Theobold, Salt Lake City, Utah. Filed Jan. 8, 1916. Serial No. 71,121. (Cl. 168—35.)



A horseshoe formed with a dovetailed groove in its face and with an integral lug having a straight vertical face in substantially horizontal alinement with the inner end of said groove, and a calk having dovetailed cross section to fit said groove and a projection at one end upon one side and bent at right angles to its length against the inner face of the wall at the inner end of said groove.

1,218,631. VEHICLE-COUPLING DEVICE. PIERRE DE MONTS, Marseille, France. Filed Mar. 17, 1916. Serial No. 84,799. (Cl. 74—17.)

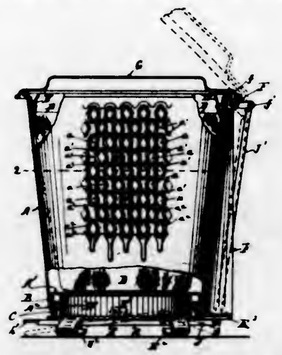


1. A coupling device comprising a bar, a hollow hemisphere carried by the bar, a second hollow hemisphere secured to the first hemisphere and provided with an opening, a ball disposed between the hemispheres and a bar connected to the ball and projecting through the opening, sleeves disposed on the bars and provided with openings arranged to register with openings formed in the bars, and pins arranged to pass through the openings when in register.

2. In combination with two adjacent vehicles, sleeves secured to the vehicles, bars adjustably secured to the sleeves, a hollow hemisphere secured on the end of one bar, a second hemisphere secured to the first hemisphere and provided with an opening through which the other bar may project and a retaining member disposed between the hemispheres and connected to the second bar.

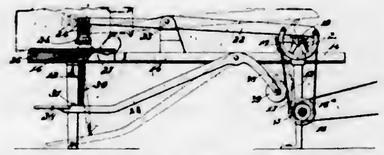
1,218,632. SHEET-METAL BASKET. EDWIN H. DERRY, Erie, Pa. Filed Apr. 8, 1916. Serial No. 89,935. (Cl. 220—34.)

A sheet metal basket, comprising an internal flange around the lower edge thereof, a bottom therefor, having a cylindrical flange around the edge thereof, the lower edge of which is provided with an exterior groove there-



around, and a double beaded strip of material between the lower edges of the basket and the bottom flange, whereby said bottom is retained in place, substantially as described.

1,218,633. CAN-STRAIGHTENING MACHINE. WILLIAM F. DESSO, Somers, Conn. Filed July 29, 1916. Serial No. 112,123. (Cl. 153—39.)



1. In a can straightening machine, the combination with a bed-plate and means for supporting same, of a straightening block coöperating with said bed-plate, a lever with which said straightening block has a hinged or pivoted connection so that it may be readily entered into the relatively small mouth of a can by being swung upward into line with said lever, and means for operating said lever to force said straightening block toward said bed-plate.

2. In a can straightening machine, the combination with a bed-plate and means for supporting same, of a straightening block coöperating with said bed-plate, a lever with which said straightening block has a hinged or pivoted connection so that it may be readily entered into the relatively small mouth of a can by being swung upward into line with said lever, and means for operating said lever to force said straightening block toward said bed-plate, said operating means consisting of a scroll cam acting on the end of said operating lever opposite that at which the said straightening block is located, and a rotating shaft by which said cam is carried.

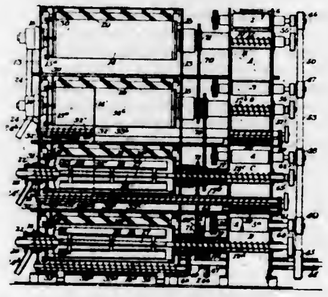
3. In a can straightening machine, the combination with a bed-plate and means for supporting same, of a straightening block coöperating with said bed-plate, a lever with which said straightening block has a hinged or pivoted connection so that it may be readily entered into the relatively small mouth of a can by being swung upward into line with said lever, means for operating said lever to force said straightening block toward said bed-plate, said operating means consisting of a scroll cam acting on the end of said operating lever opposite that at which the said straightening block is located, a rotating shaft by which said cam is carried, and means for connecting and disconnecting said shaft with a driving shaft or other source of power.

4. In a can straightening means, the combination with a work support or table, of standards on which the said work-support or table is mounted, a work-sustaining bed-plate loosely mounted on said work support or table, so

as to be movable thereon and thus be manually adjustable, with the article resting thereon, to different positions, a straightening block coöperating with said bed-plate, a lever at the forward end of which said straightening block is carried, a cam for operating said lever and which is engaged by the rear end of said lever, a shaft on which said cam is mounted, and means for connecting and disconnecting said shaft with a driving shaft or other source of power.

5. In a can straightening means, the combination with a work support or table, of standards on which the said work-support or table is mounted, a work-sustaining bed-plate loosely mounted on said work support or table, so as to be movable thereon and thus be manually adjustable, with the article resting thereon, to different positions, a straightening block coöperating with said bed-plate, a lever by which said straightening block is carried and which has a weighted rear end normally resting on said cam, a cam for operating said lever, a shaft on which said cam is mounted and which is provided with a pulley, a driving shaft also provided with a pulley, a belt connecting said pulleys, and a treadle-operated belt-tightening device which may be forced into contact with said belt when the cam shaft is to be set in operation.

1,218,634. ROLLER-MILL. ROWAN T. F. DODDS, Chicago, Ill. Filed Apr. 20, 1915. Serial No. 22,570. (Cl. 83—12.)



1. In a flour mill, a rotatable bolting reel having a central discharge opening at its tail end, and an agitator within the reel, said agitator having blades extending longitudinally within the reel and arranged to throw the material outwardly against the bolting surface of the reel, the reel also having means therein for creating a centripetal suction action to draw the lighter particles of the material toward the center of the reel and toward said discharge opening, substantially as described.

2. In a flour mill, a rotatable bolting reel and an agitator having blades extending longitudinally within the reel, and also having means for creating suction action toward the center of the reel, said reel being closed except for the openings through its cloth and a central discharge opening at the tail end thereof, whereby the air drawn in by the suction means is compelled to pass through and clear the cloth and passes outwardly through the central discharge opening, substantially as described.

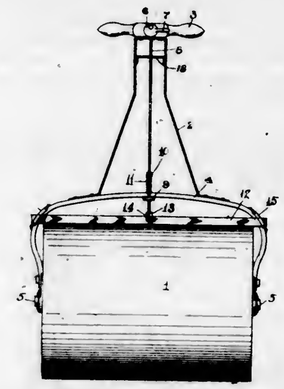
3. In a flour mill, a rotatable bolting reel having an agitator provided with means for creating both a centripetal and centrifugal action, whereby the heavier particles of the material will be thrown outwardly and the woody and fibrous particles will be drawn toward the center of the reel, there being a central discharge opening through the tail end of the reel for such particles, substantially as described.

4. A bolting reel having a closed end at the head end thereof, with the exception of a central feed opening therethrough which is closed up by the material being fed into the reel, an agitator within the reel, means for rotating the agitator and the reel, said rotating means being arranged to rotate the agitator relative to the reel, said agitator having longitudinal blades arranged to throw the heavier material against the walls of the reel by centrifugal action, and a second set of blades arranged to suck air through the bolting cloth and to draw the lighter woody particles toward the center of the reel and force them in a longitudinal direction in the central portion of the reel to the tail end thereof; the reel having a discharge opening for such particles at said end, substantially as described.

5. In a flour mill, a bolting reel provided with an internal agitator having means for throwing the material outwardly against the bolting surface of the reel, and having other means located near the center of the reel for creating an inward suction toward such center, the reel also having a discharge opening for the lighter material separated out by such suction action, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,218,635. COMBINED SCRAPER AND HANDLE-LOCK FOR LAWN-ROLLERS. RAY E. DUNHAM, Berea, Ohio, assignor to The Dunham Company, Berea, Ohio, a Corporation of Ohio. Filed May 27, 1916. Serial No. 100,307. (Cl. 55—6.)



1. In a land roller, the combination of a drum; an oscillatory handle mounted upon the latter; a scraper mounted upon said handle and adapted to be moved into and out of the vicinity of the drum; and means for locking said scraper in its engaging position, whereby it may be caused to form a lock for the said handle.

2. In a lawn roller, the combination of a drum; an oscillatory handle mounted upon the latter; a manually operable eccentric mounted upon said handle; a rod having one end articulating with said eccentric and extending toward the roller drum; a scraper bar connected with the opposite end of said rod and extending substantially parallel with the drum's axis, the length of said rod being such that said scraper bar may be caused to engage the surface of said drum.

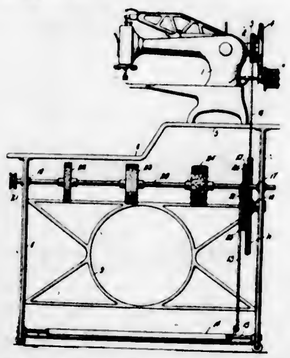
3. In a lawn roller, the combination of a drum; an oscillatory handle mounted upon the latter and including a transverse member; a manually operable eccentric mounted upon said handle; a rod having one end articulating with said eccentric and extending toward the cylindrical drum and through a guide in said transverse member; a collar secured to said rod; a coil-spring located intermediately of said collar and said transverse member and tending to actuate the rod away from the drum; and a scraper bar connected with the other end of said rod, the latter being of a length such that said scraper bar may be caused to engage or disengage the cylindrical surface of said drum.

1,218,636. SOLDERING IRON OR COPPER. CLAUDE M. EDWARDS, Galveston, Tex. Filed May 3, 1916. Serial No. 95,158. (Cl. 158—27.)



An iron or copper comprising a tank, a pipe connected at one end with the tank, a head connected at the other end of the pipe, said head having a central opening, and a valve carried by the head and located in alinement with said opening, a coiled rod connected with the tank and the head, the said rod having an intermediate convolution which is of greater diameter than its terminal convolution; a shell connected with the head and a copper connected with the shell.

1,218,637. SHOEMAKER'S SEWING-MACHINE. ONNIG ENSANIAN, Green Island, N. Y. Filed May 19, 1914. Serial No. 839,635. (Cl. 12—1.)



1. In a machine adapted for sewing, trimming, polishing and finishing work, a table mounted on a stand having end supports, a sewing head carrying a belt wheel mounted on said table, a shaft carrying a belt wheel rotatably mounted in said supports and extending beyond the end of one thereof, a trimming wheel mounted upon said extended end, polishing and finishing wheels mounted upon said shaft intermediate of the end supports, a double belt wheel mounted on one end support, a belt running from one belt wheel thereof over the belt wheel carried by the sewing head, a belt running from the other belt wheel over the belt wheel upon said shaft, a foot treadle, and a connection therefrom to actuate said double belt wheel.

2. In a shoe sewing machine, a sewing head, a driving shaft therefor provided with a hand wheel, a pulley upon said shaft, a fly wheel comprising two grooved pulleys, a treadle for operating said fly wheel, a connection from one of said grooved pulleys to said sewing head shaft, a shaft carrying finishing and trimming wheels, a connection from the other of said pulleys to drive the shaft of the trimming and finishing wheels, and a thread twisting mechanism mounted upon the sewing machine frame and provided with a grooved pulley engaging the hand wheel of the sewing mechanism.

1,218,638. PROCESS FOR THE UTILIZATION OF WASTE SULPHITE LIQUOR. ADOLPH D. FEST, Chicago, Ill. Filed Oct. 30, 1915. Serial No. 58,875. (Cl. 23—13.)

1. The process for utilizing waste sulphite liquor which comprises separating in any approved manner from such liquor solid substances, calcining such solid substances, confining the gases of calcination, and passing the gases of calcination into association with means capable of extracting sulphurous gas therefrom.

2. The process for utilizing waste sulphite liquor which comprises separating in any approved manner from such liquor solid constituents, calcining such solid constituents, confining the gases of calcination, passing the gases of calcination into association with means capable of extracting sulphurous gas therefrom, and forming bisulphite liquor from the sulphurous gas extracted from such gases of calcination.

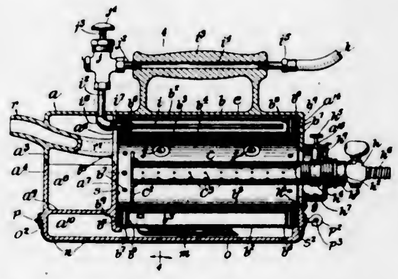
3. The process for utilizing waste sulphite liquor which comprises separating in any approved manner from such liquor solid substances, calcining such solid substances, and passing the gases of calcination into association with ashes of such calcination in the presence of water.

4. The process for utilizing waste sulphite liquor which comprises inciting fermentation of sugar therein by the addition of yeast, separating from the liquor after the fermentation a product of fermentation, separating from the remaining liquor solid substances, calcining such solid substances, and forming bisulphite liquor from the sulphurous gas given off by such calcination.

5. The process for utilizing waste sulphite liquor which consists in concentrating the waste liquor; neutralizing the concentrated liquor until it is but slightly acid; inducing alcoholic fermentation in the liquor; precipitating solid constituents from the solution; calcining the precipitate thus obtained; extracting sulphurous gas from the gases formed by calcining said precipitate.

[Claims 6 to 13 not printed in the Gazette.]

1,218,639. STEAMER, CLEANER, AND PRESSER. GEORGE FRANKS and OSCAR SPROESSIG, New York, N. Y. Filed Nov. 4, 1916. Serial No. 129,425. (Cl. 68—26.)



1. A hand-operated device of the class described, comprising a casing composed of separable top and bottom parts and in the bottom of which is a steam chamber, the bottom wall of said chamber being provided with steam ports or passages, a removable steam generator mounted in said casing and having a central combustion chamber inclosed by a steam generating chamber in communication with the steam chamber in the bottom of the casing, a burner device adapted to be inserted into and removed from the combustion chamber, and means for supplying water to the steam generating chamber in the generator.

2. In a device of the class described, a two-part casing, a steam generator mounted in said casing to form an air chamber in one of said parts and a steam chamber in the other, means for supplying water to said generator, means for heating said generator to form steam from the water supplied thereto, means for supplying steam to said steam chamber, and means for discharging the steam from said chamber.

3. In a device of the class described, a two-part casing, a steam generator mounted in said casing to form an air chamber in one of said parts and a steam chamber in the other, said generator being provided with a combustion chamber, a burner device mounted in said combustion chamber, means for supplying water to said generator to form steam, means for discharging the steam generated in said generator into said steam chamber, and means for discharging the steam from said steam chamber.

4. In a device of the class described, a two-part casing, a steam generator mounted in said casing to form an air chamber in one of said parts and a steam chamber in the other, said generator being provided with a combustion chamber, air ports or passages formed in said generator and in communication with said air chamber and said combustion chamber, a burner device mounted in said combustion chamber, means for supplying water to said generator to form steam, means for discharging the steam generated in said generator into said steam chamber, means for discharging the steam from said steam chamber, and means for discharging the products of combustion from said combustion chamber.

5. A hand-operated device of the class described, comprising a casing composed of separable top and bottom parts and in the bottom of which is a steam chamber, the bottom wall of said chamber being perforated to form steam ports or passages and the top part of said casing being provided with a handle, a steam generator mounted in said casing and having a central combustion chamber and in communication with said steam chamber, a burner device adapted to be inserted into the combustion chamber, and means for supplying water to the steam generating chamber.

1,218,640. ICE-CREAM CAN OR CONTAINER. HARRY C. FRENCH, Ontwa township, Cass county, Mich. Filed Sept. 30, 1916. Serial No. 123,085. (Cl. 220—83.)



1. A container having a removable top, a false bottom therefor, handle sections rigidly secured to the false bottom, telescopic handle sections connected with the rigid handle sections, and means carried by the rigid handle sections coöperating with means within the container for supporting the false bottom in elevated position, whereby the telescopic handle sections may be shifted wholly within the container and the top applied with the false bottom in elevated position.

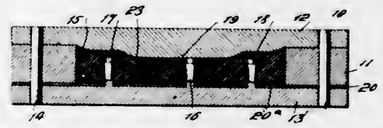
2. A container, a false bottom therefor, and handle members connected to and adapted to operate said false bottom, said handle members being made up of telescopically related sections, one section of each member being formed to provide a scraper disposed in contact with the inner surface of the container.

3. A container, a false bottom therefor, handle members for operating the false bottom and including scraper sections, and coöperating means carried by the container and scraper sections to engage the latter and support the false bottom in an elevated position.

4. A container, a false bottom therefor, handle members for operating the false bottom and including scraper sections, pins projecting inwardly from the container, the said scraper sections being formed with notches to engage the pins.

5. An elevating member for containers including a false bottom, and handle sections secured in opposed relation thereto, the handle sections comprising lower members formed of divergent plates meeting to provide a scraper edge, and an upper member operating between the plates of the lower member and having a pin slidably engaging the slot in one of said plates.

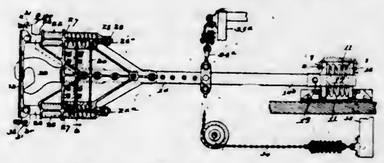
1,218,641. MOLD FOR RUBBER ARTICLES. HARRY E. FRY, New York, N. Y. Filed Apr. 24, 1915. Serial No. 23,686. (Cl. 18—42.)



1. In a mold of the character described, the combination with an intermediate member having an opening therethrough corresponding to the shape of the article to be made, of a bottom member, and a character plate arranged between said intermediate and bottom members, the marginal portion of said plate being clamped between said members and the middle portion of said plate forming one face of the mold.

2. In a mold of the character described, the combination with an intermediate member having an opening therethrough corresponding to the shape of the article to be made, of a bottom member having posts projecting therefrom for engagement with the intermediate member, and a character plate arranged between said intermediate and bottom members, the marginal portion of said plate having openings fitting around the posts on the bottom member and the middle portion of the plate forming one face of the mold.

1,218,642. DRAFT AND BUFFING MECHANISM FOR RAILWAY-CARS. FREDERICK S. GALLAGHER, Collinwood, Ohio, assignor, by mesne assignments, to Waugh Draft Gear Company, a Corporation of Illinois. Filed Mar. 30, 1906. Serial No. 308,911. (Cl. 213—42.)



1. In a draft and buffing mechanism, the combination with a draw-bar, of a buffer casting overlying the same and secured thereto, said casting having lateral pockets for the buffer springs, a depending casting secured to said overlying casting and embracing the draw-bar, buffer springs in said pockets, side stems engaging said springs, and a buffer-plate pivoted to the forward ends of said side stems, substantially as described.

2. In a buffing mechanism, the combination of a buffer-supporting frame, of buffer springs mounted in either side thereof, side stems engaging said springs, a buffer-plate connected to the forward ends of said side stems,

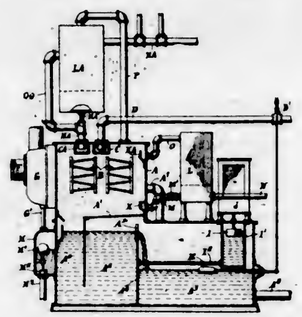
and means for the attachment of safety chains to the forward ends of said side stems, substantially as described.

3. In a buffing mechanism, the combination with a buffer-supporting frame, of buffer springs in either side thereof, side stems engaging said springs and having apertured lateral projections for the connection of the safety chains, and a buffer-plate connected to and between the forward ends of said side stems, substantially as described.

4. In a buffing mechanism for railway cars, the combination of a buffer-supporting frame, a buffing cushion, a buffer-stem connection engaging the same, and a safety chain co-acting with said stem connection, substantially as described.

5. In a buffing mechanism for cars, the combination of a buffer supporting frame, a pair of buffing cushions, buffer stem connections engaging the same, and safety chains co-acting with the said stem connections, substantially as described.

1,218,643. MEASURING APPARATUS. JOSEPH W. GAMBLE, Philadelphia, Pa., assignor to Joseph S. Lovering Wharton, William S. Hallowell, and John C. Jones, Philadelphia, Pa., doing business as Firm of Harrison Safety Boiler Works, Philadelphia, Pa. Filed Mar. 16, 1915. Serial No. 14,810. (Cl. 73—167.)

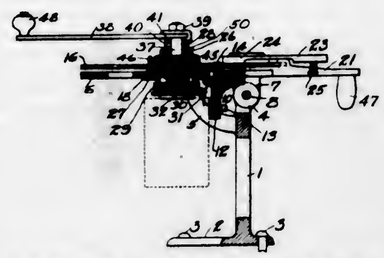


1. Liquid flow measuring apparatus comprising inlet and outlet compartments and a weir separating them, a source of liquid supply to said inlet compartment, and in combination therewith, means for equalizing the flow from said source including a reservoir receiving the liquid from said source, and two discharge connections leading from said reservoir to said inlet compartment at lower and upper levels respectively, the discharge connection from the lower level being restricted.

2. Liquid flow measuring apparatus comprising inlet and outlet compartments and a weir separating them, two sources of liquid supply to said inlet compartment, means for controlling the supply to said inlet compartment of liquid from one of the said sources in accordance with the accumulation of liquid in said outlet compartment, and means for equalizing the flow into said inlet compartment from said second source comprising a reservoir receiving the liquid from said last mentioned source and two discharge connections leading from said reservoir to said inlet compartment at lower and upper levels respectively, the discharge connection leading from the lower level being restricted.

3. In combination a metering heater comprising a heating chamber and a weir chamber having inlet and outlet compartments and a weir separating them, a main source of supply to the heating chamber of water to be heated, means for regulating the amount of water supplied from said source to said heating chamber in response to the accumulation of water in the outlet compartment of the weir chamber, and means for passing heater returns to said heating chamber comprising flow equalizing means consisting of an equalizing reservoir into which said returns are passed and two discharge connections leading from said reservoir to said heating chamber at upper and lower levels respectively, the discharge connection from the lower level being restricted.

1,218,644. CAN-OPENING MACHINE. DEXTER C. GOODALE, St. Louis, Mo. Filed July 12, 1916. Serial No. 108,798. (Cl. 30—3.)



1. In a machine of the class described, a suitable support, a tiltable lower plate pivoted to said support, an upper plate arranged above the lower plate and partially revoluble thereon, means for revolving said upper plate, said lower plate having radial slots and said upper plate being provided with cam slots, a cam clamping mechanism having clamping blocks slidably mounted in the radial slots and provided with upstanding pins slidably projecting into the cam slots of the upper plate and a hand lever for partially rotating the upper plate, a can cutting mechanism centrally mounted in the lower plate, and a lever for rotating said can cutting mechanism.

2. In a machine of the class described, the combination with a suitable support of a tiltable plate pivoted to said support, cutting mechanism rotatably mounted in said plate, and having an adjustable cutting knife and clamping mechanism carried by said plate and having a series of clamping blocks arranged around the cutting mechanism, one of said clamping blocks being adapted to be locked to the adjustable cutting knife.

3. In a machine of the class described, a suitable support, a tiltable lower plate pivoted to said support, an upper plate arranged above the lower plate and partially revoluble thereon, means for revolving said upper plate, said lower plate having radial slots and said upper plate being provided with cam slots, a can clamping mechanism having clamping blocks slidably mounted in the radial slots and provided with upstanding pins slidably projecting into the cam slots of the upper plate and a hand lever for partially rotating the upper plate, a can cutting mechanism centrally mounted in the lower plate and having an adjustable cutting knife adapted to be locked to one of the clamping blocks, and a lever for rotating said can cutting mechanism.

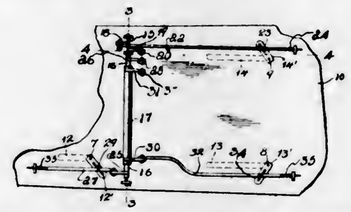
4. In a machine of the class described, a suitable support, a tiltable lower plate pivoted to said support, an upper plate arranged above the lower plate and partially revoluble thereon, means for revolving said upper plate, said lower plate having radial slots and said upper plate being provided with cam slots, a can clamping mechanism having clamping blocks slidably mounted in the radial slots and provided with upstanding pins slidably projecting into the cam slots of the upper plate and a hand lever for partially rotating the upper plate, a can cutting mechanism centrally mounted in the lower plate and having an adjustable cutting knife provided with an end lug and an inner extension on one of the clamping blocks having a groove in which said end lug is adapted to lock, and a lever for rotating said can cutting mechanism.

5. In a machine of the class described, a suitable support, a tiltable lower plate pivoted to said support and provided with a center bearing, radial slots, and a rack of teeth on a portion of its periphery, an upper plate mounted over the lower plate and partially rotatable thereon, said upper plate being provided with cam slots and a side

extension, a hand lever pivoted to the side extension and having teeth around its inner end adapted to mesh with the teeth on the periphery of the lower plate, clamping blocks slidably fitted in the radial slots of the lower plate, and having pins slidably projecting into the cam slots of the upper plate, a rotatable cutting mechanism supported in the center bearing of the lower plate and a hand lever for rotating said cutting mechanism.

[Claims 6 to 9 not printed in the Gazette.]

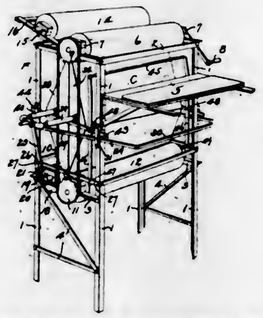
1,218,645. AUTOMOBILE-DOOR-OPERATING MECHANISM. HAROLD E. GUSTAFSON, Harcourt, Iowa. Filed Oct. 5, 1915. Serial No. 54,220. (Cl. 268—5.)



1. A door operating mechanism for automobiles comprising in combination, a plurality of transverse shafts carried by the body of the automobile, pedals operatively connected to said shafts for individually rotating the latter, a longitudinally extending rod connected to each of said shafts to be longitudinally moved when the shafts are rotated, a slotted arm rigidly carried by each of the doors of the automobile and extending across the corresponding rod, a pin carried by each of the rods and engaging with the corresponding slotted arm, the longitudinal movement of the rod sliding said pin in the slot of said arm so that the latter is swung to open the door, and resilient means for holding the parts in normal position and acting against the operation of said pedals.

2. A door operating mechanism for automobiles comprising in combination, a plurality of transverse shafts carried by the body of the automobile, pedals operatively connected to said shafts for individually rotating the latter, a longitudinally extending rod connected to each of said shafts to be longitudinally moved when the shafts are rotated, a slotted arm rigidly carried by each of the doors of the automobile, a pin carried by each of the rods and engaging with the corresponding slotted arm, resilient means for holding the parts in normal position and acting against the operation of said pedals, and means for locking the pedals in elevated or depressed position.

1,218,646. CLOTH-SPONGING MACHINE. HARRY GUTTRIDGE, Youngstown, Ohio. Filed June 12, 1916. Serial No. 103,299. (Cl. 26—7.)



1. A cloth sponging machine including a moisture chest comprising a stationary section, and an adjustable section, shiftable toward and from said stationary section to provide a cloth feeding passageway of variable width, and sets of feeding elements arranged at the inlet and outlet ends of said chest, each set including a fixed element adjacent the stationary section, and an adjustable element for the shiftable section.

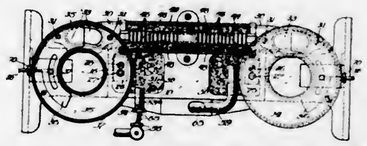
2. A cloth sponging machine comprising a moisture chest including an upright standard section, an upright shiftable section telescopically engaging at its lateral edges with said stationary section, and sets of feeding elements arranged at the upper and lower ends of said chest, each set including a relatively fixed feeding element for the stationary section, and an adjustable feed element for the shiftable section.

3. A cloth sponging machine comprising a frame including vertical standards and horizontal frame elements, a moisture chest carried by said horizontal elements, said chest comprising separate sections one of which is rigidly mounted in the frame, and the other of which is movable therein and carries laterally projecting studs adapted to ride in slots formed in the frame elements, and cloth feeding means located at the inlet and outlet ends of said steam chest.

4. A cloth sponging machine comprising a frame including vertical standards and horizontal frame elements, guide straps carried by said vertical standards, horizontal cross bars connecting the same, a moisture chest including a fixed section, and another section mounted in shiftable relation thereto, said shiftable section carrying laterally projecting studs adapted to slide in slots formed in the horizontal frame elements, and also carrying therewith supporting bars slidably engaging in the guide straps, means for moving said shiftable section comprising a handle element including arm portions having their free ends pivoted in the cross bars of the frame and having their intermediate portions pivotally connected with the supporting bars carried by the shiftable section.

5. A cloth sponging machine comprising a frame, a feeding unit at the top of said frame including a fixed driving roll and a swingingly mounted idler roll, a moisture chest, and a feeding unit at the lower end of said chest and including a fixed feed roll having a chain and sprocket connection with a fixed driving roll of the upper feeding unit, and a horizontally shiftable idler roll, journal blocks carrying said idler roll, angle plates slidably mounted on said brace elements and carrying the journal blocks, springs connected with said angle plates for drawing said idler roll toward said fixed roll, pivotal levers for engaging said angle plates, and a handle device pivotally connected with said levers.

1,218,647. OIL-BURNER. ORVILLE G. HALLIBURTON, Chicago, Ill. Filed Dec. 1, 1916. Serial No. 134,297. (Cl. 158—61.)



1. In an oil burner of the character described, the combination of a pipe adapted to be secured to a source of liquid fuel supply, valve means for controlling the flow of liquid from said source, a gas generator adapted to receive liquid fuel from said valve means, means in association with said generator forming a mixing chamber for gas and air, a gas burner head, means forming a conduit between said mixing chamber and said burner head, and means for simultaneously controlling the supply of air to said mixing chamber and the supply of mixed gas-and-air to said burner head.

2. In an oil burner of the character described, the combination of a pipe adapted to be secured to a source of liquid fuel supply, valve means for controlling the flow

of liquid from said source, a gas generator adapted to receive liquid fuel from said valve means, means in association with said generator forming a mixing chamber for gas and air, a gas burner head, means forming a conduit between said mixing chamber and said burner head, means for varying the amount of mixed gas-and-air passing to said burner head, and means under the control of said gas-and-air varying means for proportionately and simultaneously varying the amount of air passing to said mixing chamber whereby a blue flame of various degrees of strength may be produced at said burner head.

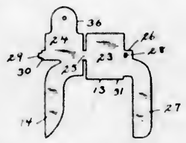
3. In an oil burner of the character described, the combination of a pipe adapted to be secured to a source of liquid fuel supply, valve means for controlling the flow of liquid from said source, a gas generator adapted to receive liquid fuel from said valve means, means in association with said generator forming a mixing chamber for gas and air, a gas burner head, means forming a conduit between said mixing chamber and said burner head, a valve for controlling the supply of gas-and-air to said burner head, and a valve for controlling the supply of air to said mixing chamber, said valves being connected together whereby the operation of one thereof operates the other thereof.

4. In an oil burner of the character described, the combination of a gas generator, means in association with said generator forming a mixing chamber for gas and air, a gas burner head, means forming a conduit between said mixing chamber and said burner head, a sliding valve within said burner head for controlling the supply of gas-and-air to said burner head, means for controlling the supply of air to said mixing chamber, and means for simultaneously operating said sliding valve and said air-controlling means.

5. In an oil burner of the character described, the combination of a gas generator, means in association with said generator forming a mixing chamber for gas and air, a gas burner head, means forming a gas-and-air conduit between said mixing chamber and said burner head, means forming an air conduit extending from said mixing chamber, said air conduit having an opening for the passage of air thereinto, valve means for controlling the supply of gas-and-air to said burner head, a pivoted lever having a closure thereon adapted to pass in close association with the air opening in said air conduit and to open and close the same, and a connection between said valve means and said lever adapted to move said lever to open and close said air opening when said valve means are operated.

[Claims 6 to 13 not printed in the Gazette.]

1,218,648. CAN-OPENING DEVICE. EMERY EASTMAN HARDY, Bayside, N. Y. Filed May 1, 1916. Serial No. 94,666. (Cl. 30—3.)



1. In a can opening device, a body portion having a longitudinal slot, a jaw member formed of a single piece of sheet material comprising a pair of side plates fitting against the said body portion, a neck connecting the said plates and extending through the said slot, and an extension on one of the said plates and also extending through the said slot, and a jaw connected to one of the said plates.

2. In a can opening device, a body portion having a longitudinal slot, a jaw member formed of a single piece of sheet material comprising a pair of side plates fitting against the said body portion, a neck connecting the said plates and extending through the said slot, an extension on one of the said plates and also extending through the said slot, a jaw connected to one of the said plates, and a guide finger connected to the other of the said plates.

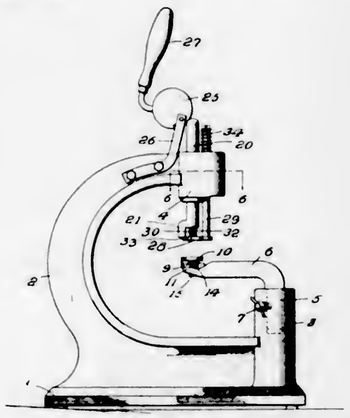
3. In a can opening device, a body portion having a slot, a jaw member comprising a pair of side plates fitting against the said body portion, a neck connecting the said plates and extending through the said slot, an extension on one of the said side plates, also extending through the said slot, an integral rivet connected to the said extension, and the other of the said plates having a hole for receiving the said rivet.

4. A blank for the jaw member of a can opening device comprising a pair of side plates connected by a neck, one of the said plates having a reduced extension on the edge remote from the said neck, a rivet extending outwardly from the said extension, and a jaw on one of the lateral edges, a guide finger connected to one edge of the other of the said plates, and the said last named plate having a hole for receiving the said rivet.

5. A can opening device of the type having an elongated handle member provided at one end with means for engaging with the top of the can as a fulcrum, operated by a crank-like movement, and having a jaw member slidably mounted on the said handle member and provided with a radial jaw, comprising an elongated handle member provided with a longitudinal slot, a set of teeth being provided along one longitudinal edge of the said slot, a jaw member having a body portion fitting against the said handle member, means for holding the said body portion in engagement with the said handle member permitting of relative longitudinal movement and also crosswise movement, means for limiting the said cross-wise movement and guide members extending from the said body portion into the said slot, suitable in one of the cross-wise limited positions of the said jaw member for engaging with the said teeth and in the other of the said limited positions to pass freely along the open portion of the said slot.

[Claim 6 not printed in the Gazette.]

1,218,649. SHOE-NAILING MACHINE. MAX J. HART, Centralia, Ill. Filed Mar. 24, 1916. Serial No. 86,462. (Cl. 1—19.)



1. A machine for repairing turned shoes comprising an arm to extend into the shoe, a nail holder mounted rotatably on said arm and yieldable toward the same, a series of nail rests carried by said arm and disposed on the arc of movement of the holder, the latter being adapted to hold a nail on any of said rests with its point directed toward the sole of the shoe, and an anvil for forcing said sole against the nail to drive and clench the latter.

2. A machine for repairing turned shoes comprising an arm for reception in the shoe, said arm having a transverse opening and having concentric to said opening a number of nail rests, a nail holder having a stub shaft received in said opening whereby said holder may be rotated to position it in operative relation with any of the nail rests to hold a nail thereon with its point directed toward the shoe sole, a spring for yieldably retaining said holder in spaced relation to the arm, and an anvil to force the shoe sole against the nail to drive and clench the latter.

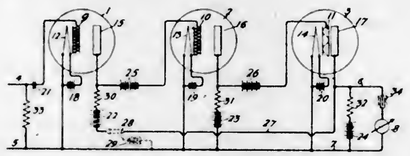
3. A machine for repairing turned shoes comprising an arm to extend into the shoe, said arm having a nail rest, a nail holder mounted on said arm and having an opening to receive a nail on said rest, said holder being yieldable toward the arm, a spring pressed jaw in the aforesaid opening for holding the nail with its point directed toward the sole of the shoe, and an anvil for forcing said sole against the nail to drive and clench the latter.

4. A machine for repairing turned shoes comprising an arm to extend into the shoe, a nail holder mounted rotatably on said arm and yieldable toward the same, said holder having an opening to receive a nail, a spring pressed jaw in said opening for holding the nail therein with its point directed toward the shoe sole, an arcuate series of nail rests on the arm opposite any one of which the aforesaid opening may be disposed by rotating the holder, and an anvil for forcing the sole against the nail and holder to drive and clench the former.

5. A machine for repairing turned shoes comprising means for rigidly holding a nail in the interior of a shoe with its point directed toward the sole of said shoe, an anvil for forcing the shoe sole toward the nail to drive and clench the latter, and a presser foot for bearing yieldably against the exterior of the sole during the driving and clenching operation.

[Claims 6 to 13 not printed in the Gazette.]

1,218,650. SYSTEM FOR AMPLIFYING ELECTRICAL ENERGY. RALPH V. L. HARTLEY, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed July 8, 1914. Serial No. 849,669. (Cl. 179—171.)



1. The combination with a plurality of thermionic repeaters, working one into another in cascade formation, of a connection between one of said repeaters and a preceding repeater in the series adapted to apply to the input circuit of the latter a part of the output energy of the former.

2. In a system for amplifying electric energy, the combination with a plurality of thermionic repeaters, working one into another in cascade formation, of a divided output circuit for one of said repeaters, one of the parts of said circuit leading to a preceding repeater in the series and adapted to apply a part of the energy of the former repeater to the latter.

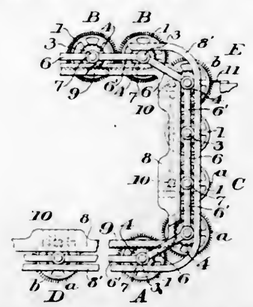
3. A system for amplifying electric energy comprising a series of thermionic repeaters, working one into another in cascade formation, of a connection between one of said repeaters and a preceding repeater in the series, the said connection being adapted to apply to the latter repeater a fraction of the output energy of the former, the fraction being less than the ratio of energy so applied to the additional energy thereby developed.

4. A system for amplifying electric energy comprising two thermionic repeaters, one working into the other, of a connection between the latter repeater and the former, said connection being adapted to apply to the said former repeater a fraction of the output energy of the latter, the fraction being less than the ratio of energy so applied to the additional energy thereby developed.

5. A system for amplifying electric energy comprising two thermionic repeaters, each working into the other.

[Claims 6 to 16 not printed in the Gazette.]

1,218,651. AUTOMATIC MATCH-MANUFACTURING MACHINE. SAKUSHIRO HATAKEYAMA, Shimoyamate Dori, Kobe, Japan, assignor of one-half to Choji Funai, Motomachi Dori, Kobe, Japan. Filed Jan. 11, 1917. Serial No. 141,787. (Cl. 144—58.)

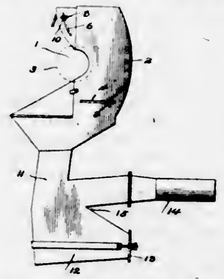


1. An automatic match manufacturing machine characterized by a number of cylinders provided with rows of small holes bored at equal distances from one another all over the circumference and joined together by means of links in such a way that they form an endless chain, and by intermittent motion or traveling of said cylinders link by link and intermittent rotation of individual cylinders, substantially as and for the purposes hereinbefore set forth.

2. An automatic match manufacturing machine characterized by a number of cylinders provided with rows of small holes bored at equal distances from one another all around the circumference and joined together by means of links into an endless chain; by rotation on their own axes of individual cylinders caused by the gearing of worms with helical pinions fixed to both sides of cylinders which makes individual cylinders to rotate on their own axes; and by the gearing of said helical pinions with racks fixed to inner side of track which makes individual cylinders rotate on their own axes while traveling as a whole, substantially as and for the purposes hereinbefore set forth.

3. An automatic match manufacturing machine consisting of cylinders having a large number of small holes all over the circumference and joined together by links, and provided with a device for removing matches consisting of a comb between the teeth of which they are admitted and caught at places where spaces between said teeth are narrowed and pulled out, substantially as and for the purposes hereinbefore set forth.

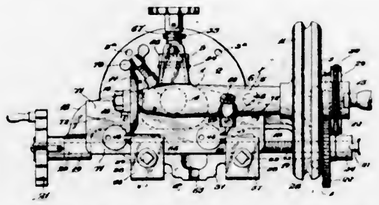
1,218,652. HOOD FOR BUFFING-WHEELS. WILLIAM M. HAUSER and JAMES MCDANIEL, Evansville, Ind. Filed Apr. 21, 1916. Serial No. 92,785. (Cl. 51—7.)



A cover for a buffing or grinding wheel, comprising a fixed hood structure having a plurality of slots therein, an adjustable interior hood carried in said fixed hood provided with slots registering with said first mentioned slots, means associated therewith for adjusting the posi-

tion of said movable hood in relation to said wheel, a vertical draw pipe connected with said hood sections beneath the wheel, a vacuum chamber at the base of said draw pipe, a suction pipe connected with said draw pipe intermediate of said hood and vacuum chamber at right angles to the draw pipe, and a removable receptacle carried in said vacuum chamber for the reception of particles produced by grinding, substantially as described.

1,218,653. KEY-CUTTING MACHINE. ANDREW HELDRICH, Philadelphia, Pa., assignor to Philip Kovsky, Philadelphia, Pa. Filed Jan. 10, 1916. Serial No. 71,267. (Cl. 90—13.)



1. A key cutting machine, comprising a support, a head thereon, a rotary cutter on the head, a frame having two vises thereon, one vise for a master key and the other for a blank, and a pilot engaging the master key and controlling the engagement of the blank key by the cutter, said head being movable to change the cutting angle of said cutter with respect to the blank, and means for securing the head to the support, substantially as described.

2. The combination in a key cutting machine, of a standard, a cutter carried by said standard, a frame pivoted on said standard and having upwardly and downwardly projecting arms, a vise supported by the upwardly extending arm, a plunger slidably mounted in said standard, and resilient means for moving said plunger toward and directly into contact with the downwardly projecting arm thereby moving said vise toward the cutter, substantially as described.

3. The combination in a key cutting machine, of a standard, a cutter carried by said standard, a frame pivoted on said standard and having upwardly and downwardly projecting arms, a vise supported by the upwardly extending arm, a plunger slidably mounted in said standard, a spring in said standard designed to move said plunger toward and directly into contact with the downwardly projecting arm of the frame whereby the vise is moved toward the cutter, substantially as described.

4. The combination in a key cutting machine, of a standard, a cutter carried by said standard, a frame pivoted on said standard and having upwardly and downwardly projecting arms, a vise supported by the upwardly extending arm, a plunger slidably mounted in said standard, a spring in said standard designed to move said plunger into contact with the downwardly projecting arm of the frame whereby the vise is moved toward the cutter, a stem on said plunger, a pin extending transversely through the stem, said standard having grooves to normally allow the pin to slide therein, a handle on said stem for retracting the plunger, said plunger and stem being designed to be rotated to change the position of said pin to permit the latter to engage said standard and hold the plunger out of engagement with said depending arm of the frame, substantially as described.

5. In a key cutting machine, the combination with a standard, of a head supported on the standard, a horizontal spindle in the head having a cutter on one end, and means on the other end for turning the spindle, a frame pivotally connected to the standard, two vises on the frame, one for a master key and the other for a blank, and a pilot pin on the head adapted to be engaged by the master key and guide the blank against the cutter, said head being movable to change the cutting angle of said cutter with respect to the blank, and means for securing the head to the standard, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

1,218,654. UREIDS AND THIOUREIDS. BERNHARD HEYMANN, Wiesdorf-on-the-Niederrhein, RICHARD KOTHE, Opladen, near Cologne, OSKAR DRESSEL, Mülheim, near Cologne, and ANTON OSSENBECK, Cologne, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York, Filed Dec. 17, 1914. Serial No. 877,683. (Cl. 8—1.)

1. As new products ureid compounds of substituted amino derivatives of aromatic substances characterized by containing in their molecule the general group:

A—NH—R—Y—NH—

in which A stands for the monovalent ryl radical of an aromatic substance containing a sulfo group, R stands for the residue of an acid group, and Y for an aromatic radical containing no substituted amino groups, substantially as described.

2. As new products ureid compounds of substituted amino derivatives of aromatic substances characterized by containing in their molecule the general group:

A—NH—CO—Y—NH—

in which A stands for the monovalent aryl radical of an aromatic substance containing a sulfo group, and Y for an aromatic radical containing no substituted amino groups, substantially as described.

3. As new products ureid compounds of substituted amino derivatives of aromatic substances characterized by containing in their molecule the general group:

A—NH—CO—C_6H_4—NH—

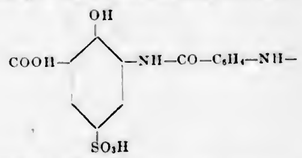
in which A stands for the aryl radical of an aromatic substance containing a sulfo group, substantially as described.

4. As new products ureid compounds of substituted amino derivatives of aromatic substances characterized by containing in their molecule the general group:

A—NH—CO—C_6H_4—NH—CO—C_6H_4—NH—

in which A stands for the aryl radical of an aromatic substance containing a sulfo group, substantially as described.

5. As new products ureid compounds of substituted amino derivatives of aromatic substances characterized by containing in their molecule the general group:



substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

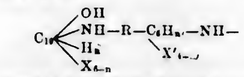
1,218,655. DERIVATIVES OF SUBSTITUTED AMINONAPHTHALENE SUBSTANCES. BERNHARD HEYMANN, Wiesdorf Niederrhein, RICHARD KOTHE, Vohwinkel, near Elberfeld, OSKAR DAESSEL, Mülheim-on-the-Rhine, and ANTON OSSENBECK, Cologne, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed June 19, 1914. Serial No. 846,195. (Cl. 23—24.)

1. As new products ureids of substituted aminonaphthalene substances characterized by containing in their molecule the general group:

A—NH—R—Y—NH—

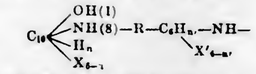
in which A stands for the radical of a naphthalene compound, R stands for the residue of an acid group, and Y for an aromatic radical, substantially as described.

2. As new products ureids of substituted aminonaphthol substances characterized by containing in their molecule the general group:



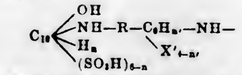
in which R stands for the residue of an acid group, n a number less than 7, X for substituting groups, n' a number less than five, and X' for substituting groups, forming salts with metals, and forming azo dyestuffs with diazotized aniliin, substantially as described.

3. As new products ureids of substituted aminonaphthol substances characterized by containing in their molecule an aggregation of the general group:



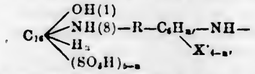
in which R stands for a divalent group containing an acidyl radical, n a number less than seven, X for substituting groups, n' a number less than 5, and X' for substituting groups, forming salts with metals, and forming azo dyestuffs with diazotized aniliin, substantially as described.

4. As new products the ureids of substituted aminonaphthol substances characterized by containing in their molecule the general group:



in which R stands for the residue of an acid group, n a number less than 7, n' a number less than five and X' for substituting groups; forming salts with metals and forming azo dyestuffs with diazotized aniliin, substantially as described.

5. As new products the ureids of substituted aminonaphthol substances characterized by containing in their molecule an aggregation of the general group:



in which R stands for a divalent group containing an acidyl radical, n a number less than seven, n' a number less than 5, and X' for substituting groups; forming salts with metals and forming azo dyestuffs with diazotized aniliin, substantially as described.

[Claims 6 to 29 not printed in the Gazette.]

1,218,656. UREA AND THIOUREA COMPOUNDS. PAUL THOMASCHEWSKI, Opladen, near Cologne, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed June 26, 1915. Serial No. 36,485. (Cl. 23—24.)

1. As new products ureids and thioureids of diaminodiarylsulfonic acids characterized by containing in their molecule the general group —NH—A—NH—R—NH— in which A stands for the radical of a diarylsulfonic acid and R for —CO— or —CS—, which products precipitate glue from its aqueous solution, being in the shape of their alkali-metal salts whitish powders soluble in hot water; and showing strong-blood-parasite-destroying qualities, substantially as described.

2. As new products, ureids and thioureids of diaminodiarylsulfonic acids characterized by containing in their molecule a plurality of groups having the general formula —NH—A—NH—, in which A stands for the radical of a diarylsulfonic acid, connected together by —CO— or —CS— groups, which products are, in the form of their alkali-metal salts, soluble in hot water, substantially as described.

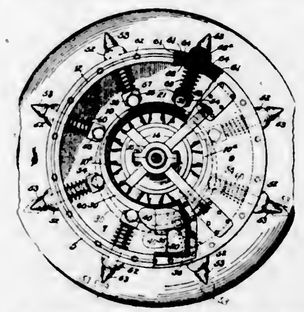
3. As new products, ureids and thioureids of diaminodiarylsulfonic acids characterized by containing in their molecule a plurality of groups having the general formula —NH—A—NH—, in which A stands for the radical of a diarylpolysulfonic acid, connected together by —CO— or —CS— groups, which products are, in the form of their alkali-metal salts, soluble in hot water, substantially as described.

4. As new products ureids of diaminodiarylsulfonic acids characterized by containing in their molecule the general group: —NH—A—NH—CO—NH— in which A stands for the radical of a diarylsulfonic acid, which products precipitate glue from its aqueous solution; being in the shape of their alkali-metal salts whitish powders soluble in hot water; and showing strong-blood-parasite-destroying qualities, substantially as described.

5. As new products ureids of diaminodiarylsulfonic acids characterized by containing in their molecule the general group: —NH—A—NH—CO—NH—, in which A stands for the radical of a diarylpolysulfonic acid of the benzene series, which products precipitate glue from its aqueous solution; being in the shape of their alkali-metal salts whitish powders soluble in water; and showing strong-blood-parasite-destroying qualities, substantially as described.

[Claim 6 not printed in the Gazette.]

1,218,657. ANTISKID DEVICE FOR VEHICLE-WHEELS. GEORGE L. HIMMELBERGER, Reading, Pa. Filed Dec. 7, 1916. Serial No. 135,550. (Cl. 21—210.)



1. In an anti-skid device for vehicle wheels, a spike-ring concentrically secured to the wheel, radially movable spikes mounted therein, a non-rotating cover plate for said ring having an annulus extended into the latter, an expansion ring supported on said annulus and normally forming a concentric track for said spikes, and means to eccentrically expand said expansion ring.

2. In an anti-skid device for vehicle wheels, a spike-ring having a radially extended flange concentrically secured to the wheel and forming one member of a casing, a non-rotating cover-plate for said ring having an annulus extended into the latter and forming the other member of the casing, an expansion ring within said casing normally concentrically supported on said annulus, and spikes radially mounted in said spike-ring and riding on said expansion ring.

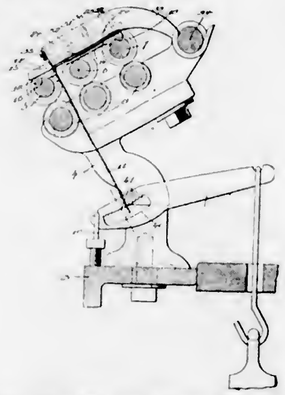
3. In an anti-skid device for vehicle wheels, a spike-ring concentrically secured to the wheel and provided with a radially extended flange formed with a grooved central opening, a non-rotating cover-plate for said spike-ring having an annulus extended into said grooved central opening of the radially extended flange, a coöperating groove and recess on the meeting faces of said cover plate and spike-ring, an expansion ring normally supported on said annulus, and spikes radially mounted in said spike-ring and riding on said expansion ring.

4. In an anti-skid device for vehicle wheels, a spike-ring concentrically secured to the wheel, a non-rotating cover-plate for said ring having an annulus extending into the latter, an expansion ring normally concentrically supported on said annulus, spikes radially mounted in said spike-ring and having headed inner ends riding on said expansion ring, and spiral springs on said spikes between said headed ends and the spike-ring.

5. In an anti-skid device for vehicle wheels, a spike-ring concentrically secured to the wheel, a non-rotating cover-plate for said ring having an annulus extending into the latter, an expansion ring normally concentrically supported on said annulus, spikes radially mounted in said spike-ring and having headed inner ends riding on said expansion ring, circular grooves in said headed ends and in the spike-ring surrounding said spike openings, anti-rattle washers in said circular grooves, and spiral springs on said spikes seating on said washers.

[Claims 6 to 10 not printed in the Gazette.]

1,218,658. TOP-ROLL-SADDLE MECHANISM. LEWIS T. HOUGHTON, Worcester, Mass. Filed July 28, 1909. Serial No. 510,017. (Cl. 19—33.)



1. In top roll saddle mechanism, the combination with top rolls, of a top roll saddle resting thereon, a weight-transmitting member having a general U-shape in cross section and resting on and embracing the top roll saddle, whereby said member does not add materially to the height of the saddle, and a weighted stirrup sustained from said member.

2. In top roll saddle mechanism, the combination with three pairs of top rolls, of a top roll saddle comprising an under member resting on the rear and center top rolls and an upper member resting on the front top rolls and the under member, a weight-transmitting member separate from the saddle, said weight-transmitting member having a general U-shape in cross section and embracing and resting on the upper saddle member, and a weighted stirrup sustained from said weight-transmitting member.

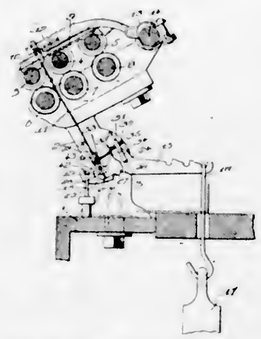
3. In top roll saddle mechanism, the combination with three pairs of top rolls, of a top roll saddle comprising an under member resting on the center and rear top rolls and an upper member resting on the front top rolls and the under saddle member, a weight-transmitting member having a general U-shape in cross section embracing the top roll saddle, and a bearing block situated within said weight-transmitting member and bearing against the upper saddle member.

4. In top roll saddle mechanism, the combination with three pairs of top rolls, of a top roll saddle comprising an under member resting on the center and rear top rolls and an upper member resting on the front top rolls and the under saddle member, a weight-transmitting member overlying the top roll saddle and presenting a body portion having a general U-shape in cross section to permit it to embrace and set low on the upper saddle member, the rear end of said member being forked and pivotally connected to a fixed support, and a bearing member situated within the U-shaped body portion between the latter and the top roll saddle.

5. In top roll saddle mechanism, the combination with top rolls, of a top roll saddle resting thereon, a weight-transmitting member resting on the saddle, a stirrup hung from said member, a weighted lever hung from the stirrup, said lever having an opening therein, and a stirrup having a laterally-extending finger entering said slot.

[Claims 6 to 13 not printed in the Gazette.]

1,218,659. TOP-ROLL-SADDLE MECHANISM. LEWIS T. HOUGHTON, Worcester, Mass. Filed Oct. 20, 1911. Serial No. 655,685. (Cl. 19—33.)



1. In a top roll saddle mechanism, the combination with a top roll saddle, of a stirrup for applying weight thereto, a fulcrum member, a weighted lever engaging said fulcrum member and hung from said stirrup, and means accessible from the fulcrum end of the lever for adjusting the point of engagement between the stirrup and lever in a direction at right angles to the stirrup thereby to vary the relative lengths of the lever arm of said lever.

2. In a top roll saddle mechanism, the combination with a top roll saddle, of a stirrup for applying weight thereto, a weighted lever hung from said stirrup, a stirrup positioning member adjustable on the lever in a direction at right angles to the stirrup and operating to control the position of the stirrup relative to said lever, and means for adjusting said member on the lever.

3. In a top roll saddle mechanism, the combination with a top roll saddle, of a stirrup for applying weight thereto, a weighted lever hung from the stirrup, a stirrup positioning member slidably mounted on the lever and engaging the stirrup, and an adjusting screw to effect adjustment of and control the position of said member.

4. In top roll saddle mechanism, the combination with a top roll saddle, of a stirrup for applying weight thereto, a weighted lever hung from the stirrup, a stirrup positioning member slidably mounted on the lever and engaging the stirrup, and an adjusting screw having swivel connection with said member and screw-threaded connection with the lever.

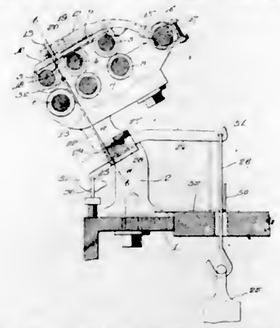
5. In a top roll saddle mechanism, the combination with a top roll saddle, of a stirrup for applying weight thereto, a weighted lever hung from the stirrup, a stirrup positioning member slidably mounted on the lever and engaging the stirrup, an adjusting screw carried by said member, and a nut associated with the lever and with which said screw has screw threaded engagement.

[Claims 6 to 26 not printed in the Gazette.]

1,218,660. TOP-ROLL-SADDLE MECHANISM. LEWIS T. HOUGHTON, Worcester, Mass. Filed Oct. 20, 1911. Serial No. 655,686. (Cl. 19—33.)

1. In top roll saddle mechanism, the combination with a top roll saddle, of a weighted lever, a stirrup for transmitting the weight of the lever to the saddle, and means encircling the lever and having a screw-threaded engagement therewith for positioning the latter on the lever.

2. In a top roll saddle mechanism, the combination with a top roll saddle, of a lever screw, a weighted lever fulcrumed thereon, said lever extending rearwardly therefrom but entering said lever screw from the front side thereof, and a stirrup connecting said lever and saddle.



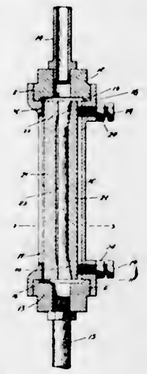
3. In a top roll saddle mechanism, the combination with a top roll saddle, of a fulcrum having an eye, a weighted lever extending rearwardly from the fulcrum and having at its front end a rearwardly-extending portion to enter the eye of the fulcrum from the front side, and a stirrup connecting said lever and saddle.

4. In a top roll saddle mechanism, the combination with a top roll saddle, of a lever screw, a weighted lever extending rearwardly therefrom and having a hook-shaped portion to enter the front side of the lever screw, a stirrup connecting said lever and saddle, and adjustable connections between the stirrup and lever.

5. In a top roll saddle mechanism, the combination with a plurality of top rolls, of a top roll saddle resting thereon, a weight-transmitting member separate from said saddle and loosely resting thereon, and a jointed weight-supporting stirrup hung from said member near the end thereof and passing between two adjacent top rolls, the joint of the stirrup being situated adjacent the top rolls thereby to permit the upper end of the stirrup to be readily disconnected from said weight-transmitting member.

[Claims 6 to 11 not printed in the Gazette.]

1,218,661. WATER-GAGE. HEISTER S. HUNTER and THOMAS WATKINS, Philadelphia, Pa. Filed Jan. 13, 1916. Serial No. 71,829. (Cl. 73—54.)



1. A water-gage embracing an elongated integral continuous body having a central passage therethrough, the central portion of which body is contracted and the ends of which are enlarged and internally screw-threaded, the diameter of each threaded portion being at least equal to diameter of said central passage, said body having a flat front face provided with a sight opening and having tapped portions upon the body back, removable caps each having an opening therethrough for partially closing the open ends of said body, a flat gasket within the body for covering the flat inner surface of the body face, a reflex-glass fitted against said gasket, a backing element of semi-tube contour disposed within the body to form a continuous vertical passage directly to the rear of said glass and in alinement with the cap openings, and set screws operative through the tapped rear of said body engaging the backing element to force said element, glass and gasket bodily against the face of the body.

2. A water-gage embracing an elongated integral continuous body having a central passage therethrough, the central portion of which body is contracted and the ends of which are enlarged and internally screw-threaded, the diameter of each threaded portion being at least equal to diameter of said central passage, said body having a flat front face provided with a sight opening and having tapped portions upon the body back, caps each having an opening therethrough for partially closing said open ends, a gasket of yielding metal within the body for covering the flat inner surface of the body face, a reflex-glass fitted against said gasket, a backing element of C-shape disposed within the body to form a continuous vertical passage directly to the rear of said glass and in alinement with the cap openings, and set screws operative through the tapped rear of said body for engaging the curved rear face of said backing element to force said element, glass and gasket bodily against the face of said body.

3. A water-gage embracing an elongated integral continuous body, the central portion of which is contracted and of D-shaped cross-section and the enlarged ends of which are of circular cross-section internally tapped to receive caps, said tapped portions being of a diameter at least equal to the diameter of said body central portion, said body having a flat front face having a sight opening, caps each having an opening therethrough for partially closing said open ends, a gasket of yielding metal within the body for covering the flat inner surface of the body face, a reflex glass fitted to said gasket, a backing element of C-shape disposed within the body to form a continuous, vertical passage directly back of said glass and in alinement with the cap openings, tapped offset portions for the body adjacent the ends thereof and set screws operative through said off-sets for engaging the curved rear face of said backing element to force the backing element, glass and gasket bodily against the face of said body.

1,218,662. BOTTLE AND JAR SEALING DEVICE. ALFRED INGRAM, New York, N. Y., assignor, by mesne assignments, to Anchor Cap & Closure Corporation, New York, N. Y., a Corporation of New York. Filed May 28, 1913. Serial No. 770,397. (Cl. 215—50.)

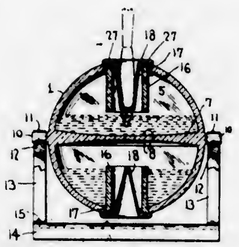


1. In a bottle closure, a bottle provided with a neck having an interior supporting member spaced from the end of the neck, in combination with a reversible stopper of heavy material whereby the weight tends to hold the stopper in place in either upright or inverted position, said stopper having a relatively long body portion adapted to fit loosely within the end of the neck and to rest upon said supporting member, and an extension of less diameter than said body portion to constitute a guide when said stopper is inserted in the neck in inverted position and to constitute a finger piece when said stopper

is inserted in the neck in upright position, said relatively long body portion of the stopper ending substantially within the neck when the stopper is inserted in inverted position.

2. In a closure for catchup bottles and the like, a bottle provided with a neck formed with a supporting member on the interior thereof spaced from the end of the neck, and said neck having a substantially cylindrical exterior portion adjacent the end thereof, in combination with a reversible premanent stopper having a relatively long body portion adapted to fit loosely within the neck and resting on said supporting member, an extension on the body portion of less diameter than the body portion and adapted to constitute a guide member to facilitate introduction of the stopper in inverted position into the bottle neck and to form a finger piece when said stopper is inserted in the neck with the extension above the body portion, said stopper extending substantially to the end of the neck when the stopper is in inverted position, and an exterior destructible sealing member covering the end of the bottle neck and locking the stopper in position therein whereby the bottle is securely sealed for packing and transportation.

1,218,663. INK-WELL. LYNWOOD B. JAMES, Washington, D. C. Filed Apr. 13, 1916. Serial No. 90,932. (Cl. 120—57.)



1. An ink well comprising a hollow body having a plurality of ink containing compartments therein, a pen receiving orifice communicating with each compartment, and means surrounding the orifice and extending into the compartments and forming with the walls of the body, means for retaining ink within the compartments, the body being adapted to be reversed to bring the ink in either compartment below the mouth of the orifice, in position for use.

2. An ink well comprising a reversible hollow body having a partition therein dividing it into compartments, a sleeve projecting into each compartment and having a pen receiving orifice therein, the sleeves together with the wall of the body, forming means to prevent the ink from spilling out of the pen orifices when the body is reversed.

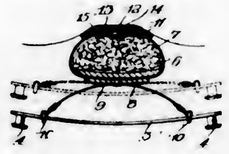
3. An ink well comprising a hollow body having a partition therein dividing the body into interior compartments, two oppositely disposed sleeves extending into the compartments and having therethrough pen receiving orifices, the sleeves, together with the wall of the well serving as means for retaining ink in the well and preventing it from spilling through the orifices when the body is reversed.

4. In an ink well, the combination with a suitable support, a hollow reversible body having trunnions having bearings in the support, said body being provided with a central partition dividing the body into compartments, oppositely disposed sleeves extending into said compartments each having a pen receiving orifice therein, the walls of the said sleeves, together with the wall of the body, serving as means for retaining the ink in the receptacle and preventing the same from spilling through the orifices when the body is being reversed.

5. An ink well comprising a hollow reversible body having a partition therein dividing it into ink containing compartments, oppositely disposed conical sleeves extending into the compartments, and having therethrough pen receiving orifices, the wall of the sleeve, together with the wall of the body, serving to prevent spilling of the ink through said orifices, while the well is being reversed.

[Claims 6 to 9 not printed in the Gazette.]

1,218,664. TRUSS. CHARLES E. JEWELL, Auburn, N. Y. Filed Apr. 17, 1916. Serial No. 91,508. (Cl. 128—26.)

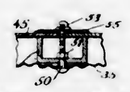


1. The combination with a truss pad, and body encircling means for applying pressure to the pad, of a retaining member adapted to be adhesively secured to the body of a person, and a detachable connection between the truss pad and said retaining member.

2. The combination with a truss pad, of a retaining member adapted to be adhesively secured to the body of a person, a socket in the truss pad, and an enlargement or head on the outer face of said retaining member for detachable engagement with said socket.

3. The combination with a truss pad, and means for supporting it, of a retaining member therefor adapted to be adhesively secured to the body of a person.

1,218,665. PORTABLE HOUSE. ROBERT I. JOHNS, New York, N. Y. Filed Dec. 19, 1912, Serial No. 737,585. Renewed Oct. 27, 1916. Serial No. 128,119. (Cl. 189—34.)



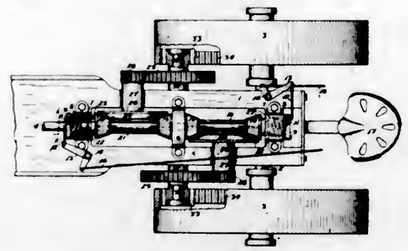
1. A wall structure comprising a plurality of spaced beams, overlapping sheet metal on one side thereof, abutting sheets of board material on the other side, strips over the joints of the board sheets, and through bolts for maintaining the relative position of the parts, said bolts having means for securing the sheet metal to the beams independently of the board sheets and the holding strips.

2. A wall structure comprising a plurality of substantially parallel channel-shaped beams, overlapping sheet metal on the flat side of the channel beams, sheets of board material abutting one another between the sides of the channel beams, ornamental strips over the joints in the board sheets, and overlapping the sides of the channel beams, and through bolts for maintaining the relative position of the parts, one nut on each bolt for securing the sheet metal to the beams independently of the board sheets, and another nut for clamping the strip and the adjacent edges of the board sheets to the sides of the channel beams.

3. A wall structure comprising a plurality of parallel channel-shaped beams, corrugated overlapping metal sheets on one side, plain abutting sheets of board material on the other side, an ornamental strip over the butt-joint in the board sheets overlapping the beams, through bolts for maintaining the relative position of the parts, a nut on each bolt located in the channel of the beam for independently securing the metal sheets thereto, and an ornamental nut for securing the board sheets and the ornamental strip to the beam.

1,218,666. TRANSMISSION MECHANISM FOR TRACTORS AND THE LIKE. ALFRED C. JOHNSON, Winters, Cal. Filed Jan. 24, 1916. Serial No. 73,840. (Cl. 21—114.)

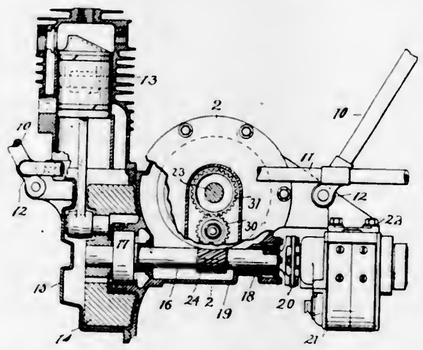
1. In combination, a driving shaft, two pairs of friction cones rotatable with and slidable on said shaft, the cones of each pair being connected to move together on said shaft, a friction cone for each pair, adapted to be engaged by one or the other of the cones of said pair, traction wheels, operative connections between said traction wheels and the last-recited cones respectively, and means for moving either pair of said cones independently on said shaft, to cause one or the other of the cones of said pair to engage the second named friction cones.



2. In combination, a driving shaft, two pairs of conical transmission devices rotatable with and slidable on said shaft, the devices of each pair being connected to move together on said shaft, a conical transmission device for each pair, adapted to be engaged by one or the other of the devices of said pair, traction wheels, operative connections between said traction wheels and the last-recited devices respectively, and means for moving either pair of said devices independently on said shaft, to cause one or the other of the devices of said pair to engage the second-named devices.

3. In combination, a driving shaft, two pairs of friction cones rotatable with, and slidable on, said shaft, rods connecting the cones of each pair so that they move together on said shaft, a friction cone for each pair, adapted to be engaged by one or the other of the cones of said pair, traction wheels, operative connections between said traction wheels and the last-recited cones respectively, and means for moving either pair of said cones independently on said shaft, to cause one or the other of the cones of said pair to engage the second-named friction cones.

1,218,667. MOTOR-CYCLE TRANSMISSION MECHANISM. WILFRED G. JOHNSON, Elyria, Ohio, assignor to The Cleveland Motorcycle Manufacturing Company, Cleveland, Ohio. Filed Nov. 8, 1915. Serial No. 60,231. (Cl. 74—59.)



1. In a motorcycle, a motorcycle frame, an engine supported thereby, a magneto, a transmission shaft, a second shaft, said transmission shaft being connected at its ends to said engine and magneto respectively, and between its ends being connected to the second shaft so as to drive the same.

2. In a motorcycle, a frame, a power plant and transmission means supported thereby and including an engine having a fly-wheel adapted to rotate in a plane at right angles to the plane of the frame, a rearwardly extending transmission shaft secured to the fly-wheel and driven at a fixed speed relative thereto, a transverse sprocket shaft, and multi-speed gearing for transmitting power from said transmission shaft to the transverse shaft and for driving the latter at a plurality of speeds relative to the former.

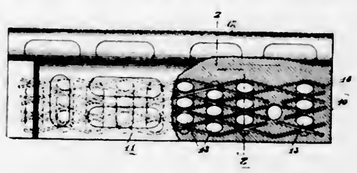
3. In combination in a motorcycle, a frame, a power and transmission means supported thereby and including an engine, a transverse sprocket shaft, a rearwardly extending transmission shaft connected to the engine and gearing for causing said transmission shaft to drive said transverse shaft at a plurality of speeds relative to the transmission shaft including a worm on a transmission shaft, a worm wheel surrounding the transverse shaft adapted to be clutched to and unclutched from said transverse shaft.

4. In combination in a motorcycle, a frame, a power and transmission means supported thereby and including an engine, a rearwardly extending transmission shaft driven by the engine at a fixed speed relative thereto, a transverse sprocket shaft and gearing for driving said transverse shaft at a plurality of speeds relative to the transmission shaft including a worm on the transmission shaft, a worm wheel surrounding the transverse shaft, and means whereby said transverse shaft may be driven at the same or at a different speed relative to said worm wheel.

5. In combination in a motorcycle, a frame, a power and transmission means supported thereby and including an engine, a rearwardly extending transmission shaft driven by the engine at a fixed speed relative thereto, a transverse shaft and gearing for driving said transverse shaft at a plurality of speeds relative to the transmission shaft and including a worm on the transmission shaft, a worm wheel surrounding the transverse shaft, multi-speed gears associated with said transverse shaft and a clutch member splined to said transverse shaft and adapted when in one operative position to cause said transverse shaft to be driven at the speed of the worm wheel and when in another operative position to cause the transverse shaft to be driven at less speed than the worm gear.

[Claims 6 to 10 not printed in the Gazette.]

1,218,668. BRAKE-SHOE. HARRY JONES, Suffern, N. Y., assignor to The American Brake Shoe & Foundry Company, Wilmington, Del., a Corporation of Delaware. Filed Dec. 28, 1916. Serial No. 139,254. (Cl. 188—27.)



1. A brake shoe consisting of a cast metal body, an insert incorporated therein and provided with projections extending inwardly away from the wearing face of the shoe, and an openwork metal reinforcing member with the strands thereof extending between the said projections and anchored thereto by the cast metal of the body of the shoe.

2. A brake shoe consisting of a cast metal body, an insert incorporated therein and provided with projections extending inwardly away from the wearing face of the shoe, said projections defining dove-tailed openings therebetween, and a reinforcing member of openwork metal extending throughout the body of said shoe, with the strands thereof extending through said dove-tailed openings and anchored to said insert.

3. A brake shoe consisting of a cast metal body, an openwork metal reinforcing member adjacent the back

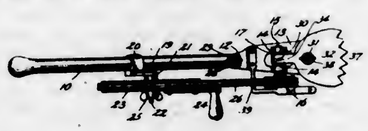
thereof, and a hard metal insert incorporated in the body of said shoe and provided with projections extending inwardly away from the wearing face of said shoe, said projections enlarging toward their outer extremities and receiving the strands of the reinforcing member therebetween and anchored thereto.

4. A brake shoe consisting of a cast metal body, a plurality of hard metal inserts incorporated in said body and provided with projections extending inwardly away from the wearing face of the shoe, said projections enlarging toward their free extremities, a reinforcing member of openwork ductile metal extending throughout the body of said shoe and receiving the said projections between the strands thereof to which the said projections are anchored.

5. A brake shoe consisting of a cast metal body, a hard metal insert incorporated therein and provided with projections extending toward the wearing face of said shoe and with projections extending away from the wearing face of said shoe, and spaced reinforcing members of openwork metal incorporated in the body of said shoe, receiving the projections of said inserts between the strands thereof, the cast metal of the body of the shoe anchoring the strands of the reinforcing members to the projections of the said insert.

[Claims 6 to 10 not printed in the Gazette.]

1,218,669. LAWN-TRIMMER. FRANK N. JORDAN, St. John, New Brunswick, Canada. Filed Nov. 10, 1916. Serial No. 130,606. (Cl. 56—19.)



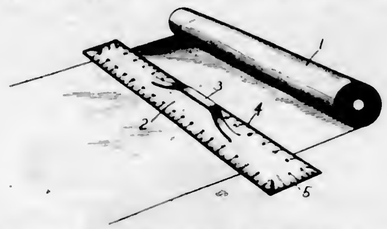
1. In a lawn trimmer, a supporting plate and a handle removably connected to said plate, a cam journaled in bearings carried by said plate, a bracket mounted on said handle, driving means for said cam carried by said bracket, a pair of coöperating cutter blades pivotally mounted on the supporting plate, a rearwardly extending arm on each of said blades engaging said cam for oscillating said blades, and a runner for upholding the supporting blade.

2. In a lawn trimmer comprising a supporting plate, a handle removably connected to said supporting plate, a horizontal shaft journaled on said supporting plate, a drum having a cam groove therein carried by said shaft, a pair of coöperating cutting blades pivotally mounted on the supporting plate in advance of said shaft, a rearwardly projecting arm on each of said cutting blades having means to engage said cam for the purpose of oscillating said blades, driving means carried by said handle and connected to said shaft for rotating the cam, and a supporting runner for the forward end of the implement.

3. In a lawn trimmer, the combination with a supporting plate having a rearwardly projecting forked end, an operating handle removably and adjustably connected to said forked end, a bracket carried by said handle, a sprocket wheel rotatably mounted on said bracket, a shaft journaled on said supporting plate, a sprocket wheel on said shaft and a chain for driving the same from the sprocket wheel carried by the handle, a cam also fixed on said shaft, a pair of coöperating cutting blades pivotally mounted on said supporting plate in advance of the shaft, and an arm projecting rearwardly from each of said blades and engaging the cam for oscillating the blades.

1,218,670. TOOL FOR USE BY PAPER-HANGERS. CHARLES A. KRAMER, Curran, Ill. Filed Apr. 13, 1916. Serial No. 90,943. (Cl. 33—83.)

A paperhanger's tool comprising an elongated plate, internally concaved with curved ends, said plate being rectangular outlined and the edges thereof in the same plane, said plate being provided with a centrally disposed handle,



the convexed surface of the plate having a scale extending entirely about the edge thereof.

1,218,671. WELL-DRILLING BIT. GEORGE LORENZO LANE, Williamstown, W. Va. Filed Aug. 1, 1916. Serial No. 112,515. (Cl. 255—73.)

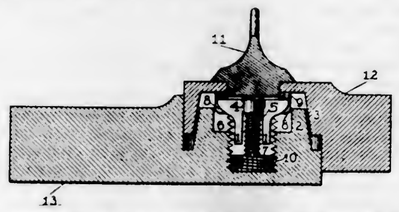


1. The herein described drilling bit comprising a main central rib having a leading point at its lower end in alinement with the axis of the rib and drill, said point being formed by the intersection of three triangular facets, said drill also including two other web members, each having a cutting point at its lower end projecting radially outwardly beyond the main surface of such web and each of said lateral points being bounded by two inclined facets, one of the facets of the leading point structure being inclined upwardly and serving to force the other two cutting points outwardly with respect to the axis of the hole being drilled, all of the other facets meeting at a point eccentric to the axis of the tool and leading point.

2. The herein described rock drilling bit comprising a straight, strong, rigid body terminating in a pyramidal downwardly projecting point, the apex or point proper being in the axis of the body and vertical center of the hole to be drilled, and a pair of parallel rigid webs of less width than the main body projecting outwardly from the main body, each of said webs having at its lower end an outwardly flared cutting point serving to form an undercut effect in the operation of the tool, each of the latter mentioned cutting points being effective at the periphery of the tool while the point first mentioned is effective in the center of the hole and projects materially below the horizontal plane of the two side points.

1,218,672. ADJUSTABLE MECHANICAL ELBOW. CARL ERICK LARSON, Long Island City, N. Y. Filed Nov. 17 1916. Serial No. 131,981. (Cl. 21—148.)

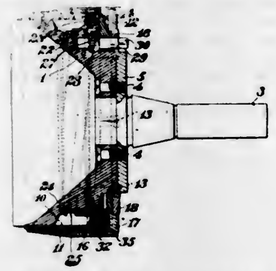
1. An adjustable joint comprising a member bearing a truncated cone and a second member bearing a cup fitting said cone, an adjusting screw exteriorly provided with means for its rotation extending through said cup and into a thread in said cone, a collar about said screw within said cup and means for retaining said collar upon said screw comprising a bridge or pin extending diametrically through said screw in a slot or aperture therein and extending at either end into recesses or slots in said collar, and means for retaining said bridge in contact with said collar, substantially as described.



2. An adjustable joint including a pair of members provided with a cone and a corresponding cup respectively, a locking screw extending through said cup and into a thread in said cone, an open slot in said locking screw and a collar about the screw within the cup, a bridge extending through said open slot and across said collar and means to adjust and retain said bridge and collar on the screw comprising an inner screw seated axially in aforesaid screw abutting said bridge with the inner end thereof, substantially as described.

3. An adjustable joint including a pair of members provided at their junction with a truncated cone, and a cup adapted to frictionally engage in rotation, a locking screw extending centrally through said cup and into a threaded socket in said cone, an open slot in the inner end of said screw and a collar about the latter within the cup and a bifurcated bridge provided with a central enlargement extending through said open slot and across said collar to retain the latter, and an adjusting screw fitted into the inner end of aforesaid screw abutting the central enlargement of said bridge and extending between the prongs thereof, there being a clearance recess in said cone to permit rotation of said collar, substantially as described.

1,218,673. SKIVING-MACHINE. ALBERT LATHAM, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 6, 1914. Serial No. 870,630. (Cl. 69—9.5.)



1. A skiving knife, having in combination, a knife blade holder, an annular knife blade supported by the holder, means for adjusting the knife blade axially of the holder, a clamping ring engaging with the outside of the knife blade, an actuating member engaging with the ring, and means for moving the actuating member axially of the knife to contract the ring and clamp the knife blade to the holder.

2. A skiving knife, having in combination, a knife blade holder, a knife blade supported upon the outside of the holder, means for adjusting the knife blade axially of the holder, an external tapered clamping ring, and mechanism coöperating with the tapered portion of the ring for contracting the ring upon the knife blade.

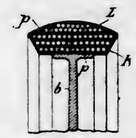
3. A skiving knife, having in combination, a knife blade holder, a cylindrical knife blade supported externally of the holder, an adjusting ring, a rotary member interposed between the adjusting ring and the holder, mechanism for rotating the member to cause an axial movement of the adjusting ring and means for clamping the knife blade to the holder.

4. A skiving knife, having in combination, a knife blade holder, having an annular recess formed upon the outside, a knife blade supported upon the holder, an adjusting ring located in the recess and connected to the knife blade, mechanism supported by the holder to cause an axial movement of the adjusting ring, an external clamping ring, and means for contracting the clamping ring upon the knife blade.

5. A skiving knife, having in combination, a knife blade holder, a knife blade supported upon the holder, means for clamping the knife blade to the holder, an adjusting ring connected to the knife blade, a rotary member interposed between the adjusting ring and holder, and an adjusting pinion journaled upon the knife holder and operatively connected with the rotary member.

[Claims 6 to 12 not printed in the Gazette.]

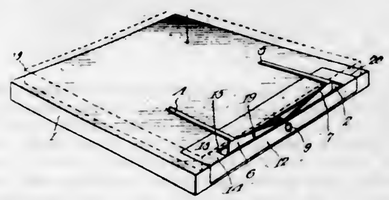
1,218,674. PULLEY FOR HIGH-SPEED TRANSMISSION. MAURICE LEBLANC, Val sur Seine, par Croisy, France, assignor to Société Anonyme pour l'Exploitation des Procédés Westinghouse-Leblanc, Paris, France. Filed Dec. 6, 1912. Serial No. 735,256. (Cl. 64—45.)



1. A pulley having a rim said rim having a tension member comprising spirally wound layers of organic filamentary materials adapted to sustain the centrifugal force acting upon the pulley and a circular band of threads parallel to the axis of the pulley between said spirally wound layers.

2. A pulley having a rim said rim having a tension member comprising spirally wound layers of organic filamentary materials adapted to sustain the centrifugal force acting upon the pulley and a plurality of circular bands of threads parallel to the axis of the pulley between said spirally wound layers.

1,218,675. PAPER-HOLDING CLAMP. HARRY E. LEININGER, Chicago, Ill. Filed Feb. 7, 1916. Serial No. 76,555. (Cl. 24—66.)



1. A means for clamping papers comprising a bed-plate, a flange and an ear on opposite sides of said bed-plate and disposed at an angle thereto, a shaft extending from said flange to said ear and being revolubly received by the same, a pair of plates received upon said shaft, a clamping-arm projecting outwardly from each of said plates, and a spring coöperating with said shaft and with each of said revoluble plates and adapted to actuate said plates.

2. A means for clamping papers comprising a bed-plate, a flange and an ear on opposite sides of said bed-plate and disposed at an angle thereto, a shaft extending from said flange to said ear and being revolubly received by the same, a pair of plates received upon said shaft, a clamping-arm projecting outwardly from each of said plates, and a spring coöperating with said shaft and with each of said revoluble plates and adapted to actuate said plates, said bed-plate being provided with a slot or perforation through which said revoluble plates are adapted to move.

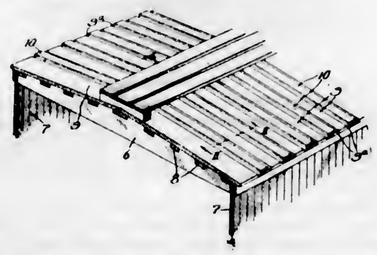
3. A means for clamping papers comprising a pair of revoluble plates, a shaft about which same are adapted to revolve, a clamping-arm extending outwardly from each of said plates, and a spring mounted upon said shaft and adapted to actuate each of said plates.

4. A means for clamping papers comprising a pair of revoluble plates, a shaft about which same are adapted to revolve, a clamping-arm extending outwardly from each of said plates, and a spring mounted upon said shaft and adapted to actuate each of said plates, said clamping-arms being substantially arcuate in transverse section.

5. A means for clamping papers comprising a writing-surface, a pair of revoluble members, a shaft in connection with which both of said members are adapted to revolve, a clamping-arm projecting from each of said members, and means adapted to actuate said members thereby to keep said clamping-arms normally in engagement with said writing-surface.

[Claims 6 to 10 not printed in the Gazette.]

1,218,676. CAR-ROOF. FREDERICK A. LESTER, Chicago, Ill., assignor to Chicago Standard Equipment Company, Chicago, Ill., a Corporation of Maine. Filed July 30, 1914. Serial No. 854,029. (Cl. 108—12.)



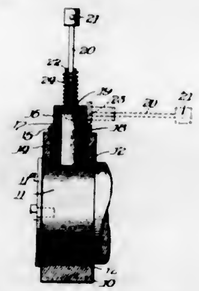
1. A metallic roof batten formed of relatively thin flexible metal and comprising a roof strip engaging head provided with dependent flared flanges adapted to lie between adjacent roof strips, said portions serving when sprung toward each other by the expansion of the roof to tighten the engagement of the head with the roof strips.

2. A metallic roof batten formed of relatively thin flexible metal and comprising a hollow roof strip engaging head provided with dependent flared spaced flanges adapted to lie between adjacent roof strips, said portions serving when sprung toward each other by the expansion of the roof to tighten the engagement of the head with the roof strips.

3. In a car roof, the combination of spaced roofing strips, a metallic batten for uniting the side edges of said strips and secured to one of the strips, said batten formed of relatively thin flexible metal and comprising a hollow strip engaging head having dependent spaced flanges adapted to lie between adjacent roof strips, said flanges constructed and arranged when sprung toward each other by the expansion of the roof to tighten the engagement of the head with the roof strips, substantially as described.

1,218,677. GREASE-CUP. FRED LOEDIGE, Chicago, Ill. Filed Dec. 4, 1916. Serial No. 134,836. (Cl. 184—45.)

1. In a lubricating device, the combination of a casing providing a longitudinal opening therethrough, a piston mounted in said opening, a stem for said piston the free end of the stem being provided with a projection adapted for manual engagement, a pivoted member engaging and guiding said stem, and a spring interposed between said piston and said member and tending to advance said piston, substantially as described.



2. In a lubricating device, the combination of a casing providing a longitudinal opening of substantially uniform size from end to end of the casing, a piston mounted in said opening, a stem for said piston, a yoke for guiding said stem, said yoke being mounted for movement out of operative position, and a spring for simultaneously advancing said piston and maintaining said yoke in operative position.

3. In a lubricating device, the combination of a casing providing a longitudinal opening therethrough, a piston mounted in said opening, a stem for said piston, a stem-guiding member pivoted to said casing and adapted to be swung out of operative position, and a spring which bears at one end on said piston and at the other end on said member, substantially as described.

4. In a lubricating device, the combination of a cylinder, the exterior portion of one end of which is screw threaded and which is provided with an opening of substantially uniform size from end to end thereof, a yoke pivoted to the sides of the cylinder and provided with a guiding aperture so arranged as to be coincident with the axis of the opening through said cylinder when said yoke is swung to a position which bisects the opening in the cylinder, a piston having a stem for coöperation with the aperture in said yoke, and a spring interposed between the piston and the yoke, substantially as described.

5. In a lubricating device, the combination of a cup having an open upper end, a yoke pivoted to the cup, a piston and stem, said stem engaging said yoke and terminating in a hand-hold outside of said yoke, and a spring mounted to bear at one end on the piston and at the other end on the yoke, substantially as described.

[Claim 6 not printed in the Gazette.]

1,218,678. TREATMENT OF MANURE. PROSPER JEAN AUGUSTE MAIGNEN, Philadelphia, Pa. Filed Feb. 3, 1915. Serial No. 5,847. (Cl. 71—8.)

1. A process of preserving the fertilizing value of manure by temporary sterilization, effected by subjecting the raw material to the action of an aqueous solution including compounds of calcium and sodium until organic constituents of the manure combine with the solvent, and then evaporating the product to such a degree as to suspend fermentation or putrefaction thereof.

2. A product including organic and inorganic soluble compounds of natural manure, modified by maceration with an aqueous solution including compounds of calcium and sodium, and evaporation to such a degree as to suspend putrefaction.

3. A product including organic and inorganic soluble compounds of natural manure, modified by maceration with an aqueous solution including sodalime, and evaporation to such a degree as to suspend putrefaction.

4. A process of treating material including elements of fertilizing value, which consists in subjecting the whole material to the action of an aqueous solution including compounds of calcium and sodium until said elements of fertilizing value combine with the solvent, and then separating said solvent with its contained fertilizing elements, from the other portions of said material, and evaporating said product to such a degree as to temporarily sterilize it and suspend putrefaction thereof.

5. The process of treating a material including elements devoid of fertilizing value and elements having fertilizing value, which consists in subjecting the whole material to the action of an aqueous solution including compounds of calcium and sodium until the fertilizing elements of said material combine with the solvent, and then separating said solvent, with its fertilizing contents, from the other elements of said material, and evaporating the product to such a degree as to temporarily sterilize it and suspend putrefaction thereof; whereby the elements of said material having fertilizing value are not only separated from the elements devoid of fertilizing value but are preserved.

1,218,679. HEAT-INSULATING COVERING. CHARLES R. MANVILLE, Milwaukee, Wis., assignor to H. W. Johns-Manville Company, Milwaukee, Wis., a Corporation of New York. Filed Jan. 8, 1914. Serial No. 810,976. (Cl. 154—45.)



1. A new article of manufacture of the class described, comprising a sheet formed of a mixture containing fibrous asbestos and particles of corn-cob embedded in and in adhesive engagement with the fibrous asbestos.

2. A new article of manufacture of the class described, consisting of a sheet of heat insulating material comprising in its construction a mixture of fibrous asbestos, particles of corn-cob, and a binder, the particles of corn-cob being embedded in and in adhesive engagement with the fibrous asbestos.

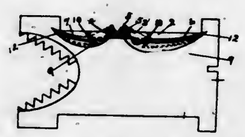
3. A new article of manufacture of the class described, comprising a sheet formed of a mixture containing fibrous asbestos and particles of corn-cob embedded in and in adhesive engagement with the particles of asbestos, said sheet having relatively thick sheet portions formed by particles of said corn-cob material and the material in which said particles of corn-cob are embedded, and having relatively thin sheet portions intermediate the portions of the sheet in which the particles of corn-cob forming part of said relatively thick sheet portions are contained.

4. A new article of manufacture of the class described, comprising a sheet formed of a mixture containing fibrous asbestos and particles of corn-cob embedded in the asbestos, said particles of corn-cob and the portions of the fibrous asbestos in which the particles of corn-cob are embedded forming protruding sheet portions which project outward with respect to the surface portions of the sheet intermediate the particles of corn-cob.

5. A new article of manufacture of the class described, consisting of superposed layers of heat-insulating material having air spaces therebetween, said material comprising fibrous material and non-yielding particles of corn-cob, said particles of corn-cob being embedded in and entirely covered by the fibrous material but causing surface elevations so as to form said air spaces between the layers.

[Claim 6 not printed in the Gazette.]

1,218,680. MATRIX BROACH-MOLDING DEVICE. ANDREW E. MARKWELL, Fort Worth, Tex., assignor, by direct and mesne assignments, of three-fourths to Charles W. Hanson, Fort Worth, Tex., and one-fourth to A. D. Evans, Tarrant county, Tex., and Geo. W. Ittner, St. Louis, Mo. Filed Aug. 14, 1913, Serial No. 784,693. Renewed Aug. 7, 1916. Serial No. 113,607. (Cl. 199—12.)



1. Matrix molding devices comprising a body provided with longitudinal cavities in the edge thereof, a pair of forming devices mounted in said cavity and having the outer surfaces flush with the edge of said body and having bearings for pivot bolts, pivot bolts holding said forming devices in said cavity, and springs for drawing said forming devices back into said cavity.

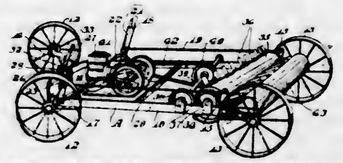
2. Matrix molding devices comprising a body having longitudinal cavities therein in one edge, a pair of forming devices pivotally mounted in said cavities and having their meeting ends triangular in cross-section and having extensions beyond the pivotal connections, and springs bearing against the undersides of said extensions.

3. Matrix molding devices having a pair of forming devices pivotally mounted therein and having openings extending inwardly toward said forming devices and springs holding said forming devices normally within said matrix.

4. Matrix molding devices comprising a matrix, forming devices having beveled under surfaces and pivotally mounted in said matrix and having backwardly extending shoulders, and springs attached to said matrix and engaging said shoulders to hold said forming devices normally within said matrix.

5. Matrix molding devices having a matrix provided with a longitudinal cavity therein, forming devices having beveled under surfaces at their meeting ends and pivotally mounted in said cavity and having backwardly extending shoulders, and springs attached to said matrix and pressing outwardly against said shoulders, said matrix having grooves extending through the sides to said forming devices.

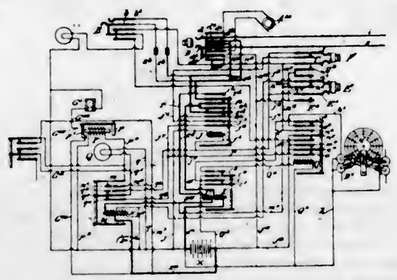
1,218,681. CULTIVATOR. WILLIAM THOMAS MILLAR, Arnprior, Ontario, Canada. Filed June 26, 1915. Serial No. 36,585. (Cl. 97—72.)



1. In a cultivator and in combination, a frame, a front axle operatively connected to the frame and provided with crank ends, wheels rotatably mounted on the crank ends, sleeves rigidly mounted on the front axle intermediate of its length, a sway bar carried by the sleeves, and a pivotally mounted bell crank lever operatively connected to the sway bar.

2. In a cultivator and in combination, a frame, a front axle operatively connected to the frame and provided with crank ends, wheels rotatably mounted on the crank ends, sleeves rigidly mounted on the front axle intermediate of its length, a sway bar carried by the sleeves, a pivotally mounted bell crank lever operatively connected to the sway bar, a sleeve embraced by the said sleeves and loosely mounted on the axle, and a king pin operatively connecting the second said sleeve and the frame.

1,218,682. POLICE SIGNALING SYSTEM. LOUIS W. MILLER, Rochester, N. Y., assignor to National Police Signal Company, Buffalo, N. Y., a Corporation of New York. Filed Aug. 23, 1911. Serial No. 645,573. (Cl. 179—5.)



1. In a signal system, the combination with a central station, a plurality of substations and normally closed line circuits between the central and substations, of an emergency call device at central under the control of a central operator, means for actuating the emergency signal from one or another of said substations, mechanism at each substation for indicating to its operator the working condition of the circuit arranged to be actuated upon the operation of said means and to thereafter continue its actuated condition independent of the operation of said means, and means at the central station adapted to be operated by the central operator to discontinue the operation of the substation indicating mechanism, whereby the substation operator may know that the emergency signal has been received and answered by the central operator.

2. In a signal system, the combination with a central office station, a plurality of substations and normally closed line circuits connecting the central and substations, of a central office emergency call apparatus common to all of the line circuits, means at each substation for signaling central, other means at the substation for effecting the operation of the emergency signal, of mechanism at the central office for answering calls despatched by the first mentioned means which at such times prevents the operation of the central office emergency signal, and a call registering mechanism adapted to be operated over said circuits upon the operation of each substation operating-means-for-signaling-central including said emergency signal.

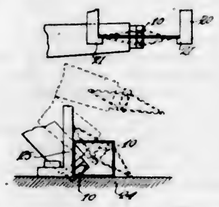
3. In a signal system, the combination with a central station, a plurality of substations and normally closed line circuits between the central and substations, of an emergency call device at central which is maintained inoperative while the continuity of the line is maintained and is adapted to be actuated upon the opening of the line, a switch for opening the line circuit, and an indicating device at each substation adapted to be bridged to the line circuit and to be actuated continuously by current thereover when said switch is operated.

4. In a signal system, the combination with a central station, a plurality of substations and line circuits connecting the central and substations, of an emergency signal at the central station, means at each substation for establishing circuit conditions for actuating said signal and a responsive signal at each substation actuated by current on the line and rendered operative when said means is actuated for the purpose of indicating to the operator at the substation the operative condition of the line, said emergency signal and responsive signal being adapted to continue in operation independent of their actuating means.

5. In a signal system, the combination with a central station, a normally closed line circuit provided with a resistance and a line relay, said resistance normally rendering the line relay inoperative, of a recording mechanism, a relay controlling it having a circuit adapted to be closed by the line relay and a normally open bridge leading around the resistance and adapted when closed to effect the operation of the line relay.

[Claims 6 to 12 not printed in the Gazette.]

1,218,683. CARTON-OPENING DEVICE. MICHAEL J. MILMOE, Chicago, Ill., assignor to F. B. Redington Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 4, 1916. Serial No. 82,074. (Cl. 93—2.)



1. In combination, a blade for opening flattened cartons, a carton seat, and mechanism for operating said blade to position cartons on said seat, said blade being thickened in a direction transverse to the direction of movement thereof.

2. In combination, a blade for opening flattened cartons, means for moving said blade transversely to the longitudinal axis thereof to transport cartons, and a strengthening portion on said blade to prevent bending or breaking thereof.

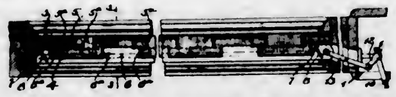
3. In combination, a blade for opening flattened cartons, means for imparting a transverse movement to said blade to transport cartons, and a strengthening rib extending longitudinally of said blade to prevent bending or breaking thereof.

4. In combination, a blade for opening flattened cartons, means for imparting a transverse movement to said blade to transport cartons, an angular seat for receiving cartons so transported, and an angular rib extending longitudinally of said blade and adapted to fit into the apex of the angle formed by said seat.

5. In carton opening mechanism, an angular seat for receiving cartons, and a blade for moving cartons into said seat, said blade being shaped in cross section to approximately fill the portion of said seat adjacent the vertex of the angle thereof.

[Claims 6 to 12 not printed in the Gazette.]

1,218,684. CLOSURE MEANS FOR TRANSOM-PASSAGES AND THE LIKE. ROBERT C. MITCHELL, Mount Vernon, N. Y. Filed July 11, 1914, Serial No. 850,521. Renewed Feb. 1, 1917. Serial No. 145,999. (Cl. 20—61.)



1. In a closure of the character described, two plates having air passages therein, the solid parts of one plate standing in front of the air passages in the other plate, said plates being relatively movable to open and close said air passages, with guard means to interrupt all lines of vision through said air passages when the plates are so placed as to open said passages.

2. In a closure of the character described, two plates having air passages therein, the solid parts of one plate extending in front of the air passages in the other plate, said plates being relatively movable to open and close said air passages, with guard means to interrupt all lines of vision through said air passages when the plates are so placed as to open said passages, said guard means being formed integrally with one of said plates.

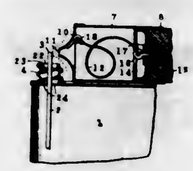
3. In a closure of the character described, two plates having air passages therein, the solid parts of one plate extending in front of the air passages in the other plate, said plates being relatively movable to open and close said air passages, with guard means to interrupt all lines of vision through said air passages when the plates are so placed as to open said passages, said guard means being formed integrally with one of said plates and comprising flanges adjacent the edges of said air passages.

4. In a closure of the character described, two plates having air passages therein, the solid parts of one plate standing in front of the air passages in the other plate, said plates being relatively movable to open and close said air passages, with guard means on both plates to interrupt all lines of vision through said air passages when the plates are so placed as to open said passages, with means to move said plates toward and from each other.

5. In a closure of the character described, two plates having air passages therein, the solid parts of one plate standing in front of the air passages in the other plate, said plates being relatively movable to open and close said air passages, with guard means to interrupt all lines of vision through said air passages when the plates are so placed as to open said passages, with means to move said plates toward and from each other in a relatively oblique direction.

[Claims 6 to 13 not printed in the Gazette.]

1,218,685. OIL-DISPENSING DEVICE. ARNOLD MOLLENHAUER, New York, N. Y. Filed June 21, 1916. Serial No. 104,836. (Cl. 137—67.)



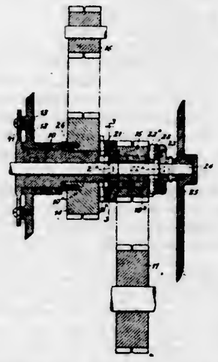
1. In an apparatus of the character described, in combination, a container, a neck projecting from a face of said container, the outer end of said neck providing a cup, a conduit of relatively small cross section communicating with the interior of said container passing through and being braced in position by said face and cup, and having a delivery nozzle outside said neck, said cup and face having openings to establish communication between the cup and the interior of the container through said neck and a blower adapted to discharge a jet of air across said nozzle.

2. In an apparatus of the character described, in combination, a substantially closed horizontally elongated container the lateral walls of which are curved so that the container is substantially rigid against lateral compression, a neck projecting from a face of said container, said neck providing a cup at its outer end, a conduit of relatively small cross section communicating with the interior of said container and having a delivery nozzle outside said neck, said conduit passing through said neck and cup and braced by said cup, said cup and face having openings to establish communication between the cup and the interior of the container through said neck, and a hand operated blower frictionally clamped to said container adapted to effect discharge of liquid from the container through said nozzle.

3. In a device of the character described, in combination, a container, a hollow neck projecting therefrom, a conduit of relatively small cross section communicating with the interior of said container, extending through and having a nozzle outside of and beyond said neck, said neck having an opening adjacent said conduit communicating with the interior of said neck, said container having an opening communicating with the interior of said neck, a blower connected to said container adapted to discharge a jet of air across said nozzle, and a cap adapted to be placed over said neck and nozzle.

4. In a device of the character described, in combination, a container, a hollow neck projecting therefrom, a conduit of relatively small cross section communicating with the interior of said container, extending through and having a nozzle outside of and beyond said neck, said neck having an opening adjacent said conduit communicating with the interior of said neck, said container having an opening communicating with the interior of said neck, a blower connected to said container adapted to discharge a jet of air across said nozzle, and a cap adapted to be placed over said neck and nozzle, said cap having an inner felt packing.

1,218,686. ADJUSTABLE BEARING FOR SPROCKET-WHEELS. FRANK L. MORSE, Ithaca, N. Y., assignor to Morse Chain Company, Ithaca, N. Y., a Corporation of New York. Filed June 1, 1915. Serial No. 31,314. (Cl. 64—53.)



1. The combination of a support, an adjustable bearing member mounted in said support, a sprocket wheel rotatably mounted on said member, another sprocket wheel rotatably mounted eccentrically to the first wheel, and a driving connection between said wheels.

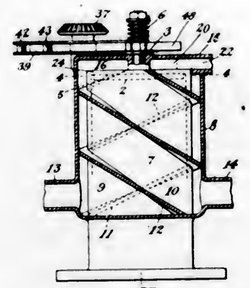
2. The combination of a support, an adjustable bearing member rotatably mounted in said support and having a plurality of eccentric portions, means for rigidly fastening said member in its adjusted position, sprocket wheels rotatably mounted on said eccentric portions, and a driving connection between said wheels.

3. The combination of a support, an adjustable bearing member rotatably mounted in said support and having a plurality of eccentric portions, means for rigidly fastening said member in its adjusted position, sprocket wheels rotatably mounted on said eccentric portions, a shaft, and driving connections between the sprocket wheels and between one of said wheels and the shaft.

4. The combination of a support, an adjustable bearing member rotatably mounted in said support, a sprocket wheel rotatably mounted on said member eccentric to the bearing in the support, another sprocket wheel rotatably mounted on said member eccentric to the first wheel and also to the bearing in the support, and a device for driving one wheel by the other.

5. The combination of a support, an adjustable bearing member rotatably mounted in said support and having a plurality of eccentric portions, means for rigidly fastening said member in its adjusted position, sprocket wheels rotatably mounted on said eccentric portions, said wheels having transverse grooves in their adjacent faces, and an intermediate coupling disk having transverse projections on its opposite sides for engaging said grooves.

1,218,687. INTERNAL-COMBUSTION ENGINE. PAUL H. MUELLER and LUDWIG H. SCHULER, Brooklyn, N. Y., assignors to L-M-S Motor Co., a Corporation of New York. Filed May 5, 1913. Serial No. 765,720. (Cl. 123—64.)

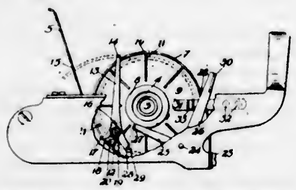


1. In a six-cycle internal combustion engine, the combination with a cylinder and a piston, of an air-jacket surrounding said cylinder and communicating with the outside air, and means coöperative with said cylinder and piston for successively effecting the following operations in the order named and each during a different stroke of the piston viz.—supplying, compressing and igniting a combustible charge, exhausting the burned gases, etc., admitting a charge of atmospheric air only through said air-jacket into the cylinder, and expelling said charge admixed with the residual gases.

2. In a six-cycle internal combustion engine, the combination with a cylinder and a piston, of a jacket surrounding said cylinder and having a spiral passage communicating at its opposite ends respectively with a source of fluid supply and with an admission port in the cylinder, and means coöperative with said cylinder and piston for successively effecting the following operations in the order named and each during a different stroke of the piston viz.—supplying, compressing and igniting a combustible charge, exhausting the burned gases, etc., admitting a charge of fluid through said spiral passage into the cylinder, and expelling said charge admixed with the residual gases.

3. In a six-cycle internal combustion engine, the combination with a cylinder and a piston, of a jacket surrounding said cylinder and having a pair of spiral passages for conducting respectively a combustible mixture and atmospheric air to said cylinder, and means coöperative with said cylinder and piston for successively effecting the following operations in the order named and each during a different stroke of the piston viz.—supplying through one of said spiral passages, and compressing and igniting a combustible charge, exhausting the burned gases, etc., admitting a charge of air through the other spiral passage into the cylinder, and expelling said charge admixed with the residual gases.

1,218,688. TYPE-WRITING MACHINE. WILLIAM J. NEIDIG, Chicago, Ill. Filed June 30, 1916. Serial No. 106,919. (Cl. 197—189.)



1. In a typewriting machine, in combination, a platen for advancing the sheet, a paper-feeler, indicating means under the control of said feeler, and a retractor adapted to move the paper-feeler out of the paper path, said retractor operated manually.

2. In a typewriting machine, in combination, a platen, a paper feeler, indicating means under the control of said feeler, a retractor for said feeler adapted to be operated manually, and means for maintaining said feeler in retracted position.

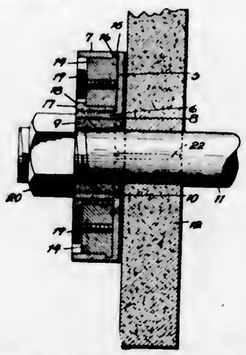
3. In a typewriting machine, in combination, a platen, a paper-feeler, indicating means under the control of said feeler, a retractor for said feeler, and a spring for holding said retractor in retracting position.

4. In a typewriting machine, in combination, a platen, indicating means including a detainable member actuated from said platen, and a detent adapted to detain said member in disuse and manually operable in every position of said indicating means.

5. In a typewriting machine, in combination, a platen, indicating means actuated from said platen, a throw-off adapted to throw said indicating means into disuse, and a spring for controlling the position of said throw-off.

[Claims 6 to 11 not printed in the Gazette.]

1,218,689. BALANCING DEVICE. FRED A. NICHOLS, Battle Creek, Mich. Filed Apr. 24, 1916. Serial No. 93,254. (Cl. 74—6.)



1. In apparatus of the character described, a body portion having substantially annular inner and outer flanges, weights adjustably mounted between the flanges, a keeper ring engaging one flange and adapted to retain the weights between the flanges, and means to lock the weights in adjustment at desired positions with relation to the body portion.

2. In apparatus of the character described, a body portion having substantially annular inner and outer flanges, a weight adjustably mounted between the flanges, a keeper ring having screw-threaded engagement with one flange and provided with a laterally projecting flange to overhang the weight and retain it in place, and clamping means carried by the weight to lock it in adjustment at a desired position with respect to the body portion.

3. In apparatus of the character described, a body portion having substantially annular inner and outer flanges with the outer flange being provided with an interior groove, a weight adjustably mounted between the flanges and provided upon its outer portion with a flange to enter the groove and having a screw-threaded opening formed therein, a clamping screw arranged within the screw-threaded opening to contact with the body portion, a keeper ring detachably connected with the inner flange and contacting with the weight, and means to secure the body portion to a rotatable member.

4. In apparatus of the character described, a body portion having substantially annular laterally extending inner and outer flanges, a weight adjustably mounted between the flanges, means to lock the weight to the body portion, a filler ring removably mounted within the inner flange with its forward end substantially flush with the forward end of the inner annular flange and its rear end flanged and extending outwardly beyond the inner annular flange for a short distance, a spindle passed through the filler ring, a rotatable member carried by the spindle and contacting with the flanged end of the filler ring, and a nut carried by the forward end of the spindle.

1,218,690. FLUE-CLEANER. ANDREW NILSON, Chicago, Ill., assignor to The Eureka Smokeless Furnace Company, Chicago, Ill., a Corporation of Illinois. Filed May 18, 1916. Serial No. 98,269. (Cl. 83—64.)



1. A device of the character described comprising a supporting arm, a rod movably mounted within said arm, a jaw structure carried at the extremity of said rod, and means carried by said arm to move said rod to thereby move said jaw structure away from or toward said arm, said means including a gripping device having means adjustably movable along said rod to thereby progressively move said rod in either direction along said arm.

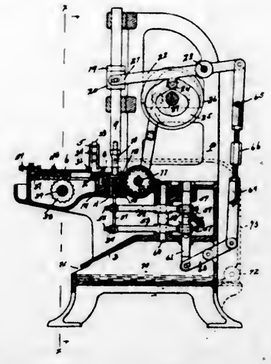
2. A device of the character described comprising a supporting arm, a rod movably mounted within said arm, a jaw structure carried at the extremity of said rod, and means carried by said arm to move said rod to thereby move said jaw structure away from or toward said arm, said jaw structure including a support, a sleeve movable relatively thereto, a plurality of jaws, and wedge mechanism for expanding and retracting said jaws upon relative movement between said sleeve and said support.

3. A device of the character described comprising a supporting arm, a rod movably mounted within said arm, an expandible and retractable jaw structure carried at the extremity of said rod, and means carried by said arm to move said rod to thereby move said jaw structure away from or toward said arm, said jaw structure including a support, a sleeve movable relatively thereto, a plurality of jaws, and wedge mechanism for expanding and retracting said jaws upon relative movement between said sleeve and said support.

4. A device of the character described comprising a supporting arm, a rod movably mounted within said arm, a jaw structure carried at the extremity of said rod, and means carried by said arm to move said rod to thereby move said jaw structure away from or toward said arm, said means including a gripping device having means adjustably movable along said rod to thereby progressively move said rod in either direction along said arm, said jaw structure including a support, a sleeve movable relatively thereto, a plurality of jaws, and means for expanding and retracting said jaws upon relative movement between said sleeve and said support.

5. A device of the character described comprising a supporting arm having a rounded extremity, a flexible tape movably mounted within said arm, a jaw structure carried at the extremity of said tape, and means carried by said arm to move said tape to thereby move said jaw structure away from or toward said arm, said jaw structure including a support, a sleeve movable relatively thereto, a plurality of jaws, and wedge mechanism for expanding and retracting said jaws upon relative movement between said sleeve and said support.

1,218,691. NUT-TAPPING MACHINE. MAYHEW E. NOYES, Cleveland, Ohio. Filed Aug. 30, 1913. Serial No. 787,414. (Cl. 10—133.)



1. In a nut tapping machine, a continuously rotatable chuck, a tap therein, means for supporting a stack of blanks adjacent the chuck, a blank holding device above the chuck, means for transferring a blank from the stack to the holder, and means for delivering the blank from the holder into the chuck and onto the tap.

2. In a nut tapping machine, a continuously rotatable chuck, a tap held stationarily within the chuck, means for supporting a stack of blanks adjacent the chuck, a holder for a single blank adjacent the mouth of the chuck, means for transferring a blank from the stack to the holder, and a plunger for transferring the blank from the holder into the chuck and onto the tap.

3. In a nut tapping machine, a continuously rotatable chuck, a stationary tap extending into the chuck, a blank holding device adjacent the mouth of the chuck, means for delivering blanks in succession to the holding device, means for transferring a blank from the holding device into the chuck, the chuck being recessed to receive the blank prior to its engagement with the tap, and means for delivering the finished nuts from the tap.

4. In a nut tapping machine a continuously rotatable chuck, a stationary tap extending into the chuck, means for introducing blanks in succession into the chuck, the chuck being recessed to receive the blank prior to the engagement thereof with the tap, and means for delivering the finished nuts from the tap.

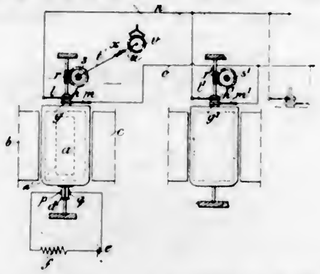
5. In a nut tapping machine, a continuously rotatable chuck, a stationary tap extending into the chuck, means for introducing blanks in succession into the chuck, said means including a plunger for forcing the blank into the chuck, the chuck having faces corresponding with the faces of the blank for a portion of its length, said chuck being recessed at the mouth to receive the blank prior to its engagement with the tap and so formed that movement of the blank longitudinally of the chuck turns the blank to bring the faces into registration with the faces of the chuck prior to engagement of the blank with the tap, and means for delivering the finished nuts from the tap.

[Claims 6 to 13 not printed in the Gazette.]

1,218,692. CLOCK. CHARLES EDOUARD O'KEENAN, Paris, France. Filed Oct. 20, 1913. Serial No. 796,228. (Cl. 58—25.)

1. A primary actuator in an electric time system, serving the purpose of a master-clock, comprising an electric

converter adapted to furnish current to a secondary clock or clocks, and a clock-escapement regulating the movement of the rotor of said converter.



2. A primary actuator in an electric time system, serving the purpose of a master-clock, comprising an electric converting device adapted to furnish current to a secondary clock or clocks, a clock escapement regulating the movement of the rotor of said converting device and a resilient connection between said rotor and said escapement.

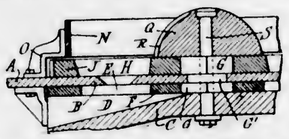
3. A primary actuator in an electric time system, serving the purpose of a master-clock, comprising an electric converting device adapted to furnish current to a secondary clock or clocks, a clock escapement regulating the movement of the rotor of said converting device, and means for varying the torque of said driving means, thereby varying the amplitude of movement of the oscillatory part of the escapement.

4. A primary actuator in an electric time system, serving the purpose of a master-clock, comprising an electric converting device adapted to furnish current to a secondary clock or clocks, a clock escapement regulating the movement of the rotor of said converting device, a resilient connection between said rotor and said escapement, and means for varying the torque of said driving means, thereby varying the tension of said resilient connection and consequently the amplitude of movement of the oscillatory part of the escapement.

5. A primary actuator in an electric time system, serving the purpose of a master-clock, comprising a current converting device adapted to furnish alternating current to a secondary clock or clocks, a clock-escapement regulating the movement of the rotor of said converting device, a resilient connection between said rotor and said escapement, and a regulatable resistance in the circuit of the motor part, consequently the torque of the motor part, and sistance being adapted to vary the current driving said motor part of said converting device, said regulatable reconsequently the tension of said spring and the amplitude of movement of the oscillatory part of said escapement.

[Claim 6 not printed in the Gazette.]

1,218,693. COAL-BREAKING METHOD AND MACHINE. FRANK PARDEE, Hazleton, Pa. Filed July 6, 1916. Serial No. 107,732. (Cl. 83—6.)



1. The method of breaking larger lumps of coal into a smaller determined size with minimum production of particles finer than said determined size which consists in breaking said larger lumps between blades having a practically continuous edge and acting in directions substantially parallel with each other.

2. The method of breaking larger lumps of coal into a smaller determined size with minimum production of particles finer than said determined size which consists in breaking said larger lumps between blades having a practically continuous edge and acting in directions substantially parallel with each other and feeding said larger lumps to positions where the lumps will be engaged singly between said blades.

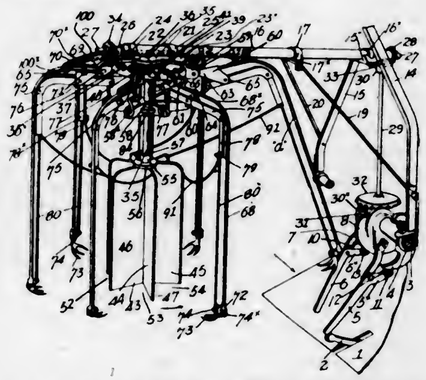
3. The method of breaking larger lumps of coal into a smaller determined size with minimum production of particles finer than said determined size which consists in breaking said larger lumps between blades having a practically continuous edge and acting in directions substantially parallel with each other and feeding said larger lumps to positions where the lumps will be engaged singly between said blades and the portions of said lumps lying beyond the blades will be of the determined size.

4. The method of breaking larger lumps of coal into a smaller determined size with minimum production of particles finer than said determined size which consists in feeding said lumps to positions where they will be engaged singly between breaking members and projecting beyond such members a distance corresponding to said determined size and then breaking off in a single piece the portion of each lump lying beyond the breaking members.

5. The method of breaking larger lumps of coal into a smaller determined size with minimum production of particles finer than said determined size which consists in feeding said lumps to positions where they will be engaged singly between breaking members in the form of blades having a practically continuous edge acting in directions substantially parallel with each other and breaking such lumps by means of said blades.

[Claims 6 to 15 not printed in the Gazette.]

1,218,694. SHOCKER. WILLIAM HUMPHRY PERRIN, New Liskeard, Ontario, Canada. Filed May 11, 1915. Serial No. 27,420. (Cl. 56—121.)



1. In a device of the class described, the combination with the vertical supporting axle, of a sheaf receiver rotatably mounted thereon and comprising a plurality of fabric strips connected together along their longitudinal center to form radially extending connected flaps and stiffening means for holding the outer edges of the flaps radially outward to form a series of pockets.

2. In a shocker attachment for binders, the combination with the supporting member carried by the binder, of a vertical axle depending from such supporting member, a revoluble member carried by the axle, means for driving the revoluble member from the binder, a shock receiver carried by the vertical axle and rotatable with the revoluble member and comprising a series of open ended vertical pockets arranged radially around the center of the axle, a sheaf gathering mechanism movable in a radial direction independent of the pocket and comprising a swinging arm carried by the revoluble member radially opposite the center of each pocket, releasable means at the lower end of each arm for engaging the sheaf, and a cord connection extending normally in downwardly looped form between one wall of the corresponding pocket and the gathering mechanism.

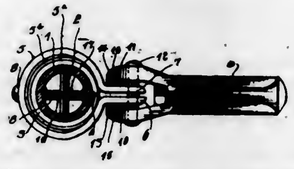
3. In a shocker attachment for binders, the combination with the supporting member carried by the binder, of a vertical axle depending from such supporting member, a revoluble member carried by the axle, means for driving the revoluble member from the binder, sheaf gathering mechanism comprising a series of arms pivoted to the revoluble member and extending radially therefrom, a pivoted fork swung at the lower end of each arm, a tripping member carried by the axle, mechanism interposed between the tripping member and each fork and for holding each fork in the sheaf engaging position and for simultaneously releasing all the forks at the tripping point, and manual means for turning the tripping member so as to drop the forks at any point in the revolution of the revoluble member

4. In a shocker attachment for binders, the combination with the supporting member carried by the binder, of a vertical axle depending from such supporting member, a revoluble member carried by the axle, means for driving the revoluble member from the binder, a shock receiver carried by the vertical axle and rotatable with the revoluble member and comprising a series of open ended vertical pockets arranged radially around the center of the axle, a series of sheaf gathering arms pivotally connected to the revoluble member and extending radially therefrom, a fork pivoted to the lower end of each arm, a lever and a link mechanism carried by the arm for raising and lowering the forks, a member rotatably carried on the axle provided with a tripping recess, a sleeve carried by the axle and having radial arms, links engaging the radial arms with the inner ends of the levers, and a pin extending upwardly from such sleeve against the face of the rotatable member in the path of the tripping recess.

5. In a shocker of the class described, the combination with the vertical supporting axle, the tripping member rotatably held thereon, a tripping pin co-acting with the tripping member and a series of forks and fork operating mechanism connected to the tripping pin and carried so as to rotate around the axle and be simultaneously released by the tripping member and co-acting tripping pin, of means for manually turning the tripping member to trip the fork operating mechanism at any point during their rotary movement.

[Claims 6 to 8 not printed in the Gazette.]

1,218,695. SPOUT ATTACHMENT FOR DISPENSING APPARATUS. THOMAS E. PHILLIPS, Bonne Terre, Mo. Filed Mar. 6, 1916. Serial No. 82,441. (Cl. 137—4.)



1. The combination of telescoping members, the outer member being slit longitudinally, lugs extending laterally from said slit member on opposite edges of the slit therein, and a lever carried by said slit end and having cam clamping fingers for engaging said lugs and forcing them toward each other when the lever is swung in one direction, whereby the outer member is bindingly engaged with the inner member.

2. The combination of telescoping members, the outer member being slit longitudinally at one end, a split clamping ring encircling the slit end of said member, said ring having laterally extending apertured lugs at the terminals thereof, and a lever having a bifurcated end with the furcations thereof disposed on the outer faces of said lugs and provided with cams for forcing said lugs toward each other when the lever is swung in one direction, the furcations of said lever being pivotally connected with said lugs.

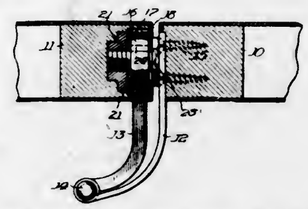
3. In a device of the class described, the combination of two tubular telescopically engaged members, each having a transversely extending pin at its lower end, a connector for said members in the form of a U-shaped loop, the cross bar of which passes over the pin of one member and the free ends of the arms thereof being engaged with the pin of the other member to provide for the longitudinal movement of said members relatively to each other and yet prevent the separation thereof, and means for securing said members in adjusted position.

4. In an attachment of the class described, the combination of telescopically engaged tubular members, the outer member being longitudinally slit, lugs extending laterally from said slit members on opposite edges of the slit therein, a lever having a bifurcated end with the furcations thereof spanning said lugs and disposed on the outer faces thereof, said furcations being pivotally engaged with said lugs, laterally extending fingers carried by said furcations and having their inner faces converging toward their free ends to form cams for forcing the lugs toward each other on the swinging of said lever in one direction, the free ends of said fingers being positioned to engage the outer face of the member when the lever is swung into closed position for locking the said lever in said position.

5. The combination of telescoping members, the outer member being slit longitudinally at one end, a split clamping ring encircling the slit end of said member, said ring having laterally extending apertured lugs at the terminals thereof, a spacing element arranged between said ring and said slit member with its ends spaced from the ends of said ring, and a lever having a bifurcated end with the furcations thereof disposed on the outer faces of said lugs and provided with cams for forcing said lugs toward each other when the lever is swung in one direction, the furcations of said lever being pivotally connected with said lugs.

[Claim 6 not printed in the Gazette.]

1,218,696. ADJUSTABLE HINGE. ETIENNE PLANCHE. Flint, Mich. Filed Dec. 11, 1916. Serial No. 136,329. (Cl. 16—5.)



1. In a door hinge, the combination of a pair of leaves having a hinge connection, means for rigidly fastening one of said leaves, and means for adjustably fastening the other of said leaves, said last-named means including an enlargement on said leaf, said enlargement having a curved periphery and being transversely apertured, a clamping member adapted to engage said enlargement, and a bolt engaging said clamping member and passing through said aperture, said bolt being of a less size than said aperture, whereby said strap may be adjusted relative to the bolt, substantially as described.

2. In a device of the class described, the combination of a pair of hinged straps, the free end of one strap having an enlargement provided with a generally spherical peripheral surface, a clamp engaging the periphery of said enlargement, and a fastening bolt engaging said clamp and adapted to hold the parts in adjusted position.

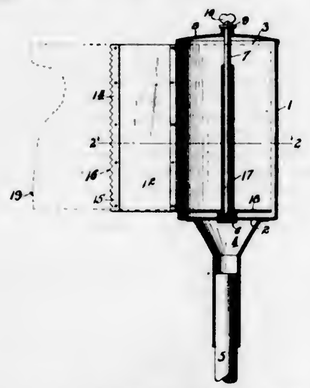
3. In a device of the class described, the combination of a leaf of a hinge, the terminal portion of which is bulbous and transversely apertured, a pair of clamp members engaging opposite sides of said bulbous end, a base having

an aperture for the accommodation of said clamps, and means coöperating with said base and passing through the aperture in said end for rigidly holding the parts in adjusted positions.

4. In a device of the class described, the combination of a pair of hinged straps, the end of one strap being enlarged and having curved side faces, a pair of seat members having surfaces curved to coöperate with said side faces, a base member within which said seat members are adjustably mounted, and means for securing the parts in adjusted position, substantially as described.

5. Means for adjustably mounting automobile doors, including, in combination, a pair of hinged straps and means for connecting one of said straps to a support in such manner as to permit of limited universal movement, said means including an end portion having curved sides, a pair of clamps having curved seat portions engaging said curved sides, said end portion and clamps having registering apertures and a bolt of a size materially less than the size of said apertures, said bolt being adapted to pass through the apertures, engage said support and rigidly hold the parts in engagement therewith.

1,218,697. BLANKER. MARTIN T. PRICE, Savannah, Ga. Filed Apr. 25, 1916. Serial No. 93,559. (Cl. 216—21.)



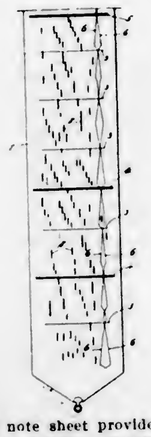
1. A blanker for applying margins to a bill-board including a container having an opening in its side wall, means for rotatably supporting a roll of blanking paper within the container, whereby an end thereof may project through the opening, means on the container for pressing the paper against the bill-board as the paper is unrolled, and a relatively long handle secured to one end of the container whereby the container may be elevated above the head, the longitudinal axes of said container and handle being in alinement.

2. A blanker including a container having an opening in its wall, means for rotatably supporting a roll of blanking paper within the container and to permit the end of the blanking strip to extend through the opening, a flap of flexible material secured to the container adjacent the edge of the opening, the material of the flap being semi-rigid, whereby the paper may be engaged by the flap and pressed against the bill-board to insure the adhesion of the paper thereto and to permit the blanking strip to be torn against the edge of the flap.

3. A blanker including a cylindrical container having a longitudinal opening in its side wall, means for rotatably supporting a roll of blanking paper within the container and to permit the end of said strip to extend through the opening, a flexible flap secured at one end of the longitudinal edge of the opening and a cutter secured at the free longitudinal edge of the flap.

4. A blanker including a cylindrical container closed at one end, and having a central threaded opening therein, a longitudinal opening provided in the side wall of the container, a closure for the central opening, a shaft extending through the closure and engaging the threaded opening at the closed end of the container for securing the cover in place, a spool rotatably mounted on the shaft for supporting a roll of blanking strip the end of the strip being permitted to extend through the longitudinal opening, a flap applied to one longitudinal edge of the opening, a clip for securing the flap in place, a cutter having a serrated edge secured to the other longitudinal edge of the strip, and a socket formed upon the closed end of the container for receiving a handle.

1,218,698. NOTE-SHEET FOR AUTOMATIC MUSICAL INSTRUMENTS. EDWIN B. PROUDFIT, Westfield, N. J., assignor to The Aeolian Company, a Corporation of Connecticut. Filed Feb. 18, 1910, Serial No. 544,593. Renewed Dec. 15, 1916. Serial No. 137,251. (Cl. 84—162.)



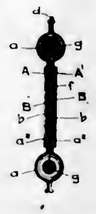
1. A perforated note sheet provided with main marks dividing the note perforations transversely of the sheet into main groups, said main marks indicating the ends of the themes forming the musical composition and with intermediate subordinate marks dividing the main groups of note perforations transversely of the sheet into subordinate groups, said marks differing in appearance from the main marks and indicating the subordinate divisions of the musical composition which make up the themes.

2. A perforated note sheet provided with main marks dividing the note perforations transversely of the sheet into main groups, said main marks indicating the ends of themes forming the musical composition, and with intermediate subordinate marks dividing the main groups of note perforations transversely of the sheet into subordinate groups, said marks indicating the subordinate divisions of the musical composition which make up the themes.

3. A perforated music sheet provided throughout its length with marks dividing the note perforations transversely of the sheet into main groups and indicating some change in the operation of the musical instrument, and subordinate marks dividing the note sheet transversely into subordinate groups, and indicating some change in the operation of the musical instrument, the change indicated by the main group marks being more pronounced than that indicated by the subordinate group marks.

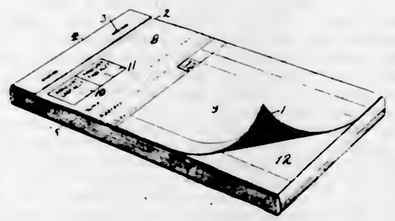
4. A perforated note sheet provided with main marks dividing the note perforations transversely of the sheet into main groups, said main marks indicating the ends of themes forming the musical composition, and with intermediate subordinate marks dividing the main groups of note perforations transversely of the sheet into subordinate groups, and indicating the subordinate divisions of the musical composition which make up the themes, and emphasis marks extending longitudinally of the sheet and extending between said group marks.

1,218,699. PUBLICITY APPARATUS. MARIE PUISSANT, St.-Gratien, near Paris, France. Filed Aug. 1, 1914. Serial No. 854,462. (Cl. 40—86.)



An advertising medium consisting of a pair of rectangular casing members hingedly connected at their lower side edges and detachably connected at their opposite side edges said casing members presenting a tubular portion in close proximity to each edge thereof extending throughout the length of the same, rollers mounted in each of said tubular portions, each of said members being offset outwardly and having apertures therein, a pair of lengths of plate glass mounted within said offset portions, a ribbon bearing advertising matter and having its opposite ends detachably mounted upon said rollers, means for rotating each of said rollers said means consisting of a wheel rigidly mounted upon one end of said rollers and having a milled edge and a slot in one of said casing members adjacent each wheel for permitting access thereto.

1,218,700. MANIFOLDING SALES-BOOK. LOUIS ROTENBERG, Akron, Ohio. Filed Dec. 26, 1916. Serial No. 138,836. (Cl. 11—23.)



1. A manifolding account book comprising a plurality of superposed sets of original and copy sheets suitably bound together, a back secured to said book at its bound end, an integral flap extending from the opposite end of the back and adapted to be inserted between adjacent sets and partially overlap the under sets, the under face of each original sheet being covered with transfer material and the upper faces of said sheets being provided with a designated place of entry for the total amount of the customer's account on said sheet, a place of entry for the total amount then due, each copy sheet of each set being provided on its under face with an isolated area of transfer material positioned in registration with the space on the original sheet of said set designated for the total amount due on the original sheet, the positions of the entry spaces and complemental areas of transfer material on the sheets of each set being progressively shifted out of alinement with similar spaces and areas of other sets, whereby said total amount is duplicated on each copy sheet from said original entry and on the next succeeding original sheet through the isolated area of transfer material on said copy sheet, and the duplication of said total amount on other succeeding sets is avoided by said progressive shifting of said spaces and areas.

2. A manifolding account book comprising a plurality of superposed sets of original and copy sheets suitably bound together, the under face of each original sheet being covered with transfer material and the upper face of each sheet provided with a designated place of entry for the total amount of the customer's account, each copy sheet of each set being provided on its rear face with an isolated area of transfer material positioned in registration with the place of entry on the original sheet of said set designated for the total amount due, the positions of the entry spaces and complemental areas of transfer material on the sheets of each set being progressively shifted out of alinement with similar spaces and areas of other sets, whereby said total amount is duplicated not only on said copy sheet by said original entry but also on the next succeeding original sheet through the isolated area of transfer material on said copy sheet and the duplication of said total amount on other succeeding sets is avoided by said progressive shifting of said spaces and areas.

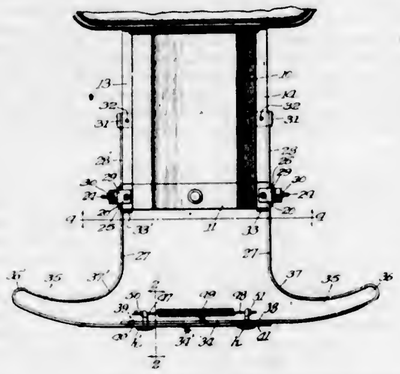
3. A manifolding account book comprising a plurality of superposed sets of original and copy sheets suitably bound together and alternately arranged, the rear face of each original sheet being covered with transfer material and the upper front face of each sheet provided with a designated place of entry for the total amount due, each copy sheet of each set being provided on its rear face with an isolated area of transfer material positioned in registration with the space on the original sheet of said set designated for the total amount due on the original sheet, the positions of the entry spaces and complemental areas of transfer material on the sheets of each set being progressively shifted out of alinement with similar spaces and areas of other sets, whereby the duplication of said total amount on other succeeding sets is avoided by said progressive shifting of said spaces and areas, the isolated areas of transfer material on the various copy sheets being out of registration with each other.

4. A manifolding account book comprising a plurality of superposed sets of original and copy sheets suitably bound together and alternately arranged, the under face of each original sheet being covered with transfer material and the upper face being each provided with a designated place of entry for the total amount of the customer's account, the designated places of entry on successive original sheets being out of registration with each other, each copy sheet of each set being provided on its rear face with an isolated area of transfer material positioned in registration with the space on the complementary original sheet of said set designated for the total amount due on the original sheet, whereby said total amount is duplicated on each copy sheet from said original entry and on the next succeeding original sheet through the isolated area of transfer material, the positions of the entry spaces and complemental areas of transfer material on the sheets of each set being progressively shifted out of alinement with similar spaces and areas of other sets, whereby the duplication of said total amount on other succeeding sets is avoided by said progressive shifting of said spaces and areas, the isolated area of transfer material on successive copy sheets being out of registration with one another but in registration with the complemental entry space on the original sheet of the set in which said copy sheet is contained.

1,218,701. AUTOMOBILE-BUMPER. SAMUEL C. ROWLAND, Crawfordsville, Ind., assignor to General Appliance Company, Chicago, Ill., a Corporation of Delaware. Filed Jan. 28, 1916. Serial No. 74,825. (Cl. 213—39.)

1. An automobile bumper structure comprising two L-shaped halves of spring metal adapted to have their side limbs secured to the opposite sides of a vehicle and having their front limbs overlapping a distance, and means connecting said overlapping ends together, said means being yieldable to permit relative longitudinal movement of said overlapping ends.

2. An automobile bumper comprising two L-shaped members of spring metal, the side limbs of said members being adapted to be secured to the opposite sides of a vehicle and the front limbs extending inwardly substantially at right angles to the side limbs and overlapping a distance, said members being deflected at the junctures of the side and front limbs to form outwardly extending loops, means for locking said overlapping limbs together against relative transverse movement and for permitting limited relative longitudinal movement thereof, and yielding means resisting such relative movement.



3. An automobile bumper structure comprising two L-shaped members adapted to be secured by their side limbs to the opposite sides of a vehicle to extend forwardly thereof, the front limbs of the members extending toward each other and overlapping a distance, keys secured to the respective overlapping sections and a spring connecting said keys for permitting relative longitudinal movement of said overlapping limbs.

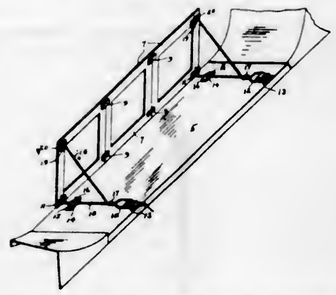
4. An automobile bumper structure comprising two similar L-shaped members adapted to be secured by their side limbs to the opposite sides of a vehicle to extend forwardly thereof, the front limbs of said members extending toward each other and overlapping a distance horizontally, keys securing said overlapping limbs together against relative transverse movement and adapted for limited longitudinal movement relative to the limbs, and a spring connecting said keys together for resisting relative longitudinal movement of said limbs.

5. An automobile bumper structure comprising two similar L-shaped members of spring metal adapted to be secured by their side limbs to the opposite sides of a vehicle to extend forwardly therefrom, the front limbs of said members extending toward each other and overlapping a distance, means for securing said overlapping limbs against relative transverse movement and for permitting relative longitudinal movement thereof, and yielding means for resisting such relative longitudinal movement.

[Claims 6 to 10 not printed in the Gazette.]

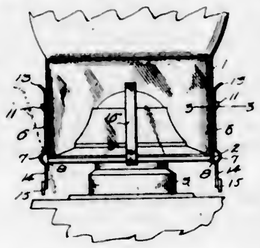
1,218,702. FOLDING PARCEL-CARRIER. EDWIN G. RUST, Sioux City, Iowa. Filed Aug. 18, 1916. Serial No. 115,633. (Cl. 224—29.)

A baggage-carrier for the running-board of a motor-vehicle comprising a wall adapted to be mounted adjacent the outer edge of the running-board and including a plurality of rectangular frames, placed edge to edge, the contiguous edges being hinged together, and braces at the ends of the wall, each including a wire formed with a horizontal part adapted to extend across the running-board, having one end pivoted to the wall and the other formed with a loop, a diagonal part extending from the looped end to the upper portion of the wall and pivoted to the wall, and clips adapted to be secured to the run-



ning board and be releasably engaged by the loops and the horizontal parts to prevent displacement of the braces.

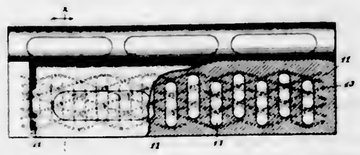
1,218,703. SAFETY LAMP-CHIMNEY AND HOLDER. LAURA ALLICE SALTHOUSE, Cuyahoga Falls, Ohio. Filed May 15, 1916. Serial No. 97,676. (Cl. 240—99.)



1. A lamp chimney holder comprising a plurality of resilient arms, each arm having a bowed lower portion, a depending bar formed upon said bowed lower portions, a finger struck from said bar and extending at right angles thereto, said finger being adapted to be secured to a burner, grip means formed upon the lower end of said bar, and retaining means formed upon said arms.

2. A one-piece resilient lamp chimney holder comprising an arm, a bar depending from said arm, a finger struck from said bar and extending to one side thereof, said finger being adapted to be secured to a burner, the lower end of said bar being rolled to form a bearing sleeve, and a chimney gripping means formed upon said arm.

1,218,704. BRAKE-SHOE. FITZ WILLIAM SARGENT, Mahwah, N. J., assignor to The American Brake Shoe & Foundry Company, Wilmington, Del., a Corporation of Delaware. Filed Jan. 6, 1917. Serial No. 140,921. (Cl. 188—27.)



1. A brake shoe consisting of a cast metal body, a reinforcing member composed of superposed layers of openwork metal extending throughout said body with the openings in said layers of openwork metal in alinement, and a plurality of separated tapering inserts extending through the mesh of the reinforcing member and anchored thereto by the cast metal of the body of the shoe.

2. A brake shoe consisting of a cast metal body, a plurality of separated inserts incorporated therein, tapering toward the wearing face of the shoe, the inner extremities of the inserts provided with off-set heads, and a reinforcing member of openwork metal incorporated in the body of the shoe and receiving the inserts therethrough.

3. A brake shoe consisting of a cast metal body, a plurality of separated inserts incorporated therein, tapering toward the wearing face of the shoe, the inner extremities of the inserts provided with off-set heads, a reinforcing member of openwork metal incorporated in the body of the shoe and receiving the inserts therethrough, and a supplemental reinforcing member extending throughout the body of the shoe and across the rear extremities of said inserts.

4. A brake shoe consisting of a cast metal body, a plurality of inserts embedded therein and tapering toward the wearing face of the shoe, a reinforcing member consisting of superposed layers of openwork metal extending throughout the body of the shoe and receiving the said inserts therethrough, the rear extremities of said inserts provided with offset heads defining connecting bars.

5. A brake shoe consisting of a cast metal body, a plurality of inserts embedded therein and tapering toward the wearing face of the shoe, a reinforcing member consisting of superposed layers of openwork metal extending throughout the body of the shoe and receiving the said inserts therethrough, the rear extremities of said inserts provided with offset heads defining connecting bars, and a supplemental reinforcing member extending across the rear extremities of said inserts.

[Claims 6 to 8 not printed in the Gazette.]

1,218,705. CIGARETTE-CASE. JOSEF SCHOLZ, Schenectady, N. Y. Filed May 26, 1916. Serial No. 99,923. (Cl. 206—41.)



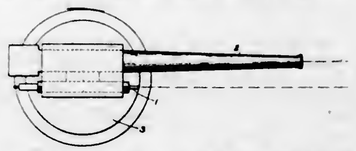
1. A case for cigars, cigarettes, or other articles having a delivery opening, a delivery member pivotally secured in said case and including a part normally extending adjacent and parallel to the bottom of the case and spring members below said delivery member and on which the latter normally rests for preventing the articles from rolling underneath said part when the latter is tilted into delivering position.

2. A case for cigars, cigarettes, or other articles consisting of a receptacle having a delivery opening and divided into two compartments of which one serves to receive the articles, a delivery member in the first compartment including a part normally extending adjacent and parallel to the bottom of said receptacle, spring members below said delivery member and on which the latter normally rests for preventing articles from rolling underneath said part when the latter is tilted into the delivering position, a spring actuated push member and other means in the second compartment, said other means being pivotally connected to said push member and serving for positively operating said delivery member.

3. A case for cigars, cigarettes, or other articles comprising a receptacle having a delivery opening and divided into two compartments, of which one serves to receive the articles, a pivoted flap for said delivery opening, a delivery member in one of the compartments of which one part is adapted to normally extend adjacent and parallel to the bottom of said receptacles, means for preventing articles from rolling under said part when the latter is tilted into the delivering position, a spring actuated push member and other means in the other compartment, said other means being pivotally connected to said push member and serving for positively and simultaneously operating the said flap and the delivery member.

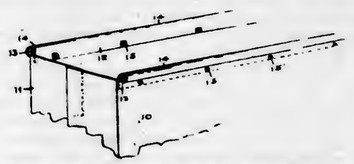
4. A case for cigars, cigarettes, or other articles comprising a receptacle having a hinged cover and divided into two compartments one of which serves to contain the articles, a flap pivotally secured to one end of said receptacle, an angular delivery member extending transversely through said article-containing compartment and of which one part normally extends adjacent and parallel to the bottom of said compartment, spring members between said part and said bottom to hold the articles from rolling underneath said part when the latter is tilted into delivering position, a spring actuated push member and levers in the other compartment, said levers being pivotally connected to said push member and operatively connected with said flap and said member and allowing the simultaneous operation thereof.

1,218,706. GUN. JOHN B. SEMPLE, Sewickley, Pa. Filed Oct. 28, 1914. Serial No. 868,975. (Cl. 89—1.)



The herein described method of finding the range of a gun which consists in firing from a second gun mounted to range in unison with the gun whose range is to be found tracer equipped projectiles and changing the direction of the said second gun according to the observations upon the flight of such tracer equipped projectiles.

1,218,707. REINFORCING-ROLL FOR STEAM-RADIATOR SHIELDS. CLARENCE C. SHIPP, Indianapolis, Ind. Filed Oct. 30, 1916. Serial No. 128,603. (Cl. 237—79.)



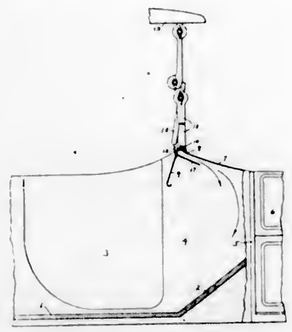
1. The combination, with a steam radiator shield, of a shield reinforcing means comprising an independently formed strip of sheet material arranged along the upper edges of the shield and having its free portion rolled to form a reinforcing roll in which the free resilient edge of the roll bears and exerts pressure against the edges of the shield.

2. The combination, with a steam radiator shield, of a shield reinforcing means comprising an independently formed strip of sheet material arranged along the upper edges of the shield and having its free portion rolled to form a reinforcing roll in which the free resilient edge of the roll bears and exerts pressure against the edges of the shield, and means for securing said reinforcing roll in operative position on said shield.

1,218,708. VENTILATOR FOR AUTOMOBILE-BODIES. LYLE K. SNELL, Detroit, Mich., assignor to Cadillac Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 27, 1915. Serial No. 10,897. (Cl. 21—148.)

1. A ventilator for the front ends of the bodies of motor vehicles provided with wind-shields suspended from horizontal axes comprising a downwardly and for-

wardly inclined plate just below the rear portion of the cowl and an upright plate at the rear edge of the inclined plate, the upper edge thereof being rearwardly of a forward lower edge of the wind-shield.



2. A ventilator for the front ends of the bodies of motor vehicles, comprising the rear portion of the cowl, a rail at the rear end thereof, a windshield mounted on the body, a dam mounted on the rail, and plates extending below the cowl and up to the horizontal plane of the rail and back of the vertical plane of the rail, thus leaving an inlet opening into which air may be conducted by the wind-shield.

3. In combination, a vehicle body comprising a cowl, a dam arranged adjacent the rear end thereof, a windshield mounted on the body with its lower edge rearwardly of said dam, said cowl having a port arranged therein rearwardly of said dam, and a downwardly and forwardly extending deflector plate arranged rearwardly of said port.

4. A ventilator for the front ends of the bodies of motor vehicles comprising louvers projecting upwardly from that portion of the body just below the wind-shield and extending parallel to the lower edge thereof, said body having a slot just in advance of said louvers, and a deflector extending downwardly and forwardly from the bottom of the louvers.

5. A ventilator for causing a current of air to flow to the front end of a motor vehicle below the sheet metal cowl thereof, formed by slitting the rail of the cowl parallel to the wind-shield and bending up the metal at the rear of the slit, a plate extending downwardly and rearwardly from said bent up portion of the cowl, and another plate connected at its rear edge to said first named plate and extending downwardly and forwardly below the cowl to deflect currents of air that enter the slit, forwardly below the cowl.

[Claims 6 to 9 not printed in the Gazette.]

1,218,709. LINE-FINDER FOR TYPE-WRITERS. JOHN J. SNYDER, Chicago, Ill., assignor to Helen Royer, Chicago, Ill. Original application filed July 30, 1914, Serial No. 854,010. Divided and this application filed Oct. 11, 1915. Serial No. 55,171. (Cl. 120—33.)

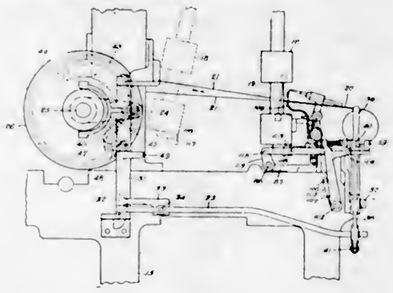
1. A line finder comprising a copy holding plate; a slide coöperating therewith; a guide plate on said slide provided with flanges at its edges; and a finding arm traversing said plate and provided with an angularly turned end slidable in said guide flanges, there being notches in the sides of said finding arm at the bend therein adapted to accommodate said flanges, substantially as described.

2. A line finder comprising a copy holding plate; a slide coöperating therewith; a guide plate on said slide provided with flanges at its edges; a finding arm traversing said plate and provided with an angularly turned end slidable in said guide flanges, there being notches in the sides of said finding arm at the bend therein adapted to accommodate said flanges; and beads at the inner ends of



said flanges arranged to limit inward movement of said arm, substantially as described.

1,218,710. LOOM. WILLIAM S. SOUTHWICK, Clinton, Mass., assignor to Clinton Wire Cloth Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 25, 1913. Serial No. 802,930. (Cl. 139—85.)



1. In a loom, the combination with let-back take-up mechanism, of reversible let-off mechanism, and means controlled by the filling to cause said let-off mechanism and said take-up mechanism conjointly to feed the fell backward in consequence of failure or breakage of the filling.

2. In a loom, the combination with let-back take-up mechanism, of warp-engaging means arranged to pull the fell back positively, and means controlled by the filling to cause said warp-engaging means to act as aforesaid in consequence of failure or breakage of the filling.

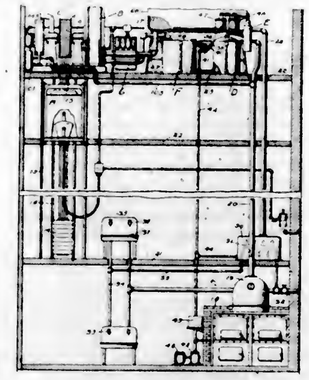
3. In a loom, the combination with let-back take-up mechanism, of a filling detector, and means controlled by said detector and arranged to pull back the fell positively a distance equal to one pick, in consequence of failure or breakage of the filling.

4. In a loom, the combination with let-back take-up mechanism, and a filling detector, of means controlled by said detector to feed the fell backward in consequence of failure or breakage of the filling, and stop mechanism controlled by said detector to stop the loom after the fell has been fed backward by said feeding means.

5. In a loom, warp let-off means and fabric take-up means arranged to coöperate to feed the fell forward or backward, means arranged to engage each new filling member in the shed to detect the presence of such filling member, and means controlled by said detecting means to cause said let-off means and take-up means conjointly to feed the fell backward in consequence of failure or breakage of the filling.

[Claims 6 to 14 not printed in the Gazette.]

1,218,711. ELEVATOR. JOHN J. SPROUL, New York, N. Y., assignor of one-half to August Sundh, Hastings-upon-Hudson, N. Y. Filed May 1, 1916. Serial No. 94,576. (Cl. 187—17.)



1. In a hydro-steam elevator system, the combination with a car and an engine to drive the car, means to supply steam under pressure providing driving power for the engine, and two columns of fluid, consisting respectively of a column of water and a column of lubricating fluid, both interposed between the steam and the engine, said column of lubricating fluid communicating with the engine, and said water column interposed between the steam and lubricating fluid to drive the latter through the engine.

2. In a hydro-steam elevator system, the combination with a car and an engine to drive the car, means to supply steam pressure, a lubricating fluid actuated by the steam pressure and circulated through the engine to drive it, and a water column interposed between the steam and said fluid.

3. In a hydro-steam elevator system, the combination of an elevator car, an engine at the upper end of the elevator shaft arranged to drive and control the car, said engine having inlet and discharge ports, receptacles communicating respectively with the inlet and discharge ports, liquid for driving the motor, said engine operable by said liquid circulating therethrough from one receptacle to the other, a steam generating plant, a riser through which steam is conveyed for applying pressure to the liquid in one receptacle to cause the liquid to drive the motor.

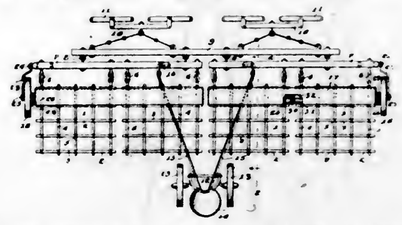
4. In a hydro-steam elevator system a steam generating plant, an elevator car, a hydraulic motor in an elevated position, arranged to drive the car, liquid to drive the motor, receptacles for said liquid adjacent the upper end of the elevator shaft, a riser from the steam generator through which steam is conveyed upward to the liquid in one receptacle and by which the liquid is forced through the motor to the other receptacle and thereby caused to drive the motor, and means to exhaust the steam.

5. In a hydro-steam elevator system, the combination with a car, of an engine operable to drive the car, said engine having an inlet port and a discharge port, conduits communicating respectively with said ports for conveying a fluid to and from the engine, and valve mechanism comprising a series of valves each controlling a passage in both said conduits, and means to operate said valves *seriatim*.

[Claims 6 to 87 not printed in the Gazette.]

1,218,712. SEEDER AND HARROW. DEWEY D. STEPHENS, Ainsworth, Iowa. Filed Mar. 19, 1915. Serial No. 15,508. (Cl. 111—1.)

1. The combination of a toothed harrow, a driver's truck, a seeder mechanism extending transversely of the harrow from one side to the other between the front and rear edges thereof, the seeder mechanism being constructed in two sections each supported at its inner end in part on the driver's truck and each having at its outer end a ground-engaging supporting and driving wheel, and draft connections for the said harrow and the outer ends of the said seeder mechanism sections permitting each to freely follow the ground surface independently of the other.



2. The combination of a toothed harrow, a driver's truck connected with the harrow to be drawn thereby, and a seeder mechanism extending transversely of the harrow from one side to the other between the front and rear edges thereof, the seeder mechanism being constructed in two sections each supported at its inner end in part on the said driver's truck and each having at its outer end a ground-engaging supporting and driving wheel.

3. The combination of a toothed harrow, a driver's truck connected with the harrow to be drawn thereby, a seeder mechanism extending transversely of the harrow from one side to the other between the front and rear edges thereof, the seeder mechanism being constructed in two sections each supported at its inner end in part on the said driver's truck and each having at its outer end a ground-engaging supporting and driving wheel, and draft connections for the said harrow and the outer ends of the said seeder mechanism sections permitting each to freely follow the ground surface independently of the other.

4. The combination of a toothed harrow, a driver's truck having ground wheels behind the harrow and draft bars extending forward to the harrow, and a seeder mechanism extending transversely of the harrow from one side to the other between the front and rear edges thereof, the seeder mechanism being constructed in two sections each supported at its inner end on one of the draft bars for the said truck and each having at its outer end a ground engaging supporting and driving wheel.

5. The combination of a toothed harrow, a driver's truck having ground wheels behind the harrow and draft bars extending forward to the harrow, a seeder mechanism extending transversely of the harrow from one side to the other between the front and rear edges thereof, the seeder mechanism being constructed in two sections each supported at its inner end on one of the draft bars for the said truck and each having at its outer end a ground-engaging supporting and driving wheel; and draft connections for the said harrow and the outer ends of the said seeder mechanism sections permitting each to freely follow the ground surface independently of the other.

[Claims 6 to 9 not printed in the Gazette.]

1,218,713. PRODUCTION OF CAOUTCHOUC-LIKE BODIES. HERMANN STERN, Munich, Germany. Original application filed July 17, 1914, Serial No. 851,486. Divided and this application filed July 30, 1915. Serial No. 42,791. (Cl. 23—24.)

1. In the art of making a vulcanized caoutchouc-like body, the improvement which consists in adding dichlorid of sulfur to a mixture containing a ketone capable of yielding isoprene and caoutchouc and allowing the two bodies to react on each other.

2. In the art of making a vulcanized caoutchouc-like body, the improvement which consists in adding sulfur dichlorid to a ketone and an alcohol and allowing said bodies to react on each other.

1,218,714. HOISTING AND SIMILAR SLING. CHARLES C. SUNDERLAND and RICHARD D. GREEN, Trenton, N. J., assignors to John A. Roebling's Sons Company, a Corporation of New Jersey. Filed Mar. 7, 1913. Serial No. 752,594. (Cl. 57—11.)



1. A sling having a loop formed of double wire rope with its two parts side by side, and provided with eyes at each end, and a wire rope gromet sliding on the loop and clamped to form two eyes, one inclosing the loop and the other carrying or receiving the hook to connect the eye at the load end of the loop with the gromet, said gromet being provided with a metal thimble or lining 20 and clamped by clamps 6 and clamping ring 7.

2. A bridle sling having two loops each formed of double wire rope with its two parts side by side, and provided with eyes at each end, metal thimbles inside the eyes secured upon the rope so as to permit equalization of the tension on the two parts of the loop, and a wire rope gromet uniting the eyes at one end for the hoist or other connection.

3. A bridle sling having two loops, each formed of double wire rope with its two parts side by side, and provided with eyes at each end, metal thimbles inside the eyes secured upon the rope so as to permit equalization of the tension on the two parts of the loop, and a wire gromet uniting the eyes at one end of the sling for the hoist or other connection, said wire gromet being provided with an inner metal thimble or lining.

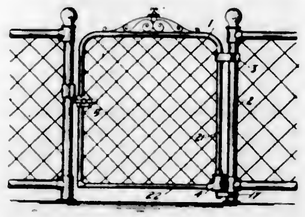
4. A bridle sling having two loops, each formed of double wire rope with its two parts side by side, and provided with eyes at each end, metal thimbles inside the eyes secured upon the rope so as to permit equalization of the tension on the two parts of the loop, a wire gromet uniting the eyes at one end of the sling for the hoist or other connection, said wire gromet being provided with an inner metal thimble or lining, and a wire gromet sliding on each loop and clamped to form two eyes, one inclosing the loop and the other carrying or receiving the hook for connecting the eyes at the load ends of the loops with the sliding gromet.

5. In a sling, the wire rope gromet 14 sliding on the sling loop, and clamped by clamps 6 and clamping ring 7 to form loop inclosing and hook carrying or receiving eyes.

[Claim 6 not printed in the Gazette.]

1,218,715. GATE AND HINGE. AUGUST SUNDH, Hastings-upon-Hudson, N. Y. Filed Jan. 11, 1915. Serial No. 1,529. (Cl. 39—84.)

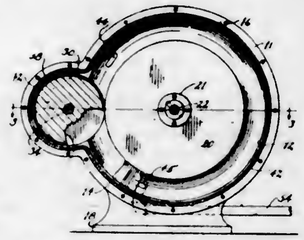
1. The combination of a gate, a support, and hinge mechanism by which the gate is suspended from said support, said gate comprising a frame having an upright member and a transverse member at the lower end of the gate, said hinge mechanism comprising a hinge part secured to said support, and a coöperating rotatable hinge part comprising a cylindrical casing closed at the top and open at the bottom to receive said first mentioned hinge part which projects upward within the casing, said casing having nipples extending upwardly and laterally respectively from its closed top and side, said nipples having screw-threaded connection with the adjacent gate frame members, whereby said rotatable hinge part forms a binder rigidly uniting the said members of the gate frame, the axis of rotation of the gate being in said upright frame member.



2. As an article of manufacture, a hinge part comprising a cylindrical casing having an integral closed end, the other end being open, and integral, screw-threaded nipples, one projecting endwise from said closed end, and the other projecting laterally from the casing adjacent the open end thereof, said nipples forming means for attachment of the hinge part to the frame work of a gate.

3. As an article of manufacture, a hinge part comprising a cylindrical casing having an integral closed end, the other end being open, and integral, screw-threaded nipples one projecting endwise from said closed end, and the other projecting laterally from the casing adjacent the open end thereof, and an integral rib on the outer face of the casing extending from one to the other of said nipples and provided with a series of openings.

1,218,716. ROTARY ENGINE. GRANT TEMPLE, Cleveland, Ohio. Filed Mar. 18, 1915. Serial No. 15,209. (Cl. 121—52.)



1. In a rotary engine, the combination of a cylinder having an annular bore, a piston revoluble in said bore, a circular disk connected with the piston and a driving shaft rigidly carrying the disk, a revoluble member adapted to extend into and close the bore and having a recess for admitting the piston and allowing it to pass the revoluble member, bearings for said revoluble member, means for admitting steam to said cylinder at one side of the revoluble member, and screw members carrying the bearings for adjusting the bearings to move the revoluble member toward the side receiving the steam pressure.

2. In a rotary engine, the combination of a cylinder having an annular bore, a piston fitting in and revoluble in said bore, a circular disk connected with said piston at its periphery, a shaft rigidly carrying said disk, means for intermittently closing said bore, means for admitting steam to and exhausting it from the cylinder, and packing rings of a lubricative nature carried by the cylinder member and tightly engaging the sides of the disk adjacent its periphery, the edges of said rings conforming to the bore of the cylinder.

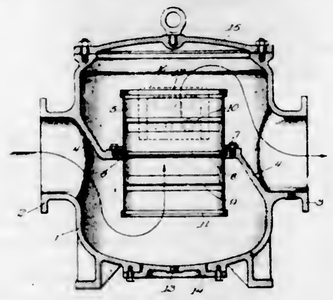
3. In a rotary engine, the combination of a cylinder having an annular bore, a gate adapted to be projected across a portion of said bore and means for operating it to intermittently close the bore, a piston revoluble in said bore, and rings on said piston having their forward edges of smaller diameter than the rear edges.

4. In a rotary engine, the combination of a cylinder having an annular bore, a gate adapted to be projected across a portion of said bore and means for operating it to intermittently close the bore, a piston revoluble in said bore, the piston rings having their forward edges of smaller diameter than the rear edges, slots adjacent the split in the ring, and means engaging said slots below the surface of the rings to prevent the ends springing outwardly when passing the gate.

5. In a rotary engine, the combination of a cylinder having an annular bore, a gate adapted to be projected across a portion of said bore, means for operating it to intermittently close the bore, a piston revoluble in said bore, and piston rings having their forward edges of smaller diameter than the rear edges and having their rear edges chamfered inwardly so that steam pressure behind the ring tends to expand the same.

[Claims 6 to 9 not printed in the Gazette.]

1,218,717. METER. CARL C. THOMAS, Madison, Wis. Filed Apr. 10, 1913. Serial No. 760,133. (Cl. 73—167.)



1. In a fluid meter, means for heating the fluid as it flows therethrough, and means causing the heated and unheated fluid to jacket the fluid being heated.

2. In a fluid meter, means for heating the fluid as it flows therethrough, a pair of temperature responsive devices one subjected to said fluid before and the other after heating, and means causing the entering fluid and the outgoing fluid to jacket the fluid between said temperature responsive devices.

3. In a fluid meter, means for heating the fluid and means for directing said fluid past said heater and preventing a deviation in the temperature of the fluid about to be heated from the temperature of the fluid entering the meter.

4. In a fluid meter, means for heating the fluid and means for directing said fluid past said heater and preventing a deviation in the temperature of the fluid immediately after heating.

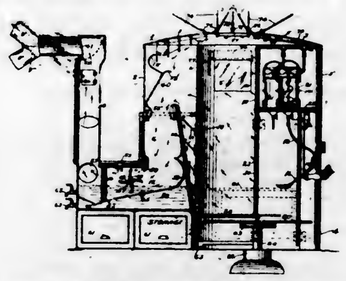
5. In a fluid meter, means for heating the fluid as it flows therethrough, and means causing said fluid to be jacketed by fluid at its own temperature just prior to being heated and to be jacketed also just subsequently to being heated, by fluid at its increased temperature.

[Claims 6 to 16 not printed in the Gazette.]

1,218,718. SPRAYING-BOOTH. CHARLES GRANT THROOP, Chicago, Ill. Filed Sept. 25, 1916. Serial No. 122,018. (Cl. 91—45.)

1. A spraying booth, comprising a top or canopy, closure walls on one or more sides, a plurality of doors adapted to close or nearly close the booth and to swing outward to open the booth and virtually increase the size thereof, a vapor discharge passage or outlet flue in the back part of the booth, and draft supplying means for directing the unused spray and vapor backward and into said outlet flue.

2. A spraying booth, comprising a wall member, a top member, one or more door members on one side, a discharge flue on the opposite side, means in or associated with said flue for condensing and collecting liquid from the passing vapor and spray, and a flue extension leading to a waste discharge or to a furnace or burner.



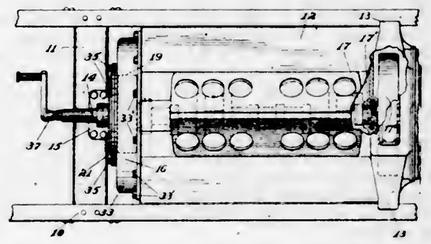
3. A spraying booth, open on one side to accommodate a workman and having means to drive the surplus spray backward and out of the booth, and means for handling and advancing the objects to be sprayed through the booth in substantially continuous procession.

4. In a spraying booth, a system of piping suitably distributed and having a plurality of discharge outlets, in combination with a source of air pressure, a source of fire extinguishing material, and means for connecting either of said sources to said piping.

5. In a spraying booth, a system of piping having a plurality of discharge apertures directed diagonally against the walls of the booth and toward the vapor discharge opening thereof, a plurality of sources of materials adapted for delivery through said piping, and means for connecting either or all of said sources to the piping.

[Claims 6 to 48 not printed in the Gazette.]

1,218,719. MOTOR-VEHICLE. MILTON TIBBETTS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed July 9, 1915. Serial No. 38,905. (Cl. 74—6.)



1. In a hydrocarbon motor the combination with a crank case having a trunnion member at one end and by which it is supported at that end, and a crank shaft mounted in bearings in the crank case, of an inertia member supported by said trunnion member, and a yielding connection between said inertia member and said crank shaft.

2. In a hydrocarbon motor the combination with a crank case having a trunnion member at one end and by which it is supported at that end, and a crank shaft mounted in bearings in the crank case, of an inertia member supported by said trunnion member and coaxial with its trunnion, and a yielding connection between said inertia member and said crank shaft.

3. In a hydrocarbon motor, the combination with a crank case having a trunnion member at one end and by which it is supported at that end, and a crank shaft mounted in bearings in the crank case, of a vibration

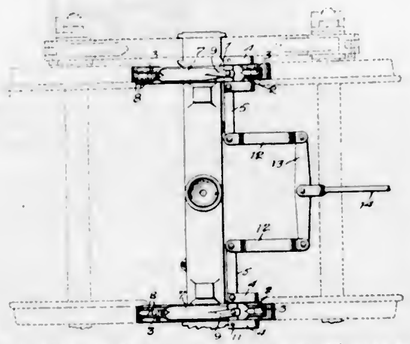
damper for said crank shaft supported by said trunnion member and coaxial with the trunnion thereof.

4. In a hydrocarbon motor the combination with a crank shaft, of a vibration damper connected to one end of said crank shaft, and a starting crank adapted for connection to said crank shaft within said damper.

5. In a hydrocarbon motor the combination with a crank shaft, of a vibration damper connected to one end of said crank shaft, and a starting crank extending into and through said damper and adapted to connect with said crank shaft.

[Claims 6 to 28 not printed in the Gazette.]

1,218,720. BRAKE-RIGGING FOR ROLLING-STOCK. THOMAS F. TOMLINSON, Lamberts Point, Va. Filed May 9, 1916. Serial No. 96,416. (Cl. 188—24.)



1. A brake rigging for rolling stock including brake shoe supporting levers, the fulcrum points of said levers being changeable to vary the strain on said shoes, and mechanism engaged with said levers to operate the latter, the fulcrum point of said mechanism being changeable to accord with the change of levers for positively applying the brakes.

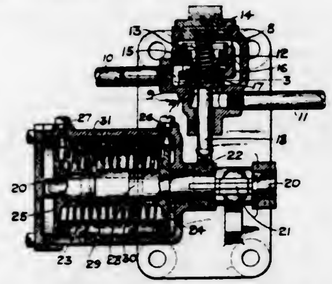
2. A brake rigging in combination with brake shoes, levers in connection with said shoes to operate the latter, and means common to all of said levers for simultaneously exerting pressure on said shoes, the points of connection between said shoes and said levers being interchangeable, to permit operation of the levers toward or away from each other for applying the brakes.

3. A brake rigging for rolling stock including brake shoe supporting levers pivotally carried by the rolling stock and equipped with shoes, the fulcrum points of said levers being changeable to permit the upper terminals of said levers to be moved toward or away from each other for applying the brakes, and means connected to the upper terminals of said levers and changeable to accord with the change of the fulcrum points of the levers, substantially as set forth.

4. A car brake mechanism including, in combination with shoe supporting levers, a body bar for association with a pair of said levers on one side of the car, one of said levers being fixedly connected with said bar, to operate simultaneously therewith, the other lever being independently movable of said bar, a floating bar carried by the body bar and being in connection with said independently movable lever to operate the latter, means pivotally engaged with said body bar and floating bar, said shoe supporting levers being simultaneously operable by the exertion of pressure upon said means to apply the brakes.

5. A car brake operating mechanism including, in combination with brake shoe supporting levers, a body bar for association with a pair of the levers on one side of the car, one end of said bar being fixedly engaged with one of said levers, whereby the latter is moved simultaneously with the movement of said bar, the opposite end of said bar being slidably engaged with the opposite lever to provide a guide, a floating bar, one end of which is in engagement with said lever which is slidably movable with the body bar, a floating lever, one end of which is in pivotal engagement with said floating bar and with one side of said body bar, whereby exertion of pressure upon said floating lever operates said brake supporting levers in opposite directions.

1,218,721. TRIP-VALVE DEVICE FOR AIR-BRAKES. WALTER V. TURNER, Edgewood borough, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed May 7, 1915. Serial No. 26,489. (Cl. 246—59.)



1. A trip valve device for air brakes comprising a vent valve for controlling a discharge of air from a pipe to the atmosphere, a piston connected to said valve and subject on one side to the pressure of said vent pipe, a small port for supplying air from said pipe to the chamber on the opposite side of said piston, a port controlled by the movement of the piston for releasing air from said chamber, and a trip means for opening said vent valve.

2. A trip valve device for air brakes, comprising a vent valve, a piston connected thereto, and subject to air pressure on its opposite sides, a port controlled by the movement of said piston for releasing air from the rear of said piston, a spring acting to close the vent valve, and a trip mechanism for opening said vent valve.

3. In a trip valve device for air brakes, the combination of a vent valve, a shaft having a trip arm, a double cam mounted on said shaft, and connections for operating said valve, and a coiled spring connected at both ends to said shaft for opposing the movement of the trip arm in either direction.

4. In a trip valve device for air brakes, the combination of a vent valve, a shaft having a trip arm and connections for operating said valve, a coiled spring, two collars loosely mounted on said shaft and connected to opposite ends of the spring, stops for said collars, and means for turning one collar by movement of the shaft in one direction, and the other collar by movement of the shaft in the opposite direction.

5. In a trip valve device for air brakes, the combination with a brake application valve, for controlling the supply of air to the brake pipe and a brake pipe discharge, and a piston for actuating said valve, of a vent valve for varying the pressure acting on said piston, a trip mechanism for opening said vent valve, and fluid pressure means for holding said vent valve open a certain length of time.

[Claim 6 not printed in the Gazette.]

1,218,722. DRAFT-GEAR. HERBERT E. VAN DORN, Chicago, Ill., assignor to Van Dorn Coupler Company, Chicago, Ill., a Corporation of Illinois. Filed June 18, 1915. Serial No. 34,788. (Cl. 213—64.)

1. A draft gear embracing stationary friction elements, movable friction elements interfitting therewith, abutments on said respective stationary and movable friction elements to constrain said movable elements to move diagonally, resilient means interposed between said movable elements to resist movement thereof, and wear plates at each end of said movable friction elements adapted to absorb stresses and cause equal movement of said elements.



2. In a device of the class described a casing, stationary friction elements mounted therein, movable friction elements mounted adjacent thereto, resilient means interposed between said movable elements to resist movement thereof toward one another, and interfitting frictional engaging surfaces of different lengths on said respective stationary and movable friction elements to resist relative movement therebetween.

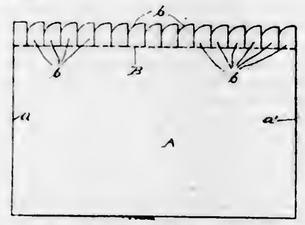
3. In a draft gear of the class described a casing, stationary friction elements disposed on each side thereof, movable friction elements mounted adjacent said stationary elements and interfitting therewith and capable of movement relative thereto, compression springs interposed between said movable elements adapted to resist movement thereof toward one another, follower plates mounted at each end of said movable elements and slidable within said casing, and a strap engaged around said follower elements to maintain said movable friction elements and springs all associated with one another.

4. In a draft gear stationary friction elements, a plurality of inclined abutments thereon having long and short angled faces, movable friction elements, a plurality of inclined abutments thereon having long and short angled faces interfitting between said inclined abutments on said stationary elements, said abutments constraining said movable elements to move diagonally within said casing, and a plurality of resilient means interposed between said movable elements and bearing thereon to resist movement thereof, and increasing the friction between said movable and stationary friction elements as said resilient means are compressed.

5. In a device of the class described a casing, stationary friction means mounted therein, movable friction elements mounted in the casing adapted to slide on said stationary means, springs interposed between said movable elements adapted to move therewith, follower plates disposed at each end of said movable friction elements, wear plates interposed between said follower plates and the ends of said movable elements, and a strap engaging around said followers and said movable friction elements to maintain the same and said springs associated with one another.

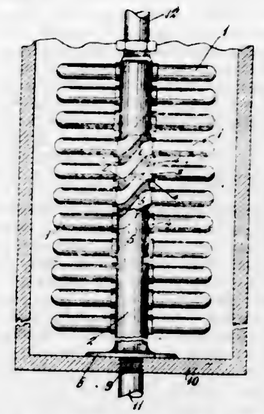
[Claims 6 to 14 not printed in the Gazette.]

1,218,723. RECEPTACLE-LINING. EMERICH H. VAVRA, Chicago, Ill. Filed June 30, 1915. Serial No. 37,309. (Cl. 229—21.)



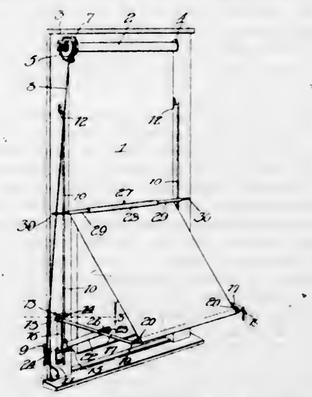
A receptacle lining comprising a single piece of material adapted to be rolled into a cylinder with opposite edges thereof overlapped, said material having a scored or weakened line near one edge thereof, one edge of said material being slit or cut in sections to overlap each other and form an inwardly turned rim for the bottom of the receptacle, each of said sections having one side thereof curved to fold beneath the straight edge of the adjacent section, and a removable disk fitting inside of and resting upon said rim to form the bottom of the lining receptacle, substantially as described.

1,218,724. BEER-COOLER. WILLIAM F. VOSSELER, Cincinnati, Ohio. Filed Sept. 24, 1915. Serial No. 52,335 (Cl. 257—198.)



In a cooler for beer or other liquids, means for providing a cylindrical coil open through the center for ice packing comprising a tubular side standard having horizontally alined apertures, with ascending partitions from one of each set of apertures to the opposite one above and split coils of pipe set with their ends in the horizontally alined apertures.

1,218,725. AWNING. WILLIAM H. WALGER, Jr., Chicago, Ill. Filed Apr. 3, 1916. Serial No. 88,532. (Cl. 156—42.)



1. In an awning the combination of a flexible awning body, means for raising and lowering the awning body, upright guides mounted adjacent to the opposite side margins of the awning body, awning-extending arms connected with the lower portion of the owning body and having their inner ends pivotally supported and operatively connected with and movable upward and downward with respect to the upright guides, a brace supporting member slidably mounted on an upright guide below the pivoted end of an awning-extending arm, and a brace pivotally

connected with said awning-extending arm and having its lower end pivotally connected with said brace supporting member below and movable upward and downward with respect to the pivoted end of such awning-extending arm.

2. In an awning the combination of a flexible awning body, means for raising and lowering the awning body, upright guides mounted adjacent to the opposite side margins of the owning body, awning-extending arms connected with the lower portion of the awning body and having their inner ends pivotally supported and operatively connected with and movable upward and downward with respect to the upright guides, a brace supporting sleeve slidably mounted and movable upward and downward upon one of said stationary upright guides below the pivoted end of an adjacent awning-extending arm, a brace pivotally connected with said awning-extending arm and having its lower end pivotally connected with said slidable brace-supporting sleeve, and means for securing said sleeve and the lower end of said brace in fixed relation to the pivoted end of said awning-extending arm.

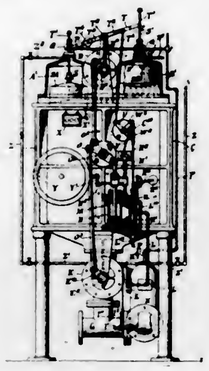
3. In an awning the combination of a flexible awning body, means for raising and lowering the awning body, stationary upright guides mounted adjacent to the opposite side margins of the awning body, awning-extending arms connected with the lower portion of the awning body and having their inner ends pivotally supported and adapted to be moved upward and downward with respect to the upright guides, a brace supporting member slidably mounted on each of said upright guides below the pivoted end of the corresponding awning-extending arm, and braces each connected with an awning-extending arm, each of said braces having its lower end pivotally connected with one of said slidable brace-supporting members, below the pivoted end of such awning-supporting arm.

4. In an awning the combination of a flexible awning body, means for raising and lowering the awning body, stationary upright guides mounted adjacent to the opposite side margins of the awning body, awning-extending arms connected with the lower portion of the owning body, upwardly and downwardly movable arm-supports slidably mounted on the stationary upright guides, means for pivotally connecting the inner end of each of said awning-extending arms with a corresponding upwardly and downwardly movable arm support, a brace-supporting member slidably mounted upon a stationary guide and below the pivoted end of an adjacent awning-extending arm and movable upward and downward with respect to the pivoted end of said arm, and a brace pivotally connected with said awning-extending arm and having its lower end pivotally connected with said slidable brace-supporting member and movable upwardly and downwardly with the same.

5. In an awning the combination of a flexible awning body, means for raising and lowering the awning body, stationary upright guides mounted adjacent to the opposite side margins of the awning body, awning-extending arms connected with the lower portion of the awning body and movable upward and downward therewith, upwardly and downwardly movable arm-supporting members slidably mounted on the stationary guides and having pivotal connection with the inner ends of the awning-extending arms, a brace-supporting sleeve slidably mounted on an upright guide below and movable upward and downward with respect to the pivoted end of the corresponding awning-extending arm, a brace pivotally connected at its lower end with said sleeve, and a connecting member forming a pivotal connection between the opposite end of said brace and said awning-extending arm and movable into and out of engagement with the adjacent upright guide.

1,218,726. LIQUID-MEASURING APPARATUS. AXEL B. WALLEM, Cynwyd, Pa., assignor to Joseph S. Lovering Wharton, William S. Hallowell, and John C. Jones, Philadelphia, Pa., doing business under the firm-name of Harrison Safety Boiler Works. Filed Apr. 3, 1914. Serial No. 829,282. (Cl. 73—28.)

1. A liquid measuring device comprising two measuring chambers each formed with a vent port at its top, a valve mechanism controlling the admission to and discharge from said chambers, and means for automatically shifting said mechanism to cause said chambers to fill and empty alternately, comprising a float in each chamber, an operating connection to each float extending through the corresponding vent port, and a valve carried by each float for closing the corresponding vent port as the float rises to its upper position.



2. A liquid measuring device comprising two measuring chambers, a valve mechanism controlling the admission to, and discharge from said chambers, and means for automatically shifting said mechanism to cause said chambers to fill and empty alternately, said means comprising fluid pressure valve shifting mechanism, a controlling valve therefor, an actuating member for said valve, said member being shiftable back and forth between two operative positions, means acting on said member to cause the latter to complete a movement from one position to the other after an initial portion of said movement has been made, and means responsive to the distribution of liquid in the two measuring chambers for starting said movement in one direction or the other as one or the other of the two chambers becomes filled and the other empty.

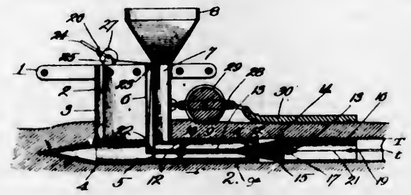
3. A liquid measuring device comprising two measuring chambers each formed with a vent port at its top, a valve mechanism controlling the admission to and discharge from said chambers, and means for automatically shifting said mechanism to cause said chambers to fill and empty alternately comprising a float in each chamber, valves moved by the floats for alternately closing each vent port as the corresponding float rises to its upper position, a member through which said valve mechanism is actuated, means including an operating connection to each float extending through a corresponding vent port connecting said floats for actuating said member said last means being so connected to said member as to permit an initial movement of each float out of its upper position without producing a corresponding movement of said member.

4. A liquid measuring device comprising two measuring chambers, a valve mechanism controlling the admission to and discharge from said chambers, and means for automatically shifting said mechanism to cause said chambers to fill and empty alternately, said means comprising a rocker shiftable back and forth between two positions, a device connected thereto and acting to cause the rocker to make the final portion of a movement in either direction after the first portion of such a movement is brought about, a second rocker coaxial with the first mentioned rocker and connected thereto by means permitting a limited angular movement of said second rocker relative to the other but causing the motion of said second rocker to be transmitted to the other when the movement of said second rocker exceeds said limited movement and float actuated means responsive to the distribution of liquid in said chambers for oscillating said second rocker on predetermined changes in the said distribution.

5. In a liquid measuring device having a measuring chamber formed with a vent port at its top, a valve mechanism for causing said chamber to alternately fill and empty, controlling means therefor including a float located in said chamber and an operating connection extending through said port through which said float actuates said mechanism to interrupt the supply of liquid to said chamber on a predetermined rise in the liquid level therein, and a valve moved by said float to close said port on said predetermined rise in liquid level in said chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,218,727. MACHINE FOR MAKING AND LAYING UNDERGROUND TILE. WILLIAM W. WATSON and JAMES S. WATSON, Kansas City, Mo. Filed May 13, 1916. Serial No. 97,440. (Cl. 37—53.)



1. A machine for making and laying underground tile, comprising a suitable frame, a vertical standard extending downward from the frame and sharpened at its front edge, a cylinder provided with a pointed front end secured horizontally to the lower end of said standard, a hollow cylinder alined with and extending rearwardly from the pointed cylinder and provided with a longitudinal slot in its wall, means to supply semi-fluid cement to the last-named cylinder so that cement may seep through the slot in the wall of the cylinder, and means movable with said cylinders for spreading outwardly the cement which escapes from the rear end of the slotted cylinder when the machine is in motion.

2. A machine for making and laying underground tile, comprising a suitable frame, a vertical standard extending downwardly from the frame and sharpened at its front edge, a cylinder provided with a pointed front end secured horizontally to the lower end of said standard, a cylinder in line with the rearward of the pointed cylinder, means to supply semi-fluid cement to the last-named cylinder, a conical spreader arranged coaxially with said cylinder and adapted to spread outwardly the cement passing rearwardly through the said last-named cylinder, and a condensing cylinder arranged coaxially and extending rearwardly from the conical spreader.

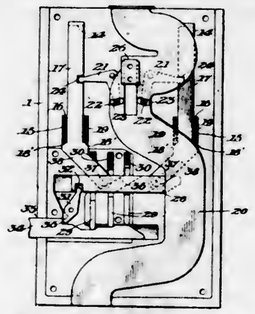
3. A machine for making and laying underground tile, comprising a suitable frame, a vertical standard extending downwardly from the frame and sharpened at its front edge, a cylinder provided with a pointed front end secured horizontally to the lower end of said standard, a cylinder in line with and rearward of the pointed cylinder, means to supply semi-fluid cement to the last-named cylinder, a conical spreader arranged coaxially with said cylinder and adapted to spread outwardly the cement passing rearwardly through the said last-named cylinder, a condensing cylinder arranged coaxially of and extending rearwardly from the conical spreader, and one or more knives carried by the condensing cylinder for producing a drain slot or slots in the cement tile.

4. A machine for making and laying underground tile, comprising a suitable frame, a vertical standard extending downwardly from the frame and sharpened at its front edge, a cylinder provided with a pointed front end secured horizontally to the lower end of said standard, a cylinder in line with and rearward of the pointed cylinder, means to supply semi-fluid cement to the last-named cylinder, a conical spreader arranged coaxially with said cylinder and adapted to spread outwardly the cement passing rearwardly through the said last-named cylinder, a condensing cylinder arranged coaxially of and extending rearwardly from the conical spreader, one or more knives carried by the condensing cylinder for producing a drain hole or holes in the cement tile, and means for moving the knives to and securing them in inoperative position.

5. A machine for making and laying underground tile, comprising a suitable frame, a vertical standard extending downwardly from the frame and sharpened at its front edge, a cylinder provided with a pointed front end secured horizontally to the lower end of said standard, a cylinder in line with and rearward of the pointed cylinder, means to supply semi-fluid cement to the last-named cylinder, a conical spreader arranged coaxially with said cylinder and adapted to spread outwardly the cement passing rearwardly through the said last-named cylinder, a condensing cylinder arranged coaxially and extending rearwardly from the conical spreader, and means for compressing the ground above the said cement receiving and condensing cylinders.

[Claim 6 not printed in the Gazette.]

1,218,728. COIN-VENDING MACHINE. (KEY.) JOHN A. WEBSTER, New York, N. Y., assignor to Autosales Gum and Chocolate Company, New York, N. Y., a Corporation of New York. Filed Dec. 4, 1906. Serial No. 346,319. (Cl. 194—59.)



1. In a coin-controlled lock, the combination of a locking member, a coin-actuated device for operating said member into releasing position, manually operable means to carry the deposited coin into operative engagement with said device, mechanism for retaining the coin in the lock after it has passed said coin-actuated device, means connecting said coin-retaining mechanism with said locking member, and means for actuating said mechanism to release the coin and at the same time operate said locking member independently of said coin-actuated device.

2. In a coin-controlled lock, the combination of a locking member, a coin-actuated device for operating said member into releasing position, manually operable means to carry the deposited coin into operative engagement with said device, mechanism for retaining the coin in the lock after it has passed said coin-actuated device, means connecting said coin-retaining mechanism with said locking member, and an insertible and detachable key for actuating said mechanism to release the coin and at the same time operate said locking member independently of said coin-actuated device.

3. In a coin-controlled lock, the combination of a locking member, a coin-actuated device for operating said member into releasing position, manually operable means to carry the deposited coin into operative engagement with said device, a slide for retaining the coin in the lock after it has passed said coin-actuated device, means connecting said slide with said locking member, and manually operable mechanism for actuating said slide to release the coin and at the same time operate said locking member independently of said coin-actuated device.

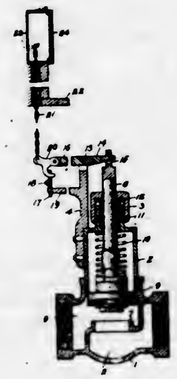
4. In a coin-controlled lock, the combination of a locking member, a coin-actuated device for operating said

member into releasing position, manually operable means to carry the deposited coin into operative engagement with said device, a slide for retaining the coin in the lock after it has passed said coin-actuated device, cam portions on said slide, means on said locking member adapted to engage said cam portions, whereby the movement of said slide into retracting position actuates said member, and manually operable mechanism for actuating said slide to release the coin and at the same time operate said locking member independently of said coin-actuated device.

5. In a coin-controlled lock, the combination of a locking member, a coin-actuated device for operating said member into releasing position, manually operable means to carry the deposited coin into operative engagement with said device, a slide for retaining the coin in the lock after it has passed said coin-actuated device, cam portions on said slide, means on said locking member adapted to engage said cam portions, whereby the movement of said slide into retracting position actuates said member, and key-controlled mechanism for actuating said slide to release the coin and at the same time operate said locking member independently of said coin-actuated device.

[Claims 6 to 13 not printed in the Gazette.]

1,218,729. THERMAL GAS-CUT-OFF VALVE. EDWIN C. WEISGERBER, Pittsburgh, Pa., assignor to Equitable Meter Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 31, 1916. Serial No. 75,355. (Cl. 137—92.)



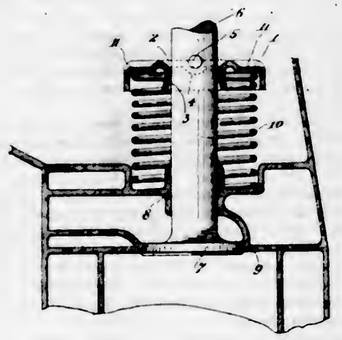
1. In a thermal cut-off valve, the combination of a casing, a packed longitudinally-movable valve stem, a stiff spring for pressing said stem toward valve-closing position, a lever pivoted to said casing adjacent to the outer end of said stem and having long and short arms extending transversely to said stem, the short arm of said lever engaging the outer end of said stem, and a fusible link connecting the long arm of the lever to said casing so as to hold the stem in its open-valve position against the pressure of said spring.

2. In a thermal cut-off valve, the combination of a casing, a packed longitudinally-movable valve stem, a spring within said casing and exerting its pressure upon said stem to press it toward valve-closing position, a lever support secured to said casing and provided with a laterally-extending link engager, a lever having long and short arms pivoted to said support and extending transversely of said stem, the short arm of said lever engaging the outer end of said stem, and a fusible link connecting the long arm of the lever to said link engager so as to hold the stem in its open-valve position against the pressure of said spring.

3. In a thermal cut-off valve, the combination of a casing, a packed longitudinally-movable valve stem therein, a spring within the casing exerting a pressure upon said stem to press it toward valve-closing position, said pressure being substantially greater than that required to overcome the oppositely-acting fluid pressure on the valve and the frictional resistance of the valve stem packing, a lever having long and short arms pivoted to said casing adjacent to the outer end of said stem, the short arm of said lever engaging said stem and the long arm thereof having a finger pivoted thereto, and a fusible link connecting said finger with said casing and thereby holding said stem in open valve position against the pressure of said spring, the tensile strength of said link being less than the unbalanced spring pressure upon said stem.

4. In a thermal cut-off valve, the combination of a casing comprising a pipe connecting member, a spring-inclosing sleeve at one side thereof and a packing nut; a longitudinally-movable valve stem extending through said sleeve and packing nut and having a lever-receiving hole at its outer end, a stiff spring within said sleeve and exerting its pressure upon said stem to press it toward valve-closing position, a lever support secured to said sleeve and provided with a laterally extending link engager, a lever pivoted to said support and having long and short arms extending transversely of said stem, the short arm of said lever extending into said hole in the valve stem, a finger pivoted to the outer end of the long arm of the lever, and a fusible link connecting said finger with the link engager of said support and thereby holding said valve stem in open-valve position against the pressure of said spring.

1,218,730. SPRING-RETAINER. GEORGE S. WETTRICH, Highland Park, and EDWARD E. AMMON, Detroit, Mich. Filed May 5, 1916. Serial No. 95,715. (Cl. 267—47.)



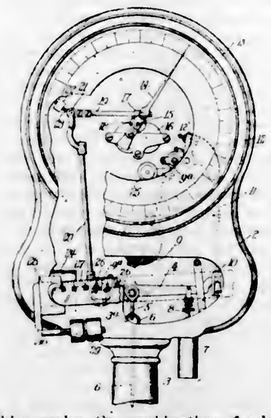
1. As a new article of manufacture, a spring retainer having rocker sockets and fulcrum bosses with the rocker socket disposed in a plane at right angles to the plane of the fulcrum bosses.

2. As a new article of manufacture, a spring retainer having diametrically opposed rocker sockets and diametrically opposed fulcrum bosses with the fulcrum bosses disposed in a plane at right angles to the plane of a rocker socket.

3. A spring retainer having a central opening, said washer having one face thereof provided with rocker sockets at opposed edges of the opening of said washer, and fulcrum bosses projecting from the other face of said washer at the outer edges thereof and disposed in a plane at right angles to the plane of the rocker sockets of said washer.

4. A spring retainer comprising a cup shaped washer having a central opening, the outer face of said washer having opposed rocker sockets therein, and fulcrum bosses in said washer in opposed relation and in a plane at a right angle to the plane of the rocker sockets of said washer.

1,218,731. WEIGHING-SCALE. LEWIS C. WETZEL, Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Company, Newark, N. J., a Corporation of New Jersey. Filed June 21, 1907. Serial No. 380,126. (Cl. 73—29.)



1. In weighing scales, the combination of a horizontally disposed scale beam having an upstanding arm rigid therewith, a dial, a pointer therefor, a gear secured to the pointer to turn therewith, a rack pivotally connected to the arm on the scale beam and resting upon and engaging the gear, the rack being without support other than said arm and gear, a counterbalance for the rack to relieve the friction thereof with the gear, and load-counterbalancing means connected with the scale beam.

2. In weighing scales, the combination of a scale-beam, an upstanding arm rigid therewith, a counterbalanced rack pivotally connected with said arm and extending horizontally, a gear engaged by said rack, a pointer turning with the gear, a dial for the pointer, and load-counterbalancing means connected with the scale-beam.

3. In weighing scales, the combination of a scale-beam, a load receiver connected thereto, a pendulum connected to the beam on the same side of the fulcrum as the load receiver, an operating connection between the pendulum and scale-beam, a dial, a pointer, a gear turning with the latter, a horizontal rack engaging the gear, and an upstanding arm on the scale-beam coupled to said rack.

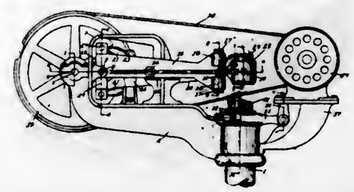
4. In weighing scales, the combination of a scale-beam, a pendulum, an operating connection between the pendulum and scale-beam, a dial, a pointer, a gear turning with the latter, a horizontal rack engaging the gear, counterbalancing means for said rack, and an upstanding arm on the scale-beam coupled to said rack.

5. In weighing scales, the combination of a dial, a pointer, a gear turning with the latter, a scale-beam having an upstanding arm, a rack pivotally connected with said arm and extending horizontally above the said gear in yielding engagement therewith with provisions for varying the degree of pressure, and load-counterbalancing means connected with the scale-beam.

[Claims 6 to 14 not printed in the Gazette.]

1,218,732. MACHINE-HAMMER. HENRY P. WHITE, Kalamazoo, Mich., assignor of one-half to Maurice E. Fuller, Detroit, Mich. Filed May 9, 1916. Serial No. 96,281. (Cl. 29—85.)

1. In a structure of the class described, the combination of a frame, a crank driving shaft, a pivot carried by said frame, a pair of striker bars mounted on said pivot in a spaced relation and provided with yoke-like arms disposed oppositely and on opposite sides of said pivot, said striker bars having pairs of spaced inwardly offset opposed spring sockets at their outer ends, a cross-head reciprocatingly mounted on said frame centrally between said striker bars, links connecting said cross-head to said arms of said striker bars, a pitman connecting said cross-head to the crank of said driving shaft, hammer shanks pivotally mounted at their inner ends on the inner sides of said striker bars and extending between said spring supporting sockets thereof, said shanks being provided with spring sockets opposite said sockets of said striker bars, springs arranged in said sockets to support said hammer shanks, and hammer heads arranged in said head sockets of said shanks.



2. In a structure of the class described, the combination of a frame, a crank driving shaft, a pivot carried by said frame, a pair of striker bars mounted on said pivot, a cross-head reciprocatingly mounted on said frame centrally between said striker bars, links connecting said cross-head to said arms of said striker bars, a pitman connecting said cross-head to the crank of said driving shaft, hammers on said striker bars, springs arranged in said sockets to support said hammer shanks, and hammer heads on said shanks.

3. In a structure of the class described, the combination of a frame, a crank driving shaft, a pivot carried by said frame, a pair of striker bars mounted on said pivot in a spaced relation and provided with yoke-like arms disposed oppositely and on opposite sides of said pivot, a cross-head reciprocatingly mounted on said frame centrally between said striker bars, links connecting said cross-head to said arms of said striker bars, a pitman connecting said cross-head to the crank of said driving shaft, hammer heads provided with shanks pivotally mounted on said striker bars, springs interposed between said striker bars and hammer shanks.

4. In a structure of the class described, the combination of a frame, a pivot carried by said frame, a pair of striker bars mounted on said pivot in a spaced relation and provided with yoke-like arms disposed oppositely and on opposite sides of said pivot, a cross-head reciprocatingly mounted, on said frame centrally between said striker bars, links connecting said cross-head to said arms of said striker bars, hammer heads provided with shanks pivotally mounted on said striker bars, and springs interposed between said striker bars and hammer shanks.

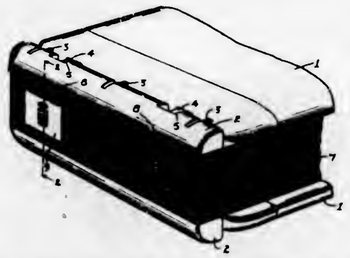
5. In a structure of the class described, the combination of a frame, a pivot carried by said frame, a pair of striker bars mounted on said pivot in a spaced relation and provided with yoke-like arms disposed oppositely and on opposite sides of said pivot, a cross-head reciprocatingly mounted on said frame centrally between said striker bars, links connecting said cross-head to said arms of said striker bars, and hammers mounted on said striker bars.

[Claims 6 to 19 not printed in the Gazette.]

1,218,733. TEMPORARY BINDER OR LOOSE-SHEET HOLDER. GEORGE P. WIGGINTON, Kalamazoo, Mich., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Filed Apr. 26, 1915. Serial No. 24,052. (Cl. 129—41.)

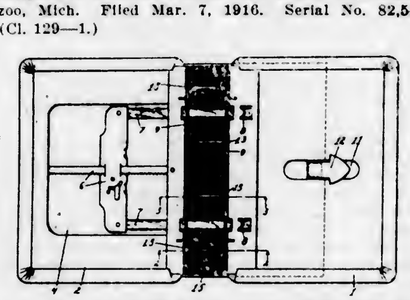
1. In a temporary binder, the combination with the covers, of binding members pivotally associated therewith, sheets or leaves disposed between said binding members, a binding strip disposed through said binding members and sheets and extending into said covers, said binding strip being flexible and permitting the independent movement of

the bnding members and covers as the binder is opened and closed and the sheets manipulated, and a title member having an inwardly projecting web-like support hinged to its rear side, said support having engagement with said binding strip whereby the title member is supported against the rear edge of the sheet body and is movable therewith.



2. In a temporary binder, the combination of binding members, sheets or leaves disposed between said binding members, a binding strip extending between said binding members, said binding strip being flexible to permit the independent movement of said binding members and said sheets as the binder is opened and closed and the sheets manipulated, and a title member having an inwardly projecting support hinged to its rear side and engaged with said binding strip whereby movement of the title member with the sheet body as the binder is opened and closed and the sheets manipulated is permitted.

1,218,734. TEMPORARY BINDER OR LOOSE-SHEET HOLDER. GEORGE P. WIGGINTON, Kalamazoo, Mich., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Filed Mar. 7, 1916. Serial No. 82,545. (Cl. 129—1.)



1. In a temporary binder, the combination with sheets provided with open notches in their binding edges and with a plurality of holes adapted to receive binding posts, of covers, clamping members pivotally connected to said covers, binding strips extending between said covers and adapted to engage said notches of said sheets, said binding strips being arranged through said clamping members, and post members having threaded engagement with said clamping members permitting their removal, the post members carried by one clamping member being out of alinement with those carried by the other and positioned to engage different holes in said sheets so that the post members carried by one clamping member may overlap in the leaf body with those carried by the other, said post members having threaded sockets in their outer ends into which another post member may be threaded.

2. In a temporary binder, the combination with sheets provided with open notches in their binding edges and with a plurality of holes adapted to receive binding posts, of covers, clamping members pivotally connected to said covers, binding strips extending between said covers and adapted to engage said notches of said sheets, said binding strips being arranged through said clamping members, and post members carried by said clamping members, the post members carried by one clamping member being out of alinement with those carried by the other and positioned to engage different holes in said sheets so that the post members carried by one clamping member may overlap in the leaf body with those carried by the other.

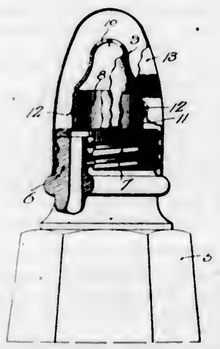
3. In a temporary binder, the combination with sheets provided with open notches in their binding edges and with a plurality of holes adapted to receive binding posts, of binder members, binding members extending between said binder members and adapted to engage said notches of said sheets, and post members having threaded engagement with said binder members permitting their removal, the post members carried by one binder member being out of a linement with those carried by the other and positioned to engage different holes in said sheets so that the post members carried by one clamping member may overlap in the leaf body with those carried by the other, said post members having threaded sockets in their outer ends into which another post member may be threaded.

4. In a temporary binder, the combination with sheets provided with open notches in their binding edges and with a plurality of holes adapted to receive binding posts, of binder members, binding members extending between said binder members and adapted to engage said notches of said sheets, and post members carried by said binder members, the post members carried by one binder member being out of alinement with those carried by the other and positioned to engage different holes in said sheets so that the post members carried by one clamping member may overlap in the leaf body with those carried by the other.

5. In a temporary binder, the combination with sheets provided with open notches in their binding edges and with a plurality of holes adapted to receive binding posts, of binder members, a binding member extending between said binder members and adapted to engage said notches of said sheets, and post members removably mounted on said binder members, the post member carried by one binder member being out of alinement with that carried by the other and positioned to engage different holes in said sheets so that the post members may overlap in the leaf body, one of said post members being adapted to be mounted on the other to provide an extension therefor.

[Claims 6 to 16 not printed in the Gazette.]

1,218,735. DETACHABLE DISTRIBUTING-CLOSURE FOR MUCILAGE-RECEPTACLES AND THE LIKE. OSCAR WINKELMILLER, Two Rivers, Wis. Filed June 17, 1916. Serial No. 104,332. (Cl. 91—67.5.)



1. A distributing closure for receptacles comprising an attaching cap member provided with a central aperture, a flexible slitted distributing hood associated with said aperture and a cover cap member connected with the attaching cap to shield the said hood.

2. A distributing closure for receptacles comprising an attaching cap member provided with a central aperture, an outstanding annular flange surrounding said aperture, a flexible slitted distributing hood having its mouth portion fitted about said flange and a retaining band disposed about said mouth portion for securing it to the flange.

3. A distributing closure for receptacles comprising an attaching body cap member adapted for threaded engagement with the neck of a receptacle and provided with a central aperture, an outstanding annular flange surrounding said aperture, a flexible slitted distributer hood secured to the flange and a cover cap member adapted for frictional engagement with the attaching cap member to shield the said hood.

1,218,736. STEREOTYPE-PLATE-SHAVING MACHINE. HENRY A. WISE WOOD, New York, N. Y., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y. Filed Aug. 11, 1910. Serial No. 576,722. (Cl. 90—25.)



1. In a stereotype plate finishing machine, the combination of a frame, a table movable thereon, a support fixed to said table, a spring-pressed bar on said support adapted to engage a plate and carry the same, and means for shaving the plate as said support moves.

2. In a stereotype plate finishing machine, the combination of a frame, a table movable thereon, a support fixed to the end of said table, a spring-pressed bar on said support adapted to engage a plate and carry the same, and a stationary shaving blade in position to shave the back of the plate as it is moved on said support.

3. In a stereotype plate finishing machine, the combination of a movable table for carrying a printing plate, a pair of standards located on opposite sides of the table, a frame mounted between the standards and comprising a bar connecting the tops of said standards, a web projecting downwardly from the bar to a point near the top of the table, and a web projecting backwardly and upwardly at an angle from the bottom of the first named web, each of said webs extending from one standard to the other, and a shaving blade carried on the front side of the first named web.

4. In a stereotype plate finishing machine, the combination of a horizontal movable support for the stereotype plate, a shaving blade over said support, means for moving the support for shaving the plate, and means movable transversely to the direction of motion of the table for removing the shaved stereotype plate therefrom in a transverse direction in the same plane.

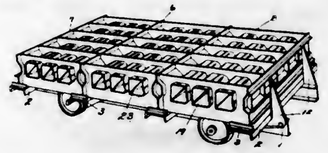
5. In a stereotype plate finishing machine, the combination with means adapted to support a stereotype printing plate on the bottom thereof, of a movable support or table adapted to move under said means to receive the plate thereon and having means for engaging the plate, means for withdrawing the table, and means for finishing the surface of the plate as it is withdrawn on said table.

[Claim 6 not printed in the Gazette.]

1,218,737. CEMENT-BLOCK MOLD. FRANK ZAGELMEYER, Bay City, Mich. Filed Feb. 7, 1913. Serial No. 746,943. (Cl. 25—121.)

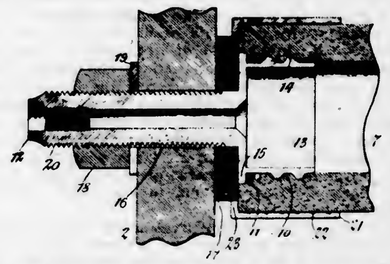
1. In a multiple concrete mold, the combination with a plurality of longitudinal partitions, of transverse partitions formed with longitudinal central portions offset inwardly, said central portions being hollow and formed with slotted openings adapted to removably receive the ends of said longitudinal partitions, said ends projecting through the walls of the hollow offset portions of the transverse partitions, whereby to remove adhering cement from the slots of the transverse partitions.

2. The combination with a mold pallet, of a set of sheet metal side walls having integral inward offsets extending along their longitudinal central portions from one end of the mold to the other and vertically slotted, a set of removable partitions fitting said slots and projecting through the inwardly offset portions of the side walls, a set of end walls secured to the side walls, and a removable core extending longitudinally through the end walls and partitions, the inwardly offset portions of the side walls being adapted to form notches in the ends of the concrete blocks, substantially as described.



3. The combination with a mold pallet, of a set of side walls having integral inward offsets extending along their longitudinal central portions from one end of the mold to the other and vertically slotted, a set of removable partitions fitting said slots and projecting through the inwardly offset portions of the side walls, a set of end walls secured to the side walls, and a removable core extending longitudinally through the end walls and partitions, the inwardly offset portions of the side walls being adapted to form notches in the ends of the concrete blocks, substantially as described.

1,218,738. FILTER. EDWARD ZAHM, Buffalo, N. Y., assignor to Zahm Manufacturing Company, Buffalo, N. Y., a Corporation of New York. Filed Dec. 28, 1911. Serial No. 668,331. Renewed Jan. 26, 1917. Serial No. 144,764. (Cl. 210—11.)



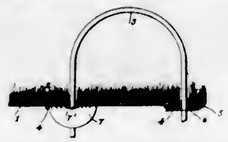
1. In a filter, the combination of a filter tube provided with an internal screw thread, an outlet nozzle provided with an external screw thread which engages with the thread of the filter tube and a ferrule surrounding that portion of the filter tube containing the nozzle and extending inwardly beyond the inner end of said nozzle and the internal thread of the filter tube.

2. In a filter, the combination of a filter tube having an internal screw thread and an annular rabbet at its outlet end, an outlet nozzle having an outer contracted neck and an inner enlarged head which is provided with an external screw thread engaging the internal thread of said tube and an external annular flange which engages with the rabet of said tube, and a ferrule arranged on the periphery of the portion of the filter tube containing the head of the nozzle and having its inner end extending beyond the inner end of said head and the internal thread of the filter tube and provided at its outer end with an internal annular flange which engages with the outlet end of said tube.

3. In an filter, the combination with a body having inlet and outlet chambers and a partition separating said chambers and provided with an opening, a filter tube ar-

ranged in said inlet chamber and provided with an internal screw thread, a nozzle having a neck secured in the opening of said partition and a head having an external screw thread which engages the thread of said tube, and a packing arranged around said neck between said partition and the head and tube and extending across the joint between said head and tube so as to simultaneously pack the joint between the neck and the partition and between the neck and the filter tube.

1,218,739. LOOP-FASTENER. ARTHUR M. J. BAUS, Brookline, Mass. Filed July 26, 1916. Serial No. 111,531. (Cl. 24—90.)



1. A fastener for securing a strandlike, penetrable loop forming member in a portion of a garment, the loop ends passing through the garment portion; said fastener comprising pins transversely penetrating the inserted body portion of the loop ends, and guard members interposed between said garment portion and through which said ends pass, tension on the bight of the loop drawing the pins against the guards and the latter against the back of the garment.

2. A fastener for securing a strand-like, penetrable loop forming member in a portion of a garment, the loop ends passing through the garment portion; said fastener comprising pins transversely penetrating the inserted body portion of the loop ends, and guard members interposed between said garment portion and through which said ends pass, tension on the bight of the loop drawing the pins against the guards and the latter against the back of the garment, each guard extending beyond the point of the pin to prevent laceration of the garment material.

3. A fastener for securing a strand-like, penetrable loop forming member in a portion of a garment, the loop ends passing through the garment portion; said fastener comprising pins transversely penetrating the inserted body portion of the loop ends, and guard members interposed between said garment portion and through which said ends pass, tension on the bight of the loop drawing the pins against the guards and the latter against the back of the garment, the said guards each being folded transversely over its respective pin to frictionally bind the interposed strand.

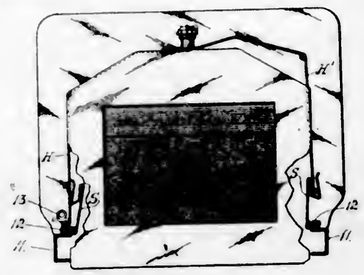
4. A fastener for securing a strand-like penetrable loop forming member in a portion of a garment, the loop ends passing through the garment portion, said fastener comprising pins transversely penetrating the inserted body portion of the loop ends, and guard members interposed between said garment portion and through which said ends pass, tension on the bight of the loop drawing the pins against the guards and the latter against the back of the garment, each guard consisting of a thin disk of a diameter about equal to the length of said pin and folded diametrically thereover to clench it against movement.

1,218,740. HOOD-SUPPORT. FREDERICK C. BIEBOW, Denver, Colo. Filed Aug. 11, 1916. Serial No. 114,367. (Cl. 74—56.)

1. In a device of the class described, a single strip of metal bent to constitute a foot, a shank, and a pocket adapted to receive the lower edge of an automobile hood.

2. In a device of the class described, a single strip of metal shaped to constitute a foot, a shank slightly inclined from the vertical, and a pocket inclosed on the front, rear and bottom but open on the top and ends.

3. In a device of the class described, a single strip of spring steel shaped to constitute a foot, a shank slightly inclined from the vertical, and a pocket inclosed on the front, rear and bottom but open on the top and ends, the angle between the bottom and front of said pocket being reëntrant whereby there is produced a slight wedging action on the lower edge of an automobile hood resting in said pocket.



4. In combination with the side frame members of an automobile, a pair of hood supports mounted on said side members at point sbelow the hood, each of said supports comprising a single strip of metal bent to constitute a foot which rests on one of said side members, a shank, and a pocket adjacent the upper end of said shank, said pocket being adapted to receive the lower edge of one of the hood sections of said automobile.

5. In combination with the side frame members of an automobile, a pair of hood supports mounted on said side members at points below the hood, each of said supports comprising a single strip of metal bent to constitute an outwardly turned foot which rests on one of said side members, a shank slightly inwardly inclined from the vertical, and a pocket on the outer side of said shank adjacent its upper end, said pocket being adapted to receive the lower edge of one of the hood sections of said automobile.

1,218,741. COMBINATION PENCIL-CLIP AND PENCIL-SHARPENER. ROGER C. BOUGHTON, Fresno, Cal. Filed Dec. 14, 1915. Serial No. 66,707. (Cl. 120—84.)

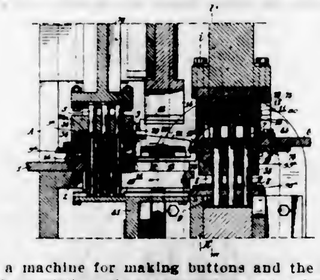


1. The combination of a pencil sharpener and pencil clip consisting of a slit tubular portion, an abrasive plate, a finger extension on the abrasive plate, and means for attaching such abrasive plate to the tubular portion, consisting of a pocket attached to such tubular portion of such size that the abrasive plate will fit loosely therein, and spring means for holding the plate in said pocket, all substantially as described.

2. A pencil sharpener and pencil clip consisting of a plate having an abrasive surface with curved wings on each side thereof, constructed of springy material, and a finger extension thereon, in combination with a container of such size that the plate will readily enter therein and the wings will press against a wall thereof, and means attached to said container for holding a pencil parallel with the finger extension, all substantially as described.

3. A pencil sharpener consisting of a plate having an abrasive surface, a finger extension at one end thereof, and curved wings on each side thereof, such curved wings being constructed of springy material and being less concave at the end farthest from the finger than near to it, and a container of such relative size that the plate will readily enter therein at the end opposite the finger, and will fit tightly therein when forced into such container in combination with means attached to said container for holding a pencil parallel with the finger.

1,218,742. MACHINE FOR MAKING BUTTONS AND THE LIKE. HUGO BRAND, Deutsch-Beneschau, Ringplatz, Austria-Hungary, assignor to Johann Schönbaumafeld, Deutsch-Beneschau, Austria-Hungary. Filed May 9, 1913. Serial No. 766,530. (Cl. 79—4.)



1. In a machine for making buttons and the like articles each consisting of an upper part and a lower part, from sheet metal, the combination of a first slide, a plurality of lower pressing matrices for the lower parts, mounted in said first slide, a second slide, a plurality of upper pressing dies for the upper parts, mounted in said second slide, a plurality of cutting dies for cutting out the lower parts, a plurality of cutting dies for cutting out the upper parts, means for moving said first and second slides away from each other under said cutting dies, and means for moving said first and second slides toward each other, whereby they are moved out of the range of said cutting dies, and so as to bring said upper pressing dies immediately over said lower pressing matrices for pressing the upper and lower parts together to form complete articles.

2. In a machine for making buttons and the like articles, each consisting of an upper part, a middle part and a lower part, from sheet metal, the combination of a first slide, a plurality of lower pressing matrices for the lower parts, mounted in said first slide, a second slide, a plurality of upper pressing dies for the upper parts mounted in said second slide, a plurality of lower cutting dies for cutting out the upper parts, a plurality of upper cutting dies for cutting out the lower parts, a plurality of middle pressing matrices for pressing the middle parts, means for moving said first slide with the cut out lower parts under said middle, means to place the middle parts on the lower parts, means for moving said first slide with the lower and middle parts under the upper parts and means whereby the upper, middle and lower parts are pressed together to form complete articles.

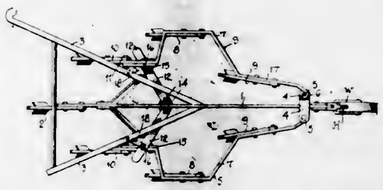
3. In a machine for making buttons and the like articles, each consisting of an upper part, and a lower part, from sheet metal, the combination of a first slide, a plurality of lower pressing matrices for the lower parts, mounted in said first slide, a second slide, a plurality of pressing dies in the said second slide, means for moving said first and second slides to and away from each other, and positive means for adjusting the pitch of said lower pressing matrices in conformity with the pitch of said upper pressing dies.

4. In a machine for making buttons and the like articles, each consisting of an upper part, a middle part, and a lower part, from sheet metal, the combination of a first slide, a plurality of lower pressing matrices for taking up the lower parts, mounted in said first slide, a plurality of middle pressing matrices for the middle parts, a second slide, a plurality of upper pressing dies, means for moving said first and second slides to and away from each other, and positive means for adjusting the pitch of said lower and middle pressing matrices in their respective slides in conformity with the pitch of said upper pressing dies.

5. In a machine for making buttons and the like articles, each consisting of an upper part, and a lower part from sheet metal, the combination of a first slide, a row of lower pressing matrices mounted in said slide, a second slide, a row of upper pressing dies mounted in said second slide, and means for adjusting the pitch of said lower pressing matrices, whereby the said pitch will be increased to the size of the pitch of said upper pressing dies by the movement of said first slide.

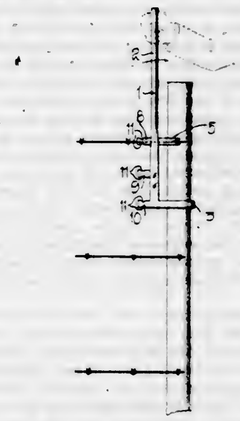
[Claims 6 to 13 not printed in the Gazette.]

1,218,743. CULTIVATOR. JOHN HARVEY CHUBB, Halifax township, Dauphin county, PA. Filed Nov. 1, 1916. Serial No. 128,964. (Cl. 97—10.)



In combination with a cultivator, a side iron having its forward end provided with a hook adapted to engage with a part of the cultivator, the intermediate portion of said iron being offset outwardly, shovels carried by the opposite end portions, a plate secured to the inner face of the side iron rearwardly of and immediately adjacent the off-set portion of the side iron, and the intermediate portion of said iron, and bracing means coacting with the cultivator and the plate.

1,218,744. WIRE-STRETCHER. WILLIAM A. CLACK, Maryneal, Tex. Filed Aug. 19, 1916. Serial No. 115,859. (Cl. 254—77.)



1. A wire stretching tool comprising a lever provided at one end thereof with a laterally extending hook projecting from one side of the lever in perpendicular relation thereto, the lever being also provided intermediate of its ends with a wire engaging member projecting from the same side of the lever as the hook, and in parallel relation thereto and formed with a notched extremity.

2. A wire stretching tool comprising a lever provided at one end thereof with a laterally extending hook projecting from one side of the lever in perpendicular relation thereto, the lever being also provided intermediate of its ends with a wire engaging member projecting from the

same side of the lever as the hook, and in parallel relation thereto and formed with a notched extremity, the said hook being formed with a sharpened extremity, as and for the purpose set forth.

1,218,745. EXPANSION-VALVE. GEORGE CLARK, Chicago, Ill., assignor to Wolf, Sayer & Heller, Chicago, Ill., a Corporation. Filed May 25, 1911. Serial No. 629,409. (Cl. 50—23.)



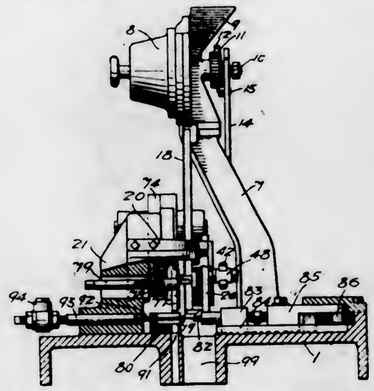
1. In an expansion valve, the combination of a valve casing having inlet and outlet ports, a valve seat between said ports, and a valve coöperating with said seat, one of said parts having a conical surface and the other an angular shoulder arranged to make a line contact with said surface to cut off the flow of fluid, and said valve having a projecting needle extending through the opening of said valve seat to effect the attenuation or wiredrawing of the fluid, and pressure operated means acting on said projecting needle to actuate said valve, substantially as described.

2. In an expansion valve, the combination of a valve casing having inlet and outlet ports and an intermediate valve seat provided with a tapering opening therethrough, a valve coöperating with said seat to make a line contact therewith to cut off the flow of fluid, said valve having a projecting needle extending through the opening of the valve seat, pressure operated means acting on said projecting needle to actuate the valve, a spring for holding said valve in engagement with its seat and with said pressure actuating means, and a stem extending into said valve casing and engaging said valve to rotate the same independently of the pressure operated means, said valve having a sliding engagement with said stem whereby it may be shifted in longitudinal direction independently thereof by said pressure operated means, substantially as described.

3. In an expansion valve, the combination of a valve casing having inlet and outlet ports and an intermediate valve seat, a valve on the inlet side of said seat, pressure operated means on the outlet side of said seat for controlling said valve, said seat having a tapering opening therethrough and said valve having an abrupt conical face arranged to engage the upper edge of said seat opening to cut off the flow of fluid and a tapering extension fitting said opening and engaging said pressure operated means, substantially as described.

4. In an expansion valve, the combination with a valve casing having a valve seat and inlet and outlet ports in its side wall on opposite sides of said seat, a valve on the inlet side of said seat having a tapering extension projecting therethrough and coöperating with said seat to effect attenuation or wiredrawing of the fluid, a diaphragm casing on one end of said valve casing and communicating with the space on the outlet side of said valve seat, pressure-controlled means for shifting said valve longitudinally to and from its seat, an actuating rod associated with said means abutting against the extension of said valve to effect said longitudinal shifting of the valve, and means operable from a point without the casing to rotate the valve independently of the pressure-controlled means.

1,218,746. RIVET-SLITTING MACHINE. JAMES W. COOMBS, Philadelphia, Pa., assignor to Penn Rivet Corporation, Philadelphia, Pa., a Corporation of Virginia. Filed July 12, 1915. Serial No. 39,231. (Cl. 10—11.)



1. In a rivet slitting machine, the combination of a rivet slitting mechanism, a source of rivet supply, a rivet holder formed of a fixed member and a movable member having complemental rivet head receiving recesses, a transferrer and means for moving it in a straight path crosswise of said holder to engage the shank of a rivet held by said holder and carrying it for presentation to the slitting mechanism, and means for moving the movable member of the rivet holder to free the rivet therefrom when it is engaged by the transferrer.

2. In a rivet slitting machine, the combination of rivet slitting mechanism, a source of rivet supply, a rivet holder formed of a fixed member and a movable member, a transferrer movable crosswise past the end of the holder at substantially a right angle to the path of movement of the movable member for taking a rivet from said holder and carrying it for presentation to the slitting mechanism, means for moving the transferrer in a straight path at an angle crosswise of and beyond the holder, and means for moving the movable member of the rivet holder positively to free the rivet therefrom when it is engaged by the transferrer.

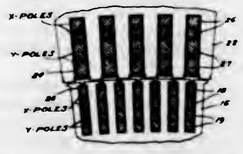
3. In a rivet slitting machine, the combination of rivet slitting mechanism, a rivet holder formed of a fixed rigid member and a movable rigid member having complemental rivet head receiving recesses and an opening for the rivet shank, a transferrer for taking hold of the projecting rivet shank held by the holder and moving the rivet to the slitting mechanism, means for reciprocating said transferrer in a rectilinear path transversely across the face of the holder, and means acting to move the movable rigid member of the holder across the path of the transferrer to free the rivet head and permit the rivet to move with the transferrer.

4. In a rivet slitting machine, the combination of a rivet slitting mechanism, a two part rivet holder comprising a fixed member and a rigid member movable in a vertical plane relatively thereto and each provided with complemental rivet head receiving recesses, one of said members having an opening through which the rivet shank may project, a transferrer, means for moving the transferrer in a path crossing the face of the holder and intersecting the rivet shank held by the holder, and means for moving the movable member of the holder from coöperating relation with the fixed member to permit the transferrer to carry the rivet transversely to one side of the holder.

5. In a rivet slitting machine, the combination of a slitting mechanism, a source of rivet supply, a rivet holder having a rivet head receiving recess to receive the rivet head single from said supply, said rivet holder comprising a fixed member having a shouldered recess in its face to support the shank of a rivet the head of which is held by the holder, and a movable member having a face adapted to close and open said face recess in the fixed member to retain and then permit movement of the rivet laterally of the holder, and a transferrer movable in a straight path transversely of the holder for taking a rivet from the holder and transferring it for the action of the slitting mechanism.

[Claims 6 to 17 not printed in the Gazette.]

1,218,747. MULTISPEED INDUCTION-MOTOR. RAE W. DAVIS, West Allis, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Feb. 7, 1913. Serial No. 746,929. (Cl. 172—280.)



1. In an induction motor, a primary member and a secondary member, each provided with a plurality of separate windings disposed in slots therein, portions of the several windings on each member being disposed in the same slots, a winding on the stator and a winding on the rotor being effective to produce the same number of magnetic poles and corresponding portions of said primary and secondary windings occupying relatively inverted positions in the slots of the two members.

2. In a dynamo-electric machine, a wound stator and a wound rotor, the stator and the rotor being provided with a plurality of mechanically separate sets of windings disposed in the same slots of the stator and rotor and effective to produce different numbers of effective magnetic poles in the operation of the machine, and the stator and rotor portions of each set being separated by approximately the same distance, whereby the magnetic leakage in the operation of the machine is approximately the same for each set.

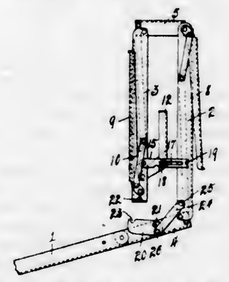
3. In a polyphase electric motor, the combination of a primary member provided with a plurality of windings disposed in the same slots and adapted to produce different numbers of effective magnetic poles in the operation of the motor, and a secondary member provided with windings disposed in the same slots and equal in number to those of the primary member, each winding of the secondary member being adapted to be closed on itself to coöperate with a certain one of the primary windings to produce a definite speed of operation of the motor, the primary winding for producing one number of magnetic poles being located adjacent the open end of the slots of the primary member, and the corresponding secondary winding being located adjacent the closed end of the slots in the secondary member.

4. In a polyphase electric motor, the combination of a primary member provided with a plurality of mechanically separate windings having portions thereof disposed in the same slots and adapted to produce different numbers of effective magnetic poles in the operation of the motor, and a secondary member provided with windings having portions thereof disposed in the same slots and equal in number to those of the primary member, each winding of the secondary member being adapted to be closed on itself to coöperate with one of the primary windings to produce a definite speed of operation of the motor, and the primary and corresponding secondary portions of the windings that coöperate to produce the different numbers of magnetic poles being separated by approximately the same distance.

5. In a dynamo-electric machine, a wound stator and a wound rotor, the stator and the rotor being provided with a plurality of mechanically separate sets of windings disposed in the same slots and capable of producing different numbers of effective magnetic poles in the operation of the machine, and the stator and rotor portions of each set being disposed at substantially the same distance from the radially inner end of the stator and rotor slots, respectively.

[Claims 6 to 9 not printed in the Gazette.]

1,218,748. SECTION-LOCKING MEANS FOR FOLDABLE BED-FRAMES. PETER J. DE DOES, Toledo, Ohio, assignor to The Toledo Parlor Furniture Company, Toledo, Ohio, a Corporation of Ohio. Filed Dec. 27, 1915. Serial No. 68,865. (Cl. 5—16.)



1. A plurality of foldably related major and minor bed frame sections, in combination with a catch member movably carried by a minor section and automatically movable into catch engagement with a part of a major section by a relative folding of the sections.

2. A plurality of foldably related major and minor bed frame sections, in combination with a catch member movably carried by a minor section and movable into catch engagement with a part of a major section when the sections are relatively folded, and means operable by relative folding movements of said sections to control the movements of the catch member.

3. In a devicce of the class described, an outer major section and an inner spacing section foldably connected together, a catch member swingingly carried by the inner one of said sections, a catch part carried by the outer of said sections, and means operable, upon a relative folding of said sections, to swing said member into catch engagement with said part.

4. In a device of the class described, a plurality of major bed-frame sections and spacing sections therefor, all foldably connected, in combination with complementary fastening means, one carried by a major section and the other carried by a spacing section, and automatically operable to engage and disengage upon folding and unfolding movements, respectively, of the sections.

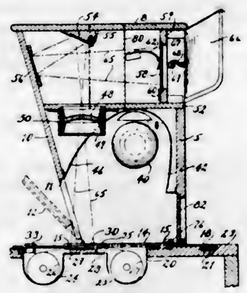
5. In a device of the class described, two bed-frame sections foldable in substantially parallel relation one over the other, and an adjoining section foldably connected to one of said first sections, and means operable by folding movements of said sections to lock the sections in folded relation and having complemental catch parts one carried by one of said first sections and the other carried by said adjoining section.

[Claims 6 to 16 not printed in the Gazette.]

1,218,749. PROJECTOGRAPHOSCOPE. WILLIAM L. DEMING, Salem, Ohio. Filed Mar. 15, 1915. Serial No. 14,309. (Cl. 88—24.)

1. The combination, with means for inclosing and supporting a record strip having a comparatively small writ-

ing opening, of means for illuminating the strip at the writing opening, a display screen, a lens, and means for supporting the same spaced from the strip at the side which receives the writing, said lens being adapted to reverse the image on the strip and project it to the screen.



2. The combination, with means for supporting a record strip and exposing a portion of the same for writing, of a casing above the exposed writing portion, a lamp in said casing, a lens, and a display screen, said lens and display screen being adapted to reverse and display the writing as it is made on the record strip.

3. The combination, with a casing, of means for supporting a record strip at the lower portion of the casing and having an opening exposing a portion of the strip, said casing having an opening to admit the hand to allow for writing on the record strip, a lamp and reflector for illuminating the strip at the writing opening, a lens above the writing opening, a mirror adapted to receive the image passing through the lens, a second mirror to which the image is reflected from the first, and a screen opposite the last named mirror and visible from the side opposite the writing opening for displaying writing on the record strip.

4. The combination, with means for supporting and inclosing a record strip and having a writing opening, of a casing above said support having an opening to permit writing on the strip, a lamp, a reflector so arranged that substantially all portions thereof may direct light onto the strip at the opening, and means including a lens for projecting the image onto said screen, said screen being mounted at the side of the casing opposite the writing opening and near the upper portion thereof, and a window adjacent the lower portion of the casing and below the reflector and through which the actual writing on the record strip may be seen.

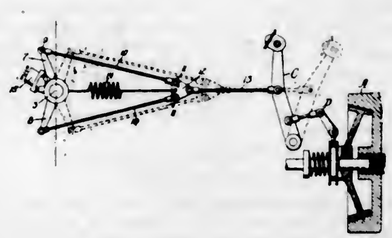
5. The combination, with means for supporting a record strip and exposing a portion of the same for writing, of a casing above said support having an opening to permit writing on the strip, a lamp, a reflector directing light onto the strip, means including a lens for projecting the image onto said screen, said screen being mounted at the side of the casing opposite writing on the strip and near the upper portion of the casing, a window adjacent the lower portion of the casing and below the reflector through which the actual writing on the record strip may be seen, and a flaring hood extending outwardly from the casing to exclude extraneous light from the screen.

[Claims 6 to 10 not printed in the Gazette.]

1,218,750. AUTOMATIC GEAR-SHIFTING MECHANISM. FRANCIS S. DENNEEN, Detroit, Mich. Filed Sept. 12, 1913. Serial No. 789,415. (Cl. 74—58.)

1. In a gear shifting mechanism, a transmission mechanism, a shaft, a clutch, electrically controlled means capable of being locked in said shaft to shift gears of said transmission mechanism by a movement of said shaft, said means being operatable with the actuation of said clutch, and means for controlling the operation of the first mentioned means.

2. In a gear shifting mechanism, a transmission mechanism, a clutch, a shaft, means shiftable into and out of said shaft and operatable in unison with said clutch for shifting gears of said transmission mechanism, and means including solenoids for controlling the operation of the first mentioned means.



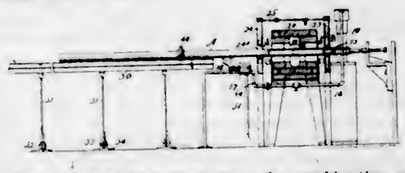
3. In a gear shifting mechanism, a transmission mechanism, a clutch, a shaft, mechanical means operatable in unison with the operation of said clutch for shifting gears of said transmission mechanism, and electrical means including shaft engaging plungers for controlling the first mentioned means.

4. In gear shifting mechanism, a transmission mechanism, a member, means for rocking said member, fingers capable of being locked on said member to shift gears of said transmission mechanism, and means including plungers for locking said fingers.

5. In a gear shifting mechanism, the combination with a pedal control clutch and a slide gear transmission, of a shaft, fingers loosely mounted upon said shaft and movable with the pedal controlling said clutch, spring pressed plungers adapted to lock said fingers relatively to said shaft, and electro-mechanical means for holding said fingers in engagement with said shaft.

[Claims 6 to 19 not printed in the Gazette.]

1,218,751. TUBE-WELDING APPARATUS. THOMAS DRAPER, Port Huron, Mich., assignor to The Draper Manufacturing Company, Port Huron, Mich., a Corporation of Michigan. Filed Jan. 8, 1915. Serial No. 1,089. (Cl. 78—84.)



1. In a tube welding apparatus, the combination of a furnace having alined holes through its end walls, a welding machine located adjacent to one end wall of said furnace, a support for the overhanging front end of two parts to be welded, which support is so placed that it will support said front end of said parts while the joint between is in the furnace and in the welding machine, and is moving from one to the other, and two fire screens, one located between one end of the furnace and said welding machine and one located alongside of the other end of the furnace, said fire screens having holes through them which are alined with the holes in the walls of the furnace and said mandrel.

2. In a tube welding apparatus, the combination of a furnace having alined holes through its end walls, a welding machine located adjacent to one end wall of said furnace, a mandrel alined with the holes in said furnace walls, and two fire screens each comprising a narrow vertical box having a cored out hole which is alined with the holes in the furnace walls, one of said fire screens being located between one end of the furnace and said welding machine, and one located along the side of the other end of the furnace, and means for continuously discharging cold water into said box-like fire screens.

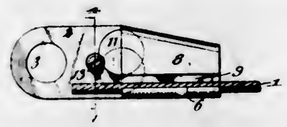
3. In a tube welding apparatus the combination of a furnace having alined holes through its end walls, a support for the overhanging end of a two-part tube to be welded by said apparatus, a welding machine located between said support and one end wall of the furnace in such position that a two-part tube which extends through the furnace and through both of the holes in said end wall may take its proper position in said welding machine, a lever which controls the starting and stopping of said welding machine and is located adjacent to the other end of said furnace, and a collar adapted to be secured to the rear part of said two-part tube in position such that it will engage and operate said lever when said tube is moved endwise to carry the joint between the two parts thereof from the furnace into the embrace of the welding machine.

4. In a tube welding apparatus, the combination of a furnace having alined holes through its end walls, a fluid pressure welding machine located adjacent to one end wall of said furnace, a pipe for supplying the pressure fluid to said welding machine, a valve controlling the flow of pressure fluid through said pipe, and means for actuating said valve located adjacent to the other end wall of said furnace.

5. In a tube welding apparatus, the combination of a furnace having alined holes through its end walls, a fluid pressure welding machine located adjacent to one end wall of the furnace, a mandrel alined with the holes in said furnace walls whereby the operator standing near the other furnace wall may push through the furnace and onto the mandrel, a composite pipe or tube to be welded, a fire screen located by the side of that wall of the furnace which is adjacent the valve hereinafter mentioned,—said fire screen having through it a hole which is alined with the holes in the furnace walls,—a pipe supplying pressure fluid to said welding machine, a valve in said pipe, and means for actuating said valve.

[Claims 6 to 13 not printed in the Gazette.]

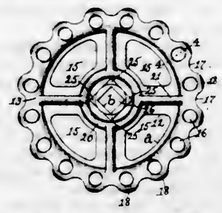
1,218,752. CLAMPING DEVICE. ARTHUR W FARR, Buffalo, N. Y. Filed June 19, 1915. Serial No. 35,099. (Cl. 24—134.)



A clamping device comprising a body having two converging flanges one of which is provided on its inner side with a longitudinal groove adapted to engage with one side of a line, while the other is provided with a longitudinal bearing rib, and a clamping disk arranged between said flanges and having a circumferential groove forming flanges on opposite side of said groove, the bottom of said groove engaging on one side of the disk with the edge of said rib while the opposite side of the bottom of this groove is adapted to engage with the opposite side of said line, the height of said rib being greater than the depth of said groove, whereby an extended bearing area is obtained between one side of said disk and the line while the opposite side of the disk is supported without wearing the edges of the disk flanges.

1,218,753. VALVE-HANDLE. PETER FORD, Somerville, Mass. Filed Sept. 13, 1915. Serial No. 50,286. (Cl. 74—33.)

1. In a handle of the character described, in combination, a sheet metal disk member provided with a central portion having an opening, arms extended from said central portion, an annular rim connected with said central portion by said arms, an annular flange depending from said rim and provided with corrugations comprising valleys and raised portions of greater length than said valleys and having inwardly bent end portions to form a plurality of smooth gripping surfaces on the underside of said rim, and a bushing having a reduced portion extended through the opening in said central portion, and means on said bushing for securing the handle to the bushing.

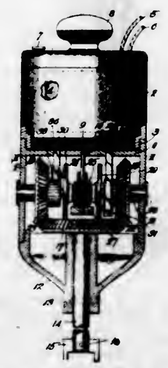


2. In a handle of the character described, in combination, a sheet metal disk member provided with a central portion having an opening and having an annular corrugation external to said opening, arms extended from said central portion and provided with corrugations extended lengthwise of said arms, an annular rim connected with said central portion by said corrugated arms, a corrugated annular flange extended from said rim, and provided with raised portions having inwardly bent end portions, which form smooth gripping projections on the under surface of said flange, and a bushing having a portion extended through the opening in said central portion and secured to the latter.

3. In a handle of the character described, a sheet metal disk member provided with a central portion having an opening, an annular rim connected with said central portion and provided with an annular flange having corrugations comprising valleys and raised portions of greater length than said valleys and provided with inwardly bent ends to form smooth gripping surfaces on the under side of said flange.

4. In a handle of the character described, a sheet metal disk member provided with a central portion having an opening, an annular rim connected with said central portion and provided with a corrugated flange, the raised portions of the corrugations of said flange being longer than the valleys thereof and bent inwardly to form smooth gripping surfaces on the underside of said flange.

1,218,754. TOOL FOR GRINDING VALVES AND THE LIKE. JOHN W. FRAIN and GEORGE B. BAILEY, Pittsburg, Kans. Filed Apr. 3, 1916. Serial No. 88,715. (Cl. 51—4.)



1. A tool for grinding valves and the like, comprising a shaft, a wheel rigid thereon, a pair of wheels geared to said first-named wheel for oscillating said shaft, and

means for positively rotating said pair of wheels unequal distances in the same direction alternately.

2. A tool for grinding valves and the like, comprising a shaft, a wheel thereon, a second shaft, means for continuously rotating said second shaft, a pair of wheels journaled on said second shaft and engaged with the first-named wheel at opposite sides of the same, and means actuated through rotation of said second shaft, to positively rotate the said wheels thereon unequal distances in the same direction alternately.

3. A tool for grinding valves and the like, comprising a shaft, a wheel thereon, a second shaft, means for continuously rotating said second shaft, a pair of wheels journaled on said second shaft and engaged with the first-named wheel at opposite sides of the same, ratchet wheels rotatable with said pair of wheels, spring-actuated pawls rotatable with said second shaft to engage the ratchet wheels and means for alternately tripping said pawls out of engagement with said wheels.

4. A tool for grinding valves and the like, comprising a shaft, a wheel thereon, a second shaft, means for continuously rotating said second shaft and engaged with the first-named wheel at opposite sides of the same, ratchet wheels rotatable with said pair of wheels, spring-actuated pawls rotatable with said second shaft to engage the ratchet wheels and means for alternately tripping said pawls out of engagement with said wheels; said tripping means comprising yoke-shaped guards extending around said ratchet wheels in the path of travel of the respective pawls of the latter, one of said guards being of greater length than the other and the two together describing less than a full circle.

5. A tool for grinding valves and the like, comprising a shaft, a wheel thereon, a second shaft, a pair of wheels journaled on said second shaft and engaged with said first-named wheel at opposite sides of the same, a suitably-driven worm, a worm wheel secured on said second shaft and meshing with said worm, and means actuated through rotation of said second shaft, to positively rotate said pair of wheels unequal distances in the same direction alternately.

[Claim 6 not printed in the Gazette.]

1,218,735. STATIONARY WASHSTAND. EDWIN P. GAYLORD, Rochester, N. Y. Filed Feb. 4, 1914. Serial No. 816,407. (Cl. 4—24.)



The combination with a stationary wash basin having a discharge opening above the bottom and a passage leading from said opening to a point below the bottom, of a hollow standard supporting the basin and constituting a discharge with which the aforesaid passage communicates, an inlet pipe arranged within said standard and extending to the bottom of the basin so as to direct a flow of water upwardly from the bottom in a vertical direction, a valve controlling the inlet pipe and foot operated means at the base of said standard coöperating with said valve.

1,218,756. ICE-CREEPER. WILLIAM H. GEHM, St. Louis, Mo. Filed Jan. 14, 1916. Serial No. 72,039. (Cl. 36—62.)



An ice-creeper of the class described comprising a skeleton bottom plate, integral downward projections formed thereon, the bottom edge of the projections provided with serrations, a spike projecting from and beneath the bottom plate, an upwardly projecting flange forming the front end of the bottom plate, a side plate fastened to the bottom plate and rivets for connecting the same, substantially as specified.

1,218,757. COMPOUND TOOL. OTTO C. GESSLER, Detroit, Mich. Filed Apr. 8, 1916. Serial No. 89,738. (Cl. 65—46.)



1. A compound tool having a head, a holder carried thereby at one side of the longitudinal axis of said head, a prong on said holder opposite said head, a hook projection carried by said head and adapted to coöperate with said prong in the removal of the cap, and a member normally fitted on said head and having an end thereof cut away to provide clearance for said hook projection.

2. A compound tool comprising a head, a holder carried thereby, a prong on said holder, a hook projection on said head adapted to coöperate with said prong in removing a bottle cap, a member normally fitted on said head and adapted for insertion in said holder, and a side projection on said member for limiting the insertion of said member in said holder.

1,218,758. LARD SUBSTITUTE. EARL B. GRAHAM and RALPH E. KIRKHAM, Bellingham, Wash. Filed Dec. 14, 1916. Serial No. 136,894. (Cl. 99—13.)

The combination of beef oil and corn oil in the proportion of 2 parts of said beef oil and 3 parts of said Argo oil.

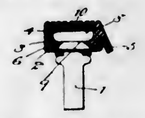
1,218,759. PROCESS OF MANUFACTURING PASTRY-SHORTENING. EARL B. GRAHAM and RALPH E. KIRKHAM, Bellingham, Wash. Filed Jan. 17, 1917. Serial No. 142,903. (Cl. 99—10.)

1. The method and process of combining beef oil and corn oil consisting in mixing said oils in a vessel in which they are raised to a temperature of 240° F., mechanically agitating said mixture until its temperature falls to 85° F., placing said mixture in the containers in which it is to be sold, allowing the mixture to remain uncovered in said containers until it becomes thoroughly chilled and solidified, and then covering said containers.

2. The method and process of combining beef oil and corn oil consisting of placing said oils together in a vessel, raising the temperature of said oils to 240° F., thoroughly mixing said oils while hot, mechanically agitating said mixture in the presence of an artificial cooling medium until its temperature falls to 95° F., mechanically agitating said mixture in the absence of said artificial cooling medium until its temperature has fallen to 85° F., and placing said mixture in the containers in which it is to be sold.

3. The method and process of combining beef oil and corn oil consisting of placing said oils together in a vessel, raising the temperature of said oils to 240° F., thoroughly mixing said oils, mechanically agitating said mixture in the presence of a cooling medium until of a semi-fluid consistency, and placing said mixture in the containers in which it is to be sold.

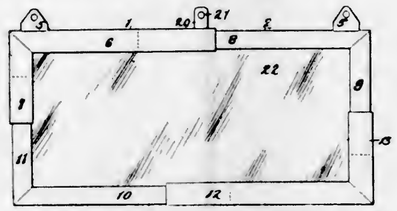
1,218,760. KEY FOR TYPE-WRITING AND OTHER MACHINES. ROBERT S. GRAHAM, New York, N. Y. Filed May 28, 1915. Serial No. 30,970. (Cl. 197—103.)



1. In combination with a key having an upwardly open cup-shaped top, a resilient member having a hollow frusto-conical base portion seated within said top and having an upper finger-engaged portion overhanging the rim of said cup, said upper portion having an inner cavity greater in diameter than the upper end of the bore of the said base portion and connected to said bore substantially in alinement with the upper end of said cup-shaped top; the upper end of the latter being larger in internal diameter than the portion of the said base housed thereby, so as to permit a radial expansion of said top upon pressure on said finger-engaged portion.

2. In combination, a key having a top equipped with an axially vertical ring, and a resilient member having a base portion disposed within said ring and an upper portion projecting above said ring, said base portion being contracted at its upper end to a diameter smaller than said ring, to permit radial expansion thereof upon a downward pressure on said member.

1,218,761. LICENSE-TAG HOLDER. RICHARD S. GRANT, Akron, Ohio. Filed July 24, 1916. Serial No. 110,992. (Cl. 40—125.)



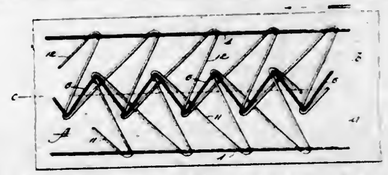
1. A license tag holder comprising four L-shaped members all of which are trough-shaped in cross section, two of the members being greater in cross sectional area than the other two and with the larger and smaller members alternating in position, the ends of coadjacent members adapted to telescope, the ends of the smaller members provided with slots, studs on the hollow faces of the larger members and adapted to project through said slots, reinforcing members provided with apertures to receive said studs and positioned in the smaller members at the joints between larger and smaller members, clamping members mounted on said studs, means on said studs to draw said clamping members toward said L-shaped members to clamp a license tag against the faces of said L-shaped members.

2. A license tag holder comprising four L-shaped members all of which are trough-shaped in cross section, two of the members being greater in cross sectional area than the other two and with the larger members opposing each other diagonally of the structure and the smaller members similarly disposed and alternating in position thereto, the ends of the smaller members adapted to be received in and lap the ends of the coadjacent larger members, the ends of the smaller members provided with slots, studs on the inner hollow faces of the larger members and adapted to project through said slots, reinforcing members mounted in the hollow portions of the smaller members where said smaller members overlap the ends of the larger members, said reinforcing members provided with apertures to receive said studs, clamping members extending inwardly toward each other mounted on said studs, means on said studs to draw said clamping members toward said L-shaped members for holding a license tag in position.

3. A license tag holder comprising four L-shaped members all of which are trough-shaped in cross section thereby providing one convex face and one concave face for each member, all of the edges of said members being approximately in the same plane, each concave face constituting a seat, two of the members fashioned of greater cross sectional area than the other two and disposed with the larger members opposing each other diagonally of the structure and with the smaller members similarly positioned, the ends of the smaller members adapted to be received in and overlap the ends of the larger members, the ends of certain of the members provided with slots, studs on the faces of the other members and adapted to project through said slots, reinforcing members provided with apertures adapted to receive said studs positioned in said smaller members where said members overlap, a sheet of transparent material mounted on said seats, a license tab or the like positioned against said sheet of transparent material, clamping members arranged on said members, and means to draw said clamping members toward said seats to hold said license tag and transparent sheet firmly against said seats.

4. A device of the class described comprising a plurality of trough-shaped members fashioned, when assembled, to form a hollow frame-like structure, a portion of said members being of larger cross sectional area than the others to thereby permit the nesting and overlapping of the end portions of coadjacent members, the ends of certain of said members where they overlap being provided with slots, means carried by the end portions of the other members arranged to extend through said slots, means on said extending means for clamping the overlapping portions of contiguous members together, and means for clamping a device such as a license tag against the edges of the rear faces of said members.

1,218,762. SEAM FOR SEWED ARTICLES. ALFRED GRIEB, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Mar. 8, 1916. Serial No. 82,789. (Cl. 112—34.)



1. In a seam, the combination with fabric, of two outer threads each formed at intervals with loops, an intermediate zigzag thread formed with loops disposed in zigzag arrangement, means for keying the loops in said outer and intermediate threads, and two cross-threads each looped

back and forth between the intermediate thread and each outer thread, respectively, and concatenated with loops in said outer and intermediate threads.

2. In a seam, the combination with fabric, of two outer straightaway threads, each formed with loops disposed in a substantially straight row, an intermediate zigzag thread formed with loops disposed in zigzag arrangement, means for keying the loops in said outer and intermediate threads, and two cross-threads each looped back and forth between the intermediate thread and each outer thread, respectively, and concatenated with loops in said outer and intermediate threads.

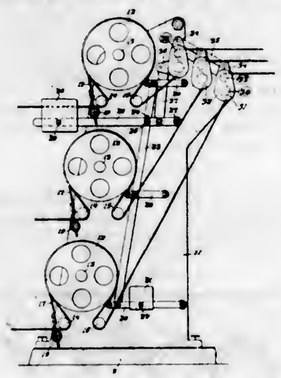
3. In a seam, the combination with fabric, of two outer straightaway threads disposed mainly upon one face of the fabric and each formed with loops disposed in a substantially straight row, of a keying thread disposed mainly upon the opposite face of the fabric and concatenated with the loops of said outer threads, a row of zigzag stitches disposed between said outer threads and confining said keying thread, and two cross-threads each looped back and forth between the zigzag stitches, and each outer thread, respectively, and concatenated with loops of said outer threads and said zigzag stitches.

4. In a seam, the combination with two opposed edge-portions of fabric, of two outer threads, one on each side of the line of division and each formed at intervals with loops entering the fabric, an intermediate zigzag thread formed with loops disposed in zigzag arrangement and entering the fabric alternately on each side of the line of division, means for keying said loops, and cross-threads each looped back and forth between the zigzag thread and each outer thread, respectively, extending across the line of division, and concatenated with the loops of said outer and zigzag threads.

5. In a seam, the combination with fabric, of two outer threads, each formed at intervals with loops, an intermediate zigzag thread formed with loops disposed in zigzag arrangement, means for keying the loops of said outer and intermediate threads, and two cross-threads each looped back and forth between the intermediate thread and each outer thread, respectively, and concatenated with loops of said outer and intermediate threads, all of the crossing portions of each cross-thread being similarly inclined to the median line of the seam.

[Claims 6 and 7 not printed in the Gazette.]

1,218,763. WEB-TENSIONING DEVICE FOR TIRE-MAKING MACHINES. FRANK H. GROVE, Columbiana, Ohio. Filed Dec. 16, 1915. Serial No. 67,095. (Cl. 242—75.)



1. A machine of the character described, comprising a frame, a power driven annular form mounted in said frame, a tension rocker mounted in said frame, a friction drum rotatably mounted in said frame, a brake band located around said friction drum, one extremity of said brake band being connected to said frame, a weighted lever pivotally mounted upon said frame, a second weighted lever pivotally mounted upon said frame, a link pivotally connected to said first named weighted lever and provided with a slot, a pin carried by said second named weighted lever and normally located at the lower extremity of said slot, a weight operatively-connected to the lower end of said link, a rocker mounted in said frame, means connecting said rocker to said lever, and a stock roll rotatably mounted in said frame, the fabric from said stock roll arranged to pass around said friction drum and around said rocker, the extremity of said fabric being attached to said annular form.

2. A machine of the character described, comprising a frame, a power driven annular form mounted in said frame, a rocker mounted in said frame, a pair of spaced rock arms carried by said rocker, a shaft spaced from said rock shaft and carried between said spaced rock arms, a friction drum mounted in said frame, a brake band located around said friction drum, one extremity of said brake band being connected to said frame, a weighted lever pivotally mounted upon said frame, a second weighted lever pivotally mounted upon said frame, a link pivotally connected to said first named weighted lever and provided with a slot, a pin carried by said second named weighted lever and normally located at the lower extremity of said slot, the free extremity of said brake band being connected to said link, a third rock arm carried by said rock shaft, a second link pivotally connecting said last named rock arm with said last named weighted lever and a stock roll rotatably mounted in said frame, the fabric from said stock roll being arranged to pass around said friction drum and around said rock shaft and over said last named shaft, the extremity of said fabric being attached to said annular form.

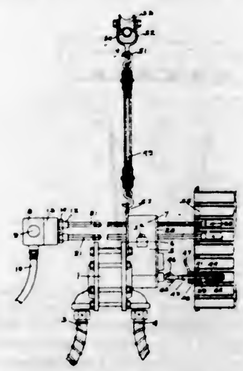
3. A machine of the character described, comprising a frame, a power driven annular form mounted in said frame, a tension rocker, a friction drum rotatably mounted in said frame, a brake band passed around said friction drum, one end of said brake band connected to said frame, a weighted lever pivotally mounted upon said frame, a link operatively connected to the free end of said brake band, and provided with a slot, a pin carried by said weighted lever and normally located at the lower extremity of said slot, a weight operatively-connected to the lower end of said link, a rocker mounted in said frame, means connecting said rocker to said lever, and a stock roll rotatably mounted in said frame, the fabric from said stock roll arranged to pass around said friction drum and around said rocker, the extremity of said fabric being attached to said annular form.

1,218,764. DEVICE FOR EXTRACTING FOREIGN SUBSTANCES FROM PIPES. ISAAC G. HANLEIN, Newark, N. J. Filed Nov. 16, 1916. Serial No. 131,679. (Cl. 4—1.)



As an article of manufacture a combined force cup and cleaning tool, comprising a flexible force cup provided with a hollow handle, a cleaning tool adapted to be inserted in said hollow handle and to be removed therefrom, said cleaning tool provided with a handle and a stop to limit its movement in the hollow handle of the force cup handle.

1,218,765. MULTIPLE-TUBE-CLEANING APPARATUS. ELMER E. HAUER, Springfield, Ohio, assignor to Elliott Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 15, 1916. Serial No. 97,726. (Cl. 83—64.)



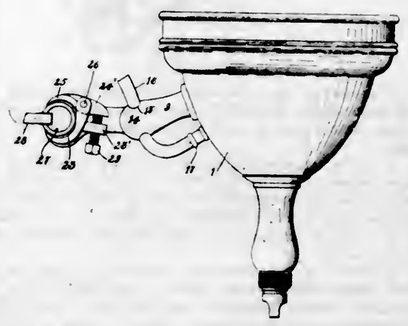
1. In a multiple tube cleaner, a motor and a casing having a plurality of gears therein, means to secure the same in a fixed position, a water-box having hollow cleaner rods extending therefrom and movable therewith, said rods being movable longitudinally through journals in said casing into the tubes to be cleaned and adapted to be rotated by said gears and cleaner heads on said rods, substantially as described.

2. In a multiple tube cleaner, a motor and a casing having a plurality of gears therein, means to flexibly carry the same into a fixed position, and means to secure the same in said position, a water-box having hollow cleaner rods extending therefrom and movable therewith, said rods being movable longitudinally through journals in said casing into the tubes to be cleaned and adapted to be rotated by said gears, cleaner heads on said rods and a flexible supply conduit secured to said box, said water-box forming a handle to manipulate said rods, substantially as described.

3. In a multiple tube cleaner, a casing having an open end with a seat, a plurality of casings each having an open end adapted to be secured to said seat, gears in each of said casings, one of the gears in said first named casing being adapted to mesh with one of the gears in any one of the other casings, means to flexibly carry said first named casing and any one of the other casings into a fixed position and means to secure the same in said position, a water-box having hollow cleaner rods extending therefrom and movable therewith, said rods being movable through said last named casing into the tubes to be cleaned and adapted to be rotated by said gears, cleaner heads on said rods and a flexible supply conduit secured to said water-box, substantially as described.

4. In a multiple tube cleaner, a casing formed as a part of a motor and having an open end with a seat and a gear in said casing, a plurality of casings each having an open end adapted to be secured to said seat, a plurality of gears in each of said last named casings, one of which is adapted to mesh with each of the others and another one of said gears adapted to mesh with the gear in said first named casing, a plurality of water-boxes each having journaled therein and extending therefrom hollow cleaner rods movable therewith, the rods of one box being movable longitudinally through journals in one of said plurality of casings into the tubes to be cleaned and adapted to be rotated by the gears therein, said water-boxes and last named casings being arranged in pairs, each pair having their rod journals like distances apart, said distances being different in the respective pairs adapting the rods to enter differently spaced tubes, cleaner heads on said rods and outlets from said rods adjacent to said heads, substantially as described.

1,218,766. VEHICLE-LAMP. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Filed June 26, 1916. Serial No. 105,786. (Cl. 240—57.)



1. A clamp comprising an arm having a fixed jaw, a pair of independently adjustable jaws operatively connected with said fixed jaw, and a pair of independently operable members carried by said fixed jaw and operating each against one of said movable jaws for independently adjusting said movable jaws to thereby adapt the clamp to supports of varying cross section.

2. Means for connecting a lamp to supports of various sections, comprising an arm having a substantially vertical end wall of hook-shaped cross-section to form a seat for the support, lugs on the back of said wall, spaced hinge-like bearings at one edge of the wall, independent clamp-leaves pivoted in said bearings, screws in said lugs for closing the leaves on the support, and an arm pivoted on the clamp arm, and upon which the lamp is turnably mounted.

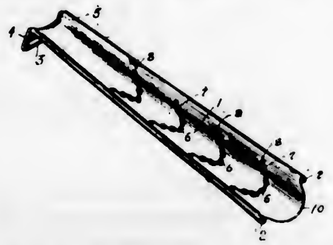
3. A clamp and hanger for lamps, comprising an elongated main hinge-like leaf with a concaved face forming a seat for a support to which the clamp may be attached, one edge of the leaf having spaced bearings, a pintle therein, independent leaves on said pintle and having ears projecting rearwardly thereof, lugs on the back of the elongated leaf, screws in said lugs for acting on the ears of the pivoted leaves, and an arm projecting rearwardly from the intermediate portion of the main leaf and to which a lamp is connectible for universal movement.

4. A clamp comprising an arm terminating in a downwardly extending curved fixed jaw, a pair of spaced lugs extending rearwardly from said jaw, a pair of independently adjustable curved jaws pivoted near one end of said fixed jaw at opposite sides of said arm, a lug extending rearwardly beyond the pivot of each adjustable jaw, and overlying said pair of lugs, and a set screw engaging each pair of overlying lugs for independently adjusting said pivoted jaws to supports of varying cross-section.

5. A bracket for mounting a lamp in universally adjustable relation to a support, comprising offset parallel lamp and clamp carrying arms pivotally connected with each other at their overlapping ends, a headed stud on said lamp carrying arm adapted to be fitted in a lamp, and a clamp on said clamp carrying arm adapted to adjustably engage the tubing of the windshield to accommodate the bracket to variations in the cross-section of the tubing.

[Claims 6 to 11 not printed in the Gazette.]

1,218,767. CLIMBOUT AND SHOVEL. SAMUEL H. HEGINBOTTOM, Saginaw, Mich. Filed Aug. 3, 1916. Serial No. 112,923. (Cl. 104—45.)

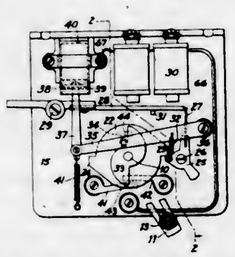


1. A device of the character described comprising a trough shaped body having a handle at one end and a series of cross chains secured at their ends in the sides of the trough.

2. A device of the character described comprising a trough shaped body having rolled edges and having a handle extending downward from one end and a series of chains secured at their ends in the sides of the trough and of a length greater than the distance between the securing points.

3. A device of the character described comprising a trough shaped body having rolled edges and having a downwardly turned handle at one end and at the other end extending beyond the rolled edges to form a shovel end, and a series of chains arranged to lie in the trough with their ends secured in the sides of the trough.

1,218,768. THERMOSTATIC REGULATOR. WILLIAM C. HEINDL, Rochester, N. Y. Filed Mar. 29, 1915. Serial No. 17,867. (Cl. 236—4.)

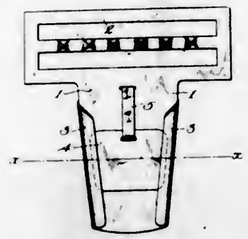


1. In combination with a power actuated member adapted for connection with the drafts of a furnace, an electrically operated escapement for said power actuated member, a thermostatically operated circuit controller for said escapement manually adjustable for different temperatures, a switch included in the circuit of the thermostatically operated circuit controller and connected to the thermostatically operated circuit controller to be moved to open position, when the thermostatically operated circuit controller is adjusted to a certain position, and a clock mechanically connected to the last named switch to shift the latter to closed position at a predetermined time.

2. In combination a power actuated member adapted for connection with the drafts of a furnace, an electrically operated escapement for said power actuated member, a thermostatically operated circuit controller for said escapement, a switch included in the circuit of the thermostatically operated circuit controller, and mechanically connected to the thermostatically operated switch so that when the latter is adjusted to a certain position, the switch will open its circuit, and a clock controlling the switch to swing the latter to close the circuit.

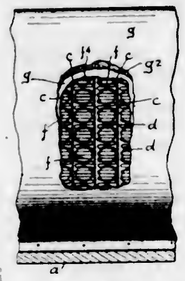
3. In a thermostatic regulator, the combination of a power-actuated rotary member adapted for connection with the drafts of a furnace, thermostatically-controlled escapement-mechanism for permitting successive semi-rotations of the rotary member, a dash-pot, and cam-mechanism connecting the dash-pot with the rotary member and arranged to act through an increasing radius, so as to subject the rotary member to a retarding force increasing toward the latter part of each semi-rotation.

1,218,769. GARMENT-CLASP. FRED T. HILL, Chicago, Ill. Filed Dec. 3, 1914. Serial No. 875,388. (Cl. 24—263.)



A garment supporter clasp, comprising a main member having at one end a strap attaching eye and in central relation thereto a depending portion formed with an open front tapering throat, a removable wedge member fitting said tapering throat and having a length less than that of said throat and adapted to lie wholly within said throat when in place, and a pliable member extending from the main member and attached to the main portion of the wedge member, substantially as set forth.

1,218,770. UPHOLSTERY. CLARENCE A. HILLS, Detroit, Mich., assignor to Hudson Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 28, 1915. Serial No. 24,383. (Cl. 155—25.)



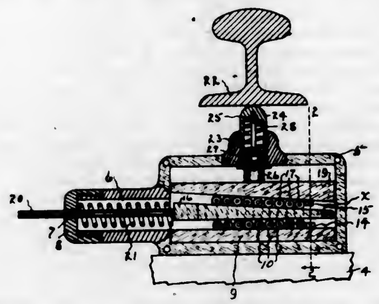
1. In a spring cushion, a plurality of upright spiral springs, a strip formed of looped wire the loops being of a length approximately equal to the diameter of the outer spire of said springs, said strip passing over said spring so as to cover the outer spires thereof to form a continuous surface of closely adjacent wires and sheet material passing over said strip.

2. In a spring cushion, a plurality of upright spiral springs, a strip formed of looped wire the loops being of a length approximately equal to the diameter of the outer spire of said springs, said strip passing over said spring so as to cover the outer spires thereof to form a continuous surface of closely adjacent wires and sheet material passing over said strip, the wires forming said loops being secured to the wire forming the outer spire of said springs at points on opposite sides of the center line of said spires.

3. In a spring cushion, a plurality of rows of upright spiral springs, a strip formed of a looped wire, said loops being of a length approximately equal to the diameter of the outer spires of said springs, passing over each row of said springs, said strips being parallel and adjacent to each other so that they shall form a continuous surface of closely adjacent wires and sheet material passing over said strip.

4. In a spring cushion, a plurality of upright spiral springs, a strip formed of looped wire the loops being of a length approximately equal to the diameter of the outer spire of said springs, said strip passing over said spring so as to cover the outer spires thereof to form a continuous surface of closely adjacent wires and sheet material passing over said strip, the ends of said strip being unattached and so located that they shall have freedom of movement.

1,218,771. MECHANICAL MOVEMENT. WILLIAM H. HOESCHEN and JOSEPH A. HOESCHEN, Omaha, Nebr. Filed Nov. 23, 1916. Serial No. 132,941. (Cl. 74—14.)



1. A mechanical movement, comprising, in combination, an upper plate, a lower plate, a wedge between the plates and provided with an actuating rod projecting outwardly of the plates, a plurality of rollers disposed between and engaging the wedge and lower plate, a plurality of rollers disposed between and engaging the wedge and upper plate, and an element arranged to press one of the plates toward the other plate for moving the wedge and actuating rod longitudinally of the plates.

2. A mechanical movement comprising, in combination, two adjacently disposed plates, a wedge therebetween and provided with a projecting part, rollers interposed between the plates and wedge, and an element arranged to press one of the plates toward the other plate to move the rollers in the same direction longitudinally of the plates and to move the wedge outwardly of said plates.

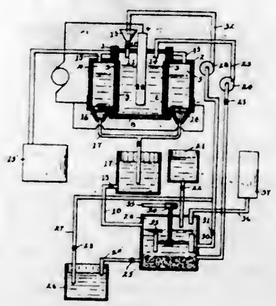
3. A mechanical movement comprising a pair of adjacent plates, a wedge between the plates, rollers between the wedge and said plates, and a pressure element for moving the wedge longitudinally of the plates, one of said plates moving toward the other plate while the wedge is moving in one direction and moving away from the other while the wedge is moving in a reverse direction.

4. A mechanical movement comprising, in combination, two adjacently disposed plates, a wedge therebetween, rollers interposed between the plates and wedge, a pressure element for moving one of the plates transversely toward the other plate to move the rollers in one direction and to move the wedge outwardly of said plates, and a resilient member interposed between the pressure element and one of said plates.

5. A mechanical movement comprising, in combination, a support, a plate on the support, a second plate adjacent to the first named plate, a wedge between the plates, connected side bars arranged in pairs at the opposed side edges of the plates and wedge, rollers journaled at their respective ends upon a side bar of each pair and disposed between the first named plate and the wedge, rollers journaled at their respective ends upon a side bar of each pair and disposed between the second plate and the wedge, and an element arranged to press one of the plates transversely toward the other plate for moving the wedge longitudinally of said plates.

[Claims 6 to 8 not printed in the Gazette.]

1,218,772. BATTERY-DEPOLARIZER. MAJOR E. HOLMES, Lakewood, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Dec. 13, 1913. Serial No. 806,356. (Cl. 204—38.)



1. The method of making a battery depolarizer which consists of precipitating a manganous hydroxid from a manganous compound and oxidizing the hydroxid with chlorin.

2. The method of making a battery depolarizer which consists in precipitating a manganous hydroxid from a solution of manganous chlorid by means of a hydroxid and oxidizing it with chlorin.

3. The method of making a battery depolarizer which consists in precipitating a manganous hydroxid from a solution of a manganous salt, gradually admitting chlorin to oxidize the manganous hydroxid and simultaneously admitting a hydroxid to neutralize the acid formed by the said oxidation.

4. The method of making a battery depolarizer which consists in electrolyzing a chlorid to form a hydroxid and chlorin gas, and treating a manganese compound with the hydroxid and the chlorin.

5. The method of making a battery depolarizer which consists in forming a hydroxid and chlorin gas by electrolysis of a chlorid solution, precipitating a manganous hydroxid from a manganous salt by means of the first mentioned hydroxid and oxidizing the manganous hydroxid by treatment with the chlorin.

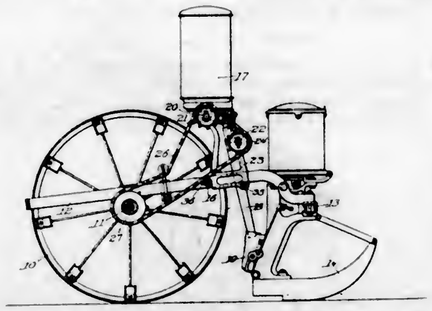
[Claims 6 and 7 not printed in the Gazette.]

1,218,773. FERTILIZER ATTACHMENT FOR CORN-PLANTERS. ARTHUR HOLSEY, Chicago, Ill., assignor to International Harvester Corporation, a Corporation of New Jersey. Filed Sept. 26, 1913. Serial No. 791,940. (Cl. 111—34.)

1. In a seed planter, a planter frame, an axle thereon, fertilizer containers carried on said frame, driving means for said containers comprising a feed operating shaft for each of the same, a countershaft arranged forwardly of the feed operating shafts, means connecting one end of the same to one of said feed operating shafts, and driving means connected to the other of said feed operating shafts and to the opposite end of said countershaft and operatively connected to said axle.

2. In a seed planter, fertilizer containers carried on the frame of said planter, driving means for said containers comprising a separate feed operating shaft for each of the containers, a wheel for each of said shafts, a countershaft arranged forwardly of and below said feed operating shafts, wheels on said countershaft in line with the wheels on said feed operating shafts, means for connecting the wheel on one of said feed operating shafts with the alined wheel on the countershaft, and a driving member con-

nected to the axle of the planter and to the remaining alined wheels on the feed shaft and countershaft.



3. In a seed planter, fertilizer containers carried on the frame of said planter, driving means for said containers comprising a separate feed operating shaft for each of said containers projecting inwardly a short distance, a sprocket wheel on the inner end of each of said shafts, a countershaft arranged forwardly and below said feed operating shaft, sprocket wheels on said countershaft in line with the sprocket wheels on the feed operating shafts, a chain connecting the wheel on one of said feed operating shafts with the alined wheel on the countershaft, and a driving chain connected to the axle of the planter and passing over the remaining alined wheels on the feed operating shaft and countershaft.

4. In a seed planter, carrying wheels, an axle for said wheels, a frame on said axle, fertilizer containers carried on said frame, driving means for said containers comprising a feed operating shaft for each of said containers, a countershaft connected to said feed operating shafts, a driving wheel carried on the axle of said planter, means for connecting said driving wheel to said countershaft, and a clutch member arranged between said driving wheel and said axle operable to throw the driving wheel into and out of engagement with the axle.

5. In a seed planter, a frame, an axle thereon, brackets disposed on opposite sides of said planter frame, fertilizer containers carried on said brackets, feed operating shafts for each of said containers rotatably mounted on said brackets, a countershaft journaled on said brackets, and operative connections between said countershaft and feed operating shafts and said countershaft and axle.

1,218,774. WINDOW-SHADE BRACKET. GUY S. HOOVER, Colorado Springs, Colo. Filed July 24, 1916. Serial No. 110,991. (Cl. 156—24.)



1. In a shade bracket, the combination with a window sash mounted on a window frame, of a supporting arm secured to the sash, means carried by the supporting arm and extending at right angles therefrom to lie in front of the window frame for supporting a shade roller, brace elements for the said supporting arm, the said elements having V-shaped slots, and material embraced by the slots being bent to provide prongs depending from one of the said brace elements.

2. In a shade bracket, the combination with a window sash mounted on a window frame, of a supporting arm secured to the sash, means carried by the supporting arm and extending at right angles therefrom to lie in front of the window frame for supporting a shade roller, brace elements for the said supporting arm, the said elements having V-shaped slots, material embraced by the slots being bent to provide prongs depending from one of the said brace elements, and a bumper secured to the said prongs.

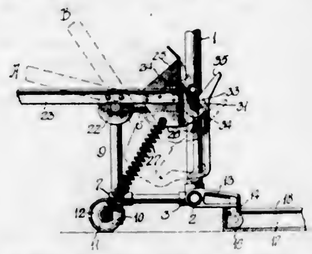
3. In a shade bracket, the combination with a window sash mounted in a window frame, of a supporting arm, brace flanges formed on each marginal edge of the supporting arm, the ends of the said supporting arm and the said brace flanges being extended and bent to overlap each other to form a supporting flange, the said brace flanges having V-shaped slots formed therein, the said supporting arm also having a V-shaped slot formed at its point of connection with the said slotted brace, the material embraced by the said slots being bent to provide prongs depending from the said slotted brace flange.

4. In a shade bracket, the combination with a window sash mounted in a window frame, of a supporting arm carried by the window sash at one end thereof, brace flanges extending at right angles from each marginal edge of the supporting arm, the terminal of the said supporting arm and the ends of the said flanges being bent to provide a supporting flange adapted to be fastened to the said window sash, the lowermost of the said brace flanges being provided with V-shaped slots, the material displaced by the slots being bent to provide prongs, the lower marginal edge of the said supporting arm being also provided with a V-shaped slot, the material displaced by the said latter slot being bent downwardly at right angles to the said lowermost base flange for providing another prong, and a bumper secured to the said prongs.

5. A shade roller bracket including a supporting arm provided with upper and lower brace flanges, flanges formed by bending the ends of the brace flanges for securing the supporting arm to a window sash, a retaining arm carried by the supporting arm and provided with a vertical slot for receiving the trunnion of a shade roller, and a stud formed on the retaining arm and extending vertically therefrom.

[Claims 6 and 7 not printed in the Gazette.]

1,218,775. BED. LEWIS C. HUNTER, Detroit, Mich. Filed Dec. 13, 1915. Serial No. 66,478. (Cl. 5—37.)

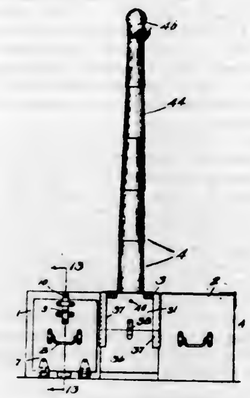


1. A foldable bed comprising a head piece, a movable counterbalance member supported thereby, and a bed structure pivoted relative to said head piece and adapted to pick up said counterbalance member after initial raising movement of said structure and discharge said counterbalance member before completing the raising movement of said structure.

2. A foldable bed comprising a head piece, a movable elevated member supported thereby and adapted to descend by gravity, and a bed structure pivoted relative to said head piece and adapted when partially elevated to release said member whereby said member controls the further movement of said bed structure.

3. The combination of a bed structure capable of being swung from a horizontal position to a vertical position, springs facilitating an initial and final movement of said bed structure and a counterbalance member inactive during an initial and final movement of said bed structure and adapted to be brought into action during the interim of such movements.

1,218,776. FIELD-RANGE. MICHAEL ILITZ, Manila, Philippine Islands. Filed Dec. 26, 1913. Serial No. 808,666. (Cl. 126—9.)



1. A collapsible stove comprising spaced cooking units having vertically disposed channels on their opposed walls and having longitudinally extending slotted members along the upper edges of said walls, and a sectional fire-box member having the opposite edges of a section thereof disposed for engagement in said channels and having depending flanges on the opposite edges of another section thereof disposed for interlocking engagement in the slots of said slotted members whereby to detachably connect said units.

2. A collapsible stove, comprising a pair of spaced cooking units, a collapsible fire-box section connecting said units, and an angle member defining with adjacent portions of said section a stack flue adapted to receive a portion of a smoke stack.

3. In a collapsible stove, a pair of spaced cooking units having outlet openings in their opposed walls, an intermediate collapsible structure detachably connecting said units and forming with said opposed walls an inclosed fire chamber, and a member defining with said collapsible structure a flue common to the outlet openings of both units.

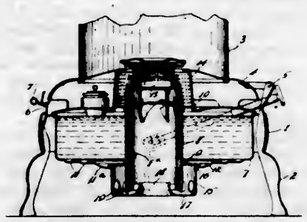
4. A collapsible stove comprising a pair of cooking units having substantially oppositely disposed outlet openings near the upper rear portions of their opposed walls, a sectional structure detachably connecting said units and forming with said opposed walls an inclosed fire-chamber, and a partition forming with the rear and top sections of said sectional structure a stack flue disposed between the outlets of said units and in communicating relation therewith.

5. A fire-box element consisting of a top section and front and rear sections movably connected with the top section, and a member secured to said rear section and contacting with said top section and defining therewith a stack flue.

1,218,777. OIL-STOVE. WILLIAM R. JEAVONS, Cleveland, Ohio. Filed July 30, 1913. Serial No. 782,005. (Cl. 158—94.)

1. The combination, with a font, of wick tubes extending therethrough and projecting therebeneath, of a wind shield surrounding the lower ends of the tubes, said wind shield comprising a wall surrounding and spaced from the tubes, an inwardly directed wall beneath and spaced from the bottoms of the tubes, and an upwardly projecting wall within and spaced from the inner wick tube, the outer wall being perforated.

2. The combination, with a font, of wick tubes extending through and beneath the font, and a wind shield applied to the bottom of the font and surrounding the lower ends of the wick tubes, said shield being spaced exteriorly from the outer wick tube and from the bottoms of both tubes and being interiorly spaced from the inner wick tubes, whereby there is provided an annular passageway for air surrounding the lower ends of the tubes and extending beneath the tubes and upwardly within the inner tube.



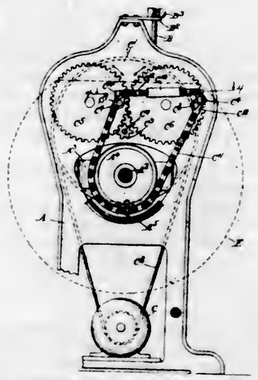
3. The combination, with a font, of wick tubes extending through said font, and a wind shield applied to the bottom of the font and extending beneath and spaced from the lower ends of the wick tubes and extending upwardly within and spaced from the lower portion of the inner wick tube, whereby a continuous air passage is formed beneath said tubes and upwardly within the inner tube.

4. The combination, with a font, of a pair of wick tubes extending therethrough and therebeneath, a wind shield carried by the font outside of the outer wick tube, said wind shield comprising a portion depending from the font to a point below the wick tubes and spaced therefrom and provided with perforations adjacent the bottom of the outer wick tube, a portion projecting inwardly beneath the wick tube and spaced therefrom, and a portion projecting upwardly within the inner wick tube and spaced therefrom to form an annular passageway therewith.

5. The combination, with a font, of an inner wick tube extending from the top to the bottom of the font, and a wind shield coöperating with the bottom of said wick tube and having a portion extending beneath and spaced from the bottom of the wick tube and a portion within the circumference defined by the wick tube and adapted and arranged to deflect the air upwardly within the same.

[Claims 6 and 7 not printed in the Gazette.]

1,218,778. MECHANICAL MOVEMENT. FRANCIS T. JOHNSON, Chicago, Ill. Filed Sept. 1, 1916. Serial No. 117,967. (Cl. 74—50.)



1. A driving mechanism comprising a pair of cranks and means for rotating them in opposite directions, compensating levers rotatably mounted one upon each crank, a rotatably mounted driven member, a flexible belt in peripheral engagement therewith, its ends being anchored on one of each said compensating levers.

2. A driving mechanism comprising a pair of cranks and means for rotating them in opposite directions, compensating levers rotatably mounted one upon each crank, a rotatably mounted driven member, a flexible belt in peripheral engagement therewith, its ends being anchored on one of each said compensating levers and a straight line connection between the free ends of said levers.

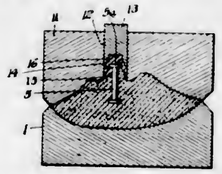
3. A driving mechanism comprising a pair of cranks and means for rotating them in opposite directions, compensating levers rotatably mounted one upon each crank, a rotatably mounted driven member, a flexible belt in peripheral engagement therewith, its ends being anchored on one of each said compensating levers and a yielding connection between the free ends of said levers.

4. A driving mechanism comprising a pair of cranks and means for rotating them in opposite directions, compensating levers rotatably mounted, one upon each crank, a rotatably mounted driven member, a flexible belt in peripheral engagement therewith, its ends being anchored on one of each said compensating levers and a straight line connection between the free ends of said levers, the free arms of said levers being bent inwardly toward one another.

5. A driving mechanism comprising a pair of cranks and means for rotating them in opposite directions; compensating levers rotatably mounted one upon each crank, a rotatably mounted driven member, a flexible belt in peripheral engagement therewith, its ends being anchored on one of each said compensating levers and a yielding connection between the free ends of said lever, the free arms of said levers being bent inwardly toward one another.

[Claim 6 not printed in the Gazette.]

1,218,779. METHOD OF MANUFACTURING ARTIFICIAL TEETH AND OTHER ARTICLES. WALTER W. CRATE, Camden, N. J. Filed Jan. 12, 1916. Serial No. 71,642. (Cl. 32—9.)



1. The method of manufacturing an artificial tooth having an anchor element of metal partially embedded in the material of said tooth, such metal fusing at a lower temperature than that at which the material of the tooth fuses, which comprises placing the said anchor element in position in the tooth while the material thereof is in a plastic state, entirely covering the projecting portion of said anchor element with a layer of the material of which the tooth is composed and thereafter heating the said tooth and layer to a temperature sufficient to fuse the material thereof.

2. The method of manufacturing an article from fusible plastic material having an anchor element of metal partially embedded therein which consists in placing the said element in position with a portion thereof embedded in said article and entirely covering the projecting portion of said element with a layer of material fusible only at a temperature equal to or greater than that at which the said plastic material of which the article consists is fusible and firing said article to fuse the same.

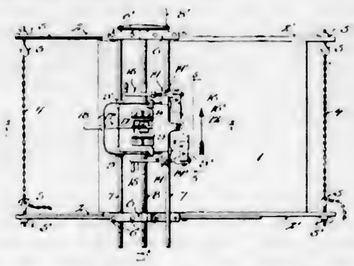
3. The method of manufacturing an article from fusible plastic material having an anchor element of metal partially embedded therein which consists in placing the said element in position with a portion thereof embedded in said article and entirely covering the projecting portion of said element with a layer of material fusible only at a temperature equal to or greater than that at which the said plastic material of which the article consists is fusible, firing said article to fuse the same and thereafter removing the said layer from the said projecting portion.

4. The method of manufacturing an artificial tooth having an anchor element of metal partially embedded in the material of said tooth, such metal fusing at a temperature lower than that at which the material of the tooth fuses, which comprises placing the said anchor element in position in the tooth while the material thereof is in a plastic state entirely covering the projecting portion of said anchor element with a coating of material which is fusible only at a very high temperature and thereafter firing the said tooth, raising it to a temperature sufficient to fuse the material thereof.

5. The method of manufacturing an artificial tooth of fusible plastic material which consists in partially embedding a pin in the body portion of the plastic tooth form and surrounding the sides of the projecting portion of said pin with portions of the plastic material projecting from the body of said tooth form, placing a laterally confining wall around the said projecting portion of said material, placing plastic fusible material upon the top of the projecting portion of said pin and around the sides of the portion of material projecting from the said tooth form, firing the said tooth and the material which covers the projecting portion of the said pin and thereafter removing the covering from the projecting portion of said pin.

[Claim 6 not printed in the Gazette.]

1,218,780. BLOCK-FINISHING APPARATUS. EUCLID LAJEUNESSE, Milwaukee, Wis. Filed Sept. 17, 1915. Serial No. 51,273. (Cl. 144—2.)



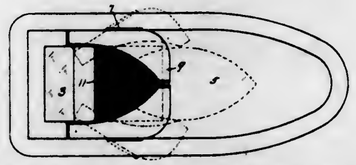
1. A block finishing apparatus comprising a main clamping frame including side rails adapted for engagement with the sides of a block and transverse tie members adjustably connected to the ends of the rails, a bridge including shoes in slidable union with the said side rails, and rails connecting the shoes, the connection of one of the shoes with the bridge rails being adjustable whereby to compensate for variations in the distance between the side rails of the clamping frame, a threaded spindle upon the bridge in parallel relation to the rails thereof, a cutter carrying carriage reciprocally mounted upon the bridge rails and a nut carried by the carriage for engagement with the threaded spindle.

2. A block finishing apparatus comprising a main clamping frame including side rails adapted for engagement with the sides of a block and transverse tie members adjustably connected to the ends of the rails, a bridge including shoes in slidable union with the said side rails and rails connecting the shoes, a threaded spindle upon the bridge in parallel relation to its rails, a cutter carrying carriage reciprocally mounted upon the bridge rails, a nut carried by the carriage for engagement with the threaded spindle, and means carried by the carriage and engageable with a block for advancing the bridge.

3. In a block finishing apparatus including side rails adapted for securement at the side of a block and a bridge including shoes in slidable union with the side rails and bridge rails connecting the shoes, the combination of a cutter carrying carriage reciprocally mounted upon the bridge rails, and means for advancing the carriage and bridge comprising a lever member intermediately pivoted to the carriage and a pawl pivoted to the lever and adapted to grippingly engage a block in one direction of movement.

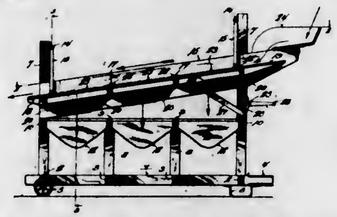
4. In a block finishing apparatus the combination with a bridge member adapted for securement over a block for movement thereover of a cutter carriage reciprocally mounted upon the bridge rail, non-rotatable bars carried by the carriage and adjustable in the direction of movement of the bridge, inclined knife plates carried by the bars and vertical knife sections carried by the bars and coacting with respective inclined plates.

1,218,781. FLAT-IRON HOLDER AND CLEANER. JERRY LA MOTHE, Grayling, Mich. Filed Apr. 18, 1916. Serial No. 91,879. (Cl. 68—27.)



In a sad-iron holder, the combination with a base having a laterally extending pocket, of wiping means on said base, substantially L-shaped guides extending up from the base, parts of said guides adapted to extend into said pocket, resilient means connecting said parts of said guides, jaws located on said base and affixed to the upper edge of said guides, wiping means on said jaws, the whole so arranged that the lateral movement of the jaws is governed solely by the resiliency of said resilient means.

1,218,782. GRADER. CHARLES A. LARKIN, Wonewoc, Wis. Filed July 6, 1915. Serial No. 38,143. (Cl. 130—82.)

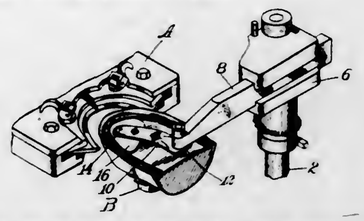


A grader of the class described comprising a support, a plurality of trough-shaped inclined chutes formed of screening material carried by the lower portion thereof, a carrier formed of guards mounted for longitudinal reciprocable movement within said support, said guards being connected by regularly spaced transverse partitions, a series of hoppers held by said partitions, each of said hoppers having inwardly projecting flanges at its upper extremity and terminating at its lower exeremity in a restricted opening for positively delivering articles passing therethrough into an individual one of said chutes, a plurality of grading screens of different meshes removably and interchangeably supported upon the flanges of said hoppers and between said partitions, a feed chute carried by and between the rear ends of said guards arranged to deliver on to the adjacent screen, and means for reciprocating said guards and the parts supported thereby in a longitudinal direction.

1,218,783. HOLDDOWN FOR LASTING-MACHINES. LEWIS H. LARSEN, Racine, Wis., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 26, 1913. Serial No. 769,954. (Cl. 12—14.)

1. A lasting machine hold-down device comprising an arm movable over a shoe supported by a lasting machine and a pressing member connected with said arm and provided with two pressing faces, one conforming to the toe portion of a right sole and the other to the toe portion of a left sole, said faces being interchangeably operative.

2. A lasting machine hold-down device comprising an arm movable over a shoe supported by a lasting machine, a pressing member having two pressing faces, one conforming to the toe portion of a right sole and the other to the toe portion of a left sole, and connections between said arm and pressing member whereby said faces may be made interchangeably operative.



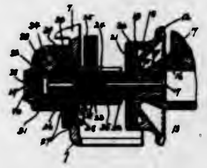
3. A lasting machine hold-down device comprising an arm movable over a shoe supported by a lasting machine, an invertible presser member having on its upper and lower sides, respectively, pressing faces shaped to fit different shoes, and means for holding said member to the arm with either pressing face of the member disposed downwardly in shoe engaging position.

4. A lasting machine hold-down device comprising an arm movable over a shoe supported by a lasting machine and a pressing member connected with said arm and provided with two pressing faces, one conforming to the toe portion of a right sole and the other to the toe portion of a left sole, said arm having a stud 14, a pressing member having a hole 18 to coöperate with the stud and a second hole 20, and means engaging the hole 20 for detachably securing the member to the arm to permit said pressing faces to be made interchangeably operative.

5. A lasting machine hold-down device comprising an arm movable over a shoe supported by a lasting machine and a pressing member connected with said arm and provided with a pressing face conforming to the toe portion of a shoe, said arm having a stud 14 and the pressing member being formed to coöperate with the stud for holding the member in dieffrent positions of adjustment, and means 22 for securing the member to the arm in its different positions of adjustment.

[Claims 6 to 16 not printed in the Gazette.]

1,218,784. POSITIVE APRON-DRIVE FOR LATHES. RICHARD K. LE BLOND and WILLIAM F. GROENE, Cincinnati, Ohio, assignors to R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 14, 1915. Serial No. 55,882. (Cl. 82—22.)



1. In an apron feed for machine tools, the combination of a carriage, a driving and a driven member mounted for movement with the carriage, a series of fine teeth extending from the driving member, a series of fine teeth extending from the driven member, a gear connected to the driven member, a feed wheel engaging said gear, means for relatively moving said driving and driven members to positively engage and disengage the fine teeth of said members, a handle at the exterior of the apron for operating said means to effect positive engagement of the driv-

ing and driven members, and means for holding the parts in such position.

2. In an apron feed for machine tools, the combination of a carriage, a gear having operatively connected therewith a large circular series of fine teeth, constituting one member of an apron feed clutch, a driving gear having a corresponding circular series of fine teeth constituting the other member of the apron feed clutch, means for holding the driving gear from movement longitudinally of its axis, means for relatively moving the circular series of fine teeth toward and from each other to effect positive engagement and disengagement of the members of the apron feed clutch, a handle at the exterior of the apron for operating said means and moving to either side of a vertical plane for locking the said members in operative or in inoperative relation.

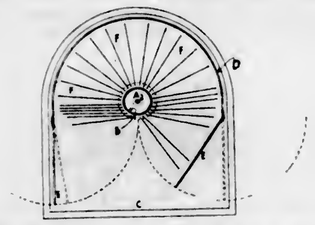
3. A positive apron feed for machine tools, comprising, in combination, a driving member having a multiplicity of fine clutch teeth arranged in circular series, a driven member having a corresponding multiplicity of fine clutch teeth arranged in circular series, a gear operatively connected to said driven member, and manual means at the exterior of the apron for moving the two circular series of fine teeth to effect positive engagement and disengagement of said driving and driven member.

4. A positive apron feed for machine tools, comprising, in combination, a driving member having a multiplicity of fine clutch teeth, a driven member having a corresponding multiplicity of fine clutch teeth, a gear connected to said driven member, a toothed device operatively connected to said driven member, means at the exterior of the apron for moving the toothed device to effect positive engagement and disengagement of the teeth of said driving and driven members, and means for holding the toothed device in position with the clutch teeth engaged or disengaged.

5. In a positive apron feed for machine tools, the combination of a feed rod, a positive clutch member operated by said feed rod, a second positive clutch member, a transmission gear connected to the driven clutch member to rotate therewith, and a clutch actuator comprising a longitudinally movable member having rack teeth, a rotatable toothed member for moving the longitudinally movable member lengthwise, and a handle exterior of the apron for rotating the rotatable toothed member to cause lengthwise movement of the longitudinally movable member and effect positive engagement or disengagement of the positive clutch members.

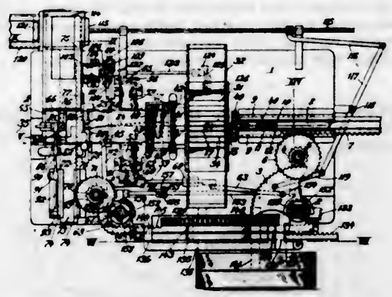
[Claims 6 to 9 not printed in the Gazette.]

1,218,785. REVOLVING ACCOUNT-REGISTER. JOHN LECKIE, Calgary, Alberta, Canada. Filed Jan. 27, 1915. Serial No. 4,806. (Cl. 45—3.)



The combination in a filing device, more particularly adapted to accounts and invoices, of a vertical support revolubly mounted and a number of leaves pivotally mounted thereon to swing horizontally and having index tabs and spring clips contained in a cabinet with semicircular back and folding doors on the front opening outward to give secrecy, and a removable top to facilitate the easy substitution of leaves and the whole mounted on a base as described in the specification.

1,218,786. PACKAGING-MACHINE. FRANK WILLIAM LEV, New York, N. Y., assignor to C. & L. Machine Company, Astoria, N. Y., a Corporation of New York. Filed May 12, 1914. Serial No. 838,090. Renewed Mar. 18, 1915. Serial No. 15,385. (Cl. 93—4.)



1. A packaging machine comprising a magazine for articles, said magazine having movable partitions, means for actuating said movable partitions whereby they are separated sufficient distances apart to permit entry of several of said articles, a wrapper folding channel and a receiving chamber on one side of said magazine, and a reciprocating plunger on the opposite side, a support for a wrapper between said wrapper folding channel and said magazine, means for actuating said plunger, said means for actuating said movable partitions being actuated by said plunger, whereby forward movement of the plunger causes the partitions to be brought closer together, thereby causing said several articles to be forced into a compact bunch, further forward movement of said plunger then causing said articles and wrapper to be forced through said wrapper folding channel, thereby causing said wrapper to be partially folded upon said articles, a paste applying mechanism in range with parts of said wrapper during travel thereof through said wrapper folding channel, and means whereby said means for actuating said plunger also actuates said paste applying mechanism, thereby causing paste to be applied to said parts of said wrapper during said travel through said wrapper folding channel.

2. A packaging machine comprising a magazine for articles, said magazine having movable partitions, means for actuating said movable partitions whereby they are separated sufficient distances apart to permit entry of several of said articles, a wrapper folding channel on one side of said magazine and a reciprocating plunger on the opposite side, a support for a wrapper between said wrapper folding channel and said magazine; means for actuating said plunger, said means for actuating said movable partitions being actuated by said plunger, whereby forward movement of the plunger causes the partitions to be brought closer together, thereby causing said several articles to be forced into a compact bunch, further forward movement of said plunger then causing said articles and wrapper to be forced through said wrapper folding channel, whereby the wrapper is folded upon the articles.

3. A packaging machine comprising a magazine for articles, said magazine having movable partitions, means for actuating said movable partitions whereby they are separated sufficient distances apart to permit entry of several of said articles, a wrapper folding channel and a receiving chamber on one side of said magazine, and a reciprocating plunger on the opposite side, a support for a wrapper between said wrapper folding channel, and said magazine, means for actuating said plunger, said means for actuating said movable partition being actuated by said plunger, whereby forward movement of the plunger causes the partitions to be brought closer together, thereby causing said several articles to be forced into a compact bunch, further forward movement of said plunger

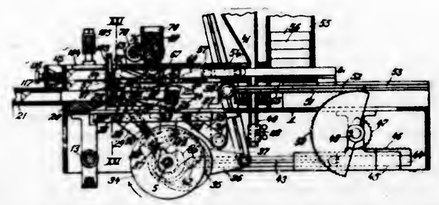
then causing said articles and wrapper to be forced through said wrapper folding channel and into said receiving chamber, whereby the wrapper is partially folded upon said articles; a second wrapper folding channel in range with said receiving chamber, and a second plunger having reciprocating movements through said receiving chamber and said second wrapper folding channel; wrapper folders having reciprocating movements across the path of the first named plunger, said wrapper folders being actuated by said second plunger; means for actuating said second plunger, whereby said wrapper folders are actuated, thereby causing the wrapper to be further folded upon said articles, further forward movement of said second plunger then causing said partially wrapped articles to be forced into said second wrapper folding channel, thereby causing said wrapper to be completely folded upon said articles; automatic mechanism for actuating the first named plunger actuating mechanism and said second plunger actuating mechanism; and adjusting means for disconnecting said automatic mechanism, whereby each one of said plunger actuating mechanisms is rendered independently operative by manual means.

4. A packaging machine comprising a magazine for articles, said magazine having movable partitions, means for actuating said movable partitions whereby they are separated sufficient distances apart to permit entry of several of said articles, a wrapper folding channel and a receiving chamber on one side of said magazine, and a reciprocating plunger on the opposite side, a support for a wrapper between said wrapper folding channel and said magazine, means for actuating said plunger, said means for actuating said movable partitions being actuated by said plunger, whereby forward movement of the plunger causes the partitions to be brought closer together, thereby causing said several articles to be forced into a compact bunch, further forward movement of said plunger then causing said articles and wrapper to be forced through said wrapper folding channel and into said receiving chamber, whereby the wrapper is partially folded upon said articles; a second wrapper folding channel in range with said receiving chamber, and a second plunger having reciprocating movements through said receiving chamber and said second wrapper folding channel; wrapper folders having reciprocating movements across the path of the first named plunger, said wrapper folders being actuated by said second plunger; means for actuating said second plunger, whereby said wrapper folders are actuated, thereby causing the wrapper to be further folded upon said articles, further forward movement of said second plunger then causing said partially wrapped articles to be forced into said second wrapper folding channel, thereby causing said wrapper to be completely folded upon said articles, further forward movement of said second plunger then causing said partially wrapped articles to be forced into said second wrapper folding channel, thereby causing said wrapper to be completely folded upon said articles.

5. A packaging machine comprising a receiving chamber and a wrapper folding channel; a reciprocating plunger, a support for a wrapper between said wrapper folding channel and said plunger, and supports for articles between said plunger and said support for a wrapper; means for actuating said plunger, whereby said articles and wrapper are forced through said wrapper folding channel and into said receiving chamber, thereby causing said wrapper to be partially folded upon said articles; a second wrapper folding channel in range with said receiving chamber, and a second plunger having reciprocating movements through said receiving chamber and second wrapper folding channel; certain walls of said receiving chamber having reciprocating movements across the path of said second plunger; wrapper folders having reciprocating movements across the path of the first named plunger, said movable walls and said wrapper folders being actuated by said second plunger; means for actuating said second plunger, whereby said wrapper folders are actuated, thereby causing the wrapper to be further folded upon said partially wrapped articles, further forward movement of said second plunger then causing said movable walls to be actuated, thereby causing said walls to be moved away from the path of said second plunger, whereby said second plunger causes said partially wrapped articles to be forced through said second wrapper folding channel, thereby causing said wrapper to be completely folded upon said articles.

[Claims 6 to 15 not printed in the Gazette.]

1,218,787. WRAPPING-MACHINE. FRANK WILLIAM LEV, New York, N. Y., assignor to C. & L. Machine Company, Astoria, N. Y., a Corporation of New York. Filed Apr. 19, 1915. Serial No. 22,370. (Cl. 93—2.)



1. A wrapping machine, comprising a wrapper folding channel or rectangular cross section, the corners of the interior of said channel having concave surfaces, means whereby a wrapper and an article having rounded corners can be moved through said wrapper folding channel, whereby the wrapper is partially folded upon the article, said concave surfaces serving to force the wrapper against the rounded corners of said article during travel of said article and wrapper through the wrapper folding channel; wrapper folders on two opposing sides of and having reciprocating movement into and out of said wrapper folding channel, whereby corresponding rear flaps of the wrapper are folded against the rear end of the article; a folder having oscillating movement at right angles to the movements of the first named folders, and adapted to move into and out of said wrapper folding channel, thereby causing a certain rear flap of the wrapper to be folded against the rear end of the article; and a plunger having reciprocating movement at right angles to the movements of the first named folders, and adapted to move said article and wrapper away from said wrapper folding channel, thereby causing a certain other rear flap of the wrapper to be forced against a wall of said wrapper folding channel, whereby said last named flap is folded against said folded rear flaps.

2. A wrapping machine, comprising a wrapper folding channel and means whereby an article and a wrapper can be moved through said wrapper folding channel, whereby the wrapper is partially folded upon the article; wrapper folders on two sides of and having reciprocating movement into and out of said wrapper folding channel, whereby side rear flaps of the wrapper are folded against the rear end of the article; a movable folder located above and adapted to swing into and out of the wrapper folding channel, thereby causing an upper rear flap of the wrapper to be folded against the rear end of the article; and means whereby said article and wrapper are moved downward, thereby causing a lower rear flap of the wrapper to be forced against the lower plate of said wrapper folding channel, whereby said flap is forced against the rear end of the article.

3. A wrapping machine comprising a wrapper folding channel and means whereby an article and a wrapper can be moved through said wrapper folding channel, whereby the wrapper is partially folded upon the article; wrapper folders on two sides of and having reciprocating movement into and out of said wrapper folding channel, whereby side rear flaps of the wrapper are folded against the rear end of the article; a movable folder, having an attached paste applying roller, located above and adapted to swing into and out of the wrapper folding channel, thereby causing an upper rear flap to be folded against the rear end of the article, said roller on said folder serving to apply paste to a lower rear flap of the wrapper; and means whereby said article and wrapper are moved down-

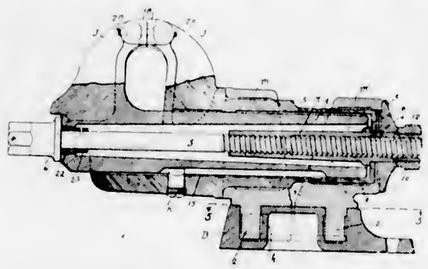
ward, thereby causing said paste coated lower rear flap to be forced against the lower plate of said wrapper folding channel, whereby said paste coated flap is forced against said folded upper rear flap.

4. A wrapping machine, comprising a wrapper folding channel consisting of upper and lower plates and inwardly extending side folders on two opposing sides; said upper plate having two downwardly extending side folders and also having surfaces which curved downward toward the inner sides of said downwardly extending folders; said lower plate having two upwardly extending side folders and also having surfaces which curve upward toward the inner sides of said upwardly extending folders; means whereby a wrapper and an article having rounded corners can be moved through said wrapper folding channel, thereby causing the wrapper to be partially folded upon the article, said curved surfaces of said upper and lower plates causing said wrapper to be forced against the rounded corners of said article while the wrapper is being folded; wrapper folders having reciprocating movement into and out of said wrapper folding channel, whereby side rear flaps of the wrapper are folded against the rear end of the article; a movable folder located above and adapted to swing into and out of said wrapper folding channel, thereby causing an upper rear flap of the wrapper to be folded against the rear end of the article; and means whereby said article and wrapper are moved downward, thereby causing a lower rear flap of the wrapper to be forced against the lower plate of said wrapper folding channel, whereby said flap is forced against the rear end of the article.

5. A wrapping machine comprising a wrapper folding channel and a reciprocating plunger; means whereby forward movement of said plunger can force an article and a wrapper into said wrapper folding channel, whereby the wrapper is partially folded upon the article; a second reciprocating plunger and means for actuating it, whereby said second plunger is moved into and forward along said wrapper folding channel during return movement of the first named plunger, whereby said article and wrapper are moved farther forward; further forward movement of the second plunger then causing said article and wrapper to be moved through said wrapper folding channel, whereby the wrapper is further folded upon the article; and means whereby said second plunger during return movement thereof is moved out of said wrapper folding channel.

[Claims 6 to 9 not printed in the Gazette.]

1,218,788. BENCH VISE. JOHN R. LONG, Akron, Ohio. Filed June 4, 1915. Serial No. 32,101. (Cl. 81—41.)



1. In bench vises as described, a base having a centrally disposed hub and an annular channel about said hub, and a pair of jaw-supporting members having segmentally curved portions seated in said channel and upon said base about said channel.

2. A bench vise comprising a base having an annular channel with substantially parallel vertical side walls, in combination with jaw supporting members seated on said base and provided with segmental portions occupying said channel and openings in their top portions, and jaws mounted in said openings.

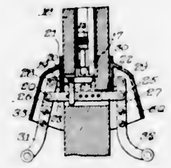
3. A bench vise as described having a base with an annular channel, in combination with two jaw supporting members having each a semi-circular bottom portion extending into said channel and provided with shoulders on their inside lapped upon the middle portion of said base, jaws in said members and means therewith to lock said members in said channels.

4. A bench vise having a base with an annular channel, a pair of jaw supports having substantially semi-circular extensions occupying said channel and provided with shoulders partially overlapping the middle of said base, jaws confined in said supports and means therewith adapted to force said supports into frictional engagement with the walls of said channel.

5. In a bench vise, the construction described comprising a pair of supports and a base in which said supports are rotatably mounted, a pair of jaws having tubular extensions mounted within said supports, an operating screw and a nut-sleeve therefor provided with an angular shank mounted in a correspondingly shaped hole in the end of the outer of said jaw extensions, a cap with an angular hole mounted on said shank and a nut bearing against said cap to tighten the same.

[Claims 6 to 8 not printed in the Gazette.]

1,218,789. DOOR-CATCH-OPERATING MECHANISM. GEORGE F. LOVDALL, Chicago, Ill., assignor to Uni-Motion Door Handle Company, Chicago, Ill., a Corporation of Illinois. Filed July 17, 1916. Serial No. 109,609. (Cl. 70—42.)



1. In a mechanism for operating standard door catches having a movable operating member in the edge of the casing, the combination of two levers pivoted each at one end upon one side of the door, a link extending through the door and pivotally connecting said levers, and mechanism operated by said link for operating said member, said levers having free operating ends extending from said link connections.

2. In a mechanism for operating standard door catches having a movable operating member in the edge of the casing, the combination of two levers pivoted one upon each side of the door, a link extending through the door and pivotally connecting said levers, and a bell crank lever operated by said link for operating said member.

3. In a mechanism for operating standard door catches having a movable operating member in the edge of the casing, the combination of a reciprocable rod extending through the door, pivotal supports for the ends of said rod, and a bell crank lever operated by said rod for operating said member.

4. In a mechanism for operating standard door catches having a movable operating member in the edge of the casing, the combination of two levers pivoted one upon each side of the door, a link extending through the door and pivotally connecting said levers, mechanism operated by said link for operating said member, and housings surrounding the pivot ends of said levers and the pivotal connections of said link.

5. In a mechanism for operating standard door catches having a movable operating member in the edge of the casing, the combination of two levers pivoted one upon each side of the door, a link extending through the door and pivotally connecting said levers, mechanism operated by said link for operating said member, and housings surrounding the pivot ends of said levers, said housings secured to the pivotal supports of said levers.

[Claims 6 to 11 not printed in the Gazette.]

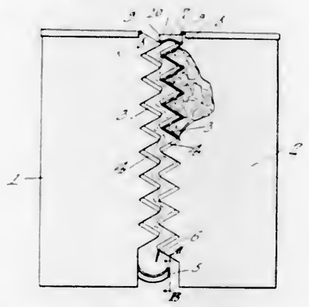
1,218,790. NEWSPAPER-EASEL. JOSEPH MCCARTHY, Spokane, Wash. Filed Jan. 24, 1916. Serial No. 73,815. (Cl. 45—57.)



1. An easel comprising two bars and a support and means for joining them and permitting their opening in one direction only, said means comprising a pivotal connection of the bars and a member hinged to and above the support, oppositely disposed curved slots in the bars spaced above the pivotal connection and a portion extending from said member hinged to the support, into and through said slots.

2. An easel comprising two bars and a support and means for joining them and permitting their opening in one direction only, said means comprising a pivotal connection of the bars and a member hinged to and above the support, oppositely disposed curved slots in the bars spaced above the pivotal connection and a portion extending from said member hinged to the support, into and through said slots, and a portion at right angles thereto bearing on the face of the outer bar for holding the parts in more uniform contact with each other.

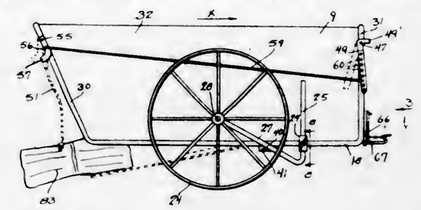
1,218,791. MILK COOLING AND AERATING APPARATUS. JAMES S. MCNEEL and JAMES M. VANCE, San Antonio, Tex. Filed Oct. 29, 1915. Serial No. 58,628. (Cl. 257—178.)



1. Apparatus of the class described including opposed normally stationary cooling tanks, said tanks having interfitting corrugated faces coöperating to form a tortuous passage extending from the top to the bottom of the apparatus, said tanks being slidable toward or from each other to vary the transverse area of the passage, a discharge trough carried by one of the tanks and located between said tanks and above the bottoms thereof to receive liquid from the tortuous passage, and an apertured distributing plate carried by one of the tanks and normally extending over the passage.

2. Apparatus of the class described including opposed normally stationary cooling tanks, said tanks having interfitting corrugated faces coöperating to form a tortuous passage extending from the top to the bottom of the apparatus, said tanks being slidable toward or from each other to vary the transverse area of the passage, a discharge trough carried by one of the tanks and located between said tanks and above the bottoms thereof to receive liquid from the tortuous passage, means carried by one of the tanks and normally extended over the upper end of the passage for distributing liquid throughout the length and width of the passage, and means upstanding from the ends of the corrugations to prevent lateral overflow of fluid from the passage.

1,218,792. SHEAF-CARRIER. JOSEPH F. MEADOWS, Rosalia, Wash., assignor of one-half to Israel D. Lemley. Filed May 22, 1916. Serial No. 99,147. (Cl. 56—37.)

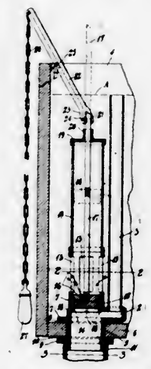


1. In a sheaf carrier, in combination, a frame, a roller on the frame, a bottom slidable on said roller, a minor bottom member pivoted to the bottom, a member on the frame, a latch carried by the bottom and normally engaging the member to prevent sliding of the bottom, means to disengage the latch from the member to permit the bottom to slide, and a spring to return the bottom to a normal position and cause the latch to become engaged with the member.

2. In a sheaf carrier, in combination, a frame, a roller on the frame, a bottom slidable on said roller, a minor bottom member pivoted to the bottom, a member on the frame, a latch carried by the bottom and normally engaging the member, a bell crank having one of its arms arranged adjacent the latch so as to disengage the same from the member when the crank is rocked, means to rock the crank, and a spring connecting the bottom with the frame, for the purpose set forth.

3. In a sheaf carrier, in combination, a frame, a roller on the frame, a bottom slidable on the roller, a minor bottom member pivoted to the bottom, a bar fixed to the frame, a latch pivoted to the bottom and having a notch for engagement with the bar, the latch, adjacent the notch, having an inclined face, a bell crank having one of its arms arranged adjacent the inclined face of the latch so as to disengage the notch from the bar when the crank is rocked, means to rock the crank, and a coil spring connecting the bottom to the frame.

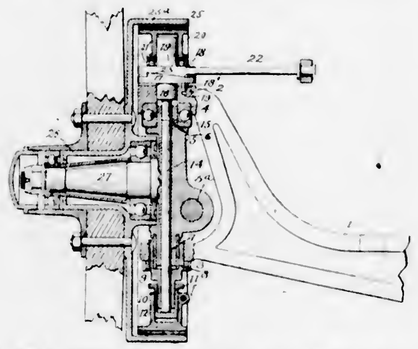
1,218,793. FLUSHING-VALVE. FRANK H. MEINERS, Cincinnati, Ohio. Filed Mar. 27, 1916. Serial No. 86,990. (Cl. 4—5.)



In combination, a hollow body with an interior valve aperture and an upwardly facing annular valve-seat

around said aperture and with upper and lower openings respectively entirely above and entirely below said valve-seat, a hollow extension on said body extending upward from above said upper opening, an inclosure outside said body and extension, communicating with and adapted to confine water in communication with said upper opening, a downwardly tapered valve-plug sliding down in said extension past said upper opening and wedging down in said valve-seat entirely below said upper opening, or sliding up in said extension far enough past said upper opening to have its fall retarded by water below it in said extension, and withdrawn entirely from said valve aperture, and means connected to said valve-plug to oppose the downward sliding of said valve-plug, in such degree that it is only slightly overcome by said valve-plug falling against the resistance of the water in said extension when said valve-plug is raised past said upper opening as aforesaid and there is a continuous body of water communicating through both of said openings and the valve aperture.

1,218,794. FRONT-WHEEL-BRAKE MECHANISM. LEO MELANOWSKI, Cleveland, Ohio, assignor, by mesne assignments, to The White Motor Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 8, 1914, Serial No. 843,665. Renewed Jan. 29, 1917. Serial No. 145,306. (Cl. 21—8.)



1. In a vehicle, the combination with a main axle; a knuckle pivotally secured upon the main axle; a wheel axle carried by the knuckle; a brake drum upon the wheel; a brake element associated with the drum; a rod extending axially through the knuckle; a supporting member for the end of the rod, said supporting member being adjustably carried by the brake element whereby the relative position of the rod and the brake element may be adjusted; cam mechanism associated with the rod whereby when the cam mechanism is operated the rod pushes the brake element into contact with the drum.

2. In a vehicle, the combination with a main axle, a knuckle pivotally secured upon the main axle, a wheel axle secured to the knuckle, a wheel upon the wheel axle, a brake drum associated with the wheel, two brake elements associated with the drum, thrust members extending axially with respect to the knuckle, and having operative engagement with the brake elements, a cam engaging the adjacent ends of the thrust members, and means when actuated causing the thrust members to push the brake elements into contact with the brake drum.

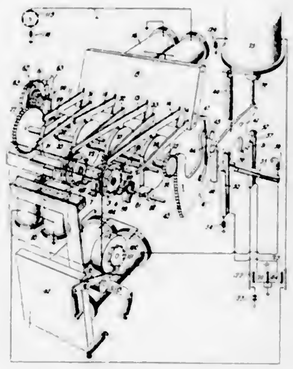
3. In a vehicle, the combination with a main axle, a knuckle pivotally mounted on the main axle, a wheel axle carried by the said knuckle, a wheel carried by the wheel axle, a brake drum carried by the wheel, a pair of oppositely disposed brake elements supported adjacent the drum, a rod extending axially through the said knuckle and operatively engaging one brake element, a cam member operatively engaging said rod, a second cam member coöperating with the first cam member, and operatively engaging with the second brake element, one of said cam members being secured against rotation, and means for operating the other of said cam elements whereby the brake elements are pushed into engagement with the brake drum.

4. In a vehicle, the combination with a main axle, a knuckle pivotally mounted on the main axle, a wheel axle carried by the said knuckle, a wheel carried by the wheel axle, a brake drum carried by the wheel, a plurality of brake shoes adapted to have contact with the brake drum, a hollow post upon each shoe, a thrust member extending into each of the said hollow members of the brake shoes, coöperating cam members between the said thrust members, coöperating with the brake shoes, one of said cam members being adapted to be moved to thrust outwardly the cylindrical members, thereby pushing the brake shoes into contact with the brake drum.

5. In a vehicle, the combination with a main axle, a knuckle pivotally secured upon the main axle, a wheel axle carried by the knuckle, a brake drum upon the wheel, a brake shoe adapted to engage the brake drum, said brake shoe having extending arms which are adapted to slidably engage a portion of the knuckle, mechanism for operating said shoe, comprising a stationary cam-shaped element which is associated with the axle and non-rotatable, a movable cam member coöperating with the first mentioned cam member, the shoe being directly engaged by the last mentioned cam member, means for operating the last mentioned cam member, whereby the shoe is pushed into engagement with the brake drum.

[Claim 6 not printed in the Gazette.]

1,218,795. INDICATING AND RECORDING APPARATUS. BENJAMIN FREDERIC MERRITT, East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 21, 1915. Serial No. 35,410. (Cl. 234—27.5.)



1. An indicating apparatus comprising a plurality of indicating devices, an actuator for each said device, an operating electro-magnet common to said actuators and operable by groups of current impulses, controllers for effecting the coöperation of said devices and said actuators, and means influenced by the current impulses for causing said controllers to effect the successive coöperation of said devices and said actuators.

2. An indicating apparatus comprising a plurality of indicating wheels, an actuator for each said wheel, an operating electro-magnet common to said actuators and operable by groups of current impulses, and means for successively effecting and terminating the coöperation of said actuators and said wheels to cause said electro-magnet to successively rotate said wheels.

3. An indicating apparatus comprising a plurality of indicating wheels, an actuator for each said wheel, an operating electro-magnet common to said actuators and operable by groups of current impulses, a cam for controlling the coöperation of each said wheel and actuator, means for rotating said cams, and a regulator for causing said cams to successively effect the coöperation of said actuators and said wheels.

4. An indicating apparatus comprising a plurality of indicating wheels, an actuator for each said wheel, an operating electro-magnet common to said actuators and operable by groups of current impulses, a cam for each said actuator for effecting and terminating its coöperation with the corresponding said wheel, and a regulator active during the receipt of impulses and non-active during the intervals between groups of impulses for effecting the action of said cams.

5. A recording apparatus comprising a plurality of recording devices, an actuator for each said device, an operating electro-magnet common to said actuators and operable by groups of current impulses, means operating during the intervals between groups of impulses for effecting the successive coöperation of said actuators and corresponding said devices, and an impression member co-operating with said devices to effect the production of a permanent record.

[Claims 6 and 7 not printed in the Gazette.]

1,218,796. SIGNAL-TRANSMITTER. BENJAMIN FREDERIC MERRITT, East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 30, 1915. Serial No. 37,236. (Cl. 177—378.)



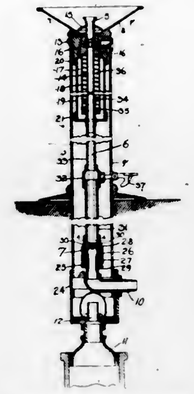
1. A signal transmitter comprising a signal wheel, a circuit controller adapted to coöperate therewith, a power system for rotating said wheel, a stop rotating with said wheel and mounted on the same shaft, and a member controlled conjointly by said system and said stop and co-operating with said controller for allowing and arresting the rotation of said wheel and effecting and terminating the coöperation between said wheel and said controller.

2. A signal transmitter comprising a signal wheel, a cam rotating therewith, a circuit controller adapted to co-operate with said wheel, means for rotating said wheel, and a member supporting said controller and coöperating with said cam and said means for releasing said wheel and bringing said controller into operative relation with said wheel.

3. A signal transmitter comprising a signal wheel, a cam rotating therewith, a circuit controller adapted to co-operate with said wheel, means for rotating said wheel, and a member supporting said controller and controlled by said cam and said means for arresting the rotation of said wheel and removing said controller from operative relation with said wheel.

4. A signal transmitter comprising a signal wheel, a circuit controller adapted to be engaged thereby, a power system for rotating said wheel, a member coöperating with said system and controlling the relation between said wheel and said controller, and means associated with said wheel and acting on one end of said member to arrest the rotation of said wheel and terminate the engagement between said wheel and said controller.

1,218,797. DRINKING-FOUNTAIN. KELSO MURDOCK, Cincinnati, Ohio. Filed Jan. 2, 1912. Serial No. 669,015. (Cl. 137—109.)



1. A drinking fountain comprising a hollow casing having a drainage port formed in its lower end, a bubbler and a catch basin mounted on said casing, a water delivery nozzle located in the lower portion of said casing, a valve for controlling the delivery of water through said nozzle, longitudinally shiftable piping for actuating said valve and for establishing communication between said nozzle and said bubbler, a pipe communicating with said bubbler and with which said piping is telescoped, a spring for engaging said piping and closing said valve, means for engaging said piping for actuating said valve, and drainage conduits communicating with said basin and disposed within said casing and inclosing said spring and the joint between said piping and said pipe.

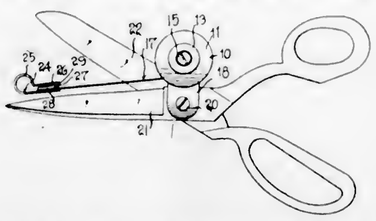
2. In combination in a drinking fountain, a bubbler, supply piping therefor, a catch basin for said bubbler, a drainage conduit communicating therewith, a hollow casing having a discharge port at its lower end and inclosing said supply piping and said drainage conduit and supporting said bubbler and said catch basin, a valve for controlling the delivery of water through said supply piping located in the lower end of said casing, an actuating spring for said valve located in the upper end of said casing within said drainage conduit and an apron extending downwardly over said spring for protecting it from the drainage water passing through said passage.

3. In combination in a drinking fountain, a hollow casing, a bubbler mounted on said casing, a catch basin mounted on said casing, a supply piping extending upwardly and centrally through said casing and communicating with said bubbler and a drain conduit extending downwardly through said casing and comprising a cylindrical wall secured to said casing, and a cap-nut through which said piping extends and discharge pipes secured to said cap-nut and extending into the lower end of said casing.

1,218,798. SCISSORS-GUIDE AND TAPE-MEASURE. IDA NELSON, Gibson City, Ill. Filed May 15, 1916. Serial No. 97,680. (Cl. 7—6.)

1. The combination with a pair of shears, of a reel housing mounted upon one blade of the shears and having a transverse slot, the housing being so disposed that one end of the slot is approximately disposed in the same plane as the inner face of one of the shear blades, a spring actuated drum disposed within the housing, and a gradu-

ated tape attached to the drum and passing out through said slot, one edge of the tape being approximately coincident with the confronting edges of the shear blades.



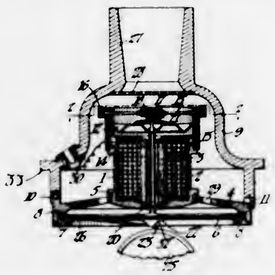
2. An attachment for shears comprising a tape housing, a spring actuated drum therein, a tape attached to the drum and passing out through said housing, and a spring actuated clip attached to the extremity of the tape and extending over the top of the tape, the clip being provided with a downwardly extending prong projecting below the under surface of the clip.

3. An attachment for shears comprising a tape housing, a spring actuated drum therein, a tape attached to the drum and passing out through said housing, and a clip attached to the extremity of the tape comprising a strip of metal attached to the under face of the tape and being bent to form a resilient loop and a tongue extending parallel to the first part of the strip, the tongue being hook-shaped at its extremity, and a strip attached to the upper face of the tape and having an upwardly and outwardly extending extremity with which the hook-shaped end of the first-named strip is adapted to be engaged and latched.

4. An attachment for shears comprising a tape housing, a spring actuated drum therein, a tape attached to the drum and passing out through said housing, a thumb tack carried by the extremity of the tape, and a resilient clip having a portion through which the thumb tack passes and having a portion pressing down and depressibly engaging the head of the thumb tack.

5. The combination with a pair of shears, of a reel housing mounted thereon, a spring actuated tape drum mounted in said housing and exerting a continual pull upon the tape to retract it into the housing, and a device on the extremity of the tape for holding it engaged with the material to be cut and with a cutting board whereby the tape will reel up within the housing as the shears approach the extremity of the tape.

1,218,799. PHONOGRAPH RECORDER AND REPRODUCER. HERMAN G. PAPE, New York, N. Y. Filed Mar. 8, 1915. Serial No. 12,770. (Cl. 179—100.1.)



1. In an instrument for making phonograph records, the combination of an electro-magnet, a diaphragm, means for causing the diaphragm to vibrate in response to electrical impulses in the electro-magnet, an inclosing casing for the electro-magnet, a cover piece hinged to the casing, said electro-magnet and diaphragm mounted on said cover piece, to move up and down therewith relatively to the casing, and a stylus connected to the diaphragm to vibrate therewith.

2. In a sound recording instrument, the combination with an electro-magnet, of a diaphragm, means for causing the diaphragm to vibrate in response to electrical impulses in the electro-magnet, a plate providing a peripheral support for the diaphragm, and on which the electro-magnet is mounted, an inclosing casing for the electro-magnet, said supporting plate being hinged to the casing, and a stylus connected to the diaphragm to vibrate therewith.

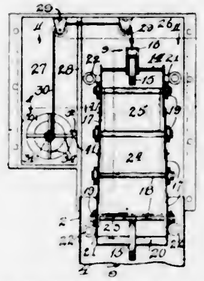
3. In a sound recording instrument, the combination of an electro-magnet, a diaphragm, means for causing the diaphragm to vibrate in response to electrical impulses in the electro-magnet, a plate providing a peripheral support for the diaphragm, and on which the electro-magnet is mounted, an inclosing casing for the electro-magnet, said supporting plate being hinged to the casing, a stylus connected to the diaphragm to vibrate therewith, said casing having an opening to provide a passage for the transmission of sound waves through the casing to the diaphragm, whereby the latter may be vibrated by the direct action thereon of sound waves transmitted thereto independently of the electro-magnet.

4. In a sound recording instrument, the combination with an electro-magnet, of a diaphragm, means for causing the diaphragm to vibrate in response to electrical impulses in the electro-magnet, a plate providing a peripheral support for the diaphragm, and on which the electro-magnet is mounted, an inclosing casing for the electro-magnet, said supporting plate being hinged to the casing, a stylus connected to the diaphragm to vibrate therewith, said casing having an opening to provide a passage for the transmission of sound waves through the casing to the diaphragm, whereby the diaphragm may be vibrated by the direct action thereon of the sound waves transmitted thereto independently of the electro-magnet, said diaphragm being located on the lower or outer side of said end plate, the latter having open portions for the passage of said sound waves.

5. In a sound recording instrument, the combination with an electro-magnet, and an armature therefor, of a support on which the electro-magnet is mounted, a diaphragm mounted on said support, means forming an elastic mounting for the armature permitting it to vibrate freely in response to electrical impulses in the electro-magnet, a stem connecting the diaphragm and said armature, cement connecting the armature to said elastic means and permitting the diaphragm to be connected through said stem to said elastic support without stress or strain on the diaphragm when in its normal position of rest, and a stylus connected to vibrate with the diaphragm.

[Claims 6 to 11 not printed in the Gazette.]

1,218,800. MAIL-ELEVATOR. GEORGE D. PETERSON, Chicago, Ill. Filed Mar. 20, 1916. Serial No. 85,277. (Cl. 214—12.)



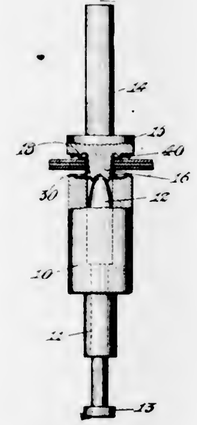
1. In a device of the class described, a chute having a slot near the lower end thereof, a door near the upper end of the chute, a mail carrier within the chute to receive mail inserted through said slot, mechanism for raising said mail carrier to the upper end of the chute, and automatic means in the upper end of the chute for holding the mail carrier stationary while said door is open to remove the carrier and for releasing the mail to permit downward movement thereof when the door is closed.

2. In a device of the class described, a chute, a mail carrier suspended therein, mechanism for raising the same, a door near the upper end of said chute, and means operated by opening said door automatically to check the movement of said mail carrier to permit mail to be removed therefrom.

3. In a device of the class described, a chute, a mail carrier therein for receiving mail at the lower end of the chute, mechanism for elevating the mail carrier to the upper end of said chute, a door near the upper end of the chute, and spring projected means in the upper end of said chute contacted with and forced rearwardly by said door when the same is closed and adapted to move outwardly to engage the mail carrier elevating mechanism to hold said mail carrier stationary when said door is open.

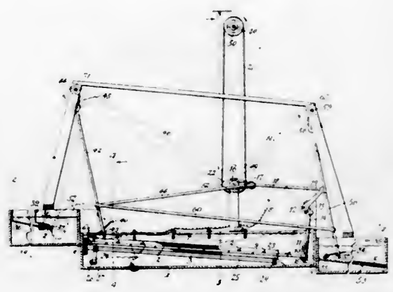
4. In a device of the class described, a chute, a mail carrier therein for receiving mail at the lower end of the chute, mechanism for elevating the mail carrier to the upper end of said chute, a door near the upper end of the chute, a projection thereon, and spring projected means in the upper end of said chute contacted with and forced rearwardly by said projection when said door is closed, said spring projected means adapted to move outwardly to engage the carrier elevating mechanism to hold said carrier stationary when said door is open.

1,218,801. SETTING-DIES. JAMES PICKLES, Ansonia, Conn., assignor to S. O. & C. Co., Ansonia, Conn., a Corporation of Connecticut. Filed May 23, 1912. Serial No. 699,299. (Cl. 218—14.)



A grommet upsetting die for use in washer and grommet setting machines, having a plane washer supporting face, an annular rib of V-shaped cross-section limiting said face at one edge, and a curved clenching surface within the rib merging into a centrally disposed spindle shaped to guide the end of the grommet barrel through the opening of a washer centered by said rib, the inner portion of the clenching surface being constructed and arranged to lie in the same plane as the washer supporting face and to clench and position the end of a grommet barrel in the same plane as the washer flange.

1,218,802. APPARATUS FOR ELECTROPLATING PIPES, RODS, &c. NELSON H. RAYMOND, Buffalo, N. Y., assignor to Clifton Manufacturing Company, Jamaica Plain, Mass., a Corporation of New Jersey. Filed Sept. 15, 1915. Serial No. 50,748. (Cl. 204—11.)



1. An apparatus for electroplating pipes or rods, comprising a tank adapted to hold an electroplating solution, and an inclined support which is arranged in said tank and upon which said pipes or rods are adapted to move from the upper end to the lower end thereof and means for shifting said pipes or rods transversely at intervals on said support.

2. An apparatus for electroplating pipes or rods, comprising a tank adapted to hold an electroplating solution, an inclined shaft which is arranged in said tank and on the upper side of which the pipes or rods to be plated are adapted to move from the elevated end toward the depressed end of the shaft, means for turning said shaft, means for temporarily arresting the movement of said pipes or rods at intervals on said shaft, and means for shifting said pipes or rods transversely at intervals on said shaft.

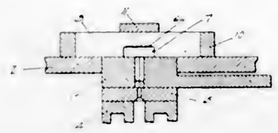
3. An apparatus for electroplating pipes or rods comprising a tank adapted to hold an electroplating solution, two inclined shafts which are arranged in said tank and on which the pipes or rods to be plated are adapted to slide downwardly by gravity from the upper to the lower ends of said shafts and in a position crosswise of the latter, means for controlling the movement of said pipes along said shafts, and means for shifting said pipes at intervals transversely on said shafts, comprising shifting plates arranged lengthwise along opposite sides of the path of the pipes, and rock arms on which said plates are mounted.

4. An apparatus for electroplating pipes or rods, comprising a tank adapted to hold an electroplating solution, two inclined shafts which are arranged in said tank and on which the pipes or rods to be plated are adapted to slide downwardly by gravity from the upper to the lower ends of said shafts and in a position crosswise of the latter, means for controlling the movement of said pipes along said shafts, means for shifting said pipes at intervals transversely on said shafts, comprising shifting plates arranged lengthwise along opposite sides of the path of the pipes, rock arms on which said plates are mounted, shifting rock shafts supporting said arms, and means for operating said shifting plates comprising operating rock arms arranged on said shifting rock shafts, and a link connecting said operating rock shafts.

5. An apparatus for electroplating pipes and rods, comprising a tank adapted to hold an electroplating solution, an inclined support for the pipes within the tank, and guide bars which are arranged above the elevated ends of said support and inclined in an opposite direction and which receive said pipes and direct the same to said support.

[Claims 6 to 11 not printed in the Gazette.]

1,218,803. TYPOGRAPH MECHANISM. WILLIAM A. READE, Cleveland, Ohio, assignor to The Ludlow Typograph Company, Cleveland, Ohio, a Corporation of Maine. Filed May 24, 1911. Serial No. 629,039. (Cl. 199—10.)



1. In mechanism of the character described, the combination with a mold formed with a casting slot; of matrix bars adapted to coöperate therewith, said bars having recesses extending transversely across their faces and of a width greater than that of such slot and type-character impressions being located in such recesses, whereby a slug may be cast with an enlarged upper portion for carrying the line of type; and other bars having blank recesses likewise extending transversely across their faces and of a width greater than that of such slot, such blank recesses being shallower than the recesses bearing the type-character impressions.

2. In mechanism of the character described, the combination with a mold formed with a casting slot; of a composite matrix adapted to coöperate therewith, said matrix being made up partly of bars having recesses extending transversely across their faces and of a width greater than that of such slot, type-character impressions being located in such recesses; and said composite matrix further including bars having blank recesses likewise extending transversely across their faces and of a width greater than that of such slot, such blank recesses being shallower than the recesses bearing the type-character impressions.

3. In mechanism of the character described, the combination with a mold formed with a casting slot; of a composite matrix adapted to coöperate therewith, said matrix being made up partly of bars having recesses extending transversely across their faces and of a width greater than that of such slot, type-character impressions being located in such recesses; said composite matrix further including bars having blank recesses likewise extending transversely across their faces and of a width greater than that of such slot, such blank recesses being shallower than the recesses bearing the type-character impressions; and another blank bar at the end of such slot and entirely closing the same.

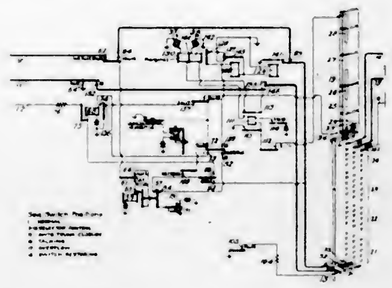
4. In mechanism of the character described, the combination with a mold formed with a casting slot; of a matrix adapted to coöperate therewith, said matrix having a recess extending transversely across its face, type-character impressions being located in such recess and the latter being wider than such slot and also longer, whereby a slug may be cast having a type-face projecting beyond the end of the slug body, substantially as described.

5. In mechanism of the character described, the combination with a mold formed with a casting slot; of a composite matrix adapted to coöperate therewith, said matrix being made up partly of bars having recesses extending transversely across their faces and of a width greater than that of such slot, type-character impressions being located in such recesses, a terminal one of said bars extending beyond the end of such slot.

[Claims 6 to 14 not printed in the Gazette.]

1,218,804. SELECTIVE SIGNALING SYSTEM. FRANK N. REEVES, Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Feb. 27, 1915. Serial No. 11,043. (Cl. 179—17.)

1. In a telephone exchange system, the combination with party lines, final selectors, a trunk selector and trunk lines leading from said trunk selector to said final selectors, of signaling mechanism for applying selective signaling current by way of said trunk selector, and means operative in response to the selection of a certain trunk for connecting said mechanism to the selected trunk.



2. In a telephone exchange system, the combination with party lines, final selectors, a trunk selector and trunk lines arranged in groups, leading from said trunk selector to said final selectors, of selective signaling current mechanism for applying selective signaling current by way of said trunk selector, and means operative in response to the selection of a certain group of trunks to apply the signaling current to selected trunks.

3. In a telephone exchange system, the combination with party lines, trunk selectors, trunks and final selectors, of mechanism for applying selective signaling current by way of said trunk selectors through said trunks and final selectors to said lines including controlling means for said mechanism actuated in response to the selection of a certain trunk.

4. In a telephone exchange system, the combination with party lines, trunk selectors, trunks and final selectors, said trunks being arranged in groups, of mechanism at said trunk selectors for applying selective signaling current by way of said trunk selectors through said trunks and final selectors to said lines including controlling means for said mechanism actuated in accordance with selected trunk groups.

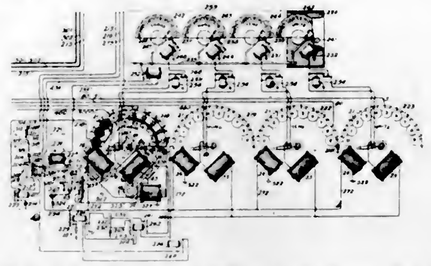
5. In a telephone exchange system, the combination with party lines, trunks, and a plurality of selectors adapted in serial combinations to extend connections through said trunks to said lines, of selective signaling means at said selectors consisting in part of characteristic current selecting means operated in response to the selection of a certain trunk and characteristic line connection selecting means controlled by selectors in series.

[Claims 6 to 19 not printed in the Gazette.]

1,218,805. AUTOMATIC CALL-DISTRIBUTING SYSTEM. JOHN G. ROBERTS, Dobbs Ferry, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 7, 1914. Serial No. 823,094. (Cl. 179—27.)

1. In a call recording system, the combination with telephone lines to which numbers are assigned, of a recording mechanism comprising sections, a plurality of recording members in each section, one member in each section for each numeral of line numbers, and a plurality of actuating devices, one for each of said members in one section and the corresponding members in the other sections, of a contact device for each line operated when the subscriber of that line is calling, circuit connections including said contact device and the actuating devices corresponding to the numerals of the subscriber's number, whereby the number of the line calling is recorded on one section of the recorder, and means for shifting the control of said actuating devices from one section to another.

2. In a call recording system, the combination with telephone lines, of a line number recording mechanism common to the use of said lines, said recorder having sections, means operating when any line is calling to record the number of that line on a section of the recorder, and means operating automatically upon a call being received and recorded in one section to shift the control of said lines to another section of the recorder.



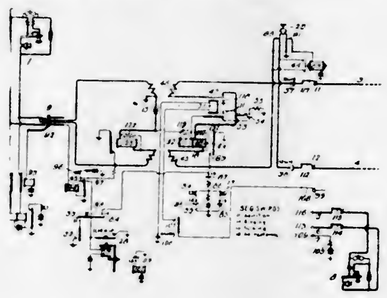
3. In a call recording system, the combination with a plurality of telephone lines, call receiving equipment and means for automatically distributing and connecting calling lines with idle receiving equipment, and a recorder having sections one for each receiving equipment, and means for recording the calling telephone line number on a section thereof at the moment said line is connected with the idle receiving equipment.

4. In a call recording system, the combination with telephone lines, of receiving apparatus, call distributing switches for connecting calling lines with idle receiving apparatus, a line number recorder associated with each receiving apparatus, and means operating at the moment of connecting the calling line with an idle receiving apparatus for registering on the recorder the number of the calling line.

5. In a call recording system, the combination with telephone lines and link circuits therefor, of receiving apparatus, call distributing switches for connecting calling lines with idle receiving apparatus, a line number recorder associated with each receiving apparatus, means operating at the moment of connecting the calling line with an idle receiving apparatus for registering the number of the calling line on said recorder, and restoring means for said call distributing switches operative upon connection of a link circuit with the calling line.

[Claims 6 to 16 not printed in the Gazette.]

1,218,806. TELEPHONE TRUNKING SYSTEM. JOHN G. ROBERTS, Dobbs Ferry, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Dec. 8, 1914. Serial No. 876,084. (Cl. 179—27.)



1. In a telephone system, a trunk line forming a combined telephonic link and controlling circuit, a differential signal controlling device having one winding in said circuit at the outgoing end, means for supplying current to the other winding of said relay, a repeating coil, a source of current connected through the winding of said repeating coil in the incoming end of said circuit, and means for repeatedly reversing the direction of current flow to said outgoing end.

2. In a telephone exchange system, a calling subscriber's line, a trunk line forming a combined telephonic link and controlling circuit, means for inductively connecting the controlling circuit to said line, a local circuit, a source of current therein, an electromagnetic signal controlling device having one winding in said local circuit and a second winding in the outgoing end of said controlling circuit, the magnetizing forces exerted by said windings being approximately equal, a source of current in the incoming end of said controlling circuit, and means for reversing the connections of said source.

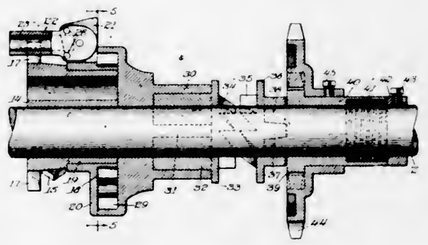
3. In a telephone exchange system, a calling subscriber's line, a trunk line forming a combined telephonic link and controlling circuit, means for inductively connecting the controlling circuit to said line, a signal controlling device responsive to current reversals and included in the outgoing end of said circuit, a source of current in the incoming end of said circuit, means for reversing the connections of said source, a controlling device unresponsive to current reversals included in the incoming end of said circuit and unaffected by current reversals responsive to the opening and closing of said circuit, and a switch for controlling said last mentioned device in the outgoing end of said circuit.

4. In a telephone exchange system, a connecting circuit, a local circuit, a source of current, a supervisory controlling magnet having two windings, and means operable at will for including both of said windings in said connecting circuit or one and the said battery in said connecting circuit and the other in said local circuit.

5. In a telephone exchange system, a trunk line forming a combined telephonic link and controlling circuit, a supervisory signal device at the outgoing end and a ringing device and a disconnecting device at the incoming end of said trunk, the said supervisory signal being responsive to reversals of current, the said ringing apparatus to a momentary interruption of current, and the said disconnecting device to a prolonged interruption of current in said circuit, and means at each end of said trunk for controlling said devices over said circuit.

[Claims 6 to 8 not printed in the Gazette.]

1,218,807. VARIABLE-SPEED MECHANISM FOR GRAIN-DRILLS AND THE LIKE. CHARLES W. ROBINSON, Hamilton, Ontario, Canada, assignor to International Harvester Corporation, a Corporation of New Jersey. Filed Aug. 29, 1913. Serial No. 787,284. (Cl. 74—35.)



1. In combination, a driving shaft, a gear eccentrically mounted thereon, a driving gear rotatable on said shaft and meshing with said eccentric gear, and means for connecting and disconnecting said eccentric gear and shaft.

2. In combination, a driving shaft, an eccentric fixed thereto, a gear rotatable with respect to sid eccentric, a gear rotatable on said shaft and meshing with said eccentric gear, and means for controlling the driving relation of said gears.

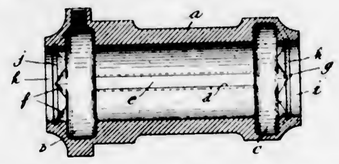
3. In combination, a driving shaft, an eccentric fixed thereto, a gear carried on said eccentric and rotatable with respect thereto, a gear rotatable on said shaft and meshing with said eccentric gear, and means for connecting said eccentric gear and eccentric.

4. In combination, a driving shaft, an eccentric fixed thereto, a gear rotatably mounted on said eccentric, a gear rotatable on said shaft meshing with said eccentric gear, and means for connecting said eccentric gear to said eccentric or holding the same against rotation thereon.

5. In a grain drill, a drive shaft, a feed shaft, operative connections between the same including a driving gear for the feed shaft carried on the drive shaft, a single planet gear for operating said driving gear, and means for connecting and disconnecting said planet gear and drive shaft to change the speed of the driving gear.

[Claims 6 to 25 not printed in the Gazette.]

1,218,808. SELF-LUBRICATING BUSHING. WILLIAM E. SHEEHY, Newfields, N. H., assignor of one-half to Thomas Sheehy, Newfields, N. H. Filed Oct. 31, 1916. Serial No. 128,780. (Cl. 64—26.)



1. A self-lubricating bushing having an annular oil-chamber leading from its bore adjacent each end, each chamber having a series of recesses in its outer side, extending obliquely from its bottom to the bearing-surface between the chamber and the end of the bushing.

2. A self-lubricating bushing having an annular oil-chamber leading from its bore, adjacent one end, and providing an end-bearing-face between said end and the chamber, the outer side wall of said chamber having a series of recesses therein, providing oil-deflecting surfaces extending divergently from said end-bearing-face to said chamber and obliquely to their path of rotation.

3. A self-lubricating bushing having an annular oil-chamber leading from its bore, adjacent one end, and providing an end-bearing-face between the same and the end of the bushing, the outer side wall of said chamber having a plurality of recesses therein, said recesses having their bottom portions extending divergently outward from said end-bearing-face to the bottom of the chamber, and oppositely-inclined sides to provide two series of oil-deflecting faces respectively operative according to the direction of rotation of the bushing.

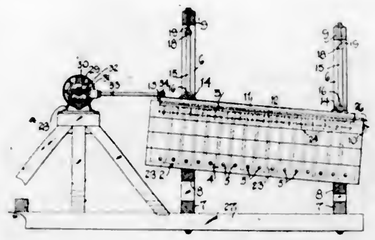
4. A self-lubricating bushing having an annular oil-chamber leading from its bore, adjacent one end, and providing an end-bearing-face between the same and the end of the bushing, the outer side wall of said chamber having a plurality of adjacently-disposed V-shaped notches therein, the bottoms of which extend obliquely from intermediate points in said end-bearing-face to the bottom portion of the chamber.

5. A self-lubricating bushing having an annular oil-chamber leading from its bore, adjacent one end, and providing an end-bearing-face between the same and the end of the bushing, the outer side wall of said chamber having a plurality of V-shaped notches therein, the bottoms of which extend obliquely from intermediate points in said end-bearing-face to the bottom portion of the chamber, and said end-bearing-face having an annular oil-intercepting groove therein, into the inner side of which said notches lead.

[Claim 6 not printed in the Gazette.]

1,218,809. ORE-SEPARATOR. DANIEL W. SHEPHERD, Rupert, Idaho. Filed June 1, 1915. Serial No. 31,570. (Cl. 83—56.)

1. A separator of the character described comprising a tank, a screen mounted in the top of the tank for longitudinal reciprocation, transverse partitions extending up from the bottom of the tank nearly to the under face of the screen, and rigid transverse splash plates carried by the screen and depending between said partitions.



2. A separator comprising a longitudinally inclined tank, a screen mounted in the upper portion of the tank for longitudinal reciprocation, means for longitudinally reciprocating said screen, partitions extending upward from the bottom of the tank nearly to the bottom of the screen, and transversely extending rigid splash plates depending from the bottom of the screen disposed between said partitions and spaced therefrom.

3. In a separator of the character described, a screen composed of vertically disposed parallel spaced bars, each bar increasing uniformly in thickness from its lower edge to its upper edge, the bars being spaced apart at their upper edges a distance less than the thickness of the bars at said upper edges to thereby provide vertically disposed screen spaces between the bars gradually contracting toward the upper edge faces of the bars, the upper edges of the bars all lying in the same plane, in combination with means for causing pulsation of water upward through the screen formed by said bars.

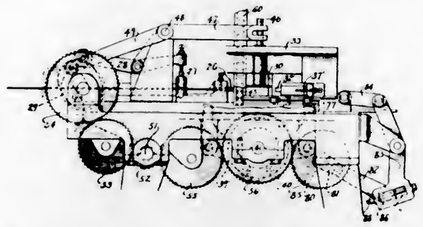
4. In a separator of the character described, the combination with a tank, of a screen composed of vertically disposed parallel spaced bars, each bar increasing in thickness from its lower edge to its upper edge, the bars being supported in parallel relation and being spaced apart at their upper edges a distance less than the thickness of the bars at the said upper edges to thus provide vertically disposed screen spaces between the bars gradually contracting toward the upper faces of the bars, the upper edges of the bars all lying in the same plane, means for longitudinally swinging the screen in a direction transverse to the bars, and means for causing pulsations of water upward through the spaces between the bars.

5. In a separator, a tank provided with a plurality of upwardly extending transverse partitions, a screen swingingly supported in the upper portion of the tank just above the upper edges of said partitions, said screen comprising a plurality of transversely extending parallel spaced bars, each of said bars gradually increasing in thickness from its lower edge to its upper edge, said bars being placed closely adjacent but in spaced relation to each other to thereby provide upwardly contracted screening spaces between the bars, and transverse splash plates carried by said frame and disposed one between each pair of partitions and coacting with said partitions to cause the liquid in the tank to be forced upward through the screen upon an oscillation of the screen.

[Claim 6 not printed in the Gazette.]

1,218,810. FORMING AND ASSEMBLING MACHINE. ELWYN P. SMITH, Waterbury, Conn., assignor to The Mattatuck Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 7, 1915. Serial No. 19,718. (Cl. 140—3.)

1. In a machine of the character described, means for intermittently feeding wire, cutters for severing the blank from the end of the wire, forming tools for forming a partially hooked link from said blank, means for supplying perforated plates, tools for assembling the links with the plates, a stripper for moving the partially hooked link into position to be acted upon by the assembling tools, and means for drawing out the completed strand.



2. In a machine of the character described, a horizontal guide for wire stock including a stationary cutter, a horizontally movable cutter coöperating therewith, a main former tool, a vertical former mandrel, laterally movable side forming tools, a horizontally movable pusher beneath said main forming tool, means for supplying plates in line with one edge of said mandrel, curling tools horizontally movable opposite said pusher, clenching tools between said curling tools, and a horizontal strand guide.

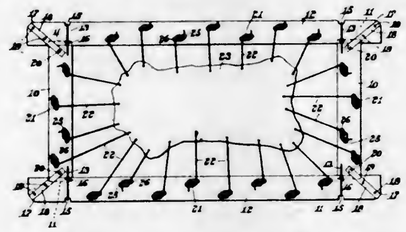
3. In a machine of the character described, a wire feeding slide, a wire holding device, a link stripping device, a shaft, elements carried by said shaft connected respectively to said three previously mentioned elements for operating the same, link forming tools, tools for assembling a link with perforated plates, a second shaft, cams carried by said second shaft operatively connected with said forming and assembling tools for operating the same, a draw-out device, a third shaft, and means for connection between said third shaft and said draw-out device.

4. In a machine of the character described, a stationary mandrel for a hooked link, a pusher at the end of said mandrel, a stripper for removing a link from the end of said mandrel and placing it in front of said pusher, means for supplying perforated plates adjacent one edge of said mandrel at the end thereof, curling tools for partially bending the ends of the link when inserted through the plates, and means for drawing out the assembled strand.

5. In a machine of the character described, a stationary forming mandrel, means for feeding wire along the side of said mandrel, a slide, a main forming tool and a cut-off carried by said slide, side-forming tools for bending the ends of a partially formed link around the edges of said mandrel, slides carrying said side-forming tools, a shaft, a cam carried thereby for operating the slide carrying the main forming tool and cutter, other cams carried by said shaft, and levers operatively connecting said other cams and the slides for said side-forming tools.

[Claims 6 to 9 not printed in the Gazette.]

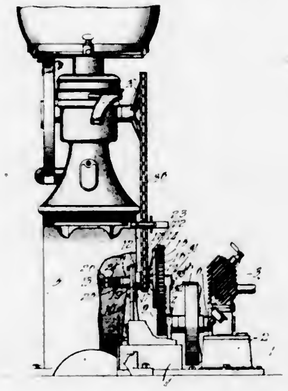
1,218,811. CORD-FASTENING DEVICE. MICHAEL H. SMITH, Woburn, Mass. Filed Apr. 22, 1916. Serial No. 93,342. (Cl. 24—131.)



1. A new article of manufacture consisting of a member formed of wire with two oppositely extending loops in the same plane connected by a central portion common to both loops, the inner ends of said loops being provided with lateral portions extending over said central portion and terminating in securing prongs adjacent to said central portion and perpendicular thereto.

2. A new article of manufacture consisting of a member formed of wire with two oppositely extending loops in the same plane connected by a central portion common to both loops, the inner ends of the outer portions of said loops extending past each other and having lateral portions extending over said central portion and each lateral portion terminating in a securing prong adjacent to said central portion and perpendicular thereto.

1,218,812. TRANSMISSION MECHANISM. HOWARD F. SNYDER, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a Corporation of Iowa. Filed Sept. 1, 1915. Serial No. 48,439. (Cl. 74—26.)



1. In apparatus of the class described a driven machine, a prime mover and a connection between the two comprising engaging friction members in relative motion along their engaged surfaces at any speed or any load of the driven friction member whereby the response of the friction members to changes in speed is rendered instantaneous.

2. In apparatus of the class described a prime mover a friction disk driven by said prime mover, a driven machine, a friction disk geared to said machine and in engagement with the first mentioned friction disk, said friction disks being rotatable about different centers.

3. In apparatus of the class described, a prime mover, a shaft geared thereto, a friction disk on said shaft, an eccentric hub on said shaft, a second friction disk on said eccentric hub, a driven machine geared to the second friction disk and resilient means for forcing said friction disks together.

4. In apparatus of the class described a prime mover, a shaft thereon, a pinion on said shaft, a gear in mesh with said pinion, a shaft for said gear, a friction disk carried by said gear, an eccentric hub on said second shaft, a second friction disk mounted on said eccentric hub means for forcing said friction disks together, and a driven machine geared to the second friction disk.

5. A slip drive comprising a pair of engaged friction surfaces and means to cause said elements to be in continual relative motion during their normal drive irrespective of the relative speed thereof.

[Claim 6 not printed in the Gazette.]

1,218,813. SECTIONAL POST. SAMUEL M. SPENCER, Eutaw, Ala. Filed Nov. 27, 1915. Serial No. 63,886. (Cl. 189—26.)

In a combination wooden and metal post for wires, in combination, a wooden base, a metallic socket member

rigidly attached to the top of the wooden base, a tubular metallic pipe forming the top of the post, a plurality of bracket supports for cross arms attached to said top, and interchangeable means to detachably connect said top to



the socket member to vary the spacing between the top and the wooden base, substantially as described.

1,218,814. ARTILLERY-AMMUNITION PACKAGE. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed Sept. 4, 1915. Serial No. 49,134. (Cl. 206—3.)



1. A tubular shell case having in one end a removable block centrally recessed to receive and protect an active point on a shell contained in the case and adapted when reversed to press the end of a like shell which lacks such point.

2. A casing for an artillery shell consisting of a rigid non-metallic tube adapted to fit the shell closely and project beyond its ends, combined with a reversible and removable block secured in one end of the casing, recessed centrally at one of its ends to receive and protect the active point of a shell and adapted when reversed to press the end of the same shell without such point.

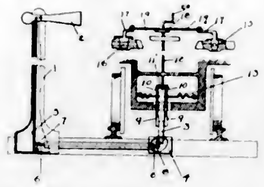
3. A tubular casing for an artillery shell having removably secured in and fully closing one end a reversible shell-holding block which in one position protects an active shell-point and in reverse position occupies the place of such point and conclusively shows that the shell is dead or without such active point.

4. The combination with a set of like externally square wood tubes forming a compact mass and each closed by suitable blocks, of cup-like suitable caps fitting over the ends of the mass, respectively, and projecting from the marginal flanges of each cap into the portions of the tubes which the flanges overlap and securing the caps in place.

5. An entirely closed, rigid non-metallic shell case consisting of a tubular body adapted to fit and project at each end beyond a shell to be incased, blocks fitting in the projecting end portions of the body and each centrally recessed to prevent contact with axial portions of the shell, readily operable means for securing and releasing the block at the base of the shell, and a folding case handle serving also as a manually operated device for securing and releasing the block at the point of the shell.

1,218,815. [WITHDRAWN.]

1,218,816. RAILROAD SAFETY DEVICE. CHARLES A. STURM and GEORGE R. HURLBUT, Portland, Oreg.; said Sturm assignor to said Hurlbut. Filed Sept. 8, 1915. Serial No. 49,483. (Cl. 246—59.)



1. In a railway safety device, a duality of rails, and a locomotive upon said rails; in combination with a vertically reciprocating trigger intermediate said rails; a duality of longitudinally disposed parallel shoes pivotally attached to said locomotive, depending therefrom, and adapted to receive said trigger therebetween for the purpose of separating said shoes when the trigger is raised; and means whereby the separation of said shoes by said trigger will shut off the steam and set the air-brakes upon said locomotive to bring the same to rest.

2. In a safety device to bringe a locomotive to rest, a semaphore, a trigger placed in the path of travel of said locomotive, means to operate said trigger simultaneously with and from said semaphore, a duality of longitudinally disposed parallel shoes pivotally attached to and depending from said locomotive, and adapted to receive said trigger therebetween for the purpose of separating said shoes, and means whereby the separation of said shoes by said trigger will operate to bring said locomotive to rest.

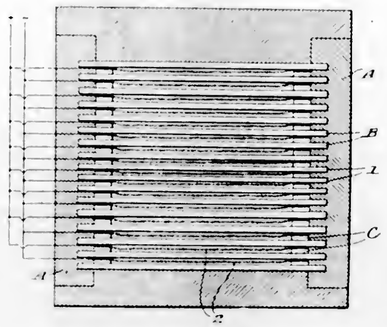
3. In a safety device for bringing a locomotive to rest, a duality of shoes pivotally attached to and depending from said locomotive each adapted for independent rotation about its respective pivotal point transversely of the locomotive; means whereby said transverse rotation of either of said shoes independently or of both simultaneously may operate to shut off the steam and set the air-brakes; and means located in the path of travel of said locomotive to rotate either or both of said shoes transversely of said locomotive as the same passes said means.

4. In a railroad safety device, a duality of rails, a locomotive, and a semaphore in combination with a vertically reciprocating trigger intermediate said rails, said trigger being a double ended wedge set longitudinally relative to said rails, a duality of shoes pivotally mounted upon said locomotive and depending beneath same and adapted to contact with said trigger as said locomotive passes said trigger, means whereby either of said shoes independently or both simultaneously may operate to shut off the steam and set the air brakes, and means to operate said trigger simultaneously with said semaphore.

5. In a railroad safety device, a locomotive in combination with a duality of shoes depending therefrom and pivotally mounted thereon, levers acting in concert with said shoes, a shaft adjacent said levers, a cross arm upon said shaft adapted to contact with said levers, a valve in the steam line, of said locomotive, a valve in the air brake service pipe of said locomotive, operable means to connect each of said valves to said shaft, and means located in the path of travel of said locomotive to operate said shoes.

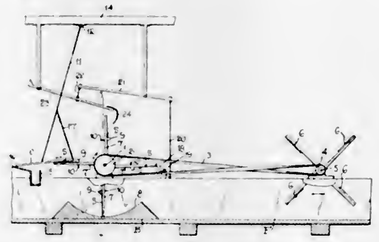
1,218,817. APPARATUS FOR PRODUCING OZONE. MELBOURNE ROY TENNANT, Colorado Springs, Colo. Filed July 12, 1913. Serial No. 778,770. (Cl. 204—31.)

In an apparatus for producing ozone, the combination with a non-conducting frame, of a plurality of mica or micanite bars mounted therein, spacing strips interposed between the bars, sheets of metallic gauze between the bars supported by the spacing strips, said gauze having no other point of support nor contact than with said spacing strips, alternate sheets of said gauze connected to alternate poles of an electric circuit, whereby surface tension is induced on said bars, and a multiplicity of electric arcs



is produced for the purpose of causing a continuous flow of ultra violet rays.

1,218,818. FILTERING APPARATUS. ANTON THOME, Glenwood Springs, Colo. Filed Oct. 16, 1916. Serial No. 125,944. (Cl. 210—16.)



1. In combination with a runway for water, a screening element movable into and out of said runway, means for imparting movement to said screening element, and a swinging carrier upon which said element discharges, said swinging carrier being provided with a brace member with which the screening element contacts for forcing said carrier away from the screening element.

2. In combination with a runway for water, a screening element movable into and out of said runway, means for imparting movement to said screening element, a swinging carrier upon which said element discharges, and a bucket carried by said element and also discharging upon the carrier.

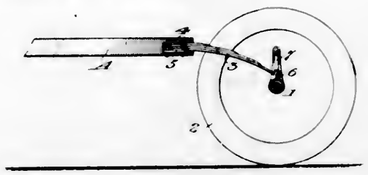
3. In combination with a runway for water, a screening element movable into and out of said runway, means for imparting movement to said screening element, a swinging carrier upon which said element discharges, water lifting means carried by the screening element and also discharging upon the carrier, and a sluice into which said carrier discharges.

4. In combination with a runway for water, a screening element movable into and out of said runway, a member adapted to strike said element when in a position out of the runway, and automatic means for moving said member out of the path of travel of the element, said striking member being provided with a flexible lash.

5. In combination with a run-way for water, a screening element movable into and out of said run-way, means for imparting movement to said screening element, a movable striking member supported adjacent the screening element, and contacting therewith by gravity, and means under control of the screening element for imparting movement to the striking member in a direction away from the screening element.

[Claims 6 and 7 not printed in the Gazette.]

1,218,819. VEHICLE SPRING SUSPENSION. ROLLAND S. TROTT, Denver, Colo. Filed Aug. 1, 1914. Serial No. 854,574. (Cl. 267—20.)



1. The combination with a vehicle frame, and a therewith associated wheel axle, of a load-spring connected with the frame, a link mounted in suspension between the spring and axle to permit movement of the axle in the direction of the longitudinal extent of the frame, and means acting to resiliently oppose said movement and to restore the parts to their normal position.

2. The combination with a vehicle frame and a therewith associated wheel axle, of a load-spring connected with the frame, a connection between the spring and axle designed to permit movement of the axle in the direction of the longitudinal extent of the frame, and means acting to resiliently oppose said movement and to restore the axle to its normal position.

3. The combination with a vehicle frame and a therewith associated wheel axle, of a load-spring connected with the frame, a connection between the axle and spring designed to permit movement of the axle in the direction of the longitudinal extent of the frame, means to resiliently oppose said movement of the axle, and means to hold the axle against twisting or side movement.

4. The combination, with a vehicle frame and a therewith associated wheel axle, of a load spring connected with the frame, links connected between the axle and the load-spring to permit movement of the axle circularly about the point of connection with the spring, means to prevent twisting or side movement of the axle, and the links so mounted as to act to resiliently oppose said circular movement of the axle, and to restore the axle to its normal position.

5. The combination with a vehicle frame and a therewith associated wheel axle, of a load spring connected with the frame, links connected between the axle and spring to permit movement of the axle in the direction of the longitudinal extent of the frame, a reach secured to the axle and connected with the frame to prevent twisting of the axle and to accommodate said movement longitudinally with respect to the frame, and the links so mounted that they act to resiliently oppose said longitudinal movement and to restore the parts to their normal position.

[Claim 6 not printed in the Gazette.]

1,218,820. CHECK-ROW ATTACHMENT FOR PLANTERS. ARTHUR L. WALTERS, Wadena, Iowa. Filed June 7, 1916. Serial No. 102,281. (Cl. 111—5.)

1. In a device of the character described, an independent frame located at one side of a planter containing at each end traveling wheels of a like predetermined circumference, a longitudinal rotary driving shaft in said frame, operative connections between said wheels and said shaft, like driven shafts extending oppositely obliquely from said driving-shaft, operative connections between said driving and driven-shafts adapted to rotate the driven shafts at intervals corresponding in number to the rotations of said traveling-wheels a crank mounted rotatably on the planter, universal-couplings connected detachably and interchangeably to and between either of said driven-

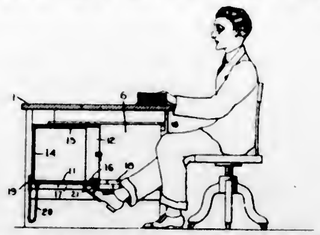
shafts and said crank, operative connections between said crank and the seed dropping mechanism of the planter adapted to actuate said seed-dropping mechanism at each rotation of the crank, and a separable draft-connection between said frame and the adjacent seed-covering shoe of the planter.



2. In a device of the character described, an attachment for a planter, comprising a frame mounted on like traveling wheels at either end of the predetermined circumference, a driving-shaft rotatably mounted longitudinally in said frame, driving-connections between said wheels and the ends of said driving-shaft, driven-shafts mounted rotatably in said frame transversely, obliquely and oppositely, driving-connections between said driving-shaft and the adjacent ends of said driven-shafts adapted to rotate the latter at intervals with a number of rotations corresponding to those of said traveling-wheels, bracketed supporting-means on a shoe of said planter, a detachable draft-connection between said supporting-means and an end of said frame adapted for interchangeable coupling to either end of the frame, a crank-shaft rotatable in bearings in said supporting-means, a universal-joint connection between one of said driven-shafts and the crank-shaft adapted to be interchangeably connected to either driven shaft, and operative mechanism between the crank on said crank-shaft and the seed-dropping mechanism of the planter adapted to actuate said seed-dropping mechanism once for each rotation of said traveling-wheels.

3. In a device of the character described, an attachment for a planter containing traveling-wheels of a predetermined circumference at either end, hexagonal cross-shafts on which said wheels are fixed, cylindrical sleeves non-rotatably mounted on said cross-shafts and rotatably mounted in bearings in said frame, a medial longitudinal hexagonal driving-shaft in said frame, cylindrical sleeves non-rotatably mounted on the ends of said driving-shaft and rotatably mounted in the bearings in the ends of said frame, like intermeshing gearing on the cross-shafts and the ends of said driving-shaft, a bearing fixedly mounted in the center of said frame, sleeves fixed on said driving shaft and rotatable in said bearing, obliquely-directed like driven-shafts rotatably mounted in said frame, like segmental gears mounted on said driving-shaft, pinions on said driven-shafts in mesh at intervals with said segmental gears, a crank-shaft mounted rotatably on a shoe of the planter, operative connections between the crank on said shaft and the seeding-mechanism of the planter, a universal-joint coupling-connection adapted to be detachably connected between either of said driven-shafts and said crank-shaft, a separable universal-joint between said squared shaft and either of said driven-shafts, a sleeve slidably non-rotatably mounted on said squared shaft, means for limiting the movement of said sleeve on said shaft, a universal-joint connection between said sleeve and said crank-shaft, and a movable draft-connection between said shoe and said frame, adapted to be detachably connected to either end of said frame.

1,218,821. DESK. HENRY J. WILLIAMS, Brookline, Mass. Filed Jan. 26, 1916. Serial No. 74,499. (Cl. 45—93.)



1. In a desk comprising a top and end supports therefor, a cabinet materially narrower than the width of the desk slidably mounted beneath the top of said desk and normally positioned beyond the reach of the hand of the user, the bottom of said cabinet being supported a sufficient distance from the floor to permit the insertion of the foot of the user therebeneath, means depending from the bottom of the cabinet having a surface which will not injure the surface of the shoe of the user, adapted to be engaged by the toe of the shoe whereby the cabinet may be drawn forward by the foot to render its contents easily accessible.

2. In a desk comprising a top and end supports therefor, a file case materially narrower than the width of the desk slidably mounted beneath the top of said desk and normally positioned beyond the reach of the hand of the user, the bottom of said file case being supported a sufficient distance from the floor to permit the insertion of the foot of the user therebeneath, means depending from the bottom of the file case having a surface which will not injure the surface of the shoe of the user, adapted to be engaged by the toe of the shoe whereby the file case may be drawn forward by the foot to render its contents easily accessible, means for limiting the forward movement of the file case and means adapted to engage the files in said file case and prevent the same from being thrown out when the file case is arrested.

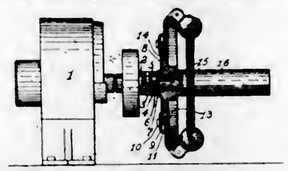
3. In a desk comprising a top and end supports therefor, a file case materially narrower than the width of the top slidable at its bottom upon guideways located upon said supports at a distance from the floor sufficient to permit the insertion of the foot of the user beneath the file case, to withdraw the same for easy access to its contents, a cross piece at the rear ends of said guideways, a chain connecting said cross piece to said file case adapted to limit the forward movement of said file case and means for locking the files in said file case adapted when unlocked automatically to permit free access to the contents of said file case.

4. In a desk comprising a top and end supports therefor, a rectangular file case materially narrower than the width of said top and having an open front slidably mounted beneath said top and between said supports, means adapted to be engaged by the foot of the user for withdrawing said file case and means for securing the files in said file case comprising coöperating bars pivotally connected to the ends of said file case, and means for locking together the adjacent ends of said bars.

1,218,822. DRIVING CONNECTION FOR MAGNETOS. LOUIS W. WITBY, Waterloo, Iowa, assignor to Waterloo Gasoline Engine Company, Waterloo, Iowa. Filed May 24, 1916. Serial No. 99,564. (Cl. 64—13.)

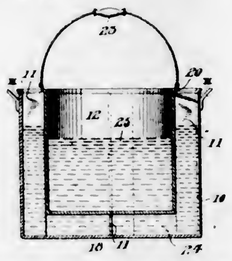
A driving-connection for a magneto, comprising in combination with a driven-shaft of a magneto and a driving-shaft, a clutch-member coupled to said driven-shaft, said clutch-member having an annular concave coaxial disk-part, a disk fixed on and coaxial with the driving-shaft of larger diameter than the first-mentioned disk-part and having a concentric boss fitting within the concavity of the latter, clamping-bodies contacting with adjacent parts of said disks and having oppositely-located projections

spacing them from the second-mentioned disk, and means for releasably securing said clamps compressibly upon the



first-mentioned disk-part to hold the first-mentioned disk-part in adjustable frictional driving-engagement with the other disk-part.

1,218,823. CULINARY BOILER. SYLVESTER WOINA, Lost Creek, W. Va. Filed Nov. 25, 1916. Serial No. 133,359. (Cl. 53—1.)



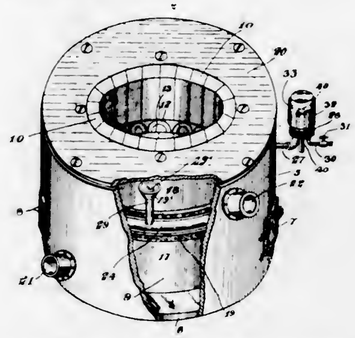
1. A double boiler comprising an outer and an inner container, the outer container having recesses in the inner face of the side wall, supporting means for the inner-container hingedly mounted upon the inner face of the side wall of the outer container and seated in said recesses to lie flush with the inner face of the side wall of the outer container when not in use.

2. A boiler comprising a kettle having recesses in the inner face of its side wall, longitudinally arranged supporting wings hinged within the said recesses adapted for seating within the latter flush with the adjacent face of the wall when closed, the said supporting wings being arranged substantially radially of the kettle when operatively positioned in their open arrangement, and an inner container arranged in said kettle and held centrally positioned by said wings.

3. A boiler comprising a kettle having recesses in the inner faces of its side wall, diametrically opposed vertically arranged supporting wings hinged within the said recesses adapted for seating within the latter flush with the adjacent face of the wall when closed, the said supporting wings being arranged substantially radially of the kettle when operatively positioned in their open arrangement, an inner receptacle of relatively less dimensions than the said kettle being of substantially the same diameter as the distance between the inner edges of the said wings when opened and an outwardly projecting annular bead upon the said receptacle adapted for seating upon the upper faces of the said wings when the receptacle is axially positioned within the kettle with the wings in their open arrangement.

1,218,824. BASE FOR HOT-AIR FURNACES AND HOT-WATER AND STEAM BOILERS. SAMUEL AIKINS, Weston, Ontario, Canada, assignor of one-half to Achille A. Pinard, Ottawa, Ontario, Canada. Filed Mar. 20, 1916. Serial No. 85,382. (Cl. 126—99.)

1. A furnace base, consisting of a combustion chamber, a cylindrical outer wall spaced from the wall of said combustion chamber, the space between said combustion chamber and said cylindrical wall being divided into two separate chambers by a diaphragm, the lower chamber being provided with an air inlet pipe, said combustion chamber being provided with openings communicating with the space between said combustion chamber and said cylindrical wall, the upper chamber being provided with an air intake pipe and an air exhaust pipe, a water pipe in said upper chamber bent to form a segment of a ring and having a screw cap closure at one end and the other end extending out through said cylindrical wall, an automatic control at the extended end of said pipe, said control consisting of a container screwed to its base and having a shut-off valve inside with water connection to said valve, and an over-flow pipe, said bent water pipe having upwardly extending branch pipes with their upper ends funnel shaped, and oppositely situated doors opening into said combustion chamber.



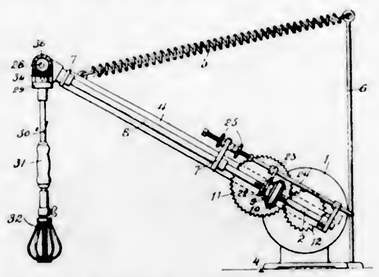
2. A furnace base, consisting of a combustion chamber, a cylindrical outer wall spaced from the wall of said combustion chamber, the space between said wall and said combustion chamber being divided by a diaphragm, said combustion chamber being provided with openings communicating with the space between said outer wall and said combustion chamber, an air-intake pipe opening into the lower portion of said space and an air intake pipe and an air exhaust pipe connected with the upper portion of said space, said upper portion of said space having a bent piping therein, one end of said piping extending out through said outer wall, said piping having upwardly extending branches with funnel shaped upper ends and located in said upper air space.

3. A furnace base, consisting of a combustion chamber, a cylindrical wall spaced from the wall of said combustion chamber having a brick facing on its inner side, the wall of said combustion chamber having openings thereabout and corresponding openings through said brick facing, the space between said outer wall and said combustion chamber being divided into two sections by a diaphragm, said diaphragm being above said openings, an inlet air pipe in said lower section and an inlet air pipe and an exhaust air pipe in said upper section, said outer wall having a set of openings and doors arranged opposite to each other, said combustion chamber having corresponding openings opposite said openings in said outer wall, said upper section having a humidifying means consisting of a bent piping around above said diaphragm with one end capped and the other end extending out through said outer wall and carrying an automatic shut-off thereon with suitable water supply means thereto, and said piping having upwardly extending branch pipings with funnel shaped upper ends.

4. A furnace base, consisting of an outer wall, and an inner cylindrical wall having a brick facing said inner wall forming the side of a combustion chamber, said walls being spaced apart, said cylindrical wall and said brick facing having alining openings, the space between said outer wall and said inner wall being divided into two sections, the lower section having an air intake pipe adapted to connect with a suitable room in the house, the upper chamber being provided with a humidifying means, an intake pipe in communication with the atmosphere and con-

necting to said upper section, an exhaust pipe from said upper section adapted to lead to main parts of the house, a humidifying means in said upper section and oppositely situated doors in said combustion chamber.

1,218,825. GEARING FOR MIXING-MACHINES. CHARLES T. ALEXANDER, Chanute, Kans. Filed Mar. 13, 1916. Serial No. 83,822. (Cl. 74—26.)



1. In a mixing machine, a support, a swinging member pivoted thereto, a driving shaft, a driven shaft rotatably mounted on said member, variable speed transmission mechanism connecting the two shafts, a swinging support carried by said driven shaft, rotary means carried by said swinging support and adapted to carry and rotate an operating tool, and means by which said rotary means is operated by said driven shaft.

2. In a mixing machine, a support, a swinging member pivoted thereto, a driven shaft rotatable on said member, a driven member rotatable with and longitudinally slidable on the driven shaft, driving means including a rotary driving member movable into and out of engagement with the driven member, the latter being movable radially toward and from the axis of the driving member, a swinging support carried by the driven shaft, rotary means carried by said swinging support and adapted to carry and rotate an operating tool, and means by which said rotary means is operated by said driven shaft.

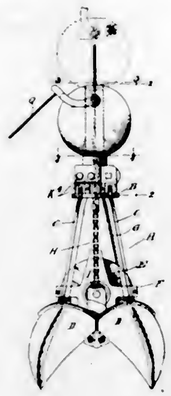
3. In a mixing machine, a support, a swinging member pivoted thereto, a driven shaft rotatable on said swinging member, a driven member rotatable with and longitudinally slidable on the driven shaft, a driving shaft rotatably mounted on said swinging-member, and longitudinally slidable toward and from the driven member, a driving member secured to the driving shaft and movable into and out of engagement with the driven member, the latter being movable radially toward and from the axis of the driving member, and means operated by the driven shaft for carrying and rotating an operating tool.

4. In a mixing machine, a support, a swinging member pivoted thereto, a driven shaft rotatable on said member, means actuated by the driven shaft adapted to carry and rotate an operating tool, a driven member rotatable with and longitudinally slidable on said driven shaft, means carried by said swinging member for adjusting the driven member longitudinally on the driven shaft, and a rotary driving member adapted to engage and rotate said driven member, the latter being radially adjustable relatively to the axis of said driving member.

5. In a mixing machine, a support, a swinging member pivoted thereto, a driven shaft rotatable on said member, means actuated by the driven shaft adapted to carry and rotate an operating tool, a driven member rotatable with and longitudinally slidable on the driven shaft, means carried by said swinging member for adjusting the driven member longitudinally on the driven shaft, a rotary driving member adapted to be moved into and out of engagement with the driven member, the latter being radially adjustable toward and from the axis of the rotary driving member, manually operated means for moving the driving member in one direction, and means for automatically retracting the driving member.

[Claims 6 and 7 not printed in the Gazette.]

1,218,826. BUCKET. PHILIP M. ARMSTRONG, Paterson, N. J., assignor to The Hayward Company, New York, N. Y., a Corporation of New York. Filed May 9, 1914. Serial No. 837,383. (Cl. 37—30.)



1. In an excavating device, the combination of a supporting head, a plurality of digging members, means connecting said head and said digging members, mechanism for closing the latter, an impact block having an opening therethrough, means for detachably securing said block to said head, a hollow guide rigidly secured to said block, a weight member adapted to slide on said guide, means for lifting and releasing said weight member to make driving contact with said block, and a line for operating said closing mechanism, passing centrally through said supporting head and through said block, guide and weight member.

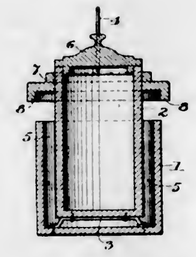
2. In an excavating device, a plurality of digging members, supporting means connecting said head and said digging members, closing mechanism having operative connection with said head and said digging members, a line connected to said closing mechanism for operating the same, an impact block detachably connected to said head, a guide rigidly secured to said block and bored for the passage of said line therethrough, and a weight member bored to slide on said guide and for the passage of said line therethrough, portions of said guide and weight member having plane surfaces to prevent rotation of the latter

3. In an excavating device, the combination of a supporting head, a plurality of digging members, supporting means connecting said head and said digging members, closing mechanism having operative connection with said head and said digging members, a line connected to said closing mechanism for operating the same, an impact block detachably connected to said head, a guide rigidly secured to said block and bored for the passage of said line therethrough, a weight member bored to slide on said guide and for the passage of said line therethrough, and self contained means on the lower part of said guide and the upper part of the weight member for limiting the upward movement of said weight member on said guide.

4. In an excavating device, a plurality of digging members, means connecting said head and said digging members, mechanism for closing the latter and having operative connection therewith and with said head, an impact block, means for detachably securing said block to said head, a hollow guide rigidly secured to said block, a weight member adapted to slide on said guide, said guide normally lying completely within said weight member, means for lifting and releasing said weight member to make driving contact with said block, a line for operating said closing mechanism, passing through said supporting head and through said block, guide and weight member, and flanged and shouldered portions on said guide and weight member to limit the lifting movement of the weight member on said guide.

5. In an excavating device, the combination of a supporting head, a plurality of digging members, means connecting said head and said digging members, mechanism for closing the latter and having operative connection therewith and with said head, an impact block, means for detachably securing said block to said head, a hollow guide rigidly secured to said block, a weight member bored to slide on said guide, a line for operating said closing mechanism, passing through said head and through said block, guide and weight member, and a bail member secured to said weight at diametrically opposite sides of its bore and adapted to take, by gravity, when not in operation, a position out of alinement with the bores of said weight and guide.

1,218,827. COOLING DEVICE. EDWARD BAER, New York, N. Y. Filed June 28, 1916. Serial No. 106,442. (Cl. 217—7.)



1. In a cooling device, the combination with an outer vessel, of an inner container extending above said vessel, and a ring-shaped cover for the outer vessel fitted around the extended portion of the container, and slidable thereon for opening and closing said vessel.

2. In a cooling device, the combination with an outer vessel, of an inner container extending above said vessel, and a cover for the vessel fitted around and frictionally engaging the outer surface of the container, whereby said cover is self-sustaining when raised.

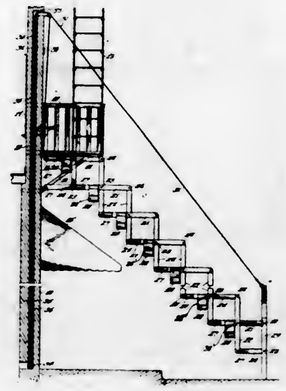
3. In a cooling device, the combination with an outer vessel, of an inner container extending above said vessel, a cover for the vessel frictionally engaging the outer surface of the container, and a depending flange on the cover for frictionally engaging the outer surface of the vessel.

1,218,828. FIRE-ESCAPE. GUY M. BARBER, Los Angeles, and LOUIS L. FRAZER, Glendale, Cal., assignors of one-half to George T. Moran, Los Angeles, Cal. Filed Sept. 14, 1914. Serial No. 861,730. (Cl. 227—15.)

1. A fire escape comprising a balcony, a lazy tong carrying treads to comprise a stair which in operative position comprises spaced horizontal members and vertical members, and an upper tread and a lower tread mounted on each of the horizontal members of said stair.

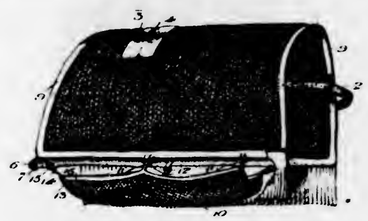
2. A fire escape comprising a balcony, a lazy tong carrying treads to comprise a stair which in operative position comprises spaced horizontal members and vertical members, each of said horizontal members being pivotally connected at each end and centrally to said vertical members, an upper tread mounted upon the horizontal members, and a lower tread mounted upon the horizontal members in front of the upper tread thereon, both of said tread members being behind the central pivoted connection of the respective vertical and horizontal members.

3. A fire escape comprising a balcony, a lazy tong carrying treads to comprise a stair which in operative position comprises spaced horizontal members and vertical members pivotally connected together, upper and lower tread members on each horizontal member, each of said lower treads having offset side portions adapted to nest when in folded position, means for pivotally connecting the upper horizontal member to said balcony, means for pivotally connecting the next lower horizontal member to a fixed member below said balcony, and means for raising and lowering the stair.



4. A fire escape comprising a balcony, a lazy tong carrying treads to comprise a stair which in operative position comprises spaced horizontal members and vertical members, an upper tread mounted upon the horizontal members, and a lower tread upon each of the horizontal members, said lower treads having offset side portions to allow said lower treads to telescope when in folded position.

1,218,829. FLY-NET. ROBERT K. BEAN, Winthrop, Mass. Filed Nov. 20, 1916. Serial No. 132,423. (Cl. 54—81.)

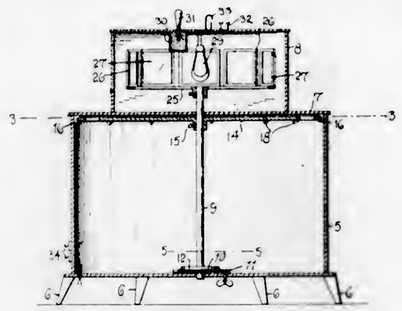


A device for protecting horses against flies and the like, said device comprising a back net adapted to extend over the horse's back and downwardly along his sides, fasteners at the front corners of said net for securing said corners together beneath the horse's neck, an auxiliary net adapted to be positioned beneath the animal's belly and having a pointed extension at its front end adapted to extend between his front legs, means for securing said pointed extension to the front end of the back net at the lower edge thereof, and means for securing the side edges of said auxiliary net to the lower edges of the back net.

1,218,830. CIGAR-TIP CUTTER. ALBERT BERGESON, Albert Lea, Minn. Filed May 31, 1916. Serial No. 100,949. (Cl. 131—38.)

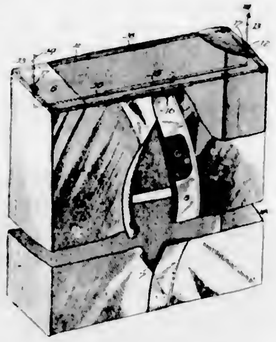
An apparatus of the character described including a rotatably mounted plate, a plurality of spaced cutter blades fixed on said plate adjacent its outer edge, said plate having slots extending between the cutter blades, means for rotating said plate, a trigger bar pivotally mounted

beneath the cutter plate and having one of its ends projecting into the slots in said plate, the other end of said bar extending upwardly from its pivot in spaced relation to said first named end, a series of spaced lugs on the under



side of the plate to engage the latter end of the trigger bar and limit the rotation of the plate, and a leaf spring connected to the first named end of the trigger bar and normally holding the same within the slots in the plate.

1,218,831. FOLDABLE GARMENT-PROTECTOR. LOUISE H. BOCH, Chicago, Ill. Filed Oct. 8, 1915. Serial No. 54,718. (Cl. 45—118.)

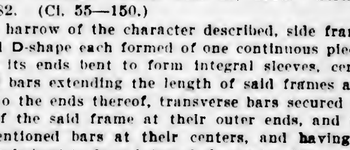


1. A foldable garment protector comprising a cover of flexible material, a supporting frame for said cover, said frame being adapted to support the upper end of said cover distended, and said frame being composed of a telescopic body member, a suspending member pivotally connected to said body member, said supporting member being also telescopically formed and forming the garment suspending member, substantially as described.

2. In a device of the class described, the combination of a cover of flexible material and a frame, said frame comprising a normally horizontally disposed extensible body member, a supporting member pivotally and slidably connected to the body member, also telescopically formed and being adapted for co-active extension movement therewith, said cover being adapted to hang from said frame and provided with a centrally-disposed aperture, said supporting member forming the garment suspending member, substantially as described.

3. A foldable garment protector, comprising a cover of flexible material and a collapsible supporting frame for said cover, the frame consisting of an extensible body member, and an extensible suspending member, said suspension member being pivotally connected to said body member, the suspending means having a pair of hook arms for attachment to a wall, a hanger bar formed by bending the hook arms at 90 degrees and telescopically joining the bent portions, and said cover having a centrally-disposed opening therein, substantially as described.

1,218,832. PROJECTILE. EMMET JOPLING BONDURANT, Athens, Ga., assignor to Georgia Plow & Foundry Co., Athens, Ga. Filed June 3, 1916. Serial No. 101,596. (Cl. 102—29.)



1. The combination with a projectile body, of members pivotally mounted in the body and adapted to swing outwardly therefrom in planes radiating from the body, a restraining means extending around the body and members to hold said members housed within the body, an explosive charge for removing the restraining means from the body to release the members, and a time element for igniting the charge.

2. A projectile having a longitudinal slot, a member pivotally mounted within the slot and adapted to be projected therebeyond by centrifugal force during the rotation of the projectile, a band encircling the projectile and holding said member within the slot, an explosive within the projectile, there being a vent leading therefrom and normally sealed by the band, and a time fuse leading to the explosive.

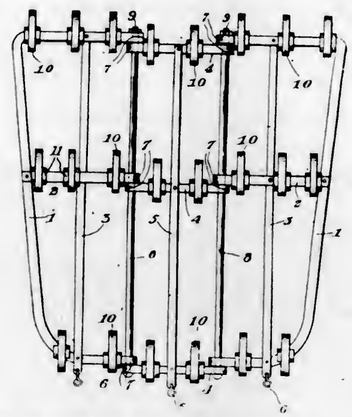
3. A projectile having a longitudinal slot, a member pivotally mounted within the slot and adapted to be projected therebeyond by centrifugal force during the rotation of the projectile, a band encircling the projectile and holding said member within the slot, an explosive within the projectile, there being a vent leading therefrom and normally sealed by the band, a time fuse leading to the explosive, a second explosive charge contained within the projectile, a time fuse connecting the same to the first named explosive, and a percussion pin leading to said explosive charge.

4. The combination with a projectile body having radial longitudinal slots, of blades pivotally mounted in the respective slots, outstanding cutting hooks upon the blades and normally housed in the slots, a band encircling the projectile and constituting means for holding the hooks and blades within the slots, timed means for removing the band and releasing the blades, said means including an explosive charge within the projectile, there being a vent leading therefrom and sealed by the band, and a time fuse leading to said charge.

1,218,833. HARROW. ALFRED BOURRET, St. Joseph, Quebec, Canada. Filed Feb. 23, 1916. Serial No. 80,082. (Cl. 55—150.)

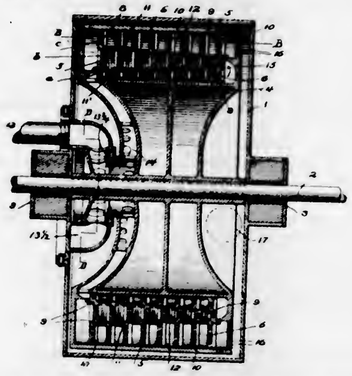
In a harrow of the character described, side frames of tapered D-shape each formed of one continuous piece and having its ends bent to form integral sleeves, centrally located bars extending the length of said frames and secured to the ends thereof, transverse bars secured to the sides of the said frame at their outer ends, and to the first-mentioned bars at their centers, and having their inner ends bent to form integral sleeves in alinement with the integral sleeves of the said D frame, a rectangular center frame composed of a center rod and transverse bars rigidly secured thereto at their centers and having their ends bent to form integral sleeves adapted to be placed in alinement with the sleeves of the said frame, bolts adapted

to be inserted through the alined sleeves of the center and side frames securing means therefor, teeth carried by



the said center and side frames, and means for securing the said teeth to the said frames.

1,218,834. STEAM-TURBINE. BYRON B. BOWER, Bainbridge, Ga. Filed May 26, 1916. Serial No. 100,084. (Cl. 253—65.)



1. In a multi-cellular, multi-velocity stage turbine, a steam casing, a rotor mounted therein, said rotor comprising a central drum, a disk peripherally disposed on said drum, a plurality of blades and shroud rings for holding said blades in position and means formed on said disk for receiving said shroud rings and blades.

2. A rotor for turbines comprising a disk having depressions alternately formed on the faces thereof, and shroud rings carrying blades mounted in said depressions.

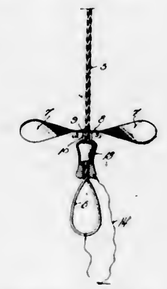
3. In a multicellular turbine, a disk having a plurality of off-set portions, nozzles concentrically formed therein and spaced around the entire circle of said disk, and rings having blades spaced around the entire circle thereof, said rings of blades being operatively disposed adjacent and detachably secured to said disk of nozzles with alternate rings of blades in radial alinement the blades receiving the impact of steam from the nozzles transversely to the main shaft.

4. In a multicellular turbine, a disk having a series of nozzles concentrically formed therein, and a plurality of blades formed in independent series, one series of blades being operatively disposed adjacent each series of nozzles, and each series of blades being in substantial radial alinement with the series of nozzles circumferentially adjoining.

5. A rotor for turbines comprising a disk having a plurality of series of nozzles formed therein, and shoulders formed between each of said series of nozzles, said shoulders projecting from opposite sides of the disk.

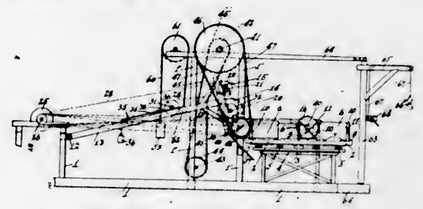
[Claims 6 to 11 not printed in the Gazette.]

1,218,835. FLYING TOY. WILLIAM P. BOWER and JOHN H. BOWER, Milwaukee, Wis. Filed Aug. 9, 1916. Serial No. 118,860. (Cl. 244—19.)



A flying toy comprising a spirally grooved launching rod, an aerial member slidable on the launching rod and formed from a single sheet of material comprising a pair of blade portions, a shank connecting said blade portions and apertured to receive the launching rod and a lateral and inward extension at one side of the shank apertured to receive the launching rod in a manner imparting rotative movement to the aerial member, and a thrust block slidable on the launching rod and engageable with the said extension of the aerial member.

1,218,836. SPIKE-HOLE-PLUG MACHINE. FRANK V. CARMAN, Oakland, Cal. Filed June 7, 1916. Serial No. 102,236. (Cl. 144—12.)



1. In a plug forming machine of the character described, the combination with a reciprocating frame, of cutting instrumentalities carried by said frame and movable therewith, a work-table movable in a plane perpendicular to the movement of the reciprocating frame, means on the work-table for supporting a plug-block and permitting the same to occupy successively different positions to the action of the cutting instrumentalities for cutting intersecting kerfs in said block to produce a multitude of block-like end sections, substantially as described.

2. In a machine for forming a multitude of block-like end sections upon a plug-block, the combination with a vertically swinging frame, cutting instrumentalities carried by said frame and movable therewith, a horizontally disposed work-table movable in a circular course, means on said table for supporting a plug-block and permitting the same to occupy different positions relative to the cutting instrumentalities for forming in said block a plurality of intersecting kerfs to produce block-like end sections.

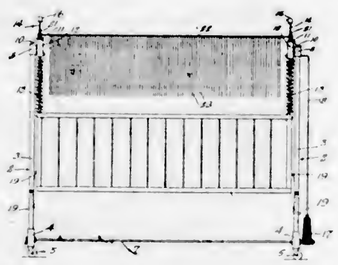
3. In a machine of the class described, the combination with a reciprocating frame, means for supporting the same, cutting instrumentalities carried by said frame and movable therewith, a work-table, means on said table for supporting a plug-block and permitting the same to be presented in successive positions to the action of the cutting instrumentalities upon the raising and lowering of the reciprocating frame to form within said plug-block a plurality of intersecting kerfs producing a multitude of block-like sections, substantially as described.

4. A machine for the described purpose, comprising a vertically swinging frame; plug-cutting instrumentalities carried by said frame; a horizontally turnable work-table movable in a plane perpendicular to the plane of the reciprocating path of the swinging frame; and means on the table by which the plug-block may be presented to the action of the cutting instrumentalities, in two successive positions, at right angles to each other.

5. In a machine of the class described, the combination with cutting instrumentalities, means for movably supporting said instrumentalities, of a work-table, a cradle on said table for receiving a plug-block and composed of two sides disposed at right angles to each other, means for supporting the table for a movement, the said cradle being adapted for a movement through a quarter turn to present the plug-block to the action of the cutting instrumentalities in two successive positions for forming in the block a series of intersecting kerfs producing block-like end sections.

[Claims 6 to 13 not printed in the Gazette.]

1,218,837. CRIB OR CRADLE. CALVIN F. CHRISTOPHER, Canton, N. C. Filed May 24, 1916. Serial No. 99,581. (Cl. 5—59.)



1. In a device of the character described, levers, a crib, spring means suspending said crib from the levers, and means connecting the crib and levers for constraining the crib for movement toward and away from the levers and for swinging movement with the levers.

2. In a device of the character described, levers, a crib, spring means suspending said crib from the levers, and means for constraining the crib to swing with the levers embodying guide rods attached to one of them and slidable through the other.

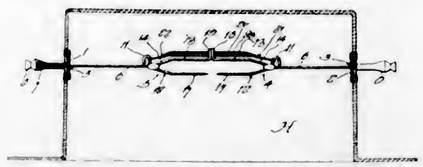
3. A device of the character described embodying a frame having standards, levers fulcrumed between their ends upon said standards, a crib between the standards, springs suspending the crib from said levers, and cooperating means carried by the frame and crib for preventing the swinging movement of the crib.

4. A device of the character described embodying a frame having standards, levers fulcrumed between their ends upon said standards, a crib between the standards, springs suspending the crib from said levers, and upstanding guide rods attached to the crib and slidable through the levers.

5. A device of the character described embodying a frame having standards, levers fulcrumed between their ends upon said standards, a crib between the standards, springs suspending the crib from said levers, upstanding guide rods attached to the crib and slidable through the levers, and coöperating means carried by the crib and standards for preventing the swinging movement of the crib.

[Claim 6 not printed in the Gazette.]

1,218,838. HAT-FASTENER. JOHN T. COONEY, Denver, Colo. Filed July 10, 1916. Serial No. 108,392. (Cl. 132—25.)



1. A hat fastener comprising two sections each having a stem provided with a detachable head at one end and with longitudinally extending laterally spaced parallel prongs at its other end, an arm also extending longitudinally from said pronged end, said arm being arranged in a plane between the plane of said prongs and spaced laterally therefrom, said arm being of the same length as said prongs, a combined stop and guide eye extending laterally from the free end of each arm and adapted to engage when the sections are at their extreme inward limit, a hook extending laterally from the base of each arm in the same direction as its guide eye, a connecting and guiding rod slidably mounted in the eyes of the two section arms and having eyes at its opposite ends, and an elastic element engaged at its opposite ends with the hooks of the two sections and threaded through the eyes of said rod.

2. A hat fastener comprising two sections each composed of a prong member and a stem, the prong member being formed of a wire bent upon itself intermediate of its ends with the members thereof arranged parallel and adjacent each other to form an arm, said members being offset inwardly at the inner end of said arm and then bent forwardly and offset outwardly and diverged at the outer end of the offset to form parallel prongs, the free end of said arm being bent laterally outward to form a guide eye, a stem for each section having its inner end bent to form a loop for interlocking engagement with the bend at the base of the prong member, said stem being arranged longitudinally relative to said prong member, with the terminal of said loop bent laterally to form a hook, a rod passing through the eyes of the arms of said sections, and an elastic element connecting the hooks of said sections and engaging said rod.

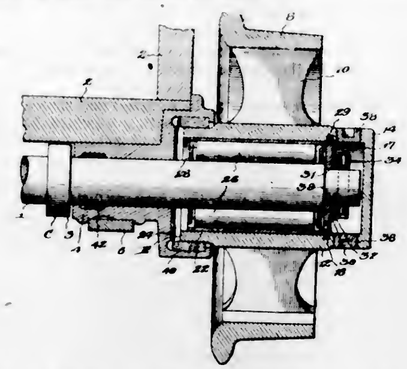
1,218,839. CAR-WHEEL BEARING. WILLIAM F. DANIEL, Bristol, Tenn. Filed July 15, 1916. Serial No. 109,499. (Cl. 64—39.)

1. In a wheel, the combination with a hub, of a partition formed of a plate of hard metal having its edges cast in the hub and surrounded by the metal of the hub so as to form a lubricating chamber at the outer end of the hub, and an axle having its end portion projecting through a hole in said partition into the lubricating chamber.

2. In a wheel, the combination with a hub, of a lubricating chamber integral with the hub and surrounding the end of the axle, a steel plate having its edges cast in and surrounded by the metal of the hub, said plate forming a partition separating the lubricating chamber from the bearing chamber, and an axle in the hub having its end portion projecting through a hole in said partition and extending into the lubricating chamber.

3. In a wheel, the combination with a hub having a bore containing roller bearings, of a lubricating chamber integral with the hub and surrounding the end of the axle, a perforated steel partition separating said chamber from the hub and having its edges cast into the metal of the hub during the molding process, and an axle arranged within the hub and having its end portion projecting through said partition and into said chamber.

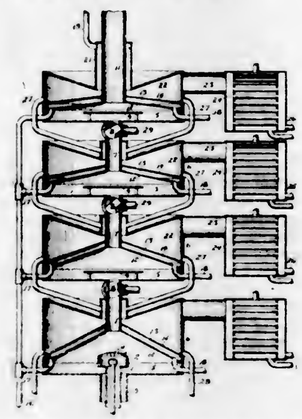
4. In a wheel, the combination with a hub, of a lubricating chamber integral with the hub and surrounding the end of the axle, a perforated steel partition cast in the hub and separating said chamber from the main portion of the hub, and an axle within the hub having a reduced end extending through said partition and a shoulder bearing upon the inner face of the partition.



5. In a wheel, the combination with a hub, of a lubricating chamber integral with the hub and surrounding the end of the axle, a perforated partition separating said chamber from the hub, and an axle having its end portion reduced to extend through said partition and a shoulder engaging the inner face of the partition to form a thrust bearing.

[Claims 6 and 7 not printed in the Gazette.]

1,218,840. APPARATUS FOR FRACTIONAL DISTILLATION. JOHN T. DAVIS, Alameda, Cal., assignor of fifty-one one-hundredths to Louis Levy and Joseph Rothschild, San Francisco, Cal. Filed Sept. 12, 1916. Serial No. 119,647. (Cl. 196—13.)



1. The combination of a downwardly extending series of vaporizers, each comprising a vaporizing chamber at the top, a heating chamber at the bottom, and a steam chamber interposed between the heating chamber and the vaporizing chamber, conduits leading from the lower portions of the vaporizing chambers to the upper portions of those below them, means for supplying the steam chambers with steam, flues connecting the upper portions of the heating chambers with the lower portions of those above them, means for supplying the lowermost heating chamber with hot gases and for drawing off hot gases from the uppermost heating chamber, conduits leading from the several vaporizing chambers, and condensers into which said conduits lead.

2. The combination of a downwardly extending series of vaporizers, each comprising a vaporizing chamber at the top, a heating chamber at the bottom, and a steam chamber having a conical top and interposed between the heating chamber and the vaporizing chamber, conduits leading from the lower portions of the vaporizing chambers to the upper portions of those below them, means for supplying the steam chambers with steam, flues connecting the upper portions of the heating chambers with the lower portions of those above them, means for supplying the lowermost heating chamber with hot gases and for drawing off hot gases from the uppermost heating chamber, conduits leading from the several vaporizing chambers, and condensers into which said conduits lead.

3. The combination of a downwardly extending series of vaporizers, each comprising a vaporizing chamber at the top, a heating chamber at the bottom, and a steam chamber having a conical top of slope increasing gradually downward and interposed between the heating chamber and the vaporizing chamber, conduits leading from the lower portions of the vaporizing chambers to the upper portions of those below them, means for supplying the steam chambers with steam, flues connecting the upper portions of the heating chambers with the lower portions of those above them, means for supplying the lowermost heating chamber with hot gases and for drawing off hot gases from the uppermost heating chamber, conduits leading from the several vaporizing chambers, and condensers into which said conduits lead.

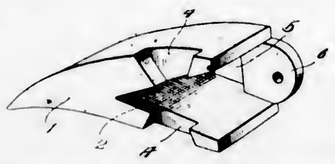
4. The combination of a downwardly extending series of vaporizers, each comprising a vaporizing chamber at the top, a heating chamber at the bottom, and a steam chamber interposed between the heating chamber and the vaporizing chamber, conduits leading from the lower portions of the vaporizing chambers to the upper portions of those below them, means for supplying the steam chambers with steam, flues connecting the upper portions of the heating chambers with the lower portions of those above them, means for supplying the lowermost heating chamber with hot gases and for drawing off hot gases from the uppermost heating chamber, baffle plates in the heating chambers against which the hot gases discharge upwardly, conduits leading from the several vaporizing chambers, and condensers into which said conduits lead.

5. The combination of a downwardly extending series of vaporizers, each comprising a vaporizing chamber at the top, a heating chamber at the bottom, and a steam chamber interposed between the heating chamber and the vaporizing chamber, conduits leading from the lower portions of the vaporizing chambers to the upper portions of those below them, means for supplying the steam chambers with steam, flues connecting the upper portions of the heating chambers with the lower portions of those above them, valves in the several flues, escape conduits communicating with the valve casings, means for supplying the lowermost heating chamber with hot gases and for drawing off hot gases from the uppermost heating chamber, conduits leading from the several vaporizing chambers, and condensers into which said conduits lead.

1,218,841. DIPPER-TOOTH. EDWIN W. DIETZ, Akron, Ohio. Filed Feb. 21, 1916. Serial No. 79,674. (Cl. 37—16.)

1. In combination, a dipper tooth having a socket whose outer end opens through the rear end of the tooth, one side wall of the socket being formed with an opening, the opposite side of said socket opening through one side of the tooth, said side of the tooth having cavities formed therein above and below and in communication with the socket, an attaching shank received in the socket, an integral projection on one side of said shank extending through the opening in the side wall of the socket, oppositely disposed wings formed integral with and projecting upwardly and downwardly from said shank, said wings being received in

the aforesaid cavities in the tooth, and releasable means for normally preventing relative movement of said tooth and shank.



2. In combination, a dipper tooth having a substantially V-shaped socket whose larger end opens through the rear end of the tooth, one side of said socket opening through one side of said tooth, the opposite side of said tooth being formed with an angular opening leading into the other side of the socket, said last named side of the tooth extending rearwardly beyond the body of said tooth to form an attaching ear and said first named side of said tooth having upper and lower cavities opening into the socket, said cavities having side walls converging toward said socket, and having flat inner walls, a shank having a tapered front end received snugly in the socket, an angular projection formed integrally with one side of said front end and received snugly in said angular opening, upper and lower flat dove-tail wings formed integrally with the other side of said end and disposed in said cavities, and a bolt passing through the aforesaid attaching ear and shank.

1,218,842. MACHINE FOR MAKING PICTURE-FRAMES AND THE LIKE. JOHN DOPYERA and RUDOLPH DOPYERA, Los Angeles, Cal., assignors of one-third to Paul Beracka, Los Angeles, Cal. Filed May 8, 1916. Serial No. 97,451. (Cl. 144—292.)



1. A machine for making picture frames and the like comprising a base, a plurality of frame holding means supported thereon at regular intervals and adjustable relative thereto, each of said frame holding means including a pair of horizontally disposed arms, the upper arm of which is slidably supported upon the lower arm, said lower arms being supported at their extremities and said upper arms being provided with means for engaging and holding the corners of the frames, and means supported on said base for simultaneously operating all of said arms to accommodate the size and form of the frames to be made.

2. A machine for making picture frames and the like comprising a suitable base provided with a table at the top thereof, a plurality of regularly spaced frame holding means supported on said base and comprising pairs of horizontally disposed arms braced at their outer extremities and slidable relative to each other, adjustable frame holding means carried by the upper arm of each pair, common operating means for said arms supported on said base, and locking means for the arms, as described.

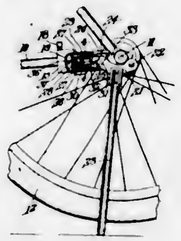
3. A machine for making picture frames and the like comprising a base having a table at the top, a plurality of regularly spaced arms pivoted to said base and extending outwardly from the periphery of said table, additional arms having independent pivotal connection with said table and supported on the outer ends of said first mentioned arms, means carried by said upper arms for firmly engaging and holding the frame members, and means supported on said base for simultaneously moving said arms to correspond to the size and form of the frames to be made.

4. A machine for making picture frames and the like including a plurality of frame supporting members having a common supporting base, each of said means comprising a pair of separately pivoted horizontally disposed arms, the outer ends of the upper arms slidably engaging the lower arms and being provided with adjustable frame clamping means, common operating means for contracting and expanding all of said adjustable frame clamping means, and means for locking the lower arms of each set against action during the frame making operation.

5. A machine for making picture frames and the like comprising a plurality of frame holding members composed of pairs of horizontally disposed arms having a common base and pivotally supported at different points there on, the upper arms of each set being slidable relative to the lower arms and provided with means adjustable to the angle of the frame corners for supporting the frame, common operating means for all of said frame holding means and locking means therefor.

[Claims 6 to 11 not printed in the Gazette.]

1,218,843. BICYCLE-STAND LOCK. WILLIAM J. DOYLE, Rome, N. Y. Filed June 2, 1915. Serial No. 31,741. (Cl. 208—75.)

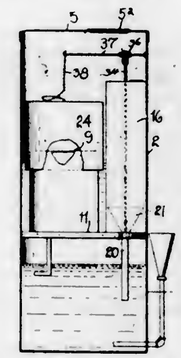


1. In a device of the class described, the combination of a bracket provided with walls forming a lock casing, means for securing said bracket to the rear axle and one member of the rear fork of a bicycle, a member pivoted to said bracket and having means rigid therewith adapted to positively engage one of said walls and limit the swinging movement of said member, an automatically operating latch mounted on said bracket within the walls of said casing and having a bolt slidable in the same plane as the member swings and adapted to secure said means against the above mentioned wall, a removable cover plate for said casing, and a key-actuated rotatable mechanism carried by said plate and adapted to release said latch.

2. In a device of the class described, the combination of a bracket adapted to be secured on the bicycle axle and comprising a vertical plate having laterally projecting walls on the outer side thereof forming a latch casing and lugs on its inner side adapted to coöperate with the bicycle frame to secure the bracket against turning about said axle, a member pivoted to said bracket and having a lug adapted to positively engage one of said walls and limit the swinging movement of said member, a spring actuated latch adapted to engage the last mentioned lug and secure the same against the above mentioned wall, and mechanism for releasing said latch.

3. In a device of the class described, the combination of a pair of brackets adapted to be secured on the opposite ends of the bicycle axle and comprising vertical plates each having a pair of inwardly projecting lugs adapted to engage the bicycle frame, and outwardly projecting lugs or abutments, one of said plates having a casing formed on the outer side thereof, a stand pivoted to said brackets and having means adapted to engage each of said outwardly projecting lugs to limit the swinging movement of the stand, a spring actuated latch arranged in said casing and adapted to engage one of said means to lock the stand in position to support the bicycle wheel off the ground, a removable cover plate for said casing, and a mechanism carried by said cover and adapted to release said latch.

1,218,844. CARBID-FEEDING MECHANISM FOR GAS-GENERATORS. WARREN E. DRESSEL, Edwardsville, Ill. Original application filed Feb. 27, 1915, Serial No. 11,012. Divided and this application filed May 8, 1915. Serial No. 26,888. (Cl. 48—52.)



1. In an acetylene gas generator, a vertically movable gas bell, a carbid receptacle having at its lower end a hopper terminating in a single discharge opening, discharging directly into the generating chamber, a valve slidable across said opening and controlling the discharge of carbid therethrough, and means for automatically shifting the valve to close said opening upon the elevation of the bell beyond a predetermined point or shifting said valve to unclose the opening upon a fall of the bell below a predetermined point and shifting said valve to close the opening upon a still further lowering of the bell due to a lack of carbid in the carbid receptacle.

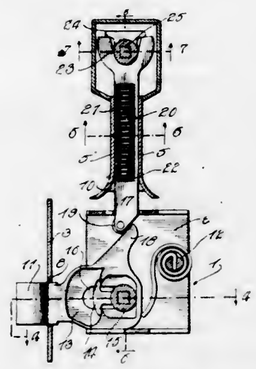
2. In an acetylene gas generator, a vertically movable gas bell, a vertically disposed carbid receptacle having a discharge opening at its lower end, a rotatable valve plate, said plate having a medially disposed opening adapted to aline with the discharge opening of the carbid receptacle, the portions of the plate at each end of said opening being of sufficient area to close the discharge opening of the carbid receptacle, a shaft upon which the valve plate is mounted, and means operatively connecting said shaft with the bell to cause a rotation of the shaft in one direction upon a lowering of the bell and a rotation of the shaft in the opposite direction upon the elevation of the bell.

3. In an acetylene gas generator, an exterior tank formed to provide a gas generating chamber at its lower end, a vertically disposed carbid receptacle mounted within the tank above the generating chamber and discharging thereinto, a vertically disposed gas receiving bell mounted within the tank above the generating chamber and to one side of the carbid receptacle, a rotatable valve plate coacting with the discharge opening of the carbid receptacle, said plate having a medially disposed opening adapted to aline with the discharge opening of the receptacle, the portions of the plate on each side of the opening therein having an area greater than the area of the discharge opening of the receptacle, a vertical shaft passing upward through the carbid container and upon which said valve plate is mounted, and means operatively connected to the bell and to the shaft causing the rotation of the shaft in one direction upon a lowering of the bell and a rotation of the shaft in the opposite direction upon the elevation of the bell.

4. In an acetylene gas generator, a vertically movable gas bell, a carbid receptacle having a discharge opening, a valve plate movable across said opening and having an opening therein adapted to aline with the discharge opening of the carbid receptacle, the portions on said plate on each side of the carbid receptacle being imperforate and equal in area with the opening of the receptacle, means operatively connected to the bell for causing a rotation of the shaft in one direction upon a depression of the bell, and a spring urging a rotation of the shaft in a reverse direction.

5. In an acetylene gas generator, a tank formed to provide a gas generating chamber at its lower end, a vertically disposed carbid receptacle mounted within the tank above the generating chamber and discharging thereinto, a vertically disposed gas receiving bell mounted within the tank above the generating chamber, means for conducting gas from the generating chamber into said gas bell, a rotatable valve coacting with the discharge opening of the carbid receptacle, said valve having a medially disposed opening adapted to aline with the discharge opening of the receptacle, the portions of the plate on each side of the opening having an area greater than the area of the discharge opening of the receptacle, a vertical shaft passing upward through the carbid container and operatively connected to the valve to cause its operation when the shaft is rotated, a lever pivotally mounted at one end, a normally slack flexible connection between the end of the lever and the gas bell, a screw threaded member mounted upon the shaft, and a yoke mounted upon the lever and having projecting portions engaging said screw threaded member whereby the shaft will be rotated upon a vertical movement of the lever.

1,218,845. VEHICLE-DOOR LATCH. CLEMENS DZIEGIELEWSKI, Detroit, Mich. Filed June 12, 1916. Serial No. 103,205. (Cl. 70—42.)

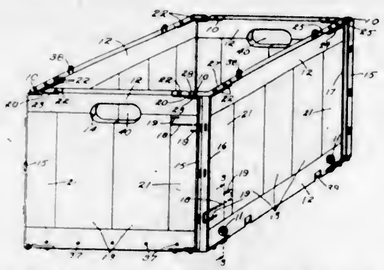


1. A device of the class described comprising a casing, a horizontal bolt slidably mounted in said casing and having means for actuating the same, a vertical guide in said casing, a vertical bar reciprocating in said guide and having a longitudinally extending undercut slot therein, coacting means arranged on said bar and said bolt for operating the latter independent of the first named means, means for reciprocating sad bar, a stop arranged in said casing, and a coiled spring disposed in said undercut slot and having one of its ends engaging one end of

the same, the other end of said spring engaging said stop for normally holding said bar in its retracted position.

2. A device of the class described including a casing having a rectangular plate, a laterally inwardly extending flange formed on one end of said plate and having a bolt receiving opening therein, an elongated portion extending upwardly from the upper edge of said plate and being slit transversely from each edge, the portion between said plate and said slits being bent laterally inward to form parallel flanges and to leave an enlarged upper end, a laterally and inwardly extending tongue struck from said elongated portion at a point adjacent said plate, a second plate abutting said flanges and having an enlarged upper end, said end having lateral flanges on its edges abutting the inner face of the first named enlarged portion, means for securing said plates together to form a guideway, a second rectangular plate having upper and lower lateral flanges abutting the inner face of the first named rectangular plate and secured thereto, a horizontally slidable bolt mounted between the two rectangular plates and sliding through the opening in the first named flange, a lug on the upper edge of said bolt having an inclined face, a vertically movable slotted bar in said guideway, a coiled spring in said slot, said tongue extending through said slot and contacting the lower end of said coiled spring and acting as a stop therefor, the upper end of said spring contacting the upper end of said slot, the lower end of said bar coacting with the upper inclined face of said lug, an operating cam engaging the upper end of said bar and a second operating cam engaging said bolt whereby said bolt may be operated by one cam independently of the other.

1,218,846. COLLAPSIBLE BOX. HERBERT A. FARNQUIST, Minneapolis, Minn. Filed May 14, 1915. Serial No. 28,036. (Cl. 217—14.)



1. A box having end and side walls each formed with horizontal top and bottom strips and vertical panel members held by said top and bottom strips, and a metal binding strap secured to the edge of the outside vertical strips and to the ends of the top and bottom strips.

2. A box having end and side walls each formed with horizontal top and bottom strips and vertical panel members held by said top and bottom strips, and a metal binding strip secured to each of the edges of the outside vertical strips and to the ends of the top and bottom strips, adjacent members of said binding strips being provided at the top and bottom with coöperating portions hingedly uniting the ends to the sides at the corners of the box.

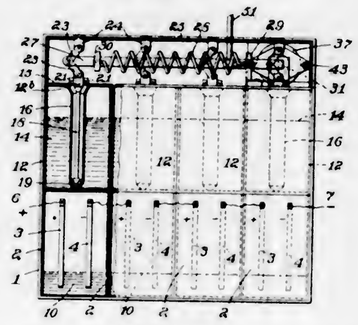
3. A box having end and side walls each formed with horizontal top and bottom strips and vertical panel members held by said top and bottom strips, and a metal binding strip secured to the edges of the outside vertical strips and to the ends of the top and bottom strips, some of said binding strips having extensions transverse to the plane thereof and others extensions in the plane thereof overlying and hingedly connected with the binding strips of the adjacent end or side member so that the ends and sides are hingedly connected by the corners.

4. A box having end and side walls each formed with horizontal top and bottom strips, a plurality of vertical panel members, said panel members being formed with facing grooves along the ends thereof and the top and bottom strips with tongues insertible in said grooves for holding the panel members from lateral movement, and metal binding strips secured to the edges of the outside vertical strips and to the ends of the top and bottom strips for securing the parts together.

5. A box having end and side walls each formed with horizontal top and bottom strips and a plurality of vertical panel members, said panel members being provided with symmetrically formed V-shaped facing grooves along the ends thereof and the top and bottom strips with correspoding V-shaped tongues insertible in said grooves for holding the panel members from lateral movement, and metal binding strips secured to the edges of the outside vertical strips and to the ends of the top and bottom strips for securing the parts together.

[Claim 6 not printed in the Gazette.]

1,218,847. EMERGENCY POWER DEVICE. WILLIAM PAYSON FIREY, Roanoke, Va. Filed June 22, 1915. Serial No. 35,707. (Cl. 204—53.)



1. An apparatus for automatically supplying an electric current upon a change in external conditions, comprising a battery cell having normally inert elements, an electrolytic supply separated therefrom by a barrier or separating medium, means for disrupting said barrier and permitting the electrolyte to flow into said cell, a fluid-actuated device normally restraining said disrupting means, and a destructible element controlling the operation of said fluid-actuated device.

2. An apparatus for automatically supplying an electric current upon a change in external conditions, comprising a battery cell having normally inert elements, an electrolytic supply separated therefrom by a barrier or separating medium, means for disrupting said barrier and permitting the electrolyte to flow into said cell, and a destructible element controlling the operation of said disrupting means.

3. An apparatus for automatically supplying an electric current to a circuit connected therewith, when subjected to a change in external conditions, comprising a battery cell containing normally inert electrodes or elements, a superposed vessel containing an electrolyte and the bottom wall thereof constituting the separating medium between said cell and said vessel, a disrupting device adapted to rupture said wall, means for restraining the operation of said device, and controlling means operable by a change in external conditions adapted to release said disrupting device when affected by said conditions.

4. An apparatus for automatically supplying an electric current to a circuit connected therewith, when subjected to a change in external conditions, comprising a battery cell containing normally inert electrodes or elements, a superposed vessel containing an electrolyte and the bottom wall thereof constituting the separating medium between said cell and said vessel, a plunger operable within said vessel to disrupt said wall, means for normally holding said plunger in retracted position, and control mechanism adapted to release said holding means when affected by a change in external conditions.

5. An apparatus for automatically supplying an electric current to a circuit connected therewith when subjected to a change in external conditions, comprising a battery cell containing normally inert electrodes or elements, a superposed vessel containing an electrolyte and the bottom wall thereof coinstituting the separating medium between said cell and said vessel, a plunger operable within said vessel to disrupt said wall, means for normally holding said plunger in retracted position, including a fluid-controlled element, and means subject to external conditions for disturbing the static condition of said fluid-controlled element.

[Claims 6 and 7 not printed in the Gazette.]

1,218,848. STRAINER FOR PUMPS. WILLIAM H. FOSTER, Oilton, Okla. Filed July 1, 1916. Serial No. 107,123. (Cl. 103—64.)



1. A strainer of the character described comprising an elongated hollow member having its intermediate portion provided with perforations, unions engaged with the opposite ends of the member, the inner ends of the unions being of a diameter materially in excess of the diameter of the hollow member, and a pervious cylinder interposed between the unions and engaged therewith.

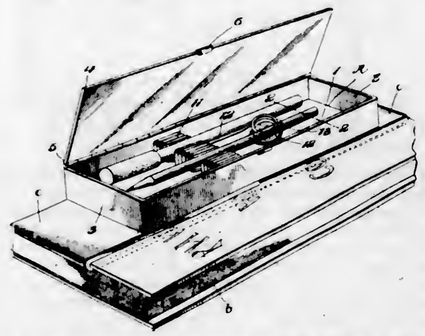
2. A strainer of the character described comprising an elongated hollow member having its intermediate portion provided with perforations, unions engaged with the opposite ends of the member, the inner ends of the unions being of a diameter materially in excess of the diameter of the hollow member, a pervious cylinder interposed between the unions and engaged therewith, and an annular member secured to the tubular member at a point intermediate the length thereof and affording a support for the intermediate portion of the pervious cylinder.

3. A strainer of the character described comprising an elongated hollow member having its intermediate portion provided with perforations, unions engaged with the opposite ends of the member, the inner ends of the unions being of a diameter materially in excess of the diameter of the hollow member, a pervious cylinder interposed between the unions and engaged therewith, an annular member secured to the tubular member at a point intermediate the length thereof and affording a support for the intermediate portion of the pervious cylinder, and means for clamping the pervious cylinder to the annular member.

4. A strainer of the character described comprising an elongated hollow member having its intermediate portion provided with perforations, unions engaged with the opposite ends of the member, the inner ends of the unions being of a diameter materially in excess of the diameter of the hollow member, a pervious cylinder interposed between the unions and engaged therewith, and a collecting member removably engaged with one of the unions.

5. A strainer of the character described comprising an elongated hollow member having its intermediate portion provided with perforations, unions engaged with the opposite ends of the member, the inner ends of the unions being of a diameter materially in excess of the diameter of the hollow member, a pervious cylinder interposed between the unions and engaged therewith, and a member secured to the tubular member at a point intermediate the length thereof and affording a support for the intermediate portion of the pervious cylinder.

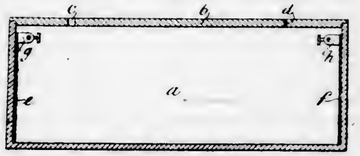
1,218,849. COIN AND PEN HOLDER. JENNIE J. FREDERICKSON, Springfield, Minn. Filed Oct. 20, 1916. Serial No. 126,756. (Cl. 120—23.)



1. In a device of the character described, the combination of a container, means to connect said container with a supporting object, an object retaining device arranged within the container, said retaining device comprising a main coil spring portion, formed from a strand of wire having the free ends thereof secured to the container, said free ends being provided with coils arranged adjacent one end of the container remote from said main coil, and a closure for the container.

2. In a device as specified, the combination with a housing, of an object retaining member therein formed of a strand of wire provided with a main coiled portion arranged transversely of the housing, the free ends of the strands being provided with coils to retain objects.

1,218,850. TREATMENT OF SEEDS. HENRY ERNEST FAY, Godmanstone, Dorchester, England, assignor to Charles Edward De Wolf, London, England. Filed June 3, 1916. Serial No. 101,575. (Cl. 175—311.)



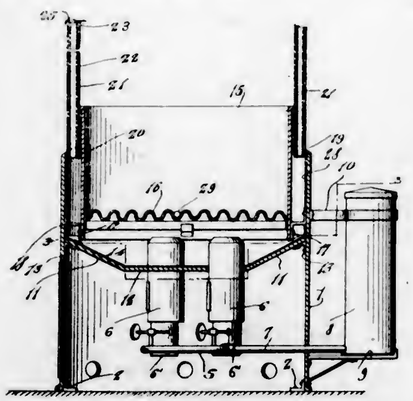
1. The herein-described process of treating seeds before they are sown, which consists in steeping in a radio-active liquid.

2. The herein-described process of treating seeds before they are sown, which consists in steeping them in a radio-active solution of manure and water.

3. The herein-described process of treating seeds which consists in steeping them in a radio-active liquid, and passing an electric current through said liquid.

4. The herein-described process of treating seeds which consists in steeping them in a radio-active solution of manure and water, and passing an electric current through the solution.

1,218,851. WATER-HEATER OR COOKER. FRANK GEMINDEN, Jamestown, Mo. Filed Mar. 25, 1916. Serial No. 86,691. (Cl. 126—350.)



1. In a device as set forth, the combination of a casing, a liquid retaining receptacle extending downwardly into said casing from the upper end of the same and being of smaller diameter than the casing, a partition extending across within said casing beneath the bottom of said liquid retaining receptacle, the upper edge of said casing being bent inwardly and engaging the outer surface of said liquid retaining receptacle a short distance below the upper edge of the retaining receptacle, a plurality of burners positioned within said casing and having their upper heat outlets projecting through said partition, a sheet of asbestos positioned upon the upper surface of said partition and engaging the inner surface of the upper portion of the casing, the upper inturned edge of said casing fitting snugly about said receptacle for retaining the heat generated by said burners within said casing above said partition and about said receptacle, the inwardly bent upper edge of said casing being provided with a plurality of openings, draft pipes extending upwardly through said openings.

2. In a device as set forth, the combination of a casing, a liquid retaining receptacle extending downwardly into said casing from the upper end of the same and being of smaller diameter than the casing, a partition extending across within said casing beneath the bottom of said liquid retaining receptacle, the upper edge of said casing being bent inwardly and engaging the outer surface of said liquid retaining receptacle a short distance below the upper edge of the retaining receptacle, a plurality of burners positioned within said casing and having their upper heat outlets projecting through said partition, a sheet of asbestos positioned upon the upper surface of said partition and engaging the inner surface of the upper portion of the casing, the upper inturned edge of said casing fitting snugly about said receptacle for retaining the heat generated by said burners within said casing above said partition and about said receptacle, the inwardly bent upper edge of said casing being provided with a plurality of openings, draft pipes extending upwardly through said openings.

3. In a device as set forth, the combination of a casing, a liquid retaining receptacle extending downwardly into said casing from the upper end of the same and being of smaller diameter than the casing, a partition extending across within said casing beneath the bottom of said liquid retaining receptacle, the upper edge of said casing being bent inwardly and engaging the outer surface of said liquid retaining receptacle, a short distance below the upper edge of the retaining receptacle, a plurality of burners positioned within said casing and having their upper heat outlets projecting through said partition, a sheet of asbestos positioned upon the upper surface of said partition and engaging the inner surface of the upper portion of the casing, the upper inturned edge of said casing fitting snugly about said receptacle for retaining the heat generated by said burners within said casing above said partition and about said receptacle, the inwardly bent upper edge of said casing being provided with a plurality of openings, draft pipes extending upwardly through said openings, and means carried by the top of said draft pipes for regulating the size of the openings therein for regulating the draft through the pipes, upper portion of the casing and burners.

1,218,852. TOY. BLANCHE R. GILPIN, Tygee Valley, Idaho. Filed May 9, 1916. Serial No. 96,332. (Cl. 46—40.)



1. A toy comprising a removable flexible cover made of washable material and having an irregularly shaped cavity and an aperture, an inflatable balloon inserted through the aperture into the cavity and adapted to distend the cover about the cavity, a check valve in the balloon and a flap cover for the aperture.

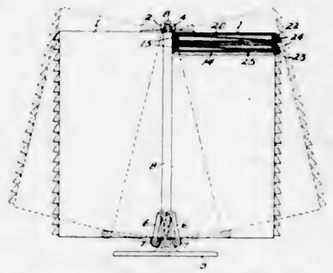
2. A toy comprising an inflatable balloon, and a cover for the balloon having an irregularly shaped interior and made of flexible washable fabric.

3. A toy comprising an inflatable balloon, a check valve in the balloon, and a removable, flexible washable cover for the balloon having stuffed projecting portions and a cavity holding the inflated balloon.

4. A toy comprising an inflatable balloon, and a removable, flexible cover having an irregularly shaped cavity for the balloon, and having an aperture for the insertion of the balloon.

5. A toy comprising an inflatable balloon, and a removable cover of flexible fabric for the balloon having stuffed projecting portions and a cavity holding the inflated balloon.

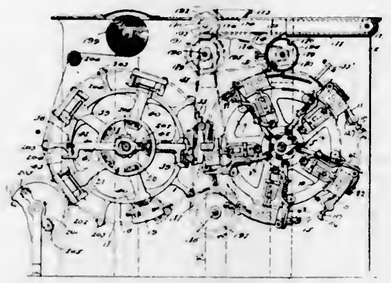
1,218,853. FILING-CABINET. WILLIAM G. GOODNEY, Stambaugh, Mich. Filed Oct. 16, 1915. Serial No. 56,170. (Cl. 45—3.)



1. In a filing cabinet, a supporting standard, cabinet sections hinged together at their upper ends and rotatably mounted on said standard, jointed braces hingedly connecting the lower ends of the cabinet sections and adapted to unfold outwardly to extend said sections to angular positions relatively with said standard, a plurality of drawers slidably mounted in each of the sections, and means for yieldably retaining said drawers normally within said sections.

2. In a filing cabinet, a supporting standard, upper and lower horizontal cross arms rotatably mounted on said standard, cabinet sections hingedly connected together and to said upper cross arm to swing thereon and rotate therewith, jointed braces hingedly connecting the lower ends of the cabinet sections to said lower cross arm, said braces adapted to unfold outwardly to extend said sections to angular positions relatively with said standard, a plurality of drawers slidably mounted in each of the sections, and elastic members connecting said drawers with said sections for normally retaining said drawers therein.

1,218,854. CANDY-WRAPPING MACHINE. JESSE W. GREER, Fort Worth, Tex., assignor, by mesne assignments, to Massachusetts Machinery Company, a Corporation of Massachusetts. Filed Mar. 23, 1915. Serial No. 16,365. (Cl. 93—5.)



1. A candy wrapping machine comprising two revolving members, one revolving member carrying a series of rotatable paper carrying tables and the other revolving member carrying a series of wrapping tables, means for rotating each paper carrying table one-quarter turn during the travel thereof to turn each sheet of paper at right angles to the travel thereof, means for shifting sheets of paper from the paper carrying member to the wrapping member and means for feeding sticks of candy to the tables carried by the wrapping member.

2. A candy wrapping machine comprising a revolving wrapping member and a revolving paper feeding member, the latter carrying a series of rotatable tables, each carrying a single sheet of paper, means for turning each rotatable table one-quarter turn to place the grain of each sheet of paper at right angles to the travel of said feeder member, the wrapping member having a series of wrapping tables, means carried by the two revolving members for shifting a sheet of paper from one paper carrying table to one wrapping table on the other member and means for wrapping the sheet of paper about a stick of candy.

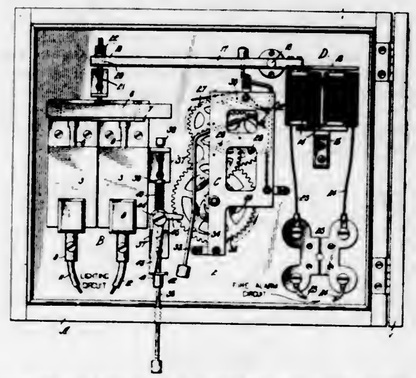
3. A candy wrapping machine comprising a paper carrying and feeding revolving member, a revolving member carrying a series of wrapping tables, means on the paper carrying member for turning each sheet of paper at right angles to the travel of the revolving member, means for shifting the sheet of paper from the paper carrying member to each one of the tables on the revolving wrapping member and means for wrapping a sheet of paper about a stick of candy on a wrapping table of the wrapper revolving member.

4. A candy wrapping machine comprising a paper carrying member provided with a series of rotatable tables thereon, each carrying a sheet of paper, a wrapper revolving member carrying a series of wrapping tables, means for shifting a sheet of paper from the paper carrying table to a wrapping table as these tables pass each other, means carried on a wrapping table for clamping the sheet of paper to the wrapping table, means for feeding candy stick by stick to a wrapping table and means carried by the wrapper member for twisting the paper on each stick of candy.

5. A candy wrapping machine having a revolving paper feeding member, a revolving candy wrapping member, the paper feeding member being provided with means for cutting the paper into sheets and having a series of rotatable paper carrying tables for turning each sheet of paper at right angles to the travel of said wheel, the wrapper member having a series of wrapping tables, means for shifting a sheet of paper from a paper carrying table to a wrapping table as these tables pass each other and means carried by the wrapping member for wrapping each sheet of paper about a stick of candy and twisting the ends of the paper at the ends of the stick of candy.

[Claims 6 to 51 not printed in the Gazette.]

1,218,855. LIGHT-CUT-OUT SWITCH FOR FIRE-HOUSES. JOHN GROUSS, Elizabeth, N. J., assignor of one-half to Clarence E. Pryor, Elizabeth, N. J. Filed Mar. 24, 1916. Serial No. 86,386. (Cl. 161—27.)



1. The combination of a normally closed fire alarm circuit and an electromagnet therein and normally energized, with a fire house lighting system, a device for throwing the system into and out of operation and controlled by the electromagnet to throw the said device into operation, and a clockworks determining the period during which the lighting system will remain in use, and including means whereby the lighting system will be thrown out of use and remain so until the apparatus is manually reset after the receiving of an alarm.

2. The combination of a normally closed alarm circuit and a normally energized electromagnet therein, with a fire house lighting system, a device for throwing the said system into service, means adapted to be manually reset and normally held by the energized electromagnet for holding the device in service cut-out position and adapted, when the magnet is deënergized, to permit the device to move to service position, a clockworks for determining the period in which the lighting system will be in service, means controlled by the electromagnet for controlling the starting of the clockworks, means having a movement sufficient for throwing the device to service cut-out position and insufficient to reset the first mentioned means to normal position, a device actuated by the clockworks for controlling the last-mentioned means, and means for automatically stopping the clockworks after the lapse of a predetermined period of time.

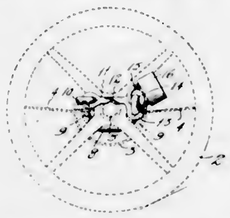
3. The combination with an alarm circuit normally closed and a magnet in the said circuit, with a fire house lighting system, a device for throwing the system into and out of service, a member normally held by the electromagnet to retain the device in service cut-out position and released by the electromagnet when the same is deënergized, to permit the device to throw the system into service, a clockworks, a dog connected with the member to control the starting of the clockworks when the magnet is deënergized, a dog automatically actuated by the clock-

works for stopping the same after the lapse of a predetermined period of time, a member actuated by the clockworks just prior to the stopping thereof, and means controlled by the last-mentioned member for causing the said device to be thrown to service cut-out position.

4. The combination of a normally closed fire alarm circuit and a normally energized magnet therein, with a fire house electric lighting system, a normally open switch in the said system, a member normally held by the energized electromagnet to hold the movable element of the switch in open circuit position, a clockworks, a device controlled by the clockworks for moving the movable element of the switch to open circuit position, a dog controlled by the electromagnet to permit the clockworks to start when the electromagnet is de-energized, and a device for automatically stopping the clockworks after the same has caused the switch to automatically open.

5. The combination of a fire alarm circuit and an electromagnet normally energized, with a fire house lighting system including a device for throwing the lights into and out of use, said device including a movable element mounted to automatically move to service position, manually reset means controlled by the electromagnet for holding the element out of service position, means tending to move the element from service to non-service position, and a mechanism active after a predetermined lapse of time after the throwing into service of the lighting system for causing the last-mentioned means to throw the element to non-service position.

1,218,856. LOCKING DEVICE FOR MOTOR-VEHICLES. RICHARD A. GULDEN, West Dallas, Tex. Filed Jan. 31, 1916. Serial No. 75,334. (Cl. 70—90.)



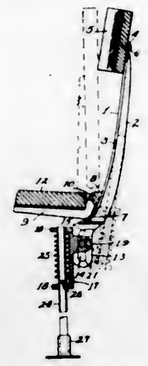
1. The combination with the central web of the spider of the steering wheel of a motor vehicle, of a locking device including a pair of upright members straddling the said web and occupying positions on opposite sides of the steering post of the wheel, a connection between the members holding them spaced apart, and means for locking the members in position on the web.

2. The combination with a central web of the spider of a steering wheel and its post, of a pair of upright locking members straddling said web in spaced order on each side of said post, means for connecting the members and holding them apart, a connecting element extending from the free end of one member to which it is hinged to the free end of the other member, and a lock engaging the said free end of the last named member and fastening the free end of the connecting element thereon.

3. In a locking device for the steering wheel of a motor vehicle, a pair of elongated elements connected together and spaced apart to straddle the post and central web of a steering wheel, projections carried by the elements having their free ends positioned to project into the path of the controlling levers of a steering gear, and a fastening connection pivoted to one of the elements and engaging the other element.

1,218,857. FOLDABLE SEAT. AUGUST W. L. HARTBAUER, Detroit, Mich. Filed Mar. 6, 1916. Serial No. 82,304. (Cl. 155—22.)

1. In a foldable seat, a back member having a seat member hingedly mounted thereon, a supporting standard adapted for detachable engagement with a floor socket, connecting means mounted on said standard and having pivotal and slidable interlocking engagement with said back member to retain said member in fixed extended relation to said standard and to permit said standard to swing thereon into folded relation with said seat and back member.



2. In a foldable seat, a back member having a seat member mounted thereon, a supporting standard, and a spring-pressed bracket mounted on said standard and pivotally and slidably connected with said back member to fold thereon and to interlock in an extended relation therewith.

3. In a foldable seat, a back member carrying a seat member and having a bifurcated extension provided with elongated apertures therein, a supporting standard, and a bracket mounted on said standard and having trunnions engaging in the apertures of said bifurcated extension to retain said bracket in fixed parallel engagement with said extension and to permit said bracket to swing about the end thereof.

4. In a foldable seat, a back member having a seat member hingedly mounted to fold thereon, a supporting standard, and a bracket mounted on said standard and pivotally connected to interlock with said back member and to swing thereon into folded relation with said seat and back member.

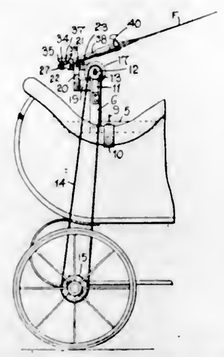
5. In a foldable seat, a back member carrying a back rest at its upper end and terminating at its lower end in a bifurcated angular extension having elongated apertures formed therethrough, a seat member hingedly mounted on said back member and supported on said angular extension, a supporting standard, and a bracket mounted on said standard, said bracket having an ear provided with trunnions engaged in the apertures of said extension to hingedly connect and slidably interlock said bracket with said back member.

[Claims 6 and 7 not printed in the Gazette.]

1,218,858. AUTOMATIC BABY-CARRIAGE FAN. BERNHARD B. HARTLEB and RUDOLPH C. HARTLEB, Baltimore, Md. Filed Aug. 19, 1916. Serial No. 115,893. (Cl. 230—7.)

1. The combination of a support, a shaft mounted in the support, an arm slidably supported intermediate of its ends and eccentrically connected at one of its ends to said shaft, means for attaching a fan to the other end of said arm, and means for rotating the shaft, whereby the arm is oscillated to impart a bodily movement to the fan.

2. The combination of a support and means for detachably clamping the same upon a vehicle, a shaft rotatably mounted in said support, a driving connection between said shaft and one of the vehicle wheels, an arm operatively connected to said shaft and supported for sliding and vertical oscillatory movement, an angular rod, means for securing a fan to one end of said rod, and means for adjustably clamping the other end of the rod to said arm.



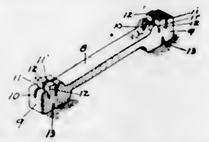
3. The combination of a support and means for detachably clamping the same upon a vehicle, a shaft rotatably mounted in said support, a driving connection between said shaft and one of the vehicle wheels, an arm operatively connected to said shaft and supported for sliding and vertical oscillatory movement, an angular rod, means for securing a fan to one end of said rod, the other end of the rod being shiftable in said arm at right angles thereto, a clamping screw to hold the rod against movement with respect to the arm, and means permitting of a limited rotation of the rod with respect to the arm to adjustably position the fan with respect to the vehicle.

4. The combination of a support and means for detachably clamping the same upon a vehicle, a shaft rotatably mounted in said support, a driving connection between said shaft and one of the vehicle wheels, an arm operatively connected to said shaft and supported for sliding and vertical oscillatory movement, an angular rod, means for securing a fan to one end of said rod, a sleeve projecting laterally from said arm, said rod being shiftable through the sleeve, a set screw threaded in the sleeve for engagement with the rod, and means on the rod coöperating with means on said sleeve to permit of a limited turning movement of the rod in said sleeve.

5. The combination of a support and means for detachably clamping the same upon a vehicle, a shaft rotatably mounted in said support, a driving connection between said shaft and one of the vehicle wheels, an arm operatively connected to said shaft and supported for sliding and vertical oscillatory movement, an angular rod, means for securing a fan to one end of said rod, a sleeve projecting laterally from said arm, said rod being shiftable through said sleeve, a set screw threaded in the sleeve for engagement with the rod and said sleeve having a pin projecting in spaced parallel relation to the rod, and a collar on said rod having spaced shoulders to contact with said pin and limit the turning movement of the rod in the sleeve when the set screw is loosened.

[Claims 6 to 8 not printed in the Gazette.]

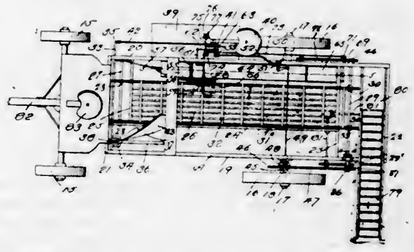
1,218,859. PACKAGE CARRIER AND FASTENER. LOUIS HESS, Portland, Oreg. Filed July 24, 1916. Serial No. 110,960. (Cl. 224—56.)



1. A device of the character described having a central bar and rectangularly formed ends, said ends being provided with longitudinal slits in their upper parts, and with two transverse slits in the same parts the latter slits having the sides next to each other verfical so that rectangular binding posts are formed between said slits, substantially as described.

2. A device of the character described having a central bar and rectangularly formed ends, said ends being provided with longitudinal slits in their upper parts, with two transverse slits in the same parts the latter slits having the sides next to each other vertical so that rectangular binding posts are formed between said slits, and with a transverse slit in the lower parts of each of the said ends, substantially as described.

1,218,860. BEET-HARVESTING MACHINE. CARL DONALD HEYER, Laird, Colo. Filed Jan. 19, 1915. Serial No. 3,121. (Cl. 55—51.)



1. In a beet harvester, the combination of a wheeled frame, a traction operated conveyer carried by the frame, digging mechanism for delivering the beets to the conveyer, a cutting mechanism mounted on the frame, and means for adjusting the cutting mechanism transversely of the conveyer.

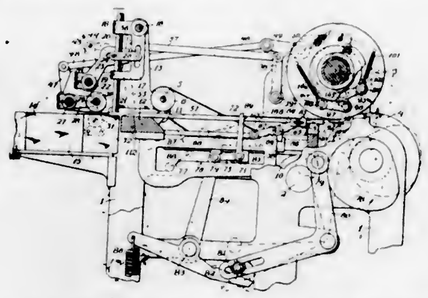
2. In a beet harvester, the combination of a wheeled frame, a digging mechanism, a traction operated conveyer for receiving the beets from the digging mechanism, a guide plate yieldingly supported adjacent the conveyer and provided with a longitudinal recess in its forward end for receiving the tops of the beets as moved by the conveyer, and a knife element adjacent the plate and partly overlying said recess for severing the tops in their movement.

3. In a beet harvester, the combination of a wheeled frame, a digging mechanism, a traction operated conveyer for receiving the beets from the digging mechanism, studs projecting inwardly from one side of the frame, a plate slidably supported on said studs, springs encircling said studs to yieldingly hold the plate at the limit of its movement in one direction, said plate being provided with a longitudinal recess in its forward end for receiving the tops of the beets as moved by the conveyer, and a knife element adjacent the plate and partly overlying said recess for severing the tops in their movement.

1,218,861. FEEDING MECHANISM FOR PAPER OR CARDBOARD. CHARLES H. HEYWOOD and DENISON E. TRAVIS, Waukegan, Ill., assignors to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed Mar. 26, 1908. Serial No. 423,312. (Cl. 101—41.)

1. In a feeding mechanism of the kind specified, means for supporting the blank to be fed, a suction pickup adapted to engage the forward edge of said blank, a constantly operating blank forwarding means, and a pair of normally separated rolls interposed in the path of said blank between said constantly operating forwarding means and the edge of said blank, means for operating said pickup to engage the blank and to deposit it between the separated rolls of said pair, and means for thereafter bringing said rolls together to feed the blank to said constantly operating forwarding means.

2. In a mechanism of the kind specified, means for supporting the blank to be fed, a suction pickup adapted to engage the forward edge of said blank, pairs of normally separated rolls on each side of said pickup and in advance of the forward edge of said blank, means for operating said pickup to carry the edge of the blank, by the exertion of a tensile strain on the blank between the separated rolls of said pairs, and means for thereafter bringing the rolls of said pairs together to continue the forward movement of said blank.



3. In a feeding mechanism of the kind specified, means for supporting a blank to be fed, a suction pickup adapted to engage the blank at its extreme forward point, pairs of feed rolls disposed rearwardly of the point of engagement of said pickup and in advance of the longitudinally alined portions of the forward edge of said blank, and means for moving said pickup forwardly, whereby the forward edge of said blank is drawn into the bight of said feed rolls by the exertion of a tensile strain on the blank.

4. In a feeding mechanism of the kind specified, supporting means for the blank to be fed, pairs of feed rolls disposed in advance of the correspondingly longitudinally alined portions of the forward edge of said blank, a suction pickup adapted to engage said blank at a portion thereof in advance of the bight of said feed rolls, and means for moving said pickup forwardly to carry the edge of said blank into the bight of said rolls by the exertion of a tensile strain on said blank.

5. In a feeding mechanism of the kind specified, a support for the material to be fed, a rocking shaft above said support, a swinging frame carried by said shaft, a suction pickup slidable in said frame, a second rocking shaft, an arm carried by said second shaft with its free end engaging said pickup to impart an up and down movement thereto in said frame, a common cam shaft for controlling the rocking movement of both of said rocking shafts, two pairs of normally separated feed rolls having their axes located in a vertical plane behind the mouth of said suction pickup and upon opposite sides of the plane of its movement, and means for bringing said rolls together at the end of the swinging movement of said pickup.

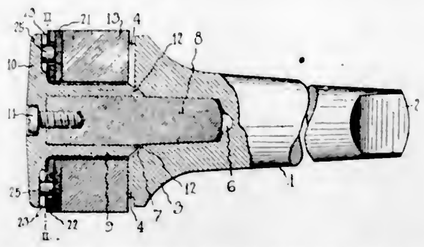
[Claims 6 and 7 not printed in the Gazette.]

1,218,862. REAMER. ALBERT CHARLES HOEH, Detroit, Mich. Filed July 10, 1916. Serial No. 108,294. (Cl. 77—72.)

1. A reamer comprising a shank, a cap non-rotatably and detachably supported thereby, a cutter head loosely interposed between a head on said cap and said shank, cutters carried by the periphery of said cutter head, and a driving connection between said cap and said cutter head and between cutters thereof.

2. A reamer comprising a shank, a cap non-rotatably and detachably supported thereby, a ring shaped cutter head loosely interposed between a head on said cap and said shank, and driving connections between said cap and said cutter head in opposed relation and adjacent to the peripheries thereof.

3. A reamer comprising a shank, a pin carried thereby, a cap having a sleeve non-rotatably held upon said pin, a cutter head loose upon said sleeve between a head on the cap and said shank, and driving connections between said cutter head and said cap.

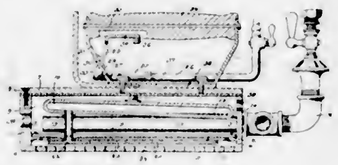


4. A reamer comprising a shank having a head, a cap having a sleeve non-rotatably engaging in the head of said shank, a cutter head loosely supported by the sleeve of said cap and provided with cutters, and driving connections between said cap and said cutter head adjacent to the cutters thereof.

5. A reamer comprising a shank having a head, a pin carried by said shank, a cap having a sleeve encircling said pin and non-rotatably engaging in the head of said shank, a cutter head loose upon the sleeve of said cap against the head of said shank, plates interposed between the cap and head, and driving means between the plates and the cap and head, permitting limited lateral displacement of the connected parts.

[Claim 6 not printed in the Gazette.]

1,218,863. SAD-IRON. LOUIS HOFFMAN, Duluth, Minn. Filed Oct. 9, 1916. Serial No. 124,696. (Cl. 68—26.)



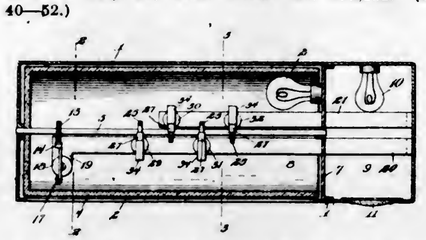
1. In combination, a two chambered sad-iron, an inclined steam generating receptacle in the uppermost chamber, and having a water supply connected therewith, a steam or water distributing perforated pipe within the lowermost chamber and connected with the steam generating receptacle, heating means within the iron and above the lowermost chamber whereby both the receptacle and iron are heated and means for controlling the water and heating elements, substantially as described.

2. In combination, a two chambered sad-iron, an elongated steam generating receptacle in the uppermost chamber and having a water supply connected therewith, a steam or water distributing perforated pipe within the lowermost chamber and connected with the steam generating receptacle, heating means intermediate the lowermost chamber and the receptacle whereby both are heated, means whereby either water or steam or a mixture of both may be admitted to the lowermost chamber, and means for controlling the water and heating elements, substantially as described.

3. The combination with a sadiron having a heating chamber and a distributing chamber, of a steam generating receptacle within the heating chamber and having means whereby either steam, water or both may be discharged therefrom into the distributing chamber, parallel heating pipes extending within the heating chamber and substantially intermediate of the generating receptacle and the upper wall of the distributing chamber whereby

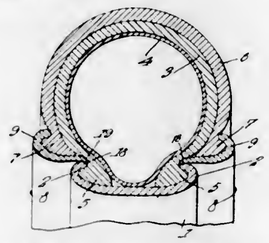
an equal distribution of heat is accomplished, and means for controlling the water and heating elements, substantially as described.

1,218,864. SIGNAL. WILLIAM ROBERT HONEYBALL, Pasadena, Cal. Filed Mar. 20, 1914, Serial No. 825,962. Renewed July 25, 1916. Serial No. 111,281. (Cl. 40—52.)



In combination, a casing provided with a sight opening therein, an electric lamp arranged interiorly of said casing, a transparent drum having one end closed and rigidly secured to said shaft and its opposite end open and arranged around said lamp, electro-responsive means for rotating said shaft, two pairs of magnets arranged on opposite sides and coöperating with said shaft for allowing the latter to make a complete or partial revolution, control circuits for said magnets, and a supporting bar for each of said pairs of magnets, and arranged below the sight opening, said bar passing through the open end of the drum and secured to the casing.

1,218,865. RETAINING-RING. CHARLES A. HORNBURG, Devine, Tex. Filed Apr. 7, 1916. Serial No. 89,627. (Cl. 152—17.)

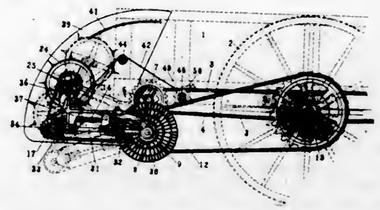


In a device of the class described, a rim including flanges; a main casing having edges coacting directly with the flanges; an auxiliary casing disposed outside of the main casing and provided with clencher beads; and rings having clencher flanges receiving the beads of the auxiliary casing, the rings resting on the outer edges of the flanges of the main rim and terminating at said outer edges, thereby to permit the edges of the main casing to coact directly with the flanges of the main rim.

1,218,866. MANURE-SPREADER. WILLIAM C. JIRDINSTON, Moline, Ill., assignor to Marseilles Company, East Moline, Ill., a Corporation of Illinois. Filed Jan. 27, 1913. Serial No. 744,423. (Cl. 111—40.)

1. In a manure spreader, the combination of a box body having a conveyer bottom, an auxiliary conveyer rearward of the conveyer bottom and below the plane thereof, a distributer adapted to lift material from the auxiliary conveyer and carry it upward and rearward over the distributer to the ground, and means to operate the conveyer bottom and the distributer.

2. In a manure spreader, the combination of a box body having a conveyer bottom, an auxiliary conveyer rearward of the conveyer bottom and below the plane thereof, a distributer supported above the rear of the auxiliary conveyer and adapted to lift material therefrom and carry it upward and rearward over the distributer to the ground, and means to actuate the conveyer bottom, the auxiliary conveyer and the distributer.



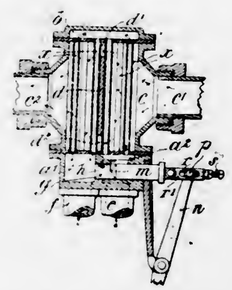
3. In a manure spreader, the combination of a box body having a conveyer bottom, an auxiliary conveyer extending forwardly and beneath the rear of the conveyer bottom and pivotally supported in fixed relation thereto, a distributer supported above the rear of the auxiliary conveyer and adapted to lift material therefrom and carry it upward and rearward over the distributer to the ground, and means to actuate the conveyer bottom, the auxiliary conveyer and the distributer.

4. In a manure spreader having a bottom conveyer and a distributer, an auxiliary conveyer between the bottom conveyer and the distributer, the distributer and the rearward end of the auxiliary conveyer being vertically adjustable simultaneously, and means to operate both conveyers and the distributer.

5. In a manure spreader having a main conveyer, an adjustable auxiliary conveyer supported beneath the rear of the main conveyer and extending rearwardly, a distributer above the rear of the auxiliary conveyer and adapted to lift material therefrom to carry it upward and rearward over the distributer to the ground, means to vertically adjust the auxiliary conveyer and the distributer simultaneously, and means to actuate the conveyers and the distributer.

[Claims 6 to 12 not printed in the Gazette.]

1,218,867. CARBURETING APPARATUS FOR INTERNAL-COMBUSTION ENGINES. ERNEST WILLIAM JOHNSON, Ballinacurra, Ireland. Filed July 17, 1916. Serial No. 109,866. (Cl. 123—122.)



1. A vaporizer for use in combination with spray carbureting-apparatus for internal combustion engines, comprising three chambers the central one being provided with an inlet and outlet for the exhaust gases and the end ones being in communication with one another by two groups of tubes through which the gas or vapor passes from one of the end chambers to the other one of said chambers, one of said chambers being divided into two compartments each of which is provided with an opening by means of which one of said compartments is connected to the carbureter and the other to the engine, a baffle plate between the two groups of tubes in the heating chamber, a by-pass between

said compartments, a valve controlling said by-pass, and means for operating said valve.

2. A vaporizer for use in combination with spray carbureting-apparatus for internal combustion engines, comprising three chambers the central one being provided with an inlet and outlet for the exhaust gases and the end ones being in communication with one another by a series of tubes arranged in two groups through which the gas or vapor passes from one of the end chambers to the other one of said chambers, one of said chambers being divided into two compartments each of which is provided with an opening by means of which one of said compartments is connected to the carbureter and the other to the engine, a baffle plate between the two groups of tubes in the heating chamber, a by-pass between said compartments, a valve controlling said by-pass, a slotted extension of said valve, means for regulating the length of the slot in said extension, and a pivoted lever one end of which carries a pin which engages the slot in the extension of the valve and the other end is in couple with the throttle valve of the engine.

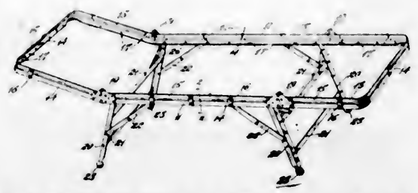
3. A vaporizer for use in combination with spray carbureting-apparatus for internal combustion engines, comprising three chambers the central one being provided with an inlet and outlet for the exhaust gases and the end ones being in communication with one another by a series of tubes arranged in two gronps through which the gas or vapor passes from one of the end chambers to the other, said tubes being arranged in rows in two groups one of said chambers being divided into two compartments each of which is provided with an opening by means of which one of said compartments is connected to the carbureter and the other to the engine, a baffle plate between the two groups of tubes in the heating chamber, a by-pass between said compartments, a valve controlling said by-pass, a slotted extension of said valve, means for regulating the length of the slot in said extension, and a pivoted lever one end of which carries a pin which engages the slot in the extension of the valve and the other end of which is in couple with the throttle valve of the engine.

4. A vaporizer for use in combination with spray carbureting-apparatus for internal combustion engines, comprising three chambers the central one being provided with an inlet and outlet for the exhaust gases and the end ones being in communication with each other by a series of tubes arranged in two groups through which the gas or vapor passes from the spray carbureting-apparatus to the engine one of said chambers being in direct communication with the engine and the other being divided into two compartments one of which is provided with an opening by means of which it is put in communication with the carbureter and the other of which is in communication with the chamber in direct communication with the engine, a by-pass between the two compartments, a valve controlling said by-pass, and means for controlling the position of said valve.

5. A vaporizer for use with spray carbureting-apparatus for internal combustion engines, comprising three chambers the central one of which is provided with an inlet and an outlet for the exhaust gases of the engine and the end ones of which are in communication with one another by a series of tubes one of said end chambers being divided into two compartments one of which has an orifice by means of which it is put in communication with the carbureting-apparatus and the other of which has an orifice by means of which it is put in communication with the engine, a diaphragm or baffle plate in the central chamber dividing the tubes into two groups, a cylinder between said compartments which is in communication with one compartment by means of a port and in communication with the other compartment by means of its open end, a piston valve in said cylinder, an extension of said valve, a slot in said extension, means for varying the length of said slot, a lever pivoted in fixed relation to the vaporizer which carries a pin which engages the slot in the extension of the valve and provides a means of varying the position of said valve.

[Claim 6 not printed in the Gazette.]

1,218,868. FOLDING COT-BED. BENJAMIN H. JONES, St. Louis, Mo. Filed June 4, 1915. Serial No. 32,033. (Cl. 5—5.)



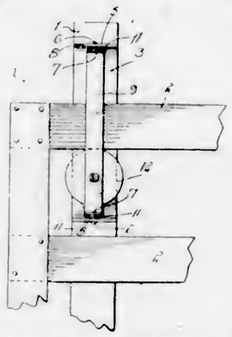
1. A folding cot having a sectional frame adapted to receive a spring and mattress, each section of said frame consisting of a lower angle bar with one leg turned in and an upper flat bar spaced above said angle bar and secured thereto at intervals to stiffen said frame and inclose said mattress, said angle bar and flat bar being rigidly connected at their ends, and pivot joints connecting the ends of said sections.

2. A folding cot having a sectional frame adapted to receive a spring and mattress, adjoining sections of said frame comprising alining bars, said bars being arranged on edge and spaced apart one above the other, the bars of each section being secured together at the ends by plates rigidly fastened to each bar, said plates projecting above and beyond the ends of said upper bars, and pivots connecting the projecting portions of adjacent plates, whereby said plates stiffen said sections and permit folding of one section over the adjoining section.

3. A folding cot having a sectional frame adapted to receive a spring, each section of said frame consisting of a lower angle bar with one leg turned in and an upper flat bar spaced above said angle bar and secured thereto at intervals to stiffen said frame, the ends of said sections abutting against each other, pivot joints connecting said sections, said pivot joints being located above said upper flat bar, and a spring connected to the inturned legs of said lower bar and operating in open position to prevent closing up of said cot.

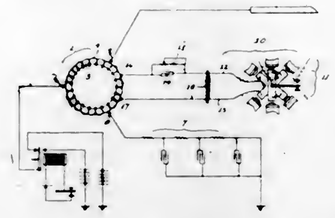
4. A sectional folding cot consisting of a middle section supported on legs and two end sections hinged to the ends of the middle section at their inner ends to fold over said middle section, a spring supported by the side members of said sections and by the outer ends of said end sections, said spring being positioned below the pivot axis of said joints, whereby it tends to hold said end sections in open position.

1,218,869. SLIDING-GATE HANGER. HUGH G. JONES, Glen, Colo. Filed May 19, 1916. Serial No. 98,629. (Cl. 64—70.)



In a gate hanger, the combination with a bracket having a pair of spaced parallel arms, of plates rotatably mounted on said arms, washers for spacing the plates from the arms, guide bars having tongues engaging the faces of the plates, bolts for removably securing the guide bars to the plates and a roller mounted between the guide bars and adjacent the lower ends of the same.

1,218,870. DUPLEXING TELEGRAPHIC LINES. ISIDOR KITSEE. Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed Apr. 12, 1911. Serial No. 620,649. Renewed Dec. 30, 1916. Serial No. 139,962. (Cl. 178—60.)



1. As a means to duplex lines of transmission, an auto-transformer, part of said transformer connected to the transmitting circuit and part of said transformer connected to the receiving circuit comprising an impedance and a receiving device connected to said impedance.

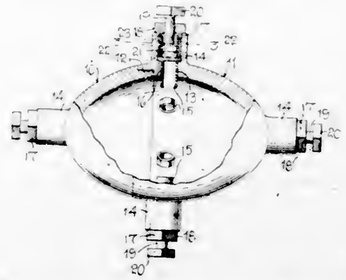
2. As a means to duplex lines of transmission, a closed electromagnetic coil, means to connect part of said coil to the transmitting circuit, part of said coil to the line of transmission and part of said coil to the receiving circuit, said receiving circuit comprising a condenser, a resistance overbridging said condenser, and an impedance, and comprising also a polarized relay in shunt with said impedance.

3. In cable telegraphy, in combination with a line of transmission, an artificial line, a receiving device and a transmitting device, a duplexing device comprising an auto-transformer in the form of a closed magnetic impedance, a connection between said impedance and one terminal of said transmitting device, a connection between said impedance and one terminal of said line of transmission, a connection between said impedance and one terminal of the artificial line and two connections between said impedance and the circuit including the receiving device; each of said connections comprising only part of said closed impedance.

4. In cable telegraphy, the combination with a line of transmission, an artificial line, a receiving device and a transmitting device, of a duplexing device comprising an auto-transformer in the form of a closed impedance, a connection between said impedance and one terminal of said transmitting device, a connection between said impedance and one terminal of said line of transmission, a connection between said impedance and one terminal of the artificial line, and two connections between said impedance and the circuit including the receiving device, said several connections being variable to include more or less of said closed impedance.

1,218,871. AERIAL BOMB. JOSEPH KOVÁCS, Fords, N. J. Filed Aug. 9, 1916. Serial No. 113,971. (Cl. 102—29.)

An explosive bomb of the character described including an ovoidal hollow body formed with two coacting sections having screw-threaded engagement with each other, the body being formed with a plurality of openings extending at spaced distances in a plane intersecting the middle of the body and disposed also at the ends of the body, each of said openings being formed with a projecting wall interiorly screw-threaded and constituting a socket larger in diameter than the diameter of the corresponding passage, a firing plug for each socket having a relatively large head and having screw-threaded engagement with said socket and adapted to bear at its inner end against the head of the detonator and hold it in place,



and a firing pin slidably mounted in the head of the plug and having an enlarged head at its outer end and an enlarged head at its inner end.

1,218,872. BOX CONSTRUCTION. JOHN A. LAFORE, Ardmore, Pa. Filed June 12, 1915. Serial No. 33,634. (Cl. 229—49.)



1. In a collapsible box structure, integral box elements formed of a blank of air cell board scored or creased from the inner side only to form a corner hinge or joint between said elements, and a reinforcing strip attached to said elements and extending along their hinge or joint on the outside thereof, and creased outwardly in register with the scoring whereby when the structure is folded to form a box bending at the hinge or joint will not take place along the line where the scoring has been done, but at two regions on either side of such line.

2. In a collapsible box structure, integral box elements formed of a blank of air cell board having a reinforcing strip attached to the elements and extending along the portions thereof which are to form the hinges or joints when the box structure is complete, said reinforced regions being scored or creased from the inner side only in such manner that when the box is folded the principal bending will not take place along the lines where the scoring has been done, but at regions on either side of such lines.

3. In a collapsible box structure, integral box elements formed of a blank of air cell board having a reinforcing strip attached to the elements and extending along the portions thereof which are to form the hinges or joints when the box structure is complete, said reinforced regions being scored or creased from the inner side only in such manner that when the box is folded the principal bending will not take place along the lines where the scoring has been done, but at regions on either side of

such lines, said reinforcing strips being countersunk in the external wall only of the air cell board.

4. In a collapsible box structure, integral box elements formed of a blank of air cell board having a reinforcing strip attached to the elements and extending along the portions thereof which are to form the hinges or joints when the box structure is complete, said reinforced regions being scored or creased from the inner side only in such manner that when the box is folded the principal bending will not take place along the lines where the scoring has been done, but at regions on either side of such lines, thus allowing the flaps at either end of the box to be folded over each other without undue strain upon the portions forming the hinges.

5. In a collapsible box structure, integral box elements of air cell board scored or creased on the inner side only to form joints or hinges between said elements, and a reinforcing strip attached to said elements and extending over the hinges or joints to reinforce the same, said reinforcing strip being disposed in depressions in the outer wall of said air cell board and creased outward in register with the scoring of the inner wall of the air cell board.

[Claims 6 to 8 not printed in the Gazette.]

1,218,873. TROUGH OR FLUME. WILLIAM LENNON, Manitou, Colo. Filed Nov. 29, 1913. Serial No. 803,667. (Cl. 61—5.)



1. A flume composed of sections having overlapping extremities provided with interlocking beads, inner and outer clamping members, the inner clamping member being located within the bead of the adjacent section, the bead being larger than said member and the space within the bead around the clamping member being non-uniform in depth and filled with material adapted to soften under the influence of a degree of heat sufficient to expand the flume in a lengthwise direction.

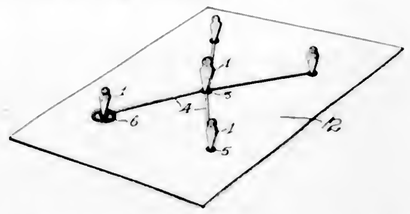
2. A flume composed of sections having overlapping extremities provided with interlocking beads, inner and outer clamping members, the inner clamping member being located within the bead of the adjacent section, the bead being larger than said member and the space within the bead around the clamping member being filled with material adapted to soften under the influence of heat, for the purpose set forth.

3. A flume composed of sections having overlapping extremities provided with interlocking beads, said flume including an inner clamping member located within the bead of the adjacent section, the bead being larger than said member and the space within the bead around the clamping member being filled with material adapted to soften under the influence of heat, for the purpose set forth.

4. A flume having overlapping extremities provided with interlocking beads, said flume including an inner clamping member located within the adjacent bead which is larger than said member and so spaced therefrom that the bead and member engage each other at a single point only, the said space being filled with resilient material, for the purpose set forth.

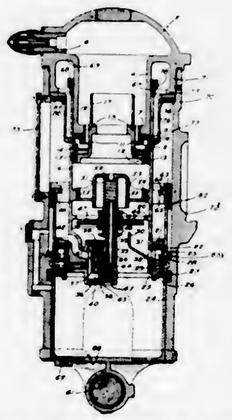
1,218,874. GAME APPARATUS. HARRIET E. LEWIS, New York, N. Y. Filed Oct. 27, 1916. Serial No. 127,984. (Cl. 46—61.)

1. A game apparatus comprising a number of tapes radiating from a center, means connecting the tapes together at the center, means at the outer ends of the tapes for connection with upright stakes, and stakes coöperating with said means and adapted to co-act with sustaining means for maintaining the tapes distended and spaced apart from one another, said stakes also serving to receive a member to "ring" the stakes.



2. A game apparatus comprising a central ring, tapes extending radially from said ring, a ring connected to the outer end of each of said tapes, and stakes, one for each ring, adapted to be positioned one within each ring and to co-act with sustaining means, said stakes serving to hold the tapes distended and to receive a member to "ring" the stakes.

1,218,875. VARIABLE-LOAD AIR-SPRING. RICHARD LIEBAU, Swissvale, Pa., assignor to The Westinghouse Air Spring Company, a Corporation of Pennsylvania. Filed May 13, 1913. Serial No. 767,312. (Cl. 267—49.)



1. A cushioning device comprising telescopically arranged members having a sliding joint therebetween and forming an inclosed chamber of variable volumetric capacity, a floating member telescopically arranged with each of said first mentioned members, for increasing the effective load supporting area of the device when the load supported thereby is increased, and for decreasing the effective load supporting area of the device during light loads, a separate packing between said floating member and each of the first mentioned members, and a pump mounted on the floating member for returning liquid leaking past both packings to said chamber.

2. A cushioning device comprising two relatively movable telescopically arranged members inclosing a chamber of variable volumetric capacity, a floating member telescopically arranged with both of said members and adapted to move under conditions of light load with one and under heavy load conditions with the other of said first mentioned members, a separate packing between said floating member and each of said first mentioned members, and means mounted on said floating member for returning liquid leaking past both of said packings to said chamber.

3. A cushion device comprising telescopically arranged members forming a closed chamber having two effective diameters, a sliding joint for each diameter, and a pump

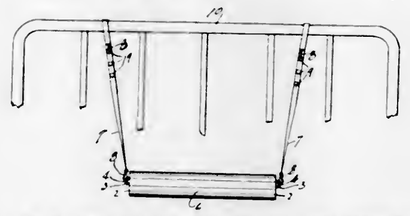
the inlet of which connects with the low pressure side of one of said sliding joints and the outlet of which connects with the interior of said chamber.

4. A cushion device comprising telescopically arranged members forming a closed chamber of two effective diameters, a sliding joint for each diameter, a pump the inlet of which connects with the low pressure side of the sliding joint for the largest diameter and the outlet of which connects with the interior of said chamber.

5. A cushion device comprising three telescopically arranged members having two sliding joints therebetween and forming a closed chamber of two effective diameters, and a pump within said chamber having its inlet connected to the low pressure side of one of said sliding joints and its outlet connecting with the interior of said chamber.

[Claims 6 to 15 not printed in the Gazette.]

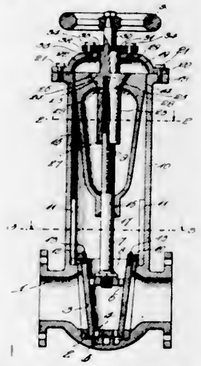
1,218,876. SANITARY INVALID-SUPPORT. ANNA M. LIVERSON, Seattle, Wash. Filed Sept. 14, 1915. Serial No. 50,550. (Cl. 5—41.)



1. In a device of the class described, the combination of a cylindrical supporting spool having flanged ends and swivel eyebolts in either end and adjustable supporting straps attachable to said eyebolts, sanitary padding including a rubber casing which fits the spool tightly between the flnges, and a linen envelop outside the casing, whereby a soft and pliable sanitary supporting surface is provided for the patient's body.

2. In a device of the class described, the combination of a rollably suspended hollow cylindrical spool with flanged ends, a cylindrical rubber casing which fits the spool tightly between the flanges and which is removable, and an endless linen sanitary covering which fits the casing tightly all around whereby a soft and sanitary rest is provided.

1,218,877. VALVE. JOHN C. F. LONG, FREDERICK H. BUNKE, and CHARLES F. BUNKE, Lima, Ohio. Filed July 24, 1916. Serial No. 111,060. (Cl. 137—5.)



1. A device of the class described comprising a body, a valve, a stem, a casing, a rigid supplemental casing secured in said first mentioned casing, an operating member extending through the upper end of the supplemental casing and having a fluid-tight connection therewith, and the lower end of said supplemental casing surrounding the stem and adapted to be slidably engaged thereby.

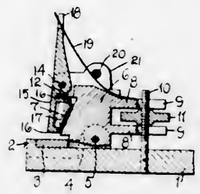
2. A device of the class described comprising a body, a valve, a slidable stem, a casing, a rigid supplemental casing secured in said first mentioned casing adjacent its upper end, said supplemental casing having an opening in its upper end with beveled side walls, an operating member positioned through said opening and having a fluid-tight connection with the side walls of the same, and said supplemental casing having a contracted lower end terminating in a guide sleeve through which the stem is adapted to slide.

3. A device of the class described comprising a body, a valve, a stem, a casing, a supplemental interior casing secured in the upper end of said first mentioned casing and surrounding the upper end of the stem, an operating member including an enlarged portion intermediate its ends swiveled in an opening in said supplemental casing, a lower portion operatively engaging the stem, and an upwardly projecting stem provided with means to make the swiveled connection fluid-tight.

4. A device of the class described comprising a body, a valve, a stem, a casing, a supplemental interior casing secured in the upper end of said first mentioned casing and surrounding the upper end of the stem, an operating member including an enlarged head portion with beveled sides intermediate its ends having a swiveled ground joint connection with an opening in the supplemental casing, a lower portion on said member comprising a hollow plug operatively engaging the stem in the supplemental casing, an upwardly projecting shouldered stem above said enlarged head, and a vertically adjustable pressure plate on said stem engaging the shoulder to adjust the tension of the swiveled connection.

5. A device of the class described comprising a body, a slide valve mounted therein, a non-rotatable stem on said valve having a threaded upper end, an upright casing surrounding said stem, projecting spaced ribs on the inner surface of said casing, laterally projecting guide lugs on the upper end of said valve positioned between said ribs, a supplemental interior casing in the upper end of said first mentioned casing surrounding the upper end of the stem and slidably engaged therewith, a rotatable operating member having a swiveled connection intermediate its ends in an opening in the supplemental casing, tension adjusting means to make said connection fluid-tight, and the lower portion of said member comprising an internally threaded hollow plug operatively engaging the upper end of said stem in the supplemental casing.

1,218,878. SHARPENING DEVICE. DESIRE LONQUET, Fairfield, Me. Filed Jan. 13, 1917. Serial No. 142,309. (Cl. 51—7.)



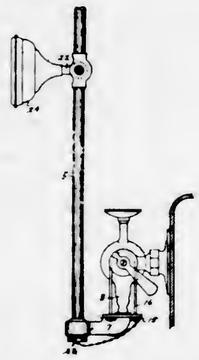
1. A device of the character described including a member provided with a sharpening element, a block supported by the member and positioned in proximity to the sharpening element, a rock arm carried by the block and overlying a face thereof, the portion of the rock arm overlying a face of the block being provided with anti-friction means, and means for constantly urging said portion of the rock arm in a direction toward the block.

2. A sharpening device including a member provided with a sharpening element, a block supported by the mem-

ber for rocking movement and positioned in proximity to the sharpening element, guiding means coacting with the block, and coacting means carried by the member and the block for rocking the block in opposite directions.

3. A sharpening implement including a member provided with a sharpening element, a block supported by the member for rocking movement and in proximity to the sharpening element, guiding means carried by the block, spaced arms extending from the face of the block and having their outer ends slotted, an elongated member carried by the first named member and disposed through the slots of the arms, and a wheel threaded upon the last named member and positioned between the arms whereby the movement of the wheel longitudinally of the second named member serves to rock the block.

1,218,879. SHOWER-BATH ATTACHMENT. AUGUST F. LUZZI, Houston, Tex. Filed Apr. 18, 1916. Serial No. 91,918. (Cl. 4—26.)

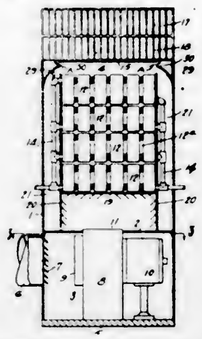


1. In a device of the character described a stand pipe, a socket therein, forming a bearing, the inner wall of which is provided with a groove forming a by-pass, a hollow rotatable member fitted in said socket, and provided with an orifice through the wall thereof, a tubular arm integral with and extending laterally from said member and a spray nozzle carried by the free end of said arm.

2. In a device of the character described a stand pipe, having a plurality of sockets therein, spaced apart and forming bearings, the inner walls of said bearings being provided with grooves forming by-passes, hollow rotatable members fitted into said respective sockets each member having an orifice through the wall thereof, the orifice of the lower one being through its upper wall, a hollow arm integral with each member by the movement of which the orifice of the corresponding member may be brought into and out of alinement with the passageway through said pipe, and flow of water through said arm thereby controlled, and a spray nozzle carried by the free end of each arm.

1,218,880. HEATING APPARATUS. JOSEPH E. MCGINNESS, Pittsburgh, Pa. Filed Apr. 8, 1916. Serial No. 89,904. (Cl. 257—137.)

1. A unitary heating and ventilating apparatus comprising a housing having an inlet opening adjacent its bottom and a discharge opening near its top, heating radiators located at an intermediate point within said housing and arranged so that air may be forced through and over the same, said housing being provided with passages around the radiators, means within the housing arranged to draw air from the inlet opening and force it over the radiators and through the passages to the discharge opening, means for controlling the passage through and over the radiators, and means for controlling the entrance to the passages around the radiators, both of said latter controlling means being operable in unison, whereby the relative flow of air over the radiators and through the passages may be regulated.



2. A unitary heating and ventilating apparatus comprising a housing having an inlet opening near its bottom and a discharge opening adjacent its top, heating radiators located at an intermediate point within said housing within a passage therein, a series of horizontally located dampers controlling the entrance to said passage, said housing being provided with a plurality of passages around said radiators, a plurality of vertically located dampers for controlling the entrance to said last named passages, all of said dampers being arranged to be operated in unison, whereby the relative flow of air over and around the radiators may be regulated.

3. Heating and ventilating apparatus, comprising a shell or casing opening into the room or space to be heated, a pump for circulating a current of air through said casing, radiators therein, and two sets of dampers one of which controls the flow of air between said radiators and the other of which controls the flow of air around the same.

4. Heating and ventilating apparatus, comprising a shell or casing opening into the room or space to be heated, a pump for circulating a current of air through said casing, radiators therein, two sets of dampers one of which controls the flow of air between said radiators and the other of which controls the flow of air around the same, and means for simultaneously operating said two sets of dampers.

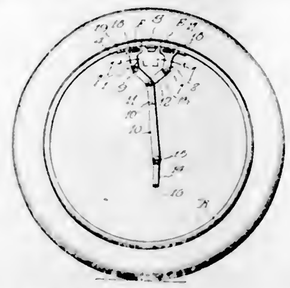
5. Heating and ventilating apparatus, comprising a shell or casing opening into the room or space to be heated, a pump for circulating a current of air through said casing, radiators therein, two sets of dampers one of which controls the flow of air between said radiators and the other of which controls the flow of air around the same, and a perforated wall or plate beyond said radiators for partially retarding the air flow to produce an even temperature.

[Claim 6 not printed in the Gazette.]

1,218,881. TIRE-RIM SETTER. VICTOR C. MCLAIN, East Moline, Ill., assignor to E. J. Bronson, East Moline, Ill. Filed Nov. 11, 1915. Serial No. 60,871. (Cl. 157—1.)

1. A rim tool of the class described comprising a pair of feet adapted to bear on the inner face of a split rim at the ends thereof, said feet having apertures to receive studs projecting inwardly from the ends of the rim and also having toes for reception under undercut lugs on said ends of the rim, whereby said feet may be held against rocking around the studs, rigid projections extending from the feet beyond their inner sides, and means connected with said projections for moving said feet toward or away from each other.

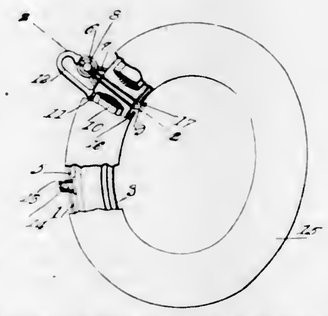
2. A rim tool of the class described comprising a pair of one-piece feet having flat outer faces to bear against the inner face of a split rim at the ends thereof, said feet having formed therethrough apertures which open through the side edges thereof, said feet also having notches opening through one of said edges and leading from said apertures to the aforesaid outer faces of the feet, said notches being adapted to receive pins projecting from the ends of the rim and the apertures being adapted to receive the heads of said pins, rigid posts formed integrally with and extending from the inner sides of the feet, and means pivotally connected with the free ends of said posts for moving the latter toward or away from each other.



3. A rim tool of the class described comprising a pair of attaching feet adapted to bear on the inner surface of a split rim at the ends thereof, the remote ends of said feet being beveled to form toes for reception beneath undercut lugs carried by the ends of the rim, said feet having formed therethrough apertures opening through the side edges thereof and also having notches opening through one of said edges and leading from said apertures to the rim engaging faces of the feet, said notches being adapted to receive studs projecting from the ends of the rim and the apertures being adapted to receive the heads of said studs, rigid posts extending from the inner sides of the feet and formed integrally therewith, and means pivotally connected with said posts for moving the latter toward or away from each other.

4. A rim expander comprising a pair of plates adapted to bear on the inner surface of a split rim at the ends of said rim, said plates each having in one side edge a notch adapted to receive studs projecting inwardly from the aforesaid ends of the rim, a pair of rigid posts formed integrally with the aforesaid plates and extending beyond the inner faces thereof, and means pivotally connected with the free ends of said posts for moving said posts toward or away from each other.

1,218,882. CLOSET ATTACHMENT. CLARKSON W. MACY, Converse, Ind. Filed Jan. 11, 1917. Serial No. 141,863. (Cl. 4—30.)



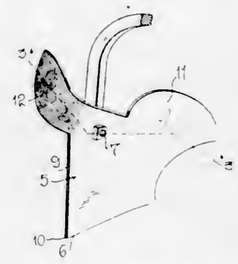
1. A closet attachment embodying a deodorant atomizer for spraying the interior of a bowl, and an endless deflatable tube connected to the atomizer for supplying air thereto, and adapted to be supported upon the bowl.

2. A closet attachment embodying a body member to seat on a bowl, a deodorant atomizer for spraying the interior of the bowl, a deflatable member upon said member and connected to the atomizer for supplying air thereto, and a seat upon said deflatable member.

3. A closet attachment embodying a member to seat on the rim of a bowl, a deodorant atomizer for spraying the interior of the bowl, an endless deflatable tube seated upon said member and connected to the atomizer for supplying air thereto, and a seat mounted upon said tube.

4. A closet attachment embodying a member to seat on the rim of a bowl, a deodorant atomizer for spraying the interior of the bowl, an endlesa deflatable tube seated upon said member and connected to the atomizer for supplying air thereto, a seat mounted upon said tube, and a depending apron carried by the seat to overlap the inner edge of said member and protect said tube.

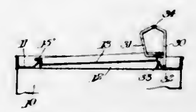
1,218,883. PLOW. WILLIAM F. MOORE, Votaw, Tex. Filed July 22, 1916. Serial No. 110,732. (Cl. 97—11.)



1. As a new article of manufacture, a plow consisting of a blade having one vertical edge substantially straight and provided at its opposite vertical portion with a mold board, and a wing extending laterally from the upper portion of the vertical edge of the blade, said wing being curved upwardly and outwardly relative to a face of the blade.

2. As a new article of manufacture, a plow consisting of a blade having one vertical edge substantially straight and provided at its opposite vertical portion with a mold board, and a wing substantially concavo-convex in cross section extending laterally from the upper portion of the vertical edge of the blade, said wing being curved upwardly and outwardly relative to a face of the blade.

1,218,884. CAN-OPENER. JOHN MORGAN, New York, N. Y., assignor of one-half to Lulu Jones, New York, N. Y. Filed Mar. 9, 1916. Serial No. 83,129. (Cl. 220—76.)



1. A lifter for can lids, adapted to coöperate with the top of a can and the rim of its lid, comprising a metal loop, the free ends of which are normally close together and adapted to be sprung over the bead of a can lid to permanently engage the same, one free end of the loop having a shoulder to engage the bead or flange of the can lid and having an extension beyond the shoulder to serve as a fulcrum adapted to rest on the can when prying the lid open.

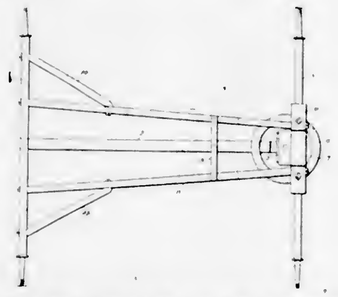
2. A lifter for can lids, adapted to coöperate with the top of a can and the rim of a lid therein, comprising a loop of spring wire having its terminals close together, one leg or member of said loop having a return bend, the

end of which constitutes a shoulder adapted to engage and pry up the flange of the can lid, substantially as described.

3. A lifter for can lids, adapted to coöperate with the top of a can and the rim of a lid therein, comprising a loop of spring wire having its terminals close together, one leg or member of the loop having a return bend 32 terminating in a shoulder 33 and the other leg terminating close to the shoulder 33, the return bend serving as a fulcrum and the coöperating ends of the loop serving to hold the device in permanent engagement with a can top.

4. A lifter for can lids comprising a nearly closed loop having two legs or members, a return bend on one of said legs terminating in a shoulder arranged close to the terminus of the other leg and the upper portion of the loop being bent out of the plane of said legs or members, whereby the device may lie flat upon the lid of a can when engaged with the flange thereof.

1,218,885. RUNNING-GEAR. EUGENE MORRIS, Jr., Westport, Tenn. Filed Feb. 29, 1916. Serial No. 81,246. (Cl. 21—39.)

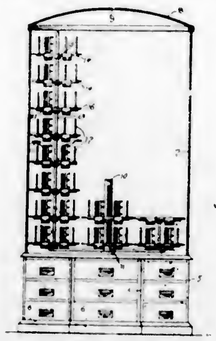


A running gear comprising front and rear axles, said front axle having at a point between its ends a rearwardly disposed portion, a reach pole connected with the rear axle and pivotally connected with the rearwardly disposed portion of the front axle, a fifth wheel mounted upon the front axle and having its center in alinement with the point of pivotal connection between the reach pole and the said rearwardly disposed portion of the front axle, a hood turnably mounted upon the fifth wheel and engaging the same, a bolster mounted upon the hood and pivotally connected with the front axle at the point of pivotal connection between the said axle and the said reach pole, brace rods connected with the rear axle and the bolster at the opposite sides of the said point of pivotal connection and in advance thereof, and a transverse brace connecting the intermediate portions of the brace rods and the said reach pole together.

1,218,886. RIBBON-CABINET. DAVID ROSCOE MURPHY and HOUSTON W. BLANKENSHIP, Kellogg, Idaho. Filed Oct. 18, 1913. Serial No. 796,022. (Cl. 33—130.)

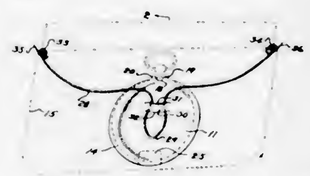
1. In a device of the kind described, a support, a bolt-carrying means on said support, a roller rotatably mounted adjacent said bolt-carrying means, a member adjacent said roller having one end adapted to engage a bolt carried by said bolt-carrying means, a knife at the opposite end of said member, means for guiding material on said bolt-carrying member over said roller and adjacent said knife edge, means associated with said roller whereby the material passing over said roller is automatically measured, and the material can be severed by said knife blade, as and for the purpose set forth.

2. In combination with a bolt-carrying member having a bolt thereon, of a measuring means for the material on said bolt when the same is dispensed, a roller over which said material is moved when the same is being dispensed, a member having fingers in engagement with said bolt and a cutting edge at the opposite end thereof, said cutting edge in proximity with said roller whereby said material can be severed when desired, and mechanism connected with said roller for automatically measuring the material dispensed as the same passes over said roller.



3. The combination with a bolt-carrying member having a bolt of material thereon, a roller, a cutting means adjacent said roller, said material on said bolt adapted to be passed over said roller when the same is dispensed, a guard adjacent said cutting means and said roller and means integral with said cutting means for engagement with said bolt for holding said material on said bolt and in tensioned engagement with said roller and means for automatically measuring said material as the same passes over said roller, as and for the purpose set forth.

1,218,887. WATCH-GUARD. CARL ANTON NORD, New York, N. Y. Filed June 25, 1915. Serial No. 36,302. (Cl. 2—153.)



1. A watch guard including a removable case for the watch having a marginal notch for the reception of the watch stem, and prongs offset in opposite directions inwardly and outwardly relatively to the center of said case so as to form a restricted passage through which said stem can pass only in an oblique direction.

2. A watch guard including a removable case provided with an upwardly directed flange adapted to receive the bottom edge of the watch, and a marginal notch in the upper edge of said case substantially opposite said flange, the outer extremities of said notch constituting prongs offset inwardly and outwardly in opposite directions relatively to the center of the case, whereby a restricted passage is afforded for receiving the watch stem obliquely prior to the watch being lodged behind the flange.

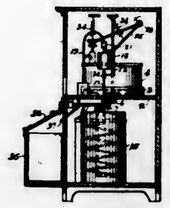
3. A watch guard including a removable case for the watch, a loop or bridge on the back thereof, and a retainer having a member capable of engagement and disengagement with said loop or bridge.

4. A watch guard including a removable case for the watch, a bridge or loop formed in said case, and a retainer having a tongue-like member slidably engageable with said bridge or loop.

5. A watch guard including a removable case for the watch, a receiving element thereon, and a double armed retainer having a member engaging said element from above downwardly.

[Claims 6 to 8 not printed in the Gazette.]

1,218,888. LIQUID-VENDING MACHINE. CARLTON N. OGDEN, Houston, Tex. Filed May 9, 1916. Serial No. 96,316. (Cl. 225—21.)



1. A device of the character described including a container, an inlet pipe leading thereto and a discharge pipe leading therefrom, a valve controlling each of said pipes, a valve actuating mechanism arranged to open one of said valves and simultaneously close the other, in combination with a rotatable drum separated into compartments provided to contain liquids and means for discharging said liquids from said respective compartments, said container and said compartments discharging at a common point.

2. A device of the character described including a container, a discharge spout leading therefrom, a valve controlling said spout, a rotatable drum formed into separate compartments, for containing liquids, a pump for each compartment provided to force the liquid contained therein therefrom and a manual mechanism arranged to open said valve and to simultaneously manipulate the corresponding pump.

3. In a device of the character described, a container having a plurality of compartments fixed relative to each other, said container being bodily rotatable, a mechanism carried by each compartment for discharging the contents thereof therefrom, means for actuating said mechanism, and a container having a discharge pipe, said container and said compartments discharging at a common point.

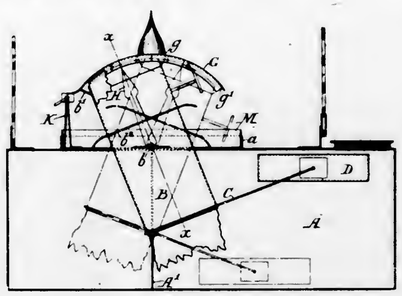
4. In a device of the character described, a drum having a plurality of compartments, a mechanism carried by each compartment for discharging fluid therefrom, means for manually actuating said mechanism, means for rotating said drum, a container, and inlet and outlet valves therefor in operative connection with and controlled by said actuating mechanism.

5. A device of the character described including a container, an inlet pipe leading thereto and a discharge pipe leading therefrom, a valve controlling each of said pipes, a valve actuating mechanism arranged to open one of said valves and simultaneously close the other, a rotatable drum formed into separate compartments for containing liquids, a pump for each compartment provided to force the liquid contained therein therefrom, a transverse shaft, a pair of arms fixed thereto, one of which is in operative connection with the valve actuating mechanism and the other of which is arranged to manipulate said pump, said arms manipulating said valve and pump simultaneously and operating to discharge the contents of said container and said compartments at a common point.

1,218,889. OIL-LAMP. CHARLES EDMUND PALMER, Castle Cary, England. Filed Aug. 18, 1916. Serial No. 115,731. (Cl. 67—53.)

1. The combination, in an oil lamp, of a hood or flame-controller which has a flame opening therethrough, a wick-holder of flat shape which is considerably wider than said flame opening, a flat-shaped wick which passes through said holder and is also considerably wider than said flame opening, and means whereby said wick-holder may be moved in relation to said hood or flame-controller to bring different portions of the width of the upper termination of the wick in succession beneath said flange opening, substantially as set forth.

2. The combination, in an oil lamp, of a hood or flame-controller which has a flame opening therethrough, a wick-holder of flat shape which is considerably wider than said flame opening and is pivotally connected with the lamp base, a flat-shaped wick which passes through said holder and is also considerably wider than said flame opening, whereby as the wick-holder is turned about its pivot axis it moves the upper end of the wick beneath the flame opening, bringing different portions of the wick in succession beneath such opening.



3. The combination, in an oil lamp, of a hood or flame-controller which has a flame opening therethrough, a wick-holder of flat shape which is considerably wider than said flame opening, a flat-shaped wick which passes through said holder and is also considerably wider than said flame opening, and a float within the reservoir for the oil which, as it falls with the level of the oil, operates the wick-holder and thereby moves the upper end of the wick beneath the flame opening.

4. The combination, in an oil lamp, of a hood or flame-controller which has a flame opening therethrough, a wick-holder which is pivotally connected with the lamp base and passes down into the oil reservoir and a float which is carried by the wick-holder, and as it falls with the level of the oil, turns the wick-holder beneath the flame opening, bringing different portions of the wick in succession beneath such opening.

5. The combination, in an oil lamp, of a hood or flame-controller which has a flame opening therethrough, a wick-holder which is pivotally connected with the lamp base, whereby as the wick-holder is turned about its pivot axis it moves the upper end of the wick beneath the flame opening, a scale which is marked upon the flame-controller, and a pointer which turns with the wick-holder and indicates, along said scale, the height of the oil within the reservoir.

1,218,890. ELECTRIC SWITCH. CLARENCE D. PLATT, Bridgeport, Conn. Filed Apr. 20, 1916. Serial No. 92,426. (Cl. 175—293.)



1. In a switch of the character described, the combination with a freely swinging contact making lever, a freely swinging operating lever and a spring connection between said levers tending to swing the end portions of said levers together, of stop means at one side of the point of support of the levers interposed in the path of movement of said levers toward each other and engaged on opposite sides by

said levers to fix the stopping point of both levers whereby the force of impact of one lever against said stop means will be opposed by the force of impact of the other lever and means for actuating the operating lever against said stop means.

2. In a switch of the character described, a supporting base, a switch operating lever pivoted on said base having outstanding operating arms disposed flatwise with the greatest dimension thereof at right angles to the plane of movement of such arms, a pivoted contact making lever, a spring connection between said levers and means connected with the relatively flatwise disposed outstanding arms of the switch operating lever for actuating said lever.

3. In a switch of the character described, the combination with a supporting base, of a switch operating lever pivotally mounted on said base and provided with transversely arched outstanding operating arms, operating means connected with said transversely arched outstanding arms, a pivoted contact making lever and a spring connection between the levers.

4. In a switch of the character described, a base, a switch operating lever pivotally supported on said base and provided with outstanding operating arms disposed flatwise with the greatest dimension thereof at right angles to the plane of movement of such arms, push buttons connected with the end portions of said relatively flat outstanding arms, stops disposed in the path of movement of said arms substantially in line with the points of connection with the push buttons therewith whereby to take the strain of pressure on said push buttons and a contact making device connected with the operating lever.

5. In a switch of the character described, a supporting base, a switch operating lever pivotally mounted on said base and provided with operating arms disposed flatwise with the greatest dimension thereof at right angles to the plane of movement of such arms having outstanding stop lugs at the ends thereof, push buttons connected with the relatively flat operating arms substantially in line with said outstanding stop lugs, stops disposed in the path of movement of said stop lugs on the operating arms and a contact making device connected with the switch operating lever.

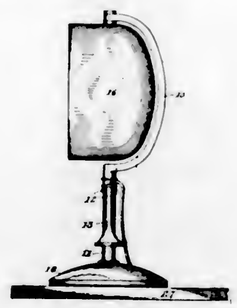
[Claims 6 and 7 not printed in the Gazette.]

1,218,891. HAT-VENTILATING SUPPORT. ALEKSANDER PLUDOWSKI, Waterbury, Conn., assignor of one-half to Bronislaus Grebziszewski and one-fourth to Wincenty Wodzinski, Waterbury, Conn. Filed July 28, 1916. Serial No. 111,858. (Cl. 2—33.)



A device of the class described comprising in combination with a hat having a crown, a split band adjustable in length having overlapping ends adapted for close engagement within the said crown, a split annulus parallel with the said band having overlapping ends corresponding thereto, connecting plates perpendicularly arranged between the said band and annulus forming rectangular ventilating openings therebetween, the annulus being spaced a distance from the hat band so that the head of the wearer is spaced therefrom to insure a horizontal air space between the hat and head of the wearer, the adjacent faces of the overlapped ends of the band and annulus being provided with coöperating spurs and sockets, and a fabric covering inclosing the said plates and annulus adapted for resting upon the head of the wearer when the device is in use.

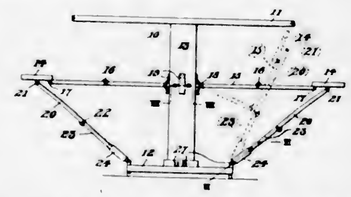
1,218,892. MUFFLER FOR TELEPHONES. ALEKSANDER PLUDOWSKI, Waterbury, Conn., assignor of one-third to Wladyslaw Szczepaniak and one-third to Stanyslaw Orlowski, Waterbury, Conn. Filed Aug. 3, 1916. Serial No. 112,930. (Cl. 179—183.)



1. A device of the class described comprising a standard, a curved vertical tubular arm mounted upon the said standard, a hollow dome-shaped casing shiftably arranged within the said arm swivelly attached at its upper side to the free end of the arm, a telephone transmitter operatively secured centrally within the said casing, and a marginal contacting band arranged within the open end of the casing.

2. A device of the class described comprising a standard, a curved vertical tubular arm mounted upon the said standard, a hollow dome-shaped casing shiftably arranged within the said arm swivelly attached at its upper side to the free end of the arm, a telephone transmitter operatively secured centrally within the said casing, circuit wires for the said transmitter threaded through the said arm, a lighting member within the said casing, a fabric lining within the latter, and a pneumatic head-engaging band marginally positioned within the open side of the said casing.

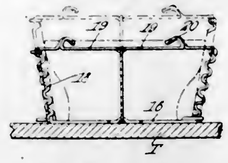
1,218,893. TABLE AND CHAIR CONSTRUCTION. ALEKSANDER PLUDOWSKI, Waterbury, Conn., assignor of one-third to Wladyslaw Szczepaniak and one-third to Stanyslaw Orlowski, Waterbury, Conn. Filed Aug. 8, 1916. Serial No. 113,732. (Cl. 45—31.)



1. A device of the class described comprising a table having a top, a base, a central upright connecting the said base and top, seats arranged adjacent the said top, two-part foldable braces arranged in parallelism pivotally connecting the said seats with the adjacent sides of the upright, downwardly converging struts swivelly connected at their upper ends to the said seats, cylinders pivoted to the said base, pistons upon the lower ends of the said struts slidably arranged within the said cylinders, and shock absorbing springs positioned between the inner ends of the said pistons and cylinders.

2. A device of the class described comprising a table having a top, a base, and a connecting upright, side seats, foldable braces pivotally connecting the said seats with the said upright, retaining leaf springs for the said braces and seats carried by the upright and adapted to engage the seats when arranged in their folded positions adjacent the said upright, struts swivelly mounted between the said base and seats, and cushioning means provided for the said struts.

1,218,894. DISH-HOLDER. ALFRED POIMIROO and ANGELINA POIMIROO, Seattle, Wash. Filed July 1, 1916. Serial No. 107,050. (Cl. 65—61.)

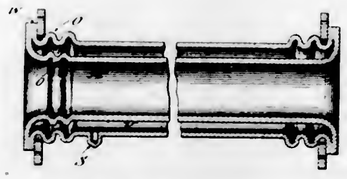


1. A holder of the class described including a base ring, means for detachably securing it to a support, a top ring shiftable relative to the base ring, means extending from the base ring for engaging the top ring to hold it in a predetermined position relative to the base ring, hooked loops extending from the top ring for engaging the upper edge portion of a dish surrounded by the rings.

2. A holder of the class described including a base, means for detachably securing the base to a support, a top ring, means extending therefrom for engaging the upper edge portion of a dish, and adjustable connections between the base and top ring, two of said connections being spaced apart a distance substantially equal to the diameter of the base.

3. A holder of the class described including a base ring, means for detachably engaging the ring to hold it to a support, a top ring, downwardly and inwardly extending loops carried by the top ring, and extensible connections between the rings.

1,218,895. PIPE FOR THE CONVEYANCE OF FLUIDS. EDWIN H. PORTER, Philadelphia, Pa. Filed Feb. 10, 1914. Serial No. 817,818. (Cl. 137—75.)

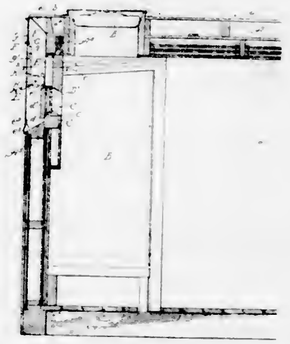


1. An integral unit for pipes for conveying fluids with a minimum of heat transference between the interior bore or passage of the pipe and the exterior, comprising a duplex tubular metallic casing having imperforate inner and outer walls inclosing an exhausted or vacuum annular space extending substantially throughout the length thereof, said walls being united at the ends into a single wall, and having corrugations adjacent the union of the walls at each end to accommodate the variations in the expansion of the walls and relieve the strains at the points of union between the inner and outer walls of the duplex casing.

2. An integral unit for pipes for conveying fluids with a minimum of heat transference between the interior bore or passage of the pipe and the exterior, comprising a duplex tubular metallic casing having imperforate inner and outer walls inclosing an exhausted or vacuum annular space extending substantially throughout the length thereof, said inner and outer walls being welded at each end into single end portions, the outer wall having corrugations at each end adjacent the weld union to thereby relieve the strains at this point caused by the variations in expansion between the inner and outer walls.

3. An integral unit for pipes for conveying fluids with a minimum of heat transference between the interior bore or passage of the pipe and the exterior, comprising a duplex tubular metallic casing having imperforate inner and outer walls inclosing an exhausted or vacuum annular space extending substantially throughout the length thereof, said inner and outer walls being welded at each end into single end portions, the one of said walls having corrugations therein to thereby relieve the strains at the points of union of the inner and outer walls caused by the variations in expansion between the inner and outer walls.

1,218,896. VENTILATOR FOR REFRIGERATOR-CARS. EDWARD POSSON, Chicago, Ill. Filed Feb. 5, 1912. Serial No. 675,611. (Cl. 98—22.)



1. A car having spaced apart walls at one end thereof, said walls being each provided with ventilating openings, said openings being offset the one with respect to the other, and means to simultaneously open and close said openings.

2. A car having an end wall provided with an opening therein, a plate spaced from said end wall, said plate being provided with an opening offset with respect to said first named opening, a closure for said opening in said plate, and means to operate said closure, said plate being arranged to provide an aperture adjacent its lower portion, said plate being further provided with a strip secured thereto and inclined with respect to said plate, said strip being located adjacent said aperture.

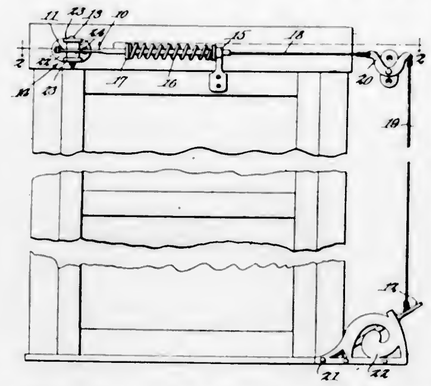
3. A car having an end wall provided with an opening therein, a plate spaced from said end wall, said plate being provided with an opening offset with respect to said first named opening, a closure for said opening in said plate, means to operate said closure, said plate being arranged to provide an aperture adjacent its lower portion, said plate being further provided with a strip secured thereto and inclined with respect to said plate, said strip being located adjacent said aperture, and means to direct water, dust and the like outwardly beneath said strip through said aperture.

4. A car having an end wall provided with an air chamber therein, the opposite vertical walls of said air chamber being provided with offset openings, the lower wall of said air chamber being formed by a transverse beam having a downwardly and outwardly inclined upper surface, and the outer wall of said air chamber being formed by a plate which terminates along its lower edge adjacent to but spaced from said transverse beam whereby a drain opening is provided for said air chamber.

1,218,897. DOOR-OPENING DEVICE. WILLIAM R. RAMEY, Iola, Kans., assignor of one-half to Jesse B. Starr, Iola, Kans. Filed Aug. 24, 1916. Serial No. 116,659. (Cl. 268—9.)

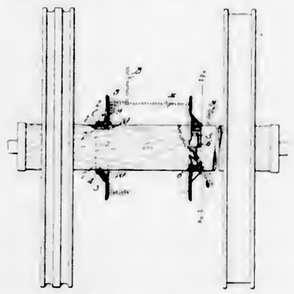
A door operating device embodying a bracket attachable to a door casing, a lever fulcrumed to said bracket

and having a long arm and a short arm extending at an obtuse angle therefrom, an upwardly projecting guide attachable to a door, said long arm being slidable through the guide, said long arm having a shoulder, a spring upon



said long arm between said shoulder and guide for closing the door, and operating means including a rod extending behind said guide and lever and connected to the short arm of the lever.

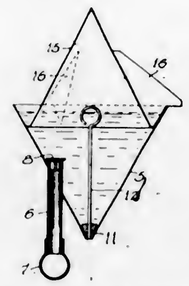
1,218,898. SPOOL-FLANGE FOR BULL-WHEEL SHAFTS. WESLIE M. ROADES, Okmulgee, Okla., assignor to United Iron Works Company, Springfield, Mo., a Corporation of Missouri. Filed July 10, 1916. Serial No. 108,365. (Cl. 242—117.)



1. A spool flange for bull wheel shafts composed of two segmental-shaped castings, each of which comprises a horizontal leg and a vertical leg, a segmental-shaped sheet metal plate secured to the vertical leg of each of said castings, lugs at the ends of said castings integrally connected to the horizontal and vertical legs of same and provided with holes for receiving fastening devices that secure said castings together and clamp them to the bull wheel shaft, two of the adjacent lugs on said castings being spaced apart, and oppositely-inclined, beveled surfaces on said spaced lugs that form a slot for the cable or rope of the drilling rig.

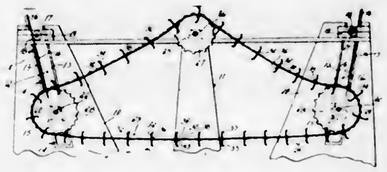
2. A spool flange for bull wheel shafts composed of two segmental-shaped castings, each of which is substantially angle-shaped in cross section, pointed devices on the inner sides of the horizontal legs of said castings that are adapted to sink into the bull wheel shaft, thickened portions on the outer sides of said horizontal legs, inclined reinforcing ribs integrally connected to said thickened portions and to the vertical legs of said castings, segmental-shaped sheet metal plates arranged on the inner sides of said vertical legs and secured to same, perforated lugs at the ends of said castings, and bolts that pass through said lugs for securing said castings together and for causing the pointed devices thereon to sink into the bull wheel shaft.

1,218,899. ANIMAL DRINKING-FOUNTAIN. ROBERT MEHAREY RUSSELL, Boulevarde Miranda, near Sydney, New South Wales, Australia. Filed Feb. 18, 1916. Serial No. 79,127. (Cl. 119—74.)



A drinking fountain for live stock, including a cup formed with smooth upwardly flared sides, a removable cover closed at the top and formed with downwardly flared smooth sides, the mouth of the cover being smaller than that of the cup so that it will extend downwardly into the same below the surface of the water therein, and flat radial plates projecting from the exterior of the cover, said plates being vertically disposed and having the lower ends thereof formed with notched seats for engagement with the upper edge of the cup to support the cover with the lower edge thereof slightly clear of the sides of the cup.

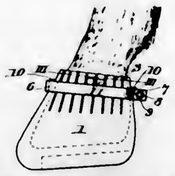
1,218,900. WATER-MOTOR. HOWARD H. SAWYER, Portland, Oreg. Filed Mar. 28, 1916. Serial No. 87,307. (Cl. 170—90.)



1. In a water motor, piers, vertically adjustable shafts mounted on the piers, sprockets carried by the shafts, additional piers disposed between the first-named piers, a shaft carrying sprockets mounted on the additional piers, power chains engaged around the sprockets, and vertically disposed vanes secured at intervals in the chains, said vanes each comprising a metal plate having its upper and lower edge portions curved rearwardly, rearwardly extending integral members formed at the sides of the vane, plates having their ends rolled into tubular form secured to the said members, and bolts engaged through the tubular portions and the adjacent links of the chains.

2. A water motor incinding an endless traveling element comprising a plurality of vertically disposed plates each having a tab formed at one end and on the upper portion thereof, the tab being bent to extend at right angles to the plane of the plate, a plate secured to the tab and extending forwardly and rearwardly of the first-named plate, the ends of the second-named plate being rolled into tubular form, bolts disposed in the tubular portions, and links engaged on the bolts at the ends of the tubular portions.

1,218,901. HORSE-BOOT. ROBERT SAXTON, Brooklyn, N. Y. Filed Aug. 24, 1916. Serial No. 116,704. (Cl. 168—18.)



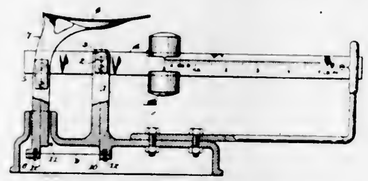
1. The combination, with a boot for horses, having upwardly converging sides to fit around a hoof, of a clamping band mounted around the upper portion of said boot, and lugs on the boot having their outer faces arranged at acute angles to adjacent portions of the sides to fit the inner face of the band for the purpose specified.

2. The combination, with a boot for horses, having upwardly converging sides to fit around a hoof, of a clamping band mounted around the upper portion of said boot, and lugs on the front and rear portions of said sides, said lugs having their outer faces substantially parallel to fit the inner face of the band for the purpose specified.

3. The combination, with a boot for horses, of a clamping band mounted around said boot, spaced lugs carried by the boot and having their outer faces fitting the inner face of the band, and other spaced lugs arranged on a higher level and between the first lugs and also carried by the boot for holding the band down on said first lugs.

4. The combination, with a boot for horses, of a clamping band mounted around said boot, lugs on the front and rear portions of the boot and having their outer faces fitting the inner face of the band, and other lugs on the sides of the boot for engaging the upper edges of the band to hold the same down on the first lugs.

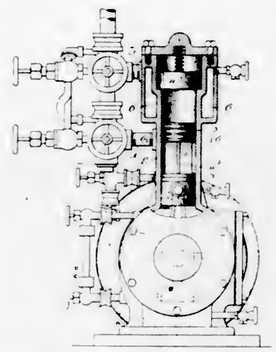
1,218,902. WEIGHING-SCALE. FREDERICK J. SCHLINK, Washington, D. C. Filed July 22, 1916. Serial No. 110,804. (Cl. 73—3.)



In a weighing scale, the combination with the scale beam of a load supporting member pivotally connected to the beam at one side of the fulcrum of the beam, said member having its load receiving platform so disposed with reference to said pivot that the center of gravity of the system including the said member and the load placed upon its load receiver will always lie on a given side of the vertical plane through the pivot axis, said member extending away from the plane of said load-pivot and fulcrum and a flexible tape so connected at one end to said member at a point outside the plane of said pivots and at the other end to a stationary part of the scale as to afford a free portion of the tape between the points of connection substantially equal in length to and, under tension parallel with, a straight line terminating in the axes of the above-named pivot and fulcrum and perpendicular to such axes.

1,218,903. COMPRESSOR. JOHN C. SCOVEL, Jr., Chicago, Ill., assignor to The Creamery Package Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed May 17, 1916. Serial No. 98,040. (Cl. 230—27.)

1. A compressor having, in combination, a cylinder having an inlet port, a piston comprising a head portion and a body portion having a central portion and a plurality of radially disposed vanes forming central angles, and inlet valves in said head portion alined with the central angles defined by said vanes whereby a direct and unobstructed passage is provided from said port to each of said valves.



2. A compressor having, in combination, a cylinder having an inlet port, a piston comprising a head portion and a cross-shaped body portion, and inlet valves in said head portion alined with the quadrants defined by said body portion whereby a direct and unobstructed passage is provided from said port to each of said valves.

3. A compressor having, in combination, a piston, an inlet suction valve in said piston, a pin in the piston extending loosely through said valve for limiting the reciprocatory movement of said valve, and a piston ring on said piston for holding said pin in place.

4. A compressor having, in combination, an inlet pipe, a plurality of cylinders each having an inlet port, the adjacent walls of said cylinders forming a chamber communicating with said ports and said inlet pipe, and a partition in said chamber between said cylinder ports and said inlet pipe whereby said chamber acts as a suction trap.

5. A compressor having, in combination, a plurality of cylinders each having a port, an inlet pipe for supplying gas to said cylinders, the adjacent walls of said cylinders forming a chamber therebetween, said chamber communicating with said ports and said pipe, a piston in each of said cylinders comprising a head portion and a body portion having a central portion and a plurality of radially disposed vanes, means for admitting gas from said pistons to within said cylinders, and a partition in said chamber between said inlet pipe and said ports whereby said chamber will act as a suction trap.

[Claims 6 and 7 not printed in the Gazette.]

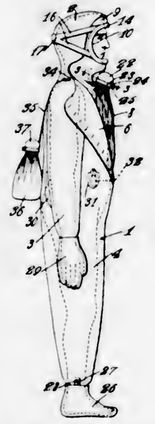
1,218,904. LIFE-PRESERVER. SAMUEL F. SHAFER, Tacoma, Wash. Filed Apr. 25, 1916. Serial No. 93,515. (Cl. 9—20.)

1. In a garment of the class described, a body and a helmet, the helmet including a mask having an opening; a ring exerting a pressure on the outer surface of the mask about the opening; and a helmet-engaging band, the forward ends of which are assembled with the ring.

2. In a garment of the class described, a body provided with a helmet including a mask having an opening; adhesive material assembled with the inner surface of the mask about the opening; and pressure exerting means cooperating with the mask and with the adhesive material.

3. In a garment of the class described, a body and a helmet, the helmet including a mask having an opening; adhesive material applied to the inner surface of the mask about the opening; a ring exerting a pressure on the outer surface of the mask about the opening; and a resilient, helmet engaging band, the forward ends of which are assembled with the ring.

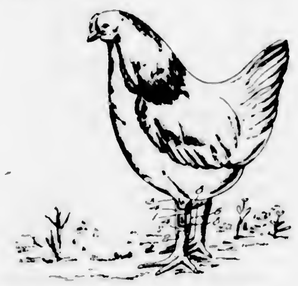
4. In a garment of the class described, a body and a helmet, the helmet including a mask having an opening, the mask being provided with perforations located about the opening; adhesive material applied to the inner face of the mask about the opening and adjacent the perforations, the perforations giving access to the adhesive material, whereby the latter may be loosened; a ring bearing against the mask about the opening and covering the perforations; and a helmet engaging means for holding the ring in place.



5. In a device of the class described, a bifurcated garment provided adjacent its crotch with a forwardly extended basin and provided adjacent its crotch with a funnel, the basin and the funnel being adapted to receive natural products voided respectively by female and male wearers; a tank in one leg of the garment; conduits leading to the tank from the basin and from the funnel; an outlet pipe leading from the tank and discharging outside of the garment; and a pump on the exposed end of the outlet pipe.

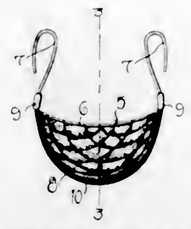
[Claim 6 not printed in the Gazette.]

1,218,905. DEVICE FOR PREVENTING HENS FROM SETTING. EDWIN JOSEPH SHAUT, Hammondsport, N. Y. Filed May 11, 1916. Serial No. 96,885. (Cl. 119—97.)



A device for preventing hens from setting formed from a single piece of sheet metal including a pair of spaced transversely curved parallel strips adapted to engage opposite sides of the leg of a hen at the joint, integral bands connecting the opposite side edges of said strips above and below the joint and disposed in single transverse planes, and integral coacting means on said device for connecting two opposite side edges of said strip to removably secure the device in position on the hen's leg.

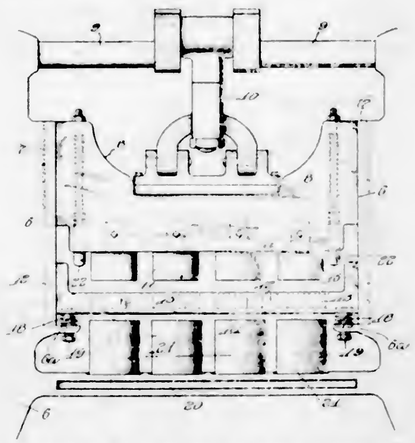
1,218,906. INHALER. ALFRED C. SHEPHERD, Bridgetown, Barbados, West Indies. Filed Nov. 18, 1916. Serial No. 132,172. (Cl. 128—13.)



1. An inhaler comprising a length of resilient wire having a bowed, intermediate portion to extend under the nostrils, the end portions of said wire being angularly projected from the intermediate portion and formed into nose clamps, and a foraminous container secured to the intermediate portion of said wire in pendant relation thereto.

2. An inhaler comprising a length of resilient wire having a bowed, intermediate portion to extend under the nostrils, the end portions of said wire being angularly projected from the intermediate portion and formed into nose clamps, and a sector-shaped container having foraminous, converging walls permanently secured to the intermediate portion of said wire.

1,218,907. CAPPING-DIE. CHARLES W. SHEVLIN, Chicago, Ill., assignor to Climax Container Company, Chicago, Ill., a Corporation of Delaware. Filed Dec. 22, 1913. Serial No. 808,061. Renewed July 3, 1916. Serial No. 107,466. (Cl. 93—55.)

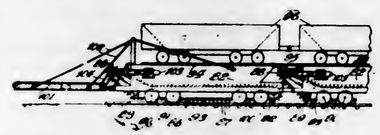


1. A capping die, comprising a mobile plunger die, a forming die adapted to receive said plunger die, said forming die having means provided therein for truing the shape of the container to be capped and for securing said container in trued position during the capping operation, and a spring pressed plunger adapted to be compressed against the surface of said receiving die when said plunger die is in its extreme lower position, for the purpose of retarding said receiving die until said plunger die is withdrawn upwardly and well without the cap.

2. A capping die, comprising a mobile plunger die, a relatively movable receiving die, said receiving die having means provided therein for truing the shape of the container to be capped, and for securing said container in trued position during the capping operation, and means for relieving all the force of said operation from the walls of the said container, and a spring pressed plunger adapted to be compressed against the surface of said receiving die when said plunger die is in its extreme lower position, for the purpose of retarding said receiving die until said plunger die is withdrawn upwardly and well without the cap.

3. A capping die, comprising a mobile plunger die, a relatively movable receiving and forming die, last said die having an outwardly flaring taper on its under side, an annular shoulder at the intersection of said taper and the inner wall of last said die, and an annular groove around said inner wall on the upper surface of last said receiving die, and a spring pressed plunger adapted to be compressed against the surface of said receiving die when said plunger die is in its extreme lower position, for the purpose of retarding said receiving die until said plunger die is withdrawn upwardly and well without the cap.

1,218,908. COMBINED RECEIVING, DISCHARGING, AND CONVEYING DEVICE. EDWARD W. SHUTT, Pueblo, Colo., assignor to American Clay Products Company, St. Louis, Mo., a Corporation of Arizona. Filed Nov. 8, 1913. Serial No. 799,913. (Cl. 193—1.)



1. In a combined receiving and discharging receptacle, a regulated discharge opening therefor, a door for said discharge opening, a support for said door, and a movably mounted platform located below said discharge opening, said door when swung wide open adapted to rest on said support.

2. In a combined receiving and discharging receptacle, a discharge opening therefor, a downwardly swinging door for said opening, means for regulating the swinging movement of said door, a moving platform located beneath said discharge opening, and a support adapted to support said door and prevent said door from being swung wide open.

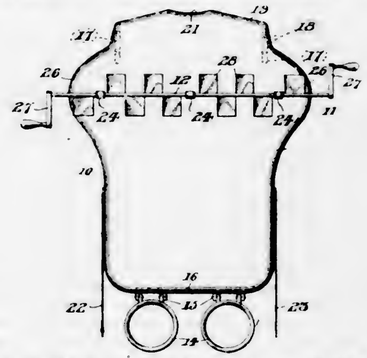
3. In a vehicle, a combined receiving and discharging receptacle, a regulated discharge opening for said receptacle, a door for said discharge opening, a movable platform located beneath said opening, a support located beneath said door, said door when being opened adapted to swing downwardly and engage said support, and trackways located above said receptacle, said trackways being for the reception of a loaded vehicle.

4. In a vehicle, a combined receiving and discharging receptacle, a regulated discharge opening for said receptacle, a door swingingly mounted beneath said opening, means for regulating the swinging of said door, a movable platform located beneath said opening, a support for limiting the movement of said door, an operably mounted distributing conveyer having one end engaged beneath said platform, and trackways located above said receptacle, said trackways being for the reception of a loaded vehicle.

1,218,909. LIFE-PRESERVER. NICHOLAS SINKOVICH, Omaha, Nebr. Filed Dec. 15, 1916. Serial No. 137,175. (Cl. 9—18.)

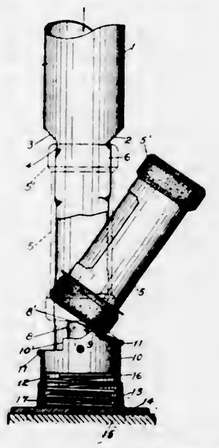
1. A device of the class described comprising an inflated float substantially rectangular in outline, with a concave side adapted for engaging the body of the wearer, leg receiving rings hinged to the lower portion of the float, opposite arm-receiving loops laterally swingingly attached to the upper portion thereof, a rearwardly extending strap-collar mounted centrally upon the upper edge of the float, and a paddle propelling device carried by the front side of the float.

2. A device of the class described comprising an inflated float substantially rectangular in outline with a concave side adapted for engaging the body of the wearer, leg-receiving rings hinged to the lower portion of the float, opposite arm-receiving loops laterally swingingly attached to the upper portion thereof, a rearwardly extending strap-collar mounted centrally upon the upper edge of the float, projecting rods carried by the front side of the float, posts adjustably slidably mounted upon the said rods, an operating shaft journaled in the free ends of the said posts, opposite alternately arranged projecting blades detachably mounted upon the said shaft, and operating cranks carried by the opposite ends of the shaft.



3. A device of the class described comprising a float adapted for removable adjustment to a person, projecting rods carried by the float, posts having axial bars slidably mounted upon the said rods, adjusting means between the said posts and rods, a propeller shaft journaled in the outer ends of the posts, blades detachably carried by the shaft alternately arranged, projecting in opposite directions and an operating crank at each end of the said shaft.

1,218,910. ASSORTING DEVICE FOR CARRIERS. FRED R. TAISEY, Lowell, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Apr. 14, 1916. Serial No. 91,202. (Cl. 243—24.)



1. In a pneumatic despatch tube apparatus, the combination of carriers of different classes having ends of different formations to determine the classes of said carriers, with a transmission tube through which said carriers are transmitted irrespective of the classes to which they pertain, and abutment acting means in the path of said carriers for directly engaging the forward end of each carrier delivered thereto, to one or the other side of the center

of gravity of said carrier, according to the class of said carrier and unstably supporting the latter momentarily to cause the so supported carrier to topple over toward one side or another thereof, according to its class.

2. In a pneumatic despatch tube apparatus, the combination of different classes of carriers having ends of different formation to determine the classes of said carriers, with a transmission tube through which said carriers are transmitted irrespective of the classes to which they pertain, and a receiver to which said carriers are delivered, said receiver being open at determined sides thereof to permit of the egress of all carriers laterally therefrom but in different ways according to said classes, and said receiver having means to normally prevent a carrier of one class from emerging from said receiver in the way in which carriers of another class emerge therefrom, and means to cause all of said carriers to emerge from said receiver through the side openings of the latter, laterally with respect to the path of travel of said carriers as they enter said receiver and in said different ways according to the classes thereof.

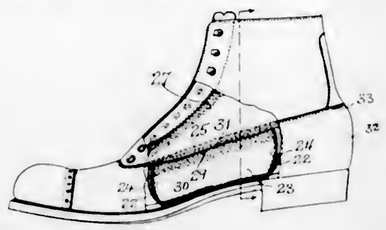
3. In a pneumatic despatch tube apparatus, the combination of elongated carriers of two different classes A and B, having ends of different formations to determine the classes of said carriers, the forward traveling end of each of the carriers in said class A having a portion thereof disposed at a different distance away from a transverse plane which bisects the major axis of said carrier, than is another portion of said end, a transmission tube through which said carriers travel, and carrier sorting means comprising a resisting abutment disposed directly in the path of travel of the class A carriers for engaging said first mentioned portion of the forward end of each carrier in said class upon its arrival at a determined point in said path, to one side of said axis, to impart to said carrier a tendency to topple over toward the opposite side, with respect to said axis and to said sorting means, and a resisting abutment for engaging a portion of the end of each carrier of class B, laterally with respect to its major axis and toward said opposite side of said sorting means, to correspondingly impart to these latter carriers a tendency to topple over in a different direction to that in which the class A carriers move.

4. In a pneumatic despatch tube apparatus, the combination of elongated carriers of two different classes A and B, having ends of different formations to determine the classes of said carriers, the forward traveling end of each of the carriers in said class A having a portion thereof disposed at a different distance away from a transverse plane which bisects the major axis of said carrier, than is another portion of said end, a transmission tube through which said carriers travel, and carrier sorting means comprising an abutment disposed in the path of travel of the class A carriers for engaging said first mentioned portion of the forward end of each carrier in said class upon its arrival at a determined point in said path, to one side of said axis, to impart to said carrier a tendency to topple over toward the opposite side, with respect to said axis and to said sorting means, and an abutment for engaging a portion of the end of each carrier of class B, laterally with respect to its major axis and toward said opposite side of said sorting means, to correspondingly impart to these latter carriers a tendency to topple over in a reverse direction to that in which the class A carriers tend to fall.

5. In a pneumatic despatch tube apparatus, the combination of carriers of two different classes A and B, having ends of different formations to determine the classes of said carriers, a transmission tube for said carriers having a substantially fixed receiving element to which said carriers are delivered, means for causing carriers of class A as they arrive at said substantially fixed element, to topple over toward one side of said element, out of the path of any succeeding carrier about to engage said means, and means for causing the carriers of class B, as they arrive, to topple over out of said path toward another side of said element.

[Claims 6 to 14 not printed in the Gazette.]

1,218,911. ARCH-SUPPORTING SHOE AND METHOD OF MAKING SAME. JOHN F. TEEHAN, Brockton, Mass. Filed Aug. 2, 1916. Serial No. 112,758. (Cl. 36—71.)



1. The herein described method of making an arch-supporting shoe, which comprises permanently securing the inner end of an arch-supporting strap to the upper, passing the strap between the last and the insole, and securing together the free edge of the upper, the free end of the strap and the bottom of the shoe, at the outer side of the shoe.

2. The herein described method of making an arch-supporting shoe, which comprises permanently securing the inner end of an arch-supporting strap to the upper, locating the body of the strap between the insole and the hollowed shank of a last, and bottoming the shoe, including attaching the free end of the strap by a seam which unites the outsole and the upper.

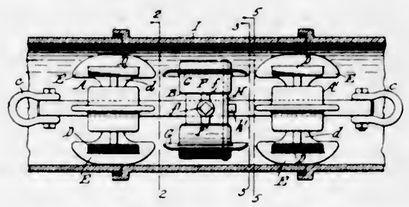
3. The herein described method of making an arch-supporting shoe, comprising attaching the inner end of an arch-supporting strap to the shoe upper, lasting the upper and passing the strap between the insole and the last, temporarily locating a filler piece between the inner sole and said strap, securing the outer end of the strap on the outer face of the insole, and finally removing said filler piece.

4. The herein described method of making an arch-supporting shoe, comprising slitting the upper lining, passing an arch-supporting strap through said slit, and securing the said inserted strap end to the upper.

5. The herein described method of making an arch-supporting shoe, comprising slitting the upper lining at the inner side on a line substantially parallel with the bottom edge thereof, stitching the inner end of an arch-supporting strap to the upper and passing said strap through said slit.

[Claims 6 to 13 not printed in the Gazette.]

1,218,912. SEWER-CLEANER. JOHN M. THOMPSON, Buffalo, N. Y. Filed Aug. 17, 1916. Serial No. 115,494. (Cl. 182—2.)



1. In a sewer cleaner, the combination of a supporting member adapted to be moved lengthwise through a sewer, a plurality of cutting members mounted on said supporting member, means for adjusting said cutting members relatively to each other on said supporting member and a contact shoe on each of said cutting members.

2. In a sewer cleaner, a cutting member having radial arms, and cutting blades on the outer portions of said arms, said cutting blades having sharpened front and side edges.

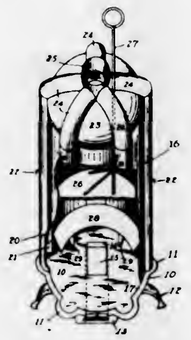
3. In a sewer cleaner, the combination of a plurality of cutting members arranged one in advance of another, each of said cutting members having a plurality of cutting blades, the cutting blades of one member being arranged substantially in alinement with the space between the cutting blades of an adjacent member and extending circumferentially to a considerable distance to each side of said space.

4. In a sewer cleaner, the combination of a supporting bar adapted to be moved lengthwise through a sewer, a plurality of cutting members having hub portions through which said bar passes, each of said cutting members having a plurality of cutting blades arranged circumferentially at intervals from each other, the cutting blades of one member being arranged in longitudinal alinement with the intervals between the blades of the next adjacent cutting member and being of sufficient width to cut through a space exceeding the width of said intervals.

5. In a sewer cleaner, the combination of a plurality of cutting members arranged one in advance of another, each of said cutting members comprising a hub portion and a plurality of arms extending outwardly from said hub portion, and cutting blades arranged at the outer portions of said arms, said cutting blades being spaced circumferentially at intervals from each other, and said arms being arranged at intervals from each other to form spaces through which liquid can flow, whereby the cleaner may be passed through a sewer without interrupting the flow of liquid through the same.

[Claims 6 to 14 not printed in the Gazette.]

1,218,913. STOVE. WILLIAM E. VAN SYOC, Pueblo, Colo., assignor of one-half to Perry H. Streeter, Pueblo, Colo. Filed Apr. 27, 1914. Serial No. 834,736. Renewed Aug. 9, 1916. Serial No. 114,073. (Cl. 126—58.)



1. In a stove, a body portion having a tubular interior and a plurality of flues on the exterior thereof, and an imperforate, frusto-conical deflector spaced above the bottom of said body portion, said flues being open to the body portion from the bottom to a point intermediate the top and bottom of said deflector.

2. In a stove, a body portion having a tubular interior and a plurality of flues on the exterior thereof, and a cover for said body portion also having a plurality of flues on the exterior thereof, the flues on the cover being so placed as to form continuations of the flues on the body portion.

3. In a stove, a body portion having a plurality of flues communicating with its interior adjacent the bottom thereof but closed from said body portion throughout the remainder of their length, and an inclined, imperforate deflector within said body portion and extending over said flue openings.

4. In a stove, a base, a body portion having a plurality of flues communicating with its interior adjacent the bottom thereof but closed from said body portion throughout the remainder of their length, and an inclined, imperforate deflector supported on said base but spaced therefrom, said deflector extending over said flue openings.

1,218,914. PROCESS FOR CURING FIGS FOR USE IN MAKING A BEVERAGE. MESROB VARJEBEDIAN, Fresno, Cal. Filed Dec. 4, 1916. Serial No. 134,893. (Cl. 99—11.)

1. A process for curing figs consisting of drying them, subjecting them to a bath consisting of a mixture of approximately 5 gallons of water, 2 pounds of salt, and 1 pound of lime, again drying them, cutting them into pieces, and roasting them until browned, substantially as described and for the purposes set forth.

2. A process for curing dried figs for use in making a beverage therefrom, consisting of subjecting the dried figs to a bath containing water, salt and lime, then drying them, and roasting them until browned, substantially as described.

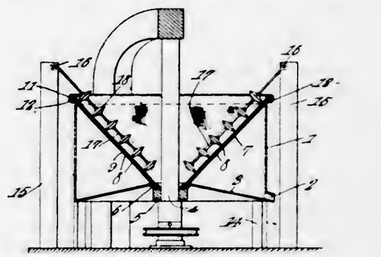
3. A process for curing figs consisting of soaking them in a solution of water, salt and lime, for about fifteen minutes, then drying them, cutting them into pieces, and then browning them by heat, substantially as described.

4. A process for treating figs preparatory to making a tea therefrom consisting of drying the figs, subjecting them to a bath of about fifteen minutes duration in a solution of water, salt and lime, then again drying them, cutting them into pieces, and roasting them, substantially as described.

5. A process for treating figs prior to making tea therefrom, consisting of impregnating the figs with salt and lime, and then roasting them until they assume a brown color.

[Claims 6 and 7 not printed in the Gazette.]

1,218,915. FILTER. WILLIAM H. WAGGONER, Jeanerette, La. Filed Feb. 29, 1916. Serial No. 81,285. (Cl. 210—31.)



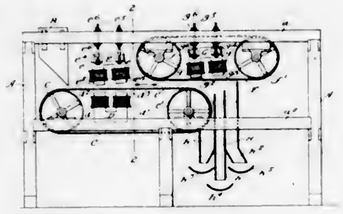
1. In a device of the class described, a tank; an upright shaft journaled in the tank; a perforated cone carried by the shaft and extended within the tank, the cone having its smaller end disposed downwardly; an arm extended within the cone; a scraper carried by the arm; and means for pivotally mounting the arm at its outer end for vertical swinging movement whereby the scraper will coöperate with the cone, the arm being disposed at an angle to a radius of the shaft passing through the pivotal mounting of the outer end of the arm.

2. In a device of the class described, a tank; an upright shaft journaled in the tank; a perforated cone carried by the shaft and extended within the tank, the cone having its smaller end disposed downwardly; an arm extended within the cone; a scraper carried by the arm and disposed substantially at right angles to the axis of the arm; and means for mounting the arm at its outer end for vertical swinging movement whereby the scraper will cooperate with the cone, the arm being disposed at an angle to a radius of the shaft passing through the pivotal mounting of the outer end of the arm.

3. In a device of the class described, a tank; an upright shaft journaled in the tank; a perforated cone carried by the shaft and extended within the tank, the cone having its smaller end disposed downwardly; an arm extended within the cone; a plurality of scrapers rotatably mounted on the arm and located one above another, the scrapers being disposed substantially at right angles to the axis of the arm; and means for pivotally mounting the arm at its outer end for vertical swinging movement whereby the scrapers will coöperate with the cone, the arm being disposed at an angle to a radius of the shaft passing through the pivotal mounting of the outer end of the arm.

4. In a device of the class described, a tank having a bottom which slants downwardly and outwardly toward the periphery of the tank, the tank being provided with an outlet; a shaft journaled for rotation in the tank; a perforated cone carried by the shaft and located within the tank; a support; a shaft pivoted to the support for swinging movement in a plane parallel to the axis of the shaft; and a wheel journaled on the shaft and in contact with the cone, whereby the wheel will be rotated when the cone is rotated.

1,218,916. METHOD AND APPARATUS FOR SEPARATING MAGNETIC ORES. JOSEPH WEATHERBY, New Cumberland, Pa., assignor, by direct and mesne assignments, to Electric Ore Separator Company, New Cumberland, Pa., a Corporation of Delaware. Filed June 12, 1915. Serial No. 33,747. (Cl. 83—71.)



1. The process of separating a mixture of magnetic and non-magnetic ore particles, which consists in subjecting the mass first to the influence of a magnetic field, the polarity of which is rapidly alternated and secondly, to the influence of magnetic fields of similar polarity located above and below the mass whereby the magnetic particles are alternately set into violent agitation or ebullition and caused to repel each other and settle in a surface layer on the non-magnetic particles.

2. The process of separating a mixture of magnetic and non-magnetic ore particles, which consists in supporting the mass and subjecting it first to the influence of a magnetic field between pole pieces of opposite sign the polarity of which is rapidly alternated and, secondly to the influence of a magnetic field between pole pieces of similar sign, whereby the magnetic particles are alternately agitated in the mass and caused to rise to the surface and are caused to repel and lie inert as a surface layer on the non-magnetic particles.

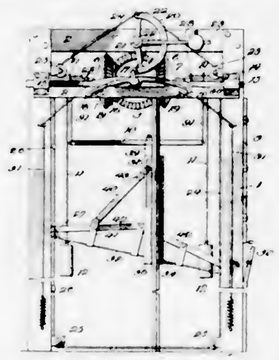
3. The process of separating a mixture of magnetic and non-magnetic ore particles, which consists in supporting the mass and subjecting it to the influence of a constantly and rapidly alternating magnetic field between oppositely located pole pieces which are periodically of opposite sign and similar sign.

4. A method of separating a mixture of magnetic and non-magnetic particles which consists in bringing the mixture under the influence of a magnetic field of constantly and rapidly alternating polarity, the characteristics of which are such that a magnetic condition is induced in the magnetic particles to impart a spinning motion thereto causing them to free themselves from the non-magnetic particles and intermittently subjecting them to the influence of a repulsive magnetic field adapted to cause the particles to repel one another whereby the magnetic particles are alternately under the influence of alternating and repulsive magnetic fields.

5. A method of separating a mixture of magnetic and non-magnetic particles which consists in bringing the mixture under the influence of a magnetic field of constantly and rapidly alternating polarity, the characteristics of which are such that a magnetic condition is induced in the magnetic particles causing them to revolve and free themselves from the non-magnetic particles, and then, while the magnetic particles are still in the area sensitive to the magnetic forces, subjecting them to the influence of a repulsive magnetic field of constantly and rapidly alternating polarity.

[Claims 6 to 20 not printed in the Gazette.]

1,218,917. ICE-HANDLING APPARATUS. WILLIAM E. WILLIS, Fairview, Okla. Filed Dec. 16, 1915. Serial No. 67,271. (Cl. 187—36.)



1. In an apparatus for the purpose set forth, the combination of a supporting frame, a carrier movable vertically therein, a shaft mounted in the frame and operatively supporting the carrier, means for rotating said shaft alternately in opposite directions, inclined stop plates upon the frame, a slide mounted upon the frame above said plates, an escapement dog pivotally mounted upon the slide and provided at its ends with teeth adapted to engage the lower ends of the said stop plates, and means controlled by the carrier and acting upon the said dog to reverse the direction of rotation of the carrier supporting shaft.

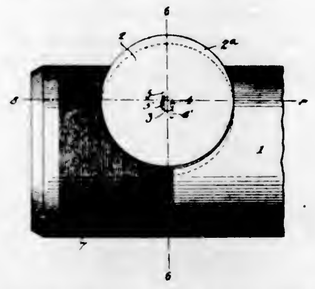
2. The combination of a supporting frame, a carrier mounted to travel within the frame, a slide mounted on the side of the frame, inclined rests on the frame below the slide, an escapement dog pivoted on the slide and having its ends disposed to ride on the respective rests and engage the lower ends of the same whereby to hold the slide against movement, means controlled by the slide for effecting the travel of the carrier, and means controlled by the carrier to release the dog and actuate the slide whereby to reverse the direction of travel of the carrier.

1,218,918. RECORDER-REPRODUCER DEVICE. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Mar. 18, 1915. Serial No. 15,206. (Cl. 274—30.)

1. A recorder-reproducer for dictation-machines, comprising a rectilinearly-reciprocatory head having a recording-stylus and a reproducing-stylus located diagonally with respect to the direction of reciprocation.

2. A recording-reproducer for dictation-machines, comprising a recording-stylus and a reproducing-stylus having a rectilinearly-reciprocatory movement, and located diagonally with respect to the direction of reciprocation.

3. A rectilinearly-reciprocatory recorder-reproducer system for dictation-machines, having the recording-stylus and the reproducing-stylus located diagonally of each other with respect to said rectilinear path.

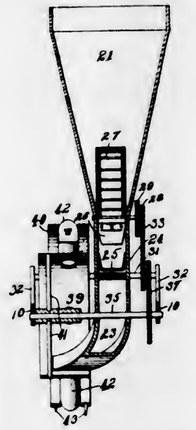


4. A recorder-reproducer for dictation-machines, comprising a recording-stylus and a reproducing-stylus, said styli being so located with respect to each other that upon shifting into the reproducing-position said reproducing-stylus engages the record-groove in the rear of the termination thereof.

5. A recorder-reproducer for dictation-machines, comprising a recording-stylus and a reproducing-stylus, said styli being so located with respect to each other that upon shifting into the recording-position said recording-stylus engages the record-tablet in advance of the point in the record-groove from which said reproducing-stylus has just been removed.

[Claim 6 not printed in the Gazette.]

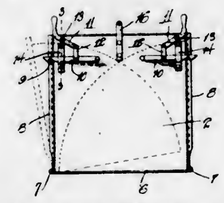
1,218,919. POTATO-PLANTER. ALFRED YOUNGREN and HENRY L. LIND, Barnum, Minn. Filed Apr. 28, 1916. Serial No. 94,168. (Cl. 111—27.)



1. A potato planting machine comprising a supporting frame, a hopper supported above said frame and provided with an outlet spout, a planting wheel rotatably connected with said frame and provided with an outer ground engaging rim and inner rim, planting chutes leading from said inner rim through the outer rim, the spout of said hopper engaging said inner rim for registering with the planting chutes as said planting wheel rotates, a driven shaft carried by said frame, cutting means actuated from said driven shaft for cutting potatoes passing through said spout, feeding means operatively connected with said hopper for feeding potatoes into said spouts, and means for transmitting rotary movement of said planting wheel to said driven shaft.

2. A potato planting machine comprising a supporting frame, a hopper provided with an outlet spout, a planting wheel rotatably connected with said frame and provided with inner and outer rims, planting chutes leading from said inner rim through the outer rim, the spout of said hopper engaging said inner rim for registering with the planting chutes as said planting wheel rotates, ground engaging teeth carried by the outer rim, cutting means for cutting potatoes passing through said spout, and feeding means operatively connected with said hopper for feeding potatoes into said spout.

1,218,920. CARRIER. BRADLEY R. AVERILL, Greens Farms, Conn. Filed Oct. 13, 1916. Serial No. 125,487. (Cl. 57—13.)



1. A carrier comprising a container having its sides hingedly mounted to swing outwardly from the container, segmental shields carried by the sides and normally disposed within the container, a rod extending longitudinally through the container above the marginal edges of the said shields, a cylindrical pipe embracing the said rod and having its ends secured to the end walls, and operating means mounted upon each end of each rod for coöperating with the said hingedly mounted sides whereby the same may be swung to open position.

2. A carrier comprising a container having its sides hingedly mounted to swing outwardly from the container, segmental shields carried by the sides and normally disposed within the container, a rod extending longitudinally through the container above the marginal edges of the said shields, a cylindrical pipe embracing the said rod and having its ends secured to the end walls, operating means mounted upon each end of each rod for coöperating with the said hingedly mounted sides whereby the same may be swung to open position, and means for holding the said hingedly mounted sides in locked position.

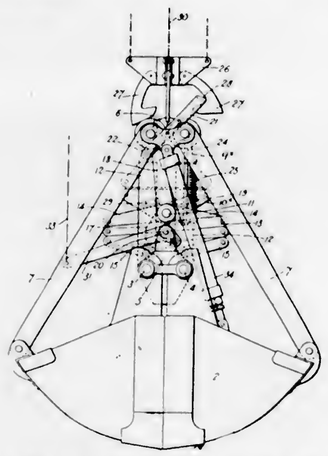
3. A carrier comprising a container, the said container having its sides hingedly mounted to swing outwardly, a pair of oppositely extending latches mounted upon each side of each end of the container, operating levers having their ends connected to the said latches, and means extending through the said container adjacent each longitudinal side thereof and associated with each pair of said levers whereby the latches at each end of the said container may be simultaneously operated.

4. A carrier comprising a container having its sides hingedly mounted to swing outwardly from the container a rod extending longitudinally through the container and protruding beyond each end wall thereof, a cylindrical pipe embracing the said rod and having its end secured to each end wall, and operating means mounted upon each end of each rod for coöperating with the said swinging sides for permitting the same to be swung to open or for holding the same in locked position.

5. A carrier comprising a container having its sides hingedly mounted to permit the sides to swing outwardly from the container, segmental shields carried by the sides and normally disposed within the container, latches pivotally mounted and adapted to coöperate with the swinging sides for holding the same in closed position, operating levers for unlocking the said latches, a pair of cylindrical pipe elements mounted within the container and fixed in the end walls thereof, and means connecting the said operating levers through the said cylindrical pipe elements

for permitting two of the latches for one of the said swinging sides to be simultaneously operated with the operation of one of the said levers.

1,218,921. GRAB. DUDLEY JAMES BARNARD, East Ham, England. Filed June 27, 1916. Serial No. 106,250. (Cl. 37—30.)



1. In a grab of the kind herein described, the combination of means connecting the cross-beam and power-shaft for preventing any tendency on the part of said beam and power-shaft to overbalance, comprising a device which is extensible longitudinally and vertically but is otherwise rigid, independent means co-acting with said extensible device for guiding said beam and power-shaft into locking position, means for locking said parts together and means for disconnecting such locking means.

2. In a grab of the kind herein described, the combination of means connecting the cross-beam and power-shaft for preventing any tendency on the part of said beam and power shaft to overbalance, comprising a system of levers arranged in the form of a lazy-tongs, such levers being free to extend or contract vertically and longitudinally as the cross-beam and power-shaft come together, independent means co-acting with said levers, comprising vertically disposed guides rigidly fixed to the beam, for guiding said beam and power-shaft into locking position, means for locking said parts together and means for automatically disconnecting such locking means.

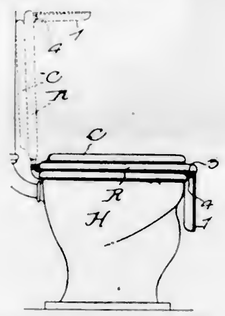
3. In a grab of the kind herein described, the combination of means connecting the cross-beam and power-shaft for preventing any tendency on the part of said beam and power-shaft to overbalance, comprising a system of extensible levers, independent means co-acting with said extensible levers to guide the cross-beam and power-shaft into locking position, means for locking said beam and shaft together comprising gravity catches pivotally mounted on the power-shaft and means co-acting therewith mounted on the beam, and means for disconnecting said locking means.

4. In a grab of the kind described, the combination of means connecting the cross-beam and power-shaft for preventing any tendency on the part of said beam and power-shaft to overbalance, comprising a system of extensible levers, guides mounted on the beam, means carried by said extensible levers co-acting with said guides, means for locking the cross-beam and power-shaft together and hand actuated means for disconnecting said locking means.

5. In a grab of the kind herein described, the combination of means connecting the cross-beam and power-shaft for preventing any tendency on the part of said beam and power-shaft to overbalance, comprising a system of extensible levers, independent means co-acting therewith to guide said beam and shaft into locking position, means for locking said beam and shaft together and means, comprising a tipping ring for disconnecting such locking means.

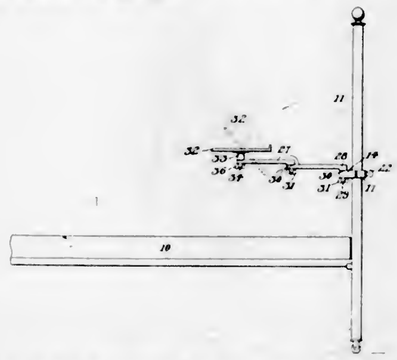
[Claims 6 to 8 not printed in the Gazette.]

1,218,922. SHIELD FOR CLOSET-HOPPERS. WILLIAM LOUIS BASS, Washington, D. C. Filed Mar. 23, 1915. Serial No. 16,394. (Cl. 4—18.)



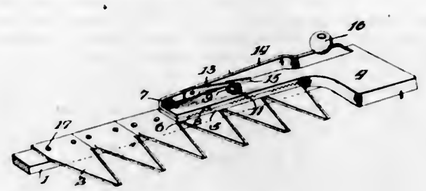
The combination of a sanitary closet bowl having its entire front exposed, a seat ring mounted above the bowl for movement toward and from the same, said bowl being adapted for use as a urinal when the seat ring is raised and being thus exposed and prone to become soiled, and a retractable shield plate controlled by the movement of the seat ring and automatically positioned vertically in advance of said bowl when said seat ring is lowered for use, said plate being curved in horizontal section to conform substantially to the curvature of the bowl front and being of a size to cover the upper half of said front to shield the user's clothes from contact with this portion of the bowl, the front face of said plate being smooth and free of projections to prevent articles of clothing from being caught and torn thereby.

1,218,923. READING-BRACKET FOR BEDS. MICHAEL S. BOGDAŃSKI, Clymer, Pa. Filed Feb. 4, 1915. Serial No. 6,092. (Cl. 45—82.)



In a bracket as specified, the combination of a supporting arm having a vertical opening in its outer end and slots radiating from the opening, a block seated on said arm and having a depending bolt extending downwardly through said opening to support the block for pivotal adjustment in a horizontal plane and further having ribs radiating from the bolt, a set nut on the lower end of the bolt for binding engagement against the arm to retain said ribs in the slots and secure the block from turning when adjusted, said block also having a shaft extending horizontally from one side thereof, a table having a depending apertured lug engaging over the shaft to permit tilting of the table into various angles, a set nut on the outer end of said shaft adapted to bear against said lug, and an expansion spring interposed between the lug and the block to yieldingly hold the table in adjusted position.

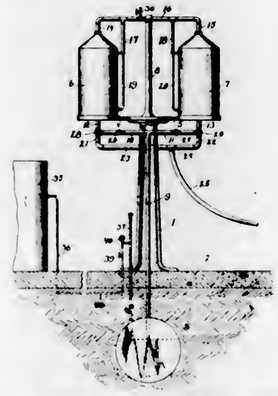
1,218,924. CUTTER FOR MOWERS. LARKIN BRILES, Lake City, Cal. Filed Aug. 10, 1916. Serial No. 114,260. (Cl. 56—44.)



1. The combination of a cutter bar, a sickle head having one side abutting the end of the cutter bar and having a tenon and mortise engagement therewith, the sickle head having a lateral extension projecting from the upper rear portion of said side over the cutter bar, means for preventing relative longitudinal movement between the cutter bar and the extension, and a fastening device securing said extension to the cutter bar.

2. The combination of a cutter bar, cutters secured upon said bar, a clamping bar secured over the cutters, a sickle head having one side abutting the end of the cutter bar, the clamping bar and the cutter, and having a tenon and mortise engagement with the cutter bar, the sickle head being further provided with a lateral extension projecting from the upper rear portion of its side over the clamping bar, means for preventing relative longitudinal movement between the said extension and the clamping bar, and a single bolt inserted through the said extension, the clamping bar, the cutter and the cutter bar to rigidly secure the extension to the cutter bar.

1,218,925. DEVICE FOR DISPENSING LIQUIDS. THOMAS S. BRUCE, Dallas, Tex. Filed Oct. 21, 1915. Serial No. 57,123. (Cl. 221—99.)



1. In a liquid dispensing device, the combination of a storage tank, a plurality of measuring vessels, a supply pipe leading from said tank to said vessels, a delivery pipe connected to said vessels, means for forcing liquid from said storage tank into said supply pipe, valve connections for supplying liquid and delivering from each of said vessels and means connecting said measuring vessels whereby the pressure established through the flow of liquid into one vessel will deliver the measured liquid at a point above the normal gravity delivery therefrom.

2. In a liquid dispensing device, the combination of a storage tank, a plurality of measuring vessels, a supply pipe leading from said tank to said vessels, a delivery pipe connected to said vessels, means for forcing liquid from said storage tank into said supply pipe, an air pipe connecting the upper ends of said measuring vessels, and valves arranged to independently control the supply and delivery pipe connections therefrom whereby a pressure may be maintained in one of said vessels, to deliver pressure through said air pipe to deliver liquid from another measuring vessel connected therewith.

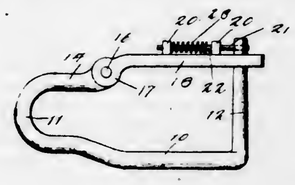
3. In a liquid dispensing device, the combination of a storage tank, a plurality of measuring vessels, a supply pipe leading from said tank to said vessels, a delivery pipe connected to said vessels, means for forcing liquid from said storage tank into said supply pipe, an air pipe connecting the upper ends of the measuring vessels, valves in said supply pipe to independently control the supply to each vessel, and cocks disposed at the junction of the supply and delivery pipes to permit passage of liquid either from said vessels or from said supply pipe.

4. In a liquid dispensing device, the combination of a storage tank, a plurality of measuring vessels, each having an inlet pipe near its bottom, a supply pipe leading from the storage tank provided with branches, and a delivery pipe, the inlet pipe for each measuring vessel, a branch of the supply pipe and the delivery pipe being arranged to meet at a common point, an air pipe connecting the upper ends of the measuring vessels, means for forcing liquid from the storage tank into the supply pipe, and threeway valves at the junctions of the branch supply pipes, inlet pipes and delivery pipe.

5. In a liquid dispensing device, the combination of a storage tank, a standard disposed above the same and provided with lateral brackets, measuring vessels mounted upon said brackets, a supply pipe extending upward through the standard from said tank to said vessels, a delivery pipe connected to said supply pipe, cocks disposed at the intersection of the supply and delivery pipes, and means for creating a pressure in said tank to force liquid through said supply pipe.

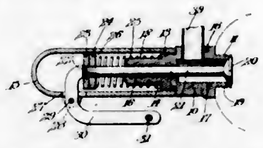
[Claims 6 and 7 not printed in the Gazette.]

1,218,926. CLEVIS. CHARLES L. BURNS, Altamont, Mo. Filed July 25, 1916. Serial No. 111,322. (Cl. 97—4.)



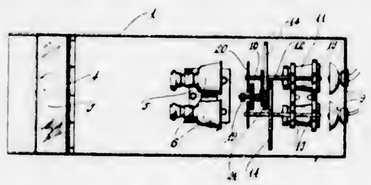
A clevis adaptable for connection to doubletrees comprising a link having one side open, the open side of said link having a rear portion provided at its forward extremity with an eye, the forward end of the link comprising a bar having a spaced series of openings therein, a closure having hinge eyes at one end and a slot at the other end engaging the forward end of the link, a pivot pin passing through the eyes, spaced ears on said closure, a bolt slidable in said ears and engageable in the openings in the forward end of the link, a finger piece projecting from the bolt between the ears, and a spring surrounding the bolt and bearing at one end against the finger piece and at its other end against the ear nearer the pivot pin.

1,218,927. FOOT AIR-ACCELERATOR FOR HYDRO-CARBON-MOTORS. ERNEST BUSSEY, Dothan, Ala., assignor to Foot Air Accelerator Company, Cincinnati, Ohio, a Corporation of Alabama. Filed June 29, 1916. Serial No. 106,718. (Cl. 137—26.)



An air valve adapted to be attached to the inlet manifold of an internal combustion engine comprising a body formed with an air chamber open at one end thereof and having an air inlet, a nipple at said end for attaching the valve to the inlet manifold, said nipple formed with a valve seat, a valve coöperating with said seat and having a stem extending through the body and projecting beyond the same, spring means to close the valve against the difference of pressure in the chamber and manifold, a cylindrical cap carried by the body and inclosing said spring and stem and carrying means coöperating with the stem for actuating the valve.

1,218,928. STEREOPTICON. CECIL C. CLEMENT, Spokane, Wash., assignor of one-half to Henry B. Kingsbury, Spokane, Wash. Filed May 15, 1916. Serial No. 97,661. (Cl. 88—27.)



1. In a device of the class described, a casing, a screen arranged at one end thereof, lamps arranged at the opposite ends of the same, a pair of adjustable lenses provided intermediate of the ends of the casing, light receiving chambers arranged in duplicate adjacent the lamps, condensing lenses mounted in the forward ends of said light receiving chambers, a pair of picture wheels rotatably mounted in overlapping relation to one another intermediate the condensing and adjustable lenses, and a rotatable shutter operated upon the rotation of said wheels to fade-out the picture in one wheel and fade-in the picture of the other wheel.

2. In a device of the class described, a casing, a screen arranged at one end thereof, lamps arranged at the opposite ends of the same, a pair of adjustable lenses provided intermediate of the ends of the casing, light receiving chambers arranged in duplicate adjacent the lamps, condensing lenses mounted in the forward ends of said light receiving chambers, a pair of rotatable shafts arranged longitudinally of the casing, a pair of picture wheels carried by said shafts and arranged in overlapping relation for disposition between the condensing and adjustable lenses, star wheels carried by said shafts, a central rotating means adapted for alternate engagement with said star wheels to alternately operate said picture wheels and a shutter rotatable upon the operation of said central rotating means whereby to fade-out the picture in one wheel and fade-in the picture in the other wheel.

3. In a device of the class described, a casing, a screen arranged at one end thereof, lamps arranged at the opposite ends of the same, a pair of adjustable lenses provided intermediate of the ends of the casing, light receiving chambers arranged in duplicate adjacent the lamps, condensing lenses mounted in the forward ends of said light receiving chambers, of a pair of rotatable shafts arranged longitudinally of the casing, a pair of picture wheels carried by said shafts and arranged in overlapping relation for disposition between the condensing and adjustable lenses, star wheels carried by said shafts, a central rotating gear carrying a laterally extending pin adapted for engagement alternately with said star wheels to alternately rotate said picture wheels, means for rotating said gear, an additional shaft having connection with the aforesaid gear for rotation therewith, and a shutter carried by the latter shaft for rotation therewith to fade-out one picture and fade-in the other.

4. In a device of the class described, a casing arranged on an adjustable support and provided at its one end with a clear glass inclined inwardly from its upper to its lower edge, a ground glass arranged perpendicularly in the casing immediately in the rear of the aforesaid clear glass and designed to form a screen therein, lamps arranged at the rear of the casing, condensing lenses disposed forwardly of said lamps, adjustable focusing lenses disposed between the condensing lenses and said screen and rotating picture wheels interposed between said lenses in the path of the light rays.

1,218,929. SHOCK-ABSORBING SHAFT. HERBERT COOPER, Brooklyn, N. Y. Filed Feb. 29, 1912. Serial No. 680,583. Renewed June 13, 1916. Serial No. 103,589. (Cl. 64—13.)



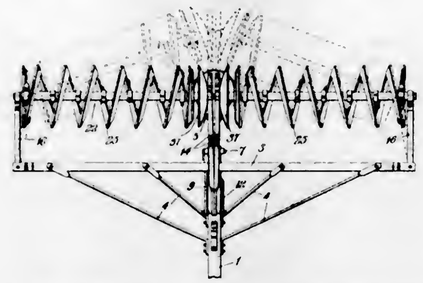
1. A shock absorbing shaft provided with a driving shaft section, and a driven shaft section adjacent and relatively rotatable in alinement with the driving shaft section, an internally threaded sleeve filled with a substantially incompressible fluid carried by one of said sections and projecting over the adjacent end of the other section, an externally threaded member engaging the thread of the sleeve and slidably engaging said second mentioned shaft section, said threaded member being constructed and arranged to permit the leakage of fluid from one side of it to the other, and a pair of springs interposed between the threaded member and the ends of the sleeve for returning the threaded member to its central position.

2. A shock absorbing shaft provided with a driving shaft section having a squared end, a driven shaft section adjacent and relatively movable in alinement with the driving shaft section, an internally threaded sleeve filled with a substantially incompressible fluid carried by the driven shaft section and projecting over the adjacent end of the driving shaft section and journaled on said section beyond its squared end, an externally threaded member engaging the thread of the sleeve and having a square hole slightly larger than and slidably engaging the squared end of the driving shaft section, and a pair of springs one coiled around the squared end of the driving shaft section on each side of the member and engaging the sleeve and member for returning the latter to its central position.

3. A shock absorbing shaft provided with a driving shaft section having a squared end, a driven shaft section adjacent and relatively movable in alinement with the driving shaft section, an internally threaded sleeve filled with a substantially incompressible fluid having an oil-tight head carried by the driven shaft section and a removable oil-tight head journaled on the driving shaft section beyond its squared end, an externally threaded member engaging the thread of the sleeve and having a square hole slidably engaging the squared end of the driving shaft section, and a pair of springs one coiled around the squared end of the driving shaft section on each side of the member and engaging the member and one of the sleeve heads for returning the threaded member to its central position.

4. A member, a hollow housing rotatably mounted thereon and arranged to form a closed chamber surrounding said member, a second member non-rotatably mounted on said first member within said housing and dividing said chamber into two compartments and arranged to move longitudinally upon relative rotation of said first member and said housing, one of said members being formed to provide a by-pass between said compartments, an incompressible fluid filling said housing.

1,218,930. HARROW. ARTHUR J. CUMMER, CHARLES F. MATZ, and MICHAEL G. MATZ, Dubuque, Iowa. Filed June 22, 1916. Serial No. 105,231. (Cl. 55—152.)



1. The combination of a main frame, supporting members extending rearwardly from said frame at the center and the outer ends thereof, axles supported rigidly by and between the said supporting members, rotatable shafts mounted upon and carried by said axles, spiral blades secured to said shafts, and thrust-receiving members at the inner ends of said shafts.

2. The combination of a main frame, supporting members extending rearwardly from said frame, axles disposed between and carried by the rear ends of said supporting members, hollow shafts rotatably mounted upon said axles, spokes connected to and radiating from said hollow shafts, and spiral ribbons secured to and carried by the outer ends of said spokes.

3. The combination of a main frame, a rotary shaft supported from said main frame, and a spiral blade carried by said shaft, the inner end of said spiral blade being yieldably connected with the shaft.

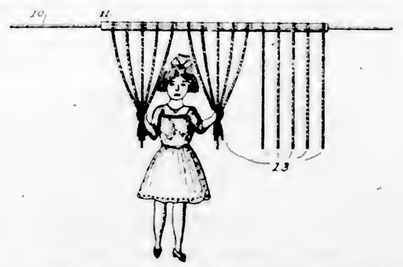
4. The combination of a main frame, a rotatable shaft supported therefrom, a plurality of collars upon said shaft, spokes secured to the respective collars, and a spiral ribbon secured to and carried by the outer ends of said spokes, the spokes at the inner end of the spiral ribbon being pivotally connected to their respective collar.

5. The combination of a main frame, supporting members extending rearwardly therefrom, brackets secured to the respective supporting members and having a portion spaced from the extremity of the same, nuts engaged between the extremities of the supporting members and the brackets secured respectively thereto and held against turning by the same, an axle fitted in and secured by said nuts, and a spiral blade mounted upon and rotatable about said axle.

1,218,931. APPARATUS FOR TEACHING ARITHMETIC. HERMAN G. CUTHBERT, Newark, N. J. Filed Mar. 22, 1913. Serial No. 756,108. (Cl. 35—2.)

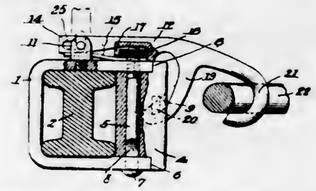
1. In apparatus for teaching, a support, and a multiplicity of spaced pendant flexible members thereon, tending to hang in vertical parallel relation.

2. Apparatus for teaching arithmetic comprising a support, an approximately horizontal guide thereon, a plurality of apertured elongated blocks slidably engaged on the guide, each block having an intermediate circumscribing groove, and counter units carried thereby comprising sections of cable each having one end looped around a respective block in the groove, and secured, the other end hanging free.



3. Apparatus of the class described comprising a horizontal support, a plurality of relatively movable sliding elements thereon, pendant cable sections carried by each, a body having central apertures receiving the end of the cable projected therethrough, the body having an enlarged recess at its lower end, and the cable having a knot at its lower end for retention of the body and concealed in the recess.

1,218,932. AUTOMOBILE-LOCK. CHARLES OLIVER DICK, Glenwood, Iowa, assignor of one-half to E. V. Rhodes, Glenwood, Iowa. Filed Nov. 1, 1916. Serial No. 129,032. (Cl. 70—90.)



1. An automobile lock adapted to be secured to the front axle of an automobile and comprising a U-shaped frame member in combination with a lock carrying block, means to secure the block within U-shaped frame member, a locking arm pivotally mounted upon said frame member, means to yieldingly retain said locking arm in inoperative position, and a lock within said locking block and coöperating with said locking arm, a hook on the end of said locking arm and adapted to engage the steering knuckle to retain a road wheel at an angle to the axle substantially as described.

2. In a device of the character described in combination, a U-shaped frame adapted to fit over the front axle of an automobile, a block constructed to fit within said U-shaped frame, a bolt adapted to retain said block in position within said frame, a pivoted locking arm mounted upon said frame, said locking arm being provided with a recess adapted to receive and inclose the nut of said bolt, locking mechanism provided within said locking block, a hasp upon said locking arm constructed to engage with said locking mechanism, an engaging member upon the outer end of said arm, said engaging member being adapted to coöperate with the angle arm of a front wheel to lock said front wheel in angular position relatively to said front axle.

3. In a device of the character described in combination, a U-shaped member adapted to engage and inclose a part of an automobile, a block adapted to fit within said U-shaped member, a bolt constructed to secure said block and said clevis member together, a locking arm pivotally mounted upon said clevis member and provided with a recess to receive and inclose the nut of said bolt, and locking means for retaining said locking arm in position over said nut.

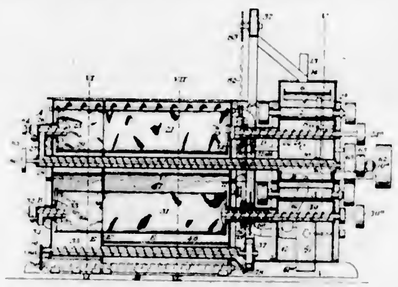
4. In a device of the class described in combination, a locking block, locking mechanism carried by said locking

block, a securing member for securing said locking block to a part of an automobile, a bolt fastening said locking block and securing member together, a locking arm provided with means to engage said locking mechanism, and means provided upon said locking arm to inclose and engage the nut of said bolt so that when said locking arm is locked in position the nut of said bolt is likewise locked in position.

5. In a device of the character described in combination, a locking arm adapted to engage the angle arm of the steering knuckle of an automobile, supporting means constructed to engage a part of the automobile and adapted to carry said locking arm, locking mechanism in engagement with said supporting means, a securing member securing said supporting means and locking mechanism together, and means provided on said locking arm for locking said securing member in position when said locking arm is locked in operative relation to the automobile.

[Claim 6 not printed in the Gazette.]

1,218,933. ROLLER-MILL. ROWAN T. F. DODDS, Decatur, Ill. Continuation in part of application Serial No. 22,570, filed Apr. 20, 1915. This application filed Jan. 4, 1916. Serial No. 70,175. (Cl. 83—12.)



1. A flour mill having a set of grinding elements, a bolting reel, a conveyer for carrying ground material from the grinding elements to the bolting reel, a screw conveyer for conveying the coarse material discharged from the bolting reel to another set of grinding elements, a conveyer casing in which the conveyer operates, and means whereby the material may be discharged from said casing directly to a flour bin or receptacle without passing to the other set of grinding elements, substantially as described.

2. A flour mill comprising a plurality of separable mill units one above the other, each unit having a set of grinding elements, a bolting reel arranged in line with each set of the grinding elements, a substantially horizontal conveyer in each unit for carrying the ground material from the grinding elements to the reel, and another substantially horizontal conveyer for returning the coarse material from the reel back to the grinding elements in another unit in a lower plane, substantially as described.

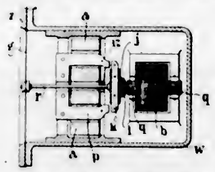
3. A flour mill comprising a plurality of mill units, each unit having a set of grinding elements, a bolting reel arranged in line with the grinding elements, a substantially horizontal conveyer for carrying the ground material from the grinding elements to the reel, and another substantially horizontal conveyer for returning the coarse material from the reel back to the grinding elements in another unit, each of said units being structurally separate from the other, and the units being superimposed one upon another, substantially as described.

4. A flour mill comprising a plurality of superimposed mill units set one upon another, and each unit being structurally independent of the other, each unit comprising grinding elements, a bolting reel and a conveyer, substantially as described.

5. A flour mill comprising a plurality of separate superimposed mill units each having a set of grinding elements, an inclosed bolting reel and a conveyer leading from the grinding elements to their respective reels, and driving means for the bolting reels located between the reels and the grinding elements, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,218,934. SOUND-EMITTER. SYDNEY EVERSHED and WILLIE DICKSON KILROY, Chiswick, England. Filed May 3, 1910. Serial No. 559,158. (Cl. 177—7.)

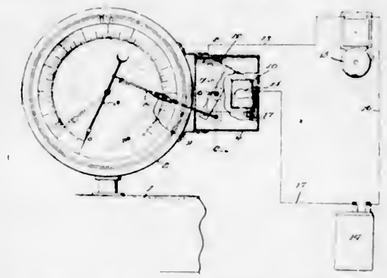


1. A sound emitting apparatus comprising in combination a vibratory electromotor having a vibrator composed of two armatures coupled together and disposed at right angles to one another, a stator comprising separate coils adapted when energized to attract alternately the respective armatures, two phase alternating current mains having two terminals, one set of coils being connected in series with one of said terminals and the other set of coils being similarly connected with the other terminal, a vibratory diaphragm and a mechanical connection between said armatures and said diaphragm, substantially as described.

2. A sound emitting apparatus comprising in combination a vibratory electromotor having a stator composed of two sets of windings, a vibrator comprising a movable frame, a pair of armatures carried in said frame and disposed at right angles to each other, a two-phase alternating current main having two terminals, one of said windings being connected in series with one of said terminals and the other winding being similarly connected with the other terminal, a vibratory diaphragm and a rigid bar connecting said movable frame with said diaphragm, substantially as described.

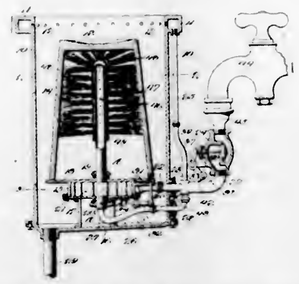
3. A sound-emitting apparatus comprising in combination a vibratory electromotor having a vibrator comprising a double armature formed of parts disposed at right angles to one another, a stator comprising separate coils adapted when energized to attract alternately the respective armatures, means for supplying two-phase alternating current to said armatures one element of the armature being excited from one phase and the other from the other phase, a vibratory diaphragm and a rigid mechanical connection between said vibrator and said diaphragm.

1,218,935. LOW-WATER ALARM. CHARLES R. FORD, Paducah, Ky. Filed Aug. 26, 1915. Serial No. 47,511. (Cl. 200—27.)



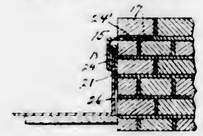
In an apparatus for the purpose set forth, the combination of a resilient contact plate fixed at one end and having its other end free, a rock shaft mounted adjacent said contact plate, a lever secured intermediate its ends to said rock shaft, and means for connecting one end of said lever with a movable indicator member, the other end of the lever being disposed to effect wiping engagement with the intermediate portion of the side face of said resilient contact plate whereby to close a circuit through the indicator.

1,218,936. TUMBLER AND BOTTLE WASHER. CHARLES R. FORD, Paducah, Ky. Filed Nov. 13, 1915. Serial No. 61,330. (Cl. 141—3.)



A washing apparatus comprising a main casing having a tubular rim around its upper end and provided with perforations through its wall communicating with the interior of said rim, a platform secured rigidly within said casing concentric therewith and in spaced relation to the bottom and side walls thereof, said platform being adapted to support the article to be washed and having a socket in its upper side, a motor casing secured concentrically on the under side of the platform, a tubular shaft extending through and journaled in said casing and platform and rising above the platform, a motor wheel secured to said shaft within said casing, a water supply pipe leading to said motor casing, a branch leading from said water supply pipe to the hollow tubular rim of the main casing, a second branch leading from the water supply pipe through the main casing and terminating within said hollow shaft, a brush secured on and around the upper end of the hollow shaft, a controlling valve mounted within the supply pipe, a trip plate arranged to fit within the socket in the platform and be depressed by the article to be washed, and operative connections between said trip plate and the controlling valve.

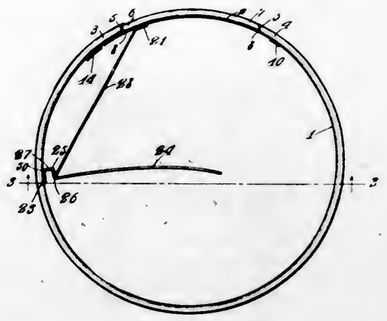
1,218,937. FLASHING AND FASTENING STRIP FOR ROOFS. CHARLES E. HEARD, Washington, D. C. Filed Oct. 4, 1916. Serial No. 123,737. (Cl. 108—26.)



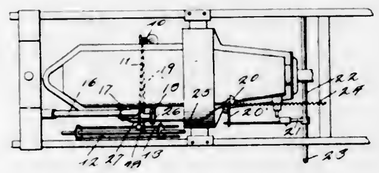
A flashing comprising a strip having a wide flange for insertion between the courses of masonry, said flange having a toothed edge facilitating its insertion by a sawing action in masonry already in place and tending to prevent longitudinal movement of the strip when built into a wall, and said strip also having a flange bent at an angle to the first-named flange and having a portion twice folded upon itself to form a depending rib and an adjacent groove and then extending below the rib to form an apron.

1,218,938. DEMOUNTABLE RIM FOR AUTOMOBILES. JUSTIN SAMUEL HEMENWAY, River Falls, Wis. Filed Dec. 29, 1915. Serial No. 69,233. (Cl. 152—21.)

A wheel rim comprising a body and a relatively short section removable as an entity from the body, the body and both ends of the section being provided with detachably interengaged elements which limit the outward movement of the section, the body and the section being provided with detachably interengaging elements which prevent relative circumferential movement between the section and the body; and members carried by the body and coacting with the second specified interengaging elements of the section to prevent inward movement of the ends of the section, one of said members being movable to permit inward movement of the corresponding end of the section.



1,218,939. THROTTLE-CONTROLLING MECHANISM FOR AUTOMOBILES. HIRAM HERROLD and AMES D. HERROLD, Luther, Okla. Filed Sept. 21, 1916. Serial No. 121,493. (Cl. 21—90.)



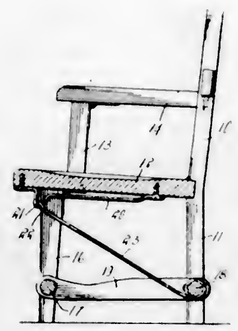
1. A throttle and brake mechanism for an automobile including a manually operable throttle means, an angle member, connections between one arm of the angle member and the throttle, a brake pedal normally and resiliently held in inoperative position, and a link carried by the brake pedal and slidably connected with the other arm of the angle lever.

2. A throttle and brake mechanism for an automobile including a throttle valve, means for opening and partially closing the valve, an angle lever operatively connected with the valve and movable therewith, an angularly extending apertured portion on one end of one arm of the angle lever, a brake pedal having a depending extension, an emergency brake member, a link pivotally connected to the emergency member and slidable through the said extension, and a link pivotally connected to the brake pedal and slidable through the apertured portion of the angle lever, said link being formed with a head for operative engagement with the angle lever to move the same in one direction.

1,218,940. FOLDING CHAIR. WILLIAM HILLIER, Walhalla, N. D. Filed Mar. 9, 1915. Serial No. 13,184. (Cl. 155—8.)

A folding chair including a back having rear legs connected by a fixed rung, a seat connected to the legs and movable toward and away from the back, a rod secured to the lower side of the seat and having a depression in

its forward end, and a spring wire coiled around the rung with one end secured thereto, the other end of the wire being provided with an eye slidably engaged with the rod,



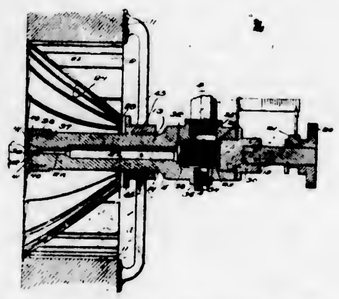
the resiliency of the wire urging the free edge of the seat away from the back when the seat is in raised position and urging the eye into the said depression when the seat is in lowered position.

1,218,941. WEARING-APPAREL. DAVID H. HODES, Brooklyn, N. Y. Filed Nov. 10, 1915. Serial No. 60,736. (Cl. 2—96.)



As a new article of manufacture, a vest or similar garment provided upon its inner side at its back with a belt loop and provided upon its inner side approximately at each side seam with a belt loop, and further provided at the inner side of the front of one of its flaps with a belt loop.

1,218,942. OIL-BURNER. HERBERT W. HOOVER, Bayonne, N. J. Filed May 9, 1913, Serial No. 766,584. Renewed Aug. 24, 1916. Serial No. 116,702. (Cl. 158—1.5.)



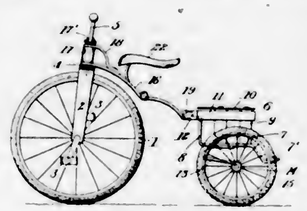
1. A burner comprising a body having a nozzle at its inner end, a circumscribing air agitating hood mounted slidably on the body rearwardly of the nozzle and including an apertured base portion adjacent the burner body, a flange on the body arranged to abut and close the aperture in the hood at one limit of its movement, and means to reciprocate the hood on the body.

2. In a burner of the class described, a burner body having a nozzle at its inner end, a circumscribing air agitating hood longitudinally slidable on the body rearwardly of the nozzle, air inlet means arranged, constructed, and adapted to be closed by the hood at one limit of its movement, guide lugs on two sides of the body, rods slidable therein and connected to the hood, a coaxial threaded member at the outer end of the burner, a nut engaged thereon having a peripheral groove, and a collar in the groove connected to the rods.

3. A burner comprising a body having an elongated forward portion, a nozzle at the extremity of the elongated portion, an air duct surrounding the said elongated portion of the body, an air agitating hood surrounding and longitudinally reciprocable on the elongated portion of the body and adapted to close said air duct at a stage of its movement, and means on the burner to reciprocate the hood.

4. A burner comprising a body having an elongated inner portion, a nozzle at the extremity thereof, a hood longitudinally reciprocable thereon, adapted for agitation of air passing therethrough and therearound, air inlet means constructed and adapted to be controlled by the position of the hood, a fuel passage formed through the body, a closure member engaged in the outer end of the passage, including an axial threaded member projected outwardly thereof, a circumferentially grooved nut engaged thereon, a collar in the groove, rods attached to the collar on each side of the burner and connected to the hood, and guide means for the rods.

1,218,943. CHILD'S VEHICLE. JOHN HUDRY, Hazleton, Pa. Filed Sept. 13, 1915. Serial No. 50,419. (Cl. 208—113.)



1. In a combined velocipede and go-cart, a front steering and driving wheel, a fork in which said wheel is mounted, a steering post on said fork, a go-cart body and supporting wheels therefor, a backbone for connecting said fork and the go-cart body terminating at its forward end in a tubular steering head adapted to engage the steering post on said fork, and means for detachably connecting said steering head with the steering post, whereby the front steering and driving wheel and its fork may be detached from the backbone, and the go-cart used as an ordinary go-cart, the said backbone serving as a handle therefor.

2. In a combined velocipede and go-cart, a front wheel and fork therefor, a go-cart frame, a backbone connected to said fork, and means for slidably connecting said backbone with the go-cart frame.

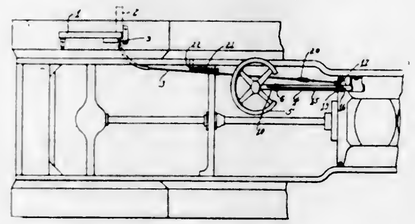
3. In a combined velocipede and go-cart, a front wheel and fork therefor, a go-cart frame having an open bottom and spaced rods extending along the opening in said bottom, a backbone connected to said fork, and means for slidably connecting said backbone with said rods, whereby the front wheel and go-cart may be adjusted to a folded condition with the front wheel located between the sides of the go-cart.

4. In a combined velocipede and go-cart, a front wheel and fork therefor, a go-cart frame having an open bottom and spaced rods extending along the opening in said bottom, a tubular backbone connected to said fork, and a two-part clamp fixed to the rear end of the backbone and adapted to be detachably and adjustably fitted to said rods, whereby the front wheel and go-cart may be adjusted to a folded condition with the front wheel located between the sides of the go-cart.

5. In a combined velocipede and go-cart, a front wheel and fork therefor, a go-cart frame, a backbone detachably connected at its forward end to said fork, and means for detachably and slidably connecting the rear end of said backbone to the front of said go-cart frame, said backbone adapted to be detached from the go-cart frame and reversed and secured to the rear of said go-cart frame.

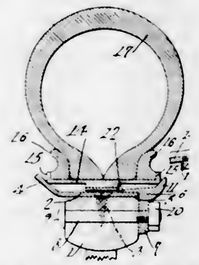
[Claims 6 to 8 not printed in the Gazette.]

1,218,944. DIRECTION-SIGNAL FOR MOTOR-VEHICLES. HANS O. JOHNSON, Sacramento, Cal., assignor of one-third to Carl T. Wengard, San Francisco, Cal. Filed Dec. 1, 1915. Serial No. 64,454. (Cl. 116—31.)



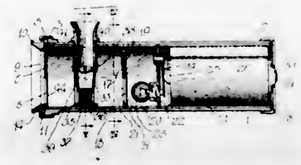
The combination with a pivoted signal and a cable for operating the signal, of means for drawing on the cable to operate the signal, such means comprising a support having a lug, a lever pivoted on the support and having a pair of finger members operable on each side of the lug and arranged to engage the lug to limit the movement of the lever, means interposed between the lever and the cable for drawing on the cable with the action of the lever, such latter means comprising a pivoted bell crank connected at one end with the cable, a collar on the other end of the bell crank, and a pull rod adjustably mounted through the collar and connected with the lever, as described.

1,218,945. DEMOUNTABLE RIM. CLARENCE S. JOHNSTON, Glendive, Mont., assignor of one-fourth to Clarence H. Crockard and one-fourth to Sam H. Clark, Bismarck, N. D. Filed Dec. 28, 1915. Serial No. 69,094. (Cl. 152—21.)



In a device of the class described, a rim comprising relatively movable ends; a pivot element carried by one end; a latch mounted to swing on the pivot element and located beneath the ends, the latch being provided on its outer face with a dove-tailed recess extended entirely across the latch and struck on an arc the center of which is the pivot element, the other of said ends being provided on its inner face with a dove-tailed lug received in the recess, and curved on an arc the center of which is the pivot element.

1,218,946. PHOTOMETER. CLAYTON LAING, Chicago, Ill. Filed Jan. 10, 1916. Serial No. 71,187. (Cl. 88—23.)



1. Means for comparing light rays, comprising a comparator adapted to be exposed to natural and artificial lights, and means for simultaneously varying the intensity of rays from said lights to balance the light intensity in said comparator.

2. Means for comparing light rays, comprising a comparator adapted to be simultaneously exposed to natural and artificial lights, and means for varying the intensity of either light until rays from said lights have an equal intensity in said comparator.

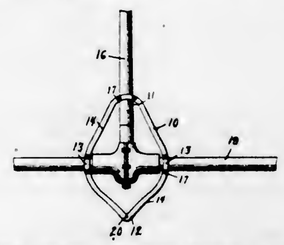
3. Means for comparing light rays, comprising a stationary light, a stationary comparator adapted to be simultaneously exposed to said artificial light and to a natural light, and means for varying the intensity of either light until rays from said lights have an equal intensity in said comparator.

4. Means for comparing light rays, comprising a stationary artificial light, a stationary comparator adapted to be exposed to said artificial light and to a natural light, and shutters between said comparator and each light movable in synchronism adapted for balancing the light rays in said comparator.

5. Means for comparing light rays, comprising a stationary artificial light, a comparator adapted to be exposed to said artificial light and to a natural light, a shutter between said comparator and each light, and means adapted to move said shutters to regulate the intensity of the light rays in said comparator.

[Claims 6 to 13 not printed in the Gazette.]

1,218,947. AUTOMOBILE ATTACHMENT. EDWARD MAKER, Eldridge, N. D. Filed Oct. 19, 1916. Serial No. 126,571. (Cl. 21—137.)



1. A draft device for motor vehicles, comprising an elongated link adapted to be supported upon the rear axle or casing and braced from the drive shaft casing of said vehicle, said bracket projecting rearwardly from said axle, staples embracing the casings and extending through perforations in the link, nuts on the ends of the staples, and coupling means on the rear of the link for the attachment of such objects as are to be drawn by the motor vehicle.

2. A draft link for motor vehicles made of sheet metal comprising an elongated loop having blunt pointed for-

ward and rear ends and laterally expanded intermediate portions, staples to embrace the axle and drive shaft casings of the vehicle and passing through perforations in the laterally expanded sides and forward end of the link for removably securing said link to the vehicle, nuts for fastening said staples in clamping position, and means at the rear end of said link for the attachment of a towing device.

1,218,948. ERASER ATTACHMENT FOR FOUNTAIN-PENS. DANIEL R. MARKLEY, Lancaster, Pa. Filed Sept. 22, 1916. Serial No. 121,624. (Cl. 120—36.)



1. The combination with a pen holder, of a tubular member detachably connected therewith and provided with an opening at its outer end thereof, erasing bristles arranged in the bore of the tubular member and projecting through the opening, the pen holder engaging the erasing bristles and retaining the same in position.

2. The combination with a pen holder, of a tubular member longitudinally adjustable on the pen and provided with an opening at its outer end thereof, a plurality of erasing bristles arranged in the tubular member and projecting through the opening, the upper extremity of the pen bearing against the erasing bristles.

3. The combination with a body, of a sleeve longitudinally adjustable thereon and having an opening at its outer end thereof, of a cap longitudinally adjustable in the tubular member, an eraser carried thereby and extending through the opening, the body bearing against the cap and retaining the same in adjusted positions.

4. The combination with a pen, of a sleeve threaded thereon and provided with an opening in its outer end thereof, a plurality of lugs arranged upon the interior of the tubular member, a cap longitudinally adjustable in the tubular member and its movement in one direction being limited by the lugs, and an eraser carried by the cap and projecting through the opening, the pen holder bearing against the cap to retain the same in such adjusted positions.

1,218,949. PROCESS OF TREATING RUBBER. ERWIN E. A. G. MEYER, Detroit, Mich., assignor to Morgan & Wright, a Corporation of Michigan. Filed May 18, 1916. Serial No. 98,286. (Cl. 18—50.)

1. In the process of treating rubber, the step which comprises the mixing of different varieties of crude rubber under pressure, in the presence of water.

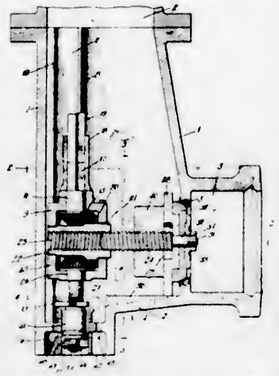
2. In the process of treating rubber, the step which comprises the blending of different varieties of rubber stock by passing the same between pressure rolls in the presence of water.

3. In the process of treating rubber stock, the steps which comprise the blending of different varieties of rubber stock by passing the same between pressure rolls in the presence of running water, forming the same into sheets, and then drying the compound sheets so formed.

1,218,950. HYDRANT. CHARLES H. MILLER and KNUT A. READ, Oskaloosa, Iowa. Filed Apr. 25, 1916. Serial No. 93,434. (Cl. 137—13.)

1. In a hydrant, the combination of a casing having an inlet port in its side and provided with laterally extending guides adjacent the port, a valve to open or close said port and constructed to engage said guides, and means for moving the said valve laterally to or from the inlet port, the range of movement of the valve exceeding the extent of the said guides whereby when the valve is fully opened, it may be moved across the ends of the guides and withdrawn from the casing with the operating mechanism.

2. In a hydrant, the combination of a casing having a lateral offset forming an inlet and having a drain spout depending from its lower end, the floor of the said casing at one side of said drain spout being inclined from the inlet to said spout, a valve movable over said floor to and from the inlet, a valve controlling the flow through the drain spout, and means for simultaneously operating said valves.



3. In a hydrant, the combination of a casing having vertically disposed guides on its inner wall and having an inlet spaced laterally from the said guides, a gear case fitted within the casing and engaging said guides, a valve to control the flow through said inlet, gearing journaled in and housed within the gear case, operative connection between said gearing and valve, and means for actuating said gearing.

4. In a hydrant, the combination of a casing, a gear case mounted therein, a gear disposed transversely in the said gear case and having a hollow internally threaded hub, means for actuating said gear, a valve controlling the flow into the casing, and a threaded spindle for said valve engaging the internally threaded hub of the said gear.

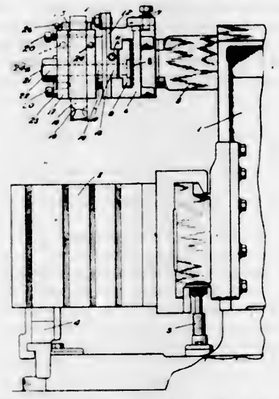
5. In a hydrant, the combination of a casing having an inlet in one side and having guides on its opposed walls adjacent the said inlet, a gear case mounted within the said casing, a valve arranged to control the flow through the inlet and constructed to engage the guides adjacent the inlet, wings projecting from the valve to bear against the opposite sides of the gear case, gearing within the gear case operatively connected with said valve, and means for actuating said gearing.

[Claim 6 not printed in the Gazette.]

1,218,951. HEAD FOR DRAW-CUT SHAPERS. HENRY E. MORTON, Muskegon Heights, Mich. Filed Feb. 18, 1916. Serial No. 79,155. (Cl. 90—52.)

1. In combination, a supporting head having a T-slot in a face thereof, a pair of bolt heads positioned in the slot, a saddle in front of each bolt head, a swiveling block located in front of each saddle having a slot in its upper portion, a bolt passing from the saddle through the slot, a nut on the bolt, a tool holding support on each swiveling block, each mounted on a horizontal pin extending through the block, the pin in one block passing through the support adjacent its rear side and above the middle thereof, while the pin in the other block passes through the other support adjacent its front side and above the middle thereof, a tool carried by each support the cutting edges thereof being located opposite to each other and a bolt extending through each bolt head, saddle, swiveling block and tool holder and provided with a nut at its forward end for securing said parts together in fixed relation to each other and the supporting head.

2. In combination, a supporting head, a pair of bolt heads carried by the supporting head, a saddle in front of each bolt head, an adjusting device extending through each saddle, said devices being adjustably connected together, a swiveling block positioned in front of each saddle having a slot in its upper portion, a bolt extending through said slot and carried by the saddle, a nut on the bolt, a clapper box carried by each swiveling block, said clapper boxes being mounted on horizontal axes one located above the middle and adjacent the rear face of a clapper box and the other above the middle and adjacent the front face of the other clapper box, means for detachably securing a cutting tool in each clapper box with the cutting edges thereof positioned oppositely, a bolt extending through each bolt head, saddle, swiveling block and clapper box, and a nut on the front end of each bolt for securing said bolt head, saddle and swiveling block together and fixing them on the supporting head.



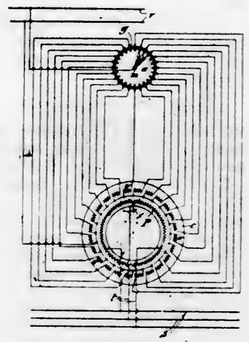
3. In combination, a supporting head, a pair of bolt heads carried by the supporting head and movable lengthwise of or removable therefrom, a bolt extending forward from each bolt head, a saddle in front of each bolt head, adjusting screws extending horizontally through each saddle, a connection between the meeting ends of the adjusting screws, a swiveling block in front of each saddle through which the associated bolt extends, a clapper box mounted on an extension to each swiveling block, a horizontal pin passing through each clapper box and extension, said pins both being located above the middle of the clapper boxes and with one pin located adjacent the rear face of a clapper box and the other adjacent the front face of the other clapper box, and a nut on the forward end of each bolt for securing the parts together, substantially as described.

1,218,952. RECTIFIER FOR POLYPHASE ALTERNATING CURRENTS. ERNST OELSCHLÄGER, Berlin-Charlottenburg, Germany, assignor to Siemens-Schuckertwerke, G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed Nov. 20, 1913. Serial No. 802,151. (Cl. 175—363.)

1. In combination, a source of polyphase alternating currents of a given number of phases, means for producing a rotary magnetic field with current from said source, a multiplicity of phase-windings mounted to be subject to induction from said rotary field, a vapor rectifying device having anodes connected to said system of windings, and a continuous current circuit derived from the cathode of said rectifying device and a zero-point of said system of windings.

2. In combination, a system of phase-windings distributed on a magnetizable core, a vapor rectifying device having anodes connected to said phase-windings, a continuous current circuit derived from the cathode of said rectifying device and a zero point of said system of phase windings, and means for generating a rotary field in said magnetizable core.

3. In combination, a system of phase windings, a vapor rectifying device having anodes connected in succession to the phases of said system, a continuous current circuit derived from the cathode of said rectifying device and a zero-point of said system of windings, and electromagnetic means for inducing in said phase-windings E. M. F.'s which are progressing through the several phases.

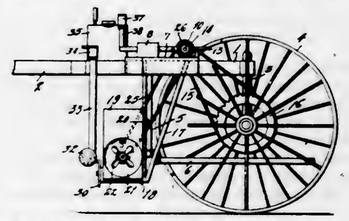


4. In combination, a polyphase alternating current source of a given number of phases; means for producing a rotary magnetic field with current from said source; a phase-transformer having a distributed primary winding of said given number of phases and a distributed secondary winding of a relatively great number of phases; a vapor rectifying device having circularly arranged anodes of a number corresponding to that of the phases of said secondary winding and connected thereto in the sense of the phase rotation in said winding; and a continuous current circuit derived from the cathode of said rectifying device and a zero-point of said phase-transformer.

5. In combination, a polyphase alternating current source of a given number of phases; means for producing a rotary magnetic field with current from said source; a phase-transformer having a distributed primary winding of said given number of phases and a distributed secondary winding of a relatively great number of phases; a vapor rectifying device having circularly arranged anodes of a number corresponding to that of the phases of said secondary winding and connected thereto in the sense of the phase rotation of said winding; and a continuous current circuit derived from the cathode of said rectifying device and a zero-point of said secondary winding.

[Claims 6 and 7 not printed in the Gazette.]

1,218,953. SPRAYING AND POWDER-DUSTING ATTACHMENT. FRANK OLDHAM, Dallas, Tex. Filed Nov. 23, 1915. Serial No. 63,114. (Cl. 43—1.)



1. In a spraying and powder dusting attachment, a base plate adapted to be mounted on a wheel supported frame of a cultivator, an air compressor mounted on the plate, a liquid tank connected with the air compressor, a hanger carried by the plate, a powder dusting hopper carried by the hanger and having provision for dusting powder, and a nozzle carried in advance of the hopper and connected with the tank.

2. In a spraying and powder dusting attachment, a base plate constructed to be attached to a wheel supported frame, an air compressor mounted on the plate, a driving element mounted on the plate and having operative connection with the air compressor, a hanger depending from the plate, a powder hopper vertically adjustable on the hanger, a fan mounted in juxtaposition to the hopper and having driven connection with the driving element, a bracket mounted on the hanger in advance of the hopper, a nozzle mounted on the bracket, a tank, a flexible connection between the tank and the nozzle, a connection between the air compressor and the tank, and means for imparting motion to the driving element.

1,218,954. PROCESS OF DISSOLVING CELLULOSE. ZENO OSTENBERG, San Francisco, Cal., assignor to International Cellulose Company, Reno, Nev., a Corporation of Nevada. Filed Jan. 31, 1916. Serial No. 75,356. (Cl. 127—10.)

1. The process of dissolving cellulose in a mixture of hydrochloric acid and a concentrated inorganic acid which does not react chemically with hydrochloric acid at room temperature and atmospheric temperature.

2. In the process of dissolving cellulose in highly concentrated hydrochloric acid the replacement of part of the hydrochloric acid by a concentrated inorganic acid, at room temperature and atmospheric pressure.

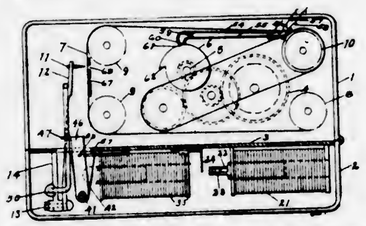
3. In the process of dissolving cellulose in highly concentrated hydrochloric acid the replacement of part of the hydrochloric acid by concentrated phosphoric acid.

4. The process of dissolving cellulose in a mixture of concentrated hydrochloric acid and a concentrated inorganic acid which does not react chemically with hydrochloric acid, at a temperature below 50° C.

5. The process of dissolving cellulose in a mixture of hydrochloric acid and phosphoric acid containing not less than 25% hydrogen chlorid by weight.

[Claims 6 and 7 not printed in the Gazette.]

1,218,955. SERVICE, DEMAND, OR OPERATION RECORDER. EMMET GRATTAN RALSTON, Indianapolis, Ind. Filed Apr. 8, 1916. Serial No. 89,987. (Cl. 234—5.5.)



1. A demand, service or operation recording mechanism comprising in combination a clock work, a graduated record sheet, and means for recording on said sheet by perforations or prick points the maximum demand or service during each of successive predetermined periods of time by means of an arcuately moving stylus advanced from an initial or zero position by means of a flexible element winding by successive increments on an intermittently moving drum actuated by said mechanism to be tested, and means for releasing and returning said recording mechanism to its initial position after making such record.

2. A service, operation or demand recording mechanism comprising in combination a clock work, a record sheet, an arcuately moving stylus traversing said sheet, a flexible element or cord for advancing said stylus, a ratchet operated drum for advancing said cord, a solenoid or magnet for operating said ratchet, a second solenoid or magnet for depressing said stylus, means for releasing said drum, a second flexible element attached to said stylus arm and a gravitatively operated member attached to said flexible element for returning said stylus to its initial position.

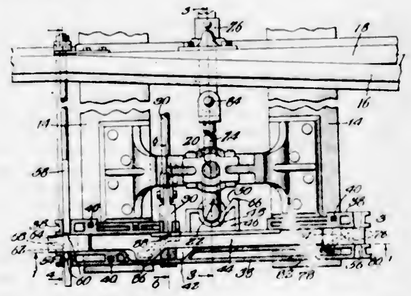
3. A service, operation or demand recording mechanism comprising in combination a clock work, a record sheet, a stylus or perforating needle traversing said sheet at the extremity of a vertically flexible arcuately moving indicator arm, a solenoid or magnet for advancing said arm, a yoke superimposed on said arm, a second solenoid or magnet for depressing said yoke and causing said stylus to perforate or mark said sheet, an escapement or spring arms to allow vertical release of said indicator arm, toggle arms for spreading or releasing said arms, a counterweight or spring for returning said arms to an initial position after the stylus record is complete.

4. A service, operation or demand recording mechanism comprising in combination a clock work, a graduated and longitudinally actuated record sheet, a stylus arcuately traversing said sheet for recording on said sheet by perforations or prick points, a pivotally mounted yoke, toggle actuated escapement or spring arms for depressing and releasing said yoke, a rotary shaft connected to said spring arms, and a solenoid for revolving or oscillating said shaft; an arcuate cam or cams attached to and operated by said clock work, a pair of superimposed resilient electric contact arms, a solenoid connected to said arms, a source of electric energy for energizing said solenoids, a ratchet mechanism actuated by one of said solenoids, a pinion mounted on said ratchet, a free pinion connected to a drum, and means for connecting and releasing said pinion, substantially as described.

5. A service, operation or demand recording mechanism comprising in combination a clock work, a plurality of arcuate cams attached adjustably to a shaft of said clock work and adjustable in relation to each other, a plurality of superimposed or adjacent resilient contact arms adjustably supported on said clock work and operable by said cams for closing and opening an electric current circuit, means for securing said arms in adjusted relation, a solenoid or electro-magnet operated by the current through said circuit, a ratchet operated by said solenoid or magnet, gearing connected to said ratchet, means for automatically connecting and disconnecting said gearing, a drum attached to one of said gears for arcuately advancing a recording stylus or point transversely over a record sheet; a second solenoid or electromagnet energized intermittently by said source of electric energy, means controlled by the mechanism to be tested for making and breaking the energizing current through this second solenoid, for depressing said stylus in contact with the record sheet and for releasing said stylus and allowing its return to an initial or zero position.

[Claim 6 not printed in the Gazette.]

1,218,956. SWITCH-STAND. EUGENE M. ROBINSON, Chicago, Ill. Filed Mar. 19, 1914. Serial No. 825,808. (Cl. 104—25.)

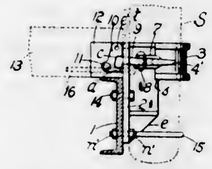


1. In apparatus of the class described, in combination with a rail and switchpoint reciprocatable to and from the rail, a locking rod movable with the switchpoint, a locking bar movable at an angle to the path of travel of said rod and intermeshing with it to, in one position of the bar, lock the switchpoint to the rail and in all other positions leave the switchpoint free to move, and a switch stand device located above the bar provided with means for reciprocating the switchpoint, said reciprocating means intermittently engaging the locking bar to operate the same for the purposes set forth, whereby the switchstand device may be accidentally removed without disturbing the locking effect of the bar upon the rod.

2. In apparatus of the class described, the combination with a rail and a switch point reciprocatable to and from the rail, a locking rod movable with the switch point, a locking bar movable at an angle to the path of travel of said rod and interfitting with it to, in one position of the bar, lock the switch point to the rail and in all other positions leave the switch point free to move, a switch stand device located above the bar, a crank arm mounted in said switch stand and rotatable with reference thereto, means connected to said crank arm whereby the movement of the crank arm reciprocates the switch point, and means whereby the crank arm in one portion of its movement engages the locking bar to operate the same, the point at which the crank arm engages the locking bar being so located that the locking and unlocking movement of the locking bar is effected while the switch point is in safe position with reference to the rail for the purposes set forth.

3. In apparatus of the class described, the combination with a rail and switch point reciprocatable to and from the rail, a locking rod movable with the switch point, a locking bar movable at an angle to the path of travel of said rod and interfitting with it to, in one position of the bar, lock the switch point to the rail and in all other positions leave the switch point free to move, a crank pin carried by a crank arm journaled adjacent to said bar, means connecting the crank pin to the switch point so that as the crank pin is rotated by the crank arm it reciprocates the switch point, a part on the locking bar engageable by the crank pin only while the crank arm and the means connecting the crank pin and switch point are in substantial alinement with each other whereby at this portion of the stroke of the crank arm the locking bar is moved by the crank pin for the purposes set forth, and means for operating the crank arm.

1,218,957. STAKE-POCKET. KENNETH ROSS, Bonner, Mont. Filed Dec. 1, 1916. Serial No. 134,339. (Cl. 105—173.)



1. A member provided with a stake-pocket, means for securing the member to the body of a car, and a tie or tension rod leading from the member to a corresponding member placed in opposed relation thereto for connecting the members and thereby maintaining the axes of the pockets of the respective members in vertical positions.

2. A member provided with a stake-pocket, and with a bunk pocket partitioned therefrom.

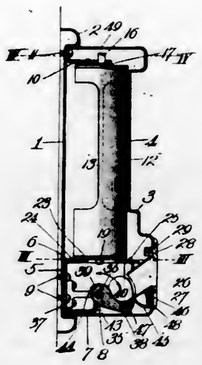
3. A member provided with a stake-pocket on one side and with a bunk pocket partitioned therefrom on the opposite side.

4. A member provided with a stake-pocket on one side and with a bunk pocket on the opposite side opposite to and partitioned from the stake-pocket.

5. A pocket-body provided with a depression on one side, a movable complementary member secured to the pocket-body and operating with the walls of said depression to form an open-bottomed stake-pocket, and a member positioned below the pocket for holding the lower end of the stake inserted into the pocket.

[Claims 6 to 20 not printed in the Gazette.]

1,218,958. DISPENSING-MACHINE. VERNON ROSS, Kansas City, Mo. Filed Sept. 7, 1915. Serial No. 49,200. (Cl. 194—70.)



1. In a dispensing machine, a casing, a shelf therein provided with an opening and a slot intersecting the opening, a bearing bracket above the shelf, a compartment standing vertically between and journaled in the shelf and bearing bracket, a spring actuated latch holding the compartment against rotation by engaging the opening in the shelf, an arm provided with an open pocket for receiving and holding a coin so that the same shall project from the pocket, means to turn the arm to cause the projecting portion of the coin to swing through the slot and opening of the pocket to a point beyond the vertical plane of the axis of said arm to successively effect the tripping of the catch and the discharge of the coin from the pocket, and means to turn the compartment the instant the catch tripping operation is completed.

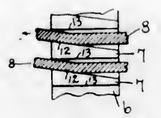
2. In a dispensing machine, a casing, a compartment provided with an opening, within the casing, means for automatically moving the casing to dispose its opening in position where it is accessible, means for normally holding the compartment with its opening inaccessible, a rock shaft journaled in the casing, an arm secured to the rock shaft and provided with a pocket for holding the coin, a coin tube for guiding a coin into said pocket, a handle for turning the shaft and arm to cause the coin to trip the compartment holding means and then effect the discharge of the coin from the pocket, and means to turn the shaft and arm to normal position after the discharge of the coin.

3. In a dispensing machine, a wall plate, a shelf secured thereto, brackets secured to the wall plate above the shelf, a series of vertical cylinders between and bearing a journaled relation to said shelf and brackets and provided with openings, a face or cover plate fitting against the wall plate and inclosing the parts carried thereby and provided with an opening, means for locking the face or cover plate to said shelf, means for locking each cylinder with its opening inaccessible through the opening of the face or cover plate, coin-controlled means for tripping the cylinder locking means, and means engaging each cylinder for turning the same when its locking means is tripped, until its opening is accessible through the opening of the face or cover plate.

4. In a dispensing machine, a casing, superposed bearings therein, the lower one having a locking opening, a vertical cylinder journaled in the bearings and provided

with an opening, a vertically movable catch carried by the cylinder, a spring exerting pressure on the catch to hold the same in engagement with said locking opening, means to effect repression of the catch from said opening, and a spring to rotate the cylinder about a half revolution the instant the complete repression of the catch is effected.

1,218,959. INTERMITTENT ROTATING MOTION. LEWIS L. SCOTT, St. Louis, Mo. Filed July 24, 1915. Serial No. 41,771. (Cl. 74—36.)



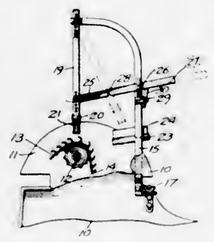
1. The combination with a worm wheel having teeth one side of each of which is substantially radial and the other side tangential, of a worm having a part of its thread arranged at a different angle from another part thereof.

2. The combination with a worm wheel having teeth one side of which is substantially radial and the other side tangential, of a worm having a part of its thread arranged at right angles to its axis and a part inclined thereto.

3. The combination with a worm wheel having one side of each of its teeth substantially radial and the other side inclined thereto and to the axis of the wheel, of a worm having a part of its teeth arranged at a different angle from another part thereof.

4. The combination with a worm wheel having one side of each of its teeth substantially radial and the other side inclined thereto and to the axis of the wheel, of a worm having a part of its thread arranged at right angles to its axis and a part inclined thereto.

1,218,960. SEPARATING DEVICE. MONTGOMERY SLEETH, Bellevue, Pa., assignor to Fort Pitt Bedding Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 3, 1915. Serial No. 59,479. (Cl. 83—71.)

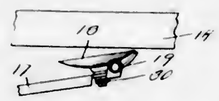


1. The combination with a material-conveyer, of a pair of standards disposed, one at each side of said conveyer, a pair of hangers pivoted to said standards, a cross-bar carried by said hangers, electro-magnets carried by said cross-bar, said hangers being disposed so as normally to support said cross-bar and magnets in proximity to said conveyer, a receiver carried between said standards, and means for moving said hangers to bring said electro-magnets into coöperative relation with said receiver.

2. The combination with a material conveyer, of a pair of standards disposed, one at each side of said conveyer, a pair of hangers pivoted to said standards and capable of vertical adjustment with respect thereto, a cross-bar carried by said hangers, electro-magnets carried by said cross-bar, said hangers being disposed so as normally to support said cross-bar and magnets in proximity to said conveyer, a receiver carried between said standards, and means for moving said hangers to bring said electro-magnets into coöperative relation with said receiver.

3. The combination with a material conveyer, of means for separating iron or steel articles from the material to be carried by said conveyer, said separating means including a pair of standards disposed one at each side of said conveyer, a pair of hangers pivoted to said standards and capable of vertical adjustment with respect thereto, a cross-bar carried by said hangers, electro-magnets carried by said cross-bar, said hangers being disposed so as normally to support said magnets in proximity to said conveyer, a receiver, means for removably mounting said receiver on said hangers, links carried by said hangers for moving the latter to bring said magnets into coöperative relation with said receiver, and means for retaining said links in the positions in which said electro-magnets are operative, and in which said electro-magnets are in coöperative relation with said receiver.

1,218,961. PLANTER. CHARLES B. SMITH and LINWOOD L. MILLER, Jackson, Tenn. Filed June 30, 1916. Serial No. 106,860. ((Cl. 111—6.)



1. In a planter, a ground wheel having means to prevent earth passing therethrough, a furrow opener arranged to throw the displaced earth from the furrow inside the rim of the ground wheel, and a seed delivery device arranged in rear of the furrow opener.

2. In a planter, a ground wheel, a furrow opening disk positioned beside the ground wheel and arranged to throw the earth from the furrow onto the inner surface of the rim, a guard plate carried by the wheel to prevent the earth from passing therethrough, and a seed delivery device arranged in rear of the disk.

3. In a planter, a ground wheel having a rim inclined away from the axis of the wheel from the center line of the rim to its edges, a guard plate fixed within the wheel to bear against the central portion of the rim, a furrow opener arranged to throw the displaced earth onto the inner side of the rim and a seed delivery device in rear of said opener.

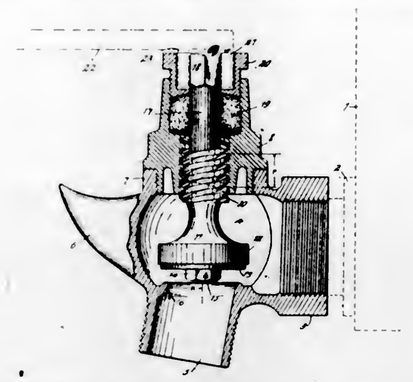
4. In a planter, a ground wheel having a rim inclined away from the axis of the wheel from the center line of the rim to its edges, a guard plate fixed within the wheel to bear against the central portion of the rim, a furrow opening the disk carried adjacent the sides of the wheel and diagonally disposed to throw the displaced earth onto the rim of the wheel, and a seed delivery device in rear of the disk.

5. In a planter, a ground wheel having means to prevent earth passing therethrough, a furrow opener arranged to throw the displaced earth from the furrow inside the rim of the ground wheel, a seed delivery device arranged in rear of the furrow opener, and means to adjust the furrow opener relative to said wheel.

[Claims 6 and 7 not printed in the Gazette.]

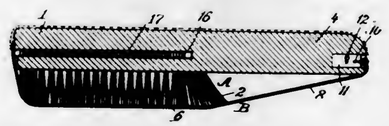
1,218,962. FAUCET. WILLIAM H. SMITH, Cleveland, Ohio. Filed Apr. 22, 1913. Serial No. 762,910. (Cl. 137—4.)

In a tank faucet a casing having a threaded boss for attachment to a horizontal tank nipple, and a forwardly and downwardly inclined discharge spout, a circular seat at the juncture of the casing and spout, a neck integral with said casing and opposite said seat, a bonnet connected to said neck having a recess in its upper end, a valve adapted to rest upon said seat, the stem of said valve working in said bonnet and recess, packing in said recess,



and a recessed nut for securing said packing in place, the end of the valve stem extending into the recess of said nut.

1,218,963. PROTECTIVE DEVICE FOR BRUSHES. STEPHEN TACTKIAN, New York, N. Y. Filed June 21, 1916. Serial No. 104,883. (Cl. 15—29.)



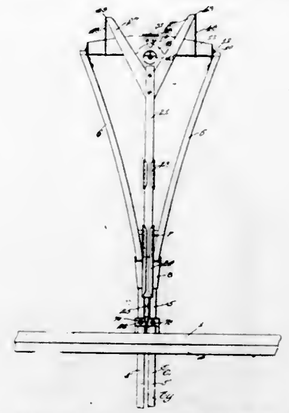
1. The combination of a brush including a back and bristles, a cover secured permanently to one end of the back and having side portions inclosing the sides of the bristles and overlapping the side edges of the back, a lock located within the back at the end opposite the end to which the cover is permanently secured, a locking member carried by the cover to engage the lock to fasten the cover on the brush, and headed projections extending laterally from the sides of the brush, the side portions of the cover having button holes to engage over said projections.

2. The combination of a brush including a back and bristles, a cover secured permanently to one end of the back and having side portions inclosing the sides of the bristles and overlapping the side edges of the back, a lock located within the back at the end opposite the end to which the cover is permanently secured, and a locking member carried by the cover to engage the lock to fasten the cover on the brush.

3. The combination of a brush including a back and bristles, a cover secured to one end of the back and having side portions inclosing the sides of the bristles and overlapping the side edges of the back, projections extending laterally from the sides of the back, the cover having openings adapted to fit over said projections, and key operated means to lock the cover on the brush.

1,218,964. SKETCHING AND DRAWING APPARATUS. CHRISTIAN THOMSON, Colville, Wash. Filed July 22, 1915. Serial No. 41,311. (Cl. 33—20.)

1. In a sketching or drawing apparatus, a support adapted to overhang a drawing surface, a rocking member mounted to oscillate on said support, a pencil holder movably mounted on said rocking member to swing about a fixed axis, view finding means movably mounted on said rocking member to move about a fixed axis intersecting the axis of movement of said pencil holder, and mechanism operatively connecting said view finding means for actuation by said pencil holder, substantially as described.



2. In a sketching or drawing apparatus, a support adapted to overhang a drawing surface, a rocking member mounted to oscillate on said support, a pencil holder movably mounted on said rocking member to swing about an axis intersecting the axis of movement of said rocking member, view finding means mounted on said rocking member to swing about an axis intersecting the axis of movement of said rocking member and also the axis of movement of said pencil holder, and means operatively connecting said view finding means with said pencil holder to cause movement of the view finding means in synchronism with said pencil holder, substantially as described.

3. In a sketching or drawing apparatus, a support adapted to overhang a drawing surface, a rocking member mounted to oscillate on said support, a pencil holder mounted to swing on said rocking member about an axis fixed with respect to said rocking member, view finding means mounted to swing about an axis fixed with respect to said rocking member and at right angles to and intersecting the axis of movement of said pencil holder, and mechanism operatively connecting said view finding means with said pencil holder to cause the former to move in synchronism with the latter, substantially as described.

4. In a sketching or drawing apparatus, a support adapted to overhang a drawing surface, a rocking member mounted to oscillate on said support, a pencil holder mounted to oscillate on said rocking member, a view finding means mounted to oscillate on said rocking member and having its longitudinal axis at right angles to the longitudinal axis of said pencil holder, and inclastic mechanism operatively connecting said view finding means with said pencil holder to cause movement of the former in positive synchronism with the latter in either direction, substantially as described.

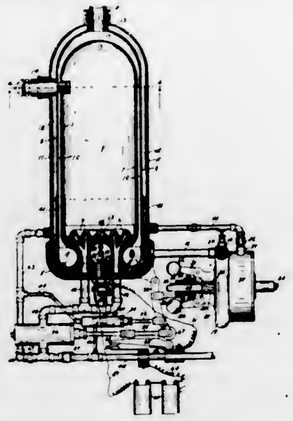
5. In a sketching or drawing apparatus, a support adapted to overhang a drawing surface, a rocking member mounted to oscillate on said support, a pencil holder having a pencil and said holder being mounted on said rocking member to oscillate about an axis at right angles to and intersecting the oscillating axis of said rocking member, the marking axis of said pencil intersecting the oscillating axis of said rocking member at the point of intersection of the oscillating axis of said pencil holder with the oscillating axis of said rocking member, substatnially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,218,965. WATER-HEATER. JUSTIN KAY TOLES, San Francisco, Cal. Filed Dec. 20, 1915. Serial No. 67,938. (Cl. 126—351.)

1. A water heater, comprising the combination of a base, a burner thereon, shells mounted on the base, said shells

formed and arranged to provide a closed combustion chamber, said chamber having a restricted relief vent, there being a water space surrounding the combustion chamber, and a dead air space surrounding the water space, a motor, an air pump operatively connected to the motor for supplying air under pressure to said burner, means for supplying gas fuel to said burner and means operatively connected to said motor adapted to control the supply to the burner of the gas fuel and air under pressure, substantially as set forth.

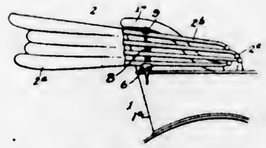


2. A water heater, comprising the combination of a base, a burner thereon, shells mounted on the base, said shells formed and arranged to provide a closed combustion chamber, said chamber having a restricted relief vent, there being a water space surrounding the combustion chamber, and a dead air space surrounding the water space, means for supplying air under pressure to said burner, means for supplying gas fuel to said burner, automatic means for controlling the supply to the burner of the gas fuel and air under pressure and automatic means for electrically igniting the gas fuel and air supplied to the burner.

3. A water heater, comprsing the combination of a base, a burner thereon, an inner shell, an intermediate shell, and an outer shell, each substantially cylindrical in form and having the upper parts thereof provided with crowns and having the lower parts thereof connected to the base, and arranged to provide a closed combustion chamber, said combustion chamber having a restricted relief vent, and there being a narrow water space surrounding the combustion chamber and a dead air space surrounding the water space, a hydraulic motor, a rotary air pump, operatively connected to the hydraulic motor for supplying air under pressure to said burner, means for supplying gas fuel to said burner, means operatively connected to said hydraulic motor, adapted to control the supply to the burner of gas fuel and air under pressure, and automatic means for electrically igniting the gas fuel and air supplied to the burner, substantially as set forth.

1,218,966. BOW REST AND CLAMPING DEVICE. HARRY B. WHITE, Canton, Ohio, assignor to The Gilliam Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Dec. 16, 1913. Serial No. 807,049. (Cl. 21—61.)

1. In a device of the character described, the combination of a rest for the lowermost bow of a vehicle top adapted to be supported at the side of the vehicle, a rod supported by said rest and provided with a clamp member arranged to engage the uppermost bow, and a lever interposed between said rod and said rest, swingable relative to the latter for operating the said rod, and a spring located around said rod arranged to be compressed by the operation of the lever, and means permitting vertical adjustment of said rod.



2. In a device of the character described, the combination of a rests for the lowermost bow of a vehicle top adapted to be supported at the side of the vehicle, a rod supported by said rest and provided with a clamp member arranged to engage the uppermost bow, and a lever interposed between said rod and said rest, and a spring interposed between said lever and said rest arranged to be compressed by the operation of the lever.

3. In a device of the character described, the combination of a rest member, having a supporting arm, a rod slidably and rotatably mounted in said arm, a bow engaging member carried by said rod, a lever pivoted to the lower end of the rod, and a cam carried by the lever and arranged to engage the arm, when said lever is operated, and a spring interposed between said lever and said rest member arranged to be compressed by the operation of said lever, whereby the bow engaging member is clamped in operative position.

4. In a device of the character described, the combination of a rest member, having a supporting arm, a rod slidably and rotatably mounted in said arm, a bow engaging member carried by said rod, a lever pivoted to the lower end of the rod, a cam carried by the lever and a spring bearing plate interposed between said cam and said arm and arranged to be engaged by the cam when the lever is operated to clamp the bow engaging member in operative position.

5. In a device of the character described, the combination of a rest having a supporting arm, a rod slidably mounted in said arm, a bow clamp carried by said rod, a lever pivoted to said rod and having a U-shaped upper portion, a yieldable device provided between said arm and said lever, the legs of the U being provided with cams arranged to engage the yieldable device when the lever is operated to cause the operation of the bow clamp.

[Claims 6 to 8 not printed in the Gazette.]

1,218,967. SEPARATOR FOR STORAGE BATTERIES AND PROCESS OF MAKING THE SAME. THEODORE A. WILLARD, Cleveland, Ohio. Filed July 24, 1914. Serial No. 852,943. (Cl. 204—29.)



1. A separator, comprising a body of separator material having embedded therein a sheet or layer of porosity producing material which is exposed at intervals at the surface on opposite sides of the body.

2. A separator, composed of a body of separator material having porosity producing material embedded therein, and having portions removed from opposite sides thereof down to said porosity producing material.

3. The method of producing a porous separator which comprises embedding in the body of the separator porosity producing material and removing portions of the body on opposite sides thereof down to the porosity producing material on the opposite surfaces of the separator.

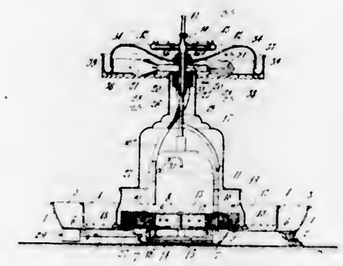
4. The method of producing a porous separator, which comprises forming the separator body of non-porous material and embedding therein a sheet or layer of porosity producing material, and thence exposing said sheet or layer on opposite sides of the body by removing portions of the body down to the said sheet or layer.

5. The method of producing a porous separator, which comprises forming the separator body of non-porous material and embedding therein a sheet or layer of porosity producing material, and thence cutting the body on opposite sides down to the porosity producing material.

[Claims 6 to 8 not printed in the Gazette.]

1,218,968. [WITHDRAWN.]

1,218,969. FOUNTAIN-DISPLAY. ADOLPH OSWALD ZIENER, New York, N. Y. Filed Feb. 15, 1915. Serial No. 8,330. (Cl. 137—108.)



1. A device of the character described comprising a base adapted to contain water and provided with a depressed recess, a plate disposed in said base, covering said depressed recess and provided with a central opening, a horizontal rotary pump casing disposed below said plate and in communication with said base through said opening, a driving shaft extending into said recess through said opening and provided with a rotary member within said casing, and pipes connected with said pump casing and leading upward therefrom.

2. A device of the character described, comprising a base adapted to have water placed therein, a restricted pump-housing mounted below the level of the water in the base and adapted to receive a relatively small amount of water from said base and provided with a central opening in the upper wall thereof, a pump, a shaft suspended in said housing through said opening and supporting said pump, means mounted above the level of the water in said base for supplying power to said pump, the said pump being slightly spaced from the walls of said housing, the said shaft being annularly spaced from the sides of said opening, the annular space between the said shaft and the sides of said opening permitting entrance of water from said base to said pump-housing, and means connected to said pump-housing for directing the water to a higher level.

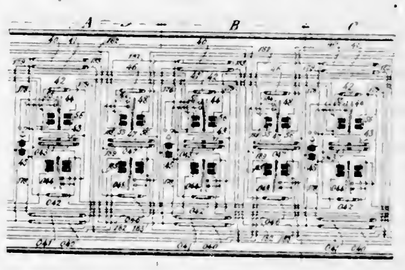
3. A device of the character described, comprising a base adapted to have water placed therein, a restricted pump-housing mounted below the level of the water in the base and adapted to receive a relatively small amount of water from said base and provided with a central opening in the upper wall thereof, a pump, a shaft suspended in said housing through said opening and supporting said pump, means mounted above the level of the water in said base for supplying power to said pump, the said pump being slightly spaced from the walls of said housing, the said shaft being annularly spaced from the sides of said opening, the annular space between the said shaft and the sides of said opening permitting entrance of water from said base to said pump housing, the said pump adapted to force the water contained in said pump-housing laterally therefrom, and means connected to said pump-housing for directing the water to a higher level.

4. A device of the character described, comprising a base adapted to have water placed therein, a fountain device, a restricted pump-housing mounted below the level of the water in the base and adapted to receive a relatively small amount of water from said base, and provided with an opening, a pump, a shaft suspended in said housing through said opening and supporting said pump, means mounted above the level of the water in said base for supplying power to said pump, the said shaft being annularly spaced from the sides of said opening, and means connected to said pump-housing for supplying water to the said fountain device, the water being directed from the said fountain device back to the said base.

5. A device of the character described, comprising a base adapted to have water placed therein, and provided with a recessed portion therein, a pump-housing horizontally arranged in said recessed portion provided with an opening for permitting entrance of water from the base into said pump-housing, a plate engaging the said base and forming a closure for the said recessed portion, a pump suspended in said housing through the said opening, means mounted above the level of the water in said base for supplying power to the said pump, and means connected to the said pump for directing the water to a higher level.

[Claims 6 to 12 not printed in the Gazette.]

1,218,970. DEVICE FOR PREVENTING COLLISIONS BETWEEN TRAINS. ARTHUR REGINALD ANGUS, Spit Road Mosman, New South Wales, Australia. Filed Dec. 27, 1909. Serial No. 534,936. (Cl. 246—58.)



1. In a railway signaling system, a series of block sections, in each of said block sections track controlling means, a first signaling means, means for enabling said first signaling means to be rendered operative by means of a said controlling means located in the next but one of said block sections behind, means for enabling said first signaling means to be rendered inoperative by means of a said controlling means in its own section, a second signaling means located behind the last mentioned controlling means, means for enabling said second signaling means to be rendered operative by means of the last mentioned controlling means, and means for enabling said second signaling means to be rendered inoperative by means of a said controlling means located in front of the last mentioned controlling means, and on a train, danger-indicating means, signal transmitting means adapted to coöperate with said signaling means on the track and to operate said danger-indicating means when coöperating with a said signaling means located on the track and rendered operative as aforesaid, and controlling means adapted to coöperate with said track controlling means to render said signaling means operative and inoperative as aforesaid.

2. In a railway signaling system, a series of block sections, in each of said block sections track controlling means, a first fixed signaling means, means for enabling said first signaling means to be rendered operative by

means of a said controlling means located in the next but one of said block sections behind, means for enabling said first signaling means to be rendered inoperative by means of a said controlling means in its own section, a second fixed signaling means located behind the last mentioned controlling means, means for enabling said second signaling means to be rendered operative by means of the last mentioned controlling means, and means for enabling said second signaling means to be rendered inoperative by means of a second controlling means located in front of the last mentioned controlling means, and on a train, danger-indicating means, signal transmitting means adapted to coöperate with said signaling means on the track and to operate said danger-indicating means when cooperating with a said signaling means located on the track and rendered operative as aforesaid, and controlling means adapted to coöperate with said track controlling means to render said signaling means operative and inoperative as aforesaid.

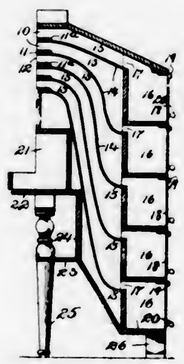
3. Train protecting apparatus comprising in each block section a pair of controlling track contacts, a pair of indicating track contacts, electro-magnetic means adapted when energized to connect together electrically the contacts of said pair of indicating track contacts, electrical connections permanently connecting said electromagnetic means between the contacts of a said pair of controlling contacts located in the next but one block section in the rear, a second electromagnetic means adapted when energized to disconnect the contacts of said pair of indicating track contacts, electrical connections permanently connecting said second electromagnetic means between the contacts of the first mentioned pair of controlling contacts, a second pair of indicating track contacts, a third electromagnetic means adapted when energized to connect together electrically the contacts of said second pair of indicating track contacts, electrical connections permanently connecting said third electromagnetic means between the contacts of a said pair of controlling contacts located in a block section in advance, a fourth electromagnetic means adapted when energized to disconnect the contacts of said second pair of indicating track contacts, and electrical connections permanently connecting said fourth electromagnetic means between the contacts of a said pair of controlling contacts located farther in advance than the last mentioned pair of controlling contacts, and on a train contacting means adapted to come into contact with each pair of said controlling contacts and thereby to complete electrical circuits through the aforesaid electromagnetic means connected thereto and located in the block section in question and in block sections in the rear and in advance thereof, a danger indicating device adapted to come into contact with each pair of said indicating contacts and thereby to complete an electric circuit and produce a danger indication when the indicating contacts with which said indicating device is in contact are connected together by the corresponding electromagnetic means.

4. Train protecting apparatus comprising in each block section a pair of controlling track contacts, signaling means, electromagnetic means adapted when energized to render operative said signaling means, electrical connections permanently connecting said electromagnetic means between the contacts of a said pair of controlling contacts located in the next but one block section in the rear, a second electromagnetic means adapted when energized to render inoperative said signaling means, electrical connections permanently connecting said second electromagnetic means between the contacts of the first mentioned pair of controlling contacts, a second signaling means, a third electromagnetic means adapted when energized to render operative said second signaling means, electrical connections permanently connecting said third electromagnetic means between the contacts of a said pair of controlling contacts located in a block section in advance, a fourth electromagnetic means adapted when energized to render inoperative said second signaling means, and electrical connections permanently connecting said fourth electromagnetic means between the contacts of a said pair of controlling contacts located farther in advance than the last mentioned pair of controlling contacts, and on a train contacting means adapted to come into contact with each pair of said controlling contacts and thereby to complete electrical circuits through the aforesaid electromagnetic means connected thereto and located in the block section in question and in block sections in the rear and in advance thereof, and a danger indicating device adapted to come into contact with and be operated by each of said signaling means rendered operative as aforesaid.

5. Train protecting apparatus comprising a pair of controlling track contacts, a pair of indicating track contacts located remote from said controlling contacts, a generator of electricity, an electromagnetic device adapted when operated to render said indicating contacts operative, contacting means carried by a train and adapted to effect contact with said controlling contacts, an electric circuit including said generator and said electromagnetic device and adapted to be completed, by contact of said contacting means with said controlling contacts, so as to operate said electromagnetic device and thereby to render said indicating contacts operative, a second pair of indicating track contacts, contacting means carried by said train and adapted to come into contact with said second pair immediately after the aforesaid contacting means effects contact with said controlling contacts, and a second electromagnetic device included in said circuit in series with the first mentioned electromagnetic device and adapted to be energized by the current sent through said circuit and to be operated by such current so as to render the last mentioned pair of indicating contacts inoperative only when such current is sufficient for operating the first mentioned electromagnetic device.

[Claims 6 to 14 not printed in the Gazette.]

1,218,971. DISTRIBUTING-CASE. WILLIAM G. AXWORTHY, Montclair, N. J. Filed Jan. 5, 1916. Serial No. 70,383. (Cl. 211—36.)

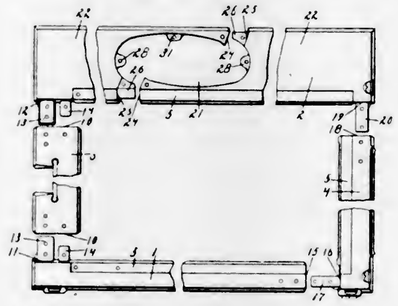


1. In a distributing case, a series of receiving compartments arranged in a zone of narrow vertical dimension and having their mouths in the same vertical plane, a series of receptacles corresponding in number to the receiving compartments, and a series of chutes leading from the receiving compartments to the receptacles, all the chutes having shallow horizontal mouths arranged in banks one over another in a narrow vertical zone, substantially as set forth.

2. In a distributing case, a series of receptacles with substantially horizontal bottoms, means for delivering flat objects into each receptacle at one side and near the top thereof, and a vertically depending weighted closure bar hinged to each receptacle at its top on the side opposite the delivery means and extending to substantially the bottom thereof and serving to retain the objects received in the receptacle in place and in alinement therein, substantially as set forth.

3. A distributing case comprising a plurality of receptacles arranged on its forward side, a corresponding number of shallow, horizontally arranged receiving compartments at the rearward side of the case and having their mouths in a narrow zone and in the same vertical plane, a series of chutes extending downwardly and forwardly from each receiving compartment to a corresponding receptacle, and a shelf arranged behind and below said chutes, substantially as set forth.

1,218,972. STOVE-TOP. RALPH M. BABBITT, Kalamazoo, Mich., assignor to Kalamazoo Stove Company, Kalamazoo, Mich. Filed June 16, 1916. Serial No. 103,953. (Cl. 126—211.)



1. In a stove top, the combination of front and rear side members and front and rear end members, the front end member being adapted to receive a fire-box door and having plain ends abutting the inner edges of the front and rear side members, the front side member and the rear end member each having one plain end abutting the edges of the rear end and rear side members respectively, said members having tongues on their end abutting edges underlapping and secured to the members and abutting therewith, said rear side member having a central pipe collar opening therein and being formed of sections having abutting joints at diagonally opposite points of said opening, each section having one plain joint end and one tongued joint end coacting with such plain joint ends and secured thereto, and a pipe collar secured in said opening and constituting a coupling member for said sections.

2. In a stove top, the combination of front and rear side members and front and rear end members, the front end member being adapted to receive a fire-box door and having plain ends abutting the inner edges of the front and rear side members, the front side member and the rear end member each having one plain end abutting the edges of the rear end and rear side member respectively, said members having tongues on their end abutting edges underlapping and secured to the members and abutting therewith, said rear side member having a central pipe collar opening therein and being formed of sections having joints at opposite sides of said opening, one end of each of such section joints being plain and the other tongued, and a pipe collar secured in said opening and constituting a coupling member for said sections.

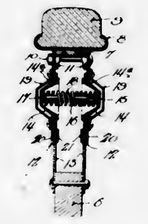
3. In a stove top, the combination of front and rear side members and front and rear end members, the front end member being adapted to receive a fire-box door and having plain ends abutting the inner edges of the front and rear side members, the front side member and the rear end member each having one plain end abutting the edges of the rear end and rear side members respectively, said members having tongues on their end abutting edges underlapping and secured to the members and abutting therewith, said rear side member having a central pipe opening therein and being formed of sections having joints at opposite sides of said opening, one end of each of such section joints being plain and the other tongued.

4. In a stove top, the combination of front and rear side members and end members, one end member having plain ends abutting the inner edges of the front and rear side member, the front side member having one plain end abutting the edge of the other end member, such other end member having one plain end abutting the edge of the rear side member, said members having joint tongues on their end abutting edges coacting with the ends of the members and abutting therewith, said rear side member having a central pipe collar opening therein and being formed of sections having joints at opposite sides of said opening, one end of each joint being plain and the other tongued, and a pipe collar secured in said opening and constituting a coupling member for said sections.

5. In a stove top, the combination of front and rear side members and end members, one end member having plain ends abutting the inner edges of the front and rear side member, the front side member having one plain end abutting the edge of the other end member, such other end member having one plain end abutting the edge of the rear side member, said members having joint tongues on their end abutting edges coacting with the ends of the members and abutting therewith, said rear side member having a central opening therein and being formed of sections having joints at opposite sides of said opening, one end of each joint being plain and the other tongued.

[Claim 6 not printed in the Gazette.]

1,218,973. RESILIENT WHEEL. WILLIAM M. BONNING, Manitowoc, Wis. Filed Jan. 12, 1916. Serial No. 71,611. (Cl. 152—37.)



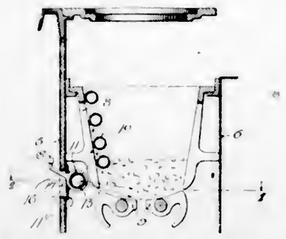
1. A spring wheel including a hub portion, a rim portion, a pair of members each connected with a respective portion and provided with an opening adapted to aline with the opening of the other member, said pair of members being held against lateral relative movement, and spring-urged cam members extending into both openings and having cam faces operatively engaging the edges of both openings at diametrically opposite points of the cam surfaces.

2. A spring wheel including a hub portion, a rim portion, a pair of members each connected with a respective portion and provided with an opening adapted to aline with the opening of the other member, said pair of members being held against lateral relative movement, a spring and a member urged by said spring and extending into both openings and having its sides which engage the openings relatively and variably inclined and convex, whereby to exert a cam action on the members variable to correspond to the normal variation of the spring resistance.

1,218,974. CONVERTIBLE FLUID-FUEL KINDLER AND HEATER FOR STOVES. JOHN S. BRENNAN, Milwaukee, Wis., assignor to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Filed Dec. 11, 1915. Serial No. 66,334. (Cl. 126—36.)

1. In a fire box including a grate, a side grid member and a water container associated with the grid member, the combination of a fluid fuel burner apparatus permanently secured in the fire box juxtaposing the grid member, said apparatus being shiftable to adapt it for either

kindling fuel on the grate or for heating water in the container.

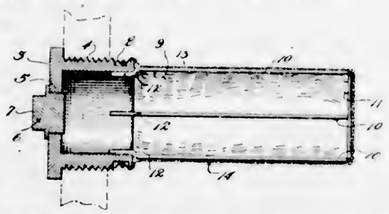


2. In a fire box including a grate, a side grid member and a water container associated with the grid member, the combination of a fluid fuel burner permanently secured in the fire box and extending longitudinally thereof outside of the grid member, said burner being rotatably mounted to direct its flames toward either the grate or the water container, and means for rotating said burner.

3. In a fire box including a grate, a side grid member and a water container associated with the grid member, the combination of a permanently secured fluid fuel burner extending longitudinally of the fire box at one side thereof between the grate and grid member, the burner being rotatably mounted and provided with spaced longitudinally-extended series of fuel outlets adapted to direct flame at both sides of either the grate or the water container, and means for rotating said burner for selective association with the grate and said water container.

4. In a fire box provided with a front opening and having a grate, a side grid member, and a water container associated with the grid member, the combination of an indicator plate, a sleeve carried by the indicator plate and secured in the fire box opening, a burner pipe journaled in said sleeve, a journal bearing for the inner end of the burner pipe whereby it may be rotated to direct its flames either toward the grate for kindling fuel or toward the water container, a split collar clamped on the pipe outwardly of the plate and an indicator arm carried by the collar.

1,218,975. COMBINED BUNG AND STRAINER. WILLIAM R. BRISON, Tompkinsville, N. Y. Filed June 9, 1916. Serial No. 102,718. (Cl. 210—16.)



A bung of the class described comprising a head, an annular flange carried by the head, a frame comprising a plurality of arms, offsets formed in the arm adjacent their outer ends, the outer ends of said arms being engaged within the flange, and a strainer enveloping the frame and having its outer end engaged around the flange, and means for securing the outer end of the strainer to the flange to hold said strainer taut and the offsets bindingly engaged with the inner edge of said flange.

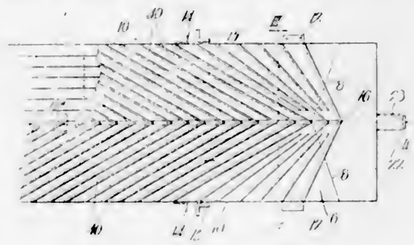
1,218,976. CHLORATE EXPLOSIVE. JAMES MADISON BROWN, Johnson City, Tenn. Filed Mar. 3, 1915. Serial No. 11,862. (Cl. 52—1.)

1. The process of producing a high powdered powder which consists in preparing a solution of substantially 8% to 10% of rosin and boiled linseed oil; mixing substantially 70% to 76% sodium chlorate in said solution; and adding 22% to 14% of grain flour to the mass thus produced, substantially as described.

2. The process of producing a high powderer powder which consists in preparing a solution of substantially 8% to 10% of rosin and boiled linseed oil; mixing substantially 70% to 76% sodium chlorate in said solution, adding a grain flour to the mass thus produced; adding substantially 4% of finely divided carbon; subjecting the mass to pressure; and cracking the same into grains, substantially as described.

3. The herein described new explosive comprising by weight rosin dissolved in linseed oil 10%; sodium chlorate substantially 70%; and cereal flour substantially 20%, substantially as described.

1,218,977. ORE-CONCENTRATING APPARATUS. GEORGE W. BURNHART, Denver, Colo. Filed July 13, 1914. Serial No. 851,217. (Cl. 83—88.)



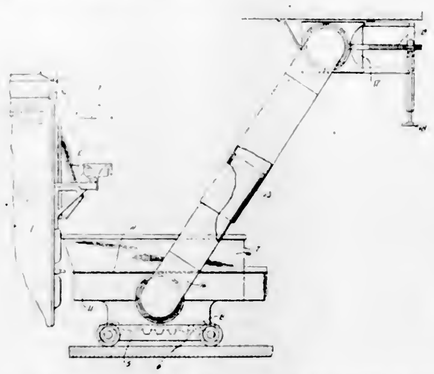
1. In an ore concentrating apparatus, a table having its upper surface sloping from the sides toward an intermediate line extending longitudinally of the table, and riffles extending across the upper face of the table from said sides diagonally in the direction of the head or ore-receiving end of the table, the entire upper edge of each of said riffles lying in approximately the same horizontal plane, and means for imparting a shake to the table, adapted to propel the concentrates toward the head of the table.

2. In an ore concentrating apparatus, a table having its upper surface sloping from the sides toward an intermediate line extending longitudinally of the table, and riffles extending across the upper face of the table from said sides diagonally in the direction of the head or ore-receiving end of the table, said riffles being undercut on their sides facing the foot or tailings end of the table, and means for imparting a shake to the table, adapted to propel the concentrates toward the head of the table.

3. In an ore concentrating apparatus, a table having its upper surface sloping from the sides toward an intermediate line extending longitudinally of the table, and riffles extending across the upper face of the table from said sides diagonally in the direction of the head or ore-receiving end of the table, said riffles being undercut on their sides facing the foot or tailings end of the table and the entire upper edges of said riffles lying in approximately the same horizontal plane, and means for imparting a shake to the table, adapted to propel the concentrates toward the head of the table.

4. In an ore concentrating apparatus, the combination of a table having its upper surface sloping from the sides toward an intermediate line extending longitudinally of the table and provided with a longitudinal opening along said intermediate line and with riffles extending across the upper face of the table from said sides to said opening diagonally in the direction of the head or ore-receiving end of the table, said riffles being undercut on their sides facing the foot or tailings end of the table and the entire upper edges of said riffles lying in approximately the same horizontal plane, and a concentrates trough underlying said opening, and means for imparting a shake to the table, adapted to propel the concentrates toward the head of the table.

1,218,978. APPARATUS FOR COOLING COFFEE, &c. WILLIAM G. BURNS, New York, N. Y., assignor to Jabez Burns & Sons, a Corporation of New York. Filed Dec. 6, 1915. Serial No. 65,222. (Cl. 34—21.)



1. The combination with a reciprocating cooling car, an elbow horizontally pivoted at one end to said car, an air main, a second elbow parallel to said first elbow and horizontally pivoted to said main, and a telescopic pipe connection between said elbows.

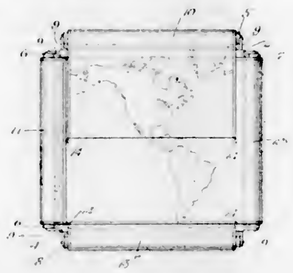
2. The combination with a reciprocatory tipping cooling car, of an elbow pivoted to said car in the tipping axis, a stationary air main, an elbow pivoted thereto parallel to said first elbow, and a telescopic connection between said elbows.

3. The combination with a tipping car, of an elbow swiveled thereto, a stationary main, and a second elbow swiveled thereto and telescopically connected with said first elbow.

4. The combination with a truck, of a cooling car mounted to rock thereon, an elbow swiveled to said car, a stationary main, a second elbow swiveled thereto, and a continuous extensible connection between said elbows.

5. The combination with a traveling tipping car, an elbow horizontally swiveled thereto, a stationary overhead main having a depending horizontally pivoted elbow, and means telescopically connecting said elbows to form a continuous passage between the car and the stationary main.

1,218,979. APPARATUS FOR RECEIVING PROJECTED IMAGES. CHARLES T. CAHILL, Boston, Mass. Filed Sept. 21, 1915. Serial No. 51,782. (Cl. 35—12.)



1. Apparatus of the kind described, comprising means to hold a plurality of screens, in combination with mechanism arranged to permit a selected one of said screens to be drawn from different angular directions across the field of view of the apparatus in substantially the same plane as that of each of the other screens of said plurality.

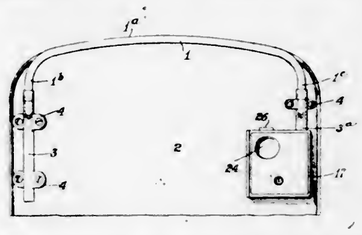
2. Apparatus of the kind described, comprising means to hold a plurality of screens, consisting in a plurality of self-acting rollers arranged to permit each of said screens to be drawn across the same field of view and to have two or more of said screens occupying a portion of said field of view simultaneously.

3. Apparatus of the kind described, comprising a plurality of screens, each screen being mounted on an independent self-acting roller, and projecting apparatus cooperating therewith and adapted to maintain a projected view in the same relative position on different screens successively brought into the field of view.

4. Apparatus for projecting a view on a plurality of screens, comprising a source of light, means to position one or more of said screens in the field of view of the projecting part of said apparatus, each screen being substantially in the same focal plane, and being moved into or out of view from relatively angular directions.

5. Apparatus for projecting a view on a plurality of screens, comprising mountings for said screens adjacent the field of view of the projecting apparatus, means to position any screen across the field of projection, successively or simultaneously with the overlapping portions of a plurality of screens being all in substantially the same plane and capable of receiving the view projected from the same distance, whereby each of a plurality of screens may receive separate and independent data in connection with the projection appearing on all the screens within the field of view.

1,218,980. RELEASABLY-LOCKED GARMENT RAIL OR HANGER. JEREMIAH M. CALLAHAN, New York, N. Y. Filed June 9, 1915. Serial No. 33,037. (Cl. 45—13.)



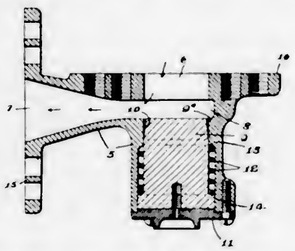
1. A garment hanger comprising guides; slides mounted to move in said guides; a garment supporting member pivotally mounted on said slides; means for exerting pressure against said slides and normally tending to force them out of said guides; means for limiting the outward movement of said slides in the guides; said garment supporting member being adapted to swing outwardly and downwardly when the slides are in an outer position in the guides and to swing upwardly and inwardly when the slides are forced inwardly against the pressure exerting means; and means for locking and releasing the slides when pushed into the guides against the force of said pressure exerting means.

2. A garment hanger comprising guides; slides mounted to move in said guides; a garment supporting member pivotally mounted on said slides; pressure exerting means acting against said slides and normally tending to force them out of the guides, means for limiting the outward movement of said slides in the guides; said garment supporting member being adapted to swing outwardly and downwardly when the slides are forced outwardly from the guides, a portion of said garment supporting member being adapted to be forced into the guides when carried back into alinement therewith; and means comprising locking instrumentality for securing the slides in the guides against the force of said pressure exerting means.

3. In combination with a support, a garment hanger comprising a plurality of guides adapted to be mounted on said support and provided with a plurality of slots; said guides being closed at one end and open at their op-

posite ends; a spring member housed in the closed end of each guide; slide members disposed in said guides and having projections extending through said slots; a garment rail having an angulated portion at each end, pivotally mounted on the free ends of the slides; said rail being adapted to swing outwardly and downwardly when the slides are in their outer position and inwardly and into approximate engagement with the support when the slides are forced inwardly against the tension of said spring members; and releasable locking means for holding the slides in the guides against the force of the springs.

1,218,981. INTERNAL-COMBUSTION-ENGINE GOVERNOR. AUBIN M. CHASE, Syracuse, N. Y. Filed May 29, 1913. Serial No. 770,616. (Cl. 50—35.)



1. An internal combustion engine governor comprising a casing adapted to be connected in the intake pipe of the engine and having inlet and outlet passages, and a normally open suction controlled valve arranged to move toward the inlet passage into position to cut off the outlet passage, which is connected to the engine cylinders, said valve being movable in a direction contrary to the flow of the gas through the passages whereby the valve is relieved of the suction when in its closed position, the advance end of the valve being designed to enter the inlet passage and being of smaller diameter than the contiguous portion of the inlet passage and loosely fitting the same, substantially as and for the purpose set forth.

2. An internal combustion engine governor comprising a casing adapted to be connected in the intake pipe of the engine and having inlet and outlet passages, and a normally open suction controlled valve arranged to move toward the inlet passage which is connected to the engine carbureter, said valve being movable in a direction contrary to the flow of gases through the passages whereby the valve is relieved of the suction when in its closed position, the advance end of the valve being designed to enter the inlet passage and the peripheral surface of such advance end being opposed to the inner circumferential surface of the contiguous portion of the inlet passage and one of said opposing surfaces being tapered whereby a gradual shutting off of the gases and suction is effected, substantially as and for the purpose described.

3. An internal combustion engine governor comprising a casing adapted to be connected in the intake pipe of the engine and having inlet and outlet passages, and a normally open suction controlled valve arranged to move toward the inlet passage into position to cut off the outlet passage, which is in communication with the engine cylinders, said valve being movable in a direction contrary to the flow of the gases through the passages whereby the valve is relieved of the suction when in its closed position, the advance end of the valve being tapered slightly and designed to enter the inlet passage, substantially as and for the purpose specified.

4. An internal combustion engine governor comprising a casing adapted to be connected in the intake pipe of the engine and having inlet and outlet passages arranged at an angle to each other, the former being in communication with the carbureter, and the latter with the engine cylinders, the casing being also formed with a valve passage alined with the inlet passage and located on the opposite side of the outlet passage to that on which the inlet passage is located, and a valve movable in the valve passage across the outlet into the inlet whereby the valve is relieved of the influence of the suction when in its closed position, the advance end of the valve being of slightly less diameter than the portion of the inlet passage in which said advance end enters, substantially as and for the purpose specified.

5. An internal combustion engine governor comprising a casing for connection in an intake pipe of the engine, the casing having inlet and outlet passages, and a normally open suction controlled valve arranged to move toward the inlet passage into a position to cut off the outlet passage which is connected to the engine cylinder, the valve being movable in a direction contrary to the flow of gas through the passages whereby the valve is relieved of the suction when in its closed position, and the governor being formed with a passage for maintaining communication between the inlet and outlet passages as the valve approaches its closed position.

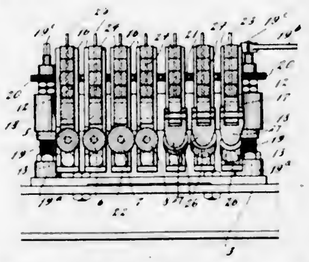
1,218,982. CORK AND LEATHER SUBSTITUTE AND PROCESS OF MAKING THE SAME. ALBERT L. CLAPP, Braintree, Mass. Filed July 16, 1914. Serial No. 851,348. (Cl. 91—68.)



1. As an article of manufacture, a paper-felt sheet comprising associated wood fibers, puffed or increased in diameter with a surface texture resembling felt, waterproofed by a solution of rubber-like substance, whereby the resiliency of the paper-felt and waterproofing is maintained, producing a substance for cork, leather and the like.

2. The process of treating paper-felt material composed of associated wood fibers puffed or increased in diameter and having a surface texture resembling felt, which consists in waterproofing said fibers by the application of rubber-like solution capable of uniting with said fibers to render same substantially waterproof while acting as a preservative and maintaining the former resiliency of said paper-felt.

1,218,983. MACHINE FOR MAKING RUBBER GOODS. MYRON H. CLARK, Malden, Mass., assignor to The Goodyear's Metallic Rubber Shoe Company, a Corporation of Connecticut. Filed Jan. 10, 1913. Serial No. 741,218. (Cl. 12—34.)



1. A machine of the class described embodying means for holding a shoe, and a series of rollers graduated in width and each adapted to roll a greater area down the center of the sole than the next preceding roller.

2. A machine of the class described comprising means for holding a shoe, a primary roller arranged to contact with the longitudinal central portion of the sole of the shoe, and a second roller of greater width than the primary roller arranged to follow and roll a greater area down the center of the sole than the primary roller.

3. A machine for forming rubber shoes, comprising a sole roller, a toe roller for rolling the toe above the sole, and a heel roller for rolling the heel above the sole, and means common to all of said rollers for presenting a form upon which the shoe is built up to said rollers successively.

4. A machine for forming rubber shoes, comprising an endless conveyer adapted to carry a shoe form upon which the shoe is built up with the sole of the form uppermost, sole edge rolling means, toe rolling means for rolling the toe above the sole, heel rolling means for rolling the heel above the sole, and sole rolling means to which the form is presented by said conveyer, all of said means being mounted above said conveyer and acting toward the same, and means for supporting the conveyer in opposition to the pressure of the rollers on the form.

5. A machine for forming rubber shoes, comprising an endless conveyer having means to support a shoe form with the sole outermost, and means for uniting shoe parts assembled on the form, said means comprising rollers rotatable on an axis parallel to the plane of movement of the conveyer, rollers rotatable on axes transverse of and inclined in the direction of travel of the conveyer, rollers rotatable on axes inclined upwardly transversely of the conveyer and in the direction of travel of the latter, and rollers rotatable on axes substantially at right angles to the direction of movement of the conveyer, and means to cause the conveyer to travel in a straight path, and supported rigidly in opposition to the pressure of the rollers on the form.

[Claims 6 to 22 not printed in the Gazette.]

1,218,984. PAPER BOTTLE. FREDERICK COATES, Rochester, N. Y. Filed June 23, 1916. Serial No. 105,511. (Cl. 229—3.)



1. As a new article of manufacture, a bottle of the character described comprising a bottom, a wall formed of paper and having a longitudinally fluted portion, and a ferrule slotted to form interlocking engagement with said fluted wall portion at the open end of the bottle.

2. As a new article of manufacture, a bottle of the character described comprising a bottom, a wall formed of paper and having a conical portion in which are formed equally spaced longitudinally extending channels gradually deepening toward their outer ends, and a ferrule slotted to form interlocking engagement with said fluted wall portion at the open end of the bottle.

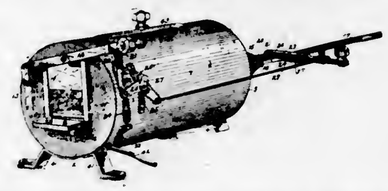
3. As a new article of manufacture, a bottle of the character described comprising a bottom, a wall formed from a paper tube and having a conical portion in which are formed equally spaced longitudinally extending channels gradually deepening toward their outer ends, a ferrule slotted to form interlocking engagement with said fluted wall portion at the open end of the bottle, and engaging means bent from the said wall portion to hold the ferrule against removal.

4. As a new article of manufacture, a bottle of the character described comprising a bottom, a wall formed from a paper tube and having a conical portion in which are formed equally spaced longitudinally extending channels gradually deepening toward their outer ends, a ferrule slotted to form interlocking engagement with said fluted wall portion at the open end of the bottle, and a flange turned from the said wall portion to hold the ferrule against removal.

5. As a new article of manufacture, a bottle of the character described comprising a bottom, a wall formed from a paper tube and having a conical portion in which are formed equally spaced longitudinally extending channels gradually deepening toward their outer ends, and a reinforcing member encircling the open end of the bottle comprising a seat for a sealing-cap and a ferrule which is slotted to form interlocking engagement with the said fluted wall portion.

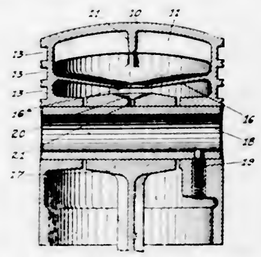
[Claims 6 and 7 not printed in the Gazette.]

1,218,985. ICE-CREAM MACHINE. NELSON C. COLLISTER, Cleveland, and CHARLES R. MCDONALD, East Liverpool, Ohio, assignors, by mesne assignments, to Arthur Leich and J. Berner, Milwaukee, Wis. Filed Feb. 1, 1915. Serial No. 5,426. (Cl. 107—14.)



A machine of the described character comprising an open-ended casing, a longitudinally reciprocated plunger fitted therein, a toothed feed-bar extending from the plunger beyond one end of the casing, a feed-arm carrying a pawl engageable with the teeth of the feed-bar, the feed-arm being provided with a manual grip, a reciprocative cutter in sliding engagement with the open end of the casing, a manually operated actuating arm for the cutter and means connecting the cutter arm and feed arm whereby they may be operated conjointly or independently to perform their respective feeding and cutting functions.

1,218,986. PISTON. HORACE E. DODGE, Grosse Pointe, Mich., assignor to Dodge Brothers, Detroit, Mich., a Corporation of Michigan. Filed Nov. 3, 1916. Serial No. 129,281. (Cl. 74—85.)



1. A piston having a head and a diaphragm within said piston, located between said head and the piston-pin holes.

2. In an internal combustion engine, a piston having a head, and a diaphragm adapted to collect oil thrown upon said diaphragm at one or more points and arranged to

conduct the collected oil to the bearing surfaces in the piston.

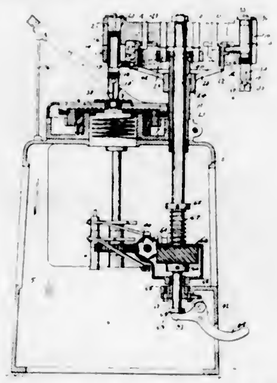
3. A piston having a head, and a diaphragm of conical form, the taper of the cone being toward the bearing surfaces in the piston.

4. In an internal combustion engine, a piston having a head, and a diaphragm adapted to conduct oil toward the longitudinal axis of the piston at a point between the said head and the parts within and operated by said piston.

5. A piston having a head, and a diaphragm separated from said head at a distance less than that of the piston-pin holes from said head, and forming a shield for protecting said head from oil.

[Claims 6 to 12 not printed in the Gazette.]

1,218,987. MECHANISM FOR FEEDING BLANKS. GEORGE W. DRAKE, South Euclid, Ohio, assignor, by mesne assignments, to George W. Bowen, Auburn, N. Y. Filed July 31, 1913. Serial No. 782,184. (Cl. 10—162.)



1. The combination with a chuck, of a rotatable turret, means on the turret for holding the article to be operated on by the chuck, said means being movable into the chuck to hold the article therein, and means for actuating the turret, substantially as and for the purpose described.

2. The combination with a chuck, of a rotatable turret, means on the turret for holding the article to be operated on by the chuck, said means being movable into the chuck to hold the article therein, and being rotatable relatively to the turret with the chuck, and means for actuating the turret, substantially as and for the purpose specified.

3. The combination with a chuck, of a rotatable turret, means on the chuck for grasping an article, and means for intermittently rotating the turret and moving the same axially to bring said means into and out of alinement with the chuck and into and out of the chuck, substantially as and for the purpose set forth.

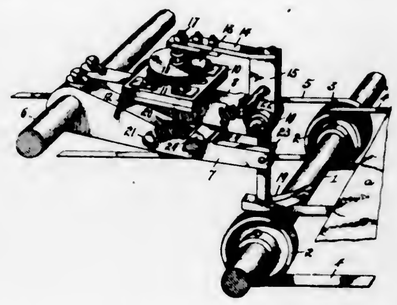
4. The combination of a rotatable and axially slidable turret, slidable means carried on the turret for holding an article, means for successively rotating and moving the turret along its axis, and means for moving the article holding means in the turret consequent upon the rotation of the turret.

5. The combination of a rotatable turret, slidable means carried on the turret for holding an article, means for rotating the turret, and for moving the turret along its axis, means for moving the article holding means in the turret after the rotation of the turret to release the article consequent upon the rotation of the turret.

[Claims 6 to 24 not printed in the Gazette.]

1,218,988. TWO-SHEET STOP-FEED DETECTOR MEANS. MICHAEL ANDREW DROITCOUR, Delphos, Ohio. Filed May 4, 1916. Serial No. 95,384. (Cl. 101—36.)

1. The combination with means over which sheets are fed, of a vertically movable member, a detector part movably carried by said member, an element for limiting the lowering movements of said member and coöperating therewith to support the detector part in such relation to said means as to provide a predetermined minimum spacing between said means and part, said spacing being increased a predetermined extent by inserting a piece of a sheet to be run between the coacting stop parts of said member and element whereby the feeding of two or more sheets in superimposed order over said means will cause a movement of said detector part relative to said member, and means actuated to break an electric circuit when said detector part is moved by the passage of sheets thereunder.



2. In combination a stationary part having an anvil, a vertically movable member adapted to rest on and having its lowering movements limited by said anvil, an electric switch, a detector part swingingly carried by said member and having connection with the movable member of the switch, sheet-advancing means disposed in predetermined spaced subjacent relation to said detector part whereby a switch opening movement will be imparted to the detector part by the passage of a sheet between it and said means and be prevented, unless more than one sheet is fed, by the insertion of a piece of a sheet to be fed between said anvil and member.

3. In a detector mechanism of the class described, in combination, a stationary part, a vertically movable member having its lowering movements limited by said part, a detector part movably carried by said member, an electric circuit-breaking element carried by said detector part and sheet-advancing means disposed below the detector part whereby the advancing movement of a sheet between said means and detector part in coaction with the latter will move said latter to impart a circuit breaking movement to said element, the spacing of said means and detector part being varied by inserting spacing members of different thickness between said stationary part and member.

4. In a detector mechanism of the class described, in combination, an adjustable stationary part, a vertically movable member having its lowering movements limited by said part, a detector part movably carried by said member, an electric circuit-breaking element carried by said detector part and sheet-advancing means disposed below the detector part whereby the advancing movement of a sheet between said means and detector part in coaction with the latter will move said latter to impart a circuit breaking movement to said element, the spacing of said means and detector part being varied by inserting spacing members of different thickness between said stationary part and member.

5. In a detector mechanism of the class described, a sheet-advancing means, a movable member supported above said means at a distance less than the thickness of a sheet, an electric switch having connection with and operated by said member, a movable support for said member, a limiting stop for coacting with said support to determine the spacing of said advancing means and movable member, and a spacing part of a thickness substantially equal to the thickness of the sheets to be run inserted between said support and stop, whereby said member is moved when more than one sheet is fed at a time between said member and advancing means.

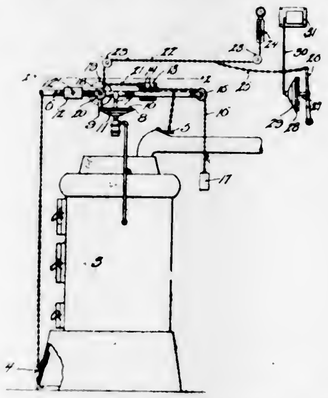
[Claims 6 to 12 not printed in the Gazette.]

1,218,989. ARTIFICIAL TOOTH. LEO E. EVSLIN, New York, N. Y. Filed Oct. 21, 1910. Serial No. 588,378. (Cl. 32—9.)



The combination with a tooth having a socket formed therein, extending at an acute angle relatively to one face of said tooth, of a lining for said socket, a backing positioned upon the mentioned face of the tooth, and a pin extending obliquely through said backing and into the lining in said socket, and having a head disposed at an angle so as to engage flat against the surface of said backing to retain the backing in position upon the tooth.

1,218,990. DRAFT-REGULATOR. ANTHONY B. FERDINAND, Wauwatosa, Wis. Filed Feb. 8, 1912. Serial No. 676,298. (Cl. 236—6.)



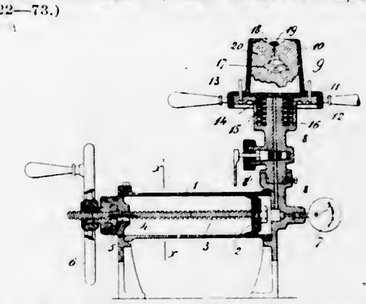
1. A heating-apparatus damper-regulator lever and means controlling tilt of the same coincidental to fluctuations of pressure or temperature in the apparatus, a spindle upon which the lever is fulcrumed, a pair of drums fast on the spindle, a governor slidable on the lever, a flexible device connecting the governor with one of the drums, a similar device leading from the other drum to a station distant from the heating apparatus, means for adjustably supporting the latter flexible device at said distant station, a pull-weight, and a flexible hanger for the weight guided in connection with the lever and attached to said governor, the draw of the weight being opposite the aforesaid flexible device in connection with said governor and the independent adjustment of the governor on said lever serving to determine the degree of pressure or temperature at which the lever-tilting means may become effective.

2. A regulator comprising a pivotally mounted lever, a governor slidably connected thereto, means for slidably moving the governor in one direction on the lever, locking means for preventing reverse movement of the governor, means for releasing the locking means, and means opposing movement of the governor by the first mentioned means and adapted to move the governor in an opposite direction when the actuating means are inactive and the locking means are released.

3. A regulator comprising a lever, a thermally actuated motor, a governor slidably mounted on the lever and adapted to be moved in one direction thereon by said motor, locking means for preventing reverse movement of the governor but permitting advancing movement of the governor by said motor, and means opposing movement of the governor by the motor and for reversing the movement of the governor when the locking means are released and the motor not acting on the governor.

4. A regulator comprising an intermediately pivoted control lever, a governor weight slidably mounted on the lever at one side of its pivot, automatic mechanism for moving the governor weight in one direction on the lever, automatically acting means opposing movement of the governor by the said automatic mechanism and adapted to move said governor in an opposite direction and an adjustable weight on the other side of the lever.

1,218,991. COMPOUND APPARATUS FOR CASTING METALS IN VACUUM. ERMINIO FERRARI, Venice, Italy. Filed Apr. 18, 1913. Serial No. 761,999. (Cl. 22—73.)



1. A flask device for vacuum casting apparatus comprising a conical flask, a movable bottom to the flask, a support for the flask and movable bottom, vacuum generating means, a duct in said support for connecting the flask to the vacuum generating means, a circular groove on the support, a spring in the groove acting against the bottom and means for mounting said flask on the support and for setting the spring in tension against the bottom.

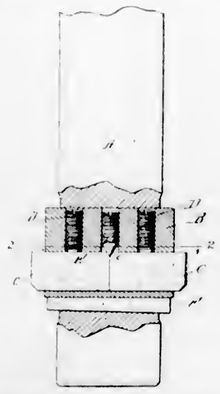
2. A flask device for vacuum casting apparatus comprising a conical flask having a flanged base, a movable bottom to the flask, a tubular projection from the bottom, a support for the flanged flask and movable bottom, the support having a duct to the vacuum generating means, a circular groove on said support to receive the tubular projection, a spring in the groove, a screw thread around said support, a union nut for securing the flask on the support and to draw the movable bottom against the said spring.

1,218,992. ADJUSTABLE CUTTER. BION D. FORD, Cleveland, Ohio. Filed Nov. 8, 1915. Serial No. 60,195. (Cl. 77—58.)

1. A self-contained cutter head comprising a holder body having a slot extending longitudinally therethrough and adapted to be inserted into and clamped within the slot of a cutter bar or shank, the said body being widened or thickened at one side of said slot, a pair of radially movable blades in said slot, said blades having their adjacent end corners beveled, a countersunk adjusting screw in the thickened portion of said body and having a conical point adapted to be interposed between said beveled corners, and a countersunk clamping screw for each of said blades also mounted in the widened or thickened portion of said body.

2. A self-contained cutter head adapted to be inserted into and clamped within the slot of a cutter bar or head, said head comprising a holder body having a slot extending longitudinally therethrough, a pair of radially movable blades within the slot in said body, a countersunk ad-

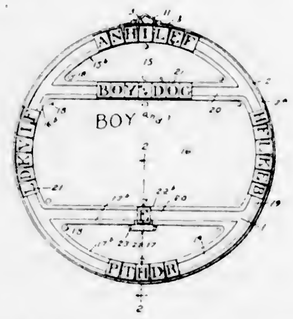
justing screw tapped into said holder and having a conical point interposed between the opposed ends of said blades, and a clamping screw for each blade also countersunk in said body.



3. A self-contained cutter head comprising a holder body having a slot extending therethrough and adapted to be inserted into and clamped within the slot of a cutter bar or shank, said body having a relatively thick wall extending from one side of its slot, a pair of blades longitudinally movable in the last mentioned slot, an adjusting screw in the thickened wall of said body and having a conical point adapted to be interposed between the proximate ends of said blades, and a clamping screw for each of said blades also mounted in the thickened wall of said body and adapted by their adjustment to engage and clamp the blades in the positions in which they may be adjusted by the first-mentioned screw.

4. A self-contained cutter head adapted to be inserted into and clamped within the slot of a cutter bar or head, said head comprising a unitary holder body having a slot extending therethrough, a pair of blades adjustable lengthwise of the slot in said body, an adjusting device interposed between the proximate ends of said blades and countersunk within said body and adapted to move the blades longitudinally of the slot therein, and a clamping screw for each of said blades adapted each to engage a blade and also countersunk in said body.

1,218,993. EDUCATIONAL DEVICE. JOHN H. FOX, Berea, Ohio. Filed Aug. 7, 1915. Serial No. 44,186. (Cl. 35—2.)



1. A device of the character set forth comprising a supporting plate, an inwardly opening channel member applied to the periphery of the supporting plate, the side flanges of the channel member being spaced from the opposite sides of the plate, a member applied to each side of the supporting plate and having a wall that is opposed to the web of the channel member and a flange that extends from the wall toward the flange of the channel, and in substantially the plane thereof, and buttons having each a pair of opposed heads that are connected by a neck, the necks of the buttons being slidable between the flanges of the aforesaid members.

2. A device of the character set forth comprising a supporting plate, a pair of plates secured thereto, the last mentioned plates having edges that are spaced apart and are substantially parallel, the adjacent edges of said plates being turned at substantially right angles to their body portions and then toward each other, and a plurality of buttons having each a pair of opposed heads that are connected by a neck, the necks of the buttons being slidable between the adjacent edges of the aforesaid plates.

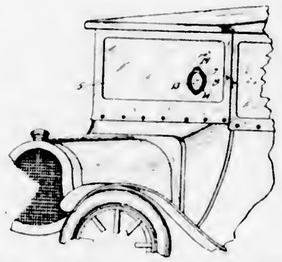
3. A device of the character set forth comprising a supporting plate, a member surrounding said plate and having a flange extending inward over the plate and spaced therefrom, and face plates secured to the supporting plate having peripheral flanges extending toward and in substantially the plane of the flange of the aforesaid member, the adjacent face plates having opposed flanges that are in substantially the plane of the first mentioned flanges, and buttons guided between opposed flanges of the face plates and aforesaid member, each button comprising a pair of opposed heads that are connected by a neck that is slidable between said flanges.

4. A device of the character set forth comprising a supporting member having a storage slot and a branch slot that extends from the storage slot, buttons that are slidable within the aforesaid slots, each button consisting of a pair of opposed heads that are connected by a neck which is slidable between the opposed edges of the aforesaid slots, one edge of one of the slots having an opening through which the aforesaid buttons may be removed, a gate hingedly connected to the supporting member for normally closing said opening, and means for retaining the gate closed.

5. A device of the character set forth comprising a supporting plate, a member secured to each side thereof, and having a peripheral flange that is spaced from the adjacent side of the supporting plate and inwardly from the edge thereof, and a pair of opposed continuous bands that are substantially L shaped in cross section, one flange of each band being in substantially the plane of the flange of one of the aforesaid members, the other flanges of said bands overlapping each other and being attached to the periphery of the supporting plate.

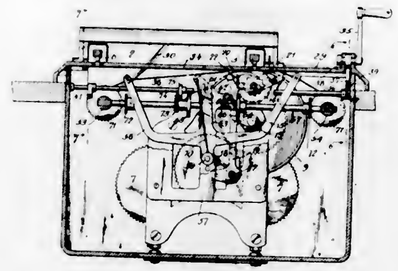
[Claims 6 to 9 not printed in the Gazette.]

1,218,994. WIND-SHIELD. NAIMAN GOLDBERG, Hartford, Conn. Filed Jan. 10, 1916. Serial No. 71,165. (Cl. 21—148.)



A wind shield having a comparatively small opening therein comprising a sight opening, a frame attached to the shield around said opening, a cover of transparent material to close said opening, and means upon the cover and frame to secure the cover in place and for bodily removal from the shield, the said means extending completely through the wind shield, frame and cover.

1,218,995. TIME-RECORDER AND METHOD OF RECORDING ELAPSED TIME. HARRY T. GOSS, Rutherford, and JAMES W. BRYCE, Bloomfield, N. J.; assignors to International Time Recording Company of New York, Endicott, N. Y., a Corporation of New York. Filed Jan. 25, 1912. Serial No. 673,404. (Cl. 234—43.)



1. In an elapsed time recording machine, the combination of a card guide adapted when in operative position itself to properly position a card relative to two time markers in accordance with time, clock controlled means for moving the card guide, and two stationary time markers spaced apart a distance along the line of travel of the card guide equal to the length of travel of the card guide, and each adapted when opposite the card to make a mark thereon representing by its location on the card the time of such marking or the elapsed time between the two operations.

2. In an elapsed time recording machine, the combination of a card guide adapted when in operative position itself to properly position a card relative to two time markers in accordance with time, clock controlled means for moving the card guide, two stationary time markers spaced apart a distance along the line of travel of the card guide equal to the length of travel of the card guide, and each adapted when opposite the card to make a mark thereon representing by its location on the card the time of such marking or the elapsed time between two operations, all so arranged that when, on a second operation of the machine, the card is inserted in the reverse way and the time mark made at the first operation, is brought into register with the card guide, that one of the time markers, which is opposite the card will make a time mark upon the opposite side of the card from the first mark, indicating by its location upon the card the elapsed time between two operations.

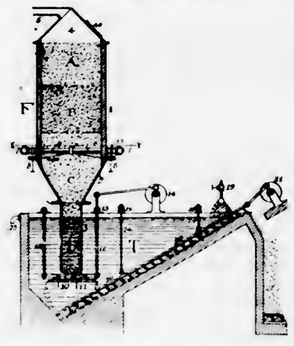
3. In a elapsed time recording machine, the combination of a card guide adapted, when in operative position itself to properly position a card relative to two time markers in accordance with time, clock controlled means for moving the card guide, two stationary time punches spaced apart a distance along the line of travel of the card guide, equal to the length of travel of the time guide, and each adapted when opposite the card to make a mark thereon representing by its location on the card the time of such marking, and a card provided on one side with a time scale, all so arranged that upon a first operation of the machine a time mark will be placed by one of the punches upon the edge of the card opposite the time scale representing by its location on the card the time of the first or "in" operation, and when on a second operation the said time mark is brought into register with the card guide, a time mark will be produced by one of the time punches on the scale side of the card representing by its location on the scale the elapsed time between the two operations.

4. In an elapsed time recording machine, the combination of a card guide adapted when in operative position itself to properly position a card relative to two time markers, clock controlled means for moving the card guide, two stationary time markers spaced apart a distance, along the line of travel of the card guide, equal to the length of travel of the card guide, and each adapted when opposite the card, to make a mark thereon representing by its location on the card the time of such marking or the elapsed time between the two operations.

5. In an elapsed time recording machine, the combination of a spiral card guide for properly positioning a card in the machine, clock controlled means for rotating the card guide so that the card guide will always position a card in the machine in accordance with time, two stationary time markers spaced apart a distance, along the line of travel of the card guides, equal to the length of travel of the card guide and each adapted, when opposite the card, to make a mark thereon representing by its location on the card the time of such marking or the elapsed time between two operations.

[Claims 6 to 11 not printed in the Gazette.]

1,218,996. PROCESS OF EXTRACTING METALS FROM THEIR ORES. WILLIAM E. GREENAWALT, Denver, Colo. Filed June 1, 1915. Serial No. 31,551. (Cl. 75—18.)



1. A process of treating ores of metals which consists in disposing the ore in a vertical column having the top exposed to a gaseous atmosphere and the bottom submerged in a liquid capable of dissolving the soluble values in the ore, heating the ore, applying air or other gases to the ore to convert the metals into a soluble form, subjecting the roasted ore to the action of the liquid in which it is submerged, and withdrawing the ore from the vertical column in the submerging liquid.

2. A process of treating ores of metals which consists in disposing the ore in a vertical column having its top exposed to a gaseous atmosphere and its bottom submerged in a liquid capable of dissolving the soluble values in the ore, heating the ore, treating the ore with air or other gases to convert the metals into soluble form, cooling and moistening the ore while still in the vertical column, and then withdrawing the ore from the vertical column in the submerging liquid.

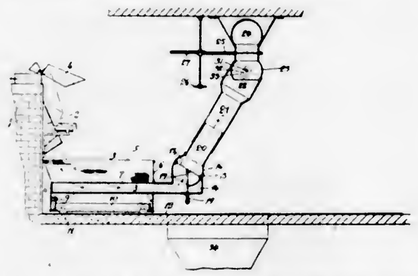
3. A process of treating ores of metals which consists in disposing the ore in a vertical column having the top exposed to a gaseous atmosphere and the bottom submerged in an acid solution capable of dissolving the soluble values in the ore, heating the ore, applying air or other gases to the ore to convert the metals into a soluble form, and withdrawing the ore from the bottom of the vertical column in the submerging liquid.

4. A process of treating ores of metals which consists in disposing the ore in a vertical column, heating the ore, applying air or other gases into the ore and roasting it by the internal combustion of its combustible elements, cooling and wetting the ore while still in the vertical column, and then withdrawing the ore from the vertical column in a submerging liquid, and continuously withdrawing the ore from the submerging liquid.

5. A process of treating ores which consists in disposing the ore in a vertical column, heating the ore, applying air or other gases to the ore and roasting it by the internal combustion of its combustible elements, cooling the roasted ore and applying to it a leaching solution, and then removing the ore from the vertical column and separately withdrawing the sands and the slimes from the leaching solution.

[Claims 6 to 10 not printed in the Gazette.]

1,218,997. APPARATUS FOR COOLING COFFEE. RICHARD A. GREENE, Brooklyn, N. Y., assignor to Jabez Burns & Sons, a Corporation of New York. Filed Jan. 31, 1916. Serial No. 75,472. (Cl. 34—21.)



1. The combination with a relatively stationary main, of a movable car separated from said main, and a pivoted, extensible pipe connection between said main and said cooling car.

2. The combination with an elevated relatively stationary main, of a movable car below said main, and a telescopic universal pipe connection between said main and said car.

3. The combination with a movable car, of a relatively stationary main, and a telescopic pipe universally connected to said main at one end and to said car at the other end.

4. The combination with a movable car, of a main, a pipe comprising telescoping sections, one pivotally connected to said main and the other to said car, said sections being slidably connected to permit variation of the distance between said main and said car.

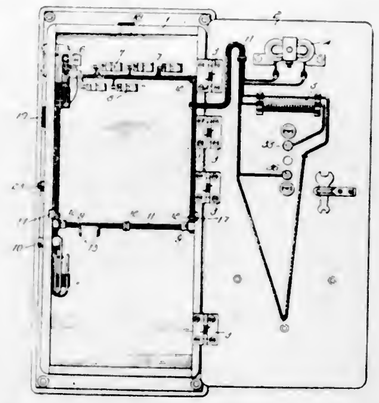
5. The combination with a traveling cooling car having a perforated bottom, of an air box below said bottom, an air main, and an extensible air pipe pivoted at one end to said air box, and at its other end pivoted to said air main.

[Claims 6 to 13 not printed in the Gazette.]

1,218,998. SYSTEM FOR PACKING AND SHIPPING TELEPHONE APPARATUS. ALEXANDER M. HAUBRICH, Chicago, Ill., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed May 23, 1913. Serial No. 769,390. (Cl. 179—100.)

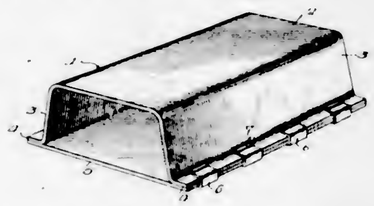
1. In a telephone, the combination of a cabinet, a generator shelf removably supported in the cabinet, a generator rigidly secured to the shelf, telephone apparatus mounted upon the door of the cabinet, binding clamps mounted within the cabinet, and wiring permanently mounted upon the cabinet to connect said telephone apparatus and said clamps, said wiring comprising a separately-formed cable of connectors inserted bodily into the cabinet, said generator and said apparatus being readily removable for shipment.

2. A telephone instrument including a cabinet, a transmitter arm and a transmitter mounted thereon, a generator mounted in said cabinet, a switch hook extending from said cabinet and a shelf mounted on the front face of said cabinet, said cabinet having wiring for said elements grouped in a cable and mounted upon the inner walls thereof, said group of elements being readily sep-



arable, for shipment, into units which do not exceed a predetermined weight, said weight being less than the combined weight of all of said elements.

1,218,999. CORE FOR REINFORCED CONCRETE OR PLASTER FLOOR CONSTRUCTION. CHARLES F. HENNING, Chicago, Ill., assignor to The United States Gypsum Company, Chicago, Ill., a Corporation of New Jersey. Original application filed Apr. 9, 1915, Serial No. 20,162. Divided and this application filed July 26, 1915. Serial No. 41,887. (Cl. 72—66.)



1. A core for concrete and plaster construction comprising an integral member molded from a single sheet of plaster board and having a top, sides and outwardly projecting flanges along the lower edges of the sides, a bottom consisting of a flat sheet of plaster board, and metallic clips securing said bottom to said flanges.

2. A core for concrete and plaster floor construction comprising a member molded from a single sheet of plaster board and having a top and outwardly flaring integral sides of a width equivalent to the desired depth of said core, the lower edges of said sides projecting outwardly parallel to said top and forming flanges, a bottom consisting of a flat sheet of plaster board, and metal clips securing said bottom to said flanges.

1,219,000. CONDENSER FOR AUTOMOBILES. JOE B. HITCH, Brunswick, Ga. Filed Sept. 24, 1915. Serial No. 52,500. (Cl. 261—3.)

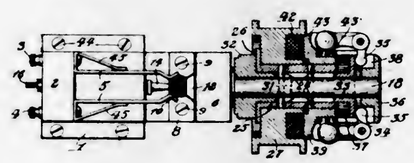
1. The herein described attachment for an automobile radiator, the same comprising an upright cylindrical member mounted on the nipple, its upper end being bent forward and cut off on an oblique line to form a mouth, a funnel, and a movable connection between the funnel and mouth, for the purpose set forth.



2. The herein described attachment for an automobile radiator, the same comprising an upright cylindrical member mounted on the nipple, its upper end being bent forward and cut off on an oblique line to leave a circular opening; a funnel whose shank is cut off on an oblique line to leave a circular opening; and a swivel connection between the members around their circular openings, for the purpose set forth.

3. The herein described condenser for attachment to the nipple of an automobile radiator, the same comprising an upright cylindrical body member, means at its lower end for connection with said nipple, and a reduced upper end bent forward and cut off on an oblique line to leave a circular opening; a funnel whose shank is cut off on an oblique line to leave a circular opening; and a swivel connection between the members around their circular openings, for the purpose set forth.

1,219,001. GOVERNOR AND AUTOMATIC CUT-OUT FOR ELECTRIC GENERATORS. SOLOMON F. JOHNSON and LEVI P. AYRES, Indianapolis, Ind. Filed Dec. 15, 1913. Serial No. 806,751. (Cl. 171—313.)



1. The combination with an electric generator and the armature shaft thereof, of driving means for rotating the armature shaft, a charging circuit connected to the generator, a switch in said charging circuit and means including a single governor associated with the driving means for opening and closing the switch and disconnecting the driving means from the armature shaft.

2. The combination with the storage battery, a charging circuit therefor, a generator and switch included in said circuit, of an armature shaft, driving means for rotating said shaft, means associated with the driving means whereby the switch will be closed when the armature shaft has gained a predetermined speed and opened when the armature shaft has gone below a predetermined speed, including means whereby the driving means will be disconnected from the armature shaft when the same has gone beyond a speed which is greater than is necessary for closing the switch.

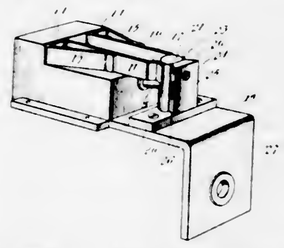
3. The combination with a storage battery, a charging circuit therefor, a generator and a switch included in said circuit, of an armature shaft projecting from the generator, a centrifugal governor carried by the armature shaft, a driving connection between the armature shaft and the prime mover, means for operatively connecting the switch with the centrifugal governor, whereby the switch may be opened and closed and means governed by the centrifugal governor for disconnecting the driving means from the armature shaft when the said shaft attains a predetermined speed for the purpose specified.

4. The combination with a storage battery, a charging circuit therefor, a generator and a switch included in said circuit, of an armature shaft projecting from the generator, a centrifugal governor carried by the armature shaft, a bracket supported upon the generator, the contact member of the switch being carried by the bracket for opening and closing the switch, and means for operatively connecting the bracket with the centrifugal governor for the purpose specified.

5. In combination with a storage battery, a charging circuit therefor, a generator and a switch included in said circuit, of an armature shaft extending from the generator, a centrifugal governor carried by the armature shaft, of driving means associated with said governor for rotating the armature shaft whereby when the shaft has gained a predetermined speed of rotation the switch will be closed and when it has gone beyond a predetermined speed of rotation, the driving means will be disconnected.

[Claims 6 to 18 not printed in the Gazette.]

1,219,002. ELECTRIC SWITCH. SOLOMON F. JOHNSON and LEVI P. AYRES, Indianapolis, Ind. Original application filed Dec. 15, 1913, Serial No. 806,751. Divided and this application filed July 27, 1914. Serial No. 853,302. (Cl. 175—283.)



A circuit closing or breaking device comprising a pair of spring blades having a constricted throat portion but outwardly angularly bent ends, a contact member comprising an insulating block having a rounded front face and having its rear face beveled on both sides to accommodate the constricted portion of the blades, and a conducting block associated with said insulating block and having contact faces parallel with the ends of the blades, said combined blocks forming V-shaped notches having flat faces, substantially as described.

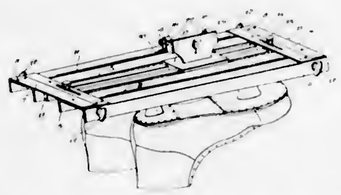
1,219,003. BINDING-POST. WILLIAM KAISLING, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 4, 1913. Serial No. 782,891. (Cl. 173—259.)



A spring binding post comprising a main body portion and a clamping element, a terminal having a slotted end connected to an enlarged central circular orifice for connection to said binding post, the said body portion of the binding post having a threaded shank adapted to receive a nut for securely clamping the binding post, said body portion also having a central circular orifice with an enlarged counterbore at each end thereof, a shank for said clamping element extending through the said central orifice of the body, an actuating spring encircling the shank within the lower enlarged counterbore of the body portion, a central upwardly extending annular rib upon the top face of the enlarged upper portion of the body adapted to receive the enlarged central orifice of the terminal clip, an enlarged head for the clamping element having a downwardly extending circular outer rib adapted to press against the terminal clip to yieldingly hold it through the medium of said actuating spring upon the

central circular rib, and an inner upwardly extending circular recess for said clamping element adapted to receive the said central upwardly extending circular rib of the body portion thereby permitting terminals of different thickness to be securely clamped between the said clamping element and body portion.

1,219,004. SKATE-CLAMP. HARRY E. KALANQUIN, Seattle, Wash. Filed Aug. 16, 1915. Serial No. 45,807. (Cl. 76—83.)



1. In a skate clamp, in combination, a pair of clamping members, a trackway alongside of and parallel to said clamping members, a carriage slidable thereon, and means for clamping a file upon said carriage against movement relative thereto.

2. In a skate clamp, in combination, a pair of blade-clamping members, a trackway alongside of and parallel to said clamping members, a carriage slidable thereon, said carriage having a vertical slot therein, a file clamp, and a screw passing through said vertical slot and secured in the file clamp to adjustably secure the latter upon the carriage.

3. In a skate clamp, in combination, a pair of blade-clamping members, a trackway alongside of and substantially parallel to said clamping members, transverse slots in said clamping members, set-screws passing through said slots and secured in said trackway to adjust the position of the latter relative to the clamping members, a carriage slidable upon said trackway, and a file clamp secured thereon.

4. In a skate clamp, in combination, blade-clamping members, trackway bars extending alongside of and parallel to the blade-clamping members, means for adjusting said bars toward and from the blade-clamping members, a carriage provided with grooves upon its under face adapted to receive said bars, and slidable thereon, and provided with a vertical plate, a plate vertically adjustable thereon, the ends of said plate being turned inward and spring file clamps secured upon the ends of said plate.

5. In a skate clamp, in combination, a pair of blade-clamping members, trackway bars alongside of and parallel to the clamping members, means for adjusting said bars toward and from the clamping members, a carriage provided with grooves upon its under face adapted to receive said bars and slidable thereon, an upright plate provided with a vertical slot mounted upon said carriage, a second plate adjustably secured thereto by a set screw passing through said slot, the ends of said second plate being turned inward, and file clamps secured upon said ends, and adapted to secure a file against movement relative to the carriage.

1,219,005. FOOD PRODUCT AND PROCESS OF PREPARING THE SAME. JOHN H. KELLOGG, Battle Creek, Mich. Filed Jan. 13, 1916. Serial No. 71,844. (Cl. 99—5.)

1. An article of food in the form of flakes comprising figs, a starch, bran, sugar and salt combined into a mixture in approximately the proportions stated.

2. An article of food in the form of flakes comprising figs, a starch, and bran combined into a mixture in approximately the proportions stated.

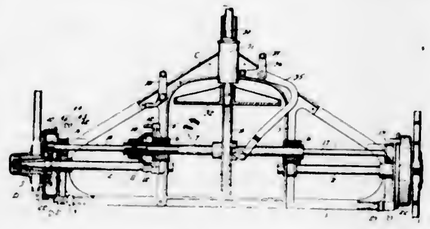
3. An article of food comprising figs, a starch material and bran combined in a mixture in approximately the proportion of one part figs, 1 part starch material and 6 parts bran.

4. A cooked article of food in the form of dry flakes, comprising figs, starch and bran.

5. The process of manufacturing an article of food in the form of toasted flakes consisting of reducing figs to a paste or semi-liquid condition, reducing starch to a pasty or semi-liquid condition, mixing such fig and starch materials with bran, and sugar and salt in approximately the proportions stated, reducing such mixture to a granular condition, and flaking and drying the flakes.

[Claim 6 not printed in the Gazette.]

1,219,006. REAR-AXLE CONSTRUCTION FOR MOTOR-VEHICLES. CADWALLADER W. KELSEY, Hartford, Conn. Filed Oct. 29, 1914. Serial No. 869,214. (Cl. 21—90.)



1. In a device of the character described, a rear axle frame, wheel shafts and supports therefor mounted on said frame, traction wheels mounted on said shafts; a friction wheel shaft parallel to said traction wheel shafts and supports therefor on said frame in fixed relation to the support of said traction wheel shafts; reduction gearing between said friction wheel shaft and said traction wheels; a friction wheel keyed to and slidingly mounted upon its shaft; a propeller shaft supported at its rear end in said frame, a friction disk mounted on said shaft, means for moving said disk into and out of engagement with said friction wheel; and differential mechanism located between said traction wheels.

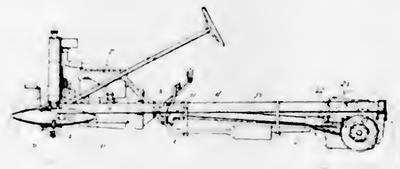
2. In a device of the character described, a rigid rear axle frame, axially alined shafts and fixed bearings therefor on said frame, a differential mechanism located between the adjacent ends of said alined shafts, a member of said differential mechanism being connected with each shaft; a friction wheel, a shaft to which it is keyed and on which it is slidingly mounted, fixed bearings for said shaft on said frame, said shaft being coupled to said differential mechanism; wheel shafts parallel to said alined shafts and fixed bearings therefor on said frame; wheels on said shafts; reduction gearing between said alined shafts and their corresponding wheels, a propeller shaft supported at its rear end in said frame, a friction disk mounted on said propeller shaft in operative relation with said wheel, and means for moving said disk into and out of engagement with said wheel.

3. In a device of the character described, a rigid rear axle frame, axially alined shafts and fixed bearings therefor on said frame; a differential mechanism located between the adjacent ends of said alined shafts, a member of said differential mechanism being connected with each shaft; a tubular shaft surrounding one of said alined shafts, fixed bearings therefor on said frame, said shaft being coupled to said differential mechanism, and a friction wheel keyed to and slidingly mounted upon said shaft, wheel shafts parallel to said alined shafts and fixed bearings therefor on said frame, wheels on said shafts, reduction gearing between said alined shafts and their corresponding wheels; a propeller shaft supported at its rear end in said frame, a friction disk mounted on said propeller shaft in operative relation with said wheel, and means for moving said disk into and out of engagement with said wheel.

4. A rear axle frame for motor vehicles, spindles separated from but supported at each end thereof, wheels rotatably mounted on said spindles, a differential mechanism carried by said frame, shafts mounted in said frame and connected with members of said differential mechanism, driving connections between said shafts and said wheels, a tubular shaft connected with the housing of said differential, a friction wheel mounted upon and slidable along said tubular shaft, and a friction disk supported on said axle and in operative relation with said friction wheel.

5. In a motor vehicle, a rear axle comprising a frame, a central integral bracket mounted on said frame, a propeller shaft supported at its rear end in a bearing in said bracket, a friction disk mounted at the end of said shaft, a second shaft arranged at right angles to the propeller shaft and supported in bearings in said bracket, a friction wheel slidingly mounted on said shaft and adapted for coöperation with said friction disk, propeller wheels mounted on said frame, geared connections between the last mentioned shaft and said propeller wheels and means for moving said friction disk into and out of engagement with said friction wheel.

1,219,007. MOTOR-VEHICLE. CADWALLADER W. KELSEY, Hartford, Conn. Filed Oct. 25, 1915. Serial No. 57,629. (Cl. 21—90.)



1. In a motor vehicle, front and rear vehicle wheels, a vehicle frame yieldingly supported therefrom, a rear axle frame unyieldingly supported by the rear wheels, a motor and its shaft carried by the vehicle frame, a rigid propeller shaft, a support for the forward end thereof from said vehicle frame, a flexible coupling connecting said motor shaft and propeller shaft, a bearing in said rear axle frame for the rear end of said propeller shaft, a friction disk secured to the rear end of said propeller shaft, a friction wheel carried by said rear axle frame and coöperating with said disk, said wheel being mounted for movement relative to said disk to change its speed and direction of rotation, and reduction gearing mounted on said rear axle frame and connecting said friction wheel and the rear vehicle wheels.

2. In a motor vehicle, front and rear wheels, a vehicle frame spring supported therefrom, a motor and its shaft mounted at the forward end of the frame, change speed friction driving mechanism wholly supported by said rear wheels, reduction gearing between the driven member thereof and the rear wheels, a rigid propeller shaft to the rear end of which is secured the driving member of said friction mechanism, and a flexible couping forming a direct permanent driving connection between the forward end of said propeller shaft and said motor shaft.

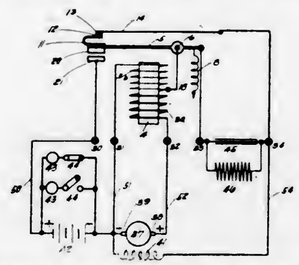
3. In a motor vehicle, a vehicle frame, a front axle and a spring suspension therefrom for said frame, a rear axle frame and a spring suspension therefrom for said vehicle frame, wheels supporting said front axle and said rear axle frame, a motor mounted in the forward end of said vehicle frame, a change speed friction driving mechanism mounted on said rear axle frame, a driving connection between the driven member of said friction mechanism and said rear wheels, reduction gearing forming a part of said driving connection, a rigid propeller shaft, a flexible connection interposed between the motor shaft and the forward end of the propeller shaft, and to the opposite sides of which the said shafts are connected to cause said shafts to always rotate together, and the driving member of said friction mechanism secured to the rear end of said propeller shaft.

4. In a motor vehicle, a front axle, a rear axle frame, wheels supporting said front axle and rear axle frame, a vehicle frame spring supported from said front axle and rear axle frame, a motor mounted on said vehicle frame, friction driving mechanism mounted on the rear axle frame, a rigid propeller shaft provided at one end with a flexible connection with said motor and at its opposite end receiving the driving member of said friction mechanism whereby said motor, propeller shaft and driving member are permanently connected to rotate together at the same speed, means for engaging and disengaging the members of said friction mechanism, and means for moving the driven member thereof relatively to the driving member to vary and change the direction of rotation of the driven member, reduction gearing between said driven member and the rear vehicle wheels, and a differential mechanism between said wheels.

5. In a motor vehicle, front and rear wheels, a vehicle frame spring supported therefrom, a rear axle frame supported by said rear wheels, a motor and its shaft at the forward end of said vehicle frame, a rigid propeller shaft, a bearing in said rear axle frame for the rear end of said propeller shaft, a friction disk mounted at the rear of said propeller shaft, a friction wheel movable across the face of said friction disk, a friction wheel shaft and bearings therefor on said rear axle frame in fixed relation with the bearing of said propeller shaft, wheel shafts and suitable bearings therefor in said rear axle frame in fixed relation with said friction wheel shaft, reduction gearing between said friction wheel shaft and said rear wheels, differential mechanism between the rear wheels, a housing, a flexible joint connecting said housing with said motor, a support between said rear axle frame and said housing, a flexible coupling directly connecting said motor shaft to the forward end of said propeller shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,219,008. SYSTEM FOR SUPPLYING ELECTRICITY. WILLIAM OSCAR KENNINGTON, Anderson, Ind., assignor to Remy Electric Company, Anderson, Ind. Filed May 21, 1914. Serial No. 840,127. (Cl. 171—313.)



1. In a system for supplying electricity, the combination with a generator, a field circuit for said generator and an armature circuit for said generator, of a relay having a magnet responsive to the output of said generator, and an armature controlling field contacts and main contacts, said field contacts being associated with said field circuit so as to reduce the excitation of said generator when its output exceeds a predetermined value, and said main contacts being associated with said main circuit so as to close said main circuit when the voltage of said generator exceeds a pre-determined value, and so as to open said main circuit when electrical power is supplied to said generator, and means yieldably opposing further closing movement of said main contacts after initial contact.

2. A system for supplying electricity including a relay having in combination, an electromagnet, an armature for said electro-magnet, a back contact associated with said armature, a coöperating back contact associated with some part other than said armature, a front contact associated

with said armature, and a coöperating front contact associated with some part other than said armature, at least one front contact and one back contact being yieldingly connected to that portion of the relay with which it is associated.

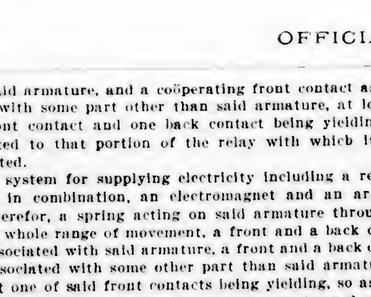
3. A system for supplying electricity including a relay having in combination, an electromagnet and an armature therefor, a spring acting on said armature throughout its whole range of movement, a front and a back contact associated with said armature, a front and a back contact associated with some other part than said armature, at least one of said front contacts being yielding, so as to permit further movement of said armature toward said electromagnet after the engagement of said front contacts, but so as to require greater force to produce said movement than is required previous to the engagement of said front contacts.

4. In a system for supplying electricity, the combination with a generator, a field circuit and an armature circuit for said generator, contacts for said circuits, of a relay having a magnet responsive to the output of said generator, an armature controlling the field and main circuits, and a resistance between said armature and said field circuit independent of said contacts, said armature adapted to separate said field contacts when the output of the generator exceeds a predetermined value, whereby the current will flow through said resistance to the field circuit, and said armature adapted to close said main contacts to close the main circuit when the voltage of said generator exceeds a predetermined value, and to separate said main contacts to open the main circuit when electrical power is supplied to said generator.

5. A system for supplying electricity, including the combination with a generator and a main circuit, and a field circuit for said generator, of a relay having an armature controlling front and back contacts controlling said circuits, said front and back contacts having overlapping closed positions, and means for limiting the movement of one of said contacts in one direction of closing movement to separate the same from its coöperating contact.

[Claim 6 not printed in the Gazette.]

1,219,009. METAL WEATHER-STRIP. ALFRED M. LANE, St. Louis, Mo., assignor to Monarch Metal Weather Strip Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 26, 1912. Serial No. 716,974. Renewed Feb. 19, 1916. Serial No. 79,469. (Cl. 20—69.)



1. In a weather guard, the combination with a frame and a sash slidably mounted therein, of a relatively rigid metal strip and a relatively flexible metal strip, one of said strips being secured to the frame and the other to the sash, said strips having coöperating portions engaged near one side of the slideway so as to prevent a draft between them, said engagement being such that the strips are capable of sliding longitudinally but are interlocked against independent lateral movement with respect to each other, said flexible strip being fastened along one of its margins near the opposite side of the slideway, its body portion lying loose between the end face of the sash and adjacent face of the frame.

2. In a weather guard, the combination with a frame and a sash slidably mounted therein, of a relatively rigid metal strip and a relatively flexible metal strip, one of said strips being secured to the frame and the other to the sash, said strips having coöperating portions engaged so as to prevent a draft between them, said engagement being such that the strips are capable of sliding longitudinally but are interlocked against independent lateral movement with respect to each other, said flexible strip being fastened along one of its margins, its body portion lying loose between the end face of the sash and adjacent face of the frame, and said flexible strip having its free marginal portion flanged and working loosely in a slot provided therefor in the part on which it is mounted.

3. In a weather guard, the combination with a frame and a sash slidably mounted therein, of a relatively flexible metal strip secured along one of its margins to the frame near one side of the slideway, the body portion of said strip lying loose between the end face of the sash and adjacent face of the slideway and extending near the opposite side of the slideway, said strip having a longitudinally slidable but laterally interlocked weather-tight engagement near its free margin with the sash.

4. In a weather guard, the combination with a frame and a sash slidably mounted therein, of a relatively rigid metal strip secured to the sash, and a relatively flexible metal strip secured along one marginal portion to the frame adjacent to one side of the slideway for the sash, its body portion lying loose between the end face of the sash and adjacent face of the slideway, and its opposite marginal portion being flanged and working loosely in a slot provided therefor in the frame adjacent to the opposite side of said slideway, said metal strips having longitudinal portions engaged so as to prevent a draft between them, the engagement being such that the strips are capable of sliding longitudinally but are interlocked against independent lateral movement with respect to each other.

5. In a weather guard, the combination with a frame and sash slidably mounted therein, of a relatively rigid metal strip and a relatively flexible metal strip, one of said strips being secured to the frame and the other to the sash, said strips having coöperating portions engaged near one side of the slideway so as to prevent a draft between them, said engagement being such that the strips are capable of sliding longitudinally but are interlocked with each other independently of the part upon which each strip is mounted against separation by movement of the sash in its plane in either direction, said flexible strip being fastened along one of its margins near the opposite side of the slideway, its body portion lying loose between the end face of the sash and adjacent face of the frame.

[Claims 6 to 9 not printed in the Gazette.]

1,219,010. VALVE-GRINDING TOOL. CHARLES L. LATIMER, Fort Wadsworth, N. Y. Filed Dec. 12, 1916. Serial No. 136,482. (Cl. 51—4.)

1. A valve grinding tool comprising an operating handle, a valve engaging head carried by said handle, a bit mounted in said head and having a projection for engaging the recess in a valve, and a centering device yieldably mounted in said head.

2. A valve grinding tool comprising an operating handle, a valve engaging head carried by said handle, a bit mounted in said head and having a projection for engaging the recess in a valve, a centering pin mounted in said head and projecting into said handle, and a spring mounted in said handle and engaging said pin for yieldably supporting the same in a projected position.

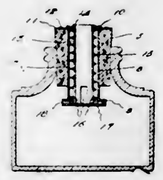
3. A valve grinding tool comprising an operating handle, a valve engaging head carried by said handle, and having oppositely disposed substantially conical recesses and openings communicating therewith, an adjustable bit rotatably mounted in each recess and having a shank extending through the opening which communicates with said recess, means engaging said shank for securing the bit in its adjusted positions, and a projection extending from each bit for engaging an opening in a valve.



4. A valve grinding tool comprising an operating handle, a valve engaging head carried by said handle, and having oppositely disposed substantially conical recesses and openings communicating therewith, an adjustable bit rotatably mounted in each recess and having a shank extending through the opening which communicates with said recess, means engaging said shank for securing the bit in its adjusted positions, a projection extending from each bit for engaging an opening in a valve, and a centering device mounted in said head.

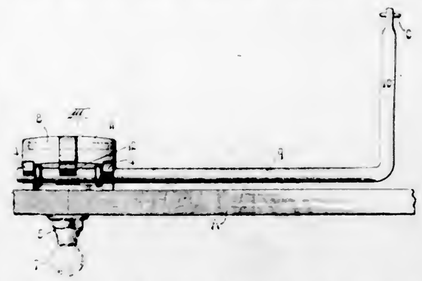
5. A valve grinding tool comprising an operating handle, a valve engaging head carried by said handle, a centering pin mounted in said head and projecting into said handle, and a spring mounted in said handle and engaging said pin for yieldably supporting the same in a projected position.

1,219,011. INK-BOTTLE. ISAAC LAUFMAN, Fort Wayne, Ind. Filed Apr. 21, 1916. Serial No. 92,740. (Cl. 120—71.)



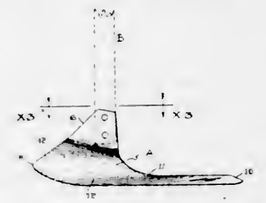
A stopper for inkwells including a tubular resilient body, a washer carried by the upper edge thereof and in alinement with the inner and outer edges, a metallic sleeve engaged within the body and having a head on the upper edge thereof for engaging the washer so as to support the body, an annular flange on the lower end of the sleeve, a pen receiving cylinder slidably mounted within the sleeve and arranged in close relation with the flange and having a plurality of slots in the lower edge thereof, an exterior annular flange on the upper end of the cylinder and arranged in close relation with the sleeve, a coil expansion sleeve disposed about the cylinder and having the respective ends abutting the flanges, the flanges also serving to guide the sliding movement of the cylinder, and a closure disk carried by the lower edge of the cylinder and having a gasket concentric of the cylinder and working against the sleeve.

1,219,012. MECHANISM FOR OPERATING FLUSH-VALVES. LOUIS D. LAWNIN and JOHN F. STAAB, Edwardsville, Ill., assignors to N. O. Nelson Manufacturing Company, Edwardsville, Ill., a Corporation. Filed May 23, 1913. Serial No. 769,385. (Cl. 4—5.)



In a flush valve operating mechanism, a valve lifting lever comprising a rotatable member and an arm extending at an angle from said rotatable member, said arm being provided with an abutment member having a convex lower face, and a shaft arranged transversely relative to said rotatable member and provided with a lift bar having a convex top face engaging said abutment member to rotate said rotatable member.

1,219,013. CULTIVATOR. ALBERT L. LEIGHTON, Artesia, Cal. Filed Dec. 16, 1916. Serial No. 137,395. (Cl. 97—16.)



A cultivator blade adapted to be applied to the earth progressively in close proximity to a row of plants, comprising an elongated body, means for supporting said body in position for service, and with a portion thereof inclined to the horizontal, said body being provided with a lower cutting edge portion lying substantially in a common plane approximately at right angles to the angle of inclination of the inclined body portion, said body likewise having an oblique transverse curvature extending from a predetermined point in its upper edge portion to its leading edge portion whereby said leading edge portion is slightly curved or offset laterally.

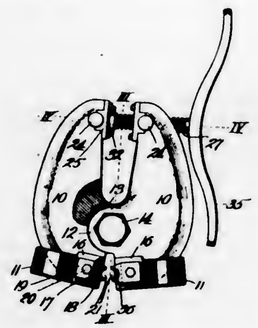
1,219,014. BURNER-LID. WALTER C. LINDEMANN, Milwaukee, Wis., assignor to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Filed Mar. 20, 1915. Serial No. 15,682. (Cl. 126—215.)



A lid for the purpose specified comprising a plate having a series of radial ribs upon one side spaced to form a series of passages, ribs extending transversely of said

first ribs at their outer ends, the ends of said transversely extending ribs being spaced to form reduced mouths for said passages and ribs extending outwardly of said transverse ribs.

1,219,015. WIRE ROPE OR CABLE CLAMP. ALBERT P. MCBRIDE, Independence, Kans. Filed July 24, 1914. Serial No. 852,924. (Cl. 24—135.)



1. A wire rope or cable clamp comprising pivoted members having jaws at one side of the pivot and swiveled blocks at the other side of the pivot, a pair of slips secured in the inner faces of the jaws and provided with opposing semicylindrical grooves and also provided with arms at their upper ends resting and secured upon the upper ends of the jaws, in combination with a screw extending through said blocks and bearing a threaded relation to one of them and a journaled relation to the other and incapable of longitudinal movement through the latter, and a handle for turning said screw.

2. The combination of a pair of members pivoted together between their ends and provided with gripping jaws at one end, and a screw extending through the members at their opposite ends and bearing a swiveled relation thereto; said screw also bearing a threaded relation to one of the members and a journaled relation to the other and a fixed relation as regards endwise movement to the last-mentioned member.

3. The combination of a pair of members pivoted together between their ends and provided with gripping jaws at one end, a block swiveled on each member, a screw extending through said blocks and journaled in one of them and threaded in the other, a thrust bearing between the screw and the inner side of the block in which the screw is journaled, and means secured to the screw and bearing against the outer side of the block in which the screw is journaled.

1,219,016. COPRA-DRYING APPARATUS. JOHN D. MCCORD, Manila, Philippine Islands. Filed Mar. 20, 1916. Serial No. 85,390. (Cl. 34—39.)

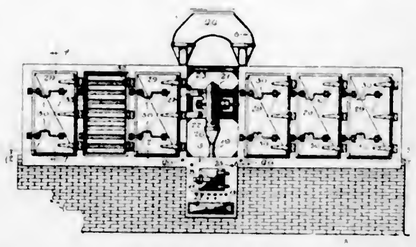
1. A drying apparatus comprising a double walled drying chamber, a heat flue surrounding said chamber, and means for circulating air between the double walls of said chamber and into same.

2. A drying apparatus comprising a drying chamber, an air flue surrounding said chamber and communicating therewith, a heat flue surrounding said air flue, and means for forcing air into said first-mentioned flue and into said chamber.

3. A drying apparatus comprising a drying chamber, a heater, a flue leading from said heater around said chamber, and means for circulating air between said flue and chamber and into the latter.

4. A drying apparatus comprising a drying chamber, a heater, a flue leading from said heater around said chamber, an air flue interposed between said heater flue and chamber and communicating with the latter, and means for forcing heated air into said air flue.

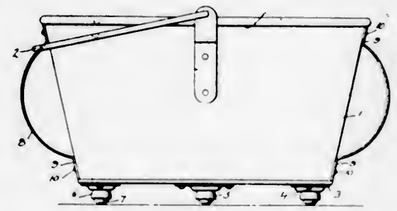
5. A drying apparatus comprising a drying chamber provided with an exterior air space, a heater having an air space exterior thereto, means establishing communi-



cation between said chamber air space and said heater air space, and a flue leading from said heater and surrounding said drying chamber and its respective air space.

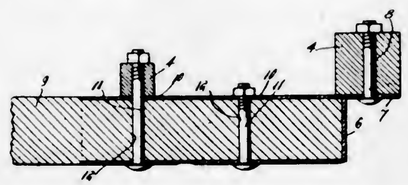
[Claims 6 to 13 not printed in the Gazette.]

1,219,017. SCRUBBING-PAIL. KATHERINE T. MACLIN, North Emporia, Va. Filed Dec. 14, 1915. Serial No. 66,781. (Cl. 220—33.)



A receptacle of the class described adapted to have movement over a surface; a pair of arcuate shaped elements located at opposite points on the receptacle and each having a length approximately co-extensive with the height of the receptacle; and a bail pivotally mounted on the receptacle at the upper end thereof and adapted, when in inoperative position, to rest on either of the arcuate shaped elements.

1,219,018. SWEEP-RAKE. STEPHEN J. MADDEN, Salina, Kans. Filed May 8, 1916. Serial No. 96,144. (Cl. 56—69.)



1. In a sweep rake, the combination with a rake frame including parallel transverse sills, of a housing extending across and secured to the sills, said housing consisting of an elongated receptacle for removably receiving the base of a rake tooth, the forward end of the housing being secured below the forward transverse sill and the rear end of the housing being provided with a rearwardly projecting plate which underlies the rearmost sill and constitutes a means for attaching the housing to the rearmost sill, and means securing said plate and said rearmost sill together.

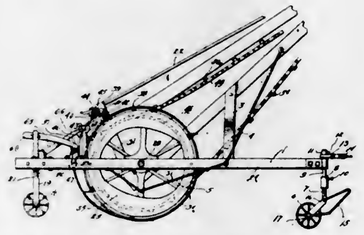
2. In a sweep rake, the combination with a rake frame, including parallel transverse sills, of a housing extending across and secured below said sill, said housing consisting of an elongated receptacle for removably receiving the base of a rake tooth, and means for securing a tooth in the housing, said housing consisting of a tubular structure having its rear end closed and having a securing plate projecting beyond the closed end and underlying the rearmost sill whereby the housing may be secured to the latter without interfering with the removability of the rake tooth.

1,219,019. ARTIFICIAL TOOTH AND MOUNTING OF SAME. EDWIN RANDOLPH MAGNUS, Sydney, New South Wales, Australia. Filed Feb. 23, 1916. Serial No. 79,907. (Cl. 32—9.)



An artificial tooth structure comprising a tooth, a resilient slipper extending over the base and sides of the tooth and a base plate in which such tooth and slipper is embedded, said slipper being entirely embedded in said base plate.

1,219,020. HAY-LOADER. JOSEPH O. MANTOOTH, Newport, Ark. Filed Sept. 18, 1916. Serial No. 120,743. (Cl. 56—61.)



1. In a hay loader, the combination with a frame and ground engaging wheels carried thereby; of a pair of castings mounted on said frame adjacent said wheels, each casting having a pair of cam tracks, a plurality of rods extending between the spokes of said wheels and having bearings thereon and also extending between said castings, diverging arms on the ends of said rods, rollers on said arms operable in said tracks, certain of said rollers engaging certain of said tracks, and a plurality of teeth carried by each of said rods.

2. In a hay loader, the combination with a frame, a raking reel carriel thereby; of a plurality of guide rods mounted in spaced relation to the reel, a bar for supporting said rods, means for raising and lowering said frame to vertically adjust said rods, means for also adjusting said rods to and away from said reel, a plurality of rake teeth, and means for moving the ends of said teeth to and away from said reel independently of the adjustment of said rods.

3. In a hay loader, the combination with a horizontal frame, of a pair of vertically arranged toothed standards adjustably connected to the rear end thereof and movable at right angles thereto, wheels on said standards, a shaft extending transversely of said frame, pinions on said shaft and engaging the teeth on said standards, a crank handle secured to said shaft, and means carried by said frame and engaging said handle for securing said standards in various positions.

4. In a hay loader, the combination with a frame, of toothed supporting standards at the rear end thereof, a raking reel, a pair of crank members mounted on the frame, a tooth carrying beam secured to said crank members, a shaft extending transversely of the frame, pinions on the shaft intermeshing with the teeth on the standards, a lever connected to one crank member and having a slot therein, a locking bolt extending through said slot and the adjacent standard and means for adjusting the frame on the standards when the bolt is released.

1,219,021. FLUID-PROOFED HOLLOW OBJECT AND PROCESS FOR MAKING HOLLOW OBJECTS FLUID-PROOF. CHARLES M. MAPES, New York, N. Y. Filed July 1, 1916. Serial No. 107,186. (Cl. 91—70.)

1. The process of making hollow objects fluid-proof which consists in subjecting said objects to a degree of force at least equal to the maximum force to which the objects will be subjected under predetermined conditions of use, and maintaining the stressed condition by filling permanently voids in the walls of the objects with a fluid-repellent material.

2. The process of making hollow objects fluid-proof which consists in subjecting said objects to pressure at least equal to the maximum pressure to which the objects will be subjected under predetermined conditions of use, and maintaining the stressed condition by filling permanently voids in the walls of the objects with a fluid-repellent material.

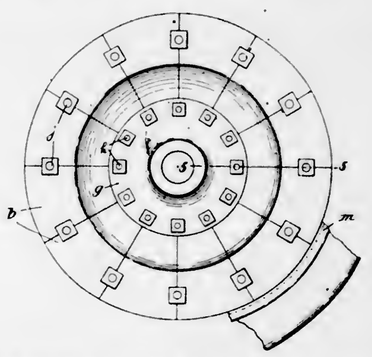
3. The process of making hollow objects fluid-proof which consists in subjecting said objects to pressure at least equal to the maximum pressure to which the objects will be subjected under predetermined conditions of use, and maintaining the stressed condition by forcing a fluid-repellent material into voids in the walls of the objects to remain therein permanently.

4. The process of making hollow objects fluid-proof which consists in subjecting said objects to pressure from a fluid-repellent material at least equal to the maximum pressure to which the objects will be subjected under predetermined conditions of use, and maintaining the stressed condition by permitting the fluid-repellent material to remain permanently in the voids in the walls of the objects.

5. The process of making hollow objects fluid-proof which consists in subjecting said objects to pressure at least equal to the maximum pressure to which the objects will be subjected under predetermined conditions of use, and maintaining the stressed condition by filling permanently the voids in the walls of the objects with a heated fluid-repellent material which solidifies at ordinary temperatures.

[Claims 6 to 24 not printed in the Gazette.]

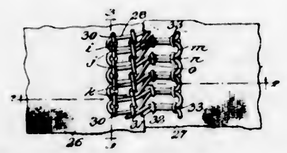
1,219,022. AUTOMOBILE-TRUCK WHEEL. FRANCIS S. MERRILL, Amesbury, Mass. Filed Dec. 27, 1915. Serial No. 68,630. (Cl. 21—69.)



A vehicle wheel comprising a plurality of layers of sector shaped pieces of wood arranged with their vertical portions adjacent to the axis of the wheel and having the

grain of the wood of said pieces extending approximately radially of the wheel, and comprising two outer layers having the pieces thereof arranged in substantially radial positions, and two inner layers having the pieces thereof respectively arranged at opposite inclinations to said positions, and clamping bolts extending through all of said layers.

1,219,023. SEAM. ARTHUR A. MERRITT, Worcester, Mass., assignor to Willcox & Gibbs Sewing Machine Co., New York, N. Y., a Corporation of New York. Filed Jan. 29, 1910. Serial No. 540,826. (Cl. 112—34.)



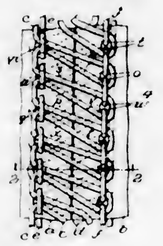
1. In a thread-structure, the combination of a surface thread looped back and forth in one face of the structure, a second surface thread looped back and forth in the other face of the structure, a locking thread looped back and forth in interlocking engagement with the loops in both surface threads along one edge of the structure, and a second locking thread looped back and forth in interlocking engagement with loops in both surface threads along the other edge of the structure, each of said four threads serving to secure the loops of the threads with which it interlocks, and one or more additional locking threads located between the two aforesaid locking threads and disposed similarly to the latter with relation to the two surface threads.

2. In a thread-structure, the combination of a surface thread looped back and forth in one face of the structure, a second surface thread looped back and forth in the other face of the structure, a locking thread looped back and forth in interlocking engagement with the loops in both surface threads along one edge of the structure, and a second locking thread looped back and forth in interlocking engagement with loops in both surface threads along the other edge of the structure, the thread of each loop in both surface threads passing through two loops in a locking thread and the thread of each loop in both locking threads passing through two loops in a surface thread, each of said four threads serving by such interlocking of loops to secure the loops of the threads with which it interlocks and one or more additional locking threads located between the two aforesaid locking threads and disposed similarly to the latter with relation to the two surface threads.

3. In a seam, the combination with fabric, of a surface thread looped back and forth against the surface of the fabric in one face of the seam, a second surface thread looped back and forth against the surface of the fabric in the opposite face of the seam, a locking thread looped back and forth through the fabric in interlocking engagement with the loops in both surface threads along one edge of the seam, and a second locking thread looped back and forth in interlocking engagement with loops in both surface threads along the other edge of the seam, each of said four threads serving to secure the loops of the threads with which it interlocks, and one or more additional locking threads located between the two aforesaid locking threads and disposed similarly to the latter with relation to the two surface threads.

4. In a seam, the combination with fabric, of a surface thread looped back and forth against the surface of the fabric in one face of the seam, a second surface thread looped back and forth against the surface of the fabric in the opposite face of the seam, a locking thread looped back and forth through the fabric in interlocking engagement with the loops in both surface threads along one edge of the seam, and a second locking thread looped back and forth in interlocking engagement with loops in both surface threads along the other edge of the seam, the thread of each loop in both surface threads passing through two loops in a locking thread and the thread of each loop in both locking threads passing through two loops in a surface thread, each of said four threads serving by such interlocking of loops to secure the loops of the threads with which it interlocks, and one or more additional locking threads located between the two aforesaid locking threads and disposed similarly to the latter with relation to the two surface threads.

1,219,024. SEAM AND METHOD OF FORMATION. ARTHUR A. MERRITT, Worcester, Mass., assignor to Willcox & Gibbs Sewing Machine Co., New York, N. Y., a Corporation of New York. Filed Oct. 18, 1915. Serial No. 56,459. (Cl. 112—34.)



1. In a thread structure, the combination of a surface-thread looped back and forth in one face of the structure, a second surface-thread looped back and forth in the other face of the structure, a locking-thread looped back and forth in interlocking engagement with the loops in both surface-threads along one edge of the structure, and a second locking-thread looped back and forth in interlocking engagement with loops in both surface-threads along the other edge of the structure, each of said four threads serving to secure the loops of the threads with which it interlocks, and the loops of said threads being so arranged as to project through each other in the following order—a loop of the first surface-thread projects through a loop of the first locking-thread; a loop of the second locking-thread projects through said loop of the first surface-thread; a loop of the second surface-thread projects through said loop of the second locking-thread; an alternately succeeding loop of the first locking-thread projects through said loop of the second surface-thread; an alternately succeeding loop of the first surface-thread projects through said last-named loop of the first locking-thread, and so on.

2. In a thread structure, the combination of a surface-thread looped back and forth in one face of the structure, a second surface-thread looped back and forth in the other face of the structure, a locking-thread looped back and forth in interlocking engagement with the loops in both surface-threads along one edge of the structure, and a second locking-thread looped back and forth in interlocking engagement with loops in both surface-threads along the other edge of the structure, the thread of each loop in both surface-threads passing through two loops in a locking-thread and the thread of each loop in both locking-threads passing through two loops in a surface-thread, each of said four threads serving by such interlocking of loops to secure the loops of the threads with which it interlocks, and the loops of said threads being so arranged as to project through each other in the following order—a loop of the first surface-thread projects through a loop of the first locking-thread; a loop of the second-locking-thread projects through said loop of the first surface-thread; a loop of the second surface-thread projects through said loop of the second locking-thread; an alternately succeeding loop of the first locking-thread projects through said loop of the second surface-thread; an alternately succeeding loop of the first surface-thread projects through said last-named loop of the first locking-thread, and so on.

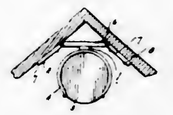
3. In a seam, the combination with fabric, of a surface-thread looped back and forth against the surface of the fabric in one face of the seam, a second surface-thread looped back and forth against the surface of the fabric in the opposite face of the seam, a locking-thread looped back and forth through the fabric in interlocking engagement with the loops in both surface-threads along one edge of the seam, and a second locking-thread looped back and forth in interlocking engagement with loops in both surface-threads along the other edge of the seam, each of said four threads serving to secure the loops of the threads with which it interlocks, and the loops of said threads being so arranged as to project through each other in the following order—a loop of the first surface-thread projects through a loop of the first locking-thread; a loop of the second locking-thread projects through said loop of the first surface-thread; a loop of the second surface-thread projects through said loop of the second locking-thread; an alternately succeeding loop of the first locking-thread projects through said loop of the second surface-thread; an alternately succeeding loop of the first surface-thread projects through said last-named loop of the first locking-thread, and so on.

4. In a seam, the combination with fabric, of a surface-thread looped back and forth against the surface of the fabric in one face of the seam, a second surface-thread looped back and forth against the surface of the fabric in the opposite face of the seam, a locking-thread looped back and forth through the fabric in interlocking engagement with the loops in both surface-threads along one edge of the seam, and a second locking-thread looped back and forth in interlocking engagement with loops in both surface-threads along the other edge of the seam, the thread of each loop in both surface-threads passing through two loops in a locking-thread and the thread of each loop in both locking-threads passing through two loops in a surface-thread, each of said four threads serving by such interlocking of loops to secure the loops of the threads with which it interlocks, and the loops of said threads being so arranged as to project through each other in the following order—a loop of the first surface-thread projects through a loop of the first locking-thread; a loop of the second locking-thread projects through said loop of the second surface-thread; an alternately succeeding loop of the first locking thread projects through said loop of the second surface-thread; an alternately succeeding loop of the first surface-thread projects through said last-named loop of the first locking-thread, and so on.

5. In a thread structure, the combination of two surface-threads looped from opposite directions and simultaneously across both faces respectively of the structure, and two locking-threads interlooping with said surface-threads from opposite sides respectively of the structure, said locking-threads being thus interlooped simultaneously with respect to each other and also simultaneously with respect to the looping of said surface-threads for each stitch, each of said four threads serving by such interlocking of loops to secure the loops of the threads with which it interlocks, and the loops of said threads being so arranged as to project through each other in the following order—a loop of the first surface-thread projects through a loop of the first locking-thread; a loop of the second locking-thread projects through said loop of the first surface-thread; a loop of the second surface-thread projects through said loop of the second locking-thread; an alternately succeeding loop of the first locking-thread projects through said loop of the second surface-thread; an alternately succeeding loop of the first surface-thread projects through said last-named loop of the first locking-thread, and so on.

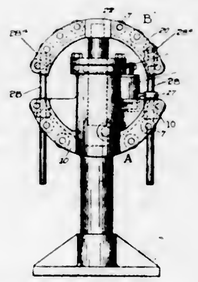
[Claims 6 to 16 not printed in the Gazette.]

1,219,025. BRACKET. GEORGE W. MERTZ, North Fort Worth, Tex. Filed Oct. 7, 1916. Serial No. 124,326. (Cl. 248—20.)



A bracket comprising a vertical standard, a supporting plate secured to the standard, resilient clamps secured to the standard for receiving and supporting an article upon the plate, transverse bars secured to the upper and lower ends of the vertical standard and each consisting of a central section and a pair of movable sections hinged to each end of the central section whereby the device may be secured to a wall or in the corner of a pair of adjoining walls.

1,219,026. STRETCHING-MACHINE. HOWARD I. MORRIS, San Diego, Cal., assignor to The Savage Tire Company, San Diego, Cal., a Corporation of California. Filed Nov. 18, 1916. Serial No. 132,163. (Cl. 69—1.5.)



1. A machine of the character disclosed, comprising relatively separable members with which the work is to be engaged for stretching, means for relatively moving said members, and work-engaging means movably mounted upon one of said members in such manner that the work may freely stretch over said member.

2. A machine of the character disclosed, comprising relatively separable members with which the work is to be engaged for stretching, means for relatively moving said members, and work-engaging means movably mounted upon both of said members in such manner that the work may freely stretch over said members.

3. A machine of the character disclosed, comprising relatively separable members with which the work is to be engaged for stretching, means for relatively moving said members, and work-engaging means movably mounted upon one of said members in such manner that the work may freely stretch over said member; said movably mounted means comprising a plurality of rollers.

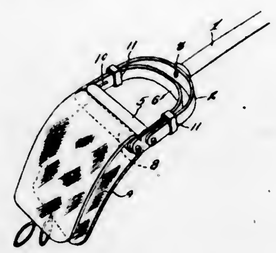
4. A machine of the character disclosed, comprising relatively separable members with which the work is to be engaged for stretching, means for relatively moving said members, and work-engaging means movably mounted upon both of said members in such manner that the work may freely stretch over said members; said movably mounted means comprising a plurality of rollers; said members being curved and said rollers being arranged with respect to each member in a series conforming to such curvature.

5. A machine of the character disclosed, comprising relatively separable members with which the work is to be engaged for stretching, means for relatively moving said members, and work-engaging means movably mounted upon one of said members in such manner that the work

may freely stretch over said members; means further being provided for limiting the relative movement of said members.

[Claims 6 to 9 not printed in the Gazette.]

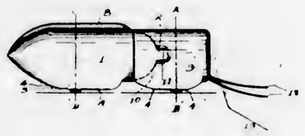
1,219,027. MOP HOLDER AND WRINGER. ISRAEL H. MURDICK, Benton Harbor, Mich. Filed June 1, 1916. Serial No. 101,126. (Cl. 15—43.)



1. A mop holder comprising a pair of U-shaped spring frames, one fitting within the other so that the side arms of both frames may slide adjacent each other, the arms of the inner frame being longer than the arms of the exterior frame, said inner arms having elongated slots, a roller having its pintles extending through the slots of the inner frame and being journaled in the extremities of the arms of the exterior frame, a roller journaled in the extremities of the arms of the inner frame, and between which and the first roller a mop may be clamped, the arched portions of both frames being spaced apart, metal straps extending about the adjacent arms of both frames to be adjusted toward the center portion of the arches of both frames to draw the arches closer together to clamp the rollers together, and a handle secured to the central part of the arch of the exterior frame.

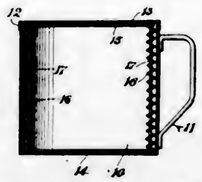
2. In a mop holder, the combination of a pair of U-shaped spring frames, one fitting within the other so that the sides of both frames may slide adjacent each other and provided with guiding means carried by the sides to guide one of the frames when moved and rollers adjacent to each other journaled in the ends of said frames, of means carried by the sides of the frame to hold one frame in adjusted position relative to the other, whereby a mop may be clamped between the said rollers.

1,219,028. LAND-TORPEDO. ABRAHAM MUST, Ste. Agathe des Monts, Quebec, Canada. Filed Feb. 19, 1916. Serial No. 79,381. (Cl. 102—2.)



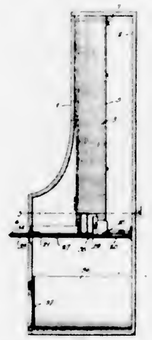
A four wheeled truck having the front frame supported on wheels flexibly connected to its rear frame similarly supported, said rear frame carrying an electric equipment operatively connected to the rear and driven wheels and said front frame carrying a shell adapted to contain explosives electrically ignited from said equipment and forming the forward body of the vehicle adapted to be driven toward an obstacle, an electric switch mechanism apart from the vehicle and trailing wires electrically connecting said switch mechanism and said electric equipment.

1,219,029. SPRING-CLOSING RECEPTACLE. RICHARD O. MYERS and JOHN A. KELL, East Akron, Ohio. Filed June 29, 1916. Serial No. 106,689. (Cl. 220—9.)



A device of the character described comprising a receptacle open at its upper end and provided with an inwardly extending flange, a closure disk for said receptacle positioned within the same and provided with openings positioned beneath the inwardly extending flange, rods positioned in said receptacle between the inwardly extending flange and the bottom of the receptacle and extending through the openings of the closure disk to slidably mount the closure disk, and springs positioned about the rods between the closure disk and the bottom of the receptacle and yieldably holding the closure disk raised in engagement with the inwardly extending flange.

1,219,030. COIN-CONTROLLED VENDING-MACHINE. WILLIAM L. NOTTINGHAM, Capeville, Va. Filed Sept. 9, 1915. Serial No. 49,808. (Cl. 194—80.)



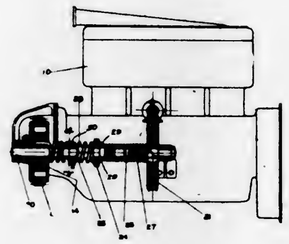
1. In a coin controlled mechanism for vending machines a plate having a coin aperture, a plunger mounted for sliding movement upon said plate and being provided with a coin opening adapted to register with the aperture in said plate, the said plunger being provided with a longitudinal slot communicating with said coin opening, a slide lever arranged in said slot, and a downwardly turned portion on the forward end of said lever extending through said coin aperture and adapted to engage the edges thereof to limit the rearward movement of said lever.

2. In a coin controlled mechanism for vending machines a plate having a coin aperture, a plunger mounted for sliding movement upon said plate and being provided with a coin opening adapted to register with the aperture in said plate, the said plunger being provided with a longitudinal slot communicating with said coin opening, a slide lever arranged in said slot, a downwardly turned portion on the forward end of said lever extending through said coin aperture and adapted to engage the edges thereof to limit the rearward movement of said lever, and a spring for yieldably holding said plunger at the limit of its forward movement.

3. In a coin controlled mechanism for vending machines a plate having a coin aperture, a plunger mounted for sliding movement upon said plate and being provided with a coin opening adapted to register with the aperture in said plate, a slide lever arranged upon said plate, a downwardly turned portion on the forward end of said lever extending through the coin aperture in said plate and adapted to be engaged by a coin confined in the opening in said plunger, and a spring for holding said plunger at the limit of its forward movement.

4. In a coin controlled mechanism for vending machines, a plate having a coin aperture, a plunger mounted for sliding movement upon said plate and being provided with a coin opening adapted to register with said aperture, the said plunger being provided with a longitudinal slot extending inwardly from its rear end and communicating with said opening, a slide lever arranged in said slot, a downwardly turned portion on the forward end of said lever extending through said coin aperture and adapted to engage the edges thereof to limit the rearward movement of said lever, the said plate being provided with an elongated slot, a pin on said slide lever engaged in said slot, and a spring for normally holding said plunger at the limit of its movement in forward direction.

1,219,031. STARTER FOR INTERNAL-COMBUSTION ENGINES. LOUIS H. OBERREICH, Indianapolis, Ind. Filed Oct. 7, 1916. Serial No. 124,414. (Cl. 64—29.)



1. In a starter for internal combustion engines, the combination, with the engine to be started, of a power-receiving part, a part connected to the engine to be started for transmitting power thereto, and a light spring and a heavy spring connected in series between said power-receiving and power-transmitting parts.

2. In a starter for internal combustion engines, the combination, with the engine to be started, of a power-receiving part, a part connected to the engine to be started for transmitting power thereto, an intermediate part, a light spring connecting said intermediate part to one of said first two parts, and a heavy spring connecting said intermediate part to the other of said first two parts.

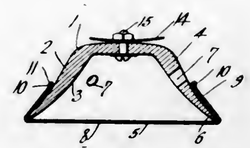
3. In a starter for internal combustion engines, the combination, with the engine to be started, of a power-receiving part, a part connected to the engine to be started for transmitting power thereto, a light spring and a heavy spring connected in series between said power-receiving and power-transmitting parts, and an overrunning clutch between said second part and the engine to be started.

4. In a starter for internal combustion engines, the combination, with the engine to be started, of a power-receiving part, a part connected to the engine to be started for transmitting power thereto, an intermediate part, a light spring connecting said intermediate part to one of said first two parts, a heavy spring connecting said intermediate part to the other of said first two parts, and an over-running clutch between said second part and the engine to be started.

5. In a self-starter for internal combustion engines, the combination, with the engine to be started, of a power-receiving part, a part connected to the engine to be started for transmitting power thereto, a light spring and a heavy spring connected in series between said power-receiving and power-transmitting parts, and a power motor for operating said first part.

[Claims 6 to 34 not printed in the Gazette.]

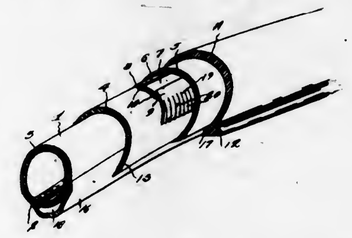
1,219,032. TRUSS-PAD. HENRY D. O'BRIEN, Forsyth, Mont. Filed Sept. 18, 1916. Serial No. 120,741. (Cl. 128—26.)



1. A truss pad comprising a resilient cup the side wall of which flares outwardly; a flexible covering extended across the mouth of the cup and onto the outer face of the cup, the side wall of the cup having perforations disposed between the rear edge of the covering and the base of the cup and arranged symmetrically with respect to the axis of the cup; and a supporting means connected with the base of the cup.

2. A truss pad comprising a resilient cup including a base and a side wall, the base being of substantially the same thickness throughout its extent, the side wall diminishing in thickness from the base to the mouth of the cup and flaring outwardly from the base to the mouth of the cup; and a textile mesh-work covering extended across the mouth of the cup and onto the outer face of the side wall.

1,219,033. PUNCTURE-PROOF LAYER FOR TIRES. LEVI S. ODELL, Forestville, N. Y. Filed Feb. 21, 1916. Serial No. 79,682. (Cl. 152—18.)

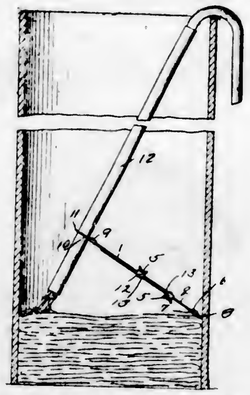


In a tire construction, an inner sheet metal tube, an outer tire casing, a pair of canvas shields between the sheet metal tube and the tire casing, and a sheet metal shield interposed between the canvas shields and extending partially transversely of the tire, said sheet metal shields comprising three sections, an intermediate section, and two side sections, the intermediate section being thicker than the side sections and adjacent the tread of the tire, said side sections being slitted partially transversely, thereby forming tongues, which are overlapped to permit the metal shield to yield incident to the depression of the tire.

1,219,034. HOLDER FOR SILO-FILLING PIPES. JOHN A. OPPEDAL, Scarville, Iowa. Filed Feb. 21, 1916. Serial No. 79,740. (Cl. 248—30.)

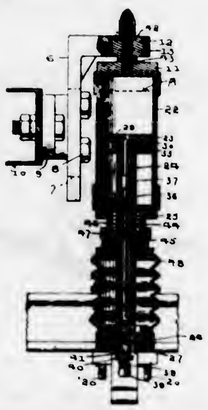
A support of the class described comprising a pair of sections, means for adjusting the sections longitudinally, one of said sections having arms carried thereby, a ring pivotally connected between said arms, spaced legs having their upper ends engaged with the sides of the other section, a plate fixed transversely of said section and hav-

ing flanges which engage the adjacent ends of the legs, means for securing the legs to the plate, said legs serving



to directly engage a silo at oppositely disposed points, as and for the purpose set forth.

1,219,035. SHOCK-ABSORBER. RALPH H. PETTENGILL, Haverhill, Mass. Filed Apr. 11, 1916. Serial No. 90,395. (Cl. 21—105.)



1. A shock absorber having a cylinder to be attached through a ball and socket joint to the frame of an automobile, and adapted to contain a portion of liquid, and a portion of air, the said cylinder having an inlet for inserting liquid, and an air valve by means of which the cylinder may be made to contain any required air pressure, a ported piston within the cylinder, and balls for closing said ports during the down stroke of the piston, said balls being contained in cages formed within the piston, and being prevented from leaving the same by pins, contained in holes drilled in the piston from an annular groove in the periphery thereof, said annular groove containing a split spring ring to prevent the pins from coming out, and also forming a tight sliding fit between the piston and the cylinder, a hollow piston rod connected to the piston and projecting through the lower end of the cylinder to be attached through a ball and socket joint to the axle of the automobile, said hollow piston rod having ports communicating with the cylinder below the piston and having a portion of its inside diameter tapered near the upper end, forming a tapered port communicating with the cylinder above the piston, and a rod, within the hollow piston rod projecting below the same, and screw threaded thereto, the upper end of said rod entering the tapered portion of the hollow piston rod and controlling the said tapered port.

2. In a shock absorber, the combination with a cylinder to contain a portion of liquid and a portion of air, of a piston therein, said piston having a plurality of ports, and balls for closing said ports, said balls being contained in cages formed within the piston, and being prevented from leaving same by pins, contained in holes drilled in the piston from an annular groove in the periphery thereof, a split spring ring positioned in the groove to prevent the pins from coming out, and also forming a tight sliding fit between the piston and the cylinder.

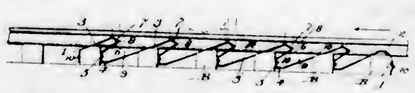
3. In a shock absorber the combination with a cylinder to contain a portion of liquid and a portion of air, of a piston therein, said piston having a plurality of ports, and balls for closing said ports, said balls being contained in cages formed within the piston, and held in place and cushioned in their opening movement by helical springs, one end bearing against said balls and the other end being twisted in the form of rings, said rings encircling pins, contained in holes, drilled in the piston from an annular groove in the periphery thereof, a split spring ring positioned in said groove to prevent the pins from coming out and also forming a tight sliding fit between the piston and the cylinder.

4. In a shock absorber having a cylinder to contain a portion of liquid and a portion of air, a ported piston therein and valves for closing said ports, the combination with a hollow piston rod connected to the piston, said hollow piston rod having ports communicating with that part of the cylinder through which the piston rod travels, and having a portion of its inside diameter tapered near the piston, forming a tapered port communicating with the cylinder beyond the piston, of a rod within the hollow piston rod, projecting beyond the lower end thereof and screw threaded thereto, the interior end of the rod entering the tapered portion of the hollow piston rod, controlling said tapered port.

5. In a shock absorber having a cylinder to contain a portion of liquid and a portion of air, a ported piston therein and valves for closing said ports, the combination with a hollow piston rod connected to the piston, said hollow piston rod having ports communicating with that part of the cylinder through which the piston rod travels, and having a portion of its inside diameter bored out from the interior end thereof, and a tapered port inserted therein, said tapered port having its largest inside diameter, approximately the same as the inside diameter of the said hollow piston rod, and communicating with the cylinder beyond the piston, said tapered port being held in place by a flange on the piston, of a rod within the hollow piston rod projecting beyond the exterior end thereof and screw threaded thereto, the interior end of the rod entering the tapered port before mentioned and controlling the same.

[Claim 6 not printed in the Gazette.]

1,219,036. RAILWAY CATTLE-GUARD. PATRICK A. PHENEY, Nampa, Idaho. Filed Mar. 24, 1916. Serial No. 86,421. (Cl. 256—14.)



1. A cattle guard comprising unit sections of sheet metal, each bent to form a succession of pockets inclining downward in the direction of advance of animals to be guarded against, each pocket having a sharp edge at that side toward which the animals move.

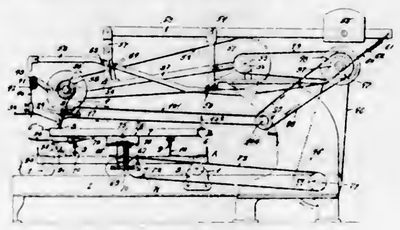
2. A railway cattle guard, comprising a series of metallic sheets to be placed between and outside the rails of a railway track, each sheet bent to form a succession of downwardly inclined pockets at such intervals as to fall between the railway ties, each pocket having at the side opposite that from which the approach of animals is to be prevented, a sharp upper edge, substantially as set forth.

3. In combination with the ties and rails of a railway track, a cattle guard consisting of sheet metal plates laid between and outside the track rails, and bent or folded to produce inclined pockets g extending downward between successive ties, said pockets having each a sharp angular upper edge at the side opposite that from which approach is to be guarded.

4. A railway cattle guard comprising a series of unit sections, each formed of sheet metal, bent to form downwardly inclined pockets with a sharp upper edge at one side, said sections being laid lengthwise between and outside the rails of the track and secured to the ties.

5. A cattle guard for railways, consisting of a series of sheet metal unit sections of like form and dimensions, each section bent to produce downwardly inclined pockets of lessening width toward their bottoms, and with sharp upper edges at their shorter sides, whereby the sections are adapted to be nested for storage, substantially as described and shown.

1,219,037. GRINDING OR POLISHING MACHINE. THEODORE F. PHILIPPI, East St. Louis, Ill. Filed June 22, 1916. Serial No. 105,168. (Cl. 51—4.)



1. A polishing machine comprising a reciprocatory carriage, a rotatable work holding device carried by said carriage and adapted to engage the opposite ends of the article to be operated upon, said rotatable work holding device being so arranged that the axis of the work will lie parallel with the path of movement of the carriage, a polishing device adapted to engage the outer face of the article operated upon, and means for automatically disengaging said polishing device from said article after an end of the article reaches said polishing device.

2. A polishing machine comprising a reciprocatory carriage, a rotatable work holding device carried by said carriage and adapted to engage the opposite ends of the article to be operated upon, said rotatable work holding device being so arranged that the axis of the work will lie parallel with the path of movement of the carriage, a polishing device adapted to engage the outer face of the article operated upon, and means for automatically disengaging said polishing device from said article after an end of the article reaches said polishing device, said means including a traveling member carried by said carriage, and an abutment secured to said polishing device, said abutment being located in the path of said traveling member.

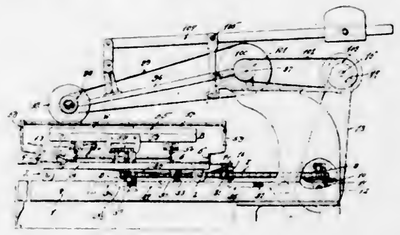
3. A polishing machine comprising a reciprocatory carriage, a rotatable work holding device carried by said carriage and adapted to engage the opposite ends of the article to be operated upon, said rotatable work holding device being so arranged that the axis of the work will lie parallel with the path of movement of the carriage, a polishing device adapted to engage the outer face of the article operated upon, and means for automatically disengaging said polishing device from said article after an end of the article reaches said polishing device, said means including a pair of rollers carried by said carriage and a pair of inclined abutments secured to the polishing device, said inclined abutments being located in the path of said rollers.

4. In a machine of the character described, a work supporting device, a polishing wheel adapted to engage the article supported by said device, a pivoted arm to which said polishing wheel is rotatably secured, a counterbalance lever secured to said arm, a slidable operating member connected to said counterbalance lever, and an adjustable device for limiting the movements of said slidable operating member in one direction.

5. In a tube finishing machine, a finishing wheel, a reciprocatory carriage, a tube holding device carried by said carriage, said tube holding device being extended into the tube to form an internal support therefor, thus leaving the outer face of the tube exposed to engage the finishing wheel, means for rotating the tube holding device while it is traveling with the carriage, and means for automatically disengaging the finishing wheel from the tube after an end of the tube reaches said finishing wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,219,038. MACHINING APPARATUS. THEODORE F. PHILIPPI, East St. Louis, Ill. Filed June 22, 1916. Serial No. 105,169. (Cl. 51—12.)



1. A machine having an endless belt, means for moving said belt continuously in an endless path, a carriage operable by said belt, a reversing device including a yieldable device for engaging said endless belt to impart a reciprocating movement to said carriage, said yieldable device being movable in opposite directions parallel with the path of the reciprocating carriage, said belt being arranged to form two oppositely moving strands which travel continuously in opposite directions and said yieldable device being adapted to engage either strand of the belt, and yieldable operating means for oscillating said yieldable device to force it into engagement with said belt.

2. A machine having a reversing device including an endless power transmission belt, a traveling reversing element adapted to be engaged with and disengaged from either rim of said power transmission belt to provide for the reversal of the movement, and a shock absorbing device including friction elements and an elastic cushion associated with said reversing element to gradually cushion the shocks to which the latter is subjected.

3. A machine having an endless belt, means for moving said belt continuously in an endless path, a carriage operable by said belt, and a reversing device for engaging said belt to impart a reciprocating movement to said carriage, said reversing device including an oscillating member adapted to occupy a neutral position to release the carriage from the endless belt, and means for forcing said oscillating member from its neutral position to its operative position wherein it engages said belt to provide for the transmission of power to said carriage.

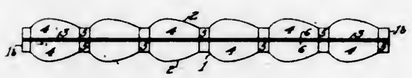
4. A machine having an endless belt, means for moving said endless belt continuously in an endless path, a carriage operable by said belt, said endless belt being arranged to form two belt strands which travel in opposite directions, and a reversing device including a power transmission device and means for moving said power transmission device into and out of engagement with the oppo-

sitely moving strands to impart a reciprocating movement to said carriage.

5. A machine having an endless belt, means for moving said endless belt continuously in an endless path, said endless belt being arranged to form two belt strands which travel in opposite directions, a carriage operable by said belt, and a reversing device including a pair of transmission members each of which is adapted to engage one of said strands, and means for shifting said transmission members into and out of engagement with said strands to impart a reciprocating movement to said carriage.

[Claims 6 to 17 not printed in the Gazette.]

1,219,039. DEVICE FOR SAFE TRANSPORTATION OF EGGS. FRAEDERICK K. PLUMBLY, Mount Ivy, N. Y. Filed Jan. 13, 1916. Serial No. 71,852. (Cl. 217—28.)



1. An egg filler tube of a single piece of material having one half thereof hinged to its other half along an indented line parallel to the longitudinal axis of the tube, each of said halves having a series of semi egg-shaped cavities complementary to the semi egg-shaped cavities of the other half and together constituting a series of egg-shaped receptacles, said receptacles adapted to receive eggs and being so configurated that the eggs when lying therein have their longitudinal axis coincident with the longitudinal axis of the tube, and tubular wall portions of said material joining said receptacle portions of the material to each other.

2. An egg filler tube of a single piece of material having one half thereof hinged to its other half along an indented line parallel to the longitudinal axis of the tube, each of said halves having a series of semi egg-shaped cavities complementary to the semi egg-shaped cavities of the other half and together constituting a series of egg-shaped receptacles, said receptacles adapted to receive eggs and being so configurated that the eggs when lying therein have their longitudinal axes coincident with the longitudinal axis of the tube and parallel to said line of hinging, and tubular reinforcing portions of said material joining said receptacle portions of the material to each other.

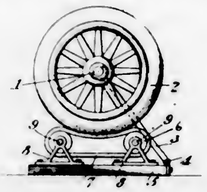
3. An egg filler tube having one half thereof hinged to its other half along a line parallel to the longitudinal axis of the tube, each of said halves having a series of semi egg-shaped cavities complementary to the semi egg-shaped cavities of the other half and together constituting a series of egg shaped receptacles, said receptacles adapted to receive eggs and being so configurated that the eggs when lying therein have their longitudinal axes coincident with the longitudinal axis of the tube, each of said halves having tubular wall portions joining said receptacle portions thereof to each other and said tubular wall portions being parallel to the axis of the tube.

4. An egg filler tube having one half thereof hinged to its other half along a line parallel to the longitudinal axis of the tube, each of said halves consisting of a single piece of material and having a series of semi egg-shaped cavities complementary to the semi egg-shaped cavities of the other half and together constituting a series of egg shaped receptacles, said receptacles adapted to receive eggs and being so configurated that the eggs when lying therein have their longitudinal axes coincident with the longitudinal axis of the tube, each of said halves being configurated to form tubular wall portions between its receptacle portions, and said tubular wall portions being concentric with the axis of the tube.

5. An egg filler tube molded of paper pulp and constituting a single piece of material having one half thereof hinged to its other half along an indented line parallel to the longitudinal axis of the tube, each of said halves having a series of semi egg-shaped cavities complementary to the semi egg-shaped cavities of the other half and together constituting a series of egg-shaped receptacles, said receptacles adapted to receive eggs and being so configurated that the eggs when lying therein have their longitudinal axes coincident with the longitudinal axis of the tube and parallel to said line of hinging, and tubular reinforcing portions of said material joining said receptacle portions of the material to each other.

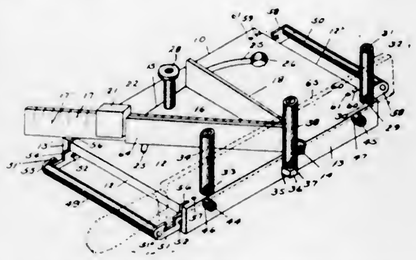
[Claim 6 not printed in the Gazette.]

1,219,040. POWER-TRANSMITTING APPARATUS FOR AUTOMOBILES. CHARLES G. POLLEYS, Newark, N. J. Filed Nov. 3, 1915. Serial No. 59,410. (Cl. 21—90.)



In a power transmitting device, a base, pulleys mounted on the base, a belt having enlarged edges forming a concaved upper surface, operating over the pulleys, the upper surface of the belt coöperating with a driving wheel of a vehicle, said driving wheel being supported adjacent the periphery of the pulleys, and means for preventing movement of the driving wheel longitudinally of the belt.

1,219,041. COMBINED MITERING AND TYPE-HIGH-LEVELING MACHINE. FRANKLIN G. POWERS, Kansas City, Mo. Filed July 19, 1916. Serial No. 110,188. (Cl. 29—76.)



1. In a combined mitering and typehigh leveling machine, the combination with the base or bed plate, of tool supporting and guiding elements at each end of the bed plate, and leveling and guiding elements operating with and movable into position at right angles to and in alinement with one of said tool supporting and guiding elements.

2. In a combined mitering and typehigh leveling machine, the combination with a base plate, and with tool supporting and guiding elements secured thereto in one longitudinal direction of the base plate, of typehigh abutments hinged to said base plate and movable in position at right angles to said tool guiding devices.

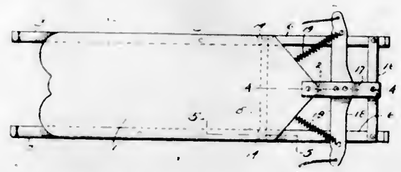
3. In a mitering mechanism, the combination with the bed plate, of a miter-forming gage plate pivoted at one end to said bed plate, and adjustable devices for controlling the movement of said gage plate, and tool-supporting and guiding devices adjacent the pivotal point of connection of said gage plate with said bed plate.

4. In a mitering machine, the combination with the bed plate of the machine and the side members, of tool guiding devices secured to said bed plate and in alinement with the vertical longitudinal outer surfaces of one of said side members of said bed, and a gage plate pivotally connected with said bed plate between the separate tool guiding devices.

5. In a mitering machine, the combination with the bed plate of the machine and one of the longitudinal vertical outer surfaces of said bed plate, of tool supporting devices secured to said outer surfaces, and tool supporting and guiding devices on said bed plate in vertical alinement with said outer surfaces, and a gage plate pivotally connected with the bed plate, and means thereon for adjustably connecting the said gage plate with the bed plate.

[Claims 6 to 15 not printed in the Gazette.]

1,219,042. SLEIGH. CHARLES PRITCHARD, Booneville, Iowa. Filed Dec. 14, 1915. Serial No. 66,791. (Cl. 21—94.)



A sled comprising pivotally connected forward and rear runners, a transverse strip pivoted to said forward runners and having its upper surface extending above the upper edges of said forward runners, a seat secured to the upper edges of said rear runners and having its forward end in engagement with the upper surface of said strip whereby to space the bottom surface of said seat from the upper edges of said forward runners, and means for swinging said forward runners into and out of alinement with said rear runners.

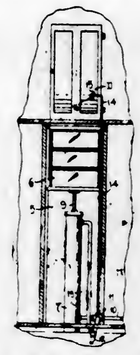
1,219,043. CLASP. MERRILL C. RAIKES, Philippi, W. Va. Filed Oct. 9, 1916. Serial No. 124,660. (Cl. 24—224.)



1. In a clasp, the combination of a circular member having a stud button on one face thereof and a second circular member having an opening corresponding in shape to the head of the stud button to receive the button when the members are placed together concentrically, of a circular split ring having its end portions terminating in parallel spring arms extending across edge portions at substantially diametrically opposite points of the opening, to spring under the head of the button at diametrically opposite points to retain the two members clasped, the second member having lugs, one to anchor one end of each arm to the second member, the second member having an annular flange overlying the ring to hold it in place, said flange at points opposite said lugs overlying the free extremities of the arms, to prevent outward displacement of the free extremities of the arms.

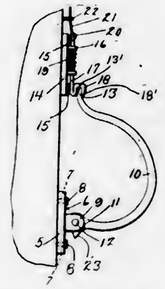
2. In a clasp, a circular member having a substantially central opening and provided with a pair of lugs struck up therefrom at one end of said opening, a circular split ring arranged concentric with said member and having its end portions terminating in parallel spring arms secured to said member by said lugs and extending across edge portions of the opening at substantially diametrically opposite points thereof, said member having an annular flange overlying and holding the ring in place and overlying the extremities of the spring arms opposite said lugs, thereby preventing the arms from springing outwardly from the member, when they are sprung from each other, and a second circular member having a stud button on one face thereof conforming to and adapted to pass through said opening engaging and spreading the arms, whereby said arms may engage under the head of the stud button.

1,219,044. HYDRAULIC OPERATING MEANS FOR DUMB-WAITERS. ERVIN H. REICHARD and FRANCIS H. HARROLD, Columbiana, Ohio. Filed Apr. 15, 1916. Serial No. 91,381. (Cl. 187—30.)



The combination with a dumb waiter and a door to close the shaft thereof, of a cylinder arranged in the dumb waiter shaft, a piston to reciprocate in said cylinder operatively connected to the dumb waiter, a water supply pipe connected to the lower end of the cylinder, a valve interposed in the supply pipe, a discharge pipe connected to said valve, a rod connected to the valve and extending upwardly in the shaft, the upper end of said rod being angularly disposed, and a bracket fixed upon the door to which the angular end of the rod is slidably connected, said rod being rotated when the door is opened to operate the valve and establish communication between the supply pipe and the cylinder whereby the dumb waiter is moved upwardly in the shaft, such communication being cut off when the shaft door is closed and communication opened between the cylinder and the discharge pipe whereby the water is discharged from the cylinder and the dumb waiter permitted to drop by gravity in the shaft.

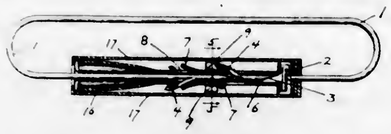
1,219,045. HARNESS-HANGER. CHARLES G. SCHMIDT, Garner, Iowa. Filed Nov. 24, 1915. Serial No. 63,258. (Cl. 248—24.)



A harness support consisting of attaching plates, a hook pivotally mounted on one of the plates and having the terminal of its bill beveled, a spring pressed latch bolt slidably mounted on the other plate and having one end bent upon itself and thence directed laterally and again

bent in spaced parallel relation to the first named bent portion whereby to provide a socket, the terminal of said last named bent portion being beveled and coöperating with the beveled portion of the hook to retract the latch when the hook is swung to engage its bill within the socket.

1,219,046. WIRE SEAL. ISRAEL SCHULTZ, Chicago, Ill. Filed June 15, 1916. Serial No. 103,704. (Cl. 70—99.)



1. In a seal of the class described, a flexible member having one end equipped on opposite sides with barbs disposed in a common plane, a casing having at one end an elongated opening permitting the entrance of said end when presented with the said barbs in alinement with the longer axis of said opening, and spring jaws within the casing disposed transversely of the said axis, each of said jaws having a formation adapted to engage one of said barbs and having a tapering groove, the said grooves being in alinement with the said axis.

2. A seal comprising a wire having a pointed end and equipped adjacent to said end with spaced prongs, a housing secured to one end of said wire, and a pair of opposed resilient jaws integral with the housing and disposed within the latter, said jaws being equipped with apertures adapted to be entered by said prongs and with lugs intermediate of the jaws for limiting the separational movement of the latter.

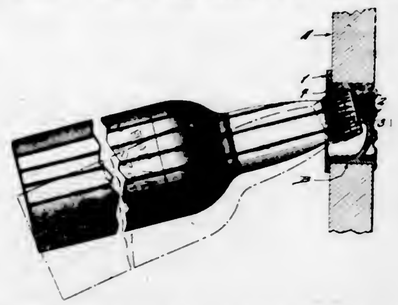
3. A seal comprising a wire having a pointed end and equipped adjacent to said end with spaced prongs, a housing secured to one end of said wire, and a pair of opposed resilient jaws integral with the housing and disposed within the latter, said jaws being equipped with apertures adapted to be entered by said prongs, said prongs being recurved for engagement with the jaws so as to prevent a separational movement of the jaws when engaged by the prongs.

4. A seal comprising a wire having a pointed end and equipped adjacent to the latter with oppositely directed prongs, a housing secured to one end of said wire, and a pair of resilient jaws integral with the housing and disposed within the latter, said jaws including flat portions each equipped with an aperture; each jaw having near its juncture with the housing a channel formation arranged for guiding one of said prongs into the aperture in said jaw.

1,219,047. BOTTLE-CAP REMOVER. JOSEPH R. SCHULTZ, St. Louis, Mo. Filed May 8, 1916. Serial No. 96,201. (Cl. 65—46.)

1. A bottle cap remover comprising a circular cap-receiving member, adapted to be mounted in a circular opening in a suitable support, a retaining flange at one edge of said circular cap-receiving member adapted to engage one side of said support, flexible retaining elements extending from the opposite edge of said circular cap-receiving member, an abutment extending inwardly from a point near said retaining flange adapted to be engaged by the edge of the bottle cap, an interior abutment at a point near said flexible retaining elements adapted to be engaged by the outer face of the bottle cap, said flexible retaining elements being so formed that they may be readily inserted through said circular opening and thereafter bent to secure said circular cap-receiving member in said opening, said flange, abutments and flexible retaining elements being formed integral with each other.

2. A bottle cap remover comprising a circular cap-receiving member, adapted to be mounted in a circular opening in a suitable support, a rigid circular retaining flange at the outer edge of said circular cap-receiving member adapted to engage one side of said support, flexible retaining tongues extending from the inner edge of said circular cap-receiving member, an abutment extending inwardly from said circular retaining flange adapted to be engaged by the edge of the bottle cap, an interior abutment member in the form of a reinforcing web formed integral with said circular cap-receiving member at a point near said



flexible retaining tongues, said flexible retaining tongues being so formed that they may be readily inserted through said circular opening and thereafter bent to secure said circular cap-receiving member in said opening, and sharp ribs 5 extending from the periphery of said circular cap-receiving member to coöperate with said flange and tongues in securing said circular cap-receiving member in said circular opening.

1,219,048. CONCENTRATOR. HARLEY L. SHERWOOD, Oregon City, Oreg. Filed July 26, 1915. Serial No. 41,909. (Cl. 83—89.)

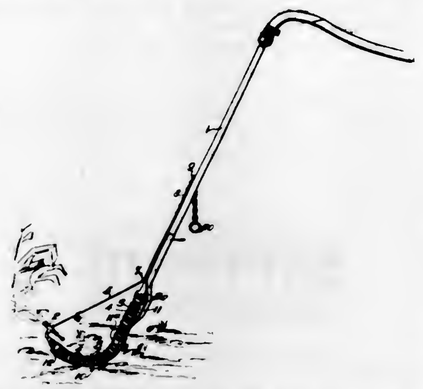


In apparatus for recovering gold, a box-like frame open at one end, bars extending transversely across said frame, a sheet of fibrous material on the bottom of said frame and around said bars, a frame comprising two sheet metal side pieces and U-shaped bars secured to said side pieces and contacting with said sheet.

1,219,049. SPRAYER. LOUIS J. STRICKLIN, Chehalis, Wash. Filed July 29, 1915. Serial No. 42,606. (Cl. 137—56.)

1. In a spraying appliance of the character described, a rigid tubular handle, a flexible hose section coupled to said handle, a resilient extension carried by said handle, means for clamping said hose section to said extension, said extension continuously tending to maintain said hose section in alinement with the handle, a nozzle member coupled to the end of said hose section and lying in a position to one side of the axis of said hose section, and a pull device connected to said nozzle, guides on said handle through which said pull device passes and means on said handle to which said pull device may be connected to hold said hose section curved as desired.

2. In a spraying appliance of the character described, a tubular handle, a flexible hose connection for joining the inner end of the handle with the water pressure supply, spraying elements mounted on the outer end of the handle, the said elements including a flexible hose section coupled at one end to the inner end of the said tubular handle, means mounted on the handle and connected with the spraying elements for flexing such elements and holding them to their flexed position, other means for restoring the spraying elements to a normal position, the said other means comprising a spring plate slidable at the outer end on the hose section, a stiffener member connected to and projected from the handle, the said stiffener member supporting the spring plate.



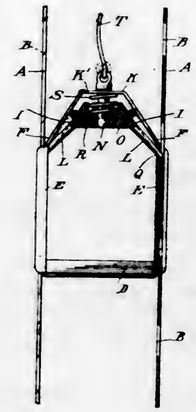
3. In a spraying appliance of the character described a tubular handle, a flexible hose connection for joining the inner end of the handle with the water pressure supply, spraying elements mounted on the outer end of the handle, the said elements including a flexible hose section coupled at one end to the outer end of the tubular handle, a spraying head connected to the inner end of the said hose section, means mounted on the handle and connected with the spraying elements for flexing such elements and holding them to their flexed position, other means for restoring the spraying elements to a normal position, said other means comprising a spring plate slidable at the outer end on the hose section, a stiffener member connected to and projected from the handle, the said stiffener member supporting the spring plate, and means for holding the outer end of the stiffener in a fixed connection with the flexible hose section.

4. In a spraying device, a portable rigid handle, a flexible hose section extending from the end of said handle, a flexible bar carried by said handle and extending beyond the end of the same, clamps for securing said hose section to said bar, a nozzle on the end of said hose section, and a pull device connecting said nozzle with said handle whereby said hose section and said flexible bar may be bent to assume any desired curvature, said flexible bar normally tending to hold said hose section in alinement with said handle and means on the handle to which said pull device may be connected to hold said hose section curved as desired.

1,219,050. SAFETY DEVICE FOR ELEVATORS. CHARLES PETTIT SUGG, Spottsville, Ky. Filed Nov. 29, 1916. Serial No. 134,142. (Cl. 187—82.)

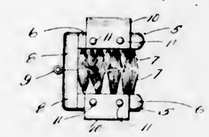
1. A safety device for elevators comprising a car guide having oppositely disposed openings, the upper and lower edges of which are beveled, plates, the edges of which are flanged and adapted to engage said car guides, said plates being apertured, the upper portions of the plates being bent toward each other and fastened together, said plates having a horizontally disposed portion which is apertured, a post movable through said aperture in the horizontal portion, a block to which said post is pivoted, said block having recesses in its upper edge, a spring seated in said recesses and bearing against the horizontal portion of one of said plates, a cable secured to said post, pawls carried by the post and movable through apertures in the plates and designed to engage the openings in said guide.

2. A safety device for elevators comprising a car guide having oppositely disposed openings, the upper and lower edges of which are beveled, plates, the edges of which are flanged and adapted to coöperate with the car guide, said plates being apertured, the upper portions of the plates being bent toward each other and fastened together, said plates having a horizontally disposed portion which is apertured, a post movable through said aperture in the



horizontal portion, a block to which said post is pivoted, the ends of said block being inclined and the upper edge provided with recesses, a spring seated in said recesses and bearing against the horizontal portion of one of said plates, pawls pivoted to the ends of said block and movable through apertures in the plates, the free ends of the pawls being beveled.

1,219,051. CLOTHES-LINE CLEANER. SELMA E. TALLAKSEN, Ridgefield Park, N. J. Filed July 25, 1916. Serial No. 111,265. (Cl. 15—8.)



A clothes line cleaner comprising brush members having coöperating bristle provided surfaces, flanges at corresponding edges of the member extending in the same direction as the bristles, hinges connecting the flanges and disposed outwardly thereof whereby inward movement of the members will be limited by mutual contact of the flanges, and finger engaging strap carried by and disposed on the opposite sides of the members from said bristles.

1,219,052. INVISIBLE SHOE-FASTENER. KAY. T. TANAKA, Salt Lake City, Utah. Filed Mar. 27, 1915. Serial No. 17,481. (Cl. 24—226.)

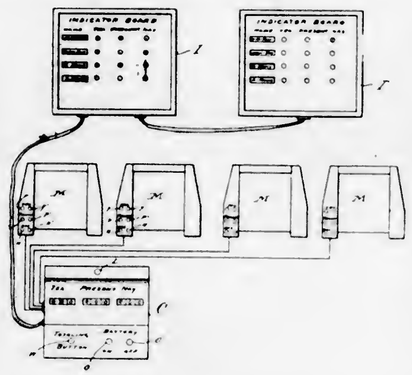
A fastener of the class described including a plurality of U-shaped staples adapted to have their legs extended through material and bent back upon itself for securing the same therein, and arranging their web portions in vertical alinement at a spaced distance from the surface of the material, a plurality of fastening tongues each formed of a single piece of flat tapered metal having spaced or enlarged portions secured to and between the

folds of the material and positioning their smaller ends in direct alinement with the webs of each of the staples



so that the same may be readily and quickly inserted under the staple and fastened as and for the purpose specified.

1,219,053. VOTING APPARATUS. MARSHALL F. THOMPSON and ARTHUR L. TOWNSEND, Washington, D. C.; said Townsend assignor to said Thompson. Filed Mar. 15, 1915. Serial No. 14,426. (Cl. 235—50.)



1. In a device of the kind described, a primary circuit including a voter's circuit closer, a visual signal and a relay magnet, a secondary circuit closed by the energization of said magnet and including said visual signal, and vote recording means operable by said secondary circuit.

2. In a device of the kind described, a primary circuit including a voter's circuit closer, a visual signal and a relay magnet, a secondary circuit closed by the energization of said magnet and including said visual signal, said secondary circuit also including a secondary magnet and vote recording means operable by the closing of said secondary circuit.

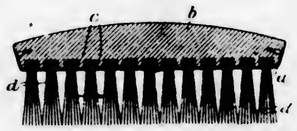
3. In a device of the kind described, a primary circuit including a voter's circuit closer, a visual signal and a relay magnet, a secondary circuit closed by the energization of the relay magnet, vote recording means operable by the closing of the secondary circuit and means adjacent the voter's circuit closer to break the secondary circuit.

4. In a device of the kind described, a primary circuit including a voter's circuit closer, a visual signal and a relay magnet, a secondary circuit closed by the energization of said magnet and including said visual signal, vote recording means operable by the closing of the secondary circuit, a totalizing device connected to the vote recording means, and means adjacent the voter's circuit closer to break the secondary circuit.

5. In a device of the kind described, a primary circuit including a voter's circuit closer, a visual signal and a relay magnet, a secondary circuit closed by the energization of the magnet, vote recording means operable by the closing of the secondary circuit, and means out of control of the voter to break said primary circuit.

[Claims 6 to 13 not printed in the Gazette.]

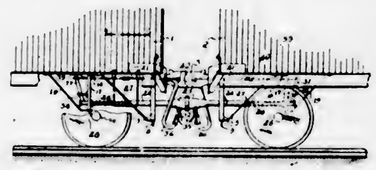
1,219,054. BRUSH AND METHOD OF MANUFACTURING THE SAME. ALBERT HENRY TIMMIS, Harrow, England, assignor to Rubber Set Brush Co. Limited, London, England. Filed May 13, 1916. Serial No. 97,254. (Cl. 15—29.)



1. The method of manufacturing brushes of the kind described consisting in stamping a metal plate into dish form having a series of upwardly extending and outwardly flaring sockets introducing knots or tufts of bristles into these sockets, coating the inner ends of said bristles which project above the sockets, with india rubber, drawing the coated ends into said sockets, subsequently securing the bristles together and to the plate by vulcanization, and then securing a back to the dished plate.

2. A brush comprising a metallic plate provided with upwardly extending and outwardly flaring edges, upwardly extending and outwardly flaring sockets integral with said plate, a knot of bristles provided in each of said sockets, the bristles of each knot being secured together and to its respective socket by vulcanized india rubber, and a back having a downwardly extending portion resting within the edges of the plate and provided with a series of recesses in which the upper ends of the knots and sockets rest.

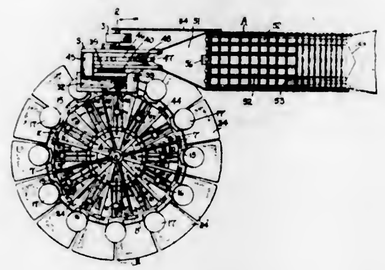
1,219,055. AUTOMATIC AIR-COUPLING DEVICE FOR RAILWAY-TRAINS. CLAUD L. TURNER, PERRY E. WHITEHEAD, and SYE C. CLARKE, Gering, Nebr. Filed Nov. 17, 1915. Serial No. 61,972. (Cl. 188—13.)



1. In an air coupler, the combination with a pair of coupler heads having elongated shanks, of forward and rear frames supporting the heads, each of the forward frames including a fixed rectangular element, and a second rectangular element inclosed within the first element and having spring connections with the latter, a set of inter-sliding plates inclosing the shanks of the coupler heads and lying in the plane of the inner element, rods slidably mounted in the sides of the inner and outer rectangular elements, and springs carried by said rods and bearing between the sides of the inner element and the corresponding plates.

2. In an air coupler, the combination with a pair of coupler heads having elongated shanks, of forward and rear frames supporting the heads, each of the forward frames including a fixed rectangular element, and a second rectangular element inclosed within the first element and having spring connections with the latter, a set of inter-sliding plates inclosing the shanks of the coupler heads and lying in the plane of the inner element, rods slidably mounted in the sides of the inner and outer rectangular elements, springs carried by said rods and bearing between the sides of the inner element and the corresponding plates, means for resiliently throwing the heads forward, levers pivoted upon the rear frames and connected to the shanks of the coupler heads, and links connected to the opposite ends of the levers and extending forwardly into proximity with the coupler heads for the manual retraction of the heads from one another.

1,219,056. SIZING-MACHINE. BENJAMIN F. TUSSING, Fruitland, Idaho. Filed Oct. 16, 1916. Serial No. 125,913. (Cl. 130—32.)



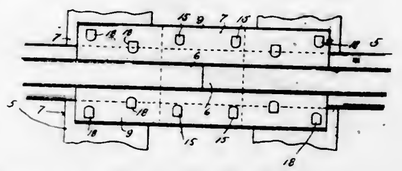
1. A device of the character described comprising a table, an element rotatably supported thereby and provided with a radially disposed trackway, a slide supported by the trackway, a member depending from the slide, a tiltable beam carried by the rotatable element and provided at one end portion with a cup, a poise slidably engaged with the opposite end portion of the beam, means carried by the slide and coacting with the poise for moving said poise longitudinally of the beam in unison with and in the same general direction as the movement of the slide, and means carried by the table and coacting with the member depending from the slide for imparting movement to the slide upon movement of the rotatable element.

2. A device of the character described comprising a movable element, a tiltable beam carried thereby and provided at one end portion with a cup, a poise slidably engaged with the opposite end portion of the beam, a slide carried by the movable element and traveling longitudinally of the beam, means for imparting movement to the slide, and upstanding guide members carried by the slide and positioned in advance and to the rear of the poise whereby said poise is caused to move in unison with and in the same general direction as the slide.

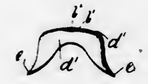
3. A device of the character described comprising a movable element, a tiltable beam carried thereby and provided at one end portion with a cup, a poise slidably engaged with the opposite end portion of the beam, a slide carried by the movable element and traveling longitudinally of the beam, means for imparting movement to the slide, upstanding guide members carried by the slide and positioned in advance and to the rear of the poise whereby said poise is caused to move in unison with and in the same general direction as the slide, said guide members being formed of a single length of material bent upon itself to afford a guide member substantially in the form of an inverted U with the opposite extremities thereof extending upwardly, and means coacting with the intermediate portion thereof for clamping the same to the slide.

1,219,057. RAIL-JOINT. JAMES W. WAGGONER, Mountain View, Okla. Filed Mar. 30, 1915. Serial No. 18,155. (Cl. 239—6.)

The combination with the meeting ends of two rails, of a pair of securing plates for engaging the web and base portions of the rails, blocks depending from said securing plates and having transverse openings therein, portions of said blocks being spaced from the under side of said securing plates to provide shoulders upon which the outer longitudinal edges of the bases of the rails are adapted to rest, a connecting plate disposed between said blocks and having its longitudinal edges mounted in the openings therein, said connecting plate having a longitudinally extending cutaway portion in its upper surface, the bottom of said portion being in the same plane with the upper surface of said shoulders and adapted to have the rails rest thereon, and means for fastening said rails to said securing and connecting plates.



1,219,058. ARTIFICIAL EYE. PAUL WEBER, New York, N. Y. Filed Dec. 6, 1916. Serial No. 135,333. (Cl. 3e—13.)



1. An artificial eye made of pliable material in the form of a hollow body.

2. An artificial eye made of pliable and transparent material in form of a hollow body the inner surface of which bears the design of the eye which is visible through the outer surface of the material.

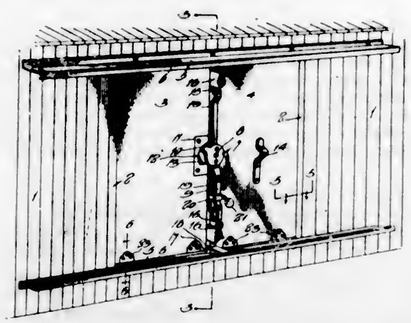
3. An artificial eye made of pliable and transparent material in form of a hollow body, the inner surface of which bears the design of the eye which is visible through the outer surface of the material and the edges of which body are bent to serve as retaining means for the eye.

4. A method of making artificial eyes consisting in applying the contour and design of an eye to the inner surface of a pliable and transparent sheet of material, then cutting out the contour and pressing the cut out piece into the shape of a hollow body so that the inner surface of said body will bear the design, and that projecting parts will be formed to serve as retaining means for the eye.

1,219,059. CAR-DOOR FASTENER. GEORGE F. WIESECKEL, Hagerstown, and GEORGE C. SCHIMPF, Curtis Bay, Md. Filed Oct. 12, 1916. Serial No. 125,254. (Cl. 20—23.)

1. In a flush door, the combination of a frame, horizontal tracks at the upper and lower ends thereof, a door mounted for sliding on said tracks and for lateral movement therefrom into said frame, upper and lower horizontally elongated shoes mounted on the upper and lower ends of said door, said shoes extending at right angles from the door and having respectively an inclined upper face and an inclined lower face extending longitudinally thereof and contacting respectively with the lower edge of the upper track and the upper edge of the lower track, and means for forcing said upper and lower shoes respectively

upwardly and downwardly to cause them to slide laterally on the tracks to move said door into the frame.



2. In a flush door, the combination of a frame, tracks above and below said frame, a door mounted for sliding between said tracks and for lateral shifting therefrom into the frame, the upper and lower tracks having longitudinal flanges on their outer edges respectively depending and rising from said tracks, vertically disposed guides secured to the outer face of the door adjacent the upper and lower ends thereof, vertical bolts mounted slidably in said guides, a pivotally mounted operating member carried by the door between the two guides, links pivoted to the inner ends of the bolts and extending to said operating member, said links being pivoted to said member on opposite sides of its pivot, and horizontally elongated shoes on the outer ends of the bolts having inclined faces for contact with the edges of the track flanges for forcing the door laterally into the frame when the operating member is turned to force the shoes outwardly.

3. In a flush door the combination with a door frame, tracks above and below said frame, and a door mounted for sliding between said tracks and for lateral shifting therefrom into the frame; of vertically moving cams carried by the upper and lower ends of the door for forcing the latter into the frame when projected, links extending toward each other from said cams, a rotary member mounted on the door and pivotally connected with the inner ends of said links at points spaced diametrically opposite from its turning point, and a relatively fixed cam coöperating with said rotary member to force the door from the frame when said member is turned to retract the first named cams.

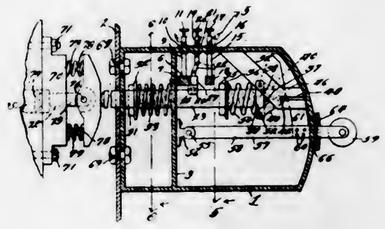
4. In a flush door the combination with a door frame, tracks above and below said frame, and a door mounted for sliding between said tracks and for lateral shifting therefrom into the frame, of vertically movable cams carried by the upper and lower ends of the door for forcing the latter into the door frame when projected, links extending toward each other from said cams, a rotary member mounted on the door and pivotally connected with the inner ends of said links at points spaced diametrically opposite from its turning point, a finger projecting inwardly from said rotary member, and a cam inset in a relatively fixed part of the frame, said cam and finger coöperating to force the door from the frame when the aforesaid member is turned to retract the first named cams.

1,219,060. COMPOSITION OF MATTER FOR USE IN THE TREATMENT OF FLOORS. WARREN S. WILLIAMS, Pocatello, Idaho. Filed May 3, 1916. Serial No. 95,205. (Cl. 252.)

The herein described composition of matter for use in the treatment of floors, including approximately 90 per cent. of powdered alum and approximately ten per cent. of powdered sulfur.

1,219,061. MECHANISM FOR AUTOMATICALLY CONTROLLING ELEVATOR-CARS. FRANK FAYETTE WORTHEN, Piermont, N. H. Filed Mar. 1, 1916. Serial No. 81,437. (Cl. 187—32.)

1. In combination with a movable body having a guide therefor, of a controlling device on said body in circuit with the controlling mechanism for the body, said controlling device having a multiple of stationary contacts and provided with a multiple of movable switch members having contacts to coöperate with the stationery contacts, said switch members being under double tension, means to be actuated to reduce the double tension substantially to one half of any one of the switch members, and a device on the guide to actuate the switch member and overcome the remaining half tension of the switch member, thereby breaking the circuit and stopping the movable body at a predetermined point on the guide.



2. In combination with a movable body having a guide therefor, an electrical multiple switch controlling device in circuit with the controlling means of the movable body, holding means for said switches, means for partially releasing any one of the multiple of switches, and a device on the guide to actuate the partially released switch member, to stop the body at a predetermined point on the guide.

3. In combination with a movable body having a guide therefor, an electrical controlling device on the body and in circuit with the controlling means of the movable body and having a multiple of switch members, yieldable holding means therefor, means for partially releasing the holding means of any one of the switch members, and means on the guide to contact with said switch member to overcome the remainder of the holding means and actuate the switch member to break the circuit and stop the body.

4. In combination with a movable body having a guide therefor, an electrical controlling device on the body and in circuit with the controlling means of the movable body and having a multiple of switch members, yieldable holding means therefor, means for partially releasing the holding means of any one of the switch members, and buffer cams on the guide, any one of which to contact with one of said switch members to overcome the remainder of the holding means and actuate the switch member to break the circuit and stop the body.

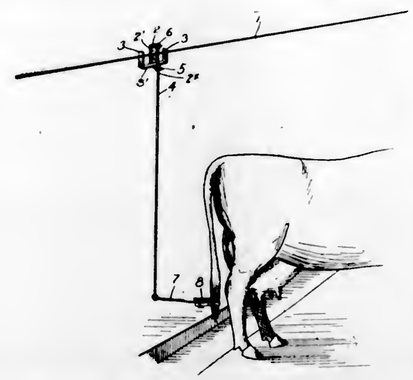
5. In combination with a movable body having a guide therefor, an electrical controlling device on the body and in circuit with the controlling means of the movable body and having a multiple of push rods, yieldable holding means therefor, means for partially releasing the holding means of any one of said push rods, and means on the guide to contact with said push rod to overcome the remainder of the holding means and actuating the push rod to break the circuit and stop the body.

[Claims 6 to 8 not printed in the Gazette.]

1,219,062. DEVICE FOR HOLDING COWS' TAILS. JOSUA AERNI and JOSEPH O. VENDEN, Guler, Wash. Filed May 18, 1916. Serial No. 98,472. (Cl. 104—146.)

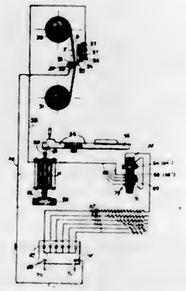
A carriage device for supporting cow tail holding devices, comprising a bar having portions bent parallel to

each other and apertured to receive a track wire, a second bar having laterally extending arms, one of which is fastened to said first referred to bar and provided with a



recess in its edge, the other arm having a notched end, a rod engaging said notch and recess, said rod having a head resting upon the upper surface of the notched arm.

1,219,063. ELECTRICAL PIANO. MARIO ARESE, Turin, Italy. Filed May 3, 1916. Serial No. 95,143. (Cl. 84—174.)



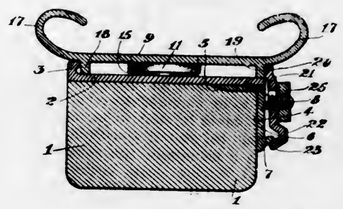
1. In a key actuated musical instrument, a series of key levers, an electro-magnet and its core arranged in operative relation to each lever, a current supply, a branch circuit for each electro-magnet, an automatic circuit closer in each branch circuit, a resistance device having branches of different resistance common to all the branch circuits of the electro-magnets, means to select a resistance, and means to selectively apply the selected resistance to branch circuits of the electro-magnets.

2. In a key actuated musical instrument, a series of key levers, an electro-magnet and its core arranged in operative relation to each lever, a current supply, a branch circuit for each electro-magnet, an automatic circuit closer in each branch circuit, a resistance device having branches of different resistance common to all the branch circuits of the electro-magnets, means to select a resistance branch, contacts for the magnets arranged in groups, and means to electrically connect the selected resistance branch with said groups of contacts.

3. In a key actuated musical instrument, a series of key levers, an electro-magnet and its core, arranged in operative relation to each lever, a current supply, a branch circuit for each electro-magnet, an automatic circuit closer in each branch circuit, a resistance device in the common part of the circuit, branches in the resistance, manually operated switches for the branches of the resistance, a contact plate electrically connected with each switch, and contacts for the magnets in contact with the plates.

4. In a key actuated musical instrument, a series of key levers, an electromagnet and its core arranged in operative relation to each lever, a current supply, a branch circuit for each electromagnet, an automatic circuit closer in each branch circuit, a resistance device in the common part of the circuit, branches connected with the resistance, manually operated switches for the branches of the resistance, a contact plate electrically connected with each switch, contacts for the magnets in contact with the plates, and means to simultaneously shift the plates with respect to the contacts of the magnets.

1,219,064. VEHICLE-WHEEL RIM. ROBERT W. ASHLEY, New York, N. Y., assignor of one-half to Frank Oberkirch, St. Marys, Pa. Filed Mar. 14, 1916. Serial No. 84,007. (Cl. 152—21.)



1. A device of the character described comprising a fixed rim, a demountable rim loosely mounted thereon, and means associated with said fixed rim in relation to means forming part of said demountable rim for distorting said demountable rim into a plurality of points of contact on one edge of said fixed rim and for forcing it into circumferential contact on the opposite edge of said fixed rim.

2. A device of the character described comprising a fixed rim, a demountable rim loosely mounted thereon, and means associated with said fixed rim in relation to means forming part of said demountable rim for distorting said demountable rim into a plurality of points of contact on the front edge of said fixed rim and for forcing it into circumferential contact of the rear edge of said fixed rim.

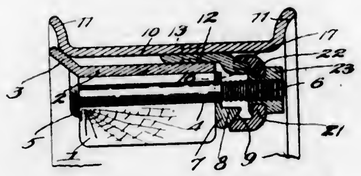
3. A device of the character described comprising a felly band having mounted thereon independent fastening means, a demountable rim adapted for engagement with said felly band, a plurality of locking traction cleats mounted on said demountable rim adapted for engagement with said fastening means, and means associated with said fastening means and engaging said locking traction cleats adapted to exert a contractive and transverse binding action on said demountable rim to seat the same circumferentially on the rear edge of said felly band and at a plurality of points of contact on the front edge of said felly band.

4. A device of the character described comprising a fixed rim, a demountable rim loosely mounted thereon, means associated with said fixed rim in relation to means forming part of said demountable rim for distorting said demountable rim into a plurality of points of contact on one edge of said fixed rim and for forcing it into circumferential contact on the opposite edge of said fixed rim, and means limiting the lateral movement of said demountable rim with relation to said fixed supporting rim independent of the movement radially of said demountable rim.

5. A device of the character described comprising a fixed supporting rim, reception locking plates associated with said fixed rim, a demountable rim loosely mounted on said fixed supporting rim, means forming part of said demountable rim engaging said reception locking plates adapted to distort said demountable rim for forcing it into a plurality of points of contact on the front edge of said fixed rim and into circumferential contact on the op-

posite edge of said fixed rim, said distorting means acting as abutting means to seat said demountable rim laterally simultaneously with the locking of said demountable rim at the plurality of points of contact on said fixed rim.

1,219,065. VEHICLE-WHEEL RIM. ROBERT W. ASHLEY and FRANK OBERKIRCH, New York, N. Y. Filed Aug. 11, 1916. Serial No. 114,369. (Cl. 152—21.)



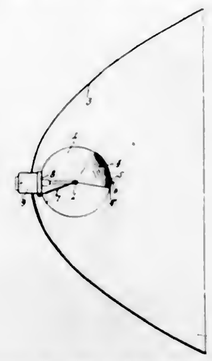
1. A device of the character described comprising a wood felly, a felly band mounted thereon, a plurality of supporting bolts mounted in said wood felly, a plurality of locking plates mounted on said wood felly adjacent said plurality of bolts, a demountable rim engaging said felly band, a plurality of locking cleats mounted on said demountable rim, a plurality of locking traction means mounted on said plurality of bolts engaging said locking plates and locking cleats adapted to exert upon said demountable rim a contractive seating action, and means mounted on said locking traction means engaging means on said plurality of locking cleats adapted to prevent circumferential movement of said demountable rim on said felly band.

2. A device of the character described comprising a wood felly, a felly band mounted thereon, a plurality of supporting bolts in said felly band, a plurality of locking plates mounted on said wood felly adjacent said plurality of bolts, a demountable rim engaging said felly band, a plurality of locking cleats mounted on said demountable rim, a plurality of locking traction means mounted on said plurality of bolts engaging said locking plates and locking cleats adapted to exert upon said demountable rim a contractive seating action to distort same and force it into contact at a plurality of points on one edge and circumferentially at the opposite edge of said felly band, and means mounted on said locking traction means engaging means on said plurality of locking cleats adapted to prevent circumferential movement of said demountable rim on said felly band.

3. A device of the character described including a locking traction means for demountable rims comprising a cleat provided with a reception groove, and a traction locking plate having rotatively mounted therein a nut and having formed on its upper and lower edges thereof hooks, one of said hooks being provided with a locking key adapted to engage the reception groove on said cleat.

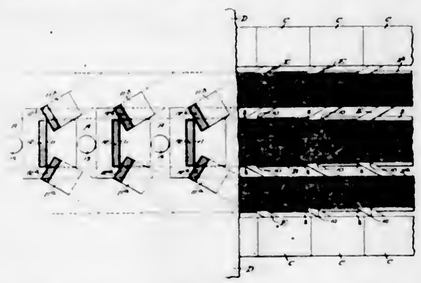
1,219,066. HEADLIGHT-DIMMER. ALLEN H. BABCOCK, Berkeley, Cal. Filed Mar. 15, 1916. Serial No. 84,268. (Cl. 240—48.6.)

In a headlight and in combination with its principal reflector and its focal lamp, a ray-affecting device consisting in its entirety of a spherical secondary reflector member having a full reflecting surface on its concave face and an area so related to the principal reflector that none of the direct rays from the source of light to the principal reflector will be affected, said member closely covering substantially only the upper forward quadrantal section of the lamp globe and having a radius adapting it to intercept and reflect back to the principal reflector only those direct rays from the lamp which otherwise would emerge from the headlight case above the horizontal, said reflected rays being thrown back to the reflector in such directions



that by the latter they will be reflected substantially parallel with its axis.

1,219,067. DISTRIBUTING-MACHINE. CHARLES H. H. BAILEY and WILLIAM H. H. BAILEY, Braintree, Mass. Filed Dec. 16, 1915. Serial No. 67,111. (Cl. 193—4.)



1. A distributing machine comprising a belt conveyer, a plurality of partitions above the same dividing its surface in article segregating zones and an assorting station located above the conveyer, said station having accommodation for an operative to work with the conveyer beneath him whereby he may face longitudinally of the same and feed to the same at either hand, and having chutes extending therefrom longitudinally of the conveyer and opening to the individual zones whereby to deliver articles to the conveyer in substantially its direction of movement.

2. An apparatus of the class described comprising, in combination, pairs of suspension brackets adapted to be secured to a ceiling, rollers carried by said brackets, a belt trained over said rollers, hangers carried by said brackets above the belt and having alining flanges and longitudinal wall members secured to said flanges and suspended above the belt.

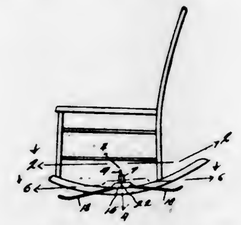
3. An apparatus of the class described comprising, in combination, conveyers arranged beside one another, a station from which to feed articles to said conveyers arranged above one of them and chutes leading from said station to the conveyers, the intake end of the chute leading to the laterally disposed conveyer being arranged diagonally at the side of the other.

4. An apparatus of the class described comprising, in combination, conveyers arranged beside one another, a station from which to feed articles to said conveyers arranged above one of them and chutes leading from said station to the conveyers, the intake end of the chute leading to the laterally disposed conveyer being arranged diagonally at the side of the other and higher than the same.

5. An apparatus of the class described comprising, in combination, conveyers arranged one beside the other, means to divide said conveyers into article segregating zones, a station from which to feed articles to said conveyer arranged above one of them, a set of chutes leading from said station to each of the conveyers and providing means whereby an article may be fed to any zone, the intake end of the set of chutes leading to the laterally disposed conveyer being arranged diagonally at the side of the other.

[Claims 6 and 7 not printed in the Gazette.]

1,219,068. ROCKING-CHAIR HOLDER. AVERILL M. BENNETT, Fromberg, Mont. Filed July 21, 1916. Serial No. 110,552. (Cl. 155—26.)



1. In a creeping or walking preventing device for rockers, the combination of a standard having a vacuum anchoring connection with the floor and a sleeve yieldably mounted upon the standard, of a yieldable connection between the sleeve and the rocking rail of the rocker, and means mounted in bearings on the rail and designed to cooperate between the floor, the rail, and the sleeve, for depressing the sleeve successively during the rocking movement of the rocker.

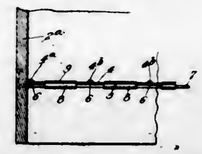
2. In a creeping or walking preventing device for rockers, the combination of a standard having a vacuum anchor connection with the floor and a sleeve yieldably mounted on the standard provided with laterally extended lugs of a yieldable connection between one of the rocking rails of the rocker and said sleeve, a pair of rocking rods mounted in bearings on the rail, each rod having a right angle extending arm engaging the floor at one end, and an offset arm at the other end engaging one of the lugs, to successively depress the sleeve, as the rocker is in motion.

3. In a creeping preventing device for rocking chairs, the combination of a standard having a vacuum anchoring connection with the floor and a sleeve yieldably mounted upon the standard, of a rod connected to one side of the sleeve adjacent its lower portion and merging near its other end into a single volute helix spring terminating in an end portion axial with the body of the rod and connected to one of the rockers of the chair, a pair of rocking rods mounted in bearings on one of the rockers, each rocking rod having a right angle extending arm at one end to engage the floor and an off set arm at the other end, said sleeve having laterally extending lugs to be engaged by the off set arms of both rocking rods, whereby the sleeve may be successively depressed as the chair is in motion.

1,219,069. DELIVERY-CASE. THOMAS V. BOARDMAN, Knoxville, Tenn., assignor to American Box and Crate Company, Knoxville, Tenn., a Corporation of Tennessee. Filed May 31, 1916. Serial No. 100,895. (Cl. 217—22.)

1. In a crate of the character described, the combination with an inclosing frame, of a bottom comprising a metal sheet having tubular beads at opposite side edges, metal rods extending through said beads and secured to the ends of the frame, similar rods arranged beneath said sheet and secured at their ends to the sides of the frame, and means connecting the last said rods and metal sheet.

2. In a crate of the character described, the combination with an inclosing frame, of a bottom comprising a metal sheet having tubular beads at opposite side edges, metal rods extending through said beads and secured to the ends of the frame, similar rods extending beneath the sheet and secured to the ends of the frame, and other rods secured at their ends to the sides of the frame and each connected with the metal sheet between the rods that are attached to the ends of the frame.



3. In a crate of the character described, the combination with an inclosing frame, of a bottom comprising a metal sheet having a plurality of grooves formed in its lower face and extending throughout its length, a metal rod extending through each of said grooves and having its ends attached to the ends of the frame, and similar rods extending transversely of those aforesaid and having their ends attached to the sides of the frame, said transverse rods being locked to the sheet at points between the longitudinally extending rods.

4. In a crate of the character described, the combination with an inclosing frame, of a bottom comprising a metal sheet provided with a plurality of rows of apertures, opposite edges of said sheet being formed into tubular beads and the body thereof being shaped to provide a plurality of grooves in its lower surface, metal rods extending through said beads and grooves and having their ends secured to the ends of the frame, and transverse rods secured at their ends to the sides of the frame and each connected with said metal sheet at a plurality of points.

5. In a crate of the character described, the combination with an inclosing frame, of a bottom comprising two series of metal rods extending across the area inclosed by the frame, the rods of one series extending through and having their ends bent into engagement with the ends of the frame and the rods of the other series extending through and secured to the sides of the frame, and a plate or sheet of metal supported by and engaged with each of said rods at a plurality of points.

[Claims 6 to 10 not printed in the Gazette.]

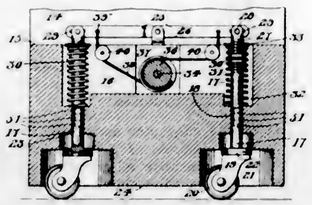
1,219,070. HAIR-PIN. CHARLES S. BOCK, Chicago, Ill. Filed Apr. 5, 1916. Serial No. 89,094. (Cl. 24—155.)



A device of the character described, comprising a tubular pin, a slidable rod housed in the pin and projecting from one end thereof, and pivoted spurs carried by the rod, the side of the pin having apertures through which the spurs project and in which they are free to swing,

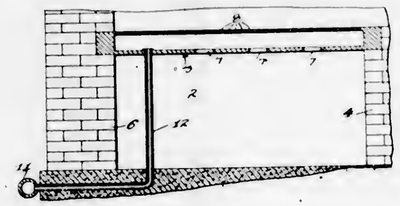
said spurs projecting obliquely from the pin and being swung by sliding the rod, and pointing rearward with respect to the pin at the limit of the sliding movement of the rod in one direction, and forward at the limit of the sliding movement of the rod in the opposite direction.

1,219,071. CASTER RAISING AND LOWERING DEVICE. JOHN BODNAR, Atlasburg, Pa. Filed July 12, 1916. Serial No. 108,880. (Cl. 16—165.)



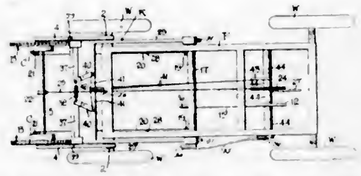
A mounting device including a chambered and recessed machine-base, vertically slidable caster-equipped shafts, the recesses of said machine-base being adapted for the disappearance of the casters or rotary members of said shafts, said shafts being resiliently mounted in position within said machine-base, said shafts each being in sections, the upper shaft section having screw-threaded sleeved connection with the lower shaft-section, the shaft resilient-mounting element of each shaft being engaged by the upper end of the sleeve connection, said shaft resilient-mounting element bearing at its lower end in the bottom of the chamber of said machine-base, levers having their inner or meeting ends fulcrumed at a common point upon said machine-base, the opposite ends of said levers being pivotally connected to the upper ends of said legs, a manually-actuated winding shaft and flexible connections between said levers and said winding shaft, said flexible connections being wound in the same direction upon said shaft, the lever-attaching ends of said flexible connections being near the pivotal connection between said shafts and said levers, said ends of said flexible connections being controlled with respect to their attachment to said levers by rotary members or idlers, said shaft-section sleeved connections being capable of tensioning said resilient elements.

1,219,072. GAS-BURNER FOR STEAM-BOILERS. SAMUEL A. BOYD, Charleston, W. Va. Filed Sept. 13, 1915. Serial No. 50,461. (Cl. 158—7.)



The combination with a steam boiler furnace, of independent burners of frusto-pyramidal formation arranged longitudinally of the fire box and below the boiler thereof and having their sides abutting to form a continuous concave upper surface, said burners having their bottoms provided with openings and their tops with obliquely disposed jets, a main gas pipe disposed along the front of the boiler below said fire box, and a feed pipe for each burner leading from said main pipe upwardly through said fire box and connected to said burner.

1,219,073. VEHICLE-BRAKE. JOHN H. BREWER, Louisville, Ky. Filed Dec. 2, 1916. Serial No. 134,746. (Cl. 21—8.)



1. In combination with a vehicle, arms pivotally engaged therewith and extending rearwardly thereof, means for swinging the arms in opposite directions, a stationary shaft connecting said arms, a ground engaging member loosely mounted on the shaft, and clutch means coacting with the shaft and ground engaging member for retarding the rotation of said member.

2. In combination with a vehicle, arms pivotally engaged therewith and extending rearwardly thereof, means for swinging the arms in opposite directions, a stationary shaft connecting said arms, a ground engaging member loosely mounted on the shaft, and clutch means coacting with the shaft and ground engaging member for retarding the rotation of said member, said arms being also capable of limited longitudinal movement.

3. In combination with a vehicle, arms pivotally engaged therewith and extending rearwardly thereof, a stationary shaft connecting said arms, a ground engaging member loosely mounted on the shaft, clutch member coacting with the shaft and ground engaging member for retarding the rotation of said member, and means for imposing pressure upon said arms.

4. In combination with a vehicle, arms pivotally engaged therewith and extending rearwardly thereof, a stationary shaft connecting said arms, a ground engaging member loosely mounted on the shaft, clutch means coacting with the shaft and ground engaging member for retarding the rotation of said member, a rock frame carried by the vehicle, and means for engaging said rock frame with the arms.

5. In combination with a vehicle, arms pivotally engaged therewith and extending rearwardly thereof, a stationary shaft connecting said arms, a ground engaging member loosely mounted on the shaft, clutch means coacting with the shaft and ground engaging member for retarding the rotation of said member, a rock frame carried by the vehicle, movable members carried by the rock frame, means for extending said members outwardly, and lugs carried by the arms with which said members are adapted to engage when in their outward position.

[Claims 6 to 10 not printed in the Gazette.]

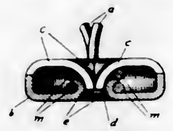
1,219,074. GALVANIC BATTERY-CELL OF THE MERCURIC-OXID TYPE. JOHANNES NICOLAUS BRÖNSTED, Copenhagen, Denmark, assignor to the Firm of Hellesens Enke & V. Ludvigsen, Copenhagen, Denmark. Filed Aug. 4, 1915. Serial No. 43,604. (Cl. 204—78.)

1. In a galvanic battery having a mercury oxid cathode and a zinc anode, an electrolyte of a solution of an alkali metal hydroxid having a concentration of about six gram-molecules per liter.

2. In a galvanic battery having a mercury oxid cathode and a zinc anode, an electrolyte comprising an aqueous solution of an alkali metal hydroxid of a concentration of from six to ten gram-molecules per liter.

1,219,075. SEAL. WINFRED MUDGE BROOKS, East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y., a Corporation of New York. Filed Dec. 22, 1916. Serial No. 138,380. (Cl. 70—98.)

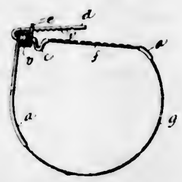
1. A press fastened seal comprising a shackle of wire having a loop at each end, a hollow sheet metal seal part having two faces, and centrally inturned portions of said faces adapted to pass through the superimposed loops of said shackle and secure same within said seal part.



2. A press fastened seal comprising a shackle of wire having a loop at each end and a seal part of sheet metal substantially in the form of a hollow disk having inturned portions of the disk faces, those of the upper face passing interiorly those of the lower, said inturned parts passing through and securing the superimposed loop ends of the shackle centrally within said seal part.

3. A press fastened seal comprising a shackle having a loop at each end and a one piece sheet metal seal part, said seal part being preliminarily pressed into a substantially tulip shaped part having a bottom, a hole punched upwardly in the center of said bottom producing an upwardly projecting bur, said bur being adapted to receive over it one looped end of the shackle and to be then pressed down upon same preliminarily securing said shackle end to said bottom, a plurality of vertical petals surrounding said bottom having pointed apexes and adapted to be pressed inward and downward when the second shackle end loop has been placed over that preliminarily secured to the bottom, the points of said petals converging at the center and being pressed downward by the sealing operation through the superimposed looped shackle ends and into the burred hole of the bottom, all substantially as hereinbefore specified.

1,219,076. SEAL. WINFRED MUDGE BROOKS, East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y., a Corporation of New York. Filed Jan. 2, 1917. Serial No. 140,277. (Cl. 70—98.)



1. A wire seal comprising a loop-forming part, a tubular coil angularly disposed at one end thereof having a catch at its outer end, a stop near the other end of said loop-forming part, a sealing part beyond said stop adapted to be passed through said tubular part, bent back and caught under said catch and means for preventing the unbending of said sealing part.

2. A wire seal comprising a loop-forming part, a substantially tubular coil angularly disposed at one end thereof, a catch at the outer end of said coil, a flattened portion of the wire in said loop-forming part flattened in a plane substantially perpendicular to that of the axis of said tubular coil, a stop near the other end of said loop-forming part and a part beyond said catch provided with transverse cut nicks in the face opposite the outer or catch end of said coil.

3. A wire seal comprising a loop-forming part, a substantially tubular coil angularly disposed at one end thereof, a catch at the outer end of said coil, a stop near the other end of said loop-forming part, a continuation of the wire beyond said stop, transverse nicks cut therein on the side opposite the catch end of the tubular coil, means for causing said loop-forming part to bend only in a plane of the axis of said tubular coil and means for accommodating the outer or catch end of said tubular coil to the ready ingress of said nicked part which is adapted to be passed therethrough up to the stop, bent back over the coil and caught under the catch.

4. A wire seal comprising a loop-forming part, a substantially tubular coil at one end thereof bent back to form an acute angle therewith, a catch at the outer end of said coil, a flattened portion of the loop-forming part flattened in a plane perpendicular to that of the axis of said coil, a stop near the other end of said loop-forming part, a continuation of the wire beyond said stop, transverse nicks cut into the face of said continuation opposite the catch or outer end of said coil, all substantially as hereinbefore specified.

1,219,077. FEEDING DEVICE FOR TOBACCO-LEAVES. JAMES C. BUCHANAN, Washington, D. C., assignor to Rapid Tobacco Stemmer Co., Wilmington, Del., a Corporation of Delaware. Filed Dec. 9, 1914. Serial No. 876,342. (Cl. 131—57.)



1. A feeding device for leaves comprising a feed table, a plurality of rollers provided on said table, an endless conveyer provided upon said rollers for supporting and moving the major portions of the leaves horizontally, an auxiliary carrying mechanism for engaging the leaves near their butt ends, means for turning the leaves from horizontal to vertical position, one of said rollers being provided with a roughened surface for positively engaging the leaves near their butt portions to prevent any slipping of the same during such turning movement, and a delivery mechanism for conveying said leaves after they have been turned.

2. A feeding device for leaves comprising a feed table, a plurality of rollers provided on said table, an endless conveyer provided upon said rollers for supporting and moving the major portions of the leaves horizontally, an auxiliary carrying mechanism for engaging the leaves at their butts, means for turning the leaves from a horizontal to a vertical position, a card clothing surface provided upon the inner end of one of said rollers for positively engaging the leaves near their butt portions to prevent any slipping of the same during such turning movement, and a delivery mechanism for conveying said leaves after they have been turned.

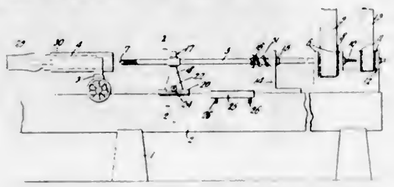
3. A feeding device for leaves, comprising a feed table, a conveyer for supporting and moving the major portions of the leaves horizontally, an auxiliary carrying mechanism consisting of a plurality of card clothing belts for engaging the butts of the leaves, the supporting surface of one belt being extended beyond the other for receiving the leaves, a plurality of rollers upon which said conveyer is mounted, means for turning said leaves from horizontal to vertical position, one of the rollers being provided with a roughened surface for positively engaging the leaves near their butt portions to prevent any slipping of the same during such turning movement, and a delivery mechanism for conveying said leaves after they have been turned.

4. A feeding device for leaves comprising a feed table, a conveyer for supporting and moving the major portions of the leaves, an auxiliary carrying mechanism arranged adjacent to one edge of said conveyer and consisting of a plurality of card clothing belts for engaging and conveying the butt ends of the leaves, the supporting surface of one belt being extended beyond the other for receiving the leaves, a delivery mechanism for conveying said leaves after they leave the conveyer and carrier, means for turning the butt ends of the leaves as they are delivered to said delivery mechanism, and means for positively engaging and turning the major portions of the leaves simultaneously with the turning of the butts by the butt turning means.

5. A feeding device for leaves comprising means for conveying the leaves horizontally, means for engaging and turning the butts of the leaves from horizontal to vertical position, means comprising a conical roller for positively engaging and turning the major portions of the leaves simultaneously with the turning of the butts by the butt turning mechanism, and a delivery device for conveying said leaves after they have been turned.

[Claims 6 to 11 not printed in the Gazette.]

1,219,078. AUTOMATIC BORING-MACHINE. DELONA L. CALAHAN, Fairfax, Wash., assignor to Manley, Moore Lumber Company, Tacoma, Wash. Filed Mar. 11, 1916. Serial No. 83,583. (Cl. 144—93.)



1. In a boring machine, an auger shank having an auger at one end, a reamer carried by said shank, a longitudinally movable support for said shank between said auger and reamer embodying separable sections movable away from the shank to pass said reamer, and means for automatically separating said sections when said support approaches said reamer.

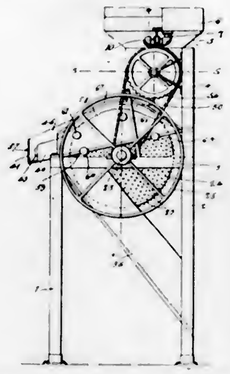
2. In a boring machine, a longitudinal shank having an auger at one end, a reamer carried by said shank, a longitudinally movable pedestal for supporting said shank between said auger and reamer and comprising a pair of sections having notched portions for engaging and supporting said shank, and means for automatically separating said sections when said support is moved toward said reamer in order that the sections can pass said reamer without interference.

1,219,079. COFFEE PEELING AND CLASSIFYING MACHINE. LUIS B. GANDIA CARRERAS, Morovis, Porto Rico. Filed Apr. 14, 1916. Serial No. 91,155. (Cl. 83—36.)

1. In a coffee sorting and peeling machine, the combination, of coffee berry sorting means, berry peeling means divided into a portion for peeling large coffee berries and a portion for peeling small coffee berries and means for delivering the sorted berries to the respective parts of the peeling means.

2. In a coffee sorting and peeling machine, the combination, of coffee berry sorting means, berry peeling means divided into a portion for peeling large coffee berries and a portion for peeling small coffee berries, means for delivering the sorted berries to the respective parts of the peeling means, and a separator structure for delivering the sorted and peeled beans to sacks.

3. In a coffee sorting and peeling machine, the combination, of coffee berry sorting means, berry peeling means divided into a portion for peeling large coffee berries and a portion for peeling small coffee berries, means for delivering the sorted berries to the respective parts of the peeling means, a separator structure for delivering the sorted and peeled beans to sacks, and means for directing a plurality of streams of water upon said sorting means.

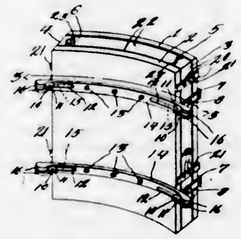


4. In a coffee sorting and peeling machine, the combination, of coffee berry sorting means, berry peeling means including a rotary drum, peeling spurs formed upon the ends and the periphery of the drum, vertical jaws positioned at each end of said drum and being provided with corrugated portions for co-action with the peeling spurs, and means for adjusting the positions of said jaws with respect to said drum.

5. In a coffee sorting and peeling machine, the combination, of a supporting frame, coffee berry sorting means, peeling means for receiving and peeling the sorted berries, said peeling means including a rotary peeling drum, jaws for coacting with said drum, and means for adjusting the position of said jaws with respect to said drum.

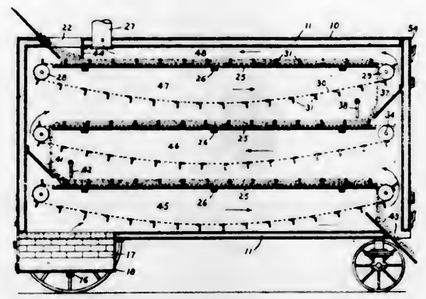
[Claims 6 to 12 not printed in the Gazette.]

1,219,080. MOLD. FREDRICK W. CASE, Larwill, Ind. Filed Nov. 3, 1915. Serial No. 59,478. (Cl. 25—121.)



In a concrete mold, the combination of a side piece curved transversely and two end pieces, of a second side piece curved transversely correspondingly to the first side piece, and between which and the first side piece said end pieces fit with their outer faces flush with the end edges of said side pieces, hinges carried by the first side piece, each having an elongated hinge leaf extending across the end edges of the side pieces and secured to the outer face of an end piece, whereby each end piece may swing outwardly and toward the outer face of the first side piece, whereby the molded block may be easily removed, bars secured to the outer faces of the end pieces and having their ends overlying the end edges of said side pieces, curved bars secured to the outer face of the second side piece and having forked ends extending beyond the end edges of the second side piece to be engaged by the elongated leaves of the hinges, said forks having bulges, and cam members carried by said elongated hinge leaves to cooperate with the bulges, to bind the parts of the mold together in two directions at right angles to each other.

1,219,081. DRIER. MYRON T. CASS, Schenectady, N. Y., assignor of one-half to The Kellam & Shaffer Company, a Corporation of New York. Filed Mar. 31, 1916. Serial No. 88,153. (Cl. 263—24.)



1. In a drier, the combination of a hollow body structure, platforms located one above the other which extend between the side walls of the body and are separated from the end walls, chambers between the platforms, a power driven scraper for each platform which receives the material to be dried at one end, moves it longitudinally along said platform and discharges it at the other end, means which receive the material discharged from one platform, break up its mass and deliver it to the next lower platform, a hopper for feeding material to the upper platform, an outlet for the dried material at the lower end, a furnace which delivers hot gas to the lower chamber from which it flows through the other chambers, first in one direction and then in the other heating the under side of each platform and directly heating the material thereon, and an outlet for said gases.

2. In a drier, the combination of a hollow body structure, platforms located therein, one above the other, which extend from side to side of the body and are separated from the end walls, longitudinally extending chambers between the platforms through which hot gases pass back and forth, said chambers being connected in series, scrapers arranged to travel lengthwise of the platforms to move the material being dried and cause it to fall through the stream of hot gases from the furnace, inclined members which receive the material from one platform, break up its mass and deliver it to the next lower platform, said members also serving to cause the hot gases to flow serially through the chambers, a furnace located below the chambers and from which hot gases flow through said chambers in series, means for moving the scrapers, an inlet for the material to be dried located at the top of the body, and an outlet for said material located at the bottom.

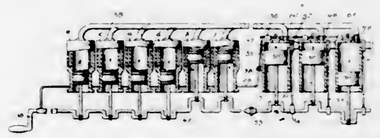
3. In a drier, the combination of a hollow body structure, platforms therein located one above the other, which extend from side to side of the body and are separated from the end walls, said platforms defining chambers between them, means for moving the material to be dried over the platforms in succession from the top to the bottom, a furnace located at the bottom of the body and from which the hot gases flow in a zig-zag manner through the chambers, the direction of movement in each chamber being opposite to that of the material moving over the platform, an inlet and an outlet for the material being dried, and an opening to permit the escape of the furnace gases after they have given up heat.

4. In a drier, the combination of a portable hollow body structure, a plurality of platforms located one above the other which extend from side to side of the body and divide it into chambers, said platforms being shorter than the body to define with the walls thereof passages which connect the chambers, an endless belt and scrapers for each of said platforms to move the material to be dried along the upper surface thereof, pulleys for the belts which are located in the passages at opposite ends of each platform, the under side of each of said belts and their scrapers moving idly in the chambers below the platforms, a hopper for feeding material to the upper platform, means below the ends of the platforms for breaking up the material as it is discharged and which also serve to direct the hot gases, an outlet for the dried material, a furnace located below the platforms and at one end of the body, the gases from which flow serially through the chambers, an outlet for the gases communicating with the upper chamber, and means for driving the belts and scrapers in adjacent chambers in opposite directions.

5. In a drier, the combination of a hollow body structure, wheels for the same whereby it may be moved from place to place, platforms that divide the interior of the body into chambers which communicate serially with each other, a hopper for feeding material to one end of the top platform, means for moving the material along each platform, comprising side chains which are connected by transversely extending scrapers that move over the upper face of the platform, inclined members which receive the material from one platform, break up its mass, and deliver it to the next, distributers which assist in spreading and leveling the material between said scrapers, means for holding the distributers yieldingly in place, and a furnace located at the lower part of the body and from which the hot gases flow through the chambers.

[Claims 6 and 7 not printed in the Gazette.]

1,219,082. COMPOUND INTERNAL-COMBUSTION ENGINE. EDWARD E. CHALBERG, Chappell, Nebr., assignor of one-half to A. B. Ozman, Chappell, Nebr. Filed Apr. 9, 1913. Serial No. 760,064. (Cl. 123—36.)

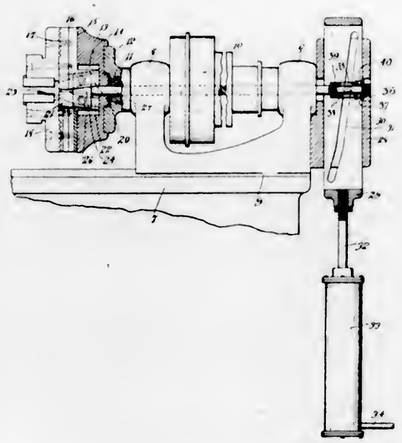


The combination with an explosive engine including a plurality of cylinders, pistons operable within the cylinders, a crank shaft, connecting rods connecting the pistons with the crank shaft, the cylinders being provided with exhaust ports and a cranking device for cranking the engine, of a plurality of low pressure cylinders, pistons operable in the low pressure cylinders, a crank shaft connected to the crank shaft of the engine, connecting rods connecting the last mentioned crank shaft with the pistons in the low pressure cylinders, the said pistons in the low pressure cylinders being in opposed relation to the pistons in the engine cylinders, the low pressure cylinders having intake ports therein, pipes connecting the exhaust ports of the engine cylinders with the intake ports of the low pressure cylinders, relief valves on the low pressure cylinders, a rod connecting the relief valves for simultaneously operating the same and means connecting the rod with the cranking device whereby when said cranking device is moved into operative position with relation to the crank shaft the rod will be moved to open the relief valves.

1,219,083. CHUCK. ALBERT E. CHURCH, New Britain, Conn., assignor to Union Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed June 23, 1914. Serial No. 846,790. (Cl. 29—138.)

1. A chuck body, a member movable radially therein and having a groove extending transversely to its direction

of movement in the chuck body, grooves opening toward each other in the walls of the first mentioned groove and having accelerating and holding parts, an actuator, and means in engagement with said accelerating and holding parts of said grooves and connecting said actuator with said member to reciprocate the latter.



2. A chuck body, members arranged upon diametrically opposite sides of said body and movable radially therein, said members having grooves extending transversely to their direction of movement on the chuck body and with grooves opening toward each other in the walls of the first mentioned grooves, an actuator extending into said first mentioned grooves and having projections extending into the grooves in the walls of said first mentioned grooves, and means for operating said actuator.

3. A chuck body, a member movable radially therein, said member having a groove with parallel opposing walls and formed into an accelerating and a holding portion, an actuator, and means in engagement with said groove and connecting the actuator with said member to cause said actuator to impart reciprocating movement to said member.

4. A chuck body, a member movable radially therein, said member having a groove with parallel opposing walls and formed into a cam groove constituting an accelerating and a holding portion, an actuator having a projection extending into said groove to impart reciprocating movement to said member, and means for operating the actuator.

5. A chuck body having a central recess, a member slidably mounted on the chuck body and having a projection entering said recess and extending therein axially of the chuck body, an actuator, and a connection between said actuator and projection to reciprocate said member.

[Claims 6 to 15 not printed in the Gazette.]

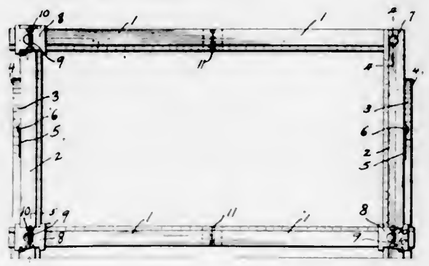
1,219,084. KNITTED AND CROCHETED ARTICLE OF WEARING-APPAREL. EDMUND T. CHURCH, New Rochelle, and WILLIAM E. WEBB, Jr., Larchmont, N. Y., assignors to Reinforced Cravat Corporation, New York, N. Y., a Corporation of New York. Filed Mar. 20, 1913. Serial No. 755,663. (Cl. 2—11.)

A knitted or crocheted tubular elastic scarf having one of its ends cut obliquely to form a depending tab-like portion on one side, a cord around said obliquely cut end, said cord being of greater elasticity than the body of the scarf, encircling threads covering said elastic cord and closely engaging it, said threads being secured only to the scarf whereby when the end of the scarf is distorted by a strain, the elastic cord will return to its normal position



and the cord in extending and contracting will move relatively to the encircling threads.

1,219,085. CURTAIN-STRETCHER. PATRICK J. CONNOLLY, Youngstown, Ohio, assignor of one-half to Edward R. Lewis. Filed Dec. 4, 1915. Serial No. 65,050. (Cl. 45—24.)



A device of the class described, having in combination with a curtain stretching frame, a clamp provided with a flat body portion, an arch shaped aperture formed in the flat body portion of said clamp, upturned perforated lugs positioned directly adjacent the arch shaped aperture, the straight side of which serves as a stop, a clamping lever pivoted in the perforations of said lugs, said clamping lever provided with a U-shaped portion to swing downwardly into said aperture to clamp the ends of the frame members within the clamp and to engage with the straight side of the arch, four downwardly turned members at each corner of said body portion, inturned members forming a shoulder at the ends of the downturned members of the clamp, as set forth for the purpose specified.

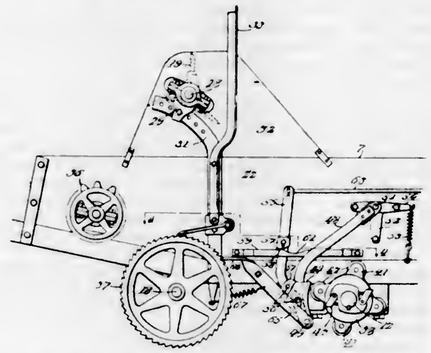
1,219,086. HAT-SIZE-REDUCING DEVICE. HENRY D. CURTIS, Red Bank, N. J. Filed Nov. 1, 1916. Serial No. 128,838. (Cl. 2—32.)



1. A size-reducing device for hats comprising a flexible metal core having spurs projecting from one side thereof, and a covering of pliable material surrounding said core, said covering being formed of a plurality of strips of material wound around said core and having the ends of the strips at each end of the core twisted and cemented together.

2. A size reducing device for hats comprising a flexible core having spurs and a covering of open-mesh fabric completely inclosing the core, said covering consisting of a plurality of strips of fabric wound one upon the other spirally around the core, the margins of the adjacent coils overlapping each other, the ends of the strips extending beyond the ends of the core being twisted and cemented together to prevent unwinding of the strips.

1,219,087. INTERMITTENT FEEDING MECHANISM FOR FERTILIZER-DISTRIBUTERS. CALVIN R. DAVIS, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Apr. 11, 1916. Serial No. 90,483. (Cl. 74—54.)



1. In a ratchet feed mechanism, the combination of a ratchet wheel, a series of revolving tappets, and means adapted to be actuated by the tappets for imparting feed movement to the ratchet wheel, said means being adjustable into and out of the path of the tappets to vary the movement of the ratchet wheel and constructed to be actuated throughout a uniform portion of the cycle of each tappet at any adjustment for variation in degree of feed movement so that the advance feed movement will be uniformly gradual.

2. In a ratchet feed mechanism, the combination of a ratchet wheel, a series of revolving tappets, a floating cam adapted to be actuated by the tappets, the cam being adjustable relatively to the path of the tappets and arranged so that in any of its operative adjustments the tappets will operate upon and throughout the same length of the cam face, and means operable between the cam and ratchet wheel for feeding the latter by operation of the former.

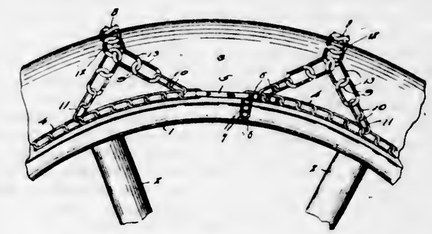
3. The combination with a ratchet wheel and a rotary driver equipped on its periphery with a series of projecting tappets, of a cam shoe disposed in close proximity to the path of said tappets and suspended by a pendant pivotally connected to the lower end of the cam shoe and pivotally mounted on a fixed pivot above the driver, a pawl arm pivotally connected with the cam shoe and adapted to feed the ratchet wheel, and means for adjusting the cam shoe on its said lower pivot relatively to the path of the tappets whereby the shoe will alternately be moved outwardly by a tappet and when the same is passed will drop into the path of the next succeeding tappet and be operated thereby.

4. The combination with a ratchet wheel and a rotary driver equipped on its periphery with a series of projecting tappets, of a cam shoe, means supporting the shoe in proximity to the path of the tappets so that one end of the cam face of the shoe is out of said path and the opposite end is adjustable more or less into said path and so that the tappets will engage the cam shoe throughout a uniform length at any adjustment of the cam shoe, means for so adjusting the cam shoe, and a pawl arm disposed in operative relation to said ratchet wheel and connected with the cam shoe to be moved thereby an amount determined by said adjustment.

5. A ratchet conveyer-feed mechanism for fertilizer distributers comprising a ratchet wheel, a rotary driver equipped with a series of projecting tappets, a cam shoe having an arcuate cam face of a length slightly less than the circumferential distance between adjacent tappets, means supporting the cam shoe in such relation to the tappets that as the driver is rotated each tappet may operate in succession along substantially the entire length of said arcuate cam face to move the cam shoe outwardly the distance that the cam face projects into the path of the tappets, the cam shoe and tappets being relatively adjustable to effect greater or less movement of the cam shoe and the engagement between the tappets and cam shoe being of the same duration under any of said adjustments, and means operable between the cam shoe and ratchet wheel for feeding the latter by said operation of the former.

[Claims 6 to 12 not printed in the Gazette.]

1,219,088. TIRE-CHAIN. HOWARD C. DAVIS, Cambridge, Ohio. Filed Apr. 21, 1916. Serial No. 92,686. (Cl. 152—14.)



1. A device of the class described comprising a pair of spaced longitudinally extending chains, a plurality of transverse chains each terminating at its opposite ends to provide divergently disposed branches, the latter being connected with said longitudinal chains, longitudinal projections on all of said transverse chains and their branches, and means for connecting the ends of said longitudinal chains.

2. A tire chain comprising side chains and a plurality of cross chains at right angles to said side chains and of less length than the distance between the latter with divergently disposed links connecting the ends of the cross chains with the side chains, the cross chains and adjacent divergent links having longitudinally disposed projections for contact with the ground.

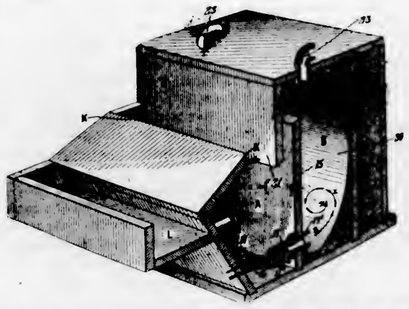
1,219,089. METHOD AND APPARATUS FOR CONCENTRATING ORE. HARRY M. DUNN, Hurley, N. Mex. Filed May 11, 1915. Serial No. 27,348. (Cl. 83—85.)

1. The herein described method of concentrating ores which consists in imparting an upward velocity in substantially vertical planes only to a stream of a mixture of pulp and a frothing agent, permitting the elevated portion of the stream to fall back upon itself in contact with a free atmosphere whereby air is entrained in the mixture, and separating the froth produced thereby.

2. The herein described method of concentrating ores which consists in adding a frothing agent to a stream of pulp, discharging gas into the stream to impart a velocity thereto, discharging said stream upwardly in substantially vertical planes only, permitting said stream to fall back upon itself in contact with a free atmosphere whereby additional air is entrained and the whole mass is agitated, and separating the froth produced thereby.

3. The herein described method of concentrating ores which consists in forcibly impelling a stream of a mixture

of a frothing agent and pulp to rise through and in contact with a body of such a mixture to a point above the said body, permitting a portion of the part of the mixture so elevated above the body to fall back thereupon in contact with a free atmosphere forming a froth and separating the froth.

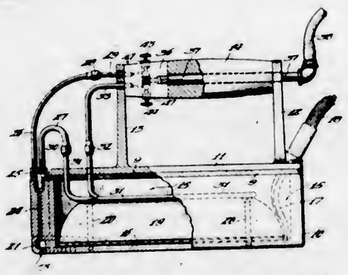


4. The herein described method of concentrating ores which consists in imparting a velocity to a portion of a body of a mixture of pulp and oil, permitting said portion to flow through and in contact with the remainder of the body, deflecting the moving portion upward so that it rises above the remainder of the body and permitting it to fall back upon itself forming a froth.

5. The herein described method of concentrating ores which consists in imparting a velocity to a portion of a body of a mixture of pulp and oil, permitting said portion to flow through and in contact with the remainder of the body, deflecting said moving portion upward so that it rises above the remainder of the body and permitting it to fall in contact with a free atmosphere back upon the remainder of the body forming a froth.

[Claims 6 to 10 not printed in the Gazette.]

1,219,090. TAILOR'S IRON. ALEXANDER DURAND, Los Angeles, Cal. Filed Oct. 19, 1914, Serial No. 867,550. Renewed Nov. 1, 1916. Serial No. 129,041. (Cl. 68—26.)



1. A tailor's iron comprising a heating means, a water supply means, a steam generating means in contact with said heating means, and means whereby water can be passed through the steam generating means to the toe of the iron and also directly to the toe of the iron without passing through said steam generating means.

2. A tailor's iron comprising a body portion, a rib formed at the forward end of said body portion having a distributing channel therein, said channel having minute openings communicating with the face of the iron, a water supply means, a cover for said body portion having standards formed thereon, a handle secured between said standards, a heating means, a steam coil so placed as to be heated by said heating means, and valve means in said handle whereby said water supply means can be connected to said channel through said steam coil.

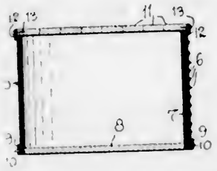
3. A tailor's iron comprising a body portion, a rib formed at the forward end of said body portion having a distributing channel therein, said channel having minute openings communicating with the face of the iron, a water supply means, a cover for said body portion having standards formed thereon, a handle secured between said standards, a heating means, a steam coil so placed as to be heated by said heating means, and valve means in said handle whereby said water supply means can be connected to said channel both directly and through the steam coil.

4. A tailor's iron comprising a body portion, a rib formed at the forward end of said body portion having a distributing channel therein, said channel having minute openings communicating with the face of the iron, a water supply means, a cover for said body portion having standards formed thereon, a handle secured between said standards, a heating means, a steam coil so placed as to be heated by said heating means, and valve means in said handle whereby said water supply means can be connected to said channel both directly and through the steam coil and whereby the proportion of water passing through the steam coil and directly to said channel can be regulated.

5. A tailor's iron comprising a body portion, a rib formed at the forward end of said body portion having a distributing channel therein, said channel having minute openings communicating with the face of the iron, a water supply means, a cover for said body portion having standards formed thereon, a handle secured between said standards, a heating means, a steam coil so placed as to be heated by said heating means, a valve body having a central opening in direct communication with the water supply means and having outlet openings in one end in open communication with said steam coil and said channel, and means whereby the flow of water between said central opening and the said outlet openings can be regulated and controlled.

[Claim 6 not printed in the Gazette.]

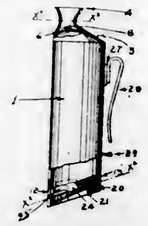
1,219,091. RECEPTACLE. WORTH R. FAIRBANKS, Fine, N. Y. Filed Jan. 5, 1916. Serial No. 70,502. (Cl. 229—12.)



A receptacle of the character described including a body wall, a bottom to which one end of the body wall is secured, a removable top for the box consisting of a plurality of wood strips arranged in the same plane, and a circumscribing flexible wood band engaged upon the periphery of said top and fixed to the individual strips thereof, said band being of a width greater than the thickness of the top and having one of its edges flush with one surface of the top, the other edge of said band projecting beyond the opposite face of the box top and adapted for frictional engagement upon the body wall of the box.

1,219,092. MONEY-CHANGER. EDWARD J. FAY, Los Angeles, Cal. Filed July 7, 1915. Serial No. 38,436. (Cl. 133—6.)

1. In a money changer, a tubular receptacle having a flared filling aperture, an inclined shelf within said receptacle, and a delivery slot in said receptacle and above said shelf, a chamber within said receptacle and below said shelf, an obstructer within said receptacle and above said shelf, and normally obstructing said delivery slot, means within said chamber and below said shelf for actuating and removing said obstruction from said delivery slot all arranged and operating substantially as shown and described and for the purpose specified.

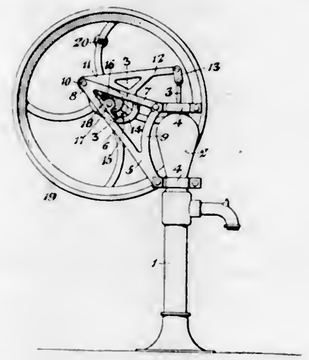


2. In a money changer, a tubular receptacle having an inclined shelf within said receptacle, and a delivery slot above said shelf and an obstructer within said tubular receptacle above said shelf and normally obstructing said delivery slot, an actuating lever below said shelf, and adapted to actuate and remove said obstruction from said delivery slot.

3. In a money changer, a tubular receptacle having an inclined shelf, a delivery slot above said shelf, and an obstructer within said receptacle and normally obstructing said delivery slot, a chamber below said shelf and an actuating lever within said chamber and connecting directly with said obstructer, and adapted to actuate and control said obstructer substantially as shown and described.

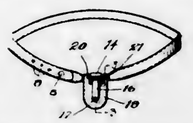
4. In a money changer, a tubular receptacle having an inclined shelf therein, a delivery slot above said shelf, and a chamber below said shelf, an obstructer within said receptacle and a spring controlled actuating lever within said chamber and below said shelf and connecting directly with said obstructer above said shelf, a stop lug integral with said actuating lever and within said chamber, and adapted to contact with the wall of said chamber and limit the downward movement of said actuating lever and said obstructer and retard the action of the said spring, substantially as shown and described.

1,219,093. PUMP-DRIVING MECHANISM. ELIAS BICKEL FETZER, Milton, Pa., assignor to Charles E. Hoy, Milton, Pa. Filed May 6, 1916. Serial No. 95,879. (Cl. 74—14.)



An operating mechanism for reciprocating pumps, comprising two substantially triangular-shaped frame members in spaced registering relation, clamping means provided at the upper and lower angles of the frame members for fastening said members to a pump in offset relation thereto with the apexes of the members extending above the upper fastening means, a rock lever arranged between the frame members and pivoted at one end to the apexes thereof and at the other end connected to the pump rod, said rock lever working between the frame members and having a slot frame below the plane of the pivot and pump rod connections, and a cam shaft carried by the frames below the top thereof and provided with a cam to work in the slot frame.

1,219,094. TRUSS ADOLF A. FILLIP, Schulenburg, Tex. Filed Aug. 22, 1916. Serial No. 116,263. (Cl. 128—26.)



1. In a truss structure, the combination of a body engaging binder including a pair of flexible metallic bands, soft flexible material covering said bands, the forward meeting ends of said bands being rolled for forming bearing sleeves, a pin carried by said sleeves, a ratchet carried by said pin, a pad pivotally connected to said pin, and a flat spring pawl carried by said pad and adapted to engage the teeth of said ratchet for holding said pad in adjusted pivotal position.

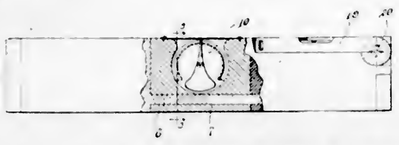
2. In a truss structure, the combination of a body engaging binder including a pair of flexible metallic bands, soft flexible material covering said bands, the forward meeting ends of said bands being rolled for forming bearing sleeves, a pin carried by said sleeves, a ratchet carried by said pin, a pad pivotally connected to said pin, and a flat spring pawl carried by said pad and adapted to engage the teeth of said ratchet for holding said pad in adjusted pivoted position, said spring pawl being pivotally connected to said pad for pivotal movement out of engagement with said ratchet teeth for permitting said pad to be moved outwardly.

3. In a truss structure, the combination of a body engaging binder including a pair of flexible metallic bands, soft flexible material covering said bands, the forward meeting ends of said bands being rolled for forming bearing sleeves, a pin rigidly supported by its ends in said sleeves, a ratchet carried by said pin, a pad pivotally connected about said sleeves and supported by the pin, and a flat spring pawl carried by said pad and adapted to engage the teeth of said ratchet for holding said pad in adjusted pivoted position, said spring pawl being pivotally connected to said pad for pivotal movement out of engagement with said ratchet teeth for permitting said pad to be moved outwardly.

4. In a truss structure, the combination of a body engaging binder including a pair of flexible metallic bands, soft flexible material covering said bands, the forward meeting ends of said bands being rolled and terminating in bearing sleeves, a pin having each of its ends secured in one of said sleeves, a ratchet wheel rigidly secured to the pin centrally of its ends, a pad pivotally mounted about the sleeves on opposite sides of the ratchet wheel, and a flat spring pivotally carried by said pad and having one end adapted to engage the teeth of said ratchet for holding said pad in adjusted pivoted position.

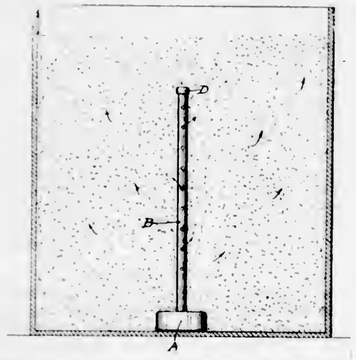
5. In a truss structure, the combination of a body engaging binder including a pair of flexible metallic bands, soft flexible material covering said bands, the forward meeting ends of said bands being rolled for forming bearing sleeves, a pin substantially elliptical in cross section secured in said sleeves, a ratchet wheel rigidly secured to the medial portion of said pin, a pad pivotally arranged over the sleeve and pin, and a flat spring pawl carried by said pad and adapted to engage the teeth of said ratchet wheel for holding said pad in adjusted pivoted position, said spring pawl being pivotally connected to said pad for pivotal movement out of engagement with said ratchet teeth for permitting said pad to be moved outwardly.

1,219,095. HAND-LEVEL. CHARLES FLINT, Spokane, Wash. Filed Apr. 26, 1916. Serial No. 93,669. (Cl. 33—221.)



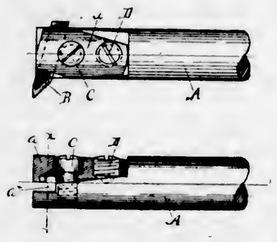
In a level of the class described, a stock, a pendulum-like indicator pivoted intermediate of its ends within said stock, a locking mechanism for said indicator comprising a spring controlled fulcrumed latch member normally held out of engagement therewith, and means for manually disposing said locking mechanism in its engaging position, said means consisting of a thumb-screw provided with a cone-shaped head-piece adapted to engage said latch-member.

1,219,096. APPARATUS FOR DESTROYING INSECTS. ROBERT WORN GEESLIN, Caradan, Tex. Filed Dec. 2, 1916. Serial No. 134,761. (Cl. 99—9.)



A fumigating apparatus consisting of a closed bulb having a flat bottom adapted to contain a fumigant, a perforated tube attached to said bulb and closed by a cap.

1,219,097. COUNTERBORING-TOOL. EDWARD F-G. GIBBS, Washington, D. C. Filed Jan. 22, 1915. Serial No. 3,772. (Cl. 29—99.)



1. A counter-boring tool, comprising a straight cylindrical bar, the same having a portion of its body split away by a longitudinally disposed cut from its front end, a lever clamp fitted to the said cut, a transversely disposed cutter-holding aperture being formed between the said bar and clamp near their front ends, a cutter fitted within the said aperture, a pull screw adjacent to the said aperture which engages both clamp and bar, the head of which screw is countersunken into the member which it enters, and a headless push screw near the rear end of the said clamp, substantially as set forth.

2. A counter-boring tool, comprising a straight bar of uniform diameter in cross section, the same having a portion of its body split away by a longitudinally disposed cut from its front end, the said cut forming an acute angle with the axis of the bar, a lever clamp fitted to the said cut, a transversely disposed cutter holding aperture being formed between the said bar and clamp near their front ends, a cutter fitted within the said aperture, a pull screw adjacent to the said aperture which engages both bar and clamp, the head of which screw is countersunken into the member which it enters, and a headless push screw near the rear end of the said clamp, substantially as set forth.

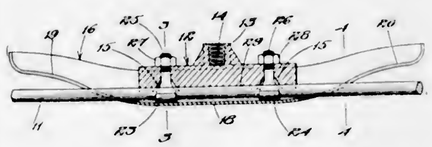
3. A counter-boring tool, comprising a straight cylindrical bar, the same having a portion of its body split away by a longitudinally disposed cut from its front end, a lever clamp fitted to the said cut, a transversely disposed cutter-holding aperture being formed between the said bar and clamp near their front ends, a cutter fitted within the said aperture, a pull screw adjacent to the said aperture which engages both bar and clamp, the head of which screw is countersunken into the member which it enters, substantially as set forth.

4. A counter-boring tool, comprising a straight cylindrical bar, the same having a portion of its body cut from its front end on a plane approximately longitudinally disposed to its axis, a lever clamp fitted to the said cut, a transversely disposed cutter-holding aperture being formed between the said bar and clamp near their front ends, a cutter fitted within the said aperture, a pull screw, having a flat bottomed head which head enters a flat bottomed counter-bore adjacent to the said aperture, which screw engages both clamp and bar, and a push screw near the rear end of the said clamp which engages both clamp and bar, all of which screws and clamp, when clamped in working position, are within the limits of the peripheral surface of the bar extended, substantially as set forth.

5. A counter-boring tool, comprising a straight cylindrical bar, the same having a portion of its body split away by a longitudinally disposed cut from its front end, which cut forms an acute angle with the axis of the bar, a lever clamp fitted to the said cut, a transversely disposed cutter holding aperture being formed between the said bar and clamp near their front ends, a cutter fitted to the said aperture, a pull screw having a flat bottomed head, which head enters a flat bottomed counter-bore, adjacent to the said aperture and which screw engages both clamp and bar, and a push screw near the rear end of the said clamp, which engages both bar and clamp by extending through one and entering the other, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,219,098. TROLLEY-EAR. WILLIAM F. HALL, Newton, Mass.; Winifred F. Hall executrix of said William F. Hall, deceased. Filed Oct. 15, 1915. Serial No. 56,080. (Cl. 191—43.)



1. The improved straight line trolley ear comprising a shield having a bottom and upwardly inclined ends with slots therein, a hook secured to said shield adjacent said bottom which is adapted to engage a trolley wire passing through said slots, a body member adapted to be received within said shield to engage said wire, and means for drawing said hook and body member together to clamp a trolley wire between them.

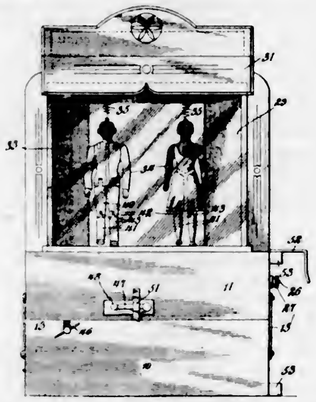
2. The improved straight line trolley ear comprising a shield having a bottom and upwardly inclined ends with slots therein to permit a trolley wire to rest adjacent the upper surface of said bottom, a hook secured to said shield adjacent said bottom which is adapted to engage a trolley wire passing through said slots, an upwardly projecting shank secured to said hook, a body member for engaging the opposite side of said wire from said hook, and means engaging said shank to draw said hook and body member together to clamp a trolley wire between them.

3. The improved straight line trolley ear comprising a shield having a bottom portion and upwardly inclined ends with slots therein to receive a trolley wire and permit it to lie adjacent the upper surface of said bottom, a hook having its outer curved end secured to the bottom of said shield substantially in line with said slots which is adapted to engage a trolley wire passing between them, a body member adapted to be received within said shield to engage the upper surface of said trolley wire, and means for drawing the hook and body member together to clamp a trolley wire between them.

4. The improved straight line trolley ear comprising a shield for guiding a trolley wheel having a bottom portion and upwardly inclined ends with slots therein, a hook secured adjacent the bottom of said shield and adapted to engage a straight line trolley wire passing through said slots, a shank on said hook, a body member adapted to be received within said shield to engage the upper surface of said trolley wire which has a hole therein through which the shank of said hook projects, and a nut threaded to said shank for drawing said hook and body member together to clamp a trolley wire between them.

5. The improved straight line trolley ear comprising a shield for guiding a trolley wheel having sides adapted to contact with the sides of the groove of a trolley wheel to guide the same and to hold the bottom of the groove of said trolley wheel away from the shield, a hook secured to said shield and adapted to engage a trolley wire, a body member adapted to engage the opposite side of said trolley wire from that engaged by said hook, and means for drawing said hook and body member together to clamp a trolley wire between them.

1,219,099. MECHANICAL TOY. JOHN WILEY HART, Iola, Kans., assignor of one-half to James Waring Wilgus, Iola, Kans., and one-fourth to Edward G. Cresse, Iola, Kans. Filed June 23, 1916. Serial No. 105,475. (Cl. 46—40.)



1. The combination with a figure, and vibrating means therefor, of a plate provided with guiding means, and a support freely suspended from the plate and having connection with the figure for supporting it, said support being directed into various positions by said guiding means when moved by said vibrating means.

2. The combination with a figure and means for vertically vibrating the same, of a support connected at its lower end to the figure, a guiding plate secured above the figure and having a relatively large opening therein to loosely receive the upper end of the support, and retaining means on the support above the plate for contact therewith to suspend the figure, said opening in the plate admitting of the relatively free turning and lateral movements of the figure and its support.

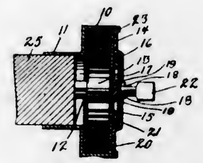
3. The combination with a vertically vibrating platform, and a figure adapted to be vibrated thereby, of a support connected at its lower end to the figure and adapted to be moved by the vibrations thereof, and a detachable top plate provided with guiding means for engagement with the upper end of the support to permit and generally direct the movements thereof.

4. The combination with a vertically vibrating platform, of a guiding plate supported above the platform and having a relatively wide opening therein, a figure, a spring connected at its lower end to the figure, a relatively thin eye-bolt connected to the upper end of the spring and extending through said opening in the plate, and retaining means adjustably mounted on the upper end of the eye-bolt, and engaging the plate at the opposite sides of the opening to suspend the eye-bolt and vertically adjust the figure, and to permit the free vertical vibration and lateral and turning movements of the eye-bolt in the opening.

5. The combination with a base, of a screen rising from the base, a top plate detachably fitting over the screen and having an opening therein, a support depending through the opening and adapted for vertical, lateral and turning movements therein, means on the upper end of the support and wider than the said opening to engage the plate and freely suspend the support, a figure detachably hung upon the lower end of the support, and a vibrating platform detachably mounted on the base within the screen for contact with the figure to vibrate it and jar the support about in said opening to change the position of the figure.

[Claims 6 to 11 not printed in the Gazette.]

1,219,100. SPRING-ROLLER. EDGAR HAYSLETT, Warsaw, Ind. Filed Jan. 27, 1915. Serial No. 4,702. (Cl. 156—36.)

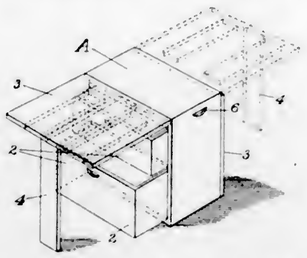


A spring winding device for a shade roller comprising a cup member, a circular flange carried by the cup for the reception of one end of a shade roller, a spring within the cup and having its outer end attached to the cup, a closing disk at the open end of the cup, a pintle disposed through the cup and attached to the inner end of the spring, said pintle having diametrically opposite recesses, a rectangular plate disposed on the spindle outwardly of the disk and provided with longitudinally extending and oppositely curved openings, balls disposed in the openings and adapted to move at times into the recesses and inner ends of the openings, and a cover plate fixed to the cup member and having a recess of a size and shape to snugly receive the said plate and hold the same against rotation.

1,219,101. AUTO COMMISSARY AND TABLE. ADDISON N. HIMES, Berkeley, Cal. Filed Mar. 13, 1916. Serial No. 83,836. (Cl. 190—12.)

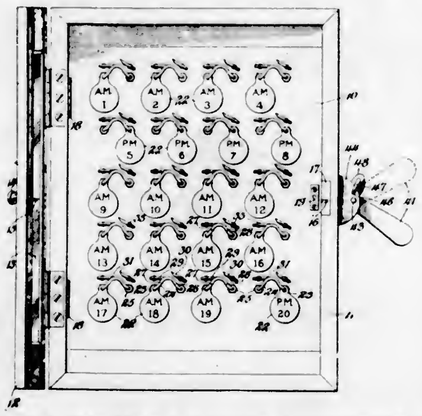
1. A commissary attachment for automobiles and the like, comprising a rectangular case having open sides,

drawers fitting and slidable in said case, and closures for said open sides consisting of boards hinged at the upper edges and closable over the open sides, said boards having legs hinged to their lower edges and foldable against their inner faces, said legs being capable of extension at right angles with the boards, with their lower ends resting upon the ground to hold the boards substantially level with the upper side of the case and forming therewith a table.



2. A combination containing case, table and seats, including an exterior case having top, bottom and end members permanently united and open sides, drawer-like boxes slidable into and fitting the interior of the case, and sides hinged to the top of the case adapted to be opened out to form leaves of a table, said sides having legs hinged to their movable edges and foldable against the lower sides of the leaves to allow them to close and open at right angles so that their free ends will rest upon the ground and support the leaves parallel with the top of the case, said boxes being removable and convertible into seats.

1,219,102. TIME-CHECK BOARD. WILLIAM G. HOOK, Portsmouth, Va. Filed Nov. 20, 1915. Serial No. 62,680. (Cl. 116—31.)



1. In a check board, a base board, a loop mounted on the face of the base board, an indicator slidable from end to end on the loop, and means for preventing the return of the indicator to the end of the loop subsequent to its shifting to the opposite end.

2. In a check board, a base board, a loop mounted on the face of the base board, an indicator slidable from end to end on the loop, and means on each end of the loop for preventing the return of the indicator to that end subsequent to its shifting to the opposite end.

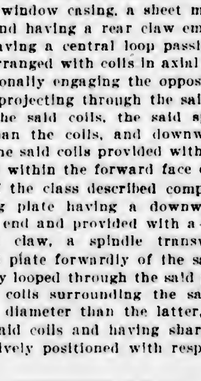
3. In a check board, a base board, a loop mounted on the face of the base board, an indicator slidable from end to end of the loop, and guards on each end of the loop to prevent the return of the indicator after shifting the indicator to the opposite end, and shifting means for the guards to alternately move the same into and out of operative position.

4. In a check board, a base board, an arched loop secured at its ends to the base board, an indicator permanently mounted on the loop and adapted to be raised and slid from end to end on the loop for overturning the indicator, and a guard engaging the loop to prevent the return of the overturned indicator.

5. In a check board, a base board, a plurality of disks permanently attached to the face of the base board and adapted to be independently turned over to disclose the opposite sides thereof without removal from the base board, adjustable means for preventing the turning back of the disks from any one of their turned over positions, and locking means for securing said first means when adjusted.

[Claims 6 to 19 not printed in the Gazette.]

1,219,103. WINDOW-SHADE BRACKET. JOZEF HWALEK, Globe Village, Mass. Filed Aug. 28, 1916. Serial No. 117,220. (Cl. 156—24.)



1. A shade bracket comprising a supporting plate having a depending claw at its rear end and arranged with a perforation adjacent thereto, a coil spring centrally arranged through the said perforation and having windowcasing engaging sharpened terminal ends, and a spindle carried by the said plate freely engaged with the said spring when operatively positioned.

2. A device of the class described comprising in combination with a window casing, a sheet metal plate positioned thereon and having a rear claw embedded therein, a wire spring having a central loop passing through the said plate and arranged with coils in axial alinement with each other frictionally engaging the opposite sides of the plate, a spindle projecting through the said plate and arranged within the said coils, the said spindle being of less diameter than the coils, and downwardly-diverging feet carried by the said coils provided with sharpened terminals embedded within the forward face of the casing.

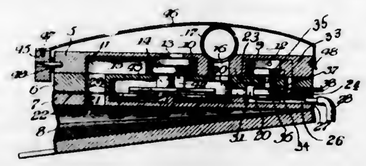
3. A device of the class described comprising an elongated supporting plate having a downwardly-extending claw at its rear end and provided with a perforation adjacent the said claw, a spindle transversely secured through the said plate forwardly of the said perforation, a spring centrally looped through the said perforation and having opposite coils surrounding the said spindle and being of greater diameter than the latter, diverging legs carried by the said coils and having sharpened engaging free ends operatively positioned with respect to the said claw.

1,219,104. PNEUMATIC DEVICE FOR PLAYER-PIANOS. CHARLES V. JAMESON, Chicago, Ill. Filed Jan. 18, 1915. Serial No. 2,835. (Cl. 84—178.)

1. In a valve box for player pianos, a valve controlling the flow of air to and from a pneumatic, two pouches, a bridge connected to the valve and resting upon said pouches, a primary valve for controlling the flow of air to operate said pouches, a pouch for said primary valve, and connections extending to a tracker for admitting air under the pouch for the primary valve.

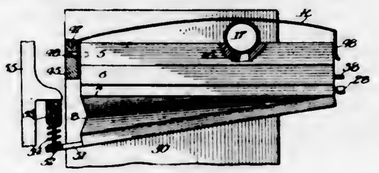
2. In a valve box for player pianos, a valve controlling the flow of air through the box, two pouches, a bridge connected to the valve and resting upon said pouches, and means for admitting air to and exhausting it from the spaces under said pouches.

3. In a valve box for player pianos, a valve controlling the flow of air through the box, two circular pouches, a bridge having its ends mounted upon the centers of said pouches, a stem connecting the center of the bridge to the valve, and means for admitting air to and exhausting it from the spaces under said pouches so as to cause said pouches to act together to move said valve.



4. The combination with a pneumatic having recesses formed in the outer face of its stationary member, and pouches mounted over said recesses, of a plate mounted upon said stationary member and having recesses in its lower face to correspond with the pouch covered recesses, an upper plate mounted upon the previously mentioned plate and having a recess in its under face, and a valve located in the recess in the upper plate and operated by the pouches covering the recesses in the stationary member of the pneumatic.

1,219,105. DETACHABLE PNEUMATIC FOR PLAYER-PIANOS. CHARLES V. JAMESON, Chicago, Ill. Filed Jan. 18, 1915. Serial No. 2,836. (Cl. 84—178.)



1. A pneumatic and a valve box connected together, the box having an air port connected to a cylindrical seat formed in the surface of the box, a cylindrical vacuum chest fitting into the seat and having a port arranged to connect with the port in the box, and a clamping device for securing the box to the vacuum chest.

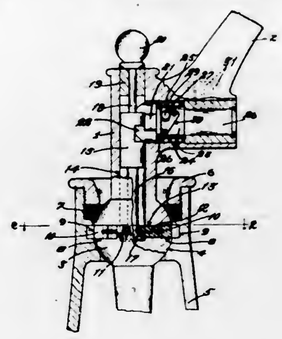
2. The combination with a cylindrical vacuum chest having a port therein, and a valve box having a curved seat fitting the exterior surface of the chest and a port located within the curve of the seat, of a releasable clamping device for securing the box to the chest with the two ports in communication with each other.

3. The combination with the casing and stickers of a piano, of a tubular vacuum chest provided with ports corresponding to the stickers, pneumatic units provided with curved seats having ports corresponding to the ports in the chest, supports in the casing for the rear ends of the units, and clamping devices for securing the units to the chest and supporting the front ends of said units.

4. The combination with the casing and vacuum chest of a player piano, of a valve box engaging one side of the chest and having its rear end supported by the casing, a spring engaging the opposite side of the chest and having one end secured to the casing, and a releasable connection between the front end of the box and the free end of the spring whereby the chest is clamped between the box and the spring.

1,219,106. LOCK-CONTROLLED LEVER. GEORGE C. JENSEN, Oakland, Cal. Filed Jan. 3, 1917. Serial No. 140,471. (Cl. 70—90.)

1. In combination with a movable lever having a straight lower portion, an offset upper portion, and a spherical fulcrum portion; a substantially spherical socket member within which said spherical fulcrum portion is movably seated, said socket member having a groove formed therein, laterally movable locking members associated with said spherical lever portion and adapted to engage said groove to lock said lever against movement; a lineally movable bolt carried within the straight lower portion of the lever for actuating said locking members; a lock-controlled means for retaining said bolt in operative position.

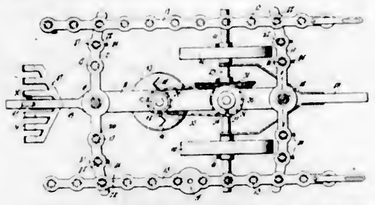


2. In combination with a movable lever having a straight lever portion, an offset upper portion, and a spherical fulcrum portion; a substantially spherical socket member within which said spherical fulcrum portion is movably seated, said socket member having a groove formed therein; laterally movable locking members associated with said spherical lever portion and adapted to engage said groove to lock said lever against movement; a lineally movable bolt for actuating said locking members, said bolt being carried within the straight lower portion of said lever and projecting from the upper end thereof to form a handle; and lock controlled means adapted to engage said bolt to retain the same in operative position.

3. In combination with a movable lever having a straight lever portion, an offset upper portion, and a spherical fulcrum portion; a substantially spherical socket member within which said spherical fulcrum portion is movably seated, said socket member having a groove formed therein; laterally movable locking members associated with said spherical lever portion and adapted to engage said groove to lock said lever against movement; a lineally movable bolt for actuating said locking members, said bolt being carried within the straight lower portion of said lever and projecting from the upper end thereof to form a handle; a transversely movable latch adapted to engage said bolt to retain the same in locking position; and lock controlled means for actuating said latch.

4. In combination with a movable lever having a lineal bore and a spherical fulcrum portion; a substantially spherical socket member within which said spherical fulcrum portion is movably seated, said socket member having a groove formed therein; laterally movable locking members associated with said spherical lever portion and adapted to engage said groove to lock said lever against movement; a lineally movable bolt carried within the bore of said lever for actuating said locking members; means for moving said bolt; a lateral projection, having a bore therein extending from said lever; a transversely movable latch mounted within said lateral bore and adapted to engage said bolt to hold the same in operative position; a cylindrical sleeve upon which said latch is carried, said sleeve having a cam slot formed therein; a rotatable key controlled lock mounted in said lateral bore and within said sleeve; and a pin carried by said lock and engaging said cam slot, whereby rotation of said lock causes axial movement of said sleeve.

1,219,107. FARMING IMPLEMENT. WASHINGTON S. JONES, Lockhart, Miss. Filed May 10, 1916. Serial No. 96,699. (Cl. 55—19.)

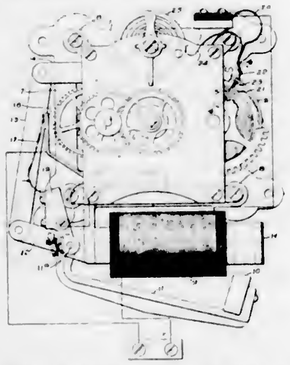


1. An agricultural implement including a frame having cross bars, side bars, said cross bars and side bars being provided with openings having side grooves extending therefrom, digging implements including standards having their upper end portions reduced and provided with side ribs for fitting into the grooves of said openings, and supporting means for said frame.

2. A farming implement comprising a frame including a main beam provided with sockets, cross bars having substantially spherical heads fitting into the sockets, securing bolts passing through the heads to pivotally connect the cross bars with the main beam, side bars connected with said cross bars, digging means connected with said side bars and cross bars, and supporting means for said frame.

3. In a farming implement, a frame including a main beam provided with sockets, cross bars having substantially spherical heads fitting into the sockets, and securing means passing through the heads to pivotally connect the cross bars with the main beam.

1,219,108. ELECTRIC SELF-WINDING CLOCK. WALTER H. KALLENBACH, Jamaica Plain, and CHARLES C. BERTSCH, Forest Hills, Mass. Filed June 18, 1910. Serial No. 567,588. (Cl. 58—41.)



1. An electric self-winding clock, having, in combination, clock mechanism comprising a main spring, means for automatically rewinding the clock mechanism comprising an electrically operated prime mover, a circuit closer for closing the circuit and actuating the prime mover having a movable contact member, a spring contact member, the movable contact member adapted to be moved outwardly and engage the spring contact member upon uncoiling of the main spring and to move the spring contact member upon continued uncoiling of the main spring, and means connected to and operated by the movement of the spring contact member for stopping the operation of the clock mechanism upon failure of the source of electrical energy with the curcuit closer in operative position, substantially as described.

2. An electric self winding clock, having, in combination, clock mechanism, rewinding mechanism therefor comprising an electromagnet and armature, an armature supporting arm, a shaft about which it oscillates, a pair of relatively movable contacts operated by movement of the armature to alternately open and close the circuit including the electromagnet, one of the contacts being mounted eccentrically upon the shaft whereby the contacts have a sliding engagement with one another, substantially as described.

3. An electric self winding clock, having, in combination, clock mechanism comprising a main spring, rewinding mechanism adapted to rewind the main spring when the latter has uncoiled a predetermined amount, a circuit closer governing the operation of the rewinding mechanism and controlled by the uncoiling of the main spring, and a brake attached to the circuit closer and adapted to operate upon the clock mechanism to stop the same upon the failure of the rewinding mechanism to operate when the circuit closer is in operative position, substantially as described.

4. An electric self winding clock, comprising a main spring, rewinding mechanism therefor, a drum inclosing the main spring, a circuit closer which controls the operation of the rewinding mechanism comprising two relatively movable contacts, one of the contacts being attached to the inside of the drum and having a portion extending laterally through the periphery of the drum to engage with the second contact member, and a shoulder formed on the laterally extending portion of the first contact member adapted to engage the periphery of the drum and act as a stop to prevent movement of the contact member beyond a predetermined point, substantially as described.

5. An electric self winding clock comprising a main spring, rewinding mechanism therefor comprising an electrically operated prime mover, a circuit closer adapted when in operative position to close the circuit and energize the prime mover, and means mounted upon the circuit closer and adapted to prevent uncoiling of the main spring beyond a predetermined amount when the clock mechanism is removed, substantially as described.

[Claim 6 not printed in the Gazette.]

1,219,109. POCKET FLASH-LIGHT. MORDUCH L. KAPLAN, Brooklyn, N. Y., assignor to Beacon Miniature Electric Co. Inc., New York, N. Y., a Corporation of New York. Filed Jan. 16, 1915. Serial No. 2,514. (Cl. 240—8.5.)



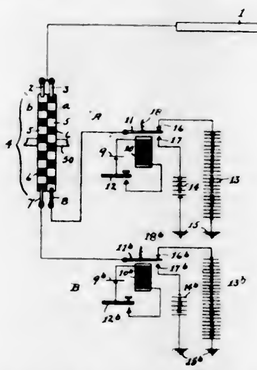
1. In a pocket electric light comprising an exterior casing having at one end a lamp and containing a battery for the lamp, a clip for retaining the light in the pocket of the owner, and manually operative means for closing the circuit comprising an exposed slide and a circuit closer connected therewith, said slide being mounted on said clip and said casing having an opening therein for said circuit closer when in its operative position.

2. In a pocket electric light comprising an exterior casing having at one end a lamp and containing a battery for the lamp, a clip for retaining the light in the pocket of the owner, and manually operative means for closing the circuit comprising an exposed slide and a circuit closer connected therewith, said slide being mounted on said clip and requiring a forward movement to complete the circuit, whereby the material at the front of said pocket is permitted to prevent movement of said slide to circuit closing position while the light is in the pocket.

3. In a pocket electric light comprising an exterior casing having at one end a lamp and containing a battery for the lamp, means for retaining the light in the pocket of the owner and closing the circuit comprising a clip electrically connected with the casing and adapted when manually operated for that purpose to close the circuit, and further means for closing the circuit comprising an exposed slide and a circuit closer connected therewith, said slide being mounted on said clip and its said closer being behind said clip.

4. In a pocket electric light comprising an exterior casing having at one end a lamp and containing a battery for the lamp, means for retaining the light in the pocket of the owner and closing the circuit comprising a clip electrically connected with the casing and adapted when manually operated for that purpose to close the circuit, and further means for closing the circuit comprising an exposed slide and a circuit closer connected therewith, said slide being mounted on said clip and its said closer being behind said clip, and said casing having an opening therein for said circuit closer when moved to its operative position and also an opening for the free end of said clip when it is moved to circuit closing position.

1,219,110. METHOD OF AND MEANS FOR QUADRUPLEXING CABLES. ISIDOR KITSEE, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed Aug. 2, 1911, Serial No. 641,933. Renewed Dec. 30, 1916. Serial No. 139,963. (Cl. 178—55.)



1. The method of quadruplexing lines with great capacity, which consists in impressing upon the line true reversals of comparatively high electromotive force to denote that no message is transmitted, reducing but not interrupting the positive pulse of said reversals to denote that one message is transmitted, reducing the negative pulse of said reversals to denote that a second message is transmitted, and reducing the electromotive force of both polarities of said reversals to denote that two messages are simultaneously transmitted.

2. In a system of quadruplex telegraphy, a line of transmission, means for each terminal of said line to normally impress thereon reversals, means for one station of each terminal to depress the positive pulses of said reversals, means for the second station of each terminal to depress the negative pulses of said reversals, two receiving devices for each terminal, a local circuit for each device of each terminal, both devices at each terminal alternately making and breaking said local circuit in quick succession through the transmission of said reversals, an electromagnet for each local circuit of said devices, a translating device operatively related to each of said electromagnets and means whereby each of said translating devices is silent as long as its receiving device is operative and means for each of said translating devices to make the same operative as soon as its receiving device becomes silent.

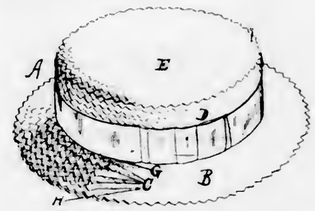
3. In a quadruplex telegraphy, a line of transmission, two transmitting stations for each terminal of the line, a source of current for each of said stations, means to normally connect said source of current to said line of transmission, means for each of said stations to reduce but not interrupt the electromotive force of said source of current, and means to connect one or the other of said sources alternately to the line.

4. In quadruplexing lines with distributed capacity, two receiving stations for each terminal of the line, one station of each terminal provided with a receiving device adapted to be actuated by a positive current, the second station of each terminal provided with a receiving device adapted to be actuated by a negative current, an armature for each of said receiving devices, a contacting device in juxtaposition to the armatures of the receiving devices of each station, a local circuit for each of said armatures, a source of current and electromagnet in each local circuit, an armature for each of said electromagnets, a translating device in operative relation to each of said armatures and means to make the translating device operative through the inoperativeness of the armature of its electromagnet and make said translating device inoperative during the time that said armature is operative.

5. In quadruplex telegraphy, a receiving station comprising the following instrumentalities:—a polar relay inserted in the line of transmission, a localized relay operatively related to said line relay and means for said localized relay to generate locally pulses of alternate direction in accordance with the movement of the movable part of the line relay.

[Claims 6 to 12 not printed in the Gazette.]

1,219,111. STRAW-BRAID HAT. PHILIP N. KNAPP, South Norwalk, Conn. Filed Dec. 10, 1915. Serial No. 66,053. (Cl. 2—108.)

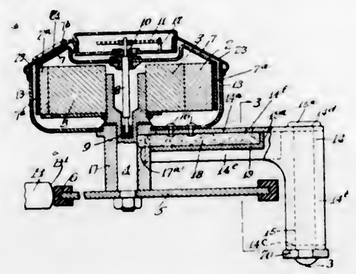


In a straw-braid hat, a brim having the right or ornamented edge of the braid directed toward the crown.

1,219,112. SPEED-INDICATOR FOR TALKING-MACHINES. HENRY KOCOUREK, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Jan. 2, 1915. Serial No. 211. (Cl. 264—2.)

1. In a speed indicator comprising a casing, a vertical shaft therein; a journal bearing for said shaft at the lower portion of said casing, and a supporting arm secured to the casing and extending transversely of said

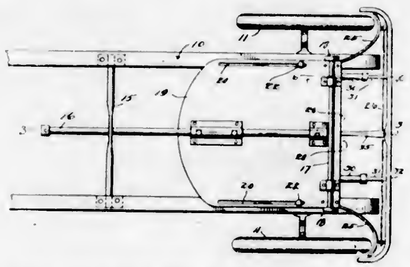
shaft, said journal bearing having an aperture and said arm being hollow with its bore connecting with said aperture, and an oil wick in said hollow arm extending into said aperture, the arm having an aperture beyond the casing to admit oil to said wick.



2. In combination with a speed indicator, a support for the purpose indicated comprising a pivot post and an arm of sheet metal having a portion which extends parallel to said post with one edge bent at right angles to said portion and pivotally engaging the post, and with a lug bent at right angles to said portion at its opposite edge also pivotally engaging said post, and means securing the speed indicator casing to the said bent edge of the arm at the end opposite the pivot post.

3. In combination with a speed indicator, a support for the purpose indicated, comprising a pivot post and a bracket of sheet metal comprising two arms substantially at right angles to each other, one of said arms being folded into channel form, one side of the channel comprising the other arm, the remote end of said other arm being bent to form a lug parallel with the web of said channel, said web and said lug being pivotally engaged with the post, and the end of said channel remote from the pivot being provided with means for securing the speed-indicator casing thereto.

1,219,113. AUTOMATIC FENDER FOR AUTOMOBILES. JOHN KONIUSZEWSKI, Manchester, N. H. Filed Jan. 10, 1917. Serial No. 141,512. (Cl. 105—255.)



1. The combination with an automobile frame; of a fender movable longitudinally of said frame, spring means constantly urging said fender to protracted position, a releasable latch normally holding the fender retracted, means to lift the front end of the fender as it moves forwardly, and means to release the latch.

2. The combination with an automobile frame; of a fender movable longitudinally of said frame, spring means constantly urging said fender to protracted position, a releasable latch normally holding the fender retracted, a spring beneath the forward part of the fender and constantly urging it upward, and means to release said latch.

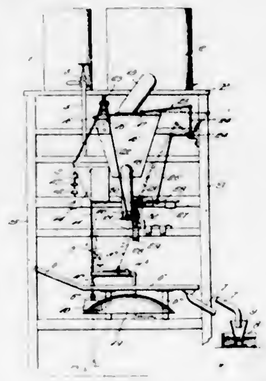
3. The combination with an automobile frame; of a fender movable longitudinally of said frame, spring means constantly urging said fender to protracted position, a releasable latch normally holding the fender retracted, guide rails supported on said frame above the fender and having their forward ends curved upwardly, rollers carried by the fender and engaging the under surface of the guide rails, a spring carried by the frame and bearing against the fender to hold the rollers against the guide rails, and means to release said latch.

4. The combination with an automobile frame; of a fender movable longitudinally of said frame, spring means constantly urging said fender to protracted position, a releasable latch normally holding the fender retracted, means to lift the front end of the fender as it moves forwardly, means to release the latch, and stops to limit the longitudinal and vertical movements of the fender.

5. The combination with an automobile frame; of a fender movable longitudinally of said frame, spring means constantly urging said fender to protracted position, a releasable latch normally holding the fender retracted, a spring beneath the forward part of the fender and constantly urging it upward, means to release said latch, and stops to limit the longitudinal and vertical movements of the fender.

[Claims 6 to 12 not printed in the Gazette.]

1,219,114. AUTOMATIC POULTRY-FEEDER. NIKILAS LAPPAS, Salem, Mass. Filed Nov. 13, 1916. Serial No. 131,099. (Cl. 119—56.)



1. In a poultry feeder, the combination of a supporting structure, a water tank and a food bin mounted thereon and each having a discharge spout, a tilting bucket mounted below the tank spout, a controlling valve for said spout, a hopper disposed below said bin spout, a closure for said bin spout, a discharge spout for said hopper, a pivoted closure for said hopper spout, an actuating cable for said hopper spout closure connected with said bucket and adapted to exert a pulling action on the tilting of the bucket whereby said closure is opened, and connections between said bucket and bin spout closure whereby said closure is closed on the tilting of the bucket.

2. In a poultry feeder, the combination of a supporting structure, a water tank and a food bin mounted thereon and each having a discharge spout, a tilting bucket mounted below the tank spout, a controlling valve for said spout, a hopper disposed below said bin spout, a closure for said bin spout, a discharge spout for said hopper, a pivoted closure for said spout, an actuating cable for said hopper spout closure connected with said bucket and adapted to exert a pulling action on the tilting of the bucket, whereby said closure is opened, a bell crank fulcrumed on said support, a connecting element between one end of said crank and said bin spout closure, and a connection between said bucket and the other end of said crank, whereby the tilting of the bucket will rock the bell crank to close said closure and to open it on the righting of the bucket.

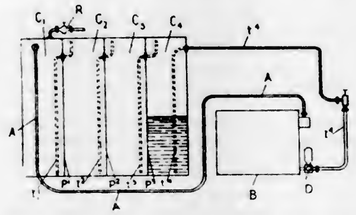
3. An apparatus of the class described including a tilting bucket mounted to automatically tilt on the filling thereof, a weight pendant from said bucket to insure the complete tilting thereof, a weight connected to automatically right the bucket after it empties, and means arranged between said pendant weight and bucket for supporting the weight and normally rendering it inoperative.

4. An apparatus of the class described including a tilting bucket mounted to automatically tilt on the filling thereof, a weight pendant from said bucket to insure the complete tilting thereof, a weight connected to automatically right the bucket after it empties, means for normally rendering said first mentioned weight inoperative, and means operable on the initial tilting of the bucket to bring said weight into operation.

5. An apparatus of the class described including a tilting bucket mounted to automatically tilt on the filling thereof, a weight carrying strap pendant from said bucket to insure the complete tilting of the bucket, a spring clamp normally engaging said strap to hold said weight inoperative, and a connection between said clamp and bucket operable on the initial tilting of the bucket to release said weight.

[Claims 6 and 7 not printed in the Gazette.]

1,219,115. LIQUID-FUEL RESERVOIR. CESARE LAURENTI, Turin, Italy, assignor to Società Anonima Fiat-San Giorgio, Spezia, Italy. Filed Aug. 24, 1915. Serial No. 47,026. (Cl. 114—16.)



1. A submarine or the like, having a liquid fuel reservoir, comprising a plurality of liquid fuel containers, and means placing the containers in communication with one another, said means comprising a pipe leading from the top of one container to the lower part of a succeeding container, said pipe being adapted to conduct fuel serially from one container to a succeeding container, said containers and pipe being so constructed that said pipe also serves as a conduit for the expellant liquid, following the passage of the fuel, from one container to the next.

2. A submarine or the like, having a liquid fuel reservoir, comprising a plurality of containers arranged transversely of the longitudinal axis of the submarine, and means placing the containers in communication with one another, said means comprising a pipe running from one container to a succeeding container, said pipe having one end opening at the top of one container and its other end opening at the lower part of the succeeding container, said pipe being adapted to conduct fuel serially from one container to another, said containers and pipe being so constructed that said pipe also serves as a conduit for the expellant liquid, following the passage of the fuel, from one container to the next.

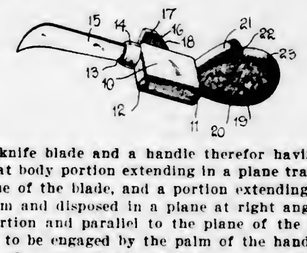
3. A submarine or the like, having a liquid fuel reservoir, said reservoir having transverse compartments therein and means placing the compartments in communication with one another, the said means comprising a pipe running from one compartment to a succeeding compartment, said pipe having one end opening at the top of one compartment and its other end opening at the lower part of a succeeding compartment, the said pipe being adapted to conduct fuel serially from one compartment to a succeeding compartment, said compartments and pipe being so constructed that said pipe also serves as a conduit for the expellant liquid, following the passage of the fuel, from one container to the next.

4. A submarine or the like, having a liquid fuel reservoir, said reservoir having transverse compartments therein, and means placing the containers in communication with one another, said means comprising a pipe running from one compartment to a succeeding compartment, said pipe being inside of said reservoir and having one end opening at the top of one compartment and its other end opening at the lower part of a succeeding compartment, said containers and pipe being so constructed that said pipe also serves as a conduit for the expellant liquid, following the passage of the fuel, from one container to another.

5. In combination, a liquid fuel reservoir for use in submarines or the like, and a water pump, said reservoir comprising transverse compartments and a pipe running from one compartment to a succeeding compartment, said pipe having one end opening at the top of one compartment and its other end opening at the lower part of a succeeding compartment, said pipe being adapted to conduct fuel serially from one compartment to a succeeding compartment, said water pump being connected to the lower part of a compartment at one end of the series, and said liquid reservoir having a fuel outlet at the opposite end of the series, the fuel and water being adapted to pass from one compartment to another through the same pipe.

[Claim 6 not printed in the Gazette.]

1,219,116. KNIFE-HANDLE. DANIEL J. LEFEBVRE, East Lynn, Mass. Filed Sept. 11, 1916. Serial No. 119,526. (Cl. 30—9.)



1. A knife blade and a handle therefor having a relatively flat body portion extending in a plane transverse to the plane of the blade, and a portion extending rearward therefrom and disposed in a plane at right angles to the body portion and parallel to the plane of the blade and adapted to be engaged by the palm of the hand, the first named body portion having a lug upon one edge and extending in a plane at right angles to the plane of the body portion adapted to be grasped between the first and second fingers of the hand.

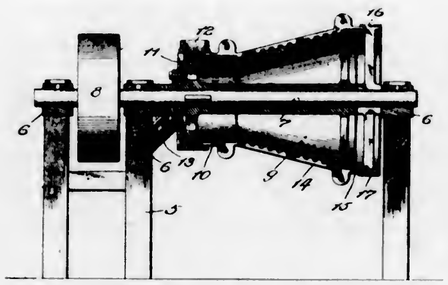
2. A knife blade and handle therefor including a relatively flat body portion extending at right angles to the plane of the knife blade having the forward corner of one edge cut away to form a rest for the thumb, the opposite edge of the body portion being formed with a laterally and upwardly projecting lug extending parallel to the plane of the blade and adapted to be grasped between the first and second fingers of the hand.

3. A knife handle of the character described including a relatively flat body portion adapted to extend transversely to the plane of the knife, one edge of said body portion constituting a seat for the thumb and the other edge having a lug adapted to be grasped between the first and second fingers of the hand, there being an extension of the body portion rearward therefrom and adjacent the last named edge of the body portion, said extension being disposed in a plane at right angles to the plane of the body portion and having a protuberance upon its upper edge face with which the palm of the hand is adapted to engage.

4. A knife handle of the character described including a relatively flat body portion adapted to extend transversely to the plane of the knife, one edge of said body portion constituting a seat for the thumb and the other edge having a lug adapted to be grasped between the first and second fingers of the hand, there being an extension

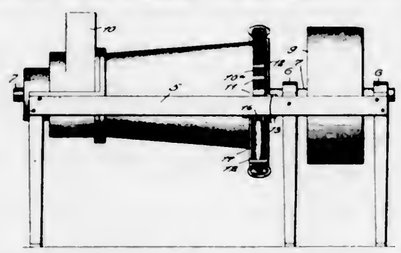
of the body portion rearward therefrom and adjacent the last named edge of the body portion, said extension being disposed at right angles to the body portion and having a protuberance upon its upper edge face with which the palm of the hand is adapted to engage, the lower edge of said extension at its forward end being formed to provide a neck between the body portion and said extension adapted to be engaged by the third finger of the hand.

1,219,117. CORN-DEGERMINATOR. MAX LINDEMANN, East St. Louis, Ill., assignor of one-half to Eugene J. Feiner, St. Louis, Mo. Filed May 17, 1915. Serial No. 28,604. (Cl. 83—13.)



In a machine of the class described, a frame, a shaft rotatably mounted on said frame, means for connecting said shaft with power, a crushing element supported by said shaft, means for causing said crushing element to rotate with said shaft, a second crushing element surrounding the first mentioned crushing element and loosely mounted upon said shaft and arranged to be rotated by reason of the material acted upon between its inner surface and the outer surface of the first mentioned crushing element, a friction brake secured to the frame of the machine, and arranged to bear upon the second mentioned crushing element and means for adjusting said friction brake for variable pressure upon the second mentioned crushing element.

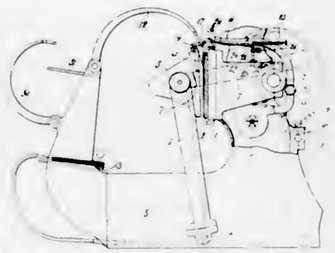
1,219,118. BRAKE FOR CORN-DEGERMINATORS. MAX LINDEMANN, East St. Louis, Ill. Filed Aug. 25, 1915. Serial No. 47,379. (Cl. 83—13.)



1. In combination with a power driven rotatable grinding element and an indirectly driven rotatable grinding element, a brake for the indirectly driven grinding element comprising a peripherally toothed annulus secured to the indirectly driven grinding element, a pair of oppositely arranged rollers, and means for exerting a yielding pressure on said rollers in the direction of the rotation of said annulus.

2. In a machine of the class described, an inner, power-driven, rotatable grinding element, an outer grinding element, not connected with power but rotatable along with the inner element by the material acted upon, a flange bearing spaced teeth secured to the outer element, oppositely disposed spring pressed rollers bearing on said teeth in the direction of rotation of the element, said rollers being relatively arranged so that while one is bearing on an obstructing tooth face its companion is rolling freely over an unobstructing tooth face, and means for varying the pressure of said rollers.

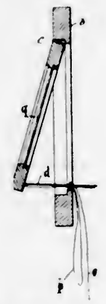
1,219,119. PLATEN PRINTING-PRESS AND THE LIKE. GUSTAF HJALMAR LINDSTRÖM, Gottenborg, Sweden, assignor to Aktiebolaget Princeps, Gottenborg, Sweden, a Corporation of Sweden. Filed Dec. 7, 1915. Serial No. 65,519. (Cl. 101—297.)



1. In a platen printing press the combination of the form support, the platen and a device, which, while the paper sheet is moved from the printing form, forces air between the paper sheet and the form for facilitating the separating of the paper sheet from the form.

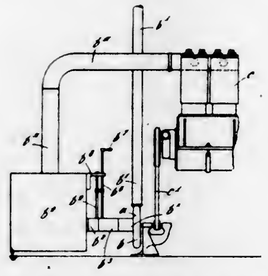
2. In a platen printing press the combination of the form support, the platen, a feed table for the paper sheets to be printed, a transporter or the like, which moves the sheets to the platen, means provided on the platen for holding the sheet during the printing operation, a conduit for compressed air, a deflector provided at the mouth of the said conduit, and means for changing the position of the said deflector, so that the air passes either into the space between the platen and the form, against the sheet, moved by the transporter to the platen, and from the edge of the sheet held by the transporter for preventing the sheet from being folded, or into the space between the sheet and the form for facilitating the separating of the sheet from the form.

1,219,120. MEANS FOR ADJUSTING VENTILATING-CLOSURES. EVAN LLEWELLYN, Ystrad, Rhondda, Wales. Filed Nov. 27, 1914. Serial No. 874,188. (Cl. 16—28.)



Adjusting means for ventilating closures comprising a guide block pivoted to the fixed portion of the window or the like and having a slot therethrough, an adjustment bar pivoted to the movable member of the window or the like and having a plurality of apertures therein, the adjustment bar passing through the slot in said block, a spring-controlled detent comprising a double-ended lever pivoted upon said block and having a projection on one end thereof adapted to pass through an aperture in said block, and into one or the other of the apertures in said adjustment bar, a flexible operating member attached to each end of said adjustment bar, a separate flexible operating member attached to one end of said double-ended lever, two anti-friction members arranged centrally of and below the slot in said guide block for the support of the flexible member operating the adjustment bar, and an anti-friction member for the cord operating the detent.

1,219,121. AIRSHIP OR DIRIGIBLE BALLOON. THOMAS RUTHERFORD MACMECHEN and EDWIN MARSHALL FOX, Westminster, London, England. Filed Dec. 1, 1915. Serial No. 64,530. (Cl. 244—6.)



1. In an airship or dirigible balloon, the combination with apparatus for forcing cool and heated media around the gas bags or compartments of the airship, for buoyancy control, of means for regulating the relative proportions of said media and for excluding one while admitting the other.

2. In an airship or dirigible balloon, the combination with a propelling engine, of apparatus for forcing cool and heated media around the gas bags or compartments of the airship, for buoyancy control, and means for regulating the relative proportions of said media and for excluding one while admitting the other.

3. In an airship or dirigible balloon, the combination with a propelling engine, of apparatus for forcing air and the heated products of combustion from the engine around the gas bags or compartments of the airship, and means for proportionately varying the relative quantities of said media.

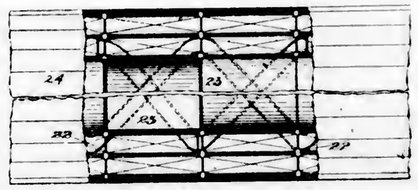
4. In an airship or dirigible balloon the combination with a propelling engine of a rotary fan, a casing for said rotary fan, inlet branches thereon communicating with the engine exhaust and the atmosphere and dampers for controlling said inlet branches to vary the temperature of the air or gaseous media forced by the said fan around the gas bags or compartments of the airship.

5. In an airship or dirigible balloon, the combination with a propelling engine of an exhaust box, a blower, an inlet pipe on said blower having a number of branches which communicate respectively with the said exhaust box and the atmosphere and a system of inter-connected dampers for controlling said inlet branches and thereby varying the temperature of the air or gaseous media forced by the blower around the gas bags or compartments of the airship.

[Claim 6 not printed in the Gazette.]

1,219,122. AIRSHIP. THOMAS R. MACMECHEN and WALTER V. KAMP, New York, N. Y. Filed June 22, 1916. Serial No. 105,095. (Cl. 244—3.)

1. A tubular frame composed of parallel longitudinal girders and opposite, parallel spiral girders, all of said girders comprising spaced bars, the bars of opposite spiral girders intersecting in alternate relation with each other, and also intersecting with the bars of said longitudinal girders, whereby said girders provide a combined arch and triangle effect in said frame.



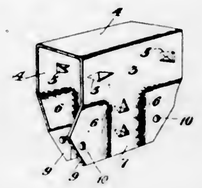
2. A tubular frame composed of parallel longitudinal girders and opposite, parallel spiral girders, all of said girders comprising spaced bars, the bars of opposite spiral girders intersecting in alternate relation with each other, and also intersecting with the bars of said longitudinal girders, whereby said girders provide a combined arch and triangle effect in said frame, said spiral girders being of equal depth and lying between the bars of said longitudinal girders.

3. A girder consisting of spaced, parallel bars, each composed of laminated material, and struts connecting said bars, at intervals, the laminæ having their end joints in line with the axes of said struts.

4. A girder consisting of spaced, parallel bars, each composed of laminated material, and struts connecting said bars, at intervals, respective laminæ having their end joints in longitudinal staggered relation and in line with the axes of said struts.

5. A girder consisting of spaced, parallel bars, each composed of laminated material, struts connecting said bars, at intervals, the laminæ having their end joints in line with the axes of said struts, and tension strands extending obliquely, in crossed relation, between said bars.

1,219,123. AIRSHIP. THOMAS R. MACMECHEN and WALTER V. KAMP, New York, N. Y. Filed June 22, 1916. Serial No. 105,096. (Cl. 244—31.)

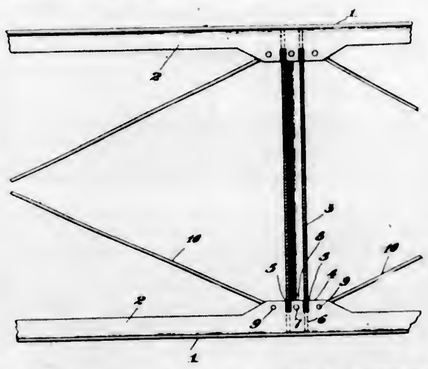


1. The combination with a girder including longitudinal members and transverse connecting members, of a metal strap having parallel leaves extending over opposite surfaces of said members, to unite them, said leaves being shaped to provide fitting and retaining seats for said members, whereby the base of a seat, and the exterior contiguous material of the leaf in which said seat is formed, lie in different parallel planes, and means to connect said leaves in clamped relation.

2. The combination with a girder including longitudinal members and transverse connecting members, of a metal strap having parallel leaves extending over opposite surfaces of said members, to unite them, the corners of said leaves being reinforced and provided with holes to receive tension wires, and uniting means for said leaves.

3. The combination with a girder including longitudinal members and transverse connecting members, of a metal strap having parallel leaves extending over opposite surfaces of said members, to unite them, the corners of said leaves being reinforced and provided with holes to receive tension wires, and a bolt to unite said leaves through said transverse member.

1,219,124. AIRSHIP. THOMAS R. MACMECHEN and WALTER V. KAMP, New York, N. Y. Filed June 22, 1916. Serial No. 105,098. (Cl. 244—31.)

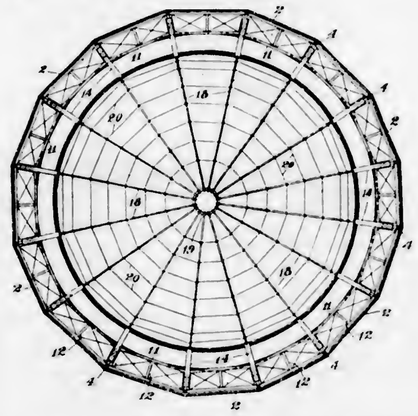


1. A girder composed of parallel, spaced, T-members, whose web portions are opposed, and, respectively, are provided with pairs of slots, and connecting, tubular struts, whose ends, respectively, fit within said slots, to effect interlocking engagement with said web portions.

2. A girder composed of parallel, spaced, T-members, whose web portions are opposed, and, respectively, are provided with pairs of slots, and connecting, tubular struts, whose ends are also provided with slots the slotted ends of said struts effecting interlocking engagement with said web portions through their pairs of slots, and said strut ends seating against the T-beam heads.

3. In a composite girder, the combination of a pair of parallel, spaced T-beams, whose respective webs are opposed, and have enlarged, opposite portions, struts connecting said T-beams and seated in said enlarged portions, and tension wires engaging with said enlarged portions and strung diagonally between said T-beams.

1,219,125. AIRSHIP. THOMAS R. MACMECHEN and WALTER V. KAMP, New York, N. Y. Filed June 22, 1916. Serial No. 105,100. (Cl. 244—3.)



1. In an airship, a tubular frame therefor comprising a series of longitudinal girders, and a series of transverse, polygonal, hoop girders, members of said polygonal girders intersecting in abutting relation with said longitudinal girders, and means for connecting said longitudinal and polygonal girders, to constitute a unified structure.

2. In an airship, a tubular frame therefor comprising a series of longitudinal girders composed of spaced, parallel bars, with interconnecting, radial struts, and a series of transverse, polygonal, hoop girders composed of sections having spaced parallel bars with interconnecting radial struts, ends of said hoop sections and struts therein being in opposed intersecting relation, respectively, with said longitudinal girder bars and with struts of said longitudinal girders, thus constituting the polygonal angles of said hoop girders, and means for uniting said elements to comprise a unified structure.

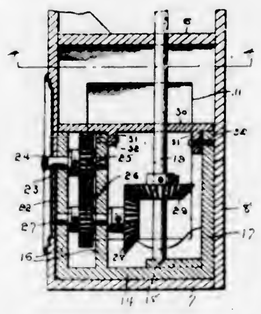
3. In an airship, a tubular frame therefor comprising a series of longitudinal girders composed each of three, spaced, parallel bars, with interconnecting radial struts, the struts connecting the outer and inner bars to the central bar being in axial alinement, a series of polygonal hoop girders in intersecting relation with the outer and central bars of said longitudinal girder, and connecting means therefor.

4. In an airship, a tubular frame therefor comprising a series of longitudinal girders composed each of three, spaced, parallel bars, with interconnecting radial struts, the struts connecting the outer and inner bars to the central bar being in axial alinement, a series of polygonal, hoop girders composed each of sections having two spaced parallel bars with connecting radial struts, the two outer bars of a longitudinal girder and a strut thereof intersecting in abutting relation with the ends, and a strut, respectively, of a hoop girder section, and uniting means therefor.

5. In an airship, a tubular frame therefor comprising a series of longitudinal girders composed each of three, spaced, parallel bars, with interconnecting, radial struts, a series of polygonal hoop girders in intersecting relation with the outer and central bars of said longitudinal girder, and series of opposite spiral girders, in crossed, intersecting relation with the inner and central bars of said longitudinal girders.

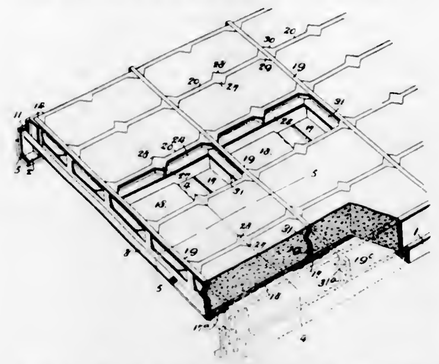
[Claims 6 and 7 not printed in the Gazette.]

1,219,126. WEATHER-VANE INDICATOR. VICTOR MARKKULA, Aberdeen, Wash. Filed May 26, 1916. Serial No. 100,134. (Cl. 73—55.)



A weather vane indicator comprising a casing, a frame mounted in said casing and including a base plate, and a plurality of uprights supported upon said base plate, a dial positioned upon the front of said casing, a shaft rotatably supported in said frame and projecting upwardly through said casing, an indicator shaft rotatably supported in several of said uprights, a hand carried by said shaft and movable over said dial, an intermediate shaft rotatably supported in several of said uprights and arranged below the indicator shaft, means connecting said indicator and intermediate shafts, bevel gear wheels connecting said vertical shaft with the intermediate shaft, an adjustable bearing plate supported upon said uprights and rotatably receiving said vertical shaft, and means for adjusting said bearing plate.

1,219,127. MOLD FOR BUILDING-BLOCKS. GEORGE MILLER MARSHALL, Woodlands, Manitoba, Canada. Filed June 30, 1916. Serial No. 106,940. (Cl. 25—121.)



1. In a mold of the character described, the combination with a rectangular carrying frame that includes oppositely disposed angle side bars and vertically extended angled corner pieces at the ends of the side bars, a plurality of transversely positioned spaced sole plates whose ends rest on the angled side bars, pallets that form the bottoms of the mold pockets, supported on the sole plates, arranged in transverse series and uniformly spaced apart, a series of side plates, a plurality of end plates between which the side plates are assembled and with which the opposite ends of the said side plates abut, the said side and end plates resting on the sole plates with their lower edges surrounding and engaging the respective pallets, the said end plates having extensions that project over the said angled side bars of the frame, the said end plates having a series of V-shaped tongues on one side and like shaped grooves on the other side, the side plates having V-shaped ribs on the opposite sides that aline the grooves and the tongues on the end plate when the parts are assembled, the ribs at one end of the side plates and the corresponding tongues on the abutting end plate being mitered.

2. In a building block mold construction of the character described, the combination with a suitable supporting frame, the said frame including a pair of oppositely disposed angled bearing members and sole plates whose opposite ends rest upon the horizontal portions of the bearing members; of a series of uniformly positioned pallets loosely held at their opposite ends on the sole plates, a plurality of longitudinally extending side mold plates, end mold plates that abut the opposite ends of the side mold plates, the said side and end mold plates resting upon the sole plates with their lower edges embracing the sides and ends of the the pallets, and means for locking the supporting frame and the assembled sole plates, pallets and the side and end mold plates in rigid position, the said means including draw bolts that extend across and connect with the opposite angled bearing members.

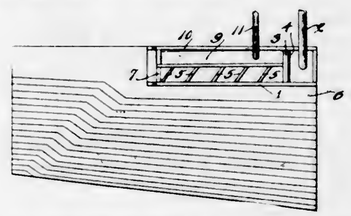
3. A building block mold comprising a series of longitudinally extending side mold plates, transversely extending end mold plates, said side plates having horizontal tongues at the opposite sides, the end plates having a longitudinal series of tongues at one side and corresponding grooves on the other side, the tongues and grooves of the side and end plates being in alinement when the plates are assembled, and means for holding the plates in rigid position when assembled.

4. A building block mold comprising a series of longitudinally extending side mold plates, transversely extending end mold plates, said side plates having horizontal tongues at the opposite sides, the end plates having a longitudinal series of tongues at one side and corresponding grooves on the other side, the tongues and grooves of the side and end plates being in alinement when the plates are assembled, said side plates also having laterally extending projections midway their length and at their ends which extend vertically from the horizontal tongues to the top of the plates, and means for holding the plates in rigid assembled relation.

5. In a mold of the class described having a series of longitudinally extending side mold plates and transversely extending end mold plates, said side mold plates being provided with oppositely projected horizontal tongues and oppositely projected vertically extended portions at their ends and midway of their ends that extend from the top of the plate and merge with the horizontal tongues.

[Claims 6 to 8 not printed in the Gazette.]

1,219,128. ORE-CONCENTRATING APPARATUS. JOHN MICKELSON, Anaconda, Mont. Filed July 17, 1916. Serial No. 109,710. (Cl. 83—88.)



1. In ore concentrating apparatus of the class described, the combination of an elongated receptacle into which the ore is fed longitudinally having a bottom unobstructed as to the longitudinal flow and a series of lateral discharge outlets, and means arranged opposite said outlets and sufficiently above the receptacle for supplying a falling fluid pressure to said receptacle effective transversely of the feed whereby to separate and induce a transverse movement of the ore contents through said outlets.

2. In ore concentrating apparatus of the class described, the combination of an elongated receptacle into which the ore is fed in a longitudinal direction having a series of lateral discharge outlets arranged in stepped relation to the bottom of the receptacle, and supply means arranged over the surface of the ore stream in the receptacle having a varying discharge disposed longitudinally of the receptacle for supplying a downwardly acting separating medium in gradually increasing impinging force and effect proportionately to the increasing weight or size of the ore contents at a particular part of the receptacle.

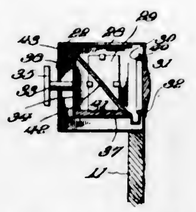
3. In ore concentrating apparatus of the class described, the combination of a receptacle into which the ore is fed having lateral outlets, means in said receptacle arranged at different planes from the bottom of the receptacle for holding the ore contents in suspension in separate strata according to their specific gravities, and means for supplying a gravitating pressure medium arranged at different heights from the several strata for separating and inducing counteracting lateral movement of the respective strata through the lateral outlets.

4. In concentrating apparatus of the class described, a receptacle into which the ore flows and having separate compartments, and a fluid conduit extending longitudinally of the receptacle and having a continuous discharge opening extending the length of the receptacle to simultaneously feed into the several compartments.

5. In concentrating apparatus of the class described, a receptacle into which the ore flows divided into a series of compartments, and a fluid conduit extending longitudinally of the receptacle having a varying size continuous discharge opening extending throughout its length to feed the fluid into the compartments in volumes varying toward the discharge end of the receptacle whereby the contents of said compartments are varyingly affected.

[Claims 6 to 8 not printed in the Gazette.]

1,219,129. PHOTOGRAPHIC VIEW-FINDER. GEORGE W. MILLER, Midland, Tex. Filed June 29, 1915. Serial No. 37,082. (Cl. 88—1.5.)



1. A device of the character described including a casing provided with sight openings, there being a lens opening formed in the casing and surrounded by an annular flange, a stem mounted within the casing and having a finger portion projecting outwardly of the casing, a mirror frame pivotally supported by said stem and having an annulus freely embracing the said flange and a mirror carried by said frame, the said frame being adapted for movement to dispose the mirror in coöperative relation relative to the lens opening and each of said sight openings.

2. A device of the character described including a casing provided with sight openings and having a lens opening formed therein, a flange arranged adjacent said lens opening, a stem projecting into the casing, a frame swingingly supported by said flange and stem, and a mirror carried by the frame, the flange being adapted to support a lens and the stem being adapted to provide a handle for shifting the mirror into coöperative relation with said lens and each of said sight openings respectively.

3. In a device of the class described, a casing, a lens mounted within one wall of the casing, the casing being provided with sight openings, a bearing surrounding the lens, a frame provided with an annulus rotatably fitting the said bearing, a mirror supported within the frame and presented in the general direction of the lens and arranged in the turning movement of the frame to be presented toward one or the other of the said sight openings, a stem rotatably fitted through that wall of the casing which is opposite the said lens and secured at its inner end to the said casing, the stem being located axially with respect to the bearing surrounding the lens, and a finger piece upon the stem located outwardly of the said casing.

1,219,130. PROCESS FOR TREATING FRESH MEATS WITH A VIEW TO CONSERVE THE SAME IN A FRESH CONDITION IN OPEN AIR. JULIEN JOSEPH MONVOISIN, Montreuil, Paris, France. Filed Nov. 11, 1914. Serial No. 871,584. (Cl. 99—1.)

1. A process for treating fresh meats for the purpose of keeping the latter in a fresh condition in open air, consisting in superficially sterilizing meat, cooling the said meat by the action of a vacuum, moistening the superficial portion of the said meat, and drying the said superficial portion.

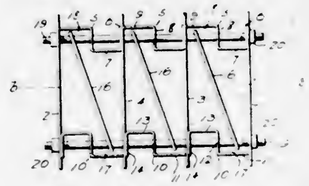
2. A process for treating fresh meats for the purpose of keeping the latter in a fresh condition in open air, consisting: in superficially sterilizing the meat immediately after the animal is slaughtered, cooling the said meat in a vacuum at a low temperature, moistening the superficial portion of the said meat on its leaving the vacuum producing apparatus; and drying the said meat by hot air.

3. A process for treating fresh meats for the purpose of keeping the latter in a fresh condition in open air, consisting: in superficially sterilizing the said meat, immediately after the animal is slaughtered, by means of a volatile chemical substance; cooling the said meat in a vacuum at a low temperature, in order to eliminate the volatile substance, moistening the superficial portion of the said meat, in order to restore the tegniments to their primitive suppleness; and drying the superficial portion of the said meat by a current of dry and sterile hot air.

4. A process for treating fresh meats for the purpose of keeping the latter in a fresh condition in open air, consisting: in superficially sterilizing the meat, immediately after the animal is slaughtered, by sulfurous acid, cooling the said meat in a vacuum at a low temperature during a very short time, in order to eliminate the sulfurous acid and produce a thin and regular aseptic protecting film on the surface of the said meat, moistening the superficial portion of the said meat, in order to restore the tegniments to their primitive suppleness, and drying the superficial portion of the said meat by a current of dry and sterile hot air, in order to strengthen the protective film.

5. A process for treating fresh meats for the purpose of keeping the latter in a fresh condition in open air, consisting: in superficially sterilizing the meat, immediately after the animal is slaughtered, by sulfurous acid, cooling the said meat in a vacuum at a low temperature during a very short time, in order to eliminate the sulfurous acid and produce a thin and regular aseptic protecting film on the surface of the said meat, moistening the superficial portion of the said meat in order to restore the tegniments to their primitive suppleness, and drying the superficial portion of the said meat by a current of hot and dry air made sterile by ultra-violet rays.

1,219,131. DEVICE FOR MOLDING CONCRETE SLABS OR BLOCKS. MERRILL MOORE, Creston, Iowa. Filed May 31, 1916. Serial No. 100,785. (Cl. 25—121.)



1. A device for molding building slabs, comprising a series of vertical plates, a series of vertical side walls secured to said vertical plates, said side walls forming an upper and lower lateral molding chamber extension between each vertical plate, and a plurality of rods passing through each vertical plate and through part of the molding chamber, forming a hole in the slab, and clamping the mold elements together.

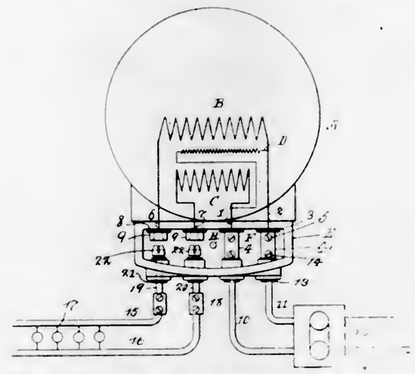
2. A device for molding building slabs, comprising a series of molds formed by a series of vertical plates, a series of vertical side walls secured to said vertical plates, said side walls being constructed so as to form an upper and a lower lateral molding chamber extension within each mold, a plurality of rods passing through the said vertical plates, through part of the molding chamber, forming a hole in the slab, and clamping the mold elements together, and means for securing each rod at each end thereof.

3. A device for molding building slabs, comprising a series of molds formed by a series of vertical plates, a series of vertical side walls secured to the vertical plates, and a plurality of rods passing through the said vertical plates and through part of the molding chamber, forming a hole in the slab, and clamping the mold elements together, said rods serving to support a plurality of reinforcing bars within each mold.

4. A device for molding building slabs, comprising a series of molds formed by a series of vertical plates, a series of vertical side walls secured to said vertical plates, said side walls forming an upper and lower lateral molding chamber extension within each mold, a plurality of rods passing through the said vertical plates and through part of the molding chamber, forming a hole in the slab, and clamping the mold elements together, said rods serving to support a plurality of reinforcing rods within each mold, and means for securing the rods at each end thereof.

5. A structure for molding building slabs, comprising a series of vertical plates, a series of vertical side walls secured to said plates, each side wall consisting of two lateral extensions and two upright walls at a right angle to said lateral extensions adapted to form extended molding chambers, a plurality of rods passing through the said vertical plates and through part of the molding chamber, forming a hole in the slab, and clamping the mold elements together, said rods serving to support a plurality of reinforcing rods within each mold, and means for securing the rods at each end thereof.

1,219,132. METER-TESTING CUT-OUT. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 5, 1912. Serial No. 735,051. (Cl. 175—183.)

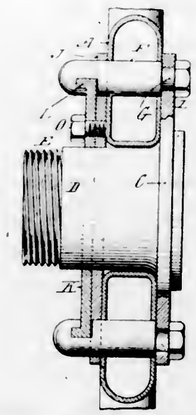


1. In combination with the field coils of an electric meter, and an inclosing case therefor, contact blocks outside of said case respectively connected to two terminals of said field coils, line conductors connected to said blocks, tubular sockets on the exterior of said case connected to the remaining field coil terminals, rods slidably supported in front of said sockets, load conductors connected to said rods, heads on said rods fitting said sockets, a gang plug having contacts coöperating with said contact blocks and said heads, connections on said plug and between the contacts thereof for cutting the field coils out of line circuit, and a voltmeter connection across the line, a second gang plug having contacts coöperating with said sockets, and an ammeter connection on said second plug and between said plug contacts.

2. In combination with the field coils of an electric meter, and a case having two compartments, one of said compartments inclosing said coils, contact blocks secured in said second compartment, insulated from the walls thereof and connected to two terminals of said field coils, line conductors connected to said blocks, tubular sockets in said second compartment, supported on a wall thereof and connected to the remaining field coil terminals, rods slidably supported in the opposite wall of said second compartment, load conductors connected to said rods, heads on said rods fitting said sockets, a gang plug having contacts coöperating with said contact blocks and said heads, connections on said plug and between the contacts thereof for cutting the field coils out of line circuit, and a voltmeter connection across the line, a second gang plug having contacts coöperating with said sockets, and an ammeter connection on said second plug and between said plug contacts.

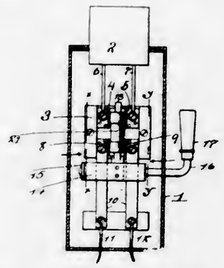
1,219,133. DEMOUNTABLE VEHICLE-WHEEL. THOMAS E. MURRAY and ARTHUR V. A. MCHARG, New York, N. Y. Filed May 29, 1916. Serial No. 100,594. (Cl. 21—31.)

1. A demountable vehicle wheel, comprising a hub, a flange thereon, an annular plate on said hub, a wheel nave interposed between said flange and said plate, studs on said flange extending through openings in said nave and said plate and having transverse undercut recesses on their protruding portions, an annular locking disk disposed on said hub in front of said plate, and cam projections on the front side of said locking disk entering said stud recesses to lock together said disk and said studs.



2. A demountable vehicle wheel, comprising a hub, a flange thereon, an annular plate on said hub, a wheel nave interposed between said flange and said plate, studs on said flange extending through openings in said nave and said plate and having transverse undercut recesses on their protruding portions, an annular locking disk disposed on said hub in front of said plate, cam projections on the front side of said locking disk entering said stud recesses to lock together said disk and said studs, and means for securing said disk and said plate in locking engagement.

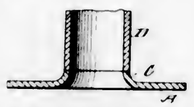
1,219,134. SWITCH. THOMAS E. MURRAY, JR., Brooklyn, N. Y. Filed June 3, 1916. Serial No. 101,504. (Cl. 175—292.)



1. A switch, comprising two pairs of fixed contacts, a pivoted switch lever, contacts on said lever respectively coöperating with one member of each of said pairs of fixed contacts, a fuse on said lever having its terminals connected to said lever contacts, and a contact on said lever coöperating with both remaining members of said pairs of fixed contacts.

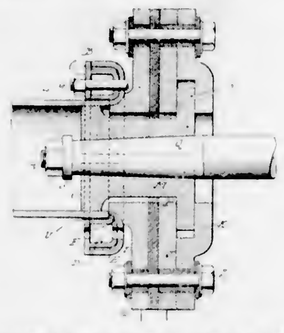
2. A switch, comprising two pairs of fixed contacts, a pivoted switch lever, two spring clips on the outer face of said lever, contacts on said lever respectively connected to one member of each clip and respectively coöperating with one member of each of said pairs of fixed contacts, a fuse removably seated in said clips, and a contact on said lever coöperating with both remaining members of said pairs of fixed contacts.

1,219,135. METHOD OF FLANGING THE END OF A METAL TUBE. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 29, 1916. Serial No. 134,003. (Cl. 219—10.)



The method of flanging the end of a metal tube, which consists in making a circular opening in a metal plate and bending the edge of said opening to form a circular rib registering with the butt end of said tube, placing the said tube end in contact with said rib and electrically welding said tube and rib at said joint.

1,219,136. ELECTRICAL WELDING APPARATUS. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 29, 1916. Serial No. 134,004. (Cl. 219—6.)



1. An apparatus for electrically making a welded joint between the butt end of a tube and a shoulder within a sleeve receiving said tube, comprising two electrodes respectively in contact with said sleeve and said tube and disposed on opposite sides of said joint.

2. An apparatus for electrically making a welded joint between the butt end of a tube and a shoulder within a sleeve receiving said tube, comprising an electrode constructed to make contact with the exterior of said sleeve, and an electrode constructed to enter said tube and to make contact with the inner periphery thereof.

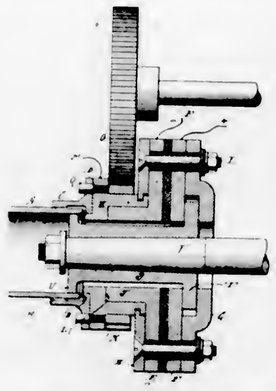
3. An apparatus for electrically making a welded joint between the butt end of a tube and a shoulder within a sleeve receiving said tube, comprising an electrode constructed to make contact with the exterior of said sleeve, an electrode constructed to enter said tube and to make contact with the inner periphery thereof, and means for expanding said last-named electrode to clamp said tube between said electrode and said sleeve.

4. An apparatus for electrically welding the butt end of a tube to a shoulder within a sleeve receiving said tube, comprising an electrode having an opening, and a recess receiving said sleeve surrounding said opening, an electrode formed in two longitudinally divided half sections disposed in said opening and constructed to make contact with the inner periphery of said tube, and a tapered mandrel entering between said half sections and longitudinally movable to separate said sections to clamp said tube between said sections and said sleeve.

1,219,137. ELECTRICAL WELDING APPARATUS. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 29, 1916. Serial No. 134,005. (Cl. 219—6.)

1. Electrical welding apparatus, comprising means for rotating one of two bodies to be welded, and means actuated by said rotating body for subjecting to pressure the welding joint between said bodies.

2. Electrical welding apparatus, comprising means for rotating one of two bodies to be welded, and means actuated by said rotating body for moving the other of said bodies into pressing contact with said rotating body at the welding joint.

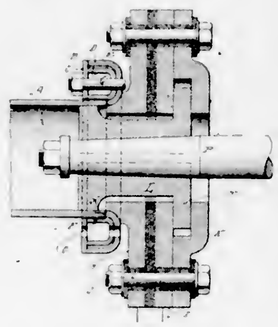


3. Electrical welding apparatus, comprising means for rotating one of two bodies to be welded, and means actuated by said rotating body and engaging the other body for moving said last-named body into pressing contact with said rotating body at the welding joint.

4. Electrical welding apparatus, comprising means for rotating one of two bodies to be welded, and a sleeve on said body receiving and internally threaded to engage the other of said bodies; whereby upon the rotation of said first-named body, said last-named body shall be drawn into said sleeve and into pressing contact with said rotating body at the welding joint.

5. Electrical tube-welding apparatus, comprising means for rotating the body to which the tube is to be butt-welded, and a sleeve on said body receiving and internally threaded to engage with said tube; whereby said tube is moved longitudinally into pressing butt contact with said rotating body at the welding joint.

1,219,138. ELECTRICALLY-WELDED TUBE AND FLANGE. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 29, 1916. Serial No. 134,008. (Cl. 219—6.)



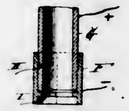
1. A tube, and a hollow flange of plate metal having a shoulder on its inner periphery; the said tube being received in said flange and butt welded to said shoulder.

2. A tube, a hollow flange of plate metal having a shoulder on its inner periphery, and a reinforcing ring of plate metal within said hollow flange; the said tube being received in said flange and butt-welded to said shoulder.

3. A tube, a metal ring of substantially U-shaped cross section having the edge of its inner wall welded to the end of said tube and its outer wall extending over the welded joint, an annular plate inclosing said tube and making face contact with the edge of said outer wall, and means for securing together said plate and said ring.

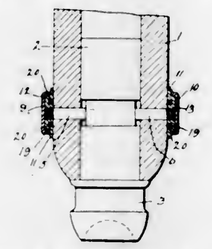
4. A tube, a metal ring of substantially U-shaped cross section having the edge of its inner wall welded to the end of said tube and its outer wall extending over the welded joint, a metal ring of U-shaped cross section seated in said first-named ring, an annular plate inclosing said tube and making face contact with the edge of both walls of said inner ring and with the edge of the outer wall of said outer ring, and means for securing together said plate and said rings.

1,219,139. METHOD OF ELECTRICALLY WELDING THE END OF A TUBE WITHIN A SLEEVE OR SOCKET. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 14, 1916. Serial No. 136,859. (Cl. 219—10.)



The method of electrically butt-welding a threaded tube to a shoulder within a threaded sleeve, which consists in engaging said tube in said sleeve and moving the said tube into contact with said shoulder, establishing welding current to the joint, and rotating said tube to press the end thereof against said shoulder during the passage of the welding current.

1,219,140. SAFETY ATTACHMENT FOR PNEUMATIC TOOLS. CHARLES A. NAGLE, St. Louis, Mo. Filed Mar. 24, 1916. Serial No. 86,443. (Cl. 78—44.5.)



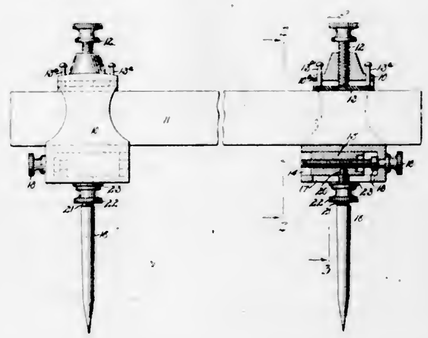
1. In a device as set forth, the combination with a casing, and a reciprocatory tool having a shank mounted in said casing, said shank being provided with an annular recess, a plurality of pins extending through said casing and having their inner ends seated in said recess, means for holding said pins firmly in position and means for moving said pins out of said annular recess immediately upon the release of said first named means.

2. In a device as set forth, the combination with a casing and a tool having a shank reciprocably mounted within said casing, said shank being provided with an annular recess, of a plurality of pins extending through said casing and having their inner ends seated in said recess, blocks positioned exteriorly of said casing, the outer ends of said pins being detachably connected to said blocks for holding said blocks in firm abutting engagement with portions of the outer surface of said casing for holding the inner ends of said pins in said recess, said blocks being provided with recesses extending inwardly from their inner faces, springs mounted in said recesses, and adapted for forcing said blocks away from said casing upon release of said first named means and means engaging the outer surfaces of said blocks for holding them in firm abutting engagement with portions of the inner surface of said casing.

3. In a device as set forth, the combination with a tool casing, a reciprocatory tool having a shank mounted within said casing, said shank being provided with an annular recess, of a plurality of pins extending through said casing and having their inner ends seated in said annular recess, blocks being positioned exteriorly of said casing, said pins having their outer ends detachably connected to said blocks, a pair of substantially semi-circular members engaging the outer surfaces of said blocks for binding the blocks in firm abutting engagement with portions of the outer surface of said casing for holding the inner ends of said pins in said recess, means for moving and holding said semi-circular members into a locking position, said means operable for moving said semi-circular members out of a locking position with respect to said blocks.

4. In a device as set forth, the combination with a tool casing, a reciprocatory tool having a shank mounted within said casing, said shank being provided with an annular recess, of a plurality of pins extending through said casing and having their inner ends seated in said annular recess, blocks being positioned exteriorly of said casing, said pins having their outer ends detachably connected to said blocks, a pair of substantially semi-circular members engaging the outer surfaces of said blocks for binding the blocks in firm abutting engagement with portions of the outer surface of said casing for holding the inner ends of said pins in said recess, means for moving and holding said semi-circular members into a locking position, said means operable for moving said semi-circular members out of a locking position with respect to said blocks, said blocks provided with recesses extending inwardly from their inner faces, and springs mounted in said recesses for forcing said blocks out of abutting engagement with said casing upon the movement of said semi-circular members into an unlocking position.

1,219,141. TRAMMEL. ROBERT ALDEEN NELSON, Oakland, Cal. Filed July 15, 1916. Serial No. 109,446. (Cl. 33—159.)



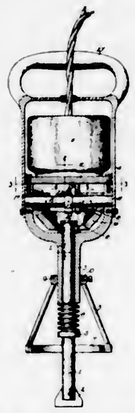
1. A trammel including a body having a transverse opening to receive a beam and formed with a box-like extension at the lower end below said opening, one end of said extension being open, and there being a longitudinal slot in the bottom of said extension communicating with the interior thereof, a block slidable longitudinally in said extension and having a threaded bore, a screw swiveled to the wall of the said extension opposite the open end and provided with a head at the exterior of said wall, said screw engaging the threaded bore of the block, a trammel point extending at its upper end through the longitudinal slot of said extension and detachably secured

to the under side of the said block, said point having a threaded section adjacent to the upper end extending through the said slot, a nut on said threaded section, and a washer between said nut and the under side of the extension.

2. A trammel including a body formed with a transverse opening to receive a beam, said body having a horizontally disposed box extension, integral with said body below the said opening, a block housed within said box extension and slidable longitudinally therein, a screw engaging said block to move the said block back and forth in said extension, the bottom of said extension being slotted, a trammel point extending at its upper end through said slot and secured to said block to slide with the latter, and a clamp nut threaded onto the said point at the under side of said extension.

3. A trammel having a body formed with a transverse opening to receive a beam, a trammel point in said body at the lower end, a set screw in said body and extending into the opening at the top thereof, a clamp plate in the opening of the body to bear against the beam, and guide pins on said clamp plate extending through members on the body, the said pins having heads above the said body members to limit the downward movement of the clamp plate and prevent displacement of the latter.

1,219,142. ELECTRIC VALVE-GRINDER. HARRY C. NEWMAN, Los Angeles, Cal., assignor of one-half to Loren O. Clampitt, Los Angeles, Cal. Filed Nov. 23, 1916. Serial No. 133,014. (Cl. 51—4.)

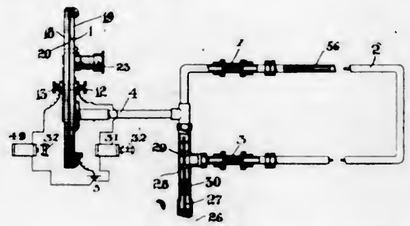


1. A valve grinder comprising a supporting body, a rotary and axially movable valve-turning spindle, a gear connected with the spindle, mutilated gears arranged to alternately mesh with the gear to impart rotary motion in opposite directions, a lifter operatively connected with the spindle for moving the same axially, a cam for actuating the lifter, and means for simultaneously rotating the mutilated gears and cam.

2. A valve grinder comprising a supporting body, a rotary and axially movable valve-turning spindle, a gear connected with the spindle, coaxial mutilated gears arranged to alternately mesh with the gear to impart rotary motion in opposite directions, a lifter operatively connected with the spindle for moving the same axially, a cam located between the mutilated gears for actuating the lifter, and a motor mounted on the body and operatively connected with the cam and mutilated gears for rotating the same simultaneously.

3. A valve grinding tool comprising a body, a bit-carrying spindle, a gear feathered to the spindle, mutilated gears adapted to mesh with the first-mentioned gear for moving the same forwardly a given step and backwardly a shorter step, a shaft carrying the mutilated gear, a cam on the shaft, a lifter operatively connected with the spindle and actuated by the cam for lifting the spindle, a spring yieldingly opposing the lifting movement of the spindle, and a motor carried by the body and operatively connected with the said shaft for turning the same.

1,219,143. SUPERVISORY SYSTEM. JAMES G. NOLEN, New York, N. Y., assignor, by mesne assignments, to Automatic Fire Protection Company, New York, N. Y., a Corporation of Maine. Filed July 23, 1909. Serial No. 509,103. (Cl. 177—355.)



1. In combination, fluid-pressure-actuated means, and a pipe loop, both ends of which are in connection with such fluid-pressure-actuated means, such loop comprising impedance means on both sides.

2. In combination, fluid-pressure-actuated means, and a pipe loop, both ends of which are in connection with such fluid-pressure-actuated means, such loop comprising impedance means on both sides and located in close proximity to said fluid-pressure-actuated means.

3. In combination, a fluid-pressure-actuated contact device, and a pipe loop, both ends of which are in connection with such contact device, said loop comprising impedance means on both sides.

4. In combination, a fluid-pressure-actuated contact device, and a pipe loop, both ends of which are in connection with such contact device, said loop comprising impedance means on each side, and located in close proximity to said contact device.

5. In combination, a fluid-pressure-actuated contact device and a pipe loop, both ends of which are in connection with such contact device, and impeding and insulating means in each side of such loop comprising a small bore glass tube serving both to impede flow of fluid to and from said contact device, and to insulate the pipe loop from such contact device.

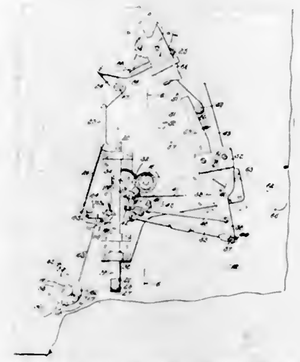
[Claims 6 to 19 not printed in the Gazette.]

1,219,144. REPEATER FOR TALKING-MACHINES. JOHN PARA, Elizabeth, N. J. Filed June 21, 1916. Serial No. 104,973. (Cl. 274—15.)

1. A repeater as characterized comprising a transmission mechanism permanently disposed on the frame of a talking machine; means for temporarily operatively engaging and disengaging said transmission mechanism and the driving shaft of a talking machine, said means embodying a member moved in correspondence with the tone arm of said talking machine; and means for operatively connecting said transmission mechanism and said tone arm for returning the tone arm to its initiatory position.

2. A repeater as characterized comprising a transmission mechanism permanently disposed on the frame of a talking machine; means for temporarily operatively engaging and disengaging said transmission mechanism and the driving shaft of a talking machine, said means embodying a member moved in correspondence with the tone arm of said talking machine; means for operatively connecting said transmission mechanism and said tone arm for returning the tone arm to its initiatory position, said means embodying a connecting link having an elongated engagement slot for engaging the tone arm for movement in one direction only.

3. A repeater as characterized comprising a transmission mechanism permanently disposed on the frame of a talking machine; means for temporarily operatively engaging and disengaging said transmission mechanism and the driving shaft of a talking machine, said means embodying a member moved in correspondence with the tone arm of said talking machine; means for operatively connecting said transmission mechanism and said tone arm for returning the tone arm to its initial position; and automatic means for returning the transmission mechanism to its initial position when disengaged from said driving shaft.



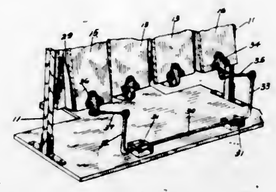
4. A repeater as characterized comprising a transmission mechanism permanently disposed on the frame of a talking machine; means for temporarily operatively engaging and disengaging said transmission mechanism and the driving shaft of a talking machine, said means embodying a member moved in correspondence with the tone arm of said talking machine; means for operatively connecting said transmission mechanism and said tone arm for returning the tone arm to its initial position; automatic means for returning the transmission mechanism to its initial position when disengaged from said driving shaft; and means for regulating the speed of retraction of said transmission mechanism.

5. A repeater as characterized comprising a transmission mechanism permanently disposed on the frame of a talking machine; means for temporarily operatively engaging and disengaging said transmission mechanism and the driving shaft of a talking machine, said means embodying a member moved in correspondence with the tone arm of said talking machine; means for operatively connecting said transmission mechanism and said tone arm for returning the tone arm to its initial position; automatic means for returning the transmission mechanism to its initial position when disengaged from said driving shaft; and means for regulating the speed of retraction of said transmission mechanism, said means embodying a dash pot operatively connected with a plunger of said transmission mechanism.

[Claims 6 to 19 not printed in the Gazette.]

1,219,145. ACCENT CONTROL FOR MUSICAL INSTRUMENTS. GEORGE H. PARSONS, Stamford, Conn., assignor to Kroeger Piano Company, Stamford, Conn., a Corporation of New York. Filed Oct. 26, 1916. Serial No. 127,864. (Cl. 84—168.)

1. In a pneumatically operated musical instrument, the combination, with an exhauster, means for actuating said exhauster, a wind-duct with which said exhauster communicates and which is designed to have pneumatic connection with the actuating mechanisms of the sound-producing instrumentalities, and two individually spring-tensioned equalizers all normally communicating with said wind-duct, of means operable upon an excess of force suddenly applied to the exhauster actuating means for instantly cutting off communication between a portion of said equalizers and said duct, and connecting means between said equalizers to combine the forces due to the spring-tensioning of each thereof in the portion of the equalizers remaining effectively operable.



2. In a pneumatically operated musical instrument, the combination, with an exhauster, means for actuating said exhauster, a wind-duct with which said exhauster communicates and which is designed to have pneumatic connection with the actuating mechanisms of the sound-producing instrumentalities, and two individually spring-tensioned equalizers both normally communicating with said wind-duct, of means operable upon an excess of force suddenly applied to the exhauster actuating means for instantly cutting off communication between one of said equalizers and said duct, and means for transmitting the forces due to the spring-tensioning of the ineffectively operable equalizer to the equalizer remaining effectively operable.

3. In a pneumatically operated musical instrument, the combination, with the exhausters, two foot-pedals for actuating said exhausters, a wind-duct with which said exhausters communicate and which is designed to have pneumatic connection with the actuating mechanisms of the sound-producing instrumentalities, and two individually spring-tensioned equalizers both normally communicating with said wind-duct, of means operable upon an excess of force suddenly applied to either of said pedals for instantly cutting off communication between one of said equalizers and said duct, and means for transmitting the forces due to the spring-tensioning of the ineffectively operating equalizer to the equalizer remaining effectively operable.

4. In a pneumatically operated musical instrument, the combination, with an exhauster, means for actuating said exhauster, a wind-duct with which said exhauster communicates and which is designed to have pneumatic connection with the actuating mechanisms of the sound-producing instrumentalities, and a plurality of collapsible equalizers all normally communicating with said duct, each of said equalizers being provided with a spring yieldingly opposing collapse thereof, of means operable upon an excess of pressure suddenly applied to the exhauster actuating means for instantly cutting off communication between a portion of said equalizers and said duct, and connecting means between said equalizers to effect collapse of all thereof against the action of their springs upon collapse of that portion of the equalizers remaining effectively operable.

5. In a pneumatically operated musical instrument, the combination, with two exhausters, a foot-pedal for actuating each of said exhausters, a wind-duct with which both of said exhausters communicate and which is designed to have pneumatic connection with the actuating mechanisms of the sound-producing instrumentalities, and two collapsible equalizers both normally communicating with said duct, each of said equalizers being provided with a spring yieldingly opposing collapse thereof, of means operable upon excess of force suddenly applied to either of said pedals for instantly cutting off communication between one of said equalizers and said duct, and connecting means between said equalizers to effect collapse of both thereof against the action of their springs upon collapse of the equalizer remaining effectively operable.

[Claims 6 to 11 not printed in the Gazette.]

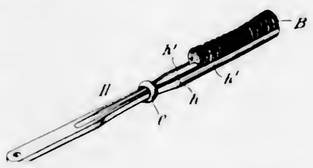
1,219,146. SHOE-FASTENING DEVICE. JOHN H. N. PETERSON, Baker, Oreg. Filed Nov. 16, 1916. Serial No. 131,735. (Cl. 24—209.)



1. The combination with a pair of members to be secured together and adapted to be disposed in overlapped relation, the upper member having a hole, and an upstanding eye on the lower member, of a button plate comprising a flat metal plate having one end tapered and bent downwardly, a narrow integral strip projecting from the opposite end of the large portion of the plate and being bent back upon itself beneath the button plate with its free end projecting upwardly and connected to the plate at the juncture of the flat and downwardly bent portions to form an elongated resilient loop, said loop having its intermediate portion bowed inwardly toward the bottom of said plate and spaced therefrom, thereby forming an enlarged loop at each end, said enlarged loops being in a plane with the end of the tapered portion of the plate, whereby when the device is in locked position, the enlarged loops will contact the aforesaid upper member and said end of the tapered portion will bear against the edge of the said upper member to keep it in close contact with the lower member.

2. A device of the class described comprising a button plate formed from a single piece of metal with one end pointed and bent downwardly, a narrow integral strip projecting from the opposite end of the plate and bent back upon itself, said strip extending beneath the button plate with its free end projecting upwardly and connected with the plate to form an elongated loop disposed beneath said plate adapted to engage a stationary eye, and the lower portion of said strip beneath the plate being resilient and bowed to form a lock for the eye.

1,219,147. TOOTH-BRUSH. ALPHONSE ARTHUR PICARD, New York, N. Y. Filed Mar. 9, 1916. Serial No. 83,037. (Cl. 15—39.)

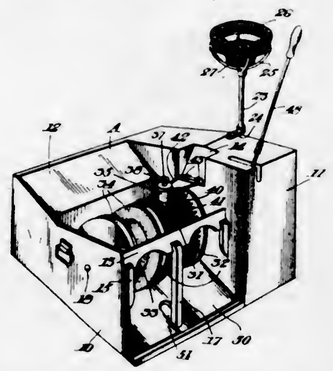


1. A tooth brush of the character designated, comprising a handle formed with a medial supporting member and lateral jaw members of resilient material, a removable brush pad adapted to rest on said medial supporting member and to be embraced by said jaw members, and a clasp slidably embracing said medial supporting member and the jaw members for clamping said pad in position.

2. A tooth brush of the character designated, comprising a one-piece handle of elastic resilient material formed with a medial supporting member and with clamping jaws extending on opposite sides thereof, a removable brush pad supported upon said medial supporting member, and means slidably embracing said medial supporting member and clamping jaws to firmly clamp said pad between said jaws.

3. A tooth brush of the character designated, comprising a one-piece handle of elastic resilient material formed with a medial supporting member and with clamping jaws extending on opposite sides thereof, a removable brush pad supported upon said medial supporting member, and means slidably embracing said medial supporting member and clamping jaws to firmly clamp said pad between said jaws, said medial supporting member being received within and embraced by the side portions of said pad.

1,219,148. SHOE-SHINING AND HAT-DUSTING MACHINE. GASTON POOTMANS, EUGENE POOTMANS, and GEORGE POOTMANS, Regina, Saskatchewan, Canada. Filed Apr. 19, 1916. Serial No. 92,242. (Cl. 15—61.)



1. A machine of the class described, comprising a frame, a plurality of flat brushes having opposing faces spaced apart, a cylindrical brush arranged between the opposing faces of the flat brushes, means for rotating the brushes, a pivotally mounted polish container, a ball carried by said container and normally engaging the faces of all of said brushes, said ball being freely rotatable in all directions, and means for feeding polish from said container to the ball.

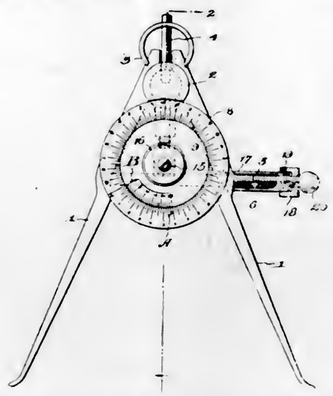
2. A machine of the class described, comprising a frame, a plurality of flat brushes having opposing faces spaced apart, a cylindrical brush arranged between the opposing faces of the flat brushes, means for rotating the brushes, a polish container, a cage mounted on the lower end of said container, a ball loosely mounted in the cage above the cylindrical brush and between the flat brushes, and means for moving the ball into and out of engagement with the adjacent brushes.

3. A machine of the class described comprising a frame, brushes rotatably mounted therein, an oscillating foot rest located below the brushes, rollers rotatably mounted in the foot rest intermediate of the length thereof, a bracket on the back of the foot rest, a roller rotatably mounted in the bracket, and resilient means for retaining the foot rest in a normal position.

4. A machine of the class described comprising a frame, brushes rotatably mounted therein, an oscillating foot rest located below the brushes, rollers rotatably mounted on the foot rest intermediate of the length thereof, and a spiral spring operatively connected at one end to the foot rest and at the other end to the frame.

1,219,149. ROTARY VERNIER-CALIPERS. FRANK B. PUGLISI, New Brunswick, N. J. Filed Apr. 18, 1916. Serial No. 91,949. (Cl. 33—148.)

1. The combination with a pair of calipers, of a rotary vernier carried thereby, a worm gear having twenty-one teeth carried by the vernier disk, and a worm shaft adapted to engage said worm gear.



2. The combination with a caliper, of a vernier disk carried thereby, a worm gear secured to said disk, and a worm shaft pivoted to one of the caliper legs and adapted to be held in engagement with said worm gear.

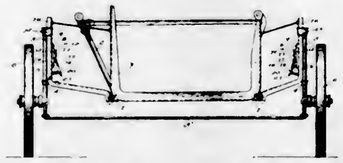
3. In a device of the kind described, caliper legs, a worm gear mounted between said legs, a vernier disk carried by said gear, one of said legs being slotted, and a worm shaft pivoted to the non-slotted leg and working in the slot of the other leg, and engaging said gear.

4. In a device of the kind described, caliper legs, a fork loosely carried by the leg joint, a worm gear carried by said fork, a worm shaft adapted to mesh with said gear, a disk carried by the gear and having a vernier scale thereon, and a second disk set into the face of the first mentioned disk and held against rotation, said second disk having a coöperating scale thereon.

5. The combination with a pair of calipers, a fixed and a rotary vernier disk carried thereby, a worm gear carried by the rotary disk, a worm shaft adapted to engage said gear, said shaft working loosely through one of the caliper legs and having a head at its outer end, and means carried by the shaft for spacing said head from said caliper leg.

[Claim 6 not printed in the Gazette.]

1,219,150. GRAIN-SHOCKING MACHINE. CLEMMA R. RANEY, Chicago, and ROBERT C. LIVESAY, Moline, Ill., assignors to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Jan. 6, 1913. Serial No. 740,484. (Cl. 21—186.)



1. In a shocking machine, a wheeled member having a rotatable standard thereon, a shocker frame carried thereby and operatively connected to said standard, a rack member carried on one of said members forming a journal for said standard, a pinion carried on the other member coöperating with said rack member to vary the relative position of said members, and means for locking the parts in position.

2. In a shocking machine, a wheeled member having a rotatable standard thereon, a rack member carried by said standard and forming a journal therefor, a shocker frame slidably connected to said standard and rack member, a pinion rotatably mounted on said frame and having teeth engaging said rack member, and means normally locking said pinion in engagement with said rack member.

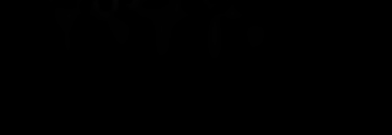
3. In a shocking machine, a truck standard, a rack member thereon, a slotted frame member slidably mounted on said standard, a pinion journaled on said frame member and extending through the slot therein into engagement with said rack, and a pawl pivotally mounted on said frame member beneath said pinion disposed in supporting engagement beneath one of the teeth thereof.

4. In a shocking machine, a truck having rotatable wheel standards on opposite sides of the same, rack members in which said standards are swiveled, a frame vertically adjustable with respect to said standards, and means carried on said frame and coöperating with said rack members for varying the elevation of said frame and locking the same in each position of adjustment thereof.

5. In a shocking machine, a plurality of rotatable wheel standards, rack members to which said standards are swivelingly connected, a frame slidable relative to said standards and rack members, and means carried on said frame and coöperating with said rack members whereby said frame may be raised and lowered with respect to said standards and secured in each position of adjustment.

[Claims 6 to 10 not printed in the Gazette.]

1,219,151. WOVEN-FABRIC ENDLESS BELT. ALBERT G. REED, Middletown, Conn., assignor to Russell Mfg. Co., Middletown, Conn., a Corporation. Filed June 7, 1916. Serial No. 102,217. (Cl. 74—63.)



1. As a new article of manufacture, a woven fabric endless belt comprising a belt-strip spliced by having its respective ends unraveled to free the ends of its warp-threads, the said warp-thread ends being passed transversely through the body of the strip and drawn through the same, and means for securing the said warp-thread ends in place.

2. As a new article of manufacture, a woven fabric endless belt consisting of a belt-strip wound upon itself to produce a plurality of belt-layers and spliced by having its respective ends unraveled to free the ends of its warp-threads, the said warp-thread ends being passed transversely through the body of said strip, and confined in place between the said belt-layers.

3. As a new article of manufacture, a woven fabric endless belt consisting of a belt-strip wound upon itself to form a plurality of belt-layers and spliced by having its respective ends unraveled to free the ends of its warp-threads, the said warp-thread ends being passed transversely through the body of the strip and confined in place between the said belt-layers, and means for securing the said belt-layers together.

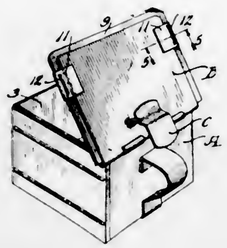
4. As a new article of manufacture, a woven fabric endless belt consisting of a belt-strip wound upon itself to produce an inner and an outer belt-layer and spliced by having its respective ends unraveled to free the ends of its warp-threads, the said warp-thread ends being passed transversely in opposite directions through the longitudinal center of the body of the belt-strip and confined in place between the said belt-layers, and means for securing the said belt-layers together.

5. As a new article of manufacture, a woven fabric endless belt consisting of a belt-strip wound upon itself to form a plurality of belt-layers and spliced by having its respective ends unraveled to free the ends of its warp-threads, the said warp-thread ends being passed transversely through the strip until the ends of its filling threads are abutted against it, and the said unraveled

ends of the warp-threads being confined between the adjacent belt-layers, and means for securing the said belt-layers together.

[Claims 6 to 9 not printed in the Gazette.]

1,219,152. SANITARY RECEPTACLE. MAURICE L. REID, San Francisco, Cal., and ROBERT E. REID, Seattle, Wash. Filed Aug. 16, 1916. Serial No. 115,351. (Cl. 4—39.)



1. The combination with a filler receptacle comprising a permanently connected flexible lid of a sufficient area to rest on the edges of the opening of said receptacle, of a holder from which the filler is bodily removable so as to be discarded and adapted to receive said receptacle, said holder being provided with a cover so constructed and arranged as to firmly press on the lid of the filler receptacle over the edges of its opening to thereby tightly close said filler receptacle, and means to detachably connect the lid of the filler with the receptacle.

2. The combination with a holder and cover therefor, of a cup adapted to be received in said holder, a lid for said cup, and flaps formed on the edges of the lid and bent upwardly and over the holder cover to engage with the latter.

3. The combination with a holder and cover therefor, of a filler cup adapted to be received in said holder, a lid for said cup, flaps carried by said lid for coöperation with the holder cover aforesaid, and connecting means intermediate said flaps and lid.

4. A receptacle of the class described comprising a blank folded to provide front, back and side sections, corner folds intermediate the said sections and arranged to lie against the side sections in pairs, each side having an extension foldable inwardly of the receptacle onto the corner folds and means interlocking with said folds.

5. A receptacle of the class described comprising a blank folded to provide front, back and side sections, corner folds intermediate the said sections and arranged to lie against the side sections in pairs, each side having an extension foldable inwardly of the receptacle onto the corner folds and terminating in a locking tongue engageable beneath the folds.

[Claim 6 not printed in the Gazette.]

1,219,153. WAGON-AXLE. FREDERICK REISSNER, Chatham, Ontario, Canada, assignor of one-half to A. T. Munger, Harrow, Ontario, Canada. Filed Aug. 16, 1912. Serial No. 715,509. (Cl. 21—5.)

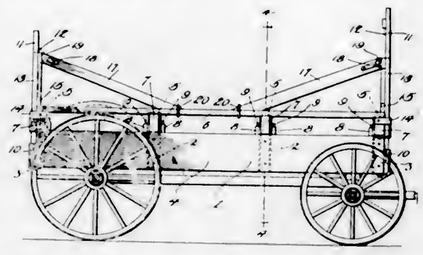


1. A tubular metallic axle provided internally on each side with curved metallic reinforcing strips welded to said axle.

2. A tubular metallic axle composed of two parts U-shaped in cross-section and fitted and welded together, also provided internally with pairs of curved metallic reinforcing strips arranged on each side of the axle and welded thereto.

3. A tubular axle having internally screw-threaded rings welded into its extremities, in combination with end screws engaging said rings and provided with laterally extending flanges for holding the wheels in place.

1,219,154. ONE-MAN HAY-RACK. LEON RHEAULT, Hickson, N. D. Filed Sept. 14, 1916. Serial No. 120,117. (Cl. 21—74.)

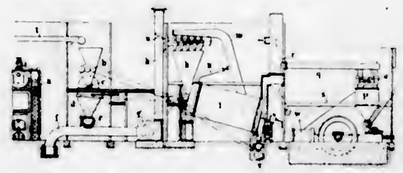


1. A hay rack comprising a rectangular bed frame to be placed on a running gear, a pair of side floor sections having inwardly extending sills to rest on said frame, means for detachably holding said sills in operative position, a central floor section to rest on said sills between said side sections, front and rear vertical end frames, means for detachably connecting them to the ends of the bed frame, and means on said end frames for holding the central floor section in operative position.

2. A hay rack comprising a rectangular bed frame to be placed on a running gear, a pair of side floor sections having inwardly extending sills to rest on said frame, means for detachably holding said sills in operative position, a central floor section to rest on said sills between said side sections, front and rear vertical end frames, means for detachably connecting them to the ends of the bed frame, and horizontal cleats secured to said end frames to overlie the ends of said central floor section to retain said section in operative position.

3. A rack of the class described comprising a rectangular bed frame to be placed on a running gear, said frame including transverse bars and end bars, sockets carried by and disposed above the centers of said transverse and end bars, a pair of side floor sections having inwardly extending sills to rest on said transverse and end bars with their inner ends received in said sockets, vertical flanges carried by the sills and disposed above the side bars of the bed frame, and vertical pins rising from said side bars and abutting said flanges to prevent endwise shifting of the sills until the latter are tilted upwardly.

1,219,155. TREATMENT OF LIGNITE AND THE LIKE. THOMAS RIGBY, Dumfries, Scotland, assignor of one-half to Nils Testrup, London, England. Filed Jan. 11, 1913. Serial No. 741,583. (Cl. 34—24.)



1. A method of drying inflammable solids such as lignite consisting in pulverizing the solid and then causing the resulting powder to be suspended in waste products of combustion until dried to the desired extent.

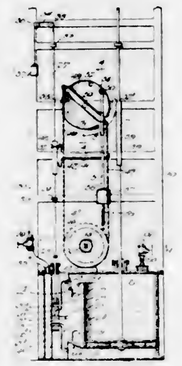
2. A method of drying lignite consisting in reducing the lignite to a homogeneous powder and causing the powder to float in a rapidly flowing current of hot flue gases until dried to the desired extent.

3. In drying finely divided materials by causing the latter to float in a hot gaseous medium, the method of drying powdered lignite consisting in dispersing it in a current of hot flue gases moving at a velocity of about 50 feet per second or over until dried to the desired extent.

4. A method of drying lignite consisting in reducing the lignite to a homogeneous powder, causing said powder to float in a current of hot products of combustion, separating the powder from said products and further drying the powder out of the contact with a drying medium.

5. A method of drying lignite consisting in reducing the lignite to a homogeneous powder, causing said powder to float in a current of hot products of combustion, separating the powder from said products and utilizing the separated products of combustion to convey dried powder to be consolidated.

1,219,156. HYDRAULIC MOTOR. RUBÉN RIVERA, Sonsonate, Salvador. Filed Nov. 1, 1915. Serial No. 58,973. (Cl. 138—2.)



1. In a hydraulic motor, a cylinder, a piston thereon, a main slide valve, connections between the piston rod and said main slide valve for operating the latter, a discharge passage at each end of the cylinder, and automatic valves operated by the motive fluid for controlling the said passages.

2. In a hydraulic motor, a cylinder, a piston therein, a main slide valve for directing the motive fluid alternately to opposite sides of the piston, a lever having operative connection with said main slide valve, a suspension member, an arm secured to the suspension member, a weight carried by the suspension member, means operated by the movement of the piston for raising the suspension member and for dropping the latter and the attached weight at a predetermined moment, so as to bring the arm in contact with the lever, thereby moving the latter and shifting the valve.

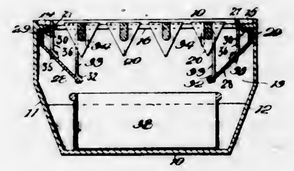
3. In a hydraulic motor, a cylinder, a piston therein, a main slide valve for directing the motive fluid alternately to opposite sides of the piston, a lever having operative connection with said main slide valve, a suspension member, an arm secured to the suspension member, a weight carried by the suspension member, means operated by the movement of the piston for raising the suspension member and for dropping the latter and the attached weight at a predetermined moment, so as to bring the arm in contact with the lever, thereby moving the latter and shifting the valve, and means for subsequently raising the suspension member and dropping it on the opposite side of the fulcrum of the lever, thereby shifting the lever in the opposite direction, through the engagement with the arm of the suspension member.

4. In a hydraulic motor, a cylinder, a piston therein, a main slide valve for directing motive fluid alternately to opposite sides of the piston, a lever operatively connected with said valve, a wheel loosely mounted for revolution on a fixed axis, a suspension member carried by said wheel, an arm secured to said suspension member, a weight carried by said suspension member, and means connected with the piston for rotating said wheel, so as to shift the point of suspension from one side of the wheel to the other, and for permitting the weight to move downwardly by gravity, thereby causing engagement of the arm with the lever and thus shifting the valve.

5. In a hydraulic motor, a cylinder, a piston therein, a main slide valve for directing motive fluid alternately to opposite sides of the piston, a lever operatively connected with said valve, a wheel loosely mounted for revolution on a fixed axis, a suspension member carried by said wheel, an arm secured to said suspension member, a weight carried by said suspension member, means connected with the piston for rotating said wheel, so as to shift the point of suspension from one side of the wheel to the other, and for permitting the weight to move downwardly by gravity, thereby causing engagement of the arm with the lever and thus shifting the valve and for reversing the movement of the wheel to bring the arm into engagement with the lever on the opposite side of the fulcrum, and thereby shifting the valve in the opposite direction.

[Claim 6 not printed in the Gazette.]

1,219,157. ATTACHMENT FOR ASH-PITS. HENRY I. ROGERS, Fort Fairfield, Me. Filed Jan. 4, 1916. Serial No. 70,271. (Cl. 126—245.)



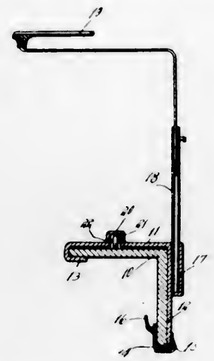
1. An ash pit having inwardly directed side ledges, a plurality of grate bars each including terminal journals and supported upon said ash pit, oppositely disposed longitudinal aprons inclining inwardly and downwardly with their upper edges bearing beneath said ledges, hangers attached to said aprons and having terminal hooks engaging over the journals of the grate bars, other hangers connected to said apron, and means for suspending said last-mentioned hangers from said ledges.

2. An ash pit having inwardly directed side ledges, each having a plurality of inwardly projecting lugs, a plurality of grate bars each including terminal journals and supported upon said ash pit, oppositely disposed longitudinal aprons inclining inwardly and downwardly and bearing by their upper edges beneath said ledges, hangers attached to said apron and having terminal hooks engaging over the journals of the grate bars, and other hangers connected to said aprons and having apertures engaging over said lugs.

1,219,158. ATTACHMENT FOR BEDS. EDWARD ROSE, Stapleton, N. Y. Filed Mar. 9, 1916. Serial No. 83,111. (Cl. 45—82.)

An attachment for an iron bed rail comprising an L-shaped member arranged to engage the outer faces of the vertical and horizontal portions of the bed rail, the outer end of the horizontal portion of the L-shaped member having a downwardly and inwardly turned part engaging in embracing relation with the outer edge of the horizontal portion of the rail, a standard receiving socket member formed on the vertical portion of the L-shaped member, and a spring pressed L-shaped member pivotally car-

ried by the lower end of the vertical portion of the first named L-shaped member for embracing engagement with



the lower edge portion of the vertical portion of the bed rail.

1,219,159. FRAME CONSTRUCTION FOR TYPEWRITERS. GEORGE F. ROSE, New York, N. Y. Filed May 29, 1914. Serial No. 841,701. (Cl. 197—186.)



1. In a frame construction for typewriters, a frame member formed by a metal stamping comprising an unbroken solid back plate and a plurality of wings bendable into substantially parallel relation to each other and at a right angle to the back plate, said metal stamping being slotted inwardly from the edges thereof and producing members adapted to be bent relatively to the metal stamping, which bent members are adapted to form brackets whereby the frame member resulting from the metal stamping is adapted to be fastened to an exterior machine frame.

2. In a frame construction for typewriters, a frame member formed from a metal stamping comprising a back plate and a plurality of wings bendable into substantially parallel relation to each other and at a right angle to the back plate, said back plate being provided with an integral bracket for a ribbon vibrator.

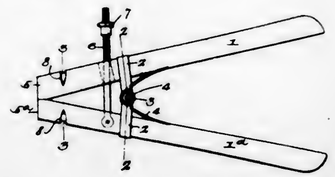
3. In a frame construction for typewriters, a frame member formed from a metal stamping comprising a back plate and a plurality of wings bendable into substantially parallel relation to each other and at a right angle to the back plate, said back plate being provided with integral lugs extending forwardly from said back plate and positioned for supporting the space key devices.

4. In a frame construction for typewriters, a frame member formed from a metal stamping comprising a back plate and a plurality of wings bendable into substantially parallel relation to each other and at a right angle to the back plate, said wings being provided with lugs for supporting parts of a ribbon reverse mechanism.

5. In a frame construction for typewriters, a frame member comprising a flanged plate having integral therewith two wings bendable into substantially parallel relation to each other, said plate being provided with a ribbon mechanism bracket positioned centrally thereof and extending outwardly therefrom.

[Claims 6 to 20 not printed in the Gazette.]

1,219,160. RIM-STRETCHING DEVICE. AARON ROSENBLATT, Philadelphia, Pa. Filed Aug. 1, 1916. Serial No. 112,562. (Cl. 81—3.)

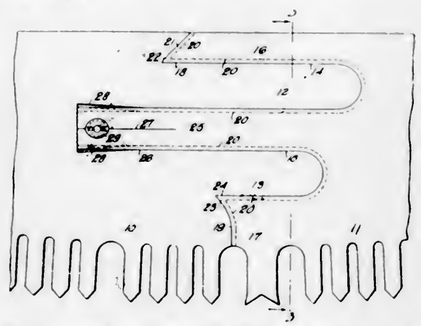


1. A rim stretching device consisting of two pivotally connected bars; a spring normally operative to maintain an end of one bar in engagement with the corresponding end of the other bar; a graduated member connected to one of the bars; and an adjustable element on said graduated member placed to engage the other bar to limit the separation of the normally engaged ends of the bars.

2. The combination of a pair of bars having means for holding in place a rim to be stretched; means for pivotally connecting the bars; a graduated spindle mounted on one of the bars and extending through the other, and a nut adjustable on the spindle to limit the amount of separation of the rim supporting ends of the bars.

3. A rim stretching device consisting of a pair of bars having means on a pair of adjacent ends for retaining thereon a rim to be stretched; U-shaped members respectively fixed to said bars; a pivot connecting the free ends of said members; a spring on the pivot acting on the bars to normally force together their rim engaging ends; and means for positively limiting the amount of separation of said rim engaging ends of the bars.

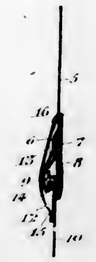
1,219,161. LOCKING MEANS FOR SECTIONAL CROSS-CUT-SAWS. FRANK POMEROY ROWLAND, Donnelly, Idaho. Filed Dec. 22, 1915. Serial No. 68,186. (Cl. 143—139.)



The combination of sections fitting end to end, one of said sections having a longitudinal recess therein, and the other section having a tongue split longitudinally at the end thereof, the tongue at the split thereof presenting opposed recesses forming an oblong hole in the tongue, and an oval expansion device fitting the said oblong recess and revoluble therein to bring the major axis of said device in line longitudinally with the split of the tongue or transverse thereto, the said expansion device being composed of separate side plates, the peripheral edge of said expansion device and the opposed wall of the oblong opening being correspondingly V-shaped.

1,219,162. GARMENT-SUPPORTER. WALTER C. RUNGE, West Collingswood, N. J., assignor to David L. Short, Philadelphia, Pa. Filed Feb. 2, 1915. Serial No. 5,612. (Cl. 24—245.)

1. The combination with a garment supporter having a loop for engaging said garment, of a sheath having an open end restricted, and having elastic adjacent to said open end tending to draw the walls of said sheath into frictional engagement with said loop.



2. The combination with a garment supporter having a loop for engaging said garment, of a sheath having an opening in its upper end through which said loop is inserted, and means for attaching its open end with said supporter.

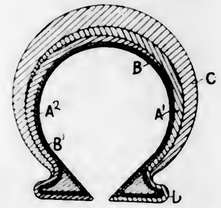
3. The combination with a garment supporter having a loop for engaging said garment, of a sheath having a restricted opening through which said loop may be inserted, and means for permanently attaching said sheath to said supporter.

4. An article of manufacture comprising a closed sheath for clothing the loop of a garment supporter, and having a restricted opening at one end through which the loop is inserted.

5. An article of manufacture comprising a closed sheath for clothing the loop of a garment supporter, and having a restricted neck at its upper end through which said loop is inserted, and a broadened body, one wall of which is arranged to be engaged in the opening of said loop, together with the fabric of the garment to be supported.

[Claim 6 not printed in the Gazette.]

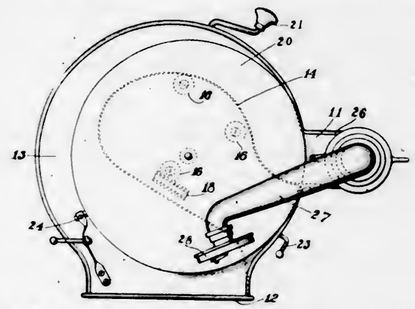
1,219,163. PROCESS OF MANUFACTURING PNEUMATIC TIRES. JOHN BOURKE SALMON, Dunedin, New Zealand. Filed Sept. 20, 1915. Serial No. 51,684. (Cl. 154—14.)



1. The herein-described process of making pneumatic tires, which consists in successively stretching soft, wet, pulpy leather over a mold-block so that the center line of the body of said leather substantially coincides with that of the tread of the mold-block; working the leather over the mold-block, so as to fit the same without puckering, and tacking it to said block as the fitting proceeds; forming beads on the edges of the leather thus shaped; drying it, and subsequently degreasing and roughening it on both faces to form a nap thereon; saturating the roughened faces with a rubber solution; applying canvas to the inner face of the leather, and rubber tread-stock to the outer face thereof; and vulcanizing the whole together in a dry heat.

2. The herein-described process of making pneumatic tires, which consists in successively stretching rings of soft, wet, pulpy chrome leather over a mold-block from opposite sides thereof; trimming and fitting the smaller sides or circumferences of said rings to the mold-block, and working in the larger sides or circumferences of the rings to prevent puckering, and securing the latter sides to said mold-block as the fitting proceeds; forming beads on the edges of the leather thus shaped, and subsequently drying it; degreasing and roughening the leather to bring up a nap on the faces thereof; saturating the leather with a rubber solution; applying canvas to the inner face of the leather, and rubber tread-stock to the outer face thereof, and finally vulcanizing the whole together in a dry heat.

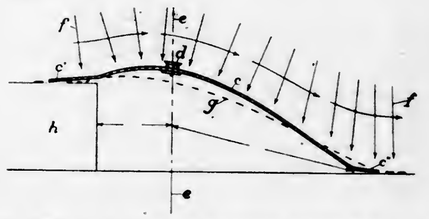
1,219,164. PHONOGRAPH. MARK JAY SAMUELS, New York, N. Y. Filed Apr. 17, 1915. Serial No. 21,983. (Cl. 274—2.)



1. In a device of the character described, a metallic sound amplifying device arranged circularly to form a central recess and including a circular top plate which bridges said recess, a motor located in said recess and dependently supported from said plate, a record supporting disk adapted to be driven by said motor, and sound reproducing means adapted to coöperate with a record on the record supporting disk and communicating with the sound amplifying device.

2. In a device of the character described, a metallic sound amplifying device arranged circularly to form a central recess, and including a circular top plate which bridges said recess, a motor located in said recess and dependently supported from said plate, a record supporting disk adapted to be driven by said motor, sound reproducing means adapted to coöperate with a record on the record supporting disk and communicating with the sound amplifying device, and a bottom plate hingedly connected to said amplifier, and adapted when closed to bridge the bottom of said recess, and when open to permit access to said motor.

1,219,165. BOOT OR SHOE. JAMES WEBB SAFFOLD, Cleveland, Ohio. Filed Oct. 24, 1914. Serial No. 868,398. (Cl. 36—71.)



1. A boot or shoe having a resilient arched steel member centrally secured to the insole permanently built into the shank thereof, said member having an extended rear end supported in position to slide upon the heel section and a widened forwardly disposed supporting section, free likewise to slide upon the upper face of the sole, beyond the arch, substantially as set forth.

2. A boot or shoe equipped with a resilient arched sole brace interiorly secured in position within the shoe permanently built into the shank thereof and having an extended rear supporting section and a widened front supporting section, both of which are free to move as the resilient sole brace is elongated by pressure or weight thereon, substantially as set forth.

3. A boot or shoe having an arched sole brace secured approximately at its middle portion only with its ends left free to slide; said sole brace being centrally cut away in its body portions to reduce the weight thereof, rearwardly elongated and narrowed to afford a bearing surface above the heel and forwardly widened to afford a bearing surface upon the sole of the shoe beyond the arch, substantially as set forth.

4. A boot or shoe having built into its shank, an arched resilient sole brace centrally secured to the shoe structure with its ends respectively bearing upon and left free to slide above the heel and forwardly of the arch upon the sole of the shoe, substantially as set forth.

5. A boot or shoe equipped with a resilient arched sole brace; the same having an integral anchoring portion intermediate of its ends and angularly bent unattached supporting ends, with a median portion of said sole brace cut away adjacent to the wider section thereof, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,219,166. MANUFACTURE OF CHLORINATED PRODUCTS OF XYLENE, ALDEHYDOBENZOIC ACIDS, AND DYESTUFFS THEREFROM. JULIUS SCHMIDLIN, Bergen, near Frankfort-on-the-Main, and MAX FISCHER, Frankfort-on-the-Main, Germany. Filed May 16, 1916. Serial No. 97,890. (Cl. 8—1.)

1. The process of producing dyestuffs of the triphenylmethane series which consists in chlorinating xylenes chlorinated in the nucleus, at elevated temperatures (100–130° C.) and under exposure to light until further four chlorin atoms have been introduced in the side chains, then subsequently condensing these new chlorin derivatives with ortho-cresotinic acid to the leuco compound, after saponification to chlorinated dialdehydes by means of concentrated sulfuric acid, and oxidizing the leuco compound with sodium nitrite in concentrated sulfuric acid solution to the above described dyestuff, substantially as described.

2. The process of producing new dyestuffs of the triphenylmethane series, which consists in chlorinating xylenes chlorinated in the nucleus at elevated temperatures (100–130° C.) and under exposure to light until further five chlorin atoms have been introduced in the side chains, then subsequently condensing these new chlorin derivatives with ortho-cresotinic acid after saponification to chlorinated aldehydecarbonic acids by means of concentrated sulfuric acid to the leuco-compound, and finally oxidizing same with sodium nitrite in concentrated sulfuric acid solution to the above described dyestuff, substantially as described.

3. As new products for manufacturing the emanating herein described new aldehydobenzoic acids chlorinated in the nucleus, which are soluble in hot water, being obtained therefrom in fine crystals, dissolving also in cold diluted alkalis and alkaline carbonates, substantially as described.

4. As new emanating products for manufacturing the new triphenylmethane dyestuffs herein described, produced from aldehydobenzoic acids chlorinated in the nucleus and ortho-cresotinic acid, being orange-red powders in the dry state, dissolving in water with a yellow-brown color, in diluted alkali with an intense violet-blue color, dyeing wool from an acid bath a brown-red shade, and yielding after chroming bright, beautiful, violet-blue dyeings of very good fastness to washing and milling, substantially as described.

1,219,167. CARPET-FASTENER. PHILIPP SCHNEIDER, St. Louis, Mo. Filed Dec. 20, 1915. Serial No. 67,941. (Cl. 85—10.)

1. A carpet fastener constructed of a single piece of material having a substantially V-shaped body and a pointed lateral at each end of said body, and an element at the bight of said body for bearing upon the carpet.

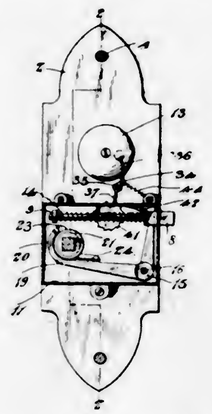


2. A carpet fastener constructed of a single piece of material comprising nonparallel legs of different lengths and a pointed lateral on each leg arranged at an angle other than a right angle relative to the leg, and an element at the bight of said body for bearing upon the carpet.

3. A carpet fastener comprising a V-shaped body having a pointed lateral at each of its free ends, a plate for the covering of the apex or bight of the body of the fastener and a washer for each of said laterals substantially as shown and for the purpose stated.

4. A carpet fastener constructed of a single piece of wire the body of which is substantially V-shaped with the bight thereof rounded, a pointed lateral extended integrally from each free end of the V-shaped body and bent reversely, the two elements of the V-shaped body having different lengths whereby the end of the one element of the body projects beyond the end of the other element in order to be accessible to an impacting tool.

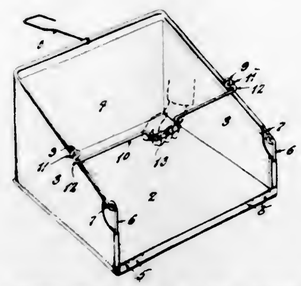
1,219,168. LATCH. JOSEPH SCHUBERT, Middletown, Conn. Filed Feb. 15, 1915. Serial No. 8,249. (Cl. 116—61.)



1. In an alarm lock, a horizontally disposed bolt, a rotatable ratchet wheel located at one side of said bolt, a series of circumferentially disposed spaced pins carried by one face of said ratchet wheel, a pawl pivotally carried by the upper portion of said bolt and engaging the teeth on said ratchet, whereby when said bolt is moved rearwardly, said ratchet wheel will be rotated, a lever pivoted intermediate its ends and arranged above and to one side of said ratchet wheel, the lower portion of said lever being disposed in the path of the pins, a bell arranged above said ratchet, a tapper carried by the upper portion of said lever, and means to operate said bolt.

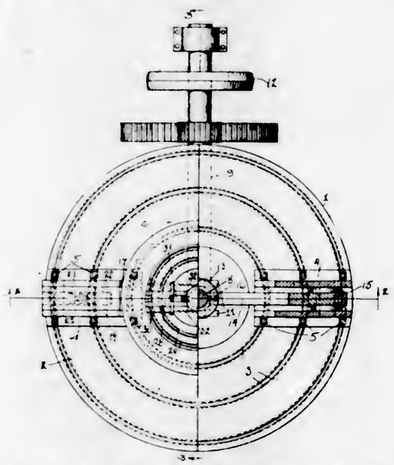
2. A latch of the class described including a horizontally disposed bolt, a rotatable ratchet wheel located to one side of said bolt, a series of circumferentially spaced pins carried by one face of said ratchet wheel, a pawl pivotally carried by the upper portion of said bolt and engaging said ratchet, whereby when said bolt is moved rearwardly, said ratchet wheel will be rotated, a lever pivoted intermediate its ends and arranged above and to one side of said ratchet wheel, the lower portion of said lever being disposed in the path of the pins, a bell arranged above said ratchet wheel, a tapper carried by the upper portion of said lever, a spring secured to the upper arm of said lever and arranged to normally hold said tapper out of engagement with said bell, and means to operate said bolt.

1,219,169. GRASS-CATCHER FOR LAWN-MOWERS. HERMAN E. SCHULTZ, Jr., St. Louis, Mo., assignor to Zittlosen Manufacturing Company, a Corporation of Missouri. Filed Oct. 27, 1916. Serial No. 128,022. (Cl. 56—114.)



A grass catcher comprising a grass receptacle having means for detachably securing it to a lawn mower; said receptacle having a top frame formed with a pair of pivot-eyes at the sides thereof and a bail having an offset hand-hold provided with means for pivoting it to said pivot-eyes and means offset from said pivoting means adapted to engage the top of the frame at the sides of the frame so as to limit the movement of the bail in a forward direction for tilting the grass catcher and delivering the load.

1,219,170. MACHINE FOR PUNCHING AND SETTING TIRES. FRANK J. SCHUMANN, Cleveland, Ohio, assignor to The Standard Welding Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 14, 1914. Serial No. 877,130. (Cl. 164—91.)



1. In a machine of the character described, the combination of a plurality of circularly adjustable, radially movable slides; members carried by said slides, respectively, and adapted to operate on a rim, or the like; and means adapted to simultaneously actuate said slides, said means including a spindle reciprocable axially of the circle on which said slides are adjustable, and bell-cranks adjustable along with said slides and connected to operate the same, respectively, one arm of each such bell-crank engaging said spindle so as to be oscillated upon reciprocation of the latter.

2. In a machine of the character described, the combination of a plurality of circularly adjustable, radially movable slides; members carried by said slides, respectively, and adapted to operate on a rim, or the like; and means adapted to simultaneously actuate said slides, said means including a spindle reciprocable axially of the circle on which said slides are adjustable, and bell-cranks adjustable along with said slides, respectively, one arm of each such bell-crank engaging said spindle so as to be oscillated upon reciprocation of the latter, and a link connecting the other arm of each bell-crank with the corresponding slide.

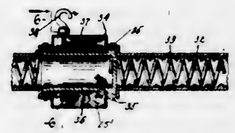
3. In a machine of the character described, the combination of a plurality of circularly adjustable, radially movable slides; members carried by said slides, respectively, and adapted to operate on a rim, or the like; and means adapted to simultaneously actuate said slides, said means including a spindle reciprocable axially of the circle on which said slides are adjustable, and bell-cranks adjustable along with said slides, respectively, one arm of each such bell-crank engaging said spindle so as to be oscillated upon reciprocation of the latter, and an adjustable link connecting the other arm of each bell-crank with the corresponding slide.

4. In a machine of the character described, the combination of a plurality of circularly adjustable, radially movable slides; members carried by said slides, respectively, and adapted to operate on a rim or the like; and means adapted to simultaneously actuate said slides, said means including a spindle reciprocable axially of the circle on which said slides are adjustable and having a beveled portion adapted to engage said slides to force the same radially outward, and resilient means tending to draw said slides in the opposite direction.

5. In a machine of the character described, the combination of a plurality of circularly adjustable, radially movable slides; members carried by said slides, respectively, and adapted to operate on a rim, or the like; rollers mounted on the inner ends of said slides; and means adapted to simultaneously actuate said slides, said means including a spindle reciprocable axially of the circle on which said slides are adjustable, and having a beveled portion adapted to engage said rollers to force said slides radially outward and resilient means tending to retract said slides.

[Claims 6 to 8 not printed in the Gazette.]

1,219,171. CHANDELIER. MORITZ D. SCHWARTZ, New York, N. Y. Filed Oct. 2, 1916. Serial No. 123,310. (Cl. 240—78.)



1. A lighting fixture for indirect lighting systems comprising a support adapted to be secured to a ceiling or the like, a plurality of flexible supporting members depending therefrom, an inverted dome-shaped shade, an endless tube secured to said shade having a number of cylindrical enlargements corresponding to the number of flexible supporting members, a drum rotatably mounted in each enlargement, a cord attached to each drum and wound thereupon and secured to its respective flexible member, and a plurality of springs within said tube, each spring being attached to one drum and to said tube.

2. A lighting fixture for indirect lighting systems, comprising a support adapted to be secured to a ceiling or the like, a plurality of flexible supporting members depending therefrom, an inverted dome-shaped shade, a plurality of drums corresponding to the number of said flexible supporting members rotatably mounted upon said shade, a cord attached to each drum and wound thereupon and

secured to its respective flexible member, and a spring attached to each drum and said shade.

3. A lighting fixture for indirect lighting systems, comprising a support adapted to be secured to a ceiling or the like, a plurality of flexible supporting members depending therefrom, an inverted dome-shaped shade, a plurality of cylindrical casings corresponding to the number of said flexible supporting members attached to said shade, a drum rotatably mounted in each casing, a cord attached to each drum and wound thereupon and secured to its respective flexible member, and a spring attached to each drum and said shade.

1,219,172. JEWELRY. ALEXANDER SEGMAN, New York, N. Y. Filed June 23, 1913. Serial No. 775,399. (Cl. 63—15.)



1. An article of jewelry comprising a ring having a head with an aperture therein, a setting, a shank passing through said aperture and connected to said setting, the adjacent parts of said shank and setting being swiveled on a flange in said head, an adjustable member movable on said shank by turning the setting to determine the effective opening of the ring, and means for guiding and maintaining said adjustable member in the plane of the ring during the adjustment thereof.

2. An article of jewelry comprising a ring having an open head in one portion thereof, a flange extending inwardly from said head, a setting, a screw threaded shank connected to the setting, the setting and shank being swiveled to turn on the said flange, an adjustable member, means for connecting the adjustable member to said shank, and means for guiding and maintaining the adjustable member in the plane of the ring during the adjustment thereof and also for limiting the extent of the inward movement of the same.

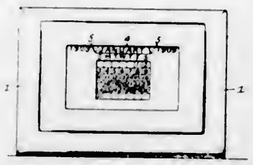
3. An article of jewelry comprising a ring having an open head in one portion thereof, a flange extending inwardly from said head, a setting, a screw threaded shank connected to said setting, the setting and shank being swiveled to turn on said flange on said head, an adjustable member, a socket connected thereto and adapted to receive the screw threaded shank, and means for guiding and maintaining the adjustable member in the plane of the ring during the adjustment thereof and also for limiting the extent of the inward movement of the same.

4. An article of jewelry comprising a ring having an open head in one portion thereof, a flange extending inwardly from said head, a setting, a screw threaded shank connected to said setting, the setting and shank being swiveled to turn on said flange on said head, an adjustable member normally adapted to lie in a recess in the ring, a socket connected to said adjustable member and adapted to receive the screw threaded shank, and pins secured in and projecting from said socket and extending into recesses provided therefor in the head of the ring in order to maintain said adjustable member in the plane of the ring during the adjustment thereof, and also to limit the extent of the inward movement thereof.

1,219,173. CALENDAR. RICHARD C. SELLERS, Swarthmore, Pa. Filed Oct. 20, 1915. Serial No. 56,938. (Cl. 40—122.)

1. The combination in a calendar of a series of month cards each having rows of consecutive figures representing the dates of the days of the month, certain of said rows including more than seven figures; with a year card designed to fit over any one of said month cards and having an opening placed to display only those figures of one month card required to indicate the dates of the days of the month designated on said card in the year designated on said year card.

2. The combination in a calendar of a series of month cards each having rows of consecutive figures representing the dates of the days of a month; with a series of year cards each designed to fit over any of said month cards and respectively having definitely placed openings positioned to display only those figures of any month card which are required to properly indicate the dates of the days of the month designated on that particular card in the year designated on the year card used.



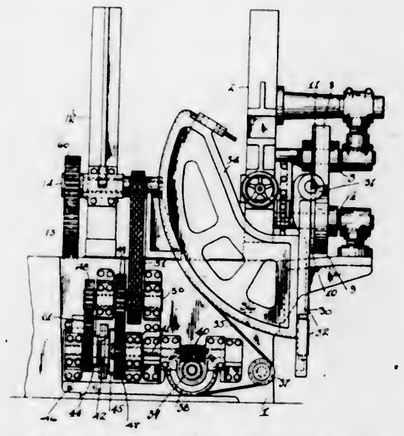
3. The combination in a calendar of a series of month cards each having rows of from one to thirteen consecutive figures; any figure in any row being seven more or less than the figure immediately above or below it; a series of year cards designed to fit over any of the month cards and each having an opening whose length is equal to the length occupied by seven figures of any row on the month cards and whose width is at least equal to the combined height of the rows of figures on any month card.

4. The combination in a calendar of a series of month cards each having consecutive rows of figures indicating the dates of the days of the month; a series of year cards each designed to fit over any of said month cards and each having an opening placed to display only those figures of any month card which are required to correctly indicate the dates of the days of the month designated on said card in the year designated on the particular year card used, the openings of said year cards being differently positioned with reference to any one of the month cards.

5. The combination in a calendar of a series of month cards each having six rows of figures representing the dates of the days of the month; with seven year cards each designed to fit over any of said month cards and each having an opening whose length is at least equal to that occupied by seven consecutive figures in one row.

[Claims 6 to 9 not printed in the Gazette.]

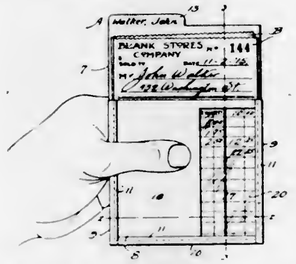
1,219,174. RIM FORMING AND FLANGING MACHINE. FRANK L. SESSIONS, Lakewood, Ohio, assignor to The Standard Welding Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 27, 1913. Serial No. 786,900. (Cl. 153—31.)



In a machine of the character described, the combination of two horizontally disposed coöperative rolls having parallel axes and being adapted to receive therebetween

an annular band, means adapted to vary the distance between the axes of said rolls, driving means for one of said rolls, a supporting member pivotally mounted about an axis transverse to the axes of said rolls and lying between the latter, said member being adapted to receive said annular band, said member normally depending in a substantially vertical position, an arm attached to said supporting member and having an arcuate periphery formed about the axes of said member as a center, a cable engaging over such arcuate periphery of said arm and attached to one end of said arm, and means adapted to operate said cable, thereby swinging said member to a substantially horizontal position.

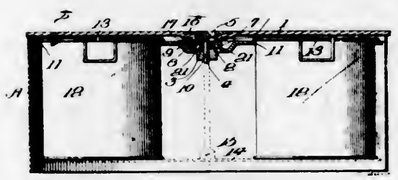
1,219,175. ACCOUNT-FILING SYSTEM. WILLIAM B. SEWELL, Agricultural College, Miss., assignor to Scientific Accounting Company, Wilmington, Del., a Corporation of Delaware. Filed Dec. 18, 1915. Serial No. 67,543. (Cl. 129—16.7.)



1. In an account filing system, the combination of an account slip having a plurality of spaces to contain amounts representing itemized debits or credits defined by delinerations thereon, and a container therefor slightly wider than said slip, including a closed front wall transparent at that portion comprehending the slip at all of said item spaces, and opaque at other portions, substantially as and for the purpose set forth.

2. A container for account slips comprising in combination, a front wall, a rear wall, and adjustable side walls and bottom, said front wall comprising an opaque major portion, provided with an elongated sight opening disposed inwardly of but adjacent its right hand margin and bounded on all sides by material of said front wall, said opening disposed with its major axis upright, and a transparent closure for said opening, substantially as and for the purpose set forth.

1,219,176. ROTARY ASH AND GARBAGE RECEPTACLE. WARREN M. SHARP, Binghamton, N. Y. Filed June 22, 1916. Serial No. 105,267. (Cl. 220—118.)

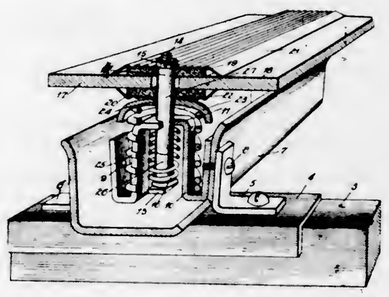


1. The combination of a cylinder, a top-plate, the latter having a depressed central hub, a grooved saddle mounted to turn in the hub, said saddle and hub having a central registering orifice, a shaft extending through said orifices and supported by the saddle, and means carried by the shaft upon which cans or receptacles are removably supported.

2. The combination of a cylinder, a top-plate, the latter having a depressed central hub, a grooved saddle mounted to turn in the hub, said saddle and hub having a central registering orifice, a shaft extending through said orifices and supported by the saddle, and means carried by the shaft upon which cans or receptacles are removably supported, said hub and means having holes therethrough adapted when in registry to permit the escape of ashes and dirt accumulating thereabout.

3. The combination with a cylinder, a top-plate, the latter having a depressed central hub, a grooved saddle mounted to turn in the hub, said saddle and hub having a central registering orifice, a shaft extending through said orifices and supported by the saddle, means carried by the shaft upon which cans or receptacles are removably supported, and a dial fitted to and removably connected with the depressed hub of the top-plate and constructed and adapted to turn with the shaft.

1,219,177. SKYLIGHT CONSTRUCTION. MORRIS SILVERMAN, Chicago, Ill., assignor to Lynn A. Williams, Chicago, Ill. Filed May 8, 1916. Serial No. 96,038. (Cl. 108—16.)



1. A skylight structure comprising a glass pane, a helical compression spring forming a support therefor on the inner side thereof and a second helical compression spring disposed on the inner side of the pane and concentric with the first mentioned spring for pressing the pane against the support.

2. In a skylight construction the provision of means for flexibly supporting the adjacent edges of the glass panes comprising, a channel bar lying parallel with and under the adjacent edges of the glass panes, an inverted U member carried by the bar and provided with a central aperture, a rod extending between the glass panes and through the aperture in the U member, a flange on the inner end of the rod, a helical compression spring interposed between the flange and the U member tending to move the rod inwardly, an enlarged head at the outer end of the rod and a helical compression spring disposed around the U member and rod between the underside of the glass panes and the channel bar.

3. In a skylight construction the provision of means for flexibly supporting the adjacent edges of glass panes, comprising, a channel bar lying parallel with and under the adjacent edges of the glass panes, an inverted U member carried by the bar and provided with a central aperture, a rod extending between the glass panes and through the aperture in the U member, a flange carried at the inner end of the rod, a helical compression spring disposed around the rod between the flange and the U member tending to move the rod inwardly, an enlarged head at the outer end of the rod, an inverted tapering cup resting against the underside of the glass panes and having a central aperture through which the rod extends, and a helical compression spring disposed around the U member and rod and between the inverted cup and the channel bar.

4. In a skylight construction the combination of glass panes, a support on the inner side thereof, a longitudinally contractible rod extending between the edges of the panes, a flange provided on the inner end of the rod, a spring

abutment carried by the support and positioned intermediate the flange and the glass panes, a compression spring interposed between the flange and the abutment tending to move the said rod inwardly, and means carried at the outer end of the rod for engaging the outer sides of the glass panes.

5. In a skylight construction the combination of glass panes, a support on the inner side thereof, a longitudinally contractible bolt extending between the edges of the panes, a flange provided on the inner end of the bolt, a spring abutment carried by the support and positioned intermediate the flange and the glass panes, a compression spring interposed between the flange and the abutment tending to move the bolt inwardly, and a nut provided on the outer end of the rod.

[Claims 6 to 11 not printed in the Gazette.]

1,219,178. COMPOSITION FUEL AND FIRE LIGHTER. EDWARD HORACE SMIRK, St. Annes-on-the-Sea, England. Filed June 19, 1916. Serial No. 104,598. (Cl. 44—1.)

1. Composition fuel or firelighters, in which brewers' barm or yeast is a constituent.

2. Composition fuel and firelighter, containing brewers' barm or yeast, and a suitable pulverized or reduced carbonaceous matter.

3. Composition fuel or firelighter containing brewers' barm or yeast, sawdust, tanners' spent waste, dyers' waste, coffee husks and spent hops.

4. Composition fuel or firelighter containing barm or yeast as a binding agent, and naphthalene to increase combustion.

5. Composition fuel or firelighter, containing brewers' barm or yeast, coal dust and coke dust.

[Claim 6 not printed in the Gazette.]

1,219,179. FASTENER. HARRY O. SMITH, Kansas City, Mo. Filed Oct. 24, 1916. Serial No. 127,389. (Cl. 24—217.)

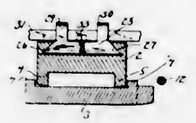


1. A fastener of the class described comprising male and female members, said male member comprising a rectangular plate, a stud formed on one end of said plate, said female member comprising a plate, a socket formed on one end of the plate and provided on one end wall with a vertical slot adapted to receive a portion of the plate of the male member when the stud is arranged in the socket, a retaining flange formed on the upper edge of the socket, a locking member positioned in the said socket, said locking member located under the retaining flange to prevent vertical movement of the same, said locking member adapted to receive the stud therein and hold it against displacement therefrom, and means carried by the body of the rectangular plates for securing them in position.

2. A fastener of the class described including a male and female member, said male member comprising a metal plate having one end bent angularly, a stud having concaved walls formed on the angularly bent end of said plate, said female member comprising a rectangular plate, a socket formed on one end of the plate and having its wall provided with vertical slot, the lower end of the socket being closed, a peripheral flange formed on the upper end of said socket, a locking member, said locking member provided with a base plate having spaced resilient fingers formed thereon said locking member adapted to be arranged in the socket and having the edges of the fingers engaged under the peripheral flange for holding the same against vertical movement in the socket, a retaining rim carried by the outer wall of said socket, said stud adapted to be positioned in said socket and engaged by the fingers of the locking member guarding the same against accidental withdrawal from the socket, and fastening tongues struck up from the bodies of the plates for securing the male and female members in position.

3. A fastener of the class described comprising male and female members, said male member comprising a flat metal plate, substantially rectangular in cross section, one end of said plate bent angularly, a concave stud formed on the extreme end of the angularly bent portion of the plate, said female member comprising a rectangular metal plate, a socket formed on one end of the plate and provided with a slot in the wall thereof, one end of said socket being closed, the opposite end being open and provided with a peripheral annular retaining flange, a spring locking member comprising a bottom wall and spaced upwardly extending fingers formed integrally with the bottom wall, the upper edge of said fingers located under the peripheral flange of the socket, the medial portions of the fingers bowed inwardly, said inwardly bowed portion of the fingers adapted to engage the concave wall of the stud when positioned in the socket for holding the same against accidental withdrawal therefrom and a portion of the socket carrying plates arranged in the slot in the socket to permit the slot to be readily inserted in the socket, and tongues struck up from the plate of the male and female members for securing the same in position.

1,219,180. MOLD FOR CASTING BRASS BARS. JOSEPH E. SOMERS, Waterbury, Conn. Filed Apr. 1, 1916. Serial No. 88,258. (Cl. 22—138.)



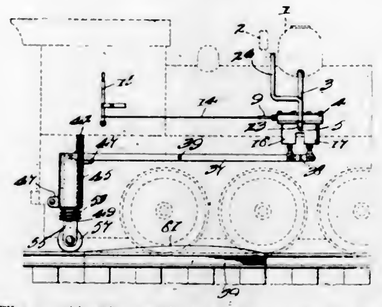
1. A mold for casting brass bars comprising a front plate and a back plate, the side and bottom edges of the front plate formed with a rearwardly projecting flange, the side and bottom edges of the back plate formed with a forwardly projecting beveled flange fitting within the flange on the front plate, the said plates formed on one side with knuckles, a pintle extending through said knuckles, whereby said plates are hinged together, transverse rods mounted on the rear of the back plate and on the front of the front plate, the ends of the rods projecting beyond the sides of the plates, and latches pivotally mounted on the rods at the rear and adapted to engage with the rods at the front, whereby the plates may be locked together.

2. A mold for casting brass bars comprising a front plate and a back plate, the side and bottom edges of the front plate formed with a rearwardly projecting flange, the side and bottom edges of the back plate formed with a forwardly projecting beveled flange fitting within the flange on the front plate, the said plates formed on one side with knuckles, a pintle extending through said knuckles, whereby said plates are hinged together, transverse rods mounted on the rear of the back plate and on the front of the front plate, the ends of the rods projecting beyond the sides of the plates, latches pivotally mounted on the rods at the rear and adapted to engage with the rods at the front, whereby the plates may be locked together, said front plate also formed with integral transverse shields inclined downwardly over the said rods mounted on the said front plate.

3. A mold for casting brass bars comprising a back plate and a front plate, said plates formed with overlapping flanges, said plates formed at one side with knuckles, a pintle extending through said knuckles whereby the plates are hinged together, transverse rods mounted on the front and back plates, latches pivotally connected with the ends of the rods on the back plate and adapted to engage with the ends of the rods on the front plate, whereby the two plates are locked together, the said back

plate formed at its rear with undercut guides, a slide entered between said guides and formed with hooked fingers, and a support for said fingers whereby the molds may be held in an upright position.

1,219,181. AUTOMATIC SIGNALING APPARATUS FOR LOCOMOTIVES. JOSEPH STANLEY, Huntington, Ind., assignor of one-third to Ethel Stanley, one-third to Edwin B. Ayres, and one-third to I. B. Wike, Huntington, Ind. Filed Jan. 17, 1916. Serial No. 72,565. (Cl. 246—14.)



1. The combination with a steam locomotive having a whistle, of means placing said whistle in communication with a source of steam supply, a controller located in said means, a plurality of valves in said controller normally closed and adapted to open to provide through passages from the steam source to the whistle, levers pivoted on said locomotive and connected at one end each to operate one of said valves, plungers connected to the opposite ends of said levers, and cam sections along the roadway for operating said plungers to shift the levers and valves, substantially as described.

2. The combination with a locomotive having a whistle, means placing said whistle in communication with a source of steam supply, a controller included in said means and comprising a plurality of cylinders, valve pistons in each of said cylinders, a steam chest, a slide valve in said steam chest for controlling communication between the latter and said cylinders, and means for actuating said valve pistons to open passage from the steam source to said whistle, substantially as described.

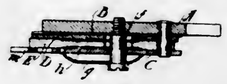
3. In an apparatus of the character described, the combination of a steam locomotive having a whistle, of means placing said whistle in communication with a source of steam supply, a controller located in said means and comprising a steam chest, a slide valve fitted in said steam chest, connections between said slide valve and the engine reverse lever, a pair of cylinders adapted to communicate with said steam chest as controlled by the slide valve, valve pistons fitted to reciprocate in said cylinders, piston rods connected to actuate said valve pistons, means for limiting the movement of said pistons, means for returning said pistons to closed position, and means for individually actuating said valve pistons, substantially as described.

4. The combination with a steam locomotive having a whistle, of means for placing the whistle in communication with a source of steam supply, a controller included in said means and comprising a plurality of cylinders, a valve piston fitted to reciprocate in each of said cylinders, means for normally tending to move said valve pistons to closed position, a steam chest arranged in communication with both ends of each of said cylinders, a slide valve in said steam chest for controlling communication therebetween and the several cylinders, means connecting said slide valve to be operated from the engine reverse lever, means for opening said valves including spring-pressed plungers, and cam sections along the track for alternately operating said spring plungers, substantially as described.

5. The combination with a steam locomotive having a whistle, of means placing said whistle in communication with a source of steam supply, a controller located in said means and including a plurality of valves normally closed but adapted to open to provide a through passage from the steam supply to the whistle, individual levers pivoted on the locomotive and connected at one end each to actuate one of said valves, cylinders mounted on the locomotive framework and providing guideways for receiving the opposite ends of said levers, plungers fitted in said cylinders and connected to the adjacent ends of said levers, spring means associated with said plungers for normally projecting the same, and cam sections arranged along the roadway for engagement to lift said plungers and rock the associated levers, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,219,182. WEFT BINDING AND CUTTING DEVICE FOR LOOMS. WILLARD W. STEARNS, Holyoke, Mass. Filed Sept. 21, 1915. Serial No. 51,888. (Cl. 139—85.)



1. In a device of the character described, a supporting and carrying member having a normally fixed cutter jaw and a binder jaw plate opposite and separated from the supporting member, and non-movable relatively thereto, a combined pivotally mounted cutter jaw and a non-metallic binder jaw between the fixed cutter jaw and the binder jaw plate, which latter in its swinging movement facewise on the side of the outer binder jaw is operative when such jaws are closed to carry the thread to a position between, and to be bound by, the coacting movable non-metallic binder jaw member and the adjacent relatively immovable binder jaw member

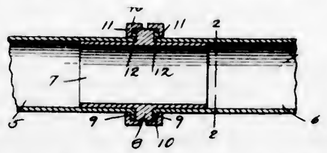
2. In a device of the character described, a supporting and carrying member having a metallic binder jaw opposite and separated therefrom and a pivoted binder jaw facewise in relation to said jaw composed of a non-metallic material and having intermediate portions of the sides thereof reduced to permit facewise bearings of the end portions of such member against the portions of the device at opposite sides thereof for preventing warping of the said non-metallic jaw member.

3. In a device of the character described, a supporting and carrying member made with a cutter jaw thereon, and having a metallic jaw opposite and spaced from such cutter jaw, a metallic cutter blade or plate, and a plate forming a binder member, which binder member and said cutter plate are facewise adjoined and engaged one with the other, and together pivotally mounted for swinging movements on the supporting and carrying member, between same and the said opposite spaced jaw, and said pivoted member being composed of a non-metallic material such as fiberoid and having intermediate portions of the sides thereof reduced to permit facewise bearings of opposite sides of the end portions of such member against the cutter blade and the said spaced jaw for the purpose explained.

1,219,183. SIMPLEX JOINT. ALFRED ST. JAMES, Brooklyn, N. Y. Filed Jan. 18, 1916. Serial No. 72,775. (Cl. 137—28.)

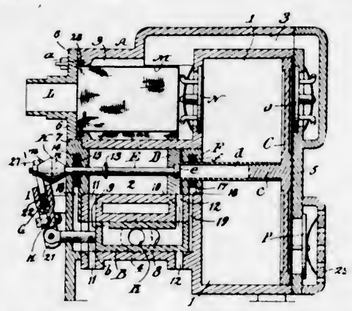
A pipe coupling, comprising in combination with alined pipe ends having opposed extremities out-turned in right-angled flanges, a tubular joint comprising a narrow flange adapted to have said right-angled flanges seated flatly thereagainst, said flange being threaded throughout its length, and a relatively long continuous pipe section extending in opposite directions from said flange and having its outer periphery equal to the normal interior di-

mension of the pipe ends, and collars of annular angle-metal having one side threaded on said flange, the oppo-



site sides being adapted to clamp said right-angled flanges against said tubular joint.

1,219,184. HYDRAULIC MOTOR-DRIVEN AIR EXHAUSTER AND COMPRESSOR. STANLEY M. STONE, New York, N. Y. Filed Jan. 26, 1914. Serial No. 814,325. (Cl. 230—28.)



1. In an air-exhauster having a water-cylinder and air-cylinder, adjacent one another and having a single wall between them said wall serving as a common head for the adjoining cylinders, said cylinders having inlets and outlets, pistons operable within said cylinders, a hollow piston rod connecting the pistons, a bearing in the piston of the water cylinder and a rod slidably extended therethrough and having its end slidably held in the chamber of the hollow piston rod, and having its opposite end extending through the outer head of the water cylinder, and being seated in a bearing in said head, and having on its outer end a double cone shaped head, and valve connections for the cylinder inlets and outlets, and a reciprocating feed-valve communicating with said water cylinder, motive fluid connections and means operated by the movement of said pistons for actuating said feed-valve, and an air-chamber with passages for the air communicating with the air cylinder, for exhausting the air from the chamber into the air-cylinder; the combination of an inlet passage in each of the heads of the air-cylinder, and each having a spring controlled air-valve seated therein, and an outlet passage in each of the heads of the air-cylinder and each having a spring controlled air-valve seated therein, whereby the piston of the air-cylinder will alternately exhaust the air from the cylinder through the outlets in the opposite cylinder heads, and simultaneously draw the air into the cylinder through the inlet in the opposite cylinder head with each stroke of said piston, substantially as shown and described.

2. In a device of the character described; having a screened air-chamber, and an air-cylinder, passages leading from the air-chamber to the said air-cylinder, a water cylinder axially in allinement with the air-cylinder, said cylinders connected by a common head, pistons in the air-cylinder and the water-cylinder, a hollow piston rod connecting the pistons and having a bearing in the common head, and a rod slidably held in the chamber of the hollow piston rod and extending outwardly through the piston of the water cylinder, said rod having a bearing in the outer head of the water cylinder and having a double cone shaped head extending beyond the outer surface of the said cylinder head, for connecting with the valve-mechanism of the water-cylinder; the combination of a chamber in each of the said heads of the water cylinder around the opening for the piston rod and an absorbent packing ring disposed around the piston rod in each of said chambers, and a channel leading from each of said chambers to the water exhaust outlet whereby the moisture accumulated by the packing in said chamber is dispensed with, substantially as shown and described.

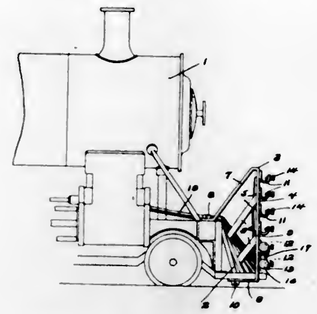
3. In a device of the character described, comprising an air-chamber, an air-cylinder communicating therewith, a water-cylinder in axial alinement with the air-cylinder, a piston in the air-cylinder and a piston in the water-cylinder, a hollow piston rod connecting said pistons, and a rod having a head seated in the hollow piston rod and extending through the piston of the air cylinder and extending through the head of the water cylinder, and a double cone-shaped head on its outer end; a feed valve with an extended rod for supplying water for actuating the pistons, and valves for the inlet and exhaust of the air from the air cylinder; the combination of a rocking lever pivotally secured to the head of the casing of the device adjacent to the head of the water-cylinder, said lever having one end pivotally secured to the extended rod of the feed valve of the water cylinder, and its opposite end having clamping jaws which yieldingly engage the head of the piston rod of the water cylinder, said head being a double cone in conformation and adapted to move the rocking lever to the limit of its stroke, then pass between the yielding jaws, and on the reverse stroke to similarly carry the arm of the rocking lever to the limit of its movement in the opposite direction, substantially as shown and described.

4. In a device of the character described, having a casing with opposing heads, an air-chamber, an air-cylinder communicating therewith, and inlet and outlet valves for air; a water cylinder in axial alinement with the air cylinder, pistons within said cylinders and a hollow piston rod connecting the pistons, and a rod slidably held in a bearing in the piston of the water-cylinder and the chamber of the hollow piston rod and having its opposite end extending outwardly through the opposite head of the water cylinder, and having a double cone-shaped head for connecting with the valve mechanism of the water cylinder, conduits for a motive fluid and a reversible feed valve for regulating the flow of the motive fluid, said feed-valve having an extended valve-rod extending beyond the casing; the combination of a rocking lever pivotally mounted upon a boss provided upon the head of the casing between the piston rod and the valve rod, one end of said lever being pivotally connected with the valve rod and the opposite end of said lever having spring actuated clamping jaws for yieldingly engaging the double conical head of the piston rod, whereby the feed valve is reciprocally moved simultaneously with the movement of the piston and in opposite relation thereto, substantially as shown and described.

5. In a hydraulic motor driven air exhauster and air compressor, having inlets and outlets for air and valves for controlling the air, the combination of an air-cylinder and a water cylinder, adjacent to one another in axial alinement and having a wall between them serving as a common cylinder-head, a piston disposed in each of said cylinders, and connected by a hollow piston rod, said rod having a bearing in said common head, and a rod slidably held in the chamber of the hollow piston-rod and extending through the piston of the water-cylinder and the opposite head of the water-cylinder, and having a bearing in the said head of the water-cylinder, each of said bearings having a chamber between the walls of the head surrounding the openings for the rods disposed therethrough, and a packing ring of absorbent material in each of said chambers, and a passage leading from the lower extremity of each of said chambers, and communicating with the valve chamber of the hydraulic-valve mechanism, for automatically draining the bearing boxes of all excessive moisture, substantially as shown and described.

[Claims 6 to 9 not printed in the Gazette.]

1,219,185. SNOW-MELTING ATTACHMENT FOR LOCOMOTIVES. HERBERT L. STULL, Stroudsburg, Pa. Filed Jan. 24, 1917. Serial No. 144,225. (Cl. 104—58.)



1. An attachment of the character described, comprising a rack adapted to be removably secured to the cow-catcher of a locomotive, and a horizontal steam discharge pipe in the rack and having a series of steam discharge orifices.

2. An attachment of the character described, comprising a rack, consisting of parallel brackets adapted to be removably connected at their ends to a cow-catcher, said brackets having hooks thereon, and horizontal steam pipes supported in the hooks.

3. An attachment of the character described, comprising a rack having hooks thereon, a pair of horizontal steam pipes supported in the racks and having each a longitudinal series of discharge nozzles, intake manifolds connecting the pair of pipes, and means for directing steam into the manifolds.

4. The combination with a cow-catcher, of a rack having side brackets, each bracket having rearwardly projecting ends removably secured to the cow-catcher, hooks on the brackets, horizontal pipes supported on the hooks and consisting each of a plurality of sections having inlets, flexible hose removably connected to the inlets, and means to supply steam to the hose.

5. An attachment of the character described, comprising a rack consisting of side brackets, braces connecting the side brackets, hooks on the brackets, horizontal pipes in the hooks, set-screws in the hooks engaging the pipes, a plurality of steam inlets in each pipe, a plurality of discharge nozzles in each pipe, a manifold connecting the inlets, and means for directing steam into the manifold.

[Claim 6 not printed in the Gazette.]

1,219,186. LAUNDRY BLUING. ADRIANNA STÜRCKE, Ossining, N. Y. Filed June 13, 1913. Serial No. 773,520. (Cl. 8—6.)

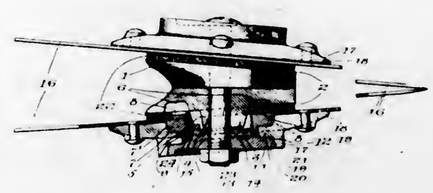
A laundry bluing comprising approximately 95 per cent. of finely powdered borax mixed with approximately five per cent. of soluble Prussian blue.

1,219,187. JOURNAL-BEARING. JOHN STURROCK, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Feb. 2, 1914. Serial No. 816,012. (Cl. 64—10.)

1. In a journal bearing, a rotatable member, a support, a series of concentric face cams upon said support, a bearing block between said support and rotatable member, a corresponding series of face cams upon said bearing block engaging with the face cams upon said support, and means for securing said parts in operative relation.

2. In a journal bearing, a rotatable member, a support, a series of concentric face cams upon said support, said cams having radial corrugations, a bearing block between said support and rotatable member, a corresponding series of face cams upon said bearing block adapted to interlock with the face cams upon said support, and means for securing said parts in operative relation.

3. In a journal bearing, a pair of rotatable members, a support having forwardly converging surfaces upon opposite sides thereof, a series of concentric face cams upon the converging surfaces of said support, bearing blocks between said support and rotatable member, a corresponding series of face cams upon said bearing blocks, means for securing said parts in operative relation, and means for adjusting said blocks to change the relative positions of the rotatable members on the support.

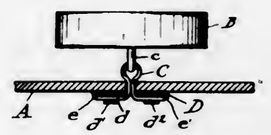


4. In a journal bearing, a support having a notched boss protruding therefrom and an annular groove surrounding the base of said boss, an annular bearing block seated in said groove, a coaxially disposed positioning member spaced apart from said block having a lug extending into the notch in said boss, a rotating element journaled between said positioning member and said bearing block, and means for holding the parts in assembled relation.

5. In a journal bearing, a support having an annular groove thereon, an annular bearing block carried in said groove, a coaxially arranged positioning member spaced apart from said bearing block, means for locking said positioning member against rotation with respect to said support, a rotating element having an inner peripheral flange rotatably mounted in the interval between said block and positioning member, and means for adjusting the interval between said positioning member and said support.

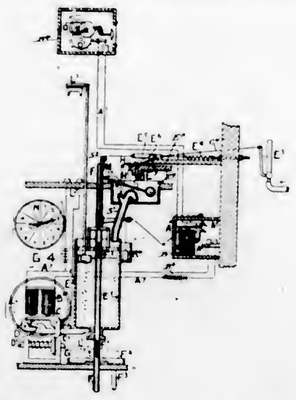
[Claims 6 to 21 not printed in the Gazette.]

1,219,188. DETACHABLE BUTTON. RACHEL SUDIAB, New York, N. Y. Filed May 17, 1915. Serial No. 28,508. (Cl. 24—104.)



As a new article of manufacture, detachable button-securing means embodying an attaching plate provided with a centrally disposed aperture, and a pair of co-operating tongues integral with said plate and positioned adjacent said aperture so as to face in oppostie directions, said plate being provided with a pair of depressed channels radiating from said aperture in diverging relation and extending into juxtaposition with the tongues, in combination with a malleable pin adapted to be secured to a button and having a pair of legs adapted to be passed through the aperture in the plate and thereafter bent over into diverging relation and rotated to seat the bent-over portions of said legs in the depressed channels of the plate and beneath the tongues, whereby the tongues operate to maintain said bent-over portions against inadvertent displacement from said channels for the purpose of detachably locking the button in position, said legs being of such length as not to extend beyond the periphery of the plate.

1,219,189. AUTOMATIC RECORDING FIRE-ALARM. HENRY SYMES, Mornington, near Dunedin, New Zealand. Filed Oct. 8, 1913. Serial No. 794,178. (Cl. 177—355.)



1. In an alarm, the combination of an electrically-controlled shutter; a circuit closer operatively associated therewith; a circuit wherein said circuit closer is included; an electromagnet included in said circuit; a vertically movable weighted element having means for automatically restoring it to normal position; trip mechanism controlled by said magnet for normally holding said element in raised position; a signal; and connections between said element and said signal for automatically actuating the latter when the former descends consequent upon being tripped.

2. In an alarm, the combination of an electrically-controlled shutter; a circuit closer operatively associated therewith; a circuit wherein said circuit closer is included; an electromagnet included in said circuit; a weighted element; trip mechanism controlled by said magnet for normally holding said element in raised position; a signal; connections between said element and said signal for automatically actuating the latter when the former descends consequent upon being tripped; and means for automatically resetting said shutter during such descent.

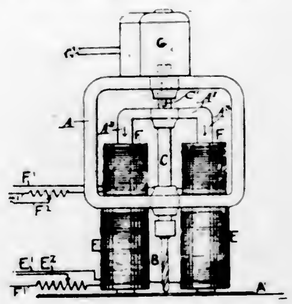
3. In an alarm, the combination of an electrically-controlled shutter; a circuit closer operatively associated therewith; a circuit wherein said circuit closer is included; an electromagnet included in said circuit; a water tank; means controlled by said magnet for normally holding said tank in raised position, said tank having means for discharging its contents during its descent consequent upon release; a signal; and connections between said tank and said signal for automatically actuating the latter when the former descends.

4. In an alarm, the combination of an electrically-controlled shutter; a circuit closer operatively associated therewith; a circuit wherein said circuit closer is included; an electromagnet included in said circuit; a water tank; means controlled by said magnet for normally holding said tank in raised position, said tank having means for discharging its contents during its descent consequent upon release; a signal; connections between said tank and said signal for automatically actuating the latter when the former descends; and means for automatically refilling said tank during its ascent.

5. In an alarm, the combination of an electrically-controlled shutter; a circuit closer operatively associated therewith; a circuit wherein said circuit closer is included; an electromagnet included in said circuit; a weighted element; trip mechanism controlled by said magnet for normally holding said element in raised position; a signal; connections between said element and said signal for automatically actuating the latter and resetting said shutter to break said circuit when the said element descends consequent upon being tripped; auxiliary means for closing said circuit at the completion of such descent to reset said trip mechanism and raise said element.

[Claims 6 not printed in the Gazette.]

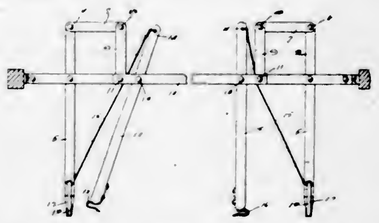
1,219,190. VARIABLE-RESISTANCE, ELECTROMAGNETIC, DRILLING MACHINERY. HENRY SYMES, Mornington, near Dunedin, New Zealand. Filed May 26, 1915. Serial No. 30,677. (Cl. 77—6.)



1. In electro-magnetic drilling machinery, the combination of a frame having extremities forming solenoids, a drill spindle rotatably mounted in the frame and provided with operating means, electro-magnets applied over the solenoids, portions of the solenoids projecting beyond the electro-magnets to provide attractive means relatively to the work to hold the drilling machinery in place, and means for feeding a variable resistance current through the solenoids to set up a direct pull by means of the latter, the variable resistance current being operable to lessen the power thereof when desired.

2. In electro-magnetic drilling machinery, the combination of a frame having yoke members forming solenoids, electro-magnets engaging said solenoids, a drill spindle rotatably and slidably mounted in relation to the frame carrying the drill, the solenoids and the electro-magnets thereof operating to draw the spindle and drill closely to the work, an electric motor connected to and operating the drill spindle, and means for feeding a variable resistance current through the solenoids to set up a direct pull by means of the latter, the said variable resistance current being reducible to obviate heating.

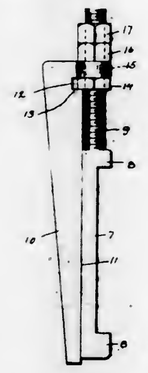
1,219,191. MAIL-CRANE. ELLIS TAYLOR, Sandersville, Miss., assignor of one-half to Thomas A. Howard, Sandersville, Miss. Filed May 27, 1916. Serial No. 100,241. (Cl. 258—14.)



1. A mail bag crane comprising a support, a delivering arm pivoted to said support, an extension on the delivering arm, a standard on the delivering arm, an arm on the standard cooperating with the extension supporting a mail bag, both the standard and the extension being pivoted, a receiving arm pivoted to the support, and normally positioned above the delivering arm, and a flexible connection between the receiving and delivering arms, whereby when one moves outwardly, the opposite arm will move in the opposite direction.

2. A mail bag receiving and delivering mechanism comprising a support, said support being formed of two parallel bars of equal length, a delivering arm pivoted between the bars, links connected to the delivering arm and to one of the bars, a receiving arm pivoted to the upper side of the upper bar, a top bar secured on top of the link, and a flexible connection between the delivering and receiving bars.

1,219,192. ADJUSTABLE JOURNAL-BOX. JAMES C. THERIOT, Taft, Cal. Filed Apr. 5, 1916. Serial No. 89,088. (Cl. 64—55.)



1. In an adjustable journal box, a shank having one end screw threaded, a wedge slidably engaged with said shank and having an angular apertured end slidably receiving the screw threaded portion of said shank and a recess adjacent the angular end, and adjusting nuts fitted on the screw threaded terminal of said shank and engaged on the opposite sides of the angular terminal of said wedge and one of said nuts being confined between one side wall of the recess and the angular terminal of said wedge, said nuts constituting adjustable means for rigidly securing the wedge against longitudinal movement in either direction upon the shank.

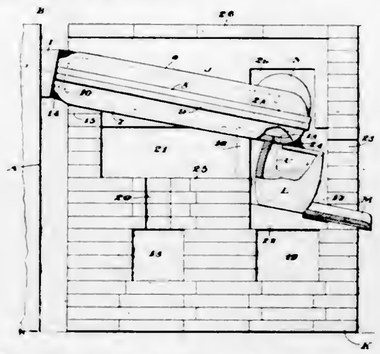
2. In an adjustable journal box, a shank having one end screw threaded, a head at the opposite end of said shank, a clamping plate adjustably fitted on the threaded end of said shank, a wedge slidably engaged with said shank having an angular apertured end and a recess adjacent the angular end, and adjusting nuts fitted on said shank and engaged upon opposite sides of said angular end, one of said nuts being confined between the angular end of said wedge and the opposite side wall of said recess.

3. In an adjustable journal box, a shank having one end screw threaded, a head at the opposite end of said shank, a clamping plate adjustably fitted on the threaded end of said shank, a wedge slidably engaged with one side of said shank, and means for adjusting said wedge longitudinally of said shank.

1,219,193. CONDENSER IN THE METALLURGY OF ZINC. JOHN THOMSON, New York, and FRANCIS A. J. FITZ GERALD, Niagara Falls, N. Y., assignors to John Thomson Press Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 21, 1916. Serial No. 104,837. (Cl. 266—19.)

1. In the metallurgy of zinc, a condenser, set at a decline from the source of fume-supply and in which liquid metal is produced but not retained, combined with a separate underlying zinc receptacle disposed in such manner that it can be removed without disturbing the said condenser.

2. In the metallurgy of zinc, a condenser in which zinc fume is condensed, the resulting liquefied zinc not being retained in the condenser, an underlying container for receiving said liquefied zinc and a brick-housing provided with side-openings and horizontal flues, whereby extraneous heat may be applied simultaneously or separately either to the said condenser or the container.



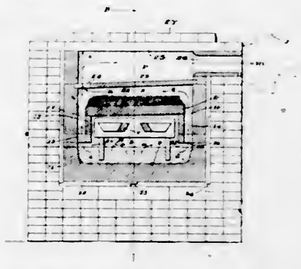
3. In the metallurgy of zinc, a condenser in which fume is condensed but not retained, an underlying container for receiving the liquefied zinc and a brick-housing provided with horizontal and connecting vertical flues, openings in the side-walls and a sectional removable cover, whereby the rate of heat-radiation from the condenser may be controlled at all portions of its surface and sufficient heat be retained in the container to prevent the liquid metal therein from solidifying.

4. In the metallurgy of zinc, a furnace for producing fume by distillation, a condenser in which fume is condensed but not retained as liquid metal, and means for so controlling the flow of fume therethrough and its rate of heat-emissivity that any desired aliquot portion of the entering fume reaches the far end of said condenser at a definite diminished temperature.

5. In the metallurgy of zinc, a furnace for producing fume by distillation, a condenser in which fume is condensed but not retained as liquid metal, and means for so controlling the flow of fume therethrough and its rate of heat-emissivity that essentially all of the entering zinc-fume is condensed when the fall of temperature will have reached 750° to 700° C.

[Claim 6 not printed in the Gazette.]

1,219,194. ELECTRIC ZINC-DISTILLING FURNACE. JOHN THOMSON, New York, and FRANCIS A. J. FITZ GERALD, Niagara Falls, N. Y., assignors to John Thomson Press Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 21, 1916. Serial No. 104,838. (Cl. 204—64.)



1. In an electric furnace, a suspended resistor embraced by an overhead horizontal and vertical side septums, so disposed within the main chamber as to provide

fume-passages between the furnace walls and along the top of the horizontal septum.

2. In an electric distilling furnace, a suspended resistor facing a volatilizable bath, a suspended trough or casing surrounding the top and sides of the resistor, vertical uprising flues between the sides of the casing and the furnace-walls and connecting spaces beneath the lower edges of the casing, whereby vaporized products are trapped in the casing but are otherwise free to escape.

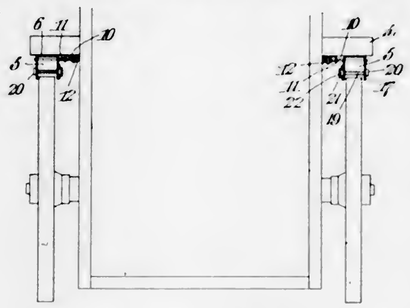
3. In an electric furnace, a suspended resistor whose top and sides are incased by a horizontal and two vertical septums, vertical fume-flues between the side-septums and the furnace walls and a superimposed horizontal ported septum forming a fume-chamber between it and the roof of the furnace, whereby the rising fume passes from the flues through the septum ports and thence into said chamber.

4. In an electric furnace, an open bottomed septum casing, suspended within the main furnace chamber, within which is a suspended resistor, and an underlying volatilizable charge, whereby the gases or fumes collected in the said septum-casing cannot be displaced.

5. In an electric zinc distilling furnace, a resistor casing, open at its bottom and having an overlying layer of granular carbon, such as charcoal or petroleum coke.

[Claims 6 to 15 not printed in the Gazette.]

1,219,195. BRAKE-SHOE AND WEAR-PLATE. ALVIN THRASHER and JOHN B. OZBIRN, Iona, Okla. Filed Feb. 3, 1916. Serial No. 75,974. (Cl. 21—82.)

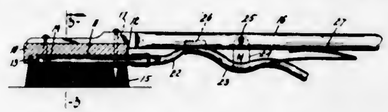


1. In a vehicle brake, a beam, a block on said beam, a plate extending outwardly from each of the lateral sides of said block, each of said plates being provided with a slot each alined with the other, a stop on the outer side of one of said plates covering one of said slots, a wear plate adapted to be inserted through said slots to cover said shoe and to abut said stop at one end, and means for securing the opposite end of said plate in the opposite slot, substantially as described.

2. In a vehicle brake, a block, a plate extending outwardly from each of the lateral sides of said block, each of said plates being provided with a slot lying flush with the outer face of said block, a stop spaced outwardly from one of said plates to cover its slot, a pair of clips secured to the opposite plate in spaced relation, a wear plate arranged upon said block with its ends in said slots, a bar for insertion through said clips to engage the adjacent end of said wear plate, and a pin on said bar to limit the movement of said bar inwardly of said clips, substantially as described.

3. In a vehicle brake, a beam, a pair of spaced members on said beam, said members being provided with alined openings, a block adapted to be inserted between said members and provided with an opening adapted to register with the openings in said members, spaced brackets on said beam, a rod mounted for sliding movement in said brackets to be projected to engage within said registered openings, a collar on said rod, a spring interposed between said collar and one of said brackets for holding said rod normally projected, and means for holding said rod retracted, substantially as described.

1,219,196. BRUSH. JOSEPH TIMKÓ, New York, N. Y. Filed Nov. 6, 1916. Serial No. 129,726. (Cl. 15—51.)



In a device of the character described, the combination with a brush back having a longitudinal groove in its underface, of a perforated water distributing tube disposed within said groove, a handle, and U-shaped clips partly embracing said tube and extending through said back and handle, the ends of said clips projecting beyond said handle and being screw-threaded, and nuts meshing with the threads of said clips and abutting against the upper face of said handle.

1,219,197. GREASE AND OIL GUN. ALFRED E. TOOMEY, Edmore, N. D. Filed May 19, 1914. Serial No. 839,560. (Cl. 221—47.)

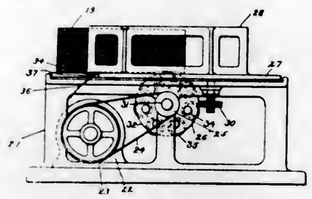


1. A grease gun comprising inner and outer casings, each provided with coincident openings, the inner casing extending beyond the outer casing, means whereby said casings may be relatively rotated to bring the openings into coincidence and to close the openings, a detachable nozzle connected to one end of the outer casing, and a plunger mounted in the inner casing for discharging the contents thereof out through said nozzle.

2. A grease gun comprising an outer cylindrical casing having its inner end fully open and having a slot in its side wall, a nozzle secured to the outer end of the outer casing, an inner cylindrical casing mounted in the outer casing and having its inner end fully open, said inner casing having a slot in its side wall and having its outer end projecting beyond the inner end of the outer casing, a closure for the outer end of the inner casing, a plunger mounted in the inner casing, a rod secured to the plunger and passing through the closure and means for limiting the rotary movement of the casings relatively one to the other and for preventing endwise movement of the casings relatively.

3. A grease gun comprising an outer casing having a discharge nozzle connected thereto, said casing being open at its inner end, an inner casing open at its outer end and having a closure at its inner end, a plunger mounted in the inner casing, said casings having longitudinal openings in their side walls, and said casings being mounted to rotate one relatively to the other, and means for limiting the rotative movement of the casings to bring the openings into coincidence and to limit the closing movement of said casings one relatively to the other.

1,219,198. PROCESS OF SEPARATING METAL PLATES. SAMUEL TROOD, New Castle, Pa., assignor to Industrial Development Company, a Corporation of Pennsylvania. Filed May 18, 1914. Serial No. 839,188. (Cl. 29—19.)



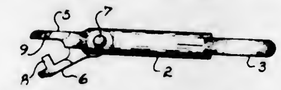
1. The process of separating metal sheets, which consists in subjecting successive portions of the surface of said sheets to a series of simultaneous, independent, resilient blows.

2. The process of separating metal sheets, which consists in flexing successive portions of said sheets by a series of independent, resilient blows.

3. The process of separating a metal sheet, which consists in the application to successive portions of the surface of said sheet of a series of independent resilient sliding blows.

4. The process of separating a metal sheet which consists in flexing and straightening portions of said sheets by the successive application to said sheet of a series of simultaneous, independent, resilient, sliding blows.

1,219,199. BREAST-CHAIN TERMINAL. GEORGE W. TROOP, New Britain, Conn., assignor to The North & Judd Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Sept. 12, 1916. Serial No. 119,674. (Cl. 24—232.)



1. A device of the class described comprising an eye formed of hooks which relatively open and close, one of the hooks having a latch bendable over the other when the hooks are closed to maintain the closed relation.

2. A device of the class described comprising a shank provided at different points in its length with a snap, and two coöperating hooks which relatively open and close, one of the hooks being provided with a latch bendable around the other, to hold the hooks in closed relation.

3. A device of the class described having an eye portion comprising two hooks which relatively open and close, said eye portion being directly provided with means to positively hold the hooks in closed relation against accidental opening movement.

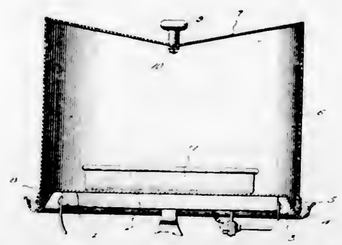
4. A device of the class described comprising an eye formed of hooks which relatively open and close, one of the hooks having a latch and the other having a seat into which the latch is bendable to hold the hooks closed.

5. A device of the class described comprising an eye formed of hooks which relatively swing toward and from each other, one of the hooks having an integral latch and the other having a notch opposite the latch and into which the latter is bendable.

[Claim 6 not printed in the Gazette.]

1,219,200. STEAM-COOKER AND HOT-PLATE. CLARENCE TRUITT, Pomona, Cal. Filed Apr. 25, 1916. Serial No. 93,546. (Cl. 126—275.)

1. An electric cooker comprising a plate having an annular trough adapted to receive fluid of condensation, the fluid level of which is on a plane below that of the body of the plate, and a cover having a double wall to provide a space for insulation, the wall of said cover being adapted to be seated against an inclined side of the trough and into the fluid of condensation in said trough.



2. An electric cooker comprising a plate having an annular trough adapted to receive fluid of condensation, the fluid level of which trough is on a plane below that of the body of the plate, and a cover, the wall of which is adapted to be seated in the trough of said plate.

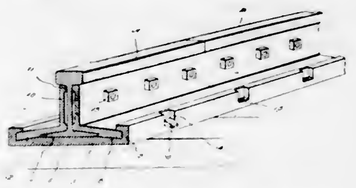
3. In an electric cooker, a plate having a trough formed at its outer edge continuously around the plate by providing the plate with a downwardly inclined wall and then bending the wall upwardly to a point less than the depth of the downwardly inclined wall to thereby provide a trough on a plane below that of the plate, and a cover provided with a side wall which is adapted to be seated in the trough of the plate.

4. An electric cooker comprising a plate having a trough formed at the outer edge thereof continuously around the plate, the trough being on a plane below that of the plate, means to heat the plate and a cover provided with a concave top to direct the fluid of condensation toward the center of the plate.

5. An electric cooker comprising a plate having a trough formed at the outer edge thereof on a plane below that of the plate, means to heat said plate and a cover provided with a concave top, the side wall of which is adapted to be seated in the trough of the plate to permit the moisture on the side wall to flow into said trough and to be there deposited, and to permit the moisture of condensation to flow toward the center of the top of said cover to be returned to the substance to be cooked.

[Claim 6 not printed in the Gazette.]

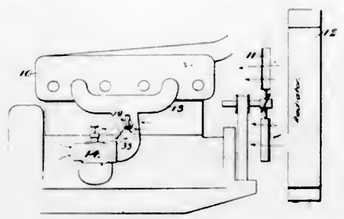
1,219,201. RAIL-PLATE. HERMAN LAWRENCE TURPIN, Dallas, Tex. Filed Sept. 15, 1916. Serial No. 120,285. (Cl. 239—6.)



A rail joint comprising a supporting plate having a medial thickened portion, provided with a flat face, upon which are adapted to rest the meeting ends of railway rails, upwardly and inwardly bent flanges at the longer edges of said supporting plate, a pair of fish plates disposed at opposite sides of the rail ends, and locked in the flanges, means for fastening the fish plates to the rail ends, each fish plate having a thickened portion contacting with the supporting bases between the flanges and the bases of the rail ends adjacent thereto, and spaced contacting ribs formed on the vertical portions of the fish

plates, each flange being formed with spaced notches and holes intersecting the same, and opening through the bottom of the supporting plates for receiving spikes.

1,219,202. AIR-REGULATOR FOR ENGINE-MANIFOLDS. EMILE WALDMEIER, Gulfport, Miss. Filed Apr. 30, 1915. Serial No. 24,868. (Cl. 123—123.)



1. In a device of the character described, the combination of a valve casing having means for direct attachment to the manifold of an engine or the like, a movable valve mounted upon the casing to control the inlet opening of the casing, and an air impact member comprising an elongated blade adapted to be actuated by air currents and directly secured at one end to said valve to actuate the latter.

2. In a device of the character described, the combination of a casing forming an air passage, and having means for connection to a manifold of an engine or the like, a valve to control said passage, and an air impact blade to be contacted and actuated by air currents and having an integral extension immovably fixed directly upon said valve to actuate the same.

3. In a device of the character described, the combination of a casing forming an air passage having means of connection with a manifold, a valve for controlling the air through said passage, and an elongated swinging blade having at one end an integral offset part detachably mounted directly upon said valve to move therewith and adapted to be actuated by air currents from a fan or the like.

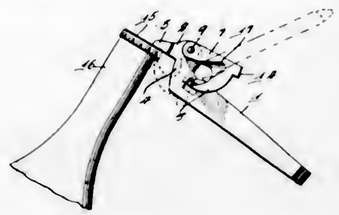
4. An attachment for intake manifolds or the like comprising a casing having an opening, a rotatable valve to control said opening, a vane adapted to be actuated by air currents, said vane having an enlarged outer free end, and being directly connected at its opposite end to said valve to actuate the latter, and spring means acting in opposition to the air currents.

5. An attachment for intake manifolds comprising a cylindrical casing, one end wall of which has the means for attachment to the manifold and the opposite end wall of which has an inlet opening, a valve disk rotatably mounted upon said opposite end wall, an elongated blade adapted to be actuated by air currents directly secured to said valve, said valve having an opening adapted in the movement of said blade to register with the opening in said opposite end wall of the casing, and a bracket mounted upon the casing overlying the valve and having a bearing therefor.

[Claims 6 to 12 not printed in the Gazette.]

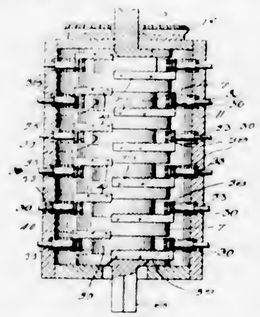
1,219,203. COMBINATION CAP-OPENER, CIGAR-CLIPPER, AND BURGLAR-KEY. HARRY WALKER, Anaheim, Cal., assignor of one-half to Victor W. La Mont, Anaheim, Cal. Filed July 19, 1916. Serial No. 110,125. (Cl. 65—47.)

A device of the class described comprising the combination of a shank formed from sheet metal and bent over upon itself along its central longitudinal axis so as to form a handle portion, a neck integrally extending at right angles to said handle, a head integrally provided upon said neck, eyes provided in said head, a nose integrally extending parallel with said handle and in the opposite direction, a pocket formed intermediate said handle



and said neck, a swinging jaw pivotally mounted upon said head.

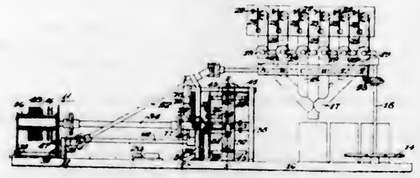
1,219,204. COTTON-PICKER. GEORGE W. WARD, Lone Mountain, Tenn. Filed Nov. 17, 1915. Serial No. 62,018. (Cl. 56—118.)



In a cotton picker structure, a supporting frame, a stationary cylinder carried by said frame, a rotary cylinder positioned about said stationary cylinder, means for rotating said rotary cylinder, said stationary cylinder provided with a plurality of vertically spaced circumferential channels, bearing brackets carried by said rotary cylinder and extending into said channels, sleeves rotatably supported by said brackets, picking spindles removably carried by said sleeves and extending out of said rotary cylinder, gears mounted upon said sleeves, rack bars carried by said stationary cylinder for meshing engagement with said gears for rotating said spindles during rotation of said rotary cylinder, said rack bars being arranged for rotating said spindles in one direction during one-half of a revolution of said rotary cylinder and for rotating the spindles in the opposite direction during the remaining half of a revolution of the rotary cylinder, a stripper structure rotatably carried by said supporting frame and having a plurality of arcuate radiating arms for passage between the horizontal rows of said spindles for stripping the cotton therefrom.

1,219,205. CAN-FILLING APPARATUS. HARVEY P. WELLMAN, Oakland, Cal. Filed Oct. 20, 1915. Serial No. 56,863. (Cl. 226—9.)

1. In a can filling apparatus, the combination with a filling device embodying a plurality of separate supply conduits, delivery mechanism for feeding cans thereto and means for controlling each of said supply conduits, of an alarm device in connection with each of the supply conduits actuated by the controlling means therefor, a setting device adjustable to discontinue any one of said alarms whereby to permit a particular supply conduit to be employed for filling cans without actuating the alarm, a grade register controlled by said setting device for designating the particular supply conduit in use, a counter operable by said can delivery mechanism for registering the number of cans filled, locking means for said setting device, and a recording attachment for said register operable by the release of said locking means to record the nature of the goods contained in the cans filled from any one of the conduits, prior to a re-setting of the device.



2. In a can filling apparatus, the combination with a filling device embodying a plurality of separate supply conduits, delivery mechanism for feeding cans thereto, and means for controlling each of said supply conduits, of an alarm device in connection with each of the supply conduits actuated by the controlling means therefor, a setting device adjustable to discontinue any one of said alarms whereby to permit a particular supply conduit to be employed for filling cans without actuating the alarm, a grade register controlled by said setting device for designating the particular supply conduit in use, and a counter operable by said can delivery mechanism for registering the number of cans filled.

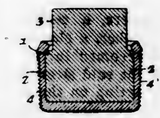
3. In a can filling apparatus, the combination with a filling device embodying a plurality of separate supply conduits, delivery mechanism for feeding cans thereto, and means for controlling each of said supply conduits, of an alarm device in connection with each of the supply conduits actuated by the controlling means therefor, a setting device adjustable to discontinue any one of said alarms whereby to permit a particular supply conduit to be employed for filling cans without actuating the alarm, a grade register controlled by said setting device for designating the particular supply conduit in use, locking means for said setting device, and a recording attachment for said register operable by the release of said locking means, to record the nature of the goods contained in the cans filled from any one of the conduits, prior to a resetting of the device.

4. In a can filling apparatus, the combination with a filling device embodying a plurality of separate supply conduits, delivery mechanism for feeding cans thereto, and means for controlling each of said supply conduits, of an alarm device in connection with each of the supply conduits actuated by the controlling means therefor, a setting device adjustable to discontinue any one of said alarms whereby to permit a particular supply conduit to be employed for filling cans without actuating the alarm, a counter operable by said can delivery mechanism for registering the number of cans filled, locking means for said setting device, and a recording attachment for said counter operable by the release of said locking means to record the number of cans filled from any one of the conduits, prior to a resetting of the device.

5. In a can filling apparatus, the combination with a filling device embodying a plurality of separate supply conduits, delivery mechanism for feeding cans thereto, and means for controlling each of said supply conduits, of a grade register for designating the particular supply conduit in use, a counter operable by said can delivery mechanism for registering the number of cans filled, and a recording attachment for said counter and grade register, to record the number of cans filled from any one of the supply conduits and the character of the goods contained therein.

[Claims 6 to 25 not printed in the Gazette.]

1,219,206. WASHOUT-PLUG. HENRY V. WILLE, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 15, 1916. Serial No. 137,204. (Cl. 137—76.)



1. The combination in a washout plug, of a center and an outer section secured to the center, said outer section being made of rolled sheet metal so that the plug will be non-porous.

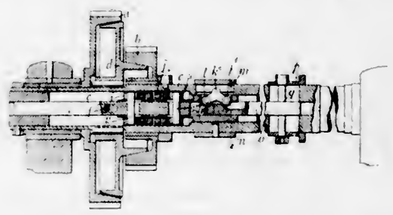
2. The combination in a washout plug, of a steel center provided with an irregularly shaped body portion; and an outer section made from sheet brass pressed into shape and surrounding the body portion and threaded at its periphery.

3. A washout plug made in two sections, the inner section having an irregular body portion and an irregular extension less in diameter than the body portion; and a cup-shaped outer section made from sheet brass and having its edge turned over the body portion and threaded on its periphery so that the outer section must turn with the body portion.

4. The process herein described of making a washout plug, said process consisting in making an irregularly shaped center, and a cup-shaped outer section from rolled brass, then assembling the two sections and passing them between dies so as to cause the outer section to conform to the shape of the center.

5. The process herein described of making a washout plug, said process consisting in forming a center having a body portion of irregular shape and a reduced extension and making a cup-shaped outer section from rolled brass, then assembling the two sections and passing them through dies so that the cup-shaped section will conform to the shape of the body portion and will extend over the shoulder formed by the reduction of the center, preventing the withdrawal of the center from the outer section.

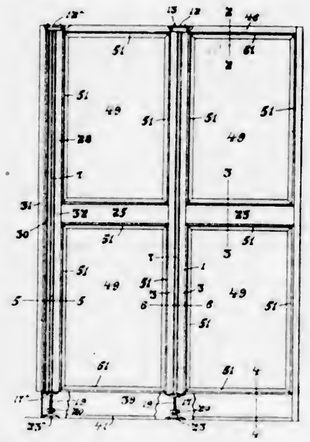
1,219,207. CLUTCH. EDWARD WILLIAMS, Edgbaston, Birmingham, England. Filed July 27, 1916. Serial No. 111,602. (Cl. 192—7.)



1. In clutches, the combination comprising a pair of conical driving members, a hollow shaft on which said members are mounted, a driven member secured to the shaft and situated between the driving members, said driven member being adapted to engage either of the driving members, a central sliding rod connected to the driven member, a thrust piece pivoted on the shaft, a sleeve adapted to be moved axially in either direction by the rocking of the thrust piece, means consisting in part of a spring for imparting movement from the sleeve to the driven member through the rod attached to said member, and a central sliding rod adapted to actuate the thrust piece, substantially as described.

2. In clutches, the combination comprising a pair of adjacent internally coned outer driving members, a hollow shaft on which said members are mounted, an inner driven member secured to the shaft and situated between the driving members, said driven member being provided with a pair of externally coned portions for engaging the respective driving members, a central sliding rod connected to the driven member, a sleeve around said rod, a rocking thrust piece fulcrumed in the shaft and located partly within a slot in the said sleeve, rollers on the ends of the thrust piece for acting on the adjacent end of said slot, a pair of collars on the sleeve, cross pins attached to the collars and passing through slots in the sleeve and sliding rod, a spring between the collars, a central sliding rod adapted to operate the thrust piece, and means for actuating the said rod, substantially as described.

1,219,208. PARTITION CONSTRUCTION. EDWARD J. ZAHNER, Canton, Ohio, and S. WEMYSS SMITH, Oklahoma, Okla. Filed June 17, 1915. Serial No. 34,614. (Cl. 189—34.)



1. An upright for a knock-down partition comprising a hollow upright member, a cap located upon the upper extremity of said hollow upright member and provided with grooves adapted to receive the edges thereof, spikes formed upon the upper face of said cap and adapted to be embedded in a ceiling, a clamping plate located at the lower extremity of said hollow upright member and provided with grooves within which said upright member is seated, said clamping plate provided with an internally screw threaded aperture, an adjusting screw located through said aperture, a head provided upon said adjusting screw intermediate the ends thereof, and a floor plate provided with a socket adapted to receive the lower extremity of said adjusting screw.

2. An upright for a knock-down partition, comprising a hollow upright member, a cap located upon the upper extremity of said hollow upright member and provided with grooves adapted to receive the edges thereof, spikes formed upon the upper face of said cap and adapted to be embedded in a ceiling, a clamping plate located at the lower extremity of said hollow upright member and provided with grooves within which said upright member is seated, said clamping plate provided with an internally screw threaded aperture, an adjusting screw located through said aperture, a head provided upon said adjusting screw intermediate the ends thereof, the lower extremities of said adjusting screw being rounded and a floor plate provided with a socket arranged to receive the rounded extremity of said adjusting screw.

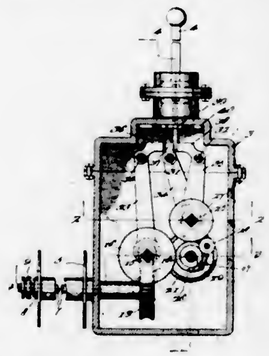
3. An upright for a knock-down partition, comprising a hollow upright member, a cap located upon the upper extremity of said hollow upright member and provided with grooves adapted to receive the edges thereof, spikes formed upon the upper face of said cap and adapted to be embeded in a ceiling, a clamping plate located at the lower extremity of said hollow upright member and provided with groves within which said upright member is seated, said clamping plate provided with an internally screw threaded aperture, an adjusting screw located through said aperture, a head provided upon said adjusting screw intermediate the ends thereof, the lower extremities of said adjusting screw being rounded, a floor plate provided with a socket arranged to receive the rounded extremity of said adjusting screw, and downwardly disposed prongs provided upon said floor plate and adapted to engage a floor.

4. A knock-down partition, comprising hollow uprights, caps carried upon the upper extremities of said uprights, spikes provided upon the upper faces of said caps and adapted to be embedded in a ceiling, a clamping plate provided with grooves which receive the lower extremities of said hollow uprights, said clamping plates being provided with internally screw threaded apertures, an adjusting screw located through each of said apertures, a head provided upon said adjusting screw intermediate the ends thereof, the lower extremity of each adjusting screw being rounded, a floor plate provided with a socket arranged to receive the rounded extremity of each adjusting screw, horizontal panels mounted between said uprights, and base boards located beneath said panels and adapted to cover said adjusting screws.

5. In a partition of the character described, a clamping device comprising a clamping plate provided with an internally screw threaded aperture, an adjusting screw located through said internally screw threaded aperture, a head provided upon said adjusting screw intermediate the ends thereof, the lower extremity of said adjusting screw being rounded and a floor plate provided with a socket arranged to receive the rounded extremity of said adjusting screw.

[Claim 6 not printed in the Gazette.]

1,219,209. PULLING ATTACHMENT FOR VEHICLES. EDMUND LOUGHBOROUGH ZANE, U. S. Army. Filed Aug. 12, 1916. Serial No. 114,599. (Cl. 254—166.)



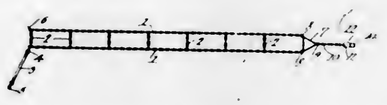
1. In an improved attachment of the character described, the combination of a transmission mechanism embodying shiftable gears, a lever for throwing the transmission gears, an H-plate for guiding said lever in moving to throw in the different speeds, said plate having an additional L-slot therein communicating with the H-slot, an additional claw for engagement by said lever when swung into said L-slot, a fork movable with said claw, a gear element slidably mounted and shiftable through said fork into and out of engagement with one of the transmission gears, a drum in operative relation to be driven from said gear element when the same is shifted into engagement with the transmission mechanism, and a cable wound on said drum and adapted to be attached to a fixed object for drawing the vehicle out of a stalled position, substantially as described.

2. In an attachment of the character described, the combination of a transmission mechanism embodying shiftable gears, a lever for shifting the transmission gears, a claw arranged adjacent said transmission mechanism and adapted to be engaged by said lever when swung to one position, a fork movable with said claw, a slidable gear element movable with said fork into and out of engagement with one of the transmission gears, a drum in operative relation to be driven from said gear element when the latter is shifted into engagement with one of the transmission gears, and a cable adapted to be wound on said drum and fixed to an object for drawing the vehicle out of a stalled position, substantially as described.

3. In an attachment of the character described, the combination with a vehicle having a power source, a transmission mechanism for said vehicle embodying shiftable gears, a lever for shifting said transmission gears, a guide plate having communicating slots therein for receiving a part of the lever when moved to control the several speeds, said guide plate having an additional communicating slot therein for receiving a part of the transmission lever, a gear element shiftable into and out of engagement with one of the transmission gears, means connecting said gear element in position to be engaged and shifted by said transmission lever when moved into the additional slot in said guide plate, a drum, a shaft for said drum, gear connections between said drum shaft and shiftable gear element for rotating the drum, and a cable wound about said drum and adapted to be attached to a fixed object for drawing the vehicle out of a stalled position, substantially as described.

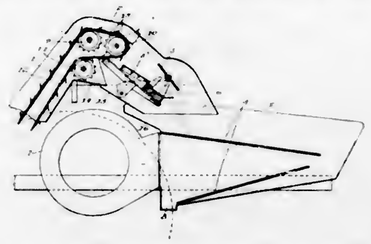
4. The combination with an automobile having the usual transmission gearing contained in the usual transmission casing, and the usual lever for throwing the transmission gears, of an attachment mounted on said vehicle and including a drum shaft journaled in the vehicle frame and extending into said transmission casing, a drum loosely mounted over said shaft on the exterior of said transmission casing, a clutch for connecting said drum to said drum shaft, a cable adapted to be wound about said drum and arranged to have its ends attached to some fixed object for drawing the vehicle out of a stalled position when the cable is wound up, a worm wheel on said drum shaft within the transmission casing, a winch shaft journaled in said transmission casing, a worm on said winch shaft in continuous mesh with said worm wheel, a gear wheel shiftable on said winch shaft and adapted to drive the latter when said gear is moved into mesh with one of the transmission gear wheels, a fork connected to said shiftable gear, a claw carried on said fork and adapted to be engaged by said transmission lever when moved to one position and whereby the drum gear train is placed in mesh with the transmission gearing to drive the drum from the automobile motor, substantially as described.

1,219,210. DEVICE FOR PULLING AUTOMOBILES FROM MUD-HOLES. LEE H. ADAMSON, Rogers, Ark. Filed Jan. 21, 1916. Serial No. 73,403. (Cl. 21—90.)



A device of the character described comprising a flexible structure adapted for attachment to an automobile driving wheel to be wound thereon, an anchor pin adapted to be driven into the ground, and an attaching member having arms arranged at an obtuse angle relative to one another, the rear arm of said member being connected to the forward end of said structure, and the forward arm of said member having an aperture for the reception of said pin, the walls of said aperture being perpendicular with said forward arm to provide corners for gripping said pin.

1,219,211. STRIPPER-HARVESTER. EMIL F. ANDERSON, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Nov. 28, 1913. Serial No. 803,501. (Cl. 130—21.)



1. In a harvester thresher, a conveyer, a thresher receiving material therefrom, a screen disposed beneath the delivery end of said conveyer, a grain shoe, a screen thereon, and means including chutes delivering directly to the screen on said shoe the loose grain carried by said conveyer and falling through the screen beneath the same.

2. In a harvester thresher, a conveyer, thresher mechanism receiving material therefrom, a screen disposed beneath the delivery end of said conveyer, conveyer and separator casings, and overlapping chute members carried thereon disposed beneath the delivery end of said conveyer and said thresher mechanism and delivering the loose grain to said separator casing.

3. In a harvester thresher, an inclined conveyer having a relatively horizontal delivery portion, a thresher receiving material therefrom, a separator screen, a screen disposed beneath the horizontal portion of said conveyer, and a chute disposed beneath said last mentioned screen delivering the loose grain falling therethrough to said separator screen.

4. In a stripper harvester, a peg drum, a conveyer delivering material thereto, a plurality of substantially horizontally disposed spaced rotating members over which said conveyer moves to a point adjacent said peg drum, a screen extending beneath said conveyer and beneath said rotating members and grain delivery means disposed beneath said rotating members and said peg drum.

5. In a stripper harvester, a peg drum, a conveyer delivering material thereto, a plurality of spaced rotating members over which said conveyer moves in a substantially horizontal plane to a point adjacent said peg drum, a screen beneath said conveyer extending under the same and between said rotating members, a separator screen, and means beneath said rotating members and said peg drum delivering to said separator screen the grain falling through said first mentioned screen.

[Claims 6 and 7 not printed in the Gazette.]

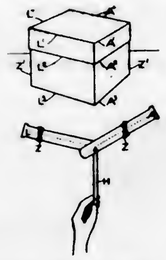
1,219,212. PERSPECTIVE-DETERMINING INSTRUMENT. EMMA M. ANDERSON. Boone, Colo. Filed July 3, 1916. Serial No. 107,350. (Cl. 33—64.)

1. An instrument for determining perspective, comprising a handle, a perspective strip pivoted thereto, a member movable along the strip, and a needle pivoted to the member.

2. An instrument for determining perspective, comprising a handle, a perspective strip pivoted thereto which is provided with a scale having dots representing the divisions thereof, a member movable along the strip, and a needle pivoted to the member.

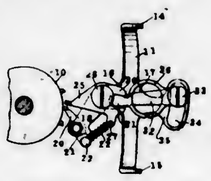
3. An instrument for determining perspective, comprising a handle, perspective strips independently pivoted to

the handle and adapted for independent adjustment, each strip having a scale provided with dots representing the divisions thereof, members movable along the respective perspective strips, and needles pivoted to the members,



said perspective strips being adapted for adjustment for the purpose of recording the appearance of the receding lines of an object seen in perspective and to be used in connection with the laying off of the lines of a perspective drawing, said needles being adapted to determine the relative foreshortening of the faces of an object as they appear in perspective.

1,219,213. TYPE-WRITING MACHINE. NILS H. ANDERSON, Middletown, Conn., assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn., a Corporation of Connecticut. Filed Sept. 12, 1913. Serial No. 789,418. (Cl. 197—88.)



1. In an escapement mechanism for typewriters, in combination, a feed rack, a dog rocker, a dog carrier medially pivoted on said rocker and extending toward and away from said rack, and a pivotal member carried by said rocker to coact with that portion of said dog carrier on the side of its pivotal axis away from said rack for controlling said dog carrier.

2. In an escapement mechanism for typewriters, in combination, a horizontally disposed dog rocker having front and rear arms, a movable dog carrier mounted upon said front arm, and adjustable means mounted on said rear arm for limiting movement of said dog carrier.

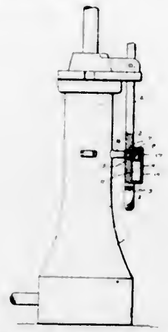
3. In an escapement mechanism, in combination, a rocker member, pivotally mounted dogs mounted upon the opposite sides of said rocker member, one of said dogs having a normally fixed relation and the other of said dogs being movable, and means coöperative with said movable dog adapted to arrest silently the movement of the member to be spaced.

4. In an escapement mechanism, in combination, a rocker member, dogs mounted upon said rocker member, one of said dogs having a normally fixed relation and the other of said dogs being movable, and a plurality of spring means coacting with said movable dog, one of said spring means being in the form of a split ring and adapted to silently arrest the movement of the movable dog when engaged with the member to be spaced.

5. In an escapement mechanism, in combination, a rocker member, a movable dog mounted thereon, and a split ring member coacting with said dog for cushioning its movement.

[Claims 6 to 37 not printed in the Gazette.]

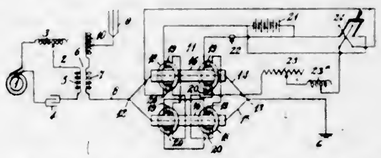
1,219,214. SELF-LOCKING SWITCH-LEVER. THOMAS J. ARLEDGE, Irvine, Ky. Filed May 20, 1916. Serial No. 98,880. (Cl. 104—25.)



1. The combination with a switch stand and a switch operating lever mounted thereon and provided with an opening, a casing associated with the lever and having its interior communicating with the opening in the lever, means carried by the switch stand and adapted to extend through the opening in the lever and into the casing when the lever is moved in one direction, and means removably positioned within the casing for engaging the first-mentioned means when the lever is extended into the casing to normally hold the lever against movement, and a removable plate inclosing one end of the casing.

2. The combination with a switch stand and a switch operating lever mounted thereon, of a casing formed integral with the lever and having one end extending beyond one side of the lever, locking means located within the extended end of the casing, and means carried by the switch stand and adapted to extend into the casing when the lever is moved in one direction and to be engaged by the locking means for normally holding the lever against movement.

1,219,215. SYSTEM OF SPACE SIGNALING. JAMES C. ARMOR, Brooklyn, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 26, 1912. Serial No. 711,620. (Cl. 250—6.)



1. The method which consists in producing a magnetizing field by means of a variable electric current, producing a high frequency alternating current and subjecting the high frequency alternating current to the action of said magnetizing field in such a manner that the variable current circuit will be unaffected by the high frequency alternating current.

2. The method which consists in subjecting two magnetic circuits to the action of a pulsating current, producing a high frequency alternating current, and conducting said high frequency alternating current within the influence of said magnetic circuits in such a manner that the magnetizing effects of the alternating current upon the two magnetic circuits are substantially equal and opposite.

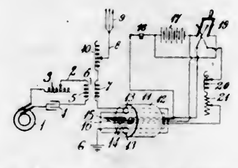
3. The method which consists in producing by a variable electric current two magnetizing fields, producing a high frequency alternating current, and subjecting said high frequency alternating current to the action of said magnetizing fields in such a manner that the electromotive forces induced in the circuit of said variable electric current by the high frequency alternating current are substantially equal and opposite, simultaneously producing by a constant direct current two other magnetizing fields and superimposing said last mentioned magnetizing fields upon the first mentioned magnetizing fields.

4. The method of amplifying a pulsating unidirectional current which consists in producing a magnetizing field by means of said current, producing a high frequency alternating current, and subjecting said high frequency alternating current to the action of said magnetizing field in such a manner that the pulsating unidirectional current circuit will be unaffected by the high frequency alternating current.

5. The method of amplifying a varying electric current which consists in producing by said varying electric current two magnetizing fields, producing a high frequency alternating current, and subjecting said high frequency alternating current to the action of said magnetizing fields in such a manner that the magnetizing effects of the alternating current upon the varying electric current circuit are opposite.

[Claims 6 to 48 not printed in the Gazette.]

1,219,216. SYSTEM OF SPACE SIGNALING. JAMES C. ARMOR, Ingram, Pa., assignor to General Electric Company, a Corporation of New York. Filed Oct. 14, 1913. Serial No. 795,033. (Cl. 250—6.)



1. The method which consists in producing a magnetizing field by means of a variable electric current, producing a radio frequency alternating current and subjecting the radio frequency alternating current to the action of said magnetizing field in such a manner as to prevent electromotive forces of a frequency equal to that of the radio frequency current from being induced in the variable current circuit.

2. The method which consists in subjecting a magnetic circuit to the action of a pulsating current, producing a radio frequency alternating current and conducting said radio frequency alternating current within the influence of said magnetic circuit in such a way that variations in the amplitude of the pulsating current will produce corresponding variations in the amplitude of the radio frequency alternating current and in such a manner as to prevent electromotive forces of a frequency equal to that of the radio frequency current from being induced in the pulsating current circuit.

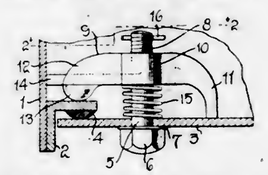
3. The method of amplifying a pulsating unidirectional current which consists in producing a magnetizing field by means of said current, producing a radio frequency alternating current and subjecting said radio frequency alternating current to the action of said magnetizing field in such a manner as to prevent electromotive forces of a frequency equal to that of the radio frequency current from being induced in the pulsating unidirectional current circuit, and that variations in the amplitude of the pulsating current will produce corresponding variations in the amplitude of the radio frequency current.

4. The method of amplifying a variable electric current which consists in subjecting a magnetic circuit to the action of the variable currents producing a radio frequency alternating current, and conducting said radio frequency alternating current within the influence of said magnetic circuit in such a manner as to prevent electromotive forces from being induced in the circuit of the variable electric current by the radio frequency alternating current, and that the radio frequency current will vary in accordance with variations in the variable current.

5. The method of controlling the flow in an electric circuit of a radio frequency alternating current which consists in producing a magnetizing field by means of a controlling current, and subjecting the radio frequency current to the action of said magnetizing field in such a manner as to prevent electromotive forces of a frequency equal to that of the radio frequency current from being induced in the controlling current circuit, and that the amplitude of the radio frequency current will depend upon the amplitude of the controlling current.

[Claims 6 to 18 not printed in the Gazette.]

1,219,217. BURIAL-VAULT. FRANKLIN E. ARNDT, Galion, Ohio, assignor to Security Metallic Grave Vault Co., Orrville, Ohio, a Corporation of Ohio. Filed Jan. 8, 1917. Serial No. 141,250. (Cl. 27—7.)



1. The combination with a vault, the body portion of which has an opening and a flange defining said opening, of a door insertible in said opening, and a plurality of locking devices carried by said door, said locking devices comprising bolts revolubly mounted in the door and locking members threaded on said bolts at the rear side of the door, said locking members having arms adapted to bear against the rear side of the flange and formed with shoulders adapted to abut against the body of the vault to limit the turning movement of the locking members in one direction, for the purpose specified.

2. The combination with a burial vault, having a casket receiving opening, and a flange defining said opening, of a door applicable to said opening, and a plurality of fastening devices carried by said door, said fastening devices comprising bolts carried by said door and revolubly mounted therein, and locking members threaded on said bolts at the rear side of the door, said locking members being provided with arms formed with protuberances adapted to engage the rear side of the flange and with laterally extended shoulders for engagement with the body of the vault to limit the turning movement of said locking members in one direction.

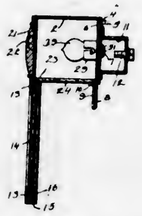
3. The combination with a burial vault having a casket receiving opening, and a flange defining said opening, a door applicable to said opening, and fastening devices carried by said door, said fastening devices comprising threaded bolts revolubly mounted in the door, and locking members threaded on said bolts at the rear side of the door, said locking members being provided with oppositely extending arms, one of which is adapted to bear against the rear side of the door and the other to engage the rear side of the flange.

4. The combination with a burial vault having a casket receiving opening, a flange defining said opening, of a door applicable to said opening, and fastening devices carried by said door, said fastening devices comprising threaded bolts revolubly mounted in the door, and locking members threaded on said bolts at the rear side of the door, said locking members being provided with oppositely extending arms, one of which is adapted to bear against the rear side of the door and the other to engage the rear side of the flange, said last named arm being provided with a lateral extension adapted to abut against the body of the vault to limit the turning movement of the locking members in one direction.

5. The combination with a burial vault having a casket receiving opening, and a flange defining said openin , of a door applicable to said opening, and a plurality of fas-

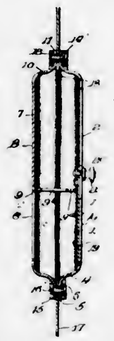
tening devices carried by said door, said fastening devices comprising threaded bolts revolubly mounted in said door, locking members threaded on said bolts at the rear side of the door and each provided with oppositely extending arms, one of which is adapted to bear against the rear side of the door and the other against the rear side of the flange, said last named arm being formed with laterally extending shoulders, for the purpose specified, and expansion springs coiled around said bolts and bearing against the locking members and said door.

1,219,218. ILLUMINATED SIGN. EDWARD P. BAKER, Darien, Conn. Filed Mar. 15, 1915. Serial No. 14,443. (Cl. 40—131.)



A device of the character described including a housing comprising end walls, front and rear walls and a top wall, a transparent bottom wall, a substantially elongated frame depending from the lower edge of the front wall of the housing, a bull's eye centrally of the front wall, a screen of translucent material removably held in the frame, a perforated number plate removably held in front of the translucent screen, lights positioned within the housing and so arranged as to illuminate the number plate by shining through the transparent bottom wall and against the translucent screen, and one end of the frame being hingedly connected to provide a guide closure to permit the number plate and translucent screen to be easily and quickly removed from the frame, said hinged end wall also adapted to close the end of the frame and hold the number plate and translucent screen against any further movement.

1,219,219. VENTILATOR FOR SLEEPING-CAR BERTHS. EMORY P. BAKER, Chicago, Ill., assignor of one-fourth to Eugene J. Fabens, Salem, Mass. Filed Nov. 10, 1915. Serial No. 60,743. (Cl. 98—27.)



1. In a ventilator, a hollow body comprising assembled sections provided each with an opening, said openings being offset at opposite sides of the axis of the body, a finger knob having a stem fitted to the wall of one section, and a damper plate carried by the said stem and rotatable therewith and arranged to be moved into and out of position to close the said opening in the said wall.

2. A ventilator of the class described comprising a hollow body consisting of assembled sections, the said sections being provided with marginal circumscribing flanges, an annulus disposed against the outer side of each flange, securing elements fitted through the flanges and through the annuli, the said sections being ventilating openings, and a damper plate carried by one of the sections and movable to control the passage of air through the opening therein.

3. In a ventilator of the class described, a body having spaced walls, the walls being provided with ventilating openings, a damper plate movable to control the passage of air through the openings in one wall, and a bracing member extending between the walls.

4. In a ventilator of the class described, a hollow body comprising assembled sections having marginal flanges arranged to receive between them the edge of a sheet within an opening in which the ventilator is arranged, the flange of one of the sections being provided with portions arranged to bite into the said sheet, and means for securing the flanges in engagement with the sheet, the said sections having ventilating openings formed therein.

5. In a ventilator, a hollow body having relatively displaced openings in its opposite walls for the passage of air currents, the opening in one wall being located in the lower portion thereof and the opening in the other wall being located in the upper portion thereof, and a water deflecting member arranged within the body and arranged to direct water entering the body outwardly therefrom through the opening in the first mentioned wall.

1,219,220. STAND. EDWARD A. BANSCHBACH, Chicago, Ill. Filed Aug. 23, 1915. Serial No. 46,790. (Cl. 45—117.)



1. The combination of a machine stand, and a yoke-shaped support having side extensions with hooks at the extremities which engage over the side rails of the stand leaving a space between the side rails and the yoke for the knees of a user and for spacing and holding the side rails of the stand in spaced position.

2. In a machine-supporting stand, a supporting yoke having a depending portion to seat the machine and lateral extending portions to provide an unobstructed space below the extending portion at the sides of the depending portion above the lower level thereof for the knees of an operator.

3. The combination with a machine to be supported, of a stand therefor having spaced lateral supports, and a front support for the machine having extremities which engage the supports and an intermediate depending portion to seat the machine, leaving a space at each side of the depending portion between the machine and the lateral support above the plane of the base of the machine for inserting the knees of an operator.

4. The combination of a stand having upright lateral spaced supports, and a yoke engaging said supports to hold up the front of a machine and to leave an unobstructed space in the stand at the sides of the machine above the plane of the base thereof for the knees of an operator.

5. A yoke for supporting the front of a machine, consisting of a depending portion for setting the machine, with lateral extensions to extend over the knees of an operator, and hooks at the extremities of the extensions by which the yoke is supported.

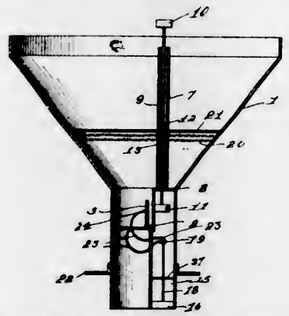
[Claims 6 to 11 not printed in the Gazette.]

1,219,221. CINEMATOGRAPHIC APPARATUS. WALTHER BAUERSFELD, Jena, Germany, assignor to the Firm of Carl Zeiss, Jena, Germany. Filed Mar. 13, 1914. Serial No. 824,527. (Cl. 88—16.8.)



In a cinematographic apparatus the combination with an uninterruptedly traveling picture-carrier of a uniformly rotated reflector-drum, the said drum having on its periphery two rings of evenly distributed plane reflectors, the reflecting surfaces of which, facing each other, are parallel in pairs and, with a constant relative distance apart, are inclined to the axis of the drum by a constant angle, the reflector-drum being placed in the path of the rays in such a manner that the axis of the image-forming rays, on impinging on the drum, is directed approximately perpendicularly to the axis of rotation of the latter.

1,219,222. FUNNEL. FREDERICK C. BAXTER and WILLIS H. KERN, Belvidere, Ill. Filed May 13, 1916. Serial No. 97,424. (Cl. 226—33.)

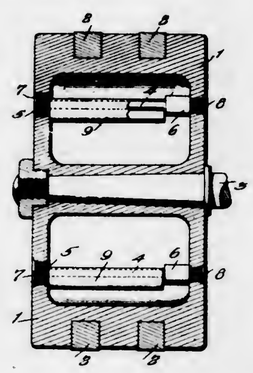


1. A funnel of the class described, including a body having a spout extending therefrom, a vertical partition in said spout, and a horizontal partition extending from said vertical partition, a valve operable in the horizontal partition to stop the flow of liquid through said spout, an extension carried by said valve, said extension passing through an opening in said vertical partition, a float, means connecting said float with said extension, and manually operable means carried by the body of the funnel for engagement with said extension to open the valve against the action of the float.

2. A funnel of the class described, including a body having a spout extending downwardly therefrom, a vertical partition in said spout, a horizontal partition extending from said vertical partition, a valve pivotally arranged on the horizontal partition, a strand of wire bent intermediate its ends to form a loop, one end of said wire being connected to the bottom of the said valve, the other end engaging the side of the first mentioned portion to form a bracing means therefor, a float, an extension carried by said float having an eye hook formed on the end thereof and adapted to be slidably mounted on the said wire strand member to operate the said valve.

3. A funnel of the class described, including a body having a spout extending therefrom, a vertical partition in said spout, a horizontal partition extending therefrom, said vertical partition forming a float chamber in combination with the spout wall, a valve operable in the first said partition, an extension carried by the said valve, a float operable in said float chamber and connected to said extension, a lateral extension formed on the vertical wall having an aperture in the said extension, a rod slidably mounted in the said tube and the said aperture, a handle formed on one end and a head on the other end of the said rod, a projection formed thereon intermediate its length for engagement with a coil spring, and the other end being in engagement with the lateral extension for a purpose specified.

1,219,223. PISTON-HEAD. BERNARD WILLIAM BEERY, Portsmouth, Ohio. Filed Sept. 28, 1916. Serial No. 122,610. (Cl. 74—85.)



1. In combination with a piston head and the plugs therefor, of means seated on each plug for preventing longitudinal movement thereof with respect to the head when the plug has been inserted, said means comprising a cylindrical casing of a diameter to enter the opening for the plug at the outer end of the head, and of a length to fit between the enlargements at the ends of the plug, and of an internal diameter to fit over the enlargement at the inner end of the plug and afterward deformed to prevent a return movement over the said plug.

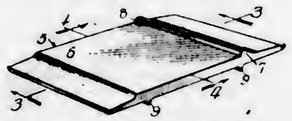
2. The combination with the piston head and the plugs thereof, of means in connection with each plug for preventing longitudinal movement thereof with respect to the head after the plug has been inserted, said means comprising counterbores at the outer ends of the openings for the plugs, the large end of the plug having a beveled marginal rib fitting the counterbore at the said end, and the other end of the plug being upset to fill the counterbore.

3. In combination with the piston head and the plugs thereof, of means in connection with each plug and within the head for preventing longitudinal movement thereof with respect to the head after the plug has been inserted.

4. In combination with the piston head and the plugs therefor, of means seated on each plug and within the head for preventing longitudinal movement thereof with respect to the head when the plug has been inserted.

5. In combination with the piston head and the plugs thereof, of means in connection with each plug for preventing longitudinal movement thereof, the said means comprising a shell or casing loosely engaging the plug within the head.

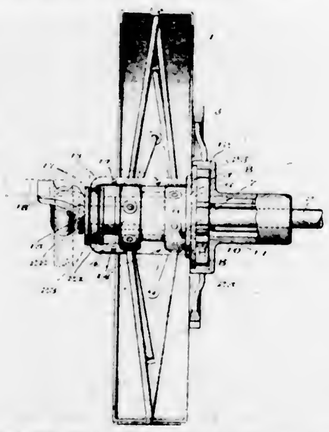
1,219,224. TIE-PLATE. EDWIN H. BELL, Chicago, Ill. Filed Oct. 9, 1916. Serial No. 124,503. (Cl. 238—2.)



1. A tie plate having a flat, rail-bearing face and a bottom, tie-engaging surface, said tie-engaging surface including two longitudinally spaced tie-engaging ribs extending transversely of said plate and projecting below its bottom surface and the bottom surface of said plate between said ribs, being formed to provide a plurality of parallel, flattened, arcuate undulations or grooves extending in the direction of the length of said plate, the surfaces of said undulations or grooves intersecting to provide a plurality of tie-engaging ribs extending in the direction of the length of said tie plate and located in the plane of the bottom surface thereof.

2. A tie plate having a flat, top, rail-bearing face and a bottom, tie-engaging surface, said tie plate being provided with a transverse, rail-abutting shoulder at one end of said rail-bearing face, and said tie-engaging surface including two longitudinally spaced, tie-engaging ribs extending transversely of said plate and projecting below its bottom surface, one of said ribs being located below said rail abutting shoulder, and a bottom surface of said plate between said ribs, being formed to provide a plurality of parallel, flattened, arcuate undulations or grooves extending in the direction of the length of said plate, the surfaces of said undulations or grooves intersecting in lines to present a plurality of tie-engaging ribs in the bottom surface of said plate extending in the direction of its length.

1,219,225. CLUTCH MECHANISM. BERT R. BENJAMIN, Oak Park, and CHARLES PEARSON, Chicago, Ill., assignors to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Apr. 24, 1912. Serial No. 692 879. (Cl. 192—20.)



1. In combination, a shaft, a driven member thereon, a harvester main wheel carried on said shaft and disposed at one side of said driven member, ratchet and pawl clutch mechanism intermediate said main wheel and said driven member, and a pawl actuating member rotatable with said main wheel and reciprocable therethrough operable from the far side thereof from said driven member.

2. In a clutch mechanism, a shaft, a driving member thereon, a driven member thereon, clutch mechanism intermediate said driving and driven members, a sleeve encircling said shaft disposed on the opposite side of said driving member from said driven member; a clutch actuating member journaled on said sleeve, and means for converting a rotary movement of said sleeve into a reciprocatory movement of the same.

3. In a clutch mechanism, a shaft, a driving member carried thereon, a driven member mounted thereon, one of said members having a ratchet surface formed thereon and the other carrying a spring pressed pawl normally engaging said ratchet, a pawl controlling member engaging said pawl, a clutch operating member operatively connected to said pawl controlling member and rotatably mounted on said shaft, and operative connections operatively connected to said operating member for converting a rotary movement of the same into a reciprocatory movement of said pawl controlling member.

4. In a clutch mechanism, a shaft, a driving member carried thereon, a driven member journaled on said shaft, one of said members having a ratchet surface formed thereon and the other carrying a plurality of spring pressed pawls normally engaging said ratchet, a pawl controlling member slidable axially of said driving member holding said pawls out of engagement with said ratchet, a sleeve carried on said shaft, an operating member operatively connected to said pawl controlling member and rotatably mounted on said sleeve, and means intermediate said operating member and said sleeve converting a rotary movement of said operating member into a reciprocatory movement of said pawl controlling member.

5. In a clutch mechanism, a shaft, a driving member carried thereon, a driven member journaled on said shaft adjacent said driving member, the hub portion of said driven member being provided with a rim, having pawl engaging teeth thereon, spring pressed pawls pivotally mounted upon one end of the hub of said driving member and normally engaging the teeth on said rim, and a movable pawl controlling member slidable axially of said driving member and operable from the opposite side of said driving member from said driven member actuating said pawls to effect disengagement thereof from said teeth when said controlling member is moved in one direction and releasing said pawls when said controlling member is moved in the opposite direction.

[Claims 6 to 10 not printed in the Gazette.]

1,219,226. PROCESS FOR THE MANUFACTURE OF BETAIN FROM VINASSES. OTTO BERGAMI, Berlin-Karlshorst, and CARL SAEMANN, Berlin-Friedenau, Germany, assignors to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Mar. 4, 1914. Serial No. 822,371. (Cl. 23—24.)

1. The process for the manufacture of betain from vinasses, consisting in freeing the parent material from water in a vacuum, the separation of the betain from the parent material being effected by the addition of an inorganic acid.

2. The process for the manufacture of betain from vinasses, consisting in freeing the parent material from water in a vacuum, the separation of the betain from the parent material being effected by the addition of a hydrogen halid.

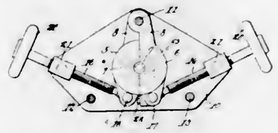
3. The process for the manufacture of betain from vinasses, consisting in freeing the parent material from water in a vacuum and effecting separation of the betain salt by the addition of a hydrogen halid.

4. The process for the manufacture of a betain salt from vinasses, consisting in freeing the parent material from water in a vacuum and effecting separation of the betain salt by the addition of hydrochloric acid.

5. The process for the manufacture of a betain salt from vinasses, consisting in adding an inorganic acid to the parent material while maintaining the mass at a temperature of about 55° C., freeing the mass from water by evaporation in a vacuum and then adding further quantities of an inorganic acid.

[Claims 6 to 9 not printed in the Gazette.]

1,219,227. APPARATUS FOR MILLING BOTTLE-MOLDS. ALBERT R. BETHEL, Westport, Md. Filed May 12, 1916. Serial No. 96,993. (Cl. 90—59.)



1. The combination with a rotary cutting tool, of a holder for a piece of work which is in sections in the meeting faces of which the tool is to operate, said holder comprising a base plate, means for pivotally supporting one side of the complemental halves of the work sections to lie on opposite sides of the cutter, and means engaging the opposite sides of the work sections for advancing them toward each other about said pivots into engagement with the tool.

2. The combination with a rotary cutting tool, of a holder for a piece of work which is in sections in the meeting faces of which the tool is to operate, said holder comprising a base plate, means for pivotally supporting the work sections to lie on opposite sides of the cutter, means for advancing the work sections toward each other into engagement with the tool, posts rising from the base plate, and a top plate carried by the posts and engaging the top of the work sections, said top plate having an opening to accommodate the tool.

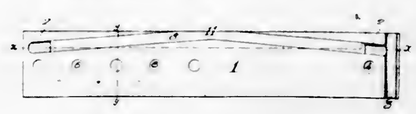
3. The combination with a rotary cutting tool, of a holder for a piece of work which is in sections in the meeting faces of which the tool is to operate, said holder comprising a base plate, means for pivotally supporting one side of the complemental halves of the work sections to lie on opposite sides of the cutter, means engaging the opposite sides of the work sections for advancing them toward each other about said pivots into engagement with the tool, said means comprising screws connected to the free ends of the work sections, and nuts carried by the base plate through which the screws are threaded.

4. The combination with a rotary cutting tool, of a holder for a piece of work which is in sections in the meeting faces of which the tool is to operate, said holder comprising a base plate, means for pivotally supporting one side of the complemental halves of the work sections to lie on opposite sides of the cutter, means engaging the opposite sides of the work sections for advancing them toward each other about said pivots into engagement with the tool, and a stop on the base plate intercepting one of the work sections.

5. The combination with a rotary cutting tool, of a holder for a piece of work which is in sections in the meeting faces of which the tool is to operate, said holder comprising a base plate, means for pivotally supporting the work sections to lie on opposite sides of the cutter, means for advancing the work sections toward each other into engagement with the tool, and a stop on the base plate intercepting one of the work sections, the side of the stop which intercepts said work section being so positioned that it coincides with a straight line drawn from the center of the pivotal axis of the work sections through the center of the tool.

[Claim 6 not printed in the Gazette.]

1,219,228. ELECTRICAL GROUNDING-CLAMP. JAMES ELBERT BIRDSALL, Philadelphia, Pa., assignor to William Gibson. Filed Aug. 17, 1915. Serial No. 45,946. (Cl. 173—273.)



1. In a device of the character described, in combination, a band, a deposit of solder lodged therein, means to direct the flow of said solder when fused and means for holding said band about a conductor.

2. In a device of the character described, in combination, a band, intercommunicating channels therein, each channel being closed at one end, and means for holding said band about a conductor.

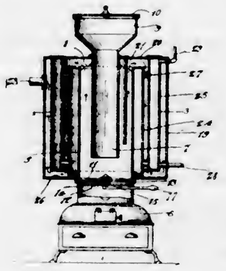
3. In a device of the character described, in combination, a band, a receptacle therein to retain solid solder, channels therein to direct the flow of said solder when fused and means for holding said band about a conductor.

4. In a device of the character described, in combination, a band, a receptacle therein to retain solid solder, a furrow shaped in said band adapted to receive a wire, a channel in said band leading to said curve and means for clamping said band about a conductor.

5. In a device of the character described, in combination, a band, a solder receptacle therein, a wire retaining furrow therein, channels therein adapted to direct the flow of molten solder, one thereof leading to said curve and means for clamping said band about a conductor.

[Claim 6 not printed in the Gazette.]

1,219,229. STOVE. SAMUEL D. BLACKBURN, Lansdale, Pa. Filed Oct. 12, 1915. Serial No. 55,522. (Cl. 122—161.)

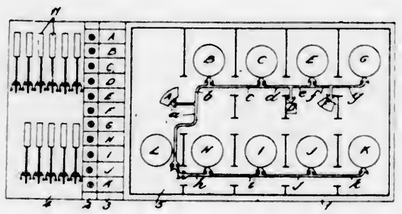


1. A stove comprising a body having its upper portion bent outwardly and downwardly upon itself forming a water receptacle, a casing supported by the lower portion of said body and inclosing said water receptacle, and engaging the lower portion thereof, said casing having a central opening in the top portion thereof, an outer water receptacle positioned in said casing in concentric relation thereto, the top portion of said outer water receptacle engaging said casing forming an additional support therefor, a plurality of pipes connecting the water receptacle and forming a support for said outer water receptacle, a magazine positioned in said central opening in said casing and extending into said body, and a grate supported by said body below said magazine.

2. A stove including a body having an open upper end, the top portion if said body being bent outwardly and bent at right angles and then downwardly parallel to said body and then inwardly in contact with the lower portion of said body forming a water receptacle, an outer annular water receptacle arranged in concentric relation

to said inner water receptacle and positioned above the lower edge of said receptacle, a plurality of pipes connecting said inner and outer receptacles and supporting said outer receptacle, an external flange positioned on said body below the water receptacle, a spider secured to the inner surface of said body adjacent the top portion thereof, a casing inclosing the open end of said body and said water receptacle and spaced therefrom, said casing resting on said flange and the top of said outer water receptacle, and a magazine positioned in said body and resting on said spider.

1,219,230. ELECTRIC ROUTE INDICATING AND LIGHTING SYSTEM. ALFRED BLACKMORE, Kensington, London, England. Filed Oct. 7, 1916. Serial No. 124,426. (Cl. 177—337.)



1. In an electric indicating and lighting system for indicating the route to be followed in reaching any place or "department", the combination with the supply leads for the electric current, of a set of department lamps, a set of route lamps, a set of selecting switches one corresponding to each department, and electro-magnetic means controlled by each of said switches adapted, when the switch is operated, to cause the circuits of the route lamps leading from the starting point to the department corresponding with the particular switch which is operated, to be closed automatically in sequence between the supply leads, without causing the circuits of any other department or route lamps in the system to be closed.

2. In an electric indicating and lighting system for indicating the route to be followed in reaching any place or "department", the combination with the supply leads for the electric current of a set of department lamps, a set of route lamps, a set of selecting switches one corresponding to each department, each of said switches when closed being adapted to close the circuit between the supply leads of its corresponding department lamp, and electromagnetic means controlled by each of said switches adapted, when the switch is operated, to cause the circuits of the route lamps leading from the starting point to the department corresponding with the particular switch which is operated, to be closed automatically in sequence between the supply leads, without causing the circuits of any other department or route lamps in the system to be closed.

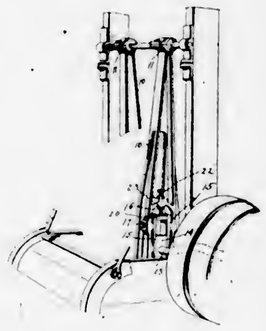
3. In an electric indicating and lighting system for indicating the route to be followed in reaching any place or "department", the combination with the supply leads for the electric current, of a set of department lamps, a set of route lamps, a set of selecting switches one corresponding to each department, each of said switches when closed being adapted to close the circuit between the supply leads of its corresponding department lamp, and means controlled by each of said switches adapted to close the circuit of a lamp at the starting point and adapted when the switch is operated, to cause the circuits of the route lamps leading from the starting point to the department corresponding with the particular switch which is operated, to be closed between the supply leads, without causing the circuits of any other route lamps in the system to be closed.

4. In an electric indicating and lighting system for indicating the route to be followed in reaching any place or "department", the combination with the supply leads for the electric current, of a set of department lamps, a set of route lamps, a set of selecting switches one corresponding to each department, and means controlled by each of said switches adapted, when the switch is operated, to cause the circuits of the route lamps leading from the starting point to the department corresponding with the particular switch which is operated, to be closed between the supply leads, without causing the circuits of any other route lamps in the system to be closed, a time-control device adapted to be operated consequent upon the closing of any of the said switches and adapted when set in operation to effect automatically after an interval of time the restoration of the system to its normal condition.

5. In an electric indicating and lighting system for indicating the route to be followed in reaching any place or "department", the combination with the supply leads for the electric current, of a set of department lamps, a set of route lamps, a set of selecting switches one corresponding to each department, each of said switches when closed being adapted to close the circuit between the supply leads of its corresponding department lamp, and means controlled by each of said switches adapted, when the switch is operated, to cause the circuits of the route lamps leading from the starting point to the department corresponding with the particular switch which is operated, to be closed between the supply leads, without causing the circuits of any other route lamps in the system to be closed, and means operated on the closing of any one of the switches adapted to prevent the closing of the circuit of another department lamp by any other of the switches until the system has been restored to its normal position ready for a fresh operation.

[Claims 6 to 11 not printed in the Gazette.]

1,219,231. OPERATING MECHANISM FOR TUBBING-MACHINES. FRED BLATTNER, Jr., Brooklyn, N. Y. Filed Aug. 23, 1916. Serial No. 116,477. (Cl. 74—5.)



An oscillating member having a journal box at one end and a foot attaching enlargement at the other end an a slot with oppositely inclined sides, in combination with a crank shaft box situated in said slot, wedges on opposite sides of the box in the slot, a cross bar extending between and slidably connected with the wedges, and an adjustable support for said cross bar.

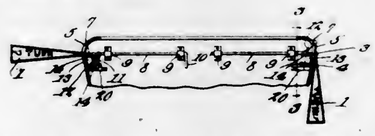
1,219,232. WATERPROOF BAG FOR BATHERS. JACOB JOSEPH BLUMBERG, New York, N. Y. Filed Mar. 16, 1916. Serial No. 84,597. (Cl. 150—5.)

1. In a device of the character set forth, the combination of a flexible rubber bag proper having a smooth mouth opening, and closure means for the mouth opening comprising a plurality of metal plates and means connecting said plates in parallel spaced relation one to another along one side of the mouth, the mouth portion of the bag being foldable with and parallel to said plates, and a rigid keeper coöperating with certain of said plates to lock the mouth closed in watertight condition.



2. In a water proof bathing bag, the combination of a flexible bag proper, a series of metal plates secured to the mouth portion of the bag on one side thereof and foldable with said mouth portion to seal the bag, a rigid keeper coöperating with certain of said plates on the front and rear portions of the bag when sealed, locking the same in sealing position, and hanger means for the bag connected to said keeper.

1,219,233. VEHICLE-SIGNAL. SAMUEL BOYER, Portland, Oreg. Filed July 15, 1915. Serial No. 40,101. (Cl. 116—31.)



A vehicle signal embodying a swinging signal arm, a slidable rock shaft having an arm, a link connecting said arms, and a plate having a pair of fingers with which the second mentioned arm is engageable to hold the signal arm in either of two positions.

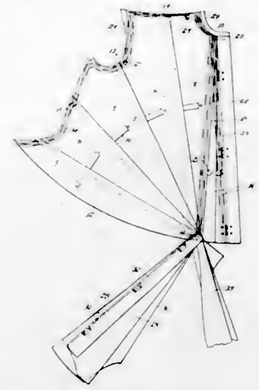
1,219,234. DRESS-WAIST PATTERN. LURA S. BRAINERD, Meriden, Conn. Filed Sept. 30, 1914. Serial No. 864,351. (Cl. 33—14.)

1. A pattern composed of a number of blades pivotally united at one end and having their edges diverging from said pivot, the outer ends of the blades collectively being formed to the shape of the side seam, arm scye, the shoulder and the neck of a garment, and means for flexibly attaching said blades together.

2. A pattern composed of a number of blades pivotally united at one end and having their edges diverging from said pivot, the side edges of the outer blades being formed to the shape of the bottom and front edge of a waist, and the ends of said blades being formed to the shape of the side, arm scye, shoulder and neck of a waist, and means for flexibly uniting said blades.

3. A pattern composed of different sections pivotally united, a plurality of said sections being each composed of a plurality of blades, the blades in each section being mounted on a common pivot, means to permit a relative disposition of the blades in different positions, and means for flexibly uniting the blades.

4. A pattern composed of sections pivotally united, a plurality of said sections being each composed of a plurality of blades pivotally united by the pivot joining the sections, and means for flexibly uniting the blades of each section.



5. A pattern including a number of blades pivotally united at one end, one of said blades having sizing blades located at one edge and pivotally connected thereto at the opposite end, the edges of said blades diverging from said pivot to the opposite end, and means for flexibly uniting said blades.

[Claims 6 to 13 not printed in the Gazette.]

1,219,235. SHEET-CENTRALIZING MECHANISM. GEORGE P. BRAND, New York, N. Y. Filed Apr. 13, 1915. Serial No. 21,166. (Cl. 84—161.)



1. A pneumatic provided with a port open to the atmosphere and a valve for said port carried directly on and movable with said pneumatic and actuated from a note sheet.

2. A pneumatic having a port in its movable member and a valve carried by said movable member and actuated from a note sheet.

3. A pneumatic provided with a port in its movable member, and a valve carried by the movable member and controlled by a note sheet and movably mounted to control said port.

4. A pneumatic provided with a port in its movable member, and a movably mounted valve carried by said movable member to control said port, and means actuated from a note sheet to control said valve.

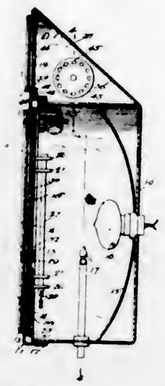
5. A pneumatic provided with a port in its movable member, a valve carried by said movable member to control said port, and a spool-moving pneumatic operatively connected with the first-named pneumatic.

[Claims 6 to 29 not printed in the Gazette.]

1,219,236. LICENSE-SIGN FOR AUTOMOBILES. HENRY BREWSTER, New York, N. Y. Filed May 26, 1916. Serial No. 100,104. (Cl. 40—132.)

1. In an automobile license holder, the combination of a lamp box having a front provided with a window and with inwardly projecting swiveled and apertured lugs, license numbers adjacent said window, a locking frame within the light box for connection with the said cover to prevent undetected removal of the license numbers, and having vertical slots to receive the said lugs of the cover,

and horizontally apertured lugs to aline with the lugs of the cover when the latter are turned to horizontal positions, locking rods extending through the apertures of the alined lugs of the cover and the locking frame, and means for securing the rods against removal.



2. The combination with a lamp box having a cover provided with windows, of a frame disposed within the said cover, a translucent plate carried by said frame, license numbers having lugs also carried by the frame, and means thereby to lock the frame within the said cover against removal, said frame having at its forward portion guides receiving the said translucent plate and also forming means for engagement by the lugs of the license numbers to support the said numbers between the translucent plate and the windows of the box.

3. The combination with a holder, of a frame within the holder, means for sealing the frame in connection with the holder against unwarranted removal, license numbers, and means carried by the frame for supporting the said license numbers between the same and a portion of the holder whereby to prevent removal of the numbers while the frame is locked in position, said sealing means including a locking member connecting the frame and box, and a seal normally preventing removal of said locking member whereby to obviate undetected manipulation of the license plates.

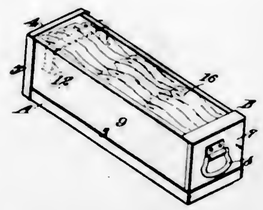
4. The combination with a lamp box having a forward drop cover and an upper opening, of a hood arranged above the opening and including an inclined upper wall and a forward cover attached to and carried by the cover of the box, outer guides carried by the said covers for the reception of transparent plates, and number carrying frames within the said covers for the purpose described.

5. The combination with a lamp box having a hinged cover, of a number carrying frame within the cover having slots, means for locking the said number carrying frame to the cover, said means including apertured lugs carried by the cover and the said frame, the lugs of the cover projecting through the slots in the frame, a rod extended through the apertures in the said lugs and provided with an opening, and a seal extending through the opening to prevent removal of the rod.

1,219,237. FISH-PACKER AND CARTON. CHRISTOPHER M. BRIDGES, San Francisco, Cal., assignor to Bridges Sanitary Fish Container Company of California, San Francisco, Cal., a Corporation of California. Filed Feb. 14, 1916. Serial No. 78,139. (Cl. 100—59.)

1. A temporary packing case and holder comprising a right-angular shaped supporting member having upwardly projecting flanges formed on its edges, and an open-ended drawer-shaped packing case adapted to be supported by the supporting member.

2. A temporary packing case and holder comprising a right-angular shaped supporting member having upwardly projecting flanges formed on its edges, and an open-ended drawer-shaped packing case adapted to be supported by the supporting member, and a removable clamping member adapted to engage the sides of the packing case near the open end.

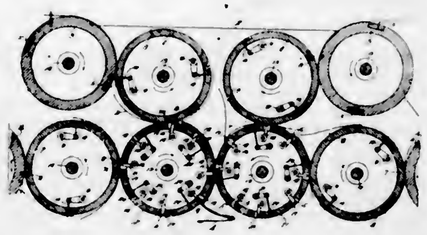


3. A temporary packing case and holder comprising a right-angular shaped supporting member, an end wall on said supporting member, an open-ended, drawer-shaped packing case, and means for supporting said packing case on said supporting member with the open end of said case against the end wall of said supporting member.

4. A temporary packing case and holder comprising a right-angular, drawer-shaped supporting member, upwardly projecting flanges on said supporting member, an upwardly extending end wall on said supporting member, and an open-ended, drawer-shaped packing case adapted to rest in said supporting member with the sides and one end thereof in engagement with said flanges and the open end thereof in engagement with said end wall of said supporting member.

5. A temporary packing case and holder comprising a right-angular shaped supporting member, an end wall on said supporting member, an open-ended, drawer-shaped packing case, guide flanges on the top edges of said packing case, and means for supporting said packing case on said supporting member with the open end of said case against the end wall of said supporting member.

1,219,238. MECHANISM FOR INTERLEAVING PAPER. HORACE P. BROWN and CLARENCE L. JOHNSTON, Oakland, Cal. Filed Dec. 14, 1914. Serial No. 877,092. (Cl. 101—43.)



1. Mechanism for folding and arranging sheets, comprising means for double-folding each sheet, and means for folding each folded sheet, with the initially folded edge of one sheet arranged in the angle of the second fold of another sheet.

2. Mechanism for folding and arranging sheets, comprising means for double-folding each sheet, and means for folding each folded sheet, with the initially folded edge of one sheet arranged in the angle of the second fold of another sheet, said last-named means forming a marginal flap on one sheet.

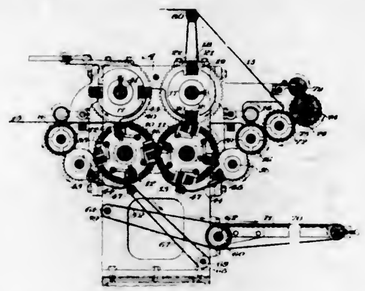
3. Mechanism for interfolding multifolded sheets to form a continuous package, comprising means for initially folding the sheets, and means acting subsequently to simultaneously fold and interfold the folded sheets in zigzag order with a portion of each sheet interfolded with a portion of each adjacent sheet.

4. Mechanism for interfolding multi-folded sheets in zigzag order, comprising means for doubling the sheets, and means acting subsequently to simultaneously fold and interfold the doubled sheets with a portion of each sheet interfolded with a portion of each adjacent sheet.

5. Mechanism for quadruplicately interfolding folded sheets, comprising means for folding the sheets along one diameter and for placing said folded sheets in overlapped relation, and means acting subsequently to fold and interfold folded and overlapped sheets in zigzag order.

[Claims 6 to 13 not printed in the Gazette.]

1,219,239. PAPER TOWEL AND TISSUE MACHINE. HORACE P. BROWN and CLARENCE L. JOHNSTON, Oakland, Cal. Filed Oct. 2, 1915. Serial No. 53,726. (Cl. 101—43.)



1. In a paper cutting and folding device, the combination with coöperative cylinders for delivering folded and interleaved strips of paper, of means for removing the folded papers from the cylinders, means forming rests for said first mentioned means and coöperating therewith for turning the folded papers away from said cylinders, and means for delivering the same in interleaved stacks to one side of the machine.

2. In a paper cutting and folding device, the combination with coöperative folding and interleaving cylinders, of stripper fingers for removing the folded papers from the cylinders, rotatable members having peripherally disposed guiding means to turn the papers away from said cylinders, and traveling means to receive the strips in interleaved stacks and deliver the same to a distant point.

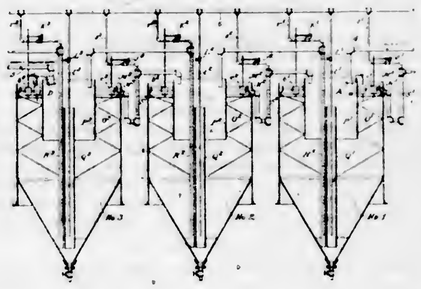
3. In a paper cutting and folding device, the combination with coöperative folding and interleaving cylinders, of stripper fingers operating in grooves in said cylinders, cam mechanism for actuating said fingers to cause them to remove the folded papers from said cylinders, means adjacent to coöperate with the stripper fingers for guiding the strips of folded paper away from the cylinders, and traveling means for delivering the strips in interleaved stacks to a distant point.

4. In a paper cutting and folding device, the combination with coöperative folding and interleaving cylinders, of stripper fingers operating in grooves in said cylinders, means for actuating said fingers to cause them to remove the folded papers from said cylinders, tumbler bars for guiding the strips of folded paper away from the cylinders, traveling means for delivering the strips in interleaved stacks to a distant point, and driving means for said tumbler bars connected to the cylinders.

5. In a paper cutting and folding device, the combination with coöperative folding and interleaving cylinders, of a rock-shaft adjacent to each cylinder, stripper fingers carried by each rock-shaft and operating in grooves in said cylinders, cam mechanism for operating said rock-shafts to cause the fingers thereon to remove the folded papers from the cylinders, tumbler bars for guiding the strips of folded paper away from the cylinders, traveling means for delivering the strips in interleaved stacks to a distant point, and driving means for said tumbler bars connected to the cylinders.

[Claims 6 to 20 not printed in the Gazette.]

1,219,240. AUTOMATIC CONTROLLING SYSTEM FOR CONTINUOUS AGITATION AND TRANSFER SYSTEMS FOR TREATMENT OF ORES. JOHN WM. BUCHER and RANDALL P. AKINS, Denver, Colo., assignors to Colorado Iron Works Company, Denver, Colo., a Corporation of Maine. Filed Oct. 7, 1915. Serial No. 54,634. (Cl. 23—31.)



1. Apparatus for treatment of ores comprising a series of tanks, means for conducting a continuous flow of pulp through said tanks in one direction, means for conducting a continuous flow of solution through said tanks in the opposite direction, and means for automatically controlling the transfer of the pulp from one tank to another in the series.

2. Apparatus for treatment of ores comprising a series of tanks, means for conducting a continuous flow of pulp through said tanks in one direction, means for conducting a continuous flow of solution through said tanks in the opposite direction, and means for automatically controlling the transfer of the solution from one tank to another in the series.

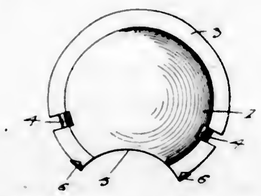
3. An apparatus for the treatment of ores comprising in combination a series of tanks, means for establishing a continuous flow of pulp through said tanks in one direction, means for establishing a continuous counterflow of solution in the opposite direction, means for supplying air to the system for agitation purposes, means automatically operated for supplying air for transfer purposes, and means automatically operated, independent of said air controlling means, for shutting off the supply of pulp and barren solution respectively.

4. An apparatus for the treatment of ores comprising in combination a series of tanks, means for conducting a continuous current of pulp through the system, means for conducting a counter-current of solution through the system in the opposite direction, means automatically controlling the transfer of the pulp flow from one tank to another, and means for automatically controlling the counter-flow of the solution from one tank to another.

5. An apparatus for the treatment of ores comprising, in combination a series of tanks, means for conducting a continuous current of pulp through the system, means for conducting a counter-current of solution through the system in the opposite direction, means for automatically controlling the supply of said pulp to the system, and means for automatically controlling the transfer of the pulp from one tank to another.

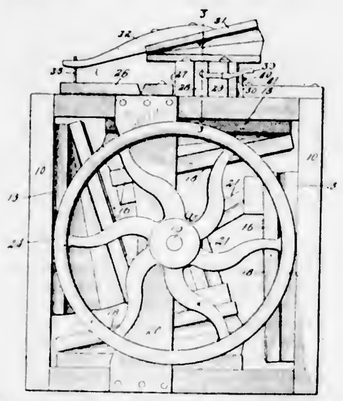
[Claims 6 to 12 not printed in the Gazette.]

1,219,241. SOUNDING TOY. BÉLA BUCHLER, Wilmington, Del. Filed Apr. 8, 1915. Serial No. 20,000. (Cl. 46—46.)



A sounding toy comprising concavo convex top and bottom members provided with horizontal peripheral flanges fitted together, said members having curved cut-away portions forming a mouth receiving opening and the flange of one of the members being provided with slots located equidistant of the ends of the said opening, and the flange of the other member being provided with a pair of tongues bent through the said slots and extending inwardly over the other concavo convex member and arranged to permit a limited separation of the said members at the back of the toy, and a second pair of tongues formed on one of the said flanges and located at the said opening and bent around and into engagement with the other flange for holding the said flanges tightly together at the said opening and providing a protector and fastener for the corners of the toy to prevent the said members from separating at the ends of the opening and pinching the mouth.

1,219,242. FOUR-WAY VACUUM-PUMP. PAUL I. BURKS, Louisville, Ky. Filed Apr. 19, 1915. Serial No. 22,376. (Cl. 230—2.)



1. In pneumatic player mechanism the combination with a vacuum pump adapted for connection with the exhaust chamber of the mechanism and a tracker-bar, of a flushing valve for the pump, and operating means for the flushing valve to open and close the same controlled directly from the tracker bar of the mechanism.

2. In pneumatic piano player mechanism, the combination with a vacuum pump and a tracker-bar, of a flushing valve communicating directly with the pump, a pneumatic connected to the flushing valve, and a valve on the pneumatic connected to the tracker-bar and adapted to establish communication between the pneumatic and the pump for opening the flushing valve and to establish communication between the pneumatic and the atmosphere whereby to close the flushing valve.

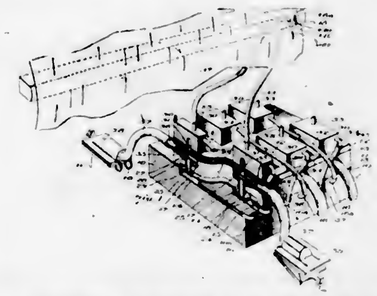
3. In pneumatic piano player mechanism, the combination with a vacuum pump and a tracker-bar, of a flushing valve communicating directly with the pump, a pneumatic connected to the flushing valve, and means actuated from the tracker-bar connected to the pneumatic and the pump and adapted to be operated to establish communication between the pneumatic and the pump whereby to open the flushing valve and adapted to be operated to establish communication between the pneumatic and the atmosphere whereby to permit the closing of the flushing valve.

4. In pneumatic piano player mechanism, the combination with a vacuum pump and a tracker-bar, of a flushing valve on the pump and means controlled from the tracker-bar for opening the flushing valve by the suction of the pump.

5. In pneumatic piano player mechanism the combination with a vacuum pump and a tracker-bar, of a flushing valve for the pump, a pneumatic connected to the valve, and means for the pneumatic controlled from the tracker-bar to place the pneumatic in communication with the pump to collapse the pneumatic and open the flushing valve.

[Claims 6 to 9 not printed in the Gazette.]

1,219,243. EXPRESSION DEVICE FOR PNEUMATIC PIANO-PLAYERS. PAUL I. BURKS, Louisville, Ky. Filed Nov. 30, 1915. Serial No. 64,244. (Cl. 84—160.)



1. In pneumatic mechanism, a pair of valves, a pouch for each valve, an exhaust chamber communicating with one side of said pouches, a pocket communicating with the opposite side of each pouch, and a duct leading from each pocket and adapted to be opened and closed to the atmosphere by the valve of the opposite pocket.

2. In pneumatic mechanism, a pair of valves, a pouch beneath each valve to actuate the same, and means controllable by each valve for actuating the pouch beneath the other valve.

3. In pneumatic mechanism, a pair of valves, means for actuating the valves, and a connection between said actuating means of one valve and the opposite valve for controlling the operation of the first valve.

4. In pneumatic mechanism, a pair of valves, means for unseating one of the valves, means between said valve and the second valve for holding said second valve to its seat, and a connection between the second valve and the first valve whereby to maintain the first valve in unseated position.

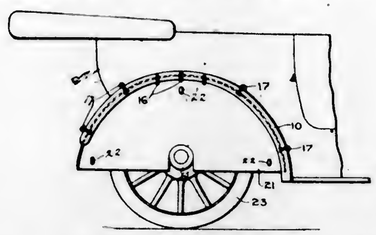
5. In pneumatic mechanism, a pair of valves, means to initially open one of the valves, a connection between said valves adapted to close one valve upon the opening of the opposite valve, and means between the opposite valve and the first valve to retain the first valve open when the second valve is closed.

[Claims 6 to 14 not printed in the Gazette.]

1,219,244. COMBINED MUD-GUARD AND ADVERTISING DEVICE. EDWARD A. CAMPBELL, St. Louis, Mo. Filed Sept. 20, 1915. Serial No. 51,590. (Cl. 40—129.)

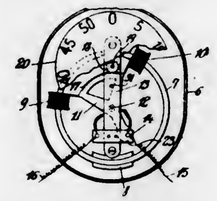
1. A device of the class described comprising an advertising base contoured to fit beneath the mud-guard of an automobile and adapted to be hingedly suspended therefrom; and means for locking said base within said mud-guard.

2. A device of the class described comprising an advertising base contoured to fit beneath the mud-guard of an automobile and adapted to be hingedly suspended



therefrom; and means for locking said base within said mud-guard; in combination with a plate adapted to cover the face of said base and means for detachably securing said plate to said base.

1,219,245. SPEEDOMETER. ALLEN A. CANTON, New York, N. Y., assignor to The Device Testing Company, a Corporation of Connecticut. Filed June 27, 1914. Serial No. 847,668. Renewed Aug. 8, 1916. Serial No. 113,843. (Cl. 175—183.)



1. A speedometer comprising a pair of solenoids of different magnetic strength, means for supplying electric current to the same, a permanent magnet, the said pair of solenoids and the said magnet being relatively movable in response to the difference in magnetic strength of the said two solenoids and means for indicating the movement of the movable element of the said relatively movable elements.

2. A speedometer comprising a pair of solenoids of different magnetic strength, means for supplying a constant electric current to one of said solenoids, means for intermittently supplying electric current to the other of said solenoids, a permanent magnet, the said pair of solenoids and the said magnet being relatively movable in response to the difference in magnetic strength of the said two solenoids and means for indicating the movement of the movable element of the said relatively movable elements.

3. A speedometer comprising a pair of solenoids of different magnetic strength, means for supplying electric current to the same, a permanent magnet, the said pair of solenoids and the said magnet being relatively movable in response to the difference in magnetic strength of the said two solenoids and a movable indicating member actuated by the movable element of the said two relatively movable elements for indicating the movement of the same.

4. A speedometer comprising a permanent magnet, a pair of solenoids of different magnetic strength mounted to move in response to the difference in their magnetic strength with relation to the said magnet, means for indicating the movement of the said solenoids and means for supplying electric current to the latter.

5. A speedometer comprising a permanent magnet, a pair of solenoids of different magnetic strength mounted to move in response to the difference in their magnetic strength with relation to the said magnet, a scale disk, means for operating the same by the said solenoids and means for supplying current to the latter.

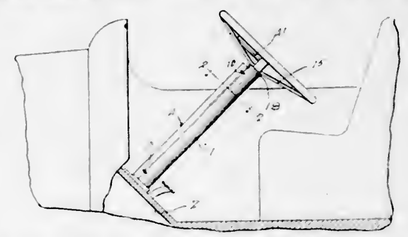
[Claims 6 and 7 not printed in the Gazette.]

1,219,246. VACUUM-BOTTLE. FREDERICK E. CARLSON, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Original application filed Aug. 7, 1913, Serial No. 783,477. Divided and this application filed Feb. 19, 1914. Serial No. 819,834. (Cl. 215—3.)



A vacuum bottle casing comprising a body and a cap secured thereto, the cap being apertured to receive the neck of the bottle, a circumferential groove formed in the cap adjacent to said aperture, a cushion located in said groove, and means carried by said cushion for retaining it in place.

1,219,247. ATTACHMENT FOR MOTOR-VEHICLES. HARVEY B. CARMICHAEL, Kegomic, Petoskey, Mich. Filed June 8, 1915. Serial No. 32,932. (Cl. 21—90.)



1. In a device of the class described, a steering column having a longitudinal slot extending down one side, a cover hinged to said column adjacent the slot for closing the same, said cover being adapted to allow access to the interior of the column, clips for holding the cover closed, a plurality of brushes carried by the cover and a plurality of rings on the steering shaft within the column adapted to coöperate with the brushes in order to establish electrical communication between the stationary and rotary elements.

2. A device of the class described comprising a steering column having a slot extending down one side, a steering rod rotatably mounted within the column, a steering wheel at the outer end of the steering rod, a switch box mounted on the steering wheel, a cover hinged to the steering column adjacent one side edge of the slot and adapted to swing over and close said slot, an insulating block within the cover, contact brushes mounted on said block, a plurality of contact rings mounted on the steering shaft and insulated from each other, strips of insulation holding said rings in place, said strips being spaced from each other to form longitudinal passages, a cable extending from the switch box through one of the passages, a plurality of strands of wire within the cable connected to the rings, the insulating block being provided with a longitudinal groove therein, and a cable seated in said groove and consisting of a plurality of strands for connection to their respective brushes, whereby electrical communication is established between the switch box and the last-named cable.

1,219,248. GLOVE. ROBERT N. CARSON, San Francisco, Cal. Filed May 12, 1915. Serial No. 27,530. (Cl. 2—9.)



1. The combination in a glove of the character described, of a body portion having a vertical slit inward from the wrist and in line with the forefinger, a thumb front member having a curved top outwardly convex, diverging edges, and a base formed of inwardly curved centrally meeting edges, said edges being stitched and united to the inner part of the slit, and a thumb back having the upper part stitched to the thumb front and the lower part to the lower edges of the slit.

2. The combination in a glove of the character described, of a body portion having a vertical slit inward from the wrist and in line with the forefinger, a thumb front member having a curved top, outwardly convex diverging edges, a base formed of inwardly curved, centrally meeting edges, said edges being stitched and united to the inner part of the slit, and a thumb back having a curved top, and side edges diverging therefrom and united to the front member as far as its base, said back having the remaining edges convergent conversely to a single point and stitched to the edges of the slit below the union with the thumb front.

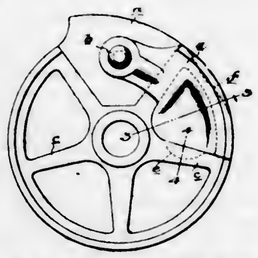
3. A straight glove comprising a body portion having integral finger and body sides of substantially equal size, said body portion being slit centrally and vertically in line with the first finger, a thumb front stitched in the upper end of the slit, and a thumb back, the upper edges of which are stitched to the sides of the thumb front and the lower edges stitched in the slit below its union with the thumb front.

4. In a glove, a body member having a thumb slit, straight, from end to end, a thumb comprising a front member and a back member stitched to each other and to the sides of the slit, said front member being substantially wider than said back member.

5. In a glove, a body member having a thumb slit, straight from end to end, a thumb comprising a front member and a back member stitched to each other and to the sides of said cut, said front member covering substantially two-thirds of the distance around the thumb and said back member covering substantially one-third of the distance around the thumb.

[Claims 6 to 9 not printed in the Gazette.]

1,219,249. CAM. MARION R. CASEY, Clinton, S. C., assignor to Clinton Cam Company, Clinton, S. C., a Corporation of South Carolina. Filed May 25, 1916. Serial No. 99,779. (Cl. 74—1.)



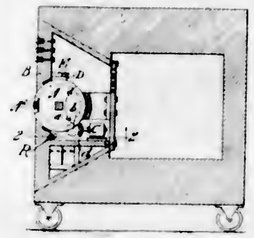
1. The combination with a cam having an opening in its body portion, a patch plate and a bolt for attaching one end of said plate to the cam body, said cam plate being provided with a lip or lug extending through said opening and engaging the opposite face of the cam body, whereby the patch plate is removably locked in position against the cam body by a single bolt.

2. The combination with a cam having a removable toe member and a bolt for fastening the toe member to the cam body, of a patch plate having one end secured to one side of the cam body by the aforesaid bolt and having its other end extending through an opening in the cam body and engaging behind the opposite face of the cam body, said patch plate having a peripheral surface in alinement with the peripheral surface of the cam.

3. In combination with a cam body having an opening therein at a distance from its periphery, a patch plate having on one face an enlargement shaped to fit in said opening and having its periphery in alinement with the periphery of the cam body, and means for fastening the patch plate removably to the cam body.

4. In combination with a cam body having an opening therein, a patch plate having one face shaped to fit in said opening and having its periphery in alinement with the periphery of the cam body, and means for fastening the patch plate removably to the cam body, said means consisting of a bolt clamping one end of the patch to one face of the cam body and a lip engaging the opposite face of the cam body.

1,219,250. LOCK-CASE-REVERSING MECHANISM. ROBERT CECCHINI, West Springfield, Mass. Filed July 12, 1915. Serial No. 39,441. (Cl. 70—63.)



1. In a device of the character described, in combination, a revolubly movable lock case, a motor having a revoluble motion imparting connection with said case, a generator, and a normally open circuit including the generator and the motor, electromagnetic closing means for said circuit, and a normally open circuit having connected therein said electromagnet circuit closing means, a generator and a plurality of sets of normally separated contacts, a predetermined or selected number of which have conductors so connected therewith that when all of such selected number of said contacts are closed the said circuit including said electromagnetic circuit closing device will be established.

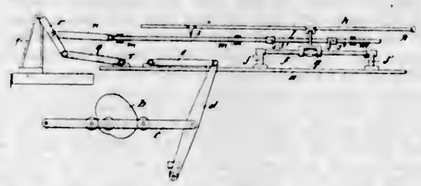
2. In a device of the character described, in combination, a revolubly movable lock case, a motor having a revoluble motion imparting connection with said case, a generator, and a normally open circuit including the generator and the motor, and an electromagnetic closing switch for such motor circuit, a normally open circuit having connected therein said electromagnet circuit-closing switch, a generator and a plurality of sets of normally separated contacts, a predetermined or selected portion of which have wiring whereby when all of such portions are closed the said circuit including said electromagnetic circuit closing switch will be established, and means actuated by the revoluble lock case for short circuiting the said second named circuit whereby the electromagnetic switch is de-energized.

3. In a device of the character described, in combination, a revolubly movable lock case, an electric motor having a motion imparting connection with said case, a generator and a normally open circuit including the generator and motor, a normally open electromagnetic switch for closing the motor circuit, a normally open circuit including a generator and also including, and for actuating, said electromagnetic switch and also including a plurality of sets of normally separated contacts,—a predetermined or selected number of which have conductors so connected therewith that when all such selected number of said contacts are closed the said magnetic switch actuating circuit will be established, and other of said sets of separated contacts having wiring connections with the said switch circuit as to cause when closed a short circuiting to exclude said switch from the actuating circuit therefor.

4. In a device of the character described, a revoluble lock case, a motor having a revolving connection therewith, a generator and normally open circuit connections, having the generator and motor connected therein, for oppositely running the motor, a switch to close either circuit, opposed electromagnets, an armature between such magnets, carrying said switch, and circuit conductors comprising said magnets and a generator, one of which is normally open and has a closing switch, and the other of which is normally open in several places and has a plurality of closing means, all of which are necessarily to be operated for the complete closing of the circuit.

5. In a device of the character described, a revoluble lock case, a motor having a revolving connection therewith, a generator and normally open circuit connections, having the generator and motor connected therein, for oppositely running the motor, a switch to close either circuit, opposed electromagnets, an armature between such magnets, carrying said switch, circuit conductors comprising said magnets, carrying said switch, circuit conductors comprising said magnets and a generator, one of which is normally open and has a closing switch, and the other of which is normally open in several places and has a plurality of closing means, all of which are necessarily to be operated for the complete closing of the circuit, and means for automatically rendering each magnet circuit ineffective at the end of each required revoluble movement of the lock case.

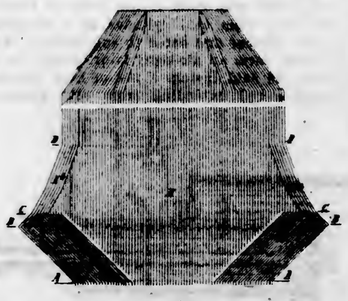
1,219,251. STRAIGHT HOSIERY-FRAME. FRANZ CECKA, Chemnitz, Germany, assignor to the Firm of Schubert & Salzer Maschinenfabrik, Aktiengesellschaft, Chemnitz, Germany. Filed Dec. 8, 1913. Serial No. 805,328. (Cl. 66—12.)



In a hosiery frame, a reciprocable slur connecting bar, a thread guide bar frictionally connected with the latter, a stop member adapted to retard the movement of the thread guide bar, means for imparting reciprocating motion to the connecting bar, a rocking lever, a connection between said connecting bar and a point of said lever, and a connection between said stop member and another point nearer the pivot of said lever.

1,219,252. METHOD OF MAKING SOCKS OR STOCKINGS. FRANZ CECKA, Chemnitz, Germany, assignor to the Firm of Schubert & Salzer Maschinenfabrik, Aktiengesellschaft, Chemnitz, Germany. Filed Sept. 8, 1914. Serial No. 860,641. (Cl. 66—4.)

1. The method of knitting socks, stockings, and the like, which consists in knitting the leg, regularly knitting the inner set of loops to form a part of the foot, widening the outer sets of loops to form the heel, thereafter continuing the regular knitting of the part of the foot, widening a part of each of the outer sets of loops and simultaneously narrowing another part of each of the outer sets of loops, and finally completing the foot.



2. The method of knitting socks, stockings, and the like, which consists in knitting the leg, regularly knitting the inner set of loops to form a part of the foot, widening the outer set of loops to form the heel, hanging loops for regular knitting on the portions being widened, thereafter continuing the regular knitting of the part of the foot, widening a part of each of the outer sets of loops and simultaneously narrowing another part of each of the outer sets of loops, and finally completing the foot.

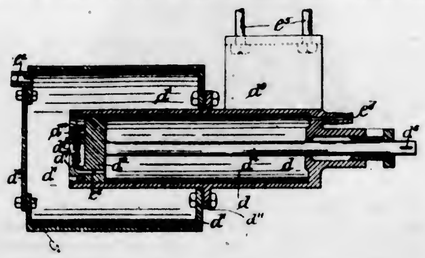
3. The method of knitting socks, stockings, and the like, which consists in knitting the leg, regularly knitting the inner set of loops to form a part of the foot, widening the outer sets of loops to form the heel, thereafter continuing the regular knitting of the part of the foot, alternately in successive rows widening the inner and medial parts while regularly knitting the outer part of each of the outer sets of loops and regularly knitting said inner part while regularly knitting said medial and outer parts, the number of the loops of the inner part being gradually reduced as narrowing of the outer parts proceeds, and finally completing the foot.

4. The method of knitting socks, stockings, and the like, which consists in knitting the leg, regularly knitting the inner set of loops to form a part of the foot, widening the outer sets of loops to form the heel, thereafter continuing the regular knitting of the part of the foot, alternately in successive rows widening the inner and medial part while regularly knitting the outer part of each of the outer sets of loops and regularly knitting said medial and outer parts, the number of the loops of the inner part being gradually reduced as narrowing of the outer part proceeds, and narrowing and widening being performed a distance corresponding to the double distance of two adjacent loops, and finally completing the foot.

1,219,253. AIR RAILWAY-BRAKE. SAMUEL CHENEY, Wickepin, Western Australia, Australia. Original application filed Dec. 30, 1913, Serial No. 809,550. Divided and this application filed Oct. 18, 1915. Serial No. 56,544. (Cl. 188—1.)

1. A device of the character described comprising, a casing formed with an opening in one end, a cylinder having an open end extended into said casing through said opened end thereof, a flange projecting outwardly from said cylinder at a substantially central portion thereof and adapted to form an air-tight joint to close said open end of the casing, means for securing said flange to the wall of the casing, a piston head in said cylinder, a rod extending from said piston head through the outer end of said cylinder, said piston head having a passage therein for communicating said casing with the rod-side of said cylinder, and a spring pressed valve carried by said piston head for normally closing said passage and preventing the passage of fluid from said casing to the cylinder, said cylinder being formed with an inlet at its outer end for admitting fluid pressure to the cylinder.

2. A device of the character described comprising, a casing having an opening in opposite ends thereof, a cylinder having one end open and the other end closed, the open end of said cylinder extending into said casing through one of the open ends of the latter, a flange projecting outwardly from said cylinder at a substantially central portion thereof and fitted to engage with the wall of said casing to form an air-tight joint, means for securing said flange to said casing, a piston head disposed in said cylinder, a rod extending from said piston head



through the closed end of said cylinder, said piston head being formed with a passage for communicating the rod-side of the cylinder chamber with said casing, an adjustable spring pressed valve carried on the piston head and adapted to normally close said passage and to prevent the passage of fluid from said casing to the rod-side of said cylinder, said cylinder being formed with an inlet in the closed end thereof for admitting fluid-pressure into the cylinder, an automatic escape valve in said casing for controlling the pressure therein, and a plate removably secured to the opposite open end of the casing.

1,219,254. ART OF MAKING EYEGLASS-RIMS. STEPHEN J. CLULEE, Attleboro, Mass. Filed Aug. 16, 1916. Serial No. 115,148. (Cl. 18—59.)

1. An art of the character described which comprises forming an elongated member from celluloid in plastic condition, permitting said member to harden, winding said member into a coil, heating said member and permitting it to cool, and cutting said coil throughout the several turns thereof.

2. An art of the character described which comprises forming an elongated member from celluloid in plastic condition, rolling said member in a form with a groove extending lengthwise thereof, winding said member into a circular coil, and cutting said member across the several turns of said coil.

3. An art of the character described which comprises forming an elongated member from celluloid in plastic condition with a groove extending lengthwise thereof, permitting said member to harden, winding said member about a mandrel, heating said member and permitting it to cool upon said mandrel, and cutting said member on said mandrel into separate rims.

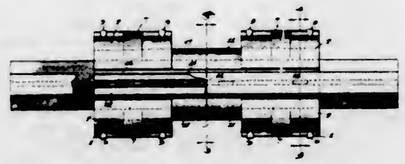
4. An art of the character described which comprises forming an elongated member from celluloid with a groove extending lengthwise thereof, rolling said member into the desired cross section, winding said member into a coil, and cutting said member across the turns of said coil.

5. An art of the character described which comprises forming a wire from celluloid, milling the groove longitudinally of said wire, winding said wire into a coil, and cutting said wire crosswise of the turns of said coil.

[Claims 6 to 20 not printed in the Gazette.]

1,219,255. BOLTLESS RAIL-JOINT CLAMP. ROBERT A. COX and THOMAS J. HARBOUR, Tupelo, Okla. Filed May 18, 1916. Serial No. 98,417. (Cl. 289—6.)

1. In a device of the class described, the combination of a plurality of tie plates, clamping fish plates rotatably mounted upon said tie plates, said fish plates being adapted to receive the abutting ends of two rails, means for normally urging said fish plates into a binding engagement with the webs of the rails, and means for swinging said fish plates upon said tie plates into an increased binding engagement with the webs of the rails as a train passes over the rails.



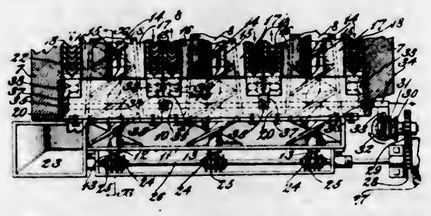
2. In a device of the class described, the combination of a plurality of tie plates having longitudinal channels formed therein, clamping fish plates positioned upon said tie plates, bodies formed integral upon said clamping fish plates, said bodies resting within said channels so as to rotatably support said fish plates, said fish plates being adapted to receive the abutting ends of two rails, means for normally retaining said fish plates in a binding engagement with the webs of the rails, and means for causing said fish plates to be swung into a more positive binding engagement with the webs of the rails as a train passes over the rails.

3. In a device of the class described, the combination of a plurality of tie plates, fish plates positioned upon said tie plates, said fish plates having bodies formed upon the lower portions thereof, said tie plates having longitudinal channels formed therein, said bodies being rotatably mounted within said channels, said fish plates being adapted to receive the abutting ends of two rails, a spring interposed between said bodies so as to urge the same away from each other and thus hold said fish plates in a binding engagement with the webs of two rails, and means for further urging said fish plates so as to more positively bind upon the ends of the rails as a train passes thereover.

4. In a device of the class described, the combination of a tie plate comprising a base, overhanging flanges formed upon said base, longitudinally extending rounded channels formed in said base and flanges, a central rib formed upon said base between said channels, a plurality of fish plates mounted upon said tie plate, bodies formed upon said fish plates, said bodies having rounded outer surfaces so as to fit snugly within said channels so as to rotate therein, longitudinally extending grooves formed in said bodies at a distance from the lower portions thereof, rails having their abutting ends fitting between said fish plates, the base of said rails extending within said grooves, said grooves being formed so as to be positioned above said rib, a spring normally urging said fish plates toward each other so as to bind upon the side portions of the webs of the rails, and the additional weight imparted by the base of the rails to said bodies as a train passes over the rails causing said bodies to slightly rotate within said channels so as to more positively bind said fish plates upon the webs of the rails.

5. In a device of the class described, the combination of a tie plate comprising a base, overhanging flanges formed upon said base, longitudinally extending rounded channels formed in said base and flanges, a central rib formed upon said base between said channels, a plurality of fish plates mounted upon said tie plate, bodies formed upon said fish plates, said bodies having rounded outer surfaces so as to fit snugly within said channels so as to rotate therein, longitudinally extending grooves formed in said bodies at a distance from the lower portions thereof, rails having their abutting ends fitting between said fish plates, the base of said rails extending within said grooves, said grooves being formed so as to be positioned above said rib, blocks formed upon said bodies, said blocks having sockets formed therein, a coil spring having its ends mounted within the sockets of said blocks, whereby said blocks will be urged away from each other so as to normally retain said fish plates in a binding engagement with the webs of the rails, and the bases of the rails being adapted to slightly rotate said bodies within said channels when the weight of a train passing over the rails is imparted to the bodies, thus causing said fish plates to be more positively urged into a binding engagement with the side portions of the webs of the rails.

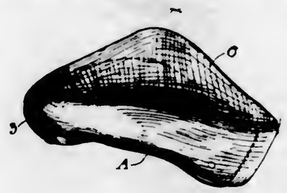
1,219,256. MECHANICAL STOKER. THOMAS ANDREW COOKE, Philadelphia, Pa. Filed June 18, 1915. Serial No. 34,782. (Cl. 110—44.)



1. A mechanical stoker, comprising a plurality of casings, each having an opening longitudinally extending along its top and each provided with flanges oppositely diverging from said openings and inclining upwardly, a feed screw in each of said casings, grate bars slidably mounted above said casings and guided by said flanges, an actuating shaft intergeared with said feed screws, a crank arm intergeared with said shaft, a rod reciprocated by said crank arm, and connections from said rod to said grate bars, whereby adjacent grate bars will reciprocate coincidently in opposite directions.

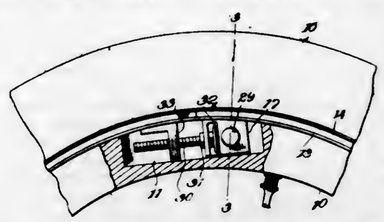
2. A mechanical stoker, comprising a plurality of castings, each having an opening longitudinally extending along its top and each provided with flanges oppositely diverging from said openings and inclining upwardly, a feed screw in each of said casings, grate bars slidably mounted above said casings and guided by said flanges, and having their side walls overhanging said flanges and forming a continuation of the upper faces thereof, an actuating shaft intergeared with said feed screws, a crank arm intergeared with said shaft, a rod reciprocated by said crank arm, and connections from said rod to said grate bars, whereby adjacent grate bars will reciprocate coincidently in opposite directions.

1,219,257. OS-CALCIS METATARSAL-ARCH SUPPORTER. GEORGE CORNET, San Francisco, Cal. Filed July 1, 1916. Serial No. 107,180. (Cl. 36—71.)



A heel and arch supporter comprising a metal plate formed to fit the arches of the foot, having its rear end bent to form a heel socket for surrounding the lower side and back portions of the heel, and having its forward end arranged to terminate beneath the metatarsal and phalangeal articulations of the foot and formed flat transversely to provide a broad seating at its forward end to withstand any lateral wabbling of the heel end which latter point of support is comparatively narrow.

1,219,258. VEHICLE-WHEEL. HAROLD F. COX and MILTON V. POWELL, Flint, Mich., assignors of one-fourth to Victor Frank Brown, Bay City, Mich. Filed May 28, 1916. Serial No. 99,383. (Cl. 152—21.)



1. A wheel including a fixed rim, a demountable tire receiving rim mounted upon the fixed rim to coact therewith, means for adjustably contracting the demountable rim and slidably shiftable to locked position, and means for shifting the said first mentioned means to locked position holding the demountable rim at contracted adjustment.

2. A wheel including a fixed rim, a demountable tire receiving rim contractible upon the fixed rim to coact therewith, a clamping member rotatable for adjustably contracting the demountable rim, means for rotating the said member, and locking means connected to said last mentioned means and shiftable thereby to active position holding the demountable rim at contracted adjustment.

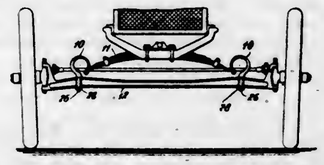
3. A wheel including a fixed rim, a demountable tire receiving rim contractible upon the fixed rim to coact therewith, a slidably shiftable shaft rotatable for adjustably contracting the demountable rim, and means for automatically shifting the said shaft to locked position holding the demountable rim at contracted adjustment.

4. A wheel including a fixed rim, a demountable tire receiving rim contractible upon the fixed rim to coact therewith, and a shaft slidably shiftable from locked position to active position rotatable for contracting the demountable rim.

5. A wheel including a fixed rim, a demountable tire receiving rim contractible upon the fixed rim to coact therewith, a shaft slidably shiftable from locked position to active position rotatable for contracting the demountable rim, and means for urging the shaft to locked position.

[Claims 6 to 12 not printed in the Gazette.]

1,219,259. VEHICLE-SPRING SHACKLE. JOHN J. CRAWFORD, New York, N. Y. Filed Nov. 15, 1916. Serial No. 131,433. (Cl. 267—27.)

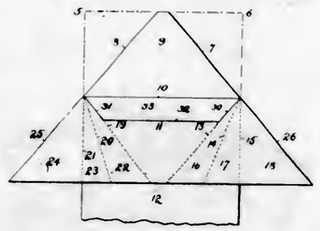


1. As an article of manufacture, a vehicle spring shackle, comprising a bowed resilient body terminating at one end in integral spaced knuckles and terminating at the other end in an integral attaching bolt.

2. As an article of manufacture, a vehicle spring shackle, comprising a bowed resilient body terminating at one end in integral spaced knuckles and terminating at the other end in an integral shoulder and a bolt extending integrally from the said shoulder.

3. As an article of manufacture, a vehicle spring shackle, comprising a bowed resilient body terminating at one end in integral spaced knuckles and terminating at the other end in an integral shoulder from which extends an integral bolt, the said body gradually increasing in thickness from the knuckle end to the shoulder end.

1,219,260. ENVELOP. JOHN F. CURRIVAN, Brooklyn, N. Y. Filed Apr. 13, 1915. Serial No. 21,040. (Cl. 229—77.)



1. In an article of the class described, the combination of a body, a portion formed integral with the wall at one side of the body and turned back upon the body to form a pocket and an extending portion, said portion being provided with a flap, and a flap on said body portion positioned to fold first over then into the pocket with its end entering with the extending portion.

2. In an article of the class described, the combination of a body portion, a portion having a turned under part and formed integral with the wall on one side of said body to provide a pocket, lateral wings on said portion and located at the sides thereof, said wings being secured to said body, a flap for said body positioned to fold first over and then into the pocket, and members interposed between the wings and the said portion and integral therewith positioned to fold first over the flap and then with the flap into the pocket.

3. In an article of the class described, the combination of a body, a portion having a turned under part and formed integral with the wall on one side of said body to provide a pocket, lateral wings forming integral parts of said portion and located at the ends thereof, said wings being secured to said body, a flap on said portion and positioned to enter the pocket, and a flap of said body portion positioned to fold first over and then into the pocket.

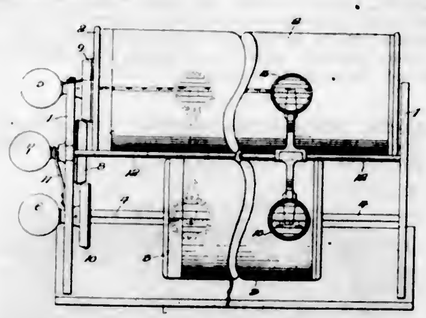
4. In an article of the class described, the combination of a body, a flap forming a continuation of the wall on the other side of said body to form a pocket, a flap on said portion and positioned to enter the pocket, and a flap integral with said portion and located between the ends thereof, positioned to fold over the first named flap and having a portion positioned to enter the pocket therewith.

5. In an article of the class described, the combination of a body, a portion formed integral with the wall on one side of said body and turned back upon the body to form a pocket, a flap for said body positioned to fold first over and then into the pocket, and flap engaging members formed on said portion and positioned to fold upon the flap when the flap is folded over the pocket.

[Claims 6 to 12 not printed in the Gazette.]

1,219,261. CALCULATING-MACHINE. HEINRICH DAEMEN-SCHMID, Uster, Zurich, Switzerland. Filed June 13, 1912. Serial No. 703,494. (Cl. 235—61.)

1. In a calculating apparatus, the combination with a frame, a manually operable cylinder provided on its periphery with suitable scale characters and rotatively mounted in the frame, a gear wheel mounted to rotate with the cylinder, a manually operable shaft rotatively mounted in the frame parallel with the cylinder, a cylinder mounted to slide on and rotate with the shaft and provided on its periphery with suitable scale characters, the cylinder on the shaft being of less length than the first mentioned cylinder, a gear wheel on the shaft, a rod mounted in the frame, a pair of indexes mounted to slide on the rod, each index extending on opposite sides of the rod to coöperate with the scale characters on the two parallel cylinders, and manually operated means mounted in the frame adapted to coöperate with the gear wheels to simultaneously rotate the cylinders after the latter have been independently rotated and the indexes moved to the selected characters, whereby to complete the result of the selected characters.



2. In a calculating apparatus, the combination with a frame, a manually operable cylinder provided on its periphery with suitable scale characters and rotatively mounted in the frame, a gear wheel mounted to rotate with the cylinder, a manually operable shaft rotatively mounted in the frame parallel with the cylinder, a cylinder mounted to slide on and rotate with the shaft and provided on its periphery with suitable scale characters, the cylinder on the shaft being of less length than the first mentioned cylinder, a gear wheel on the shaft, a rod mounted in the frame, a pair of indexes mounted to slide on the rod, each index extending on opposite sides of the rod to coöperate with the scale characters on the two parallel cylinders, a slidable shaft mounted in the frame between the two cylinders, a gear wheel on the slidable shaft, a spring acting on the slidable shaft to normally hold the gear wheels out of mesh, the slidable shaft when operated against the tension of the spring causing engagement of the gears and when rotated causing simultaneous rotation of the two cylinders, whereby to compute the result of selected characters.

1,219,262. CRIB. JOSEPH F. DAILY, St. Louis, Mo., assignor to Smith & Davis Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 6, 1915. Serial No. 65,196. (Cl. 5—58.)



1. In combination in a device of the character described, an angle bar side rail having a slot in its vertical leg, and a sheet metal clip having a circularly bent portion constituting a journal bearing arranged on the outer face of said vertical leg, and a stem portion projecting through said slot and bent parallel to the inner face of said vertical leg and secured thereto.

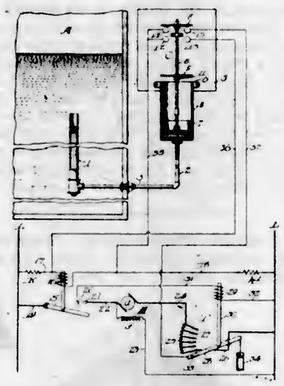
2. In combination in a device of the character described, an angle bar side rail having a slot in its vertical leg near the angle, and a sheet metal clip having one end circularly bent to form a journal bearing, the extremity of which rests on the top of said side rail with the bent bearing portion disposed on the outer face of said vertical leg, said clip having a stem portion projecting through said slot and bent parallel to the inner face of said vertical leg and secured thereto.

1,219,263. COLLAPSIBLE CONTAINER. CLAUDE B. DAVIS, Richmond, Va., assignor of one-half to Stephen A. Ellison, Richmond, Va. Filed Dec. 3, 1915. Serial No. 64,884. (Cl. 221—60.)



The combination with a collapsible tubular container of uniform interior diameter and having an outlet opening at one end, of a contents-expelling follower disposed therein and consisting of a cylindrical body slidably fitted to the container and having its end nearest the outlet opening of the container flat and its opposite end portion beveled on opposite faces whereby movement of the follower axially of the container under the influence of pressure upon its beveled faces through the wall of the container, is insured.

1,219,264. GAGE. HORACE L. DAWSON, Evanston, Ill., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 21, 1908. Serial No. 463,752. (Cl. 200—34.)



1. The combination with a fluid receptacle, of a fluid containing gage therefor having a portion within said receptacle and a communicating portion without the same, said first mentioned portion having an opening at a distance from all walls of said receptacle for subjecting the fluid contained by said gage to the pressure of the fluid in said receptacle and a circuit closer responsive to variations in the level of fluid within the portion of said gage without said receptacle.

2. The combination with a liquid containing receptacle, of a level indicating gage therefor comprising an open tube submerged within said receptacle and spaced from all walls thereof and a communicating tube without said receptacle, said tubes containing fluid subject to the pressure of the liquid within said receptacle and a circuit closer responsive to variations in the level of fluid within the second mentioned tube.

3. The combination with a fluid receptacle, of a gage therefor comprising a substantially U-shaped tubular member containing fluid, one of the uprights of said member being submerged within said receptacle and the other extending without the same and said outer upright having a portion of larger diameter than said inner upright whereby variations in the level of the fluid in said outer upright will be less than but proportional to variations in the level of the fluid in said inner upright and a circuit closer responsive to variations in the level of fluid within said outer upright.

4. The combination with a fluid receptacle, of a gage therefor comprising a substantially U-shaped tubular member containing fluid, one of the uprights of said member being submerged within said receptacle and the other extending without the same and said outer upright having a portion of larger diameter than said inner upright whereby variations in the level of the fluid in said outer upright will be less than but proportional to variations in the level of the fluid in said inner upright and a device including a float responsive to fluid level variations in said upright portion of larger diameter.

5. The combination with a fluid container, of means responsive to the variations in the level of the fluid therein, said means comprising a substantially U-shaped gage having one upright within and the other without said container, a float arranged in the outer upright and a plurality of switches operable by said float, said switches being arranged for closure upon movement of said float in opposite directions.

[Claim 6 not printed in the Gazette.]

1,219,265. ELECTRIC FLUID-HEATER. HARRY W. DENHARD, San Francisco, Cal., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 15, 1911, Serial No. 660,870. Renewed Dec. 20, 1915. Serial No. 67,956. (Cl. 219—40.)



1. An electric fluid heater comprising a receptacle provided with an inlet and an outlet opening, electric heating means within said receptacle, and means within said receptacle communicating with the outlet opening and rotatably adjustable from the outside of the receptacle for regulating the height of the fluid in the receptacle whereby the heater may be readily adjusted to operate at maximum efficiency for fluids of different specific resistance.

2. An electric fluid heater comprising a tubular receptacle having an inlet opening near the bottom thereof, a plurality of electrodes longitudinally disposed within said receptacle and adapted to be electrically connected by the fluid in the receptacle, and means within the receptacle communicating with the outlet opening therein, said means being longitudinally disposed within the receptacle and rotatably adjustable from the exterior thereof to regulate the height of the fluid in the receptacle, whereby the heater may be adjusted to operate at maximum efficiency for fluids of different specific resistance.

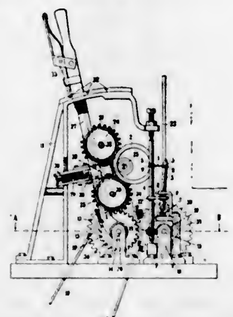
3. An electric fluid heater comprising a receptacle provided with an inlet and an outlet opening, a plurality of positive and negative electrodes within said receptacle and a pair of tubes, one within the other, in said receptacle, said tubes communicating with the outlet opening and each having openings therein adapted to coöperate to form a passage communicating with the interior of the receptacle, the one of said tubes being adjustable relative to the other so that the height of said passage above the bottom of the receptacle may be regulated.

4. An electric fluid heater comprising a tubular receptacle having an inlet opening near the bottom thereof, a plurality of positive and negative electrodes longitudinally disposed in said receptacle, a pair of tubes, one within the other, longitudinally disposed in the receptacle and communicating with an outlet opening therein, said tubes having coöperating openings therein adapted to form a passage communicating with the interior of the receptacle, one of said tubes being adjustable relative to the other from the exterior of the receptacle to vary the location of the passage to regulate the height of the fluid flowing through said receptacle whereby the heater may be adjusted to operate at maximum efficiency.

5. An electric fluid heater comprising a tubular receptacle having an inlet opening near the bottom thereof, a plurality of positive and negative electrodes longitudinally disposed within said receptacle, a tube longitudinally disposed within said receptacle and communicating with an outlet opening therein, said tube having a longitudinal slot therein, a second tube within the first having a series of spirally arranged openings therein adapted to successively register with the slot in the first tube, means operative from the exterior of the receptacle for adjusting the position of the second tube relative to the first whereby the heater may be regulated to operate at maximum efficiency for fluids of different specific resistance.

[Claims 6 to 18 not printed in the Gazette.]

1,219,266. WINDING-MACHINE FOR THREAD-BUTTONS. HERMANN DEPPERMANN, Nowawes-Neuendorf, near Potsdam, Germany. Filed May 13, 1913. Serial No. 767,464. (Cl. 242—1.)



1. Apparatus for the formation of a thread button upon a foundation ring, comprising supporting means for said ring, a winding ring furnished with a slot that can be traversed by said foundation ring, the external periphery of said winding ring being adapted to receive a thread cop, a perforation in said winding ring through which perforation thread from the cop can be conducted to the interior of said winding ring, means for adjusting said winding ring in relation to said foundation ring whereby said winding ring can be adjusted to pass around said foundation ring or to pass through said foundation ring which is then passed through aforesaid slot in said winding ring, and means for rotating said winding ring.

2. Apparatus for the formation of a thread button upon a foundation ring, comprising supporting means for said ring, a winding ring of greater interior diameter than the exterior diameter of the button to be formed furnished with a slot that can be traversed by said foundation ring, the external periphery of said winding ring being adapted to receive a thread cop, a perforation in said winding ring through which perforation thread from the cop can be conducted to the interior of said winding ring, and means for rotating said winding ring.

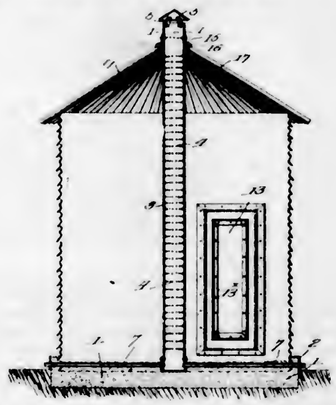
3. Apparatus for the formation of a thread button upon a foundation ring, comprising supporting means for said ring, a winding ring of greater interior diameter than the exterior diameter of the button to be formed furnished with a slot that can be traversed by said foundation ring, the external periphery of said winding ring being adapted to receive a thread cop, a perforation in said winding ring through which perforation thread from the cop can be conducted to the interior of said winding ring, means carried by said winding ring for adjusting the tension of said thread and for guiding it toward said perforation, and means for rotating said winding ring.

4. Apparatus for the formation of a thread button upon a foundation ring, comprising supporting means for said ring, a winding ring furnished with a slot that can be traversed by said foundation ring, means for adjusting said winding ring in relation to said foundation ring and for rotating said winding ring, comprising a pivotally mounted lever, a pair of friction rollers journaled on said lever and adapted to bear against the external periphery of said winding ring, guides carried by said lever, a block supported by and adapted to slide in said guides, a third friction roller carried by said block and adapted to bear against the inner periphery of said winding ring, and a spring device connected with said block and with said guides and adapted to cause the last-mentioned roller to bear against the inner periphery of said winding ring, and thereby to press the outer periphery of said winding ring against aforesaid pair of rollers.

5. Apparatus for the formation of a thread button upon a foundation ring, comprising supporting means for said ring, a winding ring of greater interior diameter than the exterior diameter of the button to be formed furnished with a slot than can be traversed by said foundation ring, the external periphery of said winding ring being adapted to receive a thread cop, a perforation in said winding ring through which perforation thread from the cop can be conducted to the interior of said winding ring, means carried by said winding ring for adjusting the tension of said thread and for guiding it toward said perforation, and means for adjusting said winding ring in relation to said foundation ring and for rotating said winding ring.

[Claims 6 to 14 not printed in the Gazette.]

1,219,267. GRAIN-STOREHOUSE CONSTRUCTION. LIZZIE H. DICKELMAN, Forest, Ohio. Filed Oct. 13, 1914. Serial No. 866,435. (Cl. 98—26.)



1. A grain store-house construction comprising a base, a central air shaft supported by said base, a laterally extending tube communicating at its inner end with said air shaft, said tube being secured to said base and the outer end being open to the atmosphere, a roof secured to said air shaft, and perforated walls carried by the base and joining said roof.

2. A grain store-house construction comprising a base, a central perforated air shaft carried by said base, a plurality of radiating tubes having their inner ends communicating with said air shaft, the outer ends of the tubes being open to the atmosphere, each of said tubes being secured to the base along its entire length, a roof supported by said central air shaft, and perforated walls carried by the base and joining the roof, said walls being anchored to said radiating tubes.

3. A grain store-house construction comprising a central perforated air shaft, a plurality of laterally extending tubes communicating at one end with the interior of said air shaft, a ring encircling said central air shaft and spaced therefrom, the opposite ends of the tubes being open to the atmosphere, and being secured to said ring, a substantially conical shaped roof carried by said central air shaft, perforated circular walls secured to said tubes near the outer ends thereof and extending upwardly to said roof, and plastic material disposed between said central air shaft and said ring, said plastic material embedding said tubes and the lower ends of said walls.

4. A grain store-house construction comprising a central perforated air shaft, a plurality of radiating tubes communicating at one end with the interior of said air shaft, a ring surrounding said air shaft and secured to each of said tubes, and plastic material disposed between the air shaft and the ring, said plastic material embedding said tubes.

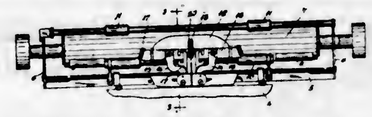
1,219,268. ELEVATOR APPLIANCE. FRED DODGE, Crichton, La., assignor of one-half to Fred A. Griffin, Crichton, La. Filed June 3, 1916. Serial No. 101,593. (Cl. 87—9.)



In an appliance of the character described, the combination of a bail, a yoke swivelly supported in said bail and having bearings and sockets adjacent said bearings, a head comprising disk sections secured together, trunnions on said disk sections journaled in the bearings in said yoke, said head having a slot therein, a recess to one side of said slot and a notch in the opposite wall of said slot, a trigger pivotally mounted in said recess and adapted to swing across said slot with one end occupying said notch, a spring-pressed rod arranged in operative relation to said trigger, casings fitted in said head, plungers in said casing adapted to enter the sockets in said yoke, and spring means for yieldingly projecting said plungers, substantially as described.

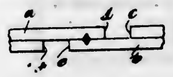
1,219,269. CARD-GUIDE FOR TYPE-WRITING MACHINES. WALTER N. DREW, Watertown, Mass., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Nov. 27, 1915. Serial No. 63,760. (Cl. 197—135.)

1. A card guide for typewriting machines comprising a fixed horizontally arranged plate having its upper edge disposed below the line of print, and a transparent card guide rigidly attached to said plate having an unbroken upper edge and formed with an opening through which the type pass to the printing point.



2. A transparent card guide for typewriting machines having side portions disposed on opposite sides of the printing point, a middle portion which rigidly connects said side portions, and an opening for the passage of the type in combination with means for supporting said guide in operative position.

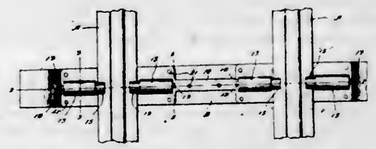
1,219,270. METHOD OF PRODUCING PISTON-RINGS. MILLARD L. DUNHAM, New York, N. Y., assignor to Dunham Piston Ring Company Inc., New York, N. Y., a Corporation of New York. Filed Oct. 19, 1916. Serial No. 126,480. (Cl. 29—148.)



1. The method of producing a piston ring having two, equal sized, split ring members, which consists in arranging said members in superposed relation and contracted to a circumferential dimension within the circumference of said members in a free state, and then in uniting adjacent, opposite ends of said ring members while so contracted, whereby the ring, in cylinder service, exerts approximately equal radial tension throughout its circumference.

2. The method of producing a piston ring having two, equal sized, split ring members, which consists in arranging said members in superposed relation and contracted to a circumferential dimension which is intermediate the circumferential dimensions of said members, in a free state, and as suited for cylinder service; and then in uniting adjacent, opposite ends of said ring members while so contracted, whereby the ring, when further contracted for cylinder service, exerts approximately equal radial tension throughout its circumference.

1,219,271. RAIL-FASTENER. IGNACE B. DUROCHER, New Orleans, La. Filed Feb. 16, 1916. Serial No. 78,673. (Cl. 238—5.)

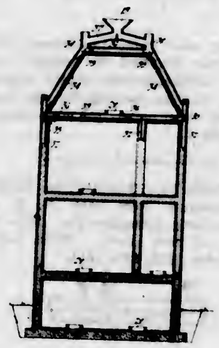


1. The combination with a slotted bed plate, of a casing removably mounted on the bed plate, a sliding clamping member movable through the casing for engaging a rail, when resting upon the bed plate, and having grooves to engage the casing and bed plate, and means connected with the casing and member for moving the latter.

2. The combination with a bed plate having a slot formed with a widened portion, a casing arranged on the plate and having internal flanges, a slidable clamping member within the casing and insertible through the widened portion of the slot for engaging a rail when supported upon the bed plate, and having grooves to receive

the flanges and side edges of the slot, and an adjusting screw connected with the casing and acting upon the member for moving the same into clamping and unclamping positions.

1,219,272. PROCESS OF CONSTRUCTING CONCRETE BUILDINGS. THOMAS A. EDISON, Llewellyn Park, Orange, N. J. Filed Aug. 13, 1908. Serial No. 448,298. (Cl. 25—1.)



1. The process of constructing a cement structure, which consists in setting up a mold for the structure and pouring fluid cement mixture into the mold at such a rate as compared with the hard-setting time of the cement mixture that only a short column thereof will act to create hydraulic pressure upon the mold, substantially as set forth.

2. The process of constructing a cement structure, which consists in pouring a rapidly hardening cement mixture into the mold for the walls of the structure at such a rate that the cement will have hardened at the bottom of the mold before the level of the liquid reaches the top of the mold, substantially as set forth.

3. The process of constructing a house, which consists in erecting a complete double-wall house formed of removably connected sections including wall, floor and roof portions, pouring a homogeneous cement mixture into the mold thus formed continuously until it has completely filled all portions of the mold, allowing the cement to harden, and removing the sections, substantially as set forth.

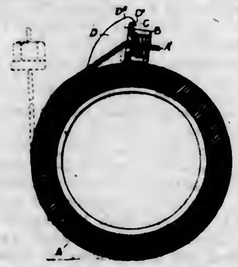
4. The process of constructing a house, which consists in erecting a complete double-wall house formed of removably connected sections including wall and floor portions, providing a supply of fluid cement mixture uniform in composition and of such a character as to flow readily and without segregation of ingredients, pouring the same continuously into the mold, causing all portions of the latter to be filled with the mixture, allowing the same to harden, and removing the sections, substantially as set forth.

5. The process of constructing a building, which consists in setting up sectionally a mold for a complete six-sided apartment, pouring cement mixture continuously into the mold to fill the same, and removing the sections of the mold after the mixture has hardened, the sections from the interior being removed through an opening or openings in the completed structure, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,219,273. BAND-CLAMP. JACOB G. ELKIN, New York, N. Y. Filed Nov. 7, 1914. Serial No. 870,886. (Cl. 137—28.)

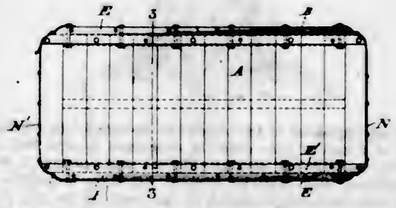
1. A band clamp, comprising a band threaded at one end, an abutment on the other end of the said band and having spaced abutment flanges between which passes the said threaded end, the upper ends of the said flanges having stops, a nut screwing on the said threaded end, and a washer interposed between the said nut and the said flanges, the washer being slidable up and down on the said flanges and its upward movement being limited by the said stops, the said washer having a conical center portion and the said nut being countersunk to receive the said conical center portion.



2. A band clamp, comprising a band threaded at one end, an abutment on the other end of the said band and having spaced abutment flanges between which passes the said threaded end, the front edges of the said flanges being inclined upwardly and forwardly, and the upper ends of the said flanges having stops, a nut screwing on the said threaded end of the band, and a washer interposed between the said nut and the beveled edges of the flanges, the washer being slidable up and down on the said front edges and the upward movement of the washer being limited by the said stops.

3. A band clamp, comprising a band having one end reduced in width and threaded, abutment flanges extending outwardly from the other end of the said band and between which passes the said threaded end of the band, the flanges being inclined upwardly and forwardly and provided with stops at their ends, a nut screwing on the said threaded end, and a washer interposed between the abutment flanges and the nut and provided at the sides with guiding flanges engaging the said abutment flanges.

1,219,274. RAISED SILL FOR EXPRESS AND BAGGAGE TRUCKS. GEORGE MADISON ENGLE, Beeville, Tex. Filed Sept. 12, 1916. Serial No. 119,687. (Cl. 21—65.)

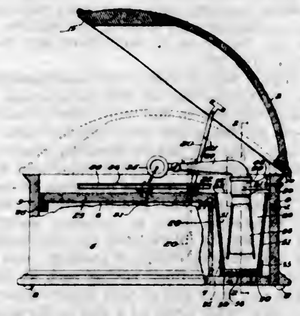


1. In combination with a baggage and express truck, strips secured to the opposite sides thereof and having their upper surfaces inclined toward the floor of the truck, and an angled plate secured to the inclined portion of said strip and to the upper surface of the floor of the truck.

2. In combination with a baggage and express truck, strips secured to the opposite sides thereof and having their upper surfaces inclined toward the floor of the truck, an angled plate secured to the inclined portion of said strip and to the upper surface of the floor of the truck, and metallic bands secured to the ends of the truck, overlapping and fastened to said strips.

1,219,275. TALKING-MACHINE. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Mar. 24, 1911. Serial No. 616,666. (Cl. 274—2.)

1. In a talking machine, the combination with a casing, of a sound reproducer, a hollow sound conveyer communicating with said reproducer and having a downwardly opening delivery end terminating within said casing, and hollow sound amplifying means arranged within said casing and opposed to and having an outlet surrounding said delivery end, to reverse the direction of sound waves issuing from said delivery end said casing being provided with an angularly adjustable cover arranged to deflect sound waves after delivery by said sound amplifying means.



2. In a talking machine, the combination with sound reproducing means, of a hollow sound conveyer communicating with said means and terminating in a longitudinally straight free delivery end, and hollow sound amplifying means coaxial with the longitudinal axis of said delivery end and opposed thereto, said amplifying means comprising a longitudinally curved support, and a pair of spaced sounding-boards secured to said support and upon opposite sides of said delivery end respectively providing a sound outlet surrounding said delivery end.

3. In a talking machine, the combination with a casing, of a sound reproducer, a hollow sound conveyer communicating with said reproducer and having a delivery end opening downwardly within said casing, and means arranged within said casing and opposed to and having an upwardly facing outlet surrounding said delivery end, to deflect sound waves upwardly from said delivery end, said casing being provided with a cover adjustable to deflect sound waves transmitted by said delivery end.

4. In a talking machine, the combination with a casing, of a sound reproducer, a hollow sound conveyer communicating therewith and inclosed by said casing, said sound conveyer having a delivery end projecting and opening downwardly within said casing, and hollow sound amplifying means including spaced sounding boards inclosed by said casing and surrounding and opposed to said delivery end, and arranged to reverse the direction of sound waves issuing from said delivery end.

5. In a talking machine, the combination with a casing, of means forming a compartment in the front and lower portion of said casing, a rotary record turn-table inclosed by said casing above said compartment, actuating means for said turn-table arranged within said compartment, a sound reproducer arranged within said casing above said turn-table, a hollow sound conveyer communicating with said sound reproducer and having a downwardly facing open delivery end terminating within said casing and below the upper plane of said compartment, hollow sound amplifying means opening upwardly within said casing outside of said compartment and coaxial with and opposed to and surrounding said delivery end and adjustable means adjacent the discharge opening of said amplifying means to direct the sound laterally therefrom.

[Claims 6 to 11 not printed in the Gazette.]

1,219,276. TRANSPORTATION SYSTEM. ROLLIE B. FAGEOL, Oakland, Cal. Filed July 26, 1915. Serial No. 41,825. (Cl. 21—90.)

A transportation system comprising a propelling vehicle or power unit having self contained power mechanism and having steering and supporting wheels, certain of said supporting wheels capable of being driven by said power mechanism and all of said supporting wheels capable of operation in unison to steer, a pair of trailers each having a single pair of supporting wheels adjacent one end, one of said trailers adapted for positioning at each end



of the propelling vehicle, and a pivotal connection between the free unsupported ends of said trailers and the opposite ends of said propelling vehicle, whereby the free end of said trailers is supported at the opposite ends of said propelling vehicle and said propelling vehicle and trailers are caused to track on the steering of the steering wheels of said propelling vehicle.

1,219,277. PROCESS OF PRODUCING SULFURIC ACID. PEDER FARUP, Glöshangen, near Trondhjem, Norway, assignor to Det norske Aktieselskab for elektrokemisk Industri, Christiania, Norway. Filed Feb. 25, 1913. Serial No. 750,568. (Cl. 23—1.)

1. The process of producing sulfuric acid, which comprises passing sulfur dioxid and oxygen over a contact mass of a double oxid of iron and titanium.

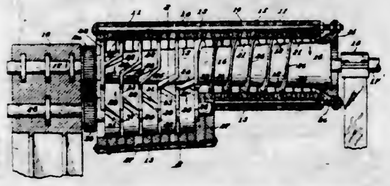
2. The process of producing sulfuric acid, which comprises conducting oxygen and a gas containing sulfur dioxid over a heated catalyst consisting of residues remaining from the heat decomposition of sulfated ilmenite.

1,219,278. PLOW ATTACHMENT. WILLIAM D. FELKEL, Elloree, S. C. Filed Jan. 13, 1916. Serial No 71,932. (Cl. 97—21.)



The combination with a plow stock having a brace and being formed with a slot at its lower end and a bolt having a bifurcated extremity extending through said slot, of a runner having a plurality of apertures and a bolt passed through one of said apertures and through the extremities of said former bolt, a link fulcrumed at the rear end of said runner and having a sleeve adapted to receive said brace and binding bolts carried by said sleeve.

1,219,279. PRESS. JOHN C. FIDDYMENT, Baltimore, Md. Filed Aug. 31, 1915, Serial No. 48,155. Renewed Jan. 26, 1917. Serial No. 144,778. (Cl. 100—48.)



1. In a press the combination with an outer shell to receive materials to be pressed, of a rotating body extending longitudinally in the shell and provided with a plu-

rality of circumferential channels which decrease in area as they recede from the feed end and each channel having an opening leading to another and smaller of said channels, and means continuously projected in each of said channels to force the material from one channel to another.

2. In a press the combination with an outer shell to receive the material to be pressed and provided with fluid escape openings, of a body mounted in the shell so as to revolve therein said body having a plurality of annular circumferential channels with means in each channel to block the same,—said channels being provided with lateral passages which provide communication with another of said channels, and means continuously projected in and coacting with each channel to force the material from one channel through the lateral passages to another channel.

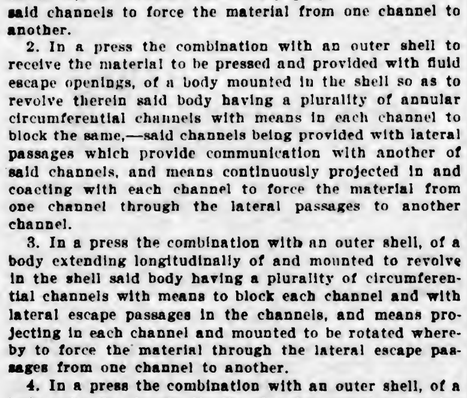
3. In a press the combination with an outer shell, of a body extending longitudinally of and mounted to revolve in the shell said body having a plurality of circumferential channels with means to block each channel and with lateral escape passages in the channels, and means projecting in each channel and mounted to be rotated whereby to force the material through the lateral escape passages from one channel to another.

4. In a press the combination with an outer shell, of a body extending longitudinally of and mounted to revolve in the shell said body having a plurality of circumferential channels which decrease in area as they recede from the feed end,—each channel being blocked circumferentially to interrupt its continuity and having a lateral passage that forms a communication between a channel of greater area with another channel of lesser area, and means always projecting into each channel to prevent rotation and back-flow of the material with respect to the body.

5. In a press the combination with an outer shell, of a body extending longitudinally of and mounted to revolve in the shell said body having a plurality of spaced circumferential partitions to form annular channels and having lateral passages to provide communication between one channel and another and rotatable heads projecting between the partitions and into said channels whereby to prevent rotation and backflow of material with respect to the body and to force the material from one channel through the lateral passage to another channel.

[Claims 6 to 8 not printed in the Gazette.]

1,219,280. FOLDING BOX OR CRATE. PETER CORNEL FLAGSTAD, Minneapolis, and WALTER SANDS, Kenyon, Minn., assignors to Folding Crate and Box Company, Minneapolis, Minn., a Corporation. Filed Nov. 8, 1915. Serial No. 60,257. (Cl. 217—47.)



1. In a box or crate, the combination with a four-cornered bottom having a rigid upstanding rim all along its edges and inwardly projecting lugs upon the corners of said rim, of two end sections and two side sections forming the body of the crate and hingedly attached to the inner sides of said rim at such distances from the bottom that two opposite sections may fold flat upon the bottom and the other two sections may fold flat upon the first mentioned sections, and an unfoldable cover having a slightly slidable section whereby the cover may be retracted with its corners from under or projected in under the corner lugs, and means for locking the cover in said extended position; said cover when extended being of a size to substantially fill between the opposite straight portions of the rim so as to hold itself and the folded sections within the rim.

2. In a folding box or crate, the combination with a hollow base or shallow box, of side sections and end sections hingedly attached to the inner sides of said box so as to fold one pair upon the other parallel upon the bottom of the box; said box having inwardly projecting lugs for retaining a cover below them, a plane and extensible cover adapted to have its corners projected in under said lugs when placed upon the folded sections; means for locking the extensible cover in extended position, said cover being of a size to fill between the sides and ends of the shallow box when in extended position; two opposite ones of said foldable sections having each at its top an inward reinforcing strip and at each upper corner a metallic loop, and said cover being of a size to fill between the section of the crate when they are set up, and to rest with its ends upon the reinforcing strips; and fingers at the corners of the cover for engagement in said loops when the crate is set up and the cover extended.

3. In a folding box or crate, the combination with a body having a hollow base and side sections and end sections hinged to fold within said base and to be set up when so desired, of automatic interlocking means at the corners of said sections, and loops upon the upper corners of two of the sections, a cover substantially filling between all of the sections and having corner fingers arranged to engage in said loops to hold the cover in place; said cover comprising two sections, one slidable on the other in the direction of the corner fingers, an elongated aperture being formed between the two sections to serve as two hand-holes, a lid hinged to one of the cover sections and arranged to cover said aperture, means for locking said lid in closed position and thereby also locking the coyer sections in extended position and interlocked in the loops.

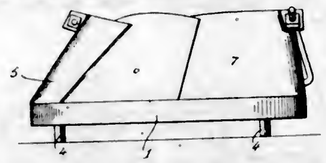
4. In a folding box or crate, a cover composed of two sections slidable one on the other to make the cover extensible, an apertured offset locking plate fixed on one of the sections and an apertured hasp carried by the other section, locking means carried by one of the sections for insertion in said apertures when they are in registering position; and means for stopping the sliding movement of the sections automatically when they are extended so as to make the apertures register, said hasp being arranged to stop its swinging movement by contacting with the offset of the locking plate when the apertures are in registering position.

5. In a folding box or crate, the combination with a hollow base provided with inward corner lugs, or foldable body sections hinged to fold into the base and provided at their upper corners with loops, an extensible cover having corner fingers arranged to engage alternately under said lugs when the crate is folded and in said loops when the crate is set up; said fingers being all positioned within the outlines of the cover, so as not to require more space than that occupied by the cover.

[Claims 6 to 8 not printed in the Gazette.]

1,219,281. HORSESHOE. CHRIST T. FORTNEY, West Prairie, Wis. Filed July 18, 1916. Serial No. 109,945. (Cl. 168—19.)

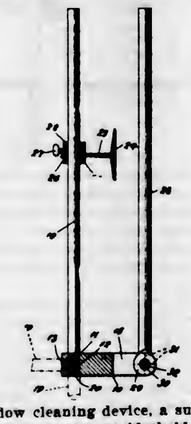
1. A horse shoe formed of sections, connected at their forward ends to provide relative movement, means for fastening the shoe to the hoof comprising a plurality of plates secured to each section in overlapping relation, adapted to engage and conform to the sides of the hoof, and having means for drawing together certain of the plates of opposite sections to bind them all to the hoof.



2. A horse shoe formed of sections, connected at their forward ends to provide relative movement, means for fastening the shoe to the hoof comprising forward, intermediate and rear plates on each section, in overlapping relation adapted to engage and conform to the sides of the hoof, lugs on the forward and rear plates in opposed relation, and bolts connecting the lugs to draw said plates together to bind them, and the intermediate plates to the hoof.

3. A horse shoe formed in sections connected at their forward ends to provide relative movement, having means for fastening the shoe to the hoof comprising forward, intermediate, and rear plates on each section in overlapping relation, and adapted for slight relative movement to engage and conform to the sides of the hoof, lugs on the meeting edges of the forward plates, a bolt extending through the lugs to bind the plates together, lugs on the edges of the rear plates disposed in spaced relation, and a pair of bolts extending through said lugs in opposite directions and in crossed relation engaging the opposite plates, whereby said plates may be drawn together to bind the same to the hoof.

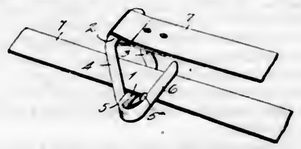
1,219,282. WINDOW-CLEANING DEVICE. HOWARD W. FOSS, Irving, N. J. Filed Sept. 14, 1915. Serial No. 50,628. (Cl. 15—59.)



1. In a window cleaning device, a supporting bar, a rod carried by said bar and removably held by one end thereof, said bar having means by which said rod may be held in various directions relatively to the bar, a bracket slidably mounted on said rod, a wiper detachably connected to said bracket, and a handle on the other end of said bar; said handle being adapted to be angularly adjusted with respect to said bar, together with means for locking said handle to said bar whereby it will be held in adjusted relation.

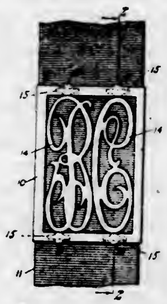
2. In a window cleaning device, a supporting bar having a threaded substantially T-shaped passage in one of its ends to provide a vertically disposed and a longitudinally disposed branch, a rod having a threaded end adapted to be screwed in any one of the branches of the T-shaped passage, a bracket slidably mounted on said rod, a wiper detachably connected to said bracket, and a handle on the other end of said bar; said handle being adapted to be angularly adjusted with respect to said bar, together with means for locking said handle to said bar in adjusted position.

1,219,283. BALE-TIE BUCKLE. EZRA A. FRANTZ, Weatherford, Tex., assignor to Frantz Standard Buckle Co., Weatherford, Tex., a Corporation of Texas. Filed Apr. 17, 1916. Serial No. 91,596. (Cl. 24—26.)



A bale tie buckle composed of a single length of flat wire having parallel side portions, a connecting end portion, one of said end portions being bent at its end into curved form, an arm forming a continuation of said curved portion, said arm and curved portion being in a common plane extending at right angles to the plane through the side portion, the other of said side portions being bent laterally to form an end portion parallel with the opposite end portion, said end portion being shorter than said side portions and being substantially in the same plane with the side portions, said laterally bent end portion being curved to form a hook partly encircling the curved end of one of said side portions and the end of said hook being disposed between the side portions of the parallel arm and arranged to engage the latter.

1,219,284. MONOGRAM ATTACHMENT FOR WATCH-FOBS, BELTS, AND THE LIKE. LOUIS FRIEDMAN, New York, N. Y. Filed Jan. 7, 1916. Serial No. 70,784. (Cl. 40—142.)

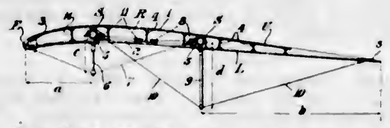


In a monogram attachment for watch fobs, belts and other webs, the combination with an open frame adapted to be applied to and overlie the face of the web, of selected letters arranged one alongside the other within the central opening of the frame to fill the same, said letters overlying the web their inner edges abutting each other, and their outer edges and ends abutting the inner edge of the frame, offset integral lugs extending from the ends of the letters, said lugs having T-heads, the frame having arms at its upper and lower edges bent to engage and hold the T-headed lugs of the letters against the back of the frame, all substantially as shown and described.

1,219,285. AEROPLANE. EDSON F. GALLAUDET, Norwich, Conn. Filed Sept. 12, 1911. Serial No. 648,847. (Cl. 244—12.)

1. In a flying machine, the combination with a wing structure flexible fore and aft as an entirety and yieldingly held in cambered position of means for changing the

camber without changing the chord angle of the structure.



2. In a flying machine, the combination with flexible wing surfaces of means for yieldingly maintaining a camber therein in such manner that changes in their fore and after curvature will be accompanied by similar changes in the angular position both of their front and rear edges and changes in the curvature of the wing surface on one side will produce symmetrical but reverse changes in the curvature of the wing surface on the other side of the machine.

3. In a flying machine, the combination with a wing structure comprising fore and aft ribs adapted to flex both at their front and rear ends of means for maintaining a camber of the ribs and so connecting together the corresponding ribs on opposite sides of the longitudinal axis of the machine with the flattening of the ribs and wing surface on one side of the machine caused by increase of wind-pressure thereon will produce a symmetrical increase in curvature of the corresponding ribs and the wing surface on the other side until the increase in wing load due to such increased curvature equals the increase of wing load due to increased wind pressure.

4. In a flying machine, the combination with a wing structure comprising flexible ribs and means for maintaining a variable camber therein of connecting means whereby changes in the curvature of a rib on one side will automatically produce equal and reverse changes in the curvature of the corresponding rib on the other side of the machine and means whereby the operator may cause or prevent such differential changes in the curvature of the ribs on opposite sides of the machine.

5. In a flying-machine, a wing structure compriaing as elements thereof a series of flexible ribs, truss-wires adapted to maintain a camber of the ribs, and adjustable connections between the truss-wires of the ribs on one side of the longitudinal center of the wing with ribs symmetrically located on the other side of the longitudinal center of the wing whereby any changes in the camber of a rib on one side will cause equal but reverse changes in the camber of the corresponding rib on the other side.

[Claims 6 to 23 not printed in the Gazette.]

1,219,286. FOOD PRODUCT AND METHOD OF MANUFACTURING AND PREPARING THE SAME. WILLIAM B. GERE, deceased, Syracuse, N. Y., by Annabel B. Gere and Alfred H. Durston, executors, assignors to Merrell-Soule Company, Syracuse, N. Y., a Corporation of New York. Original application filed Feb. 1, 1915. Serial No. 5,499. Divided and this application filed June 2, 1916. Serial No. 101,245. (Cl. 99—5.)

1. A soluble food product in powdered form consisting of substantially dry spherical particles comprising homogeneously distributed milk, sugar, and cocoa.

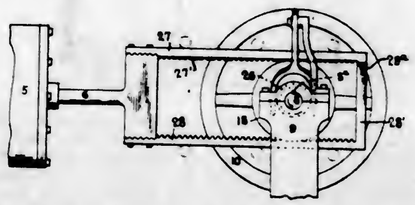
2. A soluble food product in powdered form consisting of substantially dry spherical particles comprising homogeneously distributed milk, sugar and cocoa in which the natural properties of the solids have not been altered.

3. A soluble food product in powdered form consisting of substantially dry spherical particles comprising homogeneously distributed milk, sugar and cocoa in substantially the following proportions; 40% milk solids, 45% sugar and 15% cocoa.

4. A soluble food product in powdered form consisting of substantially dry spherical particles comprising homogeneously distributed milk and cocoa.

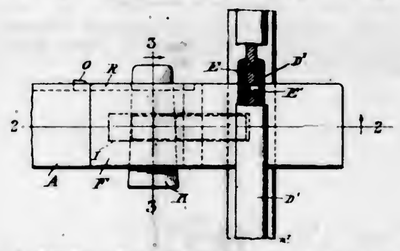
5. A soluble food product in powdered form consisting of substantially dry spherical particles comprising homogeneously distributed milk and cocoa in which the natural properties of the solids have not been altered.

1,219,287. POWER-TRANSMITTING DEVICE. ORSINAS O. GORSN, Chickasha, Okla., assignor of one-sixth to C. Sidney Foster and one-sixth to U. N. Church, Chickasha, Okla. Filed Sept. 14, 1914. Serial No. 861,722. (Cl. 74—27.)



A power device consisting of a power shaft, a series of disks keyed thereto, each disk having notches therein, spring pressed pawls in the notches, a series of ring gears inclosing the disks and having internal ratchet teeth engageable by the pawls, washers between the disks and gears, end washers, a driving element having an upper and a lower rack for engaging with different gears, a stop collar on the shaft, a spring between the stop collar and the opposing end washer, said driving element having shoulders to engage with the edge portions of the end washers, and means for shifting the disks and gears on the shaft.

1,219,288. RAILWAY-RAIL CONNECTION. ERNEST F. GOODERHAM and HENRY M. GOODERHAM, Patton, Pa. Filed Aug. 24, 1916. Serial No. 116,679. (Cl. 238—6.)



1. A railway rail connection comprising a plate with an integral lug projecting therefrom, a clamping block with a lug thereon, fish plates for engagement with the opposite faces of the web of a railway rail, and having recesses in their outer faces for the reception of said lugs, a key engaging the clamping block and said lug carrying plate, as set forth.

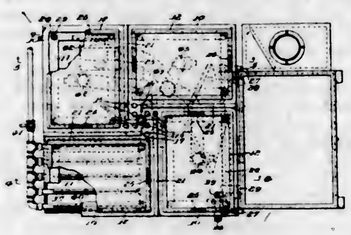
2. A railway rail connection comprising a plate with an integral lug projecting laterally therefrom, a clamping block with lug thereon, fish plates with recesses in their outer faces for the reception of said lugs and means for locking the block to said lug carrying plate, and pins upon the fish plates and designed to engage perforations in the web of a railway rail, as set forth.

3. A railway rail connection comprising a recessed plate with a laterally extending lug on one wall of its recess, said plate having a slot therein with a shoulder near one end thereof, a clamping block with a laterally extending lug thereon, fish plates with recessed faces for the reception of said lugs, and means for locking the clamping block in place, as set forth.

4. A railway rail connection comprising a plate having a longitudinal slot formed therein, the walls of which are provided with registering slots, a portion of the slot at one end having a shouldered portion, one wall of the recess of the plate having a laterally extending lug, a clamping block with a lug projecting from one end thereof, said block having a shank portion with a forwardly extending portion at the lower end thereof adapted to engage said shoulder of the plate, said shank portion of the block having a recess adapted to register with the slots in the walls of said plate, and a key adapted to engage said slots and recess to hold the clamping block in place.

5. A railway rail connection comprising a plate having a longitudinal slot formed therein, the walls of which are provided with registering slots, a portion of the slot at one end having a shouldered portion, one wall of the recess of the plate having a laterally extending lug, a clamping block with a lug projecting from one end thereof, said block having a shank portion with a forwardly extending portion at the lower end thereof adapted to engage said shoulder of the plate, said shank portion of the block having a recess adapted to register with the slots in the walls of said plate, a key adapted to engage said slots and recess to hold the clamping block in place, a pin held upon said plate and engaging an aperture in the key, shouldered portions of the clamping block and plate forming an opening, and a second key adapted to engage said opening.

1,219,289. APPARATUS FOR BACKING ELECTROTYPE-SHELLS. JAMES F. GOUNLEY, Philadelphia, Pa., assignor, by mesne assignments, to The Rapid Electrotype Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 8, 1913. Serial No. 805,243. (Cl. 22—58.)



1. In an apparatus for backing electrotype shells, the combination with heating means, of cooling means substantially circularly disposed with respect to each other, and in series with said heating means, molds for casting said backing, and a rotatable table for said molds, arranged to be intermittently rotated to present the respective molds into operative relation with the heating means and with the cooling means.

2. In an apparatus for backing electrotype shells, the combination with a rotatable table, stationary heating means disposed beneath a portion of said table, a plurality of cooling means suitably spaced under said table and disposed in a substantially circular path in series with said heating means, and molds supported on said table, said table having openings registerable with said heating and cooling means over which said molds are supported, the rotation of said table operating to successively bring said molds into operative relation over said heating and cooling means.

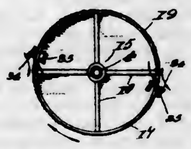
3. In an apparatus for backing electrotype shells, the combination with a table provided with a plurality of spaced apertures disposed in a substantially circular path, of heating means under said table and in registration with one of said apertures, pipes for conveying a cooling medium in registration with the other of said apertures, and molds for casting the backing of said shells removably engaged in said openings, said table being intermittently rotatable to successively present said molds into operative relation with the heating and cooling means.

4. In an apparatus for backing electrotype shells, the combination with a rotatable table, of heating means mounted beneath said table, a pipe for supplying air having branches discharging upwardly under said table, and molds for casting said backing, said table comprising a plurality of rectangular rotatable frames, one end of each frame lying along the side of the adjacent frame, the rotation of said table operating to successively bring said molds into operative relation with said heating means and over the ends of said branches.

5. In an apparatus for backing electrotype shells, the combination of a rotatable table provided with four apertures, a mold mounted over each aperture in said table, heating means beneath substantially one quarter of said table, three cooling means, one under each of the three remaining quarters of said table, means to hold said table locked from rotation with respect to said heating and cooling means, said heating and cooling means each being under a different quarter of said table and directly under a different mold, a melting pot adjacent one side of said table when in locked position, and means to release said locking means to permit of the rotation of said table through substantially one quarter of a complete revolution.

[Claims 6 to 11 not printed in the Gazette.]

1,219,290. SEPARATOR. WILLIAM J. GOYNE, WILLIAM E. GOYNE, and GEORGE M. PACETTI, City Point, Va. Filed Dec. 28, 1915. Serial No. 68,420. (Cl. 210—14.)



1. In a separator, the combination of a receptacle, a movable filter in said receptacle, and deflectors for directing the fluid through the filter walls comprising single lengths of metal bent substantially U-shaped and having their ends bent to provide supporting means, substantially as described.

2. In a separator, the combination of a receptacle for holding the material, a movable filter in said receptacle, and deflectors for said filter adapted to encounter the current set up by the latter and direct the material through and away from the filter walls, said deflectors comprising each a single strip of metal bent upon itself and having its terminal ends arranged to provide supporting means, substantially as described.

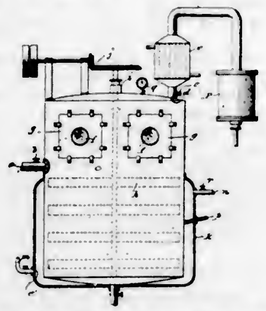
3. In a separator, the combination of a receptacle for receiving the material to be separated, a filter journaled in said receptacle, means for driving said filter, means associated with said driving means for agitating the material in said receptacle, and double deflectors for said filter adapted to encounter the currents set up by the motion of the latter and direct the material through and away from the filter walls, said deflectors comprising each a single strip of metal bent upon itself and having its terminal ends arranged to provide supporting means, substantially as described.

4. In an improved separator, the combination of a receptacle for holding the material, a movable filter in said receptacle, and exterior and interior deflectors for said filter adapted to encounter the current set up by the movement of the latter and direct the material through and away from the filter wall in coincident paths, substantially as described.

5. In a separator, the combination of a receptacle for holding the material, a movable filter in said receptacle, exterior and interior deflectors for said filter adapted to encounter the current set up by the movement of the latter and direct the material through and away from the filter wall in coincident paths, said deflectors comprising each a single strip of metal bent upon itself and having its terminal ends arranged to provide supporting means, substantially as described.

[Claim 6 not printed in the Gazette.]

1,219,291. PROCESS OF MANUFACTURING PRODUCTS FROM MILK AND CREAM. CHESTER EARL GRAY, Eureka, Cal. Filed Dec. 13, 1910. Serial No. 597,028. (Cl. 99—8.)



1. The process of manufacturing products from milk and cream, which consists in subjecting the same to rarefied conditions and heat to withdraw the incorporated oxygen and in providing the substance with a percentage of water substantially corresponding to the percentage withdrawn in the process whereby the final product has a substantially normal aqueous content.

2. The process of manufacturing products from milk and cream, which consists in heating the milk and cream, withdrawing the incorporated oxygen and aqueous vapor set free by the heat and restoring the aqueous content to the liquid whereby the relative proportions of liquid and solids remain substantially unchanged.

3. The process of manufacturing products from milk and cream, which consists in subjecting the milk and cream to rarefied conditions and heat to withdraw the incorporated oxygen, and in restoring to the liquid substantially the percentage of aqueous vapor carried off in the process.

4. The process of manufacturing products from milk and cream, which consists in subjecting the same to rarefied conditions and heat, withdrawing the incorporated oxygen, and restoring to the liquid substantially the percentage of aqueous vapor carried off in the process, and finally agitating the product under non-oxidizing conditions to change its physical condition.

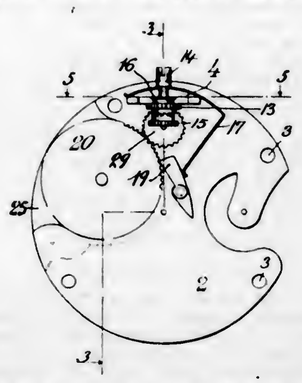
5. The process of manufacturing products from milk and cream, which consists in subjecting the same to rarefied conditions and heat, withdrawing the incorporated oxygen and restoring to the liquid substantially the percentage of aqueous vapor carried off in the process and in reducing the temperature and agitating the oxygen freed milk and cream under nonoxidizing conditions.

1,219,292. WATCH. CHARLES B. GREENBERG, Waterbury, Conn. Filed June 27, 1916. Serial No. 106,134. (Cl. 58—68.)

1. In a watch, the combination with the winding and setting mechanism and front and back plates, of a bridge located between the front and back plates, lugs on one element and notches on the other whereby said bridge is supported by said plates, an aperture in said bridge adapted to receive and hold a reciprocable stem, a winding and setting stem mounted to reciprocate in said bridge, and a spring interposed between a shoulder on the stem and the bridge with its stress tending to project the stem head away from the bridge, all substantially as set forth.

2. In a watch the combination with the winding and setting mechanism, of a bridge located between the front and back plates and adapted to receive and hold a stem, a stem supported in said bridge and provided with a shoulder, and a spring interposed between the bridge and the shoulder on the stem and provided with an extension adapted to bear against the click of the winding mechanism and in contact therewith.

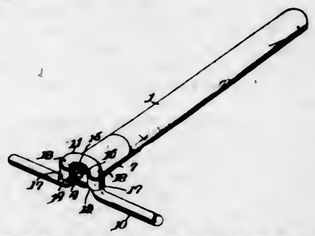
3. In a watch, the combination with the winding and setting mechanism, of a bridge located between the front and back plates and supported thereby, a winding and setting stem supported in said bridge and provided with a shoulder, and a spring interposed between the bridge and the shoulder on the stem and provided with a lateral recess to accommodate the stem, and with an extension to bear against the click of the winding mechanism.



4. In a watch, the combination of a bridge, adapted to fit between and be supported by the front and back plates and to support a stem, and provided with a lateral recess for the reception of said stem, a winding and setting stem supported in said bridge and provided with a shoulder, a spring with a lateral recess adapted to receive the stem, interposed between the bridge and the shoulder on the stem with its stress tending to lift the stem, and an extension projecting beyond the bridge and adapted to bear against the click of the winding mechanism.

5. In a watch, the combination of a bridge piece, a reciprocable stem extending through said bridge piece and provided with a setting pinion secured to it below the bridge and constituting a stop holding the stem from withdrawal through the bridge in one direction, a shoulder on said stem above the bridge, a winding pinion sleeved on said stem bearing against the under side of said bridge and provided with a collar setting against the upper side of said bridge whereby the winding pinion is held from reciprocable movement when the stem is reciprocated, and a spring interposed between the shoulder on the stem and the proximate face of the bridge piece, all substantially as set forth.

1,219,293. MEANS FOR SECURING THE HEAD OF A CARPET-SWEEPER TO A HANDLE. ALBERT M. GRUBBS, Portland, Oreg. Filed Nov. 23, 1916. Serial No. 133,078. (Cl. 15—24.)



1. In combination, a head bar, a clamp engaging same and formed with a threaded opening, a handle having an open slot therein, a screw engaging the threaded opening and having its stem fitted in the slot, said stem having a lug and a portion which extends to the circumference of the handle, the lug engaging in an opening formed in the handle, and a ferrule fitted over the handle and engaging the portion of the stem which extends to the circumference of the handle to lock the stem in the slot.

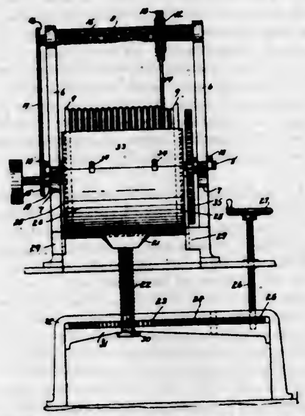
2. In combination, a head bar, a handle having an open slot and an opening in the bottom of same, a screw having its stem fitted in the slot, said stem having an intermediate hump to prevent rotation of the stem, and an end lug fitted in the opening to prevent longitudinal movement, a ferrule fitted over the slotted end of the handle, to confine the stem in the slot, and means for securing the head on the screw.

3. In combination, a handle having an open slot in one end, one wall of the slot having an opening, a screw projecting from the open slot, the stem of the screw fitting in the open slot, said stem being bent to form an intermediate hump and an end lug, the hump engaging the side walls of the slot and the lug engaging in the opening, and a ferrule fitted over the end of the handle to lock the stem in position.

4. In combination, a handle having an open slot in one end, one wall of the slot having an opening, a screw projecting from the open slot, the stem of the screw being resilient and seated in the open slot, said stem having its end bent to form a lug to engage in the opening and also provided with an intermediate bent portion to form a hump which normally projects beyond the periphery of the handle, and a ferrule fitted on the end of the handle and engaging and forcing the hump into the slot to form a frictional lock with the ferrule.

5. In combination, a handle having an open slot, a screw having a stem seated in the slot, said stem having a lock at its end to engage the handle, a ferrule on the handle to hold the stem in the slot, a sweeper head bar bent to form two legs and a cross bar, a clamp seated in the space formed by the legs and cross bar, said clamp having wings at its ends to embrace the legs, the screw extending through the central portion of the clamp to draw same and the legs against the end of the handle.

1,219,294. MACHINE FOR COILING WIRE. FIORAVANTE GUIDA, New Haven, Conn. Filed Oct. 13, 1916. Serial No. 125,458. (Cl. 91—13.)



1. In a machine for coiling wire, the combination with a frame adapted to support a reel, of a hopper beneath the reel and inclosing the lower portion thereof, and means for raising and lowering said hopper.

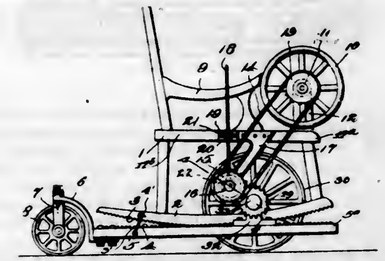
2. In a machine for coiling wire, the combination with a frame adapted to support a reel, of a hopper beneath said reel and inclosing the lower portion thereof, a removable guard connected with the upper edge of the hopper, and means for raising and lowering said hopper.

3. In a machine for coiling wire, the combination with a frame provided with inclined runways, of a reel adapted to rest upon said runways, a hopper below said reel and inclosing the lower portion thereof, and means for raising and lowering said hopper.

4. In a machine for coiling wire, the combination with a frame adapted to support a reel, a hopper below said reel and adapted to inclose the lower portion thereof, a vertically arranged worm upon which said hopper rests, and means for turning said worm, whereby said hopper may be raised and lowered.

5. In a machine for coiling wire, the combination with a frame adapted to support a reel, means for turning said reel, a hopper beneath said reel and inclosing the lower portion thereof, a worm upon which the said hopper rests, a vertically arranged post, and a hand wheel at the upper end thereof, and gear connections between the lower end of the post and said worm, whereby the worm may be moved up and down.

1,219,295. INVALID'S CHAIR. DANA G. HADLEY, West Newbury, Mass. Filed Sept. 23, 1914. Serial No. 863,157. (Cl. 208—38.)



1. A device of the class described comprising a platform, a rocking chair mounted upon said platform, means for preventing longitudinal movement of the rockers upon the platform, casters mounted in the rear of the platform, surface engaging wheels mounted in the front of the platform, and means for rotating the surface engaging wheels independently of each other.

2. A device of the class described comprising a platform, surface engaging wheels for said platforms, casters for the rear end of the platform, a rocking chair mounted upon the platform, means for supporting said surface engaging wheels, gear wheels mounted upon said supporting means and connected with said surface engaging wheels to rotate with the latter, hand wheels carried by said chair, operative connection between the hand wheels and the gear wheels, and means for disconnecting the hand wheels from said gear wheels when desired so that the engaging wheels may be independently rotated.

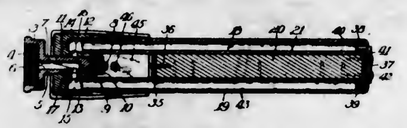
3. A device of the class described comprising a platform, surface engaging wheels for said platform, a shaft for said surface engaging wheels, gear wheels mounted upon said shaft, a chair mounted upon said platform, hand wheels carried by said chair, shafts supported beneath said chair, connection between said shafts and said hand wheels to operate the surface engaging wheels, gear wheels carried by said shafts and engaging with the gears mounted upon the first mentioned shafts, and means for disconnecting the second mentioned gear wheels from the first mentioned gear wheels.

4. A device of the class described comprising a platform, surface engaging wheels for said platform, a chair mounted upon said platform and adapted to rock upon the same, means for preventing longitudinal movement of said chair upon said platform, a shaft carried by said platform, said surface engaging wheels keyed upon said shaft and adapted to rotate freely therewith, gear wheels mounted upon said shaft which are connected with surface engaging wheels, operating means carried by said chair and engaging with said gear wheels, and means for disengaging said operating means permitting independent rotation of the surface engaging wheels.

5. A device of the class described comprising a platform, a rocking chair mounted upon said platform, means for preventing movement of said chair longitudinally upon said platform, a shaft mounted upon said platform, surface engaging wheels mounted upon said shaft beneath the chair, gear wheels connected with said surface engaging wheels, stub shafts mounted upon said chair, gear

wheels mounted upon said stub shafts, said last mentioned gear wheels being normally engaged by the first mentioned gear wheels, hand wheels mounted upon the chair, connection between said hand wheels and the second mentioned gear wheels to rotate the same when said gear wheels are engaged by the first mentioned gear wheels, and means mounted upon the chair for disengaging the second mentioned gear wheels from the first mentioned gear wheels.

1,219,296. DUSTER, SCRUBBER, AND WASHER APPLIANCE. GEORGE W. HAHN, Indianapolis, Ind. Filed Jan. 21, 1916. Serial No. 73,271. (Cl. 15—51.)



1. A scrubber appliance including a brush back having a longitudinal groove in its under side and a longitudinal groove in its upper side, a head having two frame bars fixed thereto that extend along the grooves, one in each groove, and secured to the brush back, the bar in the under groove being hollow and having apertures in its wall, a valve in the head to admit liquid to the hollow bar, and bristle-like material secured to the brush back.

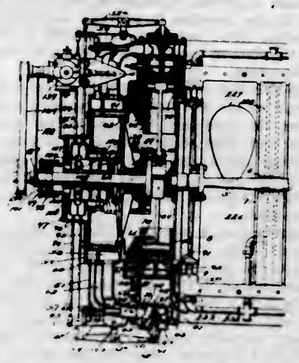
2. A scrubber and washer appliance including a brush back having a longitudinal groove in its under side and a longitudinal groove in its upper side, a head having two frame bars fixed thereto that extend along the grooves, one in each groove, and secured to the brush back, the bar in the upper groove being hollow and having a jet nozzle on its end, bristle-like material secured to the brush back, and a valve in the head to admit liquid to the hollow bar.

3. A duster, scrubber and washer appliance including a head having two chambers therein, the head being bored and having two ports extending from the chambers respectively to the bore of the head, a valve rotatable in the bore of the head and having a longitudinal duct and a continuing transverse duct to conduct liquid to either one of the ports, two tubes secured to the head in connection with the respective chambers, one of the tubes having a jet nozzle on its end, the remaining tube having a closed end and having apertures in its wall, and a brush having its back inserted between the two tubes and secured thereto.

4. In a duster, scrubber and washer appliance, the combination with a valve-equipped head, of two conduits connected to the head to receive water therefrom, one of the conduits having a jet nozzle on its end, the remaining one of the conduits having apertures in its wall, a brush back inserted between the two conduits and having grooves receiving the adjacent sides of the conduits, means securing the back to the conduits, and bristle-like material secured to the brush back.

5. In a duster, scrubber and washer appliance, the combination of a head having a longitudinal bore and also two wings on two opposite sides respectively of the head, each wing having a chamber therein, the head having two ports therein extending from the bore and also to the chambers respectively, two tubes secured to the two wings in connection with the chambers respectively, one of the tubes having a plug in its end and also apertures in the wall of the tube, the remaining tube having an apertured plug in its end, a brush back between the two tubes, bristle-like material secured to the brush back and projecting therefrom adjacent to the apertured tube, a valve rotatable in the bore of the head and having a duct therein extending to the bore to open either one of said ports, the valve being adapted to close both the ports, said valve having a cup-shaped outer member provided therein with screw threads, two handle plates covering said head and its wings and also portions of said tubes adjacent to said brush back, and a bolt connected to said plates and securing them in place.

1,219,297. GAS-TURBINE. LEWIS A. HAINES, Columbus, Ohio. Filed Apr. 8, 1914. Serial No. 829,288. (Cl. 123—9.)



1. In a gas turbine, power generating turbines, separate groups of active elements coöperating therewith, and automatically operating shifting devices having actuating electrical means for alternately supplying and shutting off the motive agent to and from the said groups of active elements and for rendering the individual units of the groups active and inactive.

2. In a gas turbine, power generating turbines having separate groups of active elements, automatically operating shifting devices having actuating electrical means for alternately supplying the heated motive agent to and from the turbines and for automatically shutting off the motive agent from the separate groups and for rendering the individual units of the groups active and inactive.

3. In a gas turbine, revolubly active turbines alternately operating as power generating means, groups of cylinders and pistons independently coöperating with the turbines, and automatically shifting devices having actuating electrical means for delivering unrestricted charges of a motive agent in succession to the cylinders and operating to supply and shut off the motive agent to and from the groups to render one group active while the other is inactive, the motive agent being held inclosed and burned in the pistons while the cylinders are receiving new charges.

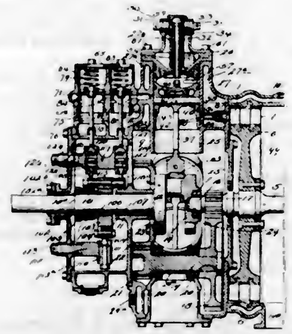
4. In a gas turbine, the combination with power generating turbines having groups of cylinders with single pistons therein having combined compression and combustion chambers therein, means being provided in the pistons for automatically closing the chambers thereof during instrokes of the pistons, of automatically operating electric means for alternately supplying and shutting off the motive agent to and from the cylinders and pistons.

5. In a gas turbine, power generating turbines, groups of cylinders with single pistons therein having combined compression and combustion chambers therein independently coöperating with the turbines, and electric means for automatically supplying and shutting off the motive agent to and from the groups in alternation, said electrical means including pairs of uniformly shifting devices, the motive agent being stored under pressure in the piston chambrs by the outward movement of the pistons in the cylinders.

[Claims 6 to 89 not printed in the Gazette.]

1,219,298. GAS-TURBINE. LEWIS A. HAINES, Columbus, Ohio. Filed Oct. 9, 1915. Serial No. 55,049. (Cl. 123—9.)

1. In a gas turbine, power generating turbines having separated groups of elements, distinct groups of cylinders having pistons therein and to which charges of the motive agent are supplied and undergo combustion for feed to the elements of the turbines, and electrically controlled means operative for alternately supplying and shutting off a motive agent to and from the cylinders and pistons and operative to deliver the motive agent to all the units of each group of cylinders and pistons in alternation or to portions of the units of each group simultaneously.



2. In a gas turbine, power generating turbines, cylinders and pistons arranged in groups adjacent to the turbines to receive and discharge the motive agent to the turbines, and electrically operated mechanism for controlling the admission of the motive agent to the cylinders and pistons of each group in succession, or to a portion of said cylinders and pistons in each group in alternation, or to portions of the cylinders and pistons of each group simultaneously in the groups.

3. In a gas turbine, revolubly active turbines alternately operating as power generating means, groups of cylinders and pistons independently coöperating with the turbines, and electrically operated mechanism controlling the delivery of charges of a motive agent in succession to the cylinders and operating to supply and shut off the motive agent to and from the groups to render one group active while the other is inactive and also including means for delivering air to the inactive groups, the said mechanism being also adjustable to effect the simultaneous operation of portions of the cylinders and pistons in the two groups.

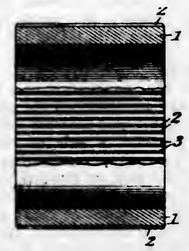
4. In a gas turbine, the combination with a power generating turbine, of a group of cylinders and pistons, each cylinder and piston of the group having automatically operating electrically controlled devices coöperating therewith for alternately supplying and shutting off a motive agent to and from the same and for supplying cooling air thereto when the motive agent is shut off therefrom, the said devices being operative to deliver the motive agent and air to all the cylinders and pistons of each group in succession or to only a part of said cylinders and pistons of each group, or to portions of the units of each group simultaneously.

5. In a gas turbine, the combination of an inclosing casing, a power generating turbine within the casing, a group of cylinders and pistons in the casing for operating on and discharging a motive agent to the turbine, mechanism consisting of feed controlling pistons and cylinders for regulating the feed of the motive agent to the said first named group of cylinders and pistons, and electrically actuated devices for controlling the operation of the said feed controlling cylinders and pistons.

[Claims 6 to 21 not printed in the Gazette.]

1,219,299. BUR FOR TREATING GRINDSTONES. EDWARD M. HALL, Carthage, N. Y. Filed Dec. 28, 1915. Serial No. 68,977. (Cl. 125—6.)

A bur for use in treating the surface of grindstones, having teeth upon its peripheral surface, said teeth being separated by channels, the bottoms of which are substantially flat and which serve to limit the depth to which



said teeth may be driven into the surface of the grindstone and to secure alternate flat-top ridges.

1,219,300. SPARK-COIL. JOHN ALDEN HALL, East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Aug. 25, 1915. Serial No. 47,333. (Cl. 175—357.)



1. In a spark coil, the combination with a coil, an inclosing casing therefor and terminals on the casing connected with the coil, of a vibrator unit therefor comprising a base, a pair of coöperating contact members supported by the base, an armature controlling the contact members, a conducting member mounted on the base, and means for securing the vibrator unit to the casing with either the contact members or the conducting member in electrical contact with the terminals.

2. In a spark coil, the combination with a coil, an inclosing casing therefor and terminals on the casing connected with the coil, of a vibrator unit therefor comprising a base, a pair of coöperating contact members supported by the base, an armature controlling the contact members, a conducting member mounted on the base and bridging the contact members, an adjusting screw carried by the conducting member for adjusting the contact pressure between the contact members, and means for securing the vibrator unit to the casing with either the contact members or the conducting member in electrical contact with the terminals.

3. In a spark coil, the combination with a coil, an inclosing casing therefor and terminals on the casing connected with the coil, of a vibrator unit therefor comprising a base, a pair of contact carrying members radially positioned with respect to and supported by the base and having their free ends in juxtaposition, an armature controlling the contact carrying members, a conducting member secured at each end thereof to opposite sides of the base, and means for securing the vibrator unit to the casing with either the contact members or the conducting members in electrical contact with the terminals.

4. In a spark coil, the combination with a coil, an inclosing casing therefor and terminals on the casing connected with the coil, of a vibrator unit therefor comprising a base, a pair of contact carrying members radially positioned with respect to and supported by the base and having their free ends in juxtaposition, an armature controlling the contact carrying members, a conducting member secured at its ends to opposite sides of the base and

bridging the free ends of the contact carrying members, an adjusting screw carried by the conducting member for adjusting the contact pressure between the contacts of the contact carrying members, and means for securing the vibrator unit to the casing with either the contact carrying members or the conducting member in electrical contact with the terminals.

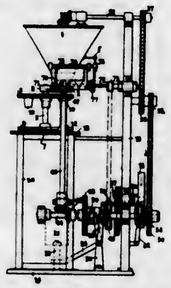
5. In a spark coil, the combination of a coil, an inclosing casing therefor and terminals on the casing connected with the coil, of a vibrator unit therefor comprising a base of non-conducting material, a pair of resilient contact carrying members, an eyelet for securing each contact carrying member to the base at opposite corners thereof, an armature for controlling the contact carrying members, a conducting member positioned at right angles with respect to the contact carrying members, eyelets for securing the ends of the conducting member to opposite corners of the base, and screws for securing the base to the casing with the eyelets of either the contact carrying members or the conducting member in electrical contact with the terminals.

1,219,301. FILLER FOR A COTTON-GIN PRESS-BLOCK. JOSEPH SIDNEY HALL, Beeville, Tex. Filed Mar. 13, 1916. Serial No. 83,962. (Cl. 100—19.)



In combination with a press block and filler having top boards, spaced apart, and bottom boards with cleats fastened to the outer faces thereof, a filler between said top and bottom boards and comprising two parallel beams with beveled ends, cross-pieces connecting said beams, the spaces intermediate said cross-pieces and ends of the beams forming pockets to receive bale bagging.

1,219,302. MACHINE FOR BAGGING AND WEIGHING GRANULAR AND POWDERY SUBSTANCES, PARTICULARLY COCOA POWDER. JOSEPH HALSIG, Viersen, Germany. Filed Mar. 16, 1915. Serial No. 14,790. (Cl. 73—183.)



1. In a bagging and weighing machine, a charging funnel, a coacting rotatable carrier having an upper apertured plate, a lower apertured plate, container-holding means on the upper plate, an apertured support below the carrier, and a scale beam having a pan adapted to be projected through said support and toward the carrier.

2. In a bagging and weighing machine, a charging funnel, an inclosed stirring arm and an inclosed conveyer, a rotatable carrier beneath said funnel, said carrier having an upper apertured plate, a lower apertured plate and container-holding means on the upper plate, a scale beam having a pan below the lower plate, and adjustable means for actuating the stirring arm and conveyer.

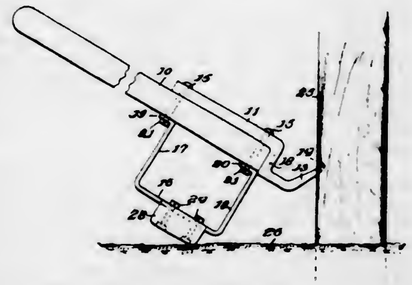
3. In a bagging and weighing machine, a rotatable carrier, having an upper toothed and apertured disk, a lower apertured disk, an upright shaft connecting the disks, nozzles depending from the upper disk, and power-transmitting means intergeared with said upper disk.

4. In a bagging and weighing machine, a rotatable carrier, container-holding means on said carrier, a primary charging device coöperating with the carrier, a supplemental charging device likewise coöperating with the carrier, a scale beam beneath the carrier, a pan on said beam adapted to be projected toward the carrier, an electro-motor for operating the carrier and secondary charging device, and a mercury contact interposed between said electro-motor and the scale beam.

5. In a bagging and weighing machine, a rotatable carrier, container-holding means on said carrier, a primary charging device coöperating with the carrier, a supplemental charging device likewise coöperating with the carrier, a scale beam beneath the carrier, a pan on said beam adapted to be projected toward the carrier, an electro-motor, adapted to rotate the carrier, a mercury contact interposed between the scale beam and the electro-motor-magnet, and means controlled by said contact for arresting the carrier and for simultaneously actuating the supplemental charging device.

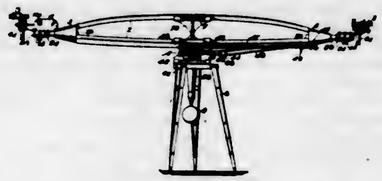
[Claim 6 not printed in the Gazette.]

1,219,303. POST-PULLER. GRANT HALSTEAD, Orlando, Nebr. Filed Sept. 12, 1916. Serial No. 119,718. (Cl. 254—182.)



A device of the class described comprising a stock extended into a handle at one end, a bar including a body portion engaging said stock at the other end and a right angled projection bearing against the adjacent end of the stock, the projection having a reduced extension terminating in a wedge shaped point, a bracket having lateral portions bearing against the stock and secured thereto by fastening devices which likewise pass through the bar, and a fulcrum block attached to the body of the bracket.

1,219,304. INSTRUMENT FOR MEASURING AND DETERMINING DISTANCES. JOHN G. HANKS, Oakland, Cal., assignor to California Range Finder Company, Oakland, Cal., a Corporation of Arizona. Filed Dec. 17, 1907. Serial No. 406,915. (Cl. 248—30.)



1. A measuring instrument comprising a beam composed of longitudinal members, a conical wedge received between the ends of the members, and a socket adapted to fit over the wedge for holding the longitudinal members thereagainst.

2. A measuring instrument comprising a beam composed of longitudinal members, a conical wedge having grooves therein, said longitudinal members converging at their ends and adapted to be received in the grooves, and a socket adapted to fit over the wedge for holding the longitudinal members in the grooves.

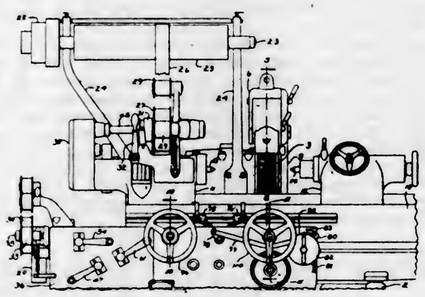
3. A measuring instrument, comprising a beam consisting of a plurality of members, a support inserted between the centers of the members and against which the latter bear, the ends of the members being caused to converge, and means embracing the latter and holding them together in opposition to the resistance of the central support.

4. A measuring instrument, comprising a beam consisting of a plurality of members, a support inserted between the centers of the members and against which the latter bear, the ends of the members being caused to converge, means embracing the latter and holding them together in opposition to the resistance of the central support, and means connected with the support to form a horizontal bearing whereby the entire beam is pivoted on its center.

5. A measuring instrument, comprising a beam consisting of a plurality of members, a support inserted between the centers of the members and against which the latter bear, the ends of the members being caused to converge, means embracing the latter and holding them together in opposition to the resistance of the central support, extensions, and means connected with the ends of the members for clamping the extensions thereto.

[Claims 6 to 8 not printed in the Gazette.]

1,219,305. METAL-REDUCING MACHINE. BENGT M. W. HANSON, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Oct. 25, 1915. Serial No. 57,641. (Cl. 51—12.)



1. The combination of means for supporting and rotating the work about a fixed axis, means for supporting a tool, mechanism for automatically causing a relative reciprocation of the work and the tool and a relative motion of the work and the tool toward each other, mechanism for causing a relative motion of the work and the tool toward each other, and means controllable at will, for alternately putting said mechanism into action.

2. The combination of means for supporting and rotating the work about a fixed axis, means for supporting a tool, and means governed at will, for automatically causing a relative reciprocation of the work and the tool and a relative movement of the same toward each other at the conclusion of each stroke of the reciprocation or for automatically causing solely a relative movement of the work and the tool toward each other.

3. The combination of means for supporting and rotating the work about a fixed axis, means for supporting a tool, means for rotating the tool about an axis parallel with the axis of rotation of the work, and means governed at will for automatically causing the reciprocation of the work and a movement of the work toward the tool at the conclusion of each stroke of the reciprocation, or for automatically causing solely a movement of the work toward the tool.

4. The combination of a main slide, an auxiliary slide supported by the main slide, and mechanism governed at will for automatically reciprocating the auxiliary slide and for moving the main slide transversely of the line of reciprocation of the auxiliary slide at the conclusion of each stroke of the reciprocation, or a motion of the main slide in a constant direction transversely of the auxiliary slide.

5. A machine of the class described having a bed, a main slide and an auxiliary slide, the auxiliary slide being supported by the main slide for movement longitudinally of the bed, and the main slide being supported by and movable transversely of the bed, and mechanism governed at will, for automatically reciprocating the auxiliary slide and for moving the main slide at the conclusion of each stroke of the reciprocation or solely the motion of the main slide.

[Claims 6 to 12 not printed in the Gazette.]

1,219,306. WIRE-STRETCHER. JOHN H. HARPER, Ringgold, Tex. Filed Aug. 18, 1916. Serial No. 115,618. (Cl. 254—72.)



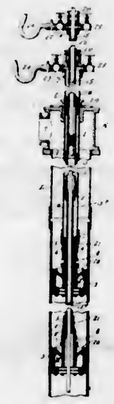
A wire stretcher including a frame embodying spaced side bars, means for anchoring the frame in position, a rack bar slidably mounted between the side bars, one of the side bars being provided with communicating V-shaped recesses, and further provided adjacent the sides of the V-shaped recesses with finger guiding recesses, a lever pivotally mounted on one of the side bars and arranged within the V-shaped recesses, and fingers pivoted to the lever above and below the rack bar to alternately engage the teeth thereof and positioned within and guided by the finger receiving recesses during the actuation of the lever.

1,219,307. DEEP-WELL PUMP. WILLIAM B. HEWITT, Holyoke, Mass., assignor, by mesne assignments, to Worthington Pump and Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Feb. 18, 1916. Serial No. 79,019. (Cl. 103—82.)

1. A pump having a plurality of independently movable buckets or plungers arranged in line and having concentric bucket or plunger rods, and having the hollow rod of an intermediate bucket or plunger formed of a larger cross-section for inclosing the inner rod and a smaller cross-section throughout the portion traversed by the upper bucket or plunger whereby space for the inner rod is provided and the reduction in capacity and port and valve area of the upper bucket by the intermediate rod diminished.

2. A pump having a plurality of independently movable buckets or plungers arranged in line and having concentric bucket or plunger rods, and having the rod of an intermediate bucket or plunger formed of a larger cross-section for inclosing the inner rod and a smaller cross-section throughout the portion traversed by the upper bucket or plunger, and having the rod of the upper bucket or plunger made of a larger cross-section for inclosing the intermediate rod and a smaller cross-section for connection to its bucket, whereby the required size of the intermediate and outer rods for inclosing the rods inside them is provided, and the reduction in capacity and port and valve area of the upper bucket by the rods diminished.

3. A pump having a plurality of independently movable buckets or plungers arranged in line and having concentric bucket or plunger rods, and having the rod of an intermediate bucket or plunger formed of a larger cross-section for inclosing the inner rod and a smaller cross-section throughout the portion traversed by the upper bucket or plunger, whereby space for the inner rod is provided and the reduction in capacity and port and valve area of the upper bucket by the intermediate rod diminished, said intermediate rod also being reduced in cross-section at its upper end to balance the pressures on the intermediate rod.



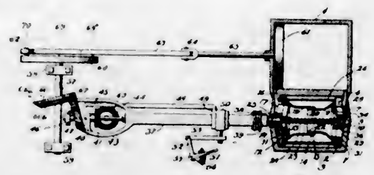
4. A pump having a plurality of independently movable buckets or plungers arranged in line and having concentric bucket or plunger rods, and having the rod of an intermediate bucket or plunger formed of a larger cross-section for inclosing the inner rod and a smaller cross-section throughout the portion traversed by the upper bucket or plunger, whereby space for the inner rod is provided and the reduction in capacity and port and valve area of the upper bucket by the intermediate rod diminished, a ring mounted internally on the outer rod to form a bearing for the reduced portion of the intermediate rod, and a packing joint to prevent leakage past the bearing ring.

5. A pump having a plurality of independently movable buckets or plungers arranged in line and having concentric bucket or plunger rods, and having the rod of an intermediate bucket or plunger formed of a larger cross-section for inclosing the inner rod and a smaller cross-section throughout the portion traversed by the upper bucket or plunger, whereby space for the inner rod is provided and the reduction in capacity and port valve area of the upper bucket by the intermediate rod diminished, means to supply lubricant to the annular space between the intermediate and outer rod, a ring mounted internally on the outer rod at the bottom of the lubricant space to form a bearing for the reduced portion of the intermediate rod, and a packing joint to prevent leakage past the bearing ring.

[Claims 6 to 9 not printed in the Gazette.]

1,219,308. ROTARY VALVE. ELBERT R. HOBBS, Buhl, Idaho. Original application filed Dec. 29, 1915, Serial No. 69,169. Divided and this application filed June 6, 1916. Serial No. 101,961. (Cl. 121—97.)

1. In combination, a reciprocating engine having a cylinder and reciprocating piston therefor connected through a pitman and crank to a shaft for rotating the same at a substantially constant rate of rotation, a rotary valve for controlling the admission of fluid to the cylinder at each side of the piston, and motion translating means connected between said valve and said shaft for rotating said valve in substantially constant relation to the rate of rectilinear movement of the piston.



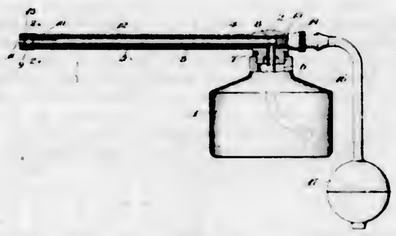
2. In combination, a reciprocating engine, a rotary valve therefor, and a variable motion transmission mechanism between a moving part of the engine and said valve for rotating said valve at a decreasing speed during the forward stroke of the engine and at an increasing speed during the back stroke.

3. In combination, a reciprocating engine and shaft therefor rotated at a substantially constant speed, a rotary valve for controlling the admission of fluid to the cylinder of the engine, and an operating shaft therefor, and a pair of intermeshing eccentric bevel gears each connected to one of said shafts and so proportioned as to cause said valve shaft to rotate in substantially constant relation to the rectilinear movement of the piston of the engine.

4. In combination, a reciprocating engine having pitman and crank connection between the piston and the engine shaft, a rotary valve for controlling the admission of fluid to the engine cylinder on both sides of the piston with driving means therefor, and motion transforming means between said engine shaft and the valve driving means adapted to compensate for the variable speed ratio between the piston and engine shaft due to the said pitman connection.

5. In a fluid engine, a reciprocating driving part and a rotating driven part with a variable speed driving connection between them, a rotary valve controlling the supply of fluid to said reciprocating part, and variable speed gear connections between said rotating part and said rotary valve so arranged as to transmit motion from said rotating part to said rotary valve constantly during the operation of the reciprocating part, in a speed ratio inversely proportional to the speed ratio between the reciprocating driving part and the rotating driven part of the engine.

1,219,309. ATOMIZER. JAMES J. HOLLAND, Philadelphia, Pa. Filed June 29, 1916. Serial No. 106,544. (Cl. 128—2.)



1. An atomizer comprising a head having a tube projected therefrom, a lining tube in the first mentioned tube and head, a liquid supply tube secured in the head and communicating with the interior of the lining tube, an air tube projecting into the lining tube across the end of the liquid supply tube, and said lining tube, liquid supply tube, and air tube composed of non-corrodible material.

2. An atomizer comprising a head having a tube projected therefrom, a lining tube in the first mentioned tube and head, a nozzle in the end of the first mentioned tube and located against the end of the lining tube, a liquid supply tube secured in the head and bearing against the lining tube, said lining tube having an opening therein communicating with the liquid supply tube, an air tube projecting through the lining tube into the nozzle, and said lining tube, nozzle, liquid supply tube, and air tube, composed of non-corrodible material.

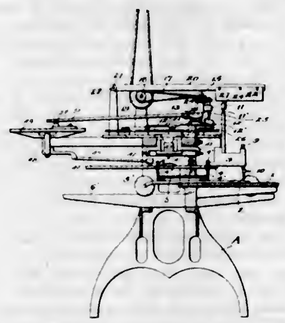
3. An atomizer comprising a head having a longitudinal bore and having an opening in its central bottom portion connected with the bore, a tube fixed to the head and having its bore registering with the bore of the head, a lining tube secured in the first mentioned tube and bore of the head and having an opening in its wall, a liquid supply tube secured in the opening in the head, bearing against the lining tube and communicating with the opening in the wall of the latter, an air tube extending through the lining tube and removably secured in the head, said lining tube, liquid supply tube, and air tube, composed of non-corrodible material.

4. An atomizer comprising a head having a longitudinal bore and having an opening in its central bottom portion communicating with the bore, a tube fixed to the head and having its bore registering with the bore of the head, a lining tube secured in the first mentioned tube and bore of the head and having an opening in its wall, a liquid supply tube secured in the opening in the head, bearing against the lining tube and communicating with the opening in the wall of the latter, an air tube extending through the lining tube and removably secured in the head, a nozzle secured in the end of the first mentioned tube, bearing against the lining tube, and receiving the discharge end of the air tube, said lining tube, nozzle, liquid supply tube, and air tube composed of non-corrodible material.

5. An atomizer comprising a head having a longitudinal bore, and having an integral tube projecting from the head with its bore registering with the bore of the head, of a lining tube secured in the first mentioned tube and in a portion of the bore of the head, said head and lining tube having openings therein, a liquid supply tube secured in the head bearing against the lining tube and registering with the opening in the latter, an air tube projecting through the lining tube and having a screw threaded nipple thereon screwed into the head and bearing against the end of the lining tube, said lining tube, liquid supply tube, and air tube composed of non-corrodible material.

[Claim 6 not printed in the Gazette.]

1,219,310. PANTOGRAPH-MACHINE. WILLIAM H. HOPE, Providence, R. I. Filed Oct. 31, 1914. Serial No. 869,641. (Cl. 90—18.1.)



1. In a pantograph machine, in combination with a pair of superposed carriages and means whereby the same are operated in unison, a pivoted arm, a gear carried by the arm, means to drive the gear, a cutter, a gear connected to the cutter and meshed with the first named gear, a plate depending from the arm, a bar upon which the plate rests, a rack, an adjustable connection between the rack and the bar, a frame connected to the lower carriage, a gear meshed with the rack and borne by the frame, a segment shaped rack connected to the gear, a pinion meshed with the rack of the segment, and a rack on the frame meshed with the pinion and carrying a stylus.

2. In a pantograph machine, a cutter, means for moving the cutter including a rack, a stylus, a rack connected with the stylus, a pinion meshing with one of the racks, a second pinion meshing with the other rack, and a segmental gear relatively fixed to one pinion and meshing with the other pinion.

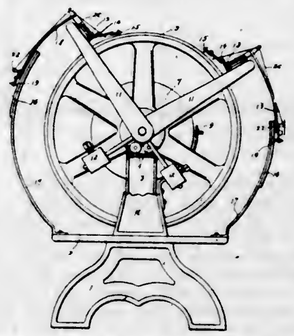
3. In combination with the carriages and stylus of a pantograph machine, a cutter arranged to operate on work held on one of the carriages, means movably connecting the carriages whereby movement of one carriage will move the other carriage, a pivotal arm actuating the cutter, a slide member connected to the arm and supporting the cutter, said stylus being mounted on the other of said carriages, a rack connected to the sylus, and gearing mechanism connecting the arm with the rack whereby the stylus and the cutter will be raised or lowered in unison.

4. In a pantograph machine, a plurality of pivoted arms, a cutter carried by each arm for movement therewith, a slidable rack bar, means operable by the latter to move the arms in unison, a stylus, and means operatively connecting the stylus to the rack bar.

5. In combination with the carriages, of a pantograph machine, a stylus carried by one carriage, a series of cutters arranged to operate on work supported by the other carriage, means to drive the cutters, a pivoted arm for supporting each cutter, a bar common to all of the arms for supporting the free ends of the same, means connected to the bar for operating the same, and means operated by the up and down movements of the stylus for effecting up and down movement of the last named means.

[Claims 6 to 10 not printed in the Gazette.]

1,219,311. PANTOGRAPH ENGRAVING-MACHINE. WILLIAM H. HOPE, Providence, R. I. Filed July 22, 1916. Serial No. 110,703. (Cl. 33—22.)



1. In a pantograph engraving machine, a frame having bearings for a roll to be engraved, a graver carriage mounted on the frame for movement about the roll, a cutter pivoted to the carriage for cutting the roll, a support arranged concentric with the roll for supporting a design pattern, a second frame connected with the carriage, a stylus on the second frame for following a pattern on the support, and means on the second frame connected to the pivoted cutter for raising and lowering the latter from and onto the roll.

2. In a pantograph engraving machine, a frame having bearings for a roll to be engraved, a U-frame pivoted to the first frame for movement about the roll concentric

therewith, a graver carriage supported on the U-frame for movement over the circumference of the roll longitudinally of the latter, a cutting point on the carriage, a design pattern support, and a stylus connected to the carriage and arranged for following a pattern on the support.

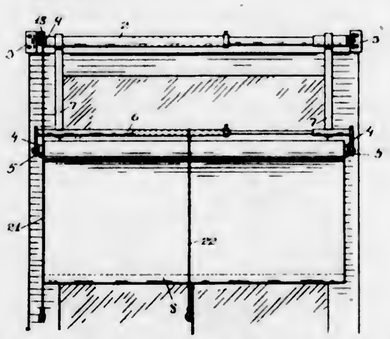
3. In a pantograph engraving machine, means for supporting a roll to be engraved, a graver carriage movable relative and concentric to the roll to be engraved, a cutter on the carriage for cutting a design on the roll, a design pattern support, and a stylus connected with the carriage for following a pattern on the support and means for supporting the graver carriage.

4. In a pantograph engraving machine, means for supporting a roll to be engraved, a graver carriage, means for holding the roll fixed, a cutter pivoted to the carriage for cutting the roll, a support arranged concentric with the roll for supporting a design pattern, a frame connected with the carriage, a stylus on the frame for following a pattern on the support, means on the frame connected to the pivoted cutter for raising and lowering the latter from and onto the roll and means for supporting the graver carriage.

5. In a pantograph engraving machine, means for supporting a roll to be engraved, a graver carriage, means supporting the carriage for concentric and longitudinal movement relative to the roll, a cutter on the carriage, a stylus connected with the carriage and a support concentric with the roll for holding a pattern to be followed by the stylus.

[Claims 6 to 14 not printed in the Gazette.]

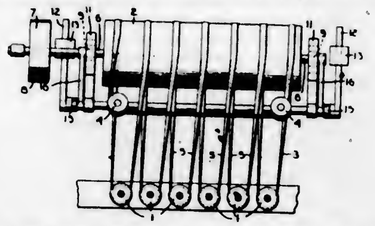
1,219,312. CURTAIN-HANGER. WATSON HOWE, Valley Stream, N. Y. Filed Apr. 14, 1916. Serial No. 91,069. (Cl. 156—36.)



In a curtain hanger, brackets one of which has a squared seat, a roller having outer peripheral recesses, a rod fitting in the end of said roller and having a squared outer end fitting in said seat and a cleft at its inner end, a coiled spring surrounding said rod and having its inner end coil engaging said cleft, an end piece having peripheral projections engaging said recesses, said end piece having lateral pins and projections engaging the outer end coil of said spring, a casting fast to said rod, and a dog pivotally mounted upon said casting and having engagement with either of said pins to lock said roller against turning, said dog having a releasing pull cord, whereby endwise movement of the spindle rod will remove the rod, the casting, the pawl, the end piece and the coiled spring, as a unit.

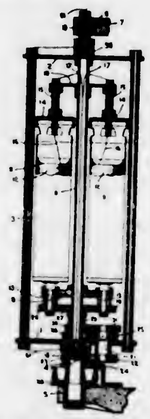
1,219,313. BELT-TIGHTENER. CHARLES W. HUBBARD, Weston, Mass. Filed July 7, 1916. Serial No. 108,059. (Cl. 64—52.)

The combination with a plurality of driven elements, of a driving drum, an endless driving belt passing around each driven element and the driving drum alternately, means for rotating the drum, means for supporting said drum both for rotative movement about its axis and for bodily movement in a direction at right angles to its axis



toward and from the driven elements, and automatically-operative means acting on said drum and tending to move it bodily in a direction to maintain the belt tight.

1,219,314. TWISTING APPARATUS. CHARLES W. HUBBARD, Weston, Mass. Filed Nov. 4, 1916. Serial No. 129,613. (Cl. 118—49.)



1. In a twisting machine, the combination with a flier, of a tubular support situated centrally thereof, a plurality of yarn holders rotatably mounted on said tubular support and adapted to deliver yarn into said support at one end thereof, means to rotate the flier and to hold the tubular support stationary, said flier having a thread passage at one end thereof which communicates with the other end of said tubular support and also having an axial thread passage at the other end thereof whereby the individual yarn ends will be twisted together once at each end of the flier for each revolution thereof.

2. In a twisting machine, the combination with a flier, of a tubular support situated centrally thereof, a plurality of yarn holders rotatably mounted on said tubular support and adapted to deliver yarn into said support at one end thereof, means to rotate the flier and to hold the tubular support stationary, said flier having a thread passage at one end thereof which communicates with the other end of said tubular support and also having an axial thread passage at the other end thereof, and means for rotating the individual yarn holders whereby each yarn end will be twisted before it is delivered to the tubular support and the yarn ends will be twisted together once at each end of the flier for each revolution thereof.

3. In a twisting apparatus, the combination with a flier having an axial thread passage at each end, of a tubular support situated axially of the flier, two yokes or heads secured to said tubular support, a plurality of yarn receivers rotatably mounted in said yokes or heads, and each having an axial yarn-delivering passage through which yarn is delivered to one end of the tubular support, the combined yarn ends being delivered from the tubular support through the thread passages in the two ends of the flier successively, and means to rotate the flier about its axis and the yarn holders about their axes while maintaining the tubular support stationary.

1,219,315. PROCESS OF PRODUCING CEMENT AND RECOVERING POTASSIUM COMPOUNDS. FREDERICK W. HUBER and FRANK F. REATH, Riverside, Cal. Filed Sept. 26, 1916. Serial No. 122,295. (Cl. 106—25.)

1. A process of recovering alkalis from by-products comprising finely divided silicious, calcareous products containing alkali salts of sulfur-and-oxygen-containing acids, which comprises mixing such material with a fluorid of an alkaline earth metal, and then heating the mixture to a cement-forming temperature, under conditions capable of promoting the liberation and volatilization of alkali metal compounds.

2. A process of treating cement kiln flue dust containing materially more alkali sulfate than a normal Portland cement raw mix, which comprises mixing such dust with a quantity of a haloid salt of an alkali earth metal, and calcining the mixture at a cement-forming temperature.

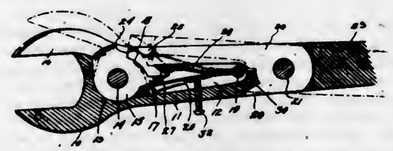
3. The step of working up a flue dust derived from the burning of cement, by mixing the same with a material containing a fluorid, and clinkering the mixture.

4. The process which comprises burning cement-forming materials containing alkali metal compounds, collecting the flue dust thereby produced, mixing the same with a haloid salt of an alkaline earth metal, again calcining and collecting a second flue dust, digesting said second flue dust with water in the presence of an alkaline earth compound and thereafter separating the aqueous liquid containing at least the major portion of the alkali in the form of water-soluble compounds from the calcareous residue.

5. The process which comprises calcining a raw cement mix containing material amounts of potash, and collecting a potassiferous flue dust, mixing such dust with a material containing calcium fluorid, calcining such mixture and collecting a second flue dust, treating such second flue dust with water in the presence of calcium compounds, separating the liquid from the solid materials, and recovering a potassium compound from the liquid.

[Claims 6 to 8 not printed in the Gazette.]

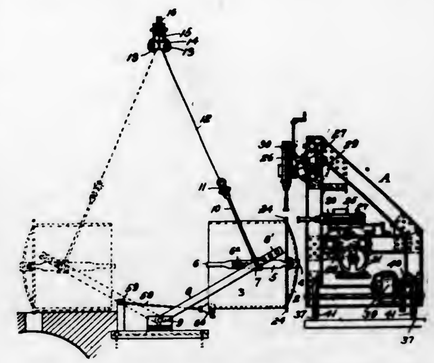
1,219,316. WRENCH. WASYL HUCAL, Vegreville, Alberta, Canada. Filed Dec. 13, 1916. Serial No. 136,659. (Cl. 81—91.)



1. In a wrench, a fixed jaw having a shank, an oscillating jaw pivoted to the shank to move into and out of parallelism with the fixed jaw, a handle lever pivoted to the shank and having a squared end, a lug on said oscillating jaw behind which said squared end rests to lock the oscillating jaw against movement away from the fixed jaw, a spring urging the oscillating jaw into parallelism with the fixed jaw, a second spring urging said squared end inward to rest behind the shoulder, and coöperating means on the shank and handle lever to limit movement of said lever in one direction.

2. In a wrench, a fixed jaw having a shank, an oscillating jaw pivoted to the shank to move into and out of parallelism with the fixed jaw, a handle lever pivoted to the shank and having a squared end, a lug on said oscillating jaw behind which said squared end rests to lock the oscillating jaw against movement away from the fixed jaw, a spring urging the oscillating jaw into parallelism with the fixed jaw, a second spring urging said squared end inward to rest behind the shoulder, coöperating means on the shank and handle lever to limit movement of said lever in one direction and interlocking means on the shank and forward end of the lever to take the strain against the squared end of said lever.

1,219,317. WELDING APPARATUS. PERCY E. HUNTER, Pittsburgh, Pa. Filed Aug. 18, 1916. Serial No. 115,693. (Cl. 78—96.)



1. In a welding apparatus of the class described, in combination with heating and welding mechanism, means for supporting and moving an article to be welded from heating to welding position embodying a pair of pivoted arms and a clamp pivoted between them.

2. In a welding apparatus of the class described, in combination with heating and welding mechanism, means for supporting and moving an article to be welded from heating to welding position, comprising a pivoted framework carrying a pivotally mounted clamp located between the heating and welding position, and means for actuating said framework.

3. In a welding apparatus of the class described, in combination with heating and welding mechanism, means for supporting and moving an article to be welded from heating to welding position, comprising a pivoted framework carrying a pivotally mounted clamp located between the heating and welding position, and means for actuating said framework and for positively throwing it from one side to the other.

4. In a welding apparatus of the class described, in combination with heating and welding mechanism, means for supporting and moving an article to be welded from heating to welding position, and for reversing it in position in its movement from one position to another.

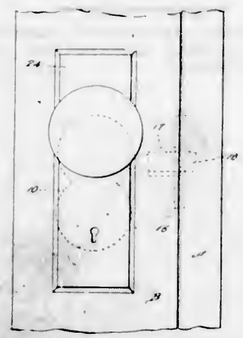
5. In combination with a welding machine at one side and a heating furnace at the other side, an intervening article-supporting mechanism having a pivotally mounted clamp adapted to pivotally support an article, and means for swinging said mechanism and article.

[Claims 6 to 15 not printed in the Gazette.]

1,219,318. LATCH. JAMES M. HYDE, Sapulpa, Okla. Filed Sept. 23, 1916. Serial No. 121,792. (Cl. 70—29.)

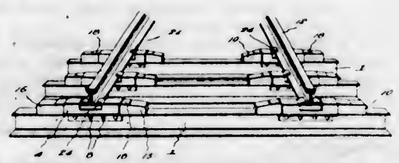
1. In a lock, a casing having a removable cover plate and also provided with internal run and guide ways at right angles to each other, a part slidable within the runway and having a lug, a locking bolt detachably engaged in the lug, a sliding locking bolt in the guideway and movable into and out of the path of movement of said part, a spindle operated cam for action upon said part, a tooth formed in the guideway and engageable with the locking bolt to hold the same in adjusted position, and spring means acting upon said part and bolt.

2. In a lock, a casing having a removable cover plate and also provided with internal run and guide ways at right angles to each other, a part slidable within the runway, a locking bolt detachably engaged in said part, a sliding locking bolt in the guideway and movable into and out of the path of movement of the part, a spindle oper-



ated cam for action upon the part, a tooth formed in the guideway and engageable with the locking bolt to hold the same in adjusted position, spring means acting upon said part and bolt, and a guide plate having a guide thimble for the latch bolt.

1,219,319. RAILWAY-TIE AND FASTENER. HARRY S. ISHAM, Belmar, N. J. Filed Mar. 31, 1916. Serial No. 88,062. (Cl. 238—5.)



1. A railway tie fastener, comprising a tie having a yoke member formed thereon, a fastening device and a supporting element coöperating with the fastening device and said member to retain the fastening device in holding engagement with a rail.

2. A railway tie fastener comprising a yoke adapted to be mounted upon a tie, a plurality of fastening devices each provided with a recess to engage a part of a railroad rail, and a supporting element interposed between a tie and a rail to direct the fastening devices against the yoke and into gripping engagement with the rail.

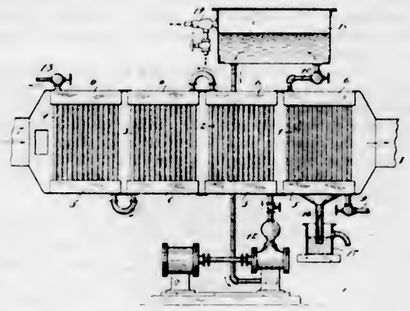
3. A railway tie fastener comprising a yoke adapted to be mounted upon a tie, a plurality of fastening devices each provided with a recessed portion, said devices serving as levers fulcrumed against the yoke with their recessed portions engaging a part of a rail, and a fibrous supporting element adapted to be positioned within the yoke to maintain such fastening devices in engagement with the rail.

4. A railway tie fastener comprising a yoke adapted to be secured to a tie, a plurality of fastening devices one end of each of which is adapted to extend through the yoke and into engagement with the foot of a rail, said fastening devices being curved longitudinally and tapered in thickness from that portion which engages the rail to the other extremity thereof, said fastening device being provided with a transverse groove to be seated against the rail and a shoulder serving as a fulcrum for the fastening device to engage the yoke, and a fibrous supporting element adapted to be inserted between the tie and the rail to cause said fastening devices to move into gripping engagement with the rail.

5. A railway tie fastener comprising a yoke adapted to be secured to a tie, a curved and wedge-shaped fastening device having a seat formed near one end thereof to engage a portion of a rail, and a bearing surface to serve as a fulcrum for said fastening device against said yoke, and means interposed between the rail and the tie to cause said fastening device to be moved into gripping engagement with the rail.

[Claims 6 to 26 not printed in the Gazette.]

1,219,320. STEAM-BOILER ECONOMIZER. DAVID S. JACOBUS, Jersey City, N. J., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Aug. 12, 1913. Serial No. 784,315. (Cl. 122—421.)



1. A steam boiler economizer having high and low pressure sections, the high pressure section being connected to a boiler, means for maintaining the water in said sections under different pressure, a receptacle to which the heated water is delivered from the low pressure section arranged to allow air or gases to escape from the water, and means for forcing the water from said receptacle through the high pressure section and thence to a boiler.

2. A steam boiler economizer having high and low pressure sections, the high pressure section being connected to a boiler, means for maintaining the water in said sections under different pressures, means for permitting the escape of air or gases from the water after it has passed through the low pressure section, and a pump between said sections for forcing the water heated in the low pressure section through the high pressure section to a boiler.

3. The combination with a steam boiler having an outlet flue for the waste gases, of an economizer having high and low pressure sections and set in said flue so that the gases first contact with the high pressure section and then with the low pressure section, means for maintaining the water in said sections under different pressures, a receptacle to which the heated water is delivered from the low pressure section arranged to allow air or gases to escape from the water, and means for forcing the water from said receptacle through the high pressure section to a boiler.

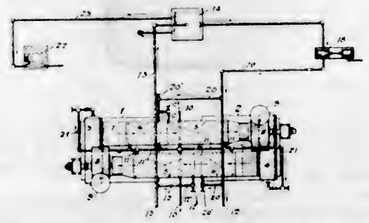
4. The combination with a steam boiler having an outlet flue for the waste products of combustion, of an economizer having high and low pressure sections set in said outlet flue and with which the gases successively contact, means for maintaining said sections of the economizer at different pressures, means for feeding water into the cooler lower-pressure section of the economizer, means intermediate the sections arranged to allow air or gases to escape from the water heated in the cooler lower-pressure section of the economizer, and means for forcing the heated and treated water to the hotter higher-pressure section or sections of the economizer.

5. The combination with a steam boiler having an outlet flue for the waste products of combustion, of an economizer in said outlet flue and formed of a plurality of sections with which the gases successively contact,

means for maintaining different sections of the economizer at different pressures, a connection for feeding water into the cooler lower-pressure section of the economizer, means intermediate the sections arranged to allow air or gases to escape from the water heated in the cooler lower-pressure section of the economizer, and means for forcing the heated and treated water to the hotter higher-pressure section or sections of the economizer, the cooler lower-pressure section of the economizer being constructed of different material from the higher-pressure section or sections and better adapted to resist corrosion than the higher-pressure section or sections thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,219,321. STEAM-BOILER ECONOMIZER. DAVID S. JACOBUS, Jersey City, N. J., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Dec. 8, 1914. Serial No. 876,014. (Cl. 122—421.)



1. In combination, a plurality of boilers, a plurality of economizers each having high and low pressure sections, means for maintaining the water in the sections of each economizer at different pressures, means for conducting the water heated in the low pressure sections to a common tank or receptacle arranged to permit the escape of air or gases from the water, and means for forcing the water from said tank or receptacle to the several high pressure sections of the economizers and from the latter to the boilers.

2. In combination, a plurality of boilers, an economizer for each boiler having high and low pressure sections, means for maintaining the water in the sections of each economizer at different pressures, means for conducting the water heated in the low pressure sections to a common tank or receptacle arranged to permit the escape of air or gases from the water, and a pump for forcing the water from said tank or receptacle to the several high pressure sections of the economizers and from the latter to the boilers.

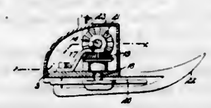
3. In combination, a plurality of boilers, an economizer for each boiler located in the corresponding outlet flue and having high and low pressure sections so arranged that the waste gases first contact with the high pressure sections and then with the low pressure section, means for conducting the water heated in the low pressure sections to a common tank or receptacle arranged to permit the escape of air or gases from the water, and means for forcing the water from said tank or receptacle to the several high pressure sections of the economizers and from the latter to the boilers.

4. A boiler unit comprising two boilers, an economizer for each boiler placed above and spanning the boilers, each of said economizers comprising a high pressure and a low pressure stage, a tank in which the air and gases in the water are permitted to escape, means for conducting the boiler feed water from the low pressure stages to said tank, and means for distributing the water from said tank to the high pressure stages and from the latter to the boilers.

5. A boiler unit comprising two boilers, an economizer for each boiler placed above and spanning the boilers, each of said economizers comprising a high pressure and a low pressure stage, a tank in which the air and gases in the water are permitted to escape, means for conducting the boiler feed water from the low pressure stages to said tank, means for distributing the water from said tank to the high pressure stages and from the latter to the boilers, and flues in which the economizers are located for conducting the gases from the boilers through the economizers in opposite directions.

[Claim 6 not printed in the Gazette.]

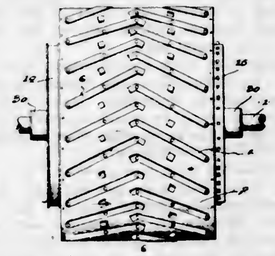
1,219,322. FINGER-BAR FOR MOWERS. CHARLES A. JOHNSON, Sacramento, Cal. Filed Apr. 11, 1916. Serial No. 90,338. (Cl. 56—45.)



1. In a mower, a finger bar, a plurality of rotary cutting knives separately mounted on different axes on the under side of the finger bar, a driving mechanism for the knives mounted on the upper side of the finger bar, the finger bar extending rearwardly of the rotary cutting knives, and a quadrant-shaped hood open at its bottom only and secured upon the upper face of the finger bar with its lower edges resting thereon, whereby the rear portion of the cutting knives are protected, the driving mechanism is wholly inclosed and liability of grass and other foreign substances being drawn in by the knives to the said driving mechanism, is prevented.

2. In a mower, a finger bar, end and intermediate brackets on the upper face of the finger bar, a horizontal revoluble shaft mounted in the end brackets of the finger bar, gear wheels on the said shaft, a plurality of vertical shafts having their upper ends mounted in the intermediate brackets of the finger bar, and their lower ends extending through the said finger bar, a gear wheel secured to the upper end of each vertical shaft and meshing with a gear wheel of the horizontal shaft, the gear wheels of the vertical shafts having hubs resting upon the upper face of the finger bar, and serving as bearing members for supporting said shafts, and a knife secured upon each vertical shaft below the finger bar, said finger bar extending rearwardly of the rotating cutting knives.

1,219,323. TRACTOR DRIVE-WHEEL AND MOUNTING FOR SAME. OLIVER W. JOHNSON, Cleveland, Ohio. Filed Mar. 29, 1916. Serial No. 87,602. (Cl. 21—207.)



1. A driving wheel for tractors consisting of a cylindrical shell, heads secured in the ends of said shell, and bearings at the centers of said heads having rotatable engagement with an axle and provided each with an annular extension to fit close to the inner periphery of the head and rock across the plane thereof.

2. In a driving wheel for tractors, the combination of a cylindrical shell, end plates secured in the ends of the said shell and having central openings, heads secured to said end plates and fitting within said central openings, and bearings mounted centrally in said heads to rotate

about an axle, the heads and the bearings having relative rocking movement across the planes of the heads.

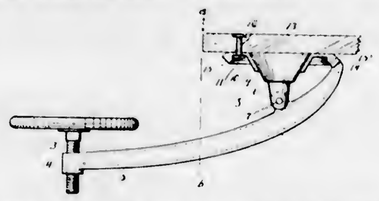
8. In a driving wheel for tractors, the combination of a cylindrical shell, heads secured in the ends of the shell and provided at their centers with axially extended hub members, a casing fitting within said hub members to oscillate axially therein and having central laterally extending sleeves, and bearings within said sleeves to rotate about an axle.

4. In a driving wheel for tractors, the combination of a cylindrical shell, end plates secured in the ends of said shell, heads secured to said end plates and having hub members projecting axially through the centers of the same, a bearing casing carried by said hub members and mounted to oscillate therein, and bearing rollers carried by said casing to encircle an axle.

5. In a tractor, the combination of a rigid axle, disks mounted for rotation upon the axle and having offset portions at their outer edges, heads secured to said disks adjacent said offset portions, operating members secured to said offset portions, and cylindrical shells secured to the outer edges of said heads.

[Claims 6 to 9 not printed in the Gazette.]

1,219,324. PENDENT SWIVEL BENCH-STOOL. WILLIAM B. JOHNSON, New Haven, Conn. Filed Aug. 19, 1915. Serial No. 46,377. (Cl. 155—22.)



1. The combination with a work-bench, of a seat-supporting lever suspended from the underside thereof to swing in a substantially horizontal path and carrying a seat at its free end near its power point, and a friction device associated with the load and fulcrum points of the said lever, and the work-bench, whereby the lever is prevented from swinging horizontally when there is weight upon the seat.

2. The combination with a work-bench, of a seat-supporting lever suspended from the underside thereof and mounted to swing at its fulcrum in a substantially vertical path and also to swing in a substantially horisontal path, and a friction device interposed between the said bench and lever to reecive the thrust of the lever when there is weight thereon, and so prevent the lever from swinging in its horizontal path.

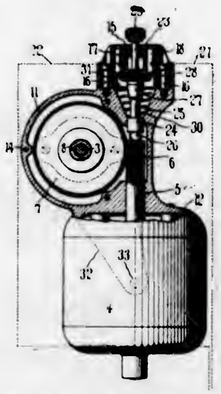
3. The combination with a work-bench, of a seat-supporting lever suspended from the underside thereof to swing in a substantially horizontal plane, and a friction-device between the work-bench and said lever adapted to receive the thrust of the lever when there is weight thereon and prevent said horizontal swing.

4. The combination with a work-bench, of a seat-supporting lever suspended from the underside thereof to swing in a substantially horizontal plane, and a pair of friction devices between the work-bench and said lever and concentric with the axis of said horizontal swing and adapted to receive the thrust of two separated points in said lever when there is weight thereon and prevent said horizontal swing.

5. The combination with a work-bench, of a seat-supporting lever suspended from the underside thereof to swing in a substantially horizontal plane, and a pair of friction devices between the work-bench and said lever and coöperative with the latter at the load and fulcrum points thereof to receive one the upward and the other the downward thrust of said lever when there is weight thereon and prevent said horizontal swing.

[Claims 6 to 8 not printed in the Gazette.]

1,219,325. WINDING DEVICE FOR SPRING-MOTORS. JOSEPH W. JONES, Pelham, N. Y., assignor to Jones Motrola, Inc., New York, N. Y., a Corporation of New York. Filed Dec. 2, 1915. Serial No. 64,721. (Cl. 185—40.)



1. A winding device for spring-motors including a prime motor, means operated by the resistance of the spring-motor spring to stop the prime motor, and manual means for starting the prime motor.

2. A winding device for spring-motors including an electric motor, means operated by the resistance of the spring-motor spring to stop the electric motor, and manual means for starting the electric motor.

3. A winding device for spring-motors including a switch, an electric motor, the switch being opened by the resistance of the spring-motor spring to stop the electric motor, and manual means for closing the switch for starting the electric motor.

4. A winding device for spring-motors including a prime motor, means for connecting it to the spring-motor comprising an element moved by the resistance of the spring-motor spring to stop the prime motor, and manual means to move said element to start the prime motor.

5. A winding device for spring-motors including a prime motor, means for connecting it to the spring-motor comprising an element moved by the resistance of the spring-motor spring, and both automatic and manual means to move said element to start the prime motor.

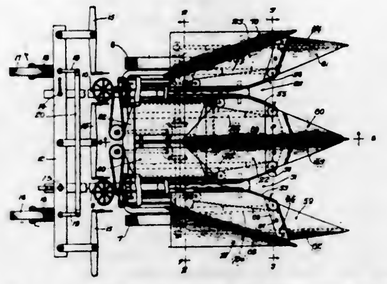
[Claims 6 to 36 not printed in the Gazette.]

1,219,326. COMBINATION-SUIT. WILLIAM KETCHUM JONES, Wichita, Kans. Filed July 11, 1914. Serial No. 850,402. (Cl. 2—144.)



A garment comprising a jacket, trousers integrally connected at the front with the said jacket, the back of said trousers having a sanitary drop flap, and buttons at its opposite edges, the sides of the trousers having button holes adapted to be engaged by said buttons, and the jacket provided with a covering flap provided with button holes at its lower corners adapted to engage the buttons prior to their engagement with the button holes in the sides of the trousers.

1,219,327. CORN-GATHERER. ALONZO R. KEELER, Altona, Ill. Filed Feb. 11, 1916. Serial No. 77,651. (Cl. 56—113.)



1. In a corn gathering machine, the combination with a suitable wheeled frame-work, and a connection for driving the same from the rear, of a table of inverted V-shaped cross-section mounted on the central forward portion of the frame-work, with its ridge portion lying on the center line of the machine and slanting upwardly from front to rear, another table of inverted V-shaped cross-section mounted on the frame-work at each side of the first mentioned table, each of the last mentioned tables having its ridge portion sloping upwardly and rearwardly toward the center line of the machine, and the rear portion of each of the last mentioned tables extending rearwardly with respect to the rear portion of the first mentioned table, a relatively flat apron adjacent to the forward end of each table, each apron overlying and extending forwardly of the forward end of the corresponding table, a pivoted connection from each apron to the frame of the machine to permit the said apron to rise and fall with respect to the corresponding table, each apron sloping upwardly and rearwardly at a lesser angle than the corresponding table, a pair of snapping rolls between each side portion of the central table, and the adjacent side table, means for driving all of the snapping rolls, a carrier traveling in the ridge portion of each table, means for operating said carriers to cause them to advance rearwardly with respect to their respective tables, a pair of carriers adjacent to each pair of snapping rolls, and means for operating said carriers to cause them to travel rearwardly with respect to the adjacent tables, substantially as described.

2. In a corn gathering machine, the combination with a suitable frame-work and a connection for driving the same in its rear portion, of a table of inverted V-shaped cross-section mounted on the central forward portion of the frame, the ridge portion of said table slanting upwardly and rearwardly on the center line of the machine, a table of inverted V-shaped cross-section adjacent to each side of the first mentioned table, the ridge portion of each of said side tables slanting upwardly and rearwardly and toward the center line of the machine, the rear portion of each of the side tables extending rearwardly with respect to the rear portion of the central table, a pair of snapping rolls between each side of the central table and the adjacent side table, means for driving the snapping rolls, a relatively flat apron adjacent to the forward portion of each table, each of said aprons lying at an angle more nearly horizontal than the corresponding table, and pivoted connections from the frame of the machine to the aprons to permit the said aprons to move up and down with respect to the frame of the machine, substantially as described.

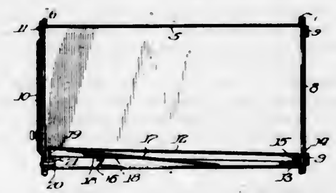
3. In a corn gathering machine, the combination with a suitable frame-work and a connection for driving the same in its rear portion, of a table of inverted V-shaped cross-section in the central forward portion of the machine, the ridge portion of said table slanting upwardly and rearwardly, a side table at each side of the central table, each side table being of inverted V-shaped cross-section and having its ridge portion slanting upwardly and rearwardly and toward the axis of the first mentioned table, a pair of snapping rolls between each side of the first mentioned table and the adjacent side table, means for driving the snapping rolls, a relatively flat apron adjacent to the forward portion of each table, each apron lying at an angle more nearly horizontal than the corresponding table, and operative connections from the frame to the aprons to permit the said aprons to move vertically with respect to the frame, substantially as described.

4. In a corn gathering machine, the combination with a suitable frame-work and a connection for driving the same in its rear portion, of a table of inverted V-shaped cross-section mounted on the forward central portion of the frame, the ridge portion of said table extending upwardly and rearwardly, a side table mounted at each side of the central table, each side table being of inverted V-shaped cross-section and having its ridge portion extending upwardly and rearwardly with respect to the frame, a pair of snapping rolls mounted between each side of the central table and the adjacent side table, means for driving the snapping rolls, an apron adjacent to the forward portion of each table, each apron lying at an angle more nearly horizontal than the corresponding table, and an operative connection from the frame to each apron, substantially as described.

5. In a corn gathering machine, the combination with a suitable frame-work and a connection for driving the same in its rear portion, of a pair of tables of inverted V-shaped cross-section mounted on the forward portion of the machine, each of said tables having its ridge portion extending upwardly and rearwardly, a pair of snapping rolls between said tables, means for driving the snapping rolls, an apron adjacent to the forward portion of each table, each apron lying at an angle more nearly horizontal than the corresponding table, and a flexible connection from each apron to the frame of the machine to permit the said apron to move vertically with respect to the frame of the machine, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,219,328. SAFETY DELIVERY-RECEPTACLE. ANDREW J. KENNEDY, Chicago, Ill. Filed Jan. 10, 1916. Serial No. 71,233. (Cl. 232—41.)



1. In a safety delivery receptacle, the combination with a cabinet, of a depressible false bottom hinged at one edge within the cabinet, a false bottom supporting member fulcrumed intermediate its ends on the bottom of the cabinet, the portion of said member on one side of the fulcrum engaging the underside of the false bottom and the portion of said member on the other side of the fulcrum serving as a counterweight to maintain the false bottom when empty in elevated position, a door on the receiving end of the cabinet, and coöperating door-locking members on said door and false bottom, operative when the latter is in depressed position and inoperative when it is in elevated position.

2. In a safety delivery receptacle, the combination with a cabinet having opposite open ends for the reception and delivery of goods, and doors guarding said open ends,

of a depressible false bottom, hinged at one edge within the cabinet adjacent to the delivery end thereof and extending substantially to the receiving end, a false bottom supporting member fulcrumed at unequal distances from its ends on the bottom of the cabinet, the shorter portion of said member on one side of the fulcrum engaging the underside of the false bottom and the longer portion of said member on the other side of the fulcrum serving as a counterweight to maintain the false bottom when empty in elevated position, and coöperating door-locking members on the door at the receiving end and on the adjacent end of the false bottom, operative when the latter is in depressed position and inoperative when it is in elevated position.

3. In a safety delivery receptacle, the combination with a cabinet having opposite open ends for the reception and delivery of goods, and doors guarding said open ends, of a depressible false bottom hinged at one edge within the cabinet adjacent to the delivery end thereof and extending substantially to the receiving end, a false bottom supporting plate of substantially the width of the false bottom fulcrumed at unequal distances from its ends on the bottom of the cabinet, the shorter portion of said plate on one side of the fulcrum engaging the under side of the false bottom between the center and the free edge of the latter and the longer portion of said plate on the other side of the fulcrum serving as a counterweight to just overbalance the weight of the false bottom resting on said shorter portion, whereby, when the false bottom is loaded, the plate rocks on its fulcrum into full surface contact with the under side of the false bottom and reinforces the latter, and coöperating door-locking members on the door at the receiving end and on the adjacent free edge of the false bottom operative when the latter is in depressed position and inoperative when it is in elevated position.

4. In a safety delivery receptacle, the combination with a cabinet having opposite open ends for the reception and delivery of goods, and doors guarding said open ends, of a depressible false bottom hinged at one edge on the bottom of the cabinet adjacent to the delivery end thereof and substantially co-extensive with and overlying the bottom of the cabinet, a false bottom supporting plate of substantially the width of the false bottom fulcrumed at unequal distances from its ends on the bottom of the cabinet between the center and the receiving end of the latter, the shorter portion of said plate on one side of the fulcrum engaging the underside of the false bottom a short distance inwardly of the free edge of the latter and the longer portion of said plate on the other side of the fulcrum serving as a counterweight to just overbalance the weight of the false bottom resting on said shorter portion, whereby, when the false bottom is loaded, the plate rocks on its fulcrum into full surface contact with the underside of the false bottom and reinforces the latter, and coöperating hooks on the door at the receiving end and on the adjacent free edge of the false bottom, said hooks automatically engaging with each other when the false bottom is depressed and the door closed, and automatically disengaging when the false bottom is elevated.

1,219,329. NECKTIE. WILLIAM A. KEYS, New York, N. Y. Filed Nov. 20, 1914. Serial No. 873,138. (Cl. 2—11.)



1. In a necktie provided with tabs adapted to be attached to a collar-button, said tabs being integral with the inner face of the tying ends of the tie, an intermediate portion of one face of said tie being of a separate piece of material, elastic means attaching the said intermediate portion to the tabs, substantially as set forth.

2. In a necktie provided with tabs adapted to be attached to a collar-button, said tabs being integral with a portion of the inner face of the tie and an intermediate portion of the inner face of said tie being folded upon itself to form pockets for a portion of said tabs, strips of elastic fabric secured to said tabs to permit extension thereof, substantially as set forth.

3. In a necktie provided with a tab adapted to be attached to a front collar-button, said tab being of material separate from an intermediate portion of the tie but integral with the material forming the inner face of the tying end of the tie.

4. In a necktie provided with a tab adapted to be attached to a front collar-button, said tab being provided with a portion integral with the material forming the inner face of the tying end of the tie, and a pocket on the inner face of the tie, the end of the material forming the outer face of the tab being located within said pocket.

5. In a necktie provided with tabs adapted to be attached to the front collar-button, an intermediate portion of one face of said tie being at its ends folded upon itself to form a pocket, said tabs being connected within said pocket.

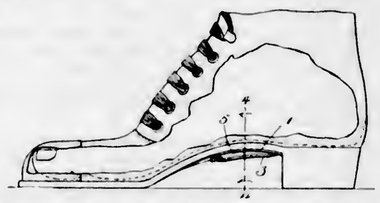
1,219,330. NECKTIE. WILLIAM A. KEYS, New York, N. Y. Original application filed Nov. 20, 1914, Serial No. 873,138. Divided and this application filed July 26, 1916. Serial No. 111,368. (Cl. 2—11.)



1. In a necktie provided with a tab, the material of a portion of one face of the tie being folded upon itself so as to form a pocket, a tab integral with said folded face material, a portion of said tab being located within said pocket so arranged that said tab will have a longitudinal movement independent of an intermediate portion of the tie.

2. In a necktie provided with tabs, the material of the entire inner face of the tie and tabs being in one piece folded to form tabs and folded to form pockets into which the base of said tabs is located, means for permitting longitudinal movement of said tabs and means for holding same in normal position.

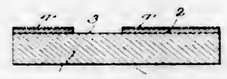
1,219,331. ARCH-SUPPORT. JAMES J. KEYS, Brooklyn, N. Y. Filed May 16, 1916. Serial No. 97,901. (Cl. 36—76.)



The herein described arch support adapted for application to the lower face of a shoe shank, the same comprising a metal plate arched throughout its length to conform with the longitudinal curvature of said shank, provided between its edges with a depressed longitudinal rib which is pronounced at its midlength and runs out at its extremities near the ends of the plate, the rib defining two leaves whereof that at the inner side of the support is transversely arched throughout its width and that at the outer side is transversely flat, and means for holding the plate in place.

1,219,332. PROCESS OF FORMING PRINTING-PLATES. WALLACE W. KIRBY, Washington, D. C., assignor, by mesne assignments, to The Rapid Process Lithograph Company, Inc., a Corporation of Delaware. Filed Oct. 28, 1915. Serial No. 58,443. (Cl. 95—5.4.)

1. The process of making a printing plate which includes applying to a metal plate a sensitized film capable of being rendered insoluble by light, exposing the plate under the desired design, washing out the unexposed portions covered by the design, washing said plate with a solution to soften the film, hardening the surface of the film, coating the plate with an acid-resisting substance, and removing the film by an acid.



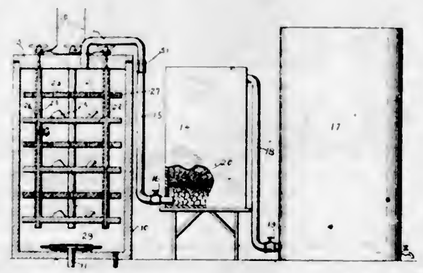
2. The process of making a printing plate which includes applying to a metal plate a film capable of being rendered insoluble by light, exposing the plate under an original drawing of the desired design, washing out the unexposed portions beneath the design, washing said plate with a caustic alkaline solution to soften the film and to clean the exposed printing surface of the metal, hardening the surface of the film, coating the plate with an acid-resisting substance, and removing the film by acid.

3. The process of making a printing plate which includes applying to a metal plate a sensitized film capable of being rendered insoluble by light, exposing the plate to a desired design, washing out the unexposed portions beneath the design, washing said plate with a caustic alkaline solution to soften the film and to clean the exposed printing surface, washing said plate with alcohol to harden the surface of the film, coating the film and printing surface with an acid-resisting substance, and subjecting the plate to a dilute acid solution to remove the film.

4. The process of making a printing plate which includes applying to a metal plate a sensitized film capable of being rendered insoluble by light, exposing the plate under an original drawing of the desired design, washing out the unexposed portions beneath the design, washing said plate with a solution of potassium hydrate, then washing said plate in alcohol, coating the film and printing surface with an asphaltum solution, subjecting said plate to a dilute hydrochloric acid to remove the film.

5. The process of making a printing plate which includes applying to a metal plate a sensitized film capable of being rendered insoluble by light, exposing the plate under an original drawing of the desired design, washing out the unexposed portion beneath the design, applying to the film a dye, washing said plate with a solution which softens the film and cleanses the exposed printing surface of the metal printing plate, washing the plate with alcohol to remove the dye and to crust harden the film, coating the film and printing surface with an acid-resisting substance and finally subjecting the plate to a dilute acid to remove the film.

1,219,333. WATER-PURIFYING APPARATUS. JOHN D. KYNASTON, Washington, D. C. Filed Nov. 15, 1916. Serial No. 131,427. (Cl. 204—25.)



1. A water purifying apparatus having a plurality of alternately disposed electrodes arranged in the path of flow of the water and connected in series with a source of electrical energy, and means for imparting a gyratory movement to the water in contact with said electrodes.

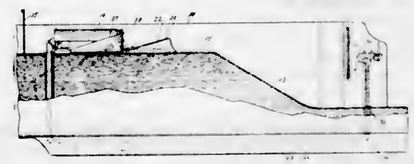
2. A water purifying apparatus having a plurality of alternately disposed electrodes arranged in the path of flow of the water and connected in series with a source of electrical energy, the anodes being of aluminum, and means for imparting a gyratory movement to the water in contact with said electrodes.

3. A water purifying apparatus having a plurality of alternately disposed electrodes arranged in the path of flow of the water and connected in series with a source of electrical energy, the anodes being of aluminum and the cathodes of carbon, and means for imparting a gyratory movement to the water in contact with said electrodes.

4. A water purifying apparatus having an upright water conveying vessel having a bottom inlet and a top outlet, a series of alternately arranged cathodes and anodes consisting of baffling disks arranged in the path of water flowing from the inlet to the outlet and disposed in series in a circuit including a source of electrical energy, and a water distributing and gyrating means in communication with the water inlet and consisting of a head or drum provided with rearwardly directed substantially tangential outlet nozzles.

5. A water purifying apparatus having an upright water conveying vessel having a bottom inlet and a top outlet, a series of alternately arranged cathodes and anodes consisting of baffling disks disposed in the path of water flowing from the inlet to the outlet and arranged in series in a circuit including a source of electrical energy, and means for producing a gyratory distribution of the water at the inlet of said vessel, in combination with a filtering settling tank in communication with the outlet of said vessel.

1,219,334. LOCOMOTIVE-TENDER. NATHAN M. LOWER, Schenectady, N. Y. Filed Jan. 18, 1916. Serial No. 72,692. (Cl. 105—260.)



1. In a locomotive tender having a fuel bin, in combination, a fuel deck back of the bin, and fuel advancing means for moving the fuel from the deck to the bin.

2. In a locomotive tender having a fuel bin, in combination, a fuel deck back of the bin, a fuel pusher reciprocable over the deck, and a motor for actuating the pusher.

3. In a locomotive tender having a fuel bin, in combination, a fuel deck back of the bin, a fuel pusher reciprocable over the deck, and a motor located on the deck for actuating the pusher.

4. In a locomotive tender having a fuel bin, in combination, a fuel deck back of the bin, a fuel pusher reciprocable over the deck, and a motor for actuating the pusher, such motor comprising a stationary piston and a reciprocating cylinder.

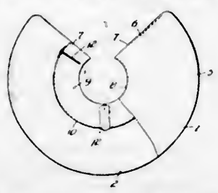
5. In a locomotive tender having a fuel bin, in combination, a fuel deck back of the bin, a motor located on the deck and comprising a piston and cylinder, one thereof being reciprocable, and pushers connected with the reciprocable member for advancing fuel over the deck toward the bin.

[Claims 6 to 19 not printed in the Gazette.]

1,219,335. DETACHABLE COAT-COLLAR. JOHN M. MCCALL, Butler, Pa. Filed June 10, 1914. Serial No. 844,267. (Cl. 2—62.)

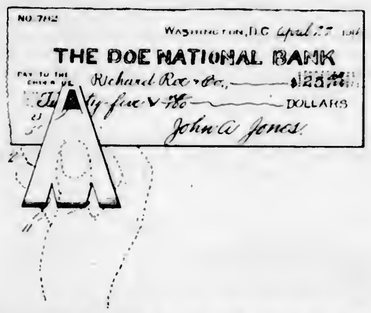
A detachable coat collar consisting of a pair of superposed plies of material having outer segmental edges se-

cured together and formed with a relatively small central opening concentric with its segmental edge, a folded segmental strip of material having its outer segmental edge secured to the edge of said opening so that its sides may hang between said plies, a plurality of strips secured on



said segmental strip and forming pockets and a series of spring metal clamps disposed in said pockets each clamp being folded so as to have its folds supported in said pockets with its sides converging in separated relation toward the edge of said opening.

1,219,336. CHECK-PROTECTOR. CHARLES CLEVELAND MCCOMBS, Stephenville, Tex. Filed May 11, 1916. Serial No. 96,888. (Cl. 101—3.)



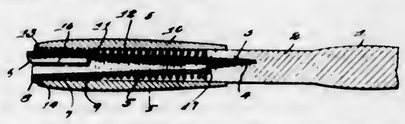
1. A check protector of the class described, comprising a body, jaws extending from said body at substantially parallel planes with respect to each other, and perforating rollers carried upon said jaws in alinement with each other, said rollers extending along the central longitudinal axis of said jaws, whereby the protector may permit a check to be passed therebetween, at which time the protector will move longitudinally of the check so as to cause the rollers to perforate the same.

2. A check protector of the class described comprising a body, substantially parallel jaws extending from said body, inwardly extending spring tongues formed upon said jaws, perforating rollers longitudinally mounted upon said tongues, said rollers extending in the same planes as the longitudinal axis of said jaws, whereby a check may be positioned between said jaws at a desired distance after which the protector may be moved along the check so as to cause the perforating rollers to form a line of perforations.

3. A check protector of the class described comprising a central body, jaws formed upon said body and tapering toward their outer ends, a reduced tongue formed upon the outer end of each jaw, said tongues extending toward each other, inner spring tongues struck from said jaws at distances from the outer ends of said jaws, said inner spring tongues extending toward each other, the inner spring tongue upon one jaw being in alinement with the tongue formed upon the outer end of the respective jaw, perforating rollers carried by said tongues so as to abut against each other when the jaws are urged toward each other, said rollers extending in the longitudinal plane of the axis of said jaws, whereby a check may be passed between said jaws to a point desired at which time the jaws may be swung toward each other so as to cause said rollers to engage the check, whereby by moving the perforator along the check a complete line of perforations may be formed therein.

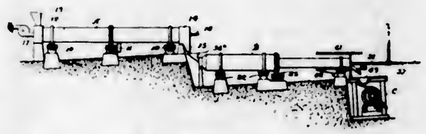
4. A check protector of the class described, comprising an enlarged central body, jaws extending from said body and tapering toward their outer ends, inwardly extending tongues formed upon the outer ends of said jaws, inner spring tongues struck from said jaws adjacent their outer ends, said last-mentioned tongues being bent so as to have the portion thereof adjacent their bases to extend normally in the same plane as said jaws, perforating rollers carried by said spring tongues, said perforating rollers extending in the plane of the central longitudinal axis of said jaws, whereby a check may be passed between said jaws to a desired point at which time said jaws may be swung toward each other so as to cause said rollers to grip firmly upon the check and form a row of perforations therein as the protector is moved along the check, and said last-mentioned spring tongues being adapted to yield slightly by moving outwardly when excessive pressure is brought to bear upon said jaws, whereby said rollers will be permitted to remain in engagement with each other at all times.

1,219,337. PEN-POINT HOLDER. CHARLES C. MCCOMBS, Frisco, Tex. Filed Sept. 30, 1916. Serial No. 123,055. (Cl. 120—101.)



In a device of the class described the combination of a handle with a shank, a pen point engaging member formed from a blank sheet of material and provided with a tapering end adapted to penetrate said shank, said body and tapering rear end being rolled to possess a substantially circular formation in cross section, shoulders provided upon said tapering rear end for limiting the inward penetration of said tapering end, an upwardly struck pen point engaging lip formed upon said sheet metal body, a pair of side lips formed upon said body and provided with laterally extending flanges, a sleeve fitting upon said pen point engaging member, a cuff carried by said sleeve, an outwardly and laterally extending flange integrally provided upon the outer end of said sleeve so as to overhang the outer end of said cuff, an inwardly and laterally extending flange integrally provided upon the inner end of said sleeve so as to form a stop for the pen point and a coil spring interposed between said shank and said sleeve.

1,219,338. PROCESS OF TREATING IRON ORES. THOMAS S. MAFFITT, St. Louis, Mo., assignor, by mesne assignments, to Mississippi Valley Iron Company, Wilmington, Del., a Corporation of Delaware. Filed May 9, 1910. Serial No. 560,329. (Cl. 83—71.)



1. The herein described process of clearing ore, containing iron as its economic component, from its gangue which consists in subjecting the ore and its gangue to heat so as to render the iron component of the ore magnetic, and separating said iron component from the gangue magnetically while in a heated state.

2. The herein described process of clearing ore, containing iron as its economic component, from its gangue which consists in subjecting the ore and its gangue to heat and a reducing agent so as to render the iron component of the ore magnetic, and separating the iron component of the ore from the gangue magnetically while in a heated state.

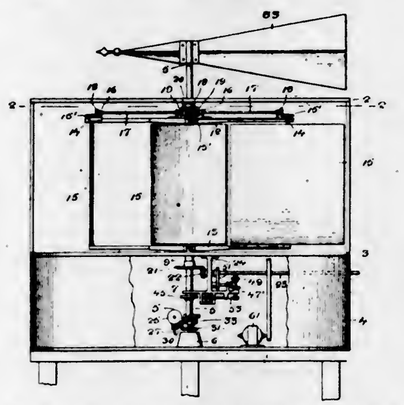
3. The herein described process of clearing ore, containing iron as its economic component, from its gangue which consists in heating the ore and its gangue, subjecting the same while hot to the action of gas containing carbon so as to render the iron component of the ore magnetic, and separating the iron component of the ore from the gangue magnetically while in a heated state.

4. The herein described process of clearing ore, containing iron as its economic component, from its gangue which consists in heating the ore and its gangue, subjecting the same while hot to the action of hydrocarbon gas generated by the heat from the heated ore so as to render the iron component of the ore magnetic, and separating the iron component of the ore from the gangue magnetically while said ore is still in a heated state.

5. The herein described process of clearing ore, containing iron as its economic component, from its gangue which consists in subjecting the ore and its gangue to heat so as to render the iron component of the ore magnetic, and separating said component from the gangue magnetically while still in a heated state and before the temperature of said ore falls below 450° F.

[Claims 6 to 10 not printed in the Gazette.]

1,219,339. WINDMILL CONSTRUCTION. EBENEZER H. MANNING, Tomah, Wis. Filed Mar. 22, 1916. Serial No. 85,949. (Cl. 170—25.)



1. In wind mill construction, a power shaft, a wind wheel secured to said shaft and disposed concentrically thereof and embodying a plurality of wind vanes spaced apart equal distances around said shaft and each pivoted centrally upon a vertical axis and adapted to receive the impact of the wind to revolve the wheel, a second shaft within the first-named shaft, connections between the last-mentioned shaft and said vanes whereby the latter will be rotated about their axes respectively in the rotation of the wind wheel to change the surfaces of the vanes presented to the wind, means for rotating the second-named shaft to revolve said vanes upon their respective axes to change the relative positions of the blades in accordance with the direction of the wind, a shaft within the second-named shaft, a connection between one end of said last shaft and said means, and a tail vane on the other end of said shaft for rotating the last-named shaft to operate said means.

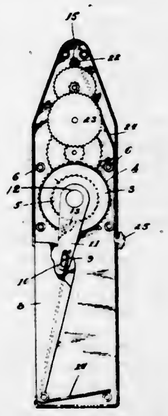
2. In wind mill construction, a wind wheel comprising a plurality of wind vanes spaced apart equal distances and arranged in a circle and adapted to be acted upon by the wind to rotate the wheel, each of said vanes being pivoted centrally upon a vertical axis, a power shaft carrying said wheel and rotatable therefrom when the vanes are subjected to the action of the wind, and electro responsive means for rotating said vanes about their respective axes to change the surfaces thereof presented to the wind.

3. In wind mill construction, a wind wheel comprising a plurality of wind vanes spaced apart equal distances and arranged in a circle and adapted to be acted upon by the wind to rotate the wheel, each of said vanes being pivoted centrally upon a vertical axis, a power shaft carrying said wheel and rotatable therefrom when the vanes are subjected to the action of the wind, electro responsive means for rotating said vanes about their respective axes to change the surfaces thereof presented to the wind, an electric circuit for said electro responsive means, and governor mechanism controlling said circuit and under the control of said wind wheel.

4. In wind mill construction, a wind wheel comprising a plurality of wind vanes spaced apart equal distances and arranged in a circle and adapted to be acted upon by the wind to rotate the wheel, each of said vanes being pivoted centrally upon a vertical axis, a power shaft carrying said wheel and rotatable therefrom when the vanes are subjected to the action of the wind, electro responsive means for rotating said vanes about their respective axes to change the surfaces thereof presented to the wind, an electric circuit for said electro responsive means, governor mechanism controlling said circuit and under the control of said wind wheel, and means for closing said circuit manually independently of said governor mechanism to throw the vanes into and out of the wind.

5. In wind mill construction, a wind wheel comprising a plurality of wind vanes spaced apart equal distances and arranged in a circle and adapted to be acted upon by the wind to rotate the wheel, each of said vanes being pivoted centrally upon a vertical axis, a power shaft carrying said wheel and rotatable therefrom when the vanes are subjected to the action of the wind, electro responsive means for rotating said vanes about their respective axes to change the surfaces thereof presented to the wind, an electric circuit for said electro responsive means, governor mechanism controlling said circuit and under the control of said wind wheel, means for closing said circuit manually independently of said governor mechanism to throw the vanes into and out of the wind, and means under the control of the wind wheel for automatically breaking said circuit after the vanes have been thrown into the wind, and out of the wind.

1,219,340. SPRING-MOTOR. JOHN C. MORGAN, Los Angeles, Cal. Filed Aug. 7, 1915. Serial No. 44,189. (Cl. 185—39.)



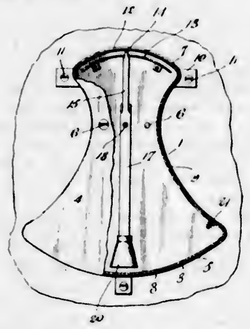
1. A mechanical power generator including a case having a pivoted section, a spring motor mounted therein, an

element to be actuated by the spring motor, winding mechanism for the spring motor including an arm and a loose connection between the arm and pivoted section of the case, whereby in the movement of the pivoted section, the arm is operated to wind the motor.

2. A mechanical power generator including a case having a pivoted section, a spring motor mounted therein, an element to be actuated by the spring motor, winding mechanism for the spring motor including an arm and a loose connection between the arm and pivoted section of the case, whereby in the movement of the pivoted section, the arm is operated to wind the motor, and a spring normally holding the pivoted section of the case in case completing relation.

3. A case of an outline form to be held in the hand, said case including a section pivotally mounted with relation to the case and adapted to be moved inwardly on compression of the hand about the case, a spring for returning the section to normal position, a motor within the case, and a winding mechanism for the motor including an arm having movable connection with the pivoted case section.

1,219,341. GRADOMETER. WILLIAM CHRISTOPHER MORROW, Des Moines, N. Mex. Filed July 10, 1916. Serial No. 108,469. (Cl. 33—215.)

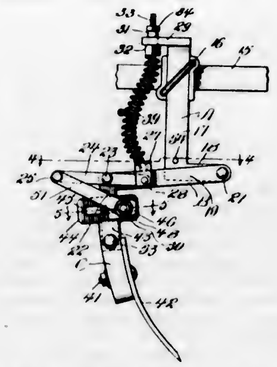


A gradometer comprising a casing formed of connected front and back plates, said back plate being provided with means for attachment to a vehicle body, and said casing having an arcuate top part provided with an observation slot; an arcuate scale plate disposed adjacent to and in spaced relation to said observation slot, said scale plate being secured to one of the plates of the casing and spaced from the other plate of the casing, a lever pivotally mounted within the casing and having an upwardly extending arm, a weight carried by the lever, and an angularly disposed pointer carried by the upwardly extending arm and movable in the space between the scale plate and the observation slot in the arcuate top part of the casing.

1,219,342. FOOT-PIECE FOR CULTIVATORS. JIM H. MYERS, Runge, Tex. Filed Nov. 18, 1916. Serial No. 132,229. (Cl. 97—11.)

1. In a device of the class described, a standard having a forwardly extending arm at its lower end, a bifurcated spring actuated lever connected pivotally with said arm, a stop member on the standard lying in the path of the lever and obstructing upward movement thereof, a downwardly extending arm at the rearward end of the lever, and a blade carrying shank pivoted adjustably on said arm.

2. In a device of the class described, a standard, a pivotally supported lever having a downwardly extending arm, a spring actuated saddle, a guide member for the saddle pivotally connected with the lever, a blade carrying shank pivoted on the downwardly extending arm of the lever, links pivoted on the lever and having their forward ends pivotally connected with the saddle, heads formed on the blade carrying shank, and links connecting said heads with the rearward ends of the first mentioned links.



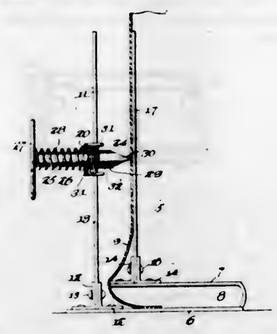
3. In a device of the class described, a pivotally supported L-shaped lever having a downwardly extending arm, a bolt pivotally connected with the lever, a bracket having a sleeve through which the bolt is guided, a nut for effecting relative adjustment of the bolt or sleeve, a saddle guided on the bolt, a spring coiled on the bolt between the saddle and the sleeve, a blade carrying shank pivoted on the downwardly extending arm of the lever, and a connection between said shank and the saddle, said connection including links pivoted at the angle of the lever and having their forward ends pivotally connected with the saddle, and other links pivotally connected at their forward ends with the blade carrying shank and at their rearward ends with the first mentioned links.

4. In a device of the class described, a pivotally supported L-shaped lever having a downwardly extending arm at its rearward end, a bolt pivotally connected with the lever, a bracket having a sleeve through which the bolt is guided, said sleeve having an offset abutting on the underside of the bracket, a nut on the bolt bearing against the upper end of the sleeve, a saddle guided on the bolt, a spring coiled on the bolt between the sleeve and the saddle to exert downward pressure on the saddle and on the lever straddled thereby, a stop member to limit the upward movement of the lever, a blade carrying shank pivoted on the downwardly extending arm of the lever, and a jointed connection between the shank and the saddle.

5. In a device of the class described, a pivotally supported L-shaped lever having a downwardly extending arm at its rearward end, a bolt pivotally connected with the lever, a bracket having a sleeve through which the bolt is guided, said sleeve having an offset abutting on the underside of the bracket, a nut on the bolt bearing against the upper end of the sleeve, a saddle guided on the bolt, a spring coiled on the bolt between the sleeve and the saddle to exert downward pressure on the saddle and on the lever, a stop member to limit the upward movement of the lever, a blade carrying shank pivoted on the downwardly extending arm of the lever, and a jointed connection between the shank and the saddle, said jointed connection including bearing members adjustably connected with the shank, links pivoted at the angle of the lever and having their forward ends pivotally connected with the saddle, links pivotally connected with the bearing members on the shank, and a pivotal connection between the two sets of links.

1,219,343. SKIRT-MARKER. EMMA NABER, Leigh, Nebr. Filed June 10, 1916. Serial No. 102,930. (Cl. 33—9.)

1. A device of the class described comprising a base, a platform formed continuous with one end of the base and bent toward the latter in spaced relation thereto for the greater portion of its length, a pair of ears secured adjacent the free terminal of the base, a measuring bar pivotally mounted between said ears for movement in a plane at right angles with respect to the plane of the base, a second pair of ears secured adjacent the free terminal of the platform, and a second measuring bar pivotally mounted between the latter mentioned pairs of ears for vertical swinging movement in spaced parallel relation with respect to the first mentioned bar.



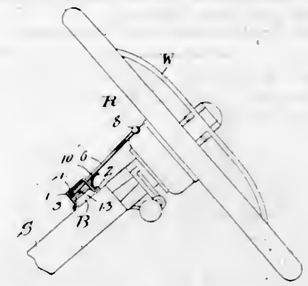
2. A device of the class described embodying a base having an opening formed adjacent one of the transverse edges thereof, a platform formed continuous with the opposite transverse edge of the base and bent toward and in spaced relation with said base for the greater portion of its length and having an opening formed therein adjacent its free transverse edge, a pair of ears secured to said base at opposite sides of its opening, a measuring bar pivotally mounted between said ears and slightly above and in vertical alinement with the opening of the base, a second pair of ears secured to said platform at opposite sides of the opening formed therein, a second measuring bar arranged in spaced parallelism with the former mentioned bar and pivotally secured between the second mentioned ears and slightly above the opening formed in said platform, said first and second mentioned bars being adapted to swing in a plane at right angles with respect to the planes of the respective base and platform.

3. A device of the class described embodying a base and a platform, a measuring bar secured to said base, a second measuring bar secured to the platform, and a marking device adjustably mounted upon the first mentioned measuring bar, said marking device comprising a bracket formed at one end with a U-shaped guide clamp, a fastening member carried by the clamp for holding the marking device in adjusted position upon the measuring bar, a spring pressed plunger mounted in the bracket for horizontal sliding movement, and a resilient socket detachably connected to the free end of the plunger and adapted for holding a stick of crayon.

1,219,344. PUSH-BUTTON OPERATOR. IRVAN NECKERMAN, Annapolis, Md. Filed Nov. 25, 1916. Serial No. 133,518. (Cl. 74—39.)

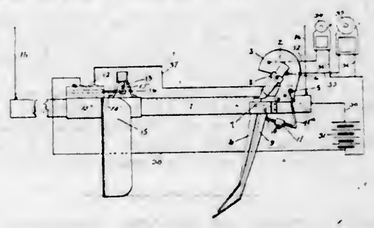
1. The herein described push button operator, the same comprising a yoke adapted to be secured over and out of contact with the push button and having an upright slot in one of its sides, an extension arm attached to the other side of said yoke, and leading across the button and through said slot to a remote point, and yielding means for holding the arm at that end of the slot which keeps it out of contact with the button, for the purpose set forth.

2. The herein described push button operator, the same comprising a yoke having an arched body adapted to overlie a push button and lateral feet whereby it may be fastened to a support astride said button, one side of the yoke having an upright slot, ears within the other side of said yoke, an extension arm having one extremity pivoted between said ears and extending thence across the interior of the yoke and through said slot to a remote point, and a spring carried by the yoke and bearing the arm to that end of the slot which holds it out of contact with said button, for the purpose set forth.



3. In an attachment for push buttons, the combination with an arched yoke adapted to be secured over the button and having an upright slot in one side, an extension arm pivotally connected with the opposite side and leading through said slot to a remote point, a spring normally holding the arm in that end of the slot which keeps said arm away from the button, and a contact member adjustably mounted on the arm between the sides of the yoke and over the head of the button, for the purpose set forth.

1,219,345. WEB GAGE AND DETECTOR. CLINTON WILLIAM NEWELL, Portland, Oreg. Filed July 28, 1914. Serial No. 853,626. (Cl. 177—311.)



1. A width variation detecting instrument for use in connection with traveling webs comprising a member to engage the edge of the web and be moved by inaccuracies thereof, and means for marking the web at the inferior points when said member encounters inaccuracies in said edge.

2. A width variation detecting instrument for use in connection with traveling webs comprising a member to engage the edge of the web and be moved by inaccuracies thereof, and means for giving warning in case said member moves excessively inward or excessively outward due to inaccuracies in said edge of the web.

3. A width variation detecting instrument for use in connection with traveling webs comprising a support, a member mounted pivotally thereon and movable in opposite directions, said member being adapted to engage the edge of the web, and means for giving warning in case said member moves excessively in either direction due to inaccuracies in said edge of the web.

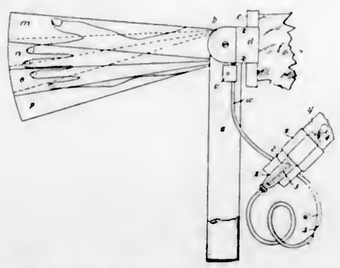
4. A width variation detecting instrument for use in connection with traveling webs comprising a member to engage the edge of the web and be moved by inaccuracies thereof, an electrically operated device for marking the web, and means for completing the circuit of said device when said member moves excessively.

5. A width variation detecting instrument for use in connection with traveling webs comprising a member to engage the edge of the web and be moved by inaccuracies thereof, said member being movable in opposite directions and having a metallic portion, a pair of contacts between

which said metallic portion normally moves idly, said portion being adapted to strike one contact or the other to complete an electric circuit in case the aforesaid member is moved excessively in one direction or the other by inaccuracies in the edge of the web.

[Claims 6 to 13 not printed in the Gazette.]

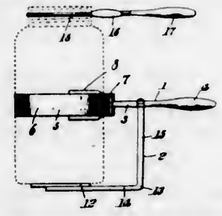
1,219,346. SIGNALING DEVICE. RYOTARO NOBUOKA, Portland, Oreg. Filed Jan. 24, 1916. Serial No. 74,025. (Cl. 116—31.)



1. A signaling device comprising a pivot member, a plurality of parallel leaves mounted loosely on the pivot member, said leaves being provided with progressively graded slots so located that when the leaves are superposed the corresponding ends of the slots will be in alinement, a member revoluble about the pivot member, said member projecting through the slots, means for revolving the member about its pivot, and means for limiting the degree of such revolution.

2. A signaling device comprising a hollow casing, a housing pivoted in said casing, a plurality of parallel leaves mounted loosely on the pivot of the housing, said leaves being provided with progressively graded slots so located that when the leaves are all superposed the corresponding ends of the slots will be in alinement, a lateral pin member secured to said housing, said member projecting through the slots, means for rotating the housing about its pivot, and means for limiting the degree of such revolution.

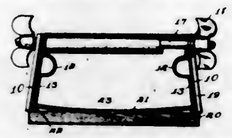
1,219,347. FRUIT-JAR HOLDER. WILLIAM G. NUTT, Jonesboro, Ark. Filed Mar. 1, 1916. Serial No. 81,520. (Cl. 65—26.)



A fruit jar holder comprising a clamping element embodying a pair of pivotally connected lever members and a clamping band connected and operated by said lever members and a supporting member for arrangement under the bottom of a jar, said supporting member having an upstanding arm which holds the clamping element and also forms the pivot for the lever members thereof.

1,219,348. MOLD FOR PLASTIC BLOCKS. CHARLES J. PERKINS, Des Moines, Iowa. Filed Oct. 9, 1916. Serial No. 124,605. (Cl. 25—121.)

1. A mold comprising side walls, inclined from their lower edges upwardly and slightly inwardly, said walls being provided with horizontal ribs on their inner sides spaced from their top and bottom edges, said ribs being provided with vertical slots, said side walls being provided with notches in their upper edges, end members comprising plates having formed at their upper edges substantially cylindrical members, said end members being placed between said side members at the ends thereof, and being partially received in the slots in said ribs, bolts extended through said substantially cylindrical members and received in the slots in said side members, said bolts having screw-threaded ends, and nuts on said bolts.



2. A mold comprising side walls, inclined from their lower edges upwardly and slightly inwardly, said walls being provided with horizontal ribs on their inner sides spaced from their top and bottom edges, said ribs being provided with vertical slots, said side walls being provided with notches in their upper edges, end members comprising plates having formed at their upper edges substantially cylindrical members, said end members being placed between said side members at the ends thereof and being partially received in the slots in said ribs, bolts extended through said substantially cylindrical members and received in the slots in said side members, said bolts having screw-threaded ends, nuts on said bolts, and engaging devices mounted on said bolts outside said side members and extending downwardly for engaging the outer surfaces of the side members.

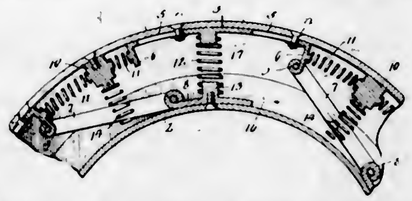
3. In a mold for blocks, mold walls, a pallet comprising a base and pallet member, having its surfaces curved from its central longitudinal center toward its side edges, and provided with downwardly extending flanges at its side edges resting upon said base, and means for securing said last described pallet member on said base.

1,219,349. METHOD OF IMPREGNATING FABRICS. LAURITZ PETERSEN-HVIID, Copenhagen, Denmark. Filed Apr. 24, 1916. Serial No. 93,307. (Cl. 91—68.)

1. The herein described method of impregnating fabric, consisting in mixing india rubber with a sulfonated oil, treating the fabric with this mixture and drying the same.

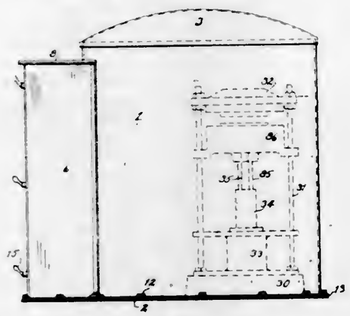
2. The herein described method of impregnating fabric consisting in mixing rubber with sulfonated ricinus oil adding sulfur, treating the fabric with the mixture, drying the same and finally vulcanizing.

1,219,350. TIRE. WILLIAM C. POST, Brewster, Minn. Filed Dec. 14, 1915. Serial No. 66,792. (Cl. 152—38.)



In a spring tire, normally concentric outer and inner hoops, arcuate stress distributing members slidable to a limited extent circumferentially of and in contact with the inner face of the outer hoop and attached thereto, draft links pivotally connected at one end with the inner hoop and pivotally connected at their opposite ends to the stress distributing members, all of said draft links being inclined in the same direction, blocks having a fixed relation to the inner face of the outer hoop, cushioning springs extending circumferentially of the tire and interposed between each block and the ends of adjacent stress distributing members, radially disposed springs interposed between said blocks and the inner hoop, and other radially disposed springs attached at their outer ends to said stress distributing members and supported at their inner ends by said inner band.

1,219,351. PROCESS OF AND APPARATUS FOR MAKING HOLLOW RUBBER ARTICLES. FRED THOMAS ROBERTS, Cleveland, Ohio. Filed Oct. 14, 1916. Serial No. 125,598. (Cl. 18—19.)



1. The process of making hollow articles of plastic material consisting of bringing the parts together within a room occupied by the operator and containing air under pressure.

2. The process of making hollow articles of plastic material consisting of bringing the parts together within a room occupied by the operator and containing air under pressure, holding the closed article in a vulcanizing mold, and vulcanizing the article while so held.

3. The process of making hollow rubber articles consisting of bringing the parts of the article together in a room occupied by the operator and filled with compressed air, holding the parts together by mechanical means while they are removed from the air room, and vulcanizing the article outside of the air room.

4. The process of making hollow rubber articles consisting of bringing the parts of the article together in a room occupied by the operator and filled with compressed air, holding the parts together by a vulcanizing mold closed within the air room, removing such mold with its inclosed article from the air room, and vulcanizing the article while in said mold.

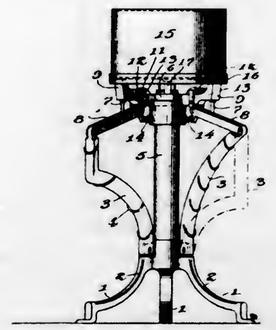
5. The process of making hollow rubber articles consisting of bringing the parts of the article together in a surrounding atmosphere of compressed air, then transferring the article to a vulcanizing mold located in such compressed air atmosphere, closing the mold in such atmosphere, and vulcanizing the article.

[Claims 6 to 45 not printed in the Gazette.]

1,219,352. HOG-OILER. ALBERT J. SCHEPP and HERMAN J. SCHEPP, Manhattan, Kans. Filed Jan. 24, 1916. Serial No. 73,969. Renewed Sept. 15, 1916. Serial No. 120,421. (Cl. 119—157.)

1. A hog oiler comprising a base consisting of longitudinally curved legs having ribs thereon, curved bars pivotally connected with the legs, a standard mounted upon the base, a reservoir supported upon the standard, and having oil outlets, blocks movably mounted in the reservoir levers fulcrumed upon the reservoir and operatively connected with the blocks and troughs pivotally connected at one end with the levers and pivotally connected at their other ends with the said bars.

2. A hog oiler comprising a base, a standard mounted thereon, longitudinally curved bars pivotally connected with the base, a reservoir mounted upon the base and having oil outlet openings, blocks movably mounted in the reservoir, and levers fulcrumed upon the reservoir and operatively connected with the blocks and troughs pivotally connected at their inner ends with the levers and pivotally connected at their outer ends with the said bars.



3. An oiler comprising a base having a standard mounted thereon, bars pivotally connected with the base, a reservoir mounted upon the standard and provided with radially disposed extensions, partitions located in the extensions, extensions having oil outlet openings located beyond the partitions, blocks movably mounted in the extensions of the reservoir, levers fulcrumed upon the reservoir and operatively connected with the blocks, and troughs pivotally connected at their inner ends with the levers and pivotally connected at their outer ends with the bars.

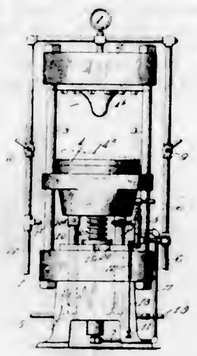
4. An oiler comprising a base having a standard located thereon, longitudinally curved bars pivotally connected with the base, a reservoir mounted upon the standard and provided with radially disposed extensions, partition walls located in the extensions, said extensions being provided with oil outlet openings located beyond the said partition walls, blocks located in the extensions, levers fulcrumed upon the reservoir and operatively connected with the blocks, means mounted on the reservoir for limiting the swinging movement of the levers and troughs pivotally connected at their inner ends with the levers and pivotally connected at their outer ends with the bars.

5. An oiler comprising a base having a standard mounted thereon, longitudinally curved bars pivotally connected with the base, a reservoir mounted upon the standard and provided with radially disposed extensions having partitions, said extensions also having oil outlet openings located beyond the said partitions, blocks movably mounted in the extensions of the reservoir, levers fulcrumed upon the reservoir and operatively connected with the blocks, troughs pivotally connected at their inner ends with the levers and pivotally connected at their outer ends with the bars, a tank mounted upon the reservoir and provided with an outlet nipple, the lower end of which is located at a lower level than the upper edges of the said partition walls.

1,219,353. HAT-PRESS. JOSEPH F. SENN, Chicago, Ill. Filed Jan. 18, 1912. Serial No. 672,018. (Cl. 223—31.)

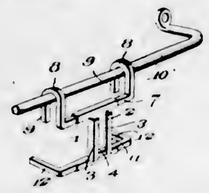
In a hat-pressing machine, a bed having openings, a reciprocatory die holder having an internal space to hold a heating medium, a supply pipe for said heating medium, opening into said space said supply pipe being in telescoping sections, stems extending from the die holder, a rotatable plate mounted on the bed and having openings which are adapted to register with the openings in the bed, through which registering openings the aforesaid

stems pass, and said plate also having elongated openings through which the aforesaid supply pipe passes, and means



for rotating the plate when the stems clear the openings thereof.

1,219,354. LAMP-HOOK FOR CARS. GEORGE ALFRED SEWARD, Rome, Ga. Filed Feb. 7, 1916. Serial No. 76,826. (Cl. 240—57.)



1. A lamp supporting hook applicable to the horizontal hand and foot rails of car bodies comprising a lamp receiving socket, a normally horizontal cross arm extending across the upper end of the socket and provided at its opposite ends with hooks having downwardly extending end portions, and another normally horizontal cross arm extending across the lower end of the socket and provided with inwardly extending off-setting legs adapted to rest against the car body.

2. A lamp supporting hook for the purpose specified comprising a lamp holding socket, suspending means therefor embodying a pair of hooks arranged in spaced relation to each other and adapted to be brought into engagement with one of the hand and foot rails of a box car, and offsetting arms located in a lower plane than the suspending means and adapted to terminally rest against the car body to hold the socket in an upright position.

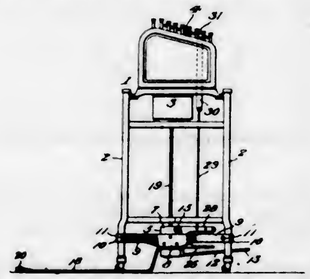
1,219,355. RAIL-JOINT. JAMES L. SIMPSON, Waterloo, Iowa. Filed June 20, 1916. Serial No. 104,724. (Cl. 239—8.)



1. In a device for the purpose set forth, two rails, each having its web cut angularly, its head to one side of its web extended and having its upper and lower faces beveled to provide a substantially V-shaped tongue, the heads of the rails, upon the opposite sides of the angular cut webs having each a transverse substantially V-shaped recess providing each a pocket receiving one of the tongues of the rails, and means for connecting the assembled rails.

2. In a device for the purpose set forth, two rails each having its web cut angularly, its head, at the outer end of the said angular web projecting, and the upper and lower walls of the said projection beveled to provide the same with a tongue which is V-shaped in side elevation, the inner wall of the tongue projecting a greater distance from the rail than the outer wall of the said tongue and forming the end of the said inner wall with a nose, the head of each of the rails upon the opposite side of the angular web having a transverse V-shaped recess providing a pocket, the inner wall of the pocket being of a greater depth than the outer portion thereof, whereby to receive the wedge-shaped tongues and the nose portions thereof, and means for connecting the rails when assembled.

1,219,356. ATTACHMENT FOR ADDING-MACHINES. SHELTON M. SIRMANS, Jacksonville, Fla. Filed Apr. 18, 1916. Serial No. 92,059. (Cl. 235—62.)



1. An attachment for adding machines of the character described comprising a frame structure, means for attaching the same to the machine frame, a pair of superposed pivotally mounted foot levers upon said frame structure, said levers being arranged in juxtaposition to each other and one extending outwardly beyond the other, switch elements controlled by one of said foot levers, an actuating element controlled by the other foot lever, guide elements upon the frame structure, in sliding engagement with the levers, and springs between the levers and the frame structure for yieldingly maintaining said levers in normal position.

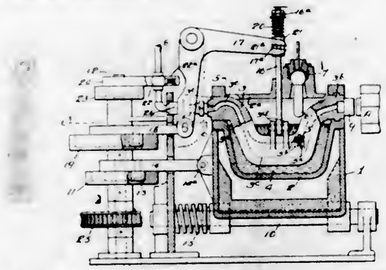
2. An attachment for adding machines of the character described comprising a frame structure, means for attaching the same to the machine frame, a pair of superposed pivotally mounted foot levers upon said frame structure, said levers being arranged in juxtaposition to each other and one extending outwardly beyond the other, switch elements controlled by one of said foot levers, an actuating element controlled by the other foot lever, guide pins upon the frame structure in sliding engagement with the levers, and springs upon said pins between the levers and the frame structure for yieldingly maintaining said levers in normal position.

1,219,357. DELIVERY MEANS FOR MELTING-POTS. JOHN K. STEWART, Chicago, Ill.; Julia B. Stewart executrix of said John K. Stewart, deceased. Filed Nov. 20, 1915. Serial No. 62,524. (Cl. 22—69.)

1. In a melting pot, means for delivering molten metal therefrom comprising a conduit movably mounted in said melting pot, having a port positioned to be submerged in the molten metal but adapted to be elevated out of said metal by a movement of the conduit, means for closing said port in elevated position, and means for applying air pressure to one end of the conduit for discharging its contents from the opposite end.

2. In a melting pot, means for delivering molten metal therefrom comprising a substantially U-shaped conduit

supported on hollow trunnions with its middle portion dimensioned to be submerged in the molten metal, a port in said middle submerged portion of the conduit adapted to be elevated out of the metal by a partial rotation of the conduit upon its trunnions, means for closing said port in said elevated position, and means for applying air pressure to one end of the conduit for discharging its contents from the opposite end.



3. In a melting pot, means for delivering molten metal therefrom comprising a substantially U-shaped conduit supported on hollow trunnions with its middle portion dimensioned to be submerged in the molten metal, and having a port in said middle submerged portion, a valve member suspended in the melting pot above the surface of the molten metal in position for closing the said port when the latter is elevated by rotation of the conduit on its trunnions, and means for applying air pressure to the conduit for discharging its contents when the port is closed by said valve member.

4. In a melting pot, means for delivering molten metal therefrom comprising a conduit movably mounted in said melting pot, having a port positioned to be submerged in the molten metal but adapted to be elevated out of said metal by a movement of the conduit, a valve member supported in the melting pot above the surface of the molten metal in position for closing said port in its elevated position, and means for applying air pressure to the conduit for discharging its contents when said port is so closed.

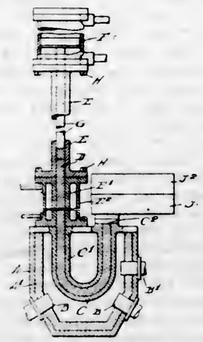
5. In a melting pot, means for delivering molten metal therefrom comprising a conduit movably mounted in said melting pot, having a port positioned to be submerged in the molten metal but adapted to be elevated out of said metal by a movement of the conduit, a valve member pendulously supported in said melting pot above the surface of the metal and free to swing through a limited range in any direction away from the vertical, said valve member being positioned to register approximately with said port when the latter is elevated by a movement of the conduit, and being adapted to adjust itself by reason of its mounting so as to seat accurately over said port for closing the latter, and means for applying air pressure to said conduit for discharging its contents when the port is so closed.

[Claims 6 to 14 not printed in the Gazette.]

1,219,358. METHOD OF MOLTEN-METAL FEED FOR DIE-CASTING. JOHN K. STEWART, Chicago, Ill.; Julia B. Stewart executrix of said John K. Stewart, deceased. Filed Nov. 20, 1915. Serial No. 62,525. (Cl. 22—209.)

1. The method of feeding metal for casting, consisting in advancing a rod of the metal as required through a confining conduit whose cross-sectional area is substantially that of the rod, and applying heat to a portion of said conduit in sufficient quantity to melt the rod therein, whereby the unmelted portion of the rod operates as a piston for expelling the melted portion through the heated portion of the conduit.

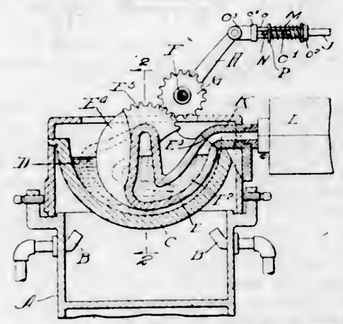
2. The method of feeding metal for casting, consisting in advancing a rod of the metal as required through a confining conduit and applying heat to a part of said conduit in sufficient quantity to melt the rod therein, and also applying cooling means to a part of the conduit immediately preceding such heated portion for dissipating the heat conducted thereto.



3. The method of feeding metal for casting, consisting in advancing a rod of the metal as required through a substantially straight confining conduit whose cross-sectional area is substantially that of the rod into an approximately U-shaped conduit and applying heat to said latter conduit in sufficient quantity to melt the metal contained therein.

4. The method of feeding metal for casting, consisting in forcing a rod of the metal through a substantially straight confining conduit into one arm of an approximately U-shaped conduit, applying heat to said U-shaped conduit in sufficient quantity to melt the metal therein, and further advancing the rod for discharging the molten metal from the other arm of the heated conduit.

1,219,359. LADLE FOR DIE-CASTING MACHINES. JOHN K. STEWART, Chicago, Ill.; Julia B. Stewart executrix of said John K. Stewart, deceased. Filed Jan. 5, 1916. Serial No. 70,380. (Cl. 22—69.)



1. The combination of a receptacle for molten metal, having a discharge nozzle, of a ladle device having a cavity and a mouth adapted to receive a charge of molten metal and to discharge the same, said ladle device having also connections for supplying compressed air to the cavity for discharging the metal therefrom to the mouth and for moving the ladle device in said receptacle to carry said discharge mouth into and out of registration with the discharge nozzle.

2. In a receptacle for molten metal, a ladle device mounted for movement therein, a fixed discharge nozzle for the receptacle, the ladle having a cavity with a mouth positioned to be submerged in the molten metal at one limit of movement of said ladle and adapted to connect with said nozzle at the other limit of such movement, together with a connection for admitting compressed air to the cavity to discharge the molten metal therefrom.

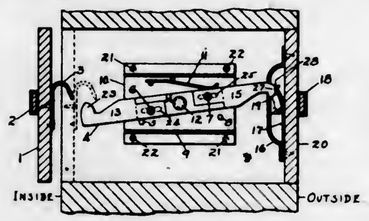
3. In a receptacle for molten metal, a ladle device mounted for movement therein, a fixed discharge nozzle for the receptacle positioned above the level of the molten metal therein, the ladle having a cavity with a mouth adapted to be submerged in the molten metal at one limit of movement of said ladle and adapted to connect with the nozzle at the other limit of such movement, together with a connection for admitting compressed air to the cavity when said mouth is connected with said nozzle for effecting discharge of the molten metal from the cavity through said nozzle.

4. In a receptacle for molten metal, a ladle device mounted to rotate therein, and a fixed discharge nozzle for the receptacle, said ladle having a cavity with a mouth positioned to be submerged in the molten metal at one limit of its rotative movement, and adapted to register with said nozzle at the other limit of such movement, together with a connection for admitting compressed air to the cavity to discharge the metal therefrom.

5. In a receptacle for molten metal, a ladle device mounted on trunnions to rotate in said receptacle, and a fixed discharge nozzle for the receptacle, said ladle having a cavity with a mouth positioned to be submerged in the molten metal at one limit of its rotative movement, and adapted to register with said nozzle at the other limit of such movement, together with a connection leading through one of said trunnions to the ladle cavity for admitting compressed air to discharge the molten metal therefrom through said nozzle.

[Claims 6 to 9 not printed in the Gazette.]

1,219,360. LOCKING MECHANISM. EARL W. STORMS, Buffalo, N. Y. Filed Feb. 2, 1916. Serial No. 75,704. (Cl. 232—41.)

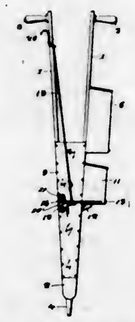


1. The combination of a receptacle having an inner and an outer door, and a mechanism for locking said outer door, said mechanism consisting of a lever having a lip on the inner end and a hook on the outer end, with a notch on said outer end, said lever pivotally attached to a plate which is located intermediate of said doors, a hook on the inner door to coöperate with the lip on said lever, a spring for holding said lever normally in a horizontal position, a catch on said outer door inclosing a spring having a shoulder to engage with a notch on the hooked end of said lever, whereby the hooked end of said lever is held out of contact with said catch when the lock is set by the action of opening the inner door.

2. Locking mechanism having, in combination with an inner and an outer door, a catch and a lever arranged in coöperating position, means connected to said inner door for operating said lever upon the opening of said inner door, said catch mounted upon said outer door and inclosing a spring adapted to engage said lever and hold the latter free from said catch so long as said outer door remains in a closed position and a spring in contact with said lever and adapted to throw said lever into operative position with said catch upon the opening of said outer door.

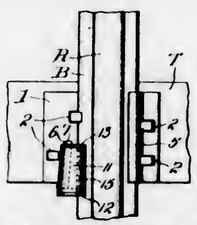
3. The combination of a receptacle, having an inner and an outer door, a hook mounted on the inner door, a catch mounted on the outer door, a lever pivoted between said doors and adapted to coöperate with said inner door by means of said hook and to engage with and lock said outer door by means of said catch, a spring for holding said lever normally in a locking position, another spring inclosed in said catch on said outer door and having a shoulder to engage with the locking end of said lever whereby the locking end of said lever is held out of operation with said catch upon the opening of said inner door, and whereby said lever is released from said inoperative position upon the opening of said outer door and then upon the closing of said outer door automatically locks the same.

1,219,361. SEED-PLANTER. STANLEY SWINFORD, Hinton, Ky. Filed Oct. 11, 1916. Serial No. 125,047. (Cl. 111—22.)



In combination with a planter comprising movable side members, an attachment comprising a hopper having a spout which passes transversely through one of the side members, a slide movably mounted in the hopper and having an opening, a rack bar connected with the slide, a pawl pivotally mounted upon the other side member and a rod connected with the pawl and adapted to be manipulated to move the pawl into engagement with the rack bar, whereby the bar is operatively connected with one of the side members.

1,219,362. TIE-PLATE. RIUSUKE WATANABE, Granger, Wyo. Filed Dec. 22, 1916. Serial No. 138,414. (Cl. 238—2.)



1. In a tie plate, the combination with a base member pierced with spike holes and having along one side a fixed overhanging flange, and along the other side a tongue of dove-tailed cross section with its butt end overhanging one end of the plate slightly and its body inclining thence toward said flange, and ribs between said flange and tongue for supporting the base of the rail; of a wedge member having an overhanging flange along its inner edge, upstanding webs at its butt end and its opposite end, and a groove in its lower face inclining toward said flange from the butt end toward its opposite end and of dove-tailed cross-section to slidably engage said tongue.

2. In a tie plate, the combination with a base member having along one side a fixed overhanging flange and along the other side a tongue of dove-tailed cross-section inclining toward said flange, and means between said flange and tongue for supporting the base of the rail; of a wedge member having an overhanging flange along its inner

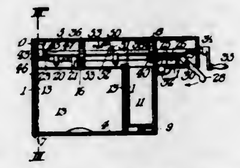
edge, upstanding webs at its butt end and its opposite end, and a groove in its lower face inclining toward said flange from the butt end toward its opposite end and of dove-tailed cross section to slidably engage said tongue.

3. In a tie plate, the combination with a base member pierced with spike holes and having along one side a fixed overhanging flange, and along the other side a tongue of dove-tailed cross section inclining toward said flange, and means between said flange and tongue for supporting the base of the rail; of a wedge member having an overhanging flange along its inner edge and a groove in its lower face inclining toward said flange and of dove-tailed cross section to slidably engage said tongue.

4. In a tie plate, the combination with a base member having near one edge a rail flange and near the other edge an upstanding tongue extending throughout part of the length of this member and disposed obliquely to said flange; of a wedge member having a rail flange along one edge and a groove in its lower face disposed obliquely to its flange and adapted to slidably engage said tongue, a driving face at the front end of this member, and a fin depending integrally from the front end of the base member and over which the wedge member moves as it is driven.

5. In a tie plate, the combination with a base member having near one edge a rail flange and near the other an upstanding tongue extending throughout part of its length, disposed obliquely to said flange, and dove-tailed in cross section with that face adjacent the flange of steeper pitch than the opposite face; of a wedge member having a rail flange along one edge and a groove in its lower face oblique to its flange and shaped to engage said tongue, the groove being closed across the driving end of this member.

1,219,363. VENDING-MACHINE. DANIEL E. WICKS, Philadelphia, Pa. Filed May 11, 1916. Serial No. 96,948. (Cl. 194—69.)



1. In a check controlled vending machine, the combination with a casing having a check inlet, a vending outlet, and doors upon respectively opposite sides thereof; of a removable check receptacle in said casing, adapted to receive checks inserted through said inlet; a holder having a series of compartments for the articles to be vended; means arranged to shift said holder to successively present said compartments in registry with said outlet, including a rack on said holder having a series of gear teeth and a series of locking notches; said notches respectively corresponding with said compartments; a reciprocatory locking bar having a projection arranged to successively engage said notches and thereby prevent movement of said holder; a spring tending to lock said bar; means arranged to disengage said bar and thus release said holder, including a check slide, a spring tending to operate said slide to close said check inlet, and a lever, connected to said slide and fulcrumed on said casing; whereby said slide may be moved in opposition to its spring, to receive a check between the adjacent ends of said locking bar and slide, so that when said lever is released said slide spring unlocks said bar, when a check is inserted between said bar and slide; means arranged to raise and lower said holder, by engagement with its gear teeth, including a shaft journaled in said casing and having a handle exterior thereto, a gear wheel on said shaft, adapted to engage said gear teeth on said rack, a ratchet wheel on said shaft, a keeper pawl, mounted to reciprocate in said casing, having a spring tending to engage it with said ratchet wheel, arranged to permit said shaft to be turned in one direction but not in the other, and to deliver, to said receptacle, a check inserted between said bar and slide, when said shaft is turned to vend the article for which said check was inserted; a detent latch, pivoted on said casing, normally detaining said shaft, against axial displacement, with said gear wheel in engagement with said rack and said ratchet wheel in engagement with said pawl; but movable to permit axial movement of said shaft; and a removable abutment arranged to detachably engage said casing and hold said locking bar in unlocked position; whereby, when said latch is moved to release said shaft the latter may be manually thrust axially to disengage said ratchet wheel from said pawl without disengaging said gear from said rack, so that the latter may then be moved in either direction by turning movement of said shaft.

2. In a check controlled vending machine, the combination with a casing having a check inlet and a vending outlet; of a receptacle in said casing, adapted to receive checks inserted through said inlet; a holder having a series of compartments for the articles to be vended; means arranged to shift said holder to successively present said compartments in registry with said outlet, including a rack on said holder having a series of gear teeth and a series of locking notches; said notches respectively corresponding with said compartments; a reciprocatory locking bar arranged to successively engage said notches and thereby prevent movement of said holder; a spring tending to lock said bar; means arranged to disengage said bar and thus release said holder, including a check slide, a spring tending to operate said slide to close said check inlet, and a lever, connected to said slide and fulcrumed on said casing; whereby said slide may be moved in opposition to its spring, to receive a check between the adjacent ends of said locking bar and slide, so that when said lever is released said slide spring unlocks said bar, when a check is inserted between said bar and slide; means arranged to raise and lower said holder, by engagement with its gear teeth, including a shaft journaled in said casing and having a handle exterior thereto, a gear wheel on said shaft, adapted to engage said gear teeth on said rack, a ratchet wheel on said shaft, a keeper pawl, having a spring tending to engage it with said ratchet wheel, arranged to permit said shaft to be turned in one direction but not in the other, and to deliver, to said receptacle, a check inserted between said bar and slide, when said shaft is turned to vend the article for which said check was inserted; a detent normally detaining said shaft, against axial displacement, with said gear wheel in engagement with said rack and said ratchet wheel in engagement with said pawl, but movable to permit axial movement of said shaft; and a removable abutment arranged to detachably engage said casing and hold said locking bar in unlocked position; whereby, when said detent is moved to release said shaft the latter may be manually thrust axially to disengage said ratchet wheel from said pawl without disengaging said gear from said rack, so that the latter may then be moved in either direction by turning movement of said shaft.

3. In a check controlled vending machine, the combination with a casing having a check inlet and a vending outlet; of a receptacle in said casing, adapted to receive checks inserted through said inlet; a holder having a series of compartments for the articles to be vended; means arranged to shift said holder to successively present said compartments in registry with said outlet, including a rack on said holder having a series of gear teeth and a series of locking notches; said notches respectively corresponding with said compartments; a reciprocatory locking bar arranged to successively engage said notches and thereby prevent movement of said holder; a spring tending to lock said bar; means arranged to disengage said bar and thus release said holder, including a check slide and a lever; whereby said slide may be moved in opposition to its spring, to receive a check between the adjacent ends of said locking bar and slide, and said lever may be moved to unlock said bar, when a check is inserted between said bar and slide; means arranged to shift said holder, by engagement with its gear teeth, including a shaft journaled in said casing and having a handle exterior thereto, a gear wheel on said shaft, adapted to engage said gear teeth on said rack, a ratchet

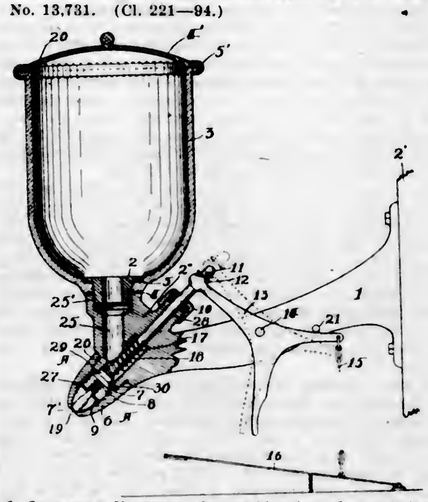
wheel on said shaft, a keeper pawl, having a spring tending to engage it with said ratchet wheel, arranged to permit said shaft to be turned in one direction but not in the other, and to deliver, to said receptacle, a check inserted between said bar and slide, when said shaft is turned to vend the article for which said check was inserted; a detent normally detaining said shaft, against axial displacement, with said gear wheel in engagement with said rack and said ratchet wheel in engagement with said pawl, but movable to permit axial movement of said shaft; and a removable abutment adjustable to hold said locking bar in unlocked position; whereby, when said detent is moved to release said shaft the latter may be manually thrust axially to disengage said ratchet wheel from said pawl without disengaging said gear from said rack, so that the latter may then be moved in either direction by turning movement of said shaft.

4. In a check controlled vending machine, the combination with a casing having a check inlet and a vending outlet; of a receptacle in said casing, adapted to receive checks inserted through said inlet; a holder having a series of compartments for the articles to be vended; means arranged to shift said holder to successively present said compartments in registry with said outlet, including a rack on said holder having a series of gear teeth and a series of locking notches; said notches respectively corresponding with said compartments; a locking element arranged to successively engage said notches and thereby prevent movement of said holder; means arranged to disengage said element and thus release said holder, including a check slide adapted to receive a check between the adjacent ends of said locking elements and slide, and then movable to unlock said element; means arranged to shift said holder, including a shaft journaled in said casing and having a handle exterior thereto, a gear wheel on said shaft, adapted to engage said gear teeth on said rack, a ratchet wheel on said shaft, having a keeper pawl arranged to permit said shaft to be turned in one direction but not in the other; a detent normally detaining said shaft, against axial displacement, with said gear wheel in engagement with said rack and said ratchet wheel in engagement with said pawl, but movable to permit axial movement of said shaft; and an abutment adjustable to hold said locking element in unlocked position; whereby, when said detent is moved to release said shaft the latter may be manually thrust axially to disengage said ratchet wheel from said pawl without disengaging said gear from said rack, so that the latter may then be moved in either direction by turning movement of said shaft.

5. In a check controlled vending machine, the combination with a casing having a check inlet and a vending outlet; of a receptacle in said casing, adapted to receive checks inserted through said inlet; a holder having a series of compartments for the articles to be vended; means arranged to shift said holder to successively present said compartments in registry with said outlet, including a rack on said holder having a series of gear teeth and a series of locking notches; said notches respectively corresponding with said compartments; a reciprocatory locking bar arranged to successively engage said notches and thereby prevent movement of said holder; a spring tending to lock said bar; means arranged to disengage said bar and thus release said holder, including a check slide having a spring, and a lever, connected to said slide and fulcrumed on said casing; whereby said slide may be moved in opposition to its spring, to receive a check between the adjacent ends of said locking bar and slide, and then movable to unlock said bar; and means arranged to shift said holder, including a shaft journaled in said casing and having a handle exterior thereto, a gear wheel on said shaft, adapted to engage said gear teeth on said rack, a ratchet wheel on said shaft, a keeper pawl, having a spring tending to engage it with said ratchet wheel, arranged to permit said shaft to be turned in one direction but not in the other, and to deliver, to said receptacle, a check inserted between said bar and slide, when said shaft is turned to vend the article for which said check was inserted.

[Claims 6 to 13 not printed in the Gazette.]

1,219,364. SOAP-DISPENSING MACHINE. ANTHONY GEORGE WISE, Minneapolis, Minn., assignor to Frank W. Adsit, Minneapolis, Minn. Filed Mar. 11, 1915. Serial No. 13,731. (Cl. 221—94.)



1. In a soap dispenser, the combination of a container, a mounting for said container having a chamber therein and a communication between said chamber and said container, a piston slidable in said chamber, a retaining valve seatable at the bottom of said chamber, a spring normally pressing said retaining valve toward said seat, a cap surrounding said retaining valve, an orifice at the bottom of said cap closable by said stem when said valve is fully depressed against the tension of said spring by said piston.

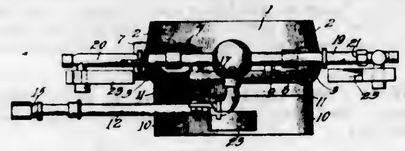
2. In a soap dispenser, the combination of a container having a support for said container, a chamber in said support and an opening leading from said chamber to said container, a piston reciprocally mounted in said chamber, a cap associated with said support at one end of said chamber, a retaining valve reciprocally mounted in said cap and a stem on said retaining valve, an orifice in said cap adapted to be closed by said stem when said retaining valve is in its normal position, flutes along the walls of said cap, a spring normally holding said plunger against said retaining valve and said stem in position to close said orifice, and a retaining valve spring adapted to seat said valve and open said orifice when said plunger is raised.

3. The combination in a soap dispenser of a container having a support for said container, a chamber in said support and an opening leading from said chamber to said container, a plunger reciprocally mounted in said chamber, an adjusting screw in the bottom of said plunger, a cap positioned on said support at one end of said chamber, a retaining valve having a stem reciprocally mounted in said cap, a seat for said valve at one end of said chamber, an orifice in said cap adapted to be closed by the stem of said valve in one position of said valve, a spring associated with said valve adapted to hold said stem away from said orifice when said plunger is elevated, a spring associated with said plunger adapted to normally press said plunger against said retaining valve and close said orifice against the tension of the retaining valve spring, an adjusting screw in said plunger for varying the reciprocal relations of said plunger and said valve, and flutes in the wall of said cap, whereby communication is opened between the part of said cap below said retaining valve and that above said retaining valve when said valve is lifted from its seat.

4. In a soap dispenser, the combination of a container, a mounting for said container having a chamber, a plunger having a piston head at one end operated by means of a bell crank at the other end, a spring normally holding the plunger at the lower end of its stroke, a valve, a stem on said retaining valve, a spring normally holding said valve against the piston head of said plunger and capable of closing said valve on its seat when said plunger is withdrawn, a cap containing said valve and said spring and attached to the mounting for the container, and having its sides fluted and having at one end a nozzle opening.

5. In a soap dispenser, a container, a mounting, means for connecting said container to said mounting, a chamber in said mounting, a plunger in said chamber held in normal position by a spring and operable by means of a bell crank, a cap attached to said mounting, a retaining valve, a spring capable of seating said valve in said mounting, said cap having its sides fluted and having at its lower extremity a nozzle opening, said plunger controlling the normal position of said valve.

1,219,365. HYDROCARBON-BURNER. WILLIAM THOMAS WOOD, Nashville, Tenn. Filed Nov. 29, 1915. Serial No. 64,018. (Cl. 158—53.)



1. The combination of an open topped bowl shaped casing, one or more mixing chambers directed tangentially into said burner casing, a vaporizing chamber located within said bowl shaped burner casing and connections for directing the gas from said vaporizing chamber endwise into the mixing chambers so as to produce a whirling flame.

2. A device of the class described, comprising an open topped bowl-shaped burner casing, a fuel vaporizing chamber located in said burner casing, means for supplying fuel to said chamber, and means for projecting the vapor formed in said chamber into said burner casing tangentially thereto for producing a whirling flame.

3. A device of the class described, comprising an annular burner casing having a plurality of tangentially disposed mixers opening thereinto, a plurality of fuel vaporizing chambers located in said burner casing, fuel supply pipes communicating with said vaporizing chambers, and vapor conducting pipes passing out of said burner casing and having nozzles located in front of said tangentially disposed mixers, all being arranged to produce a whirling flame at said burner casing.

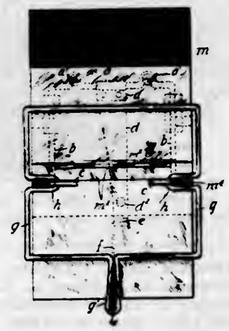
4. A device of the class described, comprising an annular burner casing having a plurality of tangentially disposed mixers in the side thereof and having an annular series of air supplying apertures in the bottom thereof, said casing also having a relatively large centrally located air inlet opening in the bottom thereof, a plurality of fuel vaporizing chambers located in said burner casing above said centrally located opening, fuel supply pipes communicating with said vaporizing chambers, and vapor conducting pipes connected to said vaporizing chambers and provided with suitable nozzles for projecting the vapor formed in said chambers into said mixers.

5. A device of the class described, comprising an open-topped bowl-shaped burner casing, a globular fuel vaporizing chamber located in said burner casing, means for supplying fuel to said chamber, and means for projecting the vapor formed in said chamber into said burner casing tangentially thereto for producing a whirling flame around said globular chamber.

[Claim 6 not printed in the Gazette.]

1,219,366. FIXTURE FOR PACKAGES OF FOLDED PAPER OR OTHER MATERIAL. CHARLES WHITNEY MORDEN, Portland, Oreg. Filed Aug. 27, 1914. Serial No. 858,968. (Cl. 211—29.)

1. A package supporting fixture of the character described comprising supporting means including a package supporting member, or members, a paper severing element provided at the extremity of the supporting member or members, such paper severing element alined approximately with the perforations partially severing the sheets of the package, and a keeper for restraining the outer folds or sections of the package.



2. A package supporting fixture of the character described comprising supporting means including laterally located supporting members, a paper severing element provided at the extremity of the supporting members, such paper severing element alined approximately with the perforations partially severing the sheets of the package, and a keeper for restraining the outer folds or sections of the package.

3. A package supporting fixture of the character described comprising supporting means including laterally located supporting members, the extremities of said supporting members being in-bent and constituting paper severing means, the supporting members being arranged to cause said in-bent extremities to be alined approximately with the perforations partially severing the sheets of the package, and a keeper engaged by said in-bent extremities of the supporting members for restraining the outer folds or sections of the package.

4. A package supporting fixture of the character described comprising supporting means including laterally located downwardly inclined supporting members, the extremities of said supporting members being in-bent and constituting paper severing means, the supporting members being arranged to cause said in-bent extremities to be alined approximately with the perforations partially severing the sheets of the package, a keeper engaged by said in-bent extremities of the supporting members for restraining the outer folds or sections of the package, and a gravity plate slidably supported on said supporting members.

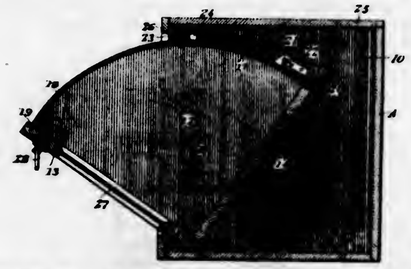
5. A package supporting fixture of the character described comprising supporting means including laterally located resilient downwardly inclined supporting members, a paper severing element provided at the extremity of the supporting members, such paper severing element alined approximately with the perforations partially severing the sheets of the package, a keeper for restraining the outer folds or sections of the package, and a gravity plate slidably supported on said supporting members.

[Claims 6 to 9 not printed in the Gazette.]

1,219,367. BIN. J. CLAY ADAMS, Weir City, Kans. Filed Feb. 11, 1914. Serial No. 818,083. (Cl. 211—6.)

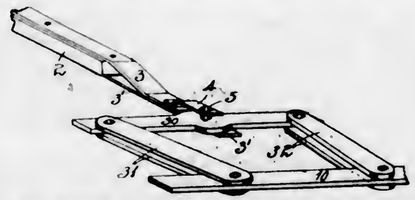
In a device of the class described, a casing, a bin tiltably supported in the casing, said bin having an arcuate rear wall member concentric with the axis about which the bin is tiltable, arcuate guide members connected with the top portion of the bin and terminally supported on the arcuate rear wall member, an arcuate lid engaging the guide members, a cross bar in the casing, and a hook

on the lid detachably engaging the cross bar; the casing and the bin being provided with interengaging pivot



members and bearings permitting the bin to be lifted from the casing when slightly tilted outwardly therefrom.

1,219,368. TANDEM DISK HARROW. WILLIAM F. BERETH, Monmouth, Ill., assignor to Monmouth Plow Factory, Monmouth, Ill., a Corporation of Illinois. Filed Nov. 30, 1915. Serial No. 64,269. (Cl. 55—83.)



1. In a tandem implement, a front frame, a rear frame, a plate pivoted transversely of and to the front frame, and divergent links pivotally connected with said plate and rear frame.

2. In a tandem implement, a front frame, a plate pivoted transversely of and to the front frame, a rear frame including a yoke the front portion of which is substantially parallel with said plate, and links pivotally connecting said plate and that portion of the yoke which parallels it.

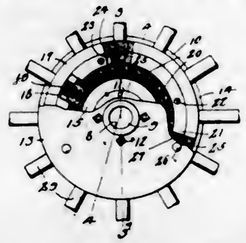
3. In a tandem implement, a front frame, a plate pivoted transversely of and to the front frame, a rear frame including a yoke the front portion of which is substantially parallel with said plate, and divergent links pivotally connecting said plate and that portion of the yoke which parallels it.

4. In a tandem implement, a tongue, an element secured thereto and extending rearwardly thereof and in line therewith, a plate pivotally connected with the last recited element and arranged transversely thereof, a rear frame including a yoke the front portion of which substantially parallels said plate, and links pivotally connecting said plate and said portion of the yoke.

5. In a tandem implement, a tongue, an element secured thereto and extending rearwardly thereof and in line therewith, a plate pivotally connected with the last recited element and arranged transversely thereof, a rear frame including a yoke the front portion of which substantially parallels said plate, and divergent links pivotally connecting said plate and said portion of the yoke.

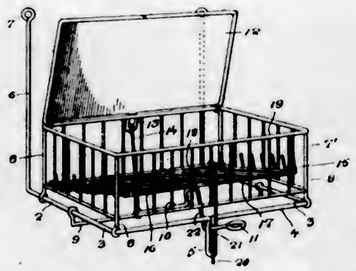
1,219,369. VEHICLE-WHEEL. ARVID BOHLIN, Trenton, N. J. Filed Dec. 22, 1916. Serial No. 138,431. (Cl. 152—45.)

A vehicle wheel having a band fixed to the inner ends of the spokes and having recesses within one side thereof, a flange on the inner face of said band having openings within the sides thereof, rings secured to the sides of the flange and covering said openings, one of said rings having recesses therein registering with the recesses in the side of the band, a second band received in the first mentioned band and having openings therein, springs interposed between said bands and having ends received in said open-



ings, a hub received in the last mentioned band and fixed thereto, a flange on said hub, a plate secured to said hub, and rollers on said plate received in the openings formed by the recesses in said ring and the first mentioned band.

1,219,370. SOAP-HOLDER. OLIVER L. BRAY, Clifton, Ariz. Filed Mar. 7, 1916. Serial No. 82,728. (Cl. 45—28.)



1. A soap holder having a base for connection with a support, a body supported by said base, a cover hingedly connected to said body, a lever connected with said base and cover and adapted when operated to raise said cover, and a bottom hingedly connected with the body and supported by said lever whereby when an article is placed within the body and upon said bottom, the lever will be operated by the weight of the article to move said cover to a closed position.

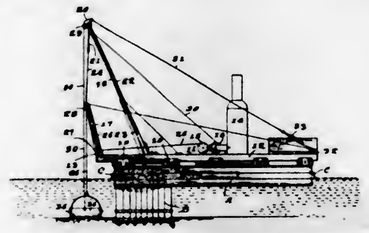
2. A soap holder having a base for connection with a support, a body carried by said base, a cover hingedly connected with the body, a bottom hingedly connected with the body, a lever mounted on said base for swinging movement and connected with the cover and contacting with the bottom and adapted when operated to simultaneously raise said cover and bottom, and a latch member carried by said body and engageable with said lever whereby said cover and bottom will be retained in a raised position.

3. A soap holder having a base for connection with a support, a body carried by said base, a cover hinged to said body, a cross bar on the base, a lever connected with the cover and mounted between its ends for turning movement on the cross bar to raise said cover to an open position, a member rigidly connected with the body and extending below the same and provided with an inclined and offset portion to engage said lever and retain the cover in a raised positon, and a bottom hingedly connected with the body and supported by said lever whereby when an article is placed upon the bottom the weight of said article will co-act with the inclined offset portion on said member to release the lever therefrom and move the cover to a closed position.

4. A soap holder having a body, a hinged cover connected with the body, a bottom hingedly connected with the body below the cover, a cross bar below said bottom, a lever mounted to turn on said cross bar and connected with the cover and having an upstruck portion between its ends for contact with said bottom whereby when the lever is operated the cover and bottom will be simultaneously raised, a base formed from a strip of material bent between its ends to provide spaced parallel arms for connection with said body and the cross bar, and an intermediate portion upon said strip looped between its ends to receive the forward end of said lever and provide a guide therefor.

5. A soap holder having a body, a cover hinged to said body, a bottom hinged to the body, feet extending below the body, a cross bar, a lever mounted to turn on said cross bar and connected with the cover, an upstruck portion on said lever for contact with said bottom, a strip of material bent between its ends to provide spaced and parallel supporting arms engaged with said feet and the cross bar, an intermediate portion on said strip connecting said arms and looped between its ends to receive the forward end of said lever and provide a guide therefor, and vertically extending portions on said arms providing attaching portions for said holder.

1,219,371. EXCAVATOR. CHARLES S. BUTTERFIELD, Mission, Tex. Filed July 28, 1916. Serial No. 111,896. (Cl. 37—19.)



1. An excavating machine comprising a pair of pontoons, a thrust board arranged between the same, a gunwale frame movably supported upon the pontoons, a boom beam fixed to one end of the gunwale frame, a pair of booms adjustably connected to the beam, a derrick upon the gunwale frame, drums rotatably supported upon the pontoons, means connected with the derrick and the booms for suspending the latter, drag buckets, and pull and back drag lines connected with the buckets and with the drums for operation by the latter to move the buckets toward and away from each other and also for raising and lowering the same.

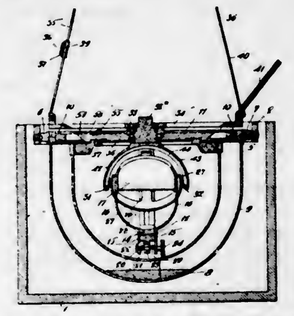
2. An excavating machine comprising a pair of pontoons, a thrust board arranged between the same, a gunwale frame movably supported upon the pontoons, a boom beam fixed to one end of the gunwale frame, a pair of booms adjustably connected to the beam, a derrick upon the gunwale frame, drums rotatably supported upon the pontoons, means connected with the derrick and the booms for suspending the latter, drag buckets, pull and back drag lines connected with the buckets and with the drums for operation by the latter to move the buckets toward and away from each other and also for raising and lowering the same, dolly supports on the pontoons, and dollies arranged in the supports and having the gunwale frame thereon.

3. An excavating machine comprising a pair of pontoons, a thrust board arranged between the same, a gunwale frame movably supported upon the pontoons, a boom beam fixed to one end of the gunwale frame, a pair of booms adjustably connected to the beam, a derrick upon the gunwale frame, drums rotatably supported upon the pontoons, means connected with the derrick and the booms for suspending the latter, drag buckets, pull and back drag lines connected with the buckets and the drums for operation by the latter to move the buckets toward and away from each other and also for raising and lowering the same, dolly supports on the pontoons, dollies arranged in the supports and having the gunwale frame thereon, and guide pulleys on the boom beam, booms and derrick for the drag lines.

4. An excavating machine comprising a pair of pontoons, a thrust board arranged between the same, a gunwale frame movably supported upon the pontoons, a boom beam fixed to one end of the gunwale frame, a pair of booms adjustably connected to the beam, a derrick upon the gunwale frame, drums rotatably supported upon the pontoons, means connected with the derrick and the booms for suspending the latter, drag buckets, pull and back drag lines connected with the buckets and with the drums for operation by the latter to move the buckets toward and away from each other and also for raising and lowering the same, dolly supports on the pontoons, dollies arranged in the supports and having the gunwale frame thereon, guide pulleys on the boom beam, booms and derrick for the drag lines, and means for adjusting the gunwale frame.

5. An excavating machine comprising a pair of pontoons, a thrust board arranged between the same, a gunwale frame movably supported upon the pontoons, a boom beam fixed to one end of the gunwale frame, a pair of booms adjustably connected to the beam, a derrick upon the gunwale frame, drums rotatably supported upon the pontoons, means connected with the derrick and the booms for suspending the latter, drag buckets, pull and back drag lines connected with the buckets and with the drums for operation by the latter to move the buckets toward and away from each other and also for raising and lowering the same, dolly supports on the pontoons, dollies arranged in the supports and having the gunwale frame thereon, guide pulleys on the boom beam, booms and derrick for the drag lines, means for adjusting the gunwale frame, and means for operating the drums.

1,219,372. AZIMUTH-CHRONOMETER. HORACE S. BUTTERFIELD, Portland, Oreg. Filed Mar. 30, 1912. Serial No. 687,325. (Cl. 88—25.)



1. An apparatus comprising in combination a driven member arranged to revolve about an axis, a driver arranged to revolve about an axis which passes through a point in the axis of the driven member, a support curved concentrically about the common point of the said axes on which said driver is adjustably mounted, and transmission means between said driver and driven member including a guide curved about said common point and a sliding element occupying said guide, said support being extended through an arc of at least ninety degrees and positioned to permit the driver to be adjusted with its axis perpendicular to the axis of the driven member or in coincidence therewith, or at any intermediate angle with respect thereto.

2. The combination of a driver and a driven member arranged to rotate respectively about axes which pass through a common point, a support curved about said common point in a plane other than perpendicular to the axis of the driven member, the driver being mounted on said support with provision for adjustment thereon about

said common point, and the support extending through an arc of at least ninety degrees whereby said driver may be placed with its axis perpendicular to or in coincidence with or at any intermediate angle to the axis of the driving member, and transmission means for imparting movement from the driver to the driven member.

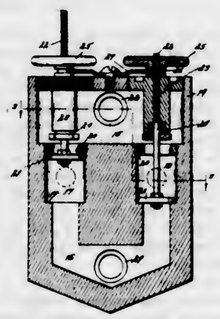
3. An apparatus comprising a driver and a driven member rotatable respectively about axes which pass through a common point, motion transmitting means between said members comprising a guide connected with the driven member and a slide connected with the driver and engageable with said guide, said guide being continuous on an arc of uniform radius of which the center is said common point and which passes through the axis of the driven member and extends approximately ninety degrees on each side of such axis, and means for supporting the driver with provision for adjustment angularly about said common point in a plane other than perpendicular to the axis of the driven member, between positions of which it is respectively perpendicular to and in coincidence with the axis of the driven member.

4. In an apparatus of the character described, a driven member rotatable about an axis, a yoke secured to said driven member and curved about a point in such axis in a plane including the axis, said yoke having a guide portion crossing such axis and extending on an arc of uniform radius about such point approximately ninety degrees on each side of the said axis, a driver having a slide occupying said guide, and a support adjustably holding said driver, the support being curved about the axis of said yoke at a plane including the axis of the driven member, and the driver being supported with its axis in the same plane and passing through the same central point.

5. An apparatus of the character described comprising driving and driven members adapted to rotate about axes which pass through a common point, a transmission member connected to the driven member and having a continuous guideway of uniform radius curved about said common point in a plane passing through the axis of the driven member and extending approximately ninety degrees on each side of said axis, said driving member having an element occupying said guideway, and a support curved on an arc about the same common point in a plane passing through said axis and having a radius greater than that of said transmission member, and extending through an arc of at least ninety degrees, and means connecting said driver to said support arranged to hold the driver with its axis radial to such common point and in a manner permitting such axis to be brought perpendicular to the axis of the driven member without interference therewith.

[Claims 6 to 21 not printed in the Gazette.]

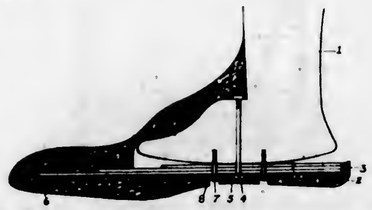
1,219,373. REVERSING DEVICE FOR PUMPS. CYRUS D. BYERS, Woodward, Iowa. Filed Mar. 27, 1916. Serial No. 87,111. (Cl. 103—66.)



1. In a device of the class described, a pump having a reversing mechanism comprising a body provided with two spaced cylinders open at their lower ends, and having valve seats formed at their lower ends, annular members screwed into the upper ends of said cylinders forming valve seats, pistons in said cylinders, removable heads mounted in said body in line with the respective cylinders having openings through them, stems on said pistons extended upwardly through said openings, and means for adjusting said stems longitudinally for varying the positions of said pistons.

2. In a device of the class described, a pump having a reversing mechanism comprising a body having spaced cylinders open at their lower ends, and having valve seats at their lower ends, annular members mounted in the upper ends of said cylinders forming valve seats, said body having a passage communicating with the lower ends of said cylinders, and another passage communicating with the upper ends of said cylinders, means for independently establishing communication between each cylinder and the pump proper, removable heads in said body spaced from said cylinders in alinement therewith having openings through them, pistons in said cylinders, stems on said pistons extending through said openings, said device having means whereby either piston may be adjusted to a variety of positions, and may be secured in any position of its adjustment.

1,219,374. ARTIFICIAL FOOT. WALTER CARRICO, Luxemburg, Mo. Filed Oct. 25, 1916. Serial No. 127,621. (Cl. 3—7.)



1. As an improved article of manufacture, an artificial foot having a light, durable, and shape retaining upper part, convex on the bottom, directly to said bottom of which is fastened a flat metallic spring of one or more leaves substantially as shown and described.

2. An improved article of manufacture, an artificial foot having a wood upper part convex on the bottom, to said bottom of which is directly fastened a flat metallic spring of one or more leaves and said spring resting on hard wool felt substantially as shown and described.

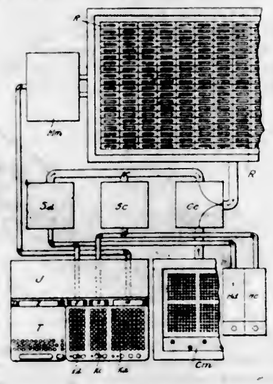
1,219,375. ROAD SCRAPING AND LEVELING DEVICE. ARTHUR L. CHAFFIN, Torrey, Utah, assignor of one-half to William Bown, Jr., Fayette, Utah. Filed June 7, 1916. Serial No. 102,290. (Cl. 37—5.)



1. In a dirt scraper, a scraper board having its ends provided with arch-shaped sides, said board being beveled from its rear face to its lower front edge, an adjustable knife member upon the board, adjustable eye bolts on the front and rear faces of the board, flexible elements connected with the eye bolts upon the rear of the board, a tailboard having plates provided with hook shaped ends receiving the links of said chains, rod members for the eye bolts upon the front face of the board, flexible elements connected with the rod members, a ring securing the flexible elements, a chain member connected with the ring and extending toward the beard, and a ring member having a beak portion loosely secured to the board and receiving one of the links of the chain whereby the board may be sustained at an angle.

2. In a dirt scraper, a scraper board having arch-shaped ends upon its outer face, an adjustable knife member upon the lower edge of the board, said board adjacent its ends being provided with a plurality of transversely arranged spaced apertures, eye bolts passing through certain of the apertures and arranged upon both the front and rear faces of the board, removable means for securing the eye bolts upon the board, flexible members connected with the front eye bolts, rod members connected with the flexible elements, other flexible elements connected with the rods, an eye connecting the last mentioned flexible elements, said eye adapted to receive the double tree of the draft animals, a chain member connected with the eye and extending toward the scraper board, and an eye member loosely connected with the center of the scraper board and having a beak portion which is adapted to receive certain of the links of the chain, as and for the purpose set forth.

1,219,376. TABULATING MECHANISM. WILLIAM J. CRUMPTON, Superior, Wis., assignor, by mesne assignments, to William R. Heath, Buffalo, N. Y. Filed Feb. 1, 1908, Serial No. 413,875. Renewed July 10, 1914. Serial No. 850,262. (Cl. 235—62.)



1. In an accounting system, the combination of a plurality of registers each comprising a series of numeral wheels and suitable carrying mechanism, means for operating any of the registers, a set of manually operable keys for connecting any register with the operating means, and automatic mechanism for connecting the register mechanisms with the operating means in a predetermined sequence.

2. In an accounting system, the combination of a plurality of registers each comprising a series of numeral wheels and suitable carrying mechanism, means for operating said registers, a manually operable keyboard comprising a set of keys for connecting the said registers with the operating means, automatic mechanism for connecting the registers with the operating means in a predetermined sequence, and means for starting and stopping the automatic mechanism at any desired point.

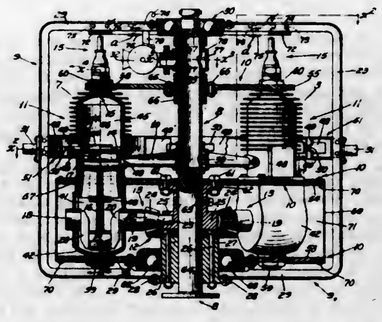
3. In combination, a plurality of registers, a manually operable keyboard comprising keys for establishing connection with any desired register, and automatic mechanism for actuating the said keys in predetermined sequence.

4. In combination, a plurality of registers each comprising a set of ordered numeral wheels and suitable carry over mechanism, manually operable keys for establishing connection with any desired register, means for causing the actuation of any connected register, and mechanism for automatically establishing connection with said registers in predetermined sequence.

5. In combination, a plurality of registers each comprising a set of suitably ordered numeral wheels and carry over mechanisms therefor, a manually operable keyboard comprising keys for establishing connection with any desired register, means for causing the actuation of any connected register, mechanism for automatically establishing connection with said registers in predetermined sequence, and means for starting and stopping the automatic mechanism at any desired points in the said predetermined sequence.

[Claims 6 to 109 not printed in the Gazette.]

1,219,377. ROTATING MOTOR. IRA M. DAVIDSON, Los Angeles, Cal., assignor, by direct and mesne assignments, of one-third to George H. Shaw and one-third to Norman L. Philp, Los Angeles, Cal. Filed July 7, 1915. Serial No. 38,616. (Cl. 123—43.)



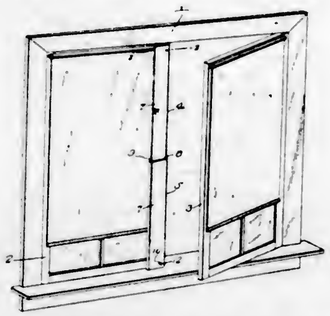
1. A motor comprising a frame, a power shaft journaled to said frame, a bevel-wheel fixed to said frame, crank shafts radial to said power shaft, pinions on the crank shafts meshing with said bevel-wheel, cylinders arranged in parallelism with said power shaft and having exhaust ports opening outwardly from the shaft, pistons in said cylinders and connected to drive said crank shafts to turn the power shaft, means to supply expansive medium in the cylinders to drive said pistons, and a hollow housing rigidly mounted in the frame and encircling the cylinders and provided with ports adapted to register with said exhaust ports to thus receive the exhaust from the cylinders.

2. A motor comprising a frame, a power shaft journaled to said frame, a bevel-wheel fixed to said frame, crank shafts radial to said power-shaft, pinions on the crank shafts meshing with said bevel-wheel, cylinders arranged in parallelism with said power shaft and having exhaust ports opening outwardly from the shaft, pistons in said cylinders and connected to drive said crank shafts to turn the power shaft, means to supply expansive medium in the cylinders to drive said pistons, a hollow housing encircling the cylinders and provided with ports adapted to register with said exhaust ports to receive the exhaust from the cylinders, and an annular guard on the cylinders adjacent said housing to cover the housing ports when said ports are not in communication with the exhaust ports to thus prevent leakage through said housing ports.

1,219,378. ATTACHMENT FOR SWINGING WINDOWS. MILLIE M. DEIBEL, Youngstown, Ohio. Filed June 7, 1916. Serial No. 102,275. (Cl. 156—26.)

1. A shield for the outer edge of a swinging window sash comprising a member of a length approximately equaling the length of the sash and which is substantially U-shaped in cross section, one of the sides of the said member being flared and being of a greater width than the other side of the said member, and spring pressed retaining means upon the wider side of the member and dis-

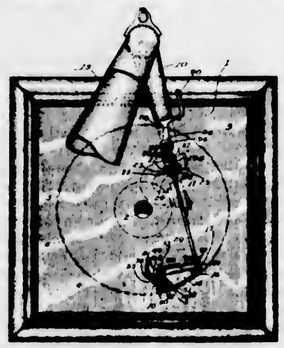
posed approximately centrally with respect to the narrow side of the said member.



2. A protective shield for the outer edge of a swinging window sash including a plurality of telescopic members each of which being substantially U-shaped in cross section, and means comprising spring pressed elements upon one of the sides of each of the sections to engage with one of the faces of a sash and to removably and adjustably sustain the device upon the said sash.

3. A protective shield for holding a curtain or the like against the outer edge of a swinging window sash comprising two members which are substantially U-shaped in cross section, each of which having one of their sides flared and of a greater length than the other side, one of said sections having its outer edges inturned to provide ways to receive the edges of the other section, a spring pressed pin disposed in an opening in the wider side of each of the sections, a flat head upon the inner end of the pin, and a handle upon the outer end of the pin.

1,219,379. AUTOMATIC BRAKE FOR TALKING-MACHINES. WILBUAN N. DENNISON, Merchantville borough, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Sept. 8, 1910. Serial No. 581,022. (Cl. 74—46.)



1. An automatic brake, comprising a brake member, a rock-shaft mounted to oscillate in a fixed axis, a catch carried by said rock-shaft to hold said brake member in inoperative position, and means pivoted upon an axis transverse to the axis of said rock-shaft for automatically rotating said rock-shaft to release said catch.

2. An automatic brake, comprising a brake member, a rock-shaft, a catch carried by said rock-shaft to hold said brake member in inoperative position, and means for rotating said rock-shaft to release said catch, said latter means comprising two coaxially rotatable members frictionally retained in predetermined relationship with respect to each other with sufficient force to release said brake member, but freely adjustable rotatably with respect to each other by a pressure slightly in excess of the pressure required to release said brake member.

3. The combination in an automatic brake, of a brake member, means for releasing said brake member, comprising two coaxially rotatable members frictionally retained in predetermined relationship with respect to each other with sufficient force to release said brake member, but freely adjustable rotatably with respect to each other by a pressure slightly in excess of the pressure required to release said brake member.

4. The combination in an automatic brake, of a brake member catch for holding said brake member in inoperative position, and means for releasing said catch, said means comprising two members frictionally retained to predetermined relationship with respect to each other, with sufficient force to release said catch, but movable with respect to each other in response to a force slightly in excess of the force required to release said catch.

5. An automatic brake comprising a brake member, a rock-shaft, an oscillatory catch rigid with said rock-shaft to hold said brake member in inoperative position, and oscillatory means pivoted upon a fixed axis for automatically rotating said rock-shaft to release said catch.

[Claims 6 to 22 not printed in the Gazette.]

1,219,380. BRAKE FOR TALKING-MACHINES. WILBURN N. DENNISON, Merchantville borough, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Original application filed Sept. 8, 1910, Serial No. 581,022. Divided and this application filed July 29, 1911. Serial No. 641,274. (Cl. 74—13.)



1. A brake comprising frictional stopping means, means for moving said stopping means into initial operative position, and means coöperating with said second mentioned means for automatically and gradually applying the braking pressure of said stopping means after it has reached said position.

2. A brake comprising frictional stopping means, means for moving said stopping means into an initial operative position, said means including a toggle joint, and yielding means surrounding one member of said joint for automatically applying the braking pressure of said stopping means after it has reached said position.

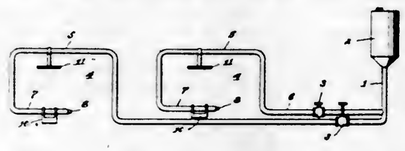
3. A brake comprising a frictional brake member, yielding means for moving said brake member into initial operative position, and means actuated by said yielding means to modify the braking pressure of said brake member after it has reached its initial braking position.

4. A brake comprising a frictional brake member, yielding actuating means for moving said brake member into initial operative position, and secondary yielding means actuated by said first mentioned yielding means for modifying the pressure of said brake member after it has reached said initial position.

5. A brake comprising two links connected to form a toggle joint, a brake-shoe carried by one of said links, a spiral spring surrounding the other of said links, said other link being longitudinally movable, and means for actuating said joint to apply said brake-shoe, said spring being arranged to be compressed by the movement of said toggle joint after said shoe has been applied, to gradually apply the braking pressure of said shoe.

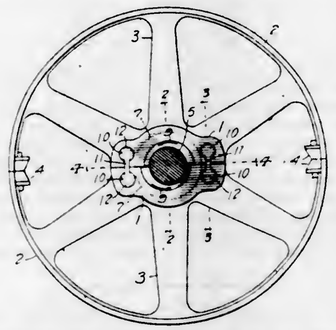
[Claims 6 to 20 not printed in the Gazette.]

1,219,381. OIL-BURNER. ARCH L. DORMAN, Cuba, Kans. Filed May 9, 1916. Serial No. 96,383. (Cl. 158—63.)



An oil burner comprising a reservoir, an oil feed pipe leading from the reservoir, a plurality of burner pipes each connected directly to and leading from said oil feed pipe, each of said burner pipes having a valve, and also having an arch vaporizing portion and a terminal burner arm below said vaporizing portion, said arm being closed at its outer end and being provided in its upper side with a minute gas escape opening, a gas spreader extending from the arched portion of each burner pipe and a priming pan suspended from the arm of each burner pipe and arranged under the said opening thereof.

1,219,382. PULLEY. JOSEPH B. DUNLAP, Tulsa, Okla. Filed Oct. 28, 1916. Serial No. 128,198. (Cl. 64—17.)

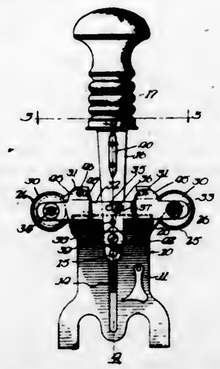


A sectional pulley embodying rim and hub sections, the rim sections having securing means at their ends, and the hub sections being provided with transversely arranged tapered openings, and registering passages in communication with the tapered openings, the bore face of each hub section being of eccentric formation, dowels connecting the hub sections, each of the dowels comprising two tapered members to fit the said tapered openings, and a connecting web to enter the registering passages and a sectional bushing fitting the bore of the hub and adapted to secure the pulley upon a shaft, said bushing comprising cidcumferentially tapered sections flanged at one end and provided with exterior circumferentially arranged ribs.

1,219,383. HAND-STAMP. CHARLES S. ELLIS, Chicago, Ill. Filed Nov. 20, 1915. Serial No. 62,476. (Cl. 101—332.)

1. In a self-inking hand stamp, a frame; a type carrier; a support on the frame; an inking ribbon shiftable across the support against which the type are upheld; reel cases attached to the support at opposite sides of the stamp, and reels journaled in the ends of said cases to which the ends of the ribbon are attached and on which the ribbon is wound.

2. In a self-inking hand stamp, a frame; a depressible type carrier; a support on the frame; an inking ribbon shiftable across the support against which the type are upheld; reels to which the ends of the ribbon are attached and on which the ribbon is wound, and means to rotate said reels to shift the ribbon across said support, including an actuating device on the hand-piece.



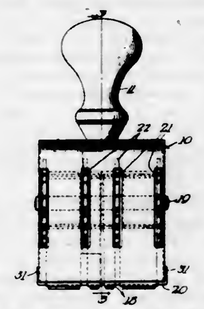
3. In a self-inking hand stamp, a frame; a depressible type carrier; a support on the frame; an inking ribbon shiftable across the support against which the type are upheld; reels to which the ends of the ribbon are attached and on which the ribbon is wound, and intermittently rotating means for said reels, embracing means depressible with the type carrier.

4. In a self-inking hand stamp, a frame; a type carrier; a support on the frame; an inking ribbon shiftable across the support against which the type are upheld; reels to which the ends of the ribbon are attached and on which the ribbon is wound; means operable during the printing stroke of the stamp to intermittently rotate said reels, and reel-reversing means.

5. A hand stamp comprising a frame having a support; an inking ribbon shiftable across said support; a type carrier depressible in said frame, with means to normally uphold the type thereof against said ribbon; ribbon shifting means; a hand piece to depress the type carrier, and means directly connected to and operated by the hand piece to actuate the ribbon shifting means.

[Claims 6 to 10 not printed in the Gazette.]

1,219,384. DATING-STAMP. CHARLES S. ELLIS, Chicago, Ill. Filed Nov. 20, 1915. Serial No. 62,477. (Cl. 101—111.)



1. A dating stamp comprising a three-piece frame embracing a two-part hollow shell and a bridge bar at the printing line; a hand piece; a shaft mounted in said frame; type wheels on said shaft and type bands trained about said wheels and bridge bar, the two parts of the frame shell abutting at their edges along the ends and top of the frame in the plane of the axis of the hand piece, and the frame being shaped to inclose the type bands except at the printing line.

2. In a dating stamp, type members adapted to be composed at a printing line and an inclosing frame therefor comprising two like shaped shells abutting at their edges and a bridge piece, with means to detachably interlock the shells to the bridge piece to prevent separation of the shells from each other.

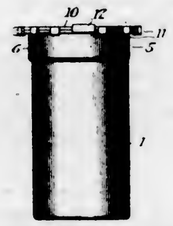
3. In a hand stamp, a bridge piece provided with longitudinal and end flanges and with perforations inside said end flanges combined with hollow frame members provided with projections to lockingly engage said perforations.

4. A dating stamp comprising a two-piece supporting frame, a single bridge piece at the printing line, a shaft mounted in said frame, type wheels on said shaft, type bands trained about said wheels and the bridge piece, a hand piece, said casing being made of two like members to inclose the type bands at their tops and sides, with means to interlock them to the bridge piece to prevent separation of the members away from each other, and other means to interlock the members together at the hand piece.

5. A dating stamp comprising type band wheels, a bridge piece, type bands trained over the wheels and bridge piece, a two-part inclosing casing interlocked to the bridge piece and slotted at their sides and abutting at the ends and top of the casing, a type band wheel supporting shaft mounted in the ends of the casing, a hand piece, said casing parts being provided at the top of the casing with overlapping apertured lugs, and a screw extending through said lugs and screw-threaded to the hand piece.

[Claims 6 to 12 not printed in the Gazette.]

1,219,385. CONDIMENT-HOLDER. JOHN T. EVANS, Hubbard, Ohio. Filed July 9, 1915. Serial No. 38,934. (Cl. 65—45.)



A condiment holder comprising a body, a cap having a flange engageable with the body, a disk turnably mounted upon the cap, spaced ears mounted upon the disk and extending around and under the edge portion of the cap, and a lug mounted on the cap and extending around and over the edge of the disk and lying between two of the ears, the space between the ears being longer than the circumferential length of the lug, the free end of the lug being disposed in an opposite direction to that in which the free ends of the adjacent ears are disposed and serving in conjunction with the ears as means for turnably holding the disk on the cap.

1,219,386. COMBINED CANE AND FLAG-STICK. CHARLES T. FERNANDEZ, Roxbury, Mass. Filed May 24, 1915. Serial No. 30,147. (Cl. 135—47.)

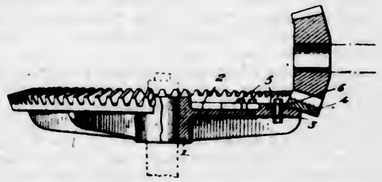
1. In a device of the class described, a cane body, a flag cylinder connected therewith and having spaced and longitudinally extending slits opening out through one end thereof, a bead on said cylinder arranged between the ends of the slits and forming an annular groove interiorly of said cylinder, a flag carrying member arranged within said cylinder and having bearing rollers thereon with one of said rollers extending slightly within said groove, and a winding key for connection with said flag carrying member engaging said bead.

2. In a device of the class described, a cane body, a flag cylinder carried thereby and having spaced and longitudinally extending slits opening out through one end thereof, a bead on said cylinder arranged between the ends of said slits, a flag carrying member within said cylinder, a winding key to be engaged with said flag carrying member engaging the slitted end of the cylinder and the bead thereon, and bearing rollers on said flag carrying member for spacing the same from the inner wall of said cylinder with one of said rollers extending slightly within said bead.



3. In a device of the class described, a cane body, a flag cylinder connected with one end thereof and having spaced and longitudinally extending slits opening out through one end of said cylinder, a locking bead on said cylinder arranged between the ends of said slits and forming an annular groove within said cylinder, a flag carrying member within said cylinder having bearing rolls with one of said rollers extending slightly within said groove, a winding key slidably mounted on the end of said cylinder to engage with the flag carrying member, and a bead on said winding key engageable with the bead on the flag cylinder.

1,219,387. GEAR-WHEEL. JESS. R. GILCREST, Toronto, Ohio. Filed Jan. 21, 1914. Serial No. 813,468. (Cl. 74—28.)



In a wheel, in combination, a hub having a series of radial spokes, each of said spokes being formed with a terminal flat portion provided with a right angular integral shoulder upon the latter, an annular rim provided with a circumferentially spaced apart series of integral perforated lugs, said annular rim including a flat annular bottom portion formed flush with all of said lugs, and an annular portion inclined with respect to and formed upon said flat annular portion, said annular rim being formed with a circumferential series of teeth upon its outer side, said teeth being formed across the plane of the flat annular bottom portion and upon the inclined annular portion of said rim, said lugs and the flat annular portion of said annular rim resting upon the spokes with the lugs engaging the shoulders of the latter thereby causing the inclined annular portion of said rim to project beyond the spokes and increasing the diameter of said wheel, and means for holding said rim against displacement.

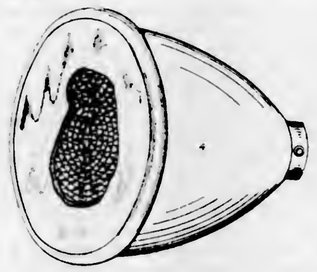
1,219,388. ART OF IMPREGNATING TIMBER AND OTHER MATERIAL WITH A PRESERVATIVE. OLIVER P. M. GOSS, Seattle, Wash. Filed Oct. 11, 1915. Serial No. 55,577. (Cl. 99—12.)

1. In the preserving treatment of porous material, the method which consists in first heating the material in a bituminous preservative, in a close container, to approximately 230 degrees Fahrenheit under normal pressure, then drawing a vacuum of approximately 15 to 28 inches in the container and maintaining the heat of the latter at a temperature above that of boiling water under said vacuum for not less than half an hour, then breaking such vacuum, and applying pressure sufficient to force approximately from five to twenty pounds of the preservative fluid into the pores of each cubic foot of material.

2. In the preserving treatment of porous material, the method which consists in first heating the material in a bituminous preservative, in a closed container, to approximately 230 degrees Fahrenheit under normal pressure, then drawing a vacuum of approximately 15 to 28 inches on the preserving fluid and continuing to heat the latter to a temperature above that of boiling water under said vacuum, for not less than half an hour, then breaking such vacuum, and applying pressure sufficient to force approximately from 5 to 20 pounds of the preservative fluid into the pores of each cubic foot of material, then reheating the fluid in the container for from one to six hours continuously to a temperature of from 200 to 240 degrees Fahrenheit under normal pressure, then emptying the container of the preserving fluid, and then, while the material is still hot, drawing a vacuum in the container of from 15 to 28 inches approximately.

3. In the preserving treatment of porous material, the method which consists in first heating the material in a bituminous preservative, in a closed container, to approximately 230 degrees Fahrenheit under normal pressure, then drawing a vacuum of approximately 15 to 28 inches on the preserving fluid and continuing to heat the latter to a temperature above that of boiling water under said vacuum, for not less than half an hour, then breaking such vacuum, and applying pressure sufficiently to force approximately from 5 to 20 pounds of the preservative fluid into the pores of each cubic foot of material, then reheating the fluid in the container for from one to six hours continuously to a temperature of from 200 to 240 degrees Fahrenheit under normal pressure, then drawing a vacuum of 15 to 28 inches on the preserving fluid and boiling in the fluid under this vacuum for not less than one hour, then breaking such vacuum and emptying the container of the preserving fluid, and then, while the material is still hot, drawing a vacuum in the container of from 15 to 28 inches approximately.

1,219,389. LIGHTING APPARATUS. THEODORE G. GRIGGS, Chatham, and ALLEN A. DITTMAR, El Mora, N. J. Filed Jan. 13, 1916. Serial No. 71,948. (Cl. 240—48.4.)



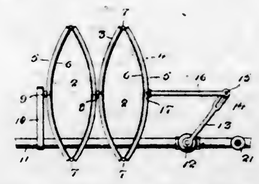
1. A device of the class described comprising narrow strips of material one of which is crinkled transversely and all of which are wound in a spiral.

2. A screen comprising spirally wound narrow strips of material, one of said strips having a series of depressions transversely of the same.

3. In combination with a lamp, a screen adapted to be secured in the front thereof, said screen having passages formed by depressions in a narrow strip of material adjacent another narrow strip of flat material.

4. In combination with a lamp, a screen adapted to be secured in the front thereof, said screen having a spirally wound ribbon of material looped at intervals throughout its length.

1,219,390. HYGROSTATIC CONTROLLER. HUGH S. GRIGSBY, Richmond, Va. Filed Feb. 23, 1916. Serial No. 80,027. (Cl. 236—27.)



1. A hygrostat comprising a pair of flexible strips having hygroscopic and non-hygroscopic surfaces, the hygroscopic surfaces of said strips being arranged face to face, said strips being connected for relatively bowing actions under the influence of moisture.

2. A hygrostat comprising a pair of flexible strips having hygroscopic and non-hygroscopic surfaces, the non-hygroscopic surfaces of said strips being arranged face to face, and means flexibly connecting said strips at their ends for relative bowing actions.

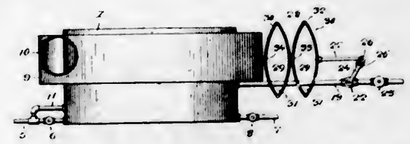
3. A hygrostat comprising a pair of strips having hygroscopic and non-hygroscopic surfaces, and means hingedly connecting said strips at their extremities with their similar surfaces in such relation as to adapt said strips to relatively bow outwardly under the influence of moisture.

4. A hygrostat comprising a pair of strips of hygroscopic material, having exposed surfaces and other surfaces provided with a coating of non-hygroscopic material, and means yieldingly connecting the ends of said strips with their non-hygroscopic surfaces in juxtaposed relation.

5. A hygrostat comprising a pair of strips having outer exposed hygroscopic surfaces and inner surfaces provided with non-hygroscopic coating, and connecting means uniting the ends of the strips for a relative bowing action.

[Claims 6 to 8 not printed in the Gazette.]

1,219,391. HUMIDIFIER. HUGH S. GRIGSBY, Richmond, Va. Filed Feb. 23, 1916. Serial No. 80,028. (Cl. 261—79.)



1. A humidifier comprising a casing having a lower compartment for containing a body of water and an upper compartment communicating at its lower portion with the upper portion of said lower compartment and adapted to serve as a commingling or vaporizing chamber, an annular series of tangential nozzles arranged at a level substantially coincident with the line of communication of said compartments, and an air chamber surrounding said casing and communicating with said nozzles.

2. A humidifier comprising a casing having a lower compartment for containing a body of water and an upper compartment communicating at its lower portion with the

upper portion of said lower compartment and adapted to serve as a commingling or vaporizing chamber, an annular series of tangential nozzles arranged at a level substantially coincident with the line of communication of said compartments, an air chamber surrounding said casing and communicating with said nozzles and a tangential air inlet communicating with said air casing.

3. A humidifying apparatus comprising a casing having a lower compartment for containing a body of water and an upper compartment communicating at its lower portion with the upper portion of said lower compartment and adapted to serve as a commingling or vaporizing chamber, an air chamber surrounding said casing, an annular series of tangential air nozzles connecting said air chamber with said compartments at a level substantially coincident with the line of communication of said compartments, and a tubular outlet leading from the top of the upper compartment downwardly into said compartment to a point in proximity to the level of the nozzles.

4. A humidifying apparatus comprising a casing having a lower compartment for containing a body of water, and an upper compartment communicating at its lower portion with the upper portion of said lower compartment and adapted to serve as a commingling or vaporizing chamber, means for supplying water to the lower compartment and maintaining a water level substantially coincident with the line of communication between the compartments, an air chamber surrounding said casing and having its lower portion arranged slightly below the normal level of the water in said water compartment, an annular series of tangential nozzles connecting the lower portion of said air chamber with said compartments at a level substantially coincident with their line of communication, and a tubular outlet depending from the top of the upper compartment to a point in proximity to the water level.

5. A humidifying apparatus comprising a casing having a lower compartment for containing a body of water and an upper compartment communicating at its lower portion with the upper portion of said lower compartment and adapted to serve as a commingling or vaporizing chamber, an annular series of tangential nozzles communicating with said compartments at a level substantially coincident with their line of communication and the level of the water, an air chamber surrounding the casing and communicating with the nozzles and having its bottom wall arranged slightly below the water level, a tubular outlet extending from the top of the upper compartment downwardly to a point in proximity to the water level, a condensing coil arranged so as to be submerged in said water compartment and having an outlet communicating therewith, means for supplying steam for condensation to said coil, and means for maintaining the water in the casing at a substantially indicated level.

[Claim 6 not printed in the Gazette.]

1,219,392. GATE-VALVE. WILLIAM F. HAGEN, Scranton, Pa. Filed Sept. 23, 1916. Serial No. 121,768. (Cl. 137—5.)



1. A gate valve comprising a casing provided at its opposite sides with openings adapted to be connected with pipe sections, a shaft journaled in one side of the casing, means for turning the shaft, a plate carried by the shaft, a valve disk removably mounted upon the shaft, a spring bearing against the shaft and adapted to hold the same away from one side of the casing, means for forcing the said plate toward the side of the casing against the tension of the said spring when the plate is moved between the said openings, a stud movably mounted in one of the sides of the casing and adapted to engage the plate when the same is moved opposite the stud, the opposite side of the said casing having an opening adapted to be closed by the plate and through which the valve disk may pass and a plug normally closing the last mentioned opening.

2. A gate valve comprising a casing provided at its opposite sides with openings adapted to be connected with pipe sections, a shaft journaled in one side of the casing, a spring bearing against the opposite side of the casing and bearing against the said shaft, a dentate segment fixed to the outer end of the shaft, a gear wheel journaled upon the casing and meshing with said segment, a plate carried by the said shaft and adapted to be interposed between the said openings, said plate having an annular flange, a disk detachably connected with the said plate and located between the flange, a valve disk carried by the first mentioned disk and adapted to be closed over one of the said openings, lugs having inclined faces mounted upon the said plate, lugs mounted at the side of the casing and adapted to be encountered by the inclined faces of the lugs upon the plate whereby the disk is forced in contact with the opposite side of the casing, a stud movably mounted in one side of the casing and adapted to engage the said plate and move the same against the tension of the said spring, the casing having at its opposite side an opening of sufficient diameter to permit the valve disk to pass through the same, the flange carried by the said plate adapted to engage around the last mentioned opening and a detachable plug normally closing the last mentioned opening.

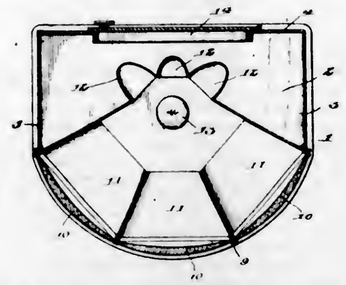
1,219,393. BOOK-REST. JOSEPHINE HARRISON, Denver, Colo. Filed Oct. 25, 1913. Serial No. 797,340. (Cl. 45—80.)



A book rest, comprising a base, a longitudinal rib secured to the base, a table hinged to the rib and foldable parallel with the base, said rib being parallel with and spaced from one longitudinal edge of the base to provide a support for the edge of the book directly on the base, between the rib and said longitudinal edge, a brace and a book retaining strip hinged on opposite longitudinal edges of the base and having their movement limited to approximately ninety degrees, the brace and strip being foldable toward each other on the base with their free edges adjacent opposite sides of the rib, said brace being adapted to maintain the table in operative position.

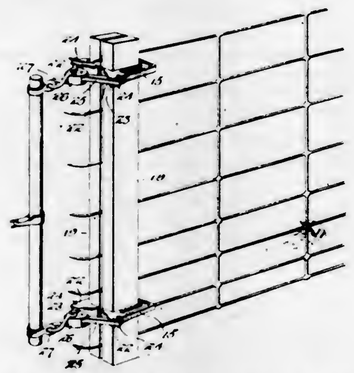
1,219,394. SAFETY-HEADLIGHT. RICHARD G. HARRIS, Knoxville, Tenn., assignor of one-fourth to Frank Haynes, one-fourth to Frank Hambright, and one-fourth to J. T. Lewis, Knoxville, Tenn. Filed Sept. 15, 1916. Serial No. 120,408. (Cl. 240—46.)

1. In a headlight, a casing embodying a bottom wall, a top wall, back and side walls connecting the top and bottom walls, and the front wall formed to provide a front section and angularly disposed side sections, bull's-eyes carried by said sections respectively, projector tubes carried by said casing in line with said bull's-eyes, a lamp at the inner end of said tubes, and reflectors behind said lamps and alining with said tubes, respectively.



2. In a headlight, a casing embodying a bottom wall, a top wall, back and side walls connecting the top and bottom walls, and the front wall formed to provide a front section and angularly disposed side sections, bull's-eyes carried by said sections, respectively, projector tubes carried by said casing in line with said bull's-eyes, a lamp at the inner end of said tubes, reflectors behind said lamps and alining with said tubes, respectively, and movable plates carried by the side sections and front wall, respectively, and carrying said bull's-eyes.

1,219,395. FENCE-CLAMP. JAMES HASCALL, Hannibal, Mo. Filed Oct. 20, 1916. Serial No. 126,746. (Cl. 254—83.)



1. In a fence clamp, a pair of jaws of substantially rectangular form having interengaging hinge lugs and a pivot member engaging the same, said jaws being provided at the outer corners of the free ends thereof with pairs of projections having recesses in their outer faces, a toggle device including a head block, and links pivotally connected therewith, said links extending between the projections and having transverse pins engaging the recesses in said projections, and a clevis member connected with the head block, said clamping jaws being provided with recesses in the faces thereof and with clamping bars secured in said recesses.

2. In a fence clamp, a pair of jaws of substantially rectangular form having interengaging hinge lugs and a pivot member engaging the same, said jaws being provided at the outer corners of the free ends thereof with pairs of projections having recesses in their outer faces, a toggle device including a head block, and links pivotally connected therewith, said links extending between the projections and having transverse pins engaging the recesses in said projections, and a clevis member connected with the head block, said clamping jaws being provided with recesses in the faces thereof and with clamping bars secured in said recesses, the clamping bars having crimping strips inset in the faces thereof and extending longitudinally thereof.

1,219,396. ALINING DEVICE FOR SPECTACLE AND EYEGLASS MOUNTINGS. CHARLES M. HAYNES, Chillicothe, Ohio. Filed Oct. 3, 1914. Serial No. 864,838. (Cl. 33—168.)



1. An alining device for spectacle and eye-glass mountings comprising a disk of non-fragile material provided with peripheral portions of different thicknesses, corresponding to the thicknesses of lenses and having their edges shaped to coöperate with the lens-bracing arms of the spectacle or eye-glass mounting.

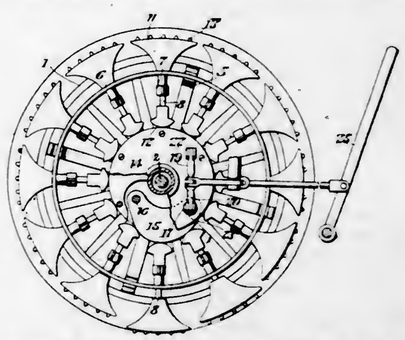
2. An alining device for spectacle and eye-glass mountings comprising a disk of non-fragile material provided with teeth of different thicknesses, corresponding to the thicknesses of lenses and having their edges shaped to coöperate with the lens-bracing arms of the spectacle or eye-glass mounting.

3. An alining device for spectacle and eye-glass mountings comprising a disk of non-fragile material provided with teeth of different thicknesses, corresponding to the thicknesses of lenses and having perforations to receive lens-fastening screws, the outer edges of the teeth being shaped in conformity to the edge-curvature of the corresponding portions of the lenses.

4. An alining device for spectacle and eye-glass mountings comprising a centrally apertured disk of non-fragile material provided with teeth of different thicknesses, corresponding to the thicknesses of lenses and having perforations to receive lens-fastening screws, the outer edges of the teeth being curved in conformity to the corresponding parts of the lenses.

5. An alining device for spectacle and eye-glass mountings, comprising a rigid non-fragile disk having at its periphery steps of different thicknesses, the outer edges of the steps being wide and curved to coöperate with the lens-bracing arms of spectacle or eye-glass mounting.

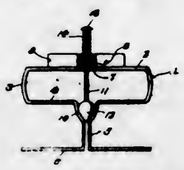
1,219,397. ANTISKIDDING DEVICE FOR USE ON AUTOMOBILE-WHEELS. CHARLES E. HERSHEY, Mechanicsburg, Pa. Filed May 9, 1916. Serial No. 96,877. (Cl. 21—210.)



A ring for attachment to one side of a wheel and provided with radial guide elements, radially movable rods

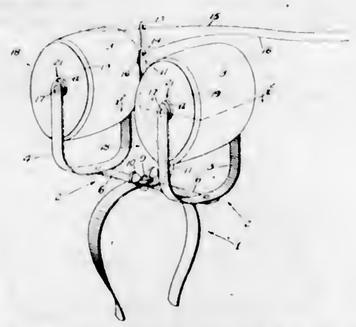
in said guide elements, each provided at its outer end with an anti-skidding head and at the inner end with a tappet foot and springs to move said rods inwardly in combination with a supporting device for attachment to an axle casing, a cam movably mounted on said supporting device, a pair of toggle levers connected together and one connected to the supporting device and the other to the cam, a lever, and a rod connecting the said lever to the toggle levers to project said cam into the path of the tappet feet to cause said cam to successively radially project the rods and anti-skidding heads as the wheel rotates.

1,219,398. JAR-LIFTING DEVICE. EDWARD E. HUNTSMAN, Thomas, W. Va. Filed May 26, 1916. Serial No. 100,170. (Cl. 65—26.)



A device of the class described comprising a strip of metal bent to form a central portion and downwardly projecting outwardly bowed portions arranged in juxtaposition to each other, plates on the ends of said downwardly projecting portions and arranged at right angles thereto, a block secured to said central portion and formed with an opening alining with an opening in the central portion, a shank passed through said alining openings and having one end equipped with a knob disposed within said outwardly bowed portions and the other end equipped with a head, and a spring surrounding said shank and acting to hold said knob normally within said outwardly bowed portions whereby said downwardly projecting portions will be held in normal position, said knob acting to spread said downwardly projecting portions to separate said plates in the downward movement of said shank against the action of said spring.

1,219,399. YARN AND THREAD HOLDER FOR CROCHETERS AND KNITTERS. TOKUGERO INOUYE, Los Angeles, Cal. Filed Mar. 8, 1915. Serial No. 13,039. (Cl. 242—136.)



1. Two U-shaped members mounted back to back so that they open in reverse relation to each other; a standard; and means to swivel and clamp the members and standard together; one of the members being provided with laterally adjustable means adapted to hold a spool; the free part of said standard being straight and parallel with the sectional planes drawn longitudinally through the middle of said members and being provided with means to guide a thread or yarn from said spool; and the guide and one of said members being relatively adjustable.

2. The combination with a lower U-shaped member for attachment to the arm of a person; of an upper U-shaped member arranged to open reversely to said lower member, said upper member being provided with laterally adjustable means adapted to support a spool; a standard mounted on said upper member; the outer part of said standard being straight and parallel with the sectional planes drawn longitudinally through the middle of said members and being provided with means to guide a thread or yarn from said spool; and the upper and lower members being relatively adjustable.

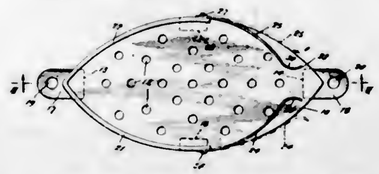
3. The combination with a lower U-shaped member for attachment to the arm of a person; of an upper U-shaped member arranged to open reversely to said lower member; said upper member being provided with laterally adjustable bearings adapted to support a spool; a standard mounted on said upper member; the outer part of said standard being straight and parallel with the sectional planes drawn longitudinally through the middle of said members and being provided with means to guide a thread or yarn from said spool; and the upper and lower members being relatively adjustable.

4. The combination with a lower U-shaped member for attachment to the arm of a person, of a cross-piece mounted upon the back of said member, a plurality of upper U-shaped members carried by said cross-piece and arranged reversely to said lower U-shaped member, said upper members being provided with bearings to support a plurality of spools, and means on the cross-piece and extending up intermediate the upper members to guide the thread or yarn from said spools.

5. The combination with a centrally perforated lower U-shaped clip, of a centrally perforated cross-piece mounted on the back of said clip, a stud extending through the perforations, a thumb nut on the stud to adjustably clamp the lower clip and cross-piece together, upper U-shaped clips carried by said cross-piece and arranged reversely to said lower clip, adjustable means to mount a spool between the ends of said upper U-shaped clips, the lower U-shaped clip being adapted for detachable attachment to the arm of the knitter, and the cross-piece and lower clip being swiveled on said stud when the nut is loosened and held in fixed relation to each other when the nut is tightened.

[Claims 6 and 7 not printed in the Gazette.]

1,219,400. STAND FOR SAD-IRONS. JOSEPH M. KARL, Roslyn Heights, N. Y., assignor, by direct and mesne assignments, to Roslyn Specialty Company, Inc., Roslyn, N. Y., a Corporation of New York. Filed Dec. 7, 1915. Serial No. 65,574. Renewed Feb. 10, 1917. Serial No. 147,880. (Cl. 68—27.)

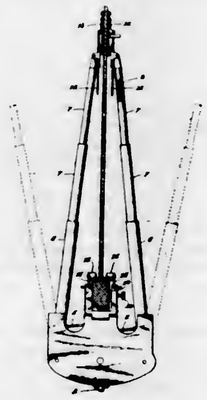


1. In a stand for sad irons, a base-plate, two spaced stationary flanges projecting upwardly from the top of one part of the base-plate to receive one end of the iron therebetween, and a yielding retainer on an opposite part of the base-plate for engaging the other end of the iron to releasably hold the iron against accidental movement on the base-plate.

2. In a stand for sad irons, a base-plate, two spaced stationary flanges projecting upwardly from the top of one part of the base-plate to receive one end of the iron therebetween, and two spring actuated clamping members on an opposite part of the base-plate for engaging the other end of the iron to releasably hold the iron against accidental movement on the base-plate.

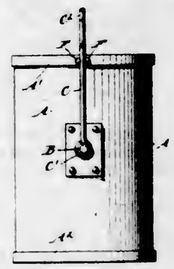
3. A stand for sad irons, comprising a substantially elliptic perforated base-plate, two approximately semi-elliptic stationary flanges projecting upwardly from the top of one end of the base-plate to receive one end of an iron therebetween, and two spaced spring strips each having one of its ends fastened to each of the flanges, and the other parts of the strips being movably disposed on the top of the base-plate toward the second end of the plate in substantially the form of a semi-ellipsis, the strips being tensioned so as to be forced normally toward each other for clamping the second end of the iron to releasably hold the iron against accidental movement on the base-plate.

1,219,401. WINDOW-WASHER. WILLIAM I. KATOW, San Francisco, Cal. Filed Nov. 10, 1916. Serial No. 130,637. (Cl. 15—59.)



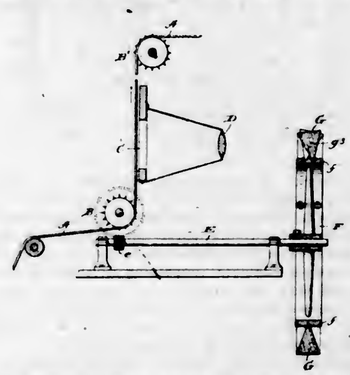
A window washer comprising a body, longitudinally extensible arms pivoted at one end thereon, scrubbers carried at the free ends of the arms, means for causing the arms to swing simultaneously toward or away from each other, a spring actuated drum journaled in the body, tapes arranged to wind upon the drum and trained through the arms and connected with the arms at the free end portions thereof.

1,219,402. HOISTING-BUCKET. WILLIAM RUTAN, New York, N. Y., assignor to Gillis & Geoghegan, New York, N. Y., a Firm. Filed Feb. 23, 1916. Serial No. 79,848. (Cl. 220—27.)



A can, a reinforcing band at the upper end thereof, a bail pivotally mounted on said can and having a partial loop at its midlength, a pair of projecting rivets on said band having rounded heads serving the double function of joining said band to said can and forming between them a notch adapted to engage the limb of said bail frictionally and hold the latter yieldingly in an upright position relatively to said can, said rivets being at a distance from the pivot of the bail and in proximity to the outer portion thereof.

1,219,403. MOVING-PICTURE MACHINE. WILLIAM H. SELBY and FREDERICK A. SELBY, Moberly, Mo., assignors, by direct and mesne assignments, to Selby Patents Company, Kansas City, Mo., a Corporation of Arizona. Filed July 29, 1915. Serial No. 42,644. (Cl. 88—16.8.)



1. A moving picture machine, including a film supporting means and a source of light, in combination with a prism having a spiral pitch corresponding to the travel of the film adapted to be mounted in front of the film for intercepting and centering the light rays passing therethrough and means for moving the prism and film in consonance.

2. A moving picture machine, including a film supporting means and a source of light, a prism of triangular cross section disposed in front of the film and having a spiral pitch throughout to compensate for the movement of the film for intercepting and centering the light rays passing through the film, and means for moving the prism to correspond with the movement of the film.

3. A moving picture machine, including a film supporting means and a source of light, a continuous integral prism ring arranged in front of the film and having a spiral pitch throughout to correspond to the advancement of the film for intercepting and centering the light rays passing through the film and means for moving the prism to correspond with the advancement of the film.

4. A moving picture machine, a film supporting means and a source of light, a continuous refracting prism having a spiral pitch throughout corresponding to the travel of the film disposed in front of the film for intercepting and centering the light rays passing through the film, and means for moving the prism to correspond with the advancement of the film.

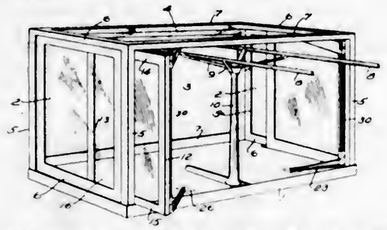
5. In a moving picture machine, a film supporting means, a source of light, a lens, a refracting prism disposed in front of the film, the faces of the prism being disposed at progressively different angles to correspond to the advancement of the film to intercept and center the light rays, and means for moving the film and prism in synchronism.

[Claims 6 to 11 not printed in the Gazette.]

1,219,404. SHOW-CASE. OSCAR L. SMITH, Grand Rapids, Mich., assignor to Samuel D. Young, trustee, Grand Rapids, Mich. Filed Dec. 9, 1911. Serial No. 664,753. (Cl. 45—37.)

1. In a device of the character described, the combination with a casing, of an upright door movable in a horizontal plane to and from closed position, supporting links pivotally connected to the casing at the top and bottom thereof, pivot elements secured to the front end of said

door, means pivotally connecting said links and elements with the latter supported on the former to sustain the front end of the door, and relatively slidable supporting members on the casing and the rear end of the door, said links and members having provision for sharing the entire weight of said door between them throughout the opening or closing movement thereof.



2. In a device of the character described, the combination with a casing, of an upright door movable in a horizontal plane to and from closed position, supporting links pivotally connected to the front end of said door and to the top and bottom of said casing adjacent the front thereof, and relatively slidable, supporting members on the rear end of said door and casing, said supporting links and slidable supporting members having provision for sharing the entire weight of said door between them throughout the opening and closing movements thereof.

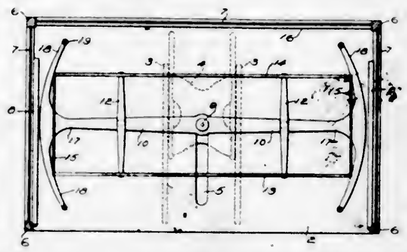
3. In a device of the character described, the combination with a casing, of an upright door movable in a horizontal plane to and from closed position, supporting links pivotally connected to said door, and to said casing, and relatively slidable supporting members on said door and said casing, said supporting links and slidable supporting members having provision for sharing the entire weight of said door between them throughout the opening or closing movement thereof.

4. In a display device, the combination of a case or cabinet, an upright door movable in a horizontal plane to and from closed position, a ball constituting the sole support for the front end portion of the door and comprising horizontally swinging arms pivoted to the case or cabinet at the front thereof, pivot socket pieces carried by the front end piece of the door at the top and bottom thereof above the adjacent ends of the swinging arms, pivotal connections between the ends of the swinging arms and said socket pieces, guiding connections at the top and bottom of said door between the end portions thereof engaging guides consisting of straight inwardly projecting portions to initiate inward movement of the door as the door is opened, and portions extending inward and toward the side of the case or cabinet to guide the door into parallelism with said side when the door is in open position.

1,219,405. DISPLAY DEVICE. OSCAR L. SMITH, Grand Rapids, Mich., assignor to Samuel D. Young, trustee, Grand Rapids, Mich. Filed May 20, 1912. Serial No. 698,361. (Cl. 211—16.)

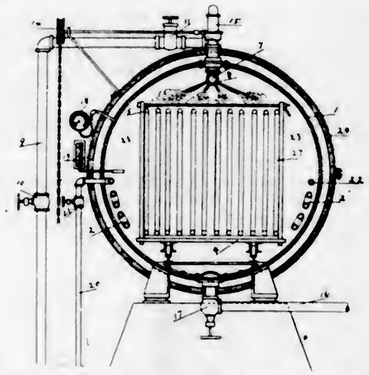
1. In a display device, the combination of a case or cabinet having a bumper extending along its lower part, a rotatable rack having rack bars and movable in and out of the cabinet, supporting arms for the rotatable rack having longitudinal extensions, and lower guard members connected to the supporting arms and having central and side extensions each projecting a greater distance radially from the axis of rotation of the rack than the end of the rack bars that the lower guard members may engage the bumper before the rack bars engage the glass should the rack be moved into the cabinet when not parallel with the rear of the cabinet.

2. In a display device, the combination of a case or cabinet having a bumper at its lower part, a rotatable rack having parallel rack bars, supporting arms at the lower part of the case carrying said rack bars and provided with end extensions, and center and side guard members the outer guarding surfaces of which are formed in the arc of a circle about the axis of the rack as a center and of greater radius than the distance from the axis of rotation to the ends of the rack bars, that the guarding surface of the guard members may contact with the bumper before the rack bars engage the glass should the rack be moved into the cabinet when not parallel with the rear of the cabinet.



3. In a display device, the combination of a case or cabinet having a bumper at its lower part, a rack movable to and from a position within the case or cabinet and revoluble about a vertical axis centrally of the rack, a lower supporting rack arm revoluble with the rack and projecting beyond the rack at each end thereof, said arm terminating at its ends in curved members transversely of the arm, all parts of which extend beyond the rack that the said curved members may engage the bumper before the rack bars engage the glass should the rack be moved into the cabinet when not parallel with the back wall of the cabinet.

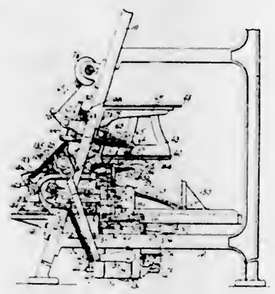
1,219,406. PROCESS OF DRYING AND EXTRACTING. DANIEL B. BANKS, Baltimore, Md., assignor to The D. B. Banks Company, a Corporation of Maryland. Filed May 20, 1916. Serial No. 98,940. (Cl. 34—24.)



1. The process of extracting fluids, substances contained in solution or suspension in such fluids and fusible substances from cellular, fibrous, or porous substances consisting of placing the same in proximity to a system of controllable heaters, inclosing such substances and controllable heaters in an inclosed shell filled with a saturated gaseous medium at a given pressure and heating the whole to the boiling point at the given pressure of the fluids of fusible substances which it is desired to remove from such cellular, fibrous, or porous substances, maintaining the saturation of the gaseous medium, and thereafter lowering the pressure and temperature of the gaseous medium while retarding the cooling of the cellular, fibrous, or porous substances by supplying heat through the controllable heaters with sufficient rapidity to maintain within such substances a temperature higher than the boiling point, at the reduced pressure of the surrounding medium, of the fluids or fusible substances which it is desired to remove from such substances, said lowering being continued until sufficient internal vaporization has been produced to expel the fluids contained in such substances.

2. The process of extracting fluids, substances contained in solution or suspension in such fluids and fusible substances from cellular, fibrous, or porous substances consisting of placing the same in proximity to a system of controllable heaters, inclosing such substances and controllable heaters in an inclosed shell filled with a saturated gaseous medium at a given pressure and heating the whole to the boiling point at the given pressure of the fluids or fusible substances which it is desired to remove from such cellular, fibrous, or porous substances, maintaining the saturation of the gaseous medium, and thereafter lowering the pressure and temperature of the gaseous medium while retarding the cooling of the cellular, fibrous, or porous substances by supplying heat through the controllable heaters with sufficient rapidity to maintain within such substances a temperature higher than the boiling point, at the reduced pressure of the surrounding medium, of the fluids or fusible substances which it is desired to remove from such substances, said lowering being continued until sufficient internal vaporization has been produced to expel the fluids contained in such substances, and then subjecting such substances to the action of heat in a non-saturated gaseous medium.

1,219,407. ENVELOP-MACHINE. HENRY B. COOLEY, New Britain, Conn., assignor to The American Paper Goods Company, Montclair, N. J., a Corporation of New Jersey. Filed June 18, 1913. Serial No. 774,341. (Cl. 93—61.)



1. In a folding machine, a pair of feed rolls, a second pair of feed rolls positioned to receive an article directly from the first pair, means for guiding an article out of the path between said feed rolls, mechanism to operate upon said article, and a diverting roll positioned to coact with a roll of each of said pairs in moving an article to and from said mechanism.

2. In a folding machine, a pair of feed rolls, a second pair of feed rolls arranged to receive an article in the shortest path directly from the first pair, mechanism to operate upon said article, and a diverting roll coacting with a feed roll of one of said pairs to deliver an article to said operating mechanism, said diverting roll also coacting with a feed roll of the other pair to deliver said article from said operating mechanism and in a different path.

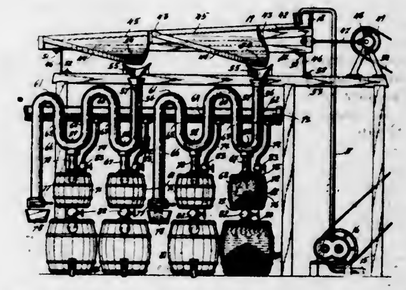
3. In a folding machine, a pair of feed rolls, a second pair of feed rolls relatively arranged with respect to the first pair, a diverting roll traveling in contact with a roll of each pair of feed rolls, means for guiding an article from the first pair of feed rolls in one path to the diverting roll, and means for delivering an article entirely in another path to the diverting roll and the second pair of feed rolls.

4. In a folding machine, a pair of feed rolls, a second pair of feed rolls arranged to receive an article directly from the first pair, a diverting roll positioned in driving contact with one of said feed rolls, a folder mechanism, means for guiding an article from the first pair of feed rolls to the diverting roll and the folder mechanism, and means for delivering an article from the folder mechanism to the diverting roll and second pair of feed rolls.

5. In a folding machine, a pair of feed rolls, a second pair of feed rolls arranged to receive an article traveling in a straight path directly from the first pair, a diverting roll rotating in contact with one roll of each of said pairs, a guide removably positioned between the first pair of feed rolls and said diverting roll, mechanism for operating upon an article delivered from the first pair of feed rolls and the diverting roll, and means for delivering the article into the bight between the second pair of feed rolls and diverting roll.

[Claims 6 to 56 not printed in the Gazette.]

1,219,408. ORE CLASSIFYING AND SEPARATING PROCESS. GEORGE C. HACKSTAFF and GEORGE B. HOLDEN, Denver, Colo. Filed Nov. 24, 1914. Serial No. 873,724. (Cl. 83—84.)



1. The herein described process consisting first in hydraulically classifying pulverized material according to the weight of its particles and regardless of size and specific gravity; second, mechanically classifying the product thus formed, according to size and regardless of specific gravity; and finally hydraulically separating each sized grade according to its specific gravity only.

2. The herein described process consisting in subjecting pulverized material to an upwardly directed current of water regulated to carry over all material of a predetermined maximum weight; classifying the said product to form grades of varying size; and finally separating the particles of each grade according to specific gravity.

3. The herein described process consisting first in treating pulverized material in the form of pulp to segregate all of the particles of a predetermined maximum weight; second classifying this material to form grades varying in size, and finally separating the particles of each grade according to specific gravity.

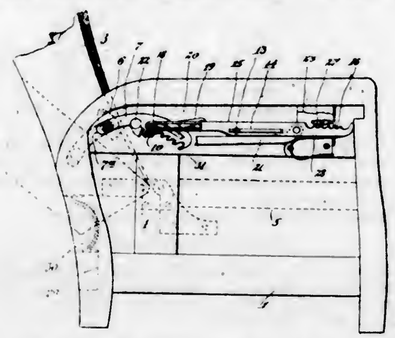
4. The herein described process consisting in subjecting pulverized material, during the pulverizing operation, to an upwardly directed current of water under atmospheric pressure, whereby the particles are sized and caused to overflow entirely by said current, subjecting said overflow to mechanical classification and finally subjecting each mechanically determined grade to an upwardly directed current of water for separating purposes, the first and last named operations taking place entirely under water.

5. The herein described process consisting in pulverizing the material, subjecting the latter during pulverization to an upwardly directed current of water under pressure, whereby the material is sized and caused to overflow entirely by said current, subjecting the overflow ma-

terial to mechanical classification, and subjecting each grade of the mechanically classified material to hydraulic separation.

[Claims 6 to 9 not printed in the Gazette.]

1,219,409. CHAIR. MAURICE MERNYK, Detroit, Mich. Filed June 2, 1916. Serial No. 101,297. (Cl. 155—27.)



1. In a chair, arm frames, a tiltable back, back members carried by said tiltable back and extending into said arm frames and adapted to be held thereby, mechanism in one of said arm frames adapted to move said back members, said mechanism comprising a fulcrum member for raising said back members, a shifting member connecting said fulcrum member to one of said back members, and means in said arm frame adapted for moving said fulcrum member to shift said back members.

2. In a chair back shifting mechanism, the combination with arm frames and a tiltable back, of members carried by said back and extending into said arm frames, a fulcrum member in one of said arm frames adapted for raising said back members, a shifting member connecting one of said back members to said fulcrum member, and a rotary actuating member normally engaging said fulcrum member and adapted for shifting said member to move said back members.

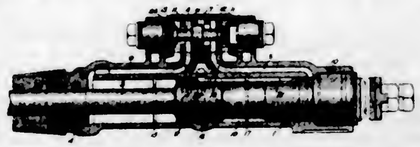
3. The combination with chair arm frames, a tiltable back, and back members carried by said tiltable back and extending into said chair arm frames, of a mechanism in one of said frames for shifting said tiltable back, said mechanism comprising a fulcrum member adapted for raising said back members, a shifting member connecting one of said back members to said fulcrum member and adapted for moving said back members after said members are raised by said fulcrum member, and means normally engaging said fulcrum member adapted for moving said member.

4. In a chair having arm frames and a tiltable back, a back member extending into one of said arm frames and adapted to be held thereby to support said back and permit of the back being raised to a normal position, a fulcrum member in the arm frame adapted for shifting said back member to lower said tiltable back, and a rotatable member in said arm frame engaging the forward end of said fulcrumed member for moving said fulcrum member.

1,219,410. PRESSURE-ACTUATED VALVE. FRANK E. WILLEY, Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed July 25, 1911. Serial No. 640,492. (Cl. 121—11.)

1. In a pressure fluid engine, the combination with a cylinder and piston, of a pressure-actuated, piston-controlled valve member controlling said piston, said valve member having provision wholly within and formed as a part of said valve member for venting the spaces at the ends of said valve member to relieve the same from piston leakage.

2. In a pressure fluid engine, the combination with a cylinder and piston, of a pressure-actuated, piston-controlled valve member having pressure areas alternately subjected to and freed from pressure from said cylinder, said valve member having provision wholly within and formed as a part of said valve member for venting the area which is freed from pressure.



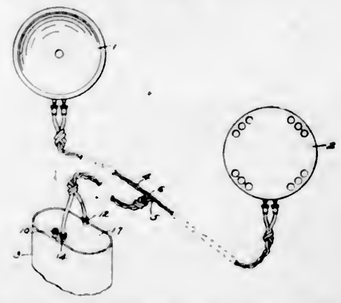
3. In a pressure fluid engine, the combination with a cylinder and piston, of a pressure-actuated, piston-controlled valve member having a pressure area alternately subjected to and freed from pressure from said cylinder, said cylinder having a piston-controlled port for admitting pressure fluid thereto, and said valve member having provision wholly within and formed as a part of said valve member for relieving said area from the effect of piston leakage.

4. In a pressure-fluid engine, the combination with a cylinder and piston, of a pressure-actuated, piston-controlled valve member having a pressure area alternately subjected to and freed from pressure from said cylinder, said cylinder having a piston-controlled port for admitting pressure fluid thereto, and said valve member having formed wholly therein a venting port for said pressure area of lesser cross-sectional area than said piston-controlled port.

5. In a pressure-fluid engine the combination with a pressure-actuated, piston-controlled valve having a pressure area alternately effective and ineffective, a piston-controlled port for admitting pressure fluid thereto and a venting port for said pressure area of lesser cross sectional area than said piston controlled port, said venting port being rendered ineffective on the pressure actuated movement of the valve.

[Claims 6 to 12 not printed in the Gazette.]

1,219,411. HEARING AID. CHARLES E. WILLIAMS, Chicago, Ill., assignor to Williams Articulator Company, a Corporation of South Dakota. Filed July 27, 1915. Serial No. 42,177. (Cl. 179—107.)



1. Apparatus of the kind described, constituting a hearing aid adapted to utilize a high voltage battery, consisting in a portable telephone transmitter and a receiver, a containgr inclosing a portable high voltage battery including a plurality of cells, a pair of terminals outside said container and means to reduce the high voltage battery by having an extra resistance wire between a terminal on one cell and a pole of another, connections from said exterior terminals to the receiver and transmitter whereby the current wires from the battery to the transmitter and receiver will provide a reduced voltage without danger of injury to the wearer and yet enable the hearing aid to have the tone, volume, and sensitiveness of said high voltage battery.

2. A portable dry cell battery adaptable for use in a hearing aid telephone, consisting in a container having a pair of terminals on the outside, a plurality of dry cells contained within said container, a pair of terminals on said battery within the container, an extra terminal to test the strength of the battery and a high resistance wire cut in between the terminals and one pole of the battery, whereby a relatively high voltage battery within said container supplies a reduced current outside said container, while permitting the sensitizing of the hearing aid instruments substantially equivalent to the normal high voltage of the battery.

1,219,412. KITCHEN-CABINET. HENRY W. BERTRAM, Frankfort, Ind., assignor to McDougall Company, Frankfort, Ind., a Corporation of Indiana. Filed Jan. 25, 1915. Serial No. 4,110. (Cl. 45—16.)



1. In a kitchen cabinet, the combination of a work table, a superstructure thereon having a cupboard, a swinging door closing the upper part of a vertical face of such cupboard, a sliding door closing the lower part of such vertical face, slideways for said sliding door mounted on the cupboard walls and on the back of the swinging door, and a spring latch for holding said sliding door in its uppermost position.

2. In a kitchen cabinet, the combination of a work table, a superstructure thereon having a cupboard, a swinging door closing the upper part of a vertical face of such cupboard, a sliding door closing the lower part of such vertical face, and slideways for said sliding door mounted on the cupboard walls and on the back of the swinging door.

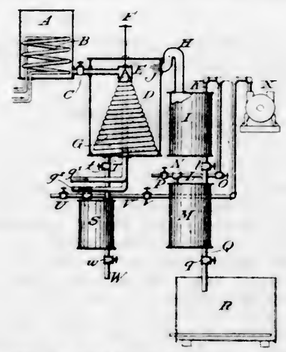
3. In a kitchen cabinet, the combination of a work table, a cupboard superstructure above said work table, said cupboard opening on a vertical face, a swinging door closing the upper part of the opening of said cupboard, a sliding door for closing the lower part of such opening, slideways on the lower part of the cupboard walls and on the rear of the swinging door for receiving said sliding door, said sliding door when in its uppermost position passing out on the slideways on the cupboard walls so that it may swing with the swinging door, and means for holding said sliding door in its raised position behind said swinging door.

4. In a kitchen cabinet, the combination of a work table, a cupboard superstructure above said work table, said cupboard opening on a vertical face, a swinging door closing the upper part of the opening of said cupboard, a sliding door for closing the lower part of such opening, and slideways on the lower part of the cupboard walls and on the rear of the swinging door for receiving said sliding door, said sliding door when in its uppermost position passing out on the slideways on the cupboard walls so that it may swing with the swinging door.

5. In a kitchen cabinet, the combination of a work table, a superstructure above such work table, said superstructure having a door frame in a vertical face, a swinging door hinged in the upper part of said frame, slideways on the lower part of the door frame and on the rear of the swinging door, the two sets of slideways being in alinement when the swinging door is closed, and a sliding door mounted in said slideways and movable either into the slideways on the frame to allow the swinging door to open independently of the sliding door or into the slideways on the door to allow the two doors to be swung out together with the swinging door behind the sliding door, and a spring latch for holding the sliding door in its upper position behind the swinging door.

[Claims 6 to 8 not printed in the Gazette.]

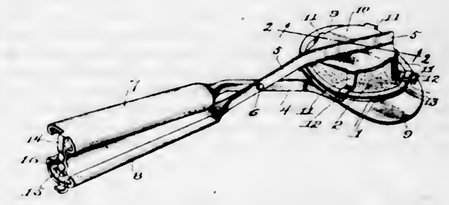
1,219,413. PROCESS FOR PRODUCING HIGH-GRADE ROSIN FROM LOW-GRADE ROSIN. MARION GILBERT DONK, Washington, D. C. Filed Apr. 1, 1915. Serial No. 18,594. (Cl. 203—4.) (Dedicated to the public.)



1. A process for producing a high grade rosin from low grade rosin, consisting in transferring low grade rosin to a still provided with an outlet guarded with projections for preventing frothing of the heated rosin, and then establishing a vacuum in said still, heating the product to the point of distillation at a temperature at which there shall be no material destructive distillation thereby separating from the dark colored bodies in the low grade material the light amber colored components present therein, transferring the distillate to a container and condensing it, withdrawing the condensed liquefied distillate and allowing the product to cool until hardened, substantially as specified.

2. A process for producing high grade rosin oil from low grade rosin, consisting in placing the low grade rosin in a still and reducing the vacuum in said still from atmospheric to partial vacuum not exceeding 100 mm. and then heating the product to the point of distillation for separating from the dark colored bodies in the low grade material the light amber colored components present therein, and then separating by fractional condensation the light colored rosin components in the distillate, substantially as specified.

1,219,414. VULCANIZING-TONGS. FRED O. LAKE, Washington, D. C. Filed June 16, 1916. Serial No. 104,011. (Cl. 18—18.)



1. A vulcanizing implement comprising a pair of hand tongs having handle portions, a series of depending legs branched from the free end of one of the tong-members,

a foot projecting outwardly from each leg and having a plurality of seats, and a clamping plate branched from the free end of the other tong-member, and extending beyond the foot ends for clamping vulcanizing elements of various size.

2. A vulcanizing implement comprising a pair of hand tongs having handle portions, a plate head extension of one of the tong-members, a series of depending legs branched from the head, a foot extension of each leg projecting outwardly, a plurality of seats in each foot, a clamping plate branched from the other tong-member and extending under the seats and beyond the foot ends, and a tongue and slot device formed in the handle portions for locking the members in clamped position.

1,219,415. FASTENER. GEORGE MULLER, Ridgewood, N. J. Filed July 12, 1916. Serial No. 108,766. (Cl. 24—224.)



1. A fastener, comprising a socket member, a stud member and a retaining spring, the said socket member being in the form of a disk having a struck-up socket provided with a central opening leading to an enlarged entrance, the said retaining spring being secured at one end to the under side of the said struck-up socket at a point diametrically opposite the said enlarged socket entrance, the said retaining spring being bent downward and being provided at its free end with a retaining means projecting into the said entrance, the said stud member having a stud provided with a head adapted to be engaged with the said retaining means to press the spring and to slip sidewise through the entrance into the socket, the said stud head snapping in behind the said spring retaining means to hold the stud member locked in position in the socket member.

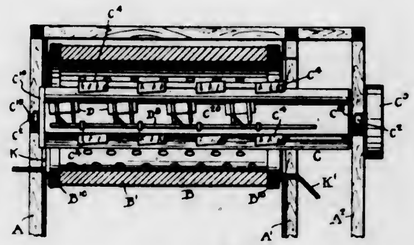
2. A fastener, comprising a socket member, a stud member and a retaining spring, the said socket member being in the form of a disk having a struck-up socket provided with a central opening leading to an enlarged entrance, the said disk having a turned annular head at its edge, the top of which extends in a plane with the top of the said socket, the said retaining spring being secured at one end to the under side of the said struck-up socket at a point diametrically opposite the said enlarged socket entrance, the said retaining spring being bent downward and being provided at its free end with a retaining means projecting into the said entrance, the said stud member having a stud provided with a head adapted to be engaged with the said retaining means to press the spring and to slip sidewise through the entrance into the socket, the said stud head snapping in behind the said spring retaining means to hold the stud member locked in position in the socket member.

3. A fastener, comprising a socket member, a stud member and a retaining spring, the said socket member having a socket provided with a sidewise extending enlarged entrance, the said retaining spring being attached to the under side of the socket member and being provided at its free end with a retaining means projecting into the said entrance and extending across the same, the said stud member having a stud provided with a head flattened at one side, the said head being adapted to be engaged with the said retaining means to press the spring and to slip sidewise through the said entrance into the socket, the said stud head snapping with its flat side in behind the said spring retaining means to hold the stud member locked in position in the socket member.

1,219,416. GREEN-PEA VINER. FRANK P. RYDER, Suspension Bridge, N. Y. Filed Jan. 6, 1915. Serial No. 870. (Cl. 130—30.)

1. A green pea viner comprising the combination of a slowly revoluble container with interior lifting devices, a rapidly revoluble support carrying a connected set of impact openers whose slant is adjustable, and a common adjusting device therefor, substantially as described.

2. A green pea viner comprising the combination of a slowly revoluble container with interior lifting devices, a rapidly revoluble prismatic support carrying connected sets of impact openers adjustable in common on different faces, and a common adjusting device therefor substantially as described.



3. A green pea viner comprising the combination of a slowly revoluble container with interior lifting devices, a rapidly revoluble support carrying a set of simultaneously adjustable impact openers, a common adjusting device therefor and an actuating part for the adjusting device operable from the machine end substantially as described.

4. A green pea viner comprising the combination of a slowly revoluble container with interior lifting devices, a rapidly revoluble support carrying an adjustable beater, and a normally loose but centrifugally tightenable mounting for the beater substantially as described.

5. A green pea viner comprising the combination of a rotary container with interior lifting devices, a rotary prismatic support carrying slanted fixed impact-openers on some of its faces and sets of connected adjustable impact openers on two other of its opposite faces substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,219,417. GOLF-CLUB. LOUIS H. VORIES, New York, N. Y. Filed Apr. 5, 1916. Serial No. 89,005. (Cl. 46—4.)



1. A golf club comprising a shank, a shaft extending therefrom, a head adjustably mounted upon said shaft, holding means arranged partly upon said shaft and partly upon said head, a securing member longitudinally-movable with reference to said shaft adapted to engage with the end thereof and with the end of said head for securing said head to its adjusted position upon said shaft, and means for limiting the outward movement of said member, substantially as specified.

2. A golf club comprising a shank, a shaft extending therefrom, a member secured to said shaft adjacent to its fixed end, a head mounted upon said shaft, means upon said head adapted to engage with the member upon said shaft for holding said head to its adjusted position upon said shaft, a longitudinally-movable securing member disposed within said head upon the free end of said shaft and adapted for engagement with the end thereof and with the outer end of said head, whereby to secure said head to its adjusted position upon said shaft, and means for limiting the outward movement of said securing member, substantially as specified.

3. A golf club comprising a shank, a shaft extending therefrom, a longitudinally-ribbed member secured to said shaft adjacent to its fixed end, a head mounted upon said shaft, means upon said head registering with the longitudinally-ribbed member upon said shaft and adapted to engage therewith for holding said head to its adjusted position upon said shaft, a securing member disposed within said head and longitudinally-movable with reference to said shaft and adapted to engage the free end of said shaft and the outer end of said head, whereby to hold said head to its adjusted position upon said shaft, and means for limiting the outward movement of said securing member, substantially as specified.

4. A golf club comprising a shank, a shaft extending therefrom, a head mounted upon said shaft, holding means arranged partly upon said shaft and partly upon said head for holding said head to its adjusted position upon said shaft, said head being longitudinally movable with respect to said shaft whereby it may be moved outwardly with respect thereto to render said holding means inoperative, longitudinally-movable means operatively associated with said shaft and said head and serving when in its innermost position to hold said head against movement relatively to said shaft, and when in its outermost position to limit the outward movement of said head with respect to said shaft, and means for limiting the outward movement of said longitudinally-movable means, substantially as specified.

5. A golf club comprising a shank, a shaft extending therefrom, a shoulder upon the end of said shank, a tapering member secured to said shaft adjacent to said shoulder but separated therefrom, radial projections upon said member, a head mounted upon said shaft, recesses upon the inner end of said head adapted to engage with the radial projections on said tapering member for holding said head to its adjusted position upon said shaft; said shaft having its outer end reduced and screw-threaded, and a sleeve member longitudinally-movable within said head and secured to the end of said shaft and adapted to engage with the end of said shaft and with the end of said head, whereby to secure said head to its adjusted position upon said shaft, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

REISSUES.

14,268. DEVICE FOR OPENING, HOLDING, PRESERVING, AND USING CANNED MILK AND OTHER CANNED FLUIDS. JOHN MILLS DAY, Seattle, Wash. Filed Oct. 24, 1914. Serial No. 868,788. Original No. 1,041,971, dated Oct. 22, 1912, Serial No. 648,973, filed Sept. 12, 1911. (Cl. 65—61.)



1. A holder for fluid containers and the like comprising a casing composed of separable top and bottom sections, and adapted to inclose the container, the top of the casing having outlet and vent openings, a support on the top of the casing, a lever removably pivoted to the support, a valve for the outlet opening carried by the lever, a valve for the vent opening pivoted to the top of the casing, said last-named valve having an upstanding stem engageable by the lever to operate said valve when the lever is swung to operate the first-mentioned valve, and a closure spring for the vent opening valve engageable with the upstanding stem to swing the same in a direction to close the valve.

2. A holder for fluid containers and the like comprising a casing adapted to inclose the container, the top of the casing having outlet and vent openings, a lever pivoted upon the top of said casing, a valve for the outlet opening carried by the lever, a valve for the vent opening pivoted to the top of the casing, said last-named valve having an upstanding stem engageable by the lever to operate said valve when the lever is swung to operate the first-mentioned valve, and a closure spring for the vent opening valve engageable with the upstanding stem to swing the same in a direction to close the vent valve.

3. A holder for fluid containers and the like comprising a casing adapted to inclose the container, the top of the casing having outlet and vent openings, a lever pivoted upon the top of said casing, a valve for the outlet opening carried by the lever, a valve for the vent opening pivoted to the top of the casing and having an upstanding stem, said last-named valve arranged to be operated by the lever when the lever is swung to operate the first-mentioned valve, and a closure spring for the vent opening valve engageable with the upstanding stem to swing the same in a direction to close the vent valve.

4. A holder for fluid containers and the like comprising a casing adapted to inclose the container, the top of the casing having outlet and vent openings, a valve for each of said openings, a lever operatively connected to actuate said outlet valve, and a leaf spring interposed between the lever and casing top in engagement with the vent opening valve to operate the same simultaneously with the outlet valve.

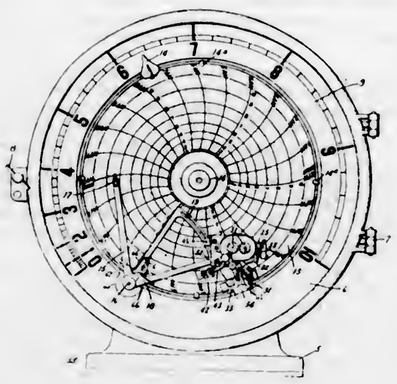
5. A holder for fluid containers and the like comprising a casing adapted to inclose the container, the top of the casing having outlet and vent openings, a valve for each of said openings, a lever operatively connected to actuate said valves in unison, and a leaf spring engageable with the lever and the vent valve to close the valves.

6. A holder for fluid containers and the like comprising a casing composed of separable top and bottom sections adapted to inclose the container, the top of the casing having outlet and vent openings, a lever pivoted upon the top of said casing, a valve for the outlet opening carried by the lever, a valve for the vent opening associated with said lever whereby it is affected by the movements of said lever to open said vent opening when said outlet valve is similarly affected, and a leaf spring interposed between the lever and casing top in engagement with the vent opening valve to operate the same simultaneously with the outlet valve.

7. A holder for fluid containers and the like comprising a casing composed of separable top and bottom sections adapted to inclose the container, the top of the casing having outlet and vent openings, a lever pivoted upon the top of said casing, a valve for the outlet opening carried by the lever, a valve for the vent opening associated with said lever whereby it is affected by the movements of said lever to open said vent opening when said outlet valve is similarly affected, and a leaf spring engageable with the lever and the vent valve to close the valves.

8. A holder for fluid containers and the like comprising a casing composed of separable top and bottom sections having threaded connections adapted to clamp a container within the casing between their respective top and bottom walls, the top wall of said casing having outlet and vent openings, resilient washers secured about said openings on the inner side of said top wall and engageable by said container, said bottom section formed with a rigid pivotal point engageable centrally with the bottom of the container.

14,269. FLOW-METER. AUSTIN R. DODGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 29, 1917. Serial No. 145,318. Original No. 1,209,567, dated Dec. 19, 1916, Serial No. 65,245, filed Dec. 6, 1915. (Cl. 234—6.)



1. The combination with an indicating instrument having a rotating member, of an integrating mechanism having a measuring wheel adapted to engage the member and have motion imparted to it therefrom, said integrating mechanism being arranged so that it may be moved to bring the measuring wheel into and out of engagement with the rotating member, means for so moving the integrating mechanism, and means for locking the measuring wheel before it is moved from the rotating member.

2. The combination with an indicating instrument having a rotating member, of an integrating mechanism having a measuring wheel adapted to engage the member and have motion imparted to it therefrom, said integrating mechanism being arranged so that it may be moved to bring the measuring wheel into and out of engagement with the rotating member, means for so moving the integrating mechanism, and means for locking the measuring wheel before it is moved from the rotating member and maintaining it locked until it is moved back into engagement therewith.

3. The combination in an indicating instrument, of a rotating chart, a pivoted integrating mechanism having a measuring wheel which engages the chart, said mechanism being adapted to be turned on its pivot to bring the measuring wheel into and out of engagement with the chart, means for so turning it, and a locking member controlled by said means for locking the measuring wheel before it is moved from the chart and maintaining it locked until it is again moved back into engagement therewith.

4. The combination in an indicating instrument, of a rotating chart, a pivoted integrating mechanism having a measuring wheel which engages the chart, said mechanism being adapted to be turned on its pivot to bring the measuring wheel into and out of engagement with the chart, and means including a locking device for the integrating mechanism for so turning it.

5. The combination with an indicating instrument having a rotating chart, of a pivoted integrating mechanism having a measuring wheel which engages the chart, said mechanism being adapted to be turned on its pivot to bring the measuring wheel into and out of engagement with the chart, means for so turning it, and means for locking the integrating mechanism against movement when out of engagement with the chart.

6. The combination in an indicating instrument having a cover, of a rotating chart, a pivoted integrating mechanism having a measuring wheel which engages the chart, said mechanism being adapted to be turned on its pivot to bring the measuring wheel into and out of engagement with the chart, and means controlled by the closing and opening of the cover for so turning it.

7. The combination with an indicating instrument having a cover and a rotating chart, of a pivoted integrating mechanism having a measuring wheel which engages the chart, said mechanism being adapted to be turned on its pivot to bring the measuring wheel into and out of engagement with the chart, and means controlled by the closing and opening of the cover for so turning it and for locking the measuring wheel against movement while it is out of engagement with the chart.

8. The combination with an indicating instrument having a cover and a rotating chart, of a pivoted integrating mechanism having a measuring wheel which engages the chart, said mechanism being adapted to be turned on its pivot to bring the measuring wheel into and out of engagement with the chart, means for so turning it, and a locking device controlled by the door for locking said integrating mechanism against movement before it is moved from the chart and maintaining it locked while out of engagement with the chart.

9. The combination with an indicating instrument having a cover, of a rotating chart, a pivoted integrating mechanism having a measuring wheel which engages the chart, said mechanism being adapted to be turned on its pivot to bring the measuring wheel into and out of engagement with the chart, and means controlled by the closing and opening of the door for so turning it and for locking the integrating mechanism against accidental movement.

10. The combination with an indicating instrument having a rotating chart, of an integrating mechanism supported adjacent thereto and having a measuring wheel which engages the chart, said mechanism being adapted to be moved on its support to bring the measuring wheel out of and into engagement with the chart, a locking member for engaging the measuring wheel and locking it against movement, and an actuator for moving the measuring wheel out of engagement with the chart and bringing the locking member and measuring wheel into engagement with each other.

11. The combination with an indicating instrument having a cover and a rotating chart, of an integrating mechanism supported adjacent thereto and having a measuring wheel which engages the chart, said mechanism being adapted to be moved on its support to bring the measuring wheel out of and into engagement with the chart, a locking member for engaging the measuring wheel and locking it against movement, and an actuator controlled by the cover for moving the measuring wheel out of engagement with the chart and bringing the locking member and measuring wheel into engagement with each other.

12. The combination with an indicating instrument having a cover and a rotating chart, of an integrating mechanism supported adjacent thereto and having a measuring wheel which engages the chart, said mechanism being adapted to be moved on its support to bring the measuring wheel out of and into engagement with the chart, a locking member for engaging the measuring wheel and locking it against movement, said locking member being normally biased to a position out of engagement with the wheel, an actuator for engaging the locking member to move it into engagement therewith, a spring which biases it to such position, and a projection carried by the actuator which is engaged by the cover to hold the actuator out of engagement with the locking member.

13. In a flow meter, the combination of a member having a cam slot which is moved in accordance with the flow, a rotating chart, an integrating mechanism having a measuring wheel which engages the chart, said mechanism being pivoted adjacent the chart to turn on an axis perpendicular thereto and also on an axis parallel to it, a pin carried by the mechanism and engaging with the cam slot for turning the mechanism on its perpendicular axis, an actuator for turning it on its parallel axis, and means for limiting the turning action on the parallel axis so that said pin will not be removed from the cam slot.

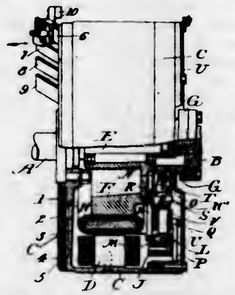
14. In a flow meter, the combination of a member having a cam slot which is moved in accordance with the flow, a rotating chart, an integrating mechanism having a measuring wheel which engages the chart, said mechanism being pivoted adjacent the chart to turn on an axis perpendicular thereto and also on an axis parallel to it, a pin carried by the mechanism and engaging with the cam slot for turning the mechanism on its perpendicular axis, an actuator for turning it on its parallel axis, means controlled by the actuator for locking the measuring wheel, and means for limiting the turning action on the parallel shaft so that said pin will not be removed from the cam slot.

15. The combination with an indicating instrument having a rotating member, of an integrating mechanism having a measuring wheel adapted to engage the member and have motion imparted to it therefrom, said integrating mechanism being arranged so that it may be moved to bring the measuring wheel into and out of engagement with the rotating member, a locking means for the measuring wheel, and means for operating said locking means so that the measuring wheel may be locked before it is removed from the rotating member and kept in locked position until it is moved back into engagement therewith.

16. The combination with an indicating instrument having a rotating member, of an integrating mechanism having a measuring wheel adapted to engage the member and have motion imparted to it therefrom, said integrating mechanism being arranged so that it may be moved to bring the measuring wheel into and out of engagement with the rotating member, means for so moving the integrating mechanism, a locking means biased to a position where it locks the integrating wheel, and means for holding it out of engagement therewith when the integrating mechanism in engagement with the rotating member.

17. The combination of an indicating instrument having a cover, a rotating member, a pivoted integrating mechanism having a measuring wheel which engages the member, said mechanism being adapted to be turned on its pivot to bring the measuring wheel into and out of engagement with the rotating member, a locking device biased to a position where it locks the measuring wheel, and means carried by it which is engaged by the door when closed for holding the locking mechanism out of locking position.

14,270. CENTRIFUGALLY-REGULATED POWER-TRANSMISSION SYSTEM. WILLIAM MORRISON, Chicago, Ill., assignor to Vesta Accumulator Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 9, 1916. Serial No. 119,302. Original No. 1,126,060, dated Jan. 26, 1915, Serial No. 790,538, filed Sept. 18, 1913. (Cl. 171—315.)



1. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, the balance of engine power being transmitted through said clutch to said driven shaft, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force, and the other rotor having a member with which said parts are adapted slidingly to engage, said parts being so proportioned that the centrifugally produced friction between said parts and member when in engagement assists the magnetic clutching action and helps compensate any tendency to increased slip at high speed.

2. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, the balance of engine power being transmitted through said clutch to said driven shaft, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force, and the other rotor having a member with which said parts are adapted slidingly to engage, said parts being so proportioned that the centrifugally produced friction between said parts and member when in engagement assists the magnetic clutching action and helps compensate any tendency to increased slip at high speed, and adjustable means for regulating the friction between said parts and member.

3. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, the balance of engine power being transmitted through said clutch to said driven shaft, a commutator carried by one of said rotors, current collecting devices adapted to be actuated by centrifugal force, movably mounted on the other rotor and engaging said commutator, the current collecting devices being so adjusted that the centrifugally produced pressure between the current collecting devices and the commutator will assist to the desired extent the magnetic clutching action.

4. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, the balance of engine power being transmitted through said clutch to said driven shaft, a commutator carried by one of said rotors, current collecting devices adapted to be actuated by centrifugal force, movably mounted on the other rotor and engaging said commutator, the current collecting devices being so proportioned that the centrifugally produced pressure between the current collecting devices and the commutator will assist to the desired extent the magnetic clutching action.

5. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, the balance of engine power being transmitted through said clutch to said driven shaft, a commutator carried by one of said rotors, current collecting devices adapted to be actuated by centrifugal force, movably mounted on the other rotor and engaging said commutator, the current collecting devices being so adjusted that the centrifugally produced pressure between the current collecting devices and the commutator will assist to the desired extent the magnetic clutching action, and adjustable means for regulating the friction between said commutator and current collecting devices.

6. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a

dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, the balance of engine power being transmitted through said clutch to said driven shaft, a commutator carried by one of said rotors, current collecting devices, adapted to be actuated by centrifugal force, movably mounted on the other rotor and engaging said commutator, springs for holding said current collecting devices against the commutator, and means for adjusting the compression of the springs, the current collecting devices and spring pressure being so adjusted that the combined effect of the spring pressure and the centrifugally produced pressure will assist to the desired extent the magnetic clutching action.

7. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, a storage battery having its respective poles connected to like poles of the armature, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, the balance of engine power being transmitted through said clutch to said driven shaft, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force, and the other rotor having a member with which said parts are adapted slidingly to engage, said parts being so proportioned that the centrifugally produced friction between said parts and member when in engagement assists the magnetic clutching action and helps compensate any tendency to increased slip at high speed.

8. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, a storage battery having its respective poles connected to like poles of the armature, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, the balance of engine power being transmitted through said clutch to said driven shaft, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force, and the other rotor having a member with which said parts are adapted slidingly to engage, said parts being so proportioned that the centrifugally produced friction between said parts and member when in engagement assists the magnetic clutching action and helps compensate any tendency to increased slip at high speed, and adjustable means for regulating the friction between said parts and member.

9. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, a storage battery having its respective poles connected to like poles of the armature, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, and to charge the storage battery, the balance of engine power being transmitted through said clutch to said driven shaft, one of said rotors, having movably connected thereto parts adapted to be actuated by centrifugal force, and the other rotor having a member with which said parts are adapted slidingly to engage, said parts being so proportioned that the centrifugally produced friction between said parts and member when in engagement assists the magnetic clutching action and helps compensate any tendency to increased slip at high speed.

10. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, a storage battery having its respective poles connected to like poles of the armature, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, and to charge the storage battery, the balance of engine power being transmitted through said clutch to said driven shaft, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force, and the other rotor having a member with which said parts are adapted slidingly to engage, said parts being so proportioned that the centrifugally produced friction between said parts and member when in engagement assists the magnetic clutching action and helps compensate any tendency to increased slip at high speed, and adjustable means for regulating the friction between said parts and member.

11. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, a storage battery having its respective poles connected to like poles of the armature, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, the balance of engine power being transmitted through said clutch to said driven shaft, a commutator carried by one of said rotors, current collecting devices adapted to be actuated by centrifugal force, movably mounted on the other rotor and engaging said commutator, the current collecting devices being so adjusted that the centrifugally produced pressure between the current collecting devices and the commutator will assist to the desired extent the magnetic clutching action.

12. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, a storage battery having its respective poles connected to like poles of the armature, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, and to charge the storage battery, the balance of engine power being transmitted through said clutch to said driven shaft, a commutator carried by one of said rotors, current collecting devices adapted to be actuated by centrifugal force, movably mounted on the other rotor and engaging said commutator, the current collecting devices being so adjusted that the centrifugally produced pressure between the current collecting devices and the commutator will assist to the desired extent the magnetic clutching action.

13. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, a storage battery having its respective poles connected to like poles of the armature, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, the balance of engine power being transmitted through said clutch to said driven shaft, a commutator carried by one of said rotors, current collecting devices adapted to be actuated by centrifugal force movably mounted on the other rotor and engaging said commutator, the current collecting devices being so adjusted that the centrifugally produced pressure between the current collecting devices and the commutator will assist to the desired extent the magnetic clutching action, and adjustable means for regulating the friction between said commutator and current collecting devices.

14. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, a storage battery having its respective poles connected to like poles of the armature, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, the balance of engine power being transmitted through said clutch to said driven shaft, a commutator carried by one of said rotors, current collecting devices adapted to be actuated by centrifugal force, movably mounted on the other rotor and engaging said commutator, the current collecting devices being so adjusted that the centrifugally produced pressure between the current collecting devices and the commutator will assist to the desired extent the magnetic clutching action, and adjustable means for regulating the friction between said commutator and current collecting devices.

15. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven load-shaft and a dynamo-electric generating clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, a storage battery having its respective poles connected to like poles of the armature, said clutch constructed and arranged to generate an amount of current sufficient to effect a clutching action between said shafts, the balance of engine power being transmitted through said clutch to said driven shaft, a commutator carried by one of said rotors, current collecting devices, adapted to be actuated by centrifugal force, movably mounted on the other rotor and engaging said commutator, springs for holding said current collecting devices against the commutator and means for adjusting the compression of the springs, the current collecting devices and spring pressure being so adjusted that the combined effect of the spring pressure and the centrifugally produced pressure will assist to the desired extent the magnetic clutching action.

16. An automobile having a variable speed gas engine and means for controlling admission of gas thereto, a driving shaft connected to the engine, a driven load shaft and a dynamo-electric clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, and a controller for making and breaking the dynamo circuits, one of the rotors having movably connected thereto parts adapted to be actuated by centrifugal force and the other rotor having a member with which such parts are adapted slidingly to engage, said parts being so proportioned that at a predetermined speed of rotation the parts and member will be brought into frictional engagement, whereby when the gas is cut off and the dynamo circuits broken, the engine may act as a braking-device.

17. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven shaft, an electro-magnetic clutch having one element connected to said driving shaft and the other element to said driven shaft and having centrifugally operated means for coupling said shafts.

18. In combination, a variable speed prime mover, a driving shaft, a driven shaft and power transmitting means between said shafts comprising clutching mechanism having an automatically decreasing electro-magnetic clutching effect as the relative speed of the shafts decreases and increasing centrifugal clutching effect as the speed of said driven shaft increases.

19. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven shaft, and clutch mechanism between said shafts having an electromagnetic clutching action and also a mechanical clutching action dependent upon the speed of the driven shaft.

20. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven shaft, and automatic clutch mechanism between said shafts having an electro-magnetic clutching action and a mechanical clutching action which automatically increases with the speed of the driven shaft.

21. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven shaft, and clutch mechanism for coupling said shafts comprising electromagnetic and centrifugally operated mechanical means.

22. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven shaft, and clutching mechanism for clutching said shafts comprising electromagnetic means, said means including current carrying devices having parts weighted for securing increasing mechanical clutching action with increase of speed.

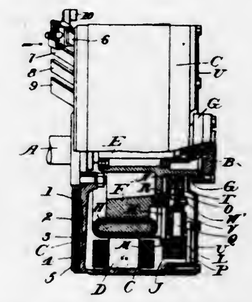
23. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven shaft, and clutching mechanism for coupling said shafts having an electromagnetic action decreasing with decrease of relative speeds of said shafts and having an internal friction surface on one of said shafts and weighted parts on the other of said shafts adapted to engage said surface with increasing frictional clutching effect with increase in speed of said last named shaft.

24. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven shaft, an electromagnetic clutch having one element connected to said driving shaft and the other element to said driven shaft and having centrifugally operated means for coupling said shafts, and a storage battery in circuit with said clutch.

25. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven shaft, clutch mechanism for coupling said shafts comprising electromagnetic and centrifugally operated mechanical means, and a storage battery in circuit with the electromagnetic means.

26. In combination, a variable speed prime mover, a driving shaft connected thereto, a driven shaft, clutching mechanism for clutching said shafts comprising electromagnetic means, said means including current carrying devices having parts weighted for securing increasing mechanical clutching action with increase of speed, and a storage battery in circuit with the electromagnetic means.

14,271. DYNAMO-ELECTRIC CLUTCH. WILLIAM MORRISON, Chicago, Ill., assignor to Vesta Accumulator Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 9, 1916. Serial No. 119,303. Original application filed Sept. 18, 1913, Serial No. 790,538. Divided and application filed Apr. 30, 1914, Serial No. 835,562. Original No. 1,126,061, dated Jan. 26, 1915. (Cl. 171—315.)



1. A dynamo-electric clutch having revoluble field and armature elements, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force, slidingly to engage said other rotor, said parts being so proportioned that the centrifugally produced friction assists the magnetic clutching action and helps compensate any tendency to increased slip at high speed.

2. A shunt wound dynamo-electric clutch having revoluble field and armature elements, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force slidingly to engage said other rotor, said parts being so proportioned that the centrifugally produced friction assists the magnetic clutching action and helps compensate any tendency to increased slip at high speed.

3. A dynamo-electric clutch having revoluble field and armature elements, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force slidingly to engage with said other rotor, said parts being so proportioned that the centrifugally produced friction assists the magnetic clutching action and helps compensate any tendency to increase slip at high speed, and adjustable means for regulating the friction between said parts and member.

4. A shunt wound dynamo-electric clutch having revoluble field and armature elements, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force slidingly to engage said other rotor, said parts being so proportioned that the centrifugally produced friction assists the magnetic clutching action and helps compensate any tendency to increased slip at high speed, and adjustable means for regulating the friction between said parts and member.

5. A dynamo-electric clutch having a revoluble field magnet and a revoluble armature, a commutator ring carried by said armature and having an internal bearing surface, spring-pressed current-collecting devices carried by said field-magnet bearing outwardly on the internal surface of the commutator, the weights of said devices and the spring pressure being so adjusted that the combined pressure due to the effect of the centrifugal and spring action will assist to the desired extent the magnetic clutching action.

6. A dynamo-electric clutch having a revoluble field magnet and a revoluble armature, a commutator carried by said armature and having an internal bearing surface, brushes movably secured to said field magnet and bearing outwardly on the internal surface of the commutator, springs for pressing said brushes outwardly against the internal bearing surface of the commutator and means for adjusting the pressure of said springs, the weight of the brushes and the pressure of the springs being so adjusted that the combined pressure due to effect of the centrifugal and spring action will assist to the desired extent the magnetic clutching action.

7. A dynamo-electric clutch having a revoluble field magnet and a revoluble armature, a commutator carried by said armature and having an internal bearing surface, brushes movably secured to said field magnet and bearing outwardly on the internal surface of the commutator, spring pressed arms for holding said brushes outwardly against the internal bearing surface of the commutator, and means for adjusting the spring pressure, the weight of the brushes and arms and the pressure of the springs being so adjusted that the combined pressure due to effect of the centrifugal and spring action will assist to the desired extent the magnetic clutching action.

8. A dynamo-electric clutch having revoluble field and armature elements, a storage battery having its respective poles connected to like poles of the armature, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force, slidingly to engage said other rotor, said parts being so proportioned that the centrifugally produced friction assists the magnetic clutching action and helps compensate any tendency to increased slip at high speed.

9. A shunt wound dynamo-electric clutch having revoluble field and armature elements, a storage battery having its respective poles connected to like poles of the armature, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force slidingly to engage said other rotor, said parts being so proportioned that the centrifugally produced friction assists the magnetic clutching action and helps compensate any tendency to increased slip at high speed.

10. A dynamo-electric clutch having revoluble field and armature elements, a storage battery having its respective poles connected to like poles of the armature, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force slidingly to engage with said other rotor, said parts being so proportioned that the centrifugally produced friction assists the magnetic clutching action and helps compensate any tendency to increased slip at high speed, and adjustable means for regulating the friction between said parts and member.

11. A shunt wound dynamo-electric clutch having revoluble field and armature elements, a storage battery having its respective poles connected to like poles of the armature, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force slidingly to engage said other rotor, said parts being so proportioned that the centrifugally produced friction assists the magnetic clutching action and helps compensate any tendency to increased slip at high speed, and adjustable means for regulating the friction between said parts and member.

12. A dynamo-electric clutch having a revoluble field magnet and a revoluble armature, a storage battery having its respective poles connected to like poles of the armature, a commutator ring carried by said armature and having an internal bearing surface, spring-pressed current-collecting devices carried by said field-magnet bearing outwardly on the internal surface of the commutator, the weights of said devices and the spring pressure being so adjusted that the combined pressure due to the effect of the centrifugal and spring action will assist to the desired extent the magnetic clutching action.

13. A dynamo-electric clutch having a revoluble field magnet and a revoluble armature, a storage battery having its respective poles connected to like poles of the armature, a commutator carried by said armature and having an internal bearing surface, brushes movably secured to said field magnet and bearing outwardly on the internal surface of the commutator, springs for pressing said brushes outwardly against the internal bearing surface of the commutator and means for adjusting the pressure of said springs, the weight of the brushes and the pressure of the springs being so adjusted that the combined pressure due to effect of the centrifugal and spring action will assist to the desired extent the magnetic clutching action.

14. A dynamo-electric clutch having a revoluble field magnet and a revoluble armature, a storage battery having its respective poles connected to like poles of the armature, a commutator carried by said armature and having an internal bearing surface, brushes movably secured to said field magnet and bearing outwardly on the internal surface of the commutator, spring pressed arms for holding said brushes outwardly against the internal bearing surface of the commutator, and means for adjusting the spring pressure, the weight of the brushes and arms and the pressure of the springs being so adjusted that the combined pressure due to effect of the centrifugal and spring action will assist to the desired extent the magnetic clutching action.

15. An electromagnetic clutch having one element adapted to be connected to a driving shaft and the other element adapted to be connected to a driven shaft and having centrifugally operated means for coupling said shafts.

16. A power transmitting device having means for connection to a driving shaft and to a driven shaft, said mechanism comprising clutching mechanism having an automatically decreasing electromagnetic clutching effect as the relative speed of the shafts decreases and increasing centrifugal clutching effect as the speed of said driven shaft increases.

17. A power transmitting device having means for connection to a driving shaft and to a driven shaft comprising a clutch mechanism having an electromagnetic clutching action and also a mechanical clutching action dependent upon the speed of the driven shaft.

18. A power transmitting device having means for connection to a driving shaft and to a driven shaft comprising an automatic clutch mechanism having an electromagnetic clutching action and a mechanical clutching action which automatically increases with the speed of the driven shaft.

19. A power transmitting device having means for connection to a driving shaft and to a driven shaft comprising a clutch mechanism for coupling said shafts, said clutch mechanism including both electromagnetic and centrifugally operated mechanical means.

20. A clutching mechanism for driving and driven shafts comprising electromagnetic means including current-carrying devices having parts weighted for securing increasing mechanical clutching action with increase of speed.

21. A clutching mechanism for driving and driven shafts having an electromagnetic action decreasing with decrease of relative speeds of said shafts and having an internal friction surface adapted to be connected to one of said shafts and weighted parts adapted to be connected to the other shaft and to engage such surface with increasing frictional clutching effect with increase in speed of said last named shaft.

22. An electromagnetic clutch having one element adapted to be connected to a driving shaft and the other element adapted to be connected to a driven shaft and having centrifugally operated means for coupling said shafts and a storage battery in circuit with said clutch.

23. A power transmitting device having means for connection to a driving shaft and to a driven shaft comprising a clutch mechanism for coupling said shafts, said clutch mechanism including both electromagnetic and centrifugally operated mechanical means and a storage battery in circuit with said electromagnetic means.

24. A clutching mechanism for driving and driven shafts comprising electromagnetic means including current-carrying devices having parts weighted for securing increasing mechanical clutching action with increase of speed and a storage battery in circuit with said electromagnetic means.

14,272. JOINT-CHAIR. JACOB LAWRENCE SPARLING, Bay City, Mich., assignor to The Rail Joint Company, a Corporation of New York. Filed Dec. 5, 1916. Serial No. 135,150. Original No. 1,064,559, dated June 10, 1913, Serial No. 661,772, filed Nov. 22, 1911. (Cl. 239—6.)



1. In a joint chair, the combination with rail ends to be connected, of fish plates mounted upon opposite sides of the rail, bolts for connecting the fish plates to the rail, flanges carried by the fish plates and extending beneath the rail and having upwardly and inwardly inclined seats, a connector plate, and inclined seats on the connector plate engaging the inclined seats on the flanges and adapted to draw the flanges together when pressure is applied to the rail.

2. In a joint chair, the combination with rail ends to be connected, of fish plate members having bodies lying upon the base flanges of the rail, bolt flanges extending at an angle therefrom and diverging from the web of the rail, L-shaped flanges connected to the bodies and having a portion extending beneath the base flanges of the rail and being provided with inclined seats adapted to form with the base of the rail half dovetail grooves, a connecter plate arranged beneath the rails and having half dovetail extensions to lie in said grooves and engage said seats of the L-shaped flange and to slide thereon, and bolts passing through the bolt flanges and the webs of the rails.

3. A rail joint including, in combination with the rails and the joint bolts, fish plates receiving the bolts, and a connector arranged beneath the rails and having an operating engagement with the fish plates to cause outward movement of their bolt-receiving members upon application of downward pressure upon the connector.

4. A rail joint including in combination the rails and the joint bolts, fish plates having upright members and base portions, and a connector arranged beneath the rails and having an operating engagement with the base portions of the fish plates to cause the upright members thereof to move outward upon application of downward pressure on the connector.

5. A rail joint including, in combination with the rails and the joint bolts, fish plates having upright members and base portions, and a connector arranged beneath the rails and having a wedging engagement with said base portions of the fish plates to cause the upright members thereof to move outwardly into binding engagement with the bolts upon application of downward pressure on the connector.

6. A rail joint including in combination with the rails and the joint bolts, fish plates fulcrumed on the rail flanges and having depending flange portions, and a base plate having wedging elements interlocking with said flange portions and arranged to cause the latter to move inwardly and said upright members to move outwardly upon application of downward pressure on the base plate.

DESIGNS.

50,441. SIGN. JAMES F. CROWLEY, Chariton, Iowa, assignor of two-fifths to H. B. Blanchard, Chariton, Iowa. Filed Dec. 27, 1916. Serial No. 139,219. Term of patent 7 years.



The ornamental design for a sign, as shown.

50,442. BADGE, PIN, OR SIMILAR ARTICLE OF JEWELRY. HARRY V. ELLIOTT, North Philadelphia, Pa. Filed Nov. 6, 1916. Serial No. 129,897. Term of patent 3½ years.



The original design for a badge, pin, or similar article of jewelry as shown.

50,443. SLIP-UNDER PHOTO-MOUNT. OLIVER GROSS, Toledo, Ohio, assignor to The Gross Photo Supply Company, Toledo, Ohio, a Corporation of Ohio. Filed Jan. 22, 1917. Serial No. 143,875. Term of patent 3½ years.



The ornamental design for a slip-under photo-mount, substantially as shown.

50,444. PRECIOUS, SEMIPRECIOUS, OR SYNTHETIC STONE, OR AN IMITATION THEREOF. SAMUEL HELLER, New York, N. Y. Filed Oct. 30, 1915. Serial No. 58,919. Term of patent 7 years.



An ornamental design for a precious, semi-precious, or synthetic stone, or an imitation thereof consisting of a crown cutting having a parallelogrammatic table, a trapezium shaped facet extending downwardly toward the girdle at each side of said table, and two skalene triangular facets at opposite sides of the crown, the short sides of said triangular facets being coincident, another of the sides of each of said triangular facets being coincident with one of the sides of the adjoining trapezium shaped facet, and the remaining side forming a part of the girdle and a pavilion having facets thereon.

50,445. MITTEN. ELIZABETH T. HINCKS, Cambridge, Mass. Filed Dec. 13, 1916. Serial No. 136,803. Term of patent 7 years.



The ornamental design for a mitten, as shown.

50,446. COMBINED CAR-HANDLE AND SHIELD. HOWELL JORDAN, Los Angeles, Cal. Filed Feb. 10, 1915. Serial No. 7,368. Term of patent 14 years.

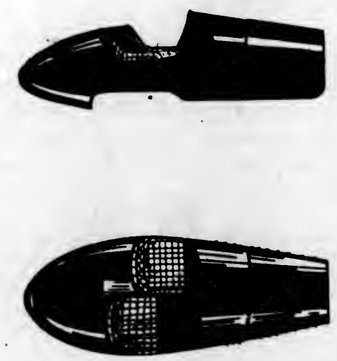
The ornamental design for a combined car handle and shield, as shown.

50,447. RING. JULIUS KATZ, Providence, R. I. Filed June 7, 1916. Serial No. 102,348. Term of patent 3½ years.



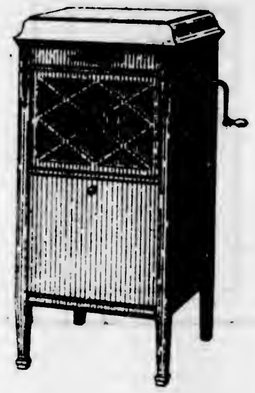
The ornamental design for a ring, as shown.

50,448. AUTOMOBILE-BODY. FRANK L. MACKEMER, Peoria, and ELI M. MACKEMER, Galesburg, Ill. Filed Jan. 19, 1917. Serial No. 143,387. Term of patent 3½ years.



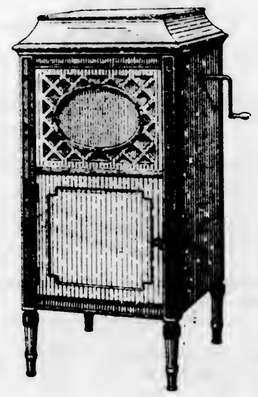
The ornamental design for an automobile body, as shown.

50,449. PHONOGRAPH-CABINET. WALTER C. PITTS, Philadelphia, Pa., assignor, by mesne assignments, to Solophone Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 26, 1916. Serial No. 139,059. Term of patent 14 years.



The original design for a phonograph cabinet, as shown.

50,450. PHONOGRAPH-CABINET. WALTER C. PITTS, Philadelphia, Pa., assignor, by mesne assignments, to Solophone Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 26, 1916. Serial No. 139,060. Term of patent 14 years.



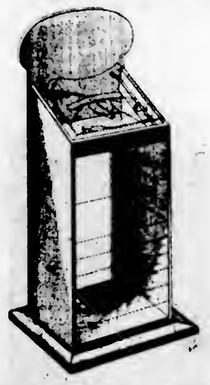
The ornamental design for a phonograph cabinet, as shown.

50,451. SHOE. CHARLES B. SPALSBURY, St. Louis, Mo., assignor to Johnson, Stephens & Shinkle Shoe Company, a Corporation of Missouri. Filed Jan. 22, 1917. Serial No. 143,868. Term of patent 3½ years.



The ornamental design for a shoe substantially as shown.

50,452. DISPLAY-CABINET FOR CARTONS. ALBERT STEIN, Chicago, Ill., assignor to A. Stein & Company, Chicago, Ill., a Corporation. Filed Dec. 28, 1916. Serial No. 139,415. Term of patent 7 years.



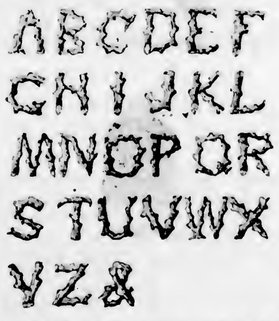
The ornamental design for a display cabinet for cartons, as shown.

50,453. CAN OR SIMILAR ARTICLE. EUGENE A. TOWLE, St. Paul, Minn. Filed Aug. 9, 1915. Serial No. 44,655. Term of patent 14 years.



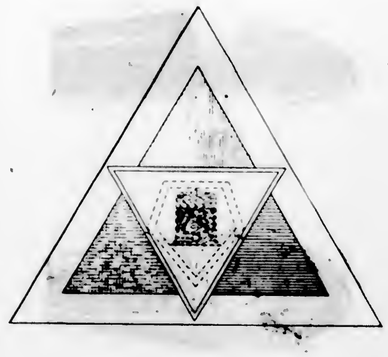
The ornamental design for a can or similar article, as shown.

50,454. FONT OF TYPE. CARLOS E. WOLFE, Monte Vista, Colo. Filed Apr. 23, 1915. Serial No. 23,542. Term of patent 7 years.



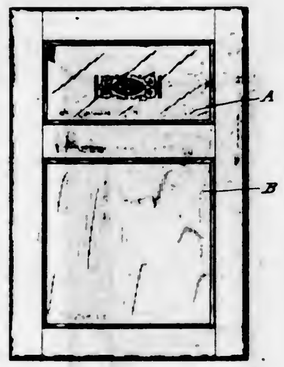
The ornamental design for a font of type, as shown.

50,455. BADGE OR BUTTON. FRED E. WHEATON, Minneapolis, Minn. Filed Oct. 2, 1915. Serial No. 53,849. Term of patent 14 years.



The ornamental design for a badge or button as shown.

50,456. PANELED PORTION OF ARTICLES OF FURNITURE. CHARLES P. MCDOUGALL, Frankfort, Ind. Filed Feb. 13, 1915. Serial No. 8,067. Term of patent 14 years.



The ornamental design for a paneled portion of articles of furniture, as shown and described.

TRADE-MARKS

PUBLISHED MARCH 13, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 69,753. (CLASS 2. RECEPTACLES.) WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany. Filed Apr. 12, 1913.

Continental

Particular description of goods.—Type-Writer Cases, Type-Writer Tool-Boxes, Adding-Machine Tool-Boxes, Oil-Containers, Bicycle-Pockets, Adding-Machine-Protecting Hoods and Cases, Cases for Adding-Machine Accessories, Machine Tool-Boxes; Adding-Machine Pockets or Bags of Leather, Oil-Cloth, and other Materials; Adding-Machine Cases, Adding-Machine Chests, Cardboard Boxes, Bags for Bicycles, and Postage-Tills.

Claims use since January, 1903.

Ser. No. 69,756. (CLASS 32. FURNITURE AND UPHOLSTERY.) WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany. Filed Apr. 12, 1913.

Continental

Particular description of goods.—Adding-Machine Standards, Carriages, and Furniture; Adding-Machine Bases, Adding-Machine Book-Stands, Cases for Adding-Machine Accessories, Adding-Machine Cases, Type-Writer Bases, Glass Plates for Type-Writers, Sound-Deadeners, Wooden Type-Writer Furniture, Type-Writer Packings, Adding-Machine Chests, Tables, Desks, Type-Writer Tables with Drop-Plates for the Type-Writer, Cabinets for Type-Writer Paper and Blanks, Type-Writer Supports, Type-Writer Tables, Type-Writer Desks, Document-Stands, Adding-Machine Supports, Adding-Machine Desks and Tables, Letter-Files, Wooden Covers for Type-Writers, Adding-Machines, and Calculating-Machines, Stands for Adding-Machines and Calculating-Machines, Book-Shelves, Supports for Calculating-Machines, Check-Tills, Paying-Out Tills, and Parts of Any of the Above Devices.

Claims use since January, 1903.

Ser. No. 85,746. (CLASS 2. RECEPTACLES.) WM. GREILICH & SONS, Brooklyn, N. Y. Filed Apr. 7, 1915.

Shusac WGS

Particular description of goods.—Fittings for Traveling-Bags, Trunks, &c., Particularly for Protecting Footwear and the Like Carried Therein.

Claims use since Feb. 10, 1915.

Ser. No. 90,621. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) SAMSTAG & HILDER BROS., New York, N. Y. Filed Nov. 12, 1915.

COLONIAL

Particular description of goods.—Mesh-Bags, Vanity-Cases, Necklaces, Powder-Boxes, Ear-Rings, Brooches, Hat-Pins, Bar-Pins, Lavallières, Bracelets, Cuff-Links, Cuff-Buttons, Collar-Buttons, Metal Chains, Gate-Tops, Lockets, Daggers, Picture-Frames, Silver Flat-Ware, Silver Hollow Ware, and Silver Tableware, All Made of or Plated with Precious Metal.

Claims use since the year 1897.

Ser. No. 91,354. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) NORMAN R. MCAFEE, Pittsburgh, Pa. Filed Dec. 9, 1915.

SLIKO

Particular description of goods.—A Plastic or Paste Composition for Cleaning the Hands, Wood, Metal, Earthenware, and Enameled Ware.

Claims use since on or about Sept. 15, 1915.

Ser. No. 91,789. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEGGERMAN BROS. INC., New York, N. Y. Filed Dec. 27, 1915.

SEGBRO

Particular description of goods.—Tuna-Fish, Crab-Meat.
Claims use since Aug. 1, 1915.

Ser. No. 92,558. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) GRECIAN IMP. & TRADING CO. INC., New York, N. Y. Filed Jan. 31, 1916.



Particular description of goods.—Bottled Grecian White Gin.
Claims use since about January, 1915.

Ser. No. 92,559. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) GRECIAN IMP. & TRADING CO. INC., New York, N. Y. Filed Jan. 31, 1916.



Particular description of goods.—Bottled Grecian White Gin.
Claims use since about January, 1915.

Ser. No. 92,643. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) UNION PACIFIC TEA COMPANY, New York, N. Y. Filed Feb. 4, 1916. Under ten-year proviso.

SOVEREIGN

Particular description of goods.—Toilet Soaps, Laundry Soaps, Scouring-Soaps, Washing-Powder, Washing-Tablets, and Silver-Polish.
Claims use since 1880.

Ser. No. 93,158. (CLASS 17. TOBACCO PRODUCTS.) SIDNEY S. SPEIER, Louisville, Ky. Filed Feb. 28, 1916.

ROXY

Particular description of goods.—Cigars.
Claims use since the year 1886.

Ser. No. 93,483. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE CONTINENTAL MILLS, Lewiston, Me., and Boston, Mass. Filed Mar. 13, 1916.

Continental

Particular description of goods.—Pillow-Tubing, Sheeting, and Cotton Piece Goods.
Claims use since some time prior to January, 1901.

Ser. No. 95,568. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNION SEED & FERTILIZER COMPANY, Guttenberg, N. J. Filed May 31, 1916.

UNION

Particular description of goods.—Foodstuffs for Cattle and other Animals, Consisting of Cotton-Seed Meal.
Claims use since Nov. 9, 1914.

Ser. No. 95,825. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARTHUR B. MOLER, Chicago, Ill. Filed June 12, 1916.

'SHAVETERIA.

Particular description of goods.—Face-Cream, Hair-Tonic, Face-Lotion for Use After Shave or When Desired.
Claims use since May 10, 1916.

Ser. No. 96,136. (CLASS 17. TOBACCO PRODUCTS.) COONY BAYER CIGAR CO., Fort Wayne, Ind. Filed June 26, 1916. Under ten-year proviso.

COONY'S

Particular description of goods.—Cigars.
Claims use since 1894.

Ser. No. 96,810. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ADAMS BROTHERS, New York, N. Y. Filed July 25, 1916.

GALA

Particular description of goods.—Chewing-Gum.
Claims use since May 15, 1916.

Ser. No. 96,811. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ADAMS BROTHERS, New York, N. Y. Filed July 25, 1916.

SNACKS

Particular description of goods.—Chewing-Gum.
Claims use since May 15, 1916.

Ser. No. 97,695. (CLASS 39. CLOTHING.) A. L. TUSKA SON & Co., New York, N. Y. Filed Aug. 29, 1916.

ALTSCO

Particular description of goods.—Men's Dress, Negligée, and Work Shirts, Pajamas, and Beach-Robes, Misses' Middy-Blouses, and Ladies' Kimonos, Lounging-Robes, and Wadded Vests.
Claims use since July, 1915.

Ser. No. 97,777. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ZIP Co., New York, N. Y. Filed Sept. 2, 1916.

ZIP!

Particular description of goods.—A Bleaching and Water-Softening Compound.
Claims use since June 12, 1916.

Ser. No. 97,791. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOPFINGER & ROTH, St. Louis, Mo. Filed Sept. 5, 1916.

LA-EM-STRAIT

Consisting of the word "La-Em-Strait," with the upper extremity of the first letter extended in a waved line over the top of said word and the lower extremity of the last letter extended in a straight line under said word.
Particular description of goods.—Hair-Dressing.
Claims use since about Feb. 1, 1915.

Ser. No. 97,942. (CLASS 39. CLOTHING.) THE WILMINGTON HOSIERY MILLS, INC., Wilmington, N. C. Filed Sept. 11, 1916.

Cape Fear

Particular description of goods.—Hosiery.
Claims use since June 23, 1916.

Ser. No. 98,151. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) THE C. M. ABBOTT COMPANY, Providence, R. I. Filed Sept. 22, 1916.



Particular description of goods.—Brooches, Cuff-Buttons, Cuff-Pins, Watch, Neck, and Fob Chains, Bar-Pins, Cuff-Links, Ear-Drops, Bracelets, Scarf-Pins, Tie-Clips, and Pendants.
Claims use since June, 1916.

Ser. No. 98,589. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CARPENTER-MORTON COMPANY, Boston, Mass. Filed Oct. 12, 1916.

COW-EASE

Particular description of goods.—A Medicated Preparation Destructive or Repellent to Certain Insects, Vermin, and Bacteria; Particularly Flies, Lice, Ticks, and the Like.
Claims use since May 1, 1900.

Ser. No. 98,749. (CLASS 32. FURNITURE AND UPHOLSTERY.) GOLDMAN BROS., St. Louis, Mo. Filed Oct. 18, 1916.



Consisting of a group of portraits of Morris Goldman and Louis Goldman, the applicants, and Charles Goldman and Sam Goldman, living individuals, whose consent to the use of their portraits is made of record.
Particular description of goods.—Tables as Articles of Furniture, Chairs as Articles of Furniture, Beds, Wardrobes, Sideboards, Desks, and Couches.
Claims use since Mar. 1, 1893.

Ser. No. 98,750. (CLASS 32. FURNITURE AND UPHOLSTERY.) GOLDMAN BROS., St. Louis, Mo. Filed Oct. 18,1916. Under ten-year proviso.

GOLDMAN BROS.

Particular description of goods.—Tables as Articles of Furniture, Chairs as Articles of Furniture, Beds, Wardrobes, Sideboards, Desks, and Couches.
Claims use since Mar. 1, 1893.

Ser. No. 98,764. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HEISIG & NORVELL, Beaumont, Tex. Filed Oct. 19, 1916.

HI-NO

Particular description of goods.—Canned Vegetables, Rolled Oats, Spices, Flavoring Extracts for Foods, Mustard, Ginger, Nutmeg, Sage, Hominy, Meal, and Mince-Meat.
Claims use since about July 1, 1911.

Ser. No. 98,870. (CLASS 39. CLOTHING.) BATTERMAN, ROOD RUBBER COMPANY, South Framingham, Mass. Filed Oct. 25, 1916.

Cinderella

The trade-mark consists of the word "Cinderella."
Particular description of goods.—Rubber Boots and Rubber Shoes.
Claims use since Aug. 28, 1916.

Ser. No. 99,049. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DOC. STROCK REMEDY CO., Akron, Ohio. Filed Nov. 2, 1916. The portrait being that of Zadoc B. Strock.



Particular description of goods.—Catarrh Remedy, Pile Remedy, Cough Remedy, Antiseptic Powder, Cathartic Pills, Kidney, Liver, and Stomach Remedy.
Claims use since Jan. 1, 1906.

Ser. No. 99,060. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE CLARK THREAD COMPANY, Newark, N. J. Filed Nov. 3, 1916. Under ten-year proviso.

O. N. T.

Particular description of goods.—Crochet Hooks or Needles.
Claims use since about the year 1867.

Ser. No. 99,249. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDGAR W. JENKINS, Chicago, Ill. Filed Nov. 11, 1916.

STEEL-EENE

Particular description of goods.—An Iron-Cement.
Claims use since Sept. 25, 1909.

Ser. No. 99,476. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 22, 1916.

HARMOGRAPH

Particular description of goods.—Talking-Machines.
Claims use since Oct. 1, 1916.

Ser. No. 99,565. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE COTTONSEED PRODUCTS CO., Roff, Okla. Filed Nov. 27, 1916.

Protomeal

No claim is made by the applicant to the word "Meal" alone or to the syllable apart from the word in which it is used.
Particular description of goods.—Stock Feed and Cotton-Seed Mixed Feed.
Claims use since Aug. 21, 1916.

Ser. No. 99,778. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) TITUS BLATTER & COMPANY, New York, N. Y. Filed Dec. 7, 1916.

SATINEEN

Particular description of goods.—Cotton Drapery Fabrics.
Claims use since July 18, 1916.

Ser. No. 99,779. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) TITUS BLATTER & COMPANY, New York, N. Y. Filed Dec. 7, 1916.

LEONITE

Particular description of goods.—Drapery Fabrics Made of Cotton and of Cotton and Silk Mixtures.
Claims use since June 20, 1916.

Ser. No. 99,822. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAQUET & MAXWELL, a Firm, New York, N. Y. Filed Dec. 9, 1916.

TANTY

Particular description of goods.—Perfumes, Face-Powders, Creams, Sachet-Powders, Toilet Waters.
Claims use since 1904.

Ser. No. 100,023. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROUND UP FISHERIES CO., Spokane, Wash. Filed Dec. 18, 1916.

HIGH TIDE

Particular description of goods.—Canned Salmon, Canned Cove-Oysters, Canned Minced Clams, and Dried Codfish.
Claims use since Sept. 1, 1915.

Ser. No. 100,160. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CRANDALL PACKING COMPANY, Palmyra, N. Y., and Birmingham, Ala. Filed Dec. 26, 1916.



Particular description of goods.—Rubber Belting and Rubber Hose.
Claims use since the 21st day of September, 1916.

Ser. No. 100,161. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CRANDALL PACKING COMPANY, Palmyra, N. Y., and Birmingham, Ala. Filed Dec. 26, 1916.



Particular description of goods.—Rubber Belting and Rubber Hose.
Claims use since the 21st day of September, 1916.

Ser. No. 100,204. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NIANA PURE FOOD COMPANY, Waukesha, Wis. Filed Dec. 27, 1916.

COMIL

Particular description of goods.—A Food Product Consisting of Prepared Animal Milk.
Claims use since Sept. 14, 1916.

Ser. No. 100,215. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) E. Y. B. ENGELMAN, Noxen, Pa. Filed Dec. 28, 1916.

E. Y. B.

Particular description of goods.—A Liquid or Paste Detergent for Removing Dirt and Grease from the Hands and Fabrics, for Cleaning Machinery, and for Use as a Leather Dressing and Lubricant.
Claims use since July 20, 1916.

Ser. No. 100,284. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM J. H. DORAN, Denver, Colo. Filed Jan. 2, 1917.

Co-Lo

Particular description of goods.—A Substitute for Coffee.
Claims use since about the 1st day of December, 1903.

Ser. No. 100,346. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ROBERT TREAT MANUFACTURING COMPANY, Newark, N. J. Filed Jan. 3, 1917.

ZIP

Particular description of goods.—Snap-Fasteners.
Claims use since the 23d day of December, 1916.

Ser. No. 100,354. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KOSTAS G. BOUZOUKIS, Nashua, N. H. Filed Jan. 4, 1917.

VALSAMOL

Particular description of goods.—Remedy for Acidity of the Stomach, Nervous and Atonic Dyspepsia, Biliousness, and Chronic Constipation, Headaches Due to Constipation, Vertigo, and Loss of Appetite, and an Excellent General Tonic and Alterative.
Claims use since Aug. 1, 1916.

Ser. No. 100,421. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CANADIAN-AMERICAN CEREAL PRODUCTS CO., New York, N. Y. Filed Jan. 8, 1917.

BULWARK

Particular description of goods.—Wheat-Flour.
Claims use since about Aug. 15, 1914.

Ser. No. 100,434. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE LARABEE FLOUR MILLS CORPORATION, Hutchinson, Kans. Filed Jan. 8, 1917.



Particular description of goods.—Wheat-Flour.
Claims use since Nov. 7, 1916.

Ser. No. 100,493. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HOMB PRODUCTS COMPANY, Newburgh, N. Y. Filed Jan. 9, 1917.

O'MELLO

Particular description of goods.—Vanishing Cream.
Claims use since Dec. 18, 1916.

Ser. No. 100,496. (CLASS 39. CLOTHING.) WM. K. JONES, Wichita, Kans. Filed Jan. 9, 1917.

AUNT SARA'S

Particular description of goods.—Infants' Flat and Knitted Underwear.
Claims use since Nov. 25, 1916.

Ser. No. 100,505. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) UNITED LIQUID SULPHUR CO., INC., New York, N. Y. Filed Jan. 9, 1917.



Particular description of goods.—Chemicals, Medicines, and Pharmaceutical Preparations Containing Sulfur in a Dissolved Form, Which Chemicals, Medicines, and Pharmaceutical Preparations Can be Taken Internally as a Medicine or Used Externally as a Sulfur Bath in the Treatment of Rheumatism, Obesity, Sciatica, Skin Eruptions, Catarrh, Hay-Fever, Eczema, Acne, and Neuritis.
Claims use since Nov. 20, 1916.

Ser. No. 100,547. (CLASS 39. CLOTHING.) HOOD RUBBER COMPANY, Watertown, Mass. Filed Jan. 12, 1917.

KLAYKORT

Particular description of goods.—Rubber Boots and Shoes, Rubber Overshoes, and Rubber-Sole Canvas Shoes.
Claims use since Sept. 1, 1915.

Ser. No. 100,548. (CLASS 39. CLOTHING.) HOOD RUBBER COMPANY, Watertown, Mass. Filed Jan. 12, 1917.

LAKESIDE

Particular description of goods.—Rubber Boots and Shoes, Rubber Overshoes, and Rubber-Sole Canvas Shoes.
Claims use since July 24, 1913.

Ser. No. 100,549. (CLASS 39. CLOTHING.) HOOD RUBBER COMPANY, Watertown, Mass. Filed Jan. 12, 1917.

BAYSIDE

Particular description of goods.—Rubber Boots and Shoes, Rubber Overshoes, and Rubber-Sole Canvas Shoes.
Claims use since June 23, 1914.

Ser. No. 100,550. CLASS 39. CLOTHING.) HOOD RUBBER COMPANY, Watertown, Mass. Filed Jan. 12, 1917.

FENWAY

Particular description of goods.—Rubber Boots and Shoes, Rubber Overshoes, and Rubber-Sole Canvas Shoes.
Claims use since July 8, 1915.

Ser. No. 100,602. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TOPEKA FLOUR MILLS COMPANY, Topeka, Kans. Filed Jan. 15, 1917.



Particular description of goods.—Wheat-Flour.
Claims use since the 25th day of October, 1915.

Ser. No. 100,603. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TOPEKA FLOUR MILLS COMPANY, Topeka, Kans. Filed Jan. 15, 1917.



Particular description of goods.—Wheat-Flour.
Claims use since the 25th day of October, 1915.

Ser. No. 100,626. (CLASS 17. TOBACCO PRODUCTS.) DAVID DER H. MINASSIAN, New York, N. Y. Filed Jan. 15, 1917.



The trade-mark comprises the word "Yeritz" and the red wafer on which the word appears in the form shown.
Particular description of goods.—Cigarettes.
Claims use since about Nov. 1, 1914.

Ser. No. 100,641. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERICK H. YOUNG, Toledo, Ohio. Filed Jan. 15, 1917.



Particular description of goods.—Toilet Creams, Toilet Powders.
Claims use since Dec. 15, 1915.

Ser. No. 100,725. (CLASS 39. CLOTHING.) TIMSON BROS. INC., Boston, Mass. Filed Jan. 18, 1917.

Timbro

Particular description of goods.—Boots, Shoes, Slippers, and Sandals Made Wholly and in Part of Leather and Cloth.
Claims use since Aug. 24, 1907.

Ser. No. 100,763. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WHATCOM FISH PRODUCTS CO., Bellingham, Wash. Filed Jan. 19, 1917.



Particular description of goods.—Canned Salmon.
Claims use since September, 1915.

Ser. No. 100,764. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WHATCOM FISH PRODUCTS CO., Bellingham, Wash. Filed Jan. 19, 1917.

EVVAMORE

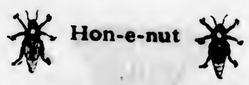
Particular description of goods.—Canned Salmon.
Claims use since September, 1915.

Ser. No. 100,765. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WINTERMINT CO., INC., Harrisburg, Pa. Filed Jan. 19, 1917.

TAIANGLE

Particular description of goods.—Candy.
Claims use since Jan. 12, 1917.

Ser. No. 100,800. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DILMAN C. GILHAM, Schuylkill Haven, Pa. Filed Jan. 22, 1917.



Particular description of goods.—A Peanut-Butter and Honey Food Compound.
Claims use since Jan. 18, 1917.

Ser. No. 100,807. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOUIS LEVY GROCER CO., LTD., Baton Rouge, La. Filed Jan. 22, 1917.



Particular description of goods.—Wheat-Flour.
Claims use since Oct. 10, 1916.

Ser. No. 100,813. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MODEL MILLS COMPANY, Philadelphia, Pa. Filed Jan. 22, 1917.

KARADI

Particular description of goods.—Textile Rugs.
Claims use since January, 1912.

Ser. No. 100,817. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) OK AUTO SUPPLY HOUSE, Oklahoma, Okla. Filed Jan. 22, 1917.

Monkey Grip

Particular description of goods.—Automobile-Tire Patches.
Claims use since Oct. 18, 1916.

Ser. No. 100,820. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) OMAHA BEVERAGE COMPANY, Omaha, Nebr. Filed Jan. 22, 1917.

OMA

Particular description of goods.—A Non-Alcoholic Beverage Sold as a Soft Drink.
Claims use since Feb. 17, 1916.

Ser. No. 100,828. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SMITH LICHTY AND HILLMAN COMPANY, Waterloo, Iowa. Filed Jan. 22, 1917.

SUPREME

Particular description of goods.—Cheese.
Claims use since on or about Jan. 1, 1914.

Ser. No. 100,846. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE CHRISTIAN MOERLEIN BREWING CO., Cincinnati, Ohio. Filed Jan. 23, 1917.

Chrismo

Particular description of goods.—A Non-Alcoholic Beverage Sold as a Soft Drink.
Claims use since about Sept. 25, 1916.

Ser. No. 100,848. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) CRAMPTON-FARLEY BRASS CO., Kansas City, Mo. Filed Jan. 23, 1917.

SANSEALO

Particular description of goods.—Floor-Drains.
Claims use since about December, 1904.

Ser. No. 100,926. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) KEYSTONE RUBBER MANUFACTURING COMPANY, Erie, Pa. Filed Jan. 25, 1917.



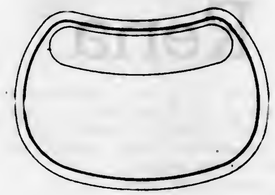
Particular description of goods.—Inner Tubes, Liners, and Patches for the Same.
Claims use since Oct. 15, 1915.

Ser. No. 100,961. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE R. LINN, Chicago, Ill. Filed Jan. 26, 1917. Under ten-year proviso.

HOLLAND

Particular description of goods.—Butter.
Claims use since Feb. 20, 1895.

Ser. No. 100,964. (CLASS 45. BEVERAGES, NON-ALCOHOLIC. MACDONELL-CHOW CORP., New York, N. Y. Filed Jan. 26, 1917.



Particular description of goods.—Mineral Waters.
Claims use since Jan. 22, 1917.

Ser. No. 100,984. (CLASS 39. CLOTHING.) BIRKENFELD, STRAUSS & CO., New York, N. Y. Filed Jan. 27, 1917.

"Elise"

Particular description of goods.—Nightgowns, Night-Robes, Night-Dresses, Chemise, Envelop-Chemise, Teddy-Bear Chemise, Corset-Covers, Camisoles, Bodices; Drawers, Open and Closed or of Any Description; Bloomers, Knickers, Underskirts, Petticoats, Brassières; Pajamas, One or Two Pieces; Made Wholly or Partially of Cotton, Wool, Linen, Silk, or other Material.
Claims use since Mar. 18, 1907.

Ser. No. 101,008. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHERWIN L. HASELTINE, Springfield, Mo. Filed Jan. 29, 1917.



Particular description of goods.—Tablets for Treatment of La Grippe and Colds.
Claims use since Nov. 1, 1915.

Ser. No. 101,019. (CLASS 39. CLOTHING.) J. M. ROBINSON, NORTON & CO., Louisville, Ky. Filed Jan. 29, 1917.



Particular description of goods.—Nightgowns, Skirts, Corset-Covers, Drawers, Chemise, Combination-Suits, Aprons, House-Dresses, Middy-Coats, and Middy-Waists.
Claims use since Apr. 1, 1891.

Ser. No. 101,029. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WOOLSON SPICE COMPANY, Toledo, Ohio. Filed Jan. 29, 1917.

CLASS

Particular description of goods.—Coffee.
Claims use since Dec. 1, 1912.

Ser. No. 101,037. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. A. GAMBRILL MFG. CO., Baltimore, Md. Filed Jan. 30, 1917.

BELLE of BALTIMORE

Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since Aug. 17, 1916.

Ser. No. 101,048. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. SLAUSON CO., Stamford, Conn. Filed Jan. 30, 1917.

RIPPOWAM

Particular description of goods.—Canned Fruits and Vegetables.
Claims use since October, 1916.

Ser. No. 101,055. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CAPITAL CITY DAIRY CO., Columbus, Ohio. Filed Jan. 31, 1917.

Cupid

Particular description of goods.—Oleomargarin.
Claims use since about Jan. 23, 1917.

Ser. No. 101,067. (CLASS 39. CLOTHING.) FREDERICK WILLIAM HAWCK, Omaha, Nebr. Filed Jan. 31, 1917.

UKIMONE

Particular description of goods.—Overcoats.
Claims use since Aug. 10, 1916.

Ser. No. 101,104. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JOS. SCHLITZ BREWING CO., Milwaukee, Wis. Filed Feb. 1, 1917.

Famo

Particular description of goods.—A Non-Alcoholic Beverage Sold as a Soft Drink.
Claims use since Dec. 22, 1916.

Ser. No. 101,110. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WASHBURN CROSBY COMPANY, Minneapolis, Minn. Filed Feb. 1, 1917.

WARRIOR

Particular description of goods.—Wheat-Flour.
Claims use since about Dec. 15, 1916.

Ser. No. 101,111. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WASHBURN CROSBY COMPANY, Minneapolis, Minn. Filed Feb. 1, 1917.

REGULAR

Particular description of goods.—Wheat-Flour.
Claims use since about Dec. 12, 1916.

Ser. No. 101,122. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRED L. DAVIS, Gloucester, Mass. Filed Feb. 2, 1917.

TOM-BOY

Particular description of goods.—Salted, Smoked, and Pickled Fish, Fresh Fish, and Canned Fish.
Claims use since Jan. 1, 1905.

Ser. No. 101,126. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JULIETTE MILLING CO., Macon, Ga. Filed Feb. 2, 1917.



Particular description of goods.—Cornmeal.
Claims use since Feb. 20, 1895.

Ser. No. 101,145. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RENATA GEIS, Ross township, Allegheny county, Pa. Filed Feb. 3, 1917.

Rena

Particular description of goods.—Salve for Cuts, Open Sores and Swellings, Pains, Sore Throat, Bruises; Cough Medicine for Coughs, Colds, Hoarseness, and Bronchitis; Liniment for Rheumatism, Pains, Sprains, Bruises, and Swellings, and Diarrhea Remedy.
Claims use since Jan. 31, 1917.

Ser. No. 101,159. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COSTIS TAKIS, New York, N. Y. Filed Feb. 3, 1917.

THE GOODY SHOP

Particular description of goods.—Candies.
Claims use since June 8, 1911.

Ser. No. 101,185. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) HENRY C. TULLEY, St. Louis, Mo. Filed Feb. 5, 1917.

DAY-O-LITE

Particular description of goods.—Unitary Electric-Lighting Fixtures.
Claims use since about Feb. 1, 1916.

Ser. No. 101,218. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SPRAGUE, WARNER & COMPANY, Chicago, Ill. Filed Feb. 7, 1917.



Particular description of goods.—Tea.
Claims use since Oct. 12, 1916.

Ser. No. 101,242. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) RALPH E. RICH, Chicago, Ill. Filed Feb. 8, 1917.

AMALGALLOY

The arbitrary coined word "Amalgalloy."
Particular description of goods.—An Alloy for Bearings, in Ingots, Castings, or Forgings.
Claims use since Oct. 15, 1916.

Ser. No. 101,249. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) S. F. ZALOOM & CO., New York, N. Y. Filed Feb. 8, 1917.

ORIENTAL STAR

Particular description of goods.—Oyzo, Koniak, Matika, and Arak.
Claims use since 1908.

Ser. No. 101,256. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ANDREW HALL BERRY, New York, N. Y. Filed Feb. 9, 1917.

FIRE POT

Particular description of goods.—Batteries.
Claims use since Oct. 1, 1916.

Ser. No. 101,312. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) WESTERN DRY BATTERY CO., Seattle, Wash. Filed Feb. 12, 1917.

BEAR

Particular description of goods.—Dry Batteries.
Claims use since Nov. 2, 1916.

Ser. No. 101,352. (CLASS 47. WINES.) LUIGI BOSCA & FIGLI, Canelli, Italy. Filed Feb. 14, 1917. Under ten-year proviso.

BOSCA

Particular description of goods.—Sparkling Wines.
Claims use since about 1890.

TRADE-MARK REGISTRATIONS GRANTED

MARCH 13, 1917.

115,833. REGULATING AND REDUCING VALVES AND OTHER METALLIC VALVES FOR GENERAL PURPOSES. THE BASTIAN-BLESSING COMPANY, Chicago, Ill.
Filed November 3, 1916. Serial No. 99,057. PUBLISHED JANUARY 9, 1917.

115,834. GAGES. BOSTON AUTO GAGE COMPANY, Boston, Mass.
Filed December 9, 1916. Serial No. 99,806. PUBLISHED JANUARY 9, 1917.

115,835. BOOTS AND SHOES HAVING FABRIC UPPERS AND RUBBER SOLES ATTACHED THERETO BY VULCANIZATION. BOSTON RUBBER SHOE COMPANY, Boston and Malden, Mass.
Filed December 2, 1916. Serial No. 99,674. PUBLISHED JANUARY 9, 1917.

115,836. ATTACHMENT-PLUG RECEPTACLES. THE BRYANT ELECTRIC COMPANY, Bridgeport, Conn.
Filed December 7, 1916. Serial No. 99,755. PUBLISHED JANUARY 9, 1917.

115,837. CHEMICALS, DYESTUFFS, AND OILS USED IN DYEING, BLEACHING, AND FINISHING. JOHN CAMPBELL & Co. INC., New York, N. Y.
Filed November 21, 1916. Serial No. 99,433. PUBLISHED JANUARY 9, 1917.

115,838. CHEMICALS, DYESTUFFS, AND OILS USED IN DYEING, BLEACHING, AND FINISHING. JOHN CAMPBELL & Co. INC., New York, N. Y.
Filed November 21, 1916. Serial No. 99,434. PUBLISHED JANUARY 9, 1917.

115,839. CHEMICALS, DYESTUFFS, AND OILS USED IN DYEING, BLEACHING, AND FINISHING. JOHN CAMPBELL & Co. INC., New York, N. Y.
Filed November 21, 1916. Serial No. 99,435. PUBLISHED JANUARY 9, 1917.

115,840. CHEMICALS, DYESTUFFS, AND OILS USED IN DYEING, BLEACHING, AND FINISHING. JOHN CAMPBELL & Co. INC., New York, N. Y.
Filed November 21, 1916. Serial No. 99,436. PUBLISHED JANUARY 9, 1917.

115,841. CHEMICALS, DYESTUFFS, AND OILS USED IN DYEING, BLEACHING, AND FINISHING. JOHN CAMPBELL & Co. INC., New York, N. Y.
Filed November 21, 1916. Serial No. 99,437. PUBLISHED JANUARY 9, 1917.

115,842. CHEMICALS, DYESTUFFS, AND OILS USED IN DYEING, BLEACHING, AND FINISHING. JOHN CAMPBELL & Co. INC., New York, N. Y.
Filed November 21, 1916. Serial No. 99,439. PUBLISHED JANUARY 9, 1917.

115,843. CHEMICALS, DYESTUFFS, AND OILS USED IN DYEING, BLEACHING, AND FINISHING. JOHN CAMPBELL & Co. INC., New York, N. Y.
Filed November 21, 1916. Serial No. 99,440. PUBLISHED JANUARY 9, 1917.

115,844. ENGINE-LATHES, STUD-LATHES, SINGLE-PURPOSE LATHES, DRILLS, PLANERS, AND GRINDERS. THE CINCINNATI IRON & STEEL COMPANY, Cincinnati, Ohio.
Filed November 25, 1916. Serial No. 99,535. PUBLISHED JANUARY 9, 1917.

115,845. CHEMICAL INK-ERASER. NORA COLE, Allentown, Pa.
Filed November 17, 1916. Serial No. 99,337. PUBLISHED JANUARY 9, 1917.

115,846. GLASS. CORNING GLASS WORKS, Corning, N. Y.
Filed July 10, 1915. Serial No. 87,861. PUBLISHED AUGUST 1, 1916.

115,847. SEWER-GAS TRAPS AND PLUMBING CONNECTIONS. DETROIT MARVEL BRASS MANUFACTURING CO., Detroit, Mich.
Filed November 15, 1916. Serial No. 99,309. PUBLISHED JANUARY 9, 1917.

115,848. ANTISEPTIC PREPARATION FOR HEALING WOUNDS, CUTS, AND ABRASIONS AND STOPPING BLEEDING. THE DIONAL SYNDICATE, London, England.
Filed November 29, 1916. Serial No. 99,620. PUBLISHED JANUARY 9, 1917.

115,849. ELECTRIC STORAGE BATTERIES OR ACCUMULATORS, THEIR PARTS AND SUPPLIES. THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia, Pa.
Filed October 3, 1916. Serial No. 98,384. PUBLISHED JANUARY 2, 1917.

115,850. NEWSPAPER ARTICLES, MAGAZINE ARTICLES, A MAGAZINE-SECTION PUBLISHED PERIODICALLY. ELIZABETH M. GILMER, New York, N. Y.
Filed August 4, 1916. Serial No. 97,081. PUBLISHED JANUARY 2, 1917.

115,851. COTTON PIECE GOODS. S. E. GOLDMANN CO., INC., New York, N. Y.
Filed November 4, 1916. Serial No. 99,085. PUBLISHED JANUARY 9, 1917.

115,852. GUM TOOTH-WASH. JOSEPH L. GREENBAUM, New York, N. Y.
Filed August 12, 1916. Serial No. 97,303. PUBLISHED SEPTEMBER 12, 1916.

115,853. NON-ALCOHOLIC CARBONATED BEVERAGE TO BE SOLD AS A SOFT DRINK. F. HOFFMAN & SONS, INC., Newark, N. J.
Filed December 13, 1916. Serial No. 99,892. PUBLISHED JANUARY 9, 1917.

115,854. BABBITT METAL. HOYT METAL COMPANY, St. Louis, Mo.
Filed December 9, 1916. Serial No. 99,816. PUBLISHED JANUARY 9, 1917.

115,855. MONTHLY PUBLICATION. THE MARCONI PUBLISHING CORPORATION, New York, N. Y.
Filed December 4, 1916. Serial No. 99,714. PUBLISHED JANUARY 9, 1917.

115,856. SILK PIECE GOODS. H. R. MALLINSON & Co., New York, N. Y.
Filed December 1, 1916. Serial No. 99,662. PUBLISHED JANUARY 9, 1917.

115,857. SILK PIECE GOODS. H. R. MALLINSON & Co., New York, N. Y.
Filed December 1, 1916. Serial No. 99,663. PUBLISHED JANUARY 9, 1917.

115,858. IRON AND STEEL CASTINGS. THE NATIONAL MALLEABLE CASTINGS COMPANY, Cleveland, Ohio.
Filed December 7, 1916. Serial No. 99,769. PUBLISHED JANUARY 9, 1917.

115,859. SEWER AND LIKE TRAPS; UNION SLEEVES, STUDS, AND QUARTER-BENDS; TRAY-LEGS, AND TRAY-BRACKETS. HORACE C. NICHOLS, Brookline, Mass.
Filed November 2, 1916. Serial No. 99,043. PUBLISHED JANUARY 9, 1917.

115,860. BABBITT METAL AND ANTIFRICTION METAL. NORTH ATLANTIC METAL CORPORATION, New York, N. Y.
Filed November 14, 1916. Serial No. 99,299. PUBLISHED JANUARY 9, 1917.

115,861. TROLLEY-WIRE CLAMPS. THE OHIO BRASS COMPANY, Mansfield, Ohio.
Filed December 7, 1916. Serial No. 99,770. PUBLISHED JANUARY 9, 1917.

115,862. NON-ALCOHOLIC PREPARATION. PABST BREWING COMPANY, Milwaukee, Wis.
Filed December 9, 1916. Serial No. 99,824. PUBLISHED JANUARY 9, 1917.

115,863. ELECTRIC-LAMP RECEPTACLES. PASS & SEYMOUR, INC., Solvay, N. Y.
Filed November 20, 1916. Serial No. 99,424. PUBLISHED JANUARY 9, 1917.

115,864. SILK PIECE GOODS. PENNSYLVANIA TEXTILE COMPANY, Boston, Mass., and New York, N. Y.
Filed March 8, 1916. Serial No. 93,394. PUBLISHED OCTOBER 24, 1916.

115,865. COTTON PIECE GOODS, PILLOW-CASES, AND SHEETS. POSTEX COTTON MILLS, Post, Tex.
Filed November 11, 1916. Serial No. 99,253. PUBLISHED DECEMBER 12, 1916.

115,866. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. THE SCHOLL MANUFACTURING COMPANY, Chicago, Ill.
Filed November 29, 1915. Serial No. 91,023. PUBLISHED JANUARY 9, 1917.

115,867. STEAM-TRAPS AND REDUCING-VALVES FOR STEAM-HEATING APPARATUS, FEED-WATER CONTROLLERS FOR STEAM-BOILERS. THE C. E. SQUIRES CO., Cleveland, Ohio.
Filed September 19, 1916. Serial No. 98,080. PUBLISHED JANUARY 2, 1917.

115,868. NON-ALCOHOLIC BEVERAGE TO BE SOLD AS A SOFT DRINK. DAVID W. STILES, La Fayette, Ga.
Filed December 13, 1916. Serial No. 99,903. PUBLISHED JANUARY 9, 1917.

115,869. SPECTACLE-LENSES. UNITED STATES LENS COMPANY, Geneva, N. Y.
Filed December 9, 1916. Serial No. 99,827. PUBLISHED JANUARY 9, 1917.

115,870. CRUDE PETROLEUM. WARREN OIL COMPANY, Warren, Pa.
Filed July 29, 1916. Serial No. 96,972. PUBLISHED JANUARY 9, 1917.

115,871. COMPOSITION TO BE APPLIED TO THE HUMAN BODY TO PREVENT MOSQUITOS FROM STINGING. YELLOW PINE MEDICINE CO., Montgomery, Ala.
Filed September 22, 1916. Serial No. 98,177. PUBLISHED JANUARY 9, 1917.

115,872. HOUSE ORGAN PUBLISHED MONTHLY. R. E. TAYLOR CORPORATION, New York, N. Y.
Filed December 2, 1916. Serial No. 99,688. PUBLISHED JANUARY 9, 1917.

TRADE-MARK REGISTRATIONS RENEWED.

14,154. TABLE SAUCE. CROSSE & BLACKWELL, Soho Square, county of Middlesex, England; Crosse & Blackwell, L., successor.
Registered March 8, 1887. Renewed March 8, 1917.

14,265. SILK-WASTE YARNS, VELVETS, VELVET RIBBONS, AND FANCY DRESS GOODS. LISTER & Co., Bradford, England; Lister & Co., Limited, successor.
Registered April 12, 1887. Renewed April 12, 1917.

14,294. CUT SMOKING-TOBACCO. FRANCIS B. CASE, Norwalk, Ohio.
Registered April 19, 1887. Renewed April 19, 1917.

DECISIONS
OF THE
COMMISSIONER OF PATENTS
AND OF
UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

GATHMANN *v.* CLARKE.

Decided December 4, 1916.

1. INTERFERENCE—REDUCTION TO PRACTICE—ABANDONED EXPERIMENT.
Ingots formed in the shape called for by the claims *Held* to amount only to an abandoned experiment where it appeared that they were cast with the big end down instead of small end down (one object of the invention being to avoid "piping") and the molds and ingots were afterward destroyed.

2. SAME—CLAIMS CONSTRUED IN THE LIGHT OF OBJECT TO BE ATTAINED.
Where the invention is an ingot formed with two opposite sides flaring, so it can be cast big end up to avoid "piping," *Held* that the production of ingots of that form but cast big end down does not show even a conception of the invention.

Mr. L. B. Wight for the appellant.
Mr. F. T. Winter for the appellee.

ROBB, *J.*:

Appeal from a decision of the Patent Office in an interference proceeding awarding priority of invention to the appellee Clarke.

The issue, expressed in six counts, will be sufficiently illustrated by a reproduction of the first, second and third:

1. An ingot having some of its sides approximately straight and parallel, and others relatively tapered.
2. An ingot having two of its opposite sides approximately straight and equi-distant from the vertical central axis of the ingot at its upper and lower portions and two intervening sides inclined and converging toward the ingot bottom.
3. A metallic mold in which the mold cavity has some of its sides approximately straight and parallel while others are relatively tapered or inclined from the upper portion of the mold downwardly toward the bottom thereof.

In the casting of steel ingots the more rapid cooling of the outer metal frequently results in a hollow space in the center. This action is known in the art as "piping." The invention, as will be gathered from a reading of the counts, resides in the shape of the ingot-molds and ingots, the object in mind being to prevent, so far as possible, the formation of "pipes" in the ingots and, at the same time, to so shape them as to facilitate their handling and working. The claim originated in the application of Gathmann who, in his specification, says:

It has been found by numerous experiments that when the mold cavity is larger at its upper than its lower end and gradually tapers toward the lower end, where the cross section is smaller, the lower portion of the ingot freezes or solidifies more quickly as less heat units are contained therein than in the larger portion of the mold.

He further states that by making two of the sides substantially parallel, difficulty in stacking and working them under a steam-hammer or hydraulic press is avoided. The Examiner of Interferences, after an exhaustive review of the evidence, reached the conclusion that Clarke, as early as July, 1911, reduced to practice the subject-matter of each of the counts, and in this finding he was affirmed by the two higher tribunals. The evidence upon which this finding is based is so clear and convincing that we accept it without further discussion.

The Examiner further found that there was no satisfactory evidence that Gathmann had even conceived the subject-matter of the counts of the issue prior to his filing date of November 12, 1912. The Examiners-in-Chief and the Assistant Commissioner, however, were of the opinion that in August, 1909, a mold was produced under Gathmann's directions from which a few ingots were cast having the characteristics set forth in counts 1 and 6. This mold, however, was used with the big end down, or exactly opposite to the teachings of the specification, to which reference has been made. The Examiners-in-Chief ruled that the production of those ingots with two substantially parallel flat sides—

was not effected on behalf of Gathmann with any such object in view as is set forth in his specification as the reason for constructing ingots in that form;

that they, as well as the molds by which they were produced, were scrapped and destroyed. The conclusion was reached, therefore, that the production of those ingots amounted to nothing more than an abandoned experiment. In this finding the Assistant Commissioner concurred.

Assuming that the Examiners-in-Chief and the Assistant Commissioner were correct in their finding that the ingots produced by Gathmann in 1909 possessed the characteristics of counts 1 and 6, (count 6 being substantially like count 1,) we agree with those tribunals that what was done at that time amounted to nothing more than an abandoned experiment. But we are disposed to go even farther. In our view, Gathmann did not then have a conception of the invention disclosed in his specification. Obviously, there is nothing patentable in having two sides of an ingot substantially parallel and the other sides tapering, unless some useful object is to be attained. Mere facility in handling, of course, would not constitute such an object, for any mechanic would know that it would be easier to

handle and work an ingot having parallel sides than one whose sides were tapered. The real object, as above pointed out, was to reduce the formation of pipes, and Gathmann himself tells us in his specification that this may be accomplished by having the mold-cavity "larger at its upper than at its lower end;" that the cross-section at the lower end being smaller and, of course, containing less heat units, that end solidifies very quickly. It is not denied that the mold from which the ingots in question were cast was used in exactly the opposite way, that is to say, with the big end down. While counts 1 and 6 do not specifically state that the two sides of the ingot shall taper toward the lower end, Gathmann's specification, to which we turn to learn the advantages of the construction described and how the invention is practised, (*Andrews* v. *Wilson*, 27 App. D. C., 451; *Ruder* v. *Schlicter*, 126 Fed., 487,) states that the mold is used big end up. If the theory underlying this invention is correct, and we here must assume it to be, the main object in view, (namely, the reduction of pipe,) could not be attained by using the mold in the way exactly opposite from that taught by the specification. On the contrary, by inverting the mold the pipe would be increased, and the ingot produced, possessing no novelty other than mere shape, would be unpatentable.

There was some evidence of further activity on the part of Gathmann, but inasmuch as all the tribunals of the Office ruled it to be insufficient, we accept their finding and affirm the decision from which the appeal was taken.

Affirmed.

Court of Appeals of the District of Columbia.

IN RE WILLARD.

Decided January 2, 1917.

1. PATENTABILITY—COMBINATION—ANTICIPATION.

Appellant's combination of a circulating head (for well-drilling apparatus) with a sectional well-casing, to which it is united by a separate screw collar or union, *Held* patentable over a like circulating head used on a drill tube or stock, to which it is united by a screw-collar integral with the head.

2. SAME—AFFIDAVITS.

Affidavits tending to show that the invention supplied a real need, which other inventions had failed to satisfy, considered and given weight on the question of patentability.

Mr. H. S. Hill for the appellant.

Mr. William R. Ballard for the Commissioner of Patents.

SIDDONS, *J.*:

This is an appeal from a decision of the Assistant Commissioner of Patents, affirming a decision of the Examiners-in-Chief, affirming a decision of the Primary Examiner, rejecting the appellant's claims for Letters Patent.

The claims which have been rejected are as follows:

1. The combination, with a sectional well casing, of a circulating head and closure for the upper end of the casing, comprising two separable members, and securing means for detachably uniting the members; one of said members comprising an annulus, the other of said members comprising a cap or plate through which the drilling string is vertically reciprocated, and said securing means comprising swinging bolts pivotally connected with one of said members and adapted for connection with the other of said members; and a collar or joint detachably applied to the annulus and applied to the upper end of the casing exteriorly of both and constituting a securing means.

2. The combination, with a sectional well casing, of a circulating head and closure for the upper end of the casing, comprising two separable members, and securing means for detachably uniting the members; one of said members comprising an annulus adapted for connection with the casing, the other of said members comprising a cap or plate, through which the drilling string is vertically reciprocated, and said securing means comprising swinging bolts pivotally connected with said annulus and adapted to enter recesses in the periphery of said cap or plate, nuts being provided to hold said bolts within said recesses; and a collar or joint detachably applied to the annulus and applied to the upper end of the casing exteriorly of both and constituting a securing means.

3. The combination, with a sectional well casing, of a closure for the casing, comprising an annulus adapted to be connected with the casing by a casing joint, and of the same internal diameter as the casing, a cap or plate adapted to be fitted to and seated upon the annulus and through which the drilling string is reciprocated, and securing means detachably uniting the annulus and the cap or plate.

4. The combination, with a sectional well casing, of a circulating head and closure for the upper end of the casing, comprising an annulus adapted to be connected with the casing by a casing joint or collar and of the same internal diameter as the casing, said annulus being perforated to accommodate pump connections, a cap or plate adapted to be fitted to and seated upon the annulus, and through which the drilling string is vertically reciprocated, securing means detachably uniting the annulus and the cap or plate, and said casing joint or collar exteriorly and detachably applied to said casing and said annulus.

5. A detachable closure for a sectional well casing, having a tubular portion the internal diameter of which is the same as that of the casing; and detachable means applied exteriorly to the closure and the casing for detachably uniting the same, said tubular portion being provided with an opening accommodating pump connections.

6. The combination, with a sectional well casing which is lowered section by section within the well as produced and is provided at its upper end with a casing joint or collar threaded upon the uppermost section; of an annulus adapted to be connected with the upper section of the casing by said casing joint or collar whereby the casing joint or collar separably overlaps the meeting ends of said upper section and said annulus and is threaded to both, said annulus being of the same internal diameter as the casing and being perforated to accommodate pump connections, a cap adapted to be fitted to and seated upon the annulus, and through which the drilling string is vertically reciprocated, and securing means detachably uniting the annulus and the cap.

The affirming decision of the Examiners-in-Chief is a majority decision, one of the three dissenting in the following language:

Appellant is clearly right and I agree with him.

The claimed invention is described as a "combination" in five of the six claims that have been rejected, and perhaps in the fifth claim as well, though it is not there in words so described.

The claims were rejected because, in the language of the Assistant Commissioner, the applicant is not seen to have done anything more than substitute for the admittedly old head attached to the upper of a series of casings the cap shown in the Bullock patent, to which references were made by both the Primary Examiner and Examiners-in-Chief, as well as a reference to Letters Patent granted to one Johnston, and he proceeds to say that the slight modification necessary to use the old coupling-sleeve is well within the ordinary skill of the mechanic.

It is undoubtedly true that in the combination are to be found features covered by the Bullock and Johnston patents, but a careful consideration of the claims leads to the conclusion that while the applicant undoubtedly made use of certain features of the Bullock and Johnston inventions, yet what he has accomplished is a *new combination*, this taking

the form of a sectional well-casing string, circulating head or top, and standard joint or collar, which latter is always provided upon the casing-sections as supplied for use. The circulating head is directly combined with the casing and its collar, and without any intermediate operation such as was necessary in the use of the Bullock invention.

The Bullock invention as stated in his specifications was an invention relating to improvements in the art of rock-core drilling and more especially to the method of withdrawing the core from a hole drilled or being drilled; and it consists, broadly and essentially, in withdrawing the core upwardly through the hollow drill-tube, while the drill-tube itself is allowed to remain in the hole either at work or at rest.

The claim of the appellant is that his invention relates to improvements in oil-well apparatus and particularly to apparatus utilized in drilling oil-wells. Referring in his specification to the process theretofore used for this purpose, he states, among other things, that—

customarily, the entire means for capping or closing the top of the casing must be removed in substituting either of the types of caps above specified, one for the other; and, furthermore, the entire cap with its attaching means, must be removed from the upper end of the casing to permit introduction or withdrawal of the drilling rig;

that his claimed invention—

provides a closure or cap for the upper end of the casing which comprises separable members one of which may remain permanently attached to the upper end of the casing, and the other of which may be removed at will, to permit the substitution of parts above referred to, or to permit the introduction or withdrawal of the drilling rig; there being provided means for detachably connecting the two members. The permanently attached member, or relatively permanently attached member is formed for connection of pumping means, or liquid supply means, which are utilized to flush the well, in the drilling operation, for the purposes well understood in the art.

He further states that—

the invention consists in the novel provision, construction, combination, association and relative arrangement of parts, members, and features,

and these are definitely described in the claims which have been rejected.

While there are certain resemblances between the invention claimed by the appellant and that of the Bullock invention, it is, we think, clear that, bearing in mind the stated purposes of the invention claimed by the appellant, the Bullock invention could not have accomplished these purposes, and we do not think that the combination which is the subject of the appellant's claims is of a character which required mere mechanical skill to accomplish.

While the commercial success of a device does not constitute satisfactory evidence of patentability, the courts, including this court, have considered it in doubtful cases. The evidence on this point in the record is in the form of affidavits, and that of Charles E. Wilcox, after showing his long familiarity with the business of producing and developing oil-wells and of supplying and inventing tools and apparatus for use in connection with such production and development, proceeds to state that prior to the offer to the market and field of the Willard device—

there had never been, to affiant's knowledge and belief, any apparatus of the same kind identical with or bearing any near resemblance in construction or function to the said apparatus or circulating head embodying the said invention, and that when said Willard circulating head or oil well apparatus was offered to the market and in the field it immediately supplanted almost entirely all other devices theretofore devised and supplied in a vain attempt to do and perform what said Willard circulating head fully and completely and satisfactorily did and now does do and perform;

and he states, according to his best knowledge and belief, that others are now imitating the Willard device and placing such imitations upon the market.

This statement is something more than a mere statement of commercial success. It amounts to a statement that the invention does supply a real need which no other invention having the same purpose has accomplished, and it is at least worthy of remark that the Bullock invention, which the Patent Office tribunals insist is substantially the same device as that of the appellant, never seems to have been applied to the uses for which the appellant's device is intended, and which appears to have very successfully accomplished its purpose.

Counsel on behalf of the Commissioner of Patents in his brief urges that the appellant has admitted that the combination itself is old. We do not think that the language in the appellant's original specification goes as far as this. What he has set forth in his specification from which the counsel quotes, is merely a statement of broad, general principles that were known and utilized in the drilling of oil-wells, and it is not, as it seems to us, an admission by the appellant that his precise combination was old and well known when he devised the one that was the subject of his application.

The fact that a new combination involves the use of some elements, the subject-matter of previous inventions by others, does not in and of itself destroy the patentability of the combination, provided that the combination is—

productive of a different result in the combined elements from that given by their separate parts. In other words, that the union of separate elements must produce something new. (*In re Eastwood*, 33 App. D. C., 291, 299.)

There is other language of this court in the Eastwood case that is very applicable to the circumstances of this case.

We do not say that the question presented by this appeal is free from doubt, and it is notable that the claim of the appellant led to precisely an opposite conclusion by one of the Examiners-in-Chief from that reached by the others. He, in brief but emphatic language, declared that—

appellant is clearly right and I agree with him.

There being a doubt, we think that, following the doctrine more than once affirmed by this court, such doubt should be resolved in favor of the appellant. (*In re Eastwood, supra.*) This case but followed a ruling in an earlier case; and, in a later case, this court, speaking through Mr. Justice Van Orsdel, used language that is peculiarly applicable to the present case and to the contentions advanced on behalf of the Commissioner. Said the court:

It is easy to dispose of a case, where the issue of invention is close, by holding that the advance over the prior art constitutes a mere mechanical change apparent to those skilled in the art. But, in the absence of proof to support this conclusion, and where the question of patentability is close, the doubt should be resolved in favor of the applicant. (*In re Harbeck*, 39 App. D. C., 555, 561.)

For the foregoing reasons, we are of opinion that the decision of the Assistant Commissioner of Patents should be reversed, and it is so ordered.

Reversed.

ADJUDICATED PATENTS.

(U. S. D. C.) The Amsden patent, No. 960,617, for a cable-carrier apparatus, *Held* valid, but not infringed. *Lamson Co.* v. *Standard Store Service*, 238 Fed. Rep., 201.

(U. S. D. C.) The Amsden patent, No. 1,071,018, for a locking device for carriers, *Held* valid and infringed. *Lamson Co.* v. *Standard Store Service*, 238 Fed. Rep., 201.

(U. S. C. C. A.) The Bonnell reissue patent, No. 13,432, (original No. 921,584,) for an outlet-box for electric conduits, claims 10 and 16 *Held* void as containing new matter and claim 6 *Held* not infringed. *Bonnell* v. *Ward*, 238 Fed. Rep., 171.

(U. S. C. C. A.) The Cheatham patent, No. 612,702, for an electric railway-switch, *Held* not infringed. *Cheatham Electric Switching Device Co.* v. *Brooklyn Rapid Transit Co.*, 238 Fed. Rep., 172.

(U. S. D. C.) The Copes patent, No. 662,687, for a boiler feed-regulator, claim 6 *Held* valid, but not infringed. *Erie Pump & Equipment Co.* v. *Wisconsin Steel Co.*, 238 Fed. Rep., 216.

(U. S. D. C.) The Gaulin patent, No. 756,953, for an apparatus for homogenizing milk, *Held* not anticipated, valid, and infringed. *Manton-Gaulin Mfg. Co.* v. *Dairy Machinery & Construction Co.*, 238 Fed. Rep., 210.

(U. S. C. C. A.) The Jewell patent, No. 649,410, for a system for controlling the operation of filters, claim 1 *Held* void for lack of invention. *City of Minneapolis* v. *Jewell*, 238 Fed. Rep., 197.

(U. S. C. C. A.) The Jewell patent, No. 649,411, for a filter, claim 14 *Held* void for lack of novelty and invention. *City of Minneapolis* v. *Jewell*, 238 Fed. Rep., 197.

(U. S. C. C. A.) The Lawson patent, No. 1,095,406, for a bottle-capping machine, *Held* infringed by a modified structure built by defendants. *Columbia Machine & Stopper Corp* v. *Adriance Mach. Works*, 238 Fed. Rep., 181.

(U. S. C. C. A.) The Ohmer patent, No. 646,759, for a fare-recorder, *Held* valid and infringed. *Ohmer Fare Register Co.* v. *Ohmer*, 238 Fed. Rep., 182.

(U. S. C. C. A.) The Ohmer patent, No. 693,322, for an improvement in fare-registers, *Held* not infringed. *Ohmer Fare Register Co.* v. *Ohmer*, 238 Fed. Rep., 182.

(U. S. C. C. A.) The Ohmer and Tyler reissue patent, No. 11,911, (original No. 635,343,) for mechanism for operating fare-registers, claims 12 and 13 construed broadly, are void for lack of invention in view of the prior art. *Ohmer Fare Register Co.* v. *Ohmer*, 238 Fed. Rep., 182.

(U. S. C. C. A.) The Pitt patent, No. 778,070, for a loose-leaf binder, *Held* not infringed. *Irving-Pitt Mfg. Co.* v. *Blackwell-Wielandy Book & Stationery Co.*, 238 Fed. Rep., 177.

(U. S. C. C. A.) The Thorn patents, Nos. 853,717, 844,973, and 844,974, for building-columns, *Held* invalid for lack of invention. *United States Column Co.* v. *Benham Column Co.*, 238 Fed. Rep., 200.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.
Washington, D. C., February 27, 1917.

Richard L. Hickson, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The American Agricultural Chemical Company, of No. 2 Rector street, New York, N. Y., for registration of a trade-mark and trade-mark registered June 9, 1885, No. 12,304, to Richard L. Hickson, Danville, Va., and a notice of such declaration sent by registered mail to said Richard L. Hickson at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Richard L. Hickson, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.
Washington, D. C., February 27, 1917.

The Cereals Mfg. Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Annan-Burg Grain & Milling Company, of Chamber of Commerce Building, St. Louis, Mo., for registration of a trade-mark and trade-mark registered July 4, 1882, No. 9,506, to The Cereals Mfg. Co., of New York, N. Y., and a notice of such declaration sent by registered mail to said The Cereals Mfg. Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless The Cereals Mfg. Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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ISSUE OF MARCH 20, 1917.

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Prints	15—No.	4,643 to No.	4,657, inclusive.
Reissues	4—No.	14,273 to No.	14,276, inclusive.
Total	875		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	6	.....	North Carolina	3	.....
Arizona	5	.....	North Dakota	3	.....
Arkansas	2	.....	Ohio	47	5
California	28	8	Oklahoma	5	1
Colorado	5	.....	Oregon	5	2
Connecticut	26	1	Pennsylvania	80	2
Delaware	1	.....	Rhode Island	5	1
Florida	5	.....	South Carolina	1	.....
Georgia	2	.....	South Dakota	4	.....
Idaho	1	.....	Tennessee	3	.....
Illinois	76	16	Texas	13	1
Indiana	21	.....	Utah	3	.....
Iowa	10	1	Vermont	6	.....
Kansas	8	.....	Virginia	7	2
Kentucky	6	1	Washington	11	1
Louisiana	1	.....	West Virginia	5	.....
Maine	3	1	Wisconsin	18	2
Maryland	12	1	Wyoming	4	.....
Massachusetts	32	6			
Michigan	32	4	Alaska Territory	2	.....
Minnesota	12	8	Canal Zone	.....	.....
Mississippi	1	1	District of Columbia	14	.....
Missouri	19	3	Hawaii Territory	.....	.....
Montana	2	.....	Philippine Islands	.....	.....
Nebraska	5	.....	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	1	.....
New Hampshire	1	.....	U. S. Navy	.....	.....
New Jersey	34	9			
New Mexico	.....	.....	Total to residents of the United States.	720	87
New York	128	15			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	1	1	Netherlands	1	.....
Bermuda	1	.....	New South Wales	1	.....
British India	.....	.....	New Zealand	1	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	7	.....	Peru	1	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	1	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	.....	.....
Denmark	.....	.....	South Australia	1	.....
England	12	2	Spain	1	.....
Finland	.....	.....	Sweden	1	.....
France	9	.....	Switzerland	.....	.....
Germany	16	1	Turkey	.....	.....
Guatemala	.....	.....	Victoria	.....	.....
India	.....	.....	Western Australia	.....	.....
Ireland	1	.....			
Italy	1	.....	Total to residents of foreign countries	57	4
Japan	1	.....			
Mexico	.....	.....			

Changes in Classification.

(ORDER No. 2,307.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 8, 1917.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 74, Machine Elements, (Division XII,) establish subclass—

105. **Automatic guards.**

The patents contained in this subclass have been taken from classes 101, Printing, and 164, Cutting and Punching Sheets and Bars, subclass 107, Punching, Machines, Shaft-driven, Safety devices, hereinafter abolished.

In class 164, Cutting and Punching Sheets and Bars, (Division XIV,) abolish the following subclass, with its definition:

Punching—
Machines—
Shaft-driven—
107. Safety devices.

The patents formerly contained in this subclass have been placed in class 74, Machine Elements, subclass 105, Automatic guards, hereinbefore established, and subclass 46, Machine-brakes, Stop mechanisms.

THOMAS EWING,
Commissioner.

Foreign Patents.

RULE 29. The receipt of Letters Patent from a foreign government will not prevent the inventor from obtaining a patent in the United States, unless *the application on which the foreign patent was granted was filed more than twelve months prior to the filing of the application in this country, in which case no patent shall be granted in this country.*

APPLICATIONS UNDER EXAMINATION.

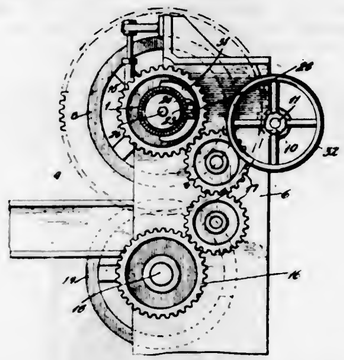
Condition at Close of Business March 16, 1917.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 19	Jan. 18	297
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Oct. 9	Jan. 10	526
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Feb. 19	Jan. 15	164
234	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Dec. 9	Feb. 16	284
167	5. Bookbinding; Harvesters; Jewelry; Music.	Nov. 27	Jan. 27	266
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Nov. 11	Jan. 9	322
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Nov. 11	Nov. 24	691
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Aug. 28	Jan. 12	1062
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Sept. 5	Feb. 4	572
235	10. Carriages and Wagons; Spring Devices	Sept. 27	Feb. 9	937
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Feb. 16	Mar. 7	87
324	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Dec. 9	Feb. 20	576
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Nov. 21	Feb. 17	541
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Nov. 1	Jan. 4	302
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Feb. 17	Feb. 26	237
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Nov. 1	Jan. 10	620
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Dec. 15	Feb. 19	215
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Feb. 6	Feb. 3	251
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Aug. 28	Dec. 2	499
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 27	Feb. 28	198
182	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Nov. 13	Jan. 22	267
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 5	Jan. 2	524
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Sept. 15	July 25	370
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Nov. 22	Feb. 8	341
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Jan. 23	Feb. 14	151
105	26. Electricity, Generation; Motive Power	Aug. 1	Jan. 5	607
375	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Jan. 10	Feb. 17	247
63	28. Internal-Combustion Engines	Sept. 23	Nov. 22	521
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Oct. 27	Jan. 2	371
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Nov. 23	Feb. 26	413
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Nov. 3	Dec. 28	274
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Aug. 15	Feb. 7	931
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Oct. 24	Feb. 10	395
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Aug. 25	Jan. 2	341
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Sept. 20	Mar. 1	686
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Nov. 24	Mar. 1	650
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	Aug. 9	Jan. 17	528
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Feb. 23	Feb. 13	174
321	39. Water Distribution	Oct. 26	Jan. 16	322
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Nov. 27	Feb. 12	557
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Nov. 20	Jan. 18	388
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	Aug. 25	Feb. 2	392
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Jan. 5	Jan. 31	161
	Oldest new case, Aug. 1; oldest amended, July 25.			
	Total number of applications awaiting action			18,548
163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 19	Feb. 26	1019
	Designs	Jan. 25	Feb. 3	352
	Labels and Prints	Feb. 20	Feb. 23	100

PATENTS

GRANTED MARCH 20, 1917.

1,219,418. INDICATOR FOR STAMPING-MACHINES. JAMES GLENN ALLEN, Hazel Hurst, Pa. Filed June 28, 1915. Serial No. 36,822. (Cl. 116—49.)



1. In a device of the class described, the combination of a dial having graduations formed thereon, said dial being provided with a shallow socket formed in its rear portions and with an opening extending through the central portions thereof, whereby the end of a shaft may fit within said socket for holding said dial against lateral displacement, said opening being adapted to receive securing means whereby said dial will be held upon a shaft, and an indicator arm overhanging the graduations of said dial, said indicator arm being adapted to be carried by a gear, whereby said dial may be moved until a desired graduation moves into alinement with said indicator arm, whereby the shaft will be adjusted with respect to a gear.

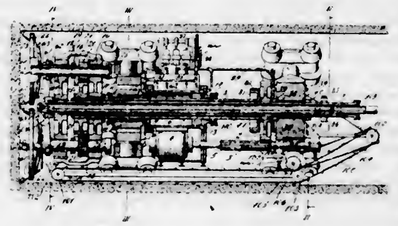
2. In a device of the class described, the combination of a shaft, a gear loosely mounted upon said shaft, a dial fixedly mounted upon the end of said shaft, a grip hub formed upon said gear, said grip hub being split longitudinally, an indicator arm carried by said grip hub and overhanging the graduations of said dial, said dial being adapted to be moved so as to allow a desired graduation to come into alinement with said indicator arm, whereby said shaft may be adjusted with respect to said gear, and means for clamping said grip hub upon said shaft for allowing said shaft and gear to rotate as a unit.

3. In a device of the class described, the combination of a shaft, a loose gear mounted upon said shaft, a grip hub formed upon said gear, said hub being split longitudinally, said shaft being adapted to be adjusted with respect to said gear, means carried by said shaft and said gear for determining the degree of adjustment of said shaft and gear, and means for binding said grip hub upon said shaft, whereby said shaft and gear may rotate as a unit.

4. In a device of the class described, the combination of a shaft, a gear loosely mounted upon said shaft, a grip hub formed upon said gear, said grip hub being formed with integral ears having threaded alined openings, a screw carried by said openings, said shaft being adapted to be adjusted with respect to said gear, and means carried by said shaft and gear for indicating the degree to which the shaft and gear are adjusted, said screw being adapted to be rotated for drawing said ears toward each other, whereby said hub will grip said shaft for causing said gear to rotate with said shaft.

5. In a device of the class described, the combination of a shaft, a gear loosely mounted upon said shaft, a grip hub formed upon said gear, said grip hub being provided with integral ears having threaded alined openings, a screw carried by said openings, a dial carried by said shaft, said dial being provided with graduations on its forward face, an indicator arm comprising a straight body having a coiled eye at one end and a depending end at the opposite end thereof, said eye fitting about said screw and between said ears, said depending end overhanging the forward face of said dial, said shaft being adapted to be turned for rotating said dial whereby a desired graduation will come into alinement with said depending end, thereby allowing the degree of adjustment of said shaft and gear to be determined, said screw then being adapted to draw said ears toward each other so as to cause said grip hub to bind upon said shaft for rotating therewith.

1,219,419. TUNNELING OR EXCAVATING MACHINE. OLIVER O. APP, New York, N. Y. Filed Sept. 10, 1910. Serial No. 581,380. (Cl. 125—14.)



1. In a tunneling and excavating machine, a rotatable support, a rotatable tunneling head, and means for rotating one of said parts at a variable speed with reference to the other of said parts.

2. In a tunneling and excavating machine, a rotatable support, a rotatable tunneling head, and automatic means for rotating one of said parts at a variable speed with reference to the other of said parts.

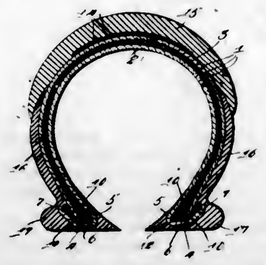
3. In a tunneling and excavating machine, a revoluble support, a revoluble tool-carrying head carried by said support, the respective axes of the support and head being out of alinement, means for rotating said support, and driving means for revolving said head about its pivotal axis, driven by said rotating means.

4. In a tunneling and excavating machine, a revoluble support, a revoluble tunneling head carried thereby, means for driving one of said parts at a fixed speed and means for driving the other of said parts at a variable speed with reference to the other of said parts.

5. In a tunneling and excavating machine, a rotatable support, a rotatable tunneling head, and means for rotating the head at a variable speed with reference to the rotatable support.

[Claims 6 to 21 not printed in the Gazette.]

1,219,420. CORD TIRE. CHARLES L. ARCHER, Minneapolis, Minn. Original application filed June 8, 1916, Serial No. 74,497. Divided and this application filed July 1, 1916. Serial No. 107,068. (Cl. 152—13.)



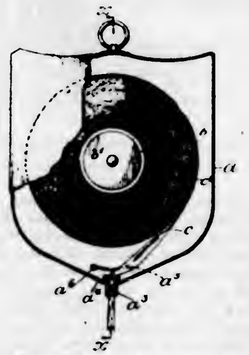
1. In a device of the class described, the combination of a plurality of longitudinally extending cords, outer transversely extending cords positioned upon said longitudinally extending cords, inner transversely extending cords positioned upon said longitudinally extending cords, the ends of the said inner transversely extending cords being bulged inwardly and then looped over a plurality of the longitudinally extending cords and over the ends of said outer transversely extending cords, the inner portions of said inner transversely extending cords being spaced away from the outer surface of said outer transversely extending cords, whereby the spaced ends and the inwardly bulged portions will form longitudinally extending pockets adjacent the longitudinally extending cords and the ends of said outer transversely extending cords, means carried within said pockets for filling the same, thereby forming enlarged rigid heels or beads, and a casing positioned upon said cords and heels or beads.

2. In a device of the class described, the combination of a plurality of longitudinally extending cords, outer transversely extending cords positioned upon said longitudinally extending cords, inner transversely extending cords positioned upon said longitudinally extending cords, the ends of said inner transversely extending cords being bulged inwardly and then looped over a plurality of the longitudinally extending cords and over the ends of said outer transversely extending cords, the inner portions of said inner transversely extending cords being spaced away from the outer surface of said outer transversely extending cords, whereby the spaced ends and the inwardly bulged portions will form longitudinally extending pockets adjacent the longitudinally extending cords and the ends of said outer transversely extending cords, cable strips positioned within said pockets, whereby said pockets will be held in their correct positions thereby forming enlarged heels or beads, and an outer casing positioned upon said cords and said heels or beads.

3. In a device of the class described, the combination of a plurality of longitudinally extending cords, outer transversely extending cords positioned upon said longitudinally extending cords, inner transversely extending cords positioned upon said longitudinally extending cords, the ends of said inner transversely extending cords being bulged inwardly and then looped over a plurality of the longitudinally extending cords and over the ends of said outer transversely extending cords, the inner portions of said inner transversely extending cords being spaced away from the outer surface of said outer transversely extending cords, whereby the spaced ends and the inwardly bulged portions will form longitudinally extending pockets adjacent the longitudinally extending cords and the ends of said outer transversely extending cords, cable strips positioned within said pockets, filler means carried within said pockets and engaging said cable strips for holding the same from shifting, whereby said pockets may be held in their correct position thereby forming enlarged heels or beads; and an outer casing carried upon said cords and heels or beads.

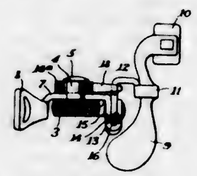
4. In a device of the class described, the combination of a plurality of longitudinally extending cords, outer transversely extending cords positioned upon said longitudinally extending cords, inner transversely extending cords positioned upon said longitudinally extending cords, the ends of said inner transversely extending cords being bulged inwardly and then looped over a plurality of the longitudinally extending cords and over the ends of said outer transversely extending cords, the inner portions of said inner transversely extending cords being spaced away from the outer surface of said outer transversely extending cords, whereby the spaced ends and the inwardly bulged portions will form longitudinally extending pockets adjacent the longitudinally extending cords and the ends of said outer transversely extending cords, cable strips positioned within said longitudinally extending pockets, said cable strips comprising fabric sheets inclosing cables, thereby forming a thickened portion adjacent the ends of said outer transversely extending cords, filler means carried within said pockets and engaging said cable strips for holding the same from shifting, and an outer casing positioned upon said thickened portion.

1,219,421. DEVICE FOR PRODUCING PAPER WRAPPING-CORD. JOHN F. AUER, Philadelphia, Pa., assignor to Auer & Twitchell, Inc., Dover, Del., a Corporation of Delaware. Filed Mar. 16, 1916. Serial No. 84,544. (Cl. 93—84.)



A holder provided with forming nozzle and a support for a paper web mounted thereon, said nozzle formed into coils and having guides arranged adjacent to the mouth thereof for the infolding of the paper ribbon or fillet from said support, whereby the paper entering the nozzle in an infolded condition is transformed into a crimped condition, substantially and for the purposes described.

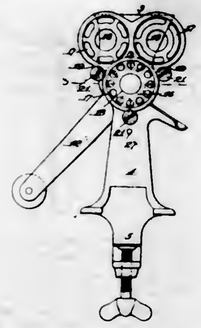
1,219,422. EYEGLASS-MOUNTING. GUSTAV A. BADER, Rochester, N. Y. Filed June 7, 1916. Serial No. 102,241. (Cl. 88—50.)



1. An eyeglass mounting comprising a support, a guard lever pivoted thereon, a guard having an arm formed with an adjustable loop and pivoted to said guard lever to turn about an axis at an angle to the turning axis of the guard lever, and a spring coiled about the axis of turning of the guard lever and having an arm engaging the guard arm above its pivot and in front of the adjustable loop so as to turn the upper portion of the guard inwardly as the guard lever is swung inwardly at its rear end.

2. An eyeglass mounting comprising a support, a guard lever pivoted to the upper side of the support and having a portion depending in rear of the support, a guard having an upper and a lower nose engaging pad and a looped arm proceeding horizontally therefrom and provided with a depending portion pivoted to the depending portion of the guard lever, and a coil spring coaxial with the guard lever and having an arm engaging the depending portion of the guard arm above the pivot of the latter to swing the upper pad of the guard inwardly as the guard lever is swung inwardly at its rear end.

1,219,423. FOOD-CHOPPER. HENRY PRICE BALL, Pittsfield, Mass. Filed May 5, 1914. Serial No. 836,403. (Cl. 17—20.)



1. A cutter for a food chopper, having a plurality of conical cutting surfaces radially disposed around a common center.

2. A cutter for a food chopper, having a number of perforated conical cutting surfaces radially disposed around a common center.

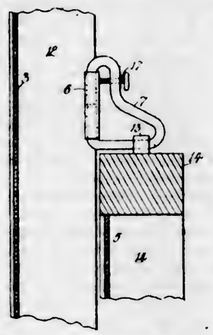
3. A cutter for a food chopper, having a number of circular groups of perforations radially disposed around a common center.

4. A cutter for a food chopper, having a number of circular groups of perforations radially disposed around a common center, each group having a different size perforation.

5. A cutter for a food chopper, made in one piece and of uniform thickness, having a plurality of separate groups of cutting elements.

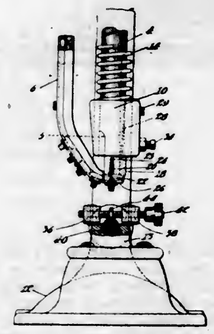
[Claims 6 to 24 not printed in the Gazette.]

1,219,424. WINDOW-SASH LOCK-STOP. HENRY BARNES, Brooklyn, N. Y. Filed May 26, 1916. Serial No. 99,950. (Cl. 16—18.)



A window sash lock comprising a bracket adapted to be attached to the stile of the upper sash and provided with an opening, an arm pivotally mounted in the bracket and adapted to be moved into and out of the path of the lower sash, a locking screw fitted in and carried by the said pivoted arm and adapted to be forced into engagement with the opening of the bracket to lock the arm in the path of the meeting rail of the lower sash to thereby limit the relative opening movement of the sashes.

1,219,425. STUD-SETTING MACHINE. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 6, 1912. Serial No. 707,975. (Cl. 218—17.)



1. A machine of the class described having, in combination, relatively movable stud setting devices, one of which is provided with a pair of coöperating flanges maintained permanently in spaced relation and arranged to engage a stud at opposite sides to support the stud during the entire setting operation while leaving the stud free to be moved transversely in either direction after the setting operation, and having a recess shaped to fit the head of a stud with respect to which recess the flanges are movable to clamp or release a stud.

2. A machine of the class described having, in combination, relatively movable stud setting devices, one of which has a transversely extending opening to permit the free passage of the head of a stud, a recess to receive the head of a stud, and coöperating oppositely disposed projections maintained permanently in spaced relation, arranged to engage the head of the stud and support the stud during the entire setting operation, and being movable away from the recess to free a stud after the setting operation.

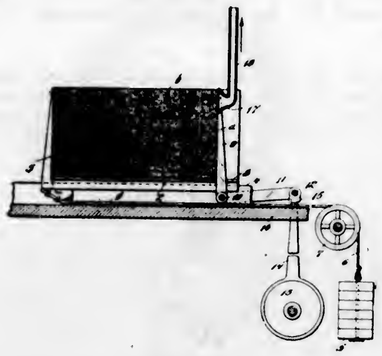
3. A machine of the class described having, in combination, relatively movable stud setting devices, one of which has coöperating flanges with parallel stud-engaging edges maintained at all times a fixed distance apart, a raceway, a stop, and means for bringing the stud-engaging flanges simultaneously into line with and between the raceway and stop.

4. A machine of the class described having, in combination, relatively movable stud setting devices, one of which has a through opening for the stud head, yielding means for decreasing the height of said opening after a stud has been moved into the opening and independently of the movement of the stud to hold the stud yieldingly in place but permitting the stud to be forcibly withdrawn in either direction.

5. A machine of the class described having, in combination, coöperating stud setting devices, one of which includes a pair of parallel flanges maintained at all times, in fixed relation and unobstructed at either end, a raceway for delivering studs to the flanges at one end thereof, and a stop located at the end of the flanges opposite to the raceway, the setting device being movable to carry the flanges out of alinement with the stop and so permit a clenched stud to be withdrawn on that side.

[Claims 6 to 9 not printed in the Gazette.]

1,219,426. MAGAZINE FOR LABELING AND WRAPPING MACHINES. CARL BECKMANN, Brooklyn, N. Y. Filed May 1, 1916. Serial No. 94,645. (Cl. 101—41.)



1. In a magazine, the combination of a box open at one end and in which the labels or wrappers are disposed vertically side by side, vertically reciprocatory pick-up devices for engaging the outermost wrapper or label and removing the same vertically out of the top of the box, means for moving the box progressively toward the pick-up devices, and stop fingers at the open end of the box for pressing the outermost label or wrapper out of the path of the pick-up devices as they descend and movable laterally to permit the foremost label or wrapper to engage with the pick-up devices.

2. In a magazine, the combination of a box open at one end and in which the labels or wrappers are disposed vertically side by side, vertically reciprocatory pick-up devices for engaging the outermost wrapper or label and removing the same vertically out of the top of the box, means for moving the box progressively toward the pick-up devices, stop fingers at the open end of the box for pressing the outermost label or wrapper out of the path of the pick-up devices as they descend and movable laterally to permit the foremost label or wrapper to engage with the pick-up devices, and a clutch device associated with the fingers to interrupt the box-moving means during the time a label or wrapper is being withdrawn by the pick-up devices.

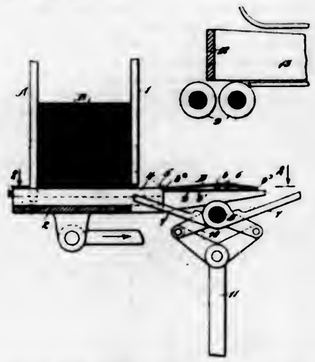
3. A magazine box open at one end and having a longitudinal slot, guide means on which the box moves horizontally, a device tending to move the box in its guiding means, a finger extending upwardly through the slotted bottom to coöperate with the closed end to support labels or wrappers vertically, and pick-up means for picking up the outermost label and conducting it out of the magazine in an upward direction.

4. A magazine of the class described comprising a holder in which a number of labels are progressively fed in one direction, pick-up means toward which the labels are fed and arranged to engage the outermost label, and stop fingers engaging the outermost label to hold the same backwardly out of the path of the pick-up means as the latter moves to pick-up position and adapted to move in the opposite direction when the pick-up device withdraws the outermost label.

5. A magazine of the class described comprising a holder in which a number of labels are progressively fed in one direction, pick-up means toward which the labels are fed and arranged to engage the outermost label, stop fingers engaging the outermost label to hold the same backwardly out of the path of the pick-up means as the latter moves to pick-up position and adapted to move in the opposite direction when the pick-up device withdraws the outermost label, means for feeding the labels progressively toward the pick-up means, and means for interrupting the feeding means when the stop fingers release the outermost label.

[Claims 6 and 7 not printed in the Gazette.]

1,219,427. CARTON-UPSETTING DEVICE. CARL BECKMANN, Brooklyn, N. Y. Filed May 1, 1916. Serial No. 94,646. (Cl. 93—53.)



1. A carton upsetting device comprising means for feeding a flat, folded carton, fingers movable into and out of the ends of the folded carton, and fingers movable toward each other and arranged to engage externally the carton at its front and rear folded edges and apply pressure to open and fold the carton flat on its other folds.

2. A carton upsetting device comprising means for feeding a flat, folded carton, fingers movable into and out of the ends of the folded carton, fingers movable toward each other and arranged to engage externally the carton at its front and rear folded edges and apply pressure to open and fold the carton flat on its other folds and in a plane at right-angles to the plane of the initial feeding movement of the carton, and rotating rolls between which the carton passes from the last-mentioned fingers, whereby the carton will automatically open up in square or rectangular form after passing through the rolls.

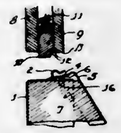
3. A carton upsetting device comprising means for feeding a flat folded carton, means for gripping the carton and progressively opening and folding the same flat on the other diagonal from that on which it is initially folded, and rotating rolls between which the carton passes to cause all the folds to have the same tension, whereby the carton will automatically open in square or rectangular form after passing the rolls, the axes of the rolls lying in a plane parallel to the plane of the initial feeding movement of the carton.

4. An upsetting device comprising means for feeding a flat folded carton in its own plane, fingers movable toward each other and into the opposite ends of the carton, swinging fingers arranged to engage the edges of the flat cartons while the first-mentioned fingers are engaged therewith, whereby the carton is folded flat in a plane at right-angles to its initial plane, and rolls arranged to receive the carton and convey it away from the last-mentioned fingers, the axis on which the swinging fingers swing lying in a plane passing between the rolls and in which the first-mentioned fingers lie.

5. A carton upsetting device comprising sets of swinging fingers which move open and closed, means for feeding a carton to the fingers when in open position and holding the cartons centrally with respect to the fingers, means for moving the fingers toward each other while engaged with the opposite folded edges of the carton to progressively open and fold the carton on the other opposite folds, and rolls arranged adjacent the fingers in such position that the carton will automatically pass to the rolls as the fingers close on the carton.

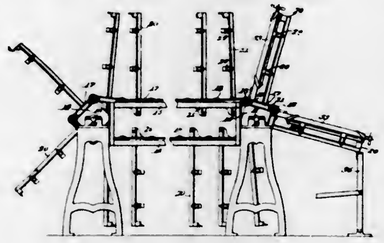
[Claims 6 and 7 not printed in the Gazette.]

1,219,428. APPARATUS FOR CONNECTING THE BODIES AND LIDS OF PRESSED SHEET-METAL RECEPTACLES. GEORGE WILLIAM BERRY, Rose Bay, near Sydney, New South Wales, Australia, assignor to The Wireless Hinge Manufacturing Company Limited, Sydney, New South Wales, Australia. Original application filed Apr. 22, 1916, Serial No. 93,013. Divided and this application filed Aug. 11, 1916. Serial No. 114,372. (Cl. 113—49.)



An apparatus for hingedly connecting a rimmed lid having pintles formed integrally on one rim thereof to a receptacle body having bulbed tongues inclining outwardly comprising a die-block shaped on one side to accommodate the receptacle body in a vertical position and shaped on the opposite side to support the lid at an angle to the receptacle body, a compound punch having a fixed and a movable operative part, said movable part depending below the fixed part and slidable against resilient members, a groove formed by cutting away the longitudinal contiguous corners of the fixed and movable parts, and projections approximating in size to one half of said bulbed tongues formed on the face of the fixed part of said compound punch.

1,219,429. GLUE-CLAMP MACHINE. NELS J. BILLSTROM, Rockford, Ill. Filed Feb. 24, 1916. Serial No. 80,229. (Cl. 144—289.)



1. A glue clamp machine comprising a carrier movable about a given axis and equipped on its periphery with a series of outwardly extending frames adapted to receive and hold in a common plane a number of sections to be clamped together, and clamps pivotally mounted on the carrier and movable on their pivots into and out of clamping relation to the sections on said frames, and means for holding the said pivoted clamps out of the said clamping relation.

2. A glue clamp machine comprising a carrier movable about a given axis and equipped on its periphery with a series of outwardly extending frames, clamps attached to each frame extending parallel with the said axis of the carrier, and clamps pivotally mounted on the carrier extending crosswise of said axis thereof and movable on their pivots into and out of clamping relation to sections on the frames so that said pivoted clamps may clamp said sections in a direction crosswise of the frame clamps.

3. A glue clamp machine comprising a carrier movable about a given axis and equipped on its periphery with a series of outwardly extending frames, each provided at its outer end with an abutment parallel with said axis, a clamp secured to each frame spaced inwardly from its abutment and parallel thereto, and clamps pivotally mounted adjacent to the inner end of the frame on an axis parallel with said given axis and adapted to be swung on their pivots into and out of clamping relation with the sections on said clamp-equipped frame for clamping the sections to said abutment.

4. A glue clamp machine, comprising spaced co-axially mounted chain-like structures the opposite links of which are joined by a pair of cross-bars, an outwardly projected frame rigidly secured to a pair of cross-bars, clamping means mounted on said frame for clamping boards carried by the frame in a direction parallel with the axis about which the carrier turns, and clamps pivotally mounted on one of the cross-bars of said pair for clamping said boards in a direction crosswise to the clamping action of the first mentioned clamping means and being movable on their pivots out of clamping relation to the boards.

5. In a glue clamp machine, the combination of an endless carrier equipped on its periphery with a plurality of outwardly extending rigid frames, a pair of parallel clamps rigidly secured to each frame and adapted to receive and support boards in a common plane and to clamp these boards, and clamps pivotally mounted at one end in connection with each frame and arranged to clamp said boards cross-wise of the clamping action of the first mentioned clamps and to be swung on their pivots into and out of clamping relation to the boards.

[Claim 6 not printed in the Gazette.]

1,219,430. INSTRUMENT FOR USE IN TOPOGRAPHY. ALFRED W. BJORNSTAD, U. S. Army. Filed Apr. 13, 1916. Serial No. 90,938. (Cl. 33—148.)



1. An instrument for use in topography comprising pivoted legs, a spring associated with said legs, and a clinometer carried by said spring, substantially as described.

2. An instrument for use in topography comprising pivoted legs, a circular spring connected to said legs, a clinometer mounted within said spring and including a pair of graduated plates, and a pendulum swinging between said plates, substantially as described.

3. In an instrument for use in topography, the combination of pivoted legs, a circular spring associated with said legs, and a clinometer fitted within said spring and including an arcuate bar, graduated plates secured to said bar, and a pendulum fitted to swing between said plates, substantially as described.

4. In an instrument for use in topography, the combination of pivoted legs, a split circular spring connected to said legs and having a perforation therein, an arcuate bar fitted within said spring, a stem on said arcuate bar passing through the perforation in said spring, means for holding said stem and bar in position, a pair of graduated plates secured to said arcuate bar, a pendulum rod fitted to swing between said plates, and a bob on said pendulum rod for moving beneath the lower edges of said graduated plates, substantially as described.

5. An instrument for use in topography including pivoted legs, a slotted scale pivoted to one of said legs and bearing separate series of graduations representing different units of linear measurements for giving actual distances from a map made to a scale corresponding therewith, and means for engaging through the slot in said scale and connected to the other leg for securing the same in adjusted position, substantially as described.

[Claim 6 not printed in the Gazette.]

1,219,431. PROCESS OF MAKING CHAIN-LINKS. FREDERICK G. BREUL, Bridgeport, Conn., assignor to American Chain Company, Incorporated, Bridgeport, Conn., a Corporation of New York. Filed May 17, 1916. Serial No. 97,989. (Cl. 59—35.)



1. The process of making curb chain links which consists in forming from round wire stock an elongated S-shaped link blank having all its parts in substantially the same plane and having a straight middle loop portion and oppositely bent slightly inclined side portions thereon and oppositely bent end hooks having diagonally severed tips on said side portions, the mid-portions of said end hooks being substantially perpendicular to and in line with the intermediate loop portion of the blank, in bending said end hooks up substantially perpendicular to their plane around the loop portion of the blank to bring the end hooks toward and into substantial contact overlapping each other to form the joint end of the link at substantially right angles to the opposite end loops of the link, in forcing said lapped end hooks into interlocking gripping engagement with each other, in holding said end hooks together and in case hardening the formed link.

2. The process of making curb chain links which consists in forming from wire stock an elongated S-shaped link blank having all its parts in substantially the same plane and having a middle loop portion and oppositely bent slightly inclined side portions thereon and oppositely bent end hooks on said side portions, in bending said end hooks up substantially perpendicular to their plane to bring the end hooks toward and into substantial contact overlapping each other to form the joint end of the link at an angle to the opposite end loop of the link, and in forcing said lapped end hooks into interlocking engagement with each other.

3. The process of making curb chain links which consists in forming from wire stock an elongated S-shaped link blank having all its parts in substantially the same plane and having oppositely bent open end hooks, in bending said end hooks up to bring the end hooks toward and into substantial contact overlapping each other to form a curb link having its joint end at an angle to the opposite end loop of the link, and in forcing said lapped end hooks into interlocking engagement with each other.

4. The process of making curb chain links which comprises forming an elongated S-shaped link blank having its end portions in substantially the same plane and having oppositely bent open end hooks and in bending said end hooks to bring the end hooks toward and into substantial contact overlapping each other to form a curb link having its joint end at an angle to the opposite end loop of the link.

5. The process of making curb chain links which comprises forming an elongated S-shaped link blank having its end portions in substantially the same plane and having oppositely bent open end hooks, in bending said end hooks to bring the end hooks toward and into substantial contact overlapping each other to form a curb link having its joint end at an angle to the opposite end loop of the link and in welding said end hooks together.

[Claims 6 to 9 not printed in the Gazette.]

1,219,432. SELENIUM BRIDGE AND METHOD FOR MAKING SAME. FAY C. BROWN, Berkeley, Cal. Filed July 28, 1916. Serial No. 111,801. (Cl. 219—63.)



1. A selenium bridge comprising a selenium crystal or crystals of microscopic dimensions.

2. A selenium bridge comprising a selenium crystal or crystals produced by sublimation and condensation.

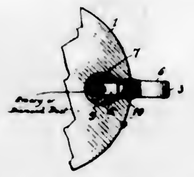
3. A selenium bridge comprising one or more isolated or separate selenium crystals.

4. A selenium bridge comprising one or more selenium crystals, and a support therefor comprising electrodes engaging the crystals to permit the impinging of a beam or beams of light thereupon.

5. A selenium bridge comprising one or more crystals of selenium, a support for the crystal or crystals, and means for applying pressure to the crystal or crystals.

[Claims 6 to 9 not printed in the Gazette.]

1,219,433. EYEGLASSES. JAMES HOYT BROWN, New York, N. Y. Filed May 5, 1915. Serial No. 25,989. (Cl. 88—47.)



1. The combination of a lens, a mounting, emery dust or like gritty material interposed between and engaging said lens and mounting to resist slipping.

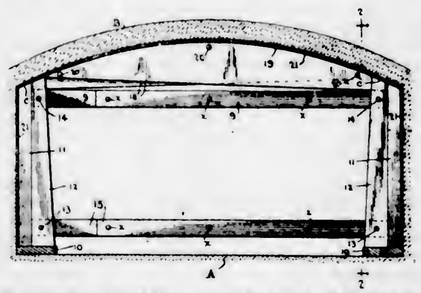
2. The combination of a lens, a mounting, and gritty particles between the lens and mounting to provide frictional engagement between the said parts.

3. The combination of a lens, a mounting having ears to receive the lens between them, means for causing the ears to hold the lens, and gritty particles between the ears and the opposite faces of the lens to provide frictional engagement between said parts.

4. The combination of a lens having an open-ended recess in its edge, a mounting comprising ears to receive the lens between them, a tightening element carried by the ears to cause the ears to hold the lens, one or more projections carried by the mounting in line with said element and adapted to be inserted with said element into said open-ended recess, and gritty material between the ears and the opposite faces of the lens, whereby, when the tightening element is operated, the lens and the mounting will be held together and the lens prevented from turning about said element as a pivot.

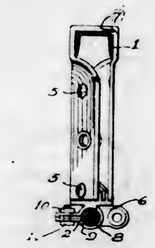
5. The combination of a lens having an open ended recess in its edge, a mounting comprising ears to receive the lens between them, a tightening element carried by the ears to cause the ears to hold the lens, and one or more projections carried by the mounting in line with said element and adapted to be inserted with said element in said open ended recess and fit said recess snugly, whereby, when the tightening element is operated, the lens and mounting will be held together and the lens prevented from turning about said element as a pivot.

1,219,434. ADJUSTABLE CONCRETE-CULVERT FORM. ROSS BURKHOLDER, Marshall, Ill. Filed May 26, 1914. Serial No. 841,067. (Cl. 25—131.5.)



A concrete culvert form comprising two side members each including an outer member, two cleats secured to each outer member in parallel spaced relation, the upper ends of said cleats being curved, each cleat being provided with an upper bolt opening and a lower bolt opening, upper pivot bolts within said upper openings, two upper spacing bars pivotally held upon the bolts within said upper openings, means to adjustably secure said upper spacing bars, two bolts within said lower openings, two lower spacing bars pivotally held upon said lower bolts, means to adjustably secure said lower spacing bars, said upper pivot bolts being located a suitable distance below the upper ends of said cleats whereby a socket is formed above said upper spacing bars, and two arched members having their upper edges curved and their ends held within said socket and against said outer bars, as, and in the manner shown.

1,219,435. TRUSSED BRAKE-BEAM. EDWIN G. BUSSE, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 11, 1916. Serial No. 114,421. (Cl. 188—22.)



1. A brake beam including in combination, a strut member, a compression member supporting one end of the strut member and having stop portions engaging the strut member laterally to prevent movement thereof longitudinally of the compression member, a tension member connected to the compression member and engaging the other extremity of the strut member, and adjustable means carried by the strut member and adapted to engage the tension member to secure the strut member against movement longitudinally thereof.

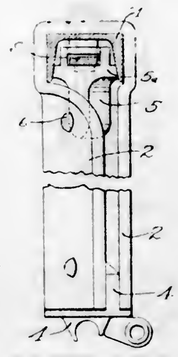
2. In a brake beam, the combination of a strut member, a compression member supporting one extremity thereof, the strut member having a portion bent to form a seat encompassing the compression member, and the compression member having notched portions coöperating with the strut member to hold it against movement longitudinally of the compression member, a part of the strut member being displaced from its normal conformation to engage said notched portions.

3. In a brake beam, the combination of a malleable strut member and a compression member having stop portions; part of the strut member being deflected from its normal conformation for engagement with said stop portions.

4. In a brake beam, a strut member having at one of its extremities a seat portion adapted for the reception of a truss member, a flexible clamping member carried by the seat portion and adapted for engagement with a truss member thereon, and means for securing said clamping member in clamping coöperation with the seat portion.

1,219,436. TRUSSED BRAKE-BEAM. EDWIN G. BUSSE, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 11, 1916. Serial No. 114,422. (Cl. 188—22.)

1. In a brake beam, a longitudinal member and a strut formed with a seat for the reception of the longitudinal member, said strut being provided with a block portion extending into said seat, a movable clamping member supported on said block, and means coöperating with the block and clamping member whereby the latter may be forced into clamping engagement with the longitudinal member within the seat.



2. In a brake beam, a longitudinal member and a strut member formed with a seat for the reception of the longitudinal member; said strut member including a block portion extending into the seat and spaced apart from the walls thereof, a movable clamping member carried on the block member and retained thereby against movement longitudinally of the longitudinal member, and means operable to urge the clamping member toward the longitudinal member.

3. In a brake beam, a longitudinal member and a transverse strut member formed with a seat portion for the reception of the longitudinal member; said strut member including a block portion extending into said seat and having portions arranged to engage the flanges of the longitudinal member and a clamping member movable on the longitudinal axis of the strut and arranged for adjustable clamping engagement with the longitudinal member.

4. In a brake beam, a truss member and a strut member formed with a seat portion adapted for the reception of the truss member; said strut member including a block portion and a movable clamping member supported thereby for clamping coöperation with an opposite side of the seat portion; the block portion carrying means for retaining the clamping member against movement longitudinally of the truss member; and a member movable longitudinally of the truss member to effect clamping engagement of the clamping member and truss member.

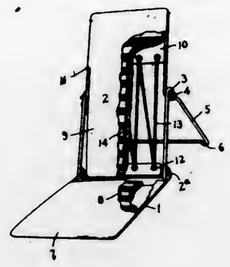
5. In a brake beam, a longitudinal member, and a strut member having a seat portion adapted for the reception of the longitudinal member; said strut member having an adjustable clamping portion operable within the seat portion for engagement with the longitudinal member and means for retaining said clamping member against movement away from the longitudinal axis of the strut member.

[Claim 6 not printed in the Gazette.]

1,219,437. FOLDING BACK-REST. HENRY E. BUTLER, Schenectady, N. Y. Filed Aug. 18, 1915. Serial No. 46,206. (Cl. 155—22.)

In a device of the character described, the combination of a rectangular metal frame adapted to rest on the ground or other flat support, an adjustable back rest comprising an inverted U-shaped metal frame which has eyes, one pair of eyes in its lower ends that surround a cross member of said supporting frame, and a second pair of eyes

between the top and bottom, all of said eyes being formed by bending the metal upon itself, a U-shaped prop whose upper ends have eyes that pass through said second pair of eyes in the U-shaped frame, a covering for the back



rest frame that comprises an envelop which snugly incloses the upper end, and a portion which extends around a cross member of the supporting frame, and a lacing for securing said portion to the rear part of the envelop.

1,219,438. METHOD OF MAKING DECOLORIZING MATERIALS. ROBERT M. CATLIN, Franklin Furnace, N. J. Filed Apr. 25, 1916. Serial No. 93,414. (Cl. 127—2.)



1. The process of making a material having decolorizing properties, which consists in acting upon a carbonaceous residue of an industrial carbonizing process with hydrofluoric acid, and then recovering the solids.

2. The process of making a material having decolorizing properties, which consists in acting with hydrofluoric acid upon a starting material comprising silica and a carbonaceous material obtained from an industrial carbonizing process, and then recovering the solids.

3. The process which consists in subjecting a residue of shale distillation to the action of hydrofluoric acid.

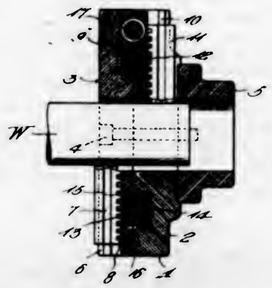
4. The process of making a material having decolorizing properties, which consists in subjecting the carbonaceous residue of an industrial carbonizing process to the action of dilute hydrofluoric acid, and then recovering the solids.

5. The process of making a material having decolorizing properties, which consists in subjecting a starting material comprising silica and a carbonaceous material obtained from an industrial carbonizing process to the action of dilute hydrofluoric acid, and then recovering the solids.

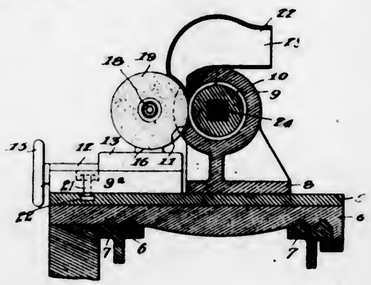
[Claims 6 and 7 not printed in the Gazette.]

1,219,439. MACHINE-CHUCK. ALBERT E. CHURCH, New Britain, Conn., assignor to Union Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Oct. 1, 1915. Serial No. 53,528. (Cl. 29—125.)

A chuck comprising a cylindrical body having therein an axial work receiving bore and having at its front and rear sides a plurality of radially disposed guideways, and a front and a rear set of work gripping jaws slidable in said guideways, the rear guideways being disposed opposite the spaces between the front guideways to prevent excessive weakening of the chuck body and to locate the jaws of one set in staggered relation with those of the other.



1,219,440. METHOD OF DRESSING PISTON-RINGS AND APPARATUS THEREFOR. WILLIAM T. CLARK, Beloit, Wis. Filed Aug. 16, 1909. Serial No. 513,177. (Cl. 51—4.)



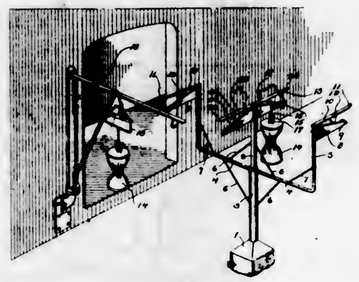
1. In an apparatus for dressing piston rings on their pistons, a cylindrical gage constructed with an opening through its side, said gage being adapted to receive a piston with a split piston ring of resilient material thereon and arranged to compress said ring to the diameter of the cylinder in which it is to be used, an adjustable dressing device arranged to operate upon the ring through said opening, means for rotating the piston and its ring within the gage, the piston and the dressing device being arranged for relative movement.

2. In an apparatus for dressing piston rings on their pistons, a cylindrical gage constructed with a short transverse slot through its side, said gage being adapted to receive a piston with a split piston ring of resilient material thereon and to compress said ring, a grinding wheel arranged to operate upon the ring through said slot while said ring is compressed by the gage to the diameter of the cylinder in which it and the piston are to be used and while the ring is held normal to the axis of the gage, means for rotating the piston and its ring within the gage, the piston and the grinding wheel being arranged for relative longitudinal movement.

3. A lathe attachment for grinding piston rings on their pistons comprising a frame adapted to be secured to the longitudinally movable lathe carriage, a cylindrical gage affixed to said frame constructed with a short transverse slot through its side, said gage being adapted to receive a piston with a split ring of resilient material thereon and to compress said ring, a transverse guide on said frame opposite the slot in the gage, a grinding wheel adjustably mounted upon said guide, and means for connecting the piston within the gage with the spindle of the lathe to be driven thereby.

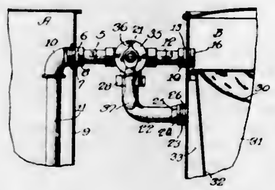
4. The herein described method of dressing piston rings which comprises placing the rings upon the pistons upon which they are to be used, compressing said rings to the diameter of the cylinder in which they are to be used, and grinding them while thus compressed.

1,219,441. MAIL-BAG-RECEIVING APPARATUS. ROBERT G. CULP, Conemaugh, Pa. Filed June 30, 1916. Serial No. 106,904. (Cl. 258—13.)



In a mail bag deliverer and receiver the combination with a support of a plate mounted on the support having its upper edge beveled from the center thereof in divergent directions to the extremties of the plate, a resilient latch comprising a resilient longitudinal strip secured to the plate at its highest point and having its ends curved upwardly, and keeper legs carried by the resilient strip and bearing against the inclined edges of the first named plate.

1,219,442. APPARATUS FOR MAKING COFFEE. JOSEPH B. DALTON, Chicago, Ill. Filed Nov. 4, 1916. Serial No. 129,444. (Cl. 53—3.)

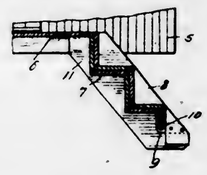


1. In combination, a water-heating tank, a coffee-making tank having a percolator therein having its body spaced from the tank walls, a substantially Y-shaped pipe connection between said tanks, a valve at the junction of the stem and arms of said pipe connection, the stem of said connection being secured to the water-heating tank whereby water may flow therethrough to said valve, one of the arms of said connection being secured to said coffee-making tank whereby water may be discharged therefrom into said percolator, the other arm of said connection being secured to said coffee making tank whereby water may be discharged therefrom into the space about said percolator, means for operating said valve, and means for indicating the relative position of valve parts, said valve being such that by operating the same water may flow alternately through either of said connection arms and whereby the flow may be cut off from each thereof.

2. In combination a water-heating tank, a coffee-making tank including a percolator within the tank and spaced from the walls thereof providing a space for hot water, a substantially Y-shaped pipe connection having the stem thereof in communication with the interior of said water-heating tank and the two arms thereof in communication with the interior of said coffee-making tank whereby one of said arm is adapted to discharge into said percolator and the other into the space about the same, a unitary valve at the junction of said stem and arms adapted to discharge water from said stem into one of said arms and then into the other thereof and means for operating said valve, said valve being such that the flow is cut off from one of said arms when the valve is operated to cause a flow through the other thereof.

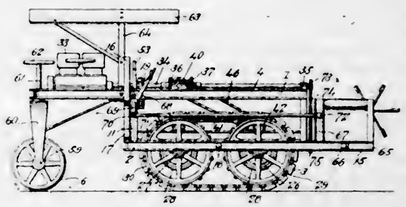
3. A pipe connection for two tanks of coffee-making apparatus of the character described, comprising in combination a pipe formed to be screwed into the water-heating tank from the outside thereof, a two-way valve secured to said pipe, two branch pipes extending from said valve, one of said branch pipes having means for securing the same to a wall of the coffee-making tank by a threaded member operable from the inside of said coffee-making tank, the other branch pipe having means for screwing the same into a wall of the coffee-making tank from the outside thereof, a union connection between said last mentioned branch pipe and said valve, said valve being formed to discharge water into said two branch pipes alternately and to cut off the flow from each thereof, and means for operating said valve.

1,219,443. STEP FOR RAILWAY-CARS AND THE LIKE. JOHN M. DIXON, Arlington, Tex., assignor of one-fourth to J. H. Jones, Denton, Tex. Filed July 17, 1916. Serial No. 109,759. (Cl. 105—86.)



In car steps, stationary steps, extensible steps foldable with relation to the stationary steps, said stationary steps having sides, a rod held by the said sides, plates on the extensible steps swingingly mounted on the said rod, a standard anchored to the stationary steps, a sheave pulley journaled at the upper end of the said standard, a flexible connection engaging the said sheave pulley and having its outer end secured to one of the extensible steps for operating the said extensible steps.

1,219,444. AGRICULTURAL IMPLEMENT. LEANDER EASTON, Roslyn, Ill. Filed Oct. 16, 1915. Serial No. 56,295. (Cl. 21—114.)



1. In a tractor, a main frame, rolling means supporting said frame, an auxiliary frame pivoted for movement relatively to said main frame, a means to adjust and lock said auxiliary frame in its adjusted position, an agricultural implement carried by said auxiliary frame, and means on the main frame to drive the said rolling means.

2. In a tractor, the combination with an agricultural implement, of an implement supporting frame pivoted to move relatively to said tractor, a means to adjust and lock said frame in its adjusted position, a third frame pivoted to said last mentioned frame and supporting said implement, and a means on the tractor engaging the third frame to permit of adjustment thereof, substantially as described.

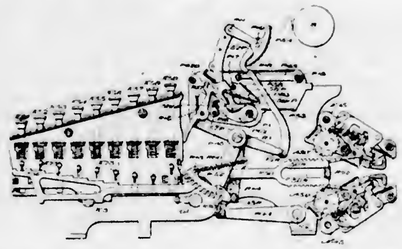
3. In a tractor, a main frame caterpillar tread devices supporting said frame, collar means on said frame for driving said devices, differential mechanism associated with said devices, and a steering mechanism for said frame.

4. A means for operatively associating an agricultural implement with a tractor including in combination with said tractor, an auxiliary supporting frame pivoted for movement relatively to the tractor, an implement supporting frame pivoted to said auxiliary frame, a means on the tractor engaging the said auxiliary frame to adjust and lock said frame in its adjusted position, and means on the tractor engaging the implement supporting frame to lock and adjust said frame in its adjusted position.

5. A means for operatively associating an agricultural implement with a tractor including in combination with the tractor, an auxiliary supporting frame attached to and adjustable upon said tractor, vertical rack bars pivoted to said auxiliary frame, means carried by the tractor to engage the rack bars for adjusting said auxiliary frame and locking said frame in its adjusted position, an implement supporting frame pivoted for movement independently of said auxiliary frame, and a means on the tractor engaging with said supporting frame to adjust and lock said frame in its adjusted position, and a power means for the tractor operatively associated with the implement mounted on said implement supporting frame.

[Claim 6 not printed in the Gazette.]

1,219,445. REBOUNDING DEVICE FOR NUMBER-PRINTING MECHANISMS. HALCOLM ELLIS, East Orange, N. J. Original application filed Oct. 13, 1914, Serial No. 866,481. Patent No. 1,203,863, dated Nov. 7, 1916. Divided and this application filed Oct. 9, 1916. Serial No. 124,673. (Cl. 235—58.)



1. In a printing mechanism, the combination with a type carrier, and a rebound member movably mounted in relation thereto, of a combined type carrier-actuator and rebounding device comprising a member movably mounted on the type carrier and engaged with the rebound member, and spring means connected to said movably mounted member.

2. In a printing mechanism, the combination with a type carrier, and a rebound member movably mounted in relation thereto, of a combined type carrier-actuator and rebounding device comprising a rocker mounted on the type carrier and engaged with the rebound member, and spring means coöperating with said rocker.

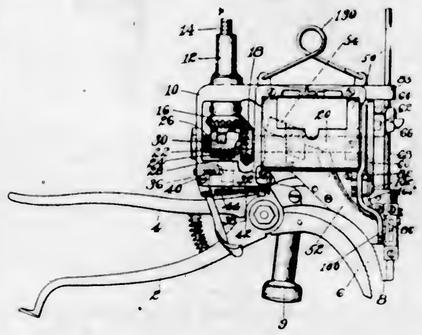
3. In a printing mechanism, the combination with a type carrier, and a rebound member movably mounted in relation thereto, of a combined type carrier-actuator and rebounding device comprising a rocker mounted on the type carrier and having a two-point engagement with the rebound member, and spring means coöperating with said rocker.

4. In a printing mechanism, the combination with a type carrier, and a rebound member movably mounted in relation thereto, of a combined type carrier-actuator and rebounding device comprising a rocker mounted on the type carrier and having heel and toe portions engaged with different parts of the rebound member, and spring means coöperating with said rocker.

5. In a printing mechanism, the combination with a type carrier, and a rebound member movably mounted in relation thereto, of a combined type carrier-actuator and rebounding device comprising a spring, and a movable mechanical element constituting an operative connection between the spring and the type carrier and rebound member, said mechanical element being carried by one of said members and engaged with the other of them.

[Claims 6 to 8 not printed in the Gazette.]

1,219,446. TACKING APPARATUS. EDWARD ERICKSON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 22, 1911. Serial No. 628,729. (Cl. 1—18.)



1. Apparatus of the class described, comprising a tack reservoir, a raceway leading therefrom constructed and arranged to be kept filled by the agitation of the apparatus incident to its operation, tack separating and tack driving mechanisms and operating means for said mechanisms comprising a clutch, the driving member of which is arranged to be power driven, and a tripping device for operating the clutch.

2. Apparatus of the class described, having in combination, supporting means, tack separating and tack driving mechanisms, a tack reservoir and a raceway mounted on the supporting means and so arranged that the raceway is kept filled with tacks by the shocks due to the action of the driving mechanism, operating means for said mechanisms comprising a clutch member arranged to be driven from a continuously running source of power, a second clutch member, and a tripping device located in position to be engaged by a finger of the hand grasping the supporting means for releasing said clutch member to connect the mechanisms with the source of power.

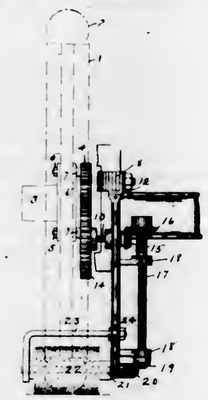
3. Apparatus of the class described comprising tack driving means, a driver passage to which tacks are to be fed, a tack reservoir, a raceway leading therefrom, a slideway located transversely of the end of said raceway and shaped to receive and guide a tack separating slide, a tack separating slide mounted for reciprocation in said slideway, and means for reciprocating the slide, said slide having at its tack engaging end a relatively wide horizontal portion corresponding to the width of the tack head and a relatively narrow vertical portion, said portions being adapted and arranged to engage respectively the head and stem of the tack presented thereto from the raceway, whereby the tack is maintained against transverse movement relatively to the slide and slideway during its transference to the driver passage.

4. Apparatus of the class described, comprising tack driving mechanism, a tack reservoir, a raceway leading therefrom, a tack separating slide mounted for reciprocation transversely of said raceway, and means for reciprocating the slide, said slide being T-shaped in transverse section and having its tack engaging end concaved and arranged to engage laterally the head and stem of a tack and to maintain the tack in upright position during its transfer to the driver passage.

5. Apparatus of the class described, comprising tack driving mechanism, a tack supplying device, a raceway leading therefrom, and a separating slide which is T-shaped in cross-section and is mounted for reciprocation transversely across the end of said raceway, the tack engaging end face of said slide being concaved and having the edge next the raceway in advance of the other edge, said concaved end being thereby adapted to engage and separate the lowermost tack from the tacks in the raceway and to transfer the separated tack to the driver passage.

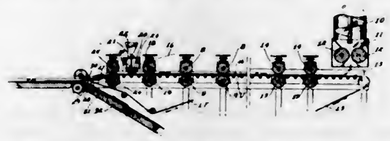
[Claims 6 to 23 not printed in the Gazette.]

1,219,447. TIRE-PROTECTOR FOR MOTOR-VEHICLES. GEORGE A. FABER, Baltimore, Md. Filed Mar. 22, 1916. Serial No. 86,029. (Cl. 208—151.)



The combination with a vehicle wheel, of a gear-wheel secured to the vehicle wheel, a rod pivotally secured at its upper end, a shaft projecting through said rod at right angles thereto, a gear-wheel on one end of said shaft in mesh with the gear-wheel on the vehicle wheel, a gear-wheel on the opposite end of said shaft, a brush mounted on the lower end of said rod and having a beveled gear-wheel on one end thereof, a shaft mounted on said rod parallel therewith, a beveled gear-wheel on the upper end of said parallel shaft driven from the gear-wheel on the first mentioned shaft, and a beveled gear-wheel on the lower end of said parallel shaft in mesh with the beveled gear-wheel on the brush.

1,219,448. APPARATUS FOR MANUFACTURING COMPOSITION BOARD. JOHN FERLA, Poughkeepsie, N. Y. Filed May 6, 1916. Serial No. 95,900. (Cl. 25—1.)



1. In apparatus for making plastic composition board, a traveling belt of absorbent material for carrying said sheet of plastic, said belt being provided with a reinforcing backing of a strong flexible material having a comparatively lower absorptive capacity than the body of the belt and stretched taut to present a flat surface for the plastic sheet, an upper belt of absorbent materia.. and tamping rolls in pairs above and below the belts.

2. In apparatus for making plastic composition board, a traveling belt of absorbent material for carrying said sheet of plastic, said belt being provided with a reinforcing backing and stretched taut to present a flat surface for the plastic sheet, an upper belt of absorbent materia.. tamping rolls in pairs above and below the belts, the lower belt extending past the upper belt, a roll of comparatively small diameter around which the lower belt turns to start its return travel, a bridging plate below the lower belt extending adjacent the crest of the small roll, and a second plate on the other side of the small roll extending to a point closely adjacent the crest of the roll whereby the sheet of plastic is transferred from the belt to the second plate.

3. In apparatus for making plastic composition board, a traveling belt of absorbent material for carrying said sheet of plastic, said belt being provided with a reinforcing backing and stretched taut to present a flat surface for the plastic sheet, an upper belt of absorbent material, tamping rolls in pairs above and below the belts, the lower belt extending beyond the upper belt, pressure rolls beyond said upper belt, the upper feed roll directly engaging the sheet of plastic, an oiling device disposed rearwardly of said pressure rolls, a roll of comparatively small diameter around which the lower belt turns to start its return travel, a bridging plate below the lower belt extending adjacent the crest of the small roll, and a second plate on the other side of the small roll extending to a point closely adjacent the crest of the roll whereby the sheet of plastic is transferred from the belt to the second plate.

4. In apparatus for making plastic composition board, a traveling belt of absorbent material for carrying said sheet of plastic, said belt being provided with a reinforcing backing and stretched taut to present a flat surface for the plastic sheet, an upper belt of absorbent material, tamping rolls in pairs above and below the belts, the lower belt extending beyond the upper belt, an oiling and trowel device disposed over said extension, a roll of comparatively small diameter around which the lower belt turns to start its return travel, a bridging plate below the lower belt extending adjacent the crest of the small roll, and a second plate on the other side of the small roll, extending to a point closely adjacent the crest of the roll whereby the sheet of plastic is transferred from the belt to the second plate.

5. In apparatus for making plastic composition board, a traveling belt of absorbent material for carrying said sheet of plastic, a second belt of absorbent material above the first mentioned belt, tamping rolls in pairs above and below the belts, the lower belt extending beyond the upper belt, pressure rolls engaging the sheet of material and the lower belt at said extension for transferring the sheet of plastic to a cut-off plate, and an oiling device disposed rearwardly of said pressure rolls to prevent adherence of the material thereto.

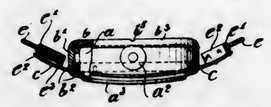
[Claims 6 to 11 not printed in the Gazette.]

1,219,449. HOLDER FOR WRIST-WATCHES. EZRA C. FITCH, Boston, Mass. Filed June 3, 1915. Serial No. 31,833. Renewed Aug. 12, 1916. Serial No. 114,638. (Cl. 224—4.)

1. A case for a wrist watch and means to secure the same in position on the wrist, said case having its back formed with grooves for circulation of air between the wrist of the wearer and the back.

2. A case for a wrist watch and means to secure the same in position on the wrist, said case having a back of non-readily corrosive material formed with grooves for circulation of air between the wrist of the wearer and the back.

3. The combination of a case for a watch comprising a center and a bezel, and a strap-plate held between the center and the bezel and adapted to have straps connected thereto for securing the case to the wrist.

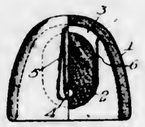


4. The combination of a case for a watch having a center and a bezel threaded into the center, and a strap plate encircling the case between the bezel and the center, and adapted to have straps connected thereto for securing the case to the wrist.

5. The combination of a case for a watch, and strap loops yieldingly connected to the case and adapted to have straps connected thereto for securing the case to the wrist.

[Claim 6 not printed in the Gazette.]

1,219,450. INSULATOR. FRANK F. FOWLE, Chicago, Ill. Filed Mar. 25, 1911. Serial No. 616,784. (Cl. 173—28.)



1. An insulator comprising a hollow inverted bowl having a bridging member spanning the interior thereof and integral with said bowl whereby a continuous passage is formed between said bridge and the closed end of said bowl, grooves on opposite sides of said bridge to facilitate the insertion of a cable through said passage, said insulator having a continuous opening therethrough which traverses said bridge and terminates in upwardly flaring mouths to permit a supporting cable to be arranged therein with its supporting spans substantially vertical, the lower wall of said opening being arranged to drain moisture through said mouths at either side, said cables passing loosely through their respective passages in the form of loops thereby insuring flexibility of support, the lower edge of ssid bowl extending downwardly below said bridge member to shed moisture from the inner depending cable and insuring a long leakage path between said loops.

2. A device of the class described comprising a hollow inverted bowl, a central portion mounted within said bowl and joining the walls thereof at a plurality of points, thereby forming two continuous, oppositely directed passages for the reception of cables, one of said passages being entirely housed within said bowl and accessible only from beneath the same, the other of said passages terminating in outwardly flaring mouths on the exterior wall of said bowl, and grooves formed in the sides of said central portion and within said first-mentioned passage, substantially as shown and described.

1,219,451. TREATED STOCKING. ARMAND GARDOS, Cleveland, Ohio. Filed Oct. 4, 1915. Serial No. 54,031. (Cl. 91—68.)

1. A stocking having the fabric impregnated with a solution to counteract the butyric acid separated by the sweat glands and treated with a solution to prevent the escape of the first solution.

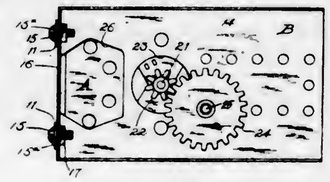
2. A stocking having the fabric subjected to a gaseous ingredient acting as a preservative and disinfectant and then treated with a fatty substance to prevent the escape of the gaseous ingredients.

3. A stocking having the fabric impregnated with formaldehyde and a fatty substance to prevent the escape of the formaldehyde from the fabric.

4. A stocking having the fabric impregnated with formaldehyde and treated with a wool fat substance to prevent the escape of the formaldehyde from the fabric.

5. A stocking having the fabric impregnated with a solution to counteract the butyric acid separated by the sweat glands and treated with a wool fat solution to prevent the escape of the first solution.

1,219,452. TOY-MOTOR INSTALLATION. ALFRED C. GILBERT, New Haven, Conn., assignor to The A. C. Gilbert Company, New Haven, Conn., a Corporation of Connecticut. Filed Apr. 18, 1916. Serial No. 91,977. (Cl. 74—7.)



1. The combination with a toy motor having side plates and a shaft journaled in said side plates, of gear box side plates detachably applied to the respective motor side plates outside of the latter plates, a shaft journaled in said gear box side plates, and means for driving said shaft from the motor shaft; substantially as described.

2. The combination with a toy motor having side plates, of a gear box having side members detachably applied to the respective side plates outside of said plates; substantially as described.

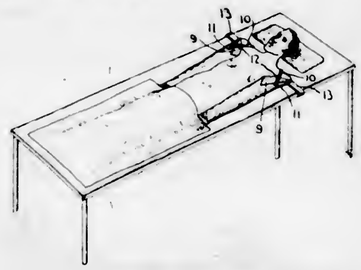
3. The combination with a toy electric motor having side plates, of a gear box having separate side plates applied to the respective side plates of the motor; substantially as described.

4. The combination with a toy electric motor having side plates, of a pair of plates detachably applied to the outside of the motor side plates, said pair of plates of greater height than the motor and having a plurality of shaft bearings therein; substantially as described.

5. The combination with a toy motor having outstanding base lugs, of a gear box resting on and detachably connected with said base lugs; substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

1,219,453. RESTRAINING DEVICE. MARY H. HANSEN, Salt Lake City, Utah. Filed Sept. 30, 1915. Serial No. 53,314. (Cl. 128—3.)



1. An arm restraining device for patients being operated upon, comprising a sheet on which the body of the patient rests and is unobstructedly exposed, spaced pockets of sufficient length to contain substantially the complete arms and hands of the patient, extending longitudinally along

and fixed to the sheet to prevent the arms and hands being raised, said pockets having open upper ends, and detachable means connecting the upper side walls of the pockets and the sheet and arranged to extend over the patient's shoulders for securing the upper portion of the patient to the sheet and retaining the arms in the pockets while maintaining the body unobstructedly exposed for operating purposes.

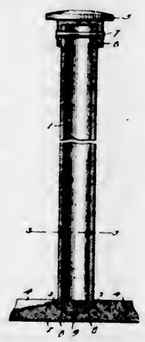
2. An arm restraining device for patients being operated upon, comprising a sheet on which the body of the patient rests and is unobstructedly exposed, spaced pockets of sufficient length to contain substantially the complete arms and hands of the patient, extending longitudinally along and fixed to the sheet to prevent the arms and hands being raised, the upper ends of the pockets being open and located over the upper surface of the sheet on which the patient rests, and shoulder straps connecting the upper portion of the sheet and pockets to retain the patient's arms and hands in the said pockets, while maintaining the body fully exposed for operating purposes.

3. An article of the character set forth, comprising a sheet on which the patient is placed, said sheet having side margins doubled back and secured to the main body thereof, thereby forming arm receiving and holding pockets, having open upper ends, and shoulder straps connecting the upper end of the sheet and the pockets.

4. An article of the character set forth, comprising a sheet on which the patient is placed, said sheet having its side margins doubled back and secured thereto, forming spaced longitudinally disposed arm receiving and holding pockets, shoulder straps and buckles therefor secured respectively to the upper portions of the sheet and pockets, and a table embracing strap secured to the upper margin of the sheet transversely thereof.

5. An article of the character set forth, comprising a sheet having a central portion on which the body of the patient lies, spaced arm receiving pockets located longitudinally along the opposite sides of said central body receiving portion and secured thereto, said pockets having upper walls that terminate short of the upper end of the sheet, forming open ends for said pockets located above the surface of the sheet, below its lower edge, detachable shoulder encircling means for connecting the upper pocket walls and upper end of the sheet for retaining the arms and hands of the patient in the pockets while leaving the body exposed, and means for securing the sheet to an operating table.

1,219,454. LAND-MARKER. CHARLES A. HANSON and ALBERT L. HANSON, Munising, Mich. Filed Dec. 3, 1915. Serial No. 64,940. (Cl. 125—15.)



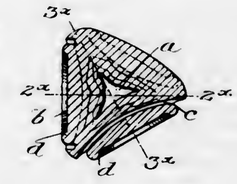
1. An indestructible land marker of light weight adapted to be readily transported by hand, comprising a flat base, flanges on its upper portion, a tubular metal stem having bent ends embedded in the base, and a cap member having direction markings on its top riveted over the metal stem.

2. A light, easily-transported and permanent land marker comprising a metal cap bearing direction markings, a light tubular metal stem bearing the metal cap, and a flat base member adapted to be completely concealed beneath the surface of the ground and having upwardly projecting flanges to prevent the disturbing of the marker without unearthing the base member and leaving evidences of tampering.

3. A fireproof land marker comprising a direction marking cap member, a light galvanized pipe stem over which the cap member is riveted, the pipe member terminating in a converging annular flange, a broad base member in which the aforesaid flange is embedded, the base member having opposite projections normally concealed beneath the surface of the ground and adapted to hold the marker against accidental displacement and to necessitate unearthing the base member to permit of turning the landmarker, whereby to prevent tampering with or disturbance of the landmarker without the leaving of evidences of such disturbance

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1,219,455. METHOD OF CUTTING BUTTONS. HERBERT HASTINGS, Rochester, N. Y., assignor to German American Button Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 8, 1912. Serial No. 689,257. (Cl. 79—1.)



1. The method of forming buttons consisting in cutting in the face of a work-piece one face and the rim of a button with one tool and subsequently simultaneously severing the button from the work-piece by another tool and forming its other face by the severing operation.

2. The method of forming buttons consisting in turning in the face of a work-piece one face of a button with one tool, and severing said button from the work-piece by transversely cutting the work-piece by another tool and by said severance also forming the other face of the button.

3. The method of forming buttons consisting in cutting in the different side walls of a vegetable ivory nut, one face of each of several buttons and subsequently separating them from the body of the nut by transversely cutting the several walls of the nut in rear of the previously formed button faces.

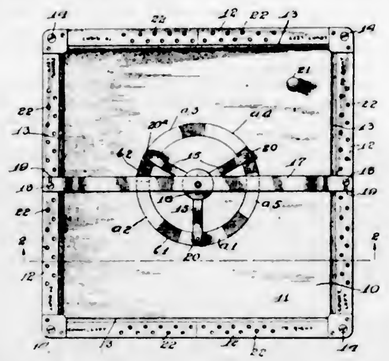
4. The method of forming buttons consisting in cutting successively in each of the several side walls of a vegetable ivory nut one face and the rim of a button and successively cutting the different walls of the nut in a direction transversely of the buttons to simultaneously form their other faces and sever them.

5. The method of forming buttons consisting in turning one side of a button in the face of a work-piece by one tool and then severing the button therefrom and thereby forming its other side in one operation by another tool having a circular travel approximating the contour desired to be given said face of the button.

1,219,456. GAME APPARATUS. MOSES L. HAWKS, New York, N. Y. Filed Jan. 7, 1915. Serial No. 900. (Cl. 46—61.)

1. A game apparatus comprising a rotary frame, balls carried by said frame, one of which, the scoring ball, is suitably differentiated from all the rest, said balls being adapted to be impinged by a cue or mallet ball, and a

circular scale divided into scoring spaces and blank spaces adapted to be disposed beneath the revolving balls, so as to indicate the points scored.

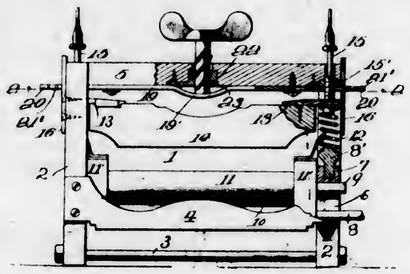


2. The combination with a platform having a rectangular bed over which the cue or mallet ball may roll, rails and cushions disposed at the marginal edges of the platform, of a readily detachable support straddling the platform, a hub rotatably mounted on the support, arms radiating from the hub, and balls carried by the arms out of contact with the bed, one of which, the scoring ball, is of a color different from all the rest, said balls being adapted to be impinged by the cue or mallet ball and a circular scale divided into scoring spaces and blank spaces for indicating the points scored.

3. A game apparatus, comprising a detachable support, a rotary frame mounted on the support, said frame comprising a hub and arms radiating from the hub, a scoring ball carried by one of these arms, balls different from said scoring ball carried by the remaining arms, a cue or mallet ball to impinge on said balls, and a circular scale having scoring spaces and blank spaces for indicating the points scored by the position of rest of the scoring ball over said scale after impingement by the cue or mallet ball.

4. A quick detachable attachment for standard billiard tables comprising a bar having slots at the extremities thereof adapted to engage fastening pins on the rails of the table, a rotary frame carried by the bar, said frame comprising radial arms, and an impingeable element carried by the arms and a circular scoring scale adapted to be applied to the face of the billiard table beneath the revolving balls.

1,219,457. PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. JOHN F. HEMENWAY, New York, N. Y. Filed July 26, 1916. Serial No. 111,404. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a resilient member having means for normally holding said pressure means in predetermined position, and a revoluble member coöperating with said resilient member for releasing said pressure means.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a resilient member having means for normally holding said pressure means in predetermined position, and a revoluble member coöperating with said resilient member for releasing and holding said pressure means in released position.

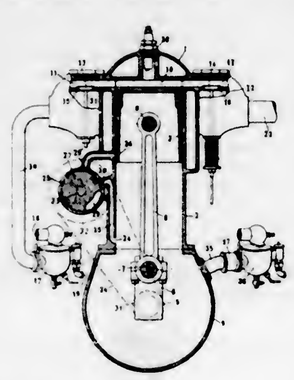
3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a resilient member having means for normally holding said pressure means in predetermined position, and a revoluble wedging member coöperating with said resilient member for releasing said pressure means.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a resilient member having means for normally holding said pressure means in predetermined position, and positive means cooperative with said resilient member for releasing and holding said pressure means in released position.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, members carried by the side bars of said frame, a resilient member coöperating with said members for holding said pressure means in predetermined position, and a revoluble member arranged to engage said resilient member for releasing said pressure means.

[Claims 6 to 15 not printed in the Gazette.]

1,219,458. INTERNAL-COMBUSTION ENGINE. CLIFFORD V. HERBERT, New York, N. Y. Filed Jan. 30, 1912. Serial No. 674,246. (Cl. 123—75.)

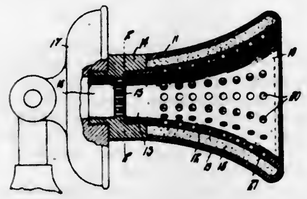


1. In an internal combustion engine the combination with a cylinder, a piston movable in said cylinder, a crank shaft, a combustion chamber at one side of said piston, a compression chamber at the other side of said piston, a valve controlled fuel supply port at all times communicating with said combustion chamber, and a fuel supply passage extending from said compression chamber to said combustion chamber closed by said piston except when said piston is in one extreme of its movement, of means interposed in the length of said fuel supply passage for preventing passage of fuel therethrough into said combustion chamber upon some of the movements of said piston into its mentioned extreme position comprising a cylindrical casing having a pair of openings therethrough spaced apart one communicating directly with said combustion chamber and the other communicating directly with said compression chamber, a constantly rotating member within said casing having a wall surface closing the mentioned openings through said casing during a portion of the rotation of said member, and having a part of the wall surface thereof cut away to establish communication between the openings in the walls of said casing

during another portion of the rotation of said member, and means for rotating said member.

2. An internal combustion engine, comprising a cylinder having a combustion chamber therein, and having an inlet port opening through the wall of the combustion chamber, a piston movable in said cylinder to draw a quantity of fuel into the combustion chamber through said inlet port by the outward movement of the piston, a compression chamber at the outer side of said piston, within which a second quantity of fuel will be compressed by said outward movement of the piston, a second inlet port opening through the wall of the combustion chamber, means forming a passage between said compression chamber and said second inlet port, said second inlet port opening into said combustion chamber in such a position as to be kept covered by the piston except when the piston is in its outermost position, and means whereby said passage is maintained closed at all times except upon alternate movements of the piston into said outermost position.

1,219,459. TELEPHONE-MOUTHPIECE. SETH M. HINO, Lander, Wyo. Filed Aug. 29, 1916. Serial No. 117,518. (Cl. 179—185.)



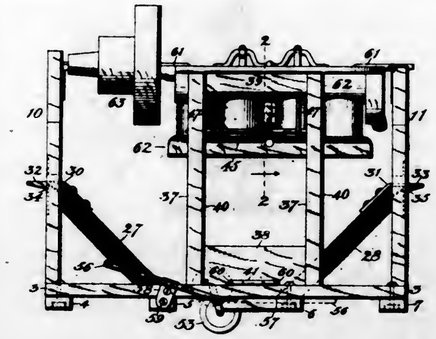
1. A mouth-piece of the character described comprising a body portion having an inner and an outer wall providing a pocket between the walls, a coupling having a perforated partition formed therein and provided at one end with an internally threaded socket and at the opposite end with an externally threaded neck, the inner wall of the body portion being perforated and provided with an externally threaded neck extending beyond the outer wall and fitting into the internally threaded socket of the coupling, a disinfecting substance placed within the pocket of said body portion, and a projecting sheet placed within the pocket and covering the opening formed in said inner wall.

2. A mouth-piece of the character described comprising a body portion having an outer wall and an inner wall perforated and extended beyond the outer wall to provide an externally threaded neck, and a coupling provided with an internally threaded pocket, the threaded neck of the inner wall of the body portion fitting into the pocket of said coupler and the coupler forming a closure for the space between the inner and outer walls of the body portion.

3. A mouth-piece of the character described comprising a body portion having an outer wall and an inner wall extending beyond the outer wall to provide a neck, and a coupling provided with a pocket, the neck of the inner wall of the body portion fitting into the pocket of the coupler and the coupler forming a closure for the space between the inner and outer walls of the body portion.

1,219,460. WORK-SUPPORT FOR FORD ENGINES. CLIFTON H. IMPSON, Auburn, Iowa. Filed Mar. 28, 1916, Serial No. 87,228. Renewed Feb. 7, 1917. Serial No. 147,257. (Cl. 29—89.)

1. In a device of the character described, a bottom; end posts hinged to the bottom to swing up and down thereon, and spaced apart a distance to adapt them to engage the ends of the crank-shaft of an engine to be supported, said end posts having bearings for receiving said ends of the crank-shaft; braces secured at their inner ends to said bottom and held rigid against longitudinal movement thereon, and extending upwardly and outwardly toward said end posts to form abutments therefor when the end posts are swung into operative position; and means for locking said posts in rigid engagement with said abutments.



2. In a device of the character described, a bottom; end posts hinged to the bottom to swing up and down thereon, and spaced apart a distance to adapt them to engage the ends of the crank-shaft of an engine to be supported, said end posts having bearings for receiving said ends of the crank-shaft; braces rigidly secured at their inner ends to said bottom and extending upwardly and outwardly toward said end posts to form abutments therefor when the posts are swung into operative position; and connections at the outer ends of said braces for automatically engaging and interlocking with said posts to rigidly hold the same in operative position.

3. In a device of the character described, a bottom; side supports hinged thereto to swing up and down thereon and adapted to engage an engine to support the same; and adjustable means for engaging said supports to hold them in operative relation to each other and in engagement with the engine at the two sides thereof.

4. In a device of the character described, a bottom; side supports hinged thereto to swing up and down thereon and adapted to engage an engine to support the same; adjustable means for engaging said supports to hold them in operative relation to each other and in engagement with the engine at the two sides thereof; and braces carried by said supports for engaging the sides of the engine below where it is engaged by the supports proper.

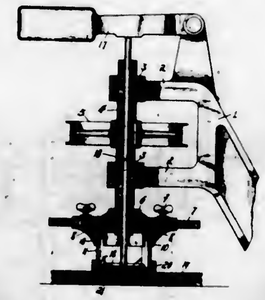
5. In a device of the character described, a bottom having side supports hinged thereto to swing up and down thereon and adapted to incline inwardly toward each other from bottom to top, when in operative position, to bring the top ends of the supports in position to engage the sides of an engine underneath the flange thereof; brace rods on said supports below the upper ends thereof; braces carried on said rods for engaging the sides of the engine below where it is engaged by the supports proper; and an adjustable tie rod adapted to pass through the center opening of the block of the engine and to engage the two brace rods carried by the supports to adjustably secure the supports and braces in engagement with the engine.

[Claims 6 to 8 not printed in the Gazette.]

1,219,461. CIRCULAR GLASS-CUTTER. ALBERT F. JOHNSTON, Toledo, Ohio, assignor of one-third to Leo Ries and one-third to Albert N. Ries, Toledo, Ohio. Filed Sept. 22, 1915. Serial No. 51,995. (Cl. 51—3.)

1. In an apparatus of the class described, a rotatable head having a plurality of radial arms, and blade carrying blocks adjustably mounted on said arms, and a cutter

blade of circular form carried at its upper edge by said blocks in concentric relation to the axis of rotation of the head.



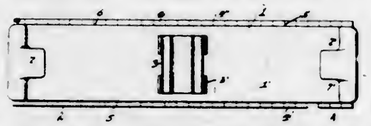
2. In an apparatus of the class described, a rotatable head having radially adjustable blade carrying members, and a strip of sheet metal bent into circular form to form a circular cutter and being carried and retained by said members in the circular form in which bent.

3. In an apparatus of the class described, a rotary head having a plurality of radially adjustable blade carrying members, a strip of sheet metal bent into circular form to form a circular cutting blade and carried by said members in pendant relation with its ends substantially in abutment, and means carried by one of said members and engaging the blade to retain it to the members.

4. In an apparatus of the class described, a circular rotary blade, and a work-holding part disposed interiorly of the blade and forming a means for banking an abrasive material against the blade.

5. In an apparatus of the class described, a frame having a vertical bearing, a hollow shaft journaled in said bearing for rotary and vertical movements, a circular cutter carried by said shaft at its lower end, a means axially movable within said cutter for applying a downward pressure on the work being acted on by the cutter, a stem rising from said means and extending vertically through said shaft for free vertical and rotary movements relative thereto, and weighted means bearing on the upper end of said stem for exerting a downward thrust thereon.

1,219,462. BRAKE-SHOE. JOHN JACOB KINZER, Wildwood, Pa., assignor to Pittsburg Brake Shoe Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 30, 1915. Serial No. 69,377. (Cl. 188—27.)



1. A brake-shoe comprising a back member and a body member composed of a plurality of sections or blocks, said back member and blocks being shaped so that in bending said back member to a curve the latter will grip and secure said blocks.

2. A brake-shoe comprising a back member and a body member composed of a plurality of interlocking wedge-shaped sections or blocks for engaging the wheel, and means for retaining said blocks in position by end pressure.

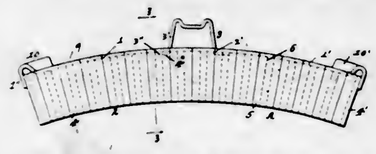
3. A brake-shoe comprising a back member and a body member composed of a plurality of wedge-shaped sections or blocks, said sections or blocks being formed alternately of two different materials.

4. A brake-shoe comprising a back member and a body member composed of a plurality of wedge-shaped sections or blocks, said blocks being formed alternately of metal and a yielding filling material.

5. A brake-shoe comprising a metallic back member and a body member connected with said back member, said body member comprising a series of similarly shaped blocks spaced apart and extending across said back member, and a series of filling members, of a different material from said blocks, disposed in the spaces between said blocks and forming, with said blocks, a continuous braking surface, said back member having downturned ends, and being bent to cause said ends to engage and secure the blocks and filling members of said body member.

[Claims 6 to 24 not printed in the Gazette.]

1,219,463. BRAKE-SHOE. JOHN JACOB KINZER, Wildwood, Pa., assignor to Pittsburg Brake Shoe Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 30, 1915. Serial No. 69,378. (Cl. 188—27.)



1. A brake-shoe comprising a supporting member, a body member formed of a plurality of inclosing sections or blocks, and fillers of frictional material in said blocks.

2. A brake-shoe comprising a supporting member, and a body member formed of a plurality of inclosing sections or blocks, said blocks being provided with wedge-shaped faces for fitting against each other, and fillers of frictional material within said blocks.

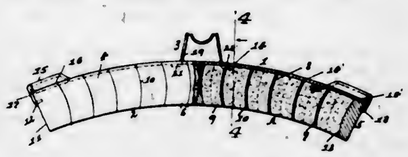
3. A brake-shoe comprising a supporting member, a body member formed of a plurality of recessed sections or blocks, and fillers of frictional material within said recesses.

4. A brake-shoe comprising a supporting member, a body member formed of a plurality of recessed sections or blocks, said blocks being provided with wedge-shaped faces for fitting against each other, and a filling of frictional material within said recesses.

5. A brake-shoe comprising a supporting member, and a body member formed of a plurality of inclosing sections or blocks, said sections being provided with flange portions for forming the sides of said body member, and fillers of frictional material within said blocks.

[Claims 6 to 24 not printed in the Gazette.]

1,219,464. BRAKE-SHOE. JOHN JACOB KINZER, Wildwood, Pa., assignor to Pittsburg Brake Shoe Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 30, 1915. Serial No. 69,379. (Cl. 188—27.)



1. A brake-shoe comprising a supporting member, a body member for engaging the wheel and formed of a plurality of inclosing sections or blocks having a filling of frictional material within the same, and means for locking said blocks.

2. A brake-shoe comprising a supporting member, a body member for engaging the wheel and formed of a plurality of inclosing sections or blocks having a filling of frictional material within the same, and means on said blocks for locking the same.

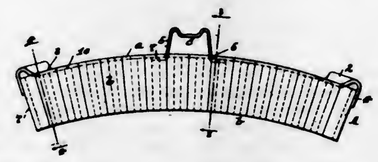
3. A brake-shoe comprising a supporting member, a body member for engaging the wheel and formed of a plurality of inclosing sections or blocks having a filling of frictional material within the same, said blocks having flange portions for forming the sides of said body member, and means on said flange portions for locking said blocks.

4. A brake-shoe comprising a supporting member, a body member engaging the wheel and formed of a plurality of inclosing sections or blocks having a filling of frictional material within the same, said blocks having flange portions for forming the sides of said body member, and means on the bearing faces on said flange portions to lock said blocks.

5. A brake-shoe comprising a supporting member, a body member for engaging the wheel and formed of a plurality of inclosing sections or blocks having a filling of frictional material within the same, said blocks having wedge-shaped flanges for bearing against each other to lock said blocks.

[Claims 6 to 20 not printed in the Gazette.]

1,219,465. BRAKE-SHOE. JOHN JACOB KINZER, Wildwood, Pa., assignor to Pittsburg Brake Shoe Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 13, 1916. Serial No. 130,950. (Cl. 188—27.)



1. In a brake-shoe, the combination with the wheel bearing portion, of a back member for holding said portion, said back member being capable of retaining and permitting the removal of said portion by a spring action.

2. In a brake-shoe, the combination with the wheel bearing portion, of a back member formed of spring metal for holding said portion, said back member being capable of retaining and permitting the removal of said portion by a spring action.

3. In a brake-shoe, the combination with the wheel bearing portion, of a back member capable of retaining and permitting the removal of said portion by a spring action, and having means thereon for holding said portion and member together.

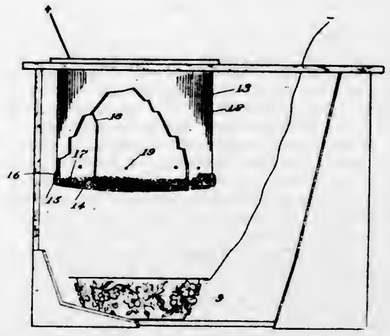
4. In a brake-shoe, the combination with the wheel bearing portion, of a back member formed of spring metal, said back member being capable of retaining and permitting the removal of said portion by a spring action and having means thereon for holding said portion and member together.

5. In a brake-shoe, the combination with the wheel bearing portion, of a back member capable of retaining and permitting the removal of said portion by a spring action and having means thereon for clamping said portion and member together.

[Claims 6 to 16 not printed in the Gazette.]

1,219,466. METHOD OF MANUFACTURING METAL ARTICLES BY DEPOSIT. HENRY C. KIRK, Jr., Roland Park, and GEORGE H. DUMLER, Baltimore, Md. Filed June 3, 1915. Serial No. 31,816. (Cl. 204—8.)

1. The method of manufacturing solid silver articles by deposit which consists in making a pattern, making a flexible, elastic mold from the pattern, removing the pattern from the mold, making a positive from the mold by coating the print with waxlike material and removing the mold, using the positive as the cathode in a copper bath whereby a coating of copper is deposited on the positive forming a copper negative, coating the surface of the copper negative, exclusive of the imprint, with a stopping-off compound, using the copper negative as the cathode in a silver solution having a silver anode, and placing the copper and silver deposit in a weak acid solution and connecting it as the anode whereby the copper is dissolved and deposited on the cathode.

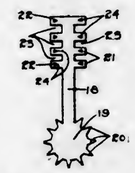


2. The method of manufacturing solid silver articles by deposit which consists in making an undercut pattern forming a flexible mold about the pattern, removing the pattern from the mold, making a positive from the mold, placing the positive in an electro-plating bath and forming a metal negative therefrom, placing the negative as the cathode in a silver-plating bath near the bottom of the tank and using a silver anode placed over the cathode in the solution.

3. The method of manufacturing solid silver articles by deposit which consists in making a chased pattern, making an elastic mold from the pattern, making a positive from the mold, making a metallic negative from the positive, depositing silver on the negative and dissolving the metallic negative.

4. The method of manufacturing solid silver articles by deposit which consists in making a pattern having an irregular surface, making a mold from the pattern, making a positive from the mold, coating the positive with electrically conducting material, making a metallic negative by deposit from the positive by electrolytic deposit, depositing silver on the negative and dissolving the metallic negative.

1,219,467. FASTENER FOR SASH-CORDS. JOHN D. C. KNAPP, Hornsilver, Nev., assignor to John C. Brown, Duluth, Minn. Original application filed Oct. 11, 1915, Serial No. 55,159. Divided and this application filed July 1, 1916. Serial No. 107,152. (Cl. 16—16.)



1. In combination with a sash having a cylindrical seat in the side thereof and a groove extending therefrom, a member having oppositely-extended pairs of barbed wings to engage about a cord in said groove adjacent the end thereof and secure the member thereto, and a pronged disk on the end of said member adapted to enter said seat and connect the cord with the sash, said disk having the prongs thereof radially curved toward the center of the disk so that they may be forced into the wood surrounding the seat when they are brought into a common plane.

2. In combination with a sash having a cylindrical seat in the side thereof and a groove extending therefrom, a plate-like member having a plurality of prongs bent outward from the plane thereof and adapted to enter

said seat and to be forced into the wood surrounding the seat when the prongs are brought into the plane of the member, and means on said member for securing the same to the end of the sash cord.

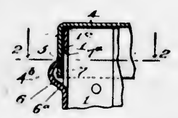
3. In combination with a sash having a cylindrical seat in the side thereof and a groove extending therefrom, a member having a pronged disk on one end adapted to enter said seat, the prongs on said disk being radially curved toward the center of the disk so that they may be forced into the wood surrounding the seat when they are brought into a common plane, and means on said member for securing the same to the end of the sash cord.

4. In combination with a sash having a cylindrical seat and a groove extending therefrom, a member adapted to engage said seat and be secured therein, said member having a pair of arms extending upwardly on both sides of the sash cord, and means on said arms for engaging the sash cord and holding the member in place thereon.

5. In combination with a sash having a cylindrical seat and a groove extending therefrom, a member adapted to engage said seat and be secured therein, said member having a pair of arms extending upwardly on both sides of the sash cord, and oppositely-extended barbed wings positioned in alternation upon said arms for engaging the sash cord and holding the member in place thereon.

[Claim 6 not printed in the Gazette.]

1,219,468. ELECTRIC CUT-OUT BOX. Louis Kossoy, New York, N. Y. Filed June 29, 1916. Serial No. 106,572. (Cl. 220—11.)



1. A box of the class described having a tongue formed integral with the wall of the box and having its free end extending toward the edge of the open side of the box, combined with a cover having a flange to extend along the box wall and provided with a slot, the tongue extending into the slot and having its free end located adjacent to the box wall to retain the cover pivotally on the box.

2. A box of the class described having a tongue bent outwardly from a wall of the box and curving toward the edge of the open side of the box, the lower part of the tongue being integral with the box wall and the free edge of the tongue extending toward the box wall above the connection of the tongue therewith, combined with a cover having a flange to fit along the box wall, the flange being provided with a slot receiving the bent portion of the tongue, the free end of the tongue opposing the flange adjacent to its slot when the cover is closed, the portion of the tongue connected to said wall supporting said portion of the flange when the cover is open.

3. A box of the class described having a curved tongue bent outwardly from a wall of the box and having its free end extending toward the edge of the open side of the box providing a space between the tongue and the box wall, combined with a cover having a flange to extend along the box wall, said flange having a slot receiving said tongue, said flange having a portion 4^b located in said space between the tongue and the box wall adapted to engage the free end of the tongue when the cover is closed and to rest upon the tongue adjacent its junction with said wall when the cover is open.

1,219,469. WRENCH. James A. Lauer and Alexander A. McConnell, Patton, Pa. Filed Oct. 3, 1914. Serial No. 864,910. (Cl. 81—134.)

In a wrench, a fixed and a movable shank, the said movable shank being equal in width with said fixed shank and being capable of sliding longitudinally thereon, the adjacent faces of said fixed and movable shanks being engaged throughout the length of the latter, jaws at the outer ends of said shanks, a central longitudinally disposed rib on the inner face of said fixed shank, the said rib being rectangular in cross section, the said movable shank being provided on its under face with a central longitudinally disposed groove of the same size and shape as said rib and being adapted to receive the latter, teeth on said rib, the said movable shank being recessed upon its under face adjacent its jaw end, the said recess opening



into said groove, a spring secured at one end to said movable shank within said recess and normally engaging with said teeth, a band secured to said movable shank and snugly holding the latter in engagement with said fixed shank, the said band having an aperture in one side, a lateral projection on the free end of said spring extending through said aperture, and a handle comprising a strap member secured to said fixed shank adjacent one end and inclosing said movable shank to hold the latter in to close engagement with the former.

1,219,470. ELECTRIC SWITCH. George N. Lemmon, Greensburg, Pa. Filed Feb. 1, 1915. Serial No. 5,561. (Cl. 175—282.)



1. An electric switch having in combination a stationary insulated support, a rotative insulated support, a conducting member mounted on each of these supports, a flexible contact-making brush, mounted on one of these conducting members, and a contact-making member pivotally mounted on the other conducting member and extending as a continuation of the conducting member upon which it is mounted, toward the other conducting member.

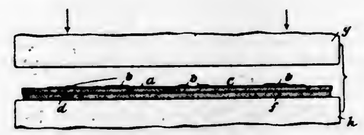
2. An electric switch having in combination a stationary insulating contact-supporting member, a rotative insulating contact-supporting member, and a contact member pivotally mounted on one of these supports and capable of limited motion about its pivot and of securing toggle-joint action in combination with a contact member on the other support.

3. In an electric switch, a pair of coöperating contact members, two pivoted levers arranged to form a toggle-lever, one of said contact members being carried by one of said pivoted levers, and coöperating interlocking members, one connected to each contact member.

4. In an electric switch, a fixed contact member, a movable contact member, a pair of pivoted levers forming a toggle, one of said levers carrying said movable contact member, and coöperating interlocking members, one connected to each contact member.

1,219,471. [WITHDRAWN.]

1,219,472. ART OF FORMING PRINTING-BODIES. Ottocar H. Martinsen, New York, N. Y., assignor, by mesne assignments, to C. Becher Furness, New York, N. Y. Filed Apr. 4, 1914. Serial No. 829,508. (Cl. 76—107.6.)

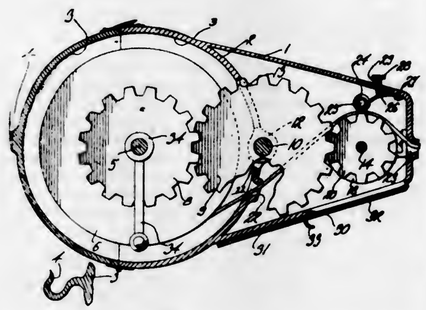


1. The method herein described consisting in placing a planiform body of plastic material flatwise on a support substantially unyielding throughout a predetermined area of said body, placing a plate having a printing impression formed therein flatwise upon and with its obverse face toward the said body and placing upon said plate in registry with a selected and more or less limited part of said impression make-ready material conforming in size and shape with said part, and thereupon exerting on said plate and the make-ready material pressure toward the support and substantially uniformly throughout said area.

2. The method herein described consisting in placing a planiform body of plastic material flatwise on a support substantially unyielding throughout a predetermined area of said body, placing a plate having a printing impression formed therein flatwise upon and with its obverse face toward the said body and placing upon said plate a make-ready sheet having a part thereof registering, and conforming in size and shape, with a selected and more or less limited part of said impression thickened-up, and thereupon exerting on said plate and the make-ready sheet pressures toward the support and substantially uniformly throughout said area.

3. The method herein described consisting in printing on a piece of sheet material a picture and forming in an impressionable plate of transparent material a picture-impression constituting an impression-counterpart of the picture, thickening up the piece of sheet material in a part thereof conforming in size and shape with a selected part of the picture-impression and thereby forming a make-ready sheet, then placing the make-ready sheet against the reverse side of said plate with the picture on said sheet registering with the picture-impression in the plate and the obverse side of the plate against an impressionable support, and then subjecting sheet, plate and support to pressure.

1,219,473. CHALK-LINE HOLDER. Henry J. Meldrum, Detroit, Mich. Filed Nov. 9, 1915. Serial No. 60,547. (Cl. 33—87.)



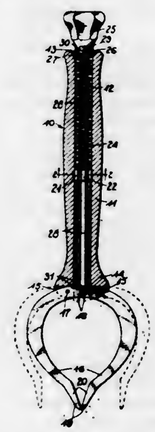
1. A chalk line holder including a casing, a chalk line, winding means for the chalk line, chalking means within the casing for acting upon the chalk line during the operation of the winding means, a rotatably and resiliently mounted roller arranged within the casing for holding the chalk line in engagement with the chalk means.

2. A chalk line holder including a casing, winding means within the casing, a chalk line associated with the winding means, chalking means coöperating with the chalk line when the chalk line is being wound upon the drum or being withdrawn therefrom, a rotatably mounted roller, resilient means for supporting the roller, and adjusting means for engagement with the supporting means for holding the roller in engagement with the chalk line and for consequently holding the chalk line in close relation with the chalking means while it is being operated.

3. A chalk line holder including a casing, a winding drum rotatably mounted in the casing, a chalk line connected to the winding means, rotatably mounted stub shafts arranged in spaced alinement in the casing, one of which is removable, cups formed on the adjacent ends of the stub shafts, a piece of chalk arranged between the cups, resilient means mounted on the removable stub shaft for maintaining an effective engagement between the cups and the chalk, and means for simultaneously rotating the drum and the stub shafts to facilitate the application of the chalk to the chalk line.

4. A chalk line holder including a casing, a drum rotatably mounted in the casing, a chalk line connected to the drum, a gear carried by the drum, a piece of chalk, a chalk holder rotatably mounted in the casing and removably and resiliently associated with the piece of chalk for coöperating with the chalk line during operation of the drum, a gear carried by the chalk holder, resilient brackets mounted in the casing, a roller rotatably mounted in the brackets, means for adjustably engaging the brackets for consequently holding the chalk line in close relation with the piece of chalk, and another gear rotatably mounted in the casing intermediate and meshing with the first mentioned gears whereby when the drum is rotated the piece of chalk will be rotated in the same direction but opposite to the direction assumed by the chalk line when it is being wound or unwound.

1,219,474. DEVICE FOR PICKING UP AND DROPPING LUMP-SUGAR AND CANDY. Aaron Mendelson, Brooklyn, N. Y. Filed Oct. 12, 1914. Serial No. 866,274. (Cl. 65—52.)



1. A device of the class described comprising a tubular handle, jaws fulcrumed on the lower end thereof, a compression spring within the handle, a doubled rod longitudinally movable in the handle and having its members engaging the respective jaws, a stop for the spring, and

an operating button connected with the doubled extremity of the rod.

2. A device of the class described comprising a tubular handle, jaws separately pivoted thereon, a pair of members connected at their upper ends and slidable in the handle, with the lower ends engaging the jaws respectively, a pushbutton on the upper end of the members, a spring surrounding the members and bearing against the pushbutton, and a stop against which the spring bears, whereby the tension of the spring holds the jaws closed.

3. A device of the class described comprising a handle, and jaws composed of curved members pivotally connected with the handle and formed with free extremities constituting a receptacle open at its top and having a closed pointed bottom, said receptacle being divided in a central plane between the jaws, whereby the receptacle discharges its contents when the jaws are opened.

1,219,475. SALT AND PEPPER DISPENSER. IRL N. MORRIS, Kansas City, Mo. Filed Feb. 14, 1916. Serial No. 78,255. (Cl. 65—45.)



1. A salt and pepper dispenser provided with two chambers having open ends, a cover normally closing said open ends and having two sets of discharge perforations respectively communicating with said chambers, and an oscillatable member pivoted to said cover and having two sets of perforations so arranged that, with the oscillatable member in one position, both sets of perforations therein will register respectively with the two sets of perforations in the cover, and when the oscillatable member is moved to another position, only one set of perforations will be in register with the perforations in the cover with which they coöperate, the arrangement of the perforations being such that with the oscillatable member in still another position, none of the perforations in the cover will be in register with the perforations in the oscillatable member.

2. A salt and pepper dispenser provided with two chambers having open ends, a cover normally closing said ends and provided with two sets of discharge perforations respectively communicating with said chambers and having an upwardly extending annular flange, and an oscillatable member pivoted to the upper side of said cover and encircled by said flange and provided with two sets of perforations, so arranged that, when the oscillatable member is in one position, one set of its perforations will register with one set of the perforations in the cover, and when the oscillatable member is in another position, the other set of its perforations will register with the other set of the perforations in the cover, and when moved to a third position, the two sets of perforations in the oscillatable member will both be in register with the two sets of perforations respectively in the cover, the oscillatable member and the cover being provided with interlocking means by which the oscillatable member will be yieldingly held from moving from either of the said three positions.

3. A salt and pepper dispenser provided with two chambers each having a set of discharge perforations, and an oscillatable member provided with two sets of perforations adapted to register alternately respectively and also simultaneously with the two sets of perforations of said chambers when the oscillatable member is moved consecutively to three positions.

4. A salt and pepper dispenser provided with two chambers each having a set of discharge perforations, an oscillatable member provided with two sets of perforations adapted to register alternately and also simultaneously with the two sets of perforations respectively of said chambers, and means for yieldingly holding the oscillatable members from moving from the operative positions to which it is adjusted.

5. A salt and pepper dispenser provided with two chambers each having an open end, a cover for closing said open ends and having two sets of perforations respectively communicating with said chambers and having an upwardly extending annular flange provided in its upper edge with a notch, and an oscillatable member pivoted to the upper side of said cover and encircled by said flange and having two sets of perforations adapted to register alternately and also simultaneously with said two sets of perforations respectively of the cover, the oscillatable member having a peripheral projection extending through said notch and beyond the peripehry of said flange by which the oscillatable member may be oscillated, the oscillatable member and the cover having means connecting them by which the oscillatable member may be yieldingly held from moving from the positions in which it is operative for placing the perforations in register.

1,219,476. GARMENT-HANGER FOR AUDITORIUM-SEATS. JOSEPH H. NELSON, Sioux City, Iowa. Filed Mar. 1, 1916. Serial No. 81,416. (Cl. 155—26.)

1. A garment hanger comprising a bracket adapted to



be secured to a support and including a longitudinally-grooved arm having a bore in one end thereof, a garment-supporting rod having a lateral arm at one end adapted to rest in the groove of the bracket arm and provided with a boss freely inclosed by said bore, and means for releasably supporting the free end of said rod at substantially the same height as the other end.

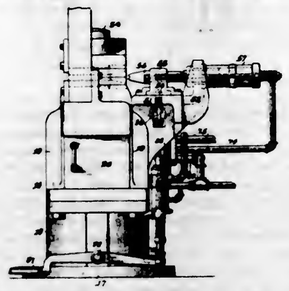
2. A garment hanger comprising a bracket adapted to be secured to a support and including a longitudinally-grooved arm having a bore in one end thereof, a garment-supporting rod having a lateral arm at one end adapted to rest in the groove of the bracket arm and provided with a boss freely inclosed by said bore, a second bracket adapted to be mounted on the support, and a hook pivoted thereon to swing horizontally and engageable with the free end of the supporting rod.

1,219,477. DRILL-SHARPENER. EDWARD L. OLDHAM, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Apr. 5, 1915. Serial No. 19,315. (Cl. 76—5.)

1. In apparatus of the character set forth, the combination with coacting dies, of fluid actuating means for relatively moving the same, a fluid operated hammer, means for supplying fluid under pressure to the die moving means and to the hammer, and a reciprocatory piston valve controlling said supply to first effect the operation of the dies and afterward the operation of the hammer when said piston valve is moved in one direction and first stopping the operation of the hammer and releasing the dies when said piston valve is moved in an opposite direction, and means for reciprocating the piston valve.

2. In apparatus of the character set forth, the combination with coacting dies, of fluid actuating means for relatively moving them, comprising a cylinder member and a piston operating therein, means for supplying fluid under pressure to the cylinder member on both sides of the piston, and means for by-passing the fluid from one side to the other.

3. In apparatus of the character set forth, the combination with coacting dies, of fluid actuating means for relatively moving them, comprising a cylinder member and a piston operating therein, means for supplying fluid under pressure to the cylinder member on both sides of the piston, means for by-passing the fluid from one side to the other, and common mechanism for controlling the supply to both sides and to the by-pass means.

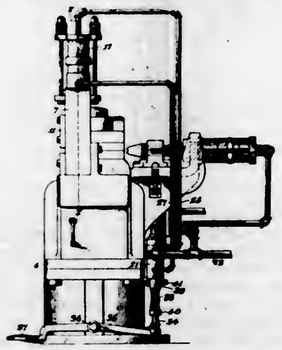


4. In apparatus of the character set forth, the combination with coacting dies, of fluid actuating means for relatively moving them, comprising a cylinder member and a piston operating therein, means for supplying fluid under pressure to the cylinder member on both sides of the piston, means for by-passing the fluid from one side to the other, and a common valve for controlling the supply to both sides of the piston and through the by-passing means.

5. In apparatus of the character set forth, the combination with coacting dies, of fluid actuating means for relatively moving them, including a cylinder member and a piston operating therein, means for supplying fluid to one side of the piston, means for exhausting it from the other side, and means for by-passing the fluid from one side to the other side and simultaneously closing the exhaust therefrom and from the fluid supply means.

[Claims 6 to 28 not printed in the Gazette.]

1,219,478. DRILL-SHARPENER. EDWARD L. OLDHAM, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Apr. 5, 1915. Serial No. 19,316. (Cl. 76—5.)



1. In apparatus of the character set forth, coacting die members, a motor for operating the same, means for supplying motive fluid under pressure to the motor and distributing it therein to repeatedly actuate it, means for supplying motive fluid under pressure to the motor to hold it in a position with the dies separated, and common means for controlling both fluid supplies.

2. In apparatus of the character set forth, coacting die members, a motor for operating the same, means for supplying motive fluid under pressure to the motor and distributing it therein to repeatedly actuate it, means for supplying motive fluid under pressure to the motor to hold it in position with the dies separated, and a common valve for consecutively controlling both fluid supplies.

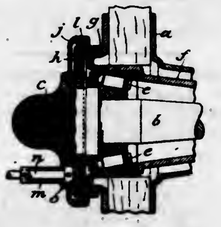
3. In apparatus of the character set forth, coacting die members, a motor for operating the same, means for supplying motive fluid under pressure to the motor and distributing it therein to repeatedly actuate it, means for supplying motive fluid under pressure to the motor to hold it in position with the dies separated, and common means for controlling both fluid supplies and admitting the motive fluid first to the motor to separate the dies and afterward to the motor to repeatedly actuate the same.

4. In apparatus of the character set forth, coacting die members, a motor comprising a cylinder member and a piston operating therein, means for supplying motive fluid to opposite faces of the piston in the cylinder member to repeatedly actuate the piston, means for also supplying motive fluid under pressure to the piston for moving the same and holding it in a position with the dies separated, and means for controlling the supplies of actuating fluid and holding fluid.

5. In apparatus of the character set forth, coacting die members, a motor comprising a cylinder member and a piston operating therein, means for supplying motive fluid to opposite faces of the piston in the cylinder member to repeatedly actuate the piston, means for also supplying motive fluid under pressure to the piston for moving the same and holding it in a position with the dies separated, and a common valve for controlling the supply of actuating fluid and the supply of the holding fluid.

[Claims 6 to 10 not printed in the Gazette.]

1,219,479. SPEEDOMETER DRIVING MECHANISM. JOHN G. PERRIN, Detroit, Mich., assignor to Motor Patents Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 3, 1912. Serial No. 713,168. (Cl. 235—96.)

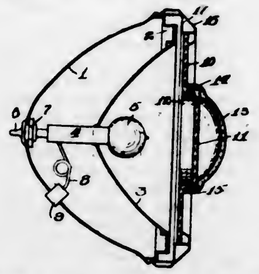


A demountable unit adapted to constitute a mounting for a driving mechanism, said unit comprising two elements, one a flat ring of relatively large diameter having internally projecting teeth on one side of said ring, and means including a smooth bearing surface at one side of said teeth for fastening the ring to an actuating member designed to close one open side of the ring, the other element being a flat cap having a peripheral flange telescoping said ring and in dust-tight sliding engagement therewith, means for mounting said cap, said cap coacting with said mounting to close the other open side of the ring, and a shaft bearing carried by said cap and adapted to support a member meshing with the teeth of the ring.

1,219,480. HEADLIGHT. WARD S. PERRY, Chicago, Ill. Filed Nov. 30, 1914. Serial No. 874,628. (Cl. 240—48.4.)

1. In a headlight of the class described a lens having transparent and semi-transparent portions, attaching means rigidly secured on said lens between said trans-

parent and semi-transparent portions, and a semi-transparent glass cap adapted to be secured to said means to cover said transparent portion.



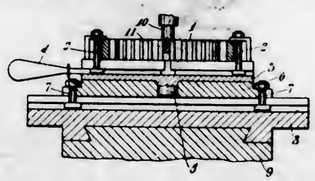
2. In a device of the class described, a casing, a reflector therein, an incandescent bulb mounted within said reflector, a main light of glass secured on said casing over said reflector, said glass having a clear outwardly directed raised portion and a translucent flat portion, and a secondary glass member adapted to be secured on said clear raised portion to completely cover the same.

3. In a device of the class described the combination with a headlight of a glass thereon having a semi-transparent annulus portion, a raised portion of clear glass within said annulus and integrally formed on said glass, and a cap adapted to be secured on said raised portion of clear glass.

4. In a device of the class described the combination with a headlight, of a light of glass secured thereon, said light of glass having a semi-transparent annulus portion and a central circular clear portion of glass, attaching means on said glass between said semi-transparent and clear portions, and a semi-transparent cap adapted to be secured on said means to cover said clear portion of glass.

5. The combination with a headlight, of a light of glass secured thereon embracing a semi-transparent annulus portion, and an integral raised portion of clear glass, threads formed around the outer periphery of said raised portion, and a semi-transparent cap adapted to be secured thereover by engagement with said threads.

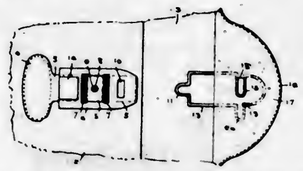
1,219,481. METHOD OF CHAMFERING THE TEETH OF GEARS. LARS AUGUST PETERSSON and GUSTAF LEANDER ANDERSSON, Stockholm, Sweden. Filed May 24, 1915. Serial No. 30,239. (Cl. 90—11.)



The method of chamfering the teeth of gear wheels, which consists in forcing a gear and a cutter, the latter of which converges to a central guiding pivot, and which rotates with its axis approximately parallel to the longitudinal direction of the tooth, against each other by pressure normal to the profile of the gear teeth at all points thereof and limiting the resulting relative movement of said parts to a uniform amount by means of said guiding pivot on the cutter resting against the side of the tooth and following the profile of the same.

1,219,482. SHOE AND OTHER FASTENER. JACOB P. Phillips, Yantley, Ala. Filed June 30, 1916. Serial No. 106,855. (Cl. 24—68.)

1. In a fastening device, the combination with a keeper formed with an opening and a loop, of a latch member embodying a body and a tongue adapted to enter said opening in the keeper, and an arm carried by the latch member adapted to engage said loop.



2. In a fastening device, a keeper having an opening formed adjacent one end, a laterally extending loop at the other end, a resilient latch member embodying a body and a tongue at one end of said body adapted to engage said keeper opening, and an inwardly and laterally projecting arm carried by the opposite end, said arm adapted to be sprung laterally to engage it with the keeper loop.

3. In a fastening device, a keeper having an opening formed therein, a loop carried by the keeper, a spring wire latch member embodying a body and a tongue at one end of said body adapted to engage said keeper opening, and an arm carried by the opposite end of the latch member, and a finger piece carried by said latch member whereby the latch member may be flexed to spring said arm into engagement with the keeper loop.

4. In a fastening device, a keeper having an opening formed therein adjacent one end, a loop formed at the other end, a spring wire latch member comprising a body and a tongue at one end for engagement with the keeper opening, a laterally projecting arm adjacent the opposite end of said body, and means projecting from the latch member and at right angles to the laterally extending arm, said members adapted to be positioned on one side of the keeper loop to prevent accidental disengagement of said latch arm from the loop.

1,219,483. FLUSH-VALVE. CLARENCE G. PLUMB, Lorain, Ohio. Filed Oct. 2, 1916. Serial No. 123,392. (Cl. 4—5.)



1. A reservoir valve comprising a hollow coupling having a bridge extending therethrough, and having its upper end portion cut to provide a valve seat, a guiding rod carried by said bridge and extending above the coupler, a cup carried by said guiding rod and provided with outlet openings adjacent its lower end, a tube slidably mounted upon said rod and extending above the lower end of said cup, a float connected with the lower portion of the tube and positioned about the same and having its lower portion forming a valve head seated upon the valve seat of said coupler when the tube moves downwardly, means for engaging the tube to move the same upwardly, and means for limiting the upward movement of the tube.

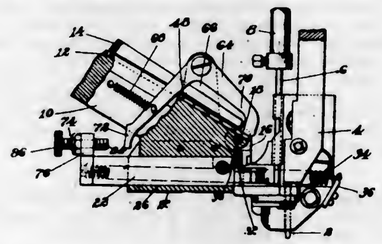
2. A reservoir tank valve comprising a coupler constituting a valve seat, a guiding rod extending above said coupler, a valve comprising an open ended tubular body slidably mounted upon said guide rod, a float positioned about the lower portion of said body and having a valve head at its lower end for seating upon the valve seat of said coupler, said guiding rod being provided at its upper end with a cup extending above the upper end of said tube and having openings in its lower portion, a refill pipe extending into said cup, and means for drawing said tubular body upwardly.

3. A reservoir valve comprising a coupling constituting a valve seat, a valve comprising a tubular body open at its lower end, a float carried by said tubular body and provided with a valve head for seating upon the valve seat of said coupler, guiding means for the tubular body including a cup provided with means for admitting fluid within the tubular body, and means for moving the tubular body upwardly to unseat the valve.

4. A reservoir valve comprising a hollow valve seat, a valve comprising a tubular body, a float carried by the body and provided with a valve head for seating upon the valve seat, and guiding means for the tubular body constituting means for admitting fluid into the tubular body through the upper portion thereof.

5. A reservoir valve comprising a hollow coupling having a valve seat at its upper end, a guiding rod extending above the coupler, a cup carried by said guiding rod and provided with outlet openings adjacent its lower end, a tube slidably mounted upon said rod and extending above the lower end of said cup, a float connected with the lower portion of the tube and having a valve head at its lower end seated upon the valve seat of said coupler when the tube moves downwardly, and means for engaging the tube to move the same upwardly.

1,219,484. MACHINE FOR INSERTING FASTENINGS. WILLIAM PRATT and GERALD PEGG, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 30, 1913. Serial No. 782,044. (Cl. 1—18.)



1. In a machine of the class described, a raceway down which fastenings gravitate end to end, a fastening carrier, a device for transferring the fastenings from said raceway to said fastening carrier comprising a movable section arranged to oscillate between two positions, in one of which it forms a continuation of said raceway and receives endwise a single fastening of the line of fastenings in said raceway, and in the other of which it discharges said fastening under the action of gravity to said fastening carrier, and means for operating said carrier to deliver said fastening to the point at which it is to be operated upon.

2. In a machine of the class described, a raceway down which fastenings gravitate end to end, a reciprocatory fastening carrier having a vertical fastening receiving opening, and a fastening transferring member operated automatically by movement of said carrier from a position in which it forms an extension of the raceway and receives endwise one of the line of fastenings in said raceway to a second position in which it places said fastening in vertical position in said carrier preparatory to being driven.

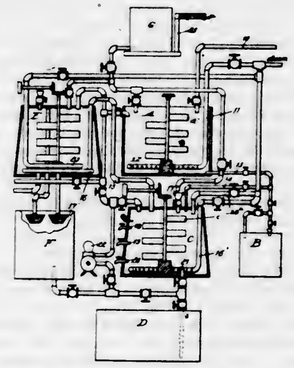
3. In a machine of the class described, an inclined raceway down which fastenings gravitate end to end, a fastening carrier having a vertical fastening receiving opening, said carrier being movable between a fastening receiving position and a fastening delivering position, and means for transferring a fastening from said inclined raceway into the vertical opening in said carrier comprising a member arranged to swing between an inclined position in which it receives a single fastening from said raceway and a vertical position in which it discharges said fastening in upright position into the vertical opening in said carrier.

4. In a machine of the class described, an inclined raceway down which fastenings gravitate end to end, a fastening carrier, means for operating said carrier to transfer the fastenings to the point at which they are to be operated upon, means for receiving endwise and separating the endmost fastening of the line of fastenings in said raceway from the remaining fastenings and presenting it in vertical position to said carrier, and means operated automatically by said carrier to control movement of the line of fastenings in the raceway.

5. In a machine of the class described, an inclined raceway down which fastenings gravitate end to end, fastening transferring means comprising a reciprocatory carrier, a member adapted to swing between a position in which it forms a continuation of said raceway and receives endwise the endmost fastening in said raceway and a position in which it presents the fastening in upright position to said carrier, and means operated automatically by said carrier as it moves into nail receiving position to prevent movement of the fastenings down said raceway.

[Claims 6 to 11 not printed in the Gazette.]

1,219,485. PROCESS FOR DECOMPOSITION OF FATS AND OILS. BALTHASAR E. REUTER, Chicago, Ill., assignor to Reuter Process Company, Chicago, Ill., a Corporation of Illinois. Filed May 20, 1912. Serial No. 698,615. (Cl. 87—4.)



1. The process of decomposing fats or oils which consists in forming a mixture of the fats or oils, catalytic reagent and water and simultaneously boiling and agitating the mixture with a portion of sulfuric acid sufficient to break up the fats or oils to insure a good emulsion whereby intimate intermixture between the reagent and fats or oils is attained.

2. The process of decomposing fats or oils which consists in forming a mixture of the fats or oils, catalytic reagent and water, agitating the mixture and simultaneously boiling the mixture with a portion of sulfuric acid sufficient to break up the fats or oils to insure an emulsion and intimate intermixture of the fats or oils and reagent, but insufficient to settle the water out of the fats or oils.

3. The process of decomposing fats or oils which consists in repeatedly subjecting the fats or oils to the following treatment: mixing the fats or oils with sulfuric

acid, water and a portion of catalytic reagent too small to wholly decompose the fats or oils, boiling the mixture, and continuously agitating the mixture during the boiling operation.

4. The process of decomposing fats or oils and bleaching the resultant fatty acids consisting in subjecting the fats or oils to successive treatments each as follows: mixing the fats or oils with water, sulfuric acid and a quantity of catalytic reagent too small to wholly decompose the fats or oils under treatment, boiling the mixture and continuously agitating the mixture during the boiling operation, and after the successive decomposing treatments bleaching the fatty acids resulting from said decomposition.

5. The process of decomposing fats or oils consisting in subjecting the fats or oils to successive treatments each as follows: mixing the fats or oils with water from .03% to 1% of sulfuric acid and from .1% to .4% of catalytic reagent, boiling the mixture from 12 to 18 hours, and continuously agitating the mixture during the boiling operation.

[Claims 6 to 11 not printed in the Gazette.]

1,219,486. PROCESS OF BLEACHING FATS, OILS, AND THEIR DERIVATIVES. BALTHASAR E. REUTER, Chicago, Ill., assignor to Reuter Process Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 8, 1912. Serial No. 730,214. (Cl. 87—12.)

1. The process of bleaching fats, oils, fatty acids, glycerin, or soap, which consists in forming an emulsion of the material treated by the addition and mixture therewith of a sufficient quantity of water, boiling the mixture, excluding air from contact with the mixture and at the same time maintaining the mixture under substantially atmospheric pressure, adding a hydro-sulfite bleaching agent, slowly and in small successive amounts to the mixture throughout the complete bleaching operation to prevent wasteful decomposition of the bleaching agent if added rapidly or in large amounts, and maintaining the mixture in a sufficiently acid condition to decompose the bleaching agent as it is added to the mixture.

2. The process of bleaching fatty acids which consists in successively boiling an emulsion of the fatty acids with a hydrosulfite compound, maintaining the mixture under substantially atmospheric pressure excluding air from contact with the fatty acids during the boiling operations and maintaining the mixture in a sufficiently acid condition to decompose the bleaching agent as it is added to the mixture.

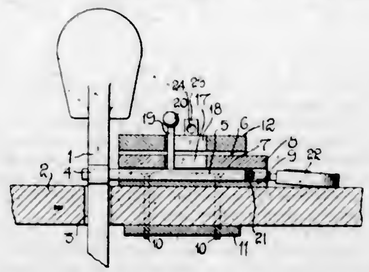
3. The process of bleaching fatty acids which consists in intimately mixing with the fatty acids a sufficient quantity of water to form an emulsion, excluding air from contact with the mixture by maintaining a steam seal above the mixture and repeatedly subjecting the mixture to the following treatment: heating and agitating the mixture with water, together with from .05% to 2% of hydro-sulfite compound, thereupon boiling from 15 to 30 minutes and maintaining the mixture at substantially atmospheric pressure, adding sufficient sulfuric acid to break the emulsion and decompose the bleaching agent, and settling out and withdrawing the water.

1,219,487. [WITHDRAWN.]

1,219,488. AUTOMOBILE-LOCKING DEVICE. GEORGE R. ROMPF, Somonauk, Ill. Filed Sept. 30, 1916. Serial No. 123,107. (Cl. 16—64.)

1. A locking device including a casing, a locking pin movable therein, fastening means engageable with the casing and adapted to secure same to a support, and a housing adapted to be slipped upon the casing over said fastening means, the casing being provided with means for engagement by the hasp of a padlock whereby the latter will serve to prevent the retraction of the locking pin, and the removal of the housing.

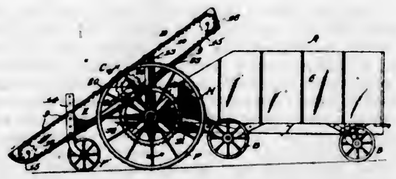
2. A locking device including a casing, a locking pin movable therein, fastening devices engageable with the casing and adapted to secure same to a support, and a housing adapted to be slipped upon the casing over the fastening devices, the casing being formed back of said housing and back of said locking pin in its projected position with an opening designed to receive the hasp of a padlock whereby the latter will serve to prevent the retraction of the locking pin and the removal of the housing.



3. A locking device comprising a casing, a locking pin movable therein, fastening devices extending through the casing and adapted to secure same to a support, and a housing adapted to be slipped upon the casing and formed with longitudinally extending ribs, the casing being formed with longitudinal grooves with which the ribs are designed to interlock, the casing being formed with a transversely extending opening back of the locking pin in the projected position of the latter, designed to receive the hasp of a padlock for holding the pin in projected position and for preventing the removal of the housing.

4. A locking device comprising a casing, a locking pin movable therein, a housing adapted to be slipped upon the casing, for the purpose specified, the casing and housing being formed with registering openings and the locking pin being provided with a handle engageable in and through said openings, the casing being formed back of the housing with transverse openings designed to receive the hasp of a padlock to hold the locking pin in projected position and prevent the removal of the housing, and ears formed on the housing on opposite sides of the opening therein, said ears being formed with transversely alining apertures, as and for the purpose set forth.

1,219,489. BUNDLE LOADING AND CONVEYING MACHINE. FORBA H. ROSE, Red Oak, Iowa. Filed July 28, 1916. Serial No. 111,868. (Cl. 214—2.)



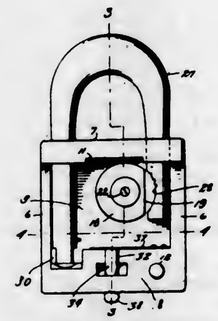
1. A bundle loading and conveying machine comprising in combination, elevating mechanism including an axle and ground wheels thereon, a receiver including ground wheels, and mechanism detachably connecting said elevating mechanism in operative relation to said receiver and pendently supporting one end portion of the latter from the axle of the ground wheels of said elevating mechanism.

2. A bundle loading and conveying machine comprising in combination, elevating mechanism including ground wheels, a receiver including two sets of ground wheels, and mechanism detachably connecting said elevating mechanism into operative relation to said receiver with one set of the wheels of the latter lifted from the ground and the elevating mechanism and receiver in rigid relation throughout their length.

3. A bundle loading and conveying machine comprising in combination, elevating mechanism including ground wheels, a receiver including two sets of ground wheels, a horizontal support carried by said elevating mechanism, bars carried by said receiver at one end thereof, said bars provided with lower faces inclined to the horizontal adapted to ride upon said support of said elevating mechanism and lift the adjacent set of wheels of said receiver from the ground, and a catch means for retaining said elevating mechanism and receiver in operative relation one to the other for the delivery of bundles elevated by said elevating mechanism to said receiver and with said bars in engagement with said support.

4. A bundle loading and conveying machine comprising in combination, elevating mechanism including ground wheels and a transverse frame member, a receiver including two sets of ground wheels, a horizontal support carried by said elevating mechanism transversely thereof, bars carried by said receiver at one end thereof, said bars provided with lower faces inclined to the horizontal, adapted to ride upon said support of said elevating mechanism and lift the adjacent set of wheels of said receiver from the ground, a transverse member carried by said receiver adapted to engage the said transverse frame member of said elevating mechanism when the said set of wheels is raised from the ground, and a catch carried by said elevating mechanism adapted to engage said transverse member of said receiver to retain the latter in operative relation to said elevating mechanism for delivering bundles elevated thereby, to said receiver.

1,219,490. COMBINATION-PADLOCK. WILLIAM H. SANDERS, Bedford Hills, N. Y. Filed Apr. 23, 1915. Serial No. 23,479. (Cl. 70—113.)

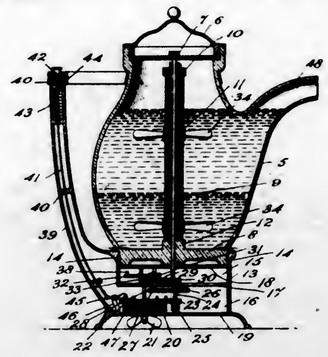


A lock of the class described comprising a casing, the top of the casing being extended and beveled and provided with a recess, a detachable back portion having its top beveled, a tenon thereon engaging in the recess, a shackle, permutation mechanism for said shackle, a member carried by the back portion and engageable by the shackle, a second member carried by the back portion, and a keeper block in the casing for engaging said second member.

1,219,491. SALAD-DRESSING CONTAINER. QUINTINO SANTICOLA, Cleveland, Ohio. Filed July 28, 1915. Serial No. 42,306. (Cl. 259—108.)

1. A portable salad dressing container, comprising a casing having a handle, disposed so as to be engageable by the hand in carrying the container; a receptacle mounted on the casing and communicating therewith; an agitator disposed in the receptacle; means for operating the agitator and disposed in the casing; and hand-operative means for controlling the agitator operating means and

connected to the handle and disposed so as to be accessible to the hand when the container is held thereby.



2. A portable salad dressing container, comprising a casing having a tubular handle disposed so as to be engageable by the hand in carrying the container; a receptacle mounted on the casing and communicating therewith; an agitator disposed in the receptacle; means for operating the agitator, and disposed in the casing, and a hand-operative means mounted in the handle and disposed so as to be accessible to the hand when the container is held thereby.

3. A portable salad dressing container, comprising a casing having a tubular handle disposed so as to be engageable by the hand in carrying the container; a receptacle mounted on the casing and communicating therewith; an agitator disposed in the receptacle; means for operating the agitator and disposed in the casing; and hand-operative spring-actuated means for controlling the agitator operating means and mounted in the handle and disposed so as to be accessible to the hand when the container is held thereby.

4. A portable salad dressing container comprising a casing, having a tubular handle disposed so as to be engageable by the hand in carrying the container; a receptacle mounted on the casing and communicating therewith; an agitator disposed in the receptacle; a motor for operating the agitator and disposed in the casing; and a hand-operative spring actuated means of controlling the motor and mounted in the handle and disposed so as to be accessible to the hand when the container is held thereby.

5. A portable salad dressing container, comprising a casing having a tubular handle disposed so as to be engageable on a hand in carrying the container; a receptacle mounted on the casing and communicating therewith; said handle also connected to the receptacle; an agitator disposed in the receptacle; means for operating the agitator and disposed in the casing; and a hand-operative spring actuated means for controlling the agitator operating means and mounted in the handle and disposed so as to be accessible to the hand when the container is held thereby.

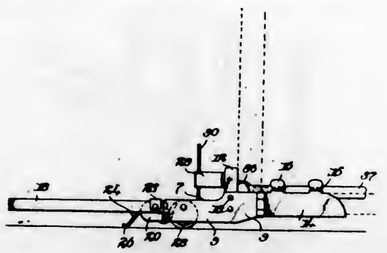
[Claims 6 and 7 not printed in the Gazette.]

1,219,492. PIANO-TRUCK. HANNIBAL C. Z. SAWTELL, Parsons, Kans. Filed Nov. 29, 1913. Serial No. 803,776. (Cl. 21—117.)

1. A device of the character described including a frame, means for moving said frame, and a clamp for securing a piano to said frame including a metallic plate hingedly connected to said frame for facilitating the engagement and removal of said piano with and from said frame, respectively.

2. A device of the character described including a main frame, a supporting plate carried by said frame, a roller frame carried in said main frame, a ball for actuating

said main frame, means for actuatably connecting said roller frame with said bail and means for limiting the movement of said roller frame in said main frame.



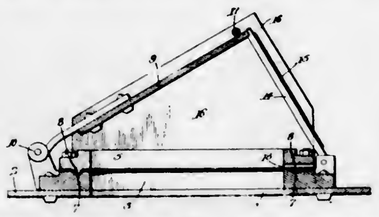
3. A piano truck including a main frame, a supporting plate carried by said frame, a roller frame comprising a metallic strap having its ends bent laterally thereto carried by said main frame, rollers mounted in spaced apart relation between the bent ends of said strap, an operating bail pivotally engaged with said main frame and being in pivotal engagement with said roller frame, means carried by said operating bail for detachably engaging said roller frame therewith, and a stop lever carried by said supporting plate for limiting the movement of said roller frame.

4. A piano truck including a frame, a supporting plate carried by said frame, a clamp element hingedly connected to said frame for engaging a piano therewith, a roller frame carried by said frame, rollers revolubly mounted in said roller frame, a bail for operating said truck, said bail being associated with said roller frame for throwing the rollers into and out of engagement with the road of travel, means carried by said bail for holding said roller frame in engagement therewith, at times, and means carried by said frame for retaining said rollers in engagement therewith, at times, for the purpose specified.

5. A piano truck including a frame, an operating handle pivoted to the frame, a roller frame pivotally associated with the handle, and means secured to the handle for attaching the roller frame thereto for contemporaneous movement.

[Claims 6 to 10 not printed in the Gazette.]

1,219,493. EXPLOSION-HATCH FOR OIL-CONTAINERS. CLARENCE N. SCOTT, Houston, Tex. Filed Nov. 6, 1915. Serial No. 60,055. (Cl. 220—121.)



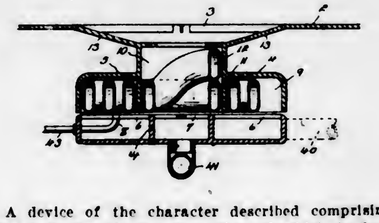
1. The combination with a roofed tank having a hatchway, of a closure easily disabled by pressure within said tank normally closing the hatchway, a self-closing hatch, means normally supporting said hatch in open position, and means operated by the passage of the gaseous contents of the tank through said hatchway for disabling said supporting means.

2. The combination with a roofed tank having a hatchway, of a closure easily disabled by pressure within said tank normally closing said hatchway, a self-closing hatch above said hatchway having hinged connection therewith at one edge, means for supporting said hatch normally in open position above said hatchway, and means operated by the passage of the gaseous contents of the tank through said hatchway for disabling said supporting means.

3. The combination with a roofed tank having a hatchway, of an easily disrupted closure fixed to normally close said hatchway and whose edges are joined to the margin thereof by a sealed joint, a self-closing hatch normally in open position, means supporting said hatch in open position, and means operated by the passage of the gaseous contents of the tank through said hatchway for disabling said supporting means.

4. The combination with a roofed tank having a hatchway, and a marginal groove surrounding the hatchway, of a facing having a bead which coincides with the groove, an easily disrupted closure normally closing the hatchway, whose edges are clamped between the margin of the hatchway and the facing and the intervening portion of which is forced by said bead into said groove, a self-closing hatch adapted to fit against said facing over said hatch, releasable means supporting said hatch normally in open position and means operated by the passage of the gaseous contents of the tank through said hatchway for disabling said supporting means.

1,219,494. COMBINATION WATER-HEATER. JAMES G. SCOTT, Washington, D. C. Filed Oct. 1, 1914. Serial No. 864,473. (Cl. 126—53.)



1. A device of the character described comprising a heating coil, the innermost portion of which is formed with one layer over the other, a housing for said coil partitioned into two compartments and independent burners for heating said compartments independently.

2. A device of the character described comprising a heating coil, the inner portion of which is formed in layers one over the other, a housing for said coil partitioned to provide a central compartment and an outer annular compartment, the central portion of said coil being disposed in said central compartment, the outer portion of said coil being disposed in said outer annular compartment and independent burners for heating said compartments.

3. A device of the character described comprising a heating coil, a housing for the same partitioned into two compartments, the central portion of said coil being disposed in one compartment, the outer portion of said coil being disposed in the other compartment and independent burners for heating the said compartments and the coil therein.

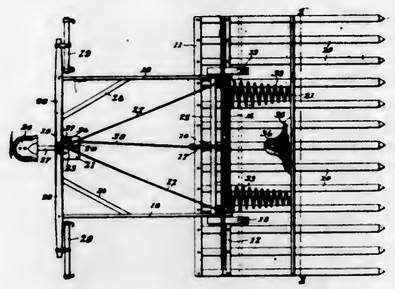
4. A device of the character described comprising a heating coil, a housing therefor partitioned into two compartments, the central portion of said coil being disposed in one compartment, the outer portion of said coil being disposed in the other compartment, an independent heater under each compartment, means above said housing for supporting cooking utensils, said housing comprising means for preventing excessive heat from one of the said burners passing to the said means for supporting the cooking utensils.

5. A device of the character described comprising a heating coil, a housing therefor partitioned into a central compartment and an outer annular compartment, the central portion of said coil being disposed in said central compartment, the outer portion of said coil being disposed in said outer compartment, a heater under said central compartment, means for supporting a cooking utensil above said central compartment to receive heat therethrough from the said burner, an independent burner under said outer compartment for heating the portion of the said coil therein, the said housing including means for preventing excessive heat from the last mentioned burner to the said means for supporting a cooking utensil.

[Claims 6 and 7 not printed in the Gazette.]

1,219,495. HAY-SWEEP CLEANER. CHARLES G. SEGER, Lyonville, S. D. Filed Dec. 29, 1915. Serial No. 69,211. (Cl. 56—137.)

1. A hay sweep including a fork, a carriage, a hay re-



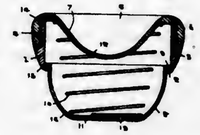
moving plate slidably mounted upon said fork, resilient means engaging said plate and serving to move the plate toward the free end of the fork when expanding, a standard carried by said fork, a latch pivotally connected with said standard, a tongue extending from said plate and engaged by said latch when the plate is moved to compress said resilient means, an actuating lever pivotally connected with said carriage, and a line connecting said actuating lever with said latch whereby said latch may be moved to release said plate upon actuation of said lever.

2. A hay sweep including a fork having teeth and a frame positioned above said teeth, a carriage connected with said fork and provided with a platform, a hay removing plate slidably mounted upon the teeth of said fork, resilient means positioned between said plate and frame and serving to move said plate toward the free ends of said teeth, a latch pivotally connected with said fork, a tongue extending from said plate for engagement by said latch to releasably hold said plate in a set position with the resilient means compressed, an actuating lever carried by said platform, and means connecting said actuating lever with said latch whereby said latch may be moved to a releasing position by movement of said lever and permit the resilient means to expand and move said plate toward the free end of the fork teeth.

3. A hay sweep including a fork having teeth and a frame above said teeth, a latch pivotally mounted to the rear of said frame, a hay removing plate slidably mounted upon said teeth in front of said frame, a tongue extending from said plate and adapted for engagement by said latch to releasably hold said plate in a set position, resilient means positioned between said plate and frame, and compressed when said tongue is engaged by said latch and means for moving said latch to release said tongue whereby said resilient means may expand and move said plate toward the free ends of said teeth.

4. A hay sweep including a fork, a hay removing plate slidably mounted upon said fork, a tongue extending from said plate and provided with an opening, a latch having its free end extending to fit into the opening of said tongue and releasably hold said plate in a set position, means for moving said latch to release said plate, and resilient means for moving said plate toward the free ends of the teeth of said fork when said plate is released from said latch.

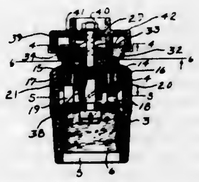
1,219,496. UTERINE SUPPORTER. EDWARD F. SHAULIS, Indiana, Pa. Filed Dec. 11, 1915. Serial No. 66,299. (Cl. 128—21.)



1. In a supporting device, a cylindrical body portion having an annular inwardly directed flange at one end, and a reduced portion at its opposite end forming a shoulder, the outer face of the reduced end being threaded, a cap having interior threads on its side wall adapted to engage the threads of the reduced end of the body portion, the inner end of the side wall of the cap resting upon said shoulder, the thickness of the side wall of the cap being equal to the width of said shoulder whereby a uniform unbroken exterior surface will be provided from the outer end of the cap to the outer end of the body, said surface being oval, and gradually decreasing in diameter from the outer edge of said cap to the outer end of the body, an auxiliary cup-shaped member having an annular outwardly projecting flange to coöperate with the flange of the body portion and limit the outward movement of the auxiliary member, the exterior of said cup shape member being likewise oval shaped and gradually decreasing in diameter from its inner to its outer edge and a spring having its ends engaging the auxiliary cup member and the cap respectively, said spring normally holding the auxiliary cup in extended position.

2. In a supporting device, a hollow body portion having a shoulder exteriorly thereof, a cap threaded on to the body portion and having its edge abutting against said shoulder, the peripheral faces of the body and cap being oval and extended in an unbroken line the full height of the body and cap, said face gradually decreasing in diameter from the outer edge of said cap to the outer end of the body, the outer ends of the body and cap being rounded, the end wall of said cap being concavo-convex to form a cup-shaped depression, an auxiliary cup-shaped member, the exterior of said cup shape member being likewise oval shaped and gradually decreasing in diameter from its inner to its outer edge, means to limit the outward movement of the auxiliary cup-shaped member, a helical-shaped coiled spring having one of its ends engaging said auxiliary member and its opposite end engaging the end wall of the cap and disposed around the concavo-convex portion thereof, said spring being adapted to normally hold the auxiliary member in extended position.

1,219,497. INCANDESCENT-LAMP SOCKET. MARTIN V. SMITH, Hartford, Conn., assignor to James E. Hamilton, Simsbury, Conn. Filed July 17, 1915. Serial No. 40,467. (Cl. 173—349.)



1. An incandescent lamp socket comprising a body member having a main section and an auxiliary section, the auxiliary section being provided with contacts and the main section having actuators of conducting material for operating said contacts and in electrical connection with the respective contacts and said sections being movable

with respect to each other to cause the actuators to advance said contacts.

2. An incandescent lamp socket comprising a body member having a main section and an auxiliary section, the auxiliary section being provided with contacts and the main section having actuators of conducting material for operating said contacts and in electrical connection with the respective contacts, said main section being rotative with respect to the auxiliary section to cause the actuators to advance the contacts, the contacts and the actuators being in electrical connection, a contact shell, and a central end contact carried by said main section and in electrical contact respective with said actuators.

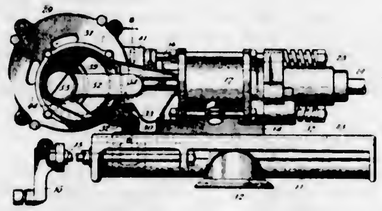
3. An incandescent lamp socket comprising a body member having a main section and an auxiliary section, the auxiliary section being provided with contacts and the main section having actuators of conducting material in electrical connection with the respective contacts, spring means tending constantly to maintain said contacts within said auxiliary section, said main section being rotative with respect to the auxiliary section, and said actuators on said rotation being adapted to advance said contacts out of the auxiliary section.

4. An incandescent lamp socket comprising a body member having a main section and an auxiliary section, the auxiliary section being provided with contacts normally within the same and the main section having spirally-formed conducting means in electrical connection with the respective contacts, the two sections being relatively movable and the spirally-formed means on the relative movement being adapted to move said contacts out of the auxiliary section.

5. An incandescent lamp socket comprising a body member, a clamping member coöperative with the body member, and means for advancing said clamping member into clamping relation and for automatically releasing the same when the pressure of the clamping member passes a certain point.

[Claims 6 to 8 not printed in the Gazette.]

1,219,498. OPERATING MECHANISM FOR ROCK-DRILLS. WILLIAM A. SMITH, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Sept. 14, 1914. Serial No. 861,563. (Cl. 74—7.)



1. In apparatus of the character set forth, the combination with a motor having a case and an internal circular bearing element thereon, of a driven member having a peripheral bearing in said element and also having an internal gear, and a pinion driven by the motor and meshing with the gear.

2. In apparatus of the character set forth, the combination with a motor having a case and an internal ball race flange on one side eccentric to the rotor of the motor, of a crank carrier having a peripheral ball-race associated with the internal race and also having an internal gear, balls in the races, and a pinion driven by the rotor and meshing with the gear.

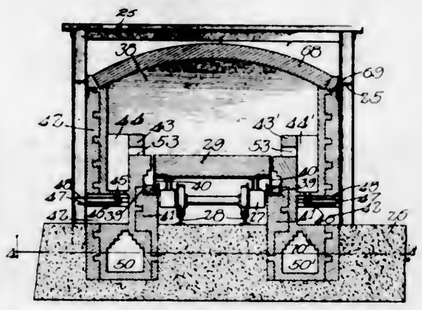
3. In apparatus of the character set forth, the combination with a motor having a casing provided with an internal circular bearing on the exterior face of one side, of a rotatable driven member having a peripheral bearing associated therewith and in internal gear, the rotor of the motor having a shaft projecting into the driven member eccentrically thereof, and a pinion mounted on the shaft and meshing with the internal gear.

4. In apparatus of the character set forth, the combination with mechanism to be operated, of a driving motor therefor, having a casing provided on the external face of one side with an eccentrically disposed internal ball-race, a pitman connected to the mechanism, a crank engaged with the pitman, a crank carrier disk having a peripheral ball-race associated with the internal ball-race, balls in said races, said disk having an internal gear, and a pinion driven by the motor and meshing with the gear.

5. In apparatus of the character set forth, the combination with mechanism to be operated, of a driving motor therefor, a pitman connected to the mechanism, a crank engaged with the pitman, a crank carrier disk having an eccentrically disposed wrist pin and an oppositely disposed counter-weight, said carrier also having an internal gear, and a pinion driven by the motor and meshing with said gear.

[Claims 6 to 9 not printed in the Gazette.]

1,219,499. ANNEALING-FURNACE. ARTHUR L. STEVENS, Chicago, Ill. Filed Sept. 10, 1912. Serial No. 719,527. (Cl. 158—7.5.)



1. In a furnace of the character described, the combination with a heating chamber, of regenerators all arranged at one end of said chamber and on substantially the same level therewith, and flues extending from said regenerators under the heating chamber and communicating with the same at opposite sides of said chamber.

2. In a furnace of the character described, the combination with a heating chamber, of regenerators arranged at one end of said chamber and on substantially the same level therewith, a door at the other end of said chamber, flues arranged below said chamber on opposite sides thereof and communicating with said regenerators, and distributing flues between said first named flues and said chamber.

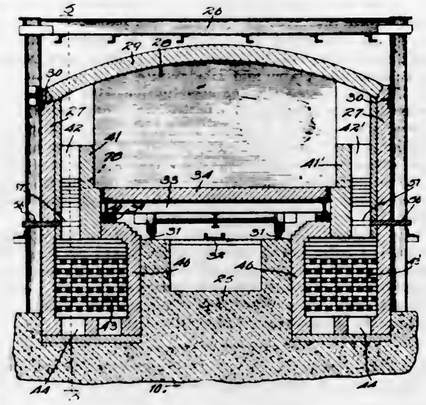
3. In a furnace of the character described, the combination with a heating chamber, of regenerators arranged at one end of said chamber and on substantially the same level therewith, a door at the other end of said chamber, flues extending from said regenerators along and below opposite sides of said chamber, and distributing flues leading substantially vertically from said first named flues to opposite sides of said chamber.

4. In a furnace of the character described, the combination with a heating chamber having a door at one end, of a pair of regenerators at the other end of the chamber, bridge walls within the chamber spaced from the sides thereof so as to constitute combustion spaces, a flue extending from each regenerator under one of said combustion spaces, and distributing flues connecting said first named flues with said spaces, respectively.

5. In a furnace of the character described, the combination with a heating chamber having a door at one end, of a pair of regenerators at the other end of the chamber, bridge walls within the chamber spaced from the sides thereof so as to constitute combustion spaces, a flue extending from each regenerator under one of said combustion spaces, distributing flues connecting said first named flues with said spaces, respectively, and means for introducing fuel into the bottom of said combustion spaces.

[Claims 6 to 10 not printed in the Gazette.]

1,219,500. REGENERATIVE FURNACE FOR ANNEALING AND LIKE PURPOSES. ARTHUR L. STEVENS, Chicago, Ill. Filed Sept. 10, 1912. Serial No. 719,529. (Cl. 158—7.5.)



1. In a furnace for annealing, or like purposes, the combination with means constituting a heating chamber, of bridge walls in said heating chamber extending above the hearth of the chamber and spaced from the side walls thereof so as to provide combustion spaces, and a plurality of separate regenerators arranged lengthwise of the furnace on each side having flues communicating with said combustion spaces.

2. In a furnace for annealing, or like purposes, the combination with means constituting a heating chamber, of bridge walls in said heating chamber extending above the hearth of the chamber and spaced from the side walls thereof so as to provide combustion spaces, and a plurality of separate regenerators arranged under each combustion space, and flues connecting said regenerators with said combustion spaces.

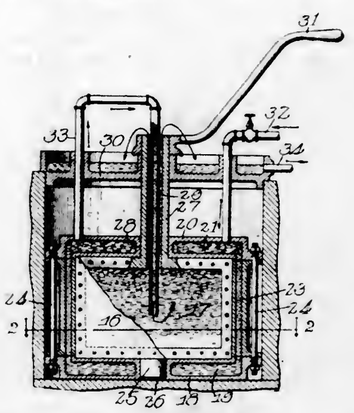
3. In a furnace for annealing, or like purposes, the combination with means constituting a heating chamber, of bridge walls in said heating chamber spaced from the side walls thereof so as to provide combustion spaces, and a plurality of separate regenerators arranged under each combustion space, and pairs of flues leading from said regenerators to the combustion spaces, the flues of each pair inclining toward each other.

4. In a furnace for annealing, or like purposes, the combination with means constituting a heating chamber, of bridge walls in said heating chamber spaced from the side walls thereof so as to provide combustion spaces, and a plurality of separate regenerators arranged under each combustion space, pairs of flues leading from said regenerators to the combustion spaces, the flues of each pair inclining toward each other, and transverse partition walls in said spaces between the pairs of flues.

5. In a furnace for annealing, or like purposes, the combination with means constituting a heating chamber, of bridge walls in said heating chamber spaced from the side walls thereof so as to provide combustion spaces, a plurality of separate regenerators arranged under each combustion space, pairs of flues leading from said regenerators to the combustion spaces, the flues of each pair inclining toward each other, and means for introducing fuel into the combustion spaces between the flues of each pair of flues.

[Claims 6 to 14 not printed in the Gazette.]

1,219,501. WATER-COOLED VALVE. ARTHUR L. STEVENS, Chicago, Ill. Filed Sept. 10, 1912. Serial No. 719,531. (Cl. 137—149.)



1. The combination with a pivoted valve formed with a water space; of a casing for said valve comprising top and base plates each formed with water spaces and one or more pairs of oppositely arranged seats which have passages therethrough communicating directly with the water spaces in the top and base plates; a hollow stem on said valve; means for introducing water to and from the water space in said valve through one end of said stem; and means for circulating water through the casing.

2. The combination with a pivoted valve formed with a water space; of a casing for said valve comprising top and base plates, each formed with water spaces and one or more pairs of oppositely arranged seats which have passages therethrough communicating directly with the water spaces in the top and base plates; a hollow stem on said valve through which water is discharged from the separate water space in the valve; and a water inlet pipe extending through said stem into the water space in said valve.

3. The combination with a pivoted valve formed with a water space; of a casing for said valve comprising top and base plates, each formed with water spaces and one or more pairs of oppositely arranged seats which have passages therethrough communicating directly with the water spaces in the top and base plates; a hollow stem on said valve through which water is discharged from the water space in the valve; a pipe leading from the water space in the casing and extending through the stem into the water space in the valve; and means for introducing water into said casing.

4. The combination with a pivoted valve formed with a water space; of a casing for said valve comprising top and base plates, each formed with water spaces and one or more pairs of oppositely arranged seats which have passages therethrough communicating directly with the water spaces in the top and base plates; a hollow stem on said valve through which water is discharged from the water space in the valve; a pipe leading from the water space in the casing and extending through the stem into the water space in the valve; and a supply pipe leading to said casing.

5. The combination with a pivoted valve formed with a water space; of a casing for said valve comprising top and base plates, each formed with water spaces and one or more pairs of oppositely arranged seats which have passages therethrough communicating directly with the water spaces in the top and base plates; a hollow stem on said

valve through which water is discharged from the water space in the valve; a pipe of smaller diameter than the inside diameter of the stem leading from the water space in the casing and extending through the stem into the water space in the valve so as to leave an overflow space in the stem; a supply pipe leading to said casing; and means on said stem for rotating the valve.

[Claims 6 to 17 not printed in the Gazette.]

1,219,502. WATER-BAG. EUGENE J. STRAUS, St. Louis, Mo. Filed July 31, 1916. Serial No. 112,401. (Cl. 150—0.5.)



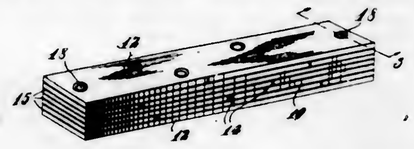
1. A water-bag of the kind and for the purposes described, the same being adapted to be slung across the back of a transporting-animal and including a pair of walls of water-proof material, a reinforcing strip folded over and upon said walls at their edges, fastening means extending through both said walls and said strip for permanently securing the same together in water-tight relation, and strap-receiving members projecting outwardly from the side edges of the bag, said members being fixed upon said strap and to the bag.

2. A water-bag of the kind and for the purposes described, the same being adapted to be slung across the back of a transporting-animal and including a pair of walls of water-proof material, a reinforcing strip of water-proof material folded over and upon said walls at their edges, fastening means extending through both said walls and said strip for permanently securing the same together in water-tight relation, flexible hinge-members projecting outwardly from the side edges of the bag, said members being permanently fixed upon said strip and to the bag, and strap-receiving members permanently engaged and secured to the bag by said hinge-members.

3. A water-bag of the kind and for the purposes described, the same being adapted to be slung across the back of a transporting-animal and including a pair of walls of water-proof material, a strip of water-proof material folded over and upon said walls at their edges, fastening means extending through both said walls and said strip for permanently securing the same together in water-tight relation, sections of flexible material folded over and upon said strip and providing hinge-members upon the bag, means engaging said sections, the strip, and said walls for permanently securing said sections upon the bag, and strap-receiving members engaged and secured to the bag by said flexible sections.

4. A water-bag of the kind and for the purposes described, the same including a pair of walls of water-proof material permanently secured together at their edges in water-tight relation, said walls being of extended area, the bag being adapted to be slung across the back of a transporting-animal, and members fixed to the bag at its edges to receive straps for fastening the same upon the animal, the bag being provided with a suitable water-opening.

1,219,503. LAMINATED RAILROAD-TIE. JULIAN STRZYCZKOWSKI, New York, N. Y. Filed Oct. 31, 1916. Serial No. 128,659. (Cl. 238—8.)



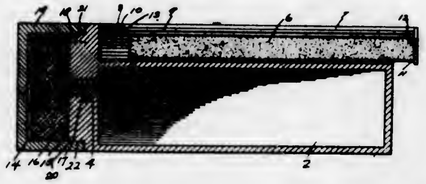
1. A tie comprised of a plurality of wooden plates and tarred fabric disposed between adjacent plates.

2. A tie comprised of a plurality of wooden plates, tarred fabric disposed between adjacent plates, and means for holding said plates and fabrics in a rigid relation.

3. In a laminated tie, the combination with upper and lower elements covering the entire horizontal superficial area of the tie, of a plurality of wooden plates disposed between said elements, said plates being of uniform width, paper strips disposed between said layers, said paper strips being saturated with tar, and means for holding the several elements comprising the tie in a rigid, clamped condition.

4. A laminated tie comprising a plurality of wooden plates, the outer plates having an unbroken surface, the inner elements being of unequal lengths, flexible sheet material disposed between adjacent layers of the said plates, said material being saturated with tar, and means for holding the several plates tightly together.

1,219,504. BRUSH. GUSTAVE SUMMER, Chicago, Ill. Filed Apr. 13, 1916. Serial No. 90,881. (Cl. 15—46.)



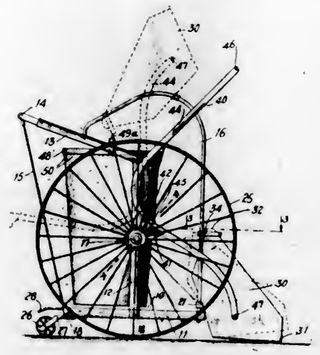
A device of the type described, including a compartmental polish-containing chamber, one compartment being adapted to contain a brush having an invertible and slidable connection therewith, and a dauber-holder having a plug threaded into an end-wall of said polish-containing chamber, said plug having a longitudinal bore establishing communication between said polish-containing chamber and said dauber-holder, and also establishing, otherwise unaided, connection therebetween.

1,219,505. STREET-CLEANING APPARATUS. WILLIAM P. TARRANT, Saratoga Springs, N. Y., assignor to Tarrant Manufacturing Co., Saratoga Springs, N. Y., a Corporation of New York. Filed Apr. 27, 1914. Serial No. 834,610. (Cl. 37—6.)

1. A hand cart comprising a frame constituting a receptacle support and having a guide frame and axle projections, wheels mounted thereon, a dust pan slidably supported on the guide frame, and a pair of curved arms pivotally and slidably supported on the wheel axles for raising the pan on the guide frame into position to discharge into the receptacle.

2. A hand cart comprising a frame having a handle bar, a pair of substantially parallel guide bars secured to the frame, a dust pan having pivots slidably supported on said guide bars, means for limiting the rotative movement of the pan about its pivot and manual means for tilting the pan about said pivot through said rotative movement before the pivots are slid on the guide bars.

3. A hand cart comprising a frame constituting a receptacle support having a handle bar, a pair of substantially parallel guide bars secured to the frame, a dust pan having pivots slidably supported on said guide bars, means for limiting the rotative movement of the pan about its pivots, and means for tilting the pan through said rotative movements before the pivots are slid on the guide bars, and then sliding the pivots and rotative limiting means on the guide bars to raise and guide the dust pan into position to discharge into the receptacle.



4. A hand cart comprising a frame having a handle bar, a pair of substantially parallel guide bars secured to the frame extending vertically in front of the car and bent at their upper ends backwardly and downwardly, a dust pan having pivots slidably supported on said guide bars, means for limiting the rotative movement of the pan about its pivots and manual means for tilting the pan about its pivots and for sliding said pivots and the rotative limiting means on the guide bars.

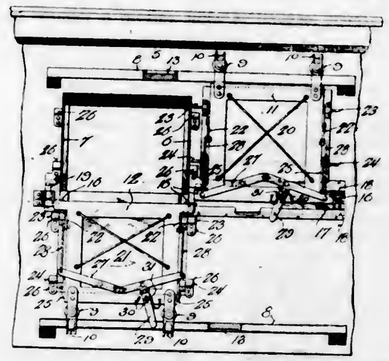
5. A hand cart comprising a frame constituting a receptacle support having a handle bar, a pair of substantially parallel guide bars secured to the frame extending vertically in front of the cart and bent at their upper ends backwardly and downwardly, a dust pan having pivots near the lower back portion thereof slidably supported on said guide bars, loops near the top of the dust pan encircling the guide bars for limiting the rotative movement of the pan about its pivots, and means for first tilting the pan through said limited rotative movement and then sliding said pivots and loops on the guide bars to raise and guide the dust pan into position to discharge into the receptacle.

[Claims 6 and 7 not printed in the Gazette.]

1,219,506. DOOR STRUCTURE FOR GRAIN-CARS AND THE LIKE. AUGUST TAUTGES, Aniwa, Wis., assignor of one-fifth to Joe Lindner, Sr., and one-fifth to Joe Lindner, Jr., Birnamwood, Wis. Filed June 24, 1916. Serial No. 105,534. (Cl. 20—31.)

1. The combination with a wall having a door opening, a door carrying frame slidably mounted adjacent the door opening, a door, levers pivoted to the door and to the frame whereby the door may swing into and out of seating relation with the door opening, levers intermediately pivoted to the frame and having their ends pivotally connected, links connecting said second named levers and the door levers, a pair of spaced holding members on the frame, and a handle pivotally connected with one of the second named levers and apertured to selectively engage the holding members.

2. The combination with a wall having a door opening of a door carrying frame slidably mounted adjacent the door opening, a door, links pivoted to the frame, lateral pintles carried by said links and journaled at the sides of the door whereby the door is held to swing into and out of seating relation with the door openings, said pintles projecting outwardly of the door and bracket members at



the sides of the door opening adapted to receive said pintles.

1,219,507. LEGGING. LILIAN G. THARP, Duluth, Minn. Filed Feb. 8, 1915. Serial No. 6,708. (Cl. 36—2.)



1. A legging comprising a knitted or woven foot and leg portion having openings only at the upper end and at the bottom of the heel, said legging being provided at the forepart only with an exterior tread sole, and said legging having an aperture formed therein at the bottom of the heel for the passage of the heel of the shoe of the wearer.

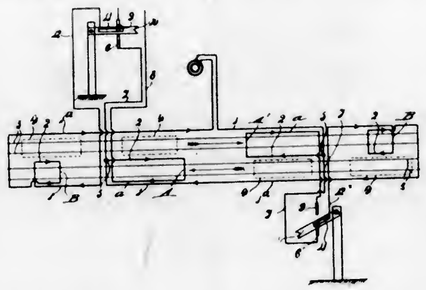
2. A legging comprising an elastic knitted or woven foot portion adapted to be drawn over and to extend beneath and inclose the foot of a shoe except the heel of such shoe, said legging being provided with an opening at the lower end for the passage of the heel of the shoe of the wearer, said legging embodying an exterior tread sole at the forepart only thereof.

3. In a legging, the combination of a knitted or woven stocking portion adapted to be drawn over and to extend beneath a shoe, a tread sole for the forepart only of said stocking portion, said stocking portion having an aperture formed in the bottom of the heel thereof for the passage of the heel of the shoe of the wearer, and a protective binding secured to the edge of said aperture.

1,219,508. MEANS FOR THE REGULATION OR CONTROL OF RAILWAY AND LIKE TRAFFIC. HANS VON KRAMER, Edgbaston, Birmingham, England. Filed Apr. 11, 1914. Serial No. 831,250. (Cl. 246—58.)

1. In apparatus for the regulation or control of railway or like traffic, the combination of a line wire laid parallel to the track of the vehicle; means for continuously pass-

ing periodic electric current through said line wire; a wire frame carried by the vehicle in inductive relation with the line wire; a signal-receiving device carried by the vehicle inoperative while current is induced into the frame from the line wire, but operative when the induced current ceases, a loop formed by a part of said main line wire, and in series relationship therewith the two wires of said loop inducing opposing inductions in the frame of the vehicle, so as to render ineffective the induction between the main wire and the frame at the places where said additional series wire is located without interrupting the current passing in the line wire, so that when the vehicle is passing said places the wire frame will operate to convey signals, while when the vehicle is passing over the inductive lengths the signal-receiving device will be inoperative.



2. In apparatus for the regulation and control of railway or like traffic, the combination of a line wire laid parallel to the track of the vehicle; means for continuously passing periodic electric current through said line wire; a wire frame carried by the vehicle in inductive relation with the line wire; a signal-receiving device carried by the vehicle inoperative while current is induced into the frame from the line wire, but operative when the induced current ceases; a loop formed by a part of said main line wire, and in series relationship therewith, the two wires of said loop inducing opposing inductions in the frame of the vehicle so as to neutralize the induction between the main wire and the frame at the places where said additional series wire is located without interrupting the current passing in the line wire, while when the vehicle is passing over the inductive lengths the signal-receiving device will be inoperative.

3. In combination, a track for vehicles; a line wire adjacent to said track; means for passing periodic current through said line wire; and an additional wire in series with said line wire and having part of its length physically parallel thereto and approximately equidistant from said track and part of its length at a considerable distance therefrom.

4. In combination, a track for vehicles; a vehicle thereon; an inductive frame carried by the vehicle; a line wire adjacent to said track; means for passing periodic current through said line wire; and an additional wire in series with said line wire and having part of its length physically parallel thereto and approximately equidistant from said track and part of its length at a considerable distance from said track.

1,219,509. FIRE-EXTINGUISHING COMPOSITION. WILLIAM W. WALKER, Camden, N. J., assignor to MacAndrews & Forbes Company, Camden, N. J., a Corporation of New Jersey. Filed Nov. 9, 1914. Serial No. 871,039. (Cl. 23—5.)

1. A component for a foam-producing fire extinguishing charge, consisting of the woody extract known as black liquor combined with a gas producing chemical substance, said component when associated with a complemental composition operating to produce fumes non-supporting to combustion.

2. A fire extinguishing charge consisting of two separate solutions containing substances adapted to unite to produce fumes non-supporting to combustion, one of said solutions having mixed therewith the woody extract known as black liquor.

1,219,510. CORK-EXTRACTOR. EUGENE R. WEBBB, Rochester, N. Y. Filed Mar. 24, 1916. Serial No. 86,464. (Cl. 65—48.)



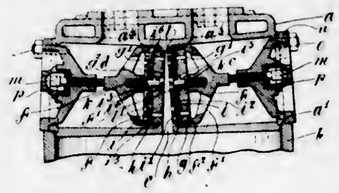
1. A cork extractor comprising a worm-shaped portion having an elongated eye at its upper end and two angled arms hinged thereto and adapted when applied and out of use to lie across the top and against the sides of a mouth of a bottle and to be swung into contact to form a T-shaped handle for use in withdrawing the cork.

2. A cork extractor comprising a worm-shaped portion having an elongated eye at its upper end extending perpendicularly to the axis of the worm-shaped portion, a pair of angled arms made of flat metal hinged on said eye, and independently movable, said arms each being shaped substantially to the outline of the mouth of a bottle to lie closely against the same and to be brought into contact to form a T-shaped handle for extracting the cork.

3. A cork extractor comprising a worm-shaped portion to engage a cork, a pair of right angled arms each hinged thereto at one end and adapted when out of use with the worm portion in the cork to lie over the top and snugly against the sides of the mouth of a bottle, and to be folded upwardly into contact with the angled ends extending in opposite directions to form a handle for withdrawing the cork.

4. A cork extractor comprising a worm-shaped portion to engage a cork and having an elongated eye at its upper end, and a pair of angular arms each hinged to said eye and adapted to be folded over the mouth of a bottle when the worm is screwed into a cork and so shaped as to lie closely against said mouth and the sides of the same with inturned terminal ends fitting beneath the shoulder of the bottle neck and having means for attaching a fastener to said ends.

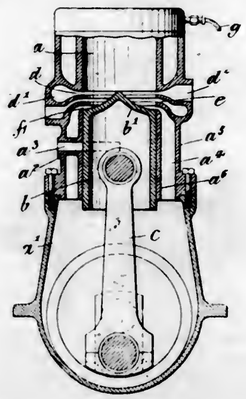
1,219,511. AIR-COMPRESSOR. CARL W. WEISS, Brooklyn, N. Y. Filed July 13, 1915. Serial No. 39,533. (Cl. 230—34.)



1. In combination with a cage, a valve unit carried on the cage and composed of a seat, a plate valve and a guard, said seat being invertible and the seat and the guard being interchangeable in position relative to the cage without disturbing their operative relation to the plate valve whereby the valve may be caused to act either as an inlet or outlet valve with said cage.

2. In combination with a cage, a valve unit carried on the cage composed of a seat, a plate valve and a guard, both the unit and the plate valve being invertible, and the seat and guard being interchangeable in position relative to the cage without changing their operative relation to the valve.

1,219,512. INTERNAL-COMBUSTION ENGINE. CARL W. WEISS, Brooklyn, N. Y. Filed Mar. 30, 1916. Serial No. 87,662. (Cl. 123—73.)



1. In a two-cycle internal combustion engine, annular exhaust, scavenging and induction ports formed in the wall thereof in juxtaposition to one another.

2. In a two-cycle internal combustion engine, annular exhaust, scavenging and induction ports formed in the wall thereof in juxtaposition to one another and adapted to be overrun by the piston.

3. In a two-cycle internal combustion engine, annular exhaust, scavenging and induction ports formed in the wall thereof in juxtaposition to one another and adapted to be overrun by the piston, and a tapered piston head to direct the inflowing fluid centrally in annular streams.

4. In a two-cycle valveless internal combustion engine, annular exhaust, scavenging and induction ports formed in the wall thereof in juxtaposition to one another and adapted to be overrun and controlled by the piston.

5. In a two-cycle internal combustion engine, annular exhaust, scavenging and induction ports formed in the wall thereof in juxtaposition to one another, the scavenging port communicating with the crank case and an inlet port in the crank case for a scavenging medium.

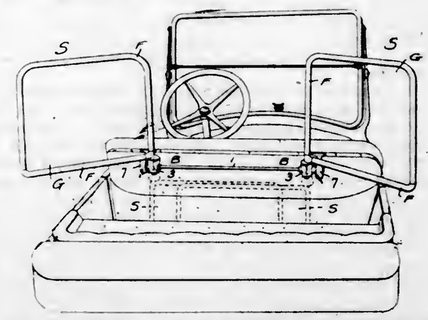
[Claims 6 to 10 not printed in the Gazette.]

1,219,513. WIND-SHIELD. CHARLES F. WENSINGER, Fremont, Ohio, assignor to The Safe Storm Shield Company, Fremont, Ohio, a Corporation of Ohio. Filed Nov. 6, 1915. Serial No. 60,023. (Cl. 21—148.)

1. A wind shield device for protecting the occupants of the rear seat of a vehicle, comprising a supporting bracket including oppositely located attachment members, a screen adjusting block carried by each member, a connecting rail having its ends loosely fitting in each of said blocks, and a screen member carried by each adjusting block, and having means whereby each screen may swing on both a horizontal and vertical axis independent of the other.

2. A wind shield device for protecting the occupants of the rear seat of a vehicle, comprising a supporting bracket including opposite attaching members and an intermediate connecting rail, and an adjusting block pivotally supported between each end of the connecting rail and each attaching member, and a protecting screen carried by said adjusting block.

3. A wind shield device for protecting the occupants of the rear seat of a vehicle, comprising a supporting bracket including oppositely located attaching members and an intermediate connecting rail, and adjusting blocks pivotally supported between the connecting rail and attaching members to move on a horizontal axis, and a screen member carried by each of said adjusting blocks and movable independently of the other.



4. A wind shield device for protecting the occupants of the rear seat of a vehicle, comprising a supporting bracket including oppositely located attaching members and an intermediate connecting rail, and a screen member located at each end of the supporting bracket, and having means for adjustably supporting the same to swing on both a vertical and a horizontal axis, said means comprising an adjusting block having horizontal supporting means respectively bearing in said attaching members and connecting rail, a swinging screen carrier, and means for locking said screen carrier in any adjusted position.

5. A wind shield device for protecting the occupants of the rear seat of a vehicle, comprising a supporting bracket including oppositely located attaching members and an intermediate connecting rail, and a screen member located at each end of the supporting bracket and having means for adjustably supporting the same to swing on both a vertical and a horizontal axis, said means comprising an adjusting block having a hub at one side for working in said attaching member, and a supporting pin at the other side engaging with said connecting rail, a swinging screen carrier mounted on said adjusting block, and means carried by the block for locking said carrier in any adjusted position.

[Claims 6 and 7 not printed in the Gazette.]

1,219,514. MEANS FOR PRODUCING COLORED-LIGHT EFFECTS. GILBERT C. WHITNEY, New York, N. Y. Filed Dec. 27, 1916. Serial No. 139,081. (Cl. 240—22.)



1. In a device of the class described, a plurality of sources of light differing in color from one another; means for controlling said sources so that light may emanate from one only of them at a time; a single uncolored objective lens; and a mirror arranged so as to reflect light emanating from said several sources and project the same through said uncolored lens.

2. In a device of the class described, a plurality of sources of light differing in color from one another; means for controlling said sources so that light may emanate from one only of them at a time; an uncolored objective lens; a mirror arranged so as to reflect light emanating

from said several sources and project the same through said uncolored lens; and a lens located between said mirror and said objective lens and adapted to disperse the light reflected by said mirror.

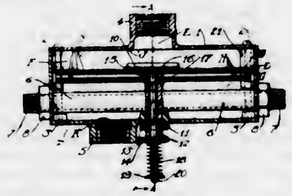
3. In a device of the class described, a suitable casing; a plurality of sources of light differing in color from one another located within said casing; means for controlling said sources so that light may emanate from one only of them at a time; a single uncolored objective lens carried by said casing; and a mirror located within said casing and arranged so as to reflect light emanating from said several sources and project the same through said uncolored lens.

4. In a device of the class described, a suitable casing; a plurality of sources of light differing in color from one another located within said casing; means for controlling said sources so that light may emanate from one only of them at a time; an uncolored objective lens carried by said casing; a mirror located within said casing and arranged so as to reflect light emanating from said several sources and project the same through said uncolored lens; and a lens located between said mirror and said objective lens and adapted to disperse the light reflected by said mirror.

5. In a device of the class described, a plurality of sources of light differing in color from one another; means for controlling said sources so that light may emanate from one only of them at a time; a mirror; means for concentrating light emanating from said several sources upon said mirror; and a single uncolored objective lens through which light reflected by said mirror is projected.

[Claims 6 to 16 not printed in the Gazette.]

1,219,515. **LIQUID-FUEL HEATER.** HENRY NEWTON WHITTELSEY, Greenwich, Conn., assignor to Whittelsey Company, New York, N. Y., a Corporation of New York. Filed Sept. 14, 1914. Serial No. 861,554. (Cl. 236—5.)



1. A device for heating liquid fuel, comprising a casing having inlet and outlet ports to permit the flow of a gaseous heating medium through the casing, a liquid fuel chamber in the casing with inlet and outlet means, and independent automatic means in said casing actuated by the heat of the said heating medium in the said casing for regulating the temperature of the liquid fuel.

2. A device for heating liquid fuel, comprising a casing having inlet and outlet ports to permit the flow of a gaseous heating medium through the casing, a liquid fuel chamber in the casing, with inlet and outlet means, a valve for said inlet port in the casing, and independent actuating means in the said casing for said valve, automatically actuated by the heat of the said heating medium for regulating the temperature within the said casing.

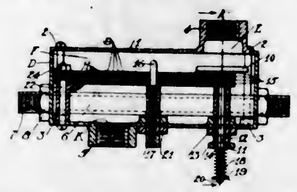
3. A device for heating liquid fuel, comprising a casing having inlet and outlet ports to permit the flow of exhaust gases through the casing, a liquid fuel chamber in the casing with inlet and outlet means, and independent thermostatic means in the said exhaust gas casing for controlling said inlet port in the casing, automatically actuated by the heat of the exhaust gases in the exhaust gas casing.

4. A device for heating liquid fuel, comprising a casing having inlet and outlet ports to permit the flow of exhaust gases through the casing, a liquid fuel chamber in the casing with inlet and outlet means, thermostatic means in the casing for controlling said inlet port in the casing, automatically actuated by the heat of the exhaust gases in the exhaust gas casing, and supporting devices for the thermostatic means affording provision for setting said casing at any angle or position whatsoever, without interfering with the automatic operation of the device.

5. A device for heating liquid fuel, comprising a casing having inlet and outlet ports to permit the flow of exhaust gases through the casing, a liquid fuel chamber in the casing with inlet and outlet means, a valve for the said inlet port in the casing and thermostatic members in the casing connected to actuate the valve and composed of metals having different coefficients of expansion.

[Claims 6 to 13 not printed in the Gazette.]

1,219,516. **LIQUID-FUEL HEATER.** HENRY NEWTON WHITTELSEY, Greenwich, Conn., assignor to Whittelsey Company, New York, N. Y., a Corporation of New York. Filed Sept. 24, 1914. Serial No. 863,375. (Cl. 236—5.)



1. A device for heating liquid fuel, comprising a casing having inlet and outlet ports to permit the flow of a gaseous heating medium through the casing, a liquid fuel chamber in the casing, with inlet and outlet means, a thermostat located in said casing for the heating medium, and actuated by the heat of said medium for automatically regulating the flow of said medium and thereby maintaining the temperature of the liquid fuel between predetermined limits, and means securing said thermostat enabling a free end to effect the regulation of said flow of the heating medium.

2. A device for heating liquid fuel, comprising a casing having inlet and outlet ports to permit the flow of a gaseous heating medium through the casing, a liquid fuel chamber in the casing, with inlet and outlet means, a thermostat located in said casing for the heating medium, and actuated by the heat of said medium for automatically regulating the flow of said medium and thereby maintaining the temperature of the liquid fuel between predetermined limits, a valve for the inlet port of the casing, means securing said thermostat enabling a free end to actuate the said valve and effect the regulation of said flow of the heating medium, and supporting means for said valve affording provision for setting said casing at any angle or position whatsoever, without interfering with the automatic operation of the device.

3. A device for heating liquid fuel, comprising a casing having inlet and outlet ports to permit the flow of a gaseous heating medium through the casing, a liquid fuel chamber in the casing, with inlet and outlet means, a thermostatic member having one end secured within the casing and the other end free to move as said member bends with variations of temperature, and means actuated by said member for controlling said inlet port.

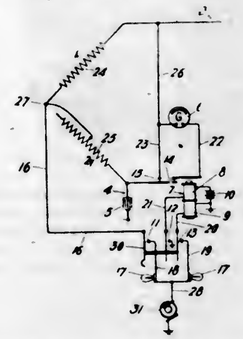
4. A device for heating liquid fuel, comprising a casing having inlet and outlet ports to permit the flow of a gaseous heating medium through the casing, a liquid fuel chamber in the casing with inlet and outlet means, a thermostatic member in the form of a strip adapted to bend with variations of temperature, one end of said strip being free to move, and means actuated by said free end for controlling the flow of the heating medium through the casing.

5. A device for heating liquid fuel, comprising a casing having inlet and outlet ports to permit the flow of a gaseous heating medium through the casing, a liquid fuel chamber in the casing with inlet and outlet means, a thermostatic member in the casing in the form of a strip composed of layers of metals having different coefficients of expansion, said strip being loosely secured within the

casing at one end, free to move at the other end and supported between the ends, and a valve for the inlet port carried by the movable end of said strip.

[Claims 6 to 10 not printed in the Gazette.]

1,219,517. **TESTING SYSTEM.** RAY SETH WILBUR, Jersey City, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed July 6, 1914. Serial No. 849,262. (Cl. 175—183.)



1. A testing system comprising a Wheatstone bridge, a condenser of known capacity in one arm thereof, a condenser of unknown capacity in another arm thereof, sources of alternating and direct current, a switch, a measuring instrument, and a relay for connecting said measuring instrument to said bridge, said relay having a plurality of windings, one of said windings being connected to said source of direct current and another of said windings being connected to said source of alternating current upon the actuation of said switch, thereby permitting said relay to be operated when the flow of current from both of said sources is in the same direction.

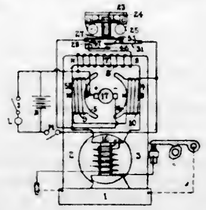
2. A testing system comprising a Wheatstone bridge, a condenser of known capacity in one arm thereof, a condenser of unknown capacity in another arm thereof, sources of alternating and direct current, a measuring instrument, and a relay for connecting said measuring instrument to said bridge, said relay having a plurality of windings, one of said windings being connected to said source of direct current and another of said windings being connected to said source of alternating current, thereby permitting said relay to be operated when the flow of current from both said sources is in the same direction.

3. A testing system comprising a Wheatstone bridge, a condenser of known capacity in one arm thereof, a condenser of unknown capacity in another arm thereof, a source of alternating current, a measuring instrument, and a polarized electromagnetic switching device operated by current from said source during each alternate half cycle to connect the measuring instrument to the bridge and in circuit with said source of current.

1,219,518. **IGNITING AND LIGHTING GENERATOR.** JAMES M. WILSON, Newark, N. J., assignor to Splitdorf Electrical Company, Newark, N. J. Filed Apr. 17, 1914. Serial No. 832,539. (Cl. 171—313.)

1. In a generator of the class described, the combination of a magnetic field frame, an ignition armature, a lighting armature, independent field pole pieces for both of said armatures only two of said pole pieces carrying windings thereon, working circuits for both of said armatures, and means including the magnetic arrangement of the field frame for controlling the magnetic flux through said armatures.

2. In an electric generator of the class described, the combination of an open field frame having inwardly projecting working pole pieces at its opposite sides, two armatures disposed one above the other, between said pole pieces thereby forming magnetic sections of said field frame, means to excite said field frame, working circuits for both of said armatures and means for controlling the magnetic flux through the sections of said field frame serving each of said armatures, substantially as described.



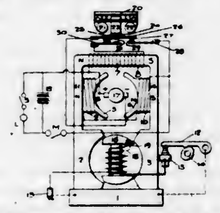
3. An electric generator consisting of a hollow field frame having inwardly projecting pole pieces at its opposite sides, an armature between each pair of pole pieces and means independent of the current in either armature and including the arrangement of the magnetic circuit for controlling the flux through said armatures in proportion the the speed of rotation of said armatures, substantially as described.

4. In an electric generator, a field frame having a plurality of inwardly projecting pole pieces on opposite sides and coils on one pair thereof, an armature between each pair of pole pieces and means for regulating the magnetic flux through each armature, substantially as described.

5. In an electric generator, a field frame having a plurality of inwardly projecting pole pieces on opposite sides and having an armature between each pair of pole pieces, coils on one pair for generating magnetic flux for both armatures, substantially as described.

[Claims 6 to 29 not printed in the Gazette.]

1,219,519. **AUTOMATIC SWITCHING MECHANISM.** JAMES M. WILSON, Newark, N. J., assignor to Splitdorf Electrical Company, Newark, N. J. Filed Aug. 26, 1915. Serial No. 47,462. (Cl. 171—313.)



1. In combination with an electrical generator having high and low tension armatures, a working circuit for said low tension armature and an auxiliary electrical circuit serving to control the output of both armatures, a plurality of switch members having a pair of switch contacts in said working circuit and a pair of switch contacts in said auxiliary circuit, a friction wearing plate carried on one of the switch members and a centrifugal governor operated by said low tension armature and acting against said wearing plate to first close the contacts in said working circuit and then to close the contacts in said auxiliary circuit, for the purpose described.

2. In combination with an electrical generator having high and low tension armatures, a working circuit for said low tension armature and an auxiliary electrical circuit serving to control the output of both armatures, a mounting plate adapted to be connected to the frame of said generator, a resilient switch member mounted on but insulated from said plate and carrying two contacts, one in said working circuit and the other in said auxiliary circuit, a second resilient member mounted on but insulated from said plate carrying a contact adapted to coöperate

with said contact in said auxiliary circuit, a bridge member attached to but insulated from said plate carrying an adjustable contact adapted to coöperate with said contact in said working circuit, a friction wearing plate attached to the first mentioned resilient member and a centrifugal governor operated by said low tension armature and acting against said wearing plate to first close said working circuit and then to close said auxiliary circuit, for the purpose described.

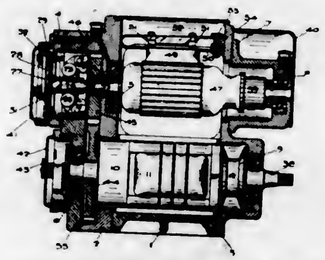
3. In combination with an electrical generator having high and low tension armatures, a working circuit for said low tension armature and an auxiliary electrical circuit serving to control the output of both armatures, a mounting plate adapted to be connected to the frame of said generator, a resilient switch member mounted on but insulated from said plate and carrying two contacts, one in said working circuit and the other in said auxiliary circuit, a bridge member attached to but insulated from said plate but in electrical contact with said resilient switch member, a stud carried by said bridge member and adapted to support the outer end of said resilient member, a second resilient member mounted on but insulated from said plate and extending below said bridge member and carrying a contact adapted to coöperate with said contact in said auxiliary circuit, a second bridge member attached to but insulated from said plate carrying an adjustable contact adapted to coöperate with said contact in said working circuit, a friction wearing plate attached to the first mentioned resilient member, a centrifugal governor operated by said low tension armature and acting against said wearing plate to first close said working circuit and then to close said auxiliary circuit, and resilient means carried on said stud for the purpose of steadying the action of the first mentioned resilient member and to assist in returning said member to its normal position after having been operated by said governor.

4. In combination with an electrical generator having high and low tension armatures, a working circuit for said low tension armature and an auxiliary circuit for controlling the output of both armatures, a mounting plate adapted to be connected to the frame of said generator, a bridge member and a resilient member connected to said plate but insulated therefrom by the same means, a stud attached to said bridge member at its outer extremity, said stud serving as a support for the outer end of said resilient member, contacts carried by said resilient member on either side of said stud support, one of said contacts being in the working circuit and the other being in the auxiliary circuit, a second resilient member mounted on but insulated from said plate and carrying a contact adapted to coöperate with said contact in said auxiliary circuit, a second bridge member mounted on bnt insulated from said plate and carrying an adjustable contact adapted to coöperate with said contact in said working circuit, a friction wearing plate attached to said first mentioned resilient member and a centrifugal governor operated by said low tension armature and acting against said wearing plate, to first close said working circuit and then to close said auxiliary circuit and means carried on said second bridge member for adjusting the time of closure of said auxiliary circuit.

5. In combination with an electrical generator having high and low tension armatures, a working circuit for said low tension armature and an auxiliary electrical circuit serving to control the output of both armatures, a resilient switch member carrying two contact points, a rigid member carrying an adjustable contact point adapted to engage one of said contact points on said resilient member, a second resilient member carrying a point adapted to engage the other of said contact points on the first mentioned resilient member, a plate for carrying said resilient and rigid members, said plate being adapted to be attached to said generator frame as a unitary structure, said resilient and rigid members being adapted to receive contact studs whereby said contact points are connected respectively into their relative positions in the working and auxiliary circuits when said plate is attached to said generator.

[Claims 6 to 10 not printed in the Gazette.]

1,219,520. ELECTRIC GENERATOR. JAMES M. WILSON, Newark, N. J., assignor to Splitdorf Electrical Company, Newark, N. J. Original application filed Apr. 17, 1914, Serial No. 832,539. Divided and this application filed Oct. 8, 1915. Serial No. 54,702. (Cl. 123—149.)



1. An electric generator, including in combination, a timer rotatable member, a direct current generating rotor and gearing connecting said timer rotatable member and the shaft of said rotor, whereby said rotor is driven at a higher rate of speed than said timer rotatable member, said parts forming a single unit.

2. An electric generator having in combination, a timer rotatable member, a direct current generating rotor, gearing connecting said timer rotatable member and the shaft of said rotor, whereby said rotor is driven at a higher rate of speed than said timer rotatable member and an adjustable timing device adapted to coöperate with said timer rotatable member for the purpose of producing electrical impulses at stated intervals.

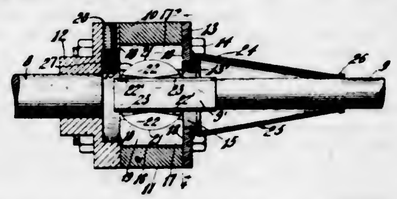
3. An electric generator, including in combination, a rotatable member, ignition timing mechanism operated by one end of said rotatable member, the other end of said rotatable member adapted to receive suitable driving means, bearings for supporting said rotatable member between said driving end and said ignition timing mechanism, a second shaft, bearings supporting said last named shaft at its end, and a generating rotor carried by said second shaft.

4. An electric ignition generator including in combination, a timer rotatable member, a generating rotor, geared to said timer rotatable member and driven thereby, and a distributer having its revolving part attached to said timer rotatable member and adapted to connect the ignition circuit successively with the various cylinders of an internal combustion engine.

5. An electric ignition generator, including the combination with a timer rotatable member, an adjustable timing member, a direct current generating rotor and bearings therefor, bearings for said rotatable member, a support for said adjustable timing member and field windings disposed on opposite sides of said timer rotatable member.

[Claim 6 not printed in the Gazette.]

1,219,521. UNIVERSAL JOINT. JOHN WITTEMANN, Milwaukee, Wis., assignor of one-third to Frederick S. Hunt, Milwaukee, Wis. Filed Feb. 9, 1914. Serial No. 817,416. (Cl. 74—19.)



1. A universal joint, comprising a coupling member having a bore and a plurality of recesses in the portion of the coupling surrounding the bore, the recesses each having a curved outer end wall and flat side walls, segmental blocks fitting within said recesses and having inner flat faces to form a rectangular supplemental bore, and a shaft having a flattened end portion which slidably fits within the supplemental bore, said blocks locking the parts rotatively together and independently slidably engaging the shaft.

2. A universal joint, comprising a coupling member having a bore and a plurality of recesses in the portion of the coupling surrounding the bore, the recesses each having a curved outer wall on the radius of a circle whose center is coincident with the axis of the coupling and parallel side walls, segmental blocks fitting within the recesses and having inner flat faces to form a rectangular supplemental bore, and a shaft having a rectangular end portion which slidably fits within the supplemental bore and is engaged on all its side faces by the segmental blocks, said blocks locking the parts rotatively together and independently slidably engaging the shaft.

3. A universal joint comprising a coupling member having a bore and a plurality of recesses surrounding the bore, said recesses being curved in a plane parallel to the bore and on the radius of a circle whose center is coincident with the axis of the coupling, segmental blocks having flat side portions which closely fit the side walls of the recesses and curved portions which fit the curved walls of the recesses, said blocks also having flat inner faces which form a rectangular bore within the coupling, and a shaft having a flattened end portion which extends into the rectangular bore and is closely engaged on all of its side faces by the inner faces of the segmental blocks.

4. A universal joint, comprising a coupling member having a bore and a plurality of recesses diametrically oppositely positioned in pairs surrounding the bore, said recesses being curved in a direction on the radius of a circle whose center is coincident with the axis of the coupling in a plane parallel to the bore and having parallel side walls, segmental blocks having parallel sides and curved outer surfaces positioned within and closely fitting the walls of the recesses, said blocks also having flat inner faces which form a rectangular supplemental bore within the coupling, and a shaft having a rectangular end portion which extends into the rectangular bore and is slidably engaged on all of its side faces by the inner faces of the blocks.

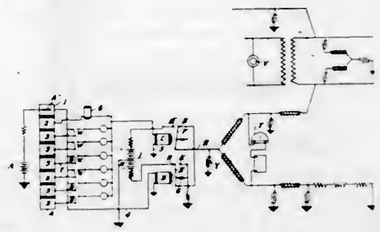
5. A universal joint, comprising a coupling member having a bore and a plurality of recesses diametrically oppositely positioned in pairs surrounding the bore, said recesses being curved in a direction on the radius of a circle whose center is coincident with the axis of the coupling in a plane parallel to the bore and having parallel side walls, segmental blocks having parallel sides and curved outer surfaces positioned within and closely fitting the walls of the recesses, said blocks also having flat inner faces which form a rectangular supplemental bore within the coupling, a shaft having a rectangular end portion which extends into the rectangular bore and is slidably engaged on all of its side faces by the inner faces of the blocks, and a flexible closure closing the open portion of the bore of the coupling member between the said member and the shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,219,522. TELEGRAPH SYSTEM. JOHN E. WRIGHT, New York, N. Y. Filed Jan. 15, 1916. Serial No. 72,221. (Cl. 178—63.)

1. In a telegraph system, the combination with a source of current and means for sending by its use impulses of either positive or negative current to line, of a compound relay comprising two electro-magnets with which the current sending devices are respectively connected or adapted to be connected, and circuit controlling devices actuated by the said two magnets for transmitting to line current impulses of opposite direction and grounding the line after each transmitted impulse.

2. In a telegraph system, a source of current and a commutator or sunflower, the segments of which are adapted to be successively charged thereby, in combination with a compound relay comprising two electro-magnets with which the said segments are connected or adapted to be connected, and circuit controlling means actuated by the said magnets for sending impulses of opposite direction to line and for connecting the said lines to ground after each interruption of current through either magnet, as set forth.



3. In a telegraph system, a source of current and a commutator or sunflower, the segments of which are adapted to be successively charged thereby, in combination with two electro-magnets and circuit connections between the same and the said segments, means for controlling said circuit connections, armatures for the magnets, a battery, the opposite poles of which are adapted to be connected to line by the movements of the armatures, and a connection between the line and ground adapted to be closed whenever the circuit through the magnets is interrupted.

4. In a composite telegraph system involving the use of transmitting and receiving telephone and current impulse operated mechanism, the combination with the transmission line of a source of current impulses, a compound relay comprising two magnets adapted to be energized by such current impulses and to send opposite flowing impulses over the line according to which magnet is energized, and means operated by such magnets to establish, after each impulse so sent, a connection between the line and the ground.

5. In a telegraph system, the combination with a transmitter and means therein for developing current impulses which produce in the line corresponding impulses, of a compound relay comprising two magnets, one adapted to connect the positive and the other the negative poles of a battery to line, means for connecting one or the other magnet in the circuit of the impulses developed by the transmitter, according to the nature and purpose of such impulses, and means controlled by the magnets for grounding the line after each transmitted impulse.

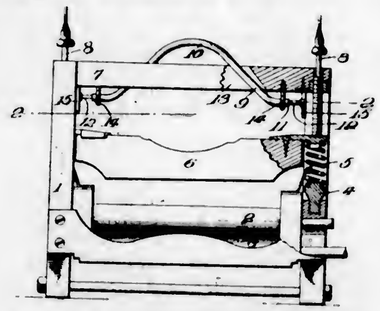
[Claim 6 not printed in the Gazette.]

1,219,523. PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. REA P. WRIGHT, Washington, D. C., assignor to The American Wringer Company, Woonsocket, R. I., a Corporation of Rhode Island. Filed July 26, 1916. Serial No. 111,406. (Cl. 68—32.)

1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted top bar arranged in said frame, keepers carried by the side bars of said frame, and a resilient member slidably mounted on the under face of said top bar having a central bowed portion extending upwardly into a plane above the top of said bar.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar having pressure screws for adjusting said pressure means, guide members secured to the under face of said top bar, a resilient member slidably mounted in said top bar having horizontally disposed portions mounted in the guide members thereof, keepers carried by the side bars provided with key-hole shaped slots, said

resilient members having reduced portions coöperating with said slots for releasing said top bar.



3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted top bar carrying pressure screws for adjusting said pressure means, said top bar having a vertically disposed slot, a resilient member having a bowed portion arranged within said slot and extending upwardly above the upper face thereof, guide members carried by the under face of said top bar to receive the end portions of said resilient members, and keepers carried by said side bars adapted to receive the end portions of said resilient member.

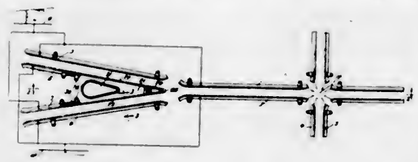
4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted top bar carrying pressure screws for adjusting said means, keepers carried by the side bars of said frame, and a bowed resilient member slidably mounted within said top bar having reduced end portions coöperating with said keepers for releasing said top bar.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted top bar carrying pressure screws for adjusting said pressure means, said top bar having a vertically disposed slot, a resilient member formed of a single piece of wire having a bowed portion extending through said slot and provided with horizontally disposed ends slidably mounted in guides carried by the under side of said top bar, and keepers carried by the side bars of said frame for holding said top bar in predetermined position within said frame.

[Claims 6 to 10 not printed in the Gazette.]

1,219,524. ELECTRIC-RAILWAY SYSTEM. ANDREW YUROW, New York, N. Y. Filed Oct. 15, 1915. Serial No. 56,007. (Cl. 191—28.)

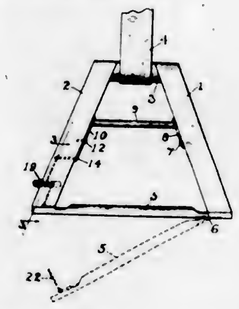
1. The combination with main line conducting rails,



of one or more pairs of branch line conducting rails, each pair being composed of long and short rails, cross connected, end to end, to said main line rails, and an auxiliary rail in each branch line electrically connected to the shorter rails of the branch lines, extending to the end of and coöperating with said longer rail of the said branch line.

2. The combination with a pair of main rails, and branch rails having their ends spaced from said main rails, certain of said branch rails being of lesser length than the others, of a fixed pendant tongue connected with the short branch rails at its rear, and an insulated point on said tongue extending co-incidently with the ends of the longer branch rails, said tongue having contact elements of opposite polarity conforming to the polarity of the rails to which they are connected.

1,219,525. STIRRUP. HENRY ZIMMERMAN, Rouleau, Saskatchewan, Canada. Filed June 21, 1916. Serial No. 105,039. (Cl. 54—49.)



1. In a stirrup, side plates, one of which is formed with upper and lower recesses and with an upper channel connecting said recesses and a lower channel leading from the lower recess to the end of the plate, a top bar connecting said side plates, a foot plate hinged to one of said side plates, a link pivotally carried by said side plate, a pitman carried by the opposite side plate and movable longitudinally thereof in a limited degree, a bar connecting said link and pitman; a link disposed in the upper channeled portion of said last named side plate, a hinge carried by said foot plate and normally disposed in the lower channeled portion of said side plate, a pin disposed in the lower recessed portion of said side plate and normally connecting said hinge and link, a connection between said link and the said pitman through the medium of said upper recess, a collar slidable upon the last named pin and normally in engagement with the last named link and a spring encircling said last named pin and said collar.

2. In a stirrup, side plates, one of which is formed with upper and lower recesses and with an upper channel connecting said recesses and a lower channel leading from the lower recess to the end of the plate, a top bar connecting said side plates, a foot plate hinged to one of said side plates, a link pivotally carried by said side plate, a link disposed in the upper channeled portion of the other side plate, a hinge carried by said foot plate and normally disposed in the lower channeled portion of said last named side plate, a pin disposed in the lower recessed portion of said last named side plate and normally connecting said hinge and the last named link, means carried by said pin for moving the same, with relation to its side plate, when disengaged from the last named link, and manually operable or foot-controlled means connecting the first and last named links and partly disposed in said upper recess whereby relative movement of the latter may be effected to disengage the same from the said pin.

1,219,526. PROCESS FOR RUST-PROOFING IRON AND STEEL. WILLIAM H. ALLEN, Detroit, Mich., assignor to Parker Rust Proof Company of America, Detroit, Mich., a Corporation of Michigan. Filed Sept. 25, 1916. Serial No. 122,148. (Cl. 148—41.)

1. The process of rust-proofing articles of iron and steel which consists in placing the same in a pickling solution of phosphoric acid to remove the scale and other insoluble oxids and then immediately submerging these articles in a rust-proofing bath containing compounds of phosphorus before the adherent pickling solution has time to evaporate.

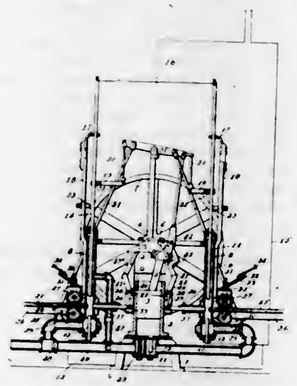
2. The process of rust-proofing articles of iron and steel which consists in placing them in a hot pickling solution of phosphoric acid to remove the scale and other insoluble oxids, then taking the articles from this solution and before the pickling solution has had time to evaporate submerging the articles in an aqueous solution of acid ferrous and ferric phosphates until black basic phosphates of iron are formed on the surfaces of such articles.

3. The process of rust-proofing articles of iron and steel which consists in placing the same in a pickling bath consisting of about five parts of water and one part of phosphoric acid to remove the scale and other insoluble oxids and then immediately before the adherent moisture has time to evaporate, submerging these articles in a rust-proofing bath containing compounds of phosphorus.

4. The process of rust-proofing articles of iron and steel which consists in placing them in a pickling solution of phosphoric acid, then taking the articles from this solution and before the pickling solution has had time to evaporate submerging the articles in a bath containing an aqueous solution of a phosphate of iron.

5. The process of rust-proofing articles of iron and steel which consists in placing them in a pickling solution of phosphoric acid, then taking the articles from this solution and before the pickling solution has had time to evaporate submerging the articles in a bath containing a form of phosphorus until basic phosphates of iron are formed on the surface of such article.

1,219,527. PRESERVING GAS. JAMES N. ALSOP, Owensboro, Ky., assignor to Alsop Electrical Company, Owensboro, Ky., a Corporation of Kentucky. Original application filed Nov. 9, 1910. Serial No. 591,503. Divided and this application filed Apr. 28, 1913. Serial No. 764,291. (Cl. 99—9.)



1. A gas having germicidal and therapeutic properties and which is derived from the action of an electric arc upon atmospheric air in the presence of the vaporized products of a substance having carbohydrates, cellulose and lignin as its constitutents.

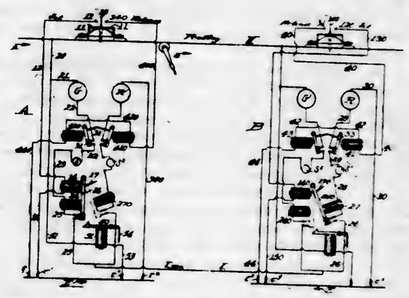
2. A gas having germicidal and therapeutic properties and which is derived from the action of an electric arc upon atmospheric air in the presence of vaporized products of wood.

3. A gas having germicidal and therapeutic properties resulting from mixing dilute nitrous gas in a state of ionization and the vaporized products of wood in a state of ionization, and which results from the action of an electric arc upon atmospheric air and the gaseous products of a vegetable substance having carbohydrates, cellulose and lignin as its constitutents in the presence of each oth..

4. A gas having germicidal and therapeutic properties and which results from the action of an electric arc upon atmospheric air and the vaporized products of wood in the presence of each other.

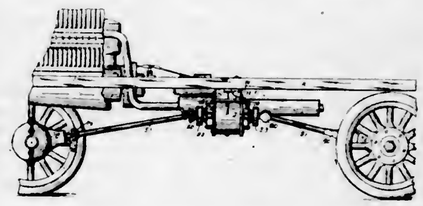
5. A gaseous product having preservative qualities and therapeutic properties and obtained by subjecting atmospheric air to the action of an electric arc to obtain dilute nitrous gas in the state of ionization, and while such atmospheric air retains the characteristics imposed thereon by the arc commingling therewith vaporized products of wood which are in a state of ionization and which are condensable at ordinary temperatures.

1,219,528. BLOCK-SIGNAL SYSTEM. HARRY W. BALCOM, Worcester, Mass. Filed Apr. 3, 1915. Serial No. 18,877. (Cl. 246—36.)



A block signal system having, in combination, a trolley wire carrying current, a trolley-controlled switch at each end of each block connected to said trolley wire, a safety signal and a danger signal at each station, a single line wire having separate branch connections to each of the four signals, an armature in each station effective in normal inoperative position to close the adjacent danger signal branch circuit and effective in operative position to close the adjacent safety signal branch circuit, a magnet controlled by said trolley switch effective to move said armature to operative position, a magnet in said safety signal branch circuit effective to thereafter hold said armature in operative position until the circuit is broken, and a magnet in said danger signal branch circuit effective to prevent movement of said armature from normal position while said danger signal and the distant safety signal are in operation.

1,219,529. TRANSMISSION MECHANISM FOR MOTOR-DRIVEN VEHICLES. PETER J. F. BATENBURG, Clintonville, Wis., assignor to Four Wheel Drive Auto Co., Clintonville, Wis., a Corporation of Wisconsin. Filed Feb. 28, 1913. Serial No. 751,197. (Cl. 21—90.)



1. A transmission mechanism for motor driven vehicles, including the combination with sets of front and rear driving axles and differential gearing connecting the members of each set, of an intermediate set of main differential gears, transmission shaft members detachably coupled together and adapted to transmit motion from the main differential gear set to the driving axles through

the other differential gear set, and clutches adapted to connect the transmission shaft members with either the driving or driven members of the differential gear set, whereby said mechanism may be operated to drive either the front or the rear wheels or both, and either with differential or uniform movement of the transmission shaft members.

2. A transmission mechanism for motor driven vehicles, including the combination with sets of front and rear driving axles and differential gearing connecting the members of each set, of an intermediate set of main differential gears, transmission shaft members detachably coupled together and adapted to transmit motion from the main differential gear set to the driving axles through the other differential gear set, brake drums mounted on the transmission shaft members between the main differential gear set and the respective axle differential gear sets, and brakes adapted to frictionally engage the same, whereby the relative movements of the front and rear wheels may be controlled.

3. A transmission mechanism for motor driven vehicles, including the combination with sets of front and rear driving axles and differential gearing connecting the members of each set, of an intermediate set of main differential gears, transmission shaft members detachably coupled together and adapted to transmit motion from the main differential gear set to the driving axles through the other differential gear set, and a set of brakes each directly controlling the rotation of the transmission shaft members between the main differential gear set and one of the axle differential gear sets.

4. A power transmission mechanism for vehicles, including the combination with sets of front and rear driving axle members, and differential gearing connecting the members of each set, of a main frame, a set of main differential gearing supported thereby between the front and rear axles and provided with flexible driving connections, flexibly jointed transmission shaft members connecting the main differential gear set with the front and rear axle gear sets, and means for coupling the transmission shaft members with either the driving or the driven members of the main differential gear set.

5. A power transmission mechanism for vehicles, including the combination with sets of front and rear driving axle members and differential gearing connecting the members of each set, of a main frame, an oil retaining casing supported thereby, a main differential gear set in said casing, flexibly jointed transmission shaft members projecting through said casing and adapted to transmit motion from the main differential gear set to the axle gear sets, and a driving shaft having flexible belt connection within the casing, with the driving member of the main differential gear set, whereby said belt connection may operate in oil, and whereby the motor may be relieved of the shocks to which the axle and transmission members are subjected.

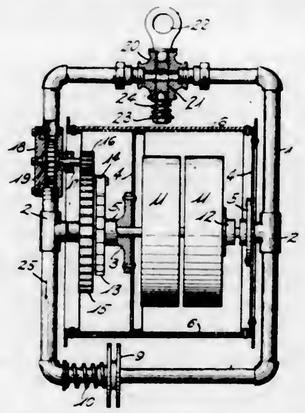
[Claims 6 to 16 not printed in the Gazette.]

1,219,530. DEVICE FOR LOWERING BODIES. JULIO C. BERNALES, Lima, Peru. Filed June 5, 1916. Serial No. 101,693. (Cl. 254—158.)

1. In a device of the character described, the combination comprising, a tubular frame, constructed to contain a fluid body, a cable carrying member rotatably supported by the frame, a pressure producing element carried by the frame and arranged to be operated by the cable carrying member and to circulate the fluid body and means for varying the pressure of the pressure producing element in proportion to weights disposed on the cable.

2. In a device of the character described, the combination comprising, a tubular frame, constructed to contain a fluid body, a cable carrying member rotatably supported by the frame, a pressure producing element carried by the frame and arranged to be operated by the cable carrying member and to circulate the fluid body, and means interposed on the frame for varying the pressure of the pressure producing means.

3. In a device of the character described, the combination comprising, a tubular frame, constructed to contain a fluid body, a cable carrying member rotatably supported by the frame, a pressure producing element carried by the frame and arranged to be operated by the cable carrying member and to circulate the fluid body, and adjustable means for varying the pressure of the pressure producing element.

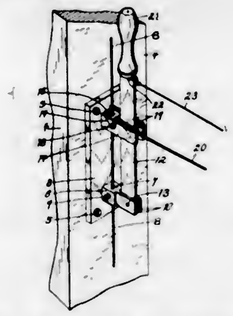


4. In a device of the character described, the combination comprising, a tubular frame constructed to contain a fluid body, a cable carrying member rotatably supported by the frame, a cable on the cable carrying member, a pump interposed in the frame and arranged to be operated by rotation of the cable carrying member and to circulate the fluid body, and a valve interposed in the frame and constructed to form a suspending element for the device.

5. In a device of the character described, the combination comprising, a tubular frame constructed to contain a fluid body, a cable carrying member rotatably supported by the frame, a cable on the cable carrying member, a pump interposed in the frame and arranged to be operated by rotation of the cable carrying member and to circulate the fluid body, a valve interposed in the frame and constructed to form a suspending element for the device, and a resilient member arranged to normally maintain the valve open.

[Claims 6 to 9 not printed in the Gazette.]

1,219,531. TELEPHONE-LINE DISCONNECTOR. MILTON S. BRICKA, Milan, Ind. Filed Aug. 23, 1912. Serial No. 716,706. (Cl. 175—282.)



A telephone line disconnector comprising a base; a substantially U-shaped spring clamp secured to said base and having its end portions bent back on its leg portions between the latter forming jaws; a bolt passing through said leg portions close to said jaws holding the latter under variable compression; a line wire connected with said clamp; a wire end disposed between said jaws; and a blade pivoted to the base and disposed between one of said jaws and said wire end frictionally locking the latter between the jaws, said wire end being adapted to be removed from said jaws upon the removal of the blade from the jaws.

1,219,532. HOLLOW BLOCK FOR REINFORCED-CONCRETE FLOORS. FERDINAND BURCHARTZ, New York, N. Y., assignor to Burchartz Fireproofing Company, Inc., a Corporation of New York. Filed Jan. 27, 1914. Serial No. 814,624. (Cl. 72—66.)



1. A floor or ceiling construction comprising a plurality of open ended blocks spaced apart to form channels adapted to receive reinforcing rods and coalescent material, closures extending transversely of said blocks and beyond the peripheries of the end openings whereby the latter are completely covered and end members forming continuations of said closures at opposite ends thereof and extending along opposite surfaces of said blocks whereby said closures are maintained in position.

2. A floor or ceiling construction comprising a plurality of open ended blocks spaced apart to form channels adapted to receive reinforcing rods and coalescent material, closures extending transversely of said blocks and beyond the peripheries of the end openings whereby the latter are completely covered and resilient end members forming continuations of said closures at opposite ends thereof and arranged to grip two opposite surfaces of said blocks whereby said closures are maintained in position.

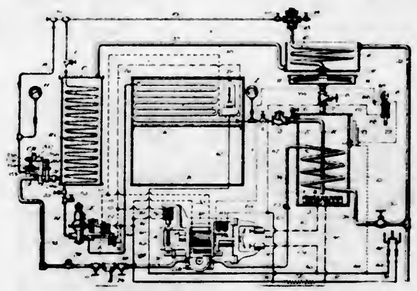
3. A floor or ceiling construction comprising a plurality of open ended blocks spaced apart to form channels adapted to receive reinforcing rods and coalescent material, projections extending lengthwise of each block in proximity to opposite edges of said blocks and having undercut surfaces whereby single dove-tail recesses are formed on opposite surfaces of each block, closures in surface engagement with the ends of said blocks and extending across the open ends thereof to close the same and end members forming continuations of said closures at opposite ends thereof and fitting into said dove-tail recesses to maintain the closures in position.

4. The combination of an open ended block, a closure in surface engagement with an end face of said block and closing an open end thereof and members forming continuations of said closure at opposite ends thereof and extending along opposite surfaces of said block to maintain said closure in position, the distance between the free ends of said members being normally less than the distance between the opposite surfaces of the block engaged thereby.

5. A floor or ceiling unit comprising an open ended block, projections extending in pairs along opposite surfaces of said block in proximity to opposite edges thereof and having undercut surfaces whereby a single dove-tail recess is formed on each of said opposite surfaces, a closure in surface engagement with an end face of said block and closing an open end thereof and members forming continuations of said closure at opposite ends thereof and extending into said dove-tail recesses to maintain said closure in position.

1,219,533. REFRIGERATING-MACHINE. GEORGE P. CARROLL, Bridgeport, Conn. Filed Apr. 1, 1908. Serial No. 424,517. (Cl. 62—5.)

1. In combination a condenser, an evaporator leading from said condenser through a place to be refrigerated, a still having a cooling water passage, adapted to contain an absorbent and leading from said evaporator into said condenser, means for preventing a back flow of refrigerant from said condenser into said still and from said still into said evaporator, a feed valve controlling the inlet end of said evaporator, a water valve controlling said passage, a thermostat operating at a low temperature limit in said place to close said valves and subsequently operating to open the valves, and means heating said still to a predetermined limit when said valves are closed.



2. In combination a condenser, an evaporator leading from said condenser through a place to be refrigerated, a still having a cooling water passage, adapted to contain an absorbent and leading from said evaporator into said condenser, means for preventing a back flow of refrigerant from said condenser into said still and from said still into said evaporator, a feed valve controlling the inlet end of said evaporator, a water valve controlling said passage, heating means for heating said still, a thermostat controlled by the temperature in said place and operating at a low temperature limit to close said valves and to start the operation of said heating means and at a high temperature limit to open the valves, and means terminating such heating before the opening of said valves.

3. In combination a condenser, an evaporator leading from said condenser through a place to be refrigerated, a still having a cooling water passage, adapted to contain an absorbent and leading from said evaporator into said condenser, means for preventing a back flow of refrigerant from said condenser into said still and from said still into said evaporator, a feed valve controlling the inlet end of said evaporator, a water valve controlling said passage, a thermostat operating at a low temperature limit in said place to close said valves and subsequently operating to open the valves, and means heating said still when said valves are closed until the absorbent and the absorbed refrigerant therewith have been reduced to a predetermined weakness.

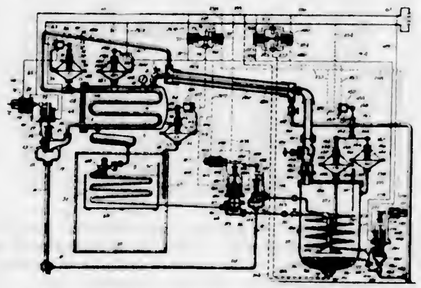
4. In combination, a condenser, an evaporator leading from said condenser through a place to be refrigerated, a still having a cooling water passage, adapted to contain an absorbent and leading from said evaporator into said condenser, means for preventing a back flow of refrigerant from said condenser into said still and from said still into said evaporator, a feed valve controlling the inlet end of said evaporator, a water valve controlling said passage, heating means for heating said still, a thermostat controlled by the temperature in said place, and operating at a low temperature limit to close said valves and to start the operation of said heating means and at a high temperature limit to open the valves, and means terminating such heating while said valves are closed and when the absorbent and the absorbed refrigerant therewith have been reduced to a predetermined weakness.

5. In combination a condenser, an evaporator leading from said condenser, a still adapted to contain an absorbent and leading from said evaporator into said condenser, means for preventing a back flow of refrigerant from said condenser into said still and from said still into said evaporator, a feed valve controlling the inlet end of said evaporator, a thermostat at a low temperature limit

controlled by the temperature about said evaporator and operative at a high temperature limit to open said valve and at such low limit to close it, means permitting a flow of cooling water to said still exclusively in its absorption period, and means operative for heating at intervals said still to a predetermined limit.

[Claims 6 to 32 not printed in the Gazette.]

1,219,534. REFRIGERATING-MACHINE. GEORGE P. CARROLL, Bridgeport, Conn. Filed Dec. 3, 1910, Serial No. 595,453. Renewed Aug. 9, 1916. Serial No. 114,069. (Cl. 62—5.)



1. In combination a condenser, an evaporator leading from said condenser, a still adapted to contain an absorbent and leading from said evaporator into said condenser, means for preventing a back flow of refrigerant from said condenser into said still and from said still into said evaporator, means for regulating the expansion of refrigerant from said condenser into said evaporator and its absorption in said still, and means operating when the pressure in said condenser falls to a predetermined limit to heat said still.

2. In combination a condenser, an evaporator leading from said condenser, a still adapted to contain an absorbent and leading from said evaporator into said condenser, means for preventing a back flow of refrigerant from said condenser into said still and from said still into said evaporator, means for regulating the expansion of refrigerant from said condenser into said evaporator and its absorption in said still, and means controlled by the pressure of refrigerant in said condenser and operating when such pressure falls to a predetermined limit to heat said still to a predetermined limit.

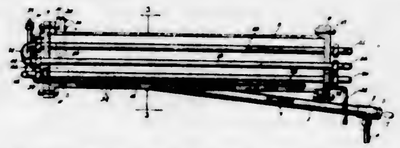
3. In combination a condenser, an evaporator leading from said condenser, a still adapted to contain an absorbent and leading from said evaporator into said condenser, means for preventing a back flow of refrigerant from said condenser into said still and from said still into said evaporator, means for regulating the expansion of refrigerant from said condenser into said evaporator and its absorption in said still, means operating when the pressure in said condenser falls to a predetermined limit to heat said still normally to one predetermined limit, and a safety device operating to stop such heating in case the pressure in said still, before such normal termination, rises above a normal limit.

4. In combination a condenser, an evaporator leading from said condenser, a still adapted to contain an absorbent and leading from said evaporator into said condenser, means for preventing a back flow of refrigerant from said condenser into said still and from said still into said evaporator, means for regulating the expansion of refrigerant from said condenser into said evaporator and its absorption in said still, means controlled by the pressure of refrigerant in said condenser and operating when such pressure falls to a predetermined limit to heat said still normally to a high temperature limit, and a safety device operating to stop such heating in case the pressure in said still in the time of heating rises above a normal limit.

5. In combination a condenser, an evaporator leading from said condenser through a place to be refrigerated, a still adapted to contain an absorbent and leading from said evaporator into said condenser, means for preventing a back flow of refrigerant from said condenser into said still and from said still into said evaporator, dominating means operating when the pressure in said condenser falls to a predetermined limit to heat said still, and refrigerant regulative means temperature controlled in the period between the operations of said dominating means and then operative to regulate the expansion of refrigerant from said condenser into said evaporator and its absorption in said still so as to maintain a predetermined temperature in said place, said dominating means during such heating also causing said regulative means to be inoperative.

[Claims 6 to 29 not printed in the Gazette.]

1,219,535. CONDENSER. GEORGE P. CARROLL, Bridgeport, Conn. Filed Nov. 4, 1913. Serial No. 799,094. (Cl. 257—236.)



1. In combination a tank having an inlet and having an outlet from its bottom, a water conduit entering said tank near the bottom thereof, emerging therefrom at a place higher than the place of entrance and consisting of sections in substantially horizontal positions in the tank connected in series by other sections, a gas conduit leading into said tank through said inlet, and a water pipe leading from the outlet end of said water conduit, entering said gas conduit, longitudinally traversing a part of said gas conduit outside of said tank for a distance and emerging therefrom.

2. In combination a tank having an outlet from its bottom, a water conduit entering said tank near the bottom thereof, emerging therefrom at a place higher than the place of entrance and consisting of sections in substantially horizontal positions in the tank connected in series by other sections, and a gas conduit descending into said tank and discharging near the bottom thereof.

3. In combination a tank having an outlet from its bottom, a water conduit entering said tank near the bottom thereof, emerging therefrom at a place higher than the place of entrance and consisting of sections in substantially horizontal positions in the tank connected in series by other sections, a gas conduit descending into said tank and discharging near the bottom thereof, and a water pipe leading from the outlet end of said water conduit, entering said gas conduit, longitudinally traversing a part of the gas conduit outside of said tank for a distance and emerging therefrom.

4. In combination a horizontal tank with heads at opposite ends, having an inlet and having an outlet from its bottom, a water conduit entering said tank near the bottom thereof, emerging therefrom at a place higher than the place of entrance and consisting of sections extending through said heads, in substantially horizontal positions and connected in series outside of the heads, a gas conduit leading into said tank through said inlet, and a water pipe leading from the outlet end of said water conduit, entering said gas conduit, longitudinally traversing a part of the gas conduit outside of said tank for a distance and emerging therefrom.

5. In combination a horizontal tank with heads at opposite ends and having an outlet from its bottom, a water conduit entering said tank near the bottom thereof, emerging therefrom at a place higher than the place of entrance and consisting of sections extending through said heads, in substantially horizontal positions and connected in series outside of the heads, and a gas conduit descending into said tank and discharging near the bottom thereof.

[Claims 6 to 20 not printed in the Gazette.]

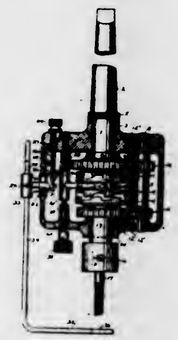
1,219,536. PLASTIC COMPOSITION. RAMON CASTELLS, Barcelona, Spain. Filed June 24, 1915. Serial No. 36,154. (Cl. 106—23.)

1. A substitute for sealing wax comprising resin, caoutchouc, sulfur, white-lead, and a solvent for the resin and caoutchouc, substantially as described.

2. A product comprising resin, caoutchouc, sulfur, white-lead, and petroleum spirit, substantially as described.

3. A substitute for sealing wax comprising resin, caoutchouc, sulfur, white-lead, and a solvent for the resin and caoutchouc, said caoutchouc constituting less than two-fifths by weight of said substance.

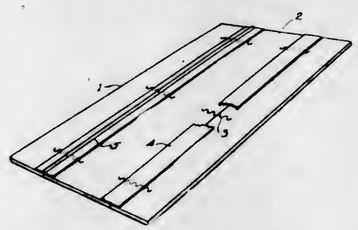
1,219,537. TAPPING-CHUCK. JOSEPH A. DALTON, Brooklyn, N. Y. Filed Feb. 20, 1914, Serial No. 819,927. Renewed Aug. 8, 1916. Serial No. 113,831. (Cl. 10—138.)



1. A tapping chuck comprising a plurality of clutch members adapted to be rotated in opposite directions, an intermediate member adapted to be engaged with either of said clutch members, a spanner for said intermediate member, a guide for said spanner, a pivoted lever for temporarily retaining said guide for disengaging said temporary retaining means.

2. A tapping chuck having a clutch member in three parts, a spanner for reciprocating one of said parts, a guide for said spanner, a pivoted lever for temporarily retaining said guide, a manually and automatically operating means for disengaging said retaining lever from said guide and a knob secured to said guide for elevating and resetting said guide for the purpose set forth.

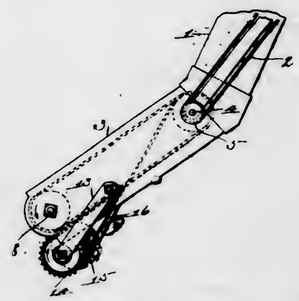
1,219,538. JOINT FOR PACKING-BOX BOARDS. WILLIAM HARRY DAVIS, Winnetka, Ill. Filed Jan. 22, 1915. Serial No. 3,824. (Cl. 20—92.)



1. A board comprising pieces of veneer wood placed with edges abutting, metal fasteners spanning the joint and driven transversely to the plane of the board, and a tape extending along and covering said joint.

2. A board comprising pieces of veneer wood placed with edges abutting, corrugated metal fasteners spanning the joint and driven transversely to the plane of the board, and a tape extending along and covering said joint.

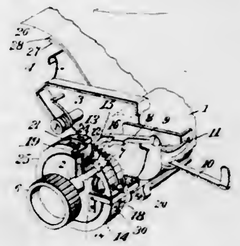
1,219,539. COTTON-PICKER. JAMES W. DINSMORE, Lookeba, Okla. Filed Oct. 21, 1914. Serial No. 867,870. (Cl. 56—117.)



1. The combination with a suction pipe, a nozzle movable freely in any plane, a rotatable screen mounted at the forward end of the nozzle, a narrow belt traveling over said screen and rotating the same, pronga carried by said belt, boll engaging toothed disks supported from the forward end of the nozzles, and means for causing said disks to rotate in a direction reverse to the rotation of the screen.

2. A device of the kind described comprising a nozzle, a rotatable screen in the forward end of the nozzle, a rotatable drum in the rear end of the nozzle, a belt running over said belt and screen, prongs carried by the belt, pivoted arms carried by the sides of the nozzle, toothed disks carried by the said arms and crossed belts running respectively from said drum to said disks in a direction reverse to the rotation of the screen.

1,219,540. TYPE-WRITING MACHINE. HERMANN V. FENGLER, West Philadelphia, Pa., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 31, 1914. Serial No. 854,236. (Cl. 197—116.)



1. In a typewriting machine, the combination with a revolnble platen, of a driver for rotating the platen backwardly a predetermined fixed distance for carrying a work-piece into position to be removed from the machine, and replaced by a new work-piece, and then rotating the platen forwardly a greater distance than said backward rotation to position the new work-piece on the platen, a stop to determine the limit of movement of the driver when rotating the platen forwardly, a coupler carried by the driver and movable thereon into and out of position for connecting the driver to the platen, means to auto-

matically actuate the coupler to connect the driver with the platen when the driver is in an intermediate position during its rotation in the direction to rotate the platen backwardly and thereafter cause the driver to rotate the platen backwardly, a stop to limit the rotation of the driver in said direction, said coupler being frictionally held in coupling position by the pressure applied thereto in transmitting driving power from the driver to rotate the platen forwardly, whereby the platen is rotated forwardly by the driver a greater distance than it is rotated backwardly thereby, and means to automatically retract the coupler to uncoupling position when the forward rotation of the platen by the driver is completed.

2. In a typewriting machine, the combination with a platen, of an oscillating driver for rotating the platen forwardly a predetermined distance and rotating the platen backwardly a less distance, a coupler carried by the driver and movable thereon into and out of coupling position to form a driving connection between the driver and platen during said rotations, means to operate the coupler to release the driver when the latter reaches the limit of its rotation in a direction to rotate the platen forwardly, the coupler being held in coupling position during the final portion of said forward rotation by the pressure applied thereto by the driver in rotating the platen, and means to operate the coupler to connect the driver with the platen when the driver is at an intermediate point during its rotation in the reverse direction.

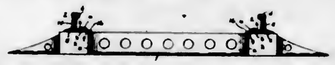
3. In a typewriting machine, the combination with a platen, of an oscillating driver for rotating the platen forwardly a predetermined distance and rotating the platen backwardly a less distance, a coupler carried by the driver and movable thereon into and out of coupling position to form a driving connection between the driver and platen during said rotations, means to operate the coupler to release the driver when the latter reaches the limit of its movement in a direction to rotate the platen forwardly, the coupler being held in coupling position during the final portion of said movement by the pressure applied thereto by the driver in rotating the platen, means to operate the coupler to connect the driver with the platen when the driver is at an intermediate point during its movement in the reverse direction, and stops to limit the throw of the driver in both directions, one of said stops adjustable to vary the throw of the driver, and thereby vary the angle through which the platen is rotated by said driver.

4. In a typewriting machine, the combination with a platen, of a driver, a coupler carried by the driver and movable thereon into and out of coupling position for connecting the driver to the platen to rotate the latter as the driver is rotated, the driver in rotating the platen applying to the coupler a pressure operative to prevent movement of the coupler to uncoupling position, a stop to limit the movement of the driver in a direction to rotate the platen forwardly, means to actuate said coupler and disconnect the platen from the driver when the latter has completed said movement, thereby permitting the platen to be rotated independently of the driver, means to operate said coupler when the driver is rotated in the reverse direction, and thereby connect the driver with the platen, said means permitting a limited rotation of the driver relatively to the platen in said reverse direction, whereby the platen is rotated backwardly a less distance than forwardly by the driver, and a stop to limit the rotation of the driver in rotating the platen backwardly.

5. In a typewriting machine, the combination with a platen, of a driver, a coupler carried by the driver and movable thereon into and out of coupling position for connecting the driver to the platen to rotate the latter as the driver is rotated, the driver in rotating the platen applying to the coupler a pressure operative to prevent movement of the coupler to uncoupling position, a stop to limit the movement of the driver in a direction to rotate the platen forwardly, means to actuate said coupler and disconnect the platen from the driver when the latter has completed said movement, thereby permitting the platen to be rotated independently of the driver, means to operate said coupler when the driver is rotated in the reverse direction, and thereby connect the driver with the platen, said means permitting a limited rotation of the driver relatively to the platen in said reverse direction, whereby the platen is rotated backwardly a less distance than forwardly by the driver, an adjustable stop limiting the rotation of the driver in rotating the platen backwardly and coöperating with the first-mentioned stop to determine the extent the platen may be rotated forwardly by the driver, and a graduated scale coöperating with said adjustable stop to indicate the distance through which the platen may be rotated forwardly by the driver.

[Claims 6 to 25 not printed in the Gazette.]

1,219,541. METALLIC RAILWAY-TIE. SAMUEL V. FULLAWAY, Sr., Omaha, Nebr. Filed May 18, 1916. Serial No. 98,303. (Cl. 238—5.)



1. A railway cross tie, comprising an elongated body provided at its top with a pair of outwardly projecting clamping members and formed with recesses opening on its top inwardly of said clamping members, and having transversely disposed, apertured walls, a pair of slide plates each being provided with an apertured lug at its inner end and an inwardly projecting clamping member at its outer end, and having a tongue-and-groove connection with said body, said slide plates being movable inwardly of the ends of the tie to dispose their ends upon opposed sides of a rail and to engage a rail between an outwardly projecting clamping member and an inwardly projecting clamping member, its apertured lug traversing one of the transversely disposed, apertured walls of said body, and a pair of keepers each being adapted to engage in the aperture of a lug of a slide plate while disposed in a recess of said elongated body.

2. A metallic railway cross tie, comprising a tie body provided inwardly of each of its ends with a transversely disposed, apertured wall having a curved flange projecting above said body, a pair of metallic slide plates each having an upwardly projecting curved part near one of its ends its opposite end being provided with an outwardly convergent lug, each slide plate being movable longitudinally inwardly of the tie body to dispose its ends upon opposed sides of a rail and to cause engagement of a rail between a curved flange of a transversely disposed wall of the tie body and an upwardly projecting curved part of a slide plate, its outwardly convergent lug traversing the aperture of a transversely disposed wall of the tie body, and keepers disposed inwardly of the transversely disposed walls of the tie body in engagement with the convergent lugs of the slide plates.

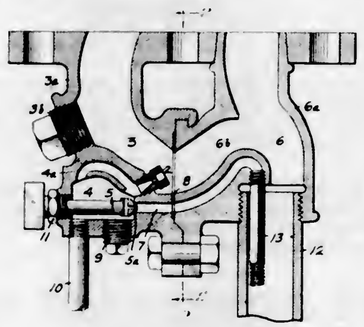
3. An apertured metallic railway cross tie provided at its top with a pair of outwardly projecting clamping members, a pair of metallic slide plates each being provided at its inner end with an apertured tongue and at its outer end with an inwardly projecting clamping member and having a tongue-and-groove connection with the cross tie, each of said slide plates being movable inwardly of the ends of the tie for engaging a rail between an outwardly projecting clamping member and an inwardly projecting clamping member, its tongue traversing an aperture of said tie, and a key member in each aperture of a slide plate to prevent an outward movement thereof after it has been moved inwardly of the ends of the tie.

4. A metallic railway tie provided near its ends with outwardly projecting clamping members, a pair of adjusting plates each being incised and bent near one of its side edges to provide a pair of longitudinally curved elastic arms with terminal transversely disposed fingers, said adjusting plates being disposed upon the inner sides of the clamping members with their transversely disposed fingers projecting outwardly of the ends thereof, a pair of metallic slide plates provided near their outer ends with inwardly projecting clamping members and having tongue-and-groove connections with the cross tie for movements toward each other longitudinally of said tie, and means to maintain the slide plates in stationary relation with the cross tie after they have been moved.

5. A railway tie provided at its top with a pair of outwardly projecting clamping members, a pair of slide plates, each having a tongue-and-groove connection with the tie and provided at its outer end with an inwardly projecting clamping member to coöperate with said outwardly projecting clamping member for engaging a rail therebetween, spring members disposed on the inner sides of the rails and provided with transverse terminals engaging the ends of the clamping members, each of said slide plates being movable inwardly of the ends of the tie for compressing the spring members between the rail and an outwardly projecting clamping member and an inwardly projecting clamping member, and means to prevent an outward movement of the slide plates after they have been moved inwardly of the ends of the tie.

[Claims 6 to 9 not printed in the Gazette.]

1,219,542. TRACK-SANDING DEVICE. JOHN GAPP, Scranton, Pa. Filed Aug. 11, 1916. Serial No. 114,419. (Cl. 105—263.)



1. In a track sanding device, the combination with a casing having a sand receiving chamber, a gravity discharge passage, and a delivery passage from said sand chamber to the gravity discharge passage, of an air chamber having a jet nozzle for raising the sand through said delivery passage, and an auxiliary air passage from said air chamber to the gravity discharge passage.

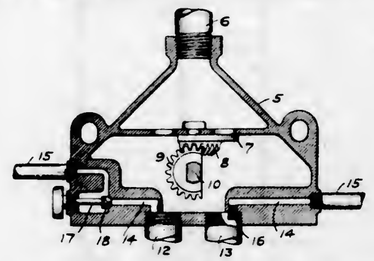
2. In a track sanding device, the combination with a casing having a sand receiving chamber, a gravity discharge passage, and a delivery passage from said sand chamber to the gravity discharge passage, of an air chamber having a jet nozzle for raising the sand through said delivery passage, an auxiliary air passage from the air chamber to the gravity discharge passage, and an auxiliary valve in said air chamber for controlling said passage.

3. In a track sanding device, the combination with a casing having a sand receiving chamber, a gravity discharge passage, and a delivery passage from said sand chamber to the gravity discharge passage, of an air chamber having a jet nozzle for raising the sand through said delivery passage, and an auxiliary air passage from the air chamber to the gravity discharge passage, and an auxiliary valve adapted to seat in the opening to said auxiliary passage and having a port through the end of the valve to supply air to said passage.

4. In a track sanding device, the combination with a casing having a sand receiving chamber, a gravity discharge passage, and a delivery passage from said sand chamber to the gravity discharge passage, of an air chamber having a jet nozzle for raising the sand through said delivery passage, and a passage at the upper portion of the air chamber in close proximity to said jet nozzle.

5. In a track sanding device, the combination with a casing having a sand receiving chamber, a gravity discharge passage, and a delivery passage from said sand chamber to the gravity discharge passage, of an air chamber having a jet nozzle for raising the sand through said delivery passage, a passage at the upper portion of the air chamber, an auxiliary air passage leading to the gravity discharge passage, and a valve controlling said auxiliary passage.

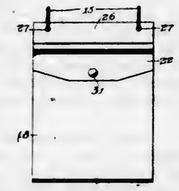
1,219,543. GRAVITY SANDING DEVICE. JOHN GAPP, Scranton, Pa. Filed Oct. 6, 1916. Serial No. 124,022. (Cl. 105—263.)



1. In a track sanding device, the combination of a manifold casing having gravity discharge pipe connections, a manually operated valve for controlling the flow of sand through said discharge pipe, an air chamber in said casing, an air passage from said chamber and having a fixed outlet directed downward into said discharge pipe, and an air supply pipe communicating with said chamber.

2. In a track sanding device, the combination of a manifold casing having gravity discharge pipe connections, a manually operated valve for controlling the flow of sand through said discharge pipe, an air chamber formed in said manifold casing, an air passage from said chamber discharging downward into the gravity discharge pipe, a valve for said passage, and an air supply pipe for said chamber.

1,219,544. BOOKBINDING. JOHN G. GARRIS, Philadelphia, Pa. Filed June 26, 1916. Serial No. 105,817. (Cl. 129—1.)



1. A loose leaf binder, comprising a board, an extension therefrom adapted to have leaves secured thereto, and a pocket board hingedly mounted on said first board.

2. A loose leaf binder, comprising a board, an extension therefrom adapted to have leaves secured thereto, a pocket board hingedly mounted on said first board, and a flap also secured to said first board.

3. A loose leaf binder, comprising a board, an extension therefrom adapted to have leaves secured thereto, a pocket board hingedly mounted on said first board, and a flap also secured to said first board, substantially at the point of hinged connection between said first board and extension.

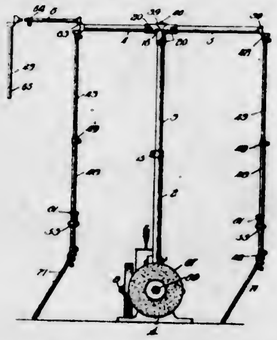
4. A loose leaf binder, comprising a board, an extension therefrom adapted to have leaves secured thereto, a pocket board hingedly mounted on said first board, and gussets closing the laterally open sides of the space between said boards.

5. A loose leaf binder, comprising a board, an extension therefrom adapted to have leaves secured thereto, a pocket board hingedly mounted on said first board, gussets closing the laterally open sides of the space between said

boards, and a flap adapted to close the open side of said pocket and secured to said first board at the point of the hinged connection between said board and said extension.

[Claims 6 to 11 not printed in the Gazette.]

1,219,545. POWER-TRANSMITTING MECHANISM. GUSTAV A. GILBERTSON, Benson, Minn. Filed Mar. 13, 1916. Serial No. 83,999. (Cl. 74—7.)



1. An apparatus of the character described comprising a motor, having a frame which serves as a supporting base, a hollow standard rigidly supported by and projecting upwardly from the motor frame, hollow cross arms at the upper end of said standard, drop tubes depending from said cross arms, and driving shafting extending from said motor through the standard, the cross arms and the drop tubes.

2. An apparatus of the character described comprising a motor, a hollow standard supported by and projecting upwardly from the motor, hollow cross arms at the upper end of said standard, drop tubes depending from said cross arms, driving shafting extending from said motor through the standard, the cross arms and the drop tubes, and means for varying the height of said standard and of said drop tubes.

3. In an apparatus of the character described, a motor having a frame adapted to serve as a supporting base, a gear mounted on the motor shaft, a hollow standard supported at its lower end only by the motor frame in proximity to the aforesaid gear, the major portion of the standard lying above the top of said frame, a shaft extending through and supported by said standard, and a gear on the lower end of said shaft meshing with the aforesaid gear.

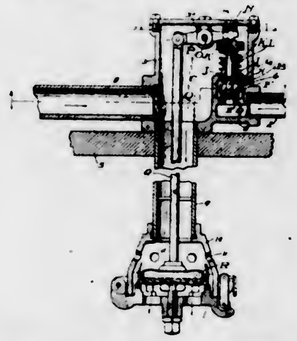
4. In an apparatus of the character described, a motor having a frame adapted to serve as a supporting base, a gear mounted on the motor shaft, a hollow standard supported by and projecting upwardly from the motor frame in proximity to the aforesaid gear, a shaft extending through and supported by said standard, a gear on the lower end of said shaft meshing with the aforesaid gear, cross arms projecting laterally from the upper end of said standard, shafts arranged in said cross arms, and gearing between the shafts and the cross arms and the shaft in the standard.

5. In an apparatus of the character described, a motor, a hollow standard supported by and projecting upwardly from the motor, hollow cross arms at the upper ends of said standard, drop tubes depending from said cross arms, driving shafting extending from said motor through the standard, the cross arms and the drop tubes, and means for adjusting the length of the drop tubes.

[Claims 6 to 13 not printed in the Gazette.]

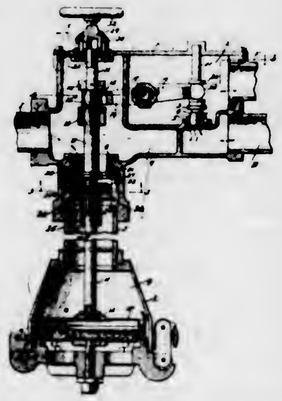
1,219,546. AUTOMATIC HEATING SYSTEM. EGBERT H. GOLD, Shelby, Ind. Filed Dec. 14, 1903. Serial No. 185,122. (Cl. 236—19.)

1. The combination with a car, of a radiator therein, constantly open to the atmosphere, means for supplying steam thereto at a substantial pressure, an admission valve for said radiator arranged to be closed against supply pipe pressure, a thermostat at the discharge end of said radiator, operative connections between said thermostat and said valve comprising a rod adapted to be actuated by the expansion of said thermostat to close said valve and to be actuated by gravity in a direction to open said valve upon the contraction of said thermostat.



2. The combination with a car, of a radiator therein constantly open to the atmosphere, an admission valve for said radiator, a thermostat at the discharge end of said radiator, operative connections between said thermostat and said valve, said connections comprising a rod adapted to be actuated by the expansion of said thermostat to close said valve and to be actuated by gravity in a direction to open said valve upon the contraction of said thermostat, and means constantly tending to actuate said structure in a direction to open said valve.

1,219,547. INTERCHANGEABLE HEATING SYSTEM. EGBERT H. GOLD, Chicago, Ill. Filed Feb. 11, 1905. Serial No. 245,311. (Cl. 236—19.)



1. The combination with a radiating system provided with an inlet and an outlet, of a valve adapted to control said inlet, a valve adapted to control said outlet, automatic means for operating said valves, and connections whereby both of said valves will be adjusted simultaneously into opposite operative relations to their respective seats.

2. The combination with a circulating system provided with an inlet and an outlet, of a valve for controlling said inlet, a valve for controlling said outlet, a thermostat, connections between said thermostat and said valves whereby said valves may be operated by said thermostat, and means for simultaneously adjusting said valves into opposite relations with their respective seats, whereby either but not both of said valves may be sufficiently closed by the expansion of said thermostat.

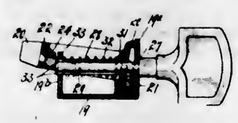
3. The combination with a radiating system provided with an inlet port and an outlet port, of simultaneously actuated valves arranged to control said inlet and outlet respectively, a thermostat, operative connections between said thermostat and said valves, and means of simultaneous adjustment of said valves with relation to their seats, all so arranged that said valves may be alternately but not simultaneously operated by the expansion of said thermostat to throttle their respective ports.

4. The combination with a radiating system provided with an inlet port and an outlet port, of valves adapted to close said inlet and outlet respectively, a thermostat, operative connections between said thermostat and said valves, and means of simultaneous adjustment of said valves whereby the adjustment of either of said valves into operative relation to its seat will cause the other valve to be moved out of operative relation with its seat.

5. The combination of a circulating system provided with an inlet and an outlet, of a thermostat, a stem adapted to be moved by the expansion of said thermostat, a valve mounted upon said stem and adapted to close said outlet, a valve adapted to close said inlet, operative connections between said inlet valve and said stem, and means for rotating said stem whereby said valves will be so adjusted with relation to their respective seats that when said inlet valve is closed by the expansion of said diaphragm the outlet valve will remain open, and vice versa.

[Claims 6 to 8 not printed in the Gazette.]

1,219,548. ELECTRIC-SWITCH MECHANISM. DAVID D. GORDON, Chicago, Ill., assignor to The Yost Electric Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed June 8, 1916. Serial No. 102,559. (Cl. 173—346.)



1. In a switch of the class described, a bridging element mounted for rocking movements and having a thrust part and a stud spaced transversely of its rocking axis, a rotatable control member, and means carried by said control member for rotary movements therewith and yielding axial movements relative thereto, said means being disposed between the thrust part and stud of the bridging element and coacting with the stud to prevent a rocking of said element until the control member has been turned a predetermined extent and coacting with the thrust part to impart a quick shifting movement to the bridging element when released for rocking movement by said means.

2. In a switch of the class described, a bridging element mounted for rocking movements and having a stud and a thrust part spaced transversely of its rocking axis, a rotatable key, and means carried by said key for rotary movements therewith and yielding axial movements relative thereto, said means coacting with said stud and thrust part and periodically operable in coöperation therewith to lock, release and impart a quick shifting movement to the bridging element at predetermined points in a rotation of the key.

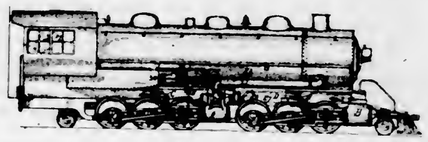
3. In a switch of the class described, a bridging element mounted for rocking movements and having inner and outer parts spaced lengthwise thereof, a key mounted for rotary movements and projected through said inner part lengthwise of the bridging element, and means carried by said key for rotary movements therewith and axial movements relative thereto and yieldingly bearing against said inner part and actuated by said inner part upon a predetermined turning of the key to move outward relative to the key into engagement with said outer part to prevent a rocking of the bridging element until the key has been rotated a predetermined extent, and then releasing said outer part and imparting a quick rocking movement to said element.

4. In a switch of the class described, a bridging element mounted for rocking movements and having a stud and a thrust part spaced transversely of its rocking axis, a rotatable key projected through said thrust part lengthwise of the bridging element, a sleeve carried by said key between the stud and thrust part of said element and rotatable with said key and axially movable relative thereto, means acting on said sleeve to yieldingly retain one end thereof in thrust contact with said thrust part, said sleeve, upon a turning thereof with the key, being actuated by said thrust part to move lengthwise of the key and to place the opposite end thereof in engagement with said stud to prevent a rocking of the bridging element until the sleeve has turned a predetermined extent, the sleeve urged by said yielding means then acting on the thrust part to effect a quick shifting movement of the bridging element.

5. In a switch of the class described, a bridging element mounted for rocking movements, a rotatable key, and means carried by said key for rotation therewith and axial shifting movements relative thereto and operable by a predetermined turning of the key to move relative to the key into element locking position to prevent a shifting thereof, then to release said element and impart quick shifting movement thereto.

[Claims 6 to 9 not printed in the Gazette.]

1,219,549. VALVE-GEAR. ROSS G. GRAHAM, Swanton, Ohio, assignor to The Pilliod Company, Swanton, Ohio, a Corporation of Ohio. Filed July 17, 1916. Serial No. 109,751. (Cl. 121—99.)



1. The combination with a pair of valve gears, of a connecting mechanism therebetween including a pair of rocker arms one inclined with respect to the other and connected to rock in unison, and separate means connecting said arms to respective gears.

2. The combination with a pair of valve gears, of a connecting mechanism therebetween including a pair of relatively angled rocker arms, pivotally-jointed connection between said arms to cause them to rock in unison, and separate means connecting said arms to respective gears.

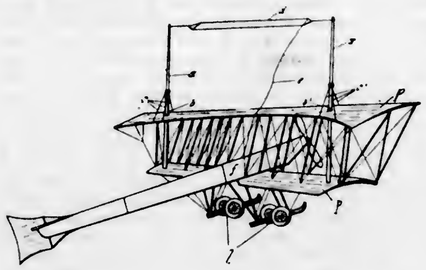
3. The combination with a pair of valve gears, each having a reverse member, of a pair of connected relatively angled rocker arms adapted to rock in unison, and separate means connecting said arms to the reverse members of respective gears.

4. The combination with a pair of valve gears, each having a reverse member, of a pair of connected rocker arms, one at approximately a 45° angle to the other, adapted to rock in unison, and separate means connecting said arms to the reverse members of respective gears.

5. In a locomotive having connected high and low pressure engines, the combination with a valve gear for each engine, of mechanism connected to each of said gears and having a plurality of relatively angled rocker arms, the angled arms of the mechanism causing it when operated to impart different predetermined movements to said gears in unison to vary the relative periods of cut-off of the admission valves of the engines.

[Claims 6 to 8 not printed in the Gazette.]

1,219,550. ANTENNA STRUCTURE ON AEROPLANES FOR WIRELESS SIGNALING. WALTER HAHNEMANN, Kitzeberg, Kiel, Germany, assignor to the Firm Signal Gesellschaft M. B. H., Kiel, Germany. Filed Jan. 13, 1915. Serial No. 2,078. (Cl. 250—33.)



1. The combination with an aeroplane, of an antenna structure for transmitting or receiving wireless signals, comprising two masts rising from the supporting planes symmetrically of the longitudinal axis of the aeroplane, a conducting element extending between the tops of the masts in a plane substantially parallel with the aeroplane structure and being insulated therefrom, and another conducting element consolidated with the aeroplane structure and extending substantially the distance between the masts.

2. The combination with an aeroplane, of an antenna structure for transmitting or receiving wireless signals, comprising two masts rising from the supporting planes symmetrically of the longitudinal axis of the aeroplane, a third mast rising from the tail supporting structure, considerably removed from the supporting planes, a conducting element extending between the tops of the masts in a plane substantially parallel with the aeroplane structure and being insulated therefrom, and another conducting element consolidated with the aeroplane structure and extending substantially the distance between the masts.

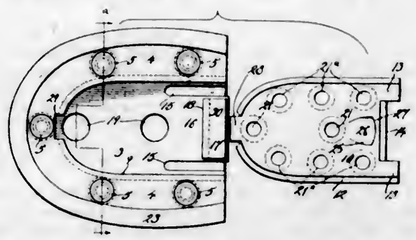
3. The combination with an aeroplane, of an antenna structure for transmitting or receiving wireless signals, comprising an electrically conducting element consolidated with the aeroplane structure, a plurality of masts extending above the aeroplane structure symmetrically of the longitudinal axis thereof and being insulated therefrom, and a second conducting element extending between the tops of the masts and also from the tops of the masts to insulating members in connecting parts fastened to the aeroplane structure.

4. The combination with an aeroplane, of an antenna structure for transmitting or receiving wireless signals, comprising an electrically conducting element consolidated with the aeroplane structure, a plurality of masts extending above the aeroplane structure at points removed from the center of gravity thereof, and being insulated therefrom, and a second conducting element extending between the tops of the masts, the height of each of the masts being less than the height of a mast for the same range on a one-mast aeroplane.

5. The combination with an aeroplane, of an antenna structure for transmitting or receiving wireless signals, comprising an electrically conducting element consolidated with the aeroplane structure, a plurality of masts extending above the aeroplane structure symmetrically of the longitudinal axis thereof and being insulated therefrom, and a second conducting element extending between the tops of the masts, the height of each of the masts being less than the height of a mast for the same range on a one-mast aeroplane.

[Claims 6 and 7 not printed in the Gazette.]

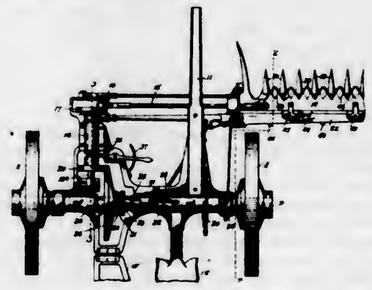
1,219,551. DETACHABLE HEEL-SECTION. LEON HAIN, Philadelphia, Pa. Filed Sept. 11, 1916. Serial No. 119,354. (Cl. 36—36.)



1. The combination of two interlocking heel sections for shoes, one of said sections being designed to be secured to the heel portion of a shoe, the other of said sections being designed to interlock with the first-mentioned section, each of said sections having holes extending therethrough and registering with each other, the holes in said first section being smaller than the holes in said second section to permit the insertion of headed nails entirely through the second section, the holes in said first section being of such size as to arrest the headed portion of the nails, said nails acting to secure said first section to the heel portion of a shoe, substantially as described.

2. The combination of two interlocking heel sections for shoes, one of said sections being designed to be secured to the heel portion of a shoe, the other of said sections being designed to interlock with the first-mentioned section, each of said sections having holes extending therethrough and registering with each other, the holes in said first section being smaller than the holes in said second section to permit the insertion of headed nails entirely through the second section, the holes in said first section being of such size as to arrest the headed portion of the nails, said nails acting to secure said first section to the heel portion of a shoe, said holes in the first section being countersunk to permit the heads of the nails to be free of the second section when said first section is thus secured to the heel of a shoe, substantially as described.

1,219,552. MOWING-MACHINE. RICHARD G. HARRIMA, North Bend, Nebr. Filed June 9, 1916. Serial No. 102,638. (Cl. 56—9.)



1. In a mowing machine, the combination of a frame a cutter bar, carrying wheels, and mechanism for operating said cutter-bar comprising a drive shaft, a driven shaft, a friction drive wheel on the drive shaft, a friction wheel on the driven shaft mounted for engagement by said drive wheel, and a helical rib and groove driving connection between one of the shafts and the wheel thereon to automatically force one wheel into operative contact with the other wheel.

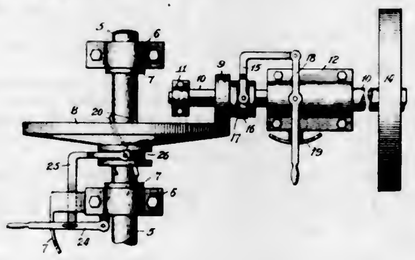
2. In a mowing machine, the combination of a frame, a reciprocable cutter bar, carrying wheels, a pitman for reciprocating said bar, and mechanism for operating said pitman comprising a drive shaft, a driven shaft, a friction drive wheel on the drive shaft, a friction wheel on the driven shaft mounted for engagement by said drive wheel, and a helical rib and groove driving connection between the drive shaft and said drive wheel whereby the drive wheel will be automatically forced into operative contact with the wheel on the driven shaft.

3. In a mowing machine, the combination of a frame, a cutter bar, carrying wheels, mechanism for operating said cutter bar comprising a drive shaft, a driven shaft, a friction drive wheel on the drive shaft, a friction wheel on the driven shaft mounted for engagement by said drive wheel, and a helical rib and groove driving connection between one of the shafts and the wheel thereon whereby the wheels will be automatically forced into operative contact, and means for adjusting one of the wheels relatively to the other to vary the speed of the driven shaft.

4. In a mowing machine, the combination of ground wheels, an axle driven by the ground wheels, a reciprocable cutter bar, a pitman for operating said bar, and mechanism for operating said pitman, comprising a friction drive wheel on the axle, a helical rib and groove connection between the axle and said drive wheel, a friction pulley, and a shaft for the friction pulley operatively connected to the pitman, said rib and groove connection acting to automatically force said wheel and said pulley into operative contact.

5. In a mowing machine, the combination of ground wheels, an axle driven by the ground wheels, a reciprocable cutter bar, a pitman for operating said bar, mechanism for operating said pitman, comprising a friction drive wheel on the axle, a helical rib and groove connection between the axle and said drive wheel, a friction pulley and a shaft for the friction pulley operatively connected to the pitman, said rib and groove connection acting to automatically force said wheel and said pulley into operative contact, and mechanism for adjusting the pulley on its shaft and toward or from the axis of the drive-wheel.

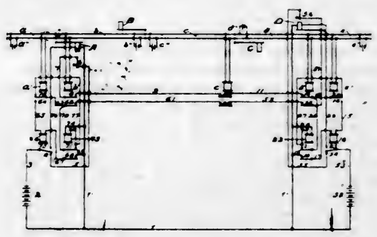
1,219,553. DRIVING MECHANISM. RICHARD G. HARRIMA, North Bend, Nebr. Filed June 9, 1916. Serial No. 102,639. (Cl. 74—26.)



1. In driving mechanism, the combination of a driveshaft, a friction drive wheel on said drive shaft, a driven shaft, a friction wheel on said driven shaft and mounted for engagement by said drive wheel, and a helical rib and groove driving connection between one of said shafts and one of said wheels, composed of elements rigid with the connected shaft and wheel respectively, whereby the wheels will be forced into operative contact by power applied to said connection.

2. In driving mechanism, the combination of a drive shaft, a friction drive wheel on said drive shaft, a driven shaft, a friction wheel on said driven shaft mounted for frictional engagement by said drive wheel, and a helical rib and groove driving connection composed of elements rigid with the drive wheel and its shaft, respectively, whereby the drive wheel will be forced into operative contact with the driven wheel by power applied to the connection.

1,219,554. ELECTRIC SIGNALING SYSTEM. ROBERT J. HEWETT, Westfield, N. J. Filed Dec. 24, 1910. Serial No. 599,131. (Cl. 246—30.)



1. In a block signaling system, the combination of signals governing opposing train movements through the block; a control relay for each signal, each relay controlling its own signal and the other relay, whereby the operation of one relay to change the indication of its signal acts to free itself from control by the other relay; a stick relay having pick-up and holding circuits controlled sequentially by a train as it passes out of and retreats from the block to prevent the train after it has left the block from controlling the signal at the distant end of the block; and track circuits adapted to be operated by a train in the block and controlling both of said control relays.

2. In a block signaling system, the combination of signals governing opposing train movements through the block; a control relay for each signal, each relay controlling its own signal and the other relay, whereby the operation of one relay to change the indication of its signal acts to free itself from control by the other relay; track circuits adapted to be operated by a train in the block and controlling both of said control relays; preliminary track circuits beyond the ends of the block, each controlling the control relay for its end of the block; and a stick relay having pick-up and holding circuits controlled sequentially by a train as it passes out of and retreats from the block to prevent the train when it is operating the preliminary track circuit at that end of the block from controlling the signal at the distant end of the block.

3. In a block signaling system, the combination of signals governing opposing train movements through the block; a control relay for each signal, each relay controlling its own signal and the other relay, whereby the operation of one relay to change the indication of its signal acts to free itself from control by the other relay; track circuits adapted to be operated by a train in the block and controlling both of said control relays; an auxiliary relay controlling each control relay; and setting and restoring circuits for each auxiliary relay, said setting circuit operating on its auxiliary relay to cause the relay to exercise its controlling action over the control relay, and said restoring circuit operating to restore its auxiliary relay to normal condition after it has been operated by the setting circuit.

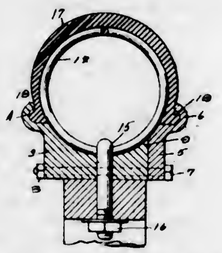
4. In a signaling system, the combination with a block of the track, of east and west bound signals guarding the block, an east-bound control relay and a circuit therefor; a west-bound control relay and a circuit therefor, each relay controlling its associated signal; an east-bound auxiliary relay controlling the east-bound signal; a controlling circuit for said east-bound auxiliary relay controlled by a train while it is in the block; a restoring circuit for said east-bound auxiliary relay operating to restore said auxiliary relay when a west bound train has passed out of the block and a predetermined distance beyond said east-bound signal; a west-bound auxiliary relay controlling the west-bound signal; a controlling circuit for said west-bound auxiliary relay controlled by a train while it is in the block; and a restoring circuit for said west-bound auxiliary relay operating to restore said auxiliary relay when an east-bound train has passed out of the

block and a predetermined distance beyond said west-bound signal.

5. In a signaling system, the combination with a block of the track, of east and west bound signals guarding the block, an east-bound control relay and a circuit therefor; a west-bound control relay and a circuit therefor; each relay controlling its associated signal; an east-bound auxiliary relay controlling the east-bound signal; a controlling circuit for said east-bound auxiliary relay controlled by a train while it is in the block; a restoring circuit for said east-bound auxiliary relay operating to restore said auxiliary relay when a west-bound train has passed out of the block and a predetermined distance beyond said east-bound signal; a west-bound auxiliary relay controlling the west-bound signal; a controlling circuit for said west-bound auxiliary relay controlled by a train while it is in the block; a restoring circuit for said west-bound auxiliary relay operating to restore said auxiliary relay when an east-bound train has passed out of the block and a predetermined distance beyond said west-bound signal; and track circuits operable by a train in the block and controlling both of said control relays.

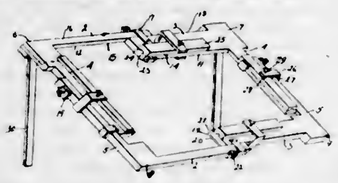
[Claims 6 to 64 not printed in the Gazette.]

1,219,555. SPRING-TIRE. JOSEPH A. HODAM, Lincoln, Nebr. Filed Aug. 24, 1915. Serial No. 47,175. (Cl. 152—8.)



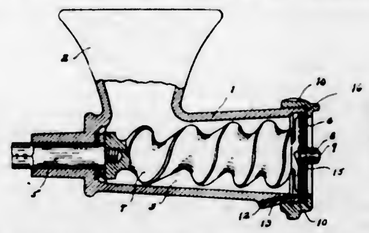
The combination with a vehicle wheel, of a rim secured on the felly of the wheel and having a channel therein, a spring arranged within said channel having its opposite ends separable and interlocked, and a bolt formed of companion clamping sections extending through the felly and said rim, the inner ends of said clamping sections of said bolt being threaded, and a nut fitted on said threaded sections and engaging said felly and the opposite ends of said clamping sections engaging the spring at the point of connection between the ends of the spring to retain the ends of said spring in interlocked position.

1,219,556. CURTAIN, BLANKET, AND QUILT FRAME. CHLOE E. JOHNSON, Springfield, Mass. Filed May 23, 1912. Serial No. 699,180. (Cl. 45—24.)



A curtain, blanket, and quilt frame comprising four corner sections each consisting of two arms projecting at right angles to eachc other with their upper faces lying in the same plane, certain of said arms being relatively wide transversely and the others relatively narrow transversely, said narrow arms adapted to coact with the outer edges of said wide arms, means carried by certain of said arms for holding and guiding the coacting arms, means for holding said arms in their adjusted positions and means for detachably fastening an object to the frame, said means consisting of ribs formed upon certain of the arms, holding strips having grooves formed lengthwise thereof in their inner faces and adapted to register with the ribs, and means engaging said strips and the arms on which they are mounted for holding the former in position.

1,219,557. MEAT-CHOPPER AND THE LIKE. HERBERT L. JOHNSTON, Troy, Ohio, assignor to the Hobart Manufacturing Company, Troy, Ohio, a Corporation of Ohio. Filed Jan. 29, 1915. Serial No. 5,131. (Cl. 17—20.)



1. In a meat chopper, a casing, a worm mounted in the casing, and a chopper plate to close the mouth of the casing, a socket in the end face of the casing, with the periphery of the chopper plate notched to register with the socket, and a rigid, non-bendable pin seated in the socket and engaging said notch to prevent the chopper plate from turning with relation to the casing, said casing being provided with an opening from the rear into the base of the socket to permit access to the inner end of the pin, for driving it out of place in the socket and notch.

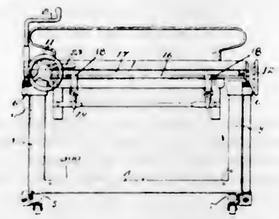
2. In a meat chopper, a casing, a worm mounted in the casing, and a chopper plate to close the mouth of the casing, a socket in the end face of the casing, with the periphery of the chopper plate notched to register with the socket, and a rigid, non-bendable pin seated in the socket and engaging said notch to prevent the chopper plate from turning with relation to the casing, said casing being provided with an opening from the rear into the base of the socket to permit access to the inner end of the pin, for driving it out of place in the socket and notch, said opening being made to enter the socket at an angle at the base of the socket to prevent the pin from falling through the socket.

3. In a meat chopper, a casing, a worm mounted in the casing, and a chopper plate to close the mouth of the casing, a socket in the end face of the casing, with the periphery of the chopper plate notched to register with the socket, and a rigid and nonbendable pin seated in the socket and engaging said notch to prevent the chopper plate from turning, with a boss on said casing provided with an opening through the boss and extending into the base of the socket to permit access to the inner end of the pin.

4. A device for preventing the rotation of the chopper plate of a meat chopper together with the worm thereof, comprising, in combination with the casing of the chopper and the plate, the casing having a bent socket, and the plate having a notch registering therewith, a rigid, non-bendable pin shaped to fit into the socket, and having an end which is adapted to lie in the notch, said socket being open at the rear end so that the pin may be driven out when rusted in with the juices of meats chopped in the machine.

1,219,558. INVALID-BED. CHARLES T. JOSLIN, New Scotland, N. Y. Filed June 18, 1913. Serial No. 774,359. (Cl. 5—12.)

1. An invalid bed consisting of a frame, a cloth covering said frame, the upper portion of said cloth adjoining the head of the bed attached to iron bars hinged to said frame, means whereby said iron bars may be sustained in a reclining or perpendicular position, the central portion of said cloth covering fixedly attached to the side of the frame, the lower portion of said cloth covering next the foot of the bed being adjustably attached to a revolving rod at the foot of the bed, whereby the same may be relaxed affording space for the feet and legs of the person occupying the bed, the central portion of said cloth being provided with an opening, a cloth under said opening, one end of the same fixedly attached to one side of said frame and the other end adjustably attached to a roller on the opposite side of said frame, means whereby said roller may hold said cloth securely under said opening, and means for releasing said cloth whereby it will hang loose under said opening.



2. An invalid bed consisting of a frame, a cloth covering said frame, means whereby the said cloth covering of said frame may be sustained in a reclining or vertical position in the form of a chair, standards at the sides of said frame, screw threads in said standards adapted to receive upright posts, upright posts mounted in said standards with screw threads adapted to mesh with the screw threads of said standards, means for mounting said frame in said standards whereby raising and lowering the standards will raise and lower the frame attached thereto.

3. In an invalid bed a frame, a cloth covering said frame, means whereby the cloth covering of said frame may be sustained in a reclining or vertical position, standards on the sides of said frame, upright posts mounted in said standards, means for mounting said frame upon said standards, means for raising and lowering said standards whereby said bed carried by said standards may be raised and lowered, rods mounted on the sides of said frame, sleeves fixedly attached to said frame and mounted slidably upon said rods, thumb screws for holding said sleeves at any position along said rods, arms hinged at one end to said sleeve and at the other end to said standards, whereby said bed may be tilted longitudinally and held in position as tilted.

4. In an invalid bed a frame, a cloth covering said frame, means whereby the cloth covering of said frame may be sustained in a reclining or vertical position, standards on the sides of said frame, upright posts mounted in said standards, means for mounting said frame upon said standards, means for raising and lowering said standards whereby said bed carried by said standards may be raised and lowered, rods mounted on the sides of said frame, sleeves fixedly attached to said frame and mounted slidably upon said rods, thumb screws for holding said sleeves at any position along said rods, arms hinged at one end to said sleeve and at the other end to said standards, whereby said bed may be tilted longitudinally and held in position as tilted, and means for holding a cot against the bottom of the covering of said frame, whereby the patient occupying said bed will rest upon said cot.

5. In an invalid bed a frame, a cloth covering said frame, means whereby the cloth covering of said frame may be sustained in a reclining or vertical position, standards on the sides of said frame, upright posts mounted in said standards, means for mounting said frame upon said standards, means for raising and lowering said standards whereby said bed carried by said standards may be raised and lowered, rods mounted on the sides of said frame, sleeves fixedly attached to said frame and mounted slidably upon said rods, thumb screws for holding said sleeves at any position along said rods, arms hinged at one end to said sleeves and at the other end to said standards, whereby said bed may be tilted longitudinally and held in position as tilted, a cot mounted under said covering, rods attached to said cot, eyelets in the ends of said rods, means whereby said rods may be extended lengthwise beyond the frame of said cot and means for holding said cot against the bottom of said frame by said rods.

[Claim 6 not printed in the Gazette.]

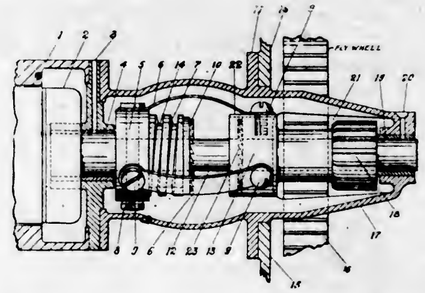
1,219,559. COMPOSITION FOR REMOVING PAINT AND VARNISH. JOHN P. KELLY and HAROLD F. REID, Grantwood, N. J. Filed Feb. 18, 1916. Serial No. 79,109. (Cl. 87—5.)

1. A composition for removing paint and varnish comprising approximately 18.27 parts tri-sodium phosphate, 8.7 parts aqua ammonia, .9 parts caustic soda, 4.35 parts sodium nitrate, 4.35 parts peroxid of hydrogen, 1 part flour, 1 part starch and 61.43 parts added water.

2. A composition for removing paint and varnish comprising approximately 18.27 parts tri-sodium phosphate, 8.7 parts aqua ammonia, .9 parts caustic soda, a stiffening material, a solution to counteract darkening of the wood by heat and water.

3. A composition for removing paint and varnish comprising approximately 18.27 parts tri-sodium phosphate, 8.7 parts aqua ammonia, .9 parts caustic soda, 4.35 parts peroxid of hydrogen, 4.35 parts sodium nitrate, a stiffening material and water.

1,219,560. ENGINE-STARTER. JESSE G. KING, Newark, N. J., assignor to Splitdorf Electrical Company, Newark, N. J. Filed June 7, 1916. Serial No. 102,242. (Cl. 74—7.)



1. An engine starter comprising in combination with a member connected to the engine, a motor, a plain rotatable shaft connected to and operated thereby, a driving member mounted upon said shaft and adapted to engage and operate said engine member but normally out of engagement therewith, and means for causing the driving member to slide longitudinally with respect to said shaft, when said shaft is turned, into engagement with said engine member, and a driving connection between the motor and driving member.

2. An engine starter comprising in combination with a member connected to the engine, a motor, a plain rotatable shaft connected to and operated thereby, a driving member mounted upon said shaft and means on said driving member to engage with and operate the engine member but normally out of engagement therewith, means operated by the rotation of the armature shaft for causing the driving member to slide longitudinally into engagement with the engine member, said means also serving to automatically withdraw the driving member from such engagement when the engine runs on its own power, and a positive clutch connection between the motor and the driving member.

3. An engine starter comprising in combination with a member operatively connected to the engine, a motor, a rotatable shaft driven thereby, a driving member mounted

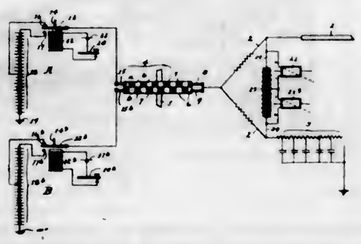
upon said shaft and adapted to automatically slide longitudinally into and out of driving engagement with the engine member, a collar mounted rigidly upon said shaft and adapted to rotate therewith, and means on said collar for automatically engaging with and operating the driving member for the purpose described.

4. An engine starter comprising in combination with a member operatively connected to the engine, a motor, a shaft operated thereby, a collar having a projecting shoulder mounted upon and rotating with said shaft, gear teeth on the end of said shoulder, a driving member mounted upon the shaft and means for causing said member to slide longitudinally into and out of engagement with the engine member, a circular gear about the inner lateral circumference of the driving member and adapted to engage with said gear on the shouldered collar, when said motor is cranking the engine.

5. An engine starter comprising a motor having an extended armature shaft, a driving member having a hub projection mounted upon said shaft and having a longitudinal movement in both directions thereupon, a collar having a sleeve extension mounted rigidly upon said motor shaft, gear teeth on the end face of said sleeve extension, a resilient member mounted on said sleeve extension, gear teeth on the end face of said hub projection, adapted to engage the gear teeth on the said sleeve extension, a collar fastened to said hub projection and extending beyond the gear teeth thereon, and adapted to engage said resilient member when said driving member is moved by said motor to working position, for the purpose described.

[Claims 6 to 15 not printed in the Gazette.]

1,219,561. QUADRUPLEX TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed Sept. 22, 1911, Serial No. 650,789. Renewed Dec. 30, 1916. Serial No. 139,964. (Cl. 178—55.)



1. The method of quadruplexing cables, which consists in impressing on the line at the sending station a series of coördinated pulses, and at the receiving station recording a straight line to denote that no message is received, a large series of curves to denote that a dash is received, and a lesser number of curves to denote that a dot is received.

2. In quadruplex telegraphy, the method, which consists in transmitting positive pulses to denote one message, transmitting negative pulses to denote a second message and transmitting alternately positive and negative pulses to denote that two messages are transmitted, and recording the characters of said messages in a series of curves, each message consisting of two or more coördinated impulses.

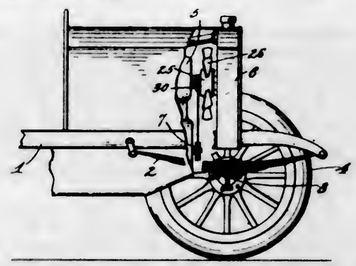
3. In a system of quadruplex telegraphy, two transmitting stations for each terminal of the line, each transmitting station provided with two sources of current oppositely connected to the line, means for each of said stations to connect the whole or part of said source to said line, means for one of the receiving stations to translate the message of one polarity into a series of curves, and means for the second receiving station to translate the message of opposite polarity into a series of curves.

4. In quadruplex telegraphy, two receiving stations for each terminal of the line, the receiving stations of each terminal comprising a bridge, an inductive resistance in the cross circuit of said bridge and two receiving devices, each in shunt with part of said inductive resistance, each of said receiving devices forming its own shunt circuit, one of said devices answering to positive and one of said devices answering to negative pulses.

5. In quadruplex telegraphy, two transmitting stations for each terminal of the line, a source of direct current for each of the two stations of each terminal, part of each of said sources normally connected to the line, a transmitting key for each of said stations, and means operatively related to each of said transmitting keys to break the normal connection of the line with part of its source of current and make the connection of said line with the whole force of its source of current.

[Claims 6 to 14 not printed in the Gazette.]

1,219,562. ELECTRIC FAN AND GENERATOR. HAROUTIUN K. KOUYOUMJIAN, Cleveland, Ohio, assignor to The Kemco Electric Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 23, 1912. Serial No. 738,233. (Cl. 171—315.)



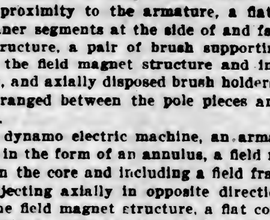
1. In combination with the engine and radiator of a motor vehicle, of a combined radiator cooling fan and generator unit mounted between the engine and radiator, said unit being supported solely at one end which is adjacent the engine, and a driving pulley at the same end of the unit and located adjacent the support for the unit.

2. In combination with the engine and radiator of a motor vehicle, of a combined radiator cooling fan and generator unit comprising a shaft, stationary and rotary generator elements and a rotary casing having fan blades and inclosing said elements of the generator, said unit being supported solely at one end which is adjacent the engine and a driving pulley located at said end of the unit adjacent the support for the unit.

3. In combination with the engine and radiator of a motor vehicle, of a combined radiator cooling fan and generator unit comprising a fixed shaft, field and armature elements one carried by the shaft, a flat commutator arranged adjacent the field and armature elements, a rotary casing inclosing all said parts of the generator, said casing having fan blades and supported on the shaft at the end of the casing next to the engine, said unit being supported from the engine at one end only, and a driving pulley for rotating the casing, said pulley being at the end of the unit next to the engine and adjacent to the point of support of the unit.

1,219,563. MOTOR-VEHICLE CONSTRUCTION. HAROUTIUN K. KOUYOUMJIAN, Cleveland, Ohio, assignor to The Kemco Electric Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 19, 1913. Serial No. 780,080. (Cl. 171—315.)

1. In combination with the chassis of a motor vehicle including the engine and radiator, of a combined radiator cooling fan and generator unit mounted between the engine and radiator and including a generator and fan blades arranged to rotate with the rotary element of the generator, said unit being supported solely at one end which is next to the engine, a support for said unit mounted on said chassis at the front of the engine, and a driving pulley at the inner end of said unit close to said support.



2. In combination with the chassis of a motor vehicle including the engine and radiator, of a combined radiator cooling fan and generator unit mounted between the engine and radiator and including a generator and fan blades arranged to rotate with the rotary element of the generator, said unit being supported solely at one end which is next to the engine, a support for said unit at the front of the engine but independent of the latter, and a driving pulley at the inner end of the said unit close to said support.

1,219,564. ELECTRIC GENERATOR. HAROUTIUN K. KOUYOUMJIAN, Cleveland, Ohio, assignor to The Kemco Electric Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 5, 1913. Serial No. 783,083. (Cl. 171—252.)

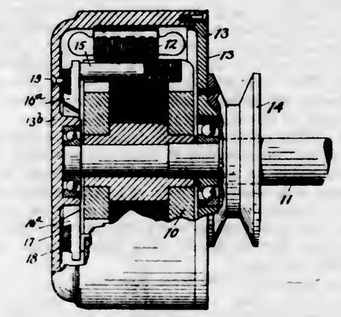
1. In a dynamo electric machine, an armature, a field magnet structure including a field frame or core, pole pieces in proximity to the armature, a flat commutator with coplaner segments at the side of and facing the field magnet structure, a pair of brush supporting rings supported by the field magnet structure and insulated from each other, and axially disposed brush holders and brushes therein arranged between the pole pieces and secured to said rings.

2. In a dynamo electric machine, an armature, including a core in the form of an annulus, a field magnet structure within the core and including a field frame with pole pieces projecting axially in opposite directions from the sides of the field magnet structure, a flat commutator including coplaner segments arranged at the side of and facing the field magnet structure, axially disposed brush holders containing brushes arranged between the pole pieces and a pair of brush supporting rings supported by the field magnet structure and in turn supporting said brush holders and brushes.

3. In a dynamo electric machine, a field magnet structure comprising a field frame or core, and an annular field coil inclosed thereby said core being provided with spaced pole pieces projecting axially in opposite directions from the side of the frame or core over the periphery of the field coil, axially disposed brush holders arranged between the pole pieces, and a pair of insulated brush holder supporting rings arranged between the field coil and the pole pieces and connected to said brush holders.

4. In a dynamo electric machine, a casing, an armature having an annular core carried by the casing, a field magnet structure within the annular core of the armature and comprising a field frame or core, and an annular field winding inclosed thereby said frame or core including a pair of side plates on opposite sides of the coil and provided with axially disposed pole pieces projecting alternately in opposite directions from said plates immediately over or around said field coil, a flat commutator secured to the casing opposite the field magnet structure and having coplaner segments facing the latter, axially disposed brushes arranged in the spaces between the pole pieces and a pair of brush supporting rings insulated from each other and arranged between the field coil and the pole pieces the brushes projecting laterally beyond the field structure and engaging the flat face of the commutator.

1,219,565. COMMUTATOR CONSTRUCTION. HAROUTIUN K. KOUYOUMJIAN, Cleveland, Ohio, assignor to The Kemco Electric Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 18, 1913. Serial No. 807,382. (Cl. 200—14.)

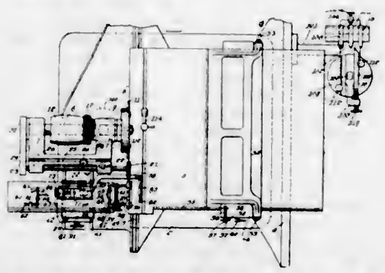


1. A commutator unit comprising a flat annulus composed of a plurality of segments extending outwardly in the same plane, said segments having on one side a flat brush surface and on the other side having a laterally projecting undercut flange, a split clamping ring engaging said flange and a continuous ring surrounding and tightly fitted on said split ring, said split ring and continuous ring having outer alined flat faces forming a substantially uninterrupted flat clamping face adapted to be clamped against a support.

2. In a commutator construction, a flat commutator support, a commutator composed of a plurality of segments arranged in the same plane, said segments having a flat brush surface and provided on the side next to the support with a laterally projecting undercut flange, annular segment retaining means comprising a split clamping ring engaging the flange, a continuous ring fitted tightly onto said split ring, and screws passing through said support into the segment retaining means for clamping the latter against the support.

3. In combination in a commutator construction, a commutator support, a commutator composed of a plurality of segments arranged in the same plane and provided on one side with a brush surface and on the other side with an undercut flange, a split clamping ring engaging the flange, a continuous ring tightly fitted onto the split ring, and means for clamping the outer faces of said two rings against the support comprising screws passing through the support and engaging both said rings.

1,219,566. PLATE-TRIMMING MACHINE. FRANK C. LEETHEM, Middletown, N. Y., assignor to Latham-Leethem Company, New York, N. Y., a Corporation of Illinois. Filed Nov. 10, 1911. Serial No. 659,542. (Cl. 33—174.)



1. In a machine of the class described, in combination, a table, a table gage comprising a carriage mounted to slide longitudinally of the table, means for supporting the same, a rack at the side of the table and having notches formed therein and teeth between said notches, and two locking plates mounted on said carriage adjacent to each other adapted to engage said notches respectively and independently of each other to lock said carriage on said table.

2. In a machine of the class described, in combination, a table having a rack on the side edge thereof, with notches and teeth between said notches, said notches and said teeth being the same in width, a carriage mounted to slide on said rack on said table, a gage mounted on said carriage, a pair of locking plates mounted on said carriage and adapted to engage said notches respectively, said plates being of the same width as said notches.

3. In a machine of the class described, in combination, a table, a carriage mounted to slide longitudinally thereof, a gage mounted on said carriage, said carriage having a slot in the edge thereof, a pair of locking plates movably mounted in contact with each other in said slot, said table having a rack with notches and teeth between said notches, each of said locking plates being equal to the width of one of said notches.

4. In a machine of the class described, in combination, a table, a slide, fixed means for guiding said slide horizontally toward and from said table, a gage carried by said slide adjacent to said table, and means on said slide for measuring the elevation of said gage above the face of said table.

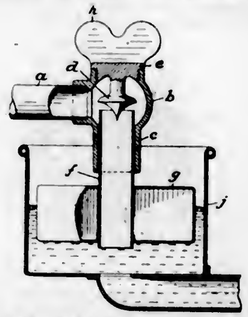
5. In a machine of the class described, the combination of a table, a slide, fixed means for guiding said slide horizontally to advance over the edge of said table, a depth gage pivotally supported on said slide and constructed to swing down to engage said table, and a measuring device carried by said slide for indicating the elevation of said gage above the upper surface of said table.

[Claims 6 to 19 not printed in the Gazette.]

1,219,567. FEED-CONTROLLING FLOAT-VALVE. MEREDITH LEITCH, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, a Corporation of New Jersey. Filed Jan. 28, 1916. Serial No. 74,788. (Cl. 137—104.)

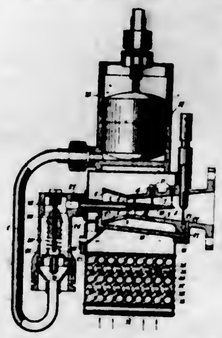
1. A liquid feed regulating device comprising a valve body having a side inlet, a tubular guide forming a bottom outlet, a removable top, a button depending and spaced from said top to allow the incoming liquid to flow around and above it, a float, and a tube carried by and extending centrally through and above the float into said guide and adapted to seat against said button.

2. A liquid feed regulating device comprising a valve body having an inlet and an outlet, a float, a tube carried by and extending above the float into said outlet, and a fixed button within, and supported from, the valve body and against which the tube is adapted to seat, said button being spaced from the top and side wall of the valve body to allow the incoming liquid to flow around and above it.



3. A liquid feed regulating device comprising a valve body having a side inlet and an outlet, a float, a tube carried thereby and extending vertically through the float and above the same into said outlet, and a button within, and supported from the top of, the valve body and affording, when the float is unseated, a free and unobstructed annular opening between the end of the tube and the button, said button affording a seat for the upper extremity of the tube and spaced from the top and side wall of the valve body to allow the incoming liquid to flow around and above it.

1,219,568. CARBURETER. HENRI ALFRED ARMAND JOSEPH LELARGE, Paris, France; Blanche Alphonsine Lelarge, *née* Tapin, Sèvres, France, executrix of said Henri Alfred Armand Joseph Lelarge, deceased. Filed July 1, 1913. Serial No. 776,785. (Cl. 261—41.)

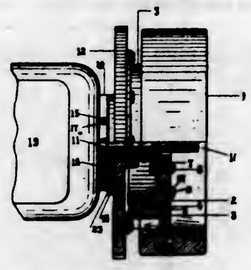


1. A carbureter, embodying a double frusto-conical jacket having a constricted cylindrical intermediate portion, a throttle valve mounted for reciprocation in said jacket near one end thereof, a spraying tube within said jacket having a plane discharge end and a central discharge orifice therein, said discharge orifice being within the intermediate portion of said jacket, and an elongated conical spreader having its base directly opposed to the discharge end of the spraying tube and its apex directed toward and in proximity to said throttle valve, and means, respectively, for supplying fuel and air to said carbureter.

2. A carbureter, embodying a jacket consisting of two frusto-conical portions and an intermediate cylindrical portion, a spraying nozzle extending axially through one of said frusto-conical portions and having a plane, bored, discharge end within said intermediate cylindrical portion, an elongated conical spreader extending axially through the other frusto-conical portion and having its base arranged in said intermediate cylindrical portion opposite the discharge end of said spraying nozzle, and means, respectively, for supplying fuel and air to said carbureter.

3. A carbureter, embodying a double frusto-conical jacket having a constricted cylindrical intermediate portion, a throttle valve mounted for reciprocation in said jacket near one end thereof, a spraying tube within said jacket, a conical spreader having its base directly opposed to the discharge end of the spraying tube, means for supplying air to the jacket and fuel to the nozzle, a cup below the jacket at the opposite end to the throttle valve, said cup being adapted to collect fuel from the jacket, means of communication between the cup and a groove in the jacket beyond the throttle valve and means for the additional supply of air to said groove, whereby when the throttle valve is closed, fuel which overflows into said cup will be allowed to pass to said groove and will be drawn in to the engine with such additional supply of air.

1,219,569. STARTING MECHANISM FOR HYDROCARBON-ENGINES. ALBION D. T. LIBBY, Orange, N. J., assignor to Splitdorf Electrical Company, Newark, N. J. Filed Apr. 12, 1918. Serial No. 760,842. (Cl. 172—289.)



1. In a device of the class described, the combination of an internal combustion motor, a fly wheel connected thereto, a flange on said fly wheel, a gear wheel having a flange thereon, gripping mechanism carried by said gear wheel, an electric motor connected to said gear wheel, and a source of power for the motor, means for connecting said source of power to said motor, and means independent of the current through said electric motor for operating said gripping mechanism, whereby the flange on said fly wheel is gripped by the gripping mechanism, and the combustion motor is caused to rotate, substantially as described.

2. In a device of the class described, the combination of an internal combustion motor, a fly wheel connected thereto, a gear wheel independently mounted thereon, means carried by said gear wheel for engaging said fly wheel, at a predetermined speed of said gear wheel, an electric motor connected to said gear wheel, and a source of power for said motor, means for connecting said source of power to said motor, means independent of the current through said electric motor for operating said first mentioned means, whereby the said fly wheel is engaged with said gear wheel and turned with it, substantially as described.

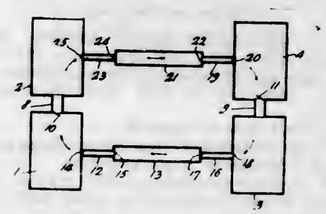
3. In a device of the class described, the combination of an internal combustion engine, a fly wheel attached to the main shaft thereof, a gear wheel mounted on said engine adjacent to said fly wheel, means carried by said gear wheel for engaging said fly wheel, an electric motor connected to said gear wheel, a source of electric current and means of applying same to the electric motor, automatic means carried on said motor and independent of its windings for conveying electric current to the first mentioned means carried by the gear wheel, whereby said means is operated to cause the gear wheel and fly wheel to engage and rotate together.

4. In a device of the class described, the combination of an internal combustion engine, a fly wheel attached to the main shaft thereof, a gear wheel independently mounted on said engine, and adjacent to the fly wheel, means including an electromagnet, carried by the gear wheel for engaging the fly wheel, an electric motor connected to said gear wheel, a source of electric current and means of applying same to said motor, governor mechanism carried by said motor and adapted to close an electrical contact at a predetermined speed, said electrical contact being in circuit with the electromagnet carried by said gear wheel, whereby when the electrical contact is closed, the electromagnet is energized, and the said engaging means is operated to cause the fly wheel to rotate with the gear wheel, substantially as described.

5. In a device of the class described, the combination of an internal combustion engine, a fly wheel attached to the main shaft of the engine, and having a flange thereon, a gear wheel independently mounted on said engine and adjacent to said fly wheel, an electromagnet, and a brake band carried by said gear wheel, an electric motor connected to said gear wheel, a source of electric current and means for applying same to the motor, governing mechanism carried by said motor, said governing mechanism being adapted to close an electrical circuit through the said electromagnet at a predetermined speed, whereby the same is operated and the brake band engages the flange on said fly wheel, causing the same to rotate with the gear wheel, substantially as described.

[Claims 6 to 35 not printed in the Gazette.]

1,219,570. APPARATUS AND PROCESS FOR CIRCULATING LIQUIDS. CHARLES WESLEY MCCOY, Sprague, Wash., assignor, by direct and mesne assignments, to Refrigerator Car Equipment Co., Seattle, Wash., a Corporation of Washington. Filed Jan. 26, 1915. Serial No. 4,549. (Cl. 103—23.)



1. The process of circulating liquid in a complete circulatory system mounted upon a vehicle which consists in utilizing the movement of the vehicle to produce a variation in pressure of the liquid in the different parts of the system and utilizing the difference in pressure to automatically produce a circulation of the liquid throughout said system in a pre-determined direction, whereby the liquid travels from a given point through the system and back to said point.

2. The process of circulating liquid in a circulatory system mounted upon a vehicle, which consists in utilizing the movement of the vehicle to produce a movement of a portion of the liquid from one part of the system to another part of the system and preventing backward movement of said moved liquid, and utilizing the lowered pressure in that part of the system from which the moved liquid came and the increased pressure in that part of the system into which the moved liquid is received, to produce a forward movement of the liquid in the system to equalize the pressures.

3. An apparatus for circulating liquid, comprising two tanks, connections between said tanks, said connections and tanks forming a complete circulatory system containing the liquid to be circulated, means for producing a variation in pressure of the liquid in different parts of said system responsive to the movement of said tanks, and means for causing the liquid to circulate through said system in a pre-determined direction responsive to said variation in pressure.

4. An apparatus for circulating liquid, comprising two tanks, means for moving said tanks, a connection between said tanks by which liquid passes from one tank to the

other tank when the tanks are moved, means for preventing the return of said liquid through said connection, and a second connection between said tanks through which said liquid is returned to the first mentioned tank, whereby a circulation of said liquid in said system is secured.

5. An apparatus for circulating liquids, comprising four receptacles located in pairs, one pair near each end of the compartment to be cooled, a connection between each pair of tanks, the two tanks at one end being connected with the two tanks at the other end so as to form a complete circulatory system containing the liquid to be circulated, means for moving said tanks so as to vary the relative height of the liquid therein, and means for causing said liquid to flow forward in the same direction when the tanks are given an opposite movement, to equalize the pressure due to said differences in level regardless of the tank in which the difference in level occurs.

[Claim 6 not printed in the Gazette.]

1,219,571. CEPHAELIN BUTYL ETHER AND PROCESS OF PRODUCING THE SAME. JOHN W. MEADER, Indianapolis, Ind., assignor to The Eli Lilly and Company, Indianapolis, Ind., a Corporation of Indiana. Filed July 17, 1915. Serial No. 40,483. (Cl. 23—24.)

1. A butyl ether of cephaelin.

2. The isobutyl ether of cephaelin.

3. A monobutyl derivative of cephaelin.

4. A butyl compound of cephaelin containing essentially the atomic aggroupment $C_{28}H_{37}O_3N_2OC_4H_9$.

5. The process of producing a butyl ether of cephaelin comprising adding to cephaelin an alkali metal, a butyl haloid and a solvent.

[Claim 6 not printed in the Gazette.]

1,219,572. CEPHAELIN ETHYL ETHER. JOHN W. MEADER, Indianapolis, Ind., assignor to The Eli Lilly and Company, Indianapolis, Ind., a Corporation of Indiana. Filed July 17, 1915. Serial No. 40,484. (Cl. 23—24.)

1. The ethyl ether of cephaelin.

2. An ethyl compound of cephaelin containing essentially the atomic aggroupment $C_{28}H_{37}O_3N_2OC_2H_5$.

3. The process of producing an ethyl ether of cephaelin comprising adding to cephaelin an alkali metal, an ethyl haloid and a solvent.

4. The process of producing cephaelin ethyl ether by treating cephaelin with sodium ethylate and ethyl bromid.

5. The process of producing an ethyl ether of cephaelin which comprises treating cephaelin with an alkali metal alcoholate and an ethyl haloid.

1,219,573. CEPHAELIN PROPYL ETHER. JOHN W. MEADER, Indianapolis, Ind., assignor to The Eli Lilly and Company, Indianapolis, Ind., a Corporation of Indiana. Filed July 17, 1915. Serial No. 40,485. (Cl. 23—24.)

1. A propyl ether of cephaelin.

2. A propyl compound of cephaelin containing essentially the atomic aggroupment $C_{28}H_{37}O_3N_2OC_3H_7$.

3. The process of producing a propyl ether of cephaelin comprising adding to cephaelin an alkali metal, a propyl haloid and a solvent.

4. The process of producing cephaelin propyl ether by treating cephaelin with sodium ethylate and propyl bromid.

5. The process of producing a propyl ether of cephaelin which comprises treating cephaelin with an alkali metal alcoholate and a propyl haloid.

1,219,574. CEPHAELIN AMYL ETHERS AND PROCESS OF PRODUCING SAME. JOHN WALTER MEADER, Indianapolis, Ind., assignor to The Eli Lilly and Company, Indianapolis, Ind., a Corporation. Filed Jan. 25, 1916. Serial No. 74,256. (Cl. 23—24.)

1. An amyl ether of cephaelin.

2. The isoamyl ether of cephaelin.

3. A monoamyl derivation of cephaelin.

4. An amyl compound of cephaelin containing essentially the atomic aggroupment $C_{28}H_{37}O_3N_2OC_5H_{11}$.

5. The process of producing an amyl ether of cephaelin comprising adding to cephaelin an alkali metal, an amyl haloid and a solvent.

[Claims 6 to 8 not printed in the Gazette.]

1,219,575. CEPHAELIN ALLYL ETHER AND PROCESS FOR MAKING SAME. JOHN WALTER MEADER, Indianapolis, Ind., assignor to The Eli Lilly and Company, Indianapolis, Ind., a Corporation. Filed Jan. 25, 1916. Serial No. 74,257. (Cl. 23—24.)

1. The allyl ether of cephaelin.

2. A monoallyl derivative of cephaelin.

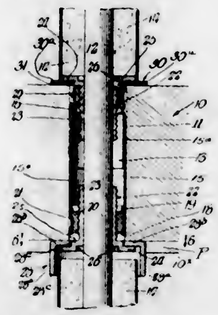
3. An allyl compound of cephaelin containing essentially the atomic aggroupment $C_{28}H_{37}O_3N_2OC_3H_5$.

4. The process of producing an allyl ether of cephaelin comprising adding to cephaelin an alkali metal, an allyl haloid and a solvent.

5. The process of producing cephaelin allyl ether by treating cephaelin with sodium ethylate and allyl bromid.

[Claim 6 not printed in the Gazette.]

1,219,576. STEAM-PIPE THIMBLE. GEORGE MEHRING, Chicago, Ill. Filed June 1, 1915. Serial No. 31,352. (Cl. 126—317.)



1. A device of the kind described, comprising a tubular sleeve, a nipple adjustably connected to each end of said sleeve, and through which a pipe is adapted to extend, said nipples centering and permitting endwise movement of said pipe relative to said sleeve, said nipples having a radial flange at one end, a plate associated with each of said nipples, each plate comprising two parts and coacting interlocking means formed on said nipples and plate parts respectively for locking said plate parts to said nipples against lateral displacement, said radial flange of said nipple preventing endwise displacement of said plate parts relative to an associated nipple.

2. A device of the kind described, comprising a tubular sleeve, an annular nut fixed in each end of said sleeve, a nipple associated with said nuts through which a pipe is adapted to extend, said nipples having a screw threaded adjustment with said nuts and acting to center said pipe relative to said sleeve but permitting an endwise movement of the pipe therethrough, said nipples having a radial flange at one end, a plate associated with each of said nipples, each plate comprising two parts, and coacting interlocking means formed on said nipples and plate parts respectively for locking said plate parts to said nipples against lateral displacement, said radial flanges of said nipples preventing endwise displacement of said plate parts relative to an associated nipple.

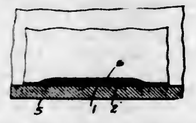
3. A device of the kind described, comprising a telescopically adjustable tubular sleeve, an annular nut fixed in each end of said sleeve, a nipple associated with said nuts through which a pipe is adapted to extend, said nipple having a screw threaded adjustment with said nuts and acting to center said pipe relative to said sleeve but permitting an endwise movement of the pipe therethrough, said nipples having a radial flange at one end, a plate associated with each of said nipples, each plate comprising two parts, and coacting interlocking means formed on said nipples and plate parts respectively for locking said plate parts to said nipples against lateral displacement, said radial flanges of said nipples preventing endwise displacement of said plate parts relative to an associated nipple.

4. A device of the kind described, comprising a tubular sleeve, an annular nut fixed in each end of said sleeve, nipples, each having a radial flange at one end in which are provided spanner wrench recesses, adapted for screw threaded engagement within each of said nuts, said nipples also being adapted to receive a pipe and center the same relative to the sleeve, a plate associated with the flanged end of each nipple, each plate comprising two parts, and coacting interlocking means formed in said nipples adjacent the radial flange and plate parts respectively for locking said plate parts to said nipples against lateral displacement, said radial flanges of said nipples preventing endwise displacement of said plate parts relative to an associated nipple.

5. A device of the kind described, comprising a tubular sleeve, a nut fixed in each end of said sleeve, a nipple having a flange at one end adapted for screw threaded engagement within each of said nuts, said nipple being adapted to receive a pipe and to center said pipe relative to said sleeve, finishing members associated with the flange of each of said nipples, each finishing member comprising two parts, and coacting means on said nipple flange and said finishing member parts for locking said part to said nipple.

[Claim 6 not printed in the Gazette.]

1,219,577. PATCH FOR PNEUMATIC TIRES. JOSEPH G. MOOMY, Erie, Pa. Filed Apr. 16, 1915. Serial No. 21,634. (Cl. 152—26.)



1. A patch for pneumatic tires comprising a layer of non-vulcanized rubber compound; and a backing of non-adhesive material extending outside of the edge of the layer of compound and forming a dam when under pressure confining the rubber compound, each of the component parts being initially in a layer in a separate plane.

2. A patch for pneumatic tires comprising a body of non-vulcanized rubber compound having its face of greater plasticity and adhesiveness when dry than the back face of such compound; and a backing on the back face of the compound of non-adhesive material extending outside the edge of the layer of compound and forming a dam when under pressure confining the compound, each of the component parts being initially in a layer in a separate plane.

1,219,578. PATCH FOR PNEUMATIC TIRES. JOSEPH G. MOOMY, Erie, Pa. Filed Oct. 13, 1916. Serial No. 125,369. (Cl. 152—26.)

1. A patch for pneumatic tires comprising a layer of non-vulcanizing rubber stock forming the face of the patch; a layer of non-vulcanized vulcanizing stock; and a backing of non-adhesive material extending outside the edge of the layers of rubber stock and forming a dam with the patch in place between the tube and the casing and under pressure for confining the layers of rubber stock.

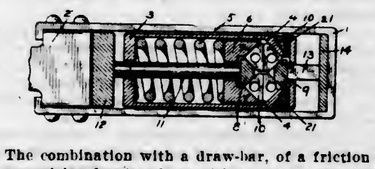
2. A patch for pneumatic tires comprising a layer of non-vulcanizing rubber stock forming the face of the patch; a layer of non-vulcanized vulcanizing stock; and a backing of non-adhesive material extending outside the edge of the layers of rubber stock and forming a dam with the patch in place between the tube and the casing and under pressure for confining the layers of rubber stock, each of the component parts being initially in a layer in a separate plane.



3. A patch for pneumatic tires comprising a layer of non-vulcanizing rubber stock forming the face of the patch; a layer of non-vulcanized vulcanizing rubber stock vulcanizing under heat; and a backing of non-adhesive material extending outside the edge of the layers of rubber stock and forming a dam with the patch in place between the tube and casing and under pressure for confining the layers of rubber stock.

4. A patch for pneumatic tires comprising a layer of non-vulcanizing rubber stock forming the face of the patch; a layer of non-vulcanized vulcanizing stock; and a backing of glazed fabric extending outside the edge of the layers of rubber stock and forming a dam with the patch in place between the tube and casing and under pressure for confining the layers of rubber stock.

1,219,579. FRICTION DRAFT-GEAR. EDWARD W. NEWELL, Pittsburgh, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Aug. 17, 1915. Serial No. 45,877. (Cl. 213—64.)



1. The combination with a draw-bar, of a friction draft gear comprising front and rear friction elements each having oppositely inclined friction faces, centrally arranged plunger wedges having oppositely inclined friction faces, wedge blocks having friction faces adapted to coöperate with the friction faces of the friction elements and the plunger wedges, stationary stops, projections carried by said plunger wedges for engaging the stops, and a yielding resistance for opposing the movement of the friction members.

2. The combination with a draw-bar, of a friction draft gear comprising front and rear friction elements each having oppositely inclined friction faces, centrally arranged plunger wedges having oppositely inclined friction faces, wedge blocks having friction faces adapted to coöperate with the friction faces of the friction elements and the plunger wedges, stop castings secured to the car center sills and provided with stops, projections carried by the plunger wedges for engaging said stops when the draw-bar is subjected to buffing and draft stresses, and a yielding resistance for opposing the movement of the friction members.

3. The combination with a friction draft gear comprising a casing having interior oppositely inclined friction faces, centrally arranged plunger wedges having oppositely inclined friction faces, a front friction element having oppositely inclined friction faces, a draft spring mounted between the casing and said friction element, wedge blocks having friction faces adapted to coöperate with the friction faces of the casing, said friction element, and the plunger wedges, stationary stops, and projections carried by the plunger wedges for engaging the stops.

4. The combination with a friction draft gear comprising, a casing having interior oppositely inclined friction faces, centrally arranged plunger wedges having oppositely inclined friction faces, a front friction element having oppositely inclined friction faces, a draft spring mounted between the casing and said friction element,

wedge blocks having friction faces adapted to coöperate with the friction faces of the casing, said friction element, and the plunger wedges, projections carried by said plunger wedges, and stationary stops spaced to engage said projections and hold the draft spring under initial compression.

1,219,580. VEGETABLE-MASHER. WILLIAM G. PANCOAST, Chicago, Ill. Filed Oct. 13, 1915. Serial No. 55,623. (Cl. 146—15.)

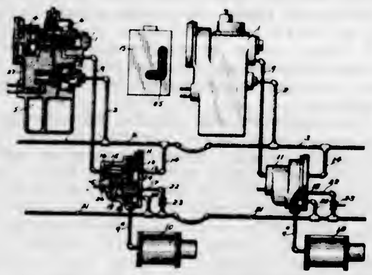


1. A vegetable masher comprising a single piece of wire-like material, square in cross-section, sinuously bent to form a mashing member and a stirring member, said members lying in planes at right angles to each other, a handle and means connecting one of said members to said handle.

2. A vegetable masher comprising a single piece of twisted wire-like material, square in cross section, sinuously bent to form a mashing member and a stirring member, said members lying in planes at right angles to each other, a handle and means connecting one of said members to said handle.

3. A vegetable masher comprising a single piece of wire-like material sinuously bent to form a plurality of horizontally disposed loops and a plurality of vertically disposed loops centrally disposed relative to said horizontal loops, the end sections of said vertically disposed loops being deflected from the vertical plane of the remaining loop sections and in opposite directions, the end sections of said horizontal loops being bent upwardly and inwardly and a handle secured to the free ends of said end sections.

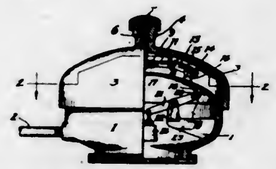
1,219,581. DOUBLE-HEADING DEVICE. FREDERIC H. PARKE, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed June 5, 1915. Serial No. 32,839. (Cl. 188—1.)



1. In a fluid pressure brake, the combination with a brake pipe, of a train pipe line for supplying fluid from one locomotive to apply the brakes on another, an automatic valve device comprising a piston subject to brake pipe pressure and a valve operated by said piston and adapted in release position to establish communication through a passage for supplying fluid to said train pipe line and having an emergency position in which said passage is blanked.

2. In a fluid pressure brake, the combination with a brake pipe, of a train pipe line for supplying fluid from one locomotive to apply the brakes on another, an automatic valve device comprising a piston subject to brake pipe pressure and a valve operated by said piston and adapted in normal release position to uncover a passage for supplying fluid to said train pipe line and having an emergency position in which said passage is blanked.

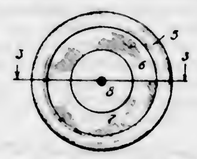
1,219,582. RADIATOR-VALVE. MATHIAS PEDERSON, Fargo, N. D. Filed Apr. 20, 1916. Serial No. 92,436. (Cl. 137—122.)



1. A radiator valve comprising a lower valve body portion provided with a steam pipe, a cap fitted to said lower valve portion and provided with a neck, a head adapted for releasable engagement with said neck, a valve stem carried by said head and extending through said neck into said cap, radial arms carried by said valve stem, a float movable with relation to said lower valve body portion, lugs carried upon the outer periphery of said float, angular levers suspended from the inner periphery of said cap and connected to said lugs and the said radial arms and permitting limited relative movement of said members; lugs depending from the inner periphery of said float, levers fulcrumed within said float below said lugs and weights terminally carried by said levers.

2. A radiator valve comprising a lower body portion provided with a steam pipe, a cap fitted to said lower valve portion and provided with a neck, a head adapted for releasable engagement with said neck, a stem carried by said head and extending through said neck, radial arms terminally carried by said stem, a float fitted snugly and movably within the upper portion of the lower body portion of the valve, lugs carried by the outer periphery of said float, pivotally supported elements connecting said lugs and the said radial arms whereby limited relative movement of the one with relation to the other is permitted, motion beyond a fixed limit being transmitted from said lugs to said arms; lugs depending from the inner periphery of said float, levers fulcrumed in said lower valve-body portion and pivotally connected to said last named lugs and weights terminally carried by said levers which will counterbalance a certain pressure upon said float in addition to the weight of said valve head and stem.

1,219,583. HEADLIGHT-DIMMER. WARD SUMNER PERRY, Chicago, Ill. Filed July 13, 1914. Serial No. 850,613. (Cl. 240—48.4.)



1. In a device of the class described the combination with the lens of a headlight, said lens having a translucent portion and a clear portion, of means attachable over the clear portion of the lens to cut off the rays of light therethrough.

2. In a device of the class described for use on a headlight the combination with an integral translucent and transparent lens, of means adapted to be secured over the transparent portion of said lens to reflect rays of light directed thereon back upon the main reflector of the headlight to be projected through the translucent portion of the lens.

3. The combination with a headlight having a lens with an annulus of translucent glass, of means adapted to be secured over the lens within the clear glass area bounded by said translucent glass portion to reflect rays of light passing therethrough back into the headlight to be projected through said translucent glass portion in a diffused state.

4. In a device of the class described a means adapted to be secured on a clear and translucent lens of a headlight to cut off the rays of light emitted from the clear portion of said headlight.

5. In a device of the class described a headlight, a lens thereon, said lens having a translucent and a clear portion, a screen for covering said clear portion to cut off the rays of light normally emitted therethrough from the headlight, and means for removably securing said screen on said lens.

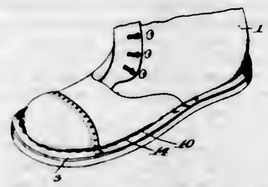
[Claim 6 not printed in the Gazette.]

1,219,584. SHOE. EMANUEL PERSSON, Yule Meadow, Alberta, Canada. Filed Apr. 5, 1916. Serial No. 89,245. (Cl. 36—50.)



A shoe having an upper provided with edges adapted to be laced together to secure the shoe on the foot, said upper being formed with perforations adjacent said edges, teats projecting from one of said edges and adapted to overlap the other edge, and a lace laced through said perforations in such manner as to form loops adapted to receive said teats and thereby hold said edges together.

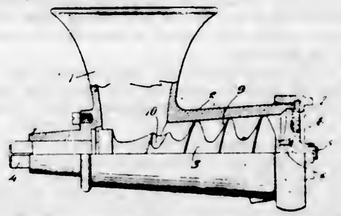
1,219,585. SHOE. ADAM H. PRENZEL, Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Oct. 12, 1912, Serial No. 725,476. Divided and this application filed Sept. 23, 1914. Serial No. 863,128. (Cl. 36—16.)



1. A stitch-down shoe comprising a flexible sole, and an upper having a flange outturned upon the upper face of the sole margin, the upper being secured to the sole in its original lasted condition by staples of fine wire passing through the upper in the vertex of the angle formed by the body of the upper and said outturned flange, and said outturned flange being entirely outside the line of junction of the inner face of the upper with the sole.

2. A stitch-down shoe comprising a flexible sole, and an upper having a flange outturned upon the upper face of the sole margin, the upper being secured to the sole in its original lasted condition by staples of fine wire passing through the upper in the vertex of the angle formed by the body of the upper and said outturned flange, the line in which the upper is so secured being of approximately the same contour as the line of junction of the inner face of the upper with the sole.

1,219,586. MEAT-CHOPPER. THOMAS F. RATAICZAK, Troy, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a Corporation of Ohio. Filed Jan. 14, 1916. Serial No. 72,031. (Cl. 17—20.)

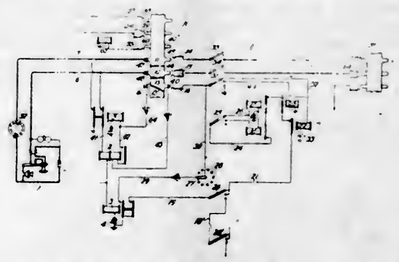


1. In a meat chopper or the like, a hopper, a chopper cylinder, a revoluble worm in the cylinder and extending across the base of the hopper, and said worm being cut to leave a clearance space between it and the upper end of the mouth of the chopper cylinder and form a discontinuance of the feed.

2. In a meat chopper or the like, a chopper cylinder, a hopper, a revoluble worm in the cylinder and extending across the base of the hopper, and having that portion of the worm which extends across the base of the hopper displaced angularly but coaxially with respect to that part of the worm which lies purely within the chopper cylinder so as to give a discontinuity of feeding between such two portions of the worm.

3. In a meat chopper or the like, a chopper cylinder, a hopper, a revoluble worm in the cylinder and extending across the base of the hopper, means for intermittently discontinuing the feeding of that portion of the worm lying across the base of the hopper with respect to that part which lies purely within the cylinder without distorting the cylinder.

1,219,587. TELEPHONE-EXCHANGE SYSTEM. JOHN NEWBERRY REYNOLDS, Greenwich, Conn., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 4, 1915. Serial No. 11,955. (Cl. 179—18.)



1. In a telephone exchange system, a telephone line, a line and a cut-off relay therefor, answering and calling multiple test contacts for said line, a connection between said test contacts established through a contact of said line relay, and a holding circuit for said line relay including its contact and one of said multiple test contacts.

2. In a telephone exchange system, a telephone line, a double wound line relay and a cut-off relay for said line,

answering and calling multiple test contacts for said line, a line finder for engaging said answering contact, a start relay for said line finder, a circuit controlled over said line and including a contact of said cut-off relay, one winding of the line relay, and the winding of said start relay, and a holding circuit for said line relay including the answering test contact and the other winding and a contact of said line relay.

3. In a telephone system, the combination with a telephone line, of multiple calling test contacts for said line and multiple answering test contacts for said line normally electrically separated from the multiple calling test contacts thereof, a cut-off relay for the line having its coil permanently connected with the multiple calling test contacts of the line, and a line relay for the line having a coil and a pair of normally open contacts included in a connection between the coil of said cut-off relay and the answering multiple test contact of said line by the actuation of the line relay.

4. In a telephone system, the combination with a telephone line, of multiple line and test terminals therefor, a set of line finder contacts and means to move them into contact with successive stationary line terminals, a line relay for the line adapted by its actuation to place calling test potential upon one of the multiple contacts for said line, and a cut-off relay for the line having its coil included in the test circuit by the actuation of said line relay, said test circuit also including a winding of said line relay.

5. In a telephone system, the combination with a telephone line, of a terminal bank, multiple contacts on one side of said bank through which connection may be established with said line as a called line, multiple contacts on the other side of said bank through which connection may be established with said line as a calling line, normally electrically separated multiple test contacts, one on each side of said terminal bank, a line relay for the line, and contacts on said line relay for connecting said test multiples together when the line relay is first actuated.

[Claims 6 to 8 not printed in the Gazette.]

1,219,588. PHOTOGRAPHIC-FILM PACK. ALFRED A. RUTTAN and CHARLES E. HUTCHINGS, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 5, 1915. Serial No. 59,861. (Cl. 95—22.)



1. In a photographic film pack, the combination with a case and a partition member therein dividing it into exposure and storage chambers, the former being provided with an exposure opening, of a follower for pressing the films toward the latter and having an opening therein and an extension on the partition member extending through the opening in the follower and serving as a guide for the follower.

2. In a photographic film pack, the combination with a case and a partition member therein dividing it into exposure and storage chambers, the former being provided with an exposure opening, of a follower for pressing the films toward the latter and having a slot therein and an extension on the partition member adapted to hold it spaced from the opposite wall of the exposure chamber, said extension coöperating with the slot in the follower to serve as a guide for the latter.

3. In a photographic film pack, the combination with a partition member and films adapted to be drawn from one side to the other of said partition member, of an outer casing supporting the partition member to form therewith light tight chambers for the film, said casing consisting of two telescoping flanged members, and detachable and replaceable means for locking said members together.

4. In a photographic film pack, the combination with a partition member and films adapted to be drawn from one side to the other of said partition member, of an outer casing supporting the partition member to form therewith light tight chambers for the film, said casing consisting of two telescoping flanged members adapted to be slid into interlocking engagement with each other at one end and a separate releasable means for locking them together at the other end.

5. In a photographic film pack, the combination with a partition member and films adapted to be drawn from one side to the other of said partition member, of an outer casing consisting of two telescoping flanged members having registering slots therein and a clip engaging over one of the members and occupying the slots to lock the members together.

[Claims 6 to 8 not printed in the Gazette.]

1,219,589. PROCESS OF MAKING BOOKS. OSCAR E. SCHAEFER, St. Louis, Mo. Filed June 12, 1916. Serial No. 103,115. (Cl. 11—17.)



1. The process of making cloth covered books which comprises combining the sides and leaves to form a strip of three or more books, covering the sides with cloth, turning the side edges of the cloth covering in, and severing the strip transversely into three parts, whereby the top and bottom edges of each part are trimmed to constitute a finished book.

2. The process of making cloth covered books with round corners which comprises assembling the sides and leaves to form a strip of three books, pasting a covering of cloth upon the outer side of the strip, turning the side edges of the cloth covering in, and severing the strip transversely into three parts, the corners of each part being cut round, to constitute a finished book.

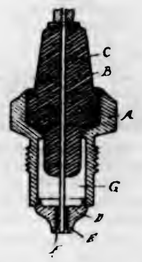
3. The process of making cloth covered books with round corners and window openings which comprises securing together the cloth covering, sides and leaves to form a strip of three books having front and back covers, turning the side edges of the cloth covering in, cutting

window openings in the front cover, lining the covers with strips having transparent windows covering said openings, severing the strip into three parts and trimming the corners of each part round to constitute a finished book.

4. The process of making cloth covered books which comprises assembling the leaves and front and back sides with a binding strip, covering the sides and strip with cloth, turning the side edges of the cloth covering in, and cutting the top and bottom edges square and the corners round to constitute a finished book.

5. The process of making cloth covered books which comprises assembling the leaves and front and back sides with a binding strip, covering the sides with cloth, turning the side edges of the cloth covering in, cutting a window opening in the front side and covering, applying a lining strip to said front side having a window conforming to said window opening, and trimming the top and bottom edges to constitute a finished book.

1,219,590. SPARK-PLUG. ALBERT SCHMIDT, Flint, Mich., assignor to Champion Ignition Company, Flint, Mich., a Corporation of Michigan. Filed Jan. 8, 1916. Serial No. 70,906. (Cl. 123—169.)



1. In a spark plug, the combination of an insulator, a casing surrounding said insulator and forming an inclosing gas chamber with a restricted passage communicating with the explosion chamber, an insulator lining to said restricted passage, and an electrode passing through said insulator and restricted passage.

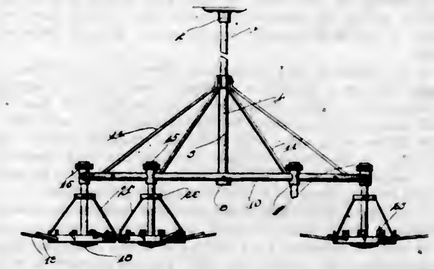
2. In a spark plug, the combination with an insulator, of a casing surrounding said insulator and contracted therebeyond to form a restricted tube, an insulator lining for said restricted tube, and an electrode passing through said insulator and said tube free from the walls of the latter, the outer end of said tube forming the coöperating electrode.

3. In a spark plug, the combination with an insulator and an electrode passing therethrough and projecting therebeyond, of a casing surrounding said insulator and forming a flame-guard, and having a passage through which the projecting electrode extends restricted and insulated to form high-velocity gas currents therethrough upon variations in pressure in the explosion chamber.

1,219,591. DRY-WASH-SORTING RACK. HERMAN C. SCHMIDT, Spokane, Wash., assignor to Ideal Laundry Company, Spokane, Wash. Filed Feb. 5, 1916. Serial No. 76,392. (Cl. 68—11.)

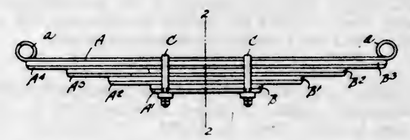
1. In a device of the class described, a depending central shaft, a tubular shaft revolubly mounted on said central shaft, radial bracing and supporting arms secured to said tubular shaft, an annular member carried by said arms, and a series of independently revoluble hangers supported on said annular member.

2. In a device of the class described, a depending support including a central shaft, radial bracing and supporting arms and an annular member revolubly carried thereby, a plurality of bearing members arranged at predetermined points on said annular member and a series of depending independently revoluble hangers mounted in the bearings on said annular member.



3. In a device of the class described, a depending supporting member revoluble on a vertical axis and a plurality of depending hangers independently revoluble on vertical axes on said supporting member.

1,219,592. LEAF-SPRING. CONSTANTINE PAOTRUS SCHWARZ, Cleveland, Ohio. Filed Feb. 4, 1916. Serial No. 76,109. (Cl. 267—33.)

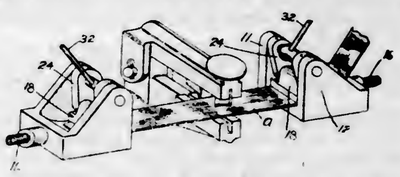


1. A leaf spring comprising a plurality of spring leaves, and layers of frictional material inserted between adjacent spring leaves differing in character from the spring leaves, said layers being of greater thickness than the leaves of said spring to cause a large relative movement of the component parts of the spring.

2. A leaf spring comprising a plurality of spring leaves, and layers of frictional material inserted between adjacent spring leaves differing in character from the spring leaves to increase the relative displacement of the contacting parts of the spring when deflected, said layers being of a thickness substantially one and one-half times the thickness of the leaves.

3. A leaf spring having a plurality of spring leaves and in which said leaves are separated by layers of flexible material of lower specific gravity than the leaves, said layers being free at their ends to move longitudinally with regard to said leaves and increasing the bulk of the spring to produce a large and unrestricted relative movement between the parts of the spring without materially increasing the weight of the spring, said layers being sufficiently flexible so that said layers of themselves offer substantially no material resistance to the deflections of the spring.

1,219,593. CLAMP. HENRY L. SCOTT, Providence, R. I. Filed June 5, 1915. Serial No. 32,470. (Cl. 24—248.)



1. A clamp of the character described comprising a base having a biting face, a supporting frame connected to said base, a gripping shoe having a broad engaging face coöperating with that of the base and an arm pivoted to

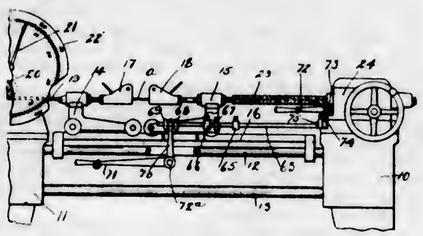
said frame and to said shoe, the latter being free to swing on said pivot to lie parallel with the surface of said base irrespective of the angle of said arm whereby a biting toggle action is provided between said biting surfaces when a strain is applied on the goods gripped between them.

2. A clamp of the character described comprising a frame having a base with a broad biting face, a gripping shoe having a broad biting face coöperating with that of said base, an arm pivoted in said frame and to said shoe, said frame being open both front and back to permit the material to be tested to pass through the back thereof, and means whereby a pulling strain may be applied to said clamp substantially on a line with its biting surfaces.

3. A clamp of the character described comprising a base having a broad biting surface, side frames connected to said base, a gripping shoe having a broad engaging face coöperating with that of the base, an arm pivoted to said frames and to said shoe whereby a biting toggle action is produced between said biting surfaces when a strain is produced on the goods gripped between them, and a spring for holding the swinging shoe normally closed.

4. A clamp of the character described comprising a base having a broad biting surface, side frames connected to said base, a gripping shoe having a broad engaging face coöperating with that of the base, and a toggle member pivoted to said side frames and to said shoe whereby a biting toggle action is produced between said biting surfaces when a strain is produced on the goods gripped between them, a spring for holding the swinging shoe normally closed and a handle for operating said shoe.

1,219,594. TENSION MECHANISM FOR TESTING-MACHINES. HENRY L. SCOTT, Providence, R. I. Filed July 6, 1915. Serial No. 38,071. (Cl. 73—51.)



1. In a testing machine, means for gripping the work, a screw connected to the gripper, means operating on the screw for moving the gripper to tension the goods, means for automatically reversing the action of the screw at a predetermined point in the tension stroke, said reversing means being adapted to produce more rapid motion in the reverse than in the direct movement of the screw.

2. In a testing machine, means for gripping the work, a screw connected to the gripper, means operating on the screw for feeding the gripper to tension the goods, and manually operable means for starting and stopping and reversing the action of the screw, and means including differential gearing for automatically returning said operable means to normal after an operating movement of the machine.

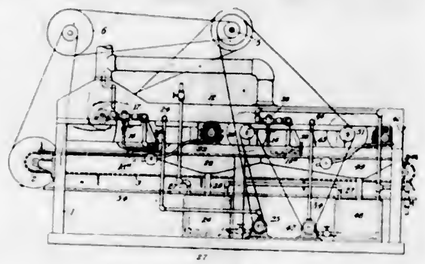
3. In a testing machine, a tension applying mechanism comprising means for gripping the work, a screw connected to the gripper, means operating on the screw for imparting a feeding movement to the gripper to tension the goods, means for automatically reversing the action of the screw at a predetermined point in the tension stroke, said reversing means being adapted to produce more rapid motion in the reverse than in the direct movement of the screws.

4. In a testing machine, a tension applying mechanism comprising means for gripping the work, a screw connected to the gripper, means operating on the screw for imparting an endwise feeding movement to the gripper to tension the goods, means for automatically reversing the action of the screw at a predetermined point in the tension stroke, and means for automatically stopping the movement of the gripper at the end of its return stroke.

5. In a testing machine, a tension applying mechanism comprising means for gripping the work, a screw connected to the gripper, means operating on the screw for imparting a feeding movement to the gripper to tension the goods and means for reversing the action of the screw at a predetermined point in the movement of the gripper, said reversing means being adapted to produce more rapid motion in the reverse than in the direct movement of the screw, and means for stopping the gripper at the end of its return stroke.

[Claims 6 to 8 not printed in the Gazette.]

1,219,595. PROCESS FOR RENOVATING CAR-CUSHIONS. WILLIAM F. SERVICE, Jersey City, N. J., assignor to Imperial Car Cleaner Company, a Corporation of New Jersey. Filed June 24, 1913. Serial No. 775,513. (Cl. 8—8.)



1. The process of re-dyeing articles, consisting in preparing the article to receive the dye solution, applying said solution to the surface of the article while both the article and the solution are in a heated condition and promptly removing any surplus dye solution from the surface so that the dye will not penetrate to the interior of the article.

2. The process of re-dyeing articles, consisting in scrubbing the article with a heated renovating solution, maintaining the article in a heated condition, spreading a heated dye solution uniformly over the surface of the article, said scrubbing and spreading of the dye solution being practically a continuous operation and rapidly removing any surplus solution before it has had an opportunity of penetrating for any material distance below the surface of the article.

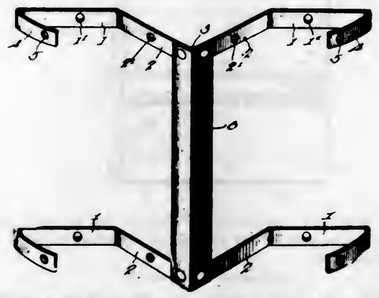
3. The process of re-dyeing articles, consisting in scrubbing the article with a renovating solution, heating the surface of the article by means of steam directed thereto and applying a heated dye solution to the heated surface of the article and promptly removing any surplus dye solution from the surface so that the dye will not penetrate to the interior of the article.

4. A process of re-dyeing articles, which consists in subjecting the surfaces to be dyed to the action of a heated cleaning liquid to cleanse and heat the same, then subjecting said surfaces to the action of a moderate heat to maintain the temperature of said surfaces and then applying a dye to said surfaces and immediately removing the surplus dyeing material therefrom, and then permitting said surfaces to be dried.

5. A process of re-dyeing articles, which consists in heating the surfaces to be dyed with a cleansing liquid, removing such liquid, and then applying dyeing material to said surfaces in a flowing stream and immediately removing any surplus of such material which does not adhere to said surfaces.

[Claims 6 to 9 not printed in the Gazette.]

1,219,596. SIGN-HOLDER. MANLEY H. SIMMONS, Chicago, Ill. Filed Aug. 23, 1915. Serial No. 46,927. (Cl. 40—125.)



1. In a sign holder; the combination of a plurality of supports, each comprising two body pieces extended in horizontal alinement with each other and connected by a right angled offset portion adapted for attachment to either a flat surface or angular post, said body pieces being provided at their outer extremities with sign attaching arms turned outwardly at an acute angle thereto, and means for securing said supports in rigidly spaced relation to each other.

2. In a sign holder; the combination of a plurality of supports, each comprising two body pieces extended in horizontal alinement with each other and connected by a right angled offset portion adapted for attachment to either a flat surface or angular post, said body pieces being provided at their outer extremities with sign attaching arms turned outwardly at an acute angle thereto, and an angle bar attached to the apices of said offset portions to hold said supports in spaced relation to each other.

3. In a sign holder; the combination of a plurality of supports, each comprising two horizontally alined body pieces connected by a right angled offset portion, said body pieces being provided at their outer extremities with sign attaching arms, and an outwardly-positioned angle bar attached to the apices of said offset portions to hold said supports in spaced relation to each other.

4. A sign support comprising two body pieces extended in horizontal alinement with each other and connected by a right angled offset portion, said body pieces being provided at their outer extremities with sign attaching arms turned backwardly and outwardly at an acute angle thereto whereby to enable the body pieces or offset portion to be attached to either a flat or angular support.

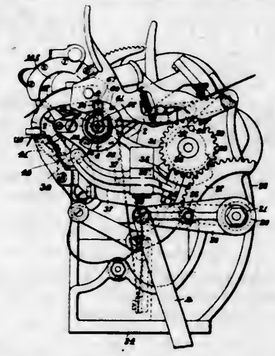
1,219,597. STITCH-MEASURER FOR SEWING-MACHINES. PETER SJOSTROM, Maplewood, Mass., assignor to Victor Shoe Machinery Company, Lynn, Mass., a Corporation of Massachusetts. Filed Dec. 13, 1915. Serial No. 67,060. (Cl. 112—20.)

1. In a machine of the class described, the combination of an oscillating member; a work feeding member vertically mounted thereon; a stop member to limit the outward movement of said work feeding member about its pivot; and means for adjusting said stop member endwise a predetermined amount.

2. In a machine of the class described, the combination of a vertically oscillating awl carrier having also a lateral swinging movement; a stop member to limit the outward swinging movement of said awl carrier; and means for adjusting said stop member endwise a predetermined amount.

3. In a machine of the class described, the combination of an oscillating awl carrier; a support; a stop member threaded to said support; and means for rotating said stop member and effecting endwise movement thereof.

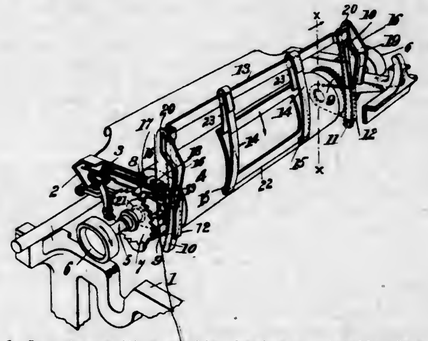
4. In a machine of the class described, the combination of an oscillating awl carrier; a support; a stop member threaded to said support; a curved plate provided with a plurality of registering members; and an arm secured to and rotatable with said stop member and adapted to coact with either of said registering devices.



5. In a machine of the class described, the combination of an oscillating awl carrier; a support; a stop member threaded to said support; a curved plate provided with a plurality of indentations; and an arm secured to and rotatable with said stop member and provided with a projection adapted to coact with either of said indentations.

[Claims 6 to 8 not printed in the Gazette.]

1,219,598. TYPE-WRITING MACHINE. JESSE A. B. SMITH, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 29, 1914. Serial No. 841,766. (Cl. 197—135.)



1. In a typewriting machine having a rotatable platen, in combination, a work holder, means for imparting to said holder vertical tangential movement to and fro past the printing point, hooks at the lower side of said holder whereby a work piece may be held and means at the upper part of said holder for pressing a work piece toward the platen, said means extending over the platen, whereby the work piece is bent backward over the platen.

2. In a typewriting machine having a rotatable platen; in combination a work holder, means for imparting to said holder vertical movement to and fro past the printing point, card holding hooks on said holder, card-deflecting springs on said holder, plates on the carriage frame, guiding and limiting slots in said plates and means on said work holder engaging said slots.

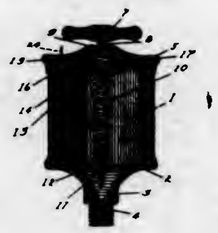
3. In a typewriting machine having a rotatable platen, a work-piece support comprising a bar extending along the platen over the printing side thereon, means, including spaced grippers, upon said bar, to form a holder for a work-piece, and means between said bar and platen to communicate the movement of said platen to said holder to feed the work-piece across the printing line.

4. In a typewriting machine having a rotatable platen, a work-piece support comprising a bar extending along the platen over the printing side thereon, means, including spaced grippers, upon said bar, to hold a work-piece, means between said bar and platen to communicate the movement of said platen to said holder to feed the work-piece across the printing line, and means to guide said holder in proximity to the platen at the printing line throughout its range of movement.

5. In a typewriting machine, the combination with a rotatable platen, of a work-piece support comprising a pair of fingers sustained over the printing side of the platen, means for moving said fingers transversely of said printing surface, and means to guide said fingers in proximity to the platen throughout their range of operative movement.

[Claims 6 to 41 not printed in the Gazette.]

1,219,599. GREASE-CUP. JOHN A. SOWELL and ERNEST E. SOWELL, Sacramento, Cal. Filed Dec. 26, 1916. Serial No. 138,739. (Cl. 184—38.)



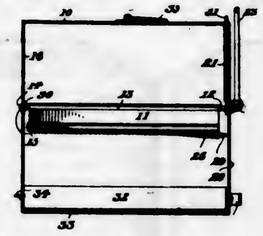
1. A grease cup comprising a casing provided with an outlet from the bottom and an operating worm fixed for rotary motion on the top, a follower on the worm, and means for filling the cup with grease without removing any of the parts thereof, such means comprising an opening through the casing and an opening through the follower, such openings being arranged to be brought into communication with each other when the cup is filled and such communication shut off when the cup is in operation.

2. A grease cup comprising a casing and follower mounted for movement within the casing and provided with an orifice, a disk mounted on the follower arranged to normally close such orifice, such disk being provided with an orifice arranged to be brought into register with the first named orifice, and an opening in the casing body adapted to register with both of these first named orifices when they register with each other.

3. A grease cup comprising a casing and a follower mounted for movement therein and provided with an orifice, a disk mounted on the follower and arranged to form a normal closure for such orifice, such disk being provided with an orifice arranged to be brought into register with the first named orifice, such casing being provided with an orifice arranged to register with both of the first named orifices when they are in register with each other, and a pin on the disk adapted to project through the orifice in the casing whereby the same may be used to move said disk.

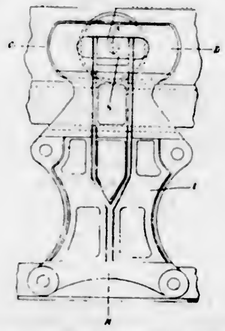
1,219,600. ASH-SIFTER. LUDWIK STAWICKI, Muskegon, Mich. Filed Mar. 18, 1916. Serial No. 85,033. (Cl. 83—60.)

An ash-sifter, including a sieve having a foraminous covering, said sieve having fixed centrally to its bottom, a shaft journaled in position for reversing the sieve bottom-upward as in presenting the sieve-covering downwardly in performing the sifting operation, said shaft having pivotally connected to one end thereof a handle, means for the retention of said handle in position as against the casual rotation of said shaft, and a tray insertible within said sieve, one end of the latter being open therefor, said tray having pivotally connected thereto a bail having its free end bent for overlying the forward



edge of said tray and wedgingly engage the forward edge of the sieve to provide for aiding the retention of the tray within the sieve.

1,219,601. DOOR-HANGER AND THE LIKE. GEORGE ELMER STERNBERGH, Montreal, Quebec, Canada, assignor to Edmond de Combre Porcheron, Montreal, Quebec, Canada. Filed Mar. 26, 1915. Serial No. 17,198. (Cl. 16—7.)



A door hanger comprising a body portion having a wheel housing at its upper end whose side walls are of substantially the same width from top to bottom and spaced apart to fit the wheel and which have elongated laterally outwardly extending hollow portions opening inwardly to form oppositely disposed trunnion recesses, said side walls including their hollow portions being imperforate, and a wheel permanently located in the housing and having integral trunnions mounted to operate in said trunnion recesses, all of said parts constituting a unitary device.

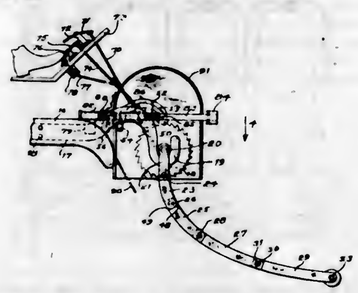
1,219,602. WHEEL-FENDER. WILLIAM H. H. STINEMAN, Baltimore, Md., assignor of one-half to Stephen Colquitt Pardee, Baltimore, Md. Filed May 10, 1916. Serial No. 96,674. (Cl. 105—130.)

1. The combination with a rolling fender, of a fixed shield partially surrounding said fender when rolled and a buffer supported in front of said shield.

2. The combination with a rolling fender, of a fixed shield partially surrounding said fender when rolled, means for locking said fender in the rolled position, a yielding buffer supported in front of said shield and means for moving said locking means by the movement of said buffer.

3. The combination with a rigidly supported fixed shield of a yielding buffer supported adjacent thereto, a rolling fender mounted in said shield, means for unrolling said fender and means operated by said buffer for controlling the unrolling of said fender mounted in front of said shield.

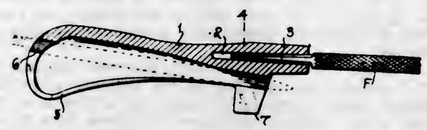
4. The combination with a main shaft, of links secured thereto, a second shaft mounted in the free ends of said links, a second set of links revolubly mounted upon said second shaft, a third shaft mounted in the free ends of said second set of links, a third set of links revolubly mounted upon said third shaft and so on for any number of shafts and sets of links, said links being so sized and shaped as to roll into a small space when said main shaft is revolved.



5. The combination with a main shaft, of links secured thereto, a second shaft mounted in the free ends of said links, a second set of links revolubly mounted upon said second shaft, a third shaft mounted in the free ends of said second set of links, a third set of links revolubly mounted upon said third shaft and so on for any number of shafts and sets of links, said links being so sized and shaped as to roll into a small space when said main shaft is revolved, and nettings supported by said shafts and links.

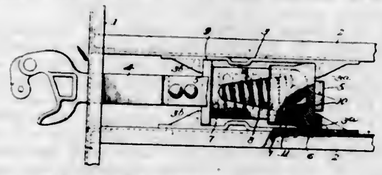
[Claims 6 to 8 not printed in the Gazette.]

1219,603. FILE-HOLDER. EDWARD P. STOLTZ, Philadelphia, Pa. Filed Oct. 14, 1916. Serial No. 125,709. (Cl. 76—47.)



A file holder comprising an elongated body provided with a longitudinal slot in one of its faces, the base of said slot being enlarged and being arranged in a plane angular to the longitudinal axis of the body and intersecting said axis, an end portion of said slot being defined by transversely alined ears.

1,219,604. DRAFT-RIGGING AND BUFFER MECHANISM. SVEN J. STAID, Chicago, Ill., assignor of one-half to Edward Carlson, Roseland, Chicago, Ill. Filed Aug. 9, 1909. Serial No. 511,942. (Cl. 213—64.)



1. A device of the character described comprising a one-piece yoke which has a free rectilinear movement and which has two parallel arms, a spring arranged therein and bearing against the outer end of the yoke, and a pair of levers acted upon and moved by said arms to cause such levers to act against the spring to compress it in all pulling and buffing movements, the line and direction of the pressure being from the yoke through the levers to the spring and the yoke and levers transmitting the entire pressure due from said movements.

2. A device of the character described comprising a one-piece yoke which has a free rectilinear movement and which has two parallel arms, a spring arranged therein and having one end bearing against the outer end of the yoke, a follower at the other end of the spring, and a pair of levers whose outer ends are acted upon and moved in unison by the arms of the yoke to cause the inner ends of the levers to bear against the follower to compress the spring in all pulling and buffing movements, the line and direction of the pressure being from the yoke through the levers, to the spring, and the yoke and levers transmitting the entire pressure due from said movements.

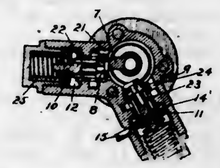
3. A device of the character described comprising a one-piece yoke which has a free rectilinear movement and which has two parallel arms, a spring arranged therein and having one end bearing against the outer end of the yoke, a follower at the other end of the spring, and a pair of similar curved levers acted upon at one end of said arms of the yoke and arranged at their other end to act upon the spring to compress it in all pulling and buffing movements, the line and direction of the pressure being from the yoke, through the levers, to the spring, and the yoke and levers transmitting the entire pressure due from said movements.

4. A device of the character described comprising a one-piece yoke which has a free rectilinear movement and which has two parallel arms, a spring arranged therein and having one end bearing against the outer end of the yoke, a follower at the other end of the spring, a pair of similar curved and overlapping levers acted upon at one end by said arms of the yoke, and arranged at their other end to act upon the spring to compress it in all pulling and buffing movements, and draft beams between which said yoke has its said movements.

5. A device of the character described comprising a one-piece yoke which has a free rectilinear movement and which has two parallel arms, a spring arranged therein and having one end bearing against the outer end of the yoke, a block which is located at the open end of the yoke and which is unconnected therewith, and a pair of levers whose outer ends are acted upon and moved by the arms of the yoke and whose inner ends are arranged to act against the spring to compress it, said levers bearing against said block, the line and direction of the pressure being from the yoke through the levers to the spring, and the yoke and levers transmitting the entire pressure due from all pulling and buffing movements.

[Claims 6 to 25 not printed in the Gazette.]

1,219,605. BRAKE-VALVE DEVICE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Nov. 2, 1914. Serial No. 869,802. (Cl. 188—7.)



In a brake valve for fluid pressure brakes, the combination with a manually operated rotatable member having a projection, of a puppet valve for controlling the release of the brakes, and a puppet valve for controlling the application of the brakes, each valve having an extended flat face, the movement across which from one edge to the opposite edge by said projection is adapted to open the valve, and the axis of rotation of the rotatable member being offset from a parallel plane through the axis of each valve.

1,219,606. BRAKE-CYLINDER-PRESSURE REGULATOR. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed July 3, 1915. Serial No. 37,891. (Cl. 188—1.)



1. In a fluid pressure brake, the combination with a brake cylinder and a valve device for controlling the application of the brakes, of a valve mechanism for regulating the brake cylinder pressure and valve means controlled by said valve device for cutting said valve mechanism into and out of action.

2. In a fluid pressure brake, the combination with a brake cylinder and a triple valve device for controlling the application of the brakes, of a valve mechanism for regulating the brake cylinder pressure to compensate for variations in brake cylinder volume and means operated by the flow of air to the brake cylinder in applying the brakes for cutting said valve mechanism into action.

3. In a fluid pressure brake, the combination with a brake cylinder and a triple valve device for controlling the application of the brakes, of a valve mechanism for regulating the brake cylinder pressure to compensate for variations in brake cylinder volume and means operated by the flow of air through the triple valve service port for cutting said valve mechanism into action and adapted to cut said valve mechanism out of action when the service port is lapped.

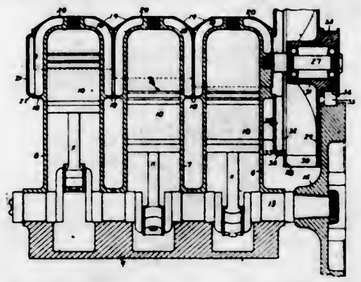
4. In a fluid pressure brake, the combination with a brake cylinder, auxiliary reservoir, and a triple valve device for controlling the application of the brakes, of a valve mechanism controlled by brake cylinder and auxiliary reservoir pressures for regulating the brake cylinder pressure and means controlled by the triple valve device for controlling the admission of fluid from the brake cylinder and the auxiliary reservoir to said valve mechanism.

5. In a fluid pressure brake, the combination with a brake cylinder, auxiliary reservoir, and a triple valve device for controlling the application of the brakes, of a valve mechanism controlled by brake cylinder and auxiliary reservoir pressures for regulating the brake cylinder pressure and means operated by the flow of air in applying the brakes for opening communication for supplying fluid from the auxiliary reservoir and the brake cylinder to said valve mechanism.

[Claims 6 to 8 not printed in the Gazette.]

1,219,607. INTERNAL-COMBUSTION ENGINE. WILLARD IRVING TWOMBLY, New York, N. Y., assignor, by mesne assignments, to Henry W. Jessup, trustee, New York, N. Y. Filed Jan. 17, 1913. Serial No. 742,524. (Cl. 123—171.)

1. In an internal combustion engine, the combination of a plurality of cylinders; jackets to inclose the heads and a portion of the sides of the cylinders, each jacket having an opening in the head end thereof; a member extending around the jackets to form a chamber around said jackets with which all of the jackets communicate at their inner ends, said chamber flaring gradually from one end to the other end and having an opening in such flaring end; and means to draw the air through the jacket openings away from the cylinders and out through said flaring opening, each of the jackets of the plurality of cylinders being of different extent with relation to the other parts whereby the cooling effect varies progressively in the order of the cylinders from one end to the other.



2. In an internal combustion engine, the combination of a plurality of cylinders having longitudinally extending cooling fins and a flange adjacent the ends of the fins; jackets to inclose the heads and a portion of the sides of the cylinders to a point adjacent the flanges, each jacket having an opening in the head end thereof, the fins in conjunction with the jackets forming air passages communicating with the openings in the head ends of the jackets, and the jacket for the cylinder at one end extending around the sides of the cylinder for a greater distance than the jacket of the succeeding cylinder; a member extending around the jackets to constitute a chamber extending around the cylinders with which the inner ends of the air passages between the fins and jackets communicate and said chamber flaring gradually from the end adjacent the shortest cylinder jacket to the longest cylinder jacket and having an opening in said flaring end at the end adjacent the longest cylinder jacket and a rotary fan operating in the opening of the chamber to draw air through the openings in the head ends of the jackets and away from the cylinders, substantially as and for the purpose specified.

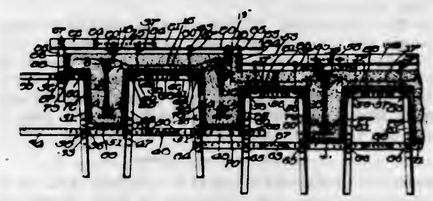
3. In an internal combustion engine, the combination of a plurality of cylinders having laterally projecting flanges; jackets inclosing the heads and a portion of the sides of the cylinder and spaced therefrom, each jacket having an opening in the head end thereof; a member to extend around all of the jackets and held in fixed relation to the cylinders, said member and flanges constituting a chamber extending around the jackets and with which the jackets communicate, and flaring outward from one end to the opposite end with an opening in the flaring end, a stud held in fixed relation with the cylinder adjacent the open end of the chamber; a rotary fan driven from the crank shaft mounted on said stud within the flaring opening of the chamber to draw air through the jacket openings and away from the cylinders through said chamber; and means to maintain a substantially air tight joint between said fan and the flaring opening, substantially as and for the purpose specified.

4. In an internal combustion engine, the combination of a plurality of cylinders having laterally projecting flanges; jackets inclosing the heads and a portion of the sides of the cylinders and spaced therefrom, each jacket having an opening in the head end thereof; a member to extend around the jackets and resting upon the cylinder flanges, said member and the flanges constituting a chamber extending around the jackets with which the latter communicate, and having a circular opening at one end, said chamber gradually flaring from one end to the open end, and means to draw the air through the jacket openings away from the cylinders and out through the flaring opening of said chamber, substantially as and for the purpose specified.

5. In an internal combustion engine, the combination of a plurality of cylinders having laterally projecting flanges; jackets inclosing the heads and a portion of the sides of the cylinders and spaced therefrom, each jacket having an opening in the head thereof; a member to extend around the jackets and resting upon the cylinder flanges, said member and the flanges constituting a chamber extending around the jackets with which the jackets communicate at their ends, and having an enlarged flaring circular opening at one end; a rotary fan driven from the crank shaft adjacent the circular opening of the chamber to draw the air from the cylinder jackets through said chamber, said fan comprising a pair of annular members connected by blades or vanes, one of the annular members having an opening to register with the circular opening in the chamber, and the other member having a hub portion whereby the fan is mounted on the piston-stud; packing extending around the annular opening in the chamber and abutting against the fan flange to form an air tight connection between said flange and chamber; and a clamping member extending around said packing to maintain it in position, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,219,608. CENTERING FOR REINFORCED-CONCRETE BRIDGES, FLOORS, AND THE LIKE. WILBUR J. WATSON, Cleveland, Ohio. Filed Sept. 8, 1913. Serial No. 788,498. (Cl. 25—131.5.)

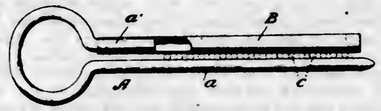


1. In combination, means adapted to coöperate with reinforcement for a reinforced concrete structure comprising longitudinal I-beams, consisting of a plurality of cross-bars supported by said I-beams, a vertical curb strip suspended from said cross-bars, and a mold for pouring concrete mixture about the reinforcement suspended from said cross-bars.

2. In combination, means adapted to coöperate with reinforcement for a reinforced concrete structure consisting of a plurality of cross-bars supported by a part of said reinforcement, horizontal strips adjustable in length and suspended from said cross-bars, additional strips connected to the outer ends of said horizontal strips and depending from the same, additional horizontal strips adjustably connected to said depending strips either horizontally or vertically, means for adjusting the length of said additional horizontal strips, and sheeting supported by both sets of horizontal strips and by the depending strips to form a mold for the pouring of concrete mixture about said reinforcement.

3. In combination, means adapted to coöperate with reinforcement for a reinforced concrete structure consisting of a plurality of cross-bars angular in cross section and adjustable in length, bolts for connecting the cross-bars to a part of said reinforcement, pipe separators for holding the cross-bars at a predetermined distance above the reinforcement, suspension bolts connected to said cross-bars, horizontal strips supported by said suspension bolts, means for adjusting the length of said horizontal strips, depending strips connected to the outer ends of said horizontal strips, additional horizontal strips, means for adjustably connecting said additional horizontal strips to said depending strips both as to vertical position and as to horizontal position, means for adjusting the length of said additional horizontal strips, and sheeting resting on the upper and lower horizontal strips and against the depending strips to form a molding for the pouring of concrete mixture about the reinforcement.

1,219,609. COMBINED POWDER-PUNCH AND BLASTING-FUSE HOLDER. DANIEL JAMES WATTS, Iron River, Mich., assignor of one-fourth to Leonard J. Wright and one-fourth to Reinhold C. Doenitz, Iron River, Mich. Filed Sept. 5, 1916. Serial No. 118,570. (Cl. 102—5.)

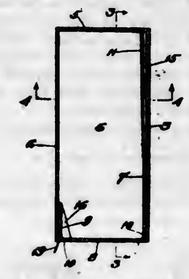


1. A fuse holder consisting of a rod bent to form two arms of unequal length and spaced apart in parallel relation, and a detachable member mounted on the shorter arm and adapted to form a continuation of said arm and arranged in like parallel relation with the longer arm.

2. A fuse holder consisting of a rod bent to form a handhold and also two arms of unequal length spaced apart in parallel relation and a detachable member mounted on the shorter arm adapted to form a continuation of said arm and arranged in like parallel relation with the longer arm.

3. A device of the character described consisting of a rod doubled upon itself terminating in parallel arms of unequal length and relatively flexible, the longer arm adapted for a powder punch, in combination with a tapering tube detachably mounted on the shorter arm.

1,219,610. BOX. PERCY E. WHITE, Mansfield, Mass. Filed June 22, 1916. Serial No. 105,261. (Cl. 129—43.)



1. A box having a disappearing closure for the open side, said closure member having two opposite side wings one of which when the box is closed fits within the box against the inner face of one of the side walls and the other of which wings fits within the box against the inner face of the opposite side wall, said wings both being hingedly connected with said closure member and being adapted to be brought into alinement with each other, said closure member and wings when thus brought into alinement being slidable back into the interior of the box alongside of the inner face of one of said side walls.

2. A box having a disappearing closure for the open side, said closure member having two opposite side wings one of which when the box is closed fits within the box against the inner face of one of the side walls and the other of which wings fits within the box against the inner face of the opposite side wall, said wings both being hingedly connected with said closure member and being adapted to be brought into alinement with each other, said closure member and wings when thus brought into alinement being slidable back into the interior of the box alongside of the inner face of one of said side walls, guide ways for said combined closure member and wings where they slide into the interior of the box, and a guide way at the opposite side of the box to receive the wing which engages with the said opposite side when the box is closed.

3. A box having a disappearing front closure, said closure member having two opposite side wings one of which when the box is closed fits within the box against the inner face of one of the side walls and the other of

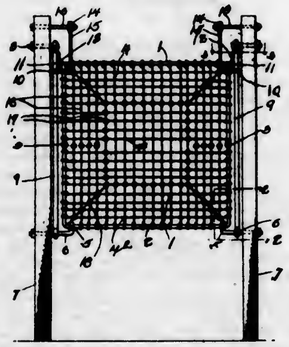
which wings fits within the box against the inner face of the opposite side wall, said wings both being hingedly connected with said closure member and being adapted to be brought into alinement with each other, said closure member and wings when thus brought into alinement being slidable back into the interior of the box alongside of the front face of one of said side walls, guide ways for said combined closure member and wings where they slide into the interior of the box, and a guide way at the opposite side of the box to receive the wing which engages with the said opposite side when the box is closed, and a flexible connection between the inner edge of the rearmost wing and the back part of the box which serves as a stop to limit the outward movement of said closure members and which is collapsible to permit the inward movement of said closure member.

4. A box having a closed top, bottom, two sides and back, and an open front, and having a closure member for the front consisting of at least three sections flexibly connected together, said sections being slidable into the interior of the box along one of the sides thereof to open the front, and being slidable outward to bring at least two of the sections to the outside leaving one of the sections extending within the box along the same side and permitting the outer end section to be folded back inside of the opposite side of the box, and permit the intermediate section to extend across the front of the box.

5. A box having a closed top, bottom, two sides and back, and an open front, and having a closure member for the front consisting of at least three sections flexibly connected together, the intermediate portion of said combined sections being adapted to close the front of the box, the section on one side of said intermediate member forming a wing, a flexible connection between said wing and the interior of the box on one side, and the section on the other side of said intermediate section forming a wing which is adapted to enter the box along the other side, and all of said sections being adapted to be turned into the same plane and moved back into the interior of the box along one of the sides thereof.

[Claims 6 to 9 not printed in the Gazette.]

1,219,611. MAIL-CATCHER. WILLIAM H. WHITNEY, Greentown, Ind. Filed July 5, 1916. Serial No. 107,616. (Cl. 258—20.)



1. In a mail bag receiver, the combination of a rectangular frame section pivotally mounted at its lower end, a second frame section having its inner ends pivotally secured to the inner ends of the first mentioned frame section and its upper end loosely and slidably mounted, a foldable receiving net secured on said sections, and releasable means for normally holding the upper frame section in raised position.

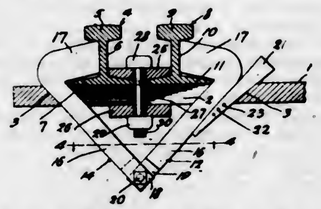
2. In a mail bag receiver, the combination of a frame section pivotally mounted at its lower end, fixedly mounted guide rods parallel with the sides of the said frame section, a second frame section having its inner ends pivotally connected to the inner ends of the first mentioned section, and its outer end loosely and slidably connected to the guide rods, a receiving net secured to said sections, and means releasably connected to the upper end of the said second frame section for normally holding the same in raised position.

3. In a mail bag receiver, the combination of a frame section pivotally mounted at its lower end, fixedly mounted guide rods parallel with the sides of the said frame section, a second frame section having its inner ends pivotally connected to the inner ends of the first mentioned section, and its outer end loosely and slidably connected to the guide rods, a receiving net secured to said sections, means releasably connected to the upper end of the said second frame section for normally holding the same in raised position, and means for returning the receiver to operative position.

4. In a mail bag receiver, the combination of two spaced supporting posts, guide rods fixedly mounted on said posts, a lower rectangular frame section pivotally mounted at its lower end between said posts, an upper frame section loosely and slidably connected adjacent its upper end to the guide rods and pivotally connected at its inner ends to the inner ends of the lower section, bow springs secured to said rods, laterally projecting loops fixedly secured to the corners of the upper section and adapted to engage under said bow springs, means for raising the upper frame section, and a foldable receiving screen carried by said frame section.

5. The combination of two pivotally connected frame sections and a receiving screen mounted thereon, said screen having an inner rectangular part and a peripheral part connected by a plurality of rings and interwoven wires secured through the same and to the frame sections, certain of said rings being located above, and the remainder below, the pivotal axis of the frame sections.

1,219,612. GUARD-RAIL BRACE. ELISHA READ WILLIAMS, Altheimer, Ark. Filed Dec. 6, 1916. Serial No. 135,428. (Cl. 239—18.)



1. In a device of the class described, a tie member; a main rail and a guard rail supported thereon; holding elements passing through the tie member and bearing on the outer sides of the rails; means for pivotally uniting the holding elements below the tie member; and clamping means engaging the inner edges of the base flanges of the rails, and the tie member.

2. In a device of the class described, a tie member having a slot; a main rail and a guard rail supported on the tie member; holding elements passing through the slot and coacting with the outer sides of the rails; means for pivotally uniting the holding elements below the tie member; clamping means passing through the slot and engaging the inner edges of the base flanges of the rails, and the tie member; and a tightening element interposed between one holding element and the tie member at one end of the slot.

3. In a device of the class described, a tie member having a slot; a main rail and a guard rail supported on the tie member; holding elements each comprising a shank and an angularly disposed head, the shanks of the holding elements passing through the slot, and the heads of the holding elements bearing against the outer sides of the rails; a wedge interposed between one holding element and the tie member at one end of the slot; means for pivotally connecting the holding elements below the tie member; a top plate engaging the base flanges of the rails; a bottom plate extended across the slot and engaging the lower face of the tie member; and a connection uniting the plates, the connection passing through the slot.

1,219,613. METHOD OF MAKING ARTIFICIAL LIMBS. ALBERT F. WINKLEY, Faribault, Minn. Filed May 22, 1915. Serial No. 29,735. (Cl. 18—55.)



1. The method of making artificial limbs which consists in soaking a cylinder of fiber until the same has become soft, placing the cylinder in place upon a mold, progressively winding a cord about the cylinder from the knee to the ankle and gradually increasing the tension in the cord toward the ankle to cause the walls of the cylinder to become distorted to thicken the stock at the ankle, drying the material while the same is so formed, and thereafter removing the cord and withdrawing the mold, leaving a seamless member in the form desired.

2. The method of making artificial limbs which consists in soaking a cylinder of fiber until the same becomes soft, placing the same in position upon a mold, progressively distorting and forming the cylinder upon the mold from one end thereof to the other while the same is softened to cause the walls of the cylinder to become thickened at one end, drying the material to restore its rigidity while the same is so formed, and thereafter withdrawing the mold, leaving a seamless member of the form desired.

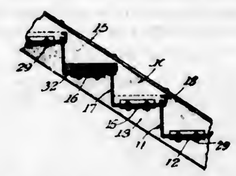
3. The method of making artificial limbs which consists in soaking a cylinder of fiber until the same has become soft, placing the cylinder in position upon the mold, progressively distorting and forming the cylinder upon a mold from the knee end to the ankle to cause the ankle to become relatively thicker than the knee while the cylinder is softened, drying the material to restore its rigidity while the same is so formed, and thereafter withdrawing the mold leaving a seamless member of the form desired.

4. The method of making artificial limbs which consists in soaking a cylinder of fiber until the same has become soft, placing the cylinder in position upon a mold, progressively winding a circular flexible member about the cylinder from the knee to the ankle to form the cylinder about the mold and to draw down a portion of the material about the knee toward the ankle to thicken the ankle while the cylinder is soft, drying the material while the same is so formed, and thereafter removing the flexible member and withdrawing the mold, leaving a seamless member in the form desired.

1,219,614. STAIR STRUCTURE. ARTHUR L. WOODBRIDGE, Chicago, Ill. Filed Jan. 3, 1916. Serial No. 69,954. (Cl. 72—96.)

1. A stair structure comprising a stringer, a member including tread and riser sections, and an angle iron tread support secured in substantially horizontal position to said stringer and tread section, one leg of the angle iron extending beneath the tread and supporting it, and one of the sections of the member coöperating with said angle iron to determine the correct assembled position of said tread section.

2. A stair structure comprising a stringer, a tread section, said tread section having a side edge recessed, and an angle iron tread support secured in substantially horizontal position to said stringer and tread section, one leg of the angle iron extending beneath the tread section and supporting it and the other leg lying in the recess and having an edge thereof engaged by a portion of the tread section to correctly position the latter.

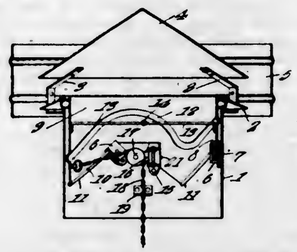


3. A stair structure comprising a stringer, a member including tread and riser sections, said tread section having a side edge recessed, and an angle iron tread support secured in substantially horizontal position to said stringer and tread section, one leg of the angle iron extending beneath the tread section and supporting it and the other leg lying in the recess and having an edge thereof engaged by a portion of the member to correctly position the latter.

4. A stair structure comprising a stringer, a member including tread and riser sections, said tread section having a side edge recessed, and an angle iron tread support secured in substantially horizontal position to said stringer and tread section, one leg of the angle iron extending beneath the tread section and supporting it, and the other leg lying in the recess of the tread section to position the tread and secure the same against movement longitudinally of the angle iron in either direction.

5. A stair structure comprising spaced stringers, a plurality of members between the stringers each including tread and riser sections, the tread and riser sections of adjacent members having forwardly and upwardly inclined portions disposed in overlying relation, securing means extending through the inclined portions, and means for supporting the members from the stringers.

1,219,615. VENTILATOR-DAMPER. ANDREW WUEST, Olean, N. Y. Filed Mar. 1, 1916. Serial No. 81,456. (Cl. 98—4.)



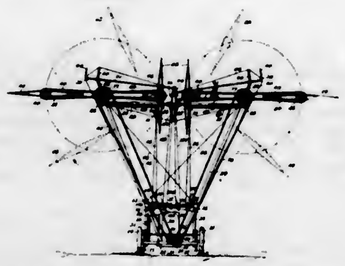
1. The combination with a cylindrical ventilator and a cap extending thereover and spaced therefrom, a cylindrical damper fitted within the ventilator, said damper having depending wings with inclined edges, means mounted within the ventilator for engaging and guiding said edges, and means for rotating the damper, said guiding means coöperating with the edges of the wings to shift the damper longitudinally during such rotation.

2. The combination with a cylindrical ventilator body and a cap extending thereover and spaced therefrom, of a cylindrical damper mounted to rotate and to shift longitudinally within the body, said damper having depending wings provided with inclined lower edges, damper supports movably engaged by said edges, and means located

within the damper for rotating said damper to shift it longitudinally toward the cap.

3. The combination with a cylindrical ventilator body and a cap extending thereover and spaced therefrom, of a cylindrical damper mounted to slide and rotate within the body and having depending wings provided with inclined lower edges, damper supports secured within the body and engaging said edges, and means secured to and surrounded by the damper for rotating said damper relative to its supports thereby to shift the damper longitudinally within the body and toward the cap.

1,219,616. FLYING-MACHINE. ADOLF ZYTKIEWICZ, Meriden, Conn. Filed July 12, 1915. Serial No. 39,317. (Cl. 244—11.)



1. A flying machine comprising a frame, oppositely positioned side wings revoluibly mounted upon the said frame, each of the said wings having oppositely arranged revoluble planes, a motor carried by the said frame, operative connections between the said motor and wings, a rear wing of similar construction to the said side wings, controllable operative connections between the said rear wing and motor, and laterally shifting means for the said rear wing adjustably controlled during the steering operation.

2. A flying machine comprising a carriage, a motor mounted thereon, front and rear triangular frames carried by the carriage with their apices projecting downwardly, upward extensions carried by the sides of the said frames, axles journaled through the said extensions arranged in parallelism longitudinally of the machine, opposite flattened winged planes journaled on beams carried by the axles between the opposite ends of the said frame extensions, sprocket wheels arranged at the ends of the said wing axles, sleeves for supporting the said sprocket wheels on the axles, operative connections between the said motor and sprocket wheels, clutch mechanism for the said operative connections, and a rearwardly positioned steering wing right-angularly positioned relative to the side wings.

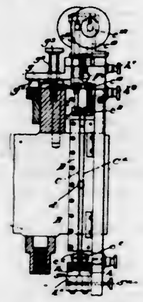
3. A flying machine comprising a carriage, a motor mounted thereon, front and rear triangular frames carried by the carriage with their apices projecting downwardly, upward extensions carried by the sides of the said frames, axles journaled through the said extensions arranged in parallelism longitudinally of the machine, opposite flattened winged planes journaled on beams carried by the axles between the opposite ends of the said frame extensions, sprocket wheels arranged at the ends of the said wing axles, sleeves for supporting the said sprocket wheels on the axles, operative connections between the said motor and sprocket wheels, clutch mechanism for the said operative connections, sprocket wheels carried by the said sleeves, sprocket chain connections between the said sprocket wheels and the said planes, operating means for the said sleeves and a rearwardly positioned steering wing right-angularly positioned relative to the side wings.

4. A flying machine comprising a carriage, a motor mounted thereon, front and rear triangular frames carried by the carriage with their apices projecting downwardly, upward extensions carried by the sides of the said frames, axles journaled through the said extensions arranged in parallelism longitudinally of the machine, opposite flattened winged planes journaled on beams carried by the axles between the opposite ends of the said frame extensions, sprocket wheels arranged at the ends of the said wing axle, sleeves for supporting the said sprocket wheels on the axles, operative connections between the said motor and sprocket wheels, clutch mechanism for the said operative connections, sprocket wheels carried by the said sleeves, sprocket chain connections between the said sprocket wheels and the said planes, arms carried by the said sleeve, slides upon the machine frame, pivotal connections between the said slides and arms, pivotal actuating screws for the said slides, operating cranks for the said actuating screws positioned adjacent the said motor, and operative connections between the said cranks and the said actuating screws.

5. A flying machine comprising opposite V-shaped frames, elevating wings oppositely journaled in the said frame longitudinally of the machine, the said wings having oppositely journaled air contacting planes operatively positioned during their outward downward movement and inoperatively positioned during the upward inward movement thereof, a motor, operative connections between the said motor and wings whereby either wing may be individually controlled, a revolubly mounted laterally shiftable wing arranged rearwardly of the frame, shifting means for the said rear wing, operable adjacent the said motor, oppositely arranged planes journaled in the said rear wing, and controllable operative connections between the said motor, rear wing and the planes thereof.

[Claims 6 to 9 not printed in the Gazette.]

1,219,617. GALVANOMETER. WILLIAM HERBERT APTHORPE, Cambridge, England, assignor to Taylor Instrument Companies, Rochester, N. Y., a Corporation of New York. Filed Aug. 14, 1914. Serial No. 856,710. (Cl. 171—95.)

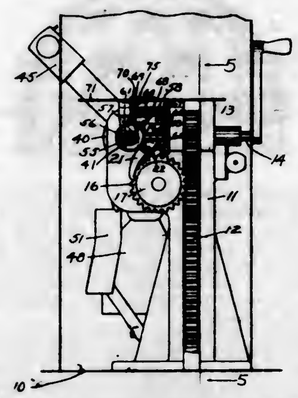


In a galvanometer, the combination with a plurality of fibers mounted in a magnetic field, of supporting means for the fibers including clamps that are adjustable to change the relative position of the fibers and means for adjusting the tension of the fibers independently of each other.

1,219,618. VENDING DEVICE. ROLLYN H. BAKER, Dayton, Ohio. Filed Aug. 5, 1912. Serial No. 713,217. (Cl. 211—8.)

1. In a dispensing device, means for delivering a cup, a reservoir, a spout above the level of the liquid in the reservoir, a pump which elevates an equal quantity of said liquid to the spout at each operation, and a manually actuated element which operates the cup delivering means and pump, causing the first to deliver a cup and the latter to elevate the liquid to the spout, the operation being so timed that the cups and liquid are delivered alternately.

2. In a dispensing device, means for delivering a cup, a reservoir, a spout above the level of the liquid in the reservoir, a pump within the reservoir which elevates an equal quantity of liquid to the spout at each operation, and a manually actuated element which alternately operates the cup delivering means and the pump, whereby a cup is first delivered and the liquid then elevated to the spout.



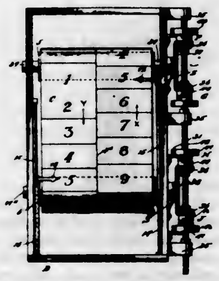
3. In a dispensing device, a rack, means for reciprocating it, a reservoir, a spout, a pump connected to the rack and adapted to draw liquid from the reservoir when the rack moves in one direction and discharge said liquid from the spout when the rack moves in the opposite direction, and a cup delivering device connected to and operated simultaneously with the rack and adapted to deliver a cup while the liquid is being drawn from the reservoir.

4. In a dispensing device, a reservoir, a spout, a pump adapted to draw liquid from the reservoir and discharge it from the spout, a rack connected to the piston of the pump, a pinion enmeshed with the rack, and means for rotating the pinion.

5. In a dispensing device, a reservoir, a spout, a pump adapted to draw liquid from the reservoir and discharge it from the spout, a rack whereby to operate the pump, means for reciprocating the rack, mechanism to prevent the rack moving in one direction, means for disabling said mechanism and means for restoring it, the restoring means being operated by a slight movement of the rack in the direction not affected by said mechanism.

[Claim 6 not printed in the Gazette.]

1,219,619. STREET OR STATION INDICATOR FOR RAILWAYS. LEWIS B. BELL, Chicago, Ill., assignor of one-half to Clara A. Bunde, Chicago, Ill. Filed Dec. 26, 1914. Serial No. 879,046. (Cl. 40—93.)



1. An indicator member for structures of the class described comprising a long continuous strip of flexible material capable of being wound upon or unwound from a roll or drum and having two parallel longitudinally disposed series of indicator characters, the order of the characters of both series beginning at the same end of said strip, and being arranged in progressively increasing spaced relation in opposite directions.

2. An indicator member for structures of the class described, comprising a long continuous strip of flexible material capable of being wound upon or unwound from a roll or drum and having two parallel longitudinally disposed series of indicator characters, the characters of both series being arranged in progressive order, and being arranged in progressively increasing spaced relation in opposite directions, one series of characters being as a whole offset longitudinally of the strip with respect to the other series as a whole.

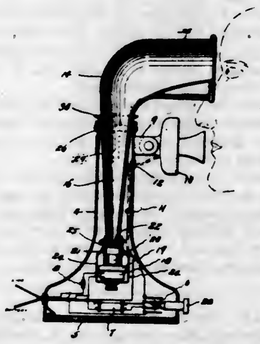
3. The combination of a pair of rolls or drums and an indicator tape adapted to wind upon and unwind from said drums, mechanism for rotating either of said drums in either direction, means individual to each drum and to each direction of rotation of each drum for connecting said mechanism with said drums, and means preventing the operation of more than one of said individual means at a time.

4. The combination of a pair of rolls or drums and an indicator tape adapted to wind upon and unwind from said drums, mechanism for rotating either of said drums in either direction, means individual to each drum and to each direction of rotation of each drum for connecting said mechanism with said drums, and interlocking mechanism to prevent the operation of more than one of said individual means at a time.

5. The combination of a pair of drums, mechanism for rotating either of said drums in either direction, clutches individual to each drum and to each direction of rotation of each drum for connecting said mechanism with and disconnecting it from said drums, mechanism individual to each clutch for actuating any one of said clutches, and means for preventing the actuation of the remaining clutches.

[Claims 6 to 9 not printed in the Gazette.]

1,219,620. TELEPHONE INSTRUMENT. FREDERICK E. BENTLEY, Maplewood, Mo., assignor of one-fourth to B. W. Frauenthal, one-fourth to A. S. Johnson, and one-fourth to I. L. Burlingame, St. Louis, Mo. Filed Nov. 29, 1915. Serial No. 63,971. (Cl. 179—147.)



1. In a telephone instrument, the combination of a yieldingly supported horn, and a telephone receiver suspended therefrom with its vibratory portion in operable association therewith.

2. In a telephone instrument, the combination of an amplifying horn, a telephone receiver disposed with its diaphragm in operative relationship thereto, and yieldable connecting members whereby the receiver is supported on the horn.

3. In a telephone instrument, a rigid supporting stand, an amplifying horn, a telephone receiver disposed with its diaphragm in operative association with the horn, and

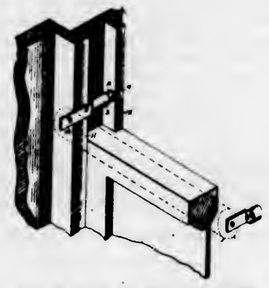
relatively flaccid connecting members for supporting the horn on the stand and the receiver on the horn.

4. In a telephone instrument, the combination of a supporting stand, a transmitter supported thereon, an amplifying horn removably supported on said stand with a portion extending within the latter and a portion disposed exterior thereof in operative association with the transmitter, and a receiver supported on the horn out of contact with the support, and having its vibratory portion operably associated with the horn.

5. A telephone instrument including the combination of a support, a telephone transmitter supported at the upper portion thereof, an amplifying horn carried on the support and having a bell or mouth portion extending from the support above the transmitter, a portion of said bell being transparent, and a telephone receiver operatively associated with said horn.

[Claims 6 to 14 not printed in the Gazette.]

1,219,621. WINDOW-SHADE BRACKET. FRANK G. BETT, Cleveland, Ohio. Filed Sept. 30, 1916. Serial No. 123,009. (Cl. 156—24.)



1. A bracket for window shades or the like, comprising two spring-pressed members adapted to be inserted between the parting strips of a window casing or the like and held by contact therewith, one of said members having a forwardly projecting arm for supporting a shade roller or the like.

2. A bracket for window shades or the like, comprising opposite members and a spring in compression therebetween, adapted to press said members against opposite parts of a window casing or the like, one of said members having a forwardly projecting arm.

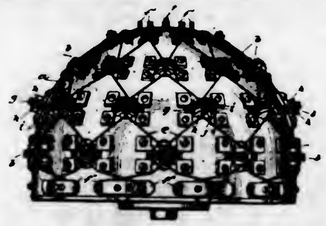
3. A bracket for window shades or the like, comprising a tube, a plunger projecting from one end thereof, a spring in the tube, pressing outwardly on the plunger, and an arm extending from the tube.

4. A bracket for window shades or the like, comprising a tube having a projecting arm at one end, and a spring-pressed plunger projecting from the other end, said tube and plunger adapted to fit between the parting strips of a casing and be held by the spring pressure, with the arm extending beside one of said strips.

1,219,622. WIRE-NETTING MACHINE. WINFRED MUDGE BROOKS, East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y., a Corporation of New York. Filed July 27, 1916. Serial No. 111,584. (Cl. 140—71.)

1. A machine for making wire netting having in combination, a substantially dome-shaped form, a plurality of wire twisters mounted on said form, means for simultaneously and equally rotating said twisters, and means for holding and guiding the extremities of the wires to be used.

2. A machine for making wire netting having in combination, a substantially dome-shaped form, a plurality of rotary wire twisters mounted on said form, means for simultaneously and equally rotating said twisters from within said form, and means for holding and guiding the extremities of the wires to be used.



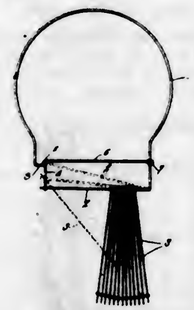
3. A machine for making wire netting having in combination, a substantially dome-shaped form, a plurality of rotary wire twisters mounted on said form in any desired pattern, the location of the twisters being determined by the desired positions of the joints of the netting to be made, means for simultaneously and equally rotating said twisters, and means for holding and guiding the ends of the wires to be used.

4. A machine for making wire netting having in combination, a substantially dome-shaped form, a plurality of rotary wire twisters each comprising a gear, bearing, disks on each side of said gear integral therewith, and a radial slot adapted to receive and grip the wires to be twisted, bearings adapted to receive said bearing disks of each twister and open at the top to admit the wires mounted on said form, means for simultaneously and equally rotating said twisters from within the form, and means for holding and guiding the wires to be used.

5. A machine for making wire netting having in combination, a substantially dome-shaped form, a plurality of wire twisters each comprising a gear having bearing disks on each side integral therewith, a slot radial to the center of the twister gear adapted to receive and grip the wires to be twisted, bearings having an open top to admit said wires and adapted to receive said bearing disks mounted on the form, a shaft mounted centrally within said form, driving gears fixedly mounted on said shaft adjacent to and engaging the various twister gears, means to rotate said shaft, and means for holding and guiding the ends of the wires to be used.

[Claims 6 to 8 not printed in the Gazette.]

1,219,623. CAR-SEAL CARRIER. LYMAN T. BUSTRAW, Marcellus, Mich. Filed May 8, 1916. Serial No. 96,163. (Cl. 224—45.)



1. A carrier having a loop, and a tongue whose free terminal projects within said loop, said loop surrounding said tongue and having a throat for the passage of the tongue into and out of the loop, and said loop being adapted to receive elements carried by the tongue to enable said elements to be removed from the terminal of the tongue.

2. A carrier embodying a handle member provided at one end with a loop and at the other end with a tongue, said loop surrounding the terminal of said tongue and having a throat for the passage of the tongue into and out of said loop, said loop being adapted to receive elements carried by said tongue to enable the elements to be removed from the terminal of said tongue within the loop.

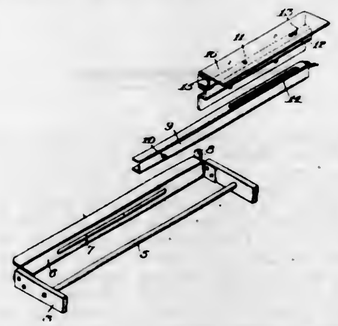
3. A carrier embodying a loop-shaped handle member formed from a single length of wire and having a loop at one end and a tongue at its other end, said loop surrounding the terminal of said tongue and having a throat for the passage of said tongue into and out of the loop, and said loop being adapted to receive elements held by said tongue to permit said elements to be removed from the terminal of the tongue within the loop.

4. A carrier embodying a handle having an inwardly projecting portion at one end and a loop carried by said portion and having a terminal spaced from said portion to provide an entrance throat, the handle having a tongue projecting from its other end, the free terminal of the tongue projecting within said loop, said loop being adapted to receive elements carried by said tongue to enable the elements to be removed from the terminal of said tongue within the loop.

5. A carrier formed from a single length of wire or equivalent stock embodying a loop-shaped handle having a tongue projecting from one end, an inwardly projecting portion at its other end, and a loop carried by said portion and surrounding the terminal of said tongue, said loop having a terminal adjacent said portion to provide an entrance throat for the tongue, said loop being adapted to receive elements carried by said tongue to enable the elements to be removed from the terminal of said tongue within the loop.

[Claim 6 not printed in the Gazette.]

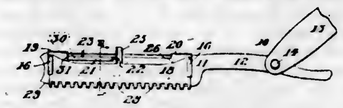
1,219,624. GARMENT-SUPPORTING RACK FOR TRUNKS. JOHN J. CANNAN, Rochester, N. Y., assignor to Henry Likly & Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 31, 1913. Serial No. 798,575. (Cl. 211—16.)



The combination with the opposite walls of a trunk, of stationary guides secured to said walls having horizontally disposed flanges extending inwardly from said walls, a stop projection extending from one of said flanges, U-shaped tracks, the opposite legs of which engage the flanges of the guide, one of the legs of the track member having an elongated aperture formed therein to receive said stop projection, horizontally disposed stops carried by said track members, and a rectangular frame, the sides of which are provided with connected flanges, horizontally disposed in engagement with the legs of the U-shaped track member, the connections between said last mentioned flanges having elongated apertures formed therein to receive the stops on said track members.

1,219,625. SAFETY-RAZOR ATTACHMENT. PETER CHELESZ, Wilkes-Barre, Pa. Filed July 31, 1916. Serial No. 112,286. (Cl. 30—12.)

A safety device for razor blades comprising an overturned sheet metal resilient base having the central longitudinal portion thereof cut away, guide flanges upon the forward side of the base, a guard plate mounted within said flanges shiftable transversely of said base, curved teeth upon one edge of the guard plate projecting forwardly of the adjacent edge of the base, the opposite edge of said plate being of arcuate form, a tubular member



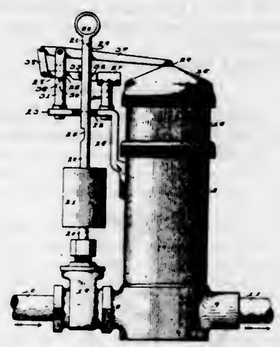
upon the forward edge of the cut-away portion of the base, a spring-pressed normally projected bolt within the tubular member, and a projecting keeper carried by the arcuate edge of the guide plate and being provided with a plurality of receiving openings for said bolt when the plate is operatively arranged in its adjusted position upon the base.

1,219,626. MANICURING DEVICE. ALLISON N. CLARK, Plainville, Conn. Filed Sept. 23, 1915. Serial No. 52,154. (Cl. 30—23.)



A manicuring device comprising a flat sheet metal shank, terminating in an abrupt bend, said shank having a substantially elliptical opening, the line of the bend extending through the opening between the ends thereof, the forward end portion of the wall of the opening being approximately at right angles to the longitudinal axis of the shank.

1,219,627. AUTOMATIC GAS CUT-OFF. GEORGE L. COFFMAN, Oklahoma, Okla. Filed Mar. 30, 1916. Serial No. 87,690. (Cl. 67—115.)



1. An automatic gas cut-off, including a closed casing having an inlet port and an outlet port, a pipe extension leading from the inlet port and extending into the casing, a lateral outlet hole being provided in the said pipe extension, a float slidable in the pipe extension and normally held away from the outlet hole therein by the pressure within the casing, a valve in the inlet port of the casing, means for closing the valve, and means whereby pressure within the casing holds the valve open.

2. In a device of the class described, an inclosed casing having an inlet port and an outlet port, a pipe extension leading from the inlet port upward in the casing and having an outlet hole in its upper end, a float fitting in the upper end of said pipe extension, a support for the float in said pipe extension and below the said outlet hole, a diaphragm compartment having one of its walls composed of a flexible diaphragm, said compartment being in communication with that portion of the pipe extension below

said outlet hole, a valve in the inlet port of the casing, and means whereby pressure on the diaphragm holds the valve open.

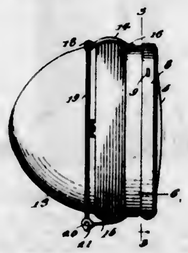
3. In a device of the class described, a closed casing having an inlet port and an outlet port, a pipe extension leading from the inlet port upward in the casing and having an outlet hole in its upper end in communication with the outlet port, a float fitting in the upper end of said pipe extension, a support for the float in the pipe extension and below said outlet hole, an upward extension screwthreaded to the casing and forming a diaphragm compartment, a tube leading from the pipe extension at a point below the support of the float and upward through the upper wall of the casing into the diaphragm compartment, a diaphragm forming one wall of the diaphragm compartment, a valve in the inlet port of the casing, and means whereby internal pressure on said diaphragm holds said valve open.

4. An automatic gas cut-off, including a closed casing having an inlet port and an outlet port, a pipe extension leading from the inlet port and projecting into the casing, a lateral outlet hole being provided in the pipe extension, a float slidable within the pipe extension and adapted to close the outlet hole, but normally held away therefrom by the pressure within the casing, a diaphragm compartment having a diaphragm for one wall thereof, a tube leading from the pipe extension to the diaphragm compartment, a valve for the inlet port of the casing, and means whereby internal pressure on said diaphragm holds said valve open.

5. An automatic gas cut-off, including a closed casing having an inlet port and an outlet port, a diaphragm compartment in communication with the chamber, a diaphragm forming one wall of the said compartment, a valve for the inlet port of the casing, a slidably mounted stem operatively connected to the valve and controlling the opening and closing thereof, said stem having a notch in one side thereof, a guide member for the stem adapted to be engaged by the notch to hold the valve in an open position, a spring actuated slide for moving the stem laterally to disengage the notch from the guide member, means for holding the slide in inoperative position, and means actuated by the before mentioned diaphragm for releasing the slide when the pressure within the casing falls below a predetermined point.

[Claims 6 and 7 not printed in the Gazette.]

1,219,628. HEADLIGHT-DIMMER. WILLIAM F. CONLAN, Cleveland, Ohio. Filed June 29, 1915. Serial No. 37,101. (Cl. 240—48.4.)



1. The combination with a headlight, of a ring, a supplemental lens removably supported in said ring, resilient straps carried by said ring to positively engage the headlight, and a resilient band carried by one of said straps and engageable with the other to position said ring upon the headlight.

2. The combination with a headlight, of a ring adapted to abut concentrically against the front of the same, a dimming lens carried by said ring, resilient straps on said ring extending over the edge of said headlight, and a curved spring wire connected to one of said straps and engageable by its ends with another strap to clamp the ring and lens upon the headlight.

3. The combination with a headlight provided with an annular beading, of a ring adapted to abut concentrically against said beading, a dimming lens carried by said ring, resilient straps on said ring extending over said beading, one of said straps having inwardly turned perforated lugs, and a curved spring wire connected to one of said straps and adapted to engage by its outwardly curved ends with the perforated lugs of the other strap for holding said ring and lens upon the headlight.

4. A headlight dimmer comprising a ring provided with a lip, a lens receivable within said ring and engaging the lip upon one face, an annular spring having inwardly projecting lugs extending through slots in the ring to engage the other face of said lens, a pin extending through said spring and ring and against the lens for holding both spring and lens in operative position, positioning straps carried by said ring on opposite sides, and an open spring band connected to one strap and resiliently engageable with the other strap for holding the dimmer upon a headlight.

5. A headlight dimmer comprising a ring formed with an annular lip, a lens having a translucent surface removably mounted within said ring and engaging the lip, an annular spring mounted on said ring and nearly encircling the same having lens-holding lugs projecting from its inner side, a pin extending through said spring and ring and against the lens to hold the latter in contact with said lip and the spring on the ring, straps carried by said ring, and a resilient band connected to one strap and separably engaging the other strip to hold said dimmer upon a headlight.

[Claims 6 and 7 not printed in the Gazette.]

1,219,629. METHOD OF FORMING ELECTRICAL HEAT UNITS. RANSOM W. DAVENPORT, Detroit, Mich., assignor to Detroit Stove Works, Detroit, Mich., a Corporation of Michigan. Original application filed Feb. 13, 1914, Serial No. 818,469. Divided and this application filed Apr. 8, 1915. Serial No. 20,011. (Cl. 219—64.)



1. The method of forming electrical heating elements, comprising the placing of a resistor strip and a strip formed of destructible material adjacent to each other, bending said strips to form adjacent contacting portions, placing plastic material on one side in binding contact with the resistor, and destroying the destructible element.

2. The method of forming electrical heating elements, comprising the placing of a resistor ribbon and a destructible strip in parallelism, bending said parallel strips to form contacting adjacent portions, covering an area, placing plastic material of an electrically insulating character on one side in binding contact with the edges of the resistor, and destroying the destructible strip.

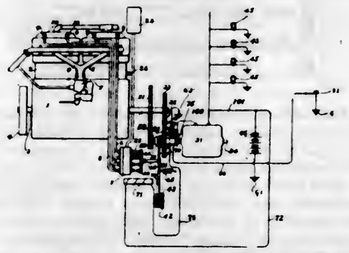
3. The method of forming electrical heating elements, comprising coiling an electrical resistor and a parallel spacing strip to cover an area, placing plastic material on one side of said area into binding contact with the edge of the resistor, and removing the spacing strip.

4. The method of forming electrical heating elements, comprising winding together into a volute coil a length of resistor and an adjacent length of destructible strip, cementing a plate of insulating material to one face of said volute coil in binding contact with the edge of the resistor, and in burning out said destructible strip.

5. The method of forming electrical heating elements, comprising winding together a resistor and a parallel destructible spacer strip to form a close coil, cementing a plate of insulating material upon one side of said coil, destroying the spacer strip and removing the same, and filling the spaces vacated by said destructible strip with an electrically insulating refractory material.

[Claims 6 to 10 not printed in the Gazette.]

1,219,630. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. WILLIAM W. DEAN, Chicago, Ill., assignor, by mesne assignments, to The Garford Manufacturing Company, Elyria, Ohio, a Corporation of Ohio. Original application filed May 10, 1911, Serial No. 626,258. Divided and this application filed Nov. 15, 1912. Serial No. 731,482. (Cl. 172—239.)



1. In combination with an internal combustion engine, a starter comprising a motor, power transmitting mechanism between the engine and motor comprising two members, one of which is movable into and out of engagement with the other, mechanism adapted to be controlled by the operator for establishing driving relation between the motor and engine, and means for rendering said mechanism inoperative when the engine is in operation.

2. In combination with an internal combustion engine, a starter comprising a motor, power transmitting mechanism between the engine and the motor comprising two members, one of which is movable into and out of engagement with the other, mechanical mechanism for establishing driving relation between the motor and engine, electrically controlled means governed by the operator for causing the operation of said mechanism and means for rendering said controlling means inoperative when the engine is in operation.

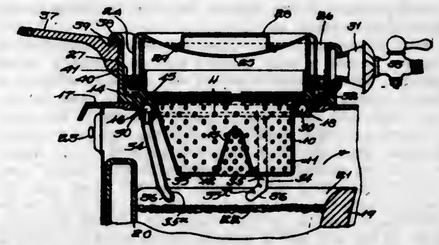
3. In combination with an internal combustion engine, a starter comprising a motor, power transmitting mechanism between the engine and motor comprising two members, one of which is adapted to be brought into and out of operative engagement with the other, a clutch for clutching the motor to the engine, an electromagnet controlling said clutch and a switch under control of the operator - controlling said magnet and speed-controlled means for rendering said clutch inoperative when the engine is in operation.

4. In combination with an internal combustion engine, a starter comprising a motor, power transmitting mechanism between the motor and engine comprising two members, one of which is movable into and out of engagement with the other, a starter controlling member, mechanism for placing the movable member of the power transmitting mechanism under the control of the starter controlling member, said last named mechanism including two members adapted to be connected and disconnected, and means for causing the disconnection of said parts when the engine is in operation.

5. In combination with an internal combustion engine, a starter comprising a motor, power transmitting mechanism between the motor and engine comprising two members, one of which is movable into and out of engagement with the other, a starter controlling member, means for placing the movable member of the power transmitting mechanism under the control of said starter controlled member, said last named means including two parts adapted to be connected and disconnected, and means for causing the disconnection of said parts after the engine begins to operate under its own power.

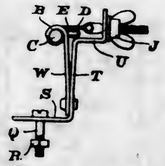
1,219,631. GARBAGE-CREMATOR. CHARLES C. DE LAPPE and CHARLES H. SMITH, Boston, Mass. Filed Apr. 28, 1916. Serial No. 94,244. (Cl. 126—224.)

1. A garbage cremator comprising a cage, an annular holder therefor, and a lid having a depression adapted to hold water, and having a depending annular flange encircling said depression, said holder having an annular channel adapted to receive said flange and adapted to catch whatever water overflows said depression.



2. A garbage cremator comprising a cage, an annular holder therefor having a duct, said duct having an inlet for combustible gas, one or more gas burners arranged below and sustained by said holder in coöperative relation to said cage, said burners being in communication with said duct, and a lid adapted to coact with said holder to inclose the upper part of said cage.

1,219,632. CONNECTOR FOR ELECTRICAL CONDUCTORS. ERNEST B. FAHNESTOCK, Plandome, N. Y. Filed Sept. 22, 1914. Serial No. 862,873. (Cl. 173—273.)



1. A connector for electrical conductors, comprising a support adapted to abut a conducting wire at approximately right angles to the longitudinal axis of said wire, a flexible metallic band looped over the conducting wire and lying on the support, with the ends of said band extending toward the rear end of the support, one end of said band being secured in contact with the support and an adjusting means connecting the other end of the band with the support, whereby the slack in the band may be taken up and the conducting wire abutted by the support firmly held.

2. A connector for electrical conductors, comprising a support having holding jaws, adapted to abut a conducting wire at approximately right angles to the longitudinal axis of said wire, a flexible metallic band looped over the conducting wire and lying on the support, with the ends of said band extending toward the rear end of the support, one end of said band being secured in contact with the support and an adjusting means connecting the other end of the band with the support, whereby the slack in the band may be taken up and the conducting wire abutted by the support firmly held.

3. A connector for electrical conductors, comprising a support adapted to abut a conducting wire, a flexible metallic band folded upon itself and both layers looped over the conducting wire and lying on the support, with the ends of said double band extending toward the rear end of the support, one end of said double band being secured in contact with the support, and an adjusting means connecting the other end of the band with the support, whereby the slack in the band may be taken up and the conducting wire abutted by the support firmly held.

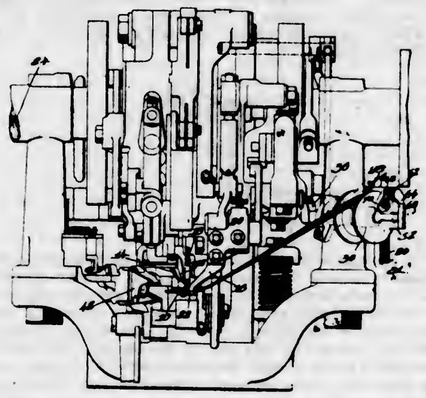
4. A connector for electrical conductors, comprising a support having a body member and an opposing spring member, holding jaws on one of said members adapted to abut a conducting wire, a flexible metallic band in con-

tact with said support at a point adjacent to the point at which said jaws abut the conducting wire, said flexible metallic band having a free end adapted to be looped around the conducting wire, and adjusting means operatively connecting said flexible metallic band and the opposing member of the support, whereby the slack in the band may be taken up.

5. A connector for electrical conductors, comprising a support having a body member and an opposing spring member, holding jaws on one of said members adapted to abut a conducting wire, a flexible metallic band in contact with said support at a point adjacent to the point at which said jaws abut the conducting wire, said flexible metallic band having a free end adapted to be looped around the conducting wire, and adjusting means operatively connecting said flexible metallic band and the opposing member of the support, whereby the slack in the band may be taken up, and means for limiting the movement of the said spring member as the band is tightened by the adjusting means.

[Claim 6 not printed in the Gazette.]

1,219,633. WELT-WETTING DEVICE FOR SEWING-MACHINES. CHARLES T. FARRELL, Stoughton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 3, 1915. Serial No. 25,550. (Cl. 112—20.)



1. A welt shoe sewing machine, having, in combination, stitch forming devices, work feeding mechanism, and means for moistening the flesh side only of the welt during its passage from a source of supply to the sewing point.

2. A welt shoe sewing machine, having, in combination, stitch forming devices, work feeding mechanism, and means for delivering a moistening liquid into the groove of the welt during its passage from a source of supply to the sewing point.

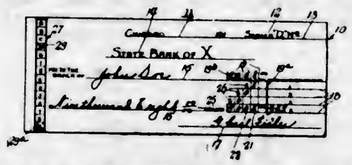
3. A welt shoe sewing machine, having, in combination, stitch forming devices, work feeding mechanism, and means for applying moistening liquid to less than the entire surface of the welt during its passage from a source of supply to the sewing point.

4. A welt shoe sewing machine, having, in combination, stitch forming devices, work feeding mechanism, means for moistening a definite width of welt during its passage from a source of supply to the sewing point, and means for varying the amount of moistening liquid applied to the welt.

5. A welt shoe sewing machine, having, in combination, stitch forming and shoe feeding mechanism, a welt measurer for determining the amount of welt drawn forward in the removal of the shoe, and a moistening device controlled by the operation of the welt measurer for delivering moisture to the welt.

[Claims 6 to 9 not printed in the Gazette.]

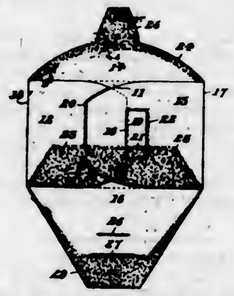
1,219,634. DRAFT, CHECK, MONEY-ORDER, AND OTHER NEGOTIABLE INSTRUMENT. GEORGE CARL FISHER, Chicago, Ill. Filed June 5, 1913. Serial No. 771,807. (Cl. 11—13.)



1. A check form designed to be drawn for not more than a maximum amount, and upon which is provided an ordinal character indicating the number of integrant places in said maximum amount that is to be written upon said check, said check having a part that is ruled by intersecting horizontal and vertical lines to provide a plurality of spaces arranged in horizontal and vertical rows, one of said vertical rows being a "cents" row or column, and in addition thereto there are as many horizontal and as many vertical rows of spaces as there are integrant places in said maximum amount, denominated by the said ordinal character, said check having another part ruled to provide a series of spaces in which are provided a series of the ordinal characters, the highest ordinal character denominating the series of the check.

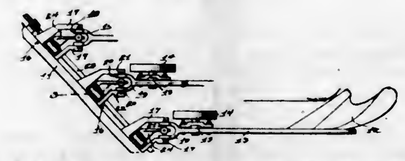
2. A check form designed to be drawn for not more than a maximum amount and upon which is provided an ordinal character indicating the number of integrant places in said maximum amount that is to be written upon the check, said check form having a part on its front face that is ruled by intersecting horizontal and vertical lines to provide a plurality of spaces arranged in horizontal and vertical rows, one of said vertical rows of spaces being a "cents" row or column, and in addition thereto there are as many horizontal and as many vertical rows of spaces as there are integrant places in said maximum amount denominated by said ordinal character, said check having another part ruled to provide spaces in which are provided a series of ordinal characters, the highest of which denominates the series of the check, each vertical row to the left of the "cents" row or column being headed by ordinal characters in series, and each horizontal row being indicated by other ordinal characters in vertical series, said check being ruled on its back by intersecting horizontal and vertical lines to provide spaces in horizontal and vertical rows, each space on the back of the check registering with a space on the front of the check, and said spaces in the vertical rows on the back of the check being provided with ordinal characters indicating the relative position in the horizontal and vertical rows of the corresponding space on the face of the check.

1,219,635. SAFETY-ENVELOP. MICHAEL FRENCH, Live Oak, Cal. Filed Aug. 8, 1916. Serial No. 113,713. (Cl. 229—82.)



An envelop formed from a blank including a central body portion, a pair of end flaps, one being longer than the other, the longer flap adapted to overlie the shorter flap, a tongue carried by the outer end of the shorter flap, a receiving slot for the tongue formed in the longer flap, a bottom flap substantially of the form of a truncated cone, the bottom flap having a pair of parallel slots formed therein, the outer slot being slightly longer than the inner slot, an upper flap adapted to underlie the lower flap in folded position, a tongue carried by the upper flap adapted to pass through the slots in the bottom flap with the free end thereof covered by the bottom flap, and adhesive applied to portions of the contacting faces of the parts.

1,219,636. DRAFT APPLIANCE FOR PLOWS. LESLIE S. HACKNEY, St. Paul, Minn. Filed Aug. 25, 1913. Serial No. 786,438. (Cl. 97—60.)



1. In a draft appliance for plows, the combination with a plow beam having a gaging device and a draft frame therefor, of a support secured to the frame, the forward end of said plow beam having a pivotal and vertically slidable connection with said support, and adjustable means to confine the vertical movements of said plow beam between certain limits, said means being also adapted to depress said plow beam and raise the same.

2. In a draft appliance for plows, the combination with a plow beam having a gaging device and a draft frame therefor, of a support secured to the frame, said plow beam being slidable vertically on said support and free to rise and fall thereon, and arms fixed with respect to each other but adjustable on said support to limit the movements of said beam, one of said arms being adapted to raise said beam and detach the same from said support.

3. In a draft appliance for plows, the combination with a plow beam having a gaging device and a draft frame therefor, of a support secured to the frame, said plow beam being slidable vertically on said support and free to rise and fall thereon, arms integral with each other but adjustable on said support to limit the upward and downward movements of said beam, and means in connection with one of said arms for exerting a yielding downward pressure upon said beam.

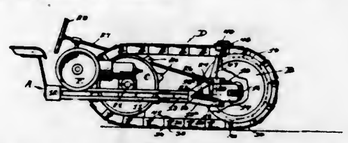
4. In a draft appliance for plows, the combination with a plow beam having a gaging device and a draft frame therefor, of a support carried by said frame, a transverse horizontal pivot in said beam, slidable vertically on said support, a lever having an upper and lower arm, said arms being located on opposite sides of said pivot and spaced apart to allow said pivot to move between them and means for operating said lever to engage the pivot and raise said beam.

5. In a draft appliance for plows, the combination with a plow beam having a gaging device and a draft frame therefor, of a support carried by said frame, a transverse horizontal pivot in said beam, slidable vertically on said support, a lever having an upper and lower arm, said arms being located on opposite sides of said pivot and spaced apart to allow said pivot to move between them and means for operating said lever to engage the pivot and raise said beam and also to detach the beam from said support.

[Claims 6 to 10 not printed in the Gazette.]

1,219,637. TRACTION-VEHICLE. LESLIE S. HACKNEY and JOHN FROELICH, St. Paul, Minn.; said Froelich assignor to said Hackney. Filed June 24, 1914. Serial No. 847,000. (Cl. 21—114.)

1. In a traction vehicle, a frame, a pair of supporting wheels on said frame, a tread mounted on said wheels comprising a series of links having double pivotal connections allowing said tread to bend over the wheels and also to bend laterally between said wheels, said links being designed to co-act with each other so that the upper run of the tread is self-supporting against sagging movements and the lower run thereof inflexible against upwardly directed forces, and means for bending said tread laterally to guide the vehicle.



2. In a traction vehicle, a frame, a pair of endless treads, revoluble supporting wheels for each tread, one of said wheels being toothed and rotated by power and the other wheel being swiveled and free to turn upon said frame, each tread consisting of a series of flexibly connected links adapted to mesh with a toothed wheel, said treads being designed to bend laterally in either direction to change the path of the vehicle and bend longitudinally in one direction only, whereby the links are permitted to turn about the wheels, but are rigidly held with respect to each other between said wheels to form a bridge between them, whereby the upper run of said tread will be self-supporting against sagging movement and the lower run adapted to resist forces tending to bend it upward and means for pivoting the swiveled wheels to bend the treads laterally and guide the vehicle.

3. In a traction vehicle, a frame, a pair of supporting wheels on said frame, a flexible tread movably mounted on said wheels, means for bending said tread laterally to change the path of the vehicle, said tread being also adapted to bridge the space between the wheels, the upper run of the tread being self-supporting against sagging movement and the lower run adapted to resist forces tending to bend it upward, and means for regulating the distance between said wheels to maintain uniform tension of the treads.

4. In a traction vehicle, a frame consisting of horizontally pivoted members, driving wheels revoluble on one frame member, revoluble idler wheels swiveled on the other member, a pair of flexible treads, each tread being movably mounted at one end on a driving wheel and at the other end on an idler wheel, connecting links between said swiveled wheels and the frame member upon which said wheels are mounted to correlate the movement of the wheels and frame member and means to swing one frame member with respect to the other, whereby the treads are bent to change the path of the vehicle and the relation of the wheels changed to maintain uniform tension of the treads.

5. In a traction vehicle, a frame, two driving wheels revolubly fixed upon the frame, a front axle pivoted horizontally upon said frame, idler wheels swiveled at opposite ends of said axle, a pair of flexible treads, each of said treads being adapted to pass over the peripheries of a drive wheel and an idler wheel at one side of the frame and means for pivoting the idler wheels to bend the treads laterally, said front axle being adapted to oscillate when the idler wheels are turned to retain the positions of said wheels with respect to the driving wheels and thereby prevent the tightening of one tread and the loosening of the other.

[Claims 6 to 12 not printed in the Gazette.]

1,219,638. SPOOL-HOLDER FOR SEWING-MACHINES. GEORGE S. HILL, Strafford, N. H., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 19, 1915. Serial No. 15,525. (Cl. 242—139.)

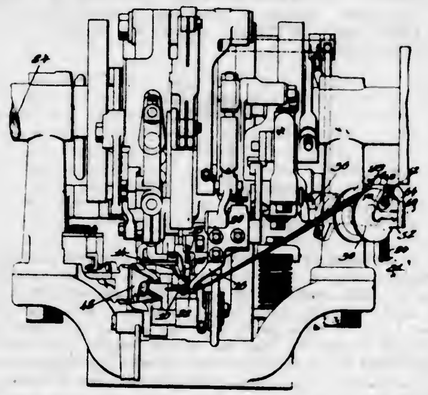
1. A spool holder for sewing machines comprising a horizontal spool support for underlying and supporting a spool, a spool retaining rod extending above and below

tact with said support at a point adjacent to the point at which said jaws abut the conducting wire, said flexible metallic band having a free end adapted to be looped around the conducting wire, and adjusting means operatively connecting said flexible metallic band and the opposing member of the support, whereby the slack in the band may be taken up.

5. A connector for electrical conductors, comprising a support having a body member and an opposing spring member, holding jaws on one of said members adapted to abut a conducting wire, a flexible metallic band in contact with said support at a point adjacent to the point at which said jaws abut the conducting wire, said flexible metallic band having a free end adapted to be looped around the conducting wire, and adjusting means operatively connecting said flexible metallic band and the opposing member of the support, whereby the slack in the band may be taken up, and means for limiting the movement of the said spring member as the band is tightened by the adjusting means.

[Claim 6 not printed in the Gazette.]

1,219,633. WELT-WETTING DEVICE FOR SEWING-MACHINES. CHARLES T. FARRELL, Stoughton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 3, 1915. Serial No. 25,550. (Cl. 112—20.)



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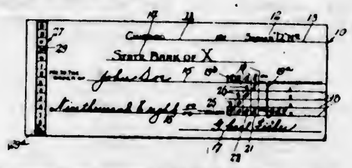
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5. A welt shoe sewing machine, having, in combination, stitch forming and shoe feeding mechanism, a welt measurer for determining the amount of welt drawn forward in the removal of the shoe, and a moistening device controlled by the operation of the welt measurer for delivering moisture to the welt.

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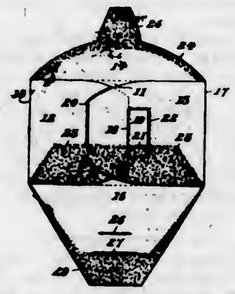
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1. A check form designed to be drawn for not more than a maximum amount, and upon which is provided an ordinal character indicating the number of integrant places in said maximum amount that is to be written upon said check, said check having a part that is ruled by intersecting horizontal and vertical lines to provide a plurality of spaces arranged in horizontal and vertical rows, one of said vertical rows being a "cents" row or column, and in addition thereto there are as many horizontal and as many vertical rows of spaces as there are integrant places in said maximum amount, denominated by the said ordinal character, said check having another part ruled to provide a series of spaces in which are provided a series of the ordinal characters, the highest ordinal character denominating the series of the check.

2. A check form designed to be drawn for not more than a maximum amount and upon which is provided an ordinal character indicating the number of integrant places in said maximum amount that is to be written upon the check, said check form having a part on its front face that is ruled by intersecting horizontal and vertical lines to provide a plurality of spaces arranged in horizontal and vertical rows, one of said vertical rows of spaces being a "cents" row or column, and in addition thereto there are as many horizontal and as many vertical rows of spaces as there are integrant places in said maximum amount denominated by said ordinal character, said check having another part ruled to provide spaces in which are provided a series of ordinal characters, the highest of which denominates the series of the check, each vertical row to the left of the "cents" row or column being headed by ordinal characters in series, and each horizontal row being indicated by other ordinal characters in vertical series, said check being ruled on its back by intersecting horizontal and vertical lines to provide spaces in horizontal and vertical rows, each space on the back of the check registering with a space on the front of the check, and said spaces in the vertical rows on the back of the check being provided with ordinal characters indicating the relative position in the horizontal and vertical rows of the corresponding space on the face of the check.

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An envelop formed from a blank including a central body portion, a pair of end flaps, one being longer than the other, the longer flap adapted to overlie the shorter flap, a tongue carried by the outer end of the shorter flap, a receiving slot for the tongue formed in the longer flap, a bottom flap substantially of the form of a truncated cone, the bottom flap having a pair of parallel slots formed therein, the outer slot being slightly longer than the inner slot, an upper flap adapted to underlie the lower flap in folded position, a tongue carried by the upper flap adapted to pass through the slots in the bottom flap with the free end thereof covered by the bottom flap, and adhesive applied to portions of the contacting faces of the parts.

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1. In a draft appliance for plows, the combination with a plow beam having a gaging device and a draft frame therefor, of a support secured to the frame, the forward end of said plow beam having a pivotal and vertically slidable connection with said support, and adjustable means to confine the vertical movements of said plow beam between certain limits, said means being also adapted to depress said plow beam and raise the same.

2. In a draft appliance for plows, the combination with a plow beam having a gaging device and a draft frame therefor, of a support secured to the frame, said plow beam being slidable vertically on said support and free to rise and fall thereon, and arms fixed with respect to each other but adjustable on said support to limit the movements of said beam, one of said arms being adapted to raise said beam and detach the same from said support.

3. In a draft appliance for plows, the combination with a plow beam having a gaging device and a draft frame therefor, of a support secured to the frame, said plow beam being slidable vertically on said support and free to rise and fall thereon, arms integral with each other but adjustable on said support to limit the upward and downward movements of said beam, and means in connection with one of said arms for exerting a yielding downward pressure upon said beam.

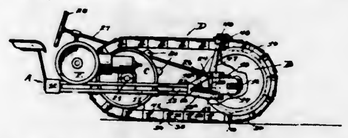
4. In a draft appliance for plows, the combination with a plow beam having a gaging device and a draft frame therefor, of a support carried by said frame, a transverse horizontal pivot in said beam, slidable vertically on said support, a lever having an upper and lower arm, said arms being located on opposite sides of said pivot and spaced apart to allow said pivot to move between them and means for operating said lever to engage the pivot and raise said beam.

5. In a draft appliance for plows, the combination with a plow beam having a gaging device and a draft frame therefor, of a support carried by said frame, a transverse horizontal pivot in said beam, slidable vertically on said support, a lever having an upper and lower arm, said arms being located on opposite sides of said pivot and spaced apart to allow said pivot to move between them and means for operating said lever to engage the pivot and raise said beam and also to detach the beam from said support.

[Claims 6 to 10 not printed in the Gazette.]

1,219,637. TRACTION-VEHICLE. LESLIE S. HACKNEY and JOHN FROELICH, St. Paul, Minn.; said Froelich assignor to said Hackney. Filed June 24, 1914. Serial No. 847,000. (Cl. 21—114.)

1. In a traction vehicle, a frame, a pair of supporting wheels on said frame, a tread mounted on said wheels comprising a series of links having double pivotal connections allowing said tread to bend over the wheels and also to bend laterally between said wheels, said links being designed to co-act with each other so that the upper run of the tread is self-supporting against sagging movements and the lower run thereof inflexible against upwardly directed forces, and means for bending said tread laterally to guide the vehicle.



2. In a traction vehicle, a frame, a pair of endless treads, revoluble supporting wheels for each tread, one of said wheels being toothed and rotated by power and the other wheel being swiveled and free to turn upon said frame, each tread consisting of a series of flexibly connected links adapted to mesh with a toothed wheel, said treads being designed to bend laterally in either direction to change the path of the vehicle and bend longitudinally in one direction only, whereby the links are permitted to turn about the wheels, but are rigidly held with respect to each other between said wheels to form a bridge between them, whereby the upper run of said tread will be self-supporting against sagging movement and the lower run adapted to resist forces tending to bend it upward and means for pivoting the swiveled wheels to bend the treads laterally and guide the vehicle.

3. In a traction vehicle, a frame, a pair of supporting wheels on said frame, a flexible tread movably mounted on said wheels, means for bending said tread laterally to change the path of the vehicle, said tread being also adapted to bridge the space between the wheels, the upper run of the tread being self-supporting against sagging movement and the lower run adapted to resist forces tending to bend it upward, and means for regulating the distance between said wheels to maintain uniform tension of the treads.

4. In a traction vehicle, a frame consisting of horizontally pivoted members, driving wheels revoluble on one frame member, revoluble idler wheels swiveled on the other member, a pair of flexible treads, each tread being movably mounted at one end on a driving wheel and at the other end on an idler wheel, connecting links between said swiveled wheels and the frame member upon which said wheels are mounted to correlate the movement of the wheels and frame member and means to swing one frame member with respect to the other, whereby the treads are bent to change the path of the vehicle and the relation of the wheels changed to maintain uniform tension of the treads.

5. In a traction vehicle, a frame, two driving wheels revolubly fixed upon the frame, a front axle pivoted horizontally upon said frame, idler wheels swiveled at opposite ends of said axle, a pair of flexible treads, each of said treads being adapted to pass over the peripheries of a drive wheel and an idler wheel at one side of the frame and means for pivoting the idler wheels to bend the treads laterally, said front axle being adapted to oscillate when the idler wheels are turned to retain the positions of said wheels with respect to the driving wheels and thereby prevent the tightening of one tread and the loosening of the other.

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1. A spool holder for sewing machines comprising a horizontal spool support for underlying and supporting a spool, a spool retaining rod extending above and below

the support, and a spool holder removably held on the lower end of the rod.



2. A spool holder for sewing machines comprising a spool support for underlying and supporting a spool, a spool retaining rod extending above and below the support and provided with spring fingers on its lower end, and a spool holder having a bore fitting the lower end of the rod.

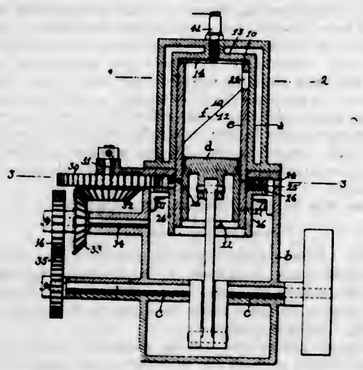
3. A spool holder for sewing machines comprising a spool support for underlying and supporting a spool, a spool retaining rod extending above and below the support and having its lower end split to form spring fingers, and a spool holder having a bore fitting the lower end of the rod.

4. A spool holder for sewing machines comprising a vertical rod, a horizontal bracket secured to the rod and provided at its outer end with a spool support, a spool retaining rod extending above and below the support, a spool holder removably held on the lower end of the rod, and a hook at the upper end of the vertical rod above the spool support.

5. A spool holder for sewing machines comprising a spool support for underlying and supporting a spool, a spool retaining rod extending above and below the support, and a small cupped spool holder for holding a flanged spool on the lower end of the rod.

[Claims 6 and 7 not printed in the Gazette.]

1,219,639. INTERNAL-COMBUSTION ENGINE. FREDERICK E. HOBNS, Jr., Pittsfield, Mass. Filed Oct. 10, 1916. Serial No. 124,884. (Cl. 123—80.)



In an internal combustion motor, in combination, a ported cylinder, a sleeve valve having a port coöperating with the port in said cylinder and located in said cylinder to permit of axial movement of said sleeve valve, the latter being provided with a split which extends the length of the sleeve at an angle to the axis thereof to form inclined edges which contact under conditions of use and coöperate to effect axial movement of said sleeve when the latter is expanded and contracted, means for moving said sleeve valve within said cylinder, and a piston movable in said sleeve valve.

1,219,640. UMBRELLA. FRANK W. HOWARD, New York, N. Y. Filed Aug. 27, 1913. Serial No. 786,844. (Cl. 135—28.)



1. An umbrella comprising the combination of a stick, a plurality of separate members each having a part adapted to encircle and grip the stick, said members having integral extensions forming the umbrella ribs, and flexible parts adjacent the stick integral with the ribs and the said members respectively, said flexible parts constructed to flex to permit a swinging movement of the ribs inwardly in closing the umbrella and outwardly in opening the umbrella.

2. An umbrella having a crown comprising a sleeve formed of a bent wire forming a coil to encircle the umbrella stick, said coil having integral extensions forming ribs extending substantially radially from the coil, said ribs having flexible parts adjacent said sleeve permitting a swinging movement of said ribs in closing and opening the umbrella.

3. An umbrella having a crown comprising a sleeve formed of a wire coil adapted to encircle the umbrella stick, said coil having integral extensions forming ribs extending substantially radially from the coil, said ribs having flexible coils adjacent said sleeve permitting swinging movement of said ribs in opening and closing the umbrella.

4. An umbrella having a crown sleeve consisting of a coil of wire adapted to encircle the stick, said coil having an integral extension on one side forming a rib of the umbrella, and having an integral extension on the side opposite to said first extension forming the opposite rib of the umbrella, said ribs having flexible coils formed therein adjacent to said first named coil, and permitting a swinging movement of said ribs inwardly and outwardly in closing or opening the umbrella.

5. An umbrella having a crown comprising a plurality of sleeves, each sleeve consisting of a coil of wire adapted to receive the umbrella stick, each of said coils having integral extensions forming the ribs of the umbrella, said ribs having flexible coils alining with each other in substantially the same plane substantially at right angles to the axis of said sleeves.

[Claims 6 to 15 not printed in the Gazette.]

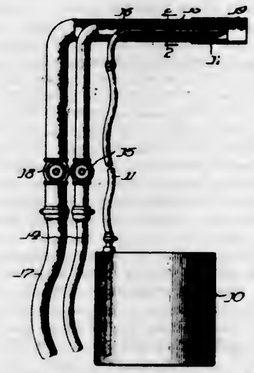
1,219,641. LAWN-SPRINKLER. JOHN D. HUMPHREY, Norfolk, Conn. Filed Nov. 6, 1916. Serial No. 129,716. (Cl. 137—57.)

A sprinkler comprising a head having perforations in its top, an inclined spreader rising from the top, the spreader being approximately semi-circular in cross section and having outwardly disposed wings at its ends, extending across and against the top, the outer edges of the wings converging downwardly, the wings being approxi-



mately midway of the front and rear of the head, the perforations being in front of the base of the spreader for the passage of the liquid whereby the liquid deflected against the wings is directed laterally.

1,219,642. SPRAYER. JOEL L. ISAACS, Chicago, Ill. Filed June 29, 1916. Serial No. 106,628. (Cl. 91—45.)



1. In an appliance of the character described, the combination of means to produce a spray, and means to confine said spray by an outer stratum or body of gas, substantially as described.

2. In an appliance of the character described, the combination of a nozzle for delivering a spray under pressure, and means to deliver gas under pressure and confining said spray, substantially as described.

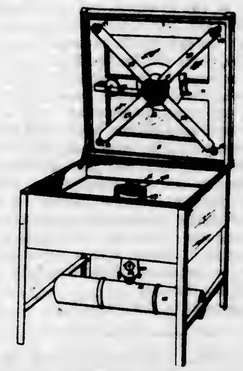
3. In an appliance of the character described, the combination of a duplex nozzle adapted to deliver a coating material under pressure in the form of a spray, and another nozzle adapted to deliver compressed-air confining said spray, substantially as described.

4. In an appliance of the character described, the combination of a nozzle for delivering a spray under pressure, and means to deliver gas under greater pressure than said spray, said gas confining said spray and preventing its undue spreading, substantially as described.

5. In an appliance of the character described, the combination of a duplex nozzle adapted to deliver a coating material under pressure in the form of a spray, and means to deliver a tube of compressed-air under greater pressure surrounding and confining said spray, substantially as described.

1,219,643. INCUBATOR. JOHN H. KATE, Des Moines, Iowa, assignor of one-half to E. J. Raymond, Des Moines, Iowa. Filed June 5, 1915. Serial No. 32,320. (Cl. 119—39.)

1. In an incubator, a body having an egg chamber and a cover therefor, an air drum arranged in the egg chamber open at its top, a second drum concentrically arranged about the first drum, a chimney extending upwardly through and above the first drum, a head carried by the cover for removably seating over the chimney, conducting pipes connected with the head, and a heat distributing drum encircling the head and arranged on the cover to enter between the concentric drums of the egg chamber.



2. An incubator comprising a body portion and a cover hinged thereon; a horizontal egg tray; a lamp mounted below the body of the incubator and extending upwardly therethrough; a metal chimney on said lamp extending through the orifice in the egg tray and nearly to the inner surface of the cover; a drum surrounding said lamp chimney, said drum being open at its upper end, a second drum also open at its upper end, surrounding the aforesaid drum; a water receptacle open at its upper end surrounding said second drum, said water receptacle resting on the egg tray; a hollow head engaging the top of the chimney and pipes running from the said hollow head to the four corners of the incubator and orifices therein to permit the heat and fumes to be expelled through the cover of the incubator; a drum, open at its lower end, secured to the top of the incubator and surrounding the aforesaid hollow head, the open lower end of the said drum entering into the circular water receptacle; pipes extending from said drum, one pipe surrounding each of the pipes connected to the aforesaid hollow head, said pipes extending to the four corners of the incubator and being open at their ends, substantially as shown and described.

3. An incubator comprising a body portion and a cover hinged thereon; a horizontal egg tray; a lamp mounted below the body of the incubator and extending upwardly therethrough; a metal chimney on said lamp extending through the orifice in the egg tray and nearly to the inner surface of the cover; a drum surrounding said lamp chimney, said drum being open at its upper end and a second drum also open at its upper end surrounding the aforesaid drum, said drum being provided with orifices at a point below the egg tray; a circular water receptacle; a third drum surrounding the said water-receptacle and also resting on the egg tray; a hollow head engaging the top of the chimney and pipes running from said hollow head to the four corners of the incubator and orifices therein to permit the heat and fumes to be expelled through the cover of the incubator; a drum, open at its lower end, secured to the top of the incubator and surrounding the aforesaid hollow head, the open lower end of the said drum entering into the circular water receptacle; pipes extending from said drum, one pipe surrounding each of the pipes connected to the aforesaid hollow head, said pipes extending to the four corners of the incubator, and being open at their ends, substantially as shown and described.

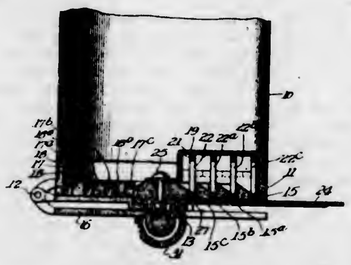
4. An incubator comprising a body portion and a cover hinged thereto; a horizontal egg tray; a lamp mounted

below the body of the incubator and extending upwardly therethrough; a metal chimney on said lamp extending through the orifice in the egg tray and nearly to the inner surface of the cover; a drum surrounding said lamp chimney, said drum being open at its upper end, and a second drum also open at its upper end, surrounding the aforesaid drum, and also being provided with lugs to support the central portion of the egg tray; a hollow head engaging the top of the chimney and pipes running from said hollow head to the four corners of the incubator, and orifices therein to permit the heat and fumes to be expelled through the cover of the incubator; a drum, open at its lower end secured to the top of the incubator, and surrounding the aforesaid hollow head, pipes extending from said drum, one pipe surrounding each of the pipes connected to the aforesaid hollow head, said pipes extending to the four corners of the incubator and being open at their ends, substantially as shown and described.

5. In an incubator, an egg chamber, a chimney disposed vertically therein, a radial series of conducting pipes connected with the chimney and opening exterior of the chamber, an annular chamber surrounding the chimney, a second series of pipes, and a drum having communication with the latter and depending into the annular chamber for dividing the same.

[Claim 6 not printed in the Gazette.]

1,219,644. PLANTER. GEORGE W. KONE, Rock Island, Ill., assignor of one-half to Stephen R. Spencer, Rock Island, Ill. Filed June 30, 1915. Serial No. 37,158. (Cl. 111—6.)



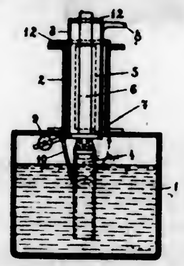
1. In a seed planter, the combination with a seed receptacle of a seed plate, a plurality of annular concentric projections on the upper surface of said plate, said plate having a plurality of seed passages positioned between the annular projections, the inner walls of said annular projections being straight and the outer walls beveled off from said vertical wall outwardly and downwardly and means for controlling the movements of seeds through said passages.

2. In a seed planter, a seed plate having a plurality of annular concentric projections on the upper face thereof, and a plurality of seed passages positioned between the annular projections, the inner annular walls of said projections being substantially vertical, and the outer walls inclined upwardly and inwardly toward the axis of the plate.

1,219,645. METHOD OF PRODUCING BLASTING CHARGES IN WHICH LIQUID AIR IS USED. AMBROSE KOWASTCH, New York, N. Y. Filed Nov. 29, 1913. Serial No. 803,835. (Cl. 102—5.)

1. A method of producing blasting charges with the use of liquid air and other liquefied gases, in which the cartridge is prepared outside of the bore hole, consisting in providing means for enabling the evolving gases to escape from the cartridge and means for securing the cartridge against fire, and introducing the cartridge together with said means for securing the cartridge against fire into the bore hole.

2. A method of producing blasting charges with the use of liquid air and other liquefied gases, in which the cartridge is prepared outside of the bore hole, a tube for introducing the blasting charge and means for securing the cartridge against fire being provided, consisting in using said tube for introducing the blasting charge also for the escape of the gases evolving from the cartridge, and introducing the cartridge together with said means for securing the cartridge against fire into the bore hole.



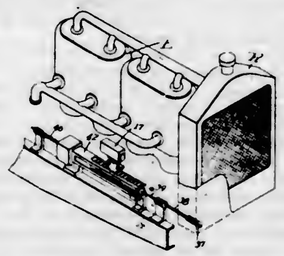
3. A method of producing blasting charges with the use of liquid air and other liquefied gases, in which the cartridge is prepared outside of the bore hole, which consists in providing the cartridge having a tamping material with a vent pipe extending through the tamping material, and inclosing the cartridge during its manufacture in a protecting cover for the purpose of enabling the blasting charge to be safely inserted into the bore hole.

4. A method of producing blasting charges with the use of liquid air and other liquefied gases in which the cartridge is prepared outside of the bore hole, consisting in providing the tamping material itself with a venting port, and inclosing the cartridge during its manufacture in a protecting cover for the purpose of enabling the blasting charges to be safely inserted into the bore hole.

5. A method of producing blasting charges, consisting in using liquid air and adding to the blasting mass in the cartridge an enhanced quantity of water, in order to afford a low blasting temperature, so as to prevent blowing out shots from igniting fire damp or coal dust.

[Claims 6 and 7 not printed in the Gazette.]

1,219,646. TEMPERATURE-CONTROLLING APPARATUS FOR INTERNAL-COMBUSTION ENGINES. HENRY E. KYBURG, Springfield, Mass. Filed Apr. 28, 1915. Serial No. 24,601. (Cl. 123—170.)



1. The combination with an internal combustion engine and a water cooling system therefor, of starting means for said engine, a thermostat responsive to changes in the temperature of the water in said system, connections by which the thermostat is enabled to cause said starting means to start the engine into operation when the temperature of the water has dropped below a predetermined point and is enabled to stop said engine when the temperature has been raised above a predetermined point, and means arranged to be operated by the engine to interrupt the operation of said starting means.

2. The combination with an internal combustion engine and a water cooling system therefor, of starting means for said engine, a thermostat responsive to changes in the temperature of the water in said system, connections by which the thermostat is enabled to cause said starting means to start the engine into operation when the temperature of the water has dropped below a predetermined point and by which the thermostat is enabled to open the ignition circuit of the engine when the temperature has been raised above a predetermined point, and means for automatically interrupting the operation of the starting means when the engine has attained a predetermined speed.

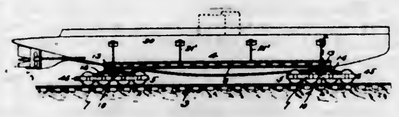
3. The combination with an internal combustion engine and a water cooling system, of electric starting means for said engine, a thermostat responsive to changes in the temperature of the water in said system, switching means controlled by the thermostat and enabling the thermostat to cause said starting means to start the engine into operation when the temperature of the water has dropped below a predetermined point, speed controlled means operative to interrupt the circuit through said starting means when the engine has attained a predetermined speed, and switching means arranged to be operated by said thermostat to open the ignition circuit of the engine when the temperature of the water has been raised above a predetermined point.

4. In an automobile, the combination with an internal combustion engine, and a water cooling system therefor, of electric starting means for said engine, a thermostat responsive to changes in the temperature of the water in said system, connections by which the thermostat is enabled to cause said starting means to start the engine into operation when the temperature of the water has dropped below a predetermined point and by which the thermostat is enabled to stop the engine when the temperature of the water has been raised above a predetermined point, and means for automatically interrupting the operation of the starting means immediately after it has started said engine.

5. The combination with an internal combustion engine, an ignition system and a water cooling system therefor, of electric starting means for said engine, circuit connections for said starting means and ignition system including a switch, a thermostat responsive to changes in the temperature of the water in said cooling system connected with said switch to operate it, and additional automatic controlling means for the circuit of said starting means.

[Claim 6 not printed in the Gazette.]

1,219,647. APPARATUS FOR TRANSPORTING SUBMARINE TORPEDO-BOATS OVERLAND. SIMON LAKE, Milford, Conn., assignor to The Lake Torpedo Boat Company of Maine, Bridgeport, Conn., a Corporation of Maine. Filed June 14, 1915. Serial No. 34,040. (Cl. 105—32.)



1. Apparatus for transporting boats overland, comprising wheeled trucks having bolsters provided with bearings, cradles pivotally mounted upon said trucks by means of journals thereon fitted in the bearings on the bolsters and having a laterally loose connection therewith by king bolts thereby to permit a limited lateral swinging motion of the cradles on the trucks, longitudinal frames connected to said cradles, and means to detachably secure a boat to the cradles and frames.

2. Apparatus for transporting boats overland, comprising wheeled trucks, bolsters forming parts of said trucks and provided with bearings, cradles pivotally secured to said bolsters and having hollow journals fitted in the bearings and provided with flaring outlets, king-bolts connecting the bearings and journals and permitting limited lateral swinging motion of the cradles on the trucks, longitudinal frames connected to said cradles, and means to secure a boat detachably to the cradles and frames.

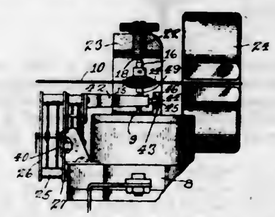
3. Apparatus for transporting boats over-land, comprising wheeled trucks, bolsters forming parts of said trucks and having hemispherical bearings thereon, cradles having hemispherical journals fitted in said bearings, king bolts connecting the bearings and journals to permit pivotal movement of the cradles on the trucks, longitudinal frames connected to said cradles, and means to secure a boat to the cradles and frames.

4. Apparatus for transporting boats overland, comprising wheeled trucks, bolsters forming parts of said trucks and having hemispherical bearings thereon, cradles having hemispherical journals fitted in said bearings, king bolts connecting the bearings and journals to permit pivotal movement of the cradles on the trucks, springs interposed between the trucks and cradles, longitudinal frames connected to said cradles, and means to secure a boat to the cradles and frames.

5. Apparatus for transporting boats overland, comprising wheeled trucks, cradles pivotally mounted upon said trucks, longitudinal frames connected to said cradles, means to change the points of application of the frames to the cradles so as to lengthen or shorten the apparatus to conform to the length of the boat, and means to secure the boat to the cradles and frames.

[Claims 6 and 7 not printed in the Gazette.]

1,219,648. ELECTRICITY-METER. ROBERT C. LANPHIER, Springfield, Ill., assignor to Sangamo Electric Company, Springfield, Ill., a Corporation of Illinois. Filed Jan. 8, 1914. Serial No. 810,951. (Cl. 171—265.)



1. In a meter of the type described, the combination of an armature shaft, a sleeve removably mounted upon said shaft and having a worm, and a damping disk adapted to fit upon said sleeve.

2. In a meter of the type described, the combination of an armature shaft, a sleeve removably mounted upon said shaft and having a worm, a damping disk adapted to fit upon said sleeve, and a pivot secured to one end of said sleeve.

3. In a meter of the type described, the combination of an armature shaft, a sleeve removably fitted upon said shaft, a worm carried by said sleeve, a damping disk also carried by said sleeve, and means for non-rotatably securing said sleeve to said shaft.

4. In a meter of the type described, the combination of an armature shaft, a slit sleeve fitted upon one end portion of said shaft, means for clamping said sleeve upon said shaft, and a pivot carried by said sleeve.

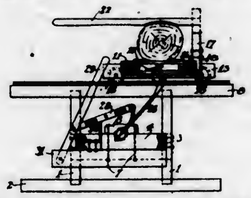
5. In a meter of the type described, the combination of an armature shaft, a sleeve slit longitudinally and transversely, said sleeve being fitted upon one end portion of said shaft, means for clamping said sleeve upon said shaft, and a damping disk mounted upon said sleeve.

[Claims 6 to 16 not printed in the Gazette.]

1,219,649. TIMBER-FEEDER FOR SAWMILLS. FREDRICK LARSEN, Skandia, Mich. Filed Apr. 17, 1914. Serial No. 832,445. (Cl. 143—105.)

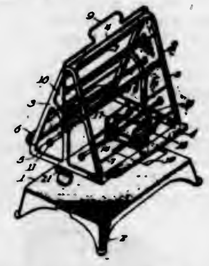
In a timber feeder for saw mills, a frame, a movable carriage, actuating means for said carriage carried by

said frame, said means including a curved arm and a pitman connected thereto, and a stop iron carried by said frame and having its free extremity disposed in the plane



of movement of said actuating means for engagement with said curved arm as the carriage moves in one direction and for engagement with said pitman as the carriage moves in the opposite direction.

1,219,650. ELECTRIC TOASTER. EDWIN N. LIGHTFOOT, New York, N. Y. Filed Dec. 26, 1912. Serial No. 738,649. (Cl. 219—19.)



1. An electric toaster comprising a base, a skeleton frame detachably mounted thereon, said frame comprising triangular shaped end pieces joined by cross-pieces, said end pieces having insulating panels mounted in openings therein and electric heater units carried by said insulating panels.

2. An electric toaster comprising a base, a skeleton frame detachably secured to said base, said frame comprising triangular shaped end pieces joined by cross-pieces, insulating panels mounted in openings in said end pieces, electric heater units carried by said frame and supported by the insulating panels mounted in the openings in said end pieces, and electric plug terminals carried by said frame independently of said base.

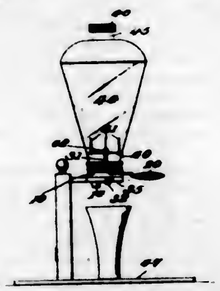
3. An electric toaster comprising a base, a skeleton frame mounted thereon, said frame comprising triangular shaped end pieces joined by cross-pieces, flanges bent out from two of the lower cross-pieces to form toast supports, insulating panels mounted in openings in said end pieces and electric heater units supported by said frame by the insulating panels mounted in openings in the end pieces.

4. An electric toaster comprising a base having a flat top provided with an opening therein, a toast supporting frame having electric heater units mounted therein, said frame also carrying electric terminals near the bottom thereof adapted, when the frame is attached to the base, to project through the opening in said base so as to be accessible beneath said base, said frame having means thereon for detachably securing it to the base so that it may be readily removed from said base at will without disassembling the toaster.

5. An electric toaster having means for supporting the objects to be heated in two converging planes, parallel heating units between said planes, three of said units being located at the vertices of a triangle two of whose sides are parallel to the heating planes and a fourth unit mounted near the center of said triangle whereby a uniform radiation to the heating planes is secured.

[Claims 6 to 13 not printed in the Gazette.]

1,219,651. DISPENSING APPARATUS. WILLIAM R. MCDONALD and WILLIAM J. MILNE, Portland, Oreg. Filed Mar. 12, 1915. Serial No. 13,975. (Cl. 221—108.)



1. A device of the character described including a casing provided with a discharge opening, a valve body arranged within the casing, a partition coöperating with the valve body and provided with a filling opening, yieldable means engaging the partition for holding it against movement with said filling opening arranged out of alinement with the discharge opening, and means for shifting the valve body to selectively coöperate with said openings.

2. A device of the character described including a casing provided with a discharge opening, an agitator mounted within the casing, a valve body independent with respect to the agitator and provided with a hollow hub, a partition coöperating with the valve body and provided with a filling opening arranged out of alinement with the discharge opening, and means projecting into the hub and operatively connecting the agitator with the valve body with the said means operable for rotating the valve body to selectively coöperate with said openings and simultaneously rotating the agitator.

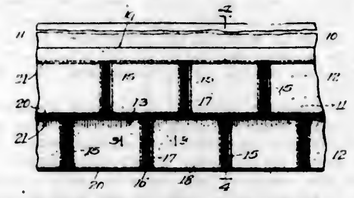
3. A device of the character described including a casing provided with a discharge opening, a valve body shiftably mounted in the casing and provided with a hollow hub, a partition coöperating with the valve body and provided with a filling opening arranged out of alinement with the discharge opening, an agitator having a shaft extending through the said hub, there being a slot formed in the wall of the hub, a member mounted within the hub and provided with a slot arranged opposite said first mentioned slot, and a handle engaging in said slots for rotating the valve body to selectively coöperate with said openings and engaging said shaft for connecting the agitator with the valve body to rotate therewith.

4. A device of the character described including a casing provided with a discharge opening, a valve body arranged within the casing and provided with a hollow hub, a partition coöperating with the valve body and provided with a filling opening arranged out of alinement with the discharge opening, an agitator having a shaft extending through said hub, means for rotating the valve body to selectively coöperate with said openings and connecting the shaft with the valve body to rotate therewith, and yieldable means disposed within the hub and engaging the valve body for normally urging the said body to a position closing the said discharge opening.

5. A device of the character described including a casing provided with a discharge opening, a valve body arranged within the casing and provided with a hollow hub, a partition coöperating with the valve body and provided with a filling opening arranged out of alinement with the discharge opening, an agitator having a shaft extending through the hub and free with respect thereto, and a handle projecting into the hub and engaging the said shaft for connecting the agitator with the valve body and operable for rotating the valve body to selectively coöperate with said openings and simultaneously rotating the said agitator.

[Claims 6 to 8 not printed in the Gazette.]

1,219,652. PREPARED ROOFING. WILLIAM F. MCKAY, La Grange, Ill. Filed Apr. 18, 1916. Serial No. 91,878. (Cl. 154—51.)



1. As an article of manufacture, a flexible prepared roofing material comprising a layer of weather resisting material having depressions formed therein, and ridges formed of said material in the areas bordering the depressions to increase the actual thickness of the said areas and produce shadows simulating the shadows caused by the uneven surface of regular roofs.

2. As an article of manufacture, a prepared roofing material comprising, a base layer, a layer of plastic material adhering thereto and having a depression formed therein, and a ridge of plastic material bordering the depression and projecting above the surface of the surrounding plastic material.

3. As an article of manufacture, a prepared roofing material comprising a base layer and a superimposed layer of plastic material having depressions formed therein, the thickness of the plastic material in the region bordering the depressions being greater than in other regions outside the depressions.

4. As an article of manufacture, a prepared roofing material comprising a base layer, a superposed layer of plastic weather resisting material, a coating of comminuted material adhering to the plastic material, the material superposed upon the base layer having depressions formed therein in regular pattern to simulate when laid the interstices between the shingles or tiles of a regular roof, and ridges formed of the aforesaid plastic material and comminuted material bordering the depressions to create an impression of greater thickness to the areas lying outside of the depressions.

5. As an article of manufacture, a prepared roofing material comprising a base layer, a superposed layer of plastic material having a kerf formed therein to a depth slightly less than the depth of the plastic material throughout its major portions, and ridges of plastic material bordering the kerf to create an impression of greater thickness to the areas lying outside of the depressions.

[Claims 6 to 8 not printed in the Gazette.]

1,219,653. WHEEL-TIRE. IDA I. MCLEOD, Lakeland, Fla. Filed Oct. 11, 1916. Serial No. 125,071. (Cl. 152—8.)



1. In a cushion tire for wheels, bow springs arranged upon the rim of the wheel in inverted order, plates spanning said bow springs and extending from one to the other, rollers on said plates for engagement with said bow springs, and a casing inclosing said bow springs and plates.

2. In a cushion tire for wheels, bow springs arranged in inverted order upon the rim of said wheel and each having a laterally disposed slot, plates spanning said springs and resting upon the latter, pins projecting from said plates into said slots, and a casing inclosing said springs and plates.

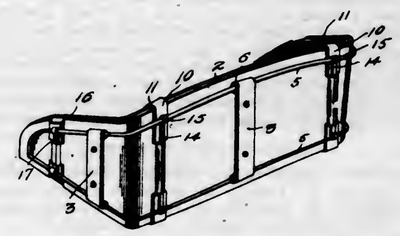
3. In a cushion tire for wheels, bow springs arranged in transverse series and in inverted order upon the rim of said wheel, coil springs within certain of said bow springs, and a casing secured to said rim and inclosing said bow springs.

4. In a cushion tire for wheels, bow springs of substantially U-shape arranged in inverted order upon the rim of said wheel, the adjacent ends of said springs being connected, each spring being provided with laterally disposed spaced parallel grooves, plates spanning said springs, rollers on said plates engaging in said grooves, and a casing inclosing said springs and plates.

5. In a cushion tire for wheels, the combination with a laterally concaved rim, of bow springs bent into U-shape and arranged in inverted order upon said rim in laterally disposed series, the adjacent ends of said springs being hinged together, plates spanning the space between the adjacent springs, rollers on said plates, tracks on said springs to receive said rollers, each spring having a laterally disposed slot, pins projecting from said plates through said slots, locking pins extending laterally through the extremities of said first named pins, and a casing inclosing said springs and plates.

[Claim 6 not printed in the Gazette.]

1,219,654. ADJUSTABLE AUTOMOBILE-SEAT. LEO MALONE, Oconomowoc, Wis. Filed Mar. 13, 1916. Serial No. 83,889. (Cl. 155—25.)



1. A device of the class described comprising a main supporting frame, a seat frame, bands passing around the rear of said seat frame, means for anchoring said bands to said main supporting frame, and means slidably connecting said seat frame to said bands and permitting the free upward and downward movement of said seat frame with respect to said bands and supporting frame.

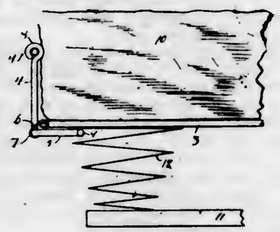
2. In a device of the class described the combination with a main supporting frame, of a seat frame, bands passing around said seat frame, means for anchoring said bands to said main supporting frame, track plates secured to said seat frame, links connected to said bands and working upon said track plates for permitting the free upward and downward movement of said seat frame with respect to said bands, and means for yieldably supporting said seat frame upon said main supporting frame.

3. In a device of the class described the combination with a main supporting frame, of a seat frame, said seat frame comprising a bottom and also comprising a back and side portions, said back and side portions comprising a pair of spaced plates, reinforcing bands interposed between said plates, an outer band secured to said seat frame, means for anchoring said outer band in engagement with said main supporting frame, means for yieldably supporting said seat frame, and means connecting said seat frame to said outer band and permitting a free upward and downward movement of said seat frame with respect thereto.

4. In a device of the class described the combination with a main supporting frame, of a seat frame, an outer band, plates for anchoring said outer band to said main

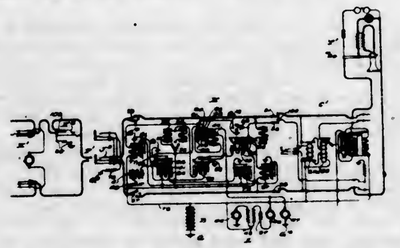
supporting frame, track plates secured to said seat frame, said track plates provided with centrally located outwardly rolled portions for constituting a track channel, links secured to said band and working in said channel for connecting said seat frame to said band and at the same time permitting the free upward and downward movement of said seat frame, and means for yieldably supporting said seat frame.

1,219,655. MATTRESS-GUARD. REINHOLD G. MARQUARDT and OSCAR H. STUBWA, Milwaukee, Wis. Filed Jan. 6, 1913. Serial No. 740,868. (Cl. 5—39.)



The combination with a mattress spring, of a foldable mattress guard, comprising a longitudinal member extending substantially the length of said mattress springs, two end members formed integral with and at right angles to said longitudinal member, said end members being pivotally connected with the edge of said mattress spring and adapted when said guard is in its raised position to extend beneath and bear against the under side of said mattress, a plurality of transverse members located between said end members and connected at their outer ends with said longitudinal member, said longitudinal member and transverse members being adapted when not in use to be folded down upon the upper side of said mattress.

1,219,656. TELEPHONE SYSTEM. TALBOT G. MARTIN, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 17, 1913. Serial No. 754,801. (Cl. 179—27.)



1. In a telephone system, a calling and a called subscriber's line, means including an operator's cord circuit for establishing a connection between said lines, means for giving the calling subscriber an audible signal, a visual signal for indicating to the operator that the called line is busy, separate operating circuits for said signals, and an automatic progressively movable switch for testing the called line, said signals operated alternately.

2. In a telephone system, a calling and a called subscriber's line, means including an operator's cord circuit for establishing a connection between said lines, means for giving the calling subscriber a signal when the called line is busy, a separate signal for indicating to the operator that the called line is busy, separate operating circuits for said signals, and an automatic progressively movable switch for testing the called line, said signals operated alternately.

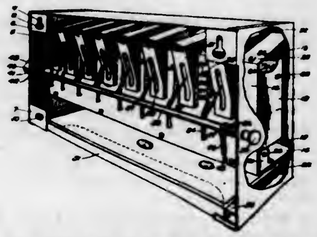
3. In a telephone system, a calling and a called subscriber's line, means including an operator's cord circuit for establishing a connection between said lines, a supervisory lamp in said cord circuit, means for giving the calling subscriber an audible signal when the called line is busy, means for operating said supervisory lamp to indicate to the operator that the called line is busy, and separate operating circuits for operating said busy signals alternately.

4. In a telephone system, a calling and a called subscriber's line, means including an operator's cord circuit for establishing a connection between said lines, a supervisory circuit in said cord circuit comprising a lamp whereby the operator may supervise said connection, means for intermittently operating said lamp to indicate that the called line is busy, and a separate busy signaling circuit, said signals operated alternately.

5. In a telephone system, a called line, an operator's cord circuit, a connector switch adapted to be connected with said cord circuit, means for controlling said connector switch to extend the connection to said called line, and means comprising a circuit for giving said operator a visual signal if the called line is busy, and a separate busy signaling circuit, said signals operated alternately.

[Claims 6 to 55 not printed in the Gazette.]

1,219,657. VENDING-MACHINE. CHARLES A. MELCHERT, Kansas City, Mo., assignor to Automatic Machine Manufacturing Co., Kansas City, Mo., a Corporation of Missouri. Original application filed May 2, 1913, Serial No. 764,987. Divided and this application filed Jan. 19, 1914. Serial No. 812,929. (Cl. 211—6.)

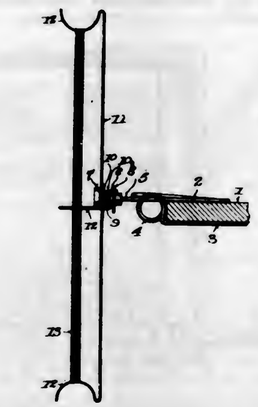


In a coin operating machine, an outer case open on its front side, a plurality of recessed stalls in said case covering the front opening thereof, a plurality of bins with top openings, one of said bins being positioned in each of said stalls, a common journal for said bins situated at the bottom rear corner of the bins and supported by said stalls, said stalls having a rear partition forming a stop for the inward swinging of the bins around the journal and said stalls also having a bottom partition forming a stop for the outward swinging of the bins permitting the complete exposure of the bin opening when each bin is being tilted forward and the bin opening being concealed when the bins are in upright or closed position; independent means for engaging with each bin to hold it in upright position, said means being mounted in the case to the rear of said partition of the stalls.

1,219,658. SKEIN-HOLDER. WILLIAM J. MEYER, Milwaukee, Wis. Filed Aug. 19, 1916. Serial No. 115,776. (Cl. 242—77.)

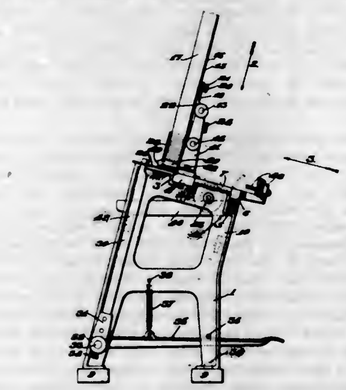
1. In a device of the described class, the combination of a plurality of radial arms formed of wire, provided at their outer ends with skein retaining loops, and at their inner ends with spiral coils adapted to loosely revolve upon a stationary hub, a pair of wire clamping members adapted to removably engage a horizontal member of a support, a hub attached to one of said clamping members, and means for retaining the inner ends of said radial arms in place on said hub.

2. In a device of the described class, the combination of a plurality of radial arms formed of wire, provided at their outer ends with skein retaining loops, and at their inner ends with spiral coils adapted to loosely revolve upon a stationary hub, a pair of wire clamping members adapted



to removably engage a horizontal member of a support, a hub attached to one of said clamping members, and a pair of bearings secured to said hub adapted to retain said radial arms in place thereon.

1,219,659. LIFT HOLDING AND DELIVERING DEVICE FOR HEEL-BUILDING MACHINES. JOHN E. MITCHELL, St. Louis, Mo. Filed Mar. 25, 1916. Serial No. 86,662. (Cl. 12—50.)



1. In a heel-building machine, the combination of a series of magazines for lifts, a table below said magazines and providing an uninterrupted exposed supporting surface on its upper side in front of said series of magazines, and means for simultaneously ejecting the lowermost lifts outwardly onto said table so that they will lie exposed and accessible thereon, said table operating as a guide and support for the lifts in assembling the same by hand.

2. In a heel-building machine, the combination of a series of magazines for lifts, a table below said magazines and providing an uninterrupted exposed supporting surface on its upper side in front of said magazines, a heel-former adjacent said table, and means for simultaneously ejecting the lowermost lifts of all of said magazines and at the same time moving the ejected lifts outwardly in front of said series of magazines onto said exposed upper surface of said table and toward said heel former, said table operating as a guide and support for the lifts in assembling the same by hand in said heel-former.

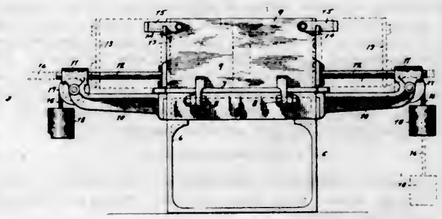
3. In a heel-building machine, the combination of a fixed supporting table having an exposed upper face, a series of magazines for lifts supported thereabove, said magazines having their lower ends open and disposed adjacent the face of said table, each of said magazines having an opening on its rear side permitting the feeding of lifts into each magazine by a lateral substantially horizontal movement said magazines being inclined in a direction away from their open sides, and means for simultaneously ejecting the lowermost lift from each of said magazines by moving each lowermost lift in the direction away from the open side of its magazine, and out onto the exposed face of said table, said table operating as a rest to hold the ejected lifts stationary to enable the operator to seize the lifts and assemble the same by hand.

4. In a heel-building machine, the combination of a fixed supporting table having an exposed upper face, a series of magazines for lifts supported thereabove, said magazines having the lower ends open and disposed adjacent the face of said table, each of said magazines having an opening on its rear side permitting the feeding of lifts into each magazine by a lateral substantially horizontal movement, said magazines being inclined in a direction away from their open sides, means for simultaneously ejecting the lowermost lift from each of said magazines by moving each lowermost lift in the direction away from the open side of its magazine, and out onto the exposed face of said table, said table operating as a rest to hold the ejected lifts stationary to enable the operator to seize the lifts and assemble the same by hand, said magazines being individually adjustable longitudinally toward the face of said table, and means for securing said magazines in any adjusted position.

5. In a heel-building machine, a support, a series of vertically-disposed magazines for lifts mounted thereon and having open lower ends spaced from the support, means for ejecting the lowermost lift from each of said magazines, and means permitting of the independent adjustment of each of said magazines laterally with respect to the others.

[Claims 6 to 26 not printed in the Gazette.]

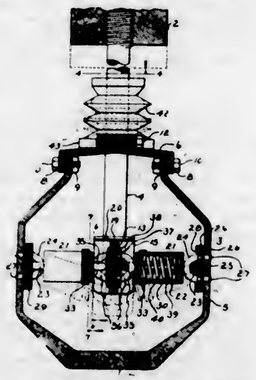
1,219,660. BLOCK-MOLD. WILLIAM H. PATTERSON, Cuyahoga Falls, Ohio, assignor of one-half to Fred T. Ellsworth, Cuyahoga Falls, Ohio. Filed Nov. 9, 1916. Serial No. 130,861. (Cl. 25—41.)



1. A block mold comprising a stand adapted to support a bottom board, side plates hinged to the stand, guides spaced from the ends of the stand, end core plates having rods slidable in said guides, and weights connected to the end plates and tending to withdraw the same to contact with the guides which serve as stops.

2. A block mold comprising a stand adapted to support a bottom board, side plates hinged to the stand, a pair of arms projecting from each end of the stand, said arms having guides spaced from the ends of the stand, a pulley supported by the arms, end core plates having a pair of rods slidable in said guides, and a weight connected to each end plate by a rope passing over the pulley, and adapted to draw the end plates outwardly to contact with the guides.

1,219,661. WHEEL. CHARLES H. PETERSON, Hartford, Conn. Filed Jan. 6, 1916. Serial No. 70,589. (Cl. 152—37.)



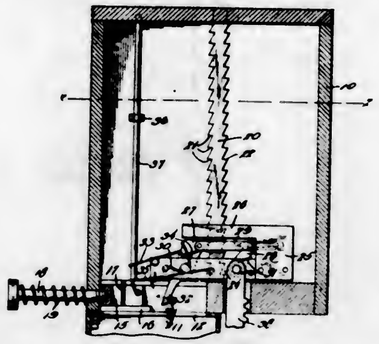
1. A wheel comprising a tire, a hub, spokes connected with the hub, an annular member inclosed by and free of the tire, said spokes being connected with said annular member, disks connected with opposite sides of the annular member and provided with staples rigidly connected therewith, disks carried by opposite sides of the tire within the same and provided with rigid staples, and shock absorbing elements between the annular member and the tire provided with resiliently associated members having staples connected respectively with the series of staples on the annular member and tire respectively.

2. A wheel comprising a tire, a hub, spokes connected with the hub, an annular member inclosed by and free of the tire, said spokes being connected with said annular member, disks threaded into opposite sides of said annular member and provided with staples rigidly connected therewith, disks having a screw-threaded connection with opposite sides of the tire within the same and provided with staples, and shock absorbing elements comprising yieldably associated members provided with staples connected respectively with the two other series of staples.

3. A wheel comprising a tire, a hub, spokes connected with the hub, an annular member inclosed by the tire and to which the spokes are connected, and shock absorbing elements between the annular member and tire, each shock absorbing element having a cup connected at one end by a universal joint with the tire, a cap inclosing said cup, a second cup inclosed by the first cup, a compression spring bearing against the cap and the bottom of the second cup, the second cup having projections and the cap being slotted to receive said projections, and a plate rigidly connected to said projections and united by a universal joint with said annular member.

1,219,662. VENDING-MACHINE. JULIUS H. POPP, Haven, Kans. Filed Sept. 14, 1916. Serial No. 120,145. (Cl. 194—60.)

1. A coin controlled device comprising a housing having an opening in the bottom thereof, a coin carrier slidably mounted in the opening, a rack bar positioned in said housing, and provided with teeth extending in opposite directions, a slide loosely mounted in said housing and provided with arms upon opposite sides of said rack bar, latches pivotally mounted between the arms and adapted to be alternately yieldably held in engagement with the teeth of the rack bar, links pivotally connected with one of said latches and pivotally and slidably engaging the second latch, the first mentioned latch being extended to provide a handle extending into the path of movement of a coin carried by the coin carrier, pins extending beyond the sides of the first mentioned latch, a fork pivotally connected with the arms of said slide and extending to engage said pins when the first mentioned latch is moved to an inoperative position to releasably hold the latch in an inoperative position, the second latch thereupon being yieldably held in engagement with the teeth of the rack bar, and means for shifting said fork to release the first mentioned latch when the slide has been moved upwardly to a predetermined point.



2. A coin controlled device of the character described comprising a housing, a coin holder movably mounted in said housing, a rack bar in said housing provided with oppositely extending teeth, a locking slide loosely mounted in said housing and provided with arms extending upon opposite sides of said rack bar, latches pivotally connected with the arms of said slide and adapted to be alternately yieldably held in engagement with the teeth of said rack bar, links pivotally connected with one of said latches and slidably connected with the second latch, one of the latches being extended into the path of movement of the coin holder for engagement by a coin carried thereby, a drop fork for engaging the first mentioned latch to releasably hold the same in an inoperative position and permit the second latch to move into engagement with the teeth of the rack bar, and means for moving said drop fork to release the latch engaged thereby when the slide has been moved to a predetermined height upon said rack bar.

3. A coin controlled device of the character described comprising a housing, a rack bar in said housing, a locking slide in said housing extending upon opposite sides of said rack bar, latches pivotally connected with said slide, links pivotally connected with one latch and slidably connected with the second latch, resilient means yieldably holding the first mentioned latch in engagement with the teeth of the rack bar, resilient means of less strength than the first mentioned resilient means and adapted to yieldably hold the second latch in engagement with the rack bar, means for releasably holding the first mentioned latch out of engagement with the rack bar to permit the second latch to move into engagement therewith, and a coin carrier mounted in operative relation to the first mentioned latch whereby the coin carried thereby may move the first mentioned latch out of an operative position.

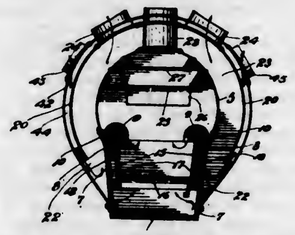
4. A coin controlled device of the character described comprising a housing, a rack bar in said housing, a locking slide movably mounted in said housing for movement along said rack bar, latches carried by said slide, springs carried by said slide and engaging said latches, links pivotally connected with one latch and slidably connected with the second latch, means carried by said slide for releasably holding the first mentioned latch in an inoperative position to permit the slide to move upwardly upon the rack bar, a coin carrier mounted in operative relation to the first mentioned latch whereby the coin carried thereby may move the first mentioned latch to an inoperative position, and means for moving the latch holding means to release the first mentioned latch when the slide is moved to a predetermined point upon the rack bar.

1,219,663. SEWER-PIPE SECTION FOR SEWER-BUILDING. WILLIAM H. ROOK, Jr., Akron, Ohio, assignor to The American Sewer Pipe Company, Akron, Ohio, a Corporation of New Jersey. Filed Dec. 23, 1913. Serial No. 808,342. (Cl. 72—51.)



A segment-shaped unit for constructing sewers and like tubular conduits, having an outer wall and an inner wall conformable to the general contour or outline of the tubular member, said segment-shaped unit having end-walls of general convex-outline and general concave-outline, respectively, each of said end-walls having a central transverse key-forming or bonding plastic material-receiving groove, and terminating in opposed limited right-line or plane portions adjacent the inner and outer side-walls of said segment-shaped unit, said end-walls being formed along relatively extending curved lines intermediate of said transverse grooves and said right-lined or plane portions of said walls.

1,219,664. FURNACE. GUSTAF E. ROSE, EINER P. BRADSTRUM, and ORA U. GRANT, Sparta, Mich. Filed Mar. 21, 1916. Serial No. 85,627. (Cl. 126—99.)



1. In a furnace, an ash pit comprised of a base, upwardly extending sides and a back, a fire box located above the base and comprised of sides spaced from the sides of the ash pit and a grate, front and rear supporting plates, upper and lower bars interposed between the back of the ash pit and the rear supporting plate, a drum located between and supported by said plates, connections between the lower edges of the drum and the upper bars and ash pit, a floor between the upper bars completing the combustion chamber, an air inclosing drum around and spaced from the first drum, means closing the openings at the ends of said drums to thereby form an air chamber, and means for conducting the heated air away from the air chamber.

2. In a furnace, an ash pit comprised of a base, upwardly extending sides and a back, a fire box located above the base comprised of sides spaced from the sides of the ash pit and a grate, extensions to the sides of the ash pit curved inwardly over the fire box, means to enter air into the spaces between the sides of the fire box and ash pit, a drum to carry the products of combustion, an outlet thereto, an air drum surrounding said first drum and fire box and conduits leading therefrom.

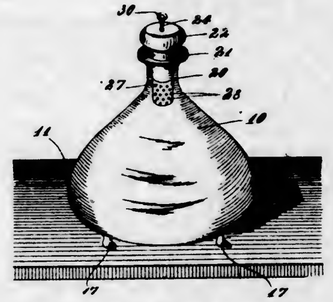
3. In a furnace, a fire box and ash pit, a horisontally positioned drum covering said fire box and ash pit and extending to the rear thereof and adapted to receive products of combustion, front and rear supporting plates for the drum, bars between the ash pit and rear support to which the drum is secured, a floor closing the space between the bars, a flue located across the drum and extending from the front support to adjacent the rear support and having a down turned rear end, a similar flue within the first flue projecting from the rear support to adjacent the front support, an air inclosing drum surrounding the inner drum, means to conduct the combustion products from the inner drum, and means to conduct heated air from the air inclosing drum, substantially as described.

4. In a furnace, front and rear supports, an ash pit and fire box construction located back of the front support including a base, sides and back with a grate supported above the base, upper and lower bars between the back of said fire box construction and the rear support at each side of the ash pit, a floor supported between the upper bars, a drum supported at its ends by said front and rear supports and having edges turned downwardly and connected to the sides of the fire box and said upper bars, a ring of substantially Z-shaped cross section secured to and projecting to the front and rear of the front and rear supports, respectively, a drum inclosing an air space supported at the ends by said rings and turned to bring its edges adjacent but spaced from the sides of the ash pit and said lower bars, means to secure the drum in place, a member provided with openings leading into the fire box and ash pit secured in front of the front support and doors to said openings.

5. In a furnace, a fire box, an ash pit having sides spaced from the fire box and extended above and turned inwardly over the sides of the fire box, a horizontal drum to receive products of combustion from the fire box, a drum inclosing the fire box and said first drum, a member provided with openings leading to the fire box and ash pit and to the spaces between the sides of the ash pit and fire box secured at the front of the furnace, doors to said openings to the fire box and ash pit, and a movable closure for the openings leading to said spaces between the fire box and ash pit.

[Claim 6 not printed in the Gazette.]

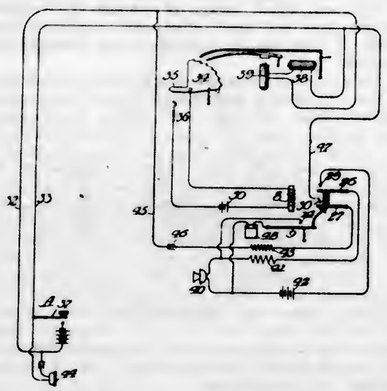
1,219,665. INSECT-TRAP. ANDRZEJ ROZWUD, Detroit, Mich. Filed July 19, 1916. Serial No. 110,036. (Cl 43—22.)



1. In a fly trap of the type described, the combination with a hollow receptacle having a mouth, an annular chamber in its base, and an entrance leading thereto, means permitting passage to said entrance, a stopper suited to the mouth of said receptacle, a cylinder engaged with said stopper, said cylinder being adapted to contain an antiseptic, a plunger movable in said cylinder, and means for operating said plunger, said operating means extending through and above said stopper.

2. In a fly trap of the type described, the combination with a hollow vessel having a bulbous base adapted to contain fluids, and an open passage-way leading thereto, of a stopper movably engaged in the mouth of said vessel, a closed cylinder engaged with said stopper, said cylinder having a plurality of lateral apertures, a plunger slidable in said cylinder, and an operating means for said plunger.

1,219,666. SIGNALING SYSTEM. HARRY O. RUOH, Chicago, Ill., assignor to Railway Electric Manufacturing Company, Chicago, Ill. Original application filed Mar. 23, 1914, Serial No. 826,775. Divided and this application filed Apr. 8, 1916. Serial No. 89,772. (Cl. 179—70.)



1. In a system of the character described the combination with a line circuit, of a receiver associated with said circuit, a transmitter remote from said receiver adapted for desired association with said circuit, and remotely controlled means for associating said transmitter with said circuit, said means including a magnet having means upon successive energizations to alternately effect association and disassociation of said transmitter with said circuit.

2. In a system of the character described the combination with a circuit, telephonic receiving mechanism at one point thereof, and remotely controlled means for associating telephonic transmitting mechanism with said circuit remote from said receiving mechanism, said means including a magnet adapted during successive energization to alternately associate and disassociate said transmitting mechanism with said circuit.

3. In a system of the character described the combination with a line circuit, a local circuit, and means for associating said local circuit with said line circuit, said means including a magnet adapted during successive energizations to alternately associate and disassociate said local circuit and said line circuit.

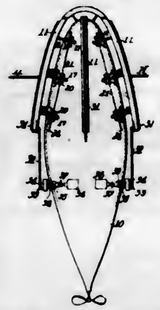
4. In a system of the character described the combination with a line circuit, a local circuit, means for associating said local circuit with said line circuit, said means including a magnet adapted during successive energizations to alternately associate and disassociate said local circuit and said line circuit, and controlling apparatus remote from said means to control said means.

5. In a system of the character described the combination with a line circuit, a local circuit, means for associating said local circuit with said line circuit, said means including a magnet adapted during successive energizations to alternately associate and disassociate said local circuit and said line circuit, and controlling apparatus associated with said line circuit remote from said means to control said means.

[Claims 6 and 7 not printed in the Gazette.]

1,219,667. SAFETY DEVICE FOR SUBMARINE BOATS. JOHN P. RYAN, Worcester, Mass. Filed Aug. 19, 1916. Serial No. 115,852. (Cl. 114—16.)

1. Means for releasing the hull of a submarine boat from entangling obstructions, said means comprising a plurality of rigid bars spaced substantially apart around the entire circumference of the front portion of said hull and extending longitudinally thereof, means to support said bars in position normally spaced from said hull, and means to vary the space between said bars and hull, said bars thereby being effective to release said boat by decreasing the effective diameter of said boat in relation to said abstructions.



2. Means for releasing the hull of a submarine boat from entangling obstructions, said means comprising a plurality of rigid bars spaced substantially apart around the entire circumference of the front portion of said hull and extending longitudinally thereof, means to support said bars in position normally spaced from said hull, and means to vary the space between said bars and hull, said bars thereby being effective to release said boat by decreasing the effective diameter of said boat in relation to said obstructions, said latter means comprising a plurality of devices for adjusting and holding each of said bars in spaced relation with said hull, and a single means for simultaneously actuating all of said devices pertaining to a single bar.

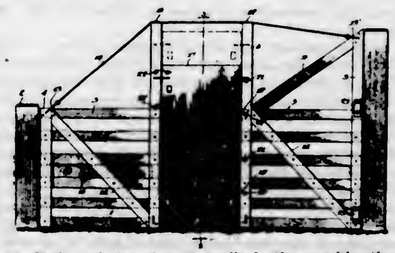
3. A submarine boat having, in combination, a hull, a plurality of separated bars extending longitudinally outside of the front portion of the hull but spaced therefrom, a plurality of studs fixed to each bar and extending within said hull, said studs being capable of axial movement either separately or simultaneous movement of said studs.

4. A submarine boat having, in combination, a hull, a plurality of separated bars extending longitudinally outside of the front portion of the hull but spaced therefrom, a plurality of studs fixed to each bar and extending within said hull, nuts on said studs within said hull rotatable both separately and simultaneously to adjust said studs axially, means to prevent axial movement of said nuts, and means to turn said nuts simultaneously.

5. A submarine boat having, in combination, a hull, a plurality of separated bars extending longitudinally alongside the front portion of the hull and substantially parallel thereto but spaced outwardly therefrom, cutting devices mounted for longitudinal reciprocation on said bars, and means to reciprocate said devices.

[Claims 6 to 8 not printed in the Gazette.]

1,219,668. FARM-GATE. HENRY C. RYBOLT, Kenney, Ill. Filed May 11, 1916. Serial No. 96,911. (Cl. 39—75.)



In a device of the class described, the combination of a main gate comprising a base beam, end standards extending vertically from each end of said base beam, the standards at one end of said beam being longer than the standards at the other end, central standards carried in spaced relation adjacent the central portions of said base beam, said central standards comprising outer strips and an interposed central strip, horizontally extending bars fitting between the end standards and the outer strips of said central standards, links carried by the upper ends of said end standards, a bracing strand connecting said links, the central strips of said central standards being provided with grooves in their upper ends, said bracing strand fitting within said grooves, whereby said main gate will be efficiently reinforced, and an auxiliary gate carried by said central standards.

1,219,669. DETACHABLE WATCH FOR MOTOR-DRIVEN VEHICLES. CHARLES SCHIEBEL, Watertown, Wis. Filed Mar. 25, 1916. Serial No. 86,666. (Cl. 224—4.)



1. The combination with the back of a watch casing, of a clamping member permanently secured thereto, a set of clamping bolts connected with the end portions of said clamping member, an auxiliary clamping member pivotally connected with one of the bolts and adapted to swing into and out of engagement with the other bolt, said auxiliary clamping member being provided with a key slot or recess extending inwardly from one of the side margins in a position to receive said other bolt.

2. The combination with the back of a watch casing, of a clamping member permanently secured thereto, a set of clamping bolts connected with the end portions of said clamping member, an auxiliary clamping member pivotally connected with one of the bolts and adapted to swing into and out of engagement with the other bolt, said auxiliary clamping member being provided with a key slot or recess extending inwardly from one of the side margins in a position to receive said other bolt, nuts on said bolts, and a resilient washer interposed between the ends of said clamping members.

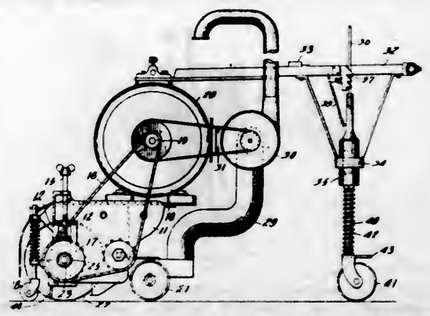
3. The combination with the back of a watch casing, of a clamping member permanently secured thereto, a set of clamping bolts connected with the end portions of said clamping member, an auxiliary clamping member pivotally connected with one of the bolts and adapted to swing into and out of engagement with the other bolt, said auxiliary clamping member being provided with a key slot or recess extending inwardly from one of the side margins in a position to receive said other bolt, and non-metallic pads mounted upon the central portion of the clamping members and adapted to bear upon the supporting member, which said clamping members are adapted to engage.

4. The combination with the back of a watch casing, of a clamping member permanently secured thereto and having offset end portions, bolts supported by said offset end portions, and an auxiliary clamping member pivoted to one of the bolts, and adapted for interlocking engagement with the other bolt under pressure, said auxiliary clamping member extended beyond said point of interlocking engagement, and the central portions of said clamping members conforming in contour with a support to be engaged thereby.

5. The combination with the back of a watch casing, of a clamping member permanently secured thereto and having offset end portions, bolts supported by said offset end portions, and an auxiliary clamping member pivoted to one of the bolts, and adapted for interlocking engagement with the other bolt under pressure, said auxiliary clamping member being extended beyond said point of interlocking engagement, and the central portions of said clamping members conforming in contour with a support to be engaged thereby, said clamping members being formed of resilient material.

[Claim 6 not printed in the Gazette.]

1,219,670. FLOOR-SURFACING-MACHINE. MAX L. SCHLUETER, Chicago, Ill. Filed June 16, 1913. Serial No. 773,811. (Cl. 51—13.)



1. A floor surfacing machine, including in combination: a frame; a main surfacing roller carried by said frame and mounted in adjustable, yieldable bearings; an edge surfacing roller carried by said frame and located outside thereof to thereby adapt the machine for treating the edge portions of floors directly up to the walls; and means for rotating said rollers, substantially as specified.

2. A floor surfacing machine, including in combination: a frame mounted on supporting wheels; a surfacing roller carried by said frame and located in front of said wheels; a motor mounted on said frame and located substantially directly above the supporting wheels to thereby minimize the length of the machine and to bring the weight over the surfacing roller; front caster wheels yieldably connected with said frame; a handle extended rearwardly from the machine; and a rear caster wheel adjustably connected to said handle to thereby regulate the pressure placed upon the surfacing roller, substantially as specified.

3. A floor surfacing machine, including in combination: a frame mounted on supporting wheels; a surfacing roller carried by said frame and located in front of the supporting wheels; means for operating said roller; front and rear caster wheels yieldingly connected to said frame, the rear caster wheel being also vertically adjustable to thereby regulate the pressure placed upon the surfacing roller, substantially as specified.

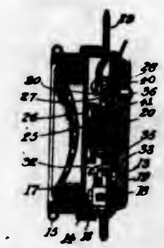
4 A floor surfacing machine, including in combination, a frame adapted to be moved over the floor, an edge surfacing roller carried by said frame and located at one side thereof, said edge roller being detachably mounted on the frame and adapted to be placed on either side thereof and thereby adapt the machine to treat the edge portion of floors in the corners, means for rotating said roller mounted above said roller and supported in part thereby, and means for regularly varying the amount of weight supported by said roller when in operative position, substantially as specified.

5. A floor surfacing machine including, in combination, a frame having a pair of wheels arranged upon a transverse axle, a surfacing roller in front of said axle, and power mechanism located directly above said axle, said frame being tiltable forwardly to cause part of the weight of said power mechanism to be borne directly by said roller, substantially as specified.

1,219,671. DEVICE FOR AIDING THE HEARING. EUGENE W. SCHNEIDER, deceased, New York, N. Y., by Elizabeth C. Schneider, executrix, New York, N. Y. Filed Sept. 9, 1916. Serial No. 119,182. (Cl. 179—107.)

1. In a telephone apparatus for aiding the hearing, the combination of a transmitter having a conducting casing

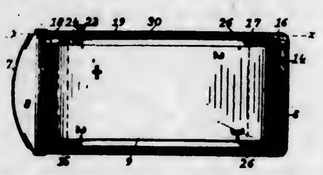
a boss centrally disposed in the rear wall of the said casing, a microphone electrode secured thereto, a series of resistance coils within the casing, an arcuate insulating block in the back wall of the casing, taps and contact points therein, said taps being connected with resistance coils, said contact points being concentrically disposed about the said boss and a switch arm pivoted upon the outer end of the said boss and adapted to be shifted to contact with any desired contact point whereby the strength of current through the microphone is controlled.



2. In a telephonic apparatus for aiding the hearing in combination, a transmitter having a conducting casing, a microphone electrode therein, a rheostat for varying the strength of current passing therethrough, said rheostat comprising a plurality of coils of resistance wire, a plurality of taps leading therefrom, contact points connected with the said taps, a switch adapted to be rotated to contact with any one of the contact points, said switch being adapted to bridge over two contacts whereby the circuit is never broken, a cover plate having an arcuate slot therein mounted upon the rear of the said casing and a switch handle attached to the switch and projecting through the said arcuate slot into a position accessible to the user.

3. In a telephonic apparatus for aiding the hearing in combination a transmitter having a conducting casing, a conducting boss in the center of the rear wall of the said casing and insulated therefrom, and arcuate insulating block concentrically disposed about the said boss, concentrically arranged contact points therein, resistance coils and taps connecting the coils with the contact points, a switch arm pivoted upon the said boss and adapted to make a contact with each of the said contact points a cover plate, an arcuate slot therein and a switch operating handle carried by the switch and projecting through the arcuate slot in the cover plate.

1,219,672. FILM-FEEDING DEVICE FOR CAMERAS. THOMAS R. SCHOONLEBER, Seattle, Wash. Filed Aug. 4, 1916. Serial No. 113,203. (Cl. 242—71.)



1. A film feeding device for cameras, a film roll and a film feeding roll journaled in a box; a wheel for each roll; a chain mounted on the wheels; the box having a slot in it over the line of the chain; a knob mounted in the slot to engage and slide upon the sides thereof; a pawl projecting down from the knob to engage the chain, and a spring actuating the knob to tip its forward edge into contact with the face of the box whereby the said forward edge serves as a pivot for the knob to tip upon.

2. In a film feeding device for cameras, a slotted box; a film roll; a film feeding roll; wheels for the rolls; a chain mounted on said wheels under the slot in the box; a knob mounted to engage the sides of the slot in the box and to rock to and fro fulcrumed on its forward edge on the box, the knob having a pawl to engage the said chain.

3. In a film feeding device for cameras, a film roll; a film feeding roll and a wheel for each roll mounted in a box; a chain upon the wheels; a slot over the chain in the box; a strip of sheet material on the box at the sides of the slot; an operating knob mounted to slide on the said strip and having a pawl to engage the chain; a graduated scale marked on the strip, the markings indicating the stopping point for the knob to locate the respective films for exposure; and a spring on the knob to engage the box top and hold the knob at each point indicating the number of exposures made.

1,219,673. ATTACHING AND RETAINING MEANS FOR VESTIBULE-DIAPHRAGMS AND THE LIKE. HARRY H. SCHROYER, Chicago, Ill., assignor to Acme Supply Company, a Corporation of Illinois. Filed Sept. 13, 1915. Serial No. 50,322. (Cl. 105—61.)



1. In an adjusting and retaining device of the class described the combination with a strip of material having a folded margin, of a metal strip, one margin thereof bent at an angle to contact a support, the other margin folded inwardly affording a space between the same and the support to receive the material threaded therebeneath and adapted to abut the inwardly folded portions of the material to prevent withdrawal thereof, and means attaching said metal strip to the support to clamp the material thereon and prevent withdrawal therefrom.

2. In a device of the class described the combination with a support and material for attachment thereon, said material having an inturned margin, of a strip one margin thereof bent at an angle thereto to abut against the support, the other margin thereof turned inwardly to receive the material inserted between the same and said support and adapted to contact the inturned portion of the material, and means adapted to attach said strip upon the support without engagement through the material.

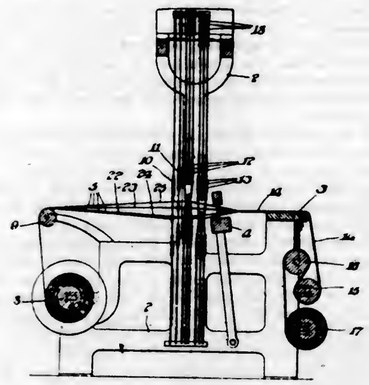
3. In a device of the class described the combination with a support and material for attachment thereon, the margin of said material turned inwardly, of an attaching strip comprising one portion turned inwardly for contact with a support, the other margin turned inwardly and spaced from the support permitting insertion of the material therebeneath to abut against the inturned portion of the margin of said material, and means engaging through said strip and into said support to clamp the same securely thereon without engagement through the material.

4. In a vestibule diaphragm of the class described the combination with a support and the fabric folds of the diaphragm, means attaching the same upon the support comprising a strip, one margin of said strip turned at a right angle to abut against the support, the other margin of said strip turned inwardly into parallel relation therewith permitting insertion of the material therebeneath, and means attaching said strip upon the support to clamp the material beneath said latter inturned margin thereof.

5. In an attaching and retaining means of the class described a strip, one margin thereof turned at a right angle to abut against a support, the other margin thereof turned inwardly therebeneath to receive a material inserted therebetween and the support, means on said material projecting above the surface thereof adapted to be contacted by said last mentioned margin, and means providing attachment on said strip for the support to permit loosening of said strip to permit insertion or removal of the material without entire detachment of the strip from the support.

[Claims 6 to 9 not printed in the Gazette.]

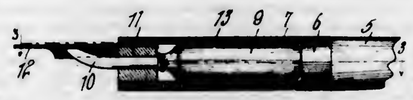
1,219,674. ART OF WEAVING HORSEHAIR CLOTH. HARRY J. SCHWEHM and ERNEST SCHWEHM, Philadelphia, Pa. Filed Apr. 30, 1915. Serial No. 24,891. (Cl. 139—84.)



1. The art of weaving horse hair cloth which consists in arranging the textile warp threads in sets of pairs throughout the width of the fabric, causing the threads of each alternate pair only to cross each other and form a twisted relation in the raising and lowering formation of sheds of all the pairs in the several sets, and then inserting horse hair wefts into the alternating warp sheds thus formed whereby a portion of each horse hair weft extends through and serves to maintain the twist formed by one pair of warps and between the upper and lower threads of the next succeeding pair of warps in the alternating series.

2. The art of weaving horse hair cloth which consists in arranging the warp threads in sets each consisting of a pair of warp threads, forming warp sheds of each pair in the sets, causing the threads in each alternate pair to cross each other and produce a twisted relation, and then inserting horse hair wefts into the alternating warp sheds thus formed, whereby said wefts are held under pressure between the pairs of twisted warp threads and under relatively less pressure between the alternating pairs of untwisted warp threads.

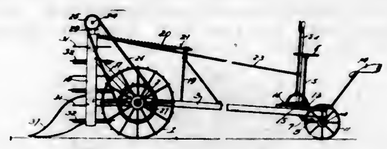
1,219,675. FOUNTAIN-PEN. ORIE SHACKELFORD, Fairmont, W. Va. Filed June 9, 1915. Serial No. 33,028. (Cl. 120—46.)



1. In a fountain pen, a pen handle having a reduced extension, a rigid casing receiving the extension in one end thereof and provided with a longitudinal opening, an elongated ink holding bulb arranged within the rigid casing, a flexible sleeve surrounding the rigid casing and covering the longitudinal opening thereof, a compression plate disposed within the longitudinal opening between the bulb and the flexible sleeve, a pin arranged approximately equidistant from the ends of the compression plate and connecting the compression plate and the flexible sleeve, a pen holding device mounted within the free end of the rigid casing, a pen point carried by the pen holding device, and a tube connected with the bulb and discharging ink to the pen point.

2. In a fountain pen, a pen handle carrying a reduced extension, a metallic sleeve mounted upon said reduced extension and having a lateral opening therein, a soft rubber sleeve arranged about and co-extensive with the metallic sleeve, a compressible bulb contained within said sleeve, a pen point holding device carried by the metallic sleeve, a tube connecting the bulb and pen point.

1,219,676. MACHINE FOR CUTTING STALKS. CULLEN R. SMITH, Fentress, Tex. Filed May 23, 1916. Serial No. 99,359. (Cl. 55—62.)



1. In a stalk cutting machine, the combination with spaced upstanding shafts and a frame for supporting the same, of alternately disposed cutting and feeding disks upon each shaft, each feeding disk being formed in a single piece and having a continuous peripheral slot for the reception of the cutting disk on the opposed shaft, and outstanding fingers adjacent the slot, there being an annular cored-out portion within each feeding disk and communicating with the slot, the bottom of the cored-out portion being open.

2. In a stalk cutting machine, an outstanding frame mounted for up and down swinging movement, parallel shafts carried by the frame, means for simultaneously rotating the shafts in opposite directions respectively irrespective of the adjustment of the frame, alternately disposed cutting and feeding disks upon each shaft, the feeding disks upon the opposed shafts being disposed in lapsed relation, each feeding disk being formed in a single piece and having a continuous peripheral slot for the reception of the cutting disk, and outstanding fingers adjacent the slot, there being an annular cored out portion within each feeding disk and communicating with the slot, the bottom of the cored out portion being open.

1,219,677. CUTTING-TOOL. WALTER SPARKS, New York, N. Y. Filed July 27, 1910. Serial No. 574,194. (Cl. 164—124.)



1. A tool of the class described having a cylindrical body portion terminating in a beveled cutter at one end, said cutter providing a shoulder at the base of said body portion on the inside, and the outside of said body portion of substantially uniform diameter.

2. A tool of the class described having a cylindrical body portion terminating in a beveled cutter at one end, said cutter providing a shoulder at the base of said body portion on the inside, and the outside of said body portion of substantially uniform diameter, and the internal bore of said tool of substantially uniform diameter.

1,219,678. PIPE-STEM. EDWARD H. SPECHT, Manitowoc, Wis. Filed Jan. 19, 1916. Serial No. 72,998. (Cl. 131—12.)

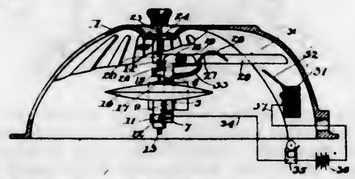
As a new article of manufacture, a pipe stem comprising an elongated tubular metallic body, the insertion end of the stem being provided with an inwardly directed

annular flange disposed substantially perpendicular to the axis of the stem, the mouth end of the stem being



flared, the portion of the insertion end of the stem immediately adjacent the flange being tapered.

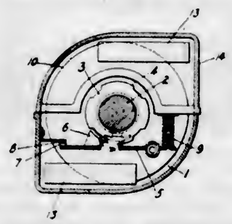
1,219,679. ELECTRIC BAROMETER-SWITCH. PETER ERNEST STOFT, New York, N. Y. Filed Apr. 25, 1916. Serial No. 93,550. (Cl. 200—32.)



1. In an electric switch, the combination with a fixed contact, of a pivoted contact arm, means for normally holding said arm away from the fixed contact, a diaphragm containing a readily volatilizing liquid, an adjusting screw carried by the contact arm, a pin seated upon the diaphragm and adapted to act upon the contact arm through the adjusting screw for moving said arm into contact with the fixed contact at a predetermined temperature, guiding means for restricting the pin to a vertical movement, and a plate spring extending between said adjusting screw and pin for the purpose specified.

2. In an electric switch, the combination with a fixed contact, of a pivoted contact arm, means for normally holding said arm away from the fixed contact, a diaphragm containing a readily volatilizing liquid, an adjusting screw carried by the contact arm, a pin seated upon the diaphragm and adapted to act upon the contact arm through the adjusting screw for moving said arm into contact with the fixed contact at a predetermined temperature, guiding means for restricting the pin to a vertical movement, a plate spring extending between the adjusting screw and pin for the purpose specified and having curved spaced fingers at its end to embrace the contact arm, and a cross pin to fit below said curved fingers and above the arm for supporting the plate spring in position.

1,219,680. IGNITION MECHANISM. HORACE V. S. TAYLOR, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 4, 1914. Serial No. 875,438. (Cl. 123—117.)



1. In an ignition device, the combination with an interrupter, an actuating member and a rotatable shaft for carrying said member, of electro-responsive means for causing said member to be advanced or retarded relatively to said shaft in accordance with an increase or a decrease in the speed of said shaft.

2. In an ignition device, the combination with a movable member, and means comprising a rotatable shaft and a loosely mounted member thereon for actuating said member, of electro-responsive means for causing said loosely mounted member to be advanced or retarded relatively to said shaft according as the speed of said shaft is increased or decreased.

3. In an ignition device, the combination with a movable member, a cam member co-acting therewith, and a rotatable element for actuating said cam member, of electro-responsive means for advancing or retarding said cam member relatively to said rotatable element to a degree corresponding to an increase or a decrease in the speed of said element.

4. In an ignition device, the combination with an interrupter mechanism comprising relatively movable contact members and a cam, and a shaft for rotatably supporting said cam, of electro-responsive means for varying the angular position of said cam relatively to said shaft in accordance with the speed of said shaft.

5. In an ignition device, the combination with an interrupter mechanism comprising a cam, and a shaft for rotatably supporting said cam, of an element rotatably mounted on said shaft, and means whereby a retardation of rotative movement of said element produces an angular advance of said cam, relatively to said shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,219,681. FLUME. KARL JOHAN THORSBY, Oakland, Cal., assignor to California Corrugated Culvert Company, Oakland, Cal., a Corporation of California. Filed May 31, 1916. Serial No. 100,848. (Cl. 61—5.)

1. In a flume, the combination with adjacent sections thereof of joining instrumentalities comprising interfitting pocket and offset members transverse to the flume axis, said pocket member having a width increasing from one extremity to the other and said offset member having a width adapting it for arcuate adjustment in the pocket member about one end as an axis; and means for clamping said members together.

2. In a flume, the combination with adjacent sections thereof of joining instrumentalities comprising interfitting pocket and offset members transverse to the flume axis, said pocket member having a width increasing from one extremity to the other and said offset member having a width adapting it for arcuate adjustment in the pocket member about one end as an axis; clamping members to hold the pocket and offset members together, and means for tightening said clamping members on their seats.

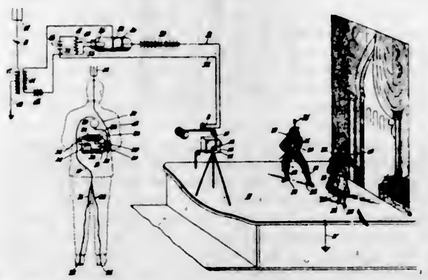
3. In a flume, the combination with adjacent sections thereof of joining instrumentalities comprising interfitting pocket and offset members transverse to the flume axis, said pocket member having a width increasing from one extremity to the other and said offset member having a width adapting it for arcuate adjustment in the pocket member about one end as an axis; outer and inner clamping members applied to said pocket and offset members respectively to hold them together; and means for tightening said clamping members on their seats.

4. In a flume, the combination of adjacent sections thereof with their ends in overlapping relation, one of said ends being formed with a pocket circumferentially directed from edge to edge of the section and increasing in width from one extremity to the other, and the other section being formed with an offset circumferentially directed from edge to edge of the section and having a width adapting it to fit within the pocket of the first section and to be adjusted therein about one end as an axis; and means for clamping said offset in said pocket.

5. In a flume, the combination of adjacent sections thereof with their ends in overlapping relation, one of said ends being formed with a pocket circumferentially directed from edge to edge of the section and increasing in width from one extremity to the other, and the other section being formed with an offset circumferentially directed from edge to edge of the section and having a width adapting it to fit within the pocket of the first section and to be adjusted therein about one end as an axis; and means for clamping said offset in said pocket comprising pressure members and means for tightening said members in their seats.

[Claims 6 to 9 not printed in the Gazette.]

1,219,682. RECORDING CORRELATED LIGHT AND SOUND EFFECTS. WILLIAM BALDWIN VANSIZE, Brooklyn, N. Y. Original application filed June 29, 1915, Serial No. 36,938. Divided and this application filed Sept. 24, 1915. Serial No. 52,353. (Cl. 88—16.2.)



1. The combination of a photographic recorder, including a moving record medium, a phonographic record medium moving with said record medium, means for phonographically recording sound waves, including an electro-magnet, a telephone transmitter located on an animate moving object, and means whereby said transmitter controls said electro-magnet, including the natural medium in the space separating the transmitting and recording points, and circuit connections for said magnet.

2. The combination, in a correlated photographic and phonographic recorder, of two characteristic record mediums moving in predetermined relation, a recording magnet for the phonographic recorder, forming part of a wireless receiving apparatus, and a wireless transmitting apparatus controlled by and moving with the moving object photographed.

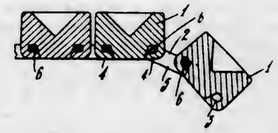
3. The combination, in a correlated photographic and phonographic recorder, of two characteristic record mediums moving in predetermined relation, a recording magnet for the phonographic recorder, forming part of a wireless receiving apparatus, and a series of independent, wireless sound-wave transmitting devices, carried by a series of independently moving objects, respectively.

4. Apparatus for recording photographically and phonographically correlated optical and audible effects, due to a moving object, consisting of the combination of a moving photographic record medium, a lens therefor, a moving phonographic record medium, means for advancing said mediums in predetermined relation, means for recording sounds, including an electro-magnet, a telephone transmitter carried by the moving object photographed, and means whereby said transmitter controls said magnet through the natural medium in the space separating the transmitting and recording points or stations.

5. In apparatus for recording correlated, optical and audible effects due to a plurality of independently moving objects, the combination of a moving-picture record medium, a lens therefor, a moving sound-record medium, a recording magnet therefor, means for moving said record mediums in predetermined relation, a plurality of independent telephone transmitters, one carried by each moving object photographed, and means including the natural medium in the space separating the transmitting and recording points or stations whereby said transmitters jointly and severally control said magnet.

[Claims 6 to 12 not printed in the Gazette.]

1,219,683. CHAIN. HARRY WACHENHEIMER, Providence, and ERNEST L. DAVIS, Cranston, R. I., assignors to Wachenheimer Bros., Providence, R. I., a Firm composed of Jacob Wachenheimer and Samuel Wachenheimer, New York, N. Y., and Harry Wachenheimer, Providence, R. I. Filed Feb. 8, 1916. Serial No. 77,089. (Cl. 59—80.)



1. An article of the character described, comprising a plurality of solid block-links and a plurality of connecting links pivotally joining said block-links.

2. An article of the character described, comprising a plurality of solid block-links and a plurality of rectangular connecting-links pivotally joining said block-links adjacent the bottom thereof.

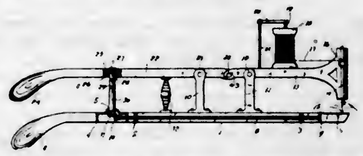
3. An article of the character described, comprising a plurality of block-links and a plurality of connecting links, each of said block-links being provided at each end with an arm embracing an adjacent connecting link.

4. An article of the character described, comprising a plurality of block-links and a plurality of connecting-links, each of said block-links being provided at each end with an arm flush with said end and each of said connecting links being provided with means embraced by the arms on two adjacent block-links.

5. An article of the character described, comprising a plurality of block-links and a plurality of connecting links, each of said block-links being provided at each end with a transverse channel and a bendable arm, and each of said connecting links being provided with two bars, one of said bars engaging the transverse channel and being embraced by the bendable arm at one end of one of said block-links, and the other bar engaging the transverse channel and being embraced by the bendable arm of the next adjacent block-link.

[Claims 6 and 7 not printed in the Gazette.]

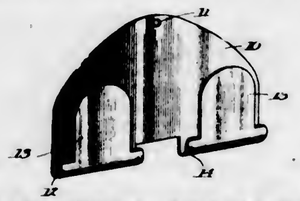
1,219,684. MACHINE FOR SEWING LEATHER ARTICLES. PETAR WAJDIĆ, Steelton, Pa. Filed July 31, 1914. Serial No. 854,421. (Cl. 112—20.)



1. A device of the class described comprising a base having a handle at its rear end and a needle plate at its forward end, spaced uprights upon the said base, a shank pivoted to the forward one of said uprights, a needle holder at the forward end of said shank adapted to operatively position a needle with respect to the said plate, a thread carrier upon the said shank, an operating lever pivoted to the rearward upright having loose pivotal connection with the adjacent end of the said shank and having a handle portion at its free end adjacent the said base handle, resilient return positioning means for said lever and shank positioned between said lever and base, the said lever and shank being normally in substantial alinement with each other and in parallelism with the said base.

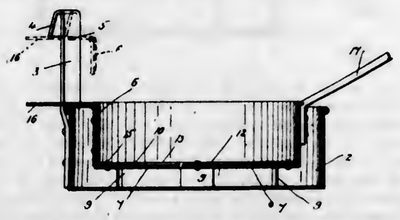
2. A device of the class described comprising a base having a handle at its rear end and a needle plate at its forward end, spaced uprights upon the said base, a shank pivoted to the forward one of said uprights, a needle holder at the forward end of said shank adapted to operatively position a needle with respect to the said plate, a thread carrier upon the said shank, an operating lever pivoted to the rearward upright having loose pivotal connection with the adjacent end of the said shank and having a handle portion at its free end adjacent the said base handle, resilient return positioning means for said lever and shank positioned between said lever and base, the said lever and shank being normally in substantial alinement with each other and in parallelism with the said base, laterally projecting arms and a housing carried by the said base, a shaft journaled through the said housing and arms, a work engaging feed wheel upon the forward end of said shaft projecting slightly above the receiving face of said plate, a pinion upon the opposite end of said shaft, a rotating member extending through said housing and lever and operatively connected to said pinion within the said housing, and rotation imparting connections between said rotating member and lever.

1,219,685. HOLDER FOR EYEGLASSES AND SPECTACLES. WILLIAM L. WALL, Philadelphia, Pa. Filed May 11, 1914. Serial No. 837,913. (Cl. 248—20.)



An eye glass holder comprising a body portion, a pair of supporting channels struck up from said body portion and formed in alinement, and a guard rising from each channel; a central cut away portion between said channels and a shoulder at each side of each of said guards formed at the junction of the guard with the supporting channel; said shoulders being so arranged that the outer two will be adapted to form a rest and stop for the temples of an eyeglass adapted to be used in connection with the holder, and the inner shoulders being so arranged as to provide a rest and stop for the nose piece of the eye glass, whereby any lateral movement of the eye-glass will be limited, and the guards being of such width and height as to substantially cover the exposed surface of the eyeglass lens.

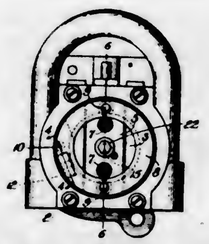
1,219,686. COOKING UTENSIL. LAURENCE LLEWELLYN WILLIAMS, Spring City, Pa. Filed Sept. 30, 1916. Serial No. 122,998. (Cl. 53—7.)



1. A cooking utensil, comprising a frying pan, a food pan having openings, legs and crossbars at its bottom, portions of the metal of the bottom cut away to form said openings being bent downwardly to form said legs which support the food pan in the frying pan, and a strainer supported by the said crossbars over the said openings.

2. A cooking utensil, comprising a frying pan having an upright at one side having an outwardly projecting hook-shaped stop at its top and a horizontal slot in its main portion, and a food pan having a strainer in its bottom and having a laterally projecting arm at one side, said arm being slidable in the said slot into engagement with the said stop, so that the food pan, when raised to drain off the grease, is wholly supported over the frying pan by the said upright.

1,219,687. IGNITION SYSTEM. BUTLER AMES, Lowell, Mass. Filed June 30, 1915. Serial No. 37,168. (Cl. 123—148.)



1. A magneto having a grounded armature circuit, a mechanical interrupter in said circuit, and a commutator for properly changing the polarity of the segment terminals of the armature circuit; an external source of unidirectional electrical current; an electric circuit whereby said source of current may be connected to brushes engaging the segments of said commutator; two starting terminals electrically connected with the opposite sides of said source of current; a grounded movable starting terminal which may be moved so that an electrical current will pass through one or the other of said terminals and hence through the primary winding of the armature and be interrupted, although the mechanical interrupter is open, and regardless of the position of the armature which is at rest; all designed for the purpose of firing a charge of explosive mixture in the cylinder to which the ignition current is delivered by properly positioned distributing apparatus also at a state of rest.

2. A magneto having a grounded armature circuit, a mechanical interrupter in said circuit, and a commutator for properly changing the polarity of the segment terminals of the armature circuit; an external source of unidirectional electrical current; an electric circuit whereby said source of current may be connected to brushes engaging the segments of said commutator; two starting terminals electrically connected with the opposite sides of said source of current; a grounded movable starting terminal which may be successively moved into and out of engagement of each of said starting terminals, so that an electrical current may pass through one or the other of said terminals and hence through the primary winding of the armature and be interrupted, although the contact points of the mechanical interrupter are open, and regardless of the position of the armature which is at rest; all designed for the purpose of firing a charge of explosive mixture in the cylinder to which the ignition current is delivered by properly positioned distributing apparatus also at a state of rest; a manual switch to connect or disconnect said source of current in circuit with said brushes; or then simply to connect or disconnect said brushes; for the purpose of starting the engine by using battery current; or after the engine is started, of using only the current from the magneto for ignition purposes, or using both said magneto current and said unidirectional current.

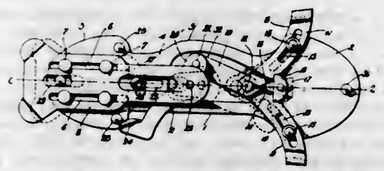
3. In a magneto, a mechanical interrupter comprising a metallic disk having a rim and being mounted upon the armature shaft of the magneto; an interrupter terminal fixed to said rim; a fiber roller freely confined in a cavity in said rim, and operating in a plane at right angles to the axis of the armature shaft; a metallic block mounted within said disk, but insulated therefrom; a metallic spring having an interrupter terminal thereon and secured to said block; an auxiliary spring over said metallic spring, and rollingly engaged by said roller; a cam surface to engage said roller and cause it to operate the auxiliary spring which in turn engages and operates the spring with interrupter terminal; and commutating means whereby said interrupter may be placed in an external circuit.

4. A mechanical interrupter comprising two symmetrical metallic plates insulated from each other, normally substantially parallel and having their centers lying in the longitudinal axis of the armature of a magneto; said plates being fixed to the armature; one plate having its outer edge portion bendable toward and away from the other plate; a cam surface on the face of the magneto, adjacent to the latter or roller plate; a roller confined in a cavity in the roller plate and in engagement with said cam surface, and with the other plate; interrupter contacts fixed in the adjacent faces of said plates; said contacts being moved into or out of engagement with each other in a line parallel with the longitudinal axis of the armature, by the roller in its movement over the cam surface; and commutating means whereby said interrupter may be placed in an external electrical circuit.

5. A mechanical interrupter comprising two symmetrical metallic plates insulated from each other, normally substantially parallel and having their centers lying in the longitudinal axis of the armature of a magneto; one plate having its outer edge portion bendable toward and away from the other plate; a cam surface on the face of the magneto, adjacent to the latter plate, a roller confined in a cavity in the roller plate and in engagement with said cam surface and with the other plate; interrupter contacts fixed in the adjacent faces of said plates; said contacts being moved into or out of engagement with each other in a line parallel with the longitudinal axis of the armature, by the roller in its movements over the cam surface; a cylindrical commutator, one metallic segment of which contacts the bendable plate; a metallic screw, insulated from said segment and bendable plate, but in contact with the other segment of the commutator, whereby said commutator and plate are axially mounted upon the armature; and means for properly positioning the commutator in relation to the bendable disk of the interrupter; all designed for use with an external source of current.

[Claims 6 to 8 not printed in the Gazette.]

1,219,688. ICE-CREEPER. OLEF A. ANDERSON, Macomb, Ill. Filed Feb. 7, 1916. Serial No. 76,745. (Cl. 36—64.)



1. An ice creeper including a foot-plate, said foot-plate comprising a toe-plate and a heel-plate having a brace-plate connecting them together, said brace-plate provided with an enlarged opening and the outer edge of the brace-plate being bowed outwardly, a heel-clamp carried by the said heel-plate and comprising a plate member, having its end extending over the enlarged opening in the brace-plate, provided with a plurality of longitudinal slots, one end of the said heel-clamp being enlarged and having one of said longitudinal slots arranged adjacent each edge of the enlarged portion, fastening elements secured to the heel-plate and extended through said slots, sole-clamps mounted slidably upon said sole-plate and provided with slots, a plurality of calks carried by said heel and toe-plates, two of the calks in said toe-plate extending through the said slots of said toe-clamp, and a lever pivotally connected to the end of said heel-clamp to provide a fulcrum for the lever; said toe-clamp being also connected to the end of said lever.

2. An ice creeper including a foot-plate, said foot-plate comprising a toe-plate and a heel-plate having a brace-plate connecting them together, said brace-plate provided with an enlarged opening and the outer edge of the brace-plate being bowed outwardly, a heel-clamp carried by the said heel-plate and comprising a plate member, having its end extending over the enlarged opening in the brace plate, provided with a plurality of longitudinal slots, one end of said heel-clamp being enlarged and having one of said longitudinal slots arranged adjacent each edge of the enlarged portion, fastening elements secured to the heel-plate and extended through said slots, sole-clamps mounted slidably upon said sole-plate and provided with slots, a plurality of calks carried by said heel and toe-plates, two of the calks in said toe-plate extending through the said slots of said toe-clamp, and a lever pivotally connected to the end of said heel-clamp to provide a fulcrum for the lever, said toe-clamp being also connected to the end of said lever, each of said toe-clamps being pivotally connected with each other at their inner ends and one of the toe-clamps having an extension pivotally connecting the end of said lever, the pivotal connections of the heel and toe-clamps with said lever and with each other being disposed within said enlarged opening, and a heel-clamp member adapted to engage the front side of the heel of a shoe, said heel-clamp member being disposed on the upper side of said heel-plate, but said heel-plate provided with a slot, and a fastening element for said heel-clamp member.

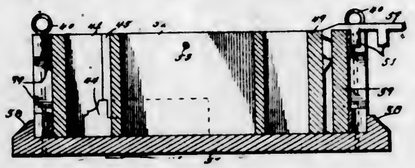
3. An ice creeper including a foot-plate, said foot-plate comprising a toe-plate and a heel-plate having a brace-plate connecting them together, the said brace-plate provided with an enlarged opening, a heel-clamp plate slidably mounted on said heel-plate, a pair of toe-clamps slidably mounted on said toe-plate, said toe-clamps being of arcuate formation and provided with arcuate slots, one of said toe-clamps provided with an extension at its inner end disposed within said enlarged opening, the inner edge of each of said toe-clamps being provided with a notch, a V-shaped stop member secured to said toe-plate and having its end disposed in a position whereby it may contact with the said notches, and a plate secured to said V-shaped member and overlapping the said toe-clamp for retaining said toe-clamps in engagement with the said toe-plate.

4. An ice creeper including a foot plate having an enlarged opening formed therein and provided with a plurality of calks, a heel plate mounted on the said foot plate and provided with a plurality of longitudinally extending slots, one of the said calks projecting through a corresponding slot, fastening elements carried by the plate and projected through the said slots, a pair of arcuate arms engaged by the calks in the forward portion of the said foot plate, the proximate terminals of the said arms being engaged together and having their curved edges each provided with a notch, the said notches forming a substantially rectangular space when the arms are in closed position, a V-shaped stop member secured to the foot plate and having its end disposed in a position to project into the said space, and a plate carried by the said stop member and overlapping the said arms for retaining them in engagement with the said foot plate.

1,219,689. CONCRETE-STEP MOLD. THOMAS H. BALDWIN, Beaumont, Tex. Filed Sept. 30, 1913. Serial No. 792,668. (Cl. 25—121.)

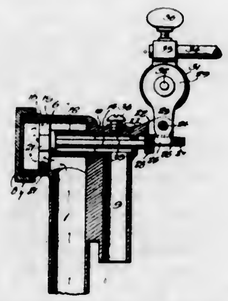
In a mold of the class described, a pallet, flanges carried by the ends of said pallet, end walls, engaging pins, said end walls stationed upon said pallet and held in close engagement with said abutting flanges by said engaging pins, side walls, said side walls provided with curved ends facilitating the swinging of said side walls into an open position, a strip portion, and an upright portion carried by said strip portion, a slot portion, an angle strip mounted

in said slot, said strip limited in one direction so as to be more readily held in an adjusted position, a partition, said partition arranged in said mold, and provided with a



handle bar, and said handle bar provided with tongues forming slots so that the partition may be rigidly held in an adjusted position in said mold.

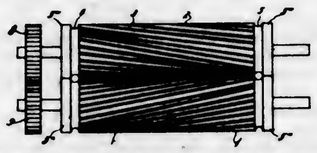
1,219,690. TANK-FILLING VALVE. ROBERT B. BARBER, Hazleton, Pa. Filed June 8, 1916. Serial No. 102,542. (Cl. 137—104.)



A tank filling valve comprising a tubular one piece vertical inlet stem having a hollow horizontally disposed cylindrical head formed integrally with its upper end, said head being closed at one end by a removable screw cap and having a horizontal port leading from its other end in line with the axis of the head, a vertical outlet neck into the upper end of which said port discharges, said neck being formed integrally with the inlet stem and having an opening in horizontal alinement with said port, a pair of lugs formed integrally with the upper end of said neck and projecting therefrom above said opening, a short horizontal tube threaded in the aforesaid port and extending into the hollow head, the free end of said tube being disposed in a vertical plane to form a valve seat, a valve in the head having projections slidable on the curved wall thereof and having a flat gasket for contact with said valve seat, a valve stem extending horizontally from said valve through the port and the aforesaid opening, a nut threaded on the outer end of said valve stem and having an integral horizontally extending ear at its upper edge underlying the aforesaid lugs, said ear having a slot opening through its upper and lower sides, a vertically disposed lever fulcrumed between its ends between said ears and having an elongated head on its lower end received in the slot of said ear, said head having rounded ends for contact with the ends of the slot, a float stem extending laterally from the upper end of the lever, and a float on said stem.

1,219,691. MACHINE FOR TREATING FLAX AND OTHER FIBROUS PLANTS. WYNFORD ORMSBY BEERE, Wellington, and JAMES ERNEST ROUGH, Foxton, New Zealand. Filed Aug. 28, 1914. Serial No. 859,114. (Cl. 13—21.)

1. In a machine of the kind described, superposed pairs of rollers the axes of each pair being in substantially the same horizontal plane, grooves extending longitudinally of the rollers and terminating in circumferential grooves near the ends of each of the rollers, the number of grooves in each of the rollers of each pair being the same.



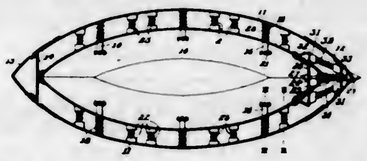
2. In a machine of the kind described, superposed pairs of rollers having grooves extending longitudinally of the rollers and terminating in circumferential grooves near the ends of the rollers, the grooves in one roller in each pair of rollers corresponding and registering face to face with the grooves of the other roller as the pair rotates so as to form a combined channel for the passage of water.

3. In a machine of the kind described, a pair of rollers having their axes in substantially the same horizontal plane and having spiral grooves which terminate in circumferential grooves near the ends of the rollers, the grooves of one roller registering with reverse grooves on the other roller as the rollers rotate, so as to form a combined channel for the passage of water.

4. In a machine of the kind described, a pair of horizontally disposed rollers having grooves extending longitudinally thereof, the groove of one roller registering with those of the other to form a combined channel and each roller terminating in a circumferential groove near each end.

5. In a machine of the kind described, superposed pairs of rollers having spiral grooves which terminate in circumferential grooves near the ends of the rollers, the grooves of any one pair of rollers being set in a reverse direction to the grooves of the pair of rollers immediately above or below the first said pair of rollers.

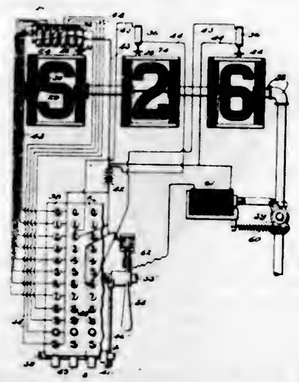
1,219,692. SHIP-PROTECTING DEVICE. LUIGI BELTRAMI, Coupon, Pa. Filed Mar. 15, 1916, Serial No. 84,386. Renewed Feb. 13, 1917. Serial No. 148,387. (Cl. 114—219.)



In a ship protecting device, the combination with the hull of the ship, a bracket secured to the inner face of said hull at the bow thereof, and a boss on said bow of the hull in line with the bracket, of a bow protecting plate spaced from the bow of the hull, a bracket secured to the inner face of said protecting plate in line with said bracket and boss on the hull, a piston slidably mounted in said brackets and boss and extending through the protecting plate, a pointed head on the forward end of said piston engaging the protecting plate, and a spring around said piston between the boat hull and protecting plate.

1,219,693. CHANGEABLE-CHARACTER BULLETIN APPARATUS. FREDERICK E. BENTLEY, Maplewood, Mo. Filed Feb. 19, 1915. Serial No. 9,248. (Cl. 40—52.)

1. In a changeable character bulletin apparatus, a plurality of devices each of which bears more than one character or matter for display, means for supporting the devices whereby they may be relatively moved, a stop on each device, said stops being in different relative positions, means for moving said devices, and a selective element movable into or out of the path of movement of said stops whereby to arrest the movement of any selected device, and means for holding said selected device against retrograde movement.



2. In a changeable character bulletin apparatus, a frame, a shaft supported in said frame, a plurality of display devices revolubly mounted on said shaft, means for revolving said devices, different relatively positioned stops on said devices, and an electromechanically operated element arranged to be moved into or out of the path of movement of each stop.

3. In a changeable character bulletin apparatus, a plurality of revolubly mounted display devices, means for rotating said devices, different relatively positioned stops on the said devices, selective electromechanically operated means movable into and out of the path of said stops whereby to stop the movement of the devices in one direction, and a single automatic means for holding said devices against movement in a retrograde direction.

4. In a changeable character bulletin apparatus, a revolubly mounted series of display devices, a blower arranged contiguous to the path of movement of said devices, whereby a jet of air therefrom will cause said devices to be moved, selective means for holding anyone of said devices against movement by said jet of air, and means for holding said selected device against retrograde movement.

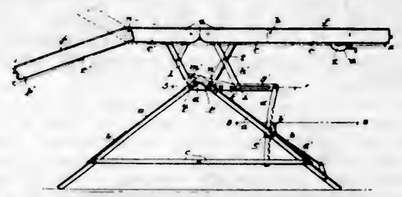
5. In a changeable character bulletin apparatus, a series of movably mounted display devices, a controllable means for an induced fluid current for the movement of said devices located contiguous to the path of movement of said devices, selective means for holding any one of said devices against movement by the induced fluid current and means for holding said display devices against retrograde movement.

[Claim 6 not printed in the Gazette.]

1,219,694. FOLDING TABLE. JOHN WORLING BEREMAN, Leavenworth, Kans. Filed Jan. 24, 1916. Serial No. 73,847. (Cl. 45—50.)

1. In combination, a foldable table top, a foldable leg structure, foldable raising and lowering means mounted on the leg structure and having a pivotal and sliding connection to the table top, these means embodying links pivoted to the leg structure, and means mounted on the leg structure for bodily tilting the table top through the medium of said links, said tilting means embodying a pair of plates pivoted at one end to the leg structure, and means for tilting the free ends of said plates and locking them in their adjusted positions, a pair of said links being pivotally supported on the leg structure and the remaining links being pivotally connected to said plates.

2. In combination, a foldable table top, a foldable leg structure, and means for bodily raising and lowering the table top as well as tilting the same forwardly or backwardly, said means embodying a plurality of pivoted links connecting the leg structure to the table top, devices for opening and closing these links, and devices mounted on the leg structure for bodily tilting said links to thereby tilt the table top, for the purpose set forth, a pair of said links being pivotally supported on the leg structure and the remaining links being pivotally connected to said plates.



3. The combination of a foldable table top, a foldable leg structure, foldable means for raising and lowering the table top with respect to the leg structure, said means embodying pivoted supporting links, a pair of tiltable plates mounted on the leg structure, and means for tilting these plates and locking them in their adjusted position, these plates being each provided with an inclined slot in which is movably journaled the pivots of a pair of said supporting links, for the purpose set forth.

4. The combination of a foldable table top, a foldable leg structure, foldable means for raising and lowering the table top with respect to the leg structure, said means embodying pivoted supporting links, a pair of tiltable plates mounted on the leg structure, means for tilting these plates and locking them in their adjusted positions, these plates being each provided with an inclined slot in which is movably journaled the pivots of a pair of said supporting links, and a latch operating to normally lock the parts in unfolded position and to normally unlock the parts when the table is inverted in the act of folding, for the purpose set forth.

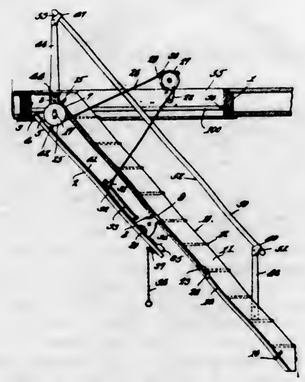
5. In combination, a foldable table top, a foldable leg structure, and means for bodily raising and lowering the table top as well as tilting the same forwardly or backwardly, said means embodying a plurality of pivoted links connecting the leg structure to the table top, devices for opening and closing these links, and devices mounted on the leg structure for bodily tilting said links to thereby tilt the table top, said devices embodying a pair of pivoted bars g' pivotally mounted at one end on the leg structure and extending toward one end of the table, a pair of said links being pivotally supported on the leg structure and the remaining links being pivotally connected to said plates, and means for raising and lowering the extended ends of these bars and locking them in their adjusted positions, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,219,695. MOVABLE STAIRWAY. FRANK E. BESSLER, Akron, Ohio. Filed Nov. 22, 1915. Serial No. 62,834. (Cl. 228—27.)

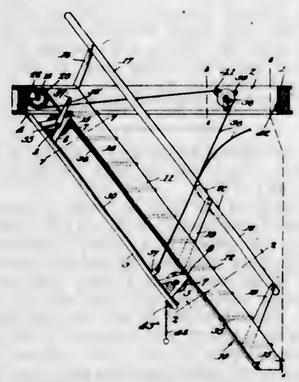
1. In a device of the class described, a frame; a vertically swinging panel hinged at one end for vertical swinging movement with respect to the frame; coöperating parts comprising a shaft supported for rotation adjacent the hinged end of the panel, and a drum journaled on the shaft; a spring connecting the drum with the shaft; a first flexible element wound in one direction around one of said coöperating parts and connected to the panel; a second flexible element wound in an opposite direction around the other of said coöperating parts and connected to the stairway; frame-carried means receiving the intermediate portion of the first flexible element slidably, and including an abutment; and a stop on the first flexible element and engaging the abutment when the panel is lowered, thereby to limit the downward movement of the panel, to limit the tension imparted to the springs, and to prevent an upward sliding movement of the stairway under the action of the spring.

2. In a device of the class described, a frame; a panel hingedly mounted with respect to the frame; a stairway slidably supported on the panel; a track extended longitudinally of the panel; a traveler adapted to traverse the track; a flexible supporting element connected with the traveler; frame supported means for receiving the intermediate portion of the supporting element; a supporting element connected with the stairway; and a resilient means with which both supporting elements are operatively connected, the resilient means being operative to aid in raising the panel and to aid in sliding the stairway upwardly.



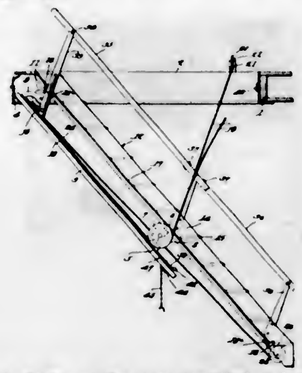
3. In a device of the class described, a frame; a panel hingedly mounted with respect to the frame; a stairway mounted to slide on the panel; a support carried by the panel; a support carried by the stairway; a handrail slidably mounted in the supports; means for limiting the sliding movement of the handrail; and a projection on the hand rail intermediate the supports and engageable by the lower support to slide the handrail in the upper support when the stairway is slid on the panel.

1,219,696. MOVABLE STAIRWAY. FRANK E. BESSLER, Akron, Ohio. Filed Nov. 22, 1915. Serial No. 62,835. (Cl. 228—27.)



In a device of the class described, a frame; a panel hinged to the frame; a stairway mounted to slide on the panel; a pair of alined, independently operable shafts journaled for rotation adjacent the hinged mounting of the panel; a drum receiving the inner ends of the shafts; a spring connecting each shaft with the drum; a flexible element connecting the drum with the stairway; and a flexible element connecting each shaft with the panel.

1,219,697. MOVABLE STAIRWAY. FRANK E. BESSLER, Akron, Ohio. Filed Apr. 28, 1916. Serial No. 94,186. (Cl. 228—27.)



1. In a device of the class described, a frame; a panel hinged thereto; a stairway mounted to slide on the panel; primary sheaves upon the panel adjacent the hinged mounting of the panel; secondary sheaves upon the panel adjacent the free end of the panel; a flexible element comprising a bight extended toward the free end of the panel the ends of the flexible element being passed first around the primary sheaves and then around the secondary sheaves and being terminally secured to the frame; an automatic rewinding drum on the stairway adjacent the free end thereof; a flexible element connected with the drum; and means for connecting the last specified flexible element slidably with the bight of the first specified element.

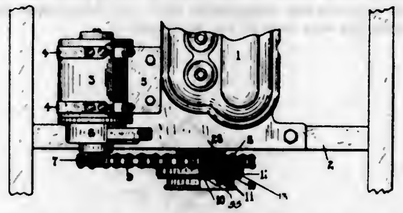
2. In a device of the class described, a frame; a panel hinged thereto; a stairway mounted to slide on the panel; primary sheaves upon the panel adjacent the hinged mounting of the panel; secondary sheaves upon the panel adjacent the free end of the panel; and a flexible element comprising a bight extended toward the free end of the panel, the ends of the flexible element being passed first around the primary sheaves and then around the secondary sheaves and being terminally secured to the frame; an automatic rewinding drum on the stairway adjacent the free end thereof and means for connecting the driving drum with the bight of the flexible element.

3. In a device of the class described, a frame; a panel hinged thereto; a stairway mounted to slide on the panel and longer than the panel, whereby when the stairway is slid rearwardly, the same will extend past the hinged mounting of the panel and tend to overbalance the panel; primary sheaves upon the panel adjacent the hinged mounting of the panel; secondary sheaves upon the panel adjacent the free end of the panel; a flexible element comprising a bight extended toward the free end of the panel, the ends of the flexible element being passed around the primary sheaves and around the secondary sheaves and being terminally secured to the frame; an automatic rewinding drum on the stairway, and means for connecting the drum with the bight of the flexible element.

4. In a device of the class described, a frame; a panel hinged thereto; a stairway mounted to slide on the panel; a primary sheave journaled on the panel adjacent the hinged mounting of the panel; a secondary sheave journaled on the panel adjacent the free end of the panel; an automatic rewinding drum mounted on the stairway adjacent the free end of the panel; a flexible element secured to the frame and extended around the secondary sheave and the primary sheave; and means for connecting the flexible element with the drum.

1,219,698. CLUTCH. ERNEST W. BRACKETT, Newark, N. J., assignor to Splitdorf Electrical Company, Newark, N. J. Filed Sept. 10, 1913. Serial No. 789,202. (Cl. 192—20.)

1. A clutch consisting of a driven member and a driving member, said driving member comprising a sprocket wheel and a ratchet wheel, and having a flanged member between said sprocket wheel and ratchet wheel, and extending over the driven member to form a housing for the parts within said driven member.



2. A clutch consisting of two members, one adapted to be driven, and the other adapted to act as the driver, said driver consisting of a sprocket wheel and a ratchet wheel, rigidly connected, said ratchet wheel having two elements of similar character, with a sound deadening element clamped therebetween, and means on the driven element to engage the two elements on the ratchet wheel, substantially as described.

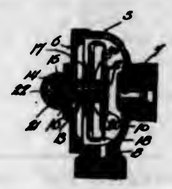
3. A clutch consisting of a driving and a driven member, said driving member consisting of a ratchet device provided with teeth and having a noise reducing element associated with a strain or working element or elements, said driven member carrying a plurality of pawls, said noise reducing element constructed and arranged to keep the pawls from contact with the strain or working element or elements except at the working portions of the teeth.

4. In a device of the class described, a driving member including a sleeve which serves as a bearing for said driving member and a sprocket wheel mounted upon said sleeve to rotate therewith, a driven member adjacent to the driving member and having a part overhanging a portion of the driving member and another part formed to receive a belt, clutching means between the overhanging part of the driven member and the driving member, and a sheet metal member between said sprocket wheel and the driven member and adapted to coöperate with said overhanging part thereof to form a housing for the clutching parts.

5. In a device of the character described, the combination of a driven member and a driving member, said driving member carrying a ratchet wheel and a sound reducing element rigidly attached to said ratchet wheel teeth, said driven member carrying pawls so distributed around the periphery of the ratchet wheel that one of said pawls is supported on the sound deadening element and nearly ready to engage with one of the ratchet teeth, on the ratchet wheel, for the purpose as described.

[Claims 6 to 16 not printed in the Gazette.]

1,219,699. THERMOSTATICALLY-CONTROLLED RADIATOR-VALVE. JOHN S. BRENNAN, Milwaukee, Wis. Filed Jan. 22, 1916. Serial No. 73,547. (Cl. 236—10.)



1. In a valve of the class described the combination of a casing including a valve seat, a valve head engageable with the seat, a stem rigidly connected with the valve head, a bearing for the intermediate portion of the stem, said bearing being rigid with respect to the casing, an expansible thermostat member between the valve head and bearing for advancing the head, and a spring between the free end of the stem and the bearing for retracting the valve head.

2. A thermostat valve head unit comprising a sleeve closed at one end, a valve head, a stem on the head slidably passed through the closed end of the sleeve, a thermostat chamber surrounding the sleeve adjacent the valve and connected with the valve head and sleeve, ports in the sleeve communicating with the chamber, a spring in the sleeve engaging the stem and a closure for the other end of the sleeve.

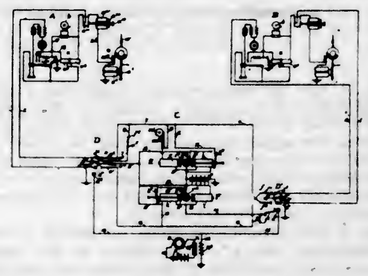
3. A thermostatically controlled valve head unit comprising a sleeve having one end closed, a valve head, a stem on said head slidable through the closed end of the sleeve and a thermostat chamber between the sleeve and valve head and having its walls connected therewith, ports in the closed end of the sleeve communicating with said chamber and a closure for the other end of the sleeve.

4. A thermostatically controlled valve head unit comprising a sleeve having one end closed, a circumscribing flange formed intermediately on the sleeve, a valve head, a stem on the valve head slidably passed through the closed end of the sleeve, thermostat plates secured to the sleeve and valve head, the edge portions of said plates being directed laterally in lapping relation and secured together to form a chamber port in the closed end of the sleeve communicating with said chamber, and a closure for the other end of the sleeve.

5. In a valve structure of the class described the combination of a main valve casing, closed at one end, an inlet port in said end, a thermostatically controlled valve head in the casing for closing the inlet port, a closure for the other end of the casing, a chamber formed in the first end of the casing below the inlet port, an outlet communicating with the chamber, a sleeve threaded in the chamber, and a flap valve carried by the sleeve and adapted to seat on the end thereof.

[Claim 6 not printed in the Gazette.]

1,219,700. TELEPHONE-EXCHANGE SYSTEM AND APPARATUS THEREFOR. ALBERT M. BULLARD, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed July 17, 1906. Serial No. 326,531. (Cl. 179—20.)



1. The combination with a plurality of telephone lines extending to a central office, of a switch having relatively stationary terminals whereon said lines terminate, and a plurality of pairs of independently movable switch arms coöperating with the same terminals, each of said pairs being adapted to connect together any two of said lines.

2. The combination with a plurality of telephone lines extending to a central office, of a switch having relatively stationary terminals whereon said lines terminate, means for connecting said terminals comprising a pair of independently movable switch arms, means for causing said arms to traverse and make contact with the aforesaid stationary terminals, and mechanism adapted to stop the movement of said arms and cause one of them to complete connection with the terminals of any predetermined line.

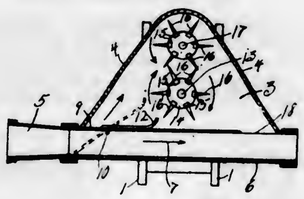
3. The combination with a plurality of telephone lines extending to a central office, of a switch having relatively stationary terminals whereon said lines terminate, a plurality of pairs of switch arms, means for causing said pairs of arms to traverse and make contact with said stationary terminals in succession, and mechanism adapted to stop the movement of any pair of said arms and cause one arm of the pair to complete connection with the stationary terminals associated with any given line.

4. The combination with a plurality of telephone lines extending from their respective substations to a central office, of a switch having stationary terminals whereon said telephone lines terminate, connecting means comprising a pair of switch arms adapted to traverse and make contact with said line terminals, means for causing the movement of said arms, mechanism made operative in initiating a call in any one of said lines adapted to arrest the movement of said arms and cause one of them to complete connection with the terminals of said line.

5. The combination with a plurality of telephone lines, each extending from its respective substation to a central office, of a switch having stationary terminals whereon said lines terminate, a plurality of pairs of switch arms, each pair being adapted to complete connection between any two of said telephone lines, means for normally causing said arms continually to traverse the terminals of said lines, means adapted in initiating a call in any of said lines to change the condition of its associated switch terminal, and mechanism associated with each pair of switch arms adapted to arrest the movement thereof, said mechanism being responsive to the changed condition of the terminal of the calling line.

[Claims 6 to 45 not printed in the Gazette.]

1,219,701. COTTON-BOLL-THRESHING MACHINE. THOMAS M. CASS, Tyler, Tex. Filed June 26, 1916. Serial No. 106,035. (Cl. 13—19.)



1. A boll threshing machine comprising a casing in combination with a cotton conduit or flue, upper and lower toothed rollers journaled in said casing, means for driving the upper roller slower than the lower roller, a valve for deflecting the cotton from said conduit to said threshing rollers, and springs carried by said valve and terminating with upwardly curved ends for regulating the feeding of cotton to said rollers.

2. A boll threshing machine comprising a casing in combination with a cotton conduit or flue, upper and lower rollers journaled in said casing and provided with relatively long intermeshing teeth, means for driving said rollers, a valve for deflecting the cotton from said conduit, and spring fingers attached to said valve and automatically actuated thereby and terminating when in operative position in close proximity to said rollers for regulating the feeding of cotton to said rollers.

1,219,702. BALE-BUCKLE. HENDERSON P. CHILDRESS, Memphis, Tenn., assignor to Cotton Buckle and Tag Co., Inc., Memphis, Tenn., a Corporation of Tennessee. Filed May 20, 1916. Serial No. 98,901. (Cl. 24—26.)

1. A one piece wire bale buckle comprising an end bar, two side bars, and extensions of each side bar directed toward the other side bar into overlapping relation and spaced apart laterally of the buckle, such extensions each terminating in a hook directed away from the end bar and on the side of the other hook toward the end bar to which said other hook is connected, said hooks being movable toward each other by the loop of an applied bale band into interlocking engagement with the interlocked hooks within the said loop of the bale band.



2. A one-piece wire bale buckle, comprising an end bar, two side bars, and a second end bar formed of extensions of the side bars and terminating between the side bars in hooks adapted to interlock and initially separated to provide an entrance to the buckle for the bale band.

3. A one-piece wire bale buckle, comprising an end bar, two side bars, and a second end bar formed of overlapping extensions of the respective side bars terminating in hooks bent in a direction away from the first-named end bar and also toward each other and toward the side bars carrying the corresponding extensions, said hooks being located to be inclosed by the looped end of a bale band applied to the buckle about the second-named end bar to be pressed toward each other and drawn into interlocking engagement by the loop of the bale band under the expansive force of the bale.

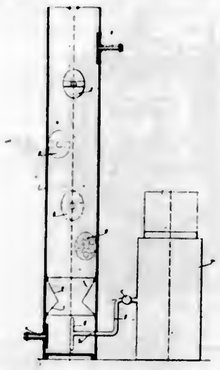
4. A one-piece wire bale buckle having an entering end composed of overlapped ends of the piece of wire terminating in hooks extending away from the interior of the buckle and separated one from the other toward respective sides of the buckle, said hooks having their extremities directed one toward the other, whereby the hooks on being moved first laterally and then longitudinally into engagement mutually embrace and interlock with each other, said hooks being so located with respect to the sides of the buckle as to be inclosed by a loop of a bale band extending about the entering end thereof.

5. A one-piece wire bale buckle, having an entering end adapted to receive and be embraced by a loop of an applied bale band, said entering end comprising overlapping terminal portions of the piece of wire each ending in a hook exterior to the buckle, with the free ends of the hooks initially closer together than the throats of the hooks both in the direction of the length and width of the buckle, with the hooks and the ends of the wire of which they are formed initially separated to permit the threading of the loop of the bale band into the buckle and said hooks being so located with respect to the sides of the buckle as to be inclosed by the applied bale band for movement toward each other into side engagement and then into interlocking engagement in order by the expansive force of the bale exerted upon the overlapping ends of the wire at the entering end of the buckle through the bale band.

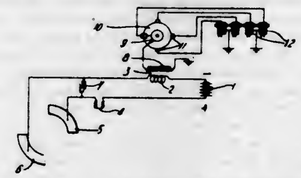
[Claims 6 to 10 not printed in the Gazette.]

1,219,703. APPARATUS FOR DISPELLING AEROPLANES AND THE LIKE. MARY HANNAH CLARKE, *née* ASHTON, and DEMETRIO MAGGIORA, Paris, France. Filed Oct. 7, 1915. Serial No. 54,672. (Cl. 89—1.)

An apparatus of the character described comprising a large and relatively light cylinder or barrel closed at one end, a conical diaphragm or throttle dividing said cylinder into a large and a small chamber, the smaller chamber comprising a firing chamber, and air inlet valves associated with both chambers.



1,219,704. IGNITION SYSTEM. FRANK CONRAD, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 4, 1913, Serial No. 788,089. Renewed Aug. 16, 1916. Serial No. 115,332. (Cl. 123—166.)



1. In an ignition mechanism, the combination with a source of current, and a pair of relatively movable contact members, of means for intermittently connecting said contact members in circuit with said source and means for effecting the engagement and disengagement of said contact members while they are in circuit with said source.

2. In an ignition mechanism, the combination with a source of current, and a pair of contact segments connected to the terminals of said source, of a pair of relatively movable contact members, means for connecting said members to said segments successively, and means for effecting the engagement and disengagement of said contact members while the latter are connected to said source.

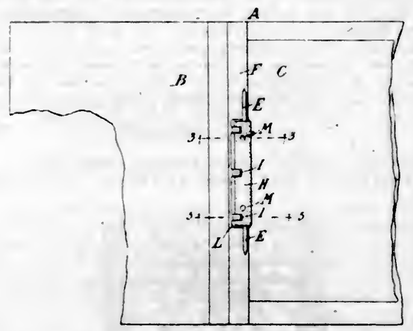
3. In an ignition system, the combination with a source of current, and contact segments connected to the terminals of said source, a plurality of movably mounted contact members, means for controlling the relative positions of said contact members, means connected to said contact members for engaging said contact segments successively, and means for simultaneously adjusting the angular positions of said controlling means and said segments.

4. In an ignition system, the combination with a source of current, and contact elements connected to the terminals of said source, of a rotatable member, a pair of relatively movable contact members carried by said rotatable member, relatively stationary members for effecting the engagement and disengagement of said contact members, means for connecting said contact members to said contact elements, and means for simultaneously adjusting the angular position of said contact elements and said stationary members.

5. In an ignition system, the combination with a coil, a source of current and an interrupter for controlling a circuit comprising said coil and said source, of a switch for reversing the connections of said source while said circuit is broken at said interrupter.

[Claims 6 to 9 not printed in the Gazette.]

1,219,705. FILE, BINDER, OR THE LIKE. WILLIAM A. COOKE, Jr., Brooklyn, N. Y. Filed Apr. 26, 1915. Serial No. 24,090. (Cl. 129—7.)



1. A file, binder or the like having a filing prong and a clamping means for such prong, said clamping means comprising a hinged plate lying above the ends of the prongs when the latter are bent, said plate having an aperture adapted to admit a pencil or the like for perforating the sheet to be filed.

2. A file, binder or the like having filing prongs and a clamping means for said prongs, said clamping means comprising a hinged plate lying above the ends of the prongs when the latter are bent, said plate having apertures spaced apart substantially the same distance as the said prongs and adapted to admit a pencil or the like for perforating a sheet of paper to be filed.

3. A file, binder or the like having filing prongs, and a clamping means therefor comprising a hinged plate having apertures spaced substantially the same distance as the filing prongs and adapted to admit a pencil or the like for perforating a sheet of paper to be filed in said binder, and a notched plate below said clamping plate adapted to admit said prongs.

4. A file, binder or the like having filing prongs, and a clamping means therefor comprising a hinged plate having apertures spaced substantially the same distance as the filing prongs and adapted to admit a pencil or the like for perforating a sheet of paper to be filed in said binder, said hinged plate adapted to move forwardly and backwardly, and having means adapted to engage a part of the binder on its rearward movement.

1,219,706. KEY-IDENTIFYING DEVICE. GUSTAV DÄHNE, New York, N. Y. Filed Dec. 22, 1915. Serial No. 68,160. (Cl. 40—10.)



1. In combination with a key having a transverse opening passing entirely through the head portion thereof, of a plate suited to be secured in said opening, said plate having inscribed flat surfaces upon each side.

2. In a device of the class described, the combination with a head of a key having an interior opening formed therethrough, of a plate removably engaged therein, and means formed with the head of said key for holding said

plate rigidly in position said plate having surfaces bearing identification marks.

3. In a device of the class described, the combination with a flat key having an enlarged head containing an open passage way therethrough, of a panel suited to be received in the passage-way visible from both sides of said key, and means for maintaining said panel in position therein, the panel being of lesser thickness than the head of the key and having surfaces bearing identification marks.

1,219,707. LOCK. JOHN DAMIANI, Syracuse, N. Y. Filed Nov. 27, 1916. Serial No. 133,628. (Cl. 70—53.)



1. A safe comprising a main wall, a movable door, a pair of bolts slidably mounted on the door, a bar for simultaneously operating both bolts, a handle outside the safe for operating said bar, one of said bolts provided with a plurality of cam surfaces, a pair of substantially parallel plates adjacent the bolt, said plates having alined openings, a plurality of dogs mounted in said openings and having ends respectively in contact with said cam surfaces, springs between said plates for holding the end portion of the bolts in contact with said cam surfaces, a plurality of rotary disks, one for each dog, each disk provided with a peripherical recess for receiving the end of the adjacent dog, a dial for each disk and means outside the safe for rotating the disks.

2. In a lock, a series of disks having peripheral recesses, a series slidable dogs having ends formed to seat in said recesses, springs normally holding the dogs out of the recesses, and a bolt having a plurality of cam surfaces for moving said dogs against the tension of their springs into said recesses when registered therewith to permit retraction of the bolt.

3. In a lock, a series of disks having peripheral recesses, a series of slidable dogs having ends formed to seat in said recesses, springs normally holding the dogs out of the recesses, a bolt having a plurality of cam surfaces for moving said dogs against the tension of their springs into said recesses when registered therewith to permit retraction of the bolt, and knobs and dials in connection with said disks.

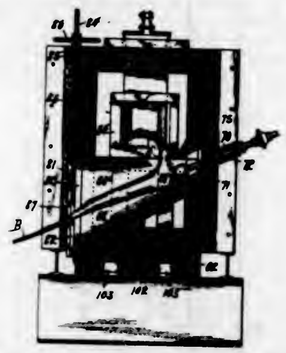
1,219,708. TENSION DEVICE FOR SHUTTLES. HENRY FERDINAND DANIELS, Shamokin, Pa. Filed Sept. 12, 1916. Serial No. 119,651. (Cl. 139—46.)



A tension device for shuttles including a frame made of a single piece of sheet material and having a portion bent to form an elongated loop closed at both ends, ears projecting from the sides of said loop and having holes therein, rods rotatably mounted in said holes in the ears and extending across said loop, substantially as described.

1,219,709. APPARATUS FOR FORMING MOLTEN MATERIAL IN CYLINDRICAL FORM. EDWARD DANNER, Toledo, Ohio, assignor to The Libbey Glass Company, Toledo, Ohio, a Corporation of Ohio. Filed June 13, 1916. Serial No. 103,380. (Cl. 49—17.1.)

1. In an apparatus of the class described, an inclined forming mandrel onto and around which molten material is permitted to flow and lengthwise from which it is drawn in cylindrical form.



2. In an apparatus of the class described, a rotating mandrel onto and around which molten material is permitted to flow and lengthwise from which it is drawn in cylindrical form.

3. In an apparatus of the class described, an inclined rotating mandrel onto and around which molten material is permitted to flow and lengthwise from which it is drawn in cylindrical form.

4. In an apparatus of the class described, an inclined mandrel onto and around which molten material is permitted to flow and lengthwise from which it is drawn in cylindrical form, said mandrel having provision for the introduction of air into the material drawn therefrom.

5. In an apparatus of the class described, a rotating mandrel onto and around which molten material is permitted to flow and lengthwise from which it is drawn in cylindrical form, said mandrel having provision for the introduction of air into the material drawn therefrom.

[Claims 6 to 62 not printed in the Gazette.]

1,219,710. VACUUM CASTING DEVICE FOR GOLD-INLAY WORK AND THE LIKE. FRANK B. DAVIS, Johnstown, Pa. Filed Jan. 28, 1916. Serial No. 74,770. (Cl. 22—73.)



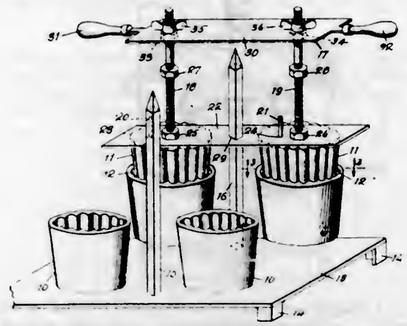
1. A device of the character described comprising a one-piece bowl of refractory material having an integral hollow stem communicating therewith, and means for connecting said stem to the intake of a blower, substantially as described.

2. An appliance of the character described comprising an integral small portable bowl of refractory material and having a projecting hollow stem communicating with the interior of the bowl, a blower having an intake provided with an opening, a valve for controlling said opening, and a detachable coupling for coupling said stem to the blower intake, substantially as described.

3. A device of the character described, comprising a bowl of refractory non-oxidizable material substantially free from expansion and contraction and having a relatively long projecting hollow integral stem communicating with its lower portion and adapted at its free end for connection to a suction-producing device, substantially as described.

4. A device of the character described, comprising a one-piece bowl of refractory material having an integral hollow stem communicating therewith, the bowl being arranged to receive the investment material, while the stem is of sufficient length to prevent the end thereof becoming heated, a blower having an intake provided with an opening, a valve for controlling said opening, and a detachable flexible coupling for coupling said stem to the blower intake; substantially as described.

1,219,711. PASTRY-MOLD. ELIE DAVOUST, New York, N. Y. Filed Mar. 22, 1916. Serial No. 85,876. (Cl. 107—19.)



1. In a pastry mold, a base, a plurality of stationary female members on the base, a plurality of complemental male members each adapted to be removably inserted in one of the female members, and the male members being smaller than the interior of the female members to provide a space between the members, a removable plate on the male members for spacing the male members accurately over the female members, and a second plate removably attached to said male members whereby they may be removed from the female members and transferred for drying.

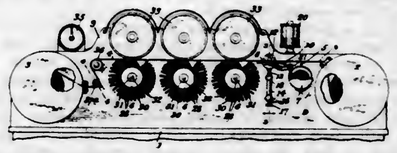
2. In a pastry mold, a base, a plurality of stationary cups on the base, a plurality of shapers each adapted to be removably inserted in one of the cups, a plurality of rods one extending from each of the shapers, a plate removably disposed on the rods for spacing the shapers so as to be accurately centered in the cups, together with a second plate removably attached to said rods whereby the shapers may be removed from the cups and transferred for drying.

3. In a pastry mold, a base, a post on the base, a plurality of spaced stationary cups on the base, a plurality of shapers each adapted to be removably inserted in one of the cups, a plurality of rods one extending from each of the shapers, an apertured plate removably disposed on the rods for spacing the shapers, said plate being adapted to pass over said post so as to accurately center the shapers in the cups, together with a second plate removably attached to said rods whereby the shapers may be removed from the cups and transferred for drying, and means on the rods for releasably clamping the first mentioned plate on the shapers.

4. In a pastry mold, a base plate having a plurality of cups mounted thereon, guide posts arranged intermediate any group of adjacent cups, a plate slidably mounted on each of said posts and held against radial movement thereon, a plurality of rods passing through said plate, a shaper secured to each of said rods, means for holding said shapers firmly against said plate, and a second plate secured to the upper ends of said rods whereby said shapers may be removed from said cups and transferred for drying.

1,219,712. APPARATUS FOR CLEANING FILMS. CHARLES DE MOOS, Fort Lee, N. J., assignor to Motion Picture Properties Company, Fort Lee, N. J., a Corporation of New Jersey. Filed Apr. 10, 1915. Serial No. 20,416. (Cl. 15—8.)

1. In a film cleaning apparatus, the combination with the distributing and collecting reels, of a moistening and cleaning device comprising a fluid receptacle through which the film is fed, a wick in said receptacle adapted to moistened by the fluid therein and arranged intermediate the film and the cleaning fluid, and means for movably supporting said receptacle.

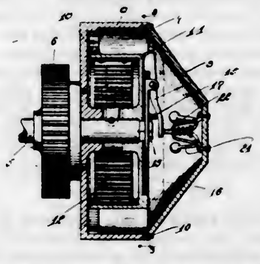


2. In a film cleaning apparatus, the combination with the distributing and collecting reels, of a moistening and cleaning device, comprising a fluid receptacle through which the film is fed, a wick reel, a wick fed from said reel into said receptacle, and means for holding said wick, moistened by the fluid in said receptacle, in contact with said film and intermediate the latter and the cleaning fluid.

3. In a film cleaning apparatus, the combination with the distributing and collecting reels, of a moistening and cleaning device comprising a fluid receptacle through which the film is fed, a wick in said receptacle between said film and said fluid, means for maintaining contact between said wick and said film, and means for rendering said last mentioned means ineffective.

4. In a film cleaning apparatus, the combination with the distributing and collecting reels, of a moistening and cleaning device comprising a fluid receptacle through which the film is fed, a roller above said receptacle beneath and around which said film passes, a wick in said receptacle beneath and in normal contact with said film, and means for supporting said receptacle, the latter being movable relatively to said supporting means to disengage said wick from said film.

1,219,713. TROLLEY-RETRIEVER. AUSTIN D. EBERLY, Spokane, Wash. Filed Mar. 13, 1916. Serial No. 83,967. (Cl. 191—93.)



1. In a trolley retriever, a shaft, a casing rotatably mounted thereon, an additional casing within the aforesaid casing also rotatably mounted on said shaft, a coil spring inclosed within said last mentioned casing and secured to the latter at its one end and secured to the shaft at its opposite end, spring held means for normally holding the second mentioned casing under tension and against rotation, means for rotating said first mentioned casing at certain times, governor means operating therein for permitting the second mentioned casing to be rotated at certain times, and centrifugally operated means connecting said casings to rotate the same simultaneously upon the rotation of the second mentioned casing.

2. In a device of the class described, a shaft, a casing rotatably mounted thereon, means for rotating said casing at predetermined times, a coil spring within said casing secured at its one end to said shaft, a spring casing loosely mounted on the shaft and secured to the outer end of said spring, spring held means carried by said shaft to lock the spring casing normally against rotation,

centrifugally operated means within said first mentioned casing for releasing said locking means upon the rapid rotation of said casing, and centrifugally operated means mounted on the spring casing and adapted for operation upon the rotation of said spring casing to carry the first mentioned casing therewith.

3. In a device of the class described, a shaft, a casing rotatably mounted thereon, means for rotating said casing at predetermined times, a coil spring within said casing secured at its one end to said shaft, a spring casing loosely mounted on the shaft and secured to the outer end of said spring, a spring held latch member carried by said shaft and engaging teeth carried on the spring casing to lock the spring casing normally against rotation, governor means within said first mentioned casing for releasing said locking means upon the rapid rotation of said casing, teeth carried within the first mentioned casing and a centrifugally actuated spring pawl mounted on the spring casing and adapted for engagement with said teeth upon the rotation of the spring casing whereby to rotate the first mentioned casing with the latter.

4. In a device of the class described, a shaft, a casing rotatably mounted thereon, means for rotating the same at certain times, a coil spring secured at its inner end on said shaft and arranged within said casing, a casing for said spring loosely mounted on the shaft and engaged with the outer end of the spring, a spring held latch member carried by the shaft, teeth carried by the spring casing for engagement with the latch to secure the casing against rotation in the normal position of the same, a centrifugal governor carried within the first mentioned casing adapted to release said latch upon the rapid rotation of said casing, whereby to permit the spring casing to be revolved, and means carried by said spring casing for engagement with portions of the first mentioned casing to revolve the latter therewith.

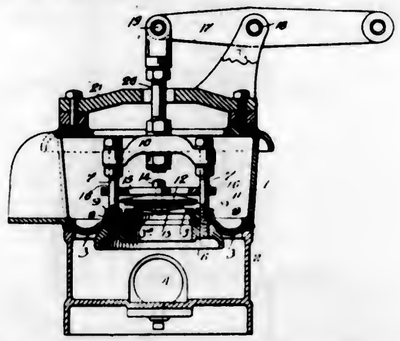
5. In a device of the class described, a shaft, a casing rotatably mounted thereon, means for rotating the same at certain times, a coil spring secured at its inner end on said shaft and means within said casing, a casing for said spring loosely mounted on the shaft and engaged with the outer end of the spring, a spring held latch member carried by the shaft, teeth carried by the spring casing for engagement with the latch to securing the casing against rotation in the normal position of the same, a centrifugal governor carried within the first mentioned casing adapted to release said latch upon the rapid rotation of said casing, whereby to permit the spring casing to be revolved, teeth carried on the inner periphery of the first mentioned casing and a spring held pawl carried by the spring casing and adapted to engage the teeth upon the rotation of the last mentioned casing, whereby to rotate said casings together.

1,219,714. DIAPHRAGM-PUMP. WILLIAM M. EBERLY, Shippensburg, Pa., assignor to Domestic Engine & Pump Co., Shippensburg, Pa., a Corporation of Pennsylvania. Filed May 26, 1916. Serial No. 99,948. (Cl. 103—10.)

1. A diaphragm pump comprising a casing provided with an apertured diaphragm, a valve seat secured to the diaphragm, a valve opposed to the seat, and means located above the valve and its seat to guide the valve for free bodily movement relatively to the seat to provide an unobstructed passage all around between the valve and seat.

2. A diaphragm pump comprising a casing provided with an apertured diaphragm, a valve seat secured to the diaphragm, a valve opposed to the seat, and means spaced without the seat and slidably coactive with the valve to guide and retain the valve in all its positions to permit the latter to rise bodily from the seat to provide an unobstructed discharge passage between the seat and valve in all positions of the latter.

3. A diaphragm pump comprising a casing provided with an apertured diaphragm, a valve seat secured to the diaphragm, a valve opposed to the seat, posts connected with the diaphragm and spaced on opposite sides of and free from the seat, and a guiding bar connected with the valve and slidably receiving said posts, whereby the valve is guided to move bodily away from the seat to provide an unobstructed discharge passage between the seat and valve in all positions of the latter.

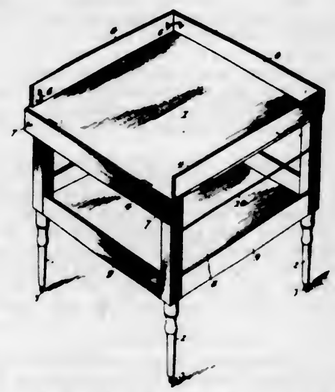


4. A diaphragm pump comprising a casing provided with an apertured diaphragm, a valve seat secured to the diaphragm, a valve opposed to the seat, means to guide the valve for free bodily movement relatively to the seat to provide an unobstructed passage all around between the valve and seat, a walking beam pivotally supported relatively to the casing, and a link pivotally connected with the walking beam and connected with the diaphragm.

5. A diaphragm pump comprising a casing provided with an apertured diaphragm, a valve seat connected with the diaphragm, a valve for said seat, posts connected with said diaphragm, a yoke connecting the posts, means on the valve co-active with said posts to guide the valve with respect to said seat, a walking beam pivotally supported upon the casing, and a link pivotally connected with the walking beam and connected to said yoke.

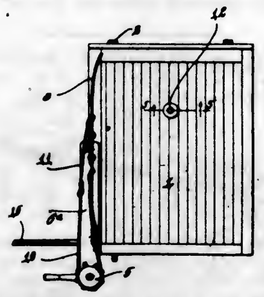
[Claim 6 not printed in the Gazette.]

1,219,715. KITCHEN-TABLE. ADELAIDE R. EISEMAN, Baltimore, Md. Filed June 4, 1915. Serial No. 32,141. (Cl. 45—17.)



A table of the class described comprising a top and supporting legs therefor, flanges hinged to the side and end edges of said top, and swinging in an arc of 180° to positions above and below said top, said flanges being so hinged as to permit their inner edges to rest flatly on said top, and to be supported vertically in one position thereof and to drop downwardly against the supporting legs and have said inner edges thereof fit flush with said top in the other position of the same, a pair of opposed flanges being shorter in length than the other opposed pair to permit the latter to rest flatly on the top and abut the end edges of the former in upright position, and locking means engaged with the inner faces of said flanges adjacent the ends thereof, whereby to lock said flanges in vertical position and form a box like top for the table.

1,219,716. DOOR OPENING AND CLOSING DEVICE. CHARLES FLINT, Spokane, Wash., assignor of one-tenth to Sarah Svanson, Spokane, Wash. Filed Aug. 21, 1916. Serial No. 116,064. (Cl. 268—6.)



1. In combination with a sliding type of door, a spring arm pivotally mounted intermediate of its extremities, and an engaging device carried upon one face of said door adapted to be engaged by one end of said arm to slide the door in one direction and by the opposite end of said arm to slide the door in the opposite direction.

2. In combination with a sliding type of door, a spring arm pivotally mounted intermediate of its extremities, a toothed gear, flexible connections between said arm and said gear including a chain for engaging the latter, and an engaging member mounted on said door adapted to be engaged by either end of said arm to open and close the door.

3. In combination with a sliding type of door, a spring arm pivotally mounted intermediate of its extremities, a toothed gear, flexible connections between said arm and said gear, a pulley mounted on said door adapted to be engaged by either end of said arm to open and close the door, and means for operating or rotating said gear.

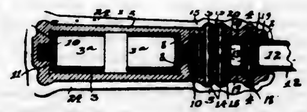
4. In combination with an independently mounted and supported sliding type of door, of an opening and closing mechanism therefor comprising an arm pivotally mounted intermediate of its extremities, and an engaging device carried upon one face of said door adapted to be engaged by one end of said arm to slide the door in one direction and by the opposite end of said arm to slide the door in the opposite direction.

5. In combination with an independently mounted and supported sliding type of door, of an opening and closing mechanism therefor comprising an arm pivotally mounted intermediate of its extremities, an engaging device carried upon one face of said door adapted to be engaged by one end of said arm to slide the door in one direction and by the opposite end of said arm to slide the door in the opposite direction, and means for actuating said arm.

1,219,717. DRAFT AND BUFFING MECHANISM. GEORGE H. FORSYTH, Chicago, Ill., assignor to Waugh Draft Gear Company, a Corporation of Illinois. Filed Nov. 26, 1907. Serial No. 403,949. (Cl. 213—42.)

1. A draw-bar yoke, having cross-sectional forms at different points thereof of varying dimensions but of substantially uniform strength to resist strains, substantially as described.

2. A draft mechanism, comprising followers, follower-stops, a draw-bar, and a yoke, said yoke being narrower at its rear end than at its point of connection with the draw bar and correspondingly thickened in vertical section at said rear end to offset its reduction in width, substantially as described.



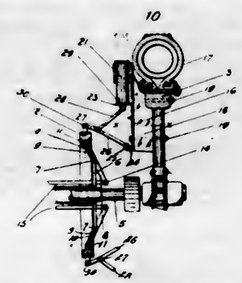
3. A tapered draw-bar yoke of less width at its inner end than at its point of attachment to the draw bar, and of reverse taper in vertical section to maintain a substantially uniform strength at all points of its cross-section, substantially as described.

4. An apertured draw-bar yoke having cross-sectional forms of varying dimensions but of such proportions as to afford a substantially uniform resistance to strains, substantially as described.

5. A draw-bar having a rivet hole the central portion whereof has a diameter slightly greater than that of the rivet, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,219,718. BRAKE ATTACHMENT FOR MOTOR-VEHICLES. ROBERT S. FRANZ, Etna, Pa. Filed Dec. 8, 1915. Serial No. 65,698. (Cl. 21—209.)



1. A brake attachment for motor vehicles comprising an annular member provided with a circumferential groove, adapted to be supported from and surround the axle of a vehicle, a plurality of reciprocatory braking elements, brake element supporting means adapted to be carried by the vehicle wheel, brackets swivelly mounted in said groove, lever mechanisms pivotally connected with said brackets and with said elements for shifting these latter, links pivotally connected with said mechanisms and with said supporting means, and operating means pivotally connected with said member for moving it concentrically with respect to the vehicle axle causing thereby the actuation of the lever mechanisms and shifting of said elements.

2. A brake attachment for motor vehicles comprising an annular member provided with a circumferential groove adapted to be supported from and surround the axle of a vehicle, a plurality of reciprocatory braking elements, brake element supporting means adapted to be carried by the vehicle wheel, brackets swivelly mounted in said groove, lever mechanisms pivotally connected with said brackets and with said elements for shifting these latter, links pivotally connected with said mechanisms and with said supporting means, and operating means pivotally connected with said member for moving it concentrically with respect to the actuation of the lever mechanism and shifting of said elements, and means for limiting the movement of said elements.

3. A brake attachment for motor vehicles comprising an annular member provided with a circumferential groove adapted to be supported from and surround the axle of a

vehicle, a plurality of reciprocatory braking elements, brake element supporting means adapted to be carried by the vehicle wheel, brackets swivelly mounted in said groove, lever mechanisms pivotally connected with said brackets and with said elements for shifting these latter, links pivotally connected with said mechanisms and with said supporting means, and a spring controlled operating means pivotally connected with said member for moving it concentrically with respect to the vehicle axle causing thereby the actuation of the lever mechanisms and shifting of said elements.

4. A brake attachment for motor vehicles comprising an annular member provided with a circumferential groove, adapted to be supported from and surround the axle of a vehicle, a plurality of reciprocatory braking elements, brake element supporting means adapted to be carried by the vehicle wheel, brackets swivelly mounted in said groove, lever mechanisms pivotally connected with said brackets and with said elements for shifting these latter, links pivotally connected with said mechanisms and with said supporting means, and a spring controlled operating means pivotally connected with said member for moving it concentrically with respect to the vehicle axle causing thereby the actuation of the lever mechanisms and shifting of said elements, and means for limiting the movement in either direction of said braking elements.

5. A braking attachment for vehicle wheels comprising a support adapted to be secured to one side of the vehicle wheel near the tire thereof, braking elements carried by said support, lever mechanisms for actuating said elements, links pivotally connected with said support and said mechanisms, a shiftable annular member, brackets swivelly mounted in the periphery of said member, means for pivoting said mechanisms to said brackets, and a spring controlled operating means for and pivotally connected with said member for operating the latter to actuate the lever mechanisms to shift said elements.

[Claim 6 not printed in the Gazette.]

1,219,719. CLASP FOR SCARFS, &c. FRANZ A. FULLER and JOHN SCHROEDER, Newark, N. J., assignors to The Hagerstrom Company, Newark, N. J., a Corporation of New Jersey. Filed May 10, 1911. Serial No. 626,350. (Cl. 24—252.)



A scarf clasp comprising two jaws pivotally connected together intermediate of their ends, a spring coiled around the pivot to normally hold said jaws closed under tension, one of said jaws being provided with an opening arranged off center near the edge of the jaw, a screw-threaded stud, one end of which is rigidly secured in the end of the other jaw and in close proximity to the longitudinal edge of said jaw, the other end of said screw-threaded stud adapted to pass through the opening in the first-named jaw, and a knurled disk provided with an integral boss adjustably mounted upon and having screw-threaded engagement with said stud, said boss extending toward and adapted to engage the under side of the opposite jaw to hold said jaws apart and in locked position, a portion only of the circumferential edge of the disk projecting a trifle beyond the longitudinal edges of the upper and lower jaws in order that the same may be readily manipulated.

1,219,720. CULTIVATOR. ROBERT ERNEST GARDINER, Sperling, Manitoba, Canada. Filed May 29, 1916. Serial No. 100,619. (Cl. 55—73.)

1. A cultivator comprising, a frame presenting rearwardly diverging beams, carriage wheels adjustably supporting the frame, a set of rotatably mounted cultivator cutting wheels carried by each beam and disposed at an angle to the direction of draft of the frame and a single means for simultaneously manipulating the cutting wheels of each set to change their angular position in respect to the line of draft.



2. In a cultivator, a frame comprising a pair of rearwardly diverging beams pivotally connected together forwardly and with the forward end of one extending in advance of the other, means for adjustably connecting the diverging ends of the beams, a forward truck adjustably supporting the advanced extremity of the one beam and caster wheels adjustably supporting the rear ends of the beams.

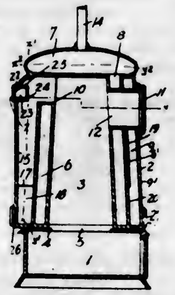
1,219,721. TEMPORARY BINDER. WILLIS E. GAYLORD and HENRY J. GAYLORD, Syracuse, N. Y. Filed Aug. 30, 1915. Serial No. 47,977. (Cl. 129—35.)



1. In a loose-leaf and pamphlet binder, the combination of a tubular support having a base section and a cap section, the base section having separate sets of jaw-openings, separate sets of jaws movable in said openings transversely of the base-section and provided with guide flanges slidable thereon, a plate slidable lengthwise of the base-section across and upon said flanges and provided with separate sets of diagonal slots, one for each jaw, those of both sets converging in the same direction, studs on the jaws riding in their respective slots, and a single screw for operating the plate.

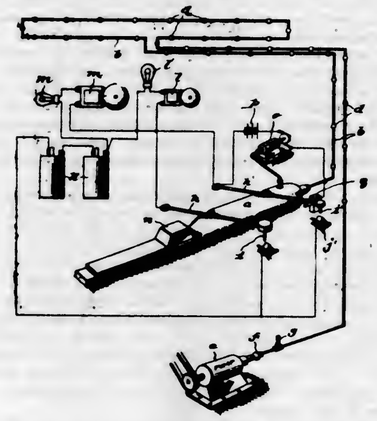
2. In a loose-leaf and pamphlet binder, the combination of a base plate having jaw-openings therethrough, jaws movable in said openings transversely of the plate and having laterally projecting flanges resting thereon, a jaw-operating plate slidable lengthwise of the base plate across said flanges, and provided with relatively short slots disposed at an angle of more than forty-five degrees to each other, studs on the jaws riding in said slots, and means for moving the jaw-operating plate endwise and holding it in its adjusted position.

1,219,722. HOT-WATER HEATER. WILLIAM GILLESPIE and CHARLES COONEY, Toronto, Ontario, Canada. Filed Feb. 28, 1916. Serial No. 81,045. (Cl. 122—160.)



In a hot water heater, the combination with the central chamber or fire pot, of a water chamber extending around the fire pot chamber, an exterior chamber extending around the water chamber, a vertical flue formed in the exterior chamber and having an opening in the bottom of one side wall, a duct leading from the top of the flue into the fire pot chamber, a chimney duct leading from the exterior chamber at the opposite side of the vertical flue to the side having the aforesaid opening, a double walled heating chamber located in the flue opposite the duct leading to the fire pot chamber and having a series of perforations in the inner wall thereof, and a suitable air regulating supply damper in the front wall of the double walled heating chamber.

1,219,723. PNEUMATIC ALARM SYSTEM. FRANK T. GRACEY and THOMAS W. LANDER, Eddyville, Ky.; said Lander assignor of one-fourth to said Gracey. Filed Jan. 6, 1914, Serial No. 810,539. Renewed Aug. 10, 1916. Serial No. 114,303. (Cl. 177—355.)



1. A fire alarm system consisting of a hollow-wire alarm-conduit extending throughout the building or buildings to be protected and having its two extremities situated in proximity to each other, a flexible air container in communication with one extremity of said conduit, a pump connected to the other end of said conduit to maintain air pressure in the conduit and thereby inflate the air container, this pump being arranged sufficiently near to the air container to enable the operator of the pump to observe the effect of increased air pressure upon the air container, a member bearing against the air container and adapted to move when the same is deflated, and an alarm mechanism adapted to be operated by the movement of said member upon deflation of the container.

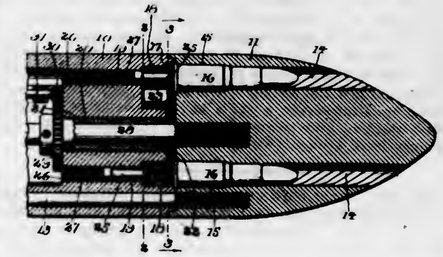
2. An alarm system comprising an inflatable bag, an alarm conduit connected thereto, a pump for maintaining the pressure in the conduit and the bag and thereby holding the bag inflated, a plurality of members bearing upon the bag and adapted to move when the bag is deflated, means being provided for pressing one of these members against the bag with a greater pressure than the other member, and two alarm mechanisms adapted to be brought into action successively by the movement of said members.

3. An alarm system consisting of a flexible air-container, an alarm conduit connected thereto, a pump for maintaining pressure in the conduit and the container, thereby inflating the container, a member bearing against the air-container and adapted to move when the same is deflated, an alarm mechanism adapted to be operated by the movement of said member, and a separate device normally tending to squeeze the air-container to thus compensate for minor leakages.

4. An alarm system consisting of a flexible air-tight-container, a hollow wire connected thereto, means being provided whereby this wire may be vented at various points, a main pump for maintaining pressure in the wire and container to thereby hold the container inflated, a member bearing upon the container and adapted to move when the same is deflated, an alarm mechanism operated by the movement of said member, and auxiliary pumping means adapted to be brought into operation by the movement of said member, this pumping means having a capacity sufficient only to replenish leakage for the purpose set forth.

5. A fire alarm system consisting of a hollow-wire alarm-conduit extending throughout the building or buildings to be protected and having its two extremities situated in proximity to each other, a flexible air container in communication with one extremity of said conduit, a pump connected to the other end of said conduit to maintain air pressure in the conduit and thereby inflate the air container, this pump being arranged sufficiently near to the air container to enable the operator of the pump to observe the effect of increased air pressure upon the air container, said air container consisting of an elongated, flexible bag, a plurality of members resting against said bag and adapted to descend successively when the bag is deflated, one of said members being adapted to compensate for slight leakage in the bag and the conduit, and alarm mechanisms adapted to be operated successively by the other members when the bag is deflated.

1,219,724. PROJECTILE. ANDREW W. GRAHAM, Buffalo, N. Y. Filed May 15, 1916. Serial No. 97,619. (Cl. 102—29.)



1. A projectile including a forward portion provided with a series of cartridge receiving openings and having a hollow base, a series of spring-pressed firing pins mounted in said base, and means normally holding said pins retracted and arranged to move and release successive pins.

2. A projectile including a forward portion provided with a series of cartridge receiving openings and having a hollow base, a series of spring-pressed firing pins mounted in said base, a disk revolubly mounted in said base and normally closing said openings, said disk having a series of openings arranged to be moved into alinement with the openings to permit movement of the firing pins.

3. A projectile including a forward portion provided with a plurality of concentric rows of forwardly directed rifled openings adapted to receive cartridges, a revoluble disk mounted in the projectile and provided with similar rows of openings adapted to register with the first openings, and spring-pressed firing pins normally bearing against said disk in alinement with the rifled openings.

4. A projectile including a forward portion provided with a plurality of concentric rows of forwardly directed rifled openings adapted to receive cartridges, a revoluble disk mounted in the projectile and provided with similar rows of openings adapted to register with the first openings, and the openings in one row being staggered with respect to the openings in the adjacent row.

1,219,725. LEDGER-TYPE MEMORIAL AND SEPULCHER. ANDREW W. GRAHAM, Buffalo, N. Y., assignor of one-half to Ellis M. Treat, Pittsburgh, Pa. Filed Aug. 30, 1916. Serial No. 117,696. (Cl. 72—7.)

1. The combination with a sepulcher having an opening in its top; of a ledger stone resting on top of said sepul-

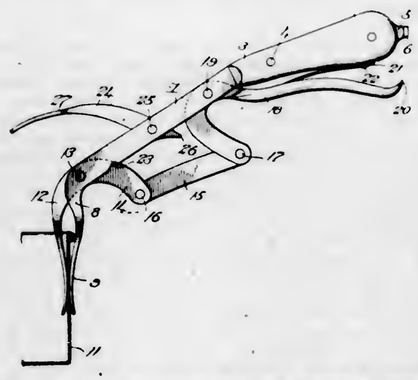
cher and having an opening registering with the first mentioned opening, a memorial normally covering said openings and resting on the ledger stone, means to raise said memorial clear of said ledger stone, and means to roll said memorial across the top of said ledger stone to uncover and cover said openings.



2. The combination with a sepulcher having an opening in its top; of a ledger stone resting on top of said sepulcher and having an opening registering with the first mentioned opening, a memorial normally covering said openings and resting on the ledger stone, said memorial having a chamber in its under side, a wheel supported carriage in said chamber, bolsters above said carriage and on which the memorial is adapted to rest, means to force said bolsters upward away from said carriage and thereby raise said memorial, and other means to rotate certain of said wheels and move the carriage laterally.

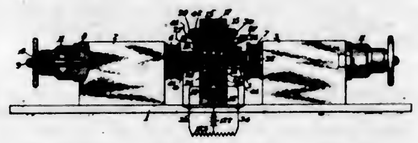
3. The combination with a sepulcher having an opening in its top; of a ledger stone resting on top of said sepulcher and having an opening registering with the first mentioned opening, a memorial normally covering said openings and resting on the ledger stone, said memorial having a chamber in its under side, a wheel supported carriage in said chamber, bolsters above said carriage and on which the memorial is adapted to rest, roller wedges between said bolsters and carriage arranged in opposed pairs, means to draw the wedges of the several pairs toward each other simultaneously, a shaft having two of said wheels fixed thereto, and means to rotate said shaft after the wedges have been drawn toward each other.

1,219,726. IMPLEMENT. ASA GRAY, Baileyton, Tenn. Filed Sept. 3, 1914. Serial No. 860,115. (Cl. 65—26.)



An implement comprising a shank having a substantially U-shaped jaw on one end thereof and extended at an angle to the shank, the arms of the jaw being arranged in spaced parallel relation with each other, a similar formed movable jaw co-acting with the first mentioned jaw and having a curved shank portion pivotally connected to said other shank, an arm projecting from said first shank at an angle thereto and extended to have its outer end lie above and in spaced relation relative to said jaws, the outer extremity of said arm being flattened, a hand lever pivoted to said first shank and co-extensive with said handle, a link connecting one end of said hand lever to the shank of the movable jaw, and means normally tending to hold said jaws opened, said arm being arranged to provide a stop to limit the open position of said jaws.

1,219,727. TELEPHONE REPEATING SYSTEM. ELWOOD GRISSINGER, Buffalo, N. Y., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed June 3, 1916. Serial No. 101,453. (Cl. 179—170.)



1. In a two-way talking telephone system, and in combination with the various elements thereof including transmitter, receiver and line, a repeater of the electro-magnet-microphone type having a mechanically vibratory element or system having a definite free period of practically simple harmonic vibration and means for supplying current to said microphone, the polarity of the connections of the repeater with said current supply and with the line being selected so that the mechanical phase displacement in the repeater will be in the direction to balance or compensate for phase displacement elsewhere in the system.

2. In a two-way talking telephone system, and in combination with the various elements thereof including transmitter, receiver and line, a repeater of the electro-magnet-microphone type having a mechanically vibratory element or system having a definite free period of practically simple harmonic vibration at frequencies as high as one-thousand or more periods per second, and means for supplying current to said microphone, the polarity of the connections of the repeater with said battery and with the line being selected so that the mechanical phase displacement in the repeater will be in the direction to balance or compensate for electrical phase displacement elsewhere in the system.

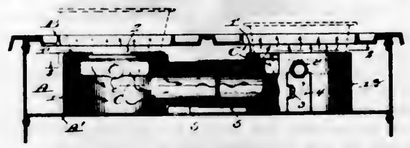
3. In a two-way talking telephone system, and in combination with the various elements thereof including transmitter, receiver and line, a repeater of the electro-microphone type having a mechanically vibratory element or system having a definite free period of practically simple harmonic vibration and a battery for supplying current to said microphone, the polarity of the connections of the repeater with said battery and with the line being selected so that the mechanical phase displacement in the repeater will be in the direction to balance or compensate for electrical phase displacement due to the electrical characteristics of the system.

4. In a two-way talking telephone system, and in combination with the various elements thereof including transmitter, receiver and line, a repeater of the electro-magnet-microphone type having a mechanically vibratory element or system having a definite free period of practically simple harmonic vibration and a battery for supplying current to said microphone, the polarity of the connections of the repeater with said battery and with the line being selected so that the mechanical phase displacement in the repeater will be in the direction to balance or compensate for electrical phase displacement due to the electrical characteristics of the system.

5. In a reciprocal or two-way talking, two repeater circuit, separate main line sections provided with phase balancing and current balancing extensions, twin repeaters and circuits connected in reciprocal relation between the balanced main line sections in such manner as not to disturb their balance, and so as to neutralize on the receiving side of each repeater the retransmitted current from the output side of the other repeater, said repeaters being of the electro-magnet-microphone type having mechanical vibratory systems of practically the same natural frequency, the connections of one repeater to its battery or to its supply circuit being reversed with respect to the corresponding connections of the other repeater; thereby establishing electromechanical phase relations in the two repeaters such that in case of singing, one of them will generate its characteristic high note and the other its characteristic low note.

[Claims 6 to 15 not printed in the Gazette.]

1,219,728. GAS-BURNER ATTACHMENT. ALFRED O. GUTSCH and ELLA C. GUTSCH, Sheboygan, Wis. Filed Jan. 7, 1916. Serial No. 70,739. (Cl. 126—216.)



The combination of a gas stove having a burner pan and burners positioned thereabove, open top and bottom hoods resting upon the bottom of the pan whereby the bottoms of the said hoods are closed, one at least of said hoods being disposed about and extending above a burner whereby to incase the burner, said hood having an open slot in its side wall adapted to receive the neck of the burner, a closure plate for the lower portion of the slot having grooves slidably receiving the edges of the slot, a communicating passage between the hoods and means for closing the tops of the hoods.

1,219,729. VALVE-STEM GAGE. GEORGE T. HACKLEY, Los Angeles, Cal.; Sarah C. Hackley, administratrix of said George T. Hackley, deceased. Filed Jan. 31, 1914. Serial No. 815,826. (Cl. 152—12.)



1. A valve stem gage comprising a valve stem having an opening in its side, means inside of the valve stem forming a conduit for fluid, there being a shoulder inside of said conduit, a follower surrounding said conduit to move therewith and shiftable in one direction by movement of the conduit, an indicator in the valve stem operated by movement of the follower and adapted to be viewed through said opening, and spring means tending to shift the follower in the opposite direction.

2. A valve stem gage comprising a valve stem, a nipple screwed in the outer end thereof, a valve in said nipple, a rubber tube secured to said nipple, the other end of the rubber tube being secured to the valve stem, said rubber tube having two internal diameters whereby the pressure in the tire will act to elongate the portion of the tube having the larger diameter, means for resisting such elongation, and an indicating device operated by the elongating movement of the tube.

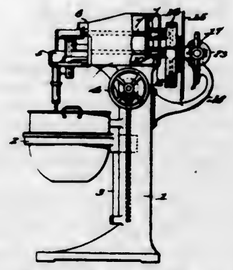
3. A valve stem gage comprising a valve stem with a valve at its outer end, an extensible tube within said valve stem with its upper end secured in airtight relation to conduct air to said valve, and its lower end secured to the valve stem, the tube having two internal diameters, means for resisting elongation of the larger portion of the tube, and an indicating device operated by the movement of the tube.

4. A valve stem gage comprising a valve stem, a nipple at the outer end thereof, a rubber tube within the valve stem for conducting air from the lower part of the valve stem to the valve, said tube having two internal diameters forming a shoulder, means at such shoulder for resisting movement of the tube, and indicating means operated by the movement of the tube.

5. A valve stem gage comprising a valve stem, a nipple at the outer end thereof, a rubber tube within the valve stem for conducting air from the lower part of the valve stem to the valve, said tube having two internal diameters, means for resisting movement of the tube, indicating means operated by the movement of the tube, and a follower slidable in the valve stem and engaging the tube, said indicating means bearing against said follower.

[Claims 6 to 13 not printed in the Gazette.]

1,219,730. MIXING-MACHINE. HARRY J. HAIGH, Stapleton, N. Y. Filed July 7, 1914. Serial No. 849,420. (Cl. 259—108.)



1. In a mixing machine, a standard, a bowl support, a beater mechanism provided with an operating shaft, a friction disk mounted on said shaft, a driving wheel also mounted on said shaft, and so secured to the driving wheel as to rotate with it, a gear secured to the shaft, a frame mounted on the standard and carrying a plurality of shafts provided with gears in mesh with the gear on the beater mechanism shaft and with a plurality of friction rollers engaging the face of the friction disk, together with means for synchronously shifting said friction rollers.

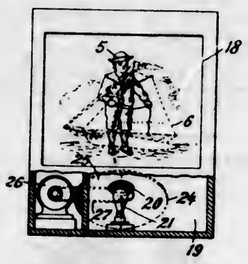
2. In a mixing machine, a standard, a bowl support, a beater mechanism provided with an operating shaft, a friction disk mounted on said sleeve, a driving wheel also mounted on said shaft, and so secured to the driving wheel as to rotate with it, a gear secured to the shaft, a frame mounted on the standard and carrying a plurality of shafts provided with gears in mesh with the gear on the beater mechanism shaft and with a plurality of friction rollers engaging the face of the friction disk, together with means for synchronously shifting said friction rollers, and a spring set substantially as described whereby its tension will press the friction disk and rollers together.

3. In a mixing machine, a beater mechanism and a friction power transmitter composed of a friction wheel, a plurality of friction rollers mounted in a rockable frame, said rollers being geared to the shaft of the beater mechanism and adjusted to engage the face of said friction wheel, all substantially as set forth.

4. In a mixing machine, a standard, a bowl support, a beater mechanism provided with an operating shaft, a sleeve surrounding said shaft, a friction disk mounted on said sleeve, a driving wheel also mounted on said sleeve, a gear secured to the shaft, a frame mounted on the standard and carrying a plurality of shafts provided with gears in mesh with the gear on the beater mecha-

nism shaft and with a plurality of friction rollers engaging the face of the friction disk, together with a feed screw, arms sleeved on the feed screw and engaging respectively the friction rollers and means for operating said feed screw substantially as set forth whereby the radial distance from the axis of the disk to the feed rollers may be varied.

1,219,731. PLURAL-IMAGE DEVICE. EDWARD HALL, Rutherford, N. J., assignor to Jersey City Printing Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 1, 1915. Serial No. 31,378. (Cl. 88—1.)



1. In a device of the character described, a plural image formed by superimposed images of contrasting colors, and adapted to be viewed directly by the eye of the observer, a source of artificial light, means for limiting its effective illumination to said plural image, and automatic means for alternating the character of said illumination in correspondence with said colors.

2. In a device of the character described, a plural image formed of superimposed images of contrasting colors, a source of artificial light adapted to illuminate said image, means for screening the direct light rays from the eye of the observer, means for projecting rays from said source upon said image, and automatic means for alternating the character of said rays falling upon said image in correspondence with said colors, comprising a continuously rotating color screen.

3. In a device of the character described, a plural image formed of superimposed images of contrasting colors, adapted to be viewed directly by the eye of the observer, a source of artificial light, means for screening the eye of the observer from its direct rays, and means for automatically varying the character of said light falling upon said image in correspondence with said colors, and adapted to render each separate image successively visible.

4. In a device of the character described, a plural image formed of superimposed images of contrasting colors, separate sources of artificial light corresponding in number and color to the several images superposed, means for screening the direct light rays from the eye of the observer, and means for altering the character of light falling upon said plural image in correspondence with said colors.

5. In a device of the character described, a plural image formed of superimposed images of contrasting colors, separate sources of artificial light corresponding in number and color to the several images superposed, means for screening the direct light rays from the eye of the observer, and means for altering the character of light falling upon said plural image in correspondence with said colors, said means comprising a flasher.

[Claims 6 to 10 not printed in the Gazette.]

1,219,732. TROLLEY-WIRE HANGER. ROBERT F. HAMILTON, Wheeling, W. Va. Filed Aug. 27, 1915. Serial No. 47,601. (Cl. 191—40.)

1. In combination, a trolley wire hanger comprising a securing member, a trolley wire supporting member, a universal joint connecting said members, means for holding said members rigid relative to one another, and means for insulating said members from one another.



2. A trolley wire hanger comprising a securing member, a supporting member, an adjustable connection between said members, means for insulating said members from one another and means for holding said members in rigid relation with one another.

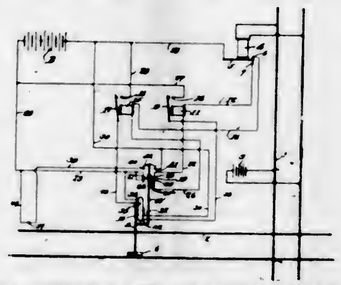
3. A trolley wire hanger comprising a depending trolley wire supporting stud, a support for said stud means for adjusting said stud to bring it into verical alinement, and means for insulating said stud from said support.

4. A trolley wire hanger comprising a depending trolley wire supporting stud, a universally adjustable member for supporting said stud, means for holding said member rigidly in position and insulating means for securing said stud to said member.

5. A trolley wire hanger comprising an outer hollow shell, a member positioned within said shell and movable relative thereto, means for securing said member rigidly relative to said shell, and a trolley wire support secured to said member and insulated therefrom.

[Claims 6 to 15 not printed in the Gazette.]

1,219,733. AUTOMATIC DERAILER. CLINTON S. HANCOCK and GEORGE W. KELLER, Portsmouth, Ohio. Filed June 27, 1916. Serial No. 106,223. (Cl. 104—127.)



1. The combination with intersecting railroad tracks, of a derailer for one track, a reversible actuating means for said derailer, a pair of electrical circuits including the actuating means, a pair of electrically operated means controlling said circuits, a second pair of circuits including said electrically operated means, means operated with the derailer for alternately opening and closing the second mentioned circuits, and means controlled by the occupancy of the other track for alternately opening and closing the second mentioned circuits.

2. The combination of a pair of intersecting railroad tracks, of a source of electrical energy connected to the rails of one track, a relay including an armature switch and magnet, said magnet being connected to said rails, a derailer coöperable with the other track, a reversible motor for operating said derailer, a pair of electrical circuits including said motor, a pair of relays including armature switches controlling said circuits and magnets, a second pair of circuits including the second mentioned magnets, the first mentioned switch alternately opening and closing the second mentioned circuits, and a switch operated with the derailer for alternately opening and closing the second mentioned circuits.

3. The combination with intersecting railroad tracks, of a derailer coöperable with one track, actuating means for said derailer, electrical means controlling the operation of the actuating means in opposite directions, electrical means controlling the aforesaid electrical means, means operable with the derailer for bringing the first mentioned electrical means out of operation when the derailer is moved to either position, and means controlled by the occupancy of the other track for bringing the second mentioned electrical means into and out of operation.

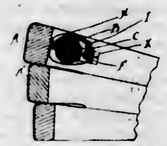
1,219,734. PIPE-CLEANING DEVICE. RUSSELL HARRIMAN, Kansas City, Mo. Filed Mar. 19, 1915. Serial No. 15,460. (Cl. 131—13.)



1. A pipe cleaner comprising a quill feather having its quill end cut approximately half in two adjacent the vanes of the feather to render the quill flexible at said cut portions, said quill end of the feather being cut away on one side to form a scoop portion between said first cut and the end of said quill portion.

2. A pipe cleaner comprising a quill feather having a notch in its quill end adjacent the vanes of the feather to render the quill flexible at said notched portion, said quill end of the feather being cut away along approximately the axial line of the quill to form a scoop portion between said notch and the end of said quill portion.

1,219,735. COVER FOR COLLAPSIBLE CANOPY-TOPS. FRED P. HARVEY, Detroit, Mich. Filed Mar. 15, 1915. Serial No. 14,587. (Cl. 21—62.)



1. The combination with a collapsible canopy top, of a slip-cover having the form of a bag adapted to be drawn over the collapsed top, and means of attachment between said slip-cover and top permitting disengagement and rolling for storage.

2. The combination with a collapsible canopy top, of a slip-cover for said top, and means of attachment between the inside of said slip-cover and said top, permitting of removal of said cover upon the reversing of the same, said means also permitting of the rolling and storage of said cover while carried by said top.

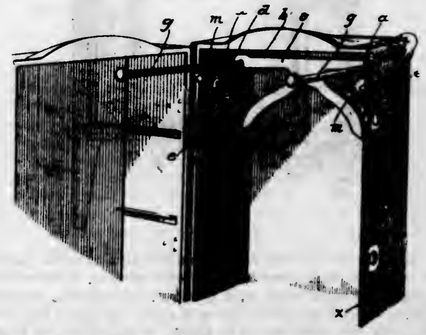
3. The combination with a collapsible canopy top, of a slip-cover for the collapsed top, and a flexible strip secured to the inside of said slip-cover and attached at its opposite end to one of the bows of the collapsible top, said strip permitting the disengagement of the cover by reversing the same and the rolling and storage of said cover adjacent to the bow to which it is attached.

4. The combination with a collapsible canopy top, of a slip-cover for the collapsed top, and a flexible strip secured to the inside of said slip-cover adjacent to one of the bows of the canopy top and having its opposite end also secured to said bow, the length of said strip being sufficient for the rolling and storage of the removed cover adjacent to said bow.

5. The combination with a collapsible canopy top, of a slip-cover for the collapsed top, a rod extending across one of the bows of the collapsible top, spaced from the top bar thereof, and a flexible strip attached to said rod and secured at its opposite end to the inside of said slip-cover at a point adjacent to the top bar of said bow for the purpose described.

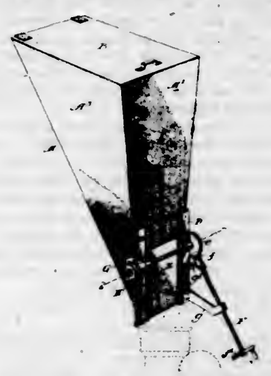
[Claims 6 to 11 not printed in the Gazette.]

1,219,736. EXTENSIBLE SUPPORTER FOR GARMENT-HANGERS. EUGENE W. HAWLEY, Philadelphia, Pa. Filed Aug. 17, 1915. Serial No. 45,866. (Cl. 211—16.)



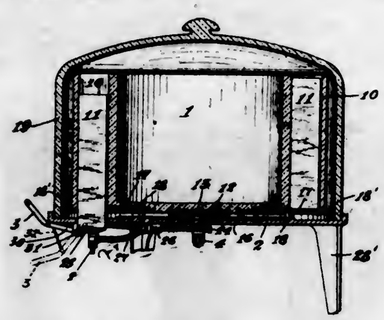
A supporter for garment hangers comprising a pair of horizontal rods adapted for fixed attachment at their rear ends to the rear wall of a trunk, extension rods pivotally attached to the horizontal rods, braces pivoted on and carried by the extension rods, and a bracket secured to each fixed rod, said bracket comprising a flat bar extending from the fixed rod successively downward, laterally and downward, the last named extension being adapted to be secured to the wall of the trunk, said bracket comprising also a loop secured to the last named downward extension of the bar and spaced from its lateral extension and adapted to hold and guide the brace, substantially as described.

1,219,737. DOUGH-CHUTE FOR DOUGH-DIVIDER HOPPERS. CYRUS HOYT HEILIG, York, Pa. Filed July 7, 1916. Serial No. 108,005. (Cl. 193—45.)



A chute or conveyer for feeding dough to a dough-divider hopper, said chute enlarging toward its upper end and tapering on all sides to its lower end, all of its sides being plain and opposite confronting sides thereof converging from their upper to their lower ends, the front presenting a continuous unobstructed surface and having a discharge opening therein at its lower end, and the back arranged at an acute angle to said front and steeply inclined so that the dough descends by gravity and is compressed on all sides with increasing force between converging walls, and means for regulating the flow through said discharge opening.

1,219,738. BUTTER-CUTTER. JOE E. HOWARD, Seattle, Wash., assignor of one-half to Irene Grant Seymour, Seattle, Wash. Filed Feb. 24, 1916. Serial No. 80,301. (Cl. 31—65.)



1. A butter serving device comprising a member having a series of butter-bar-holding cells opening downwardly, means for supporting said member for rotation, movable butter supporting plates for each cell, and means for withdrawing and replacing said plates in succession at a predetermined point in the path of rotation.

2. A butter serving device comprising a member having a series of butter-bar-holding cells opening downwardly, means for supporting said member for rotation, individual movable butter supporting plates for each cell, a stationary cam adapted to control the position of said plates, and cam-engaging means carried by each plate.

3. A butter serving device comprising a member having a series of butter-bar-holding cells opening downward, means for supporting said member for rotation, movable butter supporting plates for each cell, means for withdrawing and replacing said plates in succession at a predetermined point in the path of rotation, and a support positioned to receive the bar of butter when said plate is withdrawn.

4. A butter serving device comprising a member having a series of butter-bar-holding cells opening downward, means for supporting said member for rotation, movable butter supporting plates for each cell, means for withdrawing and replacing said plates in succession at a predetermined point in the path of rotation, and a support below said member and positioned to receive the bar of butter when said plate is withdrawn, said support having means for vertical adjustment.

5. A butter serving device comprising a member having a series of butter-bar-holding cells opening downward, means for supporting said member for rotation, movable butter supporting plates carried by said cell-containing member below each cell, means for withdrawing and replacing said plates beneath their respective cells in succession at a predetermined point in the path of rotation, and means operative at said predetermined points for cutting said bar into individual portions and successively and separately delivering each of said portions.

[Claims 6 to 14 not printed in the Gazette.]

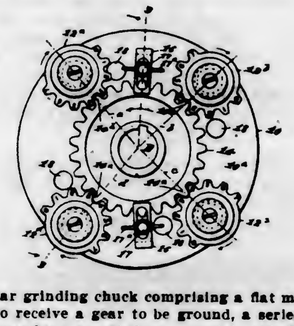
1,219,739. PHOTOGRAPHICALLY-SENSITIZED MEDIUM. ALBERT E. JACOBSON, New York, N. Y. Filed Dec. 7, 1915. Serial No. 65,572. (Cl. 95—8.)

1. A photographically sensitized medium, consisting of a tough fibrous and porous tissue impregnated with a rapid printing silver emulsion distributed through the tissue and upon both sides thereof.

2. A photographically sensitized medium consisting of a Japanese tissue impregnated with a rapid printing silver emulsion distributed through the tissue and upon both sides thereof.

3. A photographically sensitized medium consisting of a support of Japanese tissue, said support being impregnated with a rapid printing silver emulsion which is distributed upon both sides thereof to form an integral non-separable whole.

1,219,740. GEAR-GRINDING CHUCK. JAMES P. JOHNSON, Cleveland, Ohio. Filed Dec. 20, 1916. Serial No. 137,989. (Cl. 29—140.)



1. A gear grinding chuck comprising a flat mandrel face adapted to receive a gear to be ground, a series of geared gripping members mounted on eccentric spindles on said flat face, said spindles being located equidistant from the axis of rotation of the mandrel head, the teeth of the gripping members being arranged to engage the teeth of the gear to be ground.

2. A gear grinding chuck comprising a flat plate attached to the mandrel of the gear grinding lathe as a seat for the gear to be ground, a series of eccentric spindles located on said face plate equidistant from the axis of rotation of said plate, segmental gears mounted on said eccentric spindles and arranged to oscillate eccentrically thereon with their teeth in engagement with the teeth of the gear to be ground.

3. In mechanism for centering and retaining a gear in a gear grinding lathe, in combination with the mandrel of said lathe, a plain flat plate adapted to revolve with said mandrel and carry the gear to be ground, a series of eccentrically mounted gears arranged on said plate so that they will engage the teeth of the gear to be ground and bind on said gear when rotated in one direction and in the opposite direction release said gear.

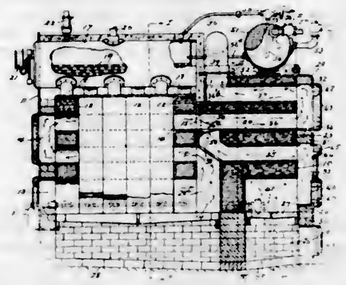
4. A gear grinding chuck comprising a flat mandrel face adapted to receive a gear to be ground, a series of geared gripping members mounted on eccentric spindles on said flat face, said spindles being located equidistant from the axis of rotation of the mandrel, the teeth of the gripping members being arranged to engage the teeth of the gear to be ground, and means for adjusting the eccentricity of the spindles.

5. A gear grinding chuck comprising a flat face plate attached to the mandrel of the gear grinding lathe as a seat for the gear to be ground, a series of eccentric spindles located on said face plate equidistant from the axis of rotation of said plate, geared gripping members mounted on said eccentric spindles and arranged to oscillate eccentrically thereon with their teeth in engagement with the teeth of the gear to be ground, means for adjusting the eccentricity of the spindles, and friction washers interposed between the gripping members and the face plate.

[Claims 6 to 14 not printed in the Gazette.]

1,219,741. HOT-WATER BOILER. BENJAMIN KAPLAN, New York, N. Y. Filed Feb. 18, 1915. Serial No. 9,055. (Cl. 122—37.)

1. The combination with a furnace having an S-shaped passage leading from the fire-box to the chimney and a water boiler superposed thereover for heating water, of a second boiler disposed adjacent the rear of the furnace, comprising a hollow body providing a single chamber for holding water, the lower part of the hollow body being recessed to provide a fire-box for a second fire and the upper part of the hollow body having spaced vertical and horizontal passages therein communicating with the S-shaped passage of the furnace whereby the fire from the furnace may be admitted through the passages of the second hot water boiler for heating water, or the fire from the second fire-box may be used for heating the water in the second boiler, and a damper for controlling the passages so as to admit the fire from the furnace or the second fire-box so that it may pass through the passages of the hollow body of the second boiler, substantially as set forth and for the purposes specified.



2. In a hot water heating system, the combination with a main boiler having an S-shaped smoke flue and a water circulating chamber, of a secondary boiler having an S-shaped smoke flue and a water circulating chamber, said main and secondary boilers being located adjacent each other and the passage in the smoke flue of the main boiler being in communication with one of the branches of the smoke flue in the secondary boiler, together with means for closing the communication between said flues.

3. In a hot water heater, a main boiler having a series of longitudinal passages therein, a secondary boiler adjacent said main boiler and closing the ends of two of said passages but leaving them in open communication one with the other, means for closing the end of one of said last mentioned passages and the end of a third passage but leaving said second and third passages in open communication one with the other, and a winding flue in said secondary boiler, the last mentioned of said passages in said main boiler being in communication with the flue in said secondary boiler at a point intermediate of its length.

1,219,742. BULLET. OTHO V. KEAN, Providence, R. I. Filed Mar. 25, 1916. Serial No. 86,567. (Cl. 102—28.)

1. In a bullet, a jacket composed of longitudinally disposed sections arranged transversely circumferentially of the bullet relative to each other.



2. In a bullet, in combination, a core, and a longitudinally sectional jacket therefor having longitudinally disposed internal stiffening ribs.

3. In a bullet, in combination, a core, and a conoidal jacket therefor composed of sections relatively transversely circumferentially arranged and anchored together by said core.

4. In a bullet, in combination, a core, a hard metallic jacket therefor composed of sections relatively transversely circumferentially arranged, and longitudinally disposed internal projections on said sections, said core anchoring said sections together.

5. In a bullet, in combination, a core, a hard metallic jacket therefor composed of sections relatively transversely circumferentially arranged, and longitudinally disposed and abutting internal projections on said sections, said core anchoring said sections together.

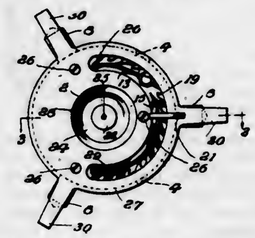
[Claims 6 to 12 not printed in the Gazette.]

1,219,743. NECKTIE ATTACHMENT. FRANCIS M. KNASEY, Watervliet, Mich. Filed May 5, 1916. Serial No. 95,728. (Cl. 2—11.)



A device of the class described comprising an arcuate resilient and relatively narrow strip having spurs extending therefrom, clips formed integrally with said strip and extending outwardly from one edge thereof and thence back upon themselves, shanks extending laterally from the other edge of said strip at oppositely disposed points from said clips, said shanks being of a greater length than the width of said strip, the outer ends of said shank being bent and terminating in clips overlying said shanks and extending toward the first named clips.

1,219,744. ADJUSTABLE EXPANDING CENTER. WALTER L. KEMPER, Fitchburg, Mass. Filed Apr. 27, 1916. Serial No. 93,927. (Cl. 33—191.)



1. A device of the class described comprising a casing, a plurality of arms extending from said casing, a member revolubly mounted within said casing and provided with means for moving said arms concentrically to the central axis of the same, a dog slidably mounted on said member, a spring fixedly mounted within said casing and operatively connected with said dog for forcing the latter outwardly, and ratchet teeth arranged on the inner side of said casing and engaged by said dog for locking said member against movement.

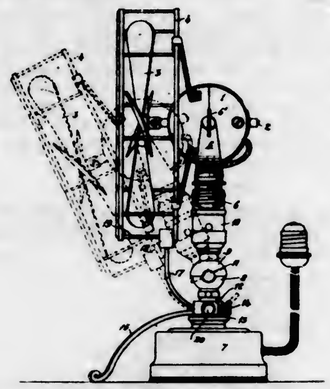
2. A device of the class described comprising a casing, a plurality of arms extending from said casing, a member revolubly mounted within said casing and provided with means for moving said arms concentrically to the central axis of the same, a dog radially slidable on said member, a spring fixedly mounted within said casing and operatively connected with said dog for forcing the latter outwardly, ratchet teeth arranged on the inner side of said casing and engaged by said dog for locking said member against movement, said casing being provided with an arcuate slot in one of its ends, and a handle extending laterally from the outer end of said dog for operating the same and for revolving said member within said casing.

3. A device of the class described comprising a casing, a plurality of arms projecting from said casing, means mounted within said casing for moving said arms radially and holding them concentric to the central axis of the same, and a centering member adjustably mounted within said casing with respect to the central axis thereof and having means for frictionally holding it in its adjusted position.

4. A device of the class described comprising a casing having a central opening at one end thereof, a plurality of arms projecting radially from said casing, means mounted within said casing for moving said arms radially and holding them concentric to the central axis of the same.

a centering pin extending longitudinally with respect to said casing, the inner end of said pin being disposed within the latter, the outer end of said pin extending through said opening to the exterior of said casing, and a head carried by the inner end of said pin yieldably clamped within said casing to allow said pin to be moved eccentrically with respect to the central axis of the same.

1,219,745. ELECTRIC FAN. ELIOT KEEN, Brooklyn, N. Y., assignor to The Aladdin Lamp Corporation, New York, N. Y., a Corporation of Delaware. Filed Aug. 18, 1915. Serial No. 46,103. (Cl. 230—1.)



In combination, a motor, an electric fan upon one end of the shaft thereof, a stem, pivotal connections between motor and stem at right angles to the motor axis, a universal joint at the base of said stem, means for fixing the motor with reference to the fork, and means for clamping the universal joint.

1,219,746. INSULATOR-BRACKET. LEWIS F. KEPPLER, Harlan, Iowa. Filed Aug. 6, 1915. Serial No. 44,099. (Cl. 173—321.)



1. In a metal insulator-bracket, a body-portion U-shaped in transverse section, having serrated edges adapted to penetrate a support, and perforate laterally-extending lugs at said edges adapted to rest against the support.

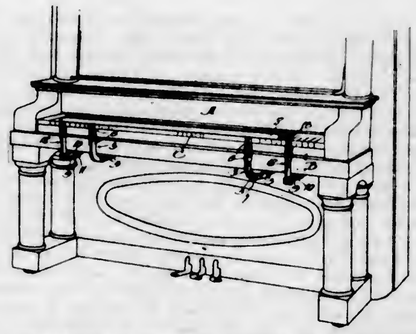
2. A pole-bracket of sheet-metal, having a body-portion substantially U-shaped in transverse section and wedge-shaped in side elevation, the longitudinal edges being serrated to enter a support and prevent spreading of said edges and twisting of the bracket relatively to the support, there being perforate laterally-extending lugs at said edges for resting against the support and receiving attaching-members driven thereinto.

3. A metal pole-bracket having a hollow body-portion U-shaped in transverse section and open at the lower end and at one side adjoining a support, means for attaching the bracket to the support, and means at the support-engaging edges for preventing lateral spreading of said edges.

4. A metal pole-bracket having a hollow U-shaped body-portion whose edges are adapted to interengage with a support to prevent spreading of said edges and lateral twisting of the bracket upon the support, means for securing the bracket to the support, and means adapted for engagement by detaching-means to pry the bracket loose from its support.

5. A sheet-metal pole-bracket having a body-portion substantially U-shaped in transverse section and adapted to rest with its open side against a support, means for attaching the bracket to the side of a support, and a lateral connecting-member between the support-engaging edges to prevent spreading thereof.

1,219,747. ATTACHMENT FOR PIANOS. AUGUST J. KITTEL, Torrington, Conn. Filed June 22, 1916. Serial No. 105,276. (Cl. 84—93.)



1. In a device of the class described, the combination with a piano; of a movable horizontal wrist engaging member extending across the front of the piano in advance of the keys thereof and disposed in a plane spaced a short distance above said keys, a movable stop disposed adjacent said keys for holding the latter against movement after said stop has been moved into engagement with said keys, and an operative connection between said member and said stop to actuate the latter upon actuation of the former.

2. In a device of the class described, the combination with a piano; of a vertically movable pivotally supported horizontal wrist engaging member extending across the front of the piano in advance of the keys thereof and disposed in a plane spaced a short distance above said keys, a movable stop disposed adjacent said keys for holding the latter against movement after said stop has been moved into engagement with said keys, and an operative connection between said member and said stop to actuate the latter upon the actuation of the former.

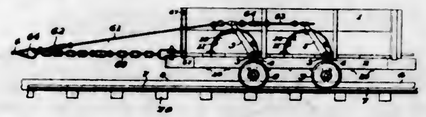
3. In a device of the class described, the combination with a piano; of a horizontal vertically movable pivotally supported wrist engaging rail extending across the front of the piano in advance of the keys thereof and disposed in a plane spaced a short distance above said keys, a vertically movable horizontal bar disposed beneath said keys for engaging and holding the latter against movement after said stop has been moved into engagement with said keys, and L-shaped arms having one of their ends secured to said rail and having their other ends in engagement with said bar to actuate the latter upon actuation of the former.

4. In a device of the class described, the combination with a piano; of a stop disposed adjacent the keys of the piano for holding the latter against movement after said stop has been moved into engagement with said keys, a horizontal movable wrist engaging member extending across the front of the piano, and supporting and connecting means for supporting said wrist engaging member in advance of the keys of the piano and in a plane spaced a short distance above said keys, and operatively connecting said wrist engaging member with said stop, said means being foldable so as to permit said wrist engaging member to be folded into an inoperative position out of the way of the player of the piano.

5. In a device of the class described, the combination with a piano; of a stop disposed adjacent the keys of the piano for holding the latter against movement after said stop has been moved into engagement with said keys, a horizontal movable wrist engaging member extending across the front of the piano, supporting and connecting means for supporting said wrist engaging member in advance of the keys of the piano and in a plane spaced a short distance above said keys, and operatively connecting said wrist engaging member with said stop, and including a slidable member mounted upon the forward key-supporting portion of the piano, said means being such as to permit said wrist engaging member to be swung downwardly to an inoperative position out of the way of the player thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,219,748. SAFETY-STOP FOR MINE-CARS. JOSEPH KLANSNIC, Black Diamond, Wash. Filed Dec. 8, 1916. Serial No. 135,738. (Cl. 188—47.)



1. The combination with a car body of levers pivoted upon the body and wheels journaled on said levers, a haulage rope and separate connections from said haulage rope to the car body and to the said levers.

2. The combination with a car body, shafts journaled on the body, downwardly extending arms secured to the shafts, wheels journaled on the lower ends of said arms, controlling levers secured to the shafts and separate connections from said levers and from said car to the haulage rope.

3. The combination with a car body, shafts journaled on the body, downwardly extending arms secured to the shafts, wheels journaled on the lower ends of said arms, controlling levers secured to the shafts, a haulage rope connected with the car body and a controlling member connecting the haulage rope with said controlling levers.

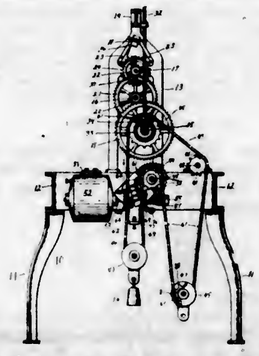
4. A car for operation on inclines comprising a body provided on its lower side with means for positive engagement with the track structure, wheels, lever arms pivoted upon the body and having the wheels journaled thereon, a haulage member connected with the car body and a controlling connection from the haulage member to said lever arms acting, when under strain, to maintain the car body in raised position.

5. A car for operation on inclines comprising a body, shafts journaled on the body, lever arms secured to the ends of said shafts outside the body, wheels journaled on the swinging ends of said lever arms, the body having pockets for the reception of the wheels and the lever arms when these swing upward, a haulage member and connections from said haulage member to the shafts acting to normally keep the wheels and their carrying arms down.

[Claims 6 to 10 not printed in the Gazette.]

1,219,749. CLOCK. HERMAN C. KORFHAGE, New Albany, Ind. Filed June 30, 1916. Serial No. 106,745. (Cl. 58—41.)

1. In a clock movement, a plurality of sprocket wheels, an endless chain disposed on and depending from said wheels, a weight adapted to ride in a bight formed by said depending chain, a motor for shortening said bight and raising said weight, and means adapted to be actuated by a descending portion of the chain to render said motor operative, and by an ascending portion thereof to render it inoperative, said means comprising an electric switch consisting of a base plate, contact blocks thereon, a spindle rotatably mounted in front of said plate and carrying brushes adapted to bear on said block and pins extended from the forward end of the spindle.



2. In a clock movement, a sprocket wheel mounted on an arbor thereof, an endless chain disposed on said wheel and depending therefrom, a sprocket wheel mounted on a lower level, said chain being looped up and its outer periphery passed over said second named wheel thereby forming bights on each side thereof, a weight for driving the clock train riding in one of said bights, an electric motor, operative connections between said motor and the second wheel for turning said wheel and raising the weight, an electric switch adapted to control the motor, said switch comprising a base plate, contact blocks thereon, a spindle rotatably mounted in front of said base plate and carrying brushes which bear on said blocks, pins extended from the forward end of the spindle and lying between the limbs of a bight, and projections on the chain adapted to engage with said pins.

3. In a clock movement, a sprocket wheel mounted on an arbor thereof, an endless chain disposed on said wheel and depending therefrom, a sprocket wheel mounted on a lower level, said chain being looped up and its outer periphery passed over said second named wheel thereby forming bights on each side thereof, a weight for driving the clock train riding in one of said bights, an electric motor, operative connections between said motor and the second wheel for turning said wheel and raising said weight, an electric switch comprising a base plate, a rotatable spindle extended therefrom and carrying brushes which bear on the plate, pins extended from the forward end of the spindle and lying between the limbs of the bight carrying the driving weight, projections on the chain adapted to engage with said pins to throw the switch, and a switch adapted to be actuated by the weight at the limit of its upward movement to render the motor inoperative.

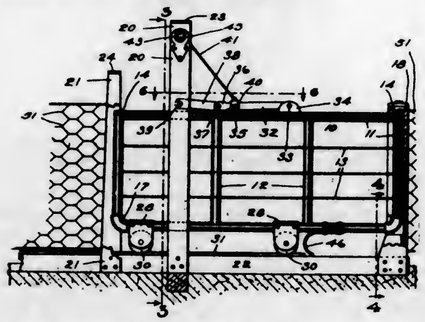
4. In a clock movement, a sprocket wheel mounted on the main arbor thereof, an endless chain disposed on said wheel and depending therefrom, a sprocket wheel mounted on a lower level, said chain being looped up and its outer periphery passed over said second named wheel thereby forming depending bights on each side thereof, a weight for driving the clock train riding in one of said bights, an electric motor, operative connections between said motor and the second wheel for turning said wheel and raising the weight, an electric switch comprising a base-plate, contact blocks thereon, a spindle rotatably mounted in front of said base-plate and carrying brushes which bear on the plate, pins extended from the forward end of the spindle and lying between the limbs of the bight carrying the driving weight.

5. In a clock, an arbor, a sprocket wheel mounted thereon, a second arbor carrying a sprocket wheel, an endless sprocket chain depending from said sprocket wheels, a

weight adapted to ride in a bight formed by said depending chain, a motor for shortening said bight and raising said weight, an electric switch comprising a base plate, contact blocks thereon, a spindle rotatably mounted in front thereof, brushes carried by said spindle and bearing on the blocks, a flange on the forward end of the spindle, pins extended from the face of the flange in planes parallel with the axis of the spindle, and lying between the limbs of a bight, and means whereby one limb of the bight engages with said pins and actuates the switch to energize the motor and the other limb of the bight actuates the switch to deënergize the motor.

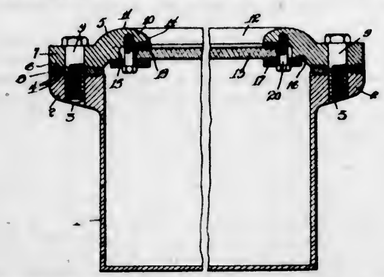
[Claims 6 and 7 not printed in the Gazette.]

1,219,750. GATE. MAYNARD LOOMIS, Orting, and PAUL M. LOOMIS, Puyallup, Wash., assignors to Warren Swartsbaugh, Puyallup, Wash. Filed June 21, 1916. Serial No. 104,843. (Cl. 39—73.)



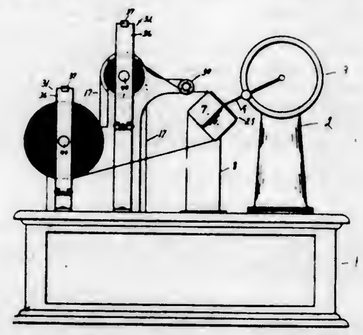
A gate comprising a rectangular frame formed of metal pipe and having its lower corners joined by elbow couplings, rollers on said frame, a trackway for said rollers, a vertical guide post for the rear end of said gate, a two-part vertical support disposed medially of the distance through which said gate may move, and extending above the top of said gate, rollers mounted in the top of said support, a link pivoted to said gate, links pivoted to said support, short links articulating said first-named links with said last named links, cables connected with said shorter links, said cables passing upwardly over said rollers in the top of said support, and thence outwardly therefrom in opposite directions, and a recessed post for the forward end of said gate, said post having shoulders that engage with said elbow couplings to prevent vertical movement of said gate.

1,219,751. BURIAL-CASKET. SPENCER O. LOYD, Modesto, Ill. Filed Jan. 3, 1914, Serial No. 810,235. Renewed Aug. 1, 1916. Serial No. 112,617. (Cl. 27—7.)



A burial casket comprising in combination, a containing body, a lid therefor provided with an opening having its lower marginal face serrated, a glass for closing said opening and having a serrated margin, a gasket between the serrated faces of the glass and said lid, said lid having a clamp seat on the inner face thereof and disposed outwardly of said serrated face, a strip clamp engaging said seat and the lower face of said glass inwardly of said opening, and fastening means disposed on the inner face of said lid for holding said clamp in place, substantially as described.

1,219,752. GRAPHOPHONE. PHILLIP MAJORANA, Louisville, Ky. Filed Mar. 30, 1916. Serial No. 87,712. (Cl. 274—11.)



1. In apparatus of the character described, a frame, a shaft mounted in and extending therefrom and provided with a socket in the extended end thereof, having a bayonet slot, a spindle adapted to fit in said socket, radial pins on the spindle adapted to be engaged in said slots, and a gate provided with a bearing adapted to receive the outer end of the spindle.

2. In a device of the character described, a frame, a shaft rotatably mounted in and extended from said frame, said shaft provided with a socket on its extended end, a receptacle positioned before said frame and having an aperture in alinement with the shaft, a spindle adapted to be projected through said aperture and engaged in said socket, and a closure for said receptacle provided with a bearing adapted to receive the free end of said spindle.

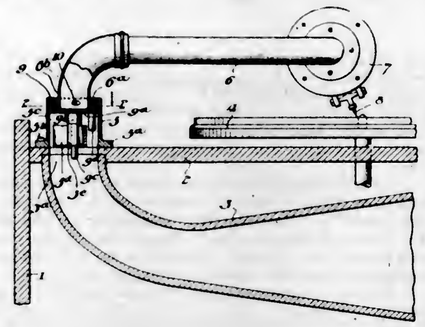
3. In a device of the character described, a frame, a shaft rotatably mounted therein and extending therefrom, said shaft provided on its extended end with a socket having a bayonet slot, a receptacle positioned before said frame and having an aperture in its rear wall in alinement with the shaft, a reversible spindle adapted to be projected through said aperture and entered in said socket, a radial pin near each end of said spindle adapted to be engaged in said bayonet slot, a closure for said receptacle provided with a bearing adapted to receive the free end of the spindle.

4. In a device of the character described, a frame, a shaft rotatably mounted therein and extending therefrom, said shaft provided on its extended end with a socket having a bayonet slot, a receptacle positioned before said frame and having an aperture in its rear wall in alinement with said shaft, a reversible spindle adapted to be projected through said aperture and entered in said socket, said spindle having a bearing in each end thereof, a radial pin near each end of the spindle adapted to be engaged in said bayonet slot, a closure for said receptacle having a recess adapted to receive the free end of the spindle and a pivot bearing in said recess adapted to enter the bearing in the end of the spindle.

5. In a device of the character described, a frame, a pair of shafts rotatably mounted therein and extending therefrom, each of said shafts being provided on its extended end with a socket having a bayonet slot, means for rotating one of said shafts, a receptacle positioned before said frame and having apertures in its rear wall in alinement with said shafts, reversible spindles adapted to be projected through said apertures and entered in said sockets,—a radial pin near each end of said spindles adapted to be engaged in said bayonet slots, closures for said receptacle provided with bearings adapted to receive the free ends of the spindles.

[Claim 6 not printed in the Gazette.]

1,219,753. TALKING-MACHINE. JOSEPH B. MARSHALL, Bridgeport, Conn., assignor to Rex Talking Machine Corporation, Wilmington, Del., a Corporation of Virginia. Filed Feb. 8, 1916. Serial No. 76,928. (Cl. 274—23.)



1. In a talking machine, the combination of a hollow support provided with a cross piece, a ring adapted to turn on said cross piece about a vertical axis, a projection on said ring adapted for engaging said cross piece to limit the movement of said ring, and a tone arm connected to said ring so as to oscillate on a horizontal axis, said ring and tone arm having means for limiting the oscillatory movement of the latter.

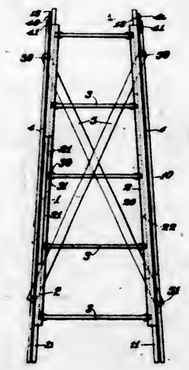
2. In a talking machine, the combination with the machine deck and horn, of a hollow member fixed on said deck in communication with said horn, said member containing a cross piece, provided with a vertical bearing, a ring adapted to oscillate about a vertical axis within said member, said ring containing a cross piece provided with a vertical bearing coacting with said cross piece and bearing first named, and a tone arm having an end thereof journaled within said ring on a horizontal axis.

3. In a talking machine, the combination with a machine deck and horn, of a vertically disposed hollow member fixed to said deck in communication with said horn, said member containing a cross piece provided with a vertical spindle bearing, a ring journaled within said member on said cross piece, said ring having a cross piece and a spindle thereon journaled in said bearing, a stud on said ring and adapted for engaging said cross piece first named to limit the oscillatory movement of said ring, and a tone arm having an end thereof journaled in said ring on the horizontal bearing means.

1,219,754. STEP-LADDER. OLE ANDREAS MELANG, Seattle, Wash. Filed Aug. 1, 1916. Serial No. 112,491. (Cl. 228—15.)

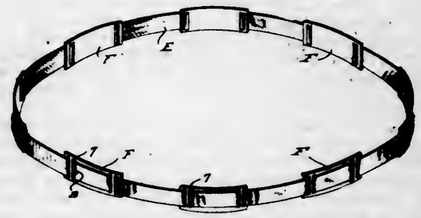
1. A ladder having side bars each composed of a front and a rear strip, means connecting the strips of each bar to permit relative longitudinal shifting, and steps pivotally connected by their four corners directly with said strips with the axes of pivots extending transversely of the steps.

2. A ladder having side bars, each composed of two bars lying alongside of each other, means connecting said bars to permit limited longitudinal shifting, steps, pivots fixedly connecting one end of the steps to the strips composing one side bar, the other side bar having sets of slots, one set in each strip and facing toward each other, and the corresponding ends of the steps having pivot projections entering said slots, whereby this end of the steps may slide upwardly upon the side bar when folding the ladder.



3. A ladder having side bars, each composed of two strips lying alongside each other, a step retaining strip extending along the outer edge of the inner face of the strip composing the side bars, spacing blocks interposed between said step retaining strip and the side bars to separate the two, and steps having side projecting pivot pins at each end adapted to fit beneath said retaining strips.

1,219,755. ADJUSTABLE SWEAT-BAND BACKING. JOHN J. MENDENHALL, Clearwater, Fla. Filed Aug. 16, 1916. Serial No. 115,294. (Cl. 2—32.)



1. A sweat band backing comprising in combination, a band of flexible material, and a plurality of shapers of inherently stiff material permanently mounted on and adjustable longitudinally of said band.

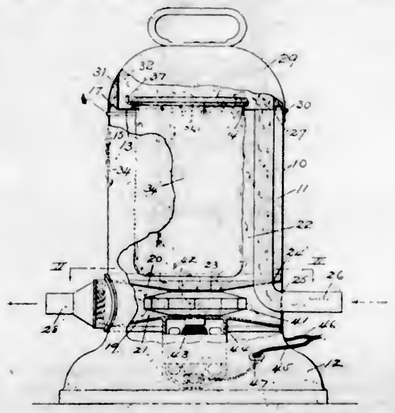
2. A sweat band backing comprising in combination, a band of flexible material, and a plurality of arcuate strips of inherently stiff material slidably mounted on and adjustable longitudinally of said band.

3. A sweat band backing comprising in combination, a band of flexible material adapted to be inserted between the crown and the sweatband of a hat, and a plurality of arcuate strips of inherently stiff bendable material adjustable longitudinally of said band.

4. A sweat band backing comprising in combination, a band of flexible material, and a plurality of arcuate strips of inherently stiff material provided with transverse slots through which said flexible band is trained.

5. A head spacing attachment for hats comprising the following elements in combination and permanently connected together to provide a unitary device; namely, an endless band adapted for insertion between the crown and the sweatband of a hat, and a plurality of relatively stiff bendable strips slidably mounted on the band and adapted for adjustment into various positions upon the hat and to be bent to conform to the curvature of the different parts of the head, said band being adapted to frictionally hold said strips in adjusted position.

1,219,756. VACUUM-CLEANER. HUBERT MEREDITH-JONES, New York, N. Y., assignor to The Rotor Vacuum Cleaner Company, Inc., a Corporation of New York. Filed Feb. 10, 1914. Serial No. 817,778. (Cl. 183—37.)



1. In a vacuum cleaner, a cylindric casing divided into an upper, a lower, and an intermediate chamber, an inlet and an outlet in the lower chamber, means connecting said inlet to said upper chamber, a dust receiver mounted in the intermediate chamber and communicating with said upper chamber, and means carried within the lower chamber for drawing air through said inlet thence into said dust receiver, and finally exhausting said air through said outlet.

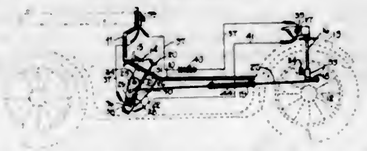
2. In a vacuum cleaner, a casing divided into an upper, a lower, and an intermediate chamber, an inlet and an outlet in said lower chamber, means connecting said inlet with said upper chamber, a dust receiver mounted in said intermediate chamber and communicating with said upper chamber, and a suction device mounted within said lower chamber and adapted to create a suction within said intermediate chamber.

3. In a vacuum cleaner, an open ended cylinder having a pair of transverse partitions in its lower portion, the upper of said partitions being provided with an opening, a suction device mounted on said lower partition, means for driving said device, an inlet and an outlet in said cylinder intermediate said transverse partitions, a dust receiver mounted in the open end of said cylinder, and a cover for said cylinder, said cover being adapted to form a closed chamber above said dust receiver, together with means connecting said inlet with the interior of said closed chamber, substantially as described.

4. In a vacuum cleaner, an open ended casing having a separate chamber in the lower portion thereof, said chamber being in open communication with the top portion of the casing, a dust receiver closing the open end of the casing, and a top for said casing adapted to form a closed chamber above said dust receiver, an inlet and an outlet in said cylinder located within said lower chamber, means for connecting said inlet with the interior of the upper closed chamber, together with means for creating a suction within said lower chamber immediately below said dust receiver.

5. In a vacuum cleaner, an open ended casing, a transverse partition in the lower end of said casing having a housing attached to the bottom thereof, a motor mounted in said housing, a suction device carried by said partition and adapted to be driven by said motor, a second partition in open communication with the interior of the casing, an inlet and an outlet in said casing intermediate said partitions, and a dust receiver secured in the open end of the casing; together with a top for said casing adapted to form a substantially closed chamber over said dust receiver, said inlet being in open communication with the interior of said substantially closed chamber, substantially as and for the purpose described.

1,219,757. OPERATING MEANS FOR AUTOMOBILE DIRECTION-INDICATORS. JOHN M. MIDDLETON and HENRY T. SHORB, Savannah, Ga., assignor of one-third to Frank Dieter, East Savannah, Ga. Filed Apr. 1, 1916. Serial No. 88,374. (Cl. 74—14.)

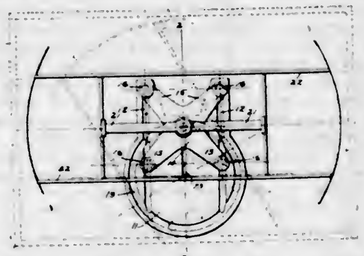


1. As a means for operating the direction signals of automobiles, a yoke, a vertically depressible toothed plunger mounted in said yoke, a spring urging the plunger in one direction, a toothed sector gear engaged by the teeth on the plunger and having an arm extending radially therefrom, and an operative connection attached to said arm.

2. Means for operating the direction signals of automobiles comprising a pair of yokes pivotally connected to each other for adjustment into angular or parallel relation, plungers extending each through one of the yokes, a spring for each plunger urging it in one direction, and operating means with which the plungers engage.

3. Means for operating the direction signals of automobiles comprising a pair of yokes pivotally connected to each other for adjustment into angular or parallel relation, plungers extending each through one of the yokes, operating means with which said plungers engage and shiftable by a movement of the plungers, and connecting rods attached to said operating means and adjustable for length.

1,219,758. DISPLAY-RACK. ANDREW E. MILLER, Baltimore, Md. Filed Aug. 21, 1913. Serial No. 785,894. (Cl. 211—16.)



1. An improvement in display racks comprising a carriage capable of bodily rotatable and reciprocatory movements, a rack member rigidly secured to said carriage to prevent relative rotation, and means engaging said carriage to prevent concurrent reciprocatory and rotatable movements of the carriage.

2. An improvement in display racks comprising a carriage capable of bodily rotatable and reciprocatory movements, a rack member rigidly secured to said carriage to prevent relative rotation, and a track plate provided with means for engaging said carriage to prevent concurrent rotary and reciprocatory movements of the carriage.

3. An improvement in display racks comprising a carriage, rollers supporting said carriage, and a track plate provided with intersecting straight and circular rails with which said rollers engage.

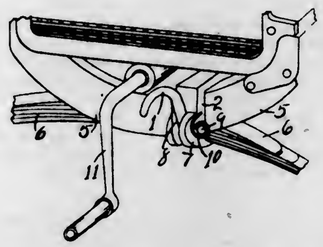
4. An improvement in display racks comprising a carriage provided with radiating arms, supporting rollers mounted in the ends of said arms, a track plate provided with intersecting straight and circular grooves with which said rollers engage, and a display rack rigidly secured to said carriage.

5. An improvement in display racks comprising a carriage provided with radiating arms, the ends of which

are provided with hemispherical chambers, ball casters mounted in said chambers, a track plate provided with intersecting straight and circular grooves with which said casters engage, and a display rack rigidly secured to said carriage.

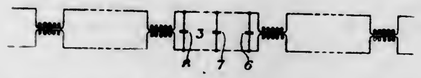
[Claims 6 to 15 not printed in the Gazette.]

1,219,759. ANTIKICKING DEVICE FOR AUTOMOBILES. HERMAN P. MILLER, Fort Worth, Tex., assignor of fifty-five one-hundredths to W. H. Logan, Fort Worth, Tex. Filed Oct. 9, 1916. Serial No. 124,543. (Cl. 123—185.)



A safety device for automobiles comprising a hook and means for mounting said hook yieldingly in the path of the automobile crank, said hook being adapted to yield to the automobile crank in the forward turning of the crank but adapted to catch and stop the crank when the crank is turned backwardly and said hook having a slanting surface for automatically drawing the crank out of operative position.

1,219,760. METHOD OF AND MEANS FOR CORRECTING LOADING-SECTION IRREGULARITIES IN TRANSMISSION-LINES. JOHN MILLS, Wyoming, N. J., and RAY S. HOYT, Brooklyn, N. Y., assignors to American Telephone and Telegraph Company, a Corporation of New York. Filed Sept. 13, 1916. Serial No. 119,939. (Cl. 178—45.)



1. The method of correcting irregularities in loading sections of periodically loaded transmission lines which consists in inserting in irregular sections corrective impedances of such value as to render the irregular section electrically equivalent to the normal section.

2. The method of correcting irregularities in loading sections of periodically loaded transmission lines which consists in connecting across irregular sections corrective impedances of such value as to render the resultant capacity of the irregular section equal to that of the normal section.

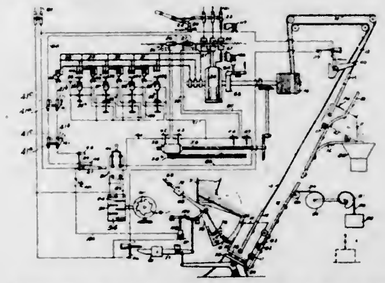
3. The combination of a transmission line, loading coils dividing said line into sections and means connected across said line for correcting irregularities of loading sections said means consisting of impedance elements having such values that the line is electrically equivalent to a uniformly loaded line.

4. The combination of a transmission line, loading coils dividing said line into sections and means connected across said line for correcting irregularities of loading sections said means consisting of condensers having such capacities that the line is electrically equivalent to a uniformly loaded line.

5. The combination of a transmission line, loading coils dividing said line into sections and means connected across said line for correcting irregularities of loading sections said means consisting of condensers having such capacities that the resultant capacities of the loading sections are equalized.

[Claims 6 and 7 not printed in the Gazette.]

1,219,761. SYSTEM OF CONTROL. RAY C. NEWHOUSE, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed May 9, 1912. Serial No. 696,107. (Cl. 214—8.)



1. A hoisting apparatus comprising a car to be hoisted, a power operated device for hoisting it, a bin from which material to be hoisted is supplied to the car, said bin having a gate, means for causing the closing of the bin gate when the weight of the material in the car reaches a predetermined value, means independent of the weight of the material in the car for controlling the closing of the bin gate, and means operated by the closing of the bin gate for causing said power operated device to hoist the car.

2. A hoisting apparatus comprising a car to be hoisted, an electric motor for hoisting it, a bin from which material to be hoisted is supplied to the car, said bin having a bin gate for controlling the supply of material to the car, means for causing the closing of the bin gate when the material in the car reaches a predetermined weight, means for controlling the closing of the gate independent of the weight of the material in the car, and means operated by the closing of the bin gate for causing the motor to be connected to hoist the car.

3. A hoisting apparatus comprising a car, a power operated device for raising and lowering said car, a bin from which material is supplied to the car when at the bottom of its travel, said bin having a gate which is automatically opened when the car reaches the bottom of its travel, means for causing the closing of said gate when the weight of the material supplied to said car has reached a predetermined value, means for controlling the closing of said gate independent of the weight of material supplied to said car, and means operated by the closing of the bin gate to cause said power operated device to raise the car.

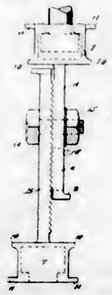
4. A hoisting apparatus comprising a car, a power operated device for raising and lowering said car, a bin from which material is supplied to the car when at the bottom of its travel, said bin having a gate which is automatically opened when the car reaches the bottom of its travel, means for causing the closing of said gate when the weight of the material supplied to said car has reached a predetermined value, means for controlling the closing of said gate independent of the weight of the material supplied to said car, means operated by the closing of the bin gate to cause the power operated device to raise the car, and means for causing the power operated device to stop raising the car when the latter reaches the top of its travel.

5. In a hoisting apparatus comprising a car, an electric motor for raising and lowering said car, a bin from which material is supplied to the car when at its lower limit of movement, said bin having a gate which is automatically opened by the car as the latter approaches its lower limit

of movement, means for causing the closing of said bin gate when the weight of the material in the car reaches a predetermined value, means for controlling the closing of said bin gate independent of the weight of the material in the car, and means operated by the closing of the bin gate for causing the completion of the motor circuit in the proper direction to cause it to raise the car.

[Claims 6 to 42 not printed in the Gazette.]

1,219,762. INSERT. CLARENCE P. OSBORN, Dayton, Ohio, assignor to The Dayton Malleable Iron Company, Dayton, Ohio, a Corporation of Ohio. Filed June 20, 1913. Serial No. 774,843. (Cl. 72—105.)

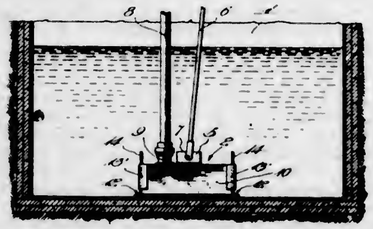


1. An extensible insert for concrete structures comprising a pair of members each composed of a shank and a base, and means for adjustably fastening the shanks together, one of said bases being hollow to permit the introduction of fixture means, and the other base having a face adapted to serve as a support, all so arranged that the insert may be embedded in the concrete either end to.

2. An extensible insert for concrete structures comprising a pair of members each composed of a shank and a base, and means for adjustably fastening the shanks together, said bases having a hollow portion adapted to receive fixture means and a portion adapted to serve as a means of support whereby either end of the insert may be used as a fixture support or as a means of support.

3. An extensible insert for concrete structures comprising a pair of members each composed of a shank and a base, and means for adjustably fastening the shanks together, said bases being recessed to receive a fixture means and being adapted also to serve as a support whereby either end of said insert may be used as a fixture support or as a means of support.

1,219,763. CISTERN-CLEANER. CURTIS SYLVESTER PEARCE, Big Island, Va. Filed Nov. 16, 1916. Serial No. 131,736. (Cl. 210—3.)



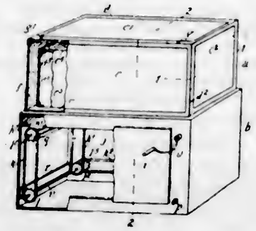
1. A device of the class described comprising a flat box, the opposite edges of the bottom thereof being extended beyond the sides to form scrapers, the sides of said box adjacent said scrapers having narrow horizontal slits formed by spacing the lower edges of said sides from the bottom, a handle connected with the top of said box, and means for removing material from said box.

2. A device of the class described comprising a box having inlet slits formed in its opposite sides adjacent its bottom, means for partially or wholly closing either of said slits, a handle connected with the top of said box, and means for removing material from said box.

3. A device of the class described comprising a flat box, the opposite edges of the bottom of the box being extended beyond the sides to form scrapers, the sides of said box adjacent said scrapers having narrow horizontal slits formed by spacing the lower edges of said sides from the bottom, a spring metal plate disposed in close proximity to each of the sides containing said slits, said plates being secured by their opposite ends to the other sides of said box, a plurality of plates adapted to be held by said spring metal plates to close said slits, a handle connected with the top of said box, and means for removing material from said box.

4. A device of the class described comprising a box, the opposite sides of said box having narrow slits adjacent the bottom, a spring metal plate disposed in close proximity to each of the sides containing said slits, said plates being secured by their opposite ends to the other sides of the box, a plurality of plates adapted to be held by said spring metal plates to wholly or partially close said slits, a handle connected to the top of said box, and means for removing material from said box.

1,219,764. TRANSPARENT REFRIGERATOR. EMILE JOSEPH PEGLER. New York, N. Y. Filed Mar. 23, 1916. Serial No. 86,149. (Cl. 45—71.)



1. A transparent display refrigerator having inner and outer glass walls spaced apart to form a receptacle between them, an insulation filler consisting of transparent liquid in the receptacle and a frame for supporting the walls in position, the frame being provided with openings for filling and replenishing the liquid filler.

2. A refrigerating compartment having transparent panels made of inner and outer glass walls spaced apart to form a receptacle between them, an insulation filler consisting of transparent liquid in the receptacle and a water-tight frame for supporting the glass walls in position.

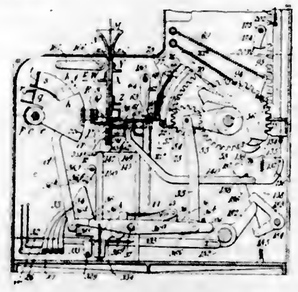
3. In a refrigerating compartment a transparent display panel having inner and outer glass walls spaced apart to form a receptacle between them, an insulation filler consisting of transparent liquid in the receptacle and a frame for supporting the glass walls in position.

4. A refrigerator body having transparent parts which are built of inner and outer glass sheets spaced apart to form a receptacle between them, an insulation filler consisting of transparent liquid in the receptacle.

5. A display refrigerator having inner and outer glass walls spaced apart to form a receptacle between them, an insulation filler consisting of transparent liquid in the receptacle, a frame for supporting the walls in position, an opening in the refrigerator, a closure for the opening, and means for moving the closure to and from closed position.

1,219,765. RECORDING APPARATUS AND DEVICE. JOHN ROYDEN PEIRCE, New York, N. Y. Filed Apr. 18, 1908. Serial No. 427,859. (Cl. 234—43.)

1. In a machine for making a record on a card, in combination, recording devices at one side of the position of the card, and calculating mechanism controlling said recording devices and arranged at the opposite side of the card, and rate-selecting mechanism arranged above the recording and calculating mechanisms and adapted to control a rate according to which the calculation and the record are made, and escapements for stopping and starting arranged above and controlling the operation of the rate mechanism.



2. The combination with a setting pin adapted to cooperate with a correspondingly located opening in a card, of an operating shaft, and means actuated by said setting pin for releasing said operating shaft.

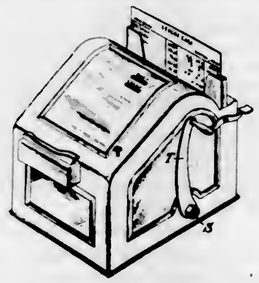
3. In combination, a setting pin 144 adapted to pass through a correspondingly located opening in a card, a main shaft 152, a hook 183 normally preventing the operation of said main shaft, and intermediate connections between the setting pin and the hook for withdrawing the latter when the setting pin is operated.

4. In combination, a setting pin 144, a rod 226 normally preventing its forward movement, and means actuated by the introduction of a card into the machine for releasing and permitting the forward movement of the setting pin.

5. The combination with a setting pin 144, of a pin 226 lying in front of a shoulder carried by said setting pin and adapted to yield to permit the forward movement of said setting pin and means for forcing and holding back said pin 226 to hold the setting pin back.

[Claims 6 to 98 not printed in the Gazette.]

1,219,766. BOOKKEEPING-MACHINE. JOHN ROYDEN PEIRCE, New York, N. Y. Filed Feb. 20, 1909. Serial No. 479,189. (Cl. 235—60.)



1. A machine of the class described including amount printing mechanism, amount reversing mechanism for reversing the printing of such amounts as debits and credits respectively, and amount reversing punches controlling said reversing mechanism.

2. A machine of the class described including balance punching mechanism adapted to record by perforations the balances of a series of debits and credits and balances printing mechanism operatively connected to said balance punching mechanism so as to record in print the balance which is recorded by perforations on the same operation of the machine.

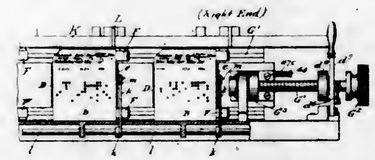
3. A machine of the class described including mechanism for adding or subtracting a reading on a controlling card to or from a previous reading on a recording sheet and automatically reproducing the reading from the controlling card in one color or another according to perforations in the controlling card.

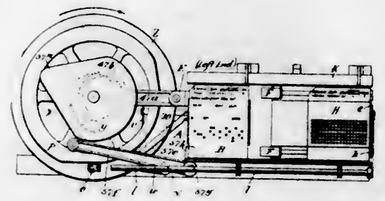
4. A machine of the class described including mechanism for adding or subtracting a reading on a controlling card to or from a previous reading on a recording sheet and automatically reproducing the reading from the controlling card in one color or another according to perforations in the recording sheet.

5. A machine of the class described including mechanism for adding or subtracting a reading on a controlling card to or from a previous reading on a recording sheet and automatically reproducing the reading from the controlling card in one color or another according to perforations in the controlling card and in the recording sheet.

[Claims 6 to 71 not printed in the Gazette.]

1,219,767. SORTING-MACHINE. JOHN ROYDEN PEIRCE, New York, N. Y. Filed July 27, 1911. Serial No. 640,937. (Cl. 83—92.)





1. A machine of the class described including in combination, a clip, means for causing said clip to engage and forward cards along a line and means for shifting said clip laterally to throw selected cards out of said line.

2. A machine of the class described including in combination, a series of clips, means for causing said clips to engage and forward cards along a line and means for shifting said clips laterally to throw selected cards out of said line, and pockets adjacent to said line adapted to receive the cards which are so thrown out.

3. A machine of the class described including in combination, a series of clips arranged along a line, means for advancing and retracting said clips, means for causing said clips in their retracted positions to engage cards, means for shifting said clips outward on their advance movement when cards are to be sorted and in order to throw out the selected cards and means for shifting said clips inward on their retractile movement to pass the cards without interference.

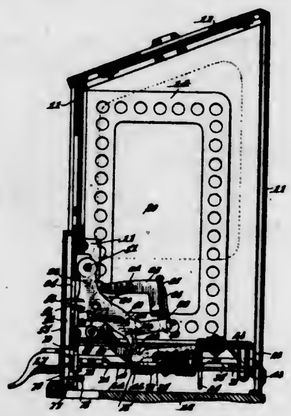
4. A machine of the class described including in combination, a series of clips arranged along a line, means for advancing and retracting said clips, means for causing said clips in their retracted positions to engage cards, means acting at each operation to move the clips outward to the normal line before an advance movement and in-

ward to the rear of said line before a retractile movement and means acting when a card is to be sorted to shift the clip holding said card outward beyond said normal line.

5. A machine of the class described including in combination, a series of clips arranged along a line, means for advancing and retracting said clips, means for causing said clips in their retracted positions to engage cards, means acting at each operation to move the clips outward to the normal line before an advance movement and inward to the rear of said line before a retractile movement, means acting when a card is to be sorted to shift the clip holding said card outward beyond said normal line, and a series of pockets arranged alongside of said normal line to receive cards which are shifted outward beyond their normal line of advance.

[Claims 6 to 31 not printed in the Gazette.]

1,219,768. VENDING-MACHINE. THOR W. PETERSEN, Chicago, Ill., assignor, by mesne assignments, to J. Luther Peacock, Chicago, Ill. Filed Aug. 11, 1915. Serial No. 44,923. (Cl. 194—93.)



1. A vending machine comprising a casing provided with a coin chute; a reciprocatory slide arranged to discharge articles from said casing; a cam member operatively connected with said slide; a locking dog arranged to engage said member after initial movement thereof to prevent discharging operation, said dog being arranged to traverse said coin chute in effecting such movement, said cam being arranged to reversely move said dog; and a stop in said chute arranged to arrest a coin in position to prevent engaging movement of said dog, substantially as described.

2. A vending machine comprising a casing provided with a coin chute; a reciprocatory slide arranged to discharge articles from said casing; a cam member operatively connected with said slide; a locking dog arranged to engage said member after initial movement thereof to prevent discharging operation, said dog being arranged to traverse said coin chute in effecting such movement, and said cam being arranged to reversely move said dog; and a stop on said dog projecting into said chute, substantially as described.

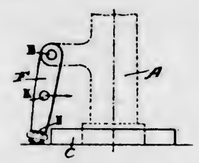
3. A vending machine comprising a casing provided with a coin chute; a reciprocatory slide arranged to discharge articles from said casing; a notched cam member operatively connected with said slide; a locking dog arranged to engage said member after initial movement thereof to prevent discharging operation, said dog being arranged to traverse said coin chute in effecting such movement, and said cam being arranged to reversely move said dog; and a stop on said dog projecting into said chute arranged to engage a coin to prevent engaging movement of said dog, substantially as described.

4. A vending machine comprising a casing provided with a coin chute; a reciprocatory slide arranged to discharge articles from said casing; a notched cam member operatively connected with said slide; a locking dog arranged to engage the notch in said member after initial movement thereof to prevent discharging operation, said dog being arranged to traverse said coin chute in effecting such movement, and said cam being arranged to reversely move said dog; and a stop in said chute arranged to arrest a coin in position to prevent engaging movement of said dog, substantially as described.

5. A vending machine comprising a casing provided with a coin chute; a reciprocatory slide arranged to discharge articles from said casing; a notched cam member operatively connected with said slide; a locking dog arranged to engaged the notch in said member after initial movement thereof to prevent discharging operation, said dog being arranged to traverse said coin chute in effecting such movement, and said cam being arranged to reversely move said dog; a stop in said chute arranged to arrest a coin in position to prevent engaging movement of said dog; and means operable by said reciprocatory slide for discharging an arrested coin, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,219,769. TROLLEY-POLE-POSITIONING MECHANISM. PIERRE PIGACHE and CHARLES EMILE PIGACHE, Paris, France. Filed Dec. 15, 1915. Serial No. 66,916. (Cl. 191—85.)



1. In a trolley mechanism, the combination, with a rotatable base for a trolley pole; of a cam track whereon said pole base is axially mounted; and a lever fulcrumed on said base and connected to be automatically rocked about its fulcrum by the trolley pole when the latter jumps the trolley wire, said lever having its lower end arranged to bear against and travel along said cam, so as to turn said base about its axis and thereby bring said pole substantially into line with the longitudinal axis of the car.

2. In a trolley mechanism, the combination, with a rotatable base for a trolley pole; of a cam track whereon said pole base is axially mounted; and a member pivotally mounted on said base and arranged to engage said cam; said member being connected to be automatically moved about its pivot when the trolley pole moves out of line with the longitudinal axis of the car, on jumping the trolley wire, whereby said member is forced against said cam and caused to travel along the same, so as to turn said pole base about its axis and restore said pole substantially into line with said car axis.

1,219,770. COMBINED TAG AND TOY. MARY AMELIA POTVIN, Detroit, Mich., assignor of one-half to Eugene E. Robb, Detroit, Mich. Filed May 20, 1916. Serial No. 98,819. (Cl. 46—37.)

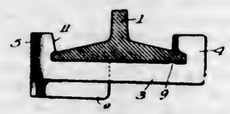
1. A device of the character described including a tag comprising a figure formed to represent a human hand and adapted to be worn for identifying purposes, and an elastic cord forming an attaching loop for the tag and adapted for connection to said figure whereby to provide a toy.

2. As a new article of manufacture, a symbolic figure adapted to be worn for identifying purposes and having a cord connected thereto to provide a tag with the said cord forming an attaching loop for the tag and adapted to



provide an element for bouncing the figure whereby to produce a toy.

1,219,771. RAIL-ANCHOR. FREDERICK A. PRESTON, Highland Park, Ill., assignor to The P. & M. Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 17, 1916. Serial No. 91,518. (Cl. 238—4.)



1. A rail anchor comprising a vertically arranged flat steel bar having a jaw at each end thereof so disposed as to require the rail anchor to be sprung in applying it to the rail base, the upper surface of one of said jaws being inclined to aid in applying the anchor.

2. In a rail anchor comprising a spring steel member, having a rail gripping jaw at one end and having the other end bent around forming an extension which constitutes a tie abutment, a pair of jaws one at each side of said bend and an inclined surface above each jaw, which surfaces are crowded against the side of the rail base when the rail anchor is being positioned.

3. A rail anchor comprising a tension member having a rail-engaging jaw at one end, the other end of said member being bowed to form a plurality of rail-engaging jaws, said latter jaws being adapted to be sprung into position.

4. A rail anchor comprising a spring steel member, having a rail gripping jaw at one end and a plurality of jaws at the other end, an inclined surface above each of said last-mentioned jaws, which surfaces are wedged against the sides of the rail base when the anchor is being sprung into position.

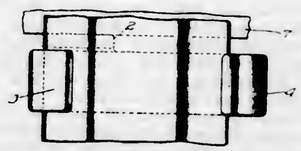
5. A rail anchor comprising a transverse element, having a vertical abutment at each end thereof, a plurality of inclined surfaces above one of said abutments constituting a wedge, and a shoulder at the lower end of each of said surfaces to prevent displacement of the rail anchor.

[Claim 6 not printed in the Gazette.]

1,219,772. ANTICREEPER. FREDERICK A. PRESTON, Highland Park, Ill., assignor to The P. & M. Co., Chicago, Ill., a Corporation of Illinois. Filed June 16, 1916. Serial No. 103,968. (Cl. 238—4.)

1. An anti-creeper comprising a spring steel member having a jaw at one end and a hook at the other end, the extreme end of said hook engaging the upper edge of the rail base.

2. A rail anchor comprising a spring steel member having a jaw at one end which maintains a firm frictional engagement on the rail base, and having a hook at the other end, the extremity of which engages the upper edge of said rail base, said extremity having a notch which prevents lateral displacement of said anchor.



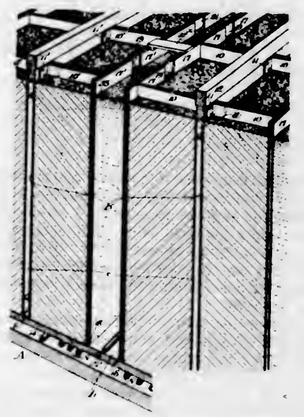
3. A rail anchor having an integral jaw at one side and having a hook at the other side thereof provided with a notch to fit the edge of the rail base, and a tie-abutting flange intermediate said parts all of which are integrally formed of spring steel.

4. A rail anchor comprising a steel bar having a jaw at one end bent to an angle somewhat less than that of the rail base section, a tie-abutting flange at the end near said jaw, said bar being bent downwardly near said jaw, and a hook at the opposite end arranged to be sprung upwardly against the other side of the rail base.

5. A rail anchor comprising a transverse member beneath the rail base having one end bent to form a jaw smaller than the rail base section whereby said jaw is sprung when in place and exerts a powerful vertical grip thereon, a tie-abutting portion adjacent to said jaw to stiffen the latter and transmit the creeping thrust without skewing the anchor appreciably, and means at the other end of said transverse member for insuring a powerful lateral grip of said jaw on the rail base.

[Claims 6 and 7 not printed in the Gazette.]

1,219,773. ICE-MAKING MACHINE. THOMAS H. RAY, Somerville, Mass. Filed June 26, 1916. Serial No. 105,796. (Cl. 62—163.)



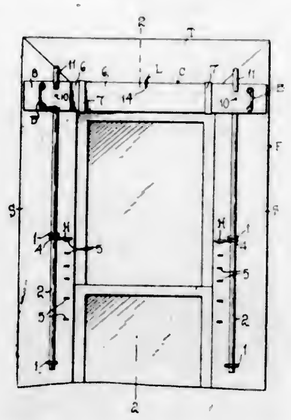
1. An ice-forming plate; two hollow metal dividing blades mounted upon and contacting said plate at right angles; two rocking hollow metal blades slightly separated from each other vertically, pivotally mounted at their bottom portions and adapted to be moved toward or away from said metal dividing blades, and into or out of contact with the adjacent edges of said blades.

2. An ice-forming plate; two ice-forming hollow metal dividing blades at right angles thereto, and in intimate contact therewith; two pivotally mounted ice-forming hollow metal blades having between them vertically a space to permit agitation of the water within the cell to be frozen, and adapted to moove into or out of contact with

the adjacent edges of the said hollow dividing blades to facilitate the removal of the ice, as by lifting from between the cell-forming freezing surfaces; and suitable means for releasing the ice from each of said ice-forming surfaces.

3. An ice-forming plate; two hollow metal dividing blades fixed at right angles to said plate, and with said plate forming the three sides of an ice-forming cell; pipe connections with the bottom of each dividing blade whereby a warm medium may be introduced into and withdrawn from said blade; two hollow metal blades having an agitation space between them, pivotally mounted at their bottoms, and adapted to be moved toward or away from said ice-forming dividing blades, and into or out of contact with the adjacent edges of said two metal dividing blades fixed to said plate; and pipe connections with the bottom of said pivoted blades whereby a heated medium may be introduced and withdrawn from said pivoted blades; all designed to obtain all the objects of my invention.

1,219,774. SHADE AND CURTAIN HANGER. LUCIAN B. REEDS, Fulton, Ky. Filed Jan. 29, 1917. Serial No. 145,222. (Cl. 156—27.)

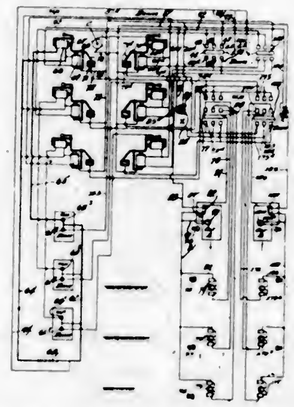


1. In combination with a window frame, vertical rods supported by said frame adjacent opposite sides thereof and mounted for endwise movement, a cross member connecting the upper portions of the rod, a latch carried by the frame and adapted to overlie the outer face of the cross member when the rods are substantially at the limit of their upward movement, and curtain supporting means carried by the rods.

2. In combination with a frame, spaced rods disposed vertically of the frame and mounted for endwise movement independently of the frame, each of said rods being provided at a point intermediate its length with an annular recess, a holding member coacting with each of the rods and provided with an eye surrounding the rod and seated within the annular recess, shoulders carried by the frame adjacent each of the rods and upon which the holding members are adapted to rest to hold said rods against downward movement, and shade supporting means carried by the rods.

3. In combination with a window frame, vertical rods supported by said frame adjacent opposite sides thereof and mounted for endwise movement, a cross member connecting the upper portions of the rod, a latch carried by the frame and adapted to overlie the outer face of the cross member when the rods are substantially at the limit of their upward movement, said latch being resilient and frictionally engaging the outer surface of the cross member, and curtain supporting means carried by the rods.

1,219,775. ELEVATOR SIGNALING APPARATUS AND CIRCUITS THEREFOR. CHARLES A. REINERS, Hoboken, N. J. Filed Feb. 1, 1912. Serial No. 674,643. (Cl. 177—336.)



1. In an elevator signaling apparatus in combination, a car, a signaling device for each of a plurality of floors, means for operating said signaling devices comprising up and down passenger-buttons at each floor, signaling circuits corresponding to said signaling devices, and circuit-controlling mechanism operated by the car and coöperating with said up and down passenger-buttons to change the character of the current to be sent through said signaling device when the car changes its direction of movement.

2. In an elevator signaling apparatus in combination, a car, a signaling device for each of a plurality of floors, means for operating said signaling devices comprising up and down passenger-buttons at each floor, signaling circuits corresponding to said signaling devices, and circuit-controlling mechanism operated by the car and coöperating with said up and down passenger-buttons to cause current of one character to flow through said signaling device when said car is going up and a current of another character to flow through said signaling device when the car is going down.

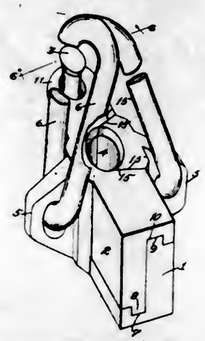
3. In an elevator signaling apparatus in combination, a car, a signaling device for each of a plurality of floors, means for operating said signaling devices comprising up and down passenger-buttons at each floor, signaling circuits corresponding to said signaling devices, and circuit-controlling mechanism operated by the car and coöperating with said up and down passenger-buttons to change the character of the current to be sent through said signaling device when the car changes its direction of movement, said signaling device being provided with means to give a different indicating signal for each character of current flowing therethrough.

4. In an elevator signaling apparatus in combination, a car, a signaling device for each of a plurality of floors, means for operating said signaling devices comprising up and down passenger-buttons at each floor, signaling circuits corresponding to said signaling devices, and circuit-controlling mechanism operated by the car and coöperating with said up and down passenger-buttons to cause current of one character to flow through said signaling device when said car is going up and a current of another character to flow through said signaling device when the car is going down, said signaling device being provided with means to give up and down indicating signals in response to each different character of current passing therethrough and in accordance with the movement of the car.

5. In an elevator signaling apparatus in combination, a car, a signaling device for each of a plurality of floors, means for operating said signaling devices comprising up and down passenger-buttons at each floor, signaling circuits corresponding to said signaling devices, and circuit-controlling mechanism operated by the car and coöperating with said up and down passenger-buttons to change the direction of the current to be sent through said signaling device when the car changes its direction of movement.

[Claims 6 to 50 not printed in the Gazette.]

1,219,776. SUCKER-ROD AND CASING ELEVATOR. LEROY L. RICHARD, Coalinga, Cal. Filed May 8, 1916. Serial No. 96,065. (Cl. 57—9.)



1. A sucker-rod and casing elevator comprising complementary jaw-members the meeting faces of which are fashioned to embrace the rod or casing; a connection between said jaw-members adapting them for an opening and closing movement, and for a relative movement, in all positions, in the plane of their meeting faces; and interengaging devices on said jaw-members for locking them against their opening and closing movement and depending for their engagement and release upon the relative movement of said members in the plane of their meeting faces.

2. A sucker-rod and casing elevator comprising complementary swinging jaw-members the meeting faces of which are fashioned to embrace the rod or casing, said members being free in all positions for relative movement in the plane of their meeting faces, parallel with their axis of swinging movement and having parts interlocking against said swinging movement and depending for engagement and release upon said relative movement; and a hinge connection between said members at one end adapting them for swinging movement at right angles to the plane of their meeting faces, said hinge connection having a play sufficient to permit said relative movement of said members in the plane of their meeting faces.

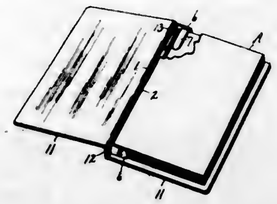
3. A sucker-rod and casing elevator comprising complementary jaw-members the meeting faces of which are fashioned to embrace the rod or casing; a connection between said jaw-members adapting them for an opening and closing movement, and for a relative movement, in all positions, in the plane of their meeting faces; and tongues and grooves on the meeting faces of the jaw-members interlocking against the opening and closing movement of said jaw-members and depending for their engagement and release upon the relative movement of said members in the plane of their meeting faces.

4. A sucker-rod and casing elevator comprising complementary swinging jaw-members the meeting faces of which are fashioned to embrace the rod or casing, said members being free in all positions for relative movement in the plane of their meeting faces, parallel with their axis of swinging movement and having tongues and grooves interlocking against said swinging movement and depending for engagement and releaae upon said relative movement; and a hinge connection between said members at one end adapting them for swinging movement at right angles to the plane of their meeting faces, said hinge connection having a play sufficient to permit said relative movement of said members in the plane of their meeting faces.

5. A sucker-rod and casing elevator comprising complementary jaw-members, their meeting faces being fashioned to embrace the rod or casing, and formed with corresponding opposing beveled surfaces adapted to direct the entering rod or casing to its embracement, said surfaces coacting when the members are closed, to lock them against relative longitudinal movement; a hinge connection between said jaw-members at one end adapting them for swinging movement, said connection having a play sufficient for a relative movement of the members in the plane of their meeting faces parallel with their axis of swinging movement; and interlocking devices on the meeting faces of said jaw-members, disposed for engagement and release by the relative movement of the members in the plane of their meeting faces.

[Claim 6 not printed in the Gazette.]

1,219,777. BOOK-HOLDER. HARRY M. RIDALL, Syracuse, N. Y., assignor to Gaylord Bros., Syracuse, N. Y., a partnership composed of Willis E. Gaylord and Henry J. Gaylord. Filed Jan. 7, 1915. Serial No. 991. (Cl. 129—40.)



1. A book holder comprising relatively thin flat bars resting flatwise one upon the other and relatively movable longitudinally, said bars being provided with separate prongs for entry between the leaves of opposite ends of the book, and means for automatically locking the bars in different positions of adjustment against relative movement in one direction and permitting their relative movement in the opposite direction.

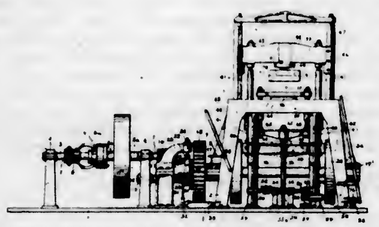
2. In a book holder, a bar having means at one end for insertion between the leaves of the corresponding end of the book, another bar adjustable lengthwise of and upon the first named bar and also provided with means for entering between the leaves of the opposite end of the book, one of the bars having a plurality of stop shoulders spaced apart longitudinally thereof, the other bar being slotted to receive said stop shoulders and having a stop shoulder at one end of the slot for interlocking engagement with either of the first named stop shoulders.

3. In combination with a pair of book covers and a back flexibly united thereto, a bar secured to said back and provided with prongs on one end for entry between the leaves at one end of the book, a separate bar slidable lengthwise of and upon the first named bar and provided with prongs adapted to enter between the leaves of the corresponding end of the book, one of said bars being provided with a plurality of beveled stop shoulders spaced apart longitudinally thereof, the other bar being provided with a single stop shoulder for interlocking engagement with either of the first named stop shoulders to hold the bars against being extended when adjusted upon the book.

4. A book-holder comprising two bars slidable one upon the other, one of the bars having beveled teeth on the face adjocent the other bar to permit either bar to slide freely upon the other in one direction, and a stop shoulder upon said other bar for engaging said teeth and resisting such sliding movement in the opposite direction, and spurs on the outer ends of said bars pointing toward each other for entry between the leaves of a book.

5. A book-holder comprising two flat bars slidable one upon the other and relatively thin flat spurs on the outer ends of the bars projecting toward each other and arranged edgewise with reference to the main body of the flat bars.

1,219,778. TILE-PRESS. WILLIAM E. RIVERS, Old Bridge, N. J., assignor to Old Bridge Enameled Brick and Tile Company, Old Bridge, N. J. Filed Mar. 22, 1915. Serial No. 16,174. (Cl. 25—83.)



1. In a tile press, a plunger plate; a pressure plate adapted to reciprocate relative to the plunger plate; a case having a plurality of mold cavities therein and adapted to be moved toward the plunger plate by engagement with the pressure plate; said pressure plate having sufficient area to cover the case; means for reversing the movement of the case independently of the withdrawal of the pressure plate; and means for automatically and intermittently operating the pressure plate.

2. In a tile press, a plunger plate; a pressure plate; a case having a plurality of mold cavities therein, and adapted to be moved toward the plunger plate by engagement with the pressure plate; and means for reversing the movement of the case independently of the withdrawal of the pressure plate.

3. In a tile press, the combination of a pressure plate resiliently mounted; a plunger plate; and a case adapted to be automatically moved toward the plunger plate by engagement with the pressure plate, and both toward and away from the plunger plate independently of the withdrawal of the pressure plate.

4. In a tile press, a compressing element; a case adapted to be engaged and moved by the compressing element; and means for adding a plurality of percussive increments to the movement of the compressing element.

5. In a tile press, a pressure plate; a plunger plate; a case adapted to be engaged by the pressure plate and moved thereby toward the plunger plate; means for reversing the movement of the case; cams for reciprocating the pressure plate relative to the case and plunger plate; and means for intermittently operating the cams.

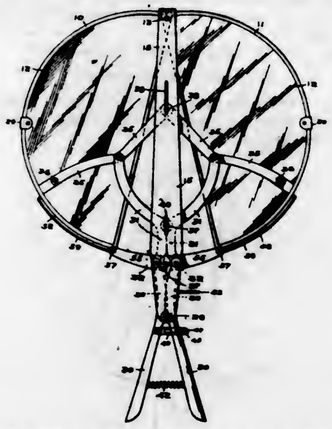
[Claims 6 to 8 not printed in the Gazette.]

1,219,779. COMBINED PAN LIFTER AND DRAINER. CHARLES O. ROE, Indianapolis, Ind., assignor, by direct and mesne assignments, to Roe and Harmon Novelty Company, Indianapolis, Ind., a Corporation of Indiana. Filed May 12, 1916. Serial No. 97,155. (Cl. 53—8.)

1. A device of the above described class comprising a pair of pivotally connected frames having perforated fillings, a supporting-frame for mounting said pivoted frames, a pair of levers pivotally connected at one end with said frames and the opposite ends of the levers having a common pivotal sliding connection in the supporting frame, a pair of actuating handles, and a pair of links pivotally engaging both the handles and levers and having a common sliding fulcrum in said supporting frame.

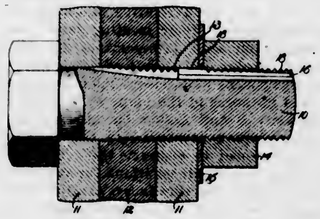
2. A device of the above described class comprising a pair of pivotally connected frames having perforated fillings, a supporting frame for mounting said pivoted frames, hooks carried by said pivoted frames to engage and support the vessel, and a movable hook arranged on the supporting-frame and independent of the pivoted frames, said hook adapted to be moved to engage and support the vessel.

3. A device of the above described class comprising a pair of movable frames pivoted at their outer ends and having perforated fillings, a pair of actuating handles, means interposed between said handles and pivoted frames to move the pivoted frames toward and away from each other



when said handles are oscillated, and means for guiding the inner ends of the pivoted frames in determined paths.

1,219,780. NUT-LOCK. JOSEPH ROHRHEIMER, Shamokin, Pa. Filed Aug. 1, 1916. Serial No. 112,512. (Cl. 151—23.)

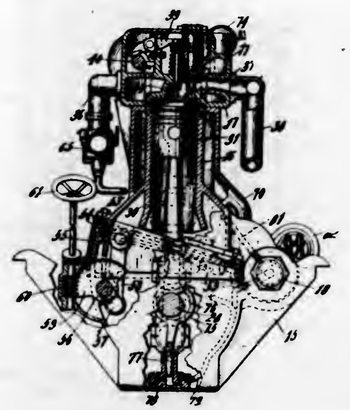


The combination with a bolt having a longitudinal groove intersecting the threads of the bolt and extending below the threads and a nut threaded for coöperation with the threaded end of the bolt, of a locking key having a body fitted into the bottom of the groove and held thereby from tilting, said key having along its outer side a sharp longitudinal edge inclined with respect to the axis of the bolt and intersecting the threads of the bolt at the place where the nut is to be applied when tight, the thread of the nut serving when the nut is being tightened to cut a series of transverse notches of gradually increasing depth into the edge of the key.

1,219,781. INTERNAL-COMBUSTION ENGINE. CHARLES K. SALISBURY, Milwaukee, Wis. Filed June 19, 1914. Serial No. 846,006. (Cl. 123—48.)

1. In an internal combustion engine, a base, a crank shaft mounted in the base, a cylinder pivotally mounted on the base, a piston fitting within the cylinder and connected with the crank shaft and cylinder adjusting and clamping means for swinging the cylinder on the base to vary the volume of the combustion chamber, said means serving to maintain the cylinder rigid with the base for any volume adjustment of the combustion chamber, and relatively fixed means for gearing the crank shaft to driven mechanism.

2. In an internal combustion engine, a base, a relatively fixed crank shaft mounted in the base and having gear driving connections, a cylinder pivotally mounted on the base, a piston fitting within the cylinder and connected with the crank shaft, and means for swinging the cylinder on the base during operation of the engine to vary the volume of the combustion chamber therein.



3. In an internal combustion engine, a base, a crank shaft journaled in the base, a cylinder pivotally mounted on the base, a piston fitting within the cylinder and connected with the crank shaft, valve mechanism carried by the cylinder, valve operating means on the pivotal axis of the cylinder driven from the crank shaft and operating the valve mechanism, and means for swinging the cylinder on its pivotal connection with the base to vary the size of the explosion chamber thereof.

4. In an internal combustion engine, a base, a crank shaft journaled therein, an upper casing containing a cylinder pivotally mounted on the base, a piston fitting in the cylinder and connected with the crank shaft, a segmental apron frame surrounding the opening of the base and detachably connected with the upper casing, and means for adjusting the position of the segmental apron frame with relation to the base for varying the size of the combustion chamber of the cylinder.

5. In an internal combustion engine, a base, a crank shaft journaled therein, an upper casing pivotally mounted on the base and containing a cylinder, a piston fitting in the cylinder and connected with the crank shaft, a segmental apron frame slidably fitting around the opening of the base and detachably connected with the upper casing, and a bellows-like sheet metal packing connecting the segmental apron frame with the base around the opening of the base.

[Claims 6 to 24 not printed in the Gazette.]

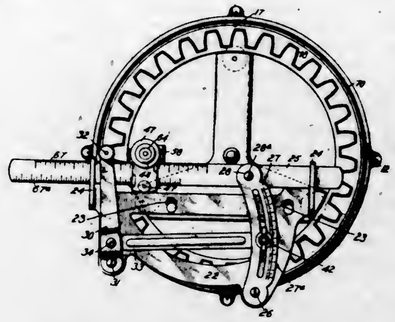
1,219,782. GEAR-DRAWING INSTRUMENT. CHARLES H. SAPPER, Norfolk, Va. Filed Feb. 4, 1916. Serial No. 76,118. (Cl. 33—23.)

1. In a gear drawing instrument, a master member having guide means, a beam disposed across the master member, a marking member carried by the beam, a tracer for moving in the guide means of the master member, and means operable by the tracer for actuating the beam.

2. In a gear drawing instrument, a master member having guide means, a beam, a marking member adjustably mounted on the beam, means to secure the marking member in adjusted position on the beam, a tracer for moving in the guide means of the master member, and means operable by the tracer for actuating the beam.

3. In a gear drawing instrument, a master member having guide means, a beam, a marking member carried by the beam, a tracer for moving in the guide means of the master member, a lever for operating the beam, and means adjustable relatively to the lever and normally secured thereto for actuating the lever, the said means being operable by the tracer.

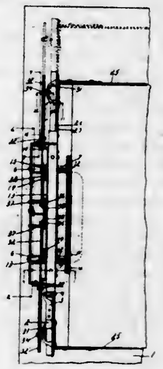
4. In a gear drawing instrument, a master member having guide means, a beam, a marking member carried by the beam, a tracer for moving in the guide means of the master member, a lever for operating the beam, and means adjustable relatively to the lever and normally secured thereto for actuating the lever, the said means being operable by the tracer.



5. In a gear drawing instrument, a master member having guide means, a frame for moving relatively thereto, a beam, a marker carried by the beam, a tracer for traveling in the guide means, a lever pivoted to the frame for operating the beam, a lever pivoted to the frame and to which the tracer is secured, and a link connecting the two levers.

[Claims 6 to 21 not printed in the Gazette.]

1,219,783. SHEET-JOGGER FOR PRINTING-PRESSES. WILLIAM H. SCOVILL, Chicago, Ill. Filed July 20, 1916. Serial No. 110,387. (Cl. 101—34.)



1. In a structure of the class described, including a sheet table and a sheet delivery means having a jogger actuating member actuated therewith, the combination of a frame, a side jogger blade, supporting slides for said jogger blade mounted in ways on said frame and provided with racks, an actuating spring, an actuating bar provided with racks disposed to reciprocate vertically, a shaft disposed longitudinally of said frame and provided with pinions coacting with said jogger blade and actuating bar

racks, a cam member adjustably mounted on said actuating bar to coact with said actuating member, a pair of end jogger blades, slides for said end jogger blades, pitmen connected to said slides, a pair of crank members to which said pitmen are connected mounted on said frame, and links connecting said crank members to said actuating bar whereby the end jogger blades are actuated simultaneously with the side jogger blade.

2. In a structure of the class described, the combination of a frame, a side jogger blade, supporting slides for said jogger blade mounted in ways on said frame and provided with racks, an actuating spring, an actuating bar provided with racks disposed to reciprocate vertically, a shaft disposed longitudinally of said frame and provided with pinions coacting with said jogger blade and actuating bar racks, a pair of end jogger blades, slides for said end jogger blades, pitmen connected to said slides, a pair of crank members to which said pitmen are connected mounted on said frame, and links connecting said crank members to said actuating bar whereby the end jogger blades are actuated simultaneously with the side jogger blade.

3. In a structure of the class described, the combination of a frame, a side jogger blade, supporting slides for said jogger blade mounted in ways on said frame and provided with racks, an actuating spring, an actuating bar provided with racks disposed to reciprocate vertically, a shaft disposed longitudinally of said frame and provided with pinions coacting with said jogger blade and actuating bar racks, a pair of end jogger blades, supporting brackets therefor mounted on said frame and provided with adjustable members, slides for said end jogger blades mounted on the adjustable members of said brackets, pitmen adjustably connected to said slides, a pair of crank members to which said pitmen are connected mounted on said frame, and links connecting said crank members to said actuating bar whereby the end jogger blades are actuated simultaneously with the side jogger blade.

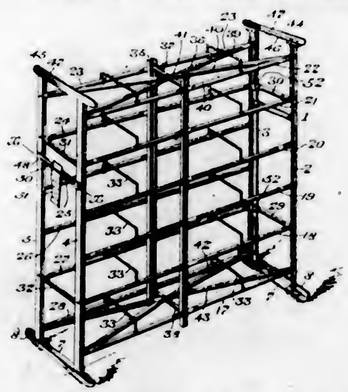
4. In a structure of the class described, the combination of a frame, a side jogger blade, supporting slides for said jogger blade mounted in ways on said frame and provided with racks, an actuating spring, an actuating bar provided with racks disposed to reciprocate vertically, a shaft provided with pinions coacting with said jogger blade and actuating bar racks, an end jogger blade, a supporting bracket therefor mounted on said frame and provided with adjustable members, a slide for said end jogger blade mounted on the adjustable member of said bracket, a pitman adjustably connected to said slide, a crank member to which said pitman is connected mounted on said frame, and a link connecting said crank member to said actuating bar whereby the end jogger blade is actuated simultaneously with the side jogger blade.

5. In a structure of the class described, the combination of a frame, a side jogger blade, supporting slides for said jogger blade mounted in ways on said frame and provided with racks, an actuating spring, an actuating bar provided with racks disposed to reciprocate vertically, a shaft provided with pinions coacting with said jogger blade and actuating bar racks, an end jogger blade, a slide for said end jogger blade, a pitman connected to said slide, a crank member to which said pitman is connected mounted on said frame, and a link connecting said crank member to said actuating bar whereby the end jogger blade is actuated simultaneously with the side jogger blade.

[Claims 6 to 20 not printed in the Gazette.]

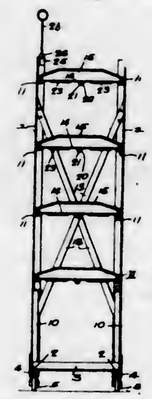
1,219,784. HAT-RACK. ROBERT R. SMITH, Philadelphia, Pa., assignor to Miller Lock Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 31, 1913. Serial No. 798,433. (Cl. 45—13.)

In a device of the character stated, base members, upright angles having the lower ends of their flanges laterally deflected at angles to each other and secured to said base members, reinforcing angles secured to said angles and said base members and having the lower ends of their flanges laterally deflected, a plurality of truss members connected with said upright angles, work supporting members connected with said upright angles, top members



secured to said upright angles, and means on said work supporting members to position articles thereon.

1,219,785. RACK. FRANK SOLEY and EDWIN STACKHOUSE, Philadelphia, Pa., assignors to Miller Lock Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 12, 1915. Serial No. 1,785. (Cl. 211—14.)



1. The combination in a rack, of corner posts made of angle bars; a series of tray supports extending from one end of the rack to the other and also made of angle bars with the lower flanges turned inward; bottom plates mounted on the inturned flanges; and transverse vertical partition plates mounted above the bottom plates and secured thereto and to the frame.

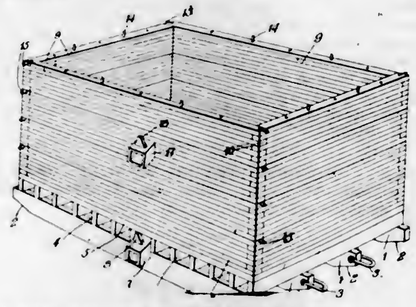
2. The combination of a rack having corner posts; a series of horizontally arranged angle bars spaced apart and having their lower flanges turned inward; a bottom plate mounted on each tier of angle bars; transverse plates projecting vertically above each bottom plate and spaced apart, each partition plate having an upper beaded edge; a wire in the beaded edge, said wire extending through the bottom plate and the supporting flange at each side of the rack and forming a means for securing the parts together.

3. The combination of a rack having vertical posts; a series of spaced horizontally arranged angle bars with their lower flanges turned inward; a bottom plate resting on the bottom flanges of each tier, the bottom plate being perforated and the edge of the perforation being turned down; and a series of vertically arranged partitions extending transversely of the rack above each bottom plate and means for uniting said angle bars, plates and partitions.

4. The combination in a rack, of corner posts; horizontal angle bars having inturned lower flanges; a bottom plate resting on the lower flanges and having the ends turned inward; and a series of vertical transverse partitions, the end partitions being arranged close to the inturned edges of the bottom plate.

5. The combination in a rack, of corner posts; two longitudinal angle bars having inturned lower flanges; a bottom plate mounted on the flanges; a series of transverse partition plates; means for securing the said partition plates to the bottom plate and the flanges of the angle bars, the bottom plate being perforated at intervals; partition plates having perforated lugs extending through the perforations in the bottom plate; and a longitudinal rod extending through the several perforations and under the bottom plate.

1,219,786. GRAIN-TANK. HENRY E. SPLATER, Hay, Wash., assignor of one-half to James V. McCall, Hay, Wash. Filed July 11, 1916. Serial No. 108,664. (Cl. 20—1.2.)



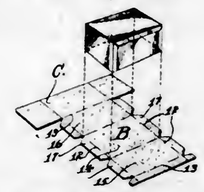
A grain tank comprising a base, walls superposed upon the base and each consisting of superposed sections having their ends in staggered relation with the projecting ends in one section fitting between and overlapping the projecting ends in a meeting section, means for preventing relative movement between superposed sections, and locking pins inserted vertically through the overlapping ends of meeting sections, the upper ends of said locking pins being turned laterally and engaging seats in the upper edges of the respective immediately adjacent sections and projecting from between said sections and the superposed sections.

1,219,787. PROCESS OF TREATING KERATIN BODIES. CARL G. STERBINS and ALBERT GELOW, Three Oaks, Mich., assignors to The Warren Featherbone Company, Three Oaks, Mich., a Corporation of Michigan. Filed Apr. 12, 1915. Serial No. 20,706. (Cl. 99—8.)

1. The herein described process of treating keratin bodies consisting of shredding said bodies to form filaments, subjecting such filaments to a sufficiently high degree of heat to destroy bacterial action and evaporate moisture therein, and then immersing said filaments in an elastic water-proofing substance whereby the interstices of the filaments are filled, thereby preventing bacteria from attacking nitrogenous matter in the keratin.

2. The herein described process of treating keratin bodies consisting of shredding said bodies to form filaments, sizing the same to fill the interstices in the keratin bodies having absorptive properties, subjecting said filaments to a sufficiently high temperature to destroy bacterial action and evaporate all moisture therein, and then immersing said filaments in an elastic water-proofing substance.

1,219,788. SEALED-WRAPPED PACKAGE. JOHN STODDELL STOKES, Moorestown, N. J. Filed June 2, 1916. Serial No. 101,258. (Cl. 229—40.)



1. A sealed wrapped package comprising a box formed from a single blank of material bent to provide a bottom section, a rigid front wall and rigid end walls, a back wall constituting a hinge for the box and a lid or cover formed integral with the back wall and having a depending flange at its front longitudinal marginal edge, such flange overlying the outer face of the front wall of the box, and a wrapper adhesively attached to and completely enveloping the box, the lower edge of the depending flange which overlies the front wall of the box forming a severing edge along which the wrapper may be cut, such depending flange of itself constituting a gripping means for enabling the box to be opened.

2. A sealed wrapped package comprising a box formed of a single blank of material and constituting a bottom section, a rigid front wall and rigid end walls, vertical stay strips at the meeting points of the front and end walls, a back wall for the box also constituting a hinge member and a lid or cover formed integral with the back wall of the box, said lid or cover having a depending front flange and depending end flanges, said front flange extending beyond the outer face of the front wall of the box the end portions of such front flange of the cover contacting with the adjacent portions of the stay strips, whereby said front flange forms a pronounced shoulder in conjunction with the front wall of the box, and a wrapper completely enveloping the box when closed and adhesively attached to said box at all sides to form a tight covering therefor, and adapted to be severed along the lower edge of the front flange.

3. A sealed wrapped package comprising a body portion of a box and a cover integral with the body portion of the box and having end flanges fitting against the inner faces of the end walls of the box and a front flange overlying and extending beyond the front wall of the box, and a wrapper completely enveloping the box and adhesively attached to all of the walls of the box, the front flange of the cover forming a shoulder in conjunction with the front wall of the box, and constituting an indicating and severing edge for that portion of the wrapper which is to be ruptured or severed to permit the opening of the box.

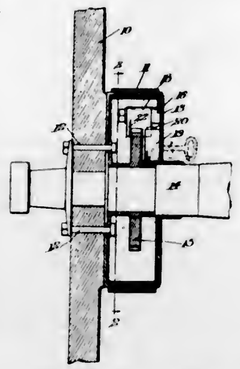
1,219,789. WHEEL-LOCK. OTHO H. W. TALBOTT and WILLIAM F. PRETTYMAN, Rockville, Md. Filed Aug. 28, 1916. Serial No. 117,296. (Cl. 70—90.)

1. The combination with the rear driving wheel of a motor vehicle having a brake drum thereon, of key actuated means within said drum for locking the said wheel against forward rotation, and means for disengaging said locking means on rearward rotation of the said wheel.

2. In combination with the non-rotative rear axle housing of a motor vehicle and the rear wheel having a brake drum thereon, means for locking the wheel against forward rotation comprising a member within the drum connected to the axle housing, and a second member within the drum connected to rotate with the wheel, one of said members being mounted for movement transverse to the axis of the axle into or out of engagement with the other member.

3. In combination with the non-rotative rear axle housing of a motor vehicle and the rear wheel having a brake drum thereon, means for locking the wheel against forward

rotation comprising a member within the drum connected to the axle housing, a second member within the drum connected to rotate with the wheel, one of said members being mounted for movement transverse to the axis of the axle into or out of engagement with the other member, and key actuated means for controlling the engagement of said members.

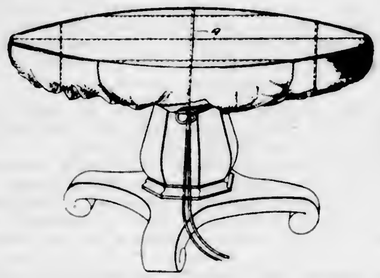


4. In combination with the non-rotative rear axle housing of a motor vehicle and the rear wheel having a brake drum thereon, means for locking the wheel against forward rotation comprising a ratchet wheel member within the drum and a pawl member, one of said members connected to the axle housing and the other to the wheel, and means for moving the pawl into or out of engagement with the ratchet wheel.

5. In combination with the non-rotative rear axle housing of a motor vehicle and the rear wheel having a brake drum thereon, means for locking the wheel against forward rotation comprising a member within the drum connected to the axle housing, a second member within the drum and adapted to coact with the first member, and means for locking the wheel against removal when the members are in engagement.

[Claims 6 to 11 not printed in the Gazette.]

1,219,790. ADJUSTABLE TABLE-TOP COVER. ROBERT G. TAYLOR, Chicago, Ill. Filed Mar. 1, 1916. Serial No. 81,439. (Cl. 45—68.)

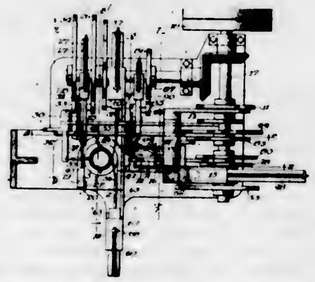


1. A cover for table tops and the like comprising a body portion having an inner ply provided with a soft nap surface to contact the surface of the table, an outer ply of heavy material, an intermediate ply, the said body portion having a marginal hem one side of which is formed by the marginal portion of the outer ply, the marginal portions of the inner and intermediate plies extending within the hem and all of the said plies being united adjacent their margins by a line of stitching extending in spaced relation to their outer edges and by lines of stitching radiating from the first mentioned line of stitching, and a piece of material secured at its outer marginal portion to the margin of the outer ply and at its inner marginal portion secured by the first mentioned line of stitching.

2. A cover for table tops and the like comprising a body portion having an inner ply provided with a soft nap surface to contact the surface of the table, an outer ply of heavy material, an intermediate ply, the said body portion having a marginal hem one side of which is formed by the marginal portion of the outer ply, the marginal portions of the inner and intermediate plies extending within the hem and all of the said plies being united adjacent their margins by a line of stitching extending in spaced relation to their outer edges and by lines of stitching radiating from the first mentioned line of stitching, and a piece of material secured at its outer marginal portion to the margin of the outer ply and at its inner marginal portion secured by the first mentioned line of stitching, and a piece of material secured at its outer marginal portion to the margin of the outer ply and at its inner marginal portion secured by the first mentioned line of stitching, all of the said plies being united throughout the intermediate or body portion of the cover by intersecting lines of stitching.

3. A cover for table tops and the like comprising a body portion consisting of an inner ply, an outer ply, and an intermediate ply, the said body portion having a marginal hem, one side of which is formed by the marginal body of one of the plies, the marginal portions of the other plies extending within the hem and all of said plies being united adjacent their margins by a line of stitching extending in spaced relation to their outer edges and by lines of stitching extending from the first-mentioned line of stitching, and a piece of material secured at its outer marginal portion to the margin of the first-mentioned ply and at its inner marginal portion secured by the first-mentioned line of stitching.

1,219,791. CLOSURE-APPLYING MACHINE. OLOF N. TEVANDER, Chicago, Ill. Filed June 26, 1915. Serial No. 36,556. (Cl. 113—2.)



1. A machine for applying skirted caps to receptacles including mechanism for folding the skirted portion of a cap into ear formation; mechanism for passing a string through said ear formation; mechanism for applying a string to the skirted portion of a cap and overlapping the ends of and pulling upon the string; mechanism for coupling a fastening device with the overlapping ends of the string to hold the ends of the string in relation; and means common to the aforesaid mechanisms for operating the same in orderly sequence.

2. A machine for applying skirted caps to receptacles including mechanism for folding the skirted portion of a cap into ear formation; mechanism for passing a string through said ear formation; mechanism for pulling upon the string; mechanism for coupling a fastening device with the ends of the string to hold the ends of the string in relation; and means common to the aforesaid mechanisms for operating the same in orderly sequence.

3. A machine for applying skirted caps to receptacles including mechanism for folding the skirted portion of a cap into ear formation; mechanism for passing a string through said ear formation; mechanism for pulling upon the string to effect its tight engagement with the skirt

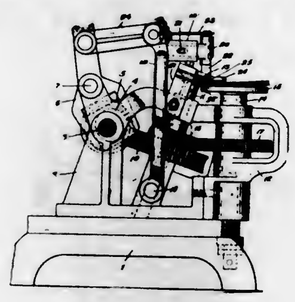
of the cap; and means common to the aforesaid mechanisms for operating the same in orderly sequence.

4. A machine for applying skirted caps to receptacles including mechanism for folding the skirted portion of a cap into ear formation; mechanism for passing a band through said ear formation and effecting its tight engagement with the cap; and means common to the aforesaid mechanisms for operating the same in orderly sequence.

5. A machine for applying skirted caps to receptacles including mechanism for passing a string through the skirt of a cap; mechanism for overlapping the ends of and pulling upon the string; and mechanism for coupling a fastening device with the overlapping ends of the string to hold the ends of the string in relation.

[Claims 6 to 21 not printed in the Gazette.]

1,219,792. LIP-TURNER. EDWIN A. WEBSTER, Groveland, Mass., assignor, by mesne assignments, to Hamel Shoe Machinery Company, Lynn, Mass., a Corporation of Massachusetts. Filed Oct. 7, 1912. Serial No. 724,238. (Cl. 12—30.)



1. A lip-turning machine comprising a sole support, a plow for raising the lip, a hammer having a face at its end, and means to hold said hammer with its face approximately parallel to the face of said support and to cause simultaneous transverse and longitudinal movements thereof, so that its said face is carried over and toward the surface of the sole supported thereon, to bend back the lip and beat it down toward the sole.

2. A lip-turning machine comprising a table having a sole-supporting surface, a plow for raising the lip, an arm pivotally mounted below the level of said surface and having means to oscillate the same, and a hammer arranged to be carried laterally by said arm and having a lip-engaging face at its end arranged to be moved to and from said surface as said arm is oscillated and to be held in angular positions which vary from an oblique position, at the beginning of its operative movement, to a position approximately parallel to said surface at the end of said movement.

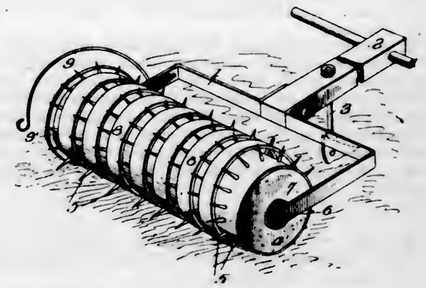
3. A lip-turning machine comprising a sole support, a plow for raising the lip, an arm pivotally mounted beneath said support and at one side thereof, said arm extending upwardly therefrom, a holder projecting forwardly from said arm over said support, and having a hammer at the end thereof provided with a downwardly facing lip-engaging face, and means to oscillate said arm to carry the face of the hammer over and toward said support.

4. A lip-turning machine comprising a sole support, a plow for raising the lip, an arm pivotally mounted beneath said support and at one side thereof, said arm extending upwardly therefrom, and a hammer held by said arm over said support and movable therewith toward and from the same, said hammer having an oblique face at its under side arranged to be carried into a position of approximate parallelism with the sole-supporting surface of said support, at the end of its downward movement.

5. A lip-turning machine comprising a sole support, a plow for raising the lip, an arm pivotally mounted beneath said support and at one side thereof, said arm extending upwardly therefrom, means to oscillate said arm, a holder mounted in said arm at its upper end and projecting at approximately right angles thereto over said support, means to permit horizontal adjustment of said holder over said support, and a hammer carried by said holder at its end and having a downwardly facing lip-engaging face arranged to be carried over and toward the face of said support as said arm is swung.

[Claim 6 not printed in the Gazette.]

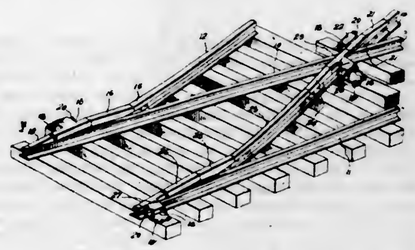
1,219,793. SOIL-PULVERIZER. ERNEST W. WINNER, Paola, Kans. Filed July 20, 1915. Serial No. 40,955. (Cl. 55—24.)



1. An apparatus of the class described comprising a roller having radial teeth, a cutting disk rotative with said roller and projecting in advance of the periphery thereof, and a vine fender located above the cutting disk and spaced therefrom.

2. In an apparatus of the class described, a supporting frame, a carrier shaft mounted for rotation on said frame, a drum carried by said shaft and having radial teeth, a cutting disk rotative with said roller and projecting in advance of the periphery thereof, and a vine fender connected to said frame and extending above the cutting disk and spaced therefrom.

1,219,794. SWITCH. GUS V. ALLEN, Arp, Tex. Filed Mar. 1, 1916. Serial No. 81,432. (Cl. 104—118.)



1. A switch mechanism including main rails providing a track, switch rails forming a track intersecting the track provided by the main rails, and tread blocks arranged to overlie the treads of the main rails to coöperate with the switch rails for merging the track formed by the switch rails into the track defined by the main rails with

the said blocks mounted to swing upwardly and outwardly in opposite directions away from the said main rails to inactive position.

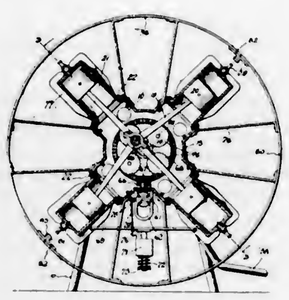
2. A switch mechanism including main rails providing a track, switch rails forming a track intersecting the track defined by the main rails, the rails of the switch track including sections having inclined tread portions extending at their summits above the plane of the main rails, and tread blocks overlying the treads of the main rails to coact with the inclined tread portions of the said sections of the switch rails for merging the switch track into the main track.

3. A switch mechanism including a main rail, a switch rail approaching the main rail, a tread block associated with the switch rail and overlying the main rail with the said block forming a continuation of the tread of the switch rail onto the tread of the main rail, and a hinge swingingly supporting said block, the said hinge including a base plate bent to abut the adjacent rail web and provided with upstanding ears, an arm carried by the tread block, and a pin pivotally connecting the said arm with the said ears.

4. A switch mechanism including main rails providing a track, switch rails forming a track intersecting the track defined by the main rails, and coacting tread blocks overlying one of the main rails at the intersection of the adjacent switch rail therewith for continuing the tread of said switch rail over the said main rail, the said blocks being mounted to swing upwardly and outwardly in opposite directions away from said main rails to inactive position.

1,219,795. ROTARY GAS-ENGINE. THOMAS L. ARTHUR, East Smethport, Pa. Filed Mar. 7, 1916. Serial No. 82,729. (Cl. 123—44.)

1. In a rotary gas engine, a fixed crank shaft, a crank

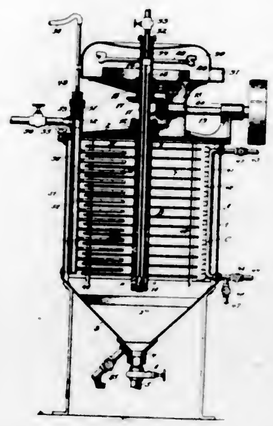


casing rotatably mounted about the shaft, radial cylinders carried by the casing, pistons in the cylinders operatively connected to the crank shaft, exhaust valve chambers, valves for controlling passage of exhaust gases from the cylinders to the valve chambers, a sleeve formed upon the crank casing and extending beyond one end of the crank shaft as a means for transmitting power, a hood fixed to the sleeve and providing an annular chamber, branch exhaust pipes leading from the valve chambers to the annular chamber, a second hood in which the sleeve is revoluble providing a chamber communicating with that of the first hood, and a main exhaust pipe leading from the second hood.

2. In a rotary gas engine, a fixed crank shaft, a crank casing revolubly mounted about the shaft, cylinders carried by the crank casing, pistons in the cylinders, operative connection between the pistons and crank shaft, the crank shaft at one end being formed with a longitudinal opening communicating at one end with the interior of the crank casing and formed at its other end with a radial branch opening through the crank shaft, a sleeve formed upon the crank casing and surrounding such end of the crank shaft and projecting beyond it to transmit power, said sleeve being formed interiorly with an annular chamber communicating with the radial branch of the passage of the crank shaft and with a radial passage opening into such chamber, and a bearing for the sleeve formed interiorly with an annular chamber communicating with the passage of the sleeve and with an oil supply duct communicating with such chamber.

3. In a rotary gas engine, a fixed crank shaft, a crank casing rotatably mounted about the shaft and having radial arms, cylinders communicating with and extending from the arms, braces secured at their inner ends to diametrically opposed sides of the arms adjacent their juncture with the cylinders and diverging from the arms at either side of the cylinders with their free ends oppositely bent, and a fly wheel secured to the oppositely bent ends of the braces and supported by them concentrically with respect to the crank case and cylinders and in spaced relation to the outer ends of the cylinders.

1,219,796. CENTRIFUGAL PRESSURE-FILTER. FRANK K. ATKINS and EARL F. ATKINS, New York, N. Y. Filed Dec. 13, 1915. Serial No. 66,515. (Cl. 210—25.)



1. In a pressure filter, the combination of a stationary casing, a plurality of disk-like filtering elements connected together in slightly spaced relation, means for rotatably supporting the elements, means for supplying to the space between the elements, the liquid to be filtered, a central conduit communicating with all the filtering elements for discharging the filtered liquid, and means for collecting the solids.

2. In a pressure filter, the combination of a casing, a plurality of rotatable filtering elements disposed therein, a manifold in the casing, perforated nozzles connected with the manifold and extending into the spaces between the elements, a supply pipe connected with the manifold, and means for drawing off the filtered liquid.

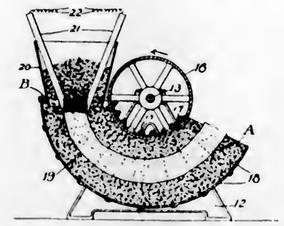
3. In a pressure filter, the combination of a casing, a plurality of rotatable filtering elements disposed therein, a manifold in the casing, perforated nozzles connected with the manifold and extending into the spaces between the elements, a supply pipe connected with the manifold to supply thereto the liquid to be filtered, means for utilizing any of the nozzles for discharging a fluid therethrough and upon the outer surfaces of the elements for cleaning the same, and means communicating with the filtering elements for drawing off the filtered liquid.

4. In a pressure filter, the combination of a casing, a plurality of rotatable filtering elements disposed in the casing and connected together in spaced relation, a conduit connected with the filtering elements to draw off the filtered liquid, a manifold in the casing, nozzles thereon and extending into the spaces between the filtering elements, a pipe connected with the manifold for supplying thereto the liquid to be filtered, a pipe movable longitudinally of the manifold, means on the inner end of the pipe in the manifold for establishing communication between such pipe and any desired nozzle for discharging fluid through the latter for cleaning the adjacent filtering elements externally, and means at the bottom of the casing for collecting the solids.

5. In a pressure filter, the combination of a casing, a plurality of disk-like filtering elements disposed therein, means supporting the elements and forming an outlet conduit for the filtered liquid, means for rotating the said means, and a device in the casing having a plurality of nozzles for discharging simultaneously streams of fluid upon the outer surfaces of the filtering elements for cleaning the same.

[Claims 6 to 22 not printed in the Gazette.]

1,219,797. ART OF PRODUCING ALUMINUM CARBID. MAURICE BARNETT and LOUIS BURGESS, New York, N. Y. Filed Dec. 18, 1916. Serial No. 137,714. (Cl. 204—62.)



1. The herein described process for producing aluminum carbid consisting in electrically heating portions of a mixture or charge of alumina and carbon to a temperature below the temperature of the electric arc, but not below approximately 2000° C., by means of electrodes extending into said mixture or charge.

2. The herein described process for producing aluminum carbid consisting in electrically heating portions of a mixture or charge of alumina and carbon to a temperature of approximately 2000° C., by means of electrodes extending into said mixture or charge.

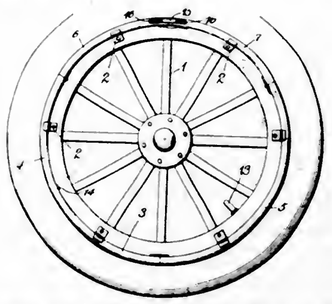
3. The herein described process for producing aluminum carbid consisting in electrically heating portions of a mixture or charge of alumina and carbon to a temperature below the temperature of the electric arc, but not below approximately 2000° C., by means of electrodes extending into said mixture or charge, the amount of carbon in said mixture or charge being in excess of that necessary to reduce the alumina to metal.

4. The herein described process for producing aluminum carbid consisting in electrically heating portions of a mixture or charge of alumina and carbon to a temperature of approximately 2000° C., by means of electrodes extending into said mixture or charge, the amount of carbon in said mixture or charge being in excess of that necessary to reduce the alumina to metal.

5. The herein described process for producing aluminum carbid consisting in electrically heating portions of a mixture or charge, comprising approximately two parts of alumina to one part of carbon, to a temperature below the temperature of the electric arc but not below approximately 2000° C., by means of electrodes extending into said mixture or charge.

[Claims 6 to 8 not printed in the Gazette.]

1,219,798. WHEEL-RIM. OHMER H. BARTHOLOMEW, Peoria, Ill., assignor of one-half to Joseph Halbrehr, Peoria, Ill. Filed July 17, 1916. Serial No. 109,762. (Cl. 152—21.)



1. A wheel rim consisting of a plurality of sections hinged together at their meeting ends, a locking plate secured to one of the sections at the end of the same and projecting over the meeting end of an adjacent section, guides on said adjacent section projecting over the end of the first-mentioned section at the sides of the locking plate and a keeper pivoted upon said adjacent section and adapted to engage over said locking plate.

2. A wheel rim consisting of a plurality of sections, plates secured upon the edges of two of the sections at the meeting ends of the same, links pivoted to and connecting said plates, and hinge members fitted to and connecting the other sections at the meeting ends of the same.

1,219,799. DEEP-WELL PUMP. WALTER G. BLACK and AUGUST L. SEGELHORST, Brea, Cal. Filed June 13, 1916. Serial No. 103,495. (Cl. 103—80.)



1. In a deep well pump, the combination with tubing, and a sleeve fitted in the tubing and having an internal conical bore forming a seat, of a pump barrel adapted to pass through said seat, a tapered anchor block secured on the pump barrel and adapted to engage said seat, an anvil connected with and disposed above said anchor block, a plunger mounted within the pump barrel, a plunger rod secured to and rising from the plunger and passing through the anvil, means on the rod above the anvil to impinge upon the anvil and drive the anchor block to its seat, and means on the rod below the anvil to impinge upon the anvil and lift the anchor block from its seat.

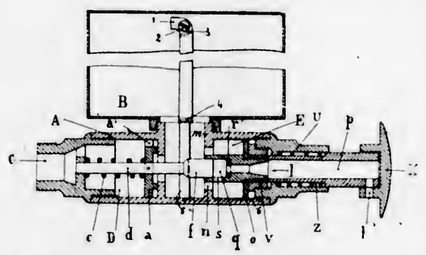
2. In a deep well pump, the combination of sectional tubing, a coupling sleeve connecting sections of the tubing and having a contracted bore and flared surfaces above and below said bore, a pump barrel insertible through said

bore, an anchor block secured to the upper end of the barrel and adapted to engage the upper flared surface of the coupling sleeve, an anvil connected with and disposed above the upper end of the anchor block, a plunger working in the pump barrel, flexible holding means on the lower end of the barrel constructed to ride on and be compressed by the flared surfaces of the anchor block whereby it may pass through the bore of said block in either direction, and means connected with the plunger to impinge against the anvil and drive the anchor block to its seat or remove it therefrom.

3. In a deep well pump, the combination of tubing sections, a coupling sleeve connecting said sections and having a contracted bore, a pump barrel insertible through said bore, an anchor block secured upon said pump barrel and adapted to seat in the bore of the said sleeve and provided with fluid escape openings in its upper portion, a plunger working in said pump barrel, a plunger rod rising from the plunger, a nipple rising from said anchor block, an anvil across the upper end of the nipple having a central opening through which the plunger rod passes, and devices secured on the plunger rod above and below the anvil to engage the anvil at times and drive the anchor block to its seat or lift it therefrom.

4. In a deep well pump, the combination of sectional tubing, a sleeve connecting sections of the tubing and having flared upper and lower ends, a pump barrel insertible through said sleeve, an anchor block on the pump barrel adapted to seat in the upper flared end of the sleeve, an anvil disposed above and connected with said anchor block, a plunger within said barrel, a plunger rod rising from the plunger and working through the anchor block and the anvil, a hammer secured on the plunger rod and adapted to impinge against the upper side of the anvil, and a spider carried by the plunger rod above the plunger and adapted to impinge against the under side of the anvil.

1,219,800. MEASURING-FAUCET. EDMOND LOUIS BONNEFON, Grenoble, France. Filed Dec. 30, 1914. Serial No. 879,778. (Cl. 221—112.)



1. A waste preventing measuring faucet comprising a valve casing with an inlet and outlet for liquid, a receptacle interposed between the inlet and outlet, means for putting the receptacle alternately in communication with the inlet and outlet of the valve casing, including a valve adapted to control the opening and closing of the inlet, a hollow manually operated spring plunger formed with an outlet passage, a piston valve arranged to slide in and control the outlet passage in the hollow plunger, and a rod rigidly connecting the inlet control valve with the outlet control valve.

2. A waste preventing measuring faucet comprising a valve casing having inlet and outlet compartments, a measuring receptacle outside the valve casing but in communication with same between the inlet and outlet compartments, an inlet valve located between the inlet compartment and the measuring receptacle and adapted to shut off the said receptacle from the inlet compartment, a spring normally holding said valve in the closed position, a hollow manually operated spring plunger arranged in the outlet compartment and formed with an outlet passage, normally in communication with said compartment through a valve controlled opening, a piston valve arranged to control the said outlet passage in the plunger, a rod rigidly connecting the inlet and outlet valves and forming an operative connection between the plunger and inlet valve such that when the outlet is open the inlet is closed and when the inlet is closed the outlet is either closed or open.

3. A waste preventing measuring faucet comprising a valve casing having inlet and outlet compartments, a measuring receptacle outside the valve casing but in communication with same between the inlet and outlet compartments, means for permitting the admission of air to or its escape from the receptacle as the liquid enters and leaves the same, an inlet valve located between the inlet compartment and the measuring receptacle and adapted to shut off the said receptacle from the inlet compartment, a spring normally holding said valve in the closed position, a hollow manually operated spring plunger arranged in the outlet compartment and formed with an outlet passage, normally in communication with said compartment through a valve controlled opening, a piston valve arranged to control the said outlet passage in the plunger, a rod rigidly connecting the outlet and inlet valves and forming an operative connection between the said plunger and inlet valve such that when the outlet is open the inlet is closed and when the inlet is closed the outlet is either closed or open.

4. Apparatus of the character described for delivering liquids comprising in combination: a tubular valve casing with inlet and outlet compartments, a measuring receptacle, an inlet valve controlling communication between the inlet compartment and the measuring receptacle, a spring arranged to normally close the inlet valve, a spring plunger formed with an outlet passage and located in the outlet compartment, a rod rigidly connected at one end with the inlet valve, an outlet valve formed on the other end of the rod rigid therewith extending into the outlet passage in the plunger and controlling communication between the measuring receptacle and the outlet, and a spring acting on the plunger to normally hold same in such position in relation to the outlet control valve that the outlet is open.

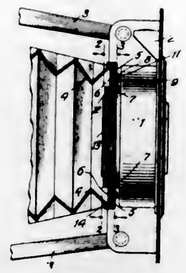
5. Apparatus of the character described for delivering liquids comprising in combination: a tubular valve casing with inlet and outlet compartments, a measuring receptacle, an inlet valve controlling communication between the inlet compartment and the measuring receptacle, a spring arranged to normally close the inlet valve, a spring plunger formed with an outlet passage and located in the outlet compartment, a rod rigidly connected with the inlet valve, an outlet valve integral with said rod and extending into the outlet passage in the plunger and controlling communication between the measuring receptacle and the outlet, and a spring acting on the plunger to normally hold same in such position in relation to the outlet control valve that the outlet is open and a vent tube opening into the upper part of the measuring receptacle so as to allow of the movements of the air and capable of serving as a by-pass for liquid substantially as described.

1,219,801. CAMERA. CARL BORNMANN, Binghamton, N. Y., assignor to Ansco Company, Binghamton, N. Y., a Corporation of New York. Filed May 6, 1916. Serial No. 95,764. (Cl. 95—39.)

1. In a camera embodying a bellows, and a lens casing, a perforated plate at the forward end of the bellows the perforations whereof connect with the interior of the bellows and are secreted behind and shaded by the lens casing, and means to prevent the entrance of light to the interior of the bellows.

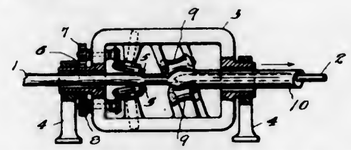
2. In a camera embodying a bellows, and a lens casing, a perforated plate at the forward end of the bellows which aids in securing the front end of the bellows, another perforated plate outside of first named plate, the perforations wherein are secreted behind the lens casing and which connect with the perforations in the first named plate.

3. In a camera provided with an expandible and collapsible member, and a lens casing, two perforated plates arranged adjacent to each other and in rear of the lens



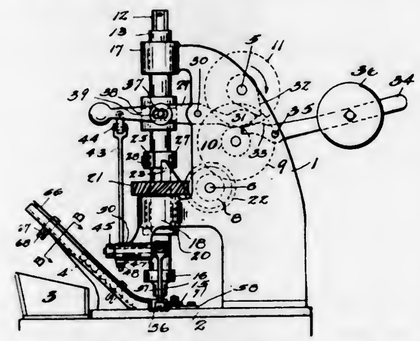
casing, the perforations in one plate being staggered relative to those in the other plate.

1,219,802. PROCESS OF FORMING A TUBE. HARRISON M. BRIGHTMAN, Columbus, Ohio. Filed May 12, 1916. Serial No. 97,066. (Cl. 80—62.)



The step in the art of forming a tube which consists in rolling a billet by bodily revolving about a billet oppositely rotated members in contact therewith, supporting the billet with rotating members bodily revolving in synchronism with the rotated members, and piercing the billet at its supported point to form the tubular structure.

1,219,803. BORING AND DRILLING MACHINE. HARRISON M. BRIGHTMAN, Columbus, Ohio, assignor of one-fifth to C. W. Brightman, one-fifth to G. F. Brightman, one-fifth to H. L. Brightman, and one-fifth to J. H. Brightman, Columbus, Ohio. Filed Sept. 9, 1916. Serial No. 119,195. (Cl. 77—33.)



1. In a boring machine, the combination with a reciprocable tool carrying spindle and operating means therefor, of a pivoted lever connected with the spindle, a positively driven cam member engaging one arm of said lever to move the spindle to inoperative position, and a weighted lever arm engaging said first mentioned lever arm to return the spindle to boring position in the absence of the cam member.

2. In a boring machine, the combination with a reciprocable tool carrying spindle having a clutch member thereon, and a driven clutch member, of means for withdrawing the spindle from boring position and disengaging said clutch members, and means for returning the spindle to boring position whereby the clutch members are engaged.

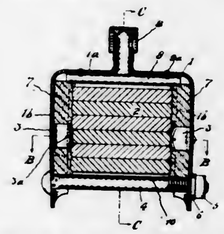
3. In a boring machine, the combination with a reciprocable tool carrying spindle having a clutch member, and a driven clutch member, of an operating lever pivoted to the spindle, a cam engaging said lever to withdraw the spindle from boring position and disengage the clutch members, and a weighted lever engaging said operating lever to return the spindle to boring position whereby the clutch members are engaged.

4. The combination in a boring machine with a feed chute, of feed mechanism comprising a rock shaft and feed arm thereon and a feed plate co-acting with the arm, an operating lever on the shaft, a connecting rod connected to the lever, an actuating lever connected with the connecting rod and means for actuating said actuating lever.

5. In a boring machine, a combined operating and feed mechanism comprising a reciprocable tool-carrying spindle and clutch mechanism and an oscillatable feed mechanism, an operating lever for actuating these parts, means co-acting with said operating lever to disengage the clutch and withdraw the spindle from operative position, and means co-acting with said operating lever for returning the spindle to operative position and engaging the clutch and displacing a finished article with a new one.

[Claim 6 not printed in the Gazette.]

1,219,804. LEAF-SPRING LUBRICATOR. WILLIAM H. BROWN, Cleveland, Ohio. Filed Dec. 27, 1915. Serial No. 68,767. (Cl. 184—1.)



1. In a spring oiler of the type set forth, a pair of channels and means for holding these channels at the sides of the spring, said means embodying a top member extending across the spring and connecting the channels, a distributing trough arranged under said top member and extending across the spring, and means for constricting the outlet ends of the distributing trough and for delivering the oil to the edge of the spring.

2. In an oiler of the type set forth, a pair of channels and means for holding these channels at the sides of the spring, an open-ended distributing channel extending across the top of the spring, and a pad in each of said channels bearing against the edges of the spring and having its upper end engaging the lower lip of said distributing trough, for the purpose set forth.

3. The combination with a spring comprising a plurality of superimposed leaves, of a clip comprising a horizontally disposed central portion having two vertically disposed downwardly extending limbs, said clip being adapted to encompass a portion of said spring about the top and two sides thereof, said clip being of channel cross section the flanges of the channel being directed toward the spring, thus forming connecting compartments at the top and sides of the spring, oil carrying material in contact with the edges of the leaves of the spring in the side compartments, and means carried by said downwardly extending limbs, engaging with only one of the leaves of said spring to prevent the longitudinal displacement of said clip on said spring.

4. The combination with a spring composed of a plurality of superimposed leaves, of an oiling device for applying a lubricant to the edges of the leaves, and means whereby the oiling device is anchored to one only of the leaves of the spring, so as to thereby permit a free and independent movement of all the leaves.

5. The combination with a spring composed of a plurality of superimposed leaves, of an oiling device for applying a lubricant to the edges of the leaves, and means whereby the oiling device is anchored to one only of the leaves of the spring, so as to thereby permit a free and independent movement of all the leaves, said anchoring means consisting of an inwardly-extending lug member biting into the leaf to which it is to be anchored.

[Claims 6 to 34 not printed in the Gazette.]

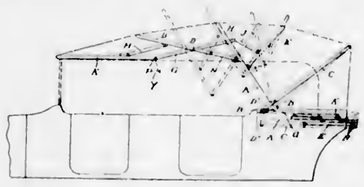
1,219,805. TOP FOR VEHICLES AND THE LIKE. MAX BUCH, Detroit, Mich., assignor to Henry E. Edwards, Jackson, Mich. Filed Feb. 21, 1916. Serial No. 79,696. (Cl. 21—62.)



1. In a vehicle top, a pair of standards adapted for pivotal connection with the vehicle body and having free upper ends, a cover supporting bow having its arms pivotally connected with said standards near their upper ends, an outrigger bow, a pair of links pivotally connected respectively to the arms of the outrigger bow and to said standards, a second pair of links pivotally connected to the arms of the outrigger bow in advance of their rear ends and to said standards above the pivots of said first named links, one of said pairs of links having extensions and means connecting said extensions with said cover supporting bow.

2. In a vehicle top, a pair of standards adapted for pivotal connection with the vehicle body and having free upper ends, a cover supporting bow having its arms pivotally connected to said standards near said upper ends, an outrigger bow, a pair of links pivotally connected respectively to the arms of the outrigger bow and to said standards, a second pair of links pivotally connected to the arms of the outrigger bow in advance of their rear ends and to said standards above the pivots of said first named links and having extensions, and means connecting the arms of said cover supporting bow to said extensions.

1,219,806. FOLDING TOP OR HOOD FOR VEHICLES. MAX BUCH, Detroit, Mich., assignor to Henry E. Edwards, Jackson, Mich. Original application filed May 28, 1914, Serial No. 841,627. Divided and this application filed Dec. 1, 1915. Serial No. 64,544. (Cl. 21—62.)



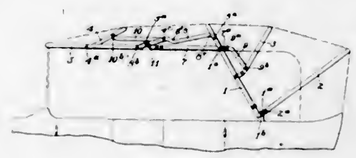
1. In a vehicle hood, a main standard and a rear bow arm adapted to be pivotally supported from a vehicle body, a supplemental rear bow arm pivoted to the standard, a flexible link connection between the said supplemental bow arm and rear bow arm, an outrigger bow arm, link mechanism connecting said outrigger bow arm to the main standard, an extension on said link mechanism, and means connecting said extension with the said rear supplemental bow.

2. In a vehicle hood, the combination with the main standard and rear bow arm pivotally supported from the vehicle body, of a rear supplemental bow arm pivotally connected to the main bow arm, an outrigger bow arm, a link connecting the rear end of said outrigger bow arm with the side of the main bow arm above the point of connection thereto of the rear supplemental bow arm, said link extending beyond its point of pivotal connection with the standard, means connecting the extended portion of the link with said rear supplemental bow arm, a front supplemental bow arm pivotally connected to said first named link and having its end extended below its pivot, a link connecting said extended end with the standard, and a link connecting said front supplemental bow arm with the outrigger bow arm.

3. In a vehicle hood, the combination with the main and rear bow arms pivotally supported from the vehicle body, of a rear supplemental bow arm pivotally connected to the main bow arm, an outrigger bow arm, a link connecting the rear end of said outrigger bow arm with the main bow arm above the point of connection thereto of the rear supplemental bow arm, said link having an extension, a link connecting said extension with the rear supplemental bow arm, an arm or lever pivotally connected to said first named link and having a part extended below its pivot, a link connecting said extended part with the main bow arm, and a link connecting the part of said arm or lever above its pivot with the outrigger bow.

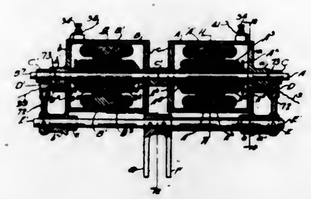
4. In a vehicle hood, the combination with the main standard and rear bow arm pivotally supported from the vehicle body, of a rear supplemental bow arm pivotally connected to the side of the standard, an outrigger bow, a flexible link connecting said rear and supplemental bow arms, an outrigger bow arm, a link connecting the rear end of the outrigger bow arm with the standard above the point of connection thereto of the rear supplemental bow arm, said link extending rearward of its point of pivotal connection with the standard, a link connecting said rearward extension with said rear supplemental bow arm, a front supplemental bow arm pivotally connected to said first named link and having its end extended below its pivot, a link connecting said extended ends with the standard and a link connecting said front supplemental bow arm with the outrigger bow arm.

1,219,807. HOOD OR COVER FOR VEHICLES. MAX BUCH, Jackson, Mich., assignor to Henry E. Edwards, Jackson, Mich. Filed Dec. 3, 1915. Serial No. 64,901. (Cl. 21—62.)



A vehicle top comprising a rear bow, a main bow, a rear supplemental bow pivoted thereto, a front or outrigger bow, a member pivoted to each side arm of the outrigger bow and main bow, said members having extensions, links connecting the arms of the rear supplemental bow with said extensions, a link pivoted to each side of the main bow above said members, and to the outrigger bow in front of the pivots of said members, a front supplemental bow having its extremities pivoted to the sides of the outrigger bow, and links connecting the sides of the front supplemental bow with said first named links.

1,219,808. ELECTRIC GEAR-SHIFTER. JOHN A. CAPOCEFALO and ROSS L. KING, Jr., Syracuse, N. Y.; said Capocefalo assignor to Bruce L. King, Syracuse, N. Y. Filed Sept. 5, 1916. Serial No. 118,555. (Cl. 74—58.)



1. In a speed gear change mechanism for automobiles, speed gear shifters, a pair of armatures for operating said shifters, said armatures connected in parallel, a pair of magnetic fields for positioning each of said armatures and said shifters in neutral position, a pair of magnetic fields for rotating each armature in opposite directions for changing from one speed to another, and a plurality of hand-operated switches for controlling said armatures and said fields.

2. In electric gear shifting mechanism, the combination with the transmission gears and a pair of fingers, of a rotor for operating each of said fingers, the windings of said rotors connected in parallel, magnetic fields for operating each rotor for effecting the changes of said gears for two different speeds, a source of electric current, and manual switch devices for controlling said fields and said rotors.

3. In electric gear shifting mechanism, the combination with transmission gears and shifters for said gears, of two motor-like devices each comprising two neutral fields and two shift-controlling fields and an armature rotatable between said fields for actuating said shifters, a source of electric current, for energizing said fields and armatures, a selective switch, circuits connecting said switch with the shift-controlling fields, a second switch, and a circuit connecting the latter switch with said selective switch.

4. Electric gear shifting mechanism, including a pair of fingers, an armature, and gears for operating each finger, electromagnetic fields for rotating said armatures in opposite directions, a selective switch determining the movements of said armatures, a source of electric current, and a cylinder switch for controlling the energizing of said fields and said armatures.

5. Electric gear shifting mechanism, including a pair of fingers, an armature and gears for operating each finger independently of the other, electro-magnetic fields for rotating each armature in opposite directions, a selective switch adapted to determine certain movements of said armatures, a source of electric current, and a switch for controlling the energizing of said fields through said selective switch, and the energizing of said armature independently of said selective switch.

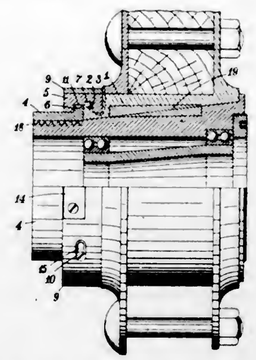
[Claims 6 to 25 not printed in the Gazette.]

1,219,809. CEREAL FOOD. ROBERT S. CATES, Kingman, Kans. Filed Feb. 15, 1916. Serial No. 78,482. (Cl. 99—10.)

1. That process of preparing a cereal food which consists in preparing a cereal grain by crushing the grain, then removing a portion of the shorts and starch, then partly carbonizing the remaining starches, and finally impregnating the product with an infusion of a laxative and allowing the whole to dry.

2. That process of preparing a cereal food which consists in preparing a cereal grain by crushing the grain, then removing a portion of the shorts and starch, then partly carbonizing the remaining starches, and finally impregnating the product with a saline infusion of senna leaves and allowing the same to dry.

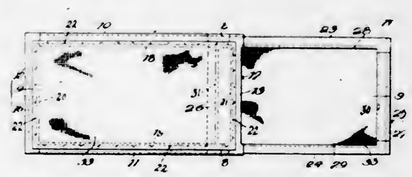
1,219,810. DETACHABLE WHEEL. ARTHUR STANLEY JAMES CHAPMAN, Derby, England. Filed July 11, 1913. Serial No. 778,568. (Cl. 21—31.)



1. In a detachable wheel, a hub shell having an outward annular flange at its outer face, a hub on which the shell is mounted, means for keying said shell upon the hub, a securing cap having an outward annular flange at its inner face, formed with a ratchet in it and equal in diameter to the aforesaid flange on the hub shell, said cap being adapted to grip upon the end of the hub when a screwing motion is imparted to it, an internally channeled ring surrounding the said abutting flanges of the shell and of the cap, a spring-pressed pawl free to slide within a radial perforation in the said ring and to engage with the said ratchet, and means for preventing relative rotation of the ring and the hub shell respectively.

2. In a detachable wheel, a hub shell having an outward annular flange at its outer face, a hub on which the shell is mounted, means for keying said shell upon the hub, a securing cap having an outward annular flange at its inner face, formed with a ratchet in it and equal in diameter to the aforesaid flange on the hub shell, said cap being adapted to grip upon the end of the hub when a screwing motion is imparted to it, an internally channeled ring divided into segments surrounding the said abutting flanges of the shell and of the cap, a band surrounding the said ring, a spring-pressed pawl free to slide within a radial perforation penetrating both the said ring and said band and to engage with the said ratchet, said pawl being divided in length into two portions, one within the ring and the other within the band, means for securing said band either in the position in which the pawl can cooperate freely with the ratchet when only a restraint upon the rotation of the cap is desired or else in the position in which the pawl is held locked upon the ratchet if it is desired that the cap shall be irremovably secured, and means for preventing relative rotation of the ring and the hub shell respectively.

1,219,811. AIR-PURIFYING AND VENTILATING DEVICE. WILLIAM D. DOTY, Streator, Ill., assignor of one-half to Matthew W. Jack, Streator, Ill. Filed Jan. 8, 1916. Serial No. 71,040. (Cl. 156—38.)



1. A device of the class described, comprising coacting frames with their confronting faces slidably engaging, the

body portion of each frame member having a part directed laterally therefrom and the outer edge of each laterally directed part provided with a plurality of spurs spaced apart and adapted to be engaged by a fabric member.

2. A device of the class described, comprising coacting frames, one of said frames having longitudinally directed guides to slidably receive the other frame and each of said frames having a part directed laterally therefrom and the outer edge of each laterally directed part provided with a plurality of spurs spaced apart and adapted to be engaged by a fabric member.

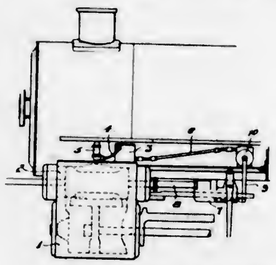
3. In a device of the class described, a frame having lateral projections at the inner edges of its members with fabric engaging elements carried by the projections, the side members of said frame having longitudinally directed guideways and one of the end members having a lateral projection at its outer edge, and a coacting frame having lateral projections at the inner edges of its members carrying fabric engaging elements, and with one of its end members formed with another lateral projection, the side members of said last-mentioned frame slidably engaging the guides of the first-mentioned frame.

4. In a device of the class described a frame formed of side members having guide devices at their outer edges and lateral projections at their inner edges, said lateral projections each carrying a plurality of spurs extending in parallel relation to the side members, and end members secured by their terminals to the side members and each having a lateral projection at its inner edge, said last mentioned projections each carrying a plurality of spurs directed in parallel relation to the end members, said spurs adapted to be engaged by a fabric element.

5. In a device of the class described, a frame formed of side members having lateral projections at their inner edges, each of said projections carrying a plurality of spurs directed in parallel relation to the frame members, and end members secured by their terminals to the side members and each having a lateral projection at its inner edge, each of said last mentioned projections carrying a plurality of spurs directed in parallel relation to the frame members, said spurs adapted to be engaged by a fabric element.

[Claim 6 not printed in the Gazette.]

1,219,812. OIL-FEED-CONTROLLING MECHANISM. CLARENCE D. DOUTY, Altoona, Pa., assignor to McCord & Company, Chicago, Ill., a Corporation of New Jersey. Filed July 5, 1913. Serial No. 777,556. (Cl. 184—36.)



1. In a forced feed lubricator for a steam cylinder, an oil pump, an oil discharge connection leading therefrom, and a controlling means for the discharge connection comprising a chamber connected to the discharge connection and to the cylinder, a valve controlling the connection from the chamber to the cylinder, a movable abutment exposed to the pressure of the oil in the chamber but cut off by the valve from pressure from the cylinder and adapted to open the valve when the oil pressure rises to a predetermined point in excess of the steam pressure in the cylinder, and a spring for holding the abutment in position to close the valve until the oil pressure in the chamber rises to the said predetermined point, the area of the valve exposed to the steam being relatively so small that the opening force applied to the valve by the steam is negligible as compared with the closing force exerted upon the valve by the spring.

2. In a forced feed lubricator for a steam cylinder, an oil pump, an oil discharge connection leading therefrom, and a controlling means for the discharge connection comprising a chamber connected to the cylinder, a movable abutment exposed to the pressure of the oil in the chamber, a valve operated by the abutment and controlling the connection from the chamber to the cylinder, and a spring for holding the abutment in position to close the valve and cut off communication between the cylinder and the abutment, the pressure of the spring being such that the pressure of the oil in the chamber must be in excess of the steam pressure in the cylinder in order to move the abutment to open the valve, and the area of the valve exposed to the steam being relatively so small that the opening force applied to the valve by the steam is negligible as compared with the closing force exerted upon the valve by the spring.

3. In a forced feed lubricator for a steam cylinder, an oil pump, an oil discharge connection leading therefrom and a controlling means for the discharge connection comprising a movable abutment exposed to the pressure of the oil in the connection, a valve operated by the abutment and controlling the flow of oil to the cylinder, and a spring for holding the abutment in position to close the valve and cut off communication between the cylinder and the abutment, the pressure of the spring being such that the pressure of the oil in the connection must be in excess of the steam pressure in the cylinder in order to open the valve, and the valve when closed cutting off communication from the abutment to the cylinder, the area of the valve exposed to the steam being relatively so small that the opening force applied to the valve by the steam is negligible as compared with the closing force exerted upon the valve by the spring.

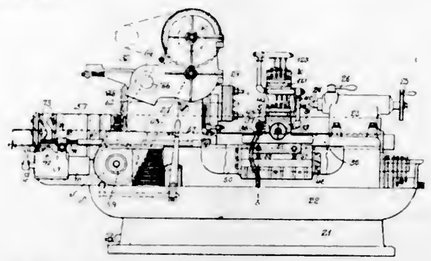
4. In a forced feed lubricator for a steam cylinder, an oil pump, an oil discharge connection leading therefrom and a controlling means for the discharge connection comprising a chamber connected to the cylinder by a relatively small passage and to the said connection, a movable abutment exposed to pressure of the oil in the chamber, a pin valve operated by the abutment and controlling the said relatively small passage, and a spring for holding the abutment in position to close the valve and cut off communication between the cylinder and the abutment until the oil pressure in the chamber rises to a predetermined point in excess of the steam pressure in the cylinder.

5. The combination with a machine having a part to which oil must be fed against a variable fluid back pressure, of a pump driven from said machine, an oil conduit leading from said pump to said part to be lubricated, and a valve mechanism controlling the oil discharge from said conduit and including yielding means operative to close said valve mechanism in opposition to a predetermined oil pressure that at least equals the maximum variable fluid back pressure, but operative to open under working oil pressure that exceeds said predetermined pressure, whereby the oil will start when said machine starts and will stop when said machine stops.

[Claims 6 to 8 not printed in the Gazette.]

1,219,813. METAL-WORKING MACHINE. RALPH E. FLANDERS, Springfield, Vt., assignor to Jones & Lamson Machine Company, Springfield, Vt., a Corporation of Vermont. Filed Dec. 2, 1915. Serial No. 64,710. (Cl. 29—27.)

1. A metal-working machine, comprising an oscillatory tool carrier, a support therefor, means for reciprocating said tool carrier longitudinally of its axis, a former or templet arranged longitudinally of the axis of said tool carrier for controlling the movement of the carrier about its axis, and mechanism for automatically moving said former at the end of each longitudinal movement of the tool carrier to oscillate said carrier about its said axis and thereby to move the tool carried thereby toward and from the work.



2. A metal-working machine, comprising a work spindle, a tool carrier capable of oscillation about an axis substantially parallel with that of the work spindle, a tool slide adjustable lengthwise of said carrier, a tool holder on said slide, a former arranged longitudinally of said axes and coacting with said carrier to control the oscillatory movement of the tool carrier, means for reciprocating said carrier axially relatively to said former, and mechanism for moving said former to rock the carrier about its axis, so as to engage the tool and disengage it from the work at the ends of the axial movements of the tool carrier.

3. A metal-working machine, comprising a bed having an inclined guideway, a work spindle, a former supported by the guideway on the bed, a tool carrier engaged with the former, mechanism for supporting said carrier whereby it is capable of oscillation about an axis longitudinal of said spindle, mechanism for automatically reciprocating said carrier lengthwise of its axis and relatively to said former, and automatic mechanism for moving said former longitudinally of said guideway to oscillate the carrier and thereby move the tool carried thereby toward and from the work held by the work spindle.

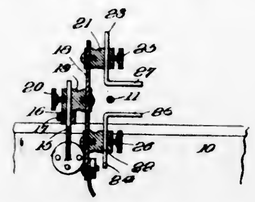
4. A metal-working machine, comprising a bed, a work spindle, a former longitudinal of the work spindle, a support therefor movable lengthwise of the bed and arranged to move said former laterally, an inclined guideway on the bed for said support, a tool carrier engaged with said former and adapted to rock about an axis longitudinally of the work spindle, a cam drum, mechanism actuated by said cam drum for reciprocating the carriage, and mechanism actuated by said cam drum for moving said support along said guideway thereby to move said former laterally and to oscillate said tool carrier about its axis.

5. A metal-working machine, comprising a bed, a work spindle, a tool carrier mounted to reciprocate longitudinally of the work-spindle axis and adapted to oscillate about an axis substantially parallel with the spindle axis, a former engaged with the tool carrier, an angular or inclined guide-way on the bed extending lengthwise of the spindle axis, a slide thereon for supporting said former, mechanism for reciprocating the tool carrier, and mechanism for reciprocating said former-supporting slide.

[Claims 6 to 12 not printed in the Gazette.]

1,219,814. INCUBATOR-ALARM. HERSCHEL V. FLICKINGER, Bucyrus, Ohio. Filed Jan. 15, 1916. Serial No. 72,309. (Cl. 200—31.)

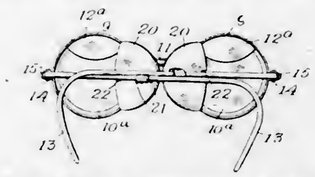
1. The combination with an incubator having a regulating lever, of a bracket carried by the incubator, a contact carrying member slidably connected with the bracket and arranged to swing thereon, spaced contacts carried by the said member to selectively coöperate with the said lever for closing a circuit therethrough with the said contacts independently adjustable for varying the instant of contact thereof with the said lever, means for holding the said contacts at adjustment, a collar mounted upon the bracket and swingingly supporting said contact carrying member with the said member adjustable to dispose the said contacts in inactive position with respect to the said lever, means for holding the said contact member at swinging adjustment, and means for adjusting the said collar upon the bracket to coöperate with the said contact carrying member for simultaneously adjusting the said contacts with respect to the lever.



2. The combination with an incubator, and an oscillating lever thereon, of a support carried by the incubator at one side of the plane of oscillation of said lever, a member slidable longitudinally and rotatable on said support, spaced contacts carried by said member and projecting laterally therefrom, means for adjusting the member longitudinally of the support, and means for holding said member in any position of rotatable adjustment whereby said contacts may be moved into or out of operative relation to said lever.

3. The combination with an incubator, and an oscillating lever thereon, of a support carried by the incubator at one side of the plane of oscillation of said lever, a member slidable longitudinally and rotatable on said support, spaced contacts projecting laterally from said member and adjustable thereon toward and away from each other, means for adjusting the member longitudinally on the support, and means for holding said member at any position of rotatable adjustment whereby said contacts may be moved into or out of operative relation to said lever.

1,219,815. GOGGLES. WILLIAM J. HINES, Leominster, Mass., assignor to Alston L. Preston, Leominster, Mass. Filed Apr. 26, 1916. Serial No. 93,787. (Cl. 2—149.)



1. As an article of manufacture, a pair of goggles formed of sheet celluloid and consisting of a single integral piece thereof, pressed and stamped out to provide a plain body portion, a longitudinal bridge and end portions, said body portion having two eye members spaced apart and having eye openings cut out of the same to leave a continuous plain rim therearound, the whole being provided with a single integral continuous marginal flange at all points at right angles to the plane of the said body portion.

2. As an article of manufacture, a pair of goggles comprising a plain flat member of sheet celluloid having two eye pieces stamped out of the same, said member being provided with flat rims around the eye pieces in the plane of said body and having a bridge piece connecting said rims integrally and in the plane thereof, said member having a transverse continuous marginal strengthening flange extending therearound, the bridge piece also having two marginal flanges integral and continuous with the first named flanges, two hollow projections formed at opposite ends of the whole frame and consisting of integral continuations of the flanges of the flat member, and temples hinged within said projections.

3. As an article of manufacture, a pair of goggles comprising a plain flat member of sheet celluloid having two eye openings stamped out of the same, said member being provided with flat rims around the eye openings in the

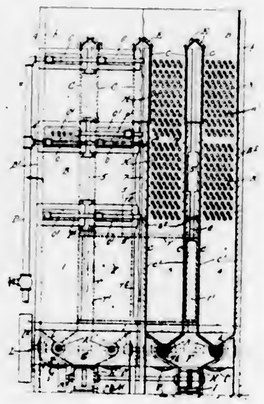
plane of said body and having a transverse continuous strengthening flange extending therearound at the extreme outer edge, and eye pieces secured to the rear of said flat rims and free from the marginal flanges.

4. As an article of manufacture, a pair of goggles consisting of sheet celluloid and having two eye-pieces integrally connected together and each having a plain rim therearound provided with a portion at the top for cutting off the light through the top part of the eye-piece.

5. As an article of manufacture, a pair of goggles comprising a frame of sheet celluloid having eye-pieces cut out therefrom and having dimmers integral with the sheet celluloid at the top of said eye-pieces and provided with opaque members at the rear.

[Claim 6 not printed in the Gazette.]

1,219,816. GRAIN-DRIER. ALFRED W. FRENCH, Piqua, Ohio. Filed Aug. 25, 1915. Serial No. 47,244. (Cl. 34—34.)



1. The combination of an upright drying chamber through which the material is adapted to descend, means for controlling the descent of the material through the chamber, heating pipes occupying the upper portion of said chamber for heating the material, the portion of said chamber below said heating pipes being substantially unobstructed, means for passing a heated drying medium through a portion of said chamber occupied by said heating pipes for drying the material heated by said pipes, and means for passing a cooling medium through the portion of the chamber below said heating pipes for cooling the material.

2. The combination of an upright drying chamber through which the material is adapted to descend, means for controlling the descent of the material through the chamber, heating pipes occupying the upper portion of said chamber for about one-half the length of said chamber, means for passing a heated drying medium through the lower part of the portion of the chamber occupied by said heating pipes for drying the material heated by said pipes, and means for passing a cooling medium through the portion of the chamber below said heating pipes for cooling the material.

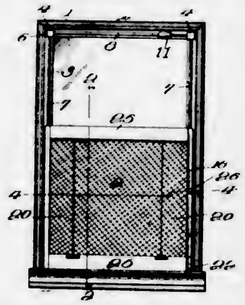
3. The combination of an upright drying chamber through which the material is adapted to descend, means for controlling the descent of the material through the chamber, said chamber having side walls provided below the upper portions thereof with openings for the passage of drying and cooling mediums, heating pipes occupying the upper portion of said chamber for heating the material, means for passing a heated drying medium through the walls of the portion of the chamber occupied by said pipes, and means for passing a cooling medium through the walls of said chamber below said heating pipes.

4. The combination of an upright drying chamber the walls of which have imperforate upper portions and are provided below said imperforate portions with openings for the passage of drying and cooling mediums, heating pipes occupying the upper imperforate portions of the chamber and extending below the same in the chamber, means for passing a heated drying medium through the walls of the portion of said chamber adjacent to said heating pipes, and means for passing a cooling medium through the walls of the portion of the chamber below said heating pipes.

5. The combination of an upright drying chamber through which the material is adapted to descend, means for controlling the descent of the material through the chamber, heating pipes occupying the upper portion of said chamber for a relatively large part of the height of the chamber, means for passing a heated drying medium through the material occupying a relatively large part of the portion of the chamber occupied by said heating pipes, and means for passing a cooling medium through the material occupying the portion of the chamber below that occupied by said pipes.

[Claims 6 to 10 not printed in the Gazette.]

1,219,817. WINDOW-SCREEN AND SCREEN-GUIDE. RICHARD H. GEMENY and RUFUS REED, Washington, D. C. Filed May 24, 1916. Serial No. 99,494. (Cl. 156—38.)



1. The combination with a rectangular frame, of members frictionally engaging the corners thereof, extensible rods connecting pairs of said members and holding them in contact with the corners of said frame, and a frame, carrying insect proof material, mounted on said rods.

2. The combination with a window frame, of blocks frictionally engaging the corners thereof, extensible rods connecting pairs of said blocks and holding them in contact with the corners of said frame, and a window screen slidably mounted on said rods.

3. The combination with a window frame, of blocks frictionally engaging the corners thereof, extensible rods connecting said blocks and holding them in contact with said frame, screen supports slidably mounted on certain of said rods, and a window screen freely mounted in said supports.

4. The combination with a window frame, of blocks frictionally engaging the corners thereof, rods having screw threaded engagement with said blocks and carrying ferrules, other rods rotatably mounted in the blocks and engaging said ferrules, and a window screen slidably mounted on certain of said rods.

5. The combination with guide rods, of screen supports slidably mounted thereon, a screen adjustably carried by said supports, and means for locking one of said screen supports to one of said guide rods.

[Claims 6 to 9 not printed in the Gazette.]

1,219,818. CAKE-TURNER. JOHN HANSON, Steele, N. D. Filed June 30, 1916. Serial No. 106,888. (Cl. 65—3.)

A cake turner having a blade, a coil spring element having one end thereof connected to said blade, the other end of said spring element being provided with a straight portion, a handle mounted on said straight portion, and the



free end of said portion being laterally bent to prevent displacement of said handle.

1,219,819. PROCESS FOR THE MANUFACTURE OF SODIUM THIOSULFATE. THOMAS WILLIAM STAINER HUTCHINS, LUKE HARGREAVES, and ALFRED CHARLES DUNNINGHAM, Middlewich, England. Filed Aug. 18, 1916. Serial No. 115,620. (Cl. 23—13.)

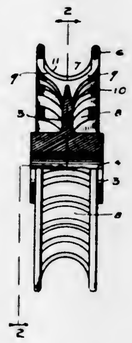
1. A process for the production of sodium thiosulfate by the action of sulfur upon sodium sulfite in which the relative masses of the reacting substances and water are proportioned to form by digestion a sodium thiosulfate solution sufficiently concentrated, without evaporation, to allow of commercial separation by crystallization, as set forth.

2. A process for the production of sodium thiosulfate in which there is employed a large excess of at least one of the reagents sodium sulfite and sulfur beyond the theoretical quantity required for the formation of sodium thiosulfate, whereby the reaction is accelerated, concentrated solutions are produced and impurities precipitate out from the hot concentrated solutions, as set forth.

3. A process for the production of sodium thiosulfate by the action of sulfur upon sodium sulfite, in which an excess of sodium sulfite and sulfur is employed alternately to enable the removal of soluble and insoluble impurities alternately and prevent loss of reagents, as set forth.

4. A process for the continuous production of sodium thiosulfate, comprising passing a hot sodium sulfite solution through an intimate mixture of solid sulfite and sulfur, as set forth.

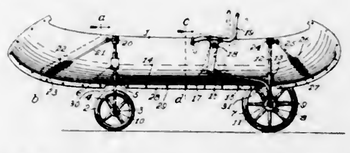
1,219,820. TROLLEY-WHEEL. VINCENT K. JOHNSON, Indianapolis, Ind., assignor of one-half to Daniel M. Moroney. Filed May 8, 1916. Serial No. 96,258. (Cl. 191—62.)



1. In a trolley wheel, a web, a rim extended laterally on both sides of the web, said rim comprising a pair of flanges separated by an annular groove which receives the wire, said rim being perforated by a plurality of clearing spaces which extend through both flanges of the rim and also radially of the wheel past the bottom of said annular groove forming transverse ribs in the grooved rim, said ribs being longitudinally beveled on both sides and the web of the wheel being reduced in thickness to form annular clearance channels opposite the major portions of said wire-receiving groove.

2. In a trolley wheel, a web, a rim extended laterally on both sides of the web, said rim comprising a pair of flanges separated by an annular groove which receives the wire, said rim being perforated by a plurality of clearing spaces which extend through both flanges of the rim and also radially of the wheel past the bottom of said annular groove forming transverse ribs in the grooved rim, said ribs being longitudinally beveled on both sides and the web of the wheel being reduced in thickness to form annular clearance channels opposite the major portions of said wire-receiving groove and the web where it crosses the clearing spaces being additionally reduced in thickness on two opposite sides to form ice cutting wedges at the mid-lengths of said transverse ribs under the middle of the downwardly pressing wire and guides to direct the cut ice-pack into said annular clearance channels.

1,219,821. VEHICLE. GEORGE COLVIN KENNEDY, Waterloo, Iowa. Filed June 26, 1916. Serial No. 106,049. (Cl. 208—38.)



1. In a vehicle, a hollow body, a frame inclosed therein, carrying-wheels for said body, said body having openings, supports connected between said wheels and said frame and passed through said opening, and yieldable resilient connections between said frame and said body adapted to allow the body to swing yieldingly in any direction from its points of support.

2. In a vehicle, a hollow body, a frame inclosed therein, forward and rear carrying-wheels, said body having openings, the forward wheels having connecting-means to said frame passed through one of said openings and adapted for rocking laterally, and the rear wheels mounted on an axle rotatable in a bearing-connection passed through another of said openings and connected rigidly to said frame, and yieldable resilient connections between said body and said frame.

3. In a vehicle, a hollow body having openings, a frame located within said body with extensions projecting through said openings, means for transportation mounted on said extensions without said body, and movable connections between said body and said frame located within said body.

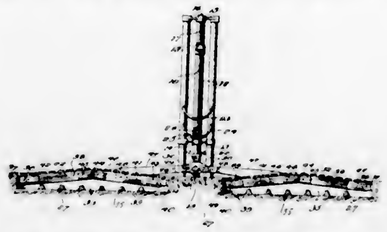
4. In a vehicle, a hollow body, a frame located within the body, means for transportation connected to said frame including a steering device, driving-mechanism mounted on said body and operatively connected to said means for transportation, and movable supporting connections between said body and frame.

5. In a vehicle, a hollow body having orifices in its bottom, rear carrying-wheels mounted on an axle provided with a crank, forward carrying-wheels rotatable on an axle, a rock-shaft passed through one of said orifices into said body and having the forward axle fixed thereon to be rocked laterally therewith, an upright passed through another of said orifices into said body, having said rear axle rotatably mounted on its lower end, a longitudinal frame-bar within said body rigidly connected to the rear upright and pivotally connected to said rock-shaft, yieldable resilient connections between the upper ends of said rock-shaft and said rear upright and opposite parts of the forward and rear ends of the body respectively adapted to allow the body to swing yieldingly and suspensively in

any direction, a seat mounted on said body to oscillate therein, and driving-connections between said seat and the crank on the rear axle.

[Claims 6 to 10 not printed in the Gazette.]

1,219,822. GATE. JOHN T. KENT, Douglas, Ariz. Filed Apr. 19, 1915. Serial No. 22,410. (Cl. 39—18.)



1. In an apparatus of the class described, a gate mounted to swing over a gate-way opening and movable vertically, a track inclined laterally and transversely of the gate-way opening, a bearing member carried by the gate and engaging said track, an arm mounted to swing vertically into engagement with the gate to simultaneously elevate the gate and move it toward open position and causing the bearing member to traverse said track, and means for actuating said swinging arm.

2. In an apparatus of the class described, a gate mounted to swing over a gate-way opening and movable vertically, a track inclined laterally and transversely of the gate-way opening, a bearing member carried by the gate and engaging said track, a vertically swinging arm in constant engagement with said gate, and means for actuating said swinging arm to cause it to simultaneously elevate said gate and move it toward open position to cause the bearing member to traverse said track and complete the elevation and swinging movement of the gate.

3. In an apparatus of the class described, a gate mounted to swing over a gate-way opening and movable vertically, a track inclined laterally and transversely of the gate-way opening, a bearing member carried by the gate and engaging said track, a support having a rod upon which said gate is vertically slidable, an arm swinging vertically upon said support and in constant engagement with said gate, and means for actuating said arm to cause it to swing the gate toward open position and cause the bearing member to traverse said track.

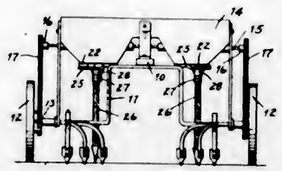
4. In an apparatus of the class described, a gate mounted to swing and movable vertically, a track adjacent to the gate and inclined transversely and longitudinally thereof when in closed position, a bearing member carried by said gate and engaging said track, a member mounted to swing vertically into engagement with the gate to simultaneously elevate the gate and move it toward open position, and means for actuating the swinging member.

5. In an apparatus of the class described, a gate mounted to swing and movable vertically, a track adjacent to the gate and inclined transversely and longitudinally thereof when in closed position, a bearing member carried by said gate and engaging said track, a body having a vertical guide member engaged by said gate, a member mounted to swing vertically relative to said body and into engagement with the gate to simultaneously elevate the gate and move it toward open position, and means for actuating the swinging member.

[Claims 6 to 13 not printed in the Gazette.]

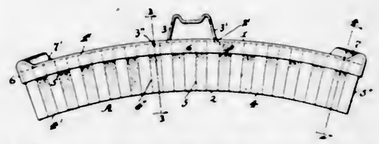
1,219,823. DISCHARGE-TUBE FOR FERTILIZER-DISTRIBUTERS. OSCAR F. KERR, Como, Tex. Filed May 25, 1914. Serial No. 840,862. (Cl. 193—45.)

The combination with a hopper bottom having an outlet opening formed therethrough, of a discharge tube secured to the lower face of the hopper bottom over said opening, a transverse web formed across the discharge tube below the upper edge thereof and having its central portion cut away to provide a valve opening, the space between the upper face of said transverse web and the upper edge of the tube providing a valve seat, a sliding valve plate



slidable into position over said transverse web to occupy said space, the side of the tube opposite said web being slotted to permit the entrance of said valve plate, a pivoted lever for swinging said valve plate into position, and means for securing said valve plate in adjusted position.

1,219,824. BRAKE-SHOE. JOHN JACOB KINZER, Wildwood, Pa., assignor to Pittsburg Brake Shoe Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 24, 1916. Serial No. 127,364. (Cl. 188—27.)



1. A brake-shoe comprising a back member and a body member, said body member composed of a plurality of sections or blocks, and side portions on said back member for being bent against said sections or blocks to hold the same in place.

2. A brake-shoe comprising a back member and a body member, said body member composed of a plurality of wedge-shaped sections or blocks, and side portions on said back member for being bent against said sections or blocks to hold the same in place.

3. A brake-shoe comprising a back member and a body member composed of a plurality of sections or blocks, and outwardly flared portions on the side of said back-member for being bent against said sections or blocks to hold the same in place.

4. A brake-shoe comprising a back member and a body member composed of a plurality of wedge-shaped sections or blocks, and outwardly flared portions on the side of said back-member for being bent against said sections or blocks to hold the same in place.

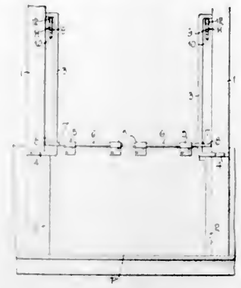
5. A brake-shoe comprising a back member and a body member, said body member composed of a plurality of sections or blocks, and lip portions on the side of said back member for being bent against said sections or blocks to hold the same in place.

[Claims 6 to 26 not printed in the Gazette.]

1,219,825. PARTITION. WILLIAM J. KLUENDER, Paullina, Iowa. Filed Dec. 4, 1916. Serial No. 134,947. (Cl. 39—93.)

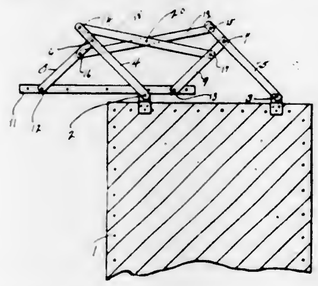
A device of the character described comprising a pair of uprights, the opposed faces of which being provided with guideways, a member slidably engaged within said guideways and positioned between the uprights, guide rods carried by the uprights and arranged inwardly thereof, bars slidably engaged with the rods and with which the member is pivotally engaged, a holding member pivotally supported adjacent an end of each of the rods and provided with an arm, a bar carried by the slidable member and adapted to contact with said arm upon movement of the

member in one direction for causing the holding member to be operatively engaged with the bar, and spring jaws car-



ried by the rod and adapted to receive therebetween the arm of the holding member for maintaining the holding member against return movement.

1,219,826. DOOR-HANGER. ANDREW F. LARSON, Portland, Oreg. Filed Oct. 24, 1916. Serial No. 127,481. (Cl. 16—156.)



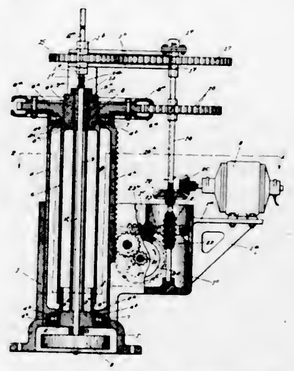
1. A supporting linkage for a door or the like, comprising in combination, a pair of relatively long links, and a pair of relatively short links; the lower ends of said long links being connected by pivot points to the door; and the lower ends of said short links being connected by pivot-points to a fixed support, the upper end of the short links being connected by pivots to points on the long links, which points are situated below the upper end of said long links, and means interconnecting said short links and said long links for preserving a predetermined relation therebetween throughout the movement of said door.

2. A supporting linkage for doors and the like comprising in combination, a pair of relatively short parallel links pivoted to a fixed support, a pair of long links pivoted to the door, said short links being pivoted to said long links, and a lazy tong for maintaining said short and long links in parallel relation.

3. A supporting linkage for doors and the like comprising in combination, a pair of relatively short parallel links pivoted to a fixed support, a pair of long links pivoted to the door, said short links being pivoted to said long links, said long links extending beyond said pivotal connection with said short links, a link connecting the end of one of said long links with one of said short links, and a link connecting the second one of said long links with the second one of said short links.

4. A supporting linkage for doors and the like comprising in combination, a pair of relatively short parallel links pivoted to a fixed support, a pair of long links pivoted to the door, said short links being pivoted to said long links, said long links extending beyond said pivotal connection with said short links, a link connecting the end of one of said long links with one of said short links, and a link connecting the second one of said long links with the second one of said short links, said last two mentioned links being pivoted together at their centers.

1,219,827. GRINDING-MACHINE. JOHN JAY LESCHER, Mount Carmel, Ill., assignor of one-half to Clarence Hurd, Mount Carmel, Ill. Filed Apr. 29, 1916. Serial No. 94,312. (Cl. 51—4.)



1. In a machine for grinding cylinders, the combination with a shaft carrying bearing sleeve provided with eccentrically arranged bearing collars having split portions at one side; of a connecting rod having tapered shoulder portions extending through and connected to said split portions whereby the latter may be expanded and secured in adjusted position.

2. A machine for grinding cylinders, comprising a stationary support, a carriage vertically movable therein, a rotatively mounted geared bearing support in said carriage, a tool carrying driving shaft, a shaft carrying bearing sleeve eccentrically and adjustably mounted in said gearing bearing support and provided with cone-shaped split bearing collars, means for expanding the latter, and means for simultaneously moving said carriage and driving said driving shaft and said geared bearing support whereby said driving shaft is given a combined vertical and planetary motion.

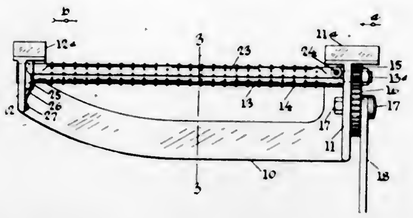
3. In a machine for grinding cylinders, a stationary support, a vertically movable carriage therein, a two-part geared bearing sleeve removably mounted in said carriage, a tool carrying driving shaft provided with eccentric bearing collars removably and adjustably mounted in said geared bearing sleeve, and driving mechanism operatively connected to said carriage driving shaft, and geared support whereby said grinding wheel carrying shaft is given a gyratory motion.

4. In a machine for grinding cylinders, a shaft carrying bearing sleeve provided with eccentrically arranged bearing collars having cone-shaped split portions, one of said collars being removable and adjustable on said shaft carrying bearing sleeve, and a connecting rod provided at its ends with tapered shoulder portions extending through and connected to said cone-shaped split portions, and adjusting nuts on the ends of said rod whereby to expand said split portions when said nuts are drawn toward said tapered shoulder portions.

5. A machine for grinding cylinders, comprising an attaching base member, a cylindrical carriage vertically movable therein and provided at its opposite ends with ball race-ways, a two-part geared bearing sleeve mounted in said carriage and provided with coöperating ball race-ways and centrally located openings, a shaft carrying bearing sleeve provided with eccentrically arranged collars in said bearing openings, and means for connecting and adjusting said collars whereby to adjust the eccentric relation of said shaft carrying bearing sleeve.

[Claims 6 to 8 not printed in the Gazette.]

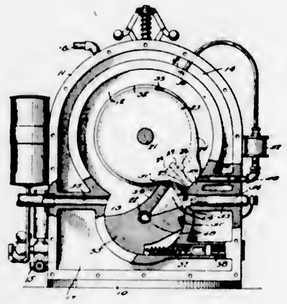
1,219,828. DEVICE FOR STRETCHING SUSPENDED FABRIC CEILING. FREDERICK E. MCCOMB, Worcester, Mass. Filed Mar. 18, 1916. Serial No. 85,127. (Cl. 254—57.)



1. A fabric stretching device comprising, in combination, a main frame, a roll having projections thereon mounted within said frame, means for revolving said roll in either direction, means for retaining said frame in its desired position, said means comprising an L shaped section which will engage the face and side of a furring.

2. A fabric stretching device comprising, in combination, a main frame, a roll having projections thereon mounted within said frame, a removable guard for said roll, means for rotating said roll in either direction, means for retaining said frame in a desired position, said means being substantially L shape in section.

1,219,829. ROTARY ENGINE. FRANK MARION, Hardwick, Vt., assignor of seventeen twenty-fourths to Frank T. Taylor and one-twelfth to V. W. Rand, Hardwick, Vt. Filed Oct. 16, 1914. Serial No. 866,971. (Cl. 123—15.)



1. An engine of the class described comprising a casing having a circular chamber therein, a piston revoluble concentrically therein, and including a head engaging close against the outer side of the chamber, a second circular chamber intersecting the first, an abutment member revoluble concentrically therein formed to clear the first chamber at one position, and having a portion to bear against the piston throughout rotation of the latter, yieldable means engaged with the abutment member for engagement thereof with the piston, said head having an inclined forward face to fend the abutment member into position to clear the first chamber, a hollow duct member engaged within the abutment member, and having a lateral port opening against the inner surface of the abutment member, said abutment member having a pocket therein opening into the first chamber when the abutment member is projected into the chamber, and opening against the duct member for registration with said port at certain positions of the abutment and duct members, an ignition device in the perimeter of the second chamber adjacent the pocket for ignition of a charge therein at times, operative connections between the piston and the duct member to change the position of the port for the purposes described, including a variable stroke device, means to operate the ignition device, and fluid supply connections with the duct member.

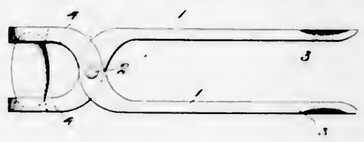
2. In a device of the class described, a casing having a circular chamber therein, a concentrically revoluble member in the chamber having a peripheral port, circumferentially spaced transverse grooves being formed in the periphery of the member, closely adjacent the port, and on opposite sides thereof, and connecting grooves in each side of the member, four substantially L-shaped packing plates having overlapped ends slidably engaged in the grooves, and means provided whereby the plates are borne outwardly for the purposes described.

3. An engine including a piston and a chambered member receiving the piston for operation therein, means for admitting an actuating fluid to the chamber including a movable member having a passage therethrough adapted to communicate with the chamber, a rotatable duct member fitted to said movable member and having a lateral port arranged to register with the said passage at certain positions of the movable member and duct member, a rotating member operatively connected with the piston, an adjustable eccentric device thereon and operative connections between said eccentric device and the duct.

4. An engine comprising a body casting having a circular chamber therein closed on each side to form a casing, a piston revolubly mounted in the chamber, a shaft carrying the piston and having an end projecting through at least one side of the casing a large gear carried thereby close against the casing, a plurality of spaced gears mounted on the casing and meshing with the large gears, and respective auxiliary devices fixed to the casing and operatively connected with said last named gears for maintaining and controlling action of the engine.

5. In a device of the class described a casing having a circular chamber a revoluble member snugly fitted in the chamber and having a port, transverse grooves formed in the outer face of the revoluble member on opposite sides of said port, connecting grooves being formed in the side of the revoluble member outwardly of its axis, and packing devices each having one arm disposed in one of the transverse grooves and in a communicating connecting groove conforming to the contour of the groove, opposed ends of the packing members being in overlapped relation for the purposes described.

1,219,830. NUTCRACKER. CYRUS MARSH, Ashland, Va. Filed Aug. 28, 1916. Serial No. 117,276. (Cl. 146—3.)



1. A nut-cracker, the opposite jaws of which are provided with approximately circular companion openings extending entirely through the jaws and alining with each other and provided at their inner ends with biting edges.

2. A nut-cracker, the opposite jaws of which are provided with approximately circular companion openings extending entirely through the jaws and alining with each other, each of said openings being provided at its inner end with a biting edge having teeth.

3. A nut-cracker, the opposite jaws of which are provided with approximately circular companion openings extending entirely through the jaws and alining with each other, said openings being flared toward their outer ends and at their inner ends provided with a biting edge.

4. A nut-cracker, the opposite jaws of which are provided with approximately circular companion openings flared toward their outer ends and extending entirely through the jaws, each of said openings having a biting edge formed at its inner end, and teeth formed in said biting edge.

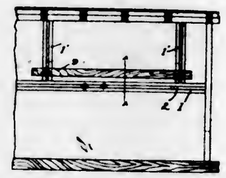
1,219,831. PACKAGE SEALER AND FASTENER. HENRY COLBY MARSTON, Goshen, N. Y. Filed July 22, 1916. Serial No. 110,648. (Cl. 24—18.)



1. A device of the class described comprising a piece of pliable material which is plain on one side to receive writing and which is gummed on the opposite side, a button disposed on the plain side of the said piece, a washer disposed on the gummed side, and a rivet passing through the button, piece and washer, said washer being located inwardly from one edge of the piece, whereby a gummed area will entirely surround the washer.

2. A device of the class described comprising a piece of pliable material gummed on one side and plain on the opposite side, and means for attaching a tie string to the said piece, said means including a rivet passing through the said piece, and a washer on the gummed side of the piece and through which the rivet extends, said washer being located inwardly from the margin of the said piece, whereby a gummed surface extends entirely around the washer.

1,219,832. FREIGHT-CAR-WALL CONSTRUCTION. BERT M. MATHIAS, Minneapolis, Minn. Filed July 22, 1916. Serial No. 110,774. (Cl. 248—19.)

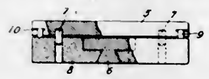


1. In a freight car wall, the combination of wall members, one of which is a longitudinal bar having a longitudinal T slot therein, and a vertically adjustable bracket supported by said bar, and means associated with said bracket for supporting an automobile thereon.

2. In walls for freight cars, the combination of a series of bars constituting oppositely disposed walls, one of said bars in each of said walls having a longitudinal T slot therein, brackets adjustably mounted and each of said bars having a T slot therein, and means supported by said brackets for supporting an automobile.

3. In a freight car wall, the combination of a series of wall members, one of which comprises a horizontal supporting bar having a T slot running longitudinally thereof, and brackets having slots running vertically thereof, and a bolt connection between said bracket and said bar, whereby the T slots in said bar and the vertical slots in said bracket, provide longitudinal and vertical adjustment of said bracket.

1,219,833. PROTECTOR. DAVID T. MAY, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Jan. 16, 1915. Serial No. 2,676. (Cl. 175—30.)



1. A protector comprising a body of insulating material, an electrode positioned therein, an opposing electrode, and metallic means inserted between said insulating material and opposing electrode for spacing said electrodes apart.

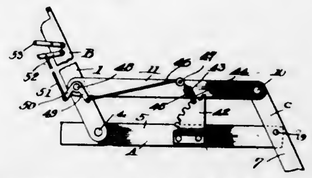
2. A protector comprising a body of insulating material, an electrode positioned therein, an opposing electrode, and a non-heat softenable means inserted between said insulating material and opposing electrode for spacing said electrodes apart.

3. A protector comprising a pair of opposing electrodes separated by an air gap, a non-conducting material forming a part of the body portion of one of said electrodes, the other of said electrodes comprising a metallic member and metallic spacing means for maintaining said air gap, said means being inserted between said metallic member and said non-conducting material.

4. A protector comprising a block of conducting material, an opposing block comprising bodies of conducting and insulating material, and a metallic spacing member being between said first mentioned block and the insulating body of the said second block.

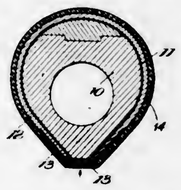
5. An electrode for a protector comprising a conducting body portion, and metallic strips secured in slots formed in the ends of said body portion.

1,219,834. ADJUSTABLE INVALID-CHAIR. ANNIE L. MEEKS, Gadsden, Ala. Filed Sept. 4, 1914. Serial No. 860,228. (Cl. 155—16.)



An invalid chair including a seat, a back including side bars pivotally connected with said seat, a leg rest including side bars pivotally connected with said seat and having their upper end portions extending above said seat, a rod constituting a rocker shaft rotatably carried by the side bars of said back, side arms for the chair pivotally connected with the upper end portions of the side bars of said leg rest and having their rear end portions pivotally connected with the side bars of said back by said rocker shaft, racks carried by said seat, pawls connected with said arms and yieldably held in position for engagement with said racks, levers rigidly mounted upon the outer end portions of said rocker shaft, flexible means connecting said levers with said pawls, and means connected with one of said levers for moving the same to draw its pawl out of engagement with its respective rack and rotating said rocker shaft to swing the second lever and draw its respective pawl out of engagement with its rack.

1,219,835. METHOD OF BUILDING CORD TIRES. ROBERT M. MERRIMAN, Akron, Ohio. Filed July 19, 1916. Serial No. 110,105. (Cl. 154—14.)



1. The method of building up a tire casing upon its core, which consists in coating the core with cement, in applying a ply of gum to the core, in applying fabric strips to the inner side portions of the core with their free edges folded upon themselves against the inner face of the core, in applying an inner ply of cord about the ply of gum, the cord being wound about the core, in setting beads in place at the sides of the core, in severing the convolutions of the cord along the center line of the inner

face of the core, and in folding the resultant ends of the cord sections outwardly against the bases of the beads, in applying a second ply of gum about the tire thus far formed, in winding a second outer ply of cord about the second ply of gum, in doubly severing the convolutions of the second ply of cord along the side lines of the inner face of the core, in unfolding the free edges of the fabric strips and in turning them outwardly about the bead portions of the tire thus far formed, and in then applying side walls and tread portions.

2. The step in the building up of a tire casing about its core which consists in winding a single ply of cord completely about the core, in applying beads to the lower side portions of the part of the tire thus far formed, in severing the convolutions of the cord ply along the center line of the inner face of the core and folding the free ends of the cord sections thus formed outwardly against the bases of the beads and terminating the ends of the cord sections substantially at the outer edges of the beads, in applying a ply of gum about the inner cord ply, and in winding a second cord ply over the ply of gum and beads, in severing the convolutions of the second cord ply in line with the side edges of the inner face of the core and forming the severed ends about the beads to bear against their inner faces and terminate at their inner edges.

3. The method of building up a tire casing upon its core, which consists in applying fabric strips to the inner side portions of the core with their free edges folded upon themselves against the inner face of the core, in winding plies of cord about the core with the strands of one ply extending at an angle to the strands of an adjacent ply, in positioning beads between certain of the plies and severing the plies and forming their ends about the beads, in unfolding the free edges of the fabric strips and turning them outwardly about the beads thus far formed, and in then applying side wall and tread portions.

1,219,836. SCALE-RULE. MILTON P. MILLER, Watervliet, N. Y. Filed Mar. 14, 1916. Serial No. 84,137. (Cl. 33—111.)



1. The combination of a casing, a slide having a plurality of scale faces and mounted in the casing for rotating and longitudinal sliding motion, and means housed within the casing and carried by the slide and the casing to lock the slide against movement.

2. In an instrument of the class described, a slide having a plurality of scale faces, a member slidably and rotatably supporting the slide, a locking member slidable with relation to the first mentioned member and held against rotation with relation thereto, and a locking member carried by the slide and arranged for coöperation with the first mentioned locking member.

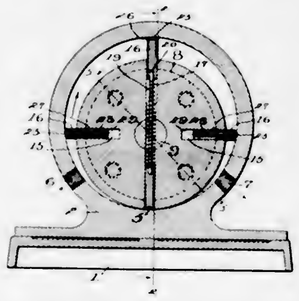
3. In an instrument of the class described, a slide having a plurality of scale faces, a member slidably and rotatably supporting the slide, a locking member slidable with relation to the first mentioned member and held against rotation with relation thereto, a locking member carried by the slide and arranged for coöperation with the first mentioned locking member, and means arranged in the movement of the slide in one direction to separate the said locking members.

4. In an instrument of the class described, a slide having a plurality of scale faces, a member slidably and rotatably supporting the slide, a locking member slidable with relation to the first mentioned member and held against rotation with relation thereto, a locking member carried by the slide and arranged for coöperation with the first mentioned locking member, means arranged in the movement of the slide in one direction to separate the said locking members, and means yieldably holding the locking members in coactive engagement with each other.

5. In an instrument of the class described, a slide having a plurality of scale faces, a member slidably and rotatably supporting the slide, a locking member carried by the slide and slidably adjustable therewith, the said slide being rotatable with relation to the said member, means for holding the locking member against rotation with relation to the supporting member, a locking member carried by the slide and normally coacting with the first mentioned locking member, the second mentioned locking member being held for rotation with the slide, and means whereby the locking members may be rendered non-coactive.

[Claims 6 and 7 not printed in the Gazette.]

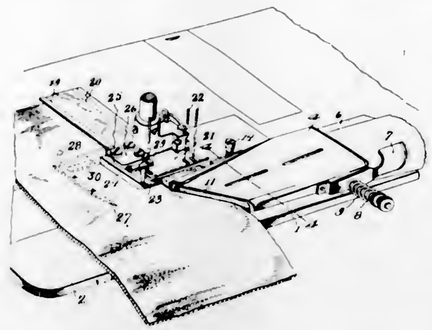
1,219,837. ROTARY ENGINE. CHARLES M. MITSCHOW and WILLIAM A. RAMEY, Buffalo, N. Y. Filed Sept. 10, 1915. Serial No. 49,935. (Cl. 121—80.)



1. A rotary engine comprising a cylinder having a longitudinal abutment on one part of its bore, an inlet for the pressure medium on one side of said abutment and an outlet for the spent pressure medium on the opposite side of said abutment, a rotor journaled eccentrically in said cylinder so that one part of its periphery is proximate to said abutment and provided with a plurality of radial guideways, and a blade arranged in each of said guide-ways and movable radially therein relatively to the rotor and each blade provided on its rear side with a recess which terminates short of the inner and outer edges of said blade and which has a short outer part and a long inner part and each blade being also provided on its front side with a recess which is arranged wholly on the outer part of the blade and extends lengthwise of the blade a greater distance than the short outer part of the recess on the rear side of the blade.

2. A rotary engine comprising a cylinder having a longitudinal abutment on one part of its bore, an inlet for the pressure medium on one side of said abutment and on outlet for the spent pressure on the opposite side of said abutment, a rotor journaled eccentrically in said cylinder so that one part of its periphery is proximate to said abutment and provided with a plurality of radial guide-ways, a blade arranged in each of said guide-ways and movable radially therein relatively to the rotor and each blade provided in its outer edge with a longitudinal groove which is arcuate in cross section, a packing strip arranged in each of said grooves and having an arcuate inner side engaging with the corresponding surface of said groove and engaging its outer side with the bore of said cylinder and means for counteracting the centrifugal action on said packing strip comprising a spring arranged in a radial opening in said blade and connected at its outer end with said packing strip and means arranged in the inner end of said opening and connected with the inner end of said spring.

1,219,838. FOLDER FOR SEWING-MACHINES. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 26, 1912. Serial No. 679,978. (Cl. 270—36.)



1. A folder for sewing machines including means for folding the edges of the strip, means for folding the strip intermediate its edges with one face of the folded strip wider than the other, means for inverting the folded strip as it is led to the stitching mechanism, said folder being so constructed and disposed relative to the stitching mechanism as to maintain the strip in folded condition until the same is led to the stitching mechanism, and a separating device located in advance of the folder for separating the upper folded portion of the strip from the body fabric.

2. A folder for sewing machines including spaced guiding walls forming upper and lower connected portions for folding a strip intermediate its edges, said upper portion of the folder being wider than the lower portion of the folder whereby the upper face of the folded strip is wider than the lower face thereof, said folder having its delivering end cut at an angle and so disposed that the strip may be inverted before it is led to the stitching mechanism, and a separating device located between the folder and the stitching mechanism for separating the upper folded portion of the strip from the body fabric.

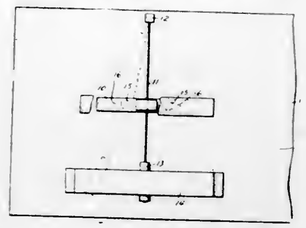
3. A folder for sewing machines including a wide guiding means for guiding the facing portion of the strip, and a narrow guiding means for guiding a narrow portion of said facing strip, said folder having means for inverting the strip as it is delivered to the stitch forming mechanism, the wide guiding means of the folder being located above the narrow guiding means, whereby the narrow fold is maintained by the folder until said strip is delivered to the stitching mechanism, and a separating device independent of the folder for holding the wide folded edge of the strip raised from the body fabric until said strip and body fabric pass beneath the presser foot of the machine.

4. A folder for sewing machines including a wide guiding means for guiding the facing portion of the strip, and a narrow guiding means for guiding a narrow portion of said facing strip, said folder having means for inverting the strip as it is delivered to the stitch forming mechanism, the wide guiding means of the folder being located above the narrow guiding means, whereby the narrow fold is maintained by the folder until said strip is delivered to the stitching mechanism, a guide for engaging the fold between the edges of the strip for directing the same to the stitching mechanism, and a separating device independent of the folder and located between the folder and the stitching mechanism for holding the wide folded edge of the strip raised from the body fabric.

5. The combination of a presser foot, a folder located in front of the presser foot, said folder including means for folding a strip intermediate its edges and inverting the strip before it passes beneath the presser foot, and a separating finger carried by the presser foot and extending underneath the upper face of the folded strip as it passes from the folder for holding said face raised from the body fabric, said finger being free from the body fabric.

[Claims 6 to 11 not printed in the Gazette.]

1,219,839. ANIMATED ADVERTISING DEVICE FOR CARS. LOUIS A. MOLTENI, Hoboken, N. J., assignor of one-half to William E. Gillespie, Hoboken, N. J. Filed May 14, 1913, Serial No. 767,539. Renewed Oct. 25, 1916. Serial No. 127,687. (Cl. 46—40.)

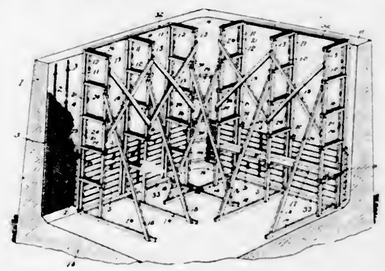


1. The combination of an advertising placard having an opening, a member at the rear side of the placard and forming an animated part thereof showing through the said opening, a single flexible element supporting the weight of the placard and permitting the same to move back and forth and up and down by the vibrations to which the placard is subjected, and fixed guiding means on the rear side of the placard and with which the member is adapted to engage and be guided thereby.

2. An advertising placard comprising a card, a cord fastened to the card, a roller weight connected with the cord, and a member forming an animated part of the placard connected with the said cord.

3. The combination of an advertising card, an animated element associated therewith, a cord to which the element is attached, the upper end of the cord being fastened to the card at a point above the element, a roller weight secured to the cord at a point below the element, and means on the card for guiding and limiting the movement of the weight.

1,219,840. APPARATUS FOR LINING RESERVOIRS AND THE LIKE. GUSTAV MONRATH, Chuquicamata, Chile, assignor to Chile Exploration Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 11, 1915. Serial No. 13,804. (Cl. 25—131.)



1. A temporary structure of the class described, comprising upright supporting members, horizontal limiting members supported thereby, said horizontal members being adapted to be introduced upon each other from above, and provided with complementary backwardly projecting flanges, whereby the adjacent members may be clamped together, said flanges being shaped to interfit when placed one on top of the other.

2. A temporary structure for the purpose specified, comprising upright supporting members and horizontal limiting members supported thereby, said horizontal members

having complementary backwardly projecting flanges of V-shaped cross-section, adapted to interfit when placed one on top of the other, and affording means for clamping the adjacent horizontal members together.

3. A temporary structure for the purpose specified, comprising upright supporting members and horizontal limiting members supported thereby, together with means for retaining the horizontal members in their proper position, said means being adjustable on said upright members and arranged to engage said upright members in position above the horizontal members, and hold the latter against the upright members.

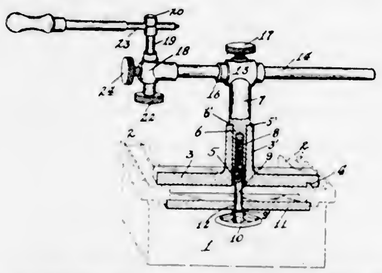
4. A temporary structure for the purpose specified, comprising upright supporting members and horizontal limiting members supported thereby, together with retaining blocks, and means for setting the blocks on said upright members in position to retain the horizontal members in their proper position, the lower surface of said retaining blocks being cut to engage the top of the horizontal members, and hold them against the upright members.

5. An apparatus for molding linings of the kind described, comprising a scaffold, and molding members adapted to be supported horizontally thereby one upon the other and having matched upper and lower edges, the upper edge of each of said members inclining downwardly and inwardly toward the molding surface.

[Claims 6 to 22 not printed in the Gazette.]

1,219,841. TOOL-HOLDER FOR LATHES. EDWARD N. MOOR, Oakland, Cal. Filed Aug. 30, 1915. Serial No. 47,983. (Cl. 125—6.)

1. An adjustable tool holder for lathes comprising a base adapted to be clamped to a lathe bed, a vertically disposed supporting column secured for adjustable rotation on said base, means for retaining the supporting column in its adjusted position and the base upon the lathe bed comprising a single fastening device, and means carried by the column for adjustably supporting a tool holder, substantially as described.



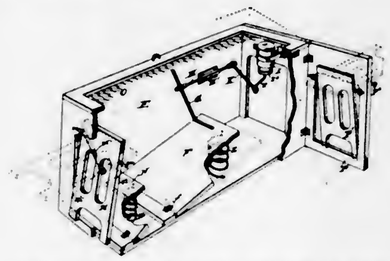
2. An adjustable tool holder for lathes comprising a base member adapted to rest transversely upon a lathe bed and bridge the guides thereof, a clamping bar beneath said base member and adapted to bridge the under side of said guides, a supporting column having an internal aperture therein carried by the base member and capable of a rotary adjustment, a screw engaging the walls of the aperture in said column and passing through the base member and the clamping bar for clamping the base to the bed, and the column to the face, and means carried by the supporting column for adjustably supporting a tool, substantially as described.

3. An adjustable tool holder for lathes comprising a base member adapted to rest upon a lathe bed, and bridge the guides thereof, said member having a hollow cylindrical upward extension, clamping means disposed beneath said base member and coöperating with the lathe bed, a supporting column having an internally threaded cylindrical lower portion adapted to fit within the hollow extension within the base member and capable of a rotary movement, a screw extending downwardly from said threaded portion and engaging the clamping means and the base for retaining the base and column in position, and tool supporting means carried by said adjustable column, substantially as described.

4. An adjustable tool holder for lathes comprising a base member adapted to rest upon a lathe bed and bridge the guides thereof, said member having a hollow cylindrical vertical extension, a spaced clamping bar beneath said member adapted to bridge and engage the under side of said guides, a supporting column having an internally threaded cylindrical lower portion adapted to fit within the hollow extension of the base member and capable of a rotary adjustment, a clamping screw extending downwardly from said threaded portion and passing through said clamping bar for clamping the column and base together and for clamping said base and bar upon the lathe bed, and horizontally adjustable tool supporting means carried by said column, substantially as described.

5. An adjustable tool holder for lathes comprising a base adapted to be clamped upon a lathe bed, a supporting column adjustably secured to said base and interfitted with a portion thereof, clamping means underlying the base and coöperating with the lathe bed, and a single fastening device engaging the column and retaining the same in its adjusted position to the base, and fastening the base and clamping means to the lathe bed, and tool supporting means carried by said adjustable column, substantially as described.

1,219,842. APPARATUS FOR DUSTING POULTRY WITH INSECTICIDE. WILLIAM P. MORGAN, Grosse Ile, Mich. Filed July 17, 1916. Serial No. 109,784. (Cl. 119—159.)

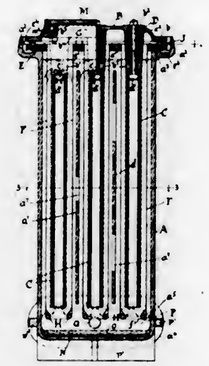


1. In a device of the character described, a frame having an open end for the admission of a fowl, a container for insecticide located within the frame, means for releasing insecticide from the container upon the fowl, actuated by the fowl itself, a hinged door adapted to be raised by the fowl to release the latter and to automatically close against the return of the fowl through the device from the direction of said door, a frame hinged to the outside of the device adapted to close against the wall of the latter for shipment, and an automatically closing door hinged in said frame adapted to be opened by the fowl, whereby the latter may again enter the open end of the device to actuate the insecticide releasing mechanism.

2. In a device of the character described, a frame, an insecticide container in said frame, a closure for said container, a platform hinged at one end to said frame, a rocker arm connected to said closure, a bar slidably mounted on the frame, a link connecting the sliding bar and the rocker arm, and an upstanding arm secured to the free end of the platform and engaging said sliding bar, whereby the aforesaid container closure will be operated upon the depression of the platform.

3. In a device of the character described, a frame having an open end for the entry of fowl, a container for insecticide located above the open end of the device, means for releasing insecticide from the container, a platform hinged at one end to the frame and adapted to be depressed by the fowl in its passage through the device, means operated by the depression of the platform for releasing insecticide from the container, a hinged door closing the opposite end of the device, a second depressible platform hinged adjacent the door within the frame and extending therein, and a link connecting the second platform with the door, whereby the latter may be opened under the weight of the fowl standing upon said second platform, said door being adapted to close against the return of the fowl through the latter end.

1,219,843. WATER-ELECTROLYZING APPARATUS. RUDOLPH JACOB JOHANNES MUELLER, Chicago, Ill., and ERROLL GODDARD ROWLANDS, Milwaukee, Wis., assignors to Universal Oxygen Company, a Corporation of Wisconsin. Filed Mar. 21, 1913. Serial No. 755,886. (Cl. 204—5.)



1. A water electrolyzing cell comprising a metal tank forming an electrode of one polarity, a metal cover for said tank provided with an electrode of opposite polarity depending therefrom into the tank, an insulating diaphragm support interposed between the tank and cover, and a tubular diaphragm secured to said support and surrounding the electrode depending from the cover.

2. A water electrolyzing cell comprising a metal tank provided with a longitudinal partition forming with the sides of the tank electrodes of one polarity, a cover for the tank provided with electrodes of opposite polarity depending therefrom between and alternating with the sides and partition of the tank, an insulating diaphragm support interposed between the tank and cover, and tubular diaphragms secured to said support and surrounding the electrodes depending from the cover.

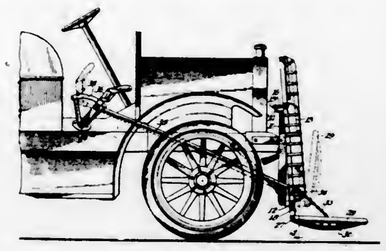
3. A water electrolyzing cell comprising a metal tank provided with a longitudinal partition parallel with its sides and forming therewith electrodes of one polarity, an arched cover for the tank, electrodes of opposite polarity consisting of metal plates suspended by electric conducting connections from the cover between and parallel with the sides and partition of the tank, an insulating diaphragm support interposed between the cover and tank and provided with depending diaphragms forming gas conduits, and sealing packing between the tank, cover and diaphragm support which hermetically separates the gas collecting space above from that below it.

4. A water electrolyzing cell comprising a metal tank forming an electrode of one polarity, a metal cover of opposite polarity for the tank, an electrode electrically connected with the cover and depending therefrom into the tank, an insulating diaphragm support interposed between the tank and cover, and a tubular diaphragm of non-corrodible flexible material pervious to liquid and impervious when wet to gas, surrounding the cover electrode.

5. A water electrolyzing cell comprising a metal tank having an outwardly projecting flange at the top and longitudinal partitions forming with the sides electrodes of one polarity, an arched metal cover for the tank having a corresponding flange, an insulating diaphragm support fitting around its margin between the flanges of the tank and cover, metal electrode plates of opposite polarity depending from the cover into the tank through gas conduits in the diaphragm support, and tubular diaphragms surrounding the depending electrodes and sustained by the diaphragm support.

[Claims 6 to 28 not printed in the Gazette.]

1,219,844. FENDER. PETER NAPIER, Chicago, Ill. Filed Dec. 8, 1915. Serial No. 65,647. (Cl. 105—127.)



1. In a fender for a vehicle, a platform or basket portion normally supported in a horizontal position, an arm normally held in a vertical position, a pivotal connection between the lower end of said arm and the rear edge of said platform, a diagonal brace of flexible and yielding material between said platform and arm and serving to support said platform in its horizontal position, and a fixed pivotal support for said arm above the pivotal connection for said platform.

2. In a fender for vehicles, a frame work, a shaft pivoted therein, arms secured to the shaft and extending in opposite directions therefrom, a platform pivoted to the lower ends of said arms, and a yielding connection from the platform to the upper ends of the arms.

3. In a fender for vehicles, a platform, pivotal support on which said platform may be raised or lowered, and a spring under tension to apply lifting action to said platform, said parts being so arranged that when the front part of said platform is raised by contact with an obstruction said spring will act to simultaneously raise the rear portion.

4. In a fender for vehicles, a frame work, arms pivoted to said frame work and extending in opposite directions from their pivoting points, a platform pivoted to the lower ends of the arms, and connections from the upper ends of the arms to the platform, said connections consisting in part of spring and in part of chains.

5. In a fender for vehicles, a platform, a pivotal support therefor, and a brace serving to normally hold said platform in a horizontal position, said brace consisting partly of spring and partly of chain, the spring portion serving as a yielding support for the weight of the platform but permitting downward movement of the platform on its pivot when subjected to load and the chain portion being adapted to fold when the platform is moved upward on its pivot.

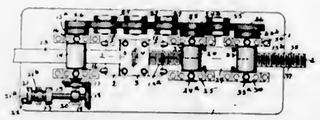
[Claim 6 not printed in the Gazette.]

1,219,845. METHOD OF FORMING GARMENT-STAYS. CHARLES R. NELSON, New York, N. Y., assignor to James W. Hatch, North Girard, Pa. Filed Sept. 13, 1915. Serial No. 50,333. (Cl. 140—91.)

1. The method of forming a garment stay which consists in slotting transversely a flat resilient metal strip, the transverse slits so made forming transverse portions joined by longitudinal portions, the longitudinal portions at the opposite sides of the transverse portions being out of alinement leaving parts of the transverse portions between the longitudinal portions free to twist as the stay is flexed flatwise, and then compressing said strip lengthwise.

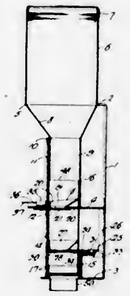
2. The method of forming a garment stay which consists in slotting transversely a flat resilient metal strip,

the transverse slits so made forming transverse portions joined by longitudinal portions, the longitudinal portions at the opposite sides of the transverse portions being out of alinement leaving parts of the transverse portions between the longitudinal portions free to twist as the stay is flexed flatwise, and then compressing said strip lengthwise sufficiently to bring the edges of the slits into contact.



3. The method of forming a garment stay which consists in slotting transversely a flat resilient metal strip, the transverse slits so made forming transverse portions joined by longitudinal portions, the longitudinal portions at the opposite sides of the transverse portions being out of alinement leaving parts of the transverse portions between the longitudinal portions free to twist as the stay is flexed flatwise, then compressing said strip lengthwise sufficiently to bring the edges of the slits into contact, and releasing the strip and permitting a slight separation of said edges.

1,219,846. DISPENSING-BIN. IRA NELSON, North Escanaba, Mich. Filed Nov. 11, 1915. Serial No. 60,928. (Cl. 221—111.)

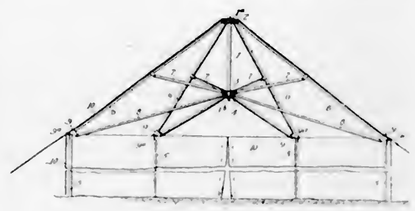


1. In a device of the class described, a receptacle comprising a trough-shaped neck open at the front; a pair of vertically spaced plates assembled with the receptacle and constituting a closure for the front of the neck; a gate constituting a closure for the neck and mounted to move between the plates; a trough-shaped section vertically movable behind the plates and with respect to the neck; and a gate constituting a closure for the lower end of the section.

2. In a device of the class described, a supporting structure; a receptacle carried by the supporting structure; a gate controlling the lower end of the receptacle; a track carried by the supporting structure; a movable section slidable with respect to the receptacle; a platform carried by the movable section and provided with means for engaging the track, the platform being provided with an opening; and a gate carried by the platform and controlling the opening.

1,219,847. FOLDING TENT. DAVID NETTENSTROM, Chicago, Ill. Filed Aug. 31, 1911. Serial No. 646,979. (Cl. 135—4.)

1. A folding tent frame comprising a central fitting and rafters pivotally connected thereto extending outwardly and downward therefrom, a second central fitting and stretchers pivotally connected thereto at one end extending outwardly therefrom and having their opposite ends hinged to the respective rafters, a third central fitting positioned above the second struts pivotally connected thereto at one end extending outwardly and upward therefrom and having their opposite ends hinged to the respective rafters, whereby said third fitting opposes movement of the second fitting toward the first, the length of each strut between pivot centers being less than the distance between its hinged connection with the rafter and the pivotal connection of such rafter with the first fitting, so that said frame may be collapsed by folding the struts and stretchers upwardly toward said first central fitting.



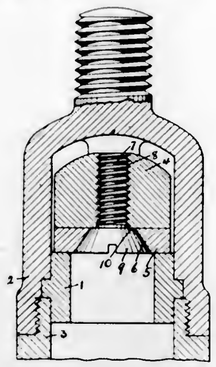
2. A folding tent frame comprising a central fitting and rafters pivotally connected thereto extending outwardly and downward therefrom, a second central fitting and stretchers pivotally connected thereto at one end extending outwardly and downward therefrom and having their opposite ends hinged to the respective rafters, means limiting the unfolding of said stretchers at such downwardly inclined position, and struts hinged to the respective rafters converging downwardly and arranged to react against the second fitting for opposing the collapse of the frame.

3. A folding tent frame comprising two central fittings vertically separated when the frame is open, a stop which determines the limit of such separation and disengageable locking means for holding the parts at such limit, together with rafters and stretchers pivotally connected to the upper and lower central fittings respectively and all extending outwardly and downwardly therefrom, the outer end of each stretcher being hinged to one of the rafters at a plane considerably below the lower central fitting and its associated stop and locking means when said fitting is at the limit indicated.

4. A tent frame comprising a folding truss panel having a pair of vertical strut rods, a pivotally jointed member pivotally connecting the upper ends of said rods; means on the jointed member adapted to prevent the closing of its joint; a tension member connecting the lower ends of the rods; diagonal ties joining the opposite corners of the quadrilateral thus formed; a series of rafters, pivotally connected to the upper end of each of said rods; a block slidably mounted upon each rod; a series of struts each pivotally connected at one end to the block and at the other end to a point on one of the rafters; a stop on the lower end of the rod adapted to limit the sliding movement of the block, the angle between the rod and the strut being acute when the block is at such limit and a tension member extending from the lower portion of the rod to a second point on each rafter.

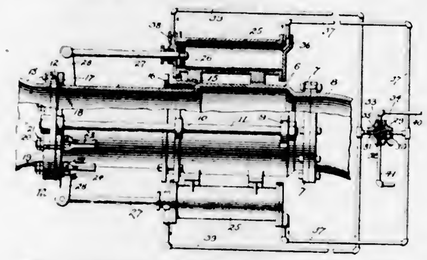
1,219,848. CHECK-VALVE. DANIEL E. NORRIS, Robinson, Ill. Filed June 19, 1915. Serial No. 35,093. (Cl. 103—66.)

1. In a check valve, the combination of an annular seat; a valve check comprising a body having a screw thread therein; a soft valve face having a perforation with tapered walls; and a screw in said screw thread having a tapered head engaging the walls of the perforation with its periphery adjacent to the inner edge of the seat, the face of the screw being positioned to give an unobstructed surface to the valve face.



2. In a check valve, the combination of an annular seat; a valve check comprising a body having a screw thread therein; a soft valve face having a perforation with tapered walls; and a screw in said screw thread having a tapered head engaging the walls of the perforation with its periphery adjacent to the inner edge of the seat, the face of the screw being positioned to give an unobstructed surface to the valve face, said head extending through the perforation and engaging the body of the check.

1,219,849. PIPE-COUPLING. JOHN B. NORRIS, Baltimore, Md., assignor to Ellicott Machine Corporation, Baltimore, Md., a Corporation of Delaware. Filed June 1, 1916. Serial No. 101,036. (Cl. 137—28.)



1. The combination of a frame provided with means for connecting two pipe sections thereto with an interval between their ends; an intermediate bridging section, movably mounted in and guided by said frame, and capable of connecting said sections by bridging said interval; and a motor operatively connected with said frame and bridging section, to move the latter to and from bridging position.

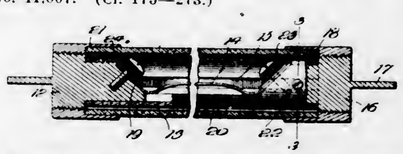
2. The combination of a frame provided with means for connecting two pipe sections thereto with an interval between their ends, and with a gland communicating with one of said pipe sections; an intermediate bridging section, mounted to telescope into said gland, and adapted when projected therefrom to bridge the interval between said sections; and a motor operatively connected with said frame and bridging section to move the latter to and from bridging position.

3. The combination of a frame provided with means for connecting two pipe sections thereto with an interval between their ends; an intermediate bridging section, movably mounted in and guided by said frame, and capable of connecting said sections by bridging said interval; a motor operatively connected with said frame and bridging section, to move the latter to and from bridging position; and quick-releasable clamping means for positively holding said bridging section in bridging position.

4. The combination of a frame provided with means for connecting two pipe sections thereto in spaced relation and provided with an abutment associated with one of said connecting means and a chamber associated with the other of said connecting means; a tubular bridging section in telescoping relation with said chamber and adapted when projected to enter into sealing engagement with said abutment; and a pressure motor, operable at will, to hold said telescoping section against said abutment or to telescope it with reference to said chamber.

5. The combination of a frame provided with means for connecting two pipe sections thereto in spaced relation and provided with an abutment associated with one of said connecting means and a chamber associated with the other of said connecting means; a tubular bridging section in telescoping relation with said chamber and adapted when projected to enter into sealing engagement with said abutment; a pressure motor, operable at will, to hold said telescoping section against said abutment or to telescope it with reference to said chamber; and releasable clamping means between said telescoping section and said abutment.

1,219,850. REFILLABLE CARTRIDGE-FUSE. JOHN F. O'BERT, Los Angeles, Cal. Filed July 20, 1915. Serial No. 41,007. (Cl. 175—273.)



1. A renewable fuse including a tubular shell provided with diametrically disposed interiorly formed longitudinal grooves, contact heads insertible in the ends of the shell, means connecting the heads and engaging the grooves to prevent turning of the heads with respect to the shell, a fuse connecting the heads, and ferrules having threaded connection with the heads and engaging about the ends of the shell.

2. A renewable fuse including a shell of insulating material formed interiorly with longitudinally extending grooves, a pair of contact heads having reduced portion adapted to project within the ends of the shell, a carriage of insulating material provided at its ends with sleeve portions surrounding the reduced portions of the contact heads, fastening devices passed through the sleeve portions and into the heads and seating at their outer ends in the grooves of the shell, means for connecting the ends of a fuse to the contact heads, and ferrules having threaded engagement with the outer ends of the heads and surrounding the ends of the shell.

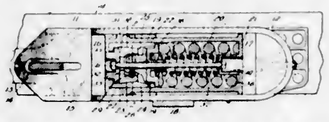
3. A renewable fuse including a shell having interiorly formed longitudinal grooves, contact heads adapted to project into the ends of the shell, means for holding the heads against movement toward and away from each other and for engagement in the grooves to hold the heads against turning movement, means for securing the heads against displacement with respect to the shell and for closing the ends of the shell and a fuse connecting the heads.

4. A renewable fuse including an inner shell of insulating material provided throughout a portion of its length with a longitudinal opening, contact heads having reduced extensions projecting within the ends of the inner shell, fastening means extending through the wall of the inner shell and into the contact heads to connect the heads to the shell, the fastening means projecting exteriorly of the inner shell, an outer shell formed throughout its length with longitudinal grooves to seat the extended portions of the fastening means, the contact heads being movable completely through the outer shell, ferrules connected to the contact heads and engaging against the ends of the outer shell to center the heads, and a fuse connecting the contact heads and disposed within the inner shell.

5. A renewable fuse including inner and outer shells, contact heads extending into the ends of the inner shell and proportioned for free movement through the outer shell, means connecting the heads to the inner shell and coöperating with the outer shell to hold the inner shell against turning movement with respect to the outer shell, and ferrules clamping the heads against longitudinal movement with respect to the outer shell.

[Claim 6 not printed in the Gazette.]

1,219,851. FRICTION-GEAR. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Feb. 6, 1915. Serial No. 6,410. (Cl. 213—64.)



1. In a draft rigging for railway cars, a friction gear comprising a friction shell, friction shoes coöperable therewith, auxiliary wedges coöperable with the friction shoes and slidable relatively thereto during initial portions of thrust and release, the engaging faces of said shoes and auxiliary wedges being inclined inwardly toward the axis of the shell, a main wedge, and spring means resisting movement of said shoes and wedges.

2. In a draft rigging for railway cars, a friction gear comprising in combination a friction shell, friction shoes coöperable therewith, auxiliary wedges coöperable with the friction shoes and movable separately thereof during initial portions of thrust and release, the engaging faces of said shoes and auxiliary wedges being inwardly inclined toward the center line of the gear, a main wedge coöperable with said auxiliary wedges, and spring means resisting movement of said shoes and wedges, said spring means acting directly through the wedges to the friction shoes.

3. A friction gear for railway car draft riggings comprising, in combination: a friction shell, friction shoes coöperable therewith, main and auxiliary wedges, and a spring, the main and auxiliary wedges moving during portions of the impact and release movements while the friction shoes remain stationary after which the shoes move simultaneously with the wedges, the auxiliary wedges engaging the inner sides of the friction shoes and being movable longitudinally and radially thereof when the friction shoes are stationary.

4. A friction gear for railway car draft riggings comprising, a friction shelf, a main wedge, a spring, friction shoes coöperable with said shell, and a set of auxiliary wedges coöperable with and engaging said friction shoes, the engaging surfaces of said shoes and auxiliary wedges being inclined relatively to the center line of the gear and said main wedge acting directly against said spring.

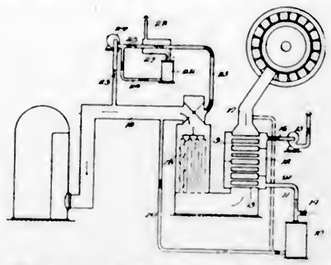
5. A friction gear for railway car draft riggings comprising, a friction shell, a main wedge, a spring, friction shoes coöperable with said shell, a set of auxiliary wedges coöperable with the inner surfaces of said friction shoes, and means for producing relative longitudinal and radial movement between the auxiliary wedges and the friction shoes during part only of the impact and releasing movements of the gear.

[Claims 6 to 15 not printed in the Gazette.]

1,219,852. PROCESS OF PREHEATING BLAST-FURNACE GASES. OTTO OESTERLEN, Zweibrücken, Germany. Filed Apr. 1, 1915. Serial No. 18,630. (Cl. 266—14.)

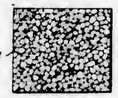
1. The process of preheating the waste gases from blast furnaces for utilization in hot blast ovens, which consists in burning a portion of such waste gases and passing the products of combustion through a preheater through which the main volume of waste gases are passed.

2. The process of preheating the waste gases from blast furnaces for utilization in hot blast ovens, which consists in filtering the waste gases, burning a portion of such waste gases, before or after filtering, or both, and passing



the products of combustion through preheaters through which the main volume of waste gases, filtered or unfiltered, are conducted.

1,219,853. CRACKLED-GLASS DIAMOND. MOKICHI OKADA, Tokyo, Japan. Filed Aug. 28, 1915. Serial No. 47,904. (Cl. 41—22.)

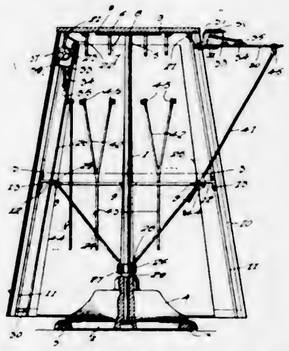


1. An article of manufacture comprising a thin sheet of glass secured to a backing or reflecting material, and having a flexible support secured evenly upon the rear surface of the reflecting material, said support being bent variously, so that the glass is covered with fine crackles, substantially as shown, and for the purposes indicated.

2. The method of decoration consisting in securing a frangible retractive body upon a flexible element, subjecting the two to such flexure as to crackle the refractive body, and securing the flexible element upon a support.

3. The method of preparing a decorative device consisting in securing a thin sheet of glass to a piece of flexible material by adhesive and before the adhesive is set subjecting the glass to strains resulting in crackling it.

1,219,854. DUSTLESS TROUSERS-CABINET. SIMEON O'NEAL, Lubbock, Tex., assignor of one-half to Walter F. Schenck, Lubbock, Tex. Filed June 2, 1915. Serial No. 31,718. (Cl. 211—16.)

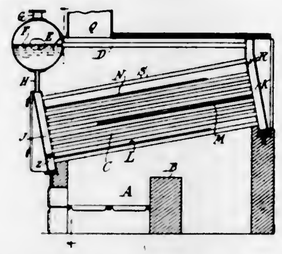


1. A cabinet of the class described including a standard, a casing mounted for rotary movement on the standard and provided with door openings and having doors, hinged sections carried by the casing and located in rear of the doors and adapted to swing outwardly from the casing through the door openings to carry trousers placed thereon entirely beyond the casing, an open frame or ring extending around the interior of the casing, inclined braces supporting the open frame or ring and connected at their lower ends with the standard and mounted for rotary movement to permit the frame to revolve with the casing, and means carried by the sections for engaging the open frame to support the sections in an extended position.

2. A display cabinet of the class described comprising a standard, a top mounted for rotary movement on the standard, an open frame or ring surrounding the standard and also mounted for rotary movement, inclined bars secured at their upper ends to the top and spaced apart to form door openings, arms connecting the inclined bars with the said ring doors hinged to the bars and forming the walls of the cabinet, sections hinged to and depending from the top of the cabinet and arranged to swing outwardly through the door openings to carry the trousers entirely outside of the cabinet and means for supporting the sections in such extended position, said means engaging the ring or open frame.

3. A display cabinet of the class described comprising a standard, a top mounted for rotary movement on the standard, an open frame or ring surrounding the standard and also mounted for rotary movement, bars secured at their upper ends to the top and spaced apart to form door openings and connected at points intermediate of their ends with said ring or frame, doors hinged to the bars, trouser receiving sections hinged to the top and adapted to rest against the frame or ring and also arranged to swing outwardly through the door openings to carry the trousers outside of the cabinet and means for supporting the sections in their extended positions, said means engaging the opening frame or ring.

1,219,855. WATER-TUBE BOILER. THOMAS T. PARKER, New York, N. Y. Filed May 6, 1915. Serial No. 26,194. (Cl. 122—303.)



1. A water tube boiler, comprising horizontally inclined tubes constituting the main bank, the front ends of which are lower than the rear ends, the tubes at each end being connected by a header and a series of down-comer water tubes extending from the front to the rear header, a baffle plate extending over the top of the main bank of tubes and beneath said down-comer tubes, whereby to prevent direct impingement of the products of combustion on said down-comer tubes throughout the major portion of their lengths, and a baffle in the upper header extending across the same below the entrance to said down-comer tubes.

2. A water tube boiler comprising horizontally inclined tubes constituting the main bank, the front ends of which are lower than the rear ends, headers connecting the ends of the tubes, a steam and water drum above said bank of tubes, connections between the steam and water drum and said headers, and a series of down-comer tubes connecting the front and rear headers, a baffle above the main bank of tubes and below the down-comer tubes and protecting the said down-comer tubes from direct impingement of the products of combustion throughout the major portion of their length, said down-comer tubes being located below the water level of the boiler, and a baffle located in the upper header below the entrance to the down-comer tubes and below the water level of the boiler, said baffle restricting the area of the upper header and being adapted to direct water into said down-comer tubes.

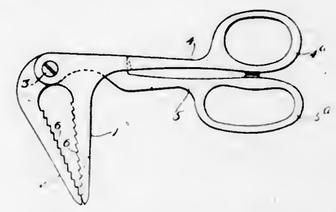
3. A water tube boiler comprising a bank of water tubes, front and rear headers connected to said tubes, a series of downcomer water tubes extending from the front to the rear header, means for protecting said tubes from the direct heat of the products of combustion throughout the major portion of the length of said tubes, whereby the tubes are maintained at temperatures which are low with relation to the tubes of the main bank to cause a downward circulation of water from the higher to the lower header, and a baffle in the higher header extending across the same below the entrance to said downcomer tubes.

4. A water tube boiler comprising horizontally inclined tubes, constituting the main bank, the front ends of which are lower than the rear ends, the tubes at each end being connected by headers, and a series of downcomer water tubes extending from the front to the rear header, means for protecting said tubes from the direct heat of the products of combustion throughout the major portion of the lengths of said tubes whereby the tubes are maintained at temperatures which are low with relation to the tubes of the main bank to cause a downward circulation of water from the higher to the lower header, and a baffle in the higher header extending across the same below the entrance to said downcomer tubes.

1,219,856. PROCESS OF FLAVORING TOBACCO. WILLIAM ANTHONY PARKER, Penhook, Va. Filed Aug. 25, 1915. Serial No. 47,217. (Cl. 131—55.)

The process of sweetening or flavoring tobacco, which consists in spraying a sweetening fluid on the leaves of the growing plant, and allowing the liquid to penetrate into the leaves while subjected to the sun's rays.

1,219,857. LOBSTER-CRUSHER. EDWARD B. PARKHURST, Woburn, Mass. Filed Sept. 2, 1915. Serial No. 48,699. (Cl. 17—31.)



1. The improved lobster-crusher comprising a pair of crushing jaws, pivotally joined together and provided with operating handles, the said jaws standing at an angle to the said handles in a plane or planes parallel with that in which the handles work, with the root-portions of the jaws spaced widely apart and the jaws converging to and meeting at their extremities in their closed condition.

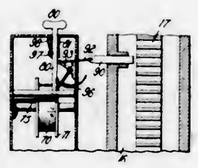
2. The improved lobster-crusher comprising a pair of narrow or slender crushing jaws adapted to be inherted into the hollow of a lobster-claw, or the like, and operating handles, the said jaws standing at an angle to the said handles in a plane or planes parallel with that in which the handles work, with the root-portions of the jaws spaced widely apart and the jaws converging to and meeting at their extremities in their closed condition.

3. The improved lobster-crusher comprising a pair of crushing jaws, pivotally joined together and provided with operating handles, the said jaws standing at an angle to the said handles, with the root-portions of the jaws spaced widely apart and the jaws converging to and meeting at their extremities in their closed condition, and

with one of the jaws composed of separated engaging portions alternating in position with the engaging portion of the opposing jaw.

4. The improved lobster-crusher comprising a pair of narrow or slender crushing jaws adapted to be inserted into the hollow of a lobster-claw, or the like, and operating handles, the said jaws standing at an angle to the said handles, with the root-portions of the jaws spaced widely apart and the jaws converging to and meeting at their extremities in their closed condition, and with one of the jaws composed of separated engaging portions alternating in position with the engaging portion of the opposing jaw.

1,219,858. TALLYING DEVICE. HERBERT HARVEY PATTERSON, Hudson Falls, N. Y. Filed Mar. 22, 1916. Serial No. 85,867. (Cl. 234—1.)



1. A tallying device for garage pumps, comprising a reel, a graduation tape unwinding from the said reel, a pair of rollers between which passes the tape, a gearing driving one of the said rollers, a plate over which passes the said tape from the reel to the rollers, the plate having differently shaped notches along one edge for register with correspondingly shaped keys to mark the corresponding edge of the tape.

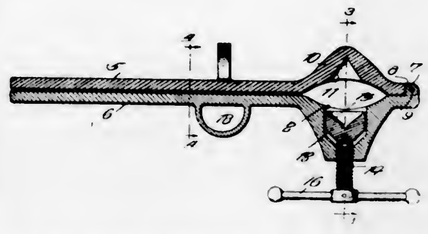
2. A tallying device for garage pumps, comprising a reel, a graduation tape unwinding from the said reel, a pair of rollers between which passes the tape, a gearing driving one of the said rollers, a plate over which passes the said tape from the reel to the rollers, the plate having different shaped notches along one edge for register with correspondingly shaped keys to mark the corresponding edge of the tape, a spring-pressed pivoted wing adapted to be engaged by the key when inserted, and a locking bolt for the pump and controlled by the said wing.

3. A tallying device for automobile pumps, comprising a casing, a reel within the casing and from which unwinds a graduated tape, a pair of rollers journaled in the casing and between which passes the tape unwound from the reel, a winding up reel on which winds the said tape, a gearing for driving one of the said rollers, a plate in the said casing intermediate the driven roller and the reel carrying the tape, said plate having differently shaped notches along one side, and key guides in register with the said notches for the insertion of keys with ends shaped to correspond to the said notches, as described.

4. A tallying device for automobile pumps, comprising a casing, a reel within the casing, and from which unwinds a graduated tape, a pair of rollers journaled in the casing and between which passes the tape unwound from the reel, a winding up reel on which winds said tape, a gearing for driving one of the said rollers, a plate in the said casing intermediate the driven roller and the reel-carrying tape, the plate having differently shaped notches along one side, key guides in register with the said notches for the insertion of keys with ends shaped to correspond to the said notches, and a spring-pressed wing pivoted in the casing and in the path of the inserted key, the wing being connected with the said locking device to unlock the pump on the insertion of a key.

5. A tallying device for automobile pumps, comprising a casing, a reel within the casing and from which unwinds a graduated tape, a pair of rollers journaled in the casing and between which passes the tape unwound from the reel, a winding up reel on which winds the said tape, a gearing for driving one of the said rollers, a plate in the said casing intermediate the driven roller and the reel carrying the tape, said plate having differently shaped notches along one side, key guides in register with the said notches for the insertion of keys with ends shaped to correspond to the said notches, a locking device for locking the pump, a spring-pressed wing pivoted in the casing and in the path of the inserted key, the wing being connected with the said locking device to unlock the pump on the insertion of a key, and means in the casing to hold an inserted key in a partly retracted position.

1,219,859. NUTCRACKER. ALEXANDER GALLATIN PAXTON, Greenville, Miss. Filed Aug. 6, 1915. Serial No. 44,025. (Cl. 146—3.)



1. A nut cracker comprising a pair of handles pivotally connected together at one end and being provided adjacent their pivot point with outwardly bowed and thickened portions, a stationary substantially cone-shaped seat provided in one of the bowed portions, a recess provided in the opposite bowed portion and having straight side walls, a cone-shaped adjustable seat arranged within the recess opposite the first mentioned seat and having straight outer walls snugly fitting the walls of the recess, a screw arranged in a threaded opening provided adjacent the said recess, a swivel connection between the screw and the adjustable seat, and a cross arm provided on the screw whereby the latter may be turned at will for shifting the adjustable seat toward and away from the stationary seat.

2. A nut cracker including a pair of levers movable toward and away from each other, a stationary nut seat provided in one of the levers, an adjustable nut seat arranged in a recess in the other lever at a point opposite the stationary nut seat, said adjustable nut seat being guided and supported by the walls of the recess, and means for adjusting the adjustable nut seat relatively to the stationary nut seat.

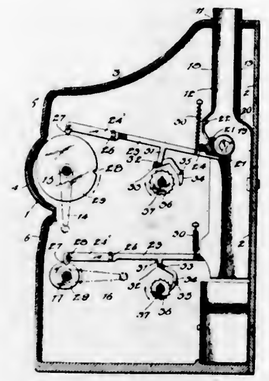
3. A nut cracker comprising a pair of pivotally connected levers having outwardly bowed portions, a stationary nut seat provided on one of the bowed portions, an adjustable nut seat provided on the opposite bowed portion and means for guiding and laterally supporting said adjustable nut seat.

1,219,860. COIN-ACTUATED STAMP-VENDING MACHINE. WALLACE A. PAYNE, Staunton, Va., assignor of one-fourth to William M. Wills and Walter P. Mehurin, Staunton, Va. Filed Dec. 6, 1915. Serial No. 65,235. (Cl. 194—26.)

1. In a coin controlled vending machine, an operating shaft, a vertical chute, an actuating arm operated by said operating shaft, one end of said actuating arm extending transversely into said chute, and a trip member on said arm for normally holding said arm in locked position and adapted to be tripped by a coin to unlock said arm, the movement of said trip member being limited by said arm.

2. In a coin controlled vending machine, an operating shaft, a cam located on said shaft, a vertical chute, an actuating arm moved by said cam, the rear end of said actuating arm extending into said chute and partly across the same, and means secured to the rear end of said actuating arm and in said chute for normally holding said arm in a locked position.

3. In a coin controlled vending machine, an operating shaft, a cam secured to said operating shaft, an actuating arm raised and lowered by the movement of said cam on said operating shaft, a chute, the rear end of said actuating arm extending transversely into said chute, a spring for holding the actuating arm in its normal position, and a trip mechanism in said chute pivoted on said rear end of said actuating arm for normally holding the same in a locked position.



4. In a coin controlled machine, an operating shaft, an actuating arm operated by said operating shaft, a chute, the rear end of said actuating arm extending into said chute, said chute provided with an enlarged portion, a projection in the enlarged portion of said chute, and a trip member pivoted to the rear end of said actuating arm extending into said chute and adapted to coöperate with the projection in the enlarged portion of said chute to hold the actuating arm in a normally locked position.

5. In a coin controlled machine, an operating shaft, an actuating arm coöperating with said actuating shaft and adapted to be raised and lowered thereby, means for holding the rear end of the said actuating arm in a horizontal position, a chute, the rear end of said arm extending into said chute and provided with an unevenly balanced trip mechanism, said chute being provided with an enlarged portion, and a projection in said enlarged portion engaged by said trip mechanism to lock the said arm in normal position, and a shoulder in said chute opposite said projection to hold a coin from continuing through said chute until said operating shaft is moved.

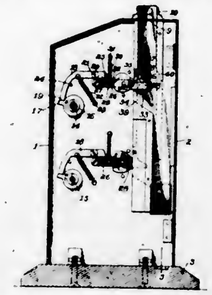
[Claim 6 not printed in the Gazette.]

1,219,861. COIN-CONTROLLED VENDING-MACHINE. WALLACE A. PAYNE, Staunton, Va., and CHARLES WILLIAM GOSNELL, Washington, D. C., assignors, by direct and mesne assignments, of one-fourth to William M. Wills and Walter P. Mehurin, Staunton, Va., and three-fourths to said Payne. Filed Aug. 31, 1916. Serial No. 117,883. (Cl. 194—26.)

1. In a coin controlled vending machine, an operating shaft, an actuating arm, means for operating the arm from the shaft, a lever adapted to be actuated by said arm, a vertical chute, a catch member on said lever extending into said chute, means engageable by the catch member to normally hold said arm and lever in a locked position said catch member being adapted to be tripped by a coin to unlock said arm and lever.

2. In a coin controlled vending machine, an operating shaft, a vertical chute, an actuating arm, means for operating the arm from the shaft, a lever pivoted beneath the inner end of said arm and provided with a catch member at its inner end, said catch member extending into said chute, and means adapted to be engaged by the catch member to hold the arm and lever in a locked position.

3. In a coin controlled vending machine, an operating shaft, an actuating arm, means for operating the arm from the shaft, a lever pivoted directly below said actuating arm, a catch member secured to the end of said lever, means engageable by the catch member to hold the arm and lever in a locked position and means for normally holding the said lever in an elevated position.



4. In a coin controlled vending machine, an operating shaft, an actuating arm, means for operating the arm from the shaft, a lever pivoted at its outer end beneath the inner end of said arm, a catch member pivoted to the inner end of said lever, a chute, the end of said catch member extending into said chute, means engageable by the catch member to retain the arm and lever in a locked position, means for holding the lever in an upper position, said catch member adapted to be released when struck by a coin, and means for holding the arm normally down.

5. In a coin controlled vending machine, an actuating shaft, an arm, means for operating the arm from the shaft, said arm being substantially right angular in shape, means for normally holding one end of said arm in its lowermost position, means for limiting its downward movement, a lever pivoted beneath the inner end of said arm, a catch member mounted on said lever, a chute, said catch member extending into said chute, means engageable by the catch member to hold the arm and lever in a locked position, means for holding the lever in an upper position, and said catch member being adapted to be released when tripped by a coin, and a stop member for limiting the upward swinging movement of said lever.

[Claims 6 to 15 not printed in the Gazette.]

1,219,862. SEPARABLE INSULATOR-THIMBLE STRUCTURE. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa., assignor of one-half to Hubbard & Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 17, 1916. Serial No. 98,032. (Cl. 173—321.)



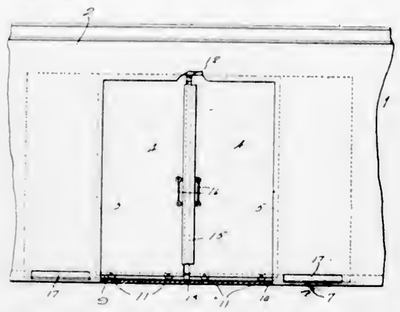
1. A detachable thimble structure comprising outer and inner members, the outer members being resilient and

providing threading for receiving and clamping an insulator, the inner member forming a support for the outer members and being threaded to fit an insulator pin.

2. A detachable thimble structure comprising an inner sheet metal cap member threaded to fit a supporting pin, and outer thread members yieldably supported on the inner member and providing flexible threading for receiving and clamping an insulator.

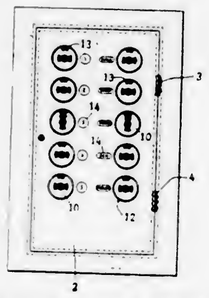
3. A thimble structure comprising a sheet metal inner member threaded to fit a supporting pin, and an outer member in the form of a wire helix supported on the inner member and providing flexible threading turns for receiving and clamping an insulator.

1,219,863. CAR-DOOR. RUSSELL A. PHILLIPS, Richmond, Va. Filed Oct. 29, 1915. Serial No. 58,607. (Cl. 20—22.)



The combination of a car including a side wall having a door opening, and a bottom provided at the door opening with a longitudinal guiding groove extending beyond the sides of the said opening, vertical partitions located at the inner face of the side wall in parallelism therewith and connected at their rear edges with the said side wall and at their lower edges with the bottom of the car and forming pockets which extend inwardly from the sides of the door opening, a track mounted in the groove and having its upper tread surface located below the upper surface of the floor of the car, sliding door sections snugly fitting the pockets and provided at their lower edges with wheels arranged to run on the said track, said side walls being provided beyond the door opening with relatively narrow horizontal openings located below the upper surface of the bottom of the car and terminating adjacent to the front and back of the said pockets to afford access to the lower edges of the sliding door sections, the wheels and the track.

1,219,864. CABINET FOR PANEL-BOARDS. CLARENCE D. PLATT, Bridgeport, Conn. Filed July 25, 1913. Serial No. 781,134. (Cl. 247—13.)



1. A cabinet for panel boards having a door in which are formed a series of regularly disposed perforations permitting access to the operative parts of the panel board, and interchangeable indicator slugs set into the substance of the door adjacent to the said perforations, there being an indicator slug for each perforation of the series.

2. A cabinet for panel boards comprising a box-like structure having a door provided with a series of perforations through which devices within the box-like structure may be controlled, and with perforations extending through said door and arranged one adjacent to each of the first named perforations, and removable interchangeable indicator slugs fitting each of the last said perforations.

3. A cabinet for panel boards having a door provided with a series of perforations through which devices within the cabinet are accessible and operable, indicator perforations through the door, one for each of the said perforations of the series arranged adjacent thereto and interchangeable indicator slugs fitting each of said indicator perforations.

4. A cabinet for panel boards comprising a door having perforations through which devices within the cabinet are controlled, perforations in the door adjacent to said switch perforations, indicator slugs having a slightly rounded peripheral edge adapted to be forced into said perforations from the rear side of the door, with their faces registering with the face of the door and with the edges of the perforation adjacent to the curved peripheral edges of the slugs swaged into close fitting contact with the slug.

5. As an article of manufacture, a door for the cabinets of panel boards having a series of perforations through which devices contained in the cabinet are accessible and a series of indicator perforations, there being an indicator perforation for each of the first named perforations, said indicator perforations having forced thereinto interchangeable indicator slugs closing the perforations and each of them denoting the character of the devices to be actuated.

[Claim 6 not printed in the Gazette.]

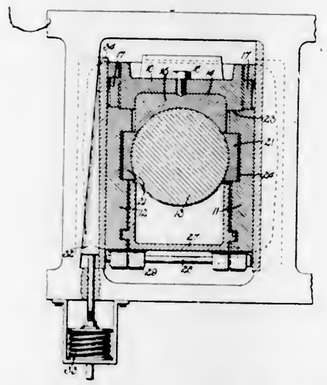
1,219,865. TIRE-GAGE. ALBERT E. POLLOCK, Chicago, Ill. Filed Feb. 19, 1917. Serial No. 149,390. (Cl. 73—111.)



1. A tire gage comprising an outer tubular shell, a cap fitting over the top thereof, a piston head fitted within said shell and provided with a piston rod, a coiled spring surrounding the rod and bearing at one end on the cap and at the other end on the piston, an indicator member loosely seated on the piston head and slidable within said shell, said member bearing a pressure indicating scale, means below said piston head adapted to establish communication between the interior of the shell and the interior of a pneumatic tire and including tire valve unseating means, a portion of said indicator member being sprung outwardly and adapted to bear against the interior of said shell to hold said member in indicating position after said gage is removed from the tire valve, there being a small opening through said shell so positioned that the indicated pressure may be read, and means for returning said indicating member at will.

2. A tire gage comprising an outer tubular shell having a slot extending longitudinally at its upper portion, a cap fitting over the top thereof, a piston head fitted within said shell and provided with a piston rod, a coiled spring surrounding the rod and bearing at one end on the cap and at the other end on the piston, an indicator member loosely seated on the piston head and slidable within said shell, said member bearing a pressure indicating scale, means below said piston head adapted to establish communication between the interior of the shell and the interior of a pneumatic tire and including tire valve unseating means, a portion of said indicator member being sprung outwardly and adapted to bear against the interior of said shell to hold said member in indicating position after said gage is removed from the tire valve, there being a small opening through said shell so positioned that the indicated pressure may be read, and a handle mounted on said outwardly sprung portion and projecting through said slot whereby said indicating member can be manually returned to its non-registering position after a reading.

1,219,866. LOCOMOTIVE DRIVING-BOX. CHARLES F. PRESCOTT, Brooklyn, N. Y., assignor of one-half to William A. Selts, Brooklyn, N. Y. Filed Sept. 20, 1916. Serial No. 121,154. (Cl. 64—55.)

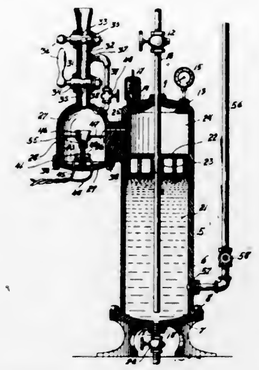


1. In a locomotive journal box, the combination of a rigid frame, a crown piece, a pair of front and rear cheek plates, connecting means between the front and rear faces of the crown piece and the upper edges of the cheek plates serving to hold the cheek plates at a constant elevation and prevent tilting thereof with respect to the axis of the journal, but permitting the cheek plates to slide toward each other, the inner faces of said crown piece and cheek plates having recesses extending longitudinally of the journal, a series of removable and interchangeable bearing brasses slidably fitted in said recesses, and automatic means acting between the frame and the cheek plates to cause the cheek plates to move toward each other to take up for wear upon the brasses carried thereby.

2. In a locomotive journal box, the combination of a crown piece, front and rear cheek plates movable toward each other and suspended from the crown piece, bearing brasses carried by the cheek plates, and means holding the cheek plates and their brasses with their effective bearing centers in the same horizontal plane as the axis of the journal therein.

3. In a locomotive journal box, a crown piece having a longitudinal recess in its underside to receive a brass and lugs projecting from its opposite sides, two cheek pieces each having an opening adjacent its upper end to receive a lug of the crown piece, a longitudinal shoulder below the opening and extending under and engaging the lower face of the crown piece, and a longitudinal groove below the shoulder to receive a brass and means for forcing the cheek pieces toward each other.

1,219,867. PRESSURE-PRODUCING APPARATUS. WILLIAM J. REILLY, Denver, Colo. Filed June 18, 1914. Serial No. 845,996. (Cl. 103—67.)



1. The combination of a liquid containing chamber, a floatable piston therein, a conduit entering the chamber and open for the escape of liquid, the piston having an opening through which the conduit passes, an auxiliary chamber in communication with the upper portion of the main chamber above the liquid and means for successively exploding combustible gaseous material within said auxiliary chamber to produce the desired pressure above said floatable piston and liquid.

2. The combination of a liquid containing chamber having a conduit projecting thereinto and open for the escape of liquid, an auxiliary chamber in communication with the upper part of the first named chamber, the auxiliary chamber having a neck, valves located therein and suitably spaced, the said valves being independently operable for the introduction of a gas producing medium, the space between the valves being sufficient to hold a quantity of such medium and permit the upper valve to be closed, and the lower valve to be opened, to allow the said medium to enter the auxiliary chamber, the upper part of the auxiliary chamber and the portion of its neck between the two valves being connected by a valve-controlled by-pass.

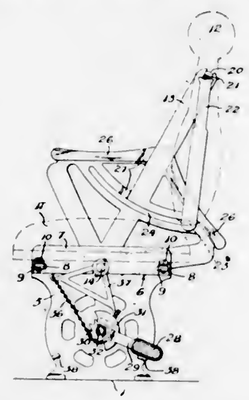
3. The combination of a liquid containing chamber, a floatable piston therein, a conduit entering the chamber and open for the escape of liquid, the piston having an opening through which the conduit passes, an auxiliary chamber in communication with the upper portion of the main chamber above the liquid, the auxiliary chamber being equipped to support a gas generating cartridge in the upright position, a valve controlled passage for the entrance of said cartridge, and means connected with the auxiliary chamber for igniting the cartridge for gas generating purposes, substantially as described.

4. The combination of a liquid containing chamber having a valve-controlled drainage outlet in the bottom and a safety valve and a pressure gage at the top, a conduit in communication with said chamber and open for the escape of liquid, a floatable piston within the chamber having an opening through which the conduit passes, an auxiliary chamber in communication with the portion of the first named chamber above the liquid, the auxiliary chamber having a relatively long neck, spaced valves mounted on said neck for controlling the passage therethrough, the said valves being independently operable, and a valve controlled conduit connecting the portion of the neck passage between the valves with the auxiliary cham-

ber, the said conduit being equipped with a controlling valve, substantially as described.

5. The combination of a liquid containing chamber, a conduit entering the chamber and open for the escape of liquid, an auxiliary chamber in communication with the first named chamber above the liquid in the latter, the auxiliary chamber being equipped with a cartridge holder, the auxiliary chamber having a controlled opening for the introduction of the cartridge, and electrodes mounted on the cartridge holder and suitably spaced, and an electric circuit in which the electrodes are located, for the purpose set forth.

1,219,868. CAR-SEAT. OHED D. REISINGER, St. Paul, Minn. Filed May 17, 1916. Serial No. 98,041. (Cl. 155—2.)



1. A car seat having a shiftable back for changing the direction in which the seat faces, a pair of pivoted arms having at their free ends a foot rest, and connections from the back to one of said arms for oscillating the foot rest from one side to the other of a vertical position above the arm pivots.

2. A car seat having a shiftable back for changing the direction in which the seat faces, a pair of pivoted arms having at their free ends a foot rest, and connections from the back to one of said arms for oscillating the foot rest from one side to the other of a vertical position above the arm pivots, said connections including a sprocket wheel and chain.

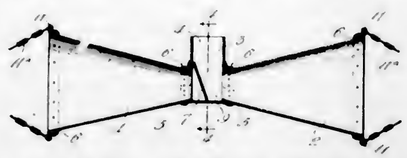
3. A car seat comprising leg members, back supporting brackets pivoted to the leg member, a pair of arms pivoted to the leg members, one of said arms having sprocket teeth, a foot rest carried by the arms, and a sprocket chain with respect to said brackets and arranged to run over said sprocket teeth for oscillating the foot rest from one side to the other of a vertical position above the arm pivots.

4. A car seat comprising leg members, back supported brackets having trunnions journaled on the leg members, a two-part arm on one of said trunnions, a pair of arms pivoted to the leg members, one of said arms having sprocket teeth, a foot rest carried by said arms, and a sprocket chain having its ends anchored to the two-part arm and arranged to run over said sprocket teeth for oscillating the foot rest from one side to the other of a vertical position above the arm pivots.

5. A car seat comprising leg members, back supporting brackets pivoted to the leg members and having open seats and segmental slots, a back having upper and lower studs, said upper studs being mounted in the open seats and said lower studs working in the segmental slots, said back adapted to be lifted from said brackets when moved to a predetermined position.

[Claim 6 not printed in the Gazette.]

1,219,869. DREDGE. BEAUREGARD ROBERTS, Mobile, Ala. Filed May 15, 1916. Serial No. 97,677. (Cl. 37—13.)



1. A dredge of the class described comprising a pair of tubular members open at each end and longitudinally alined, an outlet casing having the adjacent ends of said members secured thereto, the interior of said casing communicating with the interior of said members, and means for closing the outlet end of each of said members when the other is in operation.

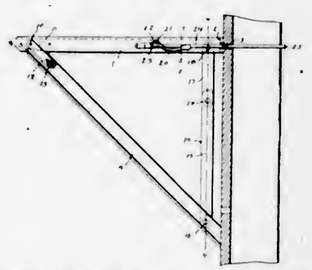
2. A dredge of the class described comprising a pair of open ended conical-shaped members, the small ends of said members being connected together to form a continuous passageway therethrough, an outlet casing communicating with the interior of said members through which the material is adapted to be discharged, and means for operating said dredge.

3. A dredge of the class described comprising an outlet casing having an open end and alining openings in its sides, a pair of longitudinally alined open ended conical shaped members secured by their smaller ends to the opposite sides of said casing and surrounding said alined openings, whereby said members communicate with said casing, and a plate pivoted within said casing opposite its open end to close the smaller ends of either member when the other is in operation.

4. The combination with a vessel and power means thereon; of a pair of spaced arms extending from one end of the vessel, a plurality of pulleys on said arms, eyes on the opposite sides of said vessel adjacent said arms, a cable extending around a pulley on each arm and through said eyes and connected with said power means, a dredge carried by said cable and operable between said arms, a pulley spaced from said vessel, an additional cable passing around said last mentioned pulley and the pulleys on one of said arms and connected to said power means, and an additional dredge carried by the last mentioned cable and operable between one of said arms and the pulley spaced from said vessel.

5. The combination with a vessel and power means thereon, of a pair of spaced arms extending from one end of the vessel, a plurality of pulleys on said arms, eyes on the opposite ends of said vessel adjacent said arms, a cable extending around a pulley on each arm and through said eyes and connected with said power means, and a dredge carried by said cable and operable between said arms.

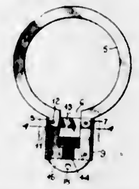
1,219,870. SCAFFOLD-BRACKET. PATRICK J. ROGAN, Ilion, N. Y., assignor to Thomas E. McGoldrick and Rose Murphy, Herkimer, N. Y. Filed Apr. 8, 1916. Serial No. 89,823. (Cl. 20—85.)



1. A scaffold bracket comprising a supporting arm, a vertical downwardly extending flange formed at one side edge of the supporting arm, the lower edge of said flange being provided with a notch adjacent its outer end, a link pivotally connected to the outer face of the downturned flange, a brace arm, an upwardly extending vertical flange formed on one side edge of the brace arm, the outer end of the vertical flange of the brace arm being provided with a longitudinal slot, a pivot pin extending through the slot and through the link to pivotally connect the inner face of the vertical flange of the brace arm to the link, the extreme outer end of the vertical flange of the brace arm being beveled to fit into the notch in the supporting arm when the device is in operative position, a relatively long link pivoted to the brace arm adjacent its inner end, a relatively short link pivoted to the end of the long link and adjacent the inner end of the supporting arm, said link when in extended position forming a brace to hold the supporting and brace arms in extended position, an outturned guide flange formed on the vertical flange of the supporting arm and a clamp attached to the supporting arm and slidable through the last mentioned guide flange to secure the device to the side of a vertical support.

2. In a scaffold bracket, the combination with a horizontal supporting arm and a diagonal brace arm, said arms being held in foldable position, of a laterally extending ear formed at the inner end of the horizontal supporting arm, said ear having a slot extending thereinto from one side edge, a lever pivotally connected to the supporting arm, a rod slidable through the slot, a lateral extension on the lever, a pivot connecting one end of the rod with the lateral extension whereby movement of the lever will move the rod longitudinally and a hook at the end of the rod opposite that which is connected to the extension on the lever, said hook being adapted to engage around a vertical support whereby when the lever is actuated the bracket will be secured to the support.

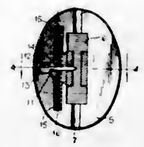
1,219,871. KEY-RING. MORRIS SAPO, New York, N. Y. Filed Aug. 5, 1916. Serial No. 113,251. (Cl. 24—241.)



1. A key ring comprising in combination a yielding ring having a gap, lugs projecting outwardly from the ring at the gap, a housing hinged to one of the lugs and adapted to engage the other, said other lug having a notch, a pin in the housing adapted to snap in the notch, a U-shaped member within the housing, a block slidably mounted within the U-shaped member, a spring for moving the block into the gap radially of the ring, said housing having a slot, and a pin projecting from the block through the slot whereby the block may be moved out of the ring's gap, substantially as and for the purpose set forth.

2. A key ring comprising in combination a yielding ring having a gap, lugs projecting outwardly from the ring at the gap and lying in the plane of the ring, a lock housing hinged to one of the lugs, said housing having a pin, said other lug having a notch into which the pin is adapted to snap, a U-shaped member within the housing adapted to aline with the lugs of the ring when the pin is snapped into the latch of the lug, a block slidably mounted within the U-shaped member, a spring for moving the block out of the U-shaped member into the gap of the ring radially of the ring when the gap of the ring is in alinement with the block, said housing having a slot, and a pin projecting from the block through the slot whereby the block may be moved out of the ring's gap and the ring sprung to disengage from the lock housing.

1,219,872. PIN-CLUTCH. MORRIS SAPO, New York, N. Y. Filed Aug. 5, 1916. Serial No. 113,252. (Cl. 24—155.)



1. A pin clutch comprising a carrier, a block slidably mounted in the carrier and having a passage for a pin, a tongue mounted to swing in the carrier and engaging the block, said tongue having a sharp end lying in the passage of block, a yielding member in the carrier engaging the tongue and normally tending to bring the said extremity of the tongue into the passage.

2. A pin clutch comprising a carrier in the shape of an elongated disk, said disk having a longitudinal rectangular cut-out, a grooved block mounted to slide in the cut-out, means extending from the block for sliding the block, a tongue pivotally mounted in the carrier and engaging the block with the free end thereof, and oppositely disposed springs in the carrier engaging the tongue intended to bring the free end of said tongue into the groove of the block.

3. A pin clutch comprising an oval-shaped disk provided with a rectangular cut-out in the longitudinal axis thereof, a grooved block mounted to slide in the cut-out, said disk having slots alining with the grooved block, a tongue pivotally mounted in the carrier and engaging the block with the free end thereof, oppositely disposed springs in the carrier engaging the tongue for maintaining the free end of said tongue in the groove of the block, a housing inclosing the carrier, a slot in said housing, a stud projecting from the block through the slot in the housing, and a head on the pin outside the housing for facilitating the displacement of the block in the carrier.

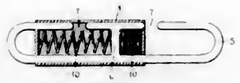
4. A pin clutch comprising a carrier in the shape of an oval disk provided with a cut-out in the longitudinal axis thereof, and a triangular cut-out in the transverse axis thereof to one side of the rectangular cut-out, one base of said triangular cut-out merging into the rectangular cut-out, a tongue mounted to swing in the triangular cut-out of the carrier so that the free end thereof enters the rectangular cut-out, a slotted block slidably mounted in the rectangular cut-out and engaged by the free end of the tongue, said carrier having alining pockets entering the triangular cut-out and disposed parallelly to the longitudinal axis of the carrier, a spring in each pocket engaging the tongue whereby the tongue has a tendency to be disposed at right angles to the rectangular cut-out, said carrier having grooves in the longitudinal axis thereof alining with the grooved block, a casing for the carrier, said casing having a slot, and a stud projecting from the grooved block through the slot whereby said block may be displaced, substantially as and for the purpose set forth.

5. A pin clutch comprising an apertured carrier for receiving a pin, a grooved block slidably mounted in the carrier, the groove of the block alining with the apertures of the block, a tongue mounted to swing in the carrier, said tongue having a sharp end adapted to enter the groove of the block, means engaging the tongue and normally tending to bring the sharp extremity of the tongue into the groove, and a stud for displacing the block in the carrier, substantially as and for the purpose set forth.

1,219,873. CUFF-LINK. MORRIS SAPO, New York, N. Y. Filed Aug. 5, 1916. Serial No. 113,253. (Cl. 24—102.)

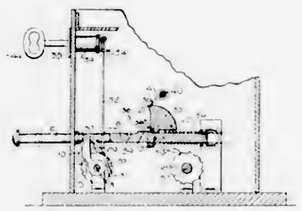
1. A cuff link comprising in combination a link having a central bridge, said link having a pair of gaps in the sides disposed on the opposite sides of the bridge and adjacent thereto, a spring housing slidably mounted on the link and having a length exceeding the distance between the remote ends of the gaps, and a pair of springs in said

housing on the opposite side of the bridge and in engagement therewith.



2. A cuff link comprising in combination a link having a central bridge, said link having a pair of gaps in the same side, each gap being on the opposite side of the bridge, a spring housing slidably mounted on the link and having a length exceeding the distance between the remote ends of the gaps, and a pair of springs in said housing on the opposite side of the bridge in engagement therewith for maintaining said housing over the gap.

1,219,874. VOTING-MACHINE. FRANK SIMPSON, La Jolla, Cal. Filed Oct. 7, 1913. Serial No. 793,869. (Cl. 235—55.)



1. In a voting machine a plurality of name rods slidably mounted, a main shaft journaled at right angles to said name rods, means whereby a longitudinal movement of any name rod will impart a rotational movement to the main shaft, a spring returned stop wheel loose upon said main shaft, and clutch mechanism for locking the stop wheel to the main shaft.

2. In a voting machine, a plurality of slidable name rods, a main shaft, means carried by the name rods for rotating said main shaft in one direction, means normally locking said shaft against rotation in the opposite direction, means normally tending to return said shaft to initial position, and adjustable means for limiting the rotational movement of said shaft.

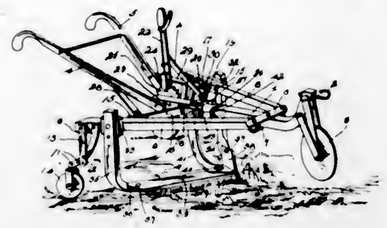
3. In a voting machine, a plurality of name rods slidable longitudinally, a main shaft journaled at right angles to said rods, means whereby a longitudinal movement of any name rod will impart a rotational movement to the main shaft, a spring influenced wheel rotatable upon said main shaft, a clutch mechanism for locking the wheel to the main shaft, and means for limiting the rotational movement of said wheel in both directions.

4. In a voting machine, a plurality of name rods slidably mounted, a main shaft journaled at right angles to said name rods, means whereby a longitudinal movement of any name rod will impart a rotational movement to the main shaft, a spring influenced wheel rotatable upon said main shaft, a clutch mechanism for locking the wheel to the main shaft, means for limiting the rotational movement of said wheel in one direction, and adjustable means for limiting the rotational movement of said wheel in the opposite direction.

5. In a voting machine, a main shaft, a spring influenced stop wheel rotatably mounted upon said shaft and having a plurality of peripheral openings, spaced stationary stops, a projection fixed to said wheel adapted to engage one of said stops to limit the movement of said wheel under the influence of its spring, and a stop screw adjustable within said openings and adapted to engage the other stationary stop to limit the movement of said wheel in the opposite direction.

[Claims 6 to 13 not printed in the Gazette.]

1,219,875. WEED-CUTTER. OTTO G. SNIDER, Muncie, Ind. Filed Nov. 12, 1914. Serial No. 871,769. (Cl. 55—60.)



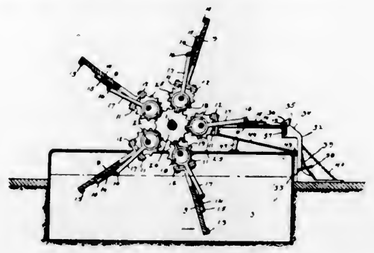
1. In a weed cutter, a central supporting bar, a pair of side rails pivotally connected at their forward ends to said central supporting bar, a block slidably mounted upon said central supporting bar, said side rails being pivotally associated with said block for movement toward or from said central supporting bar upon sliding movement of said block upon said bar, depending arms detachably carried by said side rails adjacent their rear ends, a depending arm carried by said block, a pair of cutting blades pivotally connected to said block carried depending arm and extending outwardly therefrom obliquely to the longitudinal lines of said central bar, said cutting blades being pivotally secured to said side rail carried depending arms for movement synchronously with said rails for increasing or decreasing their cutting scope with relation to the ground, and means connected to the rear end of said side rails for supporting the same and means connected to the rear end of the supporting bar and pivotally connected to the upper face of said sliding block for changing the inclination of the cutting blades with relation to the ground.

2. In a weed cutter, a central supporting bar, a pair of cross bars pivoted intermediate their ends adjacent the forward end of said central supporting bar, a pair of side rails pivotally connected at their forward ends to the cross bars, and extending rearwardly therefrom, a block slidably mounted upon said central supporting bar, bars pivotally connected at one end to the inner face of the side rails and the opposite ends pivotally connected to the block, said side rails having supporting means at their rear end, said side rails also adapted to be moved toward or from said central supporting bar upon sliding movement of said block upon said bar, depending arms detachably carried by said side rails adjacent their rear ends, a depending arm carried by said block, a pair of cutting blades pivotally connected to said block carried depending arm and extending outwardly therefrom obliquely to the longitudinal lines of said central bar, said cutting blades being pivotally connected to said rail carried depending arms for movement synchronously with said rails for increasing or decreasing their cutting scope, a lever pivotally mounted to the rear end of said central supporting bar, and means connected to said lever and said sliding block for changing the cutting scope of said cutting blades upon movement in either direction.

3. In a weed cutter, a central supporting bar, a pair of side rails, said side rails pivotally connected at their forward ends near the forward end of the central supporting bar, arcuate arms pivoted to the rear ends of said side rails, wheels pivotally carried by the lower terminals of said arcuate arms, and depending arms pivotally connected to said side rails and adjustably connected to the arcuate arms, for regulating the position of said wheels with relation to the arms, said side rails and central bar carrying cutting blades.

1,219,876. ROTARY SPRING-FITTING MACHINE. GEORGE A. SPENCER, Jackson, Mich., assignor of one-third to Ida Glenn, Jackson, Mich. Filed May 11, 1916. Serial No. 96,957. (Cl. 266—6.)

1. A machine of the class described including a central horizontal shaft, a rotary carrier mounted on the shaft and provided with a plurality of radially arranged tables, revolving transverse shafts located at the said tables and spaced from the central shaft, a main driving gear mounted on the central shaft, gears arranged on the revolving shaft and meshing with the central gear, reciprocatory plungers carried by the said tables and means operated by the said gearing for actuating the said plungers.



2. A machine of the class described including a central horizontal shaft, a rotary carrier mounted on the shaft and provided with a plurality of radially arranged tables, revolving transverse shafts located at the said tables and spaced from the central shaft, a main driving gear mounted on the central shaft, gears arranged on the revolving shaft and meshing with the central gear, reciprocatory plungers carried by the said tables, and eccentrics mounted on the revolving shaft and having rods connected with the plungers.

3. A machine of the class described including a central transverse shaft, a rotary carrier comprising hub sections mounted on the said shaft and radially arranged tables connected with the hub sections, said hub sections being also provided at the tables with opposite bearings, transverse shafts journaled in the said bearings and revolving with the rotary carrier, a main gear mounted on the central shaft, gear wheels loosely arranged on the other shaft, clutches for connecting the gear wheels with the revolving transverse shaft, plungers carried by the tables and eccentrics mounted on the transverse shafts and having eccentric rods connected with the said plungers.

4. A machine of the class described including a rotary carrier provided with radially arranged tables, and a locking device for holding the carrier against movement, said locking device including a pivoted lever having a head for engaging one of said tables, cushioning means arranged on the head and arranged to check the rotary movement of the carrier, a pintle connected with the locking device, a spring for urging the locking device toward the carrier and means for limiting the movement of the locking device.

5. A machine of the class described including a central shaft or axle, a rotary carrier mounted on the shaft or axle and provided with tables, a locking device for holding the carrier against movement, a clutch for connecting the carrier with the shaft for rotating the said carrier, a pedal connected with the locking device and provided with an arm, a clutch lever connected with the said clutch and having a portion connected with the arm of said pedal whereby when the pedal is operated the shifting lever will be actuated.

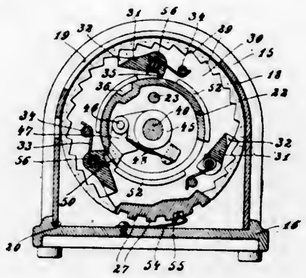
1,219,877. AUTOMOBILE-CURTAIN WINDOW. JOHN E. SPENCER and ARTHUR C. LILLIE, Los Angeles, Cal. Filed May 15, 1916. Serial No. 97,705. (Cl. 21—220.)

In an automobile curtain window, the combination of a frame having a central opening therein, the fabric curtain having an opening to receive said frame, the edges of the fabric around the opening being attached to the periphery of the opening in said frame, a transparent element insertible in the opening in said frame and seated on the edge of said fabric, and a retaining ring attached to said frame over-lapping said opening and the periphery of said transparent element, said ring serving to hold said transparent element firmly in position within the



opening of said frame and in contact with the edge of said fabric.

1,219,878. ADDING-MACHINE. ABRAHAM SPRUNG, New York, N. Y. Filed June 24, 1915. Serial No. 36,025. (Cl. 235—80.)



1. In an adding machine, a stationary hollow cylinder, a plurality of numeral wheels revolubly mounted thereon, carrying mechanism provided on the wheels, resetting mechanism disposed in the interior of the cylinder, said cylinder being formed with an exterior groove for operating the carrying mechanism, and with transverse slots for the projection of the resetting mechanism from the interior to the exterior of the cylinder.

2. In an adding machine, a stationary hollow cylinder, a plurality of numeral wheels revolubly mounted thereon, said wheels being formed with segmental hub portions, resetting mechanism disposed in the interior of the cylinder and comprising a plurality of radially movable pawls, said cylinder being formed with an exterior longitudinal groove for operating the carrying mechanism and with transverse slots disposed directly opposite the hub segments for the projection of the pawls from the interior of the cylinder to engage said hub segments.

3. In an adding machine, a base, two end frame members rigid therewith, a casing secured to said base and frame members, annular shoulders extending inwardly from the frame members, a hollow horizontal cylinder in the interior of the casing, clamped between the end frames and held in position by the shoulders, a plurality of numeral wheels revolubly mounted on said cylinder, carrying mechanism provided on the wheels, resetting mechanism disposed in the interior of the cylinder, said cylinder having exterior means for operating the carrying mechanism, and interior means for controlling the resetting mechanism.

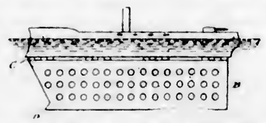
4. In an adding machine, a stationary hollow cylinder, a plurality of numeral wheels revolubly mounted thereon, carrying mechanism provided on said wheels, resetting mechanism disposed in the interior of the cylinder, said cylinder having a series of transverse slots for the projection of the resetting mechanism from the interior to the exterior of the cylinder, and an exterior longitudinal groove for the operation of the carrying mechanism, said carrying mechanism comprising a set of pawls mounted on each numeral wheel on one side thereof in operative relation to the next adjacent wheel, said pawls having an arm adapted to travel on the cylinder and operable by the groove when said arm drops into the latter, said arm being offset to clear the transverse slots in the cylinder.

5. In an adding machine of the class described, the combination of a casing, a tubular support mounted therein having a plurality of circumferential slots, a plurality of number wheels mounted upon the support, segmental flanges formed on the sides circumferentially of the num-

ber wheels and bearing upon the support and resting over the said slots, a shaft passing through said support concentrically therewith, arms extending from the shaft, a second shaft mounted in said arms, a plurality of pawls pivotally mounted upon said shaft and having reduced terminals passing through said slots and adapted to engage the said segmental flanges of the number wheels.

[Claim 6 not printed in the Gazette.]

1,219,879. TORPEDO AND SUBMARINE GUARD. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed Oct. 23, 1915. Serial No. 57,514. (Cl. 114—240.)



1. In apparatus of the class described, the combination with suitable float devices, of an approximately vertical sheet supported by said devices, arranged to swing laterally with respect thereto and adapted to explode a contact torpedo approaching the vital parts of a vessel alongside said sheet, and means for advancing the sheet synchronously with and alongside a vessel to be protected.

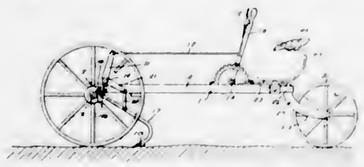
2. In apparatus of the class described, the combination with suitable float devices, of a pendant sheet supported thereby, provided with numerous transverse openings and arranged to swing laterally with respect thereto, and means for advancing the sheet with and alongside a vessel to be protected and at a suitable distance therefrom.

3. In apparatus of the class described, the combination with float devices, of a heavy sheet supported thereby, adapted to explode contact torpedoes moving transversely toward any vital part of a vessel alongside the sheet and provided at its lower forward margin with a projecting submarine-engaging point.

4. In apparatus of the class described, the combination with float devices, of a laterally swinging sheet supported thereby and provided at its lower side with a heavy approximately horizontal bar for disabling submarines by impact.

5. In apparatus of the class described, the combination with two sets of widely separated approximately parallel float devices, of heavy pendant sheets supported wholly by the float devices, respectively, adapted to explode torpedoes moving transversely toward any vital portion of a vessel between said sheets, and arranged to swing laterally with respect to their float supports.

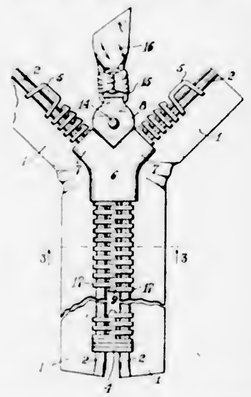
1,219,880. WEEDER. RALPH STRODE, Mikkalo, Oreg. Filed Aug. 31, 1915. Serial No. 48,295. (Cl. 97—34.)



1. In a weeder structure, a center rail, a cross rail secured to and extending transversely across the forward end of said center rail, an axle supported by said cross rail, supporting wheels carried by the end of said axle, a third supporting wheel rotatably supported rearwardly of and by the rear end of said center wheel, a pair of angled braces secured to the rear end of said center rail and to the end of said cross rail, a plurality of standards pivotally connected to said cross rail, a weed cutting blade carried by the lower ends of said standards and extending entirely across the width of the weeder, a rock shaft rockably supported by said cross rails, a plurality of arms connected to said cross rail, links pivotally connected to said arms and said standards, an upstanding arm connected to said rock shaft, a hand lever pivotally carried by said center rail, a rod connected to said hand lever and said upstanding arm for rocking said rock shaft upon pivotal movement of said hand lever.

2. In a weeder structure, a center rail, a cross rail secured to and extending transversely across the forward end of said center rail, an axle supported by said cross rail, supporting wheels carried by the ends of said axle, a third supporting wheel rotatably supported rearwardly of and by the rear end of said center rail, a plurality of standards pivotally connected to said cross rail, a weed cutting blade attached to the lower ends of said standards and extending across the width of the weeder, a plate attached to the upper surface of said cross rail intermediate of its ends, upstanding bearings carried by said plate, a rock shaft rockably supported by said bearings, a plurality of arms connected to said rock shaft, links connecting said arms to said standards, an upstanding arm attached to said rock shaft intermediate of its ends, a hand lever pivotally carried by said center rail, a rod connecting said hand lever and said upstanding arm for rocking said shaft upon pivotal movement of said hand lever.

1,219,881. SEPARABLE FASTENER. GIDEON SUNDBACK, Meadville, Pa., assignor to Hookless Fastener Company, a Corporation of Pennsylvania. Filed Aug. 27, 1914. Serial No. 858,848. (Cl. 24—205.)



1. A fastener comprising a pair of flexible stringers, interlocking members secured at one end thereto in staggered relation, each member having at the free end a rounded recess on one side and a corresponding projection on the opposite side, the recessed side and the end surface of the projection of each member meeting in an edge and constituting guiding means enabling said members to ride one on the other in interlocking.

2. A fastener comprising a pair of flexible stringers, interlocking members secured at one end thereto in staggered relation, each member having at the free end a transversely elongated rounded recess on one side and a transversely elongated rounded projection on the opposite side, the recessed side and the transversely elongated end surface of the projection of each member meeting in an edge and constituting guiding means enabling said members to ride one on the other in interlocking.

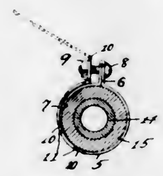
3. A fastener comprising a pair of flexible stringers, interlocking members secured thereto in staggered relation, each member having a recess on one side and a projection of similar shape on the other, said projections having inclined ends continuous with the recessed side of the member to engage and guide the coöperating member over and into engagement therewith.

4. A fastener comprising a pair of like fabric stringers, a series of like interlocking members secured to the abutting edges of each stringer, those on one stringer alternating with those on the other and having interlocking projections, means sliding on both stringers for actuating said members to lock and unlock according to its direction of movement, a double jaw stop member connecting both stringers at one end, and a separate stop member adapted to pass into said actuating means on at least one stringer at the other end.

5. In a fastener comprising two stringers, a sliding operating device mounted thereon composed of two plates having diverging channels therein, a doubled cap between the diverging channels, a fastening passing through said plates and said cap, and a pulling means carried by said cap.

[Claims 6 to 11 not printed in the Gazette.]

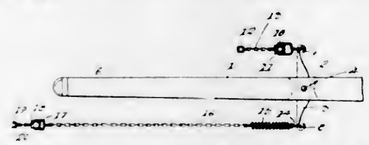
1,219,882. HOSE-CLAMP. ALBIN P. SWAIDMARK, Orlando, Fla. Filed May 19, 1916. Serial No. 98,587. (Cl. 137—28.)



1. A hose clamp, comprising a ribbon wrapped around a hose, a perpendicular loop formed adjacent one end thereof, and a bolt seated in said loop, said ribbon being provided with spaced holes each of which is adapted to receive said bolt to adjust said ribbon to hose of varying diameters, and being weakened between said spaced holes to permit the removal of excess ribbon.

2. As an article of manufacture, a ribbon having a perpendicular loop formed adjacent one end, and a bolt seated in said loop, said ribbon being provided with spaced holes at its other end, with scorings between said holes, and with edge recesses at the ends of each line of scoring.

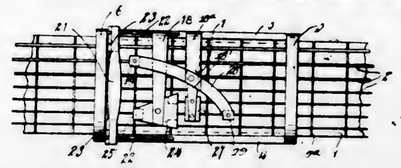
1,219,883. DRAFT-TREE. HERMAN J. SWANKE, Dodson, Mont. Filed Feb. 19, 1915. Serial No. 9,372. (Cl. 21—76.)



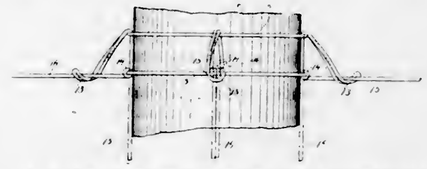
In a draft tree structure, a vehicle tongue having a slot extending therethrough, an evener bar extending through said slot and pivotally connected intermediate its end to said tongue, the end walls of said slot being convex for increasing the length of the slot at the outer surfaces of the tongue for increasing the swinging scope of the evener, said evener having its ends reduced in width and curved to form attaching hooks, an ordinary doubletree connected to the hook formed upon the upper end of said evener, a coil spring connected to the hook on the lower end of said evener, a flexible member connected to said spring and extending beyond the forward end of the tongue, and a swingletree connected to the forward end of said flexible member.

1,219,884. FINGERING ATTACHMENT FOR STRINGED INSTRUMENTS. INGVAR A. THINGSTAD, Vergas, Minn. Filed Sept. 25, 1914. Serial No. 863,517. (Cl. 84—83.)

A fingering attachment for stringed instruments comprising side bars, spring bows secured to the side bars, said bows connecting the side bars and adapted to hold the side bars in clamping engagement with the neck of the instrument, means carried by the side bars for engagement with the upper side of the neck to insure proper positioning of the attachment upon the neck, spring keys, and fingers carried by the keys.



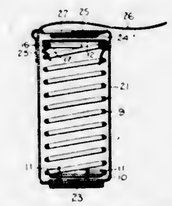
1,219,885. CLOTHES-RACK. JAMES V. THOMPSON, New Haven, Conn. Filed June 2, 1916. Serial No. 101,241. (Cl. 126—341.)



1. A clothes rack comprising two straps adapted to be secured in place, a bar-support formed from wire having an eye through which one of the straps passes; said support extending upward inside and over the other strap and downward and outward therefrom, said support terminating in a hook at its outer end, combined with a bar formed with an eye through which the lower strap passes, said bar adapted to engage with said hook whereby it is supported in a horizontal position.

2. A clothes rack comprising an upper strap and a lower strap, means for connecting the ends of said straps, a support formed from wire doubled upon itself and formed with eyes at the ends of the wire through which the lower strap passes, said support extending upward inside and over the upper strap and downward and outward therefrom, and terminating with a hook, a clothes-bar formed from wire doubled upon itself the ends formed with eyes through which the lower strap passes, said bar adapted to be engaged with said hook whereby it is supported in a horizontal position.

1,219,886. MAILING-CARTON. FRITZ E. UTTMARK, Brooklyn, N. Y. Filed May 12, 1916. Serial No. 97,002. (Cl. 150—51.)



1. A carton comprising a hollow frame constructed from an elongated wire coil; an end closure disk permanently attached to the convolution of said coil at one end thereof; and a removable cover for said frame pivotally attached to the end convolution of said coil having a spring latch to operatively hold the end convolution of said coil upon which said cover is pivotally mounted, and at the opposite side thereof.

2. A carton comprising a resilient hollow tube, said tube being bendable sidewise and compressible lengthwise; an end closure disk permanently attached at one end of

said tube; and a removable cover for said tube pivotally connected therewith at the opposite end thereof.

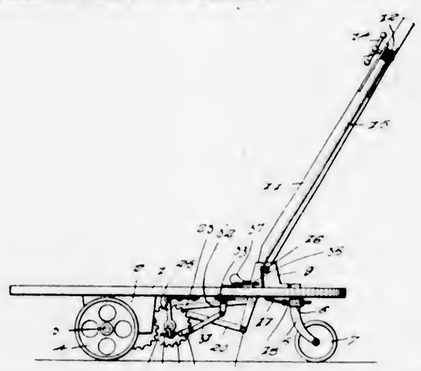
3. A carton comprising a resilient hollow tube, said tube being bendable sidewise and compressible lengthwise; an end closure disk permanently attached at one end of said tube; a removable cover for said tube pivotally connected therewith at the opposite end thereof; and means for removably locking said cover in closed position on said tube.

4. A carton comprising a resilient, compressible hollow frame; an end closure disk permanently attached at one end of said frame; a removable cover for said frame pivotally connected thereto; and a pliable cover for said frame, said cover being permanently closed over one end of said frame and temporarily closed and mechanically held over the other end of said frame.

5. A carton comprising a resilient, compressible hollow frame; an end closure disk permanently attached at one end of said frame; a removable cover for said frame pivotally connected thereto; a pliable cover for said frame, said cover being permanently closed over one end of said frame; a cover tab having a longitudinally disposed slot formed therein; and a locking member having a constricted neck portion and a widened tag portion adjacent said neck portion to extend beyond the edges of said slot.

[Claims 6 to 8 not printed in the Gazette.]

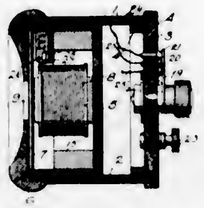
1,219,887. SELF-PROPELLED VEHICLE. CHARLES R. VAN HORNE, Aberdeen, Wash. Filed July 28, 1916. Serial No. 111,883. (Cl. 208—34.)



1. A device of the class described including a platform, a drive wheel supporting said platform, a gear train for controlling the movements of the drive wheel, a drive gear meshing with said gear train, an oscillatory lever on said platform, a crank pin carried by the drive gear, a connecting rod connecting the end of the lever with the crank pin, an auxiliary connecting rod connecting the lever intermediate its end and fulcrum with the crank pin to overcome a dead center, a swinging arm pivotally mounted to the under side of the platform and supporting the drive gear and means to swing said arm so as to move the drive gear into and out of mesh with the gear train.

2. In a device of the class described, a platform, a steering wheel mounted at the forward end of the platform, drive wheels mounted at the rear end of the platform, a lever pivoted to the platform near its forward end, a gear train for driving the drive wheels, a master gear controlling the operation of the gear train, a crank pin on the master gear, a link connected to the lower end of the lever, said link being provided with a slot near its rear end for receiving the crank pin and a secondary link pivoted to the lever intermediate its lower end and its pivot point, the last mentioned link having a slot near its rear end of greater length than the slot in the first mentioned link, the last named slot being adapted to receive the crank pin and arranged so that its walls engage the crank pin to overcome the dead center.

1,219,888. COMBINED RECEIVER AND DETECTOR FOR WIRELESS USE. FRANK WALLBERG, New York, N. Y. Filed Sept. 21, 1915. Serial No. 51,769. (Cl. 250—21.)



1. A wireless receiving outfit comprising a casing and including a detector in the casing, said detector including a crystal, a conductor bearing on the crystal, and a plastic material forming a seal over the crystal and conductor for maintaining the crystal and conductor in permanent contact.

2. A hand-carried wireless receiving outfit, comprising a unitary device including a casing, a telephone receiver therein, a detector mounted in the casing and connected across the terminals of the magnet of the telephone receiver, and a variable resistance carried by the casing and connectible in series with the telephone electromagnet and detector.

3. The combination of a casing, a crystal therein, a conductor bearing on the crystal, a plastic material covering the crystal and conductor and maintaining a permanent contact between the two, and means for connecting the crystal and conductor in a wireless circuit.

4. A wireless receiving outfit comprising a casing including a pair of shells, a resistance winding disposed between the shells, variable resistance contacts mounted on the casing and connected with the resistance winding, a binding post with which one end of the resistance winding is connected, a telephone receiver electromagnet arranged in the casing and having one terminal connected with the variable resistance through the said contacts, a binding post to which the other terminal of the electromagnet is connected, a diaphragm arranged within the casing and associated with the electromagnet, and a detector connected across the electromagnet terminals and disposed at the same side of the diaphragm as the electromagnet.

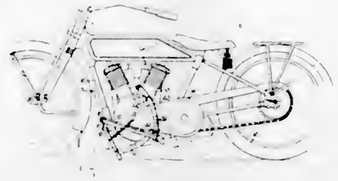
5. A wireless-receiving device comprising a casing, a cup-shaped holder therein, an apertured cap applied to the holder, a diaphragm under the cap, a magnet in the holder and associated with the diaphragm, a detector in the casing and consisting of a crystal and contacting conductor, the terminals of the detector being connected with the terminals of the electromagnet and the detector being disposed at the same side of the diaphragm as the electromagnet, a variable resistance device in the casing and having one terminal connected with the electromagnet, a binding post to which the other terminal of the resistance device is connected, and another binding post to which the other terminal of the electromagnet is connected.

[Claims 6 to 9 not printed in the Gazette.]

1,219,889. MOTOR-CYCLE STAND. HOWARD W. WEED, Stamford, Conn. Filed Nov. 10, 1916. Serial No. 131,654. (Cl. 208—78.)

1. The herein described stand for motorcycles comprising a swinging supporting member pivoted adjacent to the motor frame, a treadle rigidly secured to the supporting member, and spring operated means movably connected to the motor frame and coöperating directly with said treadle to hold the supporting member in either its operative or inoperative position.

2. The combination with a motorcycle including a motor frame and a foot rest at one side thereof, of a stand, means to pivot one end of the stand to the lower portion of the motor frame beneath said foot rest, a treadle connected to the stand and extending thence upwardly between the foot rest and the frame, and a toothed member coöperating with the treadle to hold the stand in fixed position.



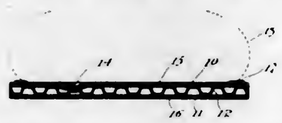
3. The combination with a motorcycle including a frame, a motor carried within the frame and a foot rest at one side of the motor frame, of a supporting stand pivoted to the frame first mentioned adjacent to the foot rest and occupying a position below the plane of said foot rest, locking means carried by the motor frame and movable relatively thereto, and means extending from the stand into coöperation with said locking means whereby the stand may be held positively in either its operative or inoperative position.

4. The combination with a motorcycle including a main frame and a motor carried within the frame, of a supporting stand, means pivotally connecting one end of the stand to the frame adjacent to the motor, a treadle extending rearwardly and upwardly from the lower portion of the stand, an arm pivoted at its upper end to the motor frame, and means providing for the interlocking of the treadle with said arm in either the supporting or idle position of the stand.

5. In a motorcycle support, the combination of a pivoted stand, a treadle extending upwardly therefrom and a locking arm coöperating with said treadle, said locking arm having a stop shoulder near its upper end against which the treadle may impinge and also having a notch just beneath said shoulder to hold the stand in idle position, said arm also being provided with a series of notches near its lower end, with any one of which the treadle may cooperate in the supporting position of the stand.

[Claims 6 to 8 not printed in the Gazette.]

1,219,890. INSOLE. BRITTON WEST, Chicago, Ill., assignor of one-half to Charles R. Cooper, Chicago, Ill. Filed July 26, 1916. Serial No. 111,329. (Cl. 36—44.)

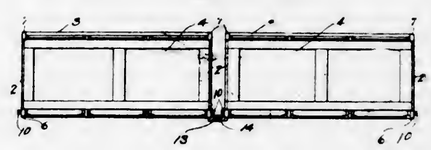


1. An impressionable, absorbent insole comprising upper, lower and intermediate sole-shaped layers of strawboard, said upper and lower layers being flat, said intermediate layer being provided with alternate elevations and depressions secured to said upper and lower layers, respectively, said material being rigid enough to support the foot without being crushed if the weight is equally distributed, but weak enough so that it may be crushed and permanently set to accommodate irregularities in the foot of the wearer.

2. An impressionable, absorbent insole comprising upper, lower and intermediate sole-shaped layers of strawboard, said upper and lower layers being flat, said intermediate layer being corrugated and secured to both upper and lower layers, said material being rigid enough to support the foot without being crushed if the weight is equally distributed, but weak enough so that it may be crushed and permanently set to accommodate irregularities in the foot of the wearer.

3. An impressionable, absorbent insole comprising upper, lower and intermediate sole-shaped layers of strawboard, said upper and lower layers being flat, said intermediate layer being corrugated, said corrugations being glued to both the upper and lower layers, said material being rigid enough to support the foot without being crushed if the weight is equally distributed, but weak enough so that it may be crushed and permanently set to accommodate irregularities in the foot of the wearer.

1,219,891. SECTIONAL FURNITURE. HENRY WILLIAMS, Chicago, Ill., assignor to Grand Rapids Show Case Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Feb. 18, 1914. Serial No. 819,325. (Cl. 45—78.)



1. Sectional furniture of the character described, comprising sections placed one above the other to form an independent vertical multiple sectional unit, a plurality of said multiple sectional units positioned end to end with adjacent ends spaced apart, a pilaster or post extending over and covering the space between the spaced apart adjacent ends of the sections and having an inwardly projecting portion, and means for detachably securing the adjacent ends of the sections to said inwardly projecting portions of the pilaster or post in their horizontal spaced relation to permit ready removal or interchangeability of the sections without disturbing other vertical sectional units.

2. Sectional furniture of the character described, comprising sections placed one above the other to form an independent vertical multiple sectional unit, a plurality of said multiple sectional units placed end to end with adjacent ends spaced apart, a removable post or pilaster extending over and covering the space between adjacent multiple sectional units, and detachable connections between the post or pilaster and the ends of adjacent sections including means connected to the post or pilaster and extending between the sections and permitting ready removal and interchangeability of the sections of a multiple sectional unit without disturbing the sections of an adjacent multiple sectional unit.

3. Sectional furniture of the character described, comprising independent series of superposed sections positioned end to end and with adjacent ends spaced apart, a post or pilaster located at the front of the adjacent ends of the sections and having an inwardly projecting portion extending into the space between the adjacent ends of the sections, and means detachably connecting the adjacent ends of the sections with the inwardly projecting portion of the pilaster to permit ready removal of the pilaster and any section of the series.

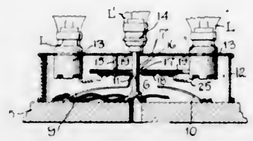
4. Sectional furniture of the character described, comprising independent series of superposed sections positioned end to end and with adjacent ends spaced a short distance apart, a post or pilaster located at the front of and lying between the adjacent ends of the sections, and means carried by the sections and by the post or pilaster adapted to have detachable engagement whereby the said sections and post or pilaster may be secured together or readily detached one from the other.

5. Sectional furniture of the character described, comprising a series of sections placed one above and resting one on the other to form an independent vertical multiple sectional unit, a plurality of said multiple units positioned end to end and with adjacent ends spaced apart, a post reaching from the bottom to the top of said multiple units and located at the front of and between the adjacent ends of adjacent sections, means carried by the sections of each

multiple unit and means carried by the post for detachably engaging said means on the sections for securing the sections together in fixed relation to each other.

[Claims 6 to 13 not printed in the Gazette.]

1,219,892. DISPLAY-STAND FOR ELECTRIC-LIGHT LAMPS. CLARENCE W. WITT, Johnstown, Pa. Filed June 15, 1916. Serial No. 103,797. (Cl. 240—81.)



1. An electric lamp display device including a base, a table rotatably mounted thereon, a plurality of spaced sockets carried by the table, to receive the lamps to be displayed, a central relatively stationary socket mounted above the table to receive a test lamp, and a circuit for said lamps including circuit closing strips fixed upon the base, and means carried by the table to be engaged by the respective circuit closing strips to close the circuit and successively illuminate the display lamps in the rotation of the table, said means including a conductor in constant engagement with one of said strips to maintain the circuit closed through the test lamp.

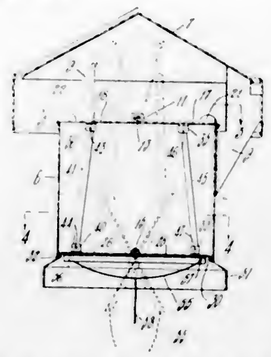
2. An electric lamp display device including a base, a table rotatably mounted thereon, a plurality of spaced sockets carried by the table to receive the lamps to be displayed, a centrally fixed standard projecting above the table, a socket upon the upper end of said standard to receive a test lamp, and a circuit for said lamps including spaced resilient circuit closing strips connected to opposite sides of the circuit, a metal annulus carried by the table and engaged by one of said strips, and means at all times connecting said annulus to one side of the circuit through the lamp sockets on the table, and spaced metal plates carried by the table and individually connected to the respective lamp sockets and adapted to be successively engaged by the other of the circuit closing strips in the rotation of the table, whereby the circuit is successively closed through the display lamps when the table is rotated.

3. An electric lamp display device including a base, a vertically disposed standard centrally mounted upon said base, a table rotatable upon the base and having a central opening to receive said standard, a plurality of spaced sockets carried by the table to receive the lamps to be displayed, a socket fixed upon the upper end of said standard, a test lamp adapted to be engaged in the latter socket, spaced circuit closers mounted upon the base, a circuit for said lamps including a metallic connection between one side of the circuit through said display lamp receiving sockets, a series of spaced contacts respectively connected to the opposite circuit terminal of said sockets, said contacts being adapted to be successively engaged by one of the circuit closers upon the rotation of the table, wire connections between the circuit closers and the socket terminals for the test lamp, and an additional contact plate carried by the table and metallically connected to the connection between the terminal sockets, whereby the test lamp is at all times illuminated in the rotation of the table.

1,219,893. VENTILATOR. ISAAC WOOLF, Providence, R. I. Filed Apr. 27, 1916. Serial No. 93,813. (Cl. 98—4.)

1. In a ventilator, the combination of a stack, a pivot rod mounted in the stack transversely thereof, damper leaves mounted on the rod, rods rigidly fixed to the faces of the leaves and extending from said faces across the pivot rod, and a flexible member connecting the extending portions of the rods.

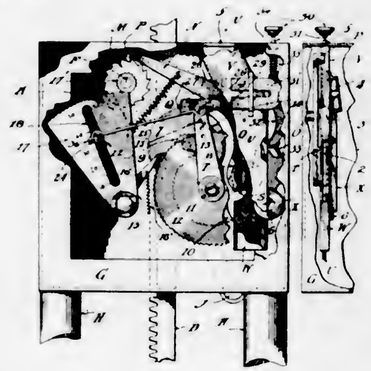
2. In a ventilator, the combination with the stack, of a pivot rod on the upper end of the stack, a second pivot rod in the lower portion of the stack, leaves upon the upper rod, leaves upon the lower rod, rods pivotally connecting the upper and lower leaves, and means for tilting one set of leaves.



3. In a ventilator, the combination with the stack, of an annular flange upon the lower portion of the stack, a pivot rod mounted in the top of the stack, leaves upon the rod adapted to engage the stack, a second pivot rod in the lower portion of the stack, leaves on the second rod adapted to rest upon the flange, rods pivotally connecting the opposite upper leaves with the lower leaves, and means for tilting the lower leaves.

4. In a ventilator, the combination with the stack, of a pivot rod in the stack, an annular shoulder on the stack, and leaves on the rod provided with downwardly inclined marginal portions adapted to rest upon the shoulder.

1,219,894. COIN-OPERATED MECHANISM FOR DISPENSING LIQUIDS. HENRY J. WYKLE, Metamora, Ill. Filed May 9, 1914. Serial No. 837,570. (Cl. 194—60.)



1. In a coin controlled mechanism, the combination with a reciprocable member and means to actuate it, including a ratchet wheel, of an arm operatively engaging said wheel, the movement of one bearing a certain definite relation to that of the other, a second ratchet wheel, means to impart movement to it operatively engaging the arm, means to engage one of the wheels and operatively engaging the other and normally holding each from rotating, and a manually operated member adapted through the instrumentality of a coin to liberate the described parts.

2. In a coin controlled mechanism, the combination with a reciprocable member and means to actuate it including a ratchet wheel, of an arm operatively engaging the wheel, a movement of one having a certain definite relation to that of the other, a second ratchet wheel, means operatively connecting the arm and the second wheel by which motion is imparted to the latter, a pawl to automatically and operatively engage the said second ratchet wheel for preventing its movement, said pawl being disengaged from said wheel by the engagement of a coin therewith introduced into said mechanism, and a manually operated member to engage and move the coin to cause such disengagement.

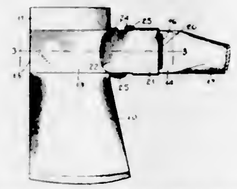
3. In a coin controlled mechanism, the combination with a reciprocable member and means to actuate it including a wheel limited in opposite directions of its movement, of an arm operatively engaging the wheel and adapted to be moved by it a definite distance in opposite directions, a second wheel, means operatively connecting the arm and said second wheel, a pawl operatively engaging the latter and the first said wheel to prevent movement of either, and a member to disengage the last said means from said second wheel through the instrumentality of a coin.

4. In a coin controlled mechanism, the combination with a reciprocable member and means to actuate it including a wheel limited with said member in opposite directions of movement, an arm engaging the wheel and oscillated by it, a second wheel, means including a gear train operated by the arm engaging and rotating the said second wheel, means to engage both wheels and removed from engagement with the same by contact of a coin therewith, and a member to move the coin into engagement with the last named means, one of said wheels adapted by its form when said means is disengaged therefrom to hold it in its disengaged position.

5. In a coin controlled mechanism, the combination with mechanism to be operated, of a wheel rotatable in either direction and operable therewith, an arm operatively engaging the wheel and swung by it in either direction, a second wheel, means moved by the arm operatively engaging and transmitting rotation to said second wheel, and a single pawl to automatically engage and hold both wheels after a predetermined extent of rotation of the second said wheel and released from both wheels by the introduction of a coin, and a manually operated member to positively engage and move the coin for causing such disengagement.

[Claims 6 to 31 not printed in the Gazette.]

1,219,895. AX OR SIMILAR TOOL. WILLIAM YANERT, Purgatory, Alaska. Filed Sept. 22, 1916. Serial No. 121,660. (Cl. 145—79.)



1. The herein described ax having a blade, a head and a neck connecting the blade and head, a handle for the ax, said handle being bifurcated to embrace the neck of the ax, and means including a U-shaped bridle embracing the ax and bifurcated portion of the handle to secure the handle in place.

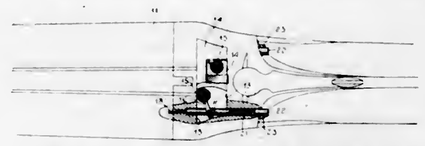
2. The combination of an ax having a neck portion wedge-shaped in cross section, a handle having a bifurcated head embracing the neck aforesaid, a U-shaped bridle embracing the neck aforesaid and bifurcated portion of the handle, and means surrounding the handle securing the bridle in place and preventing the withdrawal of the handle.

3. The combination of a tool having a reduced neck portion, a handle having a bifurcated connecting portion straddling the neck portion aforesaid, the handle having oppositely disposed side grooves, a connecting member embracing the neck and those portions of the handle adjacent thereto, said connecting member having a pair of inwardly directed lips extending into said grooves, and means surrounding the handle and lip portions of the connecting member to hold said lips in engaging position.

4. The combination of a tool having a neck, a handle having a head embracing the neck, a connecting bridle embracing the neck and the handle portions adjacent thereto, a keeper surrounding the ends of the bridle and slidable longitudinally thereof and serving to cause the ends of the bridle to engage into the sides of the handle, and means to lock the keeper in binding position.

5. The combination of a tool having a reduced neck portion, a bridle surrounding the neck portion and having a pair of free spring ends, a keeper surrounding said ends and slidable longitudinally thereof toward the tool, a handle having a split head projectable between the ends aforesaid and through the keeper to embrace the two sides of the neck, said free ends of the bridle carrying engaging means for the handle and the keeper, being slidable away from the tool to cause said engagement means to function, and a spring key located between the tool and the keeper to hold the keeper in locked position, said key having a notch to automatically interlock with said keeper.

1,219,896. SAFETY-SIGNAL FOR FIREARMS. WILLIAM YANERT, Purgatory, Alaska. Filed Sept. 22, 1916. Serial No. 121,661. (Cl. 42—1.)



1. In a firearm, the combination of a breech piece having a recess, a signal indicator movably mounted within the recess, the recess having a cover serving to render the indicator visible in one position and invisible in another position, and means movable along the breech piece and coöperating with the indicator to cause the indicator to occupy its visible position when the firearm is loaded.

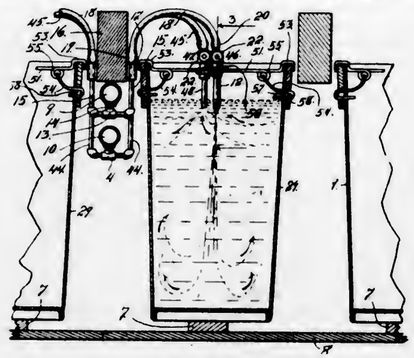
2. In a firearm of the character set forth, the combination of a breech piece having a recess, a cover for the recess having a transparency, a signal indicator movably mounted within the recess beneath the cover and adapted in one position to be seen through the transparency, while in another position it is invisible, a plunger movably mounted in the recess and projecting forwardly beyond the breech piece, means bearing upon the plunger serving to maintain it moved forwardly, connections between the plunger and the signal indicator serving to hold the indicator in its invisible position when the plunger is forward, and means carried by the plunger serving to cause the same and the indicator to be moved rearwardly when the firearm is loaded.

1,219,897. APPARATUS FOR AGITATING FREEZING WATER. EDWARD H. ALTHOFF, Salt Lake City, Utah, assignor of one-half to Louis A. Roser, Salt Lake City, Utah. Filed Aug. 10, 1914. Serial No. 856,016. (Cl. 259—95.)

1. Water agitating apparatus comprising a pump, a battery of water-containing cans, discharge and suction conduits in communication with the pump at one extremity, their body portions extending between two rows of cans of the battery, and a pair of discharge and suction nozzles for each can of the two rows, the nozzles of each pair for each can being respectively in communication with the discharge and suction conduits, and means for controlling the supply and removal of water from each of the several cans in order that the supply to and the removal from each can of the battery may be equal.

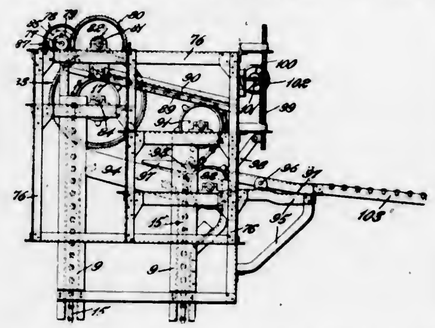
2. Water agitating apparatus comprising a pump, a battery of water-containing cans, discharge and suction con-

duits in communication with the pump in one extremity, their body portions extending between two rows of cans of the battery, and a pair of discharge and suction nozzles for each can of the two rows, the nozzles of each pair for



each can being respectively in communication with the discharge and suction conduits, and means for reducing the quantity of water delivered to and removed from any can during the freezing operation.

1,219,898. AUTOMATIC PACKAGE-ELEVATOR. JOHN A. ALVEY, St. Louis, Mo., assignor to Alvey Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed June 1, 1914. Serial No. 842,036. (Cl. 193—8.)



1. A package elevator comprising a frame, sprocket chains guided in said frame, carriers supported from said sprocket chains at fixed distances apart, means for moving said sprocket chains up one side and down the opposite side of said frame, spaced fingers extending across the path of downward movement of said carriers, guide bars for guiding said sprocket chains downwardly and longitudinally of said fingers, and sprocket wheels for guiding said sprocket chains downwardly from the ends of said guide bars.

2. A package elevator comprising a frame, sprocket chains guided in said frame, carriers supported by said sprocket chains, means for moving said sprocket chains up one side and down the opposite side of said frame, spaced fingers supported in said frame in the downward path of movement of said carriers, and means for guiding said sprocket chains and said carriers supported thereby first lengthwise of said fingers and then downwardly relative to said fingers.

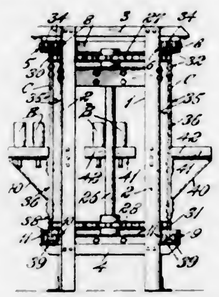
3. A package elevator comprising a frame, a plurality of spaced fingers pivotally mounted on said frame to swing across the path of movement of said elevator, vertically movable racks mounted on said frame adjacent to said fingers, links pivoted at one end to said fingers and at the other end to said racks, and manually operable means for moving said racks to tilt said fingers up and down, whereby they may be swung across and withdrawn from the path of movement of said elevator.

4. A package elevator comprising a frame, moving sprocket chains guided by said frame up one side thereof and down the opposite side, carriers connected to said sprocket chains at fixed intervals, the bottom of each of said carriers having openings therein, fingers supported by said frame and extending into the path of downward movement of said carriers, said fingers being arranged to pass through the openings of said carriers, fixed guide bars adapted to support said sprocket chains and extending lengthwise of said fingers and substantially parallel therewith, and means for guiding said sprocket chains downwardly from the lower ends of said guide bars.

5. A package elevator comprising a frame, moving sprocket chains guided by said frame up one side thereof and down the opposite side, carriers connected to said sprocket chains, the bottom of each of said carriers having openings therein, fingers supported by said frame and extending into the path of downward movement of said carriers, said fingers being arranged to pass through the openings of said carriers, means for guiding said sprocket chains lengthwise of said fingers and then downwardly relatively thereto, and means engaging said carriers near the lower ends thereof as they move lengthwise of said fingers and preventing upward movement of the lower ends of said carriers.

[Claims 6 to 8 not printed in the Gazette.]

1,219,899. CONVEYER. JOHN A. ALVEY, St. Louis, Mo., assignor to Alvey Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 8, 1914. Serial No. 855,735. (Cl. 193—2.)



1. A conveyer comprising a frame, two endless tracks each comprising two rails spaced apart, said tracks being arranged one above the other and secured to said frame, a plurality of vertical bars extending from the lower track to the upper track with their ends fitting between the rails of the upper track, wheels connected to said bars near each end thereof and supported by said tracks, said bars and wheels being guided by the inner edges of said upper track rails, horizontal shelves on said bars which are adapted to support the articles to be conveyed, endless sprocket chains secured to the ends of said bars, and means for moving said sprocket chains simultaneously at equal velocities in the same direction along said tracks.

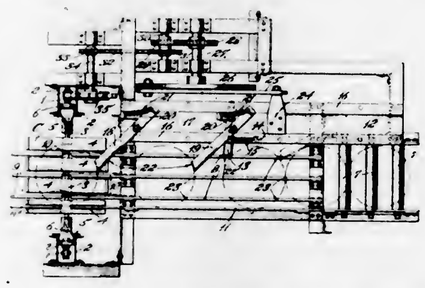
2. A conveyer comprising a frame, two endless channel-shaped tracks arranged one above the other and supported on said frame, the upper track having a continuous longitudinal slot therein, an endless sprocket chain adjacent to each track, sprocket wheels mounted on said frame for driving and guiding said sprocket chains, a plurality of vertical bars each extending from the lower track through the slot in the upper track and rigidly connected to said sprocket chains, wheels rotatably mounted in pairs on opposite sides of each of said bars near each end thereof and guided in said tracks, said bars having horizontal shelves fixed thereto which are adapted to support the articles to be conveyed.

3. A conveyer comprising a plurality of vertical members arranged in pairs, an upper cross member and a lower cross member connected to each pair of the vertical members, upper and lower endless tracks consisting of two angle irons arranged in a channel-shape, the angle irons of the upper track being spaced apart thereby leaving a slot in said upper track extending longitudinally thereof, a plurality of vertical carrier bars having a pair of wheels connected thereto at each end thereof and supported and guided by said tracks, endless sprocket chains connected to said carrier bars, and means for moving said sprocket chains.

4. A conveyer comprising a frame, upper and lower tracks arranged one above the other and supported on said frame, said tracks each comprising two angle irons arranged in a channel shape, the angle irons constituting the upper track having a space between the edges of the adjacent legs, a plurality of carrier bars extending from said lower track to said upper track and having wheels secured thereto near each end, said wheels of said carrier bars being supported and guided by said tracks, said tracks each having portions thereof curved, the angle irons of each of said tracks being farther apart throughout said curved portions than throughout the straight portions of said tracks, whereby their inner edges maintain said bars in the vertical plane of movement of the conveyer.

5. A conveyer comprising a frame, upper and lower endless tracks secured to said frame, said upper track having a longitudinal slot in the bottom thereof, a plurality of vertical carrier bars extending from said lower track through the slot in the upper track and fitting loosely therein, each of said bars having a carriage secured thereto at each end, each of said carriages having two wheels rotatably mounted thereon on a horizontal axis, shelves secured to said carrier bars and adapted to support the articles to be conveyed, and means for connecting and for moving said carrier bars.

1,219,900. LOADING MECHANISM FOR PACKAGE-CONVEYERS. JOHN A. ALVEY, St. Louis, Mo., assignor to Alvey Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 14, 1914. Serial No. 877,080. (Cl. 193—24.)



1. A package conveyer having moving carriers, a stationary way leading to said conveyer, and an intermittently operating loading mechanism for moving the packages along said way to said carriers, said loading mechanism comprising a yieldable stop device for arresting the movement of the packages along said way, and means controlled by said carriers for transferring a predetermined number of packages standing behind said stop device along said way into the path of movement of said carriers.

2. A package conveyer having moving carriers, a stationary way leading to said conveyer, and a loading mechanism for moving packages along said way to the carriers of said conveyer, said loading mechanism comprising means for arresting the movement of the packages along said way, a reciprocating member operatively connected to said carriers, and a pushing finger connected to said member and arranged to engage behind a predetermined number of packages arrested by said means, said finger operating to push said predetermined number of packages along said way into position to be automatically conveyed away from said carriers.

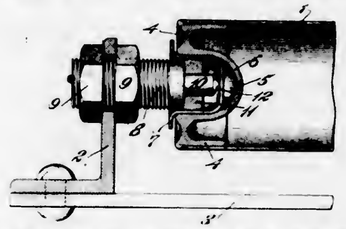
3. A package conveyer having moving carriers, a stationary way leading to said conveyer and arranged to receive packages in a line, and a loading mechanism for moving packages along said way to the carriers of said conveyer, said loading mechanism comprising a yieldable stop device normally extending into the path of movement of the packages along said way, a reciprocating member operatively connected to said carriers, a pushing finger pivoted to said reciprocating member, said reciprocating member having a stop secured thereto which limits the movement of the outer end of said finger in a direction away from the conveyer, and resilient means for swinging the said finger toward said stop.

4. A package conveyer having moving carriers, a stationary way leading to said conveyer, a loading mechanism for moving packages along said way to the carriers of said conveyer, said loading mechanism comprising means for arresting the movement of the packages along said way, a reciprocating member extending along one side of said way and operatively connected to said carriers, pushing fingers connected to said reciprocating member and normally projecting into said way, and a fixed guide-bar extending along the other side of said way.

5. A package conveyer having moving carriers, a stationary way leading to said conveyer, and a loading mechanism for moving packages along said way to said carriers, said loading mechanism comprising a stop device for arresting the movement of the packages along said way, a reciprocating member operatively connected to said conveyer and arranged to push a predetermined number of packages along said way into position to be engaged by said carriers, and means on said way for preventing movement of said packages away from said conveyer.

[Claims 6 and 7 not printed in the Gazette.]

1,219,901. BEARING FOR CONVEYER-ROLLERS. JOHN A. ALVEY, St. Louis, Mo., assignor to Alvey Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 5, 1916. Serial No. 118,452. (Cl. 64—25.)



1. In a bearing for conveyer rollers, a roller arranged between spaced supports, a cap secured to each end of the roller, a bearing cup carried by each cap, a spindle mounted on each support opposite each end of the roller and projecting into the adjacent cup, the ends of said spindles having bearings against the bottoms of the adjacent cups to prevent endwise movement of said roller, and a floating bearing member journaled upon each spindle and movably engaging the wall of said bearing cup to support said roller.

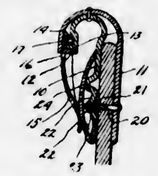
2. In a bearing for conveyer rollers, a roller mounted on spaced supports, a cap for each end of the roller, said cap being provided at its center with a concave portion, a bearing cup removably secured in said concave portion, the walls of said bearing cup frictionally engaging a bushing located in said cup and means for holding said bushing in the bearing cup.

3. In a bearing for conveyer rollers, a roller, a cap pressed into each end of said roller, a bearing cup carried by the cap, a spindle mounted adjacent to each end of the roller, the end of said spindle being pointed and engaging the bottom of the bearing cup.

4. In a bearing for conveyer rollers, a roller, a cap secured to each end of said roller, a bearing cup secured to said cap, a spindle adjustably mounted at each end of the roller, a reduced portion formed on the end of the spindle, a shoulder on said spindle formed by the reduced portion and a bushing having its periphery rounded to form a substantially spherical surface, said bushing being rotatably mounted on the reduced portion of the spindle.

5. In a bearing for conveyer rollers, a roller, caps for the respective ends of said roller, each cap carrying a bearing cup pressed therein, spindles projecting into said cups, each spindle having a bushing mounted thereon and engaging the walls of the bearing cup, said bushing being spaced away from the end wall of the bearing cup and forming therewith a grease pocket.

1,219,902. DETACHABLE BUTTON. FRANK J. ANDERSON, Great Falls, Mont. Filed Oct. 14, 1914. Serial No. 866,699. (Cl. 24—84.)



A clasp fastener comprising in combination, a base plate having an overturned portion overhanging its body, a second plate secured to the first plate and also having an overhanging portion fixed within the overturned portion of the first plate, the overhanging ends interengaging to provide a resilient bearing, and a guard lever having an angularly shaped pintle mounted within said resilient bearing, the angularly shaped pintle acting to spread the bearing during the motion of the guard lever into its open or closed position and said resilient bearing closing around the pintle to hold the guard lever in either its open or closed position.

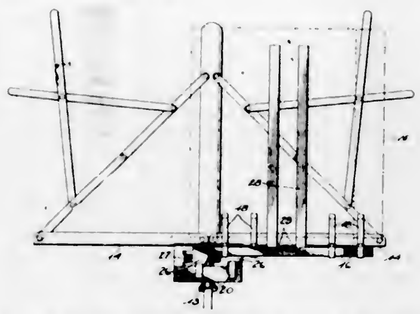
1,219,903. ELECTRIC SEALING-WAX-APPLYING DEVICE. FAY M. ANDREWS, Columbus, Ohio. Filed Mar. 10, 1915. Serial No. 13,366. (Cl. 219—21.)



1. An electric device for applying sealing wax, including a tubular handle having a socket connection in one end thereof, an insulation member having a concentric plug upon one face and a recess upon the opposite face, a metal covering for the plug, a concentric terminal mounted in the plug, a heating unit comprising a support of insulating material and a resistance wire upon such material, said unit filling the recess of the insulation member and having the terminals of the wire thereof connected respectively to the concentric terminal and to the metal covering of the plug, and a snap cover fitting over the recessed end of the insulation member and against the heating unit, the outer face and the edge of the cover forming a wax melting and applying surface.

2. An electric sealing wax applying device, including a hollow handle, a socket in one end of the handle, a resilient button actuated contact plate mounted in the handle and connected to one terminal of the socket, a resistance mounted in the handle and having one terminal normally in contact with the contact plate, a conductor bridged around the resistance, a contact connected thereto and in the path to engage the resilient contact plate when the button is depressed, a socketed member having a plug connection for engagement with the socket, a heating unit mounted therein and electrically connected with the plug connection, the outer face of the unit being beyond the outer face of the socketed member, and a wax melting and applying cap fitting over the socketed member and having its disk portion in contact with the heating unit.

1,219,904. MUSIC-LEAF TURNER. HERBERT JOHN BAILEY, Trenton, N. J. Filed Oct. 6, 1914. Serial No. 865,235. (Cl. 84—135.)

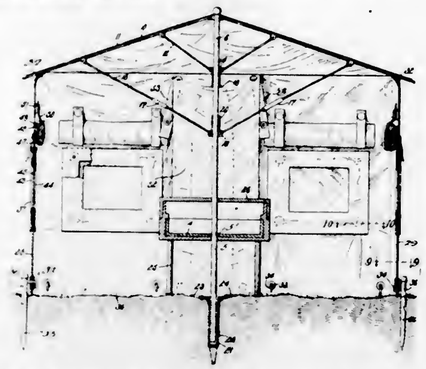


1. A music leaf turner comprising a main body portion or support having a rabbeted front face forming a step at its lower end, leaf carrying arms pivoted at one end on vertical pivots mounted on said step, the pivots being in the same vertical plane but to the rear of the front face of the step, coiled springs surrounding said pivot and engaging the aforesaid arms to swing them through an angle of substantially 180 degrees, projections extending downwardly from each arm the projections being of different lengths, resilient triggers mounted on said support and adapted to engage the projections to hold and release the same, leaf supporting clips adapted to slide on said arms, and transparent, vertical leaf supporting standards carried by said arms and adapted to lie beneath a sheet and turn the same, when the carrying arm is released from its trigger.

2. A music leaf turner comprising a base block having a rabbeted front face forming a step at its lower end, leaf carrying arms pivotally mounted on said block on vertical pivots, said pivots mounted on the step to the rear of its front face, springs carried by said pivots and acting on the arms to swing them through an angle of substantially 180 degrees, projections carried by said arms, resilient one piece triggers flexibly mounted in the base block and coacting with said projections to retain the arms in fixed positions and to release the same, a plurality of leaf holding clips slidably carried on the arms, and a plurality of transparent upstanding spaced apart standards pivoted at their lower ends to the arms and adapted to lie beneath a sheet and turn the same when its carrying arm is swung to the left.

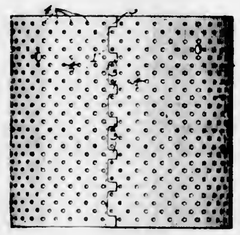
1,219,905. COMBINED UMBRELLA AND TENT. GEORGE WASHINGTON BARRINGER, Lawrence, N. Y. Filed May 15, 1916. Serial No. 97,596. (Cl. 135—2.)

1. In a device of the character described, a collapsible umbrella structure comprising a supporting pole, a plurality of rods extending from the upper end of said pole, a square covering member connected to said rods, the ends of said rods being adjacent the corners of said covering member, an upper set of bracing members for each of said rods, a sliding member connected with said upper set of bracing members, said sliding member being arranged on said pole, a pin connected with said pole for holding said sliding member in its raised position, a lower set of bracing members connected with each of said rods, said lower set of bracing members being formed in sections pivotally connected together, a stiffening member adapted to fit over the pivotal connection of said sections for holding the parts in alinement, a sliding member arranged on said pole connected to said lower bracing members, and means for locking said last mentioned sliding member in its operative position.



2. In a device of the character described, a collapsible umbrella structure comprising a supporting pole, a plurality of rods pivotally connected to the upper end of said pole, a covering for said rods, an upper bracing member for each of said rods, a sliding member arranged on said pole for said upper bracing members, means for locking said sliding member in its raised or operative position, a lower bracing member for each of said rods, said lower bracing members being formed in sections and pivotally connected together, means for holding said sections in alinement, and means for connecting said lower bracing members with said pole when in an operative position.

1,219,906. OIL-BURNER. HUBERT A. BARSCHOW, Kankakee, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Oct. 16, 1916. Serial No. 125,780. (Cl. 158—89.)

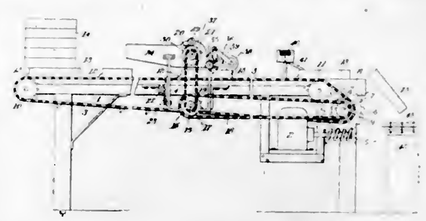


1. A perforated combustion tube formed from a strip of sheet metal one end of the strip being provided with a series of tongues which are overlapped upon and secured to the other end of the strip in the spaces between the perforations.

2. A perforated combustion tube formed from a strip of sheet metal, one end of the strip being cut away to form a series of tongues, the tongues being narrower than the distance between two successive vertically alined perforations and shorter than the distance between two successive horizontal alined perforations, said tongues being overlapped upon and secured to the other end of the strip in the spaces between the perforations.

1,219,907. CATALOGUE-LABELING MACHINE. STONEWALL J. BEAUCHAMP, Little Rock, Ark. Filed July 31, 1916. Serial No. 112,259. (Cl. 216—9.)

1. In a machine of the character described, the combination with a table, of a conveyer mounted thereon, a vertically adjustable frame, a rack on the side of said frame, a gear mounted on the table and meshing with said rack for moving the frame vertically with respect to the table, and label pasting mechanism carried by said frame.



2. In a machine of the character described, the combination with a conveyer for catalogues, of means arranged above the path traveled by the catalogues on the conveyer for feeding labels to said catalogues as they pass below said feeding means, means for applying paste to the labels before they reach the feeding mechanism, and an apron for guiding the labels from the paste applying means to the feed mechanism, extending from the paste applying means to the feed mechanism, said apron having sharp grooves in its upper surface for the purpose specified.

3. In a machine of the character described, the combination with a conveyer for catalogues, of means arranged above the path traveled by the catalogues on the conveyer for feeding labels to said catalogues as they pass below said feeding means, means for applying paste to the labels before they reach the feeding mechanism, an apron for guiding the labels from the paste applying means to the feed mechanism, extending from the paste applying means to the feed mechanism, said apron having sharp grooves in its upper surface for the purpose specified, and a roller for pressing the labels onto the catalogues after they pass below said feeding mechanism.

4. In a machine of the character described, the combination with a conveyer for catalogues, of a frame vertically adjustable with respect to said conveyer, a paste box carried by said frame, a paste applying roller arranged in said box and having its upper face flush with the top thereof, a presser roll coöperating with the paste applying roller, feeding rollers also mounted on the frame just above the path traveled by the catalogues on the conveyer, an apron for guiding the labels from the paste applying rollers to the feeding rollers, and means for driving all of said rollers in any adjustment of the frame.

5. In a machine of the character described, the combination with a conveyer for catalogues, of means for pasting labels on said catalogues as they are moved along by the conveyer, and means actuated by the catalogue as it is moved along for automatically counting said catalogues before they leave the conveyer.

[Claims 6 and 7 not printed in the Gazette.]

1,219,908. UNIVERSAL FLUSH RECEPTACLE AND PLUG. TONJES AUGUST CARL BOTH, Malden, Mass., assignor to the Zee Socket and Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 17, 1912. Serial No. 720,845. (Cl. 173—331.)

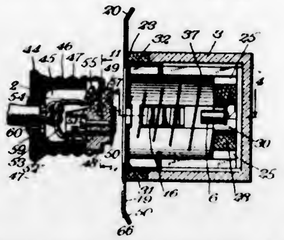
1. An article of manufacture for a flush receptacle comprising a door or shield provided with integral arms, each arm having two reduced portions and two enlarged portions.

2. In a universal flush receptacle, the combination of a base, and electrical connections carried by the base adapted to receive and coöperate with screw threaded plugs of different diameters or screw threads of different pitch, and a screw threaded plug to coöperate with the electrical connections in the receptacle.

3. In a flush receptacle, the combination of a base provided with an opening and with a yielding electrical side

contact and a center contact, a housing, and a sliding door or shield mounted in the housing.

4. In a flush receptacle, the combination of a base provided with an opening and with a yielding electrical side contact, a face plate, a housing, means to secure the housing to the face plate, a door or shield mounted in the housing, and means to normally cause the door or shield to close the opening in the housing.



5. In a flush receptacle, the combination of a base provided with an opening and with a yielding electrical side contact, a face plate, an insulating housing, means to secure the housing to the face plate, a sliding door or shield mounted in the housing, and means to normally cause the door or shield to close the opening in the insulating housing.

[Claims 6 and 7 not printed in the Gazette.]

1,219,909. IDENTIFICATION-TAG. EDWIN L. BROCKWAY, Glenside, Pa. Filed Mar. 13, 1916. Serial No. 83,904. (Cl. 40—10.)



1. A tag of the class described embracing a substantially dish-shaped frame having a closed back and an open face, a designating card, a transparent shield, a washer of pliable material and a ring-like facing within said frame, the marginal portions of said frame being clenched over said facing to clamp the parts together.

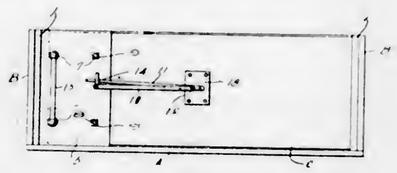
2. A tag of the class described embracing a substantially dish-shaped frame having a closed back and an open face, said back having an annular groove therein, a designating card, a transparent shield, a washer of pliable material and a ring-like facing within said frame, the marginal portions of said frame being clenched over the facing to clamp the parts together, and to force portions of said card, shield and washer within said groove.

3. A tag of the class described embracing a substantially dish-shaped frame having a closed back and an open face, said back having an annular groove therein, a designating card, a transparent shield, a washer of pliable material, a rigid ring, and a ring-like facing within the frame, the marginal portions of said frame being clenched over the facing to clamp the parts together and to force portions of at least some of said parts within said groove.

4. A tag of the class described embracing parts of dirt proof, moisture proof and fire resisting properties, said parts consisting of a substantially dish-shaped frame having a closed back having an annular groove therein and a transparent face, and a designation card within the frame, portions of said card and face being interlocked with respect to the back to form a tight joint, the marginal portions of said frame being turned over upon said face for maintaining such joint in fixed position.

5. A tag of the class described embracing parts of dirt proof, moisture proof and fire resisting properties, said parts consisting of a substantially dish-shaped frame having at least one transparent face and an annular groove and a designation card within the frame, portions of said card and face being interlocked with respect to the grooved part of the frame to form a tight joint, the marginal portions of the frame being turned over upon a face for maintaining such joint in fixed position.

1,219,910. WAGON END-GATE. WILLIAM BRUBAKER, Tolna, N. D. Filed Dec. 7, 1915. Serial No. 65,550. (Cl. 21—21.)



1. An end gate comprising a relatively stationary and a relatively movable member, the latter member being of hollow rectangular formation and slidably mounted upon one end of the stationary member, a lever pivoted at one end upon said stationary member, a rod pivoted at one end to the movable member and at its opposite end to the said lever near the pivot of the latter, and a hook carried by the movable member for the reception of the free end of the lever when the latter is swung to move the movable member outwardly on the stationary member.

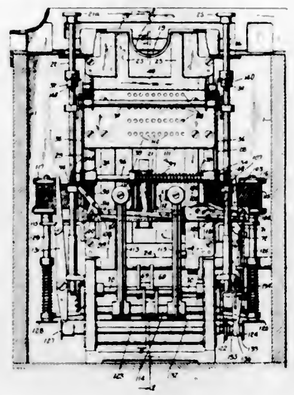
2. An end gate comprising a relatively stationary and a relatively movable member, the said stationary member having slots therein, said movable member being of hollow rectangular formation and slidably mounted upon one end of the stationary member, bolts extending through the sides of the movable member and received by the slots in the stationary member, a handle secured to certain of the bolts, a lever pivoted at one end to the stationary member and at its opposite end to the movable member, a hook carried by the latter member for the reception of the free end of the lever when the lever is swung to move said movable member on the stationary member.

1,219,911. RAILWAY-TIE. JOHN BRUNNER, Napoleon, Ind. Filed May 12, 1915. Serial No. 27,579. (Cl. 238—5.)



A rectangular hollow cross tie having a rectangular recess in its upper face, integral rail engaging lugs oppositely disposed on the ends of the cross tie and terminating at the ends of the recesses, sliding locking members mounted in the recesses and having their outer ends projected beneath the rail engaging lugs and in contact with the under face of the top wall of the head and their inner ends overlapping, said inner ends of the locking members having connecting recesses formed in their upper faces, lugs projecting upwardly from said locking members through these recesses, a plate seated within the last mentioned recesses and conforming to the shape thereof and having openings therein through which lugs extend, and locking members passing through the lugs and engaging the upperside of the plate, as for the purpose set forth.

1,219,912. TIME-RECORDER. JAMES WARES BRYCE, Bloomfield, N. J., assignor to International Time Recording Company of New York, Endicott, N. Y., a Corporation of New York. Filed Mar. 17, 1914. Serial No. 825,210. (Cl. 234—43.)



1. In a time recorder adapted to operate upon removable cards, the combination with a card chute of a movable card holder for receiving a card and removing it through the chute beyond the control of the operator to its marking position and means for actuating said holder, requiring during its operation the constant use and application of one of the operator's hands, and card marking mechanism operative while the card is in such position and requiring the use of the operator's other hand.

2. In a time recorder adapted to operate upon removable cards, the combination with recording mechanism of a chute for the cards, a movable card holder for receiving and moving a card through the chute out of the control of the operator and into coöperative relation with the recording mechanism, and means operated by the recording mechanism for adjusting the card with respect to said holder into exact register with the said recording mechanism prior to each operation of the same.

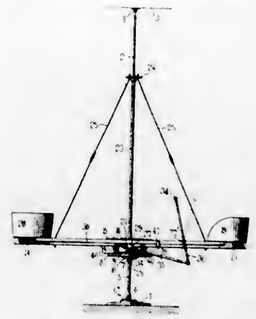
3. In a time recorder adapted to operate upon a removable card, the combination with suitable time recording mechanism of a card chute and a movable holder for receiving a card, mechanism for moving the said holder so that the card is removed through the chute into the machine beyond the reach or control of the operator into proper position for coöperating with the recording mechanism and registering devices connected with the card holder and operated by the power applied to the recording mechanism for adjusting, prior to each operation upon a card, the said card with reference to its holder into exact relationship with the recording mechanism.

4. In a time recorder adapted to operate upon removable cards, the combination with suitable time recording mechanism of a card chute for receiving the cards, a movable holder for receiving the cards and removing them through the chute and beyond the control of the operator into approximate position for coöperating with the recording mechanism, and registering devices adapted to encompass the cards loosely, and then to engage and move them relatively to the holder into exact relation with the recording mechanism.

5. In a time recorder, the combination with the operative mechanism for positioning a card requiring during its operation the constant use of one of the operator's hands and for marking the card when in position, requiring for its operation the use of the operator's other hand, of a crank or handle for imparting movement to said marking mechanism, a means for releasing the same, and a card holder for receiving and removing a card into the machine into recording position and beyond the control of the operator.

[Claims 6 to 34 not printed in the Gazette.]

1,219,913. CAROUSEL. JACOB BUFF, Union Hill, N. J. Filed Nov. 10, 1915. Serial No. 60,717. (Cl. 46—27.)

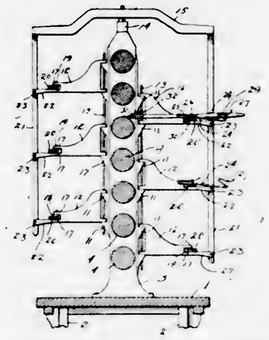


1. Apparatus of the class described comprising a pivotal support, a seat carrying frame rotatably mounted thereon, mechanism for rotating the frame, a rest plate mounted below said frame, and rollers depending from the frame and spaced slightly from the rest plate for limiting the movement of the former toward the latter.

2. Apparatus of the class described comprising a pivotal support, a seat carrying frame rotatably mounted thereon, a gear fitted on said support, a shaft loosely journaled in said frame to permit lateral movement and carrying a pinion meshed with said gear, and mechanism for rotating the shaft.

3. Apparatus of the class described comprising a pivotal support, a seat carrying frame rotatably mounted thereon, a gear fitted on said support, a pinion meshed with said gear, a shaft engaging said pinion for rotating it, and a bearing for said shaft located in the frame adjacent said gear and provided with a yielding cap to permit local lateral movement of the shaft.

1,219,914. RAZOR-BLADE SHARPENER. FILLMORE BUSHEY, St. Albans, Vt. Filed Sept. 13, 1915. Serial No. 50,460. (Cl. 51—16.)



1. In a razor sharpening machine, the combination with a plurality of sharpening rolls arranged in superposed relation, of means for supporting a plurality of razor blades in contact with said rolls, means for moving the blades alternately into contact with the adjacent rolls, means for moving the blades longitudinally of the rolls and common means for actuating the two last mentioned means.

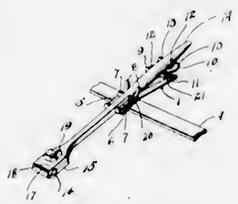
2. In a razor sharpening machine, the combination with a plurality of sharpening rolls arranged in superposed relation, of means for supporting a plurality of razor blades so that they will extend between the rolls, means for shifting the blades alternately into contact with the adjacent upper and lower rolls and means for moving the blades longitudinally of the rolls while they are in contact therewith.

3. In a razor sharpening machine, the combination with a base, of a pair of standards extending upwardly therefrom, horizontally arranged sharpening rolls mounted between said standards in superposed spaced relation, horizontally movable arms mounted on said standards, bars connecting said arms, said bars being mounted on horizontal pivots, means on the bars for supporting a plurality of razor blades in contact with the said rolls, means for moving the arms pivotally and means for simultaneously moving the bars pivotally.

4. In a razor sharpening machine, the combination with a pair of standards, of sharpening rolls mounted therebetween, arms pivotally mounted on the standards and adapted to swing in horizontal planes, bars rotatably mounted on the arms and adapted to swing in vertical planes at right angles to the planes in which the arms swing; clamping members mounted upon the said bars and razor blade holders detachably mounted on said clamping members.

5. In a razor blade sharpener, the combination with a pair of standards having sharpening rolls mounted thereon, of a frame mounted upon said standards, blade holders mounted upon said frame, means for moving the frame in a horizontal plane and means for simultaneously moving the blade holders in vertical planes at right angles to the planes of movement of the frame.

1,219,915. RAZOR-BLADE HOLDER. FILLMORE BUSHEY, St. Albans, Vt. Original application filed Sept. 13, 1915, Serial No. 50,460. Divided and this application filed Aug. 2, 1916. Serial No. 112,779. (Cl. 51—16.)



1. A razor blade support comprising a clamping member including a pair of spaced resilient legs at one end, a second pair of spaced resilient legs at the other end, a blade holder including a shank mounted on the clamping member and located between and removably engaging the members of each pair of legs and means for securing a blade in said holder, said blade holder being held in operative position when the shank is resiliently engaged by said legs.

2. In a razor-blade support, the combination with a clamping member including a body portion having spaced resilient legs on each end thereof, of a blade holder having pairs of pins removably engaged by said legs.

3. In a razor blade support, the combination with a clamping member including an angular body portion having pairs of spaced legs on the ends thereof, of a blade holder removably mounted on said clamping member and having a shank extending between the legs thereof, and pins on said shank engaged by the said legs in such manner that the relative movement of the holder and the clamping member will be prevented.

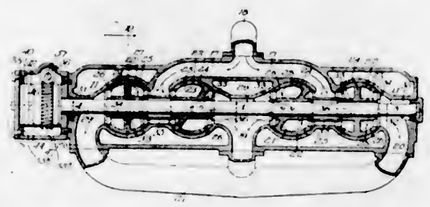
1,219,916. CAP-BUTTON. LEONARD R. CARLEY, Waterbury, Conn. Filed June 10, 1914. Serial No. 844,118. (Cl. 24—96.)

A button comprising a circular cap, a circular fastening plate comprising a disk having integral pointed prongs projecting therefrom, the prongs being joined to the disk adjacent the edges thereof, said disk including a diametrically extending web projecting across the center of said plate and terminating adjacent the opposite edges of the



disk, and having openings arranged on either side of said web, said prongs fitting within said openings and compressing the material to which the button is secured against the sides of said diametric web.

1,219,917. INTERNAL-COMBUSTION ENGINE. MILFORD G. CHANDLER, Chicago, Ill., assignor to Chandler Engine Valve Company, Chicago, Ill., a Corporation of Illinois. Filed May 27, 1914. Serial No. 841,262. (Cl. 123—59.)



1. In an internal combustion engine, the combination with its cylinder, of a valve-casing having a spherical inner surface opening into said cylinder through a single port, a spherical valve in said casing for controlling said port containing non-communicating chambers opening through the opposite ends, respectively, of the valve and each containing a port in the periphery of the valve for alternate registration with said cylinder port when the valve is actuated, a shaft, means splining the valve to said shaft permitting longitudinal movement of said valve on said shaft, and means for rotating said shaft.

2. In an internal-combustion engine, the combination with its cylinder, of a valve-casing communicating with said cylinder and having alined bearings, said casing being formed of sections one of which is removable relative to said bearings and is interposed between the latter, the joint between said sections extending lengthwise of the casing, inlet and exhaust pipes communicating with said casing, a rotatable valve in said casing for alternately opening the inlet and exhaust pipes to said cylinder, a shaft releasably connected with said valve and removable, when disconnected from said valve, by drawing it lengthwise through said bearings, and means for actuating said shaft.

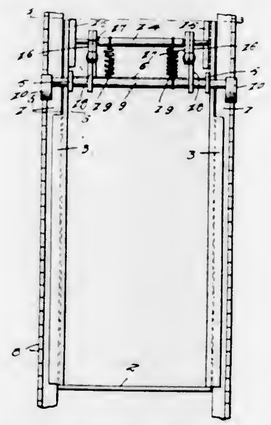
3. In a multiple-cylinder internal-combustion engine, the combination of a plurality of alined valve-casings communicating respectively with the cylinders of the engine and open at their ends, said valve-casings having alined bearings and being formed of sections certain of which are removable relative to said bearings and are interposed between the latter, inlet and exhaust pipes communicating with the interior of said casings, rotatable valves in said casings for alternately opening the inlet and exhaust pipes to said cylinders, a shaft releasably connected with said valves and removable, when disconnected from said valves, by sliding it lengthwise through the said bearings, and means for actuating said shaft.

4. In a multiple-cylinder internal-combustion engine, the combination of a plurality of alined ported valve-casings for the cylinders having alined bearings, said casings being formed of sections certain of which are removable relative to said bearings and are interposed between the latter, the joints between said sections extending lengthwise of the casings, rotatable valves in said casings for controlling the ports therein, a shaft extending through said casings and carrying said valves, said shaft being withdrawable from said valves and casings through the ends of said casings by withdrawing it lengthwise through said bearings, and means for actuating said shaft.

5. In a multiple-cylinder internal-combustion engine, the combination of a plurality of alined ported valve-casings for the cylinders having alined bearings, said casings being formed of sections certain of which are removable relative to said bearings and are interposed between the latter, the joints between said sections extending lengthwise of the casings, rotatable valves in said casings for controlling the ports therein, a shaft extending through said casings and on which said valves are splined, said shaft being withdrawable from said valves and casings through the ends of said casings by withdrawing it lengthwise through said bearings, and means for actuating said shaft.

[Claims 6 to 18 not printed in the Gazette.]

1,219,918. SAFETY DEVICE FOR MINE-ELEVATOR CAGES. GEORGE COATES, Victor, Colo., assignor of one-eighth to Richard W. Coates and one-eighth to John S. Walker, Victor, Colo. Filed Sept. 1, 1916. Serial No. 118,063. (Cl. 187—83.)

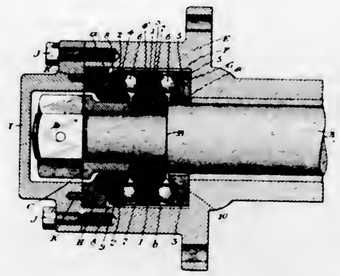


In safety brake mechanism for an elevator, the combination with the elevator car and the car guides, of a pair of guides mounted on the car, a vertically movable rod mounted in the guides on the car and adapted to have connection with the hoisting cable and to descend upon breaking of the cable, a pair of shafts journaled on the car, links connected to the movable rod, arms carried by the shafts and having connection with the links so as to effect rotation of the shafts in one direction when the rod descends, springs connecting the shafts to the rod and adapted to normally exert a downward pull on the rod, and means carried by the shafts and adapted to engage the car guides when the shafts are rotated in the mentioned direction so as to arrest movement of the car.

1,219,919. BALL-BEARING. FRANCIS A. COLLINS, Jr., Rochester, N. Y., assignor to Auburn Ball Bearing Company, Rochester, N. Y., a Corporation of New York. Filed June 11, 1915. Serial No. 33,452. (Cl. 64—49.)

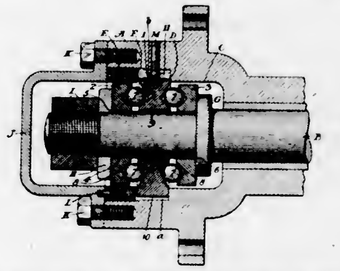
1. An end thrust ball bearing for rotary shafts, comprising an intermediate annular race member, an annular end race member disposed at either side thereof, antifriction balls between said race members, and an external sheet-metal sleeve serving to bind the three race members together to make a unit of the same, the intermediate race member projecting into closer proximity with the axis of the bearing than the end race members to permit it to be secured to the shaft.

2. An end thrust ball bearing for rotary shafts, comprising an intermediate annular race member, an annular end race member disposed at either side thereof, antifriction balls between said race members, and an external sheet-metal sleeve serving to bind the three race members together to make a unit of the same, the intermediate race member being designed to be secured at its hub portion to the rotatable shaft.



3. An end thrust ball bearing for rotary shafts, comprising an intermediate annular race member, an annular end race member disposed at either side thereof, antifriction balls between said race members, and an external sleeve secured to one of the end race members and projecting over but loose from the other two race members, said sleeve serving to bind the three race members together into a unit, the intermediate race member being adapted to be secured at its hub-portion to the rotary shaft.

1,219,920. BALL-BEARING. FRANCIS A. COLLINS, Jr., Rochester, N. Y., assignor to Auburn Ball Bearing Company, Rochester, N. Y., a Corporation of New York. Filed June 11, 1915. Serial No. 33,453. (Cl. 64—49.)



1. An end thrust ball bearing comprising annular end race members, an annular intermediate race member, antifriction balls between said end and intermediate race members, and means for securing the race members together as a unit, said intermediate race member being permitted to move radially.

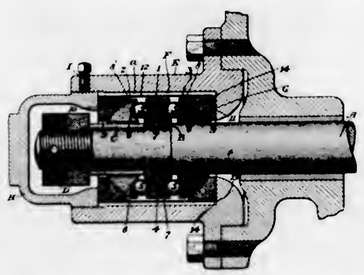
2. An end thrust ball bearing comprising annular end race members, an annular intermediate race member, and anti-friction balls between said end and intermediate race members, said intermediate race member being provided with means whereby it may be held against rotation but permitted to move radially.

3. An end thrust ball bearing comprising annular end race members, an annular intermediate race member, and anti-friction balls between said end and intermediate race members, said intermediate race member being capable of radial movement, and means for holding the same against rotary movement.

4. An end thrust ball bearing, comprising an annular intermediate race member, an annular end race member

disposed at either side thereof, anti-friction balls between said race members, and an internal sleeve passing through the central openings of the three race members and serving to bind the same together into a unit, the intermediate race member projecting radially beyond the outer surfaces of the end race members to permit it to be braced against axial movements, said radially projecting portion of the intermediate race member being provided with means whereby it may be held against rotation but permitted to move radially.

1,219,921. BALL-BEARING. FRANCIS A. COLLINS, Jr., Rochester, N. Y., assignor to Auburn Ball Bearing Company, Rochester, N. Y., a Corporation of New York. Filed June 11, 1915. Serial No. 33,454. (Cl. 64—49.)



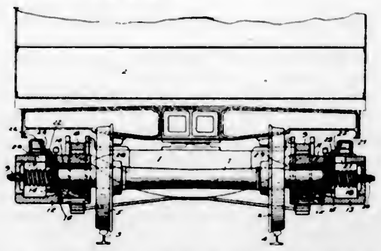
1. An end thrust ball bearing, comprising an annular intermediate race member, an annular end race member disposed at either side thereof, each of said end race members having a spherical surface, an annular element disposed adjacent each of the end race members, said annular elements being non-contiguous and each having a seat for engagement by said spherical surface of the adjacent end race member, anti-friction balls disposed between said race members, and an external sheet-metal sleeve telescoped over said annular elements and serving to bind all of the elements of the bearing into a unit.

2. An end thrust ball bearing, comprising an annular intermediate race member, an annular end race member disposed at either side thereof, each of said end race members having a spherical surface, an annular element disposed adjacent each of the end race members and having a seat for engagement by said spherical surface of the adjacent end race members, anti-friction balls disposed between said race members, and an external sheet-metal sleeve serving to bind all of the elements of the bearing into a unit, the intermediate race member projecting radially toward the axis of the bearing farther than the other elements of the bearing to provide means for securing said intermediate race member to a shaft.

3. An end thrust ball bearing, comprising an annular intermediate race member, an annular end race member disposed at either side thereof, each of said end race members having a spherical surface, an annular washer disposed adjacent each of the end race members, said annular washers being non-contiguous and each having a spherical seat for engagement by said spherical surface of the adjacent end race member, anti-friction balls disposed between said race members, and an external sheet-metal sleeve telescoped over said annular washers serving to bind all of the elements of the bearing into a unit.

1,219,922. APPARATUS FOR DETERMINING FLANGE-PRESSURES. THOMAS R. COOK and CHARLES L. FISCHER, Pittsburgh, Pa. Filed July 20, 1914. Serial No. 852,119. (Cl. 73—15.)

1. The combination with an axle provided with a pair of flanged wheels, a truck carried by the axle and mounted for lateral movement with respect thereto, yielding means for restraining such movement, and means for indicating the pressure exerted by the truck as it moves laterally with respect to the axle.



2. The combination with an axle provided with a pair of flanged wheels, a truck carried by the axle and mounted for lateral movement with respect to one of the wheels, yielding means for resisting such movement, and means for indicating the pressure exerted by the truck in its tendency to move laterally.

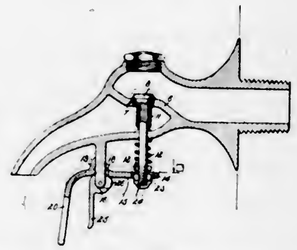
3. The combination with an axle provided with a pair of flanged wheels, a truck carried by the axle and mounted for lateral movement with respect to one of the wheels, yielding means for resisting such movement, and an indicator for showing the extent of such lateral movement against the resistance of the said yielding means.

4. The combination with an axle provided with a pair of flanged wheels, a truck carried by the axle and mounted for lateral movement with respect thereto, yielding means for restraining such movement in both directions, and indicating means for showing the extent of the lateral movement in both directions.

5. The combination with an axle provided with a pair of flanged wheels, a truck carried by the axle, a bearing box carried by the truck and mounted on the axle for lateral movement, yielding means tending to prevent relative lateral movement of the box and axle, and means for indicating the extent of such movement.

[Claims 6 and 7 not printed in the Gazette.]

1,219,923. AUTOMATIC FAUCET. THOMAS COONAN, Champlain, N. Y. Filed June 21, 1916. Serial No. 104,958. (Cl. 137—4.)

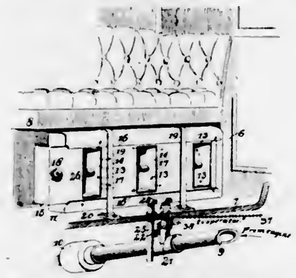


1. In a faucet of the class described, a faucet body having a valve seat, a valve engaging the seat and having a stem passing through the body of the faucet, an operating lever engaging the valve stem and shaped to be engaged by a vessel brought under the faucet, a cam on which the lever is fulcrumed, and a spring for maintaining the valve on the seat, said cam and lever having cooperating means for displacing said lever bodily when said cam is operated, whereby the valve may be raised and maintained on its seat.

2. In a faucet of the class described, a faucet body having a valve seat, a valve having a stem projecting through the faucet body, a spring for maintaining the valve on its seat, an extension from the valve body, a cam pivotally mounted on said extension, an operating lever fulcrumed on the cam and engaging the stem, said operating lever being shaped to be engaged by a vessel brought under the faucet whereby by the pressure of the vessel on the operating lever the valve is caused to move from its seat, and a lip on said lever engaging the extension, said lip adapted to cause a bodily movement to said lever when said cam is operated, substantially as and for the purpose set forth.

3. In a faucet of the class described, a faucet body having a valve seat, a valve having a stem projecting through the faucet body, a spring engaging the stem for maintaining the valve on the seat, an extension from the faucet body, an operating lever having an opening through which said extension projects, a cam pivotally mounted on the extension to support said lever on the extension, said operating lever having a slot at one end through which the valve stem projects, means for coupling the lever to the valve stem, the other end of said lever being shaped to be engaged by a vessel brought under the faucet, and a lip at the opening of the lever bearing on the extension, the engagement of the lip with the extension causing the lever to move bodily when the came is moved on its pivot, substantially as and for the purpose set forth.

1,219,924. AUTOMOBILE-HEATER. THOMAS CHARLES CROUCH, Saskatoon, Saskatchewan, Canada. Filed Sept. 15, 1916. Serial No. 120,241. (Cl. 237—21.)



1. A vehicle heater comprising a casing, supporting means for the casing embodying hinged joints to admit of the casing having a swinging movement and a heat circulating pipe embodying a fixed portion and a portion housed within the casing, the two portions of the heat circulating pipe being connected by means of universal couplings to admit of swinging movements of the heater.

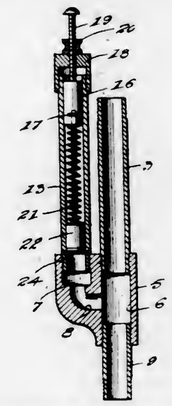
2. In a vehicle, the combination of a heater casing, a heat retaining lining in said casing and having a plurality of spaced heat outlet chambers, means leading from the exhaust pipe of the engine and surrounding said chambers for circulating the burnt gases from the exhaust pipe through said heater casing and adjustable means for regulating the size of the outlet openings of said chambers.

3. In a vehicle, the combination of a heater casing, a heat retaining lining in said casing and having a plurality of spaced heat outlet chambers, means leading from the exhaust pipe of the engine and surrounding said chambers for circulating the burnt gases from the exhaust pipe through said heater casing, adjustable means for regulating the size of the outlet openings of said chambers, and valves in the exhaust pipe of the engine and said circulating means and operated to permit of the passage of the burnt gases through the latter means.

4. In a vehicle, the combination of a heater casing, a heat retaining lining in said casing and having a plurality of spaced heat outlet chambers, means leading from the exhaust pipe of the engine and surrounding said chambers for circulating the burnt gases from the exhaust pipe through said heater casing, adjustable means for regulating the size of the outlet openings of said chambers, valves in the exhaust pipe of the engine and said circulating means and operated to permit of the passage of the burnt gases through the latter means, and means for pivotally mounting said heater casing upon the floor of the vehicle whereby the same may be adjusted to vertical and horizontal positions.

5. In a vehicle, the combination of a heater casing, a heat retaining lining in said casing and having a plurality of spaced heat outlet chambers, means leading from the exhaust pipe of the engine and surrounding said chambers for circulating the burnt gases from the exhaust pipe through said heater casing, adjustable means for regulating the size of the outlet openings of said chambers, valves in said exhaust pipe and said circulating means for controlling the passage of the burnt gases through said latter means, the valve in said exhaust pipe being normally opened, while the valve in said circulating means is normally closed, and means for simultaneously operating said valves to close the exhaust pipe and to permit of the entrance of the exhaust gases into said circulating means.

1,219,925. AUTOMATIC VALVE FOR INFLATING TIRES. FRANKLIN A. DEAN and WILLIAM H. LITTLE, Alta Vista, Kans. Filed Nov. 30, 1914. Serial No. 874,819. (Cl. 137—28.)

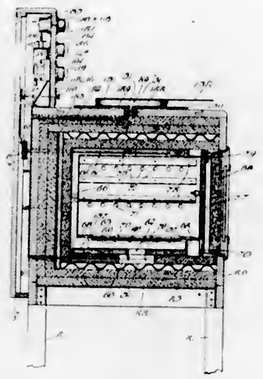


A device for regulating the pressure in pneumatic bodies comprising a union having a pair of vertically extending parallel bores therein and a transversely extending bore connecting said parallel bores, a pipe connected to one of the parallel bores and adapted to be arranged in communication with an air supply, a second pipe connected to the other end of the mentioned bore and adapted to be communicated with an insulating valve, a gage structure operatively connected to the other of said parallel bores and including a vertical tube having an escape opening adjacent its lower end and a centrally located longitudinally extending slot in the wall thereof, the upper end of the vertical tube being disposed above the upper end of the first-mentioned pipe, a piston located within the tube and disposed below the slot and operable across the opening, a plug slidably mounted within the tube, an indicator carried by the plug and extending through the longitudinal slot in the tube, a spring interposed between the plug and the piston for returning the piston to normal position after the same has been operated, and means adjustable through the upper end of the tube and against the plug and adapted when moved in one direction to move the plug inwardly and against the tension of the spring, for the purpose specified.

1,219,926. ELECTRIC COOKING APPARATUS. FOREST V. DETWILER, Chicago, Ill. Filed June 29, 1912. Serial No. 706,581. (Cl. 219—35.)

1. In a device of the character described, the combination of an electrical resistance, a circuit in which the

resistance is included, a make and break device included in the circuit and embodying a rotatable support, a contact of some length secured thereto, said contact projecting from the support a varying distance lengthwise of the contact, a contact member movable into and out of engagement with the contact, thermostatic means for controlling the movement of the contact member, and means for rotating the support.



2. In a device of the character described, the combination of an electrical resistance, a circuit in which the resistance is included, a make and break device included in the circuit, and embodying a rotatable support, a contact of some length secured thereto, said contact projecting from the support a varying distance lengthwise of the contact, a contact member movable into and out of engagement with the contact, thermostatic means for controlling the movement of the contact member; means for rotating the support for presenting a different portion of the contact to the contact member, and indicating means for indicating the position of the said contact.

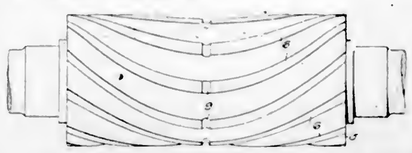
3. In a device of the character described, the combination of an electrical resistance, a circuit in which the resistance is included, a make and break device included in the circuit and embodying a rotatable support, a contact of some length carried by the support, said contact projecting a varying distance from the support lengthwise of the contact, and a contact member movable into and out of engagement with the contact, thermostatic means for moving the said contact member, and means for moving the support to vary the position of the contact relatively to the contact member and for also moving the contact out of engaging relation to the contact member.

4. In a device of the character described, the combination of an electrical resistance, a circuit in which the resistance is included, a make and break device included in the circuit and embodying a movable support, a contact of some length carried by the support, said contact projecting a varying distance from the support throughout the length of the contact, and a contact member movable into and out of engagement with the contact, thermostatic means for moving the said contact member, means for moving the support to vary the position of the contact relatively to the contact member and for also moving the contact out of engaging relation to the contact member, and indicating means for indicating the position of the said contact.

5. In a device of the class described, the combination of an electrical resistance, a circuit in which the resistance is included, a make and break device in the circuit, a branch circuit, a make and break device in the branch circuit, said make and break devices being insulated from each other and connected for simultaneous operation, and operating one to open when the other closes the respective circuits and means for operating the devices.

[Claims 6 to 36 not printed in the Gazette.]

1,219,927. CRUSHING-ROLL. LAURENT G. G. DIBBETS, The Hague, Netherlands. Filed Feb. 2, 1916. Serial No. 75,700. (Cl. 100—47.)



1. A roll of the class described having longitudinally arched teeth, the curves forming the arches being such that the thickness of the tooth in the central part of the arch is greater than at the ends thereof.

2. A crushing mill comprising meshing rolls each having teeth arched through the length, the curves forming the arched side of each tooth being that of a parabola with the axes thereof substantially in the transverse central plane of the roller.

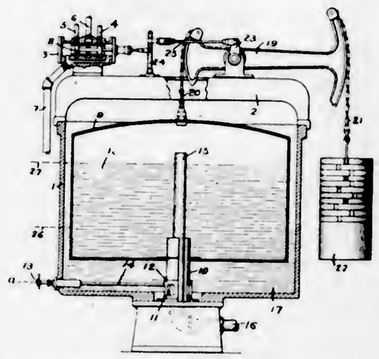
3. A crushing mill comprising meshing rolls each having longitudinally arched teeth pitched toward the direction of rotation of the roll.

4. The crushing mill comprising meshing rolls each having longitudinally arched teeth, the attacking sides of said teeth receding from a radial plane drawn through the attacking edge of the teeth.

5. A crushing mill comprising meshing rolls each having teeth pitched in the direction of the roll's rotation, the sides of the teeth being arched through the length of the roll, the curvature of the sides of each tooth being that of a parabola, the axis of which is normal to the elements of the roll.

[Claim 6 not printed in the Gazette.]

1,219,928. FLUID-PRESSURE GOVERNOR. RALPH C. ENYART, Connersville, Ind., assignor to The P. H. & F. M. Roots Company, Connersville, Ind. Filed Aug. 21, 1916. Serial No. 116,160. (Cl. 103—93.)



1. A fluid pressure governor comprising, a tank, a hollow float disposed within the tank, adjustable counterbalancing mechanism connected with the float, controlling means adapted for operative connection with devices for controlling the speed of a pump, connections between such controlling means and the float, a hollow standard fixed in the base of the tank and having a sliding fit in a guiding aperture in the base of the float and provided at its base with an opening to permit water to pass between the tank and the interior of the float while the float is stationary or moving, and a pipe extending axially through the standard and leading from the upper portion of the float and to the exterior of the float and adapted for connection with a main, combined substantially as set forth.

2. A fluid pressure governor comprising, a tank, a float disposed within the tank, adjustable counterbalancing mechanism connected with the float, controlling means adapted for operative connection with devices for controlling the speed of a pump, connections between such controlling means and the float, a conduit leading from the base of the tank to the base of the float and adapted to permit water to pass between the interior of the float and the tank while the float is stationary or moving, a valve in said conduit to control the flow of water between the tank and float, means for adjusting said valve from the exterior of the tank, and a conduit leading from the upper portion of the float and to the exterior of the float, and adapted for connection with a main, combined substantially as set forth.

3. A fluid pressure governor comprising, a tank, a float disposed within the tank, adjustable counterbalancing mechanism connected with the float, controlling means adapted for operative connection with devices for controlling the speed of a pump, connections between such controlling means and the float, a hollow standard secured at the floor of the tank and having sliding engagement with the floor of the float, a ported sleeve-valve surrounding the base of the standard and coöperating with ports in the base of the standard, means for angularly adjusting the sleeve-valve from the exterior of the tank, and a conduit leading from the upper portion of the float and to the exterior of the float and adapted for connection with a main, combined substantially as set forth.

4. A fluid pressure governor comprising, a tank, a float disposed within the tank, adjustable counterbalancing mechanism connected with the float, controlling means adapted for operative connection with devices for controlling the speed of a pump, connections between such controlling means and the float, a hollow standard secured at the floor of the tank and having sliding engagement with the floor of the float, a ported sleeve-valve surrounding the base of the standard and coöperating with ports in the base of the standard, a screw disposed within the tank and rotatable from outside the tank, a link connecting said screw with the sleeve-valve, and a conduit leading from the upper portion of the float and to the exterior of the float and adapted for connection with a main, combined substantially as set forth.

5. A fluid pressure governor comprising, a tank, a float disposed within the tank, adjustable counterbalancing mechanism connected with the float, controlling means adapted for operative connection with devices for controlling the speed of a pump, connections between such controlling means and the float, a hollow standard secured at the floor of the tank and having sliding engagement with the floor of the float, a ported sleeve-valve surrounding the base of the standard and coöperating with ports in the base of the standard, means for angularly adjusting the sleeve-valve from the exterior of the tank, and a conduit leading from the upper portion of the float down through the interior of the hollow standard and projecting to the exterior of the tank and adapted for connection with a main, combined substantially as set forth.

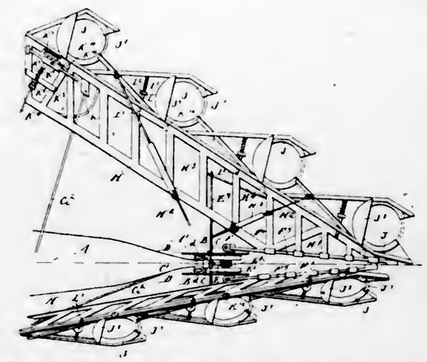
[Claims 6 and 7 not printed in the Gazette.]

1,219,929. MINE-CATCHER AND SHIP-PROTECTER. MICHEL FELLER, New York, N. Y. Filed Aug. 4, 1916. Serial No. 113,083. (Cl. 114—240.)

1. A pair of frames mounted on the vessel at the bow thereof and extending in advance of such bow, means for raising or lowering said frames, and means for varying the angularity of said frames relatively to each other and to such vessel, and a series of grasping devices mounted on said frames and adapted to grasp obstructions in the path of such vessel.

2. In an apparatus of the character set forth, a grasping device carried by the vessel and adapted to receive an obstruction in the path of such vessel, means actuated by contact with such obstruction for automatically closing said grasping device and holding such obstruction therein, and signaling means automatically actuated by such closing movement for indicating such closure.

3. In an apparatus of the character set forth, a pair of frames carried by the vessel, a series of open grasping devices carried by said frames, and bolts for closing said grasping devices.

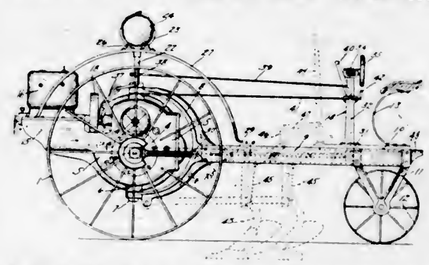


4. In an apparatus of the character set forth, a pair of frames carried by the vessel, a series of open grasping devices carried by said frames, bolts for closing said grasping devices, and means for actuating said bolts automatically by contact of said grasping devices with obstructions received therein.

5. In an apparatus of the character set forth, a pair of frames carried by the vessel, a series of grasping devices carried by said frames, each comprising an open hollow ring, a bolt in said ring for closing the latter, and means actuated by contact with an obstruction received in said ring for operating said bolt.

[Claims 6 to 12 not printed in the Gazette.]

1,219,930. TRACTOR. EDWARD FERRISS, Minneapolis, Minn., assignor to Minnesota Farm Tractor Company, Minneapolis, Minn., a Corporation of South Dakota. Filed Dec. 20, 1915. Serial No. 67,706. (Cl. 21—114.)



1. In a tractor, the combination with laterally spaced wheels and an axle therefor, of a closed gear housing carried by said axle, said housing constituting the main frame element, a reach having a forked end embracing the upper and lower portions of said housing and pivotally connected thereto, and a wheel supporting the rear end of said reach.

2. In a tractor, the combination with laterally spaced wheels and an axle therefor, of a closed gear housing carried by said axle, said housing constituting the main frame element, a reach having a forked end embracing the upper and lower portions of said housing and pivotally connected thereto, a wheel supporting the rear end of said reach, and steering connections between said reach and housing for oscillating, one horizontally in respect to the other.

3. In a tractor, the combination with laterally spaced wheels and an axle therefor, of a closed gear housing carried by said axle, said housing constituting the main

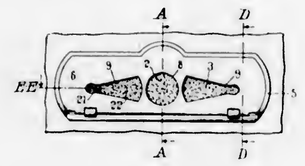
frame element, a reach having a forked end embracing the upper and lower portions of said housing and pivotally connected thereto, a wheel supporting the rear end of said reach, said gear housing having an integral forwardly projected bracket, and an internal combustion engine mounted on said bracket for driving said traction wheels, the weight of said engine counterpoising in part the weight of the said reach and parts connected thereto.

4. In a tractor, the combination with an axle comprising a shaft and axially alined driving sleeves mounted thereon and having angular exterior cross sections, of traction wheels mounted on the angular exterior surfaces of said driving sleeves with freedom for lateral adjustments.

5. In a tractor, the combination with laterally spaced wheels and an axle therefor, of a closed gear housing carried by said axle and having rigidly secured laterally projecting sleeve-like bearings in which the said rear axle is journaled, and a reach having a forked end embracing the upper and lower portions of said housing and pivotally connected thereto.

[Claims 6 and 7 not printed in the Gazette.]

1,219,931. LOCK. JOSEPH FORSHEIM, Great Neck, and JOSEPH KONIGSBERG, New York, N. Y., assignors to Lena S. Forsheim, Great Neck, N. Y. Filed Sept. 16, 1916. Serial No. 120,530. (Cl. 70—23.)



1. A lock and a protective device therefor including a protective strip, positioning means therefor arranged to permit access to the lock therethrough and a releasing device for the positioning means arranged to automatically return to its locking position, said strip covering both the lock and the releasing device and requiring mutilation of the same for gaining access to the lock or the releasing device and requiring extended mutilation for operating the releasing device.

2. A lock and a protective device therefor including a protective strip, positioning means therefor including a holder and its cover arranged to permit access to the lock through the cover and a releasing device for the cover arranged to automatically return to its locking position, said strip covering both the lock and the releasing device and requiring mutilation of the same for gaining access to the lock or the releasing device and requiring extended mutilation for operating the releasing device.

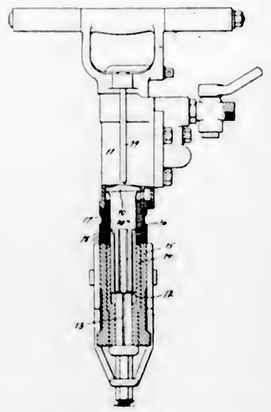
3. A lock and a protective device therefor including a protective strip, positioning means therefor and a yielding releasing device for the positioning means arranged to automatically return to its locking position, said strip covering both the lock and the releasing device and requiring mutilation for gaining access to either.

4. A lock and a protective device therefor including a protective strip, positioning means therefor including a holder and its cover and a yielding releasing device for the cover arranged to automatically return to its locking position, said strip covering both the lock and the releasing device and requiring mutilation for gaining access to either.

5. A lock and a protective device therefor including a protective strip, positioning means therefor and a releasing device for the positioning means including a bolt having a yielding member arranged to automatically return to its locking position, said strip covering both the lock and the releasing device and requiring mutilation for gaining access to either.

[Claims 6 to 10 not printed in the Gazette.]

1,219,932. PNEUMATIC TOOL. NORRIS H. FROST, West Hoboken, N. J. Filed Dec. 20, 1916. Serial No. 137,948. (Cl. 121—20.)

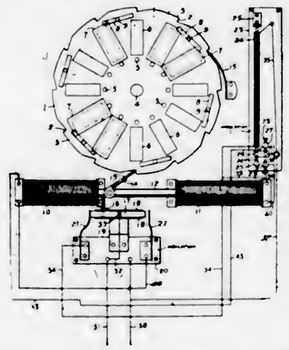


1. A pneumatic tool including a cylinder, a piston having a blow delivering extension, a front head for receiving the shank of a tool, and a washer or bushing interposed between said cylinder and said front head and formed of a plurality of superposed, separable, annular sections.

2. A pneumatic tool including a cylinder, a piston therein having a blow delivering extension, a part to be struck thereby, means for holding said part being in operative position in respect to the striking face of said extension, and means for adjusting said first mentioned means axially to compensate for reductions in the effective length of the piston extension when the latter is refaced after being chipped or broken.

3. A pneumatic tool including a cylinder, a piston having a blow delivering extension, a front head for receiving the shank of a tool, and a washer or bushing interposed between said cylinder and said front head and formed of a plurality of superposed, annular sections interengaging to remain concentric and one or more of which may be removed to compensate for reductions in the length of said piston extension when the latter is shortened by refacing.

1,219,933. ELECTRIC ADVERTISING DEVICE. WILLIAM COCHRAN GILLESPIE, Phoenix, Ariz. Filed Apr. 19, 1916. Serial No. 92,188. (Cl. 40—55.)



1. The combination with a rotatable disk, of means for intermittently rotating said disk, said means comprising a pair of solenoids, a common core for said solenoids, means connected with said common core for rotating said disk, and thermostatic means for controlling said solenoids.

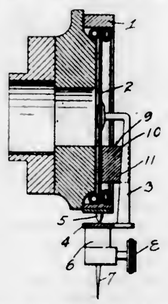
2. The combination with a rotatable slide carrier, of means for intermittently rotating said slide carrier, said means comprising a pair of solenoids, a common core for said solenoids, means connected with said common core for rotating said slide carrier, and thermostatic means for controlling said solenoids, said thermostatic means being arranged to energize one of said solenoids when heated and the other of said solenoids when cold.

3. The combination of a rotatable slide carrier, having teeth on its periphery, of a pair of solenoids, a common core for said solenoids, a pawl carried by said common core and arranged to engage the teeth of said carrier, a switch arranged to be operated by said core, and a thermostatic device controlled by said switch and having contacts for controlling the circuits of the solenoids.

4. The combination of a rotatable slide carrier, having teeth on its periphery, of a pair of solenoids, a common core for said solenoids, a pawl carried by said common core and arranged to engage the teeth of said carrier, a switch arranged to be operated by said core, and a thermostatic device controlled by said switch and having contacts for controlling the circuits of the solenoids, the movement of the thermostatic member in one direction serving to complete the actuating circuit of one of said solenoids, and the movement of the thermostatic member in the other direction serving to complete the actuating circuit of the other solenoid.

5. The combination with a slide carrier having teeth on its periphery, of a pair of solenoids, a common core for said solenoids, a pawl secured to said common core and arranged to engage the teeth of the carrier, an arm carried by said core, a movable contact member secured to said arm, spring contacts arranged to be engaged by said movable contact member, a thermostat having an expansible core, stationary contacts carried by said thermostatic member and arranged to be engaged by said arm, connections between said thermostatic member and said spring contacts, and connections between the contacts of the thermostatic member and said solenoids.

1,219,934. ATTACHMENT FOR PHONOGRAPHIC REPRODUCERS. EDMUND GOLLMER, New Ulm, Tex. Filed June 30, 1915. Serial No. 37,301. (Cl. 274—27.)



1. An attachment for reproducers comprising a cylindrical body of resilient soft material adapted to be positioned between the stylus arm and diaphragm to eliminate undesirable sounds.

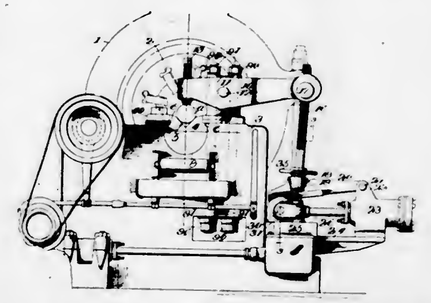
2. In combination with a reproducer including a body and a diaphragm mounted within the body, and a stylus arm connected to the diaphragm, of a cylindrical pad of soft resilient material positioned beneath the stylus arm and bearing on the diaphragm to eliminate undesirable sounds.

3. An attachment for reproducers including the combination with a reproducer having a stylus arm attached thereto, the said arm enlarging toward the end opposite that attached to the diaphragm, of a pad of a soft resilient material positioned between the stylus arm and diaphragm and arranged so that the same may be adjusted along the stylus arm to vary the pressure on the diaphragm.

4. The combination with a reproducer having a diaphragm, a stylus arm attached centrally to the diaphragm, a needle holder at the end of the stylus arm opposite that which is connected to the diaphragm, the same arm being enlarged toward the needle holder, of a circular pad of a soft resilient material having a groove extending transversely through one face thereof, said pad being adapted to be positioned between the stylus arm and the diaphragm with the stylus arm lying in the groove to prevent lateral movement of the pad with relation to the stylus arm.

5. The combination with a reproducer having a diaphragm, a stylus arm attached centrally to the diaphragm, a needle holder at the end of the stylus arm opposite that which is connected to the diaphragm, the same arm being enlarged toward the needle holder, of a circular pad of a soft resilient material having a groove extending transversely through one face thereof, said pad being adapted to be positioned between the stylus arm and the diaphragm with the stylus arm lying in the groove to prevent lateral movement of the pad with relation to the stylus arm, said pad being adapted to be adjusted longitudinally of the stylus arm to vary its pressure against the diaphragm.

1,219,935. STOCK-CLAMPING MECHANISM FOR CUTTING-OFF AND OTHER MACHINES. GEORGE GORTON, Racine, Wis. Filed Dec. 1, 1915. Serial No. 64,556. (Cl. 29—67.)



1. In stock clamping mechanism, in combination, a base having a straight socket extending transversely therethrough and longitudinally open along its upper side at an edge of said base, said socket being approximately semi-cylindrical throughout its length, a jaw block extending longitudinally through and fitted in and conforming to the curvature of said socket and forming a longitudinal V-trough exposed at said edge of the base, and clamping means arranged above said block for locking the stock in and extending longitudinally through said trough.

2. In stock clamping mechanism for cutting off and other machines, a base having alined holes extending transversely through edge portions of opposite walls and forming approximately semi-cylindrical sockets through said edges, alined jaw blocks forming longitudinal stock receiving troughs and having exterior surfaces conforming to and fitting in said holes, and clamping means secured to said base wall edges and overlapping said blocks.

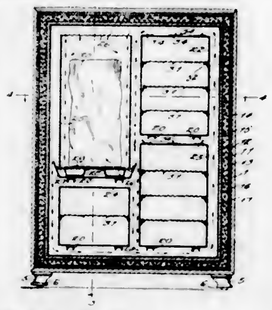
3. A wall having an approximately semi-cylindrical hole bored transversely through its top edge portion and open along its top side through said edge, in combination with a jaw-block at its upper side having a longitudinal stock receiving and centering trough and faces at opposite sides of the trough to receive clamping plates, the exterior of said block below said upper side being turned to approximately semi-cylindrical form to fit said socket, and securing members lapping over said faces.

4. In a cutting off machine, in combination, a base having an upwardly extending portion, a cutting off saw beside said portion, an approximately semi-cylindrical jaw block set down in and extending transversely through said portion and having its upper side exposed and forming a longitudinal trough to longitudinally receive the stock operated on by said saw, said portion formed with an approximately semi-cylindrical socket extending transversely therethrough and longitudinally receiving said block, means securing said block against rotating and sliding in said socket, and clamping means arranged above said block to lock the stock in said trough.

5. In stock clamping mechanism for cutting off and other machines, in combination, a support provided with a stationary jaw forming a longitudinal stock receiving V-trough open at the top and ends, a vertically-swingable clamping lever carried by said support and having its clamping end arranged over and transversely with respect to said trough to clamp the stock down therein, and operating means applied to the opposite end of said lever.

[Claims 6 to 25 not printed in the Gazette.]

1,219,936. REFRIGERATOR. CALLIE MARILIS GRAHAM, Parker, Ariz. Filed Feb. 17, 1916. Serial No. 78,879. (Cl. 62—51.)



A refrigerator comprising a casing having a non-heat conducting lining and provided with minor metallic casings for receiving the material to be refrigerated and the ice to refrigerate, said minor casings being supported loosely in the main casing and being spaced apart from the walls thereof and from each other to permit the free circulation of air about and between said minor casings, a drip pan in connection with the casing for the ice, each of said material receiving casings having shelves of perforate material, and the ice-receiving casing having ends of perforate material and supported by the drip pan.

1,219,937. DEVICE FOR USE IN FILLING SYRINGES AND THE LIKE FROM RECEPTACLES. LEONIDAS BRECK GREEN, Kansas City, Mo. Filed July 17, 1915. Serial No. 40,421. (Cl. 128—25.)

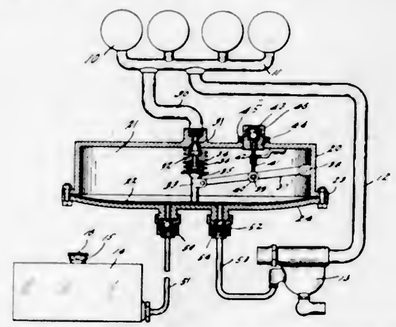
1. In a liquid extracting device for filling syringes and the like from receptacles, a tubular member adapted to extend through the mouth of the receptacle into proximity to the bottom thereof, a stopper embracing said member and adapted to fit the mouth of the receptacle, said member being provided with a nipple portion at its outer end adapted to form air-tight connection with said syringe or the like and having a threaded portion at the base of said nipple portion, and a combined shield and hand-grip member having a threaded central opening for detachably mounting the same upon the threaded portion of said tubular member.

2. In a liquid extracting device for filling syringes and the like from receptacles, a tubular member adapted to extend through the mouth of the receptacle into proximity to the bottom thereof, the outer end of said member being provided with a reduced portion forming a nipple adapted to make air-tight connection with said syringe or the like, said member having a threaded portion and shoulder at the base of said nipple, and a combined shield and hand-grip member having an opening threaded to fit said threaded portion and seat said shield member against said shoulder.



3. In a liquid extracting device for filling syringes and the like from receptacles, a tubular member adapted to extend through the mouth of the receptacle into proximity to the bottom thereof, said member being provided with a nipple portion at its outer end having a smooth tapered passage adapted to form air-tight connection with said syringe or the like, a combined shield and hand-grip member having detachable threaded engagement with the base of said nipple portion, and a check-valve associated with the lower end of said member.

1,219,938. VACUUM POWER DEVICE. HARRY W. HAMILTON, Indianapolis, Ind. Filed June 4, 1915. Serial No. 32,065. (Cl. 158—36.)

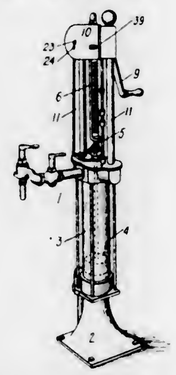


1. A vacuum power device, comprising a chamber having a movable wall, an outlet valve from said chamber for connection to a partial vacuum, an inlet valve leading from the atmosphere to said chamber, and connections from said movable wall to said two valves for closing the first valve and opening the second valve by the movement of said wall to ensmall the chamber and for opening the first valve and closing the second valve upon the movement of said wall to enlarge the chamber, said connections including a lost motion connection between the movable wall and the first valve for delaying the opening of such valve.

2. A vacuum power device, comprising a hollow casing, a flexible diaphragm closing said casing to provide a closed chamber therein, an outlet valve from said chamber for connection to a partial vacuum, an inlet valve connecting said chamber with the atmosphere, a spring tending to move said diaphragm in the direction to enlarge said chamber, and connections between said diaphragm and said two valves for closing the first valve and opening the second upon the flexing of the diaphragm inward and for opening the first valve and closing the second upon the flexing of the diaphragm outward relative to such chamber, said connection between the diaphragm and the first valve including a lost motion connection which permits the opening of said first valve to be delayed until after the outward flexing of the diaphragm has been partly completed.

3. A vacuum power device, comprising a hollow casing, a flexible diaphragm closing said casing to provide a closed chamber therein, an outlet valve from said chamber for connection to a partial vacuum, an inlet valve connecting said chamber with the atmosphere, and connections between said diaphragm and said two valves for closing the first valve and opening the second upon the flexing of the diaphragm inward and for opening the first valve and closing the second upon the flexing of the diaphragm outward relative to such chamber, said connection between the diaphragm and the first valve including a lost motion connection which permits the opening of said first valve to be delayed until after the outward flexing of the diaphragm has been partly completed.

1,219,939. REGISTERING MECHANISM. WILLIAM P. HAMMOND, Passaic, N. J., and EDMUND QUINCY MOSES, New York, N. Y. Filed Oct. 12, 1915. Serial No. 55,398. (Cl. 235—91.)



1. The combination with operation performing means, of a lock therefor, unlocking means for said lock, and registering means associated with said unlocking means, said registering means being brought into operative connection with said operation performing means when said unlocking means is used to unlock said lock.

2. The combination with a movable element, of a lock therefor, a key for operating said lock, a register combined with said key and means for placing said register in operative connection with said movable element when said key is brought into operative engagement with said lock.

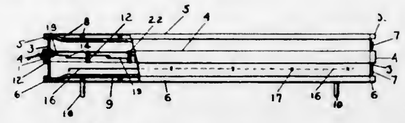
3. The combination with operation performing means, of a lock therefor, a rotatable key for unlocking said lock, a registering device connected with said key and means driven from said operation performing means adapted to engage with and operate said register when said key is utilized to unlock said lock.

4. The combination with dispensing means, of locking mechanism for the same, a key adapted to actuate said locking mechanism, a register attached to said key and means for actuating said register to cause it to register the amount of commodity dispensed when said key is employed to unlock the dispensing device.

5. The combination with a measuring pump, of means for actuating the same, locking means for locking said pump against movement, a key for unlocking said locking means and registering mechanism attached to said key and adapted to be placed in operative connection with said pump operating means when said key is utilized to unlock said locking means, whereby said register will register the amount of commodity dispensed by said pump.

[Claims 6 to 15 not printed in the Gazette.]

1,219,940. ELECTRIC HEATER. CLARENCE O. HARMON, Toledo, Ohio, assignor of one-half to Frederick B. De Frees, Toledo, Ohio. Filed Feb. 28, 1916. Serial No. 80,767. (Cl. 219—19.)



1. An electric heater comprising a straight section of electric conductor, sustaining means therefor including intermediate its length transverse dead end heat radiation members, and insulation supporting means for the sustaining means.

2. An electric heater comprising an electric conductor forming parallel straight sections, insulation strips between the straight sections of the conductor, and heat radiation members engaging the strips and conductor along the straight sections.

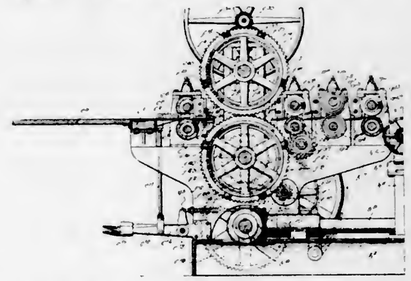
3. An electric heater comprising a continuous electric conductor forming parallel straight sections intermediate its extent, insulation strips uniformly spaced between the straight sections, and wire anchors along the straight sections each interlocking with a straight section and two insulation strips.

4. An electric heater housing comprising a sheet metal member provided with a flange along one edge thereof, a groove parallel therewith, an insulation strip carried by the groove, heat radiation means mounted by the insulation strips, and an electric conductor supported by the heat radiation means.

5. An electric heater comprising a sheet metal housing provided with an endless inwardly opening groove, and a grid carried by the groove, said housing having a second groove spaced from the first groove and electric heater means carried by the second groove parallel with the grid.

[Claims 6 to 11 not printed in the Gazette.]

1,219,941. BOX-BLANK-MAKING MACHINE. KARL I. HERMAN, Chicago, Ill. Filed Aug. 1, 1912. Serial No. 712,756. (Cl. 93—58.)



1. In a machine for creasing blanks, the combination with a rotary device for forming tranverse creases in the blanks, with a reciprocating device for forming longitudinal creases in the blanks, and continuously progressing intermittently operated means for conveying the blanks from said rotary creasing device to a position of rest beneath said reciprocating creasing device, and subsequently removing them.

2. In a machine for creasing blanks, in combination, a rotary device for forming transverse creases in the blanks,

a device for trimming the longitudinal edges of the blanks, a reciprocating device for forming longitudinal creases in the blanks, and continuously progressing intermittently operated means for conveying the blanks from said rotary creasing device to a position of rest in operative relation with said reciprocating creasing device, and subsequently removing the blanks.

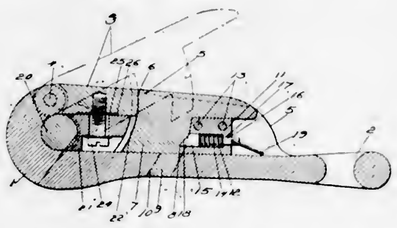
3. In a machine for creasing and slotting blanks, in combination, a rotary creasing device for forming transverse creases in the blanks, a reciprocating device for forming longitudinal creases in the blanks, a slotting device for forming slots in the blanks along the transverse creases, and means for conveying the blanks into operative relation with each of said devices in succession.

4. In a machine for creasing and slotting blanks, in combination, a rotary creasing device for forming transverse creases in the blanks, a device for trimming the longitudinal edges of the blanks, a reciprocating device for forming longitudinal creases in the blanks, a slotting device for forming slots in the blanks along the transverse creases, and means for conveying the blanks into operative relation with each of said devices in succession.

5. In a machine for creasing and slotting blanks, in combination, a rotary creasing device for forming transverse creases in the blanks, a reciprocating device for forming longitudinal creases in the blanks, a slotting device for forming slots in the blanks along the transverse creases, means for conveying the blanks from said rotary creasing device to a position of rest in operative relation with said reciprocating creasing device, and means for conveying the blanks from said reciprocating creasing device to said slotting device.

[Claims 6 to 43 not printed in the Gazette.]

1,219,942. CHOKER-HOOK. ONSON H. HIATT, Portland, Oreg., assignor of one-half to J. C. Williams, Portland, Oreg. Filed July 28, 1914. Serial No. 853,585. (Cl. 24—241.)



1. A choker hook of the character referred to, comprising a hook member, a member hinged to the hooked end thereof and adapted to close upon said hook member, whereby to leave a receiving opening therebetween, means for holding said hinged member closed, and a choker block detachably secured within said receiving opening, whereby to regulate the size of said receiving opening.

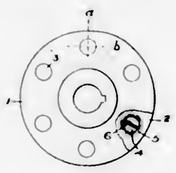
2. A choker hook of the character referred to, comprising a hook member, a member hinged to the hooked end thereof and adapted to close upon said hook member, whereby to leave a receiving opening therebetween, means for holding said hinged member closed, and a choker block adjustably mounted within said receiving opening, whereby to regulate the size of said opening.

3. A choker hook of the character referred to, comprising a hook member provided with an eyelet at one end and a hinged member at its hooked end adapted to close into interfitting engagement with said hook member, whereby to form a receiving opening therebetween, means for locking said hinged member closed, and a choker block adjustably secured to said hinged member, within said receiving opening, whereby to regulate the size of said receiving opening, substantially as described.

4. A choker hook of the character described, comprising a hook member, a member hingedly secured to the hook portion thereof and having a curved projection adapted to close into interfitting connection with said hook member, whereby to leave a receiving opening between said hook member and said hinged member, spring-actuated means for locking said hinged member into closed position, a choker block adapted to fit within said receiving opening, to form one side thereof, and means for adjustably securing it to said hinged member, substantially as described.

5. A choker hook of the character referred to, comprising in combination, a hook member having an eyelet at one end, a hook at its other end and flanges at its sides for a portion of its length, a member hinged to said hook member and adapted to close between said flanges, said member having a curved projection adapted to close into interfitting engagement with said hook member between its flanges, a spring-actuated lock-pin for holding said hinged member closed, and a choker block adjustably secured to said hinged member adjacent its hinged end, whereby to form one side of a receiving opening in said hook member, substantially as described.

1,219,943. SHAFT-COUPLING. GEORGE C. HICKS, Jr., Connersville, Ind. Filed Dec. 13, 1916. Serial No. 136,636. (Cl. 64—13.)



1. A coupling comprising, two rotatable members with a substantially common axis and with their contiguous faces spaced apart, a series of projections carried by each of the members and extending toward the contiguous face of the other member, the extending ends of the projections of one series overlapping the extending ends of the projections of the other series, and an elastic link encompassing each pair of overlapping projections and adapted to permit the projections of one series to engage with or separate from the projections of the other series, combined substantially as set forth.

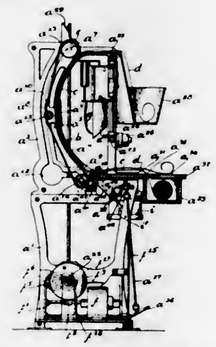
2. A coupling comprising, two rotatable members with a substantially common axis and with their contiguous faces spaced apart, a series of projections carried by each of the members and extending toward the contiguous face of the other member, the extending ends of the projections of one series overlapping the extended ends of the projections of the other series, a cushion disposed between the overlapping projections of each pair, and an elastic link encompassing each pair of overlapping projections and adapted to permit the projections of one series to engage with or separate from the projections of the other series, combined substantially as set forth.

3. A coupling comprising, two rotatable members with a substantially common axis and with their contiguous faces spaced apart, a series of pins rigidly secured in each of the members and having ends extending toward the contiguous face of the other members, the extending ends of one series of pins overlapping the extending ends of the other series, and an elastic link encompassing each pair of overlapping pin-ends and adapted to permit the pins of one series to engage with or separate from the pin-ends of the other series, combined substantially as set forth.

4. A coupling comprising, two rotatable members with a substantially common axis and with their contiguous faces spaced apart, a series of cylindrical pins rigidly secured in each of the members and having semi-cylindrical ends extending toward the contiguous face of the other member, the flat faces of the semi-cylindrical ends of one series of pins overlapping the flat faces of the semi-cylindrical ends of the other series, and an elastic link encompassing each pair of overlapping pin-ends and adapted to permit the pins of one series to engage with or separate from the pin-ends of the other series, combined substantially as set forth.

5. A coupling comprising, two rotatable members with a substantially common axis and with their contiguous faces spaced apart, a series of cylindrical pins rigidly secured in each of the members and having semi-cylindrical ends extending toward the contiguous face of the other member, the flat faces of the semi-cylindrical ends of one series of pins overlapping the flat faces of the semi-cylindrical ends of the other series, and an elastic link encompassing each pair of overlapping pin-ends and adapted to permit the pins of one series to engage with or separate from the pin-ends of the other series, combined substantially as set forth.

1,219,944. BLUE-PRINTING MACHINE. FREDERICK H. HOFFMAN, Philadelphia, Pa., assignor to Williams, Brown & Earle, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 3, 1916. Serial No. 81,817. (Cl. 95—77.5.)



1. In a blue printing machine, side frames each provided with an oblong slot, in combination with a bed mounted therein and means extending through the walls bounding each of the slots of said side-frames to hold said bed against sidewise removal.

2. In a blue printing machine, side frames having slots, a bed, means extending into the walls bounding said slots for holding said bed against removal, a conveyer positively operated in contact with said bed, a table in front of the machine and a trough suspended above said table for receiving the retained tracing or sensitized sheet or both, said trough adapted to be shifted onto the top of the machine.

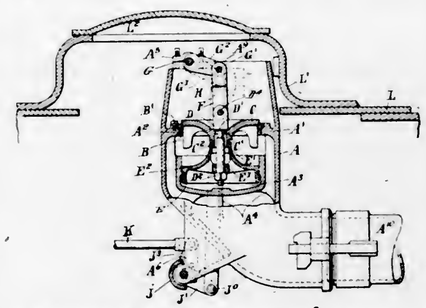
3. In a blue printing machine, side frames provided with long narrow slots, a bed-plate held in position in said slots and readily removable therefrom, said frames each provided with notches merging into a long slot terminating in an enlarged circular slot with an offset slot leading therefrom, carrier-rollers and an idler roller respectively, journaled in said notches and offset slot, an endless apron or conveyer and means to positively actuate one of said carrier rollers.

4. In a blue printing machine, side frames provided with long narrow slots, a bed plate held in position and so as to be readily removed therefrom, said frames each provided with notches merging into a long slot terminating in an enlarged opening with an offset slot leading therefrom, carrier-rollers and an idler roller respectively, journaled in said notches and offset slot, an endless apron or conveyer engaging said rollers, and a pawl or catch suitably engaging one of said carrier rollers for holding said apron or conveyer in an operative relation in contact with said bed plate.

5. In a blue printing machine, side frames provided with long narrow slots, a bed plate held in position and so as to be readily removed therefrom, each of said frames provided with notches directly merging into a long slot terminating in an enlarged slot with an offset slot leading therefrom, carrier rollers and an idler roller respectively, journaled in said notches and offset slot, an endless apron or conveyer engaging said rollers, pawls or catches engaging the journals of one of the carrier rollers and means to shift said apron or conveyer into an inoperative relation with respect to said bed plate.

[Claims 6 to 24 not printed in the Gazette.]

1,219,945. LOCOMOTIVE THROTTLE-VALVE. HARRY A. HOKE, Altoona, Pa. Filed May 19, 1916. Serial No. 98,507. (Cl. 137—4.)



1. A locomotive throttle valve comprising in combination a valve body open at its upper end and provided with an internal ported valve seat below said upper end, a valve movable toward and away from said seat to control said port and operating means for said valve comprising an upper rocking element, means for journaling said element on said valve body above the valve seat made separable to permit the element to be lifted up and away from said valve body, a lower rocking element external to said valve body and pivotally connected to the latter adjacent the lower end of the valve body, links external to the valve body connecting said rocking elements, and an operating connection to the lower rocking element.

2. In a locomotive, the combination with the boiler shell of a throttle valve located in said shell and comprising a valve body open at its upper end and provided with an internal ported valve seat below said upper end, a valve movable toward and away from said seat to control said port and operating means for said valve mounted on said valve body and comprising an upper rocking element, means for journaling said element on said valve body above the valve seat made separable to permit the element to be lifted up and away from said valve body, a lower rocking element external to said valve body and pivotally connected to the latter adjacent the lower end of the valve body, links external to the valve body connecting said rocking elements, and an operating rod connected to the lower rocking element and projecting through the rear end wall of said shell.

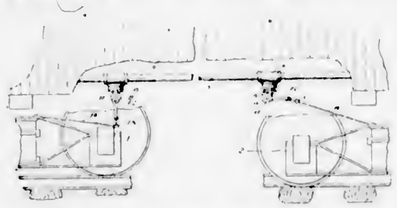
3. A locomotive throttle valve comprising in combination a valve body open at its upper end and provided with an internal ported valve seat below said upper end and a balancing cylinder located in the valve body below said seat, a main valve movable toward and away from said seat to control said port, a balancing piston working in said cylinder, a pilot valve mounted in said main valve with freedom for limited movement relative to the latter and controlling communication with the interior of said cylinder below the balancing piston and valve operating means comprising a rocking element pivotally connected to said pilot valve, means for journaling said element on said valve body above the valve seat made separable to permit the element to be lifted up and away from said valve body, and means external to and pivotally connected to said valve body adjacent the lower end of the latter for oscillating said rocking element.

4. A locomotive throttle valve comprising in combination a valve body open at its upper end and provided with an internal ported valve seat below said upper end and with external bracket ears at its lower end, a valve movable toward and away from said seat to control said port and operating means for said valve comprising a rock shaft, means for journaling said element on said valve body above the valve seat made separable to permit the element to be lifted up and away from said valve body, a second rock shaft journaled in said ears and extending beneath the valve body, links at the sides of the valve body connecting said rock shafts and an operating rod pivotally connected to the lower rock shaft.

5. A locomotive throttle valve comprising in combination a valve body open at its upper end and formed internally with a seat for a valve seat member below said upper end and beneath said seat with a balancing cylinder and provided at its upper end with separable shaft bearings, a removable annular valve seat member mounted in said seat, a main valve for controlling the passage through said annular seat member and a balancing piston working in said cylinder and of a diameter greater than the internal and less than the external diameter of said seat member, a pilot valve mounted in said main valve for controlling communication with said cylinder below the balancing piston, said piston and main and pilot valves being connected together with freedom for a limited relative movement of the two valves, a rock shaft mounted in said bearings and extending across the valve body and a connection between said pilot valve and rock shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,219,946. MEANS FOR APPLYING BRAKES ON DERAILING. GRANVILLE ADDISON HUMASON, Shreveport, La., assignor of three-fourths to James W. Atkins, Shreveport, La. Filed Dec. 26, 1916. Serial No. 138,752. (Cl. 188—2.)



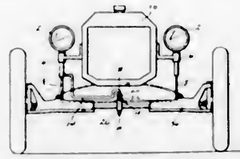
1. The combination with the train pipe of an air brake system, of a device having an outlet from said pipe, an inwardly seating cover for said outlet, a movable part pressing against said cover to hold it in an outlet-closing position, and a connection between the car truck and said part for causing the latter to release the cover upon derailment of the truck.

2. The combination with the train pipe of an air brake system, of a device connected with said train pipe and having a discharge outlet larger in cross sectional area than that of the train pipe, a cover seating inwardly against said outlet to close the same, a movable support for said cover, and a connection between a car truck and said support for causing the latter to release the cover upon derailment of the truck.

3. The combination with the train pipe of an air brake system, of a device having a discharge outlet for said pipe, an inwardly seating cover for said outlet, a pivoted cam block supported beneath said cover and having a position in which it presses the cover against its seat and another position in which it permits the cover to drop away from its seat, and a connection between said block and a car truck for causing the block to assume its released position upon abnormal movement between the car body and the truck.

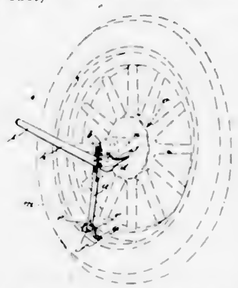
4. The combination with the train pipe of an air brake system, of a device having a discharge outlet for said pipe, an inwardly seating cover for said outlet, a pivoted cam block supported beneath said cover and having a position in which it presses the cover against its seat and another position in which it permits the cover to drop away from its seat, and a connection between said block and a car truck for causing the block to assume its released position upon abnormal movement between the car body and the truck in either direction longitudinally of the car body.

1,219,947. AUTOMATICALLY-SWINGING HEADLIGHT. GEORGE C. JONES, Kansas City, Kans. Filed May 17, 1916. Serial No. 98,078. (Cl. 240—62.)



In an automatically swinging head-light construction for motor vehicles, the combination with the steering rod, of lamps each mounted for movement about a vertical axis, and connections between said rod and lamps whereby endwise movement of the rod will move said lamps in unison about said axes, said connections including an arm rigid with one of the lamps for swinging the same, a member having a ball and socket connection at one of its ends with said arm, the other end of said member being turned downwardly and provided with a tubular member mounted slidingly thereon, said tubular member being provided with a horizontal pivotal connection to said steering rod, and an adjustable spring element carried within said tubular member in position for yieldingly supporting said downturned end of said first member.

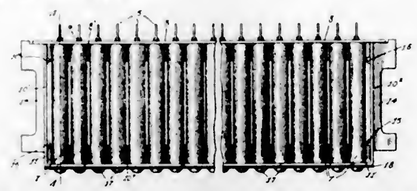
1,219,948. AUTO-RIM FORCER. GEORGE A. E. KAEGLER, Fresno, Cal. Filed June 28, 1916. Serial No. 106,372. (Cl. 254—131.)



A device for forcing rims on automobile wheels, including a substantially vertically-disposed body-portion; and a substantially horizontally-disposed hand lever pivotally mounted in said body-portion near the upper end thereof and having one of its ends forked and formed with a recessed hub-seat shaped to receive and hold securely the wheel-hub; the lower end of said body-portion being bifurcated and formed with a pair of spaced legs that terminate in feet which are disposed at substantially right angles to the legs and are wedge-shaped and formed with substantially flat lower faces.

1,219,949. ELECTROMAGNETIC SIGNAL. WILLIAM KAISLING, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed June 1, 1915. Serial No. 31,380. (Cl. 177—326.)

1. A signal device comprising an electromagnet, a signal ball operatively associated with the said electromagnet, a cylindrical shell forming a containing member for said electromagnet and signal ball, a mounting plate, a U-shaped frame, the said plate and frame forming supporting means for the said shell at its extremities, and a pair of lugs attached to said U-shaped frame for supporting the device as a unit.



2. A signal device comprising an electromagnet, a signal ball operatively associated with the said electromagnet, a cylindrical shell forming a containing member for said electromagnet and signal ball, a mounting plate, a U-shaped frame, the said plate and frame forming supporting means for the said shell, and a face plate for retaining the said signal ball in said cylindrical shell.

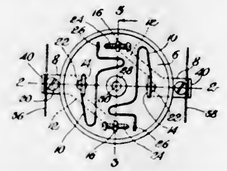
3. A signal device comprising a signal ball, an electromagnet, a shell for containing said signal ball and electromagnet, supporting means for said shell, a taper formed upon the inner circumference at the forward end of said shell, a face-plate provided with an opening, a normal position and an actuated position for said signal ball, said ball resting in said opening when at normal and withdrawn from said opening upon energization of said electromagnet.

4. A signal device comprising a signal ball and an electromagnet, a cylindrical shell containing said signal ball and electromagnet, a mounting plate, a U-shaped plate provided with a circular orifice to receive said cylindrical shell, said mounting plate and U-shaped plate providing mounting means for said device, a normal and an indicative position for said signal ball, a face-plate retaining said signal ball in said shell, and means for energizing said electromagnet to attract said ball from its normal position, the said shell forming a portion of the magnetic path of said electromagnet.

5. A signaling device comprising an electromagnet and a movable member inclosed in a casing, a rear mounting strip to which said electromagnet is secured, a front mounting strip adapted to receive the forward extremity of said inclosing casing, a face plate secured to said front mounting strip and provided with an opening through which said movable member protrudes when at normal, means for preventing the said member from becoming lodged in said opening, and means for causing the said electromagnet to withdraw the said member from the said opening.

[Claims 6 to 10 not printed in the Gazette.]

1,219,950. THERMOSTAT. WALTER H. KALLENBACH, Boston, Mass. Filed June 10, 1914. Serial No. 844,355. (Cl. 200—31.)



1. A thermostat comprising two terminals, an adjustable contact member mounted on one of said terminals and an expansion member mounted on the other of said terminals for closing a circuit through said terminals when a predetermined temperature is attained; said expansion member being composed of two U-shaped portions substantially in a right-angled relation to each other.

2. A thermostat comprising two terminal plates and an expansion member secured to one of said plates and adapted to engage the other of said plates when expanded by heat, said expansion member having two U-shaped portions arranged substantially in right-angled relation to each other.

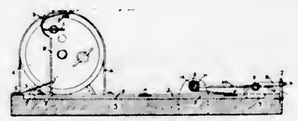
3. A thermostat comprising two terminals and an expansion member mounted on each of said terminals and adapted to engage the other of said terminals when a predetermined temperature is attained; each of said expansion members comprising two U-shaped portions in a substantially right-angled relation to each other.

4. A thermostat comprising two terminals, an adjustable contact member on each of said terminals and an expansion member on each of said terminals, each of said expansion members being adapted to engage the said contact member on the other terminal to close a circuit through said terminals when expanded by heat; each of said expansion members comprising two U-shaped portions in a substantially right-angled relation to each other.

5. A thermostat comprising two terminal plates and two expansion members, each of said expansion members being secured at one end to one of said plates and adapted when expanded by heat, to engage at the other end the other of said plates, each of said expansion members having two U-shaped portions arranged substantially in right-angled relation to each other.

[Claims 6 to 15 not printed in the Gazette.]

1,219,951. TIME-CONTROLLED OPERATING MECHANISM. WILLIAM J. KAMUF, Joplin, Mo. Filed June 12, 1916. Serial No. 103,309. (Cl. 161—1.)



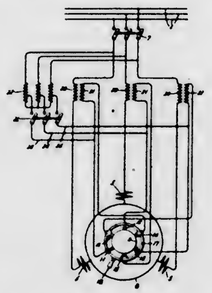
The combination, with a time-piece having an alarm mechanism that includes a lever arranged to throw said mechanism into and out of a condition wherein it is susceptive of operation at a predetermined time, an operating-shaft, and a projection on said shaft, of an operating member, a trigger normally holding said member under restraint, a slidable member connected with and arranged to release said trigger, an arm extending from said slidable member and arranged to be connected and moved by the projection of said operating-shaft, and a hook portion on said arm arranged to shift said lever whereby operation of said alarm mechanism is stopped.

1,219,952. ALTERNATING-CURRENT MOTOR. WILLEM C. KORTHALS-ALTES, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 11, 1916. Serial No. 90,460. (Cl. 172—276.)

1. A polyphase alternating current commutator motor having a polyphase stator winding and a commutated rotor winding, a polyphase arrangement of movable brushes and a polyphase arrangement of stationary brushes bearing on the commutator of said rotor winding, a polyphase series transformer included in the circuit of said stator winding, said movable and stationary brushes being connected to said series transformer so that varying degrees of series excitation can be produced in said rotor winding by movement of said movable brushes, and a polyphase shunt transformer adapted to be connected to certain of said brushes.

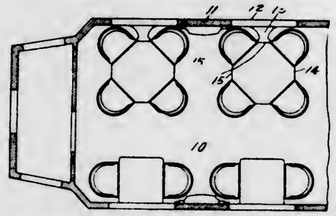
2. A polyphase alternating current commutator motor having a polyphase stator winding and a commutated rotor winding, a polyphase arrangement of movable brushes and a polyphase arrangement of stationary brushes bearing on the commutator of said rotor winding, a polyphase series transformer having its primary circuit

included in the circuit of said stator winding and its secondary circuit connected between said stationary brushes and said movable brushes so that varying degrees of series excitation can be produced in said rotor winding by moving said movable brushes, and a polyphase shunt transformer having its primary circuit connected in shunt relation to said stator winding and its secondary circuit connected to said stationary brushes.



3. A polyphase alternating current commutator motor having a polyphase field winding and a commutated armature winding, a polyphase arrangement of movable brushes and a polyphase arrangement of stationary brushes bearing on the commutator of said armature winding, a polyphase series transformer connected between said stationary brushes and said movable brushes so that varying degrees of series excitation can be produced in the armature winding by moving said movable brushes, and a polyphase shunt transformer adapted to be connected to certain of said brushes.

1,219,953. ARRANGEMENT OF TABLES IN RAILWAY DINING-CARS OR THE LIKE. OTTO KAYSER, Schöneberg, near Berlin, Germany. Filed Mar. 24, 1914. Serial No. 826,898. (Cl. 105—74.)

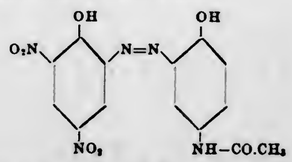


The combination with a railway dining car having a side wall provided with spaced windows; of a bracket secured to the side wall beneath a window, and a substantially square table having its corners truncated, one of said corners being hinged to the projecting edge of said bracket whereby the table is held in spaced relation to the side wall and window with one of its diagonal lines at right angles to said wall.

1,219,954. ORTHO-OXY-MONOAZO DYES. RICHARD KIRCHHOFF, JENS DEDICHEN, and WERNER LANGE, Berlin, Germany, assignors to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Nov. 27, 1915. Serial No. 63,822. (Cl. 23—24.)

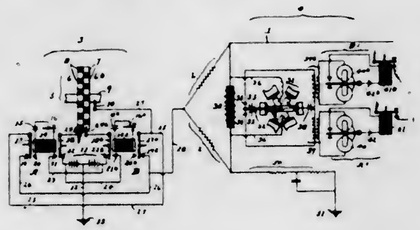
1. The herein-described monoazo dyes deriving from diazotized picramic acid and a 4-acidylaminophenol, being in the shape of pulverized dry sodium salts dark powders soluble in hot water with an orange color becoming more reddish by addition of soda-lye, the dye being precipitated as yellowish flocks by an acid; soluble in concentrated sulfuric acid with an orange color; being destroyed by strong reducing agents yielding 2.4.6-triaminophenol and a 4-acidylamino-2-aminophenol.

2. The hereindescribed monoazo dye deriving from diazotized picramic acid and 4-acetylaminophenol, in the free state corresponding to the formula:



in the shape of pulverized dry sodium salt being a blackish powder, soluble in hot water with an orange color, becoming more reddish by addition of soda lye, the dye being precipitated as yellowish flocks on the addition of an acid; soluble in concentrated sulfuric acid with an orange color; being destroyed by strong reducing agents yielding 2.4.6-triaminophenol and 4-acetylamino-2-aminophenol.

1,219,955. QUADRUPLEX TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed Oct. 10, 1911, Serial No. 653,823. Renewed Dec. 30, 1916. Serial No. 139,965. (Cl. 178—55.)



1. In quadruplex telegraphy, a line of transmission, a bridge for each terminal of said line, two local receiving stations for the cross circuit of each of said bridges, one line relay for the cross circuit of each of said bridges, both receiving stations of each bridge operatively related to said line relay, and means for said relay to disrupt both local circuits when two messages are being received.

2. The method of telegraphing, which consists in impressing on the line impulses of opposite polarity, thereby causing a line relay, when no signal is being transmitted, to vibrate in quick succession, depressing the impulses of one polarity when one message is being received to cause the relay to close one of two translating circuits, and depressing the impulses of both polarities when two messages are being received to cause said relay to disrupt both translating circuits.

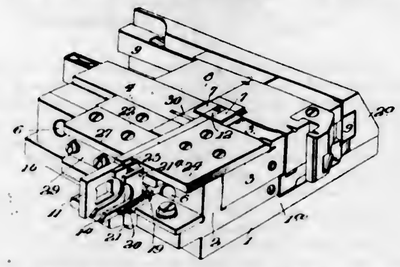
3. The method of telegraphing, which consists in impressing alternately two polarities upon the line to denote that no message is transmitted, causing said alternations to vibrate a line relay in operative relation to two local translating circuits, and depressing both polarities to denote that two messages are transmitted simultaneously and thereby causing said relay to disrupt both translating circuits.

4. The method of telegraphing, which consists in impressing upon the line a practically uninterrupted current of one polarity to denote the character of one message, impressing upon the line a practically uninterrupted current of opposite polarity to denote the character of a second message, causing said opposite polarities to separately energize two translating circuits, disrupting the line from the translating means to denote the characters of two simultaneous messages, and causing said disruption to deënergize both translating circuits.

5. In quadruplex telegraphy, a line of transmission, a bridge for said line, a single line relay inserted in the cross circuit of said bridge, two local translating circuits operatively related to said line relay, and means for said line relay upon the receipt of positive pulses to energize one of said translating circuits, upon receipt of negative pulses to energize the other of said translating circuits, and upon receipt of two messages to deënergize both of said translating circuits.

[Claims 6 to 10 not printed in the Gazette.]

1,219,956. TYPE-MOLD. AMOS L. KNIGHT, Philadelphia, Pa., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Sept. 8, 1915. Serial No. 49,457. (Cl. 199—93.)



1. A type mold embodying blocks forming walls of the mold cavity and an adjustable sectional mold blade the sections whereof are pivotally connected whereby they are free to swing laterally with respect to each other.

2. A type mold embodying blocks forming walls of the mold cavity and an adjustable sectional mold blade, the sections whereof are pivotally connected for independent lateral movement and detachable connecting means for effecting simultaneous longitudinal movement of the sections.

3. A type mold embodying blocks forming walls of the mold cavity, a sectional mold blade embodying main and supplemental sections, a carrier for the supplemental section, a latch intermediate the carrier and main section and a pivotal connection intermediate the supplemental section and carrier.

4. A type mold embodying blocks forming walls of the mold cavity, a sectional mold blade embodying main and supplemental sections, a carrier for the supplemental section, a latch intermediate the carrier and main section and loose connections intermediate the carrier and supplemental section whereby the latter is free to be guided by the blocks.

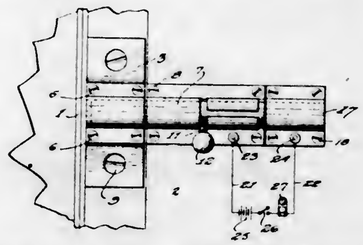
5. A type mold embodying blocks forming walls of the mold cavity, a mold blade carrier mounted in ways to move toward and from the mold cavity, and a mold blade pivotally connected with the carrier and movable between the blocks for varying the size of the cavity.

[Claims 6 to 23 not printed in the Gazette.]

1,219,957. BURGLAR-ALARM. THEOPHIL KOSCHADE, North Adelaide, South Australia, Australia. Filed Feb. 12,1914. Serial No. 818,339. (Cl. 200—30.)

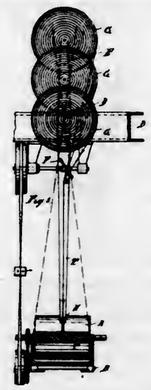
1. A burglar alarm device for doors or windows to be used in connection with an electric circuit comprising a positive locking means including a keeper on the sash and a bolt sheath on the frame, a bolt in said sheath adapted to be shot into said keeper, a tubular circuit-closing member connected with one conductor of the circuit and disposed in alinement with said sheath to receive the bolt when the same is moved toward an unlocking position, and means for connecting another conductor of the circuit with said sheath for closing circuit through said bolt when the same is moved toward an unlocking position.

2. A burglar alarm device for doors or windows to be used in connection with an electric circuit comprising a bolt sheath to be connected with one of the members to be held and connected in one of the wires of the circuit, a bolt keeper mounted on the second member to be fastened in alinement with said bolt sheath, a bolt mounted in said sheath to be capable of movement into and out of



said keeper, and an element mounted in alined proximity to said sheath and insulated therefrom and connected with the remaining wire of the circuit, the parts being arranged in a relation that as the bolt is moved into the locked relation with the keeper contact with said element is precluded and as the bolt is moved to the released position the element is engaged and the circuit is completed.

1,219,958. MACHINE FOR MAKING A WEAVABLE PAPER STRIP. RUDOLF KRON, Thalheim, Erzgebirge, Germany. Filed July 30, 1914. Serial No. 854,199. (Cl. 28—21.)

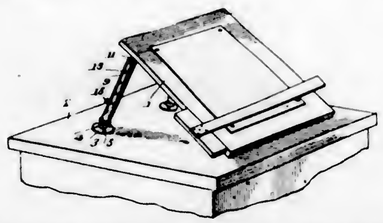


1. Machine for making a weavable strip of paper comprising a rocking lever, at the upper end of said rocking lever a reel carrying the flat paper strip, at the lower end of said rocking lever a doubling nozzle, means for conducting said paper strip from said reel to said doubling nozzle, a winding gear at the lower end of the machine adapted to wind the doubled paper strip emerging from said doubling nozzle, means for rocking said lever to and fro in front of said winding gear and means for compressing the doubled strip emerging from said nozzle to a flat strip before it is finally wound on the reel.

2. A machine for making a weavable strip of paper composed of several layers, comprising a rocking lever, at the upper end of said rocking lever reels carrying the flat paper strips to compose the final strip, at the lower end of said rocking lever a doubling nozzle, means for conducting said paper strips from said reels to said doubling nozzle, a winding gear at the lower end of the machine adapted to wind the doubled, multiple layered paper strip emerging

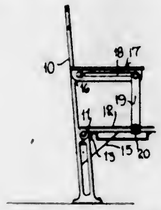
from said doubling nozzle, means for rocking said lever to and fro in front of said winding gear and means for compressing the doubled multiple layered paper strip emerging from said nozzle to a flat strip before it is finally wound on the reel.

1,219,959. DRAWING-BOARD ATTACHMENT. LOUIS R. KRUGER, Chicago, Ill. Filed Mar. 18, 1914. Serial No. 825,722. (Cl. 45—131.)



In a drawing board attachment, the combination with a base, of a supporting rod comprising hollow telescopic sections, providing means for adjusting the length of said rod, a universal member mounted upon the base and provided with a slip connection with the lowermost section of the rod, and an attaching plate secured to the underside of the board and having a hollow boss depending centrally therefrom to provide a slip connection between the uppermost section of the said rod and the plate, whereby the telescopic rod may be removed from the board and base.

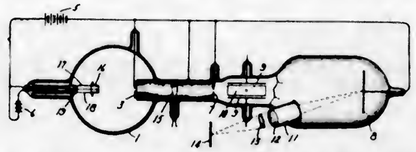
1,219,960. FOLDING CHAIR. LEANDER A. LAGERSTROM, Branford, Conn. Filed May 3, 1916. Serial No. 95,195. (Cl. 155—13.)



1. In a chair of the character described, a back, a seat pivoted thereto for movement from a horizontal to a vertical position, means below the seat for supporting it in a horizontal position, an arm pivoted to the back and having a slot extending inward from its free end, a link operatively pivoted to the seat at a point in vertical alinement with the outer end of the arm when the latter is turned to a horizontal position, the upper end of said link having a pivot member having sliding engagement with the stop, said link having a length less than the length of the arm, and means for resisting the forward movement of the link about its pivotal connection with the seat when the latter is raised.

2. A theater chair comprising a back disposed in approximately one plane, legs extending downward from the lower end of the back, said legs being disposed in planes at right angles to the plane of the back and projecting forward slightly beyond the back, a seat having its rear end pivoted between said legs at the upper end thereof, a seat support, supporting the seat in a horizontal position, a lug projecting out from the back above the pivotal connection on the seat, an arm having a side face disposed against the outside face of said lug and pivoted thereto, said arm having a slot extending inward from the free end of the arm, a link operatively pivoted to the seat and having a pivot member at its upper end having sliding engagement in said slot of the arm, said link being less in length than the length of the arm and being pivoted to the seat in vertical alinement with the outer end of the arm when the latter is turned to a horizontal position, and means for resisting rearward movement of the pivot member in said slot when the arm is raised.

1,219,961. MEANS FOR INDICATING ELECTRICAL CHARACTERISTICS OF ALTERNATING CURRENTS. IRVING LANGMUIR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 20, 1914. Serial No. 852,118. (Cl. 171—95.)



1. The combination in a vacuum tube of an electron emitting cathode, a perforated anode and a screen having a surface which gives off light under the influence of cathode rays, means for producing a discharge of cathode rays to said anode, and means for directing a portion of said cathode rays through the perforation in said anode and causing them to pass to said screen.

2. The combination in a vacuum tube of an electron emitting cathode, an anode having a surface which gives off light under the influence of cathode rays, a source of energy for producing cathode rays, a pair of plates between said cathode and said anode having perforations through which a portion of the cathode rays may pass, means for maintaining the velocity and direction of travel of said rays between said plates constant, and means for deflecting the cathode rays after they have passed through the said perforations to produce a moving spot of light on the anode.

3. The combination in a vacuum tube of an electron emitting cathode, a perforated anode, a second anode having a surface which gives off light under the influence of cathode rays, and means for directing a uniform pencil of cathode rays through the perforated anode to the second anode.

4. The combination in a vacuum tube of an electron emitting cathode, an anode having a surface which gives off light under the influence of cathode rays, a pair of plates between said cathode and said anode having perforations through which a portion of the cathode rays may pass, means for maintaining the velocity and direction of travel of said rays between said plates constant, and means for deflecting the cathode rays after they have passed through the said perforations to produce a moving spot of light on the anode.

5. The combination in a vacuum tube, of an electron emitting cathode, an anode having a surface which gives off light under the influence of cathode rays, a pair of plates having perforations through which a portion of the cathode rays may pass between said cathode and said anode, a conducting body surrounding the path of said rays between said plates and a source of energy for maintaining a positive electrical potential upon said conducting body.

[Claims 6 to 17 not printed in the Gazette.]

1,219,962. WINDOW-SCREEN. EARL R. LEARY and RALPH W. PILLSBURY, Scarboro, Me. Filed Apr. 7, 1915. Serial No. 19,644. (Cl. 156—14.)

1. A window screen including a guide strip secured to the inner edge of the outer casing, a screen frame fitting against the outer face of said casing and an extensible filling strip on said frame for closing the opening between said frame and the lower rail of the upper sash.

2. A window screen including a guide strip secured to the inner edge of the outer casing, a screen frame fitting against the outer face of said casing and an extensible filling strip on said frame for closing the opening between said frame and the lower rail of the upper sash.

3. A window screen including a guide strip secured to the inner edge of the outer casing, a screen frame fitting against the outer face of said casing and an extensible filling strip on said frame for closing the opening between said frame and the lower rail of the upper sash, the ends of said strip being formed to engage the said guide strips.

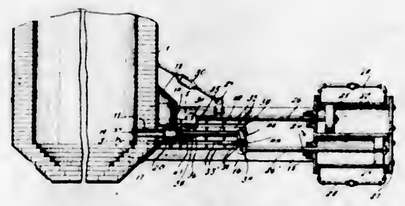
4. A window screen including a guide strip secured to the inner edge of the outer casing, a screen frame fitting against the outer face of said casing and an extensible filling strip for closing the opening between the frame and the lower rail of the upper sash, one end of said filling strip being formed by a spring pressed locking section adapted to engage the guide strip to hold the frame in place.

5. A window screen including a guide strip on the inner edge of the outer casing, a screen frame fitting against the outer face of said casing, a filling strip on said frame for filling the space between the frame and the lower rail of the upper sash, said filling strip having an extensible end adapted to engage the guide strip and a spiral spring interposed between said extensible end and the body of the filling strip.

[Claims 6 and 7 not printed in the Gazette.]



1,219,963. PUNCHING-MACHINE. HENRY LEFEBVRE, Douglas, Ariz., assignor of one-half to Manuel Elias Lucero, Douglas, Ariz. Filed Oct. 21, 1915. Serial No. 57,145. (Cl. 266—42.)



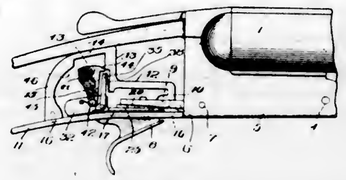
1. A punching device of the class described comprising a frame, said frame provided with an upper and a lower track, a transversely extending bar working in each track, a series of punching bars supported upon each transversely extending bar, each set of punching bars being arranged in staggered relation, and means for reciprocating said punching rods upon said frame.

2. A punching machine of the class described comprising a frame, an upper and lower track, a transversely extending bar secured to each track, punching rods secured to each transversely extending bar, the bars carried by the upper and lower transversely extending bars being arranged in alternate spaced relation, means for reciprocating said transversely extending bars upon said track, and guiding means for directing said punching bars into the converter.

3. In combination with a converter provided with twyers, of a frame, a plurality of tracks carried by said frame, a transversely extending bar working in each track, punching bars secured to each transversely extending bar, and said bars working alternately with respect to each other for causing one half of the air blast to remain effective during operation.

4. In combination with a converter provided with twyers, of a frame, a plurality of tracks carried by said frame, a transversely extending bar working in each track, punching bars secured to each transversely extending bar, punching bars carried by one transversely extending bar fitting between the punching bars of the other transversely extending bar, and means for alternately reciprocating the different series of punching bars for causing at least one half of the air blast to remain effective during operation.

1,219,964. GUN-LOCK. FRANK C. LEFLER, Rochester, N. Y. Filed Nov. 18, 1914. Serial No. 872,728. (Cl. 42—42.)



1. A double barrel gun having in combination, two sears, one for each barrel, a single trigger for successively operating the sears, a spring acting on the trigger to hold it against return movement after operating one of the sears, and a stop action for the first operation of the trigger, releasing the latter when pressure is relieved on the trigger during the rearward movement of the gun due to recoil.

2. A double-barrel gun having, in combination, two sears, one for each barrel, a trigger, a lifter operated by the trigger to operate the sears successively, a shoulder on the frame of the gun, a detent movably mounted on the lifter and operated by the trigger to engage said shoulder when the trigger is pulled to fire the first barrel, a spring for moving said detent out of engagement with the shoulder when pressure is relieved on the trigger during the rearward movement of the gun due to recoil and a spring acting to prevent the return movement of the trigger when pressure is relieved thereon.

3. A double barrel gun having, in combination, two sears, one for each barrel, a trigger, a lifter operated by the trigger and operating the sears successively, a pivoted detent on the lifter, engaged by the trigger, a straight shoulder on the frame of the gun adapted to be engaged by the detent and extending in a line parallel with the longitudinal axis of the gun, a spring for moving said detent out of engagement with the shoulder when pressure is relieved on the trigger during recoil, and a spring acting on said trigger to prevent the return of the trigger when pressure is relieved thereon.

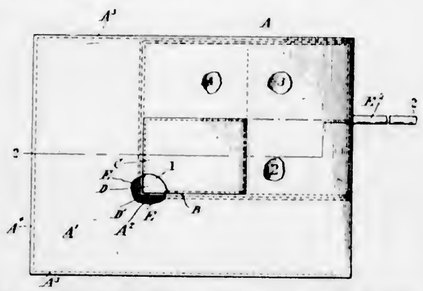
4. A double barrel gun having, in combination, two sears, a single trigger for successively operating the sears, a stop action for the first action of the trigger, releasing the latter when pressure is relieved on said trigger during the rearward movement of the gun due to recoil, a shoulder on the frame of the gun, a stop movable rearwardly by the rebound of the gun to engage such shoulder to prevent firing by pressure of the trigger during rebound, and

a spring for moving said stop forwardly out of stopping position after rebound.

5. A double barrel gun having, in combination, two sears, operating mechanism for successively operating the sears and embodying a single trigger, a stop action controlled by the trigger, a fixed shoulder on the barrel, a detent movable rearwardly to engage the fixed shoulder during the forward movement of the gun due to the rebound, to prevent firing by pressure on the trigger during rebound.

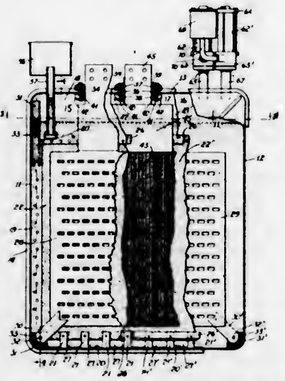
[Claims 6 and 7 not printed in the Gazette.]

1,219,965. PLATE-HOLDER FOR X-RAY EXPOSURES. HENRY G. LEISENRING, San Diego, Cal. Filed May 2, 1916. Serial No. 94,960. (Cl. 250—34.)



A device for taking X-ray photographs, comprising a metallic casing having a single open side, a covering of material, impervious to X-rays, upon the casing, said casing having registered openings in the opposite walls thereof, a plate of X-ray penetrable material placed over one of said wall openings, a plate holder adapted to retain a sensitized plate therein, a handle adapted to be placed around said plate holder and projecting from the same, said plate holder being adapted to be moved laterally and longitudinally within the casing to bring a plate carried thereby between said openings.

1,219,966. ELECTROLYTIC GAS-GENERATOR. ISAAC H. LEVIN, Newark, N. J. Filed Nov. 18, 1916. Serial No. 132,211. (Cl. 204—5.)



1. An electrolytic gas generator having an electrolyte chamber and a gas outlet, and means whereby liquid can be supplied to the electrolyte chamber through the gas outlet.

2. In an electrolytic gas generator having an internal liquid containing compartment, and a gas outlet leading therefrom; a liquid sealing device included in said gas outlet; and means whereby liquid may be supplied to said liquid containing compartment through said liquid sealing device.

3. In an electrolytic gas generator having an internal liquid containing compartment, and a gas outlet conduit leading therefrom; a liquid sealing device included in said gas outlet conduit; means whereby liquid may be supplied to said liquid sealing device; and a liquid supply conduit leading from said liquid sealing device and discharging into said internal compartment, and through which liquid may be supplied to said compartment.

4. In an electrolytic gas generator having an internal compartment adapted to contain a liquid, and a gas chamber above said compartment; a water chamber located above said compartment; a gas outlet passage leading from said gas chamber into, and the upper end of which is sealed by, the water in said water chamber; a gas outlet conduit leading from said water chamber; means for supplying water to said water chamber; and means for conducting water from said water chamber into said electrode compartment.

5. In an electrolytic gas generator having an electrode compartment within which a gas is produced; a water chamber located above said compartment; a gas outlet passage through which the gas produced in said electrode compartment passes, and the discharge end of which is sealed by the water in said water chamber; a gas outlet conduit leading from said water chamber; a water supply conduit leading into, and through which water is supplied to said water chamber; and a water supply passage leading from said water chamber and through which water is supplied to said electrode compartment.

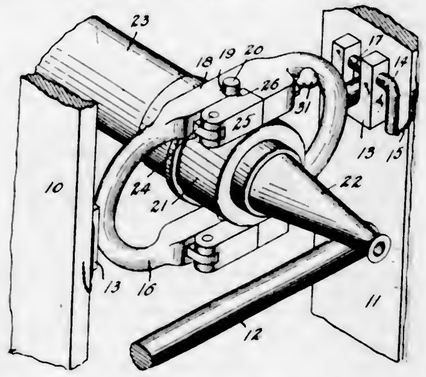
[Claims 6 to 56 not printed in the Gazette.]

1,219,967. SULFONATED PALMITIC COMPOUND. IVAN LEVINSTEIN, Manchester, England, assignor to Company of Levinstein Limited, Manchester, England. Filed Feb. 12, 1913. Serial No. 748,037. (Cl. 87—6.)

1. As a new article of manufacture, a waxy or like product soluble or miscible in water composed of paraffin wax and a sulfo acid of palmitic fat, the sulfo acid having been prepared by melting fat, treating the melted fat with sulfuric acid under heat and quickly washing after the reaction, substantially as set forth.

2. As a new article of manufacture, a waxy or like product soluble or miscible in water composed of paraffin wax and a salt of a sulfo acid of palmitic fat, the sulfo salt having been prepared by melting fat, treating the melted fat with sulfuric acid under heat and the sulfo acid produced with a base, substantially as set forth.

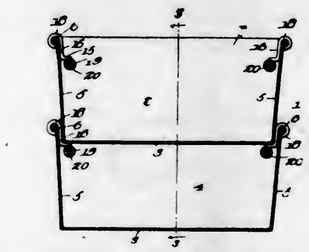
1,219,968. FIRE-HOSE CLAMP. WILLIAM J. LORCH, Cornwall-on-the-Hudson, N. Y. Filed Apr. 25, 1916. Serial No. 93,364. (Cl. 248—28.)



1. In a device of the character described, the combination of a pivotally mounted yoke having oppositely arranged arms each provided with a thickened portion and an axial bore in such thickened portion, a keeper plate pivotally mounted adjacent each thickened portion, a spring pressed plunger in said keeper plate adapted to be forced into the bore of the adjacent thickened portion of the arm, and each thickened portion and keeper plate having a groove therein adapted to receive the stud of a hose bib.

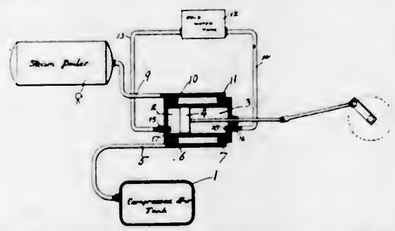
2. In a device of the character described, the combination of a pivotally mounted yoke having oppositely arranged arms each provided with a thickened portion having an axial bore therein, a keeper plate pivotally mounted adjacent each thickened portion, a spring pressed plunger axially reciprocable in each keeper plate and adapted to be forced into the bore of the adjacent thickened portion, there being a semi-circular groove in each thickened portion and each keeper plate, said grooves being complemental to each other and adapted to pivotally support the stud of a hose bib, studs projecting from opposite ends of said yoke, and sockets in which said studs are pivotally supported.

1,219,969. BASKET. WILLIAM A. J. LOWE, Bristol, Tenn., assignor of one-half to George W. Overstreet, Bristol, Tenn. Filed Oct. 10, 1916. Serial No. 124,881. (Cl. 220—30.)



A basket having graduated side and end walls, a spring finger connected with one of said end walls, U-shaped bails connected with the end walls of the basket for turning movement and adapted to be arranged within the basket to provide a support, L-shaped arms on said bails for contact with the end walls of the basket, off-set portions in said bails, and hand grips mounted on said bails and arranged in said off-set portions.

1,219,970. PROCESS FOR CONVERTING STEAM HEAT OF A LIQUID INTO MOTIVE FORCE. KARL PRINZ ZU LÖWENSTEIN, Kleingemünd, near Neckargemünd, Germany. Filed July 11, 1916. Serial No. 108,738. (Cl. 60—9.)



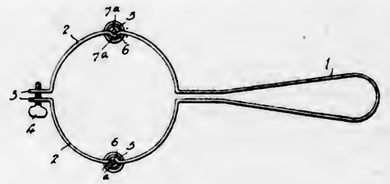
1. The process substantially as described, which consists in supplying a compressed fluid to an engine, admitting a heat carrier to said engine, allowing the fluid and heat carrier to expand, causing the fluid to absorb the heat of said carrier, and finally recompressing the fluid and returning it to its source of supply.

2. The herein described process for developing motive power, consisting in supplying a compressed fluid and a heat carrier to an engine, allowing the fluid and heat carrier to expand and develop power, re-compressing the fluid after expansion, supplying a cooling agent during the re-compression, and returning the re-compressed fluid to its source of supply, substantially as described.

3. A process for converting the steam heat of a liquid into motive force, consisting in admitting compressed gas into a working space, cutting off the gas supply, admitting steam to the gas confined in the working space, allowing the steam to condense, using the latent heat of said steam to increase the heat of the compressed gas, causing the gas to perform work and escape to the gas supply.

4. A process for converting the steam heat of a liquid into motive force, consisting in admitting compressed gas into a working space, cutting off the gas supply, admitting steam to the gas confined in the working space, allowing the steam to condense, using the latent heat of said steam to increase the heat of the compressed gas, causing the gas to perform work, and using said charge of gas to expel the preceding charge out of the working space and press it to the gas supply again.

1,219,971. CAN-OPENER. EDWIN LUTZ, Munith, Mich. Filed Aug. 11, 1916. Serial No. 114,348. (Cl. 30—3.)



1. A can opener including a handle, a pair of opposed curved jaws carried by the handle and adapted to fit laterally around the sides of a can body, cutting wheels carried by the jaws and projecting inwardly therefrom, and means for forcibly drawing the jaws toward each other to bring the cutting wheels into operative engagement with the can.

2. A can opener including a looped handle, a pair of opposed curved jaws carried by the respective arms of the looped handle and adapted to fit around the body of a can, cutting wheels carried by the jaws and projecting inwardly therefrom, and means at the free ends of the jaws for forcibly drawing the jaws toward each other to bring the cutting wheels into operative engagement with the can.

3. A can opener including a handle, a pair of opposed curved jaws carried by the handle and adapted to fit around the body of a can, said jaws having openings therein and being provided with longitudinal slits on opposite sides of the opening, the portions of the material adjacent the longitudinal slits being crimped laterally in opposite directions, spindles extending across the openings and received within the said crimped portions of the material, cutting wheels journaled upon the spindles and arranged within the openings so as to project inwardly from the jaws, and means for forcibly drawing the jaws toward each other to bring the cutting wheels into operative engagement with the can.

4. A can opener including a looped handle, a pair of opposed curved jaws carried by the respective arms of the looped handle and adapted to fit around the sides of a can body, an adjustable connection between the arms of the looped handle for setting them at different distances apart, cutting wheels carried by the curved jaws and projecting inwardly therefrom, and means at the free ends of the jaws for forcibly drawing the jaws toward each other to bring the cutting wheels into operative engagement with the can.

5. A can opener including a looped handle, a pair of opposed curved jaws carried by the respective arms of the looped handle and adapted to fit around the body of a

can, a latch strip extending across the looped handle and having a series of notches any selected pair of which is adapted to be placed in engagement with the arms of the looped handle to set them at a proper distance apart for the size of can to be operated upon, the ends of the latch strip having hook members adapted to be sprung into engagement with the jaws to hold the strip in position, cutting wheels carried by the jaws and projecting inwardly therefrom, and means at the free ends of the jaws for forcibly drawing the jaws toward each other to bring the cutting wheels into operative engagement with the can.

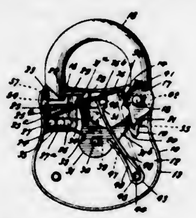
[Claim 6 not printed in the Gazette.]

1,219,972. EYE-SHIELD ATTACHMENT FOR CAPS. CLARENCE H. MCCAUGHEY, Rock Rapids, Iowa. Filed Sept. 30, 1916. Serial No. 123,110. (Cl. 2—149.)



In combination with a head covering, an attaching device comprising a rigid bar secured to the head covering and having the opposite ends thereof terminating in angularly disposed apertured pivot ears, the confronting faces of said ears being formed with grooves, an expansible frame, pintles formed on the frame and mounted in the apertures of said ears, said frame being engageable with the grooves to lock the same in folded position, and an eye shield carried by the frame.

1,219,973. LOCK. IRA A. MCCORMACK, New York, N. Y. Filed Aug. 24, 1915. Serial No. 47,083. (Cl. 116—62.)



1. In a lock with a casing having a shackle adapted to be moved inwardly and outwardly through an opening in the casing, and the said casing being provided with mechanism for locking and unlocking the shackle, an alarm removably carried in the casing, means in the casing, operable for sounding the alarm, and a member on the casing, manually adjustable for operating the alarm sounding means as well as for operating the mechanism to unlock the shackle when locked.

2. In a lock with a casing having a shackle adapted to be moved inwardly and outwardly through an opening in the casing, and the said casing being provided with mechanism for locking and unlocking the shackle, an alarm removably carried in the casing, spring actuated means in the casing, operable for sounding the alarm, and a member on the casing, manually adjustable for operating the spring actuating means and for subsequently operating the mechanism to unlock the shackle when locked.

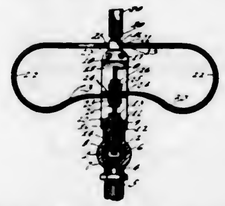
3. In a lock with a casing having a shackle adapted to be moved inwardly and outwardly through an opening in the casing, and the casing being provided with mechanism for locking and unlocking the shackle, means in the casing for permitting an explosive to be removably carried therein, means in the casing, operable for exploding the explosive, and a member on the casing, manually adjustable for operating the exploding means as well as for operating the mechanism to unlock the shackle when locked.

4. In a lock with a casing having a shackle adapted to be moved inwardly and outwardly through an opening in the casing, and the said casing being provided with mechanism for locking and unlocking the shackle, an alarm removably carried in the casing, means in the casing, operable for sounding the alarm, a member on the casing, manually adjustable for operating the alarm sounding means as well as for operating the mechanism to unlock the shackle when locked, and a fragile seal detachably held on the casing so that the seal will be required to be broken to permit the adjustable member to be operated.

5. In a lock with a casing having a shackle adapted to be moved inwardly and outwardly through an opening in the casing, and the said casing being provided with mechanism for locking and unlocking the shackle, an alarm removably carried in the casing, spring actuated means in the casing, operable for sounding the alarm, a member on the casing, manually adjustable for operating the spring actuating means and for subsequently operating the mechanism to unlock the shackle when locked, and a fragile seal detachably held on the casing so that the seal will be required to be broken to permit the adjustable member to be operated.

[Claims 6 to 12 not printed in the Gazette.]

1,219,974. PRESSURE-REGULATOR. CHARLES R. MCDONALD, Long Beach, Cal. Filed Nov. 27, 1915. Serial No. 64,787. (Cl. 50—15.)



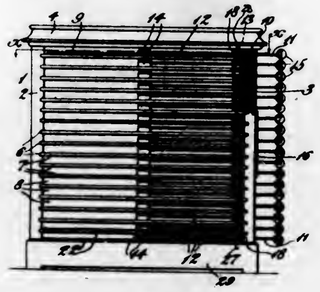
1. In a device of the character described, the combination of a pressure supply valve connected with the supply and service lines and having an extended valve stem, supporting means carried by said valve having an expansible and contractible pressure regulating tube held thereon, said tube being open and rigidly connected with the service line at one end, closed at the other end and adjustably and loosely connected with said valve stem, for permitting the movement of the tube relative to the valve stem when the tube is expanded and contracted.

2. In a device of the character described, the combination of a supply valve having an extended valve stem, a bracket supported thereon and rigidly attached thereto, an expansion tube connected with the service line from said valve and rigidly held on said bracket at one end, and means for loosely connecting the other end of said tube with said valve stem so as to render the lower end of the tube movable on the stem, for regulating the pressure in the service line.

3. In a device of the character described, the combination of a supply and a service pipe having a valve interposed therebetween, an extended valve stem in said valve, a bracket attached to the valve body, a pressure tube adjustably held on said valve stem at one end and capable of movement on said stem during the expansion and contraction of the tube, said tube being open at one end and connected with the service pipe and closed at the other end and supported at the open end on said bracket, and means on said valve stem for adjusting the position of the movable end of the tube, for regulating the pressure in the service pipe.

4. In a device of the character described, the combination with the valve body and the supply and discharge pipes connected therewith, of a removable valve head insertible in said body and substantially extended therebeyond, a bracket rigidly carried on said extension and removable therefrom, a valve stem movable in said body and said head and extended substantially above said head, there being a chamber formed on the upper portion of said bracket in communication with said discharge pipe, expansion tubes connected with said chamber at their upper ends and movably held on said valve stem at their lower ends, and means on said valve stem for adjusting the position of said tubes relative to and on said stem, for regulating the operation of said valve, as described.

1,219,975. PHONOGRAPHIC-DISK-RECORD CABINET. CECILIA D. MCVAY, Philadelphia, Pa. Filed Dec. 31, 1915. Serial No. 69,529. (Cl. 211—16.)



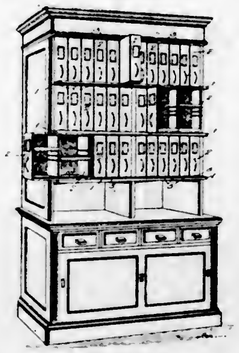
1. In a phonographic disk record cabinet, a casing having a series of superimposed substantially-horizontal phonographic-record receiving compartments, a plurality of substantially-horizontally-movable ejector devices, one for each of said compartments and guides on said casing for insuring the horizontal oscillation of said ejector devices, said ejector devices being movable in said guides and having their inner ends located in said compartments and movable in parallelism therewith and their outer ends projecting therefrom.

2. A phonographic disk having record cabinet, comprising a casing provided with a series of horizontal compartments, a portion of said casing having a vertical series of slots therein, in proximity to said compartments, a plurality of oscillatory ejector levers supported within said casing and having their inner terminals, laterally movable in parallelism with the shelf of the alining compartment, the outer terminals constituting finger-pieces for stand ejector levers, a single rod serving as a fulcrum and passing vertically through said levers, and spacing devices carried by said rod and interposed between said levers.

3. A phonographic disk record cabinet, comprising a casing provided with a series of substantially-horizontal compartments, a portion of said casing having a vertical series of slots therein, in proximity to said compartments, a plurality of oscillatory ejector levers supported in said slots and having their inner terminals substantially-horizontally-movable in parallelism with the shelves of the alining compartments, the outer terminals constituting operating members for said ejector levers and a single rod serving as a fulcrum and passing vertically through said levers.

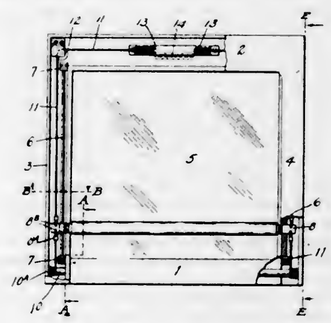
4. A phonographic disk record cabinet, comprising a casing provided with a series of horizontal compartments, a portion of said casing having a series of slots therein in alinement with said compartments and a plurality of laterally movable ejector levers pivotally supported in proximity to said slots, one portion of each of said ejector levers projecting outside of said slots and provided with finger pieces and the inner terminals of said ejector levers extending into their proper compartments and adapted to contact with the rear edge of the records placed therein.

1,219,976. DRUGGIST'S CABINET. HENRY LOUIS MARBURGER, Baltimore, Md., assignor of one-half to Reinle-Salmon Company, Baltimore, Md. Filed Apr. 4, 1916. Serial No. 88,873. (Cl. 45—95.)



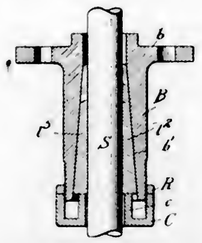
A druggist's cabinet, comprising a series of horizontal shelves, longitudinally slotted, metal guide-bars secured to, and spaced from, the under and upper sides of adjacent shelves and projecting beyond the front of the cabinet; slidable drawers having longitudinal grooves at top and bottom for the reception of said guide-bars; and headed bolts which serve as pivots and also as means for securing the drawers to the guide-bars, permitting the drawers to swing laterally in extended position, as described.

1,219,977. WINDOW-CLEANER. ANDREW MARTIN, New York, N. Y. Filed Oct. 26, 1916. Serial No. 127,836. (Cl. 15—59.)



In a device of the character described for use in connection with window sashes combined with a pane, a horizontal spring actuated roller adapted to have its axis journaled below the pane in the sash, said roller being formed with flanges on its opposed ends, guide rollers adapted to be secured in the sash one on each side of the pane above and at right angles to said roller, a bar approximately equal in length to the roller slidable on the guides in parallel relation to said roller, said bar being formed with a longitudinal channel in its top, said channel being adapted to contain a liquid, a textile adapted to absorb liquid by molecular action mounted around the bar, with a portion immersed in the liquid, means for clamping the textile in the channel, means adapted to wind upon the flanged ends of the roller connecting said ends with the ends of the bar beyond the outer sides of the rods, and means connected with said bar opposite said connecting means for elevating the bar from the roller, as and for the purposes described.

1,219,978. SHAFT-BEARING. HENRY CLARENDON MASTERS, Hamilton, Bermuda. Filed July 7, 1915. Serial No. 38,523. (Cl. 64—55.)



1. A shaft bearing comprising a box with a tapered polygonal bore, and a sleeve or liner composed of a plurality of tapered slips assembled in the bore with their inner faces forming a cylindrical bearing surface, together with means attached to the box in overlapping relation to the tapered walls of the bore to force said slips into the bore around the shaft.

2. A shaft bearing comprising a box with a tapered polygonal bore, and a sleeve or liner composed of a plurality of tapered slips assembled in the bore with their inner faces forming a cylindrical bearing surface, together with a cap ring attached to the box in overlapping relation to the tapered walls of the bore and adapted to be forced against the ends of all the slips to wedge them tightly into the bore and around the shaft.

3. A shaft bearing comprising a box with a tapered polygonal bore, and a sleeve or liner composed of a plurality of tapered slips assembled in the bore with their inner faces forming a cylindrical bearing surface, together with a cap ring threaded on the outside of the end of the box and having an internal flange surrounding the shaft and abutting against the ends of all the slips, and adapted to wedge the same tightly into the bore and around the shaft as the ring is screwed down.

4. A shaft bearing comprising a box with a tapered polygonal bore, and a sleeve or liner composed of a plurality of tapered slips assembled in the bore with their inner faces forming a cylindrical bearing surface, together with a cap ring threaded on the outside of the end of the box and having an internal flange surrounding the shaft and abutting against the ends of all the slips, and adapted to wedge the same tightly into the bore and around the shaft as the ring is screwed down, and locking means for said cap.

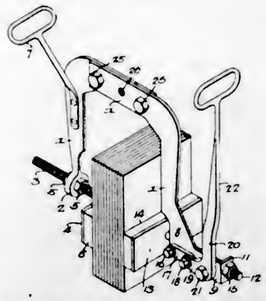
5. In combination with a journal box having a tapered bore, a bearing sleeve or liner composed of interchangeable sections or slips, each tapered all over and a follower for said slips engaging said journal box in overlapping relation to the walls of said tapered bore.

1,219,979. BATTERY-TONGS. MARTIN MELIA, Philadelphia, Pa., assignor to Commercial Truck Company of America, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 19, 1915. Serial No. 15,555. (Cl. 57—9.)

1. A battery tongs consisting of a rigid U-shaped frame; two clamping jaws respectively mounted adjacent the ends of the arms of said frame; with a toggle connected between one branch of the frame and one of the jaws and including an operating arm for forcibly moving said jaw toward the second jaw, said arm having a portion formed as a carrying handle.

2. A battery tongs consisting of a U-shaped frame of which the end of one of the arms is laterally extended; a bar slidably guided in said end extension; a jaw carried by said bar; a second jaw carried by the other arm of the frame; with means for forcibly moving said bar with its jaw toward the other jaw and thereafter holding it in a clamping position.

3. A battery tongs consisting of a U-shaped frame of which the end of one of the arms is laterally extended; a bar slidably guided in said end extension; a jaw carried by said bar; a second jaw carried by the other arm of the frame; members constituting a toggle mounted on the frame and operatively connected to said slidable bar; and an arm for actuating said toggle.

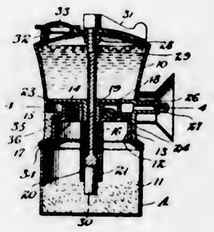


4. A battery tongs consisting of a U-shaped frame; a bar longitudinally adjustable in the end of one of the arms of said frame; a second bar slidably mounted in the end of the second arm of the frame; jaws respectively mounted on said bars; and means for forcibly moving the second bar into and locking it in a given position.

5. A battery tongs consisting of a substantially U-shaped frame having the end of one of its arms laterally extended and provided with projecting lugs; a bar slidable in openings in said lugs; a second bar mounted at the end of the other arm of the frame; two blocks forming clamping jaws and respectively mounted on said bars; with means for forcibly moving the first of said bars with its jaw toward the other jaw.

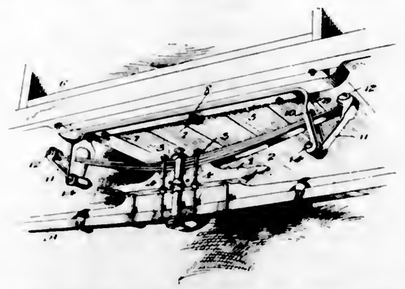
[Claims 6 to 8 not printed in the Gazette.]

1,219,980. ACETYLENE-LAMP. JOSEPH MESSINA, Bonld, Ill. Filed Aug. 10, 1915. Serial No. 44,767. (Cl. 48—4.)



A carbid lamp including a water receptacle, a carbid container detachably connected with said receptacle, the water receptacle being formed to provide a water containing section, and a gas circulating chamber arranged below said water containing section and closed against the same, a water delivery tube extending from the water section of the receptacle through and beyond the gas chamber, a gas receiver comprising an independent element centrally formed with a sleeve-like extension to encircle the tube and adapted to be removably connected with said tube, and an annular hollow head carried by the sleeve extension, and fitting within the gas chamber, said annular head having a transverse partition, and being formed with an opening on one side of said partition to establish communication between the head and carbid container, and an opening on the opposite side of the partition to establish communication between the head and gas chamber, and a wick arranged in the head with its terminals on opposite sides of the partition, and immediately adjacent the respective openings.

1,219,981. MEANS FOR FASTENING SPRINGS TO VEHICLES. WILLIAM H. MILLER, Fairbank, Iowa. Filed May 11, 1916. Serial No. 96,834. (Cl. 267—27.)

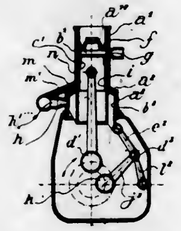


1. The combination of a spring and a rigid cross-bar, said cross bar having outwardly extending ends projecting beyond the terminals of the spring, the terminals of the spring extending beyond the outwardly extending ends of the cross-bar, and means pivotally connecting the terminals of the spring to the ends of the cross-bar for maintaining them in their proper relation to each other.

2. Means for fastening springs to vehicles, comprising a semi-elliptic spring and a rigid cross bar, said cross bar having outwardly extending ends projecting below the terminals of the spring, and means pivotally connecting the terminals of the spring to the ends of the cross bar and maintaining them in their proper relation to each other.

3. Means for fastening springs to vehicles, comprising a semi-elliptic spring and a rigid cross bar, said cross bar having outwardly extending bifurcated ends through which bifurcations the ends of the spring extend, and links pivotally connecting the ends of the springs to the ends of the cross bar.

1,219,982. INTERNAL-COMBUSTION ENGINE. CHARLES MAURICE PHILIPPE MONTBARBON, Neuilly-sur-Seine, and GUSTAVE EMILE CHÉDRU, Alfort, France; Henri Wael, Levallois-Perret, France, administrator of said Charles Maurice Philippe Montbarbon, deceased. Filed Jan. 8, 1914. Serial No. 811,030. (Cl. 123—65.)



1. A two-stroke internal combustion engine comprising a cylinder having portions of different sizes, the smaller portion forming a combustion chamber and the larger portion forming an annular pump chamber, pistons operative in the combustion and pump chambers, means of communication being provided between the pump chamber and combustion chamber, and means for operating the pump piston whereby fresh gases drawn in by the pump are transferred direct from the latter into the engine cylinder without having previous compression.

2. In an internal combustion engine, the combination of an engine cylinder having a piston working therein, a pump cylinder also having a pump piston working therein, means of communication being provided between the pump and engine cylinders, and the engine cylinder having means for exhausting gases therefrom, a sleeve movable with the pump piston and having ports controlling the means of communication between said pump cylinder and engine cylinder and the exhaust of the engine cylinder, a crank shaft operatively connected to the engine piston, and means driven by said shaft for reciprocating the pump piston and sleeve with a less stroke than the engine piston and causing said pump piston and sleeve to commence their return stroke slightly in advance of the return stroke of the engine piston to close the exhaust means when the engine piston commences its return stroke, and completing the return stroke of the pump piston and sleeve when the engine piston is approximately midway of its return stroke, said driving means comprising a rod pivoted at one end to said pump piston, a crank or eccentric on said shaft connected to the opposite end of said rod, and an arm connected at one end to the latter end of said rod and at its opposite end to a stationary pivot.

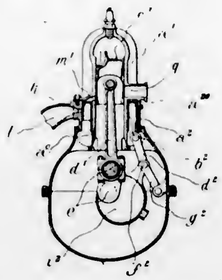
3. In an internal combustion engine, the combination of an engine cylinder having a piston working therein, a pump cylinder also having a pump piston working therein, means of communication being provided between the pump and engine cylinders, and the engine cylinder having means for exhausting gases therefrom, a sleeve movable with the pump piston and having ports controlling the means of communication between said pump cylinder and engine cylinder and the exhaust of the engine cylinder, a crank shaft operatively connected to the engine piston, and means driven by said shaft for reciprocating the pump piston and sleeve with a less stroke than the engine piston and causing said pump piston and sleeve to commence their return stroke slightly in advance of the return stroke of the engine piston to close the exhaust means when the engine piston commences its return stroke, and completing the return stroke of the pump piston and sleeve when the engine piston is approximately midway of its return stroke.

4. In an internal combustion engine, the combination of an engine cylinder having a piston working therein, a pump cylinder also having a pump piston working therein, means of communication being provided between the pump and engine cylinders, and the engine cylinder having means for exhausting gases therefrom, a sleeve movable with the pump piston and having ports controlling the means of communication between said pump cylinder and engine cylinder and the exhaust of the engine cylinder, a crank shaft operatively connected to the engine piston, and means driven by said shaft for reciprocating the pump piston and sleeve with a less stroke than the engine piston and causing said pump piston and sleeve to commence their return stroke slightly in advance of the return stroke of the engine piston to close the exhaust means when the engine piston commences its return stroke, and completing the return stroke of the pump piston and sleeve when the engine piston is approximately midway of its return stroke, said driving means comprising a rod pivoted at one end to said pump piston, a crank or eccentric on said shaft connected to the opposite end of said rod, and an arm connected at one end to the latter end of said rod and at its opposite end to a stationary pivot, and means reciprocable by the crank shaft and connected to the intermediate portion of the toggle.

5. In an internal combustion engine, the combination of an engine cylinder having a piston working therein, a pump cylinder also having a pump piston working therein, means of communication being provided between the pump and engine cylinders, and the engine cylinder having means for exhausting gases therefrom, a sleeve movable with the pump piston and having ports controlling the means of communication between said pump cylinder and engine cylinder and the exhaust of the engine cylinder, a crank shaft operatively connected to the engine piston, and means driven by said shaft for reciprocating the pump piston and sleeve with a less stroke than the engine piston and causing said pump piston and sleeve to commence their return stroke slightly in advance of the return stroke of the engine piston to close the exhaust means when the engine piston commences its return stroke, and completing the return stroke of the pump piston and sleeve when the engine piston is approximately midway of its return stroke, a toggle connected at one end to the pump piston and at its opposite end to a stationary pivot, and connected to the intermediate portion of the toggle.

[Claims 6 to 10 not printed in the Gazette.]

1,219,983. INTERNAL-COMBUSTION ENGINE. CHARLES MAURICE PHILIPPE MONTBARBON, Neuilly-sur-Seine, and GUSTAVE EMILE CHÉDRU, Alfort, France; Henri Wael, Levallois-Perret, France, administrator of said Charles M. P. Montbarbon, deceased. Filed Feb. 27, 1914. Serial No. 821,469. (Cl. 123—65.)

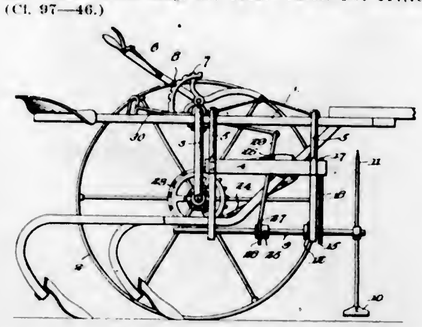


1. In an internal combustion engine of the type described comprising a working cylinder having a piston to reciprocate therein and also having a cylindrical extension, an annular chamber surrounding said extension of the working cylinder and forming with the latter an annular pump cylinder, a port being formed in the wall of the working cylinder to provide communication between the working cylinder and the annular pump cylinder at a point immediately adjacent to the head of the pump cylinder, and a port being provided to admit fresh gas to the pump cylinder, an annular piston to reciprocate axially on said cylindrical extension of the working cylinder and in the pump cylinder, and means for reciprocating the pump piston relatively to the working piston to cause the pump piston to uncover the fresh gas admission port while the intercommunicating port between the pump cylinder and the working cylinder is uncovered by the working piston whereby fresh gas passes across the top of the pump piston directly from the fresh gas admission port through the pump cylinder and into the working cylinder free of compression in the pump cylinder.

2. An internal combustion engine of the type described comprising a working cylinder having a cylindrical extension forming an annular chamber around it operative as a pump cylinder, working and pump pistons reciprocable in the respective cylinders, the pump piston being reciprocable axially on said cylindrical extension of the working cylinder, a port being formed in the wall of the working cylinder to provide communication between the latter and the pump cylinder, and a fresh gas supply port being provided for the pump cylinder, and means for reciprocating the pump piston relatively to the working piston to cause the pump piston to uncover the fresh gas supply port while the port for the working cylinder is open and to cause the pump piston to arrive at the end of its instroke slightly before the working piston, in making its instroke, covers the intermediate port between the pump cylinder and the working cylinder.

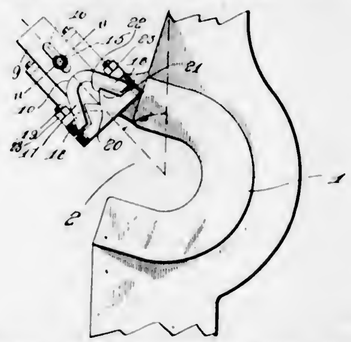
3. An internal combustion engine of the type described comprising working and pump cylinders having pistons reciprocable therein, the pump cylinder being provided with a fresh gas admission port adapted to be covered and uncovered by the pump piston, and an intercommunicating port being provided between the pump cylinder and working cylinder and adapted to be covered and uncovered by the piston in the working cylinder, and means for reciprocating the pump piston relatively to the working piston to cause the pump piston to uncover the fresh gas supply port at an intermediate point in the out-stroke of the pump piston while the intercommunicating port between the pump cylinder and the working cylinder is uncovered by the working piston to admit fresh gas direct from the fresh gas supply port to the working cylinder free from compression in the pump cylinder during the completion of the out-strokes of the pump and working pistons, and to cause the return stroke of the pump piston to force the fresh gas from the pump cylinder into the working cylinder.

1,219,984. COTTON-CHOPPER. FRED B. MOORE, Courtney, Okla. Filed Aug. 30, 1916. Serial No. 117,755. (Cl. 97—46.)



In combination with a wheel mounted frame, a cotton chopper attachment comprising loops movably mounted on the frame, a lever fulcrumed on the frame and operatively connected with the loops, a supplemental frame carried by the loops, a journaled shaft slidably mounted on the supplemental frame, a chopper carried by the said shaft, a crank shaft pivoted on the supplemental frame and having one end operatively connected with the first mentioned shaft to slide the same, a rod pivotally connected with the other end of the crank shaft, a motion transmission mechanism mounted on the supplemental frame and operatively connected with the first mentioned shaft, to rotate the same, and means for operating said transmission mechanism from one of the supporting wheels of the first mentioned frame.

1,219,985. QUARTERING DRIVE-WHEEL PRESS. MARTIN MICHAEL MORAN, Ogden, Utah. Filed Oct. 28, 1915. Serial No. 58,457. (Cl. 29—84.)



1. A device for quartering locomotive drive wheels, a main ram, a resistance post placed to the side of said main ram, said resistance post provided with an open side, a vertically adjustable pin-engaging clamp secured to said main ram, a vertically adjustable pin-engaging clamp secured to said resistance post and capable of having slidable movement relative to said resistance post for mechanically spacing the pins of a locomotive drive wheel 90° apart.

2. A device of the class described comprising a main ram, a resistance post, a clamp carried by said ram, a clamp carried by said resistance post, and each clamp adapted to firmly grip the crank pins of oppositely positioned locomotive drive wheels for spacing said pins a proper distance apart.

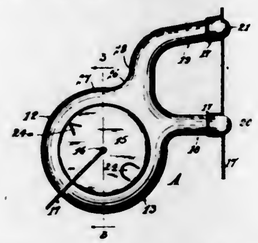
3. A device of the class described comprising a resistance post, said resistance post provided with a laterally extending ram, said ram provided with a notch formed therein, a clamp slidably mounted within said notch, a main ram coöperating with said resistance post and being positioned to the side thereof, means carried by said clamp and by said main ram for firmly gripping the crank pins and drive wheels of the locomotive for properly spacing said crank pins with respect to each other.

4. A device of the class described comprising a main ram, a resistance post, a supporting member slidably mounted upon said resistance post, a clamp carried by said supporting member and comprising a primary member, a locking pin engaging said primary member and holding the same upon said supporting member, an auxiliary clamp detachably secured to said primary member, said main ram being positioned to the side of said resistance post, and means carried by said main ram for engaging the crank pin of the locomotive drive wheel.

5. A device of the class described comprising a main ram, means carried thereby for engaging the crank pin of a locomotive drive wheel, a resistance post positioned to the side of said main ram, a supporting member carried by said resistance post, a projecting lug carried by said supporting member, a clamp device comprising a primary jaw slidably mounted upon said projecting lug, means for detachably holding said primary member in said position upon said lug, an auxiliary clamping section, and means for detachably holding said auxiliary clamping section in engagement with said primary clamping section.

[Claims 6 to 8 not printed in the Gazette.]

1,219,986. DENTAL-FLOSS HOLDER. WILLIAM MARK MUCHOW, Evanston, Ill. Filed Mar. 29, 1916. Serial No. 87,521. (Cl. 132—12.)



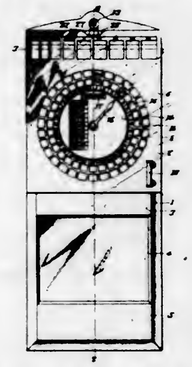
1. An article of the class described, including a non-metallic, slightly elastic, circular body having flat sides, an integral arm extending substantially tangentially from the circular marginal edge of said body, said arm having a well-defined shoulder at its jointure with said body, said arm terminating in an angularly disposed projection, said arm being constructed to form a bite for the teeth, and the periphery of said circular body being constructed to form a stop at its junction with said arm limiting the degree of insertion of said arm into the mouth, a second integral arm extending approximately radially from said circular body and in substantial parallelism to said projection, the ends of said projection and said arm having alined wedge-slots constructed for the wedging therein of a strand of dental floss or the like, the whole being formed integrally from a non-metallic material which cannot injure the teeth when contacting therewith.

2. An article of the class described, including a circular body member having flat sides, an integral arm extending substantially tangentially from the circular margin of said body member, said arm terminating in an angular projection, said arm being constructed to form a bite for the teeth, and the periphery of said body being adapted to form at the jointure of said arm and said body a stop limiting the degree of insertion of said body into the mouth, a second integral arm extending approximately radially from said body in substantial parallelism to said projection, the ends of said projection and said arm having alined wedge-slots constructed for the wedging therein of a strand of dental floss, and lobes extending laterally of the ends of said projection and said arm and constructed for the wrapping therearound the free ends of said strand of dental floss, the whole being formed integrally from a non-metallic, slightly elastic, material which will not injure the teeth when contacting therewith.

3. As a new article of manufacture, an integrally formed circular body having flat sides, there being formed on the circular margin of said flat body a projection constructed to afford a bite for the teeth, the periphery of said body being constructed to form a stop to limit the depth of insertion of said body into the mouth, an integrally formed arm extending from said body in spaced apart relationship, there being alined notches in said arm, and said projection, constructed for the wedging therein of a strand of thread, the whole being formed integrally from a non-metallic, slightly elastic, material which will not injure the teeth when contacting therewith.

4. A dental floss holder, comprising a main body, there being in said main body a cavity constructed to contain a coil of thread, said body being of substantially circular contour, an arm approximately radially projecting from said main body, a further arm projecting substantially tangentially from said main body, said latter arm having a bent portion substantially parallel to said first mentioned arm, lobes laterally projecting from the extremities of said arms, there being at the extremity of each arm a constricted slot, the slots being in axial alinement, a cover for said cavity, there being in said cover an exit opening, said cover having a cutter adapted for severance of said floss, said main body and said arms being integrally formed.

1,219,987. MEMORANDUM-CALENDAR. FRANK MULIG, Greendale, Ohio. Filed Feb. 25, 1916. Serial No. 80,470. (Cl. 40—107.)

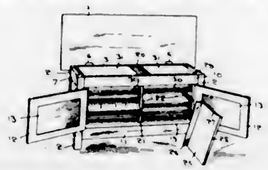


1. A calendar comprising a casing having a receiving compartment and a dial forming the front of said compartment and provided with an annular series of radially arranged month designations, and a plurality of series of slots arranged beyond said designations and concentric therewith, and provided also with a transverse opening, and a combined calendar and memorandum sheet adapted to be disposed within said compartment and exposed through said slots, whereby appropriate matter may be displayed through the transverse slot and matter written thereon through the concentric slots pertinent to said month day designations, and an indicator upon the face of the dial coöperating with said month day designations.

2. A calendar of the character described comprising a casing forming front and rear compartments, the front wall of the front compartment forming a dial and being provided with an annular series of radial month day designations, and a plurality of annular series of slots out-

side of said month day designations and concentric therewith, and further having a horizontal transverse slot at the top of said dial, a hand or pointer upon the dial adapted for coöperation with said month day designations, a backing sheet adapted to fit within the front compartment, and a combined calendar and memorandum sheet folded to embrace said backing sheet and provided with front and rear portions detachably fastened thereto, the front sheet portion being arranged so as to be displayed through said slots in the dial.

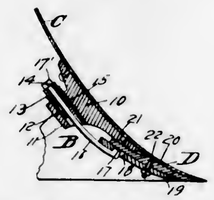
1,219,988. COMBINED PIANO-SEAT AND MUSIC-CABINET. WILLIAM S. MULLER, Cedar Rapids, Iowa. Filed Jan. 15, 1914. Serial No. 812,251. (Cl. 45—64.)



A combined piano seat and music cabinet comprising a main body provided with a central compartment having vertical strips at the center of the front and rear thereof, parallel horizontal supports connecting the strips, similar parallel horizontal supports secured to the inner sides of the ends of the compartment, and trays of thin solid material slidably supported on said horizontal strips, said trays having vertical upwardly extending flanges at their inner ends, downwardly extending flanges at their outer or front ends and upwardly extending flanges on their sides which are located at the center of the compartment.

1,219,989. [WITHDRAWN.]

1,219,990. PLOW ATTACHMENT. FRANK J. NOILES, Beaver, Manitoba, Canada. Filed Aug. 19, 1916. Serial No. 115,883. (Cl. 97—18.)



1. The combination with a moldboard and share of a plow, of a tightening device comprising two members connected respectively to the moldboard and the share, a lug on one of the members, a plug adjustably threaded in the lug, and a rod loosely carried in the plug and having loose detachable connection with the other member.

2. An attachment of the character described comprising a supporting member adapted to be fixed to the moldboard of a plow and having a lug, a plug adjustably threaded in the lug, a connecting plate adapted for connection with the share of said plow and having an aperture, and a hook member loosely carried in the plug and having its bill portion detachably engaged in the aperture in the connecting plate.

1,219,991. RUBBER HEEL. FRANCIS A. NOLAN, St. Paul, Minn. Filed July 17, 1916. Serial No. 109,654. (Cl. 36—35.)

1. A cushion heel provided with an easily penetrable substantially continuous plate embedded therein formed with detents in its lower surface for engaging and guiding points of nails driven through said heel and plate and into a shoe.



2. A cushion heel provided with an unbroken penetrable plate embedded therein formed with a rough surface facing the lower surface of the heel, for the purposes specified.

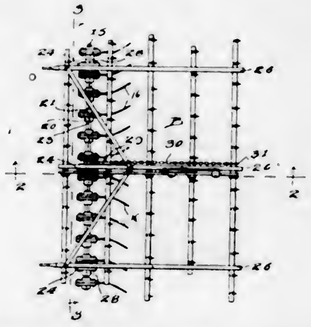
3. A cushion heel provided with a penetrable continuous plate embedded therein formed with a large number of nail point engaging detents.

4. A cushion heel provided with a penetrable continuous plate embedded therein formed with a rough surface weakened at a large number of points by a corresponding number of detents.

5. A cushion heel provided with a penetrable continuous surface detented to engage and prevent the points of nails deflecting or bending from their direct course through the heel and plate, said plate being reinforced to prevent buckling.

[Claims 6 and 7 not printed in the Gazette.]

1,219,992. HARROW ATTACHMENT. EMIL L. OLSON, Kearney, Nebr. Filed Aug. 29, 1916. Serial No. 117,527. (Cl. 55—102.)

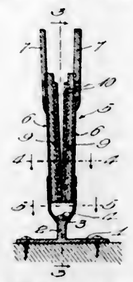


1. A harrow attachment consisting of a bar square in cross section, blades having square eyes engaging the bar, clamp devices each comprising two bar engaging members fitted adjacent to opposite faces of a blade, and bolts connecting the members and extending through the blade, and means for securing the clamping device on the bar.

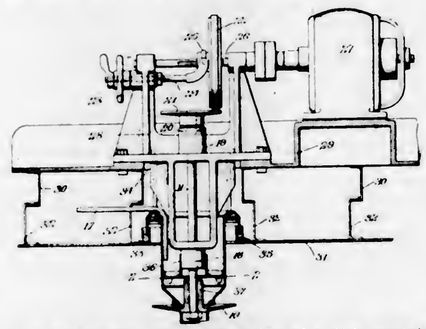
2. In a harrow attachment, a rockingly supported bar of square cross section, a plurality of cutting blades clamped and adjustably mounted on said bar, a lever clamped upon and radially extending from said bar, bearing members fixed on a harrow frame to support the bar, set collars on the bar to secure it against lengthwise displacement, and a chain adjustably connecting the lever with the harrow frame to force the cutting blades in a groundward direction.

1,219,993. KNIFE-CLEANING DEVICE. BUNNOSUKE OMOTO, Granger, Wyo. Filed Jan. 11, 1917. Serial No. 141,862. (Cl. 51—6.)

A device of the class described comprising a horizontal base, a vertically disposed resilient V-shaped member fixed at its lower end to said base and having undercut channels formed on the inner sides of its arms, blocks slidably and removably disposed in said channels and having rubbing surfaces on their inner sides, and handles at the upper ends of said arms to be engaged for moving the latter toward each other.



1,219,994. ATOMIZER FOR FLUIDS. JOHN PATTES, Baltimore, Md., assignor to Davison Chemical Company, Baltimore, Md., a Corporation of Maryland. Filed Apr. 23, 1914. Serial No. 833,936. (Cl. 137—80.)



1. In an atomizer, the combination of a disk rotatable about a vertical axis, means for rotating the disk, a supply chamber above and discharging fluid in an annular stream onto the top of the disk, and means whereby the fluid is admitted to said supply chamber tangentially so as to rotate and distribute the fluid in the supply chamber.

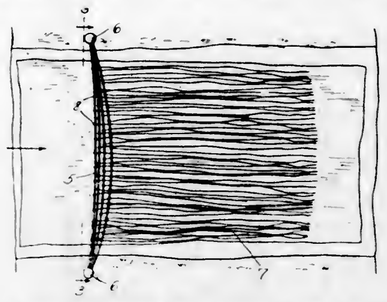
2. In an atomizer, the combination with a disk rotatable upon a vertical axis, of a supply chamber above and concentric with the disk, said supply chamber having an inverted conical bottom and an annular outlet adjacent the disk, and means for delivering fluid tangentially into the supply chamber, whereby the fluid is given a swirling movement in the supply chamber and delivered uniformly throughout the extent of the annular opening.

3. Means for atomizing fluid in a tank or vessel comprising a top for said vessel having an opening therein, a vertical shaft extending through the opening, a disk on said shaft below the opening, means for rotating said shaft and the disk thereon, a chamber for receiving fluid and for discharging the same onto said disk, the walls of said chamber being extended upward through the opening, and means for sealing said opening, substantially as described.

4. The combination with a tank or vessel provided with a top wall having an opening therein, of an atomizing mechanism comprising a shaft extending down through said opening, a disk on the part of said shaft within the tank, means outside the tank for rotating said shaft and the disk thereon, means for supplying fluid to the upper side of said rotatable disk, and means for sealing the opening in the top wall of said tank.

5. The combination with a tank or vessel provided with a top wall having an opening therein, of an atomizing mechanism comprising a shaft extending down through said opening, a disk on the part of said shaft within the tank, means outside the tank for rotating said shaft and the disk thereon, means for varying the speed of said disk, means for supplying an annular stream of fluid to the upper side of said rotatable disk, and means for sealing the opening in the top wall of said tank.

1,219,995. MEANS TO CHECK THE FLOW OF WATER IN STREAMS. WILLIAM E. PEDLEY, Riverside, Cal. Filed Apr. 8, 1916. Serial No. 89,800. (Cl. 61—24.)

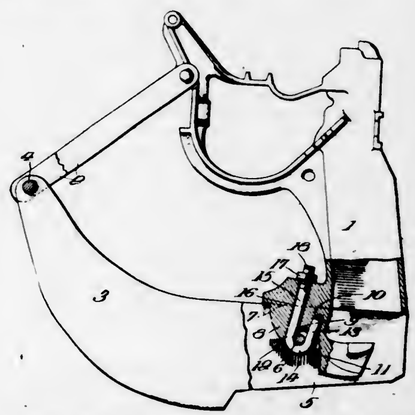


1. A current retarding means, comprising a series of lines anchored transversely of a stream and pliant streamers connected at intervals thereto, free at one end and adapted to lie in the stream for retarding the current thereof, and backing up the water level.

2. A current retarding device, comprising cables of varying lengths for sagging to a greater or less extent in the stream arranged transverse thereto, means for anchoring the ends of the cables upon the banks of the river or streams, and a plurality of pliant streamers connected with the cables at intervals, free at one end and lying in the water of the stream for checking its velocity.

3. A current retarding structure, comprising transverse strands of differing lengths adapted to be anchored at their ends, the upper strands having floats secured thereto while the lower strands are provided with weights, spreaders interposed between the strands and pliant streamers connected with the said strands, free at one end and adapted to lie in the current of a stream for producing friction therein.

1,219,996. CORN-PLANTER SHOE. EMIL J. PETERSON, Albion, Mich., assignor to Gale Manufacturing Company, Albion, Mich. Filed Nov. 24, 1916. Serial No. 133,173. (Cl. 111—11.)

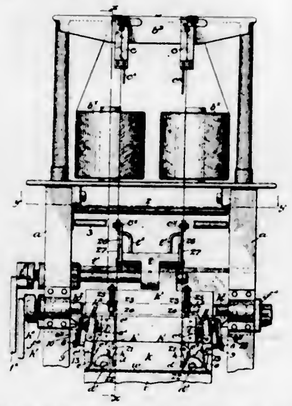


1. The combination with a planter shank and runner, of a hook bolt secured to said shank and engaging said runner and having its hooked end seated in said shank.

2. In a device of the class described, a shank provided with an aperture and a recess, a runner provided with a rivet, a hook bolt engaging said rivet and resting in said aperture and recess, and means for securing the hook bolt to the shank.

3. In a device of the class described, a shank provided at its lower end with an extension having an aperture extending through the same and a recess in its lower surface, a runner having a forked rear end which engages the sides of said extension, a rivet secured to the forked end of said runner, a hook bolt having a shank extending through said aperture and a hook portion which engages said rivet and rests in said recess, and means for securing the hook bolt to the shank.

1,219,997. BOOK-SEWING MACHINE. EDWIN B. PIERCE, Brooklyn, N. Y. Filed Aug. 13, 1912. Serial No. 714,758. (Cl. 112—41.)



1. In a book sewing machine and in combination, a needle, a looper, means for actuating the needle to cause the point thereof to pass through a supported signature, then retract the point of the needle into the signature, then to pass the point of the needle again through the signature and to then return the needle to an initial position, a spreader, and means for so actuating the spreader and looper that they coöperate with the needle on each of its passages into and through the signature, causing the spreader, during one of the movements of the needle to take a loop therefrom and by pulling the said loop to reduce a loop previously cast off around the needle from the looper and finally to cast off the loop so taken from the needle upon the looper, all of said actuations being produced in a single stitch forming cycle.

2. In a book sewing machine and in combination, a needle, means for actuating the needle to project its point through a supported signature, to then retract the point of the needle into the signature, then again project the point of the needle through the signature and to then return the needle to an initial position, a looper, means for actuating the looper to cast off a loop around the needle the second time it is projected through the signature, a spreader, and means for actuating the spreader to take a loop from the needle the second time the needle point is projected through the signature, and by pulling the said loop to reduce the loop previously cast off around the needle, and finally to cast off the loop so taken from the needle upon the looper, all of said actuations being produced in a single stitch forming cycle.

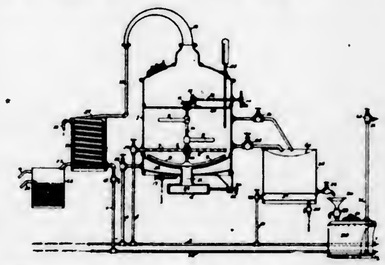
3. In a book sewing machine and in combination, a needle, means for actuating the needle to project its point through a supported signature, to then retract the point of the needle into the signature, to then again project the point of the needle through the signature and to return the needle to an initial position, a looper, a spreader, and means for operating the said looper and the said spreader to cause the looper to cast off a loop around the needle the first time the needle point is projected through the signature and the spreader to take a loop from the needle and to cast the same off on the looper as the needle is retracted into the signature, to then cause the said looper to cast off a second loop around the needle the second time the needle point is projected through the signature, and the spreader to take another loop from the needle and by pulling the same to reduce the said second loop cast off around the needle, and to finally cast off the last aforesaid loop upon the looper, all of said actuations being produced in a single stitch forming cycle.

4. In a book sewing machine, the combination with a sewing needle and means for actuating the same, of a looper device and a spreader device, a common head to which the same are connected, devices for imparting a swinging movement to said looper and spreader in planes parallel to the plane of the needle, and other devices bearing against the support of the looper and spreader and having an axis of oscillation concentric with the swinging axis of the looper and spreader, and devices for actuating the same whereby the looper and spreader are given a movement to encircle the thread about the point of the needle and forming and tying a knot in the thread over the back of the signature.

5. In a book sewing machine, the combination with a sewing needle and means for actuating the same, of a head, an auxiliary head, to which said head is pivoted for a swinging movement in a plane parallel with the plane of the needle, a shaft and bifurcated head in which the auxiliary head is pivoted for a swinging movement across the plane of the needle, and said shaft adapted to swing both heads together, and means for oscillating said shaft, the looper and spreader both mounted upon and depending from said head in proximity to the point of exit from the signature of the point of the needle, and means acting upon the auxiliary head for swinging the same with the head, the looper and the spreader in a path at right angles to the plane of the needle.

[Claims 6 to 18 not printed in the Gazette.]

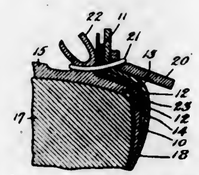
1,219,998. PROCESS AND APPARATUS FOR MAKING RESIN AND TURPENTINE. GEORGE PISSIMISIS and JAMES RIGOPULOS, Schenectady, N. Y., assignors of one-third to Peter Chiboucas, Albany, N. Y. Filed July 14, 1916. Serial No. 109,288. (Cl. 203—3.)



1. The above described process of manufacturing refined turpentine and resin by placing the crude turpentine into a tank, heating the mass in the tank by injected steam, agitating the mass while in a heated condition within the said tank, drawing the liquid from the tank at different levels, filtering the liquid when drawn from the tank, forcing it by steam pressure applied to the upper surface of the liquid through conductors into another tank, while the liquid is still heated, reducing said liquid to vapor by steam heat in the second named tank, conveying the vapor from said second named tank through cooling apparatus whereby the same may be condensed again into liquid form, and taking the resin from the bottom of said last named tank through an opening in the bottom thereof.

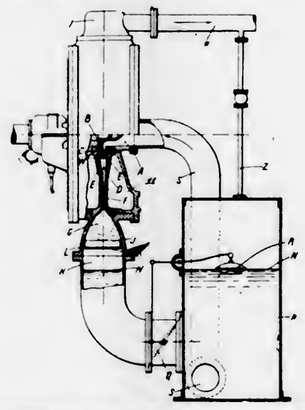
2. In the manufacture of turpentine and resin, a tank adapted to receive the crude turpentine; a pipe adapted to convey steam into said tank; another pipe adapted to convey steam into a chamber under said tank; means for agitating the mass produced from crude turpentine within said tank; means for drawing the impurities from the bottom of said tank; a pipe adapted to conduct the vaporized product from the top of said tank into cooling receptacles; pipes adapted to convey products of said crude turpentine, when in a liquid form, through outlets at different elevations from said tank into a filter; another tank adapted to receive the liquid from said filter; means for forcing said liquid product from said last named tank into an auxiliary tank by steam pressing upon the upper surface of said liquid while in said filter; means for heating the fluid in said auxiliary tank; means adapted to carry the vapor from the top of said auxiliary tank through a system of coolers and into a final receptacle, substantially as described and for the purposes set forth.

1,219,999. COUNTER-STIFFENER. GEORGE P. PRESBY, West Bridgewater, Mass., assignor to Beckwith Box Toe Company, Dover, N. H., a Corporation of Maine. Filed Feb. 5, 1915. Serial No. 6,255. (Cl. 36—68.)



A counter stiffener comprising a counter member, a heel-seat member composed of absorbent sheet material impregnated with a stiffening moisture-proof adhesive substance, whereby it is rendered relatively stiff at ordinary atmospheric temperatures but becomes limp and pliable with the application of a moderate degree of heat, said heel-seat member having a heel-seat flange and an upstanding flange adjoining the outer marginal portion of said heel-seat flange, the lower marginal portion of said counter member being arranged in side and in lapped relation to said upstanding flange, and fastening means arranged to connect the portions so lapped.

1,220,000. CENTRIFUGAL PUMP. CHARLES RADIGUER, St.-Denis, France, assignor to The Societe Anonyme Des Etablissements Delaunay-Belleville, St.-Denis, France, a Corporation of France. Filed Oct. 29, 1913. Serial No. 798,047. (Cl. 230—14.)



1. A centrifugal pump comprising a rotary wheel having a plurality of blades with concaved extremities, and means to supply liquid to said wheel which issues from the blades in sheets having a curved cross section due to the concaved extremities of the blades.

2. A centrifugal pump for compressing fluids, comprising a rotary wheel, a plurality of blades carried thereby, means to deliver liquid to the wheel which issues from the blades thereof in bodily movable sheets, a diffuser comprising a pair of spaced converging cheeks forming a restricted portion toward the periphery of the diffuser, the said cheeks having perforations therein remote from the restricted portion only, between which cheeks said sheets of liquid pass to entrain and compress fluid drawn through the perforations, an outlet for the compressed fluid, and a separate and independent outlet for the liquid.

3. A centrifugal pump for compressing fluids comprising a rotary wheel, a plurality of blades carried thereby, means to deliver liquid to the wheel which issues from the blades thereof in bodily moving sheets which entrain the fluid, an outlet at the upper portion of the pump for the compressed fluid, and a separate and independent outlet at the lower part of the pump for the liquid, whereby the liquid separates from the fluid by gravity, for the purpose described.

4. The combination with a centrifugal pump, of a liquid-containing tank, means to maintain the level of the liquid in the tank constant, means to deliver liquid from the tank to the pump, means to return only the liquid from the pump to the tank, a discharge conduit for the fluid compressed by the pump, and means to equalize the pressure in said discharge conduit and in the tank.

1,220,001. MATERIAL FOR THE PRESERVATION OF LUMBER. PETER C. REILLY, Indianapolis, Ind. Filed Mar. 28, 1914. Serial No. 827,966. Renewed June 9, 1916. Serial No. 102,802. (Cl. 134—78.5.)

1. A composition of matter, for use in the preservation of timber, comprising a mixture of waxy material produced as a distillate from coal tar, and having a specific gravity of not less than 1.14; a hard material formed as a distillate from coal tar and having a specific gravity of not less than 1.22; and a suitable solvent for said materials.

2. A composition of matter, for use in the preservation of timber, comprising a mixture of a waxy material produced as a distillate from coal tar, and having a specific gravity of not less than 1.14; and a hard material formed as a distillate from coal tar and having a specific gravity of not less than 1.22, said materials being dissolved in the lighter oils distilled from coal tar.

3. A composition of matter, for use in the preservation of timber, comprising a mixture of those materials which are produced as a distillate from coal tar when the latter is subjected to a temperature of at least 700° F., said material having a specific gravity in excess of 1.14, said distillates being dissolved in a suitable solvent.

4. A composition of matter for the treatment of timber, comprising a mixture of all of the distillates of coal tar which are driven off therefrom up to a temperature approximating 1000° F.

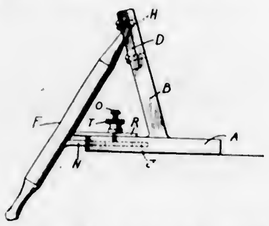
1,220,002. SPRING-CLIP FOR AUTOMOBILE-CHAIN FASTENERS. ZACHARIAH E. RICE, Landisburg, Pa. Filed Apr. 7, 1916. Serial No. 89,643. (Cl. 24—241.)



In combination with the hook member and pivoted guard casing of an automobile tire chain fastener, a spring-clip arranged transversely of and on one side of the fastener and provided with a deep substantially semicircular hook at one end engaging around one side of the hook member and detachably but securely fastening the clip

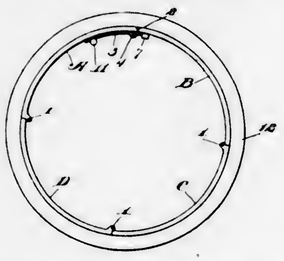
thereto, the clip being provided at the opposite end with a shallow substantially C-shaped hook adapted to snap over the outer edge of the guard casing and to be released therefrom, to permit the opening of the guard fastening, without removing the clip.

1,220,003. FLOOR-SCRAPER BURNISHER. WILLIAM PARIS ROBINSON and WESLEY COLUMBUS NASH, Miami, Fla. Filed Aug. 9, 1916. Serial No. 114,078. (Cl. 29—83.)



A burnisher for floor scrapers comprising a plate, slotted for the reception of a scraper bit, set screws engaging threaded apertures in said plate and adapted to engage the scraper bit, a gage plate provided with slots for the reception of set screws, nuts engaging the screws to hold the gage in adjusted positions, a post rising from the plate, a burnisher having a universal pivotal connection with said post and provided with a convex edge.

1,220,004. COLLAPSIBLE RIM. FRANCIS ROGERS, Galveston, Tex. Filed May 20, 1916. Serial No. 98,930. (Cl. 152—21.)

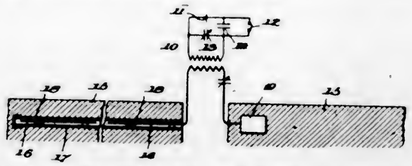


A tire carrying rim embodying a plurality of arcuate sections hinged together and collectively forming a complete annular rim transversely split at one point to form a butt joint, a keeper loop on the inner face of the rim adjacent to and at one side of said joint, and a joint breaking and closing lever pivoted and conforming in curvature to the inner face of the rim at the opposite side of said joint and comprising long and short arms, the short arm being insertible through and removable from said keeper by swinging the lever on its pivotal connection with the rim.

1,220,005. WIRELESS SIGNALING SYSTEM. JAMES HARRIS ROGERS and HENRY H. LYON, Hyattsville, Md. Filed Nov. 10, 1916. Serial No. 130,602. (Cl. 250—33.)

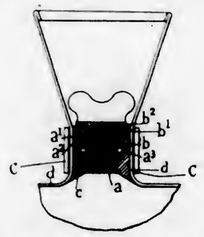
1. A wireless transmission and reception system comprising an antenna extending in direction substantially parallel to and buried under the surface of the earth but insulated therefrom substantially throughout its length.

2. A wireless signaling system comprising electromagnetic wave signal instruments, an antenna extending outwardly therefrom, a second antenna extending in the opposite direction, said antennæ being parallel to and buried under the surface of the earth but insulated therefrom substantially throughout their length, said instruments being connected between said antennæ.



3. A wireless transmission and reception system comprising an antenna extending in direction substantially parallel to and buried under the surface of the earth and a conduit in which said antenna is insulated substantially throughout its length from the earth.

1,220,006. CLOSURE FOR RUBBER RECEPTACLES. THOMAS ROWE, Leytonstone, England. Filed May 2, 1916. Serial No. 94,900. (Cl. 150—8.)



1. In a device of the character described, the combination of an internally screw-threaded socket, a screw-threaded stopper in said socket, a flange on said stopper, rubber surrounding said socket and extending above the upper surface thereof to form a seating for the said flange, and an outer casing, the rubber and the casing being vulcanized in position on said socket, substantially as set forth.

2. In a device of the character described, the combination of an internally screw-threaded socket, prominent projections on the exterior of said socket, a screw-threaded stopper in said socket, a flange on said stopper, rubber surrounding said socket and extending above the upper surface thereof to form a seating for the said flange, and an outer casing, the rubber and the casing being vulcanized in position on said socket, substantially as set forth.

3. In a device of the character described, the combination of an internally screw-threaded socket, an outwardly extending flange at the upper part of said socket, a screw-threaded stopper in said socket, a flange on said stopper, rubber surrounding said socket and extending above the upper surface of the flange on said socket to form a seating for the flange on the stopper, and an outer casing, the rubber and the casing being vulcanized in position on said socket, substantially as set forth.

4. In a device of the character described, the combination of an internally screw-threaded socket, prominent projections on the exterior of said socket, an outwardly extending flange at the upper part of said socket, a screw-threaded stopper in said socket, a flange on said stopper, rubber surrounding said socket and extending above the upper surface of the flange on said socket to form a seating for the flange on the stopper, and an outer casing, the rubber and the casing being vulcanized in position on said socket, substantially as set forth.

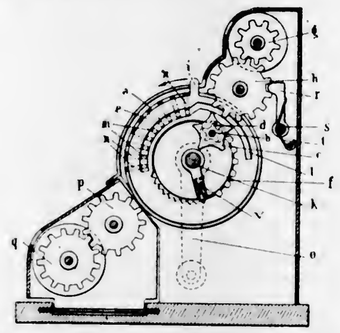
5. In a device of the character described, the combination of an internally screw-threaded socket, prominent projections on the exterior of said socket, an outwardly extending flange at the upper part of said socket, prominent projections on the under surface of said flange, a screw-threaded stopper in said socket, a flange on said stopper, rubber surrounding said socket and extending above the upper surface of the flange on said socket to form a seating for the flange on the stopper, and an outer casing, the rubber and the casing being vulcanized in position on said socket, substantially as set forth.

1,220,007. SEWING-MACHINE FEEDING DEVICE. ISABELLE C. ROWLEY, Columbus, Ohio. Filed Sept. 1, 1914. Serial No. 859,705. (Cl. 112—8.)



A sewing machine feeding device comprising a thimble-like member shaped to fit the finger of the wearer, a tapering feeder finger projecting forwardly at an angle to said thimble-like member from the forward end of said member, and a thread cutting blade extending longitudinally of and located on the upper side of said tapering feeder finger.

1,220,008. COMPUTING-MACHINE. CARL SCHALLER, Brunswick, Germany, assignor to Grimme, Natalis & Co., Commanditgesellschaft Auf Actien, Brunswick, Germany, a Corporation of Germany. Filed Nov. 15, 1915. Serial No. 61,574. (Cl. 235—73.)



1. In a computing machine, the combination, with indicating mechanism; of setting mechanism, comprising a movable setting member, and a member for positioning said setting member movable both relatively to and in unison with the same; and a device for transmitting the movements of said setting mechanism to said indicating mechanism; said device actuated by said positioning member during its movement relative to said setting member, but inactive during the movement of the latter and the positioning member in unison.

2. In a computing machine, the combination, with indicating mechanism; of setting mechanism, comprising a movable setting member, and a member for positioning said setting member disposed in juxtaposition thereto and movable both relatively to and in unison with the same; and a device for transmitting the movements of said setting mechanism to said indicating mechanism; said device movably mounted on said setting member and adapted to be engaged and actuated by said positioning member during its movement relative to said setting member, but inactive during the movement of the latter and the positioning member in unison.

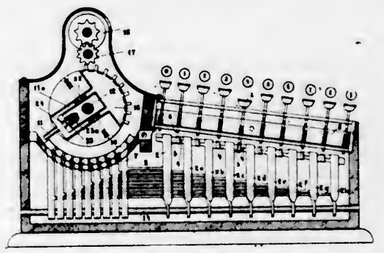
3. In a computing machine, the combination, with indicating mechanism; of setting mechanism, comprising coacting, juxtaposed setting and positioning disks, the positioning disk being rotatable both relatively to and in unison with the setting disk; and a device for transmitting the movements of said setting mechanism to said indicating mechanism; said device rotatably mounted on the setting disk and adapted to be driven by the positioning disk during its rotation relative to said setting disk, but inactive during the rotation of the latter and the positioning disk in unison.

4. In a computing machine, the combination, with indicating mechanism; of setting mechanism, comprising a movable setting member, and a member for positioning said setting member disposed in juxtaposition thereto and movable both relatively to and in unison with the same; and a device for transmitting the movements of said setting mechanism to said indicating mechanism; said device movably mounted on said setting member and comprising a pair of rigidly-connected parts, one adapted to engage and drive said indicating mechanism, and the other adapted to be engaged and driven by said positioning member during its movement relative to said setting member, but inactive during the movement of the latter and the positioning member in unison.

5. In a computing machine, the combination, with indicating mechanism; of setting mechanism comprising coacting, juxtaposed setting and positioning disks, the positioning disk being rotatable both relatively to and in unison with the setting disk and being provided with a toothed portion; and a device for transmitting the movements of said setting mechanism to said indicating mechanism; said device rotatably mounted on the setting disk and comprising a pair of rigidly-connected parts, one adapted to engage and drive said indicating mechanism, and the other adapted to be engaged and driven by the toothed portion of the positioning disk during its rotation relative to said setting disk, but inactive during the rotation of the latter and the positioning disk in unison.

[Claims 6 to 9 not printed in the Gazette.]

1,220,009. CALCULATING-MACHINE. CARL SCHALLER, Brunswick, Germany, assignor to Grimme, Natalis & Co., Commanditgesellschaft Auf Actien, Brunswick, Germany, a Corporation of Germany. Filed June 5, 1916. Serial No. 101,794. (Cl. 235—82.)



1. A machine of the character described, comprising in combination with each key for setting up numbers and items, a two-armed frame adapted to oscillate about a horizontal axis and extending toward an accumulating mechanism and having one arm adapted to co-act with said key to be oscillatingly displaced thereby, a controlling member carried by the second arm of said frame, an accumulating mechanism positioned relatively to said controlling member, and a revoluble coupling member between said accumulating mechanism and said controlling member and adapted to be moved into and out of coupling position by said controlling member.

2. A machine of the character described, comprising, in combination with an accumulating mechanism, means for revolving the same, and a plurality of keys arranged in a column for setting up numbers and items, a plurality of two-armed frames one in conjunction with each key, said frames being adapted to oscillate about a common horizontal axis, one arm of each frame extending toward the accumulating mechanism while the second arm is positioned below the associated key, a controlling member on said first arm and adapted to perform a shifting movement substantially parallel to the axis of said revolving means, two oppositely disposed projections at the end of said second

arm, one of said projections being adapted to be displaced by the associated key thereby causing said frame to swing out of its normal position, and the second projection being adapted to be locked in normal position by the adjoining key toward which said projection extends, each first projection of one arm overlapping the juxtaposed second projection of the adjoining arm, whereby a plurality of arms can be coupled to move synchronously in either direction when set in motion through any of said keys, and in operative connection with said means for revolving said accumulating mechanism, a revoluble coupling member adapted to actuate said accumulating mechanism and to be shifted into operative connection therewith by said controlling member, whereby said revoluble coupling member is enabled to actuate said accumulating mechanism in accordance with the value of the controlling members shifted.

3. A machine of the character described, comprising, in combination with an accumulating mechanism, means for revolving the same, and a plurality of keys arranged in a column for setting up numbers and items, a plurality of two-armed frames one in conjunction with each key, said frames being adapted to oscillate about a common horizontal axis, one arm of each frame extending toward the accumulating mechanism while the second arm is positioned below the associated key, a controlling member on said first arm and adapted to perform a shifting movement substantially parallel to the axis of said revolving means, the plurality of controlling members forming a circular path about the axis of said revolving means, two oppositely disposed projections at the end of said second arm, one of said projections being adapted to be displaced by the associated key thereby causing said frame to swing out of its normal position, while the second projection being adapted to be locked in normal position by the adjoining key toward which said projection extends, each first projection of one arm overlapping the juxtaposed second projection of the adjoining arm, whereby a plurality of arms can be coupled to move synchronously when set in motion through any of said keys, a resilient latching bar in operative connection with said keys, whereby a previously latched key is automatically released on depression of another key in the same column, a revoluble frame in positive connection with said revolving means and adapted to oscillate in the direction of the axis of said revolving means, a tooth on said frame and disposed so as to swing through the circular path of said controlling members, a toothed sector on said frame and opposite said tooth, said sector being disposed so as to enter into actuating connection with said accumulating mechanism when being caused to swing by said controlling members, the number of controlling members shifted determining the extent to which said accumulating mechanism is actuated.

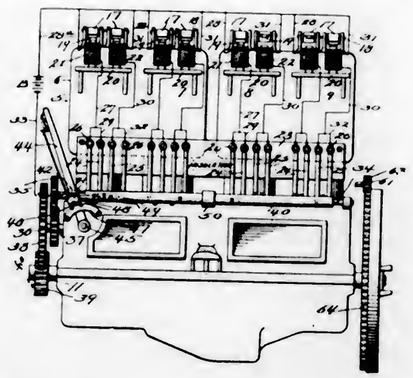
1,220,010. PROCESS FOR EMULSIFYING FATS AND FATTY SUBSTANCES. JULIUS SCHLINCK, Hamburg, Germany. Filed Aug. 12, 1916. Serial No. 114,621. (Cl. 99—11.)

1. A process of producing stable emulsions of fatty materials with liquids containing albumin which comprises thoroughly mixing together, a fat poor in cholesterin, a liquid containing albumin, and cholesterin.

2. A process of producing stable emulsions which comprises thoroughly mixing together, a fatty material poor in cholesterin and having a melting point between about 26° C., and about 36° C., skim-milk and about .1 to .4% of cholesterin.

1,220,011. ELECTRICALLY-CONTROLLED VALVE MECHANISM FOR MOTORS. SALVATORE SCOGNAMILLO, New York, N. Y. Filed Aug. 17, 1916. Serial No. 115,489. (Cl. 123—41.)

1. In a valve controlling mechanism of the class specified, the combination with cylinders and pistons and inlet and exhaust valves therefor, of electrically controlled means for opening the valves at intervals, a plurality of circuit closing devices, cam carrying means in coöperative adjacency to said circuit closing devices, the circuit closing devices and the cam carrying means being relatively adjustable, and an electric circuit including the cam carrying means, the circuit closing devices and the valve opening means.



2. In a valve controlling mechanism of the class specified, the combination with a cylinder having a piston and inlet and exhaust valves, of electrically operated means for alternately opening the said valves at predetermined intervals comprising electrical circuits and relatively shiftable circuit closing devices and rotatable means for closing said circuits and for reversing the closure of the circuits.

3. In a valve controlling mechanism of the class specified, the combination with a cylinder having a piston and inlet and exhaust valves, of springs coöperating with said valves to automatically close the same, and electrically controlled means coöperating with said valves for alternately opening the latter at intervals and comprising electrical circuits and relatively shiftable means for alternately closing said circuits in sequence and for reversing the closure of said circuits.

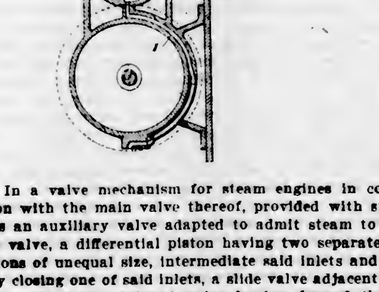
4. In a valve controlling mechanism of the class specified, the combination with cylinders having pistons and inlet and exhaust valves and a crank shaft, of electrically controlled means for opening the said valves at intervals and in properly timed sequence and comprising electrical circuits and relatively adjustable circuit closing devices and rotatable means for closing the circuits and reversing the closure of said circuits, and means for effecting a reverse operation of the crank shaft.

5. In a valve controlling mechanism of the class specified, the combination with a series of cylinders having pistons, inlet and exhaust valves and a crank shaft connected to said pistons, of electrically controlled means for opening said valves at intervals, said means comprising electrical circuits and circuit-closing devices actuated by the crank shaft, said circuit closing devices being relatively shiftable for reversing the closure of said circuits, and means for effecting a reverse operation of the crank shaft.

[Claims 6 to 10 not printed in the Gazette.]

1,220,012. COMBINATION WATER-HEATER. JAMES G. SCOTT, Washington, D. C. Filed July 29, 1915. Serial No. 42,519. (Cl. 126—53.)

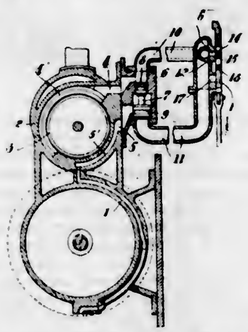
1. A device of the character described, including a central service burner, a large burner surrounding the same, a casing, a water coil arranged in said casing adjacent said large burner, a partitioning member in said casing having a central hollow depending portion comprising a series of inverted frusto-conical members arranged one above the other to provide a space between each of said inverted frusto-conical members to direct heat from said central burner to said water coil, the said casing being provided with a flue opening in communication with said central depending portion to receive heat passing therethrough from said central burner and a second flue entering said casing substantially as described.



2. A device of the character described, including a central service burner, an auxiliary burner surrounding the same, a casing, a water coil in said casing, means for dividing the space encompassed by said casing into two compartments, said means for dividing the said space into two compartments including a hollow depending portion above said central burner and comprising a series of inverted frusto-conical members arranged one above the other to provide a space between each of said inverted frusto-conical members to direct heat from said central burner in the surrounding compartment, the said casing being provided with a flue opening in communication with said central depending portion to receive heat from said central burner, and a flue entering said casing and in communication with the outermost compartment in said casing.

3. A device of the character described, including a central burner, a casing, means for dividing said casing into two compartments, a water heater above said burner, said dividing means including a depending portion above said burner and depending over said water heater, means for leading the products of combustion of the burner from said casing under said depending portion of said dividing means, the compartment above said dividing means being provided with an opening above said depending portion of said dividing means to lead heat from the burner from said casing.

1,220,013. INTERNAL VALVE-GEAR IN STEAM-ENGINES. IVO SENSINI, Vicenza, Italy. Filed June 3, 1913. Serial No. 771,484. (Cl. 136—10.)



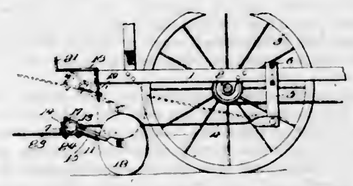
1. In a valve mechanism for steam engines in combination with the main valve thereof, provided with steam inlets an auxiliary valve adapted to admit steam to said main valve, a differential piston having two separate end portions of unequal size, intermediate said inlets and normally closing one of said inlets, a slide valve adjacent said inlets, said last mentioned valve having formed therein apertures serving to provide an initial impulse of steam being followed by the normal flow of steam substantially as described.

2. A piston valve, including its complementary cylinder, a steam valve secured to said piston valve, said valves having formed therein steam inlets, a differential piston seated in said steam valve intermediate said inlets, a slide valve seated adjacent said inlets, and having formed therein an auxiliary port and being adapted to position said differential piston before the normal flow of steam, substantially as described.

3. In a piston valve of the character described, a casing, an annular liner fitted within said casing and provided with a series of undularly disposed apertures, a differential piston having two separate end portions of unequal size for alternately uncovering and covering said apertures, and means coacting with said valve for regulating the flow of the steam, substantially as described.

4. In a valve mechanism for steam engines in combination with the main valve thereof provided with steam inlets, an auxiliary valve adapted to admit steam to said main valve, a differential piston having two separate end portions of unequal size seated in said steam valve normally closing one of said inlets, a slide valve adjacent said inlets, and means coacting with said valve and liner to direct the flow of steam into said central chamber or ports, substantially as described.

1,220,014. ATTACHMENT FOR PLANTERS. FRANK SHERWIN, Brookings, S. D. Filed Feb. 7, 1916. Serial No. 76,648. (Cl. 111—11.)



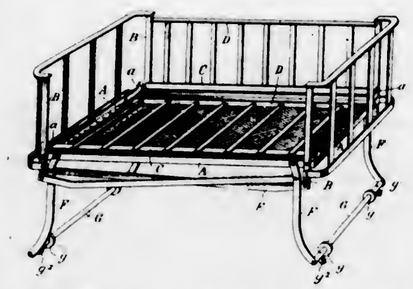
1. An attachment for planters comprising draw bars adapted at their front ends to be connected with a planter frame, a rod of circular cross section fitted in the rear ends of said draw bars, means for securing the draw bars to the said rods in any position of annular or longitudinal adjustment thereon, arms secured to said rod laterally beyond the respective draw bars and adjustable longitudinally and annularly thereof, cultivator disks mounted on the free ends of said arms, and scrapers secured to the said rod and adjustable annularly and longitudinally thereon and having their free ends bearing against the opposed faces of the disks.

2. The combination of a rod of circular cross section, arms secured to said rod and adjustable longitudinally and annularly thereon, cultivator disks carried by said arms, scrapers bearing against opposed faces of said disks and having their rear extremities overlapping against the rod, and a clip secured to the rod and embracing the same and the overlapping extremities of the scrapers.

3. In a device for the purpose set forth, the combination of a main transverse bar, arms fitted thereto and adjustable longitudinally and annularly thereof, disks mounted on the forward extremities of said arms, and scrapers secured to the main bar between the arms and adjustable longitudinally and annularly thereof and having their forward free ends bearing against the inner faces of the disks.

4. The combination with a planter frame, of a bracket secured to the rear end thereof and having an upstanding rear extremity forming a land-marker support and a depending front extremity provided with a notch in one side edge, a cultivator attachment supported from and pivoted below the planter frame, and a lifting member on said cultivator attachment adapted to engage the notch in the depending front extremity of said bracket.

1,220,015. FOLDING BED. GEORGE F. SISBOWER, East Orange, N. J., and LOUIS EDWARD PITTONI, New York, N. Y., assignors to New York Couch Bed Company, New York, N. Y., a Corporation of New York. Filed June 30, 1913. Serial No. 776,556. (Cl. 5—58.)



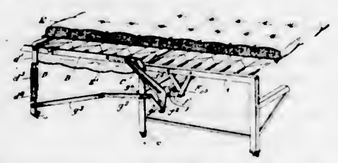
1. A folding bed comprising a main frame provided with side and end bars, folding sides pivotally connected to the side bars in different planes to lie in superposed relation spaced from the main frame when in folded position, and folding end frames pivotally attached to said side bars and having offset end portions shaped to overlap and inclose the folding sides and said side bars, when in folded relation, whereby bedding may be retained between said side frames and the main frame.

2. A folding bed comprising a main frame, folding sides therefor having flat top rails the ends of which are provided with notches, and folding ends having flat upright end bars the longitudinal edges of which interlock with the notches to retain the sides and ends in unfolded position.

3. A folding bed comprising a main frame, folding sides therefor having flat top rails the ends of which are provided with notches, and folding end frames pivoted to the main frame and having offset end portions provided with flat upright end bars, the longitudinal edges of which interlock with said notches to retain the sides and ends in unfolded position.

4. A folding bed comprising a main frame having end bars provided with extensions, folding sides pivoted to the extensions in different planes, folding end frames having offset portions provided with upright end bars pivoted to the outer faces of the sides of the main frame near the ends thereof, folding legs also pivoted to the outer faces of sides of the main frame, and links located normally below the level of the main frame, each link connecting a leg with the folding end frame at the other end of the bed.

1,220,016. FOLDING BED. GEORGE F. SISBOWER, East Orange, N. J., and LOUIS E. PITTONI, New York, N. Y., assignors to New York Couch Bed Company, New York, N. Y., a Corporation of New York. Filed June 30, 1913. Serial No. 776,557. (Cl. 5—46.)



1. An improvement in folding beds comprising a main frame, an auxiliary frame, links movably connecting said frames and pivotally attached to both, and operating members for supporting the inner edge of the auxiliary frame when in open position, said operating means being pivotally supported by the main frame and having means adapted to cause the auxiliary frame to turn on its pivotal connections with said links during its movements to open or closed position.

2. An improvement in folding beds comprising a main frame, an auxiliary frame, links movably connecting said frames and pivotally attached to both, operating members for supporting the inner edge of the auxiliary frame when in open position, said operating means being pivotally supported by the main frame and having means adapted to cause the auxiliary frame to turn on its pivotal connections with said links during its movements to open or closed position, a foldable leg attached to the auxiliary frame, and operating connections between said foldable leg and said operating member.

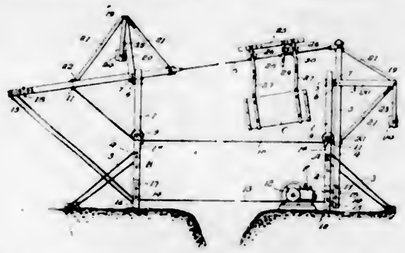
3. An improvement in folding beds comprising a main frame, an auxiliary frame, links movably connecting said frames and pivotally attached to both, a foldable leg attached to said auxiliary frame, and operating members pivotally supported by the main frame and connected with the auxiliary frame, said operating members having means for actuating said foldable leg.

4. An improvement in folding beds comprising a main frame, an auxiliary frame, links movably connecting said frames and pivotally attached to both, a foldable leg attached to said auxiliary frame, and operating members pivotally supported by the main frame and connected with the auxiliary frame, a lever pivoted to the main frame, a link connecting the lever and the foldable leg, and connections between said lever and said operating members.

5. An improvement in folding beds comprising a main frame, an auxiliary frame, links movably connecting said frames and pivotally attached to both, a foldable leg attached to said auxiliary frame, and operating members pivotally supported by the main frame and connected with the auxiliary frame, said operating members having means for actuating said foldable leg, and means for limiting the movement of said operating members and of said foldable leg.

[Claims 6 to 9 not printed in the Gazette.]

1,220,017. MATERIAL-TRANSPORTING APPLIANCE. JESSE W. SIMMONS, Nevada, Tex. Filed May 29, 1916. Serial No. 100,597. (Cl. 212—75.)

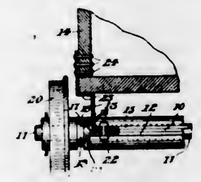


1. In an appliance of the class described, a pair of spaced apart track supporting devices, each comprising an upright supporting standard, a lever fulcrumed to the upper end of the standard, said lever being pivoted nearer one end than the other, an arm extending outwardly at right angles to the lever at its fulcrum point and rigidly fixed thereto, brace bars connecting the outer ends of the arm and the lever, a swinging arm pivoted to the outer end of the fixed arm, and a weight carried by the free end of said swinging arm, whereby overbalancing means is provided, the means on one device being inactive when the other is active, a track connecting the short ends of said levers, and a connection between the opposite ends of the levers to simultaneously operate the same.

2. In an appliance of the class described, a pair of spaced apart track supporting devices, each comprising an upright supporting standard, a lever fulcrumed to the upper end of the standard, said lever being pivoted nearer one end than the other, an arm extending outwardly at right angles to the lever at its fulcrum point and rigidly fixed thereto, brace bars connecting the outer ends of the arm and the lever, a swinging arm pivoted to the outer end of the fixed arm, and a weight carried by the free end of said swinging arm, whereby overbalancing means is provided, the means on one device being inactive when the other is active, a track connecting the short ends of said levers, a winding drum, a cable disposed around said drum, the opposite ends of said cable being connected with the long ends of said levers, and means for rotating said drum in either direction in order to simultaneously operate said levers.

3. In an appliance of the class described, a pair of spaced apart track supporting devices, each comprising an upright support, a lever fulcrumed to the upper end of the support, said lever being pivoted nearer one end than the other, an arm extending outwardly from said lever adjacent its fulcrum point, and a weight carried by the free end of said arm, whereby overbalancing means is provided, the means on one device being inactive when the other is active, a track connecting the short ends of said lever, a winding drum, a cable disposed around said drum, guides on the opposite ends of said levers, additional guides adjacent the lower ends of said supports, said cable being passed around said guides and secured at its opposite ends adjacent the lower ends of said supports, and means for rotating said drum in either direction to simultaneously operate said levers.

1,220,018. COAL-CAR. JAKOB SKANDORA, Racine, Wis. Filed July 3, 1916, Serial No. 107,389. Renewed Feb. 13, 1917. Serial No. 148,388. (Cl. 105—15.)

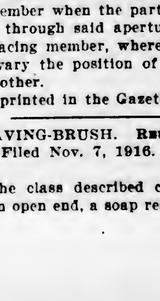


A car running gear comprising a main upper plate having transverse beads at its opposite ends arranged with journaling grooves on their under sides and having semicircular flanges at the ends of the said grooves with journaling sockets of greater diameter than the said grooves, lower journal plates having longitudinal bodies provided with journaling grooves coöperatingly secured beneath the said main plate adjacent the grooves of the latter, axles journaled within the said grooves having annular shoulders journaled within the said flange sockets, wheels secured to the opposite ends of the said axles adjacent the said flanges, lubricating means for the said axles carried by the upper plate beads, and U-shaped brackets transversely secured to the said upper plate adjacent to and inwardly of the said beads thereof and having car body receiving angular shoulders.

1,220,019. NEEDLE-THREADING ATTACHMENT FOR SEWING-MACHINES. MARY O. SMITH and WALTER E. FROST, Auburn, Me.; said Frost assignor of one-fourth of the whole right to Aimé C. Levesque and Joseph A. Larose, Lewiston, Me. Filed Mar. 2, 1916. Serial No. 81,781. (Cl. 112—18.)

1. In a sewing machine needle threader, the combination of a clamp to take over the horizontal arm of a sewing machine head, a bracket carried by said clamp and curved longitudinally to fit at the junction of the horizontal arm and the vertical head of the machine, whereby said bracket is disposed in unobstructing position when applied, and a spring retracted hook carrying member pivotally mounted on said bracket and adapted to be swung downwardly and forwardly into operative position.

2. In a sewing machine needle threader, the combination of a clamp to take over the horizontal arm of a sewing machine, a bracket carried by and mounted for longitudinal adjustment on said clamp, said bracket being curved longitudinally to fit at the junction of the horizontal arm and the vertical head of the sewing machine, whereby it is disposed in unobstructing position when applied, and a spring retracted hook carrying member pivotally mounted on said bracket and adapted to be swung downwardly and forwardly into operative position.



3. In a sewing machine needle threader, the combination of a clamp to take over the horizontal arm of the sewing machine and having depending apertured ears spaced longitudinally relatively to the clamp, longitudinally curved bracket arms attached to said ears and shaped to fit a sewing machine head at the junction of its horizontal arm and its vertical front head member, a hook carrying member pivotally mounted between said arms, a combined spacing and adjusting member carried by said arms and positioned to engage said hook carrying member when swung into retracted position, and a coiled spring connected to retract said hook carrying member.

4. In a sewing machine needle threader, the combination of a clamp to take over the horizontal arm of a sewing machine and having depending spaced apertured ears, flat faces formed on said clamp at the base of said ears extending substantially in planes at right angles to the outer faces of the ears, bracket arms engaged with the outer faces of said ears and having their upper edges engaging the flat faces of said clamp, whereby the upward movement of said arms is prevented and their downward movement limited, said arms being longitudinally slotted at their connected ends, adjusting screws passing through said slots and engaging the apertures of said ears, and a spring retracted hook carrying member pivotally mounted between said arms and adapted to be swung downwardly and forwardly into operative position, the bill of the hook carried thereby being housed between said arms when said member is in retracted position.

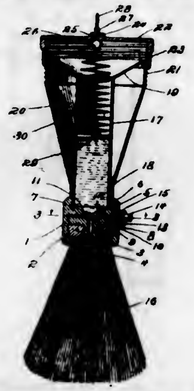
5. In a sewing machine needle threader, the combination of laterally spaced supporting arms, means for connecting said arms to a sewing machine head, a shaft pivotally mounted between said arms, a hook carrying member carried by said shaft, and a combined spacing and adjusting member arranged between said arms and having one end reduced and threaded, one of said arms having a threaded aperture to receive the reduced threaded end of said spacing and adjusting member, the other end of said member having an internally threaded socket, and the other arm having an aperture positioned to register with the aperture in the first mentioned arm and with the socket in said member when the parts are assembled, and a screw passing through said aperture and engaging the socket in the spacing member, whereby said member may be adjusted to vary the position of the arms toward or away from each other.

[Claim 6 not printed in the Gazette.]

1,220,020. SHAVING-BRUSH. REUBEN W. SMITH, Jr., Huron, Cal. Filed Nov. 7, 1916. Serial No. 130,007. (Cl. 15—50.)

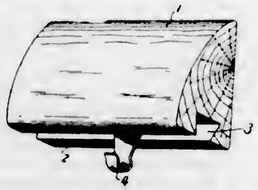
A brush of the class described comprising a body, a handle having an open end, a soap reservoir received with-

in the handle and connected therewith and with the body, a flared end on the soap reservoir closing the open end of the handle, a follower within the soap reservoir, a cap threadedly engaged with the handle and closing the flared



end of the soap reservoir, a stem mounted to turn in said cap and provided with a socket, and a spring within the soap reservoir having one end connected with the follower and its other end provided with a ball received in said socket.

1,220,021. PICTURE RAIL AND HOOK. WILLIAM ADOLPHUS SMYRK, London, England. Filed Feb. 23, 1916. Serial No. 79,991. (Cl. 20—74.)



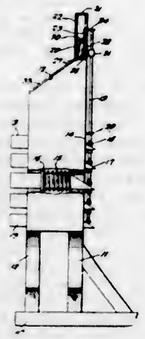
1. As an article of manufacture, a molding having its lower side substantially horizontal when in operating position on the wall, and having an upwardly enlarging hook retaining groove in its lower side, the mouth of said groove opening on said horizontal side and the sides of said groove making a large angle with the horizontal whereby the collection of dust is prevented.

2. The combination with a molding having an upwardly enlarging hook retaining groove therein and a hook having a flange at right angles to its body, the length of said flange being placed transverse to the groove of the molding and being of substantially the same length as the width of the groove.

3. The combination with a molding having an upwardly enlarging hook retaining groove therein and a hook having a flange at right angles to its body, the length of said flange being placed transverse to the groove of the molding and being of substantially the same length as the width of the groove, the body of said hook resting against one side of said groove.

1,220,022. TARGET. HENRY SWEENEY and WALTER G. SWEENEY, Fall River, Mass. Filed Dec. 12, 1916. Serial No. 136,493. (Cl. 124—15.)

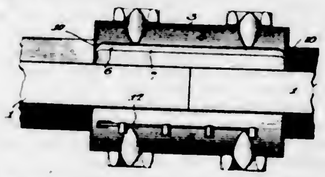
1. A target comprising a vertical support, a plurality of plungers slidably mounted in the support, springs for the plungers to independently project the same forwardly in the support, said plungers having cam faces upon their inner ends, vertically disposed push rods carried by the support and adapted to bear at their lower ends upon said cam faces, a plurality of number plates on the upper end of the support bearing numbers upon their faces, and fingers projecting from said number plates into the paths of said push rods for raising the number plates by the operation of the push rods.



2. A target comprising a support, a plurality of spring pressed plungers mounted in the support and normally urged outwardly, said plungers having rear cam faces, and being adapted to be depressed by the impact of a ball against their outer ends, push rods slidably mounted on the support and having their lower ends bearing against said cam faces, a casing on top of the support having a sight opening in its front side, a plurality of number bearing plates mounted in the lower ends of the casing and having rearwardly projecting fingers lying in the paths of said push rods, said number plates being adapted to be raised by the push rods when the plungers are retracted, a stem depending from each number plate and having a shoulder thereon, a spring pressed pawl in the casing for each shoulder, adapted to engage the same when raised to retain the number plates in raised position, and in line with the sight opening, and means for releasing said pawls from said shoulders.

3. A target comprising a support, a plurality of spring pressed plungers slidably mounted in the support and being normally projected through one side of the same, a push rod for each plunger adapted to be raised by the retraction of the plunger, a horizontal slide mounted on top of the support, a plurality of number plates carried by the slide and having rearwardly projecting fingers lying in the paths of the push rods to be independently raised by the upward movement of the push rods, pawls for locking the plates raised, and flexible means connected with the pawls for permitting the releasing of the same from engagement with said number plates to permit the lowering thereof.

1,220,023. RAIL-JOINT. PETER SZEREMETA, Hammond, Ind. Filed Sept. 8, 1916. Serial No. 119,081. (Cl. 239—6.)



1. A rail-joint comprising a chair formed with a base and side cheeks to receive the bottom flanges and webs of the adjacent ends of rails, with the upper ends of the cheeks bearing against the under face of the tread of the rails, a locking key consisting of a bar to bear against one cheek of the chair and provided with laterally extending pins to pass through the cheeks of the chair and webs of the rails, and a lock-pin engaging the ends of the pins to prevent withdrawal of the pins.

2. A rail-joint comprising a chair formed with a base and side cheeks to receive the bottom flanges and webs of the adjacent ends of the rails, a locking key consisting of a bar to bear against one cheek of the chair and formed with deflected ends to embrace opposite ends of the chair and having laterally extending pins to pass through the cheeks of the chair and webs of the rails, and a lock-pin engaging the ends of the pins to prevent withdrawal of the pins.

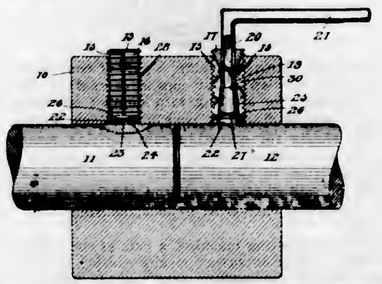
3. A rail-joint comprising a chair formed with a base and side cheeks to receive the bottom flanges and webs of the adjacent ends of rails, a locking key consisting of a bar to bear against one cheek of the chair and provided with laterally extending pins to pass through the cheeks of the chair and webs of the rails, one cheek of the chair being formed with a groove to receive the bar of the key, and a lock-pin engaging the ends of the pins to prevent withdrawal of the pins.

4. A rail-joint comprising a chair formed with a base and side cheeks to receive the bottom flanges and webs of the adjacent ends of rails, one cheek of the chair having a movable wing to permit lateral movement of one rail, a locking key consisting of a bar to bear against one cheek of the chair and provided with pins extending through the cheeks and wing of the chair and webs of the rails, and a lock-pin engaging the ends of the pins to prevent withdrawal of the locking key.

5. A rail-joint comprising a chair formed with a base and side cheeks to receive the bottom flanges and webs of the adjacent ends of rails, one cheek of the chair having a resilient wing to permit lateral movement of one rail, a locking key consisting of a bar to bear against one cheek of the chair and provided with pins extending through the cheeks and wing of the chair and webs of the rails, and a spring lock-pin having one end passing through some of the pins of the locking-key and a flattened portion receiving other pins of the locking-key.

[Claim 6 not printed in the Gazette.]

1,220,024. SHAFT SET-SCREW. AURELIO TANZI, Philadelphia, Pa. Filed Aug. 8, 1916. Serial No. 113,707. (Cl. 85—2.)



1. A set screw for shaft members, a point member removably arranged in wedging engagement with the set screw, the screw being provided with an instrument receiving longitudinal bore open at the upper end of the screw and communicating with the adjacent end of the point member.

2. A locking set screw having resilient side sections, a wedging point member removably arranged within the said sections, the set screws being provided with an axial bore adapted for the reception of an operating wrench or a removing instrument for the point member.

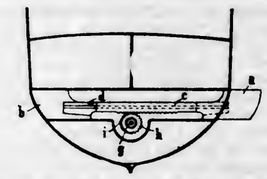
1,220,025. AUTOMATIC SPRINKLER-HEAD. JOSEPH TAYLOR, Oklahoma, Okla. Filed Oct. 25, 1916. Serial No. 127,629. (Cl. 169—5.)

1. In a sprinkler head, a frame having a duct, a deflector spaced from the end of the duct and having a stem extending from an opening in the frame and arranged opposite the end of the duct, a closure on the end of the duct, a pair of struts arranged at an angle to each other, one longer than and extending beyond the other, said struts being in mutual contact near their outer ends and being provided one with a recess on its under side near its outer end and the other with a projection on its outer end engaging in said recess, and one also having a pointed portion near its inner end bearing on the inner end portion of the other, said struts bearing one against the inner end of the stem and the other against the closure, and a fusible link connecting the outer portion of the struts together.



2. In a sprinkler head a closure cap, a stress applying member, a pair of struts in mutual contact at their inner ends and also at their outer ends, one of said struts having a recess and the other having a projection engaging in said recess, one of said struts also having a hook at the outer end and the other having a hook at the outer side, spaced from the inner end, and a link comprising a pair of members and fusible solder connecting said members together, the members being respectively provided at their outer ends with openings engaged by the hooks of the struts, one of the struts engaging the stress applying member and the other bearing on the closure cap.

1,220,026. STEERING APPARATUS FOR SHIPS. HERMANN TIMM, Luverne, Minn. Filed Apr. 19, 1915. Serial No. 22,416. (Cl. 114—145.)



1. An auxiliary steering apparatus for ships comprising in combination, wings adapted to be laterally projected from the sides of a ship, rack bars to which said wings are secured, a gear upon the shaft for the main steering gear of the ship adapted to mesh with said rack for alternately propelling said blades through an opening in the sides of the ship according to the rotation of said gear.

2. An auxiliary steering apparatus for ships comprising in combination with the main steering shaft, a gear upon said shaft, 50% of the teeth of said gear being laterally displaced from the other 50% of the same, two racks connected by a dove-tailed connection and adapted to be alternately engaged by the teeth of said gear upon the rotation of said shaft, and wings upon the outer ends of each of said racks for acting as steering blades in emergency cases, substantially as described.

1,220,027. COMBINATION TRACK GAGE AND LEVEL. SAMUEL TONEY, Clearfield, Pa. Filed Mar. 10, 1916. Serial No. 83,388. (Cl. 33—145.)

1. In a device for the purpose set forth, a casing, leg members extending longitudinally of the casing and having lugs thereon, a spreader member connecting the legs

at the outer ends thereof, said spreader member when moved to one position adapted to spread the ends of the said legs away from each other, a slidable member arranged in the casing between the legs, a gage lug on the slidable member, and means upon the slidable member coacting with the casing for limiting and retaining the slidable member in its outward position with respect to the casing.



2. In a device for the purpose set forth, a casing, leg members secured in the casing and extending longitudinally thereof, a spreader member for the legs, gage lugs upon the legs, a slidable member arranged within the casing between the legs, means for limiting the outward movement of the slidable member with relation to the casing, means for locking the slidable member upon the casing in such condition, and a movable gage lug upon the slidable member.

3. In a device for the purpose set forth, a substantially rectangular casing having its top provided with an opening, leg members secured in the casing and extending longitudinally therethrough, a spreader member pivotally connected with the legs, gage lugs upon the legs, a movable member passing through the casing and disposed between the legs, means for limiting the sliding movement of the movable member through the casing, means for locking the slidable member to the casing when the said slidable member is in its outward position, a spirit bulb upon the slidable member and adapted to be disclosed through the opening in the casing when the said slidable member is in its outward position, and a movable gage lug upon the slidable member.

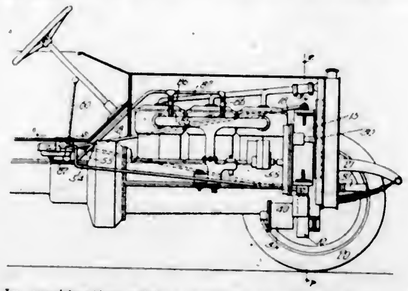
4. In a device for the purpose set forth, a casing, leg members secured to the sides of the casing and extending longitudinally of the casing, gage lugs upon the legs, a pivoted spreader member secured adjacent the ends of the legs, a slidable member arranged in the casing between the legs, means for limiting the outward movement of the slidable member with relation to the casing, means for locking the slidable member to the casing in such condition, a level bulb upon the slidable member, a movable lug upon the slidable member adjacent the outer end thereof, means for locking the lug in adjusted positions upon the movable member, said movable member having one of its sides provided with a scale graduation, a graduated elevation blade for the said slidable member, said blade having an elongated slot, a threaded element upon the slidable member and passing through the slot, and a nut for the threaded member.

1,220,028. AUTOMOBILE-TURNER. HERBERT E. SHARP, Tropico, Cal. Filed Sept. 5, 1916. Serial No. 118,368. (Cl. 21—90.)

1. In combination with a vehicle, a vertically movable wheel mounted thereon in a vertical transverse plane, fluid pressure means to move the wheel downwardly into forcible contact with the ground surface, and fluid pressure means to rotate the wheel.

2. In combination with a vehicle, a vertical fluid pressure cylinder mounted at one end thereon, a piston in said cylinder and a piston rod extending below the cylinder, a fluid pressure motor and a supporting wheel driven thereby mounted upon the lower end of the piston rod, and means to supply fluid pressure to the cylinder and to the motor.

3. In combination with a vehicle, a vertical fluid pressure cylinder mounted at one end thereon, a piston in said cylinder and a piston rod extending below the cylinder, a fluid pressure motor and a supporting wheel driven thereby mounted upon the lower end of the piston rod, and means to supply fluid pressure to the cylinder and to the motor, said means embodying manually controlled means for causing operation of the motor in either direction at will.

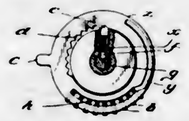


4. In combination with a vehicle, a vertically movable frame, a wheel carried thereon in a vertical transverse plane, fluid pressure means to move the frame and the wheel thereon downwardly into forcible contact with the ground surface to thereby raise the vehicle, and fluid pressure operated means carried on said frame and rotatively connected with the wheel to rotate it.

5. In combination with a vehicle, a vertically movable wheel mounted thereon in a vertical transverse plane, fluid pressure means to move the wheel downwardly into forcible contact with the ground surface to thereby raise the vehicle, fluid pressure means to rotate said wheel, and means to controllably apply fluid pressure to the rotating means including means for preventing such application of fluid pressure until the wheel is lowered.

[Claims 6 to 10 not printed in the Gazette.]

1,220,029. CALCULATING-MACHINE. FRANZ TRINKS, Brunswick, Germany. Filed Sept. 23, 1915. Serial No. 52,312. (Cl. 235—82.)



1. In a calculating machine, a pair of concentric shafts; shiftable number-operating means carried by one of said shafts; means for shifting said number operating means into and out of operative position; means carried by one of said shafts for arresting said shifting means in set position and adapted, when said shifting means is not in proper position, to couple said shafts; and means operable by one of said shafts when said shafts are coupled and given an initial movement to lock the other shaft against rotation.

2. In a calculating machine, a pair of concentric shafts; shiftable number-operating means carried by one of said shafts; means for shifting said number operating means into and out of operative position; a detent carried by one of said shafts to arrest said shifting means in set position and serving, when said shifting means is not in an arrested position, to couple said concentric shafts; and means associated with one of said shafts and operative, when said shafts are coupled and initially rocked to lock the other shaft against rotation.

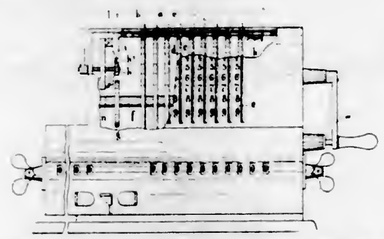
3. In a calculating machine, a rotatable shaft and a rock-shaft arranged in concentric relation; shiftable number-operating means carried by the rotatable shaft; means associated with said number-operating means to shift the latter into and out of operative position; means actuated by said shifting means for coupling said shafts whenever said shifting means has assumed an intermediate position; a pawl adapted to engage and lock said rotatable shaft against movement; and means associated with said rock shaft for moving said pawl into engagement with said rotatable shaft when said shafts are coupled and said shafts are initially rocked.

4. In a calculating machine, a pair of concentric shafts; shiftable number-operating means carried by the outer shaft; means for shifting said number operating means into and out of operative position; means actuated by said shifting means for coupling said shafts whenever said shifting means has assumed an intermediate position; a pawl movable into and out of engagement with said outer shaft; a cam associated with said pawl; and means associated with the inner shaft for actuating said cam and moving said pawl into engagement with the outer shaft whenever the shafts are coupled and the outer shaft is initially rocked.

5. In a calculating machine, a pair of concentric shafts; shiftable number-operating means carried by one of said shafts; means for shifting said number-operating means into and out of operative position; a spring actuated pawl carried by said shaft adapted to engage and arrest said number-shifting means in set position and adapted to engage the other shaft whenever said pawl is not in arresting position; and means operable by said latter shaft for locking said first-named shaft against rotation when said shafts are coupled and initially rocked.

[Claim 6 not printed in the Gazette.]

1,220,030. CALCULATING-MACHINE. FRANZ TRINKS, Brunswick, Germany. Filed June 19, 1916. Serial No. 104,534. (Cl. 235—144.)



1. In a calculating machine, in combination with a main operating member, and a mechanism comprising setting handles for setting up numbers and items, a slidable blocking member for said handles, and an operative connection between said main operating member and said blocking member, whereby said blocking member is automatically rendered operative on actuation of said main operating member and is rendered inoperative prior to the conclusion of the movement of said main operating member.

2. In a calculating machine, in combination with the main operating member and a mechanism comprising setting handles for setting up numbers and items, a slidable blocking member for said handles, a cam positively connected with said main operating member, a movable member adapted to be actuated by said cam and engaging said blocking member so as to reciprocate the same between its inoperative and its operative positions when said movable member is correspondingly actuated by said cam, whereby said blocking member is automatically rendered operative on actuation of said main operating member and is rendered inoperative prior to the conclusion of the movement of said main operating member.

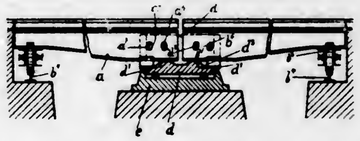
3. In a calculating machine, in combination with a main operating member and a mechanism comprising setting handles for setting up numbers and items, a slidable blocking member for said handles, yielding means on said blocking member and tending to retain said blocking member in its inoperative position, a shaft carrying said setting mechanism and having a driving connection with said main operating member, a cam on said shaft, a pivotally mounted lever adapted to be swung by said cam, an operative engagement between said lever and said blocking member, enabling said lever to cause a longitudinal displacement of said blocking member, whereby said blocking member is automatically rendered operative on actuation of said main operating member and is permitted to resume the inoperative position under the action of said yielding means and prior to the conclusion of the movement of said main operating member, and a stop adapted to limit the return movement of said blocking member.

4. In a calculating machine, in combination with a main operating member, and a mechanism comprising setting handles for setting up numbers and items, a slidable blocking member for said handles, an operative connection between said main operating member and said blocking member, whereby said blocking member is automatically rendered operative on actuation of said main operating member and is rendered inoperative prior to the conclusion of the movement of said main operating member, and means enabling the operator to disconnect the said operative connection between said main operating member and said blocking member.

5. In a calculating machine, in combination with the main operating member and a mechanism comprising setting handles for setting up numbers and items, a slidable blocking member for said handles, a cam positively connected with said main operating member, a movable member adapted to be actuated by said cam and engaging said blocking member so as to reciprocate the same between its inoperative and its operative positions when said movable member is correspondingly actuated by said cam, whereby said blocking member is automatically rendered operative on actuation of said main operating member and is rendered inoperative prior to the conclusion of the movement of said main operating member, and a revoluble member enabling the operator to disengage said movable member and said cam actuating said movable member, for the purpose of interrupting the operative connection between said main operating member and said blocking member.

[Claims 6 and 7 not printed in the Gazette.]

1,220,031. TURN-TABLE. HEINRICH VÖGELE, Mannheim, and KARL KLENSCH, Ludwigshafen-on-the-Rhine, Germany. Filed Apr. 25, 1914. Serial No. 834,416. (Cl. 104—19.)



1. A turntable comprising main girders, each girder consisting of a plurality of girder sections, being united to permit vertical movement, and rigidly connected with each other in their longitudinal direction as regards horizontal movement, a center bearing and supporting rollers at suitable places under the girder sections.

2. A turntable comprising main girders, each girder consisting of a plurality of girder sections, being united to permit vertical movement, and rigidly connected with each other in their longitudinal direction as regards horizontal movement and means for guiding and supporting the turntable.

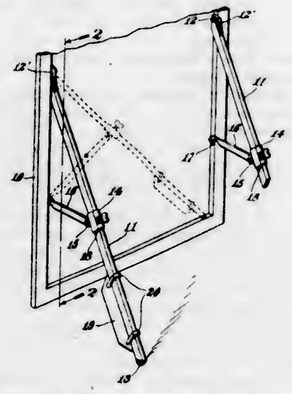
3. A turntable comprising main girders, each girder consisting of a plurality of girder sections, being united to permit vertical movement, and rigidly connected with each other in their longitudinal direction as regards horizontal movement, a center ball bearing and supporting rollers at suitable places of the girder sections for guiding and supporting the turntable respectively.

4. A turntable comprising main girders divided in a central plane of the turntable into two sections, hinge joints having horizontal pivotal axes and connecting the adjacent ends of the said sections of the main girders, rails rigidly fastened to those girder sections, which carry the said rails, a center bearing carrying the said hinge joints and trucks at the outer ends of the said sections.

5. A turntable comprising main girders divided in a central plane of the turntable into two sections, bearing eyes having horizontal axes and provided at the adjacent ends of the said sections, an intermediate member also provided with eyes, a hinge bolt freely mounted in the said eyes of the sections and the intermediate member, a central pivot supporting the latter and trucks at the outer ends of the main girders.

[Claims 6 to 15 not printed in the Gazette.]

1,220,032. SCENERY-BRACE. HUGO R. VOLLAND, St. Louis, Mo. Filed Mar. 22, 1916. Serial No. 85,794. (Cl. 46—70.)



1. In a device of the class described, comprising a perpendicular piece of scenery, the employment of a brace bar weighted adjacent its lower floor engaging end, and means for operatively connecting said brace with the piece of scenery, adapted to anchor and maintain the piece of scenery in perpendicular position.

2. A scenery brace comprising a brace-bar, a cushioning pad applied to the lower end thereof, a weight constructed and arranged for maintaining said end in secure frictional engagement with the floor surface, and means for operatively connecting said brace with a piece of scenery.

3. A scenery brace comprising a brace-bar, a strut adjustably connected therewith, means for operatively connecting said brace and strut with a pieces of scenery, and a weight provided on said brace and constructed and arranged for maintaining the lower end thereof in secure engagement with the floor surface.

4. A scenery brace comprising a brace-bar, means for operatively connecting the same with a piece of scenery, a weight constructed and arranged for maintaining the lower end of said brace in secure frictional engagement with the floor, and a strut operatively arranged between said brace and scenery.

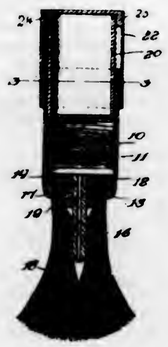
5. A scenery brace comprising a brace-bar, a strut connected at one end for adjustment along said bar, means for operatively connecting said brace and strut with a piece of scenery, and a weight applied to said brace for maintaining the lower end thereof in secure engagement with the floor surface.

[Claims 6 and 7 not printed in the Gazette.]

1,220,033. SHAVING-BRUSH. ARTHUR R. VORE, Carraway, Fla. Filed May 20, 1916. Serial No. 98,814. (Cl. 15—50.)

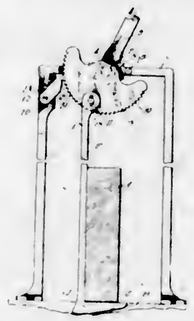
1. In a shaving brush, a hollow handle, a hollow outwardly opening plug in one end of the handle and having an inwardly flaring aperture, a nozzle having a flaring inner end engaging said flaring aperture, bristles within said plug and surrounding said nozzle, and a conical sleeve engaging over said nozzle and forced to a seat within said bristles.

2. In a shaving brush, a hollow handle, a hollow outwardly opening plug in one end of the handle and having an inwardly flaring aperture, a nozzle having a flaring inner end engaging said flaring aperture, bristles within



said plug and surrounding said nozzle, and a conical sleeve engaging over said nozzle and forced to a seat within said bristles, the lower end of said hollow handle being compressed against said plug to compress the same against the bristles and compress the bristles against the sleeve.

1,220,034. JOIST-LIFTER. JAMES WASKA, Chicago, Ill. Filed July 3, 1916. Serial No. 107,236. (Cl. 254—131.)

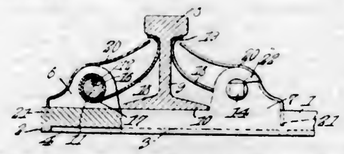


1. A joist lifter having, in combination, a frame having legs adapted to straddle a joist, an arcuate segment having teeth thereon and pivotally carried by the frame, a lifting bar pivotally connected to said segment for supporting the joist, means for rocking said segment whereby said bar will be raised or lowered, and a dog on said frame adapted to engage said teeth and lock said lifting bar in any one of several positions.

2. A joist lifter having, in combination, a frame having legs adapted to straddle a joist, an arcuate segment having teeth on the periphery thereof and pivotally carried by the frame, a lifting bar pivotally connected to said segment for supporting the joist, a hand lever for rocking said segment, and a dog pivoted to said frame adapted to engage said teeth and lock said arcuate member.

3. A joist lifter having, in combination, a frame having legs adapted to straddle a joist, an arcuate segment pivotally carried by the frame, a lifting bar pivotally connected to said segment for supporting the joist, means for rocking said segment and coöperating means on said arcuate segment and said frame for locking the lifting bar in any one of several positions.

1,220,035. RAILROAD-TIE FASTENER. CORNELIUS WEANER, Risingsun, Ohio. Filed Aug. 12, 1916. Serial No. 114,598. (Cl. 238—2.)

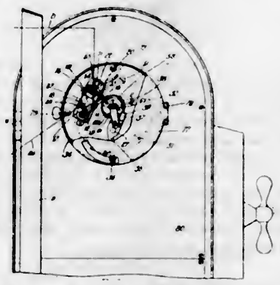


1. In a device of the class described, a tie; a shaft journaled on the tie and having a ratchet; a spring rail holder projecting from the shaft; and a guard movably engaged at its outer end with the tie and extended above the holder, the guard having a pawl engaging the ratchet.

2. In a device of the class described, a tie provided with a seat; a shaft journaled on the tie and having a ratchet; a spring rail holder projecting from the shaft; and a guard extended above the holder, the guard being provided with a pawl engaging the ratchet, and being provided with a finger detachably received in the seat.

3. In a device of the class described, a tie; a rail resting on the tie and including a ball; a shaft journaled on the tie and having a ratchet; a spring rail holder projecting from the shaft and engaging the rail; and a guard movably engaged at its outer end with the tie, the inner end of the guard projecting beneath the ball, the guard extending above the holder, the guard having a pawl engaging the ratchet.

1,220,036. SIGNAL APPARATUS. JOHN WEIGEL, Boston, Mass. Filed Nov. 11, 1915. Serial No. 60,807. (Cl. 177—365.)



1. A signal apparatus having, in combination, a rotary member, a plurality of series of teeth arranged about said member, electric circuit terminals, a contact lever adapted to be actuated by said teeth to connect and disconnect said terminals, and a door adapted to move said lever into a position to be acted upon by a predetermined series of said teeth.

2. A signal apparatus having, in combination, a movable member provided with a series of indentations thereon, a portion of the indentations of said series being detachable, and a contact member adapted to engage said indentations and be actuated thereby during the movements of said movable member.

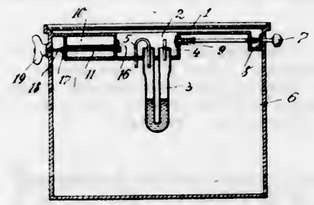
3. A signal apparatus having, in combination, a movable member provided with a series of teeth, a second series of teeth detachably arranged in alinement with the first named series of teeth, and a contact member arranged to be engaged by the teeth of said sets and to be successively moved by said teeth.

4. A signal apparatus having, in combination, a rotary member provided with two series of circumferentially disposed teeth, instrumentalities adapted to rotate said member, a pair of electric circuit terminals, a lever pivotally mounted adjacent said rotary member and adapted to be moved by said teeth to connect and disconnect said terminals, a spring adapted to retain said lever in alinement with one of said series of teeth, means to move said lever from its position alining with said last named series of teeth into alinement with the other of said series, and a latch adapted to hold said lever in said last named position.

5. The combination with a signal box provided with a door of a rotary member, a plurality of series of teeth arranged circumferentially of said member, instrumentalities to rotate said member, electric circuit terminals, a lever adapted to be actuated by said teeth to connect and disconnect said terminals, a carrier for said lever adapted to be moved to aline said lever with said series of teeth respectively, a spring adapted to move said carrier in one direction, and means actuated by the closing of the door of said signal box adapted to move said carrier in an opposite direction.

[Claims 6 to 10 not printed in the Gazette.]

1,220,037. APPARATUS FOR INDICATING THE COMPOSITION OF GASES. HANS HAUPT and MARTIN WERNER, Berlin, Germany. Filed Apr. 9, 1915. Serial No. 20,309. (Cl. 73—51.)



1. In apparatus for indicating the composition of gases by way of diffusion, the combination, with the diffusing chamber of the apparatus and an air supply chamber, of a plurality of auxiliary chambers and means for connecting said auxiliary chambers in alternation with the said diffusing chamber and with the air-supply respectively, substantially as and for the purpose set forth.

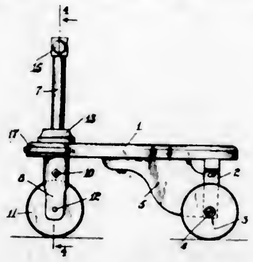
2. In apparatus for indicating the composition of gases by way of diffusion, the combination, with the diffusing chamber of the apparatus and an air supply chamber, of a plurality of auxiliary chambers of equal size separated from each other, the opposite end walls of each of said auxiliary chambers provided with ports to connect the same one way with the supply of atmospheric air and one way with the diffusing chamber of the apparatus, valves for opening and closing said ports, and a shaft for operating said valves, substantially as and for the purpose set forth.

3. In apparatus for indicating the composition of gases by way of diffusion, the combination, with the diffusing chamber of the apparatus and an air supply chamber, of a plurality of auxiliary chambers of equal size separated from each other, the opposite end walls of each of said auxiliary chambers provided with ports for connecting and disconnecting the same one way with and the other way from the supply of atmospheric air and with and from the diffusing chamber of the apparatus, a shaft carrying and controlling said valves the valves for controlling the air-supply and the valves for controlling the communication with the diffusing chamber being so shaped and located with relation to each other to permit, during each half turn of said controlling shaft, an exchange of air between the said auxiliary chambers, the diffusing chamber and the supply of atmospheric air substantially as and for the purpose set forth.

1,220,038. CHILD'S TOY VEHICLE. CLARENCE W. WHITE, North Bennington, Vt. Filed Oct. 6, 1915. Serial No. 54,322. (Cl. 21—191.)

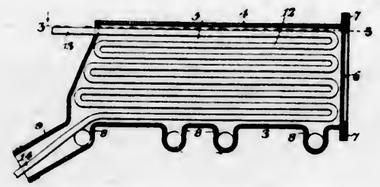
In a child's vehicle adapted to be straddled and propelled by the action of the child's feet against the sur-

face over which the vehicle travels, a flat body member comprising a wide seat section, a comparatively narrow foot supporting section, and a relatively narrower section connecting the two sections, a rear bolster connected to



the wide seat section with supporting wheels thereon, and a steering member comprising a post passing through the foot supporting section, and a wheel connected to said post.

1,220,039. KEROSENE-VAPORIZER FOR AUTOMOBILE-ENGINES. LEWIS B. WHITE, Manson, N. C., assignor to White Kerosene Fuel Company, Norlina, N. C., a Corporation of North Carolina. Filed Jan. 21, 1916. Serial No. 73,415. (Cl. 123—122.)



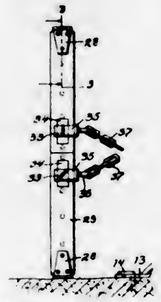
1. A vaporizing means for the utilization of heavy liquid fuels for explosion engines, comprising an exhaust manifold, and an extended fuel conveying pipe lodged therewithin, said manifold being extended in the direction of its height to form a chamber wholly above the exhaust ports leading from the engine into the manifold and the fuel conveying pipe being extended back and forth in the direction of the length of the manifold, whereby the hot products of combustion immediately on leaving the engine cylinders distribute through the chamber in the manifold and heat all parts of the fuel conveying pipe within said manifold.

2. A means for the utilization of kerosene or the like as a fuel for explosion engines, comprising an exhaust manifold having a side extension immediately adjacent to the ports connecting the manifold to the engine cylinders, said manifold having the end remote from the exhaust end provided with a removable head for access to the interior of the manifold, and a coil of pipe introduced into the manifold through the end provided with the removable head and having inlet and outlet portions extending to the exterior of the manifold through that end of the latter remote from the removable head.

3. A means for the utilization of kerosene or the like as a fuel for explosion engines having intake and exhaust manifolds, comprising an exhaust manifold structure formed with a chamber with a coil of pipe therein having one end provided with means for connection to a supply of fuel, a charge forming device between the other end of the coil of pipe and the intake manifold, and an atomizer having means for connecting it to the supply of fuel and means for connecting it to a supply of air under pressure and also with means for simultaneously controlling the inlet of fuel and air, said atomizer discharging into the intake manifold of the engine.

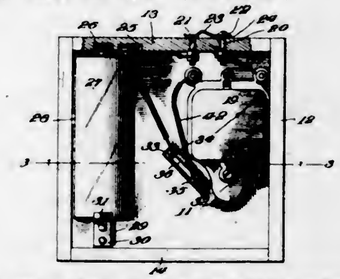
4. A means for the utilization of kerosene or the like as a fuel for explosion engines provided with intake and exhaust manifolds, comprising an exhaust manifold having an enlargement constituting a chamber, a coil of pipe therein having inlet and outlet ends extending to the exterior of the manifold, a charge forming device connected to the outlet end of the coil and to the intake manifold of the engine, a reservoir for fuel adapted to have air pressure established therein, a pipe leading from the reservoir to the inlet end of the coil and including a valve for controlling the flow of fuel to said coil, an atomizer for the fuel connected to and discharging into the intake manifold of the engine, a fuel connection between the fuel pipe and the atomizer, an air connection between the air side of the reservoir and the atomizer, and means under the control of an operator for simultaneously controlling the air and fuel inlets to the atomizer.

1,220,040. WIRE-FENCE STRETCHER. JACKSON WILLIAMS, Ekron, Ky. Filed Oct. 31, 1913. Serial No. 798,565. (Cl. 254—83.)



A device of the character described including a pair of clamp members provided with openings therein, blocks positioned in said openings and having transversely extending openings, yokes engaged with said blocks and provided with threaded openings registering with the openings of the blocks, means extending through the openings of the blocks and screwed into the openings of said yokes for holding the latter from displacement, and means extending from said yokes to be placed in connection with a power element whereby fence wires held between said clamp members may be stretched.

1,220,041. WATER-LEVEL ALARM. HARRY L. WITT and SAMUEL LOOKMAN, Pittsburgh, Pa. Filed Feb. 4, 1915. Serial No. 6,095. (Cl. 204—53.)

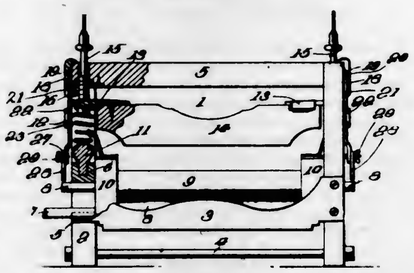


1. A device of the character described including a casing provided with sockets, circuit wires arranged within the casing and having rebent portions providing terminals mounted in said sockets, a source of electrical energy arranged within the casing and having its terminals seating in said sockets to abut said first mentioned terminals, and a clip connecting the source of electrical energy with the casing and normally acting to urge the said last mentioned terminals into engagement with said first mentioned terminals.

2. A device of the character described including a casing having an end wall thereof provided with recesses, circuit wires arranged within the casing and coiled within said recesses to provide terminals, a battery lying upon the bottom wall of the casing and provided at one end with terminals, and a spring connected to said bottom wall of the casing and engaging the opposite end of the battery for urging the terminals thereof into said recesses to engage with said first mentioned terminals with the walls of said recesses adapted to engage the battery terminals for holding the adjacent end of the battery against displacement.

3. A device of the character described including a casing having side end and bottom walls with one of the end walls provided upon the inner side thereof with spaced sockets adjacent to one of the side walls, circuit wires arranged within the casing and having adjacent rebent extremities providing terminals disposed within said recesses, a battery lying upon the bottom wall of the casing and provided with energized terminals extending within said recesses to coöperate with the said first mentioned terminals, a filler block interposed between the battery and the said side wall of the casing, and a resilient clip connected at one end to the bottom wall of the casing with the said clip engaging the end of the battery opposite to the said terminals for urging the battery to a position with the terminals thereof engaging the terminals of said wires and provided at its opposite extremity with a terminal lip engaging over the upper side of the battery for holding the battery against the said bottom wall.

1,220,042. ADJUSTABLE AUTOMATIC PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. REA P. WRIGHT, Washington, D. C., assignor to John Francis Hemenway, New York, N. Y. Filed Oct. 2, 1916. Serial No. 123,380. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, retaining means for normally holding said pressure means in predetermined position, releasing members engaging said retaining means, adjustable trip members carried by said releasing members, said trip members being arranged in the path of travel of one of said pressure roll shafts and adapted to be engaged thereby on the upward movement of said roll.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, means for normally holding said pressure means in predetermined position, releasing members arranged to engage said retaining means, trip members adjustably carried by said releasing members, said trip members being actuated on the separation of said rolls for automatically releasing said pressure means.

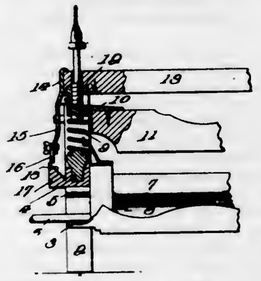
3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, movable members for holding said pressure means in predetermined position, slidably mounted releasing members coöperating with said movable members, trip members carried by said releasing members, said trip members being arranged to be engaged by the shaft of one of said pressure rolls on the upward movement thereof.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a top bar movably mounted within said frame having means for adjusting said pressure means, movable members for holding said top bar in predetermined position within said frame, releasing members slidably carried by said frame, trip members adjustably carried by said releasing members, and means actuated by the separation of said pressure rolls for moving said releasing members into engagement with said movable members for moving said movable members out of the path of travel of said top bar.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a top bar movably mounted within said frame having pressure screws for adjusting said pressure means, movable members mounted upon said frame for holding said stop bar in predetermined position therein, slidably mounted releasing members coöperating with said movable members, trip members adjustably mounted on the lower ends of said releasing members, said trip members being adapted to be engaged by the shaft of one of said pressure rolls on the upward movement thereof for actuating said releasing members.

[Claims 6 to 19 not printed in the Gazette.]

1,220,043. ADJUSTABLE AUTOMATIC PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. REA P. WRIGHT, Washington, D. C., assignor to John Francis Hemenway, New York, N. Y. Filed Oct. 2, 1916. Serial No. 123,383. (Cl. 68—32.)



1. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, means for normally holding said pressure means in predetermined position, bearings for the pressure roll shaft, and extensions carried by said bearings, engaging means for holding said pressure means in predetermined position for moving said means into position to release said pressure means.

2. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, movable members for normally holding said pressure means in predetermined position, trip members carried by said movable members, and bearings for the pressure roll shafts engaging said movable members on the separation of said pressure rolls for moving said movable members in position to release said pressure means.

3. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, movable members for normally holding said pressure means in predetermined position, bearings for the pressure roll shafts of said wringer, and extensions formed on said bearings engaging said movable members on the separation of said pressure rolls for moving said movable members in position to release said pressure means.

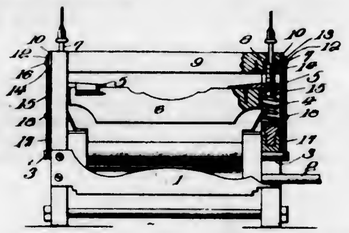
4. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having means for adjusting said pressure means, movable mem-

bers mounted on the side bars of said frame for holding said top bar in predetermined position within said frame, adjustable members carried by said movable members, and bearings for the shafts of said pressure rolls engaging said adjustable members on the separation of said rolls for shifting said movable members out of the path of travel of said top bar for releasing said pressure means.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, pivoted members for normally holding said pressure means in predetermined position, and bearings for said pressure rolls having inclined faces engaging said pivoted members for shifting said pivoted members in position to release said pressure means.

[Claims 6 to 13 not printed in the Gazette.]

1,220,044. AUTOMATIC PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. REA P. WRIGHT, Washington, D. C., assignor to John Francis Hemenway, New York, N. Y. Filed Oct. 26, 1916. Serial No. 127,895. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having means for adjusting said pressure means, projections carried by said top bar, movably mounted retaining members coöperating with said projections, levers mounted on said frame connected to said movably mounted members, said levers having tail portions arranged in the path of travel of one of the pressure roll shafts for moving said retaining members in position to release said top bar on the separation of said pressure rolls.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having means for adjusting said pressure means, studs carried by the ends of said top bar, retaining members slidably mounted on the side bars of said frame coöperating with said studs for holding said top bar in predetermined position within said frame, said retaining members having vertically disposed slots for limiting the upward movement of said top bar, and means actuated by the separation of the pressure rolls for moving said retaining members in position to release said top bar.

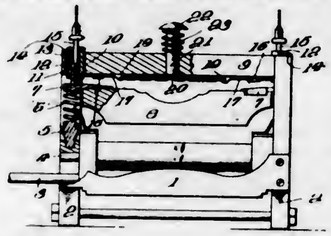
3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted member carrying means for adjusting said pressure means, slidably mounted members arranged on said frame for holding said movable members in predetermined position therein, said slidably mounted members having means for limiting the upward movement of the movably mounted members, and means actuated by the separation of said pressure rolls for shifting said slidably mounted members for releasing said pressure means.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having pressure screws for adjusting said pressure means, studs carried by the ends of said top bar, plates slidably mounted on the side bars of said frame coöperating with said studs for holding said top bar in predetermined position within said frame, angular levers pivotally mounted on the side bars of said frame slidably connected to said plates at their upper ends, said levers having their lower ends arranged in the path of travel of one of said pressure roll shafts on the separation thereof for shifting said plates in position to allow said top bar to move vertically a predetermined distance therein.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a member movably mounted in said frame having means for adjusting said pressure means, studs carried by said member, notched plates slidably mounted on the side bars for holding said movable member in predetermined position within said frame, angled levers pivotally mounted on the side bars of said frame having their upper ends slidably connected to said plates, said levers having their lower ends extending across the slots of said side bars and adapted to be oscillated upon their pivots by the separation of said pressure rolls for shifting said plates transversely on the frame for allowing said movably mounted member to move a predetermined distance upwardly within said frame for releasing said pressure means.

[Claims 6 to 8 not printed in the Gazette.]

1,220,045. PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. REA P. WRIGHT, Washington, D. C., assignor to John Francis Hemenway, New York, N. Y. Filed Oct. 26, 1916. Serial No. 127,896. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, movably mounted boxes arranged in said frame carrying pressure screws for adjusting said pressure means, releasing bars for holding said boxes in position within said frame, a chain connecting said releasing bars, and a push button mounted in said frame above said chain coöperating therewith on the downward movement thereof for moving said releasing bars out of engagement with said boxes.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar for said frame having sliding non-rotatable internally threaded boxes mounted therein, pressure screws mounted in said boxes for adjusting said pressure means, said boxes having notches, releasing bars arranged in said notches, a chain connecting said releasing bars, and a push button coöperating with said chain for moving said releasing bars out of the notches of said boxes for allowing said boxes to move vertically within said top bar.

3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar for said frame having vertical bores, fixed sleeves mounted in said bores, internally threaded boxes slidably mounted in said bearing sleeves provided with longitudinal grooves, stops carried by said top bar extending into the groove of said boxes for limiting the upward movement thereof, pressure screws mounted in said boxes for adjusting said pressure means, retaining bars carried by said top bar for holding said boxes in predetermined position within said frame, a chain connecting said releasing bars, and a push button mounted in said top bar coöperating with said chain for moving said releasing bars out of engagement with said boxes for releasing said pressure means.

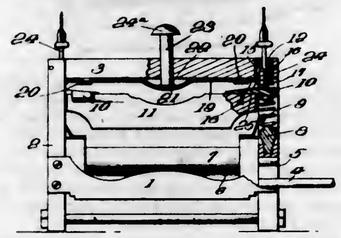
4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar fixed in said frame, a bearing sleeve secured

in said top bar adjacent each end, an internally threaded box slidably mounted in each of said bearing sleeves having a notch, pressure screws carried by said boxes for adjusting said pressure means, releasing bars slidably mounted on the under side of said top bar extending into the notches of said boxes, a chain connecting the inner ends of said releasing bars, a spring actuated push button slidably mounted in said top bar and adapted to coöperate with said chain for moving said releasing bars out of the notches of said boxes for releasing said pressure means.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar fixed in said frame having slidably mounted boxes at each end carrying pressure screws for adjusting said pressure means, means for limiting the upward movement of said boxes within said top bar, releasing bars slidably carried by said top bar for holding said boxes in predetermined position within said top bar, a chain connecting the inner ends of said releasing bars, and a push button mounted in said top bar for depressing said chain for moving said releasing bars out of engagement with said boxes for releasing said pressure means.

[Claims 6 to 9 not printed in the Gazette.]

1,220,046. PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. REA P. WRIGHT, Washington, D. C., assignor to John Francis Hemenway, New York, N. Y. Filed Oct. 26, 1916. Serial No. 127,897. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, movably mounted boxes carried by the top bar of said frame carrying pressure screws for adjusting said pressure means, a resilient member carried by the top bar detachably engaging said boxes for holding said boxes in predetermined position within said top bar, and means for bowing said resilient member for moving the ends thereof out of engagement with said boxes for releasing said pressure means.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, boxes slidably mounted in said frame carrying pressure screws for adjusting said pressure means, a resilient member detachably engaging said boxes for holding said pressure means in predetermined position, and means for contracting said resilient member for releasing said pressure means.

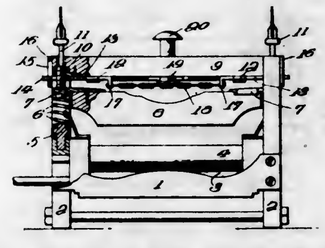
3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar fixed in said frame having bearing sleeves, boxes slidably mounted in said bearing sleeves having notches, pressure screws mounted in said boxes for adjusting said pressure means, a resilient member carried by said top bar having its free ends extended into said notches for holding said boxes in predetermined position within said top bar, and means for contracting said resilient member for releasing said boxes.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar fixed in said frame having bearing sleeves, internally threaded boxes slidably mounted in said sleeves having means for limiting the upward movement thereof, pressure screws mounted in said boxes for adjusting said pressure means, a resilient member carried by said top bar detachably engaging said boxes for holding said boxes in predetermined position, and means for contracting said resilient member for releasing said boxes.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar fixed in said frame having bearing sleeves provided with oppositely disposed grooves and a vertically disposed slot, internally threaded boxes having oppositely disposed ribs slidably mounted in said bearing sleeves, said boxes having lugs projecting within the slots thereof for limiting the upward movement of said boxes, pressure screws mounted in said boxes for adjusting said pressure means, a member carried by said top bar for holding said boxes in predetermined position within said bearings, and means coöperating with said member for moving the free ends of said member out of engagement with said boxes.

[Claims 6 to 10 not printed in the Gazette.]

1,220,047. PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. REA P. WRIGHT, Washington, D. C., assignor to John Francis Hemenway, New York, N. Y. Filed Oct. 26, 1916. Serial No. 127,898. (Cl. 68—32.)



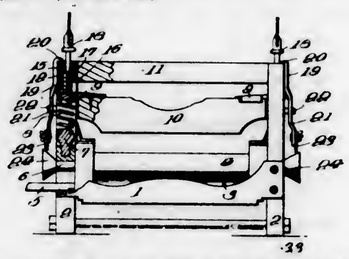
1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having means for adjusting said pressure means, retaining bars for holding said top bar in predetermined position within said frame, a spring disposed between said retaining bars for normally holding said bars in set position, a chain connecting the inner ends of said bars, and a push button slidably mounted in said top bar coöperating with said chain for moving said releasing bars in position to release said pressure means.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having means for adjusting said pressure means, keepers carried by the side bars of said frame, slidably mounted retaining bars carried by said top bar coöperating with said keepers for holding said top bar in predetermined position within said frame, said retaining bars having angled inner ends, a spring fixed to said top bar between said retaining bars and having portions contacting with the angled ends thereof for holding said retaining bars in extended position, a chain connecting said retaining bars, and a push button mounted in said top bar for depressing said chain for moving said retaining bars in position to release said pressure means.

3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having means for adjusting said pressure means, keepers carried by the side bars, retaining bars slidably mounted on said top bar coöperating with said keepers, said retaining bars having apertured angled inner ends, a substantially C-shaped spring secured to said top bar having its free end portions in engagement with the angled ends of said retaining bars for normally holding said retaining bars in extended position, a chain connecting the angled ends of said retaining bars, and a push button slidably mounted in said top bar coöperating with said chain for moving said retaining bars in position to release said pressure means.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having means for adjusting said pressure means, keepers carried by the side bars of said frame, retaining bars slidably carried by said top bar coöperating with said keepers for holding said top bar in predetermined position within said frame, said retaining bars having angled apertured ends, a chain connecting said angled ends, a substantially C-shaped spring secured to the under side of said top bar having its free end portion arranged in the path of travel of said retaining bars for normally holding said retaining bars in extended position, and a push button slidably mounted in said top bar for depressing said chain for moving said retaining bars in position to release said pressure means.

1,220,048. AUTOMATIC PRESSURE-ROLL-RELEASING DEVICE FOR CLOTHES-WRINGERS. REA P. WRIGHT, Washington, D. C., assignor to John Francis Hemenway, New York, N. Y. Filed Oct. 26, 1916. Serial No. 127,900. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, vertically movable internally threaded pressure screw carrying boxes mounted in said frame carrying pressure screws for adjusting said pressure means, movable members for holding said boxes in predetermined position within said frame, and means actuated by the separation of said pressure rolls for shifting said movable members out of engagement with said boxes for releasing said pressure means.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, said frame having a top bar, internally threaded non-rotatable boxes slidably mounted in said top bar carrying pressure screws for adjusting said pressure means, pivoted latches for holding said boxes in predetermined position within said top bar, and members having beveled faces actuated by the separation of said pressure rolls engaging said latches for moving said latches out of engagement with said boxes for releasing said pressure means.

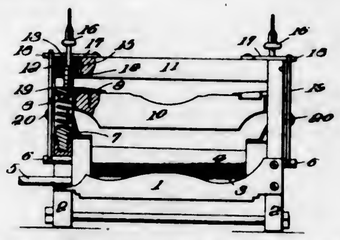
3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar fixed in said frame, slidably mounted non-rotatable internally threaded boxes carried by said top bar, pressure screws carried by said boxes for adjusting said pressure means, pivoted latches carried by the frame of said wringer for holding said boxes in predetermined position within said top bar, adjustable trip members carried by said latches, and members actuated by the separation of said rolls having inclined faces engaging said adjustable trip members for releasing said boxes.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar fixed in said frame, slidably mounted non-rotatable internally threaded boxes carried by said top bar, pressure screws mounted in said boxes for adjusting said pressure means, pivoted latches carried by the frame of said wringer engaging said boxes for holding said boxes in predetermined position within said top bar, and conical members engaging said latches on the separation of said rolls for moving said latches out of engagement with said boxes for releasing said pressure means.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar fixed in said frame, non-rotatable slidably mounted internally threaded boxes carried by said top bar, means for limiting the movement of said boxes within said top bar, pivoted latches carried by the side bars of said frame engaging said boxes for holding said boxes in predetermined position within said top bar, and members having beveled faces engaging said latches on the separation of said rolls for moving said latches out of engagement with said boxes for releasing said pressure means.

[Claims 6 to 12 not printed in the Gazette.]

1,220,049. AUTOMATIC PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. REA P. WRIGHT, Washington, D. C., assignor to John Francis Hemenway, New York, N. Y. Filed Oct. 26, 1916. Serial No. 127,901. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, slidably mounted boxes mounted in said frame carrying pressure screws for adjusting said pressure means, retaining members pivotally mounted on said frame for holding said boxes in predetermined position, and levers mounted on said frame actuated by the separation of said rolls for moving said retaining members out of the path of travel of said boxes to release said pressure means.

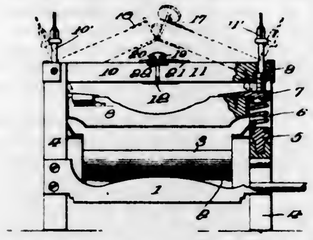
2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, said frame having a top bar carrying bearing sleeves, internally threaded boxes slidably mounted in said bearing sleeves, retaining members pivotally mounted on said top bar adapted to extend over said boxes for holding said boxes in position within said bearing sleeves, and pivoted levers mounted on the side bars of said frame for moving said releasing members out of the path of travel of said boxes on the separation of the pressure rolls.

3. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movable member having means for adjusting said pressure means, a pivoted retaining member for holding said movable member in predetermined position, a pivoted lever mounted on the frame of the wringer and adapted to be operated on the separation of said pressure rolls, said pivoted member being arranged in the path of travel of said lever and actuated thereby on the separation of said pressure rolls for releasing said pressure means.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar fixed in said frame carrying movably mounted boxes, pressure screws mounted in said boxes for adjusting said pressure means, pivoted retaining members mounted on said top bar for holding said boxes within said top bar, said retaining members having portions extending outwardly beyond the side bars of said frame, angular levers mounted on the side bars of said frame for moving said retaining members out of the path of travel of said boxes, said angular levers having portions arranged in the path of travel of one of said pressure roll shafts on the separation of said rolls.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar fixed in said frame, non-rotatable internally threaded boxes carried by said top bar having means for limiting the upward movement thereof, pressure screws carried by said boxes for adjusting said pressure means, pivoted retaining means mounted on said top bar arranged in the path of travel of said boxes, pivoted levers mounted on the side bars of said frame having portions arranged in the path of travel of one of the pressure roll shafts on the separation of said rolls for swinging said levers on their pivots, said retaining members having portions arranged in the path of travel of said levers and adapted to be engaged thereby for moving said retaining members out of the path of travel of said boxes for releasing said pressure means.

1,220,050. AUTOMATIC PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. REA P. WRIGHT, Washington, D. C., assignor to John Francis Hemenway, New York, N. Y. Filed Oct. 26, 1916. Serial No. 127,903. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a transversely breakable bar mounted in said frame carrying pressure screws for adjusting said pressure means, keepers carried by the ends of said sectional bar, and a transverse movable spring-held locking member carried by one of the sections of said bar engaging said keepers for automatically locking said sections in horizontal alinement.

2. A clothes wringer, having a pressure release comprising a sectional top bar carrying pressure screws, means for pivotally connecting said sections together, keepers provided with beveled faces carried by the abutting ends of said sections, and a transverse movable spring-held locking member carried by the end of one of said sections having locking hooks with beveled faces engaging said keepers for automatically locking said sections in horizontal alinement.

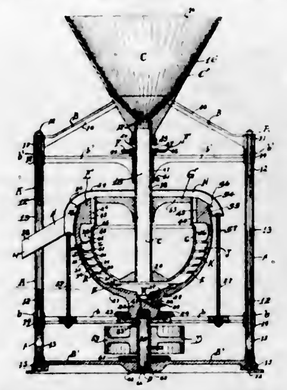
3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, cap members carried by the side bars of said frame, a sectional bar having its ends disposed under said cap members, said bar having its inner ends pivotally connected together, a transversely movable locking member pivotally carried by one of said sections, means for limiting the movement of said locking member, keepers carried by the inner ends of said sections having beveled faces, a spring for holding said locking members in locked position, said locking member having spaced hooks provided with beveled faces adapted to engage the beveled faces of said keepers for automatically locking said sections together when moved into alinement.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, cap members carried by the side bars of said frame, a sectional top bar mounted under said cap members having rounded free ends, pressure screws carried by said top bar for adjusting said pressure means, a hinge pivotally connecting the inner ends of the sections of said top bar, a locking member pivotally mounted on the inner end of one of said sections having buttons for rocking the same keepers carried by said sections having beveled faces, hooks provided with beveled faces carried by said locking member engaging said keepers, and a spring for normally holding said locking member in locked position.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar mounted in said frame having means for adjusting said pressure means, said top bar being formed of sections pivotally connected together, a transversely movable locking member pivotally mounted on the inner end of one of said sections having spaced locking hooks provided with beveled faces, a spring for holding said locking member in locked position, and keepers carried by the inner ends of said sections having beveled faces engaging the beveled faces of said hooks for automatically locking said sections together when moved into alinement.

[Claim 6 not printed in the Gazette.]

1,220,051. CENTRIFUGAL SEPARATOR AND AMALGAMATOR. HARRY R. ZIMMER, Los Angeles, Cal. Filed Aug. 4, 1914. Serial No. 855,076. (Cl. 83—67.)



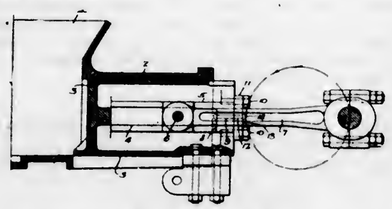
1. A separator comprising a rotatable bowl provided with a plurality of inwardly extending superposed annular shelves having upper and lower horizontal surfaces the inner edges of which are connected by downwardly and inwardly inclined surfaces forming sharp edges with the lower surfaces of the shelves, said rotatable bowl having an inwardly extending wall at the top forming with the uppermost shelf a pocket for receiving amalgam or mercury, a means forming an ore chute, a bowl stationarily mounted on said means, and in spaced relation to said rotatable bowl, said stationary bowl having a substantially vertical wall forming with the inwardly extending wall of said rotatable bowl a passageway, and means to operate said rotatable bowl.

2. A separator and amalgamator comprising a rotatable bowl provided with a plurality of superposed inwardly extending shelves having upper and lower surfaces, the inner edges of which are connected by downwardly and inwardly inclined surfaces forming sharp edges with the lower surfaces of the shelves, said bowl formed at the top with an inwardly extending substantially vertical wall the bottom of which forms with the uppermost shelf a receptacle for amalgam or mercury, an ore feed supported centrally of and extending to near the bottom of said rotatable bowl, a bowl stationarily mounted on said feed and in spaced and adjustable relation to said rotatable bowl, said stationary bowl having at its upper end a substantially vertical wall parallel with and spaced from the inwardly extending wall of said rotatable bowl to form a passageway, and means to operate said rotatable bowl.

1,220,052. SAFETY DEVICE. MAXWELL ALPERN, Philadelphia, Pa., assignor to American Engineering Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 15, 1916. Serial No. 72,320. (Cl. 74—48.)

1. The combination of a reciprocating member having an upwardly opening slot; a reciprocated member also

having an upwardly opening slot and mounted adjacent the first member; with a tension pin having integral heads and mounted in said slots in position to be removable therefrom by a lateral movement, said pin having its heads respectively engaged by the portions of said two members at the ends of their slots whereby said pin is subject to a tensile stress when the first member is moved in one direction.



2. The combination of a member having a guide; a slide movable on said guide; a second member attached to said slide so as to transmit power thereto; and a relatively weak element connecting and extending in the line of movement of, said members in position to be subjected to a tensile stress when the members are moved in one direction.

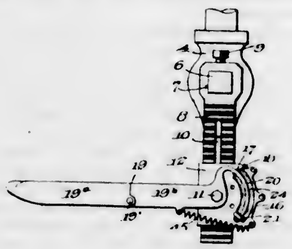
3. The combination of a plunger having a guide; a slide movable on the guide; a driving rod connected to the slide; with a relatively weak pin extending substantially parallel to the line of movement of the plunger and constituting a tension element connecting said plunger with the slide.

4. The combination of a member having a guideway; a plate mounted on said member and provided with a slot; a slide movable in the guideway and having a slot in line with that of said plate; with a pin extending through the slots and having heads respectively engaging the plate and the slide.

5. The combination of a reciprocable member having two opposite guideways; two plates mounted on said member and each provided with a slot; two slides operative in the guideways and having slots respectively in line with the slots of said plates; headed tension elements in said slots respectively; with a connecting rod pinned to said slides and operative between them.

[Claims 6 to 8 not printed in the Gazette.]

1,220,053. TRAIN-STOP. JOHN A. ANTHONY, Charleston, S. C. Filed May 9, 1916. Serial No. 96,412. (Cl. 246—59.)



1. In a train stop, the combination with a train having an air brake system including a bleed valve, and a striker member, of a throw arm connected with the stem of the valve, a fluid cylinder carried by the throw arm, a pivoted contact member for the throw arm arranged in the path of contact with the striker member, spring means between the throw arm and contact member for normally alining the said members, a perforated piston head carried by the contact member and received in the fluid cylinder and whereby when the contact member is subjected to a sharp blow by virtue of engagement with the striker member as when the train is traveling at a rapid rate to cause the piston head to act rapidly upon the fluid without permitting the said fluid to flow through the perforations therein to cause the throw arm to be moved with the contact member, and also whereby when the contact member is brought to engage with the striker member with only small violence as when the train is moving at a slow rate of speed, to permit of the fluid flowing through the perforations in the piston to allow the swinging of the contact member independent of the throw arm.

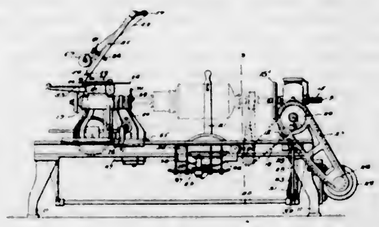
2. In a train stop, a train having an air brake system including a bleed valve, a longitudinally adjustable arm for the stem of the valve, a pivoted contact member on the arm, said member having a piston rod including a piston, and a cylinder carried by the arm and receiving the piston.

3. In a train stop, an air brake system including a bleed valve, an arm removably and adjustably connected with the stem of the valve, an adjustable plate carried by the arm, a fluid cylinder carried by the plate, a pivoted contact member upon the plate, a piston rod for the contact member, an apertured piston head for the piston rod arranged in the cylinder to contact with the fluid in the cylinder, as and for the purpose set forth.

4. In a train stop, an air brake system including a bleed valve, a throw arm on the stem of the valve, a longitudinally adjustable plate secured to the arm, a contact member pivotally secured to the plate, a piston rod for the contact member arranged concentric with its pivot, an apertured piston head for the rod, a fluid cylinder containing a fluid on the plate arranged concentric of the pivot of the contact member receiving the piston, and plugs in certain of the apertures of the piston head.

5. In a train stop, an air brake system including a bleed valve, a throw arm on the stem of the valve, a longitudinally adjustable plate secured to the arm, a contact arm pivotally secured to the plate, a piston rod connected with the contact arm and arranged concentric of its pivot, an apertured head for the rod, a fluid cylinder on the plate arranged concentric of the pivot of the contact arm, and receiving the piston head, a packing box in the open mouth of the cylinder and surrounding a portion of the piston rod, and a plug inlet opening for the cylinder.

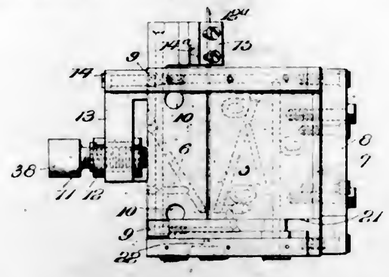
1,220,054. ARMATURE-BANDING MACHINE. GEORGE E. AUSTIN, New York, and FREDERICK LACHANCE, Brooklyn, N. Y.; said Lachance assignor to said Austin. Filed Aug. 15, 1914. Serial No. 856,961. (Cl. 242—8.)



In a machine of the class described, a frame to rotatably support an armature, a carriage slidable on said frame, a guiding lever pivotally carried by said carriage, said guiding lever having guide rollers therein, to receive and direct the course of a banding wire through and from said lever, a tension device in said lever for regulating said banding wire as it passes through said lever, said tension device comprising a plate slidably carried by said lever, spindles formed on said plate, rollers rotatably carried by said spindle, said rollers serving to receive the banding wire thereabout, means for frictionally restricting the rotation of said rollers, a scale carried by said

plate, a pointer carried by said lever registering with the indications on said plate, a tension spring connecting said plate to said lever and a dash pot carried by said lever to receive a plunger carried by said plate to cushion a sudden return stroke of said plate.

1,220,055. APPARATUS FOR CASTING PRINTERS' LEADS. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Oct. 6, 1914. Serial No. 865,340. (Cl. 199—47.)



1. In a mold adapted to be removably mounted in a casting machine, the combination with a frame, type blocks mounted in said frame and a mold blade movable between the proximate faces of said type blocks and adapted to form an edge wall of the mold cavity, of a pressure screw held by the frame and coöperating with one of the type blocks for advancing the same during the casting operation and releasing the same during the forward movement of the mold blade to discharge the casting.

2. In a mold adapted to be removably mounted in a casting machine, the combination with the frame, type blocks mounted in said frame, mold blade, movable between the proximate faces of the type blocks and forming an edge wall of the mold cavity, and cross block forming the edge wall of the mold cavity opposite the mold blade, of a pressure screw carried by the frame, and cooperating with one of the type blocks for reducing the thickness of the mold cavity during the casting operation and for releasing the pressure on the type block during the forward movement of the mold blade to discharge the casting from the mold cavity.

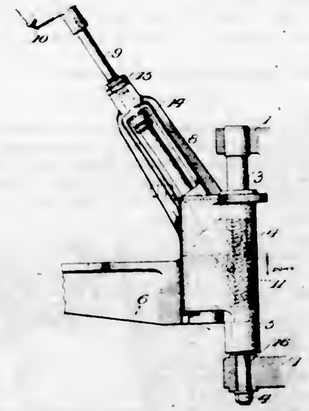
3. A mold adapted to be removably mounted in a casting machine embodying a mold frame, a mold blade mounted to reciprocate therein, a cross block mounted to reciprocate in the frame in a plane substantially at right angles to the plane of movement of the mold blade, a type block, and a filler block mounted in the frame at one side of the path of movement of the mold blade, said filler block and mold blade being adapted to form one edge wall of the mold cavity, a type block mounted in position to form the side wall of the mold cavity opposite that formed by the first mentioned type block, and means for intermittently clamping said type blocks during the casting operation, and for releasing said type blocks during the movement of the parts for discharging the casting from the mold cavity.

4. A mold of the type specified embodying a type block and a filler block located on one side of the plane of the mold cavity and adapted to form respectively a side and edge wall of said cavity, a type block forming the opposite side wall of the mold cavity, a mold blade mounted to reciprocate between the last mentioned type block, filler block and first mentioned type block, whereby a mold blade of given thickness may serve to discharge castings of varying thicknesses, and a cross block forming the edge wall of the mold opposite that formed by the mold blade and filler block.

5. A mold adapted to be removably mounted in a casting machine and embodying a casting chamber having an edge wall formed by a movable mold blade, and one side wall movable toward and from the plane of movement of the mold blade with means whereby said side wall may be periodically advanced and retracted for reducing the thickness of the casting chamber during the casting operation.

[Claims 6 to 15 not printed in the Gazette.]

1,220,056. MEANS FOR RAISING AND LOWERING CASTING-MACHINE MELTING-POTS. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Aug. 7, 1915. Serial No. 44,275. (Cl. 22—70.)



1. A raising and lowering mechanism for the melting pots of type casting machines, embodying a vertical shaft mounted in fixed supports and having teeth thereon, a melting pot support mounted to slide vertically on the shaft, a second shaft journaled in bearings in the melting pot support to move vertically therewith and having an operating handle at the upper end at one side of the pot, and a toothed gear connected with said last-mentioned shaft to be rotated thereby and engaging the teeth on the first-mentioned shaft.

2. A raising and lowering mechanism for the melting pots of type casting machines embodying a vertical shaft mounted in fixed supports and having a gear rack formed thereon, a melting pot support mounted to slide vertically on the shaft, a second shaft journaled in bearings in the melting pot support to move vertically therewith and having an operating handle at the upper end at one side of the pot, a gear wheel mounted on the lower end of the last-mentioned shaft, to be rotated thereby and meshing with the gear rack on the first mentioned shaft.

3. A raising and lowering mechanism for the melting pots of type casting machines, embodying a vertical shaft journaled in fixed supports and having rack teeth, a melting pot support mounted to move vertically on the shaft, a second shaft journaled in bearings in the melting pot support to move vertically therewith and having an operating handle at the upper end at one side of the pot, and a gear wheel connected with said last mentioned shaft to be rotated thereby and having spirally arranged teeth, meshing with the rack teeth on the first-mentioned shaft, whereby by the rotation of the shaft journaled in the melting pot support said support may be raised or lowered and locked in its adjusting position.

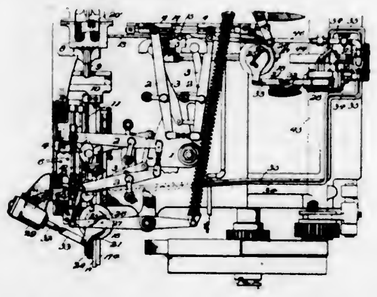
4. A raising and lowering mechanism for the melting pots of type casting machines embodying a vertical shaft journaled in fixed supports and having a gear rack formed thereon, a melting pot supporting sleeve slidably mounted on the vertical shaft, a second shaft journaled in bearings

supported by said sleeve, a melting pot bracket carried by said sleeve, an operating handle mounted on the upper end of the shaft carried by the sleeve, a gear wheel having spirally arranged teeth mounted on the lower end of said last-mentioned shaft and meshing with the gear rack on the vertical shaft, and a thrust bearing interposed between said second shaft and the bearing therefor carried by the sleeve, substantially as described.

5. A raising and lowering mechanism for the melting pots of type casting machines embodying a vertical shaft mounted in fixed supports, and having a gear rack formed thereon, a melting pot supporting sleeve mounted to move vertically on the shaft, a melting pot bracket carried by the sleeve, an operating shaft bracket also carried by the sleeve, a diagonally arranged operating shaft journaled in the last-mentioned bracket, an operating handle at the upper end of said operating shaft, and a spiral toothed gear carried by the lower end of said operating shaft and meshing with the gear rack on the vertical shaft.

[Claim 6 not printed in the Gazette.]

1,220,057. CASTING-MACHINE. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Aug. 13, 1915. Serial No. 45,420. (Cl. 199—76.)



1. A casting machine embodying the following instrumentalities, to wit: a mold, a matrix, means for positioning the matrix with relation to the mold, and means for temporarily preventing the accidental reëngagement of the positioning mechanism with the matrix after the latter has been positioned.

2. A casting machine embodying the following instrumentalities, to wit: a mold, a matrix, means for positioning the matrix with relation to the mold, a movable guard positioned in unison with the matrix, and means for holding the guard in position to temporarily prevent the accidental reëngagement of the positioning mechanism with the matrix after the latter has been positioned.

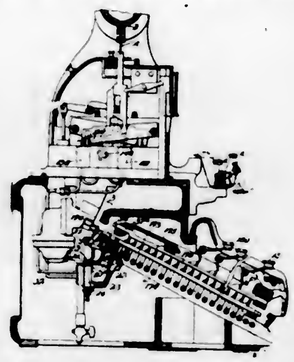
3. A casting machine embodying the following instrumentalities, to wit: a mold, a matrix, means for positioning the matrix with relation to the mold, operating mechanism therefor, operating connection intermediate the matrix and its positioning mechanism independent of the operating mechanism for the positioning means.

4. A casting machine, embodying the following instrumentalities, to wit: a mold, a matrix, means for positioning the matrix with relation to the mold, operating connections, means for separating the operating connections between the matrix and its positioning means and for holding such separating means in fixed position to form a guard for preventing the accidental reëngagement of the positioning means with the matrix.

5. A casting machine embodying the following instrumentalities, to wit: a mold, a matrix case, means for moving the matrix case to position the matrices with relation to the mold, embodying oppositely movable jaws, means independent of the positioning mechanism for opening the jaws after the case is positioned, and for temporarily preventing the reëngagement of the jaws with the matrix case.

[Claims 6 to 15 not printed in the Gazette.]

1,220,058. REPEAT MECHANISM FOR COMPOSING-MACHINES. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., and JOHN OLOF HOFBERG, Westville, N. J., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Nov. 20, 1915. Serial No. 62,611. (Cl. 164—112.)



1. In a record strip composing machine, the combination with designating keys and selectors controlled thereby for producing the desired indications in a record strip, of connections intermediate a key and its selectors embodying a bar, a supplemental member mounted on said bar and movable bodily in unison therewith or independently thereof, a latch for retaining the supplemental member in position to move in unison with the bar, a repeat motor for imparting movement to the supplemental member independently of the bar, and a repeat key controlling the latch.

2. In a record strip composing machine, the combination with designating keys and selectors controlled thereby for producing the desired indications in a record strip, of connections intermediate a key and its selectors, embodying a bar, a supplemental member pivotally mounted on the bar, a latch for supporting said member against pivotal movement, a repeat motor for imparting pivotal movement to said member independently of the movement of the bar, and a repeat key controlling the latch.

3. In a record strip composing machine, the combination with designating keys and selectors controlled thereby for producing the desired indications in a record strip, of connections intermediate a key and its selectors, embodying a longitudinally movable bar, a supplemental member pivotally mounted on the bar, a latch for supporting said member against pivotal movement, a repeat motor for imparting pivotal movement to said member independently of the movement of the bar, and a repeat key controlling the latch.

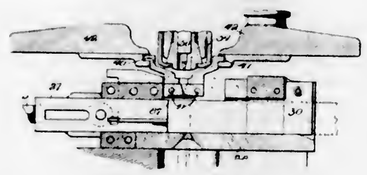
4. In a record strip composing machine, the combination with designating keys, punches for producing the desired indications in a record strip, punch motors and valves controlling said motors, of connections intermediate a key and its punch valves embodying a longitudinally movable valve bar, a supplemental member mounted on said valve bar and movable bodily in unison therewith or independently thereof, a latch for retaining the supplemental member to move bodily in unison with the bar, a repeat motor for imparting movement to the supplemental member independently of the bar, and a repeat key controlling the latch.

5. In a record strip composing machine, the combination with designating keys, punches for producing the desired indications in a record strip and valve controlled

punch motors, of connections intermediate a key and its punch motor valve, embodying a valve bar, a supplemental member pivotally mounted on the valve bar in position to coöperate with the valve, a repeat bar coöperating with said supplemental member for holding the same in position to move in unison with the bar or independently thereof on its pivotal center, a repeat motor for imparting reciprocatory movement to the repeat bar, a latch for locking the repeat bar in its normal position, and a repeat key controlling said latch.

[Claims 6 to 23 not printed in the Gazette.]

1,220,059. CASTING-MACHINE FOR ELEMENTS OF PRINTING-FORMS. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed July 20, 1916. Serial No. 110,360. (Cl. 199—1.)



1. An apparatus for casting type metal elements for printing forms, embodying means for confining a body of molten metal in contact with a surface of a previously congealed portion of the element being cast whereby the two portions are caused to unite by fusion, means for intermittently advancing the element as succeeding increments congeal, means for feeding molten metal and means for forming a printing surface on the element comprising a matrix, and means for periodically lifting said matrix during the advance movements of the element.

2. An apparatus for casting type metal elements for printing forms embodying a mold having a cavity open on two sides, means for holding congealed metal in position to close one side of the cavity, a movable matrix for closing the other side of the cavity, means for lifting the matrix away from the congealed metal, means for advancing the congealed metal while the matrix is lifted, and means for supplying molten metal to the cavity.

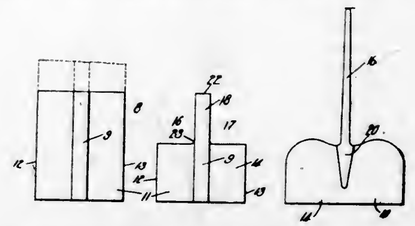
3. An apparatus for casting type metal elements for printing forms embodying a mold having a cavity open at two sides, means for holding congealed metal in position to close one side of the cavity, a movable matrix for closing the other side of the cavity, means for feeding the congealed metal, means for moving the matrix during feed movements, and means for supplying molten metal.

4. An apparatus for casting type metal elements for printing forms embodying a mold having a cavity in which the metal congeals, said cavity being open at one side for the exit of the congealed metal and provided with an opening for the entrance of molten metal, means for retaining the congealed metal in position to close the exit opening during the casting operation, a matrix forming one wall of the mold cavity, means for periodically lifting said matrix away from the mold cavity, and means for advancing the element while the matrix is lifted.

5. An apparatus for casting type metal elements for printing forms embodying a mold having a cavity open on two sides, a matrix movable toward and from the mold for closing one of said sides, means for holding metal congealed in the cavity in position to close the other of said sides, means for intermittently moving the matrix away from the mold, and for advancing the casting to form a space for a succeeding increment, and means for forcibly injecting molten metal into such space.

[Claims 6 to 15 not printed in the Gazette.]

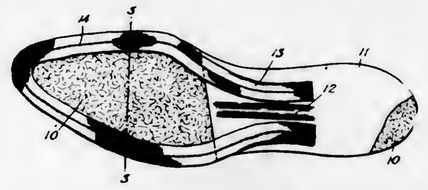
1,220,060. PROCESS FOR MAKING TOOLS. HENRY B. BARDEN, Wallingford, Vt., and CLIFFORD A. BARDEN, Wabash, Ind. Original application filed Nov. 19, 1914, Serial No. 872,926. Divided and this application filed Apr. 6, 1916. Serial No. 89,259. (Cl. 76—109.)



1. A process for making tools which consists in forming a strip of metal with an enlargement extending longitudinally through the center thereof and disposed substantially symmetrical with respect to opposite faces of said strip, then in removing predetermined portions of the material constituting said strip upon opposite sides of and contiguous to said enlargement, and in subsequently forging the remaining portions of said strip into the form desired.

2. A process for making tools which consists in forming a strip of metal with a rib extending longitudinally substantially through the center thereof, then in removing predetermined portions of the material constituting said strip upon opposite sides of and contiguous to said rib, and then in forging the portion of said rib which was contiguous to the removed portions of said strip into a shank and the remaining portion of said strip into a work member.

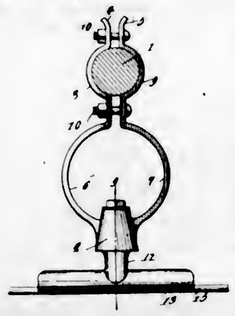
1,220,061. INSOLE. WILLIAM H. BAYNARD, Braintree, Mass., assignor of one-half to Harry H. Beckwith, Brookline, Mass. Filed Dec. 15, 1916. Serial No. 137,113. (Cl. 36—76.)



1. An insole comprising a foundation element, a strip of stitch-receiving material arranged substantially coextensively with the margin of the forepart and shank-portion of said element, a shank-stiffening element of stitch-receiving material, portions of said shank-stiffening element being interposed between said strip and said foundation element, and a course of stitches anchoring said strip to said foundation element, some of said stitches extending through said interposed portions of said shank-stiffening element, whereby the latter is anchored to said foundation element.

2. A boot or shoe comprising an upper, an insole having a foundation element, a stitch-receiving flange, a shank-stiffening element of stitch-receiving material, portions of which are interposed between said flange and said foundation element, and a course of stitches anchoring said flange to said foundation element, some of said stitches extending through said interposed portions of said shank-stiffening element to anchor the latter to said foundation element, and stitches connecting the pulled-over margin of the upper to said flange.

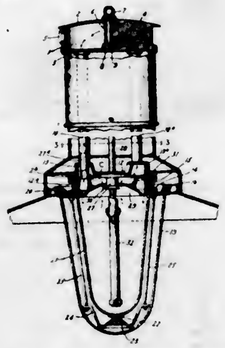
1,220,062. TROLLEY-WIRE HANGER. FRANK A. BEAN, Carrollton, Ohio. Filed July 13, 1915. Serial No. 39,685. (Cl. 191—42.)



1. In a trolley wire hanger, a supporting body having an opening therein, a clamping element including a pair of wire engaging arms, one of said arms having a pocket formed therein and a screw threaded shank upon its upper end, a hooked portion formed upon the remaining arm received by said pocket, said arms adapted for reception in the opening in the supporting body, and means engaged with said screw threaded shank for maintaining the arms upon the supporting body.

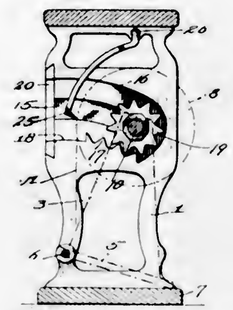
2. In a trolley wire hanger, a supporting body having a frusto-conical opening therein, a clamping element including a pair of arms having wire engaging jaws formed upon the lower extremities thereof, one of said arms being provided with a pocket and a screw threaded shank arranged upon its upper end, a hooked portion formed upon the remaining arm received by said pocket, said arms being of a shape complemental to the shape of the opening in the body and receivable thereby, and means engaged with said screw threaded shank for maintaining the arms upon the supporting body.

1,220,063. ARC-LAMP. ANDRÉ BLONDEL, Paris, France, assignor to General Electric Company, a Corporation of New York. Filed Mar. 20, 1914. Serial No. 826,014. (Cl. 176—52.)



In an arc lamp, an arc inclosure comprising an inclosing globe, a bottom plate for the lamp provided with bosses on its upper side forming recesses, a shell located above and remote from the globe forming a depositing chamber for the fumes evolved from the arc, tubes communicating with said chamber and with the recesses formed by said bosses, and a reflector loosely surrounding the upper electrode and forming with said bottom plate a chamber in which the gases evolved from the arc are received, said reflector being provided with hollow extensions projecting upwardly to and communicating with a portion of said tubes.

1,220,064. ROLL-PAPER HOLDER. EMIL JOHN BLOOM, Kemmerer, Wyo. Filed Aug. 10, 1916. Serial No. 114,206. (Cl. 211—31.)



1. A paper roll holder comprising a main frame, a roll carrier mounted in said main frame for forward and rearward movement and having supporting standards, a roll mandrel having end trunnions journaled in said supporting standards, one of said trunnions projecting beyond the standard in which it is journaled and carrying a pinion, and a series of rack teeth fixed with said main frame and arranged under and for engagement with said pinion, said main frame having a clearance at the front end of said rack teeth in which said pinion may rotate freely.

2. A paper roll holder comprising a main frame having upright standards, a roll carrier having supporting standards and end trunnions forward of the center of said supporting standards, said roll carrier being mounted within said main frame with its end trunnions journaled in said main frame standards and the roll mandrel having end trunnions journaled in said supporting standards, one of said mandrel trunnions projecting beyond the standard in which it is journaled and carrying a pinion, the adjacent main frame standard having an arcuate groove in which the end of said projecting mandrel trunnion works and having a series of rack teeth below said groove for engagement with said pinion, and a clearance in front of said rack teeth in which said pinion may rotate freely.

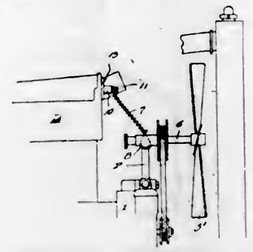
3. A paper roll holder comprising a main frame having upright standards, a roll carrier having supporting standards and end trunnions forward of the center of said supporting standards, said roll carrier being mounted within said main frame with its end trunnions journaled in said main frame standards, a roll mandrel having end trunnions journaled in said supporting standards, one of said mandrel trunnions projecting beyond the standard in which it is journaled and carrying a pinion, the adjacent main frame standard having an arcuate groove in which the end of said projecting mandrel trunnion works and having a series of rack teeth below said groove for engagement with said pinion and a key providing a closure for the front end of said groove and removably fitted in the main frame standard in which the groove is formed.

4. A paper roll holder comprising a main frame having upright standards, a roll carrier mounted in said main frame for forward and rear movement and having supporting standards and a roll mandrel having end trunnions journaled in said supporting standards, one of said trunnions projecting beyond the standard in which it is journaled and carrying a pinion, the adjacent main frame standard having an arcuate groove in which the end of said projecting mandrel trunnion works and having a series of rack teeth below said groove for engagement with said pinion and a clearance in front of said rack teeth in which said pinion may rotate freely.

5. A paper roll holder comprising a main frame having upright standards, a roll carrier having supporting standards and end trunnions forward of the center of said supporting standards, said roll carrier being mounted within said main frame with its end trunnions journaled in said main frame standards, and a roll mandrel having end trunnions journaled in said supporting standards, one of said mandrel trunnions projecting beyond the standard in which it is journaled and carrying a pinion, the adjacent main frame standard having an arcuate groove in which the end of said projecting mandrel trunnion works and having a series of rack teeth below said groove for engagement with said pinion.

[Claims 6 to 11 not printed in the Gazette.]

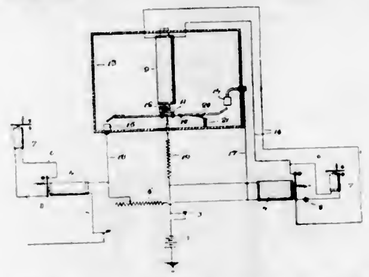
1,220,065. BELT-TIGHTENER. RAYMOND J. BLOUGH, Ionia, Mich. Filed Oct. 24, 1916. Serial No. 127,425. (Cl. 64—52.)



1. In a belt tightener of the class described the combination of a rigid body member, a bracket pivotally connected to said body, a countershaft mounted transversely of said bracket, a belt member connecting said countershaft with a driving means on the said body, with a spring, a hook associated with one end of said spring adapted to engage the bracket and countershaft at their jointure, a bolt member engaging said body, and a screw providing means for detachably connecting the said spring with the bolt for a purpose specified.

2. In a belt tightener of the class described the combination of a rigid body member, a bracket pivotally connected to said body, a countershaft mounted transversely of said bracket, a belt member connecting said countershaft with a driving means on the said body, with a tension spring, a hook member connected to one end of said spring comprising, a wire strand, said wire strand being looped intermediate the ends thereof, the ends being bent to form a seat to engage the countershaft, the free end of said wire strand being bent to form small hook members to engage one end of the spring for a purpose specified.

1,220,066. TELEGRAPH APPARATUS. HUGH M. BOAL, Titusville, Pa. Filed June 2, 1916. Serial No. 101,362. (Cl. 178—2.)



1. The combination with a normally closed telegraph line, of local circuit-controlling relays in said line, one of said relays being of relatively high resistance, a resistance in said line normally in series with the local circuit-controlling relays to weaken the latter whereby all of the low resistance relays will be weakened to such an extent as to permit the local circuits controlled thereby to remain open, and means for cutting said resistance out of the main line automatically when said main line is in service.

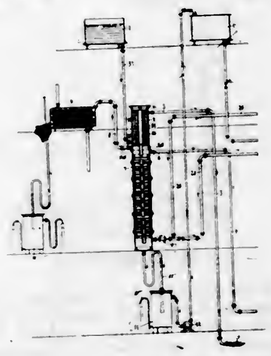
2. The combination with a normally closed telegraph line, of local circuit-controlling relays in said line, one of said relays being of relatively high resistance, a resistance in said line normally in series with the local circuit controlling relays to weaken the latter whereby all of the low resistance relays will be weakened to such an extent as to permit the local circuits controlled thereby to remain open, and means under the control of said relatively high resistance relay for cutting said resistance out of the main line automatically when said main line is in service.

3. The combination with a normally closed telegraph line, of local circuit-controlling relays in said line, one of said relays being of relatively high resistance, a resistance in said line normally in series with the local circuit controlling relays to weaken the latter whereby all of the low resistance relays will be weakened to such an extent as to permit the local circuits controlled thereby to remain open, and a relay under the control of said relatively high resistance relay for cutting said resistance out of the main line automatically when said main line is in service.

4. The combination with a normally closed telegraph line, of a resistance in said line normally in series with the local sound-controlling relays to weaken the latter whereby the local circuits may be held open, and means for cutting said resistance out of the circuit automatically when said main line is in service.

5. The combination with a normally closed telegraph line, of a resistance in said line normally in series with the local sound-controlling relays to weaken the latter whereby the local circuits may be held open, and means under the control of said main line for cutting said resistance out of the main line when said main line is in service.

1,220,067. PROCESS AND APPARATUS FOR CONTINUOUSLY DISTILLING MINERAL OILS AND THE LIKE. CARL HEINRICH BORRMANN, Essen-on-the-Ruhr, Germany. Filed July 29, 1912. Serial No. 712,176. (Cl. 196—25.)



1. A process of continuously distilling mineral oils or the like consisting in preheating and dehydrating the oil, distilling the oil vapors by superheated steam, leading vapors and steam through certain heat exchangers, dividing the mass at a certain point of the circulation, using one part of the same for the further distillation of the oils by allowing it to resume its cyclic course, and finally removing one portion of the same from said cyclic course for stripping the oil of its lighter vapors.

2. A process of continuously distilling mineral oils or the like, consisting in subjecting the oil to the action of a mixture of partly cooled steam and oil vapor, distilling the mixture in a cyclic course at the beginning by super-

heated steam and finally by a mixture of superheated steam and oil vapor.

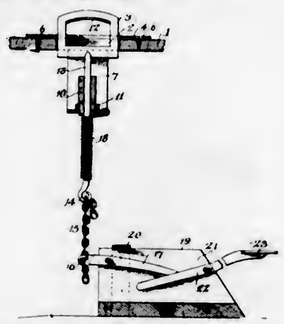
3. Apparatus for the continuous distillation of mineral oils and the like in a cyclic course comprising a main column, a superheater connected with said main column, means connected with said main column for cooling the vapors and steam and for heating the mineral oil, means for using part of said partly cooled steam and the oil vapors for distillation, and means for superheating the remaining part of the vapors and steam and returning the remaining part of the vapors and steam to the superheater and then returning the same into the cyclic course.

4. Apparatus for the continuous distillation of mineral oils and the like, comprising in combination, a column for distilling the mineral oils having a higher boiling point than that of water by superheated steam, a receptacle connected with said column for separating the products of distillation, a steam superheater connected to a source of steam adapted to receive one portion of the steam from said receptacle for superheating and for feeding the column, and a first column for distilling the mineral oils having a lower boiling point than that of water by the other portion of the steam and the oil vapors coming from said receptacle connected to the main column.

5. Apparatus for the continuous distillation of mineral oils and the like comprising in combination, a main column for distilling the mineral oils having a higher boiling point than that of water by superheated steam, a cooler for separating the products of distillation, a steam superheater adapted to receive one portion of the steam from said cooler for superheating and for feeding the column, and a first column for distilling the mineral oils having a lower boiling point than that of water by the other portion of the steam coming from said cooler connected to the main column, and a first cooler connected to said first column for precipitating the gaseous distillates.

[Claims 6 to 9 not printed in the Gazette.]

1,220,068. FOOT-PRESS TOBACCO-CUTTER. CHARLES A. BREWATHA, Kaw, Okla. Filed Oct. 11, 1915. Serial No. 55,295. (Cl. 131—34.)



1. A cutter of the class described comprising a support, a guiding bracket carried by said support and provided with a centrally located aperture, a sleeve threaded through said aperture, a cutting knife, a reciprocating rod engaging said cutting knife, said cutting knife comprising an elongated body having a centrally located aperture provided with a cutting blade upon the top thereof, a spring carried by said reciprocating rod and normally urging said rod upwardly, the lower end of said reciprocating rod provided with an eye, a chain connected to said eye, and treadle means connected to the lower end of said chain for reciprocating said cutting knife through said guiding bracket.

2. A cutter of the class described comprising a cutting member, a reciprocating rod carried by said member, a treadle block, said treadle block provided with a longitudinally extending slot, a treadle pivotally mounted in one end of said longitudinally extending slot, a link pivotally mounted in the other end of said longitudinally extending slot, means connecting said link to said reciprocating rod, the inner end of said treadle engaging the inner end of said link for swinging said link as said treadle is pushed downwardly, and a foot engaging portion carried by said treadle for facilitating the swinging thereof.

1,220,069. ADJUSTABLE MIRROR. FRANK CAPDEVILA, New York, N. Y. Filed June 9, 1913. Serial No. 772,559. (Cl. 45—100.)

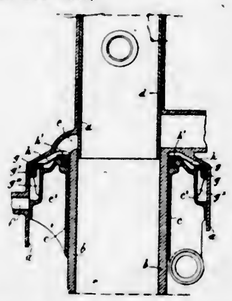


1. An adjustable mirror-support comprising a base having an arm-receiving socket provided with a plurality of arm supports in stepped relation to one another, and a mirror-carrying arm mounted to swing laterally and vertically in said socket, whereby the arm may be rested on either of the supports at a corresponding inclination; substantially as described.

2. An adjustable mirror comprising a base, a tubular column extending from said base and provided with an inturned retaining flange at its outer end having a plurality of notches of different depth, an arm slidable in said column and having an enlargement at its end designed to abut and be retained by said flange when the arm rests in the inclined position determined by the respective notch, and a mirror carried by said arm; substantially as described.

3. An adjustable mirror comprising a weighted base, a tubular column upstanding from said base and provided with an inturned retaining flange at its outer end having a plurality of notches of different depths, an arm slidable in said column and having an enlargement at its inner end designed to abut and be retained by said flange when the arm rests in the inclined position determined by the respective notch, and a mirror having a ball and socket connection with said arm; substantially as described.

1,220,070. PISTON. GUSTAVE EMILE CHÉDAU, Levallois-Perret, France. Filed Mar. 16, 1916. Serial No. 84,662. (Cl. 103—80.)



1. In a pump for the charging of two-stroke explosion engines, the combination, with a cylinder, of a piston working therein and comprising two sections, one of which forms the piston proper and is provided on its operative face with an annular groove such that a passage is formed between the piston and the wall of the cylinder, the other section forming a flap valve and being constituted by a ring engaging the operative face of the piston proper, so that it extends the said face to the wall of the cylinder.

2. In a charging pump, the combination with a cylinder; of a piston working therein and comprising two sections, one of which forms the piston proper and is provided on its operative face with an annular groove such that a passage is formed between the piston and the wall of the cylinder, the other section forming a flap valve and being constituted by a ring engaging the operative face of the piston proper, so that it extends the said face to said cylinder wall, and a spring for maintaining said flap valve in such engagement embodying a ring having a plurality of branches radiating therefrom and bearing against the flap valve.

3. In a charging pump, the combination with a cylinder; of a piston working therein and comprising two sections, one of which forms the piston proper and is provided on its operative face with an annular groove such that a passage is formed between the piston and the wall of the cylinder, the other section forming a flap valve and being constituted by an annular member engaging the operative face of the piston proper, so that it extends the said face to said cylinder wall, said annular member having a packing ring at its periphery and also having a plurality of guide ribs projecting from its inner wall.

4. In a charging pump, the combination with a cylinder; of a piston working therein and comprising two sections, one of which forms the piston proper and is provided on its operative face with an annular groove such that a passage is formed between the piston and the wall of the cylinder, the other section forming a flap valve and being constituted by an annular member engaging the operative face of the piston proper, so that it extends the said face to said cylinder wall, said annular member having a packing ring at its periphery and also having a plurality of guide ribs projecting from its inner wall, and spring means for maintaining said annular member in such engagement.

5. In a charging pump, the combination with a cylinder; of a piston working therein and comprising two sections, one of which forms the piston proper and is provided on its operative face with an annular groove such that a passage is formed between the piston and the wall of the cylinder, the other section forming a flap valve and being constituted by an annular member engaging the operative face of the piston proper, so that it extends the said face to said cylinder wall, said annular member having a packing ring at its periphery and also having a plurality of guide ribs projecting from its inner wall, and a spring for maintaining said flap valve in such engagement embodying a ring having a plurality of branches radiating therefrom and bearing against the flap valve.

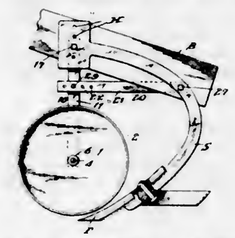
[Claim 6 not printed in the Gazette.]

1,220,071. PLOW-FENDER. WILLIAM FRANKLIN CLAYTON, Cullman county, Ala., assignor of one-half to William Earl James, Cullman, Ala. Filed Sept. 27, 1916. Serial No. 122,539. (Cl. 97—13.)

1. A fender attachment for plows, in combination with a plow beam and a standard attached thereto having at its forward upper end plates with a vertical series of transverse apertures, a hanger having an offset perforated arm connected adjustably to and depending from one of said plates, the hanger having an aperture intermediate its ends and bearing a fender disk, a brace pivoted at its rear end upon the beam and standard and having its forward end perforated with a longitudinal series of apertures, and a fastening device insertible through any selected aperture of the brace when alined with the respective aperture in the bracket whereby said parts are positively locked in adjusted relation against slipping.

2. In a fender attachment for plows, the combination with a disk, and a hanger to whose lower end of the disk is pivoted; of a bracket having an offset rear end adapted to be attached to the plow standard and a hook at its front end, a pivot uniting the hanger with the bracket adjacent said hook, and a spring connecting the upper end of the hanger with the bracket, for the puspose set forth.

3. In a fender attachment for plows, the combination with a disk, and a hanger to whose lower end the disk is pivoted; of a bracket having a hook at its lower end, a pivotal connection between the hanger and bracket adjacent its hook, a spring connecting the hanger and bracket and throwing the former normally against the rear side of the hook, adjustable means for attaching the upper end of the bracket to the plow standard, and a brace adjustably connected with the bracket between its ends and also adapted for attachment to the plow standard.

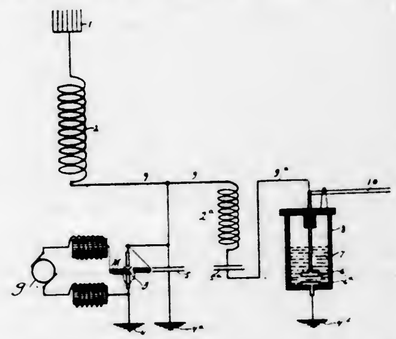


4. In a plow, a plow point and a beam to which it is connected, a bracket pivotally connected to the beam at a point substantially vertically above the forward tip of the plow point, a brace connectible adjustably to the bracket and which extends rearwardly and is pivotally connected to the beam, a hanger pivotally connected to the bracket and carrying a fender disk disposed with its periphery adjacent to and parallel with the plow point, and a spring connecting the hanger and a rigid part of the structure to yieldingly thrust the disk downward.

5. In a plow, a support, carrying a plow point, a bracket adjustably connected to said support, a member pivoted on the bracket and carrying a fender disk, and a brace connected to said support and adaptable for connection either to said bracket or to said member to hold either in adjusted position.

[Claim 6 not printed in the Gazette.]

1,220,072. METHOD OF WIRELESS SIGNALING. LOUIS COHEN, Washington, D. C. Filed Nov. 13, 1915. Serial No. 61,332. (Cl. 250—19.)



1. An arc system comprising two oscillatory circuits shunted across the arc, and means for producing radically different electrical time constants in the said two circuits, and to so proportion the said time constants in relation

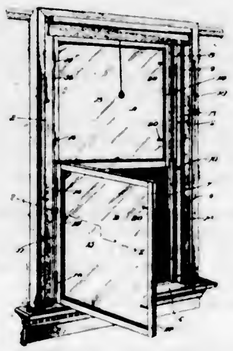
to each other that when both circuits are closed a considerable oscillatory current will exist in one circuit and substantially none in the other circuit.

2. An arc system for radio signaling comprising an antenna circuit and an absorption circuit both in parallel and shunted across the arc, and means for adjusting the electrical time constants of the two circuits in relation to each other so that when both circuits are closed simultaneously and the arc is in operation, there is an oscillatory current flow in the absorption circuit and substantially no current flow in the antenna circuit.

3. An arc system for radio signaling comprising an antenna circuit and an absorption circuit both in parallel and shunted across the arc, and means for varying the resistance of the absorption circuit to thereby vary its electrical time constant, and thus vary the amount of current flow in the antenna circuit.

4. An arc system for radio signaling comprising an antenna circuit and an absorption circuit in parallel with it, and an electrolytic means of varying the resistance of the absorption circuit to thereby vary its electrical time constant and thus vary the amount of current flow in the antenna circuit.

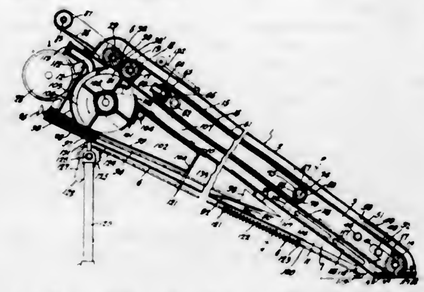
1,220,073. SASH-FASTENER. JOHN W. COOPER, Buffalo, N. Y.; Charles H. Cooper, Buffalo, N. Y., administrator of said John W. Cooper, deceased. Filed Aug. 16, 1912, Serial No. 715,446. Renewed Aug. 16, 1916. Serial No. 115,329. (Cl. 16—18.)



1. The combination with relatively movable members having registering recesses formed in their meeting faces, of a locking device, said locking device including a bracket plate secured to the inner face of the first member and forming a cover for the recess thereof, said plate having a longitudinal slot and parallel apertured ears extending from the edge portions of the slot into the said recess, a cam-shaped disk, a pivot pin extending between the said ears and receiving the disk member, whereby the disk is revolubly mounted interiorly of the recess of the first-mentioned member, and a hook member having its one terminal pivoted in the recess of the second mentioned member and of such length that its terminal may be projected through the slot of the plate and into engagement with the cam disk.

2. The combination with relatively movable members having registering recesses formed in their meeting faces, of a locking device including a rotatable cam-shaped disk having a notch formed in its periphery, said disk being mounted in the recess of the first-mentioned movable member, and a hook member having its one terminal pivoted in the recess of the second-mentioned movable member, said hook member being of such length that its free terminal may be projected into the recess of the first-mentioned movable member and into engagement with the said disk, the extreme terminal of the bill of said hook being adapted to engage in the notch of the disk when the disk and hook are in locking relation.

1,220,074. FLOOR-CLEANER. HEZIKIAH H. CRAWFORD, El Paso, Tex. Filed June 20, 1916. Serial No. 104,767. (Cl. 15—14.)



1. A floor cleaner embodying a casing, upper and lower rollers carried thereby, an endless belt trained around said rollers and adapted to rest upon the floor below the lower roller, a water tank supported by the casing between the upper and lower runs of the belt, and spraying means carried by the lower portion of said tank including a valve, operable to direct the water toward either run of the belt.

2. A floor cleaner embodying a casing having an open end, rollers carried by the casing adjacent the ends thereof, an endless belt trained around said rollers, the belt being adapted to contact with the floor below that roller adjacent the open end of the casing, brushes pivotally connected with the open end of the casing and trailing from their pivots adjacent the ends of said roller, and means carried by the casing for closing the space between the lower end thereof and the floor behind said roller.

3. A floor cleaner embodying a casing having an open end, rollers carried by the casing adjacent the ends thereof, an endless belt trained around said rollers, the belt being adapted to contact with the floor below that roller adjacent the open end of the casing, brushes pivotally connected with the open end of the casing and trailing from their pivots adjacent the ends of said roller, a throttle-plate carried by the casing and adjustable to bring its lower end close adjacent to the floor in rear of said roller, and air auction creating means carried by the casing for sucking air from the floor between said roller and throttle-plate.

4. A floor cleaner embodying a casing, rollers carried thereby, one end of the casing being opened and one roller being disposed adjacent said open end, an endless belt trained around the rollers, an adjustable throttle-plate carried by the casing below the belt having its lower end arranged adjacent said roller, and air auction creating means carried by the casing for sucking air from the floor between said throttle plate and belt, and means carried by the casing for closing the space at the ends of said roller and throttle plate.

5. A floor cleaner embodying an inclined casing having its lower end open, rollers carried by the casing, one adjacent the open end of the casing, an endless belt trained around said rollers, a throttle-plate carried by the casing for adjustment to and from the floor adjacent said roller, air suction creating means carried by the casing for sucking air from the floor between the belt and throttle-plate, means carried by the casing to rest upon the floor operatively connected with the throttle-plate and operable when the angle of inclination of the casing is changed for adjusting the throttle-plate to maintain the lower end thereof in close relation with the floor, and means carried by the casing for closing the space at the ends of said roller and throttle plate.

[Claims 6 to 10 not printed in the Gazette.]

1,220,075. SCRAPER ARRANGEMENT FOR SEWERS AND THE LIKE. HENRY ALBERT CUTLER, Belfast, Ireland. Filed May 18, 1916. Serial No. 98,325. (Cl. 137—70.)



1. Means of the kind described, comprising a draw bar, a scraper hinged thereto, lines for moving the draw bar alternately in opposite directions and position-controlling means associated with the scraper, draw bar and lines, adapted to cause the scraper to fold down against the draw bar upon movement of the latter in one direction and to take up an operative scraping position when the movement of the draw bar is reversed.

2. In combination, a scraper provided with a hinge boss, a draw bar having laterally splayed parts intermediate of its length to provide a hinge pin bearing, a hinge pin connecting said scraper to such draw bar at the bearing, a pair of lines respectively associated with opposite ends of the draw bar, and means whereby movement of the adjacent end portion of either line in a direction away from the draw bar will result in an angular movement of the scraper in relation to such draw bar.

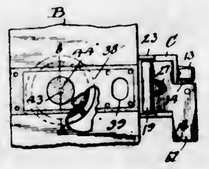
3. In combination, a draw bar, a scraper pivoted to such draw bar, a line by which the draw bar can be pulled in one direction, a line by which the draw bar can be pulled in the opposite direction and ties connected to the respective lines and adapted to impart an angular movement to the scraper in one or other direction in relation to the draw bar as either of such lines is made taut.

4. In combination, a draw bar having an eye at each end, a scraper blade pivoted to such draw bar, a line fixed to one eye of the draw bar, a tie between such line and the scraper, another tie extending in an opposite direction from the scraper and free to slide through the eye at the other end of the draw bar and a second line secured to the end of such tie, substantially as described.

5. In combination, a scraper blade a draw bar comprising two side members splayed intermediate of their length to provide a hinge pin bearing, a hinge pin connecting said blade to such draw bar, a stop arrangement upon said scraper blade adapted to engage the draw bar and limit turning movement of the blade in one direction relative thereto, lines for moving the drawbar alternately in opposite directions and position controlling means associated with the blade, draw bar and lines, adapted to cause the blade to fold down against the draw bar with movement of the latter in one direction and to take up an operative scraping position when the movement of the draw bar is reversed.

[Claims 6 to 8 not printed in the Gazette.]

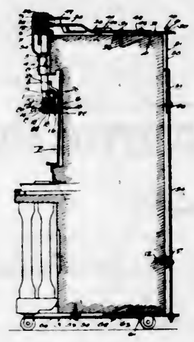
1,220,076. PNEUMATIC ACTION FOR PLAYER-PIANOS. JESSE L. A. DE YOE and JOHN W. DE YOE, Castleton, N. Y. Filed May 12, 1916. Serial No. 97,161. (Cl. 84—233.)



1. In a pneumatic action, a pneumatic having a movable member, a universal plate, a stationary bracket on the pneumatic, a sleeve on the plate, slidable and fixed pins in the sleeve and journaled in the bracket, means for tensioning the slidable pin, and a connection between the movable member of the pneumatic and the plate to actuate the latter.

2. In a pneumatic action, a pneumatic having a movable member, a universal plate, a stationary bracket on the pneumatic, a sleeve on the plate, slidable and fixed pins in the sleeve and journaled in the bracket, means for tensioning the slidable pin, a connection between the movable member of the pneumatic and the plate to actuate the latter, and adjustable means for limiting the movement of the plate.

1,220,077. MUSIC-LEAF TURNER. CHARLES A. ELLIOTT, Engadine, Mich. Filed Aug. 28, 1916. Serial No. 117,271. (Cl. 84—17.)



1. The combination with a supporting structure; of a plurality of upright rotatably mounted nested shafts projecting beyond each other at one end, pinions fixed to the projecting ends of said shafts, leaf holders carried by said shafts, a plurality of series of teeth arranged in vertically offset relation and positioned for successive engagement with the respective pinions, means for actuating said teeth to rotate said pinions, means for supporting said pinions to permit them to turn freely independently of each other, and means carried by said supporting means to exert a braking action on said pinions to prevent rebounding of the leaf holders when actuated by the turning of the pinions.

2. The combination with a supporting structure; of a plurality of upright rotatably mounted nested shafts projecting beyond each other at one end, pinions fixed to the projecting ends of said shafts, leaf holders carried by said shafts, a member attached to said structure and having laterally extending arms projecting between said pinions, said arms having offset portions and forming combined pinion supports and braking devices, and means for successively operating said pinions to turn said holders.

3. The combination with a supporting structure; of a plurality of upright rotatably mounted nested shafts projecting beyond each other at one end, pinions fixed to the projecting ends of said shafts, leaf holders carried by said shafts, a member attached to said structure and having laterally extending spring arms with offset ends, said arms projecting between said pinions, the body portion of the arm engaging and supporting one pinion and its offset portion having braking engagement with the adjacent pinion, and means for successively operating said pinions.

1,220,078. MAKING NITRO COMPOUNDS. CARLETON ELLIS and ALFRED A. WELLS, Montclair, N. J., assignors to Ellis-Foster Co., a Corporation of New Jersey. Filed May 31, 1916. Serial No. 100,776. (Cl. 23—24.)

1. In the process of making nitro derivatives of benzol, the step which comprises heating a mixture comprising chlorbenzol, sodium nitrate and sulfuric acid to a temperature at which nitration progresses regularly but at which no copious evolution of oxid of nitrogen fumes occurs.

2. In the process of making nitro derivatives of benzol,

the step which comprises heating a mixture comprising chlorbenzol, alkali nitrate and sulfuric acid to a temperature at which nitration progresses regularly but at which no copious evolution of red fumes occurs.

3. In the process of making nitro derivatives of benzol, the step which comprises heating a mixture of chlorbenzol, sodium nitrate and 66° B. sulfuric acid to a temperature at which nitration progresses regularly but at which no copious evolution of red fumes occurs.

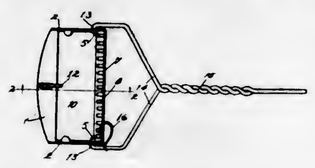
4. In the process of making derivatives of benzol, the step of nitrating chlorbenzol which comprises heating chlorbenzol, sodium nitrate and 66° B. sulfuric acid and nitric acid comprising nascent nitric acid to a temperature at which nitration progresses regularly without evolution of large quantities of oxids of nitrogen.

5. In the process of making derivatives of benzol, the step of nitrating chlorbenzol which comprises heating chlorbenzol with freshly-prepared nitric acid containing at least some portion thereof in a condition of nascency.

[Claims 6 to 16 not printed in the Gazette.]

1,220,079. S[illegible] [illegible], Sacramento, Ca[illegible] Filed Apr[illegible] [illegible] Serial No. 47,779. (Cl. 30—12.)

WITHDRAWN



1. A safety razor comprising a blade holder, a blade for positioning therein, a guard in advance of the cutting edge of the blade and in spaced relation thereto, and a handle pivotally connected to said blade holder and permitting a movement of the holder independently of the handle when the holder is being drawn across the face, the pivotal axis of which is above the cutting edge of the blade and adjacent the front edge of the holder.

2. A safety razor comprising a blade holder, a blade for positioning therein, a guard for the blade, and an operating handle pivotally connected to said blade holder, the fulcrum point of which connection is located above the cutting edge of the blade holder, whereby the blade holder is permitted to have a movement independently of the handle to allow the same to follow the contour of the face.

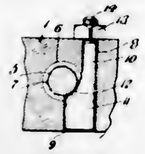
3. A safety razor comprising a blade holder, a blade for positioning in the holder, a guard for the blade, means for adjusting the rear edge of the blade to vary the angle of the cutting edge thereof, and an operating handle fulcrumed to the blade holder at a point above the cutting edge of the blade and near the forward edge of the holder, permitting the blade holder to have a movement independently of the handle to allow the same to follow the contour of the face.

4. A safety razor comprising a blade holder, a blade for positioning therein, a guard for the blade, an operating handle fulcrumed to the blade holder above the cutting edge of the blade, said holder being capable of a movement independently of the handle whereby the blade follows the contour of the face, and means for normally maintaining said blade holder in a plane parallel with said handle.

5. A safety razor comprising a blade holder, a blade removably positioned therein, a guard for the blade, an operating handle extending in a plane at substantially right angles to the cutting edge of the blade and fulcrumed to the blade holder above the cutting edge of the blade and near the forward portion of the holder, permitting a movement of the holder independently of the handle to allow the same to follow the contour of the face, and means for normally maintaining said blade holder in a plane parallel with said handle.

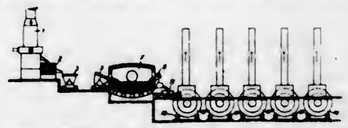
[Claims 6 to 17 not printed in the Gazette.]

1,220,080. PROPELLER. HENRY D. ESTES, Hartford, Ky., assignor of one-fourth to Rowan Holbrook, one-fourth to W. H. Parks, and one-half to H. T. Holbrook, Hartford, Ky. Filed Apr. 20, 1916. Serial No. 92,463. (Cl. 170—162.)



In a propeller, in combination with a hub having a substantially radial opening and also having an opening at an angle to and communicating at one point with the first named opening, a blade having an arm arranged in the radial opening of the hub and adapted to turn therein to adjust the blade to any desired pitch, and a locking bolt extending through said opening and having a widened wedge-shaped head presenting a curved shoulder at a point intermediate the ends of said bolt and which shoulder engages the arm of the blade, and a nut screwed on said bolt at the end opposed to the shoulder, said nut bearing against the hub.

1,220,081. PUDDLING-IRON. JOSEPH ERNST FLETCHER, Dudley, and JAMES HARRISON, Tipton, England. Filed July 31, 1916. Serial No. 112,414. (Cl. 75—46.)



1. In the refining and puddling of iron, the process which comprises delivering to a basic-lined open-hearth furnace, freely fluid molten pig iron, containing a sufficient percentage of manganese to keep down the oxidation of carbon, then oxidizing the major portion of the phosphorus and silicon and some of the manganese but without removing any great amount of the carbon, separating the slag containing the compounds of phosphorus, silicon and manganese, while leaving a freely fluid iron high in carbon and thereafter puddling the so refined molten metal.

2. In the manufacture of wrought iron, the herein described process which comprises (*a*) maintaining a considerable batch of molten pig iron, (*b*) withdrawing freely fluid portions from said batch substantially free from slag, and refining the same in an open hearth non-acid lined furnace sufficiently to bring the same while containing a high percentage of manganese to within the following limits:—

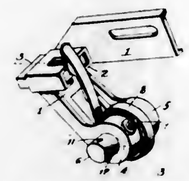
Carbon	About 2.5	to	3	%
Silicon	0	to	.5	%
Manganese	0	to	.3	%
Phosphorus	0	to	.3	%

and removing the slag therefrom, (*c*) separating the so refined freely fluid metal into smaller batches and puddling the same.

1,220,082. BRUSH-HOLDER. DAVID B. FLOWER, Glenside, Pa. Original application filed Jan. 29, 1910, Serial No. 540,784. Patent No. 1,101,917. Divided and this application filed June 2, 1914. Serial No. 842,887. (Cl. 200—24.)

1. In a brush holder, the combination of a support, a stud rotatably mounted on said support, a resilient member secured at one end to the stud and adapted to bear with its other end upon a brush, means for rotating the stud for adjusting the tension of the resilient member,

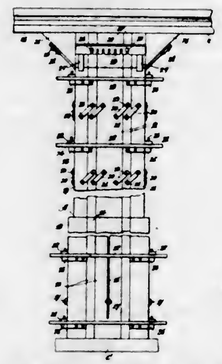
and means carried by the support and adapted to cooperate with the stud at any point around the periphery thereof for holding said stud in any desired position of adjustment.



2. In a brush holder, the combination of a support, a stud rotatable in bearings on said support, a resilient member detachably secured at one end to the stud and adapted to bear with its other end upon the brush, means for rotating the stud to adjust the tension of the resilient member, and a set screw passing through the bearing for the stud and adapted to coöperate with the stud at any point around the periphery thereof for holding said stud in any desired position of adjustment.

3. In a brush holder, the combination of a support, a stud rotatably mounted in bearings on said support, a resilient member detachably secured at one end to the stud and adapted to bear with its other end upon the brush, said stud having an extension beyond the sides of the bearings which extension is provided with a transverse bore for receiving a tool for the purpose of rotating the stud to adjust the tension of the resilient member, and a set-screw passing through the bearing for the stud and adapted to coöperate with said stud at any point around the periphery thereof for holding the stud in adjusted position.

1,220,083. FALSE WORK FOR CONCRETE CONSTRUCTION. HERMAN FOUSE, Akron, Ohio. Filed Nov. 23, 1915. Serial No. 63,026. (Cl. 25—131.)



1. In a device of the kind described, in combination a rectangular hollow body formed of sections including angle corner sections, a series of corner brackets each having its sides secured to the sides of one corner section, an integral outwardly-projecting arm formed at the corner of each corner bracket and making the bracket Y-shaped, a series of rails engaging the sectional sides of the hollow body and having their ends overlapping in supported relation upon said bracket arms, said arms and the ends of said rails having perforations and locking pins passing through the openings in the overlapping ends of the rails and through the openings in said arms.

2. In a device of the kind described in combination a rectangular hollow body composed of angle corner sections and intermediate sections, a hopper-shaped body consisting of angle corner pieces and intermediate separable pieces, outwardly-projecting studs secured upon the intermediate separable pieces of the sides of said hopper-shaped body, a series of notched cross-bars as long as the width of the sides of said hopper-shaped body, said studs passing through some of the notches of each cross-bar to support the latter in engagement with the corner pieces and integral downwardly-extending arms on each of said cross-bars and made of a length to cause their beveled edges to engage against the sides of the angle corner sections of said hollow body, the sections of said hollow body and hopper-shaped body having a tongue and groove relationship.

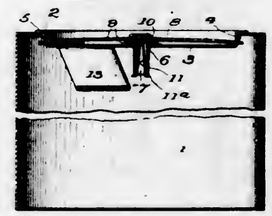
1,220,084. DOUBLE-ACTING SPRING-HINGE FOR DOORS. HERMANN FRANCKSEN, Bremen, Germany. Filed June 28, 1915. Serial No. 36,801. (Cl. 16—25.)

1. The described double acting spring hinge, comprising in combination, two casings let into the door and door-frame respectively, an axis provided in each of said casings respectively, an S-shaped piece the ends of which surround each of said axes respectively, and springs adapted to act on, and to keep, said S-shaped piece in a normal position corresponding to the closed position of the door, substantially as, and for the purpose, set forth.



2. The described double acting spring hinge, comprising in combination, two casings let into the door and door-frame respectively, an axis provided in each of said casings respectively, an S-shaped piece the ends of which surround each of said axes respectively, springs on said axis adapted to keep said S-shaped piece in a normal position corresponding to the closed position of the door, a toothed wheel connected with said spring, and a worm engaging in said toothed wheel, substantially as, and for the purpose, set forth.

1,220,085. RECEPTACLE-CLOSURE. BENJAMIN F. FREEMAN, Long Island City, N. Y. Filed June 17, 1916. Serial No. 104,178. (Cl. 220—61.)



1. The combination with a receptacle provided with an opening and a closure therefor of a fastening device for locking said closure in its closed position comprising a substantially rigid bar member extending from said closure, beyond the same and engaging the inner surface of said receptacle, and a locking member engaging with said bar member to hold the same in fixed relation with respect to said closure and said receptacle.

2. The combination with a receptacle provided with an opening and a closure therefor of a fastening device for locking said closure in its closed position comprising a substantially rigid bar member extending from said closure, beyond the same and engaging said receptacle, and a locking member engaging with said bar member to hold the same in fixed relation with respect to said closure

and said receptacle, said locking member extending through said closure and locking on the inner side thereof.

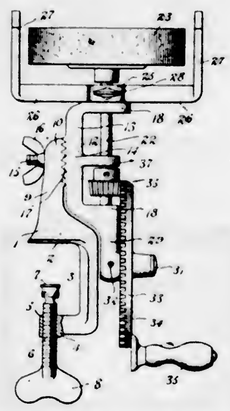
3. The combination with a receptacle provided with an opening and a closure therefor of a fastening device for locking said closure in its closed position comprising a substantially rigid bar member extending across said closure and having its ends projecting beyond either side thereof and engaging the inner surface of said receptacle, and a locking member engaging with said bar member and holding the same in fixed relation to said closure and said receptacle.

4. The combination with a receptacle provided with an opening and a closure therefor of a fastening device for locking said closure in its closed position comprising a substantially rigid bar member extending across said closure and having its ends projecting beyond either side thereof, said ends engaging with said receptacle, and a locking member engaging with said bar member and holding the same in fixed relation to said closure and said receptacle, said locking member extending through said closure and being subject to release only from the inner side thereof.

5. The combination with a receptacle provided with a circular opening and a closure therefor of a fastening device for locking said closure in its closed position comprising a substantially rigid bar member extending diametrically across said closure and having its ends projecting beyond said closure and engaging with said receptacle, said bar and said closure each having an opening therethrough, and a locking member extending inwardly through the opening in said bar member and said closure and latching on the inner side thereof to prevent endwise movement of said bar members.

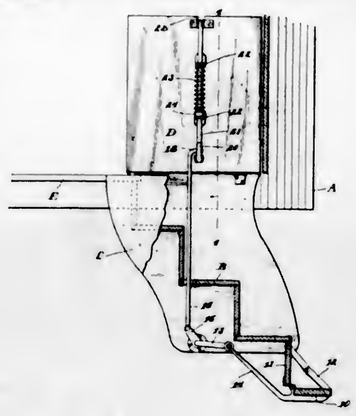
[Claims 6 to 9 not printed in the Gazette.]

1,220,086. GRINDING-MACHINE. BENJAMIN L. FRY, St. Louis, Mo. Filed July 25, 1916. Serial No. 111,210. (Cl. 51—7.)



In a grinding machine of the class described, a supporting clamp, a bracket uprising from said clamp and having the upper end thereof formed to provide a disk-like boss formed centrally with an opening and having one face thereof provided with teeth radiating from the opening, of a supporting bar, a shaft carried by said bar, a grinding wheel on said shaft, means for rotating said shaft, said bar being formed with a disk-like boss, a stud formed integral with said boss centrally thereof and adapted to pass through the opening in said casting and having the outer end thereof threaded, a nut on the outer end of said stud adapted to hold the parts in adjusted position, and teeth formed on the outer face of said boss and interlocking with the teeth on said casting to maintain the parts in adjusted position.

1,220,087. CAR-STEP. WALTER J. GARRIGAN, Bradford, Pa. Filed Nov. 28, 1916. Serial No. 133,920. (Cl. 105—88.)



1. In a device of the class described, a platform, a flight of fixed steps, a hinged trap door, a folding step hinged beneath one of said fixed steps, mechanism connecting said door and folding step for simultaneous adjustment, said mechanism including a yieldably supported rod capable of being manually disengaged from said mechanism, to permit said door to be elevated independently of the step, and said rod automatically assuming its normal position with the closing of said door.

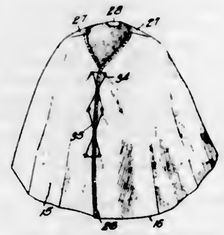
2. In a device of the class described, a platform, a flight of fixed steps, a hinged trap door, a folding step hinged beneath one of said fixed steps, a resilient finger depending from said fixed step and engaging the folding step when the latter is in folded position, mechanism connecting said door and folding step for simultaneous adjustment, and said mechanism including a yieldably supported rod capable of being manually disengaged from said mechanism to permit said door to be operated independently of the step.

3. In a device of the class described, a platform, a flight of fixed steps, a hinged trap door, a folding step hinged beneath said fixed steps, a crank shaft journaled beneath said fixed steps, a vertically disposed rod having one end pivotally connected with the crank shaft, a link pivotally associated with said door and similarly connected with the opposite end of said rod, a manually controlled yieldably mounted element normally engaging said link and holding the latter fixed relatively with said door, whereby said folding step is adjusted simultaneously with the adjustment of said door, means for disengaging the movable element from said link to permit an adjustment of said door independently of said folding step.

4. In a device of the class described, the combination with a flight of fixed steps, a folding step hinged beneath the fixed steps, and a pivoted trap door, of mechanism for effecting an adjustment of said hinged step simultaneously with the opening and closing of said door, said means including a vertically disposed rod, a link pivotally mounted on said door and connected with said rod, a second yieldably mounted rod carried by the door for normally engaging the link to provide for the adjustment of the step upon opening of the door, manually operable means for disengaging the second mentioned rod from said link whereby the door may be opened independently of an adjustment of said step, and said yieldable means operating to project the second mentioned rod in the path of said link whereby said parts will be automatically engaged with the closing of said door.

5. In a device of the class described, a flight of fixed steps, a hinged trap door, a folding step hinged beneath one of the fixed steps, mechanism for adjusting said folding step, and including a vertically disposed rod having one end connected with said door whereby the step is adjusted simultaneously with the adjustment of said door, a yieldably mounted element forming part of the connection between said rod and door and capable of being manually released from the rod to permit the door to be opened independently of an adjustment of the step, and said rod automatically assuming its normal position with the closing of said door.

1,220,088. WATERPROOF-PAPER CAPE. JOSEPH A. GAVIN, Brooklyn, N. Y. Filed Sept. 27, 1915. Serial No. 52,865. (Cl. 2—60.)

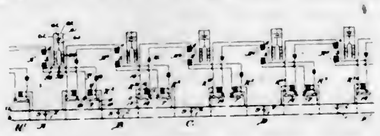


1. In a waterproof paper cape, the combination with a seamless main portion having a reinforced hem around the neck and front portions, the neck portion being V-shaped at the center of the back and notched at the point of the V to facilitate the formation of the hem and improve the fit of the garment, of a binder surrounding the notch and secured along its edges to the hem and main portions of the neck.

2. In a waterproof paper cape, a reinforcing rolled hem formed along the neck and front edge portions, the roll of the hem being from the inside to the outer side and having its extreme edge deflected outwardly in spaced relation to the main part of the cape and constituting a guide to direct the flow of water to the bottom edge of the cape, substantially as set forth.

3. The herein described waterproof paper cape having its neck and front edges formed with an outwardly turned hem, a reinforcing cord inserted in the hem and held thereby from lateral displacement, and shoulder plaits serving to improve the fit of the cape at the tops of the shoulders and as anchoring means preventing the longitudinal displacement of the cord.

1,220,089. SIGNAL SYSTEM FOR RAILWAYS. WILLARD H. GILMAN, Boston, Mass. Filed Apr. 3, 1913. Serial No. 758,583. (Cl. 246—30.)

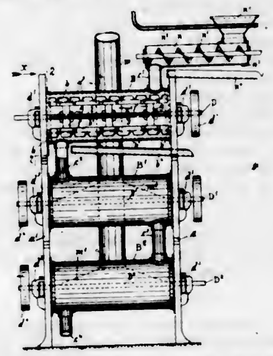


1. A signal system for railways comprising a section of track; a plurality of fusee torch holding instruments adjacent said track and provided with fusee torches of different colors, and means operated by trains or units traveling over said track for controlling said torch holding instruments so that when one train or unit approaches within a predetermined distance of another train or unit a fusee torch of one color is automatically lighted and displayed between said trains or units and when one of said trains or units moves away from the other train or unit to a predetermined distance a fusee torch of another color is automatically lighted and displayed between said trains or units.

2. A signal system for railways comprising a length of track divided into insulated sections; means connected with said sections so as to provide protective blocks for trains or units traveling over said road, said means including a plurality of fusee torch holding instruments provided with fusee torches of different colors, and means operated by trains or units traveling over said road for controlling said torch holding instruments so that when a train or unit intrudes upon a block occupied by another train or unit a fusee torch of one color is automatically lighted and displayed between said trains or units, and when one of said trains or units is moved from said block a fusee torch of another color is automatically lighted and displayed between said trains or units.

3. A signal system for railways comprising a section of track; a plurality of fusee torch holding instruments adjacent said track provided with fusee torches of different characteristics, and means operated by trains or units traveling over said track for controlling said torch holding instruments so that when one train or unit approaches within a predetermined distance of another train or unit a fusee torch of one characteristic is automatically lighted and displayed between said trains or units and when one of said trains or units moves away from the other train or unit to a predetermined distance a fusee torch of another characteristic is automatically lighted and displayed between said trains or units.

1,220,090. MILL FOR REMOVING THE SHELLS OF GRAIN AND THE LIKE. ANTON GMEINDER, Mosbach, Baden, Germany. Filed Aug. 3, 1914. Serial No. 854,847. (Cl. 83—30.)

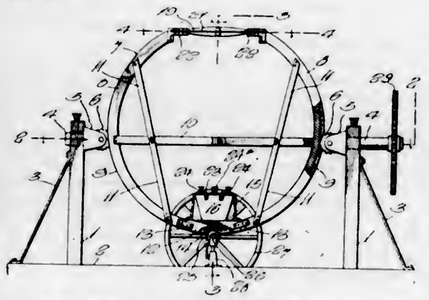


1. A mill for separating the husks from grains in a wet state comprising in combination with a fixed drum, a shaft coaxially arranged within the said drum, blades carried by the said shaft and constructed to form three different groups of blades, the blades of the first group being parallelly arranged with the shaft, the blades of the second group forming such an angle with the shaft as to move the grain in a forward direction and the blades of the third group forming an angle with the shaft as to move the grain in backward direction through the drum, the groups of blades alternating with each other and the angle of the forward blades being somewhat larger than the angle of the backward blades, means for wetting the grain and means for charging into and discharging the grain from the drum.

2. A mill for drying grains and separating their husks comprising in combination with at least one drum, standards rigidly connected with the drum and closing its ends, a shaft passing through the drum, blades provided for within that drum and carried by the shaft, the blades being constructed to form three different and distinct groups, each group having a great number of blades, the blades of the first group being parallel with the shaft, the blades of the second group forming such an angle with the shaft as to move the grain in a forward direction and the blades

of the third group forming an angle with the shaft as to move the grain in backward direction through the drum, the angle of the forward blades being somewhat larger than the angle of the backward blades and sucking pipes in communication with the drums and serving for carrying away the separated husks.

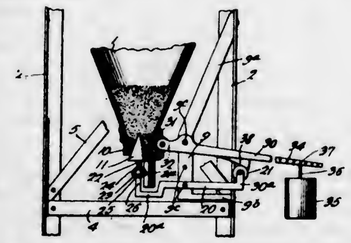
1,220,091. SOLAR DEVICE. BERT C. GOFF, Denver, Ind. Filed Apr. 13, 1916. Serial No. 90,941. (Cl. 126—271.)



1. A solar device of the class described comprising a movably mounted frame including a pair of opposed arcuate tracks spaced apart at one end, a pair of seats carried by said ends, a light intensifying lens having diametrically opposite portions of its edge engaged with said seats, heat utilizing means upon which said lens is adapted to concentrate light rays, supporting rollers upon which the aforesaid tracks rest, and supports for said rollers, said supports being mounted rockably upon axes at right angles to the axes of said rollers.

2. A solar device of the class described comprising a circular frame disposed in substantially a vertical plane and having at diametrically opposite points heat utilizing means, and means for concentrating rays of light on said utilizing means, a pair of supporting rollers upon which the sides of said frame rest, said rollers being below the plane of the axis of said frame and extending between flanges on the tracks for retaining said frame and rollers in operative relation, and supporting members for said rollers rockably mounted upon alined axes at right angles to the axes of the rollers.

1,220,092. APPARATUS FOR SEPARATING FLUID-SUSPENDED MATERIAL. GINÉS PÉREZ GOMEZ, Miami, Ariz., assignor of one-half to Emilio Sanchez de Haro, Miami, Ariz. Filed May 12, 1916. Serial No. 97,062. (Cl. 83—82.)



1. In a separating apparatus, the combination of a supporting structure, a receptacle open at both ends mounted to reciprocate vertically therein, a lever fulcrumed on said structure and supporting said receptacle, a cam carried by said lever, an overbalancing weight on said lever, a valve operating lever fulcrumed in said structure and disconnected from said first mentioned lever, a valve carried by said operating lever and positioned to normally close the lower end of said receptacle, and means on said valve lever controlled by the cam on said receptacle supporting lever whereby the opening and closing of the valve is automatically controlled by lowering and raising of the receptacle, the valve being independently closable when the receptacle is in lowered position.

2. In a separating apparatus, a vertically movable receptacle open at its upper and lower ends, means for overbalancing said receptacle, and a cam controlled valve for automatically closing and opening the lower end of said receptacle on the raising and lowering of the receptacle, said valve being manually operable independently of said cam for closing said receptacle when the latter is in its lowered position.

3. In a separating apparatus, the combination of a supporting structure, a receptacle open at both ends mounted to reciprocate vertically therein, a lever fulcrumed on said structure and supporting said receptacle, an overbalancing weight adjustable on said lever, a valve operating lever fulcrumed on said structure and disconnected from said first mentioned lever, a valve carried by said operating lever and positioned to normally close the lower end of said receptacle, and coöperating means on said levers controlled by the raising and lowering of said receptacle for automatically closing and opening the valve, one of said levers being movable independently of the other for closing said valve.

4. In a separating apparatus, the combination of a supporting structure, a receptacle open at both ends and mounted to reciprocate vertically therein, a lever fulcrumed intermediately of its ends on said structure and connected at one end with said receptacle for supporting it, an overbalancing weight adjustably mounted on the other end of said lever, a valve lever fulcrumed intermediately of its ends in said structure, a cone-shaped valve swiveled on said lever and positioned to enter and close the lower end of said receptacle, a roller carried by the other end of said lever, and a cam carried by said receptacle supporting lever and engaging said roller whereby the opening and closing of the valve is automatically controlled by the lowering and raising of the receptacle, one of said levers being movable independently of the other for closing said valve.

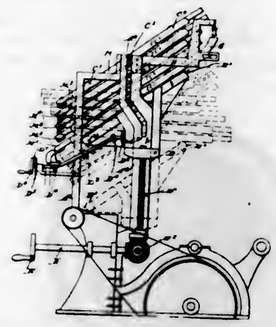
5. In a separating apparatus, a supporting structure having an annular band at its upper end with an outwardly projecting laterally extending flange, brackets depending from said band and having rollers journaled therein, an inverted substantially conical receptacle mounted to reciprocate vertically in said structure with its side walls engaged and guided by said rollers, a restricted throat at its lower end, an annular trough at its upper end adapted to engage said band for limiting the downward movement of said receptacle, a spout leading from said trough, a distributer mounted in said receptacle and spaced from the side walls thereof, a lever fulcrumed on said structure and engaged at one side of its fulcrum with said receptacle, a weight adjustably mounted on the other side thereof, a valve for closing the throat of said receptacle, and means on said lever for opening and closing the valve on the lowering and raising of the receptacle.

[Claims 6 and 7 not printed in the Gazette.]

1,220,093. TYPOGRAPHICAL OR SLUG-CASTING MACHINE. JOHN W. GRAHAM, Hinton, W. Va. Filed July 23, 1915. Serial No. 41,572. (Cl. 199—7.)

1. In a typographical machine the combination of a plurality of movable magazines, racks in which the magazines are housed, guide members fitted to said racks, and a pair of slotted guide arms engaged by said guide members on the racks, said slots being vertical above the operative position and extending downwardly and backwardly therefrom.

2. In a typographical machine the combination of a plurality of movable magazines, racks in which the magazines are housed, guide members fitted to said racks, a pair of slotted guide arms engaged by said guide members on the racks, said slots being vertical above the operative position and below the operative position extending downwardly and backwardly at an angle for a specified purpose, a base shiftable relative to said arms and normally supporting the racks, and means to shift said base.



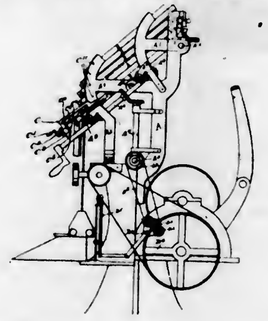
3. In a typographical machine the combination of a plurality of movable magazines, racks in which the magazines are housed, guide rollers fitted to said racks, a pair of slotted guide arms to receive said guide rollers on the racks, said slots being vertical above the operative position and extending rearwardly below the operative position, a base shiftable relative to said slotted arms and normally supporting the racks and magazines, means to shift said base, and means to support the racks and magazines in the guide arms independent of the said base.

4. In a typographical machine the combination of a plurality of movable magazines, racks in which the magazines are housed, guide rollers fitted to the said racks, a pair of slotted guide arms to engage said guide rollers on the racks, said slots being vertical above the operative position and extending backwardly at an angle therefrom, a base shiftable on said arms and normally supporting the racks and magazines, means to shift the said base, means to support the racks and magazines in the slots of the guide arms independent of the said base, and means to tilt the magazines by shifting said base.

5. In a typographical machine the combination of a plurality of movable magazines, racks in which the magazines are housed, guides fitted to the said racks, a pair of guide arms engaged by said guides on the racks, said guide arms being vertical above the operative position and below the operative position, being made with a backward angle.

[Claims 6 to 14 not printed in the Gazette.]

1,220,094. TYPOGRAPHICAL OR SLUG-CASTING MACHINE. JOHN W. GRAHAM, Hinton, W. Va. Filed July 23, 1915. Serial No. 41,573. (Cl. 199—45.)



1. In a typographical machine, the combination of a plurality of removable magazines, a series of superimposed independent racks therefor and substantially vertically disposed members having points of support for said racks, said points being set closer together near the center of the series than at the top and bottom of said series.

2. In a typographical machine, the combination of a plurality of removable magazines, racks therefor, points of support for said racks set closer together near the center of the series than at the ends, supporting members for said racks and magazines, each having a cogged surface, and cog gear wheels intermeshing with the said cog surfaces of the supporting members.

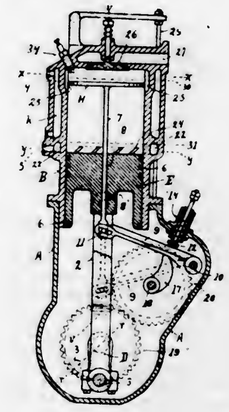
3. In a typographical machine, the combination of a plurality of removable magazines, racks therefor, points of support for said racks set closer together toward the center of the series than at the ends, supporting members for the racks, each having a cogged surface, cog gears intermeshing with the said cog surface of the supporting members, and worm gear wheels attached to the said cog gears.

4. In a typographical machine, the combination of a plurality of removable magazines, racks therefor, points of support for said racks set closer together toward the center of the series than at the ends, supporting members for the racks, each having a cogged surface, cog gears intermeshing with the said cog surface of the supporting members, worm gear wheels meshing with certain of said cog gears, a shaft for the said worm gears, and means to operate the shaft to raise or lower the magazines.

5. In a typographical machine the combination of a plurality of removable magazines, independently supported racks therefor having their points of support nearer together at the center than at the ends of the series when measured on an arc, curved supporting members to support the said rack, and the frontal pair of the said supporting members fitted with holes, each hole being laid off at a different distance from the center on which the said supporting member is hung, and a series of lock pins to engage the said holes.

[Claims 6 to 19 not printed in the Gazette.]

1,220,095. INTERNAL-COMBUSTION ENGINE. WALLACE M. GRAY, Cincinnati, Ohio. Filed Apr. 11, 1916. Serial No. 90,496. (Cl. 123—197.)



1. In a two cycle internal combustion engine, a cylinder having an inlet port near one limit of the plunger movement and an exit port near the opposite limit of the plunger movement, a main plunger connected to a crank shaft and having a reciprocating movement in said cylinder to open and close said inlet port, a valveless supplemental reciprocating plunger movable away from said main plunger when said inlet port is uncovered by the main plunger to eject the spent gas and to introduce fresh combustible gas in advance of the main plunger at each cycle of movement thereof, and ports in the cylinder

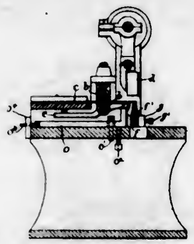
wall at one end thereof to enable the fresh charge to pass said supplemental plunger.

2. In a two cycle internal combustion engine a cylinder having inlet and exit ports located near opposite limits of the plunger movement, a main reciprocating plunger, a valveless supplemental reciprocating plunger movable independently of said main plunger through a portion of the cycle of movement of said main plunger to eject the spent gases from the cylinder and introduce a fresh charge of combustible gas into the cylinder in advance of the forward movement of the main plunger, and means at one end of the cylinder to pass the fresh charge around said supplemental plunger.

3. In a two cycle internal combustion engine a cylinder having an inlet port near one limit of the plunger movement and an exit port and by-pass ports near the opposite limit of the plunger movement, a main reciprocating plunger, and a light weight valveless supplemental reciprocating plunger movable independently of said main plunger through a portion of the cycle of movement of said main plunger to eject the spent gases from the cylinder and introduce a fresh charge of combustible gas into the cylinder in advance of the forward movement of the main plunger.

4. In a two cycle internal combustion engine, a cylinder having an inlet port near one limit of the plunger movement and an exit port and by-pass ports near the opposite limit of the plunger movement, a main reciprocating plunger to cover and uncover said inlet port, a valveless supplemental reciprocating plunger, and means to drive said supplemental plunger in the opposite direction to that of the main plunger through a portion of the cycle of movement of said main plunger to eject the spent gases from the cylinder and to introduce a fresh charge of combustible gas in advance of the main plunger.

1,220,096. TOOTHPICK-MACHINE. EDWARD GREENWOOD, Phillips, Me. Filed Sept. 24, 1915. Serial No. 52,520. (Cl. 144—197.)

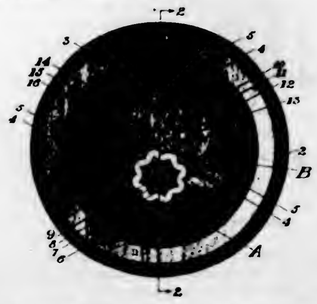


1. In a toothpick machine of the character described, the combination of means for feeding a veneer strip, a pair of straight slitting knives one end of each knife extending beyond the edge of the veneer strip, said knives being separated by a tapering space the width of a toothpick, each of said knives having at one end a lateral wing for cutting the small end of the toothpick, one of said wings terminating one end of said tapering space, a curved knife for forming the large end of the toothpick adjacent to each edge of the veneer strip, said curved knives being spaced away from said wings on the line of feed one or more double spaces.

2. In a toothpick machine of the character described, the combination of a pair of slitting knives separated by a tapering space the width of a toothpick, one of said knives having a wing terminating said tapering space and impinging on the inner side of the other knife, the cutting edge of the last mentioned knife being depressed below the cutting edge of said wing at the point of junction.

3. In a toothpick machine of the character described, the combination of a pair of slitting knives and an auxiliary end cutting knife spaced ahead of said slitting knives, a knife bar to the end of which said end cutting knife is secured, said knife bar extending to the front of the machine and an adjusting screw at the front of the machine for adjusting the knife bar longitudinally.

1,220,097. METHOD OF PRODUCING ORNAMENTAL DESIGNS. ALFRED S. W. GRUNDY and ADOLF F. MARTEN, San Francisco, Cal. Filed Apr. 25, 1916. Serial No. 93,461. (Cl. 41—34.)

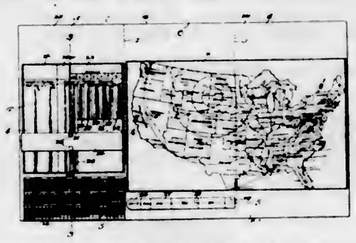


1. A method of producing ornamental designs, which consists in placing and securing upon a base member a plurality of partially overlapped groups of superposed layers of different colored fabrics.

2. The method of producing ornamental designs, which consists in forming a plurality of units each composed of superposed layers of fabric of gradually decreasing diameter, and positioning all of said units on a base member in a predetermined partially overlapping relation to form a completed design.

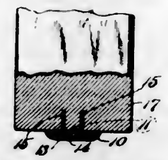
3. The method of producing ornamental designs which consists in forming a plurality of units each composed of superposed layers of differently colored fabric of gradually decreasing area, and then positioning all of said units on a base member in predetermined partially overlapping relation to form a complete design.

1,220,098. INFORMATION CARD OR FOLDER. CHARLES C. HAAS, Whitewood, S. D. Filed June 19, 1914. Serial No. 846,186. (Cl. 33—75.)



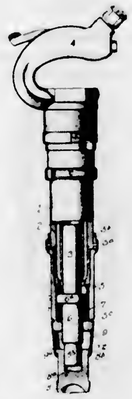
An information card of the character described comprising a sheet composed of three portions, forming a center section and two side sections, foldable on division lines and adapted to be secured in folded form for mail transmission, the center and one of said side sections bearing upon the inner faces thereof a map having various post-offices indicated thereon, and the other side section bearing upon the inner face thereof a scale of postal zone rates and a movable indicator for coöperation therewith, whereby the rate of postage between any two post-offices indicated on the map according to the zone of one with relation to the other may be determined, and an indicator carried by one of the map carrying sections of the map and operative over the surface of the map for determining the zone relationships of different post-offices for the postal rate indication, the second-named side section of the folder being foldable over upon the central section and the other first-named side section foldable over upon said second-named side section to conceal and protect the map and indicators, and said first-named side section having upon its outer face a printed form for a superscription.

1,220,099. FURNITURE-TIP. FREDERICK HACHMANN, St. Louis, Mo., assignor of one-fourth to Fred C. Schoenthaler, one-fourth to Lambert G. Smith, and one-fourth to James B. Hollis, St. Louis, Mo. Filed Apr. 10, 1915. Serial No. 20,528. (Cl. 155—33.)



A furniture tip comprising a one piece cupped metal head adapted to bear at its periphery on the tipped-article, said head having a convex outer face constructed and arranged to form the active glide surface of the tip and being provided in said face with a depressed, slotted fastener receiving portion adapted to bear at its bottom on the tipped article, and an inserted fastener adapted for attaching said head to said article, and comprising a cupped, smooth surfaced crown portion and a plurality of prongs, said prongs being disposed for coöperation with the edges of said slotted portion to hold the head against rotation and said crown portion being constructed and arranged to fit within said depression and seat against the bottom thereof with the outer face of said crown portion standing flush with the outer convex face of said head; whereby said crown portion forms, in effect, a continuation of the head and coöperates therewith for preserving the integrity of the active glide surface of the tip.

1,220,100. FLUID-PRESSURE HAMMER. CHARLES H. HAESELER, Philadelphia, Pa. Filed Mar. 29, 1915. Serial No. 17,751. (Cl. 121—20.)



1. A tool retainer for a fluid pressure operated hammer having means for engaging the front end of the hammer and adapted to loosely hold the tool in association therewith, and also having means at its forward end and operative upon the tool only when the latter is in advanced position for holding the tool in such advanced position beyond the range of the hammer blow after the first blow of the hammer when not in proper working position.

2. A working tool of a fluid pressure operated hammer provided on its inner end with a socket to loosely receive the end of the impact piece of such hammer through which the blows of the hammer piston are delivered, in combination with a tool retainer for a fluid pressure operated hammer having means for engaging the front end of the hammer and to loosely hold the tool in association therewith, and also having means for holding the tool in advanced position beyond the range of the hammer blow after the first blow of the hammer when not in proper working position.

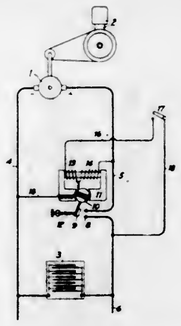
3. In combination with a fluid pressure operated hammer including its cylinder, hammer piston and impact piece struck by the piston, a working tool having on its inner end a socket which fits loosely on the outer end of the impact piece, and combined means for loosely holding the tool to the front end of the cylinder and for retaining it in advanced position out of range of the impact piece when forced to such position by said piece.

4. In combination with a fluid pressure operated hammer including its cylinder, hammer piston and impact piece struck by the piston, a working tool having on its inner end a socket which fits loosely on the outer end of the impact piece, and a clip engaging the front end of the cylinder and loosely containing the rearward end of the tool, said clip having means for engaging and holding the tool in an advanced position out of range of the impact piece when forced to such position by the first blow of the hammer when not in working position.

5. In combination with a fluid pressure operated hammer including its cylinder, hammer piston and impact piece struck by the piston, a working tool having on its inner end a socket which fits loosely on the outer end of the impact piece, and a clip engaging the front end of the cylinder and loosely containing the rearward end of the tool, said clip having an inwardly directed projection at its forward end, and the tool having at its rearward end a member coöperating with such projection when the tool is forced forward to an advanced position by the first blow of the hammer when not in working position.

[Claims 6 to 14 not printed in the Gazette.]

1,220,101. ELECTRIC STARTING AND GENERATING APPARATUS. EDWARD A. HALBLEIB, Rochester, N. Y., and FARNUM F. DORSEY, Winchester, Mass., assignors to North East Electric Company, Rochester, N. Y., a Corporation of New York. Filed May 15, 1915. Serial No. 28,446. Renewed Jan. 9, 1917. Serial No. 141,494. (Cl. 171—315.)



1. In combination with an electric motor-generator and a storage-battery, and conductors connecting them in a main circuit; a relay comprising contact-members controlling said circuit and biased to open-circuit position, and a magnet controlling the contact-members and provided with a winding divided into two independent coils; connections, between one of said coils and the main circuit, for energizing the magnet by current from the motor-generator when it is acting as a generator; connections, between the other coil and the main circuit, for energizing the relay-magnet by current from the battery when the motor-gen-

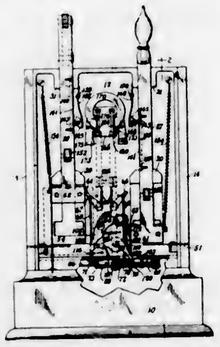
erator is to be used as a motor; and a switch for controlling the last-mentioned connections.

2. In combination with a dynamo and a storage-battery, and conductors connecting them in a main circuit; a relay comprising contact-members controlling said circuit and biased to open-circuit position, and a magnet controlling the contact-members and provided with a winding divided into two independent coils of relatively high and low resistances; connections, between the high-resistance coil and the main circuit, for energizing the magnet by current from the dynamo when it is acting as a generator; connections, between the low-resistance coil and the main circuit, for energizing the relay-magnet by current from the battery when the dynamo is to be used as a motor; and a switch for controlling last-mentioned connections.

3. In combination with a dynamo and a storage-battery, and conductors connecting them in a main circuit; a constant-torque relay biased to open-circuit position and provided with contact-members controlling the main circuit and with a magnet-winding divided into two independent coils; connections, between one of said coils and the main circuit, for energizing the magnet by current from the dynamo when it is acting as a generator; connections, between the other coil and the main circuit, for energizing the relay-magnet by current from the battery when the dynamo is to be used as a motor; and a switch for controlling the last-mentioned connections.

4. In combination with a dynamo and a storage-battery, and conductors connecting them in a main circuit; a relay comprising contact-members controlling the main circuit and a magnet controlling the contact-members; a high-resistance connection across the main-circuit conductors, between the generator and the relay-contacts, including a winding on said magnet, for energizing the magnet by current from the dynamo when it is acting as a generator; a low-resistance connection across the main conductors, between the battery and the relay-contacts, including a switch and a second winding on said magnet, for energizing the magnet by current from the battery; and means for biasing the relay to open-circuit position with a strength requiring a generated E. M. F. substantially greater than the maximum E. M. F. of the battery to cause the relay to move to closed-circuit position in response to generator-current.

1,220,102. COIN-CONTROLLED APPARATUS. ALFRED HALL, Painesville, Ohio. Original application filed Oct. 9, 1913, Serial No. 794,201. Divided and this application filed Sept. 30, 1914. Serial No. 864,248. (Cl. 194—38.)



1. In a device of the character described, the combination of a casing, a plunger, a latch engaging the plunger in one position, a coin chute, mechanism operated by the weight of a coin to release the latch, a movable stop for holding the coin in releasing position, means adapted to be operated by steps, the last step of which moves the stop and release the coin, and means whereby the plunger operates said last named means.

2. The combination of a casing, a movable plunger within the casing, a latch engaging the plunger in its inoperative position, a coin chute, mechanism adjacent the end of the coin chute and connected with said latch whereby the weight of a coin releases said latch, a separate movable abutment for holding the coin in the latch releasing position, mechanism adapted to be moved by steps the last step of which moves said abutment and releases the coin, and means carried by the plunger engaging said last named mechanism to advance it one step on each depression of the plunger.

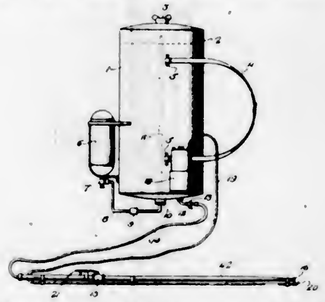
3. In a device of the character described, the combination of a casing, a vertically movable plunger carried by said casing, a latch adapted to engage the plunger in its up position, a coin chute within the casing, a lever having one end adjacent the coin chute and its other end connected with said latch whereby the weight of a coin releases the latch, a movable stop adjacent the end of the chute opposite said lever whereby the coin rests between the stop and the lever, means for moving said stop to release the coin, and means adapted to be advanced one step on each depression of the plunger, said means adapted to engage the step moving means when moved the last step.

4. In a coin controlled device, the combination of a rigidly mounted downwardly extending coin chute adapted to engage a coin at opposite sides, a latch controlling the operation of such device, the latch depending for its operation on a position of a coin still in engagement with both sides of the coin chute, means adapted to be operated by steps consequent upon a plurality of actuations of said device, said means acting to hold the coin still in engagement at opposite sides with the coin chute and adapted to be moved from such position to permit the coin to drop on the last step of said means.

5. In a coin controlled mechanism, the combination of a latch for locking such mechanism adapted to be released by the weight of a coin, a coin chute, means for stopping the coin while still engaged by the chute and in releasing position, and means operated by steps, the last step of which releases the coin whereby said coin controlled mechanism is again latched.

[Claims 6 and 7 not printed in the Gazette.]

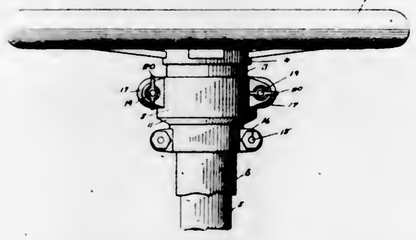
1,220,103. DEVICE FOR PROJECTING BURNING LIQUIDS. WILLIAM A. HALL, New York, N. Y. Filed Dec. 29, 1916. Serial No. 139,683. (Cl. 158—27.5.)



1. A flame projecting device, comprising a tank for containing an inflammable liquid, means for attaching the same to the body of a person, a gas pressure cylinder carried by said tank, a connection between said cylinder and said tank, a pressure regulator in said connection, a gas generator removably carried by said tank, a main burner, a liquid connection from said tank to said burner, a spring pressed normally closed valve in said burner, a pilot burner arranged in front of said main burner, and a connection from said generator to said pilot burner.

2. In a device for projecting burning liquid, a receptacle for containing a combustible liquid, a gas pressure receptacle attached thereto, means for allowing and regulating a flow of gas from said second mentioned receptacle to said first mentioned receptacle, a generator for readily inflammable gas, a long rigid tube for squirting the combustible liquid at an object, a valve therein, a nozzle on the end thereof, a pilot burner adjacent said nozzle, a flexible connection between the outlet of said receptacle for combustible liquid and said rigid tube, and a pipe connection, at least a portion of which is flexible leading from the said gas generator to said pilot burner.

1,220,104. AUTOMOBILE FRICTION STEERING DEVICE. ISIDOR HANTEN, Watertown, S. D. Filed July 17, 1916. Serial No. 109,845. (Cl. 74—33.)



1. A device for imparting a drag or friction to the steering wheel of an automobile including two duplicate mating sections provided with a differential bore, the lowermost portion of which is the smaller, fastening means for clamping the sections about the permanent steering column of an automobile, the uppermost and larger portion of the differential bore encompassing a portion of the movable steering mechanism of an automobile, a piece of suitable material in each of said sections in the uppermost enlarged portion of the differential bore for immediate frictional contact with a portion of the movable steering mechanism, and means for adjusting said sections together to increase the said frictional contact substantially as described.

2. A device for imparting a drag or friction to the steering wheel of an automobile including two mating sections provided with a differential bore, the lowermost portion of which is the smaller, fastening means for clamping the sections about the permanent steering column of an automobile, the uppermost and larger portion of the differential bore encompassing a portion of the movable steering mechanism of an automobile, a piece of suitable material in each of said sections in the uppermost enlarged portion of the differential bore for immediate frictional contact with a portion of the movable steering mechanism, and means for adjusting said sections together to increase the said frictional contact substantially as described.

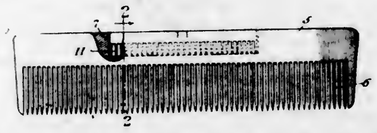
3. A device for imparting a drag or friction to the steering wheel of an automobile including two mating sections having a central bore, means for clamping one portion of said bore about the permanent steering column of an automobile, the other portion of said bore being adapted to encompass a portion of the movable steering device of an automobile, and a piece of suitable material in each of said sections for immediate contact with said portion of the movable steering mechanism, and means for clamping the said members into frictional contact with a portion of the movable steering device.

4. A device for imparting a drag or friction to the steering wheel of an automobile including two mating sections having a central bore, means for clamping one portion of said bore about the permanent steering column of an automobile, the other portion of said bore being adapted to encompass a portion of the movable steering device of an automobile, and means for clamping the said members into frictional contact with a portion of the movable steering device.

5. A device for imparting a drag or friction to the steering wheel of an automobile including a pair of mating members provided with a central bore, means for clamping a portion of the bore about the permanent steering column of an automobile, the other portion of said bore being adapted to encompass a portion of the movable steering device of an automobile, the portion of said bore which clamps the stationary steering column being chamfered to provide a point of extreme contact between said sections and the stationary steering column, and means for clamping the sections in frictional contact with a portion of the movable steering device to cause a relative movement of the said chamfered portion of the said bore with respect to the permanent steering column to increase the clamping action therebetween.

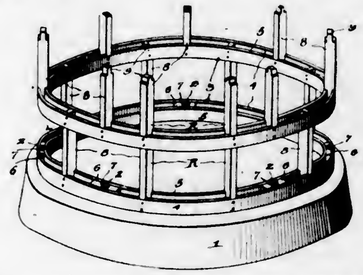
[Claims 6 and 7 not printed in the Gazette.]

1,220,105. DEVICE FOR CLEANING COMBS. JOHN W. HART, Mobile, Ala. Filed June 16, 1916. Serial No. 104,069. (Cl. 132—3.)



A comb provided with a pocket, a comb tooth cleaning element adapted to be carried by said pocket and having a portion of the upper rear edge thereof bent laterally and adapted to engage one wall of said pocket and adapted to hold one face of the element frictionally against the opposite wall of the pocket, the outer edge of the element being flush with the back of the comb.

1,220,106. SILO. ROBERT HARTENBERGER, Sheboygan Falls, Wis. Filed May 25, 1916. Serial No. 99,841. (Cl. 217—4.)



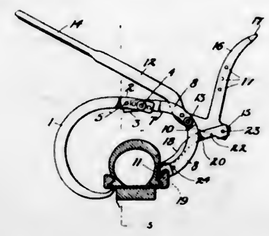
1. A silo comprising a supporting frame consisting of a plurality of superimposed rings and studs extending therebetween, said rings being each constructed of spaced inner and outer sections to allow the free passage of air vertically therethrough, a sheathing secured to the outer sides of said rings, and a lining secured to the inner sides thereof, means being provided for admitting air into the space between the lower ends of the sheathing and lining and for allowing the escape of such air from the upper end of said sheathing and lining.

2. A silo frame comprising a plurality of superimposed rings each formed of inner and outer annular sections spaced apart to allow the free circulation of air therebetween when the sheathing and lining of the silo are secured in place, and vertical studs extending between the aforesaid rings, said studs having tenons on their upper and lower ends secured between the inner and outer sections of said rings.

3. A silo frame comprising a plurality of superimposed rings each formed of inner and outer annular sections spaced apart to allow the free circulation of air there-

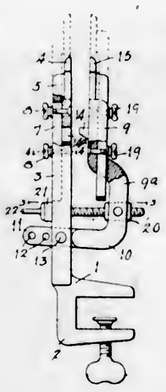
between when the sheathing and lining of the silo are secured in place, and vertical studs extending between the aforesaid rings, said studs having tenons on their upper and lower ends secured between the inner and outer sections of said rings, said studs at the front of the silo being disposed in two vertical rows to form door frames, while the other studs are disposed in staggered relation.

1,220,107. TIRE-REMOVER. AMOS C. HARTMAN, Dillsburg, Pa. Filed Mar. 29, 1916. Serial No. 87,619. (Cl. 157—6.)



A tire remover comprising a curved rim engaging member adapted to be engaged under the front edge of a wheel rim, a second curved rim engaging member pivoted to said first mentioned member and having its free end terminating in a hook adapted to fit over the rear flange of a wheel rim, a lever pivoted to said last mentioned member, and a tire engaging member pivoted to said lever.

1,220,108. SAW-CLAMP. MICHAEL S. HECKATHORN, Ten Mile Bottom, Pa. Filed Oct. 10, 1916. Serial No. 124,794. (Cl. 76—78.)



1. A saw clamp including a base, a fixed upright, a fixed jaw carried by the upright and adjustable longitudinally thereof, a swinging lever on one side of the upright, a movable jaw carried by the swinging lever and adjustable longitudinally thereon, the lower end of the lever being offset outwardly and terminating in an inwardly extending arm which is pivotally connected to the upright, a saw rest carried by one of the members of the clamp, and clamping means for moving the swinging lever toward and away from the upright.

2. A saw clamp including a base, a grooved upright projecting from the base, a fixed jaw carried by the upright, a slide secured to the fixed jaw and adjustably received within the groove of the upright, clamping means engaging the slide to lock the fixed jaw in an adjusted position, a grooved swinging lever on one side of the upright, a movable jaw carried by the lever, a slide secured to the movable jaw and adjustable within the groove of the lever, clamping means for locking the slide in an adjusted position, the lower end of the lever being pivotally connected to the upright, and means for swinging the lever toward and away from the upright.

3. A saw clamp including a base, a pair of spaced and parallel standards projecting from the base, a transversely disposed fixed jaw carried by the uprights of the upper ends thereof, a swinging lever on one side of each upright, a transversely disposed movable jaw carried by the swinging levers at the upper ends thereof, the lower ends of the swinging levers being offset outwardly and terminating in inwardly extending arms which are pivotally connected to the respective uprights, a cross piece connecting the outwardly offset lower ends of the levers, a cross piece connecting the uprights, and a clamping screw operatively connecting the cross pieces for moving the swinging levers toward and away from the uprights.

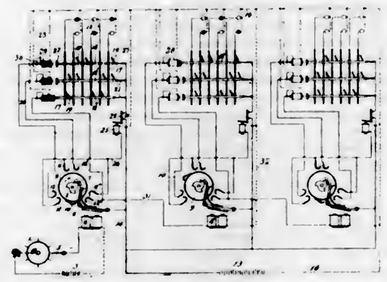
4. A saw clamp including a base, a pair of spaced and parallel uprights projecting therefrom and having transverse openings therein, a transversely disposed fixed jaw carried by the uprights at the upper ends thereof, a swinging lever on one side of each of the uprights, a transversely disposed movable jaw carried by the swinging levers at the upper ends thereof, the lower ends of the swinging levers being offset outwardly and terminating in inwardly extending arms, pivot ears projecting from the extremities of the inwardly extending arms and passing loosely through the transverse openings of the uprights, said pivot ears being each provided with a series of openings, removable pivot ears upon the uprights for engaging any selected set of said openings, a cross piece connecting the outwardly offset lower ends of the levers, a corresponding cross piece connecting the uprights, and a clamping screw operatively connecting the cross pieces for swing the levers toward and away from the uprights.

5. A saw clamp including a base, a pair of spaced and parallel uprights projecting therefrom and provided with longitudinal grooves, a transversely extending fixed jaw carried by the uprights, slides secured to the fixed jaws and adjustable within the grooves of the uprights, means for clamping the slides in an adjusted position, a swinging lever on one side of each of the uprights, said swinging levers being longitudinally grooved and the lower ends of the levers being offset outwardly and terminating in inwardly extending arms which are pivotally connected to the respective uprights, a transversely disposed movable jaw carried by the swinging levers, slides secured to the movable jaw and adjustable within the grooves of the levers, means for locking the slides in an adjusted position, a cross piece connecting the outwardly offset lower ends of the levers, a corresponding cross piece connecting the uprights, and a clamping screw operatively connecting the two cross pieces.

1,220,109. ELECTRIC DISPLAY SYSTEM. ANATOLE C. HEINY, Flushing, N. Y., assignor, by direct and mesne assignments, to Heiny Electric Co., a Corporation of New York. Filed May 10, 1905. Serial No. 259,775. Renewed Sept. 15, 1916. Serial No. 120,416. (Cl. 177—348.)

1. In an electric display apparatus, the combination of a monogram containing lamps, contact strips individual to the lamps and connected directly therewith arranged substantially parallel with each other, sliding bars freely movable in the direction of their length and arranged transversely across the strips and provided with contacts for engaging with the latter, and control devices for moving the bars endwise, consisting of a set of electro-magnets arranged close together along one side of the contact strips.

2. In an electric display apparatus, the combination of a monogram containing electric lamps, a generator and illuminating circuit, a cut-out in the illuminating circuit, an electro-magnet for operating the cut-out, movable circuit-closing devices arranged to put different groups of lamps into circuit with the generator, electro-magnets for moving the said circuit-closing devices, a series of stationary contacts with which the windings of the said electro-magnets are respectively connected, another series of stationary contacts each connected with the cut-out electro-magnet, the contacts of the said two series being arranged in pairs made up of one contact from each series, and a single movable contact arranged to successively engage with the said pairs of stationary contacts to cause first a circuit to be completed through the electro-magnet of the cut-out, and then, as the movable contact engages the second stationary contact of the pair, to close the circuit through the electro-magnets controlling the circuit-closing devices for the lamp circuits to be closed, substantially as set forth.



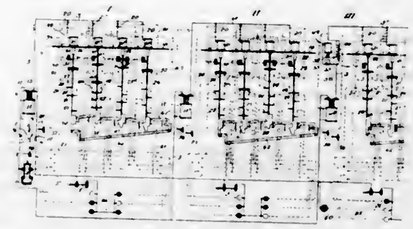
3. In an electric display apparatus, the combination of a monogram containing electric lamps, movable selecting devices arranged to put different groups of lamps into circuit with the generator, electro-magnets for controlling the movements of the said selecting devices, a series of stationary contacts connected with the electro-magnets, a movable contact arranged to be moved successively into engagement with the said stationary contacts to cause circuits to be completed through the electro-magnets with which they are connected, a second monogram, control devices associated therewith for causing successive changes in the illumination thereof, a magnet for actuating the said control mechanism, and a connection between one of the stationary contacts associated with the first monogram and the electro-magnet which operates the control devices of the second monogram, substantially as set forth.

4. In an electric display system, the combination of a monogram, movable selecting devices arranged to put different groups of lamps into circuit with the generator, electro-magnets for controlling the movements of the said selecting devices, a series of stationary contacts, connected with the electro-magnets, a cut-out in the illuminating circuit, another series of stationary contacts, connected with the cut-out, the contacts, of said series, being arranged in pairs, a movable contact arranged to engage successively with the pairs of contacts, a second monogram, means for controlling the illumination of the second monogram, an electro-magnet for operating the said controlling means, and an electrical connection between one of the first series of contacts associated with the first monogram and the actuating electro-magnet of the second monogram, substantially as set forth.

5. A contact-making device adapted for use in an electric display system, comprising a cup-shaped insulating support, a series of contacts carried by the flange or periphery of the said support, wire-connections united with the said contacts and mounted in the face plate of said support, and disposed within the flange thereof, and a movable contact arm arranged to travel entirely around the said cup-shaped support to engage with the said contacts, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,220,110. ELECTRIC DISPLAY APPARATUS. ANATOLE C. HEINY, New York, N. Y. Filed Mar. 31, 1908. Serial No. 424,455. Renewed June 2, 1916. Serial No. 101,384. (Cl. 177—346.)



1. In a display apparatus, the combination of lamps arranged in a group, stationary contacts with which the lamps are connected, circuit controlling devices arranged to respectively close the lamp circuits so as to cause different combinations of the lamps of the group to be illuminated, electro-responsive devices controlling the said circuit closing devices, a current supply circuit with which the electro-responsive devices may be respectively connected, means controlled by the said circuit controlling devices for bringing the electro-responsive devices successively into connection with the supply circuit, the said connecting means of each circuit controlling device being arranged to come into operation as the said device is disconnected from the supply circuit, means for holding said connecting means temporarily in operation, and means for releasing them when the next electro-responsive device of the series is operated.

2. In a display system, the combination of lamps arranged in a group, contacts with which the said lamps are connected, circuit controlling devices arranged to respectively engage with certain of the contacts to close circuits through different combinations of lamps of the group for illuminating them, electro-responsive devices controlling the circuit closing devices, a current supply circuit with which the electro-responsive devices may be respectively connected, means controlled by the said circuit closing devices for bringing the electro-responsive devices respectively into connection with the supply circuit, the said connecting means of each circuit-controlling device being arranged to come into operation as the said device is disconnected from the supply and the lamps it controls thereby extinguished, means for holding said connecting means temporarily in operation, means for releasing them when the next electro-responsive device of the series is operated, and means for periodically breaking the supply circuit connections of the said electro-responsive devices between each change in the illumination of the lamps.

3. In a display system, the combination of lamps arranged in a group, contacts with which the lamps are connected, circuit controlling devices arranged to respectively engage with certain of the said contacts to close circuits through different combinations of lamps of the group for illuminating them, electro-responsive devices controlling the said circuit controlling devices, a current supply circuit with which the said electro-responsive devices and the lamps of the group may be respectively connected, means for controlling the successive action of the electro-responsive devices, and means for periodically breaking the supply circuit connections of the said set of electro-responsive devices and of the group of lamps between each change in the illumination of the lamps.

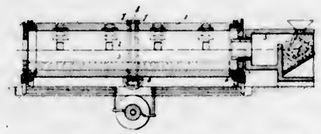
4. In a display system, the combination of lamps arranged in a group, contacts with which the lamps are connected, circuit closing devices arranged to respectively engage with certain of the contacts to close circuits through different combinations of lamps of the group for illuminating them, electro-responsive devices each controlling a circuit closing device, a current supply circuit

for the electro-responsive devices, a pair of circuit closers operated by the circuit controlling devices, one circuit closer of said pair controlling the connection of the electro-responsive device that operates that circuit closing device with the supply circuit, and the other of the pair being arranged to operate momentarily when its own electro-responsive device becomes inactive and control the connection of the next electro-responsive device to operate with the supply circuit and means for opening the circuit at the last said circuit closer when the next electro-responsive device of the series becomes active.

5. In a display system the combination of lamps arranged in a group, contacts with which the lamps are connected, circuit controlling devices arranged to respectively engage with certain of the contacts to close circuits through different combinations of lamps of the group for illuminating them, electro-responsive devices controlling the said circuit controlling devices, a current supply circuit with which the electro-responsive devices may be connected, means for establishing connections between the supply circuit and the next electro-responsive device to be operated whenever the circuits of the lamps just illuminated are opened, and means for opening the said circuit between the main line and the said next electro-responsive device when it operates to close the circuits through the set of lamps it controls.

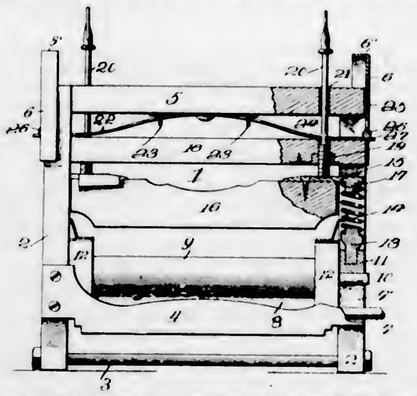
[Claims 6 to 12 not printed in the Gazette.]

1,220,111. APPARATUS FOR REFINING METALS BY HEATING. ALOIS HELFENSTEIN, Vienna, Austria-Hungary. Filed June 5, 1912. Serial No. 701,891. (Cl. 204—64.)



An apparatus for refining metals by heating comprising in combination, a long tubular furnace provided with charging openings and adapted to receive a thin metal bath, means for heating said bath by fuel, water cooled conductors extending with their ends into said bath within said furnace through the bottom thereof for short circuiting said bath, means for imparting to said furnace an intermittent rotary movement around its longitudinal axis, and means for supplying energy to said conductors, substantially as described.

1,220,112. PRESSURE-RELEASE FOR CLOTHES-WRINGERS. JOHN F. HEMENWAY, New York, N. Y. Filed July 26, 1916. Serial No. 111,403. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a resilient member having means for normally holding said pressure means in predetermined position, and a movably mounted top bar connected to said resilient member for releasing said pressure means.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, an intermediate bar mounted in said frame having means for adjusting said pressure means, a resilient member having means for normally holding said intermediate bar in predetermined position, and a top bar connected to said resilient member for releasing said pressure means.

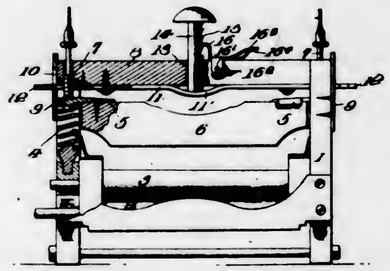
3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, an intermediate bar having means for adjusting said pressure means, headed studs carried by the side bars of said frame, a movably mounted top bar, and a bowed spring carried by said top bar having openings coöperating with said headed studs for holding said intermediate bar in predetermined position within said frame.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means mounted therein, an intermediate bar mounted in said frame having pressure screws for adjusting said pressure means, headed studs carried by the side bars of said frame, a movably mounted top bar mounted in said frame, and a bowed spring carried by the top bar having slots in the ends thereof provided with reduced end portions coöperating with the headed studs for holding and releasing said intermediate bar.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means mounted therein, an intermediate bar mounted in said frame having pressure screws for adjusting said pressure means, slotted members carried by the side bars of said frame provided with headed studs, a movably mounted top bar mounted in said frame, and a bowed spring carried by the top bar having slots in the end thereof provided with reduced end portions cooperating with the headed studs for holding and releasing said top bar.

[Claims 6 to 14 not printed in the Gazette.]

1,220,113. PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. JOHN F. HEMENWAY, New York, N. Y. Filed July 26, 1916. Serial No. 111,405. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a resilient member having means for normally holding said pressure means in predetermined position, and a slidably mounted member coöperating with said resilient member for moving and holding said resilient member in position to release said pressure means.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, members carried by the side bars of said frame, a resilient member cooperating with said members, for holding said pressure means in predetermined position, and a slidably mounted member arranged to coöperate with said resilient member for moving and holding said resilient member in position to release said pressure means.

3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, members carried by the side bars of said frame, a resilient member

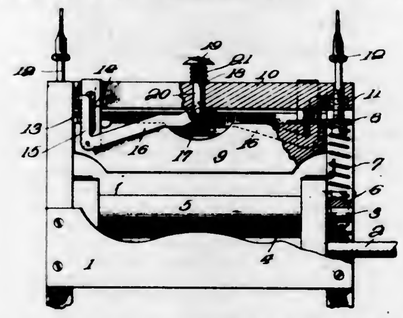
coöperating with said members for holding said pressure means in predetermined position, a slidably mounted member coöperating with said resilient member for moving said resilient member into inoperative position for releasing said pressure means, and means for holding said slidably mounted member in adjusted position.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a movably mounted top bar for said frame having pressure screws for adjusting said pressure means, members secured to the side bars of said frame, a resilient member carried by said top bar coöperating with said members for holding said top bar in predetermined position within said frame, a slidably mounted member carried by the top bar arranged to engage said resilient member for holding said resilient member in position to release said pressure means, and means for holding said movably mounted member in adjusted position.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a movably mounted top bar for said frame having pressure screws for adjusting said pressure means, members secured to the side bars of said frame having substantially inverted T-shaped openings, a spring carried by the top bar of said frame coöperating with said openings, and a slidably mounted member mounted in the top bar of said frame cooperating with said spring for moving and holding said spring in position to release said pressure means.

[Claims 6 to 15 not printed in the Gazette.]

1,220,114. PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. JOHN F. HEMENWAY, New York, N. Y. Filed Sept. 9, 1916. Serial No. 119,176. (Cl. 68—32.)



1. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls, a top bar movably mounted within said frame having pressure screws for adjusting said pressure means, keepers secured to the inner faces of the side bars of said frame, pivoted latches carried by the top bar engaging said keepers for holding the top bar in predetermined position, and a slidably mounted member carried by the top bar having a pivotal connection with the inner ends of said pivoted latches for moving said pivoted latches out of contact with said keepers to release said top bar.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a top bar movably mounted within said frame having pressure screws for adjusting said pressure means, keepers carried by the side bars of said frame, pivoted latches carried by said top bar engaging said keepers, and a push button slidably mounted within the top bar having a connection with said latches for moving said latches out of contact with said keepers to release said top bar.

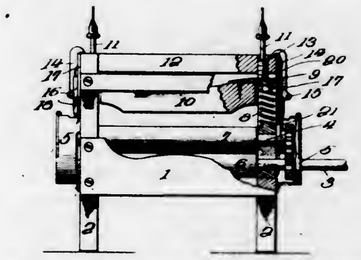
3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted top bar carrying means for adjusting said pressure means, keepers carried by the side bars of said frame, brackets carried by the top bar of said frame, pivoted latches mounted on said brackets engaging said keepers, and a spring actuated push button mounted in said top bar having a connection with said latches.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted within said frame having means for adjusting said pressure means, keepers carried by the side bars of said frame, a depending bracket secured to said top bar adjacent each end, a pivoted latch on each of said brackets engaging said keepers, a push button having a shank slidably mounted within said top bar, a cross bar carried by the shank of said push button having a connection with said latches, and a spring surrounding the shank of said push button above said top bar for normally holding said latches in engagement with said keepers.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted within the frame of said wringer having pressure screws for adjusting said pressure means, keepers carried by the side bars of said frame, brackets carried by the movable top bar, a pivoted latch mounted on each of said brackets and adapted to engage one of the keepers, a push button having a shank slidably mounted within said top bar, a cross bar carried by the lower end of said push button having a connection with said latches, and a spring for normally holding said push button in raised position.

[Claims 6 to 8 not printed in the Gazette.]

1,220,115. AUTOMATIC PRESSURE-RELEASE FOR CLOTHES-WRINGERS. JOHN F. HEMENWAY, New York, N. Y. Filed Sept. 9, 1916. Serial No. 119,178. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, means for normally holding said pressure means in predetermined position, and adjustable means actuated by the vertical movement of one of said pressure rolls for releasing said means.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, movable members for normally holding said pressure means in predetermined position, and adjustable members carried by the shaft of the upper pressure roll cooperating with said movable members for releasing said pressure means.

3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a top bar movably mounted within said frame having pressure screws for adjusting said pressure means, movable members for holding said top bar in predetermined position within said frame, and adjustably mounted members coöperating with said movable members for releasing said pressure means on the separation of said rolls.

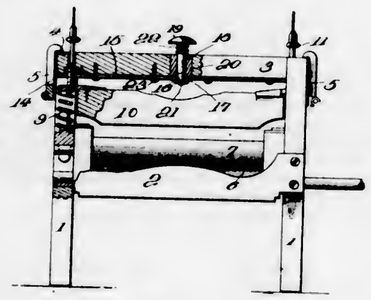
4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a top bar having means for adjusting said pressure means, movable members carried by the side bars of said frame engaging said top bar for holding said top bar in predetermined position within said frame, and adjustable means actuated by the vertical movement of one of said pressure

rolls for moving said movable members out of the path of travel of said top bar.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, movable retaining members for normally holding said pressure means in predetermined position, and adjustable means actuated by the vertical movement of one of said pressure rolls cooperating with said retaining members for releasing the pressure on the pressure rolls.

[Claims 6 to 13 not printed in the Gazette.]

1,220,116. PRESSURE-RELEASING DEVICE FOR CLOTHES-WRINGERS. JOHN F. HEMENWAY, New York, N. Y. Filed Sept. 9, 1916. Serial No. 119,180. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted top bar having means for adjusting said pressure means, pivoted members mounted on the side bars for holding said top bar in predetermined position, releasing bars slidably mounted on the under side of said top bar, and a movably mounted member slidably mounted in said top bar extending between said releasing bars for moving said releasing bars in opposite direction for moving said movable members out of the path of travel of said top bar for releasing the pressure on said pressure rolls.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted top bar having means for adjusting said pressure means, pivoted members for holding said top bar in predetermined position, releasing bars carried by said top bar having abutting ends provided with sockets, and an operating member slidably mounted in said top bar extending into said sockets for forcing said releasing bars outwardly to actuate the pivoted members to release the top bar.

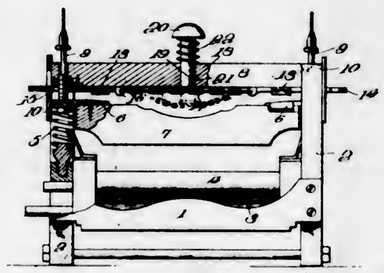
3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted top bar having means for adjusting said pressure means, plates carried by the side bars of said frame, movable latches carried by said plates for holding said top bar in predetermined position, releasing bars slidably mounted thereon, said releasing bar having abutting ends provided with registering sockets, and a movably mounted member mounted in said top bar having a conical end extending into the socket of said releasing bars for moving said releasing bars outwardly into engagement with said movable members for releasing said top bar.

4. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, means carried by the side bars of said frame for holding said pressure means in predetermined position, releasing bars arranged to coöperate with said retaining means for releasing said pressure means, and a slidably mounted member arranged between said releasing bars and having means for forcing said releasing bars outwardly for releasing said pressure means.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted top bar having means for adjusting said pressure means, apertured plates carried by the side bars, movable latches carried by said plates for holding said top bar in predetermined position within said frame, releasing bars slidably mounted on the under side of said top bar having abutting ends provided with registering sockets, said bars being provided with reduced ends extending through the apertures of said plates in alinement with said movable members and a movably mounted member mounted in said top bar having a conical end extending into the registering sockets of said releasing bars for moving said releasing bars outwardly to throw said movable members out of the path of travel of said top bar.

[Claims 6 to 9 not printed in the Gazette.]

1,220,117. PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. JOHN F. HEMENWAY, New York, N. Y. Filed Oct. 2, 1916. Serial No. 123,374. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame, means for adjusting said pressure means, retaining bars for holding said top bar in predetermined position within said frame, a flexible connection between said retaining bars, and a member slidably mounted within the top bar engaging said flexible connection for actuating said retaining bars to release said pressure means.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having means for adjusting said pressure means, plates carried by the side bars of said frame provided with inverted T-shaped slots, retaining bars slidably carried by the top bar having substantially T-shaped ends coöperating with the T-shaped slots of said plates, a link member connecting said retaining bars, and a push button slidably mounted in said top bar engaging said link member for moving said retaining bars in position to release said top bar.

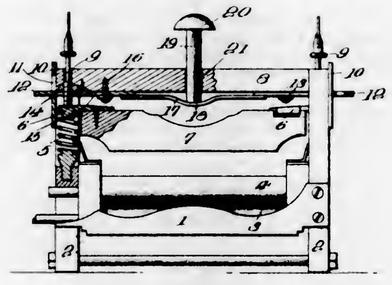
3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame, retaining bars carried by said top bar for holding said top bar in predetermined position within said frame, a chain connecting said retaining bars, and a push button slidably mounted in said top bar engaging said chain for drawing said retaining bars toward each other for allowing said top bar to move vertically within said frame.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having means for adjusting said pressure means, keepers carried by the side bars of said frame, retaining bars slidably mounted on the under side of said top bar engaging said keepers, a chain connecting the inner ends of said retaining bars, and a spring returned push button slidably mounted in said top bar having a connection with said chain for forcing said chain downwardly to draw said retaining bars toward each other in position to allow said top bar to move a predetermined distance within said frame.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame, plates secured to the side bars of said frame having substantially inverted T-shaped slots, releasing bars slidably mounted on the under side of said top bar having substantially T-shaped ends coöperating with the T-shaped slots for holding and releasing said top bar, a chain connecting the inner ends of said releasing bars, and a push button slidably mounted in said top bar over said chain for forcing said chain downwardly to move said releasing bars in position to allow said top bar to move vertically a predetermined distance within said frame.

[Claim 6 not printed in the Gazette.]

1,220,118. PRESSURE-RELEASE FOR CLOTHES-WRINGERS. JOHN F. HEMENWAY, New York, N. Y. Filed Oct. 2, 1916. Serial No. 123,375. (Cl. 68—32.)



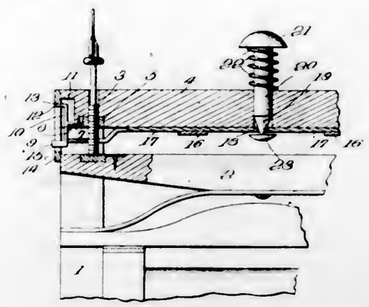
1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted top bar mounted in said frame having means for adjusting said pressure means, keepers carried by the side bars of said frame, non-resilinet releasing bars carried by the top bar coöperating with the keepers, a resilient member connecting the inner ends of said releasing bars, and a push button slidably mounted in said top bar coöperating with said resilient member for moving said releasing bars in respect to said keepers for releasing said top bar.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having pressure screws for adjusting said pressure means, plates secured to the side bars of said frame having substantially inverted T-shaped slots, non-resilient releasing bars slidably mounted on the under side of said top bar having substantially T-shaped ends coöperating with said slots for holding and releasing said top bar, a resilient member connecting said releasing bars, and a push button slidably mounted in said top bar coöperating with said resilient member for moving said releasing bars in position to release said top bar.

1,220,119. PRESSURE-RELEASE FOR CLOTHES-WRINGERS. JOHN F. HEMENWAY, New York, N. Y. Filed Oct. 2, 1916. Serial No. 123,378. (Cl. 68—32.)

1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted top bar having means for adjusting said pressure means, pivoted latches carried by said top bar for holding said top bar in adjusted position within said frame, and releasing bars engaging said latches for releasing said top bar, said latches having tail portions for limiting the upward movement of said top bar.

2. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar having means for adjusting said pressure means, keepers carried by said frame, pivoted latches carried by the top bar engaging said keepers for holding said top bar in predetermined position within said frame, means carried by the top bar for actuating said latches for releasing said top bar, and means carried by said latches for limiting the upward movement of the top bar in said frame.



3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar having means for adjusting said pressure means, keepers carried by the side bars of said frame, pivoted latches carried by the top bar coöperating with said keepers, releasing bars carried by the top bar, and means mounted in the top bar engaging said releasing bars for moving said latches in position to release said top bar, said latches having tail portions coöperating with said keepers for limiting the upward movement of the top bar within said frame.

4. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having pressure screws for adjusting said pressure means, plates carried by the side bars provided with slots, latches pivotally mounted in the ends of the said top bar extending into said slots for normally holding said top bar in predetermined position within said frame, and releasing means carried by the top bar engaging said latches for moving said latches in position to allow said top bar to move a predetermined distance within said frame.

5. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having means for adjusting said pressure means, slotted plates carried by the side bars of said frame, pivoted latches carried by the top bar having laterally projecting portions extending into the slots of said plates, releasing bar slidably mounted on said top bar, means carried by said top bar engaging said releasing bar for forcing said releasing bar into engagement with said latches for moving the extensions of said latches out of the slots of said plates for releasing said top bar, and members carried by said latches coöperating with the slots of said plates for limiting the upward movement of said top bar within said frame.

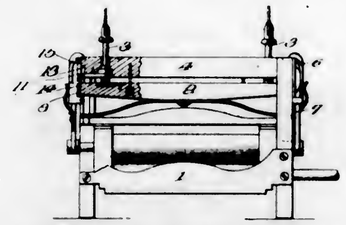
[Claims 6 to 11 not printed in the Gazette.]

1,220,120. CLOTHES-WRINGER. JOHN F. HEMENWAY, New York, N. Y. Filed Oct. 2, 1916. Serial No. 123,379. (Cl. 68—32.)

1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted top bar mounted in said frame having means for adjusting said pressure means, releasing means for normally holding said top bar in predetermined position within said frame, members carried by the side bars of said frame and pivoted members carried by the top bar engaging said members for limiting the upward movement of the top bar within said frame.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar having means for adjusting said pressure

means, releasing means for normally holding said top bar in predetermined position within said frame, slotted plates carried by the side bars of said frame, and pivoted members carried by the top bar extending into the slots of said plates for limiting the upward movement of said top bar.



3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame, means for normally holding said top bar in predetermined position therein, automatic means for releasing said means, threaded boxes mounted in said top bar, pressure screws carried by said threaded boxes for adjusting said pressure means, said boxes being provided with extensions, plates carried by the side bars of said frame having slots, and pivoted members mounted on the extensions of said boxes extending into said slots for limiting the upward movement of said top bar when released by said automatic means.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having means for adjusting said pressure means, said top bar having recesses formed in its ends, means for normally holding said top bar in predetermined position within said frame, means for releasing said top bar, members carried by the side bars of said frame, pivoted members mounted in the recesses of said top bar engaging said members for limiting the upward movement of said top bar within said frame, and means for holding said pivoted members in horizontal position.

5. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having recesses formed in the ends thereof, threaded boxes carried by said top bar, pressure screws mounted on said boxes for adjusting said pressure means, said boxes having portions extending into the recesses of said top bar provided with pivots, plates secured to the side bars of said frame having slots, and members pivotally mounted on the pivots of said boxes extending into the slots of said plates for limiting the upward movement of said top bar.

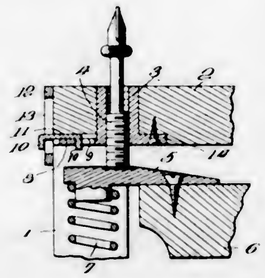
[Claims 6 to 10 not printed in the Gazette.]

1,220,121. CLOTHES-WRINGER. JOHN F. HEMENWAY, New York, N. Y. Filed Oct. 26, 1916. Serial No. 127,904. (Cl. 68—32.)

1. In a clothes wringer, the combination with a movably mounted top bar, of a threaded box having an extension mounted therein, a bolt slidably mounted in said extension, and a keeper carried by the side bar of said frame adapted to receive said bolt for limiting the upward movement of said top bar.

2. A clothes wringer, comprising a frame having a movably mounted top bar, a keeper carried by the side bar of said frame, a threaded box mounted in said top bar carrying a pressure screw, a slotted grooved extension formed on said box, and a stop slidably mounted in the groove of said extension having a depending portion working in the slot thereof, said stop coöperating with said keeper for limiting the movement of said top bar in the side bars of said frame.

3. In a clothes wringer, the combination with a movably mounted top bar, of an internally threaded pressure screw carrying box mounted therein, a stop carried by said box, and a keeper arranged on the frame of said wringer adapted to receive said stop, said stop being movably mounted on said box.

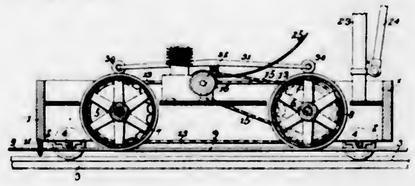


4. In a clothes wringer, the combination with a movably mounted top bar, of an internally threaded box seated within said top bar carrying a pressure screw, said box having a grooved slotted extension, of a stop slidably mounted in the groove of said extension having a depending portion extending through the slot thereof, and a keeper carried by the side bars of said frame adapted to receive said stop for limiting the upward movement of said top bar.

5. In a clothes wringer having a movably mounted top bar, the combination with an internally threaded box therefor carrying a pressure screw, of a stop slidably carried by said box, and a keeper carried by the side bars of said frame adapted to receive said stop for limiting the upward movement of said top bar.

[Claims 6 and 7 not printed in the Gazette.]

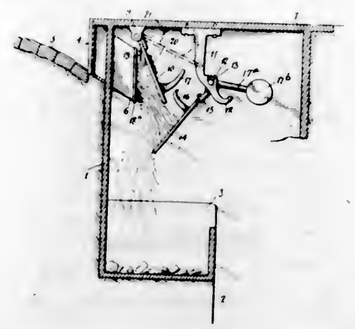
1,220,122. LOG-MOVING MACHINE. FRANK R. HEWITT, Hewitt, N. C. Filed Dec. 12, 1916. Serial No. 136,467. (Cl. 104—133.)



1. A device of the character specified, comprising a trackway, a wheeled carriage running on the trackway, reels supported by the carriage near the ends thereof, a flexible member anchored at its ends and extending along the trackway and winding on the reels intermediate its ends, means for driving the reels, a brake disk in connection with each reel, a brake ring encircling each disk, and a common means for simultaneously operating the rings, said driving means comprising a motor connected to one of the reels, a connection between the reels for constraining them to rotate together, a friction roller engaging the flexible member on each reel at the top of the reel, an arm extending between the reels on which the friction wheels are journaled, and a spring normally pressing said arm toward the wheels.

2. A device of the character specified comprising a trackway, a wheeled carriage running on the trackway, reels journaled on the carriage near the ends thereof, a flexible member anchored at its ends and extending along the trackway and winding on the reels, a positive driving connection between the reels, a friction wheel spring pressed toward each reel and engaging the flexible member thereon.

1,220,123. SEWER-TRAP. FREDERICK J. HEYBACH, Baltimore, Md. Filed May 5, 1915. Serial No. 26,062. (Cl. 182—10.)



1. In combination, a valve, automatic means for holding said valve substantially closed against the passage of solid articles past said valve while permitting the flow of fluid past the same, and means controlled by said passage of fluid past said substantially closed valve for automatically rendering said holding means ineffective.

2. In combination, a swinging valve member, a pivoted member disposed adjacent said valve and having means to engage the valve and secure the same in a substantially closed position, while permitting a restricted flow of fluid past said valve, said pivoted member having another portion adapted to be acted upon by said restricted flow of fluid to release said valve.

3. In combination, a pivoted valve member having a projection, a second pivoted member having a locking dog adapted to be automatically moved into engagement with said projection to hold the valve substantially closed, while permitting a restricted flow of fluid thereby, and a projection carried by said second pivoted member and arranged to be operated by said restricted flow of fluid to move said dog out of engagement with the projection of said valve, whereby said valve is allowed to open.

4. In combination, a valve member, a movable lock member adapted to be automatically moved into engagement with said valve member to hold the latter substantially closed, while permitting a restricted flow of fluid thereby, and a valve releasing member arranged to be actuated by said restricted flow of fluid for operating said lock member, whereby the valve is permitted to open.

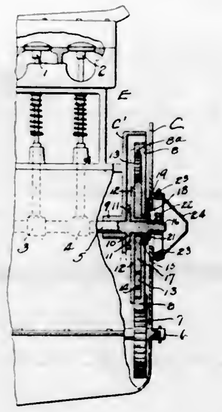
5. In combination with a sewer trap having an inlet opening, of a valve member arranged to close said opening, means disposed adjacent the valve for normally securing the same substantially closed against the passage of solid substances into the sewer, and means operable by a restricted flow of fluid through said substantially closed valve for releasing said securing means.

[Claims 6 to 11 not printed in the Gazette.]

1,220,124. INTERNAL-COMBUSTION ENGINE. JOHN WESLEY HOFFNER, Salisbury, N. C. Filed May 24, 1916. Serial No. 99,671. (Cl. 123—165.)

1. A valve regulating device for internal combustion engines, including in combination with the engine valves, the cam shaft therefor, and the engine shaft, a master timing gear geared to the engine shaft, a member rigid with the cam shaft and carrying a plurality of planetary gears meshing with the timing gear, and a toothed shifter member meshing with all of the planetary gears and having a pivotal support and an exterior adjustment connection.

2. A combined valve and spark regulating device for internal combustion engines including in combination with the engine valves, the cam shaft therefor and distributer element, of means carried by said cam shaft for advancing and retarding the position thereof to control the action of the valves and ignition spark in accordance with the speed of the engine.

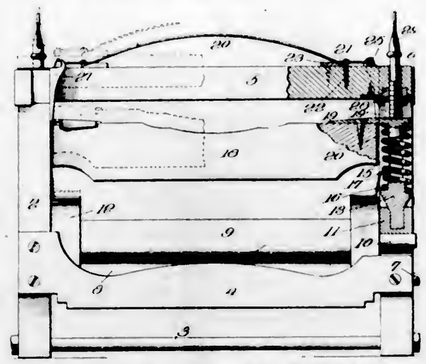


3. A combined valve and spark regulating device for internal combustion engines including in combination with the engine valves, the cam shaft therefor, and distributer element, of means carried by said cam shaft for advancing and retarding the position thereof to control the action of the valves and ignition spark in accordance with the speed of the engine, said means including an element rigid on the cam shaft, a relatively fixed shifter member, a driving element engaged with said element rigid with the cam shaft and operatively connected with the crank shaft, and a circuit closing member rigidly carried by said cam shaft and operating in connection with said distributer element.

4. A combined valve and spark regulating device for internal combustion engines including in combination with the engine valves, the cam shaft therefor, and distributer element, of means carried by said cam shaft for advancing and retarding the position thereof to control the action of the valves and ignition spark in accordance with the speed of the engine, said means comprising a carrier disk rigid with said cam shaft, planetary gears mounted on said carrier wheel, a relatively fixed shifter member meshing with said planetary gears and having an operating connection, a master timing gear having an internal gear ring also meshing with said planetary gears and operatively connected with the crank shaft, and a circuit closing member rigidly carried by said cam shaft and coöperating with said distributer element.

5. A combined valve and spark regulating device for internal combustion engines including in combination with the engine valves, the cam shaft therefor and distributer element, of means carried by said cam shaft for advancing and retarding the position thereof to control the action of the valves and ignition spark in accordance with the speed of the engine, said means including a carrier disk rigid with said cam shaft, planetary gears mounted on said carrier wheel at equidistant points, a hub integral with said carrier disk, a relatively fixed shifter gear loosely mounted on the hub of said carrier disk and meshing with said planetary gears, a hub portion integral with said shifter gear member, a master timing gear loosely mounted on the hub of said shifter gear member and having an internal gear ring meshing with said planetary gears, said master timing gear being operatively connected with the crank shaft, a shifter lever having one end rigidly connected with the hub of said relatively fixed shifter gear, and the other end exposed to receive an operating connection, and a circuit closing member rigidly carried by said cam shaft and coöperating with said distributer element.

1,220,125. PRESSURE-ROLL RELEASE FOR WRINGERS. ALBERT E. HOLADAY, Naugatuck, Conn., assignor to The American Wringer Company, Woonsocket, R. I., a Corporation of Rhode Island. Filed Mar. 31, 1916. Serial No. 88,009. (Cl. 68—32.)



1. A clothes wringer, comprising a frame having slotted side bars, pressure rolls mounted within said frame, pressure springs for said rolls, a pressure bar mounted upon said springs within the slots of said side bars, a top bar carrying pressure screws engaging said pressure bar, and a resilient expansible member having means for detachably securing said top bar in position within said frame.

2. In a clothes wringer, the combination with the frame thereof, of pressure rolls mounted in said frame, pressure means for said rolls, a top bar detachably mounted within said frame, hooks carried by the side bars of said frame, and a bowed spring mounted upon said top bar having members coöperating with said hooks for holding said top bar in position within said frame.

3. A clothes wringer, comprising a frame having a detachable top bar mounted therein carrying pressure screws, hook members carried by the frame, and a bowed spring carried by the top bar having members engaging said hook members for holding said top bar in position within said frame.

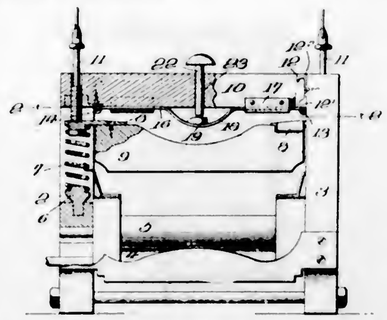
4. A clothes wringer, comprising a frame having slotted side bars, bearings mounted in the slots of said side bars, pressure rolls provided with shafts mounted in said bearings, pressure springs mounted on said bearings, a pressure bar mounted upon said springs, a top bar arranged between the slotted ends of the side bars of said frame, pressure screws carried by said top bar engaging said pressure bar, hooks carried by the side bars, and a bowed spring carried by the top bar having pins at its end cooperating with said hooks for holding said top bar in position within said frame.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, hooks carried by the side bars of said frame, and a bowed spring cooperating with said hooks for holding said pressure means in predetermined position.

[Claims 6 to 19 not printed in the Gazette.]

1,220,126. PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. ALBERT E. HOLADAY, Naugatuck, Conn., assignor to The American Wringer Company, Woonsocket, R. I., a Corporation of Rhode Island. Filed July 26, 1916. Serial No. 111,402. (Cl. 68—32.)

1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a top bar movably mounted within said frame having pressure screws for adjusting said pressure means, a resilient member carried by said top bar having laterally projecting members, keepers carried by the side bars of said frame adapted to be engaged by the laterally projecting members of said resilient member for holding said top bar in predetermined position within said frame, and a movable member mounted within said top bar coöperating with said resilient member for moving said resilient member out of contact with said keepers.



2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted top bar carrying pressure screws for adjusting said pressure means, keepers secured to the side bars of said frame provided with guideways terminating in hooks, a resilient member slidably mounted on the under side of said top bar, antifriction rollers carried by the ends of said resilient member coöperating with said keepers for holding said top bar in predetermined position within said frame, and an operating member carried by said top bar coöperating with said resilient member for moving said antifriction rollers from under said keepers into guideways thereof for releasing said pressure means.

3. A clothes wringer, comprising a frame having pressure rolls and pressure means mounted therein, a movably mounted top bar carrying pressure screws for adjusting said means, keepers carried by the side bars of said frame, a resilient member having laterally projecting members at its ends coöperating with said keepers for holding said top bar in predetermined position within said frame, means carried by said top bar for moving said resilient member in position to release said top bar, and means for limiting the upward movement of said top bar within said frame.

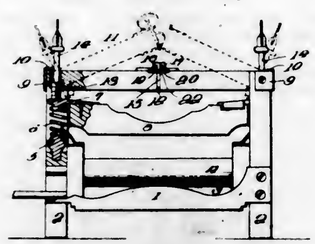
4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame, keepers secured to the side bars of said frame provided with horizontally disposed base portions and vertically disposed guides, a resilient member slidably mounted on the under side of said top bar carrying antifriction rollers, extending under the base portions of said keepers, and a movable member mounted in said top bar coöperating with said resilient member for moving said antifriction rollers from under the base portions of said keepers into the guideways thereof for releasing said pressure means.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar having means for adjusting said pressure, a resilient member for holding said top bar in predetermined position within said frame, a pin slidably mounted in said top bar detachably connected to said resilient member, and means for limiting the upward movement of said top bar within said frame.

[Claims 6 to 10 not printed in the Gazette.]

1,220,127. PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. ALBERT E. HOLADAY, Naugatuck, Conn., assignor to The American Wringer Company, Woonsocket, R. I., a Corporation of Rhode Island. Filed Oct. 26, 1916. Serial No. 127,893. (Cl. 68—32.)

1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a transversely breakable top bar mounted in said frame having means for adjusting said pressure means, a locking member carried by the end of one section of said top bar having oppositely disposed locking hooks and laterally projecting portions, and plates having upwardly projecting ends carried by the sections of said bar adapted to be engaged by the hooks of said locking member for holding said section in alinement.



2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, cap members carried by the side bars of said frame, a sectional top bar mounted in said frame under said cap members having means for adjusting said pressure means, a locking member pivotally mounted on the abutting end of one of the sections, and having oppositely disposed hooks, and plates carried by the abutting ends of the sections of said top bar having upwardly projecting end portions adapted to be engaged by said hooks for holding said top bar in position within said frame.

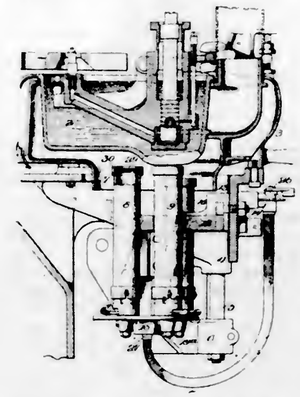
3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, cap members carried by the side bars of said frame at their upper ends thereof, a top bar formed of two sections pivotally connected together mounted within said frame under said cap members the free ends of said top bar being rounded, pressure screws carried by said top bar for adjusting said pressure means, a pivoted locking member mounted on one of the abutting ends of said sectional top bar, push buttons carried by said locking members and extending outwardly therefrom to each side of said top bar, angled plates carried by the abutting ends of said top bar, and oppositely disposed hooks carried by said locking member adapted to engage the angled ends of said plates for holding the sections of said top bar in alinement with one another.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, cap members carried by the upper ends of the side bars of said frame, a top bar formed of two sections pivotally connected together mounted in said frame under said cap members, the free ends of said top bar being provided with rounded lower portions, threaded boxes carried by said top bar, pressure screws mounted in said threaded boxes for adjusting said pressure means, a transverse movable locking member mounted on the inner end of one of the sections of said top bar having oppositely disposed push buttons, angled plates carried by the inner ends of the sections of said top bar, and oppositely disposed hooks carried by said locking member engaging said plates for holding said sections in alinement with one another.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, cap members carried by the side bars of said frame at their upper ends, a transversely breakable top bar mounted in said frame formed of sections pivotally connected together, the free ends of said sections being arranged under said cap members, plates secured to the inner ends of the sections of said top bar having upwardly projecting members, and a transversely movable locking member mounted on the inner end of one of the sections of said top bar between the abutting ends thereof having oppositely disposed depending hook members engaging the upwardly projecting portions of said plates for holding said sections in alinement with one another, said locking member having oppositely disposed push buttons.

[Claim 6 not printed in the Gazette.]

1,220,128. GAS-BURNER FOR CASTING-MACHINES. MAURITZ C. INDAHL, Philadelphia, Pa., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Aug. 7, 1915. Serial No. 44,314. (Cl. 158—106.)



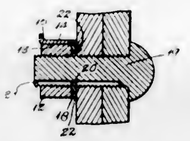
1. A heater for the melting pots of type casting machines, embodying a supporting frame forming the melting pot and burner support, a group of connected parallel vertical mixer tubes, vertically adjustable connections intermediate the body of tubes and frame, a burner base removably secured to and extending under the group of mixer tubes, an injector nozzle for each tube mounted in the base, a common supply chamber in the base with which all of the nozzles communicate, an individual gas regulator valve for each nozzle, a gas supply for the chamber, and a valve for regulating the gas supplied to the chamber.

2. A heater for the melting pots of type casting machines, embodying a group of parallel mixer tubes connected together and provided with a laterally extending supporting bracket, a separate burner base rigidly connected with and extending under the mixer tubes and having valve sockets formed therein in line with the tubes, a common gas supply chamber located within the base and in communication with each of said sockets, a gas valve located in each socket and having an upwardly extending injector nozzle, means for moving said valves in their sockets, and means for supplying gas to the central supply chamber.

3. A heater for melting pots of type casting machines, embodying an integral group of parallel mixer tubes formed with a laterally extending supporting bracket, a separate burner base rigidly connected with said group of mixer tubes and extending under the lower ends thereof, said base having formed therein in line with each of the mixer tubes a valve socket or seat and also having formed therein a central gas supply chamber in communication with each of said valve sockets or seats, a combined valve and injector nozzle journaled in each seat and extending into the mixer tube in alinement therewith, and finger pieces for adjusting the individual valves for controlling the flow of gas through the injector nozzle.

4. In a heater for melting pots of type casting machines, the combination with a vertically arranged mixer tube, a burner base secured rigidly to and extending under the lower end of said tube, said burner base having an upwardly flaring conical valve socket formed therein, with an opening extending therefrom through to the under side of the base, and a supply passage communicating with said socket, of a downwardly tapering valve seated in said socket and held in place by a fastening applied thereto on the under side of the base, said valve having an upward extension centrally thereof forming an injector nozzle within the tube and a lateral extension on the nozzle above the base forming a finger piece at one side of the tube, substantially as described.

1,220,129. NUT-LOCK. CHARLES E. INGLIS, Malden, Mass., assignor of one-half to Edward Connell, Malden, Mass. Filed Oct. 7, 1916. Serial No. 124,283. (Cl. 151—8.)



1. A nut having in one of its external peripheral faces a tapering dovetailed recess, and a tapering dovetailed locking member adapted to be driven into said recess and frictionally engage the walls thereof, the narrower end of the locking member projecting from the inner end of the nut when said member is driven to place, and adapted to engage a notched washer.

2. A nut having in one of its external peripheral faces a tapering dovetailed recess, and a tapering dovetailed locking member adapted to be driven into said recess and frictionally engage the walls thereof, the narrower end of the locking member projecting from the inner end of the nut when said member is driven to place, and adapted to engage a notched washer, said locking member being provided with a shoulder adapted to facilitate its removal from the nut.

3. In combination, a nut having in one of its external peripheral faces, a tapering dovetailed recess, a tapering dovetailed locking member adapted to be driven into said recess and frictionally engage the walls thereof, the narrower end of the locking member projecting from the inner end of the nut when said member is driven to place, a bolt engageable by the nut and having a longitudinal slot, and a washer having a tongue adapted to enter said slot, and a plurality of notches in its perimeter, either of which is adapted to receive the projecting end of said locking member, the outer end portion of said member being provided with a shoulder adapted to facilitate the removal of the member from the nut.

1,220,130. DRIER. LEWIS RHODES JACKSON, Macon, Ga., assignor to J. S. Schofield's Sons Company, Macon, Ga. Filed Mar. 30, 1916. Serial No. 87,770. (Cl. 259—89.)



1. A drier cylinder embodying a shell, and a lining for the shell comprising removable sections, the shell having openings covered by and exposing said sections and permitting material to drop therethrough from the shell when the lining sections wear out.

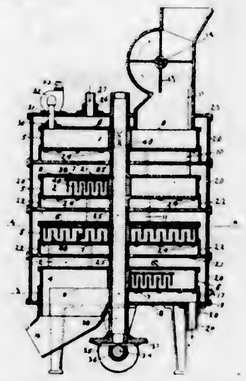
2. A drier cylinder embodying a shell, and a lining for the shell comprising removable sections, the shell having openings exposing said sections, and some of said openings being sufficiently large for the passage of said sections therethrough.

3. A drier cylinder embodying a shell, flights therein composed of sections, a lining for the shell comprising liner plates, means for securing the flights and liner plates to the shell, the shell having openings exposing the liner plates through which the material can drop when said plates are worn out, some of said openings being sufficiently large for the passage of the liner plates and flight sections therethrough.

4. A drier cylinder embodying a shell, line plates lining the inside thereof, flights overlapping the edges of said plates, and means for detachably connecting the flights to the shell, the flights being composed of sections coextensive in length with the liner plates.

5. A drier cylinder embodying a shell, series of liner plates lining the inside thereof and disposed end to end, flights overlapping the edges of said plates, and series of bolts connecting the flights and shell and disposed between the edges of the liner plates, the flights being composed of sections coextensive in length with the liner plates.

1,220,131. DRYING APPARATUS FOR PEAT AND THE LIKE. CHARLES D. JENKINS, Boston, Mass., assignor to Peat Coal Limited, Boston, Mass., a Voluntary Association. Filed May 1, 1915. Serial No. 25,136 (Cl., 34—23.)



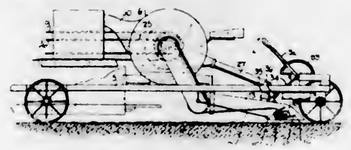
1. A drier and separator of the character described comprising a series of superimposed and communicating compartments each made with an entrance and an exit for the material that is to be treated, the exit of each compartment except the last one of the series discharging into the next compartment below it at a distant point from the exit of the latter; a shaft extending through all of said compartments; a rake in each compartment carried by said shaft, said rake having downwardly extending tines; upwardly extending tines upon the floor of each compartment between which the tines of the rake of said compartment pass as said rake rotates with the shaft; means for driving said shaft; means for heating the material while it is passing through said compartments, and means for drawing off from said compartments the vapors given off by said material.

2. A drier of the character described comprising a plurality of communicating and superimposed cylindrical chambers each made with angularly off-set inlet and outlet; a hot air jacket for each chamber, said hot air jackets being connected in series; a hot air supply pipe connected with the air jacket at one end of said series; an air outlet from the jacket at the other end of said series; a shaft extending through all of said chambers; means within each chamber and connected with said shaft for moving the material being treated from the point where it enters the chamber to the outlet of the latter, and means for removing from said chambers the vapors given off by the heated material.

3. A drier of the character described comprising a plurality of communicating and superimposed cylindrical chambers each made with angularly off-set inlet and outlet; a hot air jacket for each chamber, said jackets being connected in series; a hot air supply pipe connected with the jacket at one end of said series; an air outlet communicating with the jacket at the opposite end of said series; a shaft extending through all of said chambers; a rake within each chamber connected with said shaft; projections upon the interior of each chamber coöperating with the rake thereof to break up the material; an outlet communicating with one of said chambers, and means for drawing off through said outlet the vapors or the like produced in the chambers.

4. A drier of the character described comprising a plurality of communicating and superimposed cylindrical chambers each made with angularly off-set inlet and outlet; a hot air jacket for each chamber, said jackets being connected in series; a hot air supply pipe connected with the jacket at one end of said series; an air outlet communicating with the jacket at the opposite end of said series; an air outlet from the jacket at the other end of said series; a shaft extending through all of said chambers; a rake within each chamber connected with said shaft; means for drawing off through said outlet the vapors or the like produced in the chambers, a conduit connected with the inlet of the uppermost chamber through which the material to be treated is supplied to the apparatus, and means normally closing said conduit but adapted to be manipulated to permit of the entrance of fresh material, the outlets of each two adjoining chambers being angularly offset relatively so that the material makes nearly a complete circuit of each chamber before it reaches the outlet thereof.

1,220,132. CLOVER-HARVESTER. COLUMBUS E. JENKINS, Hagerman, Idaho. Filed July 19, 1916. Serial No. 110,163. (Cl. 56—2.)



1. In a clover harvester, a suction fan having a fan casing, a collecting nozzle connected to the fan casing, means mounted in the intake mouth of the nozzle to sever the heads of the clover whereby the same are drawn through the casing by the air suction, and means for directing an air blast upon the ground to raise the clover heads for engagement by the severing means.

2. In a clover harvester, a suction fan having a fan casing, a collecting nozzle connected to the fan casing and having two compartments each opening into the mouth of the nozzle, one of said compartments being in communication with the suction fan casing, and a blast fan connected to the other compartment of the nozzle to discharge an air blast therethrough upon the ground surface and agitate the clover heads whereby the same are drawn through the other compartment by the air suction.

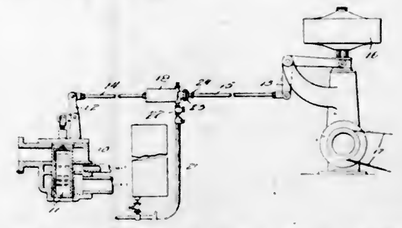
3. In a clover harvester, a suction fan having a fan casing, a collecting nozzle connected to the fan casing, said nozzle having two compartments opening into the intake mouth of the nozzle, one of said compartments being in communication with the suction fan casing, means mounted in the intake mouth of the nozzle between the entrances to said chambers to sever the clover heads, and a blast fan connected to the other of said chambers to direct an air blast therethrough upon the ground contiguous to said severing means to raise the clover heads for engagement thereby.

4. In a clover harvester, a suction fan, a collecting nozzle having two compartments opening into the intake mouth of the nozzle in spaced relation to each other, a pipe connection between one of said compartments and the suction fan, a rotatably mounted toothed cylinder arranged in the intake mouth of the nozzle between the entrances to said compartments, a blast fan connected to the other of the compartments, and means for directing an air blast discharged through said compartment upon the ground contiguous to said cylinder to life the clover heads whereby the same are engaged by the cylinder teeth.

5. In a clover harvester, a suction fan, a collecting nozzle having two compartments opening into the intake mouth of the nozzle in spaced relation to each other, a pipe connection between one of said compartments and the suction fan, a rotatably mounted toothed cylinder arranged in the intake mouth of the nozzle between the entrances to said compartments, a blast fan connected to the other of the compartments, and an angular deflecting lip secured to one wall of the nozzle in parallel relation to the open end of the latter chamber to direct the air blast discharged from said chamber downwardly upon the ground contiguous to the cylinder to raise the clover heads to be engaged and severed by the cylinder teeth.

[Claims 6 to 12 not printed in the Gazette.]

1,220,133. ENGINE-REGULATOR. DANIEL C. JENKINS, Clarksburg, W. Va. Filed Mar. 6, 1916. Serial No. 82,478. (Cl. 123—103.)



1. The combination with an engine valve, a centrifugal governor, devices connecting said valve and governor; of mechanism interposed in said devices to temporarily vary the length thereof, and means receiving fluid pressure simultaneously with a starter and connected to said mechanism.

2. The combination with a valve, a governor, and a connection between them; of mechanism to decrease the length of said connection, and means to gradually restore the connection to normal length.

3. The combination with an engine valve, a governor, and devices connecting them; of mechanism to vary the length of said devices, pneumatic means for actuating said mechanism, and means to automatically restore the devices to normal.

4. The combination with an engine valve and a governor therefor; of a link composed of alined sections connected respectively to the valve and governor, members connected with the sections and telescopic on each other, and means receiving air pressure simultaneously with a starter, operative to slide said members by said pressure to reduce the length of the link, and means to gradually restore the parts to normal after starting has been accomplished.

5. The combination with an engine valve and a governor therefor; of a link connecting the valve and the governor composed of sections slidable relative to each other, means, receiving air pressure as utilized for starting the engine, to vary the length of the link, and means to gradually restore the parts to normal after starting has been accomplished.

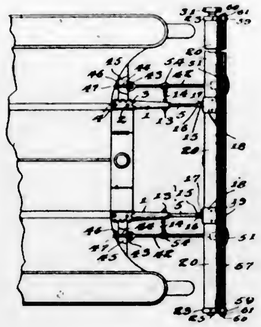
[Claims 6 to 14 not printed in the Gazette.]

1,220,134. FENDER. AUGUST H. JURK, Buffalo, N. Y. Filed Feb. 29, 1916. Serial No. 81,196. (Cl. 105—130.)

1. In a fender, a flexible apron, a roller on which said apron is wound, a tubular casing in which said apron and its roller are contained, said casing having an opening through which the apron may be drawn, apron spreading arms pivotally supported at their rear ends and having the free margin of the apron connected therewith, a cross rod at the front extremities of said arms, means on said casing for engaging and upholding said cross rod when the apron is housed in said casing, supporting means for said casing permitting the latter upon contact with an object to yield backwardly and release said cross rod, and stay chains attached to said apron spreading arms and serving to arrest the downward movement of the latter before the apron is fully unwound.

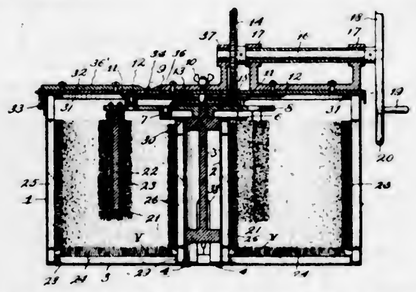
2. In a fender, a flexible apron, a roller on which said apron is wound, a tubular casing in which said apron and its roller are contained, said casing having an opening through which the apron may be drawn, apron spreading arms pivotally supported at their rear ends and having the

free margin of the apron connected therewith, a cross rod at the front extremities of said arms, means on said casing for engaging and upholding said cross rod when the apron is housed in said casing, supporting means for said casing permitting the latter upon contact with an object to yield backwardly and release said cross rod, a cylindrical housing fast on said apron roller, and an apron rewinding crank handle pivotally attached to and adapted to lie within said housing or be projected therefrom.



3. In a fender, a flexible apron, a roller on which said apron is wound, a tubular casing in which said apron and its roller are contained, said casing having an opening through which the apron may be drawn, apron spreading arms pivotally supported at their rear ends and having the free margin of the apron connected therewith, a solid cross rod at the front extremities of said arms, a flexible shock absorbing tube of metal surrounding said cross rod supported by said apron spreading arms and having an internal diameter sufficiently greater than the diameter of the cross rod to admit of transverse flexure of said tube, means on said casing for engaging and upholding said cross rod when the apron is housed in said casing, supporting means for said casing permitting the latter upon contact with an object to yield backwardly and release said cross rod, said cross rod serving as a stop for limiting the flexure of said tube.

1,220,135. WASHING-MACHINE. HENRY D. MANDEVILLE, Kansas City, Kans. Filed Mar. 8, 1915. Serial No. 12,719. Renewed Feb. 14, 1917. Serial No. 148,592. (Cl. 68—15.)



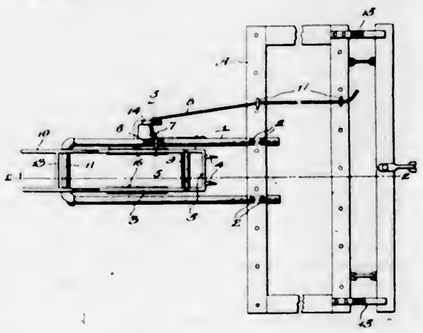
1. In combination with a tub having a central cylinder therein, a shaft in the cylinder projecting thereabove, a circular track secured to the shaft and seating on the upper end of the cylinder, a spider journaled on the shaft above said track and having rollers which ride on the track, rollers borne by the spider and extending thereabove, a lid, a circular track on the lid engaged with the last named rollers, means to rotate the spider and clothes engaging means borne by the spider and depending therefrom.

2. In combination with a tub having a central vertical member therein, two series of vertical brushes abutting said member and the interior of the tub sides respectively, a series of brushes on the tub bottom, a ring surrounding the top of said member and having a depending flange which engages the top ends of the brush backs which abut said member, a ring surrounding the top of the tub and having a a depending flange which engages the top ends of the brush backs which abut the tub sides, and a pair of rings one of which surrounds the bottom of said member and the other of which is disposed adjacent the tub sides, said pair of rings having vertical flanges which receive the lower ends of the respective series of vertical brush backs, and having horizontal flanges which engage over the respective ends of the bottom brush backs and clothes engaging means operable in the space below the brushes.

3. In combination with a tub having a central vertical hollow member the latter provided with spaced vertical slots, a series of vertical brushes arranged in abutting relation about said member and having vertical registering side recesses which registering recesses register with said slots, and clothes engaging means operable within the tub.

4. In combination with a tub having a central vertical member therein, two series of vertical brushes abutting said member and the interior of the tub sides respectively, a series of brushes on the tub bottom, removable unitary means engaged with each of the upper ends of the brush backs that abut said member, removable unitary means engaged with each of the upper ends of the brush backs which abut the tub sides, and a pair of removable unitary means which engage both the lower ends of the vertical brush backs and the adjacent ends of the bottom brush backs respectively.

1,220,136. DEVICE FOR RAISING A HARROW OR PLOW FROM THE GROUND. ARTHUR BENN MILLER, Alfeel, Oreg. Filed Sept. 13, 1916. Serial No. 119,812. (Cl. 55—34.)



1. In a device for dumping harrows, plows and the like, the combination of a frame attached to the harrow, a toothed elevating device pivotally mounted on the frame, the rear portion thereof carrying segment members, a catch mounted on the frame releasably supporting the elevating device clear from the ground, and a rope operatively connected to the catch, whereby the device may be operated by merely pulling the rope.

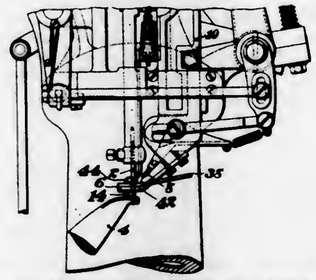
2. In a device for dumping harrows, plows and the like, the combination of a frame attached to the harrow, a toothed elevating device pivotally mounted on the frame, a stop-plate adjustably mounted on the elevating device in proximity to its toothed portion, a catch mounted on the frame releasably supporting the elevating device clear from the ground, a rope attached to the catch, and guiding means for the rope, for the purposes described.

3. In a device for dumping harrows, plows and the like, the combination of a U-shaped frame attached to the harrow, an approximately U-shaped elevating device, the rear portion thereof carrying upwardly extending segments and the forward portion carrying downwardly inclined teeth, a stop-plate for limiting the movement of the device, a catch mounted on the frame releasably supporting the elevating device clear from the ground, a rope attached to the catch, and guiding means for the rope, for the purposes described.

4. In a device for dumping harrows, plows and the like, the combination of a trailing frame, an elevating device having its rear portion pivotally mounted on the trailing frame, downwardly inclined teeth at the forward end of the elevating device, a stop-plate adjustably mounted in proximity to the teeth, upwardly extending segments on the rear portion of the elevating device positioned over its pivotal portion and having the main portions of the segment positioned rearward of the said pivotal portion, a spring arm attached to the elevating device, a spring catch releasably engaging the arm, a rope attached to the catch and means for guiding the rope to any desired position for operating the device.

5. In a device for dumping harrows, plows and the like, the combination of a frame attached to the horrow, a draw-bar, a toothed elevating device pivotally mounted on the frame, the elevating device having upwardly projecting segments on its rear portion and toothed members on its forward portion, a catch releasably supporting the elevating device clear from the ground, a rope attached to the catch, guiding means for the rope, upwardly bent plates affixed to the forward crossbar of the harrow and having their forward edges pivotally resting on the drawbar, whereby to facilitate clearing the forward as well as the rear portion of the harrow from obstructions when the elevating device is operated, as described.

1,220,137. EDGE-GAGE MECHANISM. JOHN SMITH, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 10, 1916. Serial No. 83,347. (Cl. 112—20.)



1. A machine for operating on leather, having, in combination, means for operating on the work, an edge gage for determining the distance of the point of operation of the operating mechanism from the edge of the work, an edge gage support having a slot, a movable operating member for the gage having a slot arranged transversely to the slot in the edge gage support and to the direction of movement of the operating member, and an edge gage carrier stud extending through the slots in the edge gage support and in the operating member.

2. A machine for operating on leather, having, in combination, means for operating on the work, an edge gage for determining the distance of the point of operation of the operating mechanism from the edge of the work, an edge gage support having a slot, a pivoted operating member for the gage having an eccentric slot extending across the slot in the edge gage support, and an edge gage carrier stud extending through the slots in the edge gage support and in the operating member.

3. A machine for operating on leather, having, in combination, means for operating on the work, an edge gage for determining the distance of the point of operation from the edge of the work, an edge gage support having a slot, a movable operating member having a slot arranged transversely to the slot in the edge gage support and to the direction of movement of the operating member, an edge gage carrier stud extending through the slots in the edge gage support and in the operating member, stops for limiting the movement of the operating member to determine the limiting positions of the gage, and means whereby the limiting positions of the gage as determined by the stops may be adjusted.

4. A machine for operating on leather, having, in combination, means for operating on the work, an edge gage for determining the distance of the point of operation from the edge of the work, an edge gage support having a slot, a pivoted operating member for the gage having an eccentric slot extending transversely to the slot in the edge gage support, an edge gage carrier stud extending through the slots in the edge gage support and in the operating member, and a pivot stud for said member adjustably mounted in the slot in the edge gage support.

5. A machine for operating on leather, having, in combination, means for operating on the work, an edge gage for determining the distance of the point of operation from the edge of the work, an edge gage support having a slot extending transversely to the line of feed, a pivoted operating member for the gage having an eccentric slot extending transversely to the slot in the edge gage support, an edge gage carrier stud extending through the slots in the edge gage support and in the operating member, and means whereby the axis of the operating member may be adjusted toward and from the point of operation.

[Claims 6 and 7 not printed in the Gazette.]

1,220,138. BUTTON-FASTENER. EZRA C. TEN BROOK, Lander, Wyo. Filed Apr. 8, 1916. Serial No. 89,862. (Cl. 24—102.)



As a new article of manufacture, a button fastener comprising a link, said link being formed from a single strand of resilient wire bent intermediate its ends to form side arms, said arms terminating in bent ends, said bent ends being beveled to form points, each point being formed in alinement with the arm upon which it is formed, said arms extending slightly in opposite directions, toward their bent ends so as to be slightly out of alinement, said bent ends overlapping and yieldably fitting snugly upon each other, said points fitting snugly and yieldably upon the opposite side arms from the ones upon which they are formed, said points being within planes extending along the side surfaces of said arms, thereby causing the link to present an outer wearing surface, and said link being adapted to be attached to a pair of buttons for connecting the same together.

1,220,139. CIRCUIT-CONNECTOR. HARRY A. DOUGLAS, Bronson, Mich., assignor to Douglas & Rudd Mfg. Co., Bronson, Mich., a Corporation of Michigan. Filed Mar. 27, 1916. Serial No. 86,865. (Cl. 173—346.)

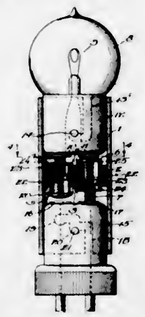
A switch including a shell having bayonet slots at the ends thereof, the bayonet slot at one end having two bayonet pin engaging seats spaced apart longitudinally of the shell; contact carriers at the ends of the shell and having bayonet pins engageable with the seats in the bayonet slots; an intermediate contact carrier within the shell and carrying contacts upon the ends thereof which are engageable with the contacts upon the aforesaid contact carriers, the contact element upon the end of the intermediate contact carrier that is adjacent that end of the shell whose bayonet slot has two seats being substantially co-axial with the shell; an abutment surrounding the latter contact and having a cup-shaped portion engaging the

carrier at the latter end of the shell and surrounding the contact upon this carrier that is complemental to the



contiguous contact upon the intermediate carrier; and a spring maintaining pressure of the abutment against the end contact carrier engaged by the abutment.

1,220,140. CIRCUIT-CONNECTOR. HARRY A. DOUGLAS, Bronson, Mich., assignor to Douglas & Rudd Mfg. Co., Bronson, Mich., a Corporation of Michigan. Filed Apr. 17, 1916. Serial No. 91,546. (Cl. 173—346.)



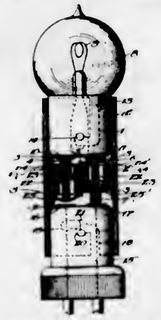
1. A connector including a shell; a circuit continuing member within each end of the shell; two pairs of contacts within the shell one contact of each pair engaging one circuit continuing member and the other contact of each pair engaging the other circuit continuing member; and a spring interposed between the contacts of each pair for maintaining them in engagement with the circuit continuing members, one of said circuit continuing members and the shell having interengaging coupling formations serving to position this circuit continuing member in inner and outer positions respectively to make and break circuit, a contact, of one pair, pressed toward this circuit continuing member having means for stopping its movement after this circuit continuing member has left its inner position and before it reaches its outer position, while a contact, of the other pair, is maintained in engagement with this circuit continuing member by its spring in both positions of this circuit continuing member.

2. A connector including a shell; a circuit continuing member within each end of the shell; two pairs of contacts within the shell one contact of each pair engaging one circuit continuing member and the other contact of each pair engaging the other circuit continuing member; a carrier within the shell for these contacts; and a spring interposed between the contacts of each pair for maintaining them in engagement with the circuit continuing members, one of said circuit continuing members and the shell having interengaging coupling formations serving to position this circuit continuing member in inner and outer positions respectively to make and break circuit, a contact, of one pair, pressed toward this circuit continuing member having means for stopping its movement after this circuit continuing member has left its inner position and before it reaches its outer position, while a contact, of the other pair, is maintained in engagement with this circuit continuing member by its spring in both positions of this circuit continuing member.

3. A connector including a shell; a circuit continuing member coupled with the shell and carrying two contacts; two additional contacts within the shell each for engaging one of the aforesaid contacts; and a spring pressing each additional contact into engagement with its complemental contact on said circuit continuing member, said circuit continuing member and the shell having interengaging coupling formations serving to position this circuit continuing member in inner and outer positions respectively to make and break circuit, one of said additional contacts having means for stopping its movement before said circuit continuing member reaches its outer position, while the spring pressing the other additional contact maintains this other additional contact in engagement with this circuit continuing member in its outer position.

4. A connector including a shell; a circuit continuing member coupled with the shell and carrying two contacts; two additional contacts within the shell each for engaging one of the aforesaid contacts; a spring pressing each additional contact into engagement with its complemental contact on said circuit continuing member, said circuit continuing member and the shell having interengaging coupling formations serving to position this circuit continuing member in inner and outer positions respectively to make and break circuit, one of said additional contacts having means for stopping its movement before said circuit continuing member reaches its outer position, while the spring pressing the other additional contact maintains this other additional contact in engagement with this circuit continuing member in its outer position; and a carrier for said additional contacts which is fixed within the shell.

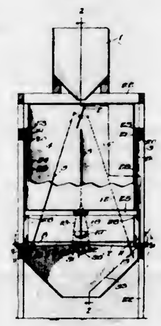
1,220,141. CIRCUIT-CONNECTOR. HARRY A. DOUGLAS, Bronson, Mich., assignor to Douglas & Rudd Mfg. Co., Bronson, Mich., a Corporation of Michigan. Filed Apr. 17, 1916. Serial No. 91,547. (Cl. 173—346.)



1. A connector including a shell; a circuit continuing member within each end of the shell; two pairs of contacts within the shell one contact of each pair engaging the circuit continuing member and the other contact of each pair engaging the other circuit continuing member; a spring interposed between the contacts of each pair for maintaining them in engagement with the circuit continuing members, one of said circuit continuing members and the shell having interengaging coupling formations serving to position this circuit continuing member in inner and outer positions respectively to make and break circuit, a contact, of one pair, pressed toward this circuit continuing member having means for stopping its movement after this circuit continuing member has left its inner position and before it reaches its outer position, while a contact of the other pair is maintained in engagement with this circuit continuing member by its spring in both positions of this circuit continuing member; and a third circuit continuing member within the shell and movable longitudinally thereof and to which third circuit continuing member one of the contacts of each of the aforesaid pairs is substantially fixed.

2. A connector including a shell; a circuit continuing member coupled with the shell and carrying two contacts; two additional contacts within the shell each for engaging one of the aforesaid contacts; a spring pressing each additional contact into engagement with its complemental contact on said circuit continuing member, said circuit continuing member and the shell having interengaging coupling formations serving to position this circuit continuing member in inner and outer positions respectively to make and break circuit, one of said additional contacts having means for stopping its movement before said circuit continuing member reaches its outer position, while the spring pressing the other additional contact maintains this other additional contact in engagement with this circuit continuing member in its outer position; and a carrier for said additional contacts which is movable longitudinally within the shell.

1,220,142. SCALE. CARL OSCAR GOODY, Chicago, Ill., assignor of one-half to Gustave W. Oesterlund, Chicago, Ill. Filed Feb. 21, 1916. Serial No. 79,497. (Cl. 73—169.)

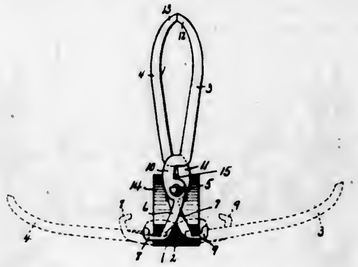


1. A weighing scale including a container having two compartments; a mounting for the container that permits its up and down movement; a scale arm structure for moving the container upwardly and in opposition to which the container is lowered when loaded with matter to be weighed; a diverter for directing the flow of matter to be weighed to either compartment; a separate trap bottom door for each compartment; a connection between the diverter and each trap bottom door, each connection adapted to be operated by the opening of the door to which it is connected to shift the diverter to direct matter to be weighted into the compartment having the other door locking devices for holding the doors of the compartments shut; and means governed by the lowering container for applying the locking device to the door of the next compartment to be loaded before the door of the other compartment is unlocked whereby the door of the compartment about to be loaded is locked before the diverter is shifted to direct matter to this latter compartment.

2. A weighing scale including a container having two compartments; a mounting for the container that permits its up and down movement; a scale arm structure for moving the container upwardly and in opposition to which the container is lowered when loaded with matter to be weighed; a diverter for directing the flow of matter to be weighed to either compartment; a separate trap bottom door for each compartment; a connection between the diverter and each trap bottom door, each connection adapted to be operated by the opening of the door to which it is connected to shift the diverter to direct matter to be weighed into the compartment having the other door; a cam 14 upon each door; an oscillating rocker arm carrying cam engaging elements at its ends and mounted to move up and down with the container, the cam engaging element at either end of the arm being adapted to engage the cam associated therewith when the cam engaging element at the other end of the arm is out of engagement with the cam associated with this latter cam engaging element; a stem secured at one end to the rocker arm and carrying a cam engaging element at its other end; and a stationary V-shaped cam adapted to be engaged by the latter cam engaging element, the cams and cam engaging elements being so arranged as to have the cam engaging elements upon the ends of the rocker arm in simultaneous engagement with the cams pertaining thereto when the apex of the V-shaped cam engages the cam engaging element pertaining thereto whereby the door of the empty compartment is locked before the door of the loaded compartment is released.

3. A weighing scale including a container having two compartments; a mounting for the container that permits its up and down movement; a scale arm structure for moving the container upwardly and in opposition to which the container is lowered when loaded with matter to be weighed; a diverter for directing the flow of matter to be weighed to either compartment; a separate trap bottom door for each compartment; a connection between the diverter and each trap bottom door, each connection adapted to be operated by the opening of the door to which it is connected to shift the diverter to direct matter to be weighed into the compartment having the other door; locking devices each for holding one door shut when its associate compartment is loaded; and means whereby one locking device is controlled to be released from the door of its loaded compartment when the container is lowered and the other locking device is controlled to lock the door of its empty compartment before the door of such loaded compartment is released.

1,220,143. TRAP. ROLLIN SMITH HURLBUT, Oneida, N. Y., assignor to Oneida Community, Limited, Oneida, N. Y., a Corporation of New York. Filed May 15, 1916. Serial No. 97,633. (Cl. 43—23.)



1. In a trap a base, a pair of crossed jaws pivotally connected and having portions rearwardly of the pivot engaged with the base and a spring secured to the base and to the jaws.

2. In a trap a pair of jaws operating in a plane substantially perpendicular to the base, said jaws having registering openings, a spring secured to the base and having a flanged end provided with an opening registering with the openings through the jaws and a pivot pin extending through said registering openings through the spring and the jaws.

3. In a trap a pair of jaws operating in a plane substantially perpendicular to the base, said jaws having registering openings, a spring secured to the base and having a flanged end provided with an opening registering with the openings through the jaws, a pivot pin extending through said registering openings through the spring and the jaws.

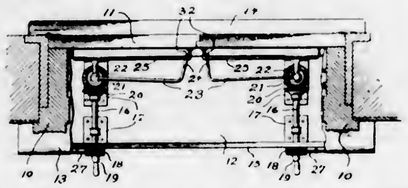
and portions of the jaws projecting rearwardly from the pivot and slidably engaged with the base.

4. In a trap a pair of oppositely bowed springs rigidly secured together at one end, one of said springs provided with an opening, a pair of jaws pivotally mounted upon the free end of the other spring and having a portion projecting rearwardly from the pivot and slidably positioned in the opening in the other spring.

5. In a trap, a base having an aperture, a pair of pivotally connected jaws having portions projecting rearwardly from the pivot and slidable in said aperture, means for limiting the movement of said portions relatively to the base, and means tending to hold said portions at a limit of movement relative to the base.

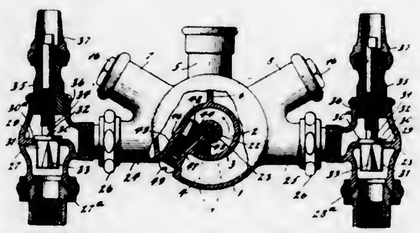
[Claims 6 to 16 not printed in the Gazette.]

1,220,144. BLIND-OPENER AND LATCH CONTROL. EDWARD S. JONES, Mobile, Ala. Filed June 4, 1914. Serial No. 842,852. (Cl. 16—136.)



A latch and connection for appliances of the character described comprising a horizontal guide rod, a pivoted arm, a transversely slotted member having said rod loosely engaged therein for relative sliding movement of the eye longitudinally of the rod and transversely thereof, a pivoted latch having a lifting laterally projected lug, and a diagonal lift member carried by said arm inclined and arranged to engage beneath the lug under outward movement of the arm on said guide rod, for lifting of the latch in the initial movement of the arm in one direction.

1,220,145. MIXING-VALVE. CHARLES LINDEMER, Trenton, N. J., assignor to The J. L. Mott Iron Works, a Corporation of New York. Filed Apr. 1, 1913. Serial No. 758,135. (Cl. 137—26.)



1. In a valve of the character described, an outer mixing chamber, inlets to the mixing chamber for hot and cold water, spring operated valves controlling the flow through said inlets, an inner chamber, a rotary cam in said inner chamber for moving said valves to open position, a lug on the cam, a stop in said inner chamber in the path of the lug to limit rotation of the cam in a direction to permit the valves to close, and an adjustable stop in said inner chamber to limit rotation of the cam in a direction to open the valves.

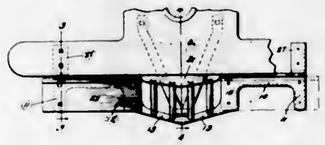
2. In a valve of the character described, a casing comprising inner and outer concentric walls forming an annular mixing chamber and an inner chamber, inlets through said outer wall for hot and cold water, spring-actuated valves coöperating with the said inlets, a cam in the inner chamber having engagement with said valves to move the same to open position, a part bridging the mixing chamber and having a passage therethrough opening into the inner chamber, and a stop threaded through said opening and adapted to be projected within the inner chamber to limit rotation of the cam in opening the valves.

3. In a valve of the character described, a mixing chamber, inlets to said chamber for hot and cold water, spring operated valves controlling the flow through the inlets, a rotary cam for opening the valves, a tubular member constituting a stationary stop limiting movement of the cam in one direction, and a screw stop projecting from said tubular member to limit movement of the cam in the opposite direction.

4. In a valve of the character described, a casing divided into an inner chamber and a concentric mixing chamber, inlets to the mixing chamber, spring pressed valves controlling the inlets and extending into the inner chamber, a rotary cam in the inner chamber adapted to open the valves, a web extending across the mixing chamber into the inner chamber to constitute a stop limiting movement of the cam in one direction, and a stop for limiting movement of the cam in the opposite direction adjustably mounted on said web.

5. In a valve of the character described, a mixing chamber having inlets for hot and cold water, spring operated valves for controlling said inlets, a rotary cam for moving said valves to open position, an operative shaft for said cam projecting through the mixing chamber, threads formed in a wall of the mixing chamber surrounding the shaft, a socket member threaded into said threaded wall, a friction plate secured to the shaft and bearing against the inner wall of the socket member, a spring in the socket member and engaging the friction plate, and a removable cap for the socket member.

1,220,146. LOCOMOTIVE-PILOT. PERSIFOR F. SMITH, Jr., Toledo, Ohio. Filed Nov. 29, 1916. Serial No. 134,084. (Cl. 105—254.)



1. The herein described locomotive pilot comprising a substantially pyramidal central portion, a pair of straight side portions, and foot boards on said side portions.

2. The herein described locomotive pilot comprising a pair of substantially straight side portions, foot boards positioned thereupon, and a substantially pyramidal middle portion arranged between said straight side portions, the lower portion of which middle portion projects a substantial distance in front of the straight side portions.

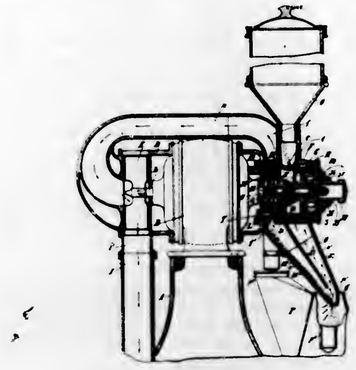
3. The herein described locomotive pilot comprising a pair of side members which are substantially L-shape in cross section, foot boards positioned on the horizontal legs of said side members, and a substantially pyramidal central member arranged between the side members and the foot boards thereon.

4. The herein described locomotive pilot comprising a pair of vertically disposed skeleton side members, base members projecting forwardly from the lower portions of said side members, foot boards on said base members, and a pyramidal shaped skeleton central member arranged between the side members and the foot boards, a portion of which central member projects a substantial distance in front of the side members and foot boards.

5. The herein described locomotive pilot comprising a pair of vertically disposed side members, foot boards projecting forwardly from the lower portions of said side members, and a substantially pyramidal central portion arranged between said side members and foot boards.

[Claims 6 to 9 not printed in the Gazette.]

1,220,147. COFFEE-MILL. FRANK F. WEAR and BERNARD M. ELY, Cincinnati, Ohio, assignors to The Alvey-Ferguson Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 14, 1914. Serial No. 872,186. (Cl. 83—18.)



1. In combination, a support, driving means supported thereby, a grinding chamber at one side of the driving means, grinding elements in the grinding chamber, one of said grinding elementa being rotatable, a fan, connections between the driving means and the rotatable grinding element and fan, a spout having a discharge channel for the ground material from said chamber and an air channel connected to said fan, said spout being constructed to create a flow of air transversely across the path of the discharge from the discharge channel.

2. In combination, a support, driving means supported thereby, a grinding chamber at one side of the driving means, grinding elements in the grinding chamber, one of said elements being rotatable, connections between the driving means and the rotatable grinding element, an internally channeled head mounted on the grinding chamber, a spout connected to the head and having a discharge channel for the ground material from said chamber and an air channel connected to said channeled head, means for creating a flow of air through the air channel and channeled head, said spout being constructed to direct such flow of air transversely across the path of the discharge from the discharge channel.

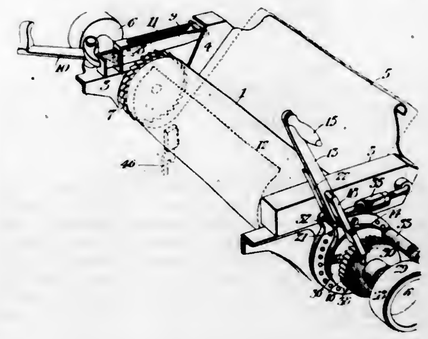
3. In combination, a support, driving means supported thereby, a grinding chamber at one side of the driving means, grinding elements in the grinding chamber, one of said grinding elements being rotatable, a fan at the other side of the driving means, connections between the driving means and the rotatable grinding element and fan, a channeled head mounted on the grinding chamber and having a spout provided with a discharge channel for the ground material from said chamber and an air channel connected to said channeled head, an air conducting means connecting said fan and channeled head to create a flow of air through the air channel, said spout being constructed to direct such flow of air transversely across the path of the discharge from the discharge channel.

4. In combination, a grinding mechanism, a receptacle for ground material, an air passage through a portion of which the ground material passes on its way to the receptacle and means for conducting the material from the grinding mechanism to the receptacle, said means being arranged to discharge the material obliquely and entirely across the air passage and means for creating a current of air in said air passage.

5. In a device of the character described, the combination with a grinding mechanism of a spout comprising an air channel and a discharge channel for ground material, means for inducing a current of air in the air channel, said channels converging toward their lower ends and said spout having a mouth common to both of said channels into which the ground material is discharged transversely and entirely across the current of air.

[Claims 6 to 36 not printed in the Gazette.]

1,220,148. TYPE-WRITING MACHINE. LESTER A. WERNERY, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 27, 1914. Serial No. 827,539. (Cl. 197—114.)



1. The combination with a rotatably-mounted platen and a normally uncoupled driver, the platen being rotatable by, and also independently of, the driver, of a normally ineffective coupling device for effecting a driving connection between the driver and the platen, said coupling device being capable of coming into operation at various points in the driving movement of the driver, and a coupler controller movable with the platen independently of the driver for predetermining the point at which the coupling device shall become effective.

2. The combination with a rotary platen, a driver loose on the platen axle, and means to limit the throw of the driver, of a ratchet wheel connected to rotate with the platen, a dog on said driver, to engage said ratchet wheel, and a gage frictionally driven by the platen and holding said dog out of engagement with the ratchet wheel during a portion of the movement of the driver.

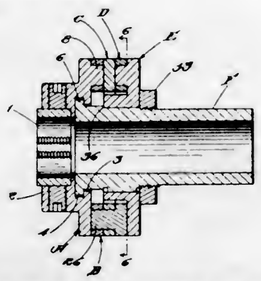
3. The combination with a rotary platen, a driver loose on the platen axle, and means to limit the throw of the driver, of a ratchet wheel connected to rotate with the platen, a dog on said driver, to engage said ratchet wheel, a gage frictionally driven by the platen and holding said dog out of engagement with the ratchet wheel during a portion of the movement of the driver, and means for causing said gage to be returned with the driver to starting position.

4. The combination with a rotary platen, of a driver mounted for rotation independently of the platen, a ratchet wheel connected to rotate with the platen, a dog on the driver to engage said ratchet wheel, and an interponent between the dog and ratchet wheel frictionally held for rotation with said ratchet wheel and holding the dog away from the ratchet wheel, said interponent formed to permit the dog to engage the ratchet wheel when the driver has been moved to a predetermined position relative to said interponent.

5. The combination with a rotary platen, of a driver mounted for rotation independently of the platen, a ratchet wheel connected to rotate with the platen, a dog on the driver to engage said ratchet wheel, and a disk frictionally held for rotation with said ratchet wheel and holding the dog away from the ratchet wheel, said disk provided with a notch or depression to permit the dog to engage the ratchet wheel when the driver has been moved to a predetermined position relative to said disk.

[Claims 6 to 26 not printed in the Gazette.]

1,220,149. FLOATING DIE-HOLDER. CHARLES E. WILLIAMS, Mansfield, Mass., assignor to Bay State Tap & Die Company, Mansfield, Mass., a Corporation of Massachusetts. Filed Oct. 6, 1916. Serial No. 124,013. (Cl. 10—89.)



1. A floating die holder composed of a plurality of annular members placed together in a normally concentric relation, some of said annular members being whole rings and others being broken rings formed of arcuate members placed end to end with narrow spaces between the adjacent ends, each of said rings having a loose pin and hole connection with the adjacent rings, constructed and arranged to permit a slight eccentric movement of said members with relation to each other.

2. A floating die holder composed of a plurality of annular members mounted upon shaft and successively contacting with each other, some of said annular members being whole rings and others being two part rings formed of arcuate members placed end to end, said two part rings alternating with the said whole rings, one of the whole rings being at each end of the series, each of said rings having a pivot connection with the adjacent rings, and means for preventing said rings from longitudinal movement on the shaft, each member of said two part rings having a floating movement in a plane parallel with the planes of the other rings.

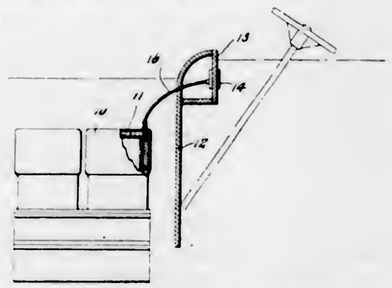
3. A floating die holder composed of a plurality of annular members mounted upon a shaft and successively contacting with each other, some of said annular members being whole rings and others being two part rings formed of arcuate members placed end to end with narrow spaces between the adjacent ends, said two part rings alternating with the said whole rings, one of the whole rings being at each end of the series, each of said rings having a pivot connection with the adjacent rings arranged to permit movement of the head ring in a plane at right angles with the axis of the shaft.

4. A floating die holder composed of a plurality of annular members mounted upon a shaft and successively contacting with each other, some of said annular members being whole rings and others being two part rings formed of arcuate members placed end to end with narrow spaces between the adjacent ends, said two part rings alternating with the said whole rings, one of the whole rings being at each end of the series, each of said rings having a pin and hole connection with the adjacent rings parallel with the axis of the shaft.

5. A floating die holder composed of at least five annular members mounted upon a shaft and successively contacting with each other, the two end rings and the middle ring being whole rings, the second and fourth annular members being each a two part ring composed of semi-circular members placed with their ends toward each other with a slight gap between them, the combined length of each pair of semi-circular members being slightly less than a full circle, the head member of said series containing the die and having two pins projecting at some distance apart from each other from the rear face thereof, the semi-circular members of the second ring each being formed with a pin hole with which respectively said pins of the first member loosely engage, one of said semi-circular members of the second ring being formed with a rearwardly extending pin, the third ring of said series being formed with a pin hole which loosely engages with said pin of the second ring, the said third ring having a rearwardly projecting pin, the fourth ring of the series, which is the second two part ring, having one of its members formed with a pin hole which is loosely engaged by the rearwardly projecting pin of said third ring, the other member of said last mentioned two part ring being formed with a forwardly extending pin, said third ring and that member of the said second two part ring which does not have the previously mentioned pin being formed with a pin hole in alinement with the last mentioned pin hole of the third ring, said forwardly projecting pin of the fourth ring loosely engaging with said alined holes of both the second and third ring, the fifth ring of the series being formed with two rearwardly projecting pins, the two members of said fourth ring being each formed with a pin hole with which said pins of the fifth ring loosely engage.

[Claims 6 to 8 not printed in the Gazette.]

1,220,150. THERMOMETER FOR THE COOLING SYSTEMS OF INTERNAL-COMBUSTION ENGINES. OLIVER J. WILLIAMS, San Francisco, Cal., assignor to Philo M. Gelatt, La Crosse, Wis. Filed Dec. 8, 1915. Serial No. 65,720. (Cl. 73—52.)



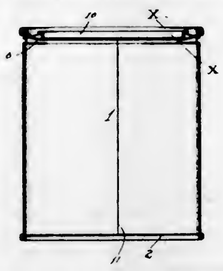
The combination with a motor vehicle and its internal combustion engine, the cylinder of which is provided with a jacket wall inclosing a chamber adapted to receive a cooling liquid, of a thermometer having its temperature responsive element secured in the jacket wall of the cylinder and projecting into the chamber where it is submerged in the cooling liquid therein, a temperature indicator located on the dash of the motor vehicle, and a flexible tube connecting said thermometer and the temperature indicating element, which tube is filled with a temperature responsive element.

1,220,151. CAN-END CLOSURE. ANTONIO ALVAREZ, San Francisco, Cal., assignor to American Can Company, San Francisco, Cal., a Corporation of New Jersey. Filed Sept. 3, 1913. Serial No. 787,897. (Cl. 220—77.)

1. In a sealing closure for containers, the combination of a container body, a container end, and a disk seal held at its margin under sealing compression between the container body and container and exterior of the end seam, the said end being seamed to the body to thereby maintain such compression of the disk seal.

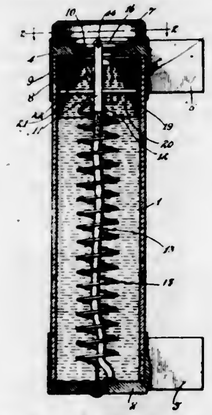
2. In a sealing closure for containers, in combination: a container body having a circumferential sealing seat at a distance within its mouth, and formed at its edge with a seaming flange; a container end having a discharge opening and formed with a circumferential surface fitting within the mouth of the body, a seaming flange seamed with the said flange of the body, and a bottom sealing shoulder which opposes and is located just above the said circumferential sealing seat; a disk seal arranged across the said opening of the container end below the same and having its edge resting on the said sealing seat of the body

exterior of the end seam and compressed tightly and smoothly thereon by the shoulder of the container end;



and a removable cover for the said opening of the container end.

1,220,152. FUSE DEVICE. NICHOLAS J. CONRAD, Chicago, Ill., assignor to Schweitzer & Conrad, Chicago, Ill., a Corporation of Illinois. Filed Apr. 4, 1914. Serial No. 829,556. (Cl. 175—273.)



1. In combination a relatively stationary terminal, a relatively movable terminal, said terminals being relatively non-fusible, a fuse connecting said terminals, means for moving said movable terminal away from the stationary terminal in a direction substantially at right angles to the length of the fuse and non-conducting means lying at the corner between the movable terminal and the fuse for causing the arc to be drawn about said corner.

2. In combination a fuse, a stationary terminal engaging the ends of the fuse, a movable terminal engaging the fuse between said ends, said terminals being relatively non-fusible, means for moving one of said terminals in a direction away from the other and crosswise to the length of the fuse, and non-conducting means lying at the corner between the movable terminal and the fuse for causing the fuse to be drawn about said corner.

3. The combination of an annular terminal having an opening therethrough, a fuse extending across said opening and connected at its ends with said terminal, a second terminal engaging said fuse at a point in said opening, said terminals being relatively non-fusible a spring acting upon one of said terminals and tending to withdraw it from said opening in a direction crosswise of the length of the fuse and non-conducting means lying at the corner between the movable terminal and the fuse for causing the fuse to be drawn about said corner.

4. The combination of a permanent annular terminal, a fuse extending across the opening of said terminal and connected with said annular terminal at points at the side of said opening, a movable terminal engaging said fuse at a point in said opening said terminals being relatively non-fusible and spring means connected with said second mentioned terminal and acting upon the same in a direction crosswise of the length of the fuse.

5. The combination of a permanent annular terminal, a fuse extending across the opening of said terminal and connected with the terminal at the sides of said opening, a second terminal engaging said fuse at a point in said opening said terminals being relatively non-fusible and spring means connected with said second mentioned terminal and acting upon the same in a direction crosswise of the length of the fuse, said spring means being held normally under tension by said fuse.

[Claims 6 to 34 not printed in the Gazette.]

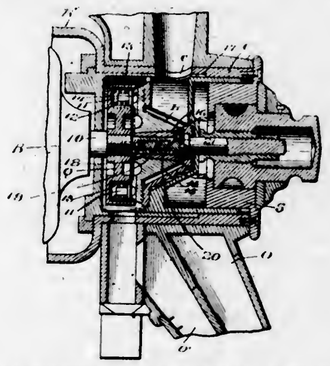
1,220,153. PISTON PACKING-RING. EUGENE F. COOK, St. Louis, Mo., assignor to Otto F. Stifel, St. Louis, Mo. Filed May 8, 1916. Serial No. 95,998. (Cl. 121—108.)



1. A packing ring comprising two split rings arranged one within the other with their ends diametrically opposite each other, the ends of the inner ring being tapered sidewise, an inner flange on one edge of the outer ring, said flange tapering in width from midway of the length of said outer ring to its ends, and an outer flange on the edge of the inner ring opposite said inner flange, said flanges bearing against the unflanged edges of said rings respectively.

2. A packing ring comprising two split rings arranged one within the other with their ends diametrically opposite each other, the ends of each ring being tapered in thickness and the ends of one of said rings being tapered sidewise, an inner flange on one edge of the outer ring, and an outer flange on the edge of the inner ring opposite said inner flange, one of said flanges tapering in width from midway of its length to its ends and contacting sidewise against the unflanged edge of said sidewise tapering ring.

1,220,154. GRINDING-MILL. BERNARD M. ELY, Cincinnati, Ohio, assignor to The Alvey-Ferguson Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 14, 1915. Serial No. 39,820. (Cl. 83—8.)



1. In a grinding mill, a driving shaft, a bur driving device fixed on the shaft, a bur loosely mounted on the shaft and releasably engaged by the driving device and means to hold the bur on the shaft arranged to regulate the pressure of the bur against the driving device.

2. In a grinding mill, a driving shaft, a bur driving device fixed on the shaft, a bur loosely mounted on the shaft and releasably engaged by the driving device, means to

hold the bur on the shaft arranged to regulate the pressure of the bur against the driving device, and a stop carried by and adjustable longitudinally of the shaft engaging the bur holding means to limit its movement in one direction.

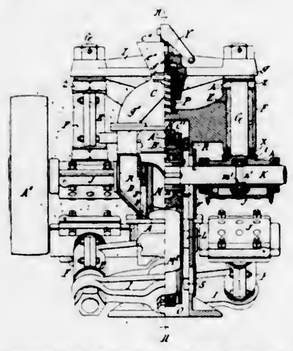
3. In a grinding mill, a driving shaft, a back plate fixed on the shaft, a runner bur loosely mounted on the shaft, a slip clutch mechanism releasably connecting the back plate and bur, and means to hold the bur on the shaft arranged to regulate the pressure of the clutch mechanism.

4. In a grinding mill, a driving shaft, a back plate fixed on the shaft, a runner bur loosely mounted on the shaft, a slip clutch mechanism releasably connecting the back plate and bur, means to hold the bur on the shaft arranged to regulate the pressure of the clutch mechanism, and a shiftable stop carried by the shaft to limit movement of the bur holding means.

5. In a grinding mill, a driving shaft, a back plate fixed on the shaft, a runner bur loosely mounted, the back plate and runner bur being provided with releasable clutch connections comprising coacting spring pressed plungers and sockets, and means to hold the bur on the shaft arranged to regulate the pressure of the clutch connections.

[Claims 6 to 11 not printed in the Gazette.]

1,220,155. ROCK CRUSHING OR GRINDING MACHINERY. GEORGE H. FRASER, Brooklyn, N. Y. Filed July 27, 1901. Serial No. 69,886. Renewed Jan. 15, 1917. Serial No. 142,564. (Cl. 83—9.)



1. The combination with a revoluble ring, of three rolls coacting with the inner face thereof and disposed the one near the upper part of and supporting said ring, and the others below the center of the ring, a casing inclosing said parts, bearings for carrying said rolls radially of a predetermined center relatively to said casing, said casing having a ring cavity eccentric of said center at its lower side, said ring disposed eccentrically relatively to and with its center below said center, and said lower rolls disposed with their points of action against the inner periphery of the ring more than 120 degrees apart.

2. The combination with a revoluble ring, of three rolls coacting with the inner face thereof and disposed the one near the upper part of and supporting said ring, and the others below the center of the ring, a casing inclosing said parts, bearings for carrying said rolls radially of a predetermined center relatively to said casing, said casing having a ring cavity eccentric of said center at its lower side, said ring disposed eccentrically relatively to and with its center below said center, and said lower rolls disposed with their points of action against the inner periphery of the ring more than 120 degrees apart, and means for relatively adjusting said ring and rolls.

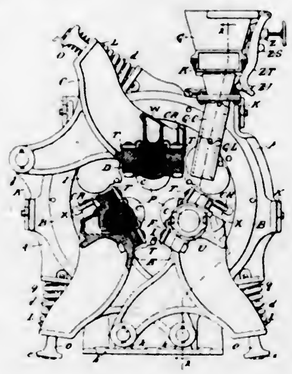
3. The combination with a revoluble ring, of three rolls coacting with the inner face thereof and disposed the one near the upper part of and supporting said ring, and the others below the center of the ring, a casing inclosing said parts, bearings for carrying said rolls radially of a predetermined center relatively to said casing, said casing having a ring cavity eccentric of said center at its lower side, said ring disposed eccentrically relatively to and with its center below said center, and said lower rolls disposed with their points of action against the inner periphery of the ring more than 120 degrees apart, and a spring supporting said top roll.

4. The combination with a revoluble ring, of three rolls coacting with the inner face thereof and disposed the one near the upper part of and supporting said ring, and the others below the center of the ring, a casing inclosing said parts, bearings for carrying said rolls radially of a predetermined center relatively to said casing, said casing having a ring cavity eccentric of said center at its lower side, said ring disposed eccentrically relatively to and with its center below said center, and said lower rolls disposed with their points of action against the inner periphery of the ring more than 120 degrees apart, and means pressing said lower rolls outwardly independent of the weight of said ring.

5. The combination with a revoluble crushing ring, three rotatable crushing rolls within and eccentric of said ring, means for driving said parts, and a casing for said parts, of means supporting said rolls radially of a predetermined center relatively to said ring, means supporting said ring eccentrically relatively to and with its center below said center, one of said rolls disposed near the upper part of said ring, and the other rolls disposed below it with their points of action against the inner periphery of said ring more than 120 degrees apart, and movable means for pressing said lower rolls apart to generate a crushing pressure toward the inner face of said ring, whereby a part of such pressure is consumed within the ring independently of said supporting means.

[Claims 6 to 58 not printed in the Gazette.]

1,220,156. CRUSHING MACHINERY. GEORGE HOLT FRASER, Brooklyn, N. Y. Filed Jan. 9, 1906, Serial No. 295,254. Renewed Jan. 12, 1917. Serial No. 142,114. (Cl. 83—9.)



1. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, three rotatable crushing rolls movable toward and from each other within and eccentric to said die and each having a peripheral crushing face reciprocal to the inner face of the latter, means for revolving one of said parts, three swinging non-rotative carriers on which said rolls are rotatably mounted respectively, each of said carriers pivotally mounted directly on and swinging positively from a fixed axis, and means acting on said carriers intermediate of their pivotal mountings and said rolls and out of line with the latter to move said rolls outwardly away from one another and toward the inner face of said die to resist a crushing pressure therefrom.

2. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, two rotatable crushing rolls movable toward and from each other within and eccentric to said die and each having a peripheral crushing face reciprocal to the inner face of the latter, means for revolving one of said parts, two swinging non-rotative carriers on which said rolls are rotatably mounted respectively, each of said carriers pivotally mounted directly on and swinging positively from a fixed axis disposed outwardly and downwardly of the axis of rotation of its roll, and means acting on said carriers to press said rolls outwardly away from one another toward the inner face of said die to resist a crushing pressure therefrom.

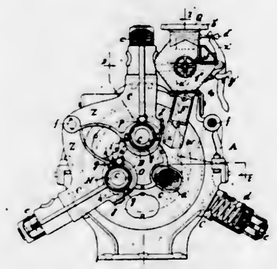
3. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, two rotatable crushing rolls movable toward and from each other within and eccentric to said die and each having a peripheral crushing face reciprocal to the inner face of the latter, means for revolving one of said parts, a frame or casing for said parts, two non-rotative members movable toward and from each other on which said rolls are rotatably mounted respectively, said members extending past each other and movably mounted on said casing beyond their overlapping portions, and a spring or springs acting on said members to press said rolls outwardly away from one another to resist a crushing pressure from the inner face of said die.

4. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, three rotatable crushing rolls within and eccentric to said die and each having a crushing face reciprocal to the inner face of the latter, one of said rolls near the upper part of said die, and the other two of said rolls below said upper roll and movable toward and from each other, means for revolving one of said parts, swinging non-rotative carriers on which said lower rolls are rotatably mounted respectively, each of said carriers pivotally mounted directly on and swinging positively from a fixed axis below the axis of its roll, and means acting on said carriers to press said rolls outwardly away from one another to resist a crushing pressure from the inner face of said die.

5. A revolving crushing ring and a crushing roll therein supporting said ring, in combination with a casing inclosing said parts and having an opening through its side large enough to pass said ring and having a pivotal provision outwardly of said opening, and a cover for said casing closing said opening and having an aperture for the shaft of said roll, and movable bearings for said shaft at the sides of said casing, pivoted directly to and swinging positively from a fixed axis and passing around the exterior of said casing for connecting said bearings having rigid projections pivoted to said casing outwardly of said cover.

[Claims 6 to 30 not printed in the Gazette.]

1,220,157. CRUSHING-MACHINE. GEORGE HOLT FRASER, Brooklyn, N. Y. Filed Dec. 31, 1907. Serial No. 408,773. Renewed June 12, 1916. Serial No. 103,341. (Cl. 83—9.)



1. In combination, an annular crushing die revolving in and eccentric to said die and each having an external crushing face, a movable and rotatable crushing roll within, eccentric to, and disposed below the uppermost part of said die and having a crushing face reciprocal to that

and from each other within and eccentric to said die and each having a peripheral crushing face reciprocal to the inner face of the latter, means for revolving one of said parts, two swinging non-rotative carriers on which said rolls are rotatably mounted respectively, each of said carriers pivotally mounted directly on and swinging positively from a fixed axis disposed outwardly and downwardly of the axis of rotation of its roll, and means acting on said carriers to press said rolls outwardly away from one another toward the inner face of said die to resist a crushing pressure therefrom.

3. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, two rotatable crushing rolls movable toward and from each other within and eccentric to said die and each having a peripheral crushing face reciprocal to the inner face of the latter, means for revolving one of said parts, a frame or casing for said parts, two non-rotative members movable toward and from each other on which said rolls are rotatably mounted respectively, said members extending past each other and movably mounted on said casing beyond their overlapping portions, and a spring or springs acting on said members to press said rolls outwardly away from one another to resist a crushing pressure from the inner face of said die.

4. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, three rotatable crushing rolls within and eccentric to said die and each having a crushing face reciprocal to the inner face of the latter, one of said rolls near the upper part of said die, and the other two of said rolls below said upper roll and movable toward and from each other, means for revolving one of said parts, swinging non-rotative carriers on which said lower rolls are rotatably mounted respectively, each of said carriers pivotally mounted directly on and swinging positively from a fixed axis below the axis of its roll, and means acting on said carriers to press said rolls outwardly away from one another to resist a crushing pressure from the inner face of said die.

5. A revolving crushing ring and a crushing roll therein supporting said ring, in combination with a casing inclosing said parts and having an opening through its side large enough to pass said ring and having a pivotal provision outwardly of said opening, and a cover for said casing closing said opening and having an aperture for the shaft of said roll, and movable bearings for said shaft at the sides of said casing, pivoted directly to and swinging positively from a fixed axis and passing around the exterior of said casing for connecting said bearings having rigid projections pivoted to said casing outwardly of said cover.

[Claims 6 to 30 not printed in the Gazette.]

1,220,157. CRUSHING-MACHINE. GEORGE HOLT FRASER, Brooklyn, N. Y. Filed Dec. 31, 1907. Serial No. 408,773. Renewed June 12, 1916. Serial No. 103,341. (Cl. 83—9.)

1. In combination, an annular crushing die revolving in and eccentric to said die and each having an external crushing face, a movable and rotatable crushing roll within, eccentric to, and disposed below the uppermost part of said die and having a crushing face reciprocal to that of the latter, means for revolving one of said parts, non-rotative swinging means on which said roll is rotatably mounted having a rigid portion pivotally suspended on and swinging directly from a fixed axis above and approximately parallel with the axis of said roll, and means pressing said roll outwardly toward the inner face of said die to resist a crushing pressure therefrom.

2. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, a plurality of rotatable crushing rolls within and eccentric to said die and each having an external crushing face reciprocal to the internal crushing face thereof, one of said rolls movable toward and from another thereof, means for revolving one of said parts, non-rotative swinging means on which said movable roll is rotatably mounted having a rigid portion extending upwardly and pivotally suspended on and swinging directly from a fixed axis above and substantially parallel with the axis of said roll, and means pressing one of said rolls away from another thereof to resist a crushing pressure from the inner face of said die.

3. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, two or more rotatable crushing rolls movable toward and from each other within and eccentric to said die and each having an external crushing face reciprocal to the internal crushing face thereof, means for revolving one of said parts, a non-rotative swinging member on which one of said rolls is rotatably mounted having a rigid portion suspended on and swinging directly from a fixed axis above the axis of its roll, a non-rotative swinging member on which another of said rolls is rotatably mounted having a rigid portion extending upwardly and suspended on and swinging directly from a fixed axis above the axis of its roll, and means holding said rolls outwardly away from one another to resist a crushing pressure from the inner face of said die.

4. In combination, a revolving annular crushing die having an internal crushing face, two or more rotatable crushing rolls movable toward and from each other within and eccentric to said die and each having an external crushing face reciprocal to the internal crushing face thereof, means for revolving one of said parts, non-rotative swinging means on which one of said rolls is rotatably mounted, non-rotative swinging means on which another of said rolls is rotatably mounted, said swinging means each having a rigid portion pivotally mounted on and swinging directly from a common axis, and means pressing said rolls outwardly to resist a crushing pressure from the inner face of said die.

5. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, three rotatable crushing rolls within and eccentric to said die, each having an external crushing face reciprocal to the internal crushing face thereof, one of said rolls disposed near the upper part of said die and the others disposed below said roll and movable toward and from each other, means for revolving one of said parts, non-rotative means on which said uppermost roll is rotatably mounted, non-rotative swinging means on which one of said lower rolls is rotatably mounted having a rigid portion suspended on and swinging directly from a fixed axis above the axis of its roll, non-rotative swinging means on which the other of said lower rolls is rotatably mounted having a rigid portion suspended on and swinging directly from a fixed axis above the axis of its roll, and means holding said lower rolls outwardly away from one another to resist a crushing pressure from the inner face of said die.

[Claims 6 to 8 not printed in the Gazette.]

1,220,158. CURTAIN-ROD. WILLIAM H. EDSALL and HENRY EDWARD CHASE, Wallingford, Conn., assignors to The H. L. Judd Company, New York, N. Y., a Corporation of New York. Filed Oct. 5, 1916. Serial No. 123,816. (Cl. 156—19.)

1. In a bracket for a curtain rod comprising an outwardly projecting member, a stud projecting laterally

therefrom near one end thereof, a guide near the other end, a rod having a slot adapted to slip over said stud by a lateral movement thereof and to be engaged with said guide by a longitudinal movement thereof.



2. In a bracket for a curtain rod comprising an outwardly projecting member, a stud projecting laterally therefrom near one end thereof, a guide near the other end, a rod having a slot adapted to slip over said stud by a lateral movement thereof and to be engaged with said guide by a longitudinal movement thereof, and means for frictionally holding said rod from accidental disengagement from said guide when the parts are assembled.

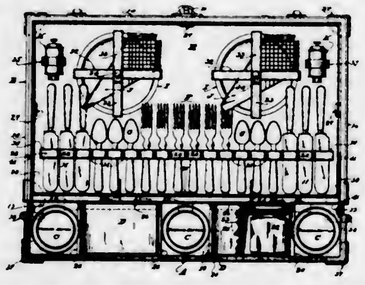
3. In a device of the character described, a curtain rod having a slot in its side near one end, a bracket including a plate, a headed stud on said plate near the outer end thereof, a guide on said plate toward the rear end thereof, one part of said slot being sufficiently large to pass over the head of said stud whereby said rod may be engaged therewith, a portion of said slot extending outwardly from said enlarged portion whereby said rod may be pushed rearwardly into engagement with said guide.

4. In a device of the character described, a curtain rod having a slot in its side near one end, a bracket including a plate, a headed stud on said plate near the outer end thereof, a guide on said plate toward the rear end thereof, one part of said slot being sufficiently large to pass over the head of said stud whereby said rod may be engaged therewith, a portion of said slot extending outwardly from said enlarged portion whereby said rod may be pushed rearwardly into engagement with said guide, said guide being constructed to prevent movement of said rod excepting in one direction.

5. In a curtain rod and bracket, a rod having a key-hole slot near one end thereof, the larger part of said slot being nearest the end, a bracket comprising a plate, a headed stud projecting laterally from said plate near the outer end thereof, a guide on said plate nearer to the rear end thereof than said stud, said guide being constructed to embrace the upper and lower side of said rod when the latter is in its operative position.

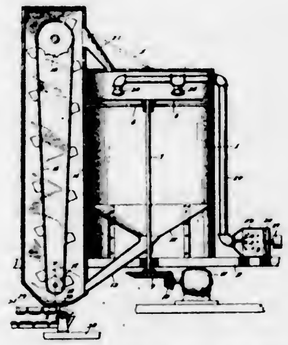
[Claim 6 not printed in the Gazette.]

1,220,159. COMBINED LUNCHEON AND CARRYING CASE. HARRY H. LABADIE and BURTON B. BEERS, Chicago, Ill., assignors, by direct and mesne assignments, of one-half to said Labadie and one-half to the estate of William Schweitzer, deceased. Filed Aug. 18, 1916. Serial No. 115,671. (Cl. 206—4.)



A combined luncheon and carrying case, including an upper, and a lower section, said sections being hinged to each other, there being in said lower section a series of vertically disposed cleats, a multiplicity of boxes in said lower section, each of said boxes having a hinged cover, a handle on said cover, and a catch on said box to hold said cover in closed condition, said boxes being retained in spaced relationship between said cleats, a thermos bottle between adjacent boxes, and two additional thermos bottles, one at each end of said lower section, said thermos bottle being retained in horizontal position by said boxes, said boxes and said thermos bottle being of a length substantially equal to the width of said lower section and a tray in the upper section, said tray being removably retained in the latter section, there being in said tray a series of loops in closely spaced relationship, said loops being constructed to removably retain table cutlery, and further loops above the first mentioned loops constructed to retain circular plates, the latter loops comprising each a horizontal member fixed at both ends to said tray, and two coacting vertical members, the latter members being secured at overlapping ends by a separable fastening, said upper section being retained in vertical position by flexible links.

1,220,160. APPARATUS FOR TREATING GRAIN. PAYTON J. H. MOORE, Chicago, Ill., assignor, by direct and mesne assignments, to American Grain Deodorizing Co., a Corporation of Illinois. Filed Apr. 9, 1914, Serial No. 830,738. Renewed July 22, 1916. Serial No. 110,772. (Cl. 99—2.)



1. Apparatus for sterilizing grain comprising a chamber; means for introducing the grain to be treated into said chamber; means for circulating through said chamber the grain introduced therein; means for spreading the grain into a thin layer in the course of its passage through said chamber; and means for introducing a sterilizing gas into said chamber, substantially as described.

2. Apparatus for sterilizing grain comprising a chamber; a rotatably mounted table arranged in said chamber onto which the grain introduced into said chamber is deposited; and means for introducing a sterilizing fluid into said chamber, substantially as described.

3. Apparatus for sterilizing grain comprising a chamber; a rotatably mounted table arranged in said chamber onto which the grain introduced into said chamber is deposited; and means for introducing a sterilizing fluid into said chamber and directing it toward the upper side of said table, substantially as described.

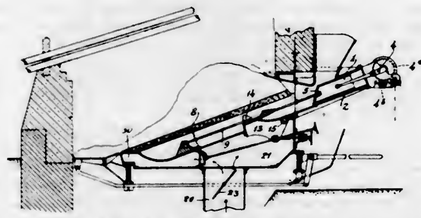
4. Apparatus for sterilizing grain comprising a chamber; a moving table arranged in said chamber onto which the grain introduced into the upper end of said chamber is deposited and whence it is dropped to the lower end of said chamber; means for conveying the grain from the lower end of said chamber and depositing it again into the upper end of said chamber; and means for introducing a sterilizing agent into said chamber, substantially as described.

5. Apparatus for sterilizing grain comprising a chamber; a moving table arranged in said chamber onto which

the grain introduced into the upper end of said chamber is deposited and whence it is dropped to the lower end of said chamber; means for conveying the grain from the lower end of said chamber and depositing it again into the upper end of said chamber; and means for introducing a sterilizing agent into said chamber and directing it toward the upper side of said table, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,220,161. FURNACE. OSCAR PATRIC OSTERGREN and EDWIN LUNDGREN, Brooklyn, N. Y., assignors, by direct and mesne assignments, to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Apr. 8, 1912. Serial No. 689,187. (Cl. 110—44.)



1. In an underfeed, forced draft furnace, the combination of a fuel support comprising an inclined, elongated fuel retort, twyers adjacent thereto, an air chamber underlying said fuel support and twyers, a partition wall dividing said chamber into a plurality of compartments, means provided in said partition wall for regulating the admission of air from one into the other of said compartments, a conduit in communication with one of said compartments, said conduit extending longitudinally beneath the fuel support, and terminating at a point above the fuel bed to deliver the heated air from said compartment above the fuel bed.

2. In an underfeed forced draft furnace the combination of a fuel support comprising an inclined elongated fuel retort, twyers adjacent thereto, an air chamber underlying said fuel support and twyers, a secondary chamber at the lower end of the retort, a conduit in communication with said secondary chamber, extending longitudinally beneath said fuel support from said secondary chamber and terminating at a point above the fuel bed to deliver heated air at a point above said fuel bed.

3. In an underfeed furnace, the combination of a fuel support, side and end walls surrounding said fuel support and perforated steam pipes adjacent to said side walls and arranged to project steam against said walls above the fuel bearing surface, and means to supply steam to said pipes.

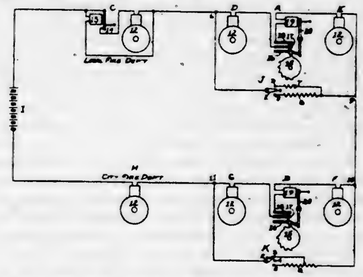
4. In an underfeed furnace, the combination of downwardly inclined, elongated fuel retorts, downwardly inclined fuel supporting surfaces alternately arranged with the retorts, and comprising fuel supporting twyer blocks located in overlapping relation and having their fuel supporting surfaces elevated above the bottoms of the retorts, a fuel hopper communicating with at least one of said retorts, means for introducing fuel from said hopper into said retort below the surface of the fuel maintained on the fuel supporting surfaces, an air chamber underlying the retorts and said fuel supporting twyer blocks, a partition dividing said chamber into a plurality of compartments, means provided within the partition for regulating the delivery of air from one compartment into another, and means for delivering air under pressure to one of said compartments.

5. In an underfeed forced draft furnace, the combination of downwardly inclined elongated fuel retorts, downwardly inclined fuel supporting surfaces alternately arranged with the retorts and comprising fuel supporting twyer blocks located in overlapping relation and having their fuel supporting surfaces elevated above the bottoms of the fuel retorts, means for delivering fuel into the upper ends of the retorts below the surface of the fuel maintained on said fuel supporting surfaces, an air chamber underlying said fuel supporting twyer blocks and said retorts, a partition extending at an angle to the retorts and dividing the chamber into a forward compartment communicating with the upper ends of the fuel supporting surfaces, and a rear compartment communicating with the lower ends of the fuel supporting surfaces, means for delivering air under pressure to the forward compartment, means provided within the partition for establishing communication between the compartments and adjustable means for regulating the flow of air from the forward to the rear compartment.

[Claims 6 to 10 not printed in the Gazette.]

REISSUES.

14,273. SIGNALING-SYSTEM. CLARENCE E. BEACH, Binghamton, N. Y., assignor, by mesne assignments, to The Gamewell Fire Alarm Telegraph Company, Newton Upper Falls, Mass., a Corporation of New York. Filed July 31, 1915. Serial No. 43,043. Original No. 1,120,995, dated Dec. 15, 1914, Serial No. 813,892, filed Jan. 23, 1914. (Cl. 177—364.)



1. In an electrical signaling system, a receiving device responsive only to relatively large current changes, a receiving device responsive to relatively small current changes, a transmitting device, one or more other receiving devices, two resistances, and means for connecting either resistance in shunt to said transmitting device and said other receiving devices, so constructed and arranged that when one resistance is so connected said transmitting device may cause said relatively small current change and when the other resistance is so connected said transmitting device may cause a current change less than said relatively small change.

2. In an electrical signaling system, a receiving device responsive only to relatively large current changes, a receiving device responsive to relatively small current changes, a transmitting device, one or more other receiving devices, two resistances, and means for connecting either resistance in shunt to said transmitting device and said other receiving devices.

3. In an electrical signaling system, a receiving device responsive only to relatively large current changes, an electromagnet, a shunt to said electromagnet, a receiving device in said shunt, a switch in said shunt controlled by said electromagnet whereby said receiving device is rendered responsive to relatively small current changes, a transmitting device, one or more other receiving devices, a resistance, and means for connecting said resistance in shunt to said transmitting device and said other receiving devices, so constructed and arranged that when said resistance is so connected said transmitting device may cause said relatively small current change.

4. A series circuit including a current source, a transmitting device so connected in said circuit as to be adapted to formulate a distinctive signal consisting of a series of relatively small current changes in the current flow

through said circuit, and an electromagnet, a shunt around that portion of the series circuit including only said magnet, a receiving device in said shunt responsive only to comparatively large current changes, and a switch in said shunt adapted to be so controlled by said electromagnet as to render said receiving device responsive to signals so formulated by said transmitting device, said current source and said shunt being connected through said series circuit only.

5. In an electrical signaling system, an electromagnet, a shunt to said electromagnet, a receiving device in said shunt, a switch in said shunt controlled by said electromagnet, a transmitting device, other receiving mechanism, a resistance, and means for connecting said resistance in shunt to said transmitting device and said other receiving mechanism.

6. In an electrical signaling system, an electromagnet, a shunt to said electromagnet, a receiving device in said shunt, a switch in said shunt controlled by said electromagnet, such construction and arrangement that said receiving device will be responsive to relatively small current changes, a receiving device responsive only to relatively large current changes, a transmitting device, other receiving devices, a resistance, and means for connecting said resistance in shunt to said transmitting device and said other receiving devices.

7. In an electrical signaling system, an electromagnet, a shunt to said electromagnet, a receiving device in said shunt, a switch in said shunt controlled by said electromagnet, such construction and arrangement that said receiving device will be responsive to relatively small current changes, a receiving device responsive only to relatively large current changes, a transmitting device, other receiving devices, two resistances, and means for connecting either resistance in shunt to said transmitting device and said other receiving devices.

8. In an electrical signaling system, an electromagnet, a shunt to said electromagnet, a receiving device in said shunt, a switch in said shunt controlled by said electromagnet, such construction and arrangement that said receiving device will be responsive to relatively small current changes, a receiving device responsive only to relatively large current changes, a transmitting device, other receiving devices, a resistance, and means for connecting said resistance in shunt to said transmitting device and said other receiving devices, so constructed and arranged that when said resistance is so connected said transmitting device may cause said relatively small current changes.

9. In an electrical signaling system, an electromagnet, a shunt to said electromagnet, a receiving device in said shunt, a switch in said shunt controlled by said electromagnet, such construction and arrangement that said receiving device will be responsive to relatively small current changes, a receiving device responsive only to relatively large current changes, a transmitting device, other receiving devices, two resistances, and means for connecting either resistance in shunt to said transmitting device and said other receiving devices, so constructed and arranged that when one resistance is so connected said transmitting device may cause said relatively small current change and when the other resistance is so connected said transmitting device may cause a current change less than said relatively small change.

10. In an electrical signaling system, a receiving device responsive only to relatively large current changes, an electromagnet, a shunt to said electromagnet, a receiving device in said shunt, a switch in said shunt controlled by said electromagnet whereby said receiving device is rendered responsive to relatively small current changes, a plurality of transmitting devices, one or more receiving devices associated with each transmitting device, and means whereby each transmitting device may be operated either to cause response of all the receiving devices or only of its associated receiving devices and said receiving device responsive to relatively small current changes.

11. In an electrical signaling system, a receiving device responsive only to relatively large current changes, an electromagnet, a shunt to said electromagnet, a receiving device in said shunt, a switch in said shunt controlled by said electromagnet whereby said receiving device is rendered responsive to relatively small current changes, a plurality of transmitting devices, a resistance and one or more receiving devices associated with each transmitting device, and means whereby each transmitting device and its associated receiving devices may be shunted by the associated resistance, so constructed and arranged that when said resistance is so connected said transmitting device may cause response of its associated receiving devices and said receiving device responsive to relatively small curretn changes.

12. In an electrical signaling system, a receiving device responsive only to relatively large current changes, an electromagnet, a shunt to said electromagnet, a receiving device in said shunt, a switch in said shunt controlled by said electromagnet whereby said receiving device is rendered responsive to relatively small current changes, a plurality of transmitting devices, a resistance and one or more receiving devices associated with each transmitting device, and means whereby each transmitting device and its associated receiving devices may be shunted by the associated resistance.

13. In a series circuit, a receiving device responsive only to relatively large current changes, a receiving device responsive to relatively small current changes, a transmitting device, one or more other receiving devices associated with said transmitting device, a movable switch member connected with said series circuit at one side of said transmitting device and said associated receiving devices, a contact coöperating with said movable member to connect a relatively high resistance from said one side to the other side of said transmitting device and said associated receiving devices, and a second contact coöperating with said movable member to connect a relatively low resistance between said sides, said movable member being arranged to open its circuit when disengaged from both of said contacts.

14. In a signaling system having a normally closed series circuit including an electromagnet, signal transmitting devices and such circuit connection that said transmitting devices may be partially shunted out without shunting said electromagnet; a shunt around that portion of said series circuit including only said electromagnet, a receiving device in said shunt, and a switch in said shunt controlled by said electromagnet.

15. In a signaling system having a normally closed series circuit including an electromagnet, signal transmitting devices and such circuit connections that said transmitting devices may be partially shunted out without shunting said electromagnet; a shunt around that portion of said series circuit including only said electromagnet, a receiving device in said shunt, and a switch in said shunt controlled by said electromagnet, all so proportioned and adjusted that said receiving device is rendered responsive to the current changes incident to the operation of said partially shunted out signaling devices.

16. In a closed circuit electrical signaling-system having signal-transmitting stations, a signal-receiving station having an electromagnetic controlling-means, a shunt around and governed by such means and having a receiver, the current paths through the electromagnetic controlling-means and the shunt having such relation to each other as to cause a repeated governing control of the shunt by said means in subnormal conditions of the system current strength to a predetermined limit, and a definite single governing control of the shunt by said means in a subnormal condition beyond such predetermined limit.

17. In a closed circuit electrical signaling system having signal transmitting stations, electromagnetically controlled receiving means so connected and arranged as to be adapted to manifest the signals of said transmitting stations by acting but once for each break or comparatively large decrease in current flow in said circuit and to be adapted to manifest a comparatively small decrease in the strength of the current flow in said circuit by repeated action.

18. In a closed circuit electrical signaling system having a plurality of transmitting stations; a signal receiving station adapted to respond to the signals of said transmitting stations and comprising,—an electromagnet, a shunt to said electromagnet, and a switch in said shunt controlled by said electromagnet, the resistances of the current paths through the electromagnet and through the shunt being so related to each other and to the resistance of the remainder of the signaling circuit as to cause continuous operation of said switch whenever the line current flow, while subnormal to at least a predetermined extent, is greater than a predetermined minimum.

19. In a closed circuit electrical signaling system having a plurality of transmitting stations; a signal receiving station adapted to respond to the signals of said transmitting stations and comprising,—an electromagnet, a shunt to said electromagnet, a receiving device in said shunt, and a switch in said shunt controlled by said electromagnet, the resistances of the current paths through the electromagnet and through the shunt being so related to each other and to the resistance of the remainder of the signaling circuit as to cause continuous operation of said receiving device whenever the line current flow, while subnormal to at least a predetermined extent, is greater than a predetermined minimum.

20. In a signaling system having a normally closed series circuit including an electromagnet and signal transmitting devices; a shunt around that portion of said series circuit including only said electromagnet, a resistance in said shunt, and a switch in said shunt controlled by said electromagnet, the resistances of the current paths through the electromagnet and through the shunt being so related to each other and to the resistance of the remainder of the signaling circuit that at normal line current said switch will hold said shunt closed, at line current strengths below a predetermined value and during open circuit periods said switch will open said shunt, and at subnormal line current strengths which are greater than said predetermined value said switch will not act continuously, alternately breaking and closing said shunt.

21. In an electrical signaling system: a signal circuit serially including a current source, two classes of general receiving devices, local receiving devices, and signal transmitting devices; switch mechanism associated with each of a plurality of said transmitting devices, conductors each including suitable resistance and adapted to form a current path in shunt with a portion of the series circuit including certain local receiving and transmitting devices, and so controlled by said switch mechanism that any switch mechanism may be set to so adjust the circuit conditions of said signaling system that the operation of its associated transmitting device will cause response thereto of certain local receiving devices without causing response of all local receiving devices or any of the general receiving devices, and so that any switch mechanism may be set to so adjust the circuit conditions of said signaling system that the operation of its associated transmitting device will cause response thereto of said certain local receiving devices and one class of the general receiving devices without causing response of the other local or general receiving devices.

22. In an electrical signaling system: a signal circuit serially including a current source, two classes of general receiving devices, local receiving devices, and signal transmitting devices; switch mechanism associated with each of a plurality of said transmitting devices, conductors each including suitable resistance and adapted to form a current path in shunt with a portion of the series circuit including certain local receiving and transmitting devices, and so controlled by said switch mechanism that any switch mechanism may be set to so adjust the circuit conditions of said signaling system that the operation of its associated transmitting device will cause response thereto of certain local receiving devices without causing response of all local receiving devices or any of the general receiving devices, so that any switch mechanism may be set to so adjust the circuit conditions of said signaling system that the operation of its associated transmitting device will cause response thereto of said certain local receiving devices and one class of the general receiving devices without causing response of the other local or general receiving devices, and so that any switch mechanism may be set to so adjust the circuit conditions of said signaling system that the operation of its associated transmitting device will cause response thereto of all local and general receiving devices.

23. In an electrical signaling system: a signal circuit serially including a current source, a general receiving device, local receiving devices, and a plurality of signal transmitting devices each having noninterference mechanism; switch mechanism associated with each of a plurality of said transmitting devices, conductors each including suitable resistance and adapted to form a current path in shunt with a portion of the series circuit including certain local receiving and transmitting devices, and so controlled by said switch mechanism that any switch mechanism may be set to so adjust the circuit conditions of such signaling system that the operation of its associated transmitting device will cause response thereto of the general receiving device and a predetermined plurality of the local receiving devices without causing response of all local receiving devices and without causing such changes in the current flow throughout such signaling system as will prevent the transmission of signals from any other transmitting device.

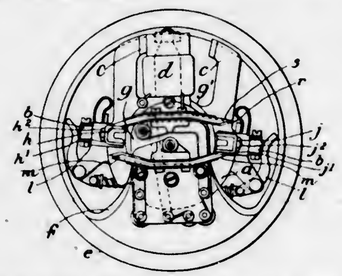
24. In an electrical signaling system: a signal circuit serially including a current source, two classes of general receiving devices, local receiving devices, and a plurality of signal transmitting devices each having noninterference mechanism; switch mechanism associated with each of a plurality of said transmitting devices, conductors each including suitable resistance and adapted to form a current path in shunt with a portion of the series circuit including certain local receiving and transmitting devices, and so controlled by said switch mechanism that any switch mechanism may be set to so adjust the circuit conditions of such signaling system that the operation of its associated transmitting device will cause response thereto of certain local receiving devices without causing response of all local receiving devices, the general receiving devices, or of the noninterference mechanism associated with other transmitting devices, and so that any switch mechanism may be set to so adjust the circuit conditions of said signaling system that the operation of its associated transmitting device will cause response thereto of said certain local receiving devices and one class of the general receiving devices without causing response of the other local or general receiving devices or of the noninterference mechanism associated with other transmitting devices.

25. In an electrical signaling system: a signal circuit serially including a current source, two classes of general receiving devices, local receiving devices, and a plurality of signal transmitting devices each having noninterference mechanism; switch mechanism associated with each of a plurality of said transmitting devices; conductors each including suitable resistance and adapted to form a current path in shunt with a portion of the series circuit including certain local receiving and transmitting devices, and so controlled by said switch mechanism that any switch mechanism may be set to so adjust the circuit conditions of such signaling system that the operation of its associated transmitting device will cause response thereto of certain local receiving devices without causing response of all of said local receiving devices, the general receiving devices, or of the noninterference mechanism associated with other transmitting devices, so that any switch mechanism may be set to so adjust the circuit conditions of said signaling system that the operation of its associated transmitting device will cause response thereto of said certain local receiving devices and one class of the general receiving devices without causing response of the other local or general receiving devices or of the noninterference mechanism associated with other transmitting devices, and so that any switch mechanism may be set to so adjust the circuit conditions of said signaling system that

the operation of its associated transmitting device will cause response thereto of all local and general receiving devices and the noninterference mechanism associated with other transmitting devices.

26. In a signaling system having a normally closed series circuit including an electromagnet and signal-transmitting devices, controlling-means associated with the transmitting-devices for partially shunting said transmitting-devices without shunting the electromagnet, a shunt around that portion of said series circuit including only said electromagnet, a receiving-device in said shunt, and a switch in said shunt so controlled by said electromagnet as to be responsive to the operation of said transmitting-devices under various conditions of said series circuit including conditions under which any portion of said circuit including one or more transmitting devices, but not including said electromagnet, is partially shunted out.

14,274. ELECTRICAL INSTALLATION FOR LIGHTING, HEATING, AND VENTILATING RAILWAY-CARRIAGES AND FOR SIMILAR PURPOSES. ALFRED HENRY DARKER, Blackheath, England, assignor to J. Stone & Company, Ltd., London, England. Filed Jan. 5, 1916. Serial No. 70,542. Original No. 1,131,914, dated Mar. 16, 1915, Serial No. 729,581, filed Nov. 5, 1912. (Cl. 171—313.)



1. In a reversible dynamo, an automatic switch gear comprising, a rocking support, switch parts thereon, contacts supported in the paths of said switch parts, a part revolving with the dynamo armature and adapted to move said switch parts against certain of said contacts, friction engaging means between said support and revolving part, and electromagnetic means operative upon said rocking support in unison with said frictional engaging means and adapted to give said support an additional movement for effecting the closing of a circuit.

2. In a reversible dynamo, an automatic switch gearing comprising, a rocking support commutator brush holders on said support, brushes in said holders, switch parts on said support, contacts mounted in the paths of respective switch parts, and electromagnetic means operative upon said support in the same direction as said support is operated by the engagement of the brushes with the commutator.

3. In a reversible dynamo, an automatic switch gear comprising, a brush rocker, switch parts thereon connected with respective brushes, coöperative switch contacts in the paths of said switch parts in different relative positions so that certain of said parts and contacts come into engagement upon the initial rocking of said brush rocker in either direction, and electromagnetic means operative upon said rocker to bring about the complete engagement of switch parts and contacts.

4. In a reversible dynamo, a rocking brush holder, reversing switch parts carried thereon and connected with respective brushes, switch brushes variably arranged in the paths of said switch parts and electromagnetic means operative upon said holder in the same direction as said holder is turned by the engagement of its brushes with the commutator in either direction of running, and circuits successively closed by said switch parts and brushes.

5. In a reversible dynamo, a rocking reversing switch arranged to rock in one direction or the other according to the direction of running, flexible switch brushes variably arranged so that certain of them contact as soon as the switch is rocked by the revolution of the armature, and electromagnetic means operative upon said rocking switch in either direction of running, a circuit closed by the brushes making the first contact, the windings of said electromagnetic means being in said circuit.

6. In a reversible dynamo, a brush rocker, contacts fixed thereon at about diametrically opposite points and in electrical connection with respective collecting brushes, positive and negative terminal switch brushes fixed to the framing of said dynamo and extending into the paths of said contacts in such manner that each brush will engage a different contact when the direction of running is reversed, a main circuit, a second positive brush constituting a terminal of said circuit, and having its contacting ends in the paths of said contacts and in the rear of the contacting ends of the first positive brush, a shunt circuit, and electro-magnetic means operative upon said brush rocker, the windings of said means being in the shunt circuit, which is closed by the engagement of said contacts with the first named brushes.

7. In a reversible dynamo, a brush rocker frame, commutator brushes thereon, arms carried on said frame and insulated therefrom, contact devices fixed on said arms and in electrical connection with respective brushes, spaced armature devices on said frame, an electromagnet fixed to the dynamo framing, a pole of said magnet lying between said armatures, a negative brush and a positive brush each comprising two arms which extend into the paths of respective contact devices, the positive brush being oppositely arranged to the negative brush, a shunt circuit, the terminals of which are constituted by said brushes, a main circuit, and a second positive brush constituting a terminal of the main circuit, said second positive brush being arranged similarly to the first positive brush but having its extremities in arrear of those of the first positive brush.

8. In a reversible shunt wound dynamo, a brush rocker frame, commutator brushes thereon, switch-contacts on said frame insulated therefrom and in electrical connection with respective commutator brushes, a switch brush fixed on said dynamo and having arms extending within the arcual paths of said contacts, said brush constituting a positive terminal of the shunt field winding, an electromagnet operative upon said rocker frame in the same sense as said frame is influenced by the engagement of its brushes with the commutator in either direction of running the windings of said magnet being in the circuit of the shunt field winding, a second switch brush fixed on said dynamo and having arms extending within the arcual paths of said contacts said brush being oppositively disposed to the first switch and constituting a negative terminal of both the shunt field winding and of the working circuit, and a third switch brush arranged alongside the first switch brush and having arms shorter than those of the first switch brush extending within the arcual paths of said contacts said third switch brush constituting the positive terminal of the working circuit.

9. In a reversible dynamo, an automatic switch gear comprising a rocking support, commutator brush holders on the support, brushes in the holders, switch parts on said support, interchangeable contacts mounted on the switch parts, coöperative contacts mounted in the paths of respective switch parts, and electromagnetic means operative upon said support in the same direction as the support is operated by the engagement of the brushes with the commutator.

10. In a reversible dynamo, a brush rocker frame, commutator brushes thereon, insulated switch contacts on said frame and in electrical connection with respective commutator brushes, liners removably arranged on said switch contacts, a switch brush fixed on said dynamo and having arms extending within the arcual paths of said contacts, said brush constituting a positive terminal of the shunt field winding, an electro-magnet operative upon said rocker frame in the same sense as said frame is influenced by the engagement of its brushes with the commutator in either direction of running the windings of said magnet being in the circuit of the shunt field winding, a working circuit, a second switch brush fixed on said dynamo and having arms extending within the arcual paths of said contacts, said brush being oppositely disposed to the first switch brush and constituting a negative terminal of both the shunt field winding and of the working circuit, and a third switch brush arranged alongside the first switch brush and having arms shorter than those of the first switch brush extending within the arcual paths of said contacts, said third switch brush constituting the positive terminal of the working circuit.

11. In a reversible dynamo, a rocking reversing switch comprising two oscillatory contacts connected with respective commutator brushes, electromagnetic means operative upon said rocking switch in unison with the influence of the frictional engagement of the brushes with the commutator in either direction of running, a double switch brush arranged on one side of the commutator and having its ends in the paths of respective contacts and constituting a terminal of the shunt field winding circuit in which is included said electromagnetic means, a second double switch brush having its ends in the paths of respective contacts but arranged on the opposite side of the commutator constituting a negative terminal of the shunt circuit and of the working circuit, a pair of switch brushes insulated from one another and placed alongside the first switch brush each member of said pair of brushes adapted to be connected with the positive pole of a respective accumulator battery, and a double switch brush constituting a positive terminal of the consuming circuit and adapted to make contact with both members of said pair of brushes in the stationary condition of the dynamo, one member of said pair being moved away from the last named double brush upon the attainment of a predetermined speed, substantially as set forth.

12. In a reversible dynamo, a rocking reversing switch comprising two oscillatory contacts connected with respective commutator brushes, electro-magnetic means operative upon said rocking switch in unison with the influence of the frictional engagement of the brushes with the commutator in either direction of running, a double switch brush arranged on one side of the commutator and having its ends in the paths of respective contacts and constituting a terminal of the shunt field winding circuit in which is included said electro magnetic means, a working circuit, a second double switch brush having its ends in the paths of respective contacts, but arranged on the opposite side of the commutator constituting a negative terminal of the shunt circuit and of the working circuit, a pair of switch brushes insulated from one another and placed alongside the first switch brush each member of said pair of brushes adapted to be connected with the positive pole of a respective accumulator battery, a consuming circuit, and a double switch brush constituting a positive terminal of the consuming circuit and adapted to make contact with both members of said pair of brushes in the stationary condition of the dynamo, one member of said pair being moved away from the last named double brush upon the attainment of a predetermined speed.

13. In apparatus of the class described, a switch gear comprising in combination, contacts, switch parts therefor, means having frictional engagement with a rotating part of the dynamo for moving said switch parts in a direction corresponding to the direction of the rotation of said rotating part, and a second means for imparting additional corresponding movement to effect the closing of a circuit.

14. In apparatus of the class described, a switch gear comprising in combination, contacts, switch parts therefor, means operated by a rotating part of the dynamo for moving said switch parts in a direction the same as the direction of movement of said rotating part, and a second means for positively imparting additional corresponding movement to effect the closing of a circuit.

15. In apparatus of the class described, a switch gear comprising in combination, contacts, switch parts therefor, means operated by a rotating part of the dynamo for moving said switch parts in a direction the same as the direction of movement of said rotating part, and a second means for positively imparting additional corresponding movement to effect the closing of a circuit.

16. In a reversing dynamo, an automatic switch gear operable from a rotating part of the dynamo in either direction of running and carrying two sets of switch parts for closing two circuits, one set being in advance of the other and relatively movable with respect thereto whereby the circuits may be successively closed.

17. In a reversing dynamo, an automatic switch gear operable from a rotating part of the dynamo in either direction of running and carrying two sets of switch parts for closing two circuits, one set being yieldingly in advance of the other whereby the circuits may be successively closed.

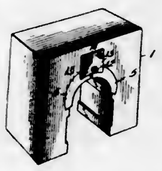
18. In apparatus of the class described, a switch gear comprising a rocking support carrying switch parts and provided with a pair of spaced armatures, means for imparting an initial movement to the rocking support in either direction of running, and an electro-magnet intermediate the armatures for imparting an additional corresponding movement to said support.

19. In apparatus of the class described, a reversing switch gear comprising a rocking support carrying switch parts and provided with a pair of spaced armatures, a circuit, means for imparting an initial movement to the rocking support in either direction of running to close said circuit, and an electro-magnet in said circuit and located intermediate said armatures for imparting an additional corresponding movement to said support.

20. In a reversing dynamo, an automatic reversing switch gear comprising a rocking support, means for rocking said support from a rotating part of the dynamo in either direction of running, said support being provided with a pair of opposed armatures and carrying switch parts, a circuit closed by switch parts on said support upon rotation of the dynamos, and an electro-magnet in said circuit located intermediate said armatures for imparting an additional movement to said support upon the closing of said circuit.

21. In apparatus of the character described, a dynamo, a switch gear operable from a rotating part of the dynamo and carrying two sets of switch parts for closing two circuits, one set being in advance of the other and relatively movable with respect thereto whereby the circuits may be successively closed.

14,275. ADJUSTABLE LOCOMOTIVE DRIVING-BOX BRASS. GEORGE HENRY LANGTON, Portsmouth, Va., assignor of one-half to J. W. Small, Portsmouth, Va. Filed Aug. 31, 1916. Serial No. 117,962. Original No. 1,150,375, dated Aug. 17, 1915, Serial No. 874,561, filed Nov. 28, 1914. (Cl. 64—20.)



1. A driving box having a seat and opposed shoulders at the sides of the seat, a sectional driving brass fitted within the seat and upon the said shoulders and having portions removed from adjacent edges to form a longitudinally tapered channel, a longitudinally tapered wedge fitted in the tapered channel and disposed wholly within the inner and outer faces of the driving brass to move freely longitudinally and laterally with reference to the seat to equalize the lateral pressure on the driving brass

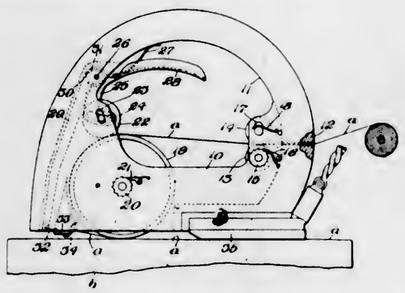
sections, and means for moving the wedge longitudinally and holding the same in the adjusted position.

2. A driving box having a seat and opposed shoulders at the sides of the seat, a sectional driving brass fitted within the seat and upon the said shoulders and having longitudinal portions removed from the outer adjacent corners to form a longitudinally tapered channel of uniform depth adjacent the seat, a wedge of uniform thickness and tapering in width throughout its length and disposed in said longitudinally tapered channel to move freely on the seat laterally and longitudinally to equalize the lateral pressure on the driving brass sections, and means coacting with the wedge and box to draw the wedge into the channel to press the driving box sections apart and hold said wedge in the adjusted position.

3. A driving box having a seat and opposed shoulders at the sides of the seat, a sectional driving brass fitted within the seat and upon the said shoulders and having longitudinal corner portions of adjacent sections next the seat removed to form a longitudinally tapered channel which is closed by the seat, a plate secured to a side of the driving box and projecting beyond the seat to overhang the smaller end of the tapered channel and the ends of the driving brass sections, said plate having an opening in line with the tapered channel, a wedge inserted in the tapered channel and freely movable laterally and longitudinally on the seat to equalize the lateral pressure on the driving brass sections, said wedge having a threaded stem at its smaller end to pass through the opening of the plate, and a nut mounted upon the projecting portion of the threaded stem and engaging the plate to draw the wedge into the tapered channel to press the driving brass sections apart and hold them firmly against the seat and upon the said shoulders.

4. In a device of the character described, the combination with a box having a seat; of a sectional brass fitting against said seat, the meeting edges of the sections being recessed longitudinally thereof to thereby form a channel tapered in the direction of the length of said sections; a wedge fitting within said channel and adapted to be moved longitudinally and laterally therein to thereby effect an equalized separating pressure on the brass sections; and means for adjusting the position of said wedge and to retain it in adjusted position.

14,276. SEALING-MACHINE. JOHN MACLAURIN, Brookfield, Mass. Filed Jan. 29, 1917. Serial No. 145,303. Original No. 1,196,796, dated Sept. 5, 1916, Serial No. 35,947, filed June 23, 1915. (Cl. 216—22.)



1. A hand operated machine for applying sealing tape in indeterminate lengths comprising a hand grip having a heat applying device adapted to be moved progressively over a strip, and means to guide a sealing strip from an exterior main supply to a point to receive said heat applying device.

2. A hand operated machine for applying sealing tape in indeterminate lengths comprising a hand grip having a fixed heat applying presser element, and means to guide a sealing strip from a main supply exterior of said grip, through said grip to a point to receive the pressure of said heat applying element in the progressive movement of said machine.

3. A hand operated machine for applying sealing tape in indeterminate lengths comprising a hand grip having a base constituted in part by a heat applying element, and having a strip guiding means mounted between said element and the forward end of said base.

4. A hand operated machine for applying sealing tape by progression of said machine over the tape, comprising a frame having a hand grip, a heater element carried by said frame, means to guide the tape to position to receive said heating element in the progression of the machine, and a manually operated tape severing device.

5. A hand operated machine for applying sealing tape in indeterminate lengths comprising means for progressively withdrawing the tape from a main source of supply as the machine is moved and guiding it into operative position, and a heat applying element which sets the tape thus positioned.

6. A hand operated machine for applying sealing tape comprising a frame having a hand grip, a roller for progressively withdrawing the tape from a main source of supply and guiding it into operative position, a heater element which sets the tape thus positioned and a manually operated severing device.

7. A hand operated machine for applying sealing tape in indeterminate lengths comprising a hand grip having a presser and feeding roller, a severing device, and means normally acting to maintain a tape in feeding relation with said feeding roller and operable with said severing device to release said tape.

8. A hand operated machine for applying sealing tape in indeterminate lengths comprising a hand grip having a heat applying means, a tape feeding device, a tape severing device, a tape checking means, and means to simultaneously operate said severing device in the active direction and a member of said feeding device to an inoperative position.

9. A hand operated machine for applying adhesive sealing tape in indeterminate lengths comprising means operated by the progression of the machine for drawing sealing tape from a source of supply exterior of the machine and for delivering said tape in position with its adhesive against the article to which it is to be affixed, and a heater following the tape as positioned to supply heat to said adhesive.

10. In a sealing machine, a frame, an applying roller journaled therein, a pressure roller co-acting with said applying roller for advancing a sealing tape, a cutter for severing the tape, a heater for softening the adhesive surface of the sealing tape, and a lever for moving the pressure roller to spaced relation with respect to said applying roller and simultaneously actuating said cutter.

11. In a sealing machine, a frame, an applying roller journaled therein, said applying roller being restricted to rotation in one direction, a pressure roller co-acting with said applying roller for advancing a sealing tape, a cutter for severing the tape, a heater for softening the adhesive surface of the sealing tape, and checking rollers for preventing withdrawal of the sealing tape from the frame.

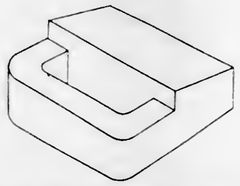
12. In a sealing machine, a frame, an applying roller journaled in said frame having restricted rotation to one direction, a pressure roller co-acting with said applying roller for advancing a sealing tape, means for releasing said pressure roller from engagement with said applying roller, and checking rollers for engagement with the sealing tape, for preventing withdrawal of the sealing tape from said frame.

13. In a sealing machine, a frame, an applying roller journaled therein for rotation in one direction, a pressure roller co-acting therewith for advancing a sealing tape, a cutter for severing the tape after passing between the applying and pressure rollers, a manually operated lever having cam slots formed therein for moving said pressure roller from co-acting relation with said applying roller, and an arm actuated by said lever for actuating said cutter.

14. In a sealing machine, a frame, an applying roller journaled therein for rotation in one direction, checking rollers journaled in said frame to receive a web of sealing tape therebetween, a pressure roller carried by said frame co-acting with said applying roller, said pressure roller being journaled in slots radially disposed with respect to said applying roller, a lever fulcrumed to said frame, said lever supporting arms which straddle said pressure roller, said arms of said lever being slotted eccentrically with respect to the fulcrum for said lever, said slotted arms also supporting said pressure roller, a cutter carried by said frame, an arm connected to said cutter, said arm being actuated by said lever upon compression of a limited movement of said lever and a heating element carried by said frame to overlie a sealing tape supplied by said applying roller to soften the adhesive surface of said sealing tape.

DESIGNS.

50,457. GRAVE-MARKER. GEORGE F. AICHELE, Fort Wayne, Ind. Filed Nov. 13, 1916. Serial No. 131,152. Term of patent 3½ years.



The ornamental design for a grave marker as shown.

50,458. GLASS ARTICLE. FRED L. ANDREWS, Beaver, Pa., assignor to H. C. Fry Glass Company, Rochester, Pa., a Corporation of Pennsylvania. Filed Jan. 15, 1916. Serial No. 72,357. Term of patent 14 years.



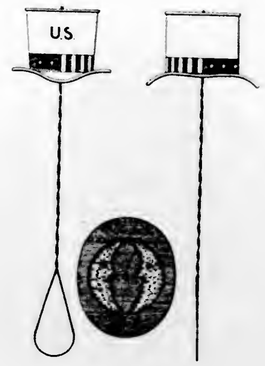
The ornamental design for a glass article, substantially as shown and described.

50,459. GLASS ARTICLE. FRED L. ANDREWS, Beaver, Pa., assignor to H. C. Fry Glass Company, Rochester, Pa., a Corporation of Pennsylvania. Filed Jan. 19, 1916. Serial No. 73,078. Term of patent 14 years.



The ornamental design for a glass article, substantially as shown and described.

50,460. TOY RATTLER. GUSTAV A. BAEHR, Baltimore, Md., assignor to Hermine Baehr, Baltimore, Md. Filed Jan. 13, 1917. Serial No. 142,327. Term of patent 7 years.



The ornamental design for a toy rattler, as shown.

50,461. RING OR SIMILAR ARTICLE. MARTIN L. BOWDEN and MARTIN L. BOWDEN, Jr., Brooklyn, N. Y. Filed Jan. 26, 1917. Serial No. 144,787. Term of patent 7 years.



The ornamental design for a ring or similar article as shown.

50,462. ELECTRICAL-CONDUIT FITTING. JOHN C. BOYTON, Cleveland, Ohio. Filed Jan. 26, 1917. Serial No. 144,792. Term of patent 14 years.



The ornamental design for an electrical conduit fitting as shown.

50,463. GLASS PLATE OR SIMILAR ARTICLE. FLOYD F. CARY, Fairhaven, Mass., assignor to The Fairpoint Corporation, a Corporation of Massachusetts. Filed Dec. 2, 1916. Serial No. 134,779. Term of patent 7 years.



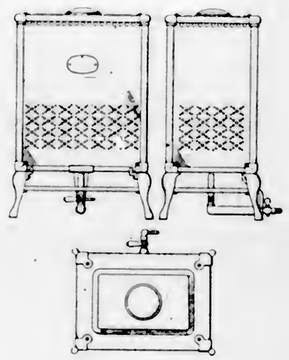
The ornamental design for a glass plate or similar article substantially as shown and described.

50,464. PLATE OR SIMILAR ARTICLE. SYDNEY DEAN, Stoke-Upon-Trent, England, assignor to William S. Pitcairn Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 25, 1917. Serial No. 144,541. Term of patent 3½ years.



The ornamental design for a plate or similar article, as shown.

50,465. STOVE. WILLIAM F. DEWEY, Kansas City, Mo. Filed Dec. 16, 1916. Serial No. 137,457. Term of patent 14 years.



The ornamental design for a stove, as shown.

50,466. SALT-CELLAR, BOTTLE, OR SIMILAR ARTICLE. THOMAS A. DE VILBISS, Toledo, Ohio, assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed June 16, 1916. Serial No. 104,113. Term of patent 14 years.

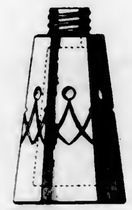




The ornamental design for a salt cellar, bottle or similar article, substantially as shown.

50,467. SALT-CELLAR, BOTTLE, OR SIMILAR ARTICLE. THOMAS A. DE VILBISS, Toledo, Ohio, assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed June 16, 1916. Serial No. 104,115. Term of patent 14 years.





The ornamental design for a salt cellar, bottle, or similar article substantially as shown.

50,468. SLIPPER-TREE AND DRESS-HANGER. LOUIE NAOMI DOUD, Norwalk, Ohio. Filed Dec. 4, 1916. Serial No. 135,057. Term of patent 3½ years.



The ornamental design for a slipper-tree and dress-hanger, as shown.

50,469. LAUNDRY-BAG. PETER J. EISEMANN, Brooklyn, N. Y. Filed Jan. 27, 1917. Serial No. 145,013. Term of patent 7 years.



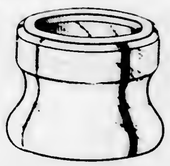
The ornamental design for a laundry bag as shown.

50,470. BADGE. HERBERT R. TERRYBERRY, Grand Rapids, Mich. Filed Jan. 29, 1917. Serial No. 145,336. Term of patent 3½ years.



The ornamental design for a badge as shown.

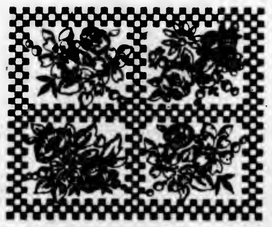
50,471. MORTAR. FRANK L. GRIER, Milford, Del., assignor to The L. D. Caulk Co., Milford, Del., a Corporation of Delaware. Filed June 10, 1916. Serial No. 103,042. Term of patent 3½ years.





The ornamental design for a mortar, as shown.

50,472. CRETONNE, SILK, TAPESTRY, WALL-PAPER, OR PRINT GOODS. ROBERT GRIFFIN, New York, N. Y., assignor to The Robert Griffin Co., New York, N. Y., a Corporation of New York. Filed Nov. 4, 1916. Serial No. 129,618. Term of patent 7 years.



The original design for "cretonne, silk, tapestry, wall paper or print goods" as shown in the drawing.

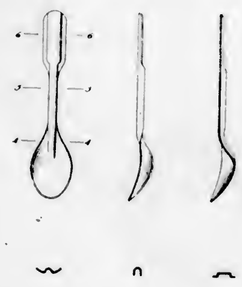
50,473. SHOE-FASTENER. BERNARD HELD, Philadelphia, Pa. Filed July 14, 1916. Serial No. 109,399. Term of patent 14 years.





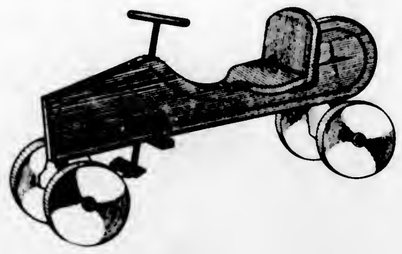
The ornamental design for a shoe fastener, as shown and described.

50,474. PAPER SPOON. LEO D. JACOBY, Boston, Mass., assignor to The Sanispoon Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 27, 1916. Serial No. 133,789. Term of patent 14 years.



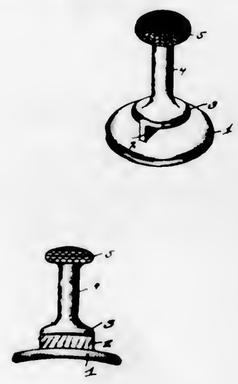
The ornamental design for a paper spoon as shown.

50,475. VEHICLE. FRANK E. KEHL, Connersville, Ind., assignor to The Dan Patch Novelty Company, Connersville, Ind., a Copartnership composed of said Kehl, E. W. Ansted, and George W. Ansted. Filed Dec. 6, 1916. Serial No. 135,509. Term of patent 7 years.



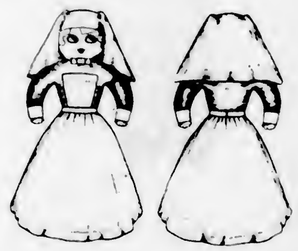
The ornamental design for a vehicle, as shown.

50,476. COLLAR-BUTTON. WILLIAM M. LARRABEE, Waupun, Wis. Filed Dec. 15, 1916. Serial No. 137,272. Term of patent 14 years.



The ornamental design for a collar button, as shown and described.

50,477. NURSE-DOLL. ELIZABETH EUNICE MERRILL, Los Angeles, Cal. Filed Jan. 25, 1917. Serial No. 144,544. Term of patent 3½ years.



The ornamental design for a nurse doll as shown.

50,478. PHONOGRAPH-CABINET. HORACE C. MOYER, Oak Park, Ill., assignor to The Windsor Furniture Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1917. Serial No. 140,321. Term of patent 14 years.



The ornamental design for a phonograph cabinet as shown.

50,479. PHONOGRAPH-CABINET. HORACE C. MOYER, Oak Park, Ill., assignor to The Windsor Furniture Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1917. Serial No. 140,322. Term of patent 14 years.



The ornamental design for a phonograph cabinet, as shown.

50,480. PHONOGRAPH-CABINET. HORACE C. MOYER, Oak Park, Ill., assignor to The Windsor Furniture Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1917. Serial No. 140,323. Term of patent 14 years.



The ornamental design for a phonograph cabinet as shown.

50,481. PHONOGRAPH-CABINET. HORACE C. MOYER, Oak Park, Ill., assignor to The Windsor Furniture Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1917. Serial No. 140,324. Term of patent 14 years.



The ornamental design for a phonograph cabinet, as shown.

50,482. PHONOGRAPH-CABINET. HORACE C. MOYER, Oak Park, Ill., assignor to The Windsor Furniture Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1917. Serial No. 140,325. Term of patent 14 years.



The ornamental design for a phonograph cabinet as shown.

50,483. PHONOGRAPH-CABINET. HORACE C. MOYER, Oak Park, Ill., assignor to The Windsor Furniture Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1917. Serial No. 140,326. Term of patent 14 years.



The ornamental design for a phonograph cabinet, as shown.

50,484. PHONOGRAPH-CABINET. HORACE C. MOYER, Oak Park, Ill., assignor to The Windsor Furniture Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1917. Serial No. 140,327. Term of patent 14 years.



The ornamental design for a phonograph cabinet, as shown.

50,485. GLASS DISH. JOHN W. MURRAY, Buffalo, N. Y. Filed Mar. 24, 1916. Serial No. 86,513. Term of patent 3½ years.



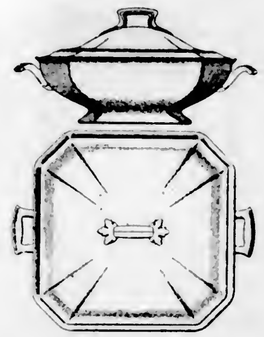
The ornamental design for a glass dish, as shown and described.

50,486. PLATE OR SIMILAR ARTICLE. EDMOND PICAULT. Stoke-upon-Trent, England, assignor to William S. Pitcairn Corporation, New York, N. Y., a Corporation of New York. Filed Jan. 25, 1917. Serial No. 144,545. Term of patent 3½ years.



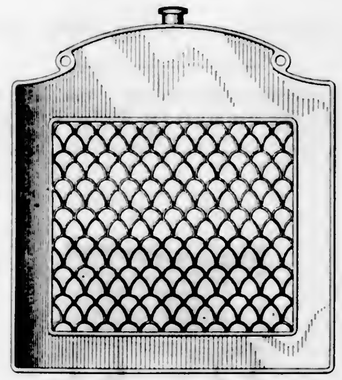
The ornamental design for a plate or similar article as shown.

50,487. COVERED DISH. EDWARD JOHN RIDGWAY, Staten Island, N. Y. Filed Sept. 27, 1916. Serial No. 122,571. Term of patent 7 years.



The ornamental design for a covered dish, as shown.

50,488. AUTOMOBILE-RADIATOR. JAKAB SKANDORA, Flint, Mich. Filed Jan. 3, 1917. Serial No. 140,462. Term of patent 7 years.



The ornamental design for an automobile radiator, as shown.

50,489. PETTICOAT. NELLIE RUTH VIDAVER, New York, N. Y. Filed Jan. 6, 1917. Serial No. 141,051. Term of patent 3½ years.



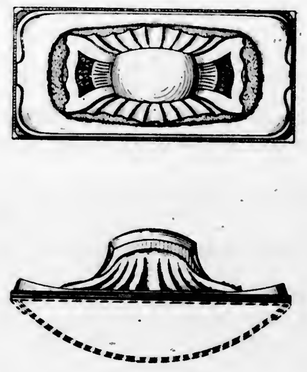
The ornamental design for a petticoat, as shown.

50,490. BACK FOR BLOTTERS, PAPER-WEIGHTS, OR SIMILAR ARTICLES. FRANK YOKEL, Pittsburgh, Pa., assignor to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa. Filed Dec. 2, 1916. Serial No. 134,766. Term of patent 3½ years.



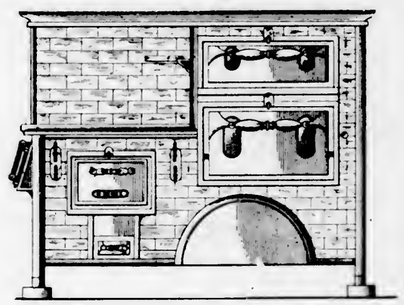
The ornamental design for a back for blotters, paper weights or similar articles, as shown.

50,491. BACK FOR BLOTTERS, PAPER-WEIGHTS, OR SIMILAR ARTICLES. FRANK YOKEL, Pittsburgh, Pa., assignor to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa. Filed Dec. 2, 1916. Serial No. 134,767. Term of patent 3½ years.



The ornamental design for a back for blotters, paper weights or similar articles as shown.

50,492. TILE-STOVE. FERDINAND ZIGANEK, Detroit, Mich. Filed Jan. 29, 1917. Serial No. 145,334. Term of patent 3½ years.



The ornamental design for a tile stove as shown.

TRADE-MARKS

PUBLISHED MARCH 20, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 61,621. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GENANT & FLACHSLAND, Syracuse, N. Y. Filed Feb. 20, 1912.

WAG

Particular description of goods.—Canned Vegetables, Fruits, and Berries, Canned or Boxed Spices, Stuffed and Bottled Olives, Peanut-Butter, Pop-Corn, and Tea.
Claims use since Dec. 1, 1909.

Ser. No. 69,761. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany. Filed Apr. 12, 1913.

Wanderer

Particular description of goods.—Type-Writers, Type-Writer Parts, Type-Writers Combined with Calculating-Machines, Type-Writers Combined with Envelop-Feeders, Type-Writer Copy-Holders as Attachments for Type-Writers, Knife-Erasers, Type-Writer Key-Protectors, Type-Writer Rolls, Type-Writer Release, Type-Writer Tabulators, Type-Writer Keys, Flat-Impression Type-Machines, Polytype Writing-Machines, Ribbon-Winding Machines, Ribbon-Inking Machines, Machines for Cutting Glass Plates, Free-Moving Crown-Gear, Connecting-Rods, Air-Pumps, Oil-Pumps, Bit Braces, Pliers, Files, Shears, Bits, Chisels, Vises, Wrenches, Hammers, Saws, Pocket Knives, Scissors, Screw Drivers, Planes, Machine Tools and Parts Thereof—Namely, Planing, Shaping, and Slotting Machines, Lathes, Drills, Thread-Cutting Machines, Milling-Machines, Grinding-Machines, Sewing-Machines, Wood-Planing Machines, Cutting and Punching Machines, Forging-Machines, Molding and Casting Machines, Wood-Lathes and Copying-Lathes, Wood-Boring Machines, Mortising-Machines, Address-Printing Machines, Envelop Filling and Sealing Machines, Letter-Opening Machines, Coin-Controlled Machines, Adding-Machine Tools, Gut Strings for Type, Bicycle-Tools, Letter-Carriages, Folding Mechanism, Gumming Mechanism, and Binding Mechanism, and Parts of Any and All of the Above Devices and Machines.
Claims use since July, 1886.

Ser. No. 87,499. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) KÖRTING & MATHIESEN AKTIENGESELLSCHAFT, Leutzsch, near Leipzig, Germany. Filed June 22, 1915.

MAGACELLO

Particular description of goods.—Arc-Lamps, Electric Lamps, Their Accessories and Supplies—Namely, Fittings, Resistances, Switches, Suspending Contrivances, Conductor-Couplings, Carbons, and Search-Lights.
Claims use since Sept. 12, 1914.

Ser. No. 92,194. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CARL C. HARRIS, Orange, Mass. Filed Jan. 17, 1916.

RIVETO

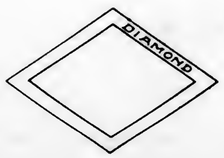
The word "Riveto."
Particular description of goods.—Punches and Pincers.
Claims use since Sept. 15, 1915.

Ser. No. 94,322. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) MARSHALL FIELD & COMPANY, Chicago, Ill. Filed Apr. 11, 1916.

Gloria

Particular description of goods.—Electric Suction-Cleaners.
Claims use since about Oct. 5, 1915.

Ser. No. 95,360. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed May 23, 1916. Under ten-year proviso.



Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since Sept. 2, 1890.

Ser. No. 95,688. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM C. YOUNG, Buffalo, N. Y. Filed June 7, 1916.



Particular description of goods.—Corn-Solvent, Dandruff Remedy, and Headache-Tablets.
Claims use since Apr. 27, 1916.

Ser. No. 96,859. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed July 26, 1916. Under ten-year proviso.

SUNFLOWER

Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since Nov. 13, 1890.

Ser. No. 97,030. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCHUYLER C. BOROM, Minneapolis, Minn. Filed Aug. 2, 1916.

MOTOLIFE

Particular description of goods.—A Chemical to be Placed in Lubricating-Oil to Render the same Non-Combustible. The Said Chemical by Rendering the Lubricating-Oil Non-Combustible Decreases the Formation of Carbon in the Explosive-Chamber of the Engine-Cylinder, and, Moreover, Has Some Sort of Chemical or other Action Which Has Been Found in Practice Will Remove Carbon Deposits from the Electros and other Parts Within the Explosive-Chamber of the Engine-Cylinder.
Claims use since on or about July 19, 1916.

Ser. No. 97,805. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MONO SERVICE CREAM CO., Knoxville, Tenn. Filed Sept. 5, 1916.



Particular description of goods.—Ice-Cream, Butter, Milk, and Sweet Cream.
Claims use since Dec. 1, 1912.

Ser. No. 98,123. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) KATHERINE A. RAUSER, Chicago, Ill. Filed Sept. 20, 1916.

DOLLY MODISTE

Particular description of goods.—Toy Dressmaking Outfit.
Claims use since July 1, 1916.

Ser. No. 98,326. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAVIDSON BAKING CO., Seattle, Wash. Filed Sept. 30, 1916.

HUNKY-DORY

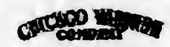
Particular description of goods.—Bread.
Claims use since Nov. 1, 1915.

Ser. No. 98,849. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE M. SMOLENSKY MANUFACTURING CO., Cleveland, Ohio. Filed Oct. 23, 1916.



Particular description of goods.—Metallic Rotary Suction-Valves, and Metallic Rotary Check-Valves.
Claims use since May 1, 1916.

Ser. No. 98,940. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CHICAGO VARNISH COMPANY, Chicago, Ill. Filed Oct. 28, 1916. Under ten-year proviso.



Particular description of goods.—Varnish, Paint, Dry, Paste, Red-Mixed, and Ceramic, Shellac-Varnish, Japan, Enamel, Stains, and Fillers.
Claims use since the year 1883.

Ser. No. 99,087. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HEZEL MILLING COMPANY, East St. Louis, Ill. Filed Nov. 4, 1916.



Particular description of goods.—Self-Rising Wheat-Flour.
Claims use since Aug. 21, 1916.

Ser. No. 99,137. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SENGER DRUG CO., Danville, Ill. Filed Nov. 6, 1916. Under ten-year proviso.



Particular description of goods.—Antiseptic Liniment for Sprains, Stiff Joints, Bruises, Rheumatism, Neuralgia, and Similar Ailments.
Claims use since Oct. 1, 1885.

Ser. No. 99,365. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WORDEN GROCER COMPANY, Grand Rapids, Mich. Filed Nov. 17, 1916.

"Quaker"

Particular description of goods.—Canned Vegetables.
Claims use since Oct. 1, 1887.

Ser. No. 99,772. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PANAMA RICE MILLING CO., New Orleans, La. Filed Dec. 7, 1916.



Particular description of goods.—Rice.
Claims use since Jan. 5, 1916.

Ser. No. 99,811. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ARTHUR S. FERGUSON, Springfield, Mo. Filed Dec. 9, 1916.

Moviescope

Comprising the word "Moviescope."
Particular description of goods.—Toy Moving-Picture Machines.
Claims use since Oct. 1, 1916.

Ser. No. 99,844. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JANE GRAY CO., New York, N. Y. Filed Dec. 11, 1916.

"KUDDLES"

Comprising the word "Kuddles."
Particular description of goods.—Dolls.
Claims use since September, 1915.

Ser. No. 99,866. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STUTTGART RICE MILL COMPANY, Stuttgart, Ark. Filed Dec. 11, 1916.



Particular description of goods.—Rice, Rice-Bran, and Rice-Polish Used for a Stock Food.
Claims use since July 1, 1916.

Ser. No. 99,913. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BEELAND-NICHOLSON WHOLESALE CO., INC., Greenville, Ala. Filed Dec. 14, 1916.



Particular description of goods.—Wheat-Flour.
Claims use since Nov. 13, 1916.

Ser. No. 99,941. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HAROLD KORN, New York, N. Y. Filed Dec. 14, 1916.

La Gaiete

Comprising the words "La Gaiete."
Particular description of goods.—Toilet Preparations—viz., Face-Powder, Liquid Face Powder and Cream.
Claims use since Dec. 5, 1916.

Ser. No. 100,143. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) DE WANE B. SMITH, Utica, N. Y. Filed Dec. 23, 1916.

SWEET BABEE

Particular description of goods.—Nursers, Nursing-Bottles, and Rubber Nipples.
Claims use since Sept. 1, 1907.

Ser. No. 100,169. (CLASS 2. RECEPTACLES.) HOLCOMB & HOKE MFG. CO., Indianapolis, Ind. Filed Dec. 26, 1916.

ButterKist

Particular description of goods.—Peanut-Bags.
Claims use since Sept. 1, 1916.

Ser. No. 100,172. (CLASS 39. CLOTHING.) KING & APPLEBAUM, New York, N. Y. Filed Dec. 26, 1916.

Virginia Dare

Comprising the name "Virginia Dare."
Particular description of goods.—Women's, Misses', and Children's Dresses, Suit-Dresses, and Coat-Dresses, Silk Slips and Underskirts.
Claims use since Dec. 15, 1916.

Ser. No. 100,303. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) NATIONAL PAPER PRODUCTS COMPANY, San Francisco, Cal. Filed Jan. 2, 1917.

ZELCO

Particular description of goods.—Floor Dressings and Polishes.
Claims use since Nov. 23, 1916.

Ser. No. 100,342. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEATTLE GRAIN CO., Seattle, Wash. Filed Jan. 3, 1917.

SPRING BLOSSOM

Particular description of goods.—Wheat-Flour.
Claims use since Oct. 25, 1916.

Ser. No. 100,382. (CLASS 15. OILS AND GREASES.) SPEEDWAY MOTOR OIL CO., New York, N. Y. Filed Jan. 5, 1917.



The mark being colored red.
Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since Dec. 20, 1916.

Ser. No. 100,413. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE ADAMS-BAGNALL ELECTRIC CO., Cleveland, Ohio. Filed Jan. 8, 1917.

AB OLITE

Particular description of goods.—Electric Lamps and Parts Thereof.
Claims use since about Jan. 1, 1912.

Ser. No. 100,536. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MIN-NIX COMPANY, Rochester, N. Y. Filed Jan. 11, 1917.

MIN-NIX

Particular description of goods.—Artificial Lures—viz., Spoons, Wabblers, and Spinners.
Claims use since Apr. 1, 1916.

Ser. No. 100,542. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BOOTT MILLS, Lowell, Mass. Filed Jan. 12, 1917. Under ten-year proviso.

BOOTT

Particular description of goods.—Cotton Piece Goods.
Claims use since March, 1882.

Ser. No. 100,755. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SAMSTAG & HILDER BROS., New York, N. Y. Filed Jan 19, 1917.

Daisy

Particular description of goods.—Dress-Fasteners and Snap-Fastners.
Claims use since Jan. 6, 1917.

Ser. No. 100,790. (CLASS 15. OILS AND GREASES.) AREA MANUFACTURING CO., Chicago, Ill. Filed Jan. 22, 1917.



Particular description of goods.—A Lubricating Compound.
Claims use since Jan. 6, 1917.

Ser. No. 100,837. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE J. B. WILLIAMS COMPANY, Glastonbury, Conn. Filed Jan. 22, 1917.

Nursery Zoo

Particular description of goods.—Soap.
Claims use since Jan. 9, 1917.

Ser. No. 100,838. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) YORKSHIRE CREAMERY CO., Ottumwa, Iowa. Filed Jan. 22, 1917.

Yorkshire Farm

Particular description of goods.—Creamery-Butter.
Claims use since Dec. 11, 1916.

Ser. No. 100,939. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SOUTHERN RAILWAY SUPPLY AND EQUIPMENT CO., St. Louis, Mo. Filed Jan. 25, 1917.

PINE RIDGE

Particular description of goods.—All Saws, Chisels, Hatchets, Files, Axes, and Adzes.
Claims use since Jan. 1, 1916.

Ser. No. 101,069. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE POMPEIAN MFG. CO., Cleveland, Ohio. Filed Jan. 31, 1917.

POMPEIAN

Particular description of goods.—Tooth-Paste and Beauty Powder—viz., Face and Toilet Powder.
Claims use since 1907.

Ser. No. 101,195. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HENRY SIEBEN, Kansas City, Mo. Filed Feb. 6, 1917.

"SNOW WHITE"

Particular description of goods.—Dolls.
Claims use since Jan. 26, 1917.

Ser. No. 101,207. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Feb. 7, 1917.

NEPTUNE

Particular description of goods.—Gasolene, Naphtha, Benzin, Kerosene, Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since on or about Jan. 1, 1900 or 1901.

Ser. No. 101,209. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DUDLEY D. CAMPBELL, New York, N. Y. Filed Feb. 7, 1917.

201

Comprising the numerals "201."
Particular description of goods.—Cotton Damasks, Napkins, Table-Cloths, and Cotton Piece Goods.
Claims use since Dec. 4, 1911.

Ser. No. 101,217. (CLASS 38. PRINTS AND PUBLICATIONS.) TOEPFER & SCHROFF, INC., New York, N. Y. Filed Feb. 7, 1917.

HELLO SPORT

Particular description of goods.—Designs for Print-Cloth, Wall-Paper, and the like.
Claims use since Jan. 10, 1917.

Ser. No. 101,230. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MOSES HERZOG, New York, N. Y. Filed Feb. 8, 1917.

"JANNETTA"

Particular description of goods.—Hair-Nets.
Claims use since about Feb. 1, 1917.

Ser. No. 101,357. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FORSTMANN & HUFFMANN CO., Passaic, N. J. Filed Feb. 14, 1917.

Berenice

Comprising the word "Berenice."
Particular description of goods.—Woolen and Worsted Piece Goods.
Claims use since January, 1917.

Ser. No. 101,358. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FORSTMANN & HUFFMANN CO., Passaic, N. J. Filed Feb. 14, 1917.

Amoretta

Comprising the word "Amoretta."
Particular description of goods.—Woolen and Worsted Piece Goods.
Claims use since January, 1917.

Ser. No. 101,359. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FORSTMANN & HUFFMANN CO., Passaic, N. J. Filed Feb. 14, 1917.

Zenobia

Comprising the word "Zenobia."
Particular description of goods.—Woolen and Worsted Piece Goods.
Claims use since January, 1917.

Ser. No. 101,361. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FORSTMANN & HUFFMANN CO., Passaic, N. J. Filed Feb. 14, 1917.

Evora

Comprising the word "Evora."
Particular description of goods.—Woolen and Worsted Piece Goods.
Claims use since January, 1917.

Ser. No. 101,363. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) EMIL GROSSMAN MANUFACTURING CORPORATION, Brooklyn, N. Y. Filed Feb. 14, 1917.

Vitristone

Particular description of goods.—Spark-Plugs.
Claims use since about Oct. 2, 1916.

Ser. No. 101,379. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE CUSSINS & FEARN CO., Columbus, Ohio. Filed Feb. 15, 1917.

HONEST ABE

Particular description of goods.—Wire Fencing.
Claims use since about Jan. 1, 1913.

Ser. No. 101,410. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE TERBETTS & GARLAND STORE, Chicago, Ill. Filed Feb. 15, 1917.

ThreeKings

Particular description of goods.—Whisky.
Claims use since Jan. 1, 1916.

Ser. No. 101,417. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) WESTERN SCREW & LOCK-NUT CO., San Francisco, Cal. Filed Feb. 15, 1917.



Particular description of goods.—Nuts.
Claims use since December, 1916.

Ser. No. 101,421. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FORSTMANN & HUFFMANN CO., Passaic, N. J. Filed Feb. 16, 1917.
Comprising the word "Gunniburl."

Gunniburl

Particular description of goods.—Woolen and Worsted Piece Goods.
Claims use since September, 1916.

Ser. No. 101,423. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PAUL S. HALPERN, New York, N. Y. Filed Feb. 16, 1917.

SYLPH

Comprising the word "Sylph."
Particular description of goods.—Cotton Piece Goods.
Claims use since Feb. 3, 1917.

Ser. No. 101,444. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JOHN C. HAGAN, Richmond, Va. Filed Feb. 17, 1917.

RITA

Particular description of goods.—Natural and Artificial Mineral Water.
Claims use since June 1, 1916.

Ser. No. 101,625. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y. Filed Feb. 23, 1917.

Kakara

Particular description of goods.—Velvets and Plushes in the Piece.
Claims use since about Dec. 1, 1916.

TRADE-MARK REGISTRATIONS GRANTED

MARCH 20, 1917.

115,873. INTERNAL REMEDY FOR RHEUMATISM, LIVER, KIDNEY, STOMACH, AND BOWEL COMPLAINTS. ALLERHUME REMEDY CO., Rochester, N. Y.
Filed October 19, 1916. Serial No. 98,762. PUBLISHED JANUARY 16, 1917.

115,874. BRACELETS, BELT-BUCKLES MADE OF OR PLATED WITH PRECIOUS METAL, LINK-BUTTONS, LAVALLIÈRES, AND BROOCHES. BATCHELDER MANUFACTURING CO., INC., New York, N. Y.
Filed June 22, 1916. Serial No. 96,044. PUBLISHED NOVEMBER 21, 1916.

115,875. DECORATED BOXES. THE BEAVER COMPANY, Buffalo, N. Y.
Filed December 14, 1916. Serial No. 99,919. PUBLISHED JANUARY 9, 1917.

115,876. DECORATED BOXES. THE BEAVER COMPANY, Buffalo, N. Y.
Filed December 14, 1916. Serial No. 99,923. PUBLISHED JANUARY 9, 1917.

115,877. DRESS, NEGLIGÉE, WORK, AND UNDER SHIRTS. BROWNSTEIN-LOUIS COMPANY, Los Angeles, Cal.
Filed October 14, 1916. Serial No. 98,645. PUBLISHED JANUARY 16, 1917.

115,878. HAIR-OIL. MADAM'S BUFORD & OWENS, Oklahoma, Okla.
Filed November 4, 1916. Serial No. 99,079. PUBLISHED JANUARY 16, 1917.

115,879. HOT-WATER BOTTLES. A. S. CAMPBELL COMPANY, Boston, Mass.
Filed February 19, 1916. Serial No. 92,969. PUBLISHED JANUARY 9, 1917.

115,880. CATAMENIAL SACKS. PHILIP J. CLUNE, Ottawa, Ill.
Filed November 27, 1916. Serial No. 99,567. PUBLISHED JANUARY 9, 1917.

115,881. CERTAIN NAMED CONSTRUCTION MATERIALS. CONSOLIDATED COMPANY, Chicago, Ill.
Filed March 18, 1916. Serial No. 93,635. PUBLISHED JANUARY 9, 1917.

115,882. YELLOW-PINE LUMBER AND TIMBER. EASTMAN, GARDINER & COMPANY, Laurel, Miss.
Filed December 9, 1916. Serial No. 99,810. PUBLISHED JANUARY 9, 1917.

115,883. MEDICINE FOR INDIGESTION. ESSEN REMEDY COMPANY, Newark, N. J.
Filed November 7, 1916. Serial No. 99,148. PUBLISHED JANUARY 16, 1917.

115,884. CHEMICAL COMPOUND USED FOR THE TREATMENT OF TUBERCULOUS DISEASES. FARBWERKE VORM. MEISTER LUCIUS & BRÜNING, Höchst-on-the-Main, Germany.
Filed November 14, 1916. Serial No. 99,296. PUBLISHED JANUARY 16, 1917.

115,885. ADHESIVES, ADHESIVE GUMS, ADHESIVE SIZINGS, INCLUDING FECULOSE. FECULOSE COMPANY OF AMERICA, Worcester, Mass.
Filed November 24, 1916. Serial No. 99,518. PUBLISHED JANUARY 9, 1917.

115,886. GERMICIDE FOR THE TREATMENT OF DISEASES OF THE MUCOUS MEMBRANE AND SKIN. OTTO A. GLESSNER, Chicago, Ill.
Filed March 30, 1916. Serial No. 93,992. PUBLISHED JANUARY 16, 1917.

115,887. HOSIERY. W. T. GRANT COMPANY, New York, N. Y.
Filed November 16, 1916. Serial No. 99,325. PUBLISHED JANUARY 16, 1917.

115,888. WATCHES AND WATCH-MOVEMENTS. THE HAMPDEN WATCH COMPANY, Canton, Ohio.
Filed November 20, 1916. Serial No. 99,407. PUBLISHED JANUARY 9, 1917.

115,889. PREGNANCY-TESTERS. WALTER HÖHN, New York, N. Y.
Filed September 13, 1916. Serial No. 97,974. PUBLISHED JANUARY 9, 1917.

115,890. CHOCOLATES AND BONBONS. IMPERIAL CANDY CO., Seattle, Wash.
Filed November 11, 1916. Serial No. 99,246. PUBLISHED DECEMBER 26, 1916.

115,891. BRASSIÈRES AND CHILDREN'S UNDERWAISTS. KABO CORSET CO., Chicago, Ill.
Filed November 23, 1916. Serial No. 99,505. PUBLISHED JANUARY 16, 1917.

115,892. RUBBER BOOTS AND RUBBER SHOES. LAMBERTVILLE RUBBER COMPANY, Lambertville, N. J.
Filed June 5, 1916. Serial No. 95,627. PUBLISHED JANUARY 16, 1917.

115,893. ROMPERS OR PLAY-SUITS FOR CHILDREN. EMANUEL J. LEVIN, New York, N. Y.
Filed August 18, 1916. Serial No. 97,433. PUBLISHED JANUARY 16, 1917.

115,894. ELECTRIC CLOCKS AND HOROLOGICAL, ASTRONOMICAL, AND NAUTICAL TIMEPIECES AND PARTS AND ATTACHMENTS THEREFOR. MANHATTAN ELECTRICAL SUPPLY COMPANY, Jersey City, N. J., and New York, N. Y.
Filed October 5, 1916. Serial No. 98,440. PUBLISHED JANUARY 9, 1917.

115,895. CHEWING-GUM, CANDY, SWEETMEATS, AND CONFECTIONS. MINT PRODUCTS COMPANY, INCORPORATED, New York, N. Y.
Filed July 15, 1916. Serial No. 96,594. PUBLISHED DECEMBER 26, 1916.

115,896. GOLF-BALLS. MARTINS BIRMINGHAM, LIMITED, Birmingham, England.
Filed October 14, 1916. Serial No. 98,664. PUBLISHED JANUARY 9, 1917.

115,897. FINGER-RINGS. F. H. NOBLE & COMPANY, Chicago, Ill.
Filed October 2, 1915. Serial No. 89,608. PUBLISHED JANUARY 9, 1917.

115,898. SMOKING-PIPES AND MOUTHPIECES. REISS BROTHERS & COMPANY, Chicago, Ill.
Filed September 23, 1916. Serial No. 98,196. PUBLISHED JANUARY 9, 1917.

115,899. JAPANESE CRAPES AND CHINESE SILKS IN THE PIECE. THE ROSENBERG-NEUGASS CO., INC., New York, N. Y.
Filed November 11, 1916. Serial No. 99,258. PUBLISHED JANUARY 16, 1917.

115,900. MALT BEVERAGE. RUFF'S BREWING CO., Quincy, Ill.
Filed November 13, 1916. Serial No. 99,283. PUBLISHED JANUARY 16, 1917.

115,901. GRAMOPHONES, PHONOGRAPHS, AND RECORDS FOR THE SAME. BARNETT SAMUEL & SONS, LTD., London, England.
Filed November 18, 1916. Serial No. 99,389. PUBLISHED JANUARY 2, 1917.

115,902. LEATHER SHOES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed December 15, 1916. Serial No. 99,971. PUBLISHED JANUARY 16, 1917.

115,903. ECZEMA REMEDY. STAR ECZEMA CO., Corsicana, Tex.
Filed November 13, 1916. Serial No. 99,285. PUBLISHED JANUARY 16, 1917.

115,904. BEVERAGE THAT IS CARBONATED AND SOLD AS A SOFT DRINK AND SYRUP FOR THE MANUFACTURE OF THE SAME. VIRGINIA BEVERAGE CORPORATION, Salem, Va.
Filed September 18, 1916. Serial No. 98,069. PUBLISHED JANUARY 16, 1917.

115,905. WOODEN BASKETS, WOODEN TILLS FOR SHIPPING FRUITS AND VEGETABLES, WOODEN CRATES. VIRGINIA MANUFACTURING CO., Norfolk, Va.
Filed November 8, 1916. Serial No. 99,179. PUBLISHED JANUARY 9, 1917.

115,906. MEDICINAL PREPARATION FOR TREATMENT OF THE EYES. VIROCULIN CO., Waterbury, Conn.
Filed November 3, 1916. Serial No. 99,072. PUBLISHED JANUARY 16, 1917.

115,907. CIGARETTE-PAPER. WALDES & CO., Prague-Wrschowitz, Austria-Hungary.
Filed November 22, 1916. Serial No. 99,490. PUBLISHED JANUARY 9, 1917.

115,908. WOOLEN GOODS IN THE PIECE. WORUMBO MANUFACTURING COMPANY, Lisbon Falls, Me.
Filed November 17, 1916. Serial No. 99,366. PUBLISHED JANUARY 16, 1917.

115,909. PICTURE-CORD, WIRE ROPES AND CABLES. WRIGHT WIRE COMPANY, Worcester, Mass.
Filed March 6, 1916. Serial No. 93,349. PUBLISHED JANUARY 9, 1917.

TRADE-MARK REGISTRATIONS CANCELED.

104,750. BLUING. RECKITTS (U. S. A.) LTD., New York, N. Y., and New Brunswick, N. J.
Registered June 15, 1915. Canceled February 27, 1917.

108,758. EXTERNAL-TREATMENT SALVE FOR ALL CONGESTION AND INFLAMMATION OF CERTAIN NAMED ORGANS. THE VICK CHEMICAL CO., Greensboro, N. C.
Registered February 22, 1916. Canceled March 1, 1917.

114,826. DRIERS FOR DRIVING OFF FREE MOISTURE FROM VARIOUS MATERIALS. RUGGLES-COLES ENGINEERING CO., New York, N. Y.; Chicago, Ill., and York, Pa.
Registered January 2, 1917. Canceled February 27, 1917.

LABELS

PUBLISHED MARCH 20, 1917.

19,959.—*Title:* "CANVAS BACK PATCHING STOCK." (For Tire-Repair Material.) THE BECKLEY-RALSTON CO., Chicago, Ill. Filed January 24, 1917.

19,960.—*Title:* "PLATES FOR STOCK TAGS." (For Tags for Live Stock to Indicate That They Have Been Tested for Various Diseases.) ATVILL BYRD, Kansas City, Mo. Filed February 26, 1917.

19,961.—*Title:* "GOLD MEDAL STEEL CUT COFFEE." (For Coffee.) THE CALDWELL COFFEE CO., Duluth, Minn. Filed March 6, 1917.

19,962.—*Title:* "CALDWELL'S AROMA GOLDEN BLEND COFFEE." (For Coffee.) THE CALDWELL COFFEE CO., Duluth, Minn. Filed March 6, 1917.

19,963.—*Title:* "CALDWELL'S AROMA ELECTRIC CUT COFFEE." (For Coffee.) THE CALDWELL COFFEE COMPANY, Duluth, Minn. Filed March 6, 1917.

19,964.—*Title:* "AROMA GOLD MEDAL COFFEE." (For Coffee.) THE CALDWELL COFFEE CO., Duluth, Minn. Filed March 6, 1917.

19,965.—*Title:* "MOOSE BRAND COFFEE." (For Coffee.) THE CALDWELL COFFEE CO., Duluth, Minn. Filed March 6, 1917.

19,966.—*Title:* "CALDWELL'S DINNER CUP BLEND COFFEE." (For Coffee.) THE CALDWELL COFFEE CO., Duluth, Minn. Filed March 6, 1917.

19,967.—*Title:* "STAR DUST." (For Silver-Cleaner.) CENTRAL MFG. CO., Kansas City, Mo. Filed February 26, 1917.

19,968.—*Title:* "FOUNTAIN BRAND BATHING SODA." (For Bathing-Soda.) DAVIS & CO., New York, N. Y. Filed February 28, 1917.

19,969.—*Title:* "CHICK-ADEE." (For Candies.) FARLEY CANDY COMPANY, Chicago, Ill. Filed February 23, 1917.

19,970.—*Title:* "BR'ER RABBIT." (For Candies.) FARLEY CANDY COMPANY, Chicago, Ill. Filed February 23, 1917.

19,971.—*Title:* "SNAPFAST." (For Garment-Fasteners.) THE GOEDECKE SPECIALTY MANUFACTURING COMPANY, Cleveland, Ohio. Filed March 3, 1917.

19,972.—*Title:* "FIR BALM EMULSION." (For a Remedy for the Treatment of Coughs, Colds, Hoarseness, and all Affections of the Throat and Lungs.) CHARLES R. HILLBERG, Campello, Mass. Filed February 9, 1917.

19,973.—*Title:* "BETSY ROSS." (For Bread.) THE H. KORN BAKING CO., Davenport and Clinton, Iowa. Filed February 23, 1917.

19,974.—*Title:* "HEBREW WORDS READING: 'TUV (GOOD) VENOOIM (SWEET) KOSHER (KOSHER) CHAMEN (OIL).'" (For Cotton-Seed Oil.) SZAIA LEIBSIGER, Brooklyn, N. Y. Filed December 18, 1916.

19,975.—*Title:* "MAID MARION DRESSES." (For Ladies' Dresses.) MARION DRESS CO., New York, N. Y. Filed February 28, 1917.

19,976.—*Title:* "QUIZZ." (For a Non-Intoxicating Non-Malt Beverage.) THE GEO. WIEDEMANN BREWING COMPANY, Newport, Ky. Filed March 6, 1917.

19,977.—*Title:* "MORRIS MILLER'S ORIGINAL LINIMENT." (For Morris Miller's Original Liniment.) MORRIS MILLER, Chicago, Ill. Filed December 26, 1916.

19,978.—*Title:* "SAN DELCO." (For Cigar-Boxes.) MOELLER & ZAPP, Winona, Minn. Filed January 2, 1917.

19,979.—*Title:* "THE TEA THE RUSSIANS DRINK." (For Tea.) MUSHER & CO., Baltimore, Md. Filed January 27, 1917.

19,980.—*Title:* "WASH-WHITE." (For Clothes-Washing Compound.) THE NATIONAL CLOCK AND MANUFACTURING CO., Chicago, Ill. Filed November 16, 1916.

19,981.—*Title:* "BUNKER HILL VARNISHES." (For Varnish.) NEW ENGLAND OIL, PAINT & VARNISH CO., Everett, Mass. Filed January 22, 1917.

19,982.—*Title:* "ADEL'S RYE BREAD." (For Bread.) NEW YORK GOLDEN STAR BREAD CO. INC., New York, N. Y. Filed January 2, 1917.

19,983.—*Title:* "OKOLENE." (For a Solution for Poison-Oak Infection.) OKOLENE CO., Los Angeles, Cal. Filed February 26, 1917.

19,984.—*Title:* "HYDROPROOF-RACKET-LAK." (For a Finishing Lacquer or Varnish.) PROVIDENCE SPECIALTY COMPANY, Providence, R. I. Filed January 12, 1917.

19,985.—*Title:* "EDELWEISS." (For Cream-Cheese.) THE PURITY CREAM CHEESE CO., Cleveland, Ohio. Filed February 9, 1917.

19,986.—*Title:* "WHITE LABEL 'CUTTERS THAT CUT.'" (For Cutters.) JOHN ROYLE & SONS, Paterson, N. J. Filed January 23, 1917.

19,987.—*Title:* "RED LABEL 'CUTTERS THAT CUT.'" (For Cutters.) JOHN ROYLE & SONS, Paterson, N. J. Filed January 23, 1917.

19,988.—*Title:* "BLUE LABEL 'CUTTERS THAT CUT.'" (For Cutters.) JOHN ROYLE & SONS, Paterson, N. J. Filed January 23, 1917.

19,989.—*Title:* "FAMO." (For Non-Intoxicating Beverage.) JOS. SCHLITZ BREWING CO., Milwaukee, Wis. Filed March 3, 1917.

19,990.—*Title:* "THOMSEN'S ELK." (For Cigars.) THEO. THOMSEN & SON, New York, N. Y. Filed February 21, 1917.

19,991.—*Title:* "TOKO." (For a Non-Intoxicating Beverage.) HENRY WEINHARD ESTATE, Portland, Oreg. Filed February 21, 1917.

19,992.—*Title:* "LUXO." (For a Non-Intoxicating Beverage.) HENRY WEINHARD ESTATE, Portland, Oreg. Filed February 21, 1917.

19,993.—*Title:* "BIG GAME HUNTER." (For a Toy.) THE A. SCHOENHUT COMPANY, Philadelphia, Pa. Filed December 14, 1916.

19,994.—*Title:* "BARMA." (For a Non-Intoxicating Cereal Beverage.) VAL BLATZ BREWING CO., Milwaukee, Wis. Filed February 26, 1917.

19,995.—*Title:* "SANTA BARBARA." (For Canned Sardines.) C. E. VAN LANDINGHAM CO., Los Angeles, Cal. Filed February 27, 1917.

19,996.—*Title:* "MARYLAND FARMS, REGISTERED HOLSTEIN MILK." (For Milk.) DUDLEY E. WATERS, Grand Rapids, Mich. Filed February 10, 1917.

19,997.—*Title:* "DENSERVO." (For Tooth-Paste.) CHARLES W. WESTENFELTER, Springfield, Ohio. Filed February 26, 1917.

PRINTS

PUBLISHED MARCH 20, 1917.

4,643.—*Title:* "AD-EL-ITE MOTOR CARBON REMOVER." (For Carbon-Remover.) ADAMS & ELTING CO., Chicago, Ill. Filed February 28, 1917.

4,644.—*Title:* "BREAKFAST, LUNCHEON AND DINNER ARMOUR'S OATS." (For Armour's Oats.) ARMOUR GRAIN COMPANY, Chicago, Ill. Filed March 2, 1917.

4,645.—*Title:* "ARMOUR'S OATS." (For Armour's Oats.) ARMOUR GRAIN COMPANY, Chicago, Ill. Filed March 2, 1917.

4,646.—*Title:* "THE NEW BRAND VACUUM CLEANER WITH SWEEPER." (For Vacuum-Cleaners.) GEORGE BRAND, Brooklyn, N. Y. Filed December 27, 1916.

4,647.—*Title:* "HERE YOU ARE." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed February 23, 1917.

4,648.—*Title:* "GOODYEAR SERVICE STATION." (For Cushion-Tires.) THE GOODYEAR TIRE & RUBBER COMPANY, Akron, Ohio. Filed February 26, 1917.

4,649.—*Title:* "KRUMBLES—WHOLE WHEAT CEREAL—KRUMBLES IS KELLOGG'S WHOLE DURUM WHEAT FOOD—EVERY SINGLE TINY SHRED IS THOROUGHLY TOASTED. THE FLAVOR IS DELICIOUS." (For a Cereal Breakfast Food.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed January 16, 1917.

4,650.—*Title:* "KRUMBLES—THE STRENGTHENING CEREAL—BETTER THAN ANY OTHER WHEAT FOOD, KRUMBLES GRATIFIES THE PALATE, SATISFIES THE APPETITE AND NOURISHES THE BODY. CHILDREN LIKE KRUMBLES." (For a Cereal Breakfast Food.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed January 16, 1917.

4,651.—*Title:* "KRUMBLES—A GOOD WINTER CEREAL—KRUMBLES IS A STRENGTHENING WINTER CEREAL FOR CHILDREN BECAUSE OF THE RICHNESS OF THE DURUM WHEAT. TRY IT WITH HOT MILK." (For a Cereal Breakfast Food.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed January 16, 1917.

4,652.—*Title:* "LISTERINE." (For Listerine.) LAMBERT PHARMACAL CO., St. Louis, Mo. Filed March 2, 1917.

4,653.—*Title:* "THIS PART OF YOUR FACE INTERESTS THE HOUSE OF MENNEN." (For Mennen's Shaving-Cream.) G. MENNEN CHEMICAL CO., Newark, N. J. Filed March 2, 1917.

4,654.—*Title:* "MENNEN'S TALCUM FOR MEN." (For Mennen's Talcum Powder.) G. MENNEN CHEMICAL CO., Newark, N. J. Filed March 2, 1917.

4,655.—*Title:* "MENNEN'S COLD CREAM IMPROVES THE COMPLEXION." (For Cold-Cream.) G. MENNEN CHEMICAL CO., Newark, N. J. Filed March 2, 1917.

4,656.—*Title:* "CUTICURA SOAP AND OINTMENT." (For Cuticura Soap and Ointment.) POTTER DRUG & CHEMICAL CORP., Boston, Mass. Filed March 2, 1917.

4,657.—*Title:* "YOU CANT GET ON WITHOUT IT." (For Cresbo Crum Catcher, a Device Which Brings Bread-Box, Bread-Board, Place for Knife, and Receptacle to Catch or Save the Crums All Together.) STANLEY WALTER KREBS, Wayne, Pa. Filed February 7, 1917.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE TASKER.

Decided October 13, 1916.

ABANDONMENT—UNAVOIDABLE DELAY—MISTAKE BY THE PATENT OFFICE.

The failure of the Office to notify an applicant whose claims were under rejection of the allowance of claims for the same invention to a rival inventor, so that an interference might be had, before passing the rival case to issue, does not excuse the applicant's failure to reply to the rejection within the year allowed by law or justify a holding that the applicant's delay in acting upon the case was unavoidable. (*Ex parte McKee*, 1907, C. D., 255; 130 O. G., 980, affirmed.)

ON PETITION.

BRASSIÈRE-BUCKLE.

Messrs. Banning & Banning and *Mr. William P. Bond* for the applicant.

EWING, *Commissioner:*

The applicant complains that after rejecting her claims upon a very simple invention the Office has granted a patent upon the same invention to a rival inventor, who filed ten months later.

An examination of the record shows that this is true. The only thing that can be said by way of extenuation is that the Examiner before whom these cases came has to pass upon over two thousand applications every year; that the two applications in question were assigned for examination to different assistants, and that the last action upon the application here involved preceded the final action upon the application of the rival inventor by almost exactly one year.

There can be no doubt that the Examiner was charged by the statute with the duty of notifying applicant of the presence of the rival application before passing it to issue; but instances of failure to perform this duty necessarily occur in the handling of nearly seventy thousand applications a year by a corps of nearly four hundred men, and any applicant who fails to exhaust his rights in demanding consideration by the Examiner or in prosecuting appeals from adverse final actions does so at the risk that some more insistent applicant may secure more favorable treatment.

The fact that an officer of the Government has failed to perform a duty to a claimant imposed by statute cannot relieve the claimant of any duty imposed upon him by statute.

The only question here presented is therefore whether the failure of the applicant to respond to the rejection of May 15, 1915, within one year thereof was unavoidable.

The record presented would seem to indicate that it was deliberate, the applicant being satisfied that the Examiner's rejection was sound and that no useful purpose could be served by a further prosecution of the application.

In *ex parte McKee* (1907, C. D., 255; 130 O. G., 980) an exactly parallel situation was presented. McKee's application was rejected February 5, 1906, and became abandoned one year thereafter. On August 25, 1906, an application for similar subject-matter was filed by one De Remer, which was allowed October 30, 1906, and patented May 14, 1907. McKee's petition to revive was filed June 20, 1907. The petition was three times considered and denied on the ground that the delay in prosecuting the application was not shown to have been unavoidable.

The petition is denied.

EX PARTE NORTHWOOD.

Decided August 1, 1916.

DESIGNS—FLOWER-PEDESTAL—COMPLETE ARTICLE MUST BE SHOWN.

Where the applicant showed his design for a flower-stand pedestal rising from the center of a bowl, but the bowl was merely indicated in dotted lines and there was nothing to indicate where it merged into the pedestal, *Held* that he should be required to show some complete article, including a base for the pedestal, but that he might be permitted to indicate in the specification that he regards the pedestal as the invention and contemplates placing it on other articles.

ON PETITION.

TUBE-RECEIVING PEDESTAL FOR FLOWER-STANDS.

Mr. H. E. Dunlap for the applicant.

CLAY, *Assistant Commissioner:*

The applicant petitions that the Examiner be directed to withdraw his requirement that the structure shown in the drawing shall be shown in full lines. Although the specific action of the Examiner is in terms a rejection on the ground that the applicant does not disclose a complete article of manufacture, the matter is believed to be properly one brought directly to the Commissioner, because it raises questions of form and practice rather than merits.

The claim in this case covers the design as a whole, and not any part of it as a part; and it is to be tested as a whole, as to novelty and infringement,

as the Supreme Court said in the case of *Dobson* v. *Dornan et al.*, (118 U. S., 10–15,) and it is for just

this reason, apparently, that the applicant objects to making such a drawing (the sole description) of his design for a flower-stand pedestal as might constitute the bowl an essential part of his design. He says he invented a design for a pedestal and not a design for a bowl, and therefore wishes to show the bowl in dotted lines.

Applicant ought to be enabled in some way to show that his design resides in the pedestal itself; but, on the other hand, he may not do so in the manner here attempted, because his drawing does not show a design for a pedestal, but rather a figure which fades away at the bottom into a twilight zone and finally nothing. There cannot be a pedestal without a base. It is not at all obvious how his design should be applied to any article, as was the case in the surface design in *ex parte Fulda*, (194 O. G., 549.)

There is no reason now apparent in this case why the applicant might not be permitted to state in his specification that he does not claim the bowl as part of his design and contemplates placing the pedestal on other articles.

The Examiner is sustained in his action requiring that there be shown in full lines some complete article, including a base for the pedestal; but he should allow some change in the specification of the import above suggested.

ADJUDICATED PATENTS.

(U. S. C. C. C. A.) The Conrader patents, for pump-governors, No. 664,468, No. 687,449, and No. 1,072,576 *Held* valid, but not infringed, and No. 810,109 *Held* void for double patenting. *Conrader* v. *Judson Governor Co.*, 238 Fed. Rep., 349.

(U. S. C. C. C. A.) The Fetzer reissue patent, No. 12,653, (original No. 723,662), for truck mechanism *Held* void for lack of patentable invention. *Fetzer* v. *Dempster Mill Mfg. Co.*, 238 Fed. Rep., 368.

(U. S. C. C. C. A.) The Samuel reissue patent, No. 13,754, (original No. 879,195), for a wind-guard for motor-vehicles *Held* void for lack of invention in view of the prior art. *Stahlbrodt Co.* v. *Ford Motor Co.*, 238 Fed. Rep., 365.

(U. S. D. C.) The Turner patent, No. 985,119, for steel-skeleton concrete construction, claims 1, 2, 4, 6, and 8 *Held* void for lack of invention in view of the prior art and also not infringed. *Turner* v. *Deere-Webber Bldg. Co.*, 238 Fed. Rep., 377.

(U. S. C. C. C. A.) The Weldon patent, No. 659,906, for a dyeing-machine *Held* not infringed. *Klauder-Weldon Dyeing Machine Co.* v. *Giles*, 238 Fed. Rep., 367.

Reciprocal Patent Laws in Italy on Account of the War.

DEPARTMENT OF STATE,
Washington, D. C., January 3, 1917.

The Honorable the Secretary of the Interior.

SIR: Referring to the letter of the Commissioner of Patents, dated September 16 last, in which he inclosed a copy of the act of Congress of August 17, 1916, extending the statutory periods for the filing of patent applications and the payment of fees in favor of the citizens or subjects of nations which extend substantially similar privileges to the citizens of the United States, and to the Department's letter to you of October 3 last, I have the honor to inclose for your information a copy of a despatch from the American Ambassador at Rome inclosing a reply made by the Italian Government to the note addressed to it by the Embassy, notifying that Government of the enactment of the law above mentioned.

I have the honor to be, sir, your obedient servant,

For the Secretary of State:
(Signed) ALVEY A. ADEE,
Second Assistant Secretary.

[Duplicate.]

THE EMBASSY OF THE UNITED STATES OF AMERICA,
No. 588. *Rome, December 2, 1916.*

The Honorable the Secretary of State, Washington.

SIR: I have the honor to inform you that the contents of the Department's circular instruction of October 7 last, file No. 811.542/36, entitled "Privileges extended to applicants for patents on account of the European war," were promptly brought to the attention of the Foreign Office upon receipt, which Ministry in turn took up the matter with the Italian Patent Office, which is a Bureau in the Ministry of Agriculture, Industry and Commerce.

I am to-day in receipt of a reply from the Foreign Office, a translation of which is hereto attached, together with a translation of the royal decree therein mentioned.

It will be seen from these communications that the Italian Government is prepared to enact reciprocal patent laws in Italy as soon as the proposed new patent laws shall have been adopted in the United States.

I have the honor to be, sir, your obedient servant,

THOMAS NELSON PAGE.

Inclosures:
Foreign Office note 55281, November 27, 1916.
Translation Regent's decree of June 20, 1915.

[Translation.] No. 55281.

MINISTRY FOR FOREIGN AFFAIRS.

(Note Verbale.)

The Royal Ministry of Industry and Commerce, to whom the R. Ministry for Foreign Affairs promptly communicated the contents of the note verbale of the Embassy of the United States No. 1330 of the 3d instant, has requested the latter Ministry to thank, in its name, the American Government and its Embassy in Rome for its courteous communication; also to transmit the attached copy of the Regent's decree of June 20, 1915, No. 962 relative to the proroguing, during the period of the war, of the rules and regulations previously established by the laws of the Kingdom relative to patents and trade-marks.

In transmitting the foregoing decree, the Royal Ministry for Foreign Affairs has also been requested to communicate to the American Embassy that as soon as the Royal Administration of Industry and Commerce shall be officially informed that the proposed new patent laws of the United States shall be applicable to Italian citizens (provided that the benefits of the attached decree shall be assured to the citizens of the United States) that Administration will hasten the issuance of the appropriate Ministerial decree by the terms of which such assurances shall be given.

The R. Ministry for Foreign Affairs begs the Embassy of the U. S. of America, therefore, to be good enough to notify it officially as soon as possible of the official and final adoption of the proposed American laws, in order that reciprocal measures may be promptly enacted in Italy, as above indicated.

Rome, November 27, 1916.

To the Embassy of the United States of America at Rome.

MINISTRY OF AGRICULTURE,
INDUSTRY AND COMMERCE,
OFFICE OF INTELLECTUAL PROPERTY,
ITALIAN PATENT OFFICE.

(Extract from the Journal for Intellectual Property, Nos. 3 and 4.)

Regent's decree concerning an extension of the terms for making payments in connection with industrial property (patents and trade-marks) and for the performance of such acts as are required to maintain such patents and trade-marks in force; also other temporary rules and regulations regarding the protection of industrial property.—Patents and trade-marks.

June 20, 1915. Nos. 962 and 961.

Thomas of Savoy, Duke of Genoa, lieutenant-general of His Majesty Victor Emanuel III, by the grace of God and the will of the nation King of Italy.

By virtue of the authority conferred on us;

In consideration of the law of May 22, 1916, No. 671, in respect to the bestowal of extraordinary powers on the Government in case of and during the period of the war;

In consideration of the laws of October 30, 1859, No. 3731, relative to patents, of August 30, 1868, No. 4577, relative to manufacturing and commercial marks and distinctive signs, and of August 30, 1868, No. 4578, relative to industrial designs and models;

On the proposal of the Ministry and Secretary of State for Agriculture, Industry and Commerce, in conjunction with the Minister of the Treasury, together with the advice of the Cabinet Council we have ordered and order.

ARTICLE 1. Persons on active service or employed in the army or navy or who by reason of their labors or services are attached to the army or navy or in its retinue, may delay the payment of taxes upon applications filed by them for patents covering industrial inventions or covering industrial models and designs as well as upon applications for the registration of manufacturing and commercial marks, until the sixtieth day following the day of the publication of peace. The applications filed by these persons, where they are not accompanied by the tax receipts, will be held suspended until after the said day.

ART. 2. The persons mentioned in the preceding article may delay the payment of the fees and the performance of the acts prescribed by the law for maintaining patents in force and for applying for a prolongation thereof, until the last day of the quarter following the quarter in which peace shall be published, provided the term for performing such acts or for making such payments had not expired at the time of the declaration of war. The same advantages will be enjoyed by the native patentees who are prevented, through circumstances arising from the state of war, from making and from doing, within the term prescribed by the law, such payments and such acts as are required to maintain their patents in force and to prolong them.

ART. 3. The provisions of the preceding article will apply also to those foreign patentees who belong to States which assure equal advantages to Italian patentees. The existence of reciprocity of treatment will be recognized by means of a decree issued by the Minister of Agriculture, Industry and Commerce.

ART. 4. The publication of a list of those patents for which the fee owed was not paid within the prescribed term, as provided by Art. 43 of the regulations sanctioned by means of the royal decree of October 2, 1913, No. 1237, will be suspended commencing with the list relative to patents for which the last term of payment expires on June 30, 1915, up to the list relative to the payments that shall have been made at the end of the quarter following the quarter in which peace shall be published.

The prolongation certificates applied for after the expiration of the term of the patent by persons who prove to be in the conditions mentioned in Arts. 2 and 3, will be delivered, provided the said term had not expired at the time of the declaration of war.

ART. 5. The delivery of patent deeds, the registration of industrial models and designs, the registration of manufacturing marks and distinctive signs and the registration of transfers of patents and marks in favor of foreigners belonging to States at war with Italy, are suspended until after the publication of peace.

ART. 6. The present decree shall take effect from the day of its issuance.

We order that the present decree, sealed with the seal of the State, be included in the official collection of the laws and decrees of the Kingdom of Italy, and bid everybody bound to do so, to observe it and to cause it to be observed.

Dated in Rome this 20th day of June, 1915.

THOMAS OF SAVOY.

SALANDRA.
CAVASOLA.
CARCANO.

Visaed: The Keeper of the Seal: ORLANDO.

Reciprocal Privileges by Austria on Account of the War.

AUSTRIA.

1. Ordinance of the Minister of Public Works, establishing ex eptional provisions, by reason of the state of war, with regard to the terms of priority fixed by the Convention of the Union of Paris for the Protection of Industrial Property.

(No. 349 of December 1, 1915.)

By virtue of the imperial ordinance of August 29, 1914, (*Reichsgesetz-Blatt* No. 227,) concerning the effects of the state of war on the time limits, forfeitures and procedures, it is hereby ordered as follows:

SECTION 1. (1) The terms of priority provided with regard to filing in the matter of patents, designs and trade-marks by article 4 of the Convention of the Union of Paris of March 20, 1883, revised at Brussels December 14, 1900, and at Washington June 2, 1911, are hereby extended, in so far as they had not expired prior to July 26, 1914, until the expiration of three months after a date to be fixed by a future ordinance.

(2) This provision shall be applicable in favor of subjects of other countries belonging to the International Union for the Protection of Industrial Property only if such countries grant to Austrian subjects an extension of the terms of priority. If, however, one of said countries accords this privilege to Austrian citizens to a less wide extent than provided for in paragraph 1, the same restriction shall apply to the subjects of such country.

(3) A notice published in the *Reichsgesetz-Blatt* shall specify to what extent the terms of priority are prolonged in Austria in favor of subjects of other countries in conformity with paragraph 2.

SEC. 2. (1) When an applicant shall have been prevented by the state of war from observing the terms of priority provided with regard to filing in the matter of patents, designs and trade-marks by article 4 of the Convention of the Union of Paris of March 20, 1883, revised at Brussels December 14, 1900, and at Washington June 2, 1911, he shall, upon his request, be restored to the former status. This shall apply also to the time limits which had expired before the present ordinance goes into force.

(2) The effect of the restoration to the former status shall be that the filing is to be considered as having been effected during the term of priority.

(3) The petition for restoration shall be presented within the three months following the disappearance of the obstacle, or, if the obstacle disappears prior to the date of the notice provided for in paragraph 5, then within the three months following such date. The petition for restoration shall, however, in all cases, be formulated not later than within three months after the date to be fixed by a future ordinance. The filing shall be effected at the same time that the petition for restoration is presented.

(4) The petition for restoration pertains to the section of applications of the Patent Office in the case of an application for patent; and in case of the filing of a design or trade-mark, it pertains to the Minister of Public Works, to whom the Chamber of Commerce and Industry shall submit the petition which must be filed with the latter.

(5) These provisions shall apply in favor of subjects of other countries belonging to the International Union for the Protection of Industrial Property in so far as acts of filing are concerned for which, according to a notice published in the *Reichsgesetz-Blatt*, like advantages are accorded in such countries to Austrian subjects.

SEC. 3. Unless an applicant established the fact that he is of another nationality insuring him more favorable treatment, he shall be considered to be a subject of the country in the territory of which his domicile or place of business is located.

SEC. 4. This ordinance shall go into force on the day on which it shall be published (published in the *Reichsgesetz-Blatt* No. 879 of December 3, 1915).

TRNKA, M. P.

DEPARTMENT OF STATE,
Washington, February 12, 1917.

The Secretary of State presents his compliments to the Honorable the Secretary of the Interior and has the honor to inclose, for the information of the Commissoner of Patents, copy and translation of a Ministerial announcement of Austria in reference to protection of industrial property rights.

(No. 426.)

[Translation.] AMERICAN EMBASSY,
GGB/ms. *Vienna, January 8, 1917.*

EXTRANEOUS PATENT PROVISIONS IN FAVOR OF AMERICA.

AUSTRIA.

Announcement of the Minister of Public Works of December 23, 1916, providing extraneous provisions for priority time terminals in compliance with the Paris Union Treaty for the Protection of Industrial Property Rights, in favor of citizens of the United States of America.

By virtue of section 2, paragraph 5, of decree No. 349, of December 1, 1915, bearing upon extraneous provisions in

connection with the war for the protection of industrial property rights in compliance with the Paris Union Treaty, it is hereby announced that in the United States of America similar favors have been awarded to subjects of Austria-Hungary in patent, "utility-model" patent and trade-mark applications as provided for in Par. 2, of the decree above referred to.

Adherence of Sweden to Convention Signed at Washington.

DEPARTMENT OF STATE,
Washington, D. C., January 12, 1917.

The Honorable the Secretary of the Interior:

SIR: I have the honor to inclose herewith, for the information of the Patent Office, a translation of a note of December 11, 1916, from the Minister of Switzerland at this capital advising the Department that the Legation of Sweden at Berne has notified the Swiss Political Department that after making the required changes in its domestic legislation, Sweden adheres to the convention signed at Washington on June 2, 1911, which modified the Paris Convention of March 20, 1883, for the protection of industrial property, revised at Brussels on December 14, 1900.

I have the honor to be sir, your obedient servant,
For the Secretary of State:
(Signed) FRANK L. POLK,
Counselor.

[Copy.] [Translation.]

LEGATION OF SWITZERLAND,
Washington, D. C., December 11, 1916.

Mr. Secretary of State:

In compliance with instructions received, I have the honor to inform your Excellency that, by note dated November 21st last the Royal Legation of Sweden at Berne notified the Swiss Political Department that after making the required changes in its domestic legislation, Sweden adheres to the convention signed at Washington on June 2, 1911, which modified the Paris convention of March 20, 1883, for the protection of industrial property, revised at Brussels on December 14, 1900.

The legation of Sweden added that as regards its contribution to the expenses of the International Bureau, Sweden wishes to be classed in the third category as heretofore.

I beg your Excellency kindly to take note of that adhesion and I embrace this opportunity to renew to you, Mr. Secretary of State, the assurances of my very high consideration.

P. RITTER,
Minister of Switzerland.

To His Excellency Mr ROBERT LANSING, Secretary of State, Washington, D. C.

In re Foreign Patents, Trade-Marks. Etc.—Taxes, Fees, Etc.

DEPARTMENT OF STATE,
Washington, D. C., January 12, 1917.

The Honorable the Secretary of the Interior.

SIR: Referring to the Department's letter of October 3, 1916, I have the honor to inclose herewith, for the information of the Commissioner of Patents, a copy of a despatch of December 8 last from the American Minister at Berne, covering a copy of his correspondence with the Swiss Political Department in regard to the privileges extended to applicants for patents on account of the European war.

I have the honor to be, sir, your obedient servant,
For the Secretary of State:
(Signed) FRANK L. POLK,
Counselor.

AMERICAN LEGATION, BERNE,
(No. 615.) *Berne, December 8, 1916.*

The Honorable the Secretary of State, Washington.

SIR: Referring to the Department's circular instruction of October 7, 1916, "File No. 811.542/36," in regard to the privileges extended to applicants for patents on account of the European war, I have the honor to inclose herewith copy of my communication of November 3, 1916, to the Swiss Political Department, bringing the provisions of the act of August 17, 1916, to the attention of the Swiss Government.

I also transmit, as inclosure No. 2 with this despatch, copy, with translation, of the reply dated November 17, 1916, of the Swiss Political Department.

I have the honor to be, sir, your obedient servant,
[Duplicat.] (Signed) PLEASANT A. STOVALL.

Inclosures:

(1) Copy of my note dated November 3, 1916, to the Swiss Political Department, Berne.

(2) Copy of note, with translation, from Swiss Political Department, Berne, dated November 17, 1916.

[Translation.]

SWISS POLITICAL DEPARTMENT,
DIVISION OF FOREIGN AFFAIRS,
107/RB. *Berne, November 17, 1916.*

SIR: We have the honor to acknowledge receipt of your Excellency's note dated November 3, 1916, and of the copy of the act of August 17, 1916, providing for the temporary prolongation, in favor of the nationals of those countries granting reciprocal privileges to citizens of the United States, of the statutory times for filing patent applications, paying fees and taking other steps in connection with proceedings at the United States Patent Office.

In reply to this note we hasten to communicate the following:

(1) Your Excellency desires to be informed as to the privileges granted by the Swiss Government to persons who have filed a patent application in order to protect them against the payment of fines imposed on account of delays brought about by the European war. In this respect we beg to state that in Switzerland no provision has been made for fines of this kind either for patents or other matters administrated by the Swiss Bureau for Intellectual Property (le Bureau Suisse de la Propriété Intellectuelle).

(2) Your Excellency further desires to know:

(*a*) If there have been any modifications of the Swiss laws designed to relieve citizens of the United States from loss or injury resulting or which might otherwise result by reason of a default or disability attributable to the state of war.

In this connection you have enumerated certain specific cases regarding patents for which a prolongation of the ordinary delays might come into consideration.

(*b*) If corresponding measures have also been taken in regard to trade-marks or other provinces of intellectual property or relative to copyrights for literary or artistic work.

These various points give rise to the following remarks:

(1) In the realm of copyright for literary and artistic works, no prolongation of delays has been granted, and no extraordinary measure has been taken.

(2) In the realm of industrial property, *i. e.*, patents, designs, and industrial models, as well as trade-marks, the Federal Council has extended various delays on account of the European war, namely, by the order of June 23, 1915, prolonging the delays relative to patents of invention and designs or industrial models, as well as by the order of February 11, 1916, prolonging the delay for the execution of patented inventions.

We inclose herewith one copy each in French of these two orders and would refer you to their contents.

Moreover, if any specific time or delay has been fixed for the payment of fees or the taking of other steps in the realm of intellectual property, no prolongations nor any other favor have been granted.

(3) With regard to the last paragraph of the order of the Federal Council of June 23, 1915, it is to be observed that the Federal Government has not decided that the prolongation of time granted by the order shall cease December 31, 1915; it follows that these prolongations continue to be valid until the date the Federal Council shall eventually fix.

(4) The above-mentioned two orders grant the prolongations of time fixed to all interested parties irrespective of nationality and reciprocity.

It follows that the citizens of the United States automatically benefit by these prolongations.

Please accept, sir, the assurances of our high consideration.

SWISS POLITICAL DEPARTMENT,
(Signed) HOFFMAN.

His Excellency PLEASANT A. STOVALL, United States Minister, Berne.

[Translation.]

SWITZERLAND.

Decree of the Federal Council extending the time limits relative to patents and to designs or industrial models.

(Of June 23, 1915.)

The Swiss Federal Council, by virtue of the federal decree of August 3, 1914, concerning measures designed to insure the safety of the country and the maintenance of neutrality (see *Recueil Officiel*, Vol. XXX, p. 347), upon the proposition of its Department of Justice and Police, decrees:

1. The terms of priority provided by the federal law of April 3, 1914, on the rights of priority in the matter of patents and of designs or industrial models (see *Recueil Officiel*, Vol. XXX, p. 317), are provisionally extended to December 31, 1915, inclusive:

(*a*) For the first foreign filing of applications for patents and utility models dated later than July 31, 1913;

(*b*) For the first foreign filing of designs or industrial models dated later than March 31, 1914;

(*c*) For inventions, utility models and designs or industrial models exhibited at an exposition provided the date of the opening of the latter is later than January 31, 1914.

II. For the payment of taxes:

(*a*) For the second year of a patent or any subsequent year;

(*b*) For the second or third period of protection of designs or industrial models filed, an extraordinary extension is granted terminating provisionally on December 31, 1915, in cases where the statutory time for payment expires after July 31, 1914.

III. Supplemental papers in support of priorities in the matter of patents and of designs or industrial models which have been registered in the meantime and the date of filing of which is later than April 30, 1913, may still be filed within a period the date of expiration of which is provisionally fixed as December 31, 1915.

IV. During a period provisionally fixed to terminate on December 31, 1915, applications for patents and designs or industrial models filed (as well as applications for the registration of trade-marks) which have been the subject of a notification shall not be rejected on account of non-observance of the ordinary time limits allowed for amending or completing the same.

V. During a period provisionally fixed to terminate on December 31, 1915, tardy declarations of intentions to appeal from rejections of applications for patents and of the filing of designs or models (as well as of applications for the registration of trade-marks) shall be accepted by the Swiss Department of Justice and Police provided the usual statutory time for such appeals shall have expired after July 31, 1914.

If the Federal Council does not decide that the above-stated time limits shall definitely expire on December 31, 1915, they shall be extended to the date which the Federal Council shall fix in the case of each of them.

Berne, June 23, 1915.

In the name of the Swiss Federal Council:
MOTTA,
President of the Federation.
SCHATZMANN,
Chancelor of the Federation.

Decree of the Federal Council extending the time for working patented inventions.

(Of February 11, 1916.)

The Swiss Federal Council, by virtue of the federal decree of August 3, 1914, concerning measures designed to insure the safety of the country and the maintenance of neutrality (see *Recueil Officiel*, Vol. XXX, p. 347), upon the proposition of its Department of Justice and Police, decrees:

The term of three years upon the expiration of which any person establishing his interest in the matter may, by virtue of article 18 of the federal law of June 21, 1907, on patents of invention (see *Recueil Officiel*, Vol. XXIII, p. 631), institute proceedings for the annulment of a patent if by the time of the institution of the proceedings the invention has not been worked to a sufficient extent in Switzerland, is hereby extended to a date hereafter to be fixed by the Federal Council. Furthermore, up to such date proceedings for annulment shall not be instituted in the case of patents for which the three-year period provided by article 18 of the above-mentioned federal law had already expired prior to the date when this decree goes into force.

This decree shall go into force on February 20, 1916.

Berne, February 11, 1916.

In the name of the Federal Council:
DECOPPET,
President of the Confederation.
SCHATZMANN,
Chancelor of the Confederation.

N. E. K.
8—2—17

Privileges by The Netherlands on Account of the War.

DEPARTMENT OF STATE,
Washington, January 24, 1917.

The Honorable the Secretary of the Interior.

SIR: Referring to the Department's letter of October 3, 1916, regarding the privileges extended to applicants for patents on account of the European war, I have the honor to inclose herewith, for the information of the Commissioner of Patents, a copy of a despatch from the American Minister at The Hague, accompanied by copies, with translations, of the Netherlands laws for the extension and renewal of the periods mentioned in the trade-mark and patent laws.

I have the honor to be, sir, your obedient servant,
For the Secretary of State:
(Signed) ALVEY A. ADEE,
Second Assistant Secretary.

LEGATION OF THE UNITED STATES OF AMERICA,
The Hague, Netherlands, December 28, 1916.

The Honorable the Secretary of State, Washington.

SIR: Referring to the Department's circular instruction of October 7, entitled "Privileges extended to applicants for patents on account of the European war," which was received here on October 29th, I have the honor to state that in reply to an inquiry which I immediately addressed to the Netherlands Minister of Foreign Affairs pursuant to the Department's instruction, I have received from him on November 29th a copy of the laws of July 29, 1916, having in view the extension of times mentioned respectively in the trade-mark law (Merkenwet) and the patent law (Octrooiwet). I inclose herewith official texts of these laws in triplicate, together with English translations of the same.

I have the honor to be, sir, your obedient servant,
HENRY VAN DYKE,
American Minister.

[Translation.]

OFFICIAL GAZETTE OF THE KINGDOM OF THE NETHERLANDS NO. 347. LAW OF THE 29TH OF JULY, 1916, FOR THE EXTENSION AND RENEWAL OF THE PERIODS MENTIONED IN THE TRADE-MARK LAW.

We, Wilhelmina, by the grace of God, Queen of the Netherlands, Princess of Oranje-Nassau, etc., etc., etc.,

To all to whom these presents shall come, greeting—to wit:

That we, having taken into consideration that in connection with the present extraordinary circumstances it has appeared desirable to make provisions in relation to the extension or renewal of the periods mentioned in the trade-mark law;

Hence we, having heard the Council of State, and in common consultation with the States-General, have approved and decreed, as we do hereby approve and decree:

ARTICLE 1. The periods mentioned in the trade-mark law, which do not refer to the settling of a difference in regard to a trade-mark before the judge, may always, upon a request stating the reasons and presented by or in the name of the claimant, be extended or renewed for a period of at most four months, by the Director of the Bureau for Industrial Property.

ART. 2. A request for renewal must be sent in within three months after the expiration of the period of which a renewal is desired.

ART. 3. The periods which were still current on August 1, 1914, and those which have expired since that date, can still be renewed by the Director mentioned in Article 1, provided a request for such renewal, stating the reasons, is addressed to that Director by or in the name of the claimant, within three months after the coming into effect of this law.

ART. 4. The renewal of a period results in the complete renewal of rights.

ART. 5. (1). This law comes into effect on the day after that on which it is proclaimed.

(2). As soon as the present extraordinary circumstances shall have ceased to exist a proposition shall be laid before the States-General regulating the withdrawal of this law.

Order and command that this be inserted in the *Official*

Gazette, and that all departments, authorities, boards and officials concerned shall strictly observe it.

Given at The Hague, the 29th of July 1916.

WILHELMINA.

The Minister of Agriculture, Industry and Commerce:

POSTHUMA.

The Minister of Justice:

B. ORT.

The Minister of Colonies:

TH. B. PLEYTE.

Issued on the tenth of August, 1916.

The Minister of Justice:

B. ORT.

[Translation.]

OFFICIAL GAZETTE OF THE KINGDOM OF THE NETHERLANDS No. 348. LAW OF THE 29TH OF JULY, 1916, FOR THE EXTENSION AND RENEWAL OF THE PERIODS MENTIONED IN THE PATENT LAW.

We, Wilhelmina, by the grace of God, Queen of the Netherlands, Princess of Oranje-Nassau, etc., etc., etc.,

To all to whom these presents shall come, greeting—to wit:

That we, having taken into consideration that in connection with the present extraordinary circumstances it has appeared desirable to make provisions in relation to the extension or renewal of the periods mentioned in the patent law, (*Official Gazette*, 1910, No. 313);

Hence we, having heard the Council of State, and in common consultation with the States-General, have approved and decreed, as we do hereby approve and decree:

ARTICLE 1. The periods mentioned in the patent law (*Official Gazette*, 1910, No. 313), which do not refer to the settling of a difference in regard to a patent before the judge, may always, upon a request stating the reasons and presented by or in the name of the claimant be extended or renewed for a period of at most six months by the Patent Council.

ART. 2. A request for renewal must be sent in within three months after the expiration of the period of which a renewal is desired, unless the request is made in regard to a period as mentioned in article 49, first clause, of the patent law, 1910, (*Official Gazette* No. 313).

ART. 3. The periods which were still current on August 1, 1914, and those which have expired since that date, can still be renewed by the Patent Council, provided, with regard to periods other than those mentioned in article 49, first clause, of the patent law, 1910, (*Official Gazette* No. 313), a request, stating the reasons, is presented to that Council by or in the name of the claimant within three months after the coming into effect of this law.

ART. 4. The renewal of a period results in the complete renewal of rights.

ART. 5. (1). This law comes into effect on the day after that on which it is proclaimed.

(2). As soon as the present extraordinary circumstances shall have ceased to exist a proposition shall be laid before the States-General regulating the withdrawal of this law.

Order and command that this be inserted in the *Official Gazette*, and that all departments, authorities, boards, and officials concerned shall strictly observe it.

Given at The Hague, the 29th of July 1916.

WILHELMINA.

The Minister of Agriculture, Industry and Commerce:

POSTHUMA.

The Minister of Justice:

B. ORT.

The Minister of Colonies:

TH. B. PLEYTE.

Issued on the tenth day of August, 1916.

The Minister of Justice:

B. ORT.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 10, 1917.

Arthur C. Northrop, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Winfield Jones, Riggs Building, Washington, D. C., for registration of a trade-mark and trade-mark registered November 22, 1892, No. 22,008, to Arthur C. Northrop, Waterbury, Conn., and a notice of such declaration sent by registered mail to the said Arthur C. Northrop at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Arthur C. Northrop, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 27, 1917.

Richard L. Hickson, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The American Agricultural Chemical Company, of No. 2 Rector street, New York, N. Y., for registration of a trade-mark and trade-mark registered June 9, 1885, No. 12,304, to Richard L. Hickson, Danville, Va., and a notice of such declaration sent by registered mail to said Richard L. Hickson at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Richard L. Hickson, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 27, 1917.

The Cereals Mfg. Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Annan-Burg Grain & Milling Company, of Chamber of Commerce Building, St. Louis, Mo., for registration of a trade-mark and trade-mark registered July 4, 1882, No. 9,506, to The Cereals Mfg. Co., of New York, N. Y., and a notice of such declaration sent by registered mail to said The Cereals Mfg. Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless The Cereals Mfg. Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 236—No. 4. TUESDAY, MARCH 27, 1917. Price—$5 per year.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Trade-Marks	115—No.	115,910 to No.	116,024,	inclusive.
Labels	None.			
Prints	None.			
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Disclaimer.

1,195,910.—*Albert P. Cochrane*, New York, N. Y. CORNER-PIECE. Patent dated August 22, 1916. Disclaimer filed March 17, 1917, by the assignee, *Jane Hartley Cochrane*.

Enters this disclaimer—

"To that part of the claim in said specification which is in the following words, to wit:

"1. A device of the character described comprising a casing suited to the edge and partially enveloping the side and base of a receptacle, a buffer fitted on the outside of said casing, a filler disposable within the interior of the receptacle, a connecting means between the filler and buffer, the latter being rigidly held to the casing by said connecting means, and means for connecting said casing to the receptacle independently of the buffer.

"2. A device of the character described comprising a casing adapted to cover the corner of a receptacle, a buffer arranged exteriorly of said casing, a filler for the interior corner of the receptacle, a disengageable connecting means between said filler and buffer, the edges of said casing extending laterally beyond the buffer, and means applied to said protruding edges of the casing for securing said casing to the receptacle independently of the buffer."

Adverse Decisions in Interference.

PATENT NO. 1,157,009.

On February 10, 1917, a decision was rendered that Francisco Lara was not the first inventor of the subject-matter covered by claims 8, 9, 10, 11, 12, and 13 of his Patent No. 1,157,009, subject, "Self-rotating screens," and no appeal having been taken within the time allowed such decision has become final.

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 10, 1917.

Arthur C. Northrop, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Winfield Jones, Riggs Building, Washington, D. C., for registration of a trade-mark and trade-mark registered November 22, 1892, No. 22,008, to Arthur C. Northrop, Waterbury, Conn., and a notice of such declaration sent by registered mail to the said Arthur C. Northrop at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Arthur C. Northrop, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

Access to Pending Applications.

No person except the applicant, the assignee whose assignment is of record, or the attorney of record will be permitted to have access to the file of any application, except as provided for under the interference rules, unless written authority from the applicant, assignee, or attorney, identifying the application to be inspected, is filed in the case to become a part of the record thereof, or upon the written order of the Commissioner, which will also become a part of the record of the case.

Correction of Drawings.

RULE 72. * * * * *

The drawing may be withdrawn only for such corrections as cannot be made by the Office; but a drawing cannot be withdrawn unless a photographic copy has been filed and accepted by the Examiner as a part of the application. Permissible changes in the construction shown in any drawing may be made only within the Office and after an approved photographic copy has been filed. Substitute drawings will not be admitted in any case unless required by the Office.

APPLICATIONS UNDER EXAMINATION.

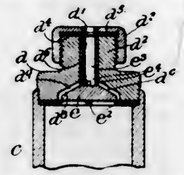
Condition at Close of Business March 23, 1917.

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154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Feb. 26	Mar. 15	87
324	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Dec. 20	Feb. 27	603
320	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Dec. 1	Feb. 26	550
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Nov. 13	Jan. 4	300
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Feb. 24	Mar. 8	232
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Nov. 10	Jan. 10	617
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Dec. 23	Feb. 26	211
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Feb. 14	Feb. 7	263
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Oct. 5	Dec. 11	497
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Mar. 2	Mar. 2	202
182	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Dec. 5	Jan. 30	280
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 24	Jan. 11	531
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Oct. 21	July 25	369
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Dec. 2	Feb. 24	339
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Feb. 5	Feb. 23	165
105	26. Electricity, Generation; Motive Power	Aug. 9	Jan. 17	614
375	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Feb. 14	Feb. 19	252
62	28. Internal-Combustion Engines	Sept. 20	Dec. 16	518
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Nov. 1	Jan. 2	406
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Dec. 14	Mar. 9	409
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Nov. 13	Jan. 2	271
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Sept. 1	Feb. 7	944
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Nov. 13	Feb. 10	391
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Sept. 2	Feb. 2	333
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Oct. 14	Feb. 7	694
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Dec. 6	Mar. 7	629
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	Sept. 5	Jan. 19	820
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Feb. 26	Feb. 26	169
221	39. Water Distribution	Oct. 17	Jan. 16	351
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Dec. 13	Feb. 26	551
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Nov. 20	Jan. 20	388
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	Sept. 6	Feb. 7	407
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Jan. 15	Jan. 31	170
	Oldest new case, Aug. 9; oldest amended, July 25.			
	Total number of applications awaiting action			18,667
163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 18	Feb. 27	988
	Designs	Feb. 2	Feb. 19	354
	Labels and Prints	Mar. 9	Mar. 1	84

PATENTS

GRANTED MARCH 27, 191.

1,220,162. CHEMICAL FIRE-EXTINGUISHING DEVICE. OLUF F. AALBUE, Brooklyn, N. Y. Filed Apr. 21, 1916. Serial No. 92,619. (Cl. 169—12.)



1. In an apparatus of the class described a gas container provided at one end with a detachable closure device in the bottom of which is a valve chamber, said closure device being provided with a central vertical bore which communicates with said chamber, and a valve mounted in said chamber and provided with a tubular sleeve which passes through said bore and is movable therein, means for supporting said valve below its seat, and a threaded apertured cap for the closure device, said cap being provided with a puncturable disk which closes the tube or sleeve of the valve when said cap is screwed on and with a central aperture which corresponds with the bore of the valve tube or sleeve.

2. In an apparatus of the class described, a tubular gas container provided at one end with a closure plug in the bottom of which is a conical valve chamber, said closure plug being provided with a central vertical bore which communicates with said chamber, a conical valve supported in said chamber and having a tubular stem which passes upwardly through said bore and is movable therethrough and provided adjacent to the valve with ports or passages, and a threaded apertured cap adapted to be screwed onto the closure plug and provided with a puncturable metallic disk adapted to bear on the valve stem, said cap being provided with a central port which corresponds with the bore of the valve stem.

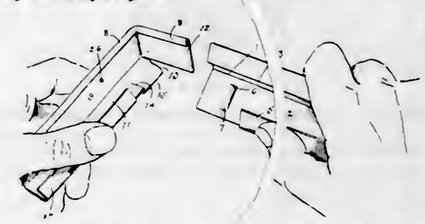
3. In a liquefied carbonic acid gas container having a discharge port, a valve device adapted to open and close said port, means for supporting said valve device in an open position when the container is empty, and means for holding said valve in an open position when the container is full, said last named means serving as a closure for said container.

4. In an apparatus of the class described, a liquid carbonic acid gas container, a valve mounted in said container and normally closed by the pressure of the contents thereof, a closure device for said container, and means governed by said closure device for holding said valve in an open position.

5. In an apparatus of the class described, a container one end of which is provided with a discharge port, a valve mounted therein, a cap detachably connected with the ported end of said container, and a puncturable disk mounted between said cap and said valve and adapted to hold said valve in an open position, said disk serving as a closure for said container.

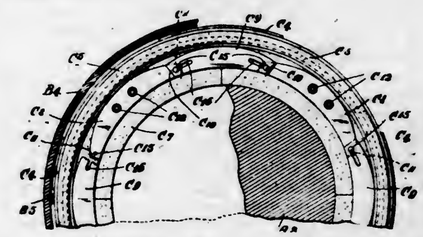
1,220,163. WINDOW-SCREEN FRAME. SWAN G. ANDERSON, Virginia, Minn. Filed Apr. 15, 1916. Serial No. 91,453. (Cl. 156—38.)

1. A screen frame of the character described, comprising four sides, each composed of two telescoping members of right angle form in cross section, inwardly turned flanges upon both edges of the telescoping members, the innermost flange being for the reception of a suitable wire screen, strips for placing within the sides and holding the screen against the flange and clips for holding the strips securely in place.



2. A screen frame of the character described comprising side members of angular shaped pieces of thin metal having inwardly turned flanges formed upon the opposite edges thereof, the innermost flange being for the reception of a suitable screen, means for holding the screen tightly within the frame and a telescopic cross bar having the opposite ends thereof turned at right angles to the body portion and designed to hook in behind the outermost flange upon two opposite sides of the frame and assist in supporting the screen within the frame.

1,220,164. APPARATUS FOR TREATING TIMBERS. HARRIS A. APPEL, New York, and DAVID DUNCAN, Brooklyn, N. Y.; said David Duncan assignor to Elizabeth O. Duncan, New York, N. Y. Filed Sept. 1, 1915. Serial No. 48,441. (Cl. 99—12.)



1. An apparatus for treating timbers, comprising a chambered member closed at one end and adapted to inclose a part only of the timber to be treated, a plurality of permanent separate sections of resilient material disposed end to end so as to form an annular packing, means for holding said sections in substantially the same plane, an inclosing member engaging the outer edge of said packing and thus co-acting with said packing in order to render the same fluid-tight, and means for introducing a liquid preservative into said inclosing chambered member.

2. An apparatus for treating timbers, comprising means forming a chamber closed at one end and adapted to inclose a part only of the timber to be treated; a plurality of permanent separate sections of resilient material disposed end to end so as to form an annular packing; means for holding said sections in substantially the same plane; an inclosing member having a conical wall engaging the outer edges of said sections of resilient material and thus coacting therewith when internal pressure is applied to render the packing fluid-tight against

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 25, 1917.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 27	Jan. 22	291
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Oct. 10	Jan. 23	517
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Feb. 19	Feb. 15	156
234	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Jan. 18	Feb. 24	244
167	5. Bookbinding; Harvesters; Jewelry; Music	Nov. 27	Feb. 3	267
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Nov. 11	Jan. 10	340
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Nov. 11	Nov. 27	699
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Sept. 23	Feb. 2	1076
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Sept. 11	Feb. 4	563
235	10. Carriages and Wagons; Spring Devices	Oct. 5	Feb. 14	951
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Feb. 26	Mar. 15	87
324	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements	Dec. 20	Feb. 27	603
320	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Dec. 1	Feb. 26	550
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Nov. 13	Jan. 4	300
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Feb. 24	Mar. 8	232
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Nov. 10	Jan. 10	617
303	17. Matrix-Making; Ornamentation; Paper Manufactures; Printing; Type-Bar Making	Dec. 23	Feb. 26	211
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Feb. 14	Feb. 7	263
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Oct. 5	Dec. 11	497
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Mar. 2	Mar. 2	202
182	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Dec. 5	Jan. 30	280
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 24	Jan. 11	531
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Oct. 21	July 25	369
144	24. Apparel; Apparel Apparatus; Sewing-Machines	Dec. 2	Feb. 24	339
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Feb. 5	Feb. 23	165
105	26. Electricity, Generation; Motive Power	Aug. 9	Jan. 17	614
375	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Feb. 14	Feb. 19	352
63	28. Internal-Combustion Engines	Sept. 20	Dec. 16	518
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Nov. 1	Jan. 2	406
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Dec. 14	Mar. 9	409
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Nov. 13	Jan. 2	271
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Sept. 1	Feb. 7	944
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Nov. 13	Feb. 10	391
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Sept. 2	Feb. 2	333
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet	Oct. 14	Feb. 7	604
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography	Dec. 6	Mar. 7	629
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	Sept. 5	Jan. 19	820
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Feb. 26	Feb. 26	169
321	39. Water Distribution	Oct. 17	Jan. 16	351
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Dec. 13	Feb. 26	551
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Nov. 20	Jan. 20	388
244	42. Electricity, Conductors; Railway Signaling; Signals; Electricity-Transmission to Vehicles	Sept. 6	Feb. 7	407
383	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Jan. 15	Jan. 31	170

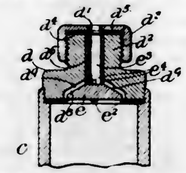
Oldest new case, Aug. 9; oldest amended, July 25.
Total number of applications awaiting action 18,667

163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 18	Feb. 27	968
	Designs	Feb. 2	Feb. 19	354
	Labels and Prints	Mar. 9	Mar. 1	84

PATENTS

GRANTED MARCH 27, 1917.

1,220,162. CHEMICAL FIRE-EXTINGUISHING DEVICE. OLUF F. AALBUE, Brooklyn, N. Y. Filed Apr. 21, 1916. Serial No. 92,619. (Cl. 169—12.)



1. In an apparatus of the class described a gas container provided at one end with a detachable closure device in the bottom of which is a valve chamber, said closure device being provided with a central vertical bore which communicates with said chamber, and a valve mounted in said chamber and provided with a tubular sleeve which passes through said bore and is movable therein, means for supporting said valve below its seat, and a threaded apertured cap for the closure device, said cap being provided with a puncturable disk which closes the tube or sleeve of the valve when said cap is screwed on and with a central aperture which corresponds with the bore of the valve tube or sleeve.

2. In an apparatus of the class described, a tubular gas container provided at one end with a closure plug in the bottom of which is a conical valve chamber, said closure plug being provided with a central vertical bore which communicates with said chamber, a conical valve supported in said chamber and having a tubular stem which passes upwardly through said bore and is movable therethrough and provided adjacent to the valve with ports or passages, and a threaded apertured cap adapted to be screwed onto the closure plug and provided with a puncturable metallic disk adapted to bear on the valve stem, said cap being provided with a central port which corresponds with the bore of the valve stem.

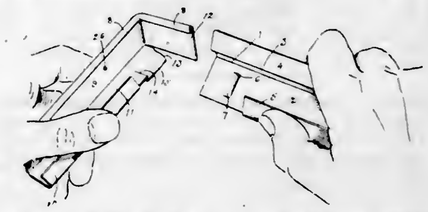
3. In a liquefied carbonic acid gas container having a discharge port, a valve device adapted to open and close said port, means for supporting said valve device in an open position when the container is empty, and means for holding said valve in an open position when the container is full, said last named means serving as a closure for said container.

4. In an apparatus of the class described, a liquid carbonic acid gas container, a valve mounted in said container and normally closed by the pressure of the contents thereof, a closure device for said container, and means governed by said closure device for holding said valve in an open position.

5. In an apparatus of the class described, a container one end of which is provided with a discharge port, a valve mounted therein, a cap detachably connected with the ported end of said container, and a puncturable disk mounted between said cap and said valve and adapted to hold said valve in an open position, said disk serving as a closure for said container.

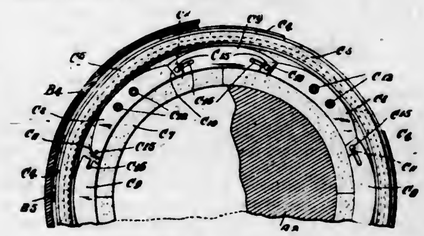
1,220,163. WINDOW-SCREEN FRAME. SWAN G. ANDERSON, Virginia, Minn. Filed Apr. 15, 1916. Serial No. 91,453. (Cl. 156—38.)

1. A screen frame of the character described, comprising four sides, each composed of two telescoping members of right angle form in cross section, inwardly turned flanges upon both edges of the telescoping members, the innermost flange being for the reception of a suitable wire screen, strips for placing within the sides and holding the screen against the flange and clips for holding the strips securely in place.



2. A screen frame of the character described comprising side members of angular shaped pieces of thin metal having inwardly turned flanges formed upon the opposite edges thereof, the innermost flange being for the reception of a suitable screen, means for holding the screen tightly within the frame and a telescopic cross bar having the opposite ends thereof turned at right angles to the body portion and designed to hook in behind the outermost flange upon two opposite sides of the frame and assist in supporting the screen within the frame.

1,220,164. APPARATUS FOR TREATING TIMBERS. HARRIS A. APPEL, New York, and DAVID DUNCAN, Brooklyn, N. Y.; said David Duncan assignor to Elizabeth O. Duncan, New York, N. Y. Filed Sept. 1, 1915. Serial No. 48,441. (Cl. 99—12.)



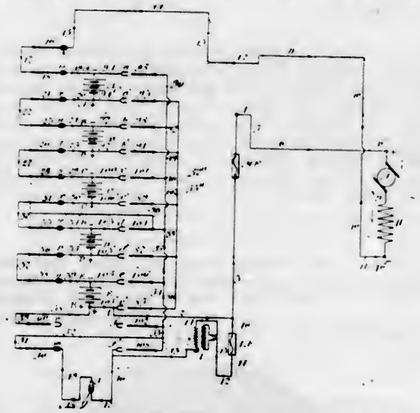
1. An apparatus for treating timbers, comprising a chambered member closed at one end and adapted to inclose a part only of the timber to be treated, a plurality of permanent separate sections of resilient material disposed end to end so as to form an annular packing, means for holding said sections in substantially the same plane, an inclosing member engaging the outer edge of said packing and thus co-acting with said packing in order to render the same fluid-tight, and means for introducing a liquid preservative into said inclosing chambered member.

2. An apparatus for treating timbers, comprising means forming a chamber closed at one end and adapted to inclose a part only of the timber to be treated; a plurality of permanent separate sections of resilient material disposed end to end so as to form an annular packing; means for holding said sections in substantially the same plane; an inclosing member having a conical wall engaging the outer edges of said sections of resilient material and thus coacting therewith when internal pressure is applied to render the packing fluid-tight against

the timber; and means for introducing the liquid preservative into said inclosing chamber.

3. An apparatus for treating timbers, comprising a chambered member closed at one end and adapted to inclose a part only of the timber to be treated, a plurality of separate sections of resilient material disposed end to end so as to form an annular packing, encircling the timber, a plurality of metallic plates carried by said annular packing and so disposed that one of said plates overlaps another and is slidable relatively thereto in order to guide said packing sections as said packing is contracted, an inclosing member connected fluid-tight with said chambered member and provided with an internal bore which tapers and which engages the outer peripheral edge of the packing, provisions for shifting said packing relatively to the inclosing member in order to render the packing fluid-tight relatively to the timber and to the inclosing member, and means for introducing into the inclosing member a liquid preservative under pressure.

1,220,165. SYSTEM OF ELECTRIC DISTRIBUTION. VINCENT G. APPLE, Dayton, Ohio, assignor to The Apple Electric Company, Dayton, Ohio, a Corporation of Ohio. Filed July 22, 1912. Serial No. 710,864. (Cl. 123—179.)



1. In an electrical apparatus for starting an internal combustion engine, the combination of a plurality of independent batteries, a dynamo electric machine, an igniting device, for the fuel charge of the internal combustion engine, connections between the said battery, dynamo, and igniting device, a switch for controlling said connections, whereby the said batteries may be included in series relation, to operate the dynamo as a motor to start the engine, a separate switch for controlling said igniting device only when the said batteries are in series relation with said dynamo and means associated with the first mentioned switch for bridging the terminals of the last mentioned switch.

2. In an electrical apparatus for starting an internal combustion engine, the combination of a plurality of batteries, each composed of a plurality of cells, independent, stationary switch terminals, divided into three groups, to which said batteries are connected, movable terminals divided into three groups, a compound-wound dynamo electric machine connected to the engine, having a series field winding and a shunt field winding, means for moving said movable switch terminals respectively to connect said batteries in series relation with the armature and series winding of the dyanmo electric machine, to operate the dynamo as a motor, and, alternatively, for connecting said batteries in parallel relation with the armature and series field winding and with the shunt field winding, to permit the dynamo to function as a differential generator, a spark producing device, a separate switch for controlling said spark producing device, only when said first mentioned switch is in position for operating the dynamo as a motor, and means associated with the first mentioned switch for bridging the terminals of the last mentioned switch when the circuits are arranged for operation of the dynamo as a generator.

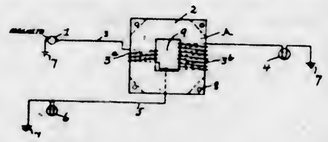
3. In a system of eelctrical distribution, comprising a storage battery, a dynamo electric machine for charging said battery and for opeartion as a motor thereby, a spark producing means, and connections for said instrumentalities in combination with means for incerasing the difference of potential at the terminals of the spark producing means, when the dynamo electric machine is operating as a motor.

4. In a system of electrical distribution, comprising in part storage battery, a dynamo electric machine for charging said battery and for operation as a motor thereby, a spark producing means, and connections for said instrumentalities in combination with a switch for changing the relation of said battery and dynamo and for increasing the differences of potential applied to the spark producing means when said dynamo is operating as a motor.

5. In a system of electrical distribution, comprising in part a storage battery composed of a plurality of cells, a dynamo electric machine for charging said battery and for operation as a motor thereby, a spark producing means connected to a given number of cells when the dynamo is operating as a generator, and means for including a greater number of cells therewith when said dynamo is operating as a motor.

[Claims 6 and 7 not printed in the Gazette.]

1,220,166. VARIABLE MAGNETIC-OPPOSED REACTION-COIL ELECTRIC CIRCUIT. IRVING E. ASKE, Duluth, Minn., assignor to Aske Automatic Voltage Regulator Company, a Corporation of Delaware. Filed June 11, 1915. Serial No. 33,511. (Cl. 171—242.)

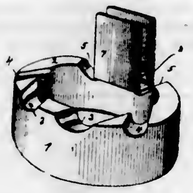


1. The combination of a source of alternating electric current, a reactance coil comprising a core having two legs connected to each other at each end to form a magnetic circuit, each leg having a coil wound thereon, said coils being wound in the same direction of rotation and connected to each other in series, said coils being connected at one end to one of the poles of said source, a translation device connected at one side with the opposite end of said coils, and a translation device connected at one side to said coils intermediate of the ends thereof, the opposite side of each of said translation devices being electrically connected with the opposite pole of said source.

2. The combination of a source of alternating electric current, two reactance coils connected to each other in series, a core for each of said coils, said cores being laminated and connected together at each end to form a magnetic circuit, said coils being wound upon said cores in such manner as to produce in both of said cores poles of like polarity, the free end of one of said coils being connected to one pole of said source, a translation device connected at one side to the free end of the other of said coils, and a translation device connected at one side to said first coil at a point near the junction of the two coils, the opposite sides of said translation devices being electrically connected with the opposite pole of said source.

3. The combination of a source of alternating electric current, two reactance coils in series, a core common to both of said coils and adapted to form a magnetic circuit, said core including two legs, one of said coils being wound upon one of said legs and the other of said coils being wound upon the other of said legs so as to produce poles of like polarity in both of said legs when both of said coils are charged, a translation device adapted to receive electric current through only the first coil of said series, a translation device adapted to receive electric current through both of said coils, the second of said coils having a greater number of turns of the electric conductor than the first of said coils.

1,220,167. ASH-TRAY. JOHN H. ASTRUCK, New York, N. Y. Filed Jan. 11, 1916. Serial No. 71,413. (Cl. 131—51.)



1. An ash tray comprising a bowl having a rim of a thickness sufficient to constitute a cigar rest, and a plurality of diagonally disposed grooves sunk into said rim and traversing the same in different oblique directions.

2. An ash tray comprising a bowl having a horizontal rim of a thickness sufficient to constitute a cigar rest, and a groove sunk into said rim and increasing in depth from its outer end toward its inner end, whereby a corresponding tilt is imparted to the cigar supported within said groove.

1,220,168. OUTLET-BOX. ARTHUR WILSON BAKER, Danbury, Conn. Filed Feb. 19, 1915. Serial No. 9,316. (Cl. 247—5.)



1. An outlet box, including a casing having a plurality of threaded apertures therein, closures for certain of said apertures, means engageable with certain other of said apertures for attachment therewith of electric conduits of various sizes, apertured members associated with certain of said threaded apertures to facilitate the securement of the device in a desired position.

2. An outlet box including a rectangular casing having an open side and a plurality of threaded apertures in its remaining sides, said casing also having threaded apertures in its end portions, closures for certain of said apertures, means engageable with certain other of said apertures for attachment therewith of electric conduits of various sizes, apertured members associated with certain of said threaded apertures to facilitate the securement of the device to a stationary support.

1,220,169. REEL-HOLDER. CLIFFORD V. BATES, Chicago, Ill. Filed Mar. 24, 1915. Serial No. 16,560. Renewed Aug. 31, 1916. Serial No. 117,958. (Cl. 242—98.)

A reel holder comprising a casing, a shaft secured to said casing and provided with a groove having curved side walls of unequal length at one end thereof to receive a check member, a guide block carried by said reel and through which said shaft extends, said guide block being provided with a slot having substantially parallel side walls disposed at approximately a right angle to the longitudinal axis of said shaft throughout their length, a check member movable within said slot, a spring normally tending to rotate the reel in one direction and a flexible member upon said reel adapted to rotate said reel in the other direction.



1,220,170. CAR-TRUCK. LARS J. BERG, Chicago, Ill. Filed Oct. 26, 1912. Serial No. 727,844. (Cl. 105—244.)



1. In a railway car-truck, the combination of journal boxes, a straight equalizer-bar bearing on said journal boxes, a truck-frame having a wheel-piece, and a spring interposed between said straight equalizer-bar and said wheel-piece, whereby to render accessible for repairs and renewal brake shoes disposed between the wheels in the space spanned by the equalizer bar, substantially as described.

2. In a six-wheel car-truck, the combination of journal boxes, an equalizer-bar bearing on said boxes, a truck-frame having a recessed wheel-piece, and a spring disposed between said equalizer-bar and truck-frame and accommodated in part at least in the recess of the wheel-piece, whereby to render accessible for repairs and renewal brake shoes disposed between the wheels in the space spanned by the equalizer bar, substantially as described.

3. In a railway car-truck, the combination of journal boxes, a substantially straight equalizer-bar bearing on said journal boxes, a recessed truck-frame, and a spring interposed between said substantially straight equalizer-bar and said truck-frame, said spring being accommodated in part at least in the recess of said frame, substantially as described.

4. In a six-wheel railway car-truck, the combination of journal boxes, substantially straight equalizer-bars bearing on said journal boxes, a truck-frame having recessed wheel-pieces, and springs interposed between said equalizer-bars and wheel-pieces, said springs being accommodated in part at least in the recesses of said wheel pieces, substantially as described.

5. In a six-wheel railway car-truck, the combination of journal boxes, a pair of truck-bolsters, and two pairs of substantially straight equalizer bars bearing on said journal boxes and located above said bolsters, whereby to render accessible for repairs and renewal brake shoes disposed between the wheels in the space spanned by the equalizer bar, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,220,171. KEY-DRESS. OLGA BERGHORN, Jersey City, N. J. Filed Dec. 26, 1916. Serial No. 139,063. (Cl. 150—40.)

1. A key dress comprising a small inclosing curtain of ornamental flexible material adapted to accommodate a key, the inclosure being open at the top and bottom, and suspension members secured to its top whereby the dress

and key may be suspended by a chain or the like passed therethrough.

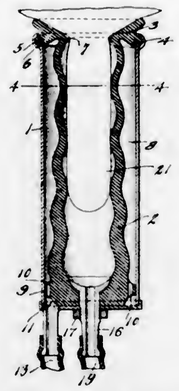


2. A key dress comprising an inclosing curtain of metal mesh fabric adapted to accommodate a key, in combination with apertured plates secured to opposite sides of the top of said curtain to receive a suspension element passed therethrough and through the opening in the head of the key.

3. A key dress comprising a curtain adapted to accommodate a key, open at the bottom, and having suspension frame members secured to its top, whereby the dress and the key may be suspended by a chain or the like passed therethrough.

4. The combination of a flexible inclosing curtain adapted to conceal a key and being open at the bottom, frame members secured to the top of the curtain, and suspension means adapted to pass through said members secured to the top of the curtain, and the key within.

1,220,172. TEAT-CUP. ANDEUS L. BERTHELSEN, Chicago, Ill. Filed Dec. 18, 1915. Serial No. 67,640. (Cl. 31–102.)



1. A teat cup comprising an outer casing having smooth walls, and an inner compressible teat receiving tube, the walls of which are formed with corrugations.

2. A teat cup comprising an outer relatively rigid casing formed with smooth walls and an inner teat receiving member formed with corrugated walls spaced from the outer casing, connecting means intermediate the top portion of said inner member and the casing for holding the upper portion of said inner member in spaced relation, and spacing means at the lower portion of said inner member.

3. A teat cup comprising an outer casing and an inner elastic compressible teat receiving member, connecting means intermediate the upper portion of the inner member and the casing permitting relative movement of the mouth of said inner member inwardly and outwardly of the casing, and means clamping the lower end portion of the inner member to the outer casing aforesaid, the walls of the inner member being formed with a series of corrugations to provide a plurality of pressure points for the teat.

4. A teat cup comprising an outer casing and an inner compressible teat receiving member, connecting means intermediate the mouth of the inner member and the casing, a spacing shoulder at the lower portion of the inner member, means for supplying pressure to the outer casing between the wall of the inner member and said casing, said spacing shoulder being provided with passages therethrough, and a tubular connecting member at the lower end of said cup clamping the inner member to the outer casing.

5. The combination with a teat cup comprising an outer casing and an inner elastic teat receiving member having corrugated walls, the material of said walls at opposite sides attenuating toward one end, of pressure means communicating with the casing aforesaid and adapted to act upon said corrugated wall to cause extension thereof for imparting stripping action to the teat when disposed therein.

[Claims 6 to 13 not printed in the Gazette.]

1,220,173. ROTARY STEAM-ENGINE. ANTONIO BORRÁS and FERNANDO IRIARTE, Buenos Aires, Argentina. Filed Mar. 1, 1916. Serial No. 81,318. (Cl. 121—64.)

1. In a rotary steam engine a shaft, an eccentric portion thereon, a plurality of piston rods rotatably mounted on said eccentric portion, rotatable plates on said shaft adjacent said eccentric portion, cylinders carried by said plates, pistons carried by said piston rods adapted to work in said cylinders, steam conduits to each of said cylinders, a fixed cam plate provided with a channel in its inner face normally in communication with two adjacent steam conduits, a steam inlet through said cam plate to said channel and means for exhausting said cylinders controlled by said cam plate.

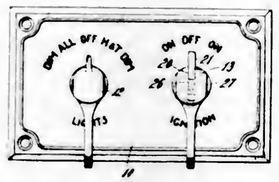
2. In a rotary steam engine a shaft, an eccentric portion thereon, a plurality of piston rods rotatably mounted on said eccentric portion, rotatable plates on said shaft adjacent said eccentric portion, cylinders carried by said plates, pistons carried by said piston rods adapted to work in said cylinders, steam conduits to each of said cylinders, a fixed cam plate provided with a channel in its inner face normally in communication with two adjacent steam conduits but adapted to come into communication with a third conduit before passing out of communication with the rearmost conduit of said two adjacent conduits, a steam inlet through said cam plate to said channel and means for exhausting said cylinders controlled by said cam plate.

3. In a rotary steam engine, rotating cylinders, steam conduits thereto and rotating therewith, a fixed plate provided with a channel in its face normally in communication with two adjacent steam conduits and a steam inlet through said plate to said channel.

4. In a rotary steam engine, rotating cylinders, steam conduits thereto and rotating therewith, a fixed plate provided with a channel in its face normally in communication with two adjacent steam conduits but adapted to come into communication with a third conduit before passing out of communication with the rearmost conduit of said two adjacent conduits and a steam inlet through said plate to said channel.

5. In a rotary steam engine, rotating cylinders, steam conduits thereto and rotating therewith, a fixed cam plate provided with a steam channel in its face in communication with at least two adjacent steam conduits, a steam inlet through said plate to said channel and means for exhausting said cylinders controlled by the cam surface of said cam plate.

1,220,174. PADLOCK-SWITCH. STEPHEN F. BRIGGS, Milwaukee, Wis., assignor to Briggs & Stratton Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 13, 1915. Serial No. 50,540. (Cl. 175—282.)



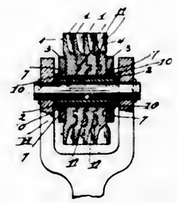
1. An electric switch, comprising a casing, a switch member rotatably mounted therein, a dog pivotally mounted on the switch member, a stop on the casing engaged by the dog, and a projection on the dog by which it may be swung, there being openings in the dog and in the switch member which register in the position of the dog in which it engages the stop, said registering openings being adapted to receive a padlock for locking the switch member against movement.

2. An electric switch, comprising a casing, a switch member pivotally mounted therein and provided with a projecting handle, a spring pressed dog pivotally mounted on the switch member and provided with a portion projecting from the switch member, a stop on the casing engaged by the dog in one position thereof, the projecting portion of the dog being adapted to be depressed within the switch member, and openings in the dog and the switch member registering in such depressed position of the dog and adapted to receive a padlock.

3. A padlock switch, comprising a casing, a switch member pivotally mounted in the casing, an insulating disk secured to the switch member, spring contact arms carried by the disk, an insulating backplate for the casing, contacts thereon engaged by the contact arms, a sleeve surrounding the switch member and confined between the insulating disk and the front plate of the casing, there being a slot in the switch member and the sleeve, a dog pivotally mounted in said slot, a spring bearing on the dog, an arm on the dog, and stationary lugs on the casing adapted to be engaged by the arm of the dog when the dog is moved against the action of its spring, said dog having a nose portion projecting from the slot of the switch member and adapted to be depressed for moving the arm in its locking position, there being openings in the dog and in the switch member which register in such depressed locking position of the dog to receive the hook portion of a padlock for locking the switch member against movement.

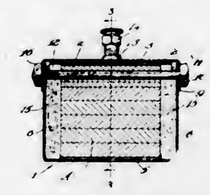
1,220,175. EMERY-WHEEL DRESSER. ERNEST J. BRISBEN, Cleveland, Ohio, assignor to Osborn-Crew Manufacturing Company, a Partnership doing business at Cleveland, Ohio. Filed Nov. 8, 1912. Serial No. 730,191. (Cl. 125—19.)

1. The combination in an emery wheel dresser, of a series of disks each having a recess in each face thereof, projecting lugs on the faces of each of said disks adapted to engage a recess in the adjacent disk on each side thereof and prevent the independent rotation of the disks with respect to each other, an end disk disposed at each end of said series and each having the face adjacent the said series complemental to and in engagement with the face of the disk adjacent thereto and the other face having projecting lugs thereon, a sleeve upon which said series of disks and the end disks are disposed, said sleeve having projections at each end thereof integral therewith, end washers disposed on the said sleeve, one adjacent each of said end disks and having recesses therein adapted to engage the projecting lugs on said end disks and also having recesses therein adapted to engage the projections on said sleeve whereby all of said disks, end washers and the sleeve are secured against independent rotation with respect to each other, and a handle upon which said sleeve is rotatably journaled.



2. The combination in an emery wheel dresser, of a series of disks each having a recess in each face thereof, a projection on each face of each of said disks adapted to engage a recess on the adjacent disks and prevent the independent rotation of the disks with respect to each other, an end disk disposed at each end of said series and having the face adjacent the said series complemental to and in engagement with the adjacent disk of the series and the other face having projecting lugs thereon, a sleeve upon which said series of disks and the end disks are disposed and having projections integral therewith, end washers disposed on the said sleeve one of which is adjacent each of said end disks and having recesses therein adapted to engage the projecting lugs on said end disks and also having recesses therein adapted to engage the projections integral with said sleeve, whereby all of the said disks and washers and the sleeve are secured against rotation with respect to each other, and the ends of said sleeve being turned over said end washers, whereby said end washers, end disks and series of disks are secured against longitudinal movement with respect to said sleeve, and a handle upon which said sleeve is rotatably journaled.

1,220,176. SPRING-LUBRICATING CLIP. WILLIAM H. BROWN, Cleveland, Ohio. Filed Dec. 4, 1914. Serial No. 875,531. (Cl. 184–1.)



1. In combination with a spring composed of a plurality of superimposed leaves, one of said leaves being provided with an eye, an oiler for the spring carrying a member engaging said eye to thereby anchor the oiler to the leaf carrying the eye, said oiler carrying a lubricating pad pressing against the edges of the leaves so as to be agitated by the relative movement thereof.

2. In combination with a spring composed of a plurality of superimposed leaves, one of said leaves being provided with an eye, an oiler for the spring carrying a member engaging said eye to thereby anchor the oiler to the leaf carrying the eye, said eye being carried at the end of the upper leaf of the spring, said oiler carrying a lubricat-

ing pad pressing against the edges of the leaves so as to be agitated by the relative movement thereof.

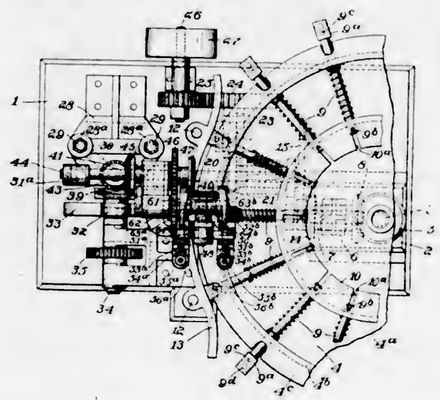
3. An oiler of the type set forth, comprising two pad-holding chambers or channels and means for holding them against opposite sides of the spring, said means embodying a top member provided with a filling hole and an open-ended trough-like distributing device under the top member to receive the oil and deliver it to the pad-holding channels.

4. A lubricating clip for vehicle springs comprising a pair of branches adapted to extend upwardly along opposite sides of a spring, one of said branches being provided with a recess for the reception of a lubricant, a removable member connecting the upper ends of said branches, and means coöperating with said member for supplying a lubricant to the recess.

5. A lubricating clip for vehicle springs comprising a pair of branches adapted to extend upwardly along opposite sides of a spring, each of said branches being provided with a recess for the reception of a lubricant, removable means connecting the upper ends of said branches, and a distributer for lubricant associated with the connecting means and adapted to supply lubricant to both of said recesses.

[Claims 6 to 12 not printed in the Gazette.]

1,220,177. MACHINE FOR STRIPPING HOLLOW ARTICLES FROM THEIR FORMS. WILLIAM A. BRUBAKER, Akron, Ohio, assignor to The Miller Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Oct. 30, 1916. Serial No. 128,543. (Cl. 18—2.)



1. In an apparatus of the class described, a moving carrier for supporting a form bearing an article to be stripped therefrom, rotatable stripping rolls mounted for movement toward and from each other to yieldingly bear against said form, and means for bodily moving said stripping rolls perpendicularly of the form.

2. In an apparatus of the class described, a moving carrier for supporting a form bearing an article to be stripped therefrom, rotatable stripping rolls mounted for movement toward and from each other to yieldingly bear against said form, means for bodily moving said stripping rolls perpendicularly of the form, and means for feeding friction producing material to prevent slipping of the rolls on the article.

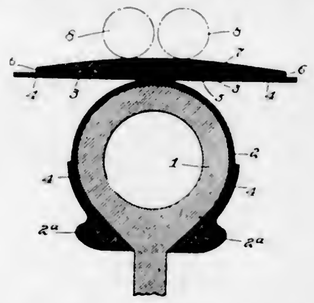
3. In an apparatus of the class described, an intermittently moving carrier for supporting forms bearing articles to be stripped therefrom, rotatable stripping rolls mounted for movement toward and from each other to embrace and contact with the forms, and means for imparting bodily movement to said rolls lengthwise of the forms while the carrier is at rest.

4. In an apparatus of the class described, an intermittingly moving carrier for supporting forms bearing articles to be stripped therefrom, rotatable stripping rolls mounted for movement toward and from each other to embrace and contact with the forms, means for imparting bodily movement to said rolls lengthwise of the forms while the carrier is at rest, and means for feeding friction producing material between the rolls and articles on the forms.

5. In an apparatus of the class described, a pair of rotating stripping rolls movable toward and from each other while spaced apart, means for imparting bodily movement to said rolls in a plane perpendicular to the plane of their movement toward and from each other, and means for presenting a form bearing an article to be stripped therefrom between said rolls and holding it during the bodily movement of the rolls.

[Claims 6 to 25 not printed in the Gazette.]

1,220,178. METHOD OF AND APPARATUS FOR APPLYING RUBBER COVERS TO TIRE-CARCASSES. FERDINAND F. BRUCKER, Akron, Ohio, assignor to The Miller Rubber Co., Akron, Ohio, a Corporation of Ohio. Filed Feb. 28, 1916. Serial No. 81,001. (Cl. 154—14.)



1. The herein described method of finishing a pneumatic tire, which consists in assembling in slab form the plurality of rubber strips comprising the rubber covering of the tire carcass, and applying said slab to the carcass by a progressive rolling action.

2. The herein described method of finishing pneumatic tires, which consists in assembling in slab form the plurality of rubber strips comprising the rubber covering of the tire carcass, and applying said slab to the carcass by the progressive rolling action of spherical rollers moving in a path which is a compound of circumferential and radial movement.

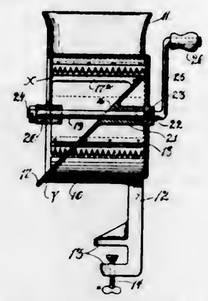
3. A device for applying rubber covering to a tire carcass, comprising a pair of spherical devices movable toward and from each other, and means for supporting them so as to be rotatable in all directions.

4. Means for applying the rubber covering to a tire carcass, comprising a pair of swinging forked arms, spherical rolling devices, and opposing ball bearings carried by the forks of the arms and supporting said spherical rolling devices.

1,220,179. VEGETABLE-CUTTER. ARTHUR C. BULLEN, Swink, Colo. Filed Dec. 5, 1916. Serial No. 135,118. (Cl. 146—11.)

1. In a device of the class described, an open-ended casing provided with a hopper and having a spider at one end thereof, an inclined disk within said casing and spaced from the walls thereof, a drum rotatably mounted within said casing and surrounding said disk, a shaft upon which said drum is mounted, said shaft being journaled in said spider and in said disk, cutting knives mounted on the outer surface of said drum, and means for rotating said shaft.

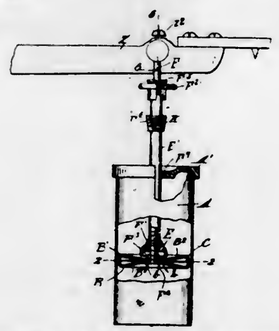
2. In a device of the class described, an open-ended horizontal casing provided with a hopper and having a spider at the rear end thereof, an inclined disk within said casing and spaced from the walls thereof, said disk extending substantially from the upper front side to the lower rear side of said casing, a drum rotatably mounted within said casing and extending from front to rear thereof and surrounding said disk, a shaft upon which said drum is mounted, said shaft being journaled in said spider and in a bearing carried by said disk, cutting knives mounted on the outer surface of said drum, and means for rotating said shaft.



3. In a device of the class described, an open-ended casing provided with a hopper and having a spider at the rear end thereof, an inclined disk within said casing and spaced from the walls thereof, a drum rotatably mounted within said casing and surrounding said disk, said drum being open on its rear side and closed on its front side, a shaft upon which said drum is mounted, said shaft being journaled in said spider and in said disk, cutting knives mounted on the outer surface of said drum, and means for rotating said shaft.

4. In a device of the class described, an open-ended cylindrical casing provided with a hopper and having a spider at one end thereof, an inclined disk within said casing, said disk being spaced from the cylindrical walls of said casing and supported independently of said cylindrical walls, a drum rotatably mounted within said casing and surrounding said disk, a shaft upon which said drum is mounted, said shaft being journaled in said spider and in said disk, cutting knives mounted on the outer surface of said drum, and means for rotating said shaft.

1,220,180. DASH-POT. JOHN D. BURKHOLDER, Lancaster, Pa., assignor, by mesne assignments, to Toledo Scale Company, Toledo, Ohio, a Corporation of New Jersey. Filed Sept. 24, 1910. Serial No. 583,676. (Cl. 74—69.)



1. In a weighing machine, a movable member, a dash pot, said dash pot having a piston and a piston rod, a journal partially rotatable in the movable member, and means for connecting the journal to the piston rod.

2. In a weighing machine, a movable member, a dash pot, said dash pot having a piston and a piston rod, a journal partially rotatable in the movable member, a head on the journal, said head having a slot therein, the piston rod having an extension lying in the slot of the head, and means for securing the piston rod to the head.

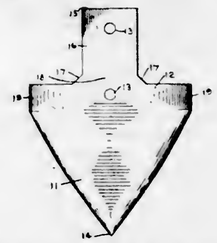
3. In a weighing machine, a movable member, a dash pot, said dash pot having a piston and a piston rod, a journal partially rotatable in the movable member, means for directly connecting the journal to the piston rod, and means in the movable member for holding the journal.

4. In a device of the class described, a cylinder, a piston movable therein and provided with a plurality of openings, manually operated means for controlling the flow through certain of the openings and spring-pressed means operated by the flow of liquid for controlling the flow through other of the openings.

5. The combination of a movable member, a disk angularly adjustable with relation thereto, a dash pot, a piston and piston rod, the latter eccentrically attached to the disk, and means for securing the disk in adjustable position.

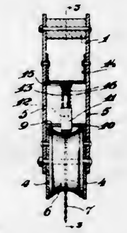
[Claims 6 to 9 not printed in the Gazette.]

1,220,181. CULTIVATOR SHOVEL OR TOOTH. CHARLES BURMEISTER, Sutherland, Iowa. Filed Oct. 19, 1915. Serial No. 56,724. (Cl. 97—11.)



A cultivator shovel comprising a blade of approximately equilateral triangular form and a mold board having a lower portion extending substantially the entire width of said blade and an upper portion extending for a portion only of the width of said lower portion; said lower portion of the mold board and said blade being together curved forwardly from the top of said lower portion of said mold board to the bottom of said blade, and said lower portion of said mold board being curved backwardly toward its side edges, said backward curve being sharper at the bottom of said lower portion than at the top thereof.

1,220,182. PULLEY-BLOCK. ADDINGTON B. CAMPBELL, Newport, N. J. Filed Mar. 14, 1916. Serial No. 84,040. (Cl. 57—34.)

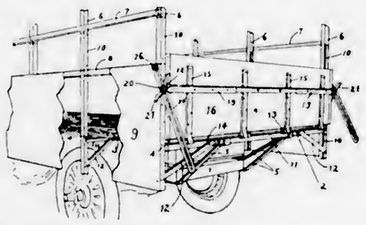


1. The combination of a support, a pulley block on the support, a pulley rotatably mounted in said block, a flexible member supported on the pulley, a bridge extending over the edge of the pulley and having a slot therein forming a guideway, a shoe having a portion extending through the slot and in frictional engagement with said

flexible member, and a spring operative to move and keep the shoe in frictional engagement with the flexible member to press the latter into engagement with the pulley, substantially as described.

2. The combination with a support, a pulley block secured to the support, a pulley in the pulley block, and a flexible device supported on the pulley, of a bracket secured to the support and having a pin thereon, a brake shoe movable on the pin and engaging the flexible device on the pulley, a spring around the pin exerting pressure on the brake shoe, a nut adjustable on the pin and engaging the spring, and a slotted bridge on the block through which the brake shoe projects, substantially as described.

1,220,183. AUTOMOBILE-TRUCK BODY. CARL L. CAPPEL, Dayton, Ohio. Filed Aug. 25, 1916. Serial No. 116,811. (Cl. 21—7.)

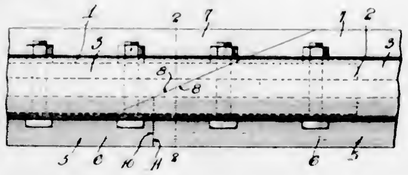


1. An automobile truck body comprising a floor, cross bars supporting said floor, a pair of uprights secured to each cross bar, angle irons attached to said uprights and their respective cross bars, and bracing means connected between the angle iron of each cross bar and the angle irons of the uprights to which said cross bar is secured.

2. An automobile truck body comprising a floor, cross bars supporting said floor, an upright secured to each end of a cross bar, said uprights extending below their respective cross bars, and a bracing member extending between the lower end of each upright and the adjacent end of the cross bar to which said upright is attached, to form a rigid support for the truck body.

3. An automobile truck body comprising a floor, cross bars supporting said floor, an upright into which each end of a cross bar is mortised, an angle iron secured to each upright, an angle iron also secured to each cross bar, the angle irons of the uprights extending below the angle irons of their respective cross bars, and an inclined bracing piece connected between the lower end of each upright angle iron and the adjacent end of the cross bar angle iron to which said upright axle iron is secured, to form a firm support for the truck body.

1,220,184. RAIL-JOINT. CHARLES H. CARROLL, Tampa, Fla. Filed May 13, 1916. Serial No. 97,375. (Cl. 239—8.)

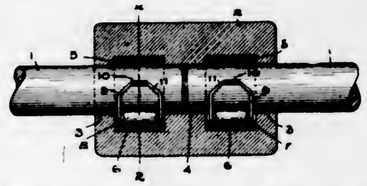


1. In a rail joint, two rails each comprising a rail head, web and base flange, the meeting end of each rail cut vertically diagonally through the said head, web and the outside half of said base flange, the diagonal cut portions being identical in each rail end and adapted to engage for preventing longitudinal movement of the rail ends out of longitudinal alinement with each other, said base flange being further vertically cut at right angles to the longitudinal center line of the rail, the right angularly vertically cut portion of said base flange extending from the inner edge of the inner half of said flange and terminating in a sharp corner at the edge of the web of the rail where said vertically cut portion joins with the diagonally cut portion of said web.

2. In a rail joint, the combination with the meeting ends of two railway rails, each comprising a head, a web and a base flange, said base flange extending outwardly equally on each side of the web to provide inside and outside halves of said base flange, the said head, web and outside half of the flange being cut vertically diagonally in each rail for providing obliquely disposed contacting surfaces adapted to engage and prevent the lateral displacement of said rail ends with respect to their true longitudinal alinement, the said inside half of the base flange in each rail being further cut vertically at right angles to the longitudinal center line of the rail for providing right angularly disposed meeting faces extending inwardly from the edge of the rail and terminating at the edge of the web, fish plates mounted upon the web and overlapping the meeting ends of each rail, and a plurality of bolts carried by the fish plates and extended through apertures formed in the web for fastening the said fish plates in position.

3. In a rail joint, the combination with the meeting ends of two railway rails, each comprising a head, a web, and a base flange, the said head, web and outside portion of the said flange being cut vertically diagonally in each rail providing obliquely disposed contacting surfaces adapted to engage and prevent the lateral displacement of the said rail ends with respect to their true longitudinal alinement, the inside half of the base flange in each rail being cut vertically at right angles to the longitudinal center line of the rail for providing right angularly disposed meeting faces adapted to contact, the angularly cut portion of the said head directly above the said inside half of the flange permitting the corresponding ends of the said flanges to be moved vertically into and out of contact with each other, the said vertical cut portion of the inside half of the flange extending from the edge thereof to the edge of the said web.

1,220,185. ROLLER-RETAINER. FRANK HENRY CATHCART, Trenton, N. J., assignor to Automatic Shaft Coupling Co., Alexandria, Va., a Corporation of Delaware. Filed June 11, 1915. Serial No. 33,507. (Cl. 64—13.)



1. A roller retainer for shaft grips, comprising flexible elastic means for supporting a roller, and adapted to engage a shaft, substantially as described.

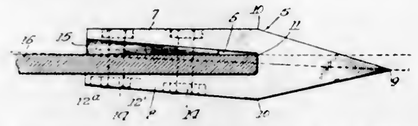
2. A roller retainer of the character described, comprising two gripping tongues adapted to engage opposite sides of a shaft, and means between the tongues for supporting a roller, substantially as described.

3. The combination with a shaft, of a roller retainer of the character described, comprising bearings, rollers in the bearings, and spring tongues adapted to engage opposite sides of said shaft beyond the center of the shaft, substantially as described.

4. The combination with a shaft, of a roller retainer of the character described, comprising two wire frames having coils intermediate their ends forming bearings, rollers having trunnions on their ends located in the bearings, and devices connecting the ends of said frames forming spring tongues adapted to engage opposite sides of the shaft, substantially as described.

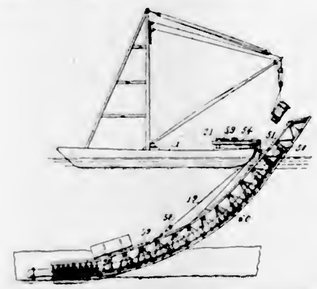
5. The combination with a shaft, and a casing having a recess therein around the shaft, of a roller in the recess, and a roller retainer engaging the ends of the roller and having spring tongues bearing against opposite sides of the shaft beyond the center of the latter, substantially as described.

1,220,186. TOOTH FOR POWER-SHOVELS. GEORGE T. CHAMBERS, La Grange, Ill. Filed Jan. 14, 1916. Serial No. 72,025. (Cl. 37—16.)



In combination with a power bucket having a flat bottom, of substantially uniform thickness, of a one piece reversible tooth of relatively refractory metal, having an integral point projecting beyond the front edge of the bucket and having a pair of integral, rearwardly tapering legs separated by a tapering slot and transversely perforated near the outer end of the slot and intermediate said perforation and the inner end of the slot, the former perforations being longitudinally elongated to accommodate the securing bolt when the tooth is reversed; a wedge of relatively softer metal tapered at substantially the same angle as the slot, and having round and elongated openings registering with the respective perforations in the tooth to underlie the upper leg within the bucket and bolts passing through said bucket, tooth and wedge.

1,220,187. PIPE-LAYING APPARATUS. WILLIAM L. CHAPMAN, Brooklyn, N. Y. Filed July 13, 1916. Serial No. 109,032. (Cl. 61—2.)



1. In a pipe laying apparatus, the combination with a support, of a skid for sliding the pipe into position, suspended from the support with freedom for lateral play, and means to suspend said skid from said support including a sling having a pivotal connection with said support.

2. In a pipe laying apparatus, the combination with a support, of a skid for sliding the pipe into position, suspended from the support with freedom for lateral play, and means to suspend said skid from said support including a sling and an eccentric sheave pivoted to said support and over which the sling passes.

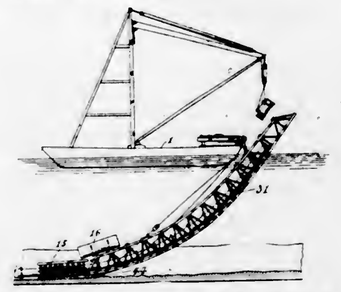
3. In a pipe laying apparatus, the combination of a scow, a supporting frame secured thereto and overhanging the scow, a skid for sliding the pipe into position, an eccentric sheave pivoted upon the frame, and a sling secured to the upper end of the skid and passing over the sheave.

4. In a pipe laying apparatus, the combination with a support, of a skid for sliding the pipe into position, secured at its upper end to the support, and towing wires to advance the skid, said wires being secured to the support adjacent the point of attachment of the skid and being secured at or near the lower end of the skid and extending substantially parallel to said skid whereby the skid is advanced by drawing on its lower end.

5. In a pipe laying apparatus, the combination with a support, of a skid for sliding the pipe into position secured at its upper end to the support, means for preventing the sidewise roll of the scow being communicated to said skid, and towing wires to advance the skid secured at or near the lower end thereof and passing forward to a point of attachment on the support near the upper end of the skid.

[Claims 6 to 8 not printed in the Gazette.]

1,220,188. PIPE-LAYING APPARATUS. WILLIAM L. CHAPMAN, Brooklyn, N. Y. Filed July 13, 1916. Serial No. 109,033. (Cl. 61—2.)



1. The combination with a skid for laying a line of pipe, of a straightening device for the pipe, at the discharging ends of the skid, and a universal joint connecting said straightening device and the skid whereby the oscillations of the skid around the lower end thereof as a center are not communicated to the straightening device.

2. The combination with a skid for laying a line of pipe and a buoyancy device for supporting the lower end of the skid, at the discharging end of the skid, a straightening device and a universal joint connecting said straightening device and the skid whereby the oscillations of the skid around the lower end thereof as a center are not communicated to the straightening device.

3. The combination with a skid for laying a line of pipe, a scow for supporting the upper end of the skid, and a buoyancy device for supporting its lower end, at the discharging end of the skid, a straightening device and a universal joint connecting said straightening device and the skid whereby the oscillations of the skid around the lower end thereof as a center are not communicated to the straightening device.

4. The combination with a skid for laying a line of pipe, of a straightening device pivoted to the discharging end of the skid and adapted to embrace the pipe as it leaves the skid and forming a tapering guide channel therefor.

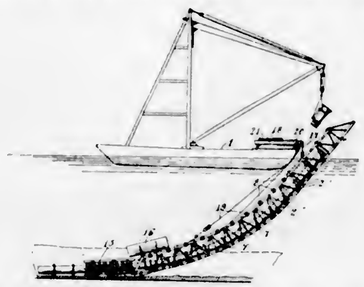
5. The combination with apparatus for laying a line of pipe, of a trailer connected to said apparatus so as to be drawn along by the same, said trailer being box-shaped so as to embrace the pipe, and having means to provide a guideway therefor tapering both laterally and vertically for part of its length.

[Claims 6 to 11 not printed in the Gazette.]

1,220,189. PIPE-LAYING APPARATUS. WILLIAM L. CHAPMAN, Brooklyn, N. Y. Filed July 13, 1916. Serial No. 109,034. (Cl. 61—2.)

1. A pipe laying apparatus having a launching skid for progressively lowering pipe into position, said launching skid being made up of a plurality of rigid sections pivotally united, and means for limiting the motion of the sections relative to each other.

2. A pipe laying apparatus having a launching skid for progressively lowering pipe into position, said launching skid being made up of a plurality of rigid sections pivotally united at the bottom and loosely connected at the top.



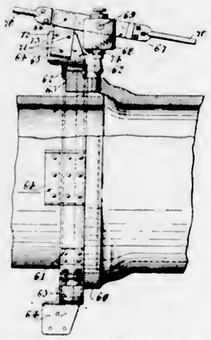
3. A pipe laying apparatus having a launching skid for progressively lowering pipe into position, said launching skid consisting of a plurality of rigid box-shaped units flexibly united end to end to form a cradle entirely surrounding the pipe.

4. A launching skid for lowering a line of flexibly jointed pipe into position, comprising a series of rigid units flexibly joined together, and means to confine the line of pipe against vertical displacement with respect to said units as the skid is advanced.

5. A launching skid for lowering a line of flexibly jointed pipe into position, comprising sections hinged together at the bottom and flexibly connected at the top, and means to confine the line of pipe against both horizontal and vertical displacement with respect to said sections.

[Claims 6 to 11 not printed in the Gazette.]

1,220,190. PIPE-LAYING APPARATUS. WILLIAM L. CHAPMAN, Brooklyn, N. Y. Filed July 22, 1916. Serial No. 110,680. (Cl. 78—47.)



1. A motor-carrying device comprising in combination a circular band having means to secure it to the work to be operated upon, with freedom for rotation; a motor, a motor-carrying arm having means for pivotally supporting the motor thereon; and a supporting link pivoted to the band and to which the motor-carrying arm is pivotally secured, whereby the motor may be shifted with respect to the work.

2. A wrench-carrying device comprising in combination a circular band having means to secure it to the work to be operated upon with freedom for rotation with respect to the work; a supporting link pivoted to the band; a wrench-carrying arm pivoted to the supporting link; and a wrench adapted to operate a tool; said arm having a handle and means to pivot the wrench thereto intermediate the handle and supporting link.

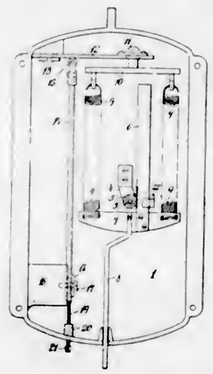
3. A wrench-carrying device comprising in combination a circular band having means to secure it to the work to be operated upon with freedom for rotation with respect to the work; a U-shaped support pivoted to the band; and a wrench-carrying fork pivoted to the U-shaped support; said fork having a handle and means to pivot a wrench thereto between the two arms of the fork; the wrench being adapted to coöperate with a suitable tool.

4. A wrench-carrying device comprising in combination a circular band having means to secure it to the work to be operated upon with freedom for rotation with respect to the works; a U-shaped support pivoted to the band; means to fasten and hold said support in a definite position; and a wrench-carrying fork pivoted to the U-shaped support; said fork having a handle and means to pivot a wrench thereto between the two arms of the fork; the wrench being adapted to coöperate with a suitable tool.

5. A wrench-carrying device comprising a circular band provided with flanges to secure it upon the flanged end of a pipe with freedom for rotation around the pipe, and a plurality of U-shaped seats rigidly secured to the band at intervals around its circumference; in combination with a U-shaped support, a wrench-carrying fork pivoted to said support and having a handle, a wrench pivoted to said fork between its two arms and adapted to coöperate with a suitable tool; and means to pivot the U-shaped support, with its wrench-carrying fork and wrench, to any of the U-shaped seats at will.

[Claims 6 to 8 not printed in the Gazette.]

1,220,191. SCALE. RALPH F. CHATILLON, Greenburg, N. Y., assignor to John Chatillon & Sons, a Corporation of New York. Filed May 23, 1912. Serial No. 699,108. (Cl. 73—46.)



1. A scale comprising a coil spring, a beam attached to said coil spring, an indicator actuated by said beam, a flat spring supporting at a free end said coil spring, and temperature controlled means for automatically moving the fulcrum of said flat spring in accordance with temperature variations.

2. A scale comprising a coil spring, a beam connected thereto, an indicator connected to said beam, multiplying gear connections, said gear connections including a rack connected to said beam, pivotal means for suspending said coil spring, and a thermostatically movable support for said pivotal means and movable relatively thereto to vary the effective pivotal point of the same in accordance with temperature variations.

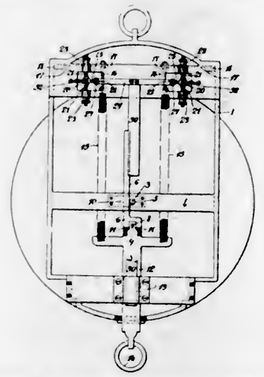
3. A scale comprising a coil spring, a beam, an indicator connected to said beam, multiplying gear connections, said gear connections including a rack connected to said beam, pivotal means for suspending said coil spring, a movable support coöperating with said pivotal means, and a thermostat controlling said support to vary the effective pivotal point of the same in accordance with temperature variations.

4. In a scale, a thermostatic control device comprising an upwardly extending and laterally movable thermostatic element, means for stationarily supporting the lower end of said thermostatic element, and a spring scale mechanism comprising a lever having an intermediate fulcrum controlled by the position of said thermostat.

5. In a scale, a thermostatic control device comprising an upwardly extending and laterally movable thermostatic element, means for stationarily supporting the lower end of said thermostatic element, a spring scale mechanism comprising a lever having an intermediate fulcrum controlled by the position of said thermostatic element and means for adjusting the vertical position of said thermostatic element.

[Claims 6 to 13 not printed in the Gazette.]

1,220,192. SCALE. RALPH F. CHATILLON, Greenburg, N. Y., assignor to John Chatillon & Sons, a Corporation of New York. Filed Jan. 24, 1914. Serial No. 814,080. (Cl. 73—46.)



1. In a scale, measuring means comprising a deflectible spring, a movable fulcrum for said spring, an independent support for said fulcrum, a thermostat for moving said fulcrum, and multiplying connections between said thermostat and said independently supported fulcrum.

2. In a scale, measuring means comprising a deflectible spring, a movable fulcrum for said spring, a thermostat for moving said fulcrum, and multiplying connections including ratio varying means between said thermostat and said fulcrum.

3. In a scale, a weighing spring, a flexible support therefor, a movable fulcrum for said support, a thermostat for moving said fulcrum, and multiplying connections between said thermostat and said fulcrum.

4. In a scale, a weighing spring, a flexible support therefor attached to said spring at one end, the other end of the support being fixed, a fulcrum movable beneath the intermediate portion of the support, a thermostat for moving the fulcrum, and multiplying connections between the thermostat and the fulcrum.

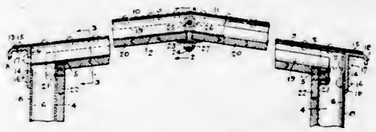
5. In a scale, a coil spring, a flexible support therefor attached to said coil spring at one end, the other end of said support being fixed, a movable fulcrum for the intermediate portion of the support, a lever carrying said fulcrum, a thermostat for moving said lever, and means for varying the ratio of movement between said thermostat and said fulcrum.

[Claims 6 to 20 not printed in the Gazette.]

1,220,193. CAR-ROOF. ANDREW CHRISTIANSON, Butler, Pa., assignor to Standard Steel Car Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 14, 1914. Serial No. 872,154. (Cl. 108—5.4.)

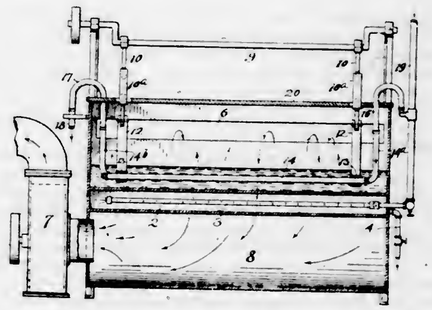
1. In a car-roof, the combination of car-lines consisting of channel-members, side-posts formed of channel-members, the web portions of said posts being cut away and bent to receive the outer ends of said car-lines.

2. In a car roof, the combination of channel shaped carlines, of roof sections, means for supporting the outer ends of said sections, a strip supporting the inner ends



of said sections, a horizontally arranged bolt passing through the flanges of said carline, and bolts suspended from said first named bolt and engaging said strip.

1,220,194. EVAPORATOR. RICHARD J. COACH, Cleveland, Ohio, assignor to The Sub-Surface Vacuum Development Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 1, 1912. Serial No. 687,621. (Cl. 127—9.)



1. In an evaporator, the combination of an evaporating pan for containing fluid to be vaporized, a heating device, and means for repeatedly reciprocating said device to move it into and out of the fluid in the pan, during the evaporation of a given charge of fluid.

2. In an evaporator, the combination of an evaporating chamber, a heating device, means for imparting to said device a reciprocating movement which carries it repeatedly into and out of the fluid in said chamber during the evaporation of a given charge of fluid, and means for withdrawing the produced vapor from said chamber.

3. In an evaporator, the combination of an evaporating chamber, a steam carrying heating device, and means for repeatedly reciprocating said device which carries it down into and out of a fluid in said chamber, during the evaporation of a given charge of fluid.

4. In an evaporator, the combination of an evaporating chamber, an air passage by the side of the same,—the partition between said air passage and evaporating chamber having an opening through it which places said chamfrom said first named and engaging said strip.
device connected with said air passage, and means for heating the contents of said chamber.

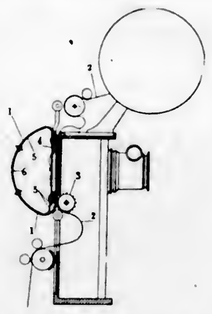
5. In an evaporator, the combination of an evaporating chamber, an air passage by the side of the same,—the partition between said air passage and evaporating chamber having an opening through it which places said chamber and passage in communication, a suction inducing device connected with said air passage and a heating device in said chamber.

[Claims 6 to 10 not printed in the Gazette.]

1,220,195. CINEMATOGRAPH APPARATUS AND FILM FOR USE THEREWITH. SILVIO COCANARI, Vieux Dieu, near Antwerp, Belgium. Filed Mar. 5, 1914. Serial No. 822,660. (Cl. 88—17.)

1. In a device of the class described, the combination of film feeding means for engaging the perforations of a motion picture film, a film gate including a pressure

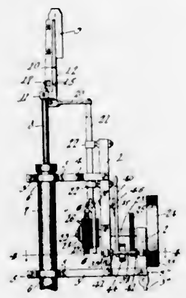
frame, and a pair of perforated endless wear resisting bands guided through the film gate in contact with the pressure frame into position for engagement by the film feeding means.



2. In a device of the class described, the combination of film feeding means for engaging the perforations of a motion picture film, a film gate including a pressure frame, a guide extending away from the film gate, and a pair of perforated endless wear resisting bands movable over the guide through the film gate in contact with the pressure frame into position for engagement by the film feeding means.

3. In a device of the class described, the combination of a toothed feeding wheel for engaging the perforations of a motion picture film, the said wheel being arranged adjacent a projection aperture, a fixed support having an opening in the line of projection through said aperture, and a pair of endless wear resisting bands guided by the lateral edges of the support into cooperative relation with the film whereby the feeding wheel engages the perforations of the film and also corresponding perforations in the bands.

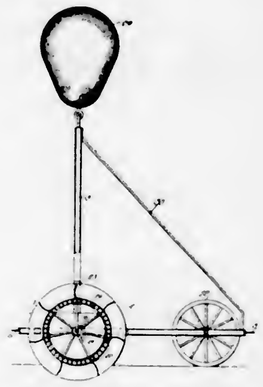
1,220,196. WINDMILL-ENGINE. ANDREW J. COMER, Cullison, Kans. Filed Nov. 10, 1915. Serial No. 60,724. (Cl. 74—55.)



1. A windmill engine embodying a standard, upper and lower bars attached to and extending to one side from said standard and having clamps at their free ends for embracing the casing of a windmill pump to hold said standard at any side of the pump, a vertically reciprocatory rod adjacent to said standard, guides for said rod carried by the standard, a horizontal arm pivoted to the upper end of the rod and attachable at its free end to the windmill rod, a horizontal shaft journaled through said standard, and an operative connection between said rod and shaft.

2. A windmill engine embodying a standard, upper and lower pairs of bars attached to said standard and extending to one side therefrom, said bars having separated curved portions adjacent to their free ends for embracing the casing of a windmill pump, means for connecting the bars of the two pairs for causing said portions to clamp the casing, said bars holding the standard at any side of the pump, a vertical reciprocatory rod adjacent to the standard and between the bars of the upper pair, guides for said reciprocatory rod carried by the standard, a horizontal arm pivoted to the upper end of the reciprocatory rod and attachable at its free end to the windmill rod, a horizontal shaft journaled through said standard between the upper and lower pairs of bars, a pair of gears rotatable in opposite directions and mounted upon said shaft, ratchet devices for connecting said gears and shaft in opposite directions, and a double rack attached to the lower end of the reciprocatory rod and straddling and meshing with said gears.

1,220,197. GOLD-DREDGE. JOHN T. COWLES, Chicago, Ill. Filed Jan. 12, 1916. Serial No. 71,609. (Cl. 83—56.)



1. In combination a dredging device, means for moving said device over a surface at the bottom of a body of water, means for excavating and collecting material from said surface, and means attached to and submersible with said dredging device, for automatically maintaining said device in upright position independently of contact with said surface to prevent escape of the material so collected.

2. In combination a dredging device adapted to operate under water and arranged to collect and retain material from the bed beneath said water, and means attached to and submersible with said dredging device for automatically maintaining said device in correct operating position while submerged.

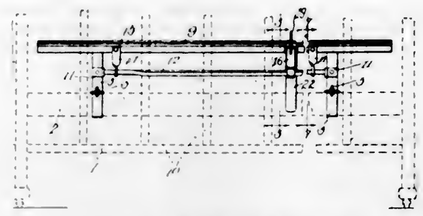
3. In combination a dredging device comprising means for collecting and transporting material from the bed beneath a body of water, and a buoy attached to said device and submersible therewith for maintaining said device in operating position.

4. In combination a dredging device comprising means for collecting, retaining and transporting material from the bed beneath a body of water, and a float secured to said dredging device for maintaining said dredging device in operating position when submerged in water, said float being of sufficient buoyancy to prevent overturning of said dredging device, but, not buoyant enough to support the weight of said dredging device when said device and float are submerged.

5. In combination a wheeled frame, dredging mechanism, carried by the lower portion of said frame, a receptacle carried by said frame for receiving material from said excavator, and a float secured to the upper portion of said frame and spaced above the wheels thereof to maintain said frame in upright position when said frame and float are submerged.

[Claims 6 to 26 not printed in the Gazette.]

1,220,198. BEDCLOTHES-HOLDER. JOHN T. COWLES, Chicago, Ill. Filed Feb. 18, 1916. Serial No. 79,091. (Cl. 5—22.)



1. In combination, a holder for bed clothes comprising a pair of clamping jaws arranged to extend substantially the full length of one end of a bed, a device for operating said jaws from a single operating position near the central portion of said holder, and resilient means for transmitting pressure from said device to opposite ends of said jaws.

2. In a holder for bed clothes, a pair of elongated clamping jaws, a resilient torsion rod extending longitudinally of said jaws, means connecting the ends of said rods with said jaws, and means for producing a twisting moment in said rod to produce a closing pressure on said jaws.

3. In a holder for bed clothes, a pair of clamping jaws, means for securing one of said jaws in a fixed position relative to a bed frame, a rotatably mounted resilient torsion rod extending longitudinally of said jaws, means carried near the ends of said torsion rod for movably supporting one of said jaws, and means for producing a twisting moment in said torsion rod for causing said rod to produce pressure near the ends of said movable jaw, tending to close said jaw relative to said fixed jaw.

4. In combination, a bed clothes holder comprising a pair of relatively movable jaws, means for securing said holder to the frame of a bed, and means for exerting pressure on said jaws to clamp said jaws in closed position, said means including a supplementary tightening device for said jaws and being movable to an inoperative position to permit quick opening and closing action of said jaws.

5. In combination, a bed clothes holder comprising a pair of relatively movable jaws, and a single means for exerting yielding pressure near the ends of said jaws for forcing said jaws into closed position, and for exerting a positive closing pressure at an intermediate portion of said jaws.

[Claims 6 to 12 not printed in the Gazette.]

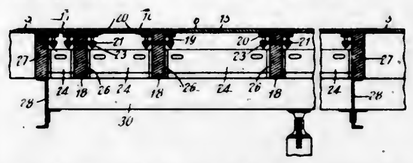
1,220,199. CUE-STRAIGHTENER. JOHN M. CRANE, Neola, Iowa. Filed Sept. 21, 1916. Serial No. 121,496. (Cl. 144—259.)



In a cue straightening device, a bar having a series of apertures, said bar having transversely disposed slots with tapered walls, threaded shanks extending through the apertures into the slots, members rotatable in the slots and held in position by the walls of the said slots for engaging the threaded shanks, and cue engaging members on the threaded shanks.

1,220,200. ADJUSTABLE STAGE-FLOOR. GEORGE E. CURRAN, Boston, and ARTHUR B. CRAIG, Somerville, Mass. Filed July 13, 1916. Serial No. 109,177. (Cl. 46—70.)

1. An adjustable stage floor having, in combination, a plurality of floor boards arranged in series, supports therefor and means for detachably fastening said floor boards to said supports, the width of a plurality of floor boards in one series being substantially equal to the width of one of the other of said floor boards in the same series.



2. An adjustable stage floor having, in combination, a plurality of floor boards, a plurality of joists extending transversely of said floor boards, means for detachably fastening said floor boards to said joists and girders extending transversely of said joists upon which said joists are adjustably supported, and removable members extending between adjacent joists and abutting thereagainst, whereby said joists may be correctly positioned and held in upright position.

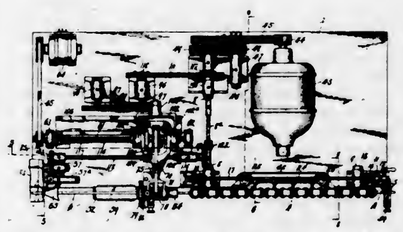
3. An adjustable stage floor having, in combination, a plurality of floor boards arranged in series, the width of a plurality of floor boards in one series being substantially equal to the width of a less number of floor boards in the same series, a plurality of joists extending transversely of said floor boards, means for detachably fastening said floor boards to said joists and girders extending transversely of said joists upon which said joists are adjustably supported.

4. An adjustable stage floor having, in combination, a plurality of floor boards, a plurality of joists extending transversely of said floor boards, means for detachably fastening said floor boards to said joists, girders extending transversely of said joists upon which the opposite ends of said joists are adjustably supported and a beam intermediate said girders upon which said joists are partly supported.

5. An adjustable stage floor having, in combination, a plurality of floor boards, a plurality of joists extending transversely of said floor boards, means for detachably fastening said floor boards to said joists, girders extending transversely of said joists upon which the opposite ends of said joists are adjustably supported, a beam intermediate said girders upon which said joists are partly supported, and girders extending transversely of said beam and upon which the opposite ends of said beams are adjustably supported.

[Claims 6 and 7 not printed in the Gazette.]

1,220,201. BAR AND TUBING FEEDING AND SEVERING MEANS. EDWARD DANNER, Toledo, Ohio, assignor to The Libbey Glass Company, Toledo, Ohio, a Corporation of Ohio. Filed May 3, 1916. Serial No. 95,069. (Cl. 49—48.)



1. In a machine of the class described, means for imparting continuous lengthwise feeding movements to the work bar or tube, a pressure member having a yielding transverse pressure against a part of the work, and a cutter member periodically operable to have forward movements with the work at a uniform speed therewith and to move into and out of engagement with the work in opposition to said pressure member at predetermined points in a forward feeding movement of said cutter member.

2. In a machine of the class described, means for imparting continuous lengthwise feeding movements to a work bar or tube, slide means reciprocally movable lengthwise of the work feed and also movable transversely thereof, a cutter part carried by said means, an endless chain connected to said means and operable by a continuous movement thereof in one direction to impart both forward and backward reciprocatory movements to said slide means, said movement being uniform in speed to the feeding movements of the work, and means for periodically moving said slide means transversely of the work to periodically place the cutter part in engagement with the work.

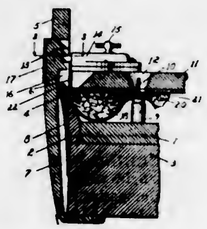
3. In a machine of the class described, work cutter carrying means mounted for reciprocatory movements and having a guide part, an endless chain continuously movable in one direction and having movable engagement with the guide part of said means whereby said means is caused to move backward and forward with said chain part as the chain is moved.

4. In a machine of the class described, means mounted for reciprocatory movements and having a guide part extending transversely of its direction of movement, and an endless chain having a part projecting transversely therefrom into engagement with the guide part of said means and operable to impart reciprocatory movement to said means when the chain is continuously moved in one direction.

5. In a machine of the class described, a reciprocally movable means having a cutter part, rotatable cam means mounted for reciprocatory movements with said first means and operable to periodically impart movements to said means transverse to its reciprocatory movements to move the cutter part into and out of work coacting position.

[Claims 6 to 28 not printed in the Gazette.]

1,220,202. UPHOLSTERING DEVICE. FRANK P. D'ARCY, Kalamazoo, Mich. Filed June 23, 1916. Serial No. 105,353. (Cl. 155—43.)



1. In an upholstering machine, the combination of a form comprising a bottom and side walls, keepers mounted on said form to project upwardly in a spaced relation to the side walls thereof and having inwardly facing ratchet keeper teeth, a filler box recessed to receive said arms, guides on said filler box coacting with said keepers, a follower plate, and latches on said follower plate coacting with said keeper ratchet teeth whereby the follower plate is retained in its adjusted position, said box being removable independently of said plate.

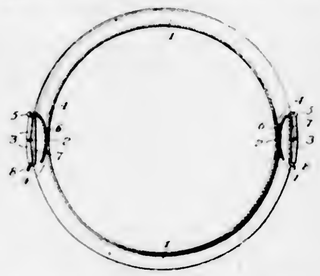
2. In an upholstering machine, the combination of a form comprising a bottom and side walls, keepers mounted on said form to project upwardly in a spaced relation to the side walls thereof and having inwardly facing ratchet keeper teeth, a filler box, and latches on said follower plate coacting with said keeper ratchet teeth whereby the follower plate is retained in its adjusted position, said box being removable independently of said plate.

3. In an upholstering machine, the combination of a form, keepers mounted on said form to project upwardly at the sides thereof and having ratchet keeper teeth, a filler box provided with guides coacting with said keepers, a follower plate, and latches on said follower plate coacting with said keeper ratchet teeth whereby the follower plate is retained in its adjusted position, said box being removable independently of said plate.

4. In an upholstering machine, the combination of a form, keepers mounted on said form to project upwardly at the sides thereof and having ratchet keeper teeth, a filler box, a follower plate, and latches on said follower plate coacting with said keeper ratchet teeth whereby the follower plate is retained in its adjusted position, said box being removable independently of said plate.

5. In an upholstering machine, the combination of a form, a filler box, means for removably supporting said filler box above said form, a follower plate adapted to slide within said filler box, and automatic means for locking said follower plate in in its adjusted position relative to said form.

1,220,203. FASTENING MEANS FOR BUTT-JOINT METAL CULVERTS. JOHN H. DEAN, Birmingham, Ala. Filed Jan. 23, 1913. Serial No. 743,766. (Cl. 61—9.)



1. In combination with a butt-joint culvert, a device formed with an outer face so shaped as to engage the side of said culvert at a point where the longitudinal edges of the same abut for holding and retaining said edges in such abutting relation, means for holding the device in such operative position, said device comprising a plurality of members at least one of which has a normal tendency to spring in an outward direction from the main structure, whereby the device is held in such position under spring tension.

2. In combination with a butt-joint culvert, a device formed with an outer face so shaped as to engage the side of said culvert at a point where the longitudinal edges of the same abut for holding and retaining said edges in such abutting relation, said device made up of a plurality of spring members, and means secured to the culvert for holding said device in such position and under spring tension.

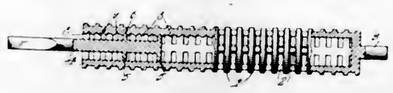
3. In combination with a butt-joint culvert having passageways formed between the side of said culvert and metal strips secured to the same, a retaining means engaging within said passageways and comprising members held therein under spring tension, whereby said means is capable of adapting itself to passageways of different widths, one of said members being so constructed upon its outer face as to be capable of properly engaging the side of the culvert for holding and retaining the longitudinal meeting edges of said culvert in abutting relation.

4. In combination with a butt-joint culvert having passageways formed between the side of said culvert and metal strips secured to the same, a spring clip or key constructed from a single piece of metal bent upon itself to form retaining members, one of which members having an outer face so shaped as to bear against the side of the culvert when the key is inserted within said passageways for holding and retaining the longitudinal meeting edges of the culvert in abutting relation.

5. In combination with a butt-joint culvert having passageways formed between its side and metal strips secured to the same, a spring clip adapted for insertion within said passageways for holding and retaining the longitudinal edges of said culvert in abutting relation, said clip having a flange at its upper end adapted to engage the top edge of the upper strip and also having an outwardly bent portion for engaging with the bottom edge of the lower strip, and said clip adapted to be held within the passageways and in such relation under spring tension.

[Claims 6 to 9 not printed in the Gazette.]

1,220,204. GRATE-BAR. DANIEL DEE, Pocatello, Idaho, assignor to Dee Manufacturing Company, Pocatello, Idaho, a Corporation. Filed June 5, 1916. Serial No. 101,843. (Cl. 126—179.)



1. A grate bar embodying a tubular body and a spindle projecting within the body, said spindle and body having interengagable portions to permit of the relative longitudinal movement of the spindle and body when they are turned to a certain position relative to one another, said portions being interengageable by a relative turning movement of the body and spindle to prevent the relative longitudinal movement of said parts at various adjustments thereof.

2. A grate bar embodying a tubular body having lugs, and a spindle projectable within the body and having means to fit snugly therein and provided with notches for the passage of said lugs, said means being engageable with the lugs.

3. A grate bar embodying a tubular body having a longitudinal series of lugs, and a spindle projectable within the body and having collars to fit snugly in the body and provided with notches for the passage of said lugs, said collars being engageable between the lugs when the body and spindle are rotated relative to one another.

4. A grate bar embodying a tubular body provided with a longitudinal series of lugs and notches therebetween, and a spindle projectable within the body and having spaced circular collars to fit snugly in the body, each collar being provided with a cut away eccentric portion engageable in said notches, and said cut away portions having notches for the passage of said lugs.

5. A grate bar embodying a tubular body composed of rings and longitudinal ribs, one of said ribs having a longitudinal series of lugs and notches therebetween, and a spindle projectable within the body having a pair of spaced circular collars to fit snugly in the body, each collar having an eccentric cut away portion to bind within said notches, and a notch between the ends of said portion for the passage of said lugs.

1,220,205. MANUFACTURE OF ALIMENTARY PRODUCTS. JOSEPH FELIX DESMARAIS, Montreal, Quebec, Canada. Filed Oct. 6, 1916. Serial No. 124,088. (Cl. 99—10.)

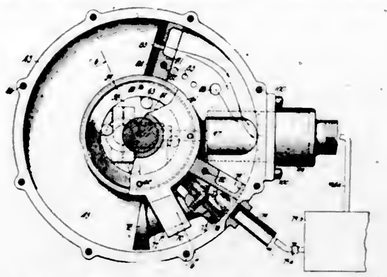
1. An alimentary paste composed of semolina of wheat and dry constituents of milk.

2. An alimentary paste composed of a large quantity of semolina of wheat and a smaller quantity of the dry constituents of milk.

3. An alimentary paste composed of approximately one hundred pounds of semolina of wheat mixed with two and a half pounds of dry powdered milk.

4. The process of manufacturing an alimentary paste, consisting of thoroughly mixing semolina of wheat with the dry constituents of milk in the proportion of two and a half per cent., and adding approximately twenty-five per cent. of water so as to form a pasty material which is pressed into shape, and then causing the water to evaporate from said combined semolina of wheat and constituents of milk.

1,220,206. ENGINE-STARTER. JOHN DESMOND, Detroit, Mich., assignor to Gray-Hawley Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 2, 1915. Serial No. 43,293. (Cl. 123—179.)



1. A starter for internal combustion engines comprising a casing having a circumferential cylinder formed therein, a pair of abutments for the cylinder, a piston arranged to reciprocate between the abutments, a tank for compressed air, a pipe leading from the tank and opening to a cylinder at a point between one of the abutments and the piston, a valve for controlling the passage of air from the tank to the cylinder whereby the piston may be forced forwardly in the cylinder at will, a starter shaft, a crank connecting the piston to the starter shaft, means for constantly sealing the joint between the crank and the casing, said crank projecting into the cylinder, an air pump carried by the casing and driven from the starter shaft, and a pipe leading from the air-pump to the tank whereby the pressure in the latter may be renewed.

2. A starter for internal combustion engines comprising a casing having a circumferential cylinder formed therein, a pair of abutments for the cylinder, a piston arranged to reciprocate between the abutments, a tank for compressed air, a pipe leading from the tank and opening to a cylinder at a point between one of the abutments and the piston, a valve for controlling the passage of air from the tank to the cylinder whereby the piston may be forced forwardly in the cylinder at will, a starter shaft, a crank connected to the piston and mounted to swing about the axis of the starter shaft, an over-running connection between the crank and the starter shaft, whereby the former may drive the latter in one direction and whereby the starter shaft is allowed to turn freely in the same direction in respect to the crank, an air pump cylinder carried by the casing, a piston driven by the starter shaft and reciprocating in the pump cylinder, and a pipe leading from the pump cylinder to the tank, whereby the pressure in the latter may be renewed.

3. A starter for internal combustion engines comprising a casing having a circumferential cylinder formed therein, a pair of abutments for the cylinder, a piston conforming to and movable in the casing, a starter shaft, a crank coaxial with the starter shaft, said crank including an arm that projects into the cylinder, the piston including a body portion having an enlarged guiding forward end loosely received in the cylinder, said piston being free to swing a limited amount in respect to the crank arm, and means for sealing the joint between the rear end of the piston and the cylinder.

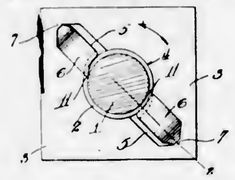
4. A starter for internal combustion engines comprising a casing having a circumferential cylinder formed therein, a pair of abutments for the cylinder, a piston arranged to reciprocate between the abutments, means for admitting compressed air to the space between one of the abutments and the piston to drive the latter in a forward direction, one of the abutments being adjustable in the cylinder whereby the stroke of the piston may be varied, a starter shaft, and a crank for driving the starter shaft from the piston.

5. A starter for internal combustion engines comprising a casing having a circumferential cylinder formed therein.

a pair of abutments for the cylinder, a piston arranged to reciprocate between the abutments, means for admitting compressed air to the space between one of the abutments and the piston to drive the latter in a forward direction, a starter shaft, the wall of the cylinder having a series of holes spaced angularly about the axis of the starter shaft, and means, insertible through any one of the holes, for retaining one of the abutments in a desired position whereby the stroke of the piston may be varied, and a crank for driving the starter shaft from the piston.

[Claims 6 to 17 not printed in the Gazette.]

1,220,207. LOCK-NUT. SAMUEL DOETHIT, Centralia, Ill. Filed June 10, 1916. Serial No. 102,971. (Cl. 151—25.)



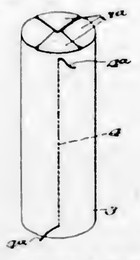
1. The combination with a bolt having a screw threaded shank and a nut for the bolt, the said nut having one face provided with recesses of V-shaped formation extending radially in opposite directions from and communicating with the central opening in the nut, a fillet formed in the vertex of each of the said depressions, latches disposed in the said recesses and means formed on the latches and adapted to be associated with the said fillets for retaining the latches within the said recesses, the said latches also being provided with serrations for engaging the said screw threaded shank.

2. The combination with a bolt having a screw threaded shank and a nut for the bolt having a screw threaded central opening, said nut also provided with recesses in one face thereof, the outer ends of said recesses being of V-shaped formation whereby the side walls of said recess join together at the V-shaped ends, a fillet formed in the vertex of each of said V-shaped ends, said fillet being provided with a depression, latches arranged in said recesses and tapered at one end to provide a point to extend into the depression of said fillet, the opposite end of said latches having serrations for engaging the threads of said shank.

3. The combination with a bolt having a screw threaded shank and a nut for the bolt having a screw threaded central aperture, said nut provided with recesses in one face thereof and extending diagonally across the nut and communicating with said central opening, the outer ends of said recesses terminating adjacent the corners of said nut and being V-shaped whereby the side walls of said recesses are joined together at the ends of the recesses, the vertex of each of said V-shaped ends having a fillet in each of which a depression is formed, and a pair of latches arranged one in each recess, said latches being of the width less than the width of said recess and terminating in a point adapted to fit in the depressions of said fillet, one side of the pointed end of each latch being spaced away from the side walls of the V-shaped end of the recess and the opposite ends of the latches provided with a sharp edge for engaging the threads of said shank.

4. The combination with a bolt having a screw threaded shank and a nut for the bolt having a screw threaded central opening, said nut also provided with recesses in one face thereof, the said recesses communicating with the central opening and being of V-shaped formation at their ends, latches mounted in said depressions, said latches being tapered at one end, the angle of said tapered end of said latches being more acute than the angle of the V-shaped ends of said latches and the width of the latches being less than the width of said recesses whereby the latch will be free to move from engagement with one wall of said recess to the opposite wall of said recess, a fillet formed in the vertex of each of said V-shaped ends and having a depression formed therein for receiving the point of the tapered end of one of the latches, the opposite ends of said latches engaging the threads of said bolt.

1,220,208. CARTRIDGE. AMOS ELLIS, Flourtown, Pa. Filed Feb. 4, 1916. Serial No. 76,096. (Cl. 102—6.)



1. A cartridge comprising a longitudinally plaited expansible container for an explosive and a sealed case for covering and retaining said container.

2. A cartridge comprising a tube having longitudinal folds permitting its contraction and expansion and a paper case for inclosing and holding said tube in its contracted condition.

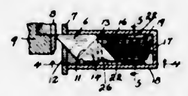
3. A cartridge comprising an expansible container for an explosive, a case for said container, and a strand adapted for splitting said case.

1,220,209. STOCKING. MORRIS ELLIS, Philadelphia, Pa. Filed Aug. 19, 1914. Serial No. 857,440. (Cl. 2—23.)



The herein described method of making stockings consisting in first forming a tube of fabric, flattening the fabric, then, while the tube is laid flat, cutting it on a line to shape the same in conformity with the rear of the leg, ankle, heel, and foot of a person, then seaming the cut edges by an elastic stitching, then moistening the stocking and finally shaping the front of the same while drying it, substantially as described.

1,220,210. AUTOMATIC OR KNOBLESS DOOR-LATCH. EMERY T. EPLING, Lewiston, Idaho. Filed Sept. 11, 1916. Serial No. 119,590. (Cl. 70—119.)



1. An automatic latch, comprising a casing having a bolt-head opening through its face-plate, a plunger in the casing having recesses in the top and bottom sides thereof, a coil spring in the casing to actuate said plunger toward the face-plate, an oscillatory and sliding catch-bolt interposed in the casing between the plunger and the face-plate, an inclined-backed bolt-head on the catch-bolt adapted to protrude through said opening and to swing therein, and spaced bolt-plates on said catch-bolt having inclined front edges and seated to swing in the recesses in the plunger.

2. An automatic latch, comprising a bifurcate plunger, a stud disposed centrally of the base of the plunger between the branches thereof, an expansive coil spring having one end disposed between the branches of the plunger and seated around said stud, a casing to inclose and carry said plunger and having a side slot for the insertion or removal of said spring, a stud disposed on the inner wall of the casing opposed to the stud on the plunger to seat the opposite end of the spring, a face-plate on the casing having a bolt-head-opening, an oscillatory sliding catch-bolt disposed in the casing between the plunger and face-plate and having a head adapted to protrude through said opening to both swing and slidingly retire therein.

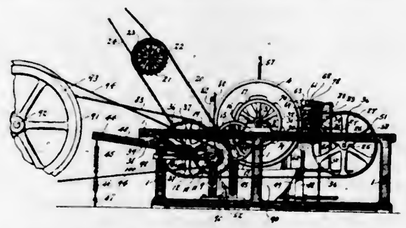
3. An automatic latch, comprising a casing, a face-plate having a bolt-head opening disposed at the outer end of said casing, a bifurcate plunger disposed in the casing with its branches toward the inner end thereof and having opposite side recesses in its base coincident with the space between its branches, a coil spring disposed between the inner end of the casing and the base of the plunger to yieldingly press the plunger toward the face-plate, an oscillatory sliding catch-bolt disposed between the plunger and face-plate, a head on the catch-bolt having an inclined back and adapted to protrude through and swing in said bolt-head-opening, and inwardly disposed spaced branch-plates on said catch-bolt having inclined front edges and seated to swing in the recesses in the base of the plunger.

4. In an automatic latch, a spring-actuated plunger having opposite side recesses, in combination with an oscillatory catch-bolt having spaced bolt-plates with inclined edges adapted to engage and swing in said recesses, whereby, the inclination of the bolt-head may be reversed and still stand in sliding alinement with the actuating plunger.

5. In an automatic latch, a latch-casing face-plate having a bolt-opening, and a bolt-actuating plunger having guide legs, in combination with an oscillatory and sliding catch-bolt consisting of a head having an inclined back and adapted to swing forwardly and backwardly and slide inwardly and outwardly in said bolt opening and a double or furcate bolt-plate having a base larger than the base of said bolt-head and disposed thereon to form intermediate shoulders on said bolt to engage the inside of said face-plate to limit the outward slide of the bolt, to pivot the bolt for oscillation and to seat it in locking position and the furcate plate having the edges of its branches inclined and disposed to engage the guide legs at opposite sides of the plunger to limit the oscillation of the bolt.

[Claims 6 and 7 not printed in the Gazette.]

1,220,211. MOLDING-MACHINE. FREDERICK A. FELDKAMP, Newark, HAROLD PAYSON, Short Hills, and WILLIAM E. WHIPPLE, Newark, N. J., assignors to Electrolytic Products Company, a Corporation of New Jersey. Filed Sept. 16, 1915. Serial No. 50,955. (Cl. 207—12.)



1. A continuous molding machine comprising a rotary molding-wheel having a matrix on its circumferential face, an endless belt running in engagement with a portion of the circumference of said molding-wheel to provide a closing member for said matrix, a melting pot, a funnel-member having outlet means entering said matrix and extending slightly beyond the junction of said endless belt with said molding-wheel, and means for automatically and continuously supplying molten metal from said melting-pot to said funnel-member.

2. A continuous molding machine comprising a rotary molding-wheel having a matrix on its circumferential face, an endless belt running in engagement with a portion of the circumference of said molding-wheel to provide a closing member for said matrix, a melting-pot, a feeding-pot, pump-means for supplying said feeding-pot with molten metal from said melting-pot, an adjustable overflow return pipe leading from said feeding-pot back to said melting-pot, a funnel-member having outlet means entering said matrix at the junction of said endless belt with said molding-wheel, a conduit-pipe leading from said feeding-pot to said funnel-member, the same being positioned beneath the normal level of the molten metal in said feeding-pot, and means for applying heat to said molten metal-containers and conveying means.

3. A continuous molding machine comprising a rotary molding-wheel having a matrix on its circumferential face, an endless belt running in engagement with a portion of the circumference of said molding-wheel to provide a closing member for said matrix, a melting-pot, a feeding-pot, pump-means for supplying said feeding-pot with molten metal from said melting-pot, an adjustable overflow return pipe leading from said feeding-pot back to said melting-pot, a funnel-member having outlet means entering said matrix at the junction of said endless belt with said molding-wheel, a conduit-pipe leading from said feeding-pot to said funnel-member, the same being positioned beneath the normal level of the molten metal in said feeding-pot, means for applying heat to said molten metal-containers and conveying means, and means for chilling that portion of the molding-wheel and its matrix into which the molten metal has been received.

4. A continuous molding machine comprising a rotary molding-wheel having a matrix on its circumferential face, an endless belt running in engagement with a portion of the circumference of said molding-wheel to provide a closing member for said matrix, a melting-pot, a feeding-pot, pump-means for supplying said feeding-pot with molten metal from said melting-pot, an adjustable overflow return pipe leading from said feeding-pot back to said melting-pot, a funnel-member having outlet means entering said matrix at the junction of said endless belt with said molding-wheel, a conduit-pipe leading from said feeding-pot to said funnel-member, the same being positioned beneath the normal level of the molten metal in said feeding-pot, means for applying heat to said molten metal-containers and conveying means, means for chilling that portion of the molding-wheel and its matrix into which the molten metal has been received, and means for removing the molded metal from the said matrix after solidification.

5. A continuous molding machine comprising a rotary molding-wheel having a matrix on its circumferential face, an endless belt running in engagement with a portion of the circumference of said molding-wheel to provide a closing member for said matrix, a melting-pot, a feeding-pot, pump-means for supplying said feeding-pot with molten metal from said melting-pot, an adjustable overflow return pipe leading from said feeding-pot back to said melting-pot, a funnel-member having outlet means entering said matrix at the junction of said endless belt with said molding-wheel, a conduit-pipe leading from said feeding-pot to said funnel-member, the same being positioned beneath the normal-level of the molten metal in said feeding-pot, means for applying heat to said molten metal-containers and conveying means, and means for applying heat to said endless belt and the matrix of said molding-wheel at a point adjacent to the entrance of molten metal into said matrix.

[Claims 6 to 22 not printed in the Gazette.]

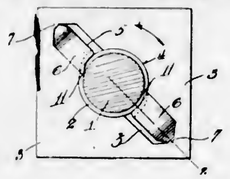
1,220,212. RULE-HOLDER. WARREN D. FERRIS, Buffalo, N. Y. Filed May 1, 1916. Serial No. 94,644. (Cl. 24—3.)

1. A holder for a rule or the like, comprising a clasp composed of substantially horizontal front and rear members connected at one side of the clasp and disconnected and separated at the other side thereof to receive the rule

a pair of abutments for the cylinder, a piston arranged to reciprocate between the abutments, means for admitting compressed air to the space between one of the abutments and the piston to drive the latter in a forward direction, a starter shaft, the wall of the cylinder having a series of holes spaced angularly about the axis of the starter shaft, and means, insertible through any one of the holes, for retaining one of the abutments in a desired position whereby the stroke of the piston may be varied, and a crank for driving the starter shaft from the piston.

[Claims 6 to 17 not printed in the Gazette.]

1,220,207. LOCK-NUT. SAMUEL DOUTHIT, Centralia, Ill. Filed June 10, 1916. Serial No. 102,971. (Cl. 151—25.)



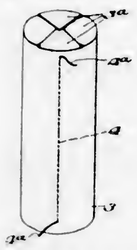
1. The combination with a bolt having a screw threaded shank and a nut for the bolt, the said nut having one face provided with recesses of V-shaped formation extending radially in opposite directions from and communicating with the central opening in the nut, a fillet formed in the vertex of each of the said depressions, latches disposed in the said recesses and means formed on the latches and adapted to be associated with the said fillets for retaining the latches within the said recesses, the said latches also being provided with serrations for engaging the said screw threaded shank.

2. The combination with a bolt having a screw threaded shank and a nut for the bolt having a screw threaded central opening, said nut also provided with recesses in one face thereof, the outer ends of said recesses being of V-shaped formation whereby the side walls of said recess join together at the V-shaped ends, a fillet formed in the vertex of each of said V-shaped ends, said fillet being provided with a depression, latches arranged in said recesses and tapered at one end to provide a point to extend into the depression of said fillet, the opposite end of said latches having serrations for engaging the threads of said shank.

3. The combination with a bolt having a screw threaded shank and a nut for the bolt having a screw threaded central aperture, said nut provided with recesses in one face thereof and extending diagonally across the nut and communicating with said central opening, the outer ends of said recesses terminating adjacent the corners of said nut and being V-shaped whereby the side walls of said recesses are joined together at the ends of the recesses, the vertex of each of said V-shaped ends having a fillet in each of which a depression is formed, and a pair of latches arranged one in each recess, said latches being of the width less than the width of said recess and terminating in a point adapted to fit in the depressions of said fillet, one side of the pointed end of each latch being spaced away from the side walls of the V-shaped end of the recess and the opposite ends of the latches provided with a sharp edge for engaging the threads of said shank.

4. The combination with a bolt having a screw threaded shank and a nut for the bolt having a screw threaded central opening, said nut also provided with recesses in one face thereof, the said recesses communicating with the central opening and being of V-shaped formation at their ends, latches mounted in said depressions, said latches being tapered at one end, the angle of said tapered end of said latches being more acute than the angle of the V-shaped ends of said latches and the width of the latches being less than the width of said recesses whereby the latch will be free to move from engagement with one wall of said recess to the opposite wall of said recess, a fillet formed in the vertex of each of said V-shaped ends and having a depression formed therein for receiving the point of the tapered end of one of the latches, the opposite ends of said latches engaging the threads of said bolt.

1,220,208. CARTRIDGE. AMOS ELLIS, Flourtown, Pa. Filed Feb. 4, 1916. Serial No. 76,096. (Cl. 102—6.)

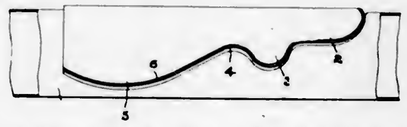


1. A cartridge comprising a longitudinally plaited expansible container for an explosive and a sealed case for covering and retaining said container.

2. A cartridge comprising a tube having longitudinal folds permitting its contraction and expansion and a paper case for inclosing and holding said tube in its contracted condition.

3. A cartridge comprising an expansible container for an explosive, a case for said container, and a strand adapted for splitting said case.

1,220,209. STOCKING. MORRIS ELLIS, Philadelphia, Pa. Filed Aug. 19, 1914. Serial No. 857,440. (Cl. 2—23.)



The herein described method of making stockings consisting in first forming a tube of fabric, flattening the fabric, then, while the tube is laid flat, cutting it on a line to shape the same in conformity with the rear of the leg, ankle, heel, and foot of a person, then seaming the cut edges by an elastic stitching, then moistening the stocking and finally shaping the front of the same while drying it, substantially as described.

1,220,210. AUTOMATIC OR KNOBLESS DOOR-LATCH. EMERY T. EPLING, Lewiston, Idaho. Filed Sept. 11, 1916. Serial No. 119,590. (Cl. 70—119.)



1. An automatic latch, comprising a casing having a bolt-head opening through its face-plate, a plunger in the casing having recesses in the top and bottom sides thereof, a coil spring in the casing to actuate said plunger toward the face-plate, an oscillatory and sliding catch-bolt interposed in the casing between the plunger and the face-plate, an inclined-backed bolt-head on the catch-bolt adapted to protrude through said opening and to swing therein, and spaced bolt-plates on said catch-bolt having inclined front edges and seated to swing in the recesses in the plunger.

2. An automatic latch, comprising a bifurcate plunger, a stud disposed centrally of the base of the plunger between the branches thereof, an expansive coil spring having one end disposed between the branches of the plunger and seated around said stud, a casing to inclose and carry said plunger and having a side slot for the insertion or removal of said spring, a stud disposed on the inner wall of the casing opposed to the stud on the plunger to seat the opposite end of the spring, a face-plate on the casing having a bolt-head-opening, an oscillatory sliding catch-bolt disposed in the casing between the plunger and face-plate and having a head adapted to protrude through said opening to both swing and slidingly retire therein.

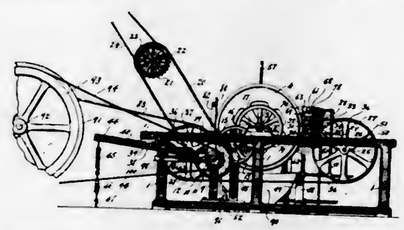
3. An automatic latch, comprising a casing, a face-plate having a bolt-head opening disposed at the outer end of said casing, a bifurcate plunger disposed in the casing with its branches toward the inner end thereof and having opposite side recesses in its base coincident with the space between its branches, a coil spring disposed between the inner end of the casing and the base of the plunger to yieldingly press the plunger toward the face-plate, an oscillatory sliding catch-bolt disposed between the plunger and face-plate, a head on the catch-bolt having an inclined back and adapted to protrude through and swing in said bolt-head-opening, and inwardly disposed spaced branch-plates on said catch-bolt having inclined front edges and seated to swing in the recesses in the base of the plunger.

4. In an automatic latch, a spring-actuated plunger having opposite side recesses, in combination with an oscillatory catch-bolt having spaced bolt-plates with inclined edges adapted to engage and swing in said recesses, whereby, the inclination of the bolt-head may be reversed and still stand in sliding alinement with the actuating plunger.

5. In an automatic latch, a latch-casing face-plate having a bolt-opening, and a bolt-actuating plunger having guide legs, in combination with an oscillatory and sliding catch-bolt consisting of a head having an inclined back and adapted to swing forwardly and backwardly and slide inwardly and outwardly in said bolt opening and a double or furcate bolt-plate having a base larger than the base of said bolt-head and disposed thereon to form intermediate shoulders on said bolt to engage the inside of said face-plate to limit the outward slide of the bolt, to pivot the bolt for oscillation and to seat it in locking position and the furcate plate having the edges of its branches inclined and disposed to engage the guide legs at opposite sides of the plunger to limit the oscillation of the bolt.

[Claims 6 and 7 not printed in the Gazette.]

1,220,211. MOLDING-MACHINE. FREDERICK A. FELDKAMP, Newark, HAROLD PAYSON, Short Hills, and WILLIAM E. WHIPPLE, Newark, N. J., assignors to Electrolytic Products Company, a Corporation of New Jersey. Filed Sept. 16, 1915. Serial No. 50,955. (Cl. 207—12.)



1. A continuous molding machine comprising a rotary molding-wheel having a matrix on its circumferential face, an endless belt running in engagement with a portion of the circumference of said molding-wheel to provide a closing member for said matrix, a melting pot, a funnel-member having outlet means entering said matrix and extending slightly beyond the junction of said endless belt with said molding-wheel, and means for automatically and continuously supplying molten metal from said melting-pot to said funnel-member.

2. A continuous molding machine comprising a rotary molding-wheel having a matrix on its circumferential face, an endless belt running in engagement with a portion of the circumference of said molding-wheel to provide a closing member for said matrix, a melting-pot, a feeding-pot, pump-means for supplying said feeding-pot with molten metal from said melting-pot, an adjustable overflow return pipe leading from said feeding-pot back to said melting-pot, a funnel-member having outlet means entering said matrix at the junction of said endless belt with said molding-wheel, a conduit-pipe leading from said feeding-pot to said funnel-member, the same being positioned beneath the normal level of the molten metal in said feeding-pot, and means for applying heat to said molten metal-containers and conveying means.

3. A continuous molding machine comprising a rotary molding-wheel having a matrix on its circumferential face, an endless belt running in engagement with a portion of the circumference of said molding-wheel to provide a closing member for said matrix, a melting-pot, a feeding-pot, pump-means for supplying said feeding-pot with molten metal from said melting-pot, an adjustable overflow return pipe leading from said feeding-pot back to said melting-pot, a funnel-member having outlet means entering said matrix at the junction of said endless belt with said molding-wheel, a conduit-pipe leading from said feeding-pot to said funnel-member, the same being positioned beneath the normal level of the molten metal in said feeding-pot, means for applying heat to said molten metal-containers and conveying means, and means for chilling that portion of the molding-wheel and its matrix into which the molten metal has been received.

4. A continuous molding machine comprising a rotary molding-wheel having a matrix on its circumferential face, an endless belt running in engagement with a portion of the circumference of said molding-wheel to provide a closing member for said matrix, a melting-pot, a feeding-pot, pump-means for supplying said feeding-pot with molten metal from said melting-pot, an adjustable overflow return pipe leading from said feeding-pot back to said melting-pot, a funnel-member having outlet means entering said matrix at the junction of said endless belt with said molding-wheel, a conduit-pipe leading from said feeding-pot to said funnel-member, the same being positioned beneath the normal level of the molten metal in said feeding-pot, means for applying heat to said molten metal-containers and conveying means, means for chilling that portion of the molding-wheel and its matrix into which the molten metal has been received, and means for removing the molded metal from the said matrix after solidification.

5. A continuous molding machine comprising a rotary molding-wheel having a matrix on its circumferential face, an endless belt running in engagement with a portion of the circumference of said molding-wheel to provide a closing member for said matrix, a melting-pot, a feeding-pot, pump-means for supplying said feeding-pot with molten metal from said melting-pot, an adjustable overflow return pipe leading from said feeding-pot back to said melting-pot, a funnel-member having outlet means entering said matrix at the junction of said endless belt with said molding-wheel, a conduit-pipe leading from said feeding-pot to said funnel-member, the same being positioned beneath the normal level of the molten metal in said feeding-pot, means for applying heat to said molten metal-containers and conveying means, and means for applying heat to said endless belt and the matrix of said molding-wheel at a point adjacent to the entrance of molten metal into said matrix.

[Claims 6 to 22 not printed in the Gazette.]

1,220,212. RULE-HOLDER. WARREN D. FERRIS, Buffalo, N. Y. Filed May 1, 1916. Serial No. 94,644. (Cl. 24—3.)

1. A holder for a rule or the like, comprising a clasp composed of substantially horizontal front and rear members connected at one side of the clasp and disconnected and separated at the other side thereof to receive the rule

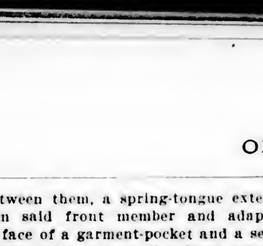
laterally between them, a spring-tongue extending downwardly from said front member and adapted to bear against the face of a garment-pocket and a second spring-tongue also depending from the front member of said clasp and adapted to bear against the inner side of the pocket and the face of the rule, the free lower end of said second tongue being bent inwardly beyond the front member of the clasp.



2. A holder for a rule or the like, comprising a clasp consisting of a substantially horizontal strip doubled on itself and having its members spaced apart and its free ends separated to receive the rule laterally between them, a pair of spring-tongues carried by the front member of said clasp and extending downwardly therefrom, said tongues being arranged one in front of the other and adapted to embrace the face of a garment-pocket and the rear tongue being bent inwardly beyond the front member of the clasp to bear against the face of the inserted rule.

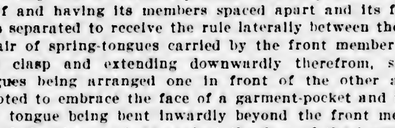
3. A holder for a rule or the like, comprising a clasp consisting of a substantially horizontal strip doubled on itself and having its members spaced apart and its free ends separated to receive the rule laterally between them, the free end of said front clasp-member having an inwardly-bent guard-lip, a pair of spring-tongues carried by the front member of said clasp and extending downwardly therefrom, said tongues being arranged one in front of the other and adapted to embrace the face of a garment-pocket and the rear tongue being bent inwardly beyond the front member of the clasp to bear against the face of the inserted rule.

1,220,213. BOLL-WEEVIL COLLECTOR. WALTER E. FRADY, Grenada, Miss. Filed Oct. 26, 1916. Serial No. 127,886. (Cl. 43—1.)



An insect collector embodying a pair of longitudinal troughs, arches embodying upwardly projecting members secured to the remote sides of the troughs and having inwardly extending portions at their upper ends, longitudinal rods upon which said portions are secured and disposed side by side, a longitudinal yoke having depending ends through which said rods are engaged for oscillatory movement, and a covering upon said arches.

1,220,214. TOWING CONNECTION FOR AUTOMOBILES. JAMES E. FUNK, Dickinson, N. D. Filed Nov. 27, 1916. Serial No. 133,693. (Cl. 21—137.)



1. In a towing connection for automobile cars the combination of a rigid member having one end bifurcated to form a clamp adapted to be secured to the rear axle of a towing car, and having its other end provided with a pivot pin adapted to normally lie in a horizontal plane; a second rigid member pivoted at one end to said pin, provided with a slot at its other end and provided between its ends with a vertically disposed pivot pin; a pair of clamping members adapted to embrace the front axle of the car being towed, one of which members is secured to said last named pivot pin, and the other of which members is provided with a second vertically disposed pivot pin; means connecting said second rigid member and said second vertically disposed pivot pin; and means associated with said slot for connecting said second rigid member with the steering rod of the car being towed, substantially as described.

2. In a towing connection for automobile cars the combination of a rigid member having one end bifurcated to form a clamp adapted to be secured to the rear axle of a towing car and having its other end provided with a pivot pin adapted to normally lie in a horizontal plane; a second rigid member pivoted at one end to said pin, provided with a slot at its other end and provided between its ends with a vertically disposed pivot pin; a pair of clamping members adapted to embrace the front axle of the car being towed, one of which members is secured to said last named pivot pin and the other of which members is provided with a second vertically disposed pivot pin; hinge means connecting said second rigid member and said second vertically disposed pivot pin to facilitate the application of said clamping members to said front axle; and means comprising a clamp and a pivoted connection associated with said slot for connecting said second rigid member with the steering rod of the car being towed, substantially as described.

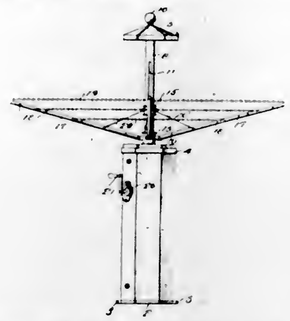
3. In a towing connection for automobile cars the combination of a rigid member having one end bifurcated to form a clamp adapted to be secured to the rear axle of a towing car and having its other end provided with a pivot pin adapted to normally lie in a horizontal plane; a second rigid member pivoted at one end to said pin, provided with a slot at its other end, provided between its ends with a vertically disposed pivot pin and provided between its first named end and said pivot pin with an extra slot, said extra slot being spaced a different distance from said pivot pin than said first named slot to facilitate steering cars of different makes; a pair of clamping members adapted to embrace the front axle of the car being towed one of which members is secured to said last named pivot pin, and the other of which members is provided with a second vertically disposed pivot pin; means connecting said second rigid member and said second vertically disposed pivot pin; and means adapted to be associated with either of said slots for connecting said second rigid member with the steering rod of the car being towed, substantially as described.

1,220,215. CLOTHES-REEL. CHARLES J. GAUSS, Duluth, Minn. Filed Sept. 3, 1915. Serial No. 48,902. (Cl. 68—34.)

1. A clothes reel including a housing, a slotted tube arranged centrally therein, a second slotted tube slidably mounted on the first, a reel mechanism operable within the housing, a tripping mechanism mounted within the tubes, and means for operating the reel mechanism.

2. A clothes reel including a housing, a telescopic tube having registering slots arranged centrally therein, sliding collars mounted on the outer member of the tube, a cross bar fixedly secured to the said outer member, a finger depending from said bar, a trip rod mounted within the tube and having its upper end secured to the uppermost collar and having its lower end projecting through the slot for engagement with the finger, a reel mechanism operable within the housing and associated with the collars, and means for operating the mechanism.

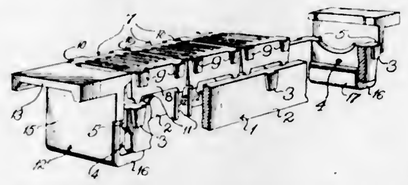
3. A clothes reel including a housing, a slotted telescopic tube centrally arranged therein, a reel mechanism operable within the housing, a tripping means mounted in the tube and associated with the mechanism, a closure for said housing carried by one section of the tube, and means for operating the reel mechanism.



4. A clothes reel including a housing, guides within the housing, a telescopic tube, a reel mechanism associated with the tube, a cross bar secured to one section of the tube, said bar having its ends yoked to receive the guides, a trip bar operated by the cross bar, and means imparting movement to the cross bar.

5. A clothes reel including a housing, a slotted telescopic tube centrally arranged therein, sleeves slidably carried by the tube, arms pivoted to one of said sleeves, brace rods pivoted to the other of said sleeves and connected to the arms, a trip rod secured to the said second sleeve, a cross bar secured to the tube, said bar operating the arms in its upward and the trip rod in its downward movement, and means for imparting movement to the cross bar.

1,220,216. FURNACE-GRATE. JAMES C. GEORGE and GABRIEL L. GEORGE, Bristol, Va. Filed Oct. 26, 1915. Serial No. 57,935. (Cl. 126—168.)



1. A grate embodying a hanger having a lower hook-shaped seat, and a frame having one end abutting said hanger and engaging said seat.

2. A grate embodying a pair of hangers having lower hook-shaped seats, an elongated open frame having its ends abutting said hangers and engaged in said seats, and removable grate sections seated in said frame.

1,220,217. DRILL. ADOLPH GIEST, Nanticoke, Pa. Filed May 16, 1916. Serial No. 97,905. (Cl. 255—69.)

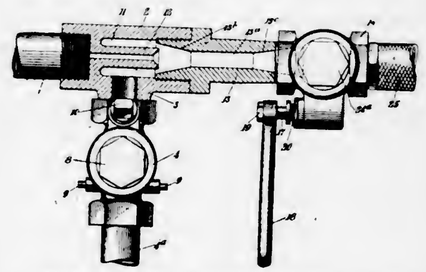
1. In a drill, the combination with a stem having a socket of the configuration of a Greek cross; of an auger having a shank oblong in section and of a size to extend across the center and into two opposite arms of said cross-shaped socket, one edge of said shank being transversely notched, a fastening device removably passing through the stem and across its socket at a point to lie in such notch, elements fitting the two remaining arms of the socket, and means for holding them in place from the shank when it is in position, for the purpose set forth.

2. In a drill, the combination with a stem having in its lower end a socket of the configuration of a Greek cross and embodying an oblong center and side channels opening thereinto; of an auger having a shank of a size to fit said center and serrated on its opposite faces, side bits having shanks of proper size to fit said channels and serrated on their inner faces to engage the serrations of the auger-shank, all shanks being parallel, and a removable fastening device connecting said stem with the auger-shank.



3. In a drill, the combination with a stem having in its lower end a socket of the configuration of a Greek cross and embodying an oblong center and side channels opening thereinto; of an auger having a shank of a size to fit said center and serrated on its opposite faces and notched in one edge, side bits having shanks of proper size to fit said channels and serrated on their inner faces to engage the serrations of the auger-shank, and a removable fastening pin passing through said stem, across the corresponding edges of said bit-shanks, and through one of said notches in the auger-shank.

1,220,218. COLD-WATER SQUIRT. ALFRED GILLIS, Baltimore, Md. Filed July 17, 1914. Serial No. 851,455. (Cl. 162—1.)



1. A cold water delivery device comprising an injector, a steam pressure supply pipe connected therewith, a water supply pipe therefor, and a delivery valve device at the outlet from the injector adapted to perform the combined action of controlling the flow of steam and water into and the delivery of water from said injector.

2. A cold water delivery device comprising an injector, a steam pressure supply pipe giving at all times a free access of steam to said injector and connected therewith, a water supply pipe therefor, and a quick-acting valve device at the outlet from the injector adapted to perform the combined action of controlling the flow of steam and water into and the delivery of water from said injector.

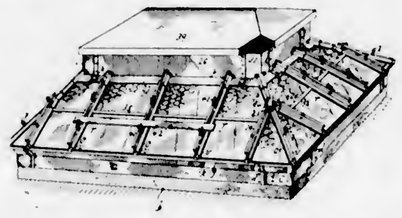
3. A cold water delivery device comprising an injector, a steam pressure supply pipe giving at all times a free access of steam to said injector and connected therewith, a water supply pipe for said injector, a check valve in said water supply pipe opening toward said injector, and a delivery valve at the outlet from the injector which performs the combined action of controlling the flow of steam and water into and the delivery of water from said injector.

4. A cold water delivery device comprising an injector, a steam pressure supply pipe giving at all times a free access of steam to said injector and connected therewith, a water supply pipe for said injector, a check valve in said

water supply pipe opening toward said injector, and a swinging delivery valve at the outlet from the injector which performs the combined action of controlling the flow of steam and water into and the delivery of water from said injector, which rotates in a plane located at right angles to the outlet pipe in which the valve is situated.

5. A cold water delivery device comprising an injector, a steam pressure supply pipe giving at all times a free access of steam to said injector and connected therewith, a water supply pipe for said injector, a swinging check valve in said water supply pipe opening toward said injector, and a delivery valve at the outlet from the injector which performs the combined action of controlling the flow of steam and water into and the delivery of water from said injector.

1,220,219. SECTIONAL SKYLIGHT. BARNEY GOLDMAN, New York, N. Y. Filed Mar. 27, 1915. Serial No. 17,359. (Cl. 108—16.)



1. A skylight comprising sectional curb and ridge members, a gutter arranged along the inner portions of the curb sections, fittings having corrugated tops located at the respective inner and outer parts of the curb and ridge sections, one fitting being opposite the other, and a hollow bar provided with corrugated glass supporting side shelves the corrugated ends of the bar being made to telescope over the fittings.

2. In a skylight the combination with a hollow transverse glass supporting bar, of a hollow longitudinal bar having ends engaged by the transverse bar, and a clamp connected to the transverse bar and having hook members to engage the lower portions of the bar, said clamp also including lug members for coöperation with the longitudinal bar.

3. In a skylight the combination with a hollow transverse glass supporting bar having lower extensions, of a hollow longitudinal bar the ends of which engage the transverse bar, said bar having lower extensions, a clamp mounted on the bar having hooks for engagement with the extensions of the transverse bar, said clamp including lugs for engagement with the extensions of the other bar.

4. In a skylight the combination with a glass supporting longitudinal and transverse bar both having lower extensions the end of the longitudinal bar being conjoined with the transverse bar, of a clamp provided with hook members to straddle the edge extensions of the transverse bar, said clamp including lugs projecting from the hook members for engagement with the extensions of the longitudinal bar.

1,220,220. ELECTRIC-SWITCH MECHANISM. DAVID D. GORDON, Chicago, Ill., assignor to The Yost Electric Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Nov. 6, 1915. Serial No. 60,044. (Cl. 173—346.)

1. In a switch of the class described, a bridging member mounted for rocking movements, an operating key for said member, said key and member having interengaging parts which coöperate to positively prevent rocking movements of the member except when the key is at predetermined points in its rotation, and a yielding element carried by the key for rotation therewith and acting on the bridging member to urge it to have rocking movements when released by said key.



2. In a switch of the class described, a bridging member mounted for rocking movements and having a part spaced from its rocking axis and provided with an elongated opening having circular end portions and a restricted intermediate portion, a key having a narrowed shaft part projecting through said opening for turning movements in the ends of the opening and for movement from one portion to the other of the opening when said narrowed shaft portion is at predetermined points in its turning movement, and means operable to urge the bridging member to have movements in first one direction and then the other relative to the key shaft upon a turning of said shaft.

3. In a switch of the class described, a bridging member mounted for rocking movements and having spaced parts each provided with an opening with one of said openings elongated and restricted at its central portion, a rotatable element projected through said openings and having a portion coacting with said elongated opening to control the rocking movements of said member, and means acting on said member to urge it to have rocking movements in first one and then the opposite direction when said element is rotated.

4. In a switch of the class described, a bridging member mounted for rocking movements, a rotatable element having a part coöperating with a part of said member to control the rocking movements of the member when the element is rotated, and spring means carried bodily by said element for rotation therewith and urging a rocking of said member in first one and then the opposite direction when said element is rotated.

5. In a switch of the class described, a bridging member mounted for rocking movements, a rotatable element projected through a part of said member and coöperating therewith to permit rocking movements thereof only at predetermined points in a rotation of said element, and spring means carried by said element and having a thrust part coacting with said member, said thrust part describing an orbital movement upon a rotating of said element and causing said member to have quick rocking movements when released for such purpose.

[Claims 6 to 14 not printed in the Gazette.]

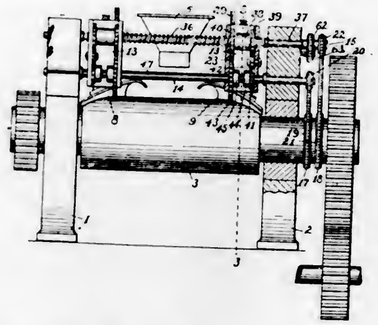
1,220,221. MIXING-MACHINE FOR RUBBER. ROBERT M. GRAHAM, Akron, Ohio. Filed Aug. 7, 1916. Serial No. 113,436. (Cl. 18—2.)

1. In a mixing machine, the combination of a roll, means for rotating the roll, a blade, and means actuated from the rotation of the roll for moving the blade vertically, substantially as described.

2. In a mixing machine, the combination of a roll, means for rotating the roll, a blade, means actuated from the rotation of the roll for moving the blade toward and away from the roll, and means actuated from the rotation of the roll for moving the blade laterally, substantially as described.

3. In a mixing machine, the combination of a roll, means for rotating the roll, a blade, means actuated from the rotation of the roll for moving the blade toward and away from the roll, and means actuated from the rotation of the roll for moving the blade toward the transverse center of the roll and back again, substantially as described.

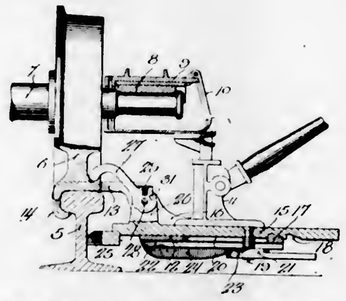
4. In a mixing machine, the combination of a pair of rolls, means for rotating the rolls, a pair of blades, means actuated from one of the rolls for moving each of said blades toward and away from said roll, means actuated from said roll for moving each of said blades toward the transverse center of said roll and back again, and means actuated from said roll for moving both of said blades at the same time toward the transverse center of said roll and back again, substantially as described.



5. In a mixing machine, the combination of a pair of rolls, means for rotating the rolls, a pair of blades, carriages supporting the blades, means actuated from the rolls for moving said blades vertically, and means actuated from the rolls for moving said carriages laterally, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

1,220,222. RAIL-BRACKET. DAVID GRISINGER, Racine, Wis., assignor of one-half to William G. Bolus, Corliss, Wis. Filed Sept. 18, 1916. Serial No. 120,669. (Cl. 254—33.)



1. A jack supporting rail bracket comprising a body plate including a portion adapted to extend transversely of and engage one side of the rail, a plate slidably connected with the body plate, a lug on one plate, the other plate being provided with a recess adapted to receive said lug, a bolt carried by one plate and slidably passed through the other plate and a cam lever on the bolt engageable with said other plate to lock said lug in the recess.

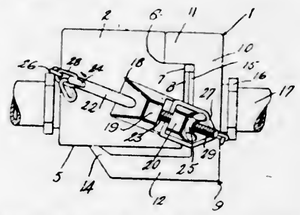
2. A jack supporting and wheel holding rail bracket comprising a body plate provided with a pair of spaced upwardly offset arms extending longitudinally from one end thereof and having their free ends bent to embrace a rail, a rail abutting plate slidably connected with the body plate and means for holding said plates against sliding movement.

3. A jack supporting and wheel holding rail bracket comprising a body plate provided with a pair of spaced upwardly offset arms extending longitudinally from one end thereof and having their free ends bent to embrace a rail, a rail abutting plate slidably connected with the body plate, means for holding said plates against sliding movement and a pair of spaced chuck blocks projecting from one end of the rail abutting plate.

4. A jack supporting and wheel holding rail bracket comprising a body plate provided with a pair of spaced upwardly offset arms extending longitudinally from one end thereof and having their free ends bent to embrace a rail, a rail abutting plate slidably connected with the body plate, a pair of spaced chuck blocks projecting from one end of the rail abutting plate, means disposed under the plates for locking said plates against sliding movement, and depending foot flanges on the body plate.

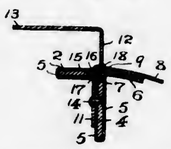
5. A jack supporting and wheel holding rail bracket comprising a body portion adapted for securement to extend laterally from a rail at different elevations, a lug on the body portion, a car wheel engaging arm including a head portion pivoted to the lug, said lug being provided with a recess, said arm being provided with a pair of recesses adapted to selectively aline with the first recesses and a locking member engageable in the first recesses and one of the second recesses.

1,220,223. HOSE-COUPLING. CLARENCE M. HARTMAN, Crofton, Nebr. Filed Aug. 10, 1916. Serial No. 114,266. (Cl. 137—28.)



A tightening device for a train pipe coupler, comprising a connector including spaced projections defining a notch; a rod slidable in both projections and extending across the notch; a flexible element connected at one end with the rod, and provided at its other end with a link passing through the notch and engaging one projection; and a tightening means on the rod, and engaging one projection.

1,220,224. BAG-FRAME. WILLIAM A. HEILMANN, Newark, N. J., assignor to The R. Neumann Hardware Co., a Corporation of New Jersey. Filed Nov. 25, 1916. Serial No. 133,287. (Cl. 190—54.)



1. A bag-frame comprising a pair of hinged frame-sections of angular cross-section, a covering upon each frame-section, each covering having a sewing flange extending in an outward direction from the outer marginal edge-portion of each frame-section, said flanges being adapted to be located beneath the edge-portion of the mouth of a bag-body and further adapted to receive a continuous straight line of stitching closely to the said outer marginal edge of each frame-section, combined with a hasp-plate secured to one of said frame-sections having hasp-lug carrying posts extending from the upper surface-portion of said frame-section at points back of the outer face of the angular member connected with the main member of said frame-section.

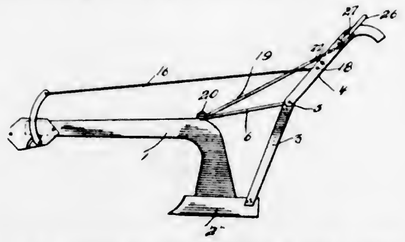
2. A bag-frame comprising a pair of frame-sections, each frame-section consisting of a main body-member and a depending member integrally connected therewith, so as to provide a frame-section of L-shaped cross section,

and a hasp-plate secured to one of said frame-sections having hasp-lug carrying posts extending from the upper surface-portion of said frame-section at points back of the outer face of the said depending member, each post being provided with an angularly bent portion extending forwardly in a direction toward the marginal edge formed by the angle of the said main body-member and the said depending member, all arranged so as to bring the outer face-portions of the said posts vertically in alinement with the outer face-portion of the said depending member.

3. A bag-frame comprising a pair of frame-sections, each frame-section consisting of a main body-member and a depending member integrally connected therewith, so as to provide a frame-section of L-shaped cross section, said main body-member being provided with openings, and a hasp-plate secured to the inner surface portion of one of said members, hasp-lug carrying posts connected with said hasp-plate, said posts extending into and through the said openings and extending from the upper surface portion of the said main body-member of said frame-section, each post being provided with an angularly bent portion extending forwardly in a direction toward the marginal edge formed by the angle of the said main body member and the said depending member, all arranged so as to bring the outer surface portions of the said posts vertically in alinement with the outer face-portions of the said depending member.

4. A bag-frame comprising a pair of frame-sections, each frame-section consisting of a main body-member and a depending member integrally connected therewith, so as to provide a frame-section of L-shaped cross section, said main body-member being provided with openings, and a hasp-plate secured to the inner surface portion of said depending member, hasp-lug carrying posts connected with said hasp-plate and extending from the upper surface portion of the said main body-member of said frame-section, each post being provided with an angularly portion extending forwardly in a direction toward the marginal edge formed by the angle of the said main body-member and the said depending member, all arranged so as to bring the outer face portions of the said posts vertically in alinement with the outer face-portions of the said depending member.

1,220,225. CLEVIS ATTACHMENT FOR PLOWS. FRANK G. HOLCOMB, Franklin, Ky. Filed Apr. 22, 1916. Serial No. 92,951. (Cl. 97—4.)



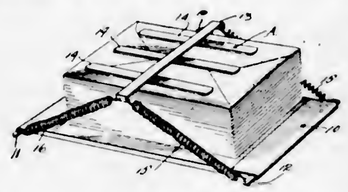
1. In a clevis attachment for plows, a clevis formed of a pair of spaced plates mounted on opposite sides of a plow beam, a plurality of levers pivoted on said plates, means for shifting said levers, and a roller carried by said levers engageable with the under face of the plow beam to raise and lower said clevis.

2. In combination, a plow beam having a clevis pivotally associated with the forward end thereof, a lever pivoted on said clevis and having an anti-friction roller engageable with the plow beam to alter the position of the clevis, a pair of handles mounted on said plow beam and having connection with said lever, means for adjusting said handles forwardly and rearwardly, whereby to raise and lower said clevis.

3. In combination, a plow beam, a clevis formed of a pair of spaced plates mounted on opposite sides of the plow beam, said plates being provided with arcuate slots, a lever pivoted to said clevis and having a roller member mounted on a shaft for engagement with the under side of the plow beam, the free ends of the shaft being accommodated by the said slots, a pair of handles mounted on said plow beam and having connection with said lever, means for adjusting said handles to raise and lower said clevis.

4. In combination, a plow beam, a clevis mounted on the forward end thereof, a lever pivotally carried by the said clevis, the beam having a pair of handles pivotally associated therewith, means for adjusting the said handles comprising a strip member, having one end mounted on the top of said beam, the other end thereof being provided with apertures and slidably mounted in a block member mounted on a transverse bar extending between the plow handles, a lever provided with a rock arm adapted to operate a sliding bolt into engagement with said apertures to maintain the handles in adjusted positions.

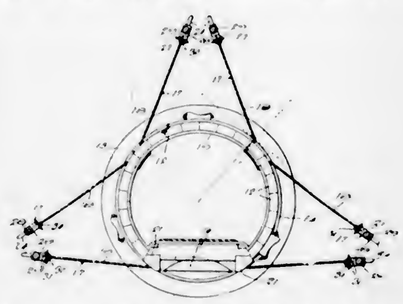
1,220,226. DEVICE FOR SECURING LOOSE MATERIAL IN BULK. HERMAN H. HOLSCHER, Wecota, S. D. Filed Mar. 18, 1914. Serial No. 825,661. (Cl. 24—17.)



1. A device for holding loose material comprising in combination, a body portion comprising a base plate and transverse bars extending across and beyond the ends of the base plate, a transverse movable bar, retaining arms carried by the movable bar, and springs connecting the extremities of the transverse end bars and the movable bar.

2. A device for holding loose material comprising in combination, a base plate, transverse elements extended beyond the side of the base plate at its corners, a transverse bar, longitudinal parallel arms supported by said transverse bar, and springs connecting the extremities of the transverse bar with said transverse elements beyond the sides of the base plate.

1,220,227. SILO-BRACING. JACOB M. HOUFF, Madison, Va., assignor to Peter L. Hargett, Frederick, Md. Filed Feb. 26, 1916. Serial No. 80,717. (Cl. 217—4.)

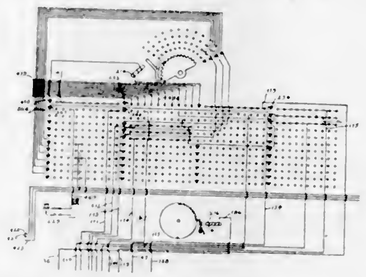


1. The combination with a silo or the like, of a bracing therefor comprising a plurality of pairs of guy members, each of said pairs comprising a continuous bracing member passing inwardly and outwardly through the wall of said silo intermediate said guy members.

2. The combination with a silo or the like provided with an interior hoop or ring, of a bracing for said silo comprising a plurality of pairs of guy members, each of said pairs comprising a continuous bracing member passing inwardly and outwardly through said hoop or ring intermediate said guy members.

3. The combination with a silo or the like provided with a doorway, of a bracing for said silo comprising a plurality of pairs of guy members, each of said pairs composing a continuous bracing member, and the guy members of one of said pairs being located at opposite sides of said doorway, respectively, the bracing member intermediate said last named guy members passing inwardly and outwardly through the wall of said silo and along the inner side of said wall at the top of said doorway.

1,220,228. TELEPHONY. DAVID S. HULFISH, Toronto, Ontario, Canada, assignor to Canadian Independent Telephone Company, Limited, Toronto, Canada, a Corporation of Canada. Original application filed May 13, 1912, Serial No. 696,902. Renewed Aug. 7, 1915, Serial No. 44,292. Divided and this application filed Sept. 30, 1912. Serial No. 723,229. (Cl. 179—17.)



1. In an automatic telephone system, a group of lines divided into smaller groups; a plurality of connective divisions serving all of said lines; a division starter; a line relay for each of said lines, said line relays being grouped in association with said smaller groups of lines; an auxiliary relay for each such group of line relays; means whereby an auxiliary relay will be charged whenever a line relay is charged; and further means whereby a charged auxiliary relay will cause the operation of said division starter.

2. In an automatic telephone system, a group of lines divided into smaller groups, a group of relays for each such smaller group of lines and containing one relay to each line; an auxiliary relay for each such group of relays, said auxiliary relays determining the order in which said line relays may be charged when effort is made to charge at the same time two or more line relays located in different relay groups.

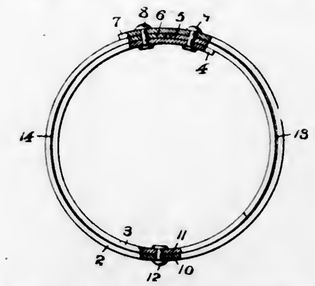
3. In an automatic telephone system, a group of lines divided into smaller groups; a group of relays for each such smaller group of lines and containing one relay to each line; and means for determining the order of operation of two of said line relays located in different groups when effort is made to operate them at the same time.

4. In an automatic telephone system, a plurality of groups of line relays; an auxiliary relay for each group and a circuit from a source of current through contact points of the auxiliary relay of a first group to the line relays of another group and a branch path from said circuit through contact points of the auxiliary relay of said second group to the line relays of a third group.

5. In an automatic telephone system, a plurality of groups of line relays; an auxiliary relay for each group and a circuit from a source of current through contact points of the auxiliary relay of a first group to the line relays of another group and a branch path from a point between said auxiliary relay and the line relays of said second group and extending through contact points of the auxiliary relay of said second group and thence to auxiliary and line relays of still other groups.

[Claims 6 to 108 not printed in the Gazette.]

1,220,229. RING OR BAND FOR USE IN PILE-DRIVING. HENRY ILLBACK, East Orange, N. J. Filed Aug. 12, 1916. Serial No. 114,508. (Cl. 189—23.1.)



1. A ring or band for use in the driving of piles, comprising a plurality of ring-like members, one set of end-portions of a pair of said ring-like members being arranged end to end and disposed between the other end-portions of said ring-like members, and means for securing said ring-like members in assembled relation.

2. A ring or band for use in the driving of piles, comprising a plurality of spirally disposed ring-like members, one set of end-portions of a pair of said ring-like members being arranged end to end and disposed between the other end-portions of said ring-like members.

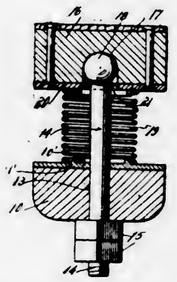
3. A ring or band for use in the driving of piles, comprising a plurality of spirally disposed ring-like members one set of end-portions of a pair of said ring-like members being arranged end to end and disposed between the other end-portions of said ring-like members, and means for securing said ring-like members in assembled relation.

4. A ring or band for use in the driving of piles, comprising a plurality of ring-like members arranged one within the other, means for securing said ring-like members in assembled relation at diametrically opposite portions, said ring or band being formed with open spaces intermediate of the secured portions of said ring-like members.

5. A ring or band for use in the driving of piles, comprising a plurality of spirally disposed ring-like members, arranged one within the other and having overlapping end-portions, means for rigidly securing said over-lapping end-portions, said spirally disposed ring-like members being spaced apart so as to provide an open portion for expansion.

[Claims 6 to 9 not printed in the Gazette.]

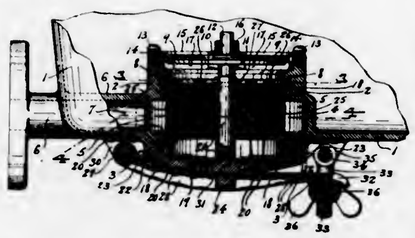
1,220,230. WHEEL. THOMAS B. INGWERSEN, Bowling Green, Mo. Filed Sept. 8, 1915. Serial No. 49,460. (Cl. 152—8.)



A resilient wheel including a rim having a band secured thereon and formed with a longitudinal series of radially

extending openings, a bolt slidably disposed through each of the openings and each having a spherical head on the outer end thereof, a plurality of tread plates each having a recess in its inner face for the reception of the spherical head of one of the bolts, a second plate secured to the inner face of each of the tread plates and provided with a central opening through which the shank of a bolt passes, a coil spring surrounding the shank of each of the bolts and bearing against the band and said second plate, the wall of the opening of each of the said second plates being inclined inwardly toward the recess to readily permit of universal movement of the tread plate on the head of the bolt.

1,220,231. STRAINER DEVICE. ROBERT K. JACK, Nutley, N. J. Filed Aug. 8, 1916. Serial No. 113,689. (Cl. 210—16.)



1. In a device of the kind described, a hollow body open at its opposite ends, a strainer-cup adapted to be inserted within the lower end of said hollow body, a strainer-element supported by said strainer-cup, a closing valve connected with the upper end of said hollow-body, means connected with said strainer-cup for opening said valve when the former is in operative position, a conduit means leading from the interior of said hollow body access to which is obtained through said strainer-elements, and means for securing said strainer-cup in operative relation to said hollow body.

2. In a device of the kind described, a hollow body open at its opposite ends, a strainer-cup adapted to be inserted within the lower end of said hollow body, a strainer-element supported by said strainer-cup, a closing valve connected with the upper end of said hollow-body, means connected with said strainer-cup for opening said valve when the former is in operative position, a conduit means leading from the interior of said hollow body access to which is obtained through said strainer-elements, means for securing said strainer-cup in operative relation to said hollow body, comprising a pivoted lock-bar adapted to be swung across the under side of said strainer-cup, a pivoted lock-bolt, the free end of said lock-bar being bifurcated to straddle said lock-bolt, and a lock-nut coöperating with said lock-bar and said lock-bolt.

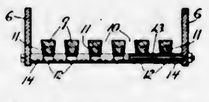
3. In a device of the kind described, a hollow body open at its opposite ends, a strainer-cup adapted to be inserted within the lower end of said hollow body, a strainer-element supported by said strainer-cup, a valve-seat located in the upper open end of said hollow body, a vertically movable valve-disk having a valve-stem, means engaging said valve-stem for guiding vertical movements of said valve-disk, a lift-finger connected with said strainer-cup adapted to engage said valve-disk to raise the same when said strainer-cup is in operative position, a conduit means leading from the interior of said hollow body access to which is obtained through said strainer-element, and means for securing said strainer-cup in operative relation to said hollow-body.

4. In a device of the kind described, a hollow body open at its opposite ends, a strainer-cup adapted to be inserted within the lower end of said hollow body, a strainer-element supported by said strainer-cup, a valve-seat located in the upper open end of said hollow body, a vertically movable valve-disk having a valve-stem, means engaging said valve-stem for guiding vertical movements of said valve-disk, a lift-finger connected with said strainer-cup adapted to engage said valve-disk to raise the same when said strainer-cup is in operative position, a conduit means leading from the interior of said hollow body access to which is obtained through said strainer-element, and means for securing said strainer-cup in operative relation to said hollow-body, comprising a pivoted lock-bar adapted to be swung across the under side of said strainer-cup, a pivoted lock-bolt, the free end of said lock-bar being bifurcated to straddle said lock-bolt, and a lock-nut coöperating with said lock-bolt.

5. In a device of the kind described, a hollow body open at its opposite ends, an annular portion providing an annular chamber intermediate of the ends of said hollow body, a conduit means leading out of said annular-chamber, a strainer-cup closed at its lower end, said strainer-cup being adapted to telescope into the lower end of said hollow-body, the side walls of said strainer-cup having outlet openings adapted to communicate with said annular chambers, a strainer-element contained in said strainer-cup adapted to extend over said outlet openings thereof, a closing valve connected with the upper end of said hollow body, means connected with said strainer-cup for opening said valve when said strainer-cup is in normal operative position, and means for securing said strainer-cup in operative relation to said hollow-body.

[Claims 6 to 8 not printed in the Gazette.]

1,220,232. SCREEN. CHARLES W. JACKSON, Chicago, Ill. Filed Apr. 21, 1910. Serial No. 556,839. (Cl. 83—56.)



1. A screen for coal, etc., comprising an inclined portion made of silicious material with which the coal makes direct contact and provided with a series of openings extending therethrough, and an inclined supporting part therefor of tenacious material fixed with relation to said silicious material adapted to relieve the strain on the silicious material and hold it in place, said tenacious material also provided with openings which register with the openings in the silicious material.

2. A screen for coal, etc., comprising an inclined engaging piece of silicious material, a series of holes therein larger in cross sectional area at their outer ends than at their inner ends, an inclined supporting piece of tenacious material supporting said silicious engaging piece and fixed with relation thereto and having a thickness less than that of the engaging piece of silicious material, said supporting piece provided with holes registering with those in said engaging piece.

3. A screen comprising a screening surface made up of silicious material and having screen openings, and supporting means for said silicious material consisting of a tenacious material, said tenacious material having screen openings registering with those of the silicious material.

4. A screen comprising a screening surface made up of silicious material and with elongated screen openings between portions of said silicious material, and a supporting device supporting said silicious material between said elongated openings, the silicious material provided with projecting parts which project into receiving spaces in the supporting device, the supporting device and silicious material being fixed with relation to each other.

5. A screen for coal, etc., comprising a screening surface made up of silicious material, said surface broken up by a series of openings or spaces through which the finer material passes, rigid metallic supporting material located below the silicious material and upon which it is supported, said supporting material provided with openings or spaces registering with the openings or spaces which break up said silicious material screening surface, the width of said openings or spaces between said rigid metallic supporting material at their narrowest portions being wider than the narrowest portions of the openings or spaces associated with the silicious material.

1,220,233. EMBLEM. GEORGE G. JONES, Cleveland, Ohio. Filed Jan. 3, 1916. Serial No. 69,720. (Cl. 40—1.6.)



1. In a device of the character described, the combination of a pair of members, means for hinging them together forming a clamp, and a device pivoted to one of the members and movable to display different insignia.

2. In an emblem, the combination of a pair of members, means for securing such members together whereby they may firmly engage a garment, one of said members having different insignia on its opposite sides adapted to be reversed so that it may present either of said insignia.

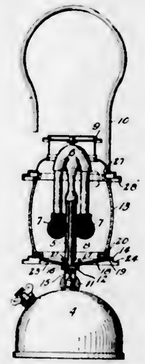
3. An emblem comprising a clamp having a pair of members hinged together, members of said clamps having extended portions adapted to embrace a portion of a garment, one of said extended portions having an opening, a plate member carrying different insignia on its opposite sides, and means for pivoting the plate member in said opening so that it may be reversed to present the different insignia.

4. In a device of the character described, the combination of a pair of hinged members, a ring rigidly carried by each of said members, each of said rings carrying a plate in its opening, said plates having thereon insignia and at least one of said plates having different insignia on its opposite sides, the latter plate being reversibly carried in said ring.

5. In a device of the character described, the combination of a pair of members hinged together in the form of a clamp, having flat portions adapted to embrace a portion of the garment carried at one side of the pivot and comparatively small thumb pieces at the opposite side of the pivot, one of said clamp members being so carried that it may be reversed to present its opposite sides, and yielding means tending to hold the clamp in engagement with the garment.

[Claim 6 not printed in the Gazette.]

1,220,234. LANTERN-GLOBE-SUPPORT PLATE. ADOLPH G. KAUFMAN, New York, N. Y. Filed June 30, 1916. Serial No. 106,773. (Cl. 67—41.)



1. A lantern having a vaporizer and preheating cup, a support plate mounted above said cup, said plate having a dish-shaped center with a central opening above the cup, and having a channel leading down the said dish-shaped portion to said opening.

2. A lantern having a vaporizer and preheating cup, a globe support plate mounted above said cup, said plate having a dish-shaped center with an opening therethrough above the cup adapted to permit the passage of the vaporizer, said plate having globe-holding means, and a channel leading from said globe-holding means to said central opening, for the purpose set forth.

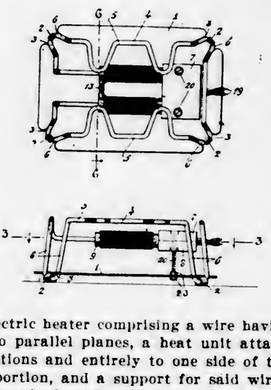
3. In a lantern, a globe support plate dish-shaped in form with a central opening, said plate having a channel therein extending from a point adjacent to the outer edge to said opening.

4. In a lantern, a globe support plate having a dish-shaped center, a globe-holding rib adjacent to the outer edge, and a channel passing through said rib to said opening, for the purpose set forth.

5. In a lantern, a globe support plate having a central opening, globe-holding means, and an inclined channel passing from said globe-holding means to said opening.

[Claims 6 to 8 not printed in the Gazette.]

1,220,235. ELECTRIC HEATER. ELIOT KEEN, Brooklyn, N. Y., assignor to The Aladdin Lamp Corporation, New York, N. Y., a Corporation of Delaware. Filed Feb. 28, 1916. Serial No. 80,883. (Cl. 219—19.)



1. An electric heater comprising a wire having portions bent in two parallel planes, a heat unit attached to one of said portions and entirely to one side of the plane of the other portion, and a support for said wire.

2. An electric heater comprising a wire having portions bent in two parallel planes arranged one below the other, a heat unit lying entirely below the upper plane and attached to the portion having the lower plane, the heat unit having an air space on its under side, and a support for said wire.

3. An electric heater comprising a wire one part of which has a plurality of bends in a single plane so as to constitute a support for that which is to be heated while another part lies in a plane parallel to but beneath the first plane, and a heat unit supported by said second part entirely outside the plane of the first part, other parts of the wire being bent downwardly so as to constitute feet.

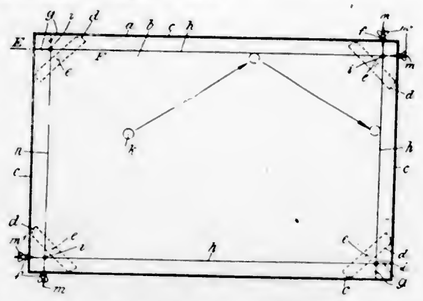
4. An electric heater comprising a wire having portions bent to and fro in one plane to constitute a support for that which is to be heated, other portions bent downwardly as loops, and parallel end portions lying in a plane beneath the first named plane, a heat unit having parallel hollow bobbins into which said ends project, a base beneath the heat unit with which the bottoms of the loops are engaged, and means for fastening the heat unit and the base together.

5. An electric heater comprising a base, a pair of spaced parallel supporting wires carried by said base and a heat unit comprising parallel hollow bobbins wound with conducting wire and fixed to one side of a connecting block the terminals of said conducting wire passing into the connecting block and being there joined to cord terminals and the cord being anchored in the block, the hollow bobbins being threaded upon the supporting wires and held in a predetermined position thereupon.

1,220,236. BILLIARD-TABLE. ERNEST ALFRED KEMP, Châtelaine, near Geneva, Switzerland. Filed Feb. 23, 1916. Serial No. 79,908. (Cl. 46—12.)

1. A billiard table attachment comprising brackets adapted to be removably secured to the corners of the

table, lines acting as cushions and crossing each other at the corners of the table, adjustable means for supporting the lines at their crossing points at the desired height above the table, and means for placing said lines under the necessary tension for use.



2. A billiard table attachment comprising brackets adapted to be removably secured to the corners of the table, lines acting as cushions and crossing each other at the corners of the table, adjustable means for supporting the lines at their crossing points at the desired height above the table, and means for placing the necessary tension on any of said lines independently of the others.

3. A billiard table attachment comprising brackets each adapted to be secured to a corner of the table, lines adapted to act as cushions and made to cross at the corners of the table, adjustable studs through each of which two of the lines pass at their crossing point, in order that said lines may be placed at the required height above the table, and means for placing the required tension on the said lines for use.

4. A billiard table attachment comprising brackets each adapted to be secured to a corner of the table, lines adapted to act as cushions and made to cross at the corners of the table, adjustable studs through each of which two of the lines pass at their crossing point, so that said lines may be placed at the required height above the table, and means for placing the required tension on any of said lines independently of the others.

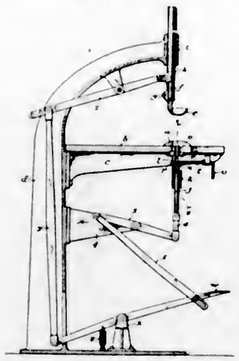
5. A billiard table attachment comprising brackets each adapted to fit on and be secured to the corner of the table, lines acting as cushions and crossing each other at the corners of the table, means carried by each bracket for supporting the two lines at their crossing point, and means associated with each line for placing the same under the necessary tension for use.

[Claim 6 not printed in the Gazette.]

1,220,237. TUFTING-MACHINE. ROY L. KENYON, Waukesha, Wis., assignor to The R. L. Kenyon Company, Waukesha, Wis., a Corporation of Wisconsin. Filed May 31, 1911, Serial No. 630,415. Renewed Feb. 5 1917. Serial No. 146,857. (Cl. 155—43.)

1. In a tufting machine the combination with means for holding the work, of a needle support having a seat for holding a tufting button with its eye loop on the exposed side thereof, a needle of less diameter than the head of the button having a point at one end and a tubular shank open and transversely slotted at the other end to receive the eye loop of the button with a tufting loop and adapted to be seated endwise on the back of the button, and means for thrusting the needle while so seated on the button, through the work and seating the button in its final position thereon.

2. In a tufting machine, the combination of a work support having an opening therein, a perforated cup-shaped presser foot, one of said parts being movable toward and from the other, a needle having a tubular shank open at the end to receive a tufting wire connected with a button, and means for compressing the work between said support and presser foot and thrusting the needle through the compressed work into the opening in the presser foot.



3. In a tufting machine the combination with means for holding the work, of a needle support having a seat for holding a tufting button with its eye loop on the exposed side thereof, a needle of less diameter than the head of the button having a point at one end and a tubular shank open and transversely slotted at the other end to receive the eye loop of the button with a tufting loop and adapted to be seated on the back of the button, means for confining the needle in proper position while it is so seated on the button and is thrust through the work, and means for thrusting the needle through the work and seating the button in its final position thereon.

4. In a tufting machine the combination of two opposing perforated work compressing members one of which is movable toward and from the other, a removable tubular needle, means for holding and guiding said needle in line with the openings in said members, and means for moving one of said compressing members toward and from the other and thrusting the needle through the work held between them.

5. In a tufting machine the combination of two opposing perforated work compressing members one of which is movable toward and from the other, a needle support in line with the openings in said compressing members, a tubular needle, needle guiding jaws movable transversely to the path of the movable compressing member and adapted to hold the needle in line with the opening therein, and means for operating the movable compressing member and thrusting the needle through the work held between said members.

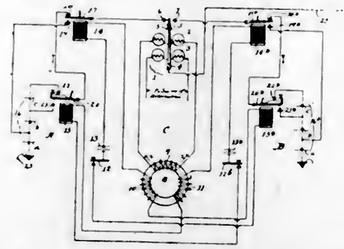
[Claims 6 to 12 not printed in the Gazette.]

1,220,238. QUADRUPLEX TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed Nov. 2, 1911, Serial No. 658,173. Renewed Dec. 30, 1916. Serial No. 139,966. (Cl. 178—55.)

1. In quadruplex telegraphy, a line of transmission, two transmitting stations for each terminal of said line and an intermediate organism operatively related to both of said stations, said intermediate organism adapted to impress upon the line reversals of equal intensity and duration, each of said transmitting stations provided with means to change the sequence of said reversals independent of the means normally controlling said organism.

2. In quadruplex telegraphy, a line of transmission, two transmitting stations for each terminal of said line and an intermediate organism operatively related to both of said stations, a source of alternation at each terminal, said intermediate organism comprising a converting device and a polarized relay, two pairs of electromagnets connected

to said source of alternation, the second pair of said electromagnets connected to a converting device.



3. In quadruplex telegraphy, a line of transmission, two transmitting stations for each terminal of said line and an intermediate organism operatively related to both of said stations, a source of alternation at each terminal, said intermediate organism comprising a polarized relay and a converter, said converter provided with three coils, one of said coils in operative relation to said relay, one of said coils in operative relation to the transmitting means of one station and one of said coils operatively related to the transmitting means of the second station.

4. In quadruplex telegraphy, a line of transmission, two transmitting stations for each terminal of said line, each transmitting station comprising a source of current, transmitting means and means operatively related to said transmitting means to connect the whole force of said battery, more than half of said force or less than half said force, to said line of transmission.

5. In quadruplex telegraphy, a line of transmission and two stations for each terminal of said line, each of said stations comprising a transmitting battery, transmitting means, an electric circuit for said transmitting means and two electromagnets in said electric circuit, one of said electromagnets adapted to reduce the transmitting force of the transmitting battery of its own station and the second of said electromagnets adapted to reduce the transmitting force of the transmitting battery of the second station.

[Claims 6 to 16 not printed in the Gazette.]

1,220,239. ARTIFICIAL TOOTH. EDWARD F. KLUMB, Chicago, Ill. Filed Oct. 28, 1916. Serial No. 128,266. (Cl. 32—9.)



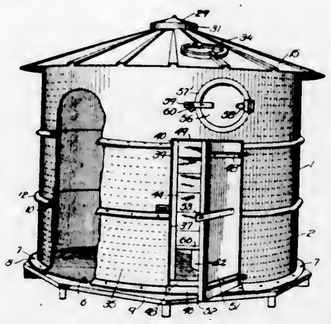
1. An artificial tooth including a metallic member adapted to be secured upon a root, a porcelain tooth member, and a dovetail connection between said porcelain tooth member and the metallic member.

2. An artificial tooth including a metallic securing adapted to be permanently engaged upon a root and having a recess and a porcelain tooth member adapted to be engaged upon the metallic member and having a projection for entering the recess therein.

3. An artificial tooth including a metallic member adapted to be engaged upon a root and having a cavity upon its under side in which the root is engaged, said metallic member having upon its forward face a dovetail recess, and a porcelain tooth member adapted to be engaged against the forward face of the metallic member, and having a dovetail projection to enter said recess.

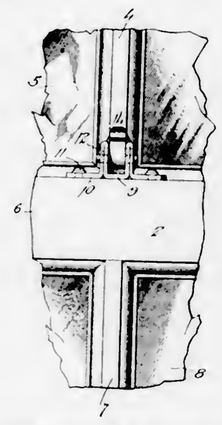
4. An artificial tooth including a metallic member adapted to be engaged upon a root and having an inclined forward face, and a cavity provided in said face, a shoulder provided upon the upper surface of the member, and a porcelain tooth member having its rear face formed to engage the inclined face of the metallic member, a projection for entering the cavity of the metallic member, and a shoulder for engaging the shoulder of said metallic member to secure the porcelain and metallic members together against displacement in any direction other than the direction in which the parts are brought together, for connection.

1,220,240. METAL BIN. ANDREW A. KRAMER, Kansas City, Mo. Filed July 19, 1915. Serial No. 40,614. (Cl. 189—3.)



In a bin the combination with a side wall, having a door opening, of a floor secured to the lower edge of the wall, a sill on said floor spanning the door opening and having an upwardly directed lip, forming a door stop, a U-member inclosing the edges of the wall at the side of the door opening and slit at its lower end to receive the sill stop, substantially as set forth.

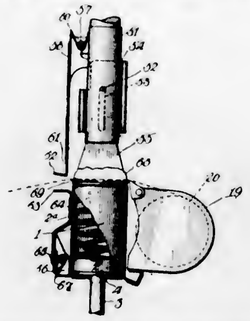
1,220,241. SASH-FASTENER. ARTHUR P. LANE, Denver, Colo. Filed Mar. 14, 1916. Serial No. 84,157. (Cl. 16—19.)



A sash fastener including a supporting bracket formed from a length of metal, the length of metal being bent to provide a U-shaped vertically extending member, the opposite ends of the length of metal being bent and extended downwardly and lying against the vertical portions of the U-shaped member, said ends being then bent at right angles and extended laterally to provide securing means, and a window engaging member having trunnions there-

on which are loosely extended through the vertical bars of the U-shaped member and the portion of the metal lying against the same, the securing means and the horizontal portion of the U-shaped member being in alinement.

1,220,242. AUTOMATIC AIR-TORPEDO. OTTO A. LANGOS, Chicago, Ill., assignor to Melville M. Ostertag, Chicago, Ill. Filed July 27, 1916. Serial No. 111,544. (Cl. 46—46.)



1. In a device of the character described, the combination of a cylinder, a handle movable with respect thereto, a spring-controlled jaw upon the cylinder and a spring-controlled jaw upon the handle adapted to be carried into engagement with said first-mentioned spring-controlled jaw, said jaws being adapted to grasp and to advance a ribbon of paper.

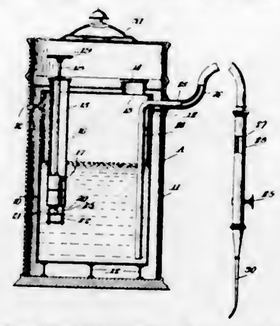
2. In a device of the character described, the combination of a cylinder, a handle movable with respect thereto, a spring-controlled jaw upon the cylinder, said jaw being provided with a flange or lip adjacent one end thereof, said jaw being, moreover, pivotally mounted at the end opposite said flange or lip, and a spring-controlled jaw upon the handle and movable therewith, said last-mentioned jaw being adapted to engage the flange or lip upon said first-mentioned jaw, thereby to force both of said jaws outwardly or away from the cylinder and to feed a ribbon of paper forward as said jaws thus move.

3. In a device of the character described, the combination of a cylinder, a handle movable with respect thereto, a pair of movable jaws, one pivoted upon the cylinder and one upon the handle, said jaws being adapted to come into contact with each other and being pivoted respectively at the ends opposite those ends which thus come into contact, the contacting ends of said jaws being adapted to grasp a ribbon of paper and feed the same forward as the contacting ends of said jaws are forced outwardly from said cylinder and said handle.

4. In a device of the character described, the combination of a cylinder, a handle movable with respect thereto, a pair of jaws, one pivoted upon the cylinder and the other pivoted upon the handle adjacent the ends of said jaws, being adapted to come into contact with each other after the jaws have been moved a predetermined distance, said handle being adapted to move toward the cylinder a distance greater than the distance necessary to carry said jaws into engagement with each other, the contacting ends of said jaws being adapted to be forced outwardly away from said cylinder and said handle as the pressure upon said handle continues, and springs for returning said jaws to normal position when the cylinder and the handle are no longer being forced toward each other.

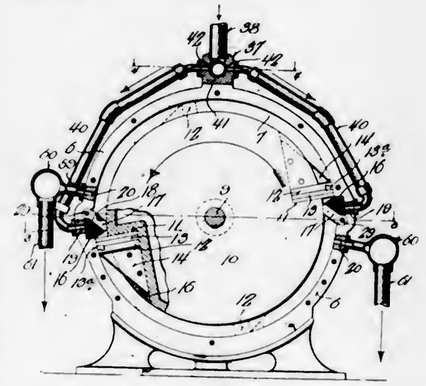
1,220,243. ANTISEPTIC FLUSH-TANK. HUGH LEITCH, Regina, Saskatchewan, Canada. Filed Apr. 27, 1916. Serial No. 94,063. (Cl. 128—47.)

A device of the class described comprising a main tank, permanent end closures therefor forming an air tight inclosure, a liquid carrying container in said inclosure, means for spacing said container from the walls of the closure, said inclosure being exhausted of air, an air pump and a filling neck carried by said container and projecting through one end closure, a cap on said neck, a



pipe extending from the bottom of the container through the walls thereof and the tank and terminating in a valved nozzle, and a cover for the upper end of the tank.

1,220,244. ROTARY ENGINE. THOMAS H. LINDLEY, Cedar Rapids, Iowa, and HERMAN SCHREIER, Sheboygan, Wis. Filed Aug. 5, 1916. Serial No. 113,228. (Cl. 121—84.)



1. In a rotary engine, the combination with a cylindrical casing, a piston block rotatable in said casing to define therewith an annular chamber, a shaft operable by the piston block, a piston blade carried by the piston block and projecting across the chamber and a gate movable across the chamber, of a slidable cam rod connected with the gate for advancing and retracting said gate, a spring connected with the rod for urging it in one direction of movement, a dash pot connected with the rod and operable in opposition to the spring, and a cam member operable by the said piston block shaft and engageable with the cam rod in opposition to the spring.

2. In a rotary engine, the combination with a cylindrical casing, a piston block rotatable in said casing to define therewith an annular chamber, a piston blade carried by the piston block and projecting across the chamber, a gate movable across the chamber, an inlet port for the chamber and a valve controlling said inlet port; of means for advancing and retracting the gate in the chamber said inlet port valve being normally closed and means for opening said valve subsequent to advancing movement of the gate for a predetermined period of time, said means being adjustable to vary the lengths of the periods of time which the valve is open.

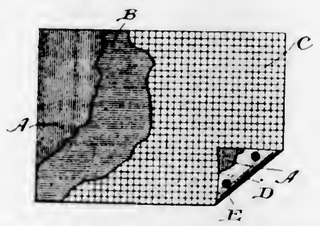
3. In a rotary engine, the combination with a cylindrical casing, a piston block rotatable in said casing to define therewith an annular chamber, a piston blade carried by the piston block and projecting across the chamber, a gate movable across the chamber, an inlet port for the chamber and a valve controlling said inlet port; of means for advancing and retracting the gate in the chamber and means urging said valve to closing position, a shaft operable by the piston block, a cam on said shaft, a member connected with the valve and engageable by the cam for opening the valve and means for varying the length of the operative face portion of the cam.

4. In a rotary engine, the combination with a cylindrical casing, a piston block rotatable in said casing to define therewith an annular chamber, a piston blade carried by the piston block and projecting across the chamber, a gate movable across the chamber, an inlet port for the chamber and a valve controlling said inlet port; of means for advancing and retracting the gate in the chamber and means urging said valve to closing position, a shaft operable by the piston block, a cam comprising a section fixed on the shaft and a section rotatively adjustable with respect to the first section, a face portion of the second section forming an extension of the face portion of the first sector and a member engageable by the said face portions of the cam sections for opening the valve.

5. In a rotary engine, the combination with a cylindrical casing, and a piston block rotatable in said casing to define therewith an annular chamber; said piston block being provided in its peripheral portion with a transverse slot open at its sides and periphery and further provided with an open longitudinal peripheral slot communicating with the first slot, a piston blade in the transverse slot projecting from the periphery of the block and a securing tongue on said blade projecting into the longitudinal slot.

[Claims 6 and 7 not printed in the Gazette.]

1,220,245. DRAFTING MATERIAL. CHARLES H. LITTLE, East Cleveland, Ohio. Filed Nov. 7, 1910. Serial No. 591,022. (Cl. 41—46.)



1. A sheet of drafting material comprising a translucent base sheet carrying a strongly adhering translucent layer of smooth-cutting material having a strongly adhering relatively opaque coating of smooth cutting material in which smooth lines may be cut by a stylus, the translucent layer affording substantial protection against the stylus cutting into the base sheet.

2. A sheet of drafting material comprising a translucent base sheet carrying a strongly adhering layer of translucent material having a relatively opaque hard coating, the layer and coating being of contrasting color and both being composed of smooth-cutting material in which smooth lines may be drawn by means of a stylus cutting through the coating, and partially into the layer.

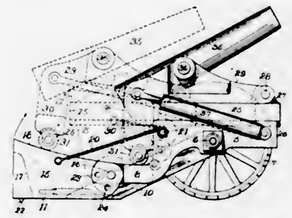
3. A sheet of drafting material comprising a translucent fibrous base sheet carrying a strongly adhering layer of firm, smooth-cutting translucent material having a strongly adhering relatively opaque coating of smooth cutting material, the layer and coating being adapted to give smooth lines when cut by a stylus and the layer being of such thickness that the stylus may cut through the coating, and into the layer without cutting through the latter.

4. A drafting material comprising a translucent base sheet carrying a strongly adhering medium in which smooth lines may be cut by a stylus and including an inner translucent smooth-cutting sheet protecting layer having a relatively opaque outer coating of dark colored smooth-cutting material, the layer being of such thickness that the stylus may cut through the coating and into the layer without cutting into the base sheet.

5. A sheet of drafting material comprising a flexible sheet of translucent fibrous material carrying a strongly adhering medium in which smooth lines may be cut by a stylus, said medium including a thin outer coating of relatively opaque smooth-cutting material, and a comparatively thick inner layer of translucent smooth-cutting material.

[Claims 6 to 8 not printed in the Gazette.]

1,220,246. CARRIAGE FOR HEAVY FIELD-ARTILLERY. HENRY F. LOOMIS, Reading, Pa. Filed Sept. 12, 1916. Serial No. 119,618. (Cl. 89—40.)



1. In heavy field artillery, a wheeled carriage comprising a platform and a trail-piece having a recoil-track extension, a frame member slidably mounted on said platform, and a cheek block member pivotally secured to the forward end of said sliding frame member and having its rear end resting on said recoil-track extension.

2. In heavy field artillery, a wheeled carriage comprising a platform and a trail-piece having a hinged recoil-track extension, a frame member slidably mounted on said platform, and a cheek block member pivotally secured to the forward end of said sliding frame member and having its rear end resting on said recoil-track extension.

3. In heavy field artillery, a wheeled carriage comprising a platform and a trail-piece having a hinged recoil-track extension, a frame member slidably mounted on said platform, a cheek block member pivotally secured to the forward end of said sliding frame member and having its rear end resting on said recoil-track extension, and means to elevate said hinged recoil-track extension.

4. In heavy field artillery, a wheeled carriage comprising a platform and a trail-piece having a hinged recoil-track extension, a frame member slidably mounted on said platform, a cheek-block member pivotally secured to the forward end of said sliding frame member and having its rear end resting on said recoil-track extension, and means to elevate said hinged recoil-track extension, and means to lock the latter in both raised and lowered positions.

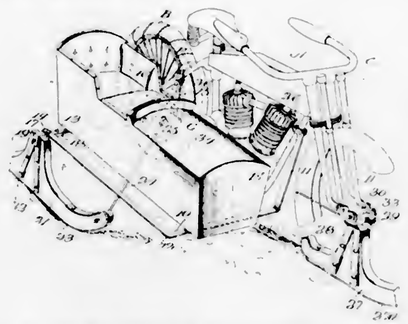
5. In heavy field artillery, a wheeled carriage comprising a fixed platform and a trail-piece having an upwardly inclined recoil track extension, a frame member slidably mounted on said platform, and a cheek-block member pivotally secured to the forward end of said sliding-frame member and having its rear end resting on said recoil-track extension.

[Claims 6 and 7 not printed in the Gazette.]

1,220,247. SNOW-TRAVELING ATTACHMENT FOR MOTOR-CYCLES. CLARENCE H. LYDAMORE and GEORGE J. BOLA, Lake Placid, N. Y. Filed Jan. 29, 1916. Serial No. 75,133. (Cl. 208—45.)

1. An outrigger frame for motorcycles comprising forward and rear laterally extending bars attachable at their inner ends to the frame of a motorcycle, a connecting bar, a runner pivotally mounted upon said connecting bar for vertical oscillation, and a brace attached to the forward

end of the runner and loosely connected to the inner end of the rear frame bar.



2. An outrigger frame for motorcycles comprising a forward bar having frame clamping means, said forward bar extending downwardly and laterally, a rear bar having clamps whereby it may be detachably connected to the rear portion of a motorcycle frame and extending downward and laterally, a longitudinally extending bar connecting said forward and rear bars, a runner pivotally supported upon the extremity of the rear bar for movement in a vertical plane, and a brace attached to the forward end of the runner and loosely connected to the lower end of the rear bar.

3. An outrigger frame for motorcycles having a front bar, the inner end of which is upwardly inclined and provided with a clamp, a rear bar angularly bent at its inner extremity and carrying a clamp, a connecting bar between the outer end of the first named bar and the outer end of the second named bar, the second named bar extending beyond said connecting bar and being downwardly bent at its extremity, an angle iron attached to said rear bar and extending downward parallel to the angular extremity, a runner disposed between the angle iron and the extremity and having upwardly extending braces, a pivot bolt passing through said braces, the angle iron and said extremity whereby to pivotally support the runner, and a brace connected to the end of the runner and loosely connected to the rear bar at its lower end.

1,220,248. PROCESS OF PRODUCING KETONIC COMPOUNDS. ARTHUR LÜTTRINGHAUS, Mannheim, and WILHELM KOCH, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Oct. 1, 1914. Serial No. 864,419. (Cl. 23—24.)

1. The process of producing a 4.4'-diamino-diaryl-ketonic body by heating a 4.4'-diamino-diaryl-methane body with a polysulfid.

2. The process of producing an N-substituted 4.4'-diamino-diaryl-thioketone by heating an N-substituted 4.4'-diamino-diaryl-methane with a polysulfid.

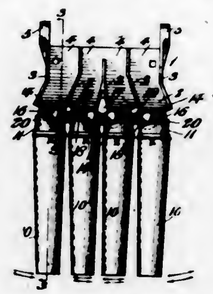
3. The process of producing tetra-methyl-4.4'-diamino-diphenyl-thioketone by heating a tetra-methyl-4.4'-diamino-diphenyl-methane with a polysulfid.

4. The process of producing 4.4'-diamino-3.3'-dimethyl-diphenyl-ketone by heating 4.4'-diamino-3.3'-dimethyl-diphenyl-methane with alkali polysulfid.

5. As a new body 4.4'-diamino-3.3'-dimethyl-diphenyl-ketone, which consists when pure of almost white crystals which are difficultly soluble in hot benzene and chloroform, more easily soluble in boiling alcohol and ethyl acetate, and which melt at about 201° to 210° C.

1,220,249. FERTILIZER-DISTRIBUTER. ALLEN MCWHORTER, Riverton, N. J. Filed Oct. 11, 1916. Serial No. 124,981. (Cl. 111—34.)

1. In a distributer of the character stated, a head connectible with the frame thereof, walls on a plate of said head forming with said plates vertical passages, discharge spouts in communication with the latter, bolts adapted to pivotally connect said spouts with said head, and a washer adapted to be fitted on said bolts, and extend from one bolt to the other and being thereby rendered nonrotatable.



2. In a distributer of the character stated, a head connectible with the frame thereof, walls on a plate of said head forming a vertical passage thereon, a tubular collar connected pivotally with said head and in communication with said passage, and a discharge spout attached to said collar and in communication therewith, said spout being adapted to be placed in perpendicular and laterally inclined directions.

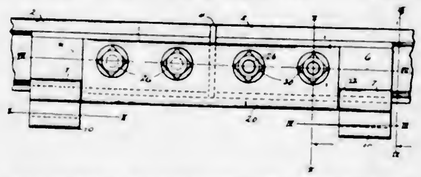
3. In a distributer of the character stated, a head connectible with the frame thereof, walls on a plate of said head forming a vertical passage thereon, a tubular collar in communication with said passage provided with an eye eccentric thereon, said eye being connected pivotally with said plate, and a discharge spout attached to said collar and in communication therewith.

4. In a distributer of the character stated, a head connectible with the frame thereof, walls on a plate of said head forming a vertical passage thereon, a tubular collar having a pivotal connection with the lower portion of said plate and depending therefrom, and a discharge spout attached to said collar and depending therefrom, said end of the plate having segmental and recessed edges to permit play of said collar on said portion in the lateral adjustment of the collar.

5. In a distributer of the character stated, a head connectible with the frame thereof, walls on a plate of said head forming a vertical passage thereon, a tubular collar having a pivotal connection with the lower portion of said plate and depending therefrom, and a discharge spout attached to said collar, said spout being adapted to move laterally on said portion of said plate and having its upper end extending above the lower edge of said plate.

[Claim 6 not printed in the Gazette.]

1,220,250. RAIL-JOINT. JAMES MADDEN, Turner, Kans. Filed Aug. 26, 1916. Serial No. 116,994. (Cl. 239—5.)



1. An insulated rail joint comprising insulated rail end portions, plate members carried by each of said end portions, means for securing said end portions together with said members embracing opposite faces thereof, and additional interengaging means acting upon relative longitudinal movement of said members to wedge the latter tightly against said opposite faces.

2. An insulated rail joint comprising insulating rail end portions, separate plate members carried by each of said end portions, means connecting said plate members and securing the same to the opposite faces of said end portions, and interengaging means carried by the plate members of each end portion and coöperating to hold said members in tight gripping engagement with said end portions.

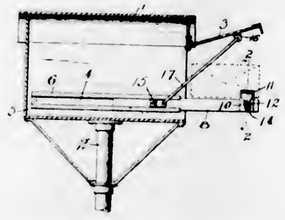
3. An insulated rail joint comprising insulated rail end portions, and separate plate members carried by each of said end portions and provided with interengaging means coacting upon relative longitudinal movement of said members to wedge the latter into tight clamping engagement with the opposite sides of said end portions.

4. An insulated rail joint comprising insulated rail end portions, separate plate members for securing said end portions together, said plate members being formed with extensions embracing the base of the corresponding rail and provided with cooperating wedge and wedge socket portions adapted to cause said plate members to grip the opposite sides of the corresponding end portion, and bolts for securing the parts in joint relation.

5. An insulated rail joint comprising insulated rail end portions, separate plate members carried by said end portions, connecting members for securing said end portions together, the plate members of each pair of said plate members being formed with extensions embracing the base of the corresponding rail and provided with cooperating wedge and socket portions adapted to cause said plate members to grip the opposite sides of the corresponding end portion, and bolts for securing the parts in joint relation.

[Claims 6 to 8 not printed in the Gazette.]

1,220,251. LETTER-HOLDER. CLAUDE F. MARTIN, Paxton, Ill. Filed June 1, 1916. Serial No. 101,129. (Cl. 232—33.)



1. An attachment for mail boxes having a hinged door for closing the same comprising a slide bar, a trackway to be secured to the inner wall of the body of the box to support the slide bar and permit movement of the same to extend from the box, means carried by said slide bar to hold mail matter, and a connection from said slide bar to the door arranged to impart extension movement to said slide bar as the door is opened.

2. An attachment for mail boxes comprising a trackway to be secured upon the inner wall of the body of said box, a slide bar mounted in said trackway, a letter holding clip carried by the outer end of said slide bar, a bracket to be connected with the door of the box, and a link connected between said bracket and the slide bar to impart movement to the slide bar as the door is opened and closed.

3. An attachment for use in connection with mail boxes having the door thereof hinged, comprising a trackway to be secured to the inner wall of the body of the box adjacent to the door and with one end opening in proximity to the opening to be closed by the door, a slide bar mounted in said trackway, a letter holding clip mounted on the outer end of said slide bar, a bearing bracket to be secured to the inner side of the door, a bearing bracket mounted on the slide bar, and a link connected between said bearing brackets to cause movement to be imparted to the slide bar as the door is opened and closed.

4. In combination with a mail box having a door hinged at one end thereof, a track way mounted on one of the inner side walls of the body of the box, a slide bar mounted in said track way to be capable of movement therein to extend from the box when the door is open, a letter holding clip mounted on the outer end of said slide bar to receive and hold mail matter, a bearing bracket secured on the inner side of the door, and a link connected between said bearing bracket and the slide bar to move the slide bar within the track way as the door is opened and closed.

1,220,252. DENTAL IMPLEMENT. AUSTIN MATTHEWS, Hardy, Nebr., assignor of one-half to Benjamin S. Baker, Omaha, Nebr. Filed Oct. 30, 1915. Serial No. 58,788. (Cl. 128—24.)

A dental implement of the type described, including a light-bulb holder, at one end, said holder having integral therewith, upon its exterior, a sleeve provided with a socket having an aperture substantially rectangular in cross-section, itself having a slot opening at its outer end, an arm conforming in cross-section to, and received by said aperture, one end portion of said arm being curved outwardly and extending through said slot, a second arm of angular outline and connected to the first-referred-to arm, the connection between said arms being effected by a set-screw for the adjustment and retention of said angular arm at a given inclination, said angular arm being provided with a mirror, said sleeve also being provided with a set-screw for the retention of the first referred-to arm in operative position and to allow of the required longitudinal movement of said arm, among other purposes, for positioning the mirror as a closure for said holder, the previous adjustment of the arm allowing of the positioning of the mirror thereon perpendicularly, preliminarily to the positioning of the mirror as a closure.

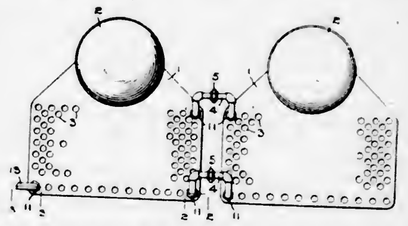
1,220,253. ENAMEL AND PROCESS OF MAKING THE SAME. MAX MAYER, Berlin-Tempelhof, and Béla Havas, Berlin-Schöneberg, Germany, assignors to Chemisch-Metallurgische Industrie Gesellschaft mit beschrankter Haftung, Berlin, Germany, a Corporation of Germany. Filed May 29, 1913. Serial No. 770,593. Cl. 106—36.2.)

1. That improvement in the art of producing an opaque white enamel, which consists in adding to the enameling material a mixture of a titanic oxid with zirconium oxid.

2. That improvement in the art of producing an opaque white enamel, which consists in adding to the enameling material a mixture of a titanic oxid with a suitable substance containing zirconium oxid.

3. An opaque white enamel comprising, as the medium for producing white opacity, a mixture of a titanic oxid with zirconium oxid.

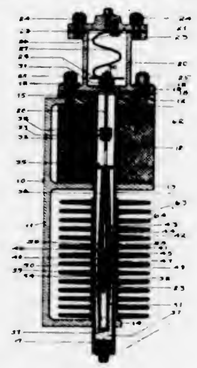
1,220,254. COUPLING. EDWARD C. MEIER, Phoenixville, Pa. Filed July 13, 1915. Serial No. 39,544. (Cl. 122—360.)



The combination with two water legs having holes in their outer plates, of couplings secured in the hand holes

of the water legs, said couplings having hollow extensions externally and internally screw-threaded, said extensions also having plates of larger area than the area of the holes and at their inner ends engaging the inner surfaces of said legs, nuts on said external threads outside of said water legs for clamping the outer plates of the water legs, and pipes connecting said water legs and having ends leading therein, said pipes having external screw-threads engaging the internal screw-threads in the couplings, said pipes forming communication between two water legs, substantially as described.

1,220,255. ELECTRICAL REGULATOR. FRANK WINTHROP MERRILL, Chicago, Ill. Filed Dec. 6, 1913. Serial No. 805,049. (Cl. 171—229.)



1. In apparatus of the character described, the combination with a receptacle, of a liquid electrical conductor contained therein, a relatively high resistance resistor substantially vertically movably mounted within the receptacle, a relatively low resistance shunt resistor electrically connected with the first named resistor and adapted to be vertically moved, and means to move said resistors.

2. In apparatus of the character described, the combination with a receptacle, of a liquid electrical conductor contained therein, a relatively high resistance resistor vertically movably mounted within the receptacle, a relatively low resistance shunt resistor electrically connected with the first named resistor and movable substantially vertically within the receptacle, and means to move the first named resistor.

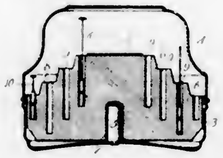
3. In apparatus of the character described, the combination with a receptacle, of a liquid electrical conductor contained therein, a relatively high resistance resistor vertically movably mounted within the receptacle, a relatively low resistance shunt resistor connected with the first named resistor and terminating at a point considerably spaced from the lower end thereof, and means to move the resistors.

4. In apparatus of the character described, the combination with a receptacle, of a liquid electrical conductor contained therein, a relatively high resistance resistor substantially vertically movably mounted within the receptacle to contact with the liquid electrical conductor, a relatively low resistance shunt resistor, connected with the first named resistor, extending longitudinally thereof, terminating at a point remote from the lower end of said first named resistor, and increasing in resistance toward its lower end, and means to move the resistors.

5. In apparatus of the character described, the combination with a receptacle, of a liquid electrical conductor contained therein, a relatively high resistance tubular resistor vertically movably mounted within the receptacle, a relatively low resistance tapered resistor mounted within the tubular resistor, decreasing in diameter downwardly, and terminating at a point remote from the lower end of the first named resistor, and means to move the resistors.

[Claims 6 to 23 not printed in the Gazette.]

1,220,256. BUR-BLOCK. FREDERICK W. MILLER, Indianapolis, Ind., assignor to Ransom & Randolph Co., Toledo, Ohio, a Corporation of Ohio. Original application filed May 23, 1913, Serial No. 769,359. Divided and this application filed Nov. 25, 1914. Serial No. 873,894. (Cl. 206—17.)

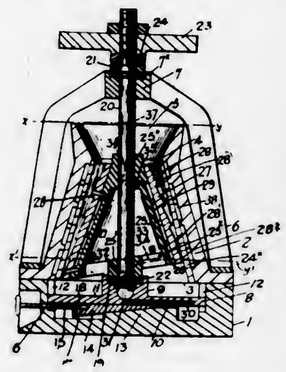


1. A packing and shipping case for elongated articles, comprising a circular block provided with a plurality of steps, openings in each of said steps arranged to receive the articles to be packed and shipped, and the substantially cone shaped cover arranged to be fitted over said block, and adapted to prevent the said articles from being displaced from their respective openings in the block when the cover is positioned over the block.

2. A packing and shipping case for burs and similar articles, comprising a circular block, a plurality of annular steps formed on said block, a plurality of vertical openings in each step, each adapted to have one of the articles loosely disposed therein, and a substantially cone shaped cover arranged to be fitted over said block, said cover being provided with annular steps arranged to prevent the several articles from being displaced from their respective openings when the cover is positioned over the block.

3. A shipping case for burs and similar elongated articles, comprising in combination a circular receptacle, a block rotatably disposed in said receptacle provided with a plurality of annular steps, a plurality of vertical openings in each step arranged to have one of the articles loosely disposed therein, and a substantially cone shaped cover provided with a plurality of annular steps adapted to prevent displacement of the several articles from their respective openings in the block when the cover is in position.

1,220,257. ORE-PULVERIZER. ALFRED MOLANDER, Minneapolis, Minn. Filed Mar. 13, 1916. Serial No. 83,942. (Cl. 83—10.)



1. An ore pulverizer comprising an outer inverted conical casing having an open upper and lower end, a vertical shaft journaled in suitable bearings and extending concentrically through the casing and a conical crushing member eccentrically secured to the shaft and having the face of the lower end inclined from one side of the member to the other so that its edge fits freely within the casing by extending parallel with the interior face of the wall of the casing and in close proximity thereto.

2. An ore pulverizer comprising an outer inverted conical casing having an open upper and lower end, a vertical shaft journaled in suitable bearings and extending concentrically through the casing, and a conical crushing member secured to the shaft and having its lower face inclined upwardly from the side of the crushing member having the smaller radius whereby a space is formed by the wall of the crushing member and the casing terminating at its lower end in an acute angle.

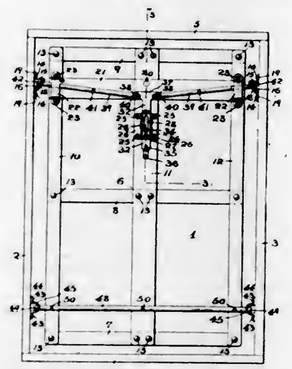
3. An ore pulverizer comprising an outer inverted conical casing having an open upper and lower end, a vertical shaft journaled in suitable bearings and extending concentrically through the casing and a conical crushing member eccentrically secured to the shaft and having the face of the lower end inclined from one side of the member to the other and fitting freely within the casing by extending parallel with the interior face of the wall of the casing, and means for automatically relieving the pressure on the conical member during the feeding out of the crushed material.

4. An ore pulverizer comprising an outer casing, a vertical shaft, an upper and lower bearing therefor, a crushing member mounted on said shaft, said member including a hollow crushing body portion, and radial arms supporting the base of said portion, and registering ducts in said lower bearing, shaft and arms whereby cooling fluid may be supplied to the interior of said body portion.

5. An ore pulverizer comprising an outer casing, a vertical shaft, an upper and lower bearing therefor, a crushing member mounted on said shaft, said member including a hollow crushing body portion, registering ducts in said lower bearing, shaft and arms whereby cooling fluid may be supplied to the interior of said body portion, and registering ducts in said upper bearing and shaft for conveying said fluid away.

[Claims 6 to 8 not printed in the Gazette.]

1,220,258. FOLLOWER FOR TRUNKS. THOMAS J. MOORE, Westfield, N. J., assignor to The R. Neumann Hardware Co., a Corporation of New Jersey. Filed Dec. 26, 1916. Serial No. 138,802. (Cl. 190—36.)



1. In combination with the tray or body of a trunk, supporting and bolt-receiving devices mounted within said tray or body, each supporting device comprising an outwardly extending portion provided with a plurality of pivot-receiving openings, and each bolt-receiving device comprising an outwardly extending portion provided with a plurality of lower open-ended receiving openings, a follower adapted to be received within said tray or body, supporting means mounted upon said follower adapted to pivotally engage said slotted supporting fixtures in said tray or body, and bolt-devices also mounted upon said follower adapted to be moved upwardly into said bolt-receiving openings for engagement with said slotted bolt-receiving fixtures in said tray or body.

2. In combination with the tray or body of a trunk, supporting and bolt-receiving devices, each device consisting of a slotted fixture mounted within said tray or body, a follower adapted to be received within said tray or body, supporting means mounted upon said follower adapted to pivotally engage said slotted supporting fixtures in said tray or body, a box-like element also mounted upon said follower, a bolt-actuating member movably disposed within said box-like element and having a portion projecting from said box-like element, and bolt-rods connected with said bolt-actuating member and also pivotally mounted upon said follower, said bolt-rods being adapted to engage the said slotted bolt-receiving fixtures in said tray or body.

3. In combination with the tray or body of a trunk, supporting and bolt-receiving devices, each device consisting of a slotted fixture mounted within said tray or body, a follower adapted to be received within said tray or body, supporting means mounted upon said follower adapted to pivotally engage said slotted supporting fixtures in said tray or body, a box-like element also mounted upon said follower, said box-like element being provided with open end-portions, and being formed also with an elongated opening and a stud-receiving perforation, a bolt-actuating member movably disposed within said box-like element, said bolt-actuating member having its respective end-portions projecting from the respective open ends of said box-like element, a finger-piece upon one of the projecting end-portions of said bolt-actuating member, a stud upon said bolt-actuating member adapted to engage said stud-receiving perforation, a spring secured to said bolt-actuating member, a rivet-post for securing said spring to said bolt-actuating member, said rivet-post having a portion extending into and movably arranged in the elongated opening of said box-like element, and bolt-rods connected with the other projecting end-portion of said bolt-actuating member, said bolt-rods being also pivotally mounted upon said follower and being adapted to engage the said slotted bolt-receiving fixtures in said tray or body.

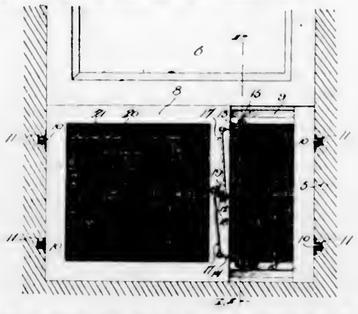
4. In combination with the tray or body of a trunk, a bolt-receiving device mounted within said tray or body, said bolt-receiving device comprising an outwardly extending portion provided with a plurality of lower open-ended receiving openings, a follower adapted to be received within said tray or body, a box-like element also mounted upon said follower, and a bolt-device movably connected with relation to said box-like element and adapted to be moved upwardly into said bolt-receiving openings of the bolt-receiving device within said tray or body.

5. In combination with the tray or body of a trunk, a bolt-receiving device mounted within said tray or body, said bolt-receiving device comprising an outwardly extending portion provided with a plurality of lower open-ended receiving openings, a follower adapted to be received within said tray or body, a box-like element also mounted upon said follower, and a bolt-device movably connected with relation to said box-like element and adapted to be moved upwardly into said bolt-receiving openings of the slotted fixture in said tray or body.

1,220,259. SCREEN-SASH-LOCKING MEANS. WILLIAM E. MOORE, Wausau Junction, and JOSEPH H. HULEHAN, Eland, Wis. Filed May 13, 1916. Serial No. 97,237. (Cl. 156—38.)

1. The combination with a window frame provided with sockets in its sides, of a screen member including a rigid frame and a mesh carried thereby, rigid lugs projecting from one side of the screen frame and engageable in the sockets of one side of the window frame, and

lugs movable relatively to that portion of the screen frame carrying the said rigid lugs and engageable in the sockets of the other side of the window frame.



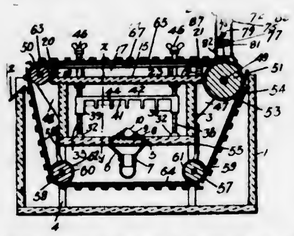
2. The combination with a window frame and a screen member comprising slidably connected rigid frame sections, of the sides of the window frame being provided with sockets, lugs at the outer sides of the screen frame sections engageable in said sockets, and means for locking the screen frame sections against sliding movement.

3. The combination with a window frame and a screen member comprising slidably connected rigid frame sections, of the sides of the wondow frame being provided with sockets, lugs at the outer sides of the screen frame section engageable in said sockets and means for locking the screen frame sections against sliding movement in varions relative positions of said frame sections.

4. The combination with a window frame and a screen member comprising slidably connected rigid frame sections, of the sides of the window frame being provided with sockets, lugs at the outer sides of the screen frame sections engageable in said sockets, one of the frame sections being provided with series of sockets in its top and bottom rails, pawl members pivoted to the adjacent side of the other frame section for selective engagement in the sockets, a bar intermediately pivoted to said adjacent side of the other frame section and links pivoted to the bar and to the pawls.

5. A screen comprising a pair of slidable sections, one of the sections being provided with series of sockets in its top and bottom rails, pawl members pivoted to the adjacent side of the other section for selective engagement in the sockets, a bar intermediately pivoted to said adjacent side of the other section and links pivoted to the bar and to the pawls.

1,220,260. SECTIONAL REINFORCING ELECTRO-PLATING-MACHINE. GEORGE OSMAN MORRISON and WILFRED THOMPSON, Toronto, Ontario, Canada. Filed June 2, 1916. Serial No. 101,337. (Cl. 204—5.)



1. In a sectional reinforcing electroplating machine, a tank designed to hold a suitable electrolyte, cathode and anode members co-acting therewith, means for passing a piece of silverware over the surface of the liquid with the portion to be reinforced in contact therewith, and means for circulating the liquid into contact with such portion.

2. In a sectional reinforcing electroplating machine, a tank designed to contain a suitable electrolyte, cathode and anode members co-acting therewith, means for carrying pieces of silverware over the surface of the liquid, and means for circulating the liquid so as to form ebullitions in contact with the portion of the piece of silverware to be reinforced.

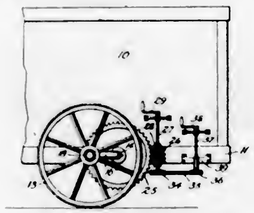
3. A sectional reinforcing electro-plating machine comprising an inner electrolytic tank having an inlet at the bottom, a cover therefor, a slotted outlet mouth formed in the cover, an outer tank, means for circulating the liquid from the outer tank into the bottom of the inner tank and upwardly through the slotted mouth to overflow and return into the outer tank, and means for conveying a piece of silverware longitudinally of the slotted mouth so that the portion to be reinforced is in contact with the overflowing liquid, an anode contacting with the electrolyte and a cathode member contacting with a piece of silverware.

4. A sectional reinforcing electro-plating machine comprising an inner electrolytic tank having an inlet at the bottom, a cover therefor, a slotted outlet mouth formed in the cover, an outer tank, means for circulating the liquid from the outer tank into the bottom of the inner tank and upwardly through the slotted mouth to overflow and return to the outer tank, and means for automatically conveying pieces of silverware successively over the slotted mouth with the portions to be reinforced in contact with the overflowing liquid.

5. A sectional reinforcing electro-plating machine comprising an inner electrolytic tank having an inlet at the bottom, a cover therefor, a slotted outlet mouth formed in the cover, an outer tank, means for circulating the liquid from the outer tank into the bottom of the inner tank and upwardly through the slotted mouth to overflow and return into the outer tank, means for diffusing the upward flow extending from the bottom orifice of the inner tank to the slotted mouth, and means for conveying a piece of silverware longitudinally of the slotted mouth so that the portion to be reinforced is in contact with the overflowing liquid, an anode electrically contacting with an electrolyte and a cathode member electrically contacting with a piece of silverware.

[Claims 6 to 19 not printed in the Gazette.]

1,220,261. LEVELING DEVICE. ANDREW MOSER, Hickman, Nebr. Filed Mar. 8, 1916. Serial No. 82,982. (Cl. 21—186.)



1. In a leveling device for a wheeled apparatus, a transverse axle formed in two independent sections, a crank on the outer end of each section for carrying a ground wheel, and means on the apparatus for independently rotating each axle section.

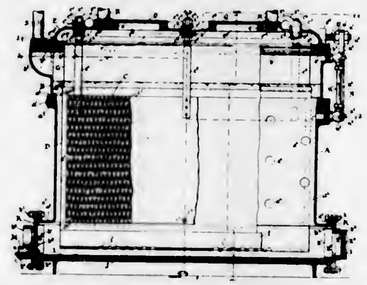
2. In a leveling device for a wheeled apparatus, a transverse axle formed of two alined and separate sections, a crank on the outer end of each section for carrying a ground wheel, self-locking gearing for independently rotating each axle section in either direction, and independent means for operating the gearing.

3. In a leveling device for a wheeled apparatus, a transverse axle formed of two alined and separate sections, a crank on the outer end of each section for carrying a ground wheel, worm gearing for independently rotating each axle section, and separate operating means on the apparatus for actuating the worm gearing.

4. In a leveling device for a wheeled apparatus, the combination with a transverse axle formed of two alined and separate sections each having a crank on its outer end for a ground wheel, a sleeve extending across the apparatus forming a bearing for the axle sections, means on the inner ends of said axle sections to hold the same against endwise movement, worm gearing for operating each axle section, and means on the apparatus for independently actuating said gearing.

5. In a leveling device for a wheeled apparatus, the combination with a transverse axle formed of two alined and separate sections each having a crank on its outer end for a ground wheel, and a collar on its inner end, a sleeve extending across the apparatus and fixed thereto to form a bearing for the axle sections, an enlargement on the sleeve for containing the collars on the adjacent ends of the axle sections and holding said sections from endwise movement, a worm gear wheel on each axle section, a worm in engagement with each worm gear, and means for operating each worm gearing to independently rotate the axle section connected thereto.

1,220,262. WATER-ELECTROLYZING APPARATUS. RUDOLPH JACOB JOHANNES MUELLER and ERROLL GODDARD ROWLANDS, Sheboygan, Wis., assignors to Universal Oxygen Company, a Corporation of Wisconsin. Filed Jan. 2, 1914, Serial No. 809,816. Renewed Jan. 17, 1917. Serial No. 142,961. (Cl. 204—5.)



1. In a water electrolyzing cell the combination of a tank member which constitutes one electrode of the cell, a neutral member mounted on and insulated from the tank member, a cover member mounted on and insulated from the neutral member, an electrode plate suspended from and electrically connected with the cover member and depending through an opening in the neutral member into the tank member, and a diaphragm suspended from said neutral member around said electrode plate and extending below the same.

2. In a water electrolyzing cell, the combination of a tank member which acts as one electrode, a neutral member which forms an extension on the upper part of the tank member and is insulated therefrom, and a cover member mounted on said neutral member and closing the top of the cell and insulated from said neutral member, said cover member forming the other electrode of the cell.

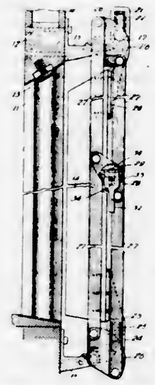
3. In a water electrolyzing cell, the combination of a tank member which acts as one electrode, a neutral member which forms an extension on the upper part of the tank member and is insulated therefrom, a cover member mounted on said neutral member and closing the top of the cell and insulated from said neutral member, said cover member forming the other electrode of the cell, and an electrode plate suspended from and electrically connected with said cover member and in position to act conjointly with the walls of said tank member as electrolytic surfaces.

4. In a water electrolyzing cell, the combination of a tank member which acts as one electrode, a neutral member which forms an extension on the upper part of the tank member and is insulated therefrom, a cover member mounted on said neutral member and closing the top of the cell and insulated from said neutral member, said cover member forming the other electrode of the cell, an electrode plate suspended from and electrically connected with said cover member and in position to act conjointly with the walls of said tank member as electrolytic surfaces, and a diaphragm suspended from said neutral member and disposed between said electrolytic surfaces of said plate and tank member.

5. In a water electrolyzing cell, the combination of a tank member which acts as one electrode, a neutral member which forms an extension on the upper part of the tank member and is insulated therefrom, a cover member mounted on said neutral member and closing the top of the cell and insulated from said neutral member, said cover member forming the other electrode of the cell, an electrode plate suspended from and electrically connected with said cover member and in position to act conjointly with the walls of said tank member as electrolytic surfaces, and a diaphragm suspended from said neutral member and surrounding said electrode plate.

[Claims 6 to 23 not printed in the Gazette.]

1,220,263. REFRIGERATOR-DOOR AND OPERATING MECHANISM THEREFOR. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 18, 1915. Serial No. 15,341. (Cl. 20—24.)



1. The combination with a member having a door opening therein and a door adapted to close said opening, of a track pivotally mounted about an axis parallel with and spaced from the face of said member, said track being upwardly oscillatable from points to one side of a vertical plane passing through its axis to the opposite side of said plane.

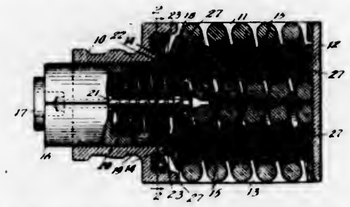
2. The combination with a member having a door opening therein and a door arranged to close said opening, of a combined opening and closing shaft and supporting track, said combined shaft and track being pivotally mounted about an axis parallel with and spaced from the face of said member, said track-shaft being swingable from its highest position downwardly and inwardly to a position between the face of said member and a vertical plane passing through said axis, whereby the weight of the door automatically assists in moving it to closed position and retains it there.

3. The combination with a member having a door opening therein and a door adapted to close said opening, of upper and lower pivotally mounted combined operating shafts and tracks, and mechanism for oscillating said track-shafts simultaneously, said mechanism including bell cranks secured to the ends of said track-shafts, parallel links connecting said bell cranks, an operating handle, and ratchet devices between said handle and links.

4. The combination with a member having a door opening therein and a door adapted to close said opening, of parallel upper and lower combined track and operating shafts for said door, and mechanism for oscillating said

track-shafts, said mechanism including bell cranks rigidly secured to the ends of said shafts, parallel links pivotally connected to the bell cranks, a plate pivotally connected to the links intermediate their ends and having a ratchet wheel thereon, and an operating handle having a pawl engageable with said ratchet and adapted to rotate it and thereby shift the links and bell cranks.

1,220,264. DRAFT-GEAR. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 12, 1915. Serial No. 39,279. (Cl. 213—64.)



1. In a device of the character described, the combination with a spring container, a follower, a spring within said container, of means facilitating the asembling of the spring and follower, said means including a removable member adapted to be inserted between said follower and a portion of said container after the spring and follower have been inserted, said member being movable in unison with the follower.

2. In a device of the character described, the combination with a spring cage open at its sides and through which a spring is adapted to be inserted, a spring, and a follower, said cage having follower shoulders, of a removable key adapted to be attached to said follower to move in unison therewith and inserted therebetween and said shoulder after the follower and spring have been placed within the cage.

3. A friction draft gear for railway cars comprising, a friction shell having an integral spring cage, friction members coöperating with said shell, twin arranged springs within said cage, a follower at the forward ends of said springs, said follower having an annular forwardly extended shoulder provided with perforations therethrough, and angular shaped keys adapted to have portions thereof inserted through said perforations and to thereby space the follower from the adjacent portion of the spring cage.

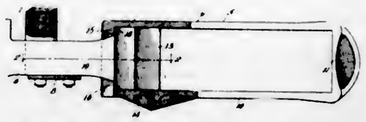
4. A friction draft gear for railway cars comprising, a friction shell having an integral spring cage, friction elements coöperating with said shell, springs within said cage, a follower at the forward ends of said springs, said follower having a forwardly extended shoulder adapted to slide within said shell, and detachable keys attached to said follower and having portions thereof located between said follower and adjacent portions of the spring cage when the parts are in normal position, to thereby provide an initial compression on the springs, said keys being movable in unison with the follower.

5. A friction gear for railway cars, comprising, a friction shell, a spring cage rigid with respect to said shell, friction elements coöperable with the shell, a spring within the cage, a follower at the forward end of said spring, means for normally spacing said follower from the adjacent portions of the shell and cage, said means including members having a flat flange interposed between said follower and said portions, said flat flanges providing wide bearings.

1,220,265. RAILROAD-CAR DRAFT-RIGGING. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 31, 1916. Serial No. 112,245. (Cl. 213—42.)

1. In a draft rigging for railway cars in combination, a draft yoke having a hollow head to receive a draw-bar, a draw-bar to enter said head and a carry iron, the carry iron supporting the draw-bar within the yoke head.

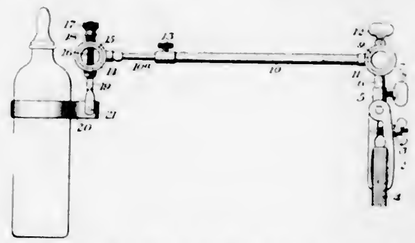
2. In a draft rigging for railway cars in combination, a draft yoke, a draw-bar and a carry iron, the draft yoke having a hollow head opening from below, said head being provided with inturned vertical shoulders, the draw-bar having lateral vertical shoulders to engage the shoulders of the yoke, the carry iron holding the draw-bar against downward displacement through the lower opening in the yoke head.



3. In a draft rigging for railway cars in combination, a draft yoke and a draw-bar, the draft yoke having a hollow head with a lower opening to receive the draw-bar, the yoke having shoulders, the draw-bar having interengaging shoulders therefor, the said draw-bar being provided with means, mounted independently of the yoke, to prevent downward displacement of the draw-bar in reference to the yoke.

4. In a draft rigging for railway cars in combination, a draft yoke, a draw-bar, and a carry iron, the draft yoke having a hollow head provided with lateral inturned shoulders and an upper inturned shoulder, the draw-bar having lateral vertical shoulders and an upper transverse shoulder to engage the shoulders of the yoke, the head having an opening underneath for the passage of the draw-bar in assembling and disassembling the draw-bar and yoke, the carry iron being mounted closely adjacent the rear of the draw-bar shank to hold the draw-bar within the yoke head.

1,220,266. NURSING-BOTTLE HOLDER. CARROL H. OTT, Johnstown, Pa. Filed Apr. 1, 1916. Serial No. 88,233. (Cl. 248—20.)

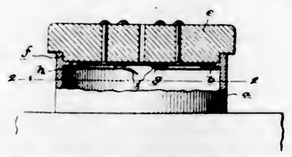


1. A device of the character described, comprising an extension rod having oscillating joints at each end thereof, a clamp connected to one joint, each of said joints comprising a ring having a peripheral slot therein and a ring rotatable therein, a screw passing through both of said ring members for securing the joint in position, and a bottle holder connected to the joint opposite the clamp, substantially as described.

2. A device of the character described, comprising an extension rod, means for connecting one end of the rod to a supporting member, a joint on the other end of the rod having two ring members, one within the other, the outer ring member having a peripheral slot, a clamping screw extending through both ring members and arranged to secure one ring in its adjusted position with relation to the other ring, and a bottle holder connected to the end of said screw, substantially as described.

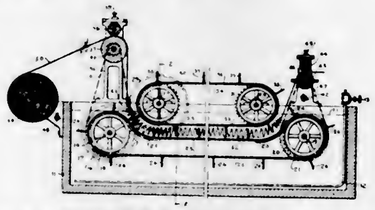
3. A device of the character described, comprising a two-part extension rod the members of which are rotatably and telescopically engaged with each other, an oscillating joint at the outer end of one of the extension rod members, a clamp rotatably connected to said joint, an oscillating joint at the outer end of the other extension rod member, a supporting device attached to the movable member of said joint, an adjusting device intermediate said clamp and joint and a bottle holder pivotally connected to the said supporting device, substantially as described.

1,220,267. CLOSURE DEVICE FOR TANKS, &c. CHARLES STUART PARK, Savannah, Ga., assignor of one-half to Merritt W. Dixon, Jr., Savannah, Ga. Filed July 28, 1916. Serial No. 111,866. (Cl. 220—124.)



In a closure device, the combination with a neck having an internal rigid flange formed with a gap at one side of said neck, the opposing radial edges of the flange adjacent said gap being beveled downwardly and upwardly to form inlet and outlet edges respectively, of a cover having secured to its underside a metal disk consisting of a body-portion and an annular outwardly projecting clamp-flange, said disk being split radially through a portion of said body-portion and said flange at one point thereof, and formed with a slot on the line of connection between said flange and body-portion to provide a pair of resilient fingers spaced from said body-portion and projecting toward each other and curved downwardly and upwardly to engage said inlet and outlet edges respectively, to guide said cover to closed and open positions.

1,220,268. APPARATUS FOR CLEANING FABRICS. JEROME PAYET, Clifton, N. J. Filed June 17, 1916. Serial No. 104,320. (Cl. 8—19.)



1. In an apparatus for cleaning fabric, the combination with a tank; of a pair of moving aprons therein provided with projections rigidly secured thereto and adapted to engage with a fabric placed between said aprons, and automatic means adapted to feed fabric between said aprons at a rate more rapid than the movement of said aprons.

2. In an apparatus for cleaning fabric, the combination with a tank; of a pair of moving aprons therein provided with projections rigidly secured thereto and adapted to engage with a fabric placed between said aprons, automatic means adapted to feed fabric between said aprons at a rate more rapid than the movement of said aprons, and automatic means adapted to remove fabric from between said aprons at a rate more rapid than the movement of said aprons.

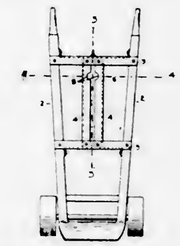
3. In an apparatus for cleaning fabric, the combination with a tank provided with shafts mounted therein, and means adapted to drive the same; of gear wheels mounted on each shaft, a pulley mounted on each shaft intermediate its ends, a moving apron passing around said shafts, said moving apron comprising a sprocket chain adapted to engage with said gear wheels, cross-pieces extending laterally from said sprocket chain, and a belt secured to said cross-pieces and adapted to pass around said pulley; and means adapted to feed fabric upon said apron at a rate more rapid than the movement of said apron.

4. In an apparatus for cleaning fabric, the combination with a tank provided with rotating devices mounted therein, and means adapted to drive the same; of a pair of moving aprons passing around said rotating devices and provided with projections rigidly secured to said aprons and adapted to engage with a fabric passed between said aprons, the upper reach of one of said aprons being permitted to sag, and automatic means adapted to feed fabric between said aprons at a rate more rapid than the movement of said aprons.

5. In an apparatus for cleaning fabric, the combination with a tank provided with rotating devices mounted therein, and means adapted to drive the same; of a pair of moving aprons passing around said rotating devices, the upper reach of one of said aprons being permitted to sag, guides adapted when said apron is in place on said rotating members to cause said sag to occupy the portion of said reach near its ends, and to hold the central portion of said reach approximately horizontal, and means adapted to feed fabric between said aprons at a rate more rapid than the movement of said aprons.

[Claim 6 not printed in the Gazette.]

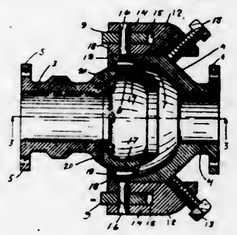
1,220,269. WAREHOUSE-TRUCK. ALEX PETERSON, San Francisco, Cal. Filed July 5, 1916. Serial No. 107,562. (Cl. 21—65.)



1. A truck having two parallel bars extending longitudinally from a point near the upper end of the truck to a point below the center of the truck and forming therebetween a slot, and a chain extending between the bars and having a hook at one end, the width of the slot being less than that of each link of the chain.

2. A truck having two parallel longitudinally extending bars, and a chain extending between the bars and having a hook at one end, the distance between the bars being less than the width of a link of the chain and the space between the bars being enlarged at a point thereon to permit the chain to pass therethrough.

1,220,270. FLEXIBLE PIPE-JOINT. JOHN HENRY PHILLIPS, Jr., Jackson, Mich., assignor to Phillips Metallic Hose Co., Jackson, Mich. Filed Jan. 4, 1915. Serial No. 386. (Cl. 137—34.)



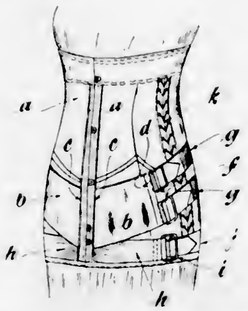
1. In a pipe coupling, the combination of a male and female member, said male member having a nipple removably secured thereto and an external annular groove at its inner end, said female member having an internal annular groove at its inner end, an annular joint member

of flexible material U-shaped in cross section arranged within said female member with the edge of its outer arm in the said internal annular groove thereof, the inner arm of said joint member being arranged upon the nipple of said male member with its edge in the said external annular groove thereof, means for securing said nipple to said male member whereby the edge of the said joint member is clamped in said groove thereof, and a universal joint connection for said members whereby the male member is supported to swing within said female member, one of the joint members constituting a means for clamping the edge of said joint member in said internal groove of said female member.

2. In a pipe coupling, the combination of a male and a female member, said male member having a nipple removably secured thereto and an external annular groove at its inner end, said female member having an internal annular groove at its inner end, an annular joint member of flexible material U-shaped in cross section arranged within said female member with the edge of its outer arm in the said internal annular groove thereof, the inner arm of said joint member being arranged upon the nipple of said male member with its edge in the said external annular groove thereof, means for securing said nipple to said male member whereby the edge of the said joint member is clamped in said groove thereof, a universal joint connection for said members whereby the male member is supported to swing within said female member, and means for clamping the edge of said joint member in said internal groove of said female member.

3. In a pipe coupling, the combination of a male and a female member, said male member having a nipple removably secured thereto and an external annular groove at its inner end, an annular joint member of flexible material U-shaped in cross section arranged within said female member with its outer arm secured thereto, the inner arm of said joint member being arranged upon the nipple of said male member with its edge in the said external annular groove thereof, means for securing said nipple to said male member whereby the edge of the said joint member is clamped in said groove thereof, and a universal joint connection for said members whereby the male member is supported to swing within said female member.

1,220,271. CORSET. WILLIAM ISIDOR PITCAN, Manchester, England. Filed Oct. 6, 1916. Serial No. 124,112. (Cl. 2—73.)



Corsets for compressing or supporting the abdomen comprising in combination two corset sections, means for connecting said sections at the back and front, a comparatively short broad band of elastic material secured to the busk or front edge of each corset half at a point slightly above the lower end of the busk and inclined upwardly toward the waist line, fastening means at the free corners of said bands, two inelastic straps secured to the back part of each corset half and inclined downwardly at an angle corresponding to and in line with the edges of the beforementioned broad band, one of the free ends of said straps being adjustably secured to one of the ends of the broad bands, a second elastic band secured to the busk or front edge of each corset section at a point near the lower edge of the same, and arranged to lie substantially parallel with said lower edge together with a complemental strap, one end of which is secured to the back part of the corset while the other end is adjustably secured to the before-mentioned band, said strap also being arranged to lie along the lower edge of the corset, and forming a continuation of the band and supplementary lacing means in each half section, substantially as described.

1,220,272. PRESSURE-GAGE. ALBERT E. POLLOCK, Chicago, Ill., assignor to Firex Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 2, 1916. Serial No. 123,215. (Cl. 73—111.)



1. In a tire gage, the combination of a barrel, a cap at the upper end of said barrel, the lower end of the barrel having an opening for the inlet of air to be measured, a piston within the barrel, a compression spring between said piston and cap, a tube extending downwardly from said cap into the barrel and receiving the upper end of the spring, a tubular indicating member within the barrel adapted to be shifted upwardly by the piston to move between the barrel and said tube, said barrel having a longitudinal slot and scale indications adjacent thereto, and an indicating arm or point extending from said indicating member into said slot to coöperate with said scale.

2. In a tire gage, the combination of a tubular barrel having an air inlet opening at its lower end, a detachable cap at the upper end of said barrel, a piston slidable within the barrel, a spring interposed between the piston and the cap, a tubular indicating member slidable in said barrel, said barrel having a slot extending downwardly from the upper end thereof and a scale on the barrel adjacent said slot, a tubular indicator slidable in said barrel with said piston, and an indicating arm projecting from said indicating member through said slot to coöperate with said scale to indicate pressure, said indicating member being removable from the top of the barrel when said cap is removed.

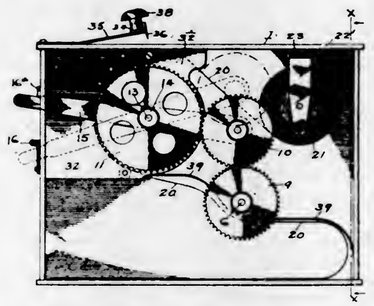
3. In a tire gage, the combination of a tubular barrel having an air inlet at its lower end, a cap at the upper end of said barrel, a piston within the barrel, a compression spring interposed between the piston and said cap, a tubular extension in the barrel from said cap receiving the upper part of the spring, a tubular indicating member receiving the lower part of the spring and shifted by the piston between the barrel and said tubular extension when the piston is shifted upwardly by air pressure, said barrel having a longitudinal slot and a scale adjacent thereto, and an indicating arm extending from said indicating member through the slot to coöperate with the scale to indicate pressure.

4. In a tire gage, the combination of a tubular barrel having an air inlet at its lower end, a cap at the upper end of said barrel, a piston within the barrel, a compression spring interposed between the piston and said cap, a tubular extension in the barrel from said cap receiving the upper part of the spring, a tubular indicating member receiving the lower part of the spring and shifted by the piston between the barrel and said tubular extension when the piston is shifted upwardly by air pressure, said barrel having a longitudinal slot and a scale adjacent thereto, an indicating arm extending from said indicating member through the slot to coöperate with the scale to indicate pressure, and an abutment at the upper end of said tubular extension for limiting the upward movement of said indicating member.

5. In a tire gage, the combination of a tubular barrel closed at its upper end and having an air inlet at its lower end, a piston reciprocable within the barrel, a spring interposed between said piston and the upper end of the barrel, a tubular indicating member within the barrel to be engaged by and shifted upwardly with the piston, said barrel having a longitudinal slot and scale markings thereon with which said indicator coöperates to indicate pressure, and a spring tongue causing frictional engagement between the indicating member and barrel to hold the indicating member in its shifted position independently of said piston.

[Claims 6 to 8 not printed in the Gazette.]

1,220,273. TIME-COST METER. JOHN T. QUIGLEY, San Francisco, Cal., assignor, by mesne assignments, to Costmeter Company, Boston, Mass., a corporation of Massachusetts. Filed April 6, 1909. Serial No. 488,162. (Cl. 234—49.)



1. In a time-cost meter, the combination of a casing with an aperture therein, a tape carrier for moving a tape under said aperture, provided with impaling points, rollers set at varying distances from the carrier having grooves in line with the impaling points, means for actuating the carrier and means for perforating a transverse line in the tape.

2. In combination, a tape carrier provided with impaling points projecting from its face to engage the tape rollers set at progressively shorter distances from the carrier for gradually impaling the tape upon said points, and means for actuating the carrier.

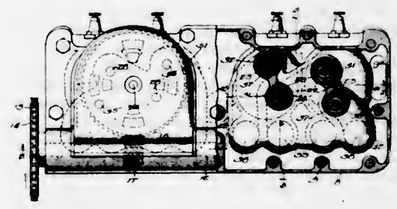
3. In a system for producing comparable records of time cost of different operations under different rates, the combination of a plurality of measuring machines each comprising a casing having a length determining member, clockwork mechanism for automatically feeding a tape relative to its length determining member, the rate of feed in each case being proportioned to elapsing time and the characteristic rate of time cost for the operation being performed, and mechanical means associated with the machine for marking a length of tape with the length determining element.

4. In a system for producing comparable records of time cost of different operations under different rates, the combination of a plurality of impression surfaces, a length determining element for each, means for automatically feeding said impression surfaces each relative to its respective length determining element, the rate of feed in each case being proportional to elapsing time and the characteristic rate of time cost for the operation being performed, and means for applying the length determining element to the impression surface.

5. In a recording machine the combination with a casing and time controlled recording means for feeding a record sheet comprising a feeding and measuring member having an accurately dimensioned feeding surface against which the sheet is adapted to press into close fitting relation, and a plurality of impaling points projecting from its surface and adapted to penetrate a previously imperforate portion of the record sheet.

[Claims 6 to 14 not printed in Gazette.]

1,220,274. VALVE-GEARING FOR INTERNAL-COMBUSTION ENGINES. GEORGE W. RICHARDSON and GEORGE H. HIGGINS, Chicago, Ill. Filed Mar. 15, 1916. Serial No. 84,378. (Cl. 123—52.)



1. In a valve gearing, the combination of two inlet valves arranged 180 degrees apart and equidistant from a given center, two exhaust valves arranged 180 degrees apart and equidistant from said given center, with the inlet valves a different distance from said center than the exhaust valves, a rotative member, means for rotating said member, a series of cams on said member, said cams lying in two circular paths of travel, the cams in one path acting to operate the inlet valves, and the cams in the other path acting to operate the exhaust valves, the cams for operating the exhaust valves having a larger area of high part than the cams for operating the inlet valves, and each cam for operating the exhaust valves being arranged in radial alinement with a cam for operating the inlet valves, substantially as described.

2. In a valve gearing, the combination of a plurality of cylinders arranged in alinement, an inlet valve on each cylinder, an outlet valve on each cylinder, with the inlet valves of adjacent cylinders arranged 180 degrees apart and equidistant from a point intermediate said cylinders, the exhaust valves on adjacent cylinders being arranged 180 degree apart and equidistant from said point intermediate said cylinders, with said inlet valves arranged on one circle of travel and the exhaust valves on another circle of travel, and said exhaust valves being out of radial alinement with said inlet valves as respects said point intermediate the cylinders, a member mounted to rotate about a center located at said point intermediate the cylinders, a series of cams on said member, and said cams lying in two circular paths of travel, the cams in one path acting to operate the inlet valves, and the cams in the other path acting to operate the exhaust valves, a shaft arranged above the cylinders and parallel to a line connecting the centers of said cylinders, and a connection between said shaft and rotating member to rotate the latter, substantially as described.

3. In a valve gearing, the combination of a plurality of cylinders arranged in alinement, an inlet valve on each cylinder, an outlet valve on each cylinder, with the inlet valves of adjacent cylinders arranged 180 degrees apart and equidistant from a point intermediate said cylinders, the exhaust valves on adjacent cylinders being arranged 180 degrees apart and equidistant from said point intermediate said cylinders, with said inlet valves arranged on one circle of travel and the exhaust valves on another circle of travel, and said exhaust valves being out of radial alinement with said inlet valves as respects said point intermediate the cylinders, a member mounted to rotate about a center

located at said point intermediate the cylinders, a series of cams on said member, and said cams lying in two circular paths of travel, the cams in one path acting to operate the inlet valves, and the cams in the other path acting to operate the exhaust valves, a shaft arranged above the cylinders and parallel to a line connecting the centers of said cylinders, a connection between said shaft and rotating member to rotate the latter, exhaust manifold openings and inlet manifold openings all arranged on the same side of the engine, passages from said exhaust valves to the exhaust manifold openings, and means establishing communication between the inlet valves and the inlet manifold openings, substantially as described.

4. In a valve gearing, the combination of a plurality of cylinders arranged in alinement, an inlet valve on each cylinder, an outlet valve on each cylinder, the inlet valves of adjacent cylinders being arranged an equidistance from a point intermediate said cylinders, the outlet valves on adjacent cylinders being also arranged an equidistance from said point intermediate said cylinders, with said inlet valves arranged on one circle of travel and the exhaust valves on another circle of travel, and said exhaust valves being out of radial alinement with said inlet valves as respects said point intermediate said cylinders, a member mounted to rotate about a center located at said point intermediate the cylinders, a series of cams on said member, said cams lying in two circular paths of travel, the cams in one path acting to operate the inlet valves, and the cams in the other path acting to operate the exhaust valves, a shaft arranged above the cylinders and parallel to a line connecting the centers thereof, and a connection between said shaft and rotating member to rotate the latter, substantially as described.

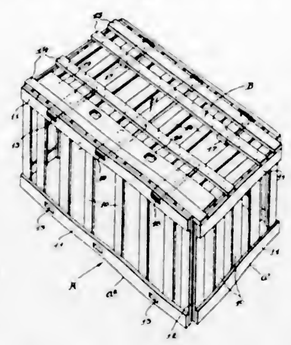
5. In a valve gearing, the combination of a plurality of cylinders arranged in alinement, an inlet valve on each cylinder, an outlet valve on each cylinder, the inlet valves of adjacent cylinders being arranged an equidistance from a point intermediate said cylinders, the outlet valves on adjacent cylinders being also arranged an equidistance from said point intermediate said cylinders, with said inlet valves arranged on one circle of travel and the exhaust valves on another circle of travel, and said exhaust valves being out of radial alinement with said inlet valves as respects said point intermediate said cylinders, a member mounted to rotate about a center located at said point intermediate the cylinders, a series of cams on said member, said cams lying in two circular paths of travel, the cams in one path acting to operate the inlet valves, and the cams in the other path acting to operate the exhaust valves, a shaft arranged above the cylinders and parallel to a line connecting the centers thereof, a connection between said shaft and rotating member to rotate the latter, and the cams for actuating the exhaust valves having a larger area of high part than the cams for actuating the inlet valves, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,220,275. COLLAPSIBLE CRATE. JOSEPH JAMES ROBEJSEK, St. Paul, Minn. Filed Mar. 27, 1916. Serial No. 86,942. (Cl. 217—48.)

1. In a shipping crate, a collapsible body, consisting of ends and sides hinged together end-to-end, identical heads to close the body, said ends, sides and heads each comprising a plurality of slats united at their ends by cleats, the cleats on said sides being formed with uniformly spaced sets of openings therein, a plurality of studs on each head arranged to fit said openings, latch bolts on each head alined with said studs and adapted to be inserted into openings opposite those in which their companion studs are placed and means to secure said bolts in said openings.

2. In a shipping crate, a collapsible body, consisting of ends and sides hinged together end-to-end, identical heads to close and brace the body against folding movement, said ends, sides and heads each comprising a plurality of slats united at their ends by cleats, the cleats on said sides being formed with uniformly shaped and spaced sets of openings therein, a plurality of studs on each head arranged to fit said openings, latch bolts on each head



alined with said studs and adapted to be inserted into openings opposite those in which their companion studs are placed and means to secure said bolts in said openings.

3. In a shipping crate, a collapsible body, consisting of ends and sides hinged together end-to-end, identical heads to close the body, said ends, sides and heads each comprising a plurality of slats united at their ends by cleats, the cleats on said sides being formed with similar sets of openings therein, a plurality of studs on each head arranged to fit said openings, latch bolts on each head alined with said studs and adapted to be inserted into openings opposite those in which their companion studs are placed, means for shifting said latch bolts and means to secure said bolts in said openings.

4. In a shipping crate, a collapsible body, consisting of side and end sections hinged together end-to-end, identical heads for said body arranged to fit within said side and end sections and adapted to brace the same against racking movements, each head having a latch bar slidable thereon, latch bolts on said bar designed to coöperate with the side sections to secure said head upon said body and a resilient catch to lock said bolts.

5. In a shipping crate, a collapsible body, consisting of side and end sections hinged together end-to-end, identical heads for said body arranged to fit within said side and end sections and adapted to brace the same against racking movements, each head having studs secured at one side thereof and latch bolts upon the other side, a slide bar to which said bolts are secured and a resilient catch to lock said bolts, said studs and bolts being adapted to engage said side sections and secure the heads with respect to the body of the crate.

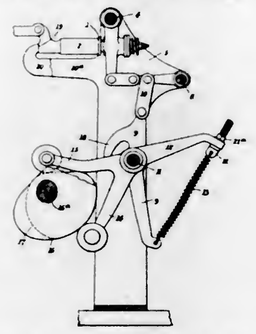
[Claim 6 not printed in the Gazette.]

1,220,276. APPARATUS FOR MAKING PAPER BAGS OR LIKE RECEPTACLES. WILLIAM ROSE, Gainsborough, England. Filed June 30, 1916. Serial No. 106,950. (Cl. 93—8.)

1. In apparatus for making receptacles such as paper bags, the combination of a presser, an abutment taking the thrust of the presser, a rock-arm carrying the presser, an actuating lever positively moved in opposite directions, a connecting lever having a toggle-like connection with the said rock-arm, a spring connecting said lever with the said actuating lever for moving the presser toward the abutment, and means for imparting positive movement from the actuating lever to the rock-arm, through the connecting lever and toggle-like arrangement, for moving the said presser away from the said abutment.

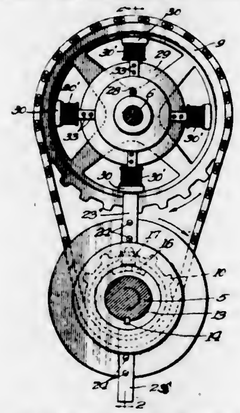
2. In apparatus for making receptacles such as paper bags, a presser, a carrier arm therefor in which the said presser is slidably mounted, an adjustable positioning presser stop carried by the said arm, and spring means for locking the said presser in its adjusted position against the said stop.

3. In apparatus for making receptacles such as paper bags, the combination of a presser, an abutment taking the thrust of the presser, a rock-arm carrying the presser, means for adjusting the presser in the said rock-arm and a spring lock for securing the presser in its adjusted position, together with an actuating lever positively moved in opposite directions, a connecting lever connected



by a toggle-like arrangement with the said rock-arm, a spring operatively interposed between the said actuating lever and connecting lever for moving the presser toward the abutment, and means for imparting positive movement from the actuating lever to the rock-arm, through the connecting lever and toggle-like arrangement, for moving said presser away from the said abutment.

1,220,277. CURRENT-GENERATOR AND SPARK-DISTRIBUTER. DAVID E. ROSS, La Fayette, Ind. Filed Jan. 25, 1916. Serial No. 74,233. (Cl. 123—149.)



1. In a device of the character described, for use with an internal combustion engine, the combination with a rotatable permanent magnet inductor; of a rotatable armature; connecting means for rotating the said armature and inductor synchronously with each other and in harmony with piston movement of an engine, so that proximate coincident current inducing parts move in an opposite direction and means for rotatively displacing said parts to change the time of coincidence thereof.

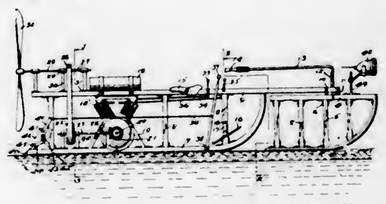
2. In a device of the character described, for use with an internal combustion engine, the combination of a rotatable permanent magnet inductor; a rotatable armature; driving means, for rotating said armature and inductor synchronously with each other and in harmony with piston movement of an engine, so that proximate coincident current generating parts move in opposite directions, and means for rotatably displacing said parts with reference to said piston movement to change time of coincidence thereof, whereby to vary the time of the current impulse.

3. In a device of the character described, for use with an internal combustion engine, the combination of a plurality of rotatable permanent magnet inductors: a series of separate and independent rotatable armatures; driving means for rotating said armatures and inductors synchronously with each other and so that proximate coincident current generating pairs of inductors and armatures move in opposite directions, and means for rotatably displacing said respective pairs to change time of coincidence thereof with respect to the driving means, to vary the time of the current impulses.

4. In a device of the character described, for use with an internal combustion engine, the combination of a rotatable inductor element, comprising a hub having a pair of radially disposed permanent magnets attached thereto, one limb thereof on each side of the hub; a rotatable armature element, comprising a hub having a pair of radially disposed electromagnets attached thereto, one limb on each side of the hub, a given armature arranged to pass through the field of a given magnet as they approach and recede from each other; rotatable driving connections between said inductor element and said armature element for synchronously driving them in opposite directions, when the armature is within the magnetic field of said inductor, and means for rotatably and relatively displacing said inductor element and said armature element to cause coincidence of operation to occur at an earlier or later period, with reference to the driving means.

5. In a device of the character described, for use with an internal combustion engine, the combination with an engine shaft to be driven at engine speed; a countershaft; means for driving the latter in two to one relation with said engine shaft; an inductor element, having half the number of inductors as there are cylinders contained in an engine with which the device is to be used, mounted on one shaft; an armature element, having as many armatures as there are cylinders in an engine with which the device is to be used, mounted on the other shaft, each armature adapted to pass a given inductor once during each revolution of the armature element; collecting rings mounted on the shaft carrying the armature element, one for each armature; brushes bearing on said rings for connection with the respective spark plugs of an engine with which the device is to be used; and means for relatively, rotatably displacing said elements, to cause generation of current impulses at earlier or later periods with reference to the cyclic operation of the pistons of said engine.

1,220,278. MOTOR-SLED. GEORGE SCHNURR, Farmington, Wash. Filed July 22, 1915. Serial No. 41,377. (Cl. 21—47.)



1. A motor sled comprising a runner, a frame comprising uprights supported on the runners, a bar extending longitudinally on the runner and secured at the upper ends of the uprights, a motor supported by the frame and disposed between said bar and runner, an air propelling blade rotatably mounted at the rear of the sled, means between the motor and the blade for transmitting motion to the latter, the forward end of said bar being extended beyond the runner, a second runner pivotally connected to the extended end of the bar and arranged in alinement with the

second runner, and steering handles extending rearwardly from said second runner.

2. A motor sled comprising a runner, a frame comprising uprights supported on the runner, a bar extending longitudinally on the runner and secured at the upper ends of the uprights, a motor supported by the frame and disposed between said bar and runner, an air propelling blade rotatably mounted at the rear of the sled, means between the motor and the blade for transmitting motion to the latter, the forward end of said bar being extended beyond the runner, a second runner pivotally connected to the extended end of the bar and arranged in alinement with the second runner, a seat disposed upon said bar and over said first mentioned runner, a foot rest on opposite sides of the frame and secured thereto adjacent said seat, and steering handles extending from the first runner rearwardly to a point adjacent said seat.

3. A motor sled comprising a runner, a frame supported by the runner and including uprights and a bar extended longitudinally of the runner and secured to said uprights, the forward end of the bar being extended beyond the runner, a motor supported on the frame between said runner and said bar, a shaft rotatably mounted on the frame, an air propelling wheel mounted on the shaft, a fly wheel mounted on the frame and having an inoperative connection with the motor, means between said fly wheel and said shaft for transmitting motion to the latter, a seat mounted on the frame, a foot rest disposed on each side of the frame and secured thereto at a point near the seat, a second runner arranged in front of the first mentioned runner and in alinement therewith, a frame supported by the second runner and rotatable with the extended end of said bar, and steering handles extended from the runner rearwardly to a point adjacent the seat.

1,220,279. HOTBED SPRINKLER SYSTEM. EARL SEXTON, Hartford, Conn. Filed Jan. 17, 1916. Serial No. 72,457. (Cl. 137—66.)



1. The combination of a hot bed, a pipe extending longitudinally of the hot bed and provided with nozzles at predetermined points thereonlong, and means for automatically preventing the issue of liquid from the nozzles when the pressure in the pipe passes below a certain point.

2. The combination of a hot bed, a pipe extending along the hot bed and provided with a plurality of spaced nozzles and also with a valve, and means for automatically preventing the issue of water from the nozzles when the valve is operated to shut off the supply of liquid to the pipe.

3. The combination of a hot bed comprising an inclosure, and a pipe extending into the inclosure and longitudinally thereof, said pipe being provided with a series of nozzles at different points in the length thereof within the inclosure and provided with a valve outside the inclosure, and means for automatically preventing the issue of liquid from the nozzles when the valve is operated to shut off the supply of water to the pipe.

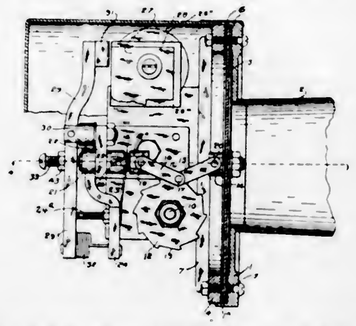
4. A hot bed sprinkler system comprising a nozzle provided with an outlet and also provided with a valve between the inlet and the outlet, spring means tending constantly to close the valve, and means for non-yieldingly closing the valve against its seat.

5. A hot bed sprinkler system comprising a nozzle having an outlet, a valve at the inlet of the nozzle, a stem extending into the nozzle and provided with a crosspiece, a spring bearing against the valve and the crosspiece, said stem having an extension within the spring and the stem being movable to carry the extension against the valve to hold the same non-yieldingly against its seat.

[Claims 6 to 10 not printed in the Gazette.]

1,220,280. AUDIBLE SIGNALING DEVICE. JOHN R. SIMPSON, Troy, Ohio. Filed Apr. 8, 1914. Serial No. 830,496. (Cl. 177—7.)

1. In an audible signaling apparatus, a diaphragm, an operating device immovable in the direction of said dia-



phragm, connecting devices connected with said diaphragm and operatively associated with said operating device, and controllable means dependent upon the operation of said apparatus for varying the throw of said connecting devices.

2. In an audible signaling apparatus, a diaphragm, an operating device, a movable connection connected with said diaphragm and operatively associated with said operating device, an abutment for said connection to limit the movement thereof in one direction, and controllable means dependent upon the operation of said apparatus for adjusting said abutment.

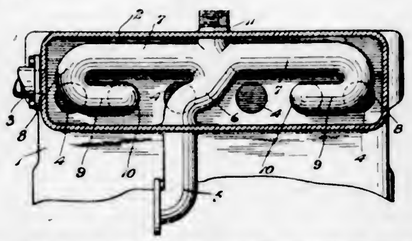
3. In an audible signaling apparatus, a diaphragm, an operating device, a toggle joint connected with said diaphragm and operatively associated with said operating device, an abutment to limit the movement of said joint in one direction, and means for adjusting said abutment to vary the throw of said toggle.

4. In an audible signaling apparatus, a diaphragm, a rotatable cam wheel, a toggle joint having one end connected to said diaphragm and operatively associated with said cam wheel, an abutment for the opposite end of said toggle joint, and means for adjusting said abutment.

5. In an audible signaling apparatus, a diaphragm, a rotatable cam wheel, a toggle joint having one end thereof pivotally connected with said diaphragm, a plunger pivotally connected to the opposite end of said toggle joint, a bearing for said plunger, and an adjustable abutment for said plunger.

[Claims 6 to 36 not printed in the Gazette.]

1,220,281. COMBINATION INTAKE-MANIFOLD AND HEATING-CASING. IRENE M. SMITH, Sparta, Mich. Filed May 29, 1916. Serial No. 98,769. (Cl. 257—241.)



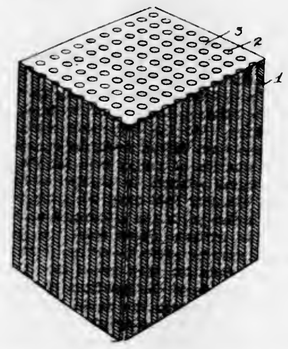
1. In combination with an internal combustion engine, an intake manifold including a depending tubular section to which a carbureter is adapted to be attached, said section adjacent its upper end being bent laterally and then forked to provide oppositely extending horizontal arms each of which at its outer end is bent back upon itself for a distance and then turned inwardly communicating with the cylinders of the engine, a hollow casing secured to the engine and inclosing the upper part of the manifold, said casing on its side adjacent the engine having openings communicating with the exhaust ports of the engine, one of the openings lying under said laterally bent section, and other of said openings lying under the bent back ends of the manifold, and an outlet pipe leading from the casing.

2. In combination with an internal combustion engine, an intake manifold including a depending tubular section, arms extending from the upper end of said section in opposite directions, said arms at their ends being bent back underneath and extended toward each other and then turned inwardly, communicating with the cylinders of the engine, and a hollow casing inclosing the upper part of the manifold, said casing on its side adjacent the engine having openings through which the exhaust gases from the engine may enter part of said openings being disposed directly under parts of the manifold, and an outlet to the casing.

3. In combination with an internal combustion engine, an intake manifold including a vertical tubular section, arms extending in opposite directions from the upper end of said section, said arms being bent back at their outer ends for a distance and then turned inwardly to communicate with the engine cylinders, a hollow casing connected to the engine and inclosing said arms, and provided with openings through which exhaust gases of the engine enter the casing, and an outlet pipe leading from the casing.

4. In combination with an internal combustion engine a hollow casing secured to the engine and having openings therethrough for communication with the exhaust ports of the engine, one of said openings being located adjacent each end of the casing, and intermediate openings between said end opening, a depending tubular member passing through the lower wall of the casing and over one of the intermediate openings being bent laterally over said opening to form a curved section against which fuel entering through the member strikes, said section being directly heated by exhaust gases as they come through the opening, branches extending laterally to each side of the upper end of the tubular member to a point closely adjacent the ends of the casing, each of said branches at its end being curved downwardly and then back under the branch, passing over an end opening at the curved portion and thence leading inwardly to the cylinders of the engine, substantially as described.

1,220,282. ERASER. JESSE CONRAD SMITH, Kansas City, Mo. Filed Aug. 2, 1915. Serial No. 43,166. (Cl. 120—36.)



1. An abrasive article comprising glass strands embedded in a relatively soft binder.

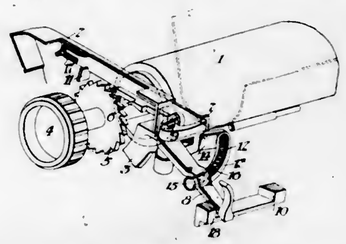
2. An abrasive article comprising glass strands embedded in a tenacious and relatively soft binder.

3. An abrasive article comprising glass strands embedded in a binder material of a nature to readily disintegrate under rubbing contact with another body.

4. An abrasive article comprising a body of vulcanized oil or rubber substitute and glass strands embedded in said body and lying in parallel relation, with the ends of the strands exposed at the ends of the embedding body.

5. An abrasive article comprising a binder of flexible and easily wearable material and glass strands embedded within the material and having their ends exposed at the end of the embedding body.

1,220,283. TYPE-WRITING MACHINE. JACOB SOKOLOV, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 24, 1914. Serial No. 814,024. (Cl. 197—114.)



1. The combination with a shiftable platen frame, of a carriage in which said platen frame is mounted, a lever on said carriage, an arm also pivoted on said carriage, a yielding connection between said lever and said arm, a line-spacing mechanism mounted upon said shiftable frame to be operated by said arm in either of the shift positions of said platen frame, said arm being mounted concentrically with said lever, and a stop on said lever to hold said arm out of position to interfere with the shifting of the line-spacing mechanism.

2. The combination with a line-spacing pawl, of an arm to drive the same, a lever or handle pivoted concentrically with the arm, a compressible spring between said arm and said lever to drive the one by the other, means to limit the stroke of said lever, means to limit the stroke of said arm relatively to said lever and thereby hold said arm out of operative relation to said pawl while the lever is in its initial position, and a curved housing for said spring arranged between said arm and said lever.

3. The combination with a line-spacing pawl, of an arm to drive the same, a lever or handle pivoted concentrically with the arm, a compressible spring between said arm and said lever to drive the one by the other, means to limit the stroke of said lever, means to limit the stroke of said arm relatively to said lever and thereby hold said arm out of operative relation to said pawl while the lever is in its initial position, a curved slotted housing for said spring arranged between said arm and said lever, and a pin extending into the slot to engage the spring and complete the connection between the arm and the lever.

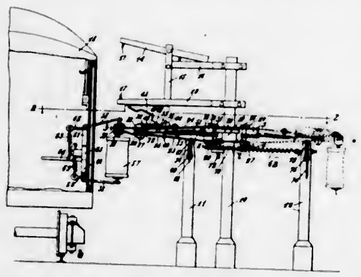
4. In a typewriter, the combination with a carriage and a platen carried thereon, of a line-space mechanism for rotating the platen, a manually operable lever therefor pivoted on said carriage, said lever also serving to return said carriage after a line of writing, a pivoted arm extending transversely to said lever, a curved tube attached thereto, a spring contained in said tube between the lever and arm and energized by said lever while returning said carriage, to operate the line-space mechanism through said pivoted arm, said spring being held by said tube perpendicular to the lever and arm respectively at its points of engagement therewith, and a stop

controlled by said lever to hold the said arm free from the line-space mechanism while the lever is in its initial position.

5. In a typewriter, the combination with a carriage, a shiftable frame thereon, and a platen mounted in said frame, of a line-space mechanism for rotating the platen, a manually operable line-spacing lever pivoted on said carriage, said lever also serving to return said carriage after a line of writing, an arm pivoted on said carriage, a guide carried by said arm, a spring positioned and guided by said guide, means on said lever having a running connection with said guide and operable to compress said spring, and thereby cause the spring to actuate the line-space mechanism, and means on said lever to limit the throw of said arm relatively to the lever by said spring and thereby hold the arm free from the line-space mechanism while the lever is in its initial or normal position of rest, to prevent binding between said arm and the line-space mechanism on the shiftable platen frame.

[Claims 6 to 9 not printed in the Gazette.]

1,220,284. MAIL-CATCHER. JOHN A. STAKE, Knowles, Wis. Filed Sept. 18, 1916. Serial No. 120,797. (Cl. 258—22.)



1. A mail handling device including a station device comprising a standard, a catching crane rotatably mounted upon said standard, and having upper and lower leaves and having its free end portion provided with stationary jaws, a movable jaw including a drum rotatably mounted between the upper and lower leaves and having arms extending therefrom, an actuating drum rotatably mounted between the inner end portions of said leaves and provided with a hub having a finger extending therefrom, a cam carried by said standard and engaged by said finger for rotating the actuating drum as the crane swings upon the standard, means for transmitting rotary movement from said actuating drum to the drum of the movable jaw.

2. A mail handling apparatus including a station device comprising a standard, a crane rotatably mounted upon said standard and provided with a stationary jaw at its outer end, a movable jaw pivotally connected with said crane in operative relation to the stationary jaw, actuating means for the movable jaw rotatably connected with said crane and having operative connection with the movable jaw, and means for actuating the operating means from said standard as the crane swings upon the standard.

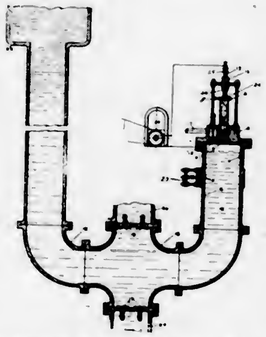
3. A mail handling device including a station device comprising a standard, a crane rotatably mounted upon said standard and provided with a stationary jaw, a movable jaw carried by said crane in operative relation to the stationary jaw thereof, and actuating means for the movable jaw carried by said crane and having operative connection with the standard whereby the actuating means will be moved to actuate the movable jaw as the crane swings about said standard.

4. A mail handling apparatus including a station device comprising a standard, a crane rotatably mounted upon said standard, and having a stationary jaw, a movable jaw connected with said crane, actuating means for the movable jaw carried by said crane, means extending from said standard for engaging the operating means to move the same as the crane swings about the standard, a latch for releasably holding the movable jaw in a closed position and including an actuating lever, and resilient means connecting said actuating lever with the operating means of the movable jaw, whereby said resilient means will be placed under tension when the operating means moves to close said movable jaw.

5. A mail handling apparatus including a station device comprising a standard, a crane rotatably mounted upon said standard and provided with a stationary jaw, a movable jaw carried by said crane, a cam carried by said standard, operating means for said movable jaw including a drum rotatably connected with the crane and provided with a finger having operative engagement with said cam, a latch slidably mounted and engaged by a spring, a lever pivotally connected with the crane and compressing the spring when the lever is moved to an operative position, and a spring connecting said latch lever with the drum of the operating means whereby the last mentioned spring will be placed under tension as the crane swings about said standard and the drum rotates to move the movable jaw to a closed position.

[Claims 6 to 10 not printed in the Gazette.]

1,220,285. INTERNAL-COMBUSTION MOTOR. ABRAM P. STECKEL, Buffalo, N. Y. Filed June 21, 1913. Serial No. 775,017. (Cl. 160—1.)



1. The combination of a play pipe for the reciprocation of a liquid column adapted to acquire useful momentum, an expansion chamber connected with the play pipe having inlet and outlet ports and a movable partition adapted to separate the exhaust gases from the fresh incoming gases until the exhaust gases are driven from the expansion chamber.

2. The combination of a play pipe for the reciprocation of a liquid column adapted to acquire useful momentum, an expansion chamber connected with the play pipe having inlet and outlet ports and a movable partition adapted to separate the exhaust gases from the fresh charge while it is being drawn into the expansion chamber and until the exhaust gases are driven from the expansion chamber.

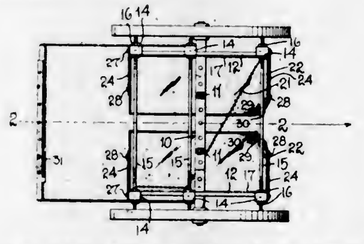
3. The combination of a play pipe for the reciprocation of a liquid column adapted to acquire useful momentum, an expansion chamber connected with the play pipe having inlet and outlet ports and a movable partition adapted to separate the exhaust gases from the fresh incoming gases until the exhaust gases are driven from the expansion chamber, and means for then permitting the fresh gases to pass from one side of the partition to the other and to assume a position between the liquid and the partition.

4. The combination of a play pipe for the reciprocation of a liquid column adapted to acquire useful momentum, an expansion chamber connected with the play pipe having inlet and outlet ports and a movable partition adapted to separate the exhaust gases from the fresh incoming gases until the exhaust gases are driven from the expansion chamber, and means for then permitting the fresh gases to pass from one side of the partition to the other and to assume a position between the liquid and the partition before the expansion takes place.

5. The combination of a play pipe for the reciprocation of a liquid column adapted to acquire useful momentum, an expansion chamber connected with the play pipe having inlet and outlet ports and a pressure controlled movable diaphragm for drawing the fresh charge into the expansion chamber and adapted to act as a partition for separating the fresh charge from the exhaust gases while the latter are being driven from the expansion chamber.

[Claims 6 to 12 not printed in the Gazette.]

1,220,286. INSECT-CATCHER. DAVID DUDLEY STEPHENS, Louisville, Ala. Filed July 29, 1916. Serial No. 112,081. (Cl. 43—1.)



1. In an insect catcher of the character described, a supporting frame, oppositely disposed downwardly depending members forming part of the supporting frame and oppositely disposed parallel laterally spaced pans hinged at their outer walls to said depending members for movement into a horizontal plane or into angular relation to a horizontal plane, or into a position parallel to and resting against the depending members, and means for supporting the pans in their adjusted positions.

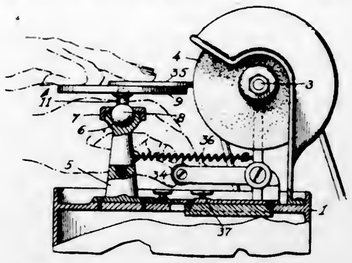
2. An insect catching device including an arched axle, longitudinally extending beams mounted upon the axle, standards rigidly mounted upon said beams, the standards of one beam being operatively connected to the standards of the opposite beam, a pair of trapping pans hingedly connected to the lower ends of said standards and laterally spaced from each other, means for supporting said trapping pans in a horizontal position or at an angle to the horizontal plane but permitting independent movement of the trapping pans, means for supporting the trapping pans in a raised position, and plant shaking devices adjustably supported upon the standards and depending over the pans.

3. In an insect catcher of the character described, an axle formed of laterally adjustable sections, supporting wheels mounted upon the axle and laterally adjustable with the sections, supporting members depending from the axle, and trapping pans each hingedly supported on the lower ends of the depending members for vertical movement in a vertical plane independent of the supporting members.

1,220,287. LENS-SLOTTING MACHINE. HARRY H. STULL and HAROLD K. PARSONS, Southbridge, Mass. Filed Dec. 18, 1915. Serial No. 67,575. (Cl. 51—11.)

1. In a device of the character described, the combination with a lens supporting table, of a depending post carried thereby, a sleeve slidably mounted on the post, arms pivoted on the sleeve and movable therewith, means for drawing the outer ends of the arms together, and pins projecting upwardly from the ends of the arms, the table being provided with arcuate slots adapted to receive the pins and allow their upper ends to project above the table when the sleeve is moved upwardly on its post.

2. In a lens slotter, the combination with a stationary but adjustable lens supporting table of a cutting disk for slotting the edge of the lens while on the table, means for automatically shifting the disk in the direction of the table to form the slot in the edge of the lens, and adjustable means for limiting the movement of the disk and thus the depth of the slot formed in the lens.



3. In a device of the character described, the combination with a base, of a support rising therefrom, a lens table adjustably mounted on the support, a standard pivoted to the support and bearing a cutting disk at its upper end, automatic means for swinging the standard toward the support to bring the disk into operative engagement with a lens on the table, an adjustable stop for limiting the approach of the disk toward the table, and manually operable means for controlling the movement of the disk irrespective of the automatic control therefor.

1,220,288. FABRIC AND HOSE MAKING MACHINE. LAWRENCE A. SUBERS, East Cleveland, Ohio. Filed Feb. 21, 1914. Serial No. 820,131. (Cl. 154—6.)



1. In a machine for constructing a tubular fabric upon a longitudinally moving mandrel, the combination with the mandrel of a chamber containing non-adhesive material through which said mandrel passes to coat the same, and an annular chamber containing an adhesive material through which said mandrel passes, thereby receiving first a coating of said non-adhesive material and subsequently receiving a tube of adhesive material, and means for controlling the thickness of the tube of adhesive material, supplied by said second named chamber.

2. In a machine for constructing a tubular fabric upon a moving mandrel, the combination with the mandrel, of a series of radially adjustable supporting rollers therefor, a series of pressure rollers, engaging the mandrel upon opposite sides, means for rotating said rollers at a common rate of speed to propel the mandrel, a series of standards in the line of the mandrel, a tube secured in each standard through which said mandrel passes, a reel rotatably mounted upon each end of each tube, means for rotating the reels on each tube in opposite directions around said mandrel, a series of spools for fabric bands on each reel, pressure devices for equalizing the tension upon the fabric bands on each spool, and guiding rollers over which the fabric bands pass from the spools to the mandrel.

3. In a machine for constructing a tubular fabric upon a moving mandrel, the combination with the mandrel, of means for alining and supporting the mandrel, propelling means for the mandrel, a series of standards spaced in line with the mandrel, a tubular bearing member secured to each standard, and through which said mandrel passes, a reel rotatably mounted upon each end of said tubular bearing member, means for rotating the reels on each tubular bearing member in opposite directions, guiding rolls and adjustable supports therefor on said reels, means for operating the propelling means for the mandrel, and means

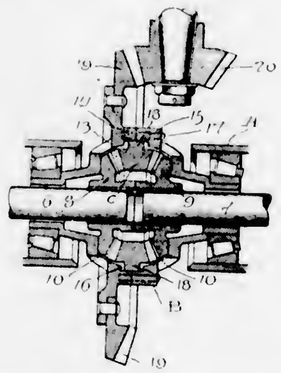
for rotating the said reels and a common operating means therefor, said mandrel propelling and reel rotating means permitting adjustment of the speed of the mandrel relative to that of the reels, and of the reels on the several bearing members relatively to each other.

4. In a machine for constructing a tubular fabric upon a moving mandrel from fabric bands coated with adhesive material, the combination with the mandrel, means for propelling the same, a series of standards spaced apart in the line of the mandrel, tubular bearing members secured to said standards and projecting upon each side thereof, a reel detachably secured upon each projecting end of each tubular bearing member, upon which said adhesive bands alternating with the bands of non-adhesive material are wound, a series of spools rotatably mounted upon each reel, adjoining spools upon which the bands of non-adhesive material are wound from the first mentioned spools, means for driving the second mentioned spools from the first mentioned spools, rollers for guiding the fabric bands to the mandrel, radially and circumferentially adjustable supports for said guide rollers, and rotatable means for adjusting the angular position of the innost guide rollers relative to the axis of the mandrel.

5. In a machine for constructing a tubular fabric upon a moving mandrel, the combination with the mandrel, of means for propelling the same at a predetermined rate of speed, means for applying a tube of adhesive material to the mandrel as it progresses through the machine, and devices rotating alternately in opposite directions for winding spaced spiral rows of fabric bands progressively upon the tube on said mandrel, the first band being laid in spaced spirals, the next laid at the reverse angle thereon, and the following bands being so laid as to coincide with and overlap the spaces between the previously laid rows, and means for operating said rotating devices at a predetermined rate of speed relative to the speed of propulsion of the mandrel.

[Claims 6 to 15 not printed in the Gazette.

1,220,289. DIFFERENTIAL MECHANISM. CLARENCE W. TAYLOR, Chicago, Ill., assignor to Onlake Company, Chicago, Ill., a Corporation of Illinois. Filed May 5, 1916. Serial No. 95,545. (Cl. 74—7.)



1. A device of the class described, comprising a divided shaft, co-axially disposed driven members fixed to the adjacent ends of the divided shaft, power imparting means having a plurality of grooves in one wall thereof, a single driving member having peripheral studs disposed between the driven members and normally in engagement with both of them and slidably connected with the power imparting means to permit lateral bodily movement of the driving member relative to the power imparting means.

2. A device of the class described, comprising a pair of co-axially disposed driven members, having an annular space between them, a single driving member disposed concentric with the driven members, in said annular space, power imparting means having a plurality of grooves in one wall thereof, the single driving member having clutch teeth on both sides for power transmitting engagement with the driven members, said single driving member being slidably connected with the power imparting means to permit lateral bodily movement of the driving member relative to the power imparting means, and a shaft secured to each of said driven members.

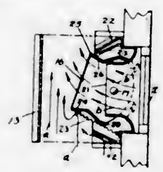
3. A device of the class described, comprising a pair of co-axially disposed driven members, having an annular space between them, a single driving member disposed concentric with the driven members, in said annular space, power imparting means having a plurality of grooves in one wall thereof, the single driving member having clutch teeth on both sides for power transmitting engagement with the driven members and peripheral studs having their free ends disposed for travel in the grooves of the power imparting means to permit lateral bodily movement of the driving member, and a shaft secured to each of said driven members.

4. A device of the class described, comprising a pair of co-axially disposed driven members, having an annular space between them, a single driving member disposed concentric with the driven members, in said annular space, power imparting means having a plurality of grooves in one wall thereof, the single driving member having a plurality of series of clutch teeth on both sides for power transmitting engagement with the driven members and peripheral studs having their free ends disposed for travel in the grooves in the power imparting means to permit lateral bodily movement of the driving member relative to the power imparting means, and a shaft secured to each of said driven members.

5. A device of the class described, comprising a pair of co-axially disposed driven members, having an annular space between them, a single driving member disposed concentric with the driven members, in said annular space, power imparting means having a plurality of grooves in one wall thereof, the single driving member having a plurality of series of clutch teeth on both sides and peripheral studs having their free ends disposed for travel in said grooves to permit lateral movement of the driving member relative to the power imparting means, each driven member having an annular series of clutch teeth on one side normally in mesh with the clutch teeth of the driving member, and a shaft secured to each of said driven members.

[Claims 6 and 7 not printed in the Gazette.]

1,220,290. VENTILATOR FOR CARS AND THE LIKE. FREDERICK B. TOWNSEND, Hinsdale, Ill., assignor to William H. Miner, Chazy, N. Y. Filed May 10, 1915. Serial No. 26,974. (Cl. 98—22.)



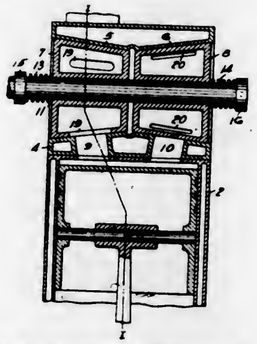
1. In a ventilator for cars and the like, the combination with a hood through which air is adapted to pass when the car is in motion and having a passage way communicating with the interior of the car, of a pivotally mounted deflector within said hood adapted to be actuated by currents of air when the car is in motion, said deflector surrounding the exit end of said passage way communicating with the interior of the car.

2. In a ventilator for cars and the like, the combination with a hood adapted to be secured to the roof of the car, said hood being provided with an opening extending lengthwise therethrough, a passageway adapted to communicate with the interior of the car and said opening through the hood, and a pivotally mounted, hollow deflector surrounding the outer end of said passageway and through which air is also adapted to pass from the interior of the car.

3. In a ventilator for cars and the like, the combination with a hood having an opening extending lengthwise therethrough and through which a current of air is adapted to be created when the car is in motion, said hood being provided with an air passageway extending substantially at right angles to said opening and adapted to communicate with the interior of the car, and a hollow deflector having portions thereof surrounding the outer end of said passageway, said deflector being pivotally mounted and adapted to swing in either direction, dependent upon the direction and motion of the car.

4. In a device of the character described, the combination with a hood having a passageway extending longitudinally therethrough and a second passageway communicating with the first passageway and at right angles thereto, a pivotally mounted and spring controlled deflector surrounding the outer end of said second named passageway and through which air is adapted to be conducted from the interior of the car into the first named passageway, and relatively fixed inclined partitions at opposite ends of said hood, whereby a current of air passing through the first named passageway is adapted to engage and actuate said deflector from normal position to thereby cause an outwardly induced draft of air from the car.

1,220,291. ENGINE-VALVE. PHILLIP O. TROUTMAN, Sharon, Pa. Filed Aug. 17, 1916. Serial No. 115,361. (Cl. 123—59.)



1. An engine, comprising a plurality of cylinders, there being a plurality of tapered valve seats above each of said cylinders, a tapered valve in each seat, ports through said valves arranged to communicate with inlet and exhaust ports communicating with their respective cylinders, for admitting fluid pressure to each cylinder and for opening the exhaust therefrom, a through shaft extending through all of said valves on which the valves are adapted to move longitudinally but are arranged to be rotated thereby, springs surrounding said shaft and engaging the valves for retaining the valves against their seat, and means for rotating the valve shaft, substantially as described.

2. An engine, comprising a cylinder, a valve casing having a plurality of tapered seats therein, a tapered valve member in each of said seats, a longitudinal shaft extending through said valves, means on said shaft for retaining the valves against their seats, there being a chamber within each of said valves, a plurality of ports in each valve extending through the walls thereof, ports extending through the valve casing, each of said ports communicating with the interior of the cylinder and one of the valve seats, there being other ports extending through the valve casing, one of said ports communicating with one of the valve seats and a fluid pressure inlet, the other port communicating with the other valve seat and an exhaust, said valves being arranged to intermittently admit fluid pressure through one of the ports communicating with the cylinder and another port communicating with the valve seat, while the other valve is arranged to intermittently permit the exhaust to pass from the engine through a port communicating with the cylinder and its valve seat and another port and the exhaust; substantially as described.

3. An engine, comprising a cylinder, a valve casing having a plurality of tapered seats therein, a tapered valve in each seat, a shaft extending through both valves, means on the shaft for retaining the valves against their seats, a chamber in each valve, there being ports extending through the valve casing, each of said valves communicating with one of the seats and the interior of the cylinder, there being a port through the valve casing communicating with a fluid pressure supply and one of the valve seats, there also being a port through the valve casing communicating with the exhaust and the other valve seat, and a plurality of ports through each of the valves, the ports in one of the valves being arranged to intermittently open communication between the fluid pressure supply and the cylinder, the ports in the other valve being arranged to intermittently open communication between the exhaust port from the cylinder and the exhaust; substantially as described.

4. An engine, comprising a plurality of cylinders, a valve casing above each cylinder, a plurality of tapered valve seats in each valve casing, a tapered valve in each seat, ports through said valve and the valve casing, for admitting fluid pressure to each cylinder and for opening the exhaust therefrom, a through shaft extending through all of said valves, springs on the ends of the shaft for retaining the end valves in position, a spring between adjacent valves for different cylinders for retaining said valves in position, and means for rotating the valve shaft; substantially as described.

1,220,292. PAVING-BRICK. JOSEPH WADE TUCKER, Kissimmee, Fla., and WILLIAM A. MCCOOL, Beaver Falls, Pa. Filed Nov. 20, 1916. Serial No. 132,325. (Cl. 106—31.)

1. A brick, block, or the like composed of comminuted non-resinous wood impregnated with a relatively light or thin asphaltum and united into a solid mass by a relatively heavy asphaltum.

2. A brick, block, or the like composed of comminuted non-resinous wood impregnated with a relatively light or thin asphaltum and united into a solid mass by a relatively heavy asphaltum in a proportion of about 18 parts of said relatively heavy asphaltum to about 82 parts of the said impregnated comminuted wood.

3. A brick, block, or the like, composed of comminuted cypress wood impregnated with a relatively light or thin asphaltum and solidly united by a binder consisting of a relatively heavy asphaltum.

4. A brick, block, or the like, composed of comminuted cypress wood impregnated with a relatively light or thin asphaltum and solidly united by a binder consisting of a relatively heavy asphaltum, in a proportion of about 18 parts of said relatively heavy asphaltum to about 82 parts of the said impregnated comminuted wood.

5. A brick, block, or the like, composed of comminuted cypress wood treated with the residue of a mineral oil having an asphalt base and from which oil the more volatile components have been extracted, said comminuted wood being impregnated with the lighter asphaltum of said residue, and being united into a solid mass by a binder consisting of the heavier asphaltum which combines with the lighter asphaltum with which said comminuted wood is impregnated, thus forming a solid homogeneous block.

1,220,293. METHOD OF MAKING BRICKS AND THE LIKE. JOSEPH WADE TUCKER, Kissimmee, Fla., and WILLIAM A. MCCOOL, Beaver Falls, Pa. Filed Nov. 20, 1916. Serial No. 132,326. (Cl. 106—31.)

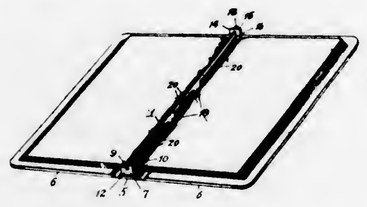
1. The herein described method of making bricks, blocks, or the like, which consists in impregnating a comminuted non-resinous wood with a relatively light hydrocarbon material and uniting the same into a solid mass, under heavy pressure, by means of a relatively heavy hydrocarbon material.

2. The herein described method of making bricks, blocks, or the like, which consists in impregnating comminuted cypress wood with a relatively light hydrocarbon material and uniting the same into a solid mass, under heavy pressure, by means of a relatively heavy hydrocarbon material.

3. The herein described method of making bricks, blocks, or the like, consisting in impregnating comminuted cypress wood with a relatively light asphaltum residue of mineral oil, and then forming the impregnated material into solid form, under heavy pressure and by means of a relatively heavy asphaltum residue of mineral oil.

4. The herein described method of making bricks, blocks, or the like, which consists in separating from each other the relatively light and heavy asphaltums constituting the residue of a mineral oil having an asphalt base, and fr m which oil the most volatile components have previously been extracted, soaking comminuted cypress wood in said lighter asphaltums to impregnate the same therewith, mixing the impregnated comminuted wood with said heavier asphaltums, and uniting the whole under pressure into a solid mass, said heavier and lighter asphaltums recombining to form an approximately homogeneous compound which entirely permeates the wood particles and acts as a binder therebetween.

1,220,294. TEMPORARY BINDER. JAMES R. TURNER, Chicago, Ill. Filed Mar. 31, 1916. Serial No. 87,957. (Cl. 129—38.)



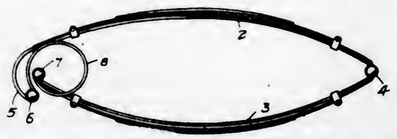
1. In a temporary binder, the combination of a back, a holder bar, means at one end of the back to which one end of the holder-bar is pivoted, and an angular spring strip secured at the other end of the back and provided with a slot having its outer end closed to receive the other end of said bar, said strip being flexible outwardly or longitudinally of the bar to permit the end of the holder-bar to be inserted and removed from the slot.

2. In a temporary binder, the combination of a back, a holder-bar, means at one end of the back to which one end of the holder-bar is pivoted, and an angular spring strip secured at the other end of the back and provided with a slot having its outer end closed, to receive the other end of said bar, said strip being flexible outwardly or longitudinally of the bar to permit the end of the holder bar to be inserted and removed from the slot, said bar having a lug on its end to arrest the strip.

3. In a temporary binder, the combination of a back, a holder bar of flat metal, means for movably securing the holder-bar to the back, and an inwardly extending flat tongue on said bar, adapted to pass between the leaves of a book and between the devices employed for securing the leaves of the book together, to secure the back of the book against lateral play on the back.

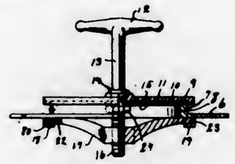
4. In a temporary binder, the combination of a back, a holder bar of flat metal, means at one end of the back to which the holder bar is pivoted, movable means at the other end of the back for securing the bar in operative position, and an inwardly extending integral, flat tongue on said bar, adapted to pass between the leaves of a book and between the devices employed for securing the leaves of the book together, to secure the back of the book against lateral play on the back.

1,220,295. FLEXIBLE SPRING-COUPLING. CHRISTIAN ULVEN, St. Paul, Minn., assignor to Minneapolis Iron Store Company, Minneapolis, Minn., a Corporation. Filed Aug. 8, 1914. Serial No. 855,813. (Cl. 267—27.)



The combination, with a full elliptic spring having its upper and lower sections hinged together at one end, the opposite end of the upper section being downwardly and inwardly curved to a point beneath and adjacent to the corresponding end of the lower section, a pair of spring steel loops disposed upon opposite sides of said sections, a bolt mounted in the end of said upper spring section and whereon the outer ends of said spring steel loops are hinged, a similar bolt mounted in the end of the lower section and whereon the inner ends of said loops are hinged, depression of said upper section operating to force the outer ends of said loops downwardly and away from the inner ends thereof, substantially as described.

1,220,296. IRRIGATING-VALVE. CARY M. VANDERFORD, San Fernando, Cal. Filed May 29, 1916. Serial No. 100,570. (Cl. 137—13.)

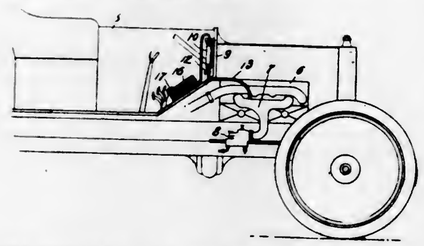


1. An irrigating valve comprising an annular base plate having an opening therethrough; an annular valve rim surrounding said opening and extending upwardly from the base plate, said rim terminating in a valve seat; a disk valve for said valve seat adapted to close the opening through the base plate; an annular recess in the underside of said disk; a flexible gasket in said recess adapted to rest upon the valve seat; a valve stem revolubly mounted centrally of said disk valve and gasket and projecting therethrough on each side thereof, the upper end terminating in a handle and the other end being threaded; bearings depending downwardly from the underside of said base plate adjacent to and at each side of said opening having narrowed angular apertures in one of the side walls thereof; a crowfoot bar extending across the opening in the base plate on the underside thereof in which the threaded end of the valve stem is mounted and having its ends mounted in said bearings, the ends of said bar having one of their sides flattened whereby when said bar is rotated to bring said flattened portions and angular apertures into register, said ends will pass through said apertures.

2. An irrigating valve comprising an annular base plate having an opening therethrough; an annular valve rim surrounding said opening and extending upwardly from the base plate, said rim terminating in a valve seat; a disk valve for said valve seat adapted to close the opening through the base plate; an annular recess in the underside of said disk; a flexible gasket in said recess adapted to rest upon the valve seat; a valve stem revolubly mounted centrally of said disk valve and gasket and projecting therethrough on each side thereof the upper end terminating in a handle and the other end being threaded; a washer mounted on said stem beneath and adjacent to said gasket; a locknut on said stem adapted to retain said washer and gasket positioned; bearings depending downwardly from the underside of said base plate

adjacent to and at each side of said opening having narrow angular apertures in one of the side walls thereof; a crowfoot bar extending across the opening in the base plate on the underside thereof in which the threaded end of the valve stem is mounted and having its ends mounted in said bearings, the ends of said bar having a cutaway portion whereby when said bar is rotated to bring the cut away portion into register with said angular apertures said ends will pass therethrough to detach said crowfoot bar from its position of use.

1,220,297. VACUUM APPARATUS. HAROLD VANDERROOF, San Francisco, Cal. Filed June 3, 1916. Serial No. 101,516. (Cl. 123—198.)



The combination with an internal-combustion engine and its intake manifold; of an air suction pipe connected to the intake manifold between the carbureter and the fuel inlets of the engine, anteriorly of the carbureter, a strainer chamber having an air inlet and an air outlet, the air outlet being connected to the aforesaid suction pipe, and a valve in the suction pipe.

1,220,298. MOUNT FOR BELT-HOOKS. ANTHONY VANDERVELD, Grand Rapids, Mich., assignor to Clipper Belt Lacer Company, a Corporation of Michigan. Filed Apr. 10, 1916. Serial No. 90,183. (Cl. 1—56.)



1. In combination, a member consisting of a thin sheet of material bent longitudinally to form a curved central section and outwardly diverging sections and to leave an open side, a plurality of belt hooks or staples each having a curved central section and diverging legs positioned side by side along said member with the legs of the staples lying against the diverging sections of the member, thereby leaving said side open, and tabs turned from the ends of said member to normally prevent movement of the belt hooks or staples lengthwise of said member and separation therefrom, substantially as described.

2. In combination, a mount consisting of a thin sheet of material bent into trough-like form to provide a central section and two diverging sections and an open side therebetween, a plurality of belt hooks or staples each having diverging legs and inwardly extending prongs at the free ends of said legs, said staples being mounted on and lying against said mount and in contact engagement with each other, said prongs extending toward each other at the open side of the mount, and means to normally retain the staples on the mount, said means being operable to permit the ready removal of said staples from the mount, substantially as described.

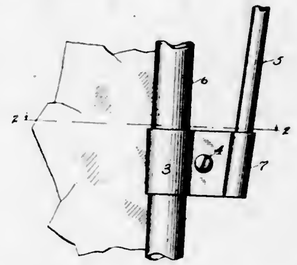
3. In combination, a mount consisting of a thin sheet of material bent into trough-like form to provide a central section and two diverging sections, a plurality of belt hooks or staples each having diverging legs of unequal length and inwardly extending prongs at the free ends of said legs mounted on the mount with the staples located side by side and positioned so that the long and short legs of said staples alternate on each side of the mount thereby locating the prongs on all of the short legs a distance from the prongs on all of the long legs of said staples, means to retain the staples on the mount, and means on the mount entering between said separated prongs to hold them against movement toward each other and to hold the staples contacting against the mount, substantially as described.

4. In combination, a mount consisting of a thin sheet of material bent into trough-like form to provide a central section and two diverging sections, a plurality of belt hooks or staples each having diverging legs and inwardly extending attaching prongs at the ends of the legs passed over the mount with the legs of the staples lying against the outer sides of the mount with the prongs projecting toward each other beyond the edges of said sections, and means to retain the staples on the mount, substantially as described.

5. In combination, a mount consisting of a thin sheet of material bent substantially along its longitudinal center line into a trough-like form to provide diverging sections, each section having a portion bent inwardly and then outwardly to form a groove in each side of the mount adjacent the free edges of said diverging sections of said mount, a plurality of belt hooks or staples each having diverging legs of unequal length with an inwardly extending prong at the end of each leg passed over the mount with the staples located side by side and so positioned that the long and short legs of said staples alternate on each side of said mount, the prongs on the short legs entering the grooves in said sections and those on the long legs passing below the outwardly extending portion on each diverging section, and means to normally retain the staples on the mount, substantially as described.

[Claim 6 not printed in the Gazette.]

1,220,299. FLAG-HOLDER. SAMUEL C. VIDEN, Milwaukee, Wis. Filed Aug. 14, 1916. Serial No. 114,709. (Cl. 248—37.)

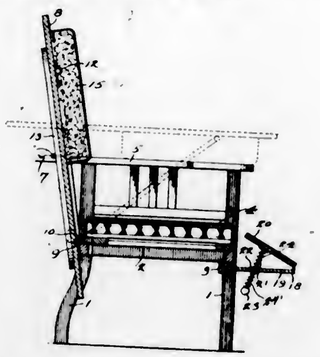


In a device of the described class, the combination of a pair of clamping plates, each provided with a single central aperture, a clamping bolt located in said apertures, the ends of said plates being clamped together forming tubular bearings, one of said bearings being conical and inclined at an angle to the other for the reception of a flag staff, the other of said bearings being formed eccentric to its longitudinal center, and converging downwardly from its upper toward its lower end.

1,220,300. CONVERTIBLE CHAIR AND TABLE. CHARLES F. VOLLMER, Denver, Colo. Filed May 11, 1915. Serial No. 27,397. (Cl. 155—6.)

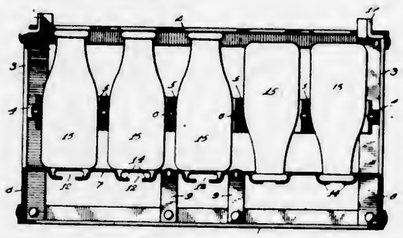
1. A convertible chair and table including a body having side arms, the back of said chair being operable into a position superposed above the side arms to provide a table, and a relatively thick member carried by one side of the chair back to provide a cushioned back, said mem-

ber adapted to engage the chair arms for holding the back spaced from the latter when used as a table, and to prevent mutilation of the side arms.



2. A convertible chair and table including a body equipped with side arms, a back movably carried by said body and movable into a position to be supported by said arms to provide a table, and a wire strand in pivotal engagement with said body and back and engageable with said side arms to limit the forward movement of the back, said strand comprising an axis to facilitate movement of the back.

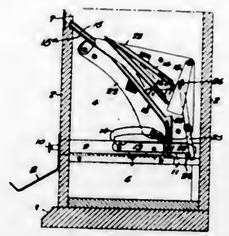
1,220,301. MILK-BOTTLE CASE. RALPH A. WALDMAN, San Francisco, Cal. Filed Oct. 5, 1914. Serial No. 865,198. (Cl. 220—111.)



1. A milk bottle case comprising upper and lower rectangular frames of angle iron with their upright leaves at the outside and in line with each other and their horizontal leaves projecting inward, posts at the corners secured within the upright leaves of said frames and resting respectively beneath and upon the horizontal leaves thereof, intermediate supporting bars connected at their ends to said posts and with their centers deflected inward beyond the planes of the upright leaves of said frames, a series of rings connected with each other and with said bars, and a bottle support disposed within the structure and having apertures respectively in line with the rings and each of a size to receive a bottle neck, for the purpose set forth.

2. A milk bottle case comprising upper and lower rectangular frames of angle iron with their upright leaves at the outside and in line with each other and their horizontal leaves projecting inward, angle iron posts at the corners secured within the upright leaves of said frames and resting respectively beneath and upon the horizontal leaves thereof, intermediate supporting bars connected at their ends to said posts and with their centers deflected inward to aline with the inner edges of the horizontal leaves of said frames, a series of rings connected with each other and with said bars, a supporting plate disposed within the structure beneath said series of rings and having apertures respectively in line therewith and each of a size to receive a bottle neck, and pendant hooks around each aperture having inturned bills, for the purpose set forth.

1,220,302. COIN-CONTROLLED APPARATUS. PERCY BLOUNT WARING, Warrington, England. Filed May 15, 1916. Serial No. 97,743. (Cl. 194—39.)

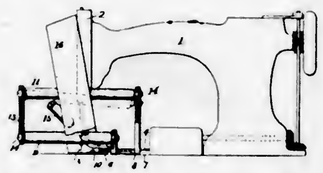


1. A coin freed apparatus of the type described having one or more auxiliary pivoted chutes adapted to be held in the inoperative position by the weight of the coin contained therein, substantially as described.

2. A coin freed apparatus of the type described comprising a main chute, a plurality of superimposed pivoted auxiliary chutes adapted to be normally co-acting with said main chute and disassociated therefrom when a coin is contained in each of said auxiliary chutes, an abutment adjoining the lower ends of said auxiliary chutes, means for displacing said abutment whereby the coins in all the chutes are released, and coin operated means for rendering said displacing means operative.

3. In a coin freed apparatus of the type described, the combination with a slide of one or more pivoted auxiliary chutes, an abutment to cause the coins to be held therein, and means connected with the slide adapted to disengage the abutment, substantially as described.

1,220,303. HOLDING AND GUIDING ATTACHMENT FOR SEWING-MACHINES. CORNELIUS WEISS, Brooklyn, N. Y. Filed Aug. 12, 1913. Serial No. 784,303. (Cl. 112—24.)



1. In a sewing machine, the combination with the machine head having a sewing needle, said head adapted to guide one edge of a frusto-conical band, of a roller spaced from said head and adapted to engage the other edge of said band, means adapted to be set within said band for maintaining the same in a substantially vertical plane, and means for feeding a portion of said band transversely to its normal line of feed.

2. In a sewing machine, the combination with the machine head having a sewing needle, said head adapted to form a stop for one edge of a frusto-conical band to be sewed, a guide for said edge and means for advancing said guide relative to the needle, of a roller adapted to guide a portion of said band horizontally to the needle and means above said roller carried by said advancing means adapted to engage the opposite edge of the band above the horizontal portion of the band.

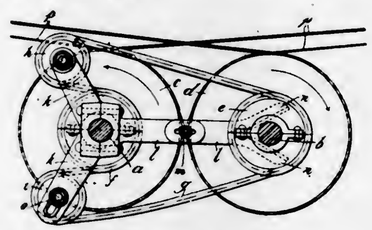
3. In a sewing machine, the combination with the machine head having a sewing needle, said head adapted to form a stop for one edge of a frusto-conical band to be sewed, a guide for said edge and means for advancing said guide relative to the needle, of a roller adapted to feed a portion of said band horizontally to the needle, an edge guiding means carried by said advancing means and inclined at an obtuse angle to the bed of the machine adapted to engage the opposite edge of the band, and resilient means engaging one side of the band for maintaining said horizontal portion of the band flat on the bed of the machine.

4. In a sewing machine, the combination with the needle, a guide, and means for automatically advancing said guide relative to the needle, of an attachment comprising a guiding means disposed above and to one side of the needle, and inclined relatively to the direction of feed of the material, whereby the material in passing across said guiding means will tend to be drawn down said incline into engagement with the guide and needle.

5. In a sewing machine, the combination with the needle, and means movable transversely of the line of feed for advancing material to be sewed relative to the needle to form spiral stitches therein, of a holder for supporting the material above the needle when the same is above its sewing position, said holder inclined to guide the material downwardly to the needle and said advancing means, said holder being freely movable about a fixed axis.

[Claims 6 and 7 not printed in the Gazette.]

1,220,304. BELT-GEARING ATTACHMENT FOR ROLLER-SHAFTS. EMILE JOHN WELFFENS, Didsbury, Manchester, England, assignor to Hans Renold Limited, Manchester, England. Filed May 4, 1916. Serial No. 95,422. (Cl. 74—31.)

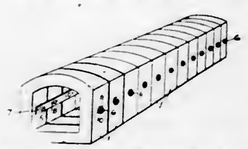


1. A mechanism for gearing together positively the shafts of two rollers around which spindle-driving-bands are carried, the said mechanism comprising the combination with the two roller shafts, of a sprocket wheel fixed on the shaft of one roller, a sprocket wheel fixed on the shaft of the other roller, a frame member supported on the two said shafts, said supporting frame member being so constructed and having means for supporting it on the two shafts such that it shall be applicable to shafts at varying distances apart, a chain and means carried by said supporting frame member for guiding the chain in such manner that it passes in one direction around one sprocket wheel and in a reverse direction around the other sprocket wheel whereby the shafts are geared together positively for turning in opposite directions of rotation.

2. A mechanism for gearing together positively the shafts of two rollers around which spindle-driving bands are carried, the said mechanism comprising the combination with the two roller shafts, of a sprocket wheel fixed on the shaft of one roller, a sprocket wheel fixed on the shaft of the other roller, a frame member supported on the two said shafts, said supporting frame member being so constructed and having means for supporting it on the two shafts such that it shall be applicable to shafts at varying distances apart, a chain and a pair of jockey wheels carried by said supporting frame member, said chain being carried around said two sprocket wheels and said pair of jockey wheels in such manner that the sprocket wheels are positively geared together to rotate in opposite directions, and means for adjusting the position of one of said jockey wheels whereby the tension of the chain may be adjusted.

3. A mechanism for gearing together positively the shafts of two rollers around which spindle-driving-bands are carried, the said mechanism comprising the combination with the two roller shafts, of a sprocket wheel fixed on the shaft of one roller, a frame member adapted to bear against one face of said sprocket wheel and to be supported on the two said shafts, another sprocket wheel fixed on the shaft of the other roller and adapted to bear against a face of said frame member, and to be in alinement with the first sprocket wheel under such conditions, a chain and means carried by said frame member for guiding the chain in such manner that it passes in one direction around one sprocket wheel and in a reverse direction around the other sprocket wheel, whereby the shafts are geared together positively for turning in opposite directions of rotation.

1,220,305. SECTIONAL CONCRETE STRUCTURE. FREDERICK S. WENDELKEN, Fort Collins, Colo. Filed Sept. 21, 1915. Serial No. 51,768. (Cl. 72—52.)



1. In a sectional structure blocks of plastic material arranged together in a series, tie rods extending longitudinally throughout said series against the sides of said blocks to positively aline and anchor said blocks in the structure, anchor bolts engaging said tie rods and extending transversely through the walls of each block rigidly anchoring each block independently and individually to said tie rods, substantially as described.

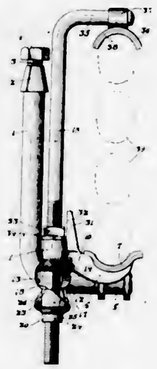
2. In a conduit a series of blocks of plastic material arranged end to end, each block having a uniform longitudinal channel opening and forming a cross section of the conduit, longitudinal tie rods arranged throughout said series against the inner faces of said blocks at the sides of the channel opening, anchor bolts engaging said tie rods and extending transversely through the side walls of each block rigidly anchoring each block independently and individually to said tie rods, substantially as described.

3. A culvert consisting of a series of plastic blocks arranged end to end, each block having a uniform longitudinal channel opening therethrough and each block forming a cross section of the culvert, longitudinal shoulders along the inner faces of said blocks, longitudinal tie rods arranged against said shoulders throughout the length of said culvert to positively aline the channel openings of said blocks, anchor bolts engaging said tie rods and extending transversely through the side walls of said blocks and rigidly anchoring each of said blocks independently and individually to said tie rods, substantially as described.

1,220,306. BOW REST AND CLAMPING DEVICE HARRY B. WHITE, Canton, Ohio, assignor to The Gilliam Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Apr. 14, 1915. Serial No. 21,209. (Cl. 21—61.)

1. In a device of the character described, the combination of a support adapted to be arranged at one side of a vehicle and having a rest movable toward and from the vehicle thereon, means for securing the rest to said support, the said rest being provided with an arm extending rearwardly therefrom and arranged at one side of said support, the arm being formed with an opening, a rod slidably and rotatably mounted in said opening and provided with an arm at its upper end, a plate mounted on said last mentioned arm and arranged to coöperate with the rest to support a set of top bows in folded position, a nut screw threaded on said rod above the arm on said rest, means connected to said rest and adapted to contact with and prevent rotation of said nut, a clamping lever screw threaded on said rod below said arm and arranged to coöperate with said nut to secure the rod to said arm in operative position, a cam face provided upon said clamping lever and arranged to contact with the under side of the arm on said rest and a spring interposed between said nut and the arm on said rest arranged to be put under tension when the clamping lever is operated.

2. In a device of the character described, the combination of a support adapted to be arranged at one side of a vehicle and having a rest movable toward and from the vehicle thereon, means for securing the rest to said support, the said rest being provided with an arm extending rearwardly therefrom and arranged at one side of said support, the arm being formed with an opening, a rod slidably and rotatably mounted in said opening and provided with an arm at its upper end, a plate mounted on the last mentioned arm and arranged to coöperate with the rest to support a set of top bows in folded position, a pair of nuts screw-threaded on said rod and arranged above and below the arm on said rest and coöperating with each other to secure the rod thereto in operative position, means connected to said rest and adapted to contact with and prevent rotation of the upper nut, a cam face provided upon the underside of the arm on said rest and a cam face provided upon the adjacent nut for locking the latter against turning movement, and a spring interposed between the nut and the arm on said rest arranged to be put under tension when the first mentioned nut is operated.

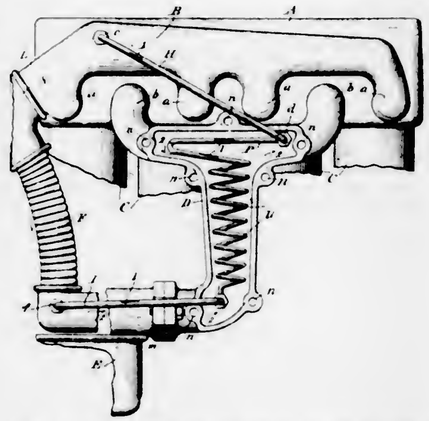


3. In a device of the character described, the combination of a supporting member having a rest arranged to support the bows of a vehicle top, a rod movably mounted on said member and provided with a clamp arranged to coöperate with the rest to support the bows, a collar screw threaded on said rod and arranged above said member, said collar being provided with a flat face, a guide finger provided upon said member and located parallel to said rod, said guide finger being arranged to contact with the flat face upon said collar to prevent said collar from rotating upon said rod, a clamping device mounted upon said rod below said member and arranged to coöperate with the collar when tightened to draw the rod downwardly and rigidly secure it to said member and a yieldable device interposed between the collar and member tending to normally elevate the rod.

4. In a device of the character described, the combination of a support adapted to be arranged at one side of the vehicle and having a rest movable toward and from the vehicle thereon, means for securing the rest to said support, the said rest being provided with an arm extending rearwardly therefrom and arranged at one side of said support, a tubular portion provided upon said arm, a rod slidably and rotatably mounted in said tubular portion and provided with an arm at its upper end, a plate mounted upon said last mentioned arm and arranged to coöperate with the rest to support a set of top bows in folded position, a nut screw-threaded on said rod above said tubular portion, spaced, laterally disposed lugs provided upon said tubular portion, each of said lugs provided with an inclined side face, a clamping lever screw-threaded on said rod below said tubular portion and arranged to coöperate with said nut to secure the rod to said arm in operative position, spaced lugs provided upon said clamping lever, each of the lugs upon said clamping lever being provided with an inclined face arranged to engage the inclined faces of the lugs upon the tubular portion of said rest when said device is in the open position, the extremities of the lugs upon said clamping lever being arranged to engage the extremities of the lugs upon the tubular portion when said device is in the clamped position, a stop lug provided upon said tubular portion, a second stop lug provided upon said clamping lever, said stop lugs adapted to contact when the device is in the clamped position and a spring interposed between said nut and the tubular portion of said rest arranged to be put under tension when the clamping member is operated.

5. In a device of the character described, the combination of a support adapted to be arranged at one side of the vehicle and having a rest movable toward and from the vehicle thereon, means for securing the rest to said support, the said rest being provided with an arm extending rearwardly therefrom and arranged at one side of said support, a tubular portion provided upon said arm, a rod slidably and rotatably mounted in said tubular portion and provided with an arm at its upper end, a plate mounted upon said last mentioned arm and arranged to coöperate with the rest to support a set of top bows in folded position, a nut screw-threaded on said rod above said tubular portion, spaced, laterally disposed lugs provided upon said tubular portion, each of said lugs provided with an inclined side face, a clamping lever screw-threaded on said rod below said tubular portion and arranged to coöperate with said nut to secure the rod to said arm in operative position, spaced lugs provided upon said clamping lever, each of the lugs upon said clamping lever being provided with an inclined face arranged to engage the inclined faces of the lugs upon the tubular portion of said rest when said device is in the open position, the extremities of the lugs upon said clamping lever being arranged to engage the extremities of the lugs upon the tubular portion when said device is in the clamped position, a finger provided upon said rest and disposed parallel to said rod, said finger adapted to engage one of the faces of said nut to prevent said nut from rotating upon said rod and a spring interposed between said nut and the tubular portion of said rest arranged to be put under tension when the clamping member is operated.

1,220,307. MOISTENER FOR INTERNAL-COMBUSTION ENGINES. LINCOLN A. YOCUM and WILLIAM A. LEWIS, Wooster, Ohio. Filed June 19, 1916. Serial No. 104,605. (Cl. 123—25.)



1. In an internal combustion engine having a plurality of cylinder chambers, an intake manifold, a carbureter, an exhaust pipe, and a hot air intake pipe, the combination with the intake manifold, of a pipe having a plurality of convolutions within the hollow body of said intake manifold, the upper end of said pipe leading to and opening into said exhaust pipe, and the lower end of said pipe leading to and opening into said hot air intake pipe, substantially as set forth and for the purpose specified.

2. In a device of the character described, the combination with the hollow body of the intake manifold, of a slender pipe having a plurality of coils within said hollow, a like pipe joined to said coils and to the rear part of the exhaust pipe of the explosive engine, nipples at the ends of said connecting pipe to detachably secure its connection, a like pipe joined to the opposite end of said coils and to the hot air intake pipe of the engine, nipples at the ends of said connecting pipe to detachably secure said junctions, and means for opening and closing the body of said intake manifold to receive said coils and secure the same gas tight therein, substantially as set forth.

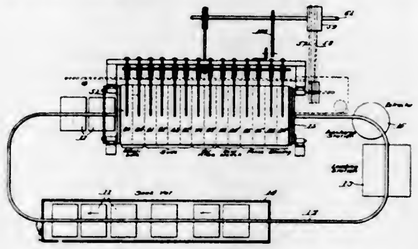
3. In an internal combustion engine, a self moistening device for conveying moisture to the cylinders thereof, comprising a pipe leading from the exhaust pipe of the engine to the hot air intake thereof, in its course passing through the intake manifold of the engine in a series of coils suspended within the hollow body of said manifold, and means for opening and closing said body to receive said coils, substantially as set forth.

4. In an internal combustion engine, a device for automatically conveying moisture to the cylinders thereof with its explosive mixtures, comprising a slender pipe having a plurality of coils inclosed within the hollow body of its intake manifold, and connected outwardly at one end with an opening into the exhaust pipe of the engine, and outwardly at the opposite end with an opening into the hot air pipe thereof.

5. In an engine of the class described, a device for automatically taking moisture from the products of combustion in process of escaping as exhaust gases, and liquefying the latter, and conveying the liquid as a spray to the intake explosive mixtures, and thence to the cylinder chambers of the engine, comprising a gas conducting pipe having a series of convolutions within the hollow body of the intake manifold, and extensions therefrom, at one end, to an opening into the exhaust pipe of the engine, and at the other, to an opening into the hot air intake pipe and carbureter of the engine, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,220,308. CLOTHES-WASHING APPARATUS. FAY H. YOUNG and GEORGE A. LEWIS, Rockford, Ill. Filed Sept. 18, 1916. Serial No. 120,822. (Cl. 68—18.)



1. Apparatus for washing clothes, comprising a series of fluid supplies of different properties such as are employed in washing clothes, a plurality of containers each adapted to carry a separate batch of clothes, means for moving the containers to different stations at each of which one of said fluids may be supplied to the container thereat, means for so supplying said fluids that the contents of the containers will be successively treated by the fluids at the various stations, and means for tumbling the clothes in opposite directions while they are being so treated.

2. In a clothes washing machine of the character described, the combination of a plurality of independent containers each adapted to carry a separate batch of clothes, a plurality of compartments containing fluids of different properties for treating and washing clothes, means for conveying the containers in succession from one compartment to another, means for supplying the fluid of each compartment to the container thereat so as to successively subject the contents of each container to the action of the fluids in the different compartments and for draining the fluid from each container, and means for revolving said containers in opposite directions while the contents are being subjected to the action of said fluids.

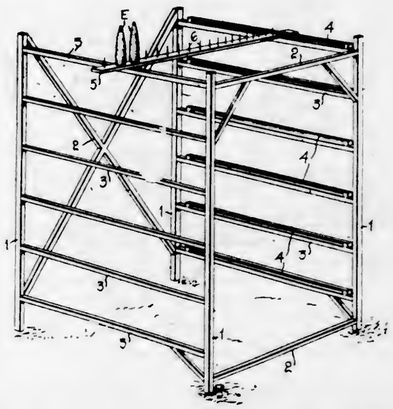
3. Apparatus for washing clothes comprising a series of compartments intersected by a substantially continuous passageway, means for passing a plurality of perforate containers along said passageway, means for supplying washing fluids and the like of different properties to the different compartments so that the contents of each container is successively subjected to the treatment of different fluids as the containers are moved along the passageway, and means for revolving the containers about the longitudinal axis of the passageway for tumbling the contents of the containers while the same are being subjected to the action of said fluids.

4. A washing machine comprising a tumbler frame having a longitudinal passage therethrough and rotatable about its longitudinal axis, a plurality of perforate containers movable through said passage, means for supplying different kinds of washing and treating fluids and the like to the containers at different points in their travel through the passage so that contents of each container will be successively subjected to the treatment of each of said fluids, and means for rotating said frame in opposite directions to tumble the contents of the container during the washing process.

5. Washing apparatus comprising a perforate tumbler frame having an axial passage therethrough and mounted to revolve about its longitudinal axis, a series of divisional compartments extending peripherally about the frame, a plurality of perforate containers movable through said passage and said compartments, each container being of substantially the same length as the length of the smallest compartment, means for supplying fluids of different properties to the different compartments so that the contents of the containers are successively subjected to the action of the different fluids in the passage of the containers through the tumbler frame, and means for revolving said frame in opposite directions for tumbling the contents of the containers.

[Claims 6 to 23 not printed in the Gazette.]

1,220,309. CORN-DRIER. LEVI ARCHIE ANDERSON, Rock Falls, Iowa. Filed Apr. 8, 1916. Serial No. 89,966. (Cl. 34—26.)



A drier comprising a supporting member including a plurality of substantially longitudinally alined bars, addi-

tional bars imposed upon and spaced relatively to certain of the first named bars to afford guides, substantially flat carriers adapted to be rested upon the bars, an extremity of each of the carriers being insertible through a guide, and penetrating members extending from the carrier.

1,220,310. FLEXIBLE SHAFT-COUPLING. GEORGE R. BALDWIN, Philadelphia, Pa. Filed Mar. 10, 1913. Serial No. 753,460. (Cl. 74—19.)



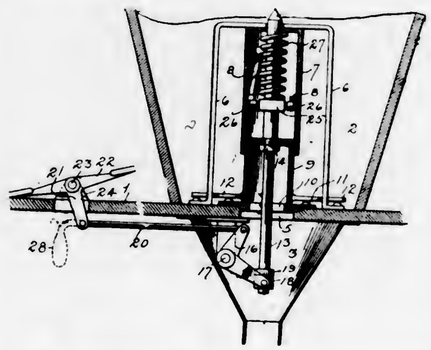
1. In a flexible shaft coupling, the combination of two coupling halves each having a socket in its face and a tilting bar normally held in both said sockets, said bar arranged and proportioned to slide in the sockets in a direction crosswise the rotative axes of said halves and to tilt both sidewise and endwise to thereby furnish flexibility between the halves.

2. In a flexible shaft coupling, the combination of two coupling halves each having an elongated socket in its face arranged crosswise its rotative axis and an elongated tilting bar normally held in both said sockets, said bar arranged and proportioned to slide in the sockets in directions both longitudinal and transverse to rotative axes of the coupling halves and to tilt both endwise and sidewise in said sockets to thereby furnish universal flexibility between said coupling halves.

3. In a flexible shaft coupling the combination of two coupling halves each having an elongated socket in its face and a tilting bar with sides cut to get greater width at its outer edges, normally held in said sockets, said bar arranged and proportioned to slide in said sockets longitudinally to itself and crosswise the rotative axes of said coupling halves and to furnish flexibility between said halves.

4. In a flexible shaft coupling the combination of two coupling halves each having an elongated socket in its face, a compressible and resilient bushing fixed to and lining said sockets and a tilting bar normally held in said sockets crosswise the axes of said halves and arranged to bear against the bushings to form resilient bearing surfaces, said tilting bar also movable longitudinally to itself and the bushed sockets and to tilt in said sockets, all arranged to furnish flexibility between the halves.

1,220,311. TRACK-SANDER. JOSIAH D. BENNER, Dayton, Ohio. Filed July 3, 1916. Serial No. 107,459. (Cl. 105—179.)



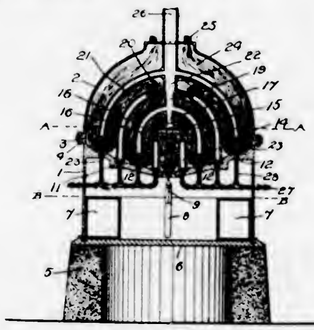
1. In a dispensing device for granular material, a hopper having a discharge orifice, a fixed sleeve terminating above the discharge orifice and alined therewith, a reciprocatory closure for said orifice telescoping within the sleeve, and means for reciprocating the closure to open an unobstructed passage from all sides to the discharge orifice.

2. In a dispensing device for granular material, a hopper having a discharge orifice located in a plain flat bearing surface, a reciprocatory closure member of greater diameter than the discharge orifice adapted to be seated upon the plain flat bearing surface surrounding the discharge opening, a fixed sleeve suspended above the discharge opening into which the closure member telescopes, and means to reciprocate the closure cap.

3. In a dispensing device for granular material, a hopper having a discharge orifice, a fixed sleeve suspended above the discharge orifice and alined therewith, a reciprocatory closure member telescoping within said suspended sleeve, a plurality of substantially radially disposed agitator arms movable in unison with the closure member and means to reciprocate the closure member and agitator arms.

4. In a dispensing device for granular material, a hopper having a discharge orifice, a sleeve suspended above the discharge orifice and in alinement therewith, a reciprocatory closure member telescoping with the sleeve, a plurality of substantially radially disposed agitator arms carried by the closure member, means for reciprocating the closure member, and means for rotating the closure member simultaneously with its reciprocatory movement.

1,220,312. FURNACE. HECTOR ANTOINE BERGERON, Montreal, Quebec, Canada. Filed June 22, 1916. Serial No. 105,198. (Cl. 122—165.)

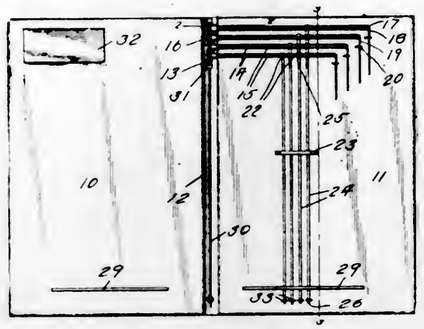


1. A furnace comprising a casing, a plurality of cup shape sections overlapping one another and suitably connected together with said casing, passages provided between said sections for the circulation of the heated fumes, water inlets and water outlets provided in said sections, a base plate secured within said casing and below said sections provided with vent holes or passages and means to heat said sections substantially as described.

2. A furnace comprising a casing, a base plate suitably supported within said casing, a plurality of cup shape sections overlapping one another and suitably connected together, every second section being shorter than the other in order to form a passage between said sections and said base plate, and passages provided in the uppermost part of the first and third sections, means to supply said sections with water, and means to heat said sections substantially as described.

3. A furnace comprising a casing, provided with fumes outlets, a base plate suitably supported within said casing provided at intervals with a plurality of vent holes, a plurality of cup shape sections overlapping one another and suitably connected together, passages provided between said sections for the circulation of the heated fumes, water supplying means connected to one end of said sections and means to conduct the hot water or steam from said sections, an oil reservoir provided below said base plate, a burner suitably connected to said reservoir, said burner being suitably disposed centrally of the inner section substantially as described.

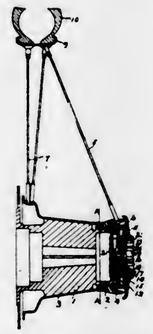
1,220,313. MUSIC-LEAF TURNER AND MUSIC-PORTFOLIO. KURISHINGAL K. BERNARD, Jubbulpore, India. Filed June 7, 1915. Serial No. 32,792. (Cl. 84—135.)



1. In a music leaf turner, a leaf holding element comprising a pair of wire arms each having an eye at one end and each provided with an outer downturned portion, said downturned portions coacting to form a leaf clamp, one of said arms having its downturned portion integral throughout and the other arm having the lower part of the downturned portion hinged to the upper part thereof, and means on the arms to force the extremity of said lower part toward the extremity of the other arm.

2. In a music leaf turner, a leaf holding element comprising a pair of wire arms, each having an eye at one end and each provided with an outer downturned portion, said downturned portions coacting to form a leaf clamp, one of said arms having its downturned portion integral throughout and the other arm having the lower part of the downturned portion hinged to the upper part thereof, and a ring embracing said downturned portions and slidable thereon to force the extremity of said lower hinged part toward the extremity of the other arm.

1,220,314. DEMOUNTABLE WIRE WHEEL. CLEMENT BOOTH, Narberth, and ALFRED CHARLES PAGE, Philadelphia, Pa. Filed Sept. 8, 1914. Serial No. 860,575. (Cl. 21—31.)



1. A demountable wheel comprising a hub provided with an inner member and an outer member formed of sections telescoped on said inner member, the outer end of said inner member and the outer section of said outer member being connected in interlocking relation, and spokes connected with respective sections of the outer member, said inner member driving through the outer section of said outer member and the spokes connected therewith.

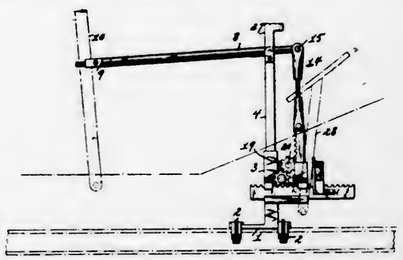
2. A demountable wheel comprising a tapered inner member having a locking section adjacent to its smaller end, a tapered outer member telescoped on said inner member, a second outer member telescoped on said inner member into abutting relation with said outer member first named, said second outer member having a section interlocking with said locking section and a part fitting within said outer member first named, and a cap screwed on said inner member into abutting relation with said outer member second named.

3. A demountable wheel comprising a hub provided with an inner member and an outer member formed of sections telescoped on said inner member, the outer end of said inner member and the outer section of said outer member being connected in interlocking relation, means comprising a cap provided with a bolt locked to said inner member for holding said outer section thereon, and spokes connected with the respective sections of the outer member, said inner member driving through the outer section of said outer member and the spokes connected therewith.

4. A demountable wheel comprising a hub having a recessed inner member provided with one or more notches, an outer member interlocked with said inner member, a cap having an angular socket and having a threaded connection with said inner member, a bolt carried by said cap and adapted to engage a notch of said inner member, a spring carried by said cap and adapted for effecting the engagement of said bolt with said notch, and a device journaled in said cap and adapted for retracting said bolt against the action of said spring, said device having an angular head whereby it is adapted to be turned.

5. A demountable wheel comprising a pair of interlocking members connected in telescoped relation, a cap having a threaded engagement with one of said members and adapted to hold one of said members on the other, said cap having an angular socket, mechanism carried by said cap for locking it, a device journaled in said cap for moving said mechanism, said device having an angular head in said socket, and a wrench adapted for engaging said head to turn said device so as to unlock said mechanism and for engaging said socket to turn said cap upon unlocking said mechanism.

1,220,315. LOCKING DEVICE FOR AUTOMOBILES. MILFARD W. BOYCE, Kearney, N. J. Filed Feb. 16, 1917. Serial No. 148,984. (Cl. 70—90.)



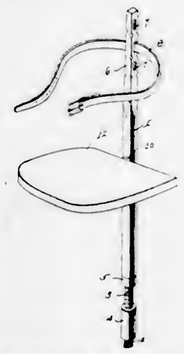
1. In a device for simultaneously securing the operating lever and clutch pedal, a base secured to the frame of a car, a standard adjustably secured in said base, an arm pivoted to said standard adapted to be engaged by and disengaged from the operating lever, locking means secured on the free outer end of said movable arm adapted to engage with and have locking engagement with said lever, a clutch locking member slidably secured to said base and means operatively connected with said clutch locking member and said locking arm, whereby movement of the locking arm causes the clutch locking member to engage with and lock the clutch pedal.

2. In a device for simultaneously securing the operating lever and clutch pedal, a base secured to the frame of a car, a standard adjustably secured in said base, an arm pivoted to said standard adapted to be engaged by and disengaged from the operating lever, a clutch locking member slidably secured to said base and means operatively connected with said clutch locking member and said locking arm, whereby movement of the locking arm causes the clutch locking member to engage with and lock the clutch pedal.

3. In a device for simultaneously securing the operating lever and clutch pedal, a base secured to the frame of a car, a standard adjustably secured in said base, an arm pivoted to said standard adapted to be engaged by and disengaged from the operating lever, locking means secured on the free outer end of said movable arm adapted to engage with and have locking engagement with said lever, and adjustable clutch locking member slidably secured to said base, an adjustable connection secured to the free end of the locking arm and means operatively connected with said clutch locking member and said adjustable connection, whereby movement of the locking arm causes the clutch locking member to engage with and lock the clutch pedal.

4. In a device for simultaneously securing the operating lever and clutch pedal, a base secured to the frame of a car, a standard adjustably secured in said base, a spring clasping member secured to the upper end of the standard, an arm pivoted to said standard adapted to be engaged by and disengaged from the operating lever, locking means secured on the free outer end of said movable arm adapted to engage with and have locking engagement with said lever, a clutch locking member provided with an extension, slidably secured to said base and means operatively connected with said clutch locking member and said locking arm, whereby movement of the locking arm causes the clutch locking member to engage with and lock the clutch pedal.

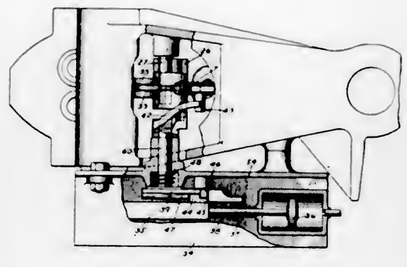
1,220,316. MILKING-STOOL. EDWARD BRAGG, Farmerville, La. Filed June 27, 1916. Serial No. 106,198. (Cl. 155—22.)



A stool of the class described comprising a standard, a seat secured intermediate the ends of the standard, means for adjusting the height of said standard, the upper end of the standard being provided with a plurality of transverse openings and a belt adapted to be passed through one of said openings to attach the device to the body of the user.

1,220,317. COMBINED CAR AND ELECTRIC COUPLING. THOMAS R. BROWN, Sparkill, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed July 13, 1916. Serial No. 109,046. (Cl. 213—40.)

1. In a car coupler, the combination with a coupler head, a movable lock, a device for releasing said lock, and a movable contact carrier adapted to be projected into a counterpart coupler, of a block fixed to the contact carrier, a rotatable member having projections adapted to engage on opposite sides of said block for locking the carrier, and a finger carried by said member and adapted to be actuated by said releasing device.



2. In a car coupler, the combination with a coupler head, a movable lock, a device for releasing said lock, and a movable contact carrier adapted to be projected into a counterpart coupler, of a block fixedly mounted on the contact carrier, a rotatable member having projections adapted to engage on opposite sides of said block for locking the carrier in release position, a finger carried by said member and adapted to be actuated by said releasing device, and a pawl for preventing movement of said member and adapted to be released by the movement of the contact carrier.

3. In a car coupler, the combination with a coupler head containing a train pipe conduit adapted to be connected to a corresponding conduit in a counterpart coupler head, a movable lock, and a device for releasing said lock, of a valve for controlling said conduit and a lever adapted to be operated by said releasing device for controlling said valve.

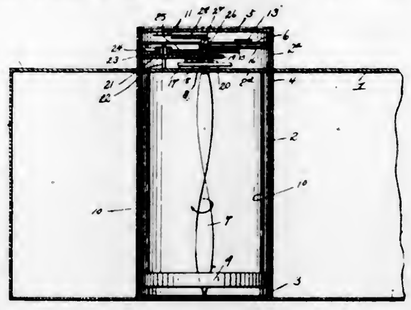
4. In a car coupler, the combination with a coupler head containing a train pipe conduit adapted to be connected to a corresponding conduit in a counterpart coupler head, a movable lock, and a device for releasing said lock, of a rotary valve for controlling said conduit, a lever for operating said valve, and a finger carried by said lever and adapted to be operated by said releasing device.

5. In a car coupler, the combination with a coupler head containing a train pipe conduit adapted to be connected to a corresponding conduit in a counterpart coupler head, a movable lock, and a device for releasing said lock, of a rotary slide valve for controlling said conduit, a lever for operating said valve, a finger actuated by said releasing device for operating said valve in one direction, and a second finger carried by said lever and actuated by said lock for moving the valve in the opposite direction.

[Claims 6 and 7 not printed in the Gazette.]

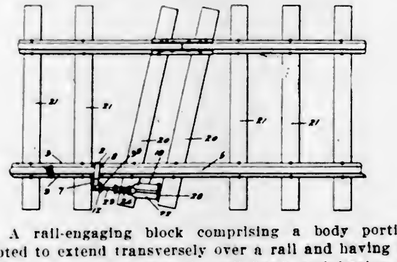
1,220,318. INDICATOR. JOHN THOMAS CAMPBELL, Norfolk, Va., assignor of one-half to Clifton G. Keesee, Norfolk, Va. Filed Oct. 27, 1913. Serial No. 797,574. (Cl. 235—109.)

In an indicator, the combination of a tube, a dial wall supported therein, a shaft extending through said wall and rotatable in opposite directions, a gear loose on the shaft, means intermediate the shaft and said gear for rotating the gear on the rotation of the shaft in one direction and leaving the gear idle on rotation of the shaft in the opposite direction, a support connected with the dial wall, a second gear loosely mounted on said support and intermeshed with the first-named gear and having at its side adjacent to the dial wall a comparatively-small, central combined ratchet and gear portion, a pawl supported on the dial wall and arranged to coöperate with said combined ratchet and gear portion, and a third gear loose on



the shaft and carrying a hand and intermeshed with said combined ratchet and gear portion.

1,220,319. RAILROAD-RAIL-ENGAGING DEVICE. EDWIN D. CASSEL, Newark, Ohio. Filed May 4, 1916. Serial No. 95,293. (Cl. 254—43.)



1. A rail-engaging block comprising a body portion adapted to extend transversely over a rail and having an opening therein to receive the rail head, and having an outwardly extending arm, and having feet adapted to bear upon the rail base, whereby when pressure is applied to said arm in a direction longitudinally of the rail said body portion will be canted horizontally into gripping engagement with the rail, and the said feet will prevent vertical canting of the body portion.

2. A rail-engaging block comprising a body portion adapted to extend transversely over a rail and having an opening therein to receive the rail head, and having an outwardly extending arm, and having feet adapted to bear upon the rail base, said feet extending outwardly longitudinally of the rail beyond positions beneath said body portion, whereby when pressure is applied to said arm in a direction longitudinally of the rail said body portion will be canted horizontally into gripping engagement with the rail, and the said feet will prevent vertical canting of the body portion.

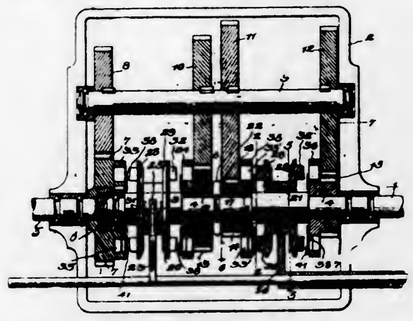
3. A rail-engaging block having an outwardly extending arm and adapted to grip a rail when pressure is applied to said arm longitudinally of the rail, said arm having a socket therein, and a bearing block removably supported on said arm and having an integral bearing part seated in said socket and removable therefrom with said bearing block when it is removed from said arm.

4. A rail-engaging block having an outwardly extending arm and adapted to grip a rail when pressure is applied to said arm longitudinally of the rail, said arm having a socket therein, and a bearing block having a pair of flanges embracing said arm and supporting the bearing block thereon and permitting it to be removed therefrom, said bearing block having an integral bearing part extending between its flanges and seated in said socket and removable therefrom with said bearing block when it is removed from said arm.

5. A rail-engaging block having an outwardly extending arm and adapted to grip a rail when pressure is applied to said arm longitudinally of the rail, and a bearing block supported on said arm and having a face adapted to be engaged by a pressure instrument, said bearing block having a pair of outwardly extending flanges adapted to receive a part of a pressure instrument between them.

[Claims 6 to 9 not printed in the Gazette.]

1,220,320. CLUTCH. FRANK M. CONWELL, Blairstown, Mo. Filed Jan. 17, 1916. Serial No. 72,537. (Cl. 192—9.)



1. In a device of the character described, the combination with a rotatable shaft, having a sliding clutch member rotating therewith, said clutch member being provided with a lug, of a clutch part adjacent the clutch member having a guiding slot leading to a socket within the clutch part, means for protecting said slot and a portion of the socket, means for shifting the clutch member into engagement with the clutch part whereby the protecting means is moved upon the rotation of the clutch member by the lug passing through the guiding slot prior to the admission of the lug into the socket.

2. In a device of the character described, the combination with a shaft having a slidable clutch member rotating therewith, said clutch member being provided with a lug, of a clutch part being provided with a socket arranged adjacent the clutch member, means for protecting said socket, and means for shifting the clutch member into engagement with the clutch part whereby the protecting means is moved upon the rotation of the clutch member by the lug thereon prior to the admission of the lug within the socket.

3. In a device of the character described, the combination with a shaft having a slidable clutch member carried thereby and rotatable with the shaft, said clutch member having a lug thereon, of a clutch part being provided with a guiding slot gradually increasing in depth and leading to a socket within the clutch part, means overlying said guiding slot and socket, and means for shifting the clutch member into engagement with the clutch part whereby the protecting means for the guiding slot and socket is moved during the rotation of the clutch member while the lug thereon is passing through the guiding slot prior to its entrance into the socket.

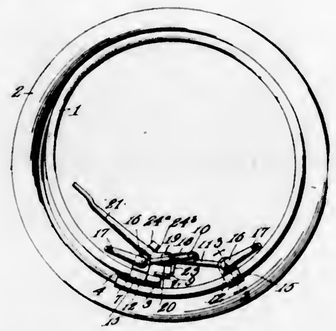
4. In a device of the character described, the combination with a shaft having a slidable clutch member carried thereby and rotatable with the shaft, of a clutch part being provided with a guiding slot gradually increasing in depth and leading to a socket within the clutch part, means overlying said guiding slot and socket, and means for shifting the clutch member into engagement with the clutch part whereby the protecting means for the guiding slot and socket is moved during the rotation of the clutch member while the lug thereon is passing through the guiding slot prior to its entrance into the socket, and resilient means acting upon said clutch member for forcing the same into engagement with the clutch part.

5. In a device of the character described, the combination with a shaft, a sliding clutch member having a lug

thereon carried by the shaft and rotatable therewith, a clutch plate arranged adjacent the sliding clutch member and having in its face a guiding slot leading to a socket, a closure overlying said slot and socket, and means for shifting the clutch member into engagement with the clutch plate whereby the closure is gradually moved during the passage of the lug on the clutch member through the slot to allow the lug to enter the socket after the same has traveled through the slot.

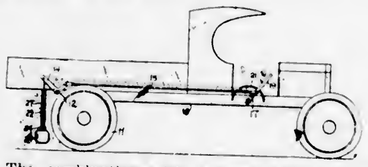
[Claims 6 to 19 not printed in the Gazette.]

1,220,321. DEVICE FOR EXPANDING AND CONTRACTING DEMOUNTABLE RIMS. CHARLES F. CORBETT, Clear Spring, Md. Filed Oct. 14, 1915. Serial No. 55,892. (Cl. 157—1.)



In a rim spreader, the combination with clamps for engaging the adjacent ends of a split rim, of toggle mechanism for operating the clamps consisting of links connected to the clamps, a lever connecting the links, and a fulcrum projection engaging one end of the rim during the expanding movement of the links to hold the said rim end down and permitting the opposite rim end to rise freely.

1,220,322. TRUCK-BLOCKING DEVICE. PETER J. CUNNINGHAM, Battle Mountain, Nev. Filed Sept. 20, 1916. Serial No. 121,256. (Cl. 21—8.)



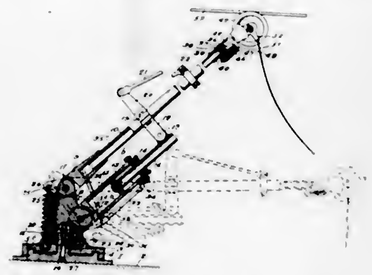
1. The combination with a truck having wheels, of guide members mounted on the truck, chocking blocks having flexible connections passing through said guide members, rocking members to which the flexible connections are connected, and manually operable means for rocking said members including a lever disposed adjacent the driver's seat.

2. The combination with a truck, of a rock shaft mounted on the truck having rearwardly extending arms, chains depending from said arms, guides through which said chains pass mounted upon the body of the truck, chocking blocks supported by said chains in operative relation to the wheels, a lever mounted on the truck, and an operative connection between said lever and said shaft.

3. The combination with a truck, of L-shaped guides mounted upon the bottom of the truck and projecting laterally therefrom rearward of certain wheels of the truck, the laterally projecting portions of the guides being slotted, a rock shaft mounted upon the truck and having a rearwardly extending arm on one end and a bell crank on the other, a pair of flexible connections extending from the rearwardly extending arm and from the bell crank passing down through said guides, chocking blocks attached to the flexible connections, a lever mounted upon the truck, and a connecting rod between said lever and the bell crank.

4. In a truck including a pair of wheels, chocking blocks supported for vertical movement behind said wheels, means for vertically shifting the chocking blocks into or out of operative position, and flexible members wrapped a plurality of times around the chocking blocks.

1,220,323. PNEUMATIC RETRIEVING-TROLLEY. ALBERT M. EATON, Santa Monica, Cal. Filed Sept. 27, 1915. Serial No. 52,959. (Cl. 191—90.)



1. A base, a trolley pole pivoted to the base, a cylinder pivoted to the base below the trolley pole, a double-acting piston in the cylinder and connected to the trolley pole, pneumatic means for balancing the piston, said pneumatic means including a valve which opens when the trolley pole flies up.

2. A base, a trolley pole pivoted to the base, a cylinder pivoted to the base below the trolley pole and substantially parallel therewith, a double-acting piston in the cylinder and connected to the trolley pole, pneumatic means for balancing the piston, said pneumatic means including a valve held closed by the resistance to the up-pressure of the trolley pole and adapted to fly open when this resistance ceases, thereby unbalancing the piston and lowering the trolley pole.

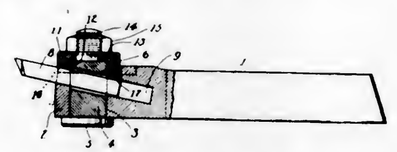
3. A base, a trolley pole pivoted to the base, a cylinder pivoted to the base, a double-acting piston in the cylinder and connected to the trolley pole, pneumatic means for balancing the piston, a trolley, a harp pivotally connecting the trolley to the trolley pole, said pneumatic means including a valve held closed by the harp when the trolley is against a trolley wire, said valve flying open when the trolley leaves the wire, thereby unbalancing the piston and lowering the trolley pole.

4. A cylinder, a piston working therein and subject to air pressure on its opposite faces; said faces being unequal; means to supply air pressure to the smaller of said faces; restricted means to supply air to the larger face of the piston and means to release air from the larger face of the piston so that the air pressure on the smaller face may move the piston in one direction when the air is released; and whereby the air pressure on the larger face may move the piston in the other direction when the air is confined.

5. The combination with a standard of a trolley pole arm pivoted to the standard; a cylinder pivoted to the standard; a piston working in the cylinder and having unequal faces; means to supply air pressure to the smaller face of the piston to depress the arm; means to apply air pressure to the larger face of the piston to move the piston toward its smaller face to raise the arm; a relief valve to release air from the larger face; a trolley harp pivoted to the arm and connected to open the valve when unrestrained; and means to close the valve when the trolley harp is restrained.

[Claims 6 and 7 not printed in the Gazette.]

1,220,324. TOOL-HOLDER. EMORY E. ELLIS, Orange, Mass. Filed Dec. 18, 1915. Serial No. 67,686. (Cl. 29—98.)



1. A tool holder comprising a shank and an immovable head thereon having a bore therethrough and a plurality of diametrical recesses intersecting said bore, providing sockets to receive and embrace the tool on opposite sides and near each end thereof, a tool post rotatably mounted in said bore and having a tool receiving opening therethrough adapted to be registered with any of said recesses, and a member on said post having portions disposed on opposite sides of its under face and arranged for positioning over said recesses of the head to engage the tool near opposite ends thereof.

2. A tool holder comprising a shank with a body part having a bore therethrough and a plurality of recesses intersecting said bore, providing sockets to receive and embrace the tool on opposite sides and near each end thereof, a tool post rotatably mounted in said bore and having a tool receiving opening therethrough adapted to be registered with said recesses and a locking member surmounting said body and having a radial cutout and a depending lug on opposite sides of its under face disposed for positioning over any of said recesses of the head to engage the tool near opposite ends thereof.

3. A tool holder comprising a shank having an immovable head, said head having a transverse bore therethrough and a plurality of radially arranged counter sunk recesses intersecting said bore, providing sockets to receive and embrace the tool on opposite sides and near each end thereof, a tool post rotatably mounted in said bore and having a tool receiving opening therethrough adapted to be registered with any of said recesses, and a locking collar on said post surmounting said head and having a radial cutout and a depending lug on diametrically opposite sides of its under face disposed for positioning over a pair of alined recesses of the head with the side walls of said cutout engaging the sides of the tool near one end and the sides of said lug abutting the side walls of the recess receiving the opposite end of the tool.

4. In a tool holder, a shank with a rigid head having a pair of diametrically opposite recesses, and a member having portions at diametrically opposite sides thereof disposed for clamping engagement with a tool held in said recesses, one of said portions entering a contiguous recess to interlock the head and said member.

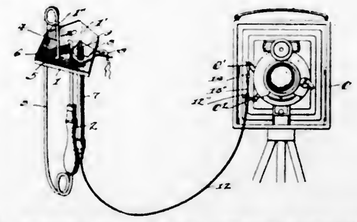
5. In a tool holder, a shank with a rigid head having a bore and a pair of opposite radial recesses intersecting the bore, and having inclined seating faces to dispose a tool obliquely to the axis of the bar, a tool post in said bore having a socket registrable with said recesses, and a member surmounting said head and having shoulders at opposite sides thereof disposed for locking engagement near each end of a tool held in said socket and recesses.

[Claims 6 to 10 not printed in the Gazette.]

1,220,325. FLASH-LIGHT AND CAMERA-SHUTTER SYNCHRONIZER. CLARENCE A. ELLSWORTH, Denver, Colo., assignor of one-half to Harry C. Rubincam, Denver, Colo. Filed Nov. 5, 1915. Serial No. 59,813. (Cl. 67—29.)

1. A device of the character described comprising, in combination with an illuminant and a shutter-release mechanism of a camera, a normally restrained operating member connected to said mechanism and adapted when released to open the shutter, and means whereby the heat of the illuminant may release said member.

2. A device of the character described comprising, in combination with an illuminant and a shutter-release mechanism of a camera, a member for actuating said mechanism to open the shutter, an element normally holding said member in inoperative position, said element being destructible by the heat of the illuminant, whereby said member is released.



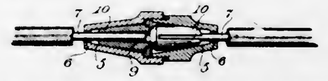
3. A device of the character described comprising, in combination with a shutter-release mechanism of a camera, and an illuminant, a tensioned operating member for said shutter release mechanism and normally adapted to open the shutter, and an element engaging said member and holding it in inoperative position, said element being destructible by the heat of the illuminant, whereby said member is allowed to assume its operative condition.

4. In a flash light device attachable to a powder pan, a shutter release mechanism attached to said device and having an operating member adapted to open the shutter and to be held in inoperative position by an element destructible by the heat of the powder when ignited.

5. A device of the character described comprising, in combination with a shutter release mechanism of a camera, an illuminating device in combination with means for causing an ignition of the illuminant, and a normally restrained member for actuating said operating mechanism to open the shutter, said member being adapted for liberation by the heat of the illuminant.

[Claims 6 to 10 not printed in the Gazette.]

1,220,326. CONNECTING DEVICE. ARTHUR H. FARGO, Wilmington, Del., assignor, by mesne assignments, to Charles Tremain. Filed Apr. 10, 1914. Serial No. 831,009. (Cl. 173—303.)



1. A connecting device, comprising members having sockets therein, said sockets being tapered and having their larger ends disposed adjacent to each other, a plurality of tapered plugs adapted to surround the adjacent portions of a plurality of wires and to cooperate with the surfaces of the respective sockets of said members with their larger ends abutting each other, and means whereby said members may be adjusted relatively.

2. A connecting device comprising a body including companion members having alining sockets therein, the said sockets being tapered and having their larger ends disposed adjacent to each other, a pair of tapered plugs adapted to be connected with the adjacent ends of a plurality of wires and to be mounted within and coöperate with the walls of the respective sockets of the body members with their larger ends abutting each other, the said members being provided in their outer ends with openings receiving the said wires, the inner end of one body member being externally threaded, and an internally threaded flange formed upon the inner end of the opposite member for engagement with the threaded portion of the first member.

3. A connecting device comprising a body including companion members having alining sockets therein, the said sockets being tapered and having their larger ends disposed adjacent to each other, a pair of tapered plugs

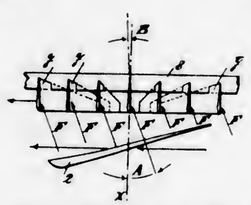
adapted to be connected with the adjacent ends of a plurality of wires and to be mounted within the respective sockets of the body members with their larger ends abutting each other, the said members being provided in their outer ends with openings receiving the said wires, the inner end of one body member being externally threaded, an internally threaded flange formed upon the inner end of the opposite member for engagement with the threaded portion of the first member, and means for securing each plug against rotation within the receiving socket.

4. A connecting device comprising a body including companion members having alining sockets therein, the said sockets being tapered and having their larger ends disposed adjacent to each other, a pair of tapered plugs adapted to be connected with the adjacent ends of a plurality of wires and to be mounted within the respective sockets of the body members with their larger ends abutting each other, the said members being provided in their outer ends with openings receiving the said wires, the inner end of one body member being externally threaded, and an internally threaded flange formed upon the inner end of the opposite member for engagement with the threaded portion of the first member, each plug and the receiving socket being elliptical in transverse section.

5. A connecting device, comprising members having tapered sockets therein, a plurality of tapered plugs respectively adapted to surround the adjacent portions of a like number of bodies and to be mounted within and coöperating with the surfaces of the respective sockets of said members with their larger ends abutting each other, and means by which said members may be adjusted relatively.

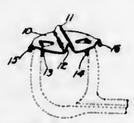
[Claims 6 to 8 not printed in the Gazette.]

1,220,327. DEVICE FOR INCREASING THE OUTPUT OF SCREW-PROPELLERS. ANGELO GLISSENTI, Brescia, Italy. Filed Jan. 12, 1916. Serial No. 71,640. (Cl. 170—156.)



A main propeller, mounted on a revolving shaft, a hollow shaft rotatably mounted on said shaft, a hub supporting both said shafts, and a paddle-wheel mounted on the said hollow shaft in front or behind said main screw propeller, to be set in movement by the jets of air caused by the rotation of said main screw propeller.

1,220,328. PIPE-COVER. BERNARD GRANVILLE, New York, N. Y. Filed Mar. 30, 1916. Serial No. 87,731. (Cl. 131—12.)



1. As a new article of manufacture, a pipe cover embodying therein a plate having an upwardly directed loop portion formed integrally therewith and extending diametrically thereacross, said loop being open at the ends and the sides thereof being spaced apart whereby a draft flue is formed, and a plurality of downwardly directed prongs extending from said plate on opposite sides of said loop and adapted to be forced by the elasticity of the loop into frictional engagement with the bowl of a pipe.

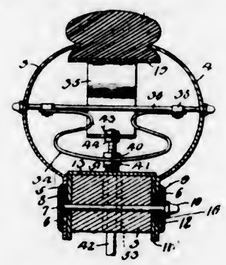
2. As a new article of manufacture, a pipe cover embodying therein a plate having an upwardly directed loop portion formed integrally therewith and extending diametrically thereacross, said loop being open at the ends and the sides thereof being spaced apart whereby a draft flue is formed, and a plurality of downwardly directed prongs extending from said plate on opposite sides of said loop and adapted to be forced by the elasticity of the loop into frictional engagement with the bowl of a pipe, the material of said loop being drawn to less thickness and greater elasticity than the material of said plate and prongs.

3. As a new article of manufacture, a pipe cover embodying therein a plate having an upwardly directed loop portion formed integrally therewith and extending diametrically thereacross, said loop being open at the ends and the sides thereof being spaced apart whereby a draft flue is formed, and a plurality of downwardly projecting prongs stamped from said plate upon opposite sides of said loop and adapted to be forced by the elasticity of the loop into frictional engagement with the bowl of a pipe, the openings in the plate adjacent said prongs forming draft openings supplemental to the flue formed by said loop.

4. As a new article of manufacture, a pipe cover embodying therein a plate having an upwardly directed loop portion formed integrally therewith and extending diametrically thereacross, said loop being open at the ends and the sides thereof being spaced apart whereby a draft flue is formed, and a plurality of downwardly directed prongs stamped from said plate on opposite sides of said loop and adapted to be forced by the elasticity of the loop into frictional engagement with the bowl of a pipe, the material of said loop being relatively thinner and more elastic than the material of said plate and said prongs.

5. As a new article of manufacture, a pipe cover embodying therein a plate having an upwardly directed spring loop portion formed integrally therewith and extending diametrically thereacross, and a plurality of downwardly projecting prongs stamped from said plate on opposite sides of said loop and adapted to be forced by the elasticity of the loop into frictional engagement with the bowl of a pipe, the material of said loop being drawn to less thickness and greater elasticity than the material of said plate and prongs.

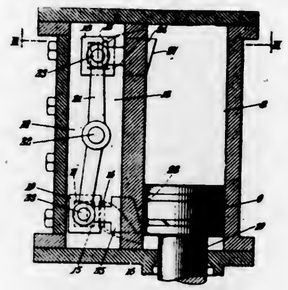
1,220,329. SPRING-WHEEL. CELESTIN GUILMART, Goshen, Conn. Filed June 22, 1915. Serial No. 35,597. (Cl. 152—38.)



1. In a spring wheel, the combination with a wheel felly, of a flexible sheet steel tubular rim divided longitudinally into approximately semi-cylindrical twin sections, means connecting the sections of said tubular rim to the felly to admit of the bodily movement of the rim in relation to the felly, a resilient tire held between the outer edges of the rim sections, flexible rim sustaining rods having a positive connection with said rim, and rod sustaining spring arms fastened to and extending transversely of the felly.

2. In a spring wheel, the combination with a wheel felly, of a flexible sheet steel tubular rim divided longitudinally into approximately semicylindrical twin sections, means connecting the sections of said tubular rim to the felly to admit of the bodily movement of the rim in relation to the felly, a resilient tire held between the outer edges of the rim sections, rim-sustaining rods, spring arms supporting said rods, and tire supporting springs operating in supplemental relations to the rim-sustaining rods and spring arms.

1,220,330. VALVE-GEAR. JAMES HAMILTON, Brooklyn, N. Y., assignor to Hamilton Hammer Company, Inc., New York, N. Y., a Corporation of New York. Filed Sept. 30, 1915. Serial No. 53,293. (Cl. 121—19.)



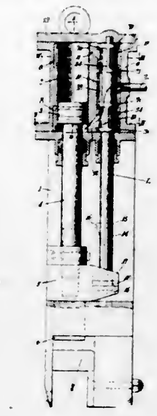
1. A valve gear comprising a cylinder, a piston therein, a valve chest connected to the said cylinder, a slide valve at each end of said valve chest, an operating lever connecting said valves together, a pivot for said lever midway its ends, and a valve operating cam connected to each valve and extending into the cylinder and adapted to be engaged by the piston as it nears the end of its stroke in either direction.

2. A valve gear comprising a cylinder, a piston therein, a valve chest connected to the said cylinder, a slide valve at each end of said valve chest, means at each end of the valve chest connected to the slide valve and extending into the path of the piston, and means connecting the two slide valves together to cause them to move in opposite directions when either of the valve operating means is engaged by the piston.

3. A power hammer comprising a frame, a power cylinder mounted at the upper end of said frame, a freely rotatable reciprocating piston in said cylinder, a piston rod extending downwardly from said piston, a valve chest connected to the cylinder, a slide valve at each end of said chest, a valve operating cam connected to each valve and extending into the cylinder and adapted to be engaged by the piston as it nears the end of its stroke, means connecting the two slide valves together to cause them to move in opposite directions when either cam is engaged by the piston, and a vertically disposed cylindrical hammer rigidly attached to the lower end of said piston rod so as to rotate and reciprocate therewith, the sides of said frame having concave vertical guideways in which the cylindrical freely rotatable hammer is adapted to reciprocate.

1,220,331. VALVE-GEAR FOR POWER-HAMMERS. JAMES HAMILTON, Brooklyn, N. Y., assignor to Hamilton Hammer Company, Inc., New York, N. Y., a Corporation of New York. Filed Feb. 1, 1916. Serial No. 75,487. (Cl. 121—19.)

1. A valve gear comprising a cylindrical valve-chamber provided with ports, a cylindrical valve therein formed with supply and exhaust passages at one side thereof, a pressure chamber opposite said passages, means for supplying fluid under presure to the pressure chamber and supply passages, a valve rod extending through a passage in said valve and having a loose driving connection with the valve whereby said valve rod is adapted to operate said valve and the valve is capable of lateral movement independently of the rod, and means for imparting a rotary oscillatory movement to the valve rod.



2. A valve gear comprising a cylindrical valve chamber provided with a port at each end, a cylindrical valve therein formed with a central annular supply chamber, an exhaust and a supply passage at each end of the valve at one side thereof, and a pressure chamber at each end of the valve opposite the supply and exhaust passages, the supply passages and pressure chambers being connected at their inner ends with the supply chamber, a valve rod extending through said valve, means for oscillating the valve rod, and means for connecting the valve to oscillate with the valve rod and to have an independent lateral movement.

3. A valve gear comprising a cylindrical valve chamber provided with a port at each of its ends, a cylindrical valve therein formed with annular bearing flanges and with longitudinally extending bearing flanges between said annular flanges to form exhaust and supply passages at each end of the valve and a supply chamber midway the ends of the valve, the supply passages being in communication with said supply chamber, said valve being slotted longitudinally, a non-circular valve rod extending through said valve chamber and the slot in the valve whereby the valve may have a lateral movement on the valve rod, and means for giving to the valve rod a rotary oscillatory movement.

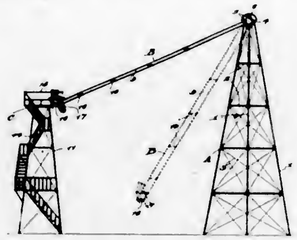
4. A valve gear comprising a cylindrical valve chamber provided with a port at each of its ends, a cylindrical valve therein formed with annular bearing flanges and with longitudinally extending bearing flanges between said annular flanges to form exhaust and supply passages at each end of the valve and a supply chamber midway the ends of the valve, the supply passages being in communication with said supply chamber, said valve being slotted longitudinally from end to end, said slot extending inwardly from a point directly opposite the longitudinally extending bearing flanges, a valve rod rectangular in cross section extending through the valve chamber and through the slot in the valve whereby the valve may have a lateral movement on the valve rod to maintain the bearing flanges seated, and means for giving to the valve rod a rotary, oscillatory movement.

5. A valve gear comprising a cylindrical valve chamber provided with a port at each of its ends, a cylindrical one-piece valve therein formed with integral annular bearing flanges at its ends and with integral annular bearing flanges a suitable distance from each of its ends, said latter flanges forming a central annular supply chamber, three integral longitudinally extending bearing flanges at each end of the valve and forming with the annular flanges an exhaust passage and a supply passage at each end of the valve, the supply passages being connected at their inner ends to the supply chamber, said valve being

slotted longitudinally from end to end, a valve rod noncircular in cross section fitting the slot in the valve and extending through the said valve chamber, whereby the valve may move laterally on the valve rod independently thereof, and means for giving to said rod a rotary oscillatory movement.

[Claim 6 not printed in the Gazette.]

1,220,332. GIANT SWING. FREDERICK E. HAPPEL, Ballston, Va. Filed Mar. 27, 1916. Serial No. 87,094. (Cl. 155—35.)



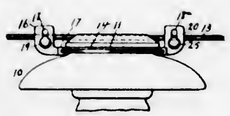
1. The combination of swing supporting mechanism, a swing chair member, means for suspending the swing chair member and maintaining the seat in a constantly horizontal position, an apertured elevated starting platform, and means for locking the chair member to and releasing it from the aforesaid platform.

2. Swing supporting mechanism, a swing chair, rods suspending and having a pivotal relation to the chair seat to maintain it in horizontal position, means for confining the oscillation of the swing chair within established limits, an apertured elevated starting platform, slidable locking and releasing means mounted on the platform and adapted to engage or release the chair at will.

3. In a swing apparatus, the combination with swing-supporting mechanism, a swing chair member, pivoted means for supporting the chair seat in horizontal position, an apertured elevated starting platform, means for locking the chair to and releasing it from the platform, said means including slidable bars mounted on the elevated platform and arranged to be thrown into or out of engagement with the chair member, a sliding bar arranged transversely to the aforesaid bars and having offset portions adapted to operate the slidable bars, a lever, and means operatively connecting the lever with the sliding bar having the offset portions, substantially as set forth.

4. In swing apparatus, the combination of a swing-supporting framework having parallel swing-supporting rods, means for suspending a swing chair therefrom and keeping its course to that of a true arc throughout its oscillation, a chair member, means for suspending same, locking members secured to the chair supporting mechanism, arranged to slide into or out of engagement with the chair lock members, lever controlled means for operating the swing-locking and releasing mechanism mentioned, and means for adjusting the position of the platform with relation to the swing chair, substantially as and for the purposes set forth.

1,220,333. INSULATOR-CLAMP. EDWIN G. HATCH, Hoboken, N. J. Filed May 19, 1916. Serial No. 98,502. (Cl. 173—313.)



1. An insulator clamp comprising a neck member adapted to fit the neck of an insulator, opposed clamping members at the ends of the neck member adapted to fit a line wire, and a second pair of clamping members slidable on the neck member and also adapted to fit a line wire.

2. An insulator clamp comprising a neck member adapted to fit an insulator neck, means at the ends of the neck member for clamping a line wire extending across the top and closing the neck member, and means slidable on the neck member for engaging the line wire.

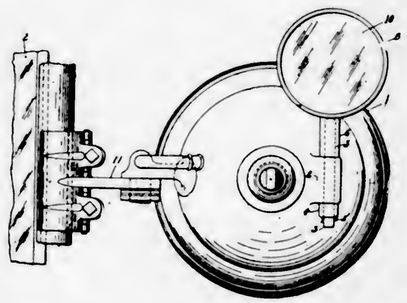
3. An insulator clamp comprising a neck member adapted to fit the neck of an insulator, clamping members at the ends of the neck member rising from said neck member and adapted to engage and clamp a line wire and also close the neck member, and a second set of clamping members slidable on the neck member and rising therefrom, said second clamping members being adapted to engage a line wire.

4. An insulator clamp comprising a neck member adapted to fit the neck of an insulator, closing and clamping members at the ends of the neck member, said clamping members having vertically adjustable means for engaging a line wire, and a second set of clamping members carried by the neck member and also having vertically adjustable means for engaging the said line wire.

5. An insulator clamp comprising a neck member adapted to fit the neck of an insulator, opposed clamping members at the ends of the neck member having recessed inner portions to fit over a line wire, means for fastening the clamping members together, and a second set of clamping members slidable on the neck member and shaped to engage the aforesaid line wire.

[Claim 6 not printed in the Gazette.]

1,220,334. VEHICLE-LAMP. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Filed June 26, 1916. Serial No. 105,787. (Cl. 240—2.)



1. A lamp, a bracket therefor adapted to attach said lamp to an edge of a support, said lamp and bracket being bodily invertible for attachment to the opposite edge of the support, a lateral bearing on said lamp, and a member reversibly and invertibly mounted in said bearing for supporting a mirror above the horizontal axis of the lamp in either position of the lamp.

2. A lamp, a bracket therefor adapted to attach said lamp to a vertical edge of the wind shield of an automobile, said lamp and bracket being bodily invertible for attachment to the opposite edge of the windshield, a bearing on said lamp having an axial opening and a member adapted for insertion through either end of said bearing and wholly removable therefrom for purposes of reversal and adapted to support a mirror above the horizontal axis of the clamp in either position of the lamp.

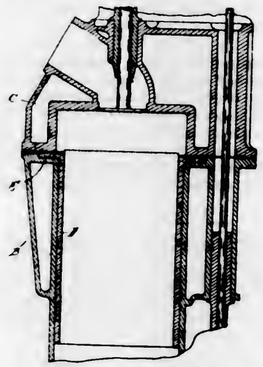
3. A lamp having a bearing, a member rotatably mounted in said bearing and supporting a mirror at one end thereof, said member being removable from said bearing and insertible from the opposite end thereof.

4. In combination with a lamp having a lateral lug, a mirror supporting stem reversibly mounted in said lug, resilient means for exerting tension on said stem, and a mirror carried by said stem.

5. In combination with a lamp having a lateral lug, a mirror supporting stem reversibly mounted in said lug, a shell about said stem, a spring concealed within said shell and providing a frictional means to exert tension on said stem, a frame holder disposed about said stem, and having an upright extension, a mirror frame permanently secured to said extension, and a mirror mounted in said frame.

[Claims 6 and 7 not printed in the Gazette.]

1,220,335. ENGINE. JOHN O. HEINZE, Jr., of Detroit, Mich., assignor to General Motors Company, Detroit, Mich., a Corporation of New Jersey. Filed Jan. 14, 1914. Serial No. 811,993. (Cl. 123—193.)



1. In an engine, a casing comprising a plurality of cylinders cast *en bloc* from a relatively light material, such as aluminum, a bushing for each of said cylinders formed of a harder material, a detachable head for said cylinders, and a plate of a harder material arranged between said cylinders and detachable head, forming an anchoring means for said bushing and a seat for the valves.

2. In an engine, the combination with a plurality of cylinders cast *en bloc* from a relatively light material, such as aluminum, of a bushing for each of said cylinders formed of a harder material, such as steel, a detachable head for said cylinders, and a facing plate of the harder material arranged between said cylinders and cap or head and forming the valve seats.

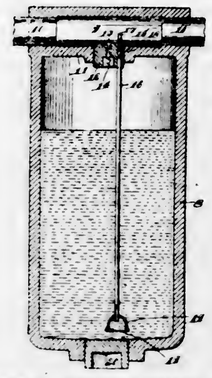
3. In an engine, the combination of a plurality of cylinders cast *en bloc* from a relatively light material, such as aluminum, and including a water jacket and a portion of the crank case, a bushing for each of said cylinders formed of a harder material, such as steel, a water jacketed head for said cylinders formed of the same light material and detachably secured thereto, and a facing plate of the harder material arranged between said head and the cylinders and forming the valve seats.

4. In an engine, the combination with a plurality of cylinders, cast from a relatively light material, of a bushing for each of said cylinders formed of a harder material, a detachable head for said cylinders, and a facing plate of the harder material arranged between said cylinders and head and forming valve seats.

5. In an engine, the combination with a cylinder and an integral water jacket formed of a relatively light material such as aluminum, a bushing for said cylinder formed of a harder material and a valve seat also formed of the harder material and secured in position with reference to the bushing by the portion of the engine formed of the lighter material.

1,220,336. FLUID-PRESSURE SYSTEM. HARRY H. HORNSBY, Chicago, Ill. Filed Apr. 20, 1916. Serial No. 92,382. (Cl. 137—70.)

1. The method of preventing clogging of an air system which consists in introducing thereinto substantially constant quantities of a clog-preventing agent, substantially as described.



2. The method of preventing clogging of a compressed air system which consists in introducing thereinto substantially constant quantities of a clog-preventing agent under varying pressures in said system, substantially as described.

3. The method of preventing formation of ice or frost in an air system which consists in introducing thereinto substantially constant quantities of a freezing-preventing agent, substantially as described.

4. The method of preventing formation of ice or frost in a compressed air system which consists in introducing thereinto substantialy constant quantities of a freezing-preventing agent under varying pressures in said system, substantially as described.

5. The combination with an air system, of means for introducing thereinto substantially constant quantities of a clog-preventing agent, substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

1,220,337. LADDER. SARAH HORNTHAL, New York, N. Y. Filed Mar. 16, 1916. Serial No. 84,507. (Cl. 228—14.)



1. In a collapsible ladder, ladder sides and steps therebetween, the rear of each step pivotally and slidably engaging the ladder sides, and pivotal connections upon the ladder sides supporting the front of the steps.

2. In a collapsible ladder, ladder sides and steps therebetween, the rear of each step pivotally and slidably engaging the ladder sides, and a pivotal connection upon the ladder sides positively supporting the front of the steps and means to slide the rear of the steps upon the ladder sides.

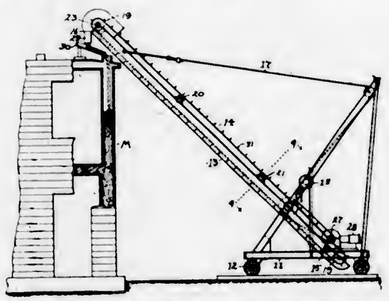
3. In a step ladder, ladder sides, steps therebetween, studs upon the rear sides of the steps, grooves in the ladder sides slidably receiving said studs, links pivoted at one end to the front of the steps and at the other end to the ladder sides.

4. In a step ladder, ladder sides, steps therebetween, studs upon the rear sides of the steps, grooves in the ladder sides slidably receiving said studs, links pivoted at one end to the front of the steps and at the other end to the ladder sides, and means to slide the steps in the grooves to collapse the ladder.

5. In a step ladder, ladder sides, steps therebetween, studs upon the rear sides of the steps, grooves in the ladder sides slidably receiving said studs, links pivoted at one end to the front of the steps and at the other end to the ladder sides, and operating rods upon the exterior of the ladder sides, and connections between the steps and the rods pivoted to the rear of the step sides.

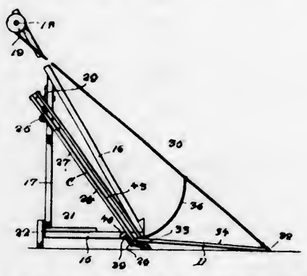
[Claim 6 not printed in the Gazette.]

1,220,338. MIXING AND TRANSPORTING CONCRETE. DUDLEY S. HUMPHREY, Cleveland, Ohio. Filed June 1, 1915. Serial No. 31,382. (Cl. 83—73.)



The process of forming concrete which consists primarily in mixing the sand, gravel, cement and other possible ingredients with saturation to produce a semi-liquid or free flowing mixture adapted ultimately to be poured and to be self-distributing to horizontal levels substantially like a liquid substance; then entraining the mixture in a continuous stream up an incline for a greater or less distance to its discharge and at the same time further mixing and improving the quality of the mixture by causing small portions thereof to flow backward or retrogressively at given intervals in and against the main ascending stream while the stream itself, as a whole is moving forward to its point of delivery.

1,220,339. HAY-LOADER. JACOB F. HUTCHINSON, Springville, Utah. Filed July 3, 1915. Serial No. 37,984. (Cl. 57—53.)



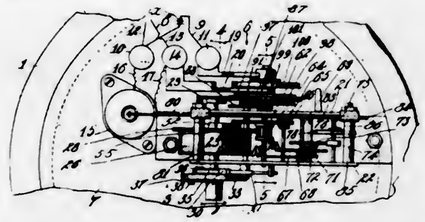
1. In a loading apparatus of the class described, a main frame, a guide frame supported in an inclined position, said guide frame having spaced slats, and a lifting platform having spaced slats engaging the interspaces between the slats of the guide frame.

2. In a loading apparatus of the class described, a main frame having transporting wheels, sills and uprights, an inclined guide frame connected adjustably at its upper end with the uprights of the main frame and having its lower end normally supported on the ground between the sills, and clamp means carried by the guide frame and adapted to engage the uprights of the main frame when the guide frame is raised from the ground for transportation of the machine.

3. In a loading apparatus of the class described, a main frame, an inclined guide frame connected therewith, said guide frame being relatively stationary, and a movably supported carrier frame, said guide frame and carrier frame having spaced slats, the slats of each frame engaging the interspaces between the slats of the other frame.

4. In a loading apparatus, a main frame including inclined uprights and vertical props, a shaft mounted for rotation in the upper ends of the uprights, an inclined guide frame, a movably supported carrier frame, drums carried by the shaft, cables connecting said drums with the forward corners of the carrier frame, slack ropes connecting said cables with the rearward corners of the carrier frame, and means for rotating the drum carrying shaft.

1,220,340. TIME-SERVICE-CONTROLLING MECHANISM. JOSEPH R. JACKSON and FRANCIS HARLEY DAVIS, Memphis, Tenn., assignors, by mesne assignments, to William H. Thompson, Memphis, Tenn. Filed Nov. 14, 1912, Serial No. 731,324. Renewed Aug. 21, 1916. Serial No. 116,192. (Cl. 161—27.)



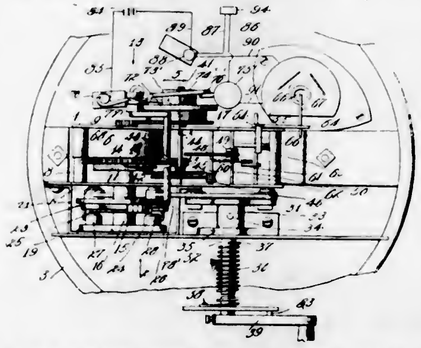
1. In apparatus of the character described, clockworks comprising a winding arbor and a running arbor, a contact disk rotatably mounted upon the running arbor and insulated therefrom and provided near its periphery with an insulating member, gearing connecting the winding arbor and contact disk whereby the disk is turned in one direction upon the rotation of the winding arbor, a contact hub rotatably mounted upon the running arbor upon one side of the contact disk and insulated from the running arbor and the contact disk, connecting means between the contact hub and the running arbor, an arm connected with the contact hub to rotate therewith, a contact carried by the arm and contacting with the periphery of the contact disk to engage with the insulating member carried thereby, a second contact hub electrically connected with the contact disk, contact members permanently contacting with the contact hubs, a circuit connected with the contact-members, and automatic means to arrest the turning movement of the winding arbor before it effects a complete revolution of the contact disk.

2. In apparatus of the character described, clockworks comprising a winding arbor and a running arbor, a contact disk rotatably mounted upon the running arbor and insulated therefrom and provided upon its outer portion with an insulating member, gearing connecting the winding arbor and contact disk whereby the disk is turned in one direction upon the rotation of the winding arbor, a contact hub carried by the running arbor and insulated therefrom, connecting means between the running arbor and the contact hub, an arm connected with the contact hub to rotate therewith, a contact carried by the arm and contacting with the outer portion of the contact disk to be brought into contact with the insulating member thereof, a second contact hub electrically connected with the contact disk, contact members permanently contacting with the contact hubs, and a circuit connected with the contact members.

3. In apparatus of the character described, clockworks, comprising a winding arbor and a running arbor, a rotatable contact member, gearing connecting the contact member and the winding arbor whereby the contact member is turned upon the rotation of the winding arbor, a co-acting contact member arranged near the first named contact member and adapted to partake of a turning movement with relation thereto, means whereby the second named contact member is operated by the running arbor, and means to arrest the turning movement of the winding arbor before the first named contact member has been turned thereby for a complete revolution.

4. In apparatus of the character described, clockworks, means to wind the clockworks, a rotatable pursued contact connected with and driven by the winding means, a rotatable pursuing contact coöperating with the pursued contact and driven by the clockworks, and means to arrest the operation of the winding means before it has turned the rotatable pursued contact for a complete revolution.

1,220,341. MAKE-AND-BREAK CONTROLLING DEVICE. JOSEPH R. JACKSON and FRANCIS HARLEY DAVIS, Memphis, Tenn., assignors, by mesne assignments, to William H. Thompson, of Memphis, Tenn. Filed Nov. 14, 1912, Serial No. 731,325. Renewed Aug. 21, 1916. Serial No. 116,193. (Cl. 161—27.)



1. In a make and break device controlling means, an electrical make and break device comprising a pair of coacting elements, clock work connected to operate one of said elements, winding means for said clock work, and a device for opening circuit during operation of said winding means, substantially as described.

2. In a make and break controlling means, an electrical make and break device, clock work for operating said make and break device, winding means for said clock work, and mechanism actuated by said winding means prior to transmission of winding movement to said clock work for opening circuit during completion of the winding movement, substantially as described.

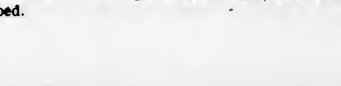
3. In a make and break device controlling means, an electrical make and break device, clock work for operating said make and break device, winding means for said clock work, and spring controlled mechanism actuated by said winding means prior to transmission of winding movement to said clock work for opening the circuit during the winding movement, substantially as described.

4. In apparatus of the character described, clockworks, means to wind the clockworks, a cam element associated with winding means to be operated thereby, a rock shaft provided with an operating crank to contact with the cam and having a lifting crank, a movable contact member having an extension, a relatively stationary contact-member normally contacting with the extension of the movable contact-member and adapted to be shifted by the lifting crank to break the contact upon the operation of the winding means, a contact device arranged in coöperative relation with the movable contact-member, and means for driving the movable contact-member by the clockworks.

5. In apparatus of the character described, clockworks, means to wind the clockworks, a rotatable contact-member connected with the clockworks to be driven thereby, a current supplying contact normally contacting with a portion of the rotatable contact-member, automatic means to move the current supplying contact out of contact with the portion of the rotatable contact-member upon the operation of the winding means, and a co-acting contact-member arranged near the rotatable contact-member.

[Claim 6 not printed in the Gazette.]

1,220,342. CLOSING DEVICE FOR ELECTRIC CIRCUITS. WILLIAM A. KILMER, De Kalb, Ill., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a corporation of New Jersey. Filed Jan. 2, 1914. Serial No. 809,915. (Cl. 177—311.)



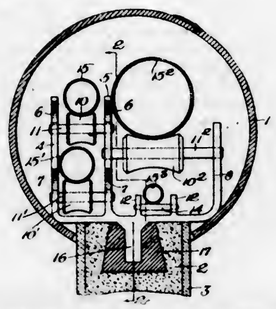
1. In a device of the class described, the combination of machine elements and an endless chain driven by said elements, lugs on said chain, a loosely mounted rotatable disk adapted for engagement with said lugs, projections on said disk, a signal circuit and an operating circuit and a switch for controlling each of said circuits, said switches being located in proximity to the projections on said disk, the projections and switches being so located as to cause closing of said signal circuit before closing said operating circuit, substantially as described.

2. In a device of the class described, the combination of machine elements, an endless chain driven by said elements, lugs removably secured to said chain, a disk having at least two lugs and so located that one of said last named lugs is certain to be engaged by one of said lugs on said chain during substantially 180° of movement around a center, a plurality of switches controlling a plurality of circuits, projections on said disk, said switches and projections being so positioned as to cause actuation of said switches during substantially 180° of movement of said disk, substantially as described.

3. In a device of the class described, the combination of an endless chain, a plurality of lugs removably secured to said chain, a disk having a plurality of lugs on one side and a plurality of projections on the other side, a plurality of switches adapted for actuation by the projections on said disk, the projections on said disk and said switches being so arranged as to cause actuation of said switches in sequence and to cause said switches to be actuated during substantially 180° of movement of said disk, substantially as described.

4. In a device of the class described, the combination of an endless chain, a sprocket around which said chain is caused to travel, a wheel mounted on the same center with said socket and independently rotatable relatively thereto, at least two lugs on one side of said wheel and at least two projections on the other side of said wheel, a plurality of lugs removably secured to said chain and adapted to contact the lugs on said wheel in sequence, a signal circuit and an operating circuit, switches controlling said circuits and located in proximity to the projections on said wheel, whereby said switches are caused to be actuated in sequence and both said switches are caused to be actuated by a rotation of said wheel of substantially 180° under the action of one of the lugs on said chain, substantially as described.

1,220,343. PIPE-SUPPORTING FRAME. RICHARD D. KIMBALL, Medford, Mass. Filed Feb. 17, 1916. Serial No. 78,985. (Cl. 137—75.)



1. A pipe-supporting frame comprising upwardly extending branches provided with opposed notches extending in a downward direction into the branches and tapering toward their lower ends, and a pipe carrying shaft wedged into and supported by said tapering notches.

2. A pipe-supporting frame comprising upwardly extending branches provided with opposed notches extending in a downward direction into the branches and tapering toward their lower ends, a pipe-carrying shaft wedged into and supported by said tapering notches, and a roller mounted on said shaft.

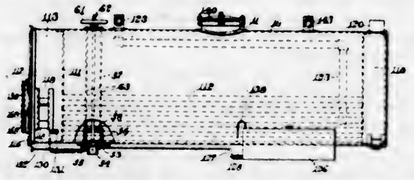
3. A pipe-supporting frame comprising upwardly extending branches provided with opposed notches extending in a downward direction into the branches and tapering toward their lower ends, a pipe-carrying shaft wedged into and supported by said tapering notches, and a roller mounted on said shaft adapted both to rotate upon and to slide lengthwise of said shaft.

4. A pipe-supporting frame comprising upwardly extending branches provided with opposed notches entering through the sides of said branches, said notches being inclined downwardly, and tapering toward their lower ends, and a pipe-carrying shaft wedged into and supported by said inclined tapering notches.

5. A pipe-supporting frame comprising upwardly extending branches provided with a number of pairs of opposed notches, entering through opposite sides of the branches, said notches being inclined downwardly, and tapering toward their lower ends.

[Claims 6 to 10 not printed in the Gazette.]

1,220,344. ROAD-OILER. JUSTUS R. KINNEY, Allston, Mass., assignor to The Kinney Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Original application filed June 2, 1915, Serial No. 32,009. Divided and this application filed Sept. 28, 1915. Serial No. 53,130. (Cl. 122—33.)



1. In a device of the class described, the combination of a tank adapted to contain heavy oils for use on roads and having a chamber at one end; a heating compartment at the opposite end; a device in said compartment for creating dry heat; a plurality of horizontal tubes within said tank extending from said compartment to said chamber and through which said dry heat is adapted to pass; means for delivering the heavy oils to said tank at a point near the bottom thereof; and means for discharging heavy oils from the bottom of said tank at a point remote from the point of delivery thereto.

2. In a device of the class described, the combination of a tank adapted to contain heavy oils for use on roads and having a chamber at one end; a heating compartment at the opposite end; a device in said compartment for creating dry heat; a plurality of horizontal tubes within said tank extending from said compartment to said chamber and through which said dry heat is adapted to pass; means for delivering the heavy oils to said tank at a point near the bottom thereof and near its forward end; and means for discharging said heavy oils from the bottom of the rear end of said tank.

3. In a device of the class described, the combination of a tank adapted to contain heavy oils for use on roads and having a chamber at one end; a heating compartment at the opposite end; a device in said compartment for creating dry heat; a plurality of horizontal tubes within said tank extending from said compartment to said chamber and through which said dry heat is adapted to pass; a pipe entering the top of the rear end of said tank and extending forwardly with a downwardly extending branch adapted to deliver the material near the bottom of the front of said tank; and an outlet from the bottom of the rear end of said tank.

1,220,345. ANTIFRICTION-BEARING. REGINALD JACOB KOSTER, Philadelphia, Pa. Filed June 4, 1915. Serial No. 32,032. (Cl. 64—62.)



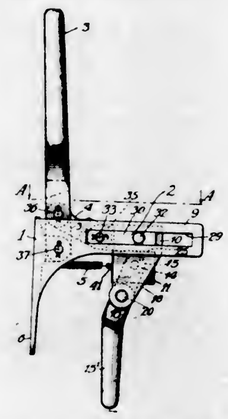
1. An antifriction bearing comprising inner and outer casing members and a series of interposed rolling elements, the outer casing member being provided with two circumferentially extending tracking surfaces on the interior of the same, and the said inner casing member being provided with two circumferentially extending tracking surfaces on the exterior of the same, and disposed respectively opposite tracking surfaces on the outer member, and the said rolling elements being provided each with two supporting surfaces sloping from the center outwardly in opposite directions and adapted to travel respectively on the opposing tracking surfaces of the casing members on single lines of contact.

2. An antifriction bearing comprising inner and outer casing members and a series of interposed rolling elements, the outer casing member being provided with two circumferentially extending tracking surfaces projecting inwardly from the interior of the member, and the said inner casing member being provided with two circumferentially extending tracking surfaces projecting outwardly from the exterior of the member, and disposed respectively opposite the tracking surfaces on the outer member, and the said rolling elements being provided each with two supporting surfaces sloping from the center of the element outwardly in opposite directions and adapted to travel respectively on the opposite tracking surfaces of the casing members on single lines of contact.

3. An antifriction bearing comprising inner and outer casing members and a series of interposed rolling elements, the outer casing member being provided on its interior with two circumferentially extending tracking surfaces convex in cross section, and the said inner casing member being provided on its exterior with two circumferentially extending tracking surfaces convex in cross section and disposed respectively opposite the tracking surfaces of the outer member, and the said rolling elements being provided each with two straight supporting surfaces sloping outwardly from the center in opposite directions and adapted to travel respectively on the opposing tracking surfaces of the casing members on single lines of contact.

4. An antifriction bearing comprising inner and outer casing members and a series of interposed rolling elements, the outer casing member being provided on its interior with two circumferentially extending tracking surfaces projecting inwardly and curved axially from a common center located outwardly of said surfaces, and the said inner casing member being provided with two circumferentially extending tracking surfaces projecting outwardly from the exterior of the member and curved axially from a common center disposed inwardly of said surfaces, and the said rolling elements being provided each with two supporting surfaces sloping from the center outwardly in opposite directions and adapted to travel respectively on the opposing tracking surfaces of the casing members on single lines of contact.

1,220,346. ROD-PULLER. HENRY H. LAMPERT, Chicago, Ill. Filed Aug. 18, 1915. Serial No. 46,141. (Cl. 254—29.)



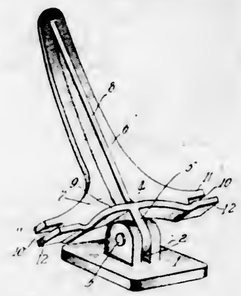
1. A rod puller, comprising a frame having a foot part for bearing against the object from which the rod is to be pulled, and guide means standing outward therefrom, in combination with a clamp carried by said guide means, manual means for moving said clamp on said guide means, and automatic means for closing the same, said clamp comprising a jaw mounted slidably on said guide means and connected to said manual means, and having a pair of spaced parallel brackets, a lever pivoted medially to said brackets and a complementary jaw pivoted medially on one arm of said lever, said arm being nearly perpendicular to the sliding jaw, but inclined outward from its fulcrum when said clamp is closed to its normal position.

2. A rod puller comprising a frame having a transversely disposed guide arm carried by a base part which is adapted to rest upon the object from which the rod is to be pulled, said base part having a recess formed therein whereby said part is adapted to embrace the rod to be pulled, a member reciprocatingly mounted on said arm, a pair of jaws carried on said member and arranged with their gripping faces substantially in axial alinement with said recess, and a lever pivoted on said frame and connected so as to reciprocate said member.

3. A rod puller, comprising a frame having a pair of parallel guide arms perpendicularly supported on a base part which is adapted to rest upon an object from which the rod is to be pulled, said base part having a recess formed therein between said arms, whereby said part is adapted to embrace the rod to be pulled, a member reciprocatingly mounted on and between said arms, a pair of jaws carried on said member and arranged with their gripping faces disposed substantially in axial alinement with said recess, and a lever pivoted on said frame and connected so as to reciprocate said member.

4. A rod puller, comprising a frame having a pair of parallel guide arms perpendicularly supported on a base part which is adapted to rest upon an object from which the rod is to be pulled, said base part having a recess formed therein between said arms, whereby said part is adapted to embrace the rod to be pulled, a member reciprocatingly mounted on and between said arms and having a jaw, a lever pivoted on said frame and connected to reciprocate said member, a second lever pivotally mounted on said member, a jaw pivotally mounted on said second lever and opposed to the jaw on said member, the gripping faces of said jaws being disposed substantially in axial alinement with said recess, and a spring connecting said second jaw with said base so as to urge said second jaw toward said first jaw and at the same time urge said member into a retracted position toward said base.

1,220,347. WIRE-TIGHTENING DEVICE. HENRY H. LAMPERT, Chicago, Ill. Filed Nov. 8, 1915. Serial No. 60,353. (Cl. 254—77.)



1. A wire tightening device, comprising a base, a lever pivoted to said base so as to swing in a plane perpendicular thereto, a transversely disposed arm on said lever adjacent to the pivot and extending parallel thereto, and a pair of spaced lugs on the end of said arm for gripping a wire, said spaced lugs being arranged to cause the wire to wrap around said arm as said lever is swung from one position to another and to move the adjacent part of the wire from one side to the other of the pivot so as to lock said lever in position for holding the wire taut.

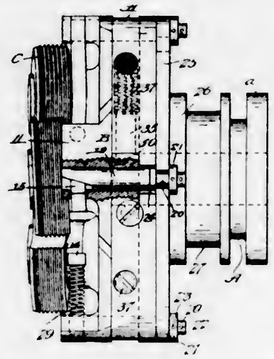
2. A wire tightening device, comprising a base, a T-shaped lever pivoted thereon to swing in a plane perpendicular to said base and transverse to the plane of said lever, and means at the ends of the transverse parts of said T-shaped lever for gripping wires, said means being arranged to cause the wires to wrap therearound as said lever is swung from one position to another and move the adjacent parts of the wires from one side to the other of said pivot for locking said lever in position to hold the wires taut.

3. A wire tightening device, comprising a base, and a T-shaped lever pivoted thereon to swing in a plane perpendicular to said base and transverse to the plane of said lever, said transverse parts of said T-shaped lever having slots formed in the ends thereof adapted to grip wires, said slots being arranged to cause the wires to wrap around said parts as said lever is swung from one position to another and move the adjacent parts of the wires from one

side to the other of said pivot for locking said lever in a position for holding the wires taut.

4. A wire tightening device, comprising a base, a lug integrally formed thereon, a T-shaped lever, a lug formed on the transverse part of said T-shaped lever, a pin pivotally connecting the lug on said lever to the lug on said base whereby said lever is adapted to swing in a plane perpendicular to said base, the transverse part of said lever having the ends thereof extending beyond said plate and having slots extending inwardly from the ends thereof adapted to receive wires, said slots being arranged so as to cause the wires to wrap around the ends of said part when said lever is swung from one position to another and move the adjacent parts of the wires from one side to the other of said pin for locking said lever in position to hold the wires taut.

1,220,348. CUTTER-HEAD. ABRAHAM B. LANDIS, Enfield, Pa. Filed July 18, 1912. Serial No. 710,290. (Cl. 10—100.)



1. A cutter-head comprising a body, cutter holders mounted in ways in the face of said body, means for adjusting said cutter holders radially, trunnions carried by said cutter holders and extending at an angle to the face of the head, cutters mounted to turn on said trunnions, means for oscillating said cutters, means for securing said cutters circumferentially, and means for adjusting said cutter holders radially, substantially as set forth.

2. A cutter-head comprising a body, cutter holders mounted in radial ways on said body, trunnions carried by said cutter holders, a toothed ring mounted on said trunnions, circular cutter holders mounted on said trunnions having teeth engaging the teeth of said toothed rings, means for turning said toothed rings positively in one direction, and means for normally holding them against said positively operating means, substantially as set forth.

3. A cutter-head comprising a body, cutter holders mounted thereon, trunnions carried by said cutter holders, a ring mounted on each of said trunnions formed with teeth in its outer face, a cutter mounted on each of said trunnions formed with teeth adapted to engage the teeth of said ring, a sliding cam adapted to operate against a radial arm extending from said ring to turn it in one direction, and a spring bearing against another radial arm for turning it in the opposite direction, substantially as set forth.

4. A cutter-head comprising a body, cutter holders having trunnions, circular cutters mounted on said trunnions, a ring interposed between said circular cutters and the base of the cutter holders and adapted to engage therewith by interengaging teeth, said ring being formed with arms extending at right angles to each other, sliding cams for engaging one of the arms of said several cutter holders, springs for bearing against the other arm of said several cutter holders, and means for sliding said cams, substantially as set forth.

5. A cutter head comprising a body, cutter holders mounted to slide radially on said body, trunnions carried by said cutter holders, circular cutters mounted on said trunnions, means for securing said cutters to said trunnions, means for oscillating said cutters, means for adjusting said cutters circumferentially on said trunnions, and means for adjusting each of said cutter holders independently in a radial direction, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,220,349. METHOD OF MAKING CAST-IRON. HORACE W. LASH, Cleveland, Ohio, assignor to The West Coast Iron Company, a Corporation of Ohio. Filed Nov. 21, 1912. Serial No. 732,638. (Cl. 75—50.)

1. The method of making casting iron which consists in melting in a reverberatory furnace a mixture of steel scrap, carbon, silicious material and finely divided cast iron.

2. The method of making cast iron which consists in melting under non-oxidizing conditions a mixture of steel scrap, carbon, silicious material and finely divided cast iron.

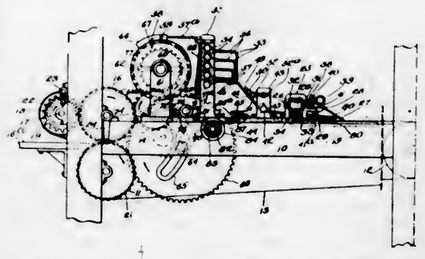
3. A method of making cast iron which consists in melting in a reverberatory furnace a mixture of steel scrap, carbonaceous material, silica and finely divided cast iron.

4. A method of making cast iron which consists in melting in a reverberatory furnace steel scrap together with a mixture in substantially equal parts of carbonaceous material, silicious material and finely divided cast iron.

5. A method of making cast iron which consists in melting under non-oxidizing conditions a mixture of steel scrap, carbonaceous material, silica and finely divided cast iron.

[Claim 6 not printed in the Gazette.]

1,220,350. RULING-MACHINE. HARMON E. LINDBLADH, Boston, Mass., assignor to The Lindbladh Corporation, a Corporation of Massachusetts. Filed Aug. 3, 1912. Serial No. 713,140. (Cl. 33—39.)



1. In a ruling machine, ruling devices, a support, controlling members each of substantially the same lateral extent as a ruling device to adapt them for independent engagement with closely adjacent ruling devices, said controlling members being independently movable upon the support in their operation of the ruling devices, and means for actuating the controlling members.

2. In a ruling machine, ruling devices, controlling means arranged in a single series for coöperation with each ruling device, means arranged in a plurality of series for actuating the controlling means in groups, and means for moving the actuating means independently of one another.

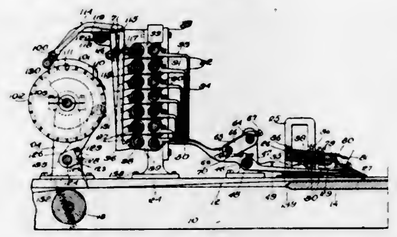
3. In a ruling machine, ruling devices, a series of controlling members, each member being adapted for coöperation with a single ruling device, and a series of members for actuating the controlling members in groups, the controlling members constituting each group being independently movable in the operation of the machine with respect to one another.

4. In a ruling machine, a pen, a lever coöperating with the pen and being throughout its length of substantially the same thickness as the pen, a fulcrum about which the lever moves, and means for rocking the lever about the fulcrum to control the pen.

5. A ruling machine comprising a series of devices adapted to rule closely adjacent lines, controlling members mounted for movement into coöperation with any ruling device of the series, and means for imparting to the members a movement to produce their controlling effect, the controlling members and moving means therefor both being adapted to be closely positioned for the operation of immediately adjacent ruling devices.

[Claims 6 to 32 not printed in the Gazette.]

1,220,351. RULING-MACHINE. HARMON E. LINDBLADH, Boston, Mass., assigner to The Lindbladh Corporation, a Corporation of Massachusetts. Filed Mar. 3, 1913. Serial No. 751,960. (Cl. 33—39.)



1. In a ruling machine, a plurality of carriers, ruling devices mounted upon the carriers, means individual to the ruling devices of one carrier for moving them from their ruling position, and means for independently moving a plurality of the carriers to simultaneously lift all the ruling devices mounted upon them.

2. In a ruling machine, a plurality of beams, ruling devices mounted upon the beams, means individual to the ruling devices of one beam for moving them from their ruling position, and means for independently moving another of the beams to simultaneously lift all the ruling devices mounted upon it.

3. The combination with a plurality of pen-beams, of ruling pens carried thereby, a series of lifting members coöperating with the pens and with the pen-beams, said series of lifting members including one for each pen-beam, and means for oscillating the lifting members.

4. The combination with a plurality of pen-beams, of ruling pens carried thereby, a series of controlling members coöperating with the pens and with the pen-beams, means for oscillating the pen-controlling members in groups, and means for oscillating the beam-controlling members individually.

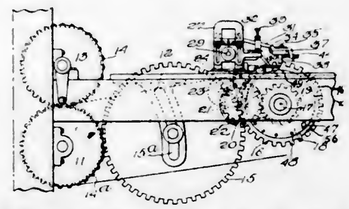
5. The combination with a plurality of pen-beams, of ruling pens carried thereby, a support, controlling levers, mounted on the support, there being a lever for coöperation with each pen-beam and levers for coöperation with certain of the pens, and means for actuating the levers.

[Claims 6 to 43 not printed in the Gazette.]

1,220,352. TRIPPING DEVICE FOR RULING-MACHINES. HARMON E. LINDBLADH, Boston Mass., assignor to The Lindbladh Corporation, a Corporation of Massachusetts. Filed May 22, 1913. Serial No. 769,192. (Cl. 33—39.)

1. In a ruling machine, a ruling device movable toward and from the work, actuating means therefor, and a member interposed between the ruling device and actuating means and being movable by the actuating means in the direction of the lift of the ruling device to both raise the ruling device and permit the same to be lowered.

2. In a ruling machine, a ruling device, actuating means therefor, a connecting member interposed between the ruling device and actuating means and being movable in one direction by the actuating means to both raise the ruling device and permit the same to be lowered, and means independent of the actuating means for varying the time of coöperation between the connecting member and ruling device.



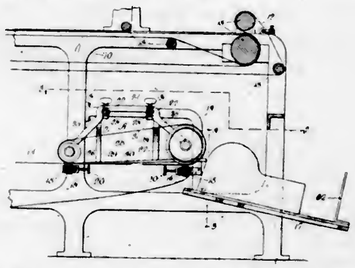
3. In a ruling machine, a ruling device having a contact portion extending downwardly with respect to the ruling device, an actuator, and a member movable by the actuator against the contact portion to raise the ruling device and then upwardly past the contact portion to permit the descent of the ruling device.

4. In a ruling machine, a ruling device having a contact portion movable independently thereof, an actuator, and a member movable by the actuator against and past the contact portion, the contact portion upon the return of the member to normal receiving its movement independently of the ruling device.

5. In a ruling machine, a ruling device having a contact portion yieldably mounted thereon, an actuator, and a connecting member for and between the actuator and contact portion.

[Claims 6 to 19 not printed in the Gazette.]

1,220,353. DELIVERY DEVICE. HARMON E. LINDBLADH, Boston, Mass., assignor to The Lindbladh Corporation, a Corporation of Massachusetts. Filed Feb. 21, 1916. Serial No. 79,543. (Cl. 271—76.)



1. In a sheet-delivery device, a receptacle, means for carrying sheets to the receptacle, and separated means for coöperation with the upper surfaces of said sheets to produce therein between the means a raised corrugation, and means for lifting the outer edges of the sheets.

2. In a sheet-delivery device, a receptacle, means for carrying sheets to the receptacle, a plurality of means converging in the direction of advance of the carrier means for coöperation with the upper surfaces of said sheets before their delivery to the receptacle, and lifting members contacting with the under surfaces of the sheets.

3. In a sheet-delivery device, a receptacle, means for carrying sheets to the receptacle, a plurality of members converging in the direction of advance of the carrier means for coöperation with said sheets before their delivery to the receptacle, and independently adjustable mountings for said members whereby their position transversely of the sheets may be varied.

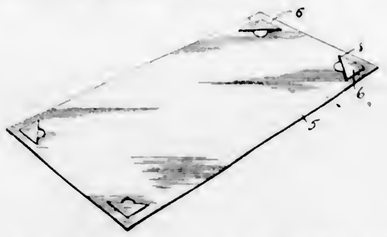
4. In a sheet-delivery device, a receptacle, means for carrying sheets to the receptacle, and plural traveling and relatively fixed sheet-corrugating means converging in the

direction of advance of the carrier means and coöperating with the upper and under surfaces of said sheets before they are delivered to the receptacle.

5. In a sheet-delivery device, a receptacle, a conveyer delivering thereto, traveling pressure members coöperating with the conveyer, and lifting means contacting with the conveyer outside the pressure members, the conveyer extending continuously across the device beneath the pressure members and lifting means.

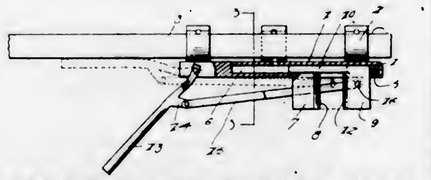
[Claims 6 to 12 not printed in the Gazette.]

1,220,354. PHOTOGRAPH-MOUNT. EDWARD N. LODGE, Columbus, Ohio. Filed Dec. 15, 1915. Serial No. 67,010. (Cl. 40—159.)



In a photograph mount, a body, embossed pockets formed integral with the body and adjacent the corners thereof, one edge of each of the pockets being separated from the body by a slit, and each body portion having a semi-circular cut out portion forming in part a continuation of the slit for providing a clearance for the reception of the corners of the photograph.

1,220,355. WIRE-CUTTER FOR GUNS. HENRY E. LODL, Mishicot, Wis. Filed July 22, 1916. Serial No. 110,767. (Cl. 42—90.)

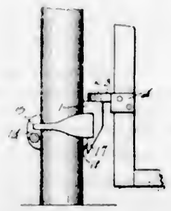


1. A wire cutter for guns comprising a base, clamps secured to the base for attaching the base to the barrel of a gun, said base having a slot in its forward end and a guide way in communication with the slot adjacent its rearward end, a blade formed on the base and having a cutting edge, a movable blade carried within the guide way and depending downwardly through the slot, and means connected to the movable blade for moving the movable blade into an engagement with the stationary blade to sever a strand of wire.

2. A wire cutter for guns comprising a base, means for securing the base to the barrel of a gun, said base having a slot in its forward end, and a guide way adjacent its rear end and in communication with the slot, a stationary blade formed on the base, a movable blade extending upwardly within the slot, an arm formed on the upper end of the movable blade and slidably received within the guide way, a lever pivoted to the base, a pair of relatively spaced links pivoted to the lever and to each side of the movable blade for sliding the movable blade into an engagement with the stationary blade to sever a strand of wire.

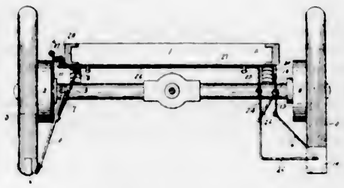
1,220,356. HINGE. CHARLIE MCCULLEY, Aldrich, Mo. Filed May 19, 1916. Serial No. 98,648. (Cl. 16—49.)

1. In a gate hinge, the combination with a body provided with a pintle, of clamping jaws mounted on said body in relatively hinged relation, said jaws being adapted to surround a post and having their ends overlapped, a link having both of said jaws projected therethrough, and nuts upon the projecting ends and bearing against opposite sides of said link to draw the jaws together.



2. In a gate hinge, the combination with a body provided with a pintle, of clamping jaws mounted on said body in relatively hinged relation, said jaws being adapted to surround a post and having their ends overlapped, a link adapted to have the ends of said jaws projected therethrough, and means coacting with said link for drawing said jaws tight around a post, and a bracing element extending below said jaws, in position to bear against the post as the clamping jaws are drawn together.

1,220,357. COMBINATION BRAKE AND BLOCK FOR VEHICLES. JOSEPH ARMAND MARENGER, Montreal, Quebec, Canada. Filed Oct. 16, 1916. Serial No. 125,786. (Cl. 21—8.)



1. The combination with a casing, a driven axle arranged therein and a wheel carried by the driven axle, of lugs extending from said casing, an arm having one end pivotally connected to said lugs, the pivoted end of said arm extending rearwardly and the opposite end of said arm extending forwardly beneath said casing, a block carried by the free end of said arm adapted to rest between the tire of the wheel and the ground to prevent the wheel from rotation, an eyelet formed within the medial portion of said arm, a link connected to said eyelet and a crank shaft connected to said link whereby said arm may be swung upon its pivoted connection so as to cause said block to swing in a path eccentric with the periphery of said wheel substantially as and for the purpose specified.

2. The combination with a casing, a driven axle arranged therein and a driving wheel carried by said axle, of a pair of lugs arranged diametrically opposite upon said casing, a pair of arms each having one end pivotally connected to said lugs, the pivoted ends of each of said arms extending in opposite directions from said casing, the free end of said arm extending in a reverse direction beneath said casing, a block carried by the extreme outer end of each arm, said blocks adapted to rest between the tire of the wheel and the ground to prevent the wheel from rotating in either direction, a link connected to the medial portion of each arm, a crank shaft connected to each link whereby said arms may be swung upon their pivoted connections so as to bring either block into operation and cause said blocks to travel eccentrically with the periphery of said wheels substantially as and for the purpose specified.

1,220,358. LEVELING-ROD. ERNEST S. MARTIN, Chicago, Ill., assignor to Lewis A. Nichols, Chicago, Ill. Filed March 7, 1913. Serial No. 752,590. (Cl. 33—74.)



1. A graduated leveling rod, having removable and interchangeable numerals for the principal scale divisions thereof.

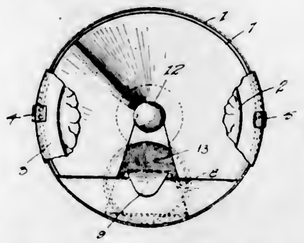
2. A graduated leveling rod having a channeled face and removable and interchangeable marking plates adapted to be secured to the bottom of such channel for indicating the principal scale divisions of the rod.

3. A graduated leveling rod comprising a principal member and an extension member slidably secured to the back thereof, removable and interchangeable marking plates for the principal scale divisions of the rod, and means on both members for securing said marking plates, the extension member having a channeled face affording space for the marking plates between said member and the principal member.

4. A graduated leveling rod and removable and interchangeable numeral plates for the principal scale divisions thereof, the rod being provided with sockets at its principal graduations, and each of said plates having a projection formed to fit in such sockets.

5. A leveling rod comprising a graduated portion, a foot piece upon which said portion is mounted for bodily vertical adjustment, and removable and interchangeable numerals for the principal scale divisions of the graduated portion.

1,220,359. ELECTRIC BICYCLE-LAMP. LAURENCE Z. MORSE, Shelton, Conn. Filed Oct. 2, 1915. Serial No. 53,817. (Cl. 240—46.)

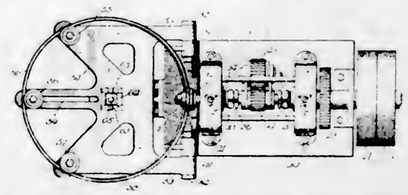


1. An electric light for an electric lamp for a bicycle comprising a casing, a lens in the front of the casing, and an electric light in the back of the casing, a red bull's eye in the back of the casing, and a reflector having an angular cutout portion bent inwardly and downwardly to conform to the shape of the bottom of the casing to reflect the rays of light through the lens and through the bull's eye.

2. An electric lamp comprising a casing having an inwardly bent lower side, a lense in the front of the casing, an electric light bulb connected near the top at the back of the casing, a bull's eye connected to the casing at the back near the bottom thereof, and a reflector provided with a cut-out tongue bent down to conform to the shape of the bottom of the casing to reflect the rays of light backward through the bull's eye.

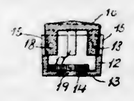
3. An electric lamp for bicycles comprising a casing having an inwardly bent lower side, a lens in the front of the casing, an electric light at the back of the casing, a colored bull's eye near the bottom at the back of the casing, and an angular reflector for reflecting the rays of light from the bulb out through the lens in the front, and back through the colored bull's eye in the rear.

1,220,360. RING-TRUING MACHINE. FREDELLIA H. MOYER, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Feb. 29, 1912. Serial No. 680,755. (Cl. 153—32.)



A machine for truing rings having annular grooves in the faces thereof, comprising a pair of coöperating truing rolls having a pass therebetween, one roll having an annular peripheral seat for one side of the work piece, the other roll having its periphery shaped to fit the groove of the work piece, a work table straddling the rolls and pivotally supported on an axis extending through the pass at substantially right angles to the axes of the rolls, a circular guideway for the work including the pass of the truing rolls and anti-friction devices on the table, and means for adjustably tilting the table on its pivotal support and for maintaining the table fixed in any adjusted position during the rotation of the rolls.

1,220,361. NON-REFILLABLE BOTTLE. JARED H. PLAISTED, Boston, Mass., assignor of one-half to H. Wadsworth Longfellow, Boston, Mass. Filed June 7, 1913. Serial No. 772,306. Renewed Aug. 10, 1916. Serial No. 114,290. (Cl. 215—65.)

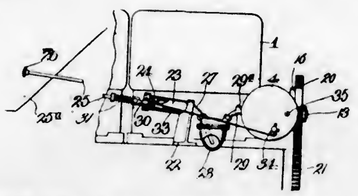


A non-refillable bottle having a plug secured within its neck, said plug comprising a shell having a bottom provided with an opening, the walls of said shell having recesses, a cap having lugs secured in the recesses of the wall of the shell, said lugs extending within the shell to form stops, and a valve loosely mounted within the chamber of the plug adapted to be limited in its outward movement by the stops formed by said lugs.

1,220,362. ENGINE-STARTER FOR AUTOMOBILES AND THE LIKE. LOUIS N. RIES and RALPH B. ALLEN, Kansas City, Mo. Filed July 24, 1915. Serial No. 41,782. (Class 123—179.)

1. An engine starter, comprising a cylinder, a piston therein, a connecting bar for the piston, a rock arm pivoted at its free end to said bar, a pawl pivotally carried by said rock arm, a ratchet wheel engaged by said pawl, a power transmitting wheel rotatable with said ratchet, a valve for the cylinder, a lug projecting from the rock arm and adapted to effect opening movement of said valve under movement of the piston produced by an explosion in the cylinder, and a second lug projecting from the rock arm to effect closing movement of the valve.

2. An engine starter, comprising a cylinder, a piston therein, a pawl movable with the piston, a rock arm suitably pivoted and movable at its free end with the pawl, a mutilated gear wheel, a ratchet wheel rotatable with said gear wheel and adapted to be turned by the pawl, one step each time an explosion in the cylinder imparts movement to the piston, a valve controlling exhaust from the cylinder, means actuated by the rock arm to open said valve when the piston is operated through an explosion in the cylinder, means for returning the piston to normal position, and means whereby said rock arm shall effect reclosure of said valve as the piston is returned to normal position.

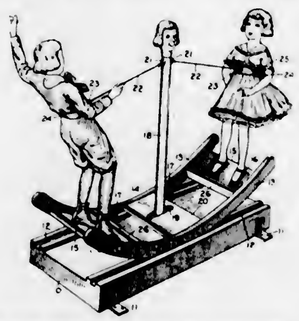


3. An engine starter, comprising a cylinder, a piston therein, a gasolene tank connected to the cylinder, a pump for forcing air through the gasolene and into the cylinder, a valve controlling an air outlet in the cylinder, and means whereby operation of the pump to charge the cylinder with gas, shall open said valve.

4. An engine starter, comprising a cylinder, a piston therein, a gasolene tank connected to the cylinder, a pump for forcing air through the gasolene and into the cylinder, a valve controlling an air outlet in the cylinder, means whereby operation of the pump to charge the cylinder with gas, shall open said valve, and means for restoring the pump to normal condition and closing said valve.

5. An engine starter, comprising a cylinder, a piston therein, a gasolene tank connected to the cylinder, a pump for forcing air through the gasolene and into the cylinder, a valve controlling an air outlet in the cylinder, means whereby operation of the pump to charge the cylinder with gas, shall open said valve, comprising a push rod for operating the pump, a rock lever, a link connecting the lever with said valve and a spring actuated by the pumping movement of the push rod to rock said lever and open the valve; said spring being adapted to reverse such operations and return the pump to normal position and the said valve to closed position.

1,220,363. AMUSEMENT AND EXERCISING APPARATUS. MADELEINE GODFREY RIVES, New York, N. Y. Filed Dec. 17, 1915, Serial No. 67,361. Renewed Aug. 12, 1916. Serial No. 114,639. (Cl. 46—22.)



1. An amusement and exercising apparatus, comprising a base, a rocking frame mounted to rock on the said base and adapted to standingly support at its ends a couple of young people, a post erected centrally on the base and flexible holding means fastened to the upper portion of the post and adapted to be attached to the bodies of the users of the apparatus.

2. An amusement and exercising apparatus, comprising a base, a rocking frame mounted to rock on the said base and adapted to standingly support at its ends a couple of young people, a post erected centrally on the base, flexible holding means fastened to the upper portion of the post and adapted to be attached to the bodies of the users of the apparatus, and flexible means connecting the rocking frame with the said base to hold the rocking frame against displacement on the base.

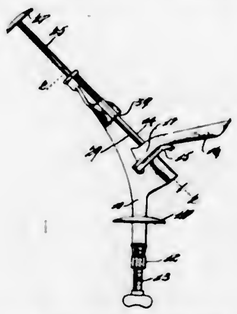
3. An amusement and exercising apparatus, comprising a base provided on its top adjacent the sides with parallel grooves, a post erected centrally on the said base, a rocking frame having rockers fitting into the said grooves, and flexible holding means fastened to the upper portion of the said post and adapted to be attached to the bodies of the users of the apparatus.

4. An amusement and exercising apparatus, comprising a base provided on its top adjacent the sides with parallel grooves, a post erected centrally on the said base, a rocking frame having rockers fitting into the said grooves, the rocking frame having foot rests at the ends for the users to stand on, and flexible holding means fastened to the upper portion of the said post and adapted to be attached to the bodies of the users of the apparatus.

5. An amusement and exercising apparatus, comprising a base provided on its top adjacent the sides with parallel grooves, a post erected centrally on the said base, a rocking frame having rockers fitting into the said grooves, the rocking frame having a guide at the middle through which extends the said post and the said rocking frame having foot rests at the ends for the users to stand on, and flexible holding means fastened to the upper portion of the said post and adapted to be attached to the bodies of the users of the apparatus.

[Claim 6 not printed in the Gazette.]

1,220,364. CHERRY-STONER. MICHAEL A. ROLLMAN and CHARLES J. SCHIEMER, Mount Joy, Pa. Filed Jan. 24, 1914. Serial No. 814,132. (Cl. 146—6.)

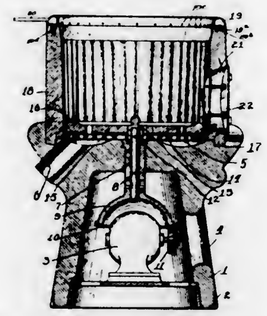


1. In a device of the character described, the combination of supporting means, a longitudinally slotted housing thereon, a plunger guided in said housing, an arm on said plunger, an ejector on said arm, a plunger retracting spring inclosed by said housing, a stoning socket, a lateral plate on said housing at one side of its slot and along which said arm is guided, said plate constituting a guard or supporting back for said arm when retracted, and pulp stripping means supported by said plate.

2. In a device of the character described, the combination of supporting means, a longitudinally slotted housing thereon, a plunger guided in said housing, an arm on said plunger guided in the slot of said housing, an ejector on said arm, a plunger retracting spring inclosed by said housing, a stoning socket and pulp stripping means, and a stop against which said arm abuts when retracted.

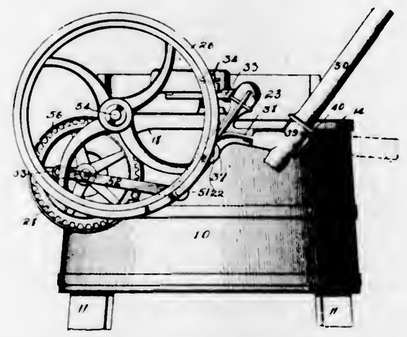
3. In a device of the character described, the combination with a support, of pulp abutment means comprising two stripper parts, one being supported directly by said support, and fastening means at the outer ends of both parts for rigidly securing the other part to the first said part against movement, said parts being solely connected by the said fastening means and having a stripping surface transversely of their joint.

1,220,365. WATER-SUPPLY MEANS FOR CLEANERS AND PEELERS. FRANK M. SCHAEFER, Chicago, Ill., assignor to Schaefer Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 15, 1912. Serial No. 715,174. (Cl. 137—83.)



The combination with a wall of plastic material, of a flattened fluid tube having an integral flange on its underside countersunk into said wall at the top of the latter, and having a depending flange thereon disposed flush with the outer face of said wall, said tube being apertured to discharge the contents thereof, and a pipe communicating with said tube and connected with a source of fluid supply.

1,220,366. WASHING-MACHINE-OPERATING MECHANISM. WILLIAM J. SCHOONOVER, Chicago, Ill. Filed Aug. 4, 1915. Serial No. 43,698. (Cl. 74—50.)



1. In a device of the class described, the combination of a support, a member hingedly mounted thereon, an upright shaft rotatably mounted in said movable member, an arm pivotally mounted between its ends on said movable member, a curved rack bar on one end of said arm, a gear on said shaft in mesh with said rack bar, a lever pivoted at one side of said movable member operatively connected with said arm for reciprocating it when the lever is moved for imparting alternating rotary motion to said shaft, a gear member supported on said movable member at one side of said support in line with the hinged points of the movable member, and means whereby motion may be transmitted from said lever to said gearing member, or from said gearing member to said lever.

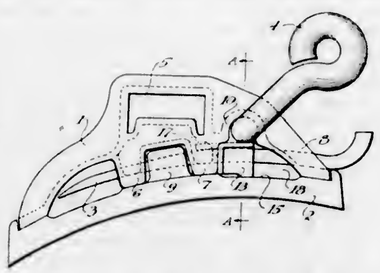
2. In a device of the class described, the combination of a support, a member hingedly mounted thereon, an upright shaft rotatably mounted in said movable member, an arm pivotally mounted between its ends on said movable member, coacting gearing devices on said arm and said shaft, a lever pivoted at one side of said movable member operatively connected with said arm for reciprocating it when the lever is moved, for imparting alternating rotary motion to said shaft, a gear member supported on said movable member at one side of said support in line with the hinged points of the movable member, means for operating said gearing member, and means whereby motion may be transmitted from said lever to said gearing member, or from said gearing member to said lever, said means comprising a gear operatively connected with both of said other gears and with said arm.

3. In a device of the class described, the combination of a support, a member hingedly mounted thereon, an upright shaft rotatably mounted in said movable member, an arm pivotally mounted on said movable member between the ends of said arm, coacting gearing devices on said arm and said shaft, a lever pivoted at one side of said movable member, means for operatively connecting said lever with said arm, said means comprising a socket rigidly connected with said lever, a rod slidably mounted in said arm having one end slidably mounted on said socket, and means for connecting said lever and said rod for sliding and universal movement.

4. In a device of the class described, the combination of a support, a member hingedly mounted thereon, an upright shaft rotatably mounted in said movable member, an arm pivotally mounted between its ends on said movable member, a curved rack bar on one end of said arm, a gear on said shaft in mesh with said rack bar, a lever pivoted at one side of said movable member operatively connected with said arm for reciprocating it when the lever is moved for imparting alternating rotary motion to said shaft, a gear member supported on said movable member at one side of said support in line with the hinged points of the movable members, means for operating said gearing member, and means whereby motion may be transmitted from said lever to said gearing member, or from said gearing member to said lever, said means comprising a shaft, a gear thereon operatively connected with said gearing member, a pitman pivoted to said lever and pivotally connected off center to said gear, said gear being mounted on the opposite side of the hinged points from said arm, and being supported on said movable member.

5. In a device of the class described, a support, a movable member pivoted thereon, a bracket on said movable member extending from the central portion thereof outwardly to the edge thereof, a right angled extension on said bracket near the edge of said pivoted member, a downward extension formed on said bracket, a second downward extension formed on said first extension, a bracket pivoted to said first described downward extension, an arm pivoted between its ends on said first described bracket, a shaft rotatably mounted in said pivotal member, coacting gearing devices on said arm and said shaft, a rod slidably mounted on said arm, a ball on the end of said rod, a socket on said second bracket for receiving said ball and for permitting sliding movement of said rod with relation to the socket, a handle on said second bracket, a gearing device mounted on one of the extensions on said first bracket substantially in line with the pivotal point of said gearing member, gearing devices mounted on one of the extensions of said first bracket on the side of said pivotal point farther away from the side on which said first and second brackets are mounted, and means for operatively connecting said gearing devices with each other and with said second bracket.

1,220,367. LOCKING-BLOCK FOR BRAKE-HANGERS. RICHARD F. C. SCHULTZ, Chicago, Ill., assignor to Joliet Railway Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 11, 1916. Serial No. 119,459. (Cl. 188—70.)

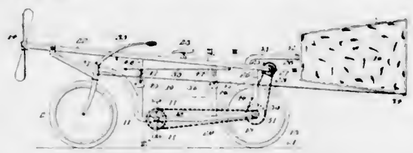


1. In a railway brake, the combination of a hanger, a brake head having a recess through which said hanger passes, a brake shoe, a key securing together the brake head and brake shoe and extending past said recess, and a locking block located between and bearing against said hanger and brake shoe for the purpose of preventing the hanger from being displaced in relation to the head or bearing against the key.

2. In a railway brake, the combination of a hanger, a brake head having a recess through which said hanger passes, a brake shoe, a key securing together the brake head and brake shoe and extending past said recess, and a locking block straddling said key located between said hanger and brake shoe for the purpose of preventing the hanger from being displaced in relation to the head or bearing against the key.

3. In a railway brake, the combination of a hanger, a brake head having a recess through which said hanger passes, a key way in said brake head, a brake shoe, a key securing the brake shoe and brake head together, and a locking block mounted in said brake head and bearing against said hanger to prevent displacement thereof, said locking block being provided with a lug extending into the key way in said brake head.

1,220,368. AEROCYCLE. KAROL SHOTOVSKY, Cleveland, Ohio. Filed Nov. 16, 1916. Serial No. 131,733. (Cl. 244—14.)

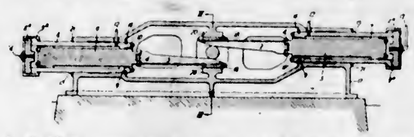


1. A device of the class described comprising a bicycle, upright posts arranged thereon, a longitudinally arranged casing carried by the said posts, a shaft journaled through the said casing, an air propeller fixed to the forward ends of the said shaft, operative connections between the said shafts and the rear wheel of the bicycle, a seat arranged upon the said casing, oppositely positioned foldable wings adjustably carried by the said posts, and a rudder rearwardly carried by the said casing, having operative connections with the handle bars of the bicycle.

2. A glider comprising a bicycle having a frame, upright posts carried by the said frame, a tubular casing upon the said posts longitudinally of the bicycle, a fork at the rear end of the said casing, a shaft journaled through the said casing, a propeller upon the forward end of the said shaft forwardly of the bicycle, a gear upon the rear end of said shaft within the said fork, an axle journaled into said fork, a gear upon the said axle in constant mesh with the gear of the said shaft, and sprocket wheel and chain connections between the said axle and the driving wheel of the bicycle.

3. A glider comprising a bicycle having a frame, upright posts carried by the said frame, a propeller shaft casing upon the frame, a rearwardly arranged rudder pivotedly mounted upon the said casing, depending arms carried by the handle bars of the bicycles, connections between the said arms and the said rudder, adjustable brackets mounted upon the said posts, and foldable planes adjustably carried by the said brackets.

1,220,369. SHEAR AND SHEAR-OPERATING MECHANISM. EDWIN E. SLICK, Pittsburgh, Pa. Filed July 22, 1912. Serial No. 710,775. (Cl. 164—56.)



1. A shear comprising two opposed, oppositely facing, lengthwise tapering shear knives, said knives being arranged to simultaneously engage and sever material positioned therebetween from opposite sides toward the axial center of the material and being adapted to revolve the material about said axial center in the severing operations, the cutting faces on one side of said knives being in a plane substantially at right angles to the aforesaid axial center and the other cutting faces being in planes inclined at an angle to said axial center to thereby sever the material substantially at right angles to its axial center, and means for actuating said shear knives.

2. A shear comprising two opposed, oppositely facing, lengthwise tapering shear knives, said knives being arranged to simultaneously engage and sever material positioned therebetween from opposite sides toward the axial center of the material and being adapted to revolve the material about said axial center in the severing operations, said knives having angular cutting faces with the faces on one side of the knives in the same plane, and means for causing a relative approach of the cutting faces of said knives and thereby cutting the material substantially at right angles to its axial center.

3. A shear comprising two opposed, oppositely facing, lengthwise tapering shear knives, said knives being arranged to simultaneously engage and sever material positioned therebetween from opposite sides toward the axial center of the material and being adapted to revolve the material about said axial center in the severing operations, said knives having angular cutting faces with the faces on one side thereof in a plane perpendicular to the axial center of the material being cut, and means for actuating said shear knives to cause a relative approach of the cutting faces thereof and thereby sever the materials substantially at right angles to the axial center thereof.

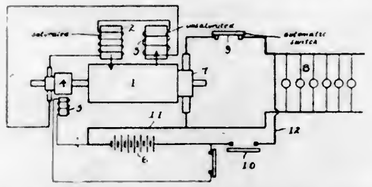
4. A shear comprising opposed reciprocating shear knives and means including fluid pressure cylinders for actuating said knives, said means being constructed and arranged to cause a relative approach of the knives and move the knives at a uniform speed.

5. A shear comprising opposed reciprocating shear knives, said knives being arranged to simultaneously engage and sever materials placed therebetween from opposite sides toward the axial center thereof, and means including fluid pressure cylinders for actuating said knives, said means being constructed and arranged to reciprocate said knives at a uniform and the same rate of speed.

[Claims 6 to 9 not printed in the Gazette.]

1,220,370. CONSTANT-VOLTAGE SYSTEM. THOMAS SPENCER, Philadelphia, Pa., assignor to Helios Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 1, 1913. Serial No. 803,899. (Cl. 171—225.)

1. In a generating system, the combination of an armature with a saturated field core adapted to send flux through the commutated coils in one direction, an unsaturated field core adapted to send field flux simultaneously through the said coils in the opposite direction, said cores having substantially similar magnetization curves, and means adapted to produce in each core a magneto motive force proportional to the speed of the armature.

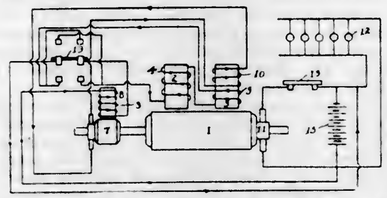


2. In a generating system, the combination of a rotatable armature with a saturated field core, a second unsaturated field core, said cores having substantially similar magnetization curves, the flux from said cores adapted to induce opposed E. M. F.'s simultaneously in the same coils of said armature, field coils on each core, and an exciter, having a constant field, connected to said armature to rotate therewith and electrically connected to said coils to saturate one core and undersaturate the other.

3. In a generating system the combination of a rotatable armature with a saturated field core, a second unsaturated field core, said cores having substantially similar magnetization curves, the flux from said cores adapted to induce opposed E. M. F.'s simultaneously in the same coil of said armature, field coils on each core, a generator having a constant field and an armature connected to rotate with the first armature and electrically connected to said coils to saturate the said first core, and undersaturate the second core, the total flux of said second core being less than that of the first.

4. In a generating system, the combination of a rotatable armature with a saturated field core, a second unsaturated field core, said cores having substantially similar magnetization curves, the flux from said cores adapted to induce opposed E. M. F.'s simultaneously in the same coil of said armature, field coils on each core, a second armature connected to rotate with the first armature, a field core therefor, means to produce a substantially constant flux in said third field core, said second armature being electrically connected in series with said field coils to saturate the first field core and undersaturate the second with a lesser flux.

1,220,371. CONSTANT-VOLTAGE SYSTEM. THOMAS SPENCER, Philadelphia, Pa., assignor to Helios Manufacturing Company, a Corporation of Pennsylvania. Filed June 11, 1914. Serial No. 844,550. (Cl. 171—225.)



1. The method of generating a constant voltage which consists in rotating armature conductors in a resultant field produced by opposing a constant field, of a value of $\frac{a}{b}$, by a second field produced by the difference between a variable M. M. F. x, proportional to the cutting speed of said conductors, and a second M. M. F. of the value $\frac{l}{b}$, said terms a, b, and x, having the relation given in Frölich's equation.

$$y=\frac{ax}{1+bx}$$

2. In a constant voltage system, the combination with a rotatable main armature of a field pole having a coil, a second field pole having two coils, a source of constant E. M. F. connected to energize the coil on the first field pole and one coil on the second field pole, an auxiliary armature connected to rotate with said main armature, a field winding for said auxiliary armature connected to a source of E. M. F. to have an unchanging polarity, said auxiliary armature being connected to energize the other coil on said second field pole, and means for reversing the current in all of said coils whenever the direction of rotation of said main armature changes.

3. In a constant voltage system, the combination with a rotatable main armature of a field pole having a coil, a second field pole having two coils, an auxiliary armature connected to rotate with the main armature, a field winding for said auxiliary armature connected in series with one coil on each of said poles to a source of constant E. M. F., said auxiliary armature being connected to energize the remaining field coil, and means for reversing the current in the field coils included in the series circuit without reversing the current in said field winding.

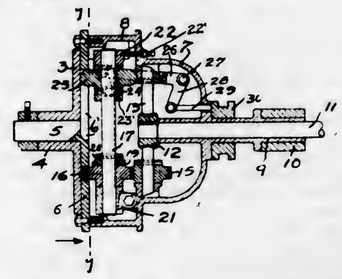
1,220,372. WATERPROOF ELASTIC FABRIC. ARTHUR C. SQUIRES, College Point, N. Y., assignor of one-half to John E. Wainwright, College Point, N. Y. Filed Oct. 9, 1916. Serial No. 124,524. (Cl. 154—48.)



1. A waterproof elastic fabric having rubber warp threads and textile warp and weft threads, and a surface coating of rubber.

2. An elastic fabric woven with rubber and textile warp threads and textile weft threads, and having a surface coating of pure rubber vulcanized thereon.

1,220,373. VARIABLE-SPEED GEARING. EDWIN GUSTAVE STAUDE, Minneapolis, Minn., assignor to E. G. Staude Manufacturing Co., Minneapolis, Minn., a Corporation. Filed Oct. 24, 1910. Serial No. 588,917. (Cl. 74—34.)



1. A gearing comprising a driving member, a stationary friction disk, a shaft mounted to revolve with said member in a plane parallel substantially with a plane of said disk, a friction wheel splined on said shaft to contact with said disk, a driven shaft, a worm thereon, a screw meshing with said worm and mounted to revolve with said driving member around said worm, and a driving connection between said screw and said friction wheel shaft.

2. A gearing comprising a driving member, a stationary friction disk, a moving disk carried by said driving member and having a radial slot therein, a shaft mounted to revolve with said driving member in a plane parallel substantially with the plane of said stationary disk, a friction wheel splined on said shaft and arranged to contact with said stationary disk through said radial slot, means for sliding said friction wheel on said shaft, a driven shaft, a worm thereon, a screw meshing with said worm

and mounted to revolve with said driving member around said worm and a driving connection between said screw and said friction wheel shaft.

3. A gearing comprising a driving member, a stationary friction disk, a second disk carried by said driving member and having a radial slot therein, a shaft mounted to revolve with said member in a plane parallel substantially with the plane of said stationary disk, a friction wheel splined on said shaft and means for moving said wheel, the periphery of said wheel projecting into said radial slot to contact with said stationary disk, a driven shaft, and a driving connection between said friction wheel shaft and said driven shaft.

4. A gearing comprising a driving member, a stationary friction disk, a pivoted shaft mounted to revolve with said member in a plane parallel substantially with the plane of said disk, said shaft being capable of swinging toward or from said disk, a friction wheel splined on said shaft to contact with said disk, a driven shaft and a driving connection between said friction wheel shaft and said driven shaft.

5. A gearing comprising a driving member, a stationary friction disk, a shaft pivoted at one end and mounted to revolve with said member, means for moving the opposite end of said shaft toward said disk, a friction wheel splined on said shaft to contact with said disk, means for moving said friction wheel toward or from the center of said disk, a driven shaft and a driving connection also carried by said driving member connecting friction wheel shaft and said driven shaft.

[Claims 6 to 13 not printed in the Gazette.]

1,220,374. AEROPLANE. MAXAMILLIAN STUPAR, Chicago, Ill., assignor of one-half to Herbert S. Renton, Chicago, Ill. Filed Feb. 1, 1915. Serial No. 5,348. (Cl. 244—29.)



1. In an aeroplane flying machine, means to vary the speed of the machine comprising means to adjust the camber of the plane at will during flight symmetrically to the fore and aft center of pressure of the plane embracing elongated means extending from the inner to the outer end of the plane and resiliently anchored at its outer end to the outer end of the plane with means for connecting it to the plane in front and in rear of the center of pressure of the plane.

2. In an aeroplane flying machine, a plane comprising upper and lower longitudinally flexible plane members extending fore and aft across the center of pressure of the plane; transverse spars between said members fixed to the lower members and one of which is fixed to the upper members, and means for moving one of the spars toward the other to vary the camber of the plane.

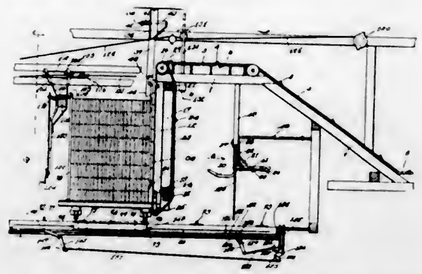
3. In an aeroplane flying machine, a plane comprising upper and lower sets of flexible ribs, front and rear transverse spars between the ribs, one of said spars being fixed to the upper and lower sets of ribs and the other spar being fixed to one set of ribs and slidable on the other set, and means for moving one spar toward the other.

4. In an aeroplane flying machine, a plane comprising upper and lower sets of flexible ribs, front and rear transverse spars between the ribs, one of said spars being fixed to the upper and lower sets of ribs and the other spar being fixed to one set of ribs and slidable on the other set, a cable extending transversely beneath the ribs between the spars, toggle bars loosely connected to said cable and to the spars, and operating means acting on the cable and acting through the toggle bars to vary the camber of said plane.

5. In an aeroplane flying machine, a plane comprising a frame consisting of flexible longitudinal ribs and means for varying the camber of the plane comprising a transverse cable and a series of toggle bars connected to said cable and connected also to said ribs in front and in rear of the center of pressure of the plane.

[Claims 6 to 21 not printed in the Gazette.]

1,220,375. LUMBER-UNLOADING MECHANISM. DANIEL R. TANNER, La Grande, Oreg. Filed Sept. 21, 1915. Serial No. 51,824. (Cl. 214—1.)



1. In a mechanism for unloading edge stacked lumber, an upright unloader including tier lifters, a carrier for the edge stacked lumber movable toward said unloader to abut the load against said unloader and movable past said unloader as the load is being removed, a pressure bar carrier movable toward the upper portion of the load as the latter is being advanced, and a pressure bar adjustable on said bar carrier to exert thrust on the upper part of the load as the latter is advanced, in a direction toward said unloader, substantially as described.

2. In a mechanism for unloading lumber, an unloader, a lumber carrier, a cable having its ends connected with opposite sides of said carrier, an idler at one limit of travel of said carrier about which one bight of said cable is trained, a drum structure at the other limit of travel of said carrier about which said cable is trained, a weight controlled cable trained about said drum structure to be reeved in and elevate said weight when said drum structure is turned to advance said carrier in one direction, whereby said weight will lower to advance the carrier in an opposite direction, substantially as described.

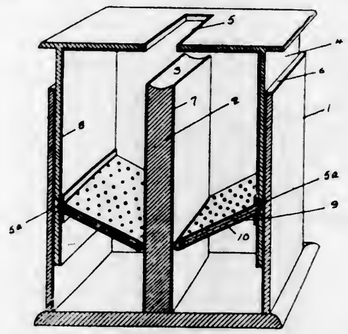
3. In a mechanism for unloading lumber, an unloader, a lumber carrier movable in opposite directions from opposite sides of said unloader, cable means for advancing said carrier in opposite directions, pressure means for exerting stress on the load of said carrier, cable means for advancing said pressure means in opposite directions, weight mechanism for actuating said cable means of said carrier and pressure means to exert a sustained advancing thrust on said carrier and the load thereof in unison toward said unloader, a power mechanism for retracting said carrier and pressure means away from said unloader in unison and energizing said weight mechanism, substantially as described.

4. In a mechanism for unloading lumber, an unloader, a lumber carrier movable in opposite directions with respect to said unloader, pressure means for exerting thrust on the load of said carrier, cable mechanism for actuating said carrier and pressure means in opposite directions, weight mechanism for actuating said cable means to exert a sustained advancing thrust on said carrier and pressure means to advance the carrier and its load toward said unloader as the load is being removed, and power mechanism for retracting said carrier and pressure means away from said unloader in unison and energizing said weight mechanism, substantially as described.

5. In a mechanism for unloading lumber, an unloader, a lumber carrier movable in opposite directions from opposite sides of said unloader, load pressure means movable in opposite directions away from and up to said unloader but not past said unloader, a unitary cable drum structure, sets of cables one for said carrier and one for said pressure means connected to said drum structure, weight mechanism actuating said sets of cables to impart a sustained advancing thrust to move said carrier toward and past and the load of said carrier against said unloader during the unloading operation and advance said carrier beyond said unloader after the loader has been removed, with said drum structure rotating wholly in one direction, and power mechanism for connection with said drum structure for rotating the same in an opposite direction to energize said weight mechanism and first retract said carrier up to said pressure means and then move said carrier and pressure means in unison away from said unloader, substantially as described.

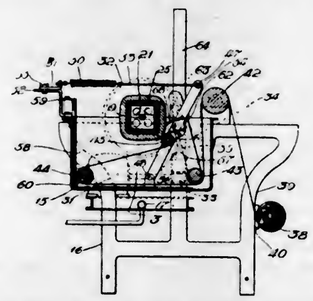
[Claims 6 to 14 not printed in the Gazette.]

1,220,376. HUMIDOR. JOHN JOSEPH TEARNEY, Toronto, and GEORGE LAING ALEXANDER, Aurora, Ontario, Canada. Filed Nov. 29, 1915. Serial No. 63,991. (Cl. 131—30.)



A cigarette box or the like comprising a stationary section having a central partition grooved at the upper end and extending across the box and a movable section telescopically arranged within said stationary section and having fixed shelves inclined downwardly to said partition and adapted to elevate the cigarettes to said groove, said shelves being perforated and containing absorbent pads adapted to deliver water vapor through said perforations.

1,220,377. MACHINE FOR MAKING INSULATING ELEMENTS. CHESTER H. THORDARSON, Chicago, Ill. Filed Apr. 20, 1914. Serial No. 833,182. (Cl. 93—81.)



1. A machine for the purpose set forth comprising a receptacle to contain a liquid insulaing compound, a winding form mounted in the receptacle and adapted to be partly submerged in the liquid, during the winding, with means to rotate it and to feed a sheet of insulating material through the liquid and reel it on said form.

2. A machine for the purpose set forth comprising a receptacle to contain a liquid insulating compound, a winding form mounted in the receptacle in position to be partly submerged in the liquid during the winding, with means to rotate it and to feed a sheet of insulating material through the liquid and reel it on said form, and a smoothing element for pressing the sheet on said form at the line of laying the sheet thereon.

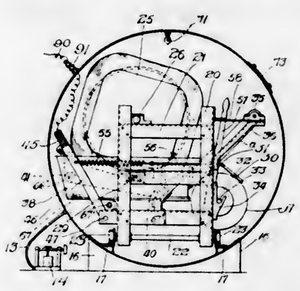
3. A machine for the purpose set forth comprising a receptacle to contain a liquid insulating compound, a form mounted in the receptacle in position to be partly submerged in the receptacle during the winding, with means to rotate it and to feed a sheet of insulating material through the liquid and reel it on said form, and a smoothing roller held against the sheet at the line of laying the sheet thereon.

4. A machine for the purpose set forth comprising a receptacle to contain a liquid insulating compound, a winding form mounted in the receptacle in position to be partly submerged in the receptacle during the winding, with means to rotate it and to feed a sheet of insulating material through the liquid and reel it on said form, a smoothing roller spring pressed against the sheet at the line of laying the sheet thereon and means to vary the pressure of said roller against said form.

5. A machine for the purpose set forth comprising a receptacle to contain a liquid insulating compound, a winding form mounted in the receptacle and adapted to be partly submerged in the receptacle during the winding, with means to rotate it and to feed a sheet of insulating material through the liquid and reel it on said form, a smoothing element for pressing the sheet on said form at the line of laying the sheet thereon, swinging arms in which said smoothing element is rotatively mounted, adjusting means, with spring connections between the same and said arms, and means to lock the adjusting means in different positions of adjustments.

[Claims 6 to 19 not printed in the Gazette.]

1,220,378. MACHINE FOR MAKING INSULATING ELEMENTS. CHESTER H. THORDARSON, Chicago, Ill. Filed Mar. 20, 1915. Serial No. 15,930. (Cl. 93—81.)



1. A machine for the purpose set forth comprising an air tight tank with means to produce and maintain a vacuum therein during the impregnation and assembling operation, mechanism within the tank for assembling thin sheets to constitute a multi-ply insulating element, means to apply pressure to the sheet as the layers are assembled in the element, means for impregnating the sheets with an insulating compound prior to the assembling operation and means whereby the sheet is subjected uniformly in all its parts to the action of the vacuum before it is impregnated.

2. A machine for the purpose set forth comprising an air tight tank with means to produce and maintain a vacuum therein during the impregnating operation, and a tube winding mechanism embracing a rotating mandrel, means to support a roll of sheet material within the tank, means to wind it on said mandrel, means to apply pressure to the sheet as it is wound upon the mandrel, and a receptacle for a liquid insulating compound through which the

sheet is passed on its way to said mandrel, the roll supporting means being exterior to said receptacle.

3. A machine for the purpose set forth comprising a receptacle to contain an insulating compound, a mandrel rotatable in the insulating compound in said receptacle, a reel to receive an insulating sheet roll, means to guide the sheet from said roll through the insulating compound in said receptacle to said mandrel, scraping means between the said receptacle and said mandrel to scrape excessive insulating compound from said sheet, and means to heat said scraping means.

4. A machine for the purpose set forth comprising a receptacle to contain an insulating compound, a mandrel rotatable in the insulating compound in said receptacle, a reel to receive an insulating sheet roll, means to guide the sheet from said roll through the insulating compound in said receptacle to said mandrel, scraping means between the said receptacle and said mandrel to scrape excessive insulating compound from said sheet, means to heat said scraping means and means between said scraping means and said mandrel to subject said sheet to the influence of a high tension electro-static discharge, for the purpose set forth.

5. A machine for the purpose set forth comprising an air tight tank with means to produce and maintain a vacuum therein, and a tube winding mechanism embracing a rotating mandrel, means to support a roll of sheet material within said tank, means to wind it on said mandrel, a receptacle for a liquid insulating compound through which the sheet is passed on its way to said mandrel, scraper devices to engage said sheet to scrape excess insulating compound therefrom and means for heating said scraper devices.

[Claims 6 to 25 not printed in the Gazette.]

1,220,379. LAND-SCRAPER. DAMON R. THROOP, Davis, Cal. Filed Nov. 4, 1916. Serial No. 129,518. (Cl. 37—7.)



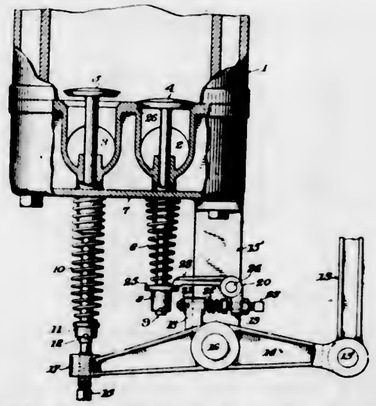
1. The combination with a portable frame, of a back plate adjustably supported within and extending below the frame, a ground scraping element carried thereby, fenders extending forwardly from and fixed relative to the back plate, an angularly adjustable link connected to each fender, a draw bar pivotally mounted upon each link and adjustably connected at its forward end to the portable frame, and flexible adjustable connections between the front portions of the fenders and the portable frame for limiting the downward tilting movement of the fenders.

2. The combination with a portable frame, of a back plate adjustably supported within and extending below the frame, a ground scraping element carried thereby, fenders extending forwardly from and fixed relative to the back plate, an angularly adjustable link connected to each fender, a draw bar pivotally mounted upon each link and adjustably connected at its forward end to the portable frame, flexible adjustable connections between the front portions of the fenders and the portable frame for limiting the downward tilting movement of the fenders, and crossed flexible connections between the back plate and the sides of the portable structure for holding the fenders out of contact with the sides of said frame.

3. The combination with a portable frame, of a back plate adjustably supported within and extending below the frame, a ground scraping element carried thereby, fenders extending forwardly from and fixed relative to the back plate, an angularly adjustable link connected to each fender, a draw bar pivotally mounted upon each link and adjustably connected at its forward end to the portable frame, flexible adjustable connections between the front portions of the fenders and the portable frame for limiting the downward tilting movement of the fenders, and an adjustable jointed connection between the front portion of the portable structure and an intermediate portion of the back plate.

4. The combination with a portable frame, a back plate, a scraping element at the lower edge of the plate, and means for raising and lowering the plate relative to the frame, of forwardly extending fenders at the sides of the plate, a forwardly extending bracket between the ends of the plate, adjustably mounted pivot devices connected to the fenders, a draw rod attached to the frame and adjustably connected to the bracket, and draw bars connecting the frame to the pivotal elements on the fenders, said points of connection between the bracket and its draw rod and the fenders and their draw bars being in alinement.

1,220,380. VALVE MECHANISM FOR GAS-ENGINES. LELAND M. TURNER, Port Washington, Wis. Filed Feb. 15, 1915. Serial No. 8,185. Renewed Sept. 2, 1916. Serial No. 118,311. (Cl. 123—90.)



1. In a device of the described class, the combination of intake and exhaust valves, means for normally retaining such valves in their closed position, a lever pivotally supported in close proximity to said valves, means connected with one end of said lever for raising the exhaust valve of said engine, means for connecting the opposite end of said lever with a movable part of said engine, a third arm projecting laterally from the side of said lever, a bell crank lever pivotally supported in close proximity to said first named lever, means for connecting said third arm with one of the arms of said bell crank lever, and means for connecting the opposite arm of said bell crank lever with said intake valve, whereby when said exhaust valve is held open said intake valve will be simultaneously held to its seat.

2. In a device of the described class, the combination of intake and exhaust valves, means for normally retaining such valves in their closed position, a lever pivotally supported in close proximity to said valves, means connected with one end of said lever for raising the exhaust valve of said engine, means for connecting the opposite end of said lever with a movable part of said engine, a third arm projecting laterally from the side of said lever, a bell crank lever pivotally supported in close proximity to said first named lever, means for yieldingly connecting said third arm with one of the arms of said bell crank lever, and means for connecting the opposite arm of said bell crank lever with said intake valve, whereby when said exhaust valve is held open said intake valve will be simultaneously held to its seat.

3. In a device of the described class, the combination of intake and exhaust valves, means for normally retaining such valves in their closed position, a lever pivotally supported in close proximity to said valves, means connected with one end of said lever for raising the exhaust valve of said engine, means for connecting the opposite end of said lever with a movable part of said engine, a third arm projecting laterally from the side of said lever, a bell crank lever pivotally supported in close proximity to said first named lever, means for adjustably connecting said third arm with one of the arms of said bell crank lever, and means for connecting the opposite arm of said bell crank lever with said intake valve, whereby as said exhaust valve is held open said intake valve will be simultaneously held to its seat.

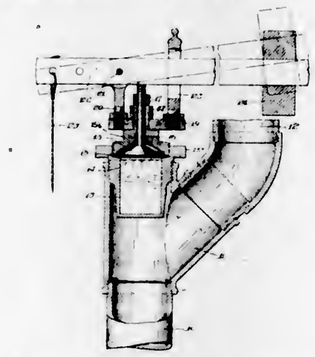
[Claim 4 not printed in the Gazette.]

4. In a device of the described class, the combination of intake and exhaust valves, means for normally retaining such valves in their closed position, a lever pivotally supported in close proximity to said valves, means connected with one end of said lever for raising the exhaust valve of said engine, means for connecting the opposite end of said lever with a movable part of said engine, a third arm projecting laterally from the side of said lever, a bell crank lever pivotally supported in close proximity to said first-named lever, means for yieldingly and adjustably connecting said third arm with one of the arms of said bell crank lever, and means for connecting the opposite arm of said bell crank lever with said intake valve, whereby when said exhaust valve is held open said intake valve will be simultaneously held to its seat.

5. In a device of the described class, the combination of the intake and exhaust valves of an engine provided with means for normally retaining such valves in their closed position, of a lever pivotally supported in close proximity to said valves, adjustable means connected with one end of said lever for raising the exhaust valve of said engine, means for connecting the opposite end of said lever with a movable member of said engine, a third arm projecting laterally from the side of said lever, a bell crank lever pivotally supported in close proximity to said first named lever, means for adjustably connecting said third arm with one of the arms of said bell crank lever, and means for connecting the opposite arm of said bell crank lever with said intake valve, whereby as said exhaust valve is held open said intake valve will be simultaneously held to its seat.

[Claim 6 not printed in the Gazette.]

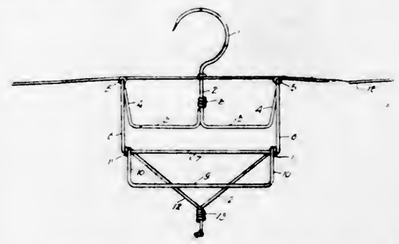
1,220,381. TEMPERATURE-REGULATOR. LEVIN D. VAUGHAN, Philadelphia, Pa. Filed June 24, 1916. Serial No. 105,533. (Cl. 236—6.)



1. In a temperature regulator, the combination with a boiler of a thermostatic chamber, connected to the water circulation therefrom, cast in one piece and having an overhanging hexagonal head, interiorly threaded to the depth of the diaphragm, a diaphragm, means for positioning said diaphragm on a ledge formed by the rim on the upper part of said chamber sealing the chamber therebeneath, means for causing an expansion of said diaphragm, a bushing exteriorly threaded to engage the interior threads of the hexagonal head aforesaid, a yoke, having upwardly extending arms adapted to act as guides for a lever, mounted on said bushing, a piston rod passing through an opening in said yoke and through said bushing and held in contact with said diaphragm by adjusting means carried by said piston rod and terminating in a piston head, which is a solid, the shape of a cone frustrum, with its base rounded to its slanting side so that when actuated by the diaphragm the contact with said piston head covers only a small area of the base of said piston head, a balanced lever pivotally mounted, at an intermediate point, on a pin through one of the arms of said yoke and in contact with the upper termination of said piston so that when the piston is actuated by the expansion of the diaphragm it will elevate said lever.

2. In a temperature regulator, the combination with a boiler of a thermostatic chamber, connected to the water circulation therefrom, cast in one piece and having an overhanging hexagonal head, interiorly threaded to the depth of the diaphragm, a diaphragm, means for positioning said diaphragm on a ledge formed by the rim on the upper part of said chamber sealing the chamber therebeneath, means for causing an expansion of said diaphragm, a bushing exteriorly threaded to engage the interior threads of the hexagonal head aforesaid, a yoke, having upwardly extending arms adapted to act as guides for a lever, mounted on said bushing, a piston rod passing through an opening in said yoke and through said bushing and held in contact with said diaphragm by adjusting means carried by said piston rod and terminating in a piston head, which is a solid the shape of a cone frustum, with its base rounded to its slanting side so that when actuated by the diaphragm the contact with said piston head covers only a small area of the base of said piston head, a balanced lever pivotally mounted, at an intermediate point, on a pin through one of the arms of said yoke and in contact with the upper termination of said piston so that when the piston is actuated by the expansion of the diaphragm it will elevate said lever and means for preventing leakage.

1,220,382. GARMENT-HANGER. JAMES A. WELLINGTON, Ensley, Ala., assignor of one-half to Charles R. Walker, Ensley, Ala. Filed Dec. 14, 1915. Serial No. 66,766. (Cl. 211—13.)



1. In a garment hanger, a hanger member and a clamp member hinged together, the hanger member comprising a shank with suspension means and two parallel arms connected overhead, the inner arm being connected to the shank and disposed on a level above the outer arm, the clamp member being hinged to said outer lower arm and having a clamp arm which is inclined upward in clamping position and adapted to engage said inner upper arm of the hanger member, and means to secure the members in operative position, substantially as described.

2. In a garment hanger, a hanger member and a clamp member hinged to the hanger member, the hanger member comprising a suspension shank, a cross arm connected to the shank, and a support for the clamp member, which support is connected to said member near the ends of its cross arm and spaced outwardly from and disposed below its said cross arm, the clamp member comprising a clamping arm hinged to said support on the hanger member

and inclined upward into position to engage the said cross arm when in clamping position, substantially as described.

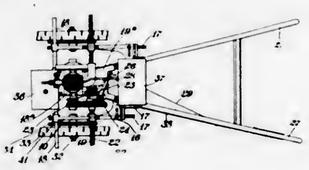
3. In a garment hanger, a hanger member and a clamp member hinged to the hanger member, the hanger member comprising a suspension shank, a cross arm connected to the shank, and a support for the clamp member, which support is connected to said member and spaced outwardly from and disposed below said cross arm, the clamp member comprising a clamping arm hinged to said support on the hanger member and inclined upward when in clamping position to engage the said cross arm, and a catch means to interlock the members in clamping position, substantially as described.

4. In a garment hanger, a hanger member comprising two spaced substantially parallel arms connected at their ends by arch shaped connections and disposed at different levels, a clamp member hinged to the lower arm and comprising a clamp arm adapted to swing across the space between the arms and to assume an upward inclined position to engage the upper arm, a suspension means for the hanger member, and a catch connected to the clamp member and adapted to engage said suspension means to hold the parts in clamped position, substantially as described.

5. In a garment hanger, a hanger member and a clamp member, the hanger member being formed of bent wire and comprising a hook, a vertical hook shank and two spaced horizontal and parallel cross arms connected at their outer ends by arched portions of the wire, and a hanger member also formed of bent wire and comprising a clamp arm having its ends bent at right angles and wound about the ends of one arm of the hanger member and then brought together, one of said ends forming a catch disposed to engage the hook shank when the clamp arm swings into engagement with the other of said arms of the hanger member.

[Claim 6 not printed in the Gazette.]

1,220,383. MOTOR-DRIVEN TRACTOR-CULTIVATOR. EARL R. WHEELER, Columbus, Ohio. Filed Feb. 18, 1916. Serial No. 79,171. (Cl. 21—114.)

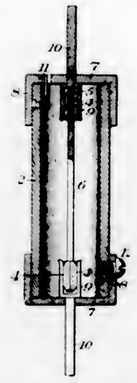


1. In a motor driven tractor cultivator, the combination of an engine, a pair of horizontal laterally extending bars forming a support for the engine, vertical integral side frames slidable onto and adjustable laterally on the ends of said bars so as to permit the straddling of a row of plants, and means for fixing the same thereon, tractor wheels supported on said frames and means whereby the tractor wheels may be driven by the engine.

2. In a motor driven tractor cultivator, the combination of an engine, a pair of horizontal laterally extending bars forming a support for the engine, vertical side frames slidable onto and adjustable on the ends of said bars, and means for fixing the same thereon, tractor wheels supported on said frames, a shaft driven by the engine onto which said side frames are also slidable, and means whereby the tractor wheels may be driven from said driven shaft.

3. In a motor driven tractor cultivator, the combination of an engine, a pair of horizontal laterally extending bars forming a support for the engine, vertical side frames slidable onto and adjustable on the ends of said bars, and means for fixing the same, means on said frame for receiving a garden tool, tractor wheels supported on said frame and means whereby the tractor wheels may be driven by the engine.

1,220,384. RENEWABLE FUSE. EDGAR H. WILSON, Chartiers township, Allegheney county, and WILLIAM F. CLARK, Cornopolis, Pa. Filed Nov. 3, 1914. Serial No. 870,046. (Cl. 175—273.)



1. A fuse device, comprising a fuse strip, clamping pieces embracing opposite sides of an end portion only of said strip, a removable spring clamp adapted to be forced over the clamping pieces, and means for holding the clamping pieces from moving with the clamp to prevent buckling of the fuse-strip when the clamp is being applied; substantially as described.

2. A fuse device, comprising a casing, a fuse member within the casing, separate clamping pieces embracing opposite sides of an end portion of the strip, the casing having abutments for supporting said pieces and limiting their inward movement in the direction of the length of the strip, and a removable clamping spring fitting over and engaging said pieces, the casing also having a removable cap member which engages and normally secures the clamping spring, said pieces and clamping member being removable at the adjacent end of the casing when the cap member is removed; substantially as described.

3. A fuse device comprising a casing, a fuse strip within the casing, a pair of separate clamping pieces embracing opposite sides of each end portion of the fuse strip, the casing having supports for the end portions of said pieces, a spring clamp embracing each pair of clamping pieces, and means for normally securing said clamps, each pair of said clamping pieces and its clamp being removable from the casing at the adjacent end of the latter; substantially as described.

4. A fuse device, comprising a casing having opposite slots at an end portion thereof, a fuse strip within the casing, clamping members removably seated in said slots and embracing an end portion of the fuse strip, a clamping device engaging the said members, and means for normally securing the clamping device in place; substantially as described.

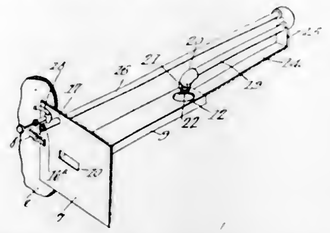
5. A fuse device comprising a casing having open slots at an end portion thereof, a fuse strip within the casing, separate clamping pieces removably seated in said slots and embracing an end portion of the fuse strip, and a U-shaped clamping spring embracing and securing said pieces, the casing having a removable cap portion holding said spring in place; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,220,385. COAL-OIL BURNER. JOHN A. L. WILSON, Watseka, Ill. Filed Aug. 26, 1914. Serial No. 858,762. Renewed Sept. 13, 1916. Serial No. 119,981. (Cl. 158—8.)

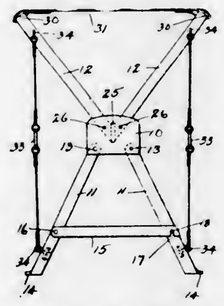
1. In a device of the class described, a face plate; an air shaft projecting from the face plate and provided with an opening; and a U-shaped pipe, one arm of which is mounted in the face plate, the other arm of which is provided with a burner head located above the opening.

2. In a device of the class described, a face plate; an air shaft projecting from the face plate; an arm projecting from the air shaft in substantial alinement with the shaft; a U-shaped pipe, one leg of which is supported



upon the arm, the other leg of which is assembled with the face plate; and a burner head upon the first specified leg, the air shaft being provided with an opening located adjacent the burner head.

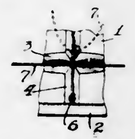
1,220,386. STAND. JOHN ALLAN, Newport, R. I. Filed Mar. 31, 1916. Serial No. 88,110. (Cl. 155—32.)



1. A folding stand comprising side plates, a foldable cross brace connecting the same, arms pivoted to said side plates in pairs, legs pivoted to said side plates in pairs, said side plates having means for limiting separating movement of the arms of each pair, and collapsible braces connecting the arms of one pair with the contiguous arms of the other pair.

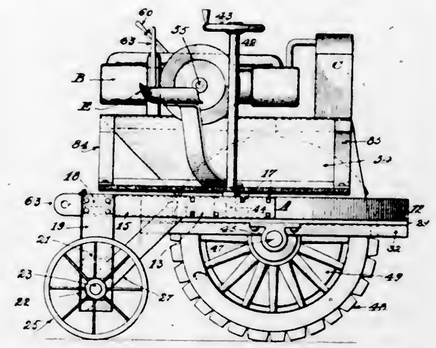
2. A folding stand comprising side plates provided with pivot lugs, a foldable cross brace pivotally attached to said lugs, arms pivoted to said side plates in pairs, said lugs being positioned to limit separating movement of the arms of each pair, legs pivoted to said side plates in pairs, and collapsible braces connecting the arms of one pair with the contiguous arms of the other pair.

1,220,387. NEEDLE-THREADING THIMBLE. ALLEN A. ANDERSON, Chicago, Ill. Filed Feb. 10, 1915. Serial No. 7,219. (Cl. 223—36.)



In a device of the class described, a thimble having needle and thread grooves at a right angle to one another in the outer wall thereof, and a looped needle-threading member mounted in one of said grooves below the outer surface of said thimble, said member having the extremity of its loop terminating in line with the other of said grooves, thus permitting a needle to be engaged thereover and to be drawn therefrom and over a thread which has been passed through the looped extremity of said member.

1,220,388. TRACTION-ENGINE. JOHN H. AUF DER HAAR, Chicago, Ill. Filed Mar. 27, 1916. Serial No. 86,940. (Cl. 21—144.)



1. A traction engine, including, in combination, a main frame, said main frame comprising a forwardly located annular ring, said annular ring being provided with cogs on its inner margin, there being rearwardly extending lugs on said ring, channels secured to said lugs, a cross bar connecting the rear extremities of said channels, downwardly pending members at the extremities of said channels, stub-axles projecting laterally from said downwardly projecting members, trailing wheels mounted on said stub-axles, an annular ring rotatably mounted below said first mentioned ring, ball bearings interposed between these two annular rings, a platform mounted on said second ring, a motor mounted on said rotatable platform, bearings projecting downwardly from said rotatable ring, an axle journaled in said bearings, a traction wheel mounted on said axle, and mechanism constructed to operatively connect said motor to said traction wheel.

2. In a traction engine, the combination, of a main frame, said main frame comprising a forwardly located annular ring, rearwardly extending lugs on said annular ring, beams connected to said lugs, a cross bar constructed to connect the rear extremities of said beams, a downwardly extending support at each rear end of said beams, stub-axles projecting laterally from said downwardly projecting supports, trailing wheels mounted on said stub-axles, a traction wheel at the forward end of said main frame constructed to support the forward end of said frame, a motor on said main frame, and mechanism constructed to operatively connect said motor to said traction wheel.

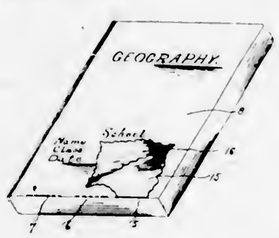
3. In a traction engine, a main frame, said main frame having trailing wheels at its rear end, a single traction wheel at the forward end of said main frame, means at the forward end of said main frame constructed to move said traction wheel obliquely to the longitudinal center line of said main frame to either side thereof, a motor mounted on said main frame, said motor being constructed to move in unison with the oblique movements of said traction wheel, and mechanism constructed to operatively connect said motor to said traction wheel, said mechanism including an engine crank shaft, a driven shaft on which said traction wheel is medially mounted, a pair of bevel gear wheels, said bevel gear wheels being loosely mounted on said engine shaft, an obliquely disposed driven shaft, said driven shaft having at one end a bevel gear wheel meshing with said pair of bevel gear wheels, a worm at the other end of said oblique shaft, a worm wheel on the aforesaid driven shaft meshing with

said worm, and clutch mechanism splined to said engine shaft and constructed to engage one or the other of said pair of bevel gear wheels.

4. In a traction engine, a main frame, said main frame having at its forward end an annular ring, said annular ring having cogs at its inner margin, said annular ring having a U-shaped transverse section, a second annular ring rotatably mounted underneath the first-mentioned annular ring, said latter annular ring having an annular upstanding portion constructed to enter and rotate in the groove formed in the first mentioned annular ring, ball bearings in the space between the top of said upstanding annular portion and the bottom of said groove, downwardly extending bearings secured to said second annular ring, a shaft rotatably mounted in said bearings, a traction wheel medially fixed to said shaft, a motor operatively connected to said shaft, and means constructed to rotate the lower annular ring.

5. In a traction engine, the combination, of a main frame, an annular ring fixed to said main frame at its forward end, a second annular ring rotatably connected to, and below, said fixed ring, bearings depending from said rotatable ring, a traction wheel shaft rotatably mounted in said bearings, a traction wheel medially fixed to said shaft, a platform above said fixed ring, said platform being connected to said rotatable ring to rotate therewith, a motor mounted on said platform above said traction wheel, gearing connecting said motor to said traction wheel shaft, means for rotating said traction wheel shaft in either forward, or reverse direction, and means for rotating the rotatable annular ring.

1,220,389. BOOK-COVER PROTECTOR. CARROLL M. AUMENT, Strasburg, Pa. Filed Nov. 6, 1915. Serial No. 59,955. (Cl. 11—4.)

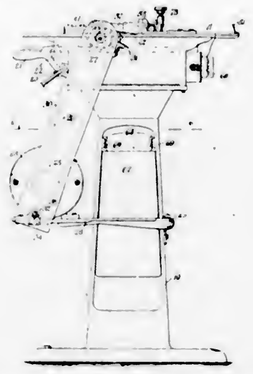


The combination with a bound book, of a plurality of superimposed cover protectors each provided with a portion secured between the inside of the cover and a fly leaf secured thereto, said fly leaf covering and holding the extreme outer edge of each of said protectors, said cover protectors being provided with means adapting other portions covering the outer surface of the book cover to be readily detached, each of said cover protectors being provided with an elongated slit running at and along the lower edge thereof, said slits being out of register with each other.

1,220,390. CUTTING-MACHINE. JOHN C. BACKERT, Brooklyn, N. Y. Filed July 28, 1916. Serial No. 111,793. (Cl. 29—60.)

1. In a machine of the character set forth, the combination of a cutter and a work supporting table relatively movable with respect to each other, said table having a socket in the top thereof at one side of the cutting plane of the cutter and a back rest for the work having a supporting face for engagement with the work provided with measurement indications and having a dependent pivot stud offset forwardly from the plane of the working face of said back rest and pivotally engaged in the socket in the table.

2. In a machine of the character set forth, the combination of a relatively movable cutter and work supporting table, said table having a groove in the top thereof parallel to the cutting plane of the cutter, a back rest for the work on the table, a slide on the table movable toward and away from the back rest and a holding gage pivoted on said slide and provided with a lug adapted to drop into the groove in the table top whereby in the sliding movements of said slide the pivoted holding gage will be guided by engagement in the groove aforesaid.



3. In a machine of the character set forth, the combination of a relatively movable cutter and work supporting table, a back rest for the work on said table, a slide mounted on the table and movable thereon toward and away from said back rest and a work holding member pivoted on said slide at a right angle to the cutting plane of the cutter.

4. In a machine of the character set forth, the combination of a relatively movable cutter and work supporting table, a back rest for the work on said table, a slide mounted on the table and movable thereon toward and away from said back rest and provided with a socket disposed at a right angle to the cutting plane of the cutter and a work holding gage disposed parallel to the cutting plane provided with a supporting stud pivotally engaged in said socket.

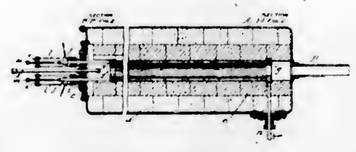
5. In a machine of the character set forth, the combination of a relatively movable cutter and work supporting table, a back rest for the work on said table, a slide mounted on the table and movable thereon toward and away from said back rest and provided with a socket disposed at a right angle to the cutting plane of the cutter, a work holding gage disposed parallel to the cutting plane and provided with a supporting stud pivotally engaged in said socket and a stop limiting the movement of said holding gage toward the cutting plane.

[Claims 6 to 21 not printed in the Gazette.]

1,220,391. MANUFACTURE OF CARBON-BLACK AND HYDROGEN. RAYMOND F. BACON, BENJAMIN T. BROOKS, and HUGH CLARK, Pittsburgh, Pa., assignors to Gulf Refining Company, Pittsburgh, Pa., a Corporation of Texas. Filed July 9, 1914. Serial No. 849,882. (Cl. 134—60.)

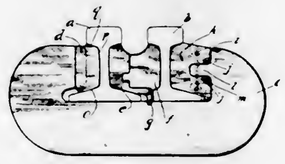
1. The method of making carbon black and hydrogen simultaneously which consists in exposing a hydrocarbon to a temperature sufficient to flash it into its constituent elements and removing the latter from the flashing zone while the carbon black thus produced is still in suspension in the hydrogen and in such condition that when deposited from the hydrogen it will have a deep black luster.

2. The method of making carbon black and hydrogen simultaneously, which consists in injecting a jet of liquid hydrocarbon into a zone of sufficiently high temperature to flash the hydrocarbon into its elemental constituents, and expelling both constituents continuously by the gas



pressure developed, while the carbon black produced is still in suspension in the hydrogen.

1,220,392. GUARD-RAIL CLAMP. JOHN A. BODKIN, New York, N. Y. Filed May 22, 1915. Serial No. 29,817. (Cl. 239—18.)



1. A guard rail clamp comprising a yoke having upwardly extending ends, one of said ends being provided with a tongue of reduced cross-section extending inwardly therefrom, co-acting filled blocks for spacing the rails, a wedge provided with a groove to receive the tongue on said one end of the yoke, and a fitting brace engaging the other end of said yoke, said yoke being formed of tougher material than said wedge and said fitting brace, substantially as specified.

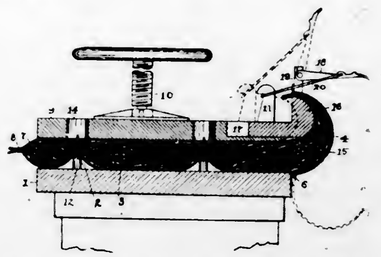
2. A guard rail clamp comprising a forged yoke having upwardly extending ends, one of said ends being provided with a tongue of reduced cross-section extending inwardly therefrom, a co-acting filled blocks for spacing the rails, a cast wedge provided with a groove to receive the tongue on said one end of the yoke, and a cast fitting brace engaging the other end of said yoke, substantially as specified.

3. A guard rail clamp comprising a yoke having upwardly extending ends, one of said ends having a bearing face and being provided with a tongue projecting inwardly from said bearing face, co-acting filler blocks for spacing the rails, a wedge engaging said bearing face and provided with a groove to receive said tongue, and a fitting brace engaging the other end of said yoke, substantially as specified.

4. A guard rail clamp comprising a yoke having upwardly extending ends, one of said ends having a bearing face and being provided with a tongue projecting inwardly from said bearing face, co-acting filler blocks for spacing the rails, a wedge engaging said bearing face and provided with a groove to receive said tongue, and a fitting brace engaging the other end of said yoke, said yoke being formed of tougher material than said wedge, substantially as specified.

5. A guard rail clamp comprising a yoke having upwardly extending ends, one of said ends having a bearing face and being provided with a tongue extending inwardly therefrom, co-acting filler blocks for spacing the rails, a wedge provided with outwardly-extending, spaced flanges engaging said bearing face, said flanges receiving between them said inwardly extending tongue, and a fitting brace engaging the other end of said yoke, substantially as specified.

1,220,393. UPHOLSTERING FORMER OR MOLD. ALBERT HENRY BRANDEL and FRANK GREER, Lansing, Mich. Filed Sept. 29, 1916. Serial No. 122,937. (Cl. 155—43.)



1. An upholstering former or mold, comprising a bottom board and a follow board provided with roll forming border parts, one of said parts being movably related to the other part, and means to draw said border parts together.

2. An upholstering former or mold, comprising a bottom board, a follow board, rounded border pieces for said boards movably related, and means to operate one of said pieces independently of the said boards to compress the upholstering on curved lines at one edge thereof.

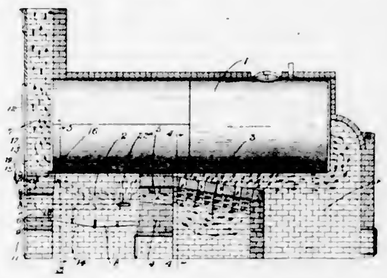
3. An upholstering former or mold, comprising a bottom board having a curved border piece adapted to round the edge portion of the upholstering, a follow board having a rounded border part movable laterally relatively to said curved border piece, and means to lock said movable border part in fixed position with the upholstering compressed.

4. An upholstering former or mold, comprising a bottom board and a follow board, a hinged border piece having a rounded recess to shape the border portion of the upholstering and means to produce an independent clamping action of said border piece upon said upholstering.

5. An upholstering former or mold, a bottom board having a rounded border recess, a follow board having a slidable member at its edge, and means to move said member toward said recess.

[Claims 6 to 12 not printed in the Gazette.]

1,220,394. SMOKELESS OVEN-FURNACE. JOHN G. BROMAN, Chicago, Ill. Filed Jan. 18, 1915. Serial No. 2,785. (Cl. 110—60.)

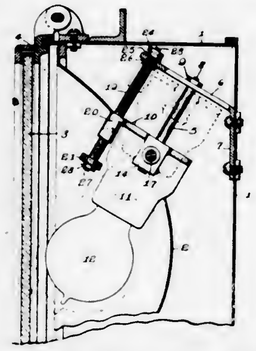


1. In a device of the class described, a boiler, a fire box, steam jet injectors projecting through the front wall thereof, each comprising a fitting, a steam nozzle extending therethrough, an air conduit communicating with said fitting, a pipe element connected with said fitting having a converging entrance and an outwardly flaring exit, and a tapered nozzle connected over the end of said pipe element, steam and air injectors discharging through the side walls of the fire box at a different level than the front wall ejectors, a combustion chamber adjacent said fire box, a perforated top wall therefor, and a large chamber dis-

posed beyond and communicating with said combustion chamber through said perforated wall, said jets adapted to inject air into the fire box to prevent the products of combustion contacting the boiler while in the fire box and forcing the same into the combustion chamber for further combustion before entering said large chamber.

2. In a device of the class described, a fire tube boiler, a fire box beneath the front end thereof, steam injectors each comprising a fitting, a steam nozzle extending therethrough, an air conduit communicating with said fitting, a pipe element connected with said fitting having a converging entrance and an outwardly flaring exit, and a tapered nozzle connected over the end of said pipe element projecting through the upper portion of the front wall of said fire box, a steam injector in each of the side walls of said fire box mounted to discharge into the fire box below the level of discharge of the injectors in the front wall, a chamber below the rear end of the boiler in communication with the interior thereof, a combustion chamber adjacent said fire box, a perforated top wall therefor, and a bridge wall between the fire box and the combustion chamber having a passage therethrough whereby said injectors in the front wall act to inject air and steam downwardly into the fire box and co-act with the injectors of the side walls to force the evolved gases through the passage in said bridge wall into the combustion chamber to prevent the gases primarily contacting the boiler to insure further combustion thereof by passage through said combustion chamber and perforated top wall into the chamber beneath the rear end of said boiler.

1,220,395. SUPPORT FOR INCANDESCENT-ELECTRIC-LAMP SOCKETS. FRANK BUCHANAN, Syracuse, N. Y. Filed Aug. 2, 1915. Serial No. 43,247. (Cl. 240—44.)



1. A support for incandescent electric lamp sockets, including a guide rod, a lamp socket, a carriage having a bearing on the rod, the rod extending at one side of the axis of the carriage, and means located at one side of the axis of the carriage and remote from the rod for moving the carriage along the guide rod, substantialy as and for the purpose described.

2. A support for incandescent electric lamp sockets, including a guide rod, a lamp socket, a carriage having a bearing on the rod, the rod extending at one side of the axis of the carriage, and means for moving the carriage along the rod, said means comprising a screw held from endwise movement and coacting with the carriage at a point spaced apart from the bearing, substantially as and for the purpose specified.

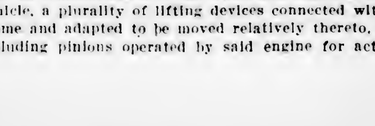
3. A support for incandescent electric lamp sockets, including a pair of parallel guide rods, a carriage located between the rods and having bearings thereon, and a screw held from endwise movement and connected to the carriage at one side of the carriage and midway between said bearings, substantially as and for the purpose set forth.

4. A headlight comprising a casing, light focusing means in the casing, a lamp support within the casing, a movable carriage carried by the support, a lamp socket supported by the carriage, and means for moving the carriage to carry the lamp in a direction at an inclined angle to the axis of the light focusing means, substantially as and for the purpose described.

5. A headlight comprising a casing, a light focusing means in the casing, a lamp support within the casing including a guide rod arranged at an inclined angle to the axis of the light focusing means, a carriage having a bearing on the rod, a lamp socket supported by the carriage, and a screw carried by the support and arranged parallel to the rod and coacting with the carriage to shift the same to carry the lamp socket relatively to the axis of the light focusing means, substantially as and for the purpose specified.

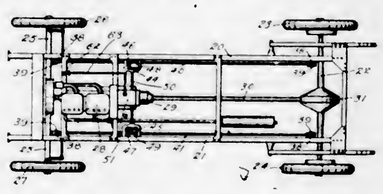
[Claims 6 to 17 not printed in the Gazette.]

1,220,396. LEAF-SPRING. ANGUS DANIEL CAMERON, Summerstown Front, Ontario, Canada, assignor to Lister Abraham Chittenden, Massena, N. Y. Filed Jan. 15, 1916. Serial No. 72,252. (Cl. 267—27.)



The combination with a leaf spring consisting of a plurality of superimposed leaves of different lengths, of a lower master leaf provided with tubular ends designed to lie along the lower face of the spring and intimately engage the ends ends of all the leaves, and links pivotally connecting the ends of the upper leaf of the spring with the tubular ends of the lower master leaf, as and for the purpose specified.

1,220,397. LIFTING DEVICE FOR MOTOR-VEHICLES. OSCAR CARGILL, Minneapolis, Minn. Filed June 8, 1915. Serial No. 32,835. (Cl. 254—86.)



1. In combination with the frame and engine of a motor vehicle, a casing adapted to be secured to the transmission casing of said engine in place of the cap, transmission gears within said casing meshing with the engine shaft drive gear, said transmission gears including a reversing mechanism, a plurality of lifting devices situated at the corners of the frame and operable from said transmission gears, and means for operating said transmission gears.

2. In combination with the frame of a motor vehicle, a plurality of lifting devices connected with said frame and adapted to be moved relatively thereto, means for actuating said lifting devices to cause them to be moved in either an upward or downward direction, means for locking said devices from movement in a direction opposite to that imparted to them by the actuating means, means for reversing the direction of movement of the devices, and means for reversing the action of the locking means.

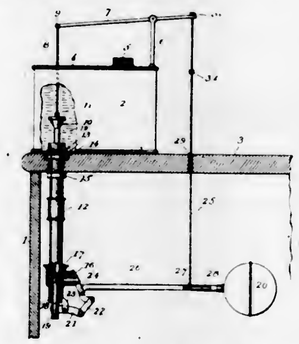
3. In combination with the frame and engine of a motor vehicle, a plurality of lifting devices connected with said frame and adapted to be moved relatively thereto, means including pinions operated by said engine for actuating said lifting devices, means for locking said lifting devices against movement opposite to that imparted to them by said actuating means, and means operable by said pinions for reversing the action of said locking means.

4. In combination with the frame of a motor vehicle, a plurality of lifting devices, each device comprising a T-shaped bar, a rack on the stem of said bar and ratchets on the arms of said bar, a pinion meshing with said rack for operating said device, and dogs engageable with said ratchets for locking said device.

5. In combination with the frame of a motor vehicle, a plurality of lifting devices, each device comprising a T-shaped bar, a rack on the stem of said bar, oppositely-extending ratchets on the arms of said bar, a pinion meshing with said rack for operating said device, arms pivoted to said frame, dogs on said arms engageable with said ratchets for locking said device, links connecting said arms so that only one of said dogs engages its corresponding ratchet at one time, and a finger engageable with said pinion for operating said links.

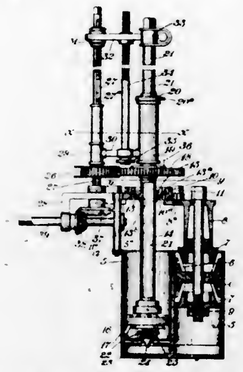
[Claims 6 to 8 not printed in the Gazette.]

1,220,398. DISINFECTANT-DISPENSING ATTACHMENT FOR FLUSH-TANKS. JOHN C. COX and BERTHOLD V. COX, St. Louis, Mo. Filed July 1, 1916. Serial No. 107,101. (Cl. 4—30.)



An improved disinfectant dispensing-attachment for flush-tanks, consisting of the combination with a flush-tank, of a disinfectant tank arranged above said flush-tank, a vertical bracket rising from the top of said disinfectant-tank, a horizontal lever pivotally mounted at the upper end of said bracket, a disinfectant measuring-chamber extending vertically from the bottom of said disinfectant-tank a considerable distance into the said flush-tank and having its interior in communication with both of said tanks, a disinfectant-valve having a long non-cylindrical stem which is mounted to slide in the upper part of the said measuring-chamber, to control the passage of a liquid disinfectant to the said measuring-chamber, a vertical rod connecting said valve to the adjacent end of said horizontal lever, an exit-valve at the lower end of said measuring-chamber, for controlling the passage of disinfectant from the latter, a common float and connections located in said flush-tank, for automatically opening said exit-valve as the water rises in said flush-tank, and for automatically closing the same when the water in said flush tank is discharged, said float having an arm that is slotted, a vertical rod extending from the slot in said float-arm upwardly to the overhanging end of the said horizontal lever, and connecting said float-arm to said lever, the upper portion of the said last-mentioned vertical rod being threaded, and the threaded portion thereof passed loosely through an opening formed in the adjacent end of the last-mentioned vertical rod, an adjusting-nut on said threaded portion above said horizontal lever, and a fixed stop on said last-mentioned vertical rod, to contact with the underside of said horizontal lever as the said float and float-arm rise.

1,220,399. BORING MECHANISM. WILLIAM H. COWELL, Columbus, Ohio. Filed Nov. 22, 1915. Serial No. 62,717. (Cl. 77—4.)



1. A boring mechanism including in combination, a tubular tool carrying shaft, a bar in said tubular tool carrying shaft, a centering device on said bar for centering one end of the tool carrying shaft, said centering device constructed to engage the inner surface of the wall of the object to be bored, and a supplementary centering device for the other end of the tool shaft.

2. In a boring mechanism, a centering device for a tool carrying shaft including, in combination a fixed ring, a second ring engaging the tool shaft adjustable on the first mentioned ring, said last named ring having a rounded inner bearing surface, and means for fixing said second ring with reference to the first mentioned ring.

3. In a boring mechanism, a centering device for a tool carrying shaft including, in combination a fixed ring, a second ring, said last named ring having a rounded inner bearing surface, a thimble on the shaft engaged by said rounded surface and means for fixing said second ring with reference to the first mentioned ring.

4. In boring mechanism, in combination, a tubular tool carrying shaft, a guide bar for said tubular shaft having centering device thereon, supplemental means for centering said guide bar and shaft, and means for turning said tool carrying shaft on said guide bar and feeding the same.

5. In boring mechanism, in combination, a tubular tool carrying shaft, a guide bar for said tubular shaft having a centering device thereon and means for fixing the same in position, supplemental means for centering said guide bar and shaft and means for turning said tool carrying shaft on said guide bar and feeding the same.

1,220,400. COMBINATION STACKER-HOOD. JOHN WILLIAM DAVIS and JOHN W. KELLER, Peru, Iowa. Filed Aug. 9, 1915. Serial No. 44,653. (Cl. 193—21.)



1. A stacker hood comprising a tubular member, a flexible tubular member on one end thereof, a door opening in said tubular member spaced from the discharge end thereof, spaced arms between said door opening and said flexible member pivotally mounted, and a hinged cover member above said arms adapted to be raised by the upward movement of said arms.

2. A stacker hood comprising a tubular member, having a door opening in its wall spaced from its discharge end, a plurality of spaced arms between said opening and said

discharge end, pivotally mounted and a hinged door above said arms adapted to be raised by the upward movement of said arms.

3. A stacker hood comprising a tubular member, having a door opening in its wall spaced from its discharge end, a plurality of spaced arms between said opening and said discharge end, pivotally mounted, a hinged door above said arms adapted to be raised by the upward movement of said arms, and means tending to yieldingly hold said hinged door in closed position.

4. A hood for pneumatic stackers comprising a body portion having openings in its upper and lower sides, fingers mounted upon said body portion and movable upwardly and downwardly through said upper opening, a cover for closing said opening, and a door for closing said lower opening.

5. A hood for pneumatic stackers comprising a body portion having openings in its upper and lower sides, a yieldingly controlled cover for said upper opening, pivotally mounted fingers on said body portion adapted to be swung thereinto for separating dust from straw and directing such straw downwardly through said lower opening when straw and other material are to be discharged together, and a closure for said lower opening adapted to be closed when straw and other material are discharged together.

1,220,401. WATERPROOF BUILDING MATERIAL. ALFRED CARLES DE CAUDEMBERG, Raimbaldi, Nice, France. Filed Nov. 29, 1913, Serial No. 803,708. Renewed Aug. 10, 1916. Serial No. 114,287. (Cl. 106—24.)

1. The herein described process of producing a waterproof building material, which consists in adding india rubber dissolved in a mixture of benzol and carbon bisulfid to gas tar heated to a high temperature, and thereafter adding cement to the product.

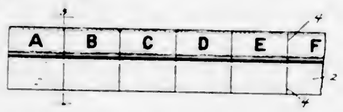
2. The herein described process of producing a waterproof building material, which consists in adding india rubber dissolved in a mixture of benzol and carbon bisulfid to gas tar heated to a high temperature, adding inert matter to the dissolved india rubber, and finally adding cement to the mixture of india rubber and inert matter.

3. The herein described process of producing a waterproof building material, which consists in dissolving india rubber in a mixture of benzol and carbon bisulfid, allowing said solution to cool, adding thereto gas tar distillate from which benzol has been removed, liquefying said mixture by heat and adding cement thereto, and finally subjecting the product to pressure.

4. The herein described process of producing a waterproof building material, which consists in dissolving india rubber in a mixture of benzol and carbon bisulfid, allowing said solution to cool, adding thereto gas tar distillate at a density of approximately 1.220 and temperature of approximately 55° C. from which distillate the benzol has been removed, liquefying said mixture by heat and adding cement thereto, and finally subjecting the product to pressure.

5. The herein described process of producing a waterproof building material, which consists in dissolving indiarubber in a mixture of benzol and carbon bisfulfid, allowing said solution to cool adding thereto gas tar distillate from which benzol has been removed, liquefying said mixture by heat and adding inert matter and cement thereto, and finally subjecting the product to pressure.

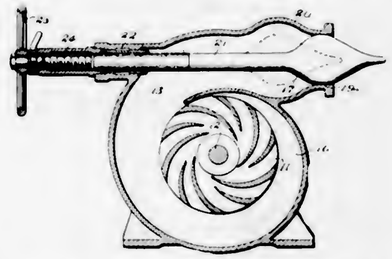
1,220,402. INDEX-TAB. WILLIAM F. DEUSS, Chicago, Ill. Filed Aug. 31, 1916. Serial No. 117,850. (Cl. 40—2.)



1. A set of index tabs including a strip of leather or the like folded longitudinally and having the portions adjacent to the folded edge secured to each other and equipped with serial legends arranged longitudinally of the strip, the parts of the strip at the opposite edge being unattached to each other, the strip being provided with transverse slits disposed between the consecutive legends and extending from opposite edges toward the center of the strip, and entirely through the said relatively secured portions, whereby the consecutive tabs are connected only by relatively narrow and loosely overlapping portions adapted to be ruptured by a relative torsional movement of adjacent tabs.

2. A set of index tabs comprising a strip of leather or the like folded longitudinally and equipped with serial legends arranged longitudinally of the strip, and a relatively narrow insert disposed within said folded strip and secured thereto close to the fold-edge of the latter; the strip being provided with transverse slits disposed between the consecutive legends and extending from opposite edges toward the center of the strip and entirely through the said relatively secured portions, whereby the consecutive tabs are connected only by relatively narrow overlapping portions spaced from both edges and from said insert and adapted to be ruptured by a relatively torsional movement of adjacent tabs.

1,220,403. CENTRIFUGAL PUMP. WILLIAM A. DOBLE, San Francisco, Cal., assignor to The Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed June 2, 1913. Serial No. 771,307. (Cl. 103—43.)



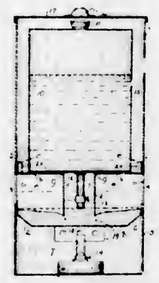
In combination, a centrifugal pump including a rotary member and a casing therefor, said casing having a discharge conduit formed integral therewith and having its outlet adapted for connection to a discharge pipe, and a needle valve extending longitudinally of said conduit, said casing having a restricted portion and an enlarged portion through both of which said valve may be moved and which are adapted to coact with said valve and respectively provide a substantially closed and a full discharge opening, and said valve being provided with a stem extending rearwardly therefrom and to the exterior of said conduit and provided with means for actuating said valve.

1,220,404. STOCK-WATERING DEVICE. ALBERT N. EATON, Omaha, Nebr. Filed Nov. 22, 1916. Serial No. 132,786. (Cl. 119—73.)

1. In a stock watering device, a cylindrical casing provided with an apertured lid and having drink apertures formed in its opposed sides, an elongated trough disposed horizontally in the casing between the drink apertures, a pair of hoods disposed in the trough with a passageway between their inner ends each being provided with a flat top and having its sides and inner end projecting above the trough to provide a compartment opening on a drink aperture, a water container disposed within the casing upon the hoods and having a discharge pipe extending within said passageway to terminate between the sides and above the bottom of the trough, and a heating element within the casing.

2. In a stock watering device, a cylindrical casing provided with an apertured lid and having drink openings in its opposed sides, a trough arranged in the casing between the drink openings, a pair of hoods within the

trough, each having its top, sides and inner end projecting above the sides of the trough, a water barrel closed at one of its ends, its opposite end being provided with a discharge pipe having a valve for controlling a flow therefrom, said barrel being disposed within the casing upon said hoods with its discharge pipe projecting downwardly intermediate the hoods to terminate between the sides and above the bottom of the trough, said casing being provided with a doorway, and closure to permit manual control of the valve, and means for applying heat to the trough.



3. In a stock watering device, a cylindrical casing provided with an apertured lid and having drink apertures formed in its opposed sides, a trough arranged in the casing between the drink apertures, a pair of hoods disposed with their inner ends adjacent to each other within the trough, each being provided with a flat top and having its sides and inner end projecting above the trough to provide a compartment opening on a drink aperture, a water container provided with a discharge pipe, said water container being disposed within the casing upon the hoods with its discharge pipe extending between the hoods, the discharge terminal of said pipe being disposed within the trough in a plane above the lower edges of the sides of the hood, and a heating element within the casing.

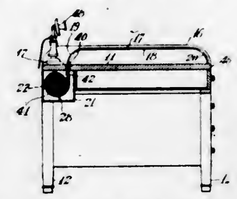
4. In a stock watering device, a cylindrical casing provided with drink openings in its opposed sides, a trough arranged in the casing between the drink openings, a pair of hoods within the trough, each having its top, sides and inner end projecting above the sides of the trough, a water barrel closed at one of its ends, its opposite end being provided with a discharge pipe, said barrel being disposed within the casing upon said hoods with its discharge pipe projecting downwardly intermediate the hoods within the trough with its free end disposed in a plane above the lower edges of the sides of the hood, an apertured cover for the casing, and means for applying heat to the trough.

5. In a stock watering device, a cylindrical casing provided with an apertured lid and having drink openings formed in its opposed sides, a trough arranged horizontally in the casing between and having a part disposed below the drink openings, a pair of hoods within the trough, each having a flat top and having its inner end and sides overhanging the trough, a cylindrical water container supported by the hoods and disposed substantially midway between the side walls of the casing to provide an annular chamber therein, said container having a discharge pipe extending between the inner ends of the hoods to dispose its terminal within the trough in a plane above the lower edges of the sides of the hood, and means for applying heat to the trough.

[Claims 6 and 7 not printed in the Gazette.]

1,220,405. DESK. FREDERICK R. FEITSHANS, Los Angeles, Cal. Filed Feb. 9, 1916. Serial No. 77,315. (Cl. 45—92.)

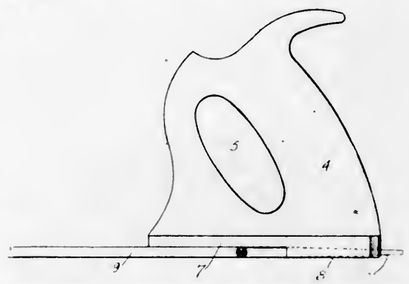
1. In a desk; a flat top having a slot at one side thereof, said slot being at least sufficiently far from the back of said top to allow a desk telephone or other device of similar proportions to rest thereon; a projection at either end of said top, said projections extending up from said top a distance somewhat less than the height of an ordinary telephone, extending along the whole length of either edge, and being provided with grooves on the inner sides thereof, said grooves registering at one end with said slot and extending down at their forward end to a point near said top; and a curtain sliding in said slot and said grooves.



2. In a desk; a flat top having a slot at one side thereof, said slot being at least sufficiently far from the back of said top to allow a desk telephone or other device of similar proportions to rest thereon; a projection at either end of said top, said projections extending up from said top a distance somewhat less than the height of an ordinary telephone, extending along the whole length of either edge, and being provided with grooves on the inner sides thereof, said grooves registering at one end with said slot and extending down at their forward end to a point near said top; and a flexible curtain extending through said slot to a point below said top, said curtain sliding in and being guided by said grooves.

3. In a desk; a flat top having a slot at one side thereof, said slot being at least sufficiently far from the back of said top to allow a desk telephone or other device of similar proportions to rest thereon; a projection at either end of said top, said projections extending up from said top a distance somewhat less than the height of an ordinary telephone, extending along the whole length of either edge, and being provided with grooves on the inner sides thereof, said grooves registering at one end with said slot and extending down at their forward end to a point near said top; a curtain sliding in said slot and said grooves; and a cross bar secured to the forward end of said curtain and so shaped as to drop into and close said slot when said curtain is slid back through said slot.

1,220,406. FILE HANDLE. JAMES M. FLESHMAN, Corydon, Ind. Filed April 21, 1916. Serial No. 92,748. (Cl. 29—80.)



A file holder comprising a plate having a flat upper face and a lower face provided at its rear end with a pair of bosses having opposed faces at right angles to the plane of the remainder of the lower face and converging rearwardly, the remainder of said lower face forming a continuous unbroken plane, said plate being provided with screw receiving openings, a handle seated on the upper face of the plate, and screws passing through the openings and into the handle, the heads of said screws lying wholly within said plate.

1,220,407. LEVELING INSTRUMENT. GEORGE W. FOGELSONG, Idaho Falls, Idaho. Filed Jan. 6, 1915. Serial No. 848. (Cl. 33—220.)



1. A level having a frangible casing, an indicator within said casing, means to cause said indicator to seek the vertical, a stock provided with a recess in which the casing is positioned and provided with a groove, said casing having an extension for insertion of the indicator and an equilibrant, said casing being positioned in said recess, and said extension being positioned in said groove to prevent turning of the casing relative to the stock.

2. A level having an indicator casing, an indicator within said casing, a stock member provided with a sight opening, a recess communicating with the sight opening, one of said members having a groove, the other of said members being provided with an extension, said groove extending but partly across its respective member, said casing being mounted in said recess below the sight opening, and said extension being mounted in said groove, said casing having indications on one side of the casing secured to the stock, and the said fastening member securing the casing in place with the extension in the groove and leaving substantially the said graduations only, exposed.

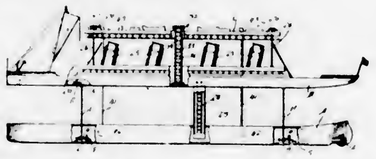
3. A level having a casing, said casing being provided with an opening, an indicator yieldable for insertion through said opening, means to mount the indicator interiorly of the casing, and means to cause said indicator to seek the vertical.

4. A level having a casing provided with bearing means interiorly thereof, said casing being provided with an opening, an indicator insertible through said opening, means to cause said indicator to seek the vertical, said indicator having a plurality of relatively movable arms, and means on one of said arms to engage said bearing means.

5. A level having a casing, said casing being provided with an opening, an indicator insertible through said opening into the casing, means to cause said indicator to seek the vertical, said indicator being yieldable for contraction while passing through the opening, and means to mount the indicator within the casing.

[Claims 6 to 8 not printed in the Gazette.]

1,220,408. SHIP-SAVING DEVICE. MARION FRANKLIN FOSTER, Sutton, Nebr. Filed Jan. 7, 1916. Serial No. 70,815. (Cl. 114—77.)



1. A boat including a hull laterally divided into three buoyant sections, means for releasing any section from the next adjacent section, and means affording a passage from each section to the others after release.

2. A boat including a hull laterally divided into three buoyant sections, means for releasing the lowermost section when the boat receives a shock, and means for subsequently releasing the next adjacent sections from each other.

3. A boat including a hull laterally divided into a plurality of buoyant sections, and means for suspending each section from the next adjacent section.

4. A boat including a hull laterally divided into three buoyant sections, means for suspending each section from the next adjacent section, and means affording a passage between such sections when suspended from each other.

5. A boat including a hull laterally divided into three buoyant sections, means for releasing such sections, said means including a device controlling the release of the lowermost section, and operative only when such lowermost section receives a shock as of impact.

[Claims 6 to 8 not printed in the Gazette.]

1,220,409. DENTAL-FLOSS-HOLDING DEVICE. ALFRED FRESCHL, Detroit, Mich. Filed July 16, 1915. Serial No. 40,162. (Cl. 132—12.)

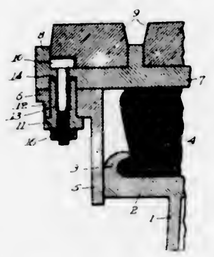


1. In a dental floss-holding device, the combination of a frame having a bow portion, a bearing portion, a screw-threaded cap non-rotatably secured in said bearing portion, a second bearing portion spaced from the first-mentioned bearing portion, said cap being provided with an aperture and a lip, and a receptacle provided with a screw-threaded mouth adpted to be passed through the second bearing portion and screwed into the cap of the first bearing portion.

2. In a dental floss-holding device, the combination of a frame comprising a bow portion having an acute hook at its outer end, a bearing portion, an arm extending from the bearing portion to a spaced point, a second bearing portion located on the end of said arm, a threaded cap non-rotatably held in the first bearing portion and provided with an aperture and a hook member integrally secured thereto, and a floss-holding receptacle adapted to be passed through the second bearing portion and screwed into the cap.

3. In a dental floss-holding device, the combination of a frame-work comprising a bow portion having at its outer end an acute hook, a bearing portion, a screw-threaded cap non-rotatably held in said bearing portion and provided with an integral hook-like member and an aperture, and a floss-holding receptacle adapted to be screwed into said cap.

1,220,410. WHEEL-RIM. FRANKLIN A. FROMMANN, Chicago, Ill., assignor to Olive Frommann, Chicago, Ill. Filed June 6, 1913. Serial No. 772,094. (Cl. 152—36.)



1. The improvements herein described comprising a vehicle rim consisting of a cylindrical portion and side flanges and adapted to be floatingly carried upon a wheel, means for securing the side flanges to the rim comprising a plurality of bolts extending radially through alined perforations in the side flanges and rim, bushings on the bolts having threaded engagement with the bolt, and projecting through the side flange and into the rim and a nut on each bolt for engagement with the bushing thereon.

2. In a vehicle rim having a cylindrical rim portion and a pair of side flanges, a cylindrical web integral with each of the said flanges, a plurality of lateral enlargements upon each side flange adjacent to its web, a radial perforation in each of said enlargements, the said perforation extended through the adjacent rim portion and contracted at its end radially outward of the wheel; a bushing slidably fitting but shorter than the uncontracted portion of the said perforation, the bore of the bushing substantially equal to the bore of the said contracted portion of the perforation; and a bolt extending through the said bore of the bushing and the said contracted portion of the perforation; the said bolt having threaded engagement with a portion of the bore of the said bushing.

3. In a vehicle rim having a cylindrical rim portion and a pair of side flanges, a cylindrical web integral with each of the said flanges, a plurality of lateral enlargements upon each side flange adjacent to its web, a radial perforation in each of said enlargements, the said perforation extended through the adjacent rim portion and contracted at its end radially outward of the wheel; a bushing slidably fitting but shorter than the uncontracted portion of the said perforation, the bore of the bushing substantially equal to the bore of the said contracted portion of the perforation; and a bolt extending through the said bore of the bushing and the said contracted portion of the perforation; the said bolt having threaded engagement with a portion of the bore of the said bushing; one of the said rims presenting a portion engaging the head of the bolt to prevent rotation thereof.

4. The improvements herein described comprising a vehicle rim consisting of a cylindrical portion and side flanges and adapted to be floatingly carried upon a wheel, means for securing the side flanges to the rim comprising a plurality of bolts extending radially through alined perforations in the side flanges and rim, bushings on the bolts extending through the side flanges and into the rim and serving to dowel the rim and side flanges together, and nuts on the bolts for holding the bushings against removal.

1,220,411. MANUFACTURE OF HYDROCHLORIC ACID. JAMES B. GARNER and HOWARD D. CLAYTON, Pittsburgh, Pa., assignors to Metals Research Company, New York, N. Y., a Corporation of Maine. Filed Mar. 4, 1915. Serial No. 12,133. (Cl. 23—1.)

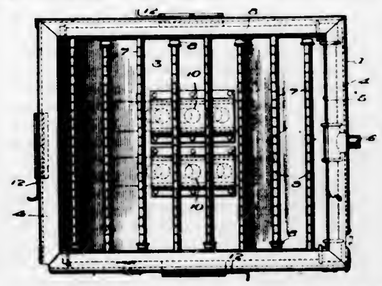
1. The method of making hydrochloric acid which comprises causing hydrogen and chlorin to react at a temperature of not below about 340° C. in the presence of wood charcoal, moisture being present in the reacting gases and the hydrogen being employed in excess, and recovering the hydrochloric acid thus formed; substantially as described.

2. The method of making hydrochloric acid which comprises causing hydrogen and chlorin in the proportion of about fifty parts of hydrogen by volume to 35 parts of chlorin to react at a temperature of about 340° C. in the presence of wood charcoal, moisture being present in the reacting gases, and dissolving in water the hydrochloric acid thus formed; substantially as described.

3. The method of making hydrochloric acid, which comprises causing hydrogen and chlorin to react in the presence of wood charcoal at a temperature of not below about 340° C., and combining the resulting hydrochloric acid with water to form a solution of hydrochloric acid; substantially as described.

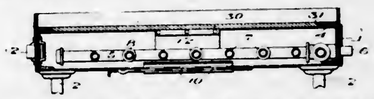
1,220,412. VAPOR-STOVE. BENJAMIN F. GOLLMAR, Baraboo, Wis. Filed Apr. 17, 1916. Serial No. 91,778. (Cl. 158—104.)

In a stove, a body having a burner space, an U-shaped horizontal manifold arranged in said space and adapted adjacent to its middle for connection with a source of vapor or gas supply, burner tubes connected to and extending inwardly from one arm of the manifold and having apertures at intervals in their lengths, alternate burner tubes connected to and extending inwardly from the other arm of the manifold and having apertures at intervals in their lengths, linings of reticulated material arranged in said tubes and close against the walls thereof, and



layers of wire mesh arranged in the manifold opposite the connection for the source of vapor or gas supply.

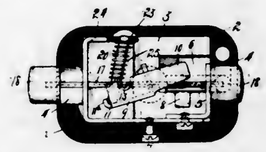
1,220,413. VAPOR-STOVE. BENJAMIN F. GOLLMAR, Baraboo, Wis. Original application filed Apr. 17, 1916, Serial No. 91,778. Divided and this application filed Oct. 7, 1916. Serial No. 124,392. (Cl. 126—44.)



1. In a vapor or gas stove, the combination of a stove casing having ventilation openings, and interior guards closed at their sides and open at their ends, and exterior regulating means complementary to said openings.

2. A cooking unit for use on a stove of the character described, including an exterior casing having an opening in its bottom wall and a depending flange surrounding the said opening and the casing also having vent openings, interior guards opposite and complementary to said openings and closed at their sides and open at their ends, exterior regulating means also opposite and complementary to said vent openings, and a compartment closed at its bottom and adapted to be charged with substance to be cooked; the said compartment being arranged in and fixed to the casing and separated therefrom by an intervening space in communication with the opening in the bottom wall of the casing and also in communication with said vent openings.

1,220,414. ELECTRIC-SWITCH MECHANISM. DAVID D. GORDON, Chicago, Ill., assignor to The Yost Electric Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed May 13, 1916. Serial No. 97,264. (Cl. 175—287.)



1. In an electric switch, a bridging element mounted for rocking movements, a control member reciprocally movable transversely of the axis of said element, said element and member having parts which coöperate to prevent movements of said element except when said member is at predetermined points in its reciprocatory movements, and thrust means shiftable with respect to said element by movements of said control member and operable to rock said element in one direction when the control member is at a predetermined point in one direction of movement thereof, and vice versa.

2. In an electric switch, spaced contacts, a bridging element mounted for oscillatory circuit making and breaking movements relative to said contacts, a reciprocatory control member coacting with said element to prevent rocking movements thereof except when at predetermined points in its movements, and thrust means shiftable by said member with respect to said element and operable to actuate movements of said element in first one direction and then the other when successively released for movement by said member.

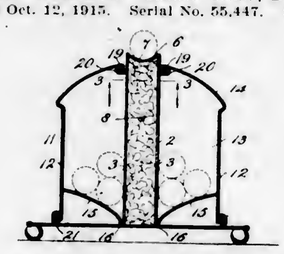
3. In an electric switch, spaced contacts, a bridging element mounted for rocking movements with respect to said contacts to make and break connection therewith, a control bar mounted for reciprocatory movements transversely of the rocking axis of said element, said element and bar having parts which coöperate to lock the element against movement except when the bar is at different predetermined points in its movement, and thrust means shiftable by movements of said bar and acting on said element transversely of the bar to effect a rocking movement of the element first in one and then the other direction when successively released for such movements.

4. In an electric switch, a bridging element mounted for rocking movements, a reciprocatory control bar movable transversely of the rocking axis of said element, said bar coöperating with said element to prevent rocking movements thereof except when said bar is at spaced predetermined points in its movement, oscillatory thrust means in thrust contact at its swinging end with said element and shiftable lengthwise of the element by movements of said bar to exert pressure on said element first at one side and then the other of its axis.

5. In an electric switch, a bridging element mounted for rocking movements and having a thrust plate extending lengthwise thereof in tangential relation to a circle struck from the rocking axis of said element, reciprocally movable means coöperating with said element to prevent rocking movements thereof except when the means is at different predetermined points in its movements, and thrust means acting on the thrust plate of said element and shiftable lengthwise thereof by movements of said control means, whereby an element rocking thrust is exerted on said plate first at one side and then the other of the rocking axis of the element.

[Claims 6 and 7 not printed in the Gazette.]

1,220,415. HUMIDOR. GEORGE GRAND, Brooklyn N. Y. Filed Oct. 12, 1915. Serial No. 55,447. (Cl. 131—30.)



1. A cigar humidor comprising a base having a column, a receptacle surrounding the column and slidable thereon and provided with means for effecting a single delivery of the cigars upon the column at a point above the top of the receptacle, and a moistening agent within the column for supplying moisture into the receptacle, and a closure plate movable over the upper end of the column and forming a rest for the cigars so that the same may be removed on returning the receptacle to its normal position.

2. A cigar humidor embodying a base having a column formed with apertures in a portion of its length, a receptacle surrounding the column and slidable thereon and provided with means for effecting a single delivery of the cigars upon the column at a point above the top of the receptacle, a moistening agent within the column for supplying moisture through the apertures of the column and into the receptacle, and packing strips carried by the receptacle and freely bearing against the upper end of the column, substantially as and for the purpose specified.

3. A cigar humidor embodying a base having a column formed with apertures in a portion of its length, a receptacle surrounding the column and slidable thereon and provided with means for effecting a single delivery of the cigars upon the column at a point above the top of the receptacle, a moistening agent within the column for supplying moisture through the apertures of the column and into the receptacle, and packing strips carried by the receptacle and freely bearing against the upper end of the column, and further packing strips upon the base of the receptacle and adapted to contact with said base, preventing the admission of air within the bottom of the receptacle.

4. A cigar humidor comprising a base having a column formed with concavo-convexed side walls, a receptacle having its side walls formed with vertical convexities adapted to extend into the channeled side walls of the column for guiding the sliding movement of the receptacle upon said column, means arranged in said receptacle for effecting a single delivery of cigars upon the column at a point above the top of the receptacle, and a moistening agent within said column for supplying moisture within said receptacle, and means for normally sealing the receptacle from the atmosphere.

1,220,416. PROCESS OF MAKING FERROPHOSPHORUS. JOHN JEFFERSON GRAY, Jr., Rockdale, Tenn. Continuation of application Serial No. 106,005, filed June 26, 1916. This application filed Dec. 28, 1916. Serial No. 139,387. (Cl. 75—45.)

1. The process of producing ferro-phosphorus in a blast furnace which consists in charging the furnace with a suitable mixture of iron bearing material, phosphatic material, fluxing material and carbon; maintaining free uncombined carbon in the fusion zone of the furnace; maintaining a temperature in said fusion zone sufficient in the presence of said free carbon to reduce the phosphorus of said phosphatic material to the elemental condition; and maintaining such a top temperature as will facilitate the entry of the phosphorus into the iron present, substantially as described.

2. The process of producing ferro-phosphorus in a blast furnace which consists in charging the furnace with a suitable mixture of iron ore, phosphate rock, fluxing materials and carbon; maintaining free carbon in the fusion zone of the furnace; maintaining a predetermined temperature above 2000° F. in the fusion zone of the furnace; and maintaining a predetermined temperature not higher than 700° F. at the stock line of the furnace; substantially as described.

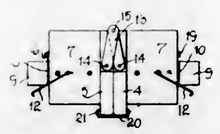
3. The process of producing ferro-phosphorus in a blast furnace which consists in charging the furnace with a suitable mixture of iron ore, phosphate rock, fluxing materials and carbon; maintaining free carbon in the fusion zone of the furnace; maintaining a predetermined top temperature near the stock line of the furnace; maintaining such a predetermined localized high temperature at the bottom of said furnace as will effect a reduction of the phosphate rock to elemental phosphorus, and which in connection with said top temperature will cause an indirect reduction of the descending iron ore from near the top to near the bottom of the furnace; substantially as described.

4. The process of producing ferro-phosphorus in a blast furnace which consists in charging the furnace with a suitable mixture of iron ore, phosphate rock, fluxing materials, and carbon; maintaining free carbon in the fusion zone of the furnace; maintaining a localized temperature in said fusion zone sufficient in the presence of said free carbon to reduce the phosphorus of said rock to the elemental condition; and maintaining a predetermined low top temperature in said furnace, substantially as described.

5. The process of preventing a "dirty hearth" in the making of ferro-phosphorus by blast furnace methods which consists in charging the furnace at suitable intervals with iron bearing material, phosphate rock, silica and an excess of carbon; smelting the same; and immediately following said charge with a charge of iron ore, basic material and carbon, substantially as described.

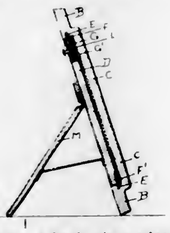
[Claims 6 to 9 not printed in the Gazette.]

1,220,417. FOLDING TABLE. JOHN G. GULLEDGE, Marshville, N. C. Filed Apr. 17, 1916. Serial No. 91,814. (Cl. 45—116.)



The herein described folding table including two top sections having their end edges recessed, the recesses in the corresponding ends of the top sections communicating with each other when said sections are disposed in the same plane, and a pair of supporting links connecting the table top sections at their opposite ends, each of the links being pivoted at one of its ends in one end of the recess in one top section, the other ends of the links in each pair being pivotally connected to each other, said links being disposed in parallel relation to the top sections of the table when said sections are disposed in the same horizontal plane and flush with the end edges of said top sections.

1,220,418. PICTURE-FRAME. TOWNSEND DE M. HAWKES, Corning, N. Y., assignor to T. G. Hawkes & Co., Corning, N. Y., a Corporation of New York. Filed July 22, 1916. Serial No. 110,784. (Cl. 40—156.)

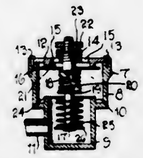


1. In a picture frame, a back piece adapted to coöperate with the frame in displaying a picture, said back piece having means adapted to releasably engage the frame comprising projections extending outwardly from the sides thereof, said frame having a picture receiving portion provided with recesses on its inner walls adapted to receive the projections on the back piece, said back piece having a recessed portion provided on one of its sides, one of said projections being slidably mounted in said recess, plates carried on both faces of the back piece adapted to overlie the recess for confining the projection therein, a slot formed in one of said plates, and a stud carried by said sliding projection adapted to extend through said slot, whereby the projection may be actuated to engage and disengage one of said recesses provided in the inner wall of the picture receiving portion of the frame.

2. In a picture frame, a back piece adapted to coöperate with the frame in displaying a picture, said back piece having means adapted to releasably engage the frame, comprising projections extending outwardly from the sides thereof, said frame having a picture receiving portion provided with recesses on its inner walls adapted to receive the projections on the back piece, said back piece having a recessed portion, one of said projections being slidably mounted in said recess, openings provided in the back piece adjacent said recess, plates carried on both faces of the back piece adapted to overlie the recess for confining the slidably mounted projection therein, spurs carried by one of said plates passing through said openings in the back piece, adapted to engage the other plate, and a stud on said sliding projection, a slot provided on one of said plates adapted to receive said stud, said stud providing means, whereby the projection may be actuated to engage or disengage one of the said recesses provided in the inner wall of the picture receiving portion of the frame.

3. A picture frame composed of glass and embodying in its structure a rim and a picture displaying portion surrounded by said rim, and a back piece adapted to be received in said picture displaying portion and coöperate with the frame in displaying a picture; said back piece having means adapted to releasably engage the frame, comprising projections extending outwardly from the sides thereof, recesses provided in the inner walls of the picture displaying portion adapted to receive the projections on the back piece, a recessed portion provided on one side of said back piece, one of said projections being slidably mounted in said recess, openings provided in the back piece adjacent said recess, plates carried on both faces of the back piece adapted to overlie the recess and confine the slidably mounted projection therein, spurs carried by one of said plates passing through said openings in the back piece, and adapted to engage the other plate, a stud on said sliding projection, a slot provided on one of said plates adapted to receive said stud, said stud providing means whereby the projection may be actuated to engage or disengage one of the said recesses provided in the inner wall of the picture displaying portion of the rim.

1,220,419. AUXILIARY AIR-SUPPLY DEVICE FOR MOTORS. JESSE G. HAWLEY, Elmira, N. Y., assignor of one-half to Walter Scott Smith, Watkins, N. Y. Filed May 27, 1916. Serial No. 100,299. (Cl. 137—26.)



1. An air supply device for the intake manifold of an internal combustion engine including a casing having two chambers and a nipple connecting one of said chambers to the manifold, said casing being provided with air inlet ports communicating with the other chamber, a spring-pressed valve disk normally closing communication between said latter chamber and the atmosphere, and a second valve normally disposed in an open position, but held by a predetermined degree of vacuum in the intake manifold during the normal operation of the motor in closed position to cut off communication between said chambers, a decrease of the vacuum permitting the latter valve to move to open position whereby the suction in the manifold opens the valve disk to admit atmospheric air to the manifold.

2. An air supply device for the intake manifold of an internal combustion engine including a casing having communicating chambers and a nipple connecting one of said chambers to the manifold, said casing being provided with a plurality of air inlet ports communicating with the other chamber, a spring-pressed valve disk normally closing said air inlet ports, and a second spring-pressed valve disk normally held in open position and moved by the vacuum in the intake manifold to a closed position to cut off communication between said chambers, said latter valve disk moving to its open position upon a decrease of the vacuum and permitting the suction in the manifold to move the first named disk to an open position when the engine attains a predetermined speed.

3. An air supply device for rthe intake manifold of an internal combustion engine including a casing having communicating chambers and a nipple connecting one of said chambers to the manifold, said casing being provided with

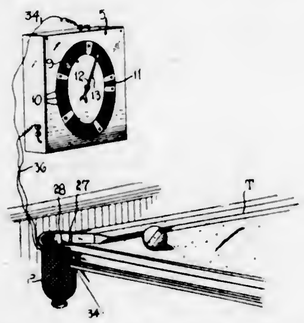
a plurality of air inlet ports communicating with the other chamber, a spring-pressed valve disk normally closing said air inlet ports, a second spring-pressed valve disk normally held in open position and moved by the vacuum in the intake manifold to a closed position to cut off communication between said chambers, an adjustable stop to limit the opening movement of the second named valve disk, said latter valve disk being moved to its open position upon a decrease of the vacuum and permitting the suction in the manifold to move the first named valve disk to an open position when the engine attains a predetermined speed.

4. An air supply device for the intake manifold of an internal combustion engine including a casing having communicating chambers and a nipple connecting one of said chambers to the manifold, said casing being provided with a plurality of air inlet ports communicating with the other chamber, a spring-pressed valve disk normally closing said air inlet ports, a second spring-pressed valve disk normally held in open position and moved by the vacuum in the intake manifold to a closed position to cut off communication between said chambers, an adjustable stop to limit the opening movement of the second named valve disk, means for varying the tension of the spring for the second named valve disk, said latter valve disk being moved to its open position upon a decrease of the vacuum and permitting the suction in the manifold to move the first named valve disk to an open position when the engine attains a predetermined speed.

5. An air supply device for the intake manifold of an internal combustion engine including a casing having communicating chambers and a nipple connecting one of said chambers to the intake manifold, a detachable plate closing one of said chambers, said plate having a plurality of air inlet openings, a sleeve having adjustable threaded engagement in said plate and extending axially into the latter chamber, a rod extending through said sleeve and into the first named chamber, a spring-pressed valve disk mounted on said sleeve and normally closing said air inlet ports, a second valve disk mounted on the rod, and a coil spring on said rod acting against the latter valve disk to hold the same against the end of said sleeve in an open position, said latter valve disk being maintained in a closed position against the action of its spring by the vacuum in the manifold during the normal operation of the engine and moved to an open position by the spring upon a decrease of the vacuum, whereby the suction in the manifold moves the first named valve disk to an open position and permits atmospheric air to enter said chamber.

[Claims 6 to 9 not printed in the Gazette.]

1,220,420. GAME DEVICE. WILLIAM H. HEFFLEY, Duncannon, Pa. Filed June 7, 1916. Serial No. 102,304. (Cl. 46—6.)



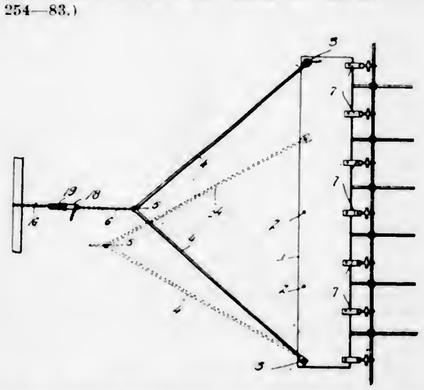
1. The combination with a game table having ball receiving pockets, of an electrically operated, chance-controlled indicator including a movable indicating element, and a circuit closer arranged in each pocket of the game table and operated by a ball entering the pocket to close the circuit of said operating means, whereby the movable element is operated.

2. The combination with a game table having a plurality of pockets, of a chance-controlled indicator including a casing provided with a dial divided into a plurality of areas each denoting a certain indicated value, a pointer mounted on the casing and freely rotatable over the surface of the dial electrically operated means for said pointer, and a circuit closer arranged in each of the pockets of the game table and operated by a ball as it enters the pocket to close the circuit of said electrically operated means and thereby rotate the pointer.

3. The combination with a game table having a ball receiving pocket, of a chance-controlled indicator including a rotatable pointer, electrically operated means for actuating said pointer, a circuit therefor, and a circuit closer arranged in each of the table pockets and including a movable element over which the ball rolls as it enters the pocket to close the circuit of the electrical means and rotate the pointer.

4. The combination with a game table having a ball receiving pocket, of a chance-controlled indicator including a rotatable pointer, electrically operated means for actuating said pointer, a circuit therefor, and a circuit closer arranged in the entrance to the table pocket consisting of a fixed contact member and a spring-supported contact member over which the ball rolls as it enters the pocket, thereby depressing said member into engagement with the fixed contact and closing the circuit, whereby the pointer is rotated.

1,220,421. WIRE-STRETCHER. MAYME HELM, Ghent, Ky. Filed Dec. 22, 1916. Serial No. 138,394. (Cl. 254—83.)

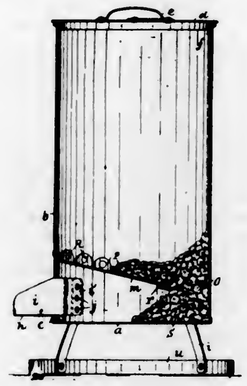


A wire fence stretcher comprising a draw bar, a plurality of fabric engaging means secured along one of the longitudinal edges of said draw bar, each of said fabric engaging means comprising a rigid hook member and a pivoted hook member supported on opposite sides of the draw bar, and means for normally holding said pivoted hook member in coöperative relation with said stationary hook member, and a pull chain connected with said draw bar.

1,220,422. COAL-RECEPTACLE. JOSEPH D. HEWITT, Paterson, N. J., assignor of one-half to Lloyd D. Henderson, Ridgewood, N. J. Filed Aug. 15, 1916. Serial No. 115,005. (Cl. 220—89.)

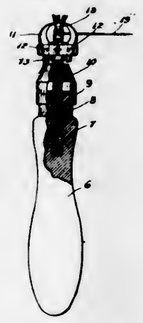
1. A receptacle for coal and similar materials consisting of an upright hollow body having a bottom and an outlet in one side thereof above the bottom and serving for the withdrawal of the material, and a spout projecting from the body at said outlet and having a bottom and two side walls, said body and spout being formed of sheet metal and the side walls of the spout being extended into said outlet and forming lips and said lips being secured flat against said body both sides of the outlet.

2. A receptacle for coal and similar materials consisting of an upright hollow body having a bottom and an outlet in one side thereof above the bottom and serving for the withdrawal of the material, and a spout projecting from said body at said outlet and having a



bottom and two side walls, said body and spout being formed of sheet metal and the side walls of the spout being secured to said body and its bottom wall joined in a lock-seam with said body.

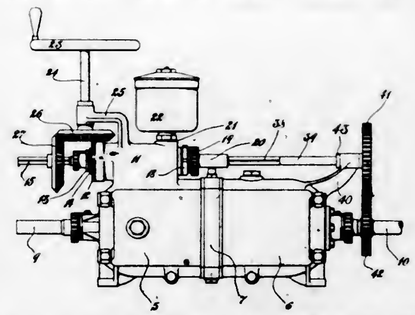
1,220,423. JEWELER'S SETTING-HOLDER. MARTIN L. HUISINGER and EDWARD F. SINGER, Minneapolis, Minn. Filed July 14, 1916. Serial No. 109,285. (Cl. 81—18.)



1. A jeweler's setting holder, comprising a handle having a rigidly secured projecting threaded stem provided with an anvil at its projecting end, a grapple-carrying head and a grapple-actuating head working independently with threaded engagement on said stem, and both adjustable longitudinally thereof toward and from said anvil, the latter being located outward of both of said heads, and a plurality of grappling-levers pivoted to said carrying head and subject to the spreading action of said actuating-head.

2. A jeweler's setting holder comprising a handle having a rigidly secured projecting threaded stem, a grapple-carrying head and a grapple-actuating head working independently with threaded engagement on said stem, and a plurality of grapple levers intermediately pivoted to said carrying head with their inner ends subject to the spreading action of said actuating-head, said actuating-head having a conical outer portion and an annular flange embracing the adjacent end of said handle.

1,220,424. CONTROLLING APPARATUS FOR FLUID-GEARS. REYNOLD JANNEY, New York, N. Y. Filed Sept. 16, 1911. Serial No. 649,698. (Cl. 138—22.)



1. In an apparatus of the class described, the combination of a hydraulic variable speed gear device having an engine section and a pump section, and also having a regulator for governing the action of the pump section, means for moving said regulator from a neutral or pump stopping position to a pump starting position to thereby start said pump and therefore said engine, and independent means for returning said regulator to said neutral position.

2. In an apparatus of the class described, the combination of a hydraulic variable speed gear device having an engine section and a pump section, and also having a regulator for governing the action of the pump section, means for moving said regulator from a neutral or pump stopping position to a pump starting position to thereby start said pump and therefore said engine, and independent means operative by said engine for returning said regulator to said neutral position.

3. In an apparatus of the class described, the combination of the tilting box of a hydraulic variable speed gear device, said tilting box being movable from a neutral or ineffective position to an effective position, means for moving said tilting box from said neutral position to said effective position, and independent means for returning said tilting box to said neutral position.

4. In an apparatus of the class described, the combination of the tilting box of a hydraulic variable speed gear device, said tilting box being movable from a neutral or ineffective position to an effective position, means for moving said tilting box from said neutral position to said effective position, and independent means operative by said hydraulic variable speed gear device, for returning said tilting box to said neutral position.

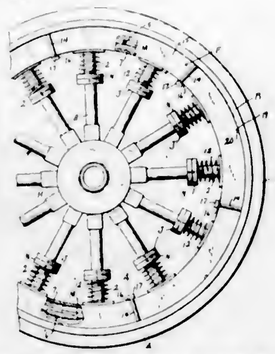
5. In an apparatus of the class described, the combination of the tilting box and control shaft of a hydraulic variable speed gear device, a movable member to which said shaft is operatively connected, said shaft being rotative in either direction and being adapted to shift said movable member to tip said tilting box from its neutral position and thereby cause the operation of said gear device, and means automatically thrown into action by and on the movement of said tilting box from said neutral position, for counteracting the effect on said movable member by the operation of said control shaft.

[Claims 6 to 16 not printed in Gazette.]

1,220,425. SPRING-WHEEL. WILLIAM KASTENS, Springfield, Ohio. Filed Dec. 26, 1916. Serial No. 138,905. (Cl. 152—48.)

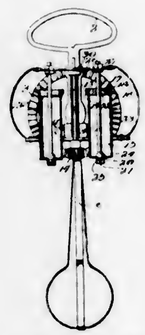
1. A wheel comprising a hub, spokes radiating therefrom, a substantially hollow felly provided with circumferentially disposed slots through which the outer end portions of the spokes are freely insertible and whereby said felly is capable of limited circumferential movement independently of the spokes, an annular member arranged within the felly and to which the spokes are attached,

yieldable means coacting with the felly for controlling the movement thereof longitudinally of the spokes, and compressible bodies carried by the annular member and frictionally engaging the rim.



2. A wheel comprising a hub, spokes radiating therefrom, a substantially hollow felly provided with circumferentially disposed slots through which the outer end portions of the spokes are freely insertible and whereby said felly is capable of limited circumferential movement independently of the spokes, an annular member arranged within the felly and to which the spokes are attached, yieldable means coacting with the felly for controlling the movement thereof longitudinally of the spokes, and compressible bodies secured to the annular member and provided with lugs frictionally engaging the felly.

1,220,426. DEVICE FOR USE IN THE PREPARATION OF MAYONNAISE DRESSING. GUY W. KELLY, Marceline, Mo., assignor of one-half to Claud Buchanon, Marceline, Mo. Filed Aug. 10, 1915. Serial No. 44,820. Renewed Aug. 21, 1916. Serial No. 116,187. (Cl. 259—21.)



1. In a device of the class described, relatively fixed containers each having an outlet, a valve controlling the outlet from each container, reciprocatory stems connected to the valves, yieldable means connected to the stems and normally tending to close the valves, a connection between the said valve stems, and a rotary cam element coöperating with the said connection whereby the valve stems may be reciprocated.

2. In a device of the class described, relatively fixed containers each having an outlet, a valve controlling the outlet from each container, reciprocatory stems connected to the valves, a connection between the said valve stems, a rotary shaft, a cam carried by the shaft and coöperating with the said connection for reciprocating the valve stems, and a spring connected to said connection between the valve stems and normally yieldably holding the stems with the valves in closed position.

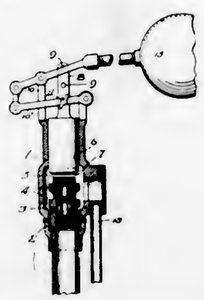
3. In a device of the class described, relatively fixed containers each having an outlet, a valve controlling the outlet from each container, reciprocatory stems connected to the valves, a relatively fixed element supporting the said containers, a connection between the said valve stems, bowed springs connected to the said fixed element and to the said connection between the valve stems and normally yieldably holding the stems with the valves in closed position, and a rotary cam element coöperating with the said connection whereby the valve stems may be reciprocated.

4. In a device of the class described, a relatively fixed support provided with an attaching means whereby it may be connected to a fixed portion of a mixing device, spaced containers carried by the said support, each of the said containers having an outlet, a valve controlling the outlet from each container, a shaft rotatably mounted upon the said support and carrying a gear element for coöperation with a gear element of the said mixing device, a cross bar connecting the stems for the said valves, an abutment carried by the said member, a cam fixed upon the said shaft and coöperating with the abutment, and springs connected to the said connection between the stems and to the said support and normally tending to move the stems to position to close the said valves.

5. In a device of the class described, a relatively fixed support designed for attachment to a mixing device, containers mounted upon the support and each having an outlet, a valve working in each of said containers and arranged to control the flow of liquid from the container through the outlet therein, a bar extending between the stems of the said valves and connecting the same, a rotary shaft journaled in the support, an abutment upon the bar, a cam upon the shaft arranged to coöperate with the said abutment whereby to impart vertical reciprocatory movement to the bar upon rotation of the shaft, and means yieldably holding the bar in a downward direction.

[Claim 6 not printed in the Gazette.]

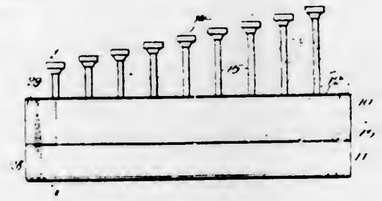
1,220,427. SUPPLY-VALVE. PAUL O. KEPPELMAN, Reading, Pa. Filed Dec. 6, 1916. Serial No. 135,289. (Cl. 137—104.)



1. In a supply valve, the combination of a valve casing, a valve casing base provided with a valve seat, a nest of removable valve seat members, a movable valve provided with a rod, said rod having a series of perforations to accommodate the valve to the respective seats, a compound lever for actuating the valve and means selectively engageable in said perforations for adjustably attaching the valve rod to the lever.

2. In a supply valve of the character described, the combination of a casing, a vertically movable valve therein, a valve rod formed integrally with the valve, said rod having a series of equi-distant perforations, a compound lever attached to the casing, a float carried by said lever, one of the lever members having a perforation adapted for registration with any one of the perforations in the valve rod, a removable pin inserted in said registering perforations for temporarily attaching the valve rod to said lever member, a casing base member formed with a valve seat, and a plurality of removable valve seat members in nested form, carried by said base member, the valve seats being adapted for successive coaction with the valve upon the successive removal of the valve seats and the successive adjustment of said lever member relative to said rod.

1,220,428. PRACTICE-KEYBOARD FOR KEY-OPERATED MACHINES. NOEL KINNAMAN, Chicago, Ill. Filed Feb. 25, 1916. Serial No. 80,403. (Cl. 35—12.)



1. A practice keyboard for key operated machines comprising upper and lower perforated body members, top clad and interleaved with thin sheet and metal plates provided with guide openings alined with the perforations of said body members, and key shanks surmounted by keys guidingly fitting the openings in said plates at vertically separate points, with yielding means to normally project the keys away from the upper face of the keyboard.

2. A practice keyboard for key operated machines comprising upper and lower perforated body members, top clad and interleaved with thin sheet metal plates provided with guide openings alined with the perforations of said body members, and key shanks surmounted by keys guidingly fitting the openings in said plates at vertically separated points, with yielding means to normally project the keys away from the upper face of the keyboard, and yielding stops to limit the depression of said key shanks.

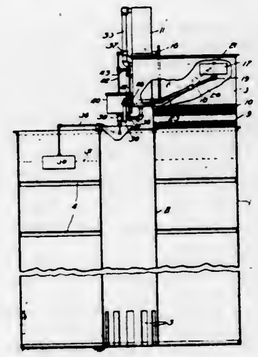
3. A practice keyboard for key operated machines comprising upper and lower body members provided with a plurality of rows of alined openings, with an interposed thin metal plate, the upper face of the upper member being metal clad, the intermediate and upper metal plates being provided with guide apertures in line with the openings of the upper and lower members, key shanks extending into said openings and having close guiding engagements with said apertured plates and surmounted by keys, and yielding means to normally hold the keys projected above the keyboard.

4. A practice keyboard for key operated machines comprising upper and lower body members provided with a plurality of rows of alined openings, with an interposed thin metal plate, the upper face of the upper member being metal clad, the intermediate and upper metal plates being provided with guide apertures in line with the openings of the upper and lower members, key shanks extending into said openings and having close guide engagement with said apertured plates and surmounted by keys, yielding means to normally hold the keys projected above the keyboard, and cushioning stops to limit the depression of the key shanks.

5. A practice keyboard for key operated machines comprising upper and lower, relatively thick, members of light texture, a thin meteal plate between them, a plurality of bars arranged longitudinally over and covering the upper face of the upper member, said bars being each provided at one edge with notches which open laterally to the edge thereof and are closed by the unnotched edge of an adjacent bar, the said upper and lower body members and the intermediate sheet metal member being provided in line with said notches with alined openings, the openings in the body members being larger than said notches and the openings of the intermediate plate, and a series of keys provided with key shanks smaller than the openings in the body members and guidingly engaging the notches and the openings in the upper and intermediate metal plates, respectively, springs to normally hold the keys projected, and cushioning stops to limit the depression of said key shanks.

[Claims 6 to 9 not printed in the Gazette.]

1,220,429. APPARATUS FOR SOFTENING WATER. LOUIS D. KINZIG, Dayton, Ohio, assignor to Optenberg Iron Works, Sheboygan, Wis., a Corporation of Wisconsin. Filed July 10, 1916. Serial No. 108,278. (Cl. 210—1.)



1. In an apparatus of the character described, a container for a fluid chemical, a controlling container adapted to contain water, means for causing the water to be discharged from the latter container so as to lower the surface level at a uniform rate, a chemical pipe having a receiving mouth, and means for controlling said pipe so as to maintain the mouth thereof in such relation to the surface of the chemical that the chemical flows into the same and for lowering said mouth as the water level in the controlling container is lowered.

2. In an apparatus of the character described, a container for a fluid chemical, a controlling container adapted to contain water, means for causing the water from the latter container to be discharged at a uniform rate so as gradually to lower the level of the water in the container, a movable chemical delivery pipe in the container for the chemical, and means for lowering the receiving end of the chemical pipe in unison with the lowering of the water level in the controlling container.

3. In an apparatus of the character described, a container for a fluid chemical, a controlling container adapted to contain water, means including a float for causing the water from the latter container to be discharged at a uniform rate, a movable chemical delivery pipe in the container for the chemical, and a connection between said float and said pipe for lowering the receiving end of the pipe as the water level in the controlling container is lowered.

4. In an apparatus of the character described, a container for a fluid chemical, a controlling container adapted to contain water, a float in the latter container, a movable chemical delivery pipe arranged in the container for the chemical, a water discharge pipe arranged in the other container, the water discharge pipe having a restricted inlet orifice, and connections between said pipes and said float whereby said orifice is maintained at a predetermined distance below the water level in the controlling container and the mouth of the chemical pipe is kept at the surface of the chemical fluid.

5. In an apparatus of the character described, a container for a fluid chemical, a controlling container adapted to contain water, a movable chemical delivery pipe in the container for the chemical, and means in the con-

trolling container for lowering the level of the water therein and simultaneously lowering the receiving end of the chemical delivery pipe.

[Claims 6 to 11 not printed in the Gazette.]

1,220,430. TUNING-PIN FOR HARPS AND THE LIKE. WALTER I. KIRK, Chicago, Ill., assignor to Lyon & Healy, Chicago, Ill. a Corporation of Illinois. Filed Nov. 26, 1913. Serial No. 803,098. (Cl. 84—78.)



1. A pin for a musical instrument string having an end portion provided with a cap, means preventing relative movement of the pin and cap, said cap and end portion being provided with registering apertures near their outer ends, said apertures forming a continuous passage for one of the strings through the cap and end portion and said cap being made of relatively soft material.

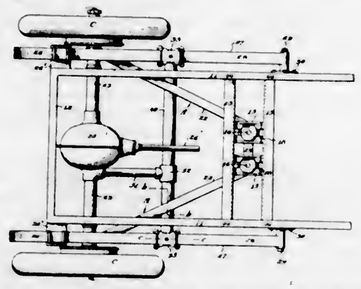
2. A metal pin for musical instrument strings having an end portion provided with a roughened surface, in combination with a celluloid cap fitting over the end portion of said pin and covering said roughened surface, said cap being provided with means for engaging a musical instrument string.

3. A tuning pin having a reduced end provided with a cap of relatively soft material and having registering apertures formed through said cap and said pin near the outer end of both the cap and the pin and means preventing relative movement of the cap and pin.

4. In a pin for a musical instrument string in combination, a tubular member of relatively softer material positioned upon an end of said pin, said pin being provided with a roughened portion adapted to engage said relatively soft member, registering apertures provided in said pin and said member, and means for engaging said member with said pin, said means including said roughened portion.

5. In a pin for a musical instrument string in combination, a music string, a tubular member of relatively soft material positioned upon an end of said pin, said pin having a roughened portion adapted to engage said relatively soft member, registering apertures provided in said pin and said member, and means for binding said member to said pin, said means including said roughened portion and said string.

1,220,431. VEHICLE SUSPENSION. EMIL KOEB, New York, N. Y. Filed July 7, 1916. Serial No. 107,898. (Cl. 267—9.)



1. In a device of the class described; a suspension-spring; a primary-shock-spring device; a compensating-lever in actuating connection with the primary-shock-spring device; a float-journal-box in actuating connection with the compensating-lever carried by the suspension-spring; and means for causing movement of such float-journal upon road shock, to ease the same.

2. In a device of the class described; a plurality of suspension-springs; a primary-shock-spring device; a compensating-lever for each of the suspension-springs in actuating connection with the primary-shock-spring device; a float-journal-box in actuating connection with the compensating-lever carried by each of the suspension-springs; and means for causing movement of such float-journal upon road shock, to ease the same.

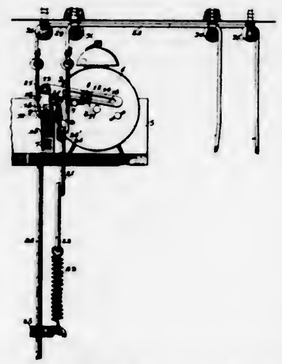
3. In a device of the class described; a plurality of suspension-springs; a primary-shock-spring device; compensating-lever mechanism in actuating connection with the primary-shock-spring device; a plurality of float-journal-boxes in actuating connection with the compensating-lever mechanism carried by the suspension-springs, and a float-bar or shaft connecting the float-journal-boxes.

4. In a device of the class described; a suspension spring; a compensating-lever; a primary shock-absorbing yielding device; and a float-journal-box connecting the suspension-spring with the compensating-lever in such manner that strain is only brought upon the suspension-spring when the primary shock-absorbing yielding device has reached the limit of its action.

5. In a device of the class described; a suspension-spring; a primary-shock-spring device; a compensating-lever in actuating connection with the primary-shock-spring device; a journal-box housing, connected with the compensating-lever and with the suspension-spring; and a floating journal-box vibratorily mounted in the housing.

[Claims 6 to 9 not printed in the Gazette.]

1,220,432. AUTOMATIC DAMPER. WILLIAM KRIEGER, Elmhurst, and MILTON MOTT, Moscow, Pa. Filed June 17, 1916. Serial No. 104,184. (Cl. 236—7.)



1. The combination with a heating apparatus having a fire door, of a support, a projection pivoted to said support, a link adapted for engagement with said projection, a hook coöperating with said link, a connection between said book and said door, a depending rod, a clamp mounted upon said rod, a spring connecting said link and clamp, and means for rotating said projection to release the link.

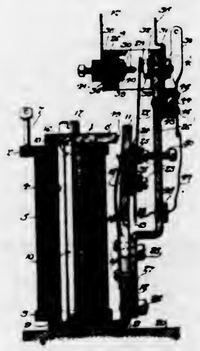
2. The combination with a heating apparatus having a fire door, of a support, a screw-threaded shaft mounted upon said support, a projection carried by said shaft and being longitudinally adjustable thereof, a spring operated link adapted for engagement with said projection, a hook coöperating with said link, a connection between said hook and said door, and means for operating the projection to release said link.

3. The combination with a heating apparatus having a fire door, of a support having a rabbeted transverse partition, a shaft extending through said support and partition, a projection carried by the shaft and adjustable longitudinally thereof within the plane of the rabbeted portion of the partition, a spring operated link adapted for engagement with said projection, a catch coöperating with said link, a connection between the catch and the door, and means for moving the projection for releasing said link.

4. The combination with a heating apparatus having a fire door and an automatic regulator for the lower front draft and flue damper, of a support having a pair of rotatable projections, means adapted to be connected to one projection for maintaining the fire door open, means adapted to be connected to the other projection for holding the regulator inactive, said two last means being independent of each other, and means for automatically disconnecting the projections from either or both of said two means.

5. The combination with a heating apparatus having a fire door and an automatic regulator for the lower front draft and flue damper, of a support having a pair of rotatable oppositely disposed projections, independently operable means connecting said combustion-controlling devices with the projections, and means for automatically disconnecting either or both of the projections from said first mentioned means whereupon the fire door is closed and the regulator is restored to working order.

1,220,433. ELECTROMAGNET. CHARLES L. KRUM and HOWARD L. KRUM, Chicago, Ill., assignors to Morkrum Company, Chicago, Ill., a Corporation of Maine. Filed June 1, 1908. Serial No. 436,169. Renewed Aug. 18, 1916. Serial No. 115,679. (Cl. 175—321.)



1. An electro-magnet comprising a straight core provided with an energizing coil, a flat pole piece and a flat supporting bar separate from and extending across the ends of said core at right angles thereto, said parts having interlocking tongues and grooves on opposite sides of the axis of said core to hold said pole piece and supporting bar against relative angular movement, fastening means extending through said pole piece and supporting bar and axially through said core, a flat armature bar pivotally connected to said supporting bar and extending across the projecting edge of said pole piece and switch contacts operated by said armature, substantially as described.

2. The combination of a straight, hollow core provided with an energizing coil, a projecting pole piece and a supporting bar extending across the opposite ends of said core, said parts having interlocking tongues and grooves, a connecting screw bolt extending through said parts, and an armature pivoted to said support and arranged to be attracted by said pole piece, and switch contacts operated by said armature, substantially as described.

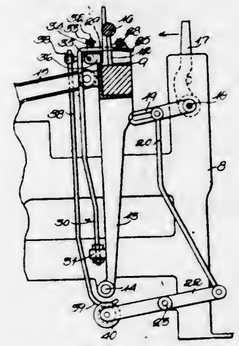
3. The combination of a straight, hollow core provided with an energizing coil, a flat pole piece and a flat supporting bar extending across the ends of said core at right angles thereto, said parts having interlocking tongues and grooves, a connecting screw bolt extending through said parts, a flat armature bar pivotally connected to said supporting bar and extending across the projecting edge of said pole piece, and switch contacts operated by said armature, substantially as described.

4. The combination of a straight, hollow core provided with an energizing coil, a flat armature bar and a flat supporting bar of magnetic material extending across the ends of said core at right angles thereto, said parts having interlocking tongues and grooves, a connecting screw bolt extending through said parts, said supporting bar having an upturned extension parallel to said core, a flat armature bar pivoted to said extension and extending in line therewith across the projecting edge of said pole piece, and switch contacts operated by said armature.

5. The combination of a straight core provided with an energizing coil, a flat pole piece and a flat supporting bar of magnetic material secured to the ends of said core and projecting laterally therefrom, said supporting bar having an extension parallel to said core, a flat armature bar pivoted to said extension and extending in line therewith across the projecting edge of said pole piece, a contact support secured to said extension and extending beyond the end of said armature, a stop screw in said contact support for engaging said armature, springs secured to said extension and engaging said armature to hold the same against said stop screw, insulated spring contact fingers secured to said armature and coöperating insulating contact screws mounted upon the end of said contact support, substantially as described.

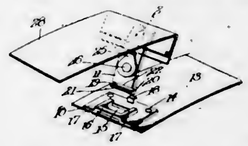
[Claims 6 to 10 not printed in the Gazette.]

1,220,434. SHUTTLE-GUARD. JOSEPH P. LANDRY, Uxbridge, Mass. Filed Apr. 12, 1915. Serial No. 20,618. (Cl. 139—30.)



In a loom, a shuttle guard comprising a plate pivotally supported on the lay and having a pinion, a rack engaging said pinion, a rockshaft having an arm and connections whereby movements of the rockshaft will reciprocate the rack, said rockshaft having another arm and a pendant from the latter, a lever adapted to shift said pendant and through it rock the shaft and move the rack, and a hand lever having connections for actuating the lever which acts upon said pendant.

1,220,435. FASTENER. DANIEL LAUER, York, Pa. Filed May 16, 1916. Serial No. 97,986. (Cl. 24—68.)



1. A fastener for detachably connecting two elements comprising a plate formed with an aperture spaced from one edge to form a rib and an upstanding lug adjacent the opposite edge, a member provided with means adapted to coöperate with said rib whereby the rib acts as a fulcrum, and a spring tongue adapted to be forced down on the out-

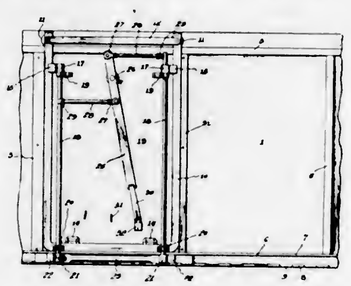
side of said lug and thereby lock the parts in closed position, and means whereby the plate may be attached to one of said elements and the said member to the other element.

2. A fastener for detachably connecting the ends of two elements comprising a plate formed with a rib adjacent one edge, a lug adjacent the opposite edge, a member having a channel near one edge adapted to receive said rib and carrying means adapted to coöperate with the outside of said lug, to hold the plate and member in closed position.

3. As an article of manufacture, a member for a fastener consisting of a plate formed with an aperture adjacent one edge, the material between the said edge and the aperture forming a rib, and being offset from the plane of the plate, ridges formed on the two sides of the aperture adjacent the rib, and an upstanding lug adjacent the edge of the plate opposite the rib.

4. As an article of manufacture, a member for a fastener consisting of a plate formed with a channel adjacent one edge and an aperture spaced therefrom, and a spring catch adapted to project through said aperture and slightly on the side opposite the channel.

1,220,436. CAR-DOOR. JOHN MAPES, Aledo, Ill., assignor of one-half to Zales S. McGinnis, Aledo, Ill. Filed Apr. 1, 1916. Serial No. 88,341. (Cl. 20—23.)



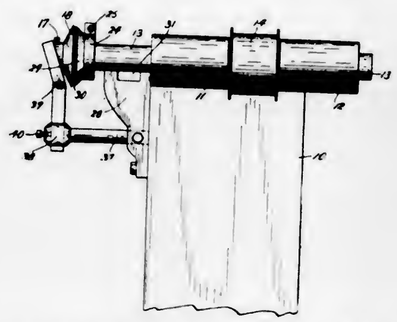
1. In a car door, the combination with a car having a door opening, of strips secured to the car at the sides of the door opening, a frame mounted to travel longitudinally of the car and to swing toward and from the same to seat between or be withdrawn from the said strips, a door carried by said frame, means for moving the frame and the door, and weather strips secured to the inner surface of the door and projecting over the inner edges of the frame.

2. The combination with a car having a door opening and tracks above and below said opening, of a carriage mounted in the lower track, a frame disposed above said track, means at the upper end of the frame for supporting the same above the upper track, a door carried by said frame, and coöperating means mounted upon the frame, the door and the lower carriage for effecting movement of the frame and the door to and from the car.

3. The combination with a car having a door opening and tracks on the car above and below said opening, a carriage mounted in the lower track, a door frame disposed above the lower track and movable toward and from the car, means at the upper end of the door frame for supporting the same on the upper track, a door hingedly mounted within the door frame, racks on the frame near the upper end thereof, other racks on the lower carriage, rock shafts journaled in bearings near the upper end of the door and at the lower end of the frame, pinions on said rock shaft engaging the said racks, and means on the door for operating said shafts whereby to move the door and the frame laterally toward and from the car.

4. The combination of upper and lower tracks, a bar slidably mounted in the lower track and having its ends only in engagement therewith, a frame disposed above said track and having its upper end mounted to travel along the upper track, a door hinged at its lower end to the lower end of the frame, rock shafts journaled upon the door and the frame, laterally extending racks on the slidable bar and the upper portion of the frame, pinions on said rock shafts meshing with said racks, and means for rocking said shafts.

1,220,437. HEEL-SEAT WHEELING AND BEATING-UP MACHINE. DELMO MATTIOLI, Philadelphia, Pa. Filed Sept. 13, 1915. Serial No. 50,488. (Cl. 12—49.)



1. A machine of the class described embracing in combination a driven shaft including an eccentric, a beating-up device rotatable with said shaft and a wheeling device operatively mounted with respect to the eccentric of said shaft for vertical reciprocation in juxtaposition to the beating-up device.

2. A machine of the class described embracing in combination a driven shaft including an eccentric, a beating-up device rotatable with said shaft, a slotted ring operatively mounted with respect to said eccentric, means for retaining said ring in position for vertical reciprocation, and a wheeling device loosely fitted over said ring between said beating-up device and said means.

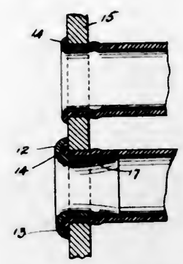
3. A machine of the class described embracing in combination a driven shaft including an eccentric, a fixed stud, a beating-up device rotatable with said shaft, a ring having a slot therein operatively mounted with respect to said eccentric, a holder pivoted to said stud at one end and clamped to said ring at its other end for maintaining said ring in operative position for vertical reciprocation and a wheeling device mounted loosely upon said ring between the beating-up device and said holder.

4. A machine of the class described embracing in combination a driven shaft including an eccentric, a bracket, a stud adjustably secured to said bracket, a beating-up device rotatable with said shaft, a ring having a slot therein operatively mounted with respect to said eccentric, a holder pivoted at one end to said stud and clamped at its other end to said ring for maintaining in operative position for vertical reciprocation said ring, a wheeling device loosely mounted upon said ring between the beating-up device and said holder and a shoe rest operatively secured with respect to said bracket.

5. A machine of the class described embracing in combination, a stand provided with an overhang bearing, a driven shaft including an eccentric supported in said bearing, a bracket fixed to said stand, a stud carried by the bracket in parallelism with said shaft, a slotted ring operatively mounted with respect to said eccentric, means between said stud and said ring for maintaining the ring in position for vertical reciprocation, a wheeling device operative upon said ring, a beating-up device rotatable with said shaft in juxtaposition to the wheeling device and a shoe rest operatively secured with respect to said bracket and extended to a position immediately adjacent the combined wheeling and beating-up devices.

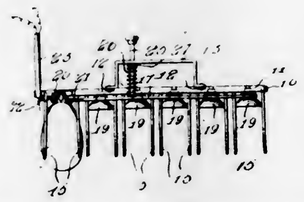
[Claim 6 not printed in the Gazette.]

1,220,438. THIMBLE FOR BOILER-FLUES. JOHN F. MCKENNA, Providence, R. I. Filed June 9, 1915. Serial No. 33,001. (Cl. 137—134.)



The combination with an end wall of a boiler, and a flue of uniform thickness and diameter having one end extending through said wall and provided with a bead engaging the wall, of an exteriorly tapered tubular thimble driven into the tube to expand the same, the inner end of said thimble having a thin edge, the outer end of the thimble having an annular flange of substantially the same thickness as the thicker portion of the body of the thimble, said flange being free of substantial projections, and engaging and covering said bead, whereby burning off of the bead is prevented.

1,220,439. EGG-CANDLER. CHARLES T. MCLELLAN and D GEORGE DANNER, Minburn, Iowa. Filed Jan. 13, 1916. Serial No. 71,976. (Cl. 99—6.)



1. A candling device comprising a frame having side and end bars, longitudinally extending bars extending between said end bars, cross bars connecting said longitudinally extending bars, brackets positioned between said longitudinally extending bars and said side bars, a handle carried by said cross bars, resilient gripping means carried by said brackets, a plunger slidably carried by said handle, a longitudinally extending bar connected with said plunger and provided with side arms extending between said resilient gripping means, egg engaging cups carried by said side arms, lamp sockets carried by said cups, resilient means yieldably holding said plunger in a raised position, and a lighting circuit connected with said lamp sockets.

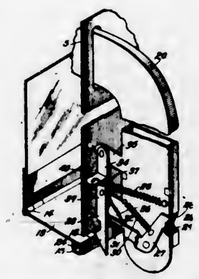
2. A candler including a frame, brackets carried by said frame, resilient gripping means carried by said brackets, a handle for said frame, a plunger slidably carried by said handle, a longitudinally extending bar connected with said plunger and provided with side arms extending between said resilient gripping means, egg engaging cups carried by said side arms, and lamp sockets carried by said cups.

3. A candler comprising a frame, egg engaging means connected with said frame, egg removing means including arms extending in operative relation to said egg gripping means, egg engaging cups carried by said arms, lamp sockets carried by said cups, and actuating means for said egg removing means.

4. A candler comprising a frame, gripping means connected with said frame, removing means movably connected with said frame and extending in operative relation to said gripping means, and means connected with said removing means for holding an illuminating element.

5. A candler comprising a frame, gripping means connected with said frame, removing means connected with said frame and extending in operative relation to said gripping means, egg engaging elements for said removing means having extensions constituting pockets, and means connected with said pockets whereby an illuminating agent may be held in the pockets.

1,220,440. AUTOMATIC VENDING-MACHINE. CHARLES A. MELCHERT, Kansas City, Mo., assignor to Automatic Machine Manufacturing Co., Kansas City, Mo., a Corporation of Missouri. Filed Dec. 7, 1914. Serial No. 875,937. (Cl. 194—18.)



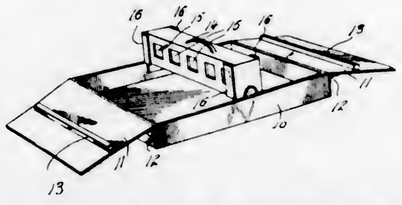
1. An automatic vending machine comprising a releasable door member, a latch comprising a latch ear and a hook member adapted for holding engagement with the door, a trip having teeth adapted for independent engagement with the latch ear, yielding means for urging the latch to release position, and yielding means for urging the trip to holding engagement with the latch ear.

2. The combination with a trap door, of a latch comprising a pivotally mounted body member, having a retaining lip and a trip ear, a hook member pivotally mounted on the body member between the lip and the ear, a spring connected with said hook member at the one side of its pivotal mounting whereby the latch body member and hook are yieldingly urged to release position, and whereby the hook member may pivot in the opposite direction independently of the latch body member, and a trip adapted for holding engagement with the latch ear to hold the latch against the tension of said spring.

3. The combination with a trap door, of a latch comprising a pivotally mounted body member, having a retaining lip and a trip ear, a hook member pivotally mounted on the body member between the lip and the ear, a spring connected with said hook member at one side of its pivotal mounting, whereby the latch body member and hook are yieldingly urged to release position, and whereby the hook member may pivot in the opposite direction independently of the latch body member, and a trip member having stop portions adapted for independent engagement with the latch ear, to hold the latch in different positions against the tension of said spring.

4. An automatic vending machine having a trap door, a pivotally mounted latch comprising a latch member having a retaining lip and a trip ear, a latch arm pivotally mounted on said latch member and adapted for bearing against said lip at one side of its pivotal point and having a hook at the opposite side of its pivotal point adapted to lock the trap door, a spring connected with the end of the latch arm opposite the hook and adapted for normally, yieldingly urging the latch to inactive position and for retaining the hook in active position, and a trip member for engaging said trip ear to retain said latch in active position against the tension of said spring.

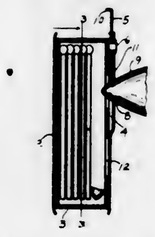
1,220,441. FEED AND MEDICAMENT TROUGH. JAMES C. MENDEL, Titusville, Fla. Filed Apr. 5, 1916. Serial No. 89,155. (Cl. 119—61.)



1. A device of the character described comprising a base forming a receptacle, a trough extending across said base intermediate its length, and covers for the space between said trough and the ends of said base serving as gang-ways when moved to an open position.

2. A device of the character described comprising a base, a trough extending across the base and havings its walls provided with inlet openings, flanges carried by said trough, and removable closures releasably held in a position to cover the inlet openings by said flanges.

1,220,442. COMBINED MATCH-BOX HOLDER AND CIGAR-TIP CUTTER. ARTHUR H. MERRILL, Hartford, Conn. Filed July 17, 1915. Serial No. 40,474. (Cl. 206—35.)

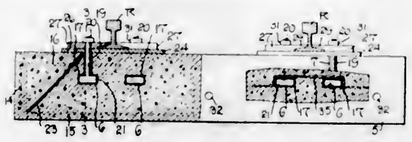


1. A device of the class described comprising a holder in the form of a clip and a match box, the match box comprising a body and a receptacle slidable in the body, the body being removably yieldingly gripped by and between the walls of the holder and the receptacle being slidable in and out of the body, while said body is thus gripped, one wall of the holder having a depression and the wall which has the depression having a perforation, the box body having a perforation in register with the other perforation and both being adapted to receive the tip portion of the cigar, and a cigar tip cutter slidable in said depression for cutting off the tip portion of the cigar extending through said registering perforations.

2. A device of the class described comprising a holder in the form of a clip and a match box, the match box comprising a body and a receptacle slidable in the body, the body being removably yieldingly gripped by and between the walls of the holder and the receptacle being slidable in and out of the body while said body is thus gripped, one wall of the holder having a perforation, the box body having a perforation in register with the other perforation and both being adapted to receive the tip portion of the cigar, and a cigar tip cutter for cutting off the tip portion of the cigar extending through said registering perforations.

1,220,443. RAIL TIE AND FASTENER. JACOB H. MILLER, Cresson, Pa. Filed Aug. 16, 1916. Serial No. 115,280. (Cl. 238—3.)

1. The combination with a concrete rail tie having spaced, transverse openings extending therethrough adjacent each of its ends and slots extending downwardly from the upper surface of the tie and communicating with one end of each opening, a metal bolt receiving tube engaged in each of said openings and having a guide-way fitting into the slot communicating therewith, a vertically disposed bolt removably engaged in said member and extending upwardly through the guide-way, and rail clamping means engaged upon each of said bolts.



2. The combination with a concrete rail tie having spaced, transverse openings extending therethrough adjacent each of its ends and slots extending downwardly from the upper surface of the tie and communicating with one end of each opening, a metal bolt receiving tube engaged in each of said openings and having a guide-way fitting into the slot communicating therewith, bracing means for the guide-way of the outermost bolt receiving tube embedded in each end of the tie, a vertically disposed bolt removably engaged in said member and extending upwardly through the guide-way, and rail clamping means engaged upon each of said bolts.

3. The combination with a concrete rail tie, of a pair of metal bolt receiving tubes extending transversely through the tie at each end thereof, each of said tubes having a longitudinal guide-way extending upwardly through the tie, bolts detachably engaged in said tubes and guide-ways and projecting above the upper surface of the tie, a chair plate arranged upon each end of the tie and over said guide-ways and having openings to receive the bolts, and clamping means for the rail engaged upon the upper ends of the bolts and having co-acting locking engagement with the chair plate.

4. The combination with a concrete rail tie, of parallel, rectangular, metal bolt receiving tubes extending transversely through the tie adjacent each of its ends, each of said tubes having a vertical guide-way extending tending upwardly through the tie body and communicating with the tube, open ends of the guide-ways in each pair of tubes being disposed upon the opposite side faces of the tie, bolts provided with rectangular heads for sliding engagement in said tubes, said bolts projecting upwardly through the guide-ways and above the upper surface of the tie, chair plates having openings to receive said bolts, and clamping dogs engaged upon the upper ends of said bolts and having heads on one end, said tie plate being provided with additional openings to receive the heads on the clamping dogs, said dogs extending over the rail base and engaging the web of the rail.

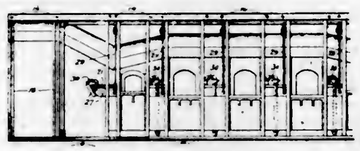
5. The combination with a concrete rail tie, of parallel, tubular members extending transversely into the tie body at its opposite ends, rail fastening means including vertically disposed elements engaged in said members and extending upwardly above the surface of the tie, and rods embedded in the tie body and extending over and upon the transverse members in the ends thereof.

1,220,444. BASIC OPEN-HEARTH FURNACE. SAMUEL NAISMITH, Chicago, Ill. Filed Apr. 17, 1916. Serial No. 91,603. (Cl. 263—44.)

1. In a basic open hearth furnace, a cooler positioned to serve as a neutral joint between the acid brick and basic lining to prevent fluxing.

2. In a furnace of the class described, a series of readily removable water coolers positioned in the walls of the furnace at the slag line and near the lining thereof, and means for producing a circulation of water through said coolers.

3. In a furnace of the class described, a series of buck stays adjacent to the outer surface of the furnace, and means secured directly to the buck stays for supporting the wall of the furnace to relieve the hearth of the weight thereof.

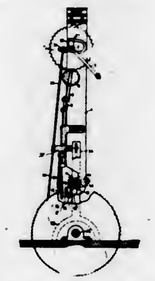


4. In a furnace of the class described, a series of buck stays adjacent to the outer surface of the furnace, an angle iron secured directly to the buck stays for supporting the wall of the furnace.

5. In a basic open hearth furnace, a cooler at the slag line and adjacent to the banks for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,220,445. TRIMMER AND FILER FOR SAWS. JAMES E. NORMAN, Addicks, Tex. Filed Oct. 4, 1915. Serial No. 53,908. (Cl. 76—32.)



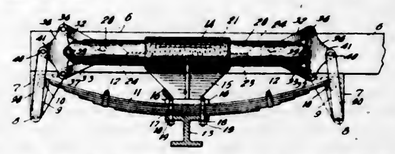
1. In a device of the character described a frame, one end of which is formed into a bearing having a counter sunk seat, a pair of dies in said seat, one of which is beveled forming a notch between said dies, a wedge shaped bolt locking said dies in position, a trimmer blade pivoted to the frame and arranged to reciprocate through said notch and means for reciprocating said blade.

2. In a device of the character described a frame, one end of which is formed into a bearing having a seat, a pair of dies in said seat, one of which is beveled forming a notch between said dies, means for locking said dies in position, a trimmer blade pivoted to the frame and arranged to reciprocate through said notch and means for reciprocating said blade.

3. In a trimmer and filer for saws, a frame, a transverse shaft rotatably mounted thereon, a means for rotating the shaft, a cam fixed to said shaft, a reciprocating member pivoted to the frame, a feed rod one end of which is pivoted to said member and the other end of which is adapted to engage successively against the teeth of the saw, said member being arranged to be engaged alternatively by said cam as it rotates whereby the feed rod is operated to feed the saw.

1,220,446. SHOCK-ABSORBING DEVICE FOR VEHICLES. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 22, 1914. Serial No. 867,947. (Cl. 21—105.)

1. In a shock absorber for vehicles, the combination with a vehicle frame, of spaced apart levers pivoted thereto, a spring mounted between said levers, a shock absorbing member connected to said spring intermediate its ends, the shock absorbing member comprising friction shells, friction elements within the shells and springs to resist said friction elements, and a toggle device operatively connecting the friction elements with the said levers.



2. In a shock absorber for vehicles, the combination with the frame of a vehicle, of levers pivoted at one end to the frame, a spring, a friction spring shock absorbing member secured to the said spring intermediate its ends, the shock absorbing member having friction elements and a toggle device, the toggle device connecting the friction elements with the said levers.

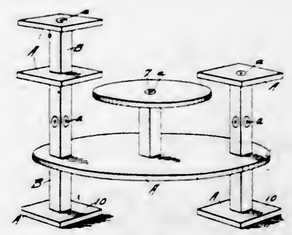
3. In a shock-absorbing device for vehicles, in combination, a spring case, a friction shell at either end thereof, friction shoes, and a wedge in each friction shell, a plunger in each shell adapted to engage the wedge, a spring, an axle to which both the spring and the spring case are engaged, pivoted levers, a toggle device connecting each plunger to one of said levers, said levers being each connected at one end to the toggle device and being adapted to pivotally engage the frame of a vehicle at the other end.

4. In a shock absorbing device for vehicles, the combination with a vehicle body and axle, of a spring secured to the axle intermediate its ends a link for each end of said spring, levers pivoted to said body, a bell crank pivoted to each of said levers at one end, a friction shell for each bell crank, friction shoes, a wedge and a plunger adapted to engage the wedge within each friction shell, a pair of links for each bell crank, one at either side of the bell cranks fulcrum, the said links being slidingly engaged to a plunger, a spring case interposed between the friction shells and adapted to support the same, springs to resist the inward movement of each set of friction shoes, the spring case being connected to the axle.

5. In a shock absorbing device for vehicles, in combination, an axle, a vehicle frame, a spring interposed between the vehicle frame and axle, a shock absorbing device secured to the axle and including friction shells substantially parallel to the said spring, friction shoes and wedges within the shells, and toggle members for operating the friction members.

[Claims 6 to 9 not printed in the Gazette.]

1,220,447. DISPLAY DEVICE. OSCAR F. ONKEN, Cincinnati, Ohio. Filed Aug. 2, 1913. Serial No. 782,547. (Cl. 211—14.)

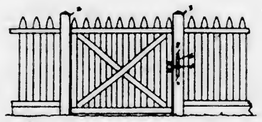


1. A display device consisting of a set of variously sized shelves provided with perforations, screw-threaded sockets occupying these perforations and at their ends flush with both sides of the shelves and a set of prismatic post-members of various lengths having screw-studs projecting from each of their square ends, both sets being complementary to each other and adapted for interchangeable assembling and detachable connection with the

square ends of the posts seated against the opposite sides of two connected shelves, in various arrangements including the connection of a plurality of shelves to a single shelf the connection between two opposite shelves being always limited to a single post.

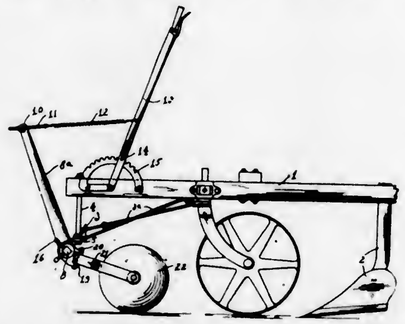
2. A display device consisting of a set of shelves of various sizes which are connected to each other in vertically spaced parallel relation to prismatic posts, said shelves having screw-threaded sockets on both sides and the posts having square ends with screw studs projecting from them in axial direction which are adapted to be received by the sockets mentioned so that, when so connected, two shelves which are connected to each other are always held to the square ends of the posts and thereby maintained in parallel relation to each other the connection between two opposite shelves being always limited to a single post.

1,220,448. AUTOMATIC LOCK. ROBERT N. PARKER and HENRY A. SMITH, Odem, Tex.; said Smith assignor to C. C. Willis, Odem, Tex. Filed Mar. 24, 1916. Serial No. 86,330. (Cl. 70—28.)



A lock for a closure including a projecting bar, a pair of projections spaced one above the other and between which the projecting bar rests when the closure is in closed position, the upper of said projections being provided with a bearing and the other with a recess alined with the bearing, a lock pin normally engaging with said bar and having a notch in one side thereof, said pin being slidable in said bearing, a resilient member operating against said pin and normally causing the free end thereof to project into said recess whereby the bar is held locked between said projections, a trigger pivoted to one of said projections, one end of which is overturned and engages in said notch when the pin is withdrawn from engagement with the bar to hold the same withdrawn, and the other end of which extends between said projections and is actuated by said bar when it passes to closed position between the projections whereby said trigger is disengaged from said notch and the pin is released to the operation of said resilient member to be projected in front of said bar to secure it in closed position.

1,220,449. SELF-ADJUSTING COLTER-WHEEL FOR PLOWS. EDIE J. PATTERSON, Stockton, Cal. Filed Apr. 26, 1916. Serial No. 93,620. (Cl. 97—43.)



1. A colter wheel attachment for plows comprising the combination with a plow frame, of a shaft journaled on the frame, a plurality of colter wheels having supports fixed to the shaft whereby all the colter wheels can be moved as a unit with the movement of the shaft, and a resilient means normally acting against the shaft to hold all of the colter wheels yieldingly against the ground.

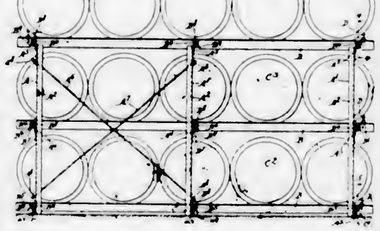
2. A colter wheel attachment for plows comprising the combination with a plow frame, of a shaft turnably mounted at the front end of the frame, colter wheels supported on the shaft, an arm on the shaft, a lever fulcrumed on the plow frame, and a resilient connection between the lever and arm.

3. A colter wheel attachment comprising the combination with a plow frame, of brackets supported on the forward end of the plow frame, a shaft turnable in the brackets, a plurality of brackets mounted on the shaft, colter wheels swiveled in the last named brackets, an arm on the shaft, an adjustable lever fulcrumed on the plow frame, and a resilient connecting means interposed between the lever and the arm.

4. A colter wheel attachment for plows comprising the combination with a plow frame, of a shaft journaled on the frame, a plurality of colter wheels having supports fixed to the shaft whereby all the colter wheels can be moved as a unit with the movement of the shaft, an arm fixed to the shaft, a lever fulcrumed on the plow frame, and a resilient connection between the arm and the lever to hold the colter wheels yieldingly against the ground.

5. A colter wheel attachment comprising the combination with a plow frame, a shaft journaled on the plow frame, a plurality of brackets fixed to the shaft, a colter wheel swiveled in each bracket, an arm fixed to the shaft, a lever fulcrumed on the plow frame, and a spring interposed between the lever and the arm to hold the colter wheels yieldingly against the ground.

1,220,450. BARREL-RACK. WILLIAM B. PAVEY and GEORGE M. FRENCH, Chicago, Ill., assignors to Economy Engineering Company, Chicago, Ill., a Corporation of Illinois. Filed May 19, 1916. Serial No. 98,485. (Cl. 248—12.)



1. A rack for barrels and the like comprising a series of parallel vertical rigid frames, a series of chairs carried by said frames having upper surfaces inwardly inclined, barrel rails removably mounted on said chairs and held in position with their upper bearing surfaces inwardly inclined to conform to the curvature of the bilge of the barrel.

2. A rack for barrels and the like comprising a series of supporting frames and a series of barrel carrying rails mounted thereon, the rails having flat bearing surfaces arranged in parallel groups with their bearing surfaces inwardly and downwardly inclined to conform to the curvature of the bilge of the barrel, chairs upon which such barrel supporting rails are rigidly mounted, said chairs being firmly attached to the frames.

3. A demountable rack for barrels and the like comprising a series of parallel permanent rectangular frames, chairs rigidly mounted on said frames, and rails bolted to the chairs, means for holding the frames in parallel position, the rails being cut away to straddle portions of the frame, the upper barrel bearing surfaces of the rails being inwardly inclined toward one another to conform to the curvature of the barrel bilge.

4. A demountable rack for barrels and the like comprising a series of parallel permanent rectangular frames, chairs rigidly mounted on said frames, and rails bolted to the chairs, means for holding the frames in parallel position, the rails being cut away to straddle portions of the frame, the upper barrel carrying surfaces of the rails being inwardly inclined toward one another to conform to the curvature of the barrel bilge, some of said chairs having downwardly extending members adapted to engage and be rigidly attached to the side members of the frames.

5. A rack for barrels and the like comprising a series of permanent frame barrels, means for holding them in parallel position with respect one to another, said means comprising barrel supporting rails secured to said members, chairs bolted upon the frame members and adapted to support the barrel carrying rails.

[Claims 6 and 7 not printed in the Gazette.]

1,220,451. FIGURE TOY. JAMES PECORA and DANIEL SMOLDONE, West Hazleton, Pa. Filed Oct. 4, 1916. Serial No. 123,728. (Cl. 46—40.)



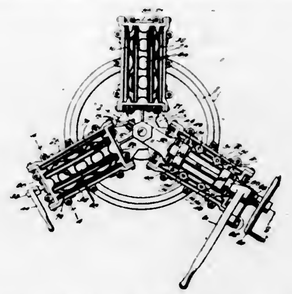
1. An animated toy comprising a body, pivoted arms attached to the body, one of said arms being uplifted and carrying a hat and the other of said arms carrying a cane, and mechanism for simultaneously swinging the arms in relatively opposite directions to simulate the doffing or removal of the hat as in salutation, and a swinging movement of the cane.

2. An animated manikin including a body, arms pivotally attached to said body, one of said arms being bent and carrying a hat, means yieldingly holding the latter arm in an uplifted position with the hat upon the head of the manikin, the other of the arms normally hanging in a pendant position at the side of the manikin, the latter arm carrying a cane, and mechanism for simultaneously swinging said arms in relatively opposite directions to simulate the doffing or removal of the hat as in salutation, and the swinging of the cane.

3. An animated manikin including a body, arms pivotally attached to said body, one of said arms being bent and carrying a hat, means yieldingly holding the latter arm in an uplifted position with the hat upon the head of the manikin, the other of the arms normally hanging in a pendant position at the side of the manikin, the latter arm carrying a cane, and manually controlled, spring-actuated mechanism for simultaneously swinging said arms in relatively opposite directions to simulate the doffing or removal of the hat as in salutation, and the swinging of the cane.

4. An animated manikin comprising a body, arms pivotally attached to opposite sides of the body for vertical swinging movement, one of said arms being bent at the elbow and carrying a hat, a spring connected to said arm yieldingly holding the same in an uplifted position with the hat upon the head of the manikin, and other arm normally hanging in a pendant position at the side of the figure, a cane carried by the latter arm, the pivoted ends of said arms being provided with extensions, and spring actuated, rotary means mounted within the body of the figure to simultaneously engage said extensions and swing the arms in relatively opposite vertical directions to cause the same to simulate the doffing or removal of the hat and the swinging of the cane.

1,220,452. BLOCK-MOLDING MACHINE. FRANK ELWOOD PETERS, Indianapolis, Ind., assignor, by direct and mesne assignments, of one-third to Joel D. Eastman and one-third to Squire R. Greer, Indianapolis, Ind. Filed June 15, 1916. Serial No. 103,770. (Cl. 25—41.)



1. A cement block molding machine comprising a base, a standard rising therefrom, a turntable having a hub mounted on said standard, said table carrying a plurality of block molds, a press member for tamping the cement in the molds, and means for locking said turntable in position to dispose any of its molds below the press member; in combination with a second standard rising from the base out of the path of the table, a horizontal arm extending between and serving as a support for the press member and its operating means, one end of said arm being pivotally mounted on the first standard for slight horizontal swinging and the other end of said arm having a transverse slot receiving the upper end of the second standard, whereby said arm may be adjusted horizontally to accurately aline the press member with the mold, and means for holding the slotted end of the arm against movement after adjustment thereof.

2. A cement block molding machine comprising a base, a standard rising rigidly therefrom, a turntable having a hub mounted on said standard, said table carrying a plurality of block molds, a press member for tamping the cement in the molds, and means for locking said turntable in position to dispose any of its molds below the press member; in combination with a second standard rising from the base out of the path of the table, and a horizontal arm extending between the two standards and serving as a support for the press member and its operating means, one end of said arm having thereon a split collar slidable and rotatable on the first named standard, said collar having a clamping bolt whereby it may be contracted around its respective standard, the other end of said arm having a transversely extending slot receiving the upper end of the second standard to permit horizontal adjustment of the arm to accurately aline the press member with the mold, and nuts threaded on said second standard in contact with the upper and lower side of said arm.

3. A cement block molding machine comprising a base including an annular track, a plurality of arms extending inwardly from said track, an anchor member to which the inner ends of said arms are secured, and a horizontal arm projecting outwardly from the track, an upright standard rising rigidly from the aforesaid anchor member, a second standard rising rigidly from the outer end of the last named arm of the base, and a horizontal arm extending between and secured to the upper ends of the two standards; a turntable having a hub mounted on the first named standard and having wheels traveling on the aforesaid

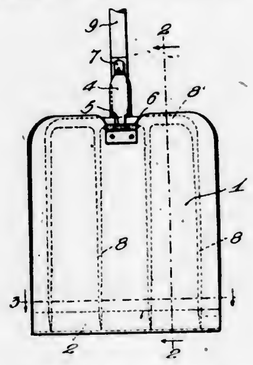
annular track, said table having a plurality of block molds, a vertically movable press member below the last named arm, operating means for said press member mounted on said arm, and means for locking said table in position to permit any one of its molds to receive said press member.

4. A cement block molding machine comprising a block mold, a tamping plate for packing cement therein, upright guide rods rising rigidly from said plate near the ends thereof, a fixed member above said tamping plate, upright guides carried by said member and receiving the aforesaid rods slidably, means on said member for depressing said plate, and additional guides spaced inwardly from the others to permit the aforesaid rods to be moved inwardly and secured to a shorter tamping plate when shorter blocks are to be constructed.

5. A cement block molding machine comprising a mold open at its upper side, a press member adapted to be forced into said mold to pack the cement therein, and an apertured pallet to be disposed in said mold, the bottom of said mold having apertures formed therethrough to permit surplus cement to be forced from the mold when the press member descends.

[Claims 6 to 8 not printed in the Gazette.]

1,220,453. SHOVEL ATTACHMENT FOR PITCHFORKS. GEORGE PETERSON, New Auburn, Wis. Filed Oct. 30, 1916. Serial No. 128,518. (Cl. 55—26.)

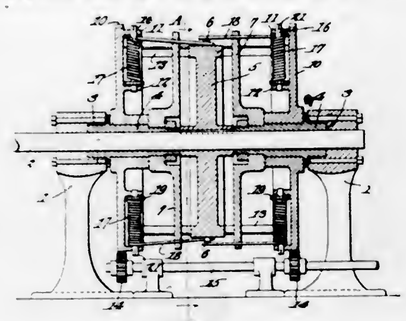


A shovel attachment for pitch forks comprising a shovel blade of a length substantially equal to the length of the pitch fork in connection with which it is to be used, sockets arranged at the lower end of said blade and on the under side thereof to receive the tines of the fork, and a resilient U-shaped clamp hinged on an axis parallel to the lower edge of said blade upon the upper side of the latter midway of its width and at the upper end thereof, said clamp extending longitudinally with respect to said blade and having its open side disposed rearwardly to receive the handle of the fork, the inner edges of the resilient arms of said clamp extending substantially at right angles to the upper portion of the back of said blade when said clamp is in its handle-engaging position to engage the cross bar connecting the upper ends of the tines of the fork.

1,220,454. SPEED-MULTIPLYING MECHANISM. HENRY A. PRESCOTT, Bethlehem, Pa. Filed Mar. 23, 1916. Serial No. 86,219. (Cl. 74—54.)

1. Speed multiplying mechanism including a rotor, spring actuating elements revoluble in the same direction with the rotor, means for simultaneously retracting said elements out of engagement with the rotor during their rotation, and simultaneously releasing said elements, and means for guiding the released elements into and out of engagement with the rotor thereby to impart an impulse to the rotor.

2. Speed multiplying mechanism including a rotor, an element revoluble in the same direction as the rotor, spring actuating members carried by said element, stationary means extending across the path of the members, means for rotating said element to bring the members against said stationary means, thereby to deflect the members, place them under increased tension and simultaneously release them during the continued rotation of said element, and means for guiding the released members into and out of engagement with the rotor to impart an impulse thereto.



3. Speed multiplying mechanism including a rotor, an element rotating in the same direction as the rotor, a resilient actuating member carried by said element, stationary means in the path of said member, means for rotating said element to bring the actuating member against said stationary means to deflect it, place it under increased tension and subsequently release it during the rotation of said element, and means for guiding the released member into and out of engagement with the rotor to impart an impulse thereto in the direction of rotation of said element.

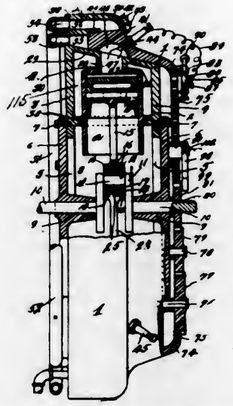
4. Speed multiplying mechanism including a rotor, an element mounted for rotation adjacent thereto, a resilient actuating member carried by said element, a guide member interposed between the rotor and said revoluble element, said resilient actuating member being extended through the guide member, and means carried by the guide member for placing the actuating member under increased tension during the rotation of the element and for releasing the actuating member, said guide member constituting means for directing the actuating member into and out of engagement with the rotor to impart an impulse to the rotor in the direction of rotation of the revoluble element.

5. Speed multiplying mechanism including a rotor, a revoluble element adjacent thereto, a fixed guide interposed between the rotor and revoluble element, resilient actuating means carried by the revoluble element and movably engaging the guide, means upon the guide for extending into the path of said actuating means, means for rotating said element to move the actuating means against the means in the path thereof, thereby to deflect the actuating means and place it under increased tension during the rotation of said element and to release said actuating means, said guide member constituting means for directing the released actuating means into and out of engagement with the rotor, and a cushioning means for limiting the movement of the actuating means in one direction.

[Claims 6 and 7 not printed in the Gazette.]

1,220,455. INTERNAL-COMBUSTION MULTIPLE-CYLINDER ENGINE. ANDREW RASMUSEN, Sr., and ANDREW RASMUSEN, Jr., Ridgway, Colo. Filed April 14, 1916. Serial No. 91,086. (Cl. 123—55.)

1. In a multiple cylinder internal combustion engine, a casing, a multiple of radially disposed cylinders, a crank shaft mounted in bearings of the casing, pistons operable in the cylinders and being connected respectively to the crank shaft, said casing having an outer wall provided with an annular channel, a valve ring slidable revolubly in the channel, said cylinders having ports of communication with the channel, the outer wall of the channel having an intake and an exhaust port for each cylinder, said valve ring having a plurality of intake and exhaust ports for registering with the ports of the cylinders and the intake and exhaust ports of the outer wall of the channel, for intaking and exhausting charges.



2. In a multiple cylinder internal combustion engine, a casing, a multiple of radially disposed cylinders, a crank shaft mounted in bearings of the casing, pistons operable in the cylinders and being connected respectively to the crank shaft, said casing having an outer wall provided with an annular channel, a valve ring slidable revolubly in the channel, said cylinders having ports of communication with the channel, the outer wall of the channel having an intake and an exhaust port for each cylinder, said valve ring having a plurality of intake and exhaust ports for registering with the ports of the cylinders and the intake and exhaust ports of the outer wall of the channel, for intaking and exhausting charges, spark plugs carried by the valve ring, said casing having a plurality of electrical contacting terminals, and means carried by the ring and electrically connected to the spark plug and coöperating with the terminals of the casing for alternately operating the spark plugs.

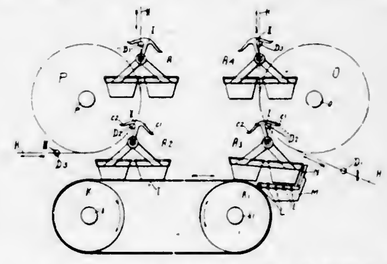
3. In a multiple cylinder internal combustion engine, a casing, a multiple of radially disposed cylinders, a crank shaft mounted in bearings of the casing, pistons operable in the cylinders and being connected respectively to the crank shaft, said casing having an outer wall provided with an annular channel, a valve ring slidable revolubly in the channel, said cylinders having ports of communication with the channel, the outer wall of the channel having an intake and an exhaust port for each cylinder, said valve ring having a plurality of intake and exhaust ports for registering with the ports of the cylinders and the intake and exhaust ports of the outer wall of the channel, for intaking and exhausting charges, and means of connection between the valve ring and the crank shaft for imparting motion to the valve ring.

4. In a multiple cylinder internal combustion engine, a casing, a multiple of radially disposed cylinders, a crank shaft mounted in bearings of the casing, pistons operable in the cylinders and being connected respectively to the crank shaft, said casing having an outer wall provided with an annular channel wedge-shaped in cross section, a valve ring wedge-shaped in cross section slidable revolubly in the channel, said cylinders having ports of communication with the channel, the outer wall of the channel having intake and exhaust ports for each cylinder, said valve ring having a plurality of intake and exhaust ports for registering with the ports of the cylinders and the intake and exhaust ports of the outer wall of the channel for intaking and exhausting charges, and spark plugs carried by the slidable valve ring.

5. In a multiple cylinder internal combustion engine, a casing, a multiple of radially disposed cylinders, a crank shaft mounted in bearings of the casing, pistons operable in the cylinders and being connected respectively to the crank shaft, said casing having an outer wall provided with an annular channel wedge-shaped in cross section, a valve ring wedge-shaped in cross section slidable revolubly in the channel, said cylinders having ports of communication with the channel, the outer wall of the channel having intake and exhaust ports for each cylinder, said valve ring having a plurality of intake and exhaust ports for registering with the ports of the cylinders and the intake and exhaust ports of the outer wall of the channel for intaking and exhausting charges, said valve ring having an overhanging flange provided with gear teeth, a train of gears carried by the casing coöperating with the gear teeth of the valve ring and having a gear connection with the crank shaft for imparting motion to the valve ring.

[Claim 6 not printed in the Gazette.]

1,220,456. CHARGING AND DISCHARGING OF AUTOMATIC OVENS, PROOFING-CHAMBERS, AND THE LIKE. LOUIS CHARLES REESE, Saginaw, Mich. Filed Feb. 28, 1916. Serial No. 81,008. (Cl. 193—2.)



1. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of crossrods connecting the chains moving the said trays through the apparatus, of hooks attached to the trays and so constructed as to turn loosely around the said crossrods when suspended from same, thus always keeping the said trays in a horizontal position, and of conveyers arranged in the apparatus at points, where the hooks of the trays situated on the said conveyers, are bound to engage with and disengage from the said crossrods.

2. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of hooks attached to each end of the trays and adapted to automatically engage with and disengage from crossrods rotatably mounted in and connecting the two chains traveling in the same direction and at the same speed through the apparatus, and conveyers arranged therein at points, where the hooks of the trays situated on the said conveyers are bound to engage with and disengage from the said crossrods.

3. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of hooks attached to each end of the trays, of crossrods rotatably mounted at their ends in and connecting two chains traveling through the apparatus in the same direction and at the same speed, the said crossrods being so adapted and arranged that the hooks of the said trays engage with the said crossrods, when the latter pass by in an upward direction, and that the hooks of the said trays disengage from the said crossrods, when the latter pass by in a downward direction.

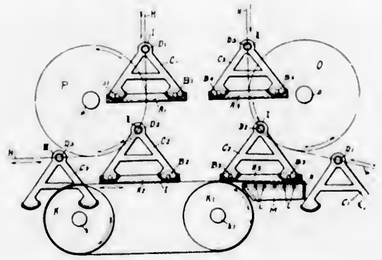
4. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of hooks attached to the said trays, of crossrods rotatably mounted in and connecting the chains moving the trays through the apparatus, of loose wheels rotatably mounted on the said crossrods, of rails supporting these wheels and so arranged in the apparatus as to secure to the chains the right direction of travel and

stability, and of conveyers arranged in the apparatus at points where the hooks of the trays, when on the said conveyers, are bound to engage with the said crossbars passing by in an upward direction, and to disengage from the said crossbars passing by in a downward direction.

5. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of hooks attached to the ends of these trays, of crossrods rotatably mounted in and connecting two parallel endless chains moving the trays through the apparatus, and adapted and arranged to engage with and disengage from the hooks of the trays, of loose wheels rotatably mounted on the said crossrods and running in the grooves of rails supported by brackets fixed to the framework of the apparatus and thus carrying the chains, crossbars and trays, and of sprocket wheels over which the chains run, when changing their direction, and then carrying the crossrods, loose wheels and trays, one or several of these sprocket wheels being rotated by suitable driving means and thus propelling the chains through the apparatus, one sprocket-wheel being arranged at the charging point of the apparatus for leading the empty crossrods upward in order to engage with the hooks of the trays carried into the aparatus by a conveyer, and another sprocket-wheel being placed at the discharging point of the apparatus for leading the trays holding the treated articles downward, in order to disengage their hooks from the crossrods of the chains and to deposit the trays being disconnected on the conveyer taking them out of the apparatus.

[Claims 6 to 9 not printed in the Gazette.]

1,220,457. CHARGING AND DISCHARGING OF AUTOMATIC OVENS, PROOFING-CHAMBERS, AND THE LIKE. LOUIS CHARLES REESE, Saginaw, Mich. Filed Feb. 28, 1916. Serial No. 81,009. (Cl. 193—2.)



1. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of studs attached to each end of these trays, of crossrods rotatably mounted at their ends in and connecting two chains traveling through the apparatus in the same direction and at the same speed, of hangers rotatably suspended from these crossrods, and of brackets fixed to these hangers and adapted to receive the studs of the trays, the said crossrods, hangers, brackets and studs being so adapted and arranged that the studs of the trays engage with the brackets of the hangers, when the latter and the crossrods carrying them pass by in an upward direction, and that the studs of the trays disengage from the brackets of the hangers, when the latter and the crossrods carrying them, pass by in a downward direction.

2. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of studs attached to each end of the trays, of crossrods rotatably mounted at their ends in and connecting two chains traveling through the apparatus at the same speed and in the same direction of hangers rotatably suspended from these crossrods, of brackets fixed to the hangers and adapted to receive the studs of the trays, and of a conveyer carrying the trays, if they are to be charged into the apparatus, to a point therein where the brackets of the hangers suspended from the crossrods mounted in the chains passing by the conveyer in an upward direction, engage with the studs fixed to the trays which are thus connected to and carried upward by the chains, and carrying the trays, if they are to be discharged, out of the apparatus, receiving them therein at a point where the said brackets of the hangers suspended from the crossrods mounted in the chains passing by the conveyer in a downward direction, disengage from the studs of the trays, which are thus deposited on and then taken away by the said conveyer.

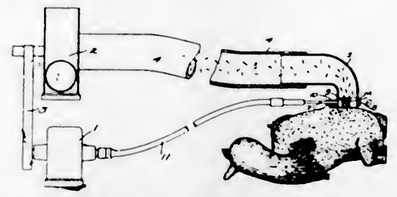
3. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of studs attached to the trays, of crossrods rotatably mounted in and connecting the chains moving the trays through the apparatus, of loose wheels rotatably mounted on the said crossrods, of rails supporting these wheels and so arranged in the apparatus as to secure to the chains the right direction of travel and stability, of hangers rotatably suspended from the said crossrods, of brackets fixed to these hangers and adapted to easily engage with and disengage from the studs of the trays, and of conveyers arranged in the apparatus at points where the studs of the trays when on the said conveyers, are bound to engage with the brackets of the hangers passing by in an upward direction, and to disengage from the brackets of the hangers passing by in a downward direction.

4. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of studs attached to each end of the trays, of crossrods rotatably mounted at their ends in and connecting two chains traveling through the apparatus in the same direction and at the same speed, of hangers rotatably suspended from these crossrods, of brackets fixed to the hangers and adapted to engage with and disengage from the studs of the trays, of loose wheels rotatably mounted on the said crossrods between the hangers and the chains, of rails arranged in the apparatus where the chains are running in a more or less horizontal direction, and provided with grooves for the said loose wheels to travel in, of brackets fixed to the frame-work of the apparatus and supporting the said rails, of a conveyer carrying the trays holding the articles to be treated, to a point in the apparatus where the brackets of the hangers suspended from the said crossrods passing by with their chains in an upward direction, engage with the studs of trays which are thus carried upward into the apparatus, and of a conveyer adapted and arranged to remove the trays holding the treated articles from the apparatus, receiving these trays therein at a point where the brackets of the hangers suspended from the said crossrods passing by with their chains in a downward direction, disengage from the studs of the said trays, which are thus deposited on and then taken out of the apparatus by the said conveyer.

5. In devices for charging and discharging apparatus of the kind described, the combination with the trays holding the articles to be treated, of two studs attached to each end of these trays, of crossrods—one corresponding to each tray—rotatably mounted at their ends in and connecting the two endless, parallel chains carrying the trays through the apparatus, of hangers—two for each crossrod, respectively for each tray—rotatably suspended from the said crossrods and kept in position thereon by suitable means, and of curved brackets two of which are attached to each hanger, pointing opposite to the ends of the crossrods from which their hanger is suspended, and with their concavity upward, and thus forming seats for the studs fixed to the trays, the said hangers being arranged on each crossrod in such a manner that the trays find ample room between them and can be easily lifted by means of their studs on and off the brackets of the hangers, and that the latter—without fouling anything—carry the trays during their whole circuitous course through the apparatus in an horizontal position.

[Claim 6 not printed in the Gazette.]

1,220,458. PIN-FEATHER-PLUCKING MACHINE. OTTO G. RIESKE, Toronto, Ontario, Canada. Filed Nov. 29, 1915. Serial No. 64,103. (Cl. 17—30.)



1. A pin feather picking machine comprising a casing having a mouth opening, a pair of coöperating picking rollers mounted in and substantially closing the mouth opening of said casing, one of the rollers having air passages through which the air is drawn into said casing, connections to one of said picking rollers for rotating the same, and means for producing a partial vacuum or suction in said casing.

2. A pin feather picking machine comprising a casing having a mouth opening, a pair of coöperating picking rollers mounted in and substantially closing the mouth opening of said casing, one of the rollers having air passages through which the air is drawn into said casing, connections to one of said picking rollers for rotating the same, means for producing a partial vacuum or suction in said casing, the rollers having air passages also having a knurled peripheral surface, and the coöperating rollers having pliable faces.

3. A pin feather picking machine comprising a casing having a mouth opening, a pair of coöperating picking rollers mounted in and substantially closing the mouth opening of said casing, one of the rollers having air passages through which the air is drawn into said casing, connections to one of said picking rollers for rotating the same, means for producing a partial vacuum or suction in said casing, and small presser bars secured to said casing and extending immediately under the said picking rollers for engaging with the skin of the bird.

4. A pin feather picking machine comprising a casing having a mouth opening, coöperating main and auxiliary picking rollers mounted in and approximately closing the mouth opening of said casing, the said main roller having an oblique air passage extending diametrically therethrough.

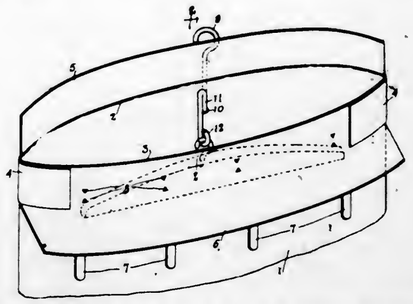
5. A pin feather picking machine comprising a casing having a mouth opening, coöperating main and auxiliary picking rollers mounted in and approximately closing the mouth opening of said casing, the said main roller having an oblique air passage extending diametrically therethrough, and presser bars secured to said casing and extending immediately under the said picking rollers.

1,220,459. HANGER. BERTON I. RIKE, Dayton, Ohio, assignor to The Rike Folding Box Company, Dayton, Ohio, a Corporation of Ohio. Filed Aug. 15, 1916. Serial No. 115,067. (Cl. 206—7.)

1. The combination, with a bag having a reinforced upper edge, of a hanger passing through said reinforced upper edge and bag and provided with attaching devices at each end, the attaching device at the inner end of the hanger being located within the bag, and a support for said bag intermediate said ends.

2. The combination, with a bag, of a hanger comprising a rod extending through one wall of said bag and having an attaching device at its outer end, the intermediate portion of said rod being bent to form a support for said bag and an attaching device at its inner end located within the bag and adapted to support the contents of said bag.

3. The combination, with a bag, the side of which is reinforced at its upper edge, of a hanger provided with a horizontal portion passing through said reinforced portion and side and attaching devices at its ends, the attaching device at the inner end of the hanger being located within the bag.

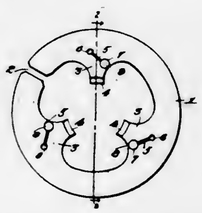


4. The combination, with a bag of a hanger provided with a portion extending through a wall thereof, said hanger having a portion within the bag extending downwardly and provided with an attaching device at its lower end and a portion on the outside of the bag for supporting both the bag and contents.

5. The combination, with a bag provided with an upper edge and an opening extending transversely of said edge, of a hanger provided with a horizontal portion rotatably mounted in said opening so that the hanger can be rotated to lie parallel with said edge.

[Claims 6 to 9 not printed in the Gazette.]

1,220,460. SCREW-CUTTING DIE. WILLIAM R. RIOUX, Montreal, Quebec, Canada. Filed Dec. 8, 1916. Serial No. 135,791. (Cl. 10—119.)



1. A die of the character described comprising a body portion, a plurality of screw chasers formed integral therewith, the base portion of said chasers having diagonally extending slots formed therein and means adapted to be inserted within said slots for moving said chasers to different angles substantially as and for the purpose specified.

2. In a die of the character described comprising a ring, a plurality of inwardly projecting screw chasers formed integral therewith, the base portions of said screw chasers each having a diagonally extending slot therein and having one end terminating at one side of said screw chasers, and tapered plugs adapted to be inserted within said slots for the purpose specified.

3. In a die of the character described comprising a split ring, a plurality of chasers formed integral therewith, each of said chasers comprising a web portion, each of said web portions having a diagonally extending slot formed therein and extending transversely throughout each web portion, and a tapered pin adapted to be inserted within each of said slots adjacent the open ends thereof substantially as and for the purpose specified.

4. In a die of the character described comprising a split ring, a plurality of radially extending screw chasers formed integral therewith, each of said screw chasers comprising a web portion having screw cutting edges formed at and extending transversely across the outer ends thereof, said

web portions each having a diagonally extending slot formed therein and extending transversely throughout each web portion, the inner end of each of said slots terminating in an enlarged aperture, the opposite ends of said slots each having an enlarged transversely extending aperture communicating therewith, and a tapered pin adapted to be inserted within each of said enlarged apertures substantially as and for the purpose specified.

1,220,461. APPARATUS FOR MOLDING CONCRETE. CHARLES W. RODGERS, East Bridgewater, Mass. Filed Sept. 28, 1912. Serial No. 722,843. (Cl. 25—131.)



1. In combination, a series of molding members having connecting hinges, a bracing structure, and struts connecting said molding members and said bracing structure to sustain the pressure of the molded structure against said molding members, said struts and bracing structure having adjustable connections arranged to vary the angular relation of said molding members.

2. In combination, a series of molding members having connecting hinges, a series of braces extending approximately parallel to the first-mentioned series, each of said braces being as long as two such molding members, and struts each attached to one of said molding members and to one of said braces, each of said molding members having one of such struts, said struts and braces having provisions for holding them in various relative positions to hold said molding members in various angular relations.

3. In combination, a series of molding members having connecting hinges, struts connected to and extending from said molding members respectively, said struts being arranged in a series, and a series of tie rods each connecting three successive said struts, said struts and tie rods being arranged to sustain conjointly outward stress against said molding members.

4. The combination with molding units arranged to cooperate to mold opposite surfaces of a single body, of means connecting the opposed molding units to hold them in coöperative relation, hinges connecting said units, braces extending away from said units substantially at right angles to the axes of said hinges, braces for connecting said first-mentioned braces with each other, and means for securing said braces to each other in various relative positions whereby the molding units may be held at angles relatively to each other.

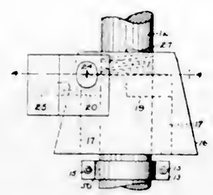
5. The combination with reinforcing members projecting from a molded body, of a molding member having provision for receiving the projecting portions of said reinforcing members, and keys for securing said molding member to said reinforcing members, said projecting portions having provision for the reception of said keys.

[Claims 6 and 7 not printed in the Gazette.]

1,220,462. LOCK FOR MOTOR-VEHICLES. BENJAMIN F. ROUSSEAU and CHAUNCEY D. ROUSSEAU, Fort Wayne, Ind.; said Chauncey D. Rosseau assignor to said Benjamin F. Rosseau. Filed Feb. 19, 1916. Serial No. 79,268. (Cl. 70—90.)

1. The combination with a lever of a fixed member adjacent the lever, a fixed member on the lever, a revoluble and slidable member on the lever and adapted to engage both fixed members and means to releasably lock the revoluble and slidable member to the fixed member on the lever.

2. The combination with a lever, a fixed member adjacent the lever, a collar secured to the lever, means revolubly and slidably mounted on the lever adapted to engage the collar and fixed member and means to releasably lock the latter means to the collar.

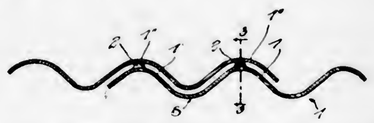


3. The combination with a collar fixed to the gear-shifting lever of a vehicle, of a revolubly and slidably mounted sleeve on the lever having means thereon adapted to engage the collar, a fixed abutment independent of the lever, adapted to be engaged by the sleeve and with reference to which the lever is movable and a lock to releasably secure the sleeve to the collar when the sleeve engages the fixed abutment.

4. The combination with a lever, of a fixed abutment relative to which the lever is movable, a member fixed to the lever, a member slidably and revolubly carried by the lever and adapted to engage the fixed abutment, a laterally projecting stop on one of the members, the other member having a cut-away portion therein adapted to receive the stop when the slidable and revoluble member is rotated and means to releasably lock the two members when the stop is in engagement with the cut-away portion and the revoluble member is in engagement with the fixed abutment.

5. The combination with a lever of a stop secured to the lever, a sleeve slidably and revolubly mounted on the lever and encircling the stop and having a transversely extending recess in its wall adapted to receive the stop when the sleeve is rotated, a fixed abutment adjacent the lever and adapted to be engaged by the sleeve, and means to releasably lock the sleeve to the stop when the stop is engaged in the recess and the sleeve is in engagement with the fixed abutment.

1,220,463. LAP-JOINT FOR ROOFING. LOUIS J. B. SCHNUG, San Diego, Cal. Filed Oct. 26, 1916. Serial No. 127,847. (Cl. 108—13.)

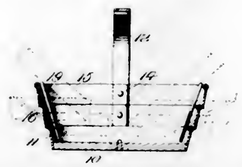


A rectangular roofing sheet formed of metal corrugated into spaced symmetrical ribs extending longitudinally of said sheet, the rib or ribs at one edge of the sheet which are intended to be overlapped being stamped outwardly at longitudinally spaced points along the crown thereof to space the lapping rib or ribs of an overlapping sheet from said first named rib or ribs whereby the accumulation of moisture in the seam and around any nails through said ribs is prevented.

1,220,464. COLLAPSIBLE BASKET. WALTER B. SCHREVER, Detroit, Mich. Filed Dec. 21, 1915. Serial No. 68,032. (Cl. 217—15.)

1. A collapsible basket comprising a bottom wall and a plurality of pairs of side wall sections each disposed in parallelism above the bottom wall, and means for moving said side wall sections to and from a collapsed position.

2. A collapsible basket comprising a bottom wall and a plurality of pairs of side wall sections each disposed in parallelism above the bottom wall and in slightly overlapped relation with respect to each other, and means for moving said side wall sections to and from a collapsed position.



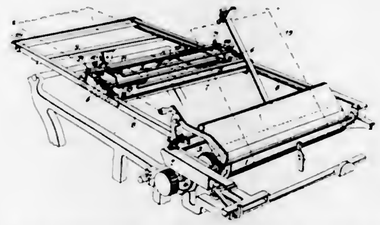
3. A collapsible basket comprising a bottom wall, a flange rising from said bottom wall, a plurality of pairs of side wall sections each disposed in parallelism above the bottom wall and in slightly overlapped relation with respect to said flange and to each other, and means for moving said side wall sections to and from a collapsed position.

4. A collapsible basket comprising a bottom wall, and a plurality of pairs of side wall sections each disposed in parallelism above the bottom wall and in slight overlapped relation with respect to each other, means interconnecting the oppositely disposed sections of the several pairs of said side wall sections, and means for moving said side wall sections to and from a collapsed position.

5. A collapsible basket comprising a bottom wall, a flange rising from said bottom wall, a plurality of pairs of side wall sections each disposed in parallelism above the bottom wall and in slightly overlapped relation with respect to said flange and to each other, means interconnecting the oppositely disposed sections of the several pairs of said side wall sections with said flange, and means for moving said side wall sections to and from a collapsed position.

[Claims 6 and 7 not printed in the Gazette.]

1,220,465. TYPE-WRITING MACHINE. JOSEPH E. SCHUBERT, Chicago, Ill., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 17, 1915. Serial No. 40,370. (Cl. 197—126.)



1. In a typewriting machine, a platen, a letter-feeding carriage to support a series of superposed webs and carbon sheets, means for retaining said webs and sheets in alinement at the platen, said sheets being liable to relative lateral derangement because of the letter-feeding movement of the carriage, said webs and carbon sheets having an intermittent relative movement to bring a fresh portion of the webs to printing position, and opposing re-aliners engaging opposite edges of the webs during said relative movement, for producing a re-alinement of said webs and carbon sheets; said re-aliners being mounted for adjustment toward and away from each other.

2. In a typewriting machine, the combination with a platen, a letter-feeding carriage, a truck or carrier carried by said carriage and supporting a series of superposed webs and carbon sheets, means for retaining said webs and carbon sheets in alinement at the platen, said sheets being liable to relative lateral derangement because of said letter-feeding movement of the carriage, said truck or carrier having an intermittent movement relative to said letter-feeding carriage to bring a fresh portion of the webs to printing position, and opposing re-aliners brought into engagement with opposite edges of said webs by said movement of said truck or carrier, for producing a re-alinement of said webs and carbon sheets.

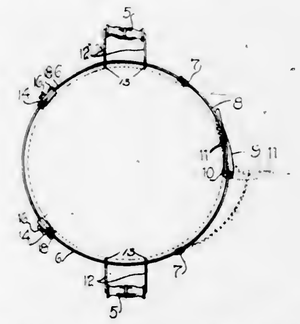
3. In a typewriting machine, the combination with a platen and a frame at the introductory side of the platen on which a web or webs may be supported as they are advanced to the platen, of a truck or carrier mounted on said frame to travel thereon and movable forwardly with the webs as the latter are advanced to the platen, and opposing re-aliners carried by said truck for engaging opposite edges of a web or webs, said re-aliners adjustable in a direction transverse to the movement of the webs.

4. The combination with a platen and means for supporting and guiding work-pieces as they are advanced to the platen, of a truck or carrier for a carbon sheet or sheets which are placed between the work-pieces, said carriage and carbon sheets arranged to advance with the work-pieces and returnable relatively to the work-pieces to position the carbon sheets for writing on a fresh portion of the work-pieces, and opposing re-aliners for the edges of the work-pieces, said re-aliners mounted on said truck to travel therewith, and acting on said work pieces to re-aline them on the return movement of said truck or carrier.

5. In a typewriting machine, a platen, a letter-feeding carriage to support a series of superposed webs and carbon sheets, means for retaining said webs and sheets in alinement at the platen, said sheets being liable to relative lateral derangement because of the letter-feeding movement of the carriage, said webs and carbon sheets having an intermittent relative movement to bring a fresh portion of the webs to printing position, opposing re-aliners engaging opposite edges of the webs during said relative movement, for producing a re-alinement of said webs and carbon sheets; said re-aliners being mounted for adjustment toward and away from each other, and means acting concomitantly with said re-aliners to render their alining action more effective.

[Claims 6 to 20 not printed in the Gazette.]

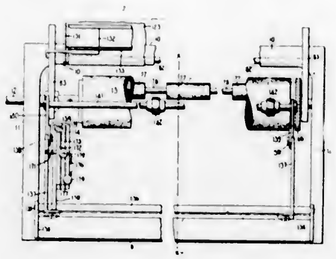
1,220,466. DETACHABLE HANDLE FOR JARS. HERMAN SCHULTZ, Parkersburg, Iowa, assignor of one-eighth to R. J. Goerner, Parkersburg, Iowa. Filed Feb. 26, 1914, Serial No. 821,268. Renewed Aug. 14, 1916. Serial No. 114, 889. (Cl. 215—1.)



A detachable handle member comprising a pair of wire sections, pairs of plates provided with opposed longitudinal grooves co-acting to receive the sections, clamping screws passed through each pair of plates, one of the plates of each pair being provided with an opening extending from one of the grooves outwardly, and the wire adjacent said opening being extended therethrough and

directed around the edge of the plates handles carried by the sections, and means associated with the other ends of the sections for drawing them together into clamping relation and holding them in such position.

1,220,467. TYPE-WRITING MACHINE. ARTHUR W. SMITH, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Original application filed Apr. 8, 1915, Serial No. 19,871. Divided and this application filed Nov. 14, 1916. Serial No. 131,201. (Cl. 197—142.)



1. In a typewriting machine, the combination of a platen, and denominational side gage devices, said devices being arranged in a permanent group and spaced a predetermined distance apart lengthwise of the platen and being separately adjustable to coöperate with the side edge of the paper as it is fed over the platen to provide for a variation in the relationship between the paper and the platen.

2. In a typewriting machine, the combination of a platen, a set of denominational side gage devices for cooperation with one work sheet to position it denominationally lengthwise of the platen, said devices being separately settable to vary the position of the paper lengthwise of the platen, and a separate side gage for cooperation with another work sheet.

3. In a typewriting machine, the combination of a platen, and denominational side gage devices comprising a plurality of gages or stops arranged side by side and having an unvarying relationship with each other lengthwise of the platen, said gages being adapted to coöperate separately with the side edges of work sheets, as they are introduced to vary the relationship between the work sheets and the platen.

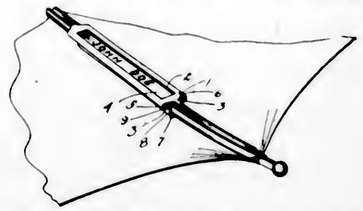
4. In a typewriting machine, the combination of a platen, and denominational side gage devices for cooperation with the side edges of work sheets as they are introduced into the machine comprising separate gages or stops movable transversely of the platen, the relationship of said gages to each other considered lengthwise of the platen always remaining constant.

5. In a typewriting machine, the combination of a platen, and a side gage arranged on the forward side thereof and movable in a straight path transversely of the platen into and out of position for coöperation with the side edge of a work sheet when introduced at the front of the machine.

[Claims 6 to 21 not printed in the Gazette.]

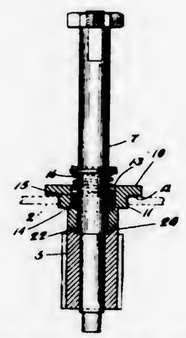
1,220,468. IDENTIFICATION NAME-PLATE FOR UMBRELLAS. CHARLES F. SMITH, Sunbury, Pa. Filed Feb. 28, 1916. Serial No. 80,970. (Cl. 40—10.)

In an identification device adapted to be attached to an umbrella rib which is U-shaped in cross-section, a channeled plate arranged to embrace the outer face of said rib and provided with an opening, a plate arranged to bridge the edges of the rib and engaging with the edges of the channeled plate, a card disposed beneath the bridging plate, and an additional plate arranged to bridge and rest upon the edges of the rib and to be disposed between the rib and the card, and bills on the bridging plate



engaging the ends of the card and the ends of the last mentioned plate.

1,220,469. DOOR-CHECK. HORACE T. SMITH, Cambridge, Mass. Filed Mar. 21, 1916. Serial No. 85,705. (Cl. 16—88.)



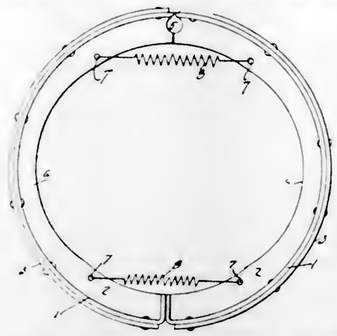
The door check herein described having an oil compartment and a dry compartment separated by a diaphragm, actuating-means arranged in the oil compartment, a shaft bearing one of the elements of the actuating-means, which is extended through the diaphragm and the dry compartment and having end-bearings, and an additional bearing and support for said shaft intermediate its length, comprising a gland stationarily supported by the diaphragm, which gland surrounds the shaft and has a conical end, and an extension with conical recess formed in the component of the actuating-means which is borne by the shaft adapted to engage the conical end of said gland, by which said component and the shaft bearing it will be held against lateral deflection, and a joint will be formed which will be liquid tight even in case the shaft should gyrate slightly.

1,220,470. PROCESS OF FORMING BRAKE-RINGS. JOHN F. SMITH and GUY H. WILLIAMS, Seattle, Wash., assignors, by mesne assignments, to Safety First Brake Shoe Co., Inc., a Corporation of Washington. Filed Dec. 14, 1915. Serial No. 67,108. (Cl. 29—148.)

1. The process of forming semi-circular brake rings from T iron, consisting in cutting away the web at one end of the piece of T iron, bending the flange of the T back at right angles and against the end of the web, cold bending the piece of T iron into a semi-circular form with the web innermost, punching an open semi-circular notch in the end of the web opposite the said cut away end, and shearing away an edge portion of the web midway between the two ends.

2. The process of forming semi-circular brake ring members, consisting in bending a piece of T iron in a semi-circle with the web innermost, cutting away a square portion of the web T iron at one end of the semi-

circular member and bending the free end of the flange against the end of the web and on a diametrical line, punching an open semi-circular notch in the web of the



other end of the semi-circular member, and shearing a crescent shaped piece from the edge of the web midway of the ends of the semi-circular member.

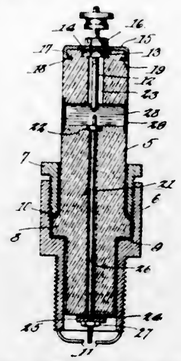
1,220,471. DEMOUNTABLE RIM FOR VEHICLE-WHEELS. FRANK SPRANGER and NICHOLAS M. SPRANGER, Detroit, Mich., assignors to Spranger Rim and Wheel Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 11, 1915. Serial No. 13,800. (Cl. 152—21.)



In a demountable rim for vehicle wheels, a channel iron rim having inner and outer flanges each provided with pairs of notches, the pairs of notches of one flange transversely alining with the pairs of notches of the other flange, the notches of the inner side flange of less depth than the outer side flange to provide abutments below the notches of the inner side flange, a demountable rim on the peripheral edges of the inner and outer flanges of said channel iron rim, blocks carried by said demountable rim and snugly fitting in the notches of the inner and outer flanges of said channel iron rim and having the inner end portions thereof undercut to receive the abutments of the inner side flange of said channel iron rim for preventing circumferential movement of said demountable rim relative to said channel iron rim and to limit the inward movement of said blocks in said notches, and means in said channel iron rim adapted to lock said blocks in the notched flanges of said channel iron rim.

1,220,472. SPARK-PLUG. EDMUND L. SUESS, Pittsburgh, Pa. Filed Mar. 8, 1916. Serial No. 82,831. Cl. 123—169.)

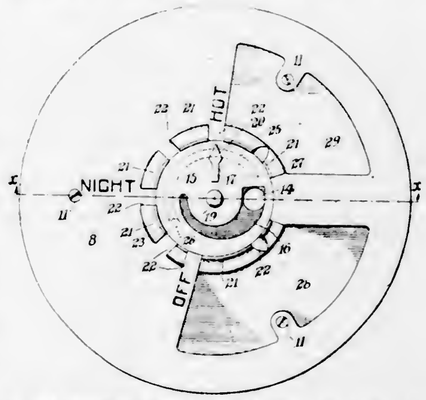
1. A spark plug having a body of insulating material provided with a transverse sight opening, axially alined upper and lower terminal rods mounted in said body, the adjacent ends of the rods extending into the opening and being spaced to produce a spark gap therein, a nut fixed on the outer end of the body through which nut the upper rod is threaded for longitudinal adjustment, said end of the body having a recess in which the nut seats, a cap mounted on the outer end of the body over the nut, said cap having a depending marginal flange provided with diametrically opposite inturned ends, and the side of the body having grooves in which said inturned ends seat between which grooves the side of the body is flattened, a jam nut on the upper rod screwed against the cap, and means for locking the lower rod against movement longitudinally in either direction.



2. A spark plug having an integral body of insulating material provided with a transverse sight opening, axially alined upper and lower terminal rods mounted in said body, the adjacent ends of the rods extending into the opening and being spaced to produce a spark gap therein, means for adjusting the upper rod longitudinally, an abutment on the lower rod, the body having a recess in which the abutment seats and a longitudinal opening above said recess in which the upper rod seats, the width of the abutment being not greater than the diameter of said opening, and an abutment on the lower rod engaging the inner end of the body.

3. A spark plug having an integral body of insulating material provided with a transverse sight opening, axially alined upper and lower terminal rods mounted in said body, the adjacent ends of the rods extending into the opening and being spaced to produce a spark gap therein, and an abutment on the lower rod, the body having a recess in which the abutment seats and a longitudinal opening above the said recess in which the upper rod seats, the width of the abutment being not greater than the diameter of said opening.

1,220,473. PREHEATER-INLET. SAMUEL H. TACY, Elkins Park, Pa., assignor to Pre-Heated Air Company, Philadelphia, Pa., a Corporation of Delaware. Filed Feb. 9, 1912. Serial No. 676,642. (Cl. 126—15.)



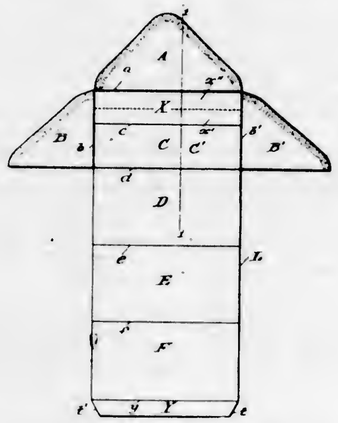
1. In a device of the character stated, a pre-heater having connecting passages and an inlet opening to one of said passages and a movable plate adapted to lie over the opening and having an opening in cam form with respect to the path of movement of the plate, the extent of the

opening in a direction perpendicular to the direction of plate movement increasing from one end of the opening toward the other throughout substantially the entire length of the opening measure along this path of movement, and covering the inlet opening to variant degrees during the movement.

2. In a device of the character stated, a stove lid, pre-heater chambers and an aperture thereinto, and a movable plate pivoted to the stove lid in proximity to said aperture and having a portion of greater extent than the opening in the direction of movement and which is eccentric to said pivot and capable of restricting said aperture progressively with movement in one direction, in combination with a stop limiting the rotation of the plate to prevent complete closure of the aperture.

3. In a device of the character stated, a pre-heater having connecting passages and an inlet opening thereto, in combination with a movable plate having an edge of the plate of greater length than the opening in the direction of movement extending progressively farther over the opening in a direction transverse to the line of movement of the plate, tending to close the opening by a wedge-like operation.

1,220,474. COMBINATION LETTER-SHEET AND ENVELOP. JOSEPH D. TESSIER, Worcester, Mass. Filed Oct. 12,1911. Serial No. 654,218. (Cl. 229—92.7.)

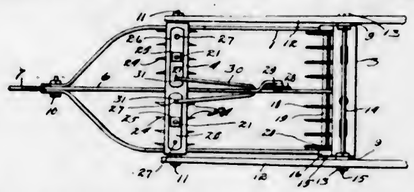


1. In a device of the character described, the combination of a letter sheet, a gummed area on the back of the letter sheet, an envelop sheet attached to the letter sheet by the gummed area, a free end on the letter sheet beyond the gummed area and a free end on the other side of the gummed area on the letter sheet.

2. In a combination letter sheet and envelop, an envelop sheet with flaps, a letter sheet, means for attaching the same together, means for foldably holding said letter sheet and envelop together as a unit, comprising a plurality of overlapping members and located between the envelop and letter when in folded position.

3. A combination letter sheet and envelop, a letter sheet, an envelop sheet, a plurality of overlapping members, one of said members being held adjacent to the envelop sheet, the other member being attached to the letter sheet, the first member occupying space provided between the second member and a portion of the letter sheet, the second member occupying space provided between the first member and the envelop, flaps on said envelop for retaining the letter sheet and the members in folded position when sealed, thus preventing an opening of the device without tearing at least one of said members and thus indicating an unauthorized opening of the article.

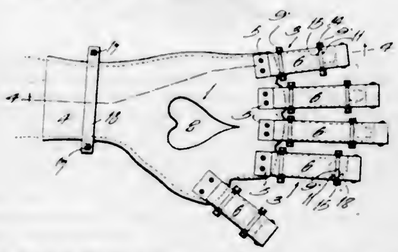
1,220,475. HARROW. JOHN P. TREADWELL, Valden, Miss. Filed Aug. 9, 1916. Serial No. 114,007. (Cl. 55—30.)



1. In an implement of the class described, the combination with a frame, of standards rotatably mounted therein, harrow disks carried by the standards, plates secured to the upper ends of the standards and having apertures in the ends thereof, an adjusting lever and a U-shaped resilient link connected to the lever and having bills extending in to the adjacent apertures in said plates, the normal distance between the bills being less than the distance between the adjacent apertures when the plates are in alinement with each other.

2. In an implement of the class described the combination with a frame, of standards rotatably mounted therein, harrow disks carried by the standards, plates secured to the upper ends of the standards, an adjusting lever, and a resilient member having its ends connected to adjacent ends of said plates and its intermediate portion connected to said lever, the normal distance between the ends of said resilient member being less than the distance between the points of connection thereof with the plates when the latter are in alinement with each other.

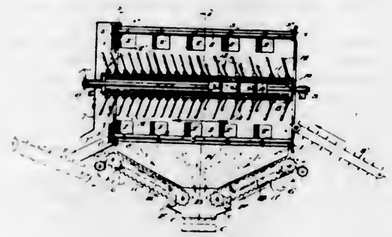
1,220,476. SURGICAL SPLINT. ANTON UJDUR, Park City, Utah. Filed Nov. 9, 1916. Serial No. 130,427. (Cl. 128—52.)



1. A surgical splint comprising two members having cooperating knuckles on their inner faces at one end whereby they are hingedly connected to swing toward and away from each other and held in spaced superposed relation, a groove extending transversely of each of said members, an attaching plate mounted in each of said grooves with the ends of said plates projecting beyond the side edges of said members, the plate of one member being arranged opposite that of the other member, and means carried by said projecting plate ends for adjustably connecting said members.

2. A surgical splint for digits comprising two members of a width slightly greater than the width of the digit to which it is to be applied, one of said members being longer than the other, said members having coöperating knuckles on their inner faces at one end whereby they are hingedly connected at one end to swing toward and away from each other, longitudinally spaced undercut grooves extending transversely of said members, attaching plates mounted in said grooves with their ends projecting beyond the side edges of said members, the attaching plates of one member being arranged opposite those of the other, fixed pins carried by the projecting ends of the plates of one member, said pins extending laterally toward the other member and threaded at their free ends, the plates of the other member being apertured at their ends to receive said pins, and nuts engaging said threaded pin ends.

1,220,477. PEA-VINE THRESHING AND HULLING MACHINE. EDWARD J. VAUDREUIL, Eau Claire, Wis. Filed Jan. 13, 1915. Serial No. 1,985. (Cl. 130—30.)



1. A rotary drum for threshing machines comprising open feed and discharge heads, reach-bars connecting the heads, a screen jacket incasing the reach-bars and spaced therefrom to form clearance channels, collector blades carried by the reach-bars, a rotary core cylinder mounted within the drum and adapted to be driven at a greater speed than the latter, and a series of beater pins extending from the cylinder, the same being inclined toward the discharge head, and screening means positioned under said drum.

2. A rotary drum for threshing machines comprising open feed and discharge heads, reach-bars connecting the heads, a screen jacket incasing the reach-bars and spaced therefrom to form clearance channels, collector blades carried by the reach-bars, the same being inclined to deflect material toward the discharge end of the drum, a revoluble core cylinder mounted within the drum and adapted to rotate at a greater speed than said drum, and two or more series of beater pins extending from the cylinder, the same being inclined toward the discharge head of said drum, the first series of pins nearest the feed head of said drum being spaced apart at greater intervals than that of the last series of said pins.

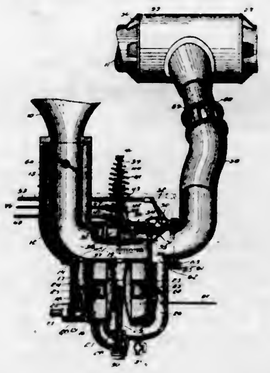
3. A rotary drum for threshing machines comprising open feed and discharge heads, reach-bars connecting the heads, a screen jacket incasing the reach-bars and spaced therefrom to form clearance channels, collector blades carried by the reach-bars, the same being inclined to deflect material toward the discharge end of the drum, a revoluble core cylinder mounted within the drum and adapted to rotate at a greater speed than said drum, and two or more staggered series of beater pins extending from the cylinder, the same being inclined toward the discharge head of said drum, the first series of pins nearest the feed head of said drum being spaced apart at greater intervals than that of the last series of said pins.

4 A rotary drum for threshing machines comprising open feed and discharge heads, reach-bars connecting the heads, a screen jacket incasing the reach-bars and spaced therefrom to form clearance channels, collector blades carried by the reach-bars, the same being inclined to deflect material toward the discharge end of the drum, a revoluble core cylinder mounted within the drum and adapted to rotate at a greater speed than said drum, rows of flanged socket hubs fitted to the periphery of the cylinder and staggered with relation to each other, beater pins mounted in the socket hubs, the same being inclined toward the discharge head of the drum, each row of said pins being increased in number toward said discharge end.

5. In a rotary drum for threshing machines; the combination of a revoluble core cylinder mounted within the drum, and series of hollow beaters extending from said core drum, the ends of said beaters being open to present two points of beating contact and said beater pins being arranged closer together toward the discharge end of the drum.

[Claims 6 to 20 not printed in the Gazette.]

1,220,478. CARBURETER. SIDNEY D. WALDON, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 15, 1912. Serial No. 690,847. (Cl. 261—55.)



1. In a carbureter, the combination of a choke tube, a fuel nozzle therein, an air supply passage for the choke tube, a mixing chamber in communication with the choke tube, an auxiliary air inlet passage for said mixing chamber, a valve adapted to close said auxiliary air inlet, an air supply conduit communicating with said first mentioned air passage and said auxiliary air inlet passage, and an opening from the latter passage to the external atmosphere.

2. In a carbureter, the combination of a choke tube, a fuel supply nozzle therein, an air passage communicating with the choke tube, a mixing chamber communicating with the choke tube, an auxiliary air inlet passage for the mixing chamber, an opening from the latter passage to the external atmosphere, an air supply conduit communicating with said first mentioned air passage and said auxiliary air inlet passage, and valve means adapted to regulate the quantities of air supplied to the said auxiliary air inlet passage through the said opening and said conduit.

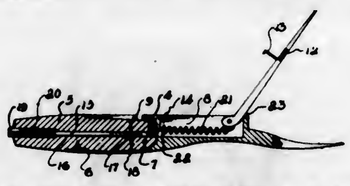
3. In a carbureter, the combination of a choke tube, a fuel supply nozzle therein, an air passage communicating with the choke tube, a mixing chamber communicating with the choke tube, an auxiliary air inlet passage for the mixing chamber, an opening from the latter passage to the external atmosphere, an air supply conduit communicating with said first mentioned air passage and said auxiliary air inlet passage, and a valve adapted to close said opening or cut off communication between said air conduit and said auxiliary air inlet passage.

4. In a carbureter, the combination of a choke tube, a fuel supply nozzle therein, an air passage communicating with the choke tube, a mixing chamber communicating with the choke tube, an auxiliary air inlet passage for the mixing chamber, an opening from the latter passage to the external atmosphere, an air supply conduit communicating with said first mentioned air passage and said auxiliary air inlet passage, and a valve adapted to regulate the quantities of air supplied to said auxiliary air inlet passage through said opening and said air supply conduit.

5. In a carbureter, the combination of a choke tube, a nozzle therein, an air supply passage communicating with the choke tube, a mixing chamber communicating with the choke tube, an auxiliary air inlet for the mixing chamber, a valve adapted to close said inlet and also regulating the flow through the choke tube, a plurality of springs adapted to regulate the opening of said valve, and independently actuated wedge devices for adjusting the action of said springs.

[Claims 6 to 9 not printed in the Gazette.]

1,220,479. CARVING-FORK. LETTIE A. WAYMIRE, Oroville, Cal. Filed Sept. 5, 1916. Serial No. 118,559. (Cl. 30—5.)



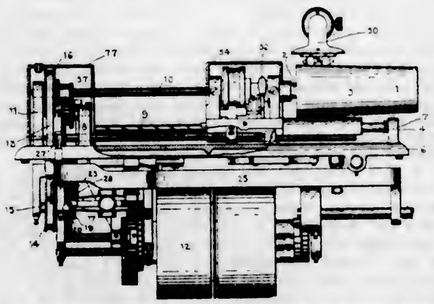
1. The combination in a carving fork, of a tang provided with integral tines, a supplemental tine pivoted to the tang for movement into and out of operative position, releasable means normally holding the supplemental tine in inoperative position; and means for automatically moving the supplemental tine to operative position when the first mentioned means is released.

2. In a carving fork, the combination with a tang having integral tines, of a supplemental tine pivoted to the tang and adapted in its inoperative position to lie folded there against, means releasably holding the supplemental tine in inoperative position, and means serving to move the supplemental tine outwardly on its pivot when said first named means is released.

3. In a carving fork, the combination with a tang having a recess therein, of a tine pivoted in the recess and foldable to lie therewithin, means for releasably maintaining the tine within the recess, means serving to swing the tine outwardly from the recess when the first named means is released, and means for limiting outward movement of the tine.

4. In a carving fork, the combination with a tang and handle having alined recesses therein, of a tine pivotally mounted on the tang and adapted to lie within said recesses, said tine having a catch thereon, a spring pressed catch mounted in the recess in the tang and arranged to engage the catch on the tine, and a spring secured within the recess in the tang and to the tine and urging the latter outwardly.

1,220,480. PHONOGRAPH. PETER WEBER, Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Aug. 6, 1910. Serial No. 575,861. (Cl. 274—17.)



1. In a phonograph, in combination, a rotatable record support, a reproducer, means for producing a relative feeding movement along a substantially straight line between said reproducer and record support, said means comprising coacting members movable into and out of operative engagement with each other, means for rotating said record support, means for holding the same against rotation, means for latching said last named means in inoperative position, a single controlling member, and connections from said controlling member operable thereby at any desired point in the relative feeding movement between said reproducer and said record support to render said latching means operative or inoperative and to simultaneously cause said coacting members to be respectively engaged with or disengaged from each other, substantially as described.

2. In a phonograph, in combination, a rotatable record support, a reproducer provided with a stylus, said record support being movable with respect to said reproducer in a direction longitudinally of the record support, means for rotating said record support, frictional braking means for holding the same against rotation, a single controlling member, and means controllable by said member at any desired position of said record support relatively to said producer to render said braking means inoperative or operative and simultaneously therewith to cause said stylus to be moved respectively into or out of engagement with the surface of a record carried by said record support, substantially as described.

3. In a phonograph, in combination, a rotatable record support, means for rotating the same, a brake band frictionally engaged upon said support and having a lug formed thereon, a stylus adapted to be operatively positioned with respect to a record carried by said support, a member adapted to move into the path of said lug to stop said support, a member adapted to disengage said stylus from said support, and a single controlling member to cause said stopping and disengaging movements of said members, substantially as described.

4. In a phonograph, in combination, a rotatable record support, driving means therefor comprising a member having a cylindrical brake surface, and means for rendering said driving means inoperative, said second named means comprising a device movable with and yieldingly and non-positively connected to said cylindrical surface, and stopping means adapted to engage said device to stop said driving means, substantially as described.

5. In a phonograph, in combination, a rotatable record support, driving means therefor, a member rotatable with said driving means, a brake band encircling the major portion of said member and rotatable therewith, and means adapted to coöperate with said brake band to stop said driving means, substantially as described.

[Claims 6 to 42 not printed in the Gazette.]

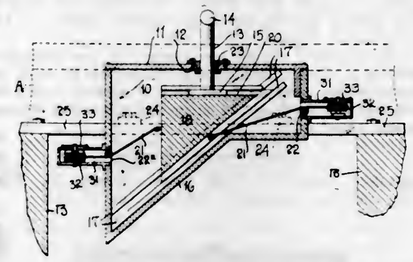
1,220,481. GRAPPLE. WILLIAM O. WEDGE, Center, Colo. Filed June 3, 1916. Serial No. 101,526. (Cl. 57—9.)



1. A device of the class described comprising a body, said body having a longitudinally extending guide slot, object engaging arms pivotally connected with said body above the slot, an actuating plate operatively engaging the arms and slidably mounted on the body, said plate having guide means thereon coacting with the slot, an expansible coiled spring surrounding the lower end of the body and bearing against the plate to hold the arms normally closed, and means for retracting the plate against the spring tension to expand said arms.

2. A device of the class described including a tubular body having alining longitudinally extending guide slots therein, object engaging arms pivotally connected with said body above the slots, a spring tensioned actuating plate slidably mounted on the body adjacent the slot, an operating rod movable longitudinally of said body having an eye on its upper end, and a transversely extending guide member on the bottom of the actuating plate extending through the slot adjacent the lower end of the operating rod.

1,220,482. AUTOMATIC TRAIN-STOP. WILLIAM H. WENTLING, Harrisburg, Pa. Filed June 10, 1916. Serial No. 102,955. (Cl. 246—59.)



1. In an automatic train stop system, a casing mounted in conjunction with a railway track, said casing having downwardly inclined tracks on its side walls, a slide movable along said inclined tracks, a vertically disposed vent valve actuating member slidably mounted in the top of the casing and slidably engaging the upper face of the slide, and operative connections to the slide whereby the slide may be moved in opposite directions.

2. In an automatic train stop system, a casing mounted in conjunction with a railway track, the top of the casing having a stuffing box, a vertically movable vent valve actuating member slidable through the stuffing box, a slide mounted in said casing, the casing having upwardly inclined tracks on which said slide moves, the slide engaging the lower end of the actuating member, and operative connections to the slide.

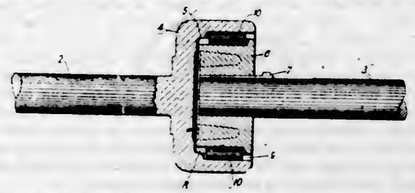
3. In an automatic train stop system, a casing mounted in conjunction with a railway track, said casing having downwardly inclined guide tracks, a slide mounted on said guide tracks, the upper face of the slide being formed with a longitudinally extending T-shaped groove, a vent valve actuating member slidably mounted in the top of the casing for vertical movement and having a head at its lower end engaging said T-shaped groove, operative connections to the slide to cause a positive movement of the slide in one direction or the other in consonance with the movement of the semaphore.

4. An operating device for the vent valves of air brakes having a casing, downwardly inclined tracks upon the lateral walls of the casing, a slide having an inclined lower face positively engaging said tracks for sliding movement longitudinally of the casing, and a vent valve actuating member extending vertically out of the casing and slidable in a vertical plane and having positive sliding engagement at its lower end with the upper face of the slide.

5. In an automatic train stop system, a casing mounted in conjunction with a railway track and having side walls formed with downwardly inclined grooves forming guide tracks, a triangular slide having a horizontal upper face and an inclined lower face, the lower face being provided with laterally disposed flanges engaging said guide tracks, the upper face of the slide being formed with a longitudinal T-shaped groove, a vent valve actuating member slidably mounted in the top of the casing for vertical movement and having a T-shaped head at its lower end engaging said T-shaped groove and the slide, and operative connections to the slide for shifting it in opposite directions to thereby raise or lower said valve actuating member.

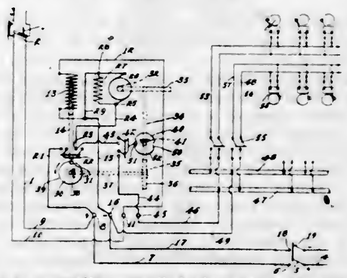
1,220,483. EXPANSION-COUPLING. HOMER D. WILLIAMS and WILLIAM AHLEN, Duquesne, Pa. Filed Nov. 22, 1913. Serial No. 802,464. (Cl. 64—13.)

The combination of a pair of alined shafts, one shaft having a terminal enlarged socket fixed thereon, the other shaft having a terminal enlarged head fixed thereon and radially filling the socket, whereby alinement of the shafts is preserved, the inner periphery of the socket and the outer periphery of the head having registered grooves extending in substantial parallelism with the shafts, the outer end of the groove in the socket being open and the inner end being closed, the inner end of the groove in the



head being open and the outer end being closed, and a substantially non-flexible key radially filling the registered grooves and of a length less than that of each groove, whereby the shafts are locked against independent rotation and are capable of independent endwise movement to compensate for expansion and contraction.

1,220,484. CENTRALLY-CONTROLLED GENERAL-ALARM SYSTEM. FRANK W. WOOD, Brooklyn, N. Y., assignor to Charles Cory & Son, Inc., New York, N. Y., a Corporation of New York. Filed June 7, 1915. Serial No. 32,574. (Cl. 177—339.)



1. In a centrally-controlled alarm apparatus, in combination, a control circuit including hand-operated means for closing the circuit, a motor, a motor circuit and a circuit closer therefor, electrically-controlled means in said control circuit for operating the circuit closer to start said motor, an alarm circuit including a plurality of alarm devices, and means actuated by said motor for opening and closing the alarm circuit and for opening said circuit closer to stop the alarm.

2. In a centrally-controlled alarm apparatus, in combination, a control circuit including hand-operated means for closing the circuit, an electric motor, a motor circuit and a circuit closer therefor, electrically-controlled means in said control circuit for operating the circuit closer to start said motor and including a solenoid for actuating the closer, an alarm circuit including a plurality of alarm devices, and means actuated by said motor for opening and closing the alarm circuit and for opening said circuit closer to stop the alarm.

3. In a centrally-controlled alarm apparatus, in combination, a control circuit including hand-operated means for closing the circuit, an electric motor, a motor circuit and a circuit closer therefor, electrically-controlled means in said control circuit for operating the circuit closer to start said motor, said means including a solenoid, an alarm circuit including a plurality of alarm devices, and means actuated by said motor for maintaining said circuit closer closed to maintain both motor and alarm circuits active.

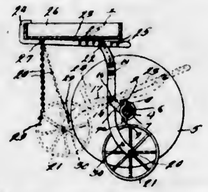
4. In a centrally-controlled alarm apparatus, in combination, a control circuit including hand-operated means for temporarily closing the circuit, an electric motor, a motor circuit and a circuit closer therefor, electrically-controlled means in said control circuit for operating the circuit closer to start said motor, an alarm circuit includ-

ing a plurality of alarm devices, and means actuated by said motor and unaffected by control circuit activity or inactivity for maintaining said circuit closer closed to maintain the motor and alarm circuits.

5. In a centrally-controlled alarm apparatus, in combination, a control circuit including hand-operated means for temporarily closing the circuit, a motor circuit and a circuit closer therefor, a motor within the motor circuit, electrically-controlled means in said control circuit including a solenoid for operating the circuit closer to close said motor circuit and start the motor, an alarm circuit including a plurality of alarm devices, and means actuated by said motor for by-passing the control circuit and for maintaining the circuit closer in circuit closing position to maintain the motor and alarm circuits during motor activity, said means being operative to break the motor circuit after a predetermined period.

[Claims 6 to 16 not printed in the Gazette.]

1,220,485. WHEEL ATTACHMENT FOR HARROWS. ART AHRENHOLTZ, Defiance, Iowa. Filed Nov. 29, 1916. Serial No. 134,117. (Cl. 55—73.)



In a device as set forth, the combination of a frame and an axle or shaft mounted in bearings thereof provided with harrow disks, of a bearing on said shaft or axle, a lever pivotally mounted on said bearing and having a supporting wheel at its lower end, the lower end of said lever being curved forwardly and under said axle or shaft, a second lever disposed substantially horizontally under said frame and having a hook at one end engaging said frame, means for adjustably connecting the first lever to the second lever, whereby the first lever may be held in different adjusted positions to support said disks of the harrow off the ground, and means consisting of a chain connected to the first lever and adapted to be detachably connected to said frame to support the said first lever in a horizontal position with the wheel off the ground, when the second lever is disconnected from said frame.

1,220,486. SELF-EXCITED DIRECT-CURRENT DYNAMO-ELECTRIC MACHINERY. PAUL AMSLER, Baden, Switzerland, assignor to Aktiengesellschaft Brown Boveri & Cie., Baden, Switzerland. Filed Feb. 12, 1912. Serial No. 677,103. (Cl. 171—252.)



1. In self excited direct current dynamo electric machines including a pole and an armature separated by an air gap, thin magnetic projections in the air gap, the relation of the thin iron section to the total iron section being between 1:4 and 1:10; as set forth.

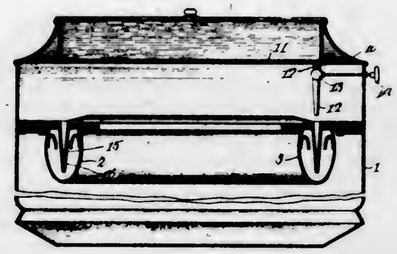
2. In dynamo electric machinery in combination a pole and an armature separated by an air gap, magnetic projections in the air gap, the width of each being between about one third and about one ninth of the width of the air space between two adjacent projections, said projections being arranged to form grooves concentric with the armature; as set forth.

3. In dynamo electric machinery in combination a pole and an armature separated by an air gap, magnetic projections in the air gap, the width of each being between about one third and about one ninth of the width of the adjacent air space; as set forth.

4. In dynamo electric machinery in combination a pole, magnetic projections thereon whose area of cross section compared with that of the whole pole area of cross section bears a ratio of between about 1:4 and 1:10; as set forth.

5. In dynamo electric machinery in combination a stator and a rotor magnetic projections on at least one thereof whose cross sectional area is between about one forth and one tenth of the magnetic path's area of cross section; as set forth.

1,220,487. CASKET. PAUL BAHA, Chicago, Ill. Filed Oct. 12, 1916. Serial No. 125,143. (Cl. 27—7.)



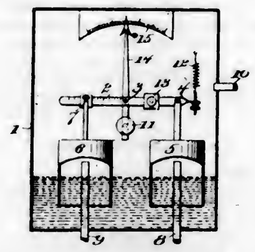
1. A casket provided with a chambered receptacle adapted to hold a quantity of cement, a cover provided with a flanged member adapted to project into said chambered receptacle and into the cement contained therewithin, a tank upon the cover, a pipe leading from said tank to a point above the chambered receptacle, and means for controlling the flow of water from said pipe.

2. A casket provided with a chambered receptacle adapted to hold a quantity of cement, a cover provided with a V-shaped flanged member adapted to project into said chambered receptacle and into the cement contained therewithin, said V-shaped member being provided with a row of perforations adjacent the crotch of the V, a tank upon the cover, a pipe leading from said tank to a point above the chambered receptacle, and means for controlling the flow of water from said pipe.

3. A casket provided with a chambered receptacle adapted to hold a quantity of cement, a cover provided with a V-shaped flanged member adapted to project into said chambered receptacle and into the cement contained therewithin, said V-shaped member being provided with a row of perforations adjacent the crotch of the V, a tank upon the cover, a pipe leading from said tank to a point above the chambered receptacle, and means for controlling the flow of water from said pipe, there being a pair of downwardly-depending lips within said chambered receptacle, said V-shaped flanged member being received within the space intermediate said downwardly depending lips.

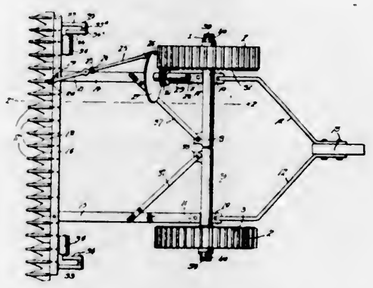
1,220,488. PRESSURE-RATIO GAGE. ERVIN G. BAILEY, Newton, Mass., assignor to Bailey Meter Company, a Corporation of Massachusetts. Filed Mar. 21, 1911. Serial No. 616,019. (Cl. 73—31.)

A pressure ratio gage consisting of two liquid sealed bells, each of which is adapted to be acted upon by a pressure difference; a pivotally supported beam from which said bells are suspended; an indicating member connected to said beam, the proportion of the parts being such that opposed and equal moments of force are produced by said pressure differences when a constant ratio other than a ratio of one to one exists between said pressure differences, regardless of their intensities; and additional force producing devices also acting on said



beam through moment arms, whereby the moments of force are varied with the movement of said beam.

1,220,489. LAWN-MOWER. CARL O. BAKKE, Fertile, Minn. Filed July 25, 1916. Serial No. 111,311. (Cl. 56—19.)



1. In a mower, an axle, a ground wheel mounted at each end thereof, a pair of sleeves rockably mounted on said axle, forwardly extending arms detachably secured at their inner ends to each of said sleeves, a cutter bar secured on the outer ends of said arms, the outer end of the arms being secured to said cutter bar by bolt and nut means whereby said arms may be folded into approximate parallelism with the cutter bar when detached from said sleeves, a sickle bar reciprocably mounted on said cutter bar, and means carried by one of said arms connected to one of the ground wheels for reciprocating said sickle bar.

2. In a mower, the combination of an axle, a ground wheel mounted at each end of the axle, sleeves rockably mounted on the axle and each provided with an integral forwardly extending lug, forwardly extending parallel arms detachably secured at their inner ends to said lugs, a bar carried by said arms at their outer ends and detachably secure thereto, means carried by the bar for adjusting the same vertically, said means being adjustable about a horizontal axis whereby the adjusting means is adapted to be moved into a position closely adjacent to, and parallel with, said bar, a cutter bar carried by the bar carried by said arms, a sickle bar reciprocably mounted on the cutter bar, a lever pivoted on one of said arms and loosely connected at its forward end to the sickle bar, a shaft rotatably supported on one of said arms, a disk secured on said shaft, a pitman pivotally connected at its forward end to the inner end of the lever, the inner end of the pitman being loosely and eccentrically connected to the disk, a gear ring pivotally connected to one of the ground wheels so as to rotate therewith when the ground wheel is rotated in one direction, and a bevel gear keyed on the shaft and meshing with said gear ring.

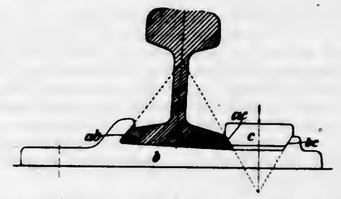
1,220,490. RAILWAY-TIE AND MEANS FOR FASTENING THE RAILS ON THE TIES. FRITZ BAURICHTER, Osnabrück, Germany, assignor to The Firm of Georgs-Marien-Bergwerks- & Hütten-Verein A.-G., Osnabrück, Germany. Filed Sept. 13, 1916. Serial No. 119,861. (Cl. 238—5.)



1. A combination of a top-plate of a railway steel-tie, having at its lower surface on both sides of the bolt hole two triangular projections and inclined flat contact-surfaces, and a bolt, having on its head two even half contact surfaces corresponding in angle and width to the inclined contact surfaces of the projections, thereby holding the tightened bolt firmly in the center of the bolt hole and preventing its turning, preventing shearing strains in the bolt and breaking strains in the tie.

2. A combination of a top-plate of a railway steel-tie, having at its lower surface on both sides of the bolt hole two triangular projections and a bolt having inclined flat contact-surfaces, corresponding in angle and width to the inclined contact-surfaces of the projections and tapering toward each other in such manner that the two sides of the top-plate of the tie are held together by the bolt head.

1,220,491. MEANS FOR FASTENING RAILS TO TIES. FRITZ BAURICHTER, Osnabrück, Germany, assignor to The Firm of Georgs-Marien-Bergwerks- & Hütten-Verein A.-G., Osnabrück, Germany. Filed Sept. 13, 1916. Serial No. 119,862. (Cl. 238—2.)



1. Means for fastening a rail to a tie by a tie-plate, having on one side of the rail an inclined rib, a fastening-plate between the rail and this inclined rib and at the other side of the rail a hooked rib, both side surfaces of the rail-flange, the contact side-surfaces of the hooked rib and of the fastening-plate engaging the rail being flat and inclined corresponding in angle to the flat and inclined contact surface between the fastening-plate and the inclined rib of the tie-plate, in such manner, that the rail-flange is held tight vertically and horizontally.

2. Means for fastening a rail to a tie by a tie-plate having on each side of the rail an inclined rib, a fastening plate at each side of the rail between the rail and the inclined rib, both side surfaces of the rail-flange and the contact side surfaces of the fastening-plates engaging the rail being flat and inclined corresponding in angle to the flat and inclined contact surfaces between the fastening plates and the inclined ribs of the tie-plate, in such manner that the rail-flange is held tight vertically and horizontally.

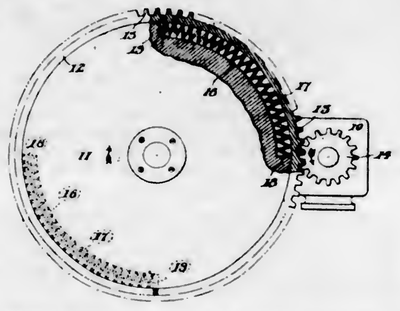
3. Means for fastening a rail to a tie by two support pieces with inclined ribs, one on each side of the rail-flange, a fastening-plate at each side of the rail between the rail and the inclined ribs, both side surfaces of the rail-flange and the contact side surfaces of the fastening plates engaging the rail being flat and inclined corresponding in angle to the flat and inclined contact surfaces between the fastening-plates and the inclined ribs of the support-pieces, in such manner that the rail-flange is held tight vertically and horizontally.

4. In a rail fastening, two abutments between which the rail is adapted to rest, both having securing faces the upper portion of which forms an acute angle with the rail supporting surface and the lower portion of which is substantially perpendicular to said surface, and a wedge-shaped clamping member for coöperation with an edge of the rail foot and with an abutment, the operating faces of said member being substantially parallel on their lower portions.

5. The combination with a railway rail having beveled edges on its foot; of fastening members having correspondingly beveled edges.

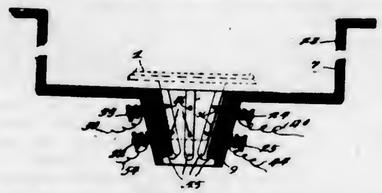
[Claim 6 not printed in the Gazette.]

1,220,492. STARTING-GEAR CONNECTION FOR EXPLOSIVE-ENGINES. DELBERT BRACE, Elmira Heights, N. Y. Filed Oct. 24, 1916. Serial No. 127,426. (Cl. 74—29.)



A device of the class described comprising in combination with the fly wheel of an explosive engine having a peripheral groove, a helical spring fitting within said groove engaging the forward end of the latter, an annular gear slidably arranged peripherally of the said wheel overlying the said groove and having an inwardly-extending flange overlying the adjacent edge of the wheel, and an inwardly extending pin carried by the said gear projecting within the said groove engaging the opposite rearward end of the spring.

1,220,493. FIRE-ALARM AND MULTIPLE-CIRCUIT CLOSER. JOHN A. BUNCH, Adams, Oreg. Filed June 30, 1916. Serial No. 106,814. (Cl. 200—27.)

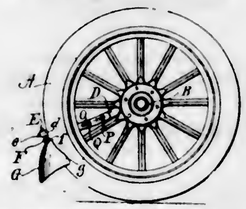


1. In a device as set forth, a movable part having a member provided with a plurality of contacting strips, a bracket, a hollow member carried by said bracket and being conical and adapted to receive the first member, and a plurality of contacts carried by the second member to be bridged in pairs by the strips of the first member.

2. In a multiple contact circuit closing device, an expansible device, a member having a plurality of contacting strips embedded therein carried by the expansible device, a second member which is hollow and corresponding in shape with and designed to receive the first member, a plurality of contact terminals carried by the second member and arranged in pairs, each pair designed to be bridged by one of the strips of the first member.

3. In a device as set forth, an expansible device, a stationary support to which said device is secured, a U-shaped bracket arching downwardly and under the expansible device, a cone-shaped member carried by the under surface of the expansible device, a hollow cone-shaped member formed integral with said bracket and adapted to receive the first member, the first member having contacting strip terminals, and a pair of contacting terminals carried by the hollow conical member, and designed to be connected electrically by the contacting strip terminals, when the first member is forced into the second member.

1,220,494. MUD-DEFLECTOR. HARRY J. BUTLER, Brockport, N. Y. Filed Feb. 4, 1916. Serial No. 76,200. (Cl. 21—23.)



1. In a mud deflector, the combination with a wheel, of a hollow deflector arranged below the center of the wheel with its top edge near the wheel, the body of the deflector sloping outwardly and downwardly from the wheel, and a roller supported within the deflector near the wheel.

2. In a mud deflector, the combination with a wheel, of a hollow deflector arranged below the center of the wheel with its top edge near the wheel, the body of the deflector sloping outwardly and downwardly from the wheel, means for adjusting the deflector bodily toward or from the periphery of the wheel, and a roller supported within the deflector near the wheel.

3. In a mud deflector, the combination with a wheel, of a hollow deflector arranged below the center of the wheel with its top edge near the wheel, the body of the deflector sloping outwardly and downwardly from the wheel, a roller arranged within the deflector near the wheel, and means carried by the deflector for supporting the roller and for adjusting the roller with respect to the wheel.

4. In a mud deflector, the combination with a wheel, of a hollow deflector arranged below the center of the wheel with its top edge near the wheel, the body of the deflector sloping outwardly and downwardly from the wheel, of means for adjusting the deflector bodily up or down with respect to the wheel, and a roller supported within the deflector near the wheel.

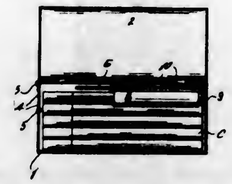
1,220,495. DISH. HARRY S. CADBY, Arlington, N. J. Filed Jan. 18, 1916. Serial No. 72,704. (Cl. 65—15.)



1. A dish comprising a bottom portion, side walls extending upwardly therefrom, said walls being comparatively low and outwardly directed at the ends of one diameter, and a substantially horizontal outwardly directed flange extending about the dish at substantially the height of said side walls, said side walls being extended to form raised inwardly directed flanges at the ends of the diameter at right angles to the first named diameter, said flanges tapering off each way toward the lower side portions.

2. A dish comprising a substantially flat bottom part adapted to rest directly on a table or other support, side walls extending upwardly from said bottom part, said side walls being highest at opposite sides and lowest at intermediate points and having inwardly directed flanges at their highest portion, and a substantially horizontal outwardly directed flange extending entirely about the dish at substantially the lowest height of the side walls.

1,220,496. CIGAR AND CIGARETTE CASE. ARTHUR C. CARR, San Francisco, Cal. Filed Mar. 20, 1915. Serial No. 15,705. (Cl. 206—41.)



1. In a cigarette case, the combination of a case provided with an opening therein, of a spring actuated closure adapted to close the opening, of a case of proportions to hold a double row of cigarettes, an ejector member confined within a slot formed in the case, and a loop formed on the ejector member adapted to displace one cigarette thereby causing the ejector member to eject one cigarette only or other matter to be ejected at each operation of said ejector.

2. In a carrying receptacle, the combination with a a case provided with an opening formed in the wall thereof, said case formed of such proportions as to contain a double row of cigarettes, an ejector member contained in the case and being confined in an elongated slot formed in said case, of an ejector bracket formed on the ejector member adapted to be in contact with one extremity of the cigarette, a pair of closure members pivoted to the case and adapted to close the aforesaid opening, and a spring lying in contact with each closure adapted to close said opening after the ejected cigarette has passed through.

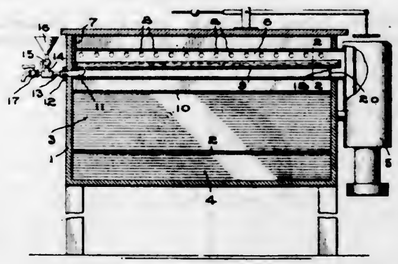
3. In a carrying receptacle, the combination with a case adapted to contain a double row of cigarettes, of an ejector member slidably confined in a slot formed in said case, said ejector member adapted to lie in contact with the first cigarette of the bottom row, and a curl or loop formed on said ejector adapted to exclude the first cigarette of the top row from assuming a position directly over the first cigarette of the bottom row.

4. In a carrying receptacle or case for cigarettes or other matter, the combination with a case provided with an opening, of a pair of spring pressed closures pivoted in the opening, an ejector member contained in the case and in direct line with the closures, said ejector member adapted to pick up and eject only one cigarette at a time ejecting same partly through the opening against the closures, and said closures adapted to grasp the cigarette and hold same in position after the ejector has returned to its normal position.

5. In a cigarette case, the combination of a container adapted to hold a double row of the objects contained therein, of a spring closed closure provided in an opening formed in the container and adapted to normally close the opening, and an ejector device slidably contained in the case and adapted to admit only one cigarette to pass into position before and in path of the opening and the closures.

1,220,497. AIR-MOISTENING ATTACHMENT FOR INCUBATORS. WILLIAM LANSING CORNELL, Brown Mills, N. J. Filed July 23, 1914. Serial No. 852,589. (Cl. 237—14.)

1. The combination with an incubator, and a warm air induction pipe located horizontally in the upper portion of the incubator and having perforations therein, of a tray positioned longitudinally inside of the air pipe, and a wire anchor connected to one end of the tray and holding the same in the pipe and against lateral or vertical movement.

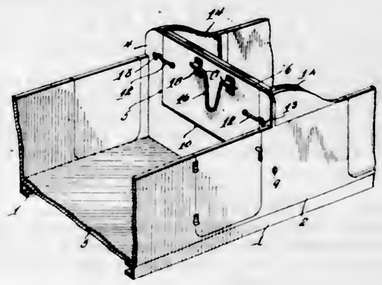


2. The combination with an incubator, and a warm air induction pipe located horizontally in the upper portion of the incubator, and having perforations in its sides adjacent its top, of a tray positioned longitudinally inside of the air pipe, said tray adapted to contain water, means at one end of the incubator for filling the tray, and means adjacent the other end of the incubator for anchoring the tray against movement in the pipe, substantially as described.

3. The combination with an incubator, and a warm air induction pipe located horizontally in the upper portion of the incubator, and having perforations in its sides adjacent its top, of a tray positioned longitudinally inside of the air pipe, said tray adapted to contain water, means at one end of the incubator for filling the tray, means adjacent the other end of the incubator for anchoring the tray against movement in the pipe, said last-mentioned means comprising a wire bent forming portions engaging all sides of the pipe and having interlocked engagement with the tray, substantially as described.

4. A heater in combination with a warm air induction pipe leading therefrom, a tray positioned within said pipe and means for anchoring the tray in position comprising a wire bent to form portions engaging all sides of the pipe and having interlocking engagement with the tray, substantially as described.

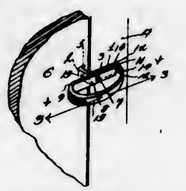
1,220,498. LET-DOWN SEAT-BACK. ALDYN T. CRAWFORD, Carmen, Okla. Filed Sept. 18, 1915. Serial No. 51,449. (Cl. 21—43.)



In a let down seat back of the class described, the combination of an automobile body having forward and rear seats, said forward seat having an opening in the back thereof, a section pivotally mounted within said opening, means for releasably holding said section in a vertical position, brackets carried in spaced relation upon the rear surface of said section, a one-piece leg formed from a single strand of wire comprising a substantially U-shaped body having oppositely extending arms extending therefrom, said arms fitting within said brackets, whereby

said leg will hang in a vertical plane, whereby as the section is swung to a horizontal plane said leg will depend so as to engage the automobile and support said section.

1,220,499. DOOR-SECURER. DANIEL P. DAUGHERTY, Worden, Oreg. Filed Aug. 9, 1916. Serial No. 113,920. (Cl. 16—8.)



In a door securer, the combination of a plate and an arm integral on one end thereof adapted to extend between the edge of a door and the jamb and provided with a lip to embed in the jamb, of a second plate pivoted to the first plate and adapted to overlie the door to prevent the same from opening, the pivot of the second plate being arranged in such relations with the arms of the first plate, that the second plate may be disposed vertically whereby the door may swing freely open, and means for locking the second plate in a position overlying the door, said means comprising a notch in one end of the first plate, and a laterally arched spring arm at one end of the second plate, the extremity of which spring arm engages said notch to hold the second plate lying across the door.

1,220,500. VENDING DISPLAY-BOX. SAMUEL DEALHAM, Jr., of Baltimore, Md., assignor to Kraus & Co., Incorporated, a Corporation of Maryland. Filed Dec. 2, 1915. Serial No. 64,767. (Cl. 220—91.)



1. A display box embracing a body, a top hinged to said body having a transparent member, lugs securing said transparent member in the top, and a holding device on the body engaging with said lugs to hold the top in closed position.

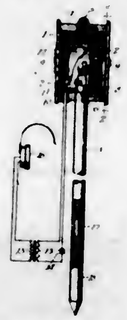
2. A display box embracing a body, a top to said body having a transparent member, lugs securing said transparent member in the top integral with said top, and a holding device on the body engaging with said lugs to hold the top in closed position.

3. A display box embracing a body, a top having a transparent member, lugs securing said transparent member in the top, a holding device on the body engaging with said lugs to hold the top in closed position and a turn-down edge of said top outside of said body when in closed position.

1,220,501. SOUND-AMPLIFIER. WILLIAM W. DEAN, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 28, 1915. Serial No. 47,757. (Cl. 179—122.)

1. In combination, a rod having at one end a hardened steel point, a granular carbon microphone directly connected to the other end of said rod only, a casing secured to said rod independently of said microphone and surrounding said microphone, and a switch for said microphone, said switch being carried by said casing.

2. In combination, a jointed rod comprising a plurality of sections secured end to end, the outermost section having a hardened steel point, a microphone connected to the opposite end of said rod, a casing secured to said rod and surrounding said microphone, a switch in said casing, said switch being operated by act of the operator in pressing the point of the rod against an object.

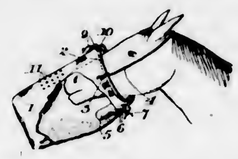


3. In combination, a rod having a hardened point, an inertia microphone connected to the opposite end of said rod, a casing surrounding said microphone and secured to said rod, and a switch having a projecting member, said member passing through said casing and having its end adapted to be depressed by the hand of the operator in pressing the point of the rod against an object.

4. In combination, a transmitting-member comprising a rod having screw-threaded sections secured end to end, the outer end of said member comprising a hardened point, an inertia microphone secured to the inner end of said rod, a casing surrounding said microphone and secured to said rod, a normally-open switch in said casing, said switch having an operating member projecting through the top of the casing in position to be depressed by the hand of the operator in pressing the point of the transmitting-member against an object.

5. In combination a rod having at one end a hardened steel point, a granular carbon microphone directly connected to the other end of said rod only, a casing surrounding said microphone but being out of contact therewith, said casing being secured to said rod adjacent the point of attachment of said microphone, said casing being substantially closed and forming a guard against the entry of extraneous noises or vibrations and as a handle for the operator.

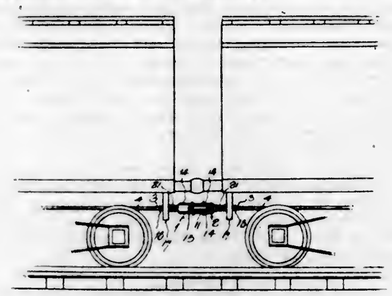
1,220,502. FEED-BAG. DOMINIQUE DU BOE, New York, N. Y. Filed June 10, 1916. Serial No. 102,850. (Cl. 119—65.)



1. The combination with a feed bag, of adjustable means for contracting the mouth of the bag below an animal's jaw, and an apron of flexible material arranged on the inside of the bag with its upper edge secured along the adjustable portion of its mouth and adjustable therewith, the bottom and lateral edges of the apron being free from the bag for the purpose specified.

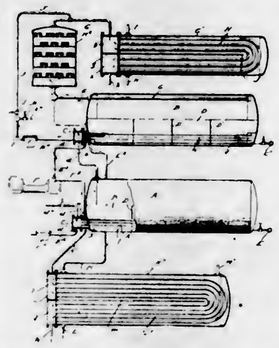
2. The combination with a feed bag, of two strands of cord secured at one point on the mouth of the bag and passed through a diametrically opposite point on said mouth, said strands of cord being of sufficient length to permit an animal's head to be inserted between them without removing their extremities from engagement with the bag, and said cords being also adapted to draw the diametrically opposite points of the mouth together and then be passed around the neck of the bag for the purpose specified.

1,220,503. AIR-PIPE COUPLING. HENRY C. DUTY and LEROY L. CRAIG, Pittsburg, Ill. Filed Aug. 14, 1916. Serial No. 114,858. (Cl. 188—13.)



In a coupler of the class described, a pair of coupler heads having longitudinally extending interlocking elements provided with air conduits having outlet orifices, the orifice of one head being positioned to register with that of the other when in operative engagement, each head having forwardly projecting spring fingers, those on one head yieldingly engaging the other head, each head having a finger on one face with a catch at its free end and a shoulder on its opposed face, the catch of one head engaging the shoulder of the other when in operative position, the other two opposed faces of each head each having a longitudinally extending spring finger arranged adjacent one edge whereby when said heads are engaged, the fingers of one head will be in parallel relation with those of the other head.

1,220,504. APPARATUS FOR DEHYDRATING HYDROCARBON-OILS. ERNEST I. DYER, Oakland, Cal. Filed Mar. 5, 1913. Serial No. 752,092. (Cl. 196—13.)



1. An apparatus for treating hydrocarbon oils for the described purpose, the same comprising a plurality of closed vessels, means for each of said vessels for causing the oil to flow in relatively small streams in a tortuous path therethrough, said means including a plurality of closely associated vertical longitudinal baffles in the vessel, a series of heat circulating tubes in each vessel, the circulating tubes being arranged so that some of the tubes extend between adjacent baffles, means for delivering oil for treatment into one of said vessels, devices for forcing a heating medium from an outside source of supply through the heat circulating tubes of the companion vessel, means for conveying the vapors generated from the oil in said vessel into and through the heat circulating tubes of the first mentioned vessel for the heating of the oil contained therein, devices for leading the oil from said vessel and forcing the same into and through the second vessel, and means for removing the vapors from the first mentioned vessel to a suitable place of deposit.

2. An apparatus for treating hydrocarbon oils for the described purpose, the same comprising a plurality of closed vessels, a series of heat circulating tubes arranged in each of said vessels, means for each of said vessels for causing the oil to flow in relatively small streams in a tortuous path therethrough, said means including a plurality of vertical longitudinal baffles within the vessel, and a plurality of transverse vertical baffles, means for delivering oil for treatment into one of said vessels, devices for forcing a heating medium from an outside source of supply through the heat circulating tubes of the companion vessel, means for conveying the vapors generated from the oil in said vessel into and through the heat circulating tubes of the first mentioned vessel for the heating of the oil contained therein, devices for leading the oil from said vessel and forcing the same into and through the second mentioned vessel, and means for removing the vapors from the first mentioned vessel to a suitable place of deposit.

3. An apparatus for treating hydrocarbon oils for the described purpose, the same comprising a plurality of closed vessels, a series of heat circulating tubes in each of said vessels, means for each of said vessels for causing oil delivered thereto to flow in relatively small streams in a tortuous path therethrough, said last mentioned means including a plurality of closely associated vertical longitudinal baffles within the vessels extending upwardly from the bottom thereof to a point substantially midway of the height of the vessels, and transverse vertical baffles provided with openings therethrough located below the tops of the longitudinal baffles, means for delivering oil for treatment into one of said vessels, means for supplying a heating medium to the heat circulating tubes of the companion vessel, means for conveying the vapors generated from the oil in said vessel into and through the heat circulating tubes of the first mentioned vessel for the heating of the oil contained therein, devices for leading the oil from said vessel and forcing the same into and through the second mentioned vessel, and means for removing the vapors from the first mentioned vessel to a suitable place of deposit.

4. An apparatus for treating hydrocarbon oils for the described purpose, the same comprising a plurality of closed vessels, and means for each of said vessels for causing the oil delivered thereto to flow in relatively small streams in a tortuous path therethrough, said means including a plurality of closely associated vertical longitudinal baffles in the vessels, and transverse baffles provided with openings forming passages through the same for oil, a series of heat circulating tubes in each of said vessels, said heat circulating tubes being arranged so that some of the tubes extend between adjacent longitudinal baffles and through the openings in the transverse baffles, said tubes being of a size in cross section less than the cross sectional area of the openings, means for supplying a heating medium to the heat circulating tubes of the companion vessel, means for conveying the vapors generated from the oil in said vessel into and through the heat circulating tubes of the first mentioned vessel for the heating of the oil contained therein, devices for leading the oil from said vessel and forcing the same into and through the second mentioned vessel, and means for removing the vapors from the first mentioned vessel to a suitable place of deposit.

1,220,505. TONGS. WILBURN W. EGGERS, Malad City, Idaho. Filed July 29, 1916. Serial No. 112,122. (Cl. 57—9.)



1. In a device of the class described, a frame, a base bar for said frame, the said frame being provided with notches in its ends, grip arms slidably engaged in said notches, a lever pivoted upon the inner end of one of said arms, an

adjusting rod connecting said lever and the adjacent end of the opposite arm, and jaws on the outer extremities of said arms, substantially as described.

2. In a device of the class described, a frame comprising a bar having angularly extending legs, the ends of said legs being notched, a bar connecting said ends, the said bar being provided with a longitudinally disposed slot, grip arms slidably extending through the notched ends of said legs, bolts extending loosely through said slot and secured to the inner ends of said grip arms, a lever pivoted to one of said arms, a threaded bar connecting said lever and the adjacent end of said opposite grip arm, and jaws at the outer extremities of said grip arms, substantially as described.

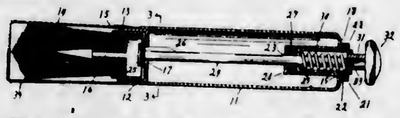
3. In a device of the class described, a frame, grip members slidably carried by said frame and adapted to move inwardly thereof to grip an article between them, a lever pivoted on one of said grip members, and a connection between said lever and the other of said grip members, substantially as described.

4. In a device of the class described, a frame, grip members arranged upon said frame and adapted to move inwardly of said frame to grip an article between them, a lever pivoted on one of said grip members, a link connecting said lever and the other of said grip members, and means associated with said link for adjusting said grip members toward and away from each other, substantially as described.

5. In a device of the class described, a frame, grip members arranged upon said frame and being adapted to move toward and away from each other, a lever pivoted at one end upon one of said grip members, the handle portion of said lever being offset and being adapted to engage said frame, a link pivoted at one end to said lever at a point removed from the connection of the lever with said grip member, and at its opposite end to the other of said grip members, and the pivotal connections of said link with said grip member and said lever being disposed out of longitudinal alinement when said handle portion is engaged with said frame, substantially as described.

[Claim 6 not printed in the Gazette.]

1,220,506. FOUNTAIN-BRUSH. CHARLES EICKMIER, Louisville, Ky. Filed May 22, 1916. Serial No. 99,037. (Cl. 15—50.)

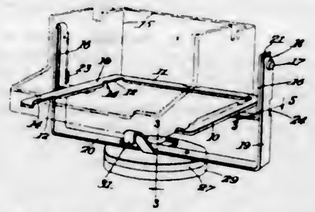


1. In a device of the character described, a reservoir having an outlet therefrom, and having an opening opposite said outlet, a cup removably disposed in said opening, a second cup telescopically fitted in the first named cup, said cups having alined perforations in the bottoms thereof, a valve closing said outlet, a rod leading from said valve through the perforations in said cups, a spring disposed about said rod within the interior cup, and a thumb-piece adjustably attached to the end of the rod.

2. In a device of the character described, a reservoir, a socket positioned in one end thereof, a brush removably positioned in said socket, said reservoir having an outlet into said socket, and having an opening opposite the outlet, a cup removably positioned in said opening, a second cup telescopically fitted in the first mentioned cup, said cups having alined perforations in the bottoms thereof, a valve for said outlet, a rod leading from said valve through the perforations in the cups, a spring disposed about said rod, and a thumb-piece adjustably attached to the end of the rod.

3. In a fountain brush, a tubular reservoir having a restricted opening at one end and an unrestricted opening at the other end, a socket positioned in the latter opening, a brush removably positioned in said socket, a cup extended through said restricted opening into the reservoir, a flange on the outer end of said cup, packing interposed between said flange and the end of the reservoir, a second cup telescopically fitting in the first cup, said cups having alined perforations in the bottoms thereof, packing interposed between the bottoms thereof, packing interposed between the bottoms of said cups, said socket having an inlet from the reservoir, a valve controlling said inlet, a rod leading from said valve through said alined perforations, a thumb piece adjustably connected to the outer end of said rod and a spring disposed about the rod within the interior cup and bearing respectively on the bottom of the cup and said thumb piece, said spring serving to close the valve and to maintain the cups in position relative to each other and to the reservoir.

1,220,507. ASSEMBLING-FRAME FOR MACHINES. MICHAEL H. FLYNN, Hartford, Conn., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed May 20, 1915. Serial No. 29,316. (Cl. 29—89.)



1. An assembling frame for machines, comprising a bed piece adapted to hold a machine to be assembled, a supporting frame having vertical arms in which the bed piece is held and adapted to rock on a horizontal axis having also a horizontal bottom bar and a base for the supporting frame to which said bottom bar is pivoted on which it is free to turn on a vertical axis.

2. An assembling frame for machines, comprising a bed piece adapted to hold a machine to be assembled and having vertical arms provided with lateral trunnions, a supporting frame having bearings in which the trunnions seat, stops for determining the two extreme positions of the bed piece, a base on which the supporting frame is carried and a rotatable connection between the supporting frame and base the vertical axis of which is substantially in plane with the rocking axis of the bed piece.

3. An assembling frame for machines, comprising a bed piece adapted to hold a machine to be assembled and having lateral trunnions, a supporting frame having bearings in which the trunnions seat, stops for determining the two extreme positions of the bed piece and a string at the lower part of the supporting frame adapted to hold the bed piece in upper position.

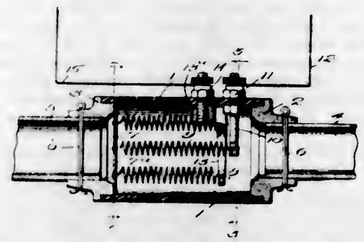
4. An assembling frame for machines, comprising a bed piece adapted to hold a machine to be assembled and having lateral trunnions, a supporting frame having open bearings in which the trunnions of bed pieces of various sizes seat, stops for determining the two extreme positions of the bed piece and an adjustable spring at the lower part of the supporting frame adapted to be set to hold the different size bed pieces in vertical positions.

5. An assembling frame for machines, comprising a bed piece adapted to hold a machine to be assembled and having vertical arms provided with lateral trunnions, a supporting frame having bearings in which the trunnions seat, stops for determining the two extreme positions of the bed piece, a base and a turn table secured to the supporting frame resting on the base and having a bearing with a vertical axis of rotation on the base.

[Claims 6 and 7 not printed in the Gazette.]

1,220,508. ELECTRIC HEATER. RALPH R. GRIMSHAW and LA MAR R. JONES, Findlay, Ohio. Filed July 27, 1916. Serial No. 111,607. (Cl. 219—39.)

1. In an electric air heating device, a cylindrical casing made of insulating material and having internally threaded ends, conducting members having threaded portions arranged to engage the threaded ends of said insulating casing and being provided with openings arranged to receive pipes, means for securing the pipes to said conducting members, a screen disposed in one end of said insulating casing and being in electrical contact with one of said threaded conducting end members, a plurality of heating coils, one of said coils being disposed centrally of said casing and the others of said coils being disposed in a circular formation around said central coil, each of said coils having electrical connection with said screen at one end, an annular conducting member secured to the inner wall of said casing and having connection with each of said circularly arranged coils, a rigid arm extending inwardly from the interior of said casing and being connected to the other coil, and means for connecting each of said coil supporting arms with a source of current.



2. In an electric air heating device, a casing, a perforated member at one end of the casing, said perforated member being of conducting material and being grounded, and a heating coil having connection at one end with said perforated conducting pipe, and an inwardly extending conducting arm having electrical connection with the other end of the coil, said conducting arm being secured in the wall of the casing and having electrical connection with a source of current.

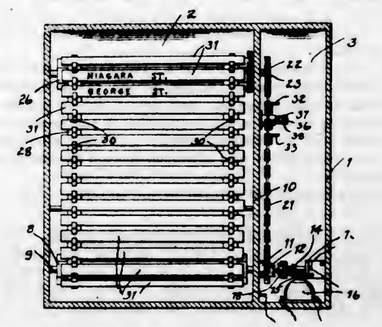
3. In an electrical air heating device, a cylindrical casing, a perforated conducting member secured at one end to said casing, a plurality of heating coils disposed within the casing, all of said heating coils being connected with said perforated conducting member, a plurality of binding posts carried by said casing, certain of said coils being connected to one of said binding posts, and the remainder being connected to the other binding post.

4. In an electric air heating device, a cylindrical casing made of insulating material, conducting ends for said casing being provided with openings arranged to receive pipes, means for securing said pipes to said ends, a perforated plate carried at one end of said casing, a plurality of sets of heating coils disposed within the casing, all of said heating coils being connected with said perforated plate, a plurality of binding posts carried by said casing, certain of said coils being connected with one of said binding posts, and other coils being connected to another binding post.

5. In an electrical air heating device, a cylindrical casing made of insulating material and being threaded at its ends, conducting threaded members arranged to be secured at each end of said casing, said threaded members having openings arranged to receive pipes, means for securing the pipes to said conducting members, a perforated plate carried at one end of said insulating casing, a plurality of sets of heating coils, each of said coils having electrical connection with said plate at one end, a plurality of conducting arms carried by the wall of the casing and extending inwardly, certain of said coils being connected with one of said arms, and other coils being connected with the other of the arms, and means for connecting each of said last named arms with a source of current.

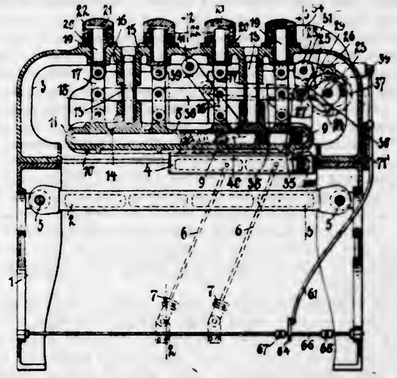
1,220,509. STATION-INDICATOR. HAROLD S. HALTON, Ridgeway, Ontario, Canada. Filed Aug. 21, 1914. Serial No. 857,977. (Cl. 40—53.)

In a station indicating device, the combination with a casing, of a pair of spaced rollers mounted therein, an endless chain of indicating cards passing over said rollers, sprockets operatively connected to said rollers and having an endless chain passing thereover, a plurality of projections on said chain, a motor operatively connected to one of said rollers, an electric circuit in which the said motor is included, an electro-magnet having a pivoted armature, a latch member pivoted to said armature, a second circuit in which the said latch member and the projections on the



chain are included, the said circuit being connected to the first mentioned circuit whereby when one of the sprockets on the chain engages the latch member the motor will be short circuited and stopped and the latch member will be moved upwardly by the momentum of the chain, and means for engaging the said latch member to limit the upward movement thereof.

1,220,510. IRONING-MACHINE. ARTHUR HAMMER, Berlin, and FRITZ EGERSDÖRFER, Charlottenburg, Germany. Filed July 14, 1914. Serial No. 850,898. (Cl. 68—9.)



1. In an ironing machine, the combination of an iron; an ironing table; power driven means for reciprocating one of said members; and power driven means for moving one of said members toward the other member; manually operable starting means for the first named power driven means, and automatic means arranged to stop said first named power driven means upon completion of a predetermined period of operation of said power driven means.

2. In an ironing machine, the combination of an iron; an ironing table; power driven means for reciprocating one of said members; and power driven means for moving one of the said members toward the other member; manually operable starting means for said power driven means, and an automatic stop for the power driven means arranged for effective operation upon completion of a predetermined period of operation of said power driven means.

3. In an ironing machine, the combination of an iron; an ironing table; power driven means for reciprocating one of said members; power driven means for moving one of said members toward the other member; controlling

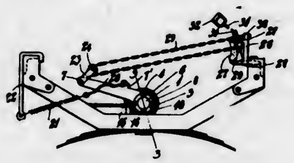
means, for both of said power driven means, dependent on each other so that said power driven means may be simultaneously started at the will of the operator; and means to automatically stop said power driven means.

4. In an ironing machine, the combination of an iron; an ironing table; power driven means for reciprocating said iron in one direction; and power driven means for reciprocating said iron in a direction transverse to said direction; and controlling means manually operable to start said first named means and arranged to stop the same automatically.

5. In an ironing machine, the combination of an iron; an ironing table; power driven means for reciprocating said iron in one direction; and power driven means for reciprocating said iron in a direction transverse to said direction; and controlling means manually operable to start both said means and arranged to stop the same automatically.

[Claims 6 to 22 not printed in the Gazette.]

1,220,511. AUTOMOBILE-ENGINE STARTER. FRANK H. HARTUNG, Norwood, Ohio, assignor, by direct and mesne assignments, to the U-Need-A Starter Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 20, 1916. Serial No. 126,659. (Cl. 123—185.)



1. In combination, a rotatable engine element, a hub element and a releaser journaled concentric with said engine element, one of said elements having a depression opening toward the other element with a bottom inclined circumferentially of said elements, said releaser having a slot to register with said depression, a gripping member in said depression and slot, to be wedged between said inclined bottom of said depression of said element and the adjacent part of the other of said elements when said hub element is rotated in engine-starting direction, one side of said slot being inclined circumferentially of said releaser to wedge said gripping member away from its wedged position between said bottom of said slot and said other member when said engine element is rotated in the opposite direction relative to said releaser, means to stop said releaser from rotating in said opposite direction, yieldable means to return said releaser from its stopped position, and means connected to said hub element to rotate it in engine-starting direction.

2. In combination with an engine and its crank shaft, a collar fixed on said crank shaft coaxial therewith, a hub and a releaser journaled concentric with said shaft and collar, said hub having a depression in its peripheral surface, said releaser having a part with a slot to register with said depression, and said collar having a part extending across said depression and slot, a gripping member in said depression and slot, the bottom of said depression being inclined circumferentially of said sub to wedge said gripping member out against said part of said collar when said hub is rotated in engine-starting direction, and one side of said slot being inclined circumferentially of said releaser to wedge said gripping member away from said part of said collar when said collar is rotated in the opposite direction relative to said releaser, means to stop said releaser from rotating in said opposite direction, yieldable means to return said releaser from its stopped position, and means connected to said hub to rotate it in engine-starting direction.

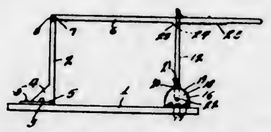
3. In combination with an engine and its crank shaft, a collar fixed on said crank shaft coaxial therewith, a hub and a releaser journaled concentric with said shaft and collar, said hub having a depression in its peripheral surface, said releaser having a part with a slot to register with said depression, and said collar having a part extending across said depression and slot, a gripping member in said depression and slot, the bottom of said depression being inclined circumferentially of said hub to wedge said gripping member out against said part of said collar when said hub is rotated in engine-starting direction, and one side of said slot being inclined circumferentially of said releaser to wedge said gripping member away from said part of said collar when said collar is rotated in the opposite direction relative to said releaser, means to stop said releaser from rotating in said opposite direction, said releaser and said hub having parts opposed on an arc concentric with said shaft, a spring compressed between these parts to return said releaser from its stopped position, and means connected to said hub to rotate it in engine-starting direction.

4. In combination with an engine and its crank shaft, a collar fixed on said crank shaft coaxial therewith, a hub and a releaser journaled concentric with said shaft and collar, said hub having a depression in its peripheral surface, said releaser having a part with a slot to register with said depression, and said collar having a part extending across said depression and slot, a gripping member in said depression and slot, the bottom of said depression being inclined circumferentially of said hub to wedge said gripping member out against said part of said collar when said hub is rotated in engine-starting direction, and one side of said slot being inclined circumferentially of said releaser to wedge said gripping member away from said part of said collar when said collar is rotated in the opposite direction relative to said releaser, means to stop said releaser from rotating in said opposite direction, said releaser and said hub having parts opposed on an arc concentric with said shaft, a spring compressed between these parts to return said releaser from its stopped position, and means connected to said hub to rotate it in engine-starting direction.

5. In combination with an engine and its crank shaft, a collar fixed on said crank shaft coaxial therewith, a hub and a releaser journaled concentric with said shaft and collar, said hub having a depression in its peripheral surface, said releaser having a part with a slot to register with said depression, and said collar having a part extending across said depression and slot, a gripping member in said depression and slot, the bottom of said depression being inclined circumferentially of said hub to wedge said gripping member out against said part of said collar when said hub is rotated in engine-starting direction, and one side of said slot being inclined circumferentially of said releaser to wedge said gripping member away from said part of said collar when said collar is rotated in the opposite direction relative to said releaser, means to stop said releaser from rotating in said opposite direction, yieldable means to return said releaser from its stopped position, and yieldable means to rotate said hub in said opposite direction.

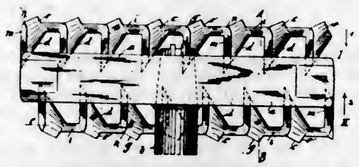
[Claims 6 and 7 not printed in the Gazette.]

1,220,512. LIFTING-JACK. HALSEY H. HASELTON, Haselton, N. Y. Filed May 3, 1916. Serial No. 95,209. (Cl. 254—113.)



In combination, a platform, an upright mounted thereon at one end, a lever pivoted to the upper end of the upright, a segment toothed rack on the platform at the opposite end to the upright, said lever having a series of ratchet teeth extending from a point substantially directly over the segment toothed rack toward the free end of the lever and provided with a stop lug at the point from which the teeth extend, a second lever pivoted to the segment toothed rack and provided with spring tensioned pawl to coöperate with the teeth of said segment and provided with a lateral lug disposed on the second lever at a point substantially corresponding to the height of said standard, to ride over the teeth of the first lever to engage any one of said teeth to hold the first lever in different positions, and to take the strain off the second lever and its spring tensioned pawl, the stop lug acting to limit the second lever when contacted with by the second lug.

1,220,513. RABBLE FOR MECHANICAL ROASTING-FURNACES. WOLDEMAR HOMMELL, Zurich, Switzerland. Filed Aug. 23, 1916. Serial No. 116,568. (Cl. 259—112.)



1. In a rabble for a mechanical roasting furnace having two groups or series of scraper blades arranged alternately or staggered relatively to each other and provided with inclined working faces arranged perpendicularly to the hearth level, on each of the blades an outwardly downsloping face *e* adjoining the inclined working face acting like a plow-blade.

2. In a rabble for a mechanical roasting furnace having groups or series of scraper blades arranged alternately or staggered relatively to each other, provided with inclined working faces arranged perpendicularly to the hearth level and outwardly downsloping faces on each of the blades adjoining the inclined working face acting like a plow-blade, an outwardly downsloping face *e* forming a cutter-like sharp edge *g* with the basis of the respective blade.

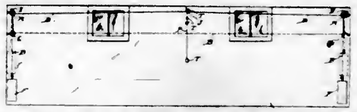
3. In a rabble for a mechanical roasting furnace having groups or series of scraper blades arranged alternately or staggered relatively to each other, provided with inclined working faces arranged perpendicularly to the hearth level and outwardly downsloping faces on each of the blades adjoining the inclined working face acting like a plow-blade, bridge-like stays *i* connecting the blades with each other.

4. In a rabble for a mechanical roasting furnace having groups or series of scraper blades arranged alternately or staggered relatively to each other, provided with inclined working faces arranged perpendicularly to the hearth level and outwardly downsloping faces on each of the blades adjoining the inclined working face acting like a plow-blade, a vertical web *m* adjoining the cutter-like outer face of each blade and also ending like a cutter.

5. In a rabble for a mechanical roasting furnace having groups or series of scraper blades arranged alternately or staggered relatively to each other, provided with inclined working faces arranged perpendicularly to the hearth level and outwardly downsloping faces on each of the blades adjoining the inclined working face acting like a plow-blade, a small inclined perpendicular face *o* adjoining the cutter-like outer edge *g* of the blade laterally of the downsloping face.

1,220,514. CLOTHES-DRIER. FREDERICK A. HUMPIDGE, Detroit, Mich. Filed Mar. 8, 1915. Serial No. 13,080. (Cl. 68—3.)

1. In a clothes drier the combination of posts provided with means near their upper ends for supporting a clothes line, a horizontally projecting pin provided on each post, a clothes line provided with a weight on each end thereof and having its intermediate portion carried by said line supporting means, the end portions of said line carrying the weights hanging downwardly alongside the posts and adapted to be coiled around said projecting pins, whereby the weight of clothes carried on the line which can be supported by the weights is greatly increased as described and set forth.

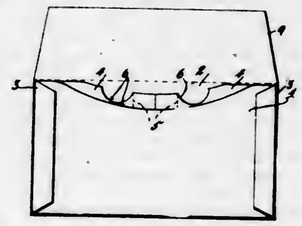


2. In a clothes drier, the combination of upright supports, a brace wire connecting the upper ends of said supports a clothes line supported between said supports and under the brace wire, and an adjustable sling carried by the brace wire for supporting the clothes line at a point intermediate the upright supports as described and set forth.

3. In a clothes drier, the combination of upright supports, a brace wire connecting the upper ends of said supports, a clothes line supported between said supports and under the brace wire, and an adjustable sling carried by the brace wire said sling consisting of a piece of line attached at one end to one branch of a U-shaped hook, the other end of said line carrying a series of rings each one of which is adapted to engage the other branch of said U-shaped hook, whereby the clothes line is adjustably supported by the loop of said U-shaped hook, at a point intermediate the upright supports as described and set forth.

4. In a clothes drier, the combination of a line supporting means, a clothes line supported thereby, weights coöperating with said line to hold the same under tension by the force of gravity and means adapted to coöperate with said line whereby the weight of clothes carried on the line which can be supported by the weights can be increased as described and set forth.

1,220,515. ENVELOP. MICHAEL KANTRO, Brooklyn, N. Y. Filed Sept. 4, 1915. Serial No. 49,026. (Cl. 229—72.)



1. As a new article of manufacture, an envelop formed from a single piece of material comprising an outer flap, a body, side flaps secured to said outer flap, end wings carried by said body, securing flaps carried by the ends of said end wings, said securing flaps being backwardly upon said end wings and being secured to the inner face of the outer flap for producing a plurality of pockets, and said side flaps being folded around the side edges of said body and being secured to the outer face of said body for firmly holding the ends of said body in engagement with said outer flap.

2. As a new article of manufacture, an envelop formed from a single piece of material comprising an outer flap, a body, end wings secured to said body, securing flaps carried by the ends of said end wings, said securing flaps being bent backwardly upon said end wings, the outer faces of said securing flaps being secured to the adjoining faces of the adjoining end wings for producing a plurality of pockets.

1,220,516. VEHICLE-TIRE. PERCIVAL E. KING and GEORGE J. WITTMANN, Newburgh, N. Y. Filed May 16, 1916. Serial No. 97,900. (Cl. 152—8.)

1. A vehicle tire comprising a casing composed of resilient sections of segmental cross-section having opposed

circumferentially extending edges, cushions interposed between said opposed edges and forming closed joints between them, and means for securing said cushions in position between the respective edges of said casing sections.



2. A vehicle tire comprising a casing composed of annular resilient sections of segmental cross-section having opposed laterally extending circumferential flanges, cushions interposed between said opposed flanges and closing the spaces between them, and means coöperative with said flanges of the casing sections to secure said cushions in position between them.

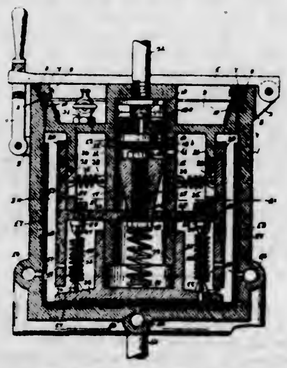
3. A vehicle tire comprising a casing composed of annular resilient sections of segmental cross-section, said sections presenting opposed circumferential flanges, a strip of cushioning material extending circumferentially and continuously between each pair of said flanges, and means extending through and uniting said flanges and the interposed cushioning strips.

4. A vehicle tire comprising a resilient annular section of segmental cross-section adapted to be secured to a wheel felly and having its outer edges out-turned to form circumferential flanges, a complemental resilient annular section of segmental cross-section at the outer side of the section first mentioned and having its inner edges out-turned to form circumferential flanges, annular cushions extending circumferentially between the flanges of the said sections, and means extending through and securing together said flanges and the respective cushions.

5. A vehicle tire comprising a casing composed of annular resilient sections of segmental cross-section, said sections presenting opposed circumferential flanges, cushions between said flanges to resist relative movement of the flanges toward one another, devices connecting said flanges and retaining them in coöperative relation, and cushions coöperating with said connecting devices and yieldingly resisting relative separating movement of the flanges.

[Claims 6 to 8 not printed in the Gazette.]

1,220,517. PROCESS AND APPARATUS FOR MAKING BOXES. MATHIAS R. KONDOLF, Rochester, N. Y. Filed Feb. 9, 1916. Serial No. 77,265. (Cl. 93—36.)



1. The process of making a box which consists in first loosely combining a plurality of layers with an adhesive between them to shape an unfinished box and then subjecting said layers to mechanical pressure and then pressing said layers closely together with compressed air.

2. In a box making machine the combination of means operating mechanically to shape a box out of a plurality of layers of material provided with an adhesive between them and means operating thereafter pneumatically to press said layers closely together and finish the box.

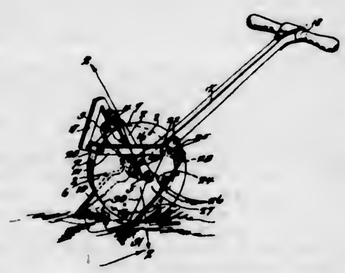
3. In a box making machine the combination of a die, a frame supported in said die, box forming sections mounted on the sides of said frame to move outwardly thereon and on the bottom of said frame to move downwardly thereon, and a cam block mounted to move longitudinally and laterally in said frame to move said sections.

4. In a box making machine the combination of a die, a frame supported in said die, box forming sections mounted on the sides of said frame to move outwardly thereon and on the bottom of said frame to move downwardly thereon, a cam block mounted to move longitudinally and laterally in said frame to move said sections, and a spring interposed between said block and the bottom section by which the movement of said block is transmitted to said bottom section, said block being so shaped that the bottom section will be moved to and held in position against the bottom of the die before the lateral movement of the side sections on the frame begins.

5. In a box making machine the combination of a die, a frame supported in said die, box forming sections mounted on the sides of said frame to move outwardly thereon and on the bottom of said frame to move downwardly thereon, a cam block mounted to move longitudinally and laterally in said frame to move said sections, and a piston for driving said cam block.

[Claims 6 to 19 not printed in the Gazette.]

1,220,518. CUTTING-MACHINE. FRANZ KRAUSE, Connellsville, Pa. Filed Nov. 29, 1916. Serial No. 134,105 (Cl. 55—64.)

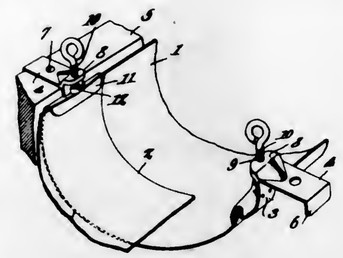


1. In a runner cutting machine, the combination of a substantially U-shaped frame and a cutting disk journaled in bearings at the lower ends of said frame, of a handle attached to said frame, and a knife blade secured to one side of said frame and the handle, and having a pointed lower extremity extending toward and slightly beyond the lower edge of the disk and provided with an inner cutting edge presented toward the side of the disk, whereby the runner may be picked up and severed between said cutting edge and the lower edge of the disk.

2. In a runner cutting machine, the combination of a substantially U-shaped frame and a cutting disk journaled in bearings at the lower ends of said frame, of a handle attached to said frame, and a knife blade secured to one side of said frame and the handle, and having a pointed lower extremity extending toward the side of the disk, whereby the runner may be picked up and severed between said cutting edge and the lower edge of the disk, and a brace between the frame and the handle.

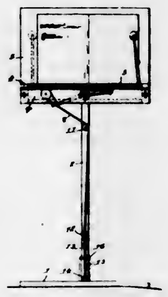
3. In a runner cutting machine, the combination of a substantially U-shaped frame and a cutting disk journaled in bearings at the lower ends of said frame, of a handle attached to said frame, and a knife blade secured to one side of said frame and the handle, and having a pointed lower extremity extending toward the side of the disk, whereby the runner may be picked up and severed between said cutting edge and the lower edge of the disk, and a brace between the frame and the handle, one face of the disk having an annular laterally extending flange of a diameter a trifle less than the diameter of the disk to prevent the disk from excessively entering into the soil.

1,220,519. PLUME. JAMES H. LANE, Grand Junction, Colo. Filed Sept. 1, 1915. Serial No. 48,464. (Cl. 61—5.)



The combination with spaced supporting beams, of a top plate mounted upon each beam, means depending from the outer end of each top plate for lapping the outer side of the adjacent beam, a hanger depending from the inner end of each top plate, an outer trough section secured to the hangers, an inner trough section resting in the outer trough section and having its side edges projecting therealbove, a saddle resting on each side edge of the inner trough section, said inner trough section being adjustable longitudinally relative to the saddles, a seat integral with each saddle, a boss integral with and projecting inwardly from each of the top plates, and a binding screw carried by each boss and adapted to engage the seat in one of the saddles to bind the saddle upon the inner trough section.

1,220,520. LEAF-TURNER. DAVID J. LEVINSON, Hinckley, N. Y. Filed Jan. 16, 1914. Serial No. 812,556. (Cl. 84—17.)



1. In a leaf turner, a support, a lever movable about an axis fixed with relation to said support, a cup-carrying arm pivoted on said lever and provided with a suction cup for engagment with the sheet to be turned, means acting to shift said arm to dispose its cup abreast of said sheet to be turned for engagement therewith during movement of said lever, means for withdrawing air from said cup so as to engage by suction the sheet to be turned, and separate means for forcing air positively into said cup so as to neutralize said suction at a predetermined step in the operation of turning the sheet.

2. In a leaf-turner, the combination of a support, a lever carried thereby and movable in opposite directions, a suction cup carried by said lever, means to be operated during the movement of said lever in one direction to cause suction engagement of the leaf by said cup when the lever starts to move in the opposite direction, means to positively force air into said cup to release the suction engagement with the sheet when the sheet is brought approximately to the turned position, and means coöperative with said lever to begin to shift said cup out of range of the sheet while the same is being turned.

3. In a leaf turner, a support, a lever movable about an axis fixed relative to said support, a pneumatic device pivoted on said lever in a position to become engaged with a sheet and turn the same, means for shifting said lever to bring said device into engaging range with the sheet to be turned while the lever is moving in one direction, means to be brought into operation during movement of the lever to create suction in the pneumatic device to engage the leaf therewith, means to carry the lever in the return movement to turn the leaf, positive means to force air into said pneumatic device at a predetermined stage so as to release the sheet, and mechanism for shifting said device out of range of the sheet while the lever is being moved in the turning direction.

4. In a leaf or sheet turner, a support, a lever pivoted between its ends so as to swing about an axis fixed with relation to said support, a pneumatic device on one end of said lever and adapted for engagement with the sheets to be turned, means in the path of the other end of said lever for energizing said pneumatic device for causing it to pick up a sheet during movement of the lever in one direction, means in the path of said other end of said lever and operable by movement thereof to deënergize said device and thus release such sheet, shifting means by which said lever is brought to such position that said pneumatic device becomes operative to engage with a sheet, and means for automatically returning said lever to initial position, thereby turning the sheet and bringing the sheet-releasing means into operation before the turning of said sheet has been completed.

5. In a leaf or sheet turner, a lever movable about a fixed axis, a pneumatic device pivoted on said lever for engaging a sheet to turn the same, manually operable means for shifting said lever to a position that said pneumatic device is engaged with a sheet, means to automatically return said lever and to carry the leaf therewith thus turning the same, and a cable attached to said pneumatic device and arranged to become operative during return movement to shift said pneumatic device out of range of the sheet.

[Claims 6 and 7 not printed in the Gazette.]

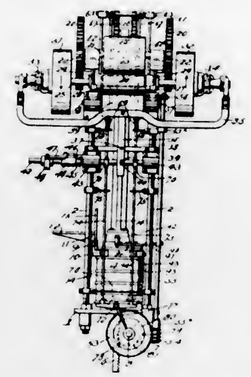
1,220,521. MACHINE FOR MAKING CONCRETE BLOCKS. JOHN DUNKIN LODGE and WILLIAM C. PELL, Bridgeport, W. Va.; Flora N. Pell, committee of Wm. C. Pell, an insane person; said Lodge and said committee assignors to said John Dunkin Lodge. Filed May 3, 1916. Serial No. 95,203. (Cl. 25—45.)

1. In a molding machine, a mold, a ram movable into and out of the mold, and operating means carrying the ram and operable for moving the ram into and out of the mold and for moving the ram alternately to opposite sides away from the mold.

2. In a molding machine, a mold, a ram, means for moving the ram into and out of the mold and to one side away from the mold when retracted therefrom, and means operated when the ram is moved to one side away from the mold for stopping the movement thereof.

3. In a molding machine, a mold, a rotary member having a wrist pin, a ram connected to the wrist pin to be moved into and out of the mold thereby, and means car-

ried by said member whereby when it is moved in either direction, the ram is swung to one side away from the mold when retracted therefrom.

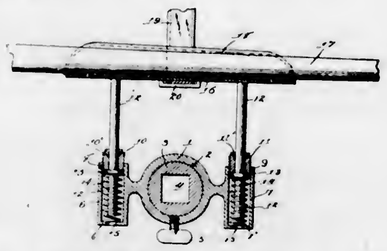


4. In a molding machine, a mold, a rotary member having a wrist pin, a ram connected to the wrist pin to be moved into and out of the mold thereby, means for oscillating said member in opposite directions, means carried by said member for swinging the ram alternately to opposite sides when the ram is retracted from the mold, and means operable when the ram is swung to either side for stopping the oscillation of said member.

5. In a molding machine, a mold, block ejecting means working therein, a ram movable into and out of the mold, means for moving the ram into and out of the mold and to one side away from the mold when it is retracted therefrom, means for moving the ejecting means in opposite directions, actuating means for actuating the second and third mentioned means, means operable when the ram is moved to one side away from the mold for stopping the movement thereof, and means operable when the ejecting means is moved to either position for stopping the movement thereof.

[Claims 6 to 21 not printed in the Gazette.]

1,220,522. BOW-REST. VERNON G. MCBRAYER, Quenemo, Kans. Filed June 4, 1914. Serial No. 843,078. (Cl. 21—61.)

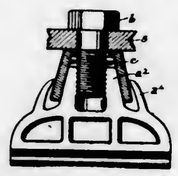


1. A bow rest, including a cylindrical body portion, tubular spring containing chambers secured to the cylindrical body portion, plungers supported by said spring and movable in said tubular members, means movably mounted in said tubular chambers for guiding and adjusting said plungers, and a bow receiving element supported by said plungers.

2. In a bow rest, a body, chamber portions carried by the body and being open at one end, the said open end being interiorly threaded, a bushing provided with a central bore threaded in each of said open ends, a plunger slidably mounted in each chamber and projecting through said bushings, a shoulder on each plunger, springs in each chamber for yieldably maintaining said shoulders engaged with said bushings, and a bow supporting member connecting the outer ends of said plungers.

3. In a bow rest, a tubular member open at one end adapted to be arranged upon a vehicle body and being provided with interior threads, a flange projecting inwardly from the opposite end of said member, a bushing having a central bore threaded in said member, a plunger slidably mounted in said tubular member and projecting through said bushing, a shoulder on said plunger adapted to engage with said bushing, an expansion spring interposed between said shoulder and said flange, and means on said plunger for supporting a bow.

1,220,523. SUSPENDING DEVICE FOR TROLLEY-WIRES. WILLIAM A. MCCALLUM, Terrace Park, Ohio. Filed Mar. 9, 1916. Serial No. 83,108. (Cl. 191—43.)



1. In a suspending ear for trolley wires, a two-part clamp; a compression collar seated thereon; and one or more projections upon the clamping parts extended into contacting engagement with the collar to prevent separation thereof from the car.

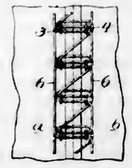
2. In a clamping device for trolley wires, a two-part clamping ear having an upward conical extension, a correspondingly formed annulus seating upon said conical extension, and a plurality of upwardly extending fingers extending into the area of upward movement of the annulus constituting a lock preventing its removal from the clamping ear.

3. In a clamping device of the character indicated, a two-part clamping ear having an upward conical extension, a correspondingly formed annulus embracing said conical extension and a plurality of fingers extending upwardly from the body of the clamping parts into the area of upward movement of the annulus and constituting a lock against its removal from the clamp—each of said fingers being divided in the common plane of division of the clamping parts.

4. In a clamping device of the character indicated, the combination of a supporting element; a two-part clamping ear having an upward conical extension, and provided with a threaded socket countersunk between the parts of the said extension; a corresponding open-ended annulus seated upon said extension and extending somewhat above the same; and a screw bolt passing through said supporting bar and engaging in the threaded socket to draw the clamping parts upward within the annulus as a compression ring and draw the annulus into contact with the overhead support as a jam-nut holding the device and its parts in rigid connection and alinement with the supporting element.

1,220,524. PROCESS OF JOINING FABRIC SECTIONS. CHESTER MCNEIL, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 13, 1915. Serial No. 21,067. (Cl. 112—34.)

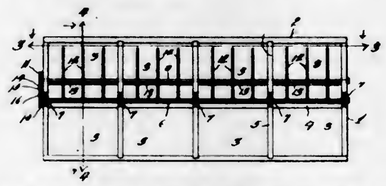
1. The process of joining fabric sections consisting in uniting the superposed edges of the fabric sections by stitching, opening the sections of fabric until the major portions lie in substantially the same plane, exerting a strain on the respective fabric sections in opposite directions away from and transversely of the line of stitching, and uniting said fabric sections while under said strain by connected parallel lines of stitches disposed respectively on opposite sides of the first line of stitching.



2. The process of joining fabric sections consisting in uniting the superposed edges of fabric sections by a line of through and through stitching, opening the sections of fabric until the major portions lie in substantially the same plane, exerting a strain on the respective fabric sections in opposite directions away from and transversely of the line of stitching and passing parallel lines of stitching of a covering seam through the respective sections on opposite sides of the first line of stitching while the fabric sections are under strain.

3. The process of joining fabric sections consisting in uniting the superposed edges of fabric sections by a line of through and through stitching, opening the sections of fabric until the major portions lie in substantially the same plane, exerting a strain on the respective fabric sections in opposite directions away from and transversely of the line of stitching, and stitching a stay strip to the fabric sections while under said strain by parallel lines of stitching passing through the stay strip and respectively through the fabric sections.

1,220,525. MAIL-SEPARATING DEVICE FOR PIGEON-HOLES. WILLIAM MANN, Bayonne, N. J. Filed July 21, 1916. Serial No. 110,550. (Cl. 211—36.)



1. In a sub-dividing device for a row of pigeon holes, the combination of a cabinet having a row of pigeon holes and a shaft in bearings on the cabinet adjacent the bottoms of the pigeon holes, of a plurality of series of arms carried by the shaft one series for each pigeon hole for sub-dividing the mail matter inserted therein, a second shaft mounted in bearings on the cabinet at the rear of the pigeon holes and carrying a plurality of mail limiting members, one for each pigeon hole, and means geared to said shafts for rocking said shafts in opposite directions, whereby as the arms are thrown down and under the pigeon holes, the limiting members are thrown upwardly to vertical positions.

2. In a subdividing device for a row of pigeon holes, the combination of a cabinet having a row of pigeon holes and a shaft in bearings on the cabinet adjacent the bottoms of the pigeon holes, of a plurality of series of arms carried by the shaft one series for each pigeon hole for subdividing the mail matter inserted therein, a second shaft mounted in bearings on the cabinet at the rear of the pigeon holes and carrying a plurality of mail limiting members, one for each pigeon hole, and means geared to said shafts for rocking said shafts in opposite directions, whereby as the arms are thrown down and under the pigeon holes, the limiting members are thrown upwardly to vertical positions, said geared means comprising gears of different diameters, the gear of larger diameter on the second shaft, and the gear of smaller diameter on the first shaft, guide bearings on one end of the cabinet, and a rack mounted in the guide bearings to mesh with the gears for rocking the shafts simultaneously.

1,220,526. MOLD FOR BUILDING-BLOCKS. GEORGE MILLER MARSHALL, Lake Francis, Manitoba, Canada. Original application filed June 13, 1916, Serial No. 106,940. Divided and this application filed Dec. 6, 1916. Serial No. 135,435. (Cl. 25—121.)



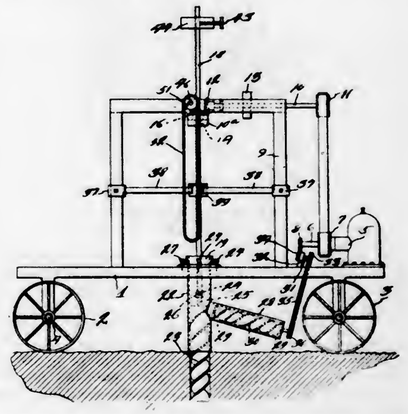
1. A mold of the class described having a series of longitudinally extending side mold plates, transversely extending end mold plates, each of the said side plates being provided with V-shaped tongues and V-shaped grooves, a filler located in the said groove and a slot forming web carried by the said filler.

2. A mold of the class described having a pair of transversely extending end mold plates, a series of longitudinally extending side mold plates located between the end plates, each of the said side mold plates having a V-shaped tongue and a V-shaped groove, a filler piece in the groove and a slot forming web projected laterally from the filler piece of the said side plate.

3. In a mold of the class described, the combination with a plurality of transverse or end mold plates; of a plurality of side mold plates, said side mold plates each including a filler piece and a laterally projected angular extension adapted for forming a slot across one edge of a block when formed in the mold.

4. In a mold of the character stated, a plurality of end plates, a plurality of side plates located between the end plates, the said side and end plates being removably sustained on the supporting frame, the end plates having a series of separated alining V-shaped tongues at one side, each tongue having one end terminating in a straight edge and the other edge terminating in a beveled edge, a series of corresponding V-shaped grooves on the other side of the said end plates whose ends terminate in straight edges, said side plates having a tongue on one face that extends from one end to a point near the other end and terminates in a beveled edge and a corresponding groove on the other face having the ends thereof terminating in straight edges, the groove having a filler portion that forms a channel in the tongue and a V-shaped web that projects laterally from the filler portion, and means for holding the frame and the mold pocket forming elements in rigid relation.

1,220,527. POST-HOLE-DIGGING MACHINE. WILLIAM T. MARTIN, Rockville, Md. Filed Nov. 2, 1916. Serial No. 129,152. (Cl. 255—21.)



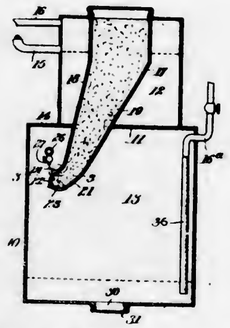
1. In a post hole digging machine, the combination of a wheel-supported platform and a frame rising therefrom, of a tubular guide adjustably mounted upon the platform,

a digging auger movable vertically in the guide, a rack bar connected to the auger, means for rotating the rack bar and with it the auger, means for elevating the rack bar and the auger, gravitational means for forcing the auger into the ground, a screw conveyer for removing the excavated dirt, a tubular member in surrounding relation to the conveyer, connected to the tubular guide and having bearings for the support of the conveyer, and an intermediate bearing for the rack bar carried on the frame of the machine.

2. In a post hole digging machine, the combination of a wheel-supported platform and a frame rising therefrom, of a tubular guide adjustably mounted on the platform, a digging auger movable vertically in the guide, a rack bar connected to the auger, means for rotating the rack bar and with it the auger, means for elevating the rack bar and the auger, gravitational means for forcing the auger into the ground, a screw conveyer for removing the excavated dirt, a tubular member in surrounding relation to the conveyer, connected to the tubular guide and having bearings for the support of the conveyer, and an intermediate bearing for the rack bar carried on the frame of the machine and adjustable vertically with respect to the frame.

3. In a post hole digging machine, the combination of a wheel-supported platform and a frame rising therefrom, of a tubular guide adjustably mounted on the platform, a digging auger movable vertically in the guide, a rack bar connected to the auger, means for rotating the rack bar and with it the auger, means for elevating the rack bar and the auger, gravitational means for forcing the auger into the ground, a screw conveyer for removing the excavated dirt, a tubular member in surroundng relation to the conveyer, connected to the tubular guide and having bearings for the support of the conveyer, and an adjustable intermediate bearing for the rack bar comprising collars movable vertically on the frame, intersecting crossbars connected with the collars and having a bearing at their point of intersection and a sleeve rotatably supported in said bearing and being in surrounding relation to said rack bar.

1,220,528. ACETYLENE-GENERATING APPARATUS. HENRY H. MOMETON, Stony Point, N. Y., assignor to Universal Lighting Systems Corporation, a Corporation of New York. Filed Aug. 15, 1914. Serial No. 856,993. (Cl. 48—4.)



1. An apparatus for generating acetylene gas comprising a generating chamber, a carbid hopper extending into said generating chamber, said hopper gradually diminishing in volume toward the lower end thereof, said lower end being curved to provide an angularly disposed outlet, intersecting grid bars forming an inclined grate closing said outlet, and means for causing water to drip upon the lower, outermost extremity of said grate, said grate-closed outlet being of a size to expose a relatively small quantity of carbid to the action of the water.

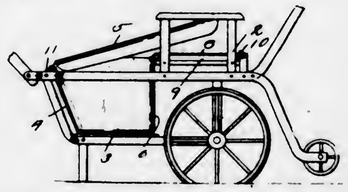
2. An apparatus for generating acetylene gas comprising a generating chamber, a carbid hopper extending into said generating chamber, said hopper gradually diminishing in volume toward the lower end thereof, said lower end being curved to provide an angularly disposed outlet, an inclined grate closing said outlet, said grate being formed of longitudinal angular grid bars and intersecting transverse grid bars, and means for causing water to drip upon the lower, outermost extremity of said grate, said grate-closed outlet being of a size to expose a relatively small quantity of carbid to the action of the water.

3. An apparatus for generating acetylene gas comprising a generating chamber, a carbid hopper extending into said generating chamber, said hopper gradually diminishing in volume toward the lower end thereof, said lower end being curved to provide an angularly disposed outlet, an inclined grate closing said outlet and formed of longitudinal grid bars having offset curved top and bottom portions, and intersecting transverse grid bars, and means for causing water to drip upon the lower, outermost extremity of said grate, said grate-closed outlet being of a size to expose a relatively small quantity of carbid to the action of the water.

4. An apparatus for generating acetylene gas comprising a casing divided by a transverse wall into an upper water reservoir and a lower generating chamber, a carbid hopper located within said reservoir and extending through said wall into the generating chamber, said hopper gradually diminishing in volume toward the lower end thereof, said lower end being curved to provide an angularly disposed outlet, intersecting grid bars forming an inclined grate closing said outlet, and means for causing water to drip upon the lower, outermost extremity of said grate, said grate-closed outlet being of a size to expose a relatively small quantity of carbid to the action of the water.

5. An apparatus for generating acetylene gas comprising a casing divided by a transverse wall into an upper water reservoir and a lower generating chamber, a carbid hopper located within said reservoir and extending through said wall into the generating chamber, said hopper gradually diminishing in volume toward the lower end thereof, said lower end being curved to provide an angularly disposed outlet, intersecting grid bars forming an inclined grate closing said outlet, and a water pipe leading from said reservoir and extending transversely to the hopper above the grate bars, said pipe having means for causing water to drip upon the lower, outermost extremity of said grate, said grate-closed outlet being of a size to expose a relatively small quantity of carbid to the action of the water.

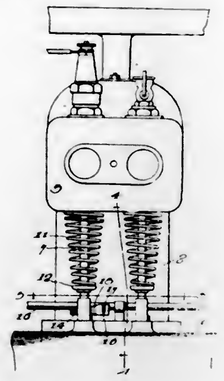
1,220,529. GO-CART STORM-APRON. EDITH M. NAGLE, Gibson City, Ill. Filed Feb. 21, 1916. Serial No. 79,724. (Cl. 21—81.)



A storm apron of the class described comprising a bottom, sides, front and back, said sides, front and back having their adjacent edges connected, a flap carried by the back for engaging the seat of a go-cart only, a body cover connected to the front, securing devices carried by the front, body cover and flap for detachably engaging the go-cart.

1,220,530. INTAKE-VALVE CONTROL. JOHN WILLIAM NEAL, Monroe, La., assignor of one-half to Augustus A. Swayze, Monroe, La. Filed Apr. 10, 1916. Serial No. 90,191. (Cl. 123—109.)

1. The combination with the intake valve of an engine, and valve operating means for moving said valve to open position at predetermined intervals, said valve having idle movement between its normal and opening positions, of means for advancing said valve toward its opening position and for imparting the thrust of the valve operating means to said valve.



2. The combination with the intake valve of an engine, and valve operating means for moving said valve to open position at predetermined intervals, said valve having idle movement between its normal and opening positions, of an insert for reception between the valve and its operating means to advance said valve toward its opening position and to impart the thrust of said valve operating means to said valve.

3. The combination with the intake valve of an engine, and valve operating means for moving said valve to open position at predetermined intervals, said valve having idle movement between its normal and opening positions, of a wedge-shaped insert for reception between the valve and its operating means to advance said valve any required amount toward its opening position and to impart the thrust of said valve operating means to said valve.

4. The combination with the intake valve of an engine, and valve operating means for moving said valve to open position at predetermined intervals, said valve having idle movement between its normal and opening positions, of an insert for reception between the valve and its operating means to advance said valve toward its opening position and to impart the thrust of said valve operating means to said valve, and an insert control member having a loose connection with said insert for allowing it to be moved by the valve operating means.

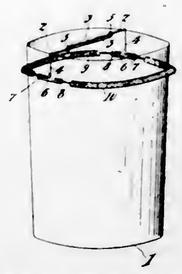
5. The combination with the intake valve of an engine, and valve operating means for moving said valve to open position at predetermined intervals, said valve having idle movement between its normal and opening positions, of a wedge-shaped insert for reception between the valve and its operating means to advance said valve any required amount toward its opening position and to impart the thrust of said valve operating means to said valve, said insert being movable transversely of the line of movement of the valve when advancing the latter, but moving on said line of movement when shifted by the valve operating means, an insert control member movable transversely of said line of movement, and a sliding connection between said control member and the insert for allowing the latter to move on the aforesaid line.

[Claims 6 to 10 not printed in the Gazette.]

1,220,531. CLEANING DEVICE. WILLIAM F. NEHR, West Orange, N. J. Filed May 23, 1916. Serial No. 99,269. (Cl. 91—67.3.)

1. A cleaning device for application to a container, comprising extensible means adapted to extend across the container, and means constantly opposing the extension of said extensible means and adapted to directly coact with the container to hold the device in position thereon.

2. A cleaning device for application to a container, comprising a member having a portion adapted to extend across the container, and a pair of unequal resilient devices connected to said member, said pair of devices, when the cleaning device is applied to the container, being adapted by reason of their being unequal and resilient to coact with the container to hold said portion in a position extending across the container to one side of the center thereof.



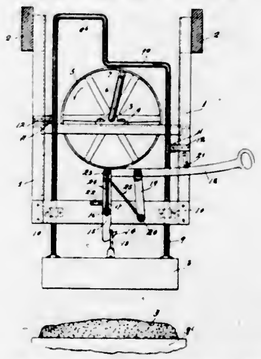
3. A cleaning device for application to a container, comprising extensible means adapted to extend across the container, and resilient means constantly opposing the extension of said extensible means and adapted to directly engage the container to hold the device in position thereon.

4. A cleaning device for application to a container, comprising an extensible member adapted to extend across the container, and means comprising a pair of springs each of which is connected at its opposite ends to said member for embracing the container and for holding the device in position thereon.

5. A cleaning device for application to a container, comprising an extensible member adapted to extend across the container, and means comprising a pair of springs of unequal strength, each connected at its opposite ends to said member, for embracing the container to hold the device in position thereon.

[Claims 6 to 13 not printed in the Gazette.]

1,220,532. TAMPING DEVICE FOR CONCRETE-BLOCK MACHINES. PETER N. NELSON, Minneapolis, Minn. Filed May 15, 1916. Serial No. 97,518. (Cl. 25—41.)



1. A tamping device comprising a crank shaft, and a vertically movable plunger equipped with a tamping head and provided with a horizontal upper portion with which the crank of said shaft engages under its upward movement, and from which it is released from its downward movement, an anchor strap attached to said tamping head, a hook-equipped anchor bar pivotally supported above said tamping head and automatically engageable with said anchor strap in one position, and a lever connection for raising said anchor bar into a position in which it will hold the said tamping head with said plunger upward beyond the heads of said crank.

2. A tamping device comprising a yoke-like vertically movable plunger equipped at its lower end with a tamping head and provided at its upper portion with a horizontal bar extended part way across the same and having beyond said horizontal portion, an upwardly extended crank clearing opening, and a rotary shaft having a crank engageable with said horizontal upper portion of said plunger under its upward movement, but disengageable therefrom in its downward movement, an anchor strap attached to said tamping head, a hook-equipped anchor bar pivotally supported above said tamping head and automatically engageable with said anchor strap in one position, and a lever connection for raising said anchor bar into a position in which it will hold the said tamping head with said plunger upward beyond the heads of said crank.

3. A tamping device comprising a crank shaft, and a vertically movable plunger equipped with a tamping head and provided with a horizontal upper portion with which the crank of said shaft engages under its upward movement, and from which it is released from its downward movement, an anchor strap attached to said tamping head, a hook-equipped anchor bar pivotally supported above said tamping head and automatically engageable with said anchor strap in one position, and a lever connection for raising said anchor bar into a position in which it will hold the said tamping head with said plunger upward beyond the heads of said crank, and a stop with which said lever is engageable to hold said anchor bar in its raised position.

4. A tamping device comprising a crank shaft and a vertically movable plunger equipped with a tamping head and provided with a horizontal upper portion with which the crank of said shaft engages under its upward movement, and from which it is released from its downward movement, an anchor strap attached to said tamping head, a hook-equipped anchor bar pivotally supported above said tamping head and automatically engageable with said anchor strap in one position, a lever connection for raising said anchor bar into a position in which it will hold the said tamping head with said plunger upward beyond the heads of said crank, a stop with which said lever is engageable to hold said anchor bar in its raised position, and a spring connection for holding said anchor bar normally out of the path of movement of said anchor strap.

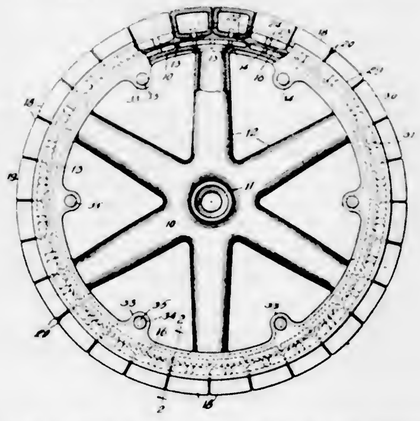
1,220,533. BUCKLE. GEORGE R. NETTLETON, New Haven, Conn., assignor to The W & E T Fitch Co., New Haven, Conn., a Corporation. Filed Feb. 7, 1916. Serial No. 76,727. (Cl. 24—192.)



1. An independently formed coupling-piece for connecting the fixed end of a strap to a buckle-frame having an attaching bar, said coupling-piece comprising a flat plate formed with side walls the ends of which are adapted to bear against the said attaching bar, said plate also formed at its forward end with a hook portion projecting beyond the ends of the side walls and corresponding substantially in width to the width of the buckle-frame between its sides and adapted to be engaged with the said attaching bar which is held between the ends of the side walls and the hook portion, and a lever pivotally mounted between the side walls of the plate and formed at its forward end with a hook adapted to engage with the hook portion of the plate and adapted at its rear end to co-act with the plate to hold the end of a strap between them.

2. An independently formed coupling-piece for connecting the fixed end of a strap to the frame of a buckle having an attaching bar and a tongue pivotally connected with said attaching bar, said coupling-piece comprising a flat plate formed with side walls adapted to bear upon the rear of the said attaching bar and at its forward end with a hook portion corresponding substantially in width to the width of the buckle-frame between its sides, said hook portion centrally notched to clear the buckle tongue and adapted to engage with the said attaching bar, and a lever pivotally mounted between the side walls of the plate and formed at its forward end with a hook notched at the center to clear the said buckle tongue and adapted to engage with the hook portion of the plate and adapted at its rear end to co-act with the plate to hold the end of a strap between them.

1,220,534. RESILIENT VEHICLE-WHEEL. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed June 10, 1915. Serial No. 33,278. (Cl. 152—8.)

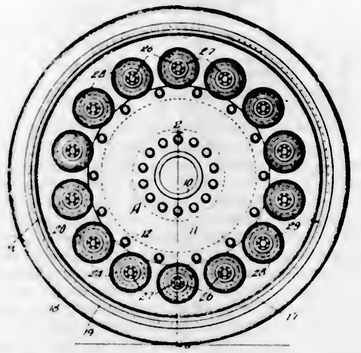


1. In a device of the character described, the combination with a wheel having a rim, said rim being provided with a series of radially extending short ribs around the periphery thereof, a circular band spring extending around said rim and supported on said ribs, of a plurality of independently movable metal tread blocks mounted on said spring, each of said blocks having a curved inner surface bearing on said spring, the number of said blocks corresponding to the number of said ribs, each block being mounted on said spring intermediate adjacent pairs of said ribs whereby inward radial pressure on a block will flex the spring between a pair of said ribs, and means for retaining said blocks in position, the blocks being movable radially and independently of said means.

2. In a device of the character described, the combination with a wheel the rim of which is provided with two series of radially arranged ribs, the ribs of one series being staggered with respect to those of the other series, of band springs extending around the rim of said wheel and supported on said ribs, two series of tread blocks mounted on said springs, the blocks of one series being staggered with respect to the blocks of the other series, each of said blocks having an inner convex surface bearing on the adjacent spring and means for retaining said blocks and springs in position.

3. In a device of the character described, the combination with a wheel the rim of which is provided with two series of radially arranged ribs, the ribs of one series being staggered with respect to those of the other series, of band springs extending around the rim of said wheel and supported on said ribs, two series of tread blocks mounted on said springs, the blocks of one series being staggered with respect to the blocks of the other series, each of said blocks having an inner convex surface bearing on the adjacent springs and means for retaining said blocks and springs in position, said blocks being each independently radially movable and rockably mounted.

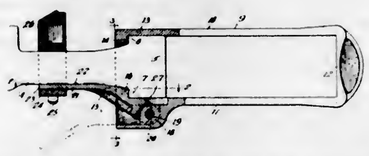
1,220,535. VEHICLE-WHEEL. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 18, 1915. Serial No. 56,431. (Cl. 21—69.)



1. In a vehicle wheel, the combination with a hub member having a series of substantially spherical sockets around the periphery thereof, of a pair of rim members on opposite sides of said hub member, said rim members having also a corresponding series of substantially spherical sockets, and a corresponding series of levers having each three substantially spherical enlargements coöperable with said sockets of the hub and rim members to thereby provide universal joints between the levers of the hub and rim members.

2. In a vehicle wheel, the combination with a hub member and a pair of rim members, of a series of levers extending through and connected to the hub and rim members, each of said levers having a ball and socket joint with the hub and each of the rim members.

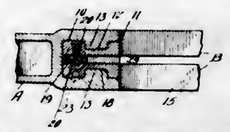
1,220,536. DRAW-BAR AND DRAFT-YOKE CONNECTING MEANS IN RAILWAY-CAR DRAFT-RIGGING. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 26, 1916. Serial No. 111,365. (Cl. 213—42.)



1. A yoke for draft riggings having means at its forward end for coöperation with the upper shoulder of a draw bar, said yoke having a displaceable locking member adapted to coöperate with the lower shouldder of a draw bar when the locking member is in operative position, said member having a forward extension and the yoke having means to limit the degree of displacement of said member from operative position, whereby said member is positioned with its extension extending forwardly and downwardly to thereby facilitate insertion of a draw bar within the yoke.

2. A yoke for draft riggings having a hood at the forward end thereof, the upper wall of the hood having a shoulder arranged to coöperate with the upper shoulder of a draw bar, said hood having a locking member pivotally mounted therein at the bottom, said member having a shoulder arranged to coöperate with the lower shoulder of the draw bar, said locking member having also a forwardly extending arm, the lower wall of the hood limiting the downward movement of the locking member to thereby position said arm so as to extend forwardly and downwardly to thereby facilitate insertion of a draw bar within the hood.

1,220,537. DETACHABLE DRAW-BAR AND YOKE CONNECTION. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Aug. 11, 1916. Serial No. 114,313. (Cl. 213—42.)



1. In a draw bar and yoke connection, the combination with a draw bar having the butt thereof provided with a recess opened toward the rear, of a two-part yoke, the latter having its forward portions insertible within the recess and the draw bar butt, and means for retaining the yoke parts and draw bar in operative position when assembled.

2. In a device of the character described, the combination with a draw bar having a recessed butt open to the rear, of a two-part yoke having its forward ends insertible within said recess, coöperating, inter-engaging shoulders formed on the interior of the draw bar butt and the yoke parts, and means for retaining the draw bar and yoke parts in operative position when assembled.

3. In a device of the character described, the combination with a draw bar having a hollow butt, of a two-part yoke having the forward ends thereof insertible within said recess, and means for separating the yoke parts when the latter have their forward ends assembled within the recessed butt.

4. In a device of the character described, the combination with a draw bar, of a yoke formed in two parts, inter-engaging, coöperating shoulders formed on the draw bar butt and the yoke parts, and detachable means insertible between the yoke parts for forcing the latter into operative engagement with the draw bar and retaining the parts in proper assembled position.

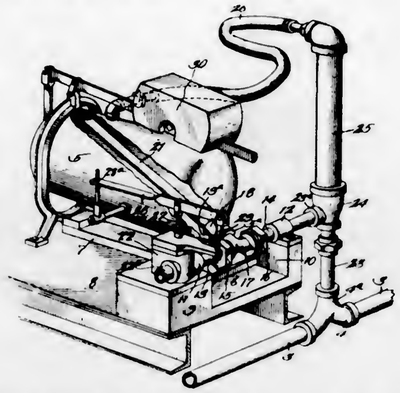
5. In a device of the character described, the combination with a draw bar having the butt thereof provided with a recess opened toward the rear, of a yoke consisting of two parts, each part having a plate at its forward end insertible within said recess, each of said plates being grooved and the inner walls of the draw bar butt being shouldered to fit into said grooves, and means for holding the yoke parts in spaced relation when inserted within the recessed butt.

[Claim 6 not printed in the Gazette.]

1,220,538. AIR-REMOVING DEVICE FOR WATER-PIPE LINES. CHARLES A. OLSON, Geneva, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 17, 1916. Serial No. 126,205. (Cl. 137—69.)

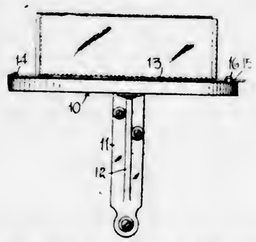
1. In a system of the character described, the combination of a water pipe line provided with a standpipe interposed in said line, a tilting tank having a supporting base positioned independently of said pipe line, air inlet and outlet trunnion pipes axially mounted in horizontal alinement on said base exteriorly of said tank and connected at their inner ends with the neck of said tank, the outer end of the inlet trunnion pipe operatively associated with said standpipe, and a single valve disposed in the air outlet pipe and actuable in the tilting of the tank, said inlet trunnion pipe and standpipe constructed to afford an unobstructed return for conducting displaced water from the tank to the said water pipe line.

2. In a system of the character described, the combination of a water pipe line provided with a standpipe interposed in said line, and a tilting tank provided with trunnion pipes constituting its axis of tilt and a flexible air conducting conduit intermediately of and connecting its upper portion and said standpipe, one of said trunnion pipes connecting the standpipe and the lower portion of the tank, the other of said trunnion pipes constituting an air venting conduit and provided with a valve actuable in the tilting of the tank.



3. In a system of the character described, the combination of a water pipe provided with a standpipe interposed in said line, a tubular air separating device mounted on said standpipe and communicating with said water pipe line through said standpipe, and a tilting tank provided with trunnion pipes and having a flexible air conducting conduit disposed between and connecting the upper portions of said tank and said tubular separating device, one of said trunnion pipes connecting the standpipe and the lower portion of the tank and the other constituting an air venting conduit and provided with a pressure controlled valve actuatable in the tilting of the tank.

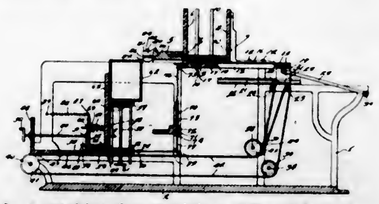
1,220,539. SAFETY MATCH-BOX HOLDER. WILLIAM B. PANKRATZ, New Castle, Pa. Filed May 10, 1916. Serial No. 96,673. (Cl. 206—31.)



A holder for boxes comprising a base forming a shelf, a bracket supporting the base, a locking bar of thin metal pivotally mounted at one end upon said base for movement in a plane parallel to the face of the base and projecting slightly beyond the other end of the base, said locking bar inward of its free extremity being formed with a notch, and a headed stud projecting upward from the base and adapted to engage in said notch when the locking bar is in an operative position.

1,220,540. BOX-TOPPING MACHINE. ARTHUR PARENT, Farley, Mass. Filed Nov. 2, 1916. Serial No. 129,167. (Cl. 144—2.)

1. In a machine for supplying sliding lids to boxes, a frame, a magazine thereon for the recepttion of lids, a lid discharging plate, a box carriage, and means of connection between the two, whereby a box and a lid may be moved toward each other to cause the lid to enter the grooves of the box, and means for operating the lid discharging member toward and from the magazine, and means for clamping said box, whereby the carriage may be moved from under the box.



2. In a machine for supplying sliding lids to boxes, a frame, a magazine thereon for the reception of lids, a lid discharging plate, a box carriage, and means of connection between the two, whereby a box and a lid may be moved toward each other to cause the lid to enter the grooves of the box, and means for operating the lid discharging member toward and from the magazine, means for clamping a box, means for removing the carriage from under the box while it is clamped, said clamping means comprising upper and lower clamps, and means of connection between the lower clamp and the carriage for causing the lower clamp to move downwardly and carry the box with it, when the carriage is moved from under the box.

3. In a machine for supplying sliding lids to boxes, a frame, a magazine thereon for the reception of lids, a lid discharging plate, a sliding cross head therefor, means for actuating the cross head, a carriage, a slide on said carriage, a platform adjustable on the slide to support a box, and means of connection between the carriage and the cross head, whereby as the cross head is operated, the box and a lid will be moved toward each other to cause the lid to enter the grooves of the box.

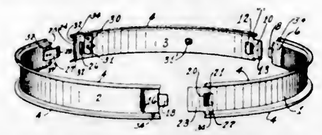
4. In a machine for supplying sliding lids to boxes, a frame, a magazine thereon for the reception of lids, a lid discharging plate, a sliding cross head therefor, means for actuating the cross head toward and from the magazine, a carriage, a slide on said carriage, a platform adjustable on the slide to support a box, and means of connection between the carriage and the cross head, whereby as the cross head is operated, the box and a lid will be moved toward each other to cause the lid to enter the grooves of the box, means for returning the carriage, as the cross head returns to its initial position.

5. In a machine for supplying sliding lids to boxes, a frame, a magazine thereon for the reception of lids, a lid discharging plate, a sliding cross head therefor, means for actuating the cross head toward and from the magazine, a carriage, a slide on said carriage, a platform adjustable on the slide to support a box, and means of connection between the carriage and the cross head, whereby as the cross head is operated toward the magazine, the box and a lid will be moved toward each other to cause the lid to enter the grooves of the box, means for returning the carriage, as the cross head returns to its initial position, and means for clamping the box with its lid in place while the carriage is returning to its initial position.

[Claims 6 and 7 not printed in the Gazette.]

1,220,541. DEMOUNTABLE RIM. ALLAN J. PARK, Madison, Wis. Filed Mar. 25, 1916. Serial No. 86,687. (Cl. 152—21.)

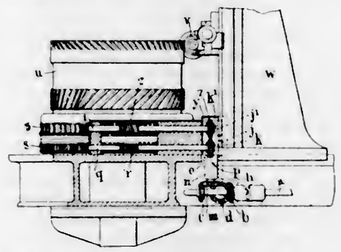
1. A demountable rim comprising a plurality of interlocking sections two of which are adapted to be manipulated into interlocking engagement with a third section: said first mentioned two sections having abutting marginal portions, one of which is provided with an inwardly offset tongue having an outwardly offset extremity adapted for interlocking engagement in said slot, and adjustable means adapted to retain said outwardly offset portion of the tongue in engagement with said slot when in interlocking position therein.



2. A demountable rim comprising the combination of a plurality of sections two of which have meeting end portions adapted to move radially into interlocking engagement, and a third section having its ends adapted to respectively engage the other ends of the first mentioned two sections, the meeting ends of the third section and the other two sections being provided with interlocking counterpart members adapted to be manipulated into mutual engagement by a swinging motion of one section upon the other.

3. A demountable rim comprising a combination of a plurality of sections two of which have meeting end portions adapted to move radially into interlocking engagement, and a third section having its ends adapted to respectively engage the other ends of the first mentioned two sections, the meeting ends of the third section and the other two sections being provided with interlocking counterpart members adapted to be manipulated into mutual engagement by a swinging motion of one section upon the other, one of the meeting end portions of said sections being provided with a slot through which the tongue on one of the other sections may be manipulated, and also having a recess adjacent to said slot adapted to receive the tongue, substantially as described.

1,220,542. FORMATION OF GEAR-WHEEL TEETH. CHARLES ALGERNON PARSONS, Newcastle-upon-Tyne, and STANLEY SMITH COOK, Wallsend, England; said Cook assignor to said Parsons. Original application filed Mar. 25, 1913, Serial No. 756,760. Divided and this application filed June 24, 1916. Serial No. 105,756. (Cl. 90—4.)



1. A gear cutting machine comprising in combination a work-table, a plurality of driven means attached to said table, and a plurality of sets of driving means, each of said sets engaging with one of said driven means.

2. A gear cutting machine comprising in combination a work table, worm wheels attached to said table, a plurality of worms, said worms engaging with said worm wheels in pairs, and means between the worms of each pair to equalize the driving forces between them.

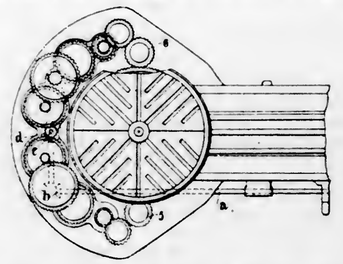
3. In a gear cutting machine, in combination, a work table, multiple driven means attached to said table, multiple sets of multiple driving means, each of said sets engaging with one of said driven means.

4. In a gear cutting machine, in combination, a rotatable work table, multiple driven means attached to said table, multiple driving means engaging with each of said driven means, and means to equalize the turning moments upon the several driven means.

5. In combination in a gear cutting machine, a work table, multiple driven gear means attached to said table, all of said gear means having different tooth pitches and multiple driving means engaging with said driven means.

[Claims 6 to 14 not printed in the Gazette.]

1,220,543. FORMATION OF GEAR-WHEEL TEETH. CHARLES ALGERNON PARSONS, Newcastle-upon-Tyne, and STANLEY SMITH COOK, Wallsend, England; said Cook assignor to said Parsons. Original applications filed Mar. 25, 1913, Serial No. 756,760, and June 24, 1916, Serial No. 105,756. Divided and this application filed Nov. 6, 1916. Serial No. 129,884. (Cl. 90—4.)



1. In combination in a gear cutting machine, a work table, spiral gear wheels attached to said table, spiral gear driving means engaging said wheels, a power shaft adapted to rotate and free to move longitudinally, a pair of pinions of opposite angle secured upon said shaft and acting to connect said shaft to said spiral driving means.

2. In combination in a gear cutting machine, a work table, spiral gear wheels attached to said table, spiral gear driving means engaging said wheels, a power shaft adapted to rotate and free to move longitudinally, gear means of opposite angle secured upon said shaft and acting to connect said shaft to said spiral driving means.

1,220,544. FROGLESS SWITCH. GEORGE S. PATTON, Pittsburgh, Pa., assignor of one-third to James F. Ewing, one-third to Henry L. Fleck, and one-sixth to Thomas P. Moran, Pittsburgh, Pa. Filed Feb. 26, 1916. Serial No. 80,606. (Cl. 104—119.)



1. In a railway switch, the combination of main line and branch line rails arranged with a gap at the location of the usual frog, a short rail section in said gap and movable to bring it into line with either the main line rail portions or the branch line rail portions, connecting means between said short rail section and the switch throwing means whereby said rail section is moved with the switch and to establish the same track connections as the switch, said connecting means including a bell crank lever having one arm connected to the rail section and the other arm to the switch throwing means, the arms of said bell crank lever being independently adjustable.

2. In a railway switch, the combination of main line and branch line rails arranged with a gap at the location of the usual frog, an oscillating rail section in said gap and movable to bring it into line with either the main line rail portions or the branch line portions, connecting means between said oscillating rail section and the switch throwing means whereby said rail section is

oscillated with the switch and to establish the same track sections as the switch, said connecting means including a bell crank lever having one arm connected to the rail section and the other arm to the switch throwing means, and means for adjusting each arm of said bell crank lever in length by small increments.

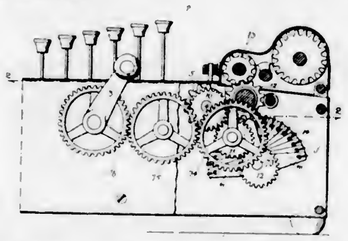
3. In a railway switch, the combination of main line and branch line rails arranged with a gap at the location of the usual frog, an oscillating rail section in said gap and movable to bring it into line with either the main line rail portions or the branch line rail portions, connecting means between said oscillating rail section and the switch throwing means, comprising a pair of reversely arranged bell-crank levers and rods connecting the same respectively to the oscillating rail section, to each other, and to the switch throwing means, the arms of one of said bell-crank levers being independently adjustable in length by small increments.

4. In a railway switch, the combination of main line and branch line rails arranged with a gap at the location of the usual frog, a bed plate at said gap to which the ends of the main and branch rails are secured, a plate mounted on the bed plate to oscillate thereon and carrying a rail section arranged to be brought into line with either the main line rails or the branch line rails, said oscillating plate overhanging the bed plate, and oscillating means connected to said plate independently of the rail section connections.

5. In a railway switch, the combination of main line and branch line rails arranged with a gap at the location of the usual frog, a bed plate at said gap to which the ends of the main and branch line rails are secured, a plate mounted on the bed plate to oscillate thereon and carrying a rail section arranged to be brought into line with either the main line rails or the branch line rails, coöperating rigid stop members on said oscillating plate and bed plate respectively and housed between the same and serving to limit the movement of said oscillating plate in both directions, and means connected to said plate for oscillating the same.

[Claims 6 to 9 not printed in the Gazette.]

1,220,545. CALCULATING-MACHINE. EDGAR E. PHINNEY, New York, N. Y., assignor to Monroe Calculating Machine Company, New York, N. Y., a Corporation of New York. Filed July 22, 1915. Serial No. 41,343. (Cl. 235—79.)



1. In a calculating machine, registering wheels, selecting wheels and carrying members actuating the registering wheels, an operating shaft, and a continuous drive connection between said operating shaft, said carrying members and said selecting wheels, involving means for obtaining variable speed.

2. In a calculating machine, registering wheels, selecting wheels and carrying members actuating the registering wheels, an operating shaft, and a continuous balanced variable speed drive connection between said operating shaft, said carrying members and said selecting wheels.

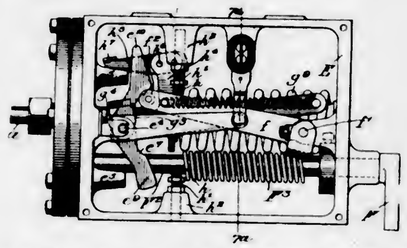
3. In a calculating machine, registering wheels, selecting wheels and carrying members actuating the registering wheels, an operating shaft, and a continuous drive connection between said operating shaft, said carrying members and said selecting wheels, involving eccentrically mounted gears for obtaining variable speed.

4. In a calculating machine, registering wheels, selecting wheels, carrying members, intermediate gears, an operating shaft, a continuous drive connection between said operating shaft, said carrying members and said selecting wheels, involving a train of gears, a gear mounted eccentrically upon the shaft of the selecting wheels and a gear mounted eccentrically upon the shaft of one of the gears of said train, meshing with the first-named eccentrically mounted gear.

5. In a calculating machine, registering wheels, selecting wheels and carrying members actuating the registering wheels, an operating shaft, and a continuous variable speed drive connection between said operating shaft, said carrying members and said selecting wheels, involving a train of gears, a gear mounted eccentrically upon the shaft of the selecting wheels, a gear mounted eccentrically upon the shaft of the carrying members and a gear mounted eccentrically upon the shaft of one of the gears of said train, meshing with the first named eccentrically mounted gears.

[Claims 6 to 11 not printed in the Gazette.]

1,220,546. CONTROLLING MECHANISM FOR FLUID-COMPRESSORS. OSCAR H. PIEPER and ALPHONSE F. PIEPER, Rochester, N. Y. Filed Feb. 7, 1914. Serial No. 817,193. (Cl. 175—308.)



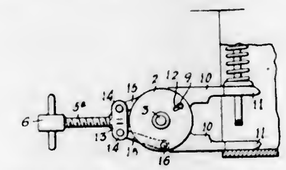
1. An automatic controlling mechanism for fluid compressors comprising in combination, a stationary electric contact and a movable contact coöperating therewith, a pivotally mounted switch arm carrying the movable contact and having opposed cam surfaces adjacent to and on opposite sides of its pivotal axis, an actuator pivotally mounted at a point removed from the pivotal axis of the switch arm and extending between said cam surfaces and coöperating alternately therewith to move the switch arm into and out of operative relation with the stationary contact, a pivoted controlling lever, a spring connecting the controlling lever and actuator and movable to opposite sides of the axis of the actuator, and a pressure controlled member governing the controlling lever.

2. An automatic controlling mechanism for fluid compressors comprising in combination, a stationary contact and a movable contact, a movable switch arm carrying the movable contact and having opposed cam surfaces, a movable actuator coöperating alternately at the limit of its movement with said cam surfaces to move the switch arm into and out of operative relation with the stationary contact, a movable controlling lever, a spring connecting the controlling lever and actuator and movable to opposite sides of the axis of the actuator, and a pressure controlled member governing the controlling lever.

3. An automatic controlling mechanism for fluid compressors comprising in combination, a stationary contact and a movable contact, a pivoted switch arm carrying the movable contact and having opposed cam surfaces adjacent to and on opposite sides of its pivotal axis, a pivotally mounted actuator coöperating with said cam surfaces alternately at the limit of its movement to actuate the switch arm into or out of operative relation with the stationary contact, a pivoted controlling lever, a spring connecting the controlling lever and actuator and movable to opposite sides of the axis of the actuator, a pressure controlled member governing the controlling lever, and means carried by the controlling lever and acting to engage the switch arm when the latter is not moved by the actuator.

4. An automatic controlling mechanism for fluid compressors comprising in combination, a stationary contact and a movable contact, a movable switch arm carrying the movable contact and having cam surfaces disposed at opposite points thereon, an actuator pivoted at a point remote from the pivotal axis of the switch arm and coöperating at the limit of its movement alternately with said cam surfaces to complete the movement of the switch arm, and an automatically controlled means governing the actuator.

1,220,547. VALVE-SPRING LIFTER. ANTON PLACEK, Cleveland, Ohio. Filed Sept. 28, 1916. Serial No. 122,687. (Cl. 29—87.1)



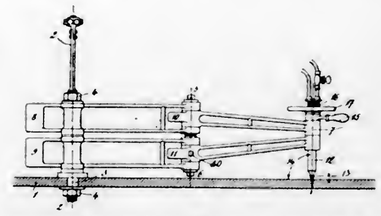
1. A valve spring lifter, including a block having a transverse guide groove in the base thereof, shoes slidable in the groove and movable toward and away from each other, jaws carried by the shoes and movable toward and away from each other as the shoes are moved, plates pivotally mounted upon opposite sides of the block and operatively connected to the shoes, a threaded stem swiveled upon the block, a sleeve engaging the stem and slidable thereon, and link members connecting the sleeve to the respective plates for forcibly revolving the same in opposite directions.

2. A valve spring lifter including a block having a transverse guide groove in the base thereof and provided with a transverse slot which intersects the guide groove and is parallel to the base thereof, shoes slidable in the guide groove, pins carried by the shoes and received within the respective portions of the transverse slot, jaws carried by the shoes and movable toward and away from each other as the shoes are moved, plates pivotally mounted upon the block and formed with radial slots loosely receiving the before mentioned pins, and means for revolving the plates in opposite directions.

3. A valve spring lifter including a block having a transverse guide groove in the base thereof and formed with a transverse slot intersecting the guide groove and arranged parallel to the base thereof, shoes slidable within the guide groove and movable back and forth in opposite directions, pins projecting from the shoes and slidable within the transverse slot of the block, jaws carried by the shoes and movable toward and away from each other as the shoes are moved, plates pivotally mounted upon opposite sides of the block and formed with radial slots receiving the respective pins of the shoes, a stem swiveled upon the block and projecting therefrom, a sleeve threaded upon the stem, and link members connecting the sleeve to the respective plates for forcibly revolving them in opposite directions.

4. A valve spring lifter including a block, shoes slidable back and forth upon the base of the block and having the same general line of movement, guide means for directing the shoes in their movements, jaws carried by the shoes and movable toward and away from each other as the shoes are moved, plates pivotally mounted upon opposite sides of the block and operatively connected to the respective shoes, a stem swiveled upon the block and projecting therefrom, a sleeve having a threaded engagement with the stem, and link members pivotally connecting the sleeve to the respective plates for forcibly rotating the plates in opposite directions as the sleeve is moved in and out upon the stem.

1,220,548. CUTTING AND WELDING APPARATUS. GEORGES PLANCQ, Koekelberg-Brussels, Belgium, assignor, by mesne assignments, to Jesse J. Ricks, Winnetka, Ill. Filed Dec. 16, 1913. Serial No. 807,092. (Cl. 266—23.)



1. Cutting and welding apparatus, comprising a pantographic frame pivotally supported at one of its corners and carrying a blowpipe at the opposite corner, said frame having pivotal connections at the intermediate corners, and means for making the connections at said intermediate corners rigid.

2. Cutting and welding apparatus, comprising a frame, a support therefor, and a blowpipe, said frame comprising two pairs of arms, one pair being pivoted at one end one above the other upon said support and the other pair being pivoted at one end one above the other upon said blowpipe, pivotal connections between the free ends of the upper arms and between the free ends of the lower arms, respectively, said lower arms and their pivotal connection being out of the path of movement of said upper arms and their pivotal connection.

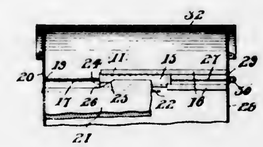
3. Cutting and welding apparatus, comprising a frame and a support therefor, a blowpipe carried by said frame on one side of said support, and a counterbalance carried by said frame on the other side of said support.

4. Cutting and welding apparatus, comprising a support, a frame carried by said support having an elongated articulated portion, a blowpipe carried by the articulated portion of said frame, and a counterbalance for maintaining the end of the blowpipe in its proper plane parallel to the work.

5. Cutting and welding apparatus, comprising a support, a pantographic frame pivotally attached at one of its corners to said support and carrying a blowpipe at the opposite corner, and a weighted extension on said frame at the side of said support opposite the blowpipe.

[Claims 6 to 10 not printed in the Gazette.]

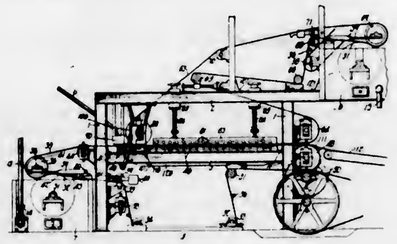
1,220,549. MAIL-BOX. ALEKSANDER PLUDOWSKI, Waterbury, Conn., assignor of one-third to Stanislaw Orlowski and one-third to Wladyslaw Szczepaniak, Waterbury, Conn. Filed July 24, 1916. Serial No. 110,981. (Cl. 232—47.)



A mail-box having a slidable closure for its mail-receiving slot, said closure having outstanding at right angles therefrom at one end, a lug with an inclined lower face, said closure also being provided with operable means accessible from without, a pivotally suspended plate or guard having an inclined wedging-shoulder at its upper edge adapted to be engaged in a plane at right angles to the movement thereof by said lower inclined face of said lug, whereby said pivotally suspended plate may be moved into a horizontal position to guard against surreptitious access to the mail-box

when depositing mail thereinto, and upon which plate the mail may be received and temporarily retained, and means for automatically returning said slidable closure to initial closed position and whereby said pivotally suspended plate is allowed to simultaneously assume its initial or lowered position.

1,220,550. PROTECTIVE-ELEMENT-FORMING MACHINE. ROY ALFRED PLUMB and CLARENCE R. WEED, Detroit, Mich., assignors to Trussed Concrete Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 26, 1916. Serial No. 74,298. (Cl. 25—1.)



1. Means for forming a refractory composition board from wet fibrous material and wet hydraulic cementitious material comprising means for continuously forming a thin moving sheet of loose wet fiber, means for continuously applying to the surface of the moving sheet of wet fiber a relatively thicker layer of plastic material consisting of wet hydraulic cement and inert filling material, and means for thereafter compressing the moving wet compound sheet so that the hydraulic plastic material will be forced between the fibers, thus cementing them together and to the main body of the plastic material.

2. Means for forming a layer of loose wet fiber of substantially uniform thickness throughout and continuously uniting said layer to one surface of a relatively thicker hydraulic plastic mass of substantially uniform thickness throughout, and means for gradually compacting said fibers with the body of the hydraulic plastic materials so that the fibers are cemented to the hydraulic plastic mass to form a compound board of substantially uniform thickness throughout having a reinforced face.

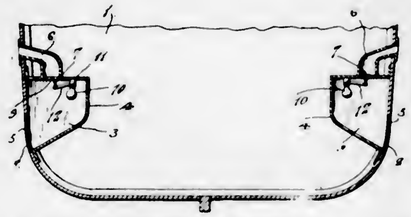
3. Means for forming refractory composition board from fibrous material, hydraulic cement and water comprising a moving foraminous member, means for distributing wet fibrous material uniformly over the surface of the foraminous member, means for continuously applying a heavier layer of material consisting essentially of wet hydraulic cement to the layer of fibrous material, a series of rolls through which the wet compound layer passes and with which it directly contacts, whereby it is gradually compacted and gaged and whereby excess water is excluded.

4. Means for forming refractory composition board from fibrous material and cementitious material comprising a plurality of vats containing liquid mixtures of fiber and water, means for continuously separating the fiber from each of the liquid mixtures, for removing it from the vats in the form of thin web sheets and for assembling the moving sheets in parallel relation, means for continuously applying a relatively thicker sheet of hydraulic cementitious material between the sheets of fibrous material, and a series of opposed rollers for gradually compressing the moving compound sheet to force the materials into intimate bonding relation, to gage the thickness of the board and to express excess water therefrom.

5. Means for forming refractory composition board from fibrous and hydraulic cementitious materials comprising a vat containing a liquid mixture of fiber and water, a rotatable foraminous collector arranged to dip into the vat and continuously remove a thin sheet of fiber therefrom, means for continuously applying a relatively thicker sheet of hydraulic cement to the fiber sheet, and means whereby the moving compound sheet of fiber and cement is gradually compressed into a thin sheet having sharply defined edges.

[Claims 6 to 16 not printed in the Gazette.]

1,220,551. PNEUMATIC STABILIZER FOR VESSELS. GEORGE E. POWELL, Chicago Heights, Ill., assignor of one-fourth to Roy Pierson, one-fourth to Peter Parr, and one-fourth to Raymond Ebner, Chicago Heights, Ill. Filed Oct. 13, 1915. Serial No. 55,676. (Cl. 114—122.)



1. A vessel having stabilizing chambers in opposite sides, communicating with the water through openings below the normal water line, each chamber having a valve and a vent controlled by said valve and means to cause said valve to open when said stabilizing chamber rises by a roll of the vessel and permit free ingress of water to said chamber, and to close when said chamber moves downwardly.

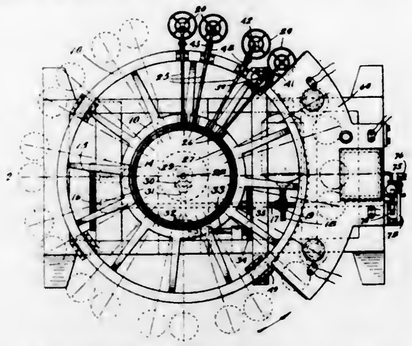
2. A vessel having stabilizing chambers at each side communicating with the water through an opening below the normal water line, each stabilizing chamber having a vent and also having a pivotally mounted valve to control said vent, a pendulum having an arm, and a link connecting said pendulum arm to said valve, to cause the pendulum to open said valve when the chamber rises with a roll of the vessel and permit the free ingress of water to said frame and to close said vent under other conditions.

3. A vessel having stabilizing chambers in each side at the water line, each stabilizing chamber having a vent, a valve to control said vent when said chamber rises during the roll of said vessel, to permit the free ingress of water into the chambers, and a spring closing said valve when said chambers move downwardly.

1,220,552. MACHINE FOR SPRAYING PAPER RECEPTACLES. HERBERT F. PROVANDIE, Melrose, Mass., assignor to American Water Supply Company of New England, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 30, 1913. Serial No. 787,431. (Cl. 91—45.)

1. In a machine for spraying paper receptacles, the combination of a turret, a plurality of forms borne by said turret, a stationary heating-compartment arranged at the side of the turret and inclosing a portion thereof with the forms thereon, said heating-compartment admitting of the passage through it of said forms, a spraying-device associated with the heating-compartment and arranged in proximity to the path of movement of the forms, means to intermittingly rotate the turret, and means to continuously rotate the forms, substantially as described.

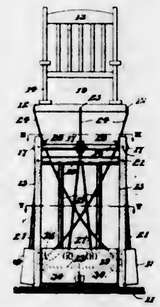
2. In a machine for spraying paper receptacles, the combination of a rotatable turret, a plurality of forms borne by said turret, a stationary heating-compartment arranged at the side of the turret and inclosing a portion thereof with the forms thereon, said heating-compartment admitting of the passage through it of said forms and being made long enough to inclose at the same time several forms, a spraying-device associated with the heating-compartment and arranged in proximity to the path of movement of the forms, and means to rotate the forms while being sprayed and also while contained in said heating-compartment after they have been sprayed, substantially as described.



3. In a machine for spraying paper receptacles, the combination of a rotatable turret, a plurality of forms borne by said turret, a stationary heating-compartment arranged at the side of the turret and inclosing a portion thereof with the forms thereon, said heating-compartment admitting of the passage through it of said forms and being made long enough to inclose at the same time several forms, a spraying-device associated with the heating-compartment and arranged in proximity to the path of movement of the forms, and means to rotate said forms while contained in said heating-compartment before they are sprayed and also while they are being sprayed, and also after they have been sprayed, substantially as described.

4. In a machine for spraying paper receptacles, the combination of a rotatable turret, a plurality of forms borne by it, a center-pin for engaging the receptacles on the forms, arranged coincident with the axis of the forms, pivoted arms bearing said center-pin, automatic means to move said arms to move the pins toward and from the forms, a stationary heating-compartment arranged at the side of the turret and inclosing a portion thereof with the forms thereon, said heating-compartment admitting of the passage through it of said forms, a spraying-device associated with the heating-compartment and arranged in proximity to the path of movement of the forms, and means to rotate the forms, substantially as described.

1,220,553. CHAIR FOR SHIPS. JOZO RASTIJA, East Akron, Ohio. Filed Dec. 14, 1916. Serial No. 136,965. (Cl. 114—194.)

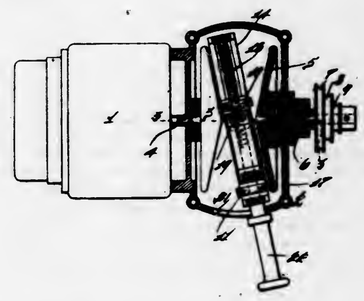


1. A ship's chair comprising a seat, a plurality of pendulums carried by the ship, grooved wheels mounted adjacent the pendulums and supporting rods for the seat passing over said wheels connecting the outer sides of the seat with the oppositely-arranged pendulums.

2. A chair for ships comprising uprights, rollers journaled between said uprights, pendulums journaled beneath the said rollers, connectors between opposite ones of said pendulums, grooved wheels centrally secured to said rollers, a chair bottom, and resilient connecting rods passing over the said wheels and attached between said pendulums and the said seat at opposite sides of the device.

3. A device of the class described comprising in combination with a deck, corner posts arranged thereon, a chair seat positioned above the said posts, pendulums arranged between adjacent ones of said posts at each side of the device, grooved wheels journaled centrally between adjacent ones of said posts above the said pendulums and connecting rods attached between said pendulums and the oppositely-positioned sides of said seat and passing over said grooved wheels.

1,220,554. SPEED-VARYING DEVICE. RAYMOND REHER, New York, N. Y. Filed Oct. 28, 1913. Serial No. 797,752. (Cl. 74—26.)



1. A frictional driving mechanism consisting of a driven disk and a second disk to be driven, a plurality of rollers interposed between and in contact with said disks so arranged to be oscillated and shifted between said disks for the purpose of increasing and decreasing the speed of the second disk.

2. A frictional driving mechanism consisting of a driven disk, a driving disk and a plurality of rollers mount upon a common axis between said disks, one of said rollers being in contact with the driven disk, and the other roller being in contact with the driving disk, in combination with means to shift the rollers from one disk to the other for the purpose of changing the speed of the driven disk.

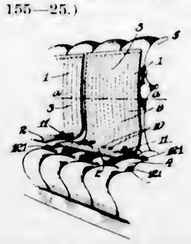
3. A frictional driving mechanism consisting of a driving disk, and a driven disk and a plurality of rollers mounted upon a common axis in a movable support between said disks, one of said rollers being in contact with the driven disk and the other roller being in contact with the driving disk, and means to shift each roller from one disk to the other in combination with means to shift said rollers relative to the centers of their respective disks.

4. A frictional driving mechanism consisting of a driven disk and a driving disk, and a plurality of rollers between and in contact with said disks, and means to change the contact of said rollers from one disk to the other.

5. A frictional driving mechanism consisting of a driving disk, a driven disk and a plurality of rollers mounted upon a common axis in a shiftable support between and in contact with said disks, the axis of said rollers being normally positioned at an angle to the axis of said disks, and means to change the positions of said rollers relative to the disks to vary the speed of the driven disk.

[Claims 6 to 8 not printed in the Gazette.]

1,220,555. ATTACHMENT FOR SEATS. ALBAN H. REID, Philadelphia, Pa. Filed Nov. 17, 1915. Serial No. 61,873. (Cl. 155—25.)



1. An attachment for seats, said attachment comprising a seat portion and a connected back portion, the seat portion being adapted to rest on the seat beneath the occupant, and the back portion being adapted to extend between the back of the seat and back of the occupant; whereby in the up and down movements of the seat, the back portion of the attachment will move up and down in unison with the occupant and relatively to the back of the seat, thereby preventing wear on the occupant's garment.

2. An attachment for seats, said attachment being adapted to be applied to the seat, and having a portion extending along the back thereof and movable with the seat relatively to the seat back.

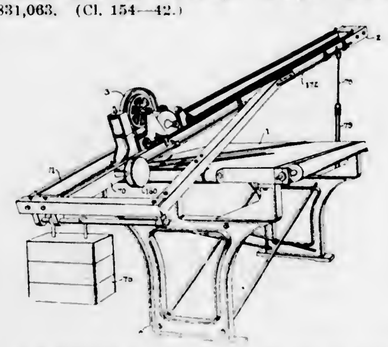
3. An attachment for seats, consisting of a flat body comprising a seat portion to rest on the seat, and a connected back portion to extend between the back of the occupant and back of the seat, said body having a plurality of stiffening members extending longitudinally of said seat and back portions; whereby in the movements of the occupant on the seat, the attachment will move up and down in unison and relatively to the back of the seat.

4. An attachment for seats consisting of a flat body having incorporated therein a plurality of stiffening members extending longitudinally thereof and adapted to be flexed to form a seat portion to rest on the seat beneath the occupant, and a back portion to extend between the back of the occupant and back of the seat.

5. An attachment for seats, said attachment comprising a body or pad adapted to be applied to the seat and comprising a seat portion and a back portion, said back portion being movable relatively to the seat back in the cushioning actions of the seat, and said seat portion being provided with devices for attaching the same to the seat to cause it to move therewith.

[Claims 6 to 10 not printed in the Gazette.]

1,220,556. CUTTING AND SEALING MACHINE. GUSTAVE B. REISBACH, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 10, 1914. Serial No. 831,063. (Cl. 154—42.)



1. In a machine of the character set forth, a traveling device provided with a supply of sealing material, a feeding mechanism for said material operating upon movement of said device and means controlling said feeding mechanism to render its operation dependent upon the position of said device with respect to its work.

2. In a machine of the character set forth, a traveling device provided with a supply of sealing material, a feeding mechanism for said material operated upon movement of said device and means controlling said feeding mechanism to limit the operation thereof to a range of movement of said device varying with the work to be performed.

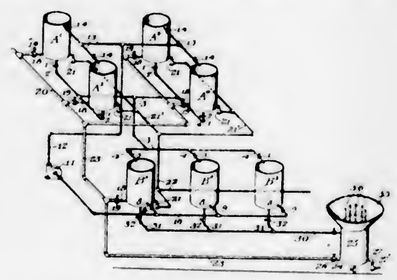
3. In a machine of the character set forth, a traveling device provided with a supply of sealing material, an automatic feeding mechanism for said material and automatic means governing said feeding mechanism to render its operation dependent upon the direction of operation and position of said device.

4. In a machine of the character set forth, a traveling device provided with a supply of sealing material, an automatic feeding mechanism therefor, and automatic means to selectively render said feeding mechanism operative and and inoperative in accordance with the direction of movement and position of said device.

5. In a machine of the character set forth, a traveling device provided with a supply of sealing material, an automatic feeding mechanism therefor, said device being movable toward and away from its work and controlling means for said feeding mechanism operating upon movement of said device relative to its work as aforesaid.

[Claims 6 to 37 not printed in the Gazette.]

1,220,557. PROCESS FOR OBTAINING BARK EXTRACTS. DANIEL C. REYNOLDS, Philadelphia, Pa. Filed June 22, 1916. Serial No. 105,311. (Cl. 187—4.)



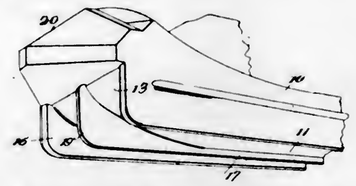
1. The process which consists in boiling water with bark, to extract certain of the ingredients therefrom, raising the temperature of said liquor to facilitate evaporation, spraying the same through air, to evaporate from said liquor a portion of the moisture therein, and then collecting the resultant liquid.

2. The process which consists in boiling water with bark to extract certain of the ingredients therefrom, removing the liquid thus formed from the spent bark, boiling the said liquid with a lot of fresh bark to raise the specific gravity of the former, then raising the temperature of the liquor to facilitate evaporation and spraying the same through relatively dry air, to evaporate from said liquid a portion of the moisture therein, and then collecting the resultant liquid.

3. The process which consists in boiling water with bark to extract certain of the ingredients therefrom, removing the liquid thus formed from the spent bark, boiling the said liquid with a lot of fresh bark to raise the specific gravity of the former, spraying said liquid through relatively dry air to evaporate from said liquid a portion of the moisture therein, and then collecting the resultant liquid.

1,220,558. BOAT. GEORGE W. RICHARDSON, South Hero, Vt. Filed Jan. 26, 1916. Serial No. 74,375. (Cl. 114—56.)

1. A boat hull including vertical, parallel side walls, a bottom wall disposed between the side walls and at a level above the lower edges of the side walls, the side walls being extended at their forward ends to provide wings and the bottom wall being curved upwardly at its ends, end walls disposed between the side walls and connected to the upcurved ends of the bottom wall and spaced inwardly from the free edges of the wings, and a wave breaker disposed between the upper portions of the forward wings.

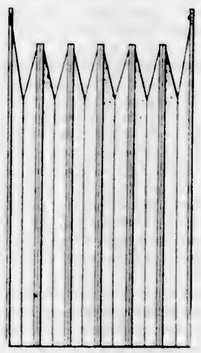


2. A boat hull including vertical, parallel side walls, a bottom wall disposed between the side walls and at a level above the lower edges of the side walls, the side walls being extended at their forward ends to provide wings and the bottom wall being curved upwardly at its ends, end walls disposed between the side walls and connected to the upcurved ends of the bottom wall and spaced inwardly from the free edges of the wings, and a wave breaker disposed between the upper portions of the forward wings, said wave breaker being wedge-shaped horizontally and having a flat horizontal bottom wall and downwardly and outwardly diverging top walls.

3. A boat hull including substantially vertical and parallel side walls, a bottom wall disposed between the side walls and at a level above the lower edges of the side walls, the side walls being extended at their forward ends to provide wings and the bottom wall being curved upwardly at its ends, and a wave breaker disposed between the upper portions of the wings and extending in advance thereof.

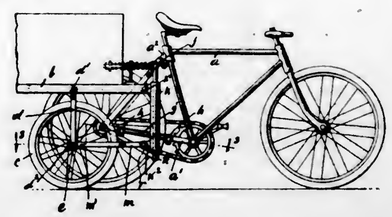
4. A boat hull including substantially vertical and parallel side walls, a bottom wall disposed between the side walls and at a level above the lower edges of the side walls, the side walls being extended at their forward ends to provide wings and the bottom wall being curved upwardly at its ends, and a wave breaker disposed between the upper portions of the wings and extending in advance thereof, said wave breaker having downwardly and rearwardly diverging upper walls.

1,220,559. HOLDER FOR TABLEWARE. ERNEST RIEBE, New York, N. Y. Filed Nov. 14, 1916. Serial No. 131,211. (Cl. 150—52.)



A holder of the kind described, constructed of soft material, comprising a plurality of adjacent complete compartments secured to each other near their side edges, and adapted to receive articles to be stored therein, the end compartments of said holder each having an extending free side adapted to be detachably fastened to the opposite free side and to effect the covering of all of the said compartments.

1,220,560. BICYCLE. MATHEW RITTER, Shrub Oak, N. Y. Filed Nov. 29, 1916. Serial No. 133,999. (Cl. 208—45.)



1. The combination with a bicycle, of a carriage removably connected thereto and capable of swinging horizontally and vertically independently of said bicycle and spring actuated means for normally maintaining said carriage parallel to said bicycle.

2. The combination with a bicycle, of a wheeled carriage arranged at the side of said bicycle, and having an axle separate from the axle of the bicycle wheels, a frame removably connected to said bicycle and to which said carriage is so connected as to be capable of moving vertically and horizontally independently of the bicycle and means interposed between said removable frame and said carriage for normally maintaining the latter parallel to said bicycle.

3. The combination with a bicycle, of a wheeled carriage, a frame therefor removably connected to the side of the bicycle and to which said carriage is connected so as to be capable of swinging horizontally and vertically independently of the bicycle and means interposed between said removable frame and said carriage for normally maintaining the latter parallel to said bicycle.

4. The combination with a bicycle, of a wheeled carriage, a frame to which said carriage is pivotally connected so as to be capable of swinging horizontally and vertically independently of the bicycle, means for removably connecting said frame to said bicycle and means interposed between said removable frame and said carriage for normally maintaining the latter parallel to said bicycle.

5. The combination with a bicycle, of a wheeled carriage, a frame to which said carriage is pivotally connected so as to be capable of swinging horizontally and vertically independently of said bicycle, clamping means for removably connecting said frame to the side of the cycle frame and means interposed between said removable frame and said carriage for normally maintaining the latter parallel to said bicycle.

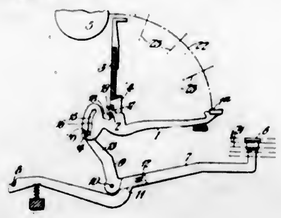
[Claims 6 to 8 not printed in the Gazette.]

1,220,561. TYPE-WRITING MACHINE. LYMAN R. ROBERTS, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 8, 1913. Serial No. 799,845. (Cl. 197—31.)

1. In a type action, the combination of a type-bar, a key, and a pivoted interponent having a slot and pin connection with the type-bar and also a pivoted connection with the key lever, the pin arranged to effect a continuous movement of the pin along the slot in one direction substantially throughout the type stroke, and said slot being open at one end for detachment, and said type-bar having a slot open ended in the same direction as the first named slot, whereby it is detachably mounted upon its pivot.

2. In a type action, the combination with a key lever, of a pivoted slotted type-bar, a pivoted operating lever con-

nected to said lever and having a pin working in said slot, the range of movement of said pin being wholly at one side of a line joining the type-bar pivot and the lever pivot, the pin contacting with the closed end of the slot which closed end thereby forms a stop for the type-bar in its movement to striking position.



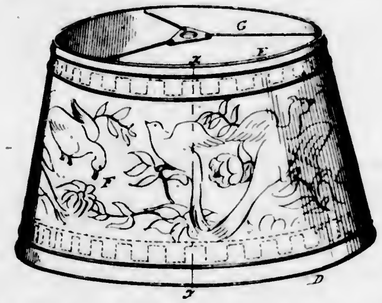
3. In a type action, the combination of a key lever, a type-bar provided with a slot, and an interponent operated by the key lever and having a continuous sliding connection with said slot substantially throughout the printing stroke, said slot formed to gradually increase the speed of the type-bar relative to the key lever substantially throughout the printing stroke, and said slot being open at one end for detachment, and said type-bar having a slot open ended in the same direction as the first named slot, whereby it is detachably mounted upon its pivot, said pivot being between the first-mentioned slot and the type.

4. In a type action, the combination of a key, a type-bar having a slot in the form of a compound curve, and a key-operated lever having a sliding connection with said curve from end to end during the printing stroke, and said slot being open at one end for detachment, and said type-bar having a slot open at the same end as the first-named slot, whereby it is detachably mounted upon its pivot, said pivot being between the first-mentioned slot and the type.

5. In a type action, the combination of a key, a type-bar having a slot therein, and an intermediate lever having a pin working in said slot, the wall of said slot formed to lock the type-bar against movement by power applied to the type-bar, and said slot being open at one end for detachment, and said type-bar having a slot open ended in the same direction as the first named slot, whereby it is detachably mounted upon its pivot, said pivot being between the first-mentioned slot and the type.

[Claims 6 to 29 not printed in the Gazette.]

1,220,562. LIGHT-SHADE. MICHAEL RONAYNE, New York, N. Y. Filed Oct. 26, 1916. Serial No. 127,793. (Cl. 240—108.)

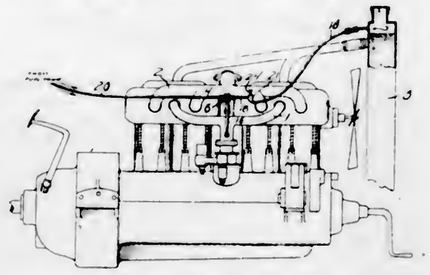


1. A lamp shade for inclosing a source of light, comprising an outer film of plastic ornamental coloring matter supported in position on a perforated metal body and a translucent inner lining portion secured thereto, substantially as shown and described.

2. In a lamp shade for surrounding a source of light a perforated metal body having on its interior side a translucent lining extending over the perforations in the metal and an outer inclosing continuous translucent film supported by the metal body, substantially as and for the purpose shown and described.

3. A lamp shade for surrounding a source of light comprising a plastic film of translucent coloring matter supported on a body of perforated metal and an interior translucent lining secured to the metal body combined with suitable means for securing the same to a lamp or other source of light, substantially as and for the purpose shown and described.

1,220,563. SUPERHEATING MECHANISM FOR AUTOMOBILES. JOHN D. RUSS, Spencer, W. Va. Filed Nov. 14, 1916. Serial No. 131,321. (Cl. 123—25.)



1. In an automobile, the combination, with the intake and exhaust manifolds of the engine, of a superheater, comprising a hollow body projecting into the exhaust-manifold and closed at the end thereof interior of the exhaust-manifold, and an open-ended tube carried within said body and spaced from the side wall and said closed end thereof, forming a superheating chamber between said tube and said body communicating with the tube adjacent said closed end of the body; a radiator; a pipe communicating with said chamber and with said radiator, above the water-level thereof; and a second pipe communicating with said tube and with said intake-manifold.

2. In an automobile, the combination, with the intake and exhaust manifolds of the engine, of a superheater, comprising a hollow body screwed into the exhaust-manifold so as to be disposed therein, and being closed at the end thereof interior of the exhaust-manifold, and an open-ended tube carried within said body and spaced from the side wall and said closed end thereof, forming a superheating chamber between said tube and said body communicating with the tube adjacent said closed end of the body; a radiator; a pipe communicating with said chamber and with said radiator, above the water-level thereof; and a second pipe communicating with said tube and with said intake-manifold.

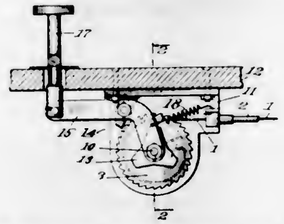
3. In an automobile, the combination, with the intake and exhaust manifolds of the engine, of a superheater, comprising a hollow body projecting into the exhaust-manifold and closed at the end thereof interior of the exhaust-manifold, and an open-ended tube carried within said body and spaced from the side wall and said closed end thereof, forming a superheating chamber between said tube and said body communicating with the tube adjacent said closed end of the body; a radiator; a pipe communicating with said chamber and with said radiator, above the water-level thereof, and carrying a suction-opening valve; and a second pipe communicating with said tube and with said intake-manifold.

4. In an automobile, the combination, with the intake and exhaust manifolds of the engine, of a superheater, comprising a hollow body projecting into the exhaust-manifold and closed at the end thereof interior of the exhaust-manifold, and an open-ended tube carried within said body and spaced from the side wall and said closed end thereof, forming a superheating chamber between said tube and said body communicating with the tube adjacent said

closed end of the body; a source of supply of liquid fuel; a pipe communicating with said source of supply and with said chamber; and a second pipe communicating with said tube and with said intake-manifold.

5. In an automobile, the combination, with the intake and exhaust manifolds of the engine, of a superheater, comprising a hollow body projecting into the exhaust-manifold and closed at the end thereof interior of the exhaust-manifold, and an open-ended tube carried within said body and spaced from the side wall and said closed end thereof, forming a superheating chamber between said tube and said body communicating with the tube adjacent said closed end of the body; a radiator; a pipe communicating with said chamber and with said radiator, above the water-level thereof; a second pipe communicating with said tube and with said intake-manifold; a source of liquid-fuel supply; and a third pipe communicating with said source of supply and with said chamber.

1,220,564. WEAR-COMPENSATING PAWL-AND-RATCHET MECHANISM. JACOB SCHLAGEL, Brooklyn, N. Y., assignor to Conrad Hubert, New York, N. Y. Filed June 27, 1913. Serial No. 776,112. (Cl. 74—81.)



1. A self-adjusting brake-releasing pawl and ratchet mechanism for brakes having a normal tendency to the applied condition, such mechanism comprising a pawl, two relatively movable parts one of which carries the pawl and the other of which is a ratchet coöperative with the pawl, one of the said parts being a brake-controlling part adapted to be connected to the brake to release the same and to be returned by the brake to the normal position and the other of the said parts being an operating member for the pawl and ratchet, means operative to disengage the pawl and ratchet upon the return of the operating member to a predetermined normal position, and yieldable movement-restraining means for the brake-controlling part for stopping and holding such part in correct adjusted position relatively to the operating member in the normal position of the latter.

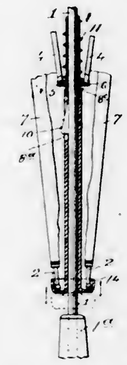
2. A self-adjusting brake-releasing pawl and ratchet mechanism for brakes having a normal tendency to the applied condition, such mechanism comprising a pawl, two relatively movable parts one of which carries the pawl and the other of which is a ratchet coöperative with the pawl, one of the said parts being a brake-controlling part adapted to be connected to the brake to release the same and to be returned by the brake to the normal position and the other of the said parts being an operating member for the pawl and ratchet, position-restoring means for the operating member for returning the latter to a predetermined normal position, means operative to disengage the pawl and ratchet upon the return of the operating member to the normal position by the position restoring means, and frictional stopping and holding means engaging the brake-controlling part for automatically adjusting the normal position of such part relatively to the normal position of the operating member.

3. A self-adjusting brake-releasing pawl and ratchet mechanism for brakes having a normal tendency to the applied position, such mechanism comprising a brake-controlling drum disk provided with ratchet teeth and having a peripheral winding space providing for flexibly connecting the brake-controlling drum to a brake for releasing the brake, a friction stop for yieldingly holding the disk at the position to which it is returned by the applied brake, a disk-operating manual lever pivoted concentrically with the disk, a pawl carried by the lever and engageable with the ratchet teeth of the disk to operate the brake during the forward movement of the lever, an abutment adapted to effect the disengagement of the pawl upon the completion of the reverse or return movement of the lever so that the disk may continue to rotate under continued stress of the brake as the brake moves to the applied position until such disk is stopped by the friction stop at the correct adjusted position relatively to the pawl carried by the operating lever in the returned position of the latter and a spring arranged to effect the return movement of the lever.

4. Brake mechanism comprising a brake and brake-releasing means including: an operative member adapted to receive operative energy, an operated member connected with the brake, means for maintaining a fixed connection between the operative and operated members during the actuation of the operative member in one direction to release the brake and during a reverse movement of both members as the brake is set, and means for discontinuing said fixed connection at the end of said reverse or brake-setting movement.

5. Brake mechanism comprising a brake and brake-releasing means including: a manually operative member, a ratchet connected with the brake, a pawl carried by the manually operative member and arranged to maintain connection with a single tooth of the ratchet during its actuation of the ratchet to release the brake and during the reverse brake-setting movement, and a detent arranged to disconnect the pawl from said tooth at the end of said reverse or brake-setting movement.

1,220,565. UMBRELLA. SIGMUND SCHLESINGER, Brooklyn, N. Y. Filed Dec. 7, 1914. Serial No. 875,867. (Cl. 135—28.)

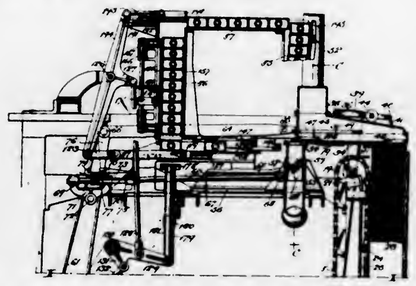


1. An umbrella comprising a rod, ribs attached thereto, a tube slidable upon the rod, a ring slidable upon the tube, stretcher rods pivotally connecting said ring with the ribs, a spring positioned between the ring and one end of the tube, the tube having a stop to engage the ring, and means to retain said tube and ring elevated, said tube having a retainer for the rib tips located at the outer end of the tube.

2. An umbrella having a rod, ribs attached thereto, a tube slidable upon the rod, a ring slidable upon the tube, stretcher rods pivotally connecting said ring with the ribs, a spring coacting with said tube and ring, and means to retain said tube and ring elevated, said tube having a slot, a stop on the rod to enter said slot, said tube having a retainer for the rib tips located at the outer end of the tube, said retainer comprising a hollow member adapted to receive the rib tips, said slot being longer than the stop to permit the tube to slide to engage the retainer with the rib tips while said stop is in said slot.

3. In an umbrella, a rod, a notched ring on the rod, ribs attached thereto, a tubular member slidable on the rod, a stop forming a part of the tubular member, stretcher ribs, a ring to which the stretcher ribs are secured, said ring adapted to slide on the tubular member, a spring mounted between the ring and stop, said spring adapted to contract under excessive wind pressure in one direction whereby the tubular member is moved longitudinally of the rod and into engagement with the notched ring.

1,220,566. CARTON-OPENING MACHINE. ERNEST A. SCHROEDER and JOHN N. TOOKER, Syracuse, N. Y., assignors to Church & Dwight Company, New York, N. Y., a Corporation of Maine. Filed July 20, 1915. Serial No. 40,823. (Cl. 93—44.)



1. In a machine of the character described, suction means for feeding in and opening up a collapsed carton, a former and means for forcing the former into the opened carton.

2. In a machine of the character described, suction means for feeding in and opening up a collapsed carton, a traveling former and means for forcing the former into the opened carton at a predetermined point in its travel.

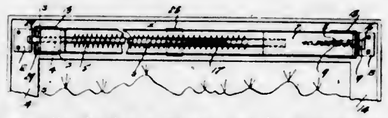
3. In a machine of the character described, suction means for feeding in and opening up a collapsed carton, a traveling former, means for forcing the former into the opened carton at a predetermined point in its travel, and mechanisms operating to fold and seal the flaps at one end of the carton.

4. In a machine of the character described, suction means for feeding in and opening up a collapsed carton, a traveling former, means for forcing the former into the opened carton at a predetermined point in its travel, mechanisms operating to fold and seal the flaps at one end of the carton, and means for exerting pressure on the sides and sealed end of the carton.

5. In a machine of the character described, suction means for feeding in and opening up a collapsed carton, a former and means for forcing the former into the carton while it is held open by the suction means.

[Claims 6 to 49 not printed in the Gazette.]

1,220,567. ADJUSTABLE SHADE-ROLLER. GEORGE SCHULER and EMIL KRAEMER, Woodside, N. Y. Filed June 14, 1916. Serial No. 103,632. (Cl. 156—36.)



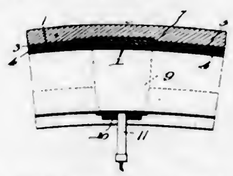
1. A roller having a tubular end, in combination with a longitudinally split block inserted in said end and a trunnion, the inner part of which is tapered and screw-threaded for screwing into said block to force the latter outward against the inner face of the roller.

2. A split tubular roller-casing, in combination with a split block fitting into one end thereof, a trunnion having its inner part tapered and screw-threaded for screwing into the split end of said block to force the latter outward against said casing and bracing means external to said casing for holding said casing against yielding to this pressure.

3. A split tubular roller casing in combination with a split block fitting into one end thereof, a cap fitting on said end, and a trunnion having its inner end tapered and screw-threaded for screwing into and expanding said block substantially as set forth.

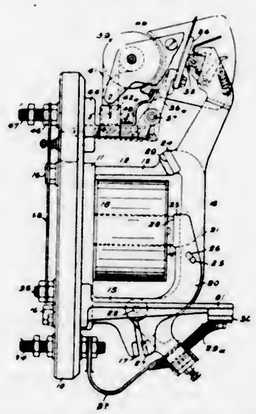
4. The combination of a fixed bracket and the casing of a rotatable spring roller with an extensible spindle within said casing, the protruding end of which spindle constitutes one of the trunnions of the roller, said spindle consisting of two telescopic parts, the inner of which slides freely outward and inward, and being provided with a helical spring fixed at one end to one of said parts and at the other end to the other part, the said spring serving to wind the roller and also to retract said trunnion into tight contact with said bracket.

1,220,568. INNER-TUBE PROTECTOR. GUSTAVE STARKE, New York, N. Y. Filed Oct. 12, 1915. Serial No. 55,513. (Cl. 152—18.)



An inner tube protector for pneumatic tires, comprising, a resilient metallic member, interposed between the shoe and inner tube and provided respectively at the opposite ends with lugs extending from the same side of the member and extending under the inner tube and overlapping one another and adapted to receive the valve stem, as and for the purpose specified and co-acting therewith to hold the protector against creeping, the said opposite side of the protector, laterally of the lugs, being free for flexing movements.

1,220,569. SWITCH. HALFDAN A. STEEN, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Original application filed Sept. 6, 1910, Serial No. 580,532. Divided and this application filed July 25, 1914, Serial No. 853,166. Renewed Sept. 28, 1916. Serial No. 123,966. (Cl. 175—282.)



1. In combination, a switch having fixed and movable parts, said movable part carrying main and auxiliary contacts at opposite ends thereof, a coöperating main contact, and a coöperating pivoted auxiliary contact.

2. In a switch, an actuating member, a contact carried by said actuating member, a relatively stationary contact adapted to be engaged by said movable contact, and a blow-out magnet for destroying arcs formed on the separation of said contacts and having a detachable switch connection with one of said contacts comprising conductive parts removably held together by the frictional engagement of the parts.

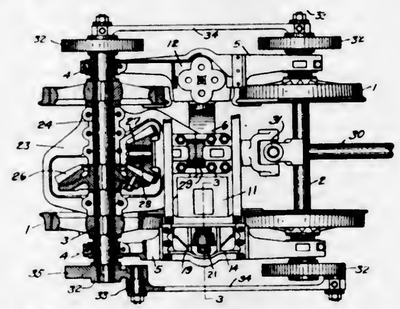
3. In a switch, an actuating member, a contact carried by said actuating member, a relatively stationary contact member engageable by said movable contact, a blow-out magnet for destroying arcs formed on the separation of said contacts, and contact sockets, said blow-out magnet having contact portions which are detachably held in said contact sockets through the frictional engagement between said contact portions and said sockets.

4. In a switch, fixed and movable contacts, a blow-out magnet adjacent said fixed contact for destroying arcs formed on the separation of said contacts, additional contacts, and a detachable connection between said latter contacts and the winding of said blow-out magnet, said connection consisting of parts held together by the frictional engagement thereof.

5. In a switch, an actuating member, a contact carried by said actuating member, a relatively stationary contact engageable by said movable contact, fixed contact portions disposed adjacent said relatively stationary contacts, and a blow-out magnet for destroying arcs, said blow-out magnet having contacts detachably retained in yielding operative engagement with said fixed contact portions to maintain said blow-out magnet in operative position with its operating circuit established and to permit removal of said blow-out magnet from operative position by forcible withdrawal thereof.

[Claims 6 to 14 not printed in the Gazette.]

1,220,570. LOCOMOTIVE. GEORGE L. SWARR, Erie, Pa., assignor to Heisler Locomotive Works, Erie, Pa., a Corporation of Pennsylvania. Filed June 30, 1916. Serial No. 106,836. (Cl. 105—227.)



1. In a locomotive truck, the combination of driving wheels; axles on which said wheels are fixed; side frames outside the wheels; bearings for the axles mounted on the side frames; a gear drive operating upon one of the axles between the wheels; a spring bar; and side spring bar bearings outside the wheels.

2. In a locomotive truck, the combination of two sets of wheels, one set of which has driving wheels; axles on which said wheels are mounted; side frames outside the wheels; bearings for the axles mounted on the side frames; and a swivel bar connection between the side frames having swivel connections with the side frames, said bar being arranged between the sets of wheels.

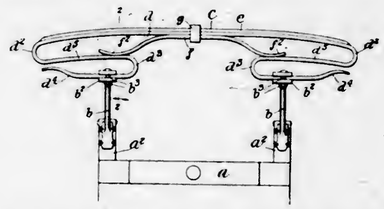
3. In a locomotive truck, the combination of two sets of wheels, one set of which has driving wheels; axles on which said wheels are mounted; side frames outside the wheels; bearings for the axles mounted on the side frames; a swivel bar connection between the side frames having swivel connections with the side frames, said bar being arranged between the sets of wheels; a spring bar resting on the side frames; and side spring bar bearings extending outside the wheels.

4. In a locomotive truck, the combination of two sets of wheels, one set of which has driving wheels; axles on which said wheels are mounted; side frames outside the wheels; bearings for the axles mounted on the side frames; a swivel bar connection between the side frames having swivel connections with the side frames, said bar being arranged between the sets of wheels; and a gear drive for one of the axles arranged between the wheels.

5. In a locomotive truck, the combination of two sets of wheels, one set of which has driving wheels; axles on which said wheels are mounted; side frames outside the wheels; bearings for the axles mounted on the side frames; a swivel bar connection between the side frames having swivel connections with the side frames, said bar being arranged between the sets of wheels; a bearing frame mounted on the driving axle and having a swivel connection with the swivel bar with a longitudinal axis; a gear on the axle; a drive shaft mounted on the gear frame; and a gear on the drive shaft driving the axle gear.

[Claim 6 not printed in the Gazette.]

1,220,571. AUTOMOBILE-BUMPER. ABRAHAM TISMAN, New York, N. Y. Filed Dec. 29, 1916. Serial No. 139,442. (Cl. 213—39.)



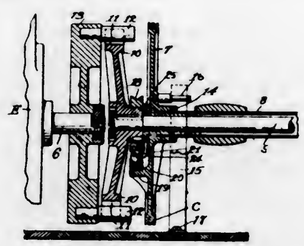
1. A spring bumper for power driven vehicles, comprising supports adapted to be connected with the front end portion of the truck frame and provided at their front ends with keepers, and a spring device mounted transversely and in front of said supports and comprising a main spring the end portions of which are S-shaped in form, and the ends of which are passed outwardly through said keepers, and a central reinforcing spring on the inner side of the central part of the main spring and the ends of which bear on the central parts of the S-shaped end portions of the main spring.

2. A spring bumper for power driven vehicles, comprising supports adapted to be connected with the front end portion of the truck frame and provided at their front ends with keepers, and a spring device mounted transversely and in front of said supports and comprising a main spring the end portions of which are S-shaped in form, and the ends of which are passed outwardly through said keepers, a central reinforcing spring on the inner side of the central part of the main spring and the ends of which bear on the central parts of the S-shaped end portions of the main spring, and another reinforcing spring placed on the outer side of the main spring.

1,220,572. STARTING DEVICE FOR ENGINES. WILLARD IRVING TWOMBLY, New York, N. Y., assignor to Twombly Car Corporation, New York, N. Y., a Corporation of New York. Filed Nov. 3, 1913. Serial No. 798,825. (Cl. 123—185.)

1. A starting device for engines, comprising in combination with the power shaft of the engine, of a rotatable wheel supported coaxially with the engine shaft having a laterally projecting portion; a fixed stop, a cable connected to and encircling said wheel to impart rotative movement thereto in one direction; means of interconnection between said wheel and power shaft whereby the

same may be readily coupled or disconnected; a spring to impart movement to the wheel reverse to the movement imparted thereto by the cable and to normally maintain said wheel in position with the lateral projection engaging with the fixed stop; and an overriding clutch to connect said wheel to the engine shaft when rotative movement is imparted thereto by the cable, substantially as and for the purpose specified.



2. A starting device for engines, comprising in cooperation with the shaft of the engine, a readily detachable rotatable wheel supported coaxially with the engine shaft and having a reciprocating movement, manual means for rotating said wheel in one direction and a spring to retrieve said wheel in the reverse direction, an over-riding clutch connecting said wheel with the outer face of said flywheel, and a stationary stop to limit the reverse movement of said wheel to a predetermined point.

3. A starting device for engines, comprising in combination with the power shaft of the engine, of a rotatable wheel supported coaxially with the engine shaft; manually operable means to impart rotative movement thereto in one direction; a spring to impart rotative movement to the wheel reverse to the movement imparted thereto by the cable and to maintain the wheel in a predetermined position of rest; and an overriding clutch to connect said wheel to the engine shaft when rotative movement is imparted thereto by the cable, comprising a collar having an annular groove connected to and rotatable with the engine shaft, a lug projecting from the wheel to overhang said collar having a V-shape groove inclined to the periphery of the collar and in line with the groove therein, a ball engaging in the space between said V-shape groove and the annular collar, said V-shape portion of the lug adapted to bite upon the ball to wedge it between said lug and the annular collar when rotative movement is imparted to the wheel by the cable, a spring to maintain said ball in the space between the wheel lug and annular collar, and an abutment to engage with and unseat the ball when the wheel is returned to initial position by the spring, substantially as and for the purpose specified.

4. A starting device for engines, comprising in combination with the power shaft of the engine, of a fly wheel fixed thereto having an annular groove, a rotatable wheel mounted coaxially with the power shaft normally maintained in a predetermined position of rest relative to said shaft and having a projecting portion overhanging the groove portion of the fly wheel with a face inclined to the periphery of the fly wheel; manually operable means to rotate the wheel; a one-way locking device carried between the projecting portion of the rotatable wheel and the groove of the fly wheel which is caused to be wedged between the groove of the fly wheel and the inclined face of the projection of the rotatable wheel in one direction; and an abutment with which the projecting portion of the rotatable wheel engages when the latter is in position of rest having means to engage with and unseat said one-way locking device, substantially as and for the purpose specified.

5. A starting device for engines, comprising in combination with the power shaft of the engine having a fly-wheel fixed thereto, of a shaft coaxially of and connected to the power shaft to rotate therewith; a wheel loosely mounted on said latter shaft and normally maintained in a predetermined position of rest; a cable connected to said wheel to impart rotative movement thereto in one direction; and an overriding clutch between said wheel and the fly-wheel thrown into operative engagement when the wheel is rotated by the cable to impart rotative movement thereto and couple it to the fly-wheel and the engine shaft, and stationary means to limit the movement of said wheel in one direction, and to release the clutch when the starting device is inoperative.

[Claim 6 not printed in the Gazette.]

1,220,573. RHEOSTAT. HERBERT A. WALLACE, Pittsburgh, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Nov. 27, 1916. Serial No. 133,558. (Cl. 219—48.)



1. A rheostat comprising a base, binding posts mounted on the base, a member of insulating material and having perforations formed therein, said member connecting said posts, a resistance element connected to one of said posts and trained through said perforations in a manner to form grids upon opposite sides of said plate, and a contact movably mounted on the remaining post and engageable with both of said grids.

2. A rheostat comprising a base, spaced conducting members upstanding from said base, an element of insulating material connecting said members and removably mounted thereon, a resistance element connected to one of said members and arranged upon opposite sides of said insulation element to provide a plurality of contact surfaces, and a contact pivoted to one of the members and movable to simultaneously engage the contact surfaces upon opposite sides of the plate.

3. A rheostat comprising a base, spaced conducting members upstanding from said base, a perforated element of insulating material connecting said members and removably mounted thereon, a resistance element formed from a single length of material and connected to one of said members and trained through said perforations to provide grids on opposite sides of said plate, and a contact mounted on the remaining conducting member and movable over said grids.

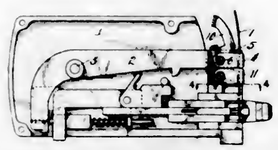
4. A rheostat comprising a base, binding posts mounted on the base, resistance elements removably supported by said posts and electrically connected to one of the posts, and a contact member pivotedly mounted on the remaining post and engagable with any of the elements.

5. A rheostat comprising a base, a pair of spaced binding posts mounted on said base, each of said posts comprising a threaded shank and nuts threadedly mounted on the shank; an insulated member connecting the posts and removably mounted on said shanks, resistance elements mounted on said member and electrically connected to one of the posts, and a contact member pivotedly mounted on the other binding post and movable over said elements, said nuts forming a clamping means for retaining the insulated member upon the shanks and for securing the contact member in adjusted position.

[Claim 6 not printed in the Gazette.]

1,220,574. WIRE-RELEASE MEANS FOR SHOE-BUTTON-FASTENING MACHINES. FRANK G. WALTZ, Toledo, Ohio, assignor to The Toledo Button Machine Company, Toledo, Ohio, a Corporation of Ohio. Filed Aug. 5, 1916. Serial No. 113,333. (Cl. 140—130.)

1. In a machine of the class described, a frame, a wire-feed member movably carried by said frame, a wire-holding jaw carried by said frame and normally engaging a wire to prevent a backward movement thereof, a wire-feed jaw carried by said member and normally engaging a wire to cause a forward feeding thereof when said member has a forward feeding movement, both of said jaws normally standing in wire-gripping position, and said feeding jaw, when at the limit of its feeding movement, having its forward edge standing in position to engage the rear edge of the holding jaw and move it from wire-gripping position when the feed jaw is moved from normal gripping position.



2. In a machine of the class described, a frame, a wire-feed lever pivoted to said frame, a wire-holding jaw pivoted to said frame at the forward side of said lever, a wire-feed jaw pivoted to said lever and having a control finger projecting rearwardly therefrom, and a spring yieldingly acting on each jaw to normally retain it in wire-gripping position, said jaws having their adjacent edges substantially abutting when the lever is at the limit of its feeding stroke whereby a movement of the feed jaw from wire-gripping position will cause it to act against the adjacent edge of the holding jaw and move it from wire-holding position.

1,220,575. WATER AND ACID PROOF CEMENT AND PROCESS OF MAKING SAME. UTLEY WEDGE, Ardmore, Pa., assignor to Electro Chemical Supply & Engineering Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 1, 1915. Serial No. 11,362. (Cl. 106—30.)

1. As an improvement in the manufacture of acid-proof cement by mixing silicious material and silicate of soda, the mode herein described of rendering the cement waterproof, said mode consisting in adding silicate of soda to the silicious material and, previous to such addition, adding to the silicious material an acid which will, on the later addition of the silicate of soda, act as a precipitant of finely divided silica in the cement.

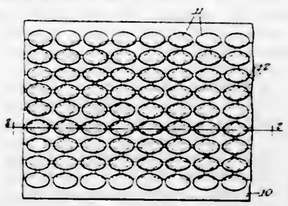
2. As an improvement in the manufacture of acid-proof cement by mixing silicious material and silicate of soda, the mode herein described of rendering the cement waterproof, said mode consisting in adding silicate of soda to the silicious material and, previous to such addition, adding to the silicious material an acid which will, on the later addition of silicate of soda, precipitate silica in a gelatinous or colloidal state.

3. As an improvement in the manufacture of acid-proof cement by mixing silicious material and silicate of soda, the mode herein described of rendering the cement waterproof, said mode consisting in adding silicate of soda to the silicious material, and, previous to such addition, adding to the silicious material in finely divided form, an acid also in finely divided form and which will, on the addition of the silicate of soda, precipitate finely divided silica in the cement.

1,220,576. ORNAMENTAL SHEET-GLASS. HERBERT W. WELD, Chicago, Ill. Filed June 14, 1916. Serial No. 103,613. (Cl. 88—60.)

1. As an article of manufacture, a sheet of glass having similar projections extending from each surface, the projections on each surface being arranged in parallel rows extending at an angle to each other and the arrangement on one surface being reciprocated substantially 50% to the arrangement of projections on the other surface of said sheet of glass, each projection having a greater length than width.

2. As an article of manufacture, a sheet of glass having similar projections extending from each surface, the projections on each surface being arranged in parallel rows extending at an angle to each other and the arrangement on one surface being reciprocated substantially 50% to the arrangement of projections on the other surface of said sheet of glass, each projection having a greater length than width and said projections extending nearly into contact with each other.



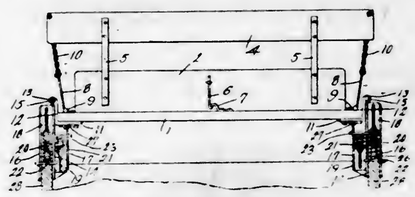
3. As an article of manufacture, a sheet of glass having similar projections extending from each surface, the projections on each surface being arranged in parallel rows extending at an angle to each other and the arrangement on one surface being reciprocated substantially 50% to the arrangement of projections on the other surface of said sheet of glass, each projection being elliptical in outline.

4. As an article of manufacture, a sheet of glass having similar projections extending from each surface, the projections on each surface being arranged in parallel rows extending at an angle to each other and the arrangement on one surface being reciprocated substantially 50% to the arrangement of projections on the other surface of said sheet of glass, each projection being elliptical in outline and said projections extending nearly into contact with each other.

5. As an article of manufacture, a sheet of glass having similar projections extending from each surface, the projections on each surface being arranged in parallel rows extending at an angle to each other and the arrangement on one surface being reciprocated substantially 50% to the arrangement of projections on the other surface of said sheet of glass, each projection being elliptical in outline and the depth of the projections being less than half of the minor axis of the elliptical outline.

[Claim 6 not printed in the Gazette.]

1,220,577. REVERSIBLE FOLDING SPRING-SEAT. ANTON E. WICKLUND and JAMES B. GROBEY, Middle River, Minn., assignors of one-third to Ira C. Richardson, Thief River Falls, Minn. Filed July 14, 1916. Serial No. 109,329. (Cl. 21—44.)



1. A seat, supporting members pivotally connected therewith to be swung to downwardly and upwardly projecting positions and having reversed U-shaped portions to straddle the sides of a vehicle body in either position of said members, and spring means within said portions seating against the closed ends thereof and seatable upon the sides of a vehicle body for yieldably supporting said members in either position thereof.

2. A seat, supporting members pivotally connected therewith to be swung to downwardly and upwardly projecting positions and having reversed U-shaped portions to straddle the sides of a vehicle body in either position of said members, plates slidable in said portions to seat

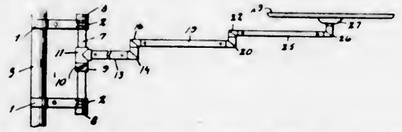
upon the sides of the vehicle body, and expansion springs between said plates and the closed ends of said portions.

3. A seat, supporting bars pivotally connected with the ends thereof to be swung to upwardly and downwardly projecting positions, said bars having tongues upon opposite sides thereof projecting toward and away from the pivoted ends thereof and providing reversed U-shaped portions to straddle the sides of a vehicle body in either position of said bars, said bars and tongues having sockets at the basal portions of said tongues, and expansion springs seated in said sockets.

4. A seat, supporting bars pivotally connected with the ends thereof to be swung to upwardly and downwardly projecting positions, said bars having tongues upon opposite sides thereof projecting toward and away from the pivoted ends thereof and providing reversed U-shaped portions to straddle the sides of a vehicle body in either position of said bars, plates slidably engaging said bars and tongues, and expansion springs disposed between said plates and the basal portions of said tongues.

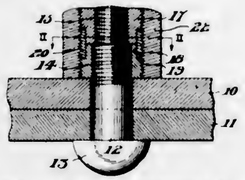
5. A seat, supporting bars pivotally connected with the ends thereof to be swung to upwardly and downwardly projecting positions, said bars having tongues upon opposite sides thereof projecting toward and away from the pivoted ends thereof and providing reversed U-shaped portions to straddle the sides of a vehicle body in either position of said bars, the bars and tongues having sockets at the basal ends of the tongues, plates having slots engaging the tongues and having T-shaped slots engaging the bars, and coiled expansion springs seated in said sockets and bearing against said plates.

1,220,578. FOLDING BED-TABLE. ORTIS J. WISE, Charleston, W. Va. Filed May 26, 1915. Serial No. 30,596. (Cl. 45—82.)



In a bed table, the combination with a cylindrical bracket member; of spaced clamps carried by said bracket member and each comprising a pair of arms each having one end journaled on the bracket member and a gripping jaw at the other end, a screw passing through one of the arms and engaging the other in each pair, each pair of said arms having their journaled ends interlocked and slidable on the bracket member, caps on the ends of the bracket member to retain the clamps thereon, a plurality of folding arms mounted on the bracket member, and a tray supported on the free end of the outermost arm.

1,220,579. BOLT AND NUT LOCK. SYLVESTER WOINA, Lost Creek, W. Va. Filed Dec. 4, 1916. Serial No. 134,901. (Cl. 151—17.)

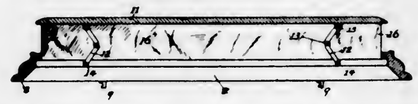


1. A bolt retaining means comprising a threaded shaft having a reduced terminal portion provided with oppositely arranged threads from the said shaft, separate sleeves screwed upon the said threaded portions in contact with each other when operatively positioned, the said sleeves having dove-tailed slots in their outer faces adjacent the contacting ends, wedge slides removably positioned within the said slots, the said sleeves and slides having similar externally threaded faces and a retaining nut threaded upon the said sleeves and slides.

2. A device of the class described comprising a bolt having adjacent oppositely threaded portions, contacting members separately threaded upon the said portions, and locking means having dove-tailed connection with the said contacting members.

3. A device of the class described comprising a bolt having adjacent oppositely threaded portions, contacting members separately threaded upon said portions, locking means having dove-tailed connection with said contacting members, and a cover nut for the said members having wedged engagement with the said means when the device is locked upon the work.

1,220,580. BURIAL-CASKET LID. JACOB H. WUNDERLICH, Baltimore, Md., assignor to National Casket Co., Baltimore, Md., a Corporation of New York. Filed Nov. 23, 1916. Serial No. 133,066. (Cl. 27—14.)



1. A burial casket having in combination a casket-body; an open-center lid-frame resting in a horizontal position on the casket-body to close the same, and said lid-frame at one of its edges hinged to the longitudinal side of said casket-body to permit the lid-frame to turn from the horizontal to an upright position; a panel which in the horizontal position closes said open-center of the lid-frame and is movable to another position where it stands vertically and forms the longitudinal back-wall of a recess; and woven fabric connecting the open-center lid-frame with the said vertically-positioned panel, said fabric forming the bottom, top and two end-walls of said recess which latter at the front, adjoining the hinged lid-frame, is open to afford access to the recess, as set forth.

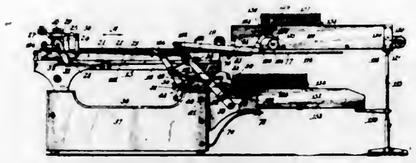
2. The combination with a burial casket-body and an open-center lid-frame hinged at one longitudinal side of said body, of a movable panel which in one position serves to close said open-center of the lid-frame, and in another position serves as the back-wall of a recess whose end-walls, bottom and top are formed by woven fabric attached to said lid-frame and to the movable panel, as set forth.

3. The combination of a burial casket; an open-center lid-frame hinged at one longitudinal side of said casket; a movable panel which in a horizontal position closes said open-center of the lid-frame, and which in a vertical position serves as the back-wall of a recess; woven fabric attached to said lid-frame and to the movable panel and forming the bottom, top and end-walls of said recess; and bars each of which has two parts that are movably connected together and one part attached to said lid-frame and the other part attached to the panel, whereby the said movable panel may be separated more or less from the lid-frame.

1,220,581. ADDRESSING ATTACHMENT FOR DUPLICATING-MACHINES. CHARLES E. ADAMSON, Buffalo, N. Y., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 7, 1914. Serial No. 875,856. (Cl. 101—56.)

1. The combination with a printing machine having a type-bed, of a pivoted auxiliary type-bed movable into and out of printing position, a series of printing units, resiliently biased means and means for actuating said resiliently biased means to deliver said printing units onto said auxiliary type-bed preparatory to each printing operation.

2. The combination with a printing machine having a main bed, a type form on said bed and an intermittently movable printing ribbon positioned over said type form, an auxiliary type-bed movable into and out of printing position underneath said printing ribbon, a series of printing units, resiliently biased means and means for actuating said resiliently biased means to deliver said printing units onto said auxiliary type-bed, said units adapted to gravitate from said type-bed when the latter is moved out of printing position.



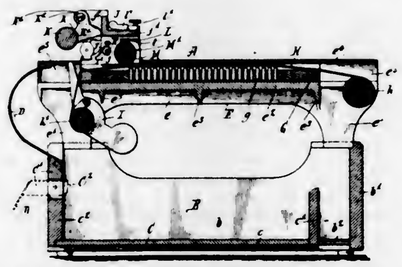
3. The combination with a printing machine having a main bed and a type form on said bed, of an auxiliary type-bed associated with said type form and movable into and out of printing position, a series of printing units, a resiliently biased shifter element and means for actuating said shifter element to successively feed said printing units onto said auxiliary type-bed.

4. The combination with a printing machine having a main bed and a type form on said bed, of a pivoted auxiliary type bed, means engaged by an operating part of said printing machine for causing movement of said auxiliary type bed into and out of printing position, a series of printing units, and a reciprocating shifter member spring-actuated in one direction and actuated in an opposite direction by movement of a part of said printing machine.

5. The combination with a printing machine having a type-bed, a type form on said bed, a carriage movable lengthwise on said bed and an impression roller rotatable in said carriage, of an auxiliary type bed, springs serving to retain said auxiliary type bed in normal or printing position, mechanism adapted to be actuated by said carriage to cause said auxiliary type bed to be moved out of printing position, a series of printing units, a shifting element spring retained in normal position, and connections between said shifting element and said carriage whereby the printing units are caused to be successively shifted onto said auxiliary type bed during certain movements of said carriage.

[Claims 6 to 27 not printed in the Gazette.]

1,220,582. DUPLICATING-MACHINE. CHARLES E. ADAMSON, Marion, Ind., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed June 14, 1909. Serial No. 502,039. Renewed Feb. 2, 1917. Serial No. 146,259. (Cl. 101—273.)



1. The combination of a type-bearing member, an impression-member coöperating therewith, an inking-device, a curved shield located at one end of said type-bearing member and pivotally secured to permit of its swinging downward, and paper delivery-mechanism adapted to move the printed paper against said shield and deliver the same underneath said type-bearing member.

2. The combination with a support having a paper-receiver, of a type-bearing member mounted on said support, above said paper-receiver, an impression-member coöperating with said type-bearing member, an inking-device, a curved shield located at one end of said support and pivotally connected therewith so as to swing thereon, and paper-delivery mechanism adapted to move the printed paper against said shield and deliver the same into said paper-receiver.

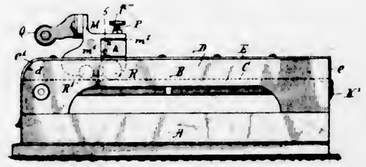
3. The combination of a type-bearing member, a carrier traversing said member, an impression-member journaled in said carrier, an inking-device, delivery-mechanism carried by said carrier and operatively related to said impression-member, a movable handle on said carrier operatively connected with said delivery-mechanism and said impression-member and adapted to cause the impression-member to be moved into and out of printing position and the delivery-mechanism into and out of delivering position.

4. A type-bearing member, a carrier traversing said member and having sides held against swinging movement, an impression roller journaled directly in said sides, and an inking device, the whole acting to print upon a sheet of paper; combined with a movable operating handle operatively connected with said impression-roller to cause the same to be moved into and out of printing position and to move said carriage relative to said type-bearing member.

5. The combination of a type-bearing member, a carrier traversing said member, an impression member mounted in said carrier and coöperating with said type-bearing member said impression member being adapted to be raised and lowered, a pivoted operating handle, a connection between said handle and said roller whereby the latter is caused to rise and lower independent of said carrier, an inking device and means controlled by said operating-handle for delivering the printed paper from said type-bearing member.

[Claims 6 to 22 not printed in the Gazette.]

1,220,583. DUPLICATING-MACHINE. CHARLES E. ADAMSON, Marion, Ind., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed June 14, 1909. Serial No. 502,040. Renewed Feb. 2, 1917. Serial No. 146,260. (Cl. 101—273.)



1. A duplicating machine comprising two members, one of said members having a type form provided with guides and the other being movable and having coöperating guides by means of which it is guided for movement in the guides of said first-mentioned member and also for bodily swinging movement, and an impression element carried by said movable member and adapted to be moved toward and from said type form when swinging said movable member.

2. The combination with a bed having a printing form thereon, of a carriage supported directly by said bed for movement relative thereto and having guide wheels thereon serving to guide it in its movements in lines conforming to the surface of said printing-form, said carriage being supported to tilt bodily on some of said guide-wheels and an impression roller rotatable in said carriage, the whole being arranged to bring said impression-roller into contact with said printing-form or to move the same away from said form when bodily tilting said carriage.

3. The combination with a frame having a printing-form thereon, of a carriage having guide means at its sides engaging said frame and adapted to be tilted bodily

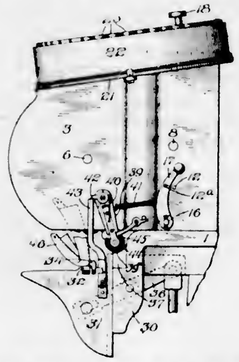
with said guide-means serving as pivotal points, and an impression-element supported by said carriage, and adapted to be moved toward or from said printing-form when bodily tilting said carriage.

4. The combination with a frame having a printing form thereon and provided with guide-means, of an impression-carriage, and an impression-roller rotatable in said carriage, said carriage having coöperating guide-means comprising a pair of alined rollers and said impression-carriage being capable of tilting bodily with said guide-means as pivotal centers so as to move said impression-roller into and out of printing position.

5. The combination with a bed bearing a type form, of a carriage supported directly by said bed and having an impression roller held against movement, other than rotary, independent of said carriage, said carriage being arranged for bodily reciprocating and swinging movement, said carriage being also adapted for hand operation and arranged to swing toward the type form when starting its movement in one direction and away from said type form when starting its movement in its opposite direction.

[Claims 6 to 15 not printed in the Gazette.]

1,220,584. MARKING-MACHINE. FRANK F. AKERLY, Chicago, Ill. Original application filed Aug. 3, 1914, Serial No. 854,746. Divided and this application filed Dec. 26 1914. Serial No. 879,034. (Cl. 101—99.)



1. A marking machine comprising a series of character-bearing wheels, independent actuating devices for said wheels, a carriage movable past said actuating devices, and means on said carriage adapted to operate on each of said devices when occupying a predetermined position relatively thereto to determine the position to which the corresponding wheel is to be moved.

2. A marking machine comprising a series of character-bearing wheels, independent actuating devices for said wheels, a carriage movable past said actuating devices, and means on said carriage for controlling said devices to determine the position to which a wheel is to be moved.

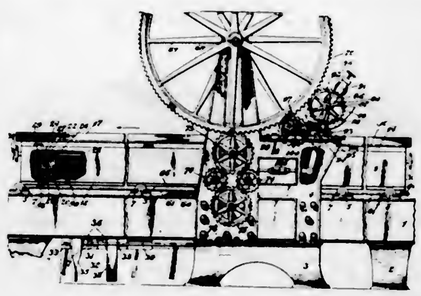
3. A marking machine comprising a series of character-bearing wheels, individual actuating devices for said wheels, a rotary carriage in proximity to said devices, and a plurality of controlling members arranged on said carriage and each adapted to be brought into controlling relation to each of said devices one at a time.

4. A marking machine comprising a series of character-bearing wheels, individual actuating devices for said wheels, a carriage movable past said actuating devices, and a series of stops differing in character from each other distributed along said carriage in position to be brought successively in position to limit the movement of each of said actuating devices when the carriage is moved.

5. A marking machine comprising a series of character-bearing wheels, independent actuating devices for said wheels, a carriage movable past said devices, and means on said carriage for controlling said devices to determine the positions to which the wheels are to be moved.

[Claims 6 to 19 not printed in the Gazette.]

1,220,585. PRINTING-MACHINE. WILLIAM M. BACON, St. Louis, Mo., assignor to Hamilton-Bacon Sign Company, Chicago, Ill., a Corporation of South Dakota. Filed Nov. 6, 1914. Serial No. 870,559. (Cl. 101—212.)



1. In a printing machine, the combination with a frame, a carriage mounted to reciprocate in a horizontal plane in said frame, a movable platen mounted in the carriage and adapted to be raised and lowered therein, a form cylinder supported in the frame and adapted to rotate above the platen, a fluid applying roller movable into and out of contact with the form cylinder, mechanism for reciprocating the carriage and for rotating the cylinder in unison, mechanism for moving the roller into contact with the cylinder when the carriage moves in one direction and out of contact with the cylinder when the carriage moves in the opposite direction, and means whereby the platen is elevated when the carriage moves in one direction and is depressed when the carriage moves in the opposite direction.

2. In a printing machine, the combination with a frame, a carriage mounted to reciprocate in a horizontal plane in the frame, a form cylinder journaled in said frame above the carriage and adapted to be rotated in opposite directions in conformity with the movement of the carriage, a platen mounted in the carriage, means for moving the platen into contact with the form cylinder when the carriage moves in one direction and out of contact with the form cylinder when the carriage moves in the opposite direction, a fluid applying roller adapted to move into and out of contact with the form cylinder, and mechanism for moving said fluid applying roller into contact with the form cylinder during the movement of the carriage in one direction and out of contact with the form cylinder during the movement of the carriage in the opposite direction.

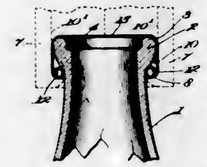
3. In a printing machine, the combination with a main frame, a carriage mounted in said frame and adapted to reciprocate thereon, a platen supported by said carriage, a form cylinder mounted in said frame and adapted to rotate above said platen, power mechanism for reciprocating said carriage, mechanism entraining said carriage and said form cylinder, automatic devices under the control of said carriage for reversing said power mechanism and automatic devices for alternately raising and lowering said platen, substantially as specified.

4. In a printing machine, the combination of a main frame, standards supported by said frame at each side thereof, a form cylinder journaled in said standards, a reciprocating carriage mounted in said frame below said form cylinder, a vertically adjustable platen mounted in said carriage, power mechanism entrained with and adapted to reciprocate said carriage, adjustable devices for controlling said power mechanism, and automatic devices under the control of said carriage for effecting the adjustment of said platen, substantially as specified.

5. In a printing machine, the combination with a main frame, a series of rollers supported by said frame, a carriage, rails formed on said carriage adapted to ride upon said rollers, a power driven shaft, flexible connections between said shaft and said carriage, power mechanism for driving said shaft and mechanism under the control of said carriage whereby said power mechanism is caused to impart to said shaft an alternating reciprocating motion, substantially as specified.

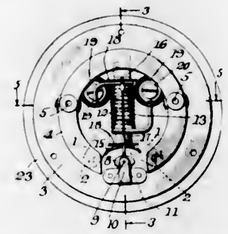
[Claims 6 to 20 not printed in the Gazette.]

1,220,586. PAPER CLOSURE FOR GLASS VESSELS. GEORGE W. BEADLE, New York, N. Y. Filed Apr. 8, 1915. Serial No. 20,090. (Cl. 215—9.)



The combination of a vessel having an interior shoulder and an exterior shoulder, and a paper cap provided with a disk fitting said interior shoulder, and having an integral spun hollow holding member located under said exterior shoulder, substantially as described.

1,220,587. ELECTRICAL MEASURING INSTRUMENT. WALTER E. BEEDE, New York, N. Y. Filed May 22, 1915. Serial No. 29,843. (Cl. 171—95.)



1. An electrical measuring instrument comprising a permanent magnet having opposed poles, a pivoted magnetic indicating armature in the field of the magnet and pivotally movable to give current indications at opposite sides of a zero point, an electric coil for deflecting the armature on its pivot in one direction or the other according to the direction of current through the coil, a magnetic core for the coil having a head extended transversely between the poles of the permanent magnet, and means for distorting the magnetic field so as to correct the current indications at both sides of the zero point.

2. An electrical measuring instrument comprising a permanent magnet having opposed poles, a pivoted magnetic indicating armature in the field of the magnet and pivotally movable to give current indications at opposite sides of a zero point, an electric coil for deflecting the armature on its pivot in one direction or the other according to the direction of current through the coil, a magnetic core for the coil having a head extended transversely between the poles of the permanent magnet, and a pivotally shiftable polar extension from one of the magnet poles for influencing the armature to give like current indications at opposite sides of the zero point.

3. An electrical measuring instrument comprising a permanent magnet having opposed poles, a pivoted magnetic indicating armature in the field of the magnet and pivotally movable to give current indications at opposite sides of a zero point, an electric coil for deflecting the armature on its pivot in one direction or the other according to the direction of current through the coil, a magnetic core for the coil having a transversely extended head forming a pole piece partly bridging the space between the magnet poles at the side of the armature, and a pivotally shiftable polar extension from each of the magnet poles for distorting the magnetic field so as to influence the armature to give correct current indications at both sides of the zero point.

4. An electrical measuring instrument comprising a permanent magnet having opposed poles, a pivoted magnetic indicating armature in the field of the magnet and pivotally movable to give current indications at opposite sides of a zero point, an electric coil for deflecting the armature on its pivot in one direction or the other according to the direction of current through the coil, a magnetic core for the coil having a transversely extended head forming a pole piece partly bridging the space between the magnet poles at the side of the armature, and a pair of independently pivotally shiftable magnetic adjusting members in the magnetic field for adjusting the instrument to give correct current indications at both sides of the zero point.

5. An electrical measuring instrument having, in combination, a permanent field magnet having opposed poles, a non-magnetic supporting plate for such magnet, and a pair of pivotally shiftable pole pieces forming polar extensions pivoted to the non-magnetic magnet supporting plate.

[Claim 6 not printed in the Gazette.]

1,220,588. LISTING DEVICE FOR STOCK-QUOTATION BOARDS. ELMER H. BEIDEMAN, Wheeling W. Va. Filed Aug. 17, 1916. Serial No. 115,543. (Cl. 40—142.)



1. A stock listing device comprising, in combination with a horizontally disposed supporting strip or molding, a plate bearing a stock designation and having a hook-like bead formed in its upper edge adapted to conformably and detachably engage said strip, said bead being pressed forward in advance of the plane of the body of the plate so that the latter rests closely against the surface which carries said strip.

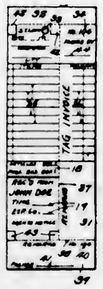
2. A stock-listing device comprising a supporting strip or molding adapted for mounting upon a stock-quotation board at the head of the vertical quotation columns, and a stock-listing plate of sheet-metal adapted to be removably mounted upon said strip and having a width less than that of the board, said plate having a strip-engaging hook at its upper edge formed by pressing the metal of its upper marginal edge forward in advance of its body so that the latter rests closely against the surface which carries said strip.

3. A stock-listing device comprising a supporting strip or molding having a convex front face and having its rear side constituted by two longitudinal plane surfaces disposed at an obtuse angle to each other, said strip being adapted for mounting upon a stock-quotation board with the lower of said plane surfaces seated against said board, and a stock-listing plate removably and slidably mounted on said strip, said plate having a hook-like forwardly projecting bead formed in its upper edge for conformably engaging said strip while its body rests closely against the board.

1,220,589. MANIFOLD INVOICE-SHEETS, EXPRESS RECEIPT, AND SHIPPING-TAG. ROBERT C. BENDER, St. Louis, Mo. Filed May 29, 1916. Serial No. 100,690. (Cl. 11—19.)

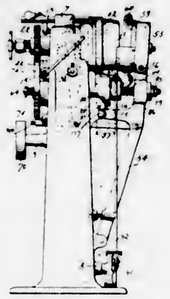
In a recording sales system, a series of separate and independent sheets of uniform size, said series comprising an original invoice sheet provided with printed headings

and spaces adapted to receive written data, a customer's invoice sheet printed with headings and provided with spaces which are identical with the headings and spaces on the original invoice sheet, an express receipt sheet printed with headings and provided with spaces which are identical with the headings and spaces on the original invoice sheet, and a separate and independent shipping tag printed with headings and provided with spaces which are identical with the headings and spaces on the



three previously mentioned sheets, said shipping tag being formed of material which is substantially heavier than the material in the three other sheets, and being provided with weakened lines whereby a predetermined portion of said tag bearing certain data can be readily detached from the main body of the tag, and to permit another predetermined portion of the tag bearing certain data to be folded into position behind the other portion when said tag is applied to a container.

1,220,590. MOLDING AND IRONING MACHINE. DANA H. BENJAMIN, Cleveland, Ohio, assignor to The Guggenheim Laundry Machinery Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 8, 1911. Serial No. 607,339. (Cl. 68—9.)



1. In a molding machine for turned down collars, a forming member for the complete collar, means for automatically folding and forming the collar upon said former, and means for simultaneously pressing the entire folded edge of the collar upon said former.

2. In a molding machine for turned-down collars, a cylindrical forming member, mechanism for automatically folding and forming the collar upon said former, and means for simultaneously pressing and ironing said collar upon said former.

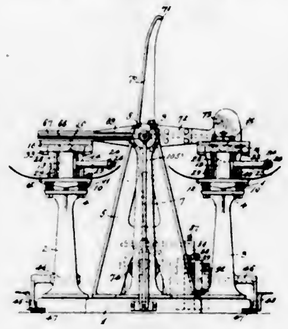
3. In a forming and ironing machine for turned down collars, a suitable former, means for gripping the collar and fitting it upon the former, means for folding the top portion of the collar against the former, and means for simultaneously pressing and ironing the entire folded edge against the former.

4. In a molding and ironing machine for turned-down collars, a former adapted for engagement between the top and the body portion of the collar, a feeding head mounted within said former and adapted to feed the collar onto said former, and means for turning the flap and finally pressing and ironing the entire folded edge of the collar.

5. In a forming and ironing machine for turned down collars, a cylindrical former, means for gripping the collar and fitting it upon the former, means for folding the top portion of the collar against the former, and means for simultaneously pressing and ironing the entire folded edge against the former.

[Claims 6 to 26 not printed in the Gazette.]

1,220,591. LAUNDRY MACHINERY. DANA H. BENJAMIN and JAMES G. ALBER, Cleveland, Ohio, assignors to The Guggenheim Laundry Machinery Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 22, 1914. Serial No. 840,192. (Cl. 68—9.)



1. In an ironing press, a pair of ironing boards mounted in a relatively fixed position, a movable ironing chest coöperating with both boards, means for equalizing the position of each board with respect to the chest whereby their meeting surfaces will contact uniformly throughout, means for moving the chest, and means for exerting an ironing pressure between the chest and each board.

2. In an ironing press, an ironing chest movably mounted, a pair of ironing board structures each comprising a standard, an ironing board, a longitudinally disposed curved ridge carried by one part and receiving a curved recessed member carried by the other part whereby the board may swing transversely to equalize itself to the chest, means for moving said chest, and means for exerting a pressure between each board and the chest.

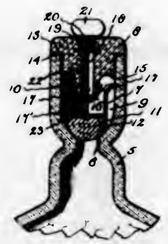
3. In an ironing press, an ironing board structure comprising an ironing board supporting member, a board slidably mounted upon said member, a neck band former comprising a main body portion fixed with respect to the support, and rear corner portions movable with the board, an ironing chest movable upon an axis in parallel alinement with the longitudinal axis of the board and having a neck band recess for receiving the neck band former, means for moving said chest, and means for exerting a pressure between the chest and the board.

4. In an ironing press, a frame, a pair of ironing boards supported thereby, a shaft mounted between and in parallel alinement with said board, an ironing chest mounted upon said shaft, suitable lever arms operatively connected to said chest to force the same in contact with the board, and means for engaging said arms to bring about said pressure.

5. In an ironing press, a frame, a pair of ironing boards supported thereby, a shaft mounted between and in parallel alinement with said board, an ironing chest mounted upon said shaft, a pair of diametrically opposed lever arms substantially ninety degrees with respect to the chest, and means for engaging one or the other of said arms and creating pressure between the chest and the board with which it is in engagement.

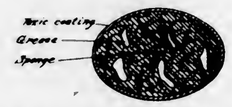
[Claims 6 to 13 not printed in the Gazette.]

1,220,592. NON-REFILLABLE BOTTLE. CARL BERG, Brooklyn, N. Y., assignor, by mesne assignments, to The Berg & Beard Manufacturing Co. Inc., a Corporation of New York. Filed Jan. 24, 1914. Serial No. 814,169. (Cl. 215—69.)



The combination with a bottle having a valve seat in the neck thereof, of a valve on said seat and having a tubular upper end, a bored plug adapted to close the mouth of the neck and provided with a reduced depending extension projecting into the tubular upper end of the valve, said extension having a lateral port and a vertical port communicating with the bore of the plug, and a combined stopper and valve holding member extending through the bore of the plug and projecting through the said vertical port into abutment with the valve to hold the latter on its seat.

1,220,593. RAT-EXTERMINATOR. CARL BERG, Brooklyn, N. Y., assignor to The Berg & Beard Manufacturing Company, Inc., Brooklyn, N. Y., a Corporation of New York. Filed Dec. 16, 1915. Serial No. 67,126. (Cl. 167—6.)



1. A rodent exterminator having the general appearance of scraps of meat and comprising sponge, animal grease, and a toxic substance, the sponge being saturated with the grease and the toxic substance forming a coating for the sponge.

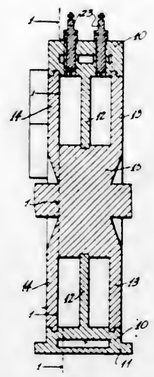
2. A rodent exterminator having the general appearance of scraps of meat and comprising sponge, animal grease and a mixture including barium carbonate and a vegetable substance in powdered form, the said sponge being saturated by the grease and the mixture forming the coating for the sponge.

3. A rodent exterminator having the general appearance of scraps of meat and comprising sponge, a baiting substance including a mixture of animal grease and meat and a toxic compound including barium carbonate and powdered vegetable matter, said sponge being saturated with the baiting substance and the toxic compound forming a coating for the sponge.

1,220,594. ROTARY ENGINE. MARTIN BETZLE, Prairie du Chien, Wis. Filed Oct. 15, 1915. Serial No. 56,051. (Cl. 123—17.)

1. A rotary engine comprising a cylindrical compartment having intake and exhaust ports, a flanged rotor journaled to rotate therein, the flanges of said rotor forming the cylinder heads, opposed compartments, one on the outer face of each flange, a swinging piston pivoted in each compartment, and a partition integral with said cylindrical compartment and having an abutment thereon engaged by said swinging pistons.

2. A rotary engine comprising a cylindrical compartment, a centrally disposed web having a radial abutment thereon, said web dividing the compartment into two similar apartments, each apartment being provided with an inlet and exhaust port, a spool-shaped rotor journaled



in the web, and a swinging piston pivoted on each flange of said rotor, the flanges of said rotor forming the heads of the respective cylinders.

1,220,595. ARTICULATED CONNECTION. WILLIAM A. BLACKBURN, Detroit, Mich. Filed Nov. 15, 1916. Serial No. 131,373. (Cl. 74—17.)

1. The combination, with a casing member and another member having a neck portion adapted to enter the first member for relative movement therewith, of a plate having a slotted portion about said neck portion, and another plate adapted to be secured to said first plate, for closing said slot.

2. The combination, with a casing member and another member having a neck portion adapted to enter the first member for relative movement therewith, of a plate having a slotted portion closely fitting about said neck portion and about said first member, respectively, and another plate adapted to be secured to said first plate, for closing said slot.

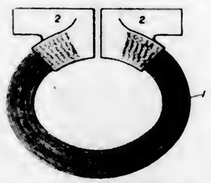
3. The combination, with a casing member and another member having a neck portion adapted to enter the first member for relative movement therewith, of a plate having a slotted portion closely fitting about said neck portion and about said first member, respectively, said plate partaking of relative movement between said members, and another plate adapted to be secured to said first plate, for closing said slot.

4. The combination, with a tubular casing member having an opening therein, of another member having a portion extending through said opening, said members being adapted for relative movements, a plate conforming to said tubular member and having a slotted portion about said portion of said second member, and means, comprising another plate, detachably secured in position over said slot.

5. The combination, with a tubular casing member having an opening therein, and another member having a portion extending through said opening, of a two-part cover plate exteriorly of and conforming to said tubular member and closing said opening.

[Claims 6 to 17 not printed in the Gazette.]

1,220,596. METHOD OF MANUFACTURING ELECTRICAL CONDUCTORS. WILLIAM P. BOYARD, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Sept. 27, 1916. Serial No. 122,417. (Cl. 29—169.)



1. The method of forming an electrical conductor having a flexible body member and two terminal members, consisting in forming a solid terminal having a groove therein with extended walls to form flanges to encircle and inclose the body member, inserting a portion of the body member in the groove and bending the flanges over onto the body member cold to encircle the body member, heating the parts and integrally uniting them together in a varying degree of intimacy, then cutting the solid terminal member forming thereby two oppositely disposed terminals.

2. The method of forming an electrical conductor having a flexible body member and terminal members which consists in forming a single terminal having a groove therein and extended flanges, pressing a portion of the body in the groove while cold, heating the parts and welding them into an integral union, then cutting the single terminal to form two oppositely disposed terminals attached to the ends of a flexible body.

3. A method of forming an electrical conductor having a flexible body and a terminal member at each end thereof, consisting in forming up a solid terminal consisting of two terminals in one and having a groove herein with extended walls to form flanges to encircle and inclose the body member and having a projection formed therewith for nattachment to a rail: inserting a portion of the body member in the groove and bending the flanges over onto the body member to encircle the body member; compressing the parts strongly together cold; heating the parts and welding them under pressure to form an integral union and then cutting the terminal member, forming thereby a conductor having a terminal at each end.

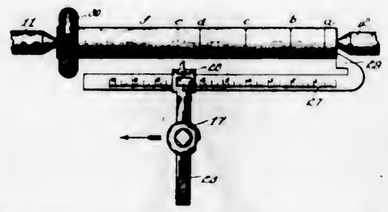
4. The method of forming an electrical conductor having a flexible body member and a terminal member on each end of the body, consisting in forming a body constituting a closed member by winding up strand until the desired capacity is secured, then forming up a single terminal member having a groove for receiving a portion of the body member, then compressing the body into the groove to secure internal contact, heating the parts and welding together and then cutting the single terminal to form two oppositely disposed terminals attached to the ends of a flexible body.

5. The method of forming an electrical conductor having a flexible body member and a terminal member on each end of the body, consisting in forming the body of a plurality of strands, then inclosing a portion of the body in a single terminal forging, compressing the forging about the body to form an intimate contact and expel the air, then heating the parts and welding them together in a varying degree of intimacy, then cutting through the single terminal forming thereby a terminal on each end of the flexible body.

[Claims 6 to 8 not printed in the Gazette.]

1,220,597. MARKER FOR LATHES AND THE LIKE. ROBERT F. BRACKE, Chicago, Ill., assignor of one-third to Albert G. McCaleb and one-third to Albin C. Ahlberg, Chicago, Ill. Filed May 3, 1915. Serial No. 25,421. (Cl. 33—44.)

1. A lathe tool comprising in combination with a lathe and tool post therefor of a marker carried by the tool post, and a straight scale slidably supported from the marker and extending horizontally therefrom along the edge of the work to be marked to designate the position of the marker relative to a point on the work located horizontally away from the marker.

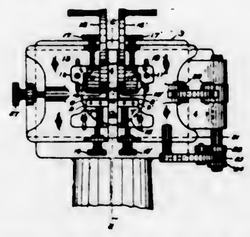


2. A lathe tool comprising in combination with a lathe and tool post therefor of a marker carried by the tool post, a straight scale slidably supported from the marker and extending horizontally therefrom along the edge of the work to be marked and a projection carried at one end of the scale arranged to engage one of the end faces of the work located horizontally away from the marker to designate the position of the marker relative to the engaged end face of the work.

3. A lathe tool comprising in combination with a lathe and tool post therefor of a marker, and a straight scale having sliding connection with the marker and extending horizontally along the edge of the work to be marked to designate the position of the marker relative to a point on the work located horizontally away from the marker, and devices for connecting one of said elements with the tool post.

4. A lathe tool comprising in combination with a lathe and a tool post therefor, a marker and a straight scale both supported by the tool post and slidable one with respect to the other, said scale being supported in a plane parallel to the plane in which the tool post operates and extending along the edge of the work to be marked to designate the position of the marker relative to a point on the work located away from said marker.

1,220,598. ELECTRIC WELDER. EDWARD A. BUCKMAN, Walkerville, Ontario, Canada, assignor of one-half to Elias H. Sellers. Filed Sept. 19, 1914. Serial No. 862,578. (Cl. 219—4.)



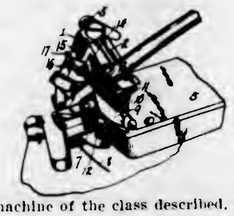
1. In an electric welding apparatus, a supporting member, a welding head journaled to rotate in said member and having welding electrodes movably mounted thereon, an electric transformer carried by said head to rotate therewith and electrically connected with said electrodes.

2. In an electric welding apparatus, a supporting case, a welding head journaled to rotate in said case, clamping jaws carrying welding electrodes movably mounted on said head, an electric transformer mounted on said head to rotate therewith and electrically connected with said electrodes.

3. In an electric welding apparatus, a supporting frame having a casing, a welding head journaled to rotate in said casing, a transformer mounted on said head and embraced by said casing, an adjustable carriage carrying clamping jaws and a welding electrode mounted on said head, a carriage carrying a welding electrode movably mounted on said head and movable toward and from said adjustable carriage, and electric conductors respectively connecting said transformer with said electrodes.

4. In an electric welding apparatus, a supporting member, a welding head journaled to rotate in said member and having electrodes movably mounted thereon, spot-welding arms detachably connected to said electrodes and movable therewith, an electric transformer carried by said head to rotate therewith and electrically connected with said electrodes.

1,220,599. BUTTON - PLACING - FINGER CONTROL. ALBERT W. BUEHLER, Toledo, Ohio, assignor to The Toledo Button Machine Company, Toledo, Ohio, a Corporation of Ohio. Filed Aug. 14, 1916. Serial No. 114,797. (Cl. 218—8.)

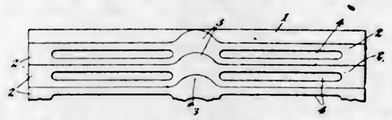


1. In a machine of the class described, a button placing finger, wire feed release means, and means coacting with said finger and first means to cause a raising of the finger from button engaging position during a retracting movement thereof.

2. The combination with a button placing finger in a machine of the class described, of an inclined cam surface below said finger intermediate its ends, and a dog pivoted to said finger for limited swinging movements relative thereto and operable at each rearward stroke of the finger to coact with said cam surface and raise the finger from button engaging position.

3. The combination, in a machine of the class described, of a button placing finger, a wire feed releasing cam having an inclined cam surface below said finger intermediate its ends and having predetermined movements imparted thereto by said finger when the finger is moved forward free from engagement with a button, and a dog pivoted to said finger for limited swinging movements relative thereto and operable at each rearward stroke of the finger to coact with said cam surface and raise the finger from button engaging position during a portion of such rearward stroke of the finger.

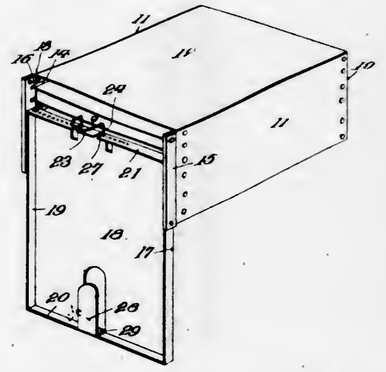
1,220,600. METHOD OF MAKING CELLULOID SPECTACLE-FRAMES. ALFRED BURKE, Brooklyn, N. Y. Filed Jan. 12, 1917. Serial No. 141,947. (Cl. 18—56.)



A method of making one piece spectable frames which consists in heating a sheet of celluloid; cutting a continuous series of long narrow strips from the sheet, the middle portion of each strip being shaped to form the bridge-piece of the frame; slitting the material at each side of the bridge-piece through part of its length; and spreading the material surrounding the slits, while in a plastic state, to the shape required to form lens supports.

1,220,601. ACCOUNTING-FILE. WILLIAM E. BURKS, Pittsburgh, Pa. Filed May 22, 1915. Serial No. 29,829. (Cl. 45—96.)

1. In a device of the character described, a cabinet including side walls and provided with a compartment, butt strips mounted upon the side walls and notched to provide sockets, a drawer slidably mounted in the compartment, a combined hinge and article retaining member carried by the drawer with the said retaining member normally disposed in active position within the drawer, and holding elements carried by said member, the drawer being movable within the compartment to engage said elements within said sockets for holding the hinge member against turning movement whereby the drawer may be swung about the axis of the hinge member to open position with the said retaining member disposed in inactive relation to the drawer.



2. In a device of the character described, a cabinet having a compartment, a drawer slidably mounted in said compartment, a hinge rod connected to the drawer and engaged with the cabinet for holding the said rod against rotation, and an article retaining member for the drawer carried by said rod and normally disposed in active position within the drawer to extend longitudinally thereof, the drawer being movable to shift the hinge rod to a position whereby the drawer may be swung upon the said rod away from the said member to open position with the retaining member disposed in inactive relation to the drawer.

3. In a device of the character described, a cabinet having a compartment, a drawer slidably mounted in said compartment, a hinge member carried by the drawer and provided with an article retaining element for the drawer, and terminal arms carried by said hinge member and engaging the cabinet for holding the said hinge member against rotation with the said retaining member normally disposed within the lines of the drawer, the drawer being shiftable to position the hinge member whereby the drawer may be swung to open position thereon with the said retaining member extending without the lines of the drawer.

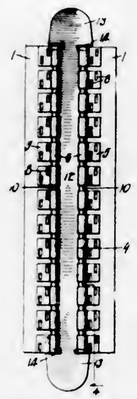
4. In a device of the character described, a cabinet having a compartment, a drawer slidably mounted in said compartment, and a hinge member carried by the drawer, said hinge member being formed from a length of material bent intermediate its ends to define a substantially U-shaped article retaining member for the drawer and having its extremities bent to define arms engaging the cabinet for normally holding the said retaining member in active position within the drawer, the drawer being shiftable to position said hinge member whereby the drawer may be swung thereon to open position with the said arms holding the hinge member against rotation to dispose the retaining member in inactive relation to the drawer.

5. In a device of the character described, a cabinet having a compartment, a drawer slidably mounted in the compartment, and a hinge member carried by the drawer and provided with an article retaining element therefor normally disposed in active position within the drawer, the said retaining element including resilient arms nor-

mally acting upon the hinge member to provide a yieldable connection between the drawer and the cabinet, the drawer being shiftable to open position upon the hinge member depending therefrom with the said retaining element disposed in inactive relation to the drawer.

[Claims 6 to 10 not printed in the Gazette.]

1,220,602. LACING DEVICE. EDWARD CAMPBELL, Windsor, Ontario, Canada, and GEORGE A. FAIR, Detroit, Mich. Filed Sept. 8, 1916. Serial No. 118,973. (Cl. 24—207.)



1. Means for lacing slitted garments comprising opposed lacing elements disposed in rows along the edges of the slit, each row of said lacing elements forming a longitudinal channel having a restricted entrance opening on the side adjacent the other row, an elastic key strip slidable longitudinally of the slit, said strip having edge ribs received in and conforming to said channels, whereby the edges of the garment may be drawn together to close the slit, said elastic key strip having a finger grip at each end arranged to co-act with the corresponding end elements of the rows to positively retain the strip in slit-closing position.

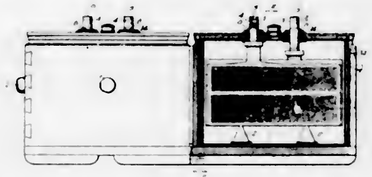
2. Means for lacing slitted garments comprising a pair of tapes adapted to be secured to the edges of the garment, inner metal strips disposed along the inner faces of the tapes and having out-turned edge ribs, outer metal strips disposed along the outer faces of the tapes and having transversely and outwardly bowed flanges the outer edges of which are spaced a short distance from the rib on the corresponding inner metal strip to form longitudinal channels, a key strip having marginal flanges slidable in the channels whereby the tapes may be drawn together, said key strip having means at its ends adapted to co-act with the ends of one of the metal strips to positively retain the key strip in slit closing position, said outer and inner metal strips being secured together by tongues that are struck from the inner strip and pass through the corresponding tapes.

3. Means for lacing slitted garments comprising opposed lacing elements disposed in rows along the edges of the slit, each row of said lacing elements forming a longitudinal channel having a restricted entrance opening on the side adjacent the other row, a flexible key strip slidable longitudinally of the slit, said strip having edge ribs received in and conforming to said channels, whereby the edges of the garment may be drawn together to close the slit, said flexible key strip having a finger grip at one end arranged to co-act with the end elements of the rows to retain the strip in slit-closing position.

4. Means for lacing slitted garments comprising opposed lacing elements disposed in rows along the edges of the slit, each row of said lacing elements forming a longitudinal channel having a restricted entrance opening on the side adjacent the other row, a key strip slidable longitudinally of the slit, said strip having edge ribs received in and conforming to said channels, whereby the edges of the garment may be drawn together to close the slit, and a continuous flexible metallic element, independent of the key strip, associated with the lacing elements of each row whereby they are held in proper alinement with reference to the adjacent members of the row of which they are a part.

5. Means for lacing slitted garments comprising a pair of tapes adapted to be secured to the edge portions of the garment, opposed lacing elements disposed in rows along the edges of the tapes, each row of lacing elements forming a longitudinal channel having a restricted entrance opening on the side adjacent the other row, a key strip slidable longitudinally of the slit, said strip having edge ribs received in and conforming to said channels, and continuous flexible metallic elements attached, respectively, to the lacing elements of the corresponding row, whereby said lacing elements are held in proper relative alinement.

1,220,603. STORAGE-BATTERY CONSTRUCTION. DAVID J. CARTWRIGHT, South Bethlehem, Pa. Filed Jan. 15, 1912. Serial No. 671,193. (Cl. 204—29.)



1. In a storage battery, in combination, a casing, a cover therefor, a plate inclosed by said casing and having a post extending through said cover, and a hard rubber band secured around said post and between the post and said cover.

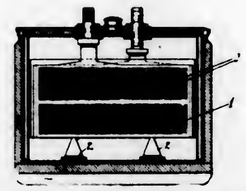
2. In a storage battery, in combination, a casing, a cover therefor, a plate inclosed by said casing and having a post extending through said cover, and a hard rubber band secured around said post and fitting snugly between the post and said cover.

3. In a storage battery, in combination, a receptacle having a lead lining, said lining having an enlarged portion at its upper end whereby a shoulder is formed, a cover for said receptacle, said cover having a flange resting on said shoulder and having its periphery extending adjacent the upper edge of said enlarged portion, the adjacent faces coöperating to provide means whereby the cover may be sealed with said lining, a post projecting through said cover, and a hard rubber bushing firmly embedded between said post and said cover.

4. A storage battery, comprising a receptacle having a lead lining, said lining having an enlarged portion at its upper end, whereby a shoulder is formed, a cover for closing said receptacle, said cover having a reinforcing flange resting on said shoulder and having its periphery extending adjacent the upper edge of said enlarged portion, the adjacent faces being beveled and fitting close together, whereby the joint may be readily sealed.

5. A storage battery, comprising a receptacle having a lead lining, said lining having an enlarged portion at its upper end, whereby a shoulder is formed, a cover for closing said receptacle, said cover having a reinforcing flange resting on said shoulder and having its periphery extending adjacent to the upper edge of said enlarger portion, the adjacent faces being beveled and fitting close together, whereby the joint may be readily sealed, and an annular chamber formed between said flange and the shoulder portion permitting the insertion of a knife in cutting through the seal to remove said cover.

1,220,604. STORAGE-BATTERY PLATE. DAVID J. CARTWRIGHT, Easton, Pa., assignor to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Feb. 21, 1916. Serial No. 79,563. (Cl. 204—29.)



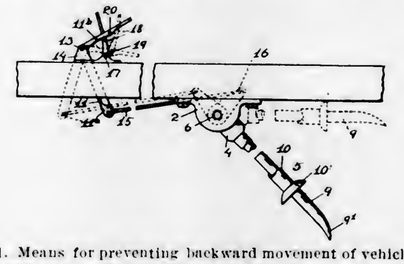
1. A Plante plate for storage batteries, said plate having vertical ribs on the surface to increase the superficial area thereof and being greater in width than in height whereby vertical growth of a plate of given capacity is lessened during continued service.

2. A Plante plate for storage batteries, said plate including a central conducting web or support having one of its linear dimensions greater than the other, and a plurality of vertical fins or ribs formed on each face of said central web to increase the superficial area of said plate, said vertical fins or ribs extending across the plate at right angles to the greatest linear dimension thereof.

3. In a Plante type storage battery, in combination, a Plante plate having vertical fins or ribs formed on each side of said plate, said vertical ribs being across the face of least diameter of the plate, a terminal lug located on one of the edges of the plate of greatest length, and a conducting web located between said ribs, said web being of the same dimensions as the plate.

4. A storage battery including an inclosing tank of greater length than height, a plurality of Plante plates arranged vertically within said tank, the vertical dimensions of said plates being less than the horizontal dimensions thereof, said plates being provided with a plurality of ribs or fins on both faces thereof, said fins extending vertically at right angles to the greatest dimension of said plate, whereby growth of said plate in proportion to the area thereof is lessened.

1,220,605. SPRAG. FRANK CAULKINGS, Hornell, N. Y. Filed July 20, 1916. Serial No. 110,345. (Cl. 21—8.)



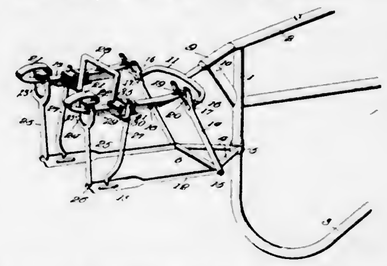
1. Means for preventing backward movement of vehicles, including a member rigidly secured to the frame of the vehicle and having branches spaced apart, and a sprag having an upper head pivotally engaged with said member between the branches thereof, said branches having a web connecting the same and extended over and fitting closely against the top of said upper head, to limit the angular movement of the sprag and form an effective backstop for the same.

2. Means for preventing backward movement of vehicles, including a member rigidly secured to the frame of the vehicle and having branches spaced apart, a sprag having an upper head provided with a squared aperture, and a shaft pivotally engaged with said branches and having a squared portion engaging said aperture, said branches having a web connecting the same and extending over and fitting closely against the top of said upper head to limit the pivotal movement of the spring and form an effective backstop for the same.

3. Means for preventing backward movement of vehicles, including a member rigidly secured to the frame of the vehicle and having branches spaced apart, a sprag having a heavy pointed lower end and hilt, a light tubular shank and an upper head pivotally engaged with said member between the branches thereof, said branches having a web connecting the same and extended over and fitting closely against the top of said upper head to limit the pivotal movement of the sprag and form an effective backstop for the same.

4. Means for preventing backward movement of vehicles, including a member rigidly secured to the frame of the vehicle and having branches spaced apart, a sprag having an upper head pivotally engaged with said member between the branches thereof, said branches having a web connecting the same, fitting closely against the top of said upper head and having an inclined wall limiting the pivotal movement of the sprag when in operative position, and means for maintaining said sprag in normally raised position capable of release by the driver to allow the sprag to fall to operative position including a lever having a catch and an operative connection with said shaft and a pivoted trigger having a hook normally engaging said catch.

1,220,606. SPRING-FRAME FOR MOTOR-CYCLES. HERBERT CHELSTROM, Turtle Lake, Wis., assignor of one-third to C. L. R. Dunberg, Turtle Lake, Wis. Filed June 23, 1914. Serial No. 846,834. (Cl. 208—94.)



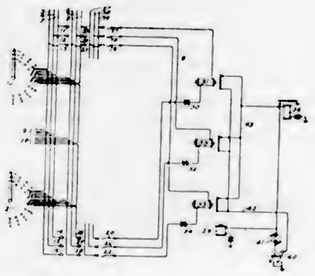
1. A device of the class described, including spaced counterpart frame sections connected to each other and each including a rigid member, a rigid member pivotally connected thereto and extending rearwardly therefrom, a rigid member secured to the second mentioned member and extending upwardly therefrom in nonparallel relation to the first mentioned member, and a leaf spring secured to the upper end of the first mentioned member and extending rearwardly and bowed and secured at the end of its bow to the last mentioned member, the second mentioned member being provided with means for connection to a wheel spindle.

2. A device of the class described, including spaced rigid members, means connecting the members, spaced rigid members pivotally connected to the lower ends of the first mentioned members and extending rearwardly therefrom, spaced rigid members connected pivotally to the rear ends of the second mentioned members and extending upwardly therefrom in nonparallel relation to the first mentioned rigid members, and a leaf spring connected to the upper end of each of the first mentioned rigid members and extending rearwardly and bowed and connected to the upper end of the corresponding one of the last mentioned rigid members, the second mentioned members being provided with means for connection to a wheel spindle.

3. A device of the class described, including spaced rigid members, means connecting the members, spaced rigid members pivotally connected to the lower ends of the first mentioned members and extending rearwardly therefrom, spaced rigid members connected pivotally to the rear ends

of the second mentioned members and extending upwardly therefrom in nonparallel relation to the first mentioned rigid members, a leaf spring connected to the upper end of each of the first mentioned rigid members and extending rearwardly and bowed and connected to the upper end of the corresponding one of the last mentioned rigid members, the second mentioned members being provided with means for connection to a wheel spindle, and a wheel-straddling yoke secured at the lower ends of its arms to the second mentioned rigid members and secured to the intermediate portions of the said springs.

1,220,607. TESTING ARRANGEMENT. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed July 24, 1916. Serial No. 110,968. (Cl. 179—175.)



1. An arrangement for testing for unstandard conditions in the multiple of a telephone exchange system, comprising a testing device adapted to operate differently in response to electrical conditions indicating standard and unstandard conditions, multiple connections, contacts associated with each end of such multiple connections, and automatic means for connecting such testing device with such contacts.

2. An arrangement for testing for unstandard conditions in the multiple of a telephone exchange system, comprising a testing device adapted to operate differently in response to electrical conditions indicating standard and unstandard conditions, sets of multiple connections, sets of contacts associated with such sets of multiple connections, and automatic means for successively connecting said testing device with such sets of contacts.

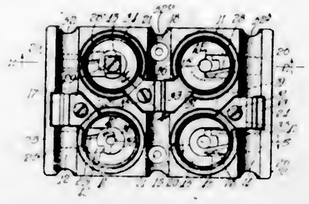
3. An arrangement for testing for unstandard conditions in the multiple of a telephone exchange system, comprising a plurality of multiple connections, contacts connected to each end of such multiple connections, a pair of brushes adapted to make contact with such contacts, a testing device associated with such brushes, and means for automatically bringing such brushes into operative relation with such contacts.

4. An arrangement for testing for unstandard conditions in the multiple of a telephone exchange system, comprising a test relay and a circuit for such test relay, including a multiple connection, and means controlled by the deënergization of such test relay for recording an unstandard condition.

1,220,608. ELECTRIC FITTING. JOHN CUTHBERT, Chicago, Ill. Filed July 26, 1915. Serial No. 41,827. (Cl. 175—274.)

1. A circuit connecting fitting comprising a block of insulating material having a plurality of depressions in its face, an equal number on each side of its median plane, for containing receptacles for current conducting devices and having three grooves in its face to receive wires, one groove in the median plane between a pair of depressions and one groove outside of said depressions on each side of said block.

2. A circuit connecting fitting comprising a block of insulating material having four depressions in its face, two on each side of its median line for containing receptacles for current conducting devices and having three grooves in its face to receive wires, one groove in the median plane between pairs of depressions and one groove beyond each pair of depressions.



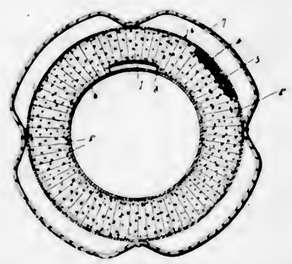
3. A support for a circuit connecting fitting comprising a block of insulating material having a depression in its face within which to contain receptacle connecting conductors for a current conducting device to be inserted therein and having a wire receiving groove in its face and a perforation under said groove through which to insert a wire into said depression.

4. A circuit connecting fitting comprising a block of insulating material having four depressions in its face, two on each side of its median line for containing receptacles for current conducting devices and having three grooves in its face to receive wires, one groove in the median plane between pairs of depressions and one groove beyond each pair of depressions and vertical grooves in its edges registering with the face grooves said block having legs whereupon to support the fitting to provide wire space therebelow.

5. A circuit connecting fitting comprising a block of insulating material having four receptacles in its face for current conducting devices, and having three grooves in its face to receive wires, one groove in the median plane between pairs of receptacles and one groove beyond each pair of receptacles and grooves in its edges registering with the face grooves and a wire clamping clip in the central face groove connecting receptacles on each side thereof and a clamping clip in each of the side grooves connected to the other receptacles, respectively, and a wire clamping binding screw in the center of each receptacle.

[Claims 6 to 10 not printed in the Gazette.]

1,220,609. LIFE-PRESERVER. GEORGE B. DAME, Brooklyn, N. Y. Filed May 26, 1916. Serial No. 100,102. (Cl. 9—17.)



1. A life preserver comprising series of circular cork slabs provided with their inner ends grooved, a hoop positioned within the grooves of the inner ends of the cork slabs, means surrounding the outer ends of the cork slabs for retaining them upon the hoop and in proper position, and means for securing a hand rope to the cork slabs.

2. A life preserver comprising a series of circular cork slabs provided with their inner and outer ends grooved, a continuous hoop positioned within the grooves upon the inner ends of the cork slabs, a rope positioned within the grooves in the outer ends of the cork slabs and provided with its ends secured together for retaining the cork slabs upon the hoop, a cover surrounding the cork slabs, and a hand rope secured to the cover at the outer ends of the cork slabs to form a hand hold.

3. A life preserver comprising a series of circular cork slabs provided with their inner and outer ends grooved, a hoop positioned within the grooves of the inner ends of the cork slabs, a second hoop positioned within the grooves of the outer ends of the cork slabs for retaining the cork slabs upon the first mentioned hoop, metallic bands surrounding the cork slabs and hoops, and a hand rope secured to the bands for forming a hand hold.

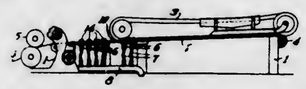
1,220,610. FOLDING WARDROBE. MICHAEL A. DARBY, Bergen, N. Y. Filed Feb. 18, 1915. Serial No. 9,138. Renewed Dec. 1, 1916. Serial No. 134,506. (Cl. 45—118.)



1. A folding wardrobe comprising a supporting element, a channeled base rail carried by and spaced away from said supporting element, lateral arms pivotally associated with said base rail and adapted to be folded thereinto, cross rods removably carried by said lateral arms, garment hangers carried by said cross rods, curtains supported by said lateral arms and adapted to be fastened together, a top frictionally retained in operative relation by said base rail and said supporting element, and a flap carried by said top for engagement with said curtains.

2. A folding wardrobe comprising a channeled base rail, castings formed with extensions carried at the ends of said base rail, lateral arms pivotally carried by said castings and releasably secured to said extensions, cross rods removably carried by said lateral arms and adapted when in inoperative position to be terminally disposed in said extensions, garment hangers releasably carried by said cross rods and straps carried by said base rail for engaging and supporting said lateral arms and cross rods when in folded or inoperative position.

1,220,611. FOURDRINIER MACHINE. ALBERT J. DAVIES, Kenogami, Quebec, Canada. Filed Jan. 5, 1916. Serial No. 70,402. (Cl. 92—45.)



1. In a machine of the Fourdrinier type, a fixed side rail with an opening; a cover plate overlying said opening and provided with a tongue adapted to loosely occupy said opening; a suction box adapted to be secured to said tongue; and means for transversely reciprocating said box.

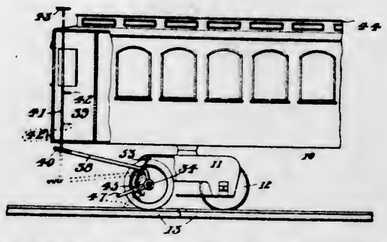
2. A fixed rail with an opening; a cover plate adapted to overlie said opening; a tongue fast on said plate and adapted to loosely occupy said opening; an anti-friction bearing for said plate; and means for causing reciprocating movements of said cover plate.

3. In a machine of the Fourdrinier type, a pair of side rails each provided with an opening; a suction box; a pair of cover plates overlying said openings and each provided with a depending tongue adapted to loosely occupy one of said openings; anti-friction bearings interposed between said rails and said cover plates; means for attaching said box to said tongue; and means for causing relative movement between said box and rails.

4. In a machine of the Fourdrinier type, a fixed rail; a suction-box; movable means for mounting said box in guided relation to said rail; and mechanism for transversely reciprocating said means.

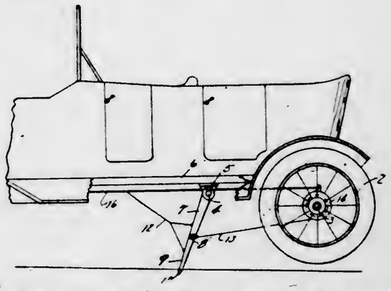
5. In a machine of the Fourdrinier type, a fixed rail; a suction-box; movable means, fast on said box, whereby said box is supported by said rail; anti-friction bearings for said means; and mechanism for transversely reciprocating said means.

1,220,612. SWITCH-OPERATING DEVICE. MICHAEL DERRECH, Cleveland, Ohio. Filed Aug. 2, 1916. Serial No. 112,751. (Cl. 104—171.)



A car carried switch operating means comprising in combination with an axle, spaced collars upon the said axle, a sleeve journaled upon the axle between the said collars, a forwardly projecting operating lever upon the said sleeve, a vertically arranged operating rod pivoted to the forward end of the said lever, a forwardly projecting housing carried by the said sleeve having a chamber therein, a tapered foot slidably arranged within the said chamber, resiliently positioned projection springs in bearing engagement inwardly of the said foot, and a retaining bolt carried by the said housing restrainingly arranged with respect to the said foot.

1,220,613. EMERGENCY-BRAKE. LOUIS DUFEK, Bremerton, Wash. Filed Aug. 21, 1916. Serial No. 115,920. (Cl. 21—8.)

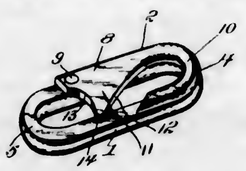


In the combination with a motor driven vehicle emergency braking means, said means including a brake bar pivotally mounted on the vehicle chassis, an extension brake bar hinged to the lower end of the first mentioned bar, and check line means for lowering and retaining the said brake bars in contact with the road surface, and power operated brake bar releasing means.

1,220,614. COUPLING-LINK. WILLIAM T. DURHAM, Ridge Spring, S. C. Filed Feb. 28, 1916. Serial No. 80,890. (Cl. 24—232.)

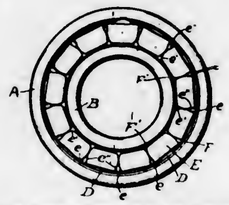
A coupling link comprising a link body having parallel sides and curved ends, one of said sides having an opening therein for the passage of a link, and a closure member for the link slot having a substantially triangular portion and a curved hook-shaped end, one corner of the triangular portion being pivoted to the link body adjacent the side opening, the outer side of the closure member lying flush with the outer side of the link body when the

parts are in locked position, one side of the triangular portion within the link body being abruptly concaved, and the other side thereof being curved continuously from the curved hook-shaped end, the free end of the triangu-



lar-shaped member overlapping the opposite parallel side of the link body whereby pressure upon the continuously curved side of the triangular portion will further hold the closure member in locked position.

1,220,615. BALL-BEARING. ANTON F. ENGLERTH, Chicago, Ill. Filed Jan. 2, 1917. Serial No. 140,075. (Cl. 64—59.)

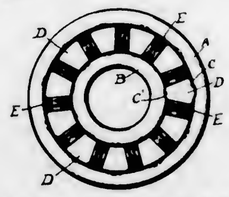


1. A ball bearing, comprising an inner and an outer ring respectively provided with raceways, balls arranged to travel in said raceways, in combination with individual separators respectively consisting of cylinders mounted on said balls with the axis of said cylinders on radial lines of said rings, and said cylinders contracted at one and expanded at the other of the open ends thereof.

2. A ball bearing, comprising an inner and an outer ring respectively provided with raceways, balls arranged to travel in said raceways, in combination with individual ball separators and retainers respectively consisting of cylinders mounted on said balls with the axis of said cylinders on radial lines of said rings, and cylinders contracted at one and expanded at the other of the open ends thereof, and also contracted between said expanded end and the ball therein to retain said ball in said cylinder.

3. In a ball bearing, a ball, in combination with a separator arranged to hold said ball, said separator consisting of a cylinder flaring outwardly at one end and inwardly at the other end, the length of said cylinder related to the diameter of said ball so that the bearing surfaces of the ball extend beyond the ends of the cylinder.

1,220,616. BALL-BEARING. ANTON F. ENGLERTH, Chicago, Ill. Filed Jan. 2, 1917. Serial No. 140,076. (Cl. 64—59.)



1. A ball bearing comprising rings provided with a plurality of raceways on adjacent faces and with transverse channels from the sides of said rings to said raceways, in combination with balls in said raceways and separators mounted on said balls, said separators respectively comprising an integral body provided with transversely extending cuts to obtain end parts and an intermediate spring part, and said end parts respectively provided with a recess fitting said balls.

2. A ball bearing comprising rings provided with raceways on adjacent faces and with transverse channels from the sides of said rings to said raceways, in combination with balls in said raceways and separators mounted on said balls, said separators respectively being of less width than the diameter of the balls, and provided with recesses on the ends thereof fitting on to the balls, said separators respectively comprising an integral body provided with transverse parallel cuts extending inwardly from opposite sides, to obtain end parts and an intermediate spring part.

3. In a ball bearing comprising balls and raceways for said balls, separators respectively consisting of an integral member provided with recesses at its ends and provided with parallel cuts from opposite sides thereof arranged to obtain end parts and an intermediate spring part.

1,220,617. FISHING SIGNALING APPARATUS. LYDA D. EVANS, Hearne, Tex. Filed Aug. 14, 1916. Serial No. 114,812. (Cl. 43—31.)



1. In a fishing signaling apparatus comprising, in combination with a fishing pole and a fishing line, a source of current and an electric light mounted on the butt-end of the pole, contact points carried by the small end of the pole, conductors connected to the contact points and adapted to coöperate with the fishing line for closing the circuit formed by the said conductors whereby the said light may be energized, the said means including a loop for receiving a portion of the line whereby each vibration of the said line is transmitted to the said means.

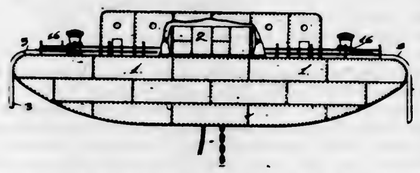
2. In a fishing signaling apparatus, the combination with a fishing pole and a fishing line, the said line diverging at right angles from the small end of the pole, a signal light and a source of current coöperating therewith arranged at the butt-end of the pole, contact points carried by the small end of the pole and insulated therefrom, a loop projecting at right angles from the pole and connected to one of the contact points, and a coil spring having one end connected to the opposite contact point and its opposite end associated with the said diverging portion of the fishing line, the said spring being projected from the said loop whereby a movement of the said line will cause the said spring to contact with the loop.

3. In a fishing signaling apparatus comprising, in combination with a fishing pole and a fishing line, a source of current and an electric light mounted upon the butt-end of the pole, a pair of insulating plates carried by the small end of the pole, contact points carried by the plates, the proximate faces of the said plates being engaged for holding the contact points at opposite ends of the plates, conductors connected to the source of current and to both the said contact points, and means connected to the contact points and adapted to coöperate with the fishing line for closing the circuit formed by the said conductors whereby the said light may be energized.

4. In a fishing signaling apparatus comprising, in combination with a fishing pole and a fishing line, a source of current and an electric light mounted upon the butt-end of the pole, a pair of insulating plates carried by the small end of the pole, contact points carried by the plates, the proximate faces of the said plates being engaged for holding the contact points at opposite ends of the plates, conductors connected to the source of current and to both of the said contact points, an eye loop extending through the said plates and connected to one of the said contact points, the looped portion being disposed at right angles to the plates, and a resilient element connected to the opposite contact point and extended through the loop for coöperation with the fishing line whereby a movement of the fishing line will cause the said resilient element to contact with the loop.

5. In a fishing signaling apparatus comprising, in combination with a fishing pole and a fishing line, a source of current and an electric light mounted upon the butt-end of the pole, a pair of insulating plates carried by the small end of the pole, contact points carried by the plates, the proximate faces of the said plates being engaged for holding the contact points at opposite ends of the plates, conductors connected to the source of current and to both of the said contact points, an eye loop extending through the said plates and connected to one of the said contact points, the looped portion being disposed at right angles to the plates, a coil spring having one end projected through the plates and connected to the opposite contact point, and a loop formed at the opposite end of the spring and associated with the said fishing line, the said spring being projected through the said loop.

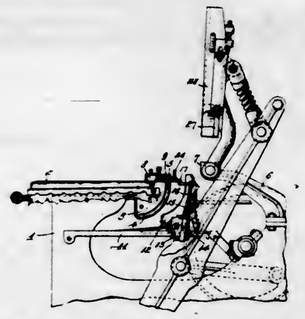
1,220,618. WAVE-MOTOR. HERBERT E. FISHER, San Francisco, Cal. Filed Feb. 14, 1916. Serial No. 79,453. (Cl. 230—32.)



The combination with a float having an air receiver thereon of a pair of hollow cone-shaped members; a flexible diaphragm consisting of radial members thereby forming a pressure chamber adapted to be normally compressed by the pressure of surrounding water; a covering of flexible fabric secured above the radial members; a second radial member interposed between the first mentioned members and the fabric and secured to every alternate radial member and overlapping each adjacent radial member thereby preventing pressure from forcing the fabric between the first mentioned members; suitable flexible connections between the air chambers and the air receiver on the float; and a suitable cable secured to each cone-shaped member and the diaphragm therefor and to each end of the float, and adapted to raise the diaphragm and thereby expand the compression chamber and to raise the cone-shaped member when said compression chamber is expanded, when that end of the float is raised by the action of waves.

1,220,619. IRONING-PRESS. LADBROOK H. FREEMAN, Cleveland, Ohio, assignor to The Guggenheim Laundry Machinery Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 5, 1912. Serial No. 707,887. (Cl. 68—9.)

1. In an ironing press, an ironing board, an ironing chest coöperating therewith, a neck band former arranged upon the board and having the rear portion of its periphery in alinement with the end of the board, means for pressing the yoke to form a folding line at the end of the board, and means for ironing the complete bosom and the portions of the yoke adjacent to the neck band to the folding line.



2. In an ironing press, an ironing board, an ironing chest coöperating therewith, a neck band former arranged upon the board and having the rear portion of its periphery in alinement with the end of the board, means for pressing the yoke to form a folding line at the end of the board, and means for ironing the portions of the yoke which lie between the curved back portion of the neck band former and the folding line.

3. In an ironing press, an ironing board, a neck band formed mounted thereon and adapted to conform to the natural configuration of the neck band, an ironing chest coöperating with the ironing board and having a recess therein having the curved forward edge and diverging side edges, means for establishing a folding line coincident with the back of the neck band, and means for ironing the angular portions of the yoke lying between the diverging edges of the recess of the chest, the folding line and the neck band.

4. In an ironing press, an ironing board, an ironing plate, an ironing chest, a neck band former, means for adjusting the neck band former to various sizes of neck bands, and means for ironing the back side yoke portions of a shirt, said portions lying adjacent to the back outer corners of the neck band.

5. In an ironing press, an ironing board, an ironing plate, an ironing chest, a neck band former, means for adjusting the neck band former to various sizes of neck bands, and adjustable side yoke ironers for ironing the back side yoke portions of a shirt, said portions lying adjacent to the back outer corners of the neck band.

[Claims 6 to 10 not printed in the Gazette.]

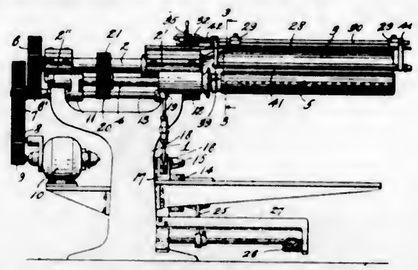
1,220,620. LAUNDRY-MACHINE. LADBROOK H. FREEMAN, Cleveland, Ohio, assignor to The Guggenheim Laundry Machinery Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 28, 1913. Serial No. 764,063. (Cl. 68—9.)

1. In combination, a platen member, a presser member, electrically operated means for bringing about a pressure between said members, and means in the entrance to said presser members for breaking the circuit of said electrical means, and co-extensive with the pressing members.

2. In combination with a stationary roll, a presser roll, means for driving said rolls, means for creating a pressure between said rolls, and a safety appliance for controlling the operation of the pressure creating means, and comprising a roll in the entrance to said rolls and adapted to be operated by the hand of the operator.

3. In combination with a stationary roll, a presser roll, means for driving said rolls, electrical means for bringing about a pressure between said rolls, and a safety appliance for releasing said pressure and com-

prising a roll in the entrance to said rolls and adapted to be operated by the hand of the operator, and a switch for said electrical means actuated by said roll.

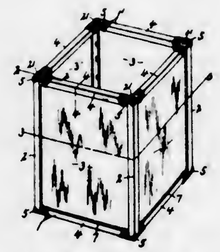


4. In combination with a stationary roll, a presser roll, means for driving said rolls, electrical means for bringing the presser roll into engagement with the stationary roll, a switch for controlling said pressure means, and a trip frame swung over the stationary roll and having a trip portion in the entrance to said rolls and adapted to be operated by the hand of the operator and adjacent to the presser roll.

5. In combination with a stationary roll, a presser roll, means for driving said rolls, electrical means for moving the presser roll into engagement with the stationary roll, and a safety appliance in the entrance to said rolls and adapted to be operated by the hand of the operator and comprising a trip frame suitably mounted and having a trip portion in the path of the hand of the operator and co-extensive with the stationary roll, a switch controlling the electrical presser moving means, connections between said switch and the trip frame whereby upon the operation of the trip frame the switch is open, and means for holding said trip frame in operative position with said switch closed.

[Claim 6 not printed in the Gazette.]

1,220,621. KNOCKDOWN BOX OR CRATE. ARTHUR C. FRIEDEL, Syracuse, N. Y. Filed Oct. 16, 1916. Serial No. 125,926. (Cl. 217—12.)



1. In a knock-down box or crate, the combination of separate sets of rails for the bottom and top of the box, respectively, upright posts for the corners of the box, corner plates, each embracing the adjacent ends of a corner post and rails, and tie-rods connecting corresponding corner plates.

2. In a knock-down box or crate, a bottom frame composed of separate rails, one for each side, and corner plates having channeled arms receiving the adjacent ends of the rails and provided with gripping members overhanging portions of the channels and rails for holding said rails in the channels, in combination with corner posts having their lower ends seated in said channels at the adjacent ends of the rails, a top frame resting on the upper ends of the posts, and tie-rods connecting the corner plates of the bottom frame with the corresponding corners of the top frame.

3. In a knock-down box or crate, the combination with a bottom frame having sockets at the corners, and posts at said corners having their lower ends seated in said sockets, of a top frame composed of separate rails, one for each side, corner plates having sockets and channels receiving, respectively, the upper ends of the posts and adjacent ends of the rails, and adjustable means for drawing the corners of both frames against the adjacent ends of the posts.

4. In a knock-down box or crate, a bottom frame, a top frame, and corner posts, each frame comprising a set of separate rails, one for each side of the box, and corner plates embracing the adjacent ends of the posts and rails, in combination with tie-rods connecting corresponding corner plates of both frames.

5. In a knock-down box or crate, a bottom frame, a top frame, and corner posts, each frame comprising a set of separate rails, one for each side of the box, and corner plates embracing the adjacent ends of the posts and rails, in combination with tie-rods connecting corresponding corner plates of both frames, and side panels connected at the corners between the posts and tie-rods.

[Claims 6 to 10 not printed in the Gazette.]

1,220,622. SNAP-FASTENER SOCKET. WILLIAM J. GALT, Jr., Philadelphia, Pa., assignor to The De Long Hook and Eye Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 30, 1915. Serial No. 69,338. (Cl. 24—218.)

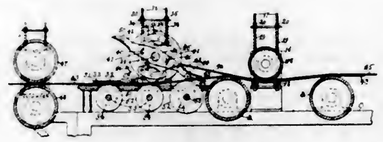


1. A reversible socket member for a snap fastener comprising plates arranged in general parallel relation to each other, the outer circumferential edge of one of said plates being bent transversely and inwardly to overlie the outer edge of the other of said plates whereby the said plates are secured together and each of the said plates having central openings in alinement or registry with each other the edges of said openings being bent inwardly toward each other whereby the head of the ball member may be inserted from either side, said openings forming the socket opening of said socket member, and a spring having portions extending in parallel relation to the said plate members and being clamped therebetween said portions cutting the said socket opening at diametrically opposed points, substantially as described.

2. A reversible socket member for a snap fastener comprising plates arranged in general parallel relation to each other, the outer circumferential edge of one of said plates being bent transversely and inwardly to overlie the outer edge of the other of said plates whereby the said plates are secured together and the said plates having central alined openings constituting the socket of said member, the edges of the openings in the respective plates being bent inwardly toward each other whereby the head of the ball member may be inserted from either side, and a yoke-shaped spring having its opposite ends seated against the inner surface of the circumferential bent edge above referred to, said spring being held between the said plates and the side portions of said spring cutting the socket opening of said socket member at diametrically opposed points, substantially as described.

1,220,623. FEEDING AND SPACING MECHANISM FOR METAL SHEETS. JAMES GARDNER, College Hill borough, Pa., assignor to Asbestos Protected Metal Company, Beaver Falls, Pa., a Corporation of Massachusetts. Filed Oct. 14, 1914. Serial No. 866,706. (Cl. 193—1.)

1. In a mechanism of the character described, in combination, a plurality of feed rolls to support a metal sheet, means for rotating said feed rolls, a presser roll to engage the upper surface of the metal sheet while supported by said feed rolls, a device for spacing successive metal sheets comprising a rotatable disk beneath which said metal sheets are passed to effect rotation thereof, and against which each succeeding sheet abuts to arrest the forward movement of each of said succeeding sheets, and a stop arm movable with said disk and engaged with a preceding metal sheet to prevent rotation of said disk by said preceding metal sheet until the rear end of said preceding sheet has passed under said arm and allowed the latter to be interposed between the rear end of the preceding sheet and the front end of the next succeeding sheet, substantially as described.



2. In a mechanism of the character described, in combination, a rotatable disk, a shaft on which said disk is mounted, a lever mounted on said shaft and having arms extended beyond the circumference of said disk to engage a metal sheet passing under said disk and stop rotation of the latter at each half turn of the said disk means for supporting said metal sheet as it passes below said disk, means for feeding said metal sheet beneath said disk, and means to cause a succeeding sheet to pass above the arm engaged with the metal sheet below said disk.

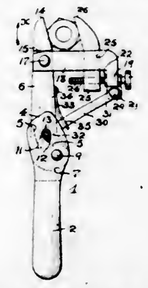
3. In a mechanism of the character described, in combination, a rotatable disk provided with a recess in its periphery, a roller located in said recess and mounted on said disk to revolve independently of the disk, a shaft on which said disk is mounted, an arm mounted on said shaft and extended beyond the circumference of said disk to engage a sheet passing under and in contact with said disk to prevent rotation of said disk, said roller and arm being arranged with relation to each other to engage the sheet on opposite sides of a vertical plane through the center of said disk, for the purpose specified.

4. In a mechanism of the character described, in combination, a rotatable device, a shaft on which said device is mounted, and an arm movable with said device and projecting beyond the same to engage a sheet passing under the said device and prevent rotation of said device until said sheet has passed from under said arm, means for supporting said metal sheet as it passes beneath said device, means for feeding said metal sheet beneath said device, means to cause a succeeding sheet to pass above said arm and engage said device, and yielding means to permit said device to be moved backward when engaged by said succeeding sheet, substantially as described.

5. In a mechanism of the character described, in combination, means for feeding in succession a plurality of sheets arranged with the front end of a succeeding sheet overlapping the rear end of a preceding sheet, means for feeding the preceding sheet independently of the first-mentioned feeding means, and a stop and spacing mechanism arranged between the said feed mechanisms and co-operating with both sheets simultaneously to arrest the feed of the succeeding sheet and to be moved by the preceding sheet so as to be interposed between said sheets to space them apart, substantially as described.

1,220,624. WRENCH. WILLIAM K. GIBSON, Newark, N. J. Filed Oct. 18, 1916. Serial No. 126,248. (Cl. 81—126.)

1. A wrench comprising a handle, a jaw-lever pivotally connected with said handle, said jaw-lever and said handle being provided with slots, a jaw-guide movably connected with said jaw-lever, a jaw movably mounted with relation to said jaw-guide, and means connecting said jaw-guide and the pivotally connected handle and jaw-lever consisting of a link pivoted at one end to said jaw-guide, and a pin at the other end of said link movably disposed in the slots of said jaw-lever and said handle to permit the wrench to be used in a ratchet-like manner.



2. A wrench comprising a handle, a jaw-lever pivotally connected with said handle, said jaw-lever and said handle being provided with slots, a jaw-guide movably connected with said jaw-lever, a jaw movably mounted with relation to said jaw-guide, means connecting said jaw-guide and the pivotally connected handle and jaw-lever consisting of a link pivoted at one end to said jaw-guide, and a pin at the other end of said link movably disposed in the slots of said jaw-lever and said handle to permit the wrench to be used in a ratchet-like manner, and a spring attached to said jaw-lever and coöperating with said means for normally maintaining a rigid relation between said handle and the jaw-lever.

3. A wrench comprising a handle having a bifurcated end-portion providing a pair of pivot-members, said pivot members being formed with elongated openings, a jaw-lever having one portion arranged between said pivot-members and pivotally connected therewith, said portion being provided with an elongated opening extending angularly across the openings in said pivot-members, a pin mounted in the openings of said pivot-members and the elongated opening of said jaw-lever, a jaw-guide movably connected with said jaw-lever, a jaw movably mounted with relation to said jaw-guide, and means between said jaw-guide and the pivotally connected handle and jaw-lever to permit the wrench to be used in a ratchet-like manner.

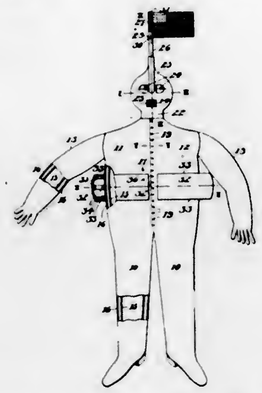
4. A wrench comprising a handle having a bifurcated end-portion providing a pair of pivot-members, said pivot members being formed with elongated openings, a jaw-lever having one portion arranged between said pivot-members and pivotally connected therewith, said portion being provided with an elongated opening extending angularly across the openings in said pivot-members, a pin mounted in the openings of said pivot-members and the elongated opening of said jaw-lever, a jaw-guide movably connected with said jaw-lever, a jaw movably mounted with relation to said jaw-guide, means between said jaw-guide and the pivotally connected handle and jaw-lever to permit the wrench to be used in a ratchet-like manner, and a spring attached to said jaw-lever and coöperating with said means for normally maintaining a rigid relation between said handle and the jaw-lever.

5. A wrench comprising a handle having a bifurcated end-portion providing a pair of pivot-members, said pivot members being formed with elongated openings, a jaw-lever having one portion arranged between said pivot-members and pivotally connected therewith, said portion being provided with an elongated opening extending angularly across the openings in said pivot-members, a pin mounted in the openings of said pivot-members and the elongated opening of said jaw-lever, a jaw-guide comprising a pair of guide-members formed with perforated end-portions, a pivot-pin for pivotally connecting said end-portions with said jaw-lever, a perforated lug-like extension connected with said guide-members, an adjusting screw rotatably mounted in said perforated lug-like extension against longitudinal movement, a jaw slidably mounted between and upon said guide-members, said jaw having a screw-threaded hole with which the screw-thread-

ed portion of said adjusting screw is in operative engagement, and means between the lug-like extension of said guide-members and the pivotally connected handle and jaw-lever to permit the wrench to be used in a ratchet-like manner.

[Claims 6 to 8 not printed in the Gazette.]

1,220,625. LIFE-SAVING SUIT. JOSEPH GRUDZIENSKI, Toledo, Ohio. Filed Oct. 26, 1916. Serial No. 127,775. (Cl. 9—20.)



1. A life saving suit comprising leg, body and arm sections of double wall construction, a hood section carried thereby, means for inflating the double wall sections, a mouth opening in the hood section, eye openings therein, the upper end of the hood section being of increased cross sectional area and having a cylindrical opening formed therein, a tubular member mounted in said opening, a screen covered ventilating opening in the upper end of the tubular member, a signal element carried by the tubular member, a belt carried by the body portion of the suit, wire reinforcing elements carried by the belt, independent means for inflating said belt, the body portion of the suit including an overlapping closure section, studs carried by the underlying flap of the closure section, longitudinal ribs carried by said flap at opposite sides of said studs, socket members for the reception of said studs carried by the adjacent face of the overlying flap member and longitudinal groove formed in the adjacent face of the overlapping flap adapted for the reception of the longitudinal ribs whereby a substantially water and air tight connection is presented.

2. A life saving suit having the body portion thereof of double wall construction, inflating means therefor, vent openings carried by the upper end of the body portion, an independently inflated belt section carried by the body portion, and wire reinforcing elements for said belt.

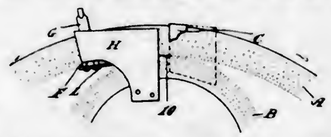
3. A life saving suit including a body portion, an inflated belt carried thereby, the inner walls of the belt being provided with beads, and reinforcing wires embedded in the beads.

4. A life saving suit including a body portion, an inflated belt carried thereby, the inner walls of the belt being provided with endless beads, and endless reinforcing wires embedded in the beads.

1,220,626. ATTACHMENT FOR CIRCULAR COMBS. SAMUEL HADFIELD, Lawrence, Mass., assignor of one-half to Gustave Buckitch, Lawrence, Mass. Filed Jan. 29, 1917. Serial No. 145,162. (Cl. 19—24.)

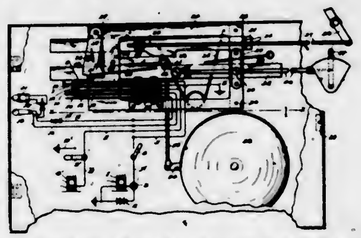
1. In a worsted comb having a large comb circle and a small comb circle tangentially disposed inside thereof, a tapering blade fixed to the frame of the machine, the tapering end extending between the large and small comb circles.

2. In a circular combing machine having a large comb circle and a small comb circle tangentially disposed inside thereof, and a dabbing brush plate proximate the tangential point between the two circles on the fiber receiving side thereof, a curved tapering blade fixed to the frame of the machine and extending under the dabbing brush plate into the space between the two circles as described.



3. In a circular combing machine the combination with a large comb circle of a small comb circle tangentially disposed inside thereof, and means between said circles and under the dabbing brush plate for preventing nolls, nips and dirt from falling between the circles and there accumulating to the injury of the work.

1,220,627. AUTOMOBILE-THIEF ALARM. WILLIAM H. HANSSEN, Denver, Colo., assignor, by mesne assignments, to V. J. Scholtz, Denver, Colo. Filed Sept. 27, 1915. Serial No. 52,762. (Cl. 177—314.)



1. In combination with an ignition system, a longitudinally adjustable and arcuately movable controller-arm, means coöperating with said arm for short circuiting the ignition system, and means coöperating with said arm for sounding an alarm, said first and second means acting simultaneously.

2. In combination with an ignition system, a longitudinally adjustable and arcuately movable controller-arm adapted upon arcuate movement to short-circuit the ignition system, and means coöperating with said arm for sounding an alarm.

3. In combination with an ignition system, a longitudinally adjustable and arcuately movable controller arm, means coöperating with said arm for short circuiting the ignition system, means coöperating with said arm for sounding an alarm, and slidable means for imparting arcuate movement to said arm.

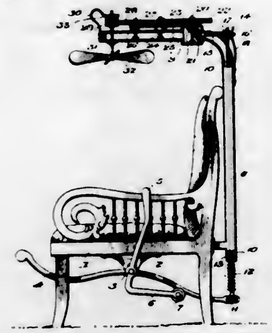
4. In combination with an ignition system, a longitudinally adjustable and arcuately movable controller-arm, means coöperating with said arm for short circuiting the ignition system, means coöperating with said arm for sounding a mechanically actuated alarm, means coöperating with said arm for sounding an auxiliary electric alarm, and slidable means for imparting arcuate movement to said arm.

5. In combination with an ignition system, an audible alarm circuit, a longitudinally adjustable and arcuately movable controller-arm adapted when moved to simultaneously short-circuit the ignition system and close said alarm circuit.

[Claims 6 to 13 not printed in the Gazette.]

1,220,628. FAN ATTACHMENT FOR CHAIRS. ALBERT EDMOND HAUSER, Pelican, La. Filed Aug. 25, 1915. Serial No. 47,254. (Cl. 230—7.)

1. In a fan attachment for chairs, the combination with a fan, of a shaft for operating said fan, a pinion removably secured on the shaft, a spring retaining device releasably receiving the end of the shaft, a collar on the shaft, said pinion being held against the collar by said spring retaining device, a rack engaging said pinion, and means for operating the rack.



2. In a fan attachment for chairs, the combination with a fan mounted to rise and fall, of operating means for said fan, and a friction governor-brake adapted to regulate the speed of the fan by the rise and fall of said fan.

3. In a fan attachment for chairs, the combination with a fan mounted to rise and fall, of operating means for said fan, and a leaf-spring governor having friction means adapted to engage the pinion to regulate the speed of the fan by the rise and fall of the latter.

4. In a fan attachment for chairs, a fan operating mechanism comprising a fan driving shaft, a pinion carried thereby, a reciprocatable rack adapted to engage the pinion, guiding means for said rack, a lever adapted to operate the rack, said lever being positioned so as to be free of the floor and operable without moving the chair, and a coil spring surrounding a portion of the rack and adapted to retract said rack and lever.

5. In a fan attachment for chairs, a rotary fan, multiplying gearing for operating said fan, a shaft for operating said gearing, a pinion carried by the shaft, a reciprocatable rack for operating the pinion, guiding means for said rack, spring means for retracting the rack, and cooperating hand operable and foot operable levers for operating the rack, said levers being adapted for individual or conjoint operation without moving the chair and both of them being positioned so as to be free of the floor.

1,220,629. SHOE-LACE-FASTENING DEVICE. MOSES L. HAWKS, New York, N. Y. Filed Aug. 18, 1916. Serial No. 115,703. (Cl. 24—117.)

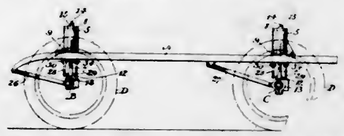


1. A shoe lace holder made in one piece, the main body portion having a central opening adapted to receive the looped ends of the lace, said body portion also being provided with arms extending outward from opposite sides thereof, each of said arm portions having an oblong opening or slot near their outer ends, said arm portions being bent inward so that their extreme ends will meet and form a wedge adapted to enter into the central opening between the bows of the lace and thus permanently secure the lace in said holder, as first described.

2. A shoe lace holder made in one piece, the main body portion having a central opening with small teeth formed at opposite sides thereof and adapted to receive the looped ends of the lace, said body portion also being provided with arms extending outward from opposite sides thereof, each of said arm portions having an oblong opening near their outer ends, said arm portions being bent inward so that their extreme ends will meet and form a wedge adapted to enter into the central opening between the bows of the lace and thus permanently secure the lace in said holder as described.

3. A shoe lace holder made in one piece, the main body portion having a central opening adapted to receive the loooped ends of the lace, said body portion also having arms extending outward from opposite side thereof, each of said arm portions having an oblong opening near their outer ends, said arm portions being bent inward so that their extreme ends will meet and form a wedge adapted to enter into the central opening between the bows of the lace and thus secure the lace in said holder, the extreme ends of the arm portions also being slightly bent outward over the bows of the lace substantially as shown and for the purpose specified.

1,220,630. AIR-CUSHION DEVICE FOR VEHICLES. RALPH VICTOR HAYES, Brooklyn, N. Y. Filed Aug. 17, 1911. Serial No. 644,610. (Cl. 267—50.)



1. A load-carrying device for the body of a vehicle embodying a cylinder and a coöperating piston provided with means for operatively connecting the same with a body and a running gear respectively, said piston being provided with an annular groove and with an internal chamber closed at the bottom thereof, said chamber and groove being adapted to contain a sealing liquid which is displaceable from the chamber by an increase in the pressure of the gaseous medium above the initial pressure, which increased pressure is due to a relative movement between the cylinder and the piston.

2. A load-carrying device for the body of a vehicle embodying a cylinder and a coöperating piston provided with means for operatively connecting the same with a body and a running gear respectively, said piston being provided with an annular groove and with an internal chamber for containing a sealing liquid, and means for displacing the sealing liquid operable by an increase in the pressure of the gaseous medium above the initial pressure established in said cylinder.

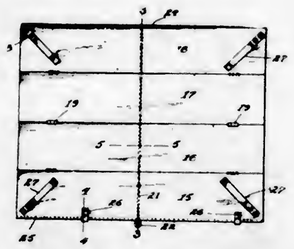
3. A load-carrying device for the body of a vehicle embodying a cylinder and a coöperating piston provided with means for operatively connecting the same with a body and a running gear respectively, said piston being provided with an annular groove and with a closed bottom chamber for containing a sealing liquid, means for establishing within the cylinder a gaseous shock absorbing medium the initial pressure of which is sufficient to sustain the weight of said vehicle body and its load, and a plunger carried by the piston for contact with the sealing liquid and exposed to an increase in the initial pressure of the gaseous medium for forcing the sealing liquid between the contacting surfaces of the cylinder and the piston.

4. A load-carrying device for the body of a vehicle embodying a cylinder and a coöperating piston provided with means for operatively connecting the same with a body and a running gear, respectively, said piston being provided with a chamber for containing a sealing liquid, and means operable by an increase in the initial pressure of the gaseous medium for forcing the sealing liquid between the contacting surfaces of the cylinder and the piston.

5. A load-carrying device for the body of a vehicle embodying a cylinder and a coöperating piston provided with means for operatively connecting the same with a body and a running gear, respectively, said piston being provided with an annular groove and with a central chamber for containing a sealing liquid, a plunger carried by the piston and operatively related to the liquid present in the

chamber, and means for yieldingly retaining the plunger in contact with the sealing liquid, said plunger being operable to displace the liquid by an increase in the pressure above the pressure initially established between the cylinder and piston.

1,220,631. FOLDING TABLE. WILLIAM HORACE HEFFNER, Spartanburg, S. C. Filed Mar. 5, 1915. Serial No. 12,325. (Cl. 45—46.)

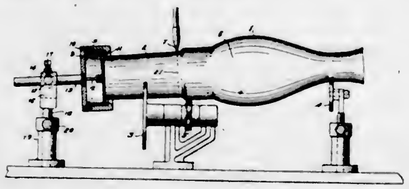


1. A folding table comprising a plurality of hingedly connected leaves provided with transverse bores, the bores of the several leaves being in longitudinal alinement when the leaves are extended, in combination with a stiffening rod adapted for insertion through said bores, said rod having at one end an eye constituting a handle which when the rod is in engagement with the bores of the leaves lies clear of the edge of one of the outermost leaves.

2. A folding table comprising a plurality of hingedly connected leaves having transverse bores which when the leaves are extended are in longitudinal alinement, one of the outermost leaves having a nut insert in the edge thereof in axial alinement with the bore, in combination with a stiffening rod adapted for insertion through said bores and having one end threaded for engagement with the nut and provided at the other end with an eye constituting a handle whereby it may be manipulated.

3. A folding table comprising a plurality of hingedly connected leaves and a stiffening rod adapted for coöperative engagement therewith, one of said leaves being provided near one edge thereof with a longitudinal groove and with keepers extending across said groove, said groove and keepers being adapted for retention of the stiffening rod when the table is folded or collapsed.

1,220,632. STOP MEANS FOR GLASS-SEPARATING DEVICES. HERMAN A. HEUPEL, Charleroi, Pa., assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 30, 1914. Serial No. 828,205. (Cl. 49—50.)



1. In combination, means for rotating a glass attached to another glass article about their common axis, a separating means adjacent the periphery of the glass, and a stop member for engaging the bottom of the glass on a line remote from its center and having a ball and socket mounting located at the axis of rotation of the glass.

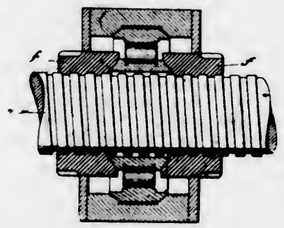
2. In combination, means for rotating a glass attached to a chimney with the axis thereof inclined downward toward the bottom thereof, a device for securing the separation of the glass and chimney located adjacent the juncture of the glass and chimney, and a stop plate mounted for rotation and adapted to engage the bottom of the glass.

3. In combination, means for rotating a glass attached to a chimney with the axis thereof inclined, a device for securing the separation of the glass and chimney located adjacent the juncture of the glass and chimney, and a stop plate mounted for rotation and for universal rocking movement and adapted to engage the bottom of the glass.

4. In combination, means for axially rotating a cylindrical glass article attached to a glass having a bottom extending transversely of the walls of the glass, a separating means adjacent the periphery of the glass and a stop member for engaging the bottom on a line remote from its center, the said member being mounted for rotary and rocking movement.

5. In combination, means for supporting a glass article attached to a glass having a bottom extending transversely of the walls of the glass, a separating means adjacent the periphery of the glass, a stop member for engaging the bottom of the glass on a line remote from its center adapted to be rotated by the glass, and means independent of the stop member for rotating the glass.

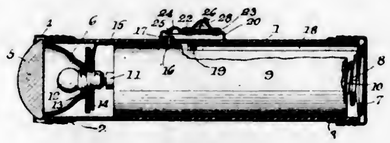
1,220,633. TWO-PART RACE FOR ROLLER OR BALL BEARINGS. CARL ALBERT HIRTH, Cannstatt-Stuttgart, Germany, assignor to Norma Compagnie G. m. b. H., Cannstatt-Stuttgart, Germany, a Corporation of Germany. Filed Mar. 19, 1912. Serial No. 684,828. (Cl. 64—39.)



1. A bearing having a two-part body, consisting of a pair of duplicate matching half-rings forming a race, each half ring having one of its meeting faces formed to a convexo cylindrical surface, and the other meeting face formed to a concavo cylindrical surface accurately matching with the convexo cylindrical surface, each of said meeting faces of each half-ring being curved at all parts thereof to the contour of a semicircle, and said meeting faces being coaxial, and also substantially normal to the race when the corresponding abutting convexo and concavo cylindrical meeting faces are pressed tightly against each other, the center of curvature of the semicircular half-ring being substantially in the median plane of the bearing.

2. A bearing having a two-part body, consisting of a pair of duplicate matching half-rings forming a race, each half-ring having one of its meeting faces formed to a convexo cylindrical surface and the other meeting face formed to a concavo cylindrical surface accurately matching with the convexo cylindrical surface, each of said meeting faces of each half-ring being curved at all parts thereof to the contour of a semicircle, and said meeting faces being coaxial, and also substantially normal to the race when the corresponding abutting convexo and concavo cylindrical meeting faces are pressed tightly against each other, the center of curvature of the semicircular half-ring being substantially in the median plane of the bearing, inclined portions at the exterior of the half-rings which are also coaxial when the half-rings are pressed tightly against each other, and screw-rings having beveled faces pressing on inclined portions of the matching half-rings for holding them firmly together coaxially both in radial and longitudinal direction.

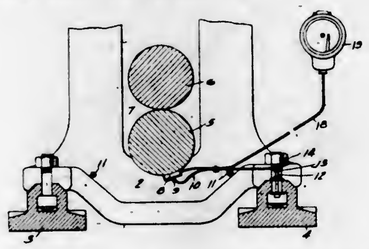
1,220,634. PORTABLE ELECTRIC LIGHT. CONRAD HUBERT, Hewlett, N. Y. Filed May 29, 1915. Serial No. 31,090. (Cl. 175—282.)



1. A circuit controller for a portable electric light having, in combination, an electrically conductive contact box provided with longitudinal guide slots and a longitudinal guiding ridge, and circuit completing means including a slide having guide lugs in the guide slots and having a longitudinal guide groove coöperative with the guide ridge on the contact box.

2. A circuit controller for a portable electric light having, in combination, a sheet metal contact box forming a housing and provided with guide slots and a guiding ridge for a slidable circuit-closing member, circuit completing means including a spring metal strip within the housing formed by the contact box and fixed at one of its ends thereto, so as to be supported upon and carried by the contact box, and such metal strip at its other end having a rounded push button projecting to the outside of the contact box, and a slidable circuit-closing member having combined guiding and attaching lugs engageable in the slots of the contact box and provided with a guide groove coöperative with the guide ridge on the contact box and slidable into or out of engagement with the push button thereby to effect the closing or the opening of the circuit.

1,220,635. TEMPERATURE INDICATING AND RECORDING APPARATUS. JOHN A. HUNTER, Ben Avon, and DEXTER EDGE, Pittsburgh, Pa., assignors to American Sheet and Tin Plate Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Jan. 12, 1915. Serial No. 1,800. (Cl. 73—52.)



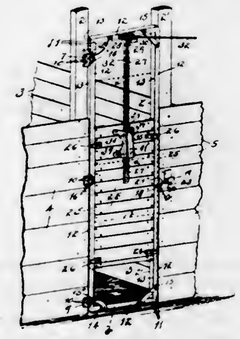
1. In apparatus for determining the temperature of rolls, the combination with a rotatable roll of a rubbing block, means for holding said rubbing block in yielding engagement with the roll surface, said rubbing block having an opening therein, a temperature measuring instrument within the opening in said block with the surfaces thereof in close contact with the walls of said opening, a temperature indicator or gage, and means operatively connecting the said indicator to said measuring instrument.

2. In apparatus for determining the temperature of rolls, the combination with a rotatable roll of an insulated rubbing block in frictional contact with the roll surface, said rubbing block having an opening therein, a temperature measuring instrument within the opening in said block with the surfaces thereof in close contact with the walls of said opening, a temperature indicator, means operatively connecting said instrument and indicator, yielding means for holding said rubbing block in contact with the roll surface, and means for adjusting said rubbing block relative to the roll surface to vary the force with which the block is held in frictional contact with the roll surface.

3. In apparatus for determining the temperature of rolls, the combination with a rotatable roll of a rubbing block, means for holding said rubbing block in yielding engagement with the roll surface, a temperature measuring instrument in operative engagement with the block, a remotely located temperature indicator, and flexible means operatively connecting the said indicator to said measuring instrument.

4. Apparatus for determining the temperature of rolls comprising a rubbing block having a curved surface arranged to contact with the revolving roll surface, said rubbing block having an opening therein, a temperature measuring instrument within the opening in said block with the surfaces thereof in close contact with the walls of said opening, a temperature indicator, means operatively connecting said instrument and indicator, and yielding means for holding said rubbing block in contact with the roll surface.

1,220,636. HOG-DOOR AND GATE. PERRY C. JAMES, Sciota, Ill., assignor to George G. Bayne, Bushnell, Ill. Filed Mar. 14, 1916. Serial No. 84,194. (Cl. 39—75.)



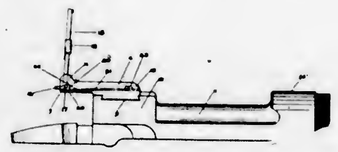
1. In a structure of the nature described, a stationary door-casing, a skeleton door-frame hinged to a vertical member thereof, a gate arranged to reciprocate vertically in the frame, a rack associated with the frame, a latch carried on the gate and adapted for engagements with the teeth of said rack, and means for releasing the latch and simultaneously elevating the gate.

2. In a structure of the nature described, a skeleton door-frame adapted to swing in a horizontal arc, a gate slidable vertically between the side-bars of said frame, a latch carried by the gate, a rack the teeth of which are adapted for engagement by said latch, a pulley arranged at the upper end of the rack, and a rope traversing said pulley and connected with the latch to operate the same.

1,220,637. REAR SIGHT FOR BOLT-ACTION SHOULDER-ARMS. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed July 10, 1916. Serial No. 108,516. (Cl. 33—57.)

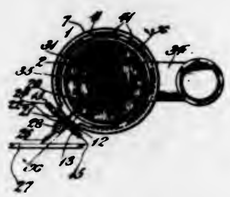
1. In a bolt-action shoulder arm, the combination with a receiver formed with an upwardly and laterally extending cartridge-charging and cartridge-ejecting opening, of a sight-base adapted at its forward end to be secured to the top-portion of the rear end of the said receiver at a point directly in the rear of the said opening and constructed to overhang the rear end of the said top-

portion of the receiver, and a sight-leaf pivotally mounted in the said sight-base.



2. In a bolt-action shoulder arm, the combination with a receiver formed with an upwardly and laterally extending cartridge-charging and cartridge-ejecting opening, and with a transversely arranged dovetail slot located directly in the rear of the said opening, of a rear-sight base formed at its forward end with a dovetail-rib adapted to enter the said dovetail-slot and having its rear end adapted to overhang the rear end of the top-portion of the receiver, and a sight-leaf pivotally mounted in the rear end of the said base.

1,220,638. SOUND-BOX. ALVA D. JONES, Philadelphia, Pa., assignor of one-fifth to E. Hayward Fairbanks, Merchantville, N. J. Filed Feb. 24, 1914. Serial No. 820,643. (Cl. 274—35.)



1. The herein described method of producing a sound box, which consists in assembling a diaphragm with respect to a body of plastic material, causing the outer portions of said material while in a plastic condition to inclose and engage the outer, front and rear surfaces of said diaphragm, whereby the latter is secured to said body during the act of casting and simultaneously casting the bearings for the stylus arm on said sound box body.

2. The herein described method of producing a sound box, which consists in assembling a sound box diaphragm with respect to a body of plastic material, and next causing outer portions of said plastic material to be compressed and be cast around the outer peripheral portions and front and rear surfaces of said diaphragm, whereby the latter becomes engaged with said body during the act of casting the latter.

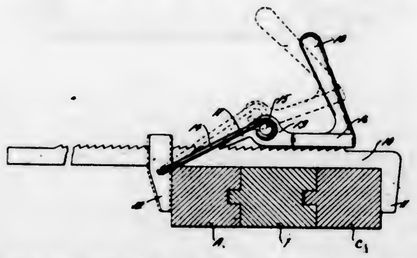
3. The herein described method of producing a sound box, which consists in producing the rear wall, outer peripheral and front portions of the sound box body, in a single operation and causing said sound box body to be cast through and to be interlocked at intervals with the outer peripheral portions of the diaphragm in one and the same casting operation.

4. The herein described method of producing a sound box, which consists in casting the rear wall, outer peripheral and front portions of the sound box body, and a rearwardly extending neck in a single operation, and causing portions of said sound box body to be interlocked with and at intervals to pass through the outer peripheral portions of the diaphragm in one and the same casting operation.

5. The herein described method of producing a sound-box, which consists in producing the rear wall, outer peripheral and front portions and the rearwardly extending neck of the sound-box body in a single operation while casting said sound-box body around the outer peripheral portions of a sound-box diaphragm and simultaneously therewith casting on said sound-box body the bearings for the stylus arm.

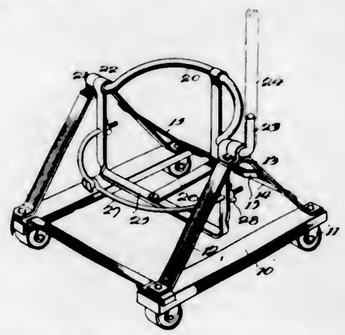
[Claims 6 to 18 not printed in the Gazette.]

1,220,639. CLAMP. ELIZABETH KAKELA, Seattle, Wash. Filed Apr. 5, 1916. Serial No. 89,110. (Cl. 144—303.)



A clamp comprising a rack one end of which terminates in a jaw, a coacting jaw slidably mounted on said rack, a cam terminating at one end in a handle, a tooth terminating the opposite end of said cam, a yielding member connected at one end to said slidable jaw, the other end whereof pivotally engages said cam mediate the tooth and handle, whereby when the handle is moved to bring the cam against the face of the rack the cam is held in such position and the slidable jaw is held in engagement with and pressed against the work.

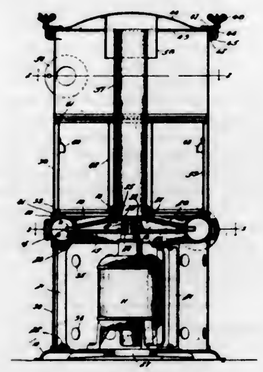
1,220,640. BARREL-STAND. WILLIAM H. KELLY, Frederick, Okla. Filed May 6, 1916. Serial No. 95,955. (Cl. 248—58.)



1. A device of the character described including a supporting structure having sills, means connecting the said sills adjacent one side of the said structure, anchoring plates associated with the said sills, a brace bar engaging said plates and extending between the sills adjacent the opposite side of the said structure, and a barrel receiving sling carried by said structure.

2. A device of the character described including a supporting structure provided with coacting brackets, a sling carried by said brackets and including a bowed rock shaft swingingly supporting the sling upon the said brackets with the bowed portion of the shaft open at one side of the supporting structure, a frame member depending from the shaft, and a flexible clamping member having adjustable connection at its extremities with the sides of said frame member in a plane below the plane of said shaft and arranged to extend away from the bowed portion of the shaft for engagement around a barrel seated upon said frame member and received within the bowed portion of the shaft.

1,220,641. VACUUM-CREATING AND DUST-SEPARATING MACHINE. BERT M. KENT, Washington, D. C., assignor, by direct and mesne assignments, to The Kent Vacuum Cleaner Company, Inc., Rome, N. Y., a Corporation of New York. Filed Aug. 26, 1913. Serial No. 786,749. (Cl. 183—37.)



1. In a vacuum creating and dust separating machine, the combination of a dust collecting chamber of circular form having a vertical axis and a horizontal tangentially arranged inlet opening whereby the air is given a cyclonic motion within the chamber, and a centrifugal fan rotating in the same direction as the air in said chamber and communicating with the chamber above the level of said inlet.

2. In a vacuum creating and dust separating machine, the combination of a dust collecting chamber of circular form having a vertical axis and a horizontal tangentially arranged inlet whereby the air is given a cyclonic motion within the chamber, a centrifugal fan rotating in the same direction as the air in said chamber, and means communicating with said chamber above the level of said inlet for conducting air from the chamber to said fan and arranged to maintain the cyclonic motion of the air until it reaches the fan.

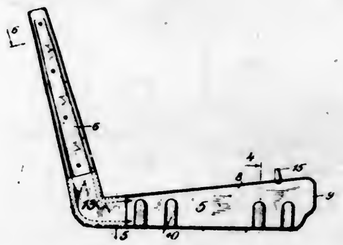
3. In a vacuum creating and dust separating machine, the combination of a dust collecting chamber of circular form having a vertical axis and a horizontal tangentially arranged inlet opening whereby the air is given a cyclonic motion within the chamber, a centrifugal fan rotating in the same direction as the air in said chamber and arranged at the bottom thereof, and a conduit opening into the upper part of said chamber above said inlet and having its lower end in communication with the inlet opening to said fan.

4. In a vacuum creating and dust separating machine, the combination of a dust collecting chamber of circular form having a vertical axis and a horizontal tangentially arranged inlet opening whereby the air is given a cyclonic motion within the chamber, a centrifugal fan rotating in the same direction as the air in said chamber, and there being an unscreened passage for the air from a point in said chamber above the level of said inlet to the fan whereby the cyclonic motion of the air is maintained and the air is permitted to enter the fan tangentially.

5. In a vacuum creating and dust separating machine, the combination of a vertical cylindrical dust separating chamber having a tangentially arranged inlet at an intermediate point in the side wall thereof, a removable cover for the top of said chamber, a pan in the lower part of the chamber adapted to receive the dust and vertically removable through the top of the chamber, vacuum creating means below said chamber, and a pipe extending upwardly in the center of said chamber to a point near the top thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,220,642. CAR-SEAT. JOHN EDWIN KILBURN, Philadelphia, Pa., assignor to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed Aug. 11, 1911. Serial No. 643,535. (Cl. 155—2.)



1. A car-seat comprising the combination of a pedestal, an arm formed of sheet-metal and having two integral portions one extending substantially horizontally and the other extending upwardly, said horizontal portion having a vertically-disposed body-portion and integral flanges at the upper and lower edges thereof, means for securing said lower flange to the pedestal, means for bracing said lower flange with respect to the body-portion, a seat-cushion mounted on said upper flange with its rear edge adjacent to but in front of said upwardly extending portion of the arm, means for reinforcing said arm at the junction of the two portions thereof, and a back-cushion of less length than the seat-cushion having its end secured to said upwardly extending portion of the arm, substantially as set forth.

2. A car-seat comprising the combination of a pedestal, an arm secured thereon having a substantially horizontal portion and an integral upwardly extending portion, and seat- and back-cushions secured upon said arm, said arm being formed of sheet-metal and having a vertically-disposed body portion throughout, integral flanges at the upper and lower edges of the horizontal portion, an integral flange at the rear edge of said upwardly extending portion, and means for reinforcing said arm at the junction of the two said portions thereof, said means consisting of a piece of sheet-metal united at its edges to the piece forming the arm, substantially as set forth.

3. In a car-seat, a cushion-supporting member formed of sheet-metal and comprising a horizontally-disposed portion and a back-supporting arm formed integral therewith and extending upwardly from one end thereof, said horizontally-disposed portion having an integral flange at its upper edge and said arm having an integral flange at its rear edge, a sheet-metal reinforce united to said member and making the same of box section at the angle therein, means for supporting said member, a seat-cushion mounted upon the flange on said horizontally disposed portion with its end extending beyond the same and said arm, and a back-cushion having its end secured to said arm and bearing against the flange thereon, substantially as set forth.

1,220,643. CARTON-HANDLING MACHINE. THEODORE E. KNOWLTON, Elba, and PETER H. MACCORQUODALE, JAMES H. WYCKOFF, CLARENCE H. RUSSELL, and JOHN N. TOOKER, Syracuse, N. Y., assignors to Church & Dwight Company, New York, N. Y., a Corporation of New York. Filed Aug. 14, 1913. Serial No. 784,753. (Cl. 93—44.)

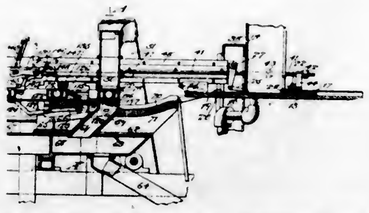
1. In a machine of the character described, means for feeding in a collapsed carton and suction means for fully opening up the carton and holding the carton open for a subsequent operation.

2. In a machine of the character described, means for feeding in a collapsed carton and suction means applied to the opposite sides of the carton for fully opening up the same and holding it open for a subsequent operation.

3. In a machine of the character described, means for feeding in a collapsed carton and suction means applied to

the upper and lower sides of the carton for fully opening up the same and holding it open for a subsequent operation.

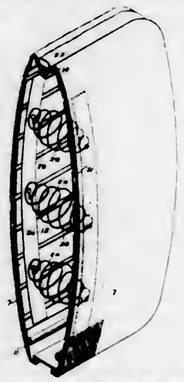
4. In a machine of the character described, means for feeding in a collapsed carton, suction means for fully opening up the carton and holding it open for a subsequent operation and mechanisms operating to fold and seal the flaps at one end of the carton.



5. In a machine of the character described, means for feeding in a collapsed carton, means for opening up the carton, a former traveling in an endless path and fluid pressure means for forcing the former into the opened carton at a predetermined point in its travel.

[Claims 6 to 78 not printed in the Gazette.]

1,220,644. BACK FOR CAR-SEATS. GEORGE B. KOHLER, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 9, 1914. Serial No. 817,696. (Cl. 155—2.)



1. The combination in a car seat back, of a main frame, the upper portion of the frame having a central groove therein and the lower portion of the frame having an undercut groove; a fabric covering adapted to the frame; a U-shaped bar adapted to clamp the fabric covering to the upper portion of the frame; and separate side and bottom plates adapted to clamp the fabric in the grooves in the lower portion of the frame.

2. The combination in a back structure, of a frame; the upper part of said frame having a recess and having a central groove therein; a bar fitting the recess but not extending into the groove; and a covering made in two sections secured together, the ends of the two sections which are secured together extending into the groove in the frame, said bar retaining the covering in the groove and forming a finish for the upper portion of the back.

3. The combination in the back of a car seat structure, of a frame; cover material; means for attaching the cover material to the exterior of the frame; a U-shaped cushion supporting plate having two side members and an integral connecting member, said connecting member being shaped to conform to the inner side of the upper portion of the frame and being held in position by said frame, the ends of the side members of the supporting plate being shaped to form an interlock, the lower portion of the main frame being also shaped to receive the interlocking portions of the supporting plate.

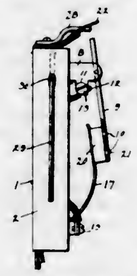
4. The combination in a car seat back, of a metallic frame having tapered undercut grooves at each side near the lower end and an undercut groove at the bottom; side clamping plates having undercut ribs adapted to the tapered side grooves of the frame; a separate clamping plate adapted to the bottom groove; a cover confined to the frame by said plates; and means for securing the upper section of the cover to the frame.

5. The combination in the back of a car seat, of a quadrangular frame, the upper portion of the frame having a groove therein; a U-shaped clamping bar covering the groove and extending on each side of the frame, the lower portion of the frame having undercut grooves; clamping bars arranged to enter said grooves; a two-part cover having a seam at the upper edge, one part being stitched to the other part face to face and forming an internally extending rib which enters the groove in the upper portion of the frame, the U-shaped bar covering the seam and the free ends of the covering extending into the grooves in the lower portion of the frame and held therein by the above mentioned clamping bars.

[Claim 6 not printed in the Gazette.]

1,220,645. [WITHDRAWN.]

1,220,646. CIRCUIT-CLOSER FOR FIRE-ALARMS. STEVEN J. KRANYAK, Duluth, Minn. Filed Feb. 29, 1916. Serial No. 81,194. (Cl. 200—33.)

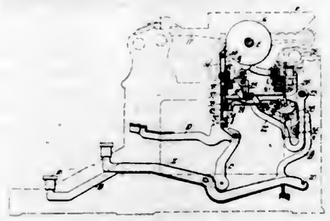


A circuit closer for fire alarms comprising a base, a contact arm pivoted to one end of the base, a spring normally tending to move said contact arm toward the base, a spring secured to the opposite end of the base and normally tending to move outwardly toward the contact arm, a block of insulating material which may be readily melted positioned between the free end of the contact arm and the free end of the spring, an auxiliary contact spring adapted to engage the opposite end of the contact arm and a pivoted hook engaging said spring and holding the same away from the contact arm and arranged so that when the hook is disengaged from the spring manually the said spring will move into engagement with the arm.

1,220,647. TYPE-WRITING MACHINE. ALFRED G. F. KUKOWSKI, Brooklyn, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 15, 1915. Serial No. 55,917. (Cl. 197—187.)

1. In a typewriting machine, the combination with a platen shiftable between upper and lower-case positions, of a line gage at the face of the platen to indicate the writing line thereon, a carriage in which the platen is supported for letter-feed movement with respect to the line gage, a device independent of the carriage for shifting the line gage to maintain the same line-indicating position of the gage at the platen in both case positions of the latter, and means for actuating said gage-shifting device when the platen is shifted.

2. In a typewriting machine, the combination with a platen shiftable between upper and lower-case positions, of a work-piece-holder bearing against the platen at the writing line, a carriage in which the platen is supported for letter-feed movement with respect to the said holder, a device independent of the carriage for shifting the holder to maintain a substantially constant relation of the holder to the platen in both case positions of the latter, and means for actuating the holder-shifting device when the platen is shifted.



3. In a typewriting machine, a platen carriage, a platen shiftable between upper and lower-case positions on the carriage, a plate coöperating with the platen at the printing line to enable proper typewriting, a rail along which the platen is driven when the carriage moves, means for shifting the rail to cause the platen to be thrown from one to another case position, and a connection from the rail to said plate whereby the latter is shifted with the platen in either direction to maintain the position of the plate relative to the printing line at the platen.

4. In a typewriting machine, a platen carriage, a frame on which the carriage runs, a platen shiftable between upper and lower-case positions on the carriage, a plate on said frame coöperating with the platen at the printing line to enable proper typewriting, a rail along which the platen is driven when the carriage moves, means for shifting the rail to cause the platen to be thrown from one to another case position, a device on said frame for shifting said plate, and a connection from said rail to the plate-shifter whereby the latter is actuated to shift the plate with the platen to maintain the position of the plate relative to the printing line at the platen in both case positions of the platen.

5. In a typewriting machine, a platen carriage, a platen shiftable between upper and lower-case positions on the carriage, a plate coöperating with the platen at the printing line to aid in the proper positioning of a work-sheet on the platen, a rail along which the platen is driven when the carriage moves, means for shifting the rail to cause the platen to be thrown from one to another case-position, a cam for shifting said plate, and a connection from said rail to the cam for actuating the latter when the platen is shifted, so that the relative position of the plate and the platen is maintained in both case positions of the platen.

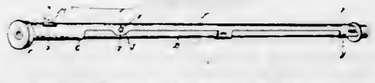
[Claims 6 to 23 not printed in the Gazette.]

1,220,648. MEANS FOR PREVENTING RATTLING AND LOST MOTION OF THE STEERING-ARMS OF FORD AUTOMOBILES. MOSES LEADER, Vidalia, Ga. Filed June 3, 1916. Serial No. 101,559. (Cl. 64—55.)

Means for preventing rattling and lost motion in the steering arms of automobiles, consisting of a member having at one end a boxing, said boxing having a perforation and a recess, said recess provided at one end with a semi-cylindrical wall, a hollow cylindrical bushing fitting in said recess against said semi-cylindrical wall, said bushing having a seat and being slotted throughout its length to provide two opposite halves having an integral spring joint, a block in said recess having a perforation and a semi-cylindrical grooved wall engaging said bushing, a set-screw having threaded engagement with said perforation of the boxing, bearing at its end against said block, having a reduced extension engaging the perforation of the block and at its extremity engaging said seat of the bushing.



1,220,649. MAGAZINE-BARREL FOR AIR-GUNS. CHARLES F. LEFEVER, Plymouth, Mich., assignor to Daisy Manufacturing Company, Plymouth, Mich., a Corporation of Michigan. Filed Mar. 31, 1916. Serial No. 87,944. (Cl. 124—11.)



1. The combination with a shooting barrel, of a channel member arranged parallel thereto and forming a shot-holding magazine having a lateral inlet at one end into the barrel, a spring-pressed follower in said channel, and a lug at one side of the channel apertured to form a fill opening for the magazine.

2. The combination with a shooting barrel, of a channel strip arranged parallel and secured thereto, forming a shot-holding magazine laterally communicating at one end with the barrel, a spring-pressed follower in said channel, and a tongue in one portion of said channel strip bendable to open and to subsequently close an entrance orifice for introducing said spring into said channel.

3. The combination with a shooting barrel, of a channel strip arranged parallel and secured thereto, and forming a shot-holding magazine laterally communicating at one end with the barrel, a bendable tongue adjacent to the opposite end of the channel strip, and a follower spring insertible into said channel when said tongue is bent outward and retained by the bending inward of said tongue.

4. The combination with a shooting barrel, of a channel strip arranged parallel and secured thereto, forming a shot-holding magazine laterally communicating at one end with the barrel, a follower, a spring for yieldably pressing said follower, and a shouldered nose piece engaging the end of said spring for facilitating the introduction of the same into said channel.

5. The combination with a shooting barrel, of a channel strip arranged parallel and secured thereto, forming a shot-holding magazine laterally communicating at one end with the barrel, a bendable tongue adjacent to the opposite end of said channel strip, a follower spring insertible through an opening disclosed by the barrel opening of said tongue and retained from displacement when said tongue is bent inward, and a shouldered nose piece at the end of said follower spring for facilitating the introduction of the same.

[Claim 6 not printed in the Gazette.]

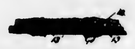
1,220,650. SEED-CORN RACK. THOMAS J. LE GORE, Jefferson, Iowa. Filed Mar. 7, 1916. Serial No. 82,562. (Cl. 34—26.)



1. A seed corn rack including a member adapted to be inserted into a cob, said member being curved whereby when the cob is rotated with relation to the member, an air space may be created.

2. A seed corn rack comprising a plurality of units, each unit having a substantially U-shaped member with portions extending downwardly from the arms of said U-shaped members, and having portions on the lower ends of said downwardly extending portions extending upwardly and away from each other, and adapted to be inserted into a cob, said last described portion being somewhat curved whereby when the cob is rotated with relation to said portions, an air space is created.

1,220,651. PROCESS AND APPARATUS FOR OBTAINING HYDROCARBONS FROM GASES. GERHARD LINDERBORG and WILLIAM B. SCOTT, Los Angeles, Cal. Filed Jan. 15, 1916. Serial No. 72,240. (Cl. 196—25.)



1. The process which consists in bringing natural gas containing gasolene, distillate or similar hydrocarbons of relatively low boiling point, into contact with a liquid consisting of an emulsion of water and a hydrocarbon of relatively high boiling point in such manner as to cause absorption of liquid hydrocarbon from the gas by said emulsion, and then treating the emulsion to separate the absorbed hydrocarbon therefrom.

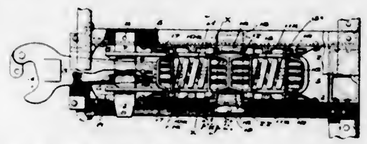
2. The process which consists in bringing natural gas containing gasolene, distillate or similar hydrocarbons of relatively low boiling point, into contact with a liquid consisting of an emulsion of water and a hydrocarbon of relatively high boiling point, in such manner as to cause absorption of liquid hydrocarbon from the gas by such emulsion, and then subjecting the emulsion to heat to separate therefrom the absorbed hydrocarbon, together with hydrocarbon derived from the emulsion.

3. The process of obtaining gasolene, distillate or like hydrocarbons from natural gas containing the same, which consists in causing the gas to flow past and in contact with an emulsion of hydrocarbon and water, in such manner as to cause liquid hydrocarbon to be absorbed from the gas by said emulsion, heating the emulsion to drive off the absorbed hydrocarbon, collecting the hydrocarbon so driven off, cooling the residue of the emulsion and utilizing such cooled residue in repetition of the process.

4. The process of separating a liquid hydrocarbon from gas containing the same, which consists in passing the gas through a body of filamentary material presenting sharp points, and simultaneously passing an absorbent liquid through said body of filamentary material, in such manner that liquid hydrocarbon is caused to be absorbed in such absorbent liquid.

1,220,652. BUFFING AND DRAFT GEAR. BENJAMIN FURMAN LIVELY, Lenoir City, Tenn. Filed June 17, 1916. Serial No. 104,249. (Cl. 213—42.)

1. In a buffing and draft gear, the combination of a frame, a coupler shank movable in the frame, pairs of followers mounted in the frame in tandem, stops on the frame for said followers, a separate element carried by the coupler shank, and springs interposed between said followers respectively, and coöperable in series on the initial buffing movement through the coupler shank and in parallel through the coupler shank and said element on the further buffing movement thereof.



2. In a buffing and draft gear, the combination of a frame, a coupler shank movable in the frame, a yoke member carried by the coupler shank, pairs of followers mounted in the frame in tandem, stops on the frame for said followers, and springs interposed between said followers respectively, and coöperable in series on the initial buffing movement through the coupler shank and in parallel through the coupling shank and said yoke member on the further buffing movement thereof.

3. In a buffing and draft gear, the combination of a frame, a coupler shank movable in the frame, pairs of followers mounted in the frame in tandem, stops on the frame for said followers, a separate element carried by the coupler shank provided with means for engaging both intermediate followers and adapted to move said followers in opposite directions, and springs interposed between said followers respectively, and coöperable in series on the the initial buffing movement through the coupler shank and in parallel through the coupler shank and said element; said coupler shank compressing the forward spring and the element compressing the rear spring through the means engaging the rear follower on the further buffing movement thereof.

4. In a buffing and draft gear the combination of a frame, a draw-bar movable in the frame, two pairs of followers mounted in the frame in tandem, stops on the frame for said followers, springs interposed between said pairs of followers respectively, and a pin interposed between the two intermediate followers and having loose engagement with the draw-bar; said followers and springs collectively coöperable in series on the initial movement of the draft bar, and said pin with the stops adapted to bring the springs to work in parallel on further movement of the draw-bar.

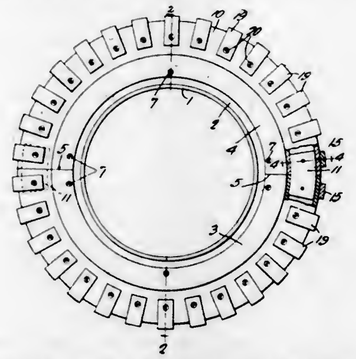
5. In a buffing and draft gear the combination of a frame, a draw-bar movable in the frame, two pairs of followers mounted in the frame in tandem, springs interposed between said pairs of followers respectively, stops on the frame normally engaging with the outer followers, stops on the frame intermediate of and spaced from the two inner followers, and a pin associated with said inner followers and having loose engagement with the draw-bar; said springs with the two inner followers coöperable in series on the initial movement of the draw-bar; and said pin with the intermediate stops adapted to bring the springs to work in parallel on the further movement of the draw-bar.

[Claims 6 to 8 not printed in the Gazette.]

1,220,653. AUTO-TIRE. GEORGE LOFFI, Garrett, Ind., assignor of forty-five one-hundredths to Frank E. Fluke, Garrett, Ind. Filed Dec. 16, 1915. Serial No. 67,214. (Cl. 21—207.)

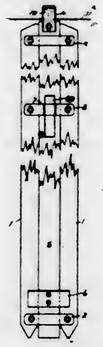
1. In a device of the class described, a tire composed of tubular members having openings in their sides; a plug inserted into the ends of the tubular members; fillers in the openings; tread strips extended transversely of the tubular members and overlapped upon the fillers; and securing devices passing through the tread strips and through the fillers, and entering the plug.

2. In a device of the class described, a tire comprising tubular members provided with openings in their sides; a plug having its ends mounted in the ends of the tubular members; tread strips applied to the tubular members and overlapped upon the openings; and securing devices passing through the tread strips and through the openings and entering the plug.



3. In a device of the class described, a tire comprising a tubular member having opposed openings; a cross member having its ends mounted in the openings; a tread strip having its ends overlapped upon the ends of the cross member; and securing devices passing through the tread strip and entering the ends of the cross member.

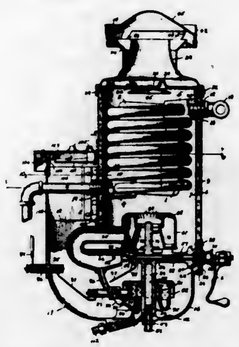
1,220,654. LINE-SUPPORT. TRUMAN R. LOTT, Houston, Tex. Filed June 20, 1916. Serial No. 104,786. (Cl. 68—12.)



A device of the character described including a frame composed of side members spaced apart, a rod slidable lengthwise between said members, bearings carried by the lower end of said rod, which slides on said side members, a bearing carried by the side members, a wedge in said bearing, an inwardly projecting tang carried by said wedge arranged to engage with the rod and hold the same in fixed position relative to the side members.

1,220,655. HEATER. STANISLAW J. LUKASZEWSKI, Detroit, Mich. Filed July 26, 1915. Serial No. 42,083. (Cl. 158—69.)

1. In a hydro-carbon burner, the combination of a valve body having a horizontal fuel discharge orifice, a valve within the valve body to control the flow of fuel, a burner ring mounted on said body, a U-shaped mixing tube having its arms in the same vertical plane with the upper arm connected into said burner ring and its lower arm in alinement with but spaced apart from said fuel orifice, a trough mounted below the valve body, means to conduct fuel thereto from the mixing tube, electric means to ignite said fuel, and a shield mounted below and extending across between said fuel orifice and the inlet end of the mixing tube to prevent the flame from the trough igniting the fuel at said orifice.



2. In a hydro-carbon burner, the combination of a valve body having a horizontal fuel discharge orifice, a valve within the valve body to control the flow of fuel, a U-shaped mixing tube having one arm in alinement with but spaced apart from said fuel orifice, a burner ring at the end of the other arm of said mixing tube, a fuel trough below said valve body, a tube to convey unvaporized fuel from the mixing tube to said trough, means to ignite the fuel in said trough, and means mounted below the mixing tube and the discharge orifice in the valve body and extending across the space between them to prevent the flame from the trough igniting the fuel at said orifice.

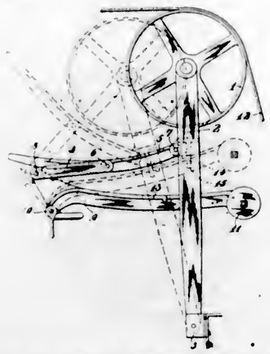
3. In a hydro-carbon burner, the combination of a valve body having a horizontal discharge orifice, a tube to feed fuel thereto, a valve to control the flow of fuel from said discharge orifice, a burner ring above said body, a U-shaped mixing tube having one arm connected into said burner ring and the other arm adjacent to but spaced apart from the fuel orifice, said mixing tube having a depressed portion adjacent its inlet opening, a fuel trough below the valve body, a drain pipe leading from the depressed portion of the mixing tube to said trough, an electric igniter mounted adjacent to said trough, and means mounted below the mixing tube and the discharge orifice in the valve body and extending across the space between them to prevent the flame from the trough igniting the fuel at said orifice.

4. In a hydro-carbon burner, the combination of a valve body having a horizontal fuel discharge orifice, a valve within the valve body to control the flow of fuel, a U-shaped mixing tube having one arm in alinement with but spaced apart from said fuel orifice, a burner ring at the end of the other arm of said mixing tube, a fuel trough below said valve body, a tube to convey unvaporized fuel from the mixing tube to said trough, means to ignite the fuel in said trough, and means to prevent the flame from the trough igniting the fuel at said orifice, said trough being formed with a drain whereby the height of the fuel therein is limited.

5. In a hydro-carbon burner, the combination of a valve body having a fuel discharge orifice, a valve within the valve body to control the flow of fuel, a tube to feed fuel thereto, a burner ring, a mixing tube having its outlet end connected into the burner ring and its inlet end adjacent to but spaced apart from the discharge orifice of the valve body, said mixing tube being formed with a depressed portion adjacent its inlet end, a trough mounted below the valve body, a tube to convey liquid fuel from said depressed portion of the mixing tube to said trough, means to ignite the fuel in the trough, and means to prevent the flame from the trough igniting the fuel at said orifice.

[Claims 6 to 8 not printed in the Gazette.]

1,220,656. BELT-TIGHTENER. EDWARD D. MACKINTOSH, Brooklyn, N. Y., assignor of one-half to S. S. Hepworth Company, New York, N. Y., a Corporation of New York. Filed Sept. 29, 1916. Serial No. 122,825. (Cl. 64—5.)



1. A pulley for pressing against a driving belt, a movable frame carrying the pulley, and means, including a bodily movable toggle, for moving the frame.

2. A pulley for pressing against a driving belt, a movable frame carrying the pulley, means, including a bodily movable toggle, for moving the frame, and means for holding the pulley back from pressing on the belt.

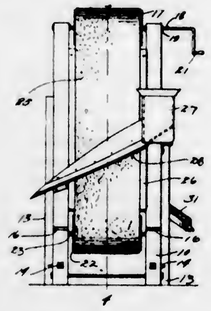
3. A pulley for pressing against a driving belt, a movable frame carrying the pulley, a lever, and a bodily movable toggle connecting the frame and the lever.

4. A pulley for pressing against a driving belt, a movable frame carrying the pulley, a weighted lever, and a bodily movable toggle pushed against the frame by the action of gravity on the lever.

5. A pulley for pressing against a driving belt, a movable frame carrying the pulley, a lever, a bodily movable toggle connecting the frame and the lever, and means for holding the pulley back from pressing on the belt.

[Claim 6 not printed in the Gazette.]

1,220,657. GRAIN-SEPARATOR. HENRY MAHRER, Milnor, N. D. Filed June 16, 1916. Serial No. 104,010. (Cl. 130—18.)



1. In a device for separating grain, an endless belt having a surface to which a certain portion of the grain will adhere, pulleys supporting the belt, a driving device for one of the pulleys, an open sided feed spout extending diagonally across the front of the belt with the open side facing the belt and the bottom in contact therewith, and means to remove the adherent grain from the belt arranged in spaced relation to the feed spout.

2. In a device for separating grain, an endless belt having a surface to which a certain portion of the grain will adhere, said belt being arranged at an angle to the horizontal, a feed spout extending diagonally downward across the upper flight of the belt, said spout having the side next the belt open and having its bottom in contact with the belt and at an angle across the belt surface.

3. In a device for separating grain, an endless belt having a surface to which a certain portion of the grain will adhere, said belt being arranged at an angle to the horizontal, a feed spout extending diagonally downward across the upper flight of the belt, said spout having the side next the belt open and having its bottom in contact with the belt and at an angle across the belt surface, and means beneath the upper flight of the belt arranged to hold the belt in engagement with the spout.

4. A scraper element for grain separators employing a belt, comprising a plate of metal having one end and the sides at right angles to each other, said end being adapted for engagement with the belt to scrape grain therefrom, the lower end of said plate being diagonally disposed with respect to the sides and being bent back toward the body of the plate to form a trough.

1,220,658. ABRASIVE AND POLISHING STRIP HOLDER. EDWARD J. MALONEY, Long Island City, N. Y. Filed June 19, 1916. Serial No. 104,375. (Cl. 51—1.)

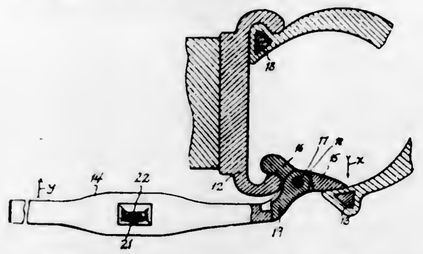


1. Means for mounting and holding abrasive strips and the like, consisting of a base or body portion providing a backing for the strip; a pivotally-mounted clamping jaw at one end of said base adapted to hold a strip thereto, and means to lock said jaw to securely retain the strip; a member adjustably mounted at the other end of said base and having an upwardly-projecting lug; a clamping jaw piece mounted over said lug to secure the other end of the strip to the said member; and means to lock said member and jaw together, the said members being adjustable as a whole with respect to the base; and means to lock the same in adjusted position to hold the strip taut.

2. Means for mounting and holding abrasive strips and the like, consisting of a channel-shaped base, over the face of which is adapted to be mounted a strip, one end of same being turned over the end of the base, the walls of the channel member at said end being cut away; a clamping jaw pivotally mounted in the walls of said base, and means to lock said jaw to the base to clamp the turned-over end of the strip; and means adjustably mounted with respect to said base to secure the other end of the strip and lock the same with respect to said base to hold the strip taut.

3. Means for mounting and holding abrasive strips and the like, consisting of a channel-shaped base, over the face of which is adapted to be mounted a strip, the outer end of same being turned over the end of the base, the walls of the channel member at said end being cut away; a T-shaped clamping member pivotally mounted in the walls of the channel, the head of the T being adapted to engage the turned-over end of the strip to clamp the same to the base, and a cam lever engaging the leg of the T to effect the locking of said strip; and means to retain the other end of said strip and lock the same to the base, comprising a sliding member adapted to move on the face of the base and provided with a lug and with sides extending over the walls of said base; a slotted clamping member or jaw piece mounted over the said lug, and means pivotally attached to the lug to lock said jaw to the said sliding plate to retain the other end of the strip; and a locking lever engaging said sliding member to lock the same to the base to hold the strip taut.

1,220,659. TIRE-TOOL. CONRAD B. MANSBACH, Brockton, Mass., assignor of one-third to Frank L. Price and one-third to Frank A. Carlson, Brockton, Mass. Filed June 19, 1916. Serial No. 104,374. (Cl. 157—6.)



1. A tire tool comprising a handspike one end of which is tapered, and a member constituting a lug and an arm having angular relation to each other, said member being pivoted substantially midway of its length to the handspike, adjacent said tapered end, a portion of said pivoted member being arranged to abut against a portion of said handspike to limit oscillation of said pivoted member and said handspike relatively to each other.

2. A tire tool comprising a handspike one end of which is tapered, and a member pivoted to said handspike, near said end, said pivoted member constituting a lug and an arm having angular relation to each other, the arm of said pivoted member being arranged to contact with two spaced-apart portions of said handspike to limit oscillation of the pivoted member and the handspike, relatively to each other, in opposite directions.

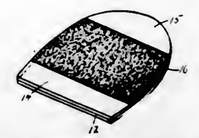
3. A tire tool comprising a handspike one end of which is tapered, and a member pivoted to said handspike, near said end, said pivoted member constituting a lug and an arm having angular relation to each other, the arm of said pivoted member being arranged to coact with the tapered end of said handspike to form a pair of jaws arranged to receive between them the bead of a tire shoe, said arm and handspike each having a portion arranged to abut a portion of the other to limit closing movement of said jaws.

4. A tire tool comprising a handspike one end of which is tapered, and a member pivoted to said handspike, near said end, said pivoted member constituting a lug and an arm having angular relation to each other, the arm of said pivoted member being arranged to coact with the tapered end of said handspike to form a pair of jaws arranged to receive between them the bead of a tire shoe when the handspike is inserted between such bead and a rim flange, said lug having a portion arranged to be engaged by such rim to limit opening movement of said jaws.

5. A tire tool comprising a handspike having an offset portion the free end of which is tapered, and a member pivoted to said handspike, near said end, said pivoted member constituting a lug and an arm having angular relation to each other, said lug having a concave portion arranged to engage a member capable of acting as a fulcrum, and said arm having a portion arranged to abut said handspike so that the handspike and lug may be moved angularly, in unison, about such fulcrum member.

[Claims 6 to 14 not printed in the Gazette.]

1,220,660. COMPOSITE HEEL. CONRAD B. MANSBACH, Brockton, Mass., assignor of one-half to Frank L. Price, Brockton, Mass. Filed Nov. 20, 1916. Serial No. 132,305. (Cl. 36—34.)

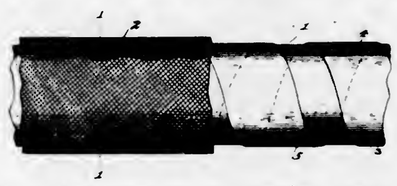


1. A composite heel, comprising a heel-shaped nail-receiving crib composed of relatively narrow elongated lift members assembled to form solid crib portions and intermediate crib portions containing crevices, and a filling occupying the said crevices and the space bounded by the crib, and adapted to harden from a plastic condition, said filling being applied when plastic.

2. A composite heel, comprising leather lift members assembled to form a heel-shaped nail-receiving crib, the end portions of said members being in overlapping contact and forming solid portions of the heel, while intermediate portions of the members are separated by crevices, and a filling occupying the said crevices and the space bounded by the crib and adapted to harden from a plastic condition, the said filling being applied when plastic.

3. A composite heel, comprising a heel-shaped nail-receiving crib composed of relatively narrow elongated lift members assembled to form solid crib portions and intermediate crib portions containing crevices, a filling occupying the said crevices and the space bounded by the crib, and adapted to harden from a plastic condition, said filling being applied when plastic, and a continuous lift secured to one side of the heel and covering the portion of the filling which occupies the said space.

1,220,661. FIRE-HOSE. ROBERT MANY, Oak Park, Ill. Filed Feb. 1, 1915. Serial No. 5,410. (Cl. 137—90.)

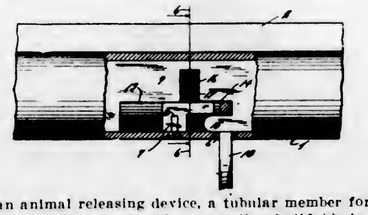


1. In a hose construction, the combination with an inclosing casing for limiting the expansion of an inner fluid conveying tube and for protecting the same, of an inner fluid conveying tube adapted to be slipped into the casing and held therein unattached throughout the major portion of its length and through its circumference, said casing and tube being designed when out of use to assume a collapsed flattened condition folded along diametrically opposed lengthwise lines and said tube having fixedly secured to the outer surface thereof spaced apart fabric strips for protecting and reinforcing the folded edges of the inner tube, said strips being spaced apart for providing for the expansion of the tube circumferentially.

2. In a hose construction, the combination with an inclosing casing for limiting the expansion of an inner fluid conveying tube and for protecting the same, of an inner fluid conveying tube adapted to be slipped into the casing and held therein unattached throughout the major portion of its length and through its circumference, said casing and tube being designed when out of use to assume a

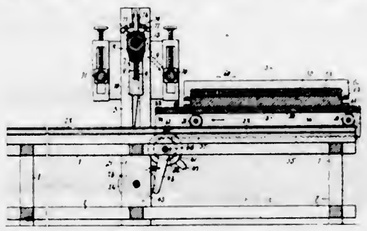
collapsed flattened condition folded along diametrically opposed lengthwise lines and said tube having fixedly secured to the outer surface thereof fabric strips for protecting and reinforcing the folded edges of the inner tube, said strips having edges extending lengthwise of the tube spaced apart for providing uncovered portions extending lengthwise of the tube.

1,220,662. ANIMAL-RELEASING DEVICE. MICHAEL MASSARD, Carroll, Iowa. Filed Oct. 15, 1915. Serial No. 56,120. (Cl. 119—115.)



In an animal releasing device, a tubular member formed with a plurality of perforations, a pull rod slidable in said tubular member and formed with a plurality of recesses and pockets which latter members are normally disposed out of alinement with the perforations in said tubular member, angular fingers carried upon the inner periphery of said tubular member and normally closing the pockets in said pull rod, expansible members normally compressed within the said pockets and bearing against said angular fingers, fingers formed integral with said pull rod and normally projected over the perforations in said tubular member into the recessed portions of said rod and into juxtaposition to said angular fingers, hitching rings releasably carried by said fingers and means for moving said pull rod longitudinally of said tubular member to uncover said pockets and tube perforations.

1,220,663. MACHINE FOR INTERLACING CURLED HAIR. FREDERICK MAUSSNER, Philadelphia, Pa. Filed Sept. 28, 1916. Serial No. 122,616. (Cl. 38—8.)



1. In a machine of the character described, the combination of a frame having side members, reciprocating members slidably mounted in the side members of the frame, and a needle bar pivotally mounted in said reciprocating members.

2. In a machine of the character described, the combination of a frame having side bearing members, reciprocating members slidably mounted in the side bearing members, a shaft extending between the reciprocating members, and a needle bar rotatably supported by said shaft.

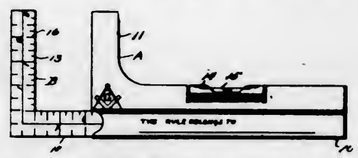
3. In a machine of the character described, the combination of a frame having side bearing members, reciprocating members slidably mounted in the side bearing members, a needle bar pivotally mounted in the reciprocating members, and means for locking the needle bar in a fixed position in relation to the reciprocating members.

4. In a machine of the character described the combination of a frame, reciprocating members mounted in the frame, a needle bar pivotally mounted in the reciprocating members, a handle upon the needle bar for rotating the latter, a bracket mounted in a fixed position for engaging the needle bar and locking the same in relation to the reciprocating members.

5. In a machine of the character described the combination of a frame, reciprocating needles mounted in said frame, a carriage, a base block, a grate adapted to fit over the base block and hold material upon the base block, and said grate having bars secured together at points below the plane of the top surface of the base block.

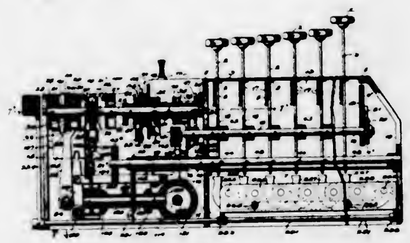
[Claims 6 to 8 not printed in the Gazette.]

1,220,664. COMBINED RULE, LEVEL, TRY-SQUARE, AND CALIPERS. JOSEPH W. MAXWELL, Waldo, Ark. Filed Jan. 14, 1916. Serial No. 72,120. (Cl. 33—143.)



A device of the class described formed from a metal blank folded upon itself to produce a body portion having long and short arms disposed at right angles to each other with the long arm having a longitudinal passage therethrough, and a try-square having its tongues slidably engaged in said passage whereby the blade of said try-square may be moved toward and away from the short arm of the body.

1,220,665. CALCULATING-MACHINE. JAMES F. MAYS, Birmingham, Ala., assignor to Mays Accounting Machine Company, Asheville, N. C., a Corporation of Nevada. Filed Mar. 19, 1914. Serial No. 825,876. (Cl. 235—59.)



1. A calculating machine, comprising a key operated rock shaft, a rotatable dial shaft and a number dial operated thereby, means to rotate said dial shaft from its key operated rock shaft, and key operated locking means acting upon said dial shaft to lock the same against overthrow by said rock shaft.

2. In a calculating machine, in combination, a key-operated master rock shaft, a rotatable dial shaft and number dials operated thereby, means to rotate said dial shaft from said key-operated rock shaft, a supplementary rock shaft associated with said master rock shaft, means to lock said dial shaft from overthrow by said master rock shaft, and key operated means to rotate said supplementary rock shaft to operate said locking means.

3. A calculating machine, comprising a key-operated master rock shaft, a rotatable dial shaft and a number dial operated thereby, means to rotate said dial shaft from its key operated rock shaft, a stop ratchet fast on said dial shaft, a supplementary rock shaft, a stop lever fast on said supplementary rock shaft, and key-operated means to rotate said supplementary shaft to cause interlocking of said stop lever and ratchet to prevent overthrow of said dial shaft.

4. A calculating machine, comprising a rock shaft, a plurality of keys adapted to operate said rock shaft, a rotatable dial shaft and a number dial operated thereby, means to rotate said dial shaft from said key operated rock shaft, a stop ratchet fast on said dial shaft, a supplementary rock shaft, a stop lever fast on said supplementary shaft, a plurality of arms fast on said supplementary shaft, and means carried by said keys to engage and operate said arms to cause interlocking of said stop lever and ratchet, in order to prevent overthrow of said dial shaft from the operation of said keys.

5. A calculating machine, comprising a plurality of dial shafts and number dials mounted thereon, means to rotatably support said shafts at two points, a sleeve surrounding each of a plurality of said shafts and out of contact therewith, and carrying escapement mechanism rotatable on said sleeve, for operating the shafts passing therethrough.

[Claims 6 to 40 not printed in the Gazette.]

1,220,666. TRENCHING-TOOL. ROBERT R. MCCORMICK, Chicago, Ill. Filed Sept. 15, 1915. Serial No. 50,749. (Cl. 42—93.)



1. A trenching tool comprising a handle, a scoop removably mounted on said handle and provided with a longitudinally extending recess in its upper edge, a sleeve open at both of its ends pivoted in said recess, and providing a socket through the ends of which the adjacent end of said handle may be passed.

2. A trenching tool comprising a handle, a scoop removably mounted on said handle and having a longitudinally extending recess in its upper edge the longitudinal edges of which are formed into rearwardly projecting lugs, a sleeve pivoted between said lugs and providing a socket for the adjacent end of said handle.

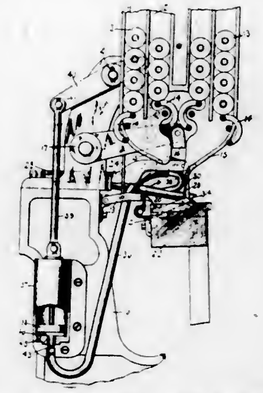
3. A trenching tool comprising a handle, a scoop, and means for removably securing the same to said handle to form a trench tool or to secure same to the barrel of a gun to form a shield.

4. A trench tool comprising a handle, a scoop removably secured to said handle, a recess in the scoop, a sleeve mounted in said recess to receive said handle or to receive the barrel of a gun, said sleeve being pivotally mounted upon the scoop to permit said scoop to be positioned upon the barrel to form a shield, and the recess forming an aperture which alines with the gun barrel when the scoop is arranged in the last named position.

1,220,667. THREAD-CATCHER FOR LOOMS. BENJAMIN F. MCGUINESS, Saundersville, Mass., assignor to Crompton & Knowles Loom Works, Worcester, Mass., a Corporation of Massachusetts. Filed Feb. 24, 1916. Serial No. 80,276. (Cl. 139—85.)

1. In a loom, in combination, a weft replenishing mechanism, means to sever the outgoing weft at two separated points, and a pneumatic device effective to remove the detached weft end, said pneumatic device comprising a tube having one end positioned adjacent the path of the weft, and means to create intermittent suction therethrough in timed relation to the operation of the thread cutter which severs the weft end from the outgoing bobbin.

2. In a loom, in combination, a weft replenishing mechanism, means to sever the outgoing weft at two separated points, and a pneumatic device effective to remove the detached weft end, said pneumatic device comprising a tube open directly to the atmosphere at both ends thereof having one end positioned adjacent the path of the weft, and intermittently actuated means for introducing a blast of air into the side of said tube intermediate to its ends and for directing the same toward the opposite or forward end of said tube, thereby drawing into one end of said tube the detached weft end, and thereafter forcibly ejecting said weft end from the opposite end of said tube.



3. In a loom, in combination, a weft replenishing mechanism, means to sever the outgoing weft at two separated points, and a pneumatic device effective to remove the detached weft end, said pneumatic device comprising a tube having one end positioned adjacent the path of the weft, means to draw an end of weft into said tube, and means to retain said weft end therein during the operation of the temple thread cutter.

4. In a loom, in combination, a weft replenishing mechanism, means to sever the outgoing weft at two separated points, and a pneumatic device effective to remove the detached weft end, said pneumatic device comprising a tube having one end positioned adjacent the path of the weft, means to draw an end of weft therein, means to grip the same, and means to thereafter eject the weft end from the opposite end of said tube.

5. In a loom, in combination, a weft replenishing mechanism, means to sever the outgoing weft at two separated points, and a pneumatic device effective to remove the detached weft end, said pneumatic device comprising a tube having one end positioned adjacent the path of the weft, means to draw an end of weft into said tube, a latch opening freely inward and effective to grip said weft end, and means to thereafter eject the weft end from the opposite end of said tube.

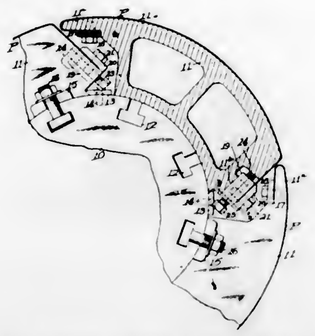
[Claims 6 to 9 not printed in the Gazette.]

1,220,668. PLATE-CYLINDER. CHARLES A. MEISEL, Boston, Mass., assignor to Meisel Press & Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 15, 1915. Serial No. 61,497. (Cl. 272.)

1. A plate cylinder comprising a cylindrical body member having a plurality of parallel T-slots formed therein and also having a plurality of axially extending beveled ribs secured thereto, a plurality of shell sections each having a beveled portion adapted to engage one of said ribs and having projections positioned for engagement by clamping bolts inserted in said T-slots, and means to secure a plate to each of said sections.

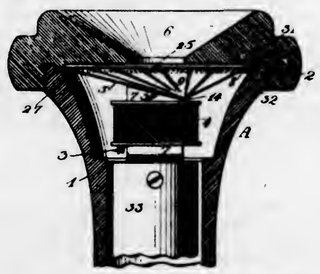
2. A plate cylinder comprising a cylindrical body member, a plurality of shell sections, each detachably secured to said member, and clamping devices for securing and stretching a metal plate on each of said sections, said devices comprising a clamping bar near one edge of each section and under a projecting outer portion thereof, a plurality of clamping jaws each fixed to a separate slid-

ing block mounted in substantially radial ways in a recessed portion at the opposite end of said section, and means for moving said sliding blocks to draw the metal plate tightly over said section the clamping jaws of one shell section fitting beneath the clamping bar and projecting outer portion of the next adjacent section, and permitting the outer surface of said sections to be made substantially continuous.



3. A plate cylinder comprising a cylindrical body member, a plurality of shell sections each detachably secured to said member, and clamping devices for securing and stretching a metal plate on each of said sections, said devices comprising a clamping bar near one edge of each section and under a projecting outer portion thereof, a clamping device for the opposite edge of the metal plate and adjusting screws effective to move said clamping device substantially radially, said clamping device when in use being positioned beneath the clamping bar and projecting outer portion of the next adjacent section and thus permitting close approach of the edges of the printing plates carried by said sections.

1,220,669. CUSP-DIAPHRAGM MECHANISM. FRANK E. MILLER, New York, N. Y. Filed Sept. 16, 1916. Serial No. 120,452. (Cl. 179—115.)



1. In sound functioning mechanism, an eccentrically dished diaphragm in combination with operating means responsive to magnetic variations.

2. In sound functioning mechanism, an eccentrically dished diaphragm; electric-circuit means adapted to convey electric variations corresponding to sound variations; and means for coöperatively relating said circuit means with said diaphragm.

3. In sound functioning mechanism, an eccentrically dished diaphragm; an electro-magnetic coil; and magnetic means coöperatively relating said coil with said diaphragm.

4. In sound functioning mechanism, an eccentrically dished diaphragm having a substantially circular periphery; a set of one or more electro-magnetic coils; a housing for containing said diaphragm and said set substantially co-axially; and means for coöperatively relating said set with said eccentric diaphragm.

5. In sound functioning mechanism, an eccentrically dished diaphragm; an electro-magnetic means; an armature coöperating with said electro-magnetic means; and a lever system connecting said armature with said diaphragm.

[Claims 6 to 8 not printed in the Gazette.]

1,220,670. PROCESS FOR PACKING ARTICLES. IRA A. MILLIRON, New York, N. Y., assignor to Hammock Egg Carrier Company, Buffalo, N. Y., a Corporation of New York. Filed July 31, 1914. Serial No. 854,281. (Cl. 93—5.)

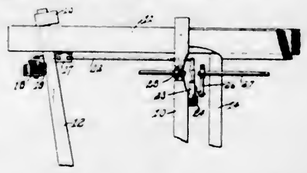


1. The process of packing eggs for transportation comprising placing the eggs, suitably spaced, on a piece of flexible material, folding the material over the eggs to inclose them in an envelop, applying torsion to the material firmly to inclose the eggs and to twist the portions of the material between the eggs, and then supporting the eggs in a suitable container at said intermediate twisted portions of the envelop, substantially as described.

2. The process of packing eggs in a paper envelop, comprising first wetting a strip of suitable paper, then depositing the eggs thereon in a row suitably spaced, then folding the paper around the eggs to form an envelop, then applying torsion to one end of the envelop and holding the other end to twist the portions of the envelop between the eggs.

3. The process of packing eggs for transportation comprising first wetting a strip of suitable paper, placing the eggs, suitably spaced, thereon, folding the paper over the eggs to inclose them in an envelop, applying torsion to the paper firmly to inclose the eggs and to twist the portions of the paper between the eggs and supporting the eggs in a suitable container at said intermediate twisted portions of the envelop substantially as described.

1,220,671. ATTACHMENT FOR SHUTTLE-CHANGING LOOMS. ALFRED F. MORELL, Worcester, Mass., assignor to Crompton & Knowles Loom Works, Worcester, Mass., a Corporation of Massachusetts. Filed Dec. 22, 1915. Serial No. 68,279. (Cl. 139—85.)



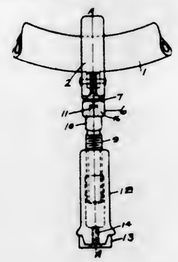
1. In a shuttle changing loom, in combination, a picker check, a member effective to cause withdrawal of said check before a shuttle change, a cam mounted on the loom frame and normally removed from the path of said member, and weft-controlled mechanism for moving said cam into the path of said member upon substantial or complete exhaustion of weft in the running shuttle.

2. In a shuttle changing loom, in combination, a picker check, a spring effective to cause said check to stop said shuttle and also to maintain said check in operative position, and devices movable by weft-controlled means to operative and inoperative positions effective when operatively positioned to positively withdraw said check against the pressure of said spring prior to a shuttle change.

3. In a shuttle-changing loom, in combination, a picker check, a spring for moving said check to operative position, and means for moving said check backward against the pressure of said spring preliminary to a shuttle change, said means including an operating cam movable into operative position by a weft-controlled actuating device, said cam and said actuating device being yieldingly connected whereby movement of said cam may be delayed.

4. In a shuttle-changing loom, in combination, a lay, a spring-actuated picker check and a pivoted lever both mounted on said lay, a link connecting said lever to said check, a cam mounted on the loom frame and normally removed from the path of said lever, and an actuating device connected to said cam, said device being controlled by weft-detecting mechanism effective to move said cam to operative position upon substantial or complete exhaustion of the weft in the active shuttle.

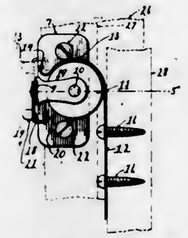
1,220,672. MOTOR-CYCLE JACK. CHARLES MOSCHEL, Cincinnati, Ohio. Filed Dec. 7, 1916. Serial No. 135,697. (Cl. 254—100.)



1. A motor-cycle jack arranged in three units, the first unit consisting of a transverse foot bar, the second unit consisting of a post and a screw fitted in said post and the third unit consisting of a cap, a nut attached to said cap by the threaded portion thereof and a pair of clamping jaws pivotally connected to said nut, the second and third units being arranged with stud and socket for rapid assembling of the units.

2. A motor-cycle jack comprising a post, a foot transversely attached to said post, a screw adjustable in said post and having its upper end provided with a stud, a cap arranged with socket to fit said stud and having its upper portion threaded, the nut 3 being formed of one piece of metal and provided with laterally extending lugs and clamping jaws pivotally connected to said lugs.

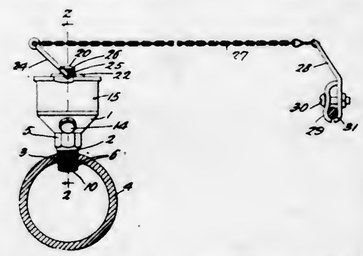
1,220,673. DOOR BUFFER AND RETAINER. ALBERT O. AUGUST NEIMAN, Topeka, Kans., assignor of one-half to Walter P. Davies, Topeka, Kans. Filed Jan. 4, 1917. Serial No. 140,632. (Cl. 16—80.)



1. The combination of a plate formed with screw-holes for attaching same to a door casing and formed also with a bracket arm composed of a portion extending at a right angle to the plate and a portion extending parallel therewith, a pin secured to and extending between the plate and the last-named portion of the bracket arm, a resilient buffer wheel rotatably mounted on said pin; a long flat spring formed with screw-slots in its shank for attaching same to a door, and having its upper portion curved forwardly to correspond with and to embrace the upper part of the buffer wheel and having its extreme tip upturned; and a latch pivoted to the first-named portion of the bracket arm and adapted to two positions, in one of which it is disengaged from said upturned tip of the spring, and in the other of which it is adapted to engage said tip and to lock said members together positively.

2. The combination of a plate formed with means for attaching same to a door casing and formed also with a bracket arm, a pin secured to and extending between the plate and the bracket arm, a resilient buffer roller mounted rotatably on said pin; a flat spring adapted to be secured to a door and formed with a curved end corresponding with and adapted to embrace the upper side of the buffer wheel and having an upturned extreme tip; and a latch pivoted to the bracket arm and adapted to engage said upturned tip to lock said members together positively.

1,220,674. AIR AND FUEL SPRAYING DEVICE FOR ENGINES. WILLIAM H. OLDHAM, Elkton, Ky. Filed June 8, 1916. Serial No. 102,547. (Cl. 123—124.)



1. A device of the character described embodying a funnel-shaped body having a nipple and a stud at the basal end of the nipple within the body, said stud having an opening leading to the nipple for the flow of air therethrough, a stem extending through the stud and having a valve coöperable with the nipple for controlling the flow of air therefrom, and a valve movable upon said stem for controlling the flow of air through the mouth of the body.

2. A device of the character described comprising a funnel-shaped body having a nipple and a stud at the basal end of the nipple projecting within the body, said stud having an opening extending to the nipple for the passage of air, a stem threadedly engaged through the stud and projecting within the nipple, said stem having a valve coöperating with the nipple for controlling the flow of air and spreading it, said stem having an extension, a cap engaged with the body and having a central opening, a valve seatable outwardly against the cap to close the opening thereof, the second mentioned valve having a sleeve slidable upon said extension, and a coiled expansion spring surrounding said stud and sleeve and confined between the body and second mentioned valve.

3. The combination with the spark controlling means of an engine, of air admitting means for the intake manifold or carbureter thereof, having a valve adapted to be unseated by suction, and means operatively connected with the spark controlling means and coöperable with said valve for preventing or limiting the unseating movement of said valve.

4. A device of the character described embodying a spring closed valve adapted to be opened by suction, and a controllable shaft having an offset portion, said valve having means connected thereto engaging said offset portion, said means of said valve and offset portion being coöperable whereby the shaft in being rotated to different positions will serve to either prevent or limit the unseating movement of the valve.

5. A device of the character described embodying air admitting means for an intake manifold or carbureter of

an engine having a spring closed valve adapted to be opened by air suction, a shaft having an offset portion, said valve having a slotted member engaging said offset portion, a spring tending to rotate said shaft in one direction whereby the offset portion moves the valve toward its seat, and means connected to said shaft for rotating it against the tension of said spring to permit the valve to unseat.

[Claims 6 to 9 not printed in the Gazette.]

1,220,675. WINDOW-SCREEN. CASSIUS M. PARSON, Kokomo, Ind. Filed Dec. 1, 1916. Serial No. 134,398. (Cl. 156—39.)



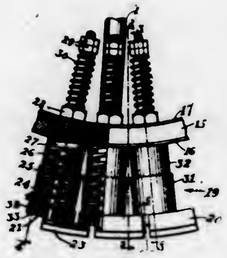
1. Window screen means including in combination with a window of the check-rail type, a roller mounted above the lintel, a second roller mounted below the sill of the window, said lintel and sill being provided with slots formed adjacent the outer side of the upper and lower sashes respectively, screen strips mounted upon said rollers and connected at their free ends with the top and bottom rails of the lower and upper sashes respectively, and a strip mounted upon the lower rail of the upper sash to provide a stop against the passage of insects between the sashes.

2. A window screen adapted for application to a window having a sliding sash including a base strip to be mounted on the casing of the window and having supporting brackets carried at the ends thereof, a spring roller mounted upon said supporting brackets, and a screen strip connected at one of the ends with a roller adapted to be attached at its free end to the window and to thus be mounted in the position for use when the base strip is secured to the casing.

3. A window screen comprising in combination with a sash mounted to be capable of sliding movement to an open relation, a screen strip connected at one of its ends to that edge of the sash which moves forward to leave the opening, a roller provided with an opening at one end and having a bearing pintle at the opposite end, a spring mandrel mounted in the open end of said roller, a spring mounted about said mandrel connected at one of its ends with the mandrel and at its opposite end with the roller, said mandrel provided with a flat portion, supporting brackets mounted in conjunction with the casing of the window to receive the bearing pintle and the flat portion of the spring mandrel, the screen strip being connected at its free end with the roller, and means to secure the spring mandrel against displacement from the bracket in which the same is fitted.

4. A window screen comprising in combination with a sash mounted to be capable of sliding movement to an open relation, a screen strip connected at one of its ends to that edge of the sash which moves forward to leave the opening, a roller provided with an opening at one end and having a bearing pintle at the opposite end, a spring mandrel mounted in the open end of said roller, a spring mounted about said mandrel connected at one of its ends with the mandrel and at its opposite end with the roller, said mandrel provided with a flat portion, supporting brackets mounted in conjunction with the casing of the window to receive the bearing pintle and the flat portion of the spring mandrel, the screen strip being connected at its free end with the roller, means to secure the spring mandrel against displacement from the bracket in which the same is fitted, and means to secure the spring mandrel against turning movement when the same has been wound to tighten the spring and store up energy therein so that the rollers can be fitted in the proper mounting.

1,220,676. SPRING-WHEEL. JOHN H. PARTRIDGE, Likely, Cal. Filed July 1, 1916. Serial No. 107,091. (Cl. 152—8.)



1. A spring wheel, comprising in combination with a wheel felly, a series of radially disposed adjustably mounted sleeves therethrough, tire stems adapted to reciprocate within said sleeve, an overlapping tire segment secured to each stem, antifriction bearing members disposed between the overlapping ends of the tire segments, means whereby each of said segments may be resiliently held against inward and outward movement, and means whereby the resilient members may be adjusted to produce varying tensions.

2. The combination with a wheel having a felly, a flexible tire comprising overlapping tire sections, resilient means holding said sections in spaced relation to said felly, said means comprising a series of tire stems one of which is secured to each section and slidably mounted through said felly, tubular stem guides secured to and extending from the circumferential faces of said felly, helical tire springs encircling said tire stems and disposed between said felly and said tire sections, helical rebound springs encircling the inner sections of said tire stems, and telescoping mud-guards inclosing said tire springs.

3. The combination with a wheel having a felly, a flexible tire composed of overlapping tire sections, resilient means holding said sections in spaced relation from said felly, said means comprising a tire stem secured to each section and slidably mounted through said felly, tire stem guides secured to and extending from the circumferential faces of said felly, tire springs encircling said stems and disposed between said felly and said tire sections, rebound spring encircling the inner sections of said tire stems, telescoping mud-guards encircling said tire springs, and roller bearing members disposed between the overlapping ends of said tire sections.

1,220,677. TICKET-DELIVERING MACHINE. AUGUSTUS T. PATTIMORE, Sacramento, Cal. Filed July 31, 1916. Serial No. 112,405. (Cl. 211—33.)

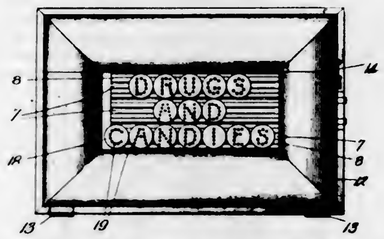
1. A ticket delivering device comprising a rotatable drum, an interior pocket carried by the periphery of the drum, the periphery of the drum having a transverse ticket discharging opening, and a longitudinal slot crossing the opening at right angles, said opening and slot being disposed adjacent the bottom of said pocket, and means for engaging a ticket through the said slot to withdraw the same from the drum.

2. A ticket delivering device comprising a rotatable drum, means within the periphery of the drum for lifting a number of tickets as the drum rotates, a ticket discharging opening formed in the periphery of the drum, and a longitudinal slot also formed in the periphery of the drum and extending at right angles to the said opening, a support mounted adjacent the periphery of the drum, an arm pivotally mounted on the support, a pointed implement carried by the arm for movement through the



slot to grasp a ticket, a second arm movable with the first arm, and a projecting track carried by the periphery of the drum whereby the pointed implement will move toward and away from the ticket opening.

1,220,678. ELECTRIC-LIGHT SIGN. THOMAS HERBERT PEERY, Brunswick, Mo. Filed Feb. 7, 1916. Serial No. 76,502. (Cl. 40—130.)



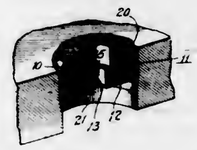
1. A sign, comprising a base provided with a plurality of parallel channels and a plurality of continuous channels surrounding the first-named channels and provided with breaks or gateways, the innermost of the continuous channels communicating with one end of each of said first-named channels, in combination with letters comprising portions fitting slidingly in said channels or either of them, and heads provided with letters formed by properly arranged incandescent lamps; and means whereby electric circuits shall be completed through the lamps of the letters when the latter engage the first-named channels.

2. A sign, comprising a base provided with a plurality of parallel channels and a plurality of continuous channels surrounding the first-named channels and provided with breaks or gateways, the innermost of the continuous channels communicating with one end of each of said first-named channels, in combination with letters comprising portions fitting slidingly in said channels or either of them, and heads provided with letters formed by properly arranged incandescent lamps, and a pair of conductors extending longitudinally in each of the first-named channels, and contacts secured to the letters and adapted when the latter occupy the first-named channels to engage said conductors and complete circuits through said letters.

3. A sign, comprising a base provided with a plurality of parallel channels and a plurality of continuous channels surrounding the first-named channels and provided with breaks or gateways, the innermost of the continuous channels communicating with one end of each of said first-named channels, in combination with letters comprising portions fitting slidingly in said channels or either of them, and heads provided with letters formed by properly arranged incandescent lamps, a pair of conductors extending longitudinally in each of the first-named channels, contacts secured to the letters and adapted when the latter occupy the first-named channels to engage said conductors and complete circuits through said letters, and a frame secured to the base and covering the other channels and the letters engaging the same.

4. A sign, comprising a base provided with a plurality of parallel channels and a plurality of continuous channels surrounding the first-named channels and provided with breaks or gateways, the innermost of the continuous channels communicating with one end of each of said first-named channels, in combination with letters comprising portions fitting slidingly in said channels or either of them, and heads provided with letters formed by properly arranged incandescent lamps, a pair of conductors extending longitudinally in each of the first-named channels, contacts secured to the letters and adapted when the latter occupy the first-named channels to engage said conductors and complete circuits through said letters, and a frame secured to the base and covering the other channels and the letters engaging the same; the said frame having a hinged portion to give access when opened to the display channels and the lower and end portions of the continuous channels for sign-changing purposes.

1,220,679. ELECTRICAL CONTACT. CHARLES PFEIFFER, Milwaukee, Wis., assignor to The Allen-Bradley Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 19, 1913. Serial No. 801,796. (Cl. 173—13.)



1. The method of making composite electrical contact members, consisting in connecting an elastic graphite element with a metallic conductor element under sufficient resilient pressure of one element upon the other to compensate for differences in expansion and contraction due to the extreme changes in temperature to which such contact members are subjected and to maintain intimate pressure contact of a substantially constant degree between the elements notwithstanding such temperature changes.

2. The method of making composite electrical contact members, which consists in subjecting a body of elastic carbonaceous material to clamping pressure of a metallic container sufficient to reduce the volume of the portion of the carbonaceous material which the container engages and develop sufficient elastic reactionary pressure to maintain the carbonaceous element and the container in intimate pressure contact under the varying temperature conditions to which such contact members are subjected.

3. That improvement in making a composite electrical contact member which consists in uniting an elastic carbonaceous element with a metallic container by subjecting the container to sufficient pressure to distort the container and densify the carbonaceous material therein sufficiently to produce an elastic reaction against the container under all service conditions of temperature variations.

4. An electrical contact composed of an elastic carbonaceous material and a conducting device adapted to maintain said material in a state of distortion under all service conditions of varying temperature, and notwithstanding differences in the co-efficient of expansion of the container as compared with said material.

5. An electrical contact composed of an elastic carbonaceous material maintained in a state of distortion by an electrical conductor medium, and adapted to maintain pressure contact with said medium under varying temperature conditions by resilient reaction.

[Claims 6 to 15 not printed in the Gazette.]

1,220,680. PROCESS OF FORMING A PAVING MATERIAL. MICHAEL A. POPKESS, Kansas City, Mo., assignor to Bituminized Road Company, a Corporation of Arizona. Filed Apr. 10, 1916. Serial No. 90,244. (Cl. 106—31.)

1. The process of preparing a substance suitable for paving and surfacing purposes, which consists in subjecting dirty gravel and sand to a disintegrating, cleaning and polishing treatment and intimately mixing the resulting material with a bituminous binder.

2. The process of producing a homogeneous wear resisting substance for paving or other surfacing purposes, which consists in simultaneously pulverizing friable earthy material and cleaning hard stony particles and mixing the same with a bituminous binder.

3. The process of forming a paving material, which consists in subjecting natural mixtures of stony and earthy material to a disintegrating action which partially pulverizes and partially cleans and fractures the same, and thoroughly mixing a bituminous binder with the resulting material.

4. The process of producing a paving material, which consists in taking natural mixtures of stony and earthy material, subjecting them to a treatment whereby the softer or earthy ingredients are reduced to dust and the harder stony ingredients are freed or cleaned from the adhering softer material, and impregnating and mixing the resulting material with asphalt.

5. The process of producing a homogeneous wear resisting substance for paving purposes and the like, which consists in impregnating disintegrated earthy material with bituminous binder, incorporating a mineral aggregate with similar binder, and mixing both materials together.

[Claims 6 to 13 not printed in the Gazette.]

1,220,681. PAVEMENT. MICHAEL A. POPKESS, Kansas City, Mo., assignor to Bituminized Road Company, a Corporation of Arizona. Filed Apr. 21, 1916. Serial No. 92,704. (Cl. 94—1.)

1. A pavement, composed of a wear-resisting and traffic-supporting mixture of finely disintegrated earthy material impregnated with not less than 14 per cent. and not more than 25 per cent. of bitumen, and a filter of mineral aggregate stirred into said mixture, so that substantially every particle thereof is entirely surrounded by the same, the resulting mass being spread and compacted upon the surface to be paved.

2. A pavement, comprising the combination of a traffic-supporting and wear resisting mass composed of ordinary soil, loam or clay, reduced to a fine powder and intimately mixed with not more than 35 per cent. of low penetration asphalt, and a filler consisting of a coarser mineral aggregate embedded there, the whole being compacted under pressure.

3. A pavement, comprising the combination of a traffic-supporting and wear-resisting mass composed of absorbent earthy material, reduced to dust and impregnated with bitumen, and a filler consisting of coarser mineral particles embedded therein, substantially all of which are separated from each other thereby, the whole being compacted under pressure.

4. A pavement, comprising the combination of a traffic-supporting and wear-resisting mass composed of absorbent earthy material, reduced to dust and impregnated with not less than 14 per cent. and not more than 30 per cent. of bitumen, and a filler of coarser mineral particles embedded therein, substantially all of which are separated from each other thereby, the whole being compacted under pressure.

5. A pavement, comprising the combination of a traffic-supporting and wear-resisting mass composed of ordinary soil, loam or clay dried and pulverized and intimately mixed with not less than 17 per cent. and not more than 30 per cent. of bitumen, and a filler of coarser mineral particles embedded therein, substantially all of which are separated from each other thereby, the whole being compacted under pressure.

[Claims 6 to 20 not printed in the Gazette.]

1,220,682. PAVEMENT AND PROCESS OF MAKING THE SAME. MICHAEL A. POPKESS, Kansas City, Mo., assignor to Bituminized Road Company, a Corporation of Arizona. Filed Sept. 15, 1916. Serial No. 120,373. (Cl. 94—1.)

1. A pavement composed of comminuted stony material in the form of dust, intimately mixed with a suitable binder, and subjected to pressure.

2. A pavement composed of mechanically pulverized rock in the form of dust, intimately mixed with a bituminous binder, and spread and compacted upon the surface to be paved.

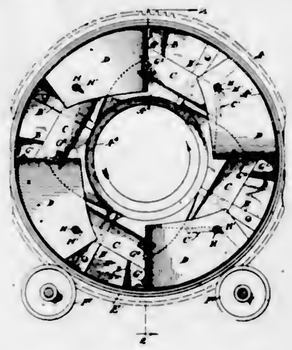
3. A pavement composed of mechanically pulverized stony material in the form of dust, intimately mixed with from 12 to 18 per cent. of a bituminous binder and spread and compacted upon the surface to be paved.

4. A pavement composed of rock mechanically pulverized to dust, intimately mixed with not less than 12 per cent. and not more than 16 per cent. of asphalt, spread and compacted upon the surface to be paved.

5. A pavement composed of pulverized stony material such as stone, rock, sand or gravel, substantially 40 per cent. of which will pass a 200 mesh screen and approximately 90 per cent. of which will pass a 30 mesh screen, intimately mixed with bitumen, and spread and compacted upon the surface to be paved.

[Claims 6 to 20 not printed in the Gazette.]

1,220,683. CONCRETE-MIXER. ARTHUR WILFRID RANSOME, Plainfield, N. J., assignor to Ransome Concrete Machinery Company, Dunellen, N. J., a Corporation of New Jersey. Filed June 30, 1916. Serial No. 106,754. (Cl. 83—73.)



1. In a concrete mixer the combination of a revoluble drum provided with an opening at one end for the admission of materials to be mixed and an opening at the other end for the discharge of the mixed materials, blades extending from the charging end of the drum toward the opposite end obliquely to the axis of rotation, other blades extending from a point near the discharge end toward the charging end and disposed in a direction approximately perpendicular to the first named blades and relatively parallel to the periphery of the drum, and other blades disposed partly in a zone coincident with all of the other blades and converging toward a point between the medial portion of said blades and the discharge end of the drum.

2. In a concrete mixer the combination of a revoluble drum provided with a charging opening at one end and a discharge opening at the other end, lifting pockets secured inside the drum and revolving therewith, blades disposed at an angle to the axis of rotation of the drum and extending from one end toward the said lifting pockets, and other blades disposed with one side approximately parallel to the shell of the drum and at an angle to the second named blades, said blades spaced from said shell and having portions inclined toward the charging head of the drum, in the line of discharge of the pockets and directing materials falling from said pockets toward the head of the drum from which the other blades extend.

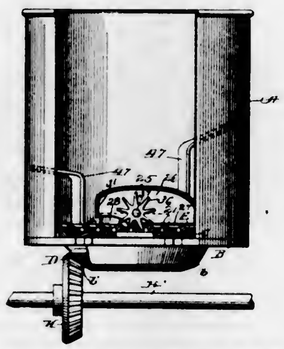
3. In a concrete mixer the combination of a revoluble drum provided with a charging opening at one end and a discharge opening at the other end, lifting pockets secured inside the drum and revolving therewith, blades disposed at an angle to the axis of rotation of the drum and extending from the discharge end toward the said lifting pockets, and other blades disposed intermediate the ends of the drum with one side approximately parallel to the shell of the drum and at an angle to the second named blades, said blades having portions inclined toward the charging head of the drum, in the line of discharge of the pockets and directing materials falling from said pockets toward the charging head of the drum, said last named blades being mounted in a position removed from the shell of the drum and between the said shell and the longitudinal axis of the drum.

4. The combination of a hollow drum provided with charging and discharging openings in its respective heads, lifting blades removed from the charging head, other blades inclined from the charging head toward the said lifting blades, the former adapted to lift the materials and the latter to pass the materials in the direction of the former, and other blades disposed approximately flatwise at an angle to a part of the two said blades and approximately in the line of discharge of the lifting blades and inclined toward the charging opening.

5. The combination of a revoluble cylinder or drum provided with a head having a charging opening and a head having a discharge opening, blades mounted in said drum extending along the inner surface thereof from the charging opening toward the discharging opening on lines oblique to the axis, other blades mounted therein and extending from the discharging opening toward the charging opening and curved intermediate their ends to form lifting pockets or scoops, a portion of the said two sets of blades being disposed edgewise on substantially radial lines, and a third set of blades extending between points intermediate the two openings and crossing the zone of a portion of the two first named sets of blades, said last named blades having a portion of their surfaces disposed substantially parallel with the axis but inclined toward the charging opening.

[Claims 6 to 12 not printed in the Gazette.]

1,220,684. SEED-HOPPER. CHARLES T. RAY, Louisville, Ky., assignor to B. F. Avery & Sons, Louisville, Ky., a Corporation of Kentucky. Filed Jan. 2, 1915. Serial No. 98. (Cl. 111—6.)



1. A seed container having an outlet, a yieldable seed protector adjacent to said outlet and a rotatably mounted seed plate having openings arranged to communicate successively with the outlet, said seed protector being arranged under the seed plate and in the path of seeds protruding from the openings in the latter.

2. A seed container having an outlet, a rotatably mounted seed plate having openings arranged to communicate successively with the outlet, and a seed protector adjacent to the outlet, said protector comprising a plurality of independently yieldable members arranged adjacent to each other and coöperatively returning to the seed cells all seeds which are firmly bound to the plate and partially protrude therefrom.

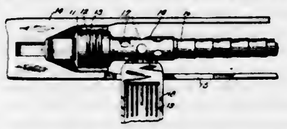
3. A seed container having an outlet, a rotatably mounted seed plate having openings arranged to communicate successively with the outlet, and a seed protector adjacent to the outlet, said seed protector comprising a yieldable member disposed in the path of seeds which are passing beyond the outlet and are tightly bound to and protrude from the seed plate, the protector further comprising a second member, arranged in advance of the first mentioned member and contiguous thereto, the second member being disposed in the path of all the seeds and freeing the more lightly bound seeds from the seed plate and pressing the others back toward the plate.

4. A seed container having an outlet, a rotatably mounted seed plate having openings arranged to communicate successively with the outlet, and a seed protector adjacent to the outlet, said seed protector having a yieldable head which engages all the seeds which protrude from the seed plate and have not previously passed into the outlet, and a yieldable member arranged after said head and contiguous thereto and passing into the seed cells the protruding seeds which have been pressed toward the plate by said head.

5. A seed container having an outlet, a rotatably mounted seed plate having openings arranged to communicate successively with the outlet, and a seed protector comprising a plurality of independently yieldable arms having free ends provided with rounded projections or heads which are arranged one after the other adjacent to the outlet and in the path of seeds protruding from the openings in the seed plate.

[Claims 6 to 29 not printed in the Gazette.]

1,220,685. WEFT-BOBBIN. EPPA H. RYON, Waltham, Mass., assignor to Crompton & Knowles Loom Works, Worcester, Mass., a Corporation of Massachusetts. Filed Aug. 2, 1915. Serial No. 43,088. (Cl. 242—120.)

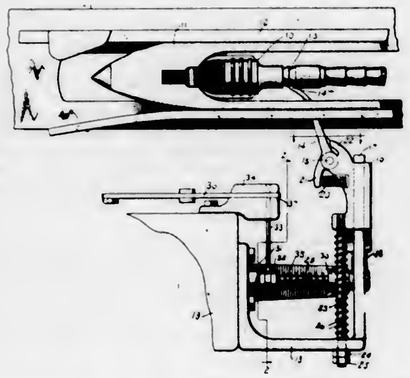


A weft bobbin having a butt, and a hollow portion adjacent said butt, and also having a plurality of circular holes extending entirely through the wall of said portion to the hollow interior thereof, holes longitudinally adjacent being angularly disposed relatively to each other and each hole being approximately one-quarter of an inch in diameter and being separated from all adjacent holes by distances not substantially less than one-quarter of an inch, whereby the strength of said bobbin is not materially decreased.

1,220,686. WEFT-DETECTING MECHANISM FOR LOOMS. EPPA H. RYON, Waltham, Mass., assignor to Crompton & Knowles Loom Works, Worcester, Mass., a Corporation of Massachusetts. Filed June 8, 1916. Serial No. 102,569. (Cl. 139—85.)

1. In a loom, in combination, a lay, a weft carrier supported in a shuttle carried by said lay, weft detecting mechanism, and normally inoperative actuating mechanism controlled thereby, said detecting mechanism comprising a movable support and a detecting member mounted thereon and also movable relatively to said support when engaged by weft on said weft carrier, said weft carrier being provided with devices which, when substantially uncovered by removal of the weft thereover, engage said member and prevent such relative movement thereof, whereby said member and support are moved bodily with said weft carrier and said actuating mechanism is rendered operative.

2. In a loom, in combination, a lay, a weft carrier supported in a shuttle carried by said lay, weft detecting mechanism, and normally inoperative actuating mechanism controlled thereby, said detecting mechanism comprising a support movable in a fixed path, a detecting member pivoted thereto, a spring to hold said member normally in operative position, said member swinging freely about its pivot when engaged by weft on the weft carrier, and devices on said weft carrier effective to positively prevent such swinging movement when the weft is substantially exhausted, whereby said member and support are moved bodily with said weft carrier and said actuating mechanism is rendered operative.



3. In a loom, a weft carrier and weft detecting mechanism comprising a detecting member positioned to engage said weft carrier, normally inoperative actuating mechanism controlled thereby, a support for said member, said member having an inoperative movement independent of said support and axial of said carrier and being also movable with said support transversely of said carrier to render said actuating mechanism operative when said independent inoperative movement is prevented, and means to prevent said inoperative axial movement of said member when the weft on said carrier is substantially exhausted.

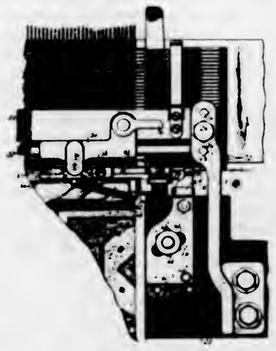
4. In a loom, a weft carrier and weft detecting mechanism comprising a detecting member positioned to engage said weft carrier, and normally inoperative actuating mechanism controlled thereby, said member normally engaging the weft on said carrier and slipping thereover, and said carrier having provision thereon effective to prevent such slipping of said member when the weft thereon is substantially exhausted.

5. In a loom, a weft carrier and weft detecting mechanism comprising a detecting member, a slide upon which said member is pivoted, and actuating mechanism controlled in its operation by said slide, the engaging portion of said member slipping longitudinally of said weft carrier when engaged by a sufficient supply of weft thereon, and said weft carrier having provision thereon effective to prevent such slipping of said member along the weft carrier when the weft thereon is substantially exhausted.

1,220,687. PILE-CUTTER FOR LOOMS. EPPA H. RYON, Waltham, Mass., assignor to Crompton & Knowles Loom Works, Worcester, Mass., a Corporation of Massachusetts. Filed July 27, 1916. Serial No. 111,732. (Cl. 139—23.)

1. A pile cutter having in combination, a rotatable disk having a plurality of separated cutting edges, means to actuate said disk intermittently to advance said edges successively to operative and inoperative positions, means to retain said disk in successive positions, and a grooved pile wire coöperating with the operatively positioned cutting edge.

2. A pile cutter having, in combination, a knife having a plurality of cutting edges, means to move one of said edges to inoperative position at the end of the cutting stroke, and means to move a succeeding edge to operative position at the beginning of the next cutting stroke.



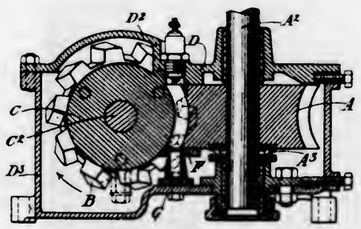
3. A pile cutter having, in combination, a disk having a plurality of cutting edges, a ratchet secured to said disk, a pawl for said ratchet, and actuating means for said pawl at each side of the loom, whereby said ratchet and disk are advanced intermittently to alternating operative and inoperative positions of the cutting edges.

4. In a loom, a fixed bar, a carrier slidable on said bar, an arm pivoted to said carrier, a knife having a plurality of cutting edges mounted on said arm, and means to move said knife intermittently to operative and inoperative positions of said cutting edges.

5. In a pile cutter, a knife having a plurality of cutting edges, a carrier on which said knife is supported, means to move said knife intermittently to operative and inoperative positions of said cutting edges, and means to retain said knife in position and to prevent backward movement thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,220,688. ROTARY ENGINE. JAMES MAUDSLAY SANDERS, Keynsham, near Bristol, England. Filed Feb. 5, 1917. Serial No. 146,828. (Cl. 123—12.)



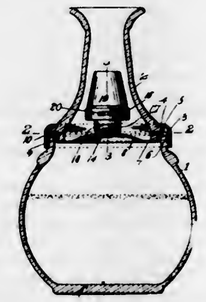
1. In a rotary internal combustion engine, a grooved worm wheel, a stationary casing inclosing a sector of said worm wheel, a toothed wheel gearing with said worm wheel, and an axial extension on said toothed wheel incasing the periphery of the worm wheel, all so arranged that the gases expand in chambers formed by the teeth of the worm wheel, one side of the casing and the teeth of the toothed wheel.

2. In a rotary internal combustion engine, a grooved worm wheel, a stationary casing consisting of a slotted plate with inlet and exhaust ports therein and an ignition device, said plate inclosing a sector of said worm wheel, a toothed wheel gearing with said worm wheel, and an axial extension on said toothed wheel incasing the periphery of the worm wheel, all so arranged that the gases expand in chambers formed by the teeth of the worm wheel, one side of the casing and the teeth of the toothed wheel.

3. In a rotary internal combustion engine, a grooved worm wheel, a stationary casing consisting of a slotted plate with inlet, exhaust and water ports therein and an ignition device, said plate inclosing a sector of said worm wheel, a toothed wheel gearing with said worm wheel, an . ial extension on said toothed wheel incasing the periphery of the worm wheel and a supplementary spring loaded plate pressing against the side of the worm wheel remote from the slotted plate, all so arranged that the exhaust discharges from a chamber formed by the teeth of the worm wheel, the slotted plate and the spring pressed plate.

4. In a rotary internal combustion engine, a grooved worm wheel, a stationary casing consisting of a slotted plate withinlet, exhaust and water ports therein and an ignition device, said plate inclosing a sector of said worm wheel, a toothed wheel gearing with said worm wheel, an axial extension on said toothed wheel incasing the periphery of the worm wheel, a supplementary spring loaded plate pressing against the side of the worm wheel remote from the slotted plate and means for injecting water through the water port, for the purpose described.

1,220,689. MEASURING-CONTAINER. EUGENE W. SANDERSON, South Norwalk, Conn. Filed Mar. 2, 1915. Serial No. 11,479. (Cl. 221—98.)



1. In a device of the character described, the combination with a receptacle adapted to hold a granular material, of a measuring device supported within the receptacle and in communication with the body thereof, and a receiver independent of the receptacle and removably supported therein, said receiver being in communication with the measuring device and with the mouth of the receptacle.

2. In a device of the character described, the combination with a receptacle, of a measuring thimble supported in the receptacle and in communication with the body thereof, a receiver independent of the receptacle and removably located therein, said receiver being positioned in the receptacle below the thimble and in communication with the thimble and the mouth of the receptacle, said receiver acting as a support for the thimble.

3. In a device of the character described, the combination with a receptacle having a body portion and a narrowed neck portion, of a measuring thimble located in the neck portion of the receptacle and in communication with the body portion thereof, a receiver independent of the receptacle located below the thimble and in communication therewith and with the neck of the bottle, and means for removably supporting the receiver in the interior of the receptacle.

4. In a device of the character described, the combination with a receptacle having a body portion and a neck portion, of a measuring thimble supported in the receptacle and in communication with the body portion thereof, a receiver independent of the receptacle removably supported interiorly of the receptacle and having sloping walls and in communication with the thimble and the neck of the bottle, said thimble being mounted on said receiver and in communication with the body of the receptacle through an aperture in the receiver.

5. In a device of the character described, the combination with a two-part bottle and means for securing the parts together, of a receiving tray held in position between the parts of the bottle, and a measuring thimble mounted on the tray and in communication with the body of the bottle through an aperture in the tray, said thimble being in communication with the top of the tray through suitable apertures leading into the thimble.

[Claim 6 not printed in the Gazette.]

1,220,690. BRAKE-BEAM FULCRUM. ADOLF H. SCHAFFERT, Cleveland, Ohio, assignor to The Damascus Brake Beam Co., Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 22, 1916. Serial No. 116,368. (Cl. 188—22.)



1. A brake beam fulcrum comprising a pair of spaced metal bars having their tension member ends deflected toward each other to provide shoulders, and having a perforation adjacent to said shoulders, with the wall of the perforation forming with said shoulders, an elongated tension member seat.

2. A brake beam fulcrum comprising a pair of spaced metal bars having their tension member ends deflected toward each other to provide shoulders, and having a perforation adjacent to said shoulders, with the wall of the perforation forming with said shoulders, an elongated tension member seat; the portions of said seat formed by said shoulders being shaped to conform to the bearing portion of the tension member to be received in said seat.

3. A brake beam fulcrum comprising a pair of spaced metal bars having their tension member ends deflected toward each other to provide shoulders, and having a perforation adjacent to said shoulders, with the wall of the perforation forming with said shoulders, an elongated tension member seat; the perforated ends of the bars having their opposed faces in abutment.

4. A brake beam fulcrum comprising a pair of spaced metal bars having their tension member ends deflected toward each other to provide shoulders, and having a perforation adjacent to said shoulders, with the wall of the perforation forming with said shoulders, an elongated tension member seat; the perforated ends of the bars being torsionally deflected relatively to the spaced portions thereof.

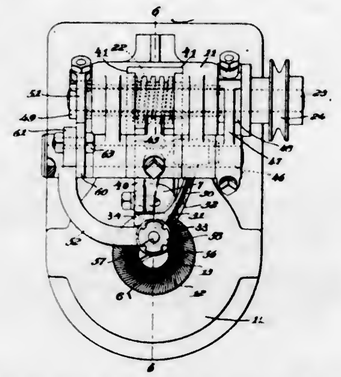
5. A brake beam fulcrum comprising a pair of spaced metal bars having their tension member ends deflected toward each other to provide shoulders, and having a perforation adjacent to said shoulders, with the wall of the perforation forming with said shoulders, an elongated tension member seat; said ends being also torsionally deflected at said shoulders, and the portions of said seat formed by said shoulders being shaped to conform to the bearing portion of the tension member to be received in said seat.

[Claims 6 to 9 not printed in the Gazette.]

1,220,691. MACHINE FOR TURNING THE LIPS OF INSOLES. AUGUST R. SCHOENKY, Somerville, Mass., assignor to The Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Nov. 11, 1915. Serial No. 60,949. (Cl. 12—30.)

1. In a machine for turning up the lips of insoles, the combination with work-feeding means, of a lip-turning element adapted to enter the channel of an insole and turn up the lip as the insole is fed, a vibrating element to give the turned-up lip a rapid succession of blows, a second element to engage the inner side of the lip, and

means to give said second element a vibrating movement toward and from the lip and transversely thereof thereby to prevent the insole from being displaced laterally by the blows of the first-named vibrating element.



2. In a machine of the class described, the combination with work-feeding means, of a combined guide and lip-turning element adapted to enter the channel of an insole and turn up a lip therefrom as the work is fed and also operating to guide the insole during its feeding movement, a vibrating lip-setting element to give the turned-up lip a rapid succession of lip-setting blows, a laterally vibrating device situated on the inside of the lip, and means to vibrate said device in a direction transverse to the lip to cause it to engage the inner face thereof and hold the insole in proper relation to the combined guide and lip-turning element as the work is fed.

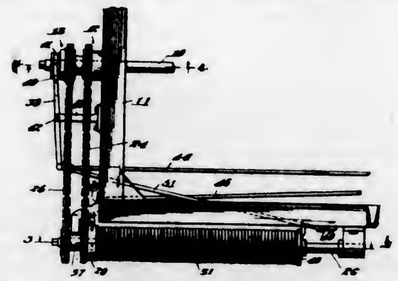
3. In a machine of the class described, the combination with work-feeding means, of a combined guide and lip-turning element adapted to enter the channel of an insole and turn up the lip therefrom as the work is fed and also operating to guide the insole during its feeding movement, a vibrating lip-setting element to give the turned-up lip a rapid succession of lip-setting blows, a laterally-vibrating device adapted to act on the inside of the lip, and means to vibrate said device in timed relation with the movements of the lip-setting element to cause said device to engage intermittently the inner face of the lip and hold the insole in proper relation to the combined guide and lip-turning element as the work is fed.

4. In a machine of the class described, the combination with work-feeding means, of a combined guide and lip-turning element adapted to enter the channel of an insole and turn up a lip therefrom as the work is fed and also operating to guide the insole during its feeding movement, a vibrating lip setting element to give the turned-up lip a rapid succession of lip-setting blows, a laterally-vibrating element, and means to vibrate said element in timed relation with the movements of the lip-setting element to cause said laterally-vibrating element to engage intermittently the inner face of the lip at a point opposite the lip-setting element and hold the insole in proper relation to the combined guide and lip-turning element as the work is fed.

5. In a machine of the class described, the combination with work-feeding means, of a combined guide and lip-turning element adapted to enter the channel of an insole and turn up a lip therefrom as the work is fed and also operating to guide the insole during its feeding movement, a vibrating lip-setting element to give the turned-up lip a rapid succession of lip-setting blows, and a vibratory device to engage intermittently the inner face of the lip and hold the insole in proper relation to the combined guide and lip-turning element as the work is fed, and means to vibrate the lip-setting element and said device in timed relation.

[Claims 6 to 16 not printed in the Gazette.]

1,220,692. ENGINE-STARTER. HENRY J. SCHULTE, Fullerton, Cal. Filed Dec. 16, 1915. Serial No. 67,153. (Cl. 185—41.)



1. In an engine starter, an engine shaft, a spring for rotating said engine shaft, means driven by the engine shaft for energizing said spring, means whereby the spring may elongate as energized, and automatic means operated by the elongating action of said spring to disconnect the spring energizing means from the engine shaft.

2. In an engine starter, a rotatable shaft, a spring coiled about said shaft and secured at one end thereto, a rotatable element loosely mounted on said shaft and connected to the other end of said spring, an engine shaft, disengageable means connecting the rotatable element to said engine shaft, disengageable means rotatably connecting the engine shaft to the first-mentioned shaft to energize the spring, means whereby the spring may be elongated as energized, and means operated by the elongation of said spring when being energized to automatically throw out of engagement said last named disengageable means.

3. In an engine starter, the combination with the engine drive shaft, of a clutch member keyed to said shaft, a sprocket adapted to be engaged by said clutch member when rotated in the same direction as the engine shaft, a second shaft parallel to said engine shaft, a sprocket wheel loosely mounted upon said second shaft, transmission means connecting said sprocket wheel and the first-named sprocket, a spring wound around said second shaft and having one end connected thereto and its other end connected to said loosely mounted sprocket wheel, a brake-band engaging said wheel to hold it against rotation by said spring, a fixed sprocket wheel secured at the outer end of said second-named shaft, a loose sprocket wheel mounted upon the outer end of the engine shaft, clutch means for locking said loose sprocket wheel to the engine shaft, transmission means for producing simultaneous rotation of the sprocket wheels at the ends of the engine and second-named shafts, and automatically operable means whereby said spring may act to disengage the loose wheel mounted upon the end of the engine shaft from the engine shaft.

4. In an engine starter, the combination with the engine drive shaft, of a clutch member keyed on said drive shaft, a loose rotary clutch member adapted to be disengageably connected with the first-named clutch member, a second shaft, a loose wheel thereon, transmission connections between said wheel and the rotary clutch member, a spring wound around said shaft having one end connected thereto and its opposite end attached to the wheel, a brake-band normally engaging said wheel to hold same against rotation in opposition to the spring, a second wheel keyed on said last-named shaft, a loose clutch member on the engine shaft rotatably connected to said wheel, and means for engaging said clutch member with the engine shaft to rotate the second shaft and wind the spring thereon.

5. In an engine starter, the combination with the engine drive shaft, of a clutch member keyed on said drive shaft, a loose rotary clutch member adapted to be disengageably connected with the first-named clutch member, a second shaft, a loose wheel thereon, transmission connections between said wheel and the rotary clutch member, a spring wound around said shaft having one end connected thereto and its opposite end attached to the wheel, a brake-band normally engaging said wheel to hold same against rotation in opposition to the spring, a second wheel keyed on said last-named shaft, a loose clutch member on the engine shaft rotatably connected to said wheel, and means for engaging said clutch member with the engine shaft to rotate the second shaft and wind the spring thereon, and means operable by said spring for automatically disconnecting said last-named clutch member when the spring has been wound to a predetermined extent.

[Claims 6 to 8 not printed in the Gazette.]

1,220,693. FIREARM. CHARLES SCHULZE, Rice Lake, Wis. Filed Jan. 29, 1917. Serial No. 145,119. (Cl. 42—17.)



1. In a firearm having a receiver and a magazine opening thereinto, the receiver having an opening in its side through which the cartridges are inserted in charging the magazine, and a closure for said opening; a cartridge deflector in the receiver on the side opposite the one having the opening, said deflector being movable to intercept the cartridges passing from the magazine into the receiver and to deflect the same toward the opening.

2. In a firearm having a receiver and a magazine opening thereinto, the receiver having an opening in its side through which the cartridges are inserted in charging the magazine, and a closure for said opening; a cartridge deflector in the receiver on the side opposite the one having the opening, said deflector having a resilient shank and being movable to intercept the cartridges passing into the receiver from the magazine and to deflect the same toward the opening.

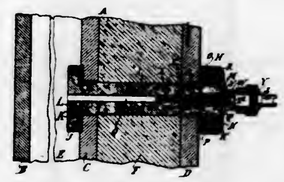
3. In a firearm having a receiver and a magazine opening thereinto, the receiver having an opening in its side through which the cartridges are inserted in charging the magazine, and a closure for said opening; a cartridge deflector in the receiver on the side opposite the one having the opening, said deflector being movable to intercept the cartridges passing into the receiver from the magazine and to deflect the same toward the opening, the side of the receiver on which the deflector is mounted having an opening and the deflector having an actuating lug on its side passing through said opening to the outside of the receiver.

4. In a firearm having a receiver and a magazine opening thereinto, the receiver having an opening in its side through which the cartridges are inserted in charging the magazine, and a closure for said opening; a cartridge deflector in the receiver on the side opposite the one having the opening, said deflector having a resilient shank and being movable to intercept the cartridges passing into the receiver from the magazine and to deflect the same toward the opening, the side of the receiver on which the deflector is mounted having an opening and the deflector having an actuating lug on its side passing through said opening to the outside of the receiver.

1,220,694. VACUUM-VALVE. MAXIMILIAN CHARLES SCHWEINERT, West Hoboken, and HENRY P. KRAFT, Ridgewood, N. J. Filed Aug. 21, 1915. Serial No. 46,640. (Cl. 137—32.)

1. A vacuum valve comprising a shell having a flange on its inner end, said shell being screw-threaded at its outer end and provided with a nut near said end, and packing members compressed by said flange and nut.

2. A vacuum valve comprising a shell and an integral seat in said shell, a valve proper co-acting with said seat, and a follower outwardly of said seat, said shell having means at its outer end for connection with an exhausting device.



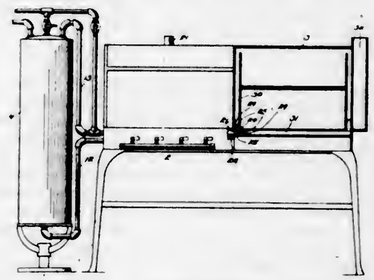
3. A vacuum valve comprising a shell and an integral seat in said shell, a valve proper co-acting with said seat, a follower outwardly of said seat, and a spring between said valve proper and said follower, said shell having means at its outer end for connection with an exhausting device.

4. A vacuum valve comprising a shell and an integral seat in said shell, a valve proper co-acting with said seat, a follower outwardly of said seat, a spring between said valve proper and follower, and a stem to which said valve proper is attached, said stem passing through said follower and connecting said follower and spring to said valve proper, said shell having means at its outer end for connection with an exhausting device.

5. A vacuum valve comprising a shell and an integral seat in said shell, a valve proper co-acting with said seat, a follower outwardly of said seat, a spring between said valve proper and follower, and a stem to which said valve proper is attached, said stem passing through said follower and connecting said follower and spring to said valve proper, and said stem having an inwardly projecting portion constituting a guide for the valve.

[Claims 6 and 7 not printed in the Gazette.]

1,220,695. COMBINATION WATER-HEATER. JAMES G. SCOTT, Washington, D. C. Filed July 29, 1915. Serial No. 42,520. (Cl. 126—39.)



A device of the character described, including a casing, means for partitioning the casing into an outer and an inner compartment communicating with each other, a water receptacle within the outer compartment, a burner under said water receptacle, the said partitioning means being provided with a depending portion extending over and within said water receptacle, a flue entering the outer compartment to lead gases from said burner from the said casing, a flue entering the inner compartment and an oven in communication with said last mentioned flue to receive heat therefrom, substantially as described.

1,220,696. KITCHEN-INDICATOR. EDGAR C. SIDDENS, Shattuck, Okla. Filed Feb. 16, 1916. Serial No. 78,683. (Cl. 116—49.)



1. An indicator of the character described including a board having various commodities indicated on the surface thereof adjacent to its edges, each of said edges having a longitudinal groove therein, wires engaged in said grooves, individually movable elements engaged upon the wires in spaced relation to each other and movable to positions upon the surface of the board in juxtaposition to the respective commodities indicated thereon, and removable pins engaged in the board and transversing said grooves to removably retain the wires therein.

2. An indicator of the character described including a body board having various commodities indicated on the surface thereof adjacent to its edges, wires extending along the edges of the board and detachably connected to each other, individually movable elements engaged upon said wires in spaced relation and movable to positions upon the surface of the board in juxtaposition to the respective commodities indicated thereon, and removable pins adapted to be engaged in the board in coöperative relation to the wires to detachably retain said wires in position.

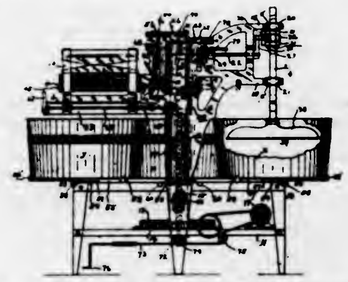
3. An indicator of the character described including a bodyboard having commodities indicated upon the surface thereof adjacent to its side and top edges, wires disposed along the side and top edges of the board and detachably connected to each other, spaced indicating members strung upon said wires and adapted to be moved to positions upon the surface of the board contiguous to the respective commodities indicated thereon, and means for detachably holding said wires in place upon the edges of the board.

4. An indicator of the character described including a bodyboard having commodities indicated upon the surface thereof adjacent to its side and top edges, wires disposed along the side and top edges of the board and detachably connected to each other, spaced indicating members strung upon said wires and adapted to be moved to positions upon the surface of the board contiguous to the respective commodities indicated thereon, and means removably mounted in the board to coöperatively engage with the wires on the side edges of the board and retain the wires in their applied positions.

5. An indicator of the character described including a bodyboard having the names of commodities printed thereon along its opposite vertical edges and along its top edge, said board being provided in each of said edges with a longitudinally extending groove and notches intersecting the grooves; a wire engaged in each of said grooves, the side wires being detachably connected to the ends of the top wire, a series of buttons strung upon each of said grooves and having shanks movable in the respective notches whereby the buttons may be disposed upon the surface of the board contiguous to the respective commodities indicated thereon, and means for detachably holding the wires in place within the grooves in the board.

[Claim 6 not printed in the Gazette.]

1,220,697. LAUNDRYING-MACHINE. JOHN HENRY SIERT, Benson, Nebr., assignor of one-fifth to Alvin H. Siert, Benson, Nebr., and one-fifth to Hilding L. Jacobson, Omaha, Nebr. Filed July 17, 1916. Serial No. 109,743. (Cl. 68—19.)

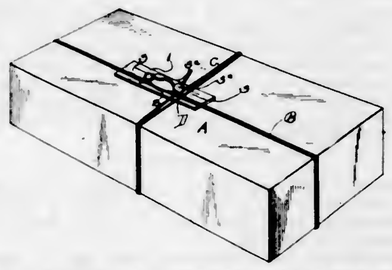


1. In devices for the purpose described, a tubular standard, a hinge member mounted thereon, a vertical shaft journaled in the hinge member and provided with a dasher, a crank shaft journaled in the hinge member, a rotatable shaft circumscribed by the tubular standard, and a plurality of co-acting gear wheels for communicating the movements of the rotatable shaft to the crank shaft for causing longitudinal reciprocation of the vertical shaft.

2. Devices for the purpose described, comprising, in combination with a base, a tubular standard projecting above the base, a hinge member mounted to swing horizontally on the standard, a vertical shaft journaled in the hinge member and provided with a dasher, a crank shaft journaled in the hinge member, a rotatable shaft circumscribed by the tubular standard, a plurality of co-acting gear wheels for communicating the movements of the rotatable shaft to the crank shaft for causing longitudinal reciprocation of the vertical shaft, and means for preventing relative movements of the hinge member and standard after said hinge member has been swung horizontally.

3. In devices for the purpose described, a tubular standard, a hinge member mounted thereon, a vertical dasher-shaft having bearings in the hinge member, a crank shaft journaled in the hinge member, a rotatable driving shaft provided with a pinion and circumscribed by the tubular standard, coöperating mechanism on the vertical dasher-shaft and hinge member for communicating the movements of the pinion of the driving shaft to the crank shaft to cause longitudinal reciprocation of the dasher-shaft, and mechanism on the vertical dasher-shaft and crank shaft arranged for coöperation to impart an intermittent rotary movement to said dasher-shaft during the longitudinal reciprocation thereof.

1,220,698. PACKAGE-TIE. HAROLD S. SMITH, New Haven, Conn. Filed Aug. 11, 1916. Serial No. 114,435. (Cl. 24—130.)

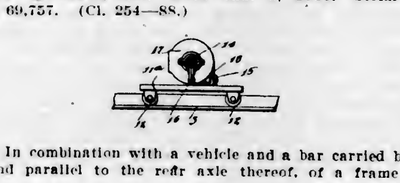


In package ties, the combination of a plate having a central opening, and flat inwardly directed tongues formed integral with the plate and positioned at each side of the opening, said tongues being in axial alinement and each of said tongues lying in the plane of the plate for the major portion of its length.

1,220,699. [WITHDRAWN.]

1,220,700. [WITHDRAWN.]

1,220,701. CIRCUIT-CLOSER FOR TRACK-SWITCHES. CHARLES W. SQUIRES, Beverly, Mass. Original application filed Aug. 27, 1915, Serial No. 47,579. Divided and this application filed Oct. 17, 1916. Serial No. 126,213. (Cl. 246—54.)



1. In combination with means for energizing an electromagnet, a circuit closer having a movable member and a stationary member, means for moving said movable member from its normal position into operative position and then releasing it, and means for guiding said movable member after its release into contact with said stationary member and thereafter into its normal position.

2. In a device of the kind described, in combination with a track switch operating mechanism, a circuit closer comprising a movable member and a stationary member, means operated by a passing car whereby said movable member will be moved into operable position and released, said stationary member being located to be engaged by said movable member after its release and during its return to its inoperative position.

3. In a device of the kind described, a circuit closer comprising a movable arm and a terminal, means for lifting and releasing said movable arm whereby it may fall by gravity, means for guiding said movable arm during its fall whereby it will be brought into momentary contact with said terminal.

4. In a device of the kind described, a circuit closer comprising a loosely hinged movable arm and a terminal, means for lifting said arm comprising a trolley actuated lever, a hinged carrier for said arm adapted to be engaged by said lever to move said arm, and a cam plate provided with a cam surface to guide said arm out of reach of said terminal during its movement in one direction and into contact with said terminal on its movement in the other direction.

5. A circuit closer having a movable member and a stationary member, means for moving said movable member from its normal position into operative position and then releasing it, and means for guiding said movable member after its release into contact with said stationary member and thereafter into its normal position.

[Claim 6 not printed in the Gazette.]

1,220,702. VEHICLE-ELEVATOR. S. GRANT STANNARD, Long Beach, Cal. Filed Jan. 3, 1916. Serial No. 69,757. (Cl. 254—88.)

In combination with a vehicle and a bar carried below and parallel to the rear axle thereof, of a frame fulcrumed intermediate its ends, supporting means at the ends of the frame, and carriages slidable upon the frame adapted for engagement with the front axle of the vehicle and the bar on the rear axle thereof respectively.

1,220,703. CONVEYER AND CLEANER. JOHN P. STOFFEL, Los Angeles, Cal. Filed Jan. 21, 1916. Serial No. 73,329. (Cl. 193—6.)



1. In a conveyer, a plurality of flexibly connected buckets, a pair of serrated members arranged to engage and jar the buckets on advance movement of the latter, said serrated members arranged with the serrations on one member staggered in relation to the serrations on the other member.

2. In a conveyer, the combination with a chain and a series of buckets thereon, of a pair of serrated bars arranged to engage and jar the buckets on forward movement of the chain, the serrations of one of said members being disposed in staggered relation to the serrations on the other member, and means for adjusting said members in relation to each other and to the buckets.

3. In a conveyer, a chain, a plurality of buckets thereon, a housing incasing said chain and buckets having a substantially horizontally extending portion formed with a discharge opening over which the chain and buckets pass, and means for jarring the buckets and rocking them transversely as they pass over the discharge opening comprising a pair of serrated bars extending above the discharge opening.

4. In a conveyer, a housing having an upwardly extending portion connecting with a horizontally extending portion, a direction roller at the intersection of the horizontal and vertical portions of said housing, a bucket conveyer in said housing passing upwardly over said roller adapted to discharge into the horizontal portion of the housing, a slidable plate arranged to contact the circumferential edge of the roller to prevent backfall of materials, and yieldable means for maintaining the plate in contact with the roller.

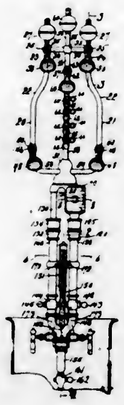
5. In a conveyer, a roller formed with a peripheral channel adapted to receive the chain of the conveyer, a slidable plate formed with a tongue adapted to contact the circumferential face of said roller and having a tongue portion extending into and contacting the walls of the channel, and spring means for maintaining the plate in contact with the roller.

[Claim 6 not printed in the Gazette.]

1,220,704. SANITARY CURTAINLESS SOAP AND WATER SPRAY. ROBERT SWIMMER, New York, N. Y. Filed June 24, 1915. Serial No. 36,049. (Cl. 4—26.)

1. In a spray of the character described the combination of a pipe frame consisting of two main vertical members, a converged member formed at the upper end of each main vertical member, a lower curved member at the lower end of each main vertical member, a combined fitting and bonnet connecting the lower curved members, a fitting at the top of each converged member, an air chamber for the latter fitting, cross pipes extending from the latter fittings, a fitting connecting the cross pipes, a central vertical pipe between the latter fitting and the said combined fitting and bonnet, a pipe extending up from the fitting connecting the cross pipes, an air

chamber for the latter pipe, valve casings adjustably connected to the frame, a valve for each valve casing and a spray head for each valve casing.



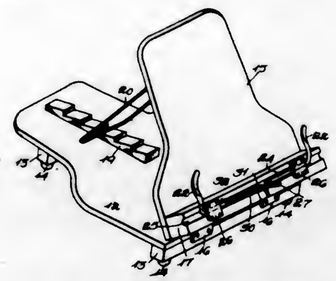
2. In a spray of the character described the combination of a frame, spray heads for the frame, means to adjust the spray heads to different positions, a combined fitting and bonnet supporting the frame, a receptacle for a material to be dissolved supporting the combined fitting and bonnet and having a port with a valve seat and having a by pass connection with a port and valve seat, a valve hinged between the valve seats to coact with either one automatically, means to conduct a fluid through the frame by way of the receptacle and means to conduct a fluid through the frame by way of the by-pass connection.

3. In a spray of the character described the combination of a frame, spray heads for the frame, a combined fitting and bonnet supporting the frame, a receptacle having a by-pass connection supporting said combined fitting and bonnet, a pipe leading to said by-pass connection, a pipe leading to said receptacle, a stuffing box at the inlet end of each of said pipes, a pipe leading to each stuffing box, the first two pipes clamped by said stuffing boxes and each of diameters to descend into the pipe leading to its accompanying stuffing box, a valve in each pipe leading to the stuffing boxes, a Y shaped fitting supporting the two latter pipes and a thermometer connected to the Y shaped fitting.

4. In a spray of the character described the combination of a frame, spray heads for the frame, a receptacle having a by-pass connection coacting with the frame at its inlet end, a pipe leading to the by-pass connection, a pipe leading to the receptacle, a pipe leading to each of said pipes and to telescope with the same, a valve in each of the latter pipes, a Y shaped fitting supporting the latter two pipes, an elbow shaped fitting supporting the Y shaped fitting, a valve connected to the latter fitting, the latter fitting connected to the faucet fitting of a bath tub and adjustable and detachable clamping means connecting the spray to said bath tub.

5. In a spray of the character described the combination of a frame, spray heads for the frame, a pair of pipes leading to said frame, a second pair of pipes to telescope with said first pair of pipes and valves for each of the latter pipes, a Y shaped fitting supporting said valves, a fitting connecting the Y shaped fitting and the faucet fitting of a bath tub, a detachable clamp fastened to the latter two pipes, a stud formed with said clamp and a clamping bracket having a stud at one end and heels at the other end interposed between said detachable clamp and the piping of the bath tub.

1,220,705. BOOK-REST. CHESTER A. S. TAYTE, Salem, Mass. Filed June 13, 1916. Serial No. 103,396. (Cl. 45—80.)



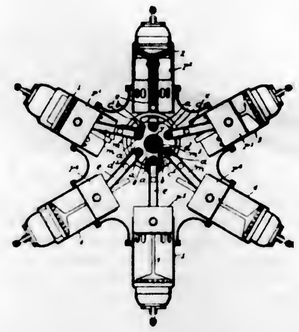
1. A book rest comprising a base, a tablet hinged at one end to the base and having a projecting ledge at its hinged end adapted to support the lower end of a book, the base and tablet being provided with complemental means for holding the tablet in an inclined position, the outer surface of the ledge having a longitudinal groove therein, a rockshaft mounted in the said groove and provided with leaf-confining fingers, and a spring engaged with the rockshaft and ledge and adapted to yieldingly press said fingers against the exposed leaves of an open book supported by the tablet and ledge, the rockshaft being provided with an arm whereby it may be turned to displace the fingers from their operative positions.

2. A book rest comprising a base, a tablet hinged at one end to the base and having a projecting ledge at its hinged end adapted to support the lower end of a book, the base and tablet being provided with complemental means for holding the tablet in an inclined position, fixed bearings at the outer side of the ledge below the upper side thereof, a rock-shaft journaled in said bearings and located below the upper side of the ledge, the ends of said rock-shaft being bent to form leaf-confining fingers adapted to project above the upper side of the ledge, and bear on the exposed leaves of an open book, and to be swung outwardly and downwardly below the upper side of the ledge to a non-obstructing position, permitting the unobstructed turning of the leaves, and a spring directly engaged with the rock-shaft and ledge and adapted to yieldingly hold said fingers in their leaf-confining position, the rock-shaft being provided with an arm whereby it may be turned to move the fingers to their non-obstructing position.

1,220,706. ROTARY-CYLINDER MOTOR. FELIX JOSEPH CHARLEMAGNE TESSE, La Varenne St. Hilaire, France, assignor of one-half to George Mallison, Eastbourne, England. Filed Oct. 17, 1914. Serial No. 867,084. (Cl. 121—64.)

1. In a radial rotary cylinder motor, having an even number of radial cylinders, a crank shaft about which said cylinders are rotatably mounted, a member revolubly mounted on the crank pin of said shaft, pistons in said cylinders, a pair of principal connecting rods appertaining respectively to the pistons of opposite cylinders and connected to said revoluble member, secondary connecting rods appertaining to the pistons of others of said cylinders and connected to said revoluble member, a connecting member between said opposite principal connecting rods, for connecting the latter mechanically together, and means for pivotally connecting said opposite principal connecting rods to said connecting member.

2. In a radial rotary cylinder motor, having an even number of radial cylinders, a crank shaft about which said cylinders are rotatably mounted, a member revolubly mounted on the crank pin of said shaft, pistons in said cylinders, a pair of principal connecting rods appertaining respectively to the pistons of opposite cylinders and connected to said revoluble member, secondary connecting rods appertaining to the pistons of others of said cylinders and connected to said revoluble member, a connecting member, independent of the crank, between said opposite principal connecting rods, for connecting the latter mechanically together, and means for pivotally connecting said principal connecting rods to said connecting member.



3. In a radial rotary cylinder motor, having an even number of radial cylinders, a crank shaft about which said cylinders are rotatably mounted, pistons in said cylinder, two principal connecting rods appertaining to the pistons of opposite cylinders, secondary connecting rods appertaining to the pistons of others of said cylinders, a hub member revolubly mounted on the crank pin of the crank shaft and to which said principal and secondary connecting rods are connected, a member extending around the crank pin and independent thereof, for mechanically connecting said opposite principal connecting rods together, and means for pivotally connecting said opposite principal connecting rods to said connecting member at points located laterally of their points of connection to the hub member.

4. In a radial rotary cylinder motor, having an even number of radial cylinders, a crank shaft about which said cylinders are rotatably mounted, pistons in said cylinders, a hub member revolubly mounted on the crank pin of the crank shaft, a pair of principal connecting rods appertaining to the pistons of opposite cylinders and connected to said hub member at diametrically opposite points, secondary connecting rods appertaining to the pistons of others of said cylinders and connected to the hub member, a member independent of the crank pin, for mechanically connecting said opposite principal connecting rods together, and to which the latter are pivotally connected at diametrically opposite points located laterally of their respective points of connection to the hub member, substantially as described.

5. In a radial rotary cylinder motor having an even number of radial cylinders, a crank shaft about which said cylinders are rotatably mounted, pistons in said cylinders, a hub member revolubly mounted on the crank pin of the crank shaft, a pair of principal connecting rods appertaining to the pistons of opposite cylinders and connected to said hub member at diametrically opposite points, secondary connecting rods appertaining to the pistons of others of said cylinders and connected to the hub member, a mechanically connecting member independent of the crank pin and to which said opposite principal connecting rods are pivotally connected at points on a diameter lying in a plane at an angle to the diametrical plane of the points of connection of these principal rods to the hub member, and means for pivotally connecting said opposite principal connecting rods to said mechanically connecting member.

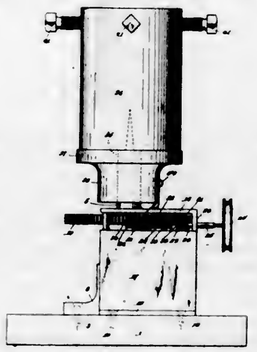
[Claims 6 to 12 not printed in the Gazette.]

1,220,707. BREAST-PUMP. MARIE VOLQUARDS, Visalia, Cal. Filed Aug. 25, 1915. Serial No. 47,224. (Cl. 128—4.)



A breast pump made entirely of glass, comprising a closed milk receptacle provided with a cup-shaped lower section, and having a lateral circular milk inlet, said milk inlet having a curved surface adapted to make an air-tight bearing on the portion of the human breast surrounding a nipple, and a tube formed integral with said receptacle extending upwardly therefrom and being bent at its upper end in a direction above said milk inlet, said tube being of a length to reach from the breast to the mouth of the user.

1,220,708. ROTATABLE SUPPORT FOR CHRISTMAS TREES. HENRY W. WASENSKE, Collinsville, Ill. Filed May 29, 1913. Serial No. 770,659. (Cl. 211—20.)

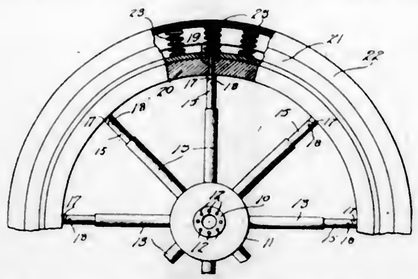


A Christmas tree support including a main supporting base, having a central recess in the upper surface thereof, a socket base having its undersurface arranged in intimate contact with the upper surface of the main base and registering with the recess in the main base, a short shaft rotatably mounted in the socket base and maintained in a vertical position thereby, a series of ball bearings arranged in the recess for supporting the lower end of the shaft, a tree receiving cylinder arranged about the shaft, adjustable means for removably holding the cylinder on the shaft so as to effectively support a tree, a needle extending axially of the shaft and arranged in the cylinder, means for removably clamping a tree in the cylinder, and means mounted on the stationary base and extending above the socket base for rotating the shaft.

1,220,709. RESILIENT WHEEL. SCOTT A. WHEATLEY, La Grande, Oreg. Filed Feb. 2, 1916. Serial No. 75,717. (Cl. 152—28.)

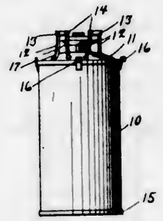
A resilient wheel comprising a hub, a felly, an inner tire section carried by said felly, an outer tire section slidably

engaging the inner tire section, resilient means yieldably holding the outer tire section in an extended position, pins extending through said felly and inner tire section, outer spoke sections pivotally connected with said pins, inner



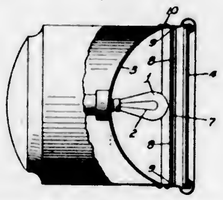
spoke sections slidably engaging the outer spoke sections and pivotally connected with said hub, abutment cores in the inner spoke sections, and springs positioned between said cores the outer spoke sections to yieldably hold the spokes extended.

1,220,710. MILK-CAN. WILLIAM W. WHITE, American Falls, Idaho. Filed Nov. 24, 1915. Serial No. 63,256. (Cl. 31—82.)



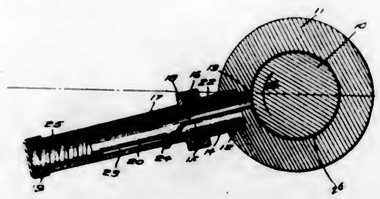
The combination with the body of a milk can, of vertical members secured to the upper end of the can and extending above the body, said members being arranged at diametrically opposite points on the can and having their upper ends turned outwardly and downwardly to form hooks, vertical members secured to diametrically opposite points on the can and at ninety degrees from the first members, said members having their upper ends extending above the can and being straight and plain throughout their lengths.

1,220,711. DIMMER ATTACHMENT FOR AUTOMOBILE-LAMPS. ALBERT H. WOOLLACOTT, Los Angeles, Cal. Filed Mar. 2, 1915. Serial No. 11,557. (Cl. 240—48.4.)



A dimming attachment for an automobile lamp having a reflector, said attachment comprising a light obscuring shield of such diameter as to interrupt the direct forward rays from the luminary and to allow the lamp to emit the rays from the reflector, an open resilient ring conforming to the interior of the lamp frame, arms extending from opposite sides of the shield and connecting with the ring, said resilient ring being adapted to spring out against the interior of said lamp frame and thus hold the shield centrally in front of the luminary of the lamp.

1,220,712. LUBRICANT-ARRESTER. CHARLES X. WRIGHT, Miami, Ariz. Filed Sept. 6, 1916. Serial No. 118,647. (Cl. 64—24.)



1. In a lubricant arrester, the combination with a rotatable shaft, of a tubular housing downwardly inclined therefrom, a curved wiper reciprocably mounted therein, said wiper having a channel to conduct the lubricant wiped from said shaft into said housing, means for guiding said wiper in its reciprocating movement, resilient means tending to move said wiper in contact with said shaft, and a removable bottom cap for said housing.

2. In a lubricant arrester, the combination with a rotatable shaft, a bearing therefor, a tubular housing detachably secured to said bearing and downwardly inclined therefrom, a wiper reciprocably mounted in said housing, and having means for conducting the lubricant wiped from said shaft in the said housing, and resilient means tending to move said wiper in contact with said shaft.

3. In a lubricant arrester, the combination with a rotatable shaft, a bearing therefor, a housing detachably secured to said bearing downwardly inclined therefrom, a wiper reciprocably mounted in said housing, means for guiding said wiper in its reciprocal movement, and resilient means tending to move said wiper in contact with said shaft.

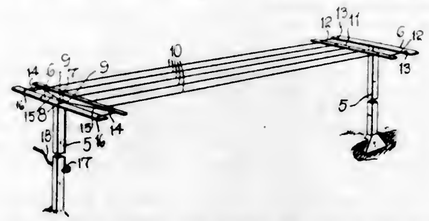
4. A lubricant arrester, comprising a cylindrical housing, a wiper reciprocably disposed therein formed with a cylindrical body portion and a semi-cylindrical wiping end adapted to bear against a rotatable shaft, means for maintaining the wiper in a single alined position in relation to the shaft, and spring means for holding the semi-circular end of the wiper against the surface of the shaft.

5. In a lubricant arrester, the combination with a rotatable shaft having a bearing thereround, of a tubular housing detachably secured to the bearing and inclined at an angle below the horizontal, a wiper adapted to reciprocate within said housing formed with a cylindrical body portion and a semi-cylindrical extension therefrom adapted to pass through the bearing and abut against the surface of said rotatable shaft, means for maintaining said wiper in an alined position, a spring adapted to hold the end of the wiper against the shaft, and means whereby the housing may be opened to remove the lubricant collected by said wiper.

1,220,713. CLOTHES-LINE. CARL EMIL ANDERSON, Sioux City, Iowa. Filed Oct. 14, 1916. Serial No. 125,666. (Cl. 68—3.)

A clothes line including a plurality of spaced lines and end bars connecting the same, spaced standards, a horizontal bar fixed upon the upper end of each standard and of approximately the same length as said end bars, flexible elements connecting one of the end bars at its extremities to one of said horizontal bars, a drum rotatably mounted upon one of said standards, sheaves on the other end bar adjacent its ends, cables passing around said sheaves and having one of their extremities fixed to the horizontal bar on the latter standard, a pair of sheaves swingingly mounted upon the latter horizontal bar over which the respective cables are engaged, said cables having their

other ends attached to said drum, whereby the clothes lines are elevated and tightened when the drum is rotated in one direction, and means for holding the drum against reverse rotation.



1,220,714. CLOTHES-PIN. NICHOLAS BAYUK, Mesaba, Minn. Filed May 1, 1916. Serial No. 94,744. (Cl. 24—139.)



As an improved article of manufacture, the herein described clothes pin consisting of a length of wire bent intermediate of its ends to provide a single finger loop therein, said wire having portions extending in spaced, parallel relation from said loop and bent to provide elongated, laterally bowed, opposed clamping loops normally in contact with each other, the end portions of the wire being extended from the latter loops in convergent relation and between said parallel portions of the wire, said end portions being twisted upon each other and the extremities of the wire having oppositely projecting eyes formed thereon engaging the respective parallel portions of the wire at their juncture with the finger loop to prevent the opening of said loop.

1,220,715. PRIMARY TERMINAL. CHARLES W. BECK, Detroit, Mich., assignor to The Beck-Frost Corporation, a Corporation of Michigan. Filed May 15, 1913. Serial No. 767,794. (Cl. 173—269.)



1. In a terminal, the combination with a bifurcated member, having its furcations formed with portions for respectively engaging the bared end of an insulated conductor, the insulation adjacent said end, and a binding post, of means for displacing the furcations of said member toward each other and into firm engagement with the bared end of the conductor and the insulation thereof.

2. In a terminal, the combination with a bifurcated member, having its furcations formed with portions for respectively engaging the bared end of an insulated conductor and the insulation adjacent said end, of means for displacing the furcations of said member toward each other and into firm engagement with the bared end of the conductor and the insulation thereof.

3. In a terminal, the combination with a bifurcated member having its furcations formed with portions for respectively engaging the bared end of an insulated conductor, the insulation adjacent said end and a binding post, of a sleeve internally threaded to engage coacting threaded portions of said furcations to displace the furcations into firm engagement with the bared end of the conductor and the insulation thereof.

4. In a terminal, the combination with a bifurcated member having its furcations formed with portions for respectively engaging the bared end of an insulated conductor, the insulation adjacent said end and a binding post, of means for displacing the furcations of said member toward each other and into firm engagement with the bared end of the conductor, the insulation thereof and the binding post.

5. In a terminal, the combination with a bifurcated member having its furcations formed with portions for respectively engaging the bared end of an insulated conductor, the insulation adjacent said end and a binding post, of a sleeve internally threaded to engage coacting threaded portions of said furcations to displace said furcations toward each other and into firm engagement with the bared end of the conductor, the insulation thereof and the binding post.

[Claims 6 and 7 not printed in the Gazette.]

1,220,716. MARKING-STAKE. JOHN R. BEERY, Celina, Ohio. Filed June 9, 1915. Serial No. 33,201. (Cl. 40—145.)



1. A marking stake comprising a body; designation plates arranged one above the other at the upper ends of said body and disposed angularly relative to each other; and a strap having its ends secured to said body and having its central portion projecting upwardly from said body and formed to embrace said plates to securely fasten the same to said body, substantially as described.

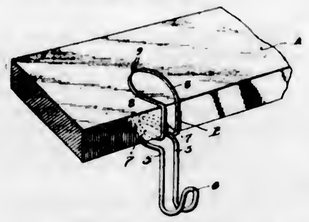
2. A marking stake comprising a body; designation plates arranged one above the other at the upper end of said body and disposed angularly relative to each other; a strap having its ends secured to said body and having its central portion projecting upwardly from said body and formed to embrace said plates; and means passing through said plates and the opposite sides of said strap for locking said plates to said strap, substantially as described.

3. A marking stake comprising a body; a vertically disposed designation plate having its lower edge resting upon the upper end of said body; and means for fastening said plate to said body, said means comprising a strap having its ends engaging against opposite sides of said body and fastened thereto and having its central portion projecting upwardly and embracing said plate, substantially as described.

4. A marking stake comprising a body; a vertically disposed designation plate having its lower edge resting upon the upper end of said body; means for fastening said plate to said body, said means comprising a strap having its ends engaging against opposite sides of said

body and fastened thereto and having its central portion projecting upwardly and embracing said plate; and means passing through said plate and the opposite sides of said strap for locking the parts together, substantially as described.

1,220,717. DETACHABLE HOOK. WILLIAM C. BENNETT, Rhinelander, Wis. Filed May 16, 1916. Serial No. 97,932. (Cl. 248—26.)

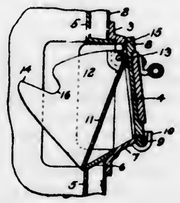


1. A hook comprising a single strand of relatively stiff resilient wire bent to form a hook proper, spaced parallel side limbs, medial and upper prongs, said upper prongs being of larger size than the lower prongs, and inwardly directed pointed tips on the upper prongs.

2. A detachable hook comprising a single strand of relatively stiff resilient wire bent to form spaced pairs of gripping portions for clamping engagement with a support, the uppermost pair of gripping portions being inwardly curved and pointed tips formed on said pair of gripping portions.

3. A detachable hook comprising a strip of relatively stiff resilient material bent to form spaced parallel limbs terminating at one end in a hook, oppositely curved clamping loops in the medial portion of said limbs arranged in opposed relation, and oppositely curved gripping prongs on said limbs spaced from said loops and having pointed ends normally held in contacting relation.

1,220,718. STOKING-DOOR FOR FURNACES, &c. GEORGE F. BIBB, Troy, N. Y., assignor to Ruud Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Sept. 8, 1915. Serial No. 49,419. (Cl. 193—33.)



1. The combination of a door frame, a door for the frame mounted to open into chute-forming position, an apron movably mounted on the door and extending into the frame for directing matter thereinto when the door is open, and stops on the frame engaged by the apron for holding the door in open position.

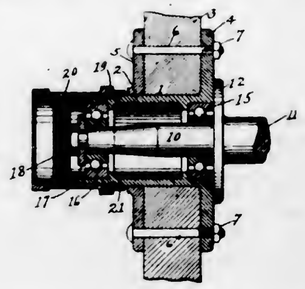
2. The combination of a door frame having its open face sloping in a direction to maintain the door closed by gravity, a stoking door adapted to close against said face and mounted at its lower side to rotate about a horizontal axis, an apron hinged to the inner side of the door and movable through the frame opening as the door opens and closes, and means on the apron for limiting the opening movement of the door to provide a chute.

3. The combination of a door frame, a door for the frame mounted to swing outwardly and downwardly, an apron having bottom and side walls, the apron hinged at one end of its bottom wall to the inner side of the door and with the free portion of the apron entered in the frame when the door is open, and stop means on the frame engaged by the side walls of the apron for limiting the opening movement of the door and apron.

4. The combination of a door frame, a door for the frame mounted to swing outwardly and downwardly into inclined position, an apron hinged to the upper portion of the inner side of the door and consisting of an imperforate bottom and imperforate opposite upstanding side walls, said apron bottom and side walls projecting into the frame when the door is open and with said walls extending upwardly to the top of the frame opening and adapted to engage the top portion of the frame for holding the apron carrying door in inclined open position.

5. The combination of a door frame, a door therefor mounted to rotate at its lower edge about a horizontal axis, bearings on the frame for the door adapted to be disengaged by upward movement of the latter, an apron at the inner side of the door and hinged to the upper portion of the latter, upstanding walls at opposite sides of the apron movable through the door opening and extending to the top thereof for engaging the frame and limiting the opening movement of the door, the side walls recessed downwardly to permit the door and the wall carrying apron to be elevated sufficiently to release the door from its bearings.

1,220,719. LUBRICATOR. CHARLES H. BIGGIN, Redlands, Cal. Filed May 31, 1916. Serial No. 100,916. (Cl. 64—26.)



1. In combination with a hub, a cap screwing on the end of the hub, and a lock nut having an annular flange on the rear thereof screwing on the hub against said cap to lock said cap in the desired position on said hub, and an annular flange on the rear of said lock nut preventing dirt entering the threads between said hub and said cap.

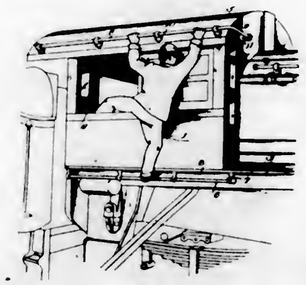
2. In combination with a hub, a cap screwing on the end of said hub, a lock nut screwing on said hub against said cap to lock said cap in the desired position on said hub said lock nut having means for preventing the entrance of dirt into the threads between said hub and said cap.

3. In combination with a hub, a lubricating device adjustably mounted on the end of said hub, said hub and said lubricating device being adapted to be filled with a lubricant, said lubricating device being adapted to be adjusted by hand on said hub so as to force the lubricant through the hub, means for locking said lubricating device in adjusted position and to prevent dirt entering and interfering with the free operation of said lubricating device.

1,220,720. LOCOMOTIVE SAFETY HAND AND FOOT RAIL. JAMES M. BLASHFIELD, Jackson, Mich., assignor of one-half to Charles L. Hayes, Jackson, Mich. Filed Sept. 22, 1916. Serial No. 121,630. (Cl. 105—194.)

1. The combination with a locomotive, of a foot rail extending beneath the floor of the cab thereof at each side of the cab, and a hand rail extending along each said side of the cab above the eaves of the roof of the cab.

2. The combination with a locomotive, of a foot rail extending beneath the floor of the cab thereof at each side of the cab and from the rear end of the cab to the running board at the respective sides of the locomotive, and a hand rail extending along each said side of the cab above the roof of the cab and from the rear end of the said cab to the forward end thereof.



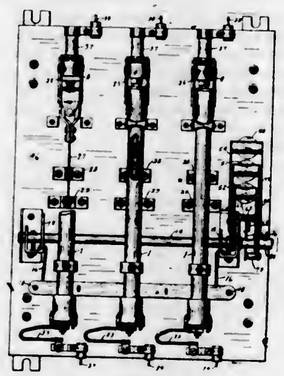
3. The combination with a locomotive, of a foot rail extending beneath the floor of the cab thereof at each side of the cab, and from the rear end of the cab to the running board at the respective sides of the locomotive, and a hand rail extending along each said side of the cab above the roof of the cab and from the rear end of the said cab to the forward end thereof, the said hand rails being provided with a lateral forward end extending transversely of the front wall of the cab.

4. The combination with a locomotive, of a foot rail extending beneath the floor of the cab thereof at each side of the cab, and a hand rail extending along each said side of the cab above the roof of the cab, the said rails being located wholly within the bounds of the respective sides of the cab.

5. The combination with a locomotive, of a foot rail extending beneath the floor of the cab thereof at one side of the cab, and a hand rail extending along the said side of the cab above the eaves of the roof of the cab.

[Claim 6 not printed in the Gazette.]

1,220,721. AUTOMATIC RELEASE MECHANISM. LYNDE BRADLEY and HARRY L. BRADLEY, Milwaukee, Wis. Filed Aug. 14, 1913. Serial No. 784,661. (Cl. 175—294.)



1. The combination with the conductors of a polyphase circuit, a set of switches, one for each phase, automatic means for actuating the switches to circuit breaking position, means for manually actuating the switches to circuit closing position, latch mechanism adapted to hold all the switches in circuit closing position, a set of latch releasing devices, and a set of electro-magnetic devices, one included in each phase and each adapted to hold one of the latch releasing devices from operation until the current in such phase falls below normal.

2. The combination with a set of polyphase conductors of an electrical circuit, of a movable support, automatic circuit breakers arranged to be mechanically actuated through said support to simultaneously close the circuit through each of said conductors, a latch adapted to hold the support and circuit breakers in circuit closing position, a set of automatically acting latch releasing mechanisms, and a set of electro-magnetic devices, one for each phase, and each adapted, while fully energized, to prevent a latch releasing movement of one of the latch releasing mechanisms.

3. The combination with the conductors of a polyphase circuit, switches, one for each phase, circuit breaking armatures, one for each conductor, each operable independently of the others and each directly and mechanically controlling the switches for the entire circuit, and a plurality of underload trip magnets, one for each conductor, and each adapted to hold the corresponding circuit breaking armature in operative position until a current interruption occurs in such conductor.

4. The combination with the conductors of a polyphase circuit, circuit closing mechanism therefor, an electromagnetic device in each circuit adapted to be energized independently of the others, an oscillatory actuating shaft, a set of armatures pivotally hung upon the shaft and each adapted to swing to a raised position within the magnetic field of one of said devices, means for transmitting motion of the shaft to raise said armatures, means for tranmitting motion from the shaft to close said circuit, and trip mechanism means connected therewith for controlling said circuit and adapted to bet set by said shaft, each of said armatures having a projection adapted to engage and release the trip mechanism after the initial downward movement of the armatures.

5. The combination with the conductors of a polyphase circuit, of electro-magnets, one for each phase conductor, a trip mechanism means connected therewith for controlling said circuit, a trip setting manually actuated member, and a set of pivotally supported armatures adapted to be swung by the trip setting member each to a raised position within the field of one of the magnets, each of said armatures having a short arm, and said trip mechanism having a trip releasing arm adapted to be engaged by any one of said short arms to release the trip after a magnet has been deënergized and its armature permitted to acquire momentum in its downwardly swinging movement.

[Claims 6 to 8 not printed in the Gazette.]

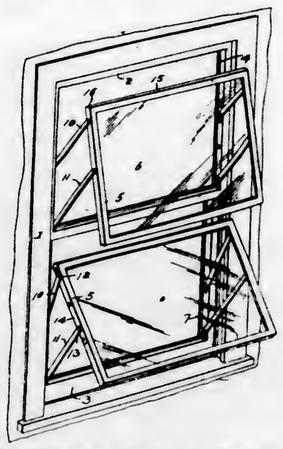
1,220,722. REVERSIBLE WINDOW-SASH. MORRIE BRAND, San Francisco, Cal., assignor of one-half to Walter Julius Gerdau, San Francisco, Cal. Filed Aug. 2, 1916. Serial No. 112,775. (Cl. 20—42.)

1. A sash, and two links of unequal lengths each pivoted at one end to the frame and the other ends pivoted to the sash at different points, said links being disconnected from each other and arranged to allow of reversal of the sash and to cross each other in one position of the sash.

2. A sash, and two links of unequal lengths each pivoted at one end to the frame and the other ends pivoted to the sash at different points, said links being disconnected from each other and arranged to allow of reversal of the sash and to cross each other in one position of the sash, the shorter link being pivoted to the frame at a point substantially opposite the mid-length of the sash in its closed position.

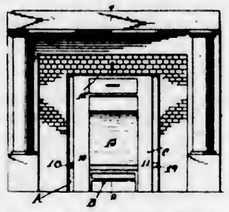
3. A sash, and two links of unequal length upon each side thereof, said links being each pivoted at one end to the frame within which the sash is closable and having their other ends pivoted to the edges of the sash at differ-

ent points, the links upon each edge being disconnected from each other and arranged to allow of reversal of the



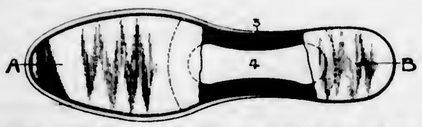
sash, with the links upon each edge adapted to cross each other in the reversal of the sash.

1,220,723. WARM-AIR ACCUMULATOR AND DISTRIBUTER. JAMES L. BROWN, Rockport, Ky. Filed Oct. 2, 1912. Serial No. 723,458. (Cl. 126—121.)



In a device of the class described, a hollow casing formed to provide spaced parallel arm portions connected together at one end by a connecting portion and adapted to be inserted within the fireplace in inverted position with the said arms in close proximity to and extending above the grate thereof, and with said connecting portion spaced above said grate, a hollow substantially shallow fireback connecting said arms throughout the major portion of their extent, the said fireback being spaced at its upper end downwardly from said connecting portion to provide a duct communicating with the flue of said fireplace and extending at its lower end downwardly to terminate a slight distance above said grate, the upper and lower ends of said fireback being provided with openings communicating with the interior of said arms, a cold air inlet pipe connected to each of the arms adjacent its lower end, and a hot air discharge pipe leading from the connecting portion.

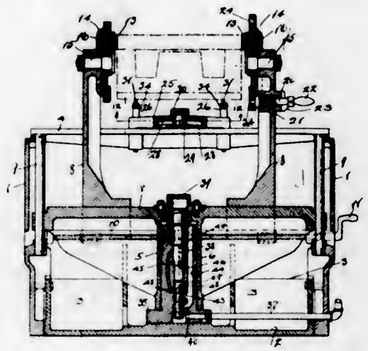
1,220,724. DEVICE FOR CORRECTING DEFORMITIES OF THE FEET. ANDREW A. S. BURNS, Montreal, Quebec, Canada. Filed Oct. 21, 1915. Serial No. 57,217. (Cl. 36—71.)



1. The combination with the shank of a shoe, of a vulcanite arch-support, and means for attaching the same to the shoe, such means consisting of wire gauze incorporated with the support.

2. An orthopedic vulcanite arch-support consisting of a sheet of wire gauze and layers of vulcanite on opposite sides of said gauze.

1,220,725. MOLD-MAKING MACHINE. EDWIN S. CARMAN, Cleveland, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 25, 1913. Serial No. 763,563. (Cl. 22—32.)



1. In mechanism of the character described, the combination with a frame; of a cross-head reciprocable in said frame; mechanism adapted to reciprocate said cross-head; brackets mounted on and adjustable along said cross-head; and means adapted simultaneously to adjust said brackets in or out.

2. In mechanism of the character described, the combination of a frame; of a cross-head reciprocable in said frame; mechanism adapted to reciprocate said cross-head; brackets mounted on and adjustable along said cross-head; and a double screw rotatably held in said cross-head and adapted simultaneously to adjust said brackets in or out.

3. In mechanism of the character described, the combination of a frame; of a cross-head reciprocable in said frame; mechanism adapted to reciprocate said cross-head; brackets supported in said cross-head; a pattern-plate carrier oscillatorily mounted on said brackets; and a leveling table located between said cross-head and said carrier.

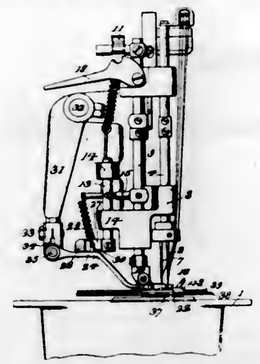
4. In mechanism of the character described, the combination of a frame; of a cross-head reciprocable in said frame; mechanism adapted to reciprocate said cross-head; brackets mounted on and adjustable along said cross-head; means adapted simultaneously to adjust said brackets in or out; and a pattern-plate carrier oscillatorily mounted on said brackets.

5. In mechanism of the character described, the combination of a frame; of a cross-head reciprocable in said frame; mechanism adapted to reciprocate said cross-head; brackets mounted on and adjustable along said cross-head; means adapted simultaneously to adjust said brackets in or out; a pattern-plate carrier oscillatorily mounted on said brackets; and a leveling table located between said cross-head and said carrier.

[Claims 6 to 12 not printed in the Gazette.]

1,220,726. FEEDING MECHANISM FOR SEWING-MACHINES. JOHN E. CHALMAN, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 24, 1913. Serial No. 769,740. (Cl. 112—8.)

1. A feeding mechanism including in combination a presser foot, a lower feed dog, an upper feed dog, spaced abutments movable with said presser foot for limiting the upward movement of the upper feed dog, yielding means for holding said upper feed dog in engagement with said spaced abutments, and means for moving said upper feed dog back and forth on said abutments.



2. A feeding mechanism including in combination a presser foot, a lower feed dog, an upper feed dog, spaced abutments movable with said presser foot for limiting the upward movement of the upper feed dog, yielding means for holding said upper feed dog in engagement with said spaced abutments, means for moving said upper feed dog back and forth on said abutments, and means whereby said abutments may be simultaneously moved toward and from the material for varying thicknesses of material.

3. A feeding mechanism including in combination a work support, an upper feed bar, a feed dog carried thereby, a presser foot, spaced abutments connected to and movable with said presser foot toward and from the material against which said feed bar is pressed, yielding means for pressing said feed bar against said abutments, and means for reciprocating said feed bar back and forth on said abutments.

4. A feeding mechanism including in combination a work support, a lower feed bar, an upper feed bar, a feed dog carried thereby, a presser foot, spaced abutments connected to and movable with said presser foot toward and from the material against which said upper feed bar is pressed, yielding means for pressing said upper feed bar against said abutments, and means for reciprocating said upper feed bar back and forth on said abutments.

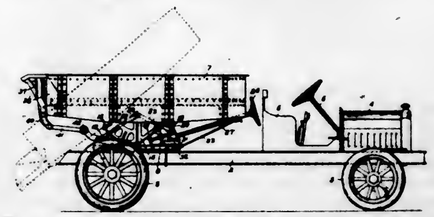
5. A feeding mechanism including in combination a lower feed dog, a work support, a presser foot, a roller abutment carried by said presser foot, an upper feed bar, a feed dog carried thereby, a second roller abutment connected to and movable with said presser foot, means for holding said feed bar in contact with said roller abutments, said roller abutments being so disposed that the lower surface of the upper feed dog is above the lower face of the presser foot, and means for moving said feed bar back and forth on said roller abutments.

[Claims 6 to 12 not printed in the Gazette.]

1,220,727. DUMP-TRUCK. CHARLES H. CLARK, Crafton, and HOWARD L. BEACH, Edgewood, Pa. Filed Feb. 27, 1915. Serial No. 10,934. (Cl. 21—20.)

1. A dump truck comprising a truck wheel supported frame, trackways carried thereby, a tilting body supported in an elevated position by and provided with depending rockers traveling on said trackways as the body tilts to and from upright and dumping positions, upwardly and forwardly inclined links at their lower ends pivotally coupled to said frame and at their upper ends having longitudinal slots receiving pivots fixed to the body at the central portion thereof and arranged to limit dumping movement and abnormal forward tilting of the body, and means for tilting the body.

2. A dump truck comprising a truck wheel supported frame, trackways carried thereby, a tilting body provided with supporting rockers traveling on said trackways as the body tilts to and from upright and dumping positions, said rockers depending from the central portion of the body, upwardly and forwardly inclined links at their lower rear ends pivotally coupled to the frame and at their upper front ends pivotally joined to the central portion of the body and arranged to limit dumping and forward tilting movements of the body and to aid in holding the rockers down on the trackways when the body is locked in upright position, and means for tilting the body and to aid said links in locking the body and its rockers against vertical movement from said trackways when the body is in upright position.



3. A dump truck comprising a truck frame, a turn table supported thereby and rotatable on a vertical axis, separated parallel rocker trackways on said turn table, a tilting truck body, separated parallel depending rockers secured to the body approximately midway its length and fitting the trackways and constituting two central supports for and on which the body is approximately balanced, an advanced central body support on said turn table, means for exerting forward and downward pull on the body to tightly draw and lock the rockers down on the trackways when the body is in normal upright position, said means embodying body tilting mechanism, and means pivotally joining the rear portion of the turntable and the body to resist abnormal forward tilting of the body and to be tightened by said forward and downward pull.

4. In a dump truck, in combination, a truck frame, spaced parallel trackways thereon, a transverse crank shaft provided with actuating means, a tilting body provided with central depending rockers adapted to travel on said trackways and on which the body is approximately balanced, a transverse rod extending between and secured to the upper portions of said rockers, an upwardly and forwardly extending slotted stop link at its upper forward end pivotally joined to said rod and at its lower rear end pivotally coupled to the frame, and a body tilting and locking link pivotally connecting the crank shaft and said rod.

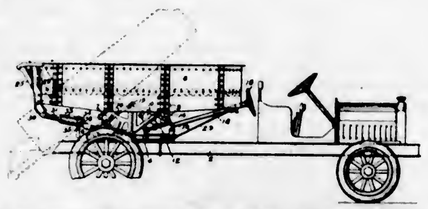
5. In a dump truck, the combination of a truck frame, a trackway supported thereby, a tilting truck body, a rocker fixed to and depending from the central portion of said body and fitting said trackway, a holding device coupled to the central portion of said body and with said frame to resist abnormal forward tilting of the body when in normal upright position and also to resist abnormal dumping movement of the body and to aid in locking the rocker down on the trackway when the body is in upright position, and body tilting mechanism carried by the frame and coupled to the body approximately over said rocker and arranged to exert downward pull on the rocker when the body is in upright position to tighten said holding device and to aid in preventing upward movement of the rocker from the trackway.

[Claims 6 to 9 not printed in the Gazette.]

1,220,728. DUMP-TRUCK. CHARLES H. CLARK, Crafton, and HOWARD L. BEACH, Edgewood, Pa., Filed Jan. 6, 1916. Serial No. 70,601. (Cl. 21—20.)

1. In a dump truck, the combination of a frame, a body mounted to tilt on the frame, a downwardly and outwardly opening gate hinged to the body, links pivotally connected to the gate and also pivotally connected to the frame for automatically opening and closing and locking the gate upon dumping and righting the body, the links slotted for

longitudinal movement relatively to the frame, and manually-adjustable movable means adapted in one position to afford the links only pivotal movement relatively to the frame and in another position adapted to afford them sliding movement relatively thereto.



2. A dump truck comprising a frame, a tilting body carried thereby, an end gate for said body, a gate swinging and locking link at one end pivotally joined to said gate to automatically swing and lock the same, said link at its opposite end pivotally mounted on a fixed portion of said frame and having a longitudinal slot with an offset, and a manually operated locking lever adapted to lock said link against longitudinal movement with said portion in said offset, and adapted to unlock said link to permit longitudinal movement thereof, with said portion in said slot, substantially as described.

3. A dump truck comprising a frame, a body mounted to tilt on the frame, means for tilting the body, a discharge-chute-forming end gate for the body, said gate being hinged at its lower portion to said body to swing outwardly and downwardly when opening, said gate when closed having its central portion inclined upwardly and outwardly from its lower edge, said gate composed of an inclined central portion and two diagonally disposed sloping side portions having laterally projecting side wings lapping the side walls of the body when the gate is closed, and gate actuating and locking means secured to the gate and to the frame for automatically opening and closing the gate as the body moves toward and from dumping position.

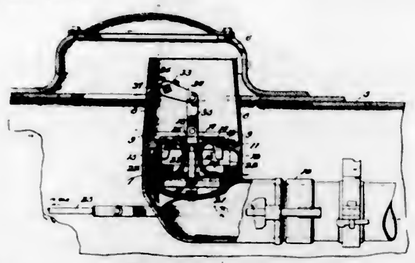
4. In combination, in a dump truck, a frame, a dumping body provided with operating means, an end gate for said body at its lower end hinged to the bottom portion of said body to swing downwardly and outwardly when opening, said gate when closed fitting the sides and floor of said body and at its central portion inclined from its lower edge upwardly and outwardly to its upper edge to increase the internal capacity of said body and when in opened position to form a discharge chute for, and projecting in approximate continuation of, said body, and means for opening, closing, and locking said gate, substantially as described.

5. In combination, a frame, a tilting dumping body, a downwardly and outwardly opening gate hinged to the body and provided with an arm rigid therewith and a gate locking and operating link connection at one end pivoted to said arm and at the opposite end directly pivoted to said frame to rock on a fixed axis on said frame as the body swings to and from dumping position and to thereby swing said gate to and from open position, and held against normal longitudinal movement to hold said gate locked in closed position when said body is in elevated position.

[Claims 6 to 8 not printed in the Gazette.]

1,220,729. THROTTLE-VALVE. FRANK H. CLARK and JOSEPH M. COFFEY, New York, N. Y., assignors to Chambers Valve Company, New York, N. Y., a Corporation of New York. Filed May 19, 1916. Serial No. 98,652. (Cl. 137—4.)

1. In a throttle valve, in combination, a throttle box open at its upper end and having its lower end connected with a dry pipe, a valve seat within said box, a valve cooperating therewith, a transversely disposed rock shaft through the upper part of the box to which said valve is flexibly connected, a pair of similar power transmitting members connected with said shaft outside of the box, and an operating rod connected with said pair of members and positioned substantially in the plane of the axis of said valve.



2. In a throttle valve, in combination, a throttle box open at its upper end, a flange formed in said box having a loosely mounted valve seat thereon, a vertically movable valve adapted to coact with the seat having a loosely connected stem, a transverse rock shaft associated with said box above the valve, intervening connections between the stem and shaft adapted to raise and lower the valve as the shaft is rotated, similar power transmitting members connected with said shaft, and a pull rod connected with said similar power transmitting members.

3. In a throttle valve, in combination, a throttle box open at its upper end, a valve therein, actuating mechanism for said valve including a transverse rock shaft having a flexible connection with said valve and adapted to raise and lower the valve as the shaft is rotated, levers connected with the ends of said shaft, links connected with said levers, bell cranks connected with the ends of said links, and means adapted to connect said bell cranks with a throttle lever within the cab.

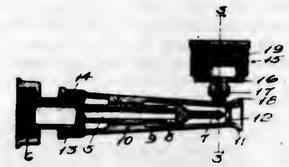
4. In a throttle valve, in combination, a throttle box, a valve, a balancing chamber below the valve, a valve stem positioned in the throttle box and providing a valved entrance through the valve to said chamber, a transverse rock shaft through the upper part of said box having operative connections with the stem, a pair of similar power transmitting members connected with said transverse shaft and positioned at opposite sides of the throttle box, a stirrup connected with the lower ends of the said power transmitting members, and a pull-rod connected with the central part of the stirrup substantially in the plane of the axis of the valve.

5. In a throttle valve, in combination, a vertically disposed throttle box open at its upper end, a valve seat centrally and loosely disposed within said box, a balance chamber below said valve seat, a valve stem having a main valve loosely mounted thereon for coacting with the valve seat and providing a valve entrance through the main valve to said chamber, a hollow piston member within said chamber connected to the stem and having a lost motion connection with the valve, and means operable from the upper part of the throttle box adapted to first actuate the valve stem to open the entrance to said chamber so as to equalize the steam pressures and then to open the main valve.

[Claims 6 to 15 not printed in the Gazette.]

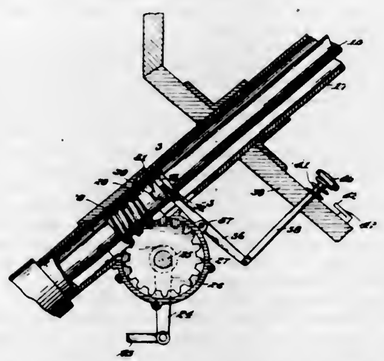
1,220,730. NOZZLE. ROBERT E. COSTNER, Lincolnton, N. C. Filed June 10, 1915. Serial No. 33,286. (Cl. 137—14.)

The combination with an inner tubular member provided with a spray head and apertured near the spray head, of an outer tube longitudinally adjustably mounted upon the inner tubular member and having a diaphragm provided with an aperture adapted to be covered and uncovered by the spray head, a receptacle for holding soap and provided with an outlet pipe connected with the outer tube and entering the same at a point immediately in advance of the apertured diaphragm, and a compression cap having screw-threaded engagement with the receptacle to place the soap under suitable pressure to force



it into the outer tube in the presence of the violent agitation of the water at the spray head.

1,220,731. DIRIGIBLE-HEADLIGHT MECHANISM. ORLANDO A. COX, Los Angeles, Cal. Filed Nov. 22, 1915. Serial No. 62,861. (Cl. 240—62.)



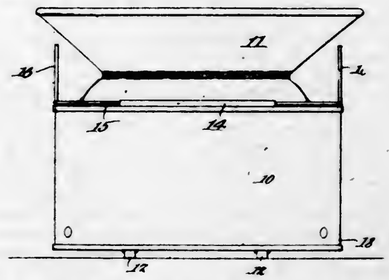
1. In a headlight operating mechanism, the combination with the steering shaft of an automobile, of a headlight mounted for horizontal movement, transmission means operated by the steering shaft whereby the headlight may be horizontally swung when the steering shaft is rotated, and a clutch mechanism adapted to render the transmission mechanism inoperative and thereby allow said transmission means to become interlocked to prevent movement of the headlight during said inoperation.

2. In a headlight operating mechanism, the combination with the steering shaft of an automobile steering gear, of headlights pivotally mounted upon the automobile for horizontal movement, a worm gear positioned upon said steering shaft, a worm wheel in fixed operative relation thereto, connecting means whereby rotation of the worm wheel will horizontally swing said headlights, and a clutch mechanism adapted to be actuated to lock said worm gear to the steering shaft and thereby insure the rotation of the worm wheel upon rotation of the steering shaft.

3. In a headlight operating mechanism, the combination with the steering shaft of a vehicle steering gear, of a pair of horizontally pivoted headlights, a driving worm gear loosely mounted upon the steering shaft, a driven worm wheel in mesh with said gear mounted in fixed relation thereto, a clutch member secured to said worm gear, a slidable clutch member mounted upon the steering shaft, and means whereby said slidable clutch member may be brought into engagement with said gear clutch member to lock it to the steering shaft and thereby produce a swinging movement of the headlights upon rotation of the steering shaft.

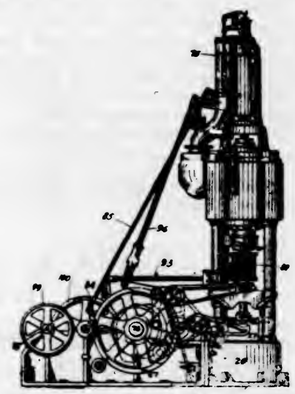
1,220,732. CUSPIDOR HOLDER AND LIFTER. WILLIAM G. DEVLIN, Arcata, Cal., assignor to Georgie A. Devlin, Arcata, Cal. Filed Aug. 28, 1916. Serial No. 117,325. (Cl. 21—65.)

1. A device of the class described having a receptacle comprising side walls, transverse rest bars and a flange depending below the plane of said rest bars, casters upon which the rest bars are mounted, the casters having their bearing surfaces below the plane of the lower edge of said flange, a lifting device removably seated in the receptacle above said rest bars and provided with finger holds or loops extending above the plane of the upper edge of said receptacle.



2. A device of the class described having a receptacle, and a cuspidor lifting device removably seated in the receptacle and provided with arcuate end walls connected, by a bottom for supporting a cuspidor, said lifting device also having at its upper edge a ring provided with upstanding loops.

1,220,733. BRIQUETING-PRESS. OTHO C. DURYEA, Chicago, Ill., assignor to American Briquette Machine Co., Huron, S. D., a Corporation of South Dakota. Filed Dec. 5, 1916. Serial No. 135,156. (Cl. 25—84.)



1. In a press, a die, a plunger movable into and out of the die, a charge-carrier journaled between the die and the plunger in the outward position of the latter, fluid-pressure means for applying power to the plunger to drive it inwardly into the die, an elastic cushion for resisting the displacement of fluid in the said means during the outward stroke of the plunger, a power transmission apparatus for forcing the plunger outward against the resistance of the said cushion, and a reservoir of power for actuating the said transmission, whereby the power consumed in forcing the plunger outwardly is stored by the said cushion and returned to the reservoir during the inward stroke of the plunger.

2. In a press, a die, a plunger movable into and out of the die, a charge-carrier traveling between the die and the plunger in the outward position of the latter, a ram for applying power to the plunger to drive it inwardly into the die, an elastic cushion for resisting the displacement of fluid by the said ram during the outward stroke of the plunger, a power transmission apparatus for forcing the ram outward against the resistance of the said cushion, a reservoir of power for actuating the said trans-

mission whereby the power consumed in forcing the plunger outwardly is stored by the said cushion and returned to the reservoir during the inward stroke of the plunger, and means independent of the said cushion for intensifying the fluid-pressure on the said ram during the inward stroke of the latter.

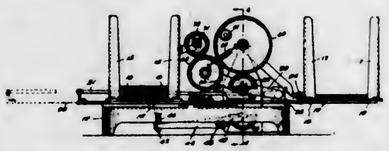
3. In a press, a die, a plunger movable into and out of the die, a charge-carrier traveling between the die and the plunger in the outward position of the latter, fluid-pressure means for applying power to the plunger to drive it inwardly, an elastic cushion for resisting the displacement of fluid in the said means during the outward stroke of the plunger, a power transmission apparatus for forcing the plunger outward against the resistance of the said cushion, a reservoir of power for actuating the said transmission, whereby the power consumed in forcing the plunger outward is stored by the said cushion and returned to the reservoir during the inward stroke of the plunger, a reciprocating member for displacing the fluid operating the said plunger, and independent means for applying power to said reciprocating member during the inward stroke of the plunger to increase the operative pressure upon the latter.

4. In a press, a die, a plunger movable into and out of the die, a charge-carrier traveling between the die and the plunger in the outward position of the latter, a fluid-pressure-actuated ram connected with the said plunger, an elastic cushion for resisting the displacement of fluid in the ram-cylinder during the outward stroke of the plunger, a power transmission apparatus for forcing the plunger outwardly against the resistance of the said cushion, a reservoir of mechanical energy for actuating the said transmission, a power cylinder and a fluid plunger operated thereby and traveling into and out of the said ram-cylinder.

5. In a press, a die adapted to hold the material to be acted upon, a plunger movable into and out of the die, fluid-pressure means for forcing the said plunger into the die, means for intensifying the actuating pressure of the plunger, and means governed by the motion of the ram under the pressure of the first-named means for controlling the operation of said pressure-intensifier.

[Claims 6 to 18 not printed in the Gazette.]

1,220,734. ADDRESSING-MACHINE. STERLING ELLIOTT, Newton, Mass. Filed Oct. 11, 1913. Serial No. 794,620. (Cl. 101—1.)



1. An addressing machine comprising a base having a flat top with a raised portion thereon at one end, a pair of grooved guide-bars arranged horizontally on said raised portion, and extended over the remainder of the top of the base in an elevated position, to provide a space beneath them for an envelop, a pair of uprights arranged on said bars at one end to form a supply-compartment for the stencils, and a pair of uprights arranged on said bars at the other end to form a receiving-compartment for the stencils, those portions of the upper lips of the grooves of said bars between the uprights of each compartment being cut away, substantially as described.

2. An addressing machine comprising a base having a flat top with a raised portion thereon at one end, a pair of grooved guide-bars arranged horizontally on said raised portion, and extended over the remainder of the top of the base in an elevated position to proivde a space beneath them for an envelop, a pair of uprights arranged on said bars at one end to form a supply-compartment for the stencils, and a pair of uprights arranged on said bars at the other end to form a receiving-compartment for the stencils, those portions of the upper lips of the grooves of said bars between the uprights of each compartment being cut away, means arranged at the bottom of the receiving-compartment to cause the stencils, when thrust thereinto to tilt and thereafter to hold them with their rear ends in elevated position, and means arranged to feed the stencils intermittently from one to the other compartment, substantially as described.

3. An addressing machine comprising a pair of horizontal bars having guiding-grooves arranged facing each other, uprights arranged on said bars to forms a stencil-receiving compartment, the upper lips of the grooves of said bars between said uprights, being cut away and bosses, with inclined tops, arranged on the lower lips of said bars in the path of movement of the stencils, and adjacent the entrance to the compartment, said bosses acting to cause the stencils, which enter the compartment, to move first in an upwardly inclined direction, and then in a downwardly inclined direction, and to finally hold them with their rear ends in an elevated position, substantially as described.

4. An addressing machine comprising a pair of horizontal bars having guiding-grooves arranged facing each other, a pair of cross-bars secured to said guide-bars, each cross-bar having uprights with angularly formed sides, the inner faces of the sides being arranged in line with the sides of the grooves, the upper lips of the grooves of the guide-bars being cut away between said cross-bars, thus forming a receiving-compartment for the stencils, and bosses having inclined tops arranged on the lower lips of the grooves near the entrance to the compartment, in the path of movement of the stencils, which cause the stencils, which enter the compartment, to tilt, and to subsequently hold them with their rear ends in elevated position, substantially as described.

5. An addressing machine, comprising a pair of rotatable sectors arranged, respectively, above and below a stencil-passage and an envelop-passage for engaging, at their points of tangency, a stencil and an envelop contained in said passages, gearing connecting said sectors and a double crank-arm with handle connected with one of the sectors for rotating them, a supply-compartment for stencils associated with the stencil-passage, a sliding-pusher arranged for reciprocation in the stencil-passage and a link pivotally connected at one end with said pusher and loosely mounted at its other end on said double crank-arm, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

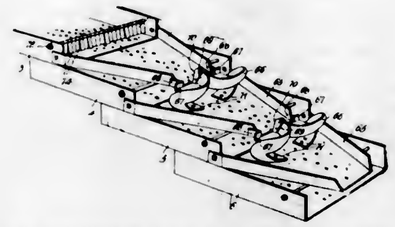
1,220,735. METHOD FOR THE PRODUCTION OF HYDRAULIC LIME AND CEMENT FROM COMBUSTION RESIDUES OF SEWAGE, CANAL-SLUDGE, OR THE LIKE. JULIUS ELSNER, Berlin-Friedenau, Germany. Filed Dec. 26, 1913, Serial No. 808,920. Renewed Jan. 29, 1917. Serial No. 145,280½. (Cl. 106—25.)

Method for the production of cement, from a combustion residue of sewage containing about 53% silica, about 23% total of oxids of iron and aluminium, about 15% of calcium oxid, and about 5% of alkali metal chlorids, consisting in mixing such residue with at least substantially an equal amount of lime, and with calcium chlorid, heating the mixture to a temperature of 600° to 1050° centigrade for a sufficient time to form a Portland cement and treating the mixture with steam and air during said heating.

1,220,736. COAL-PICKING APPARATUS. FREDERICK H. EMERY, Scranton, Pa. Filed Feb. 17, 1915. Serial No. 8,778. (Cl. 193—29.)

1. The combination with a plurality of conducting chutes of coal picking apparatus arranged to discharge one into the other, of a spiral lowering chute having its upper intake end arranged adjacent the outlet end of the upper conducting chute and its lower end adjacent the bottom of the lower conducting chute.

2. The combination with a plurality of conducting chutes of coal picking apparatus arranged to discharge one into the other, of a pair of spiral lowering conveyers having their upper intake ends arranged adjacent the outlet end of the upper conducting chute and their lower ends arranged adjacent the bottom of the lower conducting chute and extending inwardly toward each other.



3. The combination with a plurality of conducting chutes of coal picking apparatus arranged to discharge one into the other, of a pair of spiral lowering conveyers attached to the outlet end of the upper conducting chute and provided at their tops with a partition and having their lower ends arranged adjacent the bottom of the lower conducting chute and disposed transversely of said lower conducting chute and extending inwardly toward each other.

4. In coal picking apparatus, a lower inclined conducting chute, an upper inclined conducting chute having its discharge end arranged above and spaced a substantial distance from the intake end of the lower chute, and a lowering chute having its intake end arranged adjacent the discharge end of the upper chute and its discharge end arranged above and adjacent the lower chute, said lowering chute being of tortuous form, whereby it is adapted to retard the travel of the coal and discharge the same upon the lower conducting chute without breaking it.

5. A coal picking apparatus, comprising an inclined chute, and a lowering chute having its intake end opposed to the discharge end of the first-named chute; said lowering chute being of tortuous form, whereby it is adapted to retard the travel of the coal *en route* to its discharge end.

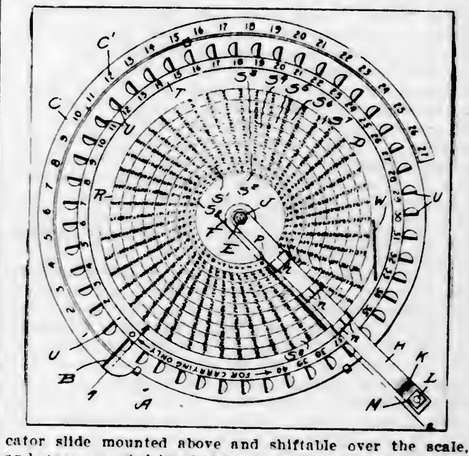
[Claim 6 not printed in the Gazette.]

1,220,737. ADDING-MACHINE. BENJAMIN K. FISHER, St. Louis, Mo. Filed Mar. 16, 1915. Serial No. 14,701. (Cl. 235—67.)

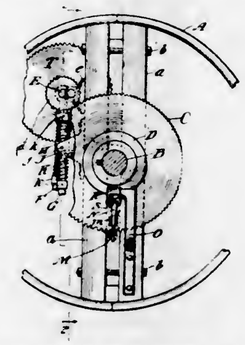
1. The combination of a base having a column marked with numerals to be added, a rotary disk mounted on the base and having a column marked with numerals to be carried and further having a scale dial thereon divided into concentric columns, each column having a series of consecutive total numbers marked thereon, the corresponding numerals of the various columns being disposed in rows in line with respective numerals to be carried, and a circular row of upstanding lips fixed to the disk adjacent the periphery thereof and disposed respectively in line with the rows and the numerals to be carried.

2. An index slide for disk adding machines formed from a metal blank having a plurality of pairs of opposite lateral arms bent inwardly to embrace a supporting bar and further having a plurality of downwardly directed tongues struck therefrom, and a total indicating pointer on the slide.

3. The combination of a base having a column marked with numerals to be added, a rotary disk mounted on the base and having a column marked with numerals to be carried and further having a scale dial thereon divided into concentric columns, each column having a series of consecutive total numbers marked thereon, the corresponding numerals of the various columns being disposed in rows in line with respective numerals to be carried, a circular row of upstanding lips fixed to the disk adjacent the periphery thereof and disposed respectively in line with the rows and the numerals to be carried, an indicator slide mounted above and shiftable over the scale, and means carried by the disk for shifting the slide from one column of numerals on the scale to an adjacent column of numerals.



1,220,738. POWER-TRANSMISSION PULLEY. FRANK FLOEGE, Chicago, Ill. Filed Oct. 9, 1916. Serial No. 124,501. (Cl. 74—34.)



1. The combination with a shaft, a clutch rotatable therewith but reciprocable longitudinally thereon, and a gear loosely mounted on said shaft, the boss of which constitutes a counterpart of and is adapted to be engaged by said clutch, of a pulley, a transverse shaft carried by said pulley, a gear on the end of said shaft engaged by said first-mentioned gear, means actuated by said transverse shaft for imparting motion to said pulley, and devices which when said first-mentioned gear and said pulley are revolving at the same speed lock the same together.

2. The combination with a shaft, a clutch rotatable therewith but reciprocable longitudinally thereon, and a gear loosely mounted on said shaft, the boss of which constitutes a counterpart of and is adapted to be engaged by said clutch, of a pulley, a transverse shaft carried by said pulley, a gear on the end of said shaft engaged by said first-mentioned gear, means actuated by said transverse shaft for imparting motion to said pulley, and a transverse bolt carried by said pulley and adapted when said pulley and gear are rotating at about the same speed to engage a recess in said first-mentioned gear.

3. The combination with a shaft, a clutch rotatable therewith but reciprocable thereon, and a gear loosely

mounted on said shaft, the boss of which constitutes a counterpart of and is adapted to be engaged by said clutch, of a pulley, a transverse shaft carried by said pulley, a pinion on the end of said shaft engaged by said gear, a transverse bolt carried by said pulley, and means for withdrawing said bolt from a recess in said gear when said clutch moves into engagement with its counterpart.

4. The combination with a shaft, a clutch rotatable therewith but reciprocable thereon, and a gear loosely mounted on said shaft, the boss of which constitutes a counterpart of and is adapted to be engaged by said clutch, of a pulley, a transverse shaft carried by said pulley, a pinion on the end of said shaft engaged by said gear, a transverse bolt carried by said pulley and adapted to engage a recess in said gear, an arm projecting from said bolt, a bell-crank one end of which is connected to the outer end of said arm, and a trip pivotally connected to the other end of said bell-crank.

5. The combination with a shaft, a clutch rotatable therewith but reciprocable longitudinally thereon, and a gear loosely mounted on said shaft, the boss of which constitutes a counterpart of and is adapted to be engaged by said clutch, of a pulley, a transverse crank-shaft carried by said pulley, a gear on the end of said crank-shaft engaged by said first-mentioned gear, a plunger one end of which is pivotally connected to the crank of said crank-shaft, rocking guide-bearings therefor, and springs resisting the reciprocations of said plungers.

[Claims 6 to 9 not printed in the Gazette.]

1,220,739. UNDERREAMING-BIT. HENRY J. FREEDON, Santa Maria, Cal. Filed May 31, 1916. Serial No. 100,945. (Cl. 255—76.)



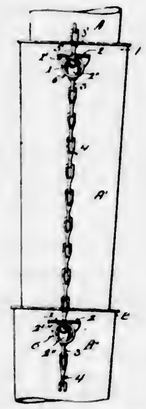
1. In a well drilling bit, the combination of a cylindrical body portion of a size to fit snugly the well casing in which it operates, a cylindrical cutting portion in axial alinement with said body portion and forming an extension thereof, said cutting portion being pivoted at its upper end to the lower end of said body portion and adapted to rock in a vertical plane, means for limiting the rock movement of said cutting portion and a spring mounted in said body portion and operatively connected with said cutting portion for moving the latter out of alinement with said body portion, whereby said cutting portion will underream the casing.

2. In a well drilling bit, the combination of a body portion of a size to fit snugly the well casing in which it operates, a cutting portion in axial alinement with said body portion and forming an extension thereof, said cutting portion being pivoted at its upper end to the lower end of said body portion and adapted to rock in a vertical plane, a shoulder on said body portion for limiting the outward movement of said cutting portion, a shoulder on said cutting portion adapted to engage said first named shoulder, and a tension spring mounted in said body portion and acting on said cutting portion to cause the shoulder thereof to move toward the shoulder on said body portion.

3. In a well drilling bit, the combination of a body portion of a size to fit snugly the well casing in which it operates, a cutting portion in axial alinement with said body portion and forming an extension thereof, means for pivoting said cutting portion to said body portion to permit the former to swing in a vertical plane, means on said body portion to limit the swinging movement of said cutting portion, and resilient means tending to swing said cutting portion toward said limiting means.

4. In a well drilling bit, the combination of a body portion of a size to fit snugly the well casing in which it operates, a cutting portion in axial alinement with said body portion and forming an extension thereof, means for pivoting the upper end of said cutting portion to the lower end of said body portion to permit the latter to swing in a vertical plane, a pair of shoulders on opposite sides of the lower end of said body portion for limiting the swinging movement of said cutting portion, a pair of shoulders on the upper end of said cutting portion, adapted to coöperate with said shoulders of said body portion, said body portion being provided with a spring chamber, a spring rod located therein and pivotally connected to a shoulder of said cutting portion, and a tension spring acting on said rod and tending to move the shoulder of said cutting portion connected to said rod in engagement with the shoulder of said body portion adjacent thereto.

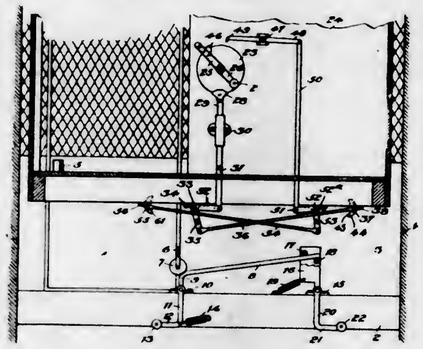
1,220,740. FLEXIBLE DISTRIBUTER-PIPE. HENRY M. GEHL, West Bend, Wis. Filed Oct. 2, 1914. Serial No. 864,633. (Cl. 193—41.)



In a distributer pipe section, means for connecting it with adjacent sections comprising angular brackets each having one arm provided with a groove on its inner face, a runner member having one end insertible in said groove, a bolt passed through said bracket arm and through the runner member and through the section, means carried by the other arm of the bracket for securing a runner end, and means at the end of the first named runner for co-acting with the securing means of the bracket of an adjacent section.

1,220,741. SAFETY DEVICE FOR ELEVATORS. WILLIAM H. GOLDEN, Newark, N. J. Filed May 27, 1915. Serial No. 30,793. (Cl. 187—49.)

1. In an elevator safety device, the combination with an elevator shaft, landing door and elevator car having a controller, of a movable track mounted on the landing, a wheel carried by the landing door and adapted to travel on said track, mechanism for locking said track in such position that the track forms an obstruction to the travel of the wheel and thereby prevents opening of the landing door, connections carried by the car and engageable with said locking mechanism to release the locking mechanism from locking relation with respect to the track upon arrival of the car at a landing, and means for operating said connections by throwing the controller to full stop position.



2. In an elevator safety device, the combination with an elevator shaft, landing door and elevator car having a controller, of a movable track mounted on the landing, a wheel carried by the landing door and adapted to travel on said track, mechanism for locking said track in such position that the track forms an obstruction to the travel of the wheel and thereby prevents opening of the landing door, connections carried by the car and engageable with said locking mechanism to release the locking mechanism from locking relation with respect to the track upon arrival of the car at a landing, means for operating said connections by throwing the controller to full stop position, and means operated by opening of the landing door for locking the controller in full stop position.

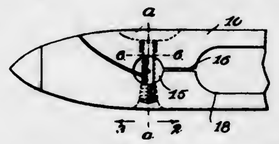
3. In an elevator safety device, the combination with an elevator shaft, landing door and elevator car having a controller, of a movable track mounted on the landing, a wheel carried by the landing door and adapted to travel on said track, mechanism for locking said track in such position that the track forms an obstruction to the travel of the wheel and thereby prevents opening of the landing door, and connections carried by the car and structurally independent of the controller but arranged to be positively operated by the controller when the controller is shifted to full stop position, said connections being engageable with said locking mechanism to release the locking mechanism from locking relation with respect to the track upon arrival of the car at a landing and shifting of the controller to full stop position.

4. In an elevator safety device, the combination with an elevator shaft, landing door and elevator car having a controller, of a movable track mounted on the landing, a wheel carried by the landing door and adapted to travel on said track, mechanism for locking said track in such position that the track forms an obstruction to the travel of the wheel and thereby prevents opening of the landing door, connections carried by the car and structurally independent of the controller but arranged to be positively operated by the controller when the controller is shifted to full stop position, said connections being engageable with said locking mechanism to release the locking mechanism from locking relation with respect to the track upon arrival of the car at a landing and shifting of the controller to full stop position, and means operated by opening of the landing door for locking the controller in full stop position.

5. In an elevator safety device, the combination with an elevator shaft, landing door and elevator car having a controller, of a movable track mounted on the landing, a wheel carried by the landing door and adapted to travel on said track, mechanism for locking said track in such position that the track forms an obstruction to the travel of the wheel and thereby prevents opening of the landing door, connections carried by the car and engageable with said locking mechanism to release the locking mechanism from locking relation with respect to the track upon arrival of the car at a landing, means for operating said connections by throwing the controller to full stop position, said track after release being moved by travel of the wheel thereupon during opening of the landing door, and means responsive to said movement of the track for locking the controller in full stop position.

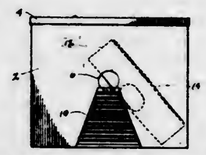
[Claim 6 not printed in the Gazette.]

1,220,742. LOOM-SHUTTLE. HUDSON W. HAKES, Millbury, Mass. Filed Apr. 6, 1914. Serial No. 829,804. (Cl. 139—46.)



In a loom shuttle, in combination, a shuttle body having a hole extending transversely therethrough, a cylindrical hand-threading slotted shuttle eye supported in said hole, and a cylindrical slotted thimble mounted in said hole concentric with said eye and having an inwardly extending flange at its outer end, the slots in the eye and in the thimble being angularly spaced with relation to each other.

1,220,743. ANIMAL-TRAP. RUSSELL HARRIMAN, Kansas City, Mo. Filed Sept. 19, 1914. Serial No. 862,426. Renewed Feb. 19, 1917. Serial No. 149,655. (Cl. 43—19.)



1. In an animal trap, the combination of a receptacle provided with openings on opposite sides thereof, exterior members leading to said openings and provided with supporting extensions projecting within the openings, and a tilting cage within the receptacle supported by said extensions, said cage being provided with openings registering in one position of the cage with the receptacle openings and passing out of register therewith on tilting of the cage.

2. In an animal trap, the combination of a closed receptacle provided with a side opening, a support adjacent the lower edge of said opening, and a member movably and slidably mounted within the receptacle upon said support and acting as a door for closing and uncloseing said opening, said member being adapted to rock and slide upon said support under the weight of the animal and come to rest with one end at the bottom of the receptacle and its opposite end closing said opening.

3. In an animal trap, the combination of a receptacle provided with an opening in each of its opposite sides, a support in line with the lower edges of said openings, and a cage within said receptacle tiltably and slidably mounted upon said support and provided with openings only on opposite sides in position to register with said receptacle openings in the horizontal position of the cage, said cage being adapted to rock and slide upon said support under the weight of the animal and thereby bring said openings out of register and close the cage.

4. In an animal trap, the combination of a receptacle provided with an opening in each of its opposite sides, a support in line with the lower edges of said openings, and a cage tiltably mounted upon said support, said cage comprising an inner receptacle provided with a removable screen cover and having openings only on opposite sides in position to register with said first named openings in the horizontal position of the cage, said cage being adapted to rock upon said support under the weight of the animal and thereby bring said openings out of register and close the cage.

1,220,744. PROCESS OF MAKING RADIATOR-CORES. HERBERT CHAMPION HARRISON, Lockport, N. Y. Filed Dec. 11, 1914. Serial No. 876,687. Renewed July 25, 1916. Serial No. 111,280. (Cl. 113—116.)



1. The method of constructing sheet metal radiator units which consists in forming a pair of outer unit plates having projections on one side thereof constituting cell walls; forming an intermediate division plate having centering projections on each side thereof, one of said plates being provided with inclined guiding surfaces associated with its projections; bringing said plates into contact with each other and applying pressure to cause the projections of the one plate to be guided by the inclined surfaces of the other plate into their centered positions; and securing the parts in the positions thus reached, substantially as described.

2. The process of making a radiator unit which consists in providing an outer unit plate having cell walls projecting from one side thereof; laying said outer plate on its side with said walls uppermost; feeding on top of said plate, a division plate having inclined centering projections on both sides thereof; feeding on top of said division plate a second outer unit plate having cell walls projecting from the lower side thereof; applying pressure transversely and longitudinally of said plates to cause the parts to become accurately centered; and fixing said parts in the centered positions thus attained, substantially as described.

3. The method of constructing sheet metal radiator sections, which consists in forming a pair of outer unit plates having offset edges and provided with cell walls projecting from one side thereof; forming a division plate having inclined centering projections on both sides thereof; bringing said plates into contact with each other with said division plate between said projecting cell walls, to assemble the parts of a radiator unit; bringing a plurality of units with the offset edges of said outer plates into contact with each other, to provide water passages between said units; applying pressure perpendicular to and longitudinally of said plates to cause the parts to center themselves and securing the parts in their centered relations, substantially as described.

4. The method of constructing sheet metal radiator units which consists in forming a pair of outer unit plates provided with oppositely extending projections constituting cell walls, forming intermediate division means provided with centering projections and inclined guiding surfaces adapted to separate said first named projections; automatically bringing said plates and means into their final positions by applying pressure thereto; and securing the parts in said positions, substantially as described.

5. The method of constructing a sheet metal radiator section having water passages which consists in forming a pair of radiator units, each comprising a pair of outer unit plates having offset edges provided with centering projections and guiding surfaces, causing the offset edges of the one unit to contact with the offset edges of the other unit, to form said passage; applying pressure to the two units to cause the centering projections of the one unit to coact with the inclined surfaces of the other unit, thereby automatically centering the parts; and securing said parts in the positions thus attained, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,220,745. AUTOMOBILE-RADIATOR. HERBERT CHAMPION HARRISON, Lockport, N. Y. Original application filed Mar. 1, 1915, Serial No. 11,387. Patented Jan. 25, 1916, No. 1,169,481. Divided and this application filed Oct. 20, 1915. Serial No. 56,914. (Cl. 257—130.)



1. The herein described radiator unit comprising outer walls made from a single strip having folded internal wall members and offset side edges, with its ends secured together; and a division plate of a single thickness of metal located between said walls and forming therewith a double row of communicating cells; said single plate also provided with perforations and projections between said folded wall members, substantially as described.

2. The herein described radiator unit comprising a single strip of corrugated material constituting the outer walls of the unit, said strip provided with folded internal wall members; and a division plate of a single thickness of metal having offset guiding and holding surfaces between said folded members, substantially as described.

1,220,746. PROCESS FOR THE MANUFACTURE OF ALDOL. WILHELM HERRMANN and MARTIN MUGDAN, Nuremberg, Germany, assignors to Consortium für elektrochemische Industrie G. M. B. H., Nuremberg, Germany. Filed Sept. 3, 1913. Serial No. 787,996. (Cl. 23—24.)

1. In the process for the manufacture of aldol by treating acetaldehyde in absence of water with not more than 5% of a suitable dry catalyst as condensing agent capable of yielding on reaction a compound of a light metal, the step which consists in separating the aldol from the condensing agent by direct distillation *in vacuo*.

2. In the process for the manufacture of aldol by treating acetaldehyde in absence of water and of other solvents with not more than 5% of a suitable dry catalyst as condensing agent capable of yielding on reaction a compound of a light metal, the step which consists in separating the aldol from the condensing agent by direct distillation *in vacuo*.

3. The process for the manufacture of aldol which comprises treating acetaldehyde in absence of water with less than 1% of a dry catalyst as condensing agent, said catalyst being such as to yield on reaction a compound of a light metal, and separating the aldol so formed from said catalyst by direct distillation *in vacuo*.

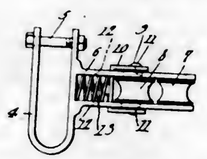
4. The process for the manufacture of aldol which comprises treating acetaldehyde in absence of water with less than 1% of a dry light metal as condensing agent, and separating the aldol so formed by direct distillation *in vacuo*.

5. The process for the manufacture of aldol which comprises treating acetaldehyde in absence of water and in presence of less than 1% of a catalyst consisting of a compound of a light metal soluble in acetaldehyde, and separating said aldol from said catalyst by direct distillation *in vacuo*.

[Claims 6 and 7 not printed in the Gazette.]

1,220,747. COMBINED BRACE AND ANTIRATTLER FOR BRAKE-RODS. HARVEY E. HILL, Galesburg, Mich. Filed Jan. 20, 1915. Serial No. 3,347. (Cl. 21—8.)

A combined brace and anti-rattler attachment for brake rods, including attaching means, superposed arms carried thereby, a yoke slidably mounted within the arms, a roller movable with the yoke and between the arms, a roller fixedly mounted between the arms, said rollers constituting



means for engaging opposed portions of a brake rod, and yielding means engaging the yoke for holding its roller normally pressed toward the other roller.

1,220,748. PROCESS OF FORMING BOSSES ON METAL BLADES. GEORGE F. HUTCHINS, Worcester, Mass., assignor to Crompton & Knowles Loom Works, Worcester, Mass., a Corporation of Massachusetts. Filed May 14, 1915. Serial No. 28,208. (Cl. 29—148.)

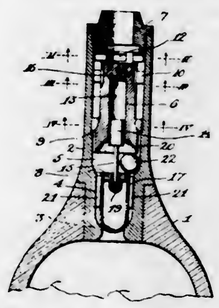


1. The process of forming a double boss on a metal blade which consists in forming a non-circular opening in said blade, forming a pair of bosses each with a projection thereon, the combined height of said projections being slightly greater than the thickness of said blade, fitting said bosses to said blade with the projections extending into said recess and held from angular movement therein, and thereafter welding said bosses to said blade under pressure.

2. The process of forming a double boss on a metal blade which consists in forming a non-circular opening in said blade, forming a pair of bosses each with a projection thereon, the combined height of said projections being slightly greater than the thickness of said blade, fitting said bosses to said blade with the projections angularly disposed to each other and held from angular movement in said recess, and thereafter welding said bosses to said blade under pressure.

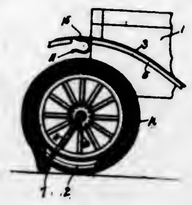
3. The process of forming a double boss on a metal blade which consists in forming a four-armed opening in said blade, forming a pair of bosses each with a substantially rectangular projection of a height slightly exceeding one half the thickness of the blade, assembling said parts with each projection fitting alternate arms of said recess, and welding said bosses to said blade under pressure.

1,220,749. BOTTLE-VALVE. GILBERT JACKSON, New York, N. Y. Filed Mar. 26, 1915, Serial No. 17,192. Renewed Aug. 4, 1916. Serial No. 113,204. (Cl. 215—62.)



The combination with a bottle neck, of an upwardly opening valve therein, a plug disposed above said valve at a distance to leave a chamber therebetween and having its lower face cup-shaped, a ball in said chamber normally resting on said valve and fitting between the same and said cupped surface at substantially the edge of the latter, a centrally disposed rod freely shiftable vertically in recesses in said valve and plug and acting when in its lowermost position to lock said ball between said valve and said cupped surface and when shifted to its uppermost position by the inversion of the bottle permitting said ball to seek the center of said cupped surface to permit said valve to open, and a weighted guide attached to said rod and movable in the recesses in said plug, said plug recess being apertured near its upper end to permit the escape of liquid entrapped therein when the bottle is inverted.

1,220,750. SUNSHADE FOR PNEUMATIC TIRES. REGINALD CALLAWAY JEBOULT, Edmonds, British Columbia, Canada. Filed Dec. 4, 1916. Serial No. 135,016. (Cl. 150—54.)



1. The combination with a pneumatic tire, of a suitably supported normally rolled up shade member, said member being adapted to be unroller and extended around the tire.

2. The combination with a pneumatic tire, of a casing disposed normally above and transversely of the tire, said casing being provided with a slot and having rotatably mounted therein a normally rolled up shade member the free end of which extends through the said slot, and means for supporting said casing in its normal position, said means being manually operable to swing the casing circumferentially around the tire.

3. The combination with a pneumatic tire, of a casing having a slot in one side and disposed adjacent the tire, a normally rolled up shade member rotatably mounted within the casing having its free end extending through said slot, and a swingably mounted arm to the free end of which the said casing is secured, said arm being adapted when swung to carry the casing circumferentially around the tire.

4. The combination with a pneumatic tire, of an arm swingably mounted in a normally vertical position adjacent the tire, a casing carried by the upper end of said arm and disposed normally above and transversely of the tire, said casing having a slot in one side, a normally rolled up shade member rotatably mounted within the casing and having its free end extending through said slot, and means for detachably holding said casing in its normal position.

5. The combination with a pneumatic tire and fender therefor, of a casing detachably mounted on the fender adjacent the tire, said casing being provided with a slot and having rotatably mounted therein a normally rolled up shade member the free end of which extends through the said slot, and manually operable means for detaching said casing and swinging it circumferentially around the tire.

[Claims 6 to 9 not printed in the Gazette.]

1,220,751. FOOD PRODUCT. KISHIRO KANZAKI, Summit, N. J. Filed Jan. 10, 1917. Serial No. 141,571. (Cl. 99—11.)

1. A food product consisting of fresh uncooked comminuted awa grain.

2. A food product consisting of awa flour.

3. A food product consisting of awa flour and a flour from another cereal.

4. A food product consisting of awa flour and wheat flour.

5. A food product consisting of awa flour and wheat flour mixed, the awa flour being at least fifty per cent. of the mixture.

[Claim 6 not printed in the Gazette.]

1,220,752. MANUFACTURE OF SULFURIC ACID. WILLIAM J. KEE, Jr., Kansas City, Kans., and UTLEY WEDGE, Ardmore, Pa. Filed Aug. 8, 1914. Serial No. 855,809. (Cl. 204—31.)

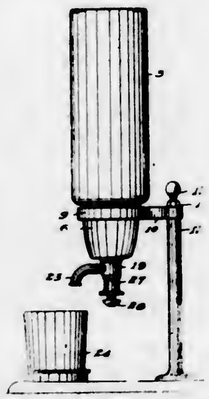
1. In sulfuric acid manufacture, the mode herein described of effecting the conversion of sulfur dioxid into sulfur trioxid, said mode consisting in subjecting the gases containing sulfur dioxid and oxygen after leaving the sulfur dioxid generator and before reaching the lead chamber to the action of an electric discharge.

2. In sulfuric acid manufacture, the mode herein described of effecting the conversion of sulfur dioxid into sulfur trioxid, said mode consisting in subjecting the gases containing sulfur dioxid and oxygen after leaving the Glover tower and before reaching the lead chamber to the action of an electric discharge.

3. In sulfuric acid manufacture, the mode herein described of effecting the conversion of sulfur dioxid into sulfur trioxid, said mode consisting in subjecting the gases containing sulfur dioxid and oxygen at one or more points between the Glover tower and the Gay Lussac tower to the action of an electric discharge.

4. In a sulfuric acid manufacture, the mode herein described of preventing reversion of oxids of nitrogen to their elements, said mode consisting in subjecting said oxids immediately after their formation at the high temperature of electric arcs to contact with sulfuric acid at a temperature at which it will absorb the same.

1,220,753. DISPENSING DEVICE. FREDERICK KEES, Minneapolis, Minn., assignor of one-half to John S. Mitchell, Minneapolis, Minn. Filed Oct. 2, 1915. Serial No. 53,699. (Cl. 225—22.)



1. The combination, with a bottle having a cap, of a horizontally supported ring into which the cap and neck of the inverted bottle are inserted, said cap having means for interlocking with said ring to hold the bottle in an upright inverted position, and a faucet mounted in said cap and having means seated against the bottle neck for closing the same and provided with a draw-off passage and a discharge valve for said passage.

2. The combination, with a bottle having a cap, of a support into which the cap and neck of the inverted bottle are inserted, said cap and support having means for interlocking to hold the bottle in an upright, inverted position, and a faucet mounted in said cap and having means seated against the bottle neck for closing the same and provided with a discharge valve.

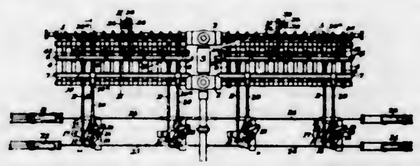
3. The combination, with a bottle and a cap fitting thereon, of a disk fitting within said cap and seated snugly against the walls thereof and having a gasket to fit against the neck of the bottle, a faucet mounted in said cap and tapped into said disk and having a draw-off opening and a valve therefor, and a ring having means for engagement with the walls of said cap for holding the bottle in an upright inverted position.

4. The combination, with a bottle, of a cap fitting the open end thereof, a faucet mounted in the top of said cap, a disk mounted on said faucet and having a tight joint with the wall of the bottle neck, a vent tube mounted in said disk and projecting into the bottle and communicating with an opening in the top of said cap, said faucet having a draw-off passage and a valve therefor, and means for supporting said bottle in an upright, inverted position.

5. The combination, with a bottle having a metallic jacket and a cap for encircling the neck and closing the same, of a ring mounted to receive said cap and the neck of the inverted bottle, said cap having means for interlocking with said ring for holding the bottle in an upright inverted position, and a faucet mounted in said cap and having a discharge passage and a draw-off valve, normally closed.

[Claim 6 not printed in the Gazette.]

1,220,754. MANIPULATOR FOR ROLLING-MILLS. JULIAN KENNEDY, Pittsburgh, Pa. Filed Mar. 13, 1916. Serial No. 83,699. (Cl. 80—48.)



1. A manipulator for rolling mills, comprising a pair of laterally movable guides, connections for simultaneously moving both guides, and other connections for moving one of the guides relatively to the other, together with motive means for actuating said connections, substantially as described.

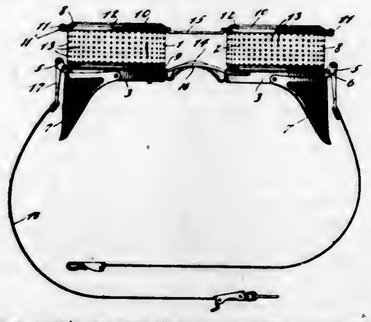
2. A manipulator for rolling mills, comprising a pair of laterally movable guides, separate actuating connections for each guide, motive means for simultaneously actuating the connections of both guides, and other motive means for separately actuating the connections of one of the guides, substantially as described.

3. In a manipulator for rolling mills, the combination with a pair of separately movable lateral guides, of lever members having actuating connections with both guides, and motive means whereby the actuating connections of both of the guides may be simultaneously moved and whereby the actuating connections of one of the guides may be independently moved, substantially as described.

4. In a manipulator for rolling mills, the combination with a pair of guides mounted for lateral movement, separate actuating connections for each guide, a lever member, a bell crank mounted on said lever member, and to which the actuating connections of both guides are attached, motive means connected to the first named lever member, a second lever member connected to the said bell crank, and other motive means connected to the second lever member, substantially as described.

5. A manipulator for rolling mills, comprising a pair of laterally movable guides, separate actuating connections for each guide, a plurality of lever mechanisms for simultaneously actuating the connections of both guides and for separately actuating the connections of one of the guides, connections between the several lever mechanisms, and motive means for actuating the last named connections, substantially as described.

1,220,755. GOGGLES. WALTER G. KING, New York, N. Y. Filed Dec. 16, 1915. Serial No. 67,123. (Cl. 2—149.)

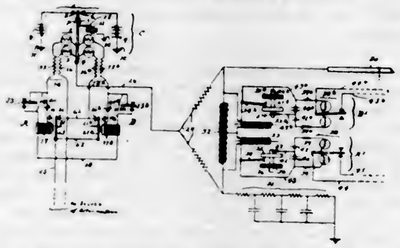


1. In a goggle construction, an eye-piece comprising a lens, a lens rim, a face-engaging rim, and a finely perforated spacer band interposed between and connecting said rims, said lens rim surrounding said spacer band and clamping it against the lens.

2. In a goggle construction, an eye-piece comprising a lens, a lens rim, a face-engaging rim, a finely perforated spacer band interposed between and connecting said rims, said lens being mounted in said band and said lens rim surrounding said band and clamping it against said lens, and beads on said face-engaging rim and spacer band respectively, fitting into each other and forming the joint between these parts.

3. In a goggle construction, a pair of eye-pieces, each comprising a lens, a lens rim and a face-engaging rim, a finely perforated cylindrical spacer band interposed between and connecting said rims, a bridge connecting said face-engaging rims and a brace connecting said lens rims.

1,220,756. QUADRUPLEX TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed Dec. 20, 1911, Serial No. 666,867. Renewed Dec. 30, 1916. Serial No. 139,967. (Cl. 178—55.)



1. In quadruplex telegraphy, the method which consists in impressing practically true reversals upon the line when no signal is being sent, substituting for such true reversals an uninterrupted flow of current of one polarity to denote a signal, and impressing upon the line as soon as said signal has ceased a momentary pulse of a polarity opposite to the polarity denoting the signal.

2. In quadruplex telegraphy, two transmitting stations, means operatively related to both stations to transmit practically true reversals, means for one of the stations to substitute for said reversals an uninterrupted flow of current of positive polarity to denote a signal from its station, means for the other of the stations to substitute for the reversals an uninterrupted flow of current of negative polarity to denote a signal from its station, and means to impress upon the line a pulse of a polarity opposite to the polarities denoting the signals as soon as said signals have ceased.

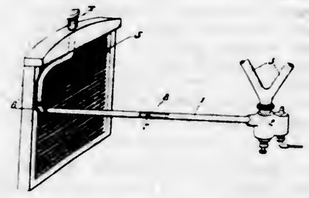
3. In quadruplex telegraphy, two transmitting stations, means operatively related to both stations to transmit practically true reversals, means for one of the stations to substitute for said reversals an uninterrupted flow of current of positive polarity to denote a signal from its station, means for the other of the stations to substitute for said reversals an uninterrupted flow of current of negative polarity to denote a signal from its station, means to impress upon the line a momentary pulse of a polarity opposite to the polarities denoting the signals as soon as said signals have ceased, and means operatively related to both stations to cease the impressing upon the line of any polarity to denote the simultaneous transmission of signals from both stations.

4. In quadruplex telegraphy, two transmitting stations, means operatively related to both stations to transmit practically true reversals, means for one of the stations to substitute for the reversals an uninterrupted flow of current of positive polarity to denote a signal from its station, means for the other of the stations to substitute for the reversals an uninterrupted flow of current of negative polarity to denote a signal from its station, means to impress upon the line a momentary pulse of a polarity opposite to the polarities denoting the signals as soon as said signals have ceased, and means operatively related to both stations to ground the transmitting line directly.

5. In quadruplex telegraphy, the method which consists in substituting for normally transmitted reversals an uninterrupted flow of current of one polarity to denote a signal from one station, an uninterrupted flow of current of opposite polarity to denote a signal from the second station, impressing upon the line a momentary pulse of a polarity opposite to the polarities denoting the signals as soon as said signals have ceased, and substituting a direct ground to denote the simultaneous transmission of signals from both stations.

[Claims 6 to 13 not printed in the Gazette.]

1,220,757. CARBURETER FEED ATTACHMENT. ALOIS KOSSINA, St. Louis, Mo. Filed Apr. 8, 1915. Serial No. 19,848. (Cl. 123—25.)

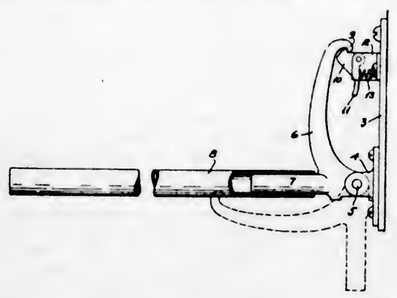


A carbureter feed attachment comprising, in combination with the carbureter and radiator of an automobile, a vapor exhaust pipe leading from the radiator to a point in the rear thereof substantially opposite the carbureter; an L-coupling attached to the lower end of the pipe; and a single unitary pipe connecting the coupling to the carbureter; said connecting pipe having a transverse curved slit in its under side at a point spaced from the coupling and that portion of the pipe, on the side of the slit remote from the coupling being bent upwardly at an inclination toward the coupling end of the pipe to extend within the pipe a distance greater than half the diameter of said pipe to serve as a baffle.

1,220,758. COMBINED GARMENT-HOOK AND CLOTHES-HANGER. WANE LAMPHIEAR, Anacortes, Wash. Filed Jan. 10, 1916. Serial No. 71,342. (Cl. 45—13.)

A combined garment-hook and clothes hanger comprising a bracket, a garment-hook having one of its ends hinged to said bracket to adapt it to be swung in a vertical plane, means for releasably locking said garment-hook in a vertical position, a lug integrally attached to the hinged

end of said garment-hook to project therefrom in a direction at right angles and a clothes hanger bar telescopically



mounted on the lug and adapted to extend in line therewith.

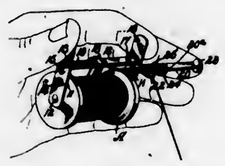
1,220,759. WINDOW-SHADE BRACKET. CASIMIR M. LANGE, Brooklyn, N. Y. Filed July 18, 1916. Serial No. 110,002. (Cl. 156—24.)



1. A bracket consisting of a metal stamping formed of an ear and a base composed of two sections bent back in overlapping relation, with the ear integrally connected with one section, and a screw rigid on the base and disposed with its axis in line with the length of the ear.

2. A bracket consisting of a metal stamping formed of an ear and a base composed of two sections bent back in overlapping relation, with the ear integrally connected with one section, one of said sections being provided with an aperture, and a screw fastened in the aperture, said screw being located approximately in the plane of and parallel with the said ear and at right-angles to the base.

1,220,760. SPOOL ATTACHMENT. LUDGER J. LECLERC, Au Sable Forks, N. Y. Filed June 30, 1916. Serial No. 106,794. (Cl. 242—134.)

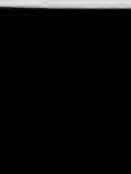


1. A spool attachment including a frame presenting a longitudinal bar and side arms spaced to receive a spool, means on the side arms in front of the longitudinal bar to revolubly mount the spool, finger holds on the side arms rearward of the longitudinal bar for springing the frame for varying the pressure of the side arms on the spool, tensioning means on the longitudinal bar adapted to yieldingly clamp a thread or wire, and a cutter mounted on the frame adjacent to one of the side arms and pivoted to rock in a plane approximately parallel with the longitudinal bar, the said cutter having its outer end projecting beyond the adjacent side arm in position to be operated by a finger of a hand holding the attachment, the back edge of the said cutter being a cutting edge and there being a relatively fixed co-acting cutting member on the frame.

2. A spool attachment including a frame presenting a longitudinal bar and side arms spaced to receive a spool, means on the side arms in front of the longitudinal bar to revolubly mount the spool, finger holds on the side arms rearward of the longitudinal bar for springing the frame for varying the pressure of the side arms on the spool, tensioning means on the longitudinal bar adapted to yieldingly clamp a thread or wire, and a cutter mounted on the frame adjacent to one of the side arms and pivoted to rock in a plane approximately parallel with the longitudinal bar, the said cutter having its outer end projecting beyond the adjacent side arm in position to be operated by a finger of a hand holding the attachment, the back edge of the said cutter being a cutting edge and there being a relatively fixed co-acting member on the frame; together with a spring acting on said cutter to return the same after cutting movement.

3. A spool attachment including a frame having means to revolubly mount a spool therein, a plate spring on said frame to yieldingly clamp a thread or wire, and guides for the thread or wire at opposite sides of the said spring, the guide at one side presenting a notch into which the thread or wire may be dropped, and the guide at the opposite side being resilient and presenting a free end beneath which the thread or wire may be passed, said resilient guide having an arched guiding member.

1,220,761. HAND-BAG AND LIKE ARTICLE. LOUIS LOWENSTEIN and SIMON ROBBINS, New York, N. Y. Filed Oct. 19, 1916. Serial No. 126,475. (Cl. 150—29.)



1. In handbags and similar articles, a frame formed of channeled members, a bag body of flexible material, wires bent to conform to the shape of the channeled members, the wires extending along the edges of the front and back of the bag body, fastening means for securing the wires to the edges of the bag body throughout the length of the wires, the wires and fastening means fitting into the channels of the said frame members, and retaining devices extending through the sides of the channeled members for holding the wires in position in the channels of said members.

2. In a hand bag and similar article, a frame formed of channeled members pivotally connected with each other to open and close, a bag body, wires conforming to the shape of the said frame members and extending along the raw edges of the said bag body, and stitches passing around the wires and through the margins of the bag body to fasten the wires in place on the bag body, the said wires and stitches fitting into the channels of the said frame members, and retaining means for permanently fastening the said bag body in place in the frame members.

3. In a hand bag and similar article, a frame formed of channeled members pivotally connected with each other to open and close, a bag body, wires conforming to the shape of the said frame members and extending along the raw edges of the said bag body and stitches passing around the wires and through the margins of the bag body to fasten the wires in place on the bag body, the said wires and stitches fitting into the channels of the said frame members, and rivets on the said frame members and extending through the bag body at the margins thereof to securely fasten the bag body in position in the frame members.

4. In hand bags and similar articles, a frame formed of channeled members, a bag body of flexible material, wires conforming to the shape of the frame members, the wires extending along the marginal edges of the bag body and secured thereto throughout the length of the wires, the edges of the bag body with the wires and securing means fitting into the channels of the said frame members, and retaining means for the wires extending through the sides of the frame members and the marginal portion of the bag material at the inner sides of the said wires.

1,220,762. ROAD-SIGNAL. CHARLES E. LYMAN, Asheville, N. C. Filed Nov. 12, 1915. Serial No. 61,151. (Cl. 116—1.)



1. In apparatus of the class described, a parting element, treads on opposite sides of the parting element, means to normally raise the treads, a signaling element operated by one of the treads, and a locking device operated by the other tread to directly prevent the operation of the first named tread.

2. In apparatus of the class described, a support providing a space thereunder, a parting element on the center of the support and presenting undercut beveled side edges, treads mounted on said support on opposite sides of the parting element and for vertical movement, means to normally raise the treads, a signaling element operated by one of the treads, and means to lock said tread and hold the same in inoperative position, said locking means being operated by the other tread.

3. In apparatus of the class described, a support providing a space thereunder, a parting element on the center of the support and presenting undercut beveled side edges, treads mounted on said support on opposite sides of the parting element and for vertical movement, means to normally raise the treads, a signaling element operated by one of the treads, means to lock said tread and hold the same in inoperative position, said locking means being operated by the other tread, the said treads being pivotally connected at their outer sides to the support and said locking means comprising a key movable into and out of the path of the signaling device actuating tread and having a cam end movable into the path of the other tread, and means to normally hold the said locking means in the last named position.

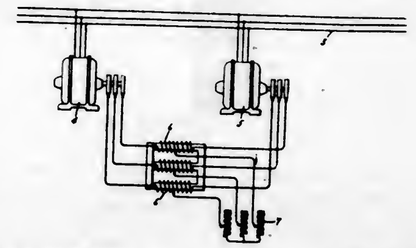
4. In apparatus of the class described, a pair of abutments, stringers connecting the abutments and arranged below their upper surfaces to form shoulders, treads on said stringers and pivotally connected to said shoulders for vertical angular movement, a parting element secured on the stringers and between the treads and having undercut opposite edges, means to raise the treads, a signaling element operated by one of the treads, and a locking means for said tread arranged for operation by the other tread.

5. In apparatus of the class described, a pair of treads mounted for vertical movement, means to normally raise the treads, a signaling element operated by one of the treads and a locking device operated by the other tread to directly prevent the operation of the first named tread.

1,220,763. REGULATING ARRANGEMENT FOR DYNAMO-ELECTRIC MACHINES. JOHN MARTIN, Clifton, England, assignor to General Electric Company, a Corporation of New York. Filed May 29, 1916. Serial No. 100,492. (Cl. 172—276.)

1. In combination, a source of supply, a plurality of induction motors having their primary windings connected to said source, reactances, regulating resistances, and means for connecting corresponding phases of the secondary windings of said motors in parallel to the regulating resistances through said reactances.

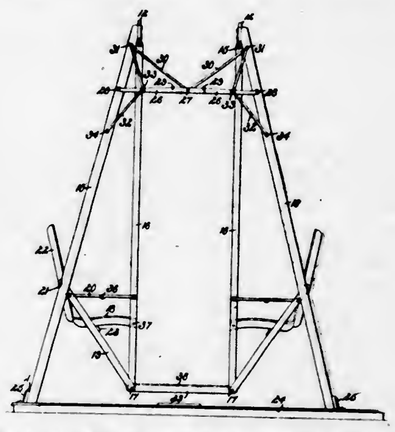
2. In combination, a source of supply, a pair of induction motors having their primary windings connected to said source, reactances interconnecting the terminals of corresponding phases of the secondary windings of said motors, and regulating resistances interconnecting intermediate points of said reactances.



3. In combination, a source of supply, a pair of induction motors having their primary windings connected to said source, reactances interconnecting the terminals of corresponding phases of the secondary windings of said motors, and regulating resistances interconnecting midpoints of said reactances.

4. In combination, a source of supply, a pair of induction motors having their primary windings connected to said source, reactances interconnecting the terminals of corresponding phases of the secondary windings of said motors, the reactance in any one phase comprising two portions wound in the same direction upon a common core, and regulating resistances interconnecting midpoints of said reactances.

1,220,764. LAWN-SWING. JOHN MICHAEL MAYER, Kingston, N. Y. Filed June 9, 1916. Serial No. 102,633. (Cl. 155—35.)



1. In a swing, the combination of two supporting frames, bars connecting the frames at opposite sides, each bar being formed of two sections pivoted together and to the frames, means for locking the said bars in alinement, braces pivoted to each frame and detachably connected with the pivots of the bars, and V-shaped braces secured to the frames and detachably connected with the sections of said bars.

2. In a swing the combination of two supporting frames, bars connecting the frames at opposite sides, each bar being formed of two sections pivoted together and to the frames, a locking member mounted on the pivot of each bar and provided with a hook at each end engaging a section of the bar, braces having one end pivoted to the frames and their ends detachably engaging the pivots of said bars, and V-shaped braces secured to the frames and each detachably connected with a section of said bars.

1,220,765. ROLLER-BEARING. ONESIME E. MICHAUD, St. Louis, Mo. Filed Jan. 14, 1916. Serial No. 72,033. (Cl. 64—62.)



1. In a roller bearing, the combination of an inner bearing ring having an exterior circumferential ridge, bearing rollers coöperating with the exterior surface of said bearing ring, each of said bearing rollers having a neck of reduced diameter between its ends positioned over said ridge, and a retaining member of sheet metal for holding said bearing rollers in alinement on said bearing ring, said retaining member comprising a band encircling said bearing rollers outside of the necks thereof, said band having integral therewith a plurality of spacing members doubled under said band and arranged between said bearing rollers, the spacing members being shaped to embrace the outer sides of the necks of the rollers.

2. In a roller bearing, the combination of an inner bearing ring having an exterior circumferential ridge, bearing rollers coöperating with the exterior surface of said bearing ring, each of said bearing rollers having a neck of reduced diameter between its ends positioned over said ridge, and a retaining member of sheet metal for holding said bearing rollers in alinement on said bearing ring, said retaining member comprising a band encircling said bearing rollers outside of the necks thereof, said band having a plurality of tongues doubled under it and arranged between said bearing rollers to form spacing members for them, said spacing members engaging the necks of the rollers and fitting in the spaces between them.

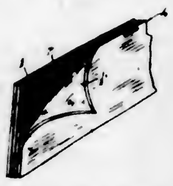
3. In a roller bearing, the combination of an inner bearing ring having an exterior circumferential ridge, bearing rollers coöperating with the exterior surface of said bearing ring, each of said bearing rollers having a neck of reduced diameter between its ends positioned over said ridge, and a retaining member of sheet metal for holding said bearing rollers in alinement on said bearing ring, said retaining member comprising a band encircling said bearing rollers outside of the necks thereof, said band having a plurality of tongues doubled under it and arranged between said bearing rollers to form spacing members for them, said spacing members engaging the necks of the rollers, the free ends of said spacing members having wings conforming to the shape of the sides of the rollers and positioned substantially the same distance from the center of said bearing ring as the path of movement of the axes of said bearing rollers.

4. In a roller bearing, the combination of an inner bearing ring having an exterior circumferential ridge, of bearing rollers coöperating with the exterior surface of said bearing ring, each of said bearing rollers having a neck of reduced diameter between its ends positioned over said ridge of said bearing ring, and a retaining member of sheet metal for holding said bearing rollers in alinement on said bearing ring, said retaining member comprising a circular band encircling said bearing rollers on the outside of the necks thereof, said band having a plurality of spacing members integral therewith doubled under it, the free ends of said spacing members lying in the spaces between adjacent rollers and having integral lateral wings forming pockets for the rollers, the intermediate portions of adjacent spacing members partly encircling the necks of said rollers.

5. In a roller bearing, the combination of an inner bearing ring having an exterior circumferential ridge, bearing rollers coöperating with the exterior surface of said bearing ring, each of said bearing rollers having a neck of reduced diameter between its ends positioned over said ridge, and a retaining member for retaining said bearing rollers in alinement of said bearing ring, said retaining member comprising a circular band encircling said bearing rollers on the outside of the necks thereof, a plurality of spacing members projecting inward from one edge of said band and having portions of their length bent parallel to the band and arranged in a circular series inside of it, the edges of said portions of adjacent spacing members embracing the neck of the bearing roller arranged between them.

[Claims 6 to 12 not printed in the Gazette.]

1,220,766. ELASTIC OR EXPANSIBLE PAVING-JOINT. WILLIAM J. MOELLER, Wyoming, Ohio, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio, a Corporation of Ohio. Filed July 5, 1912. Serial No. 707,773. (Cl. 94—1.)



1. An expansion joint for street pavements comprising a board composed of separate layers of soft felt saturated with asphalt compound, bonded together by a distinct interposed layer of asphalt, compressed into a relatively hard solid body capable of substantial compression and expansion, and presenting a tough non-frayable wearing edge.

2. An expansion joint for street pavements comprising a board composed of a body of soft felt impregnated with an asphalt compound and compressed into a relatively hard solid condition to render the same capable of allowing for heavy pressures without fracture, and presenting a tough non-frayable wearing edge.

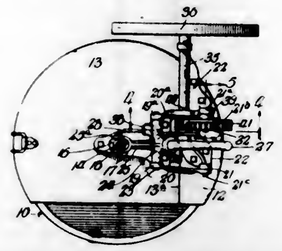
3. In combination with a street pavement formed of brick or equivalent material, an elastic joint permanently embedded in said pavement comprising a plurality of flat strips of matted expansible material saturated with asphalt compound, and having a distinct flat strip of asphalt forming a body of considerable thickness secured between and binding each two adjacent strips of matted expansible material, said joint being permanently disposed edgewise in said pavement, substantially as set forth and for the purposes specified.

4. An expansion joint for street pavements comprising a board composed of a body of soft material impregnated with an asphalt compound and compressed into a relatively hard solid condition to render the same capable of allowing for heavy pressures without fracture.

5. An expansion joint for street pavements, comprising a board composed of a supporting layer, and a layer of asphalt compound compressed together into a relatively hard solid condition to render the same capable of allowing for heavy pressures without fracture.

1,220,767. OPERATING-GEARING FOR WASHING-MACHINES. GLENN MORE, Jamestown, N. Y., assignor to The Blackstone Manufacturing Company, Jamestown, N. Y., a Corporation of New York. Filed May 22, 1916. Serial No. 99,051. (Cl. 74—7.)

1. The combination of a support and an auxiliary support, a bracket plate on said support, a second bracket plate on said auxiliary support, means operatively connecting said bracket plates providing a hinged connection between said supports, an operating shaft journaled in the bracket on said auxiliary support, a fly-wheel shaft, a fly-wheel and a large gear wheel all carried by the bracket plate on said main support, said gear being arranged with its axis of rotation coincident with the axis of the hinged connection between said supports and being operatively engaged with said fly-wheel shaft, a rocking lever carried on said auxiliary support, and directly connected to the operating shaft and means operatively connecting said lever to said gear for imparting a continuous rotary movement to said large gear and a like movement to said fly-wheel at high speed.



2. The combination of a fixed support and a movable support, a bracket plate on said fixed support, a second bracket plate on said movable support, means operatively connecting said bracket plates providing a hinged connection between said supports, an operating shaft capable of a vertical, reciprocating movement journaled in the bracket on said movable support, a fly-wheel shaft carried by the bracket plate on said fixed support, a rocking prime mover lever journaled on one of said bracket plates, said lever being directly connected to and imparting a vertical reciprocatory movement to said operating shaft and means operatively connecting said prime mover lever to said fly-wheel shaft, to impart a continuous rotary movement thereto, said means including a high speed gearing.

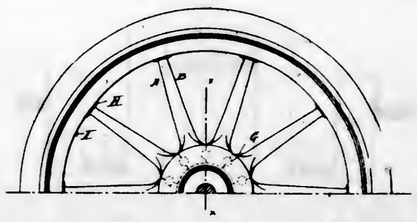
3. The combination of a main or fixed support and an auxiliary or movable support, a bracket plate on each support, means operatively connecting said bracket plates providing a hinged connection between said supports, an operating shaft, journaled in the bracket on the movable support, a fly-wheel shaft and a fly-wheel thereon carried by the bracket plate on said fixed support, a large gear arranged with its axis of rotation coincident with the axis of the hinged connection between said supports and operatively connected to said fly-wheel shaft, a lever mounted on the bracket plate on the movable support, said lever including a plurality of load arms one of which arms is directly connected to the operating shaft and the other arm indirectly connected to said large gear, said lever through its connections imparting a vertical reciprocatory movement to said operating shaft and a continuous rotary movement to said large gear.

4. The combination of a main support and an auxiliary support connected thereto, a bracket plate having upright bearing standards fixed to said main support, a second bracket plate fixed to said auxiliary support, said second bracket plate having laterally extending arms adapted for pivotal engagement with the upright standards on the first named bracket plate to provide a hinged connection between said main and auxiliary supports, a continuous rotary fly-wheel shaft and associated gearing carried by the bracket plate on said main support, an upright, vertical reciprocatory operating shaft having sliding bearing in the bracket plate on said auxiliary support, a rocking lever carried by one of said plates directly connected to said operating shaft and means operatively connecting the associated gearing of the fly-wheel shaft with said operating lever, said means being constructed to translate the rocking movement of said lever into a continuous rotary motion of the fly-wheel shaft gearing.

5. The combination of a support and an auxiliary support hinged thereto, a bracket plate fixed to said first support, a fly-wheel shaft and a gear for driving the same at high speed mounted on said bracket, a second bracket fixed to said auxiliary support, said bracket plates having parts pivotally connected together and forming the hinged connection between said main and said auxiliary supports, an operating shaft journaled in said bracket on said auxiliary support, a rocking lever mounted on said last mentioned bracket and having an arm directly connected with the operating shaft and means connecting said lever with the said driving gear, said means translating the rocking movement of said lever into a continuously rotary movement of said gear and to said fly-wheel shaft at high speed.

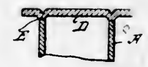
[Claims 6 to 8 not printed in the Gazette.]

1,220,768. METAL VEHICLE-WHEEL. THOMAS E. MURRAY, New York, N. Y. Filed Feb. 18, 1916. Serial No. 79,048. (Cl. 21—69.)



A metal vehicle wheel, comprising a plurality of hollow spokes having frusto-wedge-shaped enlargements at their inner ends, the inclined sides of said enlargements being placed in juxtaposition to form a nave, and the inclined sides of each spoke having a transverse recess registering with similar recesses in the inclined sides of the adjacent spokes to form tubes extending through said nave, pins wholly received in said tubes, a hub, and annular flanges on said hub welded to opposite faces of said nave, covering said tubes and centrally supporting said nave.

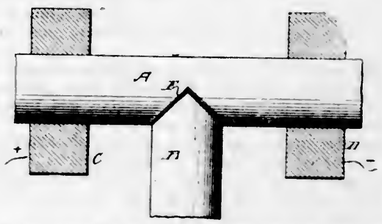
1,220,769. METAL VEHICLE-WHEEL. THOMAS E MURRAY, New York, N. Y. Original application filed Feb. 18, 1916, Serial No. 79,050. Divided and this application filed June 28, 1916. Serial No. 106,318. (Cl. 21—69.)



1. A vehicle wheel, comprising tubular spokes, a plate welded to the outer end of each spoke to close said end and to form a flange around the same, and a rim; the said plate being secured to said rim.

2. A vehicle wheel, comprising tubular spokes, a rim, and, on the inner side of said rim, annular ribs registering with and welded to the outer butt ends of said spokes.

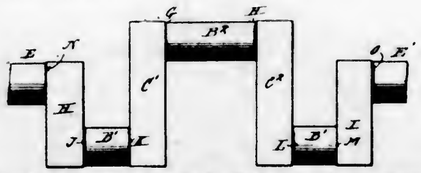
1,220,770. METHOD OF ELECTRICAL WELDING. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 29, 1916. Serial No. 134,009. (Cl. 219—10.)



1. The method of forming a welded joint between two tubes relatively at right angles to one another, which consists in forming in the wall of one of said tubes a notch having its sides converging to the longitudinal axis of said tube, beveling the end of the other tube to fit said notch, inserting said end in said notch, and establishing welding current through the joint.

2. The method of forming a welded joint between the ends of two tubes and a third tube at right angles to said first-named tubes, which consists in beveling an end of each of said first-named tubes to form unitedly a notch having its sides converging to the longitudinal axis of said tube, beveling the end of the third tube to fit said notch, inserting said end in said notch, and establishing welding current through the joint.

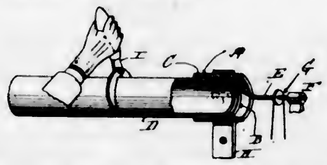
1,220,771. METHOD OF MAKING CRANK-SHAFTS. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 14, 1916. Serial No. 136,860. (Cl. 219—10.)



1. The method of making a crank shaft, which consists in turning a cylindrical crank pin, producing a crank arm from a body of material separate from the pin and the shaft, and uniting said arm to the shaft and to said pins by electrically welded joints.

2. The method of making a multiple crank shaft, which consists in turning a cylindrical rod and dividing the same into a plurality of crank pins, some of said pins being of a given length and the remainder of a given less length, producing a plurality of similar crank arms from material separate from that of said pins, producing a plurality of similar crank arms of greater length than said first-named crank arms from material separate from that of said pins, and uniting a selected number of arms and pins to each shaft by electrically welded joints to form a multiple crank on said shaft.

1,220,772. METHOD OF WELDING A THREADED TUBE IN A SLEEVE OR FERRULE. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 14, 1916. Serial No. 136,866. (Cl. 113—112.)



1. The method of welding an externally threaded tube in an internally threaded ferrule or sleeve having an internal rib, which consists in engaging said tube with the thread in said sleeve and rotating said tube to move the end thereof into proximity with said rib, raising the joint to welding temperature, and then rotating said tube to carry and press the end thereof into contact with said rib.

2. The method of welding an externally threaded tube in an internally threaded ferrule or sleeve having an internal rib, which consists in engaging said tube with the thread in said sleeve and rotating said tube to move the end thereof into proximity to said rib, applying to the interior of said sleeve a rotating flame to sweep around said rib until the joint is raised to welding heat, and then rotating said tube to carry and press the end thereof into contact with said rib.

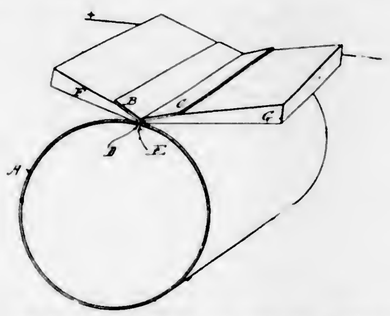
1,220,773. METHOD OF PRODUCING SOLID RIBS ON SHEET-METAL TUBES. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 23, 1916. Serial No. 138,600. (Cl. 219—6.)

1. The method of making a solid circumferential homogeneous rib on a sheet metal tube, which consists in forming similarly turned flat faced flanges on the ends of two tube sections, placing the flange of one section against and registering with the flange of the other section, and electrically welding said flanges to form said rib.



2. The method of making a plurality of solid circumferential homogeneous ribs on a sheet metal tube, which consists in forming similarly turned flat faced flanges on the ends of two tube sections, placing the flanges of one section against and registering with the flange of the other section, and electrically welding said flanges, adding a third flanged section to the free end of one of the sections so united, and electrically welding said third section in place, and so on until a ribbed tube of desired length is produced.

1,220,774. METHOD OF ELECTRICAL WELDING. THOMAS E. MURRAY, New York, N. Y. Filed Jan. 10, 1917. Serial No. 141,544. (Cl. 219—10.)



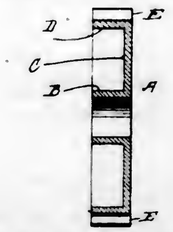
1. The method of forming an electrically welded seam in thin metal, which consists in first bending back an edge of each of the sheets to be welded, and then bringing the exterior faces of the angles formed by such bent edges into contact, and establishing welding current at the narrow joint formed at the contact areas of said faces.

2. The method of forming an electrically welded seam in a cylinder of thin metal, which consists in turning back opposite edges of a sheet of said metal, bending said sheet in cylindrical form and bringing the exterior surfaces of the angles formed by such bent edges into contact, and establishing welding current throughout the length of said joint.

1,220,775. GEAR-WHEEL. THOMAS E. MURRAY, New York, N. Y. Filed Jan. 10, 1917. Serial No. 141,547. (Cl. 74—41.)

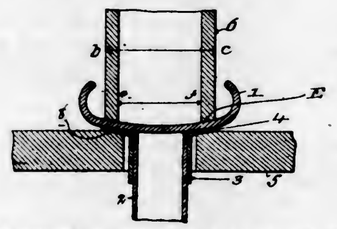
1. A gear wheel having a body portion comprising integrally a hub, a rim and a web, the said parts being of struck up, pressed or stamped sheet metal, and teeth of relatively harder metal welded to said rim.

2. A gear wheel having a body portion in two parts, each comprising a hub, a rim and a web, the said parts each being of struck up, pressed or stamped sheet metal and welded together face to face, and teeth of relatively harder metal welded to said united rims.



3. A gear wheel having a body portion comprising integrally a hub, a rim and a web, the said parts being of struck up, pressed or stamped sheet metal, an annular disk concentric with said body portion, of like diameter and welded to the face thereof, and teeth of metal relatively harder than the metal of said body portion and disk welded to said rim and to the circumferential edge of said disk.

1,220,776. METHOD OF ELECTRIC WELDING. THOMAS E. MURRAY, New York, N. Y. Filed Jan. 24, 1917. Serial No. 144,134. (Cl. 219—10.)



1. The method of constructing a welding electrode, which consists in determining an electrode surface of selected area and configuration, determining an electrode surface of enlarged area and similar but correspondingly enlarged configuration, determining the surface area of an endless band which shall be equal to said first-named area but shall have said similar but correspondingly enlarged configuration, and forming on the surface of said electrode a projection or rib having its welding face conforming in area and configuration to said endless band.

2. The method of constructing a welding electrode, which consists in determining a circular electrode area A of predetermined diameter d; determining a larger circular electrode area B of predetermined diameter D; determining a circular area whereof the diameter is

$$\sqrt{D^2-d^2}.$$

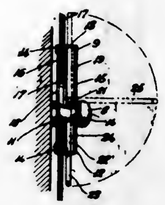
and forming said electrode with a circular contact face having the diameter D and a central recess in said face having the diameter

$$\sqrt{D^2-d^2}.$$

1,220,777. VEHICLE-CURTAIN FASTENER. FRED A. NEIDER, Augusta, Ky., assignor to The F. A. Neider Company, Augusta, Ky., a Corporation of Kentucky. Filed Nov. 9, 1916. Serial No. 130,450. (Cl. 24—211.)

1. A socket for vehicle curtain fasteners, having an aperture to receive a headed stud, and a locking member consisting of a wire loop having its ends journaled in the sides of the socket and projecting into the aperture, the locking member being adapted to be swung about its ends and in one limit of its travel to bring its ends into locking engagement with the stud and in the other limit of its travel to disengage the stud.

2. A socket for vehicle curtain fasteners, having an aperture and a recess formed therein, adapted respectively to receive a headed stud and a wire spring locking member, and a wire spring locking member having its ends extending toward the aperture and adapted to engage the stud below the head when moved to its locking position and to disengage the stud when moved to its unlocking position.



3. A socket for vehicle curtain fasteners, consisting of a lock-carrying member having a flange extending from the edge thereof and an aperture formed therein and located concentrically with the flange, said flange having curtain-securing means extending therefrom and a washer adapted to engage the flange and located between the lock-carrying member and the curtain, said washer having an aperture formed therein in alinement with the aperture of the lock-carrying member, and a wire spring lock mounted in the lock-carrying member, said lock consisting of a looped wire spring having its ends extending through the flange of the lock-carrying member and into the aperture, said ends being bent out of alinement with one another, whereby the ends in one position, will be brought into engagement with a headed stud beneath the head thereof and removed from engagement therewith when the lock is moved to its other position.

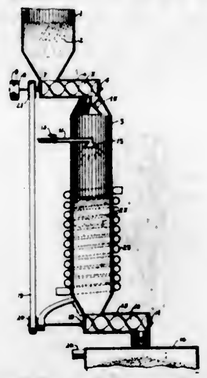
4. A socket for vehicle curtain fasteners, having an aperture and a recess formed therein adapted respectively to receive a headed stud and a wire spring locking member, and a wire spring locking member having ends extending toward the aperture and bent out of alinement with relation to one another, said locking member being pivotally mounted in said socket recess, eccentric to the center of the stud when occupying its locked position within the socket, whereby the ends of the wire spring locking members will be brought to engage the stud when the member is moved to its locking position and whereby the ends will be disengaged from the stud when the member is moved to its unlocking position.

5. A socket for vehicle curtain fasteners, having an elongated aperture and a recess formed therein, adapted respectively to receive a headed stud and a wire spring locking member, the aperture being adapted to permit the stud to occupy either end thereof, and a wire spring locking member pivotally mounted in the socket and having its ends extending toward the aperture, located midway between the ends of said aperture and adapted to engage the stud below the head when the stud occupies either end of the aperture and to be moved from its engaging position to disengage the stud when occupying either end of the aperture.

1,220,778. CHEMICAL APPARATUS. ZENO OSTENBERG, San Francisco, Cal., assignor to International Cellulose Company, Reno, Nev., a Corporation of Nevada. Filed Feb. 7, 1916. Serial No. 76,687. (Cl. 127—10.)

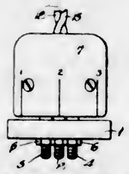
A chemical apparatus comprising a receptacle, a treating or mixing tank adapted to receive a predetermined quantity of comminuted material and hold the same in a mass for a predetermined period, a cone shaped spreader rigidly positioned in the receiving end of said mixing tank and adapted to intercept said material entering the same and cause said material to fall into said mass in a cylindrical veil, means for introducing a liquid into the interior

of said cylindrical veil and spraying the same into said material, means for cooling the treated material, and



means for effecting the simultaneous addition of material to said mass and substraction of material from said mass.

1,220,779. ELECTRICAL PLUG-SWITCH. EDWARD J. OVINGTON, Newton Center, Mass., assignor to Simplex Electric Heating Company, Cambridge, Mass., a Corporation of Massachusetts. Filed Nov. 29, 1913. Serial No. 803,709. (Cl. 175—282.)



1. A connector switch, having two members constructed for relative rotation independent of longitudinal movement, comprising combined connector and switch members having provision to hold the current transmitting members centered together under tension, and means actuated by a relative rotative movement only between said switch members to effect changed current conditions from one member to the other, one of said members constituting a pivot for said relative rotative movement.

2. A connector switch, having two members constructed for relative rotation independent of longitudinal movement, comprising combined connector and switch members, one of said members constituting the pivot for rotation, yielding means on one switch member to impel the coöperative member to full centered contact position, and means actuated by a partial rotative movement only between said switch members to effect changed current conditions from one member to the other.

3. A connector switch, having two members constructed for relative rotation independent of longitudinal movement, comprising combined connector and switch members having provision to change current transmission from one member to another by relative rotative movement only between the switch members, one of said members constituting the pivot for said rotative movement, and means to automatically impel the coöperating connecting members into center current contact position.

1,220,780. ELECTRICAL CONNECTOR. EDWARD J. OVINGTON, Newton Center, Mass., assignor to Simplex Electric Heating Company, Cambridge, Mass., a Corporation of Massachusetts. Filed Dec. 12, 1913. Serial No. 806,147. (Cl. 173—332.)

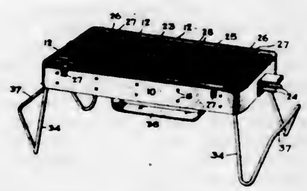
1. An electrical connector, comprising an insulated casing having two metallic contact members coöperating to form a socket, a spring pivoted outside said casing and adapted normally to exert tension on one of said contact members toward the other, in combination with means to move said spring on its pivot to free said contact member from the spring tension.



2. An electrical connector, comprising an insulated casing containing a plurality of metallic contact members in the form of a socket, one of said contacts being substantially U-shaped in cross section and the other adapted to fit freely between the open arms of the U-shaped member, in combination with a spring secured to the said casing and adapted to exert tension on one of said contacts relatively with the other, and means outside said casing to remove, instantly, the said spring from exerting tension on said contact member, before separating the connector.

3. An electrical connector, comprising an insulated casing containing a plurality of metallic contacts in the form of a socket, one of said contacts being substantially U-shaped in cross section and the other adapted to fit freely between the open arms of the U-shaped member, a leaf spring secured on the outside of said casing, a plug adapted to extend through said casing from said spring to one of the contacts, whereby said leaf spring will exert tension on one of said contacts and move it relatively with the other, in combination with devices operable from the outside of said casing to remove the action of the spring on said plug and metallic contact, before separating the connector.

1,220,781. ELECTRIC HEATING DEVICE. LEON F. PARKHURST, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Mar. 17, 1915. Serial No. 15,097. (Cl. 219—19.)



1. A heating device comprising a frame opened at the top, an electric heating unit mounted therein, a plate for closing the bottom of said frame, means for removably securing said plate to said frame and a hand-grip mounted on the bottom of said plate.

2. A heating device comprising a frame open at the top, a plate for closing the bottom thereof, means for removably securing said plate to said frame and a hand-grip mounted on said plate.

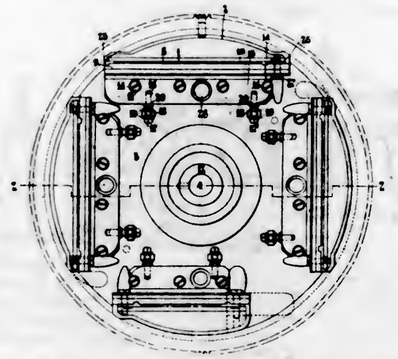
3. A heating device comprising a frame open at the top, an electric heating unit mounted therein, a releasable plate for closing the bottom thereof, and means secured to the bottom of the heating device for supporting the same in an upright position and means whereby said device may be manually inverted.

4. A heating device comprising a frame open at the top, an electric heating unit mounted therein, a releasable plate for closing the bottom of the frame, and one or more members secured to the bottom of said plate for supporting the heating device in an upright position and formed to constitute handles by which the heating device may be inverted.

5. A heating device comprising a frame open at the top, an electric heating unit mounted therein, a releasable plate for closing the bottom of said frame, said plate being provided with means for supporting the device in an upright position and with a hand-grip by which the same may be manually inverted.

[Claim 6 not printed in the Gazette.]

1,220,782. TYPOGRAPHICAL CASTING-MACHINE. HERBERT PEARCE and JOHN ERNEST BILLINGTON, Broadheath, England, assignors to Linotype and Machinery Limited, London, England. Filed Sept. 19, 1914. Serial No. 862,446. (Cl. 199—48.)



1. In a typographical casting machine, the combination of a slotted mold, a carrier whereon the mold is mounted, and adjustable supporting means for tilting the mold relatively to the carrier to secure the parallelism of its slot with a constant datum line.

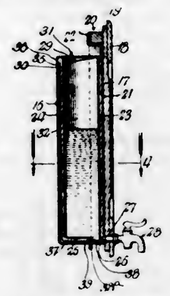
2. In a typographical casting machine, the combination of a slotted mold, a rotary wheel formed with an enlarged recess wherein the mold is mounted, and two independent adjusting devices supporting the mold free of the lower wall of said recess and adapted by their adjustment to tilt the mold relatively to the carrying wheel to secure the parallelism of its slot with a constant datum line.

3. In a typographical casting machine, the combination of a slotted mold, a rotary wheel formed with an enlarged recess wherein the mold is mounted, a pair of set screws arranged at the opposite ends of the mold and supporting it free of the lower wall of the recess and adjustable independently to tilt the mold at its opposite ends relatively to the carrying wheel to insure the parallelism of its slot with a constant datum line, and clamping screws passing through enlarged openings in the mold for holding it in its adjusted position.

4. In a typographical casting machine, the combination of a pair of parallel straight-edged trimming knives, a slotted mold wherein the slug is cast, a carrier whereon the mold is mounted and adapted to present it periodically in operative relation to the trimming knives, and means attached to the carrier for giving support to the mold thereon and adjustable at will to tilt the mold relatively to the carrier to insure the parallelism of its slot with the cutting edges of the trimming knives when presented thereto.

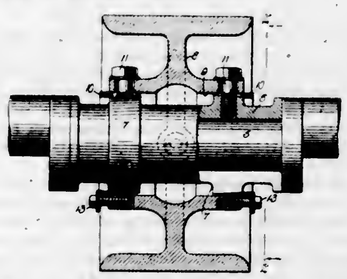
1,220,783. WATER-COOLER FOR REFRIGERATORS. FREDERICK E. RANNEY, Greenville, Mich., assignor to Ranney Refrigerator Company, Greenville, Mich., a Corporation of Michigan. Filed Sept. 16, 1915. Serial No. 50,969. (Cl. 62—38.)

1. A water cooler for refrigerators, comprising in combination with the ice compartment in said refrigerator and a door closing said compartment, said door including an inverted U-shaped frame attached to its inner face to provide the rabbet for engagement within the opening into the said compartment, a tank located partially within the recess provided by said frame, said tank being arcuate in cross section and having a flat, upright wall located adjacent to the inner face of said door and having a bottom wall provided with a discharge opening and being open at the top, a thin, metal shell inclosing said water tank on the side adjacent the ice compartment and on the bottom, said shell being attached to said U-shaped frame and providing a support for said tank, means for draining the space between said shell and tank into said ice compartment, and a faucet extending through said door into the discharge opening of said tank.



2. A water cooler for refrigerators, comprising in combination with the ice compartment in said refrigerator and a door closing said compartment, said door including an inverted U-shaped frame attached to its inner face to provide the rabbet for engagement within the opening into the said compartment, a tank located partially within the recess provided by said frame, said tank being arcuate in cross section and having a flat, upright wall located adjacent to the inner face of said door and having a bottom wall provided with a discharge opening and being open at the top, a thin, metal shell inclosing said water tank on the side adjacent the ice compartment and on the bottom, said shell being attached to said U-shaped frame and providing a support for said tank, means for draining the space between said shell and tank into said ice compartment, a faucet extending through said door into the discharge opening of said tank, and a removable lid adapted to close the open top of said water cooler.

1,220,784. TAKE-UP FOR BUSHINGS. WILLIAM HENRY REAGAN, Jr., Miami, Ariz. Filed Sept. 13, 1916. Serial No. 119,805. (Cl. 74—8.)



1. In combination with the hub of a revoluble member, a split bushing having conical shoulders within the hub, rings interposed between the shoulders and the hub, and means for locking the rings and bushing to the hub.

2. In combination with the hub of a revoluble member, a split bushing having conical shoulders within the hub, tapering rings between the shoulders and the hub, means for locking the bushing to the hub, and means for locking the rings to the hub.

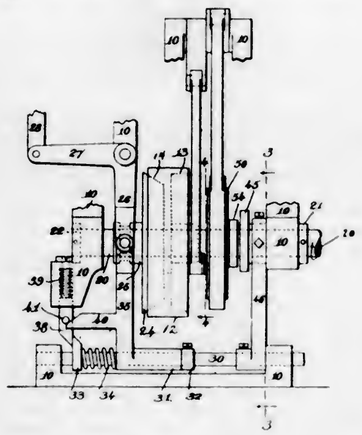
3. In combination with the hub of a revoluble member, a split bushing having conical shoulders within the hub, an annular tapering split ring between each shoulder

and the hub, adjustable locking means for securing the bushing to the hub, and adjustable locking means for securing the rings to the hub.

4. In combination with the hub of a revoluble member, which hub has a cylindrical bore, a split bushing having conical shoulders within the bore, an annular tapering split ring interposed between each shoulder and the hub, cap screws securing the shoulders to the hub, said rings having notches to clear the screws, and cap screws within the hub engaging the rings for locking said rings between the hub and the shoulders.

5. In combination with the hub of a revoluble member, a split bushing in the hub, contractible tapering rings interposed between the bushing and the hub, said bushing and hub having surfaces contacting with the rings and means for locking the rings and bushing to the hub.

1,220,785. STOP-MOTION. JOHN REECE, Manchester, Mass. Filed Sept. 5, 1916. Serial No. 118,485. (Cl. 74—46.)



1. A stop motion comprising in combination with the constantly rotating power parts, and the rotary driven parts to be stopped, reciprocating means adapted to be put into effect when the driven parts are rotating under momentum whereby a power part is caused to exert restraint against the rotation of the driven parts.

2. A stop motion comprising in combination with the constantly rotating power parts, and the rotary driven parts to be stopped, reciprocating means adapted to be put into effect when the driven parts are rotating under momentum whereby a power part is caused to exert restraint against the rotation of the driven parts to hold back the rotation thereof with a progressively decreasing speed giving a definite final stopped position.

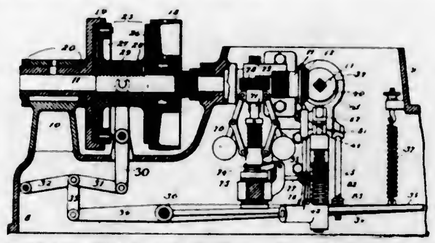
3. A stop motion comprising in combination with the constantly rotating power parts, and the rotary driven parts to be stopped, a reciprocating link and lever system between a power part and a driven part, and means for putting said system into effect during a portion of a rotation for causing the power part to produce a restraint upon and stoppage of the driven part in a definite position.

4. A stop motion comprising in combination with the constantly rotating power parts, and the rotary driven parts to be stopped, a reciprocating link and lever system between a power part and a driven part, and means for putting said system into effect during a portion of a rotation for causing the power part to produce a restraint upon and stoppage of the driven part in a definite position, said link and lever system adapted to attain a dead center condition to preclude rotation beyond the desired position.

5. A stop motion comprising in combination with the constantly rotating power parts, and the rotary driven parts to be stopped, a crank device rotating with the driven parts and through which restraint may be imposed for the stoppage thereof, and connections adapted to be rendered operative for the purposes of stopping, whereby a power part temporarily operates to restrain the driven part speed progressively to the point of stoppage.

[Claims 6 to 10 not printed in the Gazette.]

1,220,786. DRIVING AND STOPPING MECHANISM. JOHN REECE, Manchester, Mass. Filed Sept. 5, 1916. Serial No. 118,486. (Cl. 74—46.)



1. The combination with the rotating parts of a machine, of a retarding device for slowing the rotary speed thereof, a speed operated governor, and connections from said governor for rendering the retarding device inoperative at a predetermined speed.

2. A stop mechanism comprising in combination with the rotating parts to be stopped, a stopping device, a retarding device for slowing the speed of the rotary parts, a speed operated governor, and connections from said governor for rendering the retarding device inoperative at a predetermined speed, and causing the stopping device to become effective.

3. A stop mechanism comprising in combination with the rotating parts to be stopped, a stopping device, a retarding device for slowing the speed of the rotary parts, means for holding inoperative the stopping device, a governor, and connections whereby the governor at a predetermined speed renders the retarding device inoperative and releases said holding means, whereby the parts may be stopped from slow speed by said stopping device.

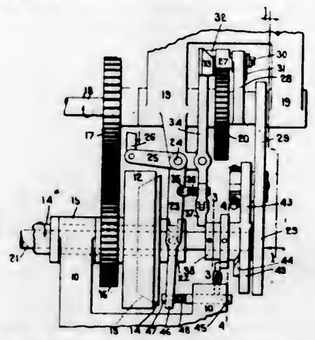
4. A stop mechanism comprising in combination with the rotating parts to be stopped, a stopping device, a retarding device for slowing the speed of the rotary parts, a driving means, a lever shiftable from a first to a second position for disengaging the driving means and applying the retarding device, and a governor operative at a predetermined speed for throwing said lever to a third position for disengaging the retarding means prior to the action of said stopping device.

1,220,787. STOP-MOTION. JOHN REECE, Manchester, Mass. Filed Sept. 13, 1916. Serial No. 119,798. (Cl. 74—46.)

1. A stop motion comprising in combination with the constantly rotating power parts and the rotary driven parts to be stopped, reciprocating means adapted to be put into effect when the driven parts are rotating under momentum whereby a power part is caused to exert restraint against the rotation of the driven parts.

2. A stop motion comprising in combination with the constantly rotating power parts, and the rotary driven parts to be stopped, reciprocating means adapted to be put into effect when the driven parts are rotating under momentum whereby a power part is caused to exert restraint against the rotation of the driven parts to hold back the rotation thereof with a progressively decreasing speed until a slow speed is secured having harmless energy.

3. A stop motion comprising in combination with the constantly rotating power parts, and the rotary driven parts to be stopped, reciprocating means adapted to be put into effect when the driven parts are rotating under momentum whereby a power part is caused to exert restraint against the rotation of the driven parts, to hold back the rotation thereof with a progressively decreasing speed until a slow speed is secured having harmless energy, and a stopping means adapted to finally stop the driven parts in a definite position.

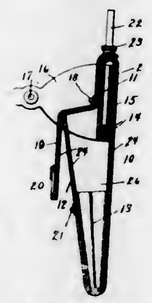


4. A stop motion comprising in combination with the constantly rotating power parts, and the rotary driven parts to be stopped, reciprocating means adapted to be put into effect when the driven parts are rotating under momentum whereby a power part is caused to exert restraint against the rotation of the driven parts, the same including a toothed ratchet constantly driven from the power parts, a reciprocable pawl adapted to engage the ratchet during stoppage, and connections from the driven parts tending to accelerate the pawl, whereby the restraint of the ratchet upon the pawl progressively retards the driven parts.

5. A stop motion comprising in combination with the constantly rotating power parts, and the rotary driven parts to be stopped, reciprocating means adapted to be put into effect when the driven parts are rotating under momentum whereby a power part is caused to exert restraint against the rotation of the driven parts, including a crank device rotating with the driven parts, a grip device mounted eccentrically to the driven parts, and connections from the power parts operative through the grip device to react upon the driven parts to retard rotation.

[Claims 6 to 8 not printed in the Gazette.]

1,220,788. MUSIC-CASE. GEORGE R. RIDGEWAY, Olympia, Wash. Filed Sept. 27, 1916. Serial No. 122,453. (Cl. 224—17.)

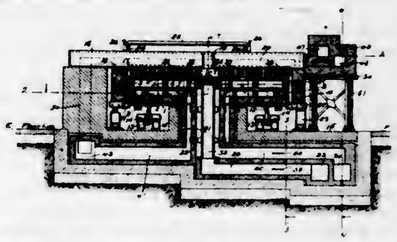


1. A carrier comprising a body formed from a strip of pliable material folded to provide a rear wall and a forward wall having an upper flap and a lower flap extending in overlapping relation to the upper flap, when closed, spacing means secured between the rear wall and the free edge portion of the upper flap to provide a rack receiving pocket in the upper portion of said carrier, webs secured between the rear walls and the edge portions of the lower flap of the forward wall to provide a music receiving pocket in the lower portion of said carrier, a closure flap secured to the upper flap and extending in overlapping relation to the lower flap, and releasably connected therewith, and side wings connected with the rear wall and having their free end portions releasably connected with the closure flap to provide closures for the ends of the rack receiving pocket.

2. A carrier comprising a body having a rear wall and a forward wall, the forward wall having upper and lower flaps, the upper flap being connected with the rear wall to provide an upper pocket, and the edge portions of the lower flap being connected with the edge portions of the rear wall to provide a lower pocket, a closure flap connected with the upper flap and releasably engaging the lower flap to provide a closure for the lower pocket, and end closures for the upper pocket connected with the rear wall and having their free end portions releasably connected with the closure flap of the lower pocket.

3. A carrier comprising a body having a rear wall and a forward wall, the forward wall having upper and lower flaps, the upper flap being connected with the rear wall to provide an upper pocket and the edge portions of the lower flap being connected with the edge portions of the rear wall to provide a lower pocket, a closure flap for the lower pocket, and end closures for the upper pocket.

1,220,789. FURNACE. GILBERT RIGG, Palmerton, Pa., and WALTER L. COURSEN, New Rochelle, N. Y., assignors to The New Jersey Zinc Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 19, 1916. Serial No. 92,121. (Cl. 263—22.)



1. A furnace, for roasting, calcining, and similar purposes, provided with a removable roof having a substantially flat bottom, said roof containing a series of combustion chambers and intervening water-cooled supports.

2. A furnace, for roasting, calcining, and similar purposes, provided with a roof having a substantially flat bottom and a central feed opening, said roof containing a series of combustion chambers and provided with means by which said roof may be bodily removed or replaced.

3. A furnace, for roasting, calcining, and similar purposes, provided with a roof made up of a series of beams spaced apart and connected by flat bottom tiles flush with the lower edges of said beams and by arched roof tiles, thereby constituting a series of combustion chambers, means for supplying gas and air to said combustion chambers and for removing the products of combustion.

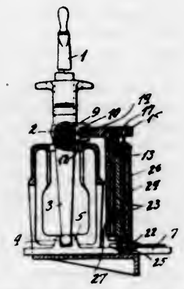
4. A furnace, for roasting, calcining, and similar purposes, provided with a roof having a series of roof beams channeled for the reception of a cooling medium, flat tiles spanning the lower portions of said beams and forming therewith the bottom of the roof structure, tiles arched between said beams above the flat tiles and forming therewith combustion chambers, means for supplying air and fuel to the combustion chambers and means for removing the products of combustion.

5. A furnace, for roasting, calcining, and similar purposes, provided with a roof having a series of roof beams provided at their bases with inclines, flat tiles spanning the beams and resting upon the inclines, said beams being further provided with an upper series of inclines, tiles spanning the beams and resting upon the upper series of

inclines, thereby forming with the flat tiles a series of combustion chambers, means for supplying air and fuel to the combustion chambers and means for withdrawing the products of combustion.

[Claims 6 to 24 not printed in the Gazette.]

1,220,790. LOCKING DEVICE FOR CHANGE-SPEED GEARS. GUSTAV SCHLATTER, Arbon, Switzerland, assignor to The Firm of Adolph Saurer, Arbon, Switzerland. Filed Dec. 31, 1915. Serial No. 69,599. (Cl. 74—39.)



1. A speed-changing gear comprising shifting rods, stops for holding said rods against accidental movement, a speed-changing shifting lever movable laterally to bring it into operative relation to one or the other of said shifting rods, a swinging locking member operatively connected with said lever and arranged to lock said stops selectively, the axes of said stops being at right angles to the plane in which said locking member is adapted to swing.

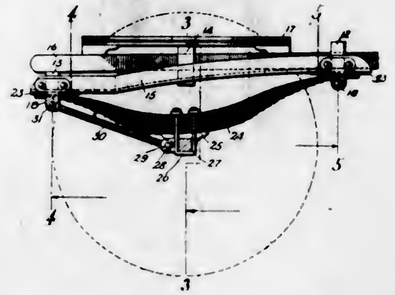
2. A speed-changing gear comprising shifting rods, stops for holding said rods against accidental movement, a speed-changing shifting lever movable laterally to bring it into operative relation to one or the other of said shifting rods, a swinging locking member operatively connected with said lever and arranged to swing to lock the stops of those shifting rods which at the time are not operatively connected with the speed-changing lever, while releasing the stop of the shifting rod temporarily connected with said lever.

3. A speed-changing gear comprising shifting rods, stops for holding said rods against accidental movement, a speed-changing shifting lever movable laterally to bring it into operative relation to one or the other of said shifting rods, an independently pivoted member operatively connected with the speed-changing lever and adapted to be swung on its pivot by the lateral shifting of said lever, to lock said stops selectively.

1,220,791. VEHICLE-BAR-SPRING UNIT. MARTIN L. SENDERLING, Jersey City, N. J. Filed Mar. 18, 1914, Serial No. 825,530. Renewed Oct. 7, 1915. Serial No. 54,691. (Cl. 21—97.)

1. A truck as characterized, comprising a plurality of elliptical springs spaced apart and secured in operative position in the usual manner; a plurality of side bars disposed in superposed relation to and in a plane coincident with said springs; a splinter bar rigidly secured to said side bars adjacent one end thereof; a spring bar rigidly secured to the opposite ends of said side bars; a plurality of hounds rigidly secured to said splinter bar and spring bar, said hounds being disposed in parallel relation to said side bars and separated to leave a space coincident with the longitudinal center of said truck; a center block fixedly attached to said side bars and to said hounds, said center block having a king bolt perforation formed therein; and a fifth wheel mounted upon and fixedly connected with said center block and said hounds.

2. A truck as characterized, comprising a plurality of elliptical springs spaced apart and secured in operative position in the usual manner; a plurality of side bars disposed in superposed relation to and in a plane coincident with said springs; a splinter bar rigidly secured to said side bars adjacent one end thereof; a spring bar rigidly secured to the opposite ends of said side bars; a plurality of hounds rigidly secured to said splinter bar and spring bar, said hounds being disposed in parallel relation to said side bars and separated to leave a space coincident with the longitudinal center of said truck; a center block fixedly attached to said side bars and to said hounds, said center block having a king bolt perforation formed therein; a fifth wheel mounted upon and fixedly connected with said center block and said hounds; and spacing rods pivotally connected with said side bars and with the center of said springs to maintain the working relation of said bars and springs.



3. The combination with a vehicle chassis having laterally-extended bracket members; of a unit spring structure embodying a plurality of superimposed semi-elliptical spring leaves; rigid riding bars permanently operatively connected with the ends of said leaves; and means for holding said bars and said ends in service relation and for permitting said ends to vary in correspondence with the pressure on said spring.

4. The combination of a vehicle chassis having laterally extended bracket members and a spring unit comprising lineally extensible spring members; a non-extensible bearing member slidably connected to said spring member adjacent the extreme ends thereof and in supported relation thereto, said bearing member being adapted to progressively shorten the active portion of said spring member in correspondence with the flexure of such spring member in service; and a non-extensible member connecting said spring member and said bearing member to maintain the centers of said members substantially alined.

1,220,792. PRICK ATTACHMENT FOR PENCILS. GEORGE N. SMITH, Jr., Cleveland, Ohio. Filed Nov. 22, 1916. Serial No. 132,735. (Cl. 120—8.)

1. In an attachment of the character described, the combination of a casing adapted to fit the head end of a pencil, a movably mounted prick point within the casing and adapted to be projected beyond the end thereof, a locking dog carried by the casing for holding the prick point in active position, and means tending to hold the locking dog in inactive position.

2. In an attachment of the character described, the combination of a casing adapted to fit the head end of a pencil, a movably mounted prick point carried thereby and adapted to be projected beyond the end thereof, and a locking device for holding the prick point in active position, consisting of a leaf spring secured to the casing and adapted to be pressed inwardly at its free end and carrying means at such end to engage the prick point.

3. In an attachment of the character described, the combination of a casing adapted to fit around the head portion of a pencil, having a head with an aperture through it, a movable prick point within the casing adapted to extend through the aperture and having a head adapted to abut the inner face of the head of the casing, and a locking device carried by the casing and adapted to engage the head of the prick point.



4. In a device of the character described, the combination of a casing having a head with an aperture through it, a prick point within the casing adapted to extend through the aperture and having a head movably confined by the head of the casing, a leaf spring anchored at one end to the casing, and means carried by the free end of the leaf spring and adapted to be pressed inwardly to engage and lock the head on the prick point.

5. The combination of a tubular casing having a head with an opening through it, a prick point having a head within the casing and a shank adapted to extend out through the opening, a leaf spring anchored at one end to the casing and at the other end carrying a bolt for engaging the head of the prick point, there being an opening through the casing through which the bolt operates.

[Claims 6 to 10 not printed in the Gazette.]

1,220,793. BAG FOR UMBRELLAS, SHOES, AND OTHER ARTICLES. SAMUEL SPECTOR, Philadelphia, Pa. Filed Sept. 28, 1916. Serial No. 122,647. (Cl. 150—1.)



1. In a bag for the purpose described, front and rear walls forming a main pocket which is closed on its sides and bottom, and open at the top, an additional wall connected with the front wall of the first named pocket forming an additional short pocket which is closed on its sides and bottom and open at the top below the open top of the main pocket, and a drip cup of water proof material in the bottom portion of said main pocket, the same being closed on its sides and bottom, and open at the top, and in communication with the portion of said pocket above said cup, it being suspended in said portion and secured on its top thereto.

2. In a bag for the purpose described formed of separate walls forming a deep pocket, a water proof drip receptacle within the lower portion of said pocket and in communication above therewith, said receptacle being closed on its sides and at the bottom, and suspended from its upper end from said walls, said closed bottom being above the closed bottom of the main pocket and adapted to be without communication with the latter named bottom.

3. A bag for the purpose described constructed of separate walls forming a plurality of independent pockets imposed one on the other, respectively closed at their sides and bottoms, said pockets being of differential depths, the lower portion of the deeper pocket having therein a water proof drip-receptacle which is in communication above with said pocket, said receptacle being closed on its sides and at the bottom and suspended from its upper end from said walls, said closed bottom being above the closed bottom of the main pocket and adapted to be without communication with the latter named bottom.

1,220,794. MOTOR-RADIATOR AIR-DRAFT CONTROL. WALTER EDWIN STEPHENSON, Roosevelt, N. Y. Filed Mar. 18, 1916. Serial No. 85,097. (Cl. 257—132.)



1. An air draft control for cellular radiators of motor vehicles, comprising a plurality of shutters each adapted to obstruct a row of cells, slides having slots engaged by said shutters, means for operating the slides whereby the shutters are actuated, certain of said slots having an angular extension whereby said slides have initial displacement relative to the shutters engaged in the slots having the extension, said slots having the extension being adapted to displace the shutters engaged therewith more rapidly than the other slots, whereby all the shutters can be fully displaced.

2. An air draft control for cellular radiators of motor vehicles comprising a plurality of rectangular shutters disposed transversely of the radiator, each of said shutters being hinged at its upper edge along a horizontal row of cells, a slide having diagonal slots open at the edge disposed along the ends of the shutters, each of said shutters having an extension engaging a slot in the slide, the slots in the slides engaging the shutters in the lower half of the radiator having an angular extension whereby said slides have an initial displacement relative to the shutters in the lower half of the radiator, the angularity of said slots having an extension being such as to cause a more rapid displacement of the shutters engaged therein than that of the slots engaging the shutters in the upper half of the radiator, and means for actuating said slides.

3. An air draft control for cellular radiators of motor vehicles comprising, a plurality of rectangular shutters disposed transversely of the radiator to cover the horizontal rows of cells, means for hinging said shutters to the radiator, members mounted to slide on the radiator along the ends of the shutters, said members having

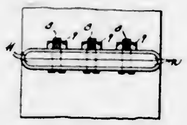
diagonal slots, each of the shutters having an extension at the end thereof engaging a slot, the slots engaged by the shutters lying in the upper half being arcuate, while those engaged by the lower half are straight and have an angular extension to allow to said members an initial displacement relative to said shutters in the lower half of the radiator, said slots in the lower half being at such an angle as to cause a more rapid displacement of the shutters in the lower half than that caused by the arcuate slots, and means for actuating said members.

4. An air draft control for cellular radiators of motor vehicles, comprising a plurality of shutters adapted to cover the horizontal rows of air cells, members mounted to slide on the radiator along the ends of the shutters, said members having slots, each of the shutters having an extension engaging a slot, the slots engaged by the extensions of the shutters lying in the lower half of the radiator having an angular extension, permitting to said members an initial displacement relative to said shutters in the lower half, and means for actuating said members and retaining the same in predetermined positions, said slots having the extension having an angularity such as to displace the shutters engaged therein more rapidly than the shutters engaged in the slots without the extension.

5. An air-draft control for cellular radiators of motor vehicles comprising, a plurality of horizontally-disposed shutters for obstructing the air flowing through the cells, and means for operating said shutters, including means for initially displacing the shutters disposed in the upper half of the radiator whereby the upper half of the shutters may be partially displaced without the displacement of the lower half of the shutters, said latter means including means for displacing the shutters of the lower half more rapidly than the shutters of the upper half.

[Claims 6 to 9 not printed in the Gazette.]

1,220,795. DRIVING-BELT. MITCHELL STONE, Philadelphia, Pa. Filed Aug. 21, 1916. Serial No. 116,086. (Cl. 24—37.)



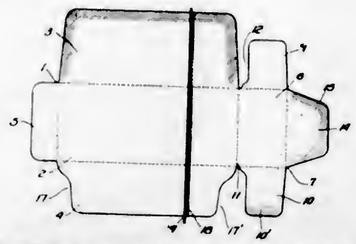
1. A belt coupling, comprising an elongated flexible band designed to entirely surround the edges and outer faces of both end portions of the belt, and means for clamping said band to said end portions, said means being operative to transversely clamp the longitudinal runs of the band and thereby frictionally hold them in contact with the end portions of the belt, substantially as described.

2. A belt coupling comprising an elongated flexible band having holes in the longitudinal runs thereof, said band entirely surrounding the edges and outer faces of both end portions of said belt, and bolts extending through said holes in the band and through said end portions whereby said end portions are laterally clamped together by said longitudinal runs of the band, substantially as described.

3. A belt coupling comprising an elongated flexible continuous band having alined holes in its opposite longitudinal runs, said band being designed to fit over and entirely surround end portions of said belt, and bolts extending through said alined holes and through said end portions whereby the end portions are laterally bound together and within said band, substantially as described.

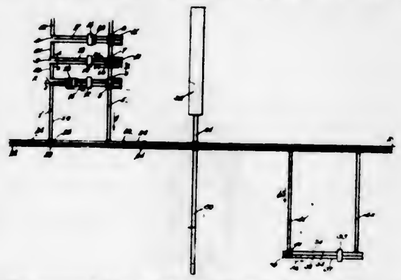
1,220,796. MONEY-TRANSMITTING ENVELOP. JOHN R. SUTTER, Kansas City, Mo. Filed Sept. 3, 1915. Serial No. 48,885. (Cl. 229—72.)

1. In an envelop, a back portion comprising body and extension members, and an end flap opposite the extension member, side and end flaps on the extension member forming an inwardly opening pocket at the end of the body member, side flaps on the body member for inclosing the said body member and the pocket when the pocket is folded onto the body member; one of the body side flaps being cut away a short distance from the edge of the envelop to expose the envelop when the flap is in folded position, and the other body side flap having gummed edges to seal against the first named body side flap and against the exposed portion of the envelop.



2. An envelop comprising a back portion, having an extension, side flaps on said extension, an end flap on said extension, folded onto the side flaps and terminating near the inner edges thereof, side flaps on the body for inclosing said body portion and pocket, when the latter is folded onto said body, said body having a line of severance extending transversely across its back and side flaps, adjacent the inner end of the pocket, when the latter is folded within the body; one of the side flaps of the body being cut away at its ends to expose the end flap and said pocket, and the other side flap having gummed edges to seal against the fur side flap and the exposed end flap and pocket.

1,220,797. LUMBER-HANDLING MECHANISM FOR KILN-DRYING. DANIEL R. TANNER, La Grande, Oreg. Filed Sept. 2, 1915. Serial No. 48,662. (Cl. 104—48.)



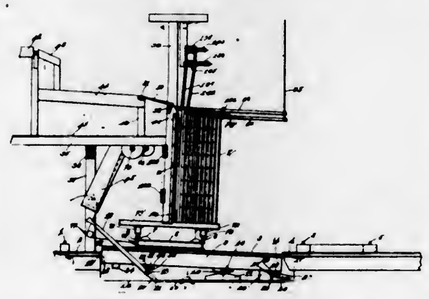
1. In combination, a system of trackage which includes a main track, an interrupted incoming and an interrupted outgoing transport track in communication therewith and disposed at right angles thereto and upon a plane below the same, said transport tracks being in spaced parallel relation one with the other, a series of transfer tracks disposed upon a plane below said transport tracks at right angles thereto and adapted to connect said transport tracks, collapsible track sections normally registering with said incoming transport track to close the interruptions or gaps in the incoming track, means for opening and closing the interruptions or gaps in said outgoing track; transfer carriers adapted to travel upon said transfer tracks and provided with track sections adapted to register with said transport tracks, load carriers adapted to travel upon said transport tracks and to be transported upon said transfer carriers, and carriers adapted to travel upon said main track to receive and transport said load carriers.

2. In combination, a system of trackage which includes a main track, an interrupted incoming and an interrupted outgoing transport track in communication therewith and disposed at right angles thereto and upon a plane below the same, said transport tracks being in spaced parallel relation one with the other, a series of transfer tracks disposed upon a plane below said transport tracks intermediate thereof and adapted to connect the same, transfer carriers adapted to travel upon said transfer tracks and provided with track sections adapted to register with said transport tracks, load carriers adapted to travel upon said transport tracks and to be transported upon said transfer carriers, a false track bearing car for each of said transfer tracks adapted to gravitate upon said extensions to register its track with said outgoing transport track, and carriers adapted to travel upon said main track to receive and transport said load carriers.

3. In combination, a system of trackage which includes a main track, an interrupted incoming and an interrupted outgoing transport track in communication therewith and disposed upon a plane below the same, said transport tracks being in spaced parallel relation one with the other, a series of transfer tracks disposed upon a plane below said transport tracks intermediate thereof and adapted to connect the same, transfer carriers adapted to travel upon said transfer tracks and provided with track sections adapted to register with said transport tracks, track sections adapted to open and close the interruptions or gaps in said incoming and outgoing transport tracks independent of the track sections of said transfer carriers, and load carriers adapted to travel upon said transport tracks and to be transported upon said transfer carriers, and carriers adapted to travel upon said main track to receive and transport said load carriers.

4. In combination, a system of trackage which includes an interrupted incoming and an interrupted outgoing transport track, said tracks being in spaced parallel relation, a series of transfer tracks disposed upon a plane below said transport tracks intermediate thereof and adapted to connect the same, transfer carriers adapted to travel upon said transfer tracks and provided with track sections adapted to register with said transport tracks, track sections adapted to open and close the interruptions or gaps in said incoming and outgoing transport tracks independent of the track sections of said transfer carriers, and load carriers adapted to travel upon said transport tracks and to be transported upon said transfer carriers.

1,220,798. LUMBER-STACKER FOR KILN-DRYING. DANIEL R. TANNER, La Grande, Oreg. Filed Sept. 30, 1915. Serial No. 53,346. (Cl. 214—6.)



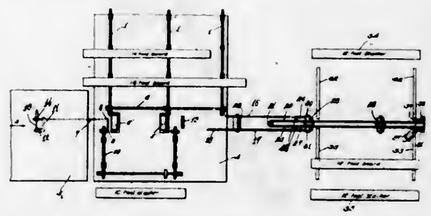
1. In a lumber stacking mechanism, an edge stacker inclined to the vertical, a lumber carrier, trackage for said lumber carrier to permit movement of the latter beneath and gradually forwardly of the stacker to receive the lumber therefrom, means for tilting a portion of said trackage to incline the carrier for gravity movement during the stacking operation, means for controlling gravity movement of said carrier during the stacking operation, said track tilting means being shiftable to normal after said carrier is loaded to permit the latter to be advanced on said trackage, substantially as described.

2. In a lumber stacking mechanism, a lumber stacker, a lumber carrier, trackage supporting said carrier for movement into loading relation with respect to said stacker, a section of said trackage being tiltable about a tilting or fulcrum axis, means for tilting said section of trackage to cause gravity movement of the carrier during the stacking or loading operation, said stacker being in such relation with respect to said fulcrum axis as to dispose the carrier in substantially counter-balanced relation on the tiltable track section with respect to said fulcrum axis at the time that the carrier is finally loaded, substantially as described.

3. In a lumber loading mechanism, an edge stacker, a lumber carrier for receiving a load from said stacker, and superposed depending hinged spring members for exerting tension on the upper portion of the load to hold the latter in compact condition while the carrier is being loaded, substantially as described.

4. In a lumber loading mechanism, an edge stacker, a lumber carrier for receiving a load from said stacker, and superposed depending hinged spring guards for exerting tension on the upper portion of the load to hold the latter in compact condition while the carrier is being loaded, and for guarding the tops of carrier stickers during the loading process.

1,220,799. LUMBER-SORTING MECHANISM. DANIEL R. TANNER, La Grande, Oreg. Filed Oct. 9, 1915. Serial No. 55,067. (Cl. 214—6.)



1. In combination, a lumber channel, means for advancing boards of different lengths on edge lengthwise through said channel and supported by both sides of the latter in upright edge position, and ejecting devices along said channed, each ejecting device comprising a board ejecting member for engagement by the board to be ejected and a trigger member controlled by the board passing through said channel, the trigger and ejecting member of each device being located different distances apart from each other with respect to said devices and corresponding to the lengths of boards conveyed as to eject boards of certain lengths at one point along the channel and boards of another length at another point along the channel, substantially as described.

2. In a means for handling lumber, a board assorting device, means for delivering boards sidewise to said device with respect to the travel of the boards through said device, a stacker delivering device in alinement with said delivering means, and mechanism for causing the boards delivered sidewise to said assorting device to pass laterally over said assorting device onto said stacker delivering device, substantially as described.

3. In a lumber handling mechanism, a lumber channel provided with a knock-off portion, a roller for advancing a board through said knock-off portion, and a knock-off device for engagement by a board to be ejected and disposed adjacent said roller, said knock-off device being shaped to transmit the thrust of the board against said

device for increasing friction between the board and its advancing roller to thereby positively cause the roller to advance the board against said device sufficiently to cause ejection of the board, substantially as described.

4. In a lumber sorter, in combination with a board delivery means, a lumber receiving deck disposed below the delivery end of said delivery means, a plurality of rollers mounted on said deck and adapted to receive the boards from the delivery means, of a receiving channel adjacent to said delivery means and in alinement with said rollers, and a plurality of branch delivery channels communicating with said receiving channel and so disposed with relation to said receiving channel and receiving deck that boards delivered to the latter may be selectively and manually shunted or directed into said branch delivery channels.

5. In a lumber sorter, a plurality of lumber conveying delivery channels, a receiving channel communicating with said delivery channels, and means for guiding and advancing boards selectively from said receiving channel to said delivery channels, said means comprising roller members, a supporting deck for the rollers, and upwardly projecting collapsible spring guide means mounted upon said deck in alinement with said rollers.

1,220,800. TROLLEY-POLE WHEEL. JOHN F. TRUST, Hagerstown, Md. Filed Aug. 3, 1916. Serial No. 113,007. (Cl. 191—74.)

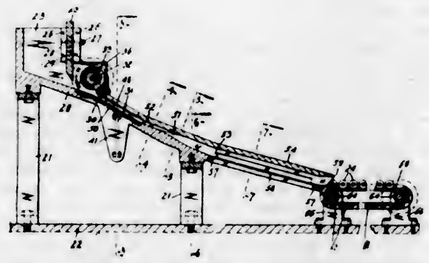


1. In combination with a trolley pole, a supplemental pole device comprising a plurality of plates, means to connect the plates intermediate their ends to provide a laterally yieldable portion, said plates adjacent one end forming a thimble receiving said pole, and said plates adjacent their other ends being yieldable relatively, a trolley wheel intermediate said plates, means of said plates removably supporting said wheel, and one of said plates being deflected inwardly to prevent accidental displacement of said wheel.

2. A trolley pole having a plurality of bearings, said bearings being deflected outwardly to provide a space, each of said bearings being yieldable relatively and having a slot therein, a wheel disposed intermediate said bearings and in said space, shaft means of said wheel entering said slots, and said arms being extended inwardly adjacent their upper ends to prevent accidental displacement of the wheel and of the trolley wire in engagement therewith.

1,220,801. APPARATUS FOR FEEDING ARTICLES TO WRAPPING-TABLES OR WRAPPING-MACHINES. PAUL VARGA, New York, N. Y. Filed Jan. 13, 1916. Serial No. 71,864. (Cl. 83—92.)

1. An apparatus of the character described, comprising a hopper adapted to receive disk-shaped articles and having an elongated outlet communicating with a passage throughout its width, said passage being of a height that is substantially that of the thickness of an individual article to be fed, and a plurality of chutes leading from said passage, each chute being of a cross section corresponding substantially to that of a disk-shaped article, said chutes being twisted and their mouths being adapted to receive the articles resting on their plane surfaces and the discharge openings thereof being disposed so as to release the articles standing upon their cylindrical surfaces, parts of the sides of said chutes being cut away, whereby broken articles are tilted by gravity and fall off said chutes.



2. An apparatus of the character described, comprising a hopper adapted to receive disk-shaped articles and having an elongated outlet communicating with a passage throughout its width, said passage being of a height that is substantially that of the thickness of an article to be fed, a plurality of chutes leading from said passage, each chute being of a cross section corresponding substantially to that of a disk-shaped article, said chutes being twisted and their mouths being adapted to receive the articles resting on their plane surfaces and the discharge openings thereof being disposed so as to release the articles standing upon their cylindrical surfaces, the bottom of said passage being constituted by a foraminated plate, and means for reciprocating said plate.

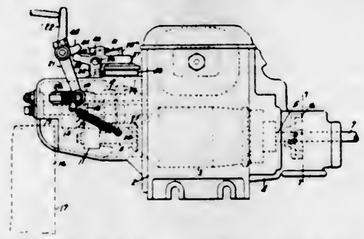
3. An apparatus of the character described, comprising a hopper adapted to receive disk-shaped articles and having an elongated outlet communicating with a passage throughout its width, said passage being of a height that is substantially that of the thickness of an individual article to be fed, a plurality of chutes leading from said passage, each chute being of a cross section corresponding substantially to that of a disk-shaped article, said chutes being twisted and their mouths being adapted to receive the articles resting on their plane surfaces and the discharge openings thereof being disposed so as to release the articles standing upon their cylindrical surfaces, the bottom of said passage being constituted by a foraminated plate, means for reciprocating said plate, and a rotary brush disposed above said plate at a distance that is approximately of the thickness of an article, said brush being located near the outlet of said hopper.

4. An apparatus of the character described, comprising a hopper adapted to receive disk-shaped articles and having an elongated outlet communicating with a passage throughout its width, said passage being of a height that is substantially that of the thickness of an individual article to be fed, a plurality of chutes leading from said passage, each chute being of a cross section corresponding substantially to that of a disk-shaped article, said chutes being twisted and their mouths being adapted to receive the articles resting on their plane surfaces and the discharge openings thereof being disposed so as to release the articles standing upon their cylindrical surfaces, and an endless conveyer having transverse recesses adapted to receive the articles from said chutes.

5. An apparatus of the character described, comprising a hopper adapted to receive disk-shaped articles and having an elongated outlet communicating with a passage throughout its width, said passage being of a height that is substantially that of the thickness of an individual article to be fed, a plurality of chutes leading from said passage, each chute being of a cross section corresponding substantially to that of a disk-shaped article, said chutes being twisted and their mouths being adapted to receive the articles resting on their plane surfaces and the discharge openings thereof being disposed so as to release the articles standing upon their cylindrical surfaces, the sides of said chutes at their discharge ends being wedge-shaped, whereby the articles issue from said chutes in the form of a horizontal column, and an endless conveyer having transverse recesses adapted to receive the articles from said chutes.

[Claims 6 and 7 not printed in the Gazette.]

1,220,802. STARTER SYSTEM AND APPARATUS FOR COMBUSTION-ENGINES. RICHARD VARLEY, Englewood, N. J. Filed Aug. 9, 1916. Serial No. 113,896. (Cl. 74—7.)



1. In a starter system for combustion engines, the combination with the engine, of a starting device comprising a motor having a movable armature and means for connecting the motor with the engine for starting of the latter, and means for preventing said connection of the motor and engine during movement of the armature.

2. In a starter system for combustion engines, the combination with the engine, of a starting device comprising a motor having a movable armature and means for connecting the motor with the engine for starting of the latter, including a plurality of gears adapted to be brought into and out of engagement with one another, and means for preventing said engagement during movement of the armature.

3. In a starter system for combustion engines, the combination with the engine, of a starting device comprising a motor having a movable armature, an engine gear, a gear driven by the motor armature, means for bringing one of the gears into and out of engagement with the other, and means for preventing said engagement during movement of the armature.

4. In a starter system for combustion engines, the combination with an internal combustion engine, having a fly wheel provided with gear teeth, of a starting device comprising a motor having a movable armature and means for connecting the armature with the fly wheel of the engine, including a gear driven by the armature and adapted to mesh with the gear teeth of the fly wheel, and means for preventing engagement of the gear with the teeth on the fly wheel during movement of the armature.

5. In a starter system for combustion engines, the combination with the engine, of a starting device comprising an electric element having a movable armature, means whereby the armature may be connected with the engine, for starting of the latter, means whereby the engine may drive the armature, and means for preventing starting connection of the armature and engine during movement of the armature.

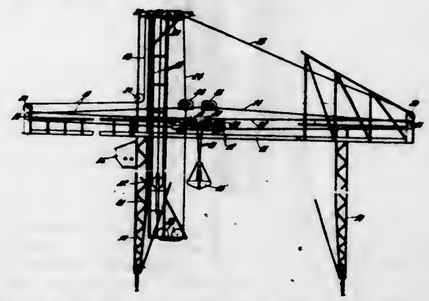
[Claims 6 to 8 not printed in the Gazette.]

1,220,803. ARTILLERY-PROJECTILE. EDWARD R. WATSON, Indianapolis, Ind. Filed Aug. 5, 1916. Serial No. 113,272. (Cl. 102—29.)

An artillery projectile, comprising a casing having a plurality of forwardly opening shell chambers, and a shell in each chamber, each shell consisting of a casing for an explosive charge, a plurality of balls in the head thereof, a tube within said head, a percussion cap in said tube and in communication with the explosive charge, and a spring resisted plunger adapted to strike said cap projected forwardly of said shell, the forward end of said plunger being recessed in order to provide a sharp rim adapted to catch on objects in the shell flight instead of deflecting the shell.



1,220,804. COAL-HANDLING BRIDGE. THOMAS S. WATSON, Milwaukee, Wis. Filed Aug. 14, 1916. Serial No. 114,736. (Cl. 212—81.)



1. In a coal handling bridge, a track, a carriage traveling on the track, independently operated drums on the carriage, a hoisting cable wound around one drum, a clam-shell suspended thereby, a closing cable connected with the clam-shell and wound around the other drum, and means for temporarily coupling the two drums together to maintain a fixed relation between the hoisting cable and the closing cable.

2. In a coal handling bridge, a track, a carriage traveling on the track, a pair of independent drums mounted on the carriage, a hoisting cable wound around one drum, a clam-shell suspended thereby, a closing cable wound around the other drum and connected with the clam-shell, and a magnetic-clutch-controlled gearing connection between the two drums for coupling them together to maintain a fixed relation between the hoisting cable and the closing cable.

3. In a coal handling bridge, a carriage, independent drums on the carriage, a hoisting cable wound around one drum, a clam-shell bucket suspended thereby, a closing cable wound around the other drum and connected with the clam-shell bucket, and a distantly controlled means for coupling the two drums together to maintain a fixed relation between the hoisting cable and the closing cable.

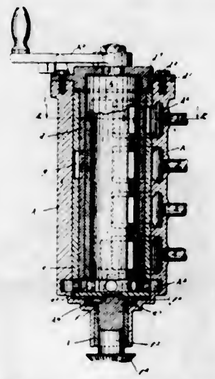
4. In a coal handling bridge, a carriage mounted to travel, independent drums on the carriage, a looped cable having its ends wound around the drums, one end forming a hoisting cable and the other end forming a closing cable, a clam-shell bucket suspended by the hoisting cable and connected with the closing cable, a counterweight supported by the looped portion of the cable, a gearing connection between the drums, and a remote controlled electrical clutch in said gearing connection.

5. In a coal handling bridge, a carriage mounted to travel, independent drums on the carriage, a looped cable having its ends wound around the drums, one end form-

ing a hoisting cable and the other end forming a closing cable, a clam-shell bucket suspended by the hoisting cable and connected with the closing cable, a suitably operated counterweight supported by the looped portion of the cable, a gearing connection between the drums, a remote controlled electrical clutch in said gearing connection, and a brake for resisting the movements of one of the drums.

[Claims 6 and 7 not printed in the Gazette.]

1,220,805. AIR-DISTRIBUTER FOR INTERNAL-COMBUSTION ENGINES. CARL W. WEISS, Brooklyn, N. Y. Filed June 29, 1916. Serial No. 106,580. (Cl. 123—41.)



1. An air distributer for multiple cylinder internal combustion engines, comprising a casing having chambers in communication with the respective cylinders, a rotary distributer sleeve in the casing having ports therein corresponding to the respective chambers, operative driving connections between the sleeve and the crank shaft, a tubular valve within the casing provided with ports corresponding in number to the first named ports, the ports in one of said elements being alined with one another and the ports in the other of said elements being staggered with relation to one another.

2. An air distributer for multiple cylinder internal combustion engines, comprising a casing having chambers in communication with the respective cylinders, a rotary distributer sleeve in the casing having ports therein corresponding to the respective chambers but staggered with relation to each other, operative driving connections between the sleeve and the crank shaft, a tubular valve within the casing provided with ports corresponding in number and relative disposition to the chambers, and a source of compressed air for the casing.

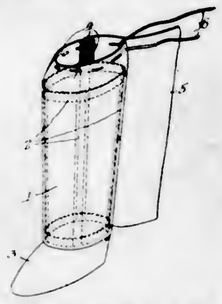
3. An air distributer for multiple cylinder internal combustion engines, comprising a casing having chambers in communication with the respective cylinders, a fixed sleeve within the casing having ports alined with the respective chambers, an oscillating tubular hand valve within the casing provided with ports corresponding in number and relative disposition to the ports in said sleeve, and a source of compressed air for the casing.

4. An air distributer for multiple cylinder internal combustion engines, comprising a casing having chambers in communication with the respective cylinders, a fixed sleeve having ports alined with the respective chambers, a rotary distributer sleeve in the casing, operative driving connections between the distributer sleeve and the crank shaft, an oscillating tubular hand valve within the casing provided with ports corresponding in number and relative disposition to the ports in said fixed sleeve, and a source of compressed air for the casing.

5. An air distributer for multiple cylinder internal combustion engines, comprising a casing having chambers in communication with the respective cylinders, a rotary distributer sleeve in the casing, ports for each of the chambers displaced with respect to one another, operative driving connections between the sleeve and the crank shaft, and a fixed sleeve within the casing having two sets of alined ports disposed, respectively, opposite the said chambers, said sets of ports being displaced with relation to each other an angular distance equal to the displacement of said ports in the distributer.

[Claims 6 and 7 not printed in the Gazette.]

1,220,806. LEGGING. FRED H. WHEELER and CHARLES R. HOLCOMB, Chicago, Ill. Filed Oct. 2, 1916. Serial No. 123,208. (Cl. 36—2.)



1. In a legging, the combination of a sheet of flexible protective material, flexible strips secured to said sheet of material forming in connection therewith pockets extending longitudinally of the legging, metal stiffening members contained in said pockets, said strips of flexible material being secured at their ends to said sheet of protective material and separate from said sheet of material intermediate of their ends forming loops adjacent the ends of the metal stiffening members, spring reinforcing members extending circumferentially of the legging through said loops, and longitudinal metal stiffeners secured to the ends of said spring reinforcing members and to said sheet of material.

2. In a legging, the combination of a sheet of flexible protective material, flexible strips secured to said sheet of material forming in connection therewith pockets extending longitudinally of the legging, metal stiffening members contained in said pockets, said strips of flexible material being secured at their ends to said sheet of protective material and separate from said sheet of material intermediate of their ends forming loops adjacent the ends of the metal stiffening members, spring reinforcing members extending circumferentially of the legging through said loops, longitudinal metal stiffeners secured to the ends of said spring reinforcing members and to said sheet of material, said last named longitudinal stiffening members extending beyond the lower edge of said sheet of material, and a flaring shoe protecting portion secured to the projecting ends of said stiffening members and to the lower edge of said sheet of protective material.

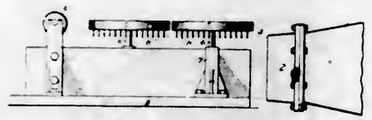
3. In a legging, the combination of a sheet of flexible protective material, flexible strips secured to said sheet of material forming in connection therewith pockets extending longitudinally of the legging, metal stiffening members contained in said pockets, said strips of flexible material being secured at their ends to said sheet of protective material and separate from said sheet of material intermediate of their ends forming loops adjacent the ends of the metal stiffening members, spring reinforcing members extending circumferentially of the legging through said loops, and longitudinal metal stiffeners secured to the ends of said spring reinforcing members and to said sheet of material, said sheet of protective material being extended laterally beyond the longitudinal stiffening member connected with one end of the spring reinforcing members to form a flap held in place on the leg of the user by the longitudinal stiffening member at the opposite edge of the legging.

4. In a legging, the combination of a sheet of flexible protective material, flexible strips secured to said sheet of material forming in connection therewith pockets extending longitudinally of the legging, metal stiffening members contained in said pockets, said strips of flexible material being secured at their ends to said sheet of protective material and separate from said sheet of material intermediate of their ends forming loops adjacent the ends of the metal stiffening members, spring reinforcing members extending circumferentially of the legging through said loops, longitudinal metal stiffeners secured to the ends of said spring reinforcing members and to said sheet of material, said last named longitudinal stiffening members extending beyond the lower edge of said sheet of material, and a flaring shoe protecting portion secured to the projecting ends of said stiffening members and to the lower edge of said sheet of protective material, said sheet of protective material being extended laterally beyond the longitudinal stiffening member connected with one end of the spring reinforcing members to form a flap held in place on the leg of the user by the longitudinal stiffening member at the opposite edge of the legging.

5. In a legging, the combination of a sheet of flexible protective material, flexible strips secured to said sheet of material forming in connection therewith pockets extending longitudinally of the legging, metal stiffening members contained in said pockets, said strips of flexible material being secured at their ends to said sheet of protective material and separate from said sheet of material intermediate of their ends forming loops adjacent the ends of the metal stiffening members, spring reinforcing members extending circumferentially of the legging through said loops, and longitudinal metal stiffeners secured to the ends of said spring reinforcing members and to said sheet of material, said sheet of protective material extending without metal reinforcement above the upper spring reinforcing member and being taken in around its upper edge to closely fit the leg of the user.

[Claims 6 to 14 not printed in the Gazette.]

1,220,807. APPARATUS FOR SURFACING BRICKS AND TILES. CHARLES CURTIS WOLFE, Haydenville, Ohio, assignor to National Fire Proofing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 11, 1915. Serial No. 33,470. (Cl. 25—1.)



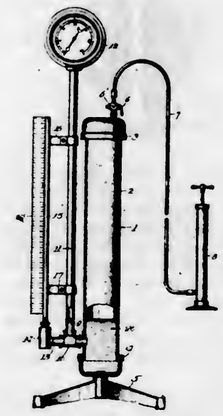
1. Apparatus of the character described, comprising a rotary member having a plurality of scratching points and located in advance of the expressing die of a clay working machine, said member being free to be rotated solely by the contact of its scratching points with the moving clay column, substantially as described.

2. Apparatus of the character described, comprising a guideway for the moving bar or column of clay, and rotary members overhanging the guideway from opposite sides and having each a plurality of depending scratching points or pins, said members being free to be rotated solely by the contact of said points or pins with the moving column of clay, and the two members having their centers of rotation at opposite sides of said guideways so as to be rotated in reverse directions, substantially as described.

3. Apparatus of the character described, comprising a guideway for the moving bar or column of clay, and rotary members overhanging the guideway from opposite sides and having each a plurality of depending scratching points or pins, said members being free to be rotated solely by the contact of said points or pins with the moving column of clay, and the two members having their centers of rotation at opposite sides of said guideways so as to be rotated in reverse directions, together with a surface roller journaled transversely of the guideway beyond said rotary members and having its surface adapted for contact with the surface of the clay column, substantially as described.

4. Apparatus of the character described, comprising a rotary member having a plurality of scratching points and located in advance of the expressing die of a clay working machine, a bearing, a stem connected to said rotary member mounted within the bearing and adapted to be freely moved therein, said member being free to be rotated solely by the contact of its scratching points with the moving clay column; substantially as described.

1,220,808. INSTRUMENT FOR DEMONSTRATING BOYLE'S LAW. WALTER R. AHRENS, Chicago, Ill. Filed June 26, 1916. Serial No. 105,834. (Cl. 73—151.)



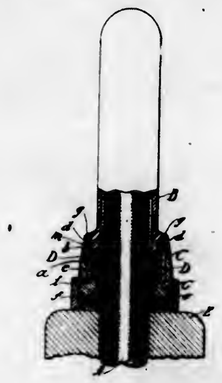
1. An instrument for demonstrating Boyle's law comprising a vertically positioned cylinder, caps closing the upper and lower ends of the cylinder, a standard secured to the lower cap for supporting the instrument, a vertically disposed transparent tube closed at its upper end, a connection between the lower end of said tube and the lower portion of the cylinder, a second vertical tube positioned between the first tube and cylinder, means connecting the lower end of the second mentioned tube with the aforesaid connection intermediate the transparent tube and the cylinder, a pressure gage connected to the upper end of the second mentioned tube and supported thereby, a fluid partially filling the cylinder, an air pump, and a flexible connection between said pump and the cap on the upper end of the cylinder.

2. An instrument for demonstrating Boyle's law comprising a reservoir, a standard supporting the reservoir, a vertically disposed transparent tube closed at its upper end, a connection between the lower end of said tube and the lower portion of the reservoir, a second vertical tube positioned adjacent the first tube, a connection between the lower end of the second tube and the lower portion of the reservoir, a pressure gage connected to the upper end of the second mentioned tube and supported thereby, a fluid partially filling the reservoir, an air pump, and a connection between the said pump and the upper portion of the reservoir.

1,220,809. DUST-CAP FOR VALVE-STEMS. EDWARD L. AIKEN, Springfield, Mass. Filed June 24, 1915. Serial No. 36,099. (Cl. 152—12.)

1. In combination, a valve stem having interrupted threads thereon, a dust cap having interrupted internal

threads for quick detachable engagement with those of the stem, said cap having a peripheral cam surface adjacent its lower portion, and a collar having encircling engagement about the lower end of the cap, having a limited endwise movement relative thereto and an inwardly pressed protuberance on the collar for endwise and transverse movement on the cam surface of the cap, said collar having means preventing rotation thereof on the stem.



2. In combination, a valve stem having interrupted threads thereon, a dust cap having interrupted internal threads for quick detachable engagement with those of the cap, said cap having a peripheral base flange, a collar engaging over the flange of the cap for rotative and limited endwise movement, means preventing rotation of the collar on the stem, said cap having a part adapted to be brought into bearing relation with the collar when the cap is threadedly engaged with the stem, and means for exerting endwise thrust on the collar for transmission to the cap to effect a corresponding binding between the threads of the cap and stem.

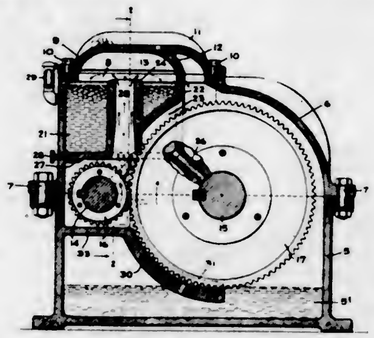
3. In combination, a wheel felly, and a valve stem passing therethrough and having interrupted threads, a dust cap having interrupted threads for quick detachable engagement with those of the stem, a collar connected with the cap for limited endwise movement relative thereto, a spring means holding the collar and cap extended, said cap when threadedly engaged with the stem being brought into positive bearing contact with the collar, the latter having an exteriorly threaded portion, and a nut engaged with the collar threads and adapted to bear against the felly to exert endwise thrust through the collar on the cap for binding the threads of the cap and stem.

1,220,810. SPUR-GEARING. KARL ALQUIST, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 1, 1915. Serial No. 48,424. (Cl. 184—6.)

1. In a gearing, the combination of a casing, meshing gear wheels therein, means defining within the casing a chamber for containing a supply of lubricant, and a chamber in which at least one of the gear wheels runs, conduit means which connect said two chambers to supply lubricant from the first named chamber to the second, and conduit means through which the gear wheels pump the lubricant from the second named chamber to the first.

2. In a gearing, the combination of a casing having two chambers therein for containing lubricant, the gear wheels when in operation acting to pump the lubricant from one chamber to the other, and conduit means for feeding the lubricant from the last named chamber back to the other chamber at a predetermined rate.

3. In a gearing, the combination of a casing having two chambers therein for containing lubricant, the gear wheels when in operation acting to pump the lubricant from one chamber to the other, conduit means for feeding the lubricant from the last named chamber to the other at a predetermined rate, and means within the casing for cooling the lubricant.

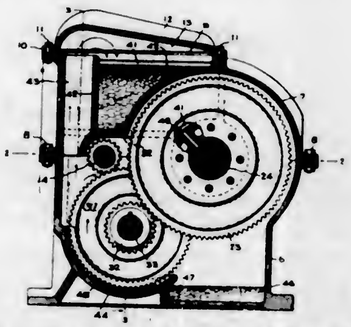


4. In a gearing, the combination of a casing, shafts having bearings, meshing gear wheels on said shafts, means defining with the casing two lubricant containing chambers, one of which is located above the bearings and to which lubricant is pumped from the other by the gear wheels, and conduits connecting the chamber which is located above the bearings to said bearings to lubricate them, the lubricant after passing through said bearings being returned to the other chamber.

5. In a gearing, the combination of a casing, shafts having bearings, meshing gear wheels on said shafts, means defining with the casing two lubricant containing chambers, one of which is located above the bearings and to which lubricant is pumped from the other by the gear wheels, conduits connecting the chamber which is located above the bearings to said bearings to lubricate them, the lubricant after passing through said bearings being returned to the other chamber, and means within the casing for cooling the lubricant.

[Claims 6 to 14 not printed in the Gazette.]

1,220,811. SPUR-GEARING. KARL ALQUIST, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 29, 1916. Serial No. 75,159. (Cl. 74—7.)



1. The combination in a double reduction gearing, of a casing divided into upper and lower sections, a high speed pinion and a low speed gear wheel, separate shafts therefor, said shafts being journaled in the casing at the dividing line between the casing sections, a shaft journaled in openings formed in the lower section of the casing at a point below the first named shafts, and gear wheels mounted on the last named shaft which mesh with the high speed pinion and the low speed wheel.

2. The combination in a gearing, of a casing divided into upper and lower sections, said sections having slots at the dividing line of the casing adapted to receive bearings, the lower half of the casing being provided with openings located below the slots also adapted to receive bearings, and with runways connecting the openings with certain of said slots whereby a shaft may be slid down said runways to the openings and have bearings slipped over its ends and into said openings.

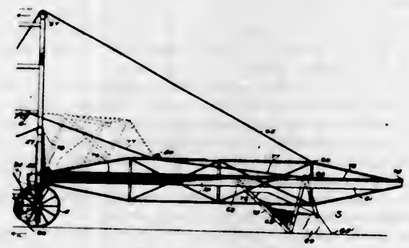
3. The combination in a double reduction gearing, of a casing divided into upper and lower sections, said sections having slots at the dividing line of the casing, said lower section being also provided with openings located below the slots, and with runways connecting said openings with certain of the slots, bearings in said slots, shafts in said bearings, a high speed pinion and a low speed wheel mounted on said shafts, bearings in said openings, a shaft in said bearings, and gear wheels mounted on said shaft which mesh with the pinion and low speed wheel.

4. The combination in a double reduction gearing, of a casing, a shaft therein, a high speed pinion mounted on said shaft and formed in two sections which are spaced apart, a second shaft journaled in the casing, a low speed wheel mounted on it which is of a width equal to the space between the two sections of the pinion, a third shaft journaled in the casing, an intermediate high speed wheel mounted on it which meshes with the low speed wheel, and an intermediate low speed wheel also mounted on the third shaft and formed in two sections one on each side of the intermediate high speed wheel, said two sections extending on each side of the low speed wheel and meshing with the sections of the high speed pinion.

5. The combination in a double reduction gearing, of a casing, a high speed pinion and a low speed gear wheel mounted therein with their centers in the same horizontal plane, intermediate gear wheels mounted in said casing below such plane, which transmit power between the pinion and low speed wheel, means forming a lubricant containing reservoir located in the upper portion of the casing, a lubricant containing well being formed in the lower portion of the casing from which lubricant is pumped by one of the intermediate gear wheels to the reservoir, and means for conveying lubricant from the reservoir to lubricate the gearing.

[Claims 6 and 7 not printed in the Gazette.]

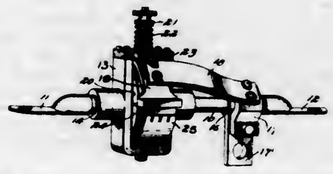
1,220,812. SELF-LOADING MIXER. GERALD S. ATKINSON, Los Angeles, Cal. Filed June 23, 1915. Serial No. 35,859. (Cl. 37—16.)



1. In a machine of the class set forth, the combination with a frame, of an open yoke pivoted on a vertical axis upon said frame, a boom comprising a pair of parallel channel beams connected to the sides of the yoke in the same plane, said channel beams having their flanges extending toward each other, a scoop movable along the boom and having pairs of wheels rolling upon the upper and lower flanges respectively of the beams, and power connections for the scoop for determining the position thereof with respect to the boom, said scoop having a filling mouth at its lower front portion and a restricted spout at its upper rear portion, said connections serving to project the scoop along the boom in one direction for filling and to return and tilt it to deliver its load through said spout and yoke.

2. The combination of a frame, a yoke supported in said frame in a vertical plane and pivoted for swinging movement around a vertical axis therein, a boom including a pair of parallel channel beams with their open sides toward each other pivoted at their rear ends to the sides of said yoke, the axis of the boom in the yoke being at right angles to the axis of the yoke, a reciprocatory digging, carrying, and dumping scoop supported upon said boom and having a pair of rear wheels operating within the channels and confined thereby to the plane of the boom and having another pair of wheels, rolling upon the upper flanges of the beams, said scoop having a wide receiving mouth at its front and a restricted delivery spout at its rear end, and flexible power connections for the scoop causing the scoop to be projected forwardly for filling and transporting the same rearwardly filled, said connections also serving to tilt the scoop upwardly around said rear wheels to cause the delivery of the material through said spout.

1,220,813. PROTECTIVE DEVICE FOR ELECTRIC DISTRIBUTING SYSTEMS. CHARLES J. BARROW, Los Angeles, Cal., assignor to General Electric Company, a Corporation of New York. Filed Jan. 30, 1913. Serial No. 745,205. (Cl. 175—281.)



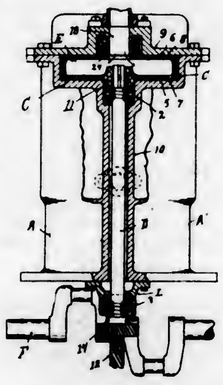
1. In combination with an electrical conductor, a body of magnetic material electrically connected to said conductor, a second body of a material in inductive relation to said first mentioned body but separated therefrom, cooperating contacts carried by said bodies, a support carried by said conductor and insulated therefrom, a resilient connection between said support and the contacts carried by said second mentioned body, and means for adjusting the distance between the said bodies.

2. A circuit making and breaking device comprising an electric conductor, a bracket mounted upon said conductor, a body of magnetic material carried by said bracket and maintained in electrical connection with said conductor, a coöperating body of magnetic material carried by said bracket and movable toward said first mentioned body, adjusting means for varying the distance between said bodies, means for resiliently supporting said coöperating body, and contacts carried by said bodies and adapted to be moved into engagement in response to movement of said bodies.

3. An electromagnetic switch comprising a conductor, a body of magnetic material responsive to electrical conditions in said conductor, a coöperating body of magnetic material insulated from said conductor and movable in response to predetermined electrical conditions in said first mentioned body, a support for said bodies carried by said conductor and insulated therefrom, coöperating contacts carried by said bodies, and adjusting means for varying the distance between said bodies.

4. An electromagnetic switch comprising an electric conductor, a body of magnetic material responsive to electric conditions in said conductor, a coöperating movable body of magnetic material spaced apart from said first mentioned body, contacts carried by said bodies and movable into engagement with each other, a support carried by said conductor but insulated therefrom, a spring connection between the contacts of said coöperating body and said support, a terminal carried by said support, and adjusting means for varying the space between said bodies.

1,220,814. VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. WILLIAM M. BAUMHECKEL, Cincinnati, Ohio. Filed Feb. 6, 1914. Serial No. 817,045. (Cl. 123—52.)



1. In combination with a pair of cylinders, a valve mechanism for combustion engine comprising a valve chamber at the closed ends of said cylinders, an intake port leading thereto independent ports leading therefrom directly to the respective cylinders, an exhaust port leading therefrom at one side, and a lubricant supply port, a valve rotatable freely in said valve chamber and provided with a passage to connect said intake port successively with said cylinder ports and an independent passage to successively connect said cylinder ports with said exhaust port.

2. A valve mechanism for combustion engines comprising a cylindrical valve chamber having a detachable cap to close one end thereof an intake port leading centrally through said cap to said valve chamber, a plurality of ports in the opposite end of said valve chamber between the axis and periphery of said chamber leading to separate engine cylinders, and an exhaust port leading from the periphery of said valve chamber, a cylindrical valve rotatably mounted in said chamber and driven from the engine shaft in unison with the movements thereof, said valve being provided with a passage to connect said fuel supply port successively with said cylinder ports through a portion of the rotation of the valve, an independent passage to successively connect said cylinder ports with said exhaust port through a portion of the rotation of the valve, and a face to close said cylinder ports through a portion of the rotation of said valve.

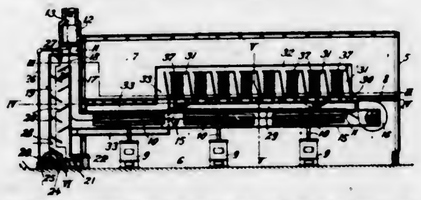
3. A valve mechanism for combustion engines comprising a valve chamber having a port leading therefrom to the engine cylinder and an exhaust port leading therefrom, a valve rotatably mounted therein and provided with a passage to conduct a fuel supply to said cylinder port and a passage to connect said cylinder port with said exhaust port, a valve stem driven from the engine shaft to rotate said valve, said valve stem being supported by a rigidly mounted bearing close to said valve, and by an adjustably mounted bearing at a greater distance from said valve to provide for an accurate alinement of said valve with the inner face of said valve chamber.

4. In combination with a pair of cylinders, a valve mechanism for combustion engine comprising a valve chamber at the closed ends of said cylinders, an intake port leading thereto at one end, independent ports leading therefrom directly to the respective cylinders at the opposite end, an exhaust port leading therefrom at one side, and a lubricant supply port, a valve rotatable freely in said valve chamber and provided with a passage to connect said intake port successively with said cylinder ports and an independent passage to successively connect said cylinder ports with said exhaust port, annular recesses surrounding said valve chamber inlet and cylinder ports and annular members having sliding engagement with opposite walls of said recesses and yieldingly held in sliding contact with the face of said valve to secure tight joints surrounding said ports between said members and the face of the valve and between said members and the walls of said recesses.

5. A valve mechanism for internal combustion engines comprising a cylindrical valve chamber having a central intake port at one end, an exhaust port through its side, and a cylinder port at its opposite end, a hollow cylindrical rotary valve located in said valve chamber and divided by a partition into two compartments with intake ports leading from opposite ends through one of said valve compartments, and exit ports leading from one end and one side through the other valve compartment.

[Claims 6 to 10 not printed in the Gazette.]

1,220,815. DEHYDRATING APPARATUS. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed Aug. 1, 1914. Serial No. 854,597. (Cl. 34—39.)



1. In a dehydrating apparatus, the combination of air dehydrating means consisting of a chamber having an opening in the lower end, means for circulating brine through said chamber, a casing connected at one end to the upper end of said chamber and at the other end to the dehydrator, means in said chamber for imparting heat to air passing through said chamber, an air pump, a series of sectional cells, means for projecting the heated air from the pump upward and through said cells, a chimney stack, and means for conveying the air from the cells to the chimney stack.

2. In a dehydrating apparatus, the combination of means for dehydrating air, a horizontally disposed casing communicating at one end with said dehydrating means, an air pump connected to the other end of said casing, heating apparatus for the air in said casing, a series of cells, a casing communicating at one end with the delivery end of the pump and communicating along its length with the individual cells, a chimney stack, and a casing arranged over the top of the cells and communicating with each cell and the chimney stack.

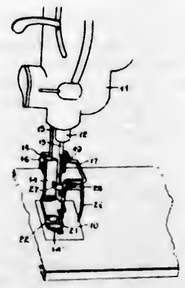
3. In a dehydrating apparatus, the combination of means for dehydrating air, a horizontally disposed casing communicating at one end with said dehydrating means, an air pump connected to the other end of said casing, heating apparatus for the air in said casing, said heating apparatus comprising pipes connected at one end to a heater and at the other end to a chimney stack through which the heated products are conveyed from the heater to the chimney stack, a series of cells, a casing communicating at one end with the delivery end of the pump and communicating along its length with the individual cells, a chimney stack, and a casing arranged over the top of the cells and communicating with each cell and the chimney stack.

4. In a dehydrating apparatus, the combination of means for dehydrating air, a horizontally disposed casing communicating at one end with said dehydrating means, an air pump connected to the other end of said casing, heating apparatus for the air in said casing, a series of cells, and a casing communicating at one end with the delivery end of the pump and communicating along its length with the individual cells.

5. In a dehydrating apparatus, the combination of means for dehydrating air, a horizontally disposed casing communicating at one end with said dehydrating means, heating apparatus for the air in said casing, a series of cells, a second casing communicating at one end with the first casing and throughout its length with the individual cells, and means for causing a current of air to flow through said dehydrating means, casings and cells.

[Claims 6 and 7 not printed in the Gazette.]

1,220,816. SEWING-MACHINE NEEDLE-GUARD. PHILIP LEVOLOGGI BIONDO, Brooklyn, N. Y., assignor of one-half to Charles Cirabolo, Brooklyn, N. Y. Filed Aug. 15, 1916. Serial No. 114,961. (Cl. 112—29.)



1. The combination with a sewing machine presser foot, presser foot bar and screw for securing the foot to the bar, of a needle guard comprising a bracket secured in place by said screw and having a vertically disposed bearing on the opposite side of the bar from the screw, said needle guard including also guard devices journaled to swing laterally around the vertical axis of the bearing aforesaid, and means to connect the front portion of the devices to the front portion of the presser foot.

2. The combination with a sewing machine presser foot, a presser foot bar, means to secure the presser foot to the bar and a needle coöperating with the presser foot, of a needle guard including a straight leg portion arranged directly in front of the needle and serving as an indicator to the operator of the machine, and independent means cooperating with the opposite ends of the guard to secure the same respectively to the presser foot bar and the toe of the foot.

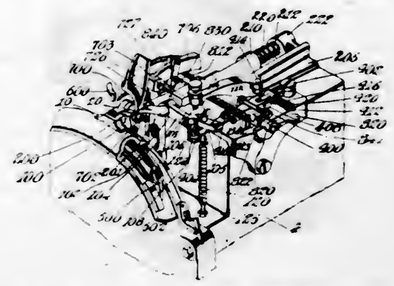
3. The combination with a presser foot, supporting means for the presser foot and a vertical needle coöperating with the presser foot, of a needle guard comprising a vertical leg portion arranged directly in front of and parallel to the needle, a projection extending laterally from the lower end of said leg portion, a keeper carried by the toe of the presser foot to receive and hold said projection, a trunnion formed at the opposite end of the needle guard and having a vertical axis, and means constituting a bearing for said trunnion and supported by the foot supporting means, said bearing providing for the swinging of the guard laterally away from the presser foot, substantially as set forth.

4. In a needle guard for sewing machines, the combination of a frame having an intermediate horizontal bar portion and a vertical leg portion extending downwardly from one end of the bar and constituting a primary guard, a secondary guard mounted upon said bar and having a finger extending downwardly from one end of the bar and spaced from the primary guard, said secondary guard being movable forwardly and upwardly around the axis of the bar, and means carried by the primary guard to hold the secondary guard in elevated position.

5. In a needle guard for sewing machines, the combination of a frame, means coöperating with the opposite ends of the frame to hold the same in operative position, the intermediate portion of the frame comprising a horizontal bar and a portion adjacent to the bar constituting a vertical primary guard, a secondary guard journaled upon the bar, said secondary guard comprising a finger extending downwardly from one end of the bar in spaced relation to the primary guard and also including a guard extension opposite the other end of the bar, and means acting between the primary guard and said guard extension to control the position of the secondary guard.

[Claims 6 to 8 not printed in the Gazette.]

1,220,817. LASTING AND SEWING MACHINE. WILLIAM A. BOND, Nahant, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 11, 1912. Serial No. 730,591. (Cl. 12—6.)



1. In a machine for lasting a shoe having an outturned flange of upper to be attached to a projecting margin of the sole, the combination with a gripper for gripping the edge of the upper, of actuating mechanism therefor arranged to move said gripper in such manner as to tension the upper and to lay it in the apex of the angle between the side of the last and the projecting margin of the sole.

2. In a machine for lasting stitch-down shoes, the combination with a gripper for seizing and tensioning the free margin of the upper toward the projecting margin of the sole, and means associated with the gripper for forcing the upper against the sole and against a limited area next to the side of the last, of means for subsequently sewing through said area and the margin of the sole to secure the parts in place.

3. A lasting machine having, in combination, upper and sole connecting mechanism including a reciprocating awl carrier, an awl moving perpendicularly to the sole for sewing through and through the sole and the margin of the upper, a gripper pointed laterally toward said awl and substantially perpendicularly to the direction of movement of the awl for grasping the margin of the upper, and means for moving the gripper in lines substantially parallel to the direction of movement of the awl.

4. A lasting machine having, in combination, sewing mechanism, a gripper, a rest to receive the margin of the tread face of a shoe outer sole, and means whereby the gripper is automatically closed upon the upper and given a bodily movement toward the rest to effect tensioning of the upper.

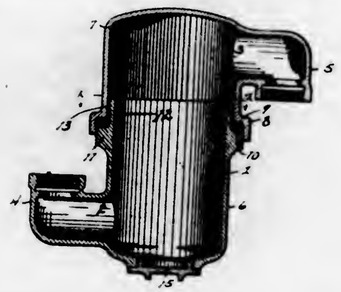
5. A lasting machine having, in combination, sewing mechanism, a gripper, a shoe rest to receive the under face of the margin of a sole, and means whereby the gripper is automatically closed and given a bodily movement toward the rest to effect stretching of the upper preparatory to its being secured to the sole by said sewing mechanism.

[Claims 6 to 57 not printed in the Gazette.]

1,220,818. TRAP. EDWARD W. N. BOOSEY, Detroit, Mich. Filed Mar. 21, 1913. Serial No. 755,891. (Cl. 137—28.)

1. A joint between the two unitable parts each having a lateral extension for a pipe connection therewith, comprising an internally threaded portion forming a terminal of one of said parts greater in diameter than the body of said part, an externally threaded portion on the other of said parts for engagement with the first named part, the two parts being formed to provide an annular channel be-

tween the assembled parts, the said last named part having a portion extending beyond the threaded part the exterior surface of which is corrugated and less in outside diameter than the internal diameter of the part into which it extends providing a space between the parts when assembled communicating with the annular channel, and a compressible packing in the annular channel, the interstice providing a relief space for the packing to allow the parts to be relatively turned to accommodate the pipe connections after the joint has been made fluid tight.



2. In plumbing, a joint between two separable parts each provided with a lateral extension providing for a pipe connection therewith comprising, an extension on one of said parts adapted to be positioned within the other part and spaced from the wall thereof, the outer surface of the extension being roughened or corrugated, and a compressible packing between the parts adapted to be forced into the space whereby the lateral extensions may be relatively positioned by a rotation of the parts after the joint has been made fluid tight.

3. A joint between two separable parts comprising a longitudinally grooved end on one of said parts extending into the other part, and a compressible packing between said parts adapted to be forced into said grooves.

4. A joint between two separable parts comprising an end upon one of the parts adapted to extend into the other part beyond the plane of the joint and spaced from the wall thereof, the outer surface of the extension being creased or grooved, a packing space between the parts in communication with the space between the said extension and surrounding wall, and a compressible packing in said packing space, the grooves or creases serving to break up the packing forced into the space by a setting up of the joint.

5. A joint between two separable parts comprising a longitudinally grooved end upon one of said parts extending into the other part, a packing space between said parts in communication with the grooves, and a compressible packing in said packing space.

1,220,819. TIRE-PATCH CLAMP. HERMAN BRETTHAUER, New York, N. Y. Filed Aug. 10, 1916. Serial No. 114,140. (Cl. 152—27.)



1. A self-closing tire clamp comprising a pair of relatively movable jaws, spring means for yieldingly holding the jaws in closed position, a plate on one of the jaws having a concave surface opposed to the other jaw, and a pivot loosely connecting the center of the plate with its respective jaw and capable of having a limited universal movement.

2. A self-closing tire patch clamping tool comprising two sections hingedly connected together intermediate their ends, whereby the sections present a pair of jaws at one end of the tool and a pair of handle members at the other end, a spring acting between the handle members to hold the jaws closed, and a plate pivotally connected with one of the jaws and having a limited universal movement thereon.

3. A tire patch clamping tool comprising two sections, each section having intermediate its ends a plurality of lugs, a hinge pintle passing through the lugs for hingedly connecting the sections together, a spring connected with the pintle and bearing against both sections at one end of the tool to force the other ends of the sections together to form jaws, and a concave plate on the jaw end of one section and coöperating with the jaw end of the other section.

1,220,820. MANUFACTURE OF A NON-SAPONIFIABLE UNSATURATED HYDROCARBON OIL FROM A DRYING-OIL. BENJAMIN T. BROOKS and FRED W. PADGETT, Pittsburgh, Pa., assignors to Gulf Refining Company, Pittsburgh, Pa., a Corporation of Texas. Filed Aug. 10, 1914. Serial No. 855,982. (Cl. 23—24.)

1. The method of producing from drying oils unsaturated hydrocarbons having valuable film-forming properties which comprises splitting off carbon dioxid from the free fatty acids of said oils; substantially as described.

2. The method of producing from drying oils unsaturated hydrocarbons having valuable film-forming properties which comprises splitting off carbon dioxid from the free fatty acids of said oils by heating in the presence of a metal oxid; substantially as described.

3. The method of producing from linseed oil unsaturated hydrocarbons having valuable film-forming properties which comprises splitting off carbon dioxid from the free fatty acids of said oil; substantially as described.

4. As a new article of manufacture, an unsaturated hydrocarbon oil corresponding to the free fatty acids of a drying oil after the splitting off of carbon dioxid therefrom, said hydrocarbon oil having valuable film-forming properties and being a valuable substitute for linseed oil; substantially as described.

5. As a new article of manufacture, an unsaturated hydrocarbon oil corresponding to the free fatty acids of linseed oil after the splitting off of carbon dioxid therefrom, said hydrocarbon oil having valuable film-forming properties and being a valuable substitute for linseed oil; substantially as described.

1,220,821. MANUFACTURE OF A NON-VOLATILE UNSATURATED HYDROCARBON FROM PETROLEUM. BENJAMIN T. BROOKS and FRED W. PADGETT, Pittsburgh, Pa., assignors to Gulf Refining Company, Pittsburgh, Pa., a Corporation of Texas. Filed Aug. 10, 1914. Serial No. 855,983. (Cl. 23—24.)

1. The method of producing a non-volatile unsaturated hydrocarbon drying oil, which comprises chlorinating a petroleum fraction having a boiling point above about 250° C. to an extent sufficient to form dichlorinated derivatives of hydrocarbons contained therein, and subjecting the resulting dichlorinated hydrocarbons to a temperature of from about 350° C. to about 550° C. to split off hydrochloric acid therefrom; substantially as described.

2. The method of producing a non-volatile unsaturated hydrocarbon oil, which comprises subjecting the dichlorinated derivatives of petroleum fractions having a boiling point above approximately 250° C. in the presence of a suitable catalyst to a temperature of from about 350° C. to about 500° C. and thereby splitting off hydrochloric acid from said chlorinated product; substantially as described.

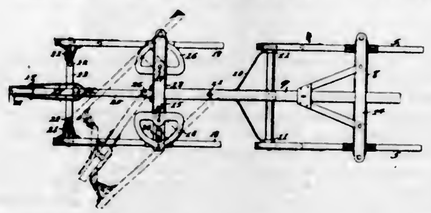
3. The method of producing a non-volatile unsaturated hydrocarbon oil, which comprises subjecting the dichlorinated derivatives of petroleum fractions having a boiling point above approximately 250° C. in the presence of a suitable catalyst and *in vacuo* to a temperature of from about 350° C. to about 500° C. and thereby splitting off hydrochloric acid from said chlorinated product; substantially as described.

4. The method of producing a non-volatile unsaturated hydrocarbon oil, which comprises subjecting the dichlorinated derivatives of petroleum fractions having a boiling point above approximately 250° C. in the presence of a suitable catalyst and of diluting inert vapors to a temperature of from about 350° C. to about 500° C. and thereby splitting off hydrochloric acid from said chlorinated product; substantially as described.

5. The method of producing a non-volatile unsaturated hydrocarbon oil which comprises subjecting the dichlorinated derivatives of petroleum fractions having a boiling point above approximately 250° C. to a temperature of about 400° C. in the presence of barium chlorid as a catalyst, and thereby splitting off hydrochloric acid from such hydrocarbon product; substantially as described.

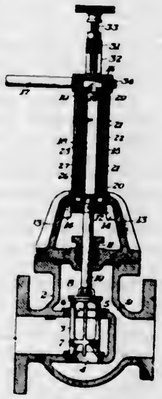
[Claims 6 and 7 not printed in the Gazette.]

1,220,822. SLED. OLE O. BROTHEN, Westby, Wis. Filed May 15, 1916. Serial No. 97,622. (Cl. 21—48.)



In a sled provided with rear and front runners, transverse beams thereover and a reach connecting said beams, offset means for pivoting said front runners to the respective beam, means for maintaining said front runners in parallelism, a pole pivoted to the forward transverse beam, a pivoted guide in which said pole is slidably held, and a tongue in pivotal connection with said pole.

1,220,823. CONTROLLING-VALVE. WILLIAM J. BURKE, Pittsburgh, Pa., assignor to Elliott Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 30, 1914. Serial No. 874,590. (Cl. 103—92.)



1. A controlling device of the character described, comprising a valve, a hollow expansible member arranged to act upon the valve, means for admitting pressure to the interior of said member, and a series of telescoping members seated around said elastic member, said telescoping members being capable of independent movement longitudinally of the elastic member and arranged to have a gripping engagement with the same, substantially as described.

2. In a controlling device of the character described, the combination with a valve and spring means tending to move said valve in one direction, of a hollow elastic member arranged to act upon the valve in the opposite direction, a series of telescoping members seated around the said elastic member, said telescoping members being free to move longitudinally one upon another and arranged to have a gripping engagement therewith, and means for admitting pressure to the interior of the elastic member, substantially as described.

3. In a controlling device of the character described, the combination with a valve, of a piston member arranged to move the valve in one direction, an elastic tube seated against said piston member, means for admitting pressure to the interior of the tube, and a series of telescoping members seated around the tube and having portions adapted to grip the same, said telescoping members being free to move longitudinally one upon another, substantially as described.

4. In a controlling device of the character described, the combination with a valve, of a piston member arranged to move the valve in one direction, an elastic tube seated against said piston member, means for admitting pressure to the interior of the tube, and a series of telescoping members seated around the tube and having portions adapted to grip the same, one of the telescoping members having a telescoping engagement with the piston member, said telescoping members being free to move longitudinally one upon another, substantially as described.

5. In a controlling device of the character described, the combination with a valve, a piston member operatively connected to the valve, an elastic tube engaging the piston member, means for admitting pressure to the interior of the tube, and a series of telescoping members surrounding said tube, said telescoping members having recessed inner faces, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,220,824. ATTACHMENT FOR FOUNTAIN-PENS. JOHN FRANCIS CONWAY, Brooklyn, N. Y. Filed Oct. 17, 1916. Serial No. 126,121. (Cl. 120—42.)



1. In an attachment for fountain pens the combination with a cap formed with openings therein, of a supporting easel structure slidingly mounted in the cap and extending through said openings, said easel structure being formed with means for preventing accidental removal.

2. In an attachment for fountain pens the combination with a cap, of a pair of supporting legs extending through the cap of the fountain pen, and a projection connecting said legs, said projection acting as a fulcrum for the legs and bearing against the end of the cap.

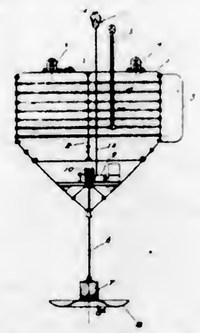
3. In an attachment for fountain pens the combination with a cap, of a pair of legs formed with means for connecting the same with said cap, and a pair of bearing members arranged at the outer end of the legs.

4. In an attachment for fountain pens, the combination with a cap having a pair of apertures, of a pair of legs extending through said apertures, means connecting said legs within said cap, and bearing means arranged at the outer end of said legs, said legs being bent at the point where they extend through the cap when moved to their outermost position.

5. In an attachment for fountain pens, the combination with a fountain pen having a cap provided with a pair of apertures in the end, of a wire member bent so as to produce a pair of legs extending through said apertures and a bowed portion arranged in the cap connecting said legs.

[Claim 6 not printed in the Gazette.]

1,220,825. SUBMARINE-SUPPLY. PHILIPPO L. E. DEL FUNGA-GIERA, New York, N. Y. Filed Aug. 28, 1916. Serial No. 117,196. (Cl. 114—5.)



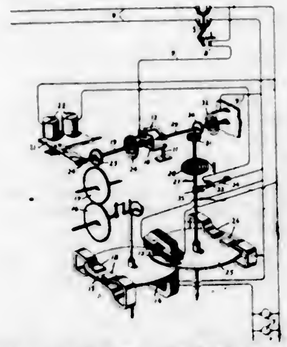
1. A submersible container, comprising a casing having a cylindrical upper portion and a conical lower portion, a horizontal partition dividing said casing into upper and lower compartments, a vertical partition sub-dividing said upper compartment, a horizontal partition sub-dividing said lower compartment into a motor chamber and a water chamber, an anchor, a cable leading therefrom to said motor chamber, and means in said motor chamber for adjusting the length of said cable to control the degree of submergence of said container.

2. A submersible container, comprising a casing having a cylindrical upper portion and a conical lower portion, a horizontal partition dividing said casing into upper and lower compartments, a vertical partition sub-dividing said upper compartment into storage and habitable chambers, a periscope extending from said habitable chamber, a horizontal partition sub-dividing said lower compartment into a motor chamber and a water chamber, an anchor, a cable leading therefrom to said motor chamber, and means in said motor chamber for adjusting the length of said cable to control the degree of submergence of said container.

3. A submersible container, comprising a casing having a cylindrical upper portion and a conical lower portion, a horizontal partition dividing said casing into upper and lower compartments, a horizontal partition dividing said lower compartment into motor and water chambers, a bell-shaped bracing and water resisting partition in said water chamber, an anchor, a cable leading therefrom to said motor chamber, and means in said motor chamber for adjusting the length of said cable to control the degree of submergence of said container.

1,220,826. RELAY. JOHN THOS. DEMPSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 24, 1916. Serial No. 775,484. (Cl. 175—270.)

1. The combination with an electrical installation, of a relay comprising electromagnetic means electrically connected to the installation and adapted to produce a magnetic field proportional to the rate of flow of current in said installation, an armature rotatably mounted in said magnetic field, a movable member adapted to be operatively connected to said armature when the rate of flow of current in the installation exceeds a predetermined amount, a second movable member arranged to move toward and in the path of movement of said first mentioned member, a second armature movably mounted in said magnetic field, means operatively connecting said second armature to said second movable member, means for rendering the extent of movement of said second movable member, means for rendering the extent of movement of said second movable member a measure of the rate of flow of current in the installation when the rate of flow of current exceeds said predetermined amount, and means controlled by the engagement of said movable members for interrupting the flow of current in said installation.



2. A relay comprising in combination an electric meter element for producing a magnetic field, a rotatable armature mounted in said magnetic field, a movable member adapted to be moved by said armature when the strength of the magnetic field exceeds a predetermined amount, a second armature also mounted in said magnetic field, and a second movable member arranged in the path of movement of said first mentioned movable member and adapted to be moved by said second armature toward said first mentioned movable member a distance which is a function of the strength of the magnetic field.

3. A relay comprising in combination an electric meter element for producing a magnetic field, a rotatable armature mounted in said magnetic field, a movable member adapted to be moved by said armature when the strength of the magnetic field exceeds a predetermined amount, a second armature also mounted in said magnetic field, means for restraining the movement of said second armature until the strength of the magnetic field exceeds said predetermined amount, and a second movable member adapted to be moved toward said first mentioned movable member by said second armature.

4. A relay comprising in combination an electric meter element for producing a magnetic field, a rotatable armature mounted in said magnetic field, a movable member adapted to be moved by said armature when the strength of the magnetic field exceeds a predetermined amount, a second armature also mounted in said magnetic field, a control spring connected to said second armature to render its movement a measure of the strength of the magnetic field, a second movable member arranged to move toward and in the path of movement of said first mentioned movable member, and means operatively connecting said second armature to said second movable member.

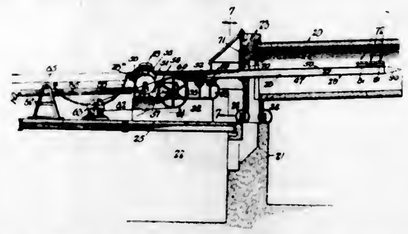
5. A relay comprising in combination, an electric energy motor meter element and an indicating electric meter element, a movable contact member adapted to be operatively connected to the energy meter element, a second movable contact member arranged to move toward and in the path of movement of said first mentioned contact member, and means operatively connecting said second contact member to the indicating meter element.

[Claims 6 to 19 not printed in the Gazette.]

1,220,827. CLEANING DEVICE FOR ROTARY KILNS. GEORGE FRANCIS DOWNS, Buffalo, N. Y. Filed Oct. 5, 1916. Serial No. 123,940. (Cl. 222—5.)

1. A cleaning device for kilns and the like comprising, a frame, a tool-holding member reciprocable on said frame in a line parallel to the axis of the kiln to be cleaned and of a length to penetrate the kiln to a point remote from said frame, means for holding said tool-holding member rigidly to said frame throughout its reciprocatory movement and one or more tools carried at the forward end of said tool-holding member.

2. A cleaning device for kilns and the like comprising, a frame, a tool-holding member reciprocable on said frame in a line parallel to the axis of the kiln to be cleaned and of a length to penetrate the kiln to a point remote from said frame, devices connecting said tool-holding member with said frame and adapted to resist the thrust against said tool-holding member and to hold it rigidly to said frame throughout its reciprocatory movement, and one or more tools carried at the forward end of said tool-holding member.



3. A cleaning device for kilns and the like comprising, a frame, a tool-holding member reciprocable on said frame in a line parallel to the axis of the kiln to be cleaned and of a length to penetrate the kiln to a point remote from said frame, antifriction devices on said frame adapted to engage said tool-holding member and resist the thrust against it, and to rigidly hold it in alinement throughout its reciprocatory movement, and one or more tools carried at the forward end of said tool-holding member.

4. A cleaning device for kilns and the like comprising, a frame, a tool-holding member reciprocable on said frame in a line parallel to the axis of the kiln to be cleaned and of a length to penetrate the kiln to a point remote from said frame, gearing intermediate said frame and said tool holding member for driving said tool-holding member, and one or more tools carried at the forward end of said tool-holding member and extending laterally therefrom.

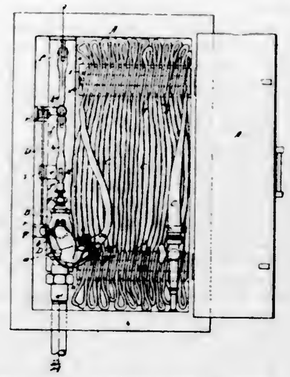
5. A cleaning device for kilns and the like comprising, a frame, a tool-holding member reciprocable on said frame in a line parallel to the axis of the kiln to be cleaned and of a length to penetrate the kiln to a point remote from said frame, means for holding said tool-holding member rigidly to said frame throughout its reciprocatory movement, gearing for reciprocating said tool-holding member, a reversible power member for driving said gearing, and one or more tools carried at the forward end of said tool-holding member.

[Claims 6 to 15 not printed in the Gazette.]

1,220,828. FIRE-EXTINGUISHING APPARATUS. JOHN EGLESTON, Westfield, Mass. Filed Mar. 21, 1916. Serial No. 85,721. (Cl. 137—31.)

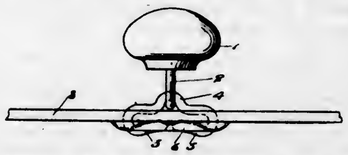
1. In a fire extinguishing apparatus, in combination, a supporting frame, a valve body in said frame having an inlet connection member, and an outlet member, and a valve in said body for closing the inlet having a slidable stem, a hose connected to the outlet member, a toggle having one link member thereof pivoted to the valve stem and having the other link member thereof pivoted to a fixed part of said frame, and adapted in its straightened condition to hold the valve closed, the hose having, to be embraced thereby, a pair of opposite curved plates and a rigid frame encircling said plates at a suitable distance from the point of connection of the hose with the valve, said embracing device having a threaded stud, and the hose being normally slack between said embracing device and the valve, a flexible connection having one end attached to a link member of the toggle, and having an eye at its opposite end adapted to detachably engage said stud, and a nut screw engaging said stud to confine the eye portion of the flexible connection in its engagement thereon.

2. In a fire extinguishing apparatus, in combination, a supporting frame made in the form of a forwardly opening casing, a valve body located within and near one end of the casing, adjacent the back of the latter, having an inlet connection member and an outlet member, and a water supply pipe leading through the end of the casing and connected with the inlet member, a valve in said body for closing the inlet, said valve having a stem slidable in a direction along the length of the casing, a hose connected to the outlet member, a toggle having one link member thereof permanently pivoted to the valve stem, and having the other link member thereof pivoted to a fixed part in the casing and adapted in its straightened condition to hold the valve closed, a flexible con-



nection attached to a part of the hose adjacent the valve outlet member, a ring eye supported by the casing at a location adjacent the valve outlet member and outwardly beyond the back of the casing, a guiding sheave in the casing inwardly opposite said ring eye, another guiding sheave in the casing located adjacent, but outwardly beyond the pivot connecting the toggle members, said flexible connection being guided from its connection with the hose through said ring eye, inwardly partially around the first named sheave, and to and partially around the second named sheave and extended from the latter in a direction angularly to the length of the toggle members and having a connection with one of such members.

1,220,829. WASHER FOR BUTTON ATTACHMENTS. WILLIAM E. ELLIOTT, Grand Rapids, Mich. Filed Mar. 4, 1916. Serial No. 82,234. (Cl. 24—94.)



1. In combination, a button having an eye adapted to be located on one side of a section of material, a washer adapted to be located on the opposite side of said material, said washer being formed of a thin circular piece of metal with a central opening and a pair of diametrically opposed openings positioned adjacent the edges of the washer, an annular lip bent from the washer toward the material, grooves formed in the washer on the outer side thereof, said grooves lying between the central opening and each of the other openings in the washer, and a staple inserted through the eye of the button with a leg passing through each of the pair of openings, said legs being clenched against the washer and seated in the grooves therein, with the ends of the legs partially entering the central opening.

2. In combination, a button having an eye adapted to be located on one side of a section of material, a washer adapted to be located on the opposite side thereof, said washer being formed from thin metal provided with a central opening and a pair of openings located equally distant from and on opposite sides of the central opening, a staple inserted through the eye of the button, the legs of the staple being adapted to pass through the material and the pair of openings in the washer and clenched against said washer, said washer also being formed with means to receive and partially house the parts of the legs clenched thereagainst.

3. In combination, a button having an eye adapted to be located on one side of a section of material, a washer adapted to be located on the opposite side thereof, said washer having a central opening and a pair of openings on opposite sides of and equally spaced from the central opening, and a staple inserted through the eye of the button with its legs adapted to pass through the material and pair of openings in the washer, said legs being turned inwardly toward each other and against the washer with the ends of the legs partially received in the central opening of the washer.

4. A washer for use in the manner described, comprised of a circular piece of thin metal and provided with a central opening and diametrically opposed openings spaced equally from the central opening, an annular lip turned to project from the edges of the washer, said central portion of the washer being depressed and formed with grooves between the central opening and each of the other openings, substantially as described.

5. A washer for use in the manner described, formed from thin metal and provided with a central opening and four additional openings positioned around the central opening substantially equal distances from each other, said washer also having grooves in alinement formed therein between the central openings and each of two of the additional openings, substantially as described.

1,220,830. HATCHWAY-OPENING FOR REFRIGERATOR-CARS. WILLIAM H. EMERICK, Omaha, Nebr. Filed Oct. 15, 1915. Serial No. 56,132. (Cl. 98—22).



1. In a railway refrigerator car, the combination of a roof provided with a hatch opening, a frame surrounding said opening and forming the walls thereof, one of said walls having its lower portion sloping downwardly and outwardly relative to its upper portion to permit access to the space beneath said roof at the side of said opening.

2. In a railway refrigerator car, the combination of a roof provided with a hatch opening, a plug or cover therefor, a frame surrounding said opening and forming the walls thereof, three of said walls sloping downwardly and inwardly and the other wall having its upper portion sloping downwardly and inwardly to form a seat for said plug or cover, the lower portion of said last named wall sloping downwardly and outwardly to permit access to the space beneath said roof at the side of said opening.

3. In a railway refrigerator car, the combination of a roof provided with a running board and oppositely disposed hatch openings in the roof at the sides of said running board, a frame surrounding each opening and forming the walls thereof, the inner walls of said frames having portions thereof sloping downwardly and toward each other to permit access through said openings to the space beneath said running board.

4. In a railway refrigerator car, the combination of a roof provided with a running board and oppositely disposed hatch openings in the roof at the sides of said running board, a frame surrounding each opening and forming the walls thereof, the inner walls of said frames having portions thereof sloping downwardly and toward each other to permit access through said openings to the space beneath said running board, and a brace block located beneath the running board and between the inner walls of said openings.

1,220,831. WATER-CLOSET-SEAT-OPERATED VALVE. GEORGE D. ENDY, Philadelphia, Pa., assignor to J. D. Johnson Co., Philadelphia, Pa., a Corporation of New Jersey. Filed Feb. 16, 1915. Serial No. 8,482. (Cl. 4—5.)



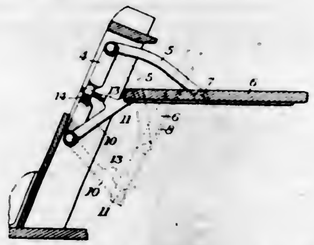
1. In a flush tank water closet, a movable seat for the bowl of said closet, a discharge pipe at the bottom of the tank, a valve for said pipe having its seat on said pipe, a stem for said valve, an oscillating elbow lever, a bearing piece for the latter, a slidable bar member adapted to carry said bearing piece, a float connected with the horizontal limb of said elbow lever, a nose on the other limb of said lever, the upper portion of said valve stem having thereon conical heads and a shoulder with which said nose is adapted to engage, and a boss on said tank, said slidable member being freely fitted in said boss and guided by the latter, means on said lever adjacent said bearing piece engageable with the latter above and below the axis of the lever on said bearing piece relatively to the different portions of said lever and means for moving said member primarily operated by said movable seat.

2. In a flush tank for a water closet, a valve on the tank, a shouldered valve stem thereon, an oscillating elbow lever having a nose on the lower end of one limb thereof adapted to engage said shoulder, a float lever connected with the other limb of said lever, a bearing piece for said lever, a slidable bar adapted to carry said means for operating said bar, and a collar on said lever adjacent to said bearing adapted to abut said bearing above and below the axis of said lever on said bearing piece relatively to the different portions of said lever.

3. In a flush tank water closet, a movable seat for the bowl of the closet, a vertically movable rod on said tank adapted to engage said seat, a vertically slidable bar on the tank, a swinging lever having one end pivotally connected with said bar, a weighted handle pivotally connected at one end with the other end of said lever and resting upon the upper end of said rod, a discharge pipe on the tank, a valve for said pipe, connections for operating said valve intermediate of the stem of said valve and said slidable bar, a hanger, an ear on said hanger forming the axis for said lever on the tank, and a boss connected with said hanger, said boss receiving freely said bar forming the guide therefor.

1,220,832. ADJUSTABLE FOLDING SEAT. JOSEPH ERRET, Cleveland, Ohio. Filed June 10, 1916. Serial No. 102,866. (Cl. 155—22.)

1. An adjustable seat of the character described, comprising a seat proper, a fixed support, and two pairs of links pivoted to said support and to the seat, the links of one pair having stop portions, and the support having coöperating adjustable stops or abutments therefor, substantially as described.



2. The combination with a support, of a seat member, a pair of links pivoted to said support and to the lateral edges of the seat member at a point intermediate its outer and inner edges, a second pair of links pivoted at one end of the support at a lower level than the pivotal connections of the first named links and at their other ends to the inner or rear portion of the seat member, the last named links having stop portions, and the support having adjustable abutments for engagement with said stop portions, substantially as described.

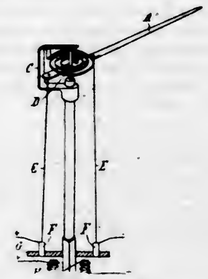
3. The combination with a support having a pocket or recess therein, a seat member adapted to lie within said pocket or recess when in folded position, a pair of links pivotally connected to the side walls of said pocket or recess at the upper portion thereof and pivotally connected at their outer ends to the lateral edge portions of the seat member at points somewhat below the center thereof, and another pair of links pivotally connected at their lower ends to the side walls of the pocket or recess and at their upper ends to the lateral edges of the seat member at points near the inner edge of said member, and adjustable stop means for supporting the seat member in its extended position, substantially as described.

4. The combination with a support having a pocket or recess therein, and a seat member adapted to be contained within said pocket or recess when in folded position, of an upper pair of links pivoted at their upper ends to the upper side portions of said pocket or recess and at their lower ends to the lateral edges of the seat member at points distant from the inner edge of said member, a lower pair of links pivoted at their inner ends to the walls of said pocket or recess at a lower level than the upper links and having their outer ends pivotally connected to the rear portion of the seat member, said seat member being adapted to swing from its folded position upwardly and outwardly on said links, and adjustable stop mechanism for supporting the seat in its extended position, substantially as described.

1,220,833. MEASURING INSTRUMENT. HARRY ALEXANDER EWEN, London, England, assignor to Marconi Wireless Telegraph Company of America, New York, N. Y., a Corporation of New Jersey. Filed Sept. 30, 1916. Serial No. 122,991. (Cl. 171—95.)

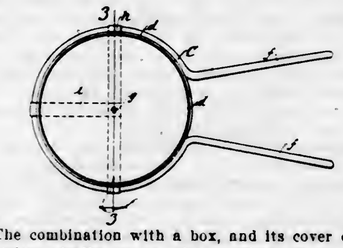
1. In a measuring instrument, the combination of a frame, an arbor rotatably mounted therein, an arm fast on the arbor, means for applying to the arm a force tending to rotate the arbor, a support carried by the frame and capable of moving upon the frame parallel to the axis of the arbor, means for applying to the support a force tending to move it and a stretched expansible filament connected at one end to the arm and at the other end to the support.

2. In a measuring instrument, the combination of a frame, an arbor rotatably mounted therein, an arm fast on the arbor, means for applying to the arm a force tending to rotate the arbor, a support carried by the frame and capable of moving upon the frame parallel to the axis of the arbor, means for applying to the support a force tending to move it and a plurality of stretched expansible filaments each connected at one end to the arm and at the other end to the support.



3. An instrument for measuring electric currents, comprising a frame, a member rotatably mounted thereon, resilient means tending to rotate said member, a support slidably mounted on the frame, an expansible conductor connecting the member and the support, the tension of said conductor acting in opposition to said resilient means and being controlled by the strength of the current carried by the conductor and by the position of the support to determine the position of said rotary member, and means controlled by an electric current for determining the position of said support.

1,220,834. HANDLE AND COVER-OPENING APPLIANCE FOR BOXES. ROCCO FABRIZIO, Springfield, Mass. Filed Nov. 24, 1916. Serial No. 133,245. (Cl. 220—7.)



The combination with a box, and its cover constructed to telescopically engage the mouth portion of the box, the box having a surrounding outwardly extending flange below the cover engaging portion and the cover having a similar flange above its box engaging portion, of a frame composed of a length of comparatively heavy, but resilient wire having the intermediate portion thereof bent around in excess of a semicircle, adapted to embrace the box, and to have the cross sectionally inwardly convergent portions thereof engaged between the said flanges of the box and cover, and said frame having divergently outwardly extending arms for the constriction of the box encircling portion of the frame, and a skeleton frame composed of sheet metal resilient members having connections at various points with said box encircling portion of the frame, and extending downwardly across the sides of, and under the box, and having the box underlying portion of such frame riveted to the bottom of the box.

1,220,835. BOX-STRAP. PHILIP JONES FORBES, Brooklyn, N. Y. Filed Sept. 23, 1916. Serial No. 121,758. (Cl. 217—68.)

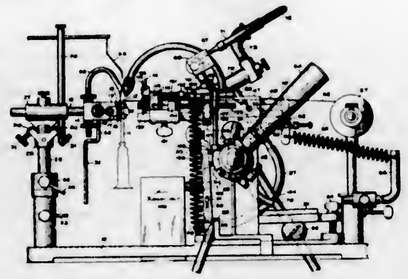


1. As an article of manufacture, a box strap made from a single piece of wire, and comprising short circular portions alternating with flat portions of relatively greater

length than the short circular portions and gradually tapering toward their ends, the flat portions being provided with nailing holes.

2. As an article of manufacture, a box strap made from a single piece of wire and comprising short circular portions alternating with flat portions of relatively greater length than the short circular portions, the flat portions being wider and thinner at the middle than at the ends, and the flat portions being provided with nailing holes.

1,220,836. FILAMENT-SUPPORT-WIRE-INSERTING MACHINE. THEODORE W. FRECH, Jr., and JOHN T. FAGAN, Cleveland, Ohio, assignors to General Electric Company, a Corporation of New York. Filed Oct. 1, 1913. Serial No. 792,900. (Cl. 49—2.)



1. A machine of the character described comprising means for holding a rod and indexing the same around to receive a ring of wire supports, a wire holder, means for advancing said wire after each indexing operation and inserting an end thereof into the said rod and means for directing a flame to fuse the edge of said button at the point of insertion of each wire support, said flame directing means being disposed at an angle with the plane of insertion of said supports to avoid impairing supports already inserted.

2. A machine of the character described comprising means for holding a rod with a button formed thereon so that the said button is more nearly horizontally than vertically disposed and for indexing said rod around its longitudinal axis to receive a series of wire supports on the periphery of said button, a wire holding means, means for advancing said wire after each indexing operation and inserting an end thereof into the edge of the said button and means for directing a flame against the edge of said button to fuse a portion thereof, said flame directing means being angularly disposed with relation to the plane of the aforesaid button to avoid impairing supports already inserted.

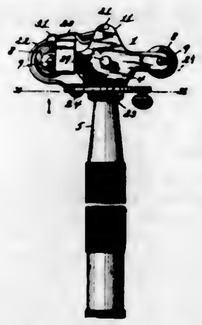
3. A machine of the character described comprising means for removably holding a rod, a wire holding means, means for directing a flame so as to fuse a portion of said rod, means for gripping and advancing said wire so as to insert an end thereof into the fused portion of said rod, means for directing a cooling blast against said fused portion and means whereby the aforestated means are successively operated.

4. A machine of the character described comprising means for removably holding a rod, a wire holding means, means for directing a flame so as to fuse a portion of said rod, means for gripping and advancing said wire so as to insert an end thereof into the fused portion of said rod, means for directing a cooling blast against said fused portion, an operating shaft and means intermediate said shaft and the aforestated means whereby the actuation of said shaft causes the said means to operate successively.

5. In a machine of the character described, means for holding a glass rod, a wire holding means, a reciprocatable gripping means arranged to insert an end of said wire to said rod, means brought into operation immediately prior to the insertion of said wire for fusing the portion of the said rod to receive the same and means brought into operation immediately following said insertion for directing a short cooling blast against said portion.

[Claims 6 to 11 not printed in the Gazette.]

1,220,837. SAFETY-RAZOR. FRANZ A. FULLER, Newark, N. J. Filed Apr. 17, 1914. Serial No. 832,407. (Cl. 30—12.)



1. A safety razor comprising a frame, said frame comprising two opposite side portions parallel each to each, and connected by a lower central cross-piece, a handle secured to said central cross-piece, a blade holder pivoted on said frame directly above said central cross-piece, a razor blade guard detachably secured to the two opposite side portions of said frame, a spring tongue secured to the under side of the central cross-piece of the frame and a locking lever secured to the under side of said guard, the free end of said locking lever engaging with a spring tongue for positively adjusting the blade relative to the guard.

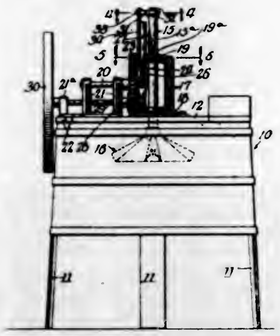
2. A safety razor comprising a frame, said frame comprising two opposite side portions parallel each to each, and connected by a lower central cross-piece, a handle secured to said central cross-piece, a blade holder pivoted on said frame directly above said central cross-piece, a razor blade guard detachably secured to the two opposite side portions of said frame, means carried by said guard for positively adjusting the blade relative to the guard, said razor blade guard being further provided with guides designed to have sliding engagement with the opposite side portions of the frame for detachably securing the guard to said frame, a spring tongue secured to the under side of the central cross-piece of the said frame and a locking lever secured to the under side of said guard for positively adjusting the blade relative to the guard.

3. A safety razor comprising a frame adapted to slide longitudinally of a strop, said frame comprising two opposite side portions parallel each to each, a blade holder pivoted on said frame with a line of pivoting transverse to the strop, a roller pivoted below said blade holder on the frame for transmitting rotary movement to said blade holder, guides arranged upon said frame and located above and below said roller for guiding the strop, a razor blade guard detachably secured to the two opposite side portions of said frame, means carried by said guard for positively adjusting the blade relative to the guard, said razor blade guard being further provided with guides designed to have sliding engagement with the opposite side portions of the frame for detachably securing the guard to said frame, a spring tongue secured to the under side of the central cross-piece of the said frame and a locking lever secured to the under side of said guard for positively adjusting the blade relative to the guard.

4. A safety razor comprising a frame, said frame comprising two opposite side portions parallel each to each, and connected by a lower central cross-piece, a handle secured to said central cross-piece, a blade holder pivoted on said frame directly above said central cross-piece, said frame being further provided with a recess in one of the

side portions thereof for the insertion and removal of the blade from the blade holder, a razor blade guard detachably secured to the two opposite side portions of said frame, a spring tongue secured to the under side of the central cross-piece of the frame and a locking lever secured to the under side of said guard, the free end of said locking lever engaging with a spring tongue for positively adjusting the blade relative to the guard.

1,220,838. GEARING FOR OPERATING WASHING-MACHINES. WILLIAM H. GEORGE, Fairfield, Iowa, assignor to The Dexter Company, Fairfield, Iowa, a Corporation of Iowa. Filed Oct. 11, 1915. Serial No. 55,140. (Cl. 74—50.)



1. A gearing of the kind described, comprising in combination with an operating shaft capable of both a vertical, reciprocating movement and of an alternating, rotary movement, a device engaged with said shaft for imparting an alternating, rotary movement to said shaft when it is reciprocated vertically, a prime moving lever, means intermediate said prime moving lever and said shaft for vertically reciprocating said shaft, said means including a gear adapted to be continuously rotated by said prime moving lever, said lever operating in a plane between said upright shaft and said gear and a fly-wheel operatively connected to said gear and rotated thereby.

2. A gearing of the kind described, comprising in combination with an operating shaft capable of both a vertical, reciprocating movement and of an alternating, rotary movement, means providing a bearing for said shaft, means intermediate said bearing and said shaft for imparting an alternating, rotary movement to said shaft when it is reciprocated vertically, a prime moving lever operating in a vertical plane closely adjacent to the vertical plane of said operating shaft, a large gear in substantially the plane of said prime moving lever, a link operatively connecting said prime moving lever with said large gear, means connecting said large gear with said operating shaft, adapted to transpose the continuous rotating movement of said large gear into a vertical, reciprocating movement of said operating shaft, a fly wheel and gearing intermediate said large gear and said fly wheel.

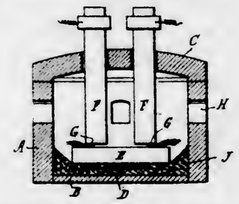
3. A gearing of the kind described, comprising in combination with a support, a hinged member carried by said support, an operating shaft capable of both a vertical, reciprocating movement and of an alternating, rotary movement, means carried by said hinged member providing a bearing for said shaft, a device engaged with said shaft for imparting an alternating, rotary movement to said shaft when it is reciprocated vertically, a prime moving lever, means intermediate said prime moving lever and said shaft for vertically reciprocating said shaft, a gear adapted to be continuously rotated by said prime moving lever, said lever operating in a plane between said upright shaft and said gear and a fly-wheel operatively connected to said gear and rotatively driven thereby.

4. A gearing of the kind described, comprising in combination with an operating shaft capable of both a vertical, reciprocating movement and of an alternating, rotary movement, means providing a bearing for said shaft, means intermediate said bearing and said shaft for imparting an alternating, rotary movement to said shaft when it is reciprocated vertically, a prime moving member operating in a median plane of said hinged member extending at right angles to the hinge line of said member and closely adjacent to said operating shaft, a large gear in substantially the plane of said prime moving lever, a link operatively connecting said prime moving lever with said large gear, means connecting said large gear with said operating shaft, adapted to transpose the continuous rotating movement of said large gear into a vertical, reciprocating movement of said operating shaft, a fly wheel and gearing intermediate said large gear and said fly wheel.

5. A gearing of the kind described, comprising in combination with an operating shaft capable of both a vertical, reciprocating movement and of an alternating, rotary movement, means providing a bearing for said shaft, a device on said bearing engaged with said shaft adapted to impart an alternating, rotary movement to said shaft when the shaft is reciprocated vertically, a prime moving lever, a large gear located closely adjacent to said operating shaft, a pitman connecting said gear with said lever, a rotative arm on said operating shaft, a pitman connecting said arm with said large gear, a fly wheel, and means connecting said large gear with said fly wheel.

[Claim 6 not printed in the Gazette.]

1,220,839. METHOD OF MAKING FURNACE-HEARTHS. JAMES H. GRAY, New York, N. Y. Filed Jan. 23, 1914. Serial No. 813,894. (Cl. 204—64.)



1. The method of making furnace hearths of pyro-conductive material which consists in introducing the material into place, heating the same to the temperature at which it becomes conductive, forming an electric arc from an electrode to said material, heating the same by said arc to the necessary pasty condition and building up the same in place while in such pasty condition.

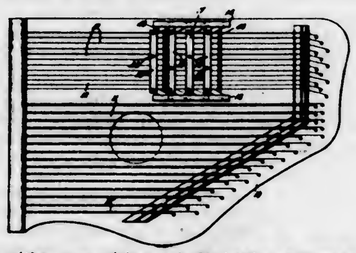
2. The method of making furnace hearths of magnesia or the like, which consists in introducing the material into place, heating the same to the temperature at which it becomes conductive, forming an electric arc from an electrode to said material, heating the same by said arc to the necessary pasty condition and building up the same in place while in such pasty condition.

1,220,840. ZITHER-ACTION. CHARLES HABERMANN, Jersey City, N. J., assignor to Oscar Schmidt, Inc., Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 7, 1916. Serial No. 89,550. (Cl. 84—116.)

1. A zither comprising a body having accompaniment strings mounted thereon, bearing members arranged on opposite sides of said strings, striking bars arranged across said strings and provided upon the undersides thereof with a series of spaced cushions, a flat spring connected at one end to each end of each of said bars for supporting the same above said strings, and means for yieldingly supporting the other end of each spring.

2. A zither comprising a body having accompaniment strings mounted thereon, bearing members arranged on opposite sides of said strings, striking bars arranged across said strings and provided upon the undersides thereof with a series of spaced cushions, a flat spring connected at one

end to each end of each of said bars for supporting the same above said strings and extending outwardly in an oblique direction, and means for yieldingly supporting the other end of each spring.



3. A zither comprising a body having accompaniment strings mounted thereon, bearing members arranged on opposite sides of said strings, striking bars arranged across said strings and provided upon the undersides thereof with a series of spaced cushions, a flat spring connected at one end to each end of the said bars for supporting the same above said strings, and means carried by said bearing members for yieldingly supporting the other end of each spring.

4. A zither comprising a body having accompaniment strings mounted thereon, bearing members arranged on opposite sides of said strings, striking bars arranged across said strings and provided upon the undersides thereof with a series of spaced cushions, a flat spring connected at one end to each end of each of said bars for supporting the same above said strings, means carried by said bearing members for yieldingly supporting the other end of each spring, and including an adjustable member mounted in a bearing member, washers between which the last named end of the spring is mounted, and a spring coiled about said adjustable member and bearing against one of the washers.

5. A zither comprising a body having accompaniment strings mounted thereon, bearing members arranged on opposite sides of said strings, striking bars arranged across said strings and provided upon the undersides thereof with a series of spaced cushions, a flat spring connected at one end to each end of each of said bars for supporting the same above said strings, means carried by said bearing members for yieldingly supporting the other end of the spring, including an adjustable member mounted in a bearing member, washers between which the last mentioned end of the spring is mounted, a spring coiled about said adjustable member and bearing against one of said washers, and a cover forming a part of each of said bearing members and overhanging the said adjustable member.

1,220,841. EXPANSION-BOLT. TOWNSON HAND, New Haven, Conn. Original application filed Nov. 19, 1915, Serial No. 62,413. Divided and this application filed May 1, 1916. Serial No. 94,643. (Cl. 85—1.)

1. A bolt of the character described comprising a main section and end sections of substantially the same diameter as said main section associated with said main section, and means for producing a relative lateral movement between said main and said end sections, whereby the sections of the bolt will bind in a bolt opening.

2. A bolt of the character described comprising a main section having diagonal surfaces and end sections associated with said main section and also having diagonal surfaces engaging the first named surfaces, one of said end sections being adjustable relative to the main section whereby a lateral movement between said main and end sections in a diagonal direction is effected to cause the sections of the bolt to bind in a bolt opening.

3. A locking bolt of the character described comprising a main section having oppositely beveled ends provided with openings, an end section associated with each end of the main section and having a beveled end adapted to cooperate with the beveled end of said main section, a lug formed upon the beveled end of each of the end sections and adapted to engage the opening in the adjacent end of the main section, each lug and opening being provided with contacting beveled surfaces whereby to cause relative lateral movement between said main and end sections when the bolt is being secured in position.

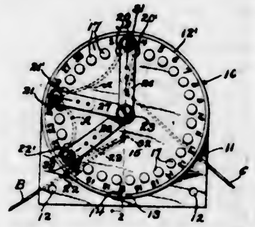


4. A locking bolt of the character described comprising a main section having oppositely beveled ends provided with openings, an end section associated with each end of the main section and having a beveled end adapted to coöperate with the beveled end of said main section, a lug formed upon the beveled end of each of the end sections and adapted to engage the opening in the adjacent end of the main section, each lug and opening being provided with contacting beveled surfaces whereby to cause relative lateral movement between said main and end sections when the bolt is being secured in position, and wedge-shaped keys adapted for insertion into the openings in the ends of the main section whereby to retain said end sections in their adjusted positions relative to the main sections.

5. A bolt of the character described comprising a main section, and end sections associated therewith, said main and end sections having oppositely beveled contacting surfaces for producing opposite lateral movement between said sections when the bolt is being locked in position.

[Claims 6 and 7 not printed in the Gazette.]

1,220,842. COMBINATION ELECTRIC LOCK-SWITCH. ROBERT O. HAMMOND, Paterson, N. J., assignor, by mesne assignments, to Bernard Urdang, Paterson, N. J. Filed Nov. 12, 1915. Serial No. 61,103. (Cl. 175—282.)



1. A combination electric switch comprising a casing, a disk secured thereto, a series of conducting members secured to said disk and extending therethrough, producing a series of contact points upon the outer face of said disk, a series of wires connected with certain of said conducting members, a bolt passing centrally through said disk and engaging said casing, a series of levers rotatably mounted thereon and each of said levers having a contact arm secured thereto and provided with a plurality of fingers for engagement with said contact points upon the outer face of said disk, as and for the purpose set forth.

2. A combination electric lock switch comprising a casing, a disk secured thereto, a series of conducting members secured to said disk and extending therethrough, a series of wires connected with certain of said conducting members, a series of contact points produced upon the outer face of said disk by said wire connections, a series of levers rotatably mounted upon said disk and each of said levers having a resilient contacting arm secured thereto and provided with a plurality of fingers for engagement with said contact points, upon the outer face of said disk, as and for the purpose set forth.

1,220,843. PRODUCTION OF METALLIC COMPOUNDS FROM CARBIDS. PAUL R. HERSHMAN, Chicago, Ill., assignor to The Mineral Products Company, New York, N. Y., a Corporation of West Virginia. Filed Dec. 21, 1914. Serial No. 878,314. (Cl. 75—58.)

1. The method of producing metallic aluminum from aluminum carbid which comprises heating the carbid in the presence of gases which do not tend to interfere with the decomposition of the carbids under super-atmospheric pressure, and to a temperature sufficient to decompose the carbid and to produce metallic aluminum.

2. The method of producing metallic aluminum from aluminum carbid which comprises heating the carbid to a temperature of about 2200° C.

3. The method of producing metallic aluminum from aluminum carbid which comprises heating the carbid to a temperature of about 2200° C., in the presence of a small amount of a metal compound facilitating the decomposition.

4. The method of producing metallic aluminum from aluminum carbid which comprises heating the carbid with small quantities of an additional aluminum compound facilitating the decomposition to a temperature of about 2200° C. until the charge begins to melt and thereafter lowering the temperature to about 2100° C. for further effecting the decomposition of the carbid and the formation of aluminum.

5. The method of producing metallic aluminum from aluminum carbid which comprises heating the carbid in the presence of a gas containing hydrogen which does not tend to interfere with the decomposition of the carbids under superatmospheric pressure, and to a temperature sufficient to decompose the carbid and to produce metallic aluminum.

[Claims 6 and 7 not printed in the Gazette.]

1,220,844. TYPE-WHEEL SLEEVE FOR PRINTING-TELEGRAPH RECEIVERS. GEORGE S. HILTZ, New York, N. Y., assignor to The Stock Quotation Telegraph Company, New York, N. Y., a Corporation of New York. Filed Aug. 31, 1916. Serial No. 117,861. (Cl. 178—38.)



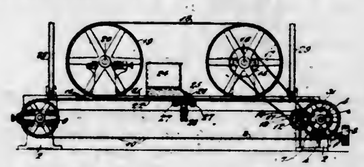
1. In a printing telegraph receiver, in combination, a type-wheel shaft of angular cross section, a sleeve of corresponding inner cross section mounted on the shaft to slide thereon but rotate therewith and having its ends slitted axially to provide inwardly yielding tongues, a type-wheel fixed on the sleeve, and means encircling the ends of the sleeve to force the said tongues radially inward, for the purpose set forth.

2. In a printing telegraph receiver, in combination, a type-wheel shaft of angular cross section, a type-wheel sleeve of corresponding inner cross section mounted on the shaft to slide thereon but rotate therewith and having its ends slitted axially to provide inwardly yielding tongues, and split clamping rings encircling the ends of the sleeve and provided with take-up means to draw the ends of the rings together whereby said yielding tongues may be forced inwardly, for the purpose set forth.

3. In a printing telegraph receiver, in combination, a type-wheel shaft of angular cross section, a type-wheel sleeve of tubular form slidably mounted on the shaft, having inner grooves to fit the edges of the shaft and having its ends slitted axially between said grooves, and take-up rings encircling the ends of the sleeve, for the purpose set forth.

4. In a printing telegraph receiver, in combination, a type-wheel shaft of angular cross section, a type-wheel sleeve of corresponding inner cross section slidably mounted on the shaft and having its ends slitted to provide inwardly yielding tongues, split clamping rings encircling the ends of the sleeve and having their ends extending radially outward, and take-up screws in the ends of the rings to draw the rings around the ends of the sleeve and force the said tongues radially inward, for the purpose set forth.

1,220,845. SANDWICH-CAKE MACHINE. CHESTER W. HITCHNER, Philadelphia, Pa. Filed June 2, 1916. Serial No. 101,217. (Cl. 107—1.)



1. In an apparatus of the character stated, the combination of an endless stencil, means arranged above the lower stretch of the stencil to apply filling through the same, an endless cake conveyer arranged with its upper stretch below and in opposed relation to the lower stretch of the stencil, means for feeding lower cakes to the conveyer to be carried by the same below the lower stretch of the stencil and the filling means, and means for placing upper cakes on the filling applied to the lower cakes.

2. In an apparatus of the character stated, the combination of an endless stencil, means arranged above the lower stretch of the stencil to apply filling through the same, an endless cake conveyer arranged with its upper stretch below and in opposed relation to the lower stretch of the stencil and extending longitudinally in opposite directions beyond the stencil, a cake receptacle arranged above one extended portion of the upper stretch of the conveyer to deliver lower cakes to said stretch, and a cake receptacle arranged above the other extended portion of the upper stretch of the conveyer to deliver upper cakes to the filling on the lower cakes.

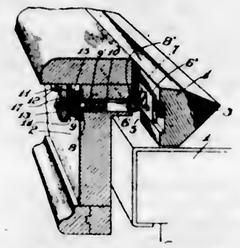
3. In an apparatus of the character stated, the combination of an endless stencil, means arranged above the lower stretch of the stencil to apply filling through the same, an endless cake conveyer arranged with its upper stretch below and in opposed relation to the lower stretch of the stencil, means for feeding lower cakes to the conveyer to be carried by the same below the lower stretch of the stencil and the filling means, means for placing upper cakes on the filling applied to the lower cakes, and means for exerting upward yielding pressure against the upper stretch of the conveyer at a point below the filling means.

4. In an apparatus of the character stated, the combination of an endless stencil, means arranged above the lower stretch of the stencil to apply filling through the same, and an endless cake conveyer arranged with its upper stretch below and in opposed relation to the lower stretch of the stencil and also arranged with said upper stretch extending longitudinally in opposite directions from the stencil so that cakes may be placed on and removed from said upper stretch.

1,220,846. COMBINATION GAME-TABLE. FRANK C. HOBBS, New York, N. Y., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed Dec. 18, 1916. Serial No. 137,524. (Cl. 46—12.)

1. In a game table, the combination of a bed, a table rail, detachable cushion rails, and means for securing

said cushion rails including a plurality of spaced longitudinally movable members supported in said table rail and having means to engage said cushion rails, plates through which the shanks of said members extend, said plates being provided with projecting humps, and operating arms rotatably mounted on said shanks and provided with complementary humps whereby said members are drawn outwardly to locking position when said arms are swung about said shanks.



2. A locking device for game table cushion rails, including a table rail, a member slidable therein and provided with means to engage the cushion rail, a plate on said table rail through which the shank of said member extends, said plate being provided with a projecting hump, and an operating arm rotatably mounted in said shank and provided with a complementary hump, whereby said member is drawn outwardly to locking position when said arm is swung about said shank.

3. A locking device for game table cushion rails, including a table rail, a member slidable therein and provided with means to engage the cushion rail, a plate on said table rail through which the shank of said member extends, said plate being provided with a projecting hump, an operating arm rotatably mounted in said shank and provided with a complementary hump, whereby said member is drawn outwardly to locking position when said arm is swung about said shank, and a spring embracing said shank between said plate and a shoulder on said member, to normally hold said member in releasing position.

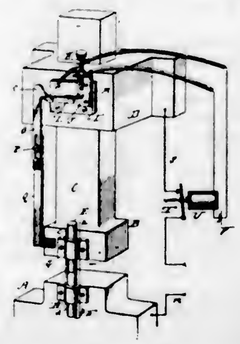
4. A locking device for game table cushion rails, including a table rail, a member slidable therein and provided with means to engage the cushion rail, a plate on said table rail through which the shank of said member extends, said plate being provided with a projecting hump, an operating arm rotatably mounted in said shank and provided with a complementary hump, whereby said member is drawn outwardly to locking position when said arm is swung about said shank, and a lip on said operating arm to engage the hump on said plate to prevent accidental displacement of said arm.

1,220,847. GRIP-CHAIN FASTENER. CHAUNCEY W. HODGES, Grand Rapids, Mich. Filed June 1, 1915. Serial No. 31,611. (Cl. 152—14.)



In an appliance for securing grip chains on automobile wheels, a metal bow formed to pass over the spoke from one side, the ends of the bow bent at right angles to form integral arms, said arms diverging from each other and formed to fit the outer surface of the wheel rim, a latch pivotally connected with one end of the bow and arranged to hook over the other end of the bow near the bend for the arms, and means for properly securing the ends of the arms to the ends of the grip chain.

1,220,848. ELECTRIC WELDING APPARATUS. HENRY S. HOLMES, Brooklyn, N. Y. Filed Jan. 24, 1917. Serial No. 144,118. (Cl. 219—4.)



1. An electric welding apparatus, comprising electrodes, one of which is movable, a fixed support, a pivoted lever on said support, an adjustable contact screw cooperating with one arm of said lever, a trigger on said movable electrode engaging the other arm of said lever, a magnet in circuit with said support and said adjusting screw, and a switch controlled by said magnet and controlling the welding current to said electrodes.

2. An electric welding apparatus, comprising electrodes, one of which is movable, a fixed support, a pivoted lever on said support, said lever having arms of unequal length, an adjustable contact screw coöperating with the long arm of said lever, a trigger on said movable electrode engaging the short arm of said lever, a magnet in circuit with said support and said adjusting screw, and a switch controlled by said magnet and controlling the welding current to said electrodes.

3. An electric welding apparatus, comprising electrodes, one of which is movable, a fixed support, a pivoted lever on said support, an adjustable contact screw coöperating with one arm of said lever, an arm on said movable electrode, a trigger adjustable on said arm and engaging the other arm of said lever, a magnet in circuit with said support and said adjusting screw, and a switch controlled by said magnet and controlling the welding current to said electrodes.

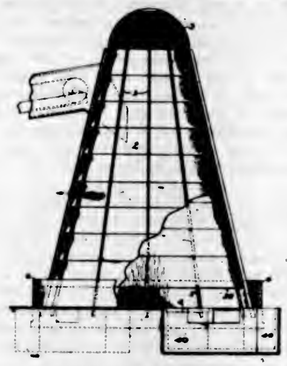
1,220,849. REFUSE-BURNER. FRANK F. HOPKINS, Seattle, Wash. Filed Nov. 8, 1916. Serial No. 130,144. (Cl. 110—18.)

1. A refuse burner comprising a shell having an upwardly converging wall supported with its bottom elevated above the ground and an encircling wall spaced outwardly from the base of the shell and rising to an elevation higher than the lower edge of the shell wall.

2. A refuse burner comprising a shell having its wall converging upwardly and at the base elevated to form a draft inlet extending about its base, an encircling wall spaced outwardly from the base of the said shell and rising to a height above that of the lower edge of the wall of the shell and draft conduits extending beneath the walls and opening at points intermediate the center and the base of the shell.

3. A refuse burner comprising a shell having its wall converging upwardly and at the base elevated to form a draft inlet extending about its base, an encircling wall spaced outwardly from the base of the said shell and rising to a height above that of the lower edge of the wall

of the shell, the floor within said shell having a plurality of grates spaced between the center and the shell and a



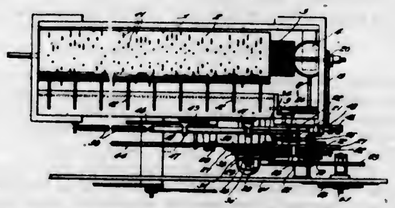
conduit connecting each grate with the outer air beneath the encircling wall.

1,220,850. PROCESS FOR PRODUCING STENCILS FOR DECORATING FABRICS. GERALD JACOBS, Dolgeville, N. Y. Filed Oct. 27, 1916. Serial No. 128,040. (Cl. 41—38.5.)



The process of producing a stencil for decorating fabrics, consisting of the following steps: (1) producing an engraving, in which the areas of the design, upon which the color is to be applied, appear in relief, and the outlines and surfaces to which no color is to be applied are excavated; (2) filling the excavated ground and lines of the engraving with a mineral powder; (3) applying paint to a sheet of bolting cloth, stretched over a frame, and then laying it upon the engraving, while the paint is yet fresh, and pressing it thereon; (4) raising the sheet of bolting cloth from the engraving and allowing the paint and the powder adhering thereto to dry; and (5) rubbing off the surplus powder, reducing the surface of the stencil to a uniform level, and rendering the same smooth; substantially as herein shown and described.

1,220,851. CHIMING-CLOCK. CHARLES A. JACQUES, New York, N. Y. Filed Sept. 1, 1916. Serial No. 118,071. (Cl. 58—13.)



1. A clock having a shiftable roller for actuating different chimes when in different positions, and means for automatically shifting said roller in a step by step manner, the steps being performed at equal intervals of several hours.

2. A clock having chime actuating means adjustable for striking different chimes, a ratchet for adjusting said means, a dog for successively moving said ratchet, and means for actuating said dog automatically at intervals of several hours.

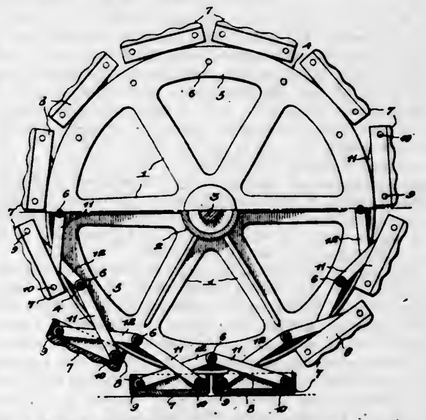
3. A clock having chime actuating means adjustable for striking different chimes, a ratchet and a dog for adjusting said means, a dog operating member on which said dog is mounted, a cam driven from the driving means of the clock for successively shifting said dog operating member, and a thrust member which said cam engages, said thrust member having a one-way yielding connection with said dog operating member to permit manual turning of the clock hands in a retrograde direction without injurious results.

4. A clock having chime actuating means adjustable for striking different chimes, a ratchet and a dog for adjusting said means, a dog operating member on which said dog is mounted, a cam driven from the driving means of the clock for successively shifting said dog operating member, a slide mounted on said last named member and having a lateral projection engaged by the cam, and a spring for permitting movement of said slide in one direction when the cam is turned in a retrograde direction by manual setting of the clock hands.

5. A clock having chime actuating means adjustable for operating different chimes, and both automatically and hand operated means for adjusting said actuating means.

[Claims 6 to 15 not printed in the Gazette.]

1,220,852. PORTABLE-TRACK WHEEL. CARL E. JOHNSON, St. Paul, Minn. Filed Aug. 29, 1916. Serial No. 117,497. (Cl. 21—150.)



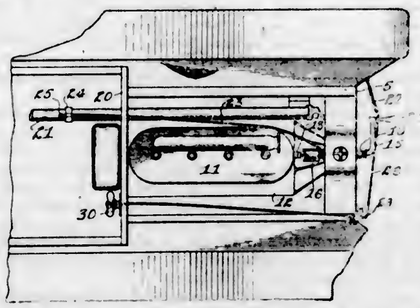
1. A device of the kind described comprising a wheel, a series of pads carried thereby, two of said pads being in simultaneous engagement with the ground throughout their entire length, and links connecting said pads to said wheel, a link of one pad having a wheel connection in common with a link of an adjacent pad.

2. The combination with a double rimmed wheel, of pins arranged transversely between the rims, pads overlapping said rims, and intersecting links carried by each pad and connected to two of said pins, respectively, each pin being pivotally connected to links of adjacent pads.

3. A device of the kind described comprising a wheel having spaced rims, ground pads corrugated on their outer faces and carrying a rectangular frame on their inner faces, the side members of the frame engaging the rims and forming track members, pins carried by the wheel and extending from one rim to the other, a double metal link carried by one end portion of each pad and

pivotally connected to one of said pins, and a single metal link carried by the other end portion of the pad and passing between said double links and being pivotally connected to an adjacent pin, as and for the purpose set forth.

1,220,853. STARTING MECHANISM FOR INTERNAL-COMBUSTION MOTORS. ENOCH E. JONES, Los Angeles, Cal. Filed Aug. 2, 1915. Serial No. 43,274. (Cl. 74—5.)

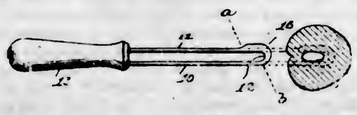


1. A starter for internal combustion engines, comprising the combination with a crank shaft, of a hand crank provided with a socket clutch arranged to be engaged with said shaft by moving it longitudinally thereto, resilient means secured to said crank normally holding the same out of operative engagement with said shaft, flexible means secured to said crank for moving the clutch into engagement with said shaft, flexible means secured to said hand crank for rotating the same, and a spring member secured to said hand crank for retracting the same.

2. A starter for automobile engines, comprising the combination with the engine crank shaft, of a hand crank provided with clutch means arranged to be engaged with said shaft by moving the crank longitudinally thereto, flexible means secured to said clutch means and adapted to extend along the steering post for operatively engaging said shaft and crank, spring means mounted on said crank and engaging the automobile frame tending to hold said clutch out of engagement with said shaft, flexible means secured to said hand crank for rotating the same and adapted to extend through the dash of the automobile, and spring means secured to said hand crank and to the automobile frame to return said crank.

3. A starter for automobile engines, comprising the combination with the engine crank shaft, of a hand crank provided with clutch means arranged to be engaged with said shaft by moving the crank longitudinally thereto, flexible means secured to said clutch means and adapted to extend along the steering post for operatively engaging said shaft and crank, spring means mounted on said crank and engaging the automobile frame tending to hold said clutch out of engagement with said shaft, flexible means secured to said hand crank for rotating the same and adapted to extend to a point accessible to the operator of the automobile, and spring means secured to said hand crank and to the automobile frame to return said crank.

1,220,854. FRUIT SEEDER OR PITTER. HARRIET B. JONES, Baltimore, Md. Filed Jan. 10, 1917. Serial No. 141,658. (Cl. 146—6.)



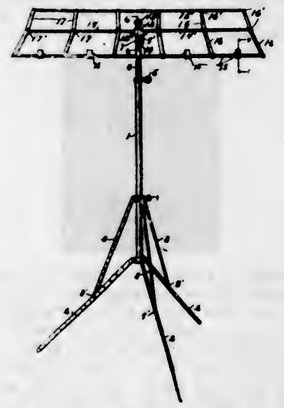
1. A device of the character described, comprising a handle and a member having straight parallel sides and formed into a loop at its outer end, said outer end being formed with a slitting blade which extends continuously from the end of one of said sides and around said end and along a portion of the other side of said member.

2. A device of the character described, comprising a handle and a member straight throughout its length and provided with a loop at its outer end, said outer end being formed with a slitting blade which extends continuously from the end of one of said sides and around said end and along a portion of the other side of said member.

3. A device of the character described, comprising a handle and a member having straight parallel sides and formed into a loop at its outer end, said outer end being formed with a slitting blade wider than the body of said member.

4. A device of the character described, comprising a handle and a member formed of wire bent in U shape to provide two straight parallel side members and a curved outer end connecting said members and forming a looped outer end, lying in the same plane as said side members, the wire forming said outer end being flattened to provide a slitting blade which extends around the end of said loop from the end of one of said side members and along a portion of the other one of said side members.

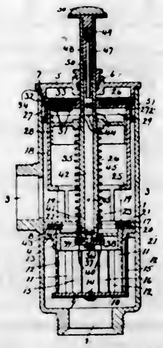
1,220,855. DISPLAY-STAND FOR FLOWERS. WILLIAM H. JOY and FRANCIS KORFF, Lansing, Mich., assignors to Korff Mfg. Co., Lansing, Mich. Filed July 10, 1913. Serial No. 778,314. (Cl. 45—121.)



A display stand for flowers comprising a collapsible stand having a supporting column and a table comprising border bars and a pair of parallel central bars connected by parallel links to both border bars, the links connecting one of said central bars with the border bars being connected to the upper side of said bars and the links connecting the other central bar to the border bars being connected to the under side of said bars, said central bars having their inner ends overlapping when the table is completely expanded and an adjustable clamp head carried by said supporting column and adjustably clamping the overlapping inner ends of said central bars, all coacting substantially as described and for the purpose specified.

1,220,856. FLUSHING-VALVE. ROBERT M. KEATING, Springfield, Mass., assignor to Springfield Valve Company, Springfield, Mass., a Corporation of Massachusetts. Filed Apr. 5, 1913. Serial No. 758,995. (Cl. 137—93.)

1. The combination, in a flushing-valve, with a casing having an interior supporting member, of a non-reciprocating perforated intake member adapted to be carried on said supporting member in said casing, and a combined valve-seat and retarding-chamber casing, which is separate from said intake member, and capable of being mounted on said supporting member in said first-mentioned casing, the arrangement of parts being such that said valve-seat retarding-chamber casing, by itself, and said intake member, by itself, are removable through the top of said first-mentioned casing, and a packing-ring between said combined valve-seat retarding-chamber casing and said intake member.



2. The combination, in a flushing valve, with a casing, a non-reciprocable perforated intake member in said casing and removable through the top thereof, a second member also in said casing and removable through the top thereof, such second member being separate from said intake member and comprising a retarding-chamber casing and a valve-seat having a guide sleeve, a combined packing and valve-seat ring between said intake member and said valve-seat and extending inwardly from the former, and means to support said members in said first-mentioned casing, of a plunger having a sliding fit in said sleeve and the top of said retarding-chamber casing, a valve carried by said plunger for said valve-seat and operating in said intake member, and a piston carried by said plunger in said retarding-chamber casing.

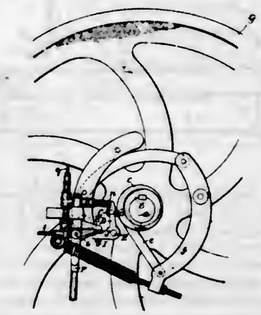
3. The combination, in a flushing-valve, with a casing provided with an inlet and an outlet, and an intake cage supported in said casing below said outlet, of a valve fitted to said cage and sliding therein, a seat for said valve above said cage, and means to operate said valve, said cage having ports therein which extend below said valve and admit water to the underside thereof, when the valve is closed, and which extend above said valve and admit water to the upper side thereof, when the valve is open.

4. The combination, in a flushing-valve, with a casing, and a valve-seat and a retarding-chamber casing in said first-mentioned casing, said valve-seat having a spring-supporting part, and said retarding-chamber having a closed top, of a suitably supported plunger, a piston carried by said plunger for said seat, a spring arranged between said spring-supporting part and said piston to elevate, when depressed, said plunger and attached parts, means of communication between opposite sides of said piston, closing means for said communicating mean, such closing means being actuated by the water, when said plunger is actuated downward, to open said closing means and admit the water to said retarding-chamber above said piston, and means to permit said water to escape slowly from above said piston, when said plunger rises with said piston and valve.

5. The combination, in a flushing valve, with a casing, and a valve-seat and a retarding-chamber casing in said first-mentioned casing, said retarding-chamber casing having a closed top, of a hollow plunger passing through said retarding-chamber casing, a piston carried by said plunger and forming the movable bottom of the retarding-chamber, a valve carried by said plunger for said seat, a spring arranged to elevate, when depressed, said plunger and attached parts, means to admit water to said plunger at the base, means, operated by the water in said plunger, to permit said water to enter said retarding-chamber, when said plunger is depressed, closing means carried by said valve for the base of said plunger, and means to permit said water to escape slowly from said chamber, when said plunger rises with said piston and valve, the base of said plunger then being closed by said valve-carried closing means.

[Claims 6 to 10 not printed in the Gazette.]

1,220,857. VARIABLE GOVERNOR-GEAR FOR INTERNAL-COMBUSTION ENGINES. ALICK KING, Lowestoft, England, assignor to Torbinia Engineering Company (1916) Limited, London, England. Filed May 7, 1915. Serial No. 26,613. (Cl. 123—140.)



In a device of the character described, the combination of a pump provided with a plunger, spring means for projecting said plunger, a bell-crank lever arranged with one arm engaging against said plunger, a roller carried in said arm, a speed-responsive device, an inner rotatable eccentric, an outer eccentric fitted over said inner eccentric and connected to be shifted from said speed-responsive device, said outer eccentric bearing against and operating said roller, and a lever for engaging the other arm of said bell-crank to shift the roller from contact with said outer eccentric, substantially as described.

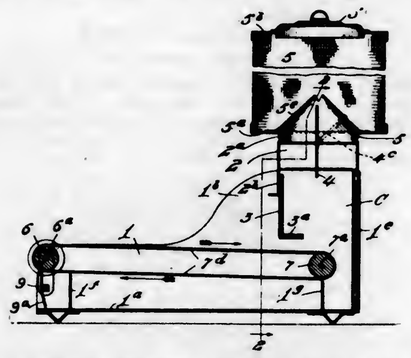
1,220,858. FOLDING AX. ERNST KLEPSCH, Saginaw, Mich. Filed Apr. 30, 1915. Serial No. 25,023. (Cl. 145—2.)



In a device of the character described, a handle, a slide in said handle, a terminal wedge member mounted in said slide, a blade carrying shank pivoted to said handle and having a recess with divergent walls adapted to be engaged by said wedge member, and means for maintaining said wedge member in tight engagement with said recess.

1,220,859. [WITHDRAWN.]

1,220,860. FLY-TRAP. SAMUEL KRUEGER, Fredericksburg, Tex., assignor to Rotary Fly-Trap Company, Houston, Tex., a Corporation of Texas. Filed Jan. 29, 1916. Serial No. 74,980. (Cl. 43—32.)



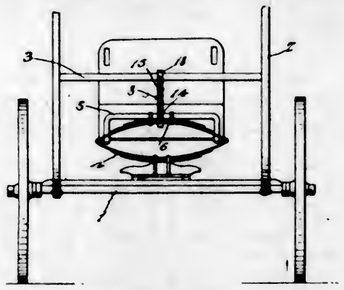
1. A fly trap comprising a trapping chamber having a transparent rear wall and a traveling apron extending into said chamber substantially parallel with the bottom thereof, together with a removable hood closing its top, and a depending screen closing the front of said chamber above said apron; said screen having at its lower end a rearwardly projecting portion slightly separated from said apron and adapted to prevent frightening the flies as the apron moves thereunder and also to direct any flies crawling down said screen rearwardly into said chamber.

2. In a fly trap, a trapping chamber having side walls and bottom, and an endless apron extending into said chamber, substantially parallel with said bottom, together with means for mounting and tightening said apron and permitting it to be readily removed; said means comprising a rock shaft having oscillatory arms with open-ended slots in their upper ends, a roller having its bearings in the slotted portions of said arms, a second roller journaled within the trapping chamber, and means for adjusting said rock shaft so as to tighten or loosen the apron and permit it to be removed.

3. A fly trap comprising a trapping chamber having a detachable hood closing its upper end, a rear transparent wall, a traveling belt extending into said chamber and a substantially L-shaped screen forming the front wall of said chamber above said belt; said screen having the lower portion thereof projecting into said chamber slightly above said belt, whereby any flies within the trapping chamber walking down said screen will be directed toward said transparent wall and thus prevented from escaping.

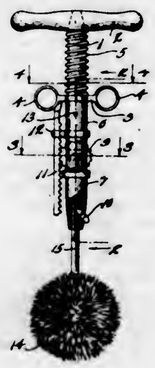
1,220,861. THILL-SUPPORT. THOMAS S. LEMMON, Latrobe, Pa. Filed May 26, 1916. Serial No. 100,107. (Cl. 21—108.)

A shaft support comprising an attaching element which is substantially L-shaped, means carried by the shorter arm of the L-shaped element providing means for securing the same to a vehicle, the longer arm of the element provided with spaced screw-threaded openings, a relatively flat rigid supporting element slidably mounted on the outer face of said longer arm of the attaching element, said supporting element provided with a longitudinally extending slot which is adapted to aline with openings in the longer vertical arm of the attaching element, means extending through the slot of the supporting element engaging one of the openings of the L-shaped attaching element for holding the supporting element against removal from the attaching element, and means extending through the slot of the supporting element engaging one of the openings of the attaching element to permit the supporting element to be raised and lowered to place the same in operative or inoperative position for holding the shaft or releasing the same to be placed in operative position, the upper end of said supporting element bent angularly in the direction of a vehicle, and adapted for engagement over



the brace bar of the shaft for holding the same in upright position, thus preventing the shaft from being accidentally released from the supporting element.

1,220,862. AGITATING DEVICE. SAMUEL W. LEWIS, Tip Top, Ky. Filed June 2, 1916. Serial No. 101,340. (Cl. 74—50.)

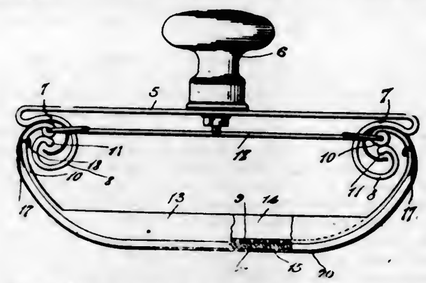


1. In an agitating device of the class described, the combination of a handle including a shank, a grip piece surrounding the same and mounted for reciprocation up and down on said shank, a rotatable member revolubly connected to the shank, and an operative connection intermediate said grip piece and the rotatable member for actuating the latter upon reciprocation of said grip piece.

2. In an agitating device of the class described, the combination of a handle member including a shank and head, a spring actuated grip piece mounted about the shank, a guide member carried by said shank, a rotatable element revolubly connected to said guide member, and a rack extending longitudinally of the shank and operatively connected to the rotatable member for actuating the latter upon reciprocation of the grip piece.

3. In an agitating device of the class described, the combination of a handle member including a shank, a spring actuating grip piece mounted thereon and having finger loops at opposite sides of the shank, a sleeve received on the lower end of the shank, a rotatable member revolubly connected to said sleeve, gear elements intermediate the sleeve and the rotatable member, a rack extending downwardly from said grip piece parallel with the shank and engaging the gear elements aforesaid for actuating the rotatable member upon actuation of the grip piece, and guide means carried by said sleeve for guiding the rack member during reciprocating movement.

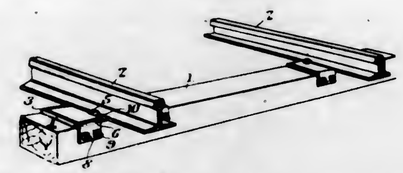
1,220,863. STAMP. ONOFRE LINDSAY and OSCAR HIDALGO, Valparaiso, Chile. Filed Apr. 12, 1916. Serial No. 90,641. (Cl. 101—132.)



1. A stamp including a body plate having two of the opposed edges curved, a handle carried by said body plate, a spring pressed plate spaced from said body plate and having upwardly curved edge portions engaged with the curved edges of said body plate, end walls carried by said spring presser plate and connected with the upwardly curved edge portions of the presser plate to form an ink receptacle, said presser plate having a plurality of perforations therein, and an ink pad secured to said spring presser plate and adapted to receive ink from said receptacle.

2. A stamp including a body plate, a spring presser plate removably secured in spaced relation to said body plate and having an ink containing chamber, said presser plate having a plurality of perforations in the lower portion thereof, and an ink pad arranged under said presser plate and removably secured to the latter.

1,220,864. RAIL-PLATE. WILLIAM W. MCCLOY, Philadelphia, Pa. Filed Oct. 5, 1915. Serial No. 54,236. (Cl. 238—2.)

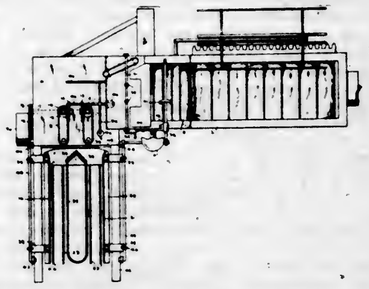


1. In combination, a rail and a tie therefor, of a tie plate arranged upon the tie for receiving the rail, the said plate having its outer transverse edges flanged upwardly and being provided with spike openings arranged at the longitudinal edges of the rail, saddle members arranged to contact with the flanges of the tie plate and with the sides of the tie, means for securing the said members to the sides of the tie, and spikes passing through spike openings in the rail plate and contacting with the inner edges of the saddle members.

2. The combination with a rail and a tie therefor, of a tie plate disposed upon the tie providing a rest for the rail, said plate having its outer edges flanged, substantially U-shaped members arranged transverse of the plate and having their side members secured to the tie and the U-shaped members having their medial or connecting portions contacting with the flanges of the tie plate, and securing members passing through the plate and contacting with the edges of the rails and with the inner longitudinal edges of the medial portions of the saddle members.

3. In combination with a rail and a tie for the rail, of a metal plate arranged longitudinally upon the tie and providing a rest for the rail, said plate having its transverse edges upturned, substantially U-shaped metallic members disposed transversely of the tie and plate and straddling the said tie and plate and having their side members secured to the tie and the outer edges of the medial portions contacting with the end flanges of the tie plate, the inner edges of the medial portions of said U-shaped members being notched, and securing elements passing through the notches and through openings in the plate and contacting with the adjacent edges of the rail.

1,220,865. BUNDLE CARRIER AND SHOCKER ATTACHMENT. ROBERT F. MCGUIRE, Grand Forks, N. D., assignor of one-half to R. B. Griffith, Grand Forks, N. D. Filed Jan. 28, 1916. Serial No. 74,802. (Cl. 56—121.)



1. In a bundle carrier and shocker of the class described, the combination with a harvester, of a platform, and a pivotally mounted frame member adapted to receive the bundle from the harvester and deposit the same upon the platform in an upright position, said frame member consisting of spaced supporting fingers, spaced guide fingers, and means for pivotally supporting said fingers whereby they can be automatically rocked from a horizontal to a vertical position by the weight of the bundle.

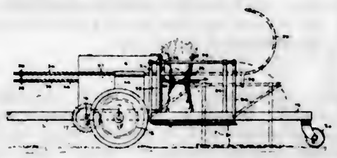
2. In a bundle carrier and shocker of the class described, the combination with a binder, of a platform, and a pivotally mounted frame member adapted to receive the bundle from the binder and deposit the same upon the platform in an upright position, said frame member consisting of spaced supporting fingers, spaced guide fingers, disposed above and in fixed relation to the supporting fingers, means for pivotally supporting said fingers, and a weight attached to the frame member to automatically return the frame to normal position after arighting the bundle on the platform.

3. In a bundle carrier and shocker of the class described, the combination with a binder, of a platform, and a pivotally mounted frame member adapted to receive the bundle from the binder, and deposit the same upon the platform in an upright position, said frame member consisting of a finger bar pivotally supported intermediate its ends upon the platform, an angular arm extending from one end of said bar, a weight adjustable thereon, bundle supporting fingers fixed upon the opposite end of the said bar, an additional finger bar fixed to and disposed above in spaced relation to the first mentioned finger bar, and guide fingers extending from the additional finger bar above the supporting fingers in spaced relation thereto.

1,220,866. COMBINED BUNDLE CARRIER AND SHOCKER DEVICE. ROBERT F. MCGUIRE, Grand Forks, N. D., assignor of one-half to R. B. Griffith, Grand Forks, N. D. Filed Apr. 5, 1916. Serial No. 89,184. (Cl. 56—121.)

1. In a bundle carrier and shocker, the combination with a platform, a carrier frame, and means to raise and lower the frame, of a pair of rods slidably mounted upon the platform, said rods each having a curved terminal at one end, means to move the bundles from the platform against said curved terminals to increase the size of the shock forming space on the carrier frame, and spring

tension means to return said rods to their initial positions after being operated to form a shock.



2. In a bundle carrier and shocker, the combination with a platform, and a vertically movable carrier frame, of a pair of rods slidably and rotatably mounted upon the platform, said rods each having a curved terminal at one end to form and retain the bundles in shock formation upon the carrier frame, spring tension means to return the sliding rods to their initial positions, and means carried by the rods controlled by the movement of the carrier frame for rotating the rods to dispose their curved terminals in a vertical position out of engagement with the shock when the carrier frame is lowered.

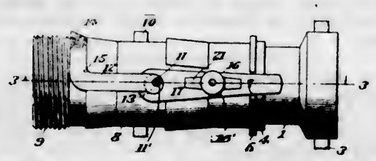
3. In a bundle carrier and shocker, the combination with a platform, a carrier frame, means to raise and lower the carrier frame, of a pair of brackets mounted on the platform, a rod slidably mounted through each bracket and formed with a curved rear end, said rods disposed in horizontal overlapping relation, an expansible coil spring arranged on each rod forwardly of the bracket, means threadingly connected to the forward end of each rod to regulate the expansive tension of each spring, means to move the bundles into engagement with the said curved rod ends to increase the shock forming space, and means to rock the said curved rod ends to a vertical position when the shock has been formed.

1,220,867. PRESSURE-INDICATOR FOR TIRES. LAUCHLIN MCINNIS and DAVID E. SEMON, St. Paul, N. C. Filed July 13, 1916. Serial No. 109,091. (Cl. 152—12.)



In combination, a wheel including a hub having spokes and a recess therein between two adjacent spokes and a pneumatic tire having an inflating valve, of a substantially U-shaped bracket located between said spokes and between the hub and said valve with its opened end opposite said valve, ears formed upon the ends of the arm portions of the brackets and secured to the spokes, a lug formed upon the web portion of the bracket and received within the recess, a gage carried by said bracket and a tube connecting said gage and inflating valve.

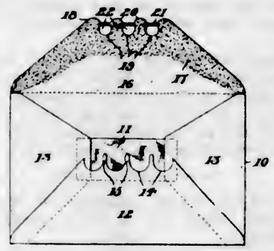
1,220,868. HOSE-COUPLING. PINKNEY A. MCSWAIN, Anderson, S. C. Filed Jan. 29, 1916. Serial No. 75,077. (Cl. 137—28.)



1. A hose coupling comprising a member having a shoulder, a second member adapted to receive the end portion of the first mentioned member, pintles and pins mounted on the second mentioned member, catches having slots which receive the pins whereby the catches may slide on the pins, springs interposed between the pins and the catches, said catches having hook ends adapted to engage the shoulder, a lever fulcrumed upon the pintles and having eccentrics which are received in the catches and a shoulder mounted upon the second mentioned member, said lever adapted to swing into engagement with the shoulder to hold the hooks of the catches in contact with the shoulder upon the first mentioned member.

2. A hose coupling comprising a member having a shoulder, a second member adapted to receive the end portion of the first mentioned member, a flange on the second memtioned member having passages, pintles and pins mounted upon the second mentioned member, catches slidably received in the passage and having slots which slidably receive the pins, springs interposed between the pins and the catches, said catches having hook ends adapted to engage the shoulder, a lever fulcrumed upon the pintles and having eccentrics which are received in the catches and a shoulder mounted upon the second mentioned member, said lever adapted to swing into engagement with the shoulder to hold the hooks of the catches in contact with the shoulder upon the first mentioned member.

1,220,869. SAFETY-ENVELOP. WOJCIECH MARCHEWCZYK, Chicago, Ill. Filed Mar. 13, 1916, Serial No. 83,917. Renewed Feb. 24, 1917. Serial No. 150,819. (Cl. 229—81.)

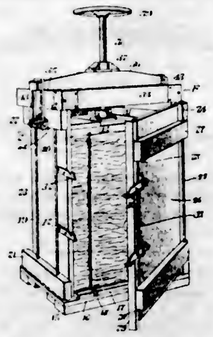


A safety envelop having opposite side flaps, a bottom flap and a normally open closing flap, a transparent glue plate secured to the inner side of the adjacent portions of the said side and bottom flaps and having an outer exposed surface rearwardly of the envelop, the said bottom flap having a serrated edge providing spaced teeth and grooved portions adjacent the said plate, the said closing flap having its free edge thereof formed substantially complementally to the said serrated edge and having spaced tabs arranged between the said teeth and with connecting ribs for the said tabs overlying the said teeth with the ends of the teeth exposed when the closing flap is in its sealed position upon the said plate, the tabs being received in the grooves the adjacent edges of the said tabs and teeth being slightly spaced apart when the envelop is closed.

1,220,870. BALING-PRESS. JOSEPH A. MARX, Saginaw, Mich., assignor to Lenmar Manufacturing Company, Saginaw, Mich., a Corporation of Michigan. Filed May 14, 1915. Serial No. 28,126. (Cl. 100—8.)

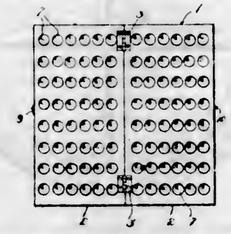
1. In a baling press of the class described, a press box having a sub-floor and flooring strips secured thereon, said flooring strips being provided with transverse grooves, retaining rods engaging said grooves, side wall members having apertures for the passage of the retaining rods, a back wall member, a hingedly supported door, a top frame supported on the side wall members and comprising a front bar spaced from the upper edge of the door and side bars, the upper edge of the back wall being unobstructed, securing clamps on the door and on the back wall member, a head block supported loosely on the top frame, means for securing the head block in fixed relation to the press box, a screw in threaded engagement with the head block, and a follower carried by the screw and having swivel connection therewith.

2. In a bailing press, a press box, a movably supported cross head having a screw threaded therethrough and a follower swiveled on the lower end of the screw, external frame members at the top of the press box, lugs secured



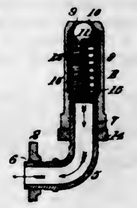
on said frame members and having flanges extending beneath the same to resist upward tension, and yokes pivoted on the lugs to engage the head block.

1,220,871. GAME. JAMES H. MASON, Grand Prairie, Tex. Filed Sept. 18, 1916. Serial No. 120,695. (Cl. 46—64.)



A game of the class described comprising a board consisting of sections, said sections being hingedly connected and having their upper surfaces provided with spaces for controlling the movement of the game pieces, said game pieces being initially placed on spaces at each corner of the board, the under surfaces of each section having recesses formed therein, said recesses being adapted to coincide when the sections are folded with their under surfaces in contacting relation to provide pockets, and means for holding the sections in contacting relation.

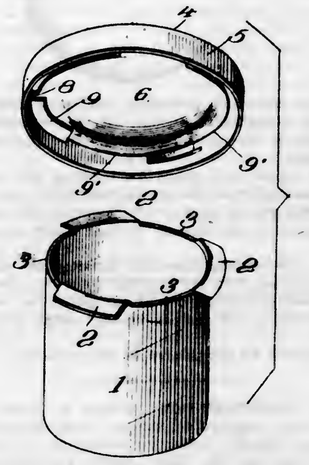
1,220,872. AUXILIARY AIR-VALVE. HENRY C. MEYER, San Francisco, Cal., assignor to James E. Hocken, San Francisco, Cal. Filed Mar. 22, 1916. Serial No. 85,849. (Cl. 137—26.)



1. An auxiliary air valve comprising an elbow adapted to be connected with the intake manifold on an internal combustion engine, an elongated cap having an air intake opening formed in one end adjustably mounted on the elbow, said cap having a plurality of V-shaped grooves formed on its interior surface, a ball-check adapted to normally close said opening, and a spring engageable with the ball-check.

2. An auxiliary air valve comprising an elongated cylindrical shaped member having an air intake opening in one end and a plurality of V-shaped grooves formed on its interior surface, a threaded extension on the end opposite the air intake adapted to receive the threaded end of an elbow or nipple to form a connection with an intake manifold, a valve adapted to close the air intake opening, a spring engageable with the valve and means for increasing or decreasing the tension of the spring.

1,220,873. CAN-CLOSURE. LAURA M. MEYERS, Elmhurst, N. Y. Filed Sept. 13, 1916. Serial No. 119,898. (Cl. 220—75.)



1. A garbage can comprising a body portion having a plurality of ears carried by the upper edge thereof, a cover, a plate carried by the under side thereof, the edge of the plate bent downwardly from the cover having a plurality of inwardly extending portions parallel with the plate forming flanges, the said flanges adapted to interlock with the ears carried by the can body portion.

2. A garbage can comprising a body portion having a plurality of outwardly extending and downwardly inclined ears carried by the upper edge thereof, a cover, a plate carried by the cover, the edge of the plate bent downwardly from the cover and having a plurality of inwardly extending portions parallel with the plate forming flanges spaced apart from the plate, the said flanges adapted to interlock with the ears on the can body and frictionally hold them between the said flanges and the downwardly bent edges of the plate.

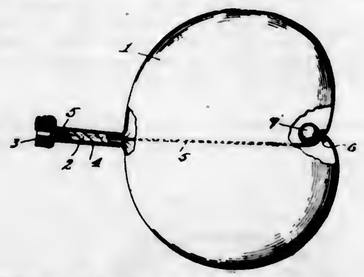
3. A garbage can comprising a body portion having a plurality of outwardly extending and downwardly inclined ears carried by the upper edge thereof, a cover of a greater diameter than the can and having a depending flange surrounding the top of the can and covering the ears carried thereby, a plate carried by the cover, the edges of the plate bent downwardly from the cover and having a plurality of inwardly extending portions parallel with the plate forming flanges spaced apart from the plate, the said flanges adapted to interlock with the ears on the can body and frictionally hold them between the said flanges and the downwardly bent edges of the plate.

1,220,874. TOY BALLOON. THOMAS W. MILLER, Ashland, Ohio, assignor to The Faultless Rubber Company, Ashland, Ohio, a Corporation of Ohio. Filed Feb. 19, 1916. Serial No. 79,410. (Cl. 46—37.)

1. In an elastically expansible balloon, means for inflating and expanding the same, and means for restricting

the expansion of the balloon at a given point under said inflation.

2. In an elastically expansible balloon, means for inflating and expanding the same, and means disposed within the balloon for restricting the expansion thereof at one or more points.



3. In an elastically expansible balloon, means for inflating and expanding the same, and a cord attached to the interior of the balloon for restricting the expansion of the latter.

4. In a toy balloon, means for inflating the same, and means extending from the inflating point into the balloon and attached to the interior of the latter for restricting the expansion of the balloon at that point when under inflation.

5. In a toy balloon, means for inflating the same, and a cord extending from the inflating point into the balloon and attached to the interior of the latter for restricting the expansion of the balloon at that point when under inflation.

[Claims 6 to 10 not printed in the Gazette.]

1,220,875. FOUNTAIN-PEN. MORRIS W. MOORE, Somerville, Mass., assignor to Samuel Ward Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 28, 1914. Serial No. 874,534. (Cl. 120—48.)

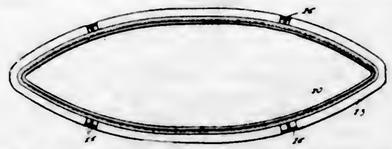


In a fountain pen, a barrel having an ink reservoir, a valve seat in said barrel, an internal stop shoulder at one end of said barrel, a pen bar consisting of a member having a valve at its inner end disposed for movement relative to said seat, an enlarged cylindrical plug on said pen bar in advance of said valve and having threaded engagement within said barrel, said plug having a plain portion at its outer end coacting with said stop shoulder of the barrel to prevent complete withdrawal of the pen bar from the barrel, and an engaging element on said pen bar in advance of said plain portion of the plug, and a cap having an operating device adapted for engagement with said engaging element of the pen bar when said cap is placed in position.

1,220,876. ATTACHMENT FOR BOATS. WARDLOW H. MOORE, Advocate Harbour, Nova Scotia, Canada. Filed May 24, 1916. Serial No. 99,597. (Cl. 9—3.)

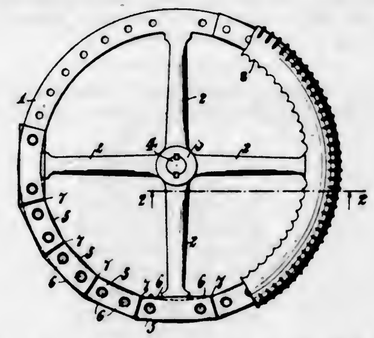
1. The combination with a boat, of a continuous rim secured to the sides adjacent the gunwale of the boat, said rim having its outer face concaved, a flexible and collapsible cover or casing, arranged in said concaved face of the rim, a plurality of inflatable and collapsible tubes, supported in said cover or casing, flexible means for supporting said cover or casing about said tubes, and means for collapsing said cover or casing.

2. The combination with a boat, a continuous rim having a concaved face secured to the outer sides and adjacent the gunwale of the boat, a flexible and collapsible cover or casing arranged in the concaved face of the rim, a plurality of inflatable and collapsible tubes supported in



said cover or casing, and flexible means arranged in the adjacent edges of the cover or casing supporting the same snugly about the tubes, and means for inflating the tubes in the casing.

1,220,877. STEERING-WHEEL. HENRY S. MORGAN, Trenton, N. J., assignor to Pouvailsmith Corporation, Poughkeepsie, N. Y., a Corporation of New York. Filed Aug. 7, 1914. Serial No. 855,596. (Cl. 74—33.)

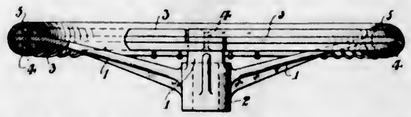


1. A steering wheel comprising in combination rim supporting means, a core for the rim containing permeable material, and a rim cover of molded plastic material united to said core by entering the said permeable material thereof.

2. A steering wheel comprising in combination with a hub and rim supporting arms, a rim core containing a wood filler and a condensite cover molded thereon under pressure.

3. A steering wheel comprising in combination with a hub and rim supporting arms, a rim core containing a plurality of pieces of wood and a cover of plastic material molded thereon under pressure so as to cause said material to permeate said wood and to be forced between the pieces of wood.

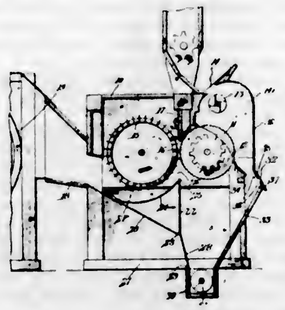
1,220,878. STEERING-WHEEL. HENRY S. MORGAN, Trenton, N. J., assignor to Pouvailsmith Corporation, Poughkeepsie, N. Y., a Corporation of New York. Filed Dec. 24, 1914. Serial No. 878,871. (Cl. 74—33.)



1. A steering wheel comprising in combination rim supporting means, a core composed entirely of light permeable material, and a rim cover of molded plastic material permeating the said core and thereby causing it to be strengthened and stiffened so as to serve as a reinforcing band as well as a filler for the rim.

2. A steering wheel comprising in combination with a hub and rim supporting arms, a core composed entirely of wood and secured to the arms, and a condensite cover molded thereon under pressure, whereby the condensite is caused to permeate the wooden core to strengthen and stiffen the same for the purpose specified.

1,220,879. COTTON-SEED LINTER. JAMES S. MULLEN, McRae, Ga., assignor to Hugh E. Sessions, Columbia, S. C. Filed Dec. 30, 1914. Serial No. 879,737. (Cl. 13—9.)



1. In a cotton seed linter, the combination of a casing, a saw cylinder therein capable of delinting cotton seed, a seed hopper located adjacent said saw cylinder and having a discharge outlet for delinted seed, a brush cylinder adapted to brush lint downwardly from said saw cylinder, and a mote board spaced from the under side of said brush cylinder and forming therewith an outlet flue beneath the brush cylinder, means for preventing the entrance of air to said flue from beneath said mote board, said casing having an air inlet opening therein on the side thereof opposite the inlet of said flue whereby air entering said inlet in the casing will pass through seed descending from said discharge outlet and through the material descending from the space between said cylinders so as to separate loose lint therefrom and carry it out through said flue.

2. In a cotton seed linter, the combination of a casing, a saw cylinder therein capable of delinting cotton seed, a seed hopper located adjacent said saw cylinder and having a discharge outlet for delinted seed, a brush cylinder adapted to brush lint downwardly from said saw cylinder, and a mote board spaced from the under side of said brush cylinder and forming therewith an outlet flue beneath the brush cylinder having an inner portion extending downwardly to the floor at an angle preventing the entrance of air to said flue from beneath the mote board, said casing having an air inlet opening therein on the side thereof opposite the inlet of said flue whereby air entering said inlet in the casing will pass through seed descending from said discharge outlet and through the material descending from the space between said cylinders so as to separate loose lint therefrom and carry it out through said flue.

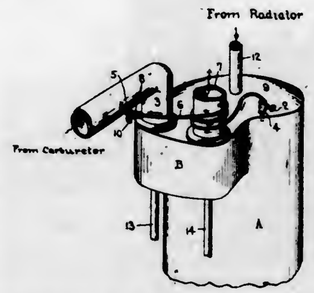
3. In a cotton seed linter, the combination of a casing, a saw cylinder therein capable of delinting cotton seed, a seed hopper located adjacent said saw cylinder and having a discharge outlet for delinted seed, a brush cylinder adapted to brush lint downwardly from said saw cylinder, a mote board spaced from the under side of said brush cylinder and forming therewith an outlet flue beneath the brush cylinder, means for shutting off the draft from beneath said mote board, and a device for receiving the seed, motes and trash descending from said discharge outlet and from the space between said cylinders, said casing having an air inlet opening therein on the side thereof opposite the inlet of said flue whereby air entering said air inlet in the casing will pass through the seed descending from said discharge outlet and through the material descending from the space between said cylinders so as to separate loose lint therefrom and carry it out through said flue.

4. In a cotton seed linter, the combination of a casing, a saw cylinder therein capable of delinting cotton seed, a brush cylinder adapted to brush lint downwardly from said saw cylinder, a mote board spaced from the under side of the brush cylinder and forming therewith an outlet flue beneath the brush cylinder, means for leading the delinted seed away from the saw cylinder, means for preventing the entrance of air to said flue from beneath said mote board, said casing having an air inlet opening therein on the side thereof opposite the inlet of said flue whereby air entering said opening in the casing will pass through the delinted seed and other descending material and out through the flue above said mote board.

5. In a cotton seed linter, the combination of a casing, a saw cylinder therein capable of delinting cotton seed, a brush cylinder adapted to brush lint downwardly from said saw cylinder, a mote board spaced from the under side of the brush cylinder and forming therewith an outlet flue beneath the brush cylinder, means for leading the delinted seed away from the saw cylinder, means for preventing the entrance of air to said flue from beneath said mote board, said casing having an air inlet opening therein on the side thereof opposite the inlet of said flue whereby air entering said opening in the casing will pass through the delinted seed and other descending material and out through the flue above said mote board, and means for varying the size of said air inlet opening to control the admission of air.

[Claims 6 to 11 not printed in the Gazette.]

1,220,880. INTERNAL-COMBUSTION ENGINE. HARRY A. MURRAY and WILLIAM T. DORMAN, Houston, Tex., assignors of one-third to Claude Pollard, Houston, Tex. Filed Oct. 15, 1914. Serial No. 866,843. (Cl. 123—25.)

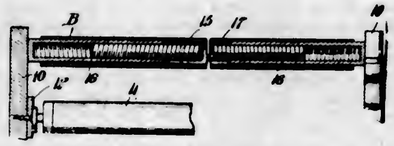


1. The combination of the cylinder of an internal combustion engine having a water jacket provided with means for supplying water thereto, of an intake pipe having a horizontal portion and communicating with the cylinder, a vertically disposed exhaust pipe communicating with the cylinder, a pipe communicating at one end with the water jacket and coiled around the vertical exhaust pipe and communicating at its opposite end with the under side of the horizontal portion of the intake pipe, said pipe at all times containing a supply of water, whereby water in the coil is heated and flows by gravity and accumulates in the bottom of the longitudinal portions of the pipe from whence it is drawn into the cylinder and vaporized with the gas by the suction of the piston, and a manually controlled valve for controlling the water passing through the pipe.

2. The combination of the cylinder of an internal combustion engine having a water jacket provided with means for supplying water thereto, of an intake pipe having a longitudinal portion and communicating with the cylinder, an exhaust pipe communicating with the cylinder, a pipe communicating at one end with the water jacket and coiled adjacent the exhaust pipe and communicating at

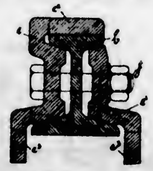
its opposite end with the horizontal portion of the inlet pipe, said pipe at all times containing a supply of water, whereby water in the coil is heated and flows into and accumulates in the horizontal portion of the intake pipe to be drawn into the cylinder and vaporized with the gas by the suction of the piston.

1,220,881. WINDOW-SCREEN. MARTIN OSCAR NELSON, Brooklyn, N. Y. Filed June 20, 1916. Serial No. 104,736. (Cl. 156—39.)



The combination with a pair of window shade roller brackets, of means for holding the brackets against the window casing, said means embodying a rod oppositely threaded from its center in the direction of its ends, a pair of sleeve-like members threadedly adjustable upon said rod, and capable of independent adjustment toward and away from each other, said members adapted to engage against the brackets to hold the latter against the window casing, and a tube loosely embracing said parts and terminating short of said sleeve-like extensions.

1,220,882. RAIL-JOINT. ANTON HELMICH OP TEN NOORT, Utrecht, Netherlands. Filed Nov. 18, 1916. Serial No. 132,180. (Cl. 239—3.)



1. In a rail joint, in combination with a plurality of rails having recesses in their tread portions at their meeting ends, the bottoms of said recesses having surfaces upwardly inclined toward the ends of the rail, a fish plate having a head portion adapted to fill the adjacent recesses of the rail treads of the abutting ends of each pair of rails, and bolts for securing the fish plates to the rails, said bolts when fastened holding the previously inclined surfaces of the rail ends in a plane substantially parallel to the treads and the upper surface of the head portion of the fish plate in alinement with said treads.

2. In a rail joint, in combination with a plurality of rails having recesses in their tread portions at their meeting ends, said recessed portions being upwardly unresiliently bent toward the ends of the rails, a fish plate having a head portion adapted to fill the adjacent recesses of the rail treads of the abutting ends of each pair of rails, and bolts for securing the fish plates to the rails, said bolts when fastened holding the upper previously bent surfaces of the recessed ends in a plane substantially parallel to the treads, and the upper surface of the head portion of the fish plate in alinement with said treads.

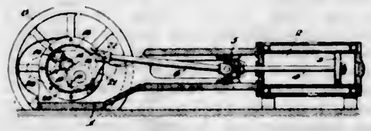
3. In a rail joint, in combination with a plurality of rails having recesses in their tread portions at their meeting ends, the bottoms of said recesses having surfaces upwardly inclined toward the ends of the rails, fish-plates, a supplemental angled fish plate adapted to be attached to one of such fish plates and having a head portion adapted to fill the adjacent recesses of the rail treads of each pair of rails, and bolts for attaching the fish plates and supplemental plate to the rails, said bolts when fastened holding the previously inclined surfaces of the rail ends in a plane subetantially parallel to the treads and the upper surface of the head portion of the supplemental plate in alinement with said treads.

4. In a rail joint, in combination with a plurality of rails having recesses in their tread portions at their meeting ends, and the bottoms of said recesses having surfaces upwardly inclined toward the ends, a fish plate having a head portion adapted to fill the adjacent recesses of the rail treads of each pair of rails, bolts for securing the fish plates to the rails, said bolts when fastened holding the previously inclined surfaces of the rail ends in a plane substantially parallel to the treads and the upper surface of the head portion of the fish plate in alinement with said treads, and a spacing plate located between the fish plate and the rail, the thickness of which provides an adjustment enabling the inner edge of the fish plate head to be brought into alinement with the inner edge of the rail heads.

5. In a rail joint of the character described, means for obtaining alinement of the tread surface of the head of a fish plate with the tread surfaces of the meeting rails comprising a pair of rails having bolt holes in their webs adjacent their ends, a fish plate having bolt holes complemental to the bolt holes in the webs of the rails and normally vertically out of line with the latter, bolts adapted to pass through the holes in the rails and fish plate, and securing means for said bolts adapted to be applied to said bolts after the holes in the rails and fish plate have been brought into alinement.

[Claims 6 and 7 not printed in the Gazette.]

1,220,883. TRANSMISSION-GEARING. HARRY W. PARKER, Philadelphia, Pa. Filed Sept. 15, 1916. Serial No. 120,232. (Cl. 74—34.)



1. The combination with a stationary, internal, circular rack, a shaft located concentrically relative to the rack and carrying a crank pin, a pinion on the crank pin meshing with the rack, a gear train connecting the pinion with said rack, and an arm fixed to the pinion and constituting a drive member.

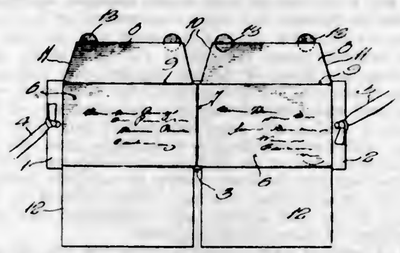
2. The combination with a circular, internal stationary rack, a shaft having a crank disk, a crank pin on the disk, a pinion on the crank pin meshing with the rack, a gear train connecting the pinion with said rack, and an arm fixed to the pinion and constituting a driving member.

3. The combination with a stationary, circular, internal rack, a crank disk, crank pins on the disk, pinions on the crank pins meshing with the rack, an idle pinion carried by the disk and meshing with both pinions, and an arm fixed to one of the first mentioned pinions and constituting a driving member.

4. The combination with a stationary, circular, internal rack, a shaft, a crank disk on the shaft located concentrically to the rack, a series of journal pins located in alinement on the disk, the two end pins constituting crank pins, pinions on the crank pins meshing with the rack, one of said pinions having half the number of teeth of the rack, an idle pinion connecting the pinions on the crank pins and a driving arm fixed to one of said pinions on the crank disk.

5. The combination with a stationary, circular internal rack, a shaft having a crank disk thereon, three pinions carried by the disk, two of which mesh with the rack, an arm fixed to one of the pinions and a driving member connected to the free end of the arm, said drive member at its point of connection with the arm movable in an elliptical path.

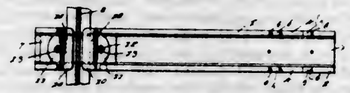
1,220,884. BOOK. ANNA DUSELL PARRETT, Denver, Colo. Filed Aug. 21, 1916. Serial No. 116,051. (Cl. 11—17.)



1. A book comprising a pair of covers, a plurality of envelops bound between said covers and arranged in pairs, the envelops of each pair being disposed end to end in longitudinal alinement having body portions the adjacent ends of which are united to each other and to the covers to form a hinged connection between the envelops and the covers.

2. A book comprising a pair of covers composed of a single rectangular sheet folded transversely its ends, and a pair of envelops disposed between said covers, said envelops comprising two leaves and being composed of a substantially rectangular sheet folded midway its length, the fold of said sheet being secured to said covers at their fold, a top and a bottom flap folded over each leaf, each top flap having its end edges inclined toward each other, the fold of the top flaps on each sheet being in alinement, the bottom flaps having their folds longitudinally alined, and means for sealing the respective top and bottom flaps together.

1,220,885. RAIL-TIE. JOHN PETERSON, Felch, Mich., assignor of one-half to Swan J. Peterson, Foster City, Mich. Filed July 11, 1916. Serial No. 108,668. (Cl. 238—5.)



A rail tie comprising a hollow body, shoulders formed on the upper edges of the opposite sides of the body, rail-supporting elements positioned within the body and located below the shoulders, rail clamping elements extending across the tie body and engaging the shoulders, extensions formed on the clamping members and extending between the sides of the tie body and resting on and engaging the rail-supporting elements, and fastening means extending through the extensions and the rail-supporting elements and the lower wall of the tie body.

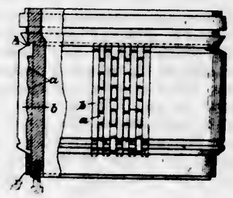
1,220,886. TUNGSTEN CONTACT-POINT. CARL A. PFANSTIEHL, Waukegan, Ill., assignor to Pfanstiehl Company, a Corporation of Delaware. Filed Apr. 6, 1914. Serial No. 830,013. (Cl. 173—13.)



1. A make and break electrical contact of drawn tungsten in which the grain or fiber of the tungsten extends perpendicularly to the contact face.

2. An electrical make and break contact sawed from the end of a tungsten rod, so that the fiber or grain of the tungsten extends perpendicularly to the impact face of the contact.

1,220,887. NEEDLE-CYLINDER FOR KNITTING-MACHINES. ALBERT M. PIGEON, Norristown, Pa., assignor to Wildman Mfg. Co., Norristown, Pa., a Corporation of Pennsylvania. Filed June 6, 1916. Serial No. 101,986. (Cl. 66—21.)

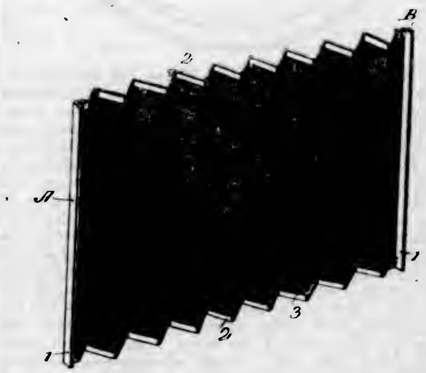


1. A needle carrier having needle guiding walls inserted in grooves therein, the metal of the carrier between the adjacent walls being swaged in spots inwardly and throughout an area from wall to wall to hold both walls in place.

2. A needle carrier having walls inserted in grooves thereof, the metal of the carrier being upset in spots first on one side of any given wall and then on the other, the swaged spots on one side of the wall being opposite unswaged portions on the opposite side of the wall, substantially as described.

3. A needle carrier having walls inserted in grooves thereof, the metal of the carrier between the walls being pressed inwardly in spots to hold the walls in place, said spots being in staggered relation throughout the needle carrier, substantially as described.

1,220,888. WINDOW-SCREEN. SIDNEY C. PORTER, East Liverpool, Ohio. Filed Oct. 2, 1915. Serial No. 53,819. (Cl. 156—14.)



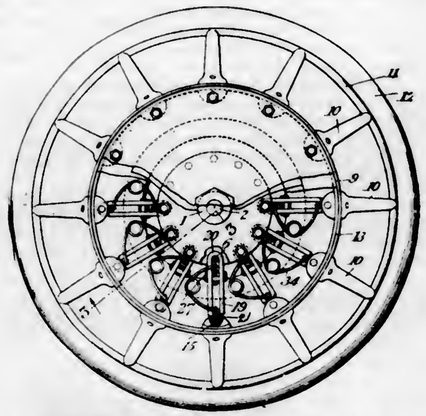
1. A window screen comprising side rails, accordion plaited edge strips secured thereto, and netting extending from one side rail to the other and supported upon the strips, whereby the screen may be lengthened or shortened and held in place by its own expansion.

2. A window screen comprising side rails, continuous edge strips secured thereto, and netting extending from one side rail to the other and supported upon the strips, said netting and strips having bends or folds therein, whereby the screen may be lengthened or shortened and held in place by its own expansion.

1,220,889. RESILIENT WHEEL. JOSEPH PRONOVOST, Detroit, Mich., assignor, by direct and mesne assignments, to Pronovost Torsion Spring Wheel Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 6, 1915. Serial No. 6,582. (Cl. 152—44.)

1. A resilient wheel having a hollow hub with circumferential flange, a plate fitted over said hub, bolts passing

through registering apertures in said flange and plate, annular disks about the hub, bolts passing through said disks near their outer edges, spring-pressed members arranged radially in pairs upon one side of the wheel and movable in opposite directions, corresponding ends of the inner parts of said members being bent and engaged by the bolts which pass through said flange of the hub and the outer parts of the said members being bent and engaging the bolts which connect said disks, slotted lugs upon the other side of the wheel, a flanged disk about said slotted lugs, other reverse, spring-pressed members arranged in pairs, the adjacent bent ends of one of each being connected to said slotted lugs and the other member of each pair fastened to said flanged disk, a buffer member secured to the flange of the disk opposite said slotted lugs, and rims connected by spokes about said disks.



2. A resilient wheel having a hollow hub with circumferential flange, a plate fitted over said hub, bolts passing through registering apertures in said flange and plate, annular disks about the hub, bolts passing through said disks near their outer ends, spring-pressed members having sliding movements in opposite directions relative to each other and arranged radially in pairs upon one side of the wheel, the opposite edges of one pair of each of said members having flanges adapted to guide the other member of each pair, adjustable means for limiting the relative movements of the members, corresponding ends of the inner parts of said members being bent and engaged by the bolts which pass through said flange of the hub and the outer parts of the said members being bent and engaging the bolts which connect said disk, slotted lugs upon the other side of the wheel, a flanged disk about said slotted lugs, other reverse, spring-pressed members arranged in pairs, the adjacent bent ends of one of each being connected to said slotted lugs and the other member of each pair fastened to said flanged disk, a buffer member secured to the flange of the disk opposite said slotted lugs, and rims connected by spokes about said disks.

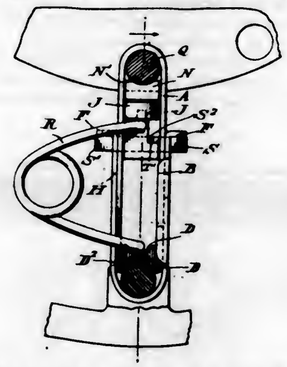
3. A resilient wheel having a hollow hub with circumferential flange, a plate fitted over said hub, bolts passing through registering apertures in said flange and plate, annular disks about the hub, bolts passing through said disks near their outer ends, members having sliding movements in opposite directions relative to each other and arranged radially in pairs upon one side of the wheel, the opposite edges of one pair of each of said members having flanges adapted to guide the other member of each pair, said members having oppositely disposed registering slots, a bar extending through said slots and having a threaded aperture, the ends of one member of each pair being bent upon itself and adapted to engage said bent ends, an adjustable screw mounted in each of said threaded apertures, a clamp member engaged by each screw, springs, each bearing intermediate a clamp member and a bent end of each of said members, adjustable means for limiting the relative movements of the members, corresponding ends of the inner bent portions of said members being engaged by the bolts which pass through said flange of the hub and the outer bent portions of the said members engaging the bolts which connect said disks, slotted lugs upon the other side of the wheel, a flanged disk about said slotted lugs, other reverse, spring-pressed members arranged in pairs, the adjacent bent ends of one of each being connected to said slotted lugs and the other member of each pair fastened to said flanged disk, a buffer member secured to the flange of the disk opposite said slotted lugs, and rims connected by spokes about said disks.

4. A resilient wheel having a hollow hub with circumferential flange, a plate fitted over said hub, bolts passing through registering apertures in said flange and plate, annular disks about the hub, bolts passing through said disks near their outer ends, members having sliding movements in opposite directions relative to each other and arranged radially in pairs upon one side of the wheel, the opposite edges of each pair of one of said members having flanges adapted to guide the other member of each pair, said members having oppositely disposed registering slots, a bar extending through said slots and having a threaded aperture, the ends of one member of each pair being bent upon itself and adapted to engage said bent ends, an adjusting screw mounted in each of said threaded apertures, a clamp member engaged by each screw, springs, each bent at its longitudinal center and engaging said clamp member, each arm of the spring bent into a coil, the ends of the springs interlocking and bearing against an angled end of one of said members, adjustable means for limiting the relative movements of the members, corresponding ends of the inner bent portions of said members being engaged by the bolts which pass through said flange of the hub and the other bent portions of the said members engaging the bolts which connect said disks, slotted lugs upon the other side of the wheel, a flanged disk about said slotted lugs, other reverse, spring-pressed members arranged in pairs, the adjacent bent ends of one of each being connected to said slotted lugs and the other member of each pair fastened to said flanged disk, a buffer member secured to the flange of the disk opposite said slotted lugs, and rims connected by spokes about said disks.

5. A resilient wheel having a hollow hub with circumferential flange, a plate fitted over said hub, bolts passing through registering apertures in said flange and plate, annular disks about the hub, bolts passing through said disks near their outer ends, spring-pressed members having sliding movements in opposite directions relative to each other and arranged radially in pairs upon one side of the wheel, corresponding ends of the inner portions of said members being engaged by the bolts which pass through said flange of the hub and the other bent portions of the said members engaging the bolts which connect said disks, slotted lugs upon the other side of the wheel, a flanged disk about said slotted lugs, other reverse, spring-pressed members arranged in pairs, the adjacent bent ends of one of each being connected to said slotted lugs and the other member of each pair fastened to said flanged disk, striking plates secured to the disk to which said slotted lugs are fastened, buffer members secured to the flanged disk opposite said striking plate, and rims connected by spokes about said disks.

1,220,890. SPRING-FRAME FOR RESILIENT WHEELS. JOSEPH PRONOVOST, Detroit, Mich. Filed Oct. 14, 1916. Serial No. 125,624. (Cl. 152—28.)

1. A spring frame for vehicle wheels, comprising two U-shaped members having sliding connection with each other and provided with oppositely disposed registering slots, a block mounted between one of the members, a spring having ends bearing against said block and an intermediate portion bearing against the end of the member, and a key passing through said slots in the members and block and serving to hold the parts together, as set forth.

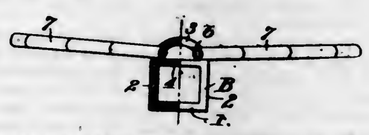


2. A spring frame for vehicle wheels, comprising two U-shaped members having sliding relation with each other and with registering slots in their opposite walls, a slotted block mounted between the walls of one of said members and having a recess in one edge, a headed key adapted to pass through registering slots in the members and block and provided with a square outlined portion for engagement with the walls of the slot in the block to prevent the key from turning, and a spring bearing against said block and one end of one of said members, as set forth.

3. A spring frame for vehicle wheels, comprising two U-shaped members having sliding relation with each other and with registering slots in their opposite walls, a slotted block mounted between the walls of one of said members and having a recess in one edge, a headed key adapted to pass through registering slots in the members and block and provided with a square outlined portion for engagement with the walls of the slot in the block to prevent the key from turning, said block having lugs projecting therefrom with indentures therein, and a spring bearing against one end of one member and its other end engaging said indentures of the lugs, as set forth.

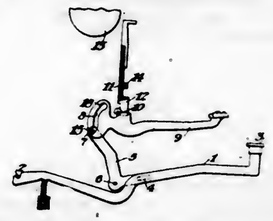
4. A spring frame for vehicle wheels comprising two sliding U-shaped members, one of said members having a closure at one end with its faces concaved, the opposite edges of one side of one of said members having flanges to guide the other member, the two members having elongated slots in the walls thereof, a slotted block with a recess in one face and oppositely disposed lugs upon the edges of the block with indentures, a key adapted to pass through registering slots in the members and block, and a spring bearing against one of said concaved faces of the closure and provided with ends which engage said indentures, as set forth.

1,220,891. DRAIN-TILE. BENJAMIN H. REED, OLMSTED A. REED, and ALBERTO N. REED, Hightstown, N. J. Filed Aug. 17, 1915. Serial No. 45,897. (Cl. 61—9.)



A drain tile system comprising a main drain having a flat bottom, an arched top, side walls, and a horizontal partition wall extending between said side walls parallel with said bottom and dividing the tile into an upper compartment, segmental in cross section, and a lower compartment substantially rectangular in cross section, in combination with branch drains tapping the upper compartment of said main drain above the partition wall thereof, said main drain being composed of sections having comparatively open joints between them, whereby water discharged into the said upper compartment from said side drains can escape downwardly through such joints into the lower compartment.

1,220,892. TYPE-WRITING MACHINE. LYMAN R. ROBERTS, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Dec. 6, 1913. Serial No. 804,957. (Cl. 197—31.)



1. In a type-action, the combination of a type-bar having a hook, a fulcrum upon which the type-bar is detachably caught by means of said hook, a key lever, and an intervening actuator for the type-bar, the latter provided adjacent to said hook with a shank having a slot closed at both ends, and a headed pin on said actuator working in said slot and movable continuously along the slot during the type-stroke, said slot formed with a locking surface at one end to lock the type-bar against rebound from its normal position of rest, and at its other end having an enlargement to permit the passage of the head of the pin for disconnecting the type bar from the actuator.

2. In a type-action, the combination of a key lever, a type-bar provided with a closed transverse slot, and a driving arm operated by the key lever and comprising a headed pin having a continuous sliding movement in said slot throughout the printing stroke, said slot formed to gradually increase the speed of the type-bar relatively to that of the key lever throughout the printing stroke, said slot having an enlargement at one end beyond the normal range of movement of said pin to permit the passage of the head of said pin for detachment, said type-bar having a separate open slot whereby it is detachably mounted on its pivot, said slots being so related that the type-bar detaches first at one slot and then at the other.

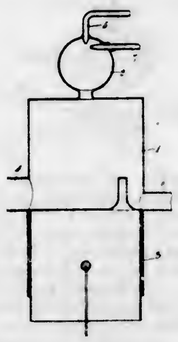
3. In a type-action, the combination of a type-bar formed with a slot entirely inclosed by the type-bar, and an actuator comprising a pin working in said slot and having a head of greater width than the slot, the slot formed with an enlargement through which said head can pass in connecting or disconnecting the parts, said enlargement located beyond the normal limit of travel of the pin in the slot during the type-stroke, said slot formed at the opposite limit of travel of said pin, with a locking surface to lock the type-bar against rebound from its normal position of rest, and said type-bar also having an open-slot construction for detachment from its pivot while said headed pin remains in its slot.

4. In a type-action, the combination of a pivoted type-bar, a key lever, and an interponent lever forming an actuator for the type-bar, the type-bar formed with a completely closed slot having an enlargement at its upper end, and a locking surface at the lower end to prevent rebound of the type-bar, and a headed pin on said interponent lever working in said slot and removable from the type-bar at said enlargement, the type-bar also formed, near the upper end of said closed slot, with an open slot or recess forming a downwardly directed hook whereby the type-bar is detachably connected to its pivot.

5. The combination of a key-operated arm, a type-bar, and a fulcrum whereon said type-bar is pivoted, said type-bar formed with a hook whereby it is detachably caught upon said fulcrum, said type-bar having a shank extending past said hook, but separate therefrom, to permit the

detachment of the type-bar from the fulcrum, said shank having a slot extending transversely of the typ-bar, and said driving arm having a headed pin working in said slot; said slot formed at its upper end with an enlargement to permit detachment of the type-bar from the headed pin, and so formed with relation to said hook as to permit the preliminary detachment of the hook from the fulcrum while the headed pin is between the ends of the slot.

1,220,893. METHOD OF AND MEANS FOR OPERATING INTERNAL-COMBUSTION ENGINES AND THE LIKE. ERIK ANTON RUNDLÖF, Stocksund, Sweden. Filed Feb. 9, 1914. Serial No. 817,474. (Cl. 123—1.)



1. The method of operating internal combustion engines and the like consisting in introducing fuel into and causing the same to ignite in the engine at intervals, and in admitting during the operation of the engine an approximately continual jet of air into the engine, substantially as and for the purpose set forth.

2. The method of operating internal combustion engines and the like consisting in introducing fuel into and causing the same to ignite in the engine at intervals, and in admitting approximately continually during the operation of the engine a jet of air into the combustion chamber of the engine, said jet of air being utilized for the "scavenging" of the combustion chamber, substantially as described.

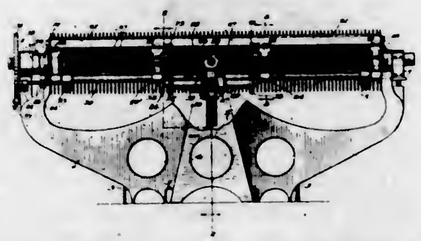
3. The method of operating internal combustion engines and the like consisting in introducing fuel into and causing the same to ignite in the engine at intervals, and in admitting approximately continually during the operation of the engine a jet of air into the combustion chamber of the engine, said jet of air being utilized for causing circulation of air in the combustion chamber and in the cylinder of the engine, substantially as described.

4. The method of operating internal combustion engines and the like consisting in introducing fuel into and causing the same to ignite in the engine at intervals, and in admitting approximately continually during the operation of the engine a jet of air into the combustion chamber of the engine, said jet of air being utilized during one part of the cycle of action of the engine for diffusing and for mixing with the fuel, and during the other part of the cycle of action of the engine for "scavenging" and for causing circulation of air in the combustion chamber and in the cylinder of the engine, substantially as and for the purpose set forth.

5. The method of operating internal combustion engines and the like consisting in introducing fuel into and causing the same to ignite in the engine at intervals, and in admitting during the operation of the engine an approximately continual jet of air into the engine, for the purpose of "scavenging" the combustion chamber, or causing circulation of air in the combustion chamber, or in the cylinder of the engine, or for diffusing and mixing with the fuel, or other liquid, during a part of the cycle of action of the engine and "scavenging" or causing circulation of air in the combustion chamber or in the cylinder of the engine during the other part of the cycle of action of the engine, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,220,894. MACHINE FOR SHARPENING GIN AND OTHER LIKE SAWS. LEONARD WATSON SAINE, Atlanta, Ga. Filed June 28, 1916. Serial No. 106,396. (Cl. 76—32.)



1. The combination with a main frame for supporting a series of saws, of a movable frame having a cutting edge adapted to engage a row of teeth of the said series of saws, means for reciprocating said cutting edge when in contact with a row of teeth of the saws, means for withdrawing said cutting edge from the row of teeth, and means for rotating the saws when the cutting edge is withdrawn from said teeth.

2. The combination with a main frame for supporting a series of saws, of a movable frame, a movable carriage mounted in said movable frame, a cutting tool carried by said movable carriage adapted to engage a row of teeth of the said series of saws, means for reciprocating the said carriage when the cutting tool is in contact with a row of teeth, means for swinging said movable frame and withdrawing the cutting tool from the row of teeth, and means for advancing a succeeding row of teeth of the series of saws when the cutting tool is withdrawn.

3. The combination with a main frame for supporting a series of saws, of a movable frame, a sliding carriage mounted in said movable frame, a cutting tool adjustably connected to said sliding carriage and adapted to engage a row of teeth of the said saws, adjustable means for reciprocating the said sliding carriage when the cutting tool is in contact with a row of teeth, adjustable means for swinging the said movable frame and withdrawing the cutting tool from the row of teeth, and means for advancing a succeeding row of teeth of the series of saws when the cutting tool is withdrawn.

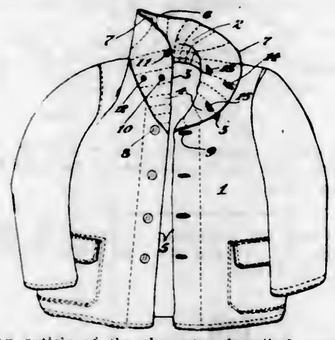
4. The combination with a main frame for supporting a series of saws, of a movable frame, a sliding carriage mounted in said movable frame having clamping jaws pivoted thereto, a cutting tool secured in said clamping jaws and adapted to engage a row of teeth of said saws, means for reciprocating the said sliding carriage when the cutting tool is in contact with a row of teeth, means for swinging the said movable frame and withdrawing the cutting tool from the row of teeth, and means for advancing a succeeding row of teeth of the series of saws, when the cutting tool is withdrawn.

5. The combination with a main frame for supporting a series of saws, of a cutting tool adapted to engage a row of the teeth of the series of saws, means for reciprocating said cutting tool when in contact with a row of teeth, means for withdrawing said cutting tool from the row of teeth, and means for advancing the succeeding row of teeth when the cutting tool is withdrawn.

[Claims 6 to 14 not printed in the Gazette.]

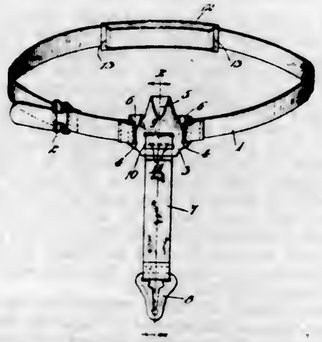
1,220,895. COLLAR. GEORGE O. SANBORN, Seattle, Wash. Filed Feb. 2, 1914. Serial No. 815,968. Renewed Sept. 14, 1916. Serial No. 120,034. (Cl. 2—62.)

1. In an article of the character described, in combination, a garment, a collar secured thereto and having overlapping end portions, spaced fasteners arranged on one end portion substantially vertically, and another fastener disposed on the end portion laterally of the other fasteners, the other end portion of the collar having spaced means for selective engagement by the uppermost of said fasteners and a single means for engagement by either of the other fasteners.



2. An article of the character described comprising a collar having meeting end portions; laterally spaced fasteners on one end portion of the collar when the same is upturned; and another fastener on the specified end portion spaced upwardly from the first fasteners; the opposite end portion of the collar being provided with a single means, adapted for selective engagement with either of the laterally spaced fasteners, and spaced means provided above the single means for being selectively engaged by the upper fastener on the opposite end portion.

1,220,896. GARMENT-RETAINER. CHRISTINE SCHWARZ, Chicago, Ill. Filed Nov. 9, 1914. Serial No. 871,063. (Cl. 241—30.)

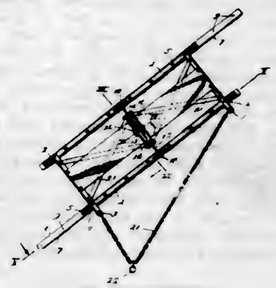


In a device of the class described, a plate having vertical belt receiving slots in opposite sides thereof and a pair of central parallel horizontal slots, outwardly and downwardly inclined teeth formed on the upper edge of the lower horizontal slot, a central hook formed at the extreme upper central portion of said plate, and side hooks formed at the upper side portions of said plate at a lower level than said central hook, substantially as described.

1,220,897. [WITHDRAWN.]

1,220,898. ROAD-DRAG. EDWARD B. SMITH, Kansas City, Mo. Filed Jan. 12, 1916. Serial No. 71,647. (Cl. 37—5.)

1. In a road drag, a frame adapted to be adjusted obliquely to the road, and front and rear blades arranged to be adjusted longitudinally of said frame, so that the rear blade may follow in the track of the front blade.



2. In a road drag, a frame adapted to be adjusted obliquely to the road, blades capable of independent longitudinal adjustment to track upon the road, and means for securing said blades at any point of their adjustment to said frame.

3. In a road drag, a frame, blades capable of independent longitudinal adjustment, angle-iron bars fixed to said blades, and means for securing said angle-iron bars to the frame after the blades have been adjusted longitudinally.

4. In a road drag, a frame adapted to be adjusted obliquely to the road, blades capable of independent longitudinal adjustment, bars fixed to said blades, and means for securing said bars to the frame after the blades have been adjusted longitudinally.

1,220,899. TONGS. NIELS CHRISTIAN SORENSEN, Chicago, Ill. Filed May 10, 1916. Serial No. 96,472. (Cl. 81—3.)



1. In a device of the class described, the combination of an elongated handle having a bifurcated front end; a pair of gripping jaws arranged between the branches at the front end of said handle and pivotally connected intermediate their ends with said branches; means for operating said jaws, said means comprising a rod movable longitudinally of said handle; a toggle having its ends connected with the rearward ends of said jaws; a pin connecting the knee joint of said toggle with the forward end of said rod whereby said jaws will be operated upon shifting of said rod; means coöperating with said pin for guiding the same in a direction longitudinally of said handle upon shifting of said rod; and means for shifting said rod, substantially as described.

2. In a device of the class described, the combination of an elongated handle having a bifurcated front end; a pair of gripping jaws arranged between the branches at the front end of said handle and pivotally connected intermediate their ends with said branches; means for operating said jaws, said means comprising a rod movable longitudinally of said handle; a toggle having its ends connected with the rearward ends of said jaws; a pin connecting the knee joint of said toggle with the forward end of said rod whereby said jaws will be operated upon shifting of said rod, said handle branches having longitudinally extending slots engaging with the ends of said

pin for guiding the same in a direction longitudinally of said handle upon shifting of said rod; and means for shifting said rod, substantially as described.

3. In a device of the class described, the combination of an elongated tubular handle; a pair of gripping jaws having pivotal connection intermediate their ends with the front ends of said handle; means for operating said jaws, said means comprising a rod mounted in said handle for longitudinal shifting; a toggle operatively connecting the front end of said rod with the rearward ends of said jaws, whereby said jaws will be operated upon shifting of said rod; a helical compression spring encircling the rearward end of said rod and interposed between the rearward end of said handle and an enlargement on said rod for normally holding said jaws in gripping relation; and a hand lever fulcrumed on the rearward end of said handle and operatively connected with the rearward end of said rod for shifting the latter, substantially as described.

1,220,900. EXTENSIBLE CURTAIN-ROD. ULRICH SPRINCHORN, Jamestown, N. Y., assignor to Jamestown Curtain Rod Company, Inc., Jamestown, N. Y., a Corporation. Filed Oct. 31, 1916. Serial No. 128,790. (Cl. 156—22.)



1. A curtain support comprising a curtain rod having an open ended slot in each end to form upper and lower similar bracket engaging elements, a bracket for each rod end adapted to be received in said slot for supporting engagement by either of said bracket engaging elements, the other of said elements abutting against the bracket to hold the rod in off-standing position, and a locking element on each of said brackets to hold said rod ends against displacement.

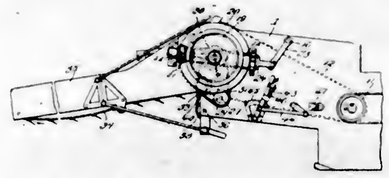
2. A curtain support comprising a curtain rod having a T-shaped slot in each end, said slot forming similar spaced bracket engaging hook and abutment members for holding said rod in off-standing position, a bracket for each rod end adapted to be received in said slot and engageable by said hook and abutment members, and a lock plate slidably mounted on said bracket to engage said hook member against displacement of said rod end.

3. A curtain support comprising a rod having a bracket engaging extremity, a bracket consisting of a plate having a V-shaped outwardly bent central portion, the upper portion of said V-shaped outwardly bent portion having a tongue struck therefrom to form side braces and a horizontal ledge with which the rod extremity is engaged, said braces forming stopping members to limit sliding adjustment of the rod end.

4. A curtain support comprising a rod having a T-shaped slot in each end to form spaced bracket engaging hooks, a bracket for each rod end consisting of a plate having a V-shaped outwardly bent central portion, a tongue struck from the upper side of said V-shaped portion to form a horizontal ledge with integral side braces which limit lateral movement of the rod end on said ledge, and a lock plate fitting within said V-shaped portion and slidably mounted to engage within said hooks to prevent displacement of said rod end.

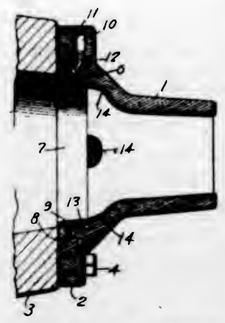
1,220,901. SELF-FEEDER FOR THRESHING-MACHINES. GEORGE M. STATES, Des Moines, Iowa. Filed June 24, 1916. Serial No. 105,650. (Cl. 130—1.)

A feeder comprising upper feeder bars, a crank shaft for reciprocating said upper feeder bars, a disk mounted upon the crank shaft, lower feeder bars, a crank shaft for reciprocating the lower feeder bars, a disk loosely mounted upon the first mentioned crank shaft, means operatively connecting the last mentioned disks with the crank shaft which operates the lower feeder bars, a wheel located between the said disks and having frictional contact with the same and means operatively connecting the



said wheel with the upper feeder bars to move the wheel with relation to the center of the disks as the upper feeder bars raise or lower.

1,220,902. DIE OR FORMER. CLARENCE M. STEELE, Statesville, N. C. Filed Mar. 31, 1916. Serial No. 87,984. (Cl. 25—17.)



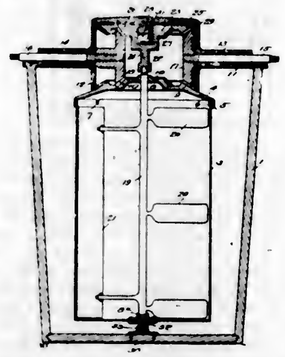
1. A die or former for brick machines, having a substantially rectangular passage and having at the inner end the passage thereof beveled outwardly and a valve ring having its outer side beveled to fit the bevel of the former and having a continuous groove at the bevel face for receiving a lubricant, that portion of the beveled face of the ring on the inner side of the groove being cut away to space the said portion of the face apart from the adjacent portion of the bevel of the former to permit the flow of lubricant from the groove to the interior of the former, said ring having a sharp edge at the inner surface of the last-named portion of the bevel extending into the path of the moving clay the former having pockets for permitting the clay to bank to retard the flow of lubricant between the corners, and the sharp edge of the ring being retracted at the pockets.

2. A die or former for brick machines having a substantially rectangular passage and having at the inner end an annular passage for receiving a lubricant and encircling the former passage and having a continuous port leading to the interior of the former, said port inclining inwardly toward the discharge end of the passage, and the inner wall of the port being extended beyond the outer wall, and the passage wall of the former having clay receiving pockets intermediate the extended portions for receiving clay to retard the flow thereof at these points, the inner wall of the port being retracted at the pockets.

3. The combination with former and valve ring, the former having shoulders more or less abrupt at points requiring little or no lubricant, adjacent to the valve ring, forming pockets of clay at these points, cutting off or regulating the lubricant as desired.

4. A die or former for brick machines, having substantially rectangular cross sections provided at its inner end with a valve ring having a beveled edge overlapping the interior former wall, the overlap being reduced at points in line with the straight walls of the former where it is desired to retard the flow of clay, and means for supplying lubricant to the former delivering at the said beveled edge.

1,220,903. ALTERNATE DRIVING-GEARING FOR FREEZERS. WADE HAMPTON STEMPLE, Aurora, W. Va. Filed Dec. 6, 1916. Serial No. 135,389. (Cl. 74—7.)



1. A gearing consisting of a vertical shaft, a gear wheel connected thereto to turn therewith and having annular series of teeth of unequal diameter, a second gear wheel journaled below the first in spaced relation and having series of teeth similarly disposed with respect to the teeth of the first-named wheel, gear wheels connecting the corresponding series of teeth, and means for turning the said wheels, said second named gear wheel being connected with an object to rotate the same.

2. A gearing comprising vertically spaced gear wheels, each wheel having annular series of gear teeth of unequal diameter, gear wheels arranged with their planes perpendicular to the planes of the first-named wheels and connecting the corresponding series of teeth of the wheels, and means for turning each of the last-named wheels, each of the said first-named wheels being adapted for connection with an object to be turned.

3. A gearing comprising vertically spaced gear wheels, each wheel having annular series of gear teeth of unequal diameter, gear wheels arranged with their planes perpendicular to the planes of the first-named wheels and connected to the corresponding series of teeth of the wheels, and means for turning each of the last-named wheels.

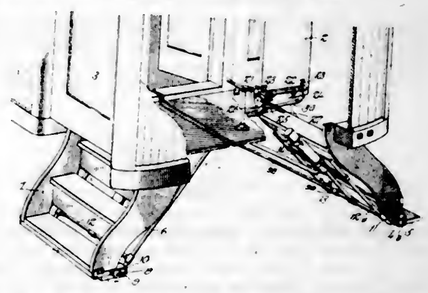
1,220,904. [WITHDRAWN.]

1,220,905. CAR STEP AND DOOR OPERATING MECHANISM. PIERCE J. STRIMPLE, Cleves, Ohio, assignor of one-half to Stanley Struble, Cincinnati, Ohio. Filed Jan. 2, 1917. Serial No. 140,161. (Cl. 105—84.)

1. A car step actuating mechanism comprising in combination, a fixed step, rods slidable below said fixed step, a movable step carried by said rods, a riser hinged to said fixed step, and a sliding connection between the movable step and the riser.

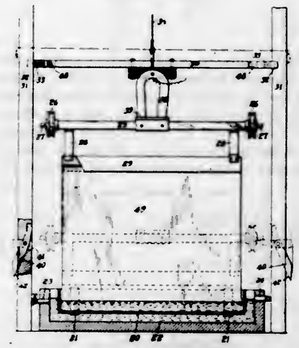
2. A car step actuating mechanism, comprising in combination, a fixed step, rods slidable below said fixed step, a step rigidly mounted on said rods to move therewith, a riser hinged to said fixed step, slotted plates on said riser and pintles on said step slidable in said slotted plates, said step being carried upwardly and rearwardly in longitudinal position and said riser folding thereon.

3. A car step actuating mechanism, comprising in combination, a fixed step, rods slidable below said fixed step, a movable step carried by said rods, a riser hinged to said fixed step, a sliding connection between the movable step and the riser, a trap door and a vestibule door, means linking said trap door to said rods and means connecting said vestibule door to said rods, whereby movement of the rods actuates said trap and vestibule doors simultaneously with the folding of said step.



4. A car step and door actuating mechanism, comprising in combination with a fixed step, a trap door and a vestibule door, rods slidable below said fixed step, a movable step carried by said rods to be carried upwardly and rearwardly below said fixed step, means linking said trap door to said rods, and means connecting said vestibule door to said rods, whereby movement of the latter simultaneously withdraws said step and closes said trap and vestibule doors.

1,220,906. WINDOW-GLASS APPARATUS. RICHARD SUMMERSGILL, Kane, Pa. Filed Aug. 10, 1916. Serial No. 114,183. (Cl. 49—17.)



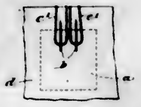
1. An apparatus of the character described, comprising a receptacle adapted to contain molten glass, movable holding devices above the receptacle, a bait frame adapted to be supported by said holding devices in set position above the receptacle, and reciprocating means adapted to lower the bait frame below said holding devices and into the receptacle, said holding devices adapted to move out of the path of the bait frame.

2. An apparatus of the character described, comprising a receptacle adapted to contain molten glass, movable holding devices above the receptacle, a bait frame adapted to be supported by said holding devices in set position above the receptacle, and reciprocating means adapted to lower the bait frame below said holding devices and into the receptacle, said holding devices adapted to move out of the path of the bait frame, said holding devices having weighted ends normally positioning said holding devices out of the path of the bait frame.

3. An apparatus of the character described, comprising a trough, means for directing molten glass into the trough, elevated horizontal tracks, a bait frame, means for holding the bait frame in set position above the trough, and vertically reciprocating means constructed to move

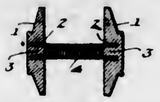
the bait frame from set position, then lower the same into operative engagement with the glass of the trough, and then elevate the bait frame and deposit the same on the track.

1,220,907. PIN-TICKET. MAX TETZLAFF, Lankwitz, Germany. Filed Apr. 7, 1913. Serial No. 759,522. (Cl. 40—23.)



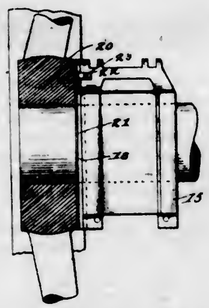
A ticket clip comprising a single piece of wire having sharpened ends thereon, said wire having a plurality of looped portions adapted to project above the top edge of the ticket, said looped portions being bent at intermediate points to form a gage for positioning the ticket, return folded portions located at the sides of said looped portions and adapted to engage the ticket on opposite sides and lateral projecting portions terminating in the sharpened ends, said projecting portions being adapted to pass through and project laterally from the rear side of the ticket.

1,220,908. CUFF-BUTTON. HARRY C. THOMAS, Philadelphia, Pa. Filed Apr. 22, 1916. Serial No. 92,895. (Cl. 24—102.)



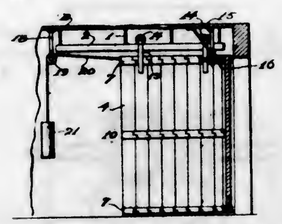
A cuff button comprising end pieces having the confronting faces thereof formed with circular grooves to provide studs, and a spring having the ends thereof seated in said grooves, respectively, and secured to said studs whereby the end pieces may be moved away from each other in the upward movement of the cuff on the forearm so that the spring may react to bind the cuff around the forearm.

1,220,909. DRIVING-BOX. HENRY H. THOMPSON, Columbus, Ga. Filed Sept. 3, 1915. Serial No. 48,881. (Cl. 64—25.)



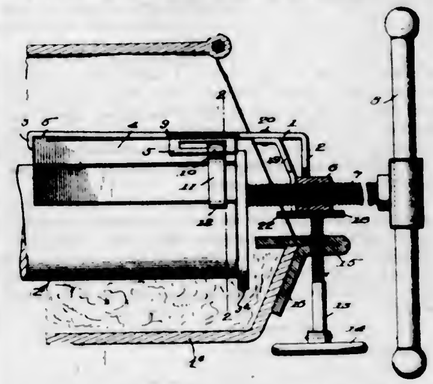
In combination, a driving-box having dovetailed flanges tapered inwardly, a U shaped lateral wear plate; the limbs of which are provided with grooves also tapered inwardly to engage the flanges on the said wear plate, the opposite side of said plate coated with Babbitt metal, said plate having its sides and ends to extend flush with said driving box, and turn buttons on said box to retain the lateral wear plate in position with respect to the box.

1,220,910. SLIDING DOOR. WILLIAM C. TOLL, Rosendale, Wis. Filed Sept. 24, 1915. Serial No. 52,484. (Cl. 20—20.)



In a door structure, the combination with an angular track, of a plurality of sections slidable on the track, hinges connecting said sections and extending outwardly from the surface thereof, a vertically disposed shaft located at the point in line with the point of juncture between the angular portions of the track, a friction reducing guide disk rotatably mounted on the lower end of said shaft and in alinement with said hinges, said friction guide disk having spaced pockets corresponding to the distance between said hinges, the pockets being adapted to receive the outwardly extending portions of the hinges when the latter are moved across the point of juncture between the angular portions of the track to guide said section over said angular portions of the track.

1,220,911. BRASS-REMOVER FOR JOURNAL-BOXES. PETER EDWARD VALENTINE, Caneyville, Ky. Filed Aug. 29, 1916. Serial No. 117,488. (Cl. 29—84.)



1. A device of the character specified comprising an angular supporting bracket having a portion for entering the journal box, and provided with a depending lip for engaging behind the inner end of the brass and provided with pivoted depending hooked links for engaging the edges of the brass to lift the same above the rib of the axle, and having a depending portion provided with a nut, a screw threaded through the nut for engaging the end of the axle and provided with means for turning the screw, an angle plate adapted to engage the lower lip of the opening of the journal box and having an outstanding portion provided with a threaded opening, and a screw engaging the opening and having means for turning the same and adapted to engage the depending portion of the bracket to lift the same, for the purpose specified.

2. A device of the character specified comprising an angular supporting bracket having a portion for entering the journal box, means for grasping and lifting the brass above the flange of the axle to permit the brass to be withdrawn, and having a portion provided with a nut, a screw threaded through the nut for engaging the end of the axle and provided with means for turning the screw, and means for connection with the journal box to lift the outer end of the bracket.

3. A device of the character specified comprising an angular supporting plate having a portion for entering the journal box, and a depending portion, said first named portion having means for grasping the brass to lift and withdraw the brass when the bracket is lifted and withdrawn, a screw threaded through the depending portion for engaging the end of the axle, and having means for turning the screw, and means for connection with the journal box for lifting the outer end of the bracket.

4. A device of the character specified comprising an angular supporting plate having a portion for entering the journal box, and a depending portion, said first named portion having means for grasping the brass to lift and withdraw the brass when the bracket is lifted and withdrawn, means for connection with the journal box for lifting the outer end of the bracket, and means in connection with the bracket for forcing the bracket with the brass grasped thereby outwardly and out of the journal box.

5. A device of the character specified comprising a support adapted to be introduced within the journal box above the brass, and having means for grasping the brass to permit the same to be lifted and withdrawn, means for engaging the journal box to lift the outer end of the support to release the brass from the flange of the wheel, and means in connection with the bracket for withdrawing the same from the journal box.

[Claims 6 and 7 not printed in the Gazette.]

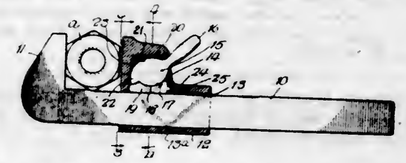
1,220,912. WIRE-CLAMP. JOHN WALKER, Wolf Lake, Ill. Filed Oct. 11, 1916. Serial No. 125,042. (Cl. 254—83.)



A clamp comprising a pair of elongated clamping members provided with smooth contacting surfaces, one of said members being provided with elongated openings, raised reinforcing edges for said openings, the other member having substantially rectangular openings therein, hooks provided with a shank portion adapted to snugly fit the rectangular openings and having free vertical movement within the elongated openings, the said hooks engaging the reinforcing edges of the slots when the clamping member is in operative position, a shoulder formed upon the shank of said hook for engagement with one of the clamping members and a threaded lever for engagement with the threaded portion formed upon the end of the hook shank.

1,220,913. WRENCH. JOHN L. WALSH, Chicago, Ill., assignor of one-half to Thomas J. Conley, Chicago, Ill. Filed Aug. 11, 1916. Serial No. 114,355. (Cl. 81—143.)

1. A wrench comprising a handle having a fixed jaw on one end, a movable jaw co-acting with said fixed jaw and slidably mounted on said handle, a gripping block yieldingly secured in a recess in said movable jaw, said handle and gripping block having interlocking serrations and said block having a concave bearing surface on the side opposite the serrations, and a gripping cam loosely secured in said recess and having oppositely and eccentrically disposed curved bearing surfaces, one adapted to bear against the concave bearing surface of the block and the other against the opposing face of the recess, said gripping cam having also a part adapted to bear against a crosswise extending face of the recess, whereby the movable jaw is forced forward by the gripping movement of the cam.



2. A wrench comprising a handle having a fixed jaw on one end, a movable jaw co-acting with said fixed jaw and slidably mounted on said handle, a gripping block located in a recess of said movable jaw, said handle and gripping block having interlocking serrations, and said block having a concave bearing face, a spring bearing against the rear end of said block, and a gripping cam loosely held in said recess and having a handle on one end and a projection on the other end, said gripping cam having also oppositely and eccentrically disposed curved bearing surfaces, one fitting in and adapted to bear against the concave face of the gripping block, and the other being adapted to bear against the face of the recess opposite the block, the projection on said cam being adapted to bear against an end face of said recess, and acting to advance the movable jaw against the stationary jaw.

3. A wrench comprising a handle having a fixed jaw on one end, a movable jaw co-acting with said fixed jaw and slidably mounted on said handle, a gripping block movably secured in a recess in said movable jaw, said handle and gripping block having interlocking serrations, said block having a concave bearing surface on the side opposite the serrations, and a gripping cam in said recess and having oppositely and eccentrically disposed curved bearing surfaces, one seated in and bearing against the concave bearing surface of the gripping block and the other adapted to bear against the opposite face of the recess and confined between said bearing surfaces, said concave bearing surface forming a bearing on which said cam may be rocked, said cam having a handle protruding from the recess whereby the same may be manipulated.

1,220,914. PUNCTURE-PROOF PNEUMATIC TIRE. RICHARD WAPSHARE, Westward Ho, Bangalur, British India. Filed July 8, 1914. Serial No. 849,828. (Cl. 152—18.)



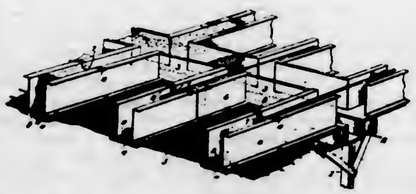
1. A pneumatic tire protector provided with a protecting sheath comprising a plurality of plates so disposed that more than two edges of one plate abut against the edges of the adjacent plates, the adjacent edges of two contiguous plates being formed throughout their length the one concave the other convex in a plane perpendicular to the faces of the plate.

2. A pneumatic tire protector provided with a protecting sheath comprising a plurality of plates so disposed that more than two edges of one plate abut against the

edges of the adjacent plates, the adjacent edges of two contiguous plates being formed throughout their length the one concave the other convex in a plane perpendicular to the faces of the plate and each plate having two concave and two convex edges.

3. A pneumatic tire protector provided with a protecting sheath comprising a plurality of plates so disposed that more than two edges of one plate abut against the edges of the adjacent plates, the adjacent edges of two contiguous plates being formed throughout their length the one concave the other convex in a plane perpendicular to the faces of the plate, and a foundation to which said plates are secured.

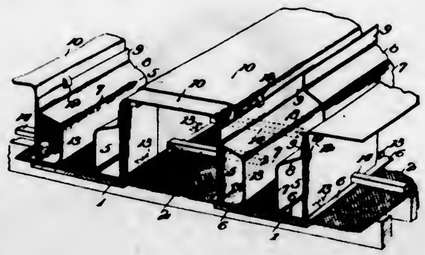
1,220,915. REINFORCED CONCRETE CONSTRUCTION. HEWITT L. WELLS, Washington, D. C. Filed Apr. 10, 1916. Serial No. 90,286. (Cl. 25—131.5.)



1. The method of producing a reinforced concrete construction which consists in positioning a series of spaced apart base plates upon false work, arranging a ceiling support thereon, placing spaced forms on said base plates with a portion of said ceiling support interposed between said forms and said plates, placing reinforcing material between pairs of said forms, filling the spaces between pairs of said forms with cementitious material, and removing said forms upwardly from said base plates and ceiling support.

2. The method of producing a reinforced concrete construction which consists in positioning a series of spaced apart base plates upon false work, arranging a ceiling support thereon, placing spaced forms on said base plates with a portion of said ceiling support interposed between said forms and said plates, placing reinforcing material between pairs of said forms, filling the spaces between pairs of said forms with cementitious material to form joists, removing said forms upwardly from said base plates and ceiling support and forming a floor over said joists.

1,220,916. FORM FOR CONCRETE CONSTRUCTION. HEWITT L. WELLS, Washington, D. C. Filed Dec. 20, 1916. Serial No. 138,054. (Cl. 25—131.5.)



1. Means for forming spaced apart concrete beams including a series of spacing frames each having a platform like top and opposite side walls, and cores for forming T-beams in juxtaposition to the sides of said frames and in parallelism there th.

2. Means for forming spaced apart concrete beams including a series of spacing frames each having a platform like top and opposite side walls, and cores for forming T-beams, said cores being detachably secured to said frames and in parallelism with the side walls thereof.

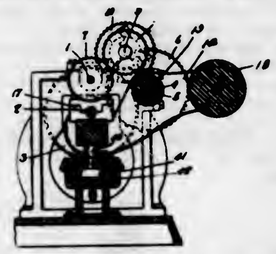
3. Means for forming spaced apart concrete beams having a top projecting flange including a series of spacing frames each having a platform like top and supports therefor, and cores in juxtaposition to said supports, said cores having an interlocking engagement with said frames.

4. Molds for concrete construction including a series of spacing frames each having a platform like top and vertically disposed supports therefor, and laterally projecting cores.

5. Means for forming concrete beams including spacing elements each having a platform like top and opposite side walls, and cores paralleling said walls and in juxtaposition thereto, each of said cores comprising a vertically disposed stem forming portion, and an overhanging flange-forming portion.

[Claims 6 and 7 not printed in the Gazette.]

1,220,917. MACHINE FOR SIZING AND POLISHING RINGS. WALLACE WHITE, Lawrence, Mass. Filed Apr. 4, 1916. Serial No. 88,782. (Cl. 29—90.)



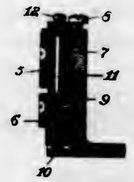
1. In a machine for rolling rings, the combination of a die-member having a die-opening for the ring to be rolled with an entrance thereto, a pair of roller-dies arranged one above the other, one of the roller dies being arranged in the die-opening for engagement with the inside of the ring, and the other roller die being arranged below the die-member and projecting into the entrance of the die-opening for engagement with the outside of the ring, and a pair of parallel arranged shafts, both extended rearwardly from the die-member and supporting the roller-dies on their corresponding ends.

2. In a machine for rolling rings, the combination of a die-member having a die-opening for the ring to be rolled with an entrance thereto, a pair of roller-dies arranged one above the other, one of the roller dies being arranged in the die-opening for engagement with the inside of the ring, and the other roller die being arranged below the die-member and projecting into the entrance of the die-opening for engagement with the outside of the ring, a pair of parallel arranged shafts both extended rearwardly from the die-member and supporting the roller-dies at their corresponding ends, a movable frame supporting one of the shafts permitting movement of one of the roller-dies toward and from the other, and a pressure device arranged to exert an upward pressure on said frame.

3. In a machine for rolling rings, the combination of a die-member having a die-opening for the ring to be rolled with an entrance thereto, a pair of roller-dies arranged one above the other, one of the roller dies being arranged in the die-opening for engagement with the inside of the ring, and the other roller die being arranged below the die-member and projecting into the entrance of the die-opening for engagement with the outside of the ring, a pair of parallel arranged shafts, both extended rearwardly from the die-member and supporting the roller-dies at their corresponding ends, a movable frame supporting one of said shafts permitting movement of one of the roller-dies toward and from the other, counterbalancing means for said frame, and a pressure-device arranged to exert an upward pressure on said frame.

4. In a machine for rolling rings, the combination of a die-member having a die-opening for the ring to be rolled with an entrance thereto, a pair of roller-dies arranged one above the other, one of the roller dies being arranged in the die-opening for engagement with the inside of the ring, and the other roller die being arranged below the die-member and projecting into the entrance of the die-opening for engagement with the outside of the ring, a pair of parallel arranged shafts, both extended rearwardly from the die-member and supporting the roller-dies at their corresponding ends, a movable frame supporting one of said shafts permitting movement of its roller-die toward and from the other roller-die, a pressure-device arranged to exert an upward pressure on said frame and pedal-controlled means for said pressure-device.

1,220,918. OVERTHROW GUARD-CAM FOR KNITTING-MACHINES. FRANK WILCOMB, Norristown, Pa., assignor to Wildman Mfg. Co., Norristown, Pa., a Corporation of Pennsylvania. Filed June 30, 1916. Serial No. 106,839. (Cl. 66—21.)



1. In combination, a needle cam and an overthrow guard cam both operating upon the needle or jack butt and upon opposite sides thereof, said cams having independent guides, means for adjusting the overthrow guard cam guide with said cam individually in relation to the needle cam guide and means for adjusting both the needle cam guide and the guard cam guide with their cams in unison while maintaining the individual adjustment of said parts relative to each other, said adjustments being effected without detaching the guides with their cams from their working position, substantially as described.

2. In combination a needle cam unit and a separate overthrow guard cam unit both operating upon the needle or jack butt and upon opposite sides thereof, means for adjusting the overthrow guard cam individually in relation to the needle operating cam and means for adjusting both the needle operating cam and the guard cam as one unit while maintaining the individual adjustment of the guard cam relative to the needle operating cam, the individual adjusting means moving with the needle operating cam when the latter is adjusted, the said adjustments being made without detaching either of the cam units from their working positions.

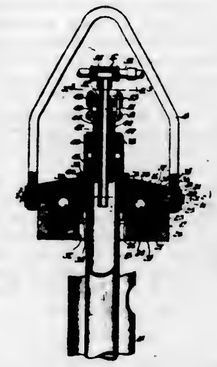
3. In combination, a needle operating cam, a slide or post carrying said cam, an overthrow guard cam opposite the needle operating cam, a separate slide carrying the guard cam and in axial alinement with the post first mentioned, means for adjusting the slide of the needle operating cam for varying the stitches, said adjustment moving the slide of the overthrow cam in unison and means accessible without detaching the units, for adjusting the guard cam individually while in its working position, substantially as described.

4. In combination, a needle operating cam and guide, an overthrow guard cam, with an independent guide, a spring pressing the guard cam guide toward the needle operating cam guide, means movable with the needle operating cam guide for adjusting the guard cam guide against the spring pressure and in relation to said needle operating cam, and means for adjusting the needle operating cam and through the individual adjusting means simultaneously adjusting the guard cam against the spring pressure, said guides and cams being adjustable while in their working positions, substantially as described.

5. In combination a needle operating cam with its guide, an independent overthrow guard cam with its guide, a spring common to both guides for adjusting them in one direction, means common to both guides for adjusting them in unison against the spring pressure and means accessible while undetached from the machine for individually adjusting the guard cam guide against the pressure of the said spring and in relation to the needle operating cam guide, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,220,919. WELL-BORING APPARATUS. CHARLES E. WILCOX, Keene, Cal., assignor of one-third to Oil Well Supply Company, Pittsburgh, Pa., and one-third to William G. Knapp Alhambra, Cal. Original application filed Aug. 1, 1913, Serial No. 782,492. Divided and this application filed Aug. 18, 1915. Serial No. 46,191. (Cl. 255—25.)



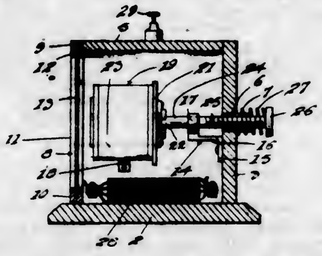
1. A swivel for a string of drill pipe comprising a stator, a rotor supported by said stator, means for minimizing the friction between the rotor and stator, means for supporting the stator, a swiveled means for supplying mud laden fluid to the drill pipe, a driving stem adapted to be secured to the drill pipe and passing through the center of said rotor and stator, threaded means for securing the driving stem to the swiveled means, and means located below said threaded means and independent of said threaded means for supporting said driving stem on said rotor.

2. A swivel for a string of drill pipe comprising a stator, a rotor supported by said stator, means for minimizing the friction between the rotor and stator, means for supporting the stator, a swiveled means for supplying mud laden fluid to the drill pipe, a drill stem adapted to be secured to the upper end of the string of drill pipe and passing through said rotor and stator, supporting means for securing said drill stem to said rotor, and means for securing said swiveled means to said drill stem above said supporting means.

1,220,920. WIRELESS SOUNDER. ARCHIE J. WILLIAMS, Covington, Ky. Filed May 21, 1915. Serial No. 29,543. (Cl. 179—117.)

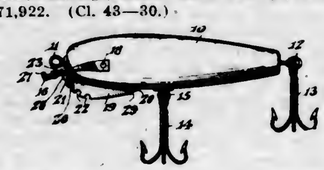
1. A wireless receiving apparatus including a casing, a diaphragm forming the front wall of said casing, the rear wall of said casing being centrally apertured, an internally threaded sleeve seated in said aperture, a stem threaded through said sleeve, a thumb piece at the outer end of said stem, a head at the inner end of the stem, magnets within the casing, the said head being swivelly connected to the magnets whereby upon turning of the thumb piece the magnets may be adjusted toward or away from the diaphragm and a horizontal supporting bar extending

transversely of the casing beneath the magnets for holding said magnets in proper position.



2. A wireless telegraph apparatus comprising a casing, a diaphragm forming the front wall of said casing, the rear wall of said casing being provided with a central opening, a sleeve having internal screw threads extending through said openings, a stem threaded through the sleeve, a thumb piece at the outer end of said stem, a compression coil spring surrounding the stem and the outwardly projecting portion of the sleeve, said spring biting against the thumb piece and the outer side of the rear wall of the casing to hold the stem in various adjusted positions, a head at the inner end of the stem, a pair of magnets within the casing, the head being swivelly connected to the magnets whereby upon turning of the stem the magnets will be moved toward or away from the diaphragm, a horizontal supporting bar extending transversely through the casing in the rear of the diaphragm for providing a supporting means for the magnets throughout their length of travel, a bracket attached to the inner side of the rear wall of the casing and a pair of upwardly extending arcuate arms partially embracing the stem and forming a support for the inner end thereof.

1,220,921. ARTIFICIAL FISH-BAIT. RICHARD T. WILSON, Hastings, Mich., assignor of one-half to Aben E. Johnson, Hastings, Mich. Filed Jan. 13, 1916. Serial No. 71,922. (Cl. 43—30.)



1. An artificial fish bait comprising a body adapted to be drawn through the water, a plane, means for pivoting the plane upon the body in rear of the front end of the latter so as to swing in the arc of a circle from a position beneath the body and inclined rearwardly to a position in projecting relation to the front end of the body, and adjusting means to retain the plane in either of said positions or any intermediate position.

2. An artificial fish bait comprising a buoyant body adapted for attachment at its head end to a fishing line, and to be drawn through the water, a plane pivoted on the head end of the body and extending transversely across the same, the plane being adapted to be swung into various angular positions beneath the body to regulate the depth thereof when drawn through the water, and means for holding the plane in adjusted position.

3. An artificial fish bait comprising a buoyant body simulating the form of a fish and adapted to be drawn through the water, hooks carried upon the tail end and at the under side of the body, a crescent shaped plane pivoted at its ends to the opposite sides of the body at the head end thereof, a sector plate secured to the body between the same and said plane, and means for locking the plane to the sector plate when the plane is swung to the desired angle to deflect the body to the desired depth in the water.

4. An artificial fish bait comprising a body adapted to be drawn through the water, a plane, and adjustable means for securing the plane at various forward inclinations upon the body, to vary the depth of travel of the body, said adjustable means also being adapted to secure the plane in a rearwardly inclined position to support the body on the surface of the water.

5. An artificial fish bait comprising a body adapted to be drawn through the water, a crescent shaped plane pivoted at its opposite ends against the opposite sides of the body at the forward end thereof, a sector plate secured to the forward end of the body and lying between the plane and the body, the plane having a slot in its inner edge adapted to receive the sector plate therein, a locking disk rotatably mounted on the plane with its peripheral edge overlapping the slotted portion of the plane and having a slot in one side adapted to register with the slot in the plane to admit the passage of the sector plate through the plane and the locking disk, said sector plate having spaced notches therein to receive the peripheral edge of said locking disk whereby when said plane is adjusted to the desired angle said locking disk may be rotated to engage the peripheral edge thereof in the adjacent notch to hold the plane in adjusted position.

[Claim 6 not printed in the Gazette.]

1,220,922. ASSORTING-MACHINE FOR CANNED GOODS. MARCENUS M. WINNINGHAM, Seattle, Wash., assignor of one-fourth to Pierre Barnes, Seattle, Wash. Filed Feb. 23, 1916. Serial No. 79,837. (Cl. 83—92.)



1. In an assorting machine, a platform, a scale having a pan operable therein, an ejector-arm, normally inoperative means for actuating said arm, means to convey cans to and upon the pan of said scale, and a controller finger operatively connected with said ejector-arm and engageable by a can having a weight insufficient to depress the scale-pan thereby imparting an initial movement to the ejector-arm and rendering said first-named means capable of influencing the ejector-arm to remove such can from the pan.

2. An assorting machine having a weighing scale adjusted to have its pan depressed only by a can of a selected weight or of a weight in excess thereof, means to progressively carry cans to and across said scale-pan, and means for ejecting light-weight cans from the scale-pan, such means comprising an ejector, a device coupled therewith and engageable by a light-weight can, and power-driven means rendered operable by a can engaging said device whereby said ejector is caused to remove a can from the scale-pan and restore said device into operative position.

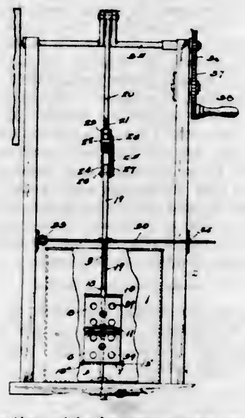
3. In an assorting machine, a platform, a weighing scale having a pan operable in an opening of the platform, a conveyer for the transmission of cans on the platform to be weighed upon the scale-pan, a vertical shaft, a sector-gear provided on said shaft, a power-driven spur-gear, an ejector finger extending from said shaft, and a controlling arm provided on the shaft and disposed at an elevation to allow the passage therebeneath of a can of weight sufficient to depress the scale-pan but engageable by a can of less weight whereby the progressive travel of such can will influence said sector-gear to effect the meshing of the same with said spur-gear whereupon the latter actuates the aforesaid ejector finger for the removal of the light-weight can from the scale-pan.

4. In an assorting machine, a platform, a scale having a pan extending through said platform, a conveyer adapted to transmit cans to and from said scale-pan, an upright shaft rotatable in proximity to said pan, a sector-gear mounted on said shaft, a spur-gear, means to rotate said spur-gear continuously during the operation of the machine, an ejector-finger provided on the shaft, a controller arm provided in superposed relation to the aforesaid finger and normally extending over the scale-pan, said arm being arranged to be subject to a can traversing the scale-pan and of insufficient weight to depress the latter whereby the shaft is influenced to cause said sector-gear to become operable with respect to the spur-gear whereupon said shaft is rotated to cause said ejector-finger to effect the removal of such light-weight can from the scale-pan.

5. An assorting machine, having a platform with an opening therein, a scale provided with a pan operating in said opening, an upright shaft, an ejector-finger extending from said shaft, a sector-gear mounted on said shaft, a power-driven gear, means to convey cans across said scale-pan, and a controller-arm extending from said shaft at a predetermined height and adapted to be encountered by a can of insufficient weight to depress the scale-pan whereby said shaft is influenced to rotate the sector-gear into mesh with said power-driven gear whereby the latter becomes operative to actuate the shaft to cause said ejector-finger to remove such light-weight can.

[Claim 6 not printed in the Gazette.]

1,220,923. CHURN. CLINTON M. WOLFE, Coeburn, Va., assignor of one-fourth to Emory Hoge Miller, one-fourth to John A. Newberry, and one-fourth to William R. Culbertson. Filed Jan. 23, 1917. Serial No. 143,922. (Cl. 259—141.)



The combination with the supporting frame, the receptacle and operating means, of a fixed spindle having a series of openings therein, a pair of oppositely located blades having a hinge pin passed through one of the openings in the spindle, a pair of blades hinged to the free ends of the first pair of blades, a pitman connected to the operating means and a link connected to the pitman, a bushing integral with the link and adapted to slide on the spindle, and a hinge joint between the second pair of blades and said bushing.

1,220,924. SPRING-OILER. GUY L. WOODJARD, San Diego, Cal. Filed Sept. 16, 1916. Serial No. 120,425. (Cl. 184—1.)

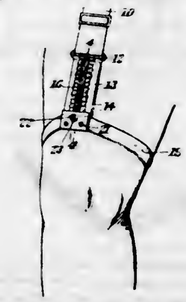


1. In a spring oiler the combination of a plate provided with side members forming reservoirs which clamp over the upper leaves of a spring, whereby oil is permitted to seep out against the sides of said spring for oiling the same and an additional oil cup secured to said plate for replenishing the oil to said oiler.

2. In a device of the class described, the combination of a plate provided with a raised portion for an oil conductor and a central hole therein for an oil intake and provided with downwardly extending portions adapted to fit snugly the sides of a spring and be held thereby, oil reservoirs formed integrally therewith along the sides, whereby the oil will seep through from said reservoirs against the sides of said spring and an oil cup secured in said central oil hole adapted as a reservoir for replenishing oil to said oiler.

3. In a device of the class described, the combination of a plate provided with a raised portion for an oil conductor and a central hole therein for an oil intake and provided with downwardly extending portions adapted to fit snugly the sides of a spring and be held thereby, oil reservoirs formed integrally therewith along the sides, whereby the oil will seep through from said reservoirs against the sides of said springs, an oil cup secured in said central oil hole adapted as a reservoir for replenishing oil to said oiler, and felt mounted in said reservoir adapted for retarding the seepage and splash of said oil from said reservoirs.

1,220,925. HOSE-SUPPORTER. ANN E. ZABRISKIE, New York, N. Y. Filed Apr. 7, 1916. Serial No. 89,686. (Cl. 241—1.)



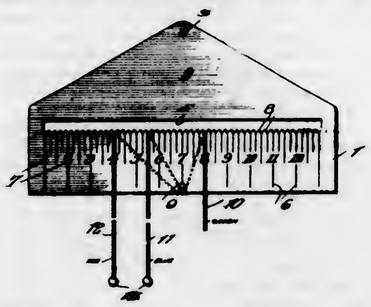
1. A hose supporter of the character described comprising an elastic strap having an adjustable loop at one end, an inelastic strip suspended from the strap and having separated branches adapted to receive the upper edge of the hose therebetween, an elastic tape associated with said strip and arranged longitudinally of one of said branches, said branch having spaced pairs of eyelets, and a safety pin carried by said tape and adapted to be passed through said eyelets, the hose, and the other of said branches to hold said parts associated, and to relieve the hose of undue strain incident to the movements of the limb.

2. A hose supporter of the character described comprising an elastic strap having an adjustable loop at one end, an inelastic strip suspended from the loop and having separated branches adapted to receive the upper edge of the hose therebetween, an elastic tape associated with said strip and arranged longitudinally of one of said branches, said branch having spaced pairs of eyelets, a safety pin carried by said tape and adapted to be passed through said eyelets, the hose, and the other of said branches to hold said parts associated and to relieve the hose of undue strain incident to the movements of the limb, and the free edge of the first mentioned branch being foldable upon itself and detachably secured to the adjacent end of the tape to conceal said pin.

1,220,926. MEDICINE-CARD. ALBERT E. AINSLIE, Brashear, Mo. Filed Feb. 15, 1916. Serial No. 78,414. (Cl. 116—60.)

A device of the character specified, comprising a card having means for permitting the same to be suspended

and having a longitudinally extending slot or passage, said slot or passage being horizontal when the card is suspended and the card having a scale below the slot or passage and the lower wall of the said slot or passage being notched or recessed at each indication of the scale, said card having an opening at its center and near its



lower edge and a series of cords of different colors tied at one end in the opening and provided at the other end with a weight and of a length to extend upwardly from the opening behind the card through the slot or passage and with the weight depending below the card at the front thereof.

1,220,927. BELTING OR WEBBING. FREDERICK WILFRID ALEXANDER, Barry, Wales. Filed Sept. 11, 1915. Serial No. 50,283. (Cl. 139—9.)



1. A fabric comprising a multiple ply woven portion and a plaited portion united to said woven portion by the weft thereof, the loops of the weft being covered and protected by strands of the plaited portion.

2. A fabric comprising a multiple ply woven portion and a plurality of plaited portions united to said woven portion by the weft thereof, the loops of the weft being covered and protected by strands of the plaited portion.

3. A fabric comprising a multiple ply woven portion and a rim or selvage of plaited strands secured or attached to the edge of said woven portion by the weft thereof, the loops of the weft being covered and protected by strands of the plaited portion.

4. A belting comprising a main woven portion and a plaited rim portion secured to the edge of the belting by the weft, the loops of the weft being covered and protected by strands of the plaited portion.

5. Woven belting or the like having a rim composed of strands of relatively tough material plaited together and secured to the edge of the belting by the weft, the loops of the weft being covered and protected by the strands of said plaited portion.

[Claim 6 not printed in the Gazette.]

1,220,928. CULINARY BEATER. EDWIN BALTZLEY and LOUIS E. BALTZLEY, Weehawken, N. J., assignors to Edward D. Farmer, trustee, Montclair, N. J. Filed July 21, 1914. Serial No. 852,200. (Cl. 259—107.)

1. In a culinary beater, a container, a top having means for supporting a bracket, a bracket formed with a comparatively broad foot rest, consisting of yielding separated portions which may be sprung apart for insertion of a shaft, means to secure the foot rest to the top, and operating mechanism supported in the bracket, said operating mechanism including a shaft extending through the top and the yielding portions of the foot rest.



2. In a culinary beater, a container, a top for the container having a hole for the reception of a shaft, a bracket supported on said top and provided with a foot rest having a hole of smaller diameter than the diameter of the hole in the top and in line therewith, an extension carried by the bracket, operating mechanism for the beater supported in said extension, and a shaft passing through both of said holes and reduced at a point along its length for engagement with the walls of the hole in said foot rest to limit the axial movement of the shaft in one direction.

3. In a culinary beater, a container and whipping mechanism therefor, said whipping mechanism comprising a beater head having depending beaters and shaft engaging means, a rotatable shaft, means to hold the shaft against axial movement, and means for rotating the same, said shaft having means engaging the beater head to constantly force the beaters toward the bottom of the container during continuous rotation of the shaft.

4. In a culinary beater, a container and whipping mechanism therefor, said whipping mechanism comprising a beater head having depending beaters and shaft engaging means, a shaft, means to hold the shaft against axial movement, and means for rotating the same, said shaft being twisted to form a screw immediately engaging the beater head to force the beaters toward the bottom of the container during continuous rotation of the shaft.

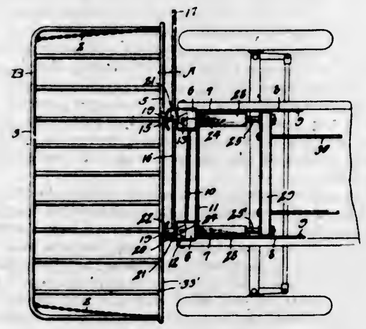
5. In a culinary beater a cap, a bracket attached thereto, a gear wheel journaled to said bracket, an angular shaft journaled in said bracket and carrying a pinion to mesh with said gear wheel, said shaft being twisted below said cap, means to hold the shaft against axial movement, and a whip having a rotatory head slidable on said twisted portion, the latter tending to force the whip downwardly upon rotation of the shaft.

1,220,929. LIQUID-FEEDING DEVICE. LOUIS E. BALTZLEY, Weehawken, N. J., assignor to Edward D. Farmer, trustee. Filed Apr. 16, 1915. Serial No. 21,700. (Cl. 221—94.)



A liquid delivering device comprising a container having at its upper end means for holding a rod supporting member, liquid delivering means at its lower end, a valve in said delivering means, a threaded rod attached to said valve, a movable arch-shaped resilient rod-supporting member bridging the top of the container and engaging the said holding means at the upper end and having a threaded opening through which the rod extends, and a handle on said rod.

1,220,930. VEHICLE-FENDER. HENRY H. BARR, Sparta, Wis. Filed Oct. 27, 1916. Serial No. 128,071. (Cl. 105—33.)



1. The combination with a motor vehicle, of substantially vertical hangers, means for fastening said hangers in fixed relation to the vehicle frame, said hangers being formed with guideways extending vertically and longitudinally thereof, vertically slidable fender-supporting members movable longitudinally of said guide-ways, a fender attached to and carried by said slidable members, and a substantially horizontal shaft journaled in bearings on said hangers and having a rack and pinion engagement with said vertically slidable fender-supporting members.

2. The combination with a motor vehicle, of substantially vertical hangers, means for fastening said hangers in fixed relation to the vehicle frame, said hangers being formed with guideways extending vertically and longitudinally thereof, vertically slidable fender-supporting members movable longitudinally of said guideways, a fender attached to and carried by said slidable members, a substantially horizontal shaft journaled in bearings on said hangers and having a rack and pinion engagement with said vertically slidable fender-supporting members, latch bolts slidable in relation to said hangers and movable into and out of engagement with said vertically slidable fender-supporting members, and manually controlled means for simultaneously withdrawing said latch bolts to release and drop the fender.

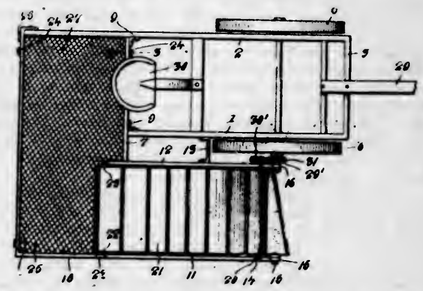
3. The combination with a motor vehicle, of substantially vertical hangers, means for fastening said hangers in fixed relation to the vehicle frame, said hangers being formed with guideways extending vertically and longitudinally thereof, vertically slidable fender-supporting members movable longitudinally of said guideways, a fender attached to and carried by said slidable members, and a substantially horizontal shaft journaled in bearings on said hangers and having a rack and pinion engagement with said vertically slidable fender-supporting members, latch bolts slidably supported in relation to said hangers and movable into and out of engagement with said slidable fender-supporting members, a yoke bar connecting said latch bolts, a manually operable lever, and a bridle connecting said lever with said yoke bar, whereby said latch bolts may be simultaneously shifted out of engagement with the slidable fender-supports to release the latter and permit the fender to drop.

4. The combination with a motor vehicle, of substantially vertical hangers, means for fastening said hangers in fixed relation to the vehicle frame, said hangers being formed with guideways extending vertically and longitudinally thereof, vertically slidable fender-supporting members movable longitudinally of said guideways, a fender attached to and carried by said slidable members, a substantially horizontal shaft journaled in bearings on said hangers and having a rack and pinion engagement with said vertically slidable fender-supporting members, and mud-guards interposed between the fender frame and said vertically slidable fender-supporting members.

5. The combination with a motor vehicle, of substantially vertical hangers, means for fastening said hangers in fixed relation to the vehicle frame, said hangers being formed with guideways extending vertically and longitudinally thereof, vertically slidable fender-supporting members movable longitudinally of said guideways, a fender attached to and carried by said slidable members, and a substantially horizontal shaft journaled in bearings on said hangers and having a rack and pinion engagement with said vertically slidable fender-supporting members, said slidable fender-supporting members and their guideways being of dovetailed formation in cross section.

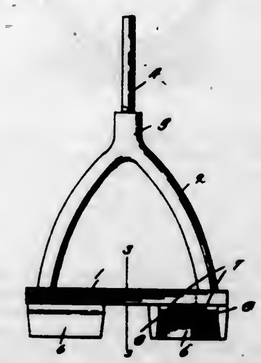
[Claim 6 not printed in the Gazette.]

1,220,931. COTTON-HARVESTER. SAMUEL BASHINSKI, Jr., Dublin, Ga. Filed Mar. 2, 1912. Serial No. 681,097. (Cl. 56—6.)



A wheel supported frame structure having side members of unequal lengths coacting to provide a support for an elongated supporting frame at the rear end of said frame structure, said supporting frame extending beyond and at right-angles to the shorter of said side members, a wheeled receptacle having an inclined bottom arranged beneath and coextensive in width and length with said supporting frame, and means on the sides of said receptacle and supporting frame whereby said receptacle is detachably connected with the supporting frame to be normally supported thereby above and free from contact with the ground, in combination with cutting means and conveying means arranged in advance of the extending portion of said supporting frame and having connection therewith and with one of said side bars, said conveying means overhanging the extending portion of said supporting frame to deliver into the receptacle carried thereby material cut by the cutting means.

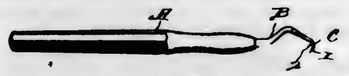
1,220,932. BRANDING-IRON. JAMES M. BASKETT, Eudora, Ark. Filed May 23, 1916. Serial No. 99,343. (Cl. 101—28.)



A branding iron comprising in combination of a base plate, a yoke-like support rising from said base plate, and

having its arms extended to the ends of said base plate, and interchangeable characters removably fastened to the bottom of said base plate, said characters comprising flange-like bodies provided with lugs for securing the bodies to said base plate.

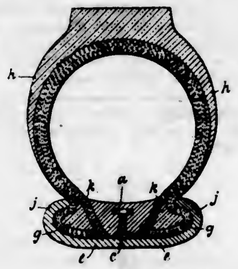
1,220,933. DENTAL SCALER. THOMAS F. BATES, Shelbyville, Tenn. Filed Sept. 23, 1914. Serial No. 863,158. (Cl. 32—10.)



1. A dental instrument comprising a handle, and an angularly bent shank projecting from said handle, and a blade flattened on both sides and forming the termination of said shank and having its cutting edges in the continuation of the axis of said handle, said blade being curved to form a quadrant of a circle whose radius is substantially the average radius of the tooth root to be operated upon, said quadrant having cutting edges on each side of the concave portion thereof, and having the convex portion thereof rounded, and each side of said blade lying in a plane at right angles to the concave surface referred to, substantially as described.

2. A dental instrument comprising a handle, and an angularly bent shank projecting from said handle, and a blade flattened on both sides forming the termination of said shank and having its cutting edges in the continuation of the axis of said handle, said blade being curved to form a quadrant of a circle whose radius is substantially the average radius of the tooth root to be operated upon, said quadrant having cutting edges on each side of the concave portion thereof, and having the convex portion thereof rounded, and each side of said blade lying in a plane at right angles to the concave surface referred to, and the tip of said blade being rounded, substantially as and for the purposes described.

1,220,934. PNEUMATIC OR ELASTIC WHEEL-TIRE. GEORGE WILLIAM BELDAM, Ealing, and ALBERT URIAH BENJAMIN RYALL, Brentford, England. Filed Oct. 19, 1914. Serial No. 867,471. (Cl. 152—20.)



1. The combination with a vehicle wheel rim comprising a body portion and flanges, and a removable resilient tire, of an endless extensible security band of considerable elasticity, the said band having an interior circumference less than the circumference of the rim, the said band adapted to be stretched and passed over the said flanges, the said band retracting and gripping the middle of the body portion of the rim.

2. The combination with a vehicle wheel rim comprising a body portion and flanges, and a removable resilient tire, of an endless security band of considerable elasticity, the said band having a flat interior surface and tapering sides engaging the tire beads and rim respectively, the said band having an interior circumference less than the circumference of the rim, the said band adapted to be stretched and passed over the said flanges, the said band retracting and gripping the middle of the body portion of the rim.

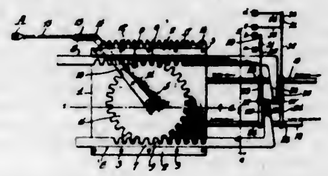
3. The combination with a vehicle wheel rim comprising a body portion and flanges, and a removable resilient tire, of an endless security band, the said band composed of lengths of extensible and non-extensible material, the said band having a flat interior surface and tapering sides, the said band having an interior circumference less than the circumference of the rim, the said security band stretched and passed over the flanges of the rim and positioned between the tire beads and gripping the center of the body portion of the rim both when the tire is inflated and deflated.

4. The combination with a vehicle wheel rim comprising a body portion and flanges, and a removable tire, of an endless extensible security band, the said band having a flat interior surface and tapering sides, the said band having an interior circumference less than the circumference of the rim, the band having transverse grooves on its flat interior surface, the said band stretched and passed over the flanges of the rim and gripping the inner surface of the body portion of the rim, the said grooves providing means for preventing circumferential movement of the said band.

5. The combination with a vehicle wheel rim comprising a body portion and flanges, and removable tire, of an endless extensible security band the inner surface of the said band provided with metallic members engaging and gripping the body portion of the rim, the said band stretched and passed over the flanges of the rim and gripping the center of the body portion thereof between the beads of the tire.

[Claims 6 to 8 not printed in the Gazette.]

1,220,935. GEAR-SHIFTING MECHANISM. ALBERT H. BENNINGTON, Park River, N. D. Filed July 28, 1916. Serial No. 111,897. (Cl. 74—58.)



1. In a gear shifting mechanism, the combination with the gear shifting rods of the transmission system and the clutch pedal of an automobile, of means normally disposed above and free from engagement with the said rods and adapted to be moved for engagement with either of the rods at different points thereon, operating means connected to said clutch pedal and coacting with the said first mentioned means for causing the said latter means to move into engagement with the said rods at the desired points thereon, and means for controlling the said first mentioned means whereby the desired rod and the desired point thereon will be engaged by the said first mentioned means.

2. In a gear shifting mechanism, the combination with the gear shifting rods of the transmission system and the clutch pedal of an automobile, the said gear shifting rods being provided with notches, of rod shifting means adapted to be engaged with any of the said notches, arms for supporting the said means, gearing mechanism associated with the said arms for changing the relative positions of the said means, and means establishing connection between the said gearing mechanism and the said clutch pedal whereby the said mechanism will be operated when the said clutch pedal is operated.

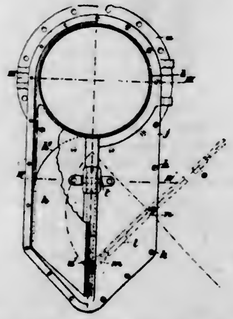
3. In a gear shifting mechanism, the combination with the gear shifting rods of the transmission system and the clutch pedal of an automobile, the said gear shifting rods being provided with a plurality of notches, of means normally disposed above said rods and adapted to be moved into and out of engagement with said notches, arms for supporting said means, means associated with said arms and connected to said clutch pedal for moving said first mentioned means into position above said notches when said clutch pedal is moved to released position, and means connected to said first mentioned means and adapted to be manually operated for moving said first mentioned means into engagement with said notches whereby movement may be imparted to one of said rods when said clutch pedal is moved to operate the clutch.

4. In a gear shifting mechanism, the combination with gear shifting rods of the transmission system and the clutch pedal of an automobile, of means adapted to engage said gear shifting rods for imparting movement to said rods when said means is operated, means carried by the automobile and connected to said clutch pedal for imparting movement to said means when said clutch pedal is operated, said means including a spur-gear and rack bars engaging said spur-gear, said rack bars being connected to said first mentioned means for imparting movement thereto when said spur-gear is rotated, and means for rotating said spur-gear when said clutch pedal is operated.

5. In a gear shifting mechanism, the combination with gear shifting rods of the transmission system and the clutch pedal of an automobile, of means normally disposed above and free from engagement with said rods and adapted to shift said rods after being engaged therewith, means for manually operating said first mentioned means for intermittently engaging said means with said rods including a plurality of push buttons connected to said first mentioned means, and means connected to said clutch pedal and co-acting with said first mentioned means for moving said means when in engagement with said rods.

[Claims 6 to 8 not printed in the Gazette.]

1,220,936. SHIP'S LIGHT. ENRICO BENVENUTI, Genoa, Italy. Filed July 17, 1916. Serial No. 109,754. (Cl. 114—174.)



1. Means for closing side openings in ships, comprising in combination, movable sashes or lights adapted to be opened or closed by individual operation, guides, shutters slidable therein capable of being closed over said openings whether said sashes or lights are opened or closed, and operative means connected with a plurality of said shutters.

2. Means for closing side openings in ships, comprising in combination, a framing, a glazed frame therein adapted to be opened or closed from the interior of the ship, guides on the outer side of said framing, a shutter slidable in said guides, mechanical means operative upon said shutter, driving mechanism, and a coupling for connecting the mechanical means with the driving mechanism.

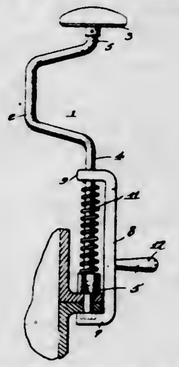
3. Means for closing side openings in ships comprising in combination, a framing, a hinged sash, a seating for said sash on said framing, hand operated means for tightening said sash against said seating, guides on said framing, a shutter slidable in said guides, mechanical means operative upon said shutter to slide the same, and control means distant from said sash and operative to control said mechanical means.

4. Means for closing port openings in ships comprising a framing, a hinged sash adapted to open inward, guides on the outer side of said framing, a shutter slidable in said guides, and means adapted to operate said shutter.

5. Means for closing port openings in ships comprising in combination a framing, a ring-shaped seating thereon, a hand-operated sash closable against said seating, tightening means adapted to hold said sash hard against said seating, guides in said framing, a slidable shutter in said guides, and mechanical means operative upon said shutter.

[Claims 6 to 21 not printed in the Gazette.]

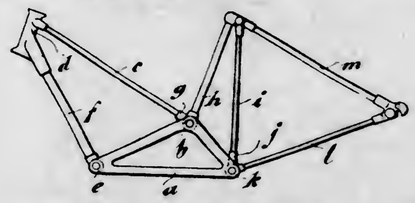
1,220,937. TOOL. FRANK W. BLACK, Downs, Kans. Filed Sept. 30, 1916. Serial No. 123,144. (Cl. 81—55.)



1. In a tool for the purpose set forth, a brace member including a sweep provided with a chuck, a substantially U-shaped member having one of its arms loosely connected with the brace, a spring between the said arm and the chuck of the brace, the second offset arm of the U-shaped member having a socket disposed opposite the chuck, and a handle for the said U-shaped member.

2. In a tool for the purpose set forth, a brace including a sweep which has arms in alinement one of which is of a greater length than the other, a revoluble head upon the shorter arm, a chuck upon the end of the longer arm, a jaw having a socket disposed in a line with the chuck, said jaw including an angular arm arranged parallel with the longer arm of the brace, the arm of the jaw having its end offset and provided with an opening to receive the longer arm of the brace, and spring means between the said offset end of the arm of the jaw and the chuck of the longer arm of the brace for normally forcing the jaw toward the chuck, and a handle for the arm of the jaw.

1,220,938. CYCLE-FRAME. LESLIE WILLIAM BLANCHARD, London, England. Filed Apr. 18, 1916. Serial No 92,012. (Cl. 208—93.)



1. A cycle frame comprising in combination an intermediate structure, a tripod structure for supporting the steering head, said tripod structure being based upon said inter-

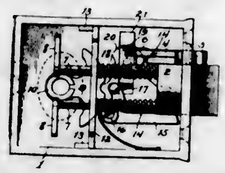
mediate structure and having two of its tubes laterally spaced from each other and disposed in a common transverse plane, a second tripod structure for supporting the seat, said last-mentioned tripod structure being also based upon said intermediate structure, and provision for supporting the rear wheel.

2. A cycle frame comprising in combination an intermediate structure, a tripod structure for supporting the steering head, said tripod structure being based on the said intermediate structure and having two of its tubes laterally spaced from each other and disposed in a common transverse plane, a second tripod structure for supporting the seat, said last-mentioned tripod structure being also based upon said intermediate structure, and means for supporting the rear wheel, the rear of the base of said second tripod structure occupying a position substantially in advance of the axle of the rear wheel of the vehicle.

3. A frame for a motor cycle or the like comprising in combination an intermediate structure, a tripod structure for supporting the steering head, said tripod structure being based upon said intermediate structure and having two of its tubes laterally spaced from each other and disposed in a common transverse plane, a second tripod structure for supporting the seat, said last-mentioned tripod structure being also based upon said intermediate structure, and provision for supporting the rear wheel, said provision including two stays extending rearwardly from the lower extremities of the two rear stays of the rear tripod structure which supports the seat, and two stays extending downwardly and rearwardly from the top of said tripod structure for supporting the seat and joining the first mentioned pair of stays.

4. A frame for a motor cycle or the like, comprising in combination an intermediate structure, a tripod structure for supporting the steering head, said tripod structure being based on the said intermediate structure and having two of its tubes laterally spaced from each other and disposed in a common transverse plane, a second tripod structure for supporting the seat, said last-mentioned tripod structure being also based upon said intermediate structure, and means for supporting the rear wheel, the rear of the base of said second tripod structure occupying a position substantially in advance of the axle of the rear wheel of the vehicle, said means including a pair of stays extending rearwardly from the lower extremities of the two rear stays of the rear tripod structure which supports the seat, and two additional stays extending downwardly and rearwardly from the top of said tripod structure for supporting the seat, said last mentioned pair of stays joining the rear extremities of the first mentioned pair of stays.

1,220,939. LATCH. ALFRED C. O. BOCK, Brooklyn, N. Y., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Jan. 25, 1917. Serial No. 144,458. (Cl. 70—29.)



1. In a latch, the combination of a double throw bolt having a shoulder at one side, and a lever pivoted to the lock casing and adapted to engage the shoulder on the bolt for holding the latter in its single throw position, the said lever adapted to be turned on its pivot by its engagement with the strike plate as the door is closed so as to release the bolt and permit it to move to its double throw position when the door reaches its closed position.

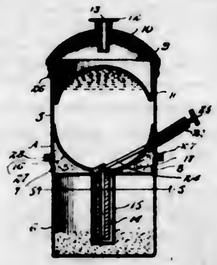
2. In a latch, the combination of a double throw bolt having a shoulder projecting at one side thereof and a spring pressed lever pivoted to the latch casing and adapted to engage the shoulder on the bolt for holding the latter in its single throw position, the said lever adapted to be turned on its pivot by its engagement with the strike plate as the door is closed, so as to release the bolt and permit it to move to its double throw position when the door reaches its closed position.

3. In a latch, the combination of a double throw bolt, key mechanism for actuating the bolt from the outer side of the door, means for holding the bolt in its single throw position, and means for deadlocking it when in such position.

4. In a latch, the combination of a spring actuated bolt, means for retracting the same, a lever pivoted to the latch casing with one end normally projecting to engage the strike plate or keeper of the latch, a projection from the bolt adapted to be engaged by the inner end of said lever whereby the bolt may be held in a partly retracted position when the door is open and a lever for dead locking the bolt when the latter is fully projected.

5. In a latch, the combination of a spring actuated bolt, means for retracting the same, means for holding the bolt partly retracted, the said means being engaged by the strike plate or keeper of the lock to release the bolt, and means for locking said bolt against retraction by the retracting means and also for holding it in its partly retracted position.

1,220,940. ACETYLENE-LAMP. ANTONIO BOMMARITO, St. Louis, Mo. Filed Aug. 17, 1915. Serial No. 45,944. (Cl. 48—30.)



1. A lamp of the class described comprising a water reservoir, a carbid container detachably connected with the reservoir, a water feed tube on the reservoir and extended within the container, a reticulated cage for the water feed tube, means for controlling the feed of water from the reservoir to the container, a removable cap for the reservoir, and an inflatable bag mounted in the cap completely closed against water and adapted to exert pressure upon the surface of the water within the reservoir for effecting a force feed thereof to the container.

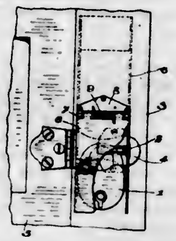
2. A lamp of the class described comprising a water reservoir, a carbid container detachably connected with the reservoir, a water feed tube on the reservoir and extended within the container, a reticulated cage for the water feed tube, means for controlling the feed of water from the reservoir to the container, a removable cap for the reservoir, an inflatable bag mounted in the cap completely closed against water and adapted to exert pressure upon the surface of the water in the reservoir for effecting a force feed thereof to the container, means on the cap for admitting air to the bag from the atmosphere, and a vent cap detachably mounted on said means.

3. A lamp of the class described comprising a water reservoir, a carbid container detachably connected with the reservoir, a water feed tube on the reservoir and extended within the container, a reticulated cage for the water feed tube, means for controlling the feed of water from the reservoir to the container, a removable cap for the reservoir, an inflatable bag mounted in the cap completely closed against water and adapted to exert pressure upon the surface of the water within the reservoir for effecting a force feed thereof to the container, means on the cap for admitting air to the bag from the atmosphere, a vent cap detachably mounted on said means, and a burner tube for admitting gas from the carbid container.

4. A lamp of the class described comprising a water reservoir, a carbid container detachably connected with the reservoir, a water feed tube on the reservoir and extended within the container, a reticulated cage for the water feed tube, means for controlling the feed of water from the reservoir to the container, a removable cap for the reservoir, an inflatable bag mounted in the cap completely closed against water and adapted to exert pressure upon the water within the reservoir for effecting a force feed thereof to the container, means on the cap for admitting air to the bag from the atmosphere, a vent cap detachably mounted on said means, a burner tube for admitting gas from the carbid container, and a false bottom in the reservoir and forming a gas circulating space between it and the bottom of the reservoir.

5. A lamp of the class described comprising a water reservoir, a carbid container detachably connected with the reservoir, a water feed tube on the reservoir and extended within the container, a reticulated cage for the water feed tube, means for controlling the feed of water from the reservoir to the container, a removable cap for the reservoir, an inflatable bag mounted in the cap completely closed against water and adapted to exert pressure upon the water within the reservoir for effecting a force feed thereof to the container, means on the cap for admitting air to the bag from the atmosphere, a vent cap detachably mounted on said means, a burner tube for admitting gas from the carbid container, a false bottom in the reservoir and forming a gas circulating space between it and the bottom of the reservoir, and a wool packing within said gas space, the bottom of the said reservoir being provided with a hole for admitting gas from the container to the gas space.

1,220,941. PROTECTOR FOR PADLOCKS. WILLIAM F. A. BOWERS, Chicago, Ill. Filed June 19, 1916. Serial No. 104,481. (Cl. 70—16.)



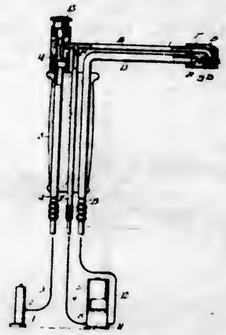
1. The combination with a padlock, of a protector adapted to inclose said lock and provided with a notch in its edge to receive a portion of said lock; and resilient means for normally holding said protector in operative position, substantially as described.

2. A padlock in combination with a protector comprising a pair of hingedly connected members provided at their adjacent edges with means for receiving a portion of the lock and means for normally maintaining said protector in closed position, substantially as described.

3. A padlock in combination with a protector comprising a pair of similar concave members hingedly connected and provided at their adjacent edges with an opening to receive a portion of the lock and a spring normally holding said protector in closed position, substantially as described.

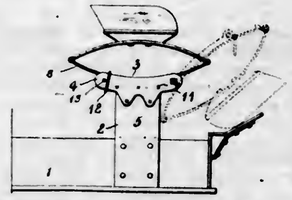
1,220,942. SPRAYING APPARATUS. FRANKLIN F. BRADLEY, Chicago, Ill., assignor to Bradley & Vrooman Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 7, 1914. Serial No. 865,487. (Cl. 91—45.)

An atomizer provided with a nozzle head having two substantially parallel bores arranged transversely of the nozzle head and each extending to one end thereof, one of these bores being for communication with a source of liquid to be sprayed and the other for communication with a source of air under pressure; a separate screw cap for each of these bores at the end of the nozzle head to which such bore extends and in threaded engagement therewith; and a nozzle tube extending longitudinally of



the nozzle head and terminating at the front end of the nozzle head and extending through the latter bore into communication with the other bore, there being space at the exit end of the nozzle tube intervening between this tube and the nozzle head, this space affording communication between the air conveying bore and the exterior of the nozzle head.

1,220,943. WAGON-SEAT. CECIL N. BRANNAN, Palouse, Wash., assignor of one-half to Charles A. Couplin, Palouse, Wash. Filed Apr. 17, 1916. Serial No. 91,732. (Cl. 21—44.)

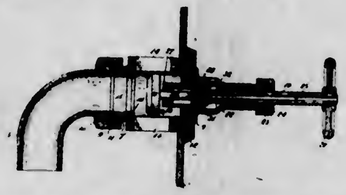


1. In a wagon seat support, the combination with a cap member, including a pair of spaced side plates and a connecting web disposed below the surfaces of said plates and forming a channel thereby, the ends of said plates projecting beyond the web, thereby making pairs of ears, said pairs of ears having transversely alined pivotal openings formed through them, a strap abutting said web and extending beyond the ends of the same, the ends of said strap having pin openings registering with the transversely alined pivotal openings in the ears of said plates, removable pins placed through said pairs of openings, the lower bow of a seat spring attached to said strap and lying in the channel between the side plates and extending beyond the ears of said plates, a ring slidably mounted on said bow of the spring, so that it may be slid down the spring and over the ears of said side plates, thereby locking the seat in fixed position.

2. In a wagon seat support, the combination with a cap member including a pair of spaced side plates and a connecting web disposed below the upper edge of said plates and forming a channel thereby, the ends of said plates projecting beyond the web, thereby making pairs of ears at each end, each pair of ears having transversely alined pivot openings formed through them, a strap abutting said web and extending beyond the ends of the same, said strap having openings registering with the transversely alined pivot openings in the ears of said plates,

pins placed through said openings, so when one is removed, the other acts as a pivot, whereby said seat may be swung in either direction or reversed either of said pins adapted to act as the pivotal point, and means carried by said strap for carrying a seat.

1,220,944. SAFETY DEVICE FOR STEAM-BOILERS AND OTHER FIXTURES CONTAINING STEAM UNDER PRESSURE. ARTHUR L. BRIDGHAM, Boston, Mass., assignor of one-half to Charles H. Sherburne, Boston, Mass. Filed Apr. 13, 1915. Serial No. 21,157. (Cl. 137——4.)



1. In a safety device of the type specified, the combination with a fixture containing steam under pressure and steam outlet pipe leading therefrom, of a valve controlling said pipe, said valve being arranged whereby it may be subjected to the steam pressure within said fixture on one side thereof and to both said steam pressure and atmospheric pressure on the other side thereof so that the valve may be overbalanced and maintained by the steam pressure in a normal open position but in a position where it is subjected to and moved by the steam pressure to a closed position for closing said outlet pipe upon undue drop in pressure in the said pipe, means having a passage in it through which atmospheric pressure may be directed to said valve by which it may be subjected to atmospheric pressure as aforesaid, and other means assisting in the control of said valve by which the pressure within said fixture is closed from said passage connecting with the atmosphere at all times during both the open and closed positions of said valve.

2. In a safety device of the type specified, the combination with a fixture containing steam under pressure and steam outlet pipe leading therefrom, of a valve controlling said pipe, said valve being arranged whereby it may be subjected to the steam pressure within said fixture on one side thereof and to both said steam pressure and atmospheric pressure on the other side thereof so that the valve may be overbalanced and maintained by the steam pressure in a normal open position but in a position where it is subjected to and moved by the steam pressure to a closed position for closing said outlet pipe upon undue drop in pressure within said pipe, means having a passage within it through which atmospheric pressure may be directed to said valve, other means assisting in the manual control of said valve and permitting of the valve being moved to a closed position when open, said other means being adapted also whereby the valve may be made susceptible to said atmospheric pressure and whereby, also, the steam within said fixture may be excluded from said passage at all times both during the open and closed positions of the valve.

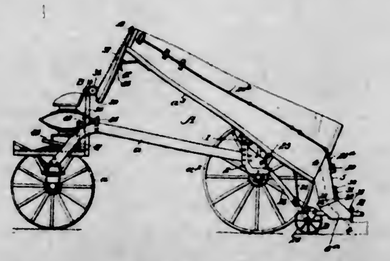
3. In a safety device of the type specified, the combination with a fixture containing steam under pressure and steam outlet pipe leading therefrom, of a valve controlling said pipe, said valve being arranged whereby it may be subjected to the steam pressure within said fixture on one side thereof and to both said steam pressure and atmospheric pressure on the other side thereof so that the valve may be overbalanced and maintained by the steam pressure in a normal open position but in a position where it is subjected to and moved by the steam pressure to a closed position for closing said outlet pipe by undue drop in pressure within said pipe, a valve stem having a passage through it by which atmospheric pressure may be directed to said valve, means whereby said valve may be connected to said stem to be manually controlled by it and said valve be movable to a closed position when open independently of said stem, said means being adapted also whereby the valve may be subjected to the atmospheric pressure acting through said stem, and the steam pressure within said fixture be excluded from the passage through the stem at all times both during the open and closed positions of the valve.

4. In a safety device of the type specified, the combination with a fixture containing steam under pressure and steam outlet pipe leading therefrom, of a valve controlling said pipe, said valve being arranged whereby it may be subjected to the steam pressure within said fixture on one side thereof and to both said steam pressure and atmospheric pressure on the other side thereof so that the valve may be overbalanced and maintained by the steam pressure in a normal open position but in a position where it is subjected to and moved by the steam pressure to a closed position for closing said outlet pipe upon undue drop in pressure in the said pipe, a valve stem by which said valve may be manually controlled from outside the fixture, said steam having a passage through it communicating with the atmosphere, a mounting within which said stem is movable longitudinally, means carried by the valve independent of said stem and comprising a member under the influence of the atmospheric pressure acting through said passage within the stem, and means carried by said stem adapted to have contact with said member for assisting in the manual control of said valve, said last-named means being adapted, also, whereby the steam pressure within said fixture may be excluded from the passage through said stem at all times both during the open and closed positions of the valve.

5. In a safety device of the type specified, the combination with a fixture containing steam under pressure and steam outlet pipe leading therefrom, of a valve controlling said pipe, said valve being arranged whereby it may be subjected to the steam pressure within said fixture on one side thereof and to both said steam pressure and atmospheric pressure on the other side thereof so that the valve may be overbalanced and maintained by the steam pressure in a normal open position but in a position where it is subjected to and moved by the steam pressure to a closed position for closing said outlet pipe upon undue drop in pressure in said pipe, a valve stem and mounting therefor in which said stem is longitudinally movable in reverse directions, said stem having a chambered extension at the forward end thereof with a passage leading from the chamber of the extension through said stem and communicating with the atmosphere, an auxiliary valve stem extending from the rear side of said valve through the end of said extension or chamber thereof, and a head carried by said auxiliary stem and contained within the chamber of said extension.

[Claims 6 to 9 not printed in the Gazette.]

1,220,945. STONE-SPREADING MACHINE. J GROVE BROWN, Groton, N. Y. Filed Oct. 21, 1913. Serial No. 796,436. (Cl. 21—20.)



1. The combination with a dumping vehicle of a chute extending from the vehicle and having a vertically movable delivery end, and a trailing gage member connected to the vehicle and adapted to support the delivery end of the chute, said delivery end being movable with respect to the gage member.

2. The combination with a dumping vehicle of a chute connected thereto, said chute having a vertically movable delivery end, and a trailing gage member connected to the vehicle, said member having a ground engaging portion and a part at the rear thereof adapted to support the delivery end of the chute, out of engagement with the ground, said delivery end being movable with respect to the gage member.

3. The combination with a dumping vehicle and a trailing gage member connected to the vehicle, said gage member having a ground engaging portion and a part projecting at the rear thereof, of a chute connected to the vehicle, said chute having a vertically movable delivery end adapted to be supported by said rearward extension of the gage member out of engagement with the ground, and a scraper upon the delivery end of the chute, said delivery end being movable with respect to the gage member.

4. The combination with a dumping vehicle and a trailing gage-member connected to the vehicle, of a chute extending from the vehicle and having a hinged delivery end adapted to rest upon said member and movable with respect thereto.

5. The combination with an endwise dumping vehicle and a trailing gage member connected to the vehicle, said gage member having a ground engaging portion and a part projecting at the rear thereof, of a chute extending from the rear of the vehicle and having a vertically movable delivery end, a scraper on said delivery end, and means, substantially in the vertical plane of said scraper, for supporting the delivery end of the chute on the rearwardly projecting part of the gage member.

[Claims 6 to 25 not printed in the Gazette.]

1,220,946. DAMPER AND HEAT-REGULATOR FOR INCUBATORS. LUCIUS A. BROWN, Clay Center, Nebr., assignor to The M. M. Johnson Co., Clay Center, Nebr. Filed May 1, 1916. Serial No. 94,720. (Cl. 236—6.)



1. In means of the class described, the combination of a wick shaft finger piece or the like, and an actuating lever therefor, the latter comprising an integral body having spaced flanges bent from its edge portions and having portions spaced from its body portion, the finger piece being clamped between the flanges and the body owing to the resiliency of the flanges.

2. A wick shaft having a finger piece and an actuating lever therefor formed with a tapering socket open at one end and having members between which the finger piece is wedged, thereby positively connecting the finger piece and lever.

3. In means of the class described, the combination of a wick shaft finger piece or the like, and an actuating lever therefor comprising a body formed with spaced flanges bent over from its edges and adapted to impingedly engage with said finger piece to establish connection intermediate the last mentioned part and said lever, the space between said flanges and the body being contracted edgewise of the lever in a direction leading away from the finger piece entering portion of said space whereby to facilitate resilient pressure and clamping engagement of the flanges and body with the finger piece.

4. In means of the class described, the combination of a wick shaft finger piece or the like, and an actuating lever therefor formed with spaced flanges bent over from its edges and adapted to impingedly engage with said finger piece to establish connection intermediate the last mentioned part and said lever, the space between the flanges and the body portion of the lever and the space between the flanges themselves being contracted in a direction leading away from the finger piece entering portion of said spaces whereby to facilitate wedging engagement between the finger piece and the lever at the flanges owing to the resiliency of the latter.

5. In means of the class described, the combination of a wick shaft finger piece or the like, and an actuating member therefor, said member being made of relatively thin sheet metal and formed with edge flanges substantially throughout its entire length, said edge flanges being bent flat against the body of the lever for a portion of its length and being spaced from said body adjacent to one end of the lever to form finger piece engaging elements for receiving therebetween the said finger piece and having a clutching or clamping action upon the finger piece.

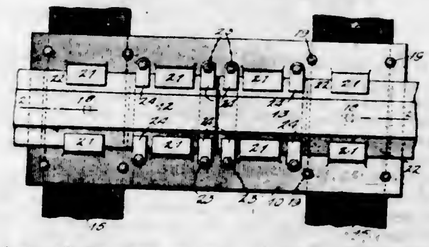
1,220,947. BRONZING LIQUID. AUGUST BUNGER, Hoboken, N. J. Filed May 18, 1916. Serial No. 98,418. (Cl. 134—51.)

1. A bronzing liquid for admixture with bronze powder, said bronzing liquid including rosin, a compound of lead, a compound of manganese, a vegetable oil, printers' varnish and coloring matter.

2. A bronzing liquid for admixture with bronze powder, said bronzing liquid including rosin, a compound of lead, manganese, a vegetable oil, printers' varnish and printers' ink for producing the proper tint or shade.

3. A bronzing liquid for admixture with bronze powder, said bronzing liquid consisting of one part rosin, one part lead oxid, one part manganese borate, two parts cotton seed oil, five parts boiled linseed oil, five parts printers' varnish, and five parts printers' ink.

1,220,948. RAIL-TIE PLATE AND RAIL-FASTENER. FRANK CALDWELL, Cincinnati, Ohio. Filed Sept. 26, 1916. Serial No. 122,227. (Cl. 239—2.)



1. A rail tie plate and rail connection, including the combination with spaced rail supporting ties, of superposed tie plates transversely above and below said ties, having angularly disposed lugs engaging opposite side faces of the ties and provided with rail engaging and holding elements, said plates and said ties having relatively engaging means and connections preventing relative movement of both the ties and the plates in any direction.

2. A rail tie plate and rail connection, including the combination with spaced rail supporting ties, of superposed tie plates transversely above and below said ties, having angularly disposed lugs engaging opposite side faces of the ties and provided with rail engaging and holding elements, said plates and said ties having relatively engaging means and connections preventing relative movement of both the ties and the plates in any direction, and including vertically extending bolts connecting the said tie plates and partially embedded in the side faces of the ties.

3. A rail tie plate and rail connection, including the combination with spaced rail supporting ties, of superposed tie plates extending transversely across and between the ties respectively above and below the same, and relatively engaging means carried by the said ties and

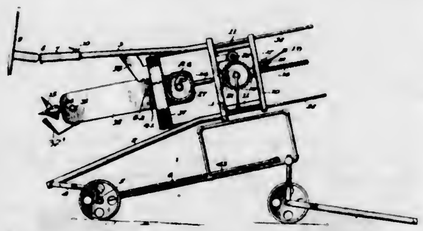
tie plates preventing relative movement thereof and including connections between said tie plates engaging the ties in their passage between the plates.

4. A rail tie plate and rail connection, including the combination with spaced ties having vertically disposed grooves along the opposite side surfaces thereof, of superposed tie plates extending transversely across and between the said ties and respectively above and below the same, rail engaging means carried by the upper tie plate, and vertically disposed bolts connecting the upper and lower tie plates and extending in their length between the plates into the said grooves of the ties.

5. A rail tie plate and rail connection, including the combination with spaced rail supporting ties having cavities in the upper and lower surfaces thereof and vertically disposed grooves in the side faces thereof, of superposed tie plates extending transversely across and between the said ties and respectively above and below the same, and provided with depressions entering the said cavities of the ties, rail engaging means carried by the said upper tie plate, and vertically extending bolts connecting the said upper and lower tie plates and projecting into the vertical grooves of the ties.

[Claims 6 to 8 not printed in the Gazette.]

1,220,499. POST-HOLE AUGER. FRED CAMP, Duncombe, Iowa. Filed July 24, 1916. Serial No. 110,971. (Cl. 255—21.)



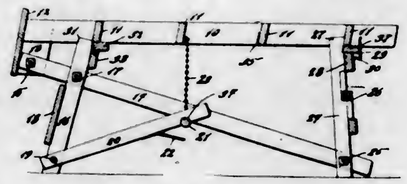
1. In a post-hole auger, the combination with a frame, of an auger-shaft mounted thereon, an auger on said shaft, means mounted on the frame for rotating said shaft, conveying means mounted upon said shaft and adapted to rotate therewith, a housing for said conveying means, one end of which terminates in a scoop, and means for actuating said conveying means.

2. In a post-hole auger, the combination with a frame, of an auger-shaft mounted thereon, an auger on said shaft, means mounted on the frame for rotating said shaft, conveying means mounted upon said shaft and adapted to rotate therewith, a housing for said conveying means, one end of which terminates in a scoop, a spout mounted on said housing adapted to receive the contents of said conveying means, and means for actuating said conveying means.

3. In a post-hole auger, the combination with a frame, of an auger-shaft vertically slidable in said frame, conveying means mounted upon said shaft, and an actuated gear-wheel connected therewith, an annular rack located in the path of said gear-wheel, radial braces extending from said shaft having rollers adapted to bear upon said annular rack on its inner and lower surfaces for the purpose of supporting the same and keeping it in its proper position with respect to the shaft, said annular rack adapted to be firmly held between said gear-wheel on one edge, and said rollers on the other, vertical guiding means engaging said annular rack and passing through openings in said frame, whereby the annular rack is in constant engagement with said gear-wheel regardless of the vertical position of said shaft, and said conveying means will be actuated upon the rotation of said shaft.

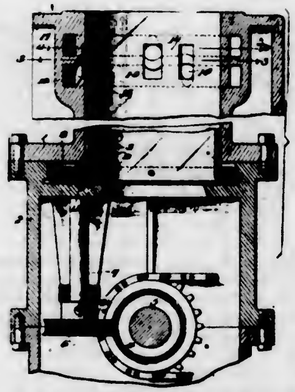
4. In a post hole auger, the combination with a frame, of digging means mounted thereon, conveying means mounted in proximity to said digging means, and so arranged as to remove the earth as it is severed, and cleaning means comprising paddles so located as to be actuated by said conveyer means, whereby said conveyer means is cleaned as it passes said cleaning means.

1,220,950. COMBINED STEP-LADDER AND WASH-BENCH. VICTOR M. CANO, St. Louis, Mo., assignor of two-fifths to David G. Black, St. Louis, Mo. Filed Mar. 1, 1915. Serial No. 11,442. (Cl. 228—32.)



A combined ladder and bench comprising a step portion adapted to form the top of the bench and having rungs and cross pieces, a support hinged to said step portion, a shelf hinged to said support, a frame hinged to said support, said shelf and said frame having cross pieces bearing under the cross pieces on said step portion, and also extensions disposed for overlapping said last named cross pieces, adapted to interlock said shelf and said frame direct with said step portion to form end supports for the bench.

1,220,951. EXPLOSIVE-ENGINE. JOHN P. CARLSON, Brooklyn, N. Y. Filed Aug 17, 1915. Serial No. 45,989. (Cl. 123—80.)



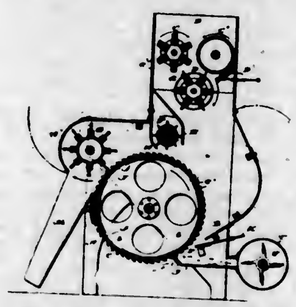
1. The combination of a cylinder having upper and lower annular passages in its wall and having pairs of ports in said wall, all the ports being in the same radial plane of the cylinder and the pairs of ports being spaced equidistantly around the cylinder, one port of each pair being an exhaust port and having its upper and lower walls inclined upwardly and outwardly to communicate with the upper annular passage and the other port of the pair being an intake port and having its upper and lower end walls inclined downwardly and outwardly to communicate with the lower annular passage, whereby fuel drawn into the cylinder will be deflected upwardly, a rotary valve sleeve disposed within the cylinder and held against longitudinal movement therein and provided with ports adapted to register successively with all the ports in the cylinder, a piston reciprocating in the valve sleeve, and means driven by the piston to continuously rotate said sleeve.

2. In internal combustion engine construction, a crank case and cylinder removably connected, the crank case having a top wall formed with an opening communicating with the cylinder and of less diameter and in its upper face with a recess providing a chamber around and below the lower end of the cylinder, the cylinder being formed with inlet and exhaust ports, a removable cylinder head, a sleeve valve forming the explosive chamber proper rotatably mounted in the cylinder and projecting into the chamber formed between the cylinder and casing, said valve being removable through the end of the cylinder when the cylinder head is removed, a gear ring detachably secured about the lower extending end of the sleeve valve, a packing ring carried by the gear ring and engaging the upper wall of the casing to shut off the chamber from communication with the casing and cylinder and thereby provide a lubricant space, a shaft extending through the upper wall of the casing and adapted to be driven by the engine, and a pinion carried by the shaft and meshing with the gear ring to continuously rotate the sleeve valve.

3. In internal combustion engine construction, a cylinder, a crank casing, the cylinder and crank casing providing between them an annular chamber of greater diameter than the internal diameter of the cylinder, the cylinder being formed with inlet and exhaust ports, a cylinder head detachably secured to the cylinder and having a thickened portion projecting within the cylinder with its peripheral edge spaced from the peripheral wall of the cylinder, a sleeve valve rotatably mounted in the cylinder and forming the combustion chamber thereof, the upper end of the sleeve valve projecting between the cylinder wall and the inwardly extending thickened portion of the cylinder head, a packing ring carried by the thickened portion of the cylinder head and engaging the sleeve valve, a gear ring about the lower end of the sleeve valve and seating in the annular chamber, means releasable from within the valve connecting the valve and gear ring, the sleeve valve being formed with openings adapted to register with the openings of the cylinder, and means driven by the engine for driving the gear ring and its sleeve valve.

4. In internal combustion engine construction, an engine cylinder having inlet and exhaust ports, a removable cylinder head, a sleeve valve rotatable within the cylinder and having ports to register with the cylinder ports, the sleeve valve forming the combustion chamber of the cylinder and being removable upon removal of the cylinder head; and means coöperating with that end of the sleeve valve opposite the cylinder head for rotating the sleeve valve.

1,220,952. HULLING AND CLEANING MACHINE. JAMES H. CARY, Memphis, Tenn. Filed June 9, 1914, Serial No. 844,056. Renewed July 6, 1916. Serial No. 107,876. (Cl. 13—12.)



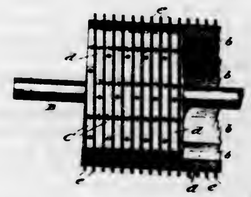
1. In a cotton hulling and cleaning machine, the combination with a frame having a blast inlet and a cylinder or drum having its periphery armed with teeth which extend into the face of the air blast and move toward the same, of a knocker roll mounted within the frame adjacent said cylinder or drum and having its periphery armed with projections having open centers to give free vent to the air current admitted through said inlet.

2. In a cotton hulling and cleaning machine, the combination with a frame having a blast inlet, and a cylinder or drum having its periphery armed with teeth which extend into the face of the air blast and move toward the same, of a knocker roll mounted within the frame adjacent said cylinder or drum, and staples fixed in the periphery of said rollers having open centers to give free vent to the air current admitted through said inlet, said staples having rounded outer ends.

3. In a cotton hulling and cleaning machine, the combination with a frame, a cylinder mounted therein having rows of teeth on its periphery, and a doffing roller, of a pair of feed rolls mounted in the frame, one of said rolls having a fluted surface and the other roll having a smooth surface, a disintegrating roll journaled below said pair of rolls, and a baffle-plate adjustably mounted below one of the first-named rolls and controlling the space between the same and the disintegrating roll and adapted to hold the material into the range of action of said disintegrating roll.

4. In a machine of the character described, the combination of a frame having an air inlet at one side and a free air space at the opposite side; a screen cylinder having rows of teeth on its periphery; a doffing roller mounted in the inlet end of the air passage above said cylinder; feed rollers adapted to feed material to the cylinder; a cleaning roll for removing separated material from the teeth of the cylinder; baffles at the lower end of the free air space and controlling the same; and an air cut-off adjacent the outlet of the free air space.

1,220,953. TOOTHED DRUM OR CYLINDER. JAMES H. CARY, Memphis, Tenn. Filed July 25, 1916. Serial No. 111,181. (Cl. 19—22.)



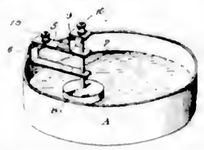
1. A rotatable drum or cylinder having its exterior composed of bands placed side by side in abutting relation, each of said bands consisting of a strip having one integral edge serrated and turned at substantially right-angles to the body portion whereby the serrations form outstanding teeth, said teeth pointing in the direction of the rotation of said drum or cylinder.

2. A rotatable drum or cylinder having its outer circumference armed with rows of outstanding teeth, said outer circumference of the drum being composed of bands circumscribing the drum and arranged side by side in abutting relation, each of said bands consisting of a plate having one integral edge bent at substantially right-angles so that the teeth extend outwardly from the surface of the drum.

3. A drum or cylinder having its circumference armed with rows of outstanding teeth, said outer circumference of the drum being composed of bands circumscribing the drum and arranged side by side in abutting relation, each of said bands consisting of a plate having one integral edge bent at substantially right-angles so that the teeth extend outwardly from the surface of the drum, and means for securing the bands to said drum the ends of said plates having openings to admit said securing means.

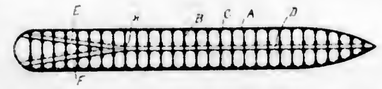
4. As an article of manufacture, a plate having one of its longitudinal edges integrally formed with teeth, said edge being bent adjacent the bases of the teeth at substantially right angles to the plane of the body of the plate, the ends of the plate having openings for securing means.

1,220,954. CIRCUIT-CLOSER FOR DRIP-PAN ALARMS. JAMES JINNINGS CHAPMAN, Indianola, Miss. Filed May 9, 1916. Serial No. 96,410. (Cl. 200—34.)



A circuit closer for drip pan alarms comprising a U-frame, having the arms thereof vertically alined, a float having a stem slidably movable through the arms of the frame, an extension member secured to the upper arm of the frame and having one portion thereof overlying the stem of the float, a clip secured to the end of the frame remote from the stem mounting to provide with the frame a means for engaging the edge of the drip pan to support the frame within the drip pan, and alarm circuit terminals secured to the frame and extension member respectively, the latter terminal being insulated from the member and presenting a contact point to be engaged by the end of the stem at the upward limit of movement of the latter, under the influence of the float.

1,220,955. NON-SINKABLE BOAT. ADOLPH J. CHAUVIN, Morgan City, La. Filed Oct. 9, 1916. Serial No. 124,583. (Cl. 114—78.)

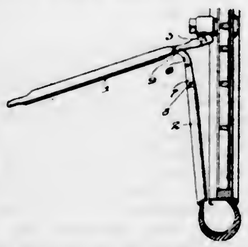


1. A hull construction for boats having a series of transverse partitions, spaced apart and extending the entire length of the hull, a brace beam extending centrally through the various partitions and having a forked portion which passes through said partitions.

2. A hull construction for boats having a series of transverse partitions, spaced apart and extending the entire length of the hull, a brace beam extending centrally through the various partitions and having a forked portion which passes through said partitions, and angle irons secured to the inner surface of the wall of the hull and to which the partitions are secured.

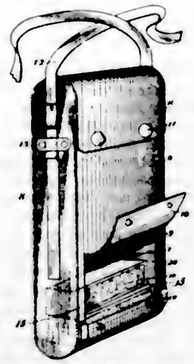
3. A hull construction for boats having a series of transverse partitions, spaced apart and extending the entire length of the hull, a brace beam extending centrally through the various partitions and having a forked portion which passes through said partitions, angle irons secured to the inner surface of the wall of the hull and to which the partitions are secured, and angle irons on opposite sides of the forked portion of the brace beam and secured thereto and to said partitions.

1,220,956. TIRE-TOOL. PARRETT W. COFFMAN, New Salem, Pa. Filed Oct. 9, 1914. Serial No. 865,912. (Cl. 157—6.)



The herein described tire jack comprising a lever having a head at one end and also provided with a longitudinal slot near said head, said head being provided with a rocker face and a hub engaging recess in said rocker face; and a bar arranged on the side of the lever bar opposite the rocker face and having a bent inner end arranged in the slot of the lever; and a pivot extending through the lever and the bent end of the bar and permanently pivotally connecting the latter to the lever, the bent end of said bar adapting the same to be folded against the lever, the said bar being provided at its free end with a notch adapted to engage one side of the tire.

1,220,957. COMBINATION CAMERA AND FILM CARRYING CASE. NORMAN B. CONWAY, Yuma, Ariz. Filed June 21, 1916. Serial No. 105,009. (Cl. 224—5.)



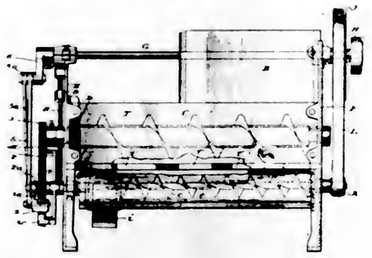
1. A combination camera and film case comprising vertically disposed side wall members, end wall members adapted to connect said side wall members, a bottom provided at the lower terminating edge of said members, a flap closure provided for the upper open end formed by said walls, a partition wall secured across the interior of the compartment formed by the walls whereby a camera compartment will be formed and a film compartment provided therebelow, a carrying strap adapted to pass beneath and support said partition wall, a film compartment closure, and means whereby said upper flap closure and the film compartment closure may be detachably secured in their closed position.

2. A combination camera and film case of uniform transverse cross section, comprising vertically disposed side wall members, end wall members adapted to connect said side wall members, a bottom provided at the lower terminating edge of said members, a flap closure provided for the upper open end, a partition wall secured across the interior of the compartment formed by the walls whereby a camera compartment will be formed and a film compartment provided therebelow, a film compartment flap closure, and means on one of said side wall members whereby said flap closures may be detachably secured in their closed position.

3. A combination camera and film case comprising vertically disposed side wall members, end wall members adapted to connect said side wall members, a bottom provided at the lower terminating edge of said members, a closure for the upper open end, a partition wall secured across the interior of the compartment formed by the walls whereby a camera compartment and a film compartment will be provided, said lower compartment being provided with an opening and closure therefor, both of said closures being formed integral with said wall members, and means on one of said side wall members for detachably securing said closures in their closed position.

4. A combination camera and film case comprising vertically disposed side wall members, end wall members adapted to connect said side wall members, a bottom provided at the lower terminating edge of said members, a partition wall secured across the interior of the compartment formed by said wall members whereby a camera compartment and a film compartment will be formed, each of said camera and film compartments being provided with openings, upwardly opening closures for said openings, and means on one of said side wall members for detachably securing said closures in their closed position.

1,220,958. FEED-REGULATOR. JOHN B. CORNWALL, Moline, Ill., assignor to Barnard and Leas Manufacturing Company, Moline, Ill., a Corporation of Illinois. Filed Dec. 1, 1915. Serial No. 64,444. (Cl. 83—44.)



1. In a feed regulator, the combination of a hopper, a primary discharging conveyer, a secondary discharging screw conveyer into which the primary conveyer discharges at a plurality of points in the length thereof, means for operating said primary conveyer intermittently and variably, and means for operating said secondary conveyer continuously.

2. In a feed regulator, the combination of a hopper, a primary conveyer discharging material from the hopper, a secondary screw conveyer into which the primary conveyer discharges at a plurality of points in the length thereof, means for operating the primary conveyer at variable speeds, and means for operating the secondary conveyer continuously and at higher speed than the primary conveyer.

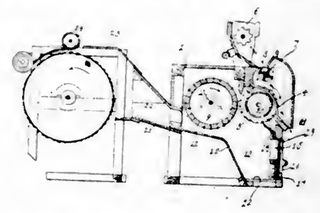
3. In a feed regulator, the combination of a trough into which material is fed having a plurality of discharge openings at different points, a primary discharge in said trough, a secondary trough into which the material is discharged from the primary trough through said openings, a secondary discharge means operating in the secondary trough, means for changing the speed of the primary discharge means, and means for operating the secondary discharge means at uniform speed.

4. In a feed regulator, the combination of a hopper, a trough into which the hopper discharges having a plurality of discharge openings at different points, a primary conveyer in said trough, a secondary trough into which the material is discharged by the primary conveyer from said trough through said openings, a secondary conveyer in the secondary trough, means for operating the primary conveyer variably and intermittently, means for operating the secondary conveyer continuously at a higher speed than the primary conveyer, and means for changing the speed of the primary conveyer.

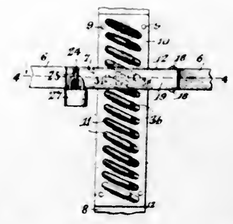
1,220,959. COTTON-SEED LINTER. WILLIAM H. COX, Atlanta, Ga., assignor to Hugh E. Sessions, Columbia, S. C. Filed July 28, 1914. Serial No. 853,598. (Cl. 13—9.)

1. The combination with a linting machine including the saw cylinder and brush and casing therefor, of a mote board forming a space below these elements within the casing, adjustable means for permitting entrance through the front of the casing of air to this space, and a transverse deflector plate between the cylinder and air inlet.

2. The combination in a linting machine with the saw cylinder, brush and casing, of a mote board forming a space below the cylinder and brush and located below the brush to form a passage, said casing having an opening in its front and an adjustable gate for regulating said opening, and a transverse deflector plate between said opening and the cylinder.



1,220,960. LOCKING MEANS FOR GATES OF IRRIGATING-CANALS. FREDERICK N. CRONHOLM, Rupert, Idaho. Filed Mar. 16, 1916. Serial No. 84,690. (Cl. 61—46.)



1. In locking means for gates of irrigating canals, the combination with a gate having a stem provided with a longitudinal series of substantially parallel spaced ribs with intervening valleys, the spacing of the ribs being in the direction of the length of the series, and a locking device movable into and out of the valleys between any two adjacent ribs and also movable laterally of the length of the series of ribs, the height of the ribs and the extent of movement of the locking device into and out of the valleys being related to prevent engagement of the locking device on the ridge portions of the ribs.

2. A locking means for gates of irrigating canals, comprising a plate with an elongated series of inclined ribs struck up therefrom, said ribs being in substantially parallel relation one to the other with intervening valleys, and spaced apart in the direction of the length of the series, and a locking device movable into and out of the valleys between any two adjacent ribs of the series and also movable laterally of the length of the series, the height of the ribs and the extent of movement of the locking device into and out of the valleys being related to prevent engagement of the locking device on the ridge portions of the ribs.

3. A locking means for gates of irrigating canals, comprising a plate with an elongated series of ribs struck up therefrom, said ribs being in substantially parallel relation one to the other with intervening valleys, and spaced apart in the direction of the length of the series, and a locking device movable into and out of the valleys between any two adjacent ribs of the series and also movable laterally of the length of the series, said locking device comprising a set screw with means carrying it, the screw having the portion entering between the ribs rounded and also having the extremity of the rounded portion flattened, and the height of the ribs and the extent of longitudinal movement of the screw being related to prevent engagement of the screw on the ridge portions of the ribs.

4. A locking means for gates of irrigating canals comprising a member adapted to be secured to the stem of the gate and provided with a longitudinally extending series of ribs in parallel spaced relation, and a locking device therein comprising a set screw and carrying means for the

set screw, said set screw being adapted to enter between any two adjacent ribs and also movable laterally of the length of the series in inclined relation to the length of the ribs and having a head of a conformation providing diameters of different lengths, and a cover member for the set screw of a width conforming to a shorter diameter of the head.

5. A locking means for gates of irrigating canals comprising a member adapted to be secured to the stem of the gate and provided with a longitudinally extended series of ribs in parallel spaced relation, and a locking device therein comprising a set screw and carrying means for the set screw, said set screw being adapted to enter between any two adjacent ribs and also movable laterally of the length of the series in inclined relation to the length of the ribs and having a head of a conformation providing diameters of different lengths, and a cover member for the set screw of a width conforming to the shorter diameter of the head, and said set screw being of a length to require the setting of the set screw between two adjacent ribs to permit the closing of the cover member.

[Claims 6 to 10 not printed in the Gazette.]

1,220,961. FARM-GATE. WARD DARLEY, Monte Vista, Colo., assignor of one-fourth to E. T. Kurrle, Monte Vista, Colo. Filed May 31, 1916. Serial No. 100,759. (Cl. 259—73.)



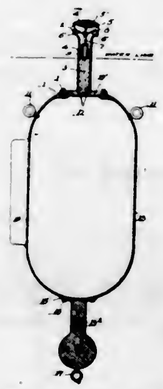
A gate of the class described, composed of side members spaced by central, end and intermediate bars, the spacing bars being of such width that the side members have their maximum separation at the center of the gate, the spacing of the side members diminishing from the center toward the opposite extremities of the gate, the gate being provided intermediate the middle and end bars with a vertically disposed bar and inclined bars arranged on opposite sides thereof, said inclined bars varying in width throughout their lengths to correspond to the varying cross section of the gate as a whole, and means for securing the opposite side members of the gate and the spacing bars in the assembled relation.

1,220,962. MINE. PHILIPPO L. E. DEL FUNGO-GIERA, New York, N. Y. Filed May 11, 1916. Serial No. 96,801. (Cl. 102—3.)

1. In combination, a mine body containing an explosive charge, an elongated extension secured to the top thereof and normally projecting above the surface of the water, said extension being so constructed as to simulate in appearance the periscope of a submarine, a contact firing mechanism contained in said extension, and a priming charge associated with said firing mechanism.

2. In combination, a mine body containing an explosive charge, a hollow elongated member secured to said mine body and normally projecting above the surface of the water and simulating in appearance the periscope of a submarine, a firing plunger, skeleton arms secured thereto and provided with contact surfaces adapted to be engaged by a body moving in the water, and a priming charge contained in said hollow member and associated with said firing plunger.

3. In combination, a mine body containing an explosive charge, a hollow elongated member secured to said mine body and normally projecting above the surface of the water and simulating in appearance the periscope of a submarine, a firing plunger, skeleton arms secured thereto and provided with contact surfaces adapted to be engaged by a body moving in the water, a priming charge contained in said hollow member and associated with said firing plunger, and a weight or inertia member secured to said mine body at a point remote from said hollow elongated member.



4. In combination, a mine containing an explosive charge, an elongated member secured to one end of said mine and normally projecting above the surface of the water, said member being so constructed as to simulate in appearance the periscope of a submarine, a firing mechanism contained in said member, a priming charge associated with said firing mechanism, and a weight or inertia member secured to the other end of said mine.

5. In combination, a mine containing an explosive charge, an elongated member secured to one end of said mine and normally projecting above the surface of the water, said member being so constructed as to simulate in appearance the periscope of a submarine, a firing mechanism contained in said member, a priming charge associated with said firing mechanism, a weight or inertia member secured to the other end of said mine, and a longitudinal fin projecting from the side of said mine.

[Claim 6 not printed in the Gazette.]

1,220,963. MINE-SHEAVE. JOHN N. DERRICK and MILLARD M. VANN, Rockwood, Tenn. Filed Dec. 22, 1916. Serial No. 138,476. (Cl. 104—18.)



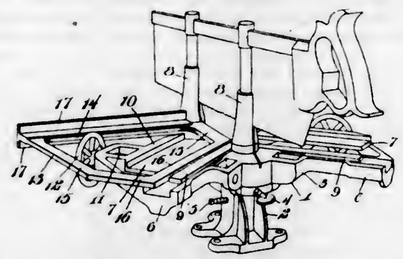
1. The combination with a track, of a bar secured thereto, a sheave supported upon said bar and an inclined guiding element adjacent the lower end of said sheave.

2. The combination with a track, of a bar secured thereto, a sheave supported upon said bar and a guiding element formed in said bar adjacent said sheave.

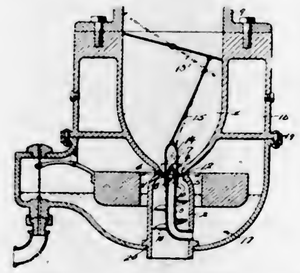
3. The combination with a track, of a bar secured thereto, clamps for said bar, a flanged pulley mounted upon a vertical pin keyed to said bar, a bearing arm secured to the bar and supporting the upper end of the pin, and a guiding element formed upon said bar adjacent said sheave.

1,220,964. MITER-MACHINE ATTACHMENT. HERMANN BRUNO DIPWORTH, Saginaw, Mich. Filed May 26, 1916. Serial No. 100,101. (Cl. 143—86.)

An attachment for miter machines of the class described, comprising a frame formed of an end bar, side bars projecting outwardly from the end bar at right angles thereto, and legs integral with the outer ends of said side bars, respectively, and projecting outwardly therefrom and converging toward each other, and having the outer ends integral with each other, substantially as and for the purpose described.



1,220,965. CARBURETER. MARIUS DUVALL, Goldfield, Nev. Filed Mar. 31, 1916. Serial No. 88,065. (Cl. 261—41.)



1. In a carbureter, in combination, a carbureting chamber, an air pipe open to the lower end of said chamber, a fuel pipe arranged co-axially within the air pipe and having near its upper end laterally directed fuel discharge openings, the air pipe having a Venturi-type choke rib adjacent said spraying nozzle, and a valve concentric to the fuel pipe and slidable lengthwise thereof to control the said openings of the fuel pipe, the valve having a flange to control the air passage between said air pipe and said fuel pipe.

2. In a carbureter, in combination, a carbureting chamber, an air pipe open to the lower end of said chamber, a fuel pipe arranged co-axially within the air pipe and having its upper end formed as a spraying nozzle and provided with a plurality of laterally directed openings, the air pipe having a Venturi-type choke rib adjacent said spraying nozzle, and a sleeve valve slidably surrounding the fuel pipe to control the openings of the spraying nozzle, the valve having at its upper end a circumscribing flange to control the air passage between said air pipe and said fuel pipe.

3. In a carbureter, in combination, a carbureting chamber, an air pipe open to the lower end of said chamber, a fuel pipe arranged co-axially within the air pipe and having its upper end formed as a spraying nozzle and provided with laterally directed openings and with an axial bore, and a valve concentric to the fuel pipe and slidable lengthwise thereof to control said laterally directed openings, the valve having a flange to control the air passage between said air tube and said fuel pipe.

4. In a carbureter, in combination, a carbureting chamber, an air pipe open to the lower end of said chamber, a fuel pipe arranged co-axially within the air pipe and having its upper end formed as a spraying nozzle and provided with laterally directed openings and with an axial bore, and a sleeve valve slidably surrounding the fuel pipe to control the openings of the spraying nozzle, the valve having at its upper end a circumscribing flange to control the air passage between said air pipe and said fuel pipe.

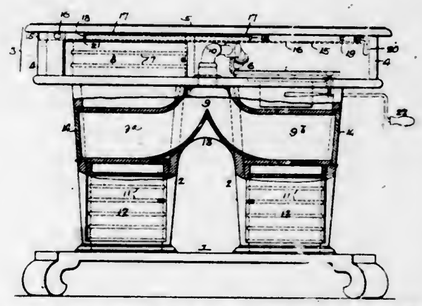
5. In a carbureter, in combination, a carbureting chamber, an air tube open to the lower end of said chamber, a fuel pipe arranged co-axially within the air tube and having near its upper end laterally directed fuel discharge openings, and a sleeve valve slidably surrounding the fuel pipe to control the said openings of the fuel pipe, said valve being provided with a circumscribing flange controlling the air passage between said air tube and said fuel pipe.

1,220,966. COMPOSITION ROOFING. OLIVER R. EMIGH, Westminster, Md., assignor to Baltimore Roofing and Asbestos Manufacturing Co., Wilmington, Del., and Ashestos, Md., a Corporation of Delaware. Filed Nov. 10, 1916. Serial No. 130,608. (Cl. 154—51.)



A composition roofing strip comprising a lower sheet of plain asbestos roofing material, and an upper and thicker layer of rag felt impregnated with asphaltums with a coating of less fluid asphaltum forming the top finish to the strip and imparting a rubber-like appearance thereto, substantially as described.

1,220,967. PHONOGRAPH-TABLE. ALBART EPRI, Philadelphia, Pa. Filed June 5, 1916. Serial No. 101,847. (Cl. 45—31.)



1. The combination of a table adapted for use as a carrier for a phonograph; and having a base, a pedestal, an upper section provided with a movable top, said upper section being adapted to receive a phonograph, and a downwardly extending sound amplifying member for connection with the phonograph and located in the pedestal.

2. The combination in a table, of a base, two pedestals, an upper section, said section being arranged to receive a phonograph, a sliding top for the upper section, and a downwardly extending sound amplifying member arranged to be connected with the phonograph and provided with two branches, one branch being located in one pedestal and the other branch being located in the other pedestal.

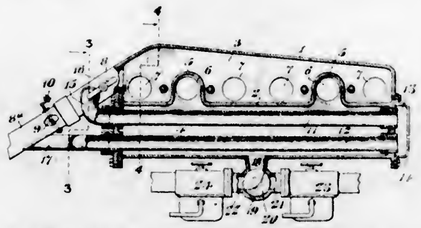
3. The combination in a table, of a base, two pedestals, a hollow upper section having a sliding top and arranged to receive a phonograph in a portion thereof, the other portion of the upper section being arranged to receive records, a sound-amplifying member adapted for connection with the phonograph and extending down through the center of the upper section and extending laterally through each of the pedestals.

4. The combination in a table, of a base, two pedestals, a hollow upper section having a sliding top, one-half of the upper section being arranged to receive a phonograph

and the other half being arranged to receive records, a sound-amplifying member adapted for connection with the phonograph and located centrally at the upper section and extending through each of the pedestals, the lower portions of the pedestals being hollow for the reception of phonograph records.

5. The combination in a table, of a pedestal, a hollow upper section having a sliding top, guides for the top, a slotted tube notched at each end of the slot and secured to the top of the table, an operating rod having a pin arranged to travel in the slot and engage either notch.

1,220,968. EXPLOSION-ENGINE VAPORIZER FOR HEAVY FUELS. JOHN J. FAHRNEY, Timberville, Va., assignor of one-fourth to Harry O. Nicodemus, Woodstock, Va., and one-fourth to Augustus W. Nicodemus, and one-fourth to Franklin C. Thomas, Buckeystown, Md. Filed Apr. 8, 1916. Serial No. 89,855. (Cl. 123—52.)



1. A means for the utilization of heavy fuels in explosion engines, comprising a casing having a chamber immediately adjacent to the engines and into which the exhaust from the engine is directed, another chamber within the casing through which the incoming fuel is directed to the engine, and ducts for the engine exhaust traversing the second-named chamber with the two chambers divided one from the other by a wall partially encircling the connections between the second-named chamber and the intakes of the engine cylinders.

2. A means for the utilization of heavy fuels in explosion engines, comprising a casing having a transverse, internal division wall defining separate chambers within the casing, one chamber having inlets for connecting it with the exhaust side of the engine, and the other chamber having outlets for communication with the intakes of the engine with each outlet partially surrounded by the division wall, and ducts through the second chamber communicating with the first-named chamber and having means for the discharge of the exhaust after passing through the ducts.

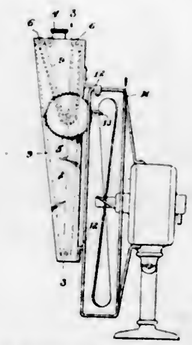
3. A means for the utilization of heavy fuels in explosion engines, comprising a casing having a transverse, internal division wall defining separate chambers within the casing, one chamber having inlets for connecting it with the exhaust side of the engine, and the other chamber having outlets for communication with the intakes of the engine with each outlet partially surrounded by the division wall, and ducts through the second chamber communicating with the first-named chamber and having means for the discharge of the exhaust after passing through the ducts, the first-named chamber being provided with an outlet having a controlling valve therein for causing the direct escape of the products of combustion from said first-named chamber or the diverting of such products of combustion through the ducts in the second-named chamber, at will.

4. A means for the utilization of heavy fuels in explosion engines, comprising a casing with a transverse internal division wall separating the interior of the casing into two chambers and the division wall having loop portions, the casing being provided with passages for connecting the exhaust side of the engine with the first-named chamber and other passages within the loops of the division wall for connecting the second-named chamber with the intake side of the engine, and ducts leading through the second-named chamber and connected up in series with the first-named chamber.

5. A means for the utilization of heavy fuels in explosion engines, comprising a casing with a transverse external division wall separating the interior of the casing into two chambers and the division wall having loop portions, the casing being provided with passages for connecting the exhaust side of the engine with the first-named chamber and other passages within the loops of the division wall for connecting the second-named chamber with the intake side of the engine, and ducts leading through the second-named chamber and connected up in series with the first-named chamber, and the first-named chamber having an outlet with a valve therein for directing the exhaust from the first-named chamber to a point of escape or through the ducts in the second-named chamber, at will.

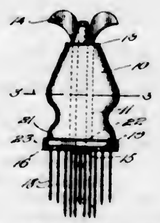
[Claim 6 not printed in the Gazette.]

1,220,969. FUMIGATOR. BERT W. FLANDERS, New London, Conn., assignor of one-half to Ira M. Comstock, New London, Conn. Filed Mar. 10, 1916. Serial No. 83,399. (Cl. 261—30.)



A fumigator attachment for a fan comprising a disinfectant receiving tank and an absorbent material for conveying the disinfectant and supported below the tank in the path of movement of air currents from the fan, means for giving movement to the absorbent material including a gear and a member supported by one blade of the fan adapted to engage said gear for intermittently moving the same and a manual control valve controlling the flow of fluid from the tank to said material.

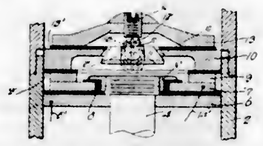
1,220,970. BUTCHER'S IMPLEMENT. GABRIEL FROHMANN, Philadelphia, Pa. Filed Nov. 10, 1916. Serial No. 130,668. (Cl. 17—22.)



In a device of the class described, the combination with a tubular handle, and a bolt through the same having an adjusting nut on its threaded upper end; of a metal plate over the lower end of the handle, a cushion plate beneath that just mentioned, a needle plate beneath the cushion plate, all of said plates being pierced with central openings

through which the bolt passes and the needle plate with fine openings countersunk at their upper ends, a series of pins whose shanks pass through said fine openings and whose heads stand normally in the countersunk portion thereof against the cushion plate, for the purpose set forth.

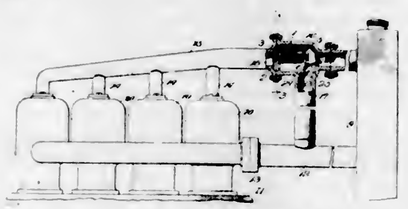
1,220,971. APPARATUS FOR CONTROLLING THE VOLTAGE IN VARIABLE-SPEED ILLUMINATING-DYNAMOS. ERNEST FUCHS, Billancourt, France, assignor to Louis Renault, Billancourt, France. Filed Aug. 31, 1915. Serial No. 48,353. (Cl. 175—349.)



1. In apparatus of the kind described, the combination with a casing having an annular plate, the wall of the opening in which inclines, which casing and plate are adapted to be included in an electrical circuit, a magnetic core, an armature for the same having an enlargement extending through the aforesaid opening, the face of the enlargement being inclined in the same direction as the wall of the opening, and means for varying the extent of the movement of the armature with relation to the core.

2. In apparatus of the kind described, the combination with a casing having an annular plate and adapted to be included in an electrical circuit, the wall of the opening in said plate being inclined, of a magnetic core, an armature for said core pivoted above the same and having an enlargement therefrom extending through the opening in the aforesaid plate, the face of said enlargement inclining to the same degree as the face of the opening, a spring for normally retracting the armature from the core, and means for varying the limit of movement of the armature away from the core whereby the gap between the wall of the plate and the face of the enlargement is varied and in such relation to the variation of the spring tension that the curve of attraction of the armature approaches the curve of the spring tension.

1,220,972. AUTOMATIC THERMOSENSITIVE DEVICE. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Mar. 29, 1915. Serial No. 17,917. (Cl. 236—6.)



1. The combination in an automobile engine, of a circulating system including a radiator for cooling said engine, a by-pass connecting the conduit leading to the radiator with the conduit leading from the radiator, a valve controlling the conduit to the radiator, a valve controlling said by-pass, and a collapsible and expansible vessel capable of being collapsed against an elastic force inherent in said vessel, said vessel being located in said circulating system and operatively connected to said valves, said vessel having a thermosensitive fluid sealed therein and exerting an internal pressure therein below that of the surrounding medium in said conduit, whereby said vessel will expand and operate said valves in a predetermined way on a rise of temperature or the occurrence of a leak in said vessel.

2. In a device of the character described, the combination of a closed circuit for a heated medium, valve mechanism in said circuit, and a collapsible and expansible vessel capable of being collapsed against an elastic force inherent in said vessel, said vessel being subjected to the medium flowing through said circuit and operatively connected to said valve mechanism, said vessel having a thermosensitive fluid sealed therein and exerting an internal pressure therein below that of the surrounding medium in which said vessel works, whereby the vessel will expand and operate said valve mechanism in a predetermined way on a rise of temperature or the occurrence of a leak in said vessel.

3. In a device of the character described, the combination of a closed circuit for a heated medium, a vessel in said circuit capable of being collapsed against an elastic force inherent in said vessel, a thermosensitive fluid sealed in said vessel at a pressure below that of the surrounding medium, and a valve in said circuit that is closed when said vessel is in collapsed condition and opened when said vessel is expanded, whereby said valve is opened by the expansion of said vessel due to a rise of temperature or to a leak in said vessel.

4. In a device for controlling the flow of a heated medium through a conduit, the combination of a valve mechanism in said conduit the open position of which is a position of safety, and a thermosensitive device exposed to medium in said conduit and operatively connected to said valve mechanism, said thermosensitive device comprising an expansible and collapsible vessel collapsible against an elastic force inherent in said vessel and having a thermosensitive fluid sealed therein at a pressure below that of the surrounding medium and operating to open said valve mechanism when the vessel is expanded.

5. In a device of the character described, the combination of a closed circuit for a heated medium, a by-pass in said circuit, valve mechanism controlling said circuit and said by-pass, a collapsible and expansible vessel collapsible against an elastic force inherent in said vessel and subject to the influence of the heated medium in said circuit, said vessel being operatively connected to said valve mechanism to move the same toward open position in the main circuit and toward closed position in the by-pass when the vessel is expanded and vice versa when the vessel is collapsed, and a thermosensitive fluid sealed in said vessel and exerting a pressure therein below that of the medium in said circuit.

[Claims 6 to 16 not printed in the Gazette.]

1,220,973. PIGMENT. HENRY A. GARDNER, Washington, D. C. Filed Feb. 18, 1915. Serial No. 9,147. (Cl. 134—58.)

1. A pigment containing a metallic phosphate and a metallic sulfid, both substantially insoluble in water.

2. A pigment containing barium phosphate and a metallic sulfid, said sulfid substantially insoluble in water.

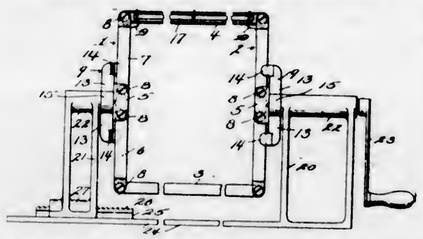
3. A pigment containing barium phosphate and zinc sulfid.

1,220,974. REEL FOR REWINDING MEASURED LENGTHS OF TEXTILE FABRICS. JOHN C. GEBHART, St. Louis, Mo., assignor to Frank Low, St. Louis, Mo. Filed Mar. 17, 1916. Serial No. 84,902. (Cl. 242—61.)

1. A reel of the class described, comprising side bars and cross-bars, the side bars consisting of members pivotally connected to one another and to the cross-bars and being collapsible by outward movements of their central portions and extensible by inward movements thereof and means provided as a part of each side bar, for bracing the members, when extended, against inward collapse, in combination with rotatable bearers detachably associated with the reel and formed to engage the side bars whereby to connect the reel for rotation therewith and also formed to engage said means whereby to support the reel.

2. A reel of the class described, comprising side bars and cross-bars, each side bar consisting of an intermediate member and outer members pivoted to the intermediate member and also pivoted to the cross-bars, the inter-

mediate members having bases which abut the outer faces of the outer members in the extended relation of the side bars and thereby brace the side bars against inward collapse and which have their outer faces recessed in combination with rotatable bearers having projections to engage in the recesses of the bases of the intermediate members and having end clips to fit over the side bars.



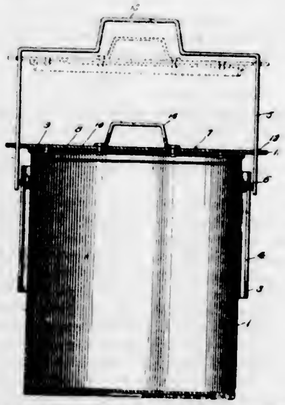
3. A reel of the class described comprising side bars composed of pivotally connected members, cross-bars extending between and pivoted to the side bars, a gripper carried by one of the cross-bars and mounted for projection and retraction and means for projecting the gripper in connection with the extension of the side bars.

4. A reel of the class described comprising side bars composed of pivotally connected members, cross-bars extending between and pivoted to the side bars, a gripper carried by one of the cross-bars and mounted for projection and retraction, the gripper having projections, and lugs provided on the side bars to engage said projections and project the gripper in connection with the extension of the side bars.

5. A reel of the class described comprising side bars composed of pivotally connected members, cross-bars extending between and pivoted to the side bars, one of the cross-bars being of channeled form and having longitudinal parallel flanges at one side thereof, said flanges being provided with openings, a gripper combined with said channeled cross-bar and consisting of a bar of substantially less width than said channel and fitted therein and pins projecting at opposite sides of said gripper bar through the openings in said flanges, and lugs provided on the side bars to engage the adjacent projections of the gripper bar and project the gripper in connection with the extension of the side bars.

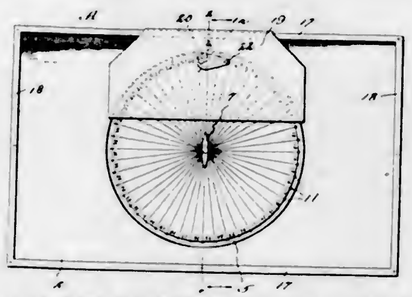
[Claim 6 not printed in the Gazette.]

1,220,975. RECEPTACLE. EMIL GEMEINDER, Philadelphia, Pa. Filed July 31, 1916. Serial No. 112,337. (Cl. 220—22.)



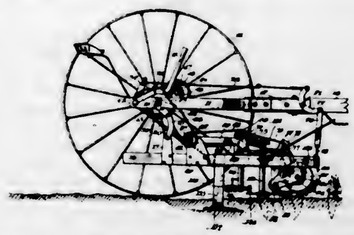
A receptacle having the lower end closed and the upper end open, strips fastened to the side wall of said receptacle at diametrically opposite points adjacent to the upper end thereof and having the central portions thereof offset outwardly and formed with vertical slots respectively, a bail, inwardly extending headed studs secured to the lower extremities of the limbs of said bail, a cover for the upper end of said receptacle, lugs formed on the edge of said cover at diametrically opposite points and formed with openings through which the limbs of said bail pass, the interconnecting member of said bail being offset upwardly centrally to form a handle, and a handle on said cover adapted to enter the space formed by the offset handle portion of said bail.

1,220,976. GAME-BOARD. OTIS C. GILBERT, Sarles, N. D. Filed Aug. 10, 1915. Serial No. 44,774. (Cl. 46—56.)



A game of the class described comprising a rectangular base having an enlarged circular recess in its upper face thereof, said recess having a central opening and an annular groove in its bottom wall, a disk provided with an annular groove rotatably mounted in the recess and the groove of the disk alining with the groove in the bottom wall of the recess, said disk provided with a squared opening centrally thereof, registering with the central opening of the recess in the base, a plurality of ball bearings arranged in the annular grooves of the recess and face to permit the disk to freely rotate therein, an operating handle associated with the disk including a stem provided with an upper squared portion and a lower cylindrical portion, the squared portion of the stem being fitted in the squared opening of the disk, and the cylindrical portion journaled in the opening in the recess thus upon the rotating of the handle, the disk will be rotated in the recess of the base, said bearing preventing the binding of the disk in the recess of the base, a plurality of pins secured to the upper face of the disk near its periphery and arranged at a relatively spaced distance apart, and a flexible indicating arm connected with said base and having its ends directed in the path of said pins, and for the purpose specified.

1,220,977. BEET-TOPPER. JOHN L. GOULET, Los Angeles, Cal. Filed Mar. 27, 1915. Serial No. 17,557. (Cl. 55—107.)



1. In a beet harvester having a cutting means which may be raised or lowered to suit the height of the beets, a gaging means for regulating the height of the cutting means, said gaging means comprising a large roller in advance of the cutting means, a small roller directly over the cutting means, a flexible belt passing over said rollers, and means whereby said rollers are driven by the axle of the harvester in such a direction and at such a speed that the lower lap of the belt is approximately stationary with regard to the ground.

2. In a beet topper, a pair of cutting disks, a pair of vertical cutting disk shafts each having one of said disks rigidly secured to the lower end thereof, a pair of driving shafts parallel to said cutting disk shafts, a pair of swinging arms each arm being pivoted to swing about the center of one of said driving shafts and having a journal in its other end in which one of said cutting disk shafts is journaled, means by which each of said driving shafts will drive one of said cutting disk shafts, and spring means for holding said arms in such a position that the cutting disks are in coöperation with each other.

3. In a beet topper, a supporting frame, a pair of vertical driving shafts journaled in said frame, a pair of wheels from which said frame is partially supported, means by which said driving shafts are driven by the rotation of said wheels, a pair of cutting disks, a pair of cutting disk shafts, each of said cutting disk shafts having a cutting disk rigidly secured at its lower end, a pair of arms, each arm being pivoted at one end to one of said vertical driving shafts and being journaled at the other end to receive one of said cutting disk shafts, a pair of driving sprockets each secured on one of said driving shafts, a pair of driven sprockets each secured on one of said cutting disk driving shafts, a pair of chains each passing around one of said driving sprockets and one of said driven sprockets, means on said frame for limiting the angular movement of each of said arms, and spring means for holding said arms in their inner position.

4. In a beet topper, a supporting frame, a pair of vertical driving shafts journaled in said frame, a pair of wheels from which said frame is partially supported, means by which said driving shafts are driven by the rotation of said wheels, a pair of cutting disks, a pair of cutting disk shafts, each of said cutting disk shafts having a cutting disk rigidly secured at its lower end, a pair of arms, each arm being pivoted at one end to one of said vertical driving shafts and being journaled at the other end to receive one of said cutting disk shafts, a pair of driving sprockets each secured on one of said driving shafts, a pair of driven sprockets each secured on one of said cutting disk driving shafts, a pair of chains each passing around one of said driving sprockets and one of said driven sprockets, a pair of shedder chain sprocket shafts each journaled in said frame, means for driving one of said shedder chain sprockets from one of said driving shafts, a pair of shedder chain sprockets each rigidly secured to the lower end of one of said shedder chain sprocket shafts slightly above said cutting disks, a shedder chain passing around said shedder chain sprockets, fingers on said chain so formed that they sweep across the top of said cutting disks for the purpose of removing tops therefrom, means on said frame for limiting the angular movement of each of said arms, and spring means for holding said arms in their inner position.

5. In a beet topper, a pair of cutting disks, a pair of vertical shafts on each of which one of said disks is mounted, a pair of swinging arms in each of which one of said shafts is mounted, and spring means for holding said arms in the cutting position.

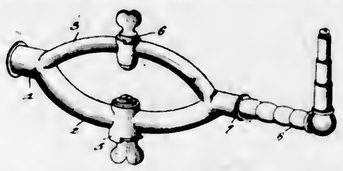
[Claim 6 not printed in the Gazette.]

1,220,978. SILO. JOSEPH E. GREEN, North Manchester, Ind. Filed Nov. 11, 1915. Serial No. 60,864. (Cl. 20—1.4.)

In a silo, the combination with channel-iron frame members forming the sides of the entrance-opening, of closures for said entrance-opening, said closures being superposed with respect to each other, hangers of general U-outline having their transverse portions pivotally connected to said closures, nearer the bottom edges of said closures than their top edges, the terminals of the arms of said hangers having connection with said entrance-opening sides to enable the hangers to be swung upon their connections with the closures and said entrance-opening sides to cause the closures to be moved from their closed positions to their open positions, and a hooked fastening connected to each closure near its bottom edge, said entrance-opening side forming members having arranged thereacross transverse members at points upon the edges of said side-forming members opposite the edges thereof to which the closures are applied, said transverse members forming ladder rungs, certain of said transverse members being arranged with definite predetermined relation to said hooked fastening to provide for engagement therewith when said closure is in a normally lowered position, said certain ladder rungs being disposed with definite predetermined relation to said hooked fastening when said closure is in a raised position to receive said hooked fastening to retain the said closure in such raised position, whereby the swinging of a closure, either into a lowered or into a raised position will dispose its hooked fastening coincident with a predetermined positioned transverse member for engagement therewith, to the end that the said hooked fastening is a common element for retaining the closure both in a raised and in a lowered position.



1,220,979. GAS-JET. JAMES T. GREGORY, Chicago, Ill. Filed Oct. 10, 1916. Serial No. 124,903. (Cl. 67—16.)

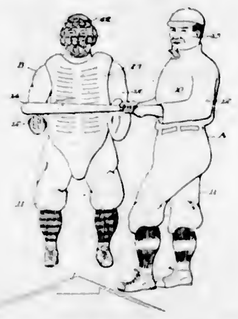


A gas jet comprising integral branch pipes of different diameters arranged in elliptical form and provided with a common inlet and outlet located at the ends of the ellipse, a valve casing located in each of said pipes at diametrically opposite points in the ellipse, valves located in each of said casings and having openings therethrough, said openings being of the same diameter as the pipes in which the valves are located and finger pieces carried by said valves, said finger pieces being disposed in opposite relation.

1,220,980. AMUSEMENT DEVICE. JOHN C. GRIESEL, Pottsville, Pa. Filed July 5, 1916. Serial No. 107,635. (Cl. 124—15.)

1. An amusement device comprising means including a bat mounted for horizontal swinging movement, and disposed in the path of perfectly thrown balls for determining "hits," and means for normally holding the bat stationary and adapted to be released upon movement of the bat in one direction.

2. An amusement device comprising a bat mounted for swinging movement and disposed in the path of perfectly thrown balls, for determining "hits," means normally holding the bat stationary and adapted to be released upon movement of the bat in one direction, and resilient means operable to swing the bat in reverse directions upon release of the latter.



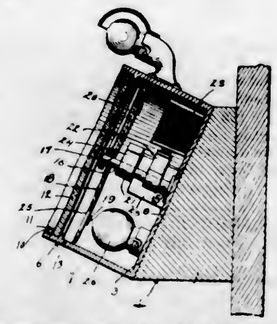
3. A device of the class described comprising a figure representing a "batter," and, a figure representing a "catcher" disposed in juxta-position to said "batter," the last mentioned figure having a movably mounted head and arms, and means connecting said parts to automatically move said arms upward when said head is moved rearwardly.

4. An amusement device comprising a figure representing a batter, and a figure representing a catcher disposed in juxta-position to the batter, a bat associated with the batter for swinging movement and disposed in the path of perfectly thrown balls, a strike board pivoted on the figure representing the catcher for rocking movement, and an audible signal normally spaced from each end of said board and operable when the board is brought into engagement therewith.

5. An amusement device comprising a figure representing a batter, and a figure representing a catcher disposed in juxta-position to said batter, a bat associated with the batter for swinging movement and disposed in the path of perfectly thrown balls, means normally holding the bat stationary, a strike board yieldably supported upon the figure representing the catcher, an audible signal supported upon said figure at the rear of said board and operable with the yielding of the latter, said figures being padded, and said strike board being wholly concealed from view by the uniform of its associated figure.

[Claim 6 not printed in the Gazette.]

1,220,981. INDICATOR. JOSEPH I. GUNGLE, Ann Arbor, Mich. Filed Dec. 17, 1915. Serial No. 67,438. (Cl. 177—327.)



An indicator comprising a casing electro-magnets mounted within said casing and arranged in annular series, a lamp bulb within the casing in place of one magnet, a sleeve secured to the bottom wall of said casing, a shaft rotatable in said sleeve, a dial secured within the casing in spaced relation to the bottom wall, said dial having a central aperture arranged therein for the reception of the shaft, said dial also having a lateral aperture formed therein to provide a sight opening through which the lamp bulb is visible, a hand secured to the outer end of the shaft and operable over the face of the dial, an armature mounted on the shaft and adapted to be attracted by the electro-magnets, said magnets being adapted to be individually excited, the armature and hand extending in the same plane from the axis of the shaft, a weight mounted on the shaft and adapted to hold the hand in a non-indicating position when the magnets are de-energized and a transparent cover for the casing adapted to completely house the hand and dial.

1,220,982. POWER-INTERRUPTING DEVICE FOR TRACTORS. RUSH E. HAMILTON, Geyersville, Cal., assignor to Hamilton Tractor Company, San Francisco, Cal., a Corporation of California. Filed Nov. 26, 1915. Serial No. 63,624. (Cl. 21—114.)



1. In combination with a tractor, a power means for propelling the same, a wheeled frame for pivotal attachment to the tractor to be drawn thereby, said frame comprising a supporting beam and a tractor bar, means for pivotally connecting said tractor bar and supporting beam at a plurality of points, a member carried by the supporting beam for exerting retarding forces on the beam on the movement of the frame, an operating lever carried by one of said pivotal connecting means and actuated by the movement thereof, tension means for resisting the movement of said operating lever, and a connection extended from said power means and operated by said lever to interrupt the power connection to said tractor on an excess of retardation forces applied to said member carried by the supporting beam over that resisted by said tension means.

2. In combination with a tractor, a power means for propelling the same, a wheeled frame for pivotal attachment to the tractor to be drawn thereby, said frame comprising a supporting beam and a tractor bar, devices for pivotally connecting said tractor bar and supporting beam at a plurality of points, a member carried by the supporting beam for exerting retarding forces on the beam when drawn by said tractor, an operating lever carried by one of said pivotal connecting devices and actuated by the movement thereof, tension means for resisting the movement of said operating lever, means for varying the tension of said tension means, and a connection extended from said power means and operated by said lever to interrupt the power connection to said tractor on an excess of retardation forces applied to said member carried by the supporting beam over that resisted by said tension means.

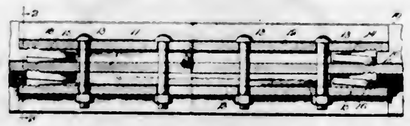
3. In combination with a tractor, a power means for propelling the same, a wheeled frame comprising pivotally connected side and end members for attachment to the tractor to be drawn thereby, one of the side members providing a supporting beam and the other a tractor bar spaced therefrom, the end frame members providing a means for pivotally connecting said supporting beam and tractor bar at a plurality of points, a member carried by the supporting beam for transmitting retarding forces thereto on the movement of the frame, a connection between the beam and tractor power means whereby on an excess of retardation over a predetermined amount the connection will be automatically actuated to interrupt the transmission of power to the tractor.

4. In combination with a tractor, a power means for propelling the same, a wheeled frame for attachment to the tractor and to be drawn thereby comprising a supporting beam and tractor bar pivotally connected together at a plurality of points, means carried by one of said members for exerting retarding forces on the same on the movement of the frame, an operating means associated with said supporting beam and actuated by the movement thereof, tension means for resisting the movement of said operating means and a connection extended from said power means and operated by said operating means to interrupt the power connection to said tractor on an excess of retarding forces applied to said member carried by the supporting beam over that resisted by said tension means.

5. In combination with a tractor, a wheeled frame for attachment thereto to be drawn thereby and comprising spaced side and end members pivotally connected together, a member carried by one of the frame members for transmitting retarding forces thereto on the movement of said frame by said tractor, yieldable means associated with said frame for resisting the retarding forces and for retaining the frame members in their normal position, and a connection between said frame and the tractor power means whereby on an excess of retardation over a predetermined amount the connection will be actuated to interrupt the transmission of power to the tractor.

[Claims 6 and 7 not printed in the Gazette.]

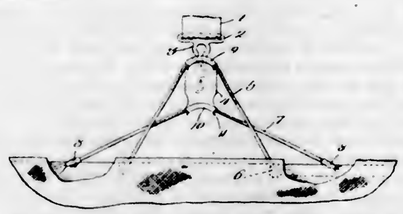
1,220,983. COMBINED BONDING AND LOCKING DEVICE. FRANKLIN A. HAPTONSTALL, Huntington, W. Va. Filed Apr. 12, 1916. Serial No. 90,679. (Cl. 173—277.)



1. A bonding member including a split annular body portion having its extremities deflected laterally in opposite directions from the plane of the body of the said member and providing terminal jaws thickened to form a series of teeth in the outer edges thereof with the series of teeth of each jaw touching a common plane normally intersecting the axis of the said member at substantially right angles with the planes of the said series of teeth disposed substantially parallel.

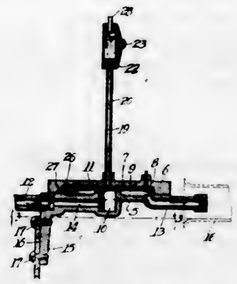
2. A combined bonding and locking member including a split annular body portion provided with smooth and unobstructed side faces and thickened at its extremities in opposite directions to form jaws each provided with a series of transversely extending teeth touching a common plane normally intersecting the axis of the said member at substantially right angles with the planes of the said series of teeth disposed substantially parallel, the jaws being offset with respect to each other a distance greater than the thickness of either of the jaws.

1,220,984. SUSPENDER ATTACHMENT. ELDON ELWOOD HARLOW, Spokane, Wash., assignor of one-half to John E. Bowen and one-half to Mae Harlow, Spokane, Wash. Filed Apr. 23, 1914. Serial No. 833,968. (Cl. 241—19.)



A suspender attachment including a combination of the straps of the suspenders having metal loops at their ends having openings, said suspender attachment including a rectangular plate having its upper and lower edges curved and rolled back upon themselves to form marginal tubes adapted to receive the medial portion of garment supporting straps therein, and a headed stud formed rigidly to and projecting outwardly from the rear face of said plate near its upper ends, and adapted to engage the openings of the metal loops of the suspender straps and connecting the attachment thereto.

1,220,985. THERMOSTATIC VALVE. NOAH S. HARTER, Waukegan, Ill., assignor, by mesne assignments, to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Feb. 9, 1914. Serial No. 817,636. (Cl. 236—6.)



1. In a device for automatically controlling the flow of a medium through a conduit, a thermostatic vessel having a movable wall adapted to be flexed against an elastic force inherent in said vessel, a thermo-sensitive fluid sealed in said vessel and exerting an internal pressure on the movable wall below the opposing pressure of the external medium on said wall, the said movable wall bearing such relation to said conduit as to control the flow of the medium therethrough upon rise or fall of temperature and to effect therein a predetermined condition of safety upon the occurrence of a leak in said thermostatic vessel.

2. In a device for automatically controlling the flow of a medium through a conduit, the combination of a valve mechanism controlling said conduit, one position of which is a position of safety, and an expansible and collapsible vessel collapsible against an elastic force inherent in said vesesl and having a thermosensitive fluid sealed therein, said fluid exerting an internal pressure below the opposing pressure of the external medium acting on said vessel, said vessel being operatively related to said valve mechanism to move the latter toward its position of safety upon the expansion of the vessel, whereby the valve mechanism will be operated by a rise or fall of temperature and moved to a position of safety upon the occurrence of a leak in said thermostatic vessel.

3. In a device for controlling the flow of a medium through a conduit, a valve mechanism, one position of which is a position of safety, a thermostatic vessel operatively related to said valve mechanism and having a resilient wall, and a thermosensitive fluid sealed in said vessel and exerting an internal pressure on said resilient wall below the pressure of the external medium thereon, said valve mechanism assuming its position of safety upon equalization of the pressures within and without said vessel.

4. In a device for controlling the flow of a fluid through a conduit, a valve mechanism comprising a valve port controlling said conduit, one position of said valve mechanism being a position of safety, a thermostatic vessel operatively related to said valve mechanism and having a resilient wall, and a thermosensitive fluid sealed in said vessel under a pressure below that of the surrounding medium, said vessel controlling said valve port in response to temperature variations in said fluid and causing said valve mechanism to assume its position of safety

upon equalization of the internal and external pressures on said vessel.

5. In a device for controlling the flow of a medium through a conduit, a valve mechanism comprising a valve port controlling said conduit, one position of said valve mechanism being a position of safety, a thermostatic vessel operatively related to said valve mechanism and comprising a movable wall displaceable against an elastic force inherent in said vessel, and a thermosensitive fluid sealed in said vessel under a pressure below the external pressure thereon, said movable wall controlling said valve port in response to temperature changes in said fluid and said valve mechanism assuming its position of safety upon equalization of the internal and external pressures on said movable wall.

[Claims 6 to 18 not printed in the Gazette.]

1,220,986. TAMPER AND TEMPLET FOR CONCRETE WORK. CLINTON H. HENDERSON, Martinez, Cal. Filed June 9, 1916. Serial No. 102,724. (Cl. 94—6.)

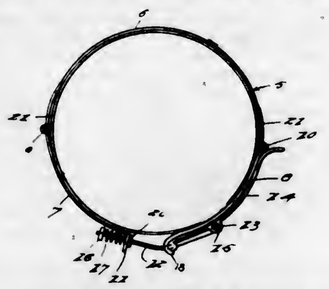


1. In a tamper and templet for concrete work, a body adapted to extend entirely across the surface being worked upon, said body having its lower edge cut concavely, a metallic plate detachably secured to said concaved lower edge, and handles attached to the ends of said body and extending upwardly and outwardly therefrom, said handles being arranged in diverging pairs.

2. In a tamper and templet for concrete work, a body adapted to extend entirely across the surface to be worked upon, said body having its lower bottom edge cut concavely, a metallic plate secured to said concaved edge, said plate being wider than said body and projecting upon opposite sides of the body.

3. In a tamper and templet for concrete work, a body adapted to extend entirely across the surface to be worked upon, said body having its lower bottom edge cut concavely, a metallic plate secured to said concaved edge, said plate being wider than said body and projecting upon opposite sides of the body, the ends of said plates being upturned and secured to the ends of said body, the portions of said plates adjacent to said upturned end being positioned in horizontal plane.

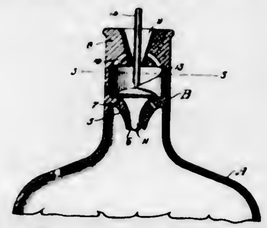
1,220,987. CHIMNEY AND STOVEPIPE ATTACHMENT. EDWARD C. HENRY, Missoula, Mont. Filed Nov. 29, 1916. Serial No. 134,071. (Cl. 126—318.)



1. A chimney and stove pipe attachment comprising a sectional band consisting of a fixed section and a pair of movable sections, means for hinging said movable sections to the fixed section, a bracket formed on the free end of one of said movable sections, a T-shaped rod adjustably secured to said bracket, the free end of the other movable section having its ends bifurcated and bent to form bearings, and a locking lever pivoted to the T-shaped rod and engaging the bearings, and means for securing the band to a chimney.

2. A chimney and stove pipe attachment comprising a sectional band consisting of a stationary section and a pair of movable sections, means for hinging the movable sections to the stationary section, a T-shaped rod slidably secured to the free end of one of said movable sections, a coil spring mounted on said rod and bearing against the free end of one of said movable sections, the other movable section having a bearing formed on the free end thereof, a locking lever having a bearing formed on one end and resting within the bearing of the second mentioned movable section and pivoted to the T-shaped rod for clamping the band upon a stove pipe, and means for connecting the band to a chimney.

1,220,988. BOTTLE. JOHN CHARLES HILL, Mazenod, Saskatchewan, Canada, assignor of one-fifth to William D. McNaughton, Mazenod, Canada. Filed Apr. 29, 1916. Serial No. 94,481. (Cl. 215—69.)



The combination with a bottle having a neck, of a frusto-conical shaped valve seat formed interiorly of the neck and having apertures spaced from the wider end of the valve seat, a valve correspondingly shaped to the seat and normally engaged therein to cover the apertures, a guard interiorly of the neck and spaced outwardly from the valve seat and having an inwardly tapered central opening and also laterally and downwardly curved passages leading from said opening through the inner end of the guard, and a stem projecting from the valve through the central opening in the guard and having a weakened portion next to the valve

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1,220,989. LEACHING FLUE-DUST. FREDERICK W. HUBER and FRANK F. REATH, Riverside, Cal., assignors to William G. Henshaw, San Francisco, Cal. Filed Dec. 2, 1916. Serial No. 134,708. (Cl. 23—22.)

1. A process of obtaining potassium salts from flue dust containing the same, and containing the sulfate radical which consists in subjecting the said dust to the action of water, and removing the liquid from the undissolved solids, both stages being effected at a temperature not below about 85° C.

2. A process of obtaining potassium salts from sulfate containing flue dust containing hot water soluble potassium compounds, which consists in agitating the said dust with water, and removing the liquid from the undissolved solids, both stages being effected at a temperature approaching 100° C.

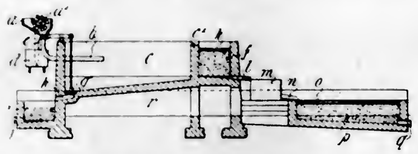
3. A process which comprises treating flue dust containing potassium compounds and insoluble matter of the general character of hydraulic cement, said dust comprising potassium sulfate and calcium sulfate, by subjecting the said dust to the action of water and removing the liquid from the undissolved solids, both these operations being performed at a temperature not below about 85° C.

4. The herein described process of treating sulfate containing cement flue dust, which comprises subjecting the same to the action of water in such proportions as to produce a solution of about 4 to 5% of K_2O, in the form of soluble salts, while at a temperature sufficiently high to prevent the formation of the insoluble double salt $CaSo_4K_2SO_4H_2O$.

5. In the extraction of flue dust, the treatment thereof with water, maintained at a temperature not below 85° C., in such relative proportions as to produce a solution containing potassium salts equivalent to 4 to 5% K_2O.

[Claims 6 and 7 not printed in the Gazette.]

1,220,990. APPARATUS FOR TREATING SEWAGE AND OTHER WASTE LIQUIDS. THOMAS KEMPLAY IRWIN, London, England, assignor to Anglo-Continental Fertilizers Syndicate Limited, London, England. Filed Sept. 4, 1914. Serial No. 860,221. (Cl. 210—19.)



1. An apparatus for the treatment of sewage and other waste liquids, comprising a precipitating tank and means for directing sewage and a precipitating medium thereinto, said tank having an overflow at the end remote from that receiving the sewage and precipitant and also having means for the removal of precipitates, a filter chamber for receiving the precipitates and retaining the solid portions thereof, a filter chamber receiving the overflow from the precipitating tank, aerating means for receiving the filtered overflow, and another filter for receiving the aerated liquid.

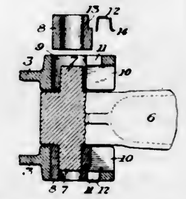
2. An apparatus for the treatment of sewage and other waste liquids, comprising a precipitating tank and means for directing sewage and a precipitating medium thereinto, said tank having an overflow at the end remote from that receiving the sewage and precipitant and also having means for the removal of precipitates, a filter chamber for receiving the precipitates and retaining the solid portions thereof, a filter chamber receiving the overflow from the precipitating tank, aerating means for receiving the filtered overflow, and another filter for receiving the aerated liquid, the apparatus also including an elevated drying floor for the solid matters removed from the sewage and the precipitating chamber having an underlying chamber communicating with the space beneath the drying floor, whereby heat may be applied to the precipitating chamber and also caused to act on the drying floor to drive off moisture from the solid matters on said drying floor.

3. Apparatus for the treatment of sewage and other waste liquids comprising in combination means for mixing the liquid with precipitants and for feeding the resulting mixture to a precipitation tank in which the solid and liquid portions are separated, a filter bed for the reception of the effluent from the said precipitation tank, centrifugal aerating apparatus for treating the liquid from the said filter bed, another filter bed for treating the aerated liquid, the solid portions being intercepted at the precipitation tank and the two aforesaid filters, a drying floor arranged longitudinally of the apparatus and extending past the filters and the precipitation tank to receive the separated solids therefrom, and means for raising the temperature of the sewage in the precipitation tank, and the solid matter on the drying floor to accelerate and increase the process of precipitation, and the drying out of the solid matter, substantially as described.

4. An apparatus for the treatment of sewage, comprising a precipitating tank decreasing in depth from one end toward the other with means at the deeper end for introducing the sewage and material for treating the same, said tank having means at the deeper end for withdrawing precipitates therefrom, means for draining the precipitates and retaining the solid portions thereof, a filter at the shallow end of the tank for receiving liquid and other matters overflowing from the tank, aerating means in position to receive liquid from said filter, and another filter in position to receive the aerated liquid.

5. An apparatus for the treatment of sewage, comprising a precipitating tank decreasing in depth from one end toward the other with means at the deeper end for introducing the sewage and material for treating the same, said tank having means at the deeper end for withdrawing precipitates therefrom, means for draining the precipitates and retaining the solid portions thereof, a filter at the shallow end of the tank for receiving liquid matters overflowing from the tank, aerating means in position to receive liquid from said filter, and another filter in position to receive the aerated liquid, the apparatus being provided with a drying floor alongside of the tank and filters and said tank and drying floor having chambers therebeneath for the application and circulation of a heating medium.

1,220,991. JOURNAL-BUSHING FOR JACKS. THOMAS A. MCGINLEY, Pittsburgh, Pa., assignor to the Duff Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Sept. 23, 1916. Serial No. 121,738. (Cl. 64—10.)



1. A jack frame having socket lever bearings, removable bushings adapted to be seated in said bearings to form bearings for the socket lever journals, each of said bushings having a key seat, there being a key seat in each of the bearings parallel with the axes of the socket lever journals, a spring key for retaining each bearing in position, each of said keys having two legs, one of said legs being arranged to engage the key seat on the bushing and the other being arranged to engage the key seat in the bearings in the frame, substantially as described.

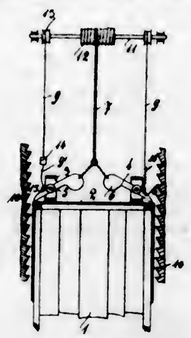
2. A jack frame having socket lever bearings, removable bushings adapted to be seated in said bearings to form bearings for the socket lever journals, each of said bushings having a key seat, there being a key seat in each of the bearings parallel with the axes of the socket lever journals, a spring key for retaining each bearing in position, each of said keys having two legs, one of said legs being arranged to engage the key seat in the bearings in the frame, and an angular projection on one of the legs for engaging the edge of the key seat in the bearing frame, the end of the other leg being arranged to engage the end wall of the key seat on the bushing, substantially as described.

3. A jack frame having socket lever bearings, bushings seated therein and arranged to form bearings for the journals of the socket lever, each of said bushings having a key seat on the periphery thereof, there being a key seat in each of the bearings of the frame extending parallel with the axis of the bearings from the ends thereof, and a U-shaped spring key for each bushing, the legs of said key extending parallel with the axes of the bearings, the end of one of said legs engaging the end wall of the seat on the bushing, and a projection on the end of the other leg for engaging the inner edge of the seat in the frame, substantially as described.

1,220,992. GRIPPING DEVICE FOR LIFT-CAGES. CELESTYN RYDLEWSKI, Posen, Germany. Filed Apr. 10, 1914. Serial No. 830,972. (Cl. 187—82.)

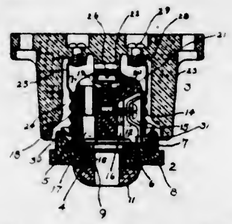
In a safety device for elevators, the combination with racks, of a cage movable between said racks, a hoop iron surrounding said cage, bearings on said iron, shafts resting in said bearings, a hoisting cable for said cage, a

cable drum, levers pivotally secured to said shafts, weights upon one end of said levers, chains connecting said weights with the end of said cable, claws at the opposite ends of said levers adapted to engage the teeth of said racks, drums upon the shaft of said cable drum, auxiliary cables guided over said drums, and secured to the claw ends of



said levers, means in said auxiliary cables for normally holding the same under less tension than that possessed by the main cable and adapted to lift said claws upon the breaking of said main cable into engagement with the teeth of said racks.

1,220,993. PLUG AND SOCKET CONNECTOR. JOSEPH SACHS, Hartford, Conn., assignor, by mesne assignments, to The Hart & Hegeman Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Original application filed Aug. 30, 1912, Serial No. 717,942. Divided and this application filed Mar. 13, 1915, Serial No. 14,240. Renewed Feb. 26, 1917. Serial No. 151,152. (Cl. 173—358.)



1. An electrical socket member comprising an insulating body, a contact shell inclosed by the body, and a contact also inclosed by said body, a plug provided with a contact shell insertible into said other contact shell and also provided with a contact to coöperate with the contact in the body, said plug having means to contract the first contact shell onto the second contact shell.

2. In a plug and socket device a receiving contact shell, a plug member insertible in said receiving contact shell, and means on the receiving contact shell and the insertible plug member whereupon by the insertion of the plug into the receiving contact shell the latter is contracted upon the plug.

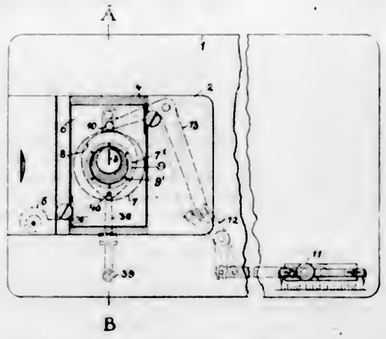
3. An electrical plug and socket device comprising a socket member having an interior contact shell, a plug member provided with a shell insertible in the other shell, the plug member being provided with means to engage the shell of the socket member to contract the same into engagement with the shell of the plug member.

4. An electrical socket member comprising an insulating body, a contact shell in the body and a second contact also inclosed by the body, said shell being contractible and having an external flange at the free end thereof, provided with a cone surface combined with a plug member comprising a contact shell and a contact, the shell of the plug member being insertible in the other contact shell and the plug member being provided with means to engage the cone surface to contract the first mentioned contact shell on the second mentioned contact shell.

5. An electrical plug and socket device comprising a socket having a contact shell, and a contact independent of the shell, a plug member provided with a contact shell to coöperate with the other contact shell and also provided with a contact co toöperate with said other contact, said plug member having means for contracting the first mentioned contact shell on the second contact shell on relative movement of the two members.

[Claims 6 to 11 not printed in the Gazette.]

1,220,994. ZIGZAG-EMBROIDERY-SEWING MACHINE. MAX SANDT, Bielefeld, Germany, assignor to Dürkoppwerke Aktiengesellschaft, Bielefeld, Germany. Filed Aug. 26, 1914. Serial No. 858,766. (Cl. 112—7.)



1. In a zigzag embroidery sewing machine having a lateral needle oscillation stroke, a device for producing embroidery designs, comprising a pattern adapted to carry the fabric and a guiding lever in contact with said pattern, both, said pattern and said lever being adjustable in the direction of the needle oscillation, and said lever being adapted during the rotation of said pattern to cause the latter to describe a figure corresponding with the configuration of said pattern.

2. In a zigzag embroidery sewing machine, having a lateral oscillation stroke, a device for producing embroidery designs, comprising a pattern adjustable in the direction of the needle oscillation and adapted to carry the fabric, means adjustable in the direction of the needle oscillation and adapted to contact with said pattern and during the rotation of the latter to cause it and the fabric to describe a figure corresponding with the configuration of said pattern and means for locking said pattern in its initial position at the end of the work.

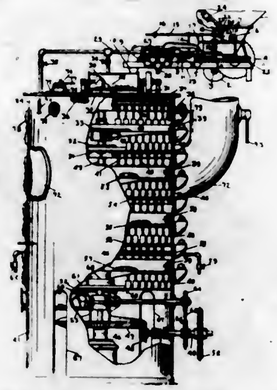
3. In a zigzag embroidery sewing machine, having a lateral needle oscillation stroke, a device for producing embroidery designs, comprising a pattern having a recess and adapted to carry the fabric, means adjustable in the direction of the needle oscillation and which during the rotation of the pattern causes the latter and the fabric to describe a figure corresponding with the configuration of said pattern and an automatic locking member adapted to engage the recess in said pattern and to arrest the latter in its initial position at the end of the work.

4. In a zigzag embroidery sewing machine, having a lateral needle oscillation stroke, a device for producing embroidery designs, comprising a pattern having a recess and adapted to carry the fabric, means adjustable in the direction of the needle oscillation and which during the rotation of the pattern causes the latter and the fabric to describe a figure corresponding with the configuration of said pattern and a spring actuated nose adapted to engage the recess in said pattern and to arrest the latter in its initial position at the end of the work.

5. In a zigzag embroidery sewing machine, having a a lateral needle oscillation stroke, a device for producing embroidery designs, comprising a pattern having a recess and adapted to carry the fabric, means whereby during the movement of the pattern the latter and the fabric are caused to describe a figure corresponding with the configuration of said pattern, a spring actuated nose adapted to engage the recess in said pattern and to arrest the latter in its initial position at the end of the work, and means for releasing said pattern at the commencement of the work.

[Claims 6 to 13 not printed in the Gazette.]

1,220,995. HYDRATION. JOHN C. SCHAFFER, Tiffin, Ohio. Filed Mar. 10, 1916. Serial No. 83,241. (Cl. 222—4.)



1. The method of continuously hydrating lime embodying the continuous definite proportion supply of lime and water, slaking the lime in a moisture saturated atmosphere, removing the slaked portions from the unslaked portions, and drying the slaked lime by variably transversely progressing the lime between successive falling stages.

2. The method of continuously hydrating lime embodying slaking lime in a moisture saturated atmosphere by variably transversely progressing the lime between successive falling stages.

3. The method of hydrating lime embodying agitating to continuously separate the slaked from the unslaked portions thereof by variably transversely progressing the lime between successive falling stages.

4. The method of hydrating lime embodying moving the material during slaking and working the unsloked material away from the slaked material by variably transversely progressing the lime between successive falling stages.

5. The method of hydrating lime embodying working the slaked lime out of the unslaked lime by variably transversely progressing the lime between successive falling stages.

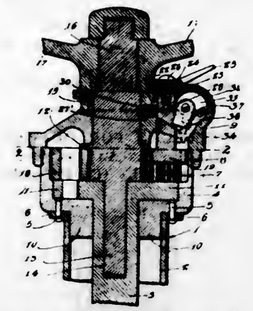
[Claim 6 not printed in the Gazette.]

1,220,996. AUTOMOBILE-STEERING-GEAR LOCK. ROBERT C. SHEPHERD, Los Angeles, Cal., assignor of one-half to Clinton F. Shepherd, Los Angeles, Cal. Filed Apr. 19, 1915. Serial No. 22,227. (Cl. 70—90.)

1. In an automobile steering gear lock, the combination with steering gear including a rotary steering post, a steering wheel and gears connecting the post and wheel, of means to hold said gears against operation.

2. In an automobile steering gear lock, the combination with steering gear including a rotary steering post, a steering wheel and gears connecting the post and wheel, of means to hold said gears against operation, and means to lock said means in gear-holding position.

3. In an automobile steering gear lock, the combination with steering gear including a rotary post, a steering wheel, a drive pinion operated by the wheel, rotatable and bodily rotatable gears carried by the post and meshing with the pinion, and means to prevent the gears from rotating bodily.

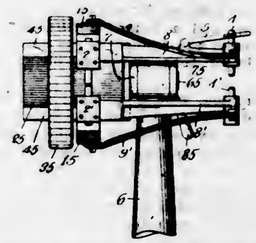


4. In an automobile steering gear lock, the combination with steering gear including a rotary post, a steering wheel, a drive pinion operated by the wheel, rotatable and bodily rotatable gears carried by the post and meshing with the pinion, means to prevent the gears from rotating bodily, and means to lock said gear locking means in locked position.

5. In an automobile steering gear lock, the combination with steering gear including a rotary post, a steering wheel, a drive pinion operated by the wheel, rotatable and bodily rotatable gears carried by the post and meshing with the pinion, and a stationary gear meshing with the bodily rotatable gears, of means adapted to be positioned between the bodily rotatable gears and interlocking with the stationary gear to lock said bodily rotatable gears against rotation bodily.

[Claims 6 to 13 not printed in the Gazette.]

1,220,997. COMBINED SPOT AND BUTT WELDER. ELIHU THOMSON, Swampscott, Mass., assignor, by mesne assignments, to Thomson Spot Welder Company, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 4, 1916. Serial No. 113,055. (Cl. 219—13.)



1. An electric welding apparatus combining in one structure electrodes for spot welding and clamps or holders for butt welding all fed by current from the same transformer secondary.

2. An electric welding apparatus having a transformer whose secondary is provided at its terminals with clamps or holders for butt welding operations and supplemental electrical terminals connected to said secondary feeding current to a pair of spot welding electrodes.

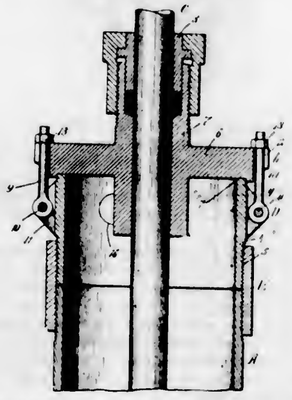
3. An electric welding apparatus having a transformer mounted upon a suitable standard or support and provided with a secondary having terminals carrying clamps or holders for butt welding and a pair of arms extended to form a gap for spot welding and carrying spot welding electrodes furnished with current by conductors extending from said secondary.

4. An electric welding apparatus having its transformer and welding devices mounted upon a suitable frame adapted to turn to change the position of the welding devices in the plane in which they operate so that the welding may be done at different angles.

5. An electric welding apparatus comprising a transformer having butt welding and spot welding devices fed therefrom and all mounted upon a frame or support capable of rotation to permit the line of operation of the welding devices to be changed to accommodate different kinds of work.

[Claims 6 and 7 not printed in the Gazette.]

1,220,998. TOP-CLOSURE FOR OIL-WELL CASINGS. ARTHUR G. WILLARD, Los Angeles, Cal. Filed May 2, 1910. Serial No. 559,012. (Cl. 166—14.)



1. The combination, with a sectional well casing; of a circulating head and closure for the upper end of the casing, comprising two separable members, and securing means for detachably uniting the members; one of said members comprising an annulus, the other of said members comprising a cap or plate through which the drilling string is vertically reciprocated, and said securing means comprising swinging bolts pivotally connected with one of said members and adapted for connection with the other of said members; and a collar or joint detachably applied to the annulus and applied to the upper end of the casing exteriorly of both and constituting a securing means.

2. The combination, with a sectional well casing; of a circulating head and closure for the upper end of the casing, comprising two separable members, and securing means for detachably uniting the members; one of said members comprising an annulus adapted for connection with the casing, the other of said members comprising a cap or plate through which the drilling string is vertically reciprocated, and said securing means comprising swinging bolts pivotally connected with said annulus and adapted to enter recesses in the periphery of said cap or plate, nuts being provided to hold said bolts within said recesses; and a collar or joint detachably applied to the annulus and applied to the upper end of the casing exteriorly of both and constituting a securing means.

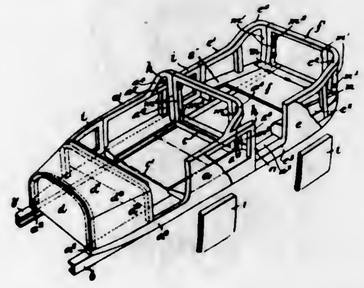
3. The combination, with a sectional well casing; of a closure for the casing, comprising an annulus adapted to be connected with the casing by a casing joint, and of the same internal diameter as the casing, a cap or plate adapted to be fitted to and seated upon the annulus and through which the drilling string is reciprocated, and securing means detachably uniting the annulus and the cap or plate.

4. The combination, with a sectional well casing; of a circulating head and closure for the upper end of the casing, comprising an annulus adapted to be connected with the casing by a casing joint or collar and of the same internal diameter as the casing, said annulus being perforated to accommodate pump connections, a cap or plate adapted to be fitted to and seated upon the annulus, and through which the drilling string is vertically reciprocated, securing means detachably uniting the annulus and the cap or plate, and said casing joint or collar exteriorly and detachably applied to said casing and said annulus.

5. A detachable closure for a sectional well casing having a tubular portion the internal diameter of which is the same as that of the casing; and detachable means applied exteriorly to the closure and the casing for detachably uniting the same; said tubular portion being provided with an opening accommodating pump connections.

[Claim 6 not printed in the Gazette.]

1,220,999. MOTOR ROAD-VEHICLE. ROBERT BOOTH, Johannesburg, Transvaal, South Africa. Filed Mar. 27, 1916. Serial No. 86,910. (Cl. 21—7.)



1. A collapsible body for motor vehicles comprising substantially flat sides and transverse seat back and seat bottom sections, the seat back and seat bottom sections lying within the body between the ends thereof, all of said sections being detachably connected together and adapted when disconnected to be packed together in close proximity throughout their broad areas, and longitudinal supporting members underlying corresponding side sections and being independent of each other for packing with said sections.

2. A collapsible body for motor vehicles comprising substantially flat sides and transverse seat back and seat bottom sections, the seat bottom sections lying within the body adjacent the lower portions of the sides, all of said sections being detachably connected together and adapted when disconnected to be packed together in close proximity throughout their broad areas, and longitudinal supporting members underlying corresponding side sections and being independent of each other for packing with said sections.

3. A convertible body for motor vehicles comprising separable front and rear portions, each body portion being collapsible and composed of substantially flat, detachable side and transverse sections adapted when disconnected to be packed together in close proximity throughout their broad areas, longitudinal supporting members underlying corresponding side sections of the front portion of the body and being independent of each other for packing with the said sections, and independent base parts provided on the side sections of the rear body portion and extending longitudinally for connection with the corresponding supporting members of the front body portion in prolongation thereof.

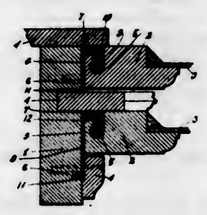
4. A convertible body for motor vehicles comprising separable front and rear portions, each body portion being collapsible and composed of substantially flat, detachable side and transverse sections adapted when disconnected to be packed together in close proximity throughout their broad areas, longitudinal supporting members underlying corresponding side sections of the front portion of the body and being independent of each other for packing with the said sections, and independent base parts provided on the side sections of the rear body portion and extending longitudinally for connection with the corresponding supporting members of the front body portion in prolongation thereof, the said supporting members being provided at their rear ends, and the base parts of the side sections of the rear body portion at their front ends, with extensions adapted to over-lap when the parts are assembled to strengthen the joint between the front and rear body portions.

5. A collapsible body for motor vehicles comprising substantially flat, detachable side and transverse sections adapted when disconnected to be packed together in close proximity throughout their broad areas, said sections including separable side and top dash sections.

[Claims 6 to 8 not printed in the Gazette.]

1,221,000. [WITHDRAWN.]

1,221,001. METAL WEATHER-STRIP. ADOLPH SOLEM, Duluth, Minn., assignor of one-half to Ludvik Solem. Continuation in part of application Serial No. 830,994, filed Apr. 10, 1914. This application filed July 15, 1915. Serial No. 40,002. (Cl. 20—69.)

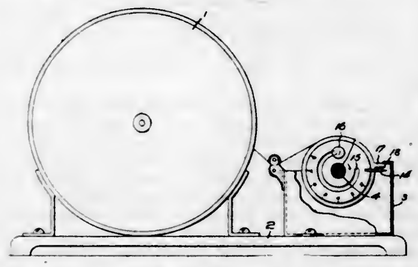


1. The combination with a window frame and a sash therein of a vertical bead strip projecting at right angles to the frame alongside the sash, said sash having a recess opening only against said strip, said recess extending inwardly from its point of opening and also toward the frame, and a metal weather strip fastened to the frame and extending across the edge of the sash, between the sash and first mentioned strip, and into said recess, the weather strip being doubled back outward toward the frame within said recess and having a rounded portion extending into the portion of said recess which extends toward the frame whereby adjustable movement of said sash in any direction is permitted.

2. As an article of manufacture a metal weather strip having a relatively long side adapted to sit between the window frame and the vertical edge of the sash, a portion extending at right angles to said first mentioned portion, a portion extending at right angles to said second mentioned portion, and a doubled back portion lying between said first mentioned and said third mentioned portion forming a rounded projection extending toward said first mentioned portion whereby a sash-way is provided surrounded on three sides by metal and having a restricted mouth.

3. The combination with a window frame and a sash therein of a vertical bead strip projecting at right angles to the frame along side the sash, said sash having a recess opening on the side toward said strip, said recess extending inwardly from its point of opening and also extending from the point of opening toward the frame, and a metal weather strip between said sash and bead strip and extending into said recess, said weather strip being doubled back toward the frame within said recess and having a laterally extending rounded portion extending into the portion of said recess which extends toward the frame from the point of opening of the recess, said rounded portion of the weather strip being smaller than the portion of the recess extending toward the frame and being adapted to engage and rock on the bottom of that portion of the recess which extends toward the frame.

1,221,002. STRIP-SERVING DEVICE. FREDERICK S. ANABLE, Brookline, Mass., assignor to National Binding Machine Company, New York, N. Y., a Corporation of New York. Filed June 23, 1915. Serial No. 35,931. (Cl. 91—14.5.)



1. A strip serving device comprising a strip support, a moistener, and strip severing means carried by said moistener.

2. A strip serving device comprising a strip support, a rotary moistener and a severing blade carried by said moistener.

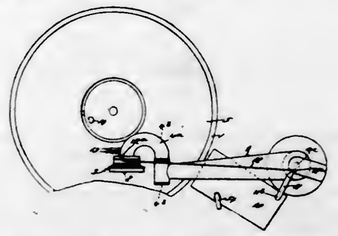
3. A strip serving device comprising a strip support, a moistener, and strip severing means carried by the moistener and operated by strip moistening movement to sever the strip.

4. A strip serving device comprising a strip support, a rotary moistener, a severing blade carried by said moistener and movable through the reservoir of the moistener into strip severing relation.

5. A strip serving device comprising a strip support, a movable moistener, and means operated by and movable with the moistener to sever a predetermined length of strip.

[Claims 6 to 24 not printed in the Gazette.]

1,221,003. SOUND-REPRODUCING MACHINE. ROBERT G. BROWN, Cincinnati, Ohio, assignor to John E. Strietelmeier, Cincinnati, Ohio. Filed Jan. 18, 1915. Serial No. 2,834. (Cl. 274—15.)



1. A replaying phonograph combining a stylus-supporting sound-box; an elevator therefor; a laterally-shiftable tone-arm carrying said sound-box; a slow-motion transmission involving reduction-gearing adapted to derive motion from the motor of the phonograph; and positive means actuated by said transmission for slowly operating said elevator to raise and then lower said sound box, and to cause said elevator meanwhile to restore said tone-arm to its initial position.

2. An instrumentality affixable to render a phonograph automatically replayable and combining a frame attachable near the turn-table; a wheel adapted to be driven by the turn-table; means carried by said frame for raising

and lowering the stylus of the phonograph; latch-mechanism adapted to be tripped at a predetermined station of the stylus to utilize said wheel in transmitting power to said means to enable it slowly to raise and lower said stylus; and means for automatically normalizing said latch mechanism and concluding the operative relation between said turn-table, said wheel and said means.

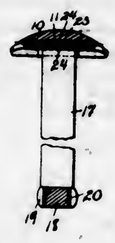
3. A tone-arm returner combining a horizontally extending tone-arm mounted to swing about a vertical axis; a pull-member attached thereto at a point remote from said axis; an actuating element having a connection with said pull-member, and normally positioned to aline said axis, point and connection; and means for automatically shifting the position of said actuating-element to off-set said connection and create a turning-moment for said tone-arm.

4. A combined stylus lifter and tone-arm shifter comprising a tone-arm swingable about a vertical axis; a stylus-support pivoted about a horizontal axis to the free end of the tone-arm; an elongated element attached to said stylus support; an actuating member having a connection with said elongated element and adapted to move it lengthwise and being normally positioned to aline said vertical axis with the two points of attachment of said elongated element to permit it initially to uplift said stylus-support without swinging said tone-arm; and means for offsetting said connection with relation to said vertical axis to create a turning moment for swinging said tone-arm.

5. A stylus-lifter combining a sound-box movable to raise its stylus; an insulated conductor attached to said sound-box to raise its stylus when pulled; a contact electrically connected with said conductor and adapted to close a circuit with a contact mounted on a record; mechanism for pulling said conductor; and magnetic means adapted to be energized through said conductor to render said mechanism operative.

[Claims 6 to 29 not printed in the Gazette.]

1,221,004. SAFETY-RAZOR AND BLADE. OTTO GOETTKE, Jersey City, N. J. Filed Dec. 21, 1916. Serial No. 138,138. (Cl. 30—12.)



1. A safety razor including, in combination, a holding member having lugs centrally arranged at the ends thereof, coöperating holding members pivotally connected to the said holding member, a double-edged blade provided with a backing member and having recesses at each end thereof arranged to receive the said lugs for centering the blade upon the holding member, retaining means for said blade including a groove arranged to receive the said backing member, and means including a pair of coöperating handle members detachably secured together for clamping the blade between the said holding member and the coöperating holding members.

2. A double-edged blade for safety razors comprising oppositely disposed blade portions each having a single sharpened edge and an opposite unsharpened edge, and a backing member for said blades having an opening therethrough, said unsharpened edges of the blade portions being arranged back to back within the backing member and movable in the opening therein when being clamped in position in the razor.

3. A double-edged blade for safety razors comprising oppositely disposed blade portions each having a single sharpened edge and an opposite unsharpened edge having a recess at each end thereof, and a backing member for said blades having an opening therethrough, said unsharpened edges of the blade portions being movable in the said opening when the double-edged blade is clamped in position in the razor and arranged back to back within the backing member to form open ended recesses at each end of the double-edged blade.

4. A safety razor including, in combination, a holding member, coöperating holding members pivotally connected to the said holding member, a double-edged blade provided with a backing member, retaining means for said blade including a groove arranged to receive the said backing member, and means including spaced handle members for positively gripping the razor when in shaving position and for clamping the blade between the holding member and coöperating holding members.

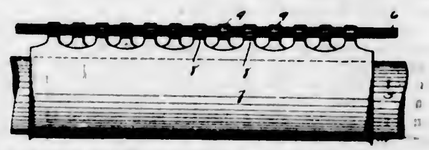
5. A safety razor including, in combination, a holding member, coöperating holding members pivotally connected to the said holding member, a double-edged blade provided with a backing member, retaining means for said blade including a groove arranged to receive the said backing member, means including spaced handle members for clamping the blade between the holding member and the coöperating holding members, and means including a latch pivoted to one of the handle members for yieldingly and detachably securing the said handle members together.

1,221,005. GARMENT-STIFFENER. JOSEPH W. SCHLOSS, New York, N. Y., assignor, by mesne assignments, to The Warren Featherbone Co., a Corporation of Illinois. Filed June 12, 1915. Serial No. 33,641. (Cl. 2—76.)



A stiffening cord for garments consisting of a cord composed of loosely laid-up strands or shreds of stiffening material, a plurality of continuous lengths of soft yarn applied to the core parallel to its axis and completely covering said core and a thread spirally wound around the exterior of the cords and binding the strands of the core and the covering together.

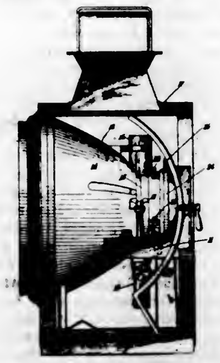
1,221,006. CABLE-GUARD. GEORGE B. WESSEL, St. Louis, Mo., assignor of one-half to John H. Luebbert, St. Louis, Mo. Filed Sept. 28, 1915. Serial No. 53,123. Renewed Jan. 6, 1917. Serial No. 140,980. (Cl. 248—33.)



A cable guard made from an integral sheet of metal bent to bowed formation and provided with a plurality of hooks along each of its edges, the hooks along one of said edges being staggered with relation to the hooks along the other of said edges and said hooks along one edge entering the spaces between the hooks along the other of said edges, whereby all of said hooks complementally engage the messenger wire.

1,221,007. HEADLIGHT. FREDERICK W. DRESSEL, New York, N. Y., assignor to The Dressel Railway Lamp Works, a Corporation of New York. Filed Jan. 2, 1915. Serial No. 188. (Cl. 240—44.)

1. In a headlight, the combination with a parabolic reflector, of a source of light fixed with respect thereto, a reflecting member in rear of said source of light and of said parabolic reflector, and means adjustably securing said reflecting member to said parabolic reflector for movement toward and away from said source of light, substantially as specified.



2. In a headlight, the combination with a parabolic reflector having an annular portion extending from the rear thereof, of a source of light fixed with respect to said reflector, and a reflecting member in rear of said source of light and adjustably supported upon the annular portion of said parabolic reflector for movement toward and away from said source of light, substantially as specified.

3. In a headlight, the combination with a parabolic reflector having a horizontally-disposed, annular portion extending from the rear thereof, of a source of light fixed with respect to said reflector, and a reflecting member in rear of said source of light and adjustably supported upon the annular portion of said parabolic reflector for movement toward and away from said source of light, substantially as specified.

4. In a headlight, the combination with a reflector having a rearwardly extending annular portion, of a source of light fixed with respect to said reflector, a member having an annular portion engaging said rearwardly extending annular portion, said member being adjustable with respect to said source of light, and a reflecting member carried by said member, substantially as specified.

5. In a headlight, the combination with a reflector having a rearwardly extending portion, of a source of light fixed with respect to said reflector, a member adjustably mounted upon said rearwardly extending portion and having a rim at the rear thereof, and a reflecting member supported within said rim, substantially as specified.

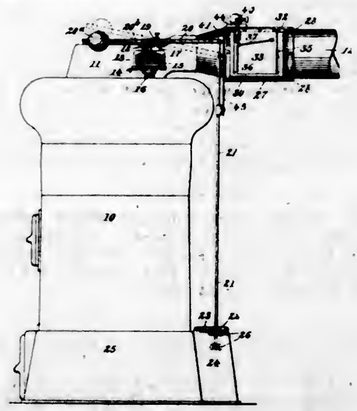
[Claims 6 to 8 not printed in the Gazette.]

1,221,008. AUTOMATIC DRAFT CONTROL. CHARLES B. THOMPSON, Buffalo, N. Y., assignor to American Radiator Company, Chicago, Ill., a Corporation of New Jersey. Filed July 15, 1913. Serial No. 779,166. (Cl. 126—293.)

1. The combination with a smoke pipe having an air inlet opening in its side, of a swinging damper extending longitudinally of the pipe and co-acting with the opening to control the flow of air therethrough, and a member secured to said swinging damper and movable in a plane transverse to the axis of the pipe to control the passage of the products of combustion therethrough, substantially as specified.

2. The combination with a smoke pipe having an air inlet opening in its side, of an inwardly swinging damper co-acting with the opening to control the flow of air therethrough, and a member secured to said damper and extending outwardly therefrom and at an angle therewith to control the passage of the products of combustion through the smoke pipe, substantially as specified.

3. A device of the character described comprising a frame adapted for securement to a pipe having an opening in its side, said frame having an opening therein, a member pivotally mounted upon said frame for controlling the entrance of fluid to said pipe through the opening in the side thereof, a part arranged upon said pivoted member and extending angularly therefrom adapted for controlling the passage of fluid longitudinally through said pipe, and means for actuating said pivoted member, substantially as specified.



4. A device of the character described comprising a frame adapted for securement to a pipe having an opening in its side, said frame having an opening therein, a single member pivotally mounted on said frame and comprising two parts arranged at an angle with one another, one of said parts controlling the entrance of fluid to the pipe through the opening in the side thereof, and the other of said parts controlling the passage of fluid longitudinally through the pipe, and means for actuating the pivoted member, substantially as specified.

5. A device of the character described comprising a frame adapted for securement to a pipe having an opening in its side, said frame having an opening therein, a single pivoted member comprising two parts arranged at right angles to each other; one of said parts controlling the entrance of fluid to said pipe through the opening in the side thereof, and the other of said parts adapted to control the passage of fluid longitudinally through said pipe, means for maintaining said damper normally in position to seal the opening in said frame, and means for actuating said damper whereby to operate the same to admit fluid through the opening in said frame, and simultaneously therewith diminish the passage of fluid longitudinally through said pipe, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

REISSUES.

14,277. UTILIZATION OF SULFUR DIOXID. JAMES B. GARNER and HOWARD D. CLAYTON, Pittsburgh, Pa., assignors to Metals Research Company, New York, N. Y., a Corporation of Maine. Filed Feb. 8, 1917. Serial No. 147,440½. Original No. 1,173,566, dated Feb. 29, 1916, Serial No. 12,134, filed Mar. 4, 1915. (Cl. 23—10.)

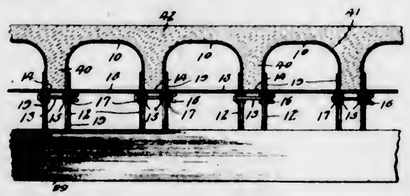
1. The method of utilizing sulfur dioxid, which comprises subjecting it to reaction with gaseous fuel in the presence of wood charcoal at a temperature below that at which the charcoal would be consumed in the gaseous mixture; substantially as described.

2. The method of utilizing sulfur dioxid, which comprises subjecting it to reaction with gaseous fuel capable of reducing sulfur dioxid in the presence of wood charcoal at a temperature of about 500 to 600° C.; substantially as described.

3. The method of utilizing sulfur dioxid, which comprises subjecting it to reaction with gaseous fuel containing hydrogen in the presence of wood charcoal at a temperature below that at which the charcoal would be consumed in the gaseous mixture, the gaseous fuel being employed in excess of that necessary for converting the sulfur dioxid into sulfur, whereby the hydrogen of the excess will react with the sulfur produced to form hydrogen sulfid; substantially as described.

4. The method of utilizing sulfur dioxid, which comprises subjecting it to reaction with gaseous fuel containing carbon monoxid and hydrogen in the presence of wood charcoal at a temperature below that at which the charcoal would be consumed in the gaseous mixture, the gaseous fuel being employed in excess of that necessary for converting the carbon monoxid into carbon dioxid whereby the hydrogen of the excess will react with the sulfur produced to form hydrogen sulfid; substantially as described.

14,278. **FALSE WORK FOR CONCRETE CONSTRUCTIONS.** CHARLES A. HAMMETT, Washington, D. C. Filed May 11, 1914. Serial No. 837,954. Original No. 1,079,045, dated Nov. 18, 1913, Serial No. 679,537, filed Feb. 23, 1912. (Cl. 25—131.5.)



1. A false work for concrete construction comprising rows of arched sections, the sides of each section being provided with slots, fillers between adjacent sides of adjacent sections, spacer bars between the sides of each section, cover plates extending over said slots and single bolts extending through the opposed slots in each of said sections, said spacer bars, and through said fillers and adjustable cover plates.

2. A false work for concrete construction comprising rows or arched sections, the sides of each section being parallel, fillers arranged between the sides of adjacent sections, spacer bars between the respective sides of each section, and single bolts passing transversely through the fillers, adjacent sides of adjusted sections and adjacent ends of respective spacer bars.

3. A false work for concrete construction comprising rows of arched sections, the sides of each section being provided with slots, fillers between adjacent sides of adjacent sections, spacer bars between the sides of each section, cover plates extending over said slots, and fastening means coöperating with the opposed slots in each of said sections, said spacer bars and through said fillers, and adjustable cover plates.

4. A false work for concrete construction comprising rows of arched sections, the sides of each section being parallel, adjustable channeled fillers arranged between the sides of adjacent sections and having their flanges down-turned and lying in abutting and sliding engagement with said sides, and bolts connected with the said down-turned flanges of the fillers and adjustably engaging the sides of adjacent sections and thus detachably and adjustably securing said fillers in position.

5. A false work for concrete construction comprising rows of arched sections, the sides of each section being parallel, adjustable channeled fillers arranged between the sides of adjacent sections and having their flanges down-turned and lying in abutting and sliding engagement with said sides, and single bolts passing through the said down-turned flanges of the fillers and adjustably engaging the sides of adjacent sections and thus detachably and adjustably securing said fillers in position.

6. A false work for concrete construction comprising rows of arched sections, the sides of each section being parallel and provided with vertical slots, adjustable channeled fillers arranged between the slotted sides of adjacent sections and having their flanges down-turned and lying in abutting and sliding engagement with said sides, and bolts engaging the slots in the sides of the sections and the down-turned flanges of the fillers and slidably, detachably and adjustably supporting said fillers in position.

7. A false work for concrete construction comprising rows of arched sections, the sides of each section being parallel and provided with vertical slots, adjustable channeled fillers arranged between the slotted sides of adjacent sections and having their flanges down-turned and lying in abutting and sliding engagement with said sides, and a bolt passing transversely through the down-turned flanges of each filler and the slots in the sections and slidably, adjustably and detachably securing said filler in position.

8. A false work for concrete construction comprising parallel arched sections, horizontal transverse fillers arranged between the sides of adjacent sections, said fillers being adjustable in the spaces between said sides for forming ribs of varying depth, horizontal transverse spacer bars between the sides of each section and adjustable with said fillers, and a fastening means passing through and connecting the fillers, adjacent sides of the sections and adjacent ends of respective spacer bars in relative position and adjustable upon the sides of the sections.

9. A false work for concrete construction comprising parallel arched sections, the adjacent sides of adjacent sections being provided with vertical slots, horizontal transverse fillers adjustably mounted between the slotted sides of adjacent sections, horizontal transverse spacer bars between the sides of each section, and a fastening means passing through the fillers, spacer bars and the slots in the adjacent sides of the sections and coupling and adjustably mounting said fillers and spacer bars in relative position.

10. A false work for concrete construction comprising parallel arched sections, the sides of each section being provided with vertical slots, horizontal transverse channeled fillers adjustably mounted between the slotted sides of adjacent sections and having their flanges down-turned and frictionally engaging the sides of the sections, horizontal transverse spaced bars between the sides of each section, and a fastening means passing through and connecting the flanges of the fillers and the adjacent ends of the respective spacer bars and extending through the slots in the sides of the sections and adjustably supporting the fillers and spacer bars thereon.

11. A false work for concrete construction comprising parallel arched sections, fillers adjustably mounted between the adjacent sides of adjacent sections, braces adjustably mounted between the sides of each section, vertical plates upon the outer faces of the sides of each section in line with the fillers and horizontal braces, and fastening means passing through and conjointly uniting said parts.

12. A false work for concrete construction comprising forming members having straight sides arranged in parallel relation and adjustable with relation to each other, horizontal fillers adjustably mounted between the sides of adjacent sections and in frictional engagement therewith, and means for adjustably uniting the sides of the sections and the adjustable fillers in position, said uniting means passing through said sides of the sections and the fillers.

DESIGNS.

50,493. **CEILING-CANOPY FOR LIGHTING-FIXTURES.** ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1917. Serial No. 143,523. Term of patent 7 years.



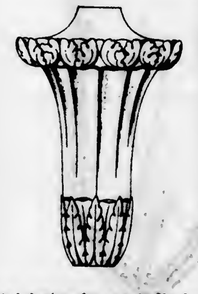
The ornamental design for a ceiling canopy for lighting fixtures, as shown.

50,494. **LOOP FOR LIGHTING-FIXTURES.** ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1917. Serial No. 143,524. Term of patent 7 years.



The ornamental design for a loop for lighting fixtures, as shown.

50,495. **SPINDLE FOR LIGHTING-FIXTURES.** ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1917. Serial No. 143,525. Term of patent 7 years.



The ornamental design for a spindle for lighting fixtures, as shown.

50,496. **ARM FOR A LIGHTING-FIXTURE.** ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1917. Serial No. 143,526. Term of patent 7 years.



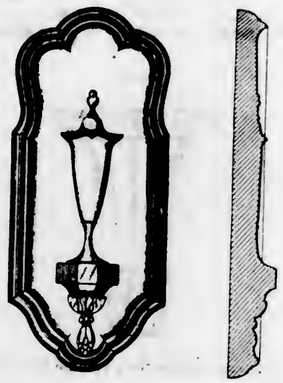
The ornamental design for an arm for a lighting fixture, as shown.

50,497. **WALL-PLATE FOR A LIGHTING-FIXTURE.** ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1917. Serial No. 143,527. Term of patent 7 years.



The ornamental design for a wall plate for a lighting fixture, as shown.

50,498. WALL-PLATE FOR A LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1917. Serial No. 143,528. Term of patent 7 years.



The ornamental design for a wall plate for a lighting fixture, as shown.

50,499. ARM FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1917. Serial No. 143,529. Term of patent 7 years.



The ornamental design for an arm for lighting fixtures, as shown.

50,500. HANGER FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1917. Serial No. 143,530. Term of patent 7 years.



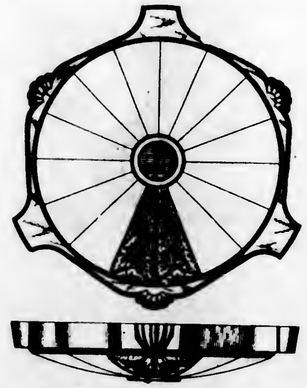
The ornamental design for a hanger for lighting fixtures, as shown.

50,501. HANGER FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1917. Serial No. 143,531. Term of patent 7 years.



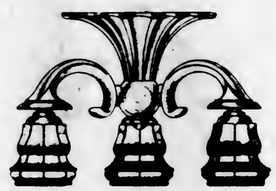
The ornamental design for a hanger for lighting fixtures, as shown.

50,502. CEILING-PLATE FOR A LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1917. Serial No. 143,532. Term of patent 7 years.



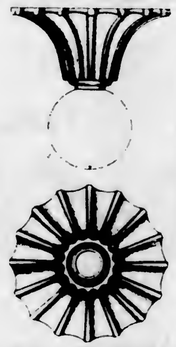
The ornamental design for a ceiling plate for a lighting fixture, as shown.

50,503. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1917. Serial No. 143,533. Term of patent 7 years.



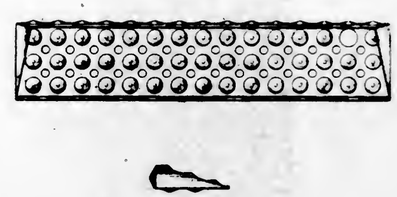
The ornamental design for a lighting fixture, as shown.

50,504. LIGHTING-FIXTURE. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1917. Serial No. 143,535. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

50,505. AUTOMOBILE-HEATER. CHARLES E. BRIDGES, Chicago, Ill. Filed Dec. 29, 1916. Serial No. 139,707. Term of patent 7 years.



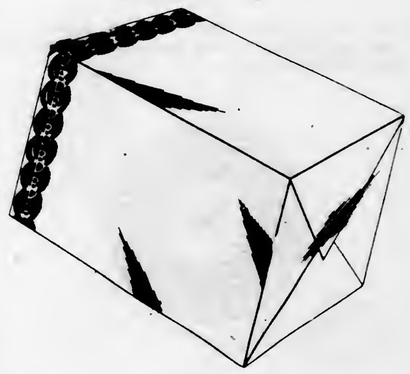
The ornamental design for an automobile heater as shown.

50,506. LIGHT-TRANSMITTING GLASS ARTICLE. WALTER J. FENSTERER, Englewood, N. J. Filed Feb. 7, 1917. Serial No. 147,263. Term of patent 7 years.



The ornamental design for a light transmitting glass article substantially as shown and described.

50,507. CARTON OR OTHER ARTICLE OF MANUFACTURE. MORTIMER C. FURCHGOTT, St. Louis, Mo., assignor to Grain Products Company, St. Louis, Mo., a Corporation of Delaware. Filed Oct. 30, 1916. Serial No. 128,623. Term of patent 14 years.



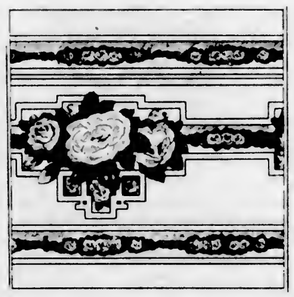
The ornamental design for a carton or other article of manufacture, substantially as shown and described.

50,508. ARTICLE OF MANUFACTURE. SAMUEL GEISMAN, New York, N. Y. Filed Nov. 6, 1916. Serial No. 129,889. Term of patent 3½ years.



The ornamental design for an article of manufacture, as shown and described.

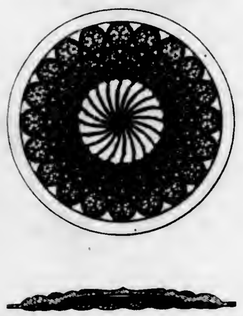
50,509. WALL-PAPER. ROBERT B. GRIFFIN, New York, N. Y. Filed Jan. 3, 1917. Serial No. 140,468. Term of patent 7 years.



The ornamental design for wall paper, substantially as shown.

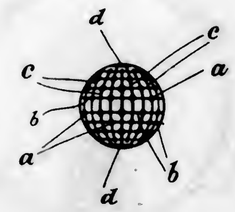
50,510. [WITHDRAWN.]

50,511. HEADLIGHT-LENS. EMIL G. JOHANSON, Chicago, Ill. Filed Dec. 26, 1916. Serial No. 139,057. Term of patent 3½ years.



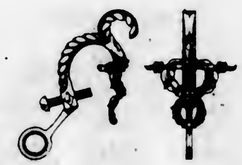
The ornamental design for a headlight lens as shown.

50,512. GOLF-BALL. ALEXANDER JOHNSTON, Edinburgh, Scotland, assignor to The North British Rubber Co. Ltd., Edinburgh, Scotland. Filed Jan. 31, 1916. Serial No. 75,451. Term of patent 14 years.



The ornamental design for a golf ball, as shown and described.

50,513. CLAMP FOR LIGHT-REFLECTING BOWLS. CHARLES ERNEST JONES, Chicago, Ill. Filed Jan. 26, 1917. Serial No. 144,793. Term of patent 3½ years.



The ornamental design for a clamp for light reflecting bowls as shown.

50,514. CLAMP FOR LIGHT-REFLECTING BOWLS. CHARLES ERNEST JONES, Chicago, Ill. Filed Feb. 5, 1917. Serial No. 146,851. Term of patent 3½ years.



The ornamental design for a clamp for light reflecting bowls as shown.

50,515. CANDLE-ARM FOR LIGHT-REFLECTING BOWLS. CHARLES ERNEST JONES, Chicago, Ill. Filed Feb. 5, 1917. Serial No. 146,852. Term of patent 3½ years.



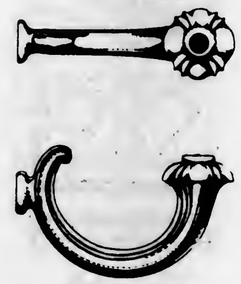
The ornamental design for a candle arm for light reflecting bowls.

50,516. ARM FOR CHANDELIERS AND BRACKETS. CHARLES ERNEST JONES, Chicago, Ill. Filed Feb. 9, 1917. Serial No. 147,710. Term of patent 3½ years.



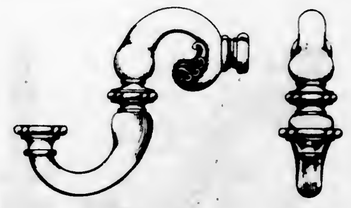
The ornamental design for an arm for chandeliers and brackets, as shown.

50,517. ARM FOR CHANDELIERS AND BRACKETS. CHARLES ERNEST JONES, Chicago, Ill. Filed Feb. 9, 1917. Serial No. 147,711. Term of patent 3½ years.



The ornamental design for an arm for chandeliers and brackets, as shown.

50,518. ARM FOR CHANDELIERS AND BRACKETS. CHARLES ERNEST JONES, Chicago, Ill. Filed Feb. 9, 1917. Serial No. 147,712. Term of patent 3½ years.



The ornamental design for an arm for chandeliers and brackets, as shown.

50,519. ARM FOR CHANDELIERS AND BRACKETS. CHARLES ERNEST JONES, Chicago, Ill. Filed Feb. 9, 1917. Serial No. 147,713. Term of patent 3½ years.



The ornamental design for an arm for chandeliers and brackets, as shown.

50,520. ARM FOR CHANDELIERS AND BRACKETS. CHARLES ERNEST JONES, Chicago, Ill. Filed Feb. 9, 1917. Serial No. 147,714. Term of patent 3½ years.



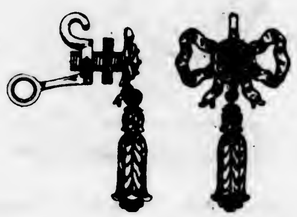
The ornamental design for an arm for chandeliers and brackets, as shown.

50,521. CLAMP AND CANDLE-ARM FOR LIGHT-REFLECTING BOWLS. CHARLES EARNEST JONES, Chicago, Ill. Filed Feb. 12, 1917. Serial No. 148,222. Term of patent 3½ years.



The ornamental design for a clamp and candle arm for light reflecting bowls, as shown.

50,522. HANGER FOR LIGHT-REFLECTING BOWLS. CHARLES EARNEST JONES, Chicago, Ill. Filed Feb. 12, 1917. Serial No. 148,223. Term of patent 3½ years.



The ornamental design for a hanger for light reflecting bowls, as shown.

50,523. HANGER FOR LIGHT-REFLECTING BOWLS. CHARLES ERNEST JONES, Chicago, Ill. Filed Feb. 12, 1917. Serial No. 148,224. Term of patent 3½ years.



The ornamental design for a hanger for light reflecting bowls, as shown.

50,524. CANDLE-CUP FOR LIGHTING-FIXTURES. WALTER R. KAHNS, Chicago, Ill., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Feb. 14, 1917. Serial No. 148,635. Term of patent 7 years.



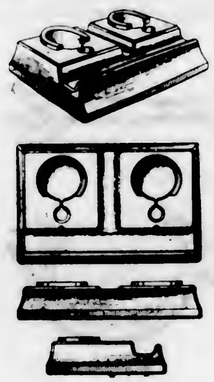
The ornamental design for a candle-cup for lighting fixtures, as shown.

50,525. HANGER-HOOK FOR LIGHT-REFLECTING BOWLS. WALTER R. KAHNS, Chicago, Ill., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Feb. 14, 1917. Serial No. 148,636. Term of patent 7 years.



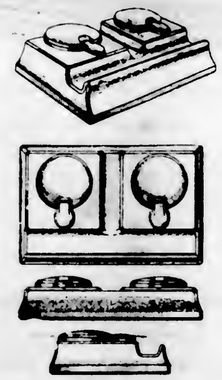
The ornamental design for a hanger hook for light reflecting bowls, as shown.

50,526. INKSTAND. CHARLES F. KIMPTON, Brooklyn, N. Y., assignor to Ruth H. Kimpton, Brooklyn, N. Y. Filed Dec. 19, 1916. Serial No. 137,901. Term of patent 7 years.



The ornamental design for an inkstand, as shown.

50,527. INKSTAND. CHARLES F. KIMPTON, Brooklyn, N. Y., assignor to Ruth H. Kimpton, Brooklyn, N. Y. Filed Dec. 19, 1916. Serial No. 137,902. Term of patent 7 years.



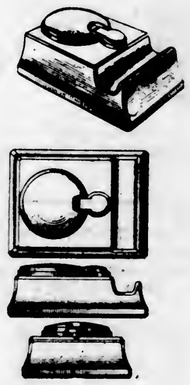
The ornamental design for an inkstand, as shown.

50,528. INKSTAND. CHARLES F. KIMPTON, Brooklyn, N. Y., assignor to Ruth H. Kimpton, Brooklyn, N. Y. Filed Dec. 19, 1916. Serial No. 137,903. Term of patent 7 years.



The ornamental design for an inkstand, as shown.

50,529. INKSTAND. CHARLES F. KIMPTON, Brooklyn, N. Y., assignor to Ruth H. Kimpton, Brooklyn, N. Y. Filed Dec. 19, 1916. Serial No. 137,904. Term of patent 7 years.



The ornamental design for an inkstand, as shown.

50,530. LIGHTING-STANDARD AND LAMP. HENRY A. LANDWEHR, Los Angeles, Cal. Filed Dec. 4, 1916. Serial No. 135,096. Term of patent 14 years.



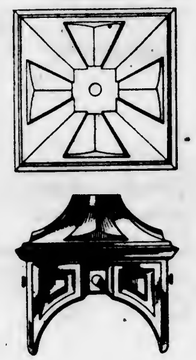
The ornamental design for a lighting standard and lamp, as shown.

50,531. BRACKET-BACK FOR LIGHTING-FIXTURES. PAUL MOHRMANN, Chicago, Ill., assignor to Friedley-Voshardt Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1916. Serial No. 139,979. Term of patent 7 years.



The ornamental design for a bracket back for lighting fixture, as shown.

50,532. LIGHTING-FIXTURE. PAUL MOHRMANN, Chicago, Ill., assignor to Friedley-Voshardt Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1916. Serial No. 139,981. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

50,533. LIGHTING-FIXTURE. PAUL MOHRMANN, Chicago, Ill., assignor to Friedley-Voshardt Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1916. Serial No. 139,980. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

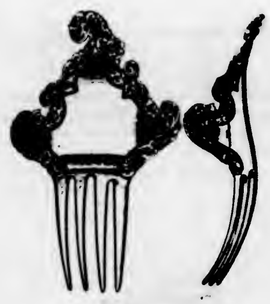
50,534. VEHICLE-HEATER CASING. CLYDE S. PELTON, Cleveland Heights, Ohio, assignor to The Perfection Spring Service Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 6, 1916. Serial No. 135,489. Term of patent 14 years.





The ornamental design for a vehicle heater casing as shown.

50,535. COMB. JESSE I. RICE, New York, N. Y. Filed Dec. 28, 1916. Serial No. 139,411. Term of patent 3½ years.



The ornamental design for a comb as shown.

50,536. AUTOMOBILE-BODY. GEORGE VINCENT STRAHAN, Newark, N. J. Filed Dec. 1, 1915. Serial No. 64,599. Term of patent 7 years.



The ornamental design for an automobile body, as shown.

50,537. AUTOMOBILE-BODY. GEORGE VINCENT STRAHAN, Newark, N. J. Filed Dec. 1, 1915. Serial No. 64,600. Term of patent 7 years.



The ornamental design for an automobile body, as shown.

50,538. CANDY TABLET. STANLEY M. WATANABE, Mountain View, Cal. Filed Oct. 3, 1916. Serial No. 123,596. Term of patent 14 years.





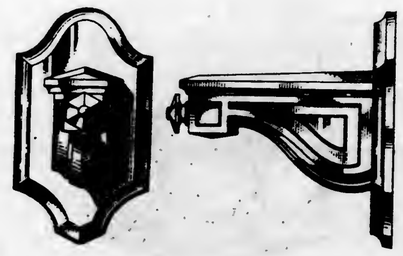
The ornamental design for a candy tablet, as shown.

50,539. LIGHTING-FIXTURE. LESTER R. WELLMAN, Chicago, Ill., assignor to Friedley-Voshardt Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1916. Serial No. 139,975. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

50,540. BRACKET-BACK FOR LIGHTING-FIXTURES. LESTER R. WELLMAN, Chicago, Ill., assignor to Friedley-Voshardt Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1916. Serial No. 139,976. Term of patent 7 years.



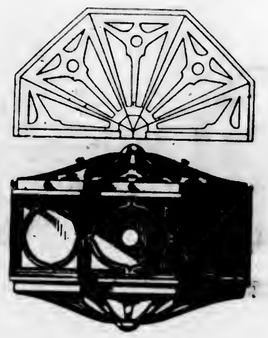
The ornamental design for a bracket back for lighting fixture, as shown.

50,541. LIGHTING-FIXTURE. LESTER R. WELLMAN, Chicago, Ill., assignor to Friedley-Voshardt Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1916. Serial No. 139,977. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

50,542. LIGHTING-FIXTURE. LESTER R. WELLMAN, Chicago, Ill., assignor to Friedley-Voshardt Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1916. Serial No. 139,978. Term of patent 7 years.



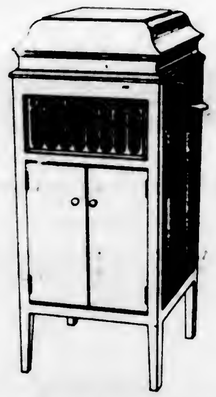
The ornamental design for a lighting fixture, as shown.

50,543. PIN-TRAY. RUSSEL H. WHEELOCK, Dayton, Ohio. Filed Sept. 5, 1916. Serial No. 118,588. Term of patent 3½ years.



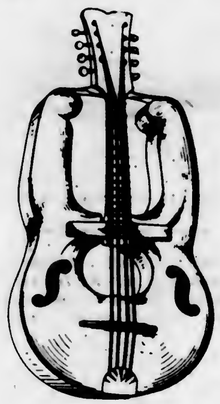
The ornamental design for a pin tray, as shown.

50,544. PHONOGRAPH-CABINET. CLARA A. WHITE, Brooklyn, N. Y. Filed Dec. 5, 1916. Serial No. 135,280. Term of patent 3½ years.



The ornamental design for a phonograph cabinet, as shown.

50,545. MANDOLIN. WILLIAM T. VAUGHN, Fort Smith, Ark., assignor of one-half to R. C. Petty, Brooken, Okla. Filed Aug. 21, 1916. Serial No. 116,207. Term of patent 14 years.



The ornamental design for a mandolin as shown.

TRADE-MARKS

PUBLISHED MARCH 27, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 69,764. (CLASS 37. PAPER AND STATIONERY.) WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany. Filed Apr. 12, 1913.

Wanderer

Particular description of goods.—Copy-Holders, Type-Writer Erasing-Shields, Manifolding-Machines, Writing and Printing Paper, Erasers other Than Knife, Type-Writer Stencil-Papers, Type-Writer Wax-Papers, Portable Document-Supports, Pencil-Sharpening Machines, Letter-Perforators, Stamp-Affixing Machines, Letter-Arranging Devices, Copying-Machines, Copy-Presses, Hand-Stamps, Cases or Racks for Holding Hand-Stamping Devices, Postage-Stamp Receptacles, Filing Devices, and Parts of Any and All of the Above Devices and Machines.

Claims use since July, 1886.

Ser. No. 71,059. (CLASS 39. CLOTHING.) L. CANDEE & COMPANY, New Haven, Conn. Filed June 12, 1913.

UNIKA

No claim is made to the use of the words "Rubber Co." or the letters "U. S. A." as a part of the trade-mark.

Particular description of goods.—Rubber Boots and Shoes.

Claims use since 1909.

Ser. No. 86,873. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE S. S. WHITE DENTAL MANUFACTURING COMPANY, Philadelphia, Pa.; New York and Brooklyn, N. Y.; Boston, Mass., Chicago, Ill., Atlanta, Ga., Cincinnati, Ohio, San Francisco and Oakland, Cal., Toronto and Montreal, Canada, and Berlin, Germany. Filed May 24, 1915.

SSW

The trade-mark consisting of the monogram "S S W."

Particular description of goods.—Tooth-Powder, Tooth-Paste, Mouth-Wash, Cold-Cream, Almond-Cream, Talcum Powder, Bay-Rum, Cologne-Water, Violet-Water, Violet-Ammonia, Nerve-Tantalizing Fiber, Nerve-Paste, Soldering Fluid, Soldering-Flux Paste.

Claims use since or prior to the year 1890.

Ser. No. 87,578. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) UNITED SHOE MACHINERY COMPANY, Paterson, N. J. Filed June 24, 1915.

SAFCo

The trade-mark consists of the arbitrary word "Safco" and is sometimes used with letters of uniform size and without the diamond-shaped panel.

Particular description of goods.—A General Line of Brushes for Manual Use in Applying Materials and for Manual Use in Cleaning and Polishing, All Designed for Use in Shoe Factories or Shoe-Repair Shops, but Capable of Being Used in other Lines of Industry.

Claims use since the latter part of the year 1908.

Ser. No. 91,330. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) CHAS. A. SCHIEREN COMPANY, New York, N. Y. Filed Dec. 8, 1915.



No claim is made to the words "Lace Leather."

Particular description of goods.—Rawhide and Lace-Leather.

Claims use since about the year 1890.

Ser. No. 92,231. (CLASS 39. CLOTHING.) CARSON, PIRIE, SCOTT & Co., Chicago, Ill. Filed Jan. 19, 1916.

WEAR-TEX

Particular description of goods.—Feet for Hosiery.

Claims use since about September, 1915.

Ser No. 93,561. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARTHUR O. SCHRADER, Milwaukee, Wis. Filed Mar. 15, 1916.



Particular description of goods.—Headache-Powders; Wafers and Tablets; Corn-Plasters; Cold-Tablets.

Claims use since Jan. 1, 1904.

Ser. No. 95,719. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC COAST BISCUIT COMPANY, Seattle, Wash. Filed June 8, 1916.

Tiffin

Particular description of goods.—Biscuits.

Claims use since Feb. 27, 1915.

Ser. No. 96,405. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE W. J. HARTZEL COMPANY, Pittsburgh, Pa. Filed July 7, 1916.

GOLD COIN

Particular description of goods.—Eggs, Butter, Butterin, Oleomargarin, and Cheese.

Claims use since on or about July 10, 1907.

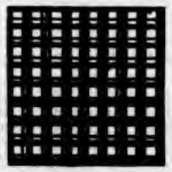
Ser. No. 97,238. (CLASS 39. CLOTHING.) ANNA L. BLAKESLEE, Malden, Mass. Filed Aug. 10, 1916.

"Virginia B." ASK FOR ME

Particular description of goods.—Clothing and Personal Wearing-Apparel—Namely, Children's Rompers, Dresses, and Outside Suits and Misses' Waists, Dresses, Outside Suits, and Blouses.

Claims use since Jan. 1, 1912.

Ser. No. 97,569. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ARMAND COMPANY, Des Moines, Iowa. Filed Aug. 23, 1916.



Consisting of squares of pink and white arranged horizontally and vertically, with a faint blue horizontal and vertical line crossing the whole between the pink squares, the colors and arrangement thereof substantially as described and shown on the accompanying drawing being claimed as features of the mark.

Particular description of goods.—Face-Powder, Cold-Cream, Hair-Wash, Tooth-Paste, Rouge, Shampoo Preparations, Perfume.

Claims use since May 29, 1916, on face-powder; since July 27, 1916, on the other items enumerated above.

Ser. No. 97,806. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE OHIO STATE STOVE CO., Columbus, Ohio. Filed Sept. 5, 1916.

Royal Oxxco

Particular description of goods.—Metal Kitchen-Cabinets, Metal Kitchen-Tables, Metal Kitchen-Stools.

Claims use since about Mar. 1, 1915.

Ser. No. 97,807. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE OHIO STATE STOVE CO., Columbus, Ohio. Filed Sept. 5, 1916.

Oxxco

Particular description of goods.—Wood, Coal, Gas, Oil, and Vapor Stoves and Ranges.

Claims use since about Mar. 1, 1915.

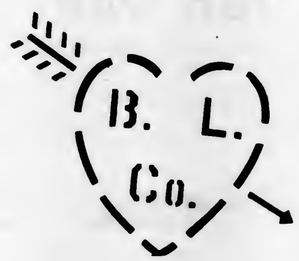
Ser. No. 97,819. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE BORGFELDT & Co., New York, N. Y. Filed Sept. 6, 1916.



Particular description of goods.—Face-Powder, Toilet Powder, Rice Powder, Talcum Powder, Sachet-Powder, Tooth-Paste, Tooth-Powder, Bath-Salts, Perfumery, Used Either Pure or as an Ingredient in Toilet Preparations in Admixture with Suitable Substances in the Form of Pastes, Salves, Soaps, Powders, Pencils, and Liquids; Nail-Polish, Rouge, Pomade-Sticks, Hair-Wax, Toilet Waters, Tooth-Washes, Cold-Cream, Ointments, Hair-Tonics, and Hair-Dyes.

Claims use since Aug. 15, 1916.

Ser. No. 97,854. (CLASS 12. CONSTRUCTION MATERIALS.) THE BAYOU LAND & LUMBER COMPANY, Cincinnati, Ohio. Filed Sept. 8, 1916.



Particular description of goods.—Hardwood Lumber.

Claims use since Apr. 19, 1908.

Ser. No. 98,155. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE BORGFELDT & Co., New York, N. Y. Filed Sept. 22, 1916.

Solemio

Particular description of goods.—Face-Powder, Toilet Powder, Tooth Powder and Pastes, Rice Powder, Smelling-Salts, Talcum Powder, Sachets, Bath-Salts, Perfumes Used Either Pure or as an Ingredient in Toilet Preparations in Admixture with Suitable Substances in the Form of Pastes, Salves, Soaps, Powders, Pencils, and Liquids; Nail-Enamels, Eyebrow-Pencils, Rouges, (Liquid, Powder, and Compact,) Pomade-Sticks, Hair-Wax, Toilet Waters, Tooth-Washes, Pomades, Nail-Polishes, Toilet Creams, Hair-Tonics, Hair Dyes and Bleaches.

Claims use since Sept. 15, 1916.

Ser. No. 98,168. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LESLIE L. KUNKEL, Madrid, Nebr. Filed Sept. 22, 1916.

KUTO-KURO

Particular description of goods.—Liniment Especially Adapted to be Used for Curing Sores, Cuts, and other Wounds on Horses and other Domestic Animals. It Sterilizes the Injured Tissues, Keeps Off Flies, and Prevents the Formation of Proud Flesh.

Claims use since Sept. 1, 1915.

Ser. No. 98,240. (CLASS 30. CLOTHING.) JOHN P. DAVIS, Chicago, Ill. Filed Sept. 26, 1916.

EASY RITE

Particular description of goods.—Men's and Ladies' Leather, Rubber, and Cloth Shoes and Slippers, Leather Gaiters, Hosiery, Coats, Overcoats, and Rain-Coats.

Claims use since July 15, 1916.

Ser. No. 98,429. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE BORGFELDT & Co., New York, N. Y. Filed Oct. 5, 1916.

Peawelle

Particular description of goods.—Face-Powder, Toilet Powder, Tooth Powder and Pastes, Rice Powder, Smelling-Salts, Talcum Powder, Sachets, Bath-Salts, Perfumes Used Either Pure or as an Ingredient in Toilet Preparations in Admixture with Suitable Substances in the Form of Pastes, Salves, Soaps, Powders, Pencils, and Liquids; Nail-Enamels, Eyebrow-Pencils, Rouges, (Liquid, Powder, and Compact,) Pomade-Sticks, Hair-Wax, Toilet Waters, Tooth-Washes, Pomades, Nail-Polishes, Toilet Creams, Hair-Tonics, Hair Dyes and Bleaches.

Claims use since Sept. 25, 1916.

Ser. No. 98,562. (CLASS 38. PRINTS AND PUBLICATIONS.) FREDERICK C. GUNNING, New York, N. Y., as signor to Wid's Film & Film Folk, Inc., a Corporation. Filed Oct. 11, 1916.

WID'S

Particular description of goods.—Magazines Issued Weekly.
Claims use since Sept. 9, 1915.

Ser. No. 98,688. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) DURKEE-ATWOOD CO., Minneapolis, Minn. Filed Oct. 16, 1916.

RieNie

Particular description of goods.—Valve-Grinding Compound, Mohair-Top Cleaner, a Cleaning and Polishing Preparation for Metal, Woodwork, and Leather, Metal-Polish, Nickel-Polish, Oil Soap, Hand-Soap, Liquid Antiseptic Toilet Soap, Carborundum, Clear-Glass Solution, an Alcohol and Glycerin Compound for Keeping Glass Transparent in Stormy Weather, Clutch and Brake Compound, a Preparation of Neat's-Foot Oil and Ingredients for Clutch-Leather and Brakelinings, Mohair Dressing and Waterproofing, Leather-Dressing, and Black Dressing.
Claims use since the 11th day of December, 1911.

Ser. No. 98,698. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) R. H. MACY & CO., New York, N. Y. Filed Oct. 16, 1916.

Pride of Broadway

The star is colored red.
Particular description of goods.—Sheets and Pillow-Cases.
Claims use since 1911.

Ser. No. 98,700. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) R. H. MACY & CO., New York, N. Y. Filed Oct. 16, 1916.

Marchioness

The star is colored red.
Particular description of goods.—Silks, (In the Piece.)
Claims use since April, 1903.

Ser. No. 98,705. (CLASS 38. PRINTS AND PUBLICATIONS.) REALTY SERVICE PUBLISHING CO., Newark, N. J., by change of name to Realty Publishing Co., Newark, N. J., a Corporation of New Jersey. Filed Oct. 16, 1916.

REALTY
In Word & Picture

Particular description of goods.—A Monthly Magazine or Periodical.
Claims use since Mar. 1, 1916.

Ser. No. 98,993. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CARPENTER-MORTON CO., Boston, Mass. Filed Oct. 31, 1916.

VIRGIN

No claim is made for the word "White" as forming any part of the trade-mark.
Particular description of goods.—Enamel Paint.
Claims use since Oct. 20, 1916.

Ser. No. 99,354. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DR. J. O. LAMBERT LIMITED, Montreal, Quebec, Canada. Filed Nov. 17, 1916.



Comprising the representation of a buoy on the ocean and in the distance a lighthouse and an island and a facsimile of the signature of F. Boisvert.
Particular description of goods.—A Preparation for the Treatment of Cough, Cold, Bronchitis, Catarrh, Whooping-Cough, Asthma, Croup.
Claims use since Dec. 4, 1912.

Ser. No. 99,388. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WILLIAM E. SPENCER, New York, N. Y. Filed Nov. 18, 1916.

PER VAR

Particular description of goods.—Varnishes.
Claims use since about Aug. 20, 1916.

Ser. No. 99,391. (CLASS 39. CLOTHING.) VELVET GRIP SHOE CO., INC., New York, N. Y. Filed Nov. 18, 1916.

Velvet Grip

No claim is made to the word "Grip" apart from the mark as shown.
Particular description of goods.—Boots and Shoes Made of Leather and Canvas.
Claims use since Oct. 1, 1916.

Ser. No. 99,432. (CLASS 5. ADHESIVES.) THE COTTA-LAP COMPANY, Somerville, N. J. Filed Nov. 21, 1916.

MAGIC

Particular description of goods.—Wall-Paper Size Adapted for Covering Walls, Ceilings, and other Surfaces.
Claims use since on or about Aug. 1, 1909.

Ser. No. 99,500. (CLASS 28. JEWELRY and PRECIOUS-METAL WARE.) JOSEPH FRACKMAN COMPANY, INC., New York, N. Y. Filed Nov. 23, 1916.



The trade-mark consists of the word "Soli," associated with the portrait of Mrs. Camille Woodford.
Particular description of goods.—Settings for Precious Stones.
Claims use since February, 1916.

Ser. No. 99,618. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE BEAVER COMPANY, Buffalo and Beaver Falls, N. Y.; Roanoke Rapids, N. C.; Thorold, Ontario, Canada, and London, England. Filed Nov. 29, 1916.



BEAVERBILT

Particular description of goods.—Dolls, Doll-Houses, Toy Houses, Toy Figures, Toy Blackboards, and Toy Furniture.
Claims use since Oct. 1, 1916.

Ser. No. 99,733. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) REX MANUFACTURING COMPANY, Connersville, Ind. Filed Dec. 5, 1916.

REX-C-DAN

Particular description of goods.—Automobile, Motor-Truck, Carriage, Wagon, and Boat Bodies and Tops and Parts of Said Bodies and Tops.
Claims use since May 1, 1915.

Ser. No. 99,875. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ERNEST MOORE, London, England. Filed Dec. 12, 1916.

AMERIND

Particular description of goods.—Preventive from Mosquito-Stings.
Claims use since Sept. 20, 1916.

Ser. No. 99,940. (CLASS 48. MALT EXTRACTS AND LIQUORS.) HINCKEL BREWERY COMPANY, Albany, N. Y. Filed Dec. 14, 1916.

TRYME

Particular description of goods.—Brewed Malt Beverages.
Claims use since Dec. 1, 1916.

Ser. No. 99,970. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Dec. 15, 1916.



No claim being made to the exclusive right to a bag colored blue.
Particular description of goods.—Stock Foods.
Claims use since July 1, 1916.

Ser. No. 99,978. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALEJANDRO ANGEL & CO., New York, N. Y. Filed Dec. 16, 1916.

PABLO

Particular description of goods.—Coffee.
Claims use since 1914.

Ser. No. 100,013. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MUELLER WILD CO., Milwaukee, Wis. Filed Dec. 18, 1916.

CREAM CITY

Particular description of goods.—Canned Tomatoes, Canned Corn, Canned Peas, Canned Pork and Beans, Canned Wax-Beans, Canned Refugee-Beans.
Claims use since June 1, 1916.

Ser. No. 100,051. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) PHINEAS M. TALCOTT, New Haven, Conn. Filed Dec. 19, 1916.

IDEAL

Particular description of goods.—Loading Implements for Rifle, Pistol, and Shotgun Cartridges and Molds for Bullets.
Claims use for about thirty years.

Ser. No. 100,077. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN ALDEN CUSHING, Lancaster, N. Y. Filed Dec. 21, 1916.

PETROMYZOL

Particular description of goods.—A Soluble Sulfonated Hydrocarbon Having Curative Properties and Used in the Treatment of Ulcers, Eczema, Venereal Diseases, Hives, Rheumatism, Any Blood Infections Causing Rashes, and Tuberculosis, Acne, Piles, Skin Infections, Varicose Veins, and Ulcerations of the Bowels.
Claims use since Oct. 25, 1916.

Ser. No. 100,175. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MIHALOVITCH BROTHERS COMPANY, Cincinnati, Ohio. Filed Dec. 26, 1916.

ZANOL

Particular description of goods.—Peroxid Cream, Disappearing Cream, Camphorated Cream, Face-Creams, Smelling-Salts, Shampoo-Foam, Tooth-Wash, Rice Powder, Toilet Water, Talcum Powders, Bath-Powder, Foot-Powder, Deodorizing-Powder, Laxative Tablets, Liver-Pills, Headache-Powders, Kidney-Tablets, Sulfur Cream-of-Tartar Tablets, Dyspepsia-Tablets, Foot-Tablets, Cough-Tablets and Cough-Drops, Charcoal Tablets, Blood-Purifier, Nerve-Tablets, Rheumatism-Tablets, Chill and Fever Tablets, Diarrhea-Tablets, Worm-Tablets, Powdered Nail-Bleach, Nail-Powder in Cake and Tablet Form, Mosquito-Repellent, Face-Powders, Face Powder and Cream Combined, Bluing in Tablet Form, Shampoo-Jelly, Camphorated Cold-Cream, Tooth-Powder, Depilatory, Liquid Rouge, Mentholated Petrolatum, Liquid Complexion-Powder, Concentrated Bluing, Corn-Solvent, Stain and Rust Remover, a Waterproof Preparation for Waterproofing Boots and Shoes, a Liquid for Stopping Leaks in Roofs, Gutters, Tanks, Pipes, Buckets, Boats, Refrigerators, Cisterns, and other Containers Which May Become Leaky Through Use or other Conditions, Rust-Remover, Camphor-Ice, Cocoa-Butter, Glycerin, Glycerin and Rose-Water, Hair-Tonics, Freckle-Cream, Face-Chamois, Brilliantine, Perfumes, Liquid Court-Plaster, Lip-Rouge Sticks, Rouge-Chamois, Dental Creams.
Claims use since 1906.

Ser. No. 100,177. (CLASS 37. PAPER AND STATIONERY.) CHANNING D. MEEKER, Bedford, Ohio. Filed Dec. 26, 1916.

SAY TF

Particular description of goods.—Coupon-Books of Address-Labels for Use on All Manner of Packages.
Claims use since Nov. 1, 1916.

Ser. No. 100,183. (CLASS 39. CLOTHING.) SAMBE & LOBEL, New York, N. Y. Filed Dec. 26, 1916.

THE CADDY

Comprising the words "The Caddy."
Particular description of goods.—Ladies' Outer Garments—viz., Blouses and Sport-Coats.
Claims use since Nov. 15, 1916.

Ser. No. 100,184. (Class 27. HOROLOGICAL INSTRUMENTS.) SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Dec. 26, 1916.

RAP RAP RAP

Particular description of goods.—Clocks.
Claims use since Dec. 15, 1916.

Ser. No. 100,185. (CLASS 27. HOROLOGICAL INSTRUMENTS.) SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Dec. 26, 1916.

R=U=UP

Particular description of goods.—Clocks.
Claims use since Dec. 15, 1916.

Ser. No. 100,191. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE SEAMLESS RUBBER COMPANY, New Haven, Conn. Filed Dec. 26, 1916.

Maderite

Particular description of goods.—Tennis-Balls.
Claims use since about Jan. 1, 1911.

Ser. No. 100,212. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SCHUYLKILL SILK MILLS, Reading, Pa. Filed Dec. 27, 1916.

Sunnisilk

Particular description of goods.—Silk Cloth in the Piece, Both Knitted and Textile.
Claims use since Dec. 10, 1916.

Ser. No. 100,255. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE GLOBE STEEL COMPANY, Mansfield, Ohio. Filed Dec. 30, 1916.

THISTLE

Particular description of goods.—Metallic Particles in Grain, Powdered, or Pulverized Form for Rubbing, Polishing, and Grinding Purposes.
Claims use since the summer of 1912.

Ser. No. 100,287. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM E. EVENSON, Baraboo, Wis. Filed Jan. 2, 1917. Under ten-year proviso.

CUTICREAM

Particular description of goods.—Liquid Toilet Creams.
Claims use since Jan. 1, 1885.

Ser. No. 100,311½. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. RAUH & SONS FERTILIZING COMPANY, Indianapolis, Ind. Filed Jan. 2, 1917.

MEATALL

Particular description of goods.—A Stock and Poultry Food Comprising the Bones and Flesh of Animals, Cooked, Sterilized, and Compressed into a Hard Dry Cake and Then Ground Fine for a Stock Food and Coarser for a Poultry Food.
Claims use since Nov. 1, 1916.

Ser. No. 100,426. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE ENAMEL PRODUCTS COMPANY, Cleveland, Ohio. Filed Jan. 8, 1917.

Tepco

Particular description of goods.—Table-Tops.
Claims use since August, 1915.

Ser. No. 100,468. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOOTH FISHERIES COMPANY, Chicago, Ill. Filed Jan. 9, 1917.



Particular description of goods.—Canned Salmon.
Claims use since May 10, 1909.

Ser. No. 100,480. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Jan. 9, 1917.

RABBETH

Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since on or about Jan. 1, 1900 or 1901.

Ser. No. 100,494. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HOME PRODUCTS COMPANY, Newburgh, N. Y. Filed Jan. 9, 1917.

O'MELLO

Particular description of goods.—Extract of Lemon for Flavoring Foods.
Claims use since Dec. 18, 1916.

Ser. No. 100,587. (CLASS 39. CLOTHING.) NIAGARA SILK MILLS, North Tonawanda, N. Y. Filed Jan. 13, 1917.

Shanette

Particular description of goods.—Silk and Fabric Gloves, Ladies' Silk and Muslin Brassières, Corset-Covers, and Camisoles, and Ladies' Woolen, Cloth, and Silk Skirts, Waists, and Coats.
Claims use since Jan. 10, 1917.

Ser. No. 100,593. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) SEMPLE RUBBER COMPANY, Trenton, N. J. Filed Jan. 13, 1917.

SEMCO

Particular description of goods.—Inner Tubes for Automobile and Motor-Cycle Pneumatic Tires.
Claims use since July 1, 1914.

Ser. No. 100,644. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) C. M. C. STEWART SULPHUR CO., Seattle, Wash. Filed Jan. 16, 1917.

LAM-A-LAX

Particular description of goods.—Laxative Tablets.
Claims use since Mar. 3, 1913.

Ser. No. 100,654. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) LANDERS, FRARY & CLARK, New Britain, Conn. Filed Jan. 16, 1917.

SILVADIUM

Particular description of goods.—Forks, Spoons, Cheese-Scoops, Nut-Picks, and Pie-Servers Made of Base Metal.
Claims use since May, 1916.

Ser. No. 100,694. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) CASCO TANNING COMPANY, Portland, Me. Filed Jan. 18, 1917.

CASGUNCO

Particular description of goods.—Leather in the Form of Tanned Hides.
Claims use since Dec. 1, 1916.

Ser. No. 100,696. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN CHICLE CO., New York, N. Y. Filed Jan. 18, 1917.

FRUITS & FLOWERS

Particular description of goods.—Chewing-Gum.
Claims use since July 1, 1909.

Ser. No. 100,759. (CLASS 12. CONSTRUCTION MATERIALS.) UNION FIBRE COMPANY, Winona, Minn. Filed Jan. 19, 1917.

UNIFELT

Particular description of goods.—A Thermal and Acoustic Insulator Made of Vegetable Fibers.
Claims use since Jan. 12, 1917.

Ser. No. 100,825. (CLASS 25. LOCKS AND SAFES.) SIGNODE SYSTEM, INC., Chicago, Ill. Filed Jan. 22, 1917.

SIGNODE

Particular description of goods.—A Seal.
Claims use since prior to Aug. 15, 1916.

Ser. No. 100,826. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) SIGNODE SYSTEM, INC., Chicago, Ill. Filed Jan. 22, 1917.

SIGNODE

Particular description of goods.—A Metal Strapping for Box-Fastenings or the Like.
Claims use prior to Aug. 15, 1916.

Ser. No. 100,831. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) STEWART K. TAYLOR, Mobile, Ala. Filed Jan. 22, 1917.



Particular description of goods.—Logs.
Claims use since 1908.

Ser. No. 100,836. (CLASS 39. CLOTHING.) BROOKS WIGELY, Chillicothe, Mo. Filed Jan. 22, 1917.

LIMP IN AND WALK OUT

Particular description of goods.—Men's, Women's, and Children's Shoes, Boots, and Slippers, Said Shoes, Boots, and Slippers Being Made of Leather, Rubber, and Canvas.
Claims use since Sept. 12, 1912.

Ser. No. 100,852. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HAGER, CLARK & CO., New York, N. Y. Filed Jan. 23, 1917.



Particular description of goods.—Woolen Piece Goods.
Claims use since Jan. 16, 1917.

Ser. No. 100,876. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) ESSANAY FILM MANUFACTURING COMPANY, Chicago, Ill. Filed Jan. 24, 1917.

A Black Cat



Particular description of goods.—Moving-Picture Films.
Claims use since Dec. 5, 1916.

Ser. No. 100,913. (CLASS 39. CLOTHING.) ELDER MANUFACTURING CO., St. Louis, Mo. Filed Jan. 25, 1917.

Rolly Poly

Particular description of goods.—Rompers and Children's Sleeping-Garments.
Claims use since Dec. 1, 1916.

Ser. No. 100,915. (CLASS 39. CLOTHING.) ELDER MANUFACTURING CO., St. Louis, Mo. Filed Jan. 25, 1917.

Touch Down

Particular description of goods.—Sweaters and Sweater-Coats.
Claims use since Dec. 1, 1916.

Ser. No. 100,917. (CLASS 39. CLOTHING.) ELDER MANUFACTURING CO., St. Louis, Mo. Filed Jan. 25, 1917.

Huck Finn

Particular description of goods.—Negligée, Work, and Under Shirts.
Claims use since Dec. 1, 1916.

Ser. No. 100,931. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MAAS BAKING CO., New York, N. Y. Filed Jan. 25, 1917.

BARLETS

Particular description of goods.—A Prepared Food Product Made from Flour and Eggs Similar to Noodles in Its Uses.
Claims use since the 15th day of January, 1917.

Ser. No. 100,989. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) EUGENE GOLDMAN, Chicago, Ill. Filed Jan. 27, 1917.

MASTER

Particular description of goods.—Motor-Trucks and Automobiles.
Claims use since on or about the 1st day of November, 1916.

Ser. No. 100,995. (CLASS 38. PRINTS AND PUBLICATIONS.) MCKESSON & ROBBINS, INCORPORATED, New York, N. Y. Filed Jan. 27, 1917.

DRUG TOPICS

Particular description of goods.—Monthly Periodicals.
Claims use since prior to the year of 1890.

Ser. No. 101,033. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE FAIRLEY-DAVIDSON STEEL CO. INC., New York, N. Y. Filed Jan. 30, 1917.

FONDWOT

Particular description of goods.—Steel in the Form of Sheets, Bars, Rods, and Blocks for Dies, Milling-Cutters, Cutlery, Saws, Pens, Wood and Metal Working Tools, Magnets, and Springs, with or without Chromium, Nickel, Vanadium, Tungsten, and Carbon.
Claims use since September, 1914.

Ser. No. 101,034. CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE FAIRLEY-DAVIDSON STEEL CO. INC., New York, N. Y. Filed Jan. 30, 1917.

GIANT

Particular description of goods.—Steel in the Form of Sheets, Bars, Rods, and Blocks for Dies, Milling-Cutters, Cutlery, Saws, Pens, Wood and Metal Working Tools, Magnets, and Springs, with or without Chromium, Nickel, Vanadium, Tungsten, and Carbon.
Claims use since September, 1914.

Ser. No. 101,035. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE FAIRLEY-DAVIDSON STEEL CO. INC., New York, N. Y. Filed Jan. 30, 1917.

RUSHITOFF

Particular description of goods.—Steel in the Form of Sheets, Bars, Rods, and Blocks for Dies, Milling-Cutters, Cutlery, Saws, Pens, Wood and Metal Working Tools, Magnets, and Springs, with or without Chromium, Nickel, Vanadium, Tungsten, and Carbon.
Claims use since September, 1914.

Ser. No. 101,058. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CANTRELL & DAWSON, Guymon, Okla. Filed Jan. 31, 1917.

JAMO-LAX

Particular description of goods.—A Laxative Jam.
Claims use since Sept. 14, 1916.

Ser. No. 101,059. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CANTRELL & DAWSON, Guymon, Okla. Filed Jan. 31, 1917.

OLKA-MO

Particular description of goods.—A Medicinal Tonic.
Claims use since Sept. 14, 1916.

Ser. No. 101,072. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) REYNOLDS WIRE CO., Dixon, Ill. Filed Jan. 31, 1917.

SUNRED

The word "Sun-Red."
Particular description of goods.—Wire Screen-Cloth.
Claims use since Feb. 1, 1914.

Ser. No. 101,077. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) B. O. & G. C. WILSON, INC., Boston, Mass. Filed Jan. 31, 1917.

WINSOL

Particular description of goods.—Medicinal Preparations for the Treatment of Diseases of the Nose, Mouth, Throat, Heart, Lungs, Bronchial Tubes, Kidneys, Liver, Bowels, Blood, Nerves, Bones, Muscles, Skin, Bladder, Glands, Larynx, Intestinal Tract, Digestive Organs, and Stomach.
Claims use since Nov. 22, 1916.

Ser. No. 101,084. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) COMAR REMEDY COMPANY, Hot Springs, Ark. Filed Feb. 1, 1917.

COMAR

Particular description of goods.—Blood Remedy for Treatment of Syphilis, Gonorrhoea, Eczema, Lupus, Psoriasis, Rheumatism, Catarrh, Stomach, Liver, and Kidney Troubles.
Claims use since Mar. 1, 1916.

Ser. No. 101,085. (CLASS 39. CLOTHING.) CARTER & HOLMES, Chicago, Ill. Filed Feb. 1, 1917.

NO-SKID

Particular description of goods.—Neckties.
Claims use since on or about Jan. 1, 1917.

Ser. No. 101,092. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FARQUHAR-MOON MANUFACTURING COMPANY, Chicago, Ill. Filed Feb. 1, 1917.

NRG ENERGY

Particular description of goods.—Washing Compounds in the Form of Tablets to be used with Saponaceous Compounds for Washing Textile Fabrics, Scrubbing Floors, and Cleaning Woodwork, Pots, Pans, Metal-Work, Enamel Ware, Bath-Tubs, &c., and for other Purposes for Which Laundry Soap is Commonly Used.
Claims use since on or about Nov. 24, 1915.

Ser. No. 101,096. (CLASS 39. CLOTHING.) JOSEPH, New York, N. Y. Filed Feb. 1, 1917.

Joseph

Particular description of goods.—Ladies' Hats and Bonnets, Toques, Cloaks, Dresses, and Outer Suits.
Claims use since 1st day of December, 1899.

Ser. No. 101,123. (CLASS 2. RECEPTACLES.) FLORENCE FORRISTALL, Brookline, Mass. Filed Feb. 2, 1917.

PENELOPE POSTERS

Particular description of goods.—Boxes of Paper or Cardboard.
Claims use since Nov. 15, 1916.

Ser. No. 101,140. (CLASS 39. CLOTHING.) CRADDOCK-TERRY COMPANY, Lynchburg, Va., and St. Louis, Mo. Filed Feb. 3, 1917.

Teenie-Weenie

Particular description of goods.—Leather Shoes.
Claims use since June 1, 1916.

Ser. No. 101,153. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MIDLAND TIRE & RUBBER CO., Cleveland, Ohio. Filed Feb. 3, 1917.

BEN HUR

Particular description of goods.—Rubber Tires, Rubber and Fabric Tires, Leather Tires, Canvas Tires, Composition Tires, Rubber Belting, Leather Belting, Canvas Belting, Rubber Hose, Canvas Hose, Rubber and Canvas Hose, and Rubber Tire-Shoes and Leather Tire-Shoes.
Claims use since Jan. 20, 1917.

Ser. No. 101,160. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Feb. 3, 1917.

USCO

Particular description of goods.—Rubberized Air-Craft Fabrics.
Claims use since Jan. 24, 1917.

Ser. No. 101,204. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) CARL ANDERSON ELECTRIC CORPORATION, New York, N. Y. Filed Feb. 7, 1917.

ANDERFONE

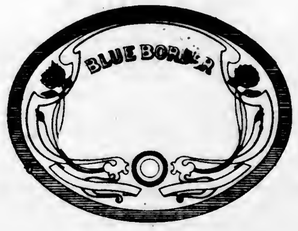
Particular description of goods.—Intercommunicating Telephones, Microphones, Transmitters, and Receivers for Use in Telephony and for Aiding the Hearing and Parts of Said Instruments.
Claims use since Jan. 2, 1917.

Ser. No. 101,229. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CALIFORNIA BAKERS SPECIALTY CO. INC., Los Angeles, Cal. Filed Feb. 8, 1917.

ORRANGERIE

Particular description of goods.—A Paste for Cakes, Cookies, Pie, Candy, and Ice-Cream.
Claims use since Nov. 20, 1916.

Ser. No. 101,260. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) COLFAX BOTTLING WORKS, Colfax, Iowa. Filed Feb. 9, 1917. Under ten-year proviso.



The border surrounding the mark is blue.
Particular description of goods.—A Non-Alcoholic Carbonated Beverage to be Sold as a Soft Drink.
Claims use since Feb. 1, 1894.

Ser. No. 101,263. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) EDWARD DIEHL, Nashville, Tenn. Filed Feb. 9, 1917.



Particular description of goods.—Non-Alcoholic Carbonated Beverages to be sold as Soft Drinks.
Claims use since Oct. 1, 1916.

Ser. No. 101,267. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) FLORIDA CITRAJUICE CO., Winter Park, Fla. Filed Feb. 9, 1917.

Florex

Particular description of goods.—Syrups Used in the Making of Soft Drinks and Bottled Non-Alcoholic Still or Carbonated Beverages Made from Such Syrups.
Claims use since Dec. 1, 1916.

Ser. No. 101,290. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. A. FOLGER & COMPANY, San Francisco, Cal. Filed Feb. 10, 1917.



Particular description of goods.—Tea.
Claims use since Jan. 4, 1917.

Ser. No. 101,292. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HEXAGON SEWING MACHINE COMPANY, New York, N. Y. Filed Feb. 10, 1917.

HEXAGON

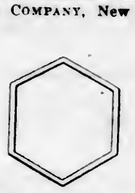
Particular description of goods.—Sewing-Machines, Parts Thereof, and the Following Attachments: Ruffling and Shirring Attachments, Guides, Quilting-Guides, Edge-Guides, Tuck-Markers, Hemmers, Presser-Feet, Braiders and Corders, Needle-Cases, Bobbins, and Bobbin-Winders.
Claims use since the month of December, 1916.

Ser. No. 101,293. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HEXAGON SEWING MACHINE COMPANY, New York, N. Y. Filed Feb. 10, 1917.



Particular description of goods.—Sewing-Machines, Parts Thereof, and the Following Attachments: Ruffling and Shirring Attachments, Guides, Quilting-Guides, Edge-Guides, Tuck-Markers, Hemmers, Presser-Feet, Braiders and Corders, Needle-Cases, Bobbins, and Bobbin-Winders.
Claims use since the month of December, 1916.

Ser. No. 101,294. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HEXAGON SEWING MACHINE COMPANY, New York, N. Y. Filed Feb. 10, 1917.



Particular description of goods.—Sewing-Machines, Parts Thereof, and the Following Attachments: Ruffling and Shirring Attachments, Guides, Quilting-Guides, Edge-Guides, Tuck-Markers, Hemmers, Presser-Feet, Braiders and Corders, Needle-Cases, Bobbins, and Bobbin-Winders.
Claims use since the month of December, 1916.

Ser. No. 101,295. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HEXAGON SEWING MACHINE COMPANY, New York, N. Y. Filed Feb. 10, 1917.



Particular description of goods.—Sewing-Machines, Parts Thereof, and the Following Attachments: Ruffling and Shirring Attachments, Guides, Quilting-Guides, Edge-Guides, Tuck-Markers, Hemmers, Presser-Feet, Braiders and Corders, Needle-Cases, Bobbins, and Bobbin-Winders.
Claims use since the month of December, 1916.

Ser. No. 101,316. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS. ANDERSEN MEYER & COMPANY, LTD., New York, N. Y. Filed Feb. 12, 1917.



Particular description of goods.—Hair-Nets.
Claims use since about September, 1916.

Ser. No. 101,331. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF. ISKO, INCORPORATED, Detroit, Mich. Filed Feb. 12, 1917.

ISKO

Particular description of goods.—Pumps and Compressors.
Claims use since Dec. 23, 1916.

Ser. No. 101,376. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN LA FRANCE FIRE ENGINE CO., INC., Elmira, N. Y. Filed Feb. 15, 1917.

DOMESTIC

Particular description of goods.—Chemical Fire-Extinguishers.
Claims use since Feb. 12, 1917.

Ser. No. 101,384. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE CUSSINS & FEARN CO., Columbus, Ohio. Filed Feb. 15, 1917.

SAFE GUARD

Particular description of goods.—Mixed Liquid Paints.
Claims use since about Jan. 30, 1911.

Ser. No. 101,393. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) EMIL GROSSMAN MANUFACTURING CORPORATION, Brooklyn, N. Y. Filed Feb. 15, 1917



The trade-mark consists of a red bushing at the base of the porcelain neck of the spark-plug, the representation of the spark-plug apart from the red bushing not constituting any portion of our mark sought to be registered.
Particular description of goods.—Spark-Plugs.
Claims use since about Nov. 15, 1916.

Ser. No. 101,413. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Feb. 15, 1917.

MAGNET

Particular description of goods.—Rubber Boots and Shoes and Fabric Shoes Having Rubber Soles Attached Thereto by Vulcanization.
Claims use since Jan. 30, 1917.

Ser. No. 101,414. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Feb. 15, 1917.

PARAMOUNT

Particular description of goods.—Rubber Boots and Shoes and Fabric Shoes Having Rubber Soles Attached Thereto by Vulcanization.
Claims use since Jan. 30, 1917.

Ser. No. 101,416. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New York, N. Y. Filed Feb. 15, 1917.

LOYALTY

Particular description of goods.—Rubber Boots and Shoes and Fabric Shoes Having Rubber Soles Attached Thereto by Vulcanization.
Claims use since Jan. 30, 1917.

Ser. No. 101,447. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) A. KRAMER, INC., Brooklyn, N. Y. Filed Feb. 17, 1917. Under ten-year proviso.

KREAMER-WARE

Particular description of goods.—Egg-Slicers, Cutlet-Cutters, Purée-Sieves, Flour-Sieves, Roll-Cutters, Fish-Turners, Apple-Corers, Doughnut-Cutters, Sandwich-Cutters, and Cake-Cutters.
Claims use since Jan. 1, 1886.

Ser. No. 101,474. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PAUL F. BEICH CO., Bloomington, Ill. Filed Feb. 19, 1917. Under ten-year proviso.

Beich's

Particular description of goods.—Chocolates and Confections.
Claims use since January, 1894.

Ser. No. 101,482. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EMERY FOOD COMPANY, Chicago, Ill. Filed Feb. 19, 1917.



Particular description of goods.—Canned Vegetables, Canned Fruits, and Canned Fish.
Claims use on canned vegetables since Aug. 24, 1916; on canned fruits since Sept. 29, 1916, and on canned fish since Oct. 4, 1916.

Ser. No. 101,504. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE PARAFFINE PAINT COMPANY, San Francisco, Cal. Filed Feb. 19, 1917.

L & S

Particular description of goods.—Ready-Mixed Paints.
Claims use since Oct. 24, 1912.

Ser. No. 101,505. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio. Filed Feb. 19, 1917.

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Particular description of goods.—Dry and Ready-Mixed Paints, Driers, Enamels, Stains, Wall-Paints, Lacs, Fillers, and Varnishes.
Claims use since Dec. 20, 1916.

Ser. No. 101,506. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio. Filed Feb. 19, 1917.

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Particular description of goods.—Dry and Ready-Mixed Paints, Driers, Enamels, Stains, Wall-Paints, Lacs, Fillers, and Varnishes.
Claims use since Jan. 29, 1917.

Ser. No. 101,507. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSÉ QUEVEDO, New York, N. Y. Filed Feb. 19, 1917.



Particular description of goods.—Condiments.
Claims use since Feb. 8, 1916.

Ser. No. 101,511. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. T. REYNOLDS & SON, Chico, Cal. Filed Feb. 19, 1917.

Sweet Heart

Particular description of goods.—Dried Fruits Put Up in Boxes and other Containers, and More Specifically for Dried Prunes, Peaches, Apricots, and Pears.
Claims use since September, 1912.

Ser. No. 101,519. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE TOURAINE COMPANY, Boston, Mass. Filed Feb. 19, 1917.

ECONOMY

Particular description of goods.—Chocolate Coating for Confectioners and Bakers.
Claims use since Dec. 15, 1916.

Ser. No. 101,525. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE W. H. WEBB PACKING CO., Bloomingdale, Ind. Filed Feb. 19, 1917.

TURKEY RUN

Particular description of goods.—Canned Pork and Beans with Tomato Sauce, Canned Apples, Canned Red Kidney-Beans, Canned Corn, Canned Tomatoes, Canned Tomato Purée, Canned Pumpkin, Canned Green Beans, Canned Cherries, Canned Gooseberries.
Claims use since November, 1911.

Ser. No. 101,585. (CLASS 48. MALT EXTRACTS AND LIQUORS.) HENRY WEINHARD ESTATE, Portland, Oreg.; Louise Weinhard, Anna Wessinger, Louise Wagner, Paul Wessinger, and Henry Wagner, executrixes and executors of the estate of said Henry Weinhard, deceased. Filed Feb. 21, 1917.

Luxo

Particular description of goods.—Non-Intoxicating Malt Beverage.
Claims use since Dec. 10, 1916.

Ser. No. 101,611. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Feb. 23, 1917.

ARLEN

Particular description of goods.—Light-Weight Rubbers.
Claims use since on or about Jan. 3, 1917.

Ser. No. 101,612. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Feb. 23, 1917.

RONDO

Particular description of goods.—Light-Weight Rubbers.
Claims use since on or about Jan. 3, 1917.

Ser. No. 101,614. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Feb. 23, 1917.

ZOLA

Particular description of goods.—Light-Weight Rubbers.
Claims use since on or about Jan. 3, 1917.

Ser. No. 101,615. (CLASS 39. CLOTHING.) MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind. Filed Feb. 23, 1917.

MISHKO

Particular description of goods.—Composition Soles Used on Rubber and Woolen Footwear.
Claims use since on or about Jan. 3, 1917.

Ser. No. 101,623. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE SALT LAKE CITY BREWING CO., Salt Lake City, Utah. Filed Feb. 23, 1917.



Particular description of goods.—Lager-Beer.
Claims use since October, 1914.

Ser. No. 101,631. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE S. S. WENZELL MACHINE COMPANY, Philadelphia, Pa. Filed Feb. 23, 1917.

BI—PLEX

Particular description of goods.—Bottle-Washing Machines.
Claims use since about Feb. 20, 1917.

TRADE-MARK REGISTRATIONS GRANTED

MARCH 27, 1917.

115,910. BRICKS MADE OF CLAY AND EQUIVALENT MATERIAL. ACME BRICK COMPANY, Cayuga, Ind.
Filed October 18, 1916. Serial No. 98,742. PUBLISHED JANUARY 23, 1917.

115,911. BRICKS MADE OF CLAY AND EQUIVALENT MATERIAL. ACME BRICK COMPANY, Cayuga, Ind.
Filed October 19, 1916. Serial No. 98,761. PUBLISHED JANUARY 23, 1917.

115,912. BITUMINOUS-TAR BINDER FOR ROADS. AMERICAN TAR PRODUCTS COMPANY, Dover, Del., and Chicago, Ill.
Filed November 18, 1916. Serial No. 99,367. PUBLISHED JANUARY 23, 1917.

115,913. MACARONI. FILOMENA AMERISE, Hazleton, Pa.
Filed December 14, 1916. Serial No. 99,910. PUBLISHED JANUARY 23, 1917.

115,914. REMEDY FOR RHEUMATISM. SAM ANTHONY, Johnstown, Pa.
Filed August 29, 1914. Serial No. 80,871. PUBLISHED JANUARY 23, 1917.

115,915. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed August 22, 1916. Serial No. 97,532. PUBLISHED JANUARY 23, 1917.

115,916. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed August 22, 1916. Serial No. 97,534. PUBLISHED JANUARY 23, 1917.

115,917. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed August 22, 1916. Serial No. 97,535. PUBLISHED JANUARY 23, 1917.

115,918. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed August 22, 1916. Serial No. 97,537. PUBLISHED JANUARY 23, 1917.

115,919. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed August 22, 1916. Serial No. 97,538. PUBLISHED JANUARY 23, 1917.

115,920. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed August 22, 1916. Serial No. 97,541. PUBLISHED JANUARY 23, 1917.

115,921. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed August 22, 1916. Serial No. 97,542. PUBLISHED JANUARY 23, 1917.

115,922. COTTON PIECE GOODS. APPLETON COMPANY, Lowell, Mass.
Filed August 22, 1916. Serial No. 97,543. PUBLISHED JANUARY 23, 1917.

115,923. OLEAGINOUS COMPOUND FOR USE AS A PASTRY-SHORTENING. ATLANTA REFINING & MANUFACTURING COMPANY, Atlanta, Ga.
Filed August 18, 1916. Serial No. 97,420. PUBLISHED JANUARY 23, 1917.

115,924. VELVETS, VELVETTAS, VELVETEENS, CORDUROYS, MOLESKINS, BEAVERTEENS, AND OTHER FUSTIAN CLOTHS. BALSTONE, COOKE & CO. LD., Manchester, England.
Filed October 11, 1916. Serial No. 98,555. PUBLISHED JANUARY 23, 1917.

115,925. WINDOW-BACKGROUNDS, OFFICE-PARTITIONS, FOLDING, SEWING, AND DECORATION SCREENS, FOLDING TABLES, and SHIRT-WAIST BOXES. THE BEAVER COMPANY, Buffalo and Beaver Falls, N. Y.; Roanoke Rapids, N. C.; Thorold and Ottawa, Ontario, Canada, and London, England.
Filed November 29, 1916. Serial No. 99,617. PUBLISHED JANUARY 23, 1917.

115,926. WRITING AND PRINTING PAPERS. BEEKMAN PAPER AND CARD COMPANY, New York, N. Y.
Filed December 12, 1916. Serial No. 99,870. PUBLISHED JANUARY 16, 1917.

115,927. COFFEE. BELL, CONRAD & COMPANY, Chicago, Ill.
Filed December 6, 1916. Serial No. 99,741. PUBLISHED JANUARY 23, 1917.

115,928. COFFEE. BELL, CONRAD & COMPANY, Chicago, Ill.
Filed December 6, 1916. Serial No. 99,742. PUBLISHED JANUARY 23, 1917.

115,929. METAL-POLISH. BENDUS-COOPER & CO. INC., New York, N. Y.
Filed December 31, 1914. Serial No. 83,598. PUBLISHED JANUARY 9, 1917.

115,930. WHEAT-FLOUR. BOGERT & GREENBANK, New York, N. Y.
Filed November 27, 1916. Serial No. 99,563. PUBLISHED JANUARY 23, 1917.

115,931. CERTAIN NAMED PAPER AND STATIONERY. GEO. BORGFELDT & CO., New York, N. Y.
Filed February 12, 1916. Serial No. 92,798. PUBLISHED NOVEMBER 7, 1916.

115,932. STATUETTES AND ORNAMENTAL HEADS AND FIGURES ADAPTED TO BE APPLIED TO ANY ARTICLE OF MANUFACTURE. GEORGE BORGFELDT & CO., New York, N. Y.
Filed October 5, 1916. Serial No. 98,428. PUBLISHED LISHED JANUARY 23, 1917.

115,933. SILVER-POLISH. BOSTON ELECTRO CLEANER CO., Portland, Me., and Boston, Mass.
Filed November 11, 1916. Serial No. 99,236. PUBLISHED JANUARY 16, 1917.

115,934. PREPARATION FOR POLISHING BUCK, SUEDE, CALF, KID, CANVAS, OR LINEN SHOES. DANIEL H. BOYKIN, Los Angeles, Cal.
Filed September 25, 1916. serial No. 98,201. PUBLISHED JANUARY 9, 1917.

115,935. LIQUID SOAP. BRISTOL-MYERS COMPANY, Brooklyn, N. Y.
Filed October 24, 1916. Serial No. 98,857. PUBLISHED JANUARY 2, 1917.

115,936. CERTAIN NAMED FOODS. THE J. S. BROWN MERC. CO., Denver, Colo.
Filed October 20, 1916. Serial No. 98,782. PUBLISHED JANUARY 9, 1917.

115,937. CANDY. BUNTE BROTHERS, Chicago, Ill.
Filed October 28, 1916. Serial No. 98,938. PUBLISHED JANUARY 23, 1917.

115,938. REMEDIES FOR TREATING CERTAIN NAMED DISEASES AND AILMENTS. CAPA DRUG COMPANY, Washington, D. C.
Filed October 23, 1916. Serial No. 98,829. PUBLISHED JANUARY 23, 1917.

115,939. MEN'S NECKWEAR—NAMELY, CRAVATS, NECKTIES, AND SCARFS. CHARMAX CRAVAT CO., New York, N. Y.
Filed November 22, 1916. Serial No. 99,462. PUBLISHED JANUARY 23, 1917.

115,940. CROCHET HOOKS OR NEEDLES. THE CLARK THREAD COMPANY, Newark, N. J.
Filed November 3, 1916. Serial No. 99,059. PUBLISHED JANUARY 2, 1917.

115,941. CANNED FRUITS AND VEGETABLES. CURTICE BROTHERS CO., Rochester, N. Y.
Filed July 6, 1916. Serial No. 96,346. PUBLISHED JANUARY 9, 1917.

115,942. CERTAIN NAMED FOODS. CURTICE BROTHERS CO., Rochester, N. Y.
Filed July 6, 1916. Serial No. 96,347. PUBLISHED JANUARY 23, 1917.

115,943. LENSES FOR VAULT-LIGHT CONSTRUCTION. DAVIS CARPENTER & CO., INC., New York, N. Y.
Filed November 21, 1916. Serial No. 99,430. PUBLISHED JANUARY 29, 1917.

115,944. CONDENSED MILK. THE DENMARK CONDENSED MILK COMPANY, Denmark, Wis.
Filed August 24, 1915. Serial No. 88,776. PUBLISHED JANUARY 9, 1917.

115,945. GRINDING MATERIAL IN THE NATURE OF AN ABRASIVE FOR GRINDING-WHEEL DRESSERS. THE DESMOND-STEPHAN MANUFACTURING CO., Urbana, Ohio.
Filed August 31, 1916. Serial No. 97,730. PUBLISHED JANUARY 9, 1917.

115,946. FIRELESS STOVES. DURHAM MANUFACTURING COMPANY, Muncie, Ind.
Filed July 6, 1916. Serial No. 96,353. PUBLISHED JANUARY 23, 1917.

115,947. METAL CULVERT PIPES OR TUBES. ALBERT N. EATON, Omaha, Nebr.
Filed August 3, 1916. Serial No. 97,057. PUBLISHED JANUARY 23, 1917.

115,948. MEN'S AND BOYS' KNIT AND CUT UNDERWEAR. ELDER MANUFACTURING CO., St. Louis, Mo.
Filed December 4, 1916. Serial No. 99,703. PUBLISHED JANUARY 23, 1917.

115,949. ELECTRIC FLASH-LIGHTS AND DRY BATTERIES. THE ELRAY CO., Chattanooga, Tenn.
Filed November 11, 1916. Serial No. 99,241. PUBLISHED JANUARY 23, 1917.

115,950. DEPILATORY. MARY GLADYS FARLEY, North Bergen, N. J.
Filed November 25, 1916. Serial No. 99,540. PUBLISHED JANUARY 23, 1917.

115,951. COFFEE. FECHER AND MCGAVOCK, INC., Chicago, Ill.
Filed October 11, 1916. Serial No. 98,561. PUBLISHED JANUARY 9, 1917.

115,952. REMEDY FOR COUGHS, COLDS, AND LA GRIPPE. GEO. C. V. FESLER, St. Louis, Mo.
Filed November 11, 1916. Serial No. 99,243. PUBLISHED JANUARY 23, 1917.

115,953. WRITING-PAPER. GALA TEA CO. INC., Brooklyn, N. Y.
Filed November 25, 1916. Serial No. 99,546. PUBLISHED JANUARY 16, 1917.

115,954. COMPOSITION SHEETS FOR FIREPROOFING IN STRUCTURAL WORK. THE GENERAL FIREPROOFING CO., Youngstown, Ohio.
Filed December 20, 1915. Serial No. 91,608. PUBLISHED JANUARY 23, 1917.

115,955. BUTTER. F. H. GEORGE & COMPANY, Fort Wayne, Ind.
Filed August 17, 1916. Serial No. 97,402. PUBLISHED JANUARY 23, 1917.

115,956. BEER. GIPPS BREWING CO., Peoria, Ill.
Filed October 30, 1916. Serial No. 98,978. PUBLISHED JANUARY 23, 1917.

115,957. CANNED SARDINES. GLOBE CANNING CO., Eastport, Me.
Filed October 31, 1916. Serial No. 99,001. PUBLISHED JANUARY 9, 1917.

115,958. CANNED SARDINES. GLOBE CANNING CO., Eastport, Me.
Filed October 31, 1916. Serial No. 99,003. PUBLISHED JANUARY 9, 1917.

115,959. CEREAL FOOD BEVERAGE SOLD AS A SOFT DRINK. M. K. GOETZ BREWING CO., St. Joseph, Mo.
Filed November 22, 1916. Serial No. 99,465. PUBLISHED JANUARY 23, 1917.

115,960. TRACTORS. THE HAPPY FARMER TRACTOR CO., Minneapolis, Minn., assignor to La Crosse Tractor Company, La Crosse, Wis., a Corporation of Delaware.
Filed August 26, 1916. Serial No. 97,641. PUBLISHED JANUARY 23, 1917.

115,961. CHEWING-GUM. THE HELMET COMPANY, Cincinnati, Ohio.
Filed December 18, 1916. Serial No. 100,009. PUBLISHED JANUARY 23, 1917.

115,962. NON-ALCOHOLIC BEVERAGE MADE FROM SELECTED GRAINS AND SOLD AS A SOFT DRINK. HEMRICH BROS. BREWING CO., Seattle, Wash.
Filed March 25, 1916. Serial No. 93,872. PUBLISHED JANUARY 23, 1917.

115,963. REPAIR PARTS FOR AUTOMOBILES CONNECTED WITH THE IGNITION SYSTEMS. THE HILL-SMITH METAL GOODS CO., Boston, Mass.
Filed July 29, 1916. Serial No. 96,955. PUBLISHED JANUARY 23, 1917.

115,964. TOILET-PAPER. THE JOHN HOBERG CO., Green Bay, Wis.
Filed October 25, 1916. Serial No. 98,879. PUBLISHED JANUARY 9, 1917.

115,965. BREAD, BISCUITS, CRACKERS, WAFERS, COOKIES, CANDIES, COCOA, AND CHOCOLATE. ALEXANDER HORLICK, Milwaukee, Wis.
Filed November 17, 1915. Serial No. 90,701. PUBLISHED JANUARY 23, 1917.

115,966. PORTABLE AND OTHER OVENS. HUBBARD PORTABLE OVEN CO., Chicago, Ill.
Filed October 20, 1916. Serial No. 98,786. PUBLISHED JANUARY 23, 1917.

115,967. FOUNTAIN AND STYLOGRAPHIC PENS. EDWARD HUGETZ, New York, N. Y.
Filed November 28, 1916. Serial No. 99,611. PUBLISHED JANUARY 16, 1917.

115,968. PUMP-ROD COUPLINGS. EDWARD E. JOHNSON, St. Paul, Minn.
Filed October 30, 1916. Serial No. 98,980. PUBLISHED JANUARY 23, 1917.

115,969. PREPARED BARLEY. KEEN ROBINSON & COMPANY LIMITED, London, England.
Filed January 28, 1916. Serial No. 92,473. PUBLISHED JANUARY 23, 1917.

115,970. WRITING AND PRINTING PAPERS. KEITH PAPER COMPANY, Turners Falls, Mass.
Filed May 10, 1916. Serial No. 95,041. PUBLISHED JANUARY 16, 1917.

115,971. WATERPROOF FABRICS USED IN THE MANUFACTURE OF WATERPROOF GARMENTS. C. KENYON COMPANY, Brooklyn, N. Y.
Filed May 25, 1916. Serial No. 95,422. PUBLISHED JANUARY 23, 1917.

115,972. REMEDIES FOR CERTAIN NAMED DISEASES AND AILMENTS. KOLOMAN KOVACS, Duquesne, Pa.
Filed January 3, 1916. Serial No. 91,876. PUBLISHED DECEMBER 26, 1916.

115,973. SOAP. LAUTZ BROS. & CO., Buffalo N. Y.
Filed August 17, 1916. Serial No. 97,405. PUBLISHED JANUARY 23, 1917.

115,974. READY-MIXED PAINTS AND ENAMELS; ALSO VARNISHES, JAPANS. W. W. LAWRENCE & COMPANY, Pittsburgh, Pa.
Filed April 17, 1915. Serial No. 86,019. PUBLISHED AUGUST 24, 1915.

115,975. CERTAIN NAMED PIECE GOODS AND DRESS FABRICS. LESHER, WHITMAN & CO. INC., New York, N. Y.
Filed December 4, 1916. Serial No. 99,713. PUBLISHED JANUARY 23, 1917.

115,976. FRECKLES, BLACKHEADS, AND SIMILAR DISEASES OF THE SKIN. MARY LEWEY, New York, N. Y.
Filed November 24, 1916. Serial No. 99,523. PUBLISHED JANUARY 23, 1917.

115,977. MACHINES FOR COMPOSING MATRICES, TYPE-SETTING, TYPE-CASTING, AND LINE-CASTING AND THE PARTS THEREOF. THE LINOGRAPH COMPANY, Augusta, Me., and Davenport, Iowa.
Filed November 6, 1915. Serial No. 90,476. PUBLISHED JANUARY 18, 1916.

115,978. CAKES. LOOSE-WILES BISCUIT COMPANY, New York, N. Y., and Kansas City, Mo.
Filed October 26, 1916. Serial No. 98,902. PUBLISHED JANUARY 23, 1917.

115,979. CONFECTIONERS' POWDERED SUGAR. JAMES A. MCATEER & SONS, INC., Pittsburgh, Pa.
Filed July 22, 1916. Serial No. 96,754. PUBLISHED JANUARY 9, 1917.

115,980. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. JAMES HARRY MCCORMICK, Comstock, Mich.
Filed October 9, 1915. Serial No. 89,766. PUBLISHED JANUARY 23, 1917.

115,981. WHEAT-FLOUR. J. D. MANOR & CO., New Market, Va.
Filed November 21, 1916. Serial No. 99,448. PUBLISHED JANUARY 23, 1917.

115,982. SALTED NUTS. MARPLE BROS., Philadelphia, Pa.
Filed August 17, 1916. Serial No. 97,408. PUBLISHED JANUARY 9, 1917.

115,983. CIGARS. MARTINEZ HAVANA CO., New York, N. Y.
Filed October 31, 1916. Serial No. 99,014. PUBLISHED JANUARY 23, 1917.

115,984. CERTAIN NAMED DENTAL, MEDICAL, AND SURGICAL APPLIANCES. MARYLAND RUBBER COMPANY, Baltimore, Md.
Filed July 10, 1914. Serial No. 79,715. PUBLISHED MARCH 7, 1916.

115,985. PISTON-RINGS. MICRO PISTON RING CO., INC., New York, N. Y.
Filed July 21, 1916. Serial No. 96,721. PUBLISHED JANUARY 23, 1917.

115,986. DOUBLE-TREAD-TIRE-REPAIR PATCHES, REPAIR-BOOTS. THE MILLER RUBBER COMPANY, Akron, Ohio.
Filed October 19, 1916. Serial No. 98,769. PUBLISHED JANUARY 23, 1917.

115,987. CERTAIN NAMED EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES. WILLIAM MILLS, Birmingham, England.
Filed January 31, 1916. Serial No. 92,534. PUBLISHED JANUARY 9, 1917.

115,988. MACARONI. MOTHER'S MACARONI COMPANY, Minneapolis, Minn.
Filed July 10, 1916. Serial No. 96,469. PUBLISHED JANUARY 23, 1917.

115,989. SYRUP AND COFFEE. NEW ORLEANS COFFEE CO., LTD., New Orleans, La.
Filed November 8, 1916. Serial No. 99,173. PUBLISHED JANUARY 9, 1917.

115,990. RICE. NEW ORLEANS COFFEE CO. INC., New Orleans, La.
Filed November 29, 1916. Serial No. 99,629. PUBLISHED JANUARY 23, 1917.

115,991. RICE. NEW ORLEANS COFFEE CO. LTD., New Orleans, La.
Filed November 29, 1916. Serial No. 99,630. PUBLISHED JANUARY 23, 1917.

115,992. ELECTRIC-FLASH-LIGHT BATTERIES AND CASINGS THEREFOR. NOVO MANUFACTURING CO., INC., New York, N. Y.
Filed November 15, 1916. Serial No. 99,314. PUBLISHED JANUARY 23, 1917.

115,993. CITRUS FRUITS. ALVIN J. NYE, Orlando, Fla.
Filed December 15, 1916. Serial No. 99,965. PUBLISHED JANUARY 23, 1917.

115,994. POLISH FOR THE FINGER-NAILS. O-MI SPECIALTY COMPANY, Chicago, Ill.
Filed April 13, 1916. Serial No. 94,389. PUBLISHED JANUARY 23, 1917.

115,995. WHEAT-FLOUR. PARKVILLE MILLING COMPANY, Parkville, Mo.
Filed May 16, 1916. Serial No. 95,178. PUBLISHED JANUARY 23, 1917.

115,996. RUBBER AND RUBBER-LINED-FABRIC HOSE. PEERLESS RUBBER MANUFACTURING COMPANY, New York, N. Y.
Filed November 9, 1916. Serial No. 99,199. PUBLISHED JANUARY 23, 1917.

115,997. SOLUBLE LUBRICATING AND SOLUBLE CUTTING OILS. THE PHOENIX OIL COMPANY, Cleveland, Ohio.
Filed July 31, 1915. Serial No. 88,339. PUBLISHED JANUARY 23, 1917.

115,998. GRAPES. JAMES ROY PINKHAM, Los Angeles, Cal.
Filed December 7, 1916. Serial No. 99,771. PUBLISHED JANUARY 23, 1917.

115,999. WOOD-STAINS, WOOD-FILLERS, VARNISHES, ENAMELS, AND DRY AND READY-MIXED PAINTS. PRATT & LAMBERT, INCORPORATED, Buffalo, N. Y.
Filed September 26, 1916. Serial No. 98,246. PUBLISHED JANUARY 23, 1917.

116,000. STEEL PORTABLE BUILDINGS. THE C. D. PRUDEN COMPANY, Baltimore, Md.
Filed November 30, 1915. Serial No. 91,040. PUBLISHED JANUARY 23, 1917.

116,001. CANNED FRUITS AND VEGETABLES. REEVES, PARVIN & CO., Philadelphia, Pa.
Filed December 14, 1916. Serial No. 99,945. PUBLISHED JANUARY 23, 1917.

116,002. MOTION-PICTURE FILMS. EMIL REINBOLD, Chicago, Ill.
Filed November 11, 1916. Serial No. 99,257. PUBLISHED JANUARY 23, 1917.

116,003. PROTECTIVE HANDLES FOR HAND-BAGS AND OTHER TRANSPORTABLE ARTICLES. RICE & WALLENSTEIN, New York, N. Y.
Filed November 21, 1916. Serial No. 99,450. PUBLISHED JANUARY 23, 1917.

116,004. CERTAIN NAMED MACHINES, PARTS THEREOF, AND ACCESSORIES THEREFOR. THE ROBERT REINER IMPORTING CO., Weehawken Heights, N. J.
Filed October 28, 1916. Serial No. 98,955. PUBLISHED JANUARY 23, 1917.

116,005. CERTAIN NAMED FOODS. THE SCHUSTER COMPANY, Cleveland, Ohio.
Filed August 7, 1916. Serial No. 97,150. PUBLISHED JANUARY 23, 1917.

116,006. WHEAT-FLOUR. SEGUIN MILLING & POWER Co., Seguin, Tex.
Filed September 19, 1916. Serial No. 98,102. PUBLISHED JANUARY 23, 1917.

116,007. WHEAT-FLOUR. SHANE BROS. & WILSON COMPANY, Philadelphia, Pa.
Filed November 27, 1916. Serial No. 99,593. PUBLISHED JANUARY 23, 1917.

116,008. MEDICINAL LINSEED-OIL FOR HUMAN AND ANIMAL USE AND PARANITRANILIN. THE SHERWIN-WILLIAMS Co., Cleveland, Ohio.
Filed October 21, 1916. Serial No. 98,815. PUBLISHED JANUARY 23, 1917.

116,009. DYES. SUNSET SOAP DYE COMPANY, New Rochelle, N. Y.
Filed December 26, 1916. Serial No. 100,186. PUBLISHED JANUARY 23, 1917.

116,010. CANNED FRUITS, CANNED VEGETABLES, TOMATO CATSUP, AND APPLE-CIDER VINEGAR. THOMAS J. SWEET, Albion, N. Y.
Filed April 11, 1916. Serial No. 94,336. PUBLISHED JANUARY 9, 1917.

116,011. CANNED SARDINES. SYME, EAGLE & Co., Chicago, Ill.
Filed November 20, 1916. Serial No. 99,418. PUBLISHED JANUARY 23, 1917.

116,012. LEDGER, RECORD, BOND, BOOK AND COVER, VELLUM, TEXT, WALL, AND COATED PAPERS, AND ENVELOPS. TAYLOR-LOGAN CO. PAPERMAKERS, Holyoke, Mass.
Filed December 16, 1916. Serial No. 99,995. PUBLISHED JANUARY 16, 1917.

116,013. CARBONATED NON-ALCOHOLIC SOFT DRINK. TEMPERANCE BEVERAGE COMPANY, Chicago, Ill.
Filed January 3, 1916. Serial No. 91,896. PUBLISHED JANUARY 23, 1917.

116,014. CIGARS. THEOBALD AND OPPENHEIMER COMPANY, Philadelphia, Pa., and New York, N. Y.
Filed October 17, 1916. Serial No. 98,721. PUBLISHED JANUARY 23, 1917.

116,015. MEN'S OVERCOATS. THEXTON & WRIGHT LD., Westminster, England.
Filed August 3, 1916. Serial No. 97,060. PUBLISHED JANUARY 23, 1917.

116,016. BROOMS. HUGH THOMPSON BROOM CORN COMPANY, Kansas City, Mo.
Filed December 2, 1916. Serial No. 99,679. PUBLISHED JANUARY 23, 1917.

116,017. ILLUMINATING-OIL. TIDE WATER OIL Co., New York, N. Y.
Filed November 10, 1916. Serial No. 99,229. PUBLISHED JANUARY 23, 1917.

116,018. LADIES' HATS. M. UFLAND & Co., New York, N. Y.
Filed December 20, 1916. Serial No. 100,075. PUBLISHED JANUARY 23, 1917.

116,019. SCISSORS, RAZORS, POCKET-KNIVES, AND STEEL TABLE-CUTLERY. U. J. ULERY Co., New York, N. Y.
Filed November 28, 1916. Serial No. 99,608. PUBLISHED JANUARY 23, 1917.

116,020. SKYLIGHTS. E. VAN NOORDEN & Co., Boston, Mass.
Filed August 4, 1916. Serial No. 97,102. PUBLISHED JANUARY 23, 1917.

116,021. CANNED SALMON. WIESE PACKING Co., Seattle, Wash.
Filed December 7, 1916. Serial No. 99,783. PUBLISHED JANUARY 23, 1917.

116,022. CANNED SALMON. WIESE PACKING Co., Seattle, Wash.
Filed December 7, 1916. Serial No. 99,784. PUBLISHED JANUARY 23, 1917.

116,023. FERTILIZERS. THE WUICHET FERTILIZER COMPANY, Dayton, Ohio.
Filed November 14, 1916. Serial No. 99,306. PUBLISHED JANUARY 23, 1917.

116,024. LIQUID SHOE-CLEANER, LIQUID SHOE-POLISH, AND LIQUID SHOE-DRESSING. CHRIST A. ZOBS, Chicago, Ill.
Filed August 19, 1916. Serial No. 97,440. PUBLISHED JANUARY 9, 1917.

TRADE-MARK REGISTRATIONS CANCELED.

111,703. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Registered August 1, 1916. Canceled February 27, 1917.

DECISIONS
OF THE
COMMISSIONER OF PATENTS
AND OF
UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE HABENICHT AND BECKE.

Decided March 15, 1917.

1. EXTENSION OF TIME, ACT OF AUGUST 17, 1916—RECIPROCAL PRIVILEGES—TIME OF FILING.
It is assumed that in view of the act of August 17, 1916, extending the time for filing an application where the failure to file it within twelve months was due to the state of war, a similar extension will be granted by the German Government to citizens of this country under the proclamation of May 7, 1915. (215 O. G., 979.)

2. SAME—SAME—SAME—DELAY DUE TO WAR.
The showing made *Held* sufficient to establish that the failure to file the application in this country within twelve months of the filing of the application in Germany was due to the existing and continuous state of war and *Held* that the grant of the German patent will not, therefore, bar the grant of a patent in this country.

ON PETITION.

CARBURETER FOR EXPLOSION-MOTORS.

Mr. B. Singer for the applicants.

EWING, *Commissioner:*

This is a petition that applicants be accorded an extension under the provisions of the act of August 17, 1916. This application was filed February 28, 1917. It appears from the oath that the corresponding German application was filed January 27, 1916. This Office has not been advised that the German Government is granting to citizens of this country similar extensions. The German ordinance of May 7, 1915, (215 O. G., 979,) providing for an extension of the periods of priority, states that the provisions of the ordinance shall apply—

in favor of subjects of foreign countries when and to the same extent as the priority time limits are prolonged in such countries in favor of German subjects, as shall be certified by proclamation published in the *Reichs-Gesetzblatt*.

It is assumed that in view of the act of August 17, 1916, extending the time for filing an application where the failure to file it within twelve months was due to the "existing and continuing state of war," a similar extension will be granted by the German Government to citizens of this country.

The showing made is deemed sufficient to establish that the applicants were unable, on account of the "existing and continuing state of war," to file their application within the twelve months. The grant of the German patent will therefore not bar the grant of a patent in this country.

The petition is granted.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

IN RE GRIEVE.

Decided December 4, 1916.

1. PATENTABILITY—SMOKE-ARRESTER.
Appellant's invention for the removal of soot from the products of combustion, which is characterized by the use of a large heat-insulated chamber between the boilers and the stack, compared with the prior art and found to justify the allowance of a claim not limited to the location of the chamber around the base of the stack.

2. SAME—AFFIDAVITS UNDER RULE 75.
Certain affidavits filed under rule 75 for the purpose of overcoming a reference considered and *Held* sufficient.

Mr. E. J. Prindle and *Mr. W. H. Small* for the appellant.

Mr. William R. Ballard for the Commissioner of Patents.

ROBB, *J.:*

Appeal from a decision of the Patent Office rejecting claims 1, 3 to 9 inclusive, 11, 13, 16 to 21 inclusive, 23, 25 and 27 of an application for patent. Claims 1 and 13 sufficiently illustrate the claims involved and are here reproduced:

1. In an apparatus for removing non-gaseous particles from the products of combustion from boilers, a boiler, a stack, and a chamber of relatively very large proportions as compared with said boiler and said stack through which said products of combustion from said boiler pass and expand before entering said stack, whereby the velocity of said products of combustion is reduced sufficiently to effect a deposition of non-gaseous particles carried thereby.

13. In an apparatus for removing non-gaseous particles from the products of combustion from boilers, a boiler, a stack, and a chamber of non-heat-conducting material of relatively very large proportions as compared with said boiler and said stack through which said products of combustion from said boiler pass and expand before entering said stack, whereby the velocity of said products of combustion is reduced sufficiently to effect a deposition of non-gaseous particles carried thereby.

The object of the invention is the removal of soot and other non-gaseous substances from the products of combustion from boilers without materially de-

creasing the draft. In his specification appellant sets forth that it is his intent to accomplish the desired result—

without the use of deflecting plates, walls, water sprays, or other obstructions which will decrease materially the draft in the stack by their interference with the flow of said products of combustion;

that it also is his intent to avoid such loss of heat from such products of combustion as will increase their specific gravity and lessen the normal draft in the stack. He further states that it was well known that swiftly-moving currents of fluid or air will carry heavy substances which will be dropped if the velocity of the current slackens. He also concedes to be old the idea of providing a very small space in boilers between the fire and the boiler, to prevent ashes and coals from entering and clogging the boiler-flues, but insists that such spaces are purposely small in order not to interfere with the draft. It likewise is conceded to be old to provide chambers in metallurgic furnaces to recover mineral from the gases, but it is pointed out that the question of draft is not considered in the construction of such chambers; that, on the contrary, they are cooling-chambers to cause the mineral to deposit, which would destroy entirely any draft in the stack. The specification continues:

It never has been considered possible, however, to lessen the rate of flow in the products of combustion from boilers sufficiently to remove all the lighter particles from the products of combustion without destroying the draft necessary to be maintained. I discovered I could do this by the use of a chamber of exceedingly large proportions and affording space for expansion in all directions. I also discovered that I could increase the effectiveness of the deposit without interference with the draft by changing the direction of flow of the expanded gases. The preservation of the heat of the gases is a material aid in maintaining the necessary draft in the stack which I have facilitated by constructing the chamber of non-heat-conducting material.

Among the references cited by the Examiner was a patent to Worm, No. 1,092,551, issued April 7, 1914, on an application filed May 24, 1912, covering a cement-manufacturing apparatus. Thereupon appellant filed affidavits, under Rule 75 of the Patent Office, which enables an applicant to avoid a patent by making oath to facts showing a conception of the invention in this country before the filing of the application on which a domestic patent was granted, or before the date of a foreign patent, or before the date of a printed publication; that he neither knows nor believes that the invention has been in public use or on sale in this country or patented or described in a printed publication in this or a foreign country for more than two years prior to his application; and that he never abandoned his invention.

In appellant's affidavit he stated that before the filing date of the Worm application he made oral disclosure of one embodiment of his invention, which involved an existing battery of boilers and stack, and comprised the interposition of a large chamber between the two of such dimensions as to reduce the velocity in the chamber of the products of combustion from the boilers sufficient to effect the deposition of non-gaseous particles carried thereby, without lessening appreciably the draft in the stack; that, in addition to this, the chamber was so constructed as to conserve the heat of the gases therein.

In the supporting affidavit of Mr. F. L. Antisell, mechanical engineer and assistant superintendent of the Raritan Copper Works, Perth Amboy, N. J., it was stated that for "the past four or five years," (that is, from 1910 or 1911, the date of the affidavits being April, 1915,) his company had experienced considerable difficulty owing to the deposit of soot and dust from its smoke-stacks, and that it had been in constant receipt of complaints from the inhabitants of Perth Amboy; that various expedients had been tried, as the result of an investigation of other plants and other methods. We now quote from the affidavit:

All the various devices used and investigated not only failed to prevent the deposit but seriously impaired the draft of the stack to which they were applied. On or about March 12, 1914, we installed a Grieve dust collector on one of our stacks the deposit from which was so bad that the workmen were obliged to turn up their collars when passing its vicinity. This stack is 175 feet high, about 12 feet in diameter, and receives the products of combustion from a boiler of about 2,500 H. P. The Grieve dust collector installed comprises a chamber of hollow tile about 38 feet square with the stack approximately at its center. The products of combustion enter the chamber at one end, pass down each side of the chamber, and enter the stack through an opening in the stack on the opposite side of the stack from the opening into the chamber. We take out of the chamber four or five tons daily of deposit which we burn again by mixing with a certain proportion of soft coal. The draft of the stack is not impaired, and the various tests show a high degree of efficiency. * * * The complaints have ceased, and the Grieve dust collector has been so successful that plans now are being made to apply a similar device to a 200-foot stack connected to a boiler having 4,000 H. P.

The affidavit further stated that previous to May 24, 1912, appellant disclosed to affiant—

one embodiment of his invention which contemplated the placing of a chamber between a battery of boilers and their stack of such dimension as to reduce in said chamber the velocity of the products of combustion from said boilers sufficiently to produce a deposition of non-gaseous particles therein;

that the chamber was to be constructed in such a manner as to conserve the heat of the gases passing therethrough.

The Examiner did not regard these affidavits as sufficiently explicit. Thereupon appellant filed a supplemental affidavit in which he stated that in the year 1912 he conducted many experiments in order to test his invention and that previous to May 24, 1912, he endeavored to have the said Raritan Copper Works install an apparatus embodying his invention, but was unable to get them to do so until they had unsuccessfully tried other devices; that he reduced his invention to practice as soon as he could. The Examiner, however, still refused to accept the affidavits and the Examiners-in-Chief, without discussion, rejected them. On appeal to the Assistant Commissioner he did not deem it necessary to pass upon the sufficiency of these affidavits, but observed that they—

did not state whether the construction suggested by applicant was the same as that shown in his application or, if not, what the construction was.

In addition to the claims allowed by the lower tribunals, the Assistant Commissioner allowed claim 2, which we here reproduce:

2. In an apparatus for removing non-gaseous particles from the products of combustion from boilers, a boiler, a stack, and a chamber surrounding said stack of relatively very large proportions as compared with said boiler and said stack through which said products of combustion from said boiler pass and expand before entering said stack, whereby the velocity of said products of combustion is reduced sufficiently to effect a deposition of non-gaseous particles carried thereby.

The reasons stated for the allowance of this claim were the statements in the specification to the effect that it is very important that the draft be not lessened, that the chamber-walls be constructed of non-heat-conducting materials, and that the placing of the chamber around the stack tends to prevent the cooling of the gases. The Assistant Commissioner said:

It is not believed that the references suggest such a construction. In the fume arresters there is sometimes a cooling effect which would interfere with the normal draft, and in the construction shown in the British patent the settling chamber does not surround the stack and, moreover, the separation of the solid particles is caused by centrifugal force.

We think it will be apparent at once that appellant has made a meritorious invention, which marks a distinct and practical advance in the art. The action of the lower tribunals of the Patent Office allowing claims covering a specific embodiment of the settling-chamber with reference to the stack amounts to a recognition that appellant has made a novel and useful discovery, while the decision of the Assistant Commissioner still more fully recognizes the scope and originality of that discovery. In considering the references it is well to have in mind that appellant has accomplished the object in view, that is, the removal of non-gaseous substances from the products of combustion, without the use of deflecting-plates, water-sprays, or other obstructions, without loss of heat from said products of combustion and without impairing the normal draft of the stack. In other words, appellant's chamber is so constructed and arranged that, independently of any other agency, it accomplishes this highly useful result. It goes without saying that the protection of an inventor should be equal to his invention, for otherwise he will not enjoy the reward which the law contemplates shall be his.

We now will briefly discuss the references relied upon by the Patent Office. The patent to Brett, No. 305,788, covers an "oxidizing and chloridizing furnace," in which an entirely different problem confronted the inventor than that with which appellant dealt. In that patent the ore is fed into the stack and down through the heat and flame. The "dust-chamber" there shown is merely an aid in saving all the elements of the ore. It really is an adjunct of the furnace. That no thought was given to draft, and that such a chamber erected in connection with an ordinary boiler would utterly fail to accomplish the object appellant had in mind, is apparent.

The patent to Van Horn, No. 1,012,301, covers a spark-arrester, "designed especially for use in connection with locomotives." The chief feature of that invention, according to the specification—

consists in providing a centrifugal separator arranged to give the exhaust gases one or more vertically disposed revolutions before the same reach the smoke stack.

Between the means for providing these revolutions and the smoke-stack is a baffle-plate. Van Horn was dealing with a locomotive-engine, in which there is a forced draft, and he measurably accomplished the object he had in view by centrifugal force and a baffle-plate. We fail to perceive that what he did in any way anticipated appellant's work.

The British patent to Dudley, No. 21,251, also covers a spark-arrester for locomotive-engines, operating under forced draft. What we have said concerning the Van Horn patent applies with equal force to this.

We come now to the Worm patent. The apparent object of Rule 75 is to require an applicant at least to make a *prima facie* showing of priority in order to overcome the references mentioned in the rule. Certainly where an applicant substantially complies with the rule his application should not be rejected summarily. In the present case, appellant states that prior to the date of the Worm application he explained his invention to the officials of the Raritan Copper Works and attempted to have that company install it. While he did not state how long prior to the date in question he first approached that company, it sufficiently appears from the affidavit of Mr. Antisell that it could not have been earlier than 1910 or 1911. Appellant in his affidavit says that the construction which he explained comprised the interposition of a large chamber between the boilers and stack of such dimensions as to reduce the velocity of the products of combustion and effect a deposition of non-gaseous particles without lessening appreciably the draft in the stack, and that in addition the chamber was to be constructed so as to conserve the heat of the gases therein. Mr. Antisell's affidavit corroborates this statement and we fail to perceive wherein the statement could have been more definite, unless the actual dimensions of the chamber had been given. Certainly it would have required no invention for any one measurably skilled to have installed the apparatus described by appellant. Nor do we think there is any failure to show diligence. Appellant was not concealing his discovery but, on the contrary, diligently endeavoring to have it tested, and the only way it could be tested was by such an installation as actually took place. This was not a hand-tool but an idea, and its demonstration involved a large expenditure, much beyond the means of appellant. Of course, he might have filed an application, but, for the purposes of Rule 75, we think his affidavit sufficient.

Moreover, even though the Worm patent be considered as a reference, what was said of the Brett patent would apply to this, for Worm's object was to deflect and conserve particles of raw material.

As previously pointed out, the Patent Office has awarded claims to appellant covering a chamber *surrounding the stack*, but it has failed to protect appellant against a possible attempt to practise and appropriate his invention by placing the same kind of a chamber between the boiler and the stack. We are convinced that the reasons underlying the grant of the allowed claims require the allowance of another claim or claims which will more adequately protect appellant. In other words, since appellant's invention resides in the discovery of a combination that will accomplish a definite result, he should be given claims sufficiently broad to prevent any one from

practising his invention by merely changing the position of the elements of the combination. We think claim 13, or a claim of equal breadth, should have been allowed. Throughout his specification appellant lays stress upon the importance of maintaining heat in the products of combustion and of constructing his chamber to that end, but a fair reading of his specification leaves no room for doubt that the desired result may be accomplished even though the chamber is located outside the stack. Claim 13 covers the disclosures of the specification and its allowance will more adequately protect this inventor.

The decision is reversed as to claim 13.

Court of Appeals of the District of Columbia.

CARLIN *v.* GOLDBERG.

Decided January 2, 1917.

1. INTERFERENCE—MOTION TO DISSOLVE—RIGHT TO MAKE THE CLAIMS—AWARDING PRIORITY ON MOTION.

Where upon appeal on a motion to dissolve the Commissioner held that Carlin, the junior party, had no right to make the claims because of an inoperative disclosure, and thereafter, at Carlin's request, changed the order from one of dissolution to one awarding priority to Goldberg, and appeal was then taken to the court, *Held* that a motion to dissolve is interlocutory and the Commissioner is without authority to convert an appeal on such a motion into an appeal on priority. (*Cosper* v. *Gold*, 34 App. D. C., 194, and 36 App. D. C., 302.) Cited by the Commissioner, distinguished.

2. SAME—SAME—JURISDICTION OF COURT.

The jurisdiction of the court of appeals with relation to the Patent Office is limited to two classes of decisions—viz., final rejections of applications for patent and final awards of priority in an interference.

3. SAME—SAME—RIGHT OF APPEAL.

The statute gives the Commissioner, without right of appeal, the authority of declaring an interference, and if upon motion to dissolve it subsequently appears that it should not have been declared there is no reason why it should not be terminated by the same authority, without right of appeal from his decision.

Mr. B. C. Stickney, *Mr. D. G. Haynes*, and *Mr. Hartwell McCarteney* for the appellant.

Mr. L. S. Bacon and *Mr. J. H. Milans* for the appellee.

VAN ORSDEL, *J.*:

This appeal is from the decision of the Commissioner of Patents in an interference proceeding wherein priority of invention was awarded to appellee.

The application of appellant Carlin was filed December 12, 1904, and that of Goldberg was filed May 28, 1904. Goldberg, being the first to file, is the senior party.

When the interference was declared Goldberg, under Rule 122 of the Rules of Practice of the Patent Office, moved to dissolve the interference on the ground—

first, that the party Carlin has no right to make the claims as his application does not disclose the subject-matter thereof; second, that the disclosure which Carlin does make is incomplete and inoperative and that the inoperativeness goes to a fundamental and essential portion of the machine.

The Primary Examiner denying the motion held—

that what Carlin lacks, could be supplied from the prior art without invention and that his disclosure is sufficient under the statute.

Whereupon Goldberg petitioned the Commissioner of Patents to instruct the Primary Examiner to require Carlin—

to file in his case an amendment to his drawings and descriptions showing and illustrating the application, if he can, of the "carrying mechanism" to the construction and arrangement of apparatus disclosed in his drawing at the present time.

The petition was granted, and Carlin was required to so amend his application. Carlin amended, and was met with another motion to dissolve on the ground of inoperativeness. Before hearing on the motion Carlin further amended his application. On hearing, the Primary Examiner granted the motion, holding that—

Carlin has clearly not shown that there is anything obvious in providing carrying mechanism suitable for his purpose from the prior art, but, on the other hand, has shown devices which, by his own models, are inoperative.

Carlin then petitioned for a rehearing, at the same time further amending his application. Again he was met with a motion to dissolve. By order of the Commissioner, the case was heard by the Law Examiner and the Primary Examiner sitting together. Each rendered independent decisions sustaining the motion and holding Carlin's structure inoperative. These decisions were affirmed on appeal by the Board of Examiners-in-Chief, which, in turn, was affirmed by the Commissioner of Patents.

The case having proceeded thus far on the motion to dissolve, and the decision of the Commissioner being confined exclusively to that question, Carlin petitioned the Commissioner to change his decision to an award of priority. The petition was granted, and Goldberg was awarded priority. From this decision the present appeal was prosecuted.

At the outset, we are confronted with a question of jurisdiction. The order of the Commissioner appealed from is as follows:

The party Carlin has petitioned that the decision of October 28, 1915, be modified by entering an award of priority. That decision was rendered on appeal by Carlin from a decision of the Examiners-in-Chief affirming the decision of the Primary Examiner and the Law Examiner granting certain motions to dissolve filed by Goldberg. These motions to dissolve were based on the ground that the Carlin application as filed did not disclose any carrying mechanism and that it was not obvious how the device could be modified from the prior art, and that therefore the application did not disclose an operative device. As this is a holding that Carlin has no right to make the claims, it is deemed, under the rulings of the Court of Appeals of the District of Columbia, to be in effect a decision on priority, and that, following the ruling in *Cosper* v. *Gold*, (34 App. D. C., 194, and 36 App. D. C., 302,) an award of priority may properly be entered thereon. The following order is made: For the reasons fully stated in the decision of October 28, 1915, it is held that the junior party Samuel E. Carlin has no right to make the claims in issue and priority is awarded to the senior party Hyman E. Goldberg.

This order is not based upon the appeal which reached the Commissioner. The sole question involved in the appeal and within the jurisdiction of the Commissioner to decide was the question of whether or not Carlin disclosed an operative device. The Commissioner has no jurisdiction to convert an appeal on a motion to dissolve for inoperativeness into an appeal upon the issue of priority.

The difficulty with the present case is that no basis existed for an award of priority. In *Cosper* v. *Gold*, cited by the Commissioner, the appeal before the Commissioner was on the right of Cosper, the senior party of record, to make the claims in issue.

but the interference had been tried and the case was in that condition where the issue of priority turned solely upon the right of Cosper to make the claims. Cosper was the senior party, both by the filing date and from the proofs; hence, if entitled to make the claims, his right to an award of priority was fully established. In other words, the parties had had their day in court in the interference proceeding. But here the interference has never been tried. Indeed, the question of priority of invention has not been raised in any of the tribunals of the Patent Office or here, except in the petition on which the Commissioner changed his order.

Let us consider for a moment where this appeal, if we were to take jurisdiction, would logically lead. If we should reverse the Commissioner on the question of priority, the only decision from which an appeal will lie to this court in an interference proceeding, it would operate as a grant of priority to Carlin, the junior party, without giving Goldberg, the senior party, his day in court on that issue. The order appealed from was not made at Goldberg's instance, but at the instance of Carlin to enable him to prosecute this appeal, which, if successful, would effectually cut the senior party out of any hearing in so far as producing proofs to establish his right to priority.

The right of appeal from the decisions of the Commissioner of Patents to this court and the procedure by which such appeals may be perfected are purely statutory, and must be strictly followed. Short-cut methods in the Patent Office for the purpose of avoiding prolonged litigation and facilitating a final appeal contrary to express statutory procedure are not within the discretionary power of the Commissioner, and, if indulged, would lead to injustice and endless confusion.

We have had occasion heretofore to call attention to the fact that the jurisdiction of this court to entertain appeals from the Commissioner of Patents is limited to two classes of decisions, namely, a final rejection of an application for a patent, and a final award of priority to one of the parties in an interference case. *In re Fullagar*, 32 App. D. C., 222–228. (*Cosper* v. *Gold*, 34 App. D. C., 194.)

A motion to dissolve is interlocutory, and appeal will not lie to this court form an order thereon. The question of priority cannot be determined in proceedings purely upon the motion, for the elementary reason that, if the motion is denied, the soundness of the ruling is a question ancillary to the final judgment on priority, and may be considered on an appeal from the final order on priority, (*Podlesak* v. *McInnerney*, 26 App. D. C., 399,) while, if the motion be sustained, it ends the interference and no cause of action survives or exists upon which an order of priority can be based. The statute reposes in the Commissioner of Patents, without right of appeal, the authority of declaring an interference, and, if upon motion to dissolve it subsequently becomes apparent that such an interference should not have been declared, there is no reason why the interference should not be terminated by the same authority that granted it, without right of appeal from his decision.

For the reasons stated, the appeal is dismissed, and the clerk is directed to certify these proceedings as by law required.

Dismissed.

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TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

MARCH, 1917.

[Decisions of the Examiner of Interferences are indicated by a paragraph-mark (¶), of the Court of Appeals of the District of Columbia by a star (*), and of the State courts by a section-mark (§).]

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DIGEST

OF THE

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ABANDONED EXPERIMENT.

INTERFERENCE—REDUCTION TO PRACTICE.

Ingots formed in the shape called for by the claims *Held* to amount only to an abandoned experiment where it appeared that they were cast with the big end down instead of small end down (one object of the invention being to avoid "piping") and the molds and ingots were afterward destroyed.

[*Gathmann *v.* Clarke, 593.

ABANDONMENT OF APPLICATIONS.

UNAVOIDABLE DELAY—MISTAKE BY THE PATENT OFFICE.

The failure of the Office to notify an applicant whose claims were under rejection of the allowance of claims for the same invention to a rival inventor, so that an interference might be had, before passing the rival case to issue, does not excuse the applicant's failure to reply to the rejection within the year allowed by law or justify a holding that the applicant's delay in acting upon the case was unavoidable. (*Ex parte McKee*, C. D., 255; 1907, 130 O. G., 980, affirmed.) [*Ex parte* Tasker, 889.

AFFIDAVIT UNDER RULE 75.

Sufficiency of.

Certain affidavits filed under Rule 75 for the purpose of overcoming a reference considered and *Held* sufficient.

[**In re* Grieve, 1219

AFFIDAVITS.

COMMERCIAL SUCCESS.

Affidavits tending to show that the invention supplied a real need, which other inventions had failed to satisfy, considered and given weight on the question of patentability.

[**In re* Willard, 594.

ANTICIPATION.

See Construction of Claims, 2.

APPEAL TO THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

See Interference.

ASSIGNMENT OF TRADE-MARKS.

PERSONAL MARKS—NOT TRANSFERABLE.

"Mutt and Jeff" *Held* to be a personal trade-mark incapable of assignment because identified in the mind of the public with the genius and skill of a particular individual.

[¶ Star Company *v.* Fisher, 283. § Fisher *v.* Star Co.; Wheeler Syndicate, Inc., *v.* Same, 285.

AUTHORITY OF THE COMMISSIONER OF PATENTS.

See Interference.

RIGHT OF APPEAL.

The statute gives the Commissioner, without right of appeal, the authority of declaring an interference, and if upon motion to dissolve it subsequently appears that it should not have been declared there is no reason why it should not be terminated by the same authority, without right of appeal from his decision.

[*Carlin *v.* Goldberg, 1222.

BAR TO PATENT.

See Construction of Statutes, 2.

COMBINATION.

See Construction of Claims, 2.

COMMERCIAL SUCCESS.

See Affidavits.

CONCEPTION OF INVENTION.

See Construction of Claims, 1.

CONSTRUCTION OF CLAIMS.

See Abandonment of Applications.

1. CONSTRUED IN THE LIGHT OF OBJECT TO BE ATTAINED.

Where the invention is an ingot formed with two opposite sides flaring, so it can be cast big end up to avoid "piping," *Held* that the production of ingots of that form but cast big end down does not show even a conception of the invention.

[*Gathmann *v.* Clarke, 593.

2. PATENTABILITY—COMBINATION—ANTICIPATION.

Appellant's combination of a circulating head (for well-drilling apparatus) with a sectional well-casing, to which it is united by a separate screw collar or union, *Held* patentable over a like circulating head used on a drill tube or stock, to which it is united by a screw-collar integral with the head. [**In re* Willard, 594.

3. SAME—SMOKE-ARRESTER.

Appellant's invention for the removal of soot from the products of combustion, which is characterized by the use of a large heat-insulated chamber between the boilers and the stack, compared with the prior art and found to justify the allowance of a claim not limited to the location of the chamber around the base of the stack. [**In re* Grieve, 1219.

CONSTRUCTION OF STATUTES.

See Authority of the Commissioner of Patents.

1. EXTENSION OF TIME, ACT OF AUGUST 17, 1916—RECIPROCAL PRIVILEGES—TIME OF FILING.

It is assumed that in view of the act of August 17, 1916, extending the time for filing an application where the failure to file it within twelve months was due to the state of war, a similar extension will be granted by the German Government to citizens of this country under the proclamation of May 7, 1915. (215 O. G., 979.) [*Ex parte* Habenicht and Becke, 1219.

2. SAME—SAME—SAME—DELAY DUE TO WAR.

The showing made *Held* sufficient to establish that the failure to file the application in this country within twelve months of the filing of the application in Germany was due to the existing and continuous state of war and *Held* that the grant of the German patent will not, therefore, bar the grant of a patent in this country. [Id.

DELAY IN FILING APPLICATIONS.

See Construction of Statutes.

DELAY IN PROSECUTING APPLICATION.

See Abandonment of Applications.

DESIGNS.

FLOWER-PEDESTAL—COMPLETE ARTICLE MUST BE SHOWN.

Where the applicant showed his design for a flower-stand pedestal rising from the center of a bowl, but the bowl was merely indicated in dotted lines and there was nothing to indicate where it merged into the pedestal, *Held* that he should be required to show some complete article, including a base for the pedestal, but that he might be permitted to indicate in the specification that he regards the pedestal as the invention and contemplates placing it on other articles. [*Ex parte* Northwood, 889.

DRAWINGS.

See Designs.

FORMER DECISIONS AFFIRMED.

See Abandonment of Applications.

FORMER DECISIONS DISTINGUISHED.

See Interference.

INTERFERENCE.

See Abandoned Experiment; Abandonment of Applications; Authority of the Commissioner of Patents; Jurisdiction of the Court of Appeals of the District of Columbia.

MOTION TO DISSOLVE—RIGHT TO MAKE THE CLAIMS—AWARDING PRIORITY ON MOTION.

Where upon appeal on a motion to dissolve the Commissioner held that Carlin, the junior party, had no right to make the claims because of an inoperative disclosure, and thereafter, at Carlin's request, changed the order from one of dissolution to one awarding priority to Goldberg, and appeal was then taken to the court, *Held* that a motion to dissolve is interlocutory and the Commissioner is without authority to convert an appeal on such a motion into an appeal on priority. (*Cosper* v. *Gold*, 34 App. D. C., 191, and 36 App. D. C., 302, cited by the Commissioner, distinguished.) [* Carlin *v.* Goldberg, 1222.

INVENTION.

See Abandoned Experiment; Abandonment of Applications; Affidavits; Construction of Claims, 1, 3; Designs.

JURISDICTION OF THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

RELATION TO THE PATENT OFFICE.

The jurisdiction of the court of appeals with relation to the Patent Office is limited to two classes of decisions—viz., final rejections of applications for patent and final awards of priority in an interference. [* Carlin *v.* Goldberg, 1222.

LIMIT OF TIME.

See Abandonment of Applications.

MISTAKE BY THE OFFICE.

See Abandonment of Applications.

MOTION TO DISSOLVE INTERFERENCE.

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PRIORITY OF INVENTION.

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STATE OF THE ART.

See Construction of Claims, 3.

SUFFICIENCY OF AFFIDAVITS.

See Affidavits Under Rule 75.

TRADE-MARKS.

See Assignment of Trade-Marks.

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF MARCH, 1917.

[Abbreviations: "Gaz."—Official Gazette.]

A. Schrader's Son. (See Nielsen, Frederik, assignor.)

A. C. Gilbert Company, The. (See Gilbert, Alfred C., assignor.)

A. J. Lindemann & Hoverson Co. (See Brennan, John S., assignor.)

A. J. Lindemann & Hoverson Co. (See Lindemann, Walter C., assignor.)

A. R. Mosler & Co. (See Mosler, Arthur R., assignor.)

Aalbue, Oluf F., Brooklyn, N. Y. Chemical fire-extinguishing device. No. 1,220,162; Mar. 27; v. 236; p. 897.

Aasen, Niels W., Copenhagen, Denmark. Gun. No. 1,218,349; Mar. 6; v. 236; p. 161.

Acme Supply Company. (See Schroyer, Harry H., assignor.)

Actien Gesellschaft für Anilin Fabrikation. (See Bergami and Saemann, assignors.)

Actien Gesellschaft für Anilin Fabrikation. (See Kirchhoff, Dedichen, and Lange, assignors.)

Adams, J. Clay, Weir City, Kans. Bin. No. 1,219,367; Mar. 13; v. 236; p. 551.

Adamson, Charles E., Buffalo, N. Y., assignor to Addressograph Company, Chicago, Ill. Addressing attachment for duplicating-machines. No. 1,220,581; Mar. 27; v. 236; p. 1044.

Adamson, Charles E., Marion, Ind., assignor to Addressograph Company, Chicago, Ill. Duplicating-machine. No. 1,220,582; Mar. 27; v. 236; p. 1045.

Adamson, Charles E., Marion, Ind., assignor to Addressograph Company, Chicago, Ill. Duplicating-machine. No. 1,220,583; Mar. 27; v. 236; p. 1045.

Adamson, Lee H., Rogers, Ark. Device for pulling automobiles from mud-holes. No. 1,219,210; Mar. 13; v. 236; p. 497.

Adder Machine Company, The. (See Reirdon, Joseph F., assignor.)

Addressograph Company. (See Adamson, Charles E., assignor.)

Adler, Bror A., Chicago, Ill. Automobile driving mechanism. No. 1,218,618; Mar. 6; v. 236; p. 261.

Adsit, Frank W. (See Wise, Anthony, assignor.)

Aeolian Company, The. (See Proudfit, Edwin B., assignor.)

Aerni, Josua, and J. O. Venden, Guler, Wash. Device for holding cows' tails. No. 1,219,062; Mar. 13; v. 236; p. 446.

Ahlberg, Albin C., *et al.* (See Bracke, Robert F., assignor.)

Ahlen, William. (See Williams and Ahlen.)

Ahrenholtz, Art, Defiance, Iowa. Wheel attachment for harrows. No. 1,220,485; Mar. 27; v. 236; p. 1012.

Ahrens, Walter R., Chicago, Ill. Instrument for demonstrating Boyle's law. No. 1,220,808; Mar. 27; v. 236; p. 1121.

Aiken, Edward L., Springfield, Mass. Dust-cap for valve-stems. No. 1,220,809; Mar. 27; v. 236; p. 1121.

Aikins, Samuel, Weston, assignor of one-half to A. A. Pinard, Ottawa, Ontario, Canada. Base for hot-air furnaces and hot-water and steam boilers. No. 1,218,824; Mar. 13; v. 236; p. 865.

Ainslie, Albert E., Brashear, Mo. Medicine-card. No. 1,220,926; Mar. 27; v. 236; p. 1159.

Akerly, Frank F., Chicago, Ill. Marking-machine. No. 1,220,584; Mar. 27; v. 236; p. 1046.

Akins, Randall P. (See Bucher and Akins.)

Aktiebolaget Princeps. See Lindström, Gustaf H., assignor.)

Aktiengesellschaft Brown Boveri & Cie. (See Amsler, Paul, assignor.)

Aladdin Lamp Corporation, The. (See Keen, Eliot, assignor.)

Alber, James G. (See Benjamin and Alber.)

Alchlor Chemical Company. (See Barnett and Burgess, assignors.)

Alexander, Alexander M., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Skiving-machine. No. 1,218,614; Mar. 13; v. 236; p. 289.

Alexander, Charles T., Chanute, Kans. Gearing for mixing-machines. No. 1,218,825; Mar. 13; v. 236; p. 366.

Alexander, Ford, Taft, Cal. Electric-blasting-cap protector. No. 1,218,504; Mar. 6; v. 236; p. 212.

Alexander, Frederick W., Barry, Wales. Belting or webbing. No. 1,220,927; Mar. 27; v. 236; p. 1160.

Alexander, George L. (See Tearney and Alexander.)

Alford, Harrison, *et al.* (See Schlundt, Christian H., assignor.)

Allan, John, Newport, R. I. Stand. No. 1,220,386; Mar. 27; v. 236; p. 977.

Allen-Bradley Company, The. (See Pfeiffer, Charles, assignor.)

Allen, Gus V., Arp, Tex. Switch. No. 1,219,794; Mar. 20; v. 236; p. 729.

Allen, James G., Hazel-Hurst, Pa. Indicator for stamping-machines. No. 1,219,418; Mar. 20; v. 236; p. 599.

Allen, Ralp B. (See Ries and Allen.)

Allen, Roy M., East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telegraph-sounder. No. 1,218,035; Mar. 6; v. 236; p. 51.

Allen, William H., assignor to Parker Rust Proof Company of America, Detroit, Mich. Rust-proofing iron and steel. No. 1,219,526; Mar. 20; v. 236; p. 636.

Allis-Chalmers Manufacturing Company. (See Davis, Rae W., assignor.)

Allis-Chalmers Manufacturing Company. (See Newhouse, Ray C., assignor.)

Allis-Chalmers Manufacturing Company. (See Schmid, Rudolf, Jr., assignor.)

Allis-Chalmers Manufacturing Company. (See Steen, Halfdan A., assignor.)

Allonby, James E., Stamford, Conn. Emergency device for automobile-springs. No. 1,217,894; Mar. 6; v. 236; p. 8.

Alpern, Maxwell, assignor to American Engineering Company, Philadelphia, Pa. Safety device. No. 1,220,052; Mar. 20; v. 236; p. 819.

Alquist, Karl, Schenectady, N. Y., assignor to General Electric Company. Spur-gearing. No. 1,220,810; Mar. 27; v. 236; p. 1122.

Alquist, Karl, Schenectady, N. Y., assignor to General Electric Company. Spur-gearing. No. 1,220,811; Mar. 27; v. 236; p. 1122.

Alsop Electrical Company. (See Alsop, James N., assignor.)

Alsop, James N., assignor to Alsop Electrical Company, Owensboro, Ky. Preserving gas. No. 1,219,527; Mar. 20; v. 236; p. 637.

Altenberg, George P., assignor to The Icy-Hot Bottle Company, Cincinnati, Ohio. Carafe and casing therefor. No. 1,218,036; Mar. 6; v. 236; p. 51.

Althoff, Edward H., assignor of one-half to L. A. Roser, Salt Lake City, Utah. Apparatus for agitating freezing water. No. 1,219,897; Mar. 20; v. 236; p. 765.

Alter, Harry N., Chicago, Ill. Electric switch. No. 1,218,037; Mar. 6; v. 236; p. 52.

Alvarez, Antonio, assignor to American Can Company, San Francisco, Cal. Can-end closure. No. 1,220,151; Mar. 20; v. 236; p. 858.

Alvey-Ferguson Company, The. (See Ely, Bernard M., assignor.)

Alvey-Ferguson Company, The. (See Wear and Ely, assignors.)

Alvey, John A., assignor to Alvey Manufacturing Company, St. Louis, Mo. Automatic package-elevator. No. 1,219,898; Mar. 20; v. 236; p. 766.

Alvey, John A., assignor to Alvey Manufacturing Company, St. Louis, Mo. Conveyer. No. 1,219,899; Mar. 20; v. 236; p. 766.

Alvey, John A., assignor to Alvey Manufacturing Company, St. Louis, Mo. Loading mechanism for package-conveyers. No. 1,219,900; Mar. 20; v. 236; p. 767.

Alvey, John A., assignor to Alvey Manufacturing Company, St. Louis, Mo. Bearing for conveyer-rollers. No. 1,219,901; Mar. 20; v. 236; p. 767.

Alvey Manufacturing Company. (See Alvey, John A., assignor.)

Amborn, George, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y. Boring-tool holder. No. 1,217,895; Mar. 6; v. 236; p. 8.

Ambrose, Thomas P., Cincinnati, Ohio. Portable burglar-alarm. No. 1,218,038; Mar. 6; v. 236; p. 52.

American Box and Crate Company. (See Boardman, Thomas V., assignor.)

American Brake Shoe & Foundry Company, The. (See Jones, Harry, assignor.)

American Brake Shoe & Foundry Company, The. (See Sargent, Fritz William, assignor.)

American Briquette Machine Co. (See Duryea, Otho C., assignor.)

American Can Company. (See Alvarez, Antonio, assignor.)

American Car Roof Company. (See Brown, Christy, assignor.)

American Chain Company. (See Breul, Frederick G., assignor.)

American Clay Products Company. (See Shutt, Edward W., assignor.)

American Engineering Company. (See Alpern, Maxwell, assignor.)

American Grain Deodorizing Co. (See Moore, Payton J. H., assignor.)

American Graphophone Company. (See Woods, Clinton E., assignor.)

American Hardware Corporation. (See Andrews, Joseph C., assignor.)

American Hardware Corporation, The. (See Svenson, Charles W., assignor.)

American Paper Goods Company, The. (See Cooley, Henry B., assignor.)

American Radiator Company. (See Thompson, Charles B, assignor.)

American Sewer Pipe Company, The. (See Rook, William H., Jr., assignor.)

American Sheet and Tin Plate Company. (See Hunter and Edge, assignors.)

American Steel and Wire Company of New Jersey. (See Carstarphen, Frederick C., assignor.)

American Steel & Wire Company of New Jersey, The. (See Kilmer, William A., assignor.)

American Telephone and Telegraph Company. (See Grisinger, Elwood, assignor.)

American Telephone and Telegraph Company. (See Kitsee, Isidor, assignor.)

American Telephone and Telegraph Company. (See Mills and Hoyt, assignors.)

American Water Supply Company of New England. (See Provandie, Herbert F., assignor.)

American Wringer Company, The. (See Holaday, Albert E., assignor.)

American Wringer Company, The. (See Wright, Rea P., assignor.)

Ames, Butler, Lowell, Mass. Ignition system. No. 1,219,687; Mar. 20; v. 236; p. 692.

Ammon, Edward E. (See Wettrich and Ammon.)

Amsler, Paul, assignor to Aktiengesellschaft Brown Boveri & Cie., Baden, Switzerland. Self-excited direct-current dynamo-electric machinery. No. 1,220,486; Mar. 27; v. 236; p. 1012.

Anable, Frederick S., Brookline, Mass., assignor to National Binding Machine Company, New York, N. Y. Strip-serving device. No. 1,221,002; Mar. 27; v. 236; p. 1185.

Anchor Cap & Closure Corporation. (See Ingram, Alfred, assignor.)

Andersen, Emil W., Aarhus, Denmark. Kiln for drying vegetable substances. No. 1,218,156; Mar. 6; v. 236; p. 94.

Andersen, Hans W., Odense, Denmark. Impregnating woven belts and conveying-bands. No. 1,218,350; Mar. 6; v. 236; p. 161.

Anderson, Allen A., Chicago, Ill. Needle-threading thimble. No. 1,220,387; Mar. 27; v. 236; p. 977.

Anderson, Axel, Clifton, N. J. Shearing implement. No. 1,218,157; Mar. 6; v. 236; p. 94.

Anderson Candy Company, The. (See Torre, Domenico D., assignor.)

Anderson, Carl E., Sioux City, Ia. Clothes-line. No. 1,220,713; Mar. 27; v. 236; p. 1088.

Anderson, Charles C., Fargo, N. D. Automobile hood and radiator cover. No. 1,218,039; Mar. 6; v. 236; p. 53.

Anderson, Emil F., Chicago, Ill., assignor to International Harvester Company of New Jersey. Stripper-harvester. No. 1,219,211; Mar. 13; v. 236; p. 497.

Anderson, Emma M., Boone, Colo. Perspective-determining instrument. No. 1,219,212; Mar. 13; v. 236; p. 497.

Anderson, Frank J., Great Falls, Mont. Detachable button. No. 1,219,902; Mar. 20; v. 236; p. 768.

Anderson, George A., Dixon, Ill. Tamping device. No. 1,218,615; Mar. 13; v. 236; p. 289.

Anderson, James B., Shickshinny, Pa. Mine-pulley. No. 1,218,505; Mar. 6; v. 236; p. 218.

Anderson, Levi A., Rock Falls, Iowa. Corn-drier. No. 1,220,309; Mar. 27; v. 236; p. 949.

Anderson, Nils H., assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn. Type-writing machine. No. 1,219,218; Mar. 13; v. 236; p. 498.

Anderson, Olef A., Macomb, Ill. Ice-creeper. No. 1,219,688; Mar. 20; v. 236; p. 693.

Anderson, Swan G., Virginia, Minn. Window-screen frame. No. 1,220,163; Mar. 27; v. 236; p. 897.

Andersson, Gustaf L. (See Peterson and Andersson.)

Andrews, Fay M., Columbus, Ohio. Electric sealing-wax-applying device. No. 1,219,903; Mar. 20; v. 236; p. 768.

Andrews, Joseph C., assignor to American Hardware Corporation, New Britain, Conn. Polishing-body for burnishing-barrels. No. 1,218,158; Mar. 6; v. 236; p. 94.

Anglo-Continental Fertilizers Syndicate Limited. (See Irwin, Thomas K., assignor.)

Angus, Arthur R., Spit Road Mosman, New South Wales, Australia. Device for preventing collisions between trains. No. 1,218,970; Mar. 13; v. 236; p. 415.

Ansco Company. (See Bornmann, Carl, assignor.)

Anthony, John A., Charleston, S. C. Train-stop. No. 1,220,053; Mar. 20; v. 236; p. 820.

App, Oliver O., New York, N. Y. Tunneling or excavating machine. No. 1,219,419; Mar. 20; v. 236; p. 599.

Appel, Harris A., New York, and D. Duncan, Brooklyn; said D. Duncan assignor to E. O. Duncan, New York, N. Y. Apparatus for treating timbers. No. 1,220,164; Mar. 27; v. 236; p. 897.

Apple Electric Company, The. (See Apple, Vincent G., assignor.)

Apple, Vincent G., assignor to The Apple Electric Company, Dayton, Ohio. System of electric distribution. No. 1,220,165; Mar. 27; v. 236; p. 898.

Apthorpe, William H., Cambridge, England, assignor to Taylor Instrument Companies, Rochester, N. Y. Galvanometer. No. 1,219,617; Mar. 20; v. 236; p. 668.

Aranyossy, Julius, New York, N. Y. Plaiting-machine. No. 1,218,351; Mar. 6; v. 236; p. 161.

Arbogast, Charles V., and G. Wesner, Pittsburgh, Pa. Mask. No. 1,218,352; Mar. 6; v. 236; p. 162.

Archer, Charles L., Minneapolis, Minn. Cord tire. No. 1,219,420; Mar. 20; v. 236; p. 600.

Arese, Mario, Turin, Italy. Electrical piano. No. 1,219,063; Mar. 13; v. 236; p. 447.

Arledge, Thomas J., Irvine, Ky. Self-locking switch-lever. No. 1,219,214; Mar. 13; v. 236; p. 498.

Armor, James C., Brooklyn, N. Y. assignor to General Electric Company. System of space signaling. No. 1,219,215; Mar. 13; v. 236; p. 498.

Armor, James C., Ingram, Pa., assignor to General Electric Company. System of space signaling. No. 1,219,216; Mar. 13; v. 236; p. 499.

Armstrong, Frank J., assignor of one-half to H. T. Broadus, Canadian, Tex. Oil-filter. No. 1,218,506; Mar. 6; v. 236; p. 213.

Armstrong, Ira P., Lock Haven, Pa. Brushing apparatus. No. 1,218,040; Mar. 6; v. 236; p. 53.

Armstrong, Philip M., Paterson, N. J., assignor to The Hayward Company, New York, N. Y. Bucket. No. 1,218,826; Mar. 13; v. 236; p. 366.

Arndt, Franklin E., Galion, assignor to Security Metallic Grave Vault Co., Orrville, Ohio. Burial-vault. No. 1,219,217; Mar. 13; v. 236; p. 499.

Arnold, Harry B., assignor to The National Spring Bed Company, New Britain, Conn. Couch-bed. No. 1,218,608; Mar. 6; v. 236; p. 249.

Arthur, Thomas L., East Smethport, Pa. Rotary gas-engine. No. 1,219,795; Mar. 20; v. 236; p. 730.

Asbestos Protected Metal Company. (See Gardner, James, assignor.)

Ashley, Robert W., New York, N. Y., assignor of one-half to F. Oberkirch, St. Marys, Pa. Vehicle-wheel rim. No. 1,219,064; Mar. 13; v. 236; p. 447.

Ashley, Robert W., and F. Oberkirch, New York, N. Y. Vehicle-wheel rim. No. 1,219,065; Mar. 13; v. 236; p. 448.

Ashworth, Arthur. (See Butterfield, John C., assignor.)

Aske Automatic Voltage Regulator Company. (See Aske, Irving E., assignor.)

Aske, Irving E., Duluth, Minn., assignor to Aske Automatic Voltage Regulator Company. Variable magnetic-opposed reaction-coil electric circuit. No. 1,220,166; Mar. 27; v. 236; p. 898.

Astruck, John H., New York, N. Y. Ash-tray. No. 1,220,167; Mar. 27; v. 236; p. 899.

Atkins, Earl F. (See Atkins, Frank K. and E. F.)

Atkins, Frank K. and E. F., New York, N. Y. Centrifugal pressure filter. No. 1,219,796; Mar. 20; v. 236; p. 730.

Atkins, James W. (See Humason, Granville A., assignor.)

Atkinson, Gerald S., Los Angeles, Cal. Self-loading mixer. No. 1,220,812; Mar. 27; v. 236; p. 1123.

Atwood Machine Company, The. (See Bradley, Edward E., assignor.)

Auburn Ball Bearing Company. (See Collins, Francis A., Jr., assignor.)

Auer, John F., Philadelphia, Pa., assignor to Auer & Twitchell, Inc., Dover, Del. Device for producing paper wrapping-cord. No. 1,219,421; Mar. 20; v. 236; p. 600.

Auer & Twitchell. (See Auer, John F., assignor.)

Auf der Haar, John H., Chicago, Ill. Traction-engine. No. 1,220,388; Mar. 27; v. 236; p. 977.

Aumann, Louis A., Chicopee, assignor to Draper Corporation, Hopedale, Mass. Warping-machine. No. 1,218,285; Mar. 6; v. 236; p. 122.

Aument, Carroll M., Strasburg, Pa. Book-cover protector. No. 1,220,389; Mar. 27; v. 236; p. 978.

Austin, George E., New York, and F. Lachance, Brooklyn, N. Y., said Lachance assignor to said Austin. Armature-banding machine. No. 1,220,054; Mar. 20; v. 236; p. 820.

Automatic Electric Company. (See Blessing, John G., assignor.)

Automatic Electric Company. (See Erickson, Charles J., assignor.)

Automatic Electric Company. (See Martin, Talbot G., assignor.)

Automatic Fire Protection Company. (See Nolen, James G., assignor.)

Automatic Machine Manufacturing Co. (See Meichert, Charles A., assignor.)

Automatic Shaft Coupling Co. (See Cathcart, Frank H., assignor.)

Autosales Gum and Chocolate Company. (See Webster, John A., assignor.)

Averill, Bradley R., Greens Farms, Conn. Carrier. No. 1,218,920; Mar. 13; v. 236; p. 399.

Avis, Samuel W., assignor to The Merrow Machine Company, Hartford, Conn. Overseaming-machine. No. 1,217,896; Mar. 6; v. 236; p. 3.

Axworthy, William G., Montclair, N. J. Distributing-case. No. 1,218,971; Mar. 13; v. 236; p. 416.

Ayres, Edwin B., *et al*. (See Stanley, Joseph, assignor.)

Ayres, Levi P. (See Johnson and Ayres.)

B. F. Avery & Sons. (See Ray, Charles T., assignor.)

Babbitt, Ralph M., assignor to Kalamazoo Stove Company, Kalamazoo, Mich. Stove-top. No. 1,218,972; Mar. 13; v. 236; p. 417.

Babcock, Allen H., Berkeley, Cal. Headlight-dimmer. No. 1,219,066; Mar. 13; v. 236; p. 448.

Babcock & Wilcox Company, The. (See Jacobus, David S., assignor.)

Bachmann, Siegmund, Chicago, Ill. Box. No. 1,218,353; Mar. 6; v. 236; p. 162.

Backert, John C., Brooklyn, N. Y. Cutting-machine. No. 1,220,390; Mar. 27; v. 236; p. 978.

Backscheider, Frank J., Cincinnati, Ohio. Power-driven tool. No. 1,218,236; Mar. 6; v. 236; p. 122.

Bacon, Raymond F., H. T. Brooks, and H. Clark, assignors to Gulf Refining Company, Pittsburgh, Pa. Manufacture of carbon-black and hydrogen. No. 1,220,391; Mar. 27; v. 236; p. 978.

Bacon, William M., St. Louis, Mo., assignor to Hamilton-Bacon Sign Company, Chicago, Ill. Printing-machine. No. 1,220,585; Mar. 27; v. 236; p. 1046.

Bader, Gustav A., Rochester, N. Y. Eyeglass-mounting. No. 1,219,422; Mar. 20; v. 236; p. 600.

Bader, Gustav A., Rochester, and C. W. Howland, assignors to The Standard Optical Company, Geneva, N. Y. Lens-drilling machine. No. 1,218,041; Mar. 6; v. 236; p. 53.

Badische Anilin & Soda Fabrik. (See Littringhaus and Koch, assignors.)

Baer, Edward, New York, N. Y. Cooling device. No. 1,218,827; Mar. 13; v. 236; p. 367.

Bahr, Paul, Chicago, Ill. Casket. No. 1,220,487; Mar. 27; v. 236; p. 1012.

Bailey, Charles H. H. and W. H. H., Braintree, Mass. Distributing-machine. No. 1,219,067; Mar. 13; v. 236; p. 448.

Bailey, Ervin G., Newton, Mass., assignor to Bailey Meter Company. Pressure-ratio gage. No. 1,220,488; Mar. 27; v. 236; p. 1012.

Bailey, George B. (See Frain and Bailey.)

Bailey, Herbert J., Trenton, N. J. Music-leaf turner. No. 1,219,904; Mar. 20; v. 236; p. 768.

Bailey Meter Company. (See Bailey, Ervin G., assignor.)

Bailey, William H. H. (See Bailey, Charles H. H. and W. H. H.)

Baily, Thaddeus F., and F. T. Cope, assignors to The Electric Furnace Company, Alliance, Ohio. Terminal for electric furnaces. No. 1,218,042; Mar. 6; v. 236; p. 54.

Baird, Warren W., Pittsburgh, Pa. Ventilator for windows. No. 1,217,897; Mar. 6; v. 236; p. 4.

Baker, Arthur W., Danbury, Conn. Outlet-box. No. 1,220,168; Mar. 27; v. 236; p. 899.

Baker, Benjamin S. (See Matthews, Austin, assignor.)

Baker, Edward P., Darien, Conn. Illuminated sign. No. 1,219,218; Mar. 13; v. 236; p. 500.

Baker, Emory P., Chicago, Ill., assignor of one-fourth to E. J. Fabens, Salem, Mass. Ventilator for sleeping-car berths. No. 1,219,219; Mar. 13; v. 236; p. 500.

Baker, Gustavus A., Memphis, Tex. Planter. No. 1,218,159; Mar. 6; v. 236; p. 95.

Baker, Rollyn H., Dayton, Ohio. Vending device. No. 1,219,618; Mar. 20; v. 236; p. 668.

Baker, Thaddeus R. (See Keeler, Frank F., assignor.)

Baker, Theodore, assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Recovering solvents. No. 1,218,616; Mar. 13; v. 236; p. 289.

Bakke, Carl O., Fertile, Minn. Lawn-mower. No. 1,220,489; Mar. 27; v. 236; p. 1013.

Bakos, Steve, Brainards, N. J. Wrist-pin lubricator. No. 1,218,507; Mar. 6; v. 236; p. 213.

Balcom, Harry W., Worcester, Mass. Block-signal system. No. 1,219,528; Mar. 20; v. 236; p. 637.

Baldwin, George R., Philadelphia, Pa. Flexible shaft-coupling. No. 1,220,310; Mar. 27; v. 236; p. 950.

Baldwin Locomotive Works, The. (See Wille, Henry V., assignor.)

Baldwin, Thomas H., Beaumont, Tex. Concrete-step mold. No. 1,219,689; Mar. 20; v. 236; p. 693.

Baldwin, William D., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Multiple-car elevator system. No. 1,218,617; Mar. 13; v. 236; p. 290.

Baldwin, William J., Brooklyn, N. Y. Separation of dust particles and smoke from air and gases. No. 1,218,354; Mar. 6; v. 236; p. 162.

Ball, Henry P., Pittsfield, Mass. Food-chopper. No. 1,219,423; Mar. 20; v. 236; p. 601.

Baltimore Roofing and Asbestos Manufacturing Co. (See Emigh, Oliver R., assignor.)

Baltzley, Edwin and L. E., Weehawken, N. J., assignors to E. D. Farmer, trustee, Montclair, N. J. Culinary beater. No. 1,220,928; Mar. 27; v. 236; p. 1160.

Baltzley, Louis E. (See Baltzley, Edwin and L. E.)

Baltzley, Louis E., Weehawken, assignor to E. D. Farmer, trustee. Liquid-feeding device. No. 1,220,929; Mar. 27; v. 236; p. 1160.

Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Apparatus for casting printers' leads. No. 1,220,055; Mar. 20; v. 236; p. 821.

Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Means for raising and lowering casting-machine melting-pots. No. 1,220,056; Mar. 20; v. 236; p. 821.

Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Casting-machine. No. 1,220,057; Mar. 20; v. 236; p. 822.

Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Casting-machine for elements of printing-forms. No. 1,220,059; Mar. 20; v. 236; p. 823.

Bancroft, John S., M. C. Indahl, Philadelphia, Pa., and J. O. Hofberg, Westville, N. J., assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Repeat mechanism for composing-machines. No. 1,220,058; Mar. 20; v. 236; p. 822.

Banks, Daniel R., Baltimore, Md., assignor to D. B. Banks Company. Drying and extracting. No. 1,219,406; Mar. 13; v. 236; p. 564.

Banschbach, Edward A., Chicago, Ill. Stand. No. 1,219,220; Mar. 13; v. 236; p. 500.

Barber, Guy M., Los Angeles, and L. L. Frazee, Glendale, assignors of one-half to G. T. Moran, Los Angeles, Cal. Fire-escape. No. 1,218,828; Mar. 13; v. 236; p. 367.

Barber, Robert B., Hazleton, Pa. Tank-filling valve. No. 1,219,690; Mar. 20; v. 236; p. 694.

Barden, Clifford A. (See Barden, Henry B. and C. A.)

Barden, Henry B., Wallingford, Vt., and C. A. Barden, Wabash, Ind. Making tools. No. 1,220,060; Mar. 20; v. 236; p. 823.

Bardet, Jean, Paris, France. Sugar breaking and packing machine. No. 1,218,355; Mar. 6; v. 236; p. 163.

Barksdale, Clement D., assignor to Seward Trunk and Bag Company, Petersburg, Va. Trunk-lock. No. 1,218,043; Mar. 6; v. 236; p. 54.

Barler, Richard O., Chicago, Ill. Ink-pad box. No. 1,218,160; Mar. 6; v. 236; p. 95.

Barnard, Dudley J., East Ham, England. Grab. No. 1,218,921; Mar. 13; v. 236; p. 400.

Barnard and Leas Manufacturing Company. (See Cornwall, John B., assignor.)

Barnes, Henry, Brooklyn, N. Y. Window-sash lock-stop. No. 1,219,424; Mar. 20; v. 236; p. 601.

Barnes, Pierre. (See Winningham, Marcenus M., assignor.)

Barnett, Maurice and L. Burgess, New York, N. Y. Producing aluminum carbid. No. 1,219,797; Mar. 20; v. 236; p. 731.

Barnett, Maurice, and L. Burgess, New York, N. Y., assignors to Aichlor Chemical Company. Producing aluminum chlorid. No. 1,218,588; Mar. 6; v. 236; p. 241.

Barnwell, Stephen E., assignor to Hiro Manufacturing Company, Louisville, Ky. Hot-air attachment for manifolds. No. 1,218,508; Mar. 6; v. 236; p. 214.

Barr, Henry H., Sparta, Wis. Vehicle-fender. No. 1,220,930; Mar. 27; v. 236; p. 1161.

Barr, John H., New York, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,217,898; Mar. 6; v. 236; p. 4.

Barringer, George W., Lawrence, N. Y. Combined umbrella and tent. No. 1,219,905; Mar. 20; v. 236; p. 768.

Barrow, Charles J., Los Angeles, Cal., assignor to General Electric Company. Protective device for electric distributing systems. No. 1,220,813; Mar. 27; v. 236; p. 1123.

Barrus, George H., Brookline, Mass. Meter for steam, air, or other gases. No. 1,217,899; Mar. 6; v. 236; p. 5.

Barschow, Hubert A., Kankakee, assignor to Sears, Roebuck and Company, Chicago, Ill. Oil-burner. No. 1,219,906; Mar. 20; v. 236; p. 769.

Bartholomew, Ohmer H., assignor of one-half to J. Halbrohr, Peoria, Ill. Wheel-rim. No. 1,219,798; Mar. 20; v. 236; p. 731.

Bartlett, Henry C., Jr., Owensboro, Ky. Self-filling fountain-pen. No. 1,217,900; Mar. 6; v. 236; p. 5.

Bartlett, John H., assignor to Columbia Paper Bag Company, Baltimore, Md. Machine for making paper bags. No. 1,218,356; Mar. 6; v. 236; p. 163.

Barton, Louis E., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Pigment and paint. No. 1,218,161; Mar. 6; v. 236; p. 96.

Bashinski, Samuel, Jr., Dublin, Ga. Cotton-harvester. No. 1,220,931; Mar. 27; v. 236; p. 1161.

Baskett, James M., Endora, Ark. Branding-iron. No. 1,220,932; Mar. 27; v. 236; p. 1161.

Bass, William L., Washington, D. C. Shield for closet-hoppers. No. 1,218,922; Mar. 13; v. 236; p. 400.

Bastian, Charles L., Chicago, Ill. Fluid-pressure-regulating valve. No. 1,217,901; Mar. 6; v. 236; p. 5.

Batenburg, Peter J. F., assignor to Four Wheel Drive Auto Co., Clintonville, Wis. Transmission mechanism for motor-driven vehicles. No. 1,219,529; Mar. 20; v. 236; p. 637.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Stud-setting machine. No. 1,219,425; Mar. 20; v. 236; p. 601.

Bates, Clifford V., Chicago, Ill. Reel-holder. No. 1,220,169; Mar. 27; v. 236; p. 899.

Bates, Thomas F., Shelbyville, Tenn. Dental scaler. No. 1,220,933; Mar. 27; v. 236; p. 1162.

Bauer, Charles, Cleveland, Ohio. Portable seat. No. 1,218,357; Mar. 6; v. 236; p, 164.

Bauer, William J., assignor, by mesne assignments, to The Linway Company, Chicago, Ill. Combined mop and wringer. No. 1,218,618; Mar. 13; v. 236; p. 290.

Bauersfeld, Walther, assignor to Firm of C. Zeiss, Jena, Germany. Cinematographic apparatus. No. 1,219,221; Mar. 13; v. 236; p. 501.

Baumann, Clifton K., New York, N. Y. Fabric-bolt board. No. 1,218,358; Mar. 6; v. 236; p. 164.

Baumgartner, Eliet S., *et al.* (See Egan, Charles E., assignor.)

Baumheckel, William M., Cincinnati, Ohio. Valve mechanism for internal-combustion engines. No. 1,220,814; Mar. 27; v. 236; p. 1124.

Baurichter, Fritz, assignor to Georgs-Marien-Bergwerks- & Hütten-Verein A.-G., Osnabrück, Germany. Railway-tie and means for fastening the rails on the ties. No. 1,220,490; Mar. 27; v. 236; p. 1013.

Baurichter, Fritz, assignor to Georgs-Marien-Bergwerks- & Hütten-Verein A.-G., Osnabrück, Germany. Means for fastening rails to ties. No. 1,220,491; Mar. 27; v. 236; p. 1013.

Baus, Arthur M. J., Brookline, Mass. Loop-fastener. No. 1,218,739; Mar. 13; v. 236; p. 334.

Bausch & Lomb Optical Company. (See Patterson, William L., assignor.)

Baxter, Frederick C., and W. H. Kern, Belvidere, Ill. Funnel. No. 1,219,222; Mar. 13; v. 236; p. 501.

Bay State Tap & Die Company. (See Williams, Charles E., assignor.)

Baynard, William H., Braintree, assignor of one-half to H. H. Beckwith, Brookline, Mass. Insole. No. 1,220,061; Mar. 20; v. 236; p. 823.

Bayne, George G. (See James, Perry C., assignor.)

Bayuk, Nicholas, Mesaba, Minn. Clothes-pin. No. 1,220,714; Mar. 27; v. 236; p. 1089.

Beach, Clarence E., Binghamton, N. Y., assignor, by mesne assignments, to The Gamewell Fire Alarm Telegraph Company, Newton Upper Falls, Mass. Signaling system. (Reissue.) No. 14,273; Mar. 20; v. 236; p. 863.

Beach, Howard L. (See Clark and Beach.)

Beacon Miniature Electric Co. (See Kaplan, Morduch L., assignor.)

Beadle, George W., New York, N. Y. Paper closure for glass vessels. No. 1,220,586; Mar. 27; v. 236; p. 1047.

Beaman, Lora E., Cranston, assignor to The Beaman & Smith Co., Providence, R. I. Milling-machine. No. 1,218,044; Mar. 6; v. 236; p. 55.

Beaman & Smith Co., The. (See Beaman, Lora E., assignor.)

Bean, Frank A., Carrollton, Ohio. Trolley-wire hanger. No. 1,220,062; Mar. 20; v. 236; p. 824.

Bean, Robert K., Winthrop, Mass. Fly-net. No. 1,218,829; Mar. 13; v. 236; p. 367.

Beatty, Edward T., Birmingham, Ala., assignor of one-half to L. Wilson, Shreveport, La. Quick-detachable coupling for drill-pipes. No. 1,218,359; Mar. 6; v. 236; p. 164.

Beauchamp, Stonewall J., Little Rock, Ark. Catalogue-labeling machine. No. 1,219,907; Mar. 20; v. 236; p. 769.

Beck, Charles W., Detroit, Mich., assignor to The Beck-Frost Corporation. Primary terminal. No. 1,220,715; Mar. 27; v. 236; p. 1089.

Beck-Frost Corporation, The. (See Beck, Charles W., assignor.)

Becker, Edmund H., Washington, D. C. Portable light. No. 1,218,162; Mar. 6; v. 236; p. 95.

Beckmann, Carl, Brooklyn, N. Y. Magazine for labeling and wrapping machines. No. 1,219,426; Mar. 20; v. 236; p. 602.

Beckmann, Carl, Brooklyn, N. Y. Carton-upsetting device. No. 1,219,427; Mar. 20; v. 236; p. 602.

Beckwith Box Toe Company. (See Presby, George P., assignor.)

Beckwith, Harry H. (See Baynard, William H., assignor.)

Beechlyn, John T., Lynn, Mass., assignor to General Electric Company. Arc-lamp. No. 1,218,509; Mar. 6; v. 236; p. 214.

Beede, Walter E., New York, N. Y. Electrical measuring instrument. No. 1,220,587; Mar. 27; v. 236; p. 1047.

Beeneck, Joseph S., Nanticoke, Pa. Miner's blasting-box. No. 1,217,902; Mar. 6; v. 236; p. 6.

Beere, Wynford O., Wellington, and J. E. Rough, Foxton, New Zealand. Machine for treating flax and other fibrous plants. No. 1,219,691; Mar. 20; v. 236; p. 694.

Beers, Burton B. (See Labadie and Beers.)

Beery, Bernard W., Portsmouth, Ohio. Piston-head. No. 1,219,228; Mar. 13; v. 236; p. 501.

Beery, John R., Celina, Ohio. Marking-stake. No. 1,220,716; Mar. 27; v. 236; p. 1080.

Beideman, Elmer H., Wheeling, W. Va. Listing device for stock-quotation boards. No. 1,220,588; Mar. 27; v. 236; p. 1047.

Beldam, George W., Ealing, and A. U. B. Ryall, Brentford, England. Pneumatic or elastic wheel-tire. No. 1,220,934; Mar. 27; v. 236; p. 1162.

Bell, Edwin H., Chicago, Ill. Tie-plate. No. 1,219,224; Mar. 13; v. 236; p. 502.

Bell, George T., assignor of one-half to W. K. Cooksey, Columbus, Ohio. Ventilating-chimney. No. 1,218,360; Mar. 6; v. 236; p. 165.

Bell, Lewis B., assignor of one-half to C. A. Bunde, Chicago, Ill. Street or station indicator for railways. No. 1,219,619; Mar. 20; v. 236; p. 669.

Beltrami, Luigi, Coupon, Pa. Ship-protecting device. No. 1,219,692; Mar. 20; v. 236; p. 694.

Bender, Robert C., St. Louis, Mo. Manifold invoice-sheets, express-receipt, and shipping-tag. No. 1,220,589; Mar. 27; v. 236; p. 1047.

Benjamin, Bert R., Oak Park, and C. Pearson, Chicago, Ill., assignors to International Harvester Company of New Jersey. Clutch mechanism. No. 1,219,225; Mar. 13; v. 236; p. 502.

Benjamin, Dana H., assignor to The Guggenheim Laundry Machinery Company, Cleveland, Ohio. Clothes-pressing machine. No. 1,218,609; Mar. 6; v. 236; p. 249.

Benjamin, Dana H., assignor to The Guggenheim Laundry Machinery Company, Cleveland, Ohio. Molding and ironing machine. No. 1,220,590; Mar. 27; v. 236; p. 1048.

Benjamin, Dana H., and J. G. Alber, assignors to The Guggenheim Laundry Machinery Company, Cleveland, Ohio. Laundry machinery. No. 1,220,591; Mar. 27; v. 236; p. 1048.

Benjamin, George H., New York, N. Y. Dehydrating apparatus. No. 1,220,815; Mar. 27; v. 236; p. 1124.

Benner, Bion S., Mankato, and E. L. Benner, Bemidji, Minn. Automobile-lift. No. 1,218,510; Mar. 6; v. 236; p. 214.

Benner, Ernest L. (See Benner, Bion S. and E. L.)

Benner, Josiah D., Dayton, Ohio. Track-sander. No. 1,220,311; Mar. 27; v. 236; p. 950.

Bennett, Averill M., Fromberg, Mont. Rocking-chair holder. No. 1,219,058; Mar. 13; v. 236; p. 449.

Bennett, John L., assignor to United States Wire Mat Company, Decatur, Ill. Implement or device for killing or disabling insects, flies, or the like. No. 1,218,619; Mar. 13; v. 236; p. 290.

Bennett, William C., Rhinelander, Wis. Detachable hook. No. 1,220,717; Mar. 27; v. 236; p. 1090.

Bennington, Albert H., Park River, N. D. Gear-shifting mechanism. No. 1,220,935; Mar. 27; v. 236; p. 1162.

Benoit, Frederick, Chicago, Ill. Animal-trap. No. 1,218,589; Mar. 6; v. 236; p. 242.

Benson, Lawrence, Spokane, Wash. Dish-washing machine. No. 1,218,620; Mar. 13; v. 236; p. 291.

Bentley, Frederick E., Maplewood, Mo. Changeable-character bulletin apparatus. No. 1,219,693; Mar. 20; v. 236; p. 694.

Bentley, Frederick E., Maplewood, assignor of one-fourth to B. W. Frauenthal, one-fourth to A. S. Johnson, and one-fourth to I. L. Burlingame, St. Louis, Mo. Telephone instrument. No. 1,219,620; Mar. 20; v. 236; p. 669.

Bentz, Harry, Montclair, N. J. Air-conditioning apparatus. No. 1,218,045; Mar. 6; v. 236; p. 55.

Benvenuti, Enrico, Genoa, Italy. Ship's light. No. 1,220,936; Mar. 27; v. 236; p. 1163.

Beracka, Paul. (See Dopyera, John and R., assignors.)

Bereman, John W., Leavenworth, Kans. Folding table. No. 1,219,694; Mar. 20; v. 236; p. 695.

Bereth, William F., assignor to Monmouth Plow Factory, Monmouth, Ill. Tandem disk harrow. No. 1,219,368; Mar. 13; v. 236; p. 552.

Berg & Beard Manufacturing Co., The. (See Berg, Carl, assignor.)

Berg, Carl, Brooklyn, N. Y., assignor, by mesne assignments, to The Berg & Beard Manufacturing Co., Inc. Non-refillable bottle. No. 1,220,592; Mar. 27; v. 236; p. 1049.

Berg, Carl, assignor to The Berg & Beard Manufacturing Company, Brooklyn, N. Y. Hat-exterminator. No. 1,220,593; Mar. 27; v. 236; p. 1049.

Berg, Lars J., Chicago, Ill. Car-truck. No. 1,220,170; Mar. 27; v. 236; p. 899.

Bergami, Otto, Berlin-Karlshorst, and C. Saemann, Berlin-Friedenau, assignors to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Manufacture of betain from vinasses. No. 1,219,226; Mar. 13; v. 236; p. 502.

Bergeron, Hector A., Montreal, Quebec, Canada. Furnace. No. 1,220,312; Mar. 27; v. 236; p. 950.

Bergeron, Henri L., Walstonburg, N. C. Sled. No. 1,217,903; Mar. 6; v. 236; p. 6.

Bergeson, Albert, Albert Lea, Minn. Cigar-tip cutter. No. 1,218,830; Mar. 13; v. 236; p. 367.

Berghorn, Olga, Jersey City, N. J. Key-dress. No, 1,220,171; Mar. 27; v. 236; p. 899.

Berglund, Herman, Mahtowa, assignor of one-half to L. Compagne, Duluth, Minn. Means for securing knife-blades to a knife-bar. No. 1,218,511; Mar. 6; v. 236; p. 215.

Bernales, Julio C., Lima, Peru. Device for lowering bodies. No. 1,219,530; Mar. 20; v. 236; p. 638.

Bernard, Kurishingal K., Jubbulpore, India. Music-leaf turner and music-portfolio. No. 1,220,313; Mar. 27; v. 236; p. 951.

Bernardi, Frank, Stockton, assignor to Patent Electric Fuse Spitter Co., Mokelumne Hill, Cal. Fuse-spitter. No. 1,218,512; Mar. 6; v. 236; p. 215.

Berner, J., *et al.* (See Collister and McDonald, assignors.)

Berry, Andrew J. (See Heard, Lucius B., assignor.)

Berry, Eliza P., assignor of one-half to J. M. De Jarnette, Sedalia, Mo. Mud-lug for propelling autos. No. 1,217,904; Mar. 6; v. 236; p. 7.

Berry, George W., Rose Bay, near Sydney, assignor to The Wireless Hinge Manufacturing Company Limited, Sydney, New South Wales, Australia. Apparatus for connecting the bodies and lids of pressed sheet-metal receptacles. No. 1,219,428; Mar. 20; v. 236; p. 603.

Berthelsen, Anders L., Chicago, Ill. Teat-cup. No. 1,220,172; Mar. 27; v. 236; p. 900.

Bertram, Henry W., assignor to McDougall Company, Frankfort, Ind. Kitchen-cabinet. No. 1,219,412; Mar. 13; v. 236; p. 567.

Bertrand, Frederic E., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Insole-reinforcing machine. No. 1,218,046; Mar. 6; v. 236; p. 56.

Bertsch, Charles C. (See Kallenbach and Bertsch.)

Bessler, Frank E., Akron, Ohio. Movable stairway. No. 1,219,695; Mar. 20; v. 236; p. 695.

Bessler, Frank E., Akron, Ohio. Movable stairway. No. 1,219,696; Mar. 20; v. 236; p. 696.

Bessler, Frank E., Akron, Ohio. Movable stairway. No. 1,219,697; Mar. 20; v. 236; p. 696.

Bethel, Albert R., Westport, Md. Apparatus for milling bottle-molds. No. 1,219,227; Mar. 13; v. 236; p. 503.

Bett, Frank G., Cleveland Ohio. Window-shade bracket. No. 1,219,621; Mar. 20; v. 236; p. 670.

Betzle, Martin, Prairie du Chien, Wis. Rotary engine. No. 1,220,594; Mar. 27; v. 236; p. 1049.

Beymer, George D., Portland, Oreg., assignor to G. F. Hupner, Omaha, Nebr. Cleaning and polishing liquid for varnished surfaces and making same. No. 1,218,163; Mar. 6; v. 236; p. 95.

Bibb, George F., Troy, N. Y., assignor to Ruud Manufacturing Company, Pittsburgh, Pa. Stoking-door for furnaces, &c. No. 1,220,718; Mar. 27; v. 236; p. 1090.

Bibbins, Francis E. (See Eldred, Bibbins, and Reed.)

Bicalky, Charles H., Buffalo, N. Y. Ventilator. No. 1,218,164; Mar. 6; v. 236; p. 96.

Biebow, Frederick C., Denver, Colo. Hood-support. No. 1,218,740; Mar. 13; v. 236; p. 334.

Biggin, Charles H., Redlands Cal. Lubricator. No. 1,220,719; Mar. 27; v. 236; p. 1090.

Bill, Harry L., Detroit, Mich. Accelerator foot-rest. No. 1,218,047; Mar. 6; v. 236; p. 56.

Billington, John E. (See Pearce and Billington.)

Billstrom, Nels J., Rockford, Ill. Glue-clamp machine. No. 1,219,420; Mar. 20; v. 236; p. 603.

Biondo, Philip L., assignor of one-half to C. Cirabolo, Brooklyn, N. Y. Sewing-machine needle-guard. No. 1,220,816; Mar. 27; v. 236; p. 1125.

Birdsall, James E., Philadelphia, Pa., assignor to W. Gibson. Electrical grounding-clamp. No. 1,219,228; Mar. 13; v. 236; p. 503.

Birnstock, William W., assignor to Hench & Dromgold Company, York, Pa. Fertilizer-distributer. No. 1,218,361; Mar. 6; v. 236; p. 165.

Biron, George B., Duluth, Minn. Surgical instrument. No. 1,218,513; Mar. 6; v. 236; p. 215.

Bituminized Road Company. (See Popkess, Michael A., assignor.)

Bjornstad, Alfred W., U. S. Army. Instrument for use in topography. No. 1,219,430; Mar. 20; v. 236; p. 603.

Black, David G. (See Cano, Victor M., assignor.)

Black, Frank W., Downs, Kans. Tool. No. 1,220,937; Mar. 27; v. 236; p. 1163.

Black, Walter G., and A. L. Segelhorst, Brea, Cal. Deep-well pump. No. 1,219,799; Mar. 20; v. 236; p. 731.

Blackburn, Samuel D., Lansdale, Pa. Stove. No. 1,219,229; Mar. 13; v. 236; p. 503.

Blackburn, William A., Detroit, Mich. Articulated connection. No. 1,220,595; Mar. 27; v. 236; p. 1049.

Blackley, Enoch P., Hamlet, N. C. Valve for air-brake systems. No. 1,218,362; Mar. 6; v. 236; p. 166.

Blacklock, Leslie H. (See Kern, Roy S., assignor.)

Blackmore, Alfred, Kensington, London, England. Electric route indicating and lighting system. No. 1,219,230; Mar. 13; v. 236; p. 504.

Blackstone Manufacturing Company, The. (See More, Glenn, assignor.)

Blakeslee, Archie, Tionesta, Pa. Animal-trap. No. 1,218,514; Mar. 6; v. 236; p. 216.

Blanchard, Leslie W., London, England. Cycle-frame. No. 1,220,938; Mar. 27; v. 236; p. 1163.

Blankenship, Houston W. (See Murphy and Blankenship.)

Blashfield, James M., assignor of one-half to C. L. Hayes, Jackson, Mich. Locomotive safety hand and foot rail. No. 1,220,720; Mar. 27; v. 236; p. 1090.

Blattner, Fred, Jr., Brooklyn, N. Y. Operating mechanism for tubbing-machines. No. 1,219,231; Mar. 13; v. 236; p. 504.

Blessing, John G., assignor to Automatic Electric Company, Chicago, Ill. Automatic selecting-switch. No. 1,218,048; Mar. 6; v. 236; p. 56.

Blondel, André, Paris, France. Method and apparatus for determining the direction of a Hertzian lighthouse. No. 1,218,237; Mar. 6; v. 236; p. 123.

Blondel, André, Paris, France, assignor to General Electric Company. Arc-lamp. No. 1,220,063; Mar. 20; v. 236; p. 824.

Bloom, Emil J., Kemmerer, Wyo. Roll-paper holder. No. 1,220,064; Mar. 20; v. 236; p. 824.

Blough, Raymond J., Ionia, Mich. Belt-tightener. No. 1,220,065; Mar. 20; v. 236; p. 825.

Blumberg, Jacob J., New York, N. Y. Waterproof bag for bathers. No. 1,219,232; Mar. 13; v. 236; p. 504.

Blumenthal, Maurice, Brooklyn, N. Y. Slip-coupling for electric-cable conduits. No. 1,218,621; Mar. 13; v. 236; p. 291.

Boal, Hugh M., Titusville, Pa. Telegraph apparatus. No. 1,220,066; Mar. 20; v. 236; p. 825.

Boardman, Thomas V., assignor to American Box and Crate Company, Knoxville, Tenn. Delivery-case. No. 1,219,069; Mar. 13; v. 236; p. 449.

Bobier, Fredrick H., Mount Green, Saskatchewan, Canada. Binder-tongue truck. No. 1,218,516; Mar. 6; v. 236; p. 216.

Boch, Louise H., Chicago, Ill. Foldable garment-protector. No. 1,218,831; Mar. 13; v. 236; p. 368.

Bock, Alfred C. O., Brooklyn, N. Y., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Latch. No. 1,220,939; Mar. 27; v. 236; p. 1164.

Bock, Charles S., Chicago, Ill. Hair-pin. No. 1,219,070; Mar. 13; v. 236; p. 449.

Bodkin, John A., New York, N. Y. Guard-rail clamp. No. 1,220,392; Mar. 27; v. 236; p. 976.

Bodnar, John, Atlasburg, Pa. Caster raising and lowering device. No. 1,219,071; Mar. 13; v. 236; p. 450.

Boenning, William M., Manitowoc, Wis. Resilient wheel. No. 1,218,973; Mar. 13; v. 236; p. 417.

Boettcher, Gustav A., Jersey City, N. J. Quilting-machine. No. 1,218,517; Mar. 6; v. 236; p. 216.

Bogdański, Michael S., Clymer, Pa. Reading-bracket for beds. No. 1,218,923; Mar. 13; v. 236; p. 400.

Bohlin, Arvid, Trenton, N. J. Vehicle-wheel. No. 1,219,369; Mar. 13; v. 236; p. 552.

Boice, Abram C., Kansas City, Mo. Swinging crib. No. 1,218,363; Mar. 6; v. 236; p. 166.

Boice, William T., Foley, Minn. Corn-husking device. No. 1,217,905; Mar. 6; v. 236; p. 7.

Bola, George J. (See Lydamore and Bola.)

Bolus, William G. (See Grisinger, David, assignor.)

Bommarito, Antonio, St. Louis, Mo. Acetylene-lamp. No. 1,220,940; Mar. 27; v. 236; p. 1164.

Bond, William A., Nahant, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting and sewing machine. No. 1,220,817; Mar. 27; v. 236; p. 1125.

Bondurant, Emmet J., assignor to Georgia Plow & Foundry Co., Athens, Ga. Projectile. No. 1,218,832; Mar. 13; v. 236; p. 368.

Bonguer, Jacob, *et al.* (See Cowgill, Orph W., assignor.)

Bonnefon, Edmond L., Grenoble, France. Measuring-faucet. No. 1,219,800; Mar. 20; v. 236; p. 732.

Bonnet, Ernest H. N., Nonancourt, France. Automotor harvesting-machine. No. 1,217,906; Mar. 6; v. 236; p. 7.

Boosey, Edward W. N., Detroit, Mich. Trap. No. 1,220,818; Mar. 27; v. 236; p. 1125.

Booth, Clement, Narberth, and A. C. Page, Philadelphia, Pa. Demountable wire wheel. No. 1,220,314; Mar. 27; v. 236; p. 951.

Booth, Robert, Johannesburg, Transvaal, South Africa. Motor road-vehicle. No. 1,220,999; Mar. 27; v. 236; p. 1184.

Borden's Condensed Milk Company. (See Young, John H., assignor.)

Bornmann, Carl, Binghamton, N. Y. Recording device for automobiles. No. 1,218,364; Mar. 6; v. 236; p. 166.

Bornmann, Carl, assignor to Ansco Company, Binghamton, N. Y. Camera. No. 1,219,801; Mar. 20; v. 236; p. 732.

Borrás, Antonio, and F. Iriarte, Buenos Aires, Argentina. Rotary steam-engine. No. 1,220,173; Mar. 27; v. 236; p. 900.

Borrmann, Carl H., Essen-on-the-Ruhr, Germany. Process and apparatus for continuously distilling mineral oils and the like. No. 1,220,067; Mar. 20; v. 236; p. 825.

Both, Tonjes A. C., Malden, assignor to The Zee Socket and Manufacturing Company, Boston, Mass. Universal flush receptacle and plug. No. 1,219,908; Mar. 20; v. 236; p. 769.

Boughton, Roger C., Fresno, Cal. Combination pencil-clip and pencil-sharpener. No. 1,218,741; Mar. 13; v. 236; p. 334.

Bourret, Alfred, St. Joseph, Quebec, Canada. Harrow. No. 1,218,833; Mar. 13; v. 236; p. 368.

Bovard, William P., assignor to The Ohio Brass Company, Mansfield, Ohio. Manufacturing electrical conductors. No. 1,220,596; Mar. 27; v. 236; p. 1050.

Boving, Paul C., Philadelphia, Pa. Laying mineral-composition floors. No. 1,218,822; Mar. 13; v. 236; p. 291.

Bowen, George W. (See Drake, George W., assignor.)

Bowen, John E., *et al.* (See Harlow, Eldon E., assignor.)

Bower, Byron B., Bainbridge, Ga. Steam-turbine. No. 1,218,834; Mar. 13; v. 236; p. 369.

Bower, John H. (See Bower, William P. and J. H.)

Bower, William P. and J. H., Milwaukee, Wis. Flying toy. No. 1,218,835; Mar. 13; v. 236; p. 369.
Bowers, William F. A., Chicago, Ill. Protector for padlocks. No. 1,220,941; Mar. 27; v. 236; p. 1165.
Bowman, Harvey, *et al.* (See Peterson, Charlie, assignor.)
Bowman, James A. (See Malins, Henry S., assignor.)
Bown, William, Jr. (See Chaffin, Arthur L., assignor.)
Boyce, Milford W., Kearney, N. J. Locking device for automobiles. No. 1,220,315; Mar. 27; v. 236; p. 951.
Boyd, Samuel A., Charleston, W. Va. Gas-burner for steam-boilers. No. 1,219,072; Mar. 13; v. 236; p. 450.
Boyer, Samuel, Portland, Oreg. Vehicle-signal. No. 1,219,233; Mar. 13; v. 236; p. 505.
Bosman, Joseph O., Baltimore, Md. Foot-rest for radiators. No. 1,218,518; Mar. 6; v. 236; p. 217.
Brace, Delbert, Elmira Heights, N. Y. Starting-gear connection for explosive-engines. No. 1,220,492; Mar. 27; v. 236; p. 1014.
Bracke, Robert F., assignor of one-third to A. G. McCaleb and one-third to A. C. Ahlberg, Chicago, Ill. Marker for lathes and the like. No. 1,220,597; Mar. 27; v. 236; p. 1050.
Brackett, Ernest W., assignor to Splitdorf Electrical Company, Newark, N. J. Clutch. No. 1,219,698; Mar. 20; v. 236; p. 696.
Bradbury, Eben T., St. Louis, Mo. Machine for manufacturing trunk slats, strips, and moldings. No. 1,217,907; Mar. 6; v. 236; p. 7.
Bradley, Edward E., assignor to The Atwood Machine Company, Stonington, Conn. Warping-machine. No. 1,218,365; Mar. 6; v. 236; p. 167.
Bradley, Franklin F., assignor to Bradley & Vrooman Company, Chicago, Ill. Spraying apparatus. No. 1,220,942; Mar. 27; v. 236; p. 1165.
Bradley, Harry L. (See Bradley, Lynde and H. L.)
Bradley, John H., Philadelphia, Pa. Bed-frame. No. 1,218,519; Mar. 6; v. 236; p. 217.
Bradley, Lynde and H. L., Milwaukee, Wis. Automatic release mechanism. No. 1,220,721; Mar. 27; v. 236; p. 1091.
Bradley & Vrooman Company. (See Bradley, Franklin F., assignor.)
Bradstrum, Einer P. (See Rose, Bradstrum, and Grant.)
Bragg, Edward, Farmerville, La. Milking-stool. No. 1,220,316; Mar. 27; v. 236; p. 952.
Brainerd, Lura S., Meriden, Conn. Dress-waist pattern. No. 1,219,234; Mar. 13; v. 236; p. 505.
Brand, Edward D. (See Parke and Brand.)
Brand, George P., New York, N. Y. Sheet-centralizing mechanism. No. 1,219,235; Mar. 13; v. 236; p. 505.
Brand, Hugo, assignor to J. Schönbaumfeld, Deutsch-Beneschau, Ringplatz, Austria - Hungary. Machine for making buttons and the like. No. 1,218,742; Mar. 13; v. 236; p. 335.
Brand, Morrie, assignor of one-half to W. J. Gerdau, San Francisco, Cal. Reversible window-sash. No. 1,220,722; Mar. 27; v. 236; p. 1091.
Brandeau, Harry H. (See Murphy and Brandeau.)
Brandel, Albert H., and F. Greer, Lansing, Mich. Upholstering former or mold. No. 1,220,393; Mar. 27; v. 236; p. 979.
Brannan, Cecil N., assignor of one-half to C. A. Couplin, Palouse, Wash. Wagon-seat. No. 1,220,943; Mar. 27; v. 236; p. 1165.
Bray, Oliver L., Clifton, Ariz. Soap-holder. No. 1,219,370; Mar. 13; v. 236; p. 552.
Brayer, Vernon G., Quenemo, Kans. Bow-rest. No. 1,220,522; Mar. 27; v. 236; p. 1024.
Brennan, John S., Milwaukee, Wis. Thermostatically-controlled radiator-valve. No. 1,219,699; Mar. 20; v. 236; p. 697.
Brennan, John S., assignor to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Convertible fluid-fuel kindler and heater for stoves. No. 1,218,974; Mar. 13; v. 236; p. 417.
Bretthauer, Herman, New York, N. Y. Tire-patch clamp. No. 1,220,819; Mar. 27; v. 236; p. 1126.
Breul, Frederick G., assignor to American Chain Company, Incorporated, Bridgeport, Conn. Making chain links. No. 1,219,431; Mar. 20; v. 236; p. 604.
Brewer, Charles B., Hyattsville, Md., and H. E. Hanes, Herndon, Va. Game apparatus. No. 1,217,908; Mar. 6; v. 236; p. 8.
Brewer, John H., Louisville, Ky. Vehicle-brake. No. 1,219,073; Mar. 13; v. 236; p. 450.
Brewster, Charles A., Kaw, Okla. Foot-press tobacco-cutter. No. 1,220,068; Mar. 20; v. 236; p. 826.
Brewster, Henry, New York, N. Y. License-sign for automobiles. No. 1,219,236; Mar. 13; v. 236; p. 505.
Bricka, Milton S., Milan, Ind. Telephone-line disconnector. No. 1,219,531; Mar. 20; v. 236; p. 638.
Bridges, Christopher M., assignor to Bridges Sanitary Fish Container Company of California, San Francisco, Cal. Fish-packer and carton. No. 1,219,237; Mar. 13; v. 236; p. 506.
Bridges Sanitary Fish Container Company of California. (See Bridges, Christopher M., assignor.)
Bridgham, Arthur L., assignor of one-half to C. H. Sherburne, Boston, Mass. Safety device for steam-boilers and other fixtures containing steam under pressure. No. 1,220,944; Mar. 27; v. 236; p. 1166.
Bried, Julien A., Oakland, Cal. Casement-window bracing and locking device. No. 1,218,366; Mar. 6; v. 236; p. 167.
Briggs, Stephen F., assignor to Briggs & Stratton Company, Milwaukee, Wis. Padlock-switch. No. 1,220,174; Mar. 27; v. 236; p. 901.
Briggs & Stratton Company. (See Briggs, Stephen F., assignor.)
Brightman, C. W., *et al.* (See Brightman, Harrison M., assignor.)
Brightman, G. F., *et al.* (See Brightman, Harrison M., assignor.)
Brightman, H. L., *et al.* (See Brightman, Harrison M., assignor.)
Brightman, Harrison M., Columbus, Ohio. Forming a tube. No. 1,219,802; Mar. 20; v. 236; p. 733.
Brightman, Harrison M., assignor of one-fifth to C. W. Brightman, one-fifth to G. F. Brightman, one-fifth to H. L. Brightman, and one-fifth to J. H. Brightman, Columbus, Ohio. Boring and drilling machine. No. 1,219,803; Mar. 20; v. 236; p. 733.
Brightman, J. H., *et al.* (See Brightman, Harrison M., assignor.)
Briles, Larkin, Lake City, Cal. Cutter for mowers. No. 1,218,924; Mar. 13; v. 236; p. 401.
Brillhart, William H., Kendallville, Ind. Mixing apparatus. No. 1,218,623; Mar. 13; v. 236; p. 291.
Brine, John H., Kenosha, Wis., assignor to Paramount Hosiery Form Drying Co., Chicago, Ill. Hosiery-finishing apparatus. No. 1,218,520; Mar. 6; v. 236; p. 218.
Brisben, Ernest J., assignor to Osborn-Crew Manufacturing Company, Cleveland, Ohio. Emery-wheel dresser. No. 1,220,175; Mar. 27; v. 236; p. 901.
Brison, William R., Tompkinsville, N. Y. Combined bung and strainer. No. 1,218,975; Mar. 13; v. 236; p. 418.
Broadbooks, Peter, Batavia, N. Y. Shears for shearing metal. No. 1,218,521; Mar. 6; v. 236; p. 218.
Broadus, Homer T. (See Armstrong, Frank J., assignor.)
Brockway, Edwin L., Glenside, Pa. Identification-tag. No. 1,219,909; Mar. 20; v. 236; p. 770.
Broman, John G., Chicago, Ill. Smokeless oven-furnace. No. 1,220,394; Mar. 27; v. 236; p. 979.
Bronson, E. J. (See McLain, Victor C., assignor.)
Brönsted, Johannes N., assignor to Hellesens Enke & V. Ludvigsen, Copenhagen, Denmark. Galvanic battery-cell of the mercuric-oxid type. No. 1,219,074; Mar. 13; v. 236; p. 450.
Brooks, Benjamin T. (See Bacon, Brooks, and Clark.)
Brooks, Benjamin T., and F. W. Padgett, assignors to Gulf Refining Company, Pittsburgh, Pa. Manufacture of a non-saponifiable unsaturated hydrocarbon oil from a drying-oil. No. 1,220,820; Mar. 27; v. 236; p. 1126.
Brooks, Benjamin T., and F. W. Padgett, assignors to Gulf Refining Company, Pittsburgh, Pa. Manufacture of a non-volatile unsaturated hydrocarbon from petroleum. No. 1,220,821; Mar. 27; v. 236; p. 1126.
Brooks, David. (See Chalupa and Brooks.)
Brooks, David, Jr. (See Chalupa and Brooks.)
Brooks, Winfred M., East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y. Seal. No. 1,219,075; Mar. 13; v. 236; p. 450.
Brooks, Winfred M., East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y. Seal. No. 1,219,076; Mar. 13; v. 236; p. 451.
Brooks, Winfred M., East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y. Wire-netting machine. No. 1,219,622; Mar. 20; v. 236; p. 670.
Brothen, Ole O., Westby, Wis. Sled. No. 1,220,822; Mar. 27; v. 236; p. 1127.
Brower, Abraham T. H., Chicago, Ill. Printing-press. No. 1,218,049; Mar. 6; v. 236; p. 57.
Brown, Charley S., Kenedy, Tex. Wrench. No. 1,218,522; Mar. 6; v. 236; p. 218.
Brown, Christy, Wilmette, assignor to American Car Roof Company, Chicago, Ill. Car-roof. No. 1,218,624; Mar. 13; v. 236; p. 292.
Brown, Fay C., Berkeley, Cal. Selenium bridge and making same. No. 1,219,432; Mar. 20; v. 236; p. 604.
Brown, Harry C., Westwood, N. J., assignor to H. B. Newhall, Littleton, N. H. Combination vise, anvil, and drill, and parts thereof. No. 1,217,909; Mar. 6; v. 236; p. 8.
Brown, Harry C., Westwood, N. J., assignor to H. B. Newhall, Littleton, N. H. Vise. No. 1,217,910; Mar. 6; v. 236; p. 9.
Brown, Harry C., Westwood, N. J., assignor to H. B. Newhall, Littleton, N. H. Drill mechanism. No. 1,217,911; Mar. 6; v. 236; p. 9.
Brown, Horace H., assignor of one-half to G. Pfei, New York, N. Y. Sound recording and reproducing machine. No. 1,218,625; Mar. 13; v. 236; p. 292.
Brown, Horace P., and C. L. Johnston, Oakland, Cal. Mechanism for interleaving paper. No. 1,219,238; Mar. 13; v. 236; p. 506.
Brown, Horace P., and C. L. Johnston, Oakland, Cal. Paper towel and tissue machine. No. 1,219,239; Mar. 13; v. 236; p. 507.
Brown, James H., New York, N. Y. Eyeglass. No. 1,219,433; Mar. 20; v. 236; p. 604.
Brown, James L., Rockport, Ky. Warm-air accumulator and distributer. No. 1,220,723; Mar. 27; v. 236; p. 1092.
Brown, James M., Johnson City, Tenn. Chlorate explosive. No. 1,218,976; Mar. 13; v. 236; p. 418.

Brown, J Grove, Groton, N. Y. Stone-spreading machine. No. 1,220,945; Mar. 27; v. 236; p. 1166.
Brown, John C. (See Knapp, John D. C., assignor.)
Brown, John T. S., Jr., Prospect, Ky. Working head for deep-well pumps. No. 1,218,626; Mar. 13; v. 236; p. 292.
Brown, Lucius A., assignor to The M. M. Johnson Co., Clay Center, Nebr. Damper and heat-regulator for incubators. No. 1,220,946; Mar. 27; v. 236; p. 1167.
Brown, Robert G., assignor to J. E. Streitelmeier, Cincinnati, Ohio. Sound-reproducing machine. No. 1,221,003; Mar. 27; v. 236; p. 1185.
Brown, Thomas R., Sparkill, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Combined car and electric coupling. No. 1,220,317; Mar. 27; v. 236; p. 952.
Brown, Victor F. (See Cox and Powell, assignors.)
Brown, William H., Cleveland, Ohio. Leaf-spring lubricator. No. 1,219,804; Mar. 20; v. 236; p. 733.
Brown, William H., Cleveland, Ohio. Spring-lubricating clip. No. 1,220,176; Mar. 27; v. 236; p. 901.
Brubaker, William, Tolna, N. D. Wagon end-gate. No. 1,219,910; Mar. 20; v. 236; p. 770.
Brubaker, William A., assignor to The Miller Rubber Company, Akron, Ohio. Machine for stripping hollow articles from their forms. No. 1,220,177; Mar. 27; v. 236; p. 902.
Bruce, Thomas S., Dallas, Tex. Device for dispensing liquids. No. 1,218,925; Mar. 13; v. 236; p. 401.
Brucker, Ferdinand F., assignor to The Miller Rubber Company, Akron, Ohio. Tire-stitching machine. No. 1,218,627; Mar. 13; v. 236; p. 293.
Brucker, Ferdinand F., assignor to The Miller Rubber Co., Akron, Ohio. Method of and apparatus for applying rubber covers to tire-carcasses. No. 1,220,178; Mar. 27; v. 236; p. 902.
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Bruggeman, Harold A., Beaver Falls, Pa. Heater for automobiles and the like. No. 1,218,367; Mar. 6; v. 236; p. 167.
Brunner, John, Napoleon, Ind. Railway-tie. No. 1,219,911; Mar. 20; v. 236; p. 770.
Bruns, Edward, Portland, Oreg. No-glare headlight. No. 1,217,912; Mar. 6; v. 236; p. 9.
Brunswick-Balke-Collender Company. (See Hobbs, Francis C., assignor.)
Bryan, Daniel R. (See Bryan, Joseph W. and D. R.) (Reissue.)
Bryan, Joseph W., New York, N. Y., and D. R. Bryan, Chatham, N. J.; said Joseph W. Bryan assignor to said D. R. Bryan. Apparatus for sorting heterogeneous material. (Reissue.) No. 14,266; Mar. 6; v. 236; p. 251.
Bryce, James W. (See Goss and Bryce.)
Bryce, James W., Bloomfield, N. J., assignor to International Time Recording Company of New York, Endicott, N. Y. Time-recorder. No. 1,219,912; Mar. 20; v. 236; p. 771.
Buch, Max, Detroit, assignor to H. E. Edwards, Jackson, Mich. Top for vehicles and the like. No. 1,219,805; Mar. 20; v. 236; p. 734.
Buch, Max, Detroit, assignor to H. E. Edwards, Jackson, Mich. Folding top or hood for vehicles. No. 1,219,806; Mar. 20; v. 236; p. 734.
Buch, Max, assignor to H. E. Edwards, Jackson, Mich. Hood or cover for vehicles. No. 1,219,807; Mar. 20; v. 236; p. 734.
Buchanan, Frank, Syracuse, N. Y. Support for incandescent-electric-lamp sockets. No. 1,220,395; Mar. 27; v. 236; p. 980.
Buchanan, James C., Washington, D. C., assignor to Rapid Tobacco Stemmer Co., Wilmington, Del. Feeding device for tobacco-leaves. No. 1,219,077; Mar. 13; v. 236; p. 451.
Buchanon, Claud. (See Kelly, Guy W., assignor.)
Bucher, Johann J., Zurich-Enge, Switzerland. Drive-chain. No. 1,218,368; Mar. 6; v. 236; p. 168.
Bucher, John W., and R. P. Akins, assignors to Colorado Iron Works Company, Denver, Colo. Automatic controlling system for continuous agitation and transfer system for treatment of ores. No. 1,219,240; Mar. 13; v. 236; p. 507.
Buchler, Béla, Wilmington, Del. Sounding toy. No. 1,219,241; Mar. 13; v. 236; p. 508.
Bucklitch, Gustave. (See Hadfield, Samuel, assignor.)
Buckman, Edward A., Walkerville, Ontario, Canada, assignor of one-half to E. H. Sellers. Electric welder. No. 1,220,598; Mar. 27; v. 236; p. 1050.
Buehler, Albert, assignor to The Toledo Button Machine Company, Toledo, Ohio. Hopper-slide-control means for shoe-button-fastening machines. No. 1,218,051; Mar. 6; v. 236; p. 57.
Buehler, Albert W., assignor to The Toledo Button Machine Company, Toledo, Ohio. Button-placing-finger control. No. 1,220,599; Mar. 27; v. 236; p. 1051.
Buehrer, Emil C., assignor to A. S. Joslin, Chicago, Ill. Dating-stamp. No. 1,218,590; Mar. 6; v. 236; p. 242.
Buff, Jacob, Union Hill, N. J. Carousel. No. 1,219,913; Mar. 20; v. 236; p. 771.
Bullard, Albert M., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system and apparatus therefor. No. 1,219,700; Mar. 20; v. 236; p. 697.
Bullen, Arthur C., Swink, Colo. Vegetable-cutter. No. 1,220,179; Mar. 27; v. 236; p. 902.
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Bunch, John A., Adams, Oreg. Fire-alarm and multiple circuit-closer. No. 1,220,493; Mar. 27; v. 236; p. 1014.
Bunde, Clara A. (See Bell, Lewis B., assignor.)
Bunger, August, Hoboken, N. J. Bronzing liquid. No. 1,220,947; Mar. 27; v. 236; p. 1167.
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Bunke, Frederick H. (See Long and Bunke.)
Buraschi, John P., South Bend, Ind. Leather-creasing machine. No. 1,218,369; Mar. 6; v. 236; p. 168.
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Burchartz, Ferdinand, New York, N. Y., assignor to Burchartz Fireproofing Company, Inc. Hollow block for reinforced-concrete floors. No. 1,219,532; Mar. 20; v. 236; p. 639.
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Burgess, Louis. (See Barnett and Burgess.)
Burke, Alfred, Brooklyn, N. Y. Making celluloid spectacle-frames. No. 1,220,600; Mar. 27; v. 236; p. 1051.
Burke, William J., assignor to Elliott Company, Pittsburgh, Pa. Controlling-valve. No. 1,220,823; Mar. 27; v. 236; p. 1127.
Burkholder, John D., Lancaster, Pa., assignor, by mesne assignments, to Toledo Scale Company, Toledo, Ohio. Dash-pot. No. 1,220,180; Mar. 27; v. 236; p. 903.
Burkholder, Ross, Marshall, Ill. Adjustable concrete-culvert form. No. 1,219,434; Mar. 20; v. 236; p. 604.
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Burmeister, Charles, Sutherland, Iowa. Cultivator shovel or tooth. No. 1,220,181; Mar. 27; v. 236; p. 903.
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Burns, Andrew A. S., Montreal, Quebec, Canada. Device for correcting the deformities of the feet. No. 1,220,724; Mar. 27; v. 236; p. 1092.
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Burns, William G., New York, N. Y., assignor to Jabez Burns & Sons. Apparatus for cooling coffee, &c. No. 1,218,978; Mar. 13; v. 236; p. 419.
Burrell, Ernest L., Chicago, Ill. Treating the fabric for power-transmission belts. No. 1,218,052; Mar. 6; v. 236; p. 58.
Burroughs Adding Machine Company. (See Vincent, Jesse G., assignor.)
Burroughs Adding Machine Company. (See Wilson, William W., assignor.)
Burton, George W. (See Fischer and Burton.)
Burtraw, Lyman T., Marcellus, Mich. Car-seal carrier. No. 1,219,623; Mar. 20; v. 236; p. 670.
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Bushey, Fillmore, St. Albans, Vt. Razor-blade holder. No. 1,219,915; Mar. 20; v. 236; p. 772.
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Busse, Edwin G., assignor to Chicago Railway Equipment Company, Chicago, Ill. Trussed brake-beam. No. 1,219,436; Mar. 20; v. 236; p. 605.
Bussey, Ernest, Dothan, Ala., assignor to Foot Air Accelerator Company, Cincinnati, Ohio. Foot air-accelerator for hydrocarbon-motors. No. 1,218,927; Mar. 13; v. 236; p. 402.
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Butterfield, Horace S., Portland, Oreg. Azimuth-chronometer. No. 1,219,372; Mar. 13; v. 236; p. 553.
Butterfield, John C., Balham, London, assignor of one-half to A. Ashworth, Bury, England. Production of tungsten from scheelite. No. 1,217,913; Mar. 6; v. 235; p. 10.
Butterfield, John C., Balham, London, assignor of one-half to A. Ashworth, Bury, England. Extraction of tungsten from tungsten ores. No. 1,217,914; Mar. 6; v. 236; p. 10.
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Cadby, Harry S., Arlington, N. J. Dish. No. 1,220,495; Mar. 27; v. 236; p. 1014.
Cadillac Motor Car Company. (See Snell, Lyle K., assignor.)
Cahill, Charles T., Boston, Mass. Apparatus for receiving projected images. No. 1,218,979; Mar. 13; v. 236; p. 419.

Calahan, Delona L., Fairfax, assignor to Manley, Moore Lumber Company, Tacoma, Wash. Automatic boring-machine. No. 1,219,078; Mar. 13; v. 236; p. 452.
Caldwell, Frank, Cincinnati, Ohio. Rail-tie plate and rail-fastener. No. 1,220,948; Mar. 27; v. 236; p. 1167.
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Callahan, Jeremiah M., New York, N. Y. Releasably-locked garment rail or hanger. No. 1,218,980; Mar. 13; v. 236; p. 419.
Cameron, Angus D., Summerstown Front, Ontario, Canada, assignor to L. A. Chittenden, Massena, N. Y. Leaf-spring. No. 1,220,396; Mar. 27; v. 236; p. 980.
Camp, Fred, Duncombe, Iowa. Post-hole auger. No. 1,220,949; Mar. 27; v. 236; p. 1168.
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Campbell, Edward, Windsor, Ontario, Canada, and G. A. Fair, Detroit, Mich. Lacing device. No. 1,220,602; Mar. 27; v. 236; p. 1052.
Campbell, Edward A., St. Louis, Mo. Combined mud-guard and advertising device. No. 1,219,244; Mar. 13; v. 236; p. 508.
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Candland, Arthur C., Provo, Utah. Rail-tie. No. 1,218,592; Mar. 6; v. 236; p. 243.
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Cano, Victor M., assignor of two-fifths to D. G. Black, St. Louis, Mo. Combined step-ladder and washbench. No. 1,220,950; Mar. 27; v. 236; p. 1168.
Canton, Allen A., New York, N. Y., assignor to The Device Testing Company. Speedometer. No. 1,219,245; Mar. 13; v. 236; p. 509.
Capdevila, Frank, New York, N. Y. Adjustable mirror. No. 1,220,060; Mar. 20; v. 236; p. 826.
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Cappel, Carl L., Dayton, Ohio. Automobile-truck body. No. 1,220,183; Mar. 27; v. 236; p. 904.
Cardwell, Allen D., Brooklyn, N. Y. Telegraph typewriter. No. 1,218,165; Mar. 6; v. 236; p. 96.
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Carlson, Frank A., *et al.* (See Mansbach, Conrad B., assignor.)
Carlson, Frederick E., assignor to Landers, Frary & Clark, New Britain, Conn. Vacuum-bottle. No. 1,219,246; Mar. 13; v. 236; p. 509.
Carlson, Isaac O., Chicago, Ill. Ice-chest shelf. No. 1,218,166; Mar. 6; v. 236; p. 96.
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Carman, Edwin S., assignor to The Osborn Manufacturing Company, Cleveland, Ohio. Mold-making machine. No. 1,220,726; Mar. 27; v. 236; p. 1092.
Carman, Frank V., Oakland, Cal. Spike-hole-plug machine. No. 1,218,836; Mar. 13; v. 236; p. 869.
Carmichael, Harvey B., Kegomic, Petoskey, Mich. Attachment for motor-vehicles. No. 1,219,247; Mar. 13; v. 236; p. 509.
Carmody, Harold J., Brooklyn, assignor of one-third to J. M. Levine and one-third to H. Ufland, New York, N. Y. Thermostat. No. 1,218,167; Mar. 6; v. 236; p. 97.
Carnahan, John W., assignor to The Wishbone Steel Wheel Company of America, Washington, D. C. Wheel construction. No. 1,218,593; Mar. 6; v. 236; p. 243.
Carr, Arthur C., San Francisco, Cal. Cigar and cigarette case. No. 1,220,496; Mar. 27; v. 236; p. 1015.
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Carrick, Gerald S., assignor to C. Scholz, trustee, Chicago, Ill. Grate-bar. No. 1,218,594; Mar. 6; v. 236; p. 244.
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Carrington, Fred W., Burlington, Vt., assignor of one-half to G. O. Taylor, Topeka, Kans. Machine for cleaning metal plates. No. 1,218,523; Mar. 6; v. 236; p. 219.
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Carstarphen, Frederick C., Trenton, assignor to The American Steel and Wire Company of New Jersey, Hoboken, N. J. Grip for aerial tramways. No. 1,218,372; Mar. 6; v. 236; p. 169.
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Cartwright, David J., Easton, Pa., assignor to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Storage-battery plate. No. 1,220,604; Mar. 27; v. 236; p. 1053.
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Cary, James H., Boston, Mass., assignor of one-half to W. H. Griffith, Narragansett Pier, R. I. Lock-nut. No. 1,218,168; Mar. 6; v. 236; p. 97.
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Casey, Marion R., assignor to Clinton Cam Company, Clinton, S. C. Cam. No. 1,219,249; Mar. 13; v. 236; p. 510.
Cass, Myron T., Schenectady, N. Y., assignor of one-half to The Kellam & Shaffer Company. Drier. No. 1,219,081; Mar. 13; v. 236; p. 453.
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Castells, Ramon, Barcelona, Spain. Plastic composition. No. 1,219,536; Mar. 20; v. 236; p. 641.
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Cecka, Franz, assignor to Schubert & Salzer Maschinenfabrik, Aktiengesellschaft, Chemnitz, Germany. Making socks or stockings. No. 1,219,252; Mar. 13; v. 236; p. 511.
Chaffin, Arthur L., Torrey, assignor to one-half to W. Bown, Jr., Fayette, Utah. Road scraping and leveling device. No. 1,219,375; Mar. 13; v. 236; p. 554.
Chalberg, Edward E., assignor of one-half to A. B. Ozman, Chapell, Nebr. Compound internal-combustion engine. No. 1,219,082; Mar. 13; v. 236; p. 453.
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Chalman, John E., assignor to Union Special Machine Company, Chicago, Ill. Feeding mechanism for sewing-machines. No. 1,220,726; Mar. 27; v. 236; p. 1092.
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Childress, Henderson P., assignor to Cotton Buckle and Tag Co., Memphis, Tenn. Bale-buckle. No. 1,219,702; Mar. 20; v. 236; p. 698.
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Christianson, Andrew, Butler, assignor to Standard Steel Car Company, Pittsburgh, Pa. Car-roof. No. 1,220,193; Mar. 27; v. 236; p. 907.
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Church, Albert E., assignor to Union Manufacturing Company, New Britain, Conn. Machine-chuck. No. 1,219,439; Mar. 20; v. 236; p. 606.
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Church & Dwight. (See Schroeder and Tooker, assignors.)
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Clack, William A., Maryneal, Tex. Wire-stretcher. No. 1,218,744; Mar. 13; v. 236; p. 335.
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Clark, Charles H., Crafton, and H. L. Beach, Edgewood, Pa. Dump-truck. No. 1,220,727; Mar. 27; v. 236; p. 1093.
Clark, Charles H., Crafton, and H. L. Beach, Edgewood, Pa. Dump-truck. No. 1,220,728; Mar. 27; v. 236; p. 1093.
Clark, Everett, Economy, Ind. Post-anchor. No. 1,218,238; Mar. 6; v. 236; p. 123.
Clark, Frank H., and J. M. Coffey, assignors to Chambers Valve Company, New York, N. Y. Throttle-valve. No. 1,220,729; Mar. 27; v. 236; p. 1094.
Clark, George, assignor to Wolf, Sayer & Heller, Chicago, Ill., a Corporation. Expansion-valve. No. 1,218,745; Mar. 13; v. 236; p. 336.
Clark, Hugh. (See Bacon, Brooks, and Clark.)
Clark, Myron H., Malden, Mass., assignor to The Goodyear's Metallic Rubber Shoe Company. Machine for making rubber goods. No. 1,218,983; Mar. 13; v. 236; p. 420.
Clark, Sam H., *et al.* (See Johnston, Clarence S., assignor.)
Clark, William F. (See Wilson and Clark.)
Clark, William T., Beloit, Wis. Dressing piston-rings and apparatus therefor. No. 1,219,440; Mar. 20; v. 236; p. 606.
Clarke, John T. (See Hillman, Henry G., assignor.)
Clarke, Mary H., *née* Ashton, and D. Maggiora, Paris, France. Apparatus for dispelling aeroplanes and the like. No. 1,219,703; Mar. 20; v. 236; p. 698.
Clarke, Sye C. (See Turner, Whitehead, and Clarke.)
Clausen, Henry P., Mount Vernon, assignor to Western Electric Company, Incorporated, New York, N. Y. Testing arrangement. No. 1,220,607; Mar. 27; v. 236; p. 1054.
Clayton, Howard D. (See Garner and Clayton.)
Clayton, William E., Altoona, Kans. Supporting device. No. 1,218,055; Mar. 6; v. 236; p. 59.
Clayton, William F., Cullman County, assignor of one-half to W. E. James, Cullman, Ala. Plow-fender. No. 1,220,071; Mar. 20; v. 236; p. 827.
Clement, Cecil C., assignor of one-half to H. B. Kingsbury, Spokane, Wash. Stereopticon. No. 1,218,928; Mar. 13; v. 236; p. 402.
Cleveland Car Specialty Company. (See Costello, Joseph A., assignor.)
Cleveland Motorcycle Manufacturing Company, The. (See Johnson, Wilfred G., assignor.)
Clifford, William P., Ottumwa, and J. C. Cook, Russell, Iowa. Ore-separator. No. 1,218,170; Mar. 6; v. 236; p. 98.
Clifton Manufacturing Company. (See Raymond, Nelson H., assignor.)
Clifton, Nels R., Duluth, Minn. Receptacle. No. 1,218,524; Mar. 6; v. 236; p. 219.
Climax Container Company. (See Shevlin, Charles W., assignor.)
Clinton Cam Company. (See Casey, Marion R., assignor.)
Clinton Wire Cloth Company. (See Southwick, William S., asignor.)
Clipper Belt Lacer Company. (See Vanderveld, Anthony, assignor.)
Clulee, Stephen J., Attleboro, Mass. Making eyeglass-rims. No. 1,219,254; Mar. 13; v. 236; p. 512.
Coach, Richard J., assignor to The Sub-Surface Vacuum Development Company, Cleveland, Ohio. Evaporator. No. 1,220,194; Mar. 27; v. 236; p. 907.
Coates, Frederick, Rochester, N. Y. Paper bottle. No. 1,218,984; Mar. 13; v. 236; p. 421.
Coates, George, assignor of one-eighth to R. W. Coates and one-eighth to J. S. Walker, Victor, Colo. Safety device for mine-elevator cages. No. 1,219,918; Mar. 20; v. 236; p. 773.
Coates, Harry E., Sacramento, Cal. Game apparatus. No. 1,218,374; Mar. 6; v. 236; p. 169.
Coates, Richard W., *et al.* (See Coates, George, assignor.)
Cocanari, Silvio, Vieux Dieu, near Antwerp, Belgium. Cinematograph apparatus and film for use therewith. No. 1,220,195; Mar. 27; v. 236; p. 907.
Coe, Robert A., and T. J. Harbour, Tupelo, Okla. Boltless rail-joint clamp. No. 1,219,255; Mar. 13; v. 236; p. 512.
Coffey, Joseph M. (See Clark and Coffey.)
Coffman, George L., Oklahoma, Okla. Automatic gas cut-off. No. 1,219,627; Mar. 20; v. 236; p. 671.
Coffman Manufacturing Company, The. (See Craig, Clyde L., assignor.)
Coffman, Parrett W., New Salem, Pa. Tire-tool. No. 1,220,956; Mar. 27; v. 236; p. 1170.
Cohen, Leon, St. Louis, Mo. Hat-box. No. 1,218,628; Mar. 13; v. 236; p. 293.
Cohen, Louis, Washington, D. C. Wireless signaling. No. 1,220,072; Mar. 20; v. 236; p. 827.
Cole, Francis J., Schenectady, N. Y. Locomotive driving-box. No. 1,218,375; Mar. 6; v. 236; p. 170.
Cole, Joseph M., New York, N. Y. Ship's draft-gage. No. 1,218,525; Mar. 6; v. 236; p. 219.
Cole, Roy E., assignor to Liberty Motor Car Company, Detroit, Mich. Battery-holder. No. 1,218,056; Mar. 6; v. 236; p. 59.
Collins, Francis A., Jr., assignor to Auburn Ball Bearing Company, Rochester, N. Y. Ball-bearing. No. 1,219,919; Mar. 20; v. 236; p. 773.
Collins, Francis A., Jr., assignor to Auburn Ball Bearing Company, Rochester, N. Y. Ball-bearing. No. 1,219,920; Mar. 20; v. 236; p. 773.
Collins, Francis A., Jr., assignor to Auburn Ball Bearing Company, Rochester, N. Y. Ball-bearing. No. 1,219,921. Mar. 20; v. 236; p. 774.
Collister, Nelson C., Cleveland, and C. R. McDonald, East Liverpool, Ohio, assignors, by mesne assignments, to A. Leich and J. Berner, Milwaukee, Wis. Ice-cream machine. No. 1,218,985; Mar. 13; v. 236; p. 421.
Colorado Iron Works Company. (See Bucher and Akins, assignors.)
Columbia Paper Bag Company. (See Bartlett, John H., assignor.)
Colvin, Charles H., Chattanooga, Tenn., assignor to E. E. Colvin. Flushing mechanism for water-closets. No. 1,218,610; Mar. 6; v. 236; p. 249.
Colvin, Elizabeth E. (See Colvin, Charles H., assignor.)
Combs, James R., Dinsmore, Fla. Computing-machine. No. 1,218,376; Mar. 6; v. 236; p. 170.
Combustion Specialty Co. (See Manhire, William J., assignor.)
Comer, Andrew J., Cullison, Kans. Windmill-engine. No. 1,220,196; Mar. 27; v. 236; p. 908.
Commercial Truck Company of America. (See Mella, Martin, assignor.)
Commonwealth Steel Company. (See Howe, Andrew F., assignor.)
Compagne, Lawrence. (See Berglund, Herman, assignor.)
Company of Levinstein Limited. (See Levinstein, Ivan, assignor.)
Comstock, Ira M. (See Flanders, Bert W., assignor.)
Concato, Girolamo, Brooklyn, N. Y. Shock-absorber. No. 1,218,171; Mar. 6; v. 236; p. 98.
Concordia Safety Lamp Company, The. (See Koch, Richard, assignor.)

Congoleum Company, The. (See Prifold, George, assignor.)
Conklin, Oliver F., assignor to Remy Electric Company, Anderson, Ind. Article composed partly of rubber or the like. No. 1,218,596; Mar. 6; v. 236; p. 244.
Conlan, William F., Cleveland, Ohio. Headlight-dimmer. No. 1,219,628; Mar. 20; v. 236; p. 672.
Conley, Thomas J. (See Walsh, John L., assignor.)
Conn, Charles G., Elkhart, Ind. Cornet. No. 1,218,057; Mar. 6; v. 236; p. 59.
Conn, Isaac D., Wellington, Tex. Hame-hook. No. 1,217,916; Mar. 6; v. 236; p. 11.
Connecticut Telephone & Electric Company. (See Lawton, Burton L., assignor.)
Connell, Edward. (See Inglis, Charles E., assignor.)
Connell, Harry W., Newark, N. J. Differential mechanism for automobiles. No. 1,217,917; Mar. 6; v. 236; p. 11.
Connell, Harry W., Bloomfield, N. J. Differential mechanism. No. 1,217,918; Mar. 6; v. 236; p. 11.
Connelly, Patrick J., Youngstown, Ohio, assignor of one-half to E. R. Lewis. Curtain-stretcher. No. 1,219,085; Mar. 13; v. 236; p. 454.
Conrad, Frank, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Ignition system. No. 1,219,704; Mar. 20; v. 236; p. 699.
Conrad, Nicholas J., assignor to Schweitzer & Conrad, Chicago, Ill. Fuse device. No. 1,220,152; Mar. 20; v. 236; p. 859.
Consolidated Car-Heating Company. (See Farmer, Thomas, Jr., assignor.)
Consortium für elektrochemische Industrie G. m. b. H. (See Herrmann and Mugdan, assignors.)
Conway, John F., Brooklyn, N. Y. Attachment for fountain-pens. No. 1,220,824; Mar. 27; v. 236; p. 1127.
Conway, Norman B., Yuma, Ariz. Combination camera and film carrying case. No. 1,220,957; Mar. 27; v. 236; 1170.
Conwell, Frank M., Blairstown, Mo. Clutch. No. 1,220,320; Mar. 27; v. 236; p. 953.
Cook, Eugene F., assignor to O. F. Stifel, St. Louis, Mo. Piston packing-ring. No. 1,220,153; Mar. 20; v. 236; p. 859.
Cook, John C. (See Clifford and Cook.)
Cook, Stanley S. (See Parsons and Cook.)
Cook, Thomas R., and C. L. Fischer, Pittsburgh, Pa. Apparatus for determining flange-pressures. No. 1,219,922; Mar. 20; v. 236; p. 774.
Cooke, Thomas A., Philadelphia, Pa. Mechanical stoker. No. 1,219,256; Mar. 13; v. 236; p. 513.
Cooke, William A., Jr., Brooklyn, N. Y. File, binder, or the like. No. 1,219,705; Mar. 20; v. 236; p. 699.
Cooksey, William K. (See Bell, George T., assignor.)
Cooley, Henry B., New Britain, Conn., assignor to The American Paper Goods Company, Montclair, N. J. Envelop-machine. No. 1,219,407; Mar. 13; v. 236; p. 565.
Coombs, James W., assignor to Penn Rivet Corporation, Philadelphia, Pa. Rivet-slitting machine. No. 1,218,746; Mar. 13; v. 236; p. 336.
Coonan, Thomas, Champlain, N. Y. Automatic faucet. No. 1,219,923; Mar. 20; v. 236; p. 774.
Cooney, Charles. (See Gillespie and Cooney.)
Cooney, John T., Denver, Colo. Hat-fastener. No. 1,218,838; Mar. 13; v. 236; p. 370.
Cooper, Charles H., administrator. (See Cooper, John W.)
Cooper, Charles R. (See West, Britton, assignor.)
Cooper, Herbert, Brooklyn, N. Y. Shock-absorbing shaft. No. 1,218,929; Mar. 13; v. 236; p. 402.
Cooper, John W., deceased. C. H. Cooper, Buffalo, N. Y., administrator. Sash-fastener. No. 1,220,073; Mar. 20; v. 236; p. 828.
Cope, Frank T., assignor to The Electric Furnace Company, Alliance, Ohio. Electric furnace. No. 1,218,058; Mar. 6; v. 236; p. 59.
Cope, Frank T., assignor to The Electric Furnace Company, Alliance, Ohio. Selective oil-break switch. No. 1,218,059; Mar. 6; v. 236; p. 60.
Cope, Frank T. (See Bally and Cope.)
Corbett, Charles F., Clearspring, Md. Device for expanding and contracting demountable rims. No. 1,220,321; Mar. 27; v. 236; p. 954.
Cordery, Frank, Monroe, Mich. Brick composition. No. 1,218,239; Mar. 6; v. 236; p. 123.
Cornell, William L., Brown Mills, N. J. Air-moistening attachment for incubators. No. 1,220,407; Mar. 27; v. 236; p. 1015.
Cornet, George, San Francisco, Cal. Os-calcis metatarsal-arch supporter. No. 1,219,257; Mar. 13; v. 236; p. 513.
Cornwall, John B., assignor to Barnard and Leas Manufacturing Company, Moline, Ill. Feed-regulator. No. 1,220,058; Mar. 27; v. 236; p. 1171.
Coryell, William C., Youngstown, Ohio. Metal-handling apparatus for rolling-mills. No. 1,217,919; Mar. 6; v. 236; p. 12.
Coshow, Oliver P. (See Sanders, John F., assignor.)
Costello, Joseph A., assignor to Cleveland Car Specialty Company, Cleveland, Ohio. Metal carline for car-roof frames. No. 1,218,629; Mar. 13; v. 236; p. 293.
Costmeter Company. (See Quigley, John T., assignor.)
Costner, Robert E., Lincolnton, N. C. Nozzle. No. 1,220,730; Mar. 27; v. 236; p. 1094.
Cotton Buckle and Tag Co. (See Childress, Henderson P., assignor.)
Cotton, Caleb, assignor of one-third to I. P. Duncan and one-third to W. S. Theobold, Salt Lake City, Utah. Horseshoe with removable calks. No. 1,218,630; Mar. 13; v. 236; p. 294.
Coupiln, Charles A. (See Brannan, Cecil N., assignor.)
Coursen, Walter L. (See Rigg and Coursen.)
Cowell, William H., Columbus, Ohio. Boring mechanism. No. 1,220,309; Mar. 27; v. 236; p. 981.
Cowgill, Orph W., assignor of twelve one-hundredths to O. F. Stifel, twelve one-hundredths to L. H. Tiemann, twelve one-hundredths to A. G. Solari, twelve one-hundredths to J. Bonguer, and twelve one-hundredths to The Envelope Manufacturing Company, St. Louis, Mo. Machine for making envelops. No. 1,218,597; Mar. 6; v. 236; p. 244.
Cowles, John T., Chicago, Ill. Gold-dredge. No. 1,220,197; Mar. 27; v. 236; p. 908.
Cowles, John T., Chicago, Ill. Bedclothes-holder. No. 1,220,198; Mar. 27; v. 236; p. 909.
Cox, Berthold V. (See Cox, John C. and B. V.)
Cox, Harold F., and M. V. Powell, Flint, assignors of one-fourth to V. F. Brown, Bay City, Mich. Vehicle-wheel. No. 1,219,258; Mar. 13; v. 236; p. 513.
Cox, John C. and B. V., St. Louis, Mo. Disinfectant-dispensing attachment for flush-tanks. No. 1,220,398; Mar. 27; v. 236; p. 981.
Cox, Orlando A., Los Angeles, Cal. Dirigible-headlight mechanism. No. 1,220,731; Mar. 27; v. 236; p. 1095.
Cox, Richard C., assignor to Crosby Steam Gage & Valve Company, Boston, Mass. Gage-tester. No. 1,218,060; Mar. 6; v. 236; p. 60.
Cox, William H., Atlanta, Ga., assignor to H. E. Sessions, Columbia, S. C. Cotton-seed linter. No. 1,220,959; Mar. 27; v. 236; p. 1171.
Craig, Arthur B. (See Curran and Craig.)
Craig, Clyde L., assignor to The Coffman Manufacturing Company, Washington Court-House, Ohio. Folding chair. No. 1,218,611; Mar. 6; v. 236; p. 250.
Craig, Clyde L., assignor to The Coffman Manufacturing Company, Washington Court-House, Ohio. Folding chair. No. 1,218,612; Mar. 6; v. 236; p. 250.
Craig, Leroy L. (See Duty and Craig.)
Crane Company. (See Olson, Charles A., assignor.)
Crane, John M., Neola, Iowa. Cue-straightener. No. 1,220,199; Mar. 27; v. 236; p. 909.
Crate, Walter W., Camden, N. J. Manufacturing artificial teeth and other articles. No. 1,218,779; Mar. 13; v. 236; p. 348.
Crawford, Aldyn T., Carmen, Okla. Let-down seat-back. No. 1,220,498; Mar. 27; v. 236; p. 1015.
Crawford, David F., Pittsburgh, Pa. Automatic safety device. No. 1,218,061; Mar. 6; v. 236; p. 60.
Crawford, Hezikiah H., El Paso, Tex. Floor-cleaner. No. 1,220,074; Mar. 20; v. 236; p. 828.
Crawford, John J., New York, N. Y. Vehicle-spring shackle. No. 1,219,259; Mar. 13; v. 236; p. 513.
Creamery Package Manufacturing Company, The. (See Scovel, John C., Jr., assignor.)
Creed, Frederick G., Croydon, England. Electric switch suitable for use in telegraphy. No. 1,218,062; Mar. 6; v. 236; p. 61.
Cresse, Edward G., *et al.* (See Hart, John W., assignor.)
Crockard, Clarence H., *et al.* (See Johnston, Clarence S., assignor.)
Crompton & Knowles Loom Works. (See Hutchins, George F., assignor.)
Crompton & Knowles Loom Works. (See McGuiness, Benjamin F., assignor.)
Crompton & Knowles Loom Works. (See Morell, Alfred F., assignor.)
Crompton & Knowles Loom Works. (See Ryon, Eppa H., assignor.)
Cronemeyer, Frederick W., Tonganoxie, Ark., assignor, by mesne assignments, to Tung-Lok Silo and Tank Company. Silo. No. 1,218,240; Mar. 6; v. 236; p. 124.
Cronholm, Frederick N., Rupert, Idaho. Locking means for gates of irrigating-canals. No. 1,220,900; Mar. 27; v. 236; p. 1171.
Crosby Steam Gage & Valve Company. (See Cox, Richard C., assignor.)
Crouch, Thomas C., Saskatoon, Saskatchewan, Canada. Automobile-heater. No. 1,219,924; Mar. 20; v. 236; p. 775.
Crouse-Hinds Company. (See Jones, Ralph E., assignor.)
Crumb, John H., Platte, S. D. Car-door. No. 1,218,377; Mar. 6; v. 236; p. 170.
Crumbaugh, George P., assignor of one-half to E. W. Grove, St. Louis, Mo. Coating apparatus. No. 1,218,241; Mar. 6; v. 236; p. 124.
Crumpton, William J., Superior, Wis., assignor, by mesne assignments, to W. R. Heath, Buffalo, N. Y. Tabulating mechanism. No. 1,219,376; Mar. 13; v. 236; p. 555.
Culbertson, William R., *et al.* (See Wolfe, Clinton M., assignor.)
Culp, Robert G., Covenaugh, Pa. Mail-bag-receiving apparatus. No. 1,219,441; Mar. 20; v. 236; p. 607.
Cummer, Arthur J., and C. F. and M. G. Matz, Dubuque, Iowa. Harrow. No. 1,218,930; Mar. 13; v. 236; p. 403.
Cummings, Henry H., Boston, Mass. Revolution-counter. No. 1,217,920; Mar. 6; v. 236; p. 12.
Cundiff, Benjamin E., Hallowell, Kans. Umbrella. No. 1,218,526; Mar. 6; v. 236; p. 220.
Cunningham, Martin B., Ubrichsville, Ohio. Clevis. No. 1,218,527; Mar. 6; v. 236; p. 220.

Cunningham, Peter J., Battle Mountain, Nev. Truck-blocking device. No. 1,220,322; Mar. 27; v. 236; p. 954.
Curcio, Rocco, Richfield Springs, N. Y. Fountain polish-dauber. No. 1,218,528; Mar. 6; v. 236; p. 220.
Curran, George E., Boston, and A. B. Craig, Somerville, Mass. Adjustable stage-floor. No. 1,220,200; Mar. 27; v. 236; p. 909.
Currivan, John F., Brooklyn, N. Y. Envelop. No. 1,219,260; Mar. 13; v. 236; p. 514.
Curtis, Henry D., Red Bank, N. J. Hat-size-reducing device. No. 1,219,086; Mar. 13; v. 236; p. 454.
Cuthbert, Herman G., Newark, N. J. Apparatus for teaching arithmetic. No. 1,218,931; Mar. 13; v. 236; p. 403.
Cuthbert, John, Chicago, Ill. Electric fitting. No. 1,220,608; Mar. 27; v. 236; p. 1054.
Cutler, George E., Mount Vernon, N. Y. Spring. No. 1,218,063; Mar. 6; v. 236; p. 61.
Cutler-Hammer Mfg. Co., The. (See Dawson, Horace L., assignor.)
Cutler-Hammer Mfg. Co., The. (See Denhard, Harry W., assignor.)
Cutler-Hammer Mfg. Co., The. (See Packard, Horace N., assignor.)
Cutler-Hammer Mfg. Co., The. (See Reisbach, Gustave B., assignor.)
Cutler, Henry A., Belfast, Ireland. Scraper arrangement for sewers and the like. No. 1,220,075; Mar. 20; v. 236; p. 829.
D. B. Banks Company. (See Banks, Daniel B., assignor.)
D. H. Burrell & Company. (See Dalzell, Charles B., assignor.)
D'Arcy, Frank P., Kalamazoo, Mich. Upholstering device. No. 1,220,202; Mar. 20; v. 236; p. 910.
Daemen-Schmid, Heinrich, Uster, Zurich, Switzerland. Calculating-machine. No. 1,219,261; Mar. 13; v. 236; p. 514.
Dähne, Gustav, New York, N. Y. Key-identifying device. No. 1,219,706; Mar. 20; v. 236; p. 699.
Daily, Joseph F., assignor to Smith & Davis Manufacturing Company, St. Louis, Mo. Crib. No. 1,219,262; Mar. 13; v. 236; p. 514.
Daisy Manufacturing Company. (See Lefever, Charles F., assignor.)
Dalton, Joseph A., Brooklyn, N. Y. Tapping-chuck. No. 1,219,537; Mar. 20; v. 236; p. 641.
Dalton, Joseph B., Chicago, Ill. Apparatus for making coffee. No. 1,219,442; Mar. 20; v. 236; p. 607.
Dalzell, Charles B., assignor to D. H. Burrell & Company, Little Falls, N. Y. Milking-machine. No. 1,218,529; Mar. 6; v. 236; p. 220.
Damascus Brake Beam Co., The. (See Schaffert, Adolf H., assignor.)
Dame, George B., Brooklyn, N. Y. Life-preserver. No. 1,220,609; Mar. 27; v. 236; p. 1054.
Damiani, John, Syracuse, N. Y. Lock. No. 1,219,707; Mar. 20; v. 236; p. 700.
Dan Patch Novelty Company, The. (See Kehl, Frank E., assignor.)
Daniel, William F., Bristol, Tenn. Car-wheel bearing. No. 1,218,839; Mar. 13; v. 236; p. 370.
Daniels, Henry F., Shamokin, Pa. Tension device for shuttles. No. 1,219,708; Mar. 20; v. 236; p. 700.
Danner, D. George. (See McLellan and Danner.)
Danner, Edward, assignor to The Libbey Glass Company, Toledo, Ohio. Drawing molten material in cylindrical form. No. 1,218,598; Mar. 6; v. 236; p. 245.
Danner, Edward, assignor to The Libbey Glass Company, Toledo, Ohio. Apparatus for forming molten material in cylindrical form. No. 1,219,709; Mar. 20; v. 236; p. 700.
Danner, Edward, assignor to The Libbey Glass Company, Toledo, Ohio. Bar and tubing feeding and severing means. No. 1,220,201; Mar. 27; v. 236; p. 909.
Darby, Michael A., Bergen, N. Y. Folding wardrobe. No. 1,220,610; Mar. 27; v. 236; p. 1055.
Darker, Alfred H., Blackheath, assignor to J. Stone & Company, Ltd., London, England. Electrical installation for lighting, heating, and ventilating railway-carriages and for similar purposes. (Reissue.) No. 14,274; Mar. 20; v. 236; p. 866.
Darley, Ward, assignor of one-fourth to E. T. Kurrle, Monte Vista, Colo. Farm-gate. No. 1,220,961; Mar. 27; v. 236; p. 1172.
Daugherty, Daniel P., Worden, Oreg. Door-securer. No. 1,220,499; Mar. 27; v. 236; p. 1016.
Davenport, Herman A., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-pressing mechanism. No. 1,218,064; Mar. 6; v. 236; p. 61.
Davenport, Ransom W., assignor to Detroit Stove Works, Detroit, Mich. Forming electrical heat units. No. 1,119,629; Mar. 20; v. 236; p. 672.
Davidson, Ira M., assignor of one-third to G. H. Shaw and one-third to N. L. Philp, Los Angeles, Cal. Rotating motor. No. 1,219,377; Mar. 13; v. 236; p. 555.
Davies, Albert J., Kenogami, Quebec, Canada. Fourdrinier machine. No. 1,220,611; Mar. 27; v. 236; p. 1055.
Davies, Walter P. (See Neiman, Albert O. A., assignor.)
Davis, Calvin R., assignor to Emerson-Brantingham Company, Rockford, Ill. Intermittent feeding mechanism for fertilizer-distributers. No. 1,219,087; Mar. 13; v. 236; p. 455.
Davis, Claude B., assignor of one-half to S. A. Ellison, Richmond, Va. Collapsible container. No. 1,219,263; Mar. 13; v. 236; p. 515.
Davis, Cy H., Detroit, Mich. Vending-machine. No. 1,218,242; Mar. 6; v. 236; p. 124.
Davis, Ernest L. (See Wachenheimer and Davis.)
Davis, Francis H. (See Jackson and Davis.)
Davis, Frank B., Johnstown, Pa. Vacuum casting device for gold-inlay work and the like. No. 1,219,710; Mar. 20; v. 236; p. 700.
Davis, Howard C., Cambridge, Ohio. Tire-chain. No. 1,219,088; Mar. 13; v. 236; p. 455.
Davis, John T., Alameda, assignor of fifty-one one-hundredths to L. Levy and J. Rothschild, San Francisco, Cal. Apparatus for fractional distillation. No. 1,218,840; Mar. 13; v. 236; p. 371.
Davis, John W., and J. W. Keller, Peru, Iowa. Combination stacker-hood. No. 1,220,400; Mar. 27; v. 236; p. 981.
Davis, Rae W., West Allis, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Multispeed induction-motor. No. 1,218,747; Mar. 13; v. 236; p. 337.
Davis, William H., Winnetka, Ill. Joint for packing-box boards. No. 1,219,538; Mar. 20; v. 236; p. 641.
Davison Chemical Company. (See Patten, John, assignor.)
Davoust, Elie, New York, N. Y. Pastry-mold. No. 1,219,711; Mar. 20; v. 236; p. 701.
Dawson, Horace L., Evanston, Ill., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Gage. No. 1,219,264; Mar. 13; v. 236; p. 515.
Day, Edgar K., assignor to Wheeling Corrugating Company, Wheeling, W. Va. Metallic mounting for metal plates. No. 1,218,172; Mar. 6; v. 236; p. 99.
Day, John M., Seattle, Wash. Device for opening, holding, preserving, and using canned milk and other canned fluids. (Reissue.) No. 14,268; Mar. 13; v. 236; p. 569.
Dayton Malleable Iron Company, The. (See Osborn, Clarence P., assignor.)
Dayton Steel Foundry Company, The. (See Walther, Jacob, assignor.)
De Does, Peter J., assignor to The Toledo Parlor Furniture Company, Toledo, Ohio. Section-locking means for foldable bed-frames. No. 1,218,748; Mar. 13; v. 236; p. 337.
De Forest Radio Telephone and Telegraph Company. (See Logwood, Charles V., assignor.)
De Frees, Frederick B. (See Harmon, Clarence O., assignor.)
De Jarnette, James M. (See Berry, Elza P., assignor.)
De Lappe, Charles C., and C. H. Smith, Boston, Mass. Garbage-cremator. No. 1,219,631; Mar. 20; v. 236; p. 673.
De Laval Separator Company, The. (See Leitch, Meredith, assignor.)
De Long Hook and Eye Company, The. (See Galt, William J., Jr., assignor.)
De Moos, Charles, assignor to Motion Picture Properties Company, Fort Lee, N. J. Apparatus for cleaning films. No. 1,219,712; Mar. 20; v. 236; p. 701.
De Wolf, Charles E. (See Fry, Henry E., assignor.)
De Yoe, Jesse L. A., and J. W., Castleton, N. Y. Pneumatic action for player-pianos. No. 1,220,076; Mar. 20; v. 236; p. 829.
De Yoe, John W. (See De Yoe, Jesse L. A. and J. W.)
De Zeng, Henry L., Maple Shade, N. J. Lens-measuring device. No. 1,218,243; Mar. 6; v. 236; p. 125.
Dealham, Samuel, Jr., Baltimore, Md., assignor to Kraus & Co., Incorporated. Vending display-box. No. 1,220,500; Mar. 27; v. 236; p. 1016.
Dean, Franklin A., and W. H. Little, Alta Vista, Kans. Automatic valve for inflating tires. No. 1,219,925; Mar. 20; v. 236; p. 775.
Dean, John H., Birmingham, Ala. Fastening means for butt-joint metal culverts. No. 1,220,203; Mar. 27; v. 236; p. 910.
Dean, William W., Chicago, Ill., assignor, by mesne assignments, to The Garford Manufacturing Company, Elyria, Ohio. Starting device for internal-combustion engines. No. 1,219,630; Mar. 20; v. 236; p. 673.
Dean, William W., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Sound-amplifier. No. 1,220,501; Mar. 27; v. 236; p. 1016.
Decker, Frederick W., Brunswick, Ga. Match-box. No. 1,218,530; Mar. 6; v. 236; p. 221.
Dedichen, Jens. (See Kirchhoff, Dedichen, and Lange.)
Dee, Daniel, assignor to Dee Manufacturing Company, Pocatello, Idaho. Grate-bar. No. 1,220,204; Mar. 27; v. 236; p. 911.
Dee Manufacturing Company. (See Dee, Daniel, assignor.)
Dees, William E., Collins, Miss. Baling-press. No. 1,217,921; Mar. 6; v. 236; p. 13.
Deibel, Millie M., Youngstown, Ohio. Attachment for swinging windows. No. 1,219,378; Mar. 13; v. 236; p. 555.
Del Funga-Giera, Philippo L. E., New York, N. Y. Submarine supply. No. 1,220,826; Mar. 27; v. 236; p. 1128.
Del Fungo-Giera, Philippo L. E., New York, N. Y. Mine. No. 1,220,962; Mar. 27; v. 236; p. 1172.
Deming, William L., Salem, Ohio. Projectographoscope. No. 1,218,749; Mar. 13; v. 236; p. 337.
Dempster, John T., Schenectady, N. Y., assignor to General Electric Company. Relay. No. 1,220,826; Mar. 27; v. 236; p. 1128.

Denhard, Harry W., San Francisco, Cal., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric fluid-heater. No. 1,219,265; Mar. 13; v. 236; p. 515.

Denneen, Francis S., Detroit, Mich. Automatic gear-shifting mechanism. No. 1,218,750; Mar. 13; v. 236; p. 338.

Dennison, Wilburn N., Merchantville borough, N. J., assignor to Victor Talking Machine Company. Automatic brake for talking-machines. No. 1,219,379; Mar. 13; v. 236; p. 556.

Dennison, Wilburn N., Merchantville borough, N. J., assignor to Victor Talking Machine Company. Brake for talking-machines. No. 1,219,380; Mar. 13; v. 236; p. 556.

Denver Rock Drill Manufacturing Company, The. (See Oldham, Edward L., assignor.)

Denver Rock Drill Manufacturing Company, The. (See Smith, William A., assignor.)

Deppermann, Hermann, Nowawes-Neuendorf, near Potsdam, Germany. Winding-machine for thread-buttons. No. 1,219,266; Mar. 13; v. 236; p. 516.

Derrech, Michael, Cleveland, Ohio. Switch-operating device. No. 1,220,612; Mar. 27; v. 236; p. 1055.

Derrick, John N., and M. N. Vann, Rockwood, Tenn. Mine-sheave. No. 1,220,963; Mar. 27; v. 236; p. 1172.

Derry, Edwin H., Erie, Pa. Sheet-metal basket. No. 1,218,632; Mar. 13; v. 236; p. 294.

Desmarais, Joseph F., Montreal, Quebec, Canada. Manufacture of alimentary products. No. 1,220,205; Mar. 27; v. 236; p. 911.

Desmond, John, assignor to Gray-Hawley Manufacturing Company, Detroit, Mich. Engine-starter. No. 1,220,206; Mar. 27; v. 236; p. 911.

Desso, William F., Somers, Conn. Can-straightening machine. No. 1,218,633; Mar. 13; v. 236; p. 294.

Det norske Aktieselskab for elektrokemisk Industri. (See Farup, Peder, assignor.)

Detroit Stove Works. (See Davenport, Ransom W., assignor.)

Detroit Stove Works. (See Harter, Evan, assignor.)

Detwiler, Forest V., Chicago, Ill. Electric cooking apparatus. No. 1,219,926; Mar. 20; v. 236; p. 775.

Deuss, William F., Chicago, Ill. Index-tab. No. 1,220,402; Mar. 27; v. 236; p. 982.

Device Testing Company, The. (See Canton, Allen A., assignor.)

Devlin, Georgie A. (See Devlin, William G., assignor.)

Devlin, William G., assignor to G. A. Devlin, Arcata, Cal. Cuspidor holder and lifter. No. 1,220,732; Mar. 27; v. 236; p. 1095.

Dexter Company, The. (See George, William H., assignor.)

Diamond Match Company, The. (See Donnelly, Joseph C., assignor.)

Diamond Match Company, The. (See Paridon and Harris, assignors.)

Diamond Match Company, The. (See Paridon, Michael, assignor.)

Diamond Match Company, The. (See Roberts, William, assignor.)

Dibbets, Laurent G. G., The Hague, Netherlands. Crushing-roll. No. 1,219,927; Mar. 20; v. 236; p. 776.

Dick, Charles O., assignor of one-half to E. V. Rhodes, Glenwood, Iowa. Automobile-lock. No. 1,218,932; Mar. 13; v. 236; p. 403.

Dickelman, Lizzie H., Forest, Ohio. Grain-storehouse construction. No. 1,219,267; Mar. 13; v. 236; p. 516.

Diesel, William F., assignor to Sargent & Greenleaf Company, Rochester, N. Y. Lock mechanism. No. 1,218,065; Mar. 6; v. 236; p. 62.

Dieter, Frank. (See Middleton and Shore, assignors.)

Dietz, Edwin W., Akron, Ohio. Dipper-tooth. No. 1,218,841; Mar. 13; v. 236; p. 371.

Dilthey, Frederick G., Kernville, Cal. Lamp-holder. No. 1,218,531; Mar. 6; v. 236; p. 221.

Dinsmore, James W., Lookeba, Okla. Cotton-picker. No. 1,219,539; Mar. 20; v. 236; p. 641.

Dippel, Harry, Philadelphia, Pa. Concrete-insert. No. 1,218,378; Mar. 6; v. 236; p. 171.

Dipworth, Hermann B., Saginaw, Mich. Miter-machine attachment. No. 1,220,964; Mar. 27; v. 236; p. 1172.

Dittmar, Allen A. (See Griggs and Dittmar.)

Dixon, John M., Arlington, assignor of one-fourth to J. H. Jones, Denton, Tex. Step for railway-cars and the like. No. 1,219,443; Mar. 20; v. 236; p. 607.

Dixon, Merritt W., Jr. (See Park, Charles S., assignor.)

Doble, William A., assignor to The Pelton Water Wheel Company, San Francisco, Cal. Centrifugal pump. No. 1,220,403; Mar. 27; v. 236; p. 982.

Dodds, Rowan T. F., Chicago, Ill. Roller-mill. No. 1,218,634; Mar. 13; v. 236; p. 295.

Dodds, Rowan T. F., Decatur, Ill. Roller-mill. No. 1,218,933; Mar. 13; v. 236; p. 404.

Dodge, Austin R., Schenectady, N. Y., assignor to General Electric Company. Flow-meter. (Reissue.) No. 14,269; Mar. 13; v. 236; p. 570.

Dodge Brothers. (See Dodge, Horace E., assignor.)

Dodge, Fred, assignor of one-half to F. A. Griffin, Crichton, La. Elevator appliance. No. 1,219,268; Mar. 13; v. 236; p. 517.

Dodge, Horace E., Grosse Point, assignor to Dodge Brothers, Detroit, Mich. Piston. No. 1,218,986; Mar. 13; v. 236; p. 421.

Doenitz, Reinhold C., *et al.* (See Watts, Daniel J., assignor.)

Domestic Engine & Pump Co. (See Eberly, William M., assignor.)

Donavan, James E., Racine, Wis. Machine-protector. No. 1,218,244; Mar. 6; v. 236; p. 125.

Donk, Marion G., Washington, D. C. Producing high-grade rosin from low-grade rosin. No. 1,219,413; Mar. 13; v. 236; p. 567.

Donnelly, John, Branford, Conn. Scraping-tool. No. 1,217,922; Mar. 6; v. 236; p. 13.

Donnelly, Joseph C., Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Machine for packing match-books, &c. No. 1,217,923; Mar. 6; v. 236; p. 13.

Dopyera, John and R., assignors of one-third to P. Beracka, Los Angeles, Cal. Machine for making picture-frames and the like. No. 1,218,842; Mar. 13; v. 236; p. 372.

Dopyera, Rudolph. (See Dopyera, John and R.)

Dorman, Arch L., Cuba, Kans. Oil-burner. No. 1,219,381; Mar. 13; v. 236; p. 557.

Dorman, William T. (See Murray and Dorman.)

Dorsey, Farnum F. (See Halbleib and Dorsey.)

Doty, William D., assignor of one-half to M. W. Jack, Streator, Ill. Air-purifying and ventilating device. No. 1,219,811; Mar. 20; v. 236; p. 735.

Doub, Talmage E., Rochelle, Ill. Railway-rail fastener. No. 1,218,379; Mar. 6; v. 236; p. 171.

Douglas, Harry A., assignor to Douglas & Rudd Manufacturing Company, Bronson, Mich. Connector. No. 1,217,924; Mar. 6; v. 236; p. 14.

Douglas, Harry A., assignor to Douglas & Rudd Mfg. Co., Bronson, Mich. Cowl-lamp. No. 1,217,925; Mar. 6; v. 236; p. 14.

Douglas, Harry A., assignor to Douglas & Rudd Mfg. Co., Bronson, Mich. Circuit-connector. No. 1,220,139; Mar. 20; v. 236; p. 853.

Douglas, Harry A., assignor to Douglas & Rudd Mfg. Co., Bronson, Mich. Circuit-connector. No. 1,220,140; Mar. 20; v. 236; p. 854.

Douglas, Harry A., assignor to Douglas & Rudd Mfg. Co., Bronson, Mich. Circuit-connector. No. 1,220,141; Mar. 20; v. 236; p. 854.

Douglas & Rudd Mfg. Co. (See Douglas, Harry A., assignor.)

Douthit, Samuel, Centralia, Ill. Lock-nut. No. 1,220,207; Mar. 27; v. 236; p. 912.

Douty, Clarence D., Altoona, Pa., assignor to McCord & Company, Chicago, Ill. Oil-feed-controlling mechanism. No. 1,219,812; Mar. 20; v. 236; p. 736.

Dowle, William, New York, N. Y. Self-closing container. No. 1,218,380; Mar. 6; v. 236; p. 171.

Downs, George F., Buffalo, N. Y. Cleaning device for rotary kilns. No. 1,220,827; Mar. 27; v. 236; p. 1128.

Doyle, William J., Rome, N. Y. Bicycle-stand lock. No. 1,218,843; Mar. 13; v. 236; p. 372.

Dragoo, Dickman D. (See Dragoo, James A. and D. D.)

Dragoo, James A. and D. D., Connersville, Ind. Vaccinating-table. No. 1,218,381; Mar. 6; v. 236; p. 172.

Drake, George W., South Euclid, Ohio, assignor, by mesne assignments, to G. W. Bowen, Auburn, N. Y. Mechanism for feeding blanks. No. 1,218,987; Mar. 13; v. 236; p. 422.

Draper Corporation. (See Aumann, Louis A., assignor.)

Draper Corporation. (See Hebert, Ubald, assignor.)

Draper Manufacturing Company, The. (See Draper, Thomas, assignor.)

Draper, Thomas, assignor to The Draper Manufacturing Company, Port Huron, Mich. Tube-welding apparatus. No. 1,218,751; Mar. 13; v. 236; p. 338.

Draver, Emil R., Richmond, Ind. Vulcanizing-tool. No. 1,218,245; Mar. 6; v. 236; p. 125.

Dressel, Frederick W., New York, N. Y., assignor to The Dressel Railway Lamp Works. Headlight. No. 1,221,007; Mar. 27; v. 236; p. 1186.

Dressel, Oskar. (See Heymann, Kothe, Dressel, and Ossenbeck.)

Dressel Railway Lamp Works, The. (See Dressel, Frederick W., assignor.)

Dressel, Warren E., Edwardsville, Ill. Carbid-feeding mechanism for gas-generators. No. 1,218,844; Mar. 13; v. 236; p. 373.

Drew, Walter N., Watertown, Mass., assignor to Royal Typewriter Company, Inc., New York, N. Y. Card-guide for type-writing machines. No. 1,219,269; Mar. 13; v. 236; p. 517.

Droitcour, Michael A., Delphos, Ohio. Two-sheet stop-feed detector means. No. 1,218,988; Mar. 13; v. 236; p. 422.

Du Boe, Dominique, New York, N. Y. Feed-bag. No. 1,220,502; Mar. 27; v. 236; p. 1016.

Dubi, Boris, Bridgeport, Conn., assignor to Rapid Button Attaching Machine Co., New York, N. Y. Button-feeding device. No. 1,217,926; Mar. 6; v. 236; p. 14.

Dufek, Louis, Bremerton, Wash. Emergency-brake. No. 1,220,613; Mar. 27; v. 236; p. 1055.

Duff Manufacturing Company, The. (See McGinley, Thomas A., assignor.)

Dumler, George H. (See Kirk and Dumler.)

Dunberg, C. L. R. (See Chelstrom, Herbert, assignor.)

Dunblazier, Charles L., Moline, Ill. Beet-harvesting machine. No. 1,218,532; Mar. 6; v. 236; p. 222.

Duncan, David. (See Appel and Duncan.)

Duncan, Elizabeth O. (See Appel and Duncan, assignors.)

Duncan, I. P., *et al.* (See Cotton, Caleb, assignor.)

Dunham Company, The. (See Dunham, Ray E., assignor.)

Dunham, Millard L., assignor to Dunham Piston Ring Company, New York, N. Y. Producing piston-rings. No. 1,219,270; Mar. 13; v. 236; p. 517.

Dunham Piston Ring Company. (See Dunham, Millard L., assignor.)

Dunham, Ray E., assignor to The Dunham Company, Berea, Ohio. Combined scraper and handle-lock for lawn-rollers. No. 1,218,635; Mar. 13; v. 236; p. 295.

Dunhill, Alfred, London, England. Metal match-box. No. 1,218,382; Mar. 6; v. 236; p. 172.

Dunlap, Alfonso H., Chattanooga, Tenn. Refrigerator. No. 1,218,533; Mar. 6; v. 236; p. 222.

Dunlap, Gustav C. (See Dunlap, Leo H. and G. C.)

Dunlap, Joseph B., Tulsa, Okla. Pulley. No. 1,219,382; Mar. 13; v. 236; p. 557.

Dunlap, Leo H. and G. C., Los Angeles, Cal. Fountain-brush. No. 1,218,534; Mar. 6; v. 236; p. 222.

Dunn, Harry M., Hurley, N. Mex. Method and apparatus for concentrating ore. No. 1,219,089; Mar. 13; v. 236; p. 455.

Dunningham, Alfred C. (See Hutchins, Hargreaves, and Dunningham.)

Durand, Alexander, Los Angeles, Cal. Tailor's iron. No. 1,219,090; Mar. 13; v. 236; p. 456.

Durham, William T., Ridge Spring, S. C. Coupling-link. No. 1,220,614; Mar. 27; v. 236; p. 1055.

Dürkoppwerke Aktiengesellschaft. (See Sandt, Max, assignor.)

Durocher, Ignace B., New Orleans, La. Rail-fastener. No. 1,219,271; Mar. 13; v. 236; p. 517.

Durr, Herbert A. (See Dutcher, John E., assignor.)

Durston, Alfred H., *et al.*, executors. (See Gere, William B.)

Durup, Paul H., Boston, Mass. Pump. No. 1,218,246; Mar. 6; v. 236; p. 126.

Duryea, Otho C., Chicago, Ill., assignor to American Briquette Machine Co., Huron, S. D. Briqueting-press. No. 1,220,733; Mar. 27; v. 236; p. 1095.

Dutcher, John E., assignor of one-half to H. A. Durr, Chicago, Ill. Humidifier. No. 1,218,247; Mar. 6; v. 236; p. 126.

Duty, Henry C., and L. L. Craig, Pittsburg, Ill. Air-pipe coupling. No. 1,220,503; Mar. 27; v. 236; p. 1017.

Duvall, Marius, Goldfield, Nev. Carbureter. No. 1,220,965; Mar. 27; v. 236; p. 1173.

Dyer, Ernest I., Oakland, Cal. Apparatus for dehydrating hydrocarbon oils. No. 1,220,504; Mar. 27; v. 236; p. 1017.

Dziegielewski, Clemens, Detroit, Mich. Vehicle-door latch. No. 1,218,845; Mar. 13; v. 236; p. 373.

E. C. Stearns & Company. (See Shannon, Oscar M., assignor.)

E. G. Staude Manufacturing Co. (See Staude, Edwin G., assignor.)

E. I. du Pont de Nemours Powder Company. (See Baker, Theodore, assignor.)

E. J. Brooks & Co. (See Brooks, Winfred M., assignor.)

Eastburg, Connie H., Idaho Falls, Idaho. Scythe. No. 1,218,535; Mar. 6; v. 236; p. 223.

Eastman, Joel D., *et al.* (See Peters, Frank E., assignor.)

Eastman Kodak Company. (See Ruttan and Hutchings, assignors.)

Eastman Kodak Company. (See Underwood and Reynolds, assignors.)

Eastman Machine Company. (See Shingler, Thomas, assignor.)

Easton, Leander, Roslyn, Ill. Agricultural implement. No. 1,219,444; Mar. 20; v. 236; p. 607.

Eaton, Albert M., Santa Monica, Cal. Pneumatic retrieving-trolley. No. 1,220,323; Mar. 27; v. 236; p. 954.

Eaton, Albert N., Omaha, Nebr. Stock-watering device. No. 1,220,404; Mar. 27; v. 236; p. 982.

Eberly, Austin D., Spokane, Wash. Trolley-retriever. No. 1,219,713; Mar. 20; v. 236; p. 701.

Eberly, William M., assignor to Domestic Engine & Pump Co., Shippensburg, Pa. Diaphragm-pump. No. 1,219,714; Mar. 20; v. 236; p. 702.

Ebner, Raymond, *et al.* (See Powell, George E., assignor.)

Economy Engineering Company. (See Pavey and French, assignors.)

Edge, Dexter. (See Hunter and Edge.)

Edison, Thomas A., Llewellyn Park, Orange, N. J. Constructing concrete buildings. No. 1,219,272; Mar. 13; v. 236; p. 518.

Edsall, William H., and H. E. Chase, Wallingford, Conn., assignors to The H. L. Judd Company, New York, N. Y. Curtain-rod. No. 1,220,158; Mar. 20; v. 236; p. 861.

Edwards, Carleton U., Fort Hunt, Va. Damper and draft controlling device. No. 1,217,927; Mar. 6; v. 236; p. 15.

Edwards, Claude M., Galveston, Tex. Soldering iron or copper. No. 1,218,636; Mar. 13; v. 236; p. 296.

Edwards, Henry E. (See Buch, Max, assignor.)

Efficiency Oil Corporation. (See Sterns, Edward, assignor.)

Egan, Charles E., Charleston, assignor of one-third to C. A. Sembower, Clarksburg, and one-third to E. S. Baumgartner, Morgantown, W. Va. Vacant-seat indicator for theaters. No. 1,218,383; Mar. 6; v. 236; p. 172.

Egersdörfer, Fritz. (See Hammer and Egersdörfer.)

Eggers, Wilburn W., Malad City, Idaho. Tongs. No. 1,220,505; Mar. 27; v. 236; p. 1017.

Egleston, John, Westfield, Mass. Fire-extinguishing apparatus. No. 1,220,828; Mar. 27; v. 236; p. 1129.

Eichhorn, Friedrich, administrator. (See Manser, Paul.)

Eichler, Armin, New York, N. Y. Paper and fabric. No. 1,218,599; Mar. 6; v. 236; p. 245.

Eickmier, Charles, Louisville, Ky. Fountain-brush. No. 1,220,506; Mar. 27; v. 236; p. 1018.

Eiseman, Adelaide R., Baltimore, Md. Kitchen-table. No. 1,219,715; Mar. 20; v. 236; p. 702.

Eldred, Frank R., F. E. Bibbins, and R. N. Reed, assignors to The Eli Lilly and Company, Indianapolis, Ind. Cocoa extract and producing same. No. 1,218,536; Mar. 6; v. 236; p. 223.

Electric Furnace Company, The. (See Baily and Cope, assignors.)

Electric Furnace Company, The. (See Cope, Frank T., assignor.)

Electric Ore Separator Company. (See Weatherby, Joseph, assignor.)

Electro-Chemical Supply & Engineering Company. (See Wedge, Utley, assignor.)

Electrolytic Products Company. (See Feldkamp, Payson, and Whipple, assignors.)

Eli Lilly and Company, The. (See Eldred, Bibbins, and Reed, assignors.)

Eli Lilly and Company, The. (See Meader, John W., assignor.)

Elkin, Jacob G., New York, N. Y. Band-clamp. No. 1,219,273; Mar. 13; v. 236; p. 518.

Ellicott Machine Corporation. (See Norris, John B., assignor.)

Elliott, Charles A., Engadine, Mich. Music-leaf turner. No. 1,220,077; Mar. 20; v. 236; p. 829.

Elliott Company. (See Burke, William J., assignor.)

Elliott Company. (See Hauer, Elmer E., assignor.)

Elliott, Sterling, Newton, Mass. Addressing-machine. No. 1,220,734; Mar. 27; v. 236; p. 1096.

Elliott, William E., Grand Rapids, Mich. Washer for button attachments. No. 1,220,829; Mar. 27; v. 236; p. 1129.

Ellis, Amos, Flourtown, Pa. Cartridge. No. 1,220,208; Mar. 27; v. 236; p. 912.

Ellis, Carleton, and A. A. Wells, Montclair, N. J., assignors to Ellis-Foster Co. Making nitro compounds. No. 1,220,078; Mar. 20; v. 236; p. 829.

Ellis, Charles S., Chicago, Ill. Hand-stamp. No. 1,219,383; Mar. 13; v. 236; p. 557.

Ellis, Charles S., Chicago, Ill. Dating-stamp. No. 1,219,384; Mar. 13; v. 236; p. 557.

Ellis, Emory E., Orange, Mass. Tool-holder. No. 1,220,324; Mar. 27; v. 236; p. 955.

Ellis-Foster Co. (See Ellis and Wells, assignors.)

Ellis, Halcolm, East Orange, N. J. Rebounding device for number-printing mechanisms. No. 1,219,445; Mar. 20; v. 236; p. 608.

Ellis, Morris, Philadelphia, Pa. Stocking. No. 1,220,209; Mar. 27; v. 236; p. 912.

Ellison, Stephen A. (See Davis, Claude B., assignor.)

Ellsworth, Clarence A., assignor of one-half to H. C. Rubincam, Denver, Colo. Flash-light and camera-shutter synchronizer. No. 1,220,325; Mar. 27; v. 236; p. 955.

Ellsworth, Fred T. (See Patterson, William H., assignor.)

Elsner, Julius, Berlin-Friedenau, Germany. Production of hydraulic lime and cement from combustion residues of sewage, canal-sludge, or the like. No. 1,220,735; Mar. 27; v. 236; p. 1096.

Ely, Bernard M. (See Wear and Ely.)

Ely, Bernard M., assignor to The Alvey-Ferguson Company, Cincinnati, Ohio. Grinding-mill. No. 1,220,154; Mar. 20; v. 236; p. 859.

Ely, Sumner A., New York, N. Y. Sectional steel vault. No. 1,218,248; Mar. 6; v. 236; p. 127.

Emerick, William H., Omaha, Nebr. Hatchway-opening for refrigerator-cars. No. 1,220,830; Mar. 27; v. 236; p. 1130.

Emerson-Brantingham Company. (See Davis, Calvin R., assignor.)

Emery, Frederick H., Scranton, Pa. Coal-picking apparatus. No. 1,220,736; Mar. 27; v. 236; p. 1096.

Emigh, Oliver R., Westminster, Md., assignor to Baltimore Roofing and Asbestos Manufacturing Co., Wilmington, Del., and Asbestos, Md. Composition roofing. No. 1,220,966; Mar. 27; v. 236; p. 1173.

Emory, Francis F., Fitchburg, Mass. Hoisting-jack for fly-wheels. No. 1,218,066; Mar. 6; v. 236; p. 62.

Endy, George D., assignor to J. D. Johnson Co., Philadelphia, Pa. Water-closet-seat-operated valve. No. 1,220,831; Mar. 27; v. 236; p. 1130.

Engineers Specialty Company. (See Jones, Edward A. and J. E., assignors.)

Engle, George M., Beeville, Tex. Raised sill for express and baggage trucks. No. 1,219,274; Mar. 13; v. 236; p. 518.

Englert, Charles, Rochester, N. Y. Machine for bending and piercing fiber strips or similar material. No. 1,218,249; Mar. 6; v. 236; p. 127.

Englerth, Anton F., Chicago, Ill. Ball-bearing. No. 1,220,615; Mar. 27; v. 236; p. 1056.

Englerth, Anton F., Chicago, Ill. Ball-bearing. No. 1,220,616; Mar. 27; v. 236; p. 1056.

English, John C., Camden, N. J., assignor to Victor Talking Machine Company. Talking-machine. No. 1,219,275; Mar. 13; v. 236; p. 518.
Ensanian, Onnig, Green Island, N. Y. Shoemaker's sewing-machine. No. 1,218,637; Mar. 13; v. 236; p. 296.
Envelope Manufacturing Company, The. (See Cowgill, Orph W., assignor.)
Enyart, Ralph C., assignor to The P. H. & F. M. Roots Company, Connersville, Ind. Fluid-pressure governor. No. 1,219,928; Mar. 20; v. 236; p. 776.
Epling, Emery T., Lewiston, Idaho. Automatic or knobless door-latch. No. 1,220,210; Mar. 27; v. 236; p. 912.
Epri, Albart, Philadelphia, Pa. Phonograph-table. No. 1,220,967; Mar. 27; v. 236; p. 1173.
Equitable Meter Company. (See Weisgerber, Edwin C., assignor.)
Erickson, Charles, *et al.* (See Peterson, Charlie, assignor.)
Erickson, Charles J., assignor to Automatic Electric Company, Chicago, Ill. Pole-changer. No. 1,218,067; Mar. 6; v. 236; p. 63.
Erickson, Edward, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Tacking apparatus. No. 1,219,446; Mar. 20; v. 236; p. 608.
Ericksson, Harold L., Larchmont, N. Y. Lawn-trimmer. No. 1,218,173; Mar. 6; v. 236; p. 99.
Erret, Joseph, Cleveland, Ohio. Adjustable folding seat. No. 1,220,832; Mar. 27; v. 236; p. 1130.
Estell, Lewis, Manasquan, N. J. Plastic tie. No. 1,218,537; Mar. 6; v. 236; p. 223.
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Evans, A. D., *et al.* (See Markwell, Andrew E., assignor.)
Evans, Evan, Berlin, Germany, assignor to General Electric Company. Metering device for electrical distributing apparatus. No. 1,218,538; Mar. 6; v. 236; p. 224.
Evans, John T., Hubbard, Ohio. Condiment-holder. No. 1,219,385; Mar. 13; v. 236; p. 558.
Evans, Lyda D., Hearne, Texas. Fishing signaling apparatus. No. 1,220,617; Mar. 27; v. 236; p. 1056.
Evans, Sylvanus C., Providence, R. I. Fastener for blinds or shutters. No. 1,218,068; Mar. 6; v. 236; p. 63.
Evershed, Sydney, and W. D. Kilroy, Chiswick, England. Sound-emitter. No. 1,218,934; Mar. 13; v. 236; p. 404.
Evslin, Leo E., New York, N. Y. Artificial tooth. No. 1,218,989; Mar. 13; v. 236; p. 423.
Ewen, Harry A., London, England, assignor to Marconi Wireless Telegraph Company of America, New York, N. Y. Measuring instrument. No. 1,220,833; Mar. 27; v. 236; p. 1131.
Ewing, James F., *et al.* (See Patton, George S., assignor.)
F. A. Nelder Company, The. (See Nelder, Fred A., assignor.)
F. B. Redington Company. (See Milmoe, Michael J., assignor.)
Fabens, Eugene J. (See Baker, Emory P., assignor.)
Faber, George A., Baltimore, Md. Tire-protector for motor-vehicles. No. 1,219,447; Mar. 20; v. 236; p. 609.
Fabrizio, Rocco, Springfield, Mass. Handle and cover-opening appliance for boxes. No. 1,220,834; Mar. 27; v. 236; p. 1131.
Fagan, John T. (See Frech and Fagan.)
Fageol, Rollie B., Oakland, Cal. Transportation system. No. 1,219,276; Mar. 13; v. 236; p. 519.
Fahnestock, Ernest B., Piandome, N. Y. Connector for electrical conductors. No. 1,219,632; Mar. 20; v. 236; p. 673.
Fahrney, John J., Timberville, assignor of one-fourth to H. O. Nicodemus, Woodstock, Va., one-fourth to A. W. Nicodemus, and one-fourth to F. C. Thomas, Buckeystown, Md. Explosion-engine vaporizer for heavy fuels. No. 1,220,968; Mar. 27; v. 236; p. 1174.
Faint, Edward, Okanagan Landing, British Columbia, Canada. Device for plucking fowls. No. 1,218,174; Mar. 6; v. 236; p. 99.
Faint, Edward, Okanagan Landing, British Columbia, Canada. Means for baling hay. No. 1,218,175; Mar. 6; v. 236; p. 100.
Fair, George A. (See Campbell and Fair.)
Fairbanks, E. Hayward. (See Jones, Alva D., assignor.)
Fairbanks, Worth R., Fine, N. Y. Receptacle. No. 1,219,091; Mar. 13; v. 236; p. 456.
Fardon, Charles C., assignor of three-fourths to F. A. Sanders and one-fourth to D. L. Sanders, Tulsa, Okla. Storage-tank. No. 1,218,600; Mar. 6; v. 236; p. 245.
Fargo, Arthur H., Wilmington, Del., assignor, by mesne assignments, to C. Tremain. Connecting device. No. 1,220,326; Mar. 27; v. 236; p. 955.
Farlow, William B., Burlingame, Cal. Hose-coupling. No. 1,218,539; Mar. 6; v. 236; p. 224.
Farmer, Edward D., trustee. (See Baltzley, Edwin and L. E., assignors.)
Farmer, Edward D., trustee. (See Baltzley, Louis E., assignor.)
Farmer, Thomas, Jr., New York, assignor to Consolidated Car-Heating Company, Albany, N. Y. Governor-magnet. No. 1,217,928; Mar. 6; v. 236; p. 15.
Farnquist, Herbert A., Minneapolis, Minn. Collapsible box. No. 1,218,846; Mar. 13; v. 236; p. 374.
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Farrell, Charles T., Stoughton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Welt-wetting device for sewing-machines. No. 1,219,633; Mar. 20; v. 236; p. 674.
Farup, Peder, Glöshaugen, near Trondhjem, assignor to Det norske Aktieselskab for elektrokemisk Industri, Christiania, Norway. Producing sulfuric acid. No. 1,219,277; Mar. 13; v. 236; p. 519.
Faultless Rubber Company, The. (See Miller, Thomas W., assignor.)
Fay, Edward J., Los Angeles, Cal. Money-changer. No. 1,219,092; Mar. 13; v. 236; p. 456.
Fefell, Henry H., Cincinnati, assignor of one-half to B. T. String, Norwood, Ohio. Sewing-machine. No. 1,217,929; Mar. 6; v. 236; p. 16.
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Feitshans, Frederick R., Los Angeles, Cal. Desk. No. 1,220,405; Mar. 27; v. 236; p. 983.
Feldkamp, Frederick A., Newark, H. Payson, Short Hills, and W. E. Whipple, Newark, N. J., assignors to Electrolytic Products Company. Molding-machine. No. 1,220,211; Mar. 27; v. 236; p. 913.
Felkel, William D., Elloree, S. C. Plow attachment. No. 1,219,278; Mar. 13; v. 236; p. 519.
Fell, Ellwood R., Philadelphia, Pa. Lock for bicycles. No. 1,218,540; Mar. 6; v. 236; p. 224.
Feller, Michel, New York, N. Y. Mine-catcher and ship-protector. No. 1,219,929; Mar. 20; v. 236; p. 777.
Fellgren, Charles W., Chicago, Ill. Building construction. No. 1,218,385; Mar. 6; v. 236; p. 173.
Fengler, Hermann V., West Philadelphia, Pa., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,219,540; Mar. 20; v. 236; p. 641.
Fenoform Corporation. (See Wiechmann, Ferdinand G., assignor.)
Ferdinand, Anthony B., Wauwatosa, Wis. Draft-regulator. No. 1,218,990; Mar. 13; v. 236; p. 423.
Ferguson, William F., Rome, N. Y. Fastener for breast-yokes and the like. No. 1,218,069; Mar. 6; v. 236; p. 63.
Ferla, John, Poughkeepsie, N. Y. Apparatus for manufacturing composition board. No. 1,219,448; Mar. 20; v. 236; p. 609.
Fernandez, Charles T., Roxbury, Mass. Combined cane and flag-stick. No. 1,219,386; Mar. 13; v. 236; p. 558.
Ferrari, Erminio, Venice, Italy. Compound apparatus for casting metals in vacuum. No. 1,218,991; Mar. 13; v. 236; p. 423.
Ferrero, Paul E., Pittsburgh, Pa. Propeller. No. 1,218,386; Mar. 6; v. 236; p. 173.
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Ferriss, Edward, assignor to Minnesota Farm Tractor Company, Minneapolis, Minn. Tractor. No. 1,219,930; Mar. 20; v. 236; p. 777.
Ferry, Frank C., East Cambridge, Mass. Pulverizing-machine. No. 1,217,930; Mar. 6; v. 236; p. 16.
Fest, Adolph D., Chicago, Ill. Utilization of waste sulfite liquor. No. 1,218,638; Mar. 13; v. 236; p. 296.
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Fiddyment, John C., Baltimore, Md. Press. No. 1,219,279; Mar. 13; v. 236; p. 519.
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Fillip, Adolf A., Schulenburg, Tex. Truss. No. 1,219,094; Mar. 13; v. 236; p. 457.
Fireproof Contractors Corporation, The. (See La Morte, William F., assignor.)
Firestone Tire & Rubber Company, The. (See Moyer, Fredellia H., assignor.)
Firex Manufacturing Company. (See Pollock, Albert E., assignor.)
Firey, William P., Roanoke, Va. Emergency power device. No. 1,218,847; Mar. 13; v. 236; p. 374.
Fischer, Charles L. (See Cook and Fischer.)
Fischer, Louis E., St. Louis, Mo., and G. W. Burton, Peoria, Ill. Passenger-car construction. No. 1,217,931; Mar. 6; v. 236; p. 16.
Fischer, Max. (See Schmidlin and Fischer.)
Fischlowitz, Fischel, St. Louis, Mo. Holder for neckties and the like. No. 1,218,070; Mar. 6; v. 236; p. 63.
Fisher, Benjamin K., St. Louis, Mo. Adding-machine. No. 1,220,737; Mar. 27; v. 236; p. 1097.
Fisher, George C., Chicago, Ill. Draft, check, money-order, and other negotiable instruments. No. 1,219,634; Mar. 20; v. 236; p. 674.
Fisher, Herbert E., San Francisco, Cal. Wave-motor. No. 1,220,618; Mar. 27; v. 236; p. 1057.
Fitch, Ezra C., Boston, Mass. Holder for wrist-watches. No. 1,219,449; Mar. 20; v. 236; p. 609.
Fitz Gerald, Francis A. J. (See Thomson and Fitz Gerald.)
Fitzgerald, John J., Brooklyn, N. Y. Table-cover. No. 1,217,932; Mar. 6; v. 236; p. 16.
Flagstad, Peter C., Minneapolis, and W. Sands, Kenyon, assignors to Folding Crate and Box Company, Minneapolis, Minn. Folding box or crate. No. 1,219,280; Mar. 13; v. 236; p. 520.

Flanders, Bert W., assignor of one-half to I. M. Comstock, New London, Conn. Fumigator. No. 1,220,969; Mar. 27; v. 236; p. 1174.
Flanders, Ralph E., assignor to Jones & Lamson Machine Company, Springfield, Vt. Metal-working machine. No. 1,219,813; Mar. 20; v. 236; p. 736.
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Fleshman, James M., Corydon, Ind. File-handle. No. 1,220,406; Mar. 27; v. 236; p. 983.
Fletcher, Byron H., Walla Walla, Wash. Combined weeder and cultivator. No. 1,218,541; Mar. 6; v. 236; p. 225.
Fletcher, J. E., Dudley, and J. Harrison, Tipton, England. Puddling-iron. No. 1,220,081; Mar. 20; v. 236; p. 830.
Flickinger, Herschel V., Bucyrus, Ohio. Incubator-alarm. No. 1,219,814; Mar. 20; v. 236; p. 737.
Flint, Charles, Spokane, Wash. Hand-level. No. 1,219,095; Mar. 13; v. 236; p. 458.
Flint, Charles, assignor of one-tenth to S. Svanson, Spokane, Wash. Door opening and closing device. No. 1,219,716; Mar. 20; v. 236; p. 703.
Floege, Frank, Chicago, Ill. Power-transmission pulley. No. 1,220,738; Mar. 27; v. 236; p. 1097.
Flora, Charles L., assignor of one-half to F. N. Laubenthal, Toledo, Ohio. Steering-gear. No. 1,218,071; Mar. 6; v. 236; p. 64.
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Fluke, Frank E. (See Lom, George, assignor.)
Flynn, Michael H., Hartford, Conn., assignor to Royal Typewriter Company, Inc., New York, N. Y. Assembling-frame for machines. No. 1,220,507; Mar. 27; v. 236; p. 1018.
Fogelsong, George W., Idaho Falls, Idaho. Leveling instrument. No. 1,220,407; Mar. 27; v. 236; p. 984.
Folding Crate and Box Company. (See Flagstad and Sands, assignors.)
Foot Air Accelerator Company. (See Bussey, Ernest, assignor.)
Forbes, Cullen C., Jr., Corpus Christi, Tex. Grain-heading machine. No. 1,217,933; Mar. 6; v. 236; p. 17.
Forbes, Philip J., Brooklyn, N. Y. Box-strap. No. 1,220,835; Mar. 27; v. 236; p. 1131.
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Forg, Peter, Somerville, Mass. Valve-handle. No. 1,218,753; Mar. 13; v. 236; p. 339.
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Forsheim, Lena S. (See Forsheim and Konigsberg, assignors.)
Forsyth, George H., Chicago, Ill., assignor to Waugh Draft Gear Company. Draft and buffing mechanism. No. 1,219,717; Mar. 20; v. 236; p. 703.
Fort Pitt Bedding Company. (See Sleeth, Montgomery, assignor.)
Fortney, Christ T., West Prairie, Wis. Horseshoe. No. 1,219,281; Mar. 13; v. 236; p. 520.
Forward, Chauncey B., Jr., and L. D., Urbana, Ohio. Aeroplane. No. 1,218,387; Mar. 6; v. 236; p. 173.
Forward, Louis D. (See Forward, Chauncey B., Jr., and L. D.)
Foss, Howard W., Irving, N. J. Window-cleaning device. No. 1,219,282; Mar. 13; v. 236; p. 521.
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Foster, George W., Providence, R. I., assignor to Universal Winding Company, Boston, Mass. Bobbin-magazine. No. 1,218,601; Mar. 6; v. 236; p. 246.
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Foster, Orval B., assignor of one-half to F. W. Traylor, Fort Smith, Ark. Nut-lock. No. 1,218,072; Mar. 6; v. 236; p. 64.
Foster, William H., Oilton, Okla. Strainer for pumps. No. 1,218,848; Mar. 13; v. 236; p. 375.
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Fougère, Angus, Cambridge, Mass. Gang-cutter. No. 1,218,389; Mar. 6; v. 236; p. 174.
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Fouse, Herman, Akron, Ohio. False work for concrete construction. No. 1,220,083; Mar. 20; v. 236; p. 831.
Fowle, Frank F., Chicago, Ill. Insulator. No. 1,219,450; Mar. 20; v. 236; p. 610.
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Fox, Jacob, New York, N. Y. Button. No. 1,218,542; Mar. 6; v. 236; p. 225.
Fox, John, Wolseley, Saskatchewan, Canada. Grain-pickler. No. 1,218,250; Mar. 6; v. 236; p. 128.
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Frady, Walter E., Grenada, Miss. Boll-weevil collector. No. 1,220,213; Mar. 27; v. 236; p. 914.
Frain, John W., and G. B. Bailey, Pittsburg, Kans. Tool for grinding valves and the like. No. 1,218,754; Mar. 13; v. 236; p. 339.
Franck, Emil J., Philadelphia, Pa. Knitting-machine. No. 1,218,073; Mar. 6; v. 236; p. 64.
Francksen, Hermann, Bremen, Germany. Double-acting spring-hinge for doors. No. 1,220,084; Mar. 20; v. 236; p. 831.
Franks, George, and O. Sproessig, New York, N. Y. Steamer, cleaner, and presser. No. 1,218,639; Mar. 13; v. 236; p. 296.
Frantz, Ezra A., assignor to Frantz Standard Buckle Co., Weatherford, Tex. Bale-tie buckle. No. 1,219,283; Mar. 13; v. 236; p. 521.
Frantz Standard Buckle Co. (See Frantz, Ezra A., assignor.)
Franz, Robert S., Etna, Pa. Brake attachment for motor-vehicles. No. 1,219,718; Mar. 20; v. 236; p. 703.
Fraser, George H., Brooklyn, N. Y. Rock crushing or grinding machinery. No. 1,220,155; Mar. 20; v. 236; p. 860.
Fraser, George H., Brooklyn, N. Y. Crushing machinery. No. 1,220,156; Mar. 20; v. 236; p. 860.
Fraser, George H., Brooklyn, N. Y. Crushing-machine. No. 1,220,157; Mar. 20; v. 236; p. 861.
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Frazee, Louis L. (See Barber and Frazee.)
Frech, Theodore W., Jr., and J. T. Fagan, Cleveland, Ohio, assignors to General Electric Company. Filament-support-wire-inserting machine. No. 1,220,836; Mar. 27; v. 236; p. 1132.
Frederickson, Jennie J., Springfield, Minn. Coin and pen holder. No. 1,218,849; Mar. 13; v. 236; p. 375.
Freedman, Louis, New York, N. Y. Monogram attachment for watch-fobs, belts, and the like. No. 1,219,284. Mar. 13; v. 236; p. 521.
Freeman, Benjamin F., Long Island City, N. Y. Receptacle-closure. No. 1,220,085; Mar. 20; v. 236; p. 831.
Freeman, Ladbrook H., assignor to The Guggenheim Laundry Machinery Company, Cleveland, Ohio. Ironing-press. No. 1,220,619; Mar. 27; v. 236; p. 1057.
Freeman, Ladbrook H., assignor to The Guggenheim Laundry Machinery Company, Cleveland, Ohio. Laundry-machine. No. 1,220,620; Mar. 27; v. 236; p. 1057.
Frecon, Henry J., Santa Maria, Cal. Underreaming-bit. No. 1,220,739; Mar. 27; v. 236; p. 1098.
French, Alfred W., Piqua, Ohio. Grain-drier. No. 1,219,816; Mar. 20; v. 236; p. 738.
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French, Harry C., Ontwa township, Cass county, Mich. Ice-cream can or container. No. 1,218,640; Mar. 13; v. 236; p. 297.
French, James R., Lomax, Ill. Piston-rod. No. 1,218,074; Mar. 6; v. 236; p. 65.
French, Michael, Live Oak, Cal. Safety-envelop. No. 1,219,635; Mar. 20; v. 236; p. 674.
Freschl, Alfred, Detroit, Mich. Dental-floss-holding device. No. 1,220,409; Mar. 27; v. 236; p. 984.
Friedel, Arthur C., Syracuse, N. Y. Knockdown box or crate. No. 1,220,621; Mar. 27; v. 236; p. 1058.
Froelich, John. (See Hackney and Froelich.)
Frohmann, Gabriel, Philadelphia, Pa. Butcher's implement. No. 1,220,970; Mar. 27; v. 236; p. 1174.
Frommann, Franklin A., assignor to O. Frommann, Chicago, Ill. Wheel-rim. No. 1,220,410; Mar. 27; v. 236; p. 984.
Frommann, Olive. (See Frommann, Franklin A., assignor.)
Frost, Norris H., West Hoboken, N. J. Pneumatic tool. No. 1,219,932; Mar. 20; v. 236; p. 778.
Frost, Walter E. (See Smith and Frost.)
Fry, Benjamin L., St. Louis, Mo. Grinding-machine. No. 1,220,086; Mar. 20; v. 236; p. 832.
Fry, Harry E., New York, N. Y. Mold for rubber articles. No. 1,218,641; Mar. 13; v. 236; p. 297.
Fry, Henry E., Godmanstone, Dorchester, assignor to C. E. De Wolf, London, England. Treatment of seeds. No. 1,218,850; Mar. 13; v. 236; p. 375.
Fuchs, Ernest, assignor to L. Renault, Billancourt, France. Apparatus for controlling the voltage in variable-speed illuminating-dynamos. No. 1,220,971; Mar. 27; v. 236; p. 1175.
Fuel Economizer Company, The. (See Kennedy, Walter J., assignor.)
Fullaway, Samuel V., Sr., Omaha, Nebr. Metallic railway-tie. No. 1,219,541; Mar. 20; v. 236; p. 642.
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Fulton Company, The. (See Fulton, Weston M., assignor.)
Fulton Company, The. (See Harter, Noah S., assignor.)
Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Automatic thermosensitive device. No. 1,220,972; Mar. 27; v. 236; p. 1175.
Funai, Choji. (See Hatakeyama, Sakushiro, assignor.)
Funk, James E., Dickinson, N. D. Towing connection for automobiles. No. 1,220,214; Mar. 27; v. 236; p. 914.
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Gabrielson, John B., Jamestown, N. Y. Radiator. No. 1,217,934; Mar. 6; v. 236; p. 17.
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Gallagher, Frederick S., Collinwood, Ohio, assignor, by mesne assignments, to Waugh Draft Gear Company. Draft and buffing mechanism for railway-cars. No. 1,218,642; Mar. 13; v. 236; p. 297.

Gallaudet, Edson F., Norwich, Conn. Aeroplane. No. 1,219,285; Mar. 13; v. 236; p. 521.

Galliher, Nathaniel C., Bristol, Va. Changeable-speed gear. No. 1,218,176; Mar. 6; v. 236; p. 100.

Galt, William J., Jr., assignor to The De Long Hook and Eye Company, Philadelphia, Pa. Snap-fastener socket. No. 1,220,622; Mar. 27; v. 236; p. 1058.

Gamble, Joseph W., assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Measuring apparatus. No. 1,218,643; Mar. 13; v. 236; p. 298.

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Gapp, John, Scranton, Pa. Gravity sanding device. No. 1,219,543; Mar. 20; v. 236; p. 643.

Gardenier, Henry, Paterson, N. J. Closet-valve. No. 1,218,251; Mar. 6; v. 236; p. 128.

Gardiner, Robert E., Sperling, Manitoba, Canada. Cultivator. No. 1,219,720; Mar. 20; v. 236; p. 704.

Gardner, Henry A., Washington, D. C. Pigment. No. 1,220,973; Mar. 27; v. 236; p. 1175.

Gardner, James, College Hill borough, assignor to Asbestos Protected Metal Company, Beaver Falls, Pa. Feeding and spacing mechanism for metal sheets. No. 1,220,623; Mar. 27; v. 236; p. 1058.

Gardos, Armand, Cleveland, Ohio. Treated stocking. No. 1,219,451; Mar. 20; v. 236; p. 610.

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Garford Manufacturing Company, The. (See Manson, Ray H., assignor.)

Garner, James B., and H. D. Clayton, Pittsburgh, Pa., assignors to Metals Research Company, New York, N. Y. Manufacture of hydrochloric acid. No. 1,220,411; Mar. 27; v. 236; p. 985.

Garner, James B., and H. D. Clayton, Pittsburgh, Pa., assignors to Metals Research Company, New York, N. Y. Utilization of sulfur dioxid. (Reissue.) No. 14,277; Mar. 27; v. 236; p. 1187.

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Gavin, Joseph A., Brooklyn, N. Y. Waterproof-paper cape. No. 1,220,088; Mar. 20; v. 236; p. 833.

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Gay, Arthur S., Everett, Wash. Spring-heel. No. 1,218,392; Mar. 6; v. 236; p. 175.

Gaylord Bros. (See Ridall, Harry M., assignor.)

Gaylord, Edwin P., Rochester, N. Y. Stationary washstand. No. 1,218,755; Mar. 13; v. 236; p. 340.

Gaylord, Henry J. (See Gaylord, Willis E., and H. J.)

Gaylord, Willis E. and H. J., Syracuse, N. Y. Temporary binder. No. 1,219,721; Mar. 20; v. 236; p. 704.

Gebhart, John C., assignor to F. Low, St. Louis, Mo. Reel for rewinding measured lengths of textile fabrics. No. 1,220,974; Mar. 27; v. 236; p. 1175.

Geeslin, Robert W., Caradan, Tex. Apparatus for destroying insects. No. 1,219,096; Mar. 13; v. 236; p. 458.

Gehl, Henry M., West Bend, Wis. Flexible distributer-pipe. No. 1,220,740; Mar. 27; v. 236; p. 1098.

Gehm, William H., St. Louis, Mo. Ice-creeper. No. 1,218,756; Mar. 13; v. 236; p. 340.

Gelatt, Philo M. (See Williams, Oliver J., assignor.)

Gelow, Albert. (See Stebbins and Gelow.)

Genechten, Emil, Philadelphia, Pa. Receptacle. No. 1,220,975; Mar. 27; v. 236; p. 1176.

Gemeny, Richard H. and R. Reed, Washington, D. C. Window-screen and screen-guide. No. 1,219,817; Mar. 20; v. 236; p. 738.

Geminden, Frank, Jamestown, Mo. Water-heater or cooker. No. 1,218,851; Mar. 13; v. 236; p. 376.

General Appliance Company. (See Rowland, Samuel C., assignor.)

General Electric Company. (See Alquist, Karl, assignor.)

General Electric Company. (See Armor, James C., assignor.)

General Electric Company. (See Barrow, Charles J., assignor.)

General Electric Company. (See Beechlyn, John T., assignor.)

General Electric Company. (See Blondel, André, assignor.)

General Electric Company. (See Dempster, John T., assignor.)

General Electric Company. (See Dodge, Austin R., assignor.) (Reissue.)

General Electric Company. (See Evans, Evan, assignor.)

General Electric Company. (See Frech and Fagan, assignors.)

General Electric Company. (See Korthals-Altes, Willem C., assignor.)

General Electric Company. (See Langmuir, Irving, assignor.)

General Electric Company. (See Martin, John, assignor.)

General Electric Company. (See Parkhurst, Leon F., assignor.)

General Electric Company. (See Reichold, Ludwig, assignor.)

General Electric Company. (See Rice, Richard H., assignor.)

General Electric Company. (See Ryan, Walter D., assignor.)

General Motors Company. (See Heinze, John O., Jr., assignor.)

Genesmer, Theodore F., Minneapolis, Minn. Shoe-shining device. No. 1,218,893; Mar. 6; v. 236; p. 175.

Genter, Albert L., Salt Lake City, Utah. Filtering. No. 1,218,544; Mar. 6; v. 236; p. 225.

George, Gabriel L. (See George, James C. and G. L.)

George, James C. and G. L., Bristol, Va. Furnace-grate. No. 1,220,216; Mar. 27; v. 236; p. 915.

George, William H., assignor to The Dexter Company, Fairfield, Iowa. Gearing for operating washing-machines. No. 1,220,838; Mar. 27; v. 236; p. 1133.

Georgia Plow & Foundry Co. (See Bondurant, Emmet J., assignor.)

Georgs-Marien-Bergwerks- & Hütten-Verein A.-G. (See Baurichter, Fritz, assignor.)

Gephart, Anna E., Mansfield, Ohio. Spring-motor-driven vehicle. No. 1,217,935; Mar. 6; v. 236; p. 17.

Gerdau, Walter J. (See Brand, Morrie, assignor.)

Gere, Annabel B., *et al.*, executors. (See Gere, William B.)

Gere, William B., deceased; A. B. Gere and A. H. Durston, executors, assignors to Merrell-Soule Company, Syracuse, N. Y. Food product and manufacturing and preparing the same. No. 1,219,286; Mar. 13; v. 236; p. 522.

German-American Button Company. (See Hastings, Herbert, assignor.)

Gernelle-Danloy, Joseph E., Moulins, France. Coating for molds and cores. No. 1,218,394; Mar. 6; v. 236; p. 176.

Gessler, Otto C., Detroit, Mich. Compound tool. No. 1,218,757; Mar. 13; v. 236; p. 340.

Gibbs, Edward F. G., Washington, D. C. Counterboring tool. No. 1,219,097; Mar. 13; v. 236; p. 458.

Gibney, Joseph W., assignor to The Sentinel Mfg. Co., New Haven, Conn. Gas-valve. No. 1,218,252; Mar. 6; v. 236; p. 129.

Gibson, William. (See Birdsall, James E., assignor.)

Gibson, William K., Newark, N. J. Wrench. No. 1,220,624; Mar. 27; v. 236; p. 1059.

Giddens, La Roux B., Tampa, Fla. Combustible-charge-forming device. No. 1,218,545; Mar. 6; v. 236; p. 226.

Giest, Adolph, Nanticoke, Pa. Drill. No. 1,220,217; Mar. 27; v. 236; p. 915.

Gilbert, Alfred C., assignor to The A. C. Gilbert Company, New Haven, Conn. Commutator. No. 1,218,076; Mar. 6; v. 236; p. 65.

Gilbert, Alfred C., assignor to The A. C. Gilbert Company, New Haven, Conn. Toy-motor installation. No. 1,219,452; Mar. 20; v. 236; p. 610.

Gilbert, Otis C., Sarles, N. D. Game-board. No. 1,220,976; Mar. 27; v. 236; p. 1176.

Gilbertson, Gustav A., Benson, Minn. Power-transmitting mechanism. No. 1,219,545; Mar. 20; v. 236; p. 644.

Gilcrest, Jess R., Toronto, Ohio. Gear-wheel. No. 1,219,387; Mar. 13; v. 236; p. 558.

Gillespie, William, and C. Cooney, Toronto, Ontario, Canada. Hot-water heater. No. 1,219,722; Mar. 20; v. 236; p. 704.

Gillespie, William C., Phoenix, Ariz. Electric advertising device. No. 1,219,933; Mar. 20; v. 236; p. 778.

Gillespie, William E. (See Molteni, Louis A., assignor.)

Gilliam Manufacturing Company, The. (See White, Harry B., assignor.)

Gillis, Alfred, Baltimore, Md. Cold-water squirt. No. 1,220,218; Mar. 27; v. 236; p. 915.

Gillis & Geoghegan. (See Rutan, William, assignor.)

Gillis, Walter R., Superior, Wis. Submarine torpedo. No. 1,218,546; Mar. 6; v. 236; p. 227.

Gilman, Willard H., Boston, Mass. Signal system for railways. No. 1,220,089; Mar. 20; v. 236; p. 833.

Gilpin, Blanche R., Tygee Valley, Idaho. Toy. No. 1,218,852; Mar. 13; v. 236; p. 376.

Glenn, Ida. (See Spencer, George A., assignor.)

Glenn, Leland E., Greensboro, N. C. Automatic speed-controller for railway-trains. No. 1,218,395; Mar. 6; v. 236; p. 176.

Glissenti, Angelo, Brescia, Italy. Device for increasing the output of screw-propellers. No. 1,220,327; Mar. 27; v. 236; p. 956.

Gmeinder, Anton, Mosbach, Baden, Germany. Mill for removing the shells of grain and the like. No. 1,220,090; Mar. 20; v. 236; p. 833.

Goben, Orsinas O., assignor of one-sixth to C. S. Foster and one-sixth to U. N. Church, Chickasha, Okla. Power-transmitting device. No. 1,219,287; Mar. 13; v. 236; p. 522.

Goerner, R. J. (See Schultz, Herman, assignor.)

Goetzke, Otto, Jersey City, N. J. Safety-razor and blade. No. 1,221,004; Mar. 27; v. 236; p. 1186.

Goff, Bert C., Denver, Ind. Gate attachment. No. 1,218,077; Mar. 6; v. 236; p. 66.

Goff, Bert C., Denver, Ind. Solar device. No. 1,220,091; Mar. 20; v. 236; p. 834.

Gold, Egbert H., Shelby, Ind. Automatic heating system. No. 1,219,546; Mar. 20; v. 236; p. 644.

Gold, Egbert H., Chicago, Ill. Interchangeable heating system. No. 1,219,547; Mar. 20; v. 236; p. 644.

Goldberg, Max, New York, N. Y. Garment-marker. No. 1,218,551; Mar. 6; v. 236; p. 228.

Goldberg, Naiman, Hartford, Conn. Wind-shield. No. 1,218,994; Mar. 13; v. 236; p. 424.

Golder, William H., Newark, N. J. Safety device for elevators. No. 1,220,741; Mar. 27; v. 236; p. 1098.

Goldman, Barney, New York, N. Y. Sectional skylight. No. 1,220,219; Mar. 27; v. 236; p. 916.

Goldman, Isidore, Leeds, England. Artificial tooth. No. 1,218,078; Mar. 6; v. 236; p. 66.

Gollmar, Benjamin F., Baraboo, Wis. Vapor-stove. No. 1,220,412; Mar. 27; v. 236; p. 985.

Gollmar, Benjamin F., Baraboo, Wis. Vapor-stove. No. 1,220,413; Mar. 27; v. 236; p. 985.

Gollmer, Edmund, New Ulm, Tex. Attachment for phonographic reproducers. No. 1,219,934; Mar. 20; v. 236; p. 779.

Gomez, Ginés P., assignor of one-half to E. Sanchez de Haro, Miami, Ariz. Apparatus for separating fluid-suspended material. No. 1,220,092; Mar. 20; v. 236; p. 834.

Goodale, Dexter C., St. Louis, Mo. Can-opening machine. No. 1,218,644; Mar. 13; v. 236; p. 298.

Gooderham, Ernest F. and H. M., Patton, Pa. Railway-rail connection. No. 1,219,288; Mar. 13; v. 236; p. 522.

Gooderham, Henry M. (See Gooderham, Ernest F. and H. M.)

Goodney, William G., Stambaugh, Mich. Filing-cabinet. No. 1,218,853; Mar. 13; v. 236; p. 376.

Goody, Carl O., assignor of one-half to G. W. Oesterlund, Chicago, Ill. Scale. No. 1,220,142; Mar. 20; v. 236; p. 855.

Goodyear's Metallic Rubber Shoe Company, The. (See Clark, Myron H., assignor.)

Gordon, Byron B., Logansport, Ind. Locomotive-scale. No. 1,218,253; Mar. 6; v. 236; p. 129.

Gordon, David D., Chicago, Ill., assignor to Yost Electric Manufacturing Company, Toledo, Ohio. Electric-switch mechanism. No. 1,219,548; Mar. 20; v. 236; p. 645.

Gordon, David D., Chicago, Ill., assignor to The Yost Electric Manufacturing Company, Toledo, Ohio. Electric-switch mechanism. No. 1,220,220; Mar. 27; v. 236; p. 916.

Gordon, David D., Chicago, Ill., assignor to The Yost Electric Manufacturing Company, Toledo, Ohio. Electric-switch mechanism. No. 1,220,414; Mar. 27; v. 236; p. 985.

Gorman, James P., New York, N. Y. Collar. No. 1,218,254; Mar. 6; v. 236; p. 129.

Gorton, George, Racine, Wis. Stock-clamping mechanism for cutting-off and other machines. No. 1,219,935; Mar. 20; v. 236; p. 779.

Gosnell, Charles W. (See Payne and Gosnell.)

Goss, Harry T., Rutherford, and J. W. Bryce, Bloomfield, N. J., assignors to International Time Recording Company of New York, Endicott, N. Y. Time-recorder and recording elapsed time. No. 1,218,995; Mar. 13; v. 236; p. 425.

Goss, Oliver P. M., Seattle, Wash. Impregnating timber and other material with a preservative. No. 1,219,388; Mar. 13; v. 236; p. 559.

Gouinlock, William S., Warsaw, N. Y. Ensilage-cutter. No. 1,218,079; Mar. 6; v. 236; p. 66.

Gould Coupler Company. (See Richards, Willard F., assignor.)

Goulet, John L., Los Angeles, Cal. Beet-topper. No. 1,220,977; Mar. 27; v. 236; p. 1176.

Gounley, James F., Philadelphia, Pa., assignor, by mesne assignments, to The Rapid Electrotype Company, Cincinnati, Ohio. Apparatus for backing electrotype-shells. No. 1,219,289; Mar. 13; v. 236; p. 523.

Goyne, William E. (See Goyne and Pacetti.)

Goyne, William J. and W. E., and G. M. Pacetti, City Point, Va. Separator. No. 1,219,290; Mar. 13; v. 236; p. 523.

Gracey, Frank T., and T. W. Lander, Eddyville, Ky.; said Lander assignor of one-fourth to said Gracey. Pneumatic alarm system. No. 1,219,723; Mar. 20; v. 236; p. 705.

Graham, Andrew W., Buffalo, N. Y. Projectile. No. 1,219,724; Mar. 20; v. 236; p. 705.

Graham, Andrew W., Buffalo, N. Y., assignor of one-half to E. M. Treat, Pittsburgh, Pa. Ledger-type memorial and sepulcher. No. 1,219,725; Mar. 20; v. 236; p. 705.

Graham, Callie M., Parker, Ariz. Refrigerator. No. 1,219,936; Mar. 20; v. 236; p. 780.

Graham, Earl B., and R. E. Kirkham, Bellingham, Wash. Lard substitute. No. 1,218,758; Mar. 13; v. 236; p. 340.

Graham, Earl B., and R. E. Kirkham, Bellingham, Wash. Manufacturing pastry-shortening. No. 1,218,759; Mar. 13; v. 236; p. 340.

Graham, John W., Hinton, W. Va. Typographical or slug-casting machine. No. 1,220,093; Mar. 20; v. 236; p. 834.

Graham, John W., Hinton, W. Va. Typographical or slug-casting machine. No. 1,220,094; Mar. 20; v. 236; p. 835.

Graham, Robert M., Akron, Ohio. Mixing-machine for rubber. No. 1,220,221; Mar. 27; v. 236; p. 916.

Graham, Robert S., New York, N. Y. Key for type-writing and other machines. No. 1,218,760; Mar. 13; v. 236; p. 341.

Graham, Ross G., assignor to The Pilliod Company, Swanton, Ohio. Valve-gear. No. 1,219,549; Mar. 20; v. 236; p. 645.

Grand, George, Brooklyn, N. Y. Humidor. No. 1,220,415; Mar. 27; v. 236; p. 986.

Grand Rapids Show Case Company. (See Williams, Henry, assignor.)

Granger, Frank B., New York, N. Y. Dress-form. No. 1,217,936; Mar. 6; v. 236; p. 18.

Granston, Charles, Watkins, N. Y. Radiator-shield. No. 1,218,547; Mar. 6; v. 236; p. 227.

Grant, Ora U. (See Rose, Bradstrum, and Grant.)

Grant, Richard S., Akron, Ohio. License-tag holder. No. 1,218,761; Mar. 13; v. 236; p. 341.

Granville, Bernard, New York, N. Y. Pipe-cover. No. 1,220,328; Mar. 27; v. 236; p. 956.

Graper, Fred F., *et al.* (See Quade, Paul R., assignor.)

Gray, Asa, Baileyton, Tenn. Implement. No. 1,219,726; Mar. 20; v. 236; p. 706.

Gray, Chester E., Eureka, Cal. Manufacturing products from milk and cream. No. 1,219,291; Mar. 13; v. 236; p. 524.

Gray-Hawley Manufacturing Company. (See Desmond, John, assignor.)

Gray, James H., New York, N. Y. Making furnace-hearths. No. 1,220,839; Mar. 27; v. 236; p. 1133.

Gray, John J., Jr., Rockdale, Tenn. Making ferrophosphorus. No. 1,220,416; Mar. 27; v. 236; p. 986.

Gray, Wallace M., Cincinnati, Ohio. Internal-combustion engine. No. 1,220,095; Mar. 20; v. 236; p. 835.

Grebziszewski, Bronislaus, *et al.* (See Pludowski, Aleksander, assignor.)

Green, Jesse S., Franklin, Pa. Vehicle-tire. No. 1,218,548; Mar. 6; v. 236; p. 227.

Green, Joseph E., North Manchester, Ind. Silo. No. 1,220,978; Mar. 27; v. 236; p. 1177.

Green, Leonidas B., Kansas City, Mo. Device for use in filling syringes and the like from receptacles. No. 1,219,937; Mar. 20; v. 236; p. 780.

Green, Richard D. (See Sunderland and Green.)

Greenawalt, William E., Denver, Colo. Metallurgical process. No. 1,218,177; Mar. 6; v. 236; p. 100.

Greenawalt, William E., Denver, Colo. Extracting metals from their ores. No. 1,218,996; Mar. 13; v. 236; p. 425.

Greenberg, Charles B., Waterbury, Conn. Watch. No. 1,219,292; Mar. 13; v. 236; p. 524.

Greene, Frank R., Chicago, Ill. Compass-clock. No. 1,217,937; Mar. 6; v. 236; p. 18.

Greene, Richard A., Brooklyn, N. Y., assignor to Jabez Burns & Sons. Apparatus for cooling coffee. No. 1,218,997; Mar. 13; v. 236; p. 426.

Greenwood, Edward, Phillips, Me. Toothpick-machine. No. 1,220,096; Mar. 20; v. 236; p. 836.

Greer, Frank. (See Brandel and Greer.)

Greer, Jesse W., Fort Worth, Tex., assignor, by mesne assignments, to Massachusetts Machinery Company. Candy-wrapping machine. No. 1,218,554; Mar. 13; v. 236; p. 377.

Greer, Squire R., *et al.* (See Peters, Frank E., assignor.)

Gregory, James T., Chicago, Ill. Gas-jet. No. 1,220,979; Mar. 27; v. 236; p. 1177.

Grieb, Alfred, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Seam for sewed articles. No. 1,218,762; Mar. 13; v. 236; p. 341.

Griesel, John C., Pottsville, Pa. Amusement device. No. 1,220,980; Mar. 27; v. 236; p. 1177.

Griffin, Fred A. (See Dodge, Fred, assignor.)

Griffith, R. B. (See McGuire, Robert F., assignor.)

Griffith, William H. (See Cary, James H., assignor.)

Griggs, Theodore G., Chatham, and A. A. Dittmar, El Mora, N. J. Lighting apparatus. No. 1,219,389; Mar. 13; v. 236; p. 559.

Grigsby, George L., Waitsburg, Wash. Trace-loop. No. 1,218,080; Mar. 6; v. 236; p. 66.

Grigsby, Hugh S., Richmond, Va. Hygrostatic controller. No. 1,219,390; Mar. 13; v. 236; p. 559.

Grigsby, Hugh S., Richmond, Va. Humidifier. No. 1,219,391; Mar. 13; v. 236; p. 559.

Grimme, Natalis & Co., Commanditgesellschaft Auf Actien. (See Schaller, Carl, assignor.)

Grimshaw, Ralph R., and L. R. Jones, Findlay, Ohio. Electric heater. No. 1,220,508; Mar. 27; v. 236; p. 1018.

Grip Nut Company. (See Ridlon, George H., assignor.)

Grisinger, David, Racine, assignor of one-half to W. G. Bolus, Corliss, Wis. Rail-bracket. No. 1,220,222; Mar. 27; v. 236; p. 917.

Grissinger, Elwood, Buffalo, N. Y., assignor to American Telephone and Telegraph Company. Telephone repeating system. No. 1,219,727; Mar. 20; v. 236; p. 706.

Grobey, James B. (See Wicklund and Grobey.)

Groene, William F. (See Le Blond and Groene.)

Groff, Franklin L., Plainfield, and W. N. Bunce, assignors to Mersereau Metal Bed Company, Jersey City, N. J. Wardrobe attachment for beds. No. 1,218,396; Mar. 6; v. 236; p. 177.

Grouss, John, assignor of one-half to C. E. Pryor, Elizabeth, N. J. Light-cut-out switch for fire-houses. No. 1,218,855; Mar. 13; v. 236; p. 377.

Grove, Edwin W. (See Crumbaugh, George P., assignor.)

Grove, Frank H., Columbiana, Ohio. Web-tensioning device for tire-making machines. No. 1,218,763; Mar. 13; v. 236; p. 342.

Grove, Jacob R., York, Pa. Electric chain-welding machine. No. 1,218,397; Mar. 6; v. 236; p. 177.

Grubbs, Albert M., Portland, Oreg. Means for securing the head of a carpet-sweeper to a handle. No. 1,219,293; Mar. 13; v. 236; p. 524.

Grudzienski, Joseph, Toledo, Ohio. Life-saving suit. No. 1,220,625; Mar. 27; v. 236; p. 1060.

Grundy, Alfred S. W., and A. F. Marten, San Francisco, Cal. Producing ornamental designs. No. 1,220,097; Mar. 20; v. 236; p. 836.

Guggenheim Laundry Machinery Company, The. (See Benjamin and Alber, assignors.)

Guggenheim Laundry Machinery Company, The. (See Benjamin, Dana H., assignor.)

Guggenheim Laundry Machinery Company, The. (See Freeman, Ladbrook H., assignor.)

Guiberson, Samuel A., Jr., San Francisco, Cal. Well-tubing catcher. No. 1,218,549; Mar. 6; v. 236; p. 228

Guice, Bengamen R., Grapeland, Tex. Valve. No. 1,217,938; Mar. 6; v. 236; p. 19.

Guida, Fioravante, New Haven, Conn. Machine for coiling wire. No. 1,219,294; Mar. 13; v. 236; p. 525.

Guilmart, Celestin, Goshen, Conn. Spring-wheel. No. 1,220,329; Mar. 27; v. 236; p. 956.

Gulden, Richard A., West Dallas, Tex. Locking device for motor-vehicles. No. 1,218,856; Mar. 13; v. 236; p. 378.

Gulf Refining Company. (See Bacon, Brooks, and Clark, assignors.)

Gulf Refining Company. (See Brooks and Padgett, assignors.)

Gulledge, John G., Marshville, N. C. Folding table. No. 1,220,417; Mar. 27; v. 236; p. 987.

Gungle, Joseph I., Ann Arbor, Mich. Indicator. No. 1,220,981; Mar. 27; v. 236; p. 1178.

Gurtov, Morris, New York, N. Y. Game device. No. 1,218,398; Mar. 6; v. 236; p. 177.

Gustafson, Harold E., Harcourt, Iowa. Automobile-door-operating mechanism. No. 1,218,645; Mar. 13; v. 236; p. 299.

Gutsch, Alfred O. and E. C., Sheboygan, Wis. Gas-burner attachment. No. 1,219,728; Mar. 20; v. 236; p. 707.

Gutsch, Ella C. (See Gutsch, Alfred O. and E. C.)

Guttridge, Harry, Youngstown, Ohio. Cloth-sponging machine. No. 1,218,646; Mar. 13; v. 236; p. 299.

Gwinner, John A., Philadelphia, Pa. Bottle-capping device. No. 1,218,550; Mar. 6; v. 236; p. 228.

H. L. Judd Company. (See Edsall and Chase, assignors.)

H. W. Johns-Manville Company. (See Manville, Charles R., assignor.)

Haas, Charles C., Whitewood, S. D. Information card or folder. No. 1,220,098; Mar. 20; v. 236; p. 836.

Habermann, Charles, assignor to Oscar Schmidt, Inc., Jersey City, N. J. Zither-action. No. 1,220,840; Mar. 27; v. 236; p. 1133.

Hachmann, Frederick, assignor of one-fourth to F. C. Schoenthaler, one-fourth to L. G. Smith, and one-fourth to J. B. Hollis, St. Louis, Mo. Furniture-tip. No. 1,220,099; Mar. 20; v. 236; p. 837.

Hackley, George T., deceased, Los Angeles, Cal.; S. C. Hackley, administratrix. Valve-stem gage. No. 1,219,729; Mar. 20; v. 236; p. 707.

Hackley, Sarah C., administratrix. (See Hackley, George T.)

Hackney, Leslie S., St. Paul, Minn. Draft appliance for plows. No. 1,219,636; Mar. 20; v. 236; p. 675.

Hackney, Leslie S., and J. Froelich, St. Paul, Minn.; said Froelich assignor to said Hackney. Traction-vehicle. No. 1,219,637; Mar. 20; v. 236; p. 675.

Hackstaff, George C., and G. B. Holden, Denver, Colo. Ore classifying and separating process. No. 1,219,408; Mar. 13; v. 236; p. 565.

Hadfield, Samuel, assignor of one-half to G. Bucklitch, Lawrence, Mass. Attachment for circular combs. No. 1,220,626; Mar. 27; v. 236; p. 1060.

Hadley, Dana G., West Newbury, Mass. Invalid's chair. No. 1,219,295; Mar. 13; v. 236; p. 525.

Haeseler, Charles H., Philadelphia, Pa. Fluid-pressure hammer. No. 1,220,100; Mar. 20; v. 236; p. 837.

Hagen, William F., Scranton, Pa. Gate-valve. No. 1,219,392; Mar. 13; v. 236; p. 560.

Hagerstrom Company, The. (See Fuller and Schroeder, assignors.)

Hahn, George W., Indianapolis, Ind. Sponge holder and moistener. No. 1,218,081; Mar. 6; v. 236; p. 67.

Hahn, George W., Indianapolis, Ind. Duster, scrubber, and washer appliance. No. 1,219,296; Mar. 13; v. 236; p. 526.

Hahnemann, Walter, Kitzeberg, assignor to Signal Gesellschaft m. b. H., Kiel, Germany. Antenna structure on aeroplanes for wireless signaling. No. 1,219,550; Mar. 20; v. 236; p. 646.

Haigh, Harry J. Stapleton, N. Y. Mixing-machine. No. 1,219,730; Mar. 20; v. 236; p. 707.

Hain, Leon, Philadelphia, Pa. Detachable heel-section No. 1,219,551; Mar. 20; v. 236; p. 646.

Haines, Jones & Cadbury. (See Sharp, Joseph W., Jr., assignor.)

Haines, Lewis A., Columbus, Ohio. Gas-turbine. No. 1,219,297; Mar. 13; v. 236; p. 526.

Haines, Lewis A., Columbus, Ohio. Gas-turbine. No. 1,219,298; Mar. 13; v. 236; p. 526.

Hakes, Hudson W., Millbury, Mass. Loom-shuttle. No. 1,220,742; Mar. 27; v. 236; p. 1099.

Halbleib, Edward A., Rochester, N. Y., and F. F. Dorsey, Winchester, Mass., assignors to North East Electric Company, Rochester, N. Y. Electric starting and generating apparatus. No. 1,220,101; Mar. 20; v. 236; p. 837.

Halbrohr, Joseph. (See Bartholomew, Ohmer H., assignor.)

Hale and Kilburn Company. (See Kilburn, John E., assignor.)

Hall, Alfred, Painesville, Ohio. Coin-controlled apparatus. No. 1,220,102; Mar. 20; v. 236; p. 838.

Hall, Edward, Rutherford, assignor to Jersey City Printing Company, Jersey City, N. J. Plural-image device. No. 1,218,082; Mar. 6; v. 236; p. 67.

Hall, Edward, Rutherford, assignor to Jersey City Printing Company, Jersey City, N. J. Plural-image device. No. 1,219,731; Mar. 20; v. 236; p. 708.

Hall, Edward M., Carthage, N. Y. Bur for treating grindstones. No. 1,219,299; Mar. 13; v. 236; p. 527.

Hall, Howard W. (See Norwood, Harry G., assignor.)

Hall, John A., East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Spark-coil. No. 1,219,300; Mar. 13; v. 236; p. 527.

Hall, Joseph S., Beeville, Tex. Filler for a cotton-gin press-block. No. 1,219,301; Mar. 13; v. 236; p. 528.

Hall, Rupert E., Philadelphia, Pa. Articulator. No. 1,218,178; Mar. 6; v. 236; p. 100.

Hall, William A., New York, N. Y. Device for projecting burning liquids. No. 1,220,103; Mar. 20; v. 236; p. 838.

Hall, William F., deceased, Newton, Mass.; W. F. Hall, executrix. Trolley-ear. No. 1,219,098; Mar. 13; v. 236; p. 458.

Hall, William H., assignor to The Pedlar People Limited, Oshawa, Ontario, Canada. Metallic shingle. No. 1,218,399; Mar. 6; v. 236; p. 177.

Hall, Winifred F., executrix. (See Hall, William F.)

Halliburton, Orville G., Chicago, Ill. Oil-burner. No. 1,218,647; Mar. 13; v. 236; p. 299.

Halsig, Joseph, Viersen, Germany. Machine for bagging and weighing granular and powdery substances, particularly cocoa-powder. No. 1,219,302; Mar. 13; v. 236; p. 528.

Halstead, Grant, Orlando, Nebr. Post-puller. No. 1,219,303; Mar. 13; v. 236; p. 528.

Halton, Harold S., Ridgeway, Ontario, Canada. Station-indicator. No. 1,220,509; Mar. 27; v. 236; p. 1019.

Hambright, Frank, *et al.* (See Harris, Richard G., assignor.)

Hamel Shoe Machinery Company. (See Webster, Edwin A., assignor.)

Hamill, Edward F., Chicago, Ill. Switching device. No. 1,218,552; Mar. 6; v. 236; p. 229.

Hamilton-Bacon Sign Company. (See Bacon, William M., assignor.)

Hamilton Hammer Company. (See Hamilton, James, assignor.)

Hamilton, Harry W., Indianapolis, Ind. Vacuum power device. No. 1,219,938; Mar. 20; v. 236; p. 780.

Hamilton, James, Brooklyn, assignor to Hamilton Hammer Company, Inc., New York, N. Y. Valve-gear. No. 1,220,330; Mar. 27; v. 236; p. 957.

Hamilton, James, Brooklyn, assignor to Hamilton Hammer Company, Inc., New York, N. Y. Valve-gear for power-hammers. No. 1,220,331; Mar. 27; v. 236; p. 957.

Hamilton, James E. (See Smith, Martin V., assignor.)

Hamilton, Robert F., Wheeling, W. Va. Trolley-wire hanger. No. 1,219,732; Mar. 20; v. 236; p. 708.

Hamilton, Rush E., Geyserville, Cal., assignor to Hamilton Tractor Company, San Francisco, Cal. Power-interrupting device for tractors. No. 1,220,982; Mar. 27; v. 236; p. 1178.

Hamilton Tractor Company. (See Hamilton, Rush E., assignor.)

Hammar, Park G. (See Mahla, Charles A., assignor.)

Hammer, Arthur, Berlin, and F. Egersdörfer, Charlottenburg, Germany. Ironing-machine. No. 1,220,510; Mar. 27; v. 236; p. 1019.

Hammett, Charles A., Washington, D. C. False work for concrete constructions. (Reissue.) No. 14,278; Mar. 27; v. 236; p. 1188.

Hammock Egg Carrier Company. (See Milliron, Ira A., assignor.)

Hammond, Robert O., assignor, by mesne assignments, to B. Urdang, Paterson, N. J. Combination electric lock-switch. No. 1,220,842; Mar. 27; v. 236; p. 1134.

Hammond, William P., Passaic, N. J., and E. Q. Moses, New York, N. Y. Registering mechanism. No. 1,219,939; Mar. 20; v. 236; p. 781.

Hancock, Clinton S., and G. W. Keller, Portsmouth, Ohio. Automatic derailer. No. 1,219,733; Mar. 20; v. 236; p. 708.

Hand, Townson, New Haven, Conn. Expansion-bolt. No. 1,220,841; Mar. 27; v. 236; p. 1134.

Hanes, Harvey E. (See Brewer and Hanes.)

Hanks, John G., assignor to California Range Finder Company, Oakland, Cal. Instrument for measuring and determining distances. No. 1,219,304; Mar. 13; v. 236; p. 528.

Hanlein, Isaac G., Newark, N. J. Device for extracting foreign substances from pipes. No. 1,218,764; Mar. 13; v. 236; p. 342.

Hans Renold, Limited. (See Welffens, Emile J., assignor.)

Hansen, Mary H., Salt Lake City, Utah. Restraining device. No. 1,219,453; Mar. 20; v. 236; p. 610.

Hanson, Albert L. (See Hanson, Charles A. and A. L.)

Hanson, Bengt M. W., assignor to Pratt & Whitney Company, Hartford, Conn. Metal-reducing machine. No. 1,219,305; Mar. 13; v. 236; p. 529.

Hanson, Charles A. and A. L., Munising, Mich. Landmarker. No. 1,219,454; Mar. 20; v. 236; p. 611.

Hanson, Charles W., *et al.* (See Markwell, Andrew E., assignor.)

Hanson, John, Steele, N. D. Cake-turner. No. 1,219,818; Mar. 20; v. 236; p. 738.

Hanssen, William H., assignor, by mesne assignments, to V. J. Scholtz, Denver Colo. Automobile-thief alarm. No. 1,220,627; Mar. 27; v. 236; p. 1060.

Hanten, Isidor, Watertown, S. D. Automobile friction steering device. No. 1,220,104; Mar. 20; v. 236; p. 839.

Happel, Frederick E., Ballston, Va. Giant swing. No. 1,220,332; Mar. 27; v. 236; p. 958.

Haptonstall, Franklin A., Huntington, W. Va. Combined bonding and locking device. No. 1,220,983; Mar. 27; v. 236; p. 1179.

Harbour, Thomas J. (See Coe and Harbour.)

Hardgrave, Everett J., San Angelo, Tex. Calculating-machine. No. 1,218,255; Mar. 6; v. 236; p. 129.

Hardy, Emery E., Bayside, N. Y. Can-opening device. No. 1,218,648; Mar. 13; v. 236; p. 300.

Hargett, Peter L. (See Houff, Jacob M., assignor.)

Hargreaves, Luke. (See Hutchins, Hargreaves, and Dunningham.)

Harlow, Eldon E., assignor of one-half to J. E. Bowen and one-half to M. Harlow, Spokane, Wash. Suspender attachment. No. 1,220,984; Mar. 27; v. 236; p. 1179.

Harlow, Mae, *et al.* (See Harlow, Eldon E., assignor.)

Harmon, Clarence O., assignor of one-half to F. B. De Frees, Toledo, Ohio. Electric heater. No. 1,219,940; Mar. 20; v. 236; p. 781.

Harper, John H., Ringgold, Tex. Wire-stretcher. No. 1,219,306; Mar. 13; v. 236; p. 529.

Harrier, Richard G., North Bend, Nebr. Mowing-machine. No. 1,219,552; Mar. 20; v. 236; p. 646.

Harrier, Richard G., North Bend, Nebr. Driving mechanism. No. 1,219,553; Mar. 20; v. 236; p. 647.

Harriman, Russell, Kansas City, Mo. Pipe-cleaning device. No. 1,219,734; Mar. 20; v. 236; p. 709.

Harriman, Russell, Kansas City, Mo. Animal-trap. No. 1,220,743; Mar. 27; v. 236; p. 1099.

Harris, Clyde R. (See Paridon and Harris.)

Harris, Richard G., assignor of one-fourth to F. Haynes, one-fourth to F. Hambright, and one-fourth to J. T. Lewis, Knoxville, Tenn. Safety-headlight. No. 1,219,394; Mar. 13; v. 236; p. 560.

Harrison, Herbert C., Lockport, N. Y. Making radiator-cores. No. 1,220,744; Mar. 27; v. 236; p. 1100.

Harrison, Herbert C., Lockport, N. Y. Automobile-radiator. No. 1,220,745; Mar. 27; v. 236; p. 1100.

Harrison, James. (See Fletcher and Harrison.)

Harrison, Josephine, Denver, Colo. Book-rest. No. 1,219,393; Mar. 13; v. 236; p. 560.

Harrison Safety Boiler Works. (See Gamble, Joseph W., assignor.)

Harrison Safety Boiler Works. (See Wallem, Axel B., assignor.)

Harrold, Francis H. (See Reichard and Harrold.)

Hart & Hegeman Manufacturing Company, The. (See Sachs, Joseph, assignor.)

Hart, John W., Mobile, Ala. Device for cleaning combs. No. 1,220,105; Mar. 20; v. 236; p. 839.

Hart, John W., assignor of one-half to J. W. Wilgus and one-fourth to E. G. Cresse, Iola, Kans. Mechanical toy. No. 1,219,099; Mar. 13; v. 236; p. 459.

Hart, Max J., Centralia, Ill. Shoe-nailing machine. No. 1,218,649; Mar. 13; v. 236; p. 300.

Hartbauer, August W. L., Detroit, Mich. Foldable seat. No. 1,218,857; Mar. 13; v. 236; p. 378.

Hartenberger, Robert, Sheboygan Falls, Wis. Silo. No. 1,220,106; Mar. 20; v. 236; p. 839.

Harter, Evan, assignor to Detroit Stove Works, Detroit, Mich. Stove-frame. No. 1,217,939; Mar. 6; v. 236; p. 19.

Harter, Noah S., Waukegan, Ill., assignor, by mesne assignments, to The Fulton Company, Knoxville, Tenn. Thermostatic valve. No. 1,220,585; Mar. 27; v. 236; p. 1179.

Hartleb, Bernhard B. and R. C., Baltimore, Md. Automatic baby-carriage fan. No. 1,218,858; Mar. 13; v. 236; p. 378.

Hartleb, Rudolph C. (See Hartleb, Bernhard B. and R. C.)

Hartley, Ralph V. L., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. System for amplifying electrical energy. No. 1,218,650; Mar. 13; v. 236; p. 301.

Hartman, Amos C., Dillsburg, Pa. Tire-remover. No. 1,220,107; Mar. 20; v. 236; p. 840.

Hartman, Clarence M., Crofton, Nebr. Hose-coupling. No. 1,220,223; Mar. 27; v. 236; p. 917.

Hartung, Frank H., Norwood, assignor to The U-Need-A Starter Company, Cincinnati, Ohio. Automobile-engine starter. No. 1,220,511; Mar. 27; v. 236; p. 1020.

Harvey, Fred P., Detroit, Mich. Cover for collapsible canopy-tops. No. 1,219,735; Mar. 20; v. 236; p. 709.

Harvey, William A., Scranton, Pa. Fuse-carrier. No. 1,218,553; Mar. 6; v. 236; p. 229.

Hascall, James, Hannibal, Mo. Fence-clamp. No. 1,219,395; Mar. 13; v. 236; p. 561.

Haselton, Halsey H., Haselton, N. Y. Lifting-jack. No. 1,220,512; Mar. 27; v. 236; p. 1020.

Hastings, Herbert, assignor to German American Button Company, Rochester, N. Y. Cutting buttons. No. 1,219,455; Mar. 20; v. 236; p. 611.

Hatakeyama, Sakushiro, Shimoyamate Dori, Kobe, assignor of one-half to C. Funai, Motomachi Dori, Kobe, Japan. Automatic match-manufacturing machine. No. 1,218,651; Mar. 13; v. 236; p. 301.

Hatch, Edwin G., Hoboken, N. J. Insulator-clamp. No. 1,220,333; Mar. 27; v. 236; p. 958.

Hatch, James W. (See Nelson, Charles R., assignor.)

Haubrich, Alexander M., Chicago, Ill., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. System for packing and shipping telephone apparatus. No. 1,218,998; Mar. 13; v. 236; p. 426.

Hauer, Elmer E., Springfield, Ohio, assignor to Elliott Company, Pittsburgh, Pa. Multiple-tube-cleaning apparatus. No. 1,218,765; Mar. 13; v. 236; p. 343.

Haultain, Herbert E. T., Toronto, Ontario, Canada. Apparatus for separating ores by flotation. No. 1,218,460; Mar. 6; v. 236; p. 178.

Haupt, H., and Martin Werner, Berlin, Germany. Apparatus for indicating the composition of gases. No. 1,220,037; Mar. 20; v. 236; p. 813.

Hauser, Albert E., Pelican, La. Fan attachment for chairs. No. 1,220,628; Mar. 27; v. 236; p. 1060.

Hauser, William M., and J. McDaniel, Evansville, Ind. Hood for buffing-wheels. No. 1,218,652; Mar. 13; v. 236; p. 301.

Havas, Béla. (See Mayer and Havas.)

Hawkes, Townsend D., assignor to T. G. Hawkes & Co., Corning, N. Y. Picture-frame. No. 1,220,418; Mar. 27; v. 236; p. 987.

Hawks, Moses L., New York, N. Y. Game apparatus. No. 1,219,456; Mar. 20; v. 236; p. 611.

Hawks, Moses L., New York, N. Y. Shoe-lace-fastening device. No. 1,220,629; Mar. 27; v. 236; p. 1061.

Hawley, Eugene W., Philadelphia, Pa. Extensible supporter for garment-hangers. No. 1,219,736; Mar. 20; v. 236; p. 709.

Hawley, Jesse G., Elmira, assignor of one-half to W. S. Smith, Watkins, N. Y. Auxiliary air-supply device for motors. No. 1,220,419; Mar. 27; v. 236; p. 987.

Hawley, John F., Chillicothe, Mo. Railway-tie and rail-fastening. No. 1,218,554; Mar. 6; v. 236; p. 229.

Hawthorne, Ellsworth A., Bridgeport, Conn. Vehicle-lamp. No. 1,218,766; Mar. 13; v. 236; p. 343.

Hawthorne, Ellsworth A., Bridgeport, Conn. Vehicle-lamp. No. 1,220,334; Mar. 27; v. 236; p. 958.

Hayes, Charles L. (See Blashfield, James M., assignor.)

Hayes, Ralph V., Brooklyn, N. Y. Air-cushion device for vehicles. No. 1,220,630; Mar. 27; v. 236; p. 1061.

Haynes, Charles M., Chillicothe, Ohio. Aiming device for spectacle and eyeglass mountings. No. 1,219,396; Mar. 13; v. 236; p. 561.

Haynes, Frank, *et al.* (See Harris, Richard G., assignor.)

Hayslett, Edgar, Warsaw, Ind. Spring-roller. No. 1,219,100; Mar. 13; v. 236; p. 459.

Hayward Company, The. (See Armstrong, Philip M., assignor.)

Heard, Charles E., Washington, D. C. Flashing and fastening strip for roofs. No. 1,218,937; Mar. 13; v. 236; p. 405.

Heard, Lucius B., assignor to A. J. Berry, Los Angeles, Cal. Paper-roll protector. No. 1,218,179; Mar. 6; v. 236; p. 101.

Heard, William C., Hemphill, Tex. Sawmill-carriage track. No. 1,218,180; Mar. 6; v. 236; p. 101.

Heath, William R. (See Crumpton, William J., assignor.)

Hebert, Ubald, Manchester, N. H., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Automatic filling-replenishing loom. No. 1,218,256; Mar. 6; v. 236; p. 130.

Hebert, Ubald, Manchester, N. H., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Automatic filling-replenishing loom. No. 1,218,257; Mar. 6; v. 236; p. 130.

Hebert, Ubald, Manchester, N. H., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Automatic filling-replenishing loom. No. 1,218,258; Mar. 6; v. 236; p. 131.

Heckathorn, Michael S., Ten Mile Bottom, Pa. Saw-clamp. No. 1,220,108; Mar. 20; v. 236; p. 840.

Heffley, William H., Duncannon, Pa. Game device. No. 1,220,420; Mar. 27; v. 236; p. 988.

Heffner, William H., Spartanburg, S. C. Folding table. No. 1,220,631; Mar. 27; v. 236; p. 1062.

Heginbottom, Samuel H., Saginaw, Mich. Climbout and shovel. No. 1,218,767; Mar. 13; v. 236; p. 344.

Heilig, Cyrus H., York, Pa. Dough-chute for dough-divider hoppers. No. 1,219,737; Mar. 20; v. 236; p. 709.

Heindl, William C., Rochester, N. Y. Thermostatic regulator. No. 1,218,768; Mar. 13; v. 236; p. 344.

Heiny, Anatole C., New York, N. Y. Electric display apparatus. No. 1,220,110; Mar. 20; v. 236; p. 841.

Heiny, Anatole C., Flushing, N. Y., assignor to Heiny Electric Co. Electric display system. No. 1,220,109; Mar. 20; v. 236; p. 840.

Heiny Electric Co. (See Heiny, Anatole C., assignor.)

Heisler Locomotive Works. (See Swabb, George L., assignor.)
Hellmann, William A., Newark, N. J., assignor to The R. Neumann Hardware Co. Bag-frame. No. 1,220,224; Mar. 27; v. 236; p. 917.
Heinze, John O., Jr., assignor to General Motors Company, Detroit, Mich. Engine. No. 1,220,335; Mar. 27; v. 236; p. 959.
Heldrich, Andrew, assignor to P. Kovsky, Philadelphia, Pa. Key-cutting machine. No. 1,218,653; Mar. 13; v. 236; p. 302.
Helfenstein, Alois, Vienna, Austria-Hungary. Apparatus for refining metals by heating. No. 1,220,111; Mar. 20; v. 236; p. 842.
Helios Manufacturing Company. (See Spencer, Thomas, assignor.)
Hellesens Enke & V. Ludvigsen. (See Brönsted, Johannes N., assignor.)
Hellwig, William, Kansas City, Kans. Chicken-house. No. 1,218,259; Mar. 6; v. 236; p. 131.
Helm, Mayme, Ghent, Ky. Wire-stretcher. No. 1,220,421; Mar. 27; v. 236; p. 988.
Hemenway, John F. (See Wright, Rea P., assignor.)
Hemenway, John F., New York, N. Y. Pressure-roll release for clothes-wringers. No. 1,219,457; Mar. 20; v. 236; p. 612.
Hemenway, John F., New York, N. Y. Pressure-release for clothes-wringers. No. 1,220,112; Mar. 20; v. 236; p. 842.
Hemenway, John F., New York, N. Y. Pressure-roll release for clothes-wringers. No. 1,220,113; Mar. 20; v. 236; p. 842.
Hemenway, John F., New York, N. Y. Pressure-roll release for clothes-wringers. No. 1,220,114; Mar. 20; v. 236; p. 843.
Hemenway, John F., New York, N. Y. Automatic pressure-release for clothes-wringers. No. 1,220,115; Mar. 20; v. 236; p. 843.
Hemenway, John F., New York, N. Y. Pressure-releasing device for clothes-wringers. No. 1,220,116; Mar. 20; v. 236; p. 844.
Hemenway, John F., New York, N. Y. Pressure-roll release for clothes-wringers. No. 1,220,117; Mar. 20; v. 236; p. 844.
Hemenway, John F., New York, N. Y. Pressure-release for clothes-wringers. No. 1,220,118; Mar. 20; v. 236; p. 845.
Hemenway, John F., New York, N. Y. Pressure-release for clothes-wringers. No. 1,220,119; Mar. 20; v. 236; p. 845.
Hemenway, John F., New York, N. Y. Clothes-wringer. No. 1,220,120; Mar. 20; v. 236; p. 845.
Hemenway, John F., New York, N. Y. Clothes-wringer. No. 1,220,121; Mar. 20; v. 236; p. 846.
Hemenway, Justin S., River Falls, Wis. Demountable rim for automobiles. No. 1,218,938; Mar. 13; v. 236; p. 405.
Hench & Drongold Company. (See Birnstock, William W., assignor.)
Henderson, Clinton H., Martinez, Cal. Tamper and templet for concrete work. No. 1,220,986; Mar. 27; v. 236; p. 1180.
Henderson, James W. (See Wristen and Henderson.)
Henderson, Lloyd D. (See Hewitt, Joseph D., assignor.)
Henning, Charles F., assignor to The United States Gypsum Company, Chicago, Ill. Core for reinforced concrete or plaster floor construction. No. 1,218,999; Mar. 13; v. 236; p. 426.
Henry, Edward C., Missoula, Mont. Chimney and stovepipe attachment. No. 1,220,987; Mar. 27; v. 236; p. 1180.
Henry Likly & Company. (See Cannan, John J., assignor.)
Henshaw, William G. (See Huber and Reath, assignors.)
Herbert, Clifford V., New York, N. Y. Internal-combustion engine. No. 1,219,458; Mar. 20; v. 236; p. 612.
Herman, Karl L., Chicago, Ill. Box-blank-making machine. No. 1,219,941; Mar. 20; v. 236; p. 781.
Herrmann, Wilhelm, and M. Mugdan, assignors to Consortium für elektrochemische Industrie G. m. b. H., Nuremberg, Germany. Manufacture of aldol. No. 1,220,746; Mar. 27; v. 236; p. 1100.
Herrold, Ames D. (See Herrold, Hiram and A. D.)
Herrold, Hiram and A. D., Luther, Okla. Throttle-controlling mechanism for automobiles. No. 1,218,939; Mar. 13; v. 236; p. 405.
Hershey, Charles E., Mechanicsburg, Pa. Antiskidding device for use on automobile-wheels. No. 1,219,397; Mar. 13; v. 236; p. 561.
Hershman, Paul R., Chicago, Ill., assignor to The Mineral Products Company, New York, N. Y. Production of metallic compounds from carbids. No. 1,220,843; Mar. 27; v. 236; p. 1135.
Hess, Louis, Portland, Oreg. Package carrier and fastener. No. 1,218,859; Mar. 13; v. 236; p. 379.
Heupel, Herman A., Charleroi, assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa. Stop means for glass-separating devices. No. 1,220,632; Mar. 27; v. 236; p. 1062.
Hewett, Robert J., Westfield, N. J. Electric signaling system. No. 1,219,554; Mar. 20; v. 236; p. 647.
Hewitt, Frank R., Hewitt, N. C. Log-moving machine. No. 1,220,122; Mar. 20; v. 236; p. 846.
Hewitt, Joseph D., Paterson, assignor of one-half to L. D. Henderson, Ridgewood, N. J. Coal-receptacle. No. 1,220,422; Mar. 27; v. 236; p. 988.
Hewitt, William B., Holyoke, Mass., assignor, by mesne assignments, to Worthington Pump and Machinery Corporation, New York, N. Y. Deep-well pump. No. 1,219,307; Mar. 13; v. 236; p. 529.
Heybach, Frederick J., Baltimore, Md. Sewer-trap. No. 1,220,123; Mar. 20; v. 236; p. 847.
Heyer, Carl D., Laird, Colo. Beet-harvesting machine. No. 1,218,860; Mar. 13; v. 236; p. 379.
Heymann, Bernhard, Wiesdorf-on-the-Niederrhein, R. Kothe, Opladen, near Cologne, O. Dressel, Mülheim, near Cologne, and A. Ossenbeck, Cologne, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y. Ureids and thioureids. No. 1,218,654; Mar. 13; v. 236; p. 302.
Heymann, Bernhard, Wiesdorf Niederrhein, R. Kothe, Vohwinkel, near Elberfeld, O. Dressel, Mülheim-on-the-Rhine, and A. Ossenbeck, Cologne, Germany, assignors to Synthetic Patents Co., Inc., New York, N. Y. Derivatives of substituted aminonaphthalene substances. No. 1,218,655; Mar. 13; v. 236; p. 302.
Heywood, Charles H., and D. E. Travis, Waukegan, Ill., assignors to United States Envelope Company, Springfield, Mass. Feeding mechanism for paper or cardboard. No. 1,218,861; Mar. 13; v. 236; p. 379.
Hiatt, Orson H., assignor of one-half to J. C. Williams, Portland, Oreg. Choker-hook. No. 1,219,942; Mar. 20; v. 236; p. 782.
Hicks, George C., Jr., Connersville, Ind. Shaft-coupling. No. 1,219,943; Mar. 20; v. 236; p. 782.
Hidalgo, Oscar. (See Lindsay and Hidalgo.)
Higgins, George H. (See Richardson and Higgins.)
High, Joe B., Brunswick, Ga. Condenser for automobiles. No. 1,219,000; Mar. 13; v. 236; p. 426.
Hill, Daniel, assignor to International Braid Co., Providence, R. I. Lacing-tip. No. 1,218,260; Mar. 6; v. 236; p. 132.
Hill, Fred T., Chicago, Ill. Garment-clasp. No. 1,218,769; Mar. 13; v. 236; p. 344.
Hill, George S., Strafford, N. H., assignor to United Shoe Machinery Company, Paterson, N. J. Spool-holder for sewing-machines. No. 1,219,638; Mar. 20; v. 236; p. 675.
Hill, Harvey E., Galesburg, Mich. Combined brace and antirattler for brake-rods. No. 1,220,747; Mar. 27; v. 236; p. 1100.
Hill, Jesse H., assignor of one-fourth to B. Wilson and one-fourth to J. A. Stuart, Portland, Oreg. Bushing for bowling-balls. No. 1,217,940; Mar. 6; v. 236; p. 19.
Hill, John C., assignor of one-fifth to W. D. McNaughton, Mazenod, Saskatchewan, Canada. Bottle. No. 1,220,988; Mar. 27; v. 236; p. 1180.
Hillier, William, Walhalla, N. D. Folding chair. No. 1,218,940; Mar. 13; v. 236; p. 405.
Hillman, Henry G., assignor to J. T. Clarke, New York, N. Y. Push-switch. No. 1,218,401; Mar. 6; v. 236; p. 178.
Hills, Clarence A., assignor to Hudson Motor Car Company, Detroit, Mich. Upholstery. No. 1,218,770; Mar. 13; v. 236; p. 344.
Hiltz, George S., assignor to The Stock Quotation Telegraph Company, New York, N. Y. Type-wheel sleeve for printing-telegraph receivers. No. 1,220,844; Mar. 27; v. 236; p. 1135.
Himes, Addison N., Berkeley, Cal. Auto commissary and table. No. 1,219,101; Mar. 13; v. 236; p. 459.
Himmelberger, George L., Reading, Pa. Antiskid device for vehicle-wheels. No. 1,218,657; Mar. 13; v. 236; p. 303.
Hinde & Dauch Paper Company, The. (See Morton, Lawrence D., assignor.) (Reissue.)
Hines, William J., assignor to A. L. Preston, Leominster, Mass. Goggles. No. 1,219,815; Mar. 20; v. 236; p. 737.
Hino, Seth M., Lander, Wyo. Telephone mouthpiece. No. 1,219,459; Mar. 20; v. 236; p. 613.
Hiro Manufacturing Company. (See Barnwell, Stephen E., assignor.)
Hirth, Carl A., assignor to Norma Compagnie G. m. b. H., Cannstatt-Stuttgart, Germany. Two-part race for roller or ball bearings. No. 1,220,633; Mar. 27; v. 236; p. 1062.
Hitchner, Chester W., Philadelphia, Pa. Sandwich-cake machine. No. 1,220,845; Mar. 27; v. 236; p. 1135.
Hobart Manufacturing Company, The. (See Johnston, Herbert L., assignor.)
Hobart Manufacturing Company, The. (See Rataiczak, Thomas F., assignor.)
Hobbs, Elbert R., Buhl, Idaho. Rotary valve. No. 1,219,308; Mar. 13; v. 236; p. 530.
Hobbs, Francis C., New York, N. Y., assignor to Brunswick-Balke-Collender Company. Suspension device for billiard-chalk. No. 1,217,941; Mar. 6; v. 236; p. 19.
Hobbs, Frank C., New York, N. Y., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Combination game-table. No. 1,220,846; Mar. 27; v. 236; p. 1135.
Hocken, James E. (See Meyer, Henry C., assignor.)
Hodam, Joseph A., Lincoln, Nebr. Spring-tire. No 1,219,555; Mar. 20; v. 236; p. 648.
Hodes, David H., Brooklyn, N. Y. Wearing-apparel. No. 1,218,941; Mar. 13; v. 236; p. 406.

Hodges, Chauncey W., Grand Rapids, Mich. Grip-chain fastener. No. 1,220,847; Mar. 27; v. 236; p. 1136.
Hoeh, Albert C., Detroit, Mich. Reamer. No. 1,218,862; Mar. 13; v. 236; p. 380.
Hoeschen, Joseph A. (See Hoeschen, William H. and J. A.)
Hoeschen, William H. and J. A., Omaha, Nebr. Mechanical movement. No. 1,218,771; Mar. 13; v. 236; p. 345.
Hofberg, John O. (See Bancroft, Indahl, and Hofberg.)
Hoffman, Frederick H., assignor to Williams, Brown & Earle, Inc., Philadelphia, Pa. Blue-printing machine. No. 1,219,944; Mar. 20; v. 236; p. 783.
Hoffman, Harry F., Allentown, Pa. Headlight-operating system. No. 1,217,942; Mar. 6; v. 236; p. 19.
Hoffman, Louis, Duluth, Minn. Sad-iron. No. 1,218,863; Mar. 13; v. 236; p. 380.
Hoffner, John W., Salisbury, N. C. Internal-combustion engine. No. 1,220,124; Mar. 20; v. 236; p. 847.
Hoke, Harry A., Altoona, Pa. Locomotive throttle-valve. No. 1,219,945; Mar. 20; v. 236; p. 783.
Holaday, Albert E., Naugatuck, Conn., assignor to The American Wringer Company, Woonsocket, R. I. Pressure-roll release for wringers. No. 1,220,125; Mar. 20; v. 236; p. 848.
Holaday, Albert E., Naugatuck, Conn., assignor to The American Wringer Company, Woonsocket, R. I. Pressure-roll release for clothes-wringer. No. 1,220,126; Mar. 20; v. 236; p. 848.
Holaday, Albert E., Naugatuck, Conn., assignor to The American Wringer Company, Woonsocket, R. I. Pressure-roll release for clothes-wringers. No. 1,220,127; Mar. 20; v. 236; p. 848.
Holbrook, H. T., *et al.* (See Estes, Henry D., assignor.)
Holbrook, Rowan, *et al.* (See Estes, Henry D., assignor.)
Holcomb, Charles R. (See Wheeler and Holcomb.)
Holcomb, Frank G., Franklin, Ky. Clevis attachment for plows. No. 1,220,225; Mar. 27; v. 236; p. 918.
Holdaway, William S., assignor to Twin Screw Pump Co., Salt Lake City, Utah. Pump. No. 1,218,602; Mar. 6; v. 236; p. 246.
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Holdsworth, Fred D. (See O'Rourke and Holdsworth.)
Holland, Henry, Cleveland, Ohio. Trolley-wheel mounting. No. 1,218,555; Mar. 6; v. 236; p. 230.
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Holmes, Henry S., Brooklyn, N. Y. Electric welding apparatus. No. 1,220,848; Mar. 27; v. 236; p. 1136.
Holmes, Major E., Lakewood, assignor to National Carbon Company, Cleveland, Ohio. Battery-depolarizer. No. 1,218,772; Mar. 13; v. 236; p. 345.
Holscher, Herman H., Wecota, S. D. Device for securing loose material in bulk. No. 1,220,226; Mar. 27; v. 236; p. 918.
Holsey, Arthur, Chicago, Ill., assignor to International Harvester Corporation. Fertilizer attachment for corn-planters. No. 1,218,773; Mar. 13; v. 236; p. 345.
Holst, Ole M., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Coil-support. No. 1,217,943; Mar. 6; v. 236; p. 20.
Holyoke Paper Products Company *et al.* (See McCorkindale, William, assignor.)
Homer, John W., Greencastle, Pa. Insulator-knob. No. 1,218,181; Mar. 6; v. 236; p. 101.
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Honeyball, William R., Pasadena, Cal. Signal. No. 1,218,864; Mar. 13; v. 236; p. 381.
Hook, William G., Portsmouth, Va. Time-check board. No. 1,219,102; Mar. 13; v. 236; p. 460.
Hookless Fastener Company. (See Sundback, Gideon, assignor.)
Hoover, Guy S., Colorado Springs, Colo. Window-shade bracket. No. 1,218,774; Mar. 13; v. 236; p. 346.
Hoover, Herbert W., Bayonne, N. J. Oil-burner. No. 1,218,942; Mar. 13; v. 236; p. 406.
Hope, William H., Providence, R. I. Pantograph-machine. No. 1,219,310; Mar. 13; v. 236; p. 531.
Hope, William H., Providence, R. I. Pantograph engraving-machine. No. 1,219,311; Mar. 13; v. 236; p. 531.
Hopkins, Edward L., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Brake for mining-machine trucks. No. 1,218,402; Mar. 6; v. 236; p. 178.
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Hornsby, Harry H., Chicago, Ill. Fluid-pressure system. No. 1,220,336; Mar. 27; v. 236; p. 959.
Hornthal, Sarah, New York, N. Y. Ladder. No. 1,220,337; Mar. 27; v. 236; p. 959.
Hotte, Arthur H. (See Nasief, Benjamin J., assignor.)
Houff, Jacob M., Madison, Va., assignor to P. L. Hargett, Frederick, Md. Silo-bracing. No. 1,220,227; Mar. 27; v. 236; p. 918.
Hough, Azel C., assignor to Hough Shade Corporation, Janesville, Wis. Screen, shade, and the like. No. 1,218,556; Mar. 6; v. 236; p. 230.
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Houghton, Lewis T., Worcester, Mass. Top-roll-saddle mechanism. No. 1,218,658; Mar. 13; v. 236; p. 304.
Houghton, Lewis T., Worcester, Mass. Top-roll-saddle mechanism. No. 1,218,659; Mar. 13; v. 236; p. 304.
Houghton, Lewis T., Worcester, Mass. Top-roll-saddle mechanism. No. 1,218,660; Mar. 13; v. 236; p. 304.
Howard, Frank W., New York, N. Y. Umbrella. No. 1,219,640; Mar. 20; v. 236; p. 676.
Howard, Joe E., assignor of one-half to I. G. Seymour, Seattle, Wash. Butter-cutter. No. 1,219,738; Mar. 20; v. 236; p. 710.
Howard, Thomas A. (See Taylor, Ellis, assignor.)
Howe, Andrew F., Granite City, Ill., assignor to Commonwealth Steel Company, St. Louis, Mo. Sand-mill. No. 1,218,403; Mar. 6; v. 236; p. 179.
Howe, Watson, Valley Stream, N. Y. Curtain-hanger. No. 1,219,312; Mar. 13; v. 236; p. 532.
Howell, Robert C., Scranton, Pa. Tag-holder. No. 1,217,944; Mar. 6; v. 236; p. 20.
Hower, Harry S., assignor to Macbeth-Evans Glass Company, Pittsburgh, Pa. Lamp. No. 1,217,945; Mar. 6; v. 236; p. 21.
Howland, Chauncy W. (See Bader and Howland.)
Hoy, Charles E. (See Fetzer, Elias B., assignor.)
Hoyt, Ray S. (See Mills and Hoyt.)
Hub, John C., Jr., Cleveland, Ohio. Tabbed sheet. No. 1,218,557; Mar. 6; v. 236; p. 231.
Hub, John C., Jr., Cleveland, Ohio. Tabbed-sheet structure. No. 1,218,558; Mar. 6; v. 236; p. 231.
Hubbard, Charles W., Weston, Mass. Belt-tightener. No. 1,219,313; Mar. 13; v. 236; p. 532.
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Huber, Frederick W., and F. F. Reath, Riverside, Cal. Producing cement and recovering potassium compounds. No. 1,219,315; Mar. 13; v. 236; p. 533.
Huber, Frederick W., and F. F. Reath, Riverside, assignors to W. G. Henshaw, San Francisco, Cal. Leaching flue-dust. No. 1,220,989; Mar. 27; v. 236; p. 1180.
Hubert, Conrad. (See Schlagel, Jacob, assignor.)
Hubert, Conrad, Hewlett, N. Y. Portable electric light. No. 1,220,634; Mar. 27; v. 236; p. 1063.
Hucal, Wasyl, Vegreville, Alberta, Canada. Wrench. No. 1,219,316; Mar. 13; v. 236; p. 533.
Hudry, John, Hazleton, Pa. Child's vehicle. No. 1,218,943; Mar. 13; v. 236; p. 406.
Hudson Motor Car Company. (See Hills, Clarence A., assignor.)
Huff, Russell, assignor to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,218,083; Mar. 6; v. 236; p. 67.
Huisinger, Martin L., and E. F. Singer, Minneapolis, Minn. Jeweler's setting-holder. No. 1,220,423; Mar. 27; v. 236; p. 989.
Hulden, Alexander S., Great Falls, Mont. Permutation-padlock. No. 1,218,084; Mar. 6; v. 236; p. 68.
Hulehan, Joseph H. (See Moore and Hulehan.)
Hulfish, David S., assignor to Canadian Independent Telephone Company, Limited, Toronto, Ontario, Canada. Telephony. No. 1,218,182; Mar. 6; v. 236; p. 102.
Hulfish, David S., assignor to Canadian Independent Telephone Company, Limited, Toronto, Ontario, Canada. Telephony. No. 1,220,228; Mar. 27; v. 236; p. 919.
Hullinger, Ashton and B., assignors to Vulcan Machinery and Reduction Co., Chicago, Ill. Machine for drying garbage. No. 1,218,559; Mar. 6; v. 236; p. 231.
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Humason, Granville A., assignor of three-fourths to J. W. Atkins, Shreveport, La. Means for applying brakes on derailing. No. 1,219,946; Mar. 20; v. 236; p. 784.
Hummel, William M., Lewistown, Pa. Mine-door-operating apparatus. No. 1,218,404; Mar. 6; v. 236; p. 179.
Humphrey, Dudley S., Cleveland, Ohio. Mixing and transporting concrete. No. 1,220,338; Mar. 27; v. 236; p. 960.
Humphrey, John D., Norfolk, Conn. Lawn-sprinkler. No. 1,219,641; Mar. 20; v. 236; p. 676.
Humpidge, Frederick A., Detroit, Mich. Clothes-drier. No. 1,220,514; Mar. 27; v. 236; p. 1021.
Hunker, Martin L., assignor to Wheeling Corrugating Company, Wheeling, W. Va. Elbow-forming machine. No. 1,218,183; Mar. 6; v. 236; p. 102.
Hunt, Frederick S. (See Wittemann, John, assignor.)
Hunter Dry Kiln Co., The. (See Hunter, Harry, assignor.)
Hunter, Harry, assignor to The Hunter Dry Kiln Co., Indianapolis, Ind. Treating rubber. No. 1,218,261; Mar. 6; v. 236; p. 132.
Hunter, Heister S., and T. Watkins, Philadelphia, Pa. Water-gage. No. 1,218,661; Mar. 13; v. 236; p. 305.
Hunter, John A., Ben Avon, and D. Edge, assignors to American Sheet and Tin Plate Company, Pittsburgh, Pa. Temperature indicating and recording apparatus. No. 1,220,635; Mar. 27; v. 236; p. 1063.
Hunter, Lewis C., Detroit, Mich. Bed. No. 1,218,775; Mar. 13; v. 236; p. 346.
Hunter, Percy E., Pittsburgh, Pa. Welding apparatus. No. 1,219,317; Mar. 13; v. 236; p. 533.
Huntsman, Edward E., Thomas, W. Va. Jar-lifting device. No. 1,219,398; Mar. 13; v. 236; p. 562.
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Hurd, Clarence. (See Lescher, John J., assignor.)
Hurlbut, George R. (See Sturm and Hurlbut.)
Hurlbut, Rollin S., assignor to Oneida Community, Limited, Oneida, N. Y. Trap. No. 1,220,143; Mar. 20; v. 236; p. 855.
Hutchings, Charles E. (See Ruttan and Hutchings.)
Hutchins, George F., assignor to Crompton & Knowles Loom Works, Worcester, Mass. Forming bosses on metal blades. No. 1,220,748; Mar. 27; v. 236; p. 1101.
Hutchins, Thomas W. S., L. Hargreaves, and A. C. Dunningham, Middlewich, England. Manufacture of sodium thiosulfate. No. 1,219,819; Mar. 20; v. 236; p. 739.
Hutchinson, Jacob F., Springville, Utah. Hay-loader. No. 1,220,339; Mar. 27; v. 236; p. 960.
Hwalek, Jozef, Globe Village, Mass. Window-shade bracket. No. 1,219,103; Mar. 13; v. 236; p. 460.
Hyde, James M., Sapulpa, Okla. Latch. No. 1,219,318; Mar. 13; v. 236; p. 533.
Iams, Charles P., and J. A. Ramsey, Washington, Pa. Trolley-pole. No. 1,217,946; Mar. 6; v. 236; p. 21.
Icy-Hot Bottle Company, The. (See Altenberg, George P., assignor.)
Ideal Laundry Company. (See Schmidt, Herman C., assignor.)
Iliitz, Michael, Manila, Philippine Islands. Field-range. No. 1,218,776; Mar. 13; v. 236; p. 347.
Illback, Henry, East Orange, N. J. Ring or band for use in pile-driving. No. 1,220,229; Mar. 27; v. 236; p. 919.
Imperial Car Cleaner Company. (See Service, William F., assignor.)
Impson, Clifton H., Auburn, Iowa. Work-support for Ford engines. No. 1,219,400; Mar. 20; v. 236; p. 613.
Indahl, Mauritz C. (See Bancroft and Indahl.)
Indahl, Mauritz C. (See Bancroft, Indahl, and Hofberg.)
Indahl, Mauritz C., assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Gas-burner for casting-machines. No. 1,220,128; Mar. 20; v. 236; p. 849.
Industrial Development Company. (See Trood, Samuel, assignor.)
Inglis, Charles E., assignor of one-half to E. Connell, Malden, Mass. Nut-lock. No. 1,220,129; Mar. 20; v. 236; p. 850.
Ingram, Alfred, assignor, by mesne assignments, to Anchor Cap & Closure Corporation, New York, N. Y. Bottle and jar sealing device. No. 1,218,662; Mar. 13; v. 236; p. 305.
Ingram, William C., Grand Rapids, Mich. Street-flushing machine. No. 1,217,947; Mar. 6; v. 236; p. 21.
Ingwersen, Thomas B., Bowling Green, Mo. Wheel. No. 1,220,230; Mar. 27; v. 236; p. 919.
Inouye, Tokugero, Los Angeles, Cal. Yarn and thread holder for crocheters and knitters. No. 1,219,399; Mar. 13; v. 236; p. 552.
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International Cellulose Company. (See Ostenberg, Zeno, assignor.)
International Harvester Company of New Jersey. (See Anderson, Emil F., assignor.)
International Harvester Company of New Jersey. (See Benjamin and Pearson, assignors.)
International Harvester Company of New Jersey. (See Raney and Livesay, assignors.)
International Harvester Company of New Jersey. (See Sturrock, John, assignor.)
International Harvester Corporation. (See Holsey, Arthur, assignor.)
International Harvester Corporation. (See Robinson, Charles W., assignor.)
International Money Machine Company. (See Overlin, William S., assignor.)
International Time Recording Company of New York. (See Bryce, James W., assignor.)
International Time Recording Company of New York. (See Goss and Bryce, assignors.)
Ireton, Artis F., assignor to The Starr Piano Company, Richmond, Ind. Stop device for phonograph-disks. No. 1,218,560; Mar. 6; v. 236; p. 231.
Iriarte, Fernando. (See Borrás and Iriarte.)
Irwin, Thomas K., assignor to Anglo-Continental Fertilizers Syndicate Limited, London, England. Apparatus for treating sewage and other waste liquids. No. 1,220,990; Mar. 27; v. 236; p. 1181.
Irwin, Thomas J., Trenton, N. J. Toy. No. 1,218,405; Mar. 6; v. 236; p. 179.
Isaacs, Joel L., Chicago, Ill. Sprayer. No. 1,219,642; Mar. 20; v. 236; p. 677.
Isham, Harry S., Belmar, N. J. Railway-tie and fastener. No. 1,219,319; Mar. 13; v. 236; p. 534.
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J. D. Johnson Co. (See Endy, George D., assignor.)
J. G. Brill Company, The. (See Kohler, George B., assignor.)
J. H. Williams & Co. (See Amborn, George, assignor.)
J. L. Mott Iron Works, The. (See Lindemer, Charles, assignor.)
J. S. Schofield's Sons Company. (See Jackson, Lewis R., assignor.)
Jabez Burns & Sons. (See Burns, William G., assignor.)
Jabez Burns & Sons. (See Greene, Richard A., assignor.)
Jack, Matthew W. (See Doty, William D., assignor.)
Jack, Robert K., Nutley, N. J. Strainer device. No. 1,220,231; Mar. 27; v. 236; p. 920.
Jackson, Charles W., Chicago, Ill. Screen. No. 1,220,232; Mar. 27; v. 236; p. 920.
Jackson, Gilbert, New York, N. Y. Bottle-valve. No. 1,220,749; Mar. 27; v. 236; p. 1101.
Jackson, Horatio N., Burlington, Vt. Receptacle. No. 1,217,948; Mar. 6; v. 236; p. 22.
Jackson, Joseph R., and F. H. Davis, assignors, by mesne assignments, to W. H. Thompson, Memphis, Tenn. Time-service-controlling mechanism. No. 1,220,340; Mar. 27; v. 236; p. 960.
Jackson, Joseph R., and F. H. Davis, assignors, by mesne assignments, to W. H. Thompson, Memphis, Tenn. Make-and-break controlling device. No. 1,220,341; Mar. 27; v. 236; p. 961.
Jackson, Lewis R., assignor to J. S. Schofield's Sons Company, Macon, Ga. Drier. No. 1,220,130; Mar. 20; v. 236; p. 850.
Jackson, William H., Sterling, Kans. Mouse and rat trap. No. 1,218,406; Mar. 6; v. 236; p. 180.
Jacobs, Gerald, Dolgeville, N. Y. Producing stencils for decorating fabrics. No. 1,220,850; Mar. 27; v. 236; p. 1137.
Jacobson, Albert E., New York, N. Y. Photographically-sensitized medium. No. 1,219,739; Mar. 20; v. 236; p. 710.
Jacobson, Hilding L., *et al.* (See Siert, John H., assignor.)
Jacobus, David S., Jersey City, assignor to The Babcock & Wilcox Company, Bayonne, N. J. Steam-boiler economizer. No. 1,219,320; Mar. 13; v. 236; p. 534.
Jacobus, David S., Jersey City, assignor to The Babcock & Wilcox Company, Bayonne, N. J. Steam-boiler economizer. No. 1,219,321; Mar. 13; v. 236; p. 535.
Jacques, Charles A., New York, N. Y. Chiming-clock. No. 1,220,851; Mar. 27; v. 236; p. 1137.
James, Lewis A., Elk City, Kans. Nut-lock. No. 1,218,184; Mar. 6; v. 236; p. 103.
James L. Morrison Machine Co. (See Ramsey, Clifford H., assignor.)
James, Lynwood B., Washington, D. C. Ink-well. No. 1,218,663; Mar. 13; v. 236; p. 306.
James, Perry C., Sciota, assignor to G. G. Bayne, Bushnell, Ill. Hog door and gate. No. 1,220,636; Mar. 27; v. 236; p. 1063.
James, William E. (See Clayton, William F., assignor.)
Jameson, Charles V., Chicago, Ill. Pneumatic device for player-pianos. No. 1,219,104; Mar. 13; v. 236; p. 460.
Jameson, Charles V., Chicago, Ill. Detachable pneumatic for player-pianos. No. 1,219,105; Mar. 13; v. 236; p. 461.
Jamestown Curtain Rod Company. (See Sprinchorn, Ulrich, assignor.)
Janney, Reynold, New York, N. Y. Controlling apparatus for fluid-gears. No. 1,220,424; Mar. 27; v. 236; p. 989.
Jay, Herman W., Ainsworth, Nebr. Milling attachment for lathes. No. 1,217,949; Mar. 6; v. 236; p. 22.
Jay, Webb, Chicago, Ill. Liquid-fuel feeding device for internal-combustion engines. No. 1,218,085; Mar. 6; v. 236; p. 68.
Jeavons, William R., Cleveland, Ohio. Oil-stove. No. 1,218,777; Mar. 13; v. 236; p. 347.
Jeboult, Reginald C., Edmonds, British Columbia, Canada. Sunshade for pneumatic tires. No. 1,220,750; Mar. 27; v. 236; p. 1101.
Jeffrey Manufacturing Company, The. (See Hopkins, Edward L., assignor.)
Jenkins, Charles D., assignor to Peat Coal Limited, Boston, Mass. Drying apparatus for peat and the like. No. 1,220,131; Mar. 20; v. 236; p. 850.
Jenkins, Columbus E., Hagerman, Idaho. Clover-harvester. No. 1,220,132; Mar. 20; v. 236; p. 851.
Jenkins, Daniel C., Clarksburg, W. Va. Engine-regulator. No. 1,220,133; Mar. 20; v. 236; p. 851.
Jenkins, George H., Oak Park, and M. N. Murphy, La Grange, Ill. Binder and transfer device. No. 1,218,262; Mar. 6; v. 236; p. 132.
Jensen, George C., Oakland, Cal. Lock-controlled lever. No. 1,219,106; Mar. 13; v. 236; p. 461.
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Jessup, Henry W., trustee. (See Twombly, Willard I., assignor.)
Jewell, Charles E., Auburn, N. Y. Truss. No. 1,218,664; Mar. 13; v. 236; p. 306.
Jirdinston, William C., Moline, assignor to Marseilles Company, East Moline, Ill. Manure-spreader. No. 1,218,866; Mar. 13; v. 236; p. 381.
John A. Roebling's Sons Company. (See Sunderland and Green, assignors.)
John Chatillon & Sons. (See Chatillon, Ralph F., assignor.)
John Thomson Press Company. (See Thomson and Fitz Gerald, assignors.)
Johns, Robert I., New York, N. Y. Portable house. No. 1,218,665; Mar. 13; v. 236; p. 306.
Johnson, Aben E. (See Wilson, Richard T., assignor.)
Johnson, Albert E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating on soles. No. 1,218,561; Mar. 6; v. 236; p. 232.
Johnson, Alfred C., Winters, Cal. Transmission mechanism for tractors and the like. No. 1,218,666; Mar. 13; v. 236; p. 306.

Johnson, A. S., *et al.* (See Bentley, Frederick E., assignor.)
Johnson, Austin, Grand Ledge, Mich. Pump. No. 1,218,086; Mar. 6; v. 236; p. 69.
Johnson, Carl E., St. Paul, Minn. Portable track-wheel. No. 1,220,852; Mar. 27; v. 236; p. 1137.
Johnson, Charles A., Sacramento, Cal. Finger-bar for mowers. No. 1,219,322; Mar. 13; v. 236; p. 535.
Johnson, Chloe E., Springfield, Mass. Curtain, blanket, and quilt frame. No. 1,219,556; Mar. 20; v. 236; p. 648.
Johnson, David A., Hammond, Ind. Automatic jointer. No. 1,218,562; Mar. 6; v. 236; p. 232.
Johnson, Ernest W., Ballinacurra, Ireland. Carbureting apparatus for internal-combustion engines. No. 1,218,867; Mar. 13; v. 236; p. 381.
Johnson, Francis T., Chicago, Ill. Mechanical movement. No. 1,218,778; Mar. 13; v. 236; p. 347.
Johnson, Hans O., Sacramento, assignor of one-third to C. T. Wengard, San Francisco, Cal. Direction-signal for motor-vehicles. No. 1,218,944; Mar. 13; v. 236; p. 407.
Johnson, James P., Cleveland, O. Gear-grinding chuck. No. 1,219,740; Mar. 20; v. 236; p. 710.
Johnson, Morton L., Chicago, Ill. Signaling system. No. 1,218,563; Mar. 6; v. 236; p. 232.
Johnson, Oliver W., Cleveland, Ohio. Tractor drive-wheel and mounting for same. No. 1,219,323; Mar. 13; v. 236; p. 535.
Johnson, Solomon F., and L. P. Ayres, Indianapolis, Ind. Governor and automatic cut-out for electric generators. No. 1,219,001; Mar. 13; v. 236; p. 427.
Johnson, Solomon F., and L. P. Ayres, Indianapolis, Ind. Electric switch. No. 1,219,002; Mar. 13; v. 236; p. 427.
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Bolt-action shoulder-arm. No. 1,218,263; Mar. 6; v. 236; p. 132.
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Rear sight for bolt-action shoulder-arms. No. 1,220,637; Mar. 27; v. 236; p. 1063.
Johnson, Vincent K., Indianapolis, Ind., assignor of one-half to D. M. Moroney, Trolley-wheel. No. 1,219,820; Mar. 20; v. 236; p. 739.
Johnson, Wilfred G., Elyria, assignor to The Cleveland Motorcycle Manufacturing Company, Cleveland, Ohio. Motor-cycle transmission mechanism. No. 1,218,667; Mar. 13; v. 236; p. 307.
Johnson, William B., New Haven, Conn. Pendent swivel bench-stool. No. 1,219,324; Mar. 13; v. 236; p. 536.
Johnston, Albert F., assignor of one-third to L. Ries and one-third to A. N. Ries, Toledo, Ohio. Circular glass-cutter. No. 1,219,461; Mar. 20; v. 236; p. 613.
Johnston, Clarence L. (See Brown and Johnston.)
Johnston, Clarence S., Glendive, Mont., assignor of one-fourth to C. H. Crockard and one-fourth to S. H. Clark, Bismarck, N. D. Demountable rim. No. 1,218,945; Mar. 13; v. 236; p. 407.
Johnston, George C., Cuba, Ill. Foldable hanging seat. No. 1,217,950; Mar. 6; v. 236; p. 22.
Johnston, Herbert L., assignor to The Hobart Manufacturing Company, Troy, Ohio. Meat-chopper and the like. No. 1,219,557; Mar. 20; v. 236; p. 648.
Joliet Railway Supply Company. (See Schultz, Richard F. C., assignor.)
Jonas, Charles E., Edwards, Mo. Frictional gearing. No. 1,218,564; Mar. 6; v. 236; p. 233.
Jones, Alva D., Philadelphia, Pa., assignor of one-fifth to E. H. Fairbanks, Merchantville, N. J. Sound-box. No. 1,220,638; Mar. 27; v. 236; p. 1064.
Jones, Benjamin H., St. Louis, Mo. Folding cot-bed. No. 1,218,868; Mar. 13; v. 236; p. 382.
Jones, Edward A. and J. E., assignors to Engineers Specialty Company, Scranton, Pa. Lubricator. No. 1,217,951; Mar. 6; v. 236; p. 22.
Jones, Edward S., Mobile, Ala. Blind-opener and latch control. No. 1,220,144; Mar. 20; v. 236; p. 856.
Jones, Edward S., assignor of one-half to M. Van Heuvel, Mobile, Ala. Ship-davit. No. 1,218,087; Mar. 6; v. 236; p. 69.
Jones, Enoch E., Los Angeles, Cal. Starting mechanism for internal-combustion motors. No. 1,220,853; Mar. 27; v. 236; p. 1138.
Jones, George C., Kansas City, Kans. Automatically-swinging headlight. No. 1,219,947; Mar. 20; v. 236; p. 784.
Jones, George G., Cleveland, Ohio. Emblem. No. 1,220,233; Mar. 27; v. 236; p. 921.
Jones, Harriet B., Baltimore, Md. Fruit seeder or pitter. No. 1,220,854; Mar. 27; v. 236; p. 1138.
Jones, Harry, Suffern, N. Y., assignor to The American Brake Shoe & Foundry Company, Wilmington, Del. Brake-shoe. No. 1,218,668; Mar. 13; v. 236; p. 307.
Jones, Hugh G., Glen, Colo. Sliding-gate hanger. No. 1,218,869; Mar. 13; v. 236; p. 382.
Jones, John E. (See Jones, Edward A. and J. E.)
Jones, J. H. (See Dixon, John M., assignor.)
Jones, John T., Ernest, Pa. Miner's lamp. No. 1,218,185; Mar. 6; v. 236; p. 103.
Jones, Joseph W., Pelham, assignor to Jones Motrola, Inc., New York, N. Y. Winding device for spring-motors. No. 1,219,325; Mar. 13; v. 236; p. 536.
Jones, La Mar R. (See Grimshaw and Jones.)
Jones & Lamson Machine Company. (See Flanders, Ralph E., assignor.)
Jones, Lulu. (See Morgan, John, assignor.)
Jones Motrola, Inc. (See Jones, Joseph W., assignor.)
Jones, Ralph E., assignor to Crouse-Hinds Company, Syracuse, N. Y. Electrical appliance for panel-boards. No. 1,218,407; Mar. 6; v. 236; p. 180.
Jones, Washington S., Lockhart, Miss. Farming implement. No. 1,219,107; Mar. 13; v. 236; p. 462.
Jones, William K., Wichita, Kans. Combination-suit. No. 1,219,326; Mar. 13; v. 236; p. 536.
Jordan, Bennett E., assignor of one-half to R. D. Wilbor, Hugo, Okla. Rein-spur. No. 1,218,088; Mar. 6; v. 236; p. 70.
Jordan, Frank N., St. John, New Brunswick, Canada. Lawn-trimmer. No. 1,218,669; Mar. 13; v. 236; p. 308.
Josephson, Eskil H., Chicago, Ill. Repeating attachment for sound-reproducing instruments. No. 1,218,408; Mar. 6; v. 236; p. 180.
Joslin, Alexander S. (See Buehrer, Emil C., assignor.)
Joslin, Charles T., New Scotland, N. Y. Invalid-bed. No. 1,219,558; Mar. 20; v. 236; p. 648.
Joy, William H., and F. Korff, assignors to Korff Mfg. Co., Lansing, Mich. Display-stand for flowers. No. 1,220,855; Mar. 27; v. 236; p. 1138.
Jurk, August H., Buffalo, N. Y. Fender. No. 1,220,134; Mar. 20; v. 236; p. 851.
Kaehler, George A. E., Fresno, Cal. Auto-rim forcer. No. 1,219,948; Mar. 20; v. 236; p. 784.
Kaeser, Robert, Milwaukee, Wis. Tailor's measuring device. No. 1,218,565; Mar. 6; v. 236; p. 233.
Kail, Grover C., Jewett, Ohio. Automatic gas-shut-off valve. No. 1,218,089; Mar. 6; v. 236; p. 70.
Kaisling, William, assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Binding-post. No. 1,219,003; Mar. 13; v. 236; p. 427.
Kaisling, William, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Electromagnetic signal. No. 1,219,949; Mar. 20; v. 236; p. 784.
Kakela, Elizabeth, Seattle, Wash. Clamp. No. 1,220,639; Mar. 27; v. 236; p. 1064.
Kalamazoo Loose Leaf Binder Company. (See Wigginton, George P., assignor.)
Kalamazoo Stove Company. (See Babbitt, Ralph M., assignor.)
Kalanquin, Harry E., Seattle, Wash. Skate-clamp. No. 1,219,004; Mar. 13; v. 236; p. 428.
Kallenbach, Walter H., Boston, Mass. Thermostat. No. 1,219,950; Mar. 20; v. 236; p. 785.
Kallenbach, Walter H., Jamaica Plain, and C. C. Bertsch, Forest Hills, Mass. Electric self-winding clock. No. 1,219,108; Mar. 13; v. 236; p. 462.
Kamp, Walter V. (See Macmechen and Kamp.)
Kamuf, William J., Joplin, Mo. Time-controlled operating mechanism. No. 1,219,951; Mar. 20; v. 236; p. 785.
Kane, Thomas H., Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich. Ceiling. No. 1,217,952; Mar. 6; v. 236; p. 23.
Kantro, Michael, Brooklyn, N. Y. Envelop. No. 1,220,515; Mar. 27; v. 236; p. 1021.
Kanzaki, Kishiro, Summit, N. J. Food product. No. 1,220,751; Mar. 27; v. 236; p. 1101.
Kaplan, Benjamin, New York, N. Y. Hot-water boiler. No. 1,219,741; Mar. 20; v. 236; p. 710.
Kaplan, Morduch L., Brooklyn, assignor to Beacon Miniature Electric Co., Inc., New York, N. Y. Pocket flash-light. No. 1,219,109; Mar. 13; v. 236; p. 462.
Karl, Joseph M., Roslyn Heights, assignor to Roslyn Specialty Company, Inc., Roslyn, N. Y. Stand for sad-irons. No. 1,219,400; Mar. 13; v. 236; p. 552.
Kastens, William, Springfield, Ohio. Spring-wheel. No. 1,220,425; Mar. 27; v. 236; p. 989.
Kate, John H., assignor of one-half to E. J. Raymond, Des Moines, Iowa. Incubator. No. 1,219,643; Mar. 20; v. 236; p. 677.
Katow, William I., San Francisco, Cal. Window-washer. No. 1,219,401; Mar. 13; v. 236; p. 563.
Kaufman, Adolph G., New York, N. Y. Lantern-globe-support plate. No. 1,220,234; Mar. 27; v. 236; p. 921.
Kavgas, Nicklaus, assignor to Products Dispensing Company, Inc., New York, N. Y. Butter-dispensing apparatus. No. 1,217,953; Mar. 6; v. 236; p. 23.
Kawakubo, Tomegoro, Seattle, Wash. Vegetable-ball cutter. No. 1,218,566; Mar. 6; v. 236; p. 234.
Kayser, Otto, Schöneberg, near Berlin, Germany. Arrangement of tables in railway dining-cars or the like. No. 1,219,953; Mar. 20; v. 236; p. 786.
Kean, Otho V., Providence, R. I. Bullet. No. 1,219,742; Mar. 20; v. 236; p. 711.
Keasey, Francis M., Watervliet, Mich. Necktie attachment. No. 1,219,743; Mar. 20; v. 236; p. 711.
Keating, Robert M., assignor to Springfield Valve Company, Springfield, Mass. Flushing-valve. No. 1,220,856; Mar. 27; v. 236; p. 1138.
Keating, William J., Escanaba, Mich. Shoveling or digging device. No. 1,217,954; Mar. 6; v. 236; p. 23.
Kee, William J., Jr., Kansas City, Kans., and U. Wedge, Ardmore, Pa. Manufacture of sulfuric acid. No. 1,220,752; Mar. 27; v. 236; p. 1102.
Keefer, Walter L., Fitchburg, Mass. Adjustable expanding center. No. 1,219,744; Mar. 20; v. 236; p. 711.
Keeler, Alonzo R., Altona, Ill. Corn-gatherer. No. 1,219,327; Mar. 13; v. 236; p. 537.

Keeler, Frank F., West Newton, assignor of one-half to T. R. Baker, Indianapolis, Ind. Auxiliary spring for vehicles. No. 1,218,409; Mar. 6; v. 236; p. 181.
Keen, Eliot, Brooklyn, assignor to The Aladdin Lamp Corporation, New York, N. Y. Electric fan. No. 1,219,745; Mar. 20; v. 236; 712.
Keen, Eliot, Brooklyn, assignor to The Aladdin Lamp Corporation, New York, N. Y. Electric heater. No. 1,220,235; Mar. 27; v. 236; p. 921.
Kees, Frederick, assignor of one-half to J. S. Mitchell, Minneapolis, Minn. Dispensing device. No. 1,220,753; Mar. 27; v. 236; p. 1102.
Keesee, Clifton G. (See Campbell, John C., assignor.)
Kehl, Frank E., assignor to The Dan Patch Novelty Company, Connersville, Ind. Vehicle-body. No. 1,218,090; Mar. 6; v. 236; p. 70.
Keir, Anita H., Philadelphia, Pa. Garment-support. No. 1,218,410; Mar. 6; v. 236; p. 181.
Keil, John A. (See Myers and Keil.)
Kellam & Shaffer Company, The. (See Cass, Myron T., assignor.)
Kellan, Edward L., Chicago, Ill. Automatic valve device for distributing liquid under pressure. No. 1,218,567; Mar. 6; v. 236; p. 234.
Keller, George W. (See Hancock and Keller.)
Keller, John W. (See Davis and Keller.)
Kellogg, John H., Battle Creek, Mich. Food product and preparing the same. No. 1,219,005; Mar. 13; v. 236; p. 428.
Kellogg Switchboard and Supply Company. (See Kaisling, William, assignor.)
Kellogg Switchboard & Supply Company. (See Smith, Charles H., assignor.)
Kelly, Guy W., assignor of one-half to C. Buchanon, Marceline, Mo. Device for use in the preparation of mayonnaise dressing. No. 1,220,426; Mar. 27; v. 236; p. 990.
Kelly, John P., and H. F. Reid, Grantwood, N. J. Composition for removing paint and varnish. No. 1,219,559; Mar. 20; v. 236; p. 649.
Kelly, William H., Waltham, Mass. Washboard. No. 1,218,411; Mar. 6; v. 236; p. 181.
Kelly, William H., Frederick, Okla. Barrel-stand. No. 1,220,640; Mar. 27; v. 236; p. 1064.
Kelsey, Cadwallader W., Hartford, Conn. Rear-axle construction for motor-vehicles. No. 1,219,006; Mar. 13; v. 236; p. 428.
Kelsey, Cadwallader W., Hartford, Conn. Motor-vehicle. No. 1,219,007; Mar. 13; v. 236; p. 429.
Kemco Electric Manufacturing Company, The. (See Kouyoumjian, Haroutiun K., assignor.)
Kemp, Ernest A., Châtelaine, near Geneva, Switzerland. Billiard-table. No. 1,220,236; Mar. 27; v. 236; p. 921.
Kennedy, Andrew J., Chicago, Ill. Safety delivery-receptacle. No. 1,219,328; Mar. 13; v. 236; p. 537.
Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,218,264; Mar. 6; v. 236; p. 133.
Kennedy, George C., Waterloo, Iowa. Vehicle. No. 1,219,821; Mar. 20; v. 236; p. 739.
Kennedy, James W., Canton, Ohio. Ice-cream-cone dispenser. No. 1,218,186; Mar. 6; v. 236; p. 104.
Kennedy, Julian, Pittsburgh, Pa. Manipulator for rolling-mills. No. 1,220,754; Mar. 27; v. 236; p. 1102.
Kennedy, Walter J., assignor to The Fuel Economizer Company, Cleveland, Ohio. Automatic valve. No. 1,217,955; Mar. 6; v. 236; p. 24.
Kennington, William O., assignor to Remy Electric Company, Anderson, Ind. Article composed partly of rubber or the like. No. 1,218,568; Mar. 6; v. 236; p. 235.
Kennington, William O., assignor to Remy Electric Company, Anderson, Ind. System for supplying electricity. No. 1,219,008; Mar. 13; v. 236; p. 429.
Kent, Bert M., Washington, D. C., assignor to The Kent Vacuum Cleaner Company Inc., Rome, N. Y. Vacuum-creating and dust-separating machine. No. 1,220,641; Mar. 27; v. 236; p. 1065.
Kent, John T., Douglas, Ariz. Gate. No. 1,219,822; Mar. 20; v. 236; p. 740.
Kent Vacuum Cleaner Company, The. (See Kent, Bert M., assignor.)
Kenyon, Otis A., New York, N. Y. Electric welding. No. 1,218,265; Mar. 6; v. 236; p. 133.
Kenyon, Otis A., New York, N. Y. Electric welding. No. 1,218,266; Mar. 6; v. 236; p. 133.
Kenyon, Otis A., New York, N. Y. Electric welding. No. 1,218,267; Mar. 6; v. 236; p. 134.
Kenyon, Otis A., New York, N. Y. Electric welding. No. 1,218,268; Mar. 6; v. 236; p. 134.
Kenyon, Otis A., New York, N. Y. Electric welding. No. 1,218,269; Mar. 6; v. 236; p. 134.
Kenyon, Roy L., assignor to The R. L. Kenyon Company, Waukesha, Wis. Tufting-machine. No. 1,220,237; Mar. 27; v. 236; p. 922.
Keppelman, Paul O., Reading, Pa. Supply-valve. No. 1,220,427; Mar. 27; v. 236; p. 990.
Keppler, Lewis F., Harlan, Iowa. Insulator-bracket. No. 1,219,746; Mar. 20; v. 236; p. 712.
Kern, Roy S., assignor of one-half to L. H. Blacklock, St. Paul, Minn. Piston. No. 1,218,569; Mar. 6; v. 236; p. 235.
Kern, Willis H. (See Baxter and Kern.)
Kerr, Andrew, Belfast, Ireland. Automatic train and the like control and (or) signaling system. No. 1,218,270; Mar. 6; v. 236; p. 134.
Kerr, Charles H., Tarentum, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Pot for the manufacture of plate-glass and making the same. No. 1,217,956; Mar. 6; v. 236; p. 24.
Kerr, Oscar F., Como, Tex. Discharge-tube for fertilizer-distributers No. 1,219,823; Mar. 20; v. 236; p. 740.
Kersten, Jacob, Grand Rapids, Mich. Top construction for dress-forms. No. 1,218,271; Mar. 6; v. 236; p. 135.
Kersten, Jacob, Grand Rapids, Mich. Adjustable dress-form connection. No. 1,218,272; Mar. 6; v. 236; p. 135.
Keys, Hiram S., Edgecomb, Wash. Silo-packer. No. 1,217,957; Mar. 6; v. 236; p. 25.
Keys, James J., Brooklyn, N. Y. Arch-support. No. 1,219,331; Mar. 13; v. 236; p. 538.
Keys, William A., New York, N. Y. Necktie. No. 1,219,329; Mar. 13; v. 236; p. 538.
Keys, William A., New York, N. Y. Necktie. No. 1,219,330; Mar. 13; v. 236; p. 538.
Khumber, Gustave, and A. A. Williams, Denver, Colo. Steam-packing valve. No. 1,218,187; Mar. 6; v. 236; p. 104.
Kilburn, John E., assignor to Hale and Kilburn Company, Philadelphia, Pa. Car-seat. No. 1,220,642; Mar. 27; v. 236; p. 1065.
Kilmer, William A., De Kalb, Ill., assignor to The American & Steel Wire Company of New Jersey, Hoboken, N. J. Closing device for electric circuits. No. 1,220,342; Mar. 27; v. 236; p. 961.
Kilroy, Willie D. (See Evershed and Kilroy.)
Kimball, Richard D., Medford, Mass. Pipe-supporting frame. No. 1,220,343; Mar. 27; v. 236; p. 962.
Kindy, Samuel B. (See McKindley and Kindy.)
King, Alick, Lowestoft, assignor to Torbinia Engineering Company (1916) Limited, London, England. Variable governor-gear for internal-combustion engines. No. 1,220,857; Mar. 27; v. 236; p. 1139.
King, Bruce L. (See Capocefalo and King, assignors.)
King, Jesse G., assignor to Splitdorf Electrical Company, Newark, N. J. Engine-starter. No. 1,219,560; Mar. 20; v. 236; p. 649.
King, Percival E., and G. J. Wittmann, Newburgh, N. Y. Vehicle-tire. No. 1,220,516; Mar. 27; v. 236; p. 1021.
King, Ross L. (See Capocefalo and King.)
King, Walter G., New York, N. Y. Goggles. No. 1,220,755; Mar. 27; v. 236; p. 1103.
Kingsbury, Henry B. (See Clement, Cecil C., assignor.)
Kineto Machine Company. (See Willens, George, assignor.)
Kinnaman, Noel, Chicago, Ill. Practice-keyboard for key-operated machines. No. 1,220,428; Mar. 27; v. 236; p. 991.
Kinney, Justus R., Allston, assignor to The Kinney Manufacturing Company, Boston, Mass. Road-oiler. No. 1,220,344; Mar. 27; v. 236; p. 962.
Kinney Manufacturing Company, The. (See Kinney, Justus R., assignor.)
Kinzer, John J., Wildwood, assignor to Pittsburg Brake Shoe Company, Pittsburgh, Pa. Brake-shoe. No. 1,219,462; Mar. 20; v. 236; p. 614.
Kinzer, John J., Wildwood, assignor to Pittsburg Brake Shoe Company, Pittsburgh, Pa. Brake-shoe. No. 1,219,463; Mar. 20; v. 236; p. 614.
Kinzer, John J., Wildwood, assignor to Pittsburg Brake Shoe Company, Pittsburgh, Pa. Brake-shoe. No. 1,219,464; Mar. 20; v. 236; p. 614.
Kinzer, John J., Wildwood, assignor to Pittsburg Brake Shoe Company, Pittsburgh, Pa. Brake-shoe. No. 1,219,465; Mar. 20; v. 236; p. 615.
Kinzer, John J., Wildwood, assignor to Pittsburg Brake Shoe Company, Pittsburgh, Pa. Brake-shoe. No. 1,219,824; Mar. 20; v. 236; p. 740.
Kinzig, Louis D., Dayton, Ohio, assignor to Optenberg Iron Works, Sheboygan, Wis. Apparatus for softening water. No. 1,220,429; Mar. 27; v. 236; p. 991.
Kirby, Wallace W., Washington, D. C., assignor, by mesne assignments, to The Rapid Process Lithograph Company, Inc. Forming printing-plates. No. 1,219,332; Mar. 13; v. 236; p. 538.
Kirchhoff, Richard J., Dedichen, and W. Lange, assignors to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Ortho-oxy-monoazo-dyes. No. 1,219,954; Mar. 20; v. 236; p. 786.
Kirk, Henry C., Jr., Roland Park, and G. H. Dumler, Baltimore, Md. Manufacturing metal articles by deposit. No. 1,219,466; Mar. 20; v. 236; p. 615.
Kirk, Rufus, *et al.* (See Schlundt, Christian H., assignor.)
Kirk, Walter L., assignor to Lyon & Healy, Chicago, Ill. Tuning-pin for harps and the like. No. 1,220,430; Mar. 27; v. 236; p. 992.
Kirkham, Ralph E. (See Graham and Kirkham.)
Kiss, Andreas, assignor of one-half to M. Rusz, Cincinnati, Ohio. Camera. No. 1,218,273; Mar. 6; v. 236; p. 136.
Kissock, Alan, Tucson, Ariz. Separating lead and molybdenum from mineral wulfenite. No. 1,218,412; Mar. 6; v. 236; p. 182.
Kitsee, Isidor, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y. Quadruplex telegraphy. No. 1,218,274; Mar. 6; v. 236; p. 136.
Kitsee, Isidor, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y. Quadruplex telegraphy. No. 1,218,413; Mar. 6; v. 236; p. 182.

Kitsee, Isidor, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y. Duplexing telegraphic lines. No. 1,218,870; Mar. 13; v. 236; p. 383.
Kitsee, Isidor, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y. Method of and means for quadruplexing cables. No. 1,219,110; Mar. 13; v. 236; p. 463.
Kitsee, Isidor, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y. Quadruplex telegraphy. No. 1,219,561; Mar. 20; v. 236; p. 650.
Kitsee, Isidor, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y. Quadruplex telegraphy. No. 1,219,955; Mar. 20; v. 236; p. 786.
Kitsee, Isidor, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y. Quadruplex telegraphy. No. 1,220,238; Mar. 27; v. 236; p. 922.
Kitsee, Isidor, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y. Quadruplex telegraphy. No. 1,220,756; Mar. 27; v. 236; p. 1103.
Kittel, August J. Torrington, Conn. Attachment for pianos. No. 1,219,747; Mar. 20; v. 236; p. 712.
Klahn, Emil, Weehawken, N. J. Ball-bearing roller. No. 1,218,275; Mar. 6; v. 236; p. 137.
Klahre, Gustav, Chicago, Ill. Water system. No. 1,217,958; Mar. 6; v. 236; p. 25.
Klansnic, Joseph, Black Diamond, Wash. Safety-stop for mine-cars. No. 1,219,748; Mar. 20; v. 236; p. 713.
Klaput, Franciszek, Woodlawn, Pa. Breech-loading ordnance. No. 1,217,959; Mar. 6; v. 236; p. 25.
Klass, Fanny, San Francisco, Cal. Combination front and back reducer. No. 1,218,414; Mar. 6; v. 236; p. 183.
Klein, Fred J., New York, N. Y. Paper-clip. No. 1,218,276; Mar. 6; v. 236; p. 137.
Klensch, Karl. (See Vögels and Klensch.)
Klepsch, Ernst, Saginaw, Mich. Folding ax. No. 1,220,858; Mar. 27; v. 236; p. 1139.
Klorer, Charles P., East Conemaugh, assignor of two-thirds to J. E. Zang, Johnstown, Pa. Flexible clamp-joint. No. 1,217,960; Mar. 6; v. 236; p. 26.
Kluender, William J., Paullina, Iowa. Partition. No. 1,219,825; Mar. 20; v. 236; p. 740.
Klumb, Edward F., Chicago, Ill. Artificial tooth. No. 1,220,239; Mar. 27; v. 236; p. 923.
Knapp, John D. C., Hornsilver, Nev., assignor to J. C. Brown, Duluth, Minn. Fastener for sash-cords. No. 1,219,467; Mar. 20; v. 236; p. 615.
Knapp, Philip N., South Norwalk, Conn. Straw-braid hat. No. 1,219,111; Mar. 13; v. 236; p. 463.
Knapp, William G., *et al.* (See Wilcox, Charles E., assignor.)
Knauf, Carl, Kronach, Germany. Map-displaying apparatus. No. 1,218,277; Mar. 6; v. 236; p. 137.
Knight, Amos L., assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Type-mold. No. 1,219,956; Mar. 20; v. 236; p. 787.
Knowlton, Theodore E., Elba, P. H. McCorquodale, J. H. Wyckoff, C. H. Russell, and J. N. Tooker, Syracuse, assignors to Church & Dwight Company, New York, N. Y. Carton-handling machine. No. 1,220,643; Mar. 27; v. 236; p. 1065.
Koch, Richard, assignor to The Concordia Safety Lamp Company, Inc., Pittsburgh, Pa. Miner's safety electric lamp. No. 1,218,570; Mar. 6; v. 236; p. 235.
Koch, Wilhelm. (See Lüttringhaus and Koch.)
Kocourek, Henry, assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Speed-indicator for talking-machines. No. 1,219,112; Mar. 13; v. 236; p. 463.
Koeb, Emil, New York, N. Y. Vehicle suspension. No. 1,220,431; Mar. 27; v. 236; p. 992.
Koger, John J., Morristown, Tenn. Power-transmitting apparatus. No. 1,218,278; Mar. 6; v. 236; p. 138.
Kohler, George B., assignor to The J. G. Brill Company, Philadelphia, Pa. Back for car-seats. No. 1,220,644; Mar. 27; v. 236; p. 1066.
Kolb, Peter, Fort Deposit, Ala. Insect-destroyer. No. 1,218,188; Mar. 6; v. 236; p. 104.
Kondolf, Mathias R., Rochester, N. Y. Process and apparatus for making boxes. No. 1,220,517; Mar. 27; v. 236; p. 1022.
Kone, George W., assignor of one-half to S. R. Spencer, Rock Island, Ill. Planter. No. 1,219,644; Mar. 20; v. 236; p. 678.
Konetsky, John R., assignor to Ralston Iron Works, San Francisco, Cal. Brake-pedal mounting. No. 1,218,415; Mar. 6; v. 236; p. 183.
Konigsberg, Joseph. (See Forsheim and Konigsberg.)
Konluszewski, John, Manchester, N. H. Automatic fender for automobiles. No. 1,219,113; Mar. 13; v. 236; p. 464.
Kopinski, August, Chicago, Ill. Air-brush. No. 1,218,279; Mar. 6; v. 236; p. 138.
Korfhage, Herman C., New Albany, Ind. Clock. No. 1,219,749; Mar. 20; v. 236; p. 713.
Korff, Francis. (See Joy and Korff.)
Korff Mfg. Co. (See Joy and Korff, assignors.)
Korthals-Altes, Willem C., Schenectady, N. Y., assignor to General Electric Company. Alternating-current motor. No. 1,219,952; Mar. 20; v. 236; p. 785.
Körting, Alfons, Berlin-Südende, Germany. Preparing a molding-powder from coal or lignite. No. 1,217,961; Mar. 6; v. 236; p. 26.
Kortz, Conrad J., Cleveland, Ohio. Combined bill-file and mailing-card. No. 1,217,962; Mar. 6; v. 236; p. 26.
Koschade, Theophil, North Adelaide, South Australia, Australia. Burglar-alarm. No. 1,219,957; Mar. 20; v. 236; p. 787.
Kositzky, Carl, Bismarck, N. D. Fastening device. No. 1,218,189; Mar. 6; v. 236; p. 105.
Kossina, Aloia, St. Louis, Mo. Carbureter feed attachment. No. 1,220,757; Mar. 27; v. 236; p. 1103.
Kossoy, Louis, New York, N. Y. Electric cut-out box. No. 1,219,468; Mar. 20; v. 236; p. 616.
Koster, Reginald J., Philadelphia, Pa. Antifriction-bearing. No. 1,220,345; Mar. 27; v. 236; p. 962.
Kothe, Richard. (See Heymann, Kothe, Dressel, and Ossenbeck.)
Kouyoumjian, Haroutiun K., assignor to The Kemco Electric Manufacturing Company, Cleveland, Ohio. Electric fan and generator. No. 1,219,562; Mar. 20; v. 236; p. 650.
Kouyoumjian, Haroutiun K., assignor to The Kemco Electric Manufacturing Company, Cleveland, Ohio. Motor-vehicle construction. No. 1,219,563; Mar. 20; v. 236; p. 650.
Kouyoumjian, Haroutiun K., assignor to The Kemco Electric Manufacturing Company, Cleveland, Ohio. Electric generator. No. 1,219,564; Mar. 20; v. 236; p. 651.
Kouyoumjian, Haroutiun K., assignor to The Kemco Electric Manufacturing Company, Cleveland, Ohio. Commutator construction. No. 1,219,565; Mar. 20; v. 236; p. 651.
Kovacs, Alexander, Harvey, assignor to W. L. Voss, Cook county, and M. Sulon, Harvey, Ill. Shade and curtain fixture. No. 1,218,280; Mar. 6; v. 236; p. 138.
Kovács, Joseph, Fords, N. J. Aerial bomb. No. 1,218,871; Mar. 13; v. 236; p. 383.
Kovsky, Philip. (See Heldrich, Andrew, assignor.)
Kowastch, Ambrose, New York, N. Y. Producing blasting charges in which liquid air is used. No. 1,219,645; Mar. 20; v. 236; p. 678.
Kraemer, Emil. (See Schuler and Kraemer.)
Kraft, Henry P. (See Schweinert and Kraft.)
Kramer, Andrew A., Kansas City, Mo. Metal bin. No. 1,220,240; Mar. 27; v. 236; p. 923.
Kramer, Charles A., Curran, Ill. Tool for use by paper-hangers. No. 1,218,670; Mar. 13; v. 236; p. 308.
Kranyak, Steven J., Duluth, Minn. Circuit-closer for fire-alarms. No. 1,220,646; Mar. 27; v. 236; p. 1066.
Krarup, Christian, Santa Cruz, Cal., assignor to Santa Cruz Portland Cement Company. Packing pulverulent materials in receptacles. No. 1,218,416; Mar. 6; v. 236; p. 183.
Kraus & Co. (See Dealham, Samuel, Jr., assignor.)
Krause, Franz, Connellsville, Pa. Cutting-machine. No. 1,220,518; Mar. 27; v. 236; p. 1022.
Kribs, Gordon. (See Rothwell and Kribs.)
Krieger, William, Elmhurst, and M. Mott, Moscow, Pa. Automatic damper. No. 1,220,432; Mar. 27; v. 236; p. 992.
Kroeger Piano Company. (See Parsons, George H., assignor.)
Kroemer, Herman. (See Schramm, Joseph J., assignor.)
Kron, Rudolf, Thalheim, Erzgebirge, Germany. Machine for making a weavable paper strip. No. 1,219,958; Mar. 20; v. 236; p. 787.
Krueger, Samuel, Fredericksburg, assignor to Rotary Fly-Trap Company, Houston, Tex. Fly-trap. No. 1,220,860; Mar. 27; v. 236; p. 1140.
Kruger, Louis R., Chicago, Ill. Drawing-board attachment. No. 1,219,959; Mar. 20; v. 236; p. 788.
Krum, Charles L. and H. L., assignors to Morkrum Company, Chicago, Ill. Electromagnet. No. 1,220,433; Mar. 27; v. 236; p. 993.
Krum, Howard L. (See Krum, Charles L. and H. L.)
Kuenzel, Charles A., Jr. (See Pelham and Kuenzel.)
Kuhn, Max O., and H. C. Shoolbred, assignors of one-third to A. M. Shoolbred, Montreal, Quebec, Canada. Indicator. No. 1,218,281; Mar. 6; v. 236; p. 139.
Kummerlander, Charles G., Washington, D. C. Carbonated beverage and making same. No. 1,218,190; Mar. 6; v. 236; p. 105.
Kurowski, Alfred G. F., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,218,282; Mar. 6; v. 236; p. 139.
Kurowski, Alfred G. F., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,220,647; Mar. 27; v. 236; p. 1066.
Kurrle, E. T. (See Darley, Ward, assignor.)
Kusterer, Aloysius J., Richmond, and C. Sanders, South Richmond, assignors to The Randolph Paper Box Co., Richmond, Va. Shell-box-making machine. No. 1,218,417; Mar. 6; v. 236; p. 183.
Kusterer, Aloysius J., Richmond, and C. Sanders, South Richmond, assignors to The Randolph Paper Box Company, Richmond, Va. Feeding and severing mechanism. No. 1,218,418; Mar. 6; v. 236; p. 184.
Kyburg, Henry E., Springfield, Mass. Temperature-controlling apparatus for internal-combustion engines. No. 1,219,646; Mar. 20; v. 236; p. 678.
Kynaston, John D., Washington, D. C. Water-purifying apparatus. No. 1,219,333; Mar. 13; v. 236; p. 539.
L-M-S Motor Co. (See Mueller and Schuler, assignors.)

La Mont, Victor W. (See Walker, Harry, assignor.)
La Morte, William F., New York, N. Y., assignor to The Fireproof Contractors Corporation. Hanger or clip for steel framework construction. No. 1,218,283; Mar. 6; v. 236; p. 139.
La Mothe, Jerry, Grayling, Mich. Flat-iron holder and cleaner. No. 1,218,781; Mar. 13; v. 236; p. 349.
Labadie, Harry H., and B. B. Beers, Chicago, Ill., assignors of one-half to said Labadie and one-half to the estate of W. Schwartzer, deceased. Combined luncheon and carrying case. No. 1,220,159; Mar. 20; v. 236; p. 862.
Labombarde, Elle W., Nashua, N. H. Machine for coating blanks. No. 1,218,419; Mar. 6; v. 236; p. 184.
Lachance, Frederick. (See Austin and Lachance.)
Lafore, John A., Ardmore, Pa. Box construction. No. 1,218,872; Mar. 13; v. 236; p. 383.
Lagerstrom, Leander A., Branford, Conn. Folding chair. No. 1,219,960; Mar. 20; v. 236; p. 788.
Laing, Clayton, Chicago, Ill. Photometer. No. 1,218,946; Mar. 13; v. 236; p. 407.
Laing, Selby A., Moundsville, W. Va. Hammock-support. No. 1,217,963; Mar. 6; v. 236; p. 26.
Lajeunesse, Euclid, Milwaukee, Wis. Block-finishing apparatus. No. 1,218,780; Mar. 13; v. 236; p. 348.
Lake, Fred O., Washington, D. C. Vulcanizing-tongs. No. 1,219,414; Mar. 13; v. 236; p. 567.
Lake, Simon, Milford, assignor to The Lake Torpedo Boat Company of Maine, Bridgeport, Conn. Apparatus for transporting submarine torpedo-boats overland. No. 1,219,647; Mar. 20; v. 236; p. 679.
Lake Torpedo Boat Company of Maine, The. (See Lake, Simon, assignor.)
Lamb, Joseph F., assignor to Landers, Frary & Clark, New Britain, Conn. Electrical contact device. No. 1,217,964; Mar. 6; v. 236; p. 27.
Lampert, Henry H., Chicago, Ill. Rod-puller. No. 1,220,346; Mar. 27; v. 236; p. 963.
Lampert, Henry H., Chicago, Ill. Wire-tightening device. No. 1,220,347; Mar. 27; v. 236; p. 963.
Lamphlear, Wane, Anacortes, Wash. Combined garment-hook and clothes-hanger. No. 1,220,758; Mar. 27; v. 236; p. 1103.
Lamson Company, The. (See Talsey, Fred R., assignor.)
Lander, Thomas W. (See Gracey and Lander.)
Landers, Frary & Clark. (See Carlson, Frederick E., assignor.)
Landers, Frary & Clark. (See Lamb, Joseph F., assignor.)
Landers, John A., Canton, Ohio. Work-clamp. No. 1,218,420; Mar. 6; v. 236; p. 185.
Landis, Abraham B., Enfield, Pa. Cutter-head. No. 1,220,348; Mar. 27; v. 236; p. 964.
Landry, Joseph P., Uxbridge, Mass. Shuttle-guard. No. 1,220,434; Mar. 27; v. 236; p. 993.
Lane, Alfred M., assignor to Monarch Metal Weather Strip Company, St. Louis, Mo. Metal weather-strip. No. 1,219,009; Mar. 13; v. 236; p. 430.
Lane, Arthur P., Denver, Colo. Sash-fastener. No. 1,220,241; Mar. 27; v. 236; p. 923.
Lane, George L., Williamstown, W. Va. Well-drilling bit. No. 1,218,671; Mar. 13; v. 236; p. 308.
Lane, James H., Grand Junction, Colo. Flume. No. 1,220,519; Mar. 27; v. 236; p. 1023.
Lange, Casimir M., Brooklyn, N. Y. Window-shade bracket. No. 1,220,759; Mar. 27; v. 236; p. 1104.
Lange, Werner. (See Kirchhoff, Dedichen, and Lange.)
Langmuir, Irving, Schenectady, N. Y., assignor to General Electric Company. Means for indicating electrical characteristics of alternating currents. No. 1,219,961; Mar. 20; v. 236; p. 788.
Langos, Otto A., assignor to M. M. Ostertag, Chicago, Ill. Automatic air-torpedo. No. 1,220,242; Mar. 27; v. 236; p. 924.
Langston, Ira A., *et al.* (See Thomas, Martin E., assignor.)
Langton, George H., assignor of one-half to J. W. Small, Portsmouth, Va. Adjustable locomotive driving-box brass. (Reissue.) No. 14,275; Mar. 20; v. 236; p. 867.
Lanphier, Robert C., assignor to Sangamo Electric Company, Springfield, Ill. Electricity-meter. No. 1,219,648; Mar. 20; v. 236; p. 679.
Lanston Monotype Machine Company. (See Bancroft and Indahl, assignors.)
Lanston Monotype Machine Company. (See Bancroft, Indahl, and Hofberg, assignors.)
Lanston Monotype Machine Company. (See Indahl, Maurlitz C., assignor.)
Lanston Monotype Machine Company. (See Knight, Amos L., assignor.)
Lapointe Machine Tool Company. (See Lapointe, Ralph R., assignor.)
Lapointe, Ralph R., assignor to Lapointe Machine Tool Company, Hudson, Mass. Spiral broaching appliance. No. 1,218,191; Mar. 6; v. 236; p. 105.
Lappas, Niklas, Salem, Mass. Automatic poultry-feeder. No. 1,219,114; Mar. 13; v. 236; p. 464.
Lard, Allan E., Washington, D. C., assignor to The Metallic Shaft Company, Wilmington, Del. Golf-club. No. 1,218,091; Mar. 6; v. 236; p. 70.
Larkin, Charles A., Wonewoc, Wis. Grader. No. 1,218,782; Mar. 13; v. 236; p. 349.
Larose Joseph A., *et al.* (See Smith and Frost, assignors.)
Larsen, Arnold, Cleveland, Ohio. Dispensing device. No. 1,218,092; Mar. 6; v. 236; p. 71.
Larsen, Fredrick, Skandia, Mich. Timber-feeder for sawmills. No. 1,219,649; Mar. 20; v. 236; p. 679.
Larsen, Lewis H., Racine, Wis., assignor to United Shoe Machinery Company, Paterson, N. J. Holddown for lasting-machines. No. 1,218,783; Mar. 13; v. 236; p. 349.
Larson, Andrew F., Portland, Oreg. Door-hanger. No. 1,219,826; Mar. 20; v. 236; p. 741.
Larson, Carl E., Long Island City, N. Y. Adjustable mechanical elbow. No. 1,218,672; Mar. 13; v. 236; p. 308.
Larsson, Carl H., Tyckilingen, near Vadstena, Sweden. Seed-drill. No. 1,218,421; Mar. 6; v. 236; p. 185.
Lasares, George C., Springfield, Mass. Toy cannon. No. 1,218,093; Mar. 6; v. 236; p. 71.
Lash, Horace W., Cleveland, Ohio, assignor to The West Coast Iron Company. Making cast-iron. No. 1,220,349; Mar. 27; v. 236; p. 964.
Latham, Albert, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Skiving-machine. No. 1,218,673; Mar. 13; v. 236; p. 309.
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Latimer, Charles L., Fort Wadsworth, N. Y. Valve-grinding tool. No. 1,219,010; Mar. 13; v. 236; p. 430.
Laubenthal, Fred N. (See Flora, Charles L., assignor.)
Lauer, Daniel, York, Pa. Fastener. No. 1,220,435; Mar. 27; v. 236; p. 993.
Lauer, James A., and A. A. McConnell, Patton, Pa. Wrench. No. 1,219,469; Mar. 20; v. 236; p. 616.
Laurenti, Cesare, Turin, assignor to Società Anonima Fiat-San Giorgio, Spezia, Italy. Liquid-fuel reservoir. No. 1,219,115; Mar. 13; v. 236; p. 465.
Lautman, Isaac, Fort Wayne, Ind. Ink-bottle. No. 1,219,011; Mar. 13; v. 236; p. 431.
Lawnin, Louis D., and John F. Staab, assignors to N. O. Nelson Manufacturing Company, Edwardsville, Ill. Mechanism for operating flush-valves. No. 1,219,012; Mar. 13; v. 236; p. 431.
Lawton, Burton L., assignor to Connecticut Telephone & Electric Company, Inc., Meriden, Conn. Wire-terminal. No. 1,218,571; Mar. 6; v. 236; p. 236.
Layman, Hebron B., assignor to The Layman Pressed Rod Co., Inc., New York, N. Y. Connecting-rod. No. 1,218,572; Mar. 6; v. 236; p. 236.
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Layne, Mahlon E., Houston, Tex. Belt-tightener for pumps. No. 1,218,192; Mar. 6; v. 236; p. 105.
Le Blond, Richard K., and W. F. Groene, assignors to R. K. Le Blond Machine Tool Company, Cincinnati, Ohio. Positive apron-drive for lathes. No. 1,218,784; Mar. 13; v. 236; p. 349.
Le Cato, John A., assignor to Standard Pneumatic Action Co., New York, N. Y. Test-roll for musical instruments. No. 1,218,094; Mar. 6; v. 236; p. 72.
Le Gore, Thomas J., Jefferson, Iowa. Seed-corn rack. No. 1,220,650; Mar. 27; v. 236; p. 1068.
Leader, Moses, Vidalia, Ga. Means for preventing rattling and lost motion of the steering-arms of Ford automobiles. No. 1,220,648; Mar. 27; v. 236; p. 1067.
Leary, Earl R., and R. W. Pillsbury, Scarboro, Me. Window-screen. No. 1,219,962; Mar. 20; v. 236; p. 788.
Leblanc, Maurice, Val sur Seine, par Croisy, assignor to Société Anonyme pour l'Exploitation de Procédés Westinghouse-Leblanc, Paris, France. Pulley for high-speed transmission. No. 1,218,674; Mar. 13; v. 236; p. 309.
Leckie, John, Calgary, Alberta, Canada. Revolving account-register. No. 1,218,785; Mar. 13; v. 236; p. 350.
Leclerc, Ludger J., Au Sable Forks, N. Y. Spool attachment. No. 1,220,760; Mar. 27; v. 236; p. 1104.
Leethem, Frank C., Middletown, assignor to Latham-Leethem Company, New York, N. Y. Plate-trimming machine. No. 1,219,566; Mar. 20; v. 236; p. 652.
Lefebvre, Daniel J., East Lynn, Mass. Knife-handle. No. 1,219,116; Mar. 13; v. 236; p. 465.
Lefebvre, Henry, assignor of one-half to M. E. Lucero, Douglas, Ariz. Punching-machine. No. 1,219,963; Mar. 20; v. 236; p. 789.
Lefever, Charles F., assignor to Daisy Manufacturing Company, Plymouth, Mich. Magazine and barrel for air-guns. No. 1,220,649; Mar. 27; v. 236; p. 1067.
Lefler, Frank C., Rochester, N. Y. Gun-lock. No. 1,219,964; Mar. 20; v. 236; p. 789.
Leich, Arthur, *et al.* (See Collister and McDonald, assignors.)
Leighton, Albert L., Artesia, Cal. Cultivator. No. 1,219,013; Mar. 13; v. 236; p. 431.
Leininger, Harry E., Chicago, Ill. Paper-holding clamp. No. 1,218,675; Mar. 13; v. 236; p. 309.
Leisenring, Henry G., San Diego, Cal. Plate-holder for X-ray exposures. No. 1,219,965; Mar. 20; v. 236; p. 790.
Leitch, Hugh, Regina, Saskatchewan, Canada. Antiseptic flush-tank. No. 1,220,243; Mar. 27; v. 236; p. 924.
Leitch, Meredith, Poughkeepsie, N. Y., assignor to The De Laval Separator Company. Feed-controlling float-valve. No. 1,219,567; Mar. 20; v. 236; p. 652.
Lekberg, Alfred, Portland, Oreg. Fire-kindler. No. 1,218,284; Mar. 6; v. 236; p. 140.
Lelarge, Blanche A., executrix. (See Lelarge, Henri A. A. J.)
Lelarge, Henri A. A. J., deceased, Paris; B. A. Lelarge, *née* Tapin, Sèvres, France, executrix. Carbureter. No. 1,219,568; Mar. 20; v. 236; p. 652.
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Lemmon, George N., Greensburg, Pa. Electric switch. No. 1,219,470; Mar. 20; v. 236; p. 616.
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Lennon, William, Manitou, Colo. Trough or flume. No. 1,218,873; Mar. 13; v. 236; p. 384.
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Lester, Frederick A., assignor to Chicago Standard Equipment Company, Chicago, Ill. Car-roof. No. 1,218,676; Mar. 13; v. 236; p. 310.
Lev, Frank W., New York, assignor to C. & L. Machine Company, Astoria, N. Y. Packaging-machine. No. 1,218,786; Mar. 13; v. 236; p. 350.
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Levien, Louis. (See Rider, Herbert E., assignor.)
Levin, Isaac H., Newark, N. J. Electrolytic gas-generator. No. 1,219,966. Mar. 20; v. 236; p. 790.
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Levinson, David J., Hinckley, N. Y. Leaf-turner. No. 1,220,520; Mar. 27; v. 236; p. 1023.
Levinstein, Ivan, assignor to Company of Levinstein Limited, Manchester, England. Sulfonated palmitic compound. No. 1,219,967; Mar. 20; v. 236; p. 790.
Levy, Alfred, Jersey City, N. J. Button. No. 1,218,095; Mar. 6; v. 236; p. 72.
Levy, Louis, *et al.* (See Davis, John T., assignor.)
Lewandowski, Leon, assignor of one-half to A. S. Fijalkowski, Detroit, Mich. Safety attachment for elevators. No. 1,218,285; Mar. 6; v. 236; p. 140.
Lewis, Edward R. (See Connolly, Patrick J., assignor.)
Lewis, George A. (See Young and Lewis.)
Lewis, Harriet E., New York, N. Y. Game apparatus. No. 1,218,874; Mar. 13; v. 236; p. 384.
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Libby, Albion, D. T., Orange, assignor to Splitdorf Electrical Company, Newark, N. J. Starting mechanism for hydrocarbon-engines. No. 1,219,569; Mar. 20; v. 236; p. 653.
Liberty Motor Car Company. (See Cole, Roy E., assignor.)
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Liebau, Richard, Swissvale, Pa., assignor to The Westinghouse Air Spring Company. Variable-load air-spring. No. 1,218,875; Mar. 13; v. 236; p. 384.
Lietz, Adolph, San Francisco, Cal. Navigator's alidade. No. 1,218,422; Mar. 6; v. 236; p. 185.
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Lightfoot, Edwin N., New York, N. Y. Electric toaster. No. 1,219,650; Mar. 20; v. 236; p. 680.
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Lindbladh, Harmon E., Boston, Mass., assignor to The Lindbladh Corporation. Ruling-machine. No. 1,220,350; Mar. 27; v. 236; p. 964.
Lindbladh, Harmon E., Boston, Mass., assignor to The Lindbladh Corporation. Ruling-machine. No. 1,220,351; Mar. 27; v. 236; p. 965.
Lindbladh, Harmon E., Boston, Mass., assignor to The Lindbladh Corporation. Tripping device for ruling-machines. No. 1,220,352; Mar. 27; v. 236; p. 965.
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Lindemann, Max, East St. Louis, Ill. Brake for corn-degerminators. No. 1,219,118; Mar. 13; v. 236; p. 466.
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Lindemer, Charles, Trenton, N. J., assignor to The J. L. Mott Iron Works. Mixing-valve. No. 1,220,145; Mar. 20; v. 236; p. 856.
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Lindley, Thomas H., Cedar Rapids, Iowa, and H. Schreier, Sheboygan, Wis. Rotary engine. No. 1,220,244; Mar. 27; v. 236; p. 924.
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Lindsey, Clinton, Salem, assignor of one-half to E. C. Waddington, Woodstown, N. J. Meat-cutter. No. 1,218,096; Mar. 6; v. 236; p. 72.
Lindsey, Earl J., Somerset, Ind. Steering-arm. No. 1,218,424; Mar. 6; v. 236; p. 186.
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Lindström, Gustaf H., assignor to Aktiebolaget Princeps, Gottenborg, Sweden. Platen printing-press and the like. No. 1,219,119; Mar. 13; v. 236; p. 466.
Ling, Leroy V., Johnstown, Pa. Porch-swing hanger. No. 1,218,194; Mar. 6; v. 236; p. 106.
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Littlefield, Frank A., assignor to Nashua Machine Co., Nashua, N. H. Steam-trap. No. 1,218,603; Mar. 6; v. 236; p. 246.
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Llewellyn, Evan, Ystrad, Rhondda, Wales. Means for adjusting ventilating-closures. No. 1,219,120; Mar. 13; v. 236; p. 466.
Lloyd, William H., Chicago, Ill. Fastening means for water-closets and the like. No. 1,217,965; Mar. 6; v. 236; p. 27.
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Lockley, Harry W., New Castle, Pa. Broaching-press. No. 1,218,426; Mar. 6; v. 236; p. 187.
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Lodl, Henry E., Mishicot, Wis. Wire-cutter for guns. No. 1,220,355; Mar. 27; v. 236; p. 966.
Loedige, Fred, Chicago, Ill. Grease-cup. No. 1,218,677; Mar. 13; v. 236; p. 310.
Loffi, George, assignor of forty-five one-hundredths to F. E. Fluke, Garrett, Ind. Auto-tire. No. 1,220,653; Mar. 27; v. 236; p. 1068.
Logan, Frederic H. (See Logan, Paul H., assignor.)
Logan, Paul H., assignor of one-half to F. H. Logan, El Paso, Tex. Cartridge-holder. No. 1,217,966; Mar. 6; v. 236; p. 27.
Logan, W. H. (See Miller, Herman P., assignor.)
Logwood, Charles V., assignor to De Forest Radio Telephone and Telegraph Company, New York, N. Y. System for transmitting communications. No. 1,218,195; Mar. 6; v. 236; p. 106.
Long, John C. F., and F. H. and C. F. Bunke, Lima, Ohio. Valve. No. 1,218,877; Mar. 13; v. 236; p. 385.
Long, John R., Akron, Ohio. Bench vice. No. 1,218,788; Mar. 13; v. 236; p. 352.
Longfellow, H. Wadsworth. (See Plaisted, Jared H., assignor.)
Longoria, Antonio, assignor to The Sterling Corporation, Cleveland, Ohio. Water-heater. No. 1,217,967; Mar. 6; v. 236; p. 28.
Lonquet, Desire, Fairfield, Me. Sharpening device. No. 1,218,878; Mar. 13; v. 236; p. 385.
Lookman, Samuel. (See Witt and Lookman.)
Loomis, Henry F., Reading, Pa. Carriage for heavy field-artillery. No. 1,220,246; Mar. 27; v. 236; p. 925.
Loomis, Maynard, Orting, and P. M., assignors to W. Swartzbaugh, Puyallup, Wash. Gate. No. 1,219,750; Mar. 20; v. 236; p. 714.
Loomis, Paul M. (See Loomis, Maynard and P. M.)
Lorch, William J., Cornwall-on-the-Hudson, N. Y. Fire-hose clamp. No. 1,219,968; Mar. 20; v. 236; p. 790.
Lott, John H., *et al.* (See Thomas, Martin E., assignor.)
Lott, Trumun R., Houston, Tex. Line-support. No. 1,220,654; Mar. 27; v. 236; p. 1069.
Lotz, James O., and J. L. Sanders, assignors of one-half to C. J. Sanders, Eunice, La. Staple. No. 1,217,968; Mar. 6; v. 236; p. 28.
Lovdall, George F., assignor to Uni-Motion Door Handle Company, Chicago, Ill. Door-catch-operating mechanism. No. 1,218,789; Mar. 13; v. 236; p. 352.
Low, Frank. (See Gebhart, John C., assignor.)
Lowe, William A. J., assignor of one-half to G. W. Overstreet, Bristol, Tenn. Basket. No. 1,219,969; Mar. 20; v. 236; p. 791.
Lowe, William B., Babylon, N. Y. Rotary-valve internal-combustion engine. No. 1,218,427; Mar. 6; v. 236; p. 187.
Löwenstein, Karl, Kleingemünd, near Neckargemünd, Germany. Converting steam heat of a liquid into motive force. No. 1,219,970; Mar. 20; v. 236; p. 791.
Lowenstein, Louis, and S. Robbins, New York, N. Y. Hand-bag and like article. No. 1,220,761; Mar. 27; v. 236; p. 1104.
Lower, Nathan M., Schenectady, N. Y. Locomotive-tender. No. 1,219,334; Mar. 13; v. 236; p. 539.
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Ludlow Typograph Company, The. (See Reade, William A., assignor.)
Lubbert, John H. (See Wessell, George B., assignor.)
Lukaszewski, Stanislaw J., Detroit, Mich. Heater. No. 1,220,655; Mar. 27; v. 236; p. 1069.
Lundgren, Edwin. (See Ostergren and Lundgren.)
Lüttringhaus, Arthur, Mannheim, and W. Koch, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Producing ketonic compounds. No. 1,220,248; Mar. 27; v. 236; p. 926.
Lutz, Edwin, Munith, Mich. Can-opener. No. 1,219,971; Mar. 20; v. 236; p. 791.
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Lyman, Charles E., Asheville, N. C. Road-signal. No. 1,220,762; Mar. 27; v. 236; p. 1105.
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Lyon, Henry H. (See Rogers and Lyon.)
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MacAndrews & Forbes Company. (See Walker, William W., assignor.)
MacCorquodale, James H. (See Knowlton, MacCorquodale, Wyckoff, Russell, and Tooker.)
MacKinlay, Eben H., Calgary, Alberta, Canada. Door-check. No. 1,218,197; Mar. 6; v. 236; p. 107.
MacLaurin, John, Brookfield, Mass. Sealing-machine. (Reissue.) No. 14,276; Mar. 20; v. 236; p. 868.
Macbeth-Evans Glass Company. (See Heupel, Herman A., assignor.)
Macbeth-Evans Glass Company. (See Hower, Harry S., assignor.)
Mackintosh, Edward D., Brooklyn, assignor of one-half to S. S. Hepworth Company, New York, N. Y. Belt-tightener. No. 1,220,656; Mar. 27; v. 236; p. 1070.
Maclin, Katherine T., North Emporia, Va. Scrubbing-pail. No. 1,219,017; Mar. 13; v. 236; p. 432.
Macmechen, Thomas R., and E. M. Fox, Westminster, London, England. Airship or dirigible balloon. No. 1,219,121; Mar. 13; v. 236; p. 467.
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Magnus, Edwin R., Sydney, New South Wales, Australia. Artificial tooth and mounting of same. No. 1,219,019; Mar. 13; v. 236; p. 433.
Mahla, Charles A., Jersey City, N. J., assignor to P. G. Hammar, New York, N. Y. Alarm-box. No. 1,218,198; Mar. 6; v. 236; p. 108.
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Majorana, Phillip, Louisville, Ky. Graphophone. No. 1,219,752; Mar. 20; v. 236; p. 714.
Maker, Edward, Eldridge, N. D. Automobile attachment. No. 1,218,947; Mar. 13; v. 236; p. 407.
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Mallison, George. (See Tesse, Felix J. C., assignor.)
Malone, Leo, Oconomowoc, Wis. Adjustable automobile-seat. No. 1,219,654; Mar. 20; v. 236; p. 681.
Maloney, Edward J., Long Island City, N. Y. Abrasive and polishing strip holder. No. 1,220,658; Mar. 27; v. 236; p. 1070.
Mandeville, Henry D., Kansas City, Kans. Washing-machine. No. 1,220,135; Mar. 20; v. 236; p. 852.
Maney, Katherine J., Mukwonago, Wis. Iron-holder. No. 1,218,098; Mar. 6; v. 236; p. 73.
Manhire, William J., Denver, Colo., assignor to Combustion Specialty Co., Kansas City, Mo. Furnace-grate. No. 1,218,199; Mar. 6; v. 236; p. 108.
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Mann, William, Bayonne, N. J. Mail-separating device for pigeonholes. No. 1,217,973; Mar. 6; v. 236; p. 30.
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Manning, Ebenezer H., Tomah, Wis. Windmill construction. No. 1,219,339; Mar. 13; v. 236; p. 541.
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Mansbach, Conrad B., assignor of one-third to F. L. Price and one-third to F. A. Carlson, Brockton, Mass. Tire-tool. No. 1,220,659; Mar. 27; v. 236; p. 1071.
Manson, Ray H., assignor, by mesne assignments, to The Garford Manufacturing Company, Elyria, Ohio. Signaling device. No. 1,218,099; Mar. 6; v. 236; p. 73.
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Manville, Charles R., assignor to H. W. Johns-Manville Company, Milwaukee, Wis. Heat-insulating covering. No. 1,218,079; Mar. 13; v. 236; p. 311.
Many, Robert, Oak Park, Ill. Fire-hose. No. 1,220,661; Mar. 27; v. 236; p. 1071.
Mapes, Charles M., New York, N. Y. Fluid-proofed hollow object and making hollow objects fluid-proof. No. 1,219,021; Mar. 13; v. 236; p. 433.
Mapes, John, assignor of one-half to Z. S. McGinnis, Aledo, Ill. Car-door. No. 1,220,436; Mar. 27; v. 236; p. 994.
Marburger, Henry L., assignor of one-half to Reinle-Salmon Company, Baltimore, Md. Druggist's cabinet. No. 1,219,976; Mar. 20; v. 236; p. 793.
Marchewczyk, Wojciech, Chicago, Ill. Safety-envelop. No. 1,220,869; Mar. 27; v. 236; p. 1142.
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Marenger, Joseph A., Montreal, Quebec, Canada. Combination brake and block for vehicles. No. 1,220,357; Mar. 27; v. 236; p. 966.
Marion, Frank, assignor of seventeen twenty-fourths to F. T. Taylor, and one-twelfth to V. W. Rand, Hardwick, Vt. Rotary engine. No. 1,219,829; Mar. 20; v. 236; p. 742.
Markkula, Victor, Aberdeen, Wash. Weather-vane indicator. No. 1,219,126; Mar. 13; v. 236; p. 468.
Markley, Daniel R., Lancaster, Pa. Eraser attachment for fountain-pens. No. 1,218,948; Mar. 13; v. 236; p. 408.
Markwell, Andrew E., assignor of three-fourths to C. W. Hanson, Fort Worth, and one-fourth to A. D. Evans, Tarrant county, Tex., and G. W. Ittner, St. Louis, Mo. Matrix broach-molding device. No. 1,218,680; Mar. 13; v. 236; p. 311.
Marquardt, Reinhold G., and O. H. Stuewe, Milwaukee, Wis. Mattress-guard. No. 1,219,655; Mar. 20; v. 236; p. 682.
Marsh, Cyrus, Ashland, Va. Nutcracker. No. 1,219,830; Mar. 20; v. 236; p. 742.
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Marshall, Joseph B., Bridgeport, Conn., assignor to Rex Talking Machine Corporation, Wilmington, Del. Talking-machine. No. 1,219,753; Mar. 20; v. 236; p. 715.
Marseilles Company. (See Jirdinston, William C., assignor.)
Marston, Henry C., Goshen, N. Y. Package sealer and fastener. No. 1,219,831; Mar. 20; v. 236; p. 743.
Marten, Adolf F. (See Grundy and Marten.)
Martin, Andrew, New York, N. Y. Window-cleaner. No. 1,219,977; Mar. 20; v. 236; p. 793.
Martin, Claude F., Paxton, Ill. Letter-holder. No. 1,220,251; Mar. 27; v. 236; p. 927.
Martin, Ernest S., assignor to L. A. Nichols, Chicago, Ill. Leveling-rod. No. 1,220,358; Mar. 27; v. 236; p. 967.
Martin, John, Clifton, England, assignor to General Electric Company. Regulating arrangement for dynamo-electric machines. No. 1,220,763; Mar. 27; v. 236; p. 1105.
Martin, Philip S., Clayton, Mo. Grease-retainer. No. 1,218,439; Mar. 6; v. 236; p. 191.
Martin, Talbot G., assignor to Automatic Electric Company, Chicago, Ill. Telephone system. No. 1,219,656; Mar. 20; v. 236; p. 682.
Martin, William T., Rockville, Md. Post-hole-digging machine. No. 1,220,527; Mar. 27; v. 236; p. 1025.
Martin, Wirt A. (See Robertson, John A., assignor.)
Martinsen, Ottocar H., assignor by mesne assignments to C. B. Furness, New York, N. Y. Forming printing-bodies. No. 1,219,472; Mar. 20; v. 236; p. 617.
Marx, Joseph A., assignor to Lenmar Manufacturing Company, Saginaw, Mich. Baling-press. No. 1,220,870; Mar. 27; v. 236; p. 1142.
Mason, James H., Grand Prairie, Tex. Game. No. 1,220,871; Mar. 27; v. 236; p. 1143.
Massachusetts Machinery Company. (See Greer, Jesse W., assignor.)
Massard, Michael, Carroll, Iowa. Animal-releasing device. No. 1,220,662; Mar. 27; v. 236; p. 1072.
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Mathe, Joseph, Omaha, Nebr. Steam-vulcanizer. No. 1,218,100; Mar. 6; v. 236; p. 74.
Mathey, Joseph, Omaha, Nebr. Steam-vulcanizer. No. 1,218,101; Mar. 6; v. 236; p. 74.
Mathias, Bert M., Minneapolis, Minn. Freight-car-wall construction. No. 1,219,832; Mar. 20; v. 236; p. 743.
Mattatuck Manufacturing Company, The. (See Smith, Elwyn P., assignor.)
Mattern, Henry J., Chicago, Ill. Rotary motor. No. 1,218,290; Mar. 6; v. 236; p. 141.

Matthews, Austin, Hardy, assignor of one-half to B. S. Baker, Omaha, Nebr. Dental implement. No. 1,220,252; Mar. 27; v. 236; p. 927.
Mattioli, Delmo, Philadelphia, Pa. Heel-seat wheeling and beating-up machine. No. 1,220,437; Mar. 27; v. 236; p. 994.
Matz, Charles F. (See Cummer and Matz.)
Matz, Michael G. (See Cummer and Matz.)
Mauser, Paul, deceased; F. Eichhorn, administrator, assignor to Waffenfabrik Mauser Aktiengesellschaft, Oberndorf-on-the-Neckar, Germany. Firearm. No. 1,217,974; Mar. 6; v. 236; p. 30.
Maussner, Frederick, Philadelphia, Pa. Machine for interlacing curled hair. No. 1,220,663; Mar. 27; v. 236; p. 1072.
Maxwell, James, Sr., New York, N. Y. Device to facilitate the parting of hair. No. 1,218,440; Mar. 6; v. 236; p. 191.
Maxwell, Joseph W., Waldo, Ark. Combined rule, level, try-square, and calipers. No. 1,220,664; Mar. 27; v. 236; p. 1072.
May, David T., New York, N. Y., assignor by mesne assignments, to Western Electric Company, Incorporated. Protector. No. 1,219,833; Mar. 20; v. 236; p. 743.
Mayer, John M., Kingston, N. Y. Lawn-swing. No. 1,220,764; Mar. 27; v. 236; p. 1105.
Mayer, Max, Berlin-Tempelhof, and B. Havas, Berlin-Schöneberg, assignors to Chemisch-Metallurgische Industrie Gesellschaft mit beschrankter Haftung, Berlin, Germany. Enamel and making the same. No. 1,220,253; Mar. 27; v. 236; p. 927.
Maynes, Hyla F., Gaines, Pa. Amusement apparatus. No. 1,218,200; Mar. 6; v. 236; p. 109.
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Mays, James F., Birmingham, Ala., assignor to Mays Accounting Machine Company, Asheville, N. C. Calculating-machine. No. 1,220,665; Mar. 27; v. 236; p. 1072.
Maytag Company, The. (See Snyder, Howard F., assignor.)
McArthur, Warren, Jr., Chicago, Ill., assignor to R. E. Dietz Company. Tubular lantern. No. 1,218,428; Mar. 6; v. 236; p. 188.
McBride, Albert P., Independence, Kans. Wire rope or cable clamp. No. 1,219,015; Mar. 13; v. 236; p. 432.
McBride, Hiram Y., Artesia, N. Mex. Cleaning animal hair and producing fertilizer. No. 1,218,573; Mar. 6; v. 236; p. 236.
McCaleb, Albert G., et al. (See Bracke, Robert F., assignor.)
McCall, James V. (See Splater, Henry E., assignor.)
McCall, John M., Butler, Pa. Detachable coat-collar. No. 1,219,335; Mar. 13; v. 236; p. 539.
McCallum, William A., Terrace Park, Ohio. Suspending device for trolley-wires. No. 1,220,523; Mar. 27; v. 236; p. 1024.
McCann, George E., Ridgeway, Wis. Cheese-press. No. 1,217,969; Mar. 6; v. 236; p. 28.
McCann, James T., and W. H. Roberts, Tuolumne, Cal. Woodworking-tool. No. 1,218,429; Mar. 6; v. 236; p. 188.
McCarthy, Joseph, Spokane, Wash. Newspaper-easel. No. 1,218,790; Mar. 13; v. 236; p. 353.
McCaskey Register Company, The. (See Silvius, Ellis T., assignor.)
McCaughey, Clarence H., Rock Rapids, Iowa. Eye-shield attachment for caps. No. 1,219,972; Mar. 20; v. 236; p. 792.
McCleary, William, Wilmington, Del. Antiskid device. No. 1,218,430; Mar. 6; v. 236; p. 188.
McCloy, William W., Philadelphia, Pa. Rail-plate. No. 1,220,864; Mar. 27; v. 236; p. 1141.
McComb, Frederick E., Worcester, Mass. Device for stretching suspended fabric ceiling. No. 1,219,828; Mar. 20; v. 236; p. 742.
McCombs, Charles C., Stephenville, Tex. Check-protector. No. 1,219,336; Mar. 13; v. 236; p. 540.
McCombs, Charles C., Frisco, Tex. Pen-point holder. No. 1,219,337; Mar. 13; v. 236; p. 540.
McConnell, Alexander A. (See Lauer and McConnell.)
McConnell, Malcolm F., Steubenville, Ohio. Adjusting mechanism for rolling-mills. No. 1,218,286; Mar. 6; v. 236; p. 140.
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McCool, William A. (See Tucker and McCool.)
McCord & Company. (See Douty, Clarence D., assignor.)
McCord, John D., Manila, Philippine Islands. Copra-drying apparatus. No. 1,219,016; Mar. 13; v. 236; p. 432.
McCorkindale, William, assignor of one-half to K. J. Yoerg and one-half to Holyoke Paper Products Company, Holyoke, Mass. Dispensing apparatus. No. 1,218,196; Mar. 6; v. 236; p. 107.
McCormack, Ira A., New York, N. Y. Lock. No. 1,219,973; Mar. 20; v. 236; p. 792.
McCormick, Robert R., Chicago, Ill. Trenching-tool. No. 1,220,666; Mar. 27; v. 236; p. 1073.
McCoy, Charles W., Sprague, assignor to Refrigerator Car Equipment Co., Seattle, Wash. Apparatus and process for circulating liquids. No. 1,219,570; Mar. 20; v. 236; p. 653.
McCrimmon, Alexander V., Beatrice, Nebr. Armor for pneumatic tires. No. 1,218,431; Mar. 6; v. 236; p. 189.
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McDaniel, James. (See Hauser and McDaniel.)
McDonald, Charles R. (See Collister and McDonald.)
McDonald, Charles R., Long Beach, Cal. Pressure-regulator. No. 1,219,974; Mar. 20; v. 236; p. 792.
McDonald, William R., and W. J. Milne, Portland, Oreg. Dispensing apparatus. No. 1,219,651; Mar. 20; v. 236; p. 680.
McDougall Company. (See Bertram, Henry W., assignor.)
McElveen, Aaron, Stilson, Ga. Honey sample-case. No. 1,218,432; Mar. 6; v. 236; p. 189.
McGinley, Thomas A., assignor to The Duff Manufacturing Company, Pittsburgh, Pa. Journal-bushing for jacks. No. 1,220,961; Mar. 27; v. 236; p. 1181.
McGinness, Joseph E., Pittsburgh, Pa. Heating apparatus. No. 1,218,880; Mar. 13; v. 236; p. 386.
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McGoldrick, Thomas E., et al. (See Rogan, Patrick J., assignor.)
McGuiness, Benjamin F., Saundersville, assignor to Crompton & Knowles Loom Works, Worcester, Mass. Thread-catcher for looms. No. 1,220,667; Mar. 27; v. 236; p. 1073.
McGuire, James C., Bridgewater, Mass. Block-holding attachment for leather-cutting machines. No. 1,218,433; Mar. 6; v. 236; p. 189.
McGuire, Robert F., assignor of one-half to R. B. Griffith, Grand Forks, N. D. Bundle carrier and shocker attachment. No. 1,220,865; Mar. 27; v. 236; p. 1141.
McGuire, Robert F., assignor of one-half to R. B. Griffith, Grand Forks, N. D. Combined bundle carrier and shocker device. No. 1,220,866; Mar. 27; v. 236; p. 1141.
McGuire, Walter S., Shadyside, Ohio. Door-check. No. 1,218,434; Mar. 6; v. 236; p. 190.
McHarg, Arthur V. A. (See Murray and McHarg.)
McInnis, Lauchlin, and D. E. Semon, St. Paul, N. C. Pressure-indicator for tires. No. 1,220,867; Mar. 27; v. 236; p. 1142.
McIntyre, Michael M., assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio. Vehicle-spring. No. 1,217,970; Mar. 6; v. 236; p. 29.
McKay, William F., La Grange, Ill. Prepared roofing. No. 1,219,652; Mar. 20; v. 236; p. 681.
McKenna, John F., Providence, R. I. Thimble for boiler-flues. No. 1,220,438; Mar. 27; v. 236; p. 995.
McKindley, John L., and S. B. Kindy, Toronto, Canada. Automatic press-trip. No. 1,217,971; Mar. 6; v. 236; p. 29.
McLain, Victor C., assignor to E. J. Bronson, East Moline, Ill. Tire-rim setter. No. 1,218,881; Mar. 13; v. 236; p. 386.
McLaren, Kate C., Washington, D. C. Chart or master-pattern. No. 1,218,435; Mar. 6; v. 236; p. 190.
McLaughlin, John C., East Orange, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,218,287; Mar. 6; v. 236; p. 140.
McLellan, Charles T., and D. G. Danner, Minburn, Iowa. Egg-candler. No. 1,220,439; Mar. 27; v. 236; p. 995.
McLeod, Ida L., Lakeland, Fla. Wheel-tire. No. 1,219,653; Mar. 20; v. 236; p. 681.
McLeod, Keith, Calgary, Alberta, Canada. Weeder. No. 1,218,436; Mar. 6; v. 236; p. 190.
McMurtry, George G., New York, N. Y., assignor to United States Steel Corporation, Hoboken, N. J. Steel-making process. No. 1,217,972; Mar. 6; v. 236; p. 29.
McNaughton, Alexander, Buffalo, N. Y. Process of molding. No. 1,218,437; Mar. 6; v. 236; p. 190.
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McNaughton, William D. (See Hill, John C., assignor.)
McNeel, James S., and J. M. Vance, San Antonio, Tex. Milk cooling and aerating apparatus. No. 1,218,791; Mar. 13; v. 236; p. 353.
McNeil, Chester, assignor to Union Special Machine Company, Chicago, Ill. Joining fabric sections. No. 1,220,524; Mar. 27; v. 236; p. 1024.
McPherson, Charles J., Portland, Oreg. Furnace. No. 1,218,288; Mar. 6; v. 236; p. 141.
McSwain, Pinkney A., Anderson, S. C. Hose-coupling. No. 1,220,868; Mar. 27; v. 236; p. 1142.
McVay, Cecilia D., Philadelphia, Pa. Phonographic-disk-record cabinet. No. 1,219,975; Mar. 20; v. 236; p. 793.
McWhorter, Allen, Riverton, N. J. Fertilizer-distributer. No. 1,220,249; Mar. 27; v. 236; p. 926.
Meader, John W., assignor to The Eli Lilly and Company, Indianapolis, Ind. Cephaelin butyl ether and producing the same. No. 1,219,571; Mar. 20; v. 236; p. 654.
Meader, John W., assignor to The Eli Lilly and Company, Indianapolis, Ind. Cephaelin ethyl ether. No. 1,219,572; Mar. 20; v. 236; p. 654.
Meader, John W., assignor to The Eli Lilly and Company, Indianapolis, Ind. Cephaelin propyl ether. No. 1,219,573; Mar. 20; v. 236; p. 654.
Meader, John W., assignor to The Eli Lilly and Company, Indianapolis, Ind. Cephaelin amyl ethers and producing same. No. 1,219,574; Mar. 20; v. 236; p. 654.
Meader, John W., assignor to The Eli Lilly and Company, Indianapolis, Ind. Cephaelin allyl ether and making same. No. 1,219,575; Mar. 20; v. 236; p. 654.
Meadows, Joseph F., Rosalia, Wash., assignor of one-half to I. D. Lemley. Sheaf-carrier. No. 1,218,792; Mar. 13; v. 236; p. 353.

Meeks, Annie L., Gadsden, Ala. Adjustable invalid-chair. No. 1,219,834; Mar. 20; v. 236; p. 743.

Mafflitt, Thomas S., St. Louis, Mo., assignor, by mesne assignments, to Mississippi Valley Iron Company, Wilmington, Del. Treating iron ores. No. 1,219,338; Mar. 13; v. 236; p. 540.

Mehring, George, Chicago, Ill. Steam-pipe thimble. No. 1,219,576; Mar. 20; v. 236; p. 654.

Mehurin, Walter P., *et al.* (See Payne and Gosnell, assignors.)

Mehurin, Walter P., *et al.* (See Payne, Wallace A., assignor.)

Meier, Edward C., Phoenixville, Pa. Coupling. No. 1,220,254; Mar. 27; v. 236; p. 927.

Meinecke, Christian W., East Orange, N. J., assignor to Meinecke & Company, New York, N. Y. Combined air and stuffed cushion. No. 1,218,291; Mar. 6; v. 236; p. 142.

Meinecke & Company. (See Meinecke, Christian W., assignor.)

Meiners, Frank H., Cincinnati, Ohio. Flushing-valve. No. 1,218,793; Mar. 13; v. 236; p. 353.

Meisel, Charles A., assignor to Meisel Press & Manufacturing Company, Boston, Mass. Plate-cylinder. No. 1,220,668; Mar. 27; v. 236; p. 1073.

Meisel Press & Manufacturing Company. (See Meisel, Charles A., assignor.)

Melang, Ole A., Seattle, Wash. Step-ladder. No. 1,219,754; Mar. 20; v. 236; p. 715.

Melanowski, Leo, assignor, by mesne assignments, to The White Motor Company, Cleveland, Ohio. Front-wheel-brake mechanism. No. 1,218,794; Mar. 13; v. 236; p. 354.

Melchert, Charles A., assignor to Automatic Machine Manufacturing Co., Kansas City, Mo. Vending-machine. No. 1,219,657; Mar. 20; v. 236; p. 682.

Melchert, Charles A., assignor to Automatic Machine Manufacturing Co., Kansas City, Mo. Automatic vending-machine. No. 1,220,440; Mar. 27; v. 236; p. 995.

Meldrum, Henry J., Detroit, Mich. Chalk-line holder. No. 1,219,473; Mar. 20; v. 236; p. 617.

Mella, Martin, assignor to Commercial Truck Company of America, Philadelphia, Pa. Battery-tongs. No. 1,219,979; Mar. 20; v. 236; p. 794.

Mendel, James C., Titusville, Fla. Feed and medicament trough. No. 1,220,441; Mar. 27; v. 236; p. 996.

Mendelson, Aaron, Brooklyn, N. Y. Device for picking up and dropping lump-sugar and candy. No. 1,219,474; Mar. 20; v. 236; p. 617.

Mendenhall, John J., Clearwater, Fla. Adjustable sweat-band backing. No. 1,219,755; Mar. 20; v. 236; p. 715.

Meredith-Jones, Hubert, New York, N. Y., assignor to The Rotor Vacuum Cleaner Company, Inc. Vacuum-cleaner. No. 1,219,756; Mar. 20; v. 236; p. 716.

Mergenthaler Linotype Company. (See Kennedy, David S., assignor.)

Mernyk, Maurice, Detroit, Mich. Chair. No. 1,219,409; Mar. 13; v. 236; p. 566.

Merrell-Soule Company. (See Gere, William B., assignor.)

Merrill, Arthur H., Hartford, Conn. Combined match-box holder and cigar-tip cutter. No. 1,220,442; Mar. 27; v. 236; p. 996.

Merrill, Francis S., Amesbury, Mass. Automobile-truck wheel. No. 1,219,022; Mar. 13; v. 236; p. 433.

Merrill, Frank W., Chicago, Ill. Electrical regulator. No. 1,220,253; Mar. 27; v. 236; p. 928.

Merriman, Robert M., Akron, Ohio. Building cord tires. No. 1,219,835; Mar. 20; v. 236; p. 743.

Merritt, Arthur A., Worcester, Mass., assignor to Willcox & Gibbs Sewing Machine Co., New York, N. Y. Seam. No. 1,219,023; Mar. 13; v. 236; p. 434.

Merritt, Arthur A., Worcester, Mass., assignor to Willcox & Gibbs Sewing Machine Co., New York, N. Y. Seam and formation. No. 1,219,024; Mar. 13; v. 236; p. 434.

Merritt, Benjamin F., East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Indicating and recording apparatus. No. 1,218,795; Mar. 13; v. 236; p. 354.

Merritt, Benjamin F., East Orange, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Signal-transmitter. No. 1,218,796; Mar. 13; v. 236; p. 355.

Merrow, Joseph M., assignor to The Merrow Machine Company, Hartford, Conn. Overseaming-machine. No. 1,217,975; Mar. 6; v. 236; p. 30.

Merrow, Joseph M., assignor to The Merrow Machine Company, Hartford, Conn. Lubricating means for sewing-machines. No. 1,217,976; Mar. 6; v. 236; p. 31.

Merrow, Joseph M., assignor to The Merrow Machine Company, Hartford, Conn. Overseaming-machine. No. 1,217,977; Mar. 6; v. 236; p. 31.

Merrow Machine Company, The. (See Avis, Samuel W., assignor.)

Merrow Machine Company, The. (See Merrow, Joseph M., assignor.)

Mersereau Metal Bed Company. (See Groff and Bunce, assignors.)

Mershon, Frank A., Red Hill, Va. Bed. No. 1,218,102; Mar. 6; v. 236; p. 75.

Mertz, George W., North Fort Worth, Tex. Bracket. No. 1,219,025; Mar. 13; v. 236; p. 435.

Messina, Joseph, Benld, Ill. Acetylene-lamp. No. 1,219,980. Mar. 20; v. 236; p. 794.

Metallic Shaft Company, The. (See Lard, Allan E., assignor.)

Metals Research Company. (See Garner and Clayton, assignors.)

Meyer, Erwin E. A. G., Detroit, Mich., assignor to Morgan & Wright. Treating rubber. No. 1,218,949; Mar. 13; v. 236; p. 408.

Meyer, Henry C., assignor to J. E. Hocken, San Francisco, Cal. Auxiliary air-valve. No. 1,220,872; Mar. 27; v. 236; p. 1143.

Meyer, William J., Milwaukee, Wis. Skein-holder. No. 1,219,658; Mar. 20; v. 236; p. 682.

Meyers, Laura M., Elmhurst, N. Y. Can-closure. No. 1,220,873; Mar. 27; v. 236; p. 1143.

Michaud, Onesime E., St. Louis, Mo. Roller-bearing. No. 1,220,765; Mar. 27; v. 236; p. 1106.

Michel, John, Philadelphia, Pa. Vulcanizer. No. 1,218,441; Mar. 6; v. 236; p. 192.

Mickelson, John, Anaconda, Mont. Ore-concentrating apparatus. No. 1,219,128; Mar. 13; v. 236; p. 469.

Middleton, John M., and H. T. Shore, Savannah, assignors of one-third to F. Dieter, East Savannah, Ga. Operating means for automobile direction-indicators. No. 1,219,757; Mar. 20; v. 236; p. 716.

Millar, William T., Arnprior, Ontario, Canada. Cultivator. No. 1,218,681; Mar. 13; v. 236; p. 311.

Miller, Andrew E., Baltimore, Md. Display-rack. No. 1,219,758; Mar. 20; v. 236; p. 716.

Miller, Arthur B., Alicel, Oreg. Device for raising a harrow or plow from the ground. No. 1,220,136; Mar. 20; v. 236; p. 852.

Miller, Charles H., and K. A. Read, Oskaloosa, Iowa. Hydrant. No. 1,218,950; Mar. 13; v. 236; p. 408.

Miller, Emory H., *et al.* (See Wolfe, Clinton M., assignor.)

Miller, Fernando G., Fort Myers, Fla. Fish-seine fabric. No. 1,217,978; Mar. 6; v. 236; p. 31.

Miller, Frank E., New York, N. Y., Cusp-diaphragm mechanism. No. 1,220,669; Mar. 27; v. 236; p. 1074.

Miller, Frederick W., Indianapolis, Ind., assignor to Ransom & Randolph Co., Toledo, Ohio. Bur-block. No. 1,220,256; Mar. 27; v. 236; p. 928.

Miller, George W., Midland, Tex. Photographic view finder. No. 1,219,129; Mar. 13; v. 236; p. 470.

Miller, Herman P., assignor of fifty-five one-hundredths to W. H. Logan, Fort Worth, Tex. Antikicking device for automobiles. No. 1,219,759; Mar. 20; v. 236; p. 717.

Miller, Jacob H., Cresson, Pa. Rail-tie and fastener. No. 1,220,443; Mar. 27; v. 236; p. 996.

Miller, Linwood L. (See Smith and Miller.)

Miller Lock Co. (See Smith, Robert R., assignor.)

Miller Lock Co. (See Soley and Stackhouse, assignors.)

Miller, Louis W., Rochester, assignor to National Police Signal Company, Buffalo, N. Y. Police signaling system. No. 1,218,682; Mar. 13; v. 236; p. 312.

Miller, Milton P., Watervliet, N. Y. Scale-rule. No. 1,219,836; Mar. 20; v. 236; p. 744.

Miller Rubber Company, The. (See Brubaker, William A., assignor.)

Miller Rubber Co., The. (See Brucker, Ferdinand F., assignor.)

Miller, Thomas W., assignor to The Faultless Rubber Company, Ashland, Ohio. Toy balloon. No. 1,220,874; Mar. 27; v. 236; p. 1143.

Miller, William H., Fairbank, Iowa. Means for fastening springs to vehicles. No. 1,219,981; Mar. 20; v. 236; p. 795.

Milligan, Williams G., Bartlesville, Okla. Lighting and signaling system for vehicles. No. 1,218,292; Mar. 6; v. 236; p. 142.

Milliron, Ira A., New York, assignor to Hammock Egg Carrier Company, Buffalo, N. Y. Packing articles. No. 1,220,670; Mar. 27; v. 236; p. 1074.

Mills, Frank W., Little Falls, N. Y. Incubator. No. 1,218,293; Mar. 6; v. 236; p. 142.

Mills, John, Wyoming, N. J., and R. S. Hoyt, Brooklyn, N. Y., assignors to American Telephone and Telegraph Company. Method of and means for correcting loading-section irregularities in transmission-lines. No. 1,219,760; Mar. 20; v. 236; p. 717.

Millward, John R., Newark, N. J. Advertising device. No. 1,217,979; Mar. 6; v. 236; p. 32.

Milmoe, Michael J., assignor to F. B. Redington Company, Chicago, Ill. Carton-opening device. No. 1,218,683; Mar. 13; v. 236; p. 312.

Milne, William J. (See McDonald and Milne.)

Miner, William H. (See O'Connor, John F., assignor.)

Miner, William H. (See Townsend, Frederick B., assignor.)

Mineral Products Company, The. (See Hershman, Paul R., assignor.)

Minneapolis Iron Store Company. (See Ulven, Christian, assignor.)

Minnesota Farm Tractor Company. (See Ferriss, Edward, assignor.)

Mintz, Alex, New York, N. Y. Coffee-making apparatus. No. 1,218,294; Mar. 6; v. 236; p. 143.

Mississippi Valley Iron Company. (See Mafflitt, Thomas S., assignor.)

Mitchell, Halsey J., Schenectady, N. Y. Wire-holder. No. 1,218,295; Mar. 6; v. 236; p. 143.

Mitchell, John E., St. Louis, Mo. Lift holding and delivering device for heel-building machines. No. 1,219,659; Mar. 20; v. 236; p. 683.

Mitchell, John S. (See Kees, Frederick, assignor.)

Mitchell, Robert C., Mount Vernon, N. Y. Closure means for transom-passages and the like. No. 1,218,684; Mar. 13; v. 236; p. 312.

Mitschow, Charles M., and W. A. Ramey, Buffalo, N. Y. Rotary engine. No. 1,219,837; Mar. 20; v. 236; p. 744.

Moe, Gerhard, Ladysmith, Wis. Wire-cable-gripping device. No. 1,218,442; Mar. 6; v. 236; p. 192.

Moeller, William J., Wyoming, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio. Elastic or expansible paving-joint. No. 1,220,766; Mar. 27; v. 236; p. 1106.

Moffat, Albert S., Belmont, assignor to H. C. Wheeler, Boston, Mass. Towel-holder. No. 1,218,103; Mar. 6; v. 236; p. 75.

Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Looper mechanism for sewing-machines. No. 1,217,980; Mar. 6; v. 236; p. 32.

Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Folder for sewing-machines. No. 1,219,838; Mar. 20; v. 236; p. 745.

Molander, Alfred, Minneapolis, Minn. Ore-pulverizer. No. 1,220,257; Mar. 27; v. 236; p. 928.

Mollenhauer, Arnold, New York, N. Y. Oil-dispensing device. No. 1,218,685; Mar. 13; v. 236; p. 313.

Moloney Electric Company. (See Mullen, James J., assignor.)

Moloney, Thomas O. (See Neeley, George S., assignor.)

Molteni, Louis A., assignor of one-half to W. E. Gillespie, Hoboken, N. J. Animated advertising device for cars. No. 1,219,839; Mar. 20; v. 236; p. 745.

Monarch Metal Weather Strip Company. (See Lane, Alfred M., assignor.)

Monmouth Plow Factory. (See Bereth, William F., assignor.)

Monrath, Gustav, Chuquicamata, Chile, assignor to Chile Exploration Company, New York, N. Y. Apparatus for lining reservoirs and the like. No. 1,219,840; Mar. 20; v. 236; p. 745.

Monroe Calculating Machine Company. (See Phinney, Edgar E., assignor.)

Montbarbon, Charles M. P., deceased, Neuilly-sur-Seine, and G. E. Chédru, A. H. Wael, Levallois-Perret, France, administrator. Internal-combustion engine. No. 1,219,982; Mar. 20; v. 236; p. 795.

Montbarbon, Charles M. P., deceased, Neuilly-sur-Seine, and G. E. Chédru, A. H. Wael, Levallois-Perret, France, administrator. Internal-combustion engine. No. 1,219,983; Mar. 20; v. 236; p. 796.

Monts, Pierre de, Marseille, France. Vehicle-coupling device. No. 1,218,631; Mar. 13; v. 236; p. 294.

Monvoisin, Julien J., Montreuil, Paris, France. Treating fresh meats with a view to conserve the same in a fresh condition in open air. No. 1,219,130; Mar. 13; v. 236; p. 470.

Moomy, Joseph G., Erie, Pa. Patch for pneumatic tires. No. 1,219,577; Mar. 20; v. 236; p. 655.

Moomy, Joseph G., Erie, Pa. Patch for pneumatic tires. No. 1,219,578; Mar. 20; v. 236; p. 655.

Moor, Edward N., Oakland, Cal. Tool-holder for lathes. No. 1,219,841; Mar. 20; v. 236; p. 746.

Moore, Fred B., Courtney, Okla. Cotton-chopper. No. 1,219,984; Mar. 20; v. 236; p. 796.

Moore, Merrill, Creston, Iowa. Device for molding concrete slabs or blocks. No. 1,219,131; Mar. 13; v. 236; p. 470.

Moore, Morris W., Somerville, assignor to Samuel Ward Manufacturing Company, Boston, Mass. Fountain-pen. No. 1,220,875; Mar. 27; v. 236; p. 1144.

Moore, Payton J. H., Chicago, Ill., assignor to American Grain Deodorizing Co. Apparatus for treating grain. No. 1,220,160; Mar. 20; v. 236; p. 862.

Moore, Samuel M., Sumner, Ill. Automobile-swing. No. 1,218,443; Mar. 6; v. 236; p. 192.

Moore, Thomas J., Westfield, N. J., assignor to The R. Neumann Hardware Co. Follower for trunks. No. 1,220,258; Mar. 27; v. 236; p. 929.

Moore, Wardlow H., Advocate Harbour, Nova Scotia, Canada. Attachment for boats. No. 1,220,876; Mar. 27; v. 236; p. 1144.

Moore, William E., Wausau Junction, and J. H. Hulehan, Eland, Wis. Screen-sash-locking means. No. 1,220,259; Mar. 27; v. 236; p. 929.

Moore, William F., Votaw, Tex. Plow. No. 1,218,883; Mar. 13; v. 236; p. 387.

Moorhead, Albert E., Ukiah, Cal. Rotary valve. No. 1,218,296; Mar. 6; v. 236; p. 144.

Moran, George T. (See Barber and Frazee, assignors.)

Moran, Martin M., Ogden, Utah. Quartering drive-wheel press. No. 1,219,985; Mar. 20; v. 236; p. 796.

Moran, Thomas P., *et al.* (See Patton, George S., assignor.)

Morden, Charles W., Portland, Oreg. Fixture for packages of folded paper or other material. No. 1,219,366; Mar. 13; v. 236; p. 551.

More, Glenn, assignor to The Blackstone Manufacturing Company, Jamestown, N. Y. Operating-gearing for washing-machines. No. 1,220,767; Mar. 27; v. 236; p. 1106.

Morell, Alfred F., assignor to Crompton & Knowles Loom Works, Worcester, Mass. Attachment for shuttle-changing looms. No. 1,220,671; Mar. 27; v. 236; p. 1074.

Moreton, Henry H., Stony-Point, N. Y., assignor to Universal Lighting Systems Corporation. Acetylene-generating apparatus. No. 1,220,528; Mar. 27; v. 236; p. 1026.

Morgan, Henry S., Trenton, N. J., assignor to Pouvaillsmith Corporation, Poughkeepsie, N. Y. Steering-wheel. No. 1,220,877; Mar. 27; v. 236; p. 1144.

Morgan, Henry S., Trenton, N. J., assignor to Pouvaillsmith Corporation, Poughkeepsie, N. Y. Steering-wheel. No. 1,220,878; Mar. 27; v. 236; p. 1144.

Morgan, John, assignor of one-half to L. Jones, New York, N. Y. Can-opener. No. 1,218,884; Mar. 13; v. 236; p. 387.

Morgan, John C., Los Angeles, Cal. Spring-motor. No. 1,219,340; Mar. 13; v. 236; p. 541.

Morgan, William P., Grosse Ile, Mich. Apparatus for dusting poultry with insecticide. No. 1,219,842; Mar. 20; v. 236; p. 746.

Morgan & Wright. (See Meyer, Erwin E. A. G., assignor.)

Morkrum Company. (See Krum, Charles L. and H. L., assignors.)

Moroney, Daniel M. (See Johnson, Vincent K., assignor.)

Morris, Eugene, Jr., Westport, Tenn. Running-gear. No. 1,218,885; Mar. 13; v. 236; p. 388.

Morris, Howard I., assignor to The Savage Tire Company, San Diego, Cal. Stretching-machine. No. 1,219,026; Mar. 13; v. 236; p. 435.

Morris, Irl N., Kansas City, Mo. Salt and pepper dispenser. No. 1,219,475; Mar. 20; v. 236; p. 618.

Morrison, George O., and W. Thompson, Toronto, Ontario, Canada. Sectional reinforcing electroplating-machine. No. 1,220,260; Mar. 27; v. 236; p. 930.

Morrison, William, assignor to Vesta Accumulator Company, Chicago, Ill. Dynamo-electric clutch. (Reissue.) No. 14,271; Mar. 13; v. 236; p. 573.

Morrison, William, assignor to Vesta Accumulator Company, Chicago, Ill. Centrifugally-regulated power-transmission system. (Reissue.) No. 14,270; Mar. 13; v. 236; p. 571.

Morrow, George N., De Begue, Colo. Tongs. No. 1,218,297; Mar. 6; v. 236; p. 144.

Morrow, William C., Des Moines, N. Mex. Gradometer. No. 1,219,341; Mar. 13; v. 236; p. 542.

Morse Chain Company. (See Morse, Frank L., assignor.)

Morse, Frank L., assignor to Morse Chain Company, Ithaca, N. Y. Adjustable bearing for sprocket-wheels. No. 1,218,686; Mar. 13; v. 236; p. 313.

Morse, Laurence Z., Shelton, Conn. Electric bicycle-lamp. No. 1,220,359; Mar. 27; v. 236; p. 967.

Morton, Henry E., Muskegon Heights, Mich. Head for draw-cut shapers. No. 1,218,951; Mar. 13; v. 236; p. 408.

Morton, Lawrence D., assignor to The Hinde & Dauch Paper Company, Sandusky, Ohio. Package-sealing machine. (Reissue.) No. 14,267; Mar. 6; v. 236; p. 252.

Morton, Reginald J., Springfield, Mass. Dimmer device for automobile-headlights. No. 1,218,104; Mar. 6; v. 236; p. 75.

Morton, Victoria, New York, N. Y. Garbage-pail. No. 1,218,574; Mar. 6; v. 236; p. 237.

Moschel, Charles, Cincinnati, Ohio. Motor-cycle jack. No. 1,220,672; Mar. 27; v. 236; p. 1075.

Moser, Andrew, Hickman, Nebr. Leveling device. No. 1,220,261; Mar. 27; v. 236; p. 930.

Moses, Edmund Q. (See Hammond and Moses.)

Mosler, Arthur R., New York, assignor to A. R. Mosler & Co., Yonkers, N. Y. Spark-plug. No. 1,218,298; Mar. 6; v. 236; p. 144.

Motion Picture Properties Company. (See De Moos, Charles, assignor.)

Motor Patents Company. (See Perrin, John G., assignor.)

Mott, Milton. (See Krieger and Mott.)

Moyer, Fredellia H., assignor to The Firestone Tire & Rubber Company, Akron, Ohio. Ring-truing machine. No. 1,220,300; Mar. 27; v. 236; p. 967.

Moyes, John. (See Stevenson and Moyes.)

Muehow, William M., Evanston, Ill. Dental-floss holder. No. 1,219,986; Mar. 20; v. 236; p. 797.

Muckenhirn, Charles H., Detroit, Mich., assignor to The Standard Sanitary Manufacturing Company, Pittsburgh, Pa. Soil-pipe-sealing device for closet-bowls and the like. No. 1,218,201; Mar. 6; v. 236; p. 109.

Mueller, Arthur W., Cincinnati, Ohio. Printing mechanism. No. 1,218,105; Mar. 6; v. 236; p. 76.

Mueller, Paul H., and L. H. Schuler, Brooklyn, N. Y., assignors to L-M-S Motor Co. Internal-combustion engine. No. 1,218,687; Mar. 13; v. 236; p. 314.

Mueller, Rudolph J. J., Chicago, Ill., and E. G. Rowlands, Milwaukee, Wis., assignors to Universal Oxygen Company. Water-electrolyzing apparatus. No. 1,219,843; Mar. 20; v. 236; p. 747.

Mueller, Rudolph J. J., and E. G. Rowlands, Sheboygan, Wis., assignors to Universal Oxygen Company. Water-electrolyzing apparatus. No. 1,220,262; Mar. 27; v. 236; p. 931.

Mugdan, Martin. (See Herrmann and Mugdan.)

Mulig, Frank, Greendale, Ohio. Memorandum-calendar. No. 1,219,987; Mar. 20; v. 236; p. 797.

Mullen, James J., assignor to Moloney Electric Company, St. Louis, Mo. Electrical fuse connection. No. 1,218,106; Mar. 6; v. 236; p. 76.

Mullen, James S., McRae, Ga., assignor to H. E. Sessions, Columbia, S. C. Cotton-seed linter. No. 1,220,879; Mar. 27; v. 236; p. 1145.

Müller, Frank X., and G. J. Winter, assignors to The Republic Hose Coupler Corporation, Buffalo, N. Y. Conduit connection. No. 1,218,444; Mar. 6; v. 236; p. 193.

Muller, George, Ridgewood, N. J. Fastener. No. 1,219,415; Mar. 13; v. 236; p. 568.

Muller, William S., Cedar Rapids, Iowa. Combined piano-seat and music-cabinet. No. 1,219,988; Mar. 20; v. 236; p. 798.

Mumford, Gurdon S., Garden City, N. Y. Apparatus for constructing concrete walls. No. 1,218,445; Mar. 6; v. 236; p. 193.

Mundlos & Co., H. (See Mundlos, Richard, assignor.)

Mundlos, Richard, assignor to H. Mundlos & Co., Magdeburg, Germany. Thread-cutting device for buttonhole-sewing machines. No. 1,218,107; Mar. 6; v. 236; p. 77.

Munger, A. T. (See Reissner, Frederick, assignor.)

Murdick, Israel H., Benton Harbor, Mich. Mop holder and wringer. No. 1,219,027; Mar. 13; v. 236; p. 436.

Murdock, Kelso, Cincinnati, Ohio. Drinking-fountain. No. 1,218,797; Mar. 13; v. 236; p. 355.

Murphy, David R., and H. W. Blankenship, Kellogg, Idaho. Ribbon-cabinet. No. 1,218,886; Mar. 13; v. 236; p. 388.

Murphy, Mark J., and H. H. Brandeau, St. Paul, Minn. Milking-machine. No. 1,218,446; Mar. 6; v. 236; p. 193.

Murphy, Mark J., and H. H. Brandeau, St. Paul, Minn. Milking-machine. No. 1,218,447; Mar. 6; v. 236; p. 193.

Murphy, Michael N. (See Jenkins and Murphy.)

Murphy, Rose, *et al.* (See Rogan, Patrick J., assignor.)

Murphy Wall Bed Company. (See Murphy, William L., assignor.)

Murphy, William L., assignor to Murphy Wall Bed Company, San Francisco, Cal. Folding bed. No. 1,218,202; Mar. 6; v. 236; p. 109.

Murray, Harry A., and W. T. Dorman, assignors of one-third to C. Pollard, Houston, Tex. Internal-combustion engine. No. 1,220,880; Mar. 27; v. 236; p. 1145.

Murray, Thomas E., New York, N. Y. Meter-testing cut-out. No. 1,219,132; Mar. 13; v. 236; p. 471.

Murray, Thomas E., Jr., Brooklyn, N. Y. Switch. No. 1,219,134; Mar. 13; v. 236; p. 471.

Murray, Thomas E., New York, N. Y. Flanging the end of a metal tube. No. 1,219,135; Mar. 13; v. 236; p. 472.

Murray, Thomas E., New York, N. Y. Electrical welding apparatus. No. 1,219,136; Mar. 13; v. 236; p. 472.

Murray, Thomas E., New York, N. Y. Electrical welding apparatus. No. 1,219,137; Mar. 13; v. 236; p. 472.

Murray, Thomas E., New York, N. Y. Electrically-welded tube and flange. No. 1,219,138; Mar. 13; v. 236; p. 472.

Murray, Thomas E., New York, N. Y. Electrically welding the end of a tube within a sleeve or socket. No. 1,219,139; Mar. 13; v. 236; p. 473.

Murray, Thomas E., New York, N. Y. Metal vehicle-wheel. No. 1,220,768; Mar. 27; v. 236; p. 1107.

Murray, Thomas E., New York, N. Y. Metal vehicle-wheel. No. 1,220,769; Mar. 27; v. 236; p. 1107.

Murray, Thomas E., New York, N. Y. Electrical welding. No. 1,220,770; Mar. 27; v. 236; p. 1107.

Murray, Thomas E., New York, N. Y. Making crank-shafts. No. 1,220,771; Mar. 27; v. 236; p. 1108.

Murray, Thomas E., New York, N. Y. Welding a threaded tube in a sleeve or ferrule. No. 1,220,772; Mar. 27; v. 236; p. 1108.

Murray, Thomas E., New York, N. Y. Producing solid ribs on sheet-metal tubes. No. 1,220,773; Mar. 27; v. 236; p. 1108.

Murray, Thomas E., New York, N. Y. Electrical welding. No. 1,220,774; Mar. 27; v. 236; p. 1108.

Murray, Thomas E., New York, N. Y. Gear-wheel. No. 1,220,775; Mar. 27; v. 236; p. 1108.

Murray, Thomas E., New York, N. Y. Electric welding. No. 1,220,776; Mar. 27; v. 236; p. 1109.

Murray, Thomas E., and A. V. A. McHarg, New York, N. Y. Demountable vehicle-wheel. No. 1,219,133; Mar. 13; v. 236; p. 471.

Must, Abraham, Ste. Agathe des Monts, Quebec, Canada. Land-torpedo. No. 1,219,028; Mar. 13; v. 236; p. 436.

Mutro, Michael, assignor of one-tenth to J. Rawliuk, Chester, Pa. Grain-grinding mill. No. 1,218,448; Mar. 6; v. 236; p. 194.

Mutschler, Albert, Rochester, N. Y. Automatic-feeding machine-tool. No. 1,218,108; Mar. 6; v. 236; p. 77.

Myers, Jim H., Runge, Tex. Foot-piece for cultivators. No. 1,219,342; Mar. 13; v. 236; p. 542.

Myers, Richard O., and J. A. Kell, East Akron, Ohio. Spring-closing receptacle. No. 1,219,029; Mar. 13; v. 236; p. 436.

Myszker, Maxymilian J., Buffalo, N. Y. Gas-valve. No. 1,218,209; Mar. 6; v. 236; p. 145.

N. O. Nelson Manufacturing Company. (See Lawnin and Staab, assignors.)

Naber, Emma, Leigh, Nebr. Skirt-marker. No. 1,219,343; Mar. 13; v. 236; p. 542.

Nagle, Charles A., St. Louis, Mo. Safety attachment for pneumatic tools. No. 1,219,140; Mar. 13; v. 236; p. 473.

Nagle, Edith M., Gibson City, Ill. Go-cart storm-apron. No. 1,220,529; Mar. 27; v. 236; p. 1026.

Naismith, Samuel, Chicago, Ill. Basic open-hearth furnace. No. 1,220,444; Mar. 27; v. 236; p. 996.

Napier, Peter, Chicago, Ill. Fender. No. 1,219,844; Mar. 20; v. 236; p. 747.

Nash, Wesley C. (See Robinson and Nash.)

Nashua Machine Co. (See Littlefield, Frank A., assignor.)

Nasief, Benjamin J., Brooklyn, assignor of one-half to A. H. Hotte, Morris Park, N. Y. Blade-sharpener. No. 1,217,981; Mar. 6; v. 236; p. 32.

National Binding Machine Company. (See Anable, Frederick S., assignor.)

National Carbon Company. (See Holmes, Major E., assignor.)

National Casket Co. (See Wunderlich, Jacob H., assignor.)

National Fire Proofing Company. (See Wolfe, Charles C., assignor.)

National Police Signal Company. (See Miller, Louis W., assignor.)

National Spring Bed Company, The. (See Arnold, Harry B., assignor.)

Neahr, Will C., assignor to The Protective Signal Manufacturing Company, Denver, Colo. Electric-circuit controller. No. 1,217,982; Mar. 6; v. 236; p. 33.

Neal, John W., assignor of one-half to A. A. Swayze, Monroe, La. Intake-valve control. No. 1,220,530; Mar. 27; v. 236; p. 1026.

Neckerman, Irvan, Annapolis, Md. Push-button operator. No. 1,219,344; Mar. 13; v. 236; p. 543.

Neeley, George S., assignor of one-half to T. O. Moloney, St. Louis, Mo. Device for manipulating fuse-boxes. No. 1,218,109; Mar. 6; v. 236; p. 78.

Nehr, William F., West Orange, N. J. Cleaning device. No. 1,220,531; Mar. 27; v. 236; p. 1027.

Neider, Fred A., assignor to The F. A. Neider Company, Augusta, Ky. Vehicle-curtain fastener. No. 1,220,777; Mar. 27; v. 236; p. 1109.

Neidig, William J., Chicago, Ill. Type-writing machine. No. 1,218,688; Mar. 13; v. 236; p. 314.

Neiman, Albert O. A., assignor of one-half to W. P. Davies, Topeka, Kans. Door buffer and retainer. No. 1,220,673; Mar. 27; v. 236; p. 1075.

Nelson, Charles R., New York, N. Y., assignor to J. W. Hatch, North Girard, Pa. Forming garment-stays. No. 1,219,845; Mar. 20; v. 236; p. 747.

Nelson, George F., Berkeley, Cal. Vacuum-pump. No. 1,218,300; Mar. 6; v. 236; p. 145.

Nelson, Harmon O., assignor to Whitin Machine Works, Whitinsville, Mass. Journal-bearing. No. 1,218,203; Mar. 6; v. 236; p. 110.

Nelson, Ida, Gibson City, Ill. Scissors-guide and tape-measure. No. 1,218,798; Mar. 13; v. 236; p. 355.

Nelson, Ira, North Escanaba, Mich. Dispensing-bin. No. 1,219,846; Mar. 20; v. 236; p. 748.

Nelson, Joseph H., Sioux City, Iowa. Garment-hanger for auditorium-seats. No. 1,219,476; Mar. 20; v. 236; p. 618.

Nelson, Martin O., Brooklyn, N. Y. Window-screen. No. 1,220,881; Mar. 27; v. 236; p. 1146.

Nelson, Peter N., Minneapolis, Minn. Tamping device for concrete-block machines. No. 1,220,532; Mar. 27; v. 236; p. 1027.

Nelson, Robert A., Oakland, Cal. Trammel. No. 1,219,141; Mar. 13; v. 236; p. 473.

Nelson Valve Company. (See Yarnall, David R., assignor.)

Nesbitt, William J., Los Angeles, Cal. Heel-cutting apparatus. No. 1,218,301; Mar. 6; v. 236; p. 146.

Nesbitt, William J., Los Angeles, Cal. Heel-cutting apparatus. No. 1,218,302; Mar. 6; v. 236; p. 146.

Nesbitt, William J., Los Angeles, Cal. Heel-cutting apparatus. No. 1,218,303; Mar. 6; v. 236; p. 146.

Nesbitt, William J., Los Angeles, Cal. Heel-cutting apparatus. No. 1,218,304; Mar. 6; v. 236; p. 147.

Nesbitt, William J., Los Angeles, Cal. Heel-cutting apparatus. No. 1,218,305; Mar. 6; v. 236; p. 147.

Nettenstrom, David, Chicago, Ill. Folding tent. No. 1,219,817; Mar. 20; v. 236; p. 748

Nettleton, George R., assignor to The W & E T Fitch Co., New Haven, Conn. Buckle. No. 1,220,533; Mar. 27; v. 236; p. 1028.

Neumayer, Maximilian J. (See Neumayer, Maximilian P. and M. J.)

Neumayer, Maximilian P., St. Charles, and M. J. Neumayer, St. Louis, Mo. Axle-driven generator for train-lighting systems. No. 1,218,110; Mar. 6; v. 236; p. 78.

New Idea Spreader Co. (See Synck and Rollman, assignors.)

New Jersey Patent Company. (See Weber, Peter, assignor.)

New Jersey Zinc Company, The. (See Rigg and Coursen, assignors.)

New York Couch Bed Company. (See Sisbower and Pittoni, assignors.)

Newberry, John A., *et al.* (See Wolfe, Clinton M., assignor.)

Newell, Clinton W., Portland, Oreg. Web gage and detector. No. 1,219,345; Mar. 13; v. 236; p. 543.

Newell, Edward W., Pittsburgh, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Friction draft-gear. No. 1,219,579; Mar. 20; v. 236; p. 655.

Newhall, Henry B. (See Brown, Harry C., assignor.)

Newhouse, Ray C., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. System of control. No. 1,219,761; Mar. 20; v. 236; p. 717.

Newman, Harry C., assignor of one-half to L. O. Clampitt, Los Angeles, Cal. Electric valve-grinder. No. 1,219,142; Mar. 13; v. 236; p. 474.

Nichols, Fred A., Battle Creek, Mich. Balancing device. No. 1,218,689 Mar. 13; v. 236; p. 314.

Nichols, Lewis A. (See Martin, Ernest S., assignor.)

Nickum, Emma, South Bethlehem, Pa. Garbage-can. No. 1,218,449; Mar. 6; v. 236; p. 194.

Nicodemus, Augustus W., *et al.* (See Fahrney, John J., assignor.)

Nicodemus, Harry O., *et al.* (See Fahrney, John J., assignor.)

Nielsen, Frederik, Boston, Mass., assignor to A. Schrader's Son, Incorporated, Brooklyn, N. Y. Dust-cap. No. 1,218,111; Mar. 6; v. 236; p. 78.

Nielsen, Louis P. F., Marquette, Nebr. Cultivator-shovel. No. 1,217,983; Mar. 6; v. 236; p. 33.

Nilson, Andrew, assignor to The Eureka Smokeless Furnace Company, Chicago, Ill. Flue-cleaner. No. 1,218,690; Mar. 13; v. 236; p. 315.

Nobuoka, Ryotaro, Portland, Oreg. Signaling device. No. 1,219,346; Mar. 13; v. 236; p. 544.

Nollies, Frank J., Beaver, Manitoba, Canada. Plow attachment. No. 1,219,990; Mar. 20; v. 236; p. 798.

Noiseless Typewriter Company, The. (See Anderson, Nils H., assignor.)

Nolan, Francis A., St. Paul, Minn. Rubber heel. No. 1,219,991 Mar. 20; v. 236; p. 798.

Nolen, James G., assignor, by mesne assignments, to Automatic Fire Protection Company, New York, N. Y. Supervisory system. No. 1,219,143; Mar. 13; v. 236; p. 474.

Nord, Carl A., New York, N. Y. Watch-guard. No. 1,218,887; Mar. 13; v. 236; p. 388.

Nordensson, Carl O., Chicago, Ill. Oil-gas producer. No. 1,218,575; Mar. 6; v. 236; p. 237.

Norma Compagnie G. m. b. H. (See Hirth, Carl A., assignor.)

Norman, James E., Addicks, Tex. Trimmer and filer for saws. No. 1,220,445; Mar. 27; v. 236; p. 997.

Norris, Daniel E., Robinson, Ill. Check valve. No. 1,219,848; Mar. 20; v. 236; p. 748.

Norris, John B., assignor to Ellicott Machine Corporation, Baltimore, Md. Pipe-coupling. No. 1,219,849; Mar. 20; v. 236; p. 749.

North American Chemical Company. (See Thoma, Andrew, assignor.)

North East Electric Company. (See Halbleib and Dorsey, assignors.)

North & Judd Manufacturing Company, The. (See Troop, George W., assignor.)

Norwood, Harry G., Stovall, N. C., assignor to H. W. Hall, Richmond, Va. Pipe-wrench. No. 1,218,576; Mar. 6; v. 236; p. 237.

Nottingham, William L., Capeville, Va. Coin-controlled vending-machine. No. 1,219,030; Mar. 13; v. 236; p. 436.

Noyes, Mayhew E., Cleveland, Ohio. Nut-tapping machine. No. 1,218,691; Mar. 13; v. 236; p. 315.

Nugent, Michael J., Scranton, Pa. Tie-plate. No. 1,218,450; Mar. 6; v. 236; p. 194.

Nutt, William G., Jonesboro, Ark. Fruit-jar holder. No. 1,219,347; Mar. 13; v. 236; p. 544.

Nutter, Charles P., Malden, Mass. Vegetable-cutter. No. 1,218,577; Mar. 6; v. 236; p. 237.

O'Bert, John F., Los Angeles, Cal. Refillable cartridge-fuse. No. 1,219,850; Mar. 20; v. 236; p. 749.

O'Brien, Henry D., Forsyth, Mont. Truss-pad. No. 1,219,032; Mar. 13; v. 236; p. 437.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Means for recording actions of railway draft-gears. No. 1,217,984; Mar. 6; v. 236; p. 33.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction-gear. No. 1,219,851; Mar. 20; v. 236; p. 750.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Refrigerator-door and operating mechanism therefor. No. 1,220,263; Mar. 27; v. 236; p. 931.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-gear. No. 1,220,264; Mar. 27; v. 236; p. 932.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Railway-car draft-rigging. No. 1,220,265; Mar. 27; v. 236; p. 932.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Shock-absorbing device for vehicles. No. 1,220,446; Mar. 27; v. 236; p. 997.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Resilient vehicle-wheel. No. 1,220,534; Mar. 27; v. 236; p. 1028.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Vehicle-wheel. No. 1,220,535; Mar. 27; v. 236; p. 1029.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draw-bar and draft-yoke connecting means in railway-car draft-rigging. No. 1,220,536; Mar. 27; v. 236; p. 1029.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Detachable draw-bar and yoke connection. No. 1,220,537; Mar. 27; v. 236; p. 1029.

O'Donnell, John R., Brooklyn, N. Y. Reinforced-concrete floor structure. No. 1,217,985; Mar. 6; v. 236; p. 34.

O'Keenan, Charles E., Paris, France. Clock. No. 1,218,692; Mar. 13; v. 236; p. 315.

O'Neal, Simeon, assignor of one-half to W. F. Schenck, Lubbock, Tex. Dustless trousers cabinet. No. 1,219,854; Mar. 20; v. 236; p. 750.

O'Rourke, Daniel J., and F. D. Holdsworth, Claremont, N. H., assignors, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Rock-drill support. No. 1,218,604; Mar. 6; v. 236; p. 247.

Oberkirch, Frank. (See Ashley and Oberkirch.)

Oberkirch, Frank. (See Ashley, Robert W., assignor.)

Oberreich, Louie H., Indianapolis, Ind. Starter for internal-combustion engines. No. 1,219,031; Mar. 13; v. 236; p. 437.

Odell, Levi S., Forestville, N. Y. Puncture-proof layer for tires. No. 1,219,033; Mar. 13; v. 236; p. 437.

Odenbach, Albert, Bonesteel, S. D. Wire-stretcher. No. 1,218,306; Mar. 6; v. 236; p. 148.

Oelschlägel, Wilhelm, New York, N. Y. Ice-skate. No. 1,218,451; Mar. 6; v. 236; p. 195.

Oelschläger, Ernst, Berlin-Charlottenburg, assignor to Siemens-Schuckertwerke G. m. b. H., Berlin, Germany. Rectifier for polyphase alternating currents. No. 1,218,952; Mar. 13; v. 236; p. 409.

Oesterlen, Otto, Zweibrücken, Germany. Preheating blast-furnace gases. No. 1,219,852; Mar. 20; v. 236; p. 750.

Oesterlund, Gustave W. (See Goody, Carl O., assignor.)

Ogden, Carlton N., Houston, Tex. Liquid-vending machine. No. 1,218,888; Mar. 13; v. 236; p. 389.

Ohio Brass Company, The. (See Bovard, William P., assignor.)

Ohl, Lloyd R., Akron, Ohio. Screw-driver. No. 1,218,452; Mar. 6; v. 236; p. 195.

Ohlson, Henry C., Columbus, Ohio. Basket-ball goal. No. 1,218,204; Mar. 6; v. 236; p. 110.

Oil Well Supply Company *et al.* (See Wilcox, Charles E., assignor.)

Okada, Mokichi, Tokyo, Japan. Crackled glass diamond. No. 1,219,853; Mar. 20; v. 236; p. 750.

Okrassa, Roberto F. E., Antigua, Guatemala. Boiler. No. 1,218,453; Mar. 6; v. 236; p. 195.

Old Bridge Enameled Brick and Tile Company. (See Rivers, William E., assignor.)

Oldham, Edward L., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Drill-sharpener. No. 1,219,477; Mar. 20; v. 236; p. 618.

Oldham, Edward L., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Drill-sharpener. No. 1,219,478; Mar. 20; v. 236; p. 619.

Oldham, Frank, Dallas, Tex. Spraying and powder-dusting attachment. No. 1,218,953; Mar. 13; v. 236; p. 409.

Oldham, William H., Elkton, Ky. Air and fuel spraying device for engines. No. 1,220,674; Mar. 27; v. 236; p. 1075.

Olson, Charles A., Geneva, assignor to Crane Company, Chicago, Ill. Air-removing device for water-pipe lines. No. 1,220,538; Mar. 27; v. 236; p. 1029.

Olson, Emil L., Kearney, Nebr. Harrow attachment. No. 1,219,992; Mar. 20; v. 236; p. 798.

Omoto, Bunnosuke, Granger, Wyo. Knife-cleaning device. No. 1,219,993; Mar. 20; v. 236; p. 798.

Oneida Community. (See Hurlbut, Rollin S., assignor.)

Onken, Oscar F., Cincinnati, Ohio. Display device. No. 1,220,447; Mar. 27; v. 236; p. 997.

Onlake Company. (See Taylor, Clarence W., assignor.)

Op ten Noort, Anton H., Utrecht, Netherlands. Rail-joint. No. 1,220,882; Mar. 27; v. 236; p. 1146.

Oppedal, John A., Scarville, Iowa. Holder for silo-filling pipes. No. 1,219,034; Mar. 13; v. 236; p. 437.

Optenberg Iron Works. (See Kluzig, Louis D., assignor.)

Orbick, John J., Hurley, Wis. Nut-lock. No. 1,218,454; Mar. 6; v. 236; p. 196.

Orizaroff, Zvetko. (See Pavloff and Orizaroff.)

Orlowski, Stanyslaw, *et al.* (See Pludowski, Aleksander, assignor.)

Osborn, Clarence P., assignor to The Dayton Malleable Iron Company, Dayton, Ohio. Insert. No. 1,219,762; Mar. 20; v. 236; p. 718.

Osborn-Crew Manufacturing Company. (See Brisben, Ernest J., assignor.)

Osborn Manufacturing Company, The. (See Carman, Edwin S., assignor.)

Oscar Schmidt, Inc. (See Habermann, Charles, assignor.)

Osley, Willard A., assignor to Vacuum Hose Protector Company, Springfield, Mass. Antifriction device for vacuum-hose. No. 1,218,578; Mar. 6; v. 236; p. 238.

Ossenbeck, Anton. (See Heymann, Kothe, Dressel, and Ossenbeck.)

Ostenberg, Zeno, San Francisco, Cal., assignor to International Cellulose Company, Reno, Nev. Dissolving cellulose. No. 1,218,954; Mar. 13; v. 236; p. 410.

Ostenberg, Zeno, San Francisco, Cal., assignor to International Cellulose Company, Reno, Nev. Chemical apparatus. No. 1,220,778; Mar. 27; v. 236; p. 1109.

Ostergren, Oscar P., and E. Lundgren, Brooklyn, N. Y., assignors to The Westinghouse Machine Company. Furnace. No. 1,220,161; Mar. 20; v. 236; p. 863.

Ostertag, Melville M. (See Langos, Otto A., assignor.)

Otis Elevator Company. (See Baldwin, William D., assignor.)

Ott, Carrol H., Johnstown, Pa. Nursing-bottle holder. No. 1,220,266; Mar. 27; v. 236; p. 932.

Overlin, William S., Portland, Oreg., assignor, by mesne assignments, to International Money Machine Company, Terre Haute, Ind. Mechanical cashier. No. 1,218,455; Mar. 6; v. 236; p. 196.

Overman, Roscoe E., Los Angeles, Cal. Drill. No. 1,218,579; Mar. 6; v. 236; p. 238.

Overstreet, George W. (See Lowe, William A. J., assignor.)
Ovington, Edward J., Newton Center, assignor to Simplex Electric Heating Company, Cambridge, Mass. Electrical plug-switch. No. 1,220,779; Mar. 27; v. 236; p. 1110.
Ovington, Edward J., Newton Center, assignor to Simplex Electric Heating Company, Cambridge, Mass. Electrical connector. No. 1,220,780; Mar. 27; v. 236; p. 1110.
Owens, Walter J. (See Vose and Owens.)
Ozbirn, John B. (See Thrasher and Ozbirn.)
Ozman, A. B. (See Chalberg, Edward E., assignor.)
P. & M. Co., The. (See Preston, Frederick A., assignor.)
P. H. & F. M. Roots Company, The. (See Enyart, Ralph C., assignor.)
Pacetti, George M. (See Goyne and Pacetti.)
Pack, Arthur, *et al.* (See Trosien, Charles G., assignor.)
Packard, Horace N., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electrical resistance unit. No. 1,218,205; Mar. 6; v. 236; p. 110.
Packard Motor Car Company. (See Huff, Russell, assignor.)
Packard Motor Car Company. (See Tibbetts, Milton, assignor.)
Packard Motor Car Company. (See Waldon, Sidney D., assignor.)
Padgett, Fred W. (See Brooks and Padgett.)
Page, Alfred C. (See Booth and Page.)
Page, Hattie J., Grand Rapids, Mich. Infant's vest. No. 1,218,307; Mar. 6; v. 236; p. 148.
Palmer, Charles E., Castle Cary, England. Oil-lamp. No. 1,218,889; Mar. 13; v. 236; p. 389.
Panasevitch, John S., Northampton, Mass. Gas heater and cooker. No. 1,218,206; Mar. 6; v. 236; p. 111.
Pancoast, William G., Chicago, Ill. Vegetable-masher. No. 1,219,580; Mar. 20; v. 236; p. 656.
Pankratz, William B., New Castle, Pa. Safety match-box holder. No. 1,220,539; Mar. 27; v. 236; p. 1030.
Pape, Herman G., New York, N. Y. Phonograph recorder and reproducer. No. 1,218,799; Mar. 13; v. 236; p. 356.
Para, John, Elizabeth, N. J. Repeater for talking-machines. No. 1,219,144; Mar. 13; v. 236; p. 474.
Paramount Hosiery Form Drying Co. (See Brine, John H., assignor.)
Parce, Donald H., Oakland, Cal. Laundry-distributing system. No. 1,217,986; Mar. 6; v. 236; p. 34.
Parce, Donald H., Oakland, Cal. Assorting-tag. No. 1,217,987; Mar. 6; v. 236; p. 34.
Parce, Donald H., Oakland, Cal. Assorting apparatus. No. 1,217,988; Mar. 6; v. 236; p. 34.
Pardee, Frank, Hazleton, Pa. Coal-breaking method and machine. No. 1,218,693; Mar. 13; v. 236; p. 316.
Pardee, Stephen C. (See Stineman, William H. H., assignor.)
Parent, Arthur, Farley, Mass. Box-topping machine. No. 1,220,540; Mar. 27; v. 236; p. 1030.
Paridon, Michael, and C. R. Harris, Oswego, N. Y., assignors to The Diamond Match Company, Chicago, Ill. Means for applying adhesive to wrapping-paper. No. 1,217,989; Mar. 6; v. 236; p. 35.
Paridon, Michael, Oswego, N. Y., assignor to The Diamond Match Company, Chicago, Ill. Box-drying apparatus. No. 1,217,990; Mar. 6; v. 236; p. 35.
Paridon, Michael, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Machine for assembling match-books, &c. No. 1,217,991; Mar. 6; v. 236; p. 35.
Paridon, Michael, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Machine for assembling match-books, &c. No. 1,217,992; Mar. 6; v. 236; p. 36.
Paridon, Michael, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Machine for making card-matches. No. 1,217,993; Mar. 6; v. 236; p. 36.
Park, Allan J., Madison, Wis. Demountable rim. No. 1,220,541; Mar. 27; v. 236; p. 1030.
Park, Charles S., assignor of one-half to M. W. Dixon, Jr., Savannah, Ga. Closure device for tanks, &c. No. 1,220,267; Mar. 27; v. 236; p. 933.
Parke, Frederic H., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Double-heading device. No. 1,219,581; Mar. 20; v. 236; p. 656.
Parke, Roderick J. M., and E. D. Brand, Toronto, Ontario, Canada. Thermostat for electric heating and cooking apparatus. No. 1,217,994; Mar. 6; v. 236; p. 37.
Parker, Harry W., Philadelphia, Pa. Transmission-gearing. No. 1,220,883; Mar. 27; v. 236; p. 1146.
Parker, Jim, Tecumseh, Okla. Raising and lowering device for agricultural implements. No. 1,217,995; Mar. 6; v. 236; p. 37.
Parker, Robert N., and H. A. Smith; said Smith assignor to C. C. Willis, Odem, Tex. Automatic lock. No. 1,220,448; Mar. 27; v. 236; p. 998.
Parker Rust Proof Company of America. (See Allen, William H., assignor.)
Parker, Thomas T., New York, N. Y. Water-tube boiler. No. 1,219,855; Mar. 20; v. 236; p. 751.
Parker, William A., Penhook, Va. Flavoring tobacco. No. 1,219,856; Mar. 20; v. 236; p. 751.
Parkhurst, Edward B., Woburn, Mass. Lobster-crusher. No. 1,219,857; Mar. 20; v. 236; p. 751.
Parkhurst, Leon F., Pittsfield, Mass., assignor to General Electric Company. Electric heating device. No. 1,220,781; Mar. 27; v. 236; p. 1110.
Parks, Edward F., Providence, R. I., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass. Belt-shifter. No. 1,218,207; Mar. 6; v. 236; p. 111.
Parks, W. H., *et al.* (See Estes, Henry D., assignor.)
Parr, Peter, *et al.* (See Powell, George E., assignor.)
Parrett, Anna D., Denver, Colo. Book. No. 1,220,884; Mar. 27; v. 236; p. 1147.
Parson, Cassius M., Kokomo, Ind. Window-screen. No. 1,220,675; Mar. 27; v. 236; p. 1076.
Parsons, Charles A., Newcastle-upon-Tyne, and S. S. Cook, Wallsend, England; said Cook assignor to said Parsons. Formation of gear-wheel teeth. No. 1,220,542; Mar. 27; v. 236; p. 1031.
Parsons, Charles A., Newcastle-upon-Tyne, and S. S. Cook, Wallsend, England; said Cook assignor to said Parsons. Formation of gear-wheel teeth. No. 1,220,543; Mar. 27; v. 236; p. 1031.
Parsons, George H., assignor to Kroeger Piano Company, Stamford, Conn. Accent control for musical instruments. No. 1,219,145; Mar. 13; v. 236; p. 475.
Parsons, Harold K. (See Styll and Parsons.)
Parsons, Harold K., Southbridge, Mass. Ophthalmic mounting. No. 1,218,112; Mar. 6; v. 236; p. 79.
Partridge, Edward O., Chicago, Ill. Guard for grinding-machines. No. 1,217,996; Mar. 6; v. 236; p. 38.
Partridge, John H., Likely, Cal. Spring-wheel. No. 1,220,676; Mar. 27; v. 236; p. 1076.
Passmore, William G., Saratoga, Wyo. Wheel. No. 1,217,997; Mar. 6; v. 236; p. 38.
Patent Devices Limited. (See Smith, Squire J., assignor.)
Patent Electric Fuse Spitter Co. (See Bernardi, Frank, assignor.)
Patten, John, assignor to Davison Chemical Company, Baltimore, Md. Atomizer for fluids. No. 1,219,094; Mar. 20; v. 236; p. 799.
Patterson, Edie J., Stockton, Cal. Self-adjusting colter-wheel for plows. No. 1,220,449; Mar. 27; v. 236; p. 998.
Patterson, Herbert H., Hudson Falls, N. Y. Tallying device. No. 1,219,858; Mar. 20; v. 236; p. 752.
Patterson, William H., assignor of one-half to F. T. Ellsworth, Cuyahoga Falls, Ohio. Block-mold. No. 1,219,660; Mar. 20; v. 236; p. 683.
Patterson, William L., assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Projection apparatus. No. 1,218,113; Mar. 6; v. 236; p. 79.
Pattimore, Augustus T., Sacramento, Cal. Ticket-delivering machine. No. 1,220,677; Mar. 27; v. 236; p. 1076.
Patton, George S., assignor of one-third to J. F. Ewing, one-third to H. L. Fleck, and one-sixth to T. P. Moran, Pittsburgh, Pa. Frogless switch. No. 1,220,544; Mar. 27; v. 236; p. 1031.
Pavey, William B., and G. M. French, assignors to Economy Engineering Company, Chicago, Ill. Barrel-rack. No. 1,220,450; Mar. 27; v. 236; p. 998.
Pavloff, Variky, and Z. Orizaroff, Harrisburg, Pa. Automobile safety-sign. No. 1,218,308; Mar. 6; v. 236; p. 148.
Paxton, Alexander G., Greenville, Miss. Nutcracker. No. 1,219,859; Mar. 20; v. 236; p. 752.
Payet, Jerome, Clifton, N. J. Apparatus for cleaning fabrics. No. 1,220,268; Mar. 27; v. 236; p. 933.
Payne, Wallace A., assignor of one-fourth to W. M. Wills and W. P. Mehuriu, Staunton, Va. Coin-actuated stamp-vending machine. No. 1,219,860; Mar. 20; v. 236; p. 752.
Payne, Wallace A., Staunton, Va., and C. W. Gosnell, Washington, D. C., assignors of one-fourth to W. M. Wills and W. P. Mehurin, Staunton, Va., and three-fourths to said Payne. Coin-controlled vending-machine. No. 1,219,861; Mar. 20; v. 236; p. 753.
Payson, Harold. (See Feldkamp, Payson, and Whipple.)
Peacock, J. Luther. (See Peterson, Thor W., assignor.)
Pearce, Curtis S., Big Island, Va. Cistern-cleaner. No. 1,219,763; Mar. 20; v. 236; p. 718.
Pearce, Herbert, and J. E. Billington, Broadheath, assignors to Linotype and Machinery Limited, London, England. Typographical casting - machine. No. 1,220,782; Mar. 27; v. 236; p. 1111.
Pearson, Charles. (See Benjamin and Pearson.)
Pearson, Miles E., Pullman, Wash. Grain-treating apparatus. No. 1,218,114; Mar. 6; v. 236; p. 79.
Peat Coal Limited. (See Jenkins, Charles D., assignor.)
Pecora, James, and D. Smoldone, West Hazleton, Pa. Figure toy. No. 1,220,451; Mar. 27; v. 236; p. 999.
Pederson, Mathias, Fargo, N. D. Radiator-valve. No. 1,219,582; Mar. 20; v. 236; p. 656.
Pedlar People Limited, The. (See Hall, William H., assignor.)
Pedley, William E., Riverside, Cal. Means to check the flow of water in streams. No. 1,219,995; Mar. 20; v. 236; p. 799.
Peery, Thomas H., Brunswick, Mo. Electric-light sign. No. 1,220,678; Mar. 27; v. 236; p. 1077.
Pegg, Gerald. (See Pratt and Pegg.)
Pegler, Emile J., New York, N. Y. Transparent refrigerator. No. 1,219,764; Mar. 20; v. 236; p. 718.
Peirce, Charles L., Jr., assignor of one-half to Hubbard & Co., Pittsburgh, Pa. Separable insulator-thimble structure. No. 1,219,862; Mar. 20; v. 236; p. 753.
Peirce, John R., New York, N. Y. Recording apparatus and device. No. 1,219,765; Mar. 20; v. 236; p. 718.
Peirce, John R., New York, N. Y. Bookkeeping-machine. No. 1,219,766; Mar. 20; v. 236; p. 719.

Peirce, John R., New York, N. Y. Sorting-machine. No. 1,219,767; Mar. 20; v. 236; p. 719.
Pelham, Richard M., and C. A. Kuenzel, Jr., Denver, Colo. Vapor-mixer for an internal-combustion engine. No. 1,218,309; Mar. 6; v. 236; p. 148.
Pell, William C. (See Lodge and Pell.)
Pelton Water Wheel Company, The. (See Doble, William A., assignor.)
Penn Rivet Corporation. (See Coombs, James W., assignor.)
Penza, Pasquale, Bologna, Italy. Pneumatic-dynamic car for diminishing the destructive effects of railway collisions. No. 1,218,310; Mar. 6; v. 236; p. 148.
Perfect, Charles A., assignor to The Sunbury Mfg. Co., Sunbury, Ohio. Automatic loader. No. 1,218,580; Mar. 6; v. 236; p. 239.
Perfect Window Regulator Company. (See Ternstedt, Alvar K., assignor.)
Perkins, Charles J., Des Moines, Iowa. Mold for plastic blocks. No. 1,219,348; Mar. 13; v. 236; p. 544.
Perkins, Julius A., New York, N. Y. Thrust-bearing. No. 1,218,311; Mar. 6; v. 236; p. 149.
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Perrin, John G., assignor to Motor Patents Company, Detroit, Mich. Speedometer driving mechanism. No. 1,219,479; Mar. 20; v. 236; p. 619.
Perrin, William H., New Liskeard, Ontario, Canada. Shocker. No. 1,218,694; Mar. 13; v. 236; p. 316.
Perry, Ward S., Chicago, Ill. Headlight. No. 1,219,480; Mar. 20; v. 236; p. 619.
Perry, Ward S., Chicago, Ill. Headlight-dimmer. No. 1,219,583; Mar. 20; v. 236; p. 656.
Persson, Emanuel, Yule Meadow, Alberta, Canada. Shoe. No. 1,219,584; Mar. 20; v. 236; p. 657.
Peters, Frank E., assignor of one-third to J. D. Eastman and one-third to S. R. Greer, Indianapolis, Ind. Block-molding machine. No. 1,220,452; Mar. 27; v. 236; p. 999.
Petersen-Hvild, Lauritz, Copenhagen, Denmark. Impregnating fabrics. No. 1,219,349; Mar. 13; v. 236; p. 544.
Petersen, Thor W., assignor by mesne assignments to J. L. Peacock, Chicago, Ill. Vending-machine. No. 1,219,768; Mar. 20; v. 236; p. 720.
Peterson, Alex, San Francisco, Cal. Warehouse-truck. No. 1,220,269; Mar. 27; v. 236; p. 933.
Peterson, Charles H., Hartford, Conn. Wheel. No. 1,219,661; Mar. 20; v. 236; p. 684.
Peterson, Charlie, assignor of one-half to H. Bowman, Florence, and C. Erickson, Commonwealth, Wis. Airship. No. 1,218,456; Mar. 6; v. 236; p. 196.
Peterson, Emil J., assignor to Gale Manufacturing Company, Albion, Mich. Corn-planter shoe. No. 1,219,996; Mar. 20; v. 236; p. 799.
Peterson, George, New Auburn, Wis. Shovel attachment for pitchforks. No. 1,220,453; Mar. 27; v. 236; p. 1000.
Peterson, George D., Chicago, Ill. Mail-elevator. No. 1,218,800; Mar. 13; v. 236; p. 356.
Peterson, Hilding F., assignor to Light Draft Harrow Company, Marshalltown, Iowa. Spring-tooth for cultivators. No. 1,218,581; Mar. 6; v. 236; p. 239.
Peterson, John. (See Peterson, Swan J., assignor.)
Peterson, John, Felch, assignor of one-half to S. J. Peterson, Foster City, Mich. Rail-tie. No. 1,220,885; Mar. 27; v. 236; p. 1147.
Peterson, John H. N., Baker, Oreg. Shoe-fastening device. No. 1,219,146; Mar. 13; v. 236; p. 476.
Peterson, Lars A., and G. L. Andersson, Stockholm, Sweden. Chamfering the teeth of gears. No. 1,219,481; Mar. 20; v. 236; p. 620.
Peterson, Nellie K., Bisbee, Ariz. Skein-holder. No. 1,218,457; Mar. 6; v. 236; p. 197.
Pettengill, Ralph H., Haverhill, Mass. Shock-absorber. No. 1,219,035; Mar. 13; v. 236; p. 438.
Pfanstiehl, Carl A., Waukegan, assignor to Pfanstiehl Company, North Chicago, Ill. Electric furnace. No. 1,218,582; Mar. 6; v. 236; p. 239.
Pfanstiehl, Carl A., Waukegan, Ill., assignor to Pfanstiehl Company. Tungsten contact-point. No. 1,220,886; Mar. 27; v. 236; p. 1147.
Pfanstiehl Company. (See Pfanstiehl, Carl A., assignor.)
Pfeiffer, Charles, assignor to The Allen-Bradley Company, Milwaukee, Wis. Electrical contact. No. 1,220,679; Mar. 27; v. 236; p. 1077.
Pheney, Patrick A., Nampa, Idaho. Railway cattle-guard. No. 1,219,036; Mar. 13; v. 236; p. 438.
Philip Carey Manufacturing Company, The. (See Moeller, William J., assignor.)
Philippi, Theodore F., East St. Louis, Ill. Grinding or polishing machine. No. 1,219,037; Mar. 13; v. 236; p. 439.
Philippi, Theodore F., East St. Louis, Ill. Machining apparatus. No. 1,219,038; Mar. 13; v. 236; p. 439.
Phillipps, Louis F., Columbus, Nebr. Shrub and plant holder. No. 1,218,115; Mar. 6; v. 236; p. 80.
Phillips, Jacob P., Yantly, Ala. Shoe and other fastener. No. 1,219,482; Mar. 20; v. 236; p. 620.
Phillips, John H., Jr., assignor to Phillips Metallic Hose Co., Jackson, Mich. Flexible pipe-joint. No. 1,220,270; Mar. 27; v. 236; p. 933.
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Phillips, Russell A., Richmond, Va. Car-door. No. 1,219,863; Mar. 20; v. 236; p. 754.
Phillips, Thomas E., Bonne Terre, Mo. Spout attachment for dispensing apparatus. No. 1,218,695; Mar. 13; v. 236; p. 317.
Philp, Norman L., *et al.* (See Davidson, Ira M., assignor.)
Phinney, Edgar E., assignor to Monroe Calculating Machine Company, New York, N. Y. Calculating-machine. No. 1,220,545; Mar. 27; v. 236; p. 1032.
Picard, Alphonse A., New York, N. Y. Tooth-brush. No. 1,219,147; Mar. 13; v. 236; p. 476.
Pickles, James, assignor to S. O. & C. Co., Ansonia, Conn. Setting-dies. No. 1,218,801; Mar. 13; v. 236; p. 357.
Piel, Gottfried. (See Brown, Horace H., assignor.)
Pieper, Alphonse F. (See Pieper, Oscar H. and A. F.)
Pieper, Oscar H. and A. F., Rochester, N. Y. Controlling mechanism for fluid-compressors. No. 1,220,546; Mar. 27; v. 236; p. 1032.
Pierce, Edwin B., Brooklyn, N. Y. Book-sewing machine. No. 1,219,997; Mar. 20; v. 236; p. 800.
Pierson, Roy, *et al.* (See Powell, George E., assignor.)
Pieser, Isaac, *et al.* (See Redd, Charlie, assignor.)
Pigache, Charles E. (See Pigache, Pierre, and C. E.)
Pigache, Pierre, and C. E., Paris, France. Trolley-pole-positioning mechanism. No. 1,219,769; Mar. 20; v. 236; p. 720.
Pigeon, Albert M., assignor to Wildman Mfg. Co., Norristown, Pa. Needle-cylinder for knitting-machines. No. 1,220,887; Mar. 27; v. 236; p. 1147.
Pillod Company, The. (See Graham, Ross G., assignor.)
Pillsbury, Ralph W. (See Leary and Pillsbury.)
Pinard, Achille A. (See Aikins, Samuel, assignor.)
Pissimisis, George, and J. Rigopulos, Schenectady, assignors of one-third to P. Chiboucas, Albany, N. Y. Process and apparatus for making resin and turpentine. No. 1,219,998; Mar. 20; v. 236; p. 800.
Pitcan, William L., Manchester, England. Corset. No. 1,220,271; Mar. 27; v. 236; p. 934.
Pittoni, Louis E. (See Sisbower and Pittoni.)
Pittsburg Brake Shoe Company. (See Kinzer, John J., assignor.)
Pittsburgh Plate Glass Company. (See Kerr, Charles H., assignor.)
Placek, Anton, Cleveland, Ohio. Valve-spring lifter. No. 1,220,547; Mar. 27; v. 236; p. 1033.
Plaisted, Jared H., assignor of one-half to H. W. Longfellow, Boston, Mass. Non-refillable bottle. No. 1,220,361; Mar. 27; v. 236; p. 967.
Planche, Etienne, Flint, Mich. Adjustable hinge. No. 1,218,696; Mar. 13; v. 236; p. 317.
Plancq, Georges, Koekelberg-Brussels, Belgium, assignor, by mesne assignments, to J. J. Ricks, Winnetka, Ill. Cutting and welding apparatus. No. 1,220,548; Mar. 27; v. 236; p. 1033.
Platt, Clarence D., Bridgeport, Conn. Cabinet for panel-boards. No. 1,219,864; Mar. 20; v. 236; p. 754.
Platt, Clarence D., Bridgeport, Conn. Electric switch. No. 1,218,890; Mar. 13; v. 236; p. 389.
Pludowski, Aleksander, assignor of one-half to B. Grebziezewski and one-fourth to W. Wodzinski, Waterbury, Conn. Flat-ventilating support. No. 1,218,891; Mar. 13; v. 236; p. 390.
Pludowski, Aleksander, assignor of one-third to W. Szczepaniak and one-third to S. Orlowski, Waterbury, Conn. Muffler for telephones. No. 1,218,892; Mar. 13; v. 236; p. 390.
Pludowski, Aleksander, assignor of one-third to W. Szczepaniak and one-third to S. Orlowski, Waterbury, Conn. Table and chair construction. No. 1,218,893; Mar. 13; v. 236; p. 390.
Pludowski, Aleksander, assignor of one-third to S. Orlowski and one-third to W. Szczepaniak, Waterbury, Conn. Mail-box. No. 1,220,549; Mar. 27; v. 236; p. 1033.
Plumb, Clarence G., Lorain, Ohio. Flush-valve. No. 1,219,483; Mar. 20; v. 236; p. 620.
Plumb, Roy A, and C. R. Weed, assignors to Trussed Concrete Steel Company, Detroit, Mich. Protective-element-forming machine. No. 1,220,550; Mar. 27; v. 236; p. 1034.
Plumbly, Fraederick K., Mount Ivy, N. Y. Device for safe transportation of eggs. No. 1,219,039; Mar. 13; v. 236; p. 440.
Plummer, Henry W., Augusta, Me. Surgical tourniquet. No. 1,218,313; Mar. 6; v. 236; p. 149.
Poimiroo, Alfred and A., Seattle, Wash. Dish-holder. No. 1,218,894; Mar. 13; v. 236; p. 391.
Poimiroo, Angelina. (See Poimiroo, Alfred and A.)
Polite, William D., Wilmington, N. C. Gun. No. 1,218,458; Mar. 6; v. 236; p. 197.
Pollard, Claude. (See Murray and Dorman, assignors.)
Polleys, Charles G., Newark, N. J. Power-transmitting apparatus for automobiles. No. 1,219,040; Mar. 13; v. 236; p. 440.
Pollock, Albert E., Chicago, Ill. Tire-gage. No. 1,219,865; Mar. 20; v. 236; p. 754.
Pollock, Albert E., assignor to Firex Manufacturing Company, Chicago, Ill. Pressure-gage. No. 1,220,272; Mar. 27; v. 236; p. 934.
Pootmans, Eugene. (See Pootmans, Gaston, E., and G.)
Pootmans, Gaston, E., and G., Regina, Saskatchewan, Canada. Shoe-shining and hat-dusting machine. No. 1,219,148; Mar. 13; v. 236; p. 476.

Pootmans, George. (See Pootmans, Gaston. E., and G.)
Popkess, Michael A., Kansas City, Mo., assignor to Bituminized Road Company. Forming a paving material. No. 1,220,680; Mar. 27; v. 236; p. 1078.
Popkess, Michael A., Kansas City, Mo., assignor to Bituminized Road Company. Pavement. No. 1,220,681; Mar. 27; v. 236; p. 1078.
Popkess, Michael A., Kansas City, Mo., assignor to Bituminized Road Company. Pavement and making the same. No. 1,220,682; Mar. 27; v. 236; p. 1078.
Popp, Julius H., Haven, Kans. Vending-machine. No. 1,219,662; Mar. 20; v. 236; p. 684.
Porcheron, Edmond D. (See Sternbergh, George E., assignor.)
Porter, Edwin H., Philadelphia, Pa. Pipe for the conveyance of fluids. No. 1,218,895; Mar. 13; v. 236; p. 391.
Porter, Sidney C., East Liverpool, Ohio. Window-screen. No. 1,220,888; Mar. 27; v. 236; p. 1147.
Posson, Edward, Chicago, Ill. Ventilator for refrigerator-cars. No. 1,218,896; Mar. 13; v. 236; p. 391.
Post, Clarence H., Seattle, Wash. Lard and flour mixer. No. 1,218,116; Mar. 6; v. 236; p. 80.
Post, William C., Brewster, Minn. Tire. No. 1,219,350; Mar. 13; v. 236; p. 544.
Potvin, Mary A., assignor of one-half to E. E. Robb, Detroit, Mich. Combined tag and toy. No. 1,219,770; Mar. 20; v. 236; p. 720.
Poundstone, Earl C., Mellen, Wis. Releasable pocket for the stakes of logging-cars. No. 1,218,117; Mar. 6; v. 236; p. 80.
Pouvailsmith Corporation. (See Morgan, Henry S., assignor.)
Powell, George E., assignor of one-fourth to R. Pierson, one-fourth to P. Parr, and one-fourth to R. Ebner, Chicago Heights, Ill. Pneumatic stabilizer for vessels. No. 1,220,551; Mar. 27; v. 236; p. 1034.
Powell, Milton V. (See Cox and Powell.)
Powers, Franklin G., Kansas City, Mo. Combined mitering and type-high-leveling machine. No. 1,219,041; Mar. 13; v. 236; p. 440.
Pratt & Whitney Company. (See Hanson, Bengt M. W., assignor.)
Pratt, William, and G. Pegg, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J. Machine for inserting fastenings. No. 1,219,484; Mar. 20; v. 236; p. 621.
Pre-Heated Air Company. (See Tacy, Samuel H., assignor.)
Prenzel, Adam H., Halifax, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe. No. 1,219,585; Mar. 20; v. 236; p. 657.
Presby, George P., West Bridgewater, Mass., assignor to Beckwith Box Toe Company, Dover, N. H. Counter-stiffener. No. 1,219,999; Mar. 20; v. 236; p. 801.
Prescott, Charles F., assignor of one-half to W. A. Selts, Brooklyn, N. Y. Locomotive driving-box. No. 1,219,866; Mar. 20; v. 236; p. 755.
Prescott, Henry A., Bethlehem, Pa. Speed-multiplying mechanism. No. 1,220,454; Mar. 27; v. 236; p. 1000.
Preston, Frederick A., Highland Park, assignor to The P. & M. Co., Chicago, Ill. Rail-anchor. No. 1,219,771; Mar. 20; v. 236; p. 721.
Preston, Frederick A., Highland Park, assignor to The P. & M. Co., Chicago, Ill. Anticreeper. No. 1,219,772; Mar. 20; v. 236; p. 721.
Preston, Alston L. (See Hines, William J., assignor.)
Prettyman, William F. (See Talbott and Prettyman.)
Price, Frank L. (See Manabach, Conrad B., assignor.)
Price, John C., Wevaco, W. Va. Tire grinding and truing machine. No. 1,218,459; Mar. 6; v. 236; p. 198.
Price, Martin T., Savannah, Ga. Blanker. No. 1,218,697; Mar. 13; v. 236; p. 318.
Price, William W., Elm Grove, W. Va. Valve-removing tool. No. 1,218,460; Mar. 6; v. 236; p. 198.
Prifold, George, Linwood, assignor to The Congoleum Company, Philadelphia, Pa. Printing-block for block-printing machines. No. 1,218,461; Mar. 6; v. 236; p. 198.
Pritchard, Charles, Booneville, Iowa. Sleigh. No. 1,219,042; Mar. 13; v. 236; p. 441.
Products Dispensing Company. (See Kavgas, Nicklaus, assignor.)
Pronovost, Joseph, Detroit, Mich. Spring-frame for resilient wheels. No. 1,220,800; Mar. 27; v. 236; p. 1148.
Pronovost, Joseph, assignor to Pronovost Torsion Spring Wheel Company, Detroit, Mich. Resilient wheel. No. 1,220,889; Mar. 27; v. 236; p. 1147.
Pronovost Torsion Spring Wheel Company. (See Pronovost, Joseph, assignor.)
Protective Signal Manufacturing Company, The. (See Neahr, Will C., assignor.)
Proudfit, Edwin B., Westfield, N. J., assignor to The Aeolian Company. Note-sheet for automatic musical instruments. No. 1,218,698; Mar. 13; v. 236; p. 318.
Provandie, Herbert F., Melrose, assignor to American Water Supply Company of New England, Boston, Mass. Machine for spraying paper receptacles. No. 1,220,552; Mar. 27; v. 236; p. 1034.
Pryor, Clarence E. (See Grouss, John, assignor.)
Puglisi, Frank B., New Brunswick, N. J. Rotary vernier-calipers. No. 1,219,149; Mar. 13; v. 236; p. 476.
Puissant, Marie, St. Gratien, near Paris, France. Publicity apparatus. No. 1,218,699; Mar. 13; v. 236; p. 319.
Quade, Bernard F., *et al.* (See Quade, Paul R., assignor.)
Quade, Paul R., Wausau, assignor of one-third to F. F. Graper, Brokaw, and one-third to B. F. Quade, Wausau, Wis. Identification-comb. No. 1,218,462; Mar. 6; v. 236; p. 198.
Quigley, John T., San Francisco, Cal., assignor, by mesne assignments, to Costmeter Company, Boston, Mass. Time-cost meter. No. 1,220,273; Mar. 27; v. 236; p. 935.
Quinn, P. J. (See Thompson, Thomas A., assignor.)
R. Neumann Hardware Co., The. (See Hellmann, William A., assignor.)
R. Neumann Hardware Co., The. (See Moore, Thomas J., assignor.)
R. E. Dietz Company. (See McArthur, Warren, Jr., assignor.)
R. L. Kenyon Company, The. (See Kenyon, Roy L., assignor.)
R. K. Le Blond Machine Tool Company. (See Le Blond and Groene, assignors.)
Radiguer, Charles, assignor to The Société Anonyme Des Etablissements Delaunay-Belleville, St. Denis, France. Centrifugal pump. No. 1,220,000; Mar. 20; v. 236; p. 801.
Raikes, Merrill C., Philippi, W. Va. Clasp. No. 1,219,043; Mar. 13; v. 236; p. 441.
Rail Joint Company, The. (See Sparling, Jacob L., assignor.)
Railway Electric Manufacturing Company. (See Rugh, Harry O., assignor.)
Ralston, Emmet G., Indianapolis, Ind. Service, demand, or operation recorder. No. 1,218,955; Mar. 13; v. 236; p. 410.
Ralston Iron Works. (See Konetsky, John R., assignor.)
Ramey, William A. (See Mitschow and Ramey.)
Ramey, William R., assignor of one-half to J. B. Starr, Iola, Kans. Door-opening device. No. 1,218,897; Mar. 13; v. 236; p. 391.
Ramsey, Clifford H., assignor to James L. Morrison Machine Co., Paterson, N. J. Stop-motion mechanism. No. 1,218,463; Mar. 6; v. 236; p. 199.
Ramsey, Julian A. (See Iams and Ramsey.)
Rand, James H., Jr., North Tonawanda, N. Y. Card unit for index systems. No. 1,218,464; Mar. 6; v. 236; p. 199.
Rand, V. W., *et al.* (See Marion, Frank, assignor.)
Randolph Paper Box Co., The. (See Kusterer and Sanders, assignors.)
Raney, Clemma R., Chicago, and R. C. Livesay, Moline, Ill., assignors to International Harvester Company of New Jersey. Grain-shocking machine. No. 1,219,150; Mar. 13; v. 236; p. 477.
Ranney, Frederick E., assignor to Ranney Refrigerator Company, Greenville, Mich. Water-cooler for refrigerators. No. 1,220,783; Mar. 27; v. 236; p. 1111.
Ranney Refrigerator Company. (See Ranney, Frederick E., assignor.)
Ransome, Arthur W., Plainfield, assignor to Ransome Concrete Machinery Company, Dunellen, N. J. Concrete-mixer. No. 1,220,683; Mar. 27; v. 236; p. 1078.
Ransome Concrete Machinery Company. (See Ransome, Arthur W., assignor.)
Ransom & Randolph Co. (See Miller, Frederick W., assignor.)
Rapid Button Attaching Machine Co. (See Dubl, Boris, assignor.)
Rapid Electrotype Company, The. (See Gounley, James F., assignor.)
Rapid Process Lithograph Company, The. (See Kirby, Wallace W., assignor.)
Rapid Tobacco Stemmer Co. (See Buchanan, James C., assignor.)
Rasmussen, Andrew, Sr., and A., Jr., Ridgway, Colo. Internal-combustion multiple-cylinder engine. No. 1,220,455; Mar. 27; v. 236; p. 1000.
Rastija, Jozo, East Akron, Ohio. Chair for ships. No. 1,220,553; Mar. 27; v. 236; p. 1035.
Rataiczak, Thomas F., assignor to The Hobart Manufacturing Company, Troy, Ohio. Meat-chopper. No. 1,219,586; Mar. 20; v. 236; p. 657.
Rateau, Battu, Smoot Company. (See Smoot, Charles H., assignor.)
Rawlluk, John. (See Mutro, Michael, assignor.)
Ray, Charles T., assignor to B. F. Avery & Sons, Louisville, Ky. Seed-hopper. No. 1,220,684; Mar. 27; v. 236; p. 1079.
Ray, Thomas H., Somerville, Mass. Ice-making machine. No. 1,219,773; Mar. 20; v. 236; p. 721.
Raymond, E. J. (See Kate, John H., assignor.)
Raymond, Nelson H., Buffalo, N. Y., assignor to Clifton Manufacturing Company, Jamaica Plain, Mass. Apparatus for electroplating pipes, rods, &c. No. 1,218,802; Mar. 13; v. 236; p. 357.
Read, Charles P., Chicago, Ill. Machine for placing springs in casings. No. 1,218,314; Mar. 6; v. 236; p. 150.
Read, Knut A. (See Miller and Read.)
Reade, William A., assignor to The Ludlow Typograph Company, Cleveland, Ohio. Typograph mechanism. No. 1,218,803; Mar. 13; v. 236; p. 358.
Reagan, William H., Jr., Miami, Ariz. Take-up for bushings. No. 1,220,784; Mar. 27; v. 236; p. 1111.
Reath, Frank F. (See Huber and Reath.)
Redd, Charlie, assignor to I. Pieser and C. G. Livingston, Chicago, Ill. Filling-machine. No. 1,218,315; Mar. 6; v. 236; p. 150.

Reece, John, Manchester, Mass. Stop-motion. No. 1,220,785; Mar. 27; v. 236; p. 1112.
Reece, John, Manchester, Mass. Driving and stopping mechanism. No. 1,220,786; Mar. 27; v. 236; p. 1112.
Reece, John, Manchester, Mass. Stop-motion. No. 1,220,787; Mar. 27; v. 236; p. 1112.
Reece Shoe Machinery Company, The. (See Schoenky, August R., assignor.)
Reed, Albert G., assignor to Russell Mfg. Co., Middletown, Conn. Woven-fabric endless belt. No. 1,219,151; Mar. 13; v. 236; p. 477.
Reed, Alberto N. (See Reed, Benjamin H., O. A., and A. N.)
Reed, Benjamin H., O. A., and A. N., Hightstown, N. J. Drain-tile. No. 1,220,801; Mar. 27; v. 236; p. 1149.
Reed, Olmsted A. (See Reed, Benjamin H., O. A., and A. N.)
Reed, Ray N. (See Eldred, Bibbins, and Reed.)
Reed, Rufus. (See Gemeny and Reed.)
Reeds, Lucian B., Fulton, Ky. Shade and curtain hanger. No. 1,219,774; Mar. 20; v. 236; p. 722.
Reese, Louis C., Saginaw, Mich. Charging and discharging of automatic ovens, proofing-chambers, and the like. No. 1,220,456; Mar. 27; v. 236; p. 1001.
Reese, Louis C., Saginaw, Mich. Charging and discharging of automatic ovens, proofing-chambers, and the like. No. 1,220,457; Mar. 27; v. 236; p. 1002.
Reeves, Frank N., Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selective signaling system. No. 1,218,804; Mar. 13; v. 236; p. 358.
Refrigerator Car Equipment Co. (See McCoy, Charles W., assignor.)
Regan, William J., assignor to The McConway & Torley Company, Pittsburgh, Pa. Coupling-centering mechanism. No. 1,218,208; Mar. 6; v. 236; p. 112.
Reher, Raymond, New York, N. Y. Speed-varying device. No. 1,220,554; Mar. 27; v. 236; p. 1035.
Reichard, Ervin H., and F. H. Harrold, Columbiana, Ohio. Hydraulic operating means for dumb-waiters. No. 1,219,044; Mar. 13; v. 236; p. 441.
Reichold, Ludwig, Pittsfield, Mass., assignor to General Electric Company. Terminal for resistance members and producing same. No. 1,218,465; Mar. 6; v. 236; p. 199.
Reid, Alban H., Philadelphia, Pa. Attachment for seats. No. 1,220,555; Mar. 27; v. 236; p. 1036.
Reid, Harold F. (See Kelly and Reid.)
Reid, Maurice L., San Francisco, Cal., and R. E. Reid, Seattle, Wash. Sanitary receptacle. No. 1,219,152; Mar. 13; v. 236; p. 478.
Reid, Robert E. (See Reid, Maurice L. and R. E.)
Reilly, Peter C., Indianapolis, Ind. Material for the preservation of lumber. No. 1,220,001; Mar. 20; v. 236; p. 801.
Reilly, William J., Denver, Colo. Pressure-producing apparatus. No. 1,219,867; Mar. 20; v. 236; p. 755.
Reiners, Charles A., Hoboken, N. J. Elevator signaling apparatus and circuit therefor. No. 1,219,775; Mar. 20; v. 236; p. 722.
Reinforced Cravat Corporation. (See Church and Webb, assignors.)
Reinle-Salmon Company. (See Marburger, Henry L., assignor.)
Reirdon, Joseph F., Kingston, Pa., assignor to The Adder Machine Company, Wilkes-Barre, Pa. Paper-feeding device. No. 1,218,118; Mar. 6; v. 236; p. 81.
Reisbach, Gustave B., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Cutting and sealing machine. No. 1,220,556; Mar. 27; v. 236; p. 1036.
Reisinger, Obied D., St. Paul, Minn. Car-seat. No. 1,219,868; Mar. 20, v. 236; p. 756.
Reissner, Frederick, Chatham, assignor of one-half to A. T. Munger, Harrow, Ontario, Canada. Wagon-axle. No. 1,219,153; Mar. 13; v. 236; p. 478.
Remington Typewriter Company. (See Barr, John H., assignor.)
Remington Typewriter Company. (See Smith, Arthur W., assignor.)
Remy Electric Company. (See Conklin, Oliver F., assignor.)
Remy Electric Company. (See Kennington, William O., assignor.)
Renault, Louis. (See Fuchs, Ernest, assignor.)
Renton, Herbert S. (See Stupar, Maxamillian, assignor.)
Republic Hose Coupler Corporation, The. (See Miller and Winter, assignors.)
Reuter, Balthasar E., assignor to Reuter Process Company, Chicago, Ill. Decomposition of fats and oils. No. 1,219,485; Mar. 20; v. 236; p. 621.
Reuter, Balthasar E., assignor to Reuter Process Company, Chicago, Ill. Bleaching fats, oils, and their derivatives. No. 1,219,486; Mar. 20; v. 236; p. 622.
Reuter Process Company. (See Reuter, Balthasar E., assignor.)
Rex Talking Machine Corporation. (See Marshall, Joseph B., assignor.)
Reynolds, Daniel C., Philadelphia, Pa. Obtaining bark extracts. No. 1,220,557; Mar. 27; v. 236; p. 1036.
Reynolds, Frank H. (See Underwood and Reynolds.)
Reynolds, John N., Greenwich, Conn., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,219,587; Mar. 20; v. 236; p. 657.
Rheault, Leon, Hickson, N. D. One-man hay-rack. No. 1,219,154; Mar. 13; v. 236; p. 478.
Rhodes, E. V. (See Dick, Charles O., assignor.)
Rice, Clair P., Slayton, Minn. Car-brake. No. 1,218,466; Mar. 6; v. 236; p. 200.
Rice, Mark A., Los Angeles, Cal. Wrench. No. 1,218,316; Mar. 6; v. 236; p. 150.
Rice, Percy, Wilsall, Mont. Sleigh-runner attachment for wagons. No. 1,218,467; Mar. 6; v. 236; p. 200.
Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Elastic-fluid turbine. No. 1,218,468; Mar. 6; v. 236; p. 200.
Rice, Zachariah E., Landisburg, Pa. Spring-clip for automobile-chain fasteners. No. 1,220,002; Mar. 20; v. 236; p. 801.
Rich, George R., Oak Park, assignor to Rich Tool Company, Chicago, Ill. Puppet-valve for internal-combustion engines. No. 1,218,317; Mar. 6; v. 236; p. 151.
Rich Tool Company. (See Rich, George R., assignor.)
Richard, Leroy L., Coalinga, Cal. Sucker-rod and casing elevator. No. 1,219,776; Mar. 20; v. 236; p. 723.
Richards, Willard F., Depew, assignor to Gould Coupler Company, New York, N. Y. Auxiliary shank and connection for passenger-car couplings. No. 1,218,469; Mar. 6; v. 236; p. 200.
Richardson, George W., South Hero, Vt. Boat. No. 1,220,558; Mar. 27; v. 236; p. 1036.
Richardson, George W., and G. H. Higgins, Chicago, Ill. Valve-gearing for internal-combustion engines. No. 1,220,274; Mar. 27; v. 236; p. 935.
Richardson, Ira C. (See Wicklund and Grobey, assignors.)
Ricks, Jesse J. (See Plancq, Georges, assignor.)
Ridall, Harry M., assignor to Gaylord Bros., Syracuse, N. Y. Book-holder. No. 1,219,777; Mar. 20; v. 236; p. 723.
Rider, Herbert E., Brooklyn, assignor to L. Levien, New York, N. Y. Gas generation. No. 1,218,470; Mar. 6; v. 236; p. 201.
Ridgeway, George R., Olympia, Wash. Music-case. No. 1,220,788; Mar. 27; v. 236; p. 1113.
Ridlon, George H., South Whitley, Ind., assignor to Grip Nut Company, Chicago, Ill. Nut-tapping machine. No. 1,217,998; Mar. 6; v. 236; p. 38.
Riebe, Ernest, New York, N. Y. Holder for tableware. No. 1,220,559; Mar. 27; v. 236; p. 1037.
Ries, Albert N., *et al.* (See Johnston, Albert F., assignor.)
Ries, Leo., *et al.* (See Johnston, Albert F., assignor.)
Ries, Louis N., and R. B. Allen, Kansas City, Mo. Engine-starter for automobiles and the like. No. 1,220,362; Mar. 27; v. 236; p. 967.
Rieske, Otto G., Toronto, Ontario, Canada. Pin-feather-plucking machine. No. 1,220,458; Mar. 27; v. 236; p. 1003.
Rietz, Erich, Elberfeld, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y. Pharmaceutical product. No. 1,218,209; Mar. 6; v. 236; p. 112.
Rigby, Thomas, Dumfries, Scotland, assignor of one-half to N. Testrup, London, England. Treatment of lignite and the like. No. 1,219,155; Mar. 13; v. 236; p. 478.
Rigg, Gilbert, Palmerton, Pa., and W. L. Coursen, New Rochelle, assignors to The New Jersey Zinc Company, New York, N. Y. Furnace. No. 1,220,789; Mar. 27; v. 236; p. 1113.
Rigopulos, James. (See Pissimisis and Rigopulos.)
Rike, Berton L., assignor to The Rike Folding Box Company, Dayton, Ohio. Hanger. No. 1,220,459; Mar. 27; v. 236; p. 1003.
Rike Folding Box Company, The. (See Rike, Berton L., assignor.)
Rimmer, James G., Quincy, Mass. Gear-cutting machine. No. 1,218,210; Mar. 6; v. 236; p. 112.
Rinfrett, Napoleon, Southington, assignor of one-half to A. R. Thomson, Plantsville, Conn. Antiskidding device. No. 1,217,999; Mar. 6; v. 236; p. 39.
Rioux, William R., Montreal, Quebec, Canada. Screw-cutting die. No. 1,220,460; Mar. 27; v. 236; p. 1003.
Rippe, Solomon, Little Rock, Ark. Collar-button. No. 1,218,318; Mar. 6; v. 236; p. 151.
Rippey, T. L. (See Wright, James C., assignor.)
Ritter, Mathew, Shrub Oak, N. Y. Bicycle. No. 1,220,560; Mar. 27; v. 236; p. 1037.
Rivera, Rubén, Sonsonate, Salvador. Hydraulic motor. No. 1,219,156; Mar. 13; v. 236; p. 479.
Rivers, William E., assignor to Old Bridge Enameled Brick and Tile Company, Old-bridge, N. J. Tile-press. No. 1,219,778; Mar. 20; v. 236; p. 724.
Rives, George H., New York, N. Y. Pedal-pad. No. 1,218,319; Mar. 6; v. 236; p. 151.
Rives, Madeleine G., New York, N. Y. Amusement and exercising apparatus. No. 1,220,363; Mar. 27; v. 236; p. 968.
Rixson, Oscar C., New York, N. Y. Mounting for door-closers. No. 1,218,471; Mar. 6; v. 236; p. 201.
Roades, Weslie M., Okmulgee, Okla., assignor to United Iron Works Company, Springfield, Mo. Spool-flange for bull-wheel shafts. No. 1,218,898; Mar. 13; v. 236; p. 392.
Robb, Eugene E. (See Potvin, Mary A., assignor.)
Robbins, Eugene S. (See Robbins, Harry D., assignor.)
Robbins, Harry D., assignor of one-half to E. S. Robbins, Chicago, Ill. Vehicle-signal. No. 1,218,320; Mar. 6; v. 236; p. 151.
Robbins, Simon. (See Lowenstein and Robbins.)
Robejsek, Joseph J., St. Paul, Minn. Collapsible crate. No. 1,220,275; Mar. 27; v. 236; p. 936.

Roberts, Beauregard, Mobile, Ala. Dredge. No. 1,219,869; Mar. 20; v. 236; p. 756.
Roberts, Fred T., Cleveland, Ohio. Process of and apparatus for making hollow rubber articles. No. 1,219,351; Mar. 13; v. 236; p. 545.
Roberts, John G., Dobbs Ferry, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Automatic call-distributing system. No. 1,218,805; Mar. 13; v. 236; p. 358.
Roberts, John G. Dobbs Ferry, N. Y., assignor, by mesne assignments to Western Electric Company, Incorporated. Telephone trunking system. No. 1,218,806; Mar. 13; v. 236; p. 359.
Roberts, Lyman R., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,220,561; Mar. 27; v. 236; p. 1037.
Roberts, Lyman R., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,220,892; Mar. 27; v. 236; p. 1149.
Roberts, William, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Machine for assembling match-books, &c. No. 1,218,000; Mar. 6; v. 236; p. 39.
Roberts, William H. (See McCann and Roberts.)
Robertson, John A., assignor of one-half to W. A. Martin, Richmond, Va. Tire-gage. No. 1,218,119; Mar. 6; v. 236; p. 81.
Robertson, John H., Platteville, Wis. Foot-rest. No. 1,218,120; Mar. 6; v. 236; p. 81.
Robertson, Thorburn B., Berkeley, Cal. Growth-controlling substance derived from the anterior lobe of the pituitary gland and producing the same. No. 1,218,472; Mar. 6; v. 236; p. 201.
Robinson, Charles W., Hamilton, Ontario, Canada, assignor to International Harvester Corporation. Variable-speed mechanism for grain-drills and the like. No. 1,218,807; Mar. 13; v. 236; p. 359.
Robinson, Eugene M., Chicago, Ill. Switch-stand. No. 1,218,956; Mar. 13; v. 236; p. 410.
Robinson, William P., and W. C. Nash, Miami, Fla. Floor-scraper burnisher. No. 1,220,003; Mar. 20; v. 236; p. 802.
Rodgers, Charles W., East Bridgewater, Mass. Apparatus for molding concrete. No. 1,220,461; Mar. 27; v. 236; p. 1004.
Rodwell, George H., assignor to The U. S. Safety Egg Carrier Co. Inc., Newark, N. Y. Apparatus and process for making pulp articles. No. 1,218,001; Mar. 6; v 236; p. 39.
Roe and Harmon Novelty Company. (See Roe, Charles O., assignor.)
Roe, Charles O., assignor to Roe and Harmon Novelty Company, Indianapolis, Ind. Combined pan lifter and drainer. No. 1,219,779; Mar. 20; v. 236; p. 724.
Rogan, Patrick J., Ilion, assignor to T. E. McGoldrick and R. Murphy, Herkimer, N. Y. Scaffold-bracket. No. 1,219,870; Mar. 20; v. 236; p. 756.
Rogers, Francis, Galveston, Tex. Collapsible rim. No. 1,220,004; Mar. 20; v. 236; p. 802.
Rogers, Henry L., Fort Fairfield, Me. Attachment for ash-pits. No. 1,219,157; Mar. 13; v. 236; p. 479.
Rogers, James H. and H. H. Lyon, Hyattsville, Md. Wireless signaling system. No. 1,220,005; Mar. 20; v. 236; p. 802.
Rohrheimer, Joseph, Shamokin, Pa. Nut-lock. No. 1,219,780; Mar. 20; v. 236; p. 724.
Rollman, Bruce B. (See Synck and Rollman.)
Rollman, Michael A., and C. J. Schiemer, Mount Joy, Pa. Cherry-stoner. No. 1,220,364; Mar. 27; v. 236; p. 968.
Rompf, George R., Somonauk, Ill. Automobile-locking device. No. 1,219,488; Mar. 20; v. 236; p. 622.
Ronayne, Michael, New York, N. Y. Light-shade. No. 1,220,562; Mar. 27; v. 236; p. 1038.
Rook, William H., Jr., assignor to The American Sewer Pipe Company, Akron, Ohio. Sewer-pipe section for sewer-building. No. 1,219,663; Mar. 20; v. 236; p. 685.
Root, John R., Terre Haute, Ind. Brickmaking-machine. No. 1,218,473; Mar. 6; v. 236; p. 202.
Rose, Edward, Stapleton, N. Y. Attachment for beds. No. 1,219,158; Mar. 13; v. 236; p. 479.
Rose, Forba H., Red Oak, Iowa. Bundle loading and conveying machine. No. 1,219,489; Mar. 20; v. 236; p. 622.
Rose, George F., New York, N. Y. Frame construction for type-writers. No. 1,219,159; Mar. 13; v. 236; p. 480.
Rose, Gustaf E., E. P. Bradstrum, and O. U. Grant, Sparta, Mich. Furnace. No. 1,219,664; Mar. 20; v. 236; p. 685.
Rose, William, Gainsborough, England. Apparatus for making paper bags or like receptacles. No. 1,220,276; Mar. 27; v. 236; p. 936.
Rosenblatt, Aaron, Philadelphia, Pa. Rim-stretching device. No. 1,219,160; Mar. 13; v. 236; p. 480.
Roser, Louis A. (See Althoff, Edward H., assignor.)
Roslyn Specialty Company. (See Karl, Joseph M., assignor.)
Ross, David E., La Fayette, Ind. Current-generator and spark-distributer. No. 1,220,277; Mar. 27; v. 236; p. 937.
Ross, James A., Boston, Mass. Making moisture-resistant wall-paper. No. 1,218,474; Mar. 6; v. 236; p. 202.
Ross, Kenneth, Bonner, Mont. Stake-pocket. No. 1,218,957; Mar. 13; v. 236; p. 411.
Ross, Vernon, Kansas City, Mo. Dispensing-machine. No. 1,218,958; Mar. 13; v. 236; p. 411.
Rotary Fly-Trap Company. (See Krueger, Samuel, assignor.)
Rotenberg, Louis, Akron, Ohio. Manifolding sales-book. No. 1,218,700; Mar. 13; v. 236; p. 319.
Rothschild, Joseph, *et al.* (See Davis, John T., assignor.)
Rothwell, Hugh D., and G. Kribs, Toronto, Ontario, Canada. Electrical conductor-connector. No. 1,218,475; Mar. 6; v. 236; p. 202.
Rotor Vacuum Cleaner Company, The. (See Meredith-Jones, Hubert, assignor.)
Rottl, Frederick, Elizabethport, N. J. Window-stand. No. 1,218,321; Mar. 6; v. 236; p. 152.
Rough, James E. (See Beere and Rough.)
Rousseau, Benjamin F. and C. D., Fort Wayne, Ind.; said C. D. Rousseau assignor to said Benjamin F. Rousseau. Lock for motor-vehicles. No. 1,220,462; Mar. 27; v. 236; p. 1004.
Rousseau, Chauncey D. (See Rousseau, Benjamin F. and C. D.)
Rowe, Alvin V., assignor to Rowe Manufacturing Co., Galesburg, Ill. Anchor. No. 1,218,211; Mar. 6; v. 236; p. 113.
Rowe Manufacturing Co. (See Rowe, Alvin V., assignor.)
Rowe, Thomas, Leytonstone, England. Closure for rubber receptacles. No. 1,220,006; Mar. 20; v. 236; p. 802.
Rowland, Erroll G. (See Mueller and Rowland.)
Rowland, Frank P., Donnelly, Idaho. Locking means for sectional crosscut-saws. No. 1,219,161; Mar. 13; v. 236; p. 480.
Rowland, Samuel C., Crawfordsville, Ind., assignor to General Appliance Company, Chicago, Ill. Automobile-bumper. No. 1,218,701; Mar. 13; v. 236; p. 319.
Rowlands, Erroll G. (See Mueller and Rowlands.)
Rowley, Isabelle C., Columbus, Ohio. Sewing-machine-feeding device. No. 1,220,007; Mar. 20; v. 236; p. 803.
Royal Typewriter Company. (See Drew, Walter N., assignor.)
Royal Typewriter Company. (See Flynn, Michael H., assignor.)
Royer, Helen. (See Snyder, John J., assignor.)
Rozwud, Andrzej, Detroit, Mich. Insect-trap. No. 1,219,665; Mar. 20; v. 236; p. 685.
Rubber Set Brush Co. Limited. (See Timmis, Albert H., assignor.)
Rubenstein, Jacob, New York, N. Y. Safety-guard for vehicles. No. 1,218,583; Mar. 6; v. 236; p. 240.
Rubincam, Harry C. (See Ellsworth, Clarence A., assignor.)
Rugh, Harry O., Chicago, Ill., assignor to Railway Electric Manufacturing Company. Signaling system. No. 1,219,666; Mar. 20; v. 236; p. 686.
Runcie, William T., Maplewood, N. J. Feed control for liquids. No. 1,218,002; Mar. 6; v. 236; p. 40.
Rundlöf, Erik A., Stocksund, Sweden. Method of and means for operating internal-combustion engines and the like. No. 1,220,893; Mar. 27; v. 236; p. 1150.
Runge, Friedrich A., San Marcos, Tex. Motor-cultivator. No. 1,218,121; Mar. 6; v. 236; p. 82.
Runge, Walter C., West Collingswood, N. J., assignor to D. L. Short, Philadelphia, Pa. Garment-supporter. No. 1,219,162; Mar. 13; v. 236; p. 480.
Russ, John D., Spencer, W. Va. Superheating mechanism for automobiles. No. 1,220,563; Mar. 27; v. 236; p. 1038.
Russell, Clarence H. (See Knowlton, MacCorquodale, Wyckoff, Russell, and Tooker.)
Russell Mfg. Co. (See Reed, Albert G., assignor.)
Russell, Robert M., Boulevarde Miranda, near Sydney, New South Wales, Australia. Animal drinking-fountain. No. 1,218,899; Mar. 13; v. 236; p. 392.
Rust, Edwin G., Sioux City, Iowa. Folding parcel-carrier. No. 1,218,702; Mar. 13; v. 236; p. 320.
Rusz, Martin. (See Kiss, Andreás, assignor.)
Rutan, William, assignor to Gillis & Geoghegan, New York, N. Y. Hoisting-bucket. No. 1,219,402; Mar. 13; v. 236; p. 563.
Ruttan, Alfred A., and C. E. Hutchings, assignors to Eastman Kodak Company, Rochester, N. Y. Photographic-film pack. No. 1,219,588; Mar. 20; v. 236; p. 658.
Ruud Manufacturing Company. (See Bibb, George F., assignor.)
Ryall, Albert U. B. (See Beldam and Ryall.)
Ryan, John P., Worcester, Mass. Safety device for submarine boats. No. 1,219,667; Mar. 20; v. 236; p. 686.
Ryan, Walter D., North Adams, Mass., assignor to General Electric Company. Illuminating apparatus. No. 1,218,470; Mar. 6; v. 236; p. 202.
Rybolt, Henry C., Kenney, Ill. Farm-gate. No. 1,219,668; Mar. 20; v. 236; p. 686.
Ryer, Frank P. Suspension Bridge, N. Y. Green-pea viner. No. 1,219,416; Mar. 13; v. 236; p. 568.
Rydlewski, Celestyn, Posen, Germany. Gripping device for lift-cages. No. 1,220,992; Mar. 27; v. 236; p. 1181.
Ryon, Eppa H., Waltham, assignor to Crompton & Knowles Loom Works, Worcester, Mass. Weft-bobbin. No. 1,220,685; Mar. 27; v. 236; p. 1079.
Ryon, Eppa H., Waltham, assignor to Crompton & Knowles Loom Works, Worcester, Mass. Weft-detecting mechanism for looms. No. 1,220,686; Mar. 27; v. 236; p. 1079.

Ryon, Eppa H., Waltham, assignor to Crompton & Knowles Loom Works, Worcester, Mass. Pile-cutter for looms. No. 1,220,687; Mar. 27; v. 236; p. 1080.
S. O. & C. Co. (See Pickles, James, assignor.)
S. S. Hepworth Company. (See Mackintosh, Edward D., assignor.)
Sacha, Joseph, assignor, by mesne assignments, to The Hart & Hegeman Manufacturing Company, Hartford, Conn. Plug and socket connector. No. 1,220,993; Mar. 27; v. 236; p. 1182.
Saemann, Carl. (See Bergami and Saemann.)
Safe Storm Shield Company, The. (See Wensinger, Charles F., assignor.)
Safety Block Signal Company, The. (See Williams, Frank C., assignor.)
Safety First Brake Shoe Co. (See Smith and Williams, assignors.)
Saffold, James W., Cleveland, Ohio. Boot or shoe. No. 1,219,165; Mar. 13; v. 236; p. 481.
Saine, Leonard W., Atlanta, Ga. Machine for sharpening gin and other like saws. No. 1,220,894; Mar. 27; v. 236; p. 1150.
Sala, Stanislaw, Detroit, Mich. Safety milk-bottle and mail-receptacle. No. 1,218,477; Mar. 6; v. 236; p. 203.
Salisbury, Charles K., Milwaukee, Wis. Internal-combustion engine. No. 1,219,781; Mar. 20; v. 236; p. 724.
Salmon, John B., Dunedin, New Zealand. Manufacturing pneumatic tires. No. 1,219,163; Mar. 13; v. 236; p. 481.
Salon, Max, *et al.* (See Kovacs, Alexander, assignor.)
Salthouse, Laura A., Cuyahoga Falls, Ohio. Safety lamp-chimney and holder. No. 1,218,703; Mar. 13; v. 236; p. 320.
Samuel Ward Manufacturing Company. (See Moore, Morris W., assignor.)
Samuels, Mark J., New York, N. Y. Phonograph. No. 1,219,164; Mar. 13; v. 236; p. 481.
Sanborn, George O., Seattle, Wash. Collar. No. 1,220,895; Mar. 27; v. 236; p. 1150.
Sanchez de Haro, Emilio. (See Gomez, Ginés P., assignor.)
Sandell, John P., Chicago, Ill. Combined chair and table. No. 1,218,322; Mar. 6; v. 236; p. 152.
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Sanders, C. J. (See Lotz and Sanders, assignors.)
Sanders, Della L., *et al.* (See Fardon, Charles C., assignor.)
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Sanders, James M., Keynsham, near Bristol, England. Rotary engine. No. 1,220,688; Mar. 27; v. 236; p. 1080.
Sanders, Jesse L. (See Lotz and Sanders.)
Sanders, John F., assignor to O. P. Coshow, Roseburg, Oreg. Electrode for generating pure oxygen. No. 1,218,584; Mar. 6; v. 236; p. 240.
Sanders, Newell, Chattanooga, Tenn. Wheel-plow. No. 1,218,003; Mar. 6; v. 236; p. 40.
Sanders, William H., Bedford Hills, N. Y. Combination-padlock. No. 1,219,490; Mar. 20; v. 236; p. 623.
Sanderson, Eugene W., South Norwalk, Conn. Measuring-container. No. 1,220,689; Mar. 27; v. 236; p. 1081.
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Sandt, Max, assignor to Dürkoppwerke Aktiengesellschaft, Bielefeld, Germany. Zigzag-embroidery-sewing machine. No. 1,220,994; Mar. 27; v. 236; p. 1182.
Sangamo Electric Company. (See Lanphier, Robert C., assignor.)
Santa Cruz Portland Cement Company. (See Krarup, Christian, assignor.)
Santicola, Quintino, Cleveland, Ohio. Salad-dressing container. No. 1,219,491; Mar. 20; v. 236; p. 623.
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Sargent, Fitz William, Mahwah, N. J., assignor to The American Brake Shoe & Foundry Company, Wilmington, Del. Brake-shoe. No. 1,218,704; Mar. 13; v. 236; p. 320.
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Saupe, Firm of Ernst. (See Saupe, Georg, assignor.)
Saupe, Georg, assignor to Firm of E. Saupe, Limbach, Germany. Flat-warp-knitting frame. No. 1,218,212; Mar. 6; v. 236; p. 113.
Saupe, Georg, assignor to Firm of E. Saupe, Limbach, Germany. Warp-knitted fabric and making the same. No. 1,218,213; Mar. 6; v. 236; p. 114.
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Savage Tire Company, The. (See Morris, Howard I., assignor.)
Savio, Michele, Turin, Italy. Brake. No. 1,218,479; Mar. 6; v. 236; p. 203.
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Sawyer, Howard H., Portland, Oreg. Water-motor. No. 1,218,900; Mar. 13; v. 236; p. 392.
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Schaefer, Oscar E., St. Louis, Mo. Making books. No. 1,219,589; Mar. 20; v. 236; p. 658.
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Schaffert, Adolf H., assignor to The Damascus Brake Beam Co., Cleveland, Ohio. Brake-beam fulcrum. No. 1,220,690; Mar. 27; v. 236; p. 1081.
Schaller, Carl, assignor to Grimme, Natalis & Co., Commanditgesellschaft Auf Actien, Brunswick, Germany. Computing-machine. No. 1,220,008; Mar. 20; v. 236; p. 803.
Schaller, Carl, assignor to Grimme, Natalis & Co., Commanditgesellschaft Auf Actien, Brunswick, Germany. Calculating-machine. No. 1,220,009; Mar. 20; v. 236; p. 803.
Schenck, Walter F. (See O'Neal, Simeon, assignor.)
Schepp, Albert J. and H. J., Manhattan, Kans. Hog-oiler. No. 1,219,352; Mar. 13; v. 236; p. 545.
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Schiebel, Charles, Watertown, Wis. Detachable watch for motor-driven vehicles. No. 1,219,669; Mar. 20; v. 236; p. 687.
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Schillinger, William H., Rock Island, Ill. Explosive-engine. No. 1,218,214; Mar. 6; v. 236; p. 114.
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Schlag, Oscar W., Chicago, Ill. Drain and trap. No. 1,218,482; Mar. 6; v. 236; p. 204.
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Schlatter, Gustav, assignor to Firm of A. Saurer, Arbon, Switzerland. Locking device for change-speed gears. No. 1,220,790; Mar. 27; v. 236; p. 1114.
Schlemmer, George, New York, N. Y. Conduit-cleaning device. No. 1,218,005; Mar. 6; v. 236; p. 41.
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Schloss, Joseph W., New York, N. Y., assignor, by mesne assignments, to The Warren Featherbone Co. Garment-stiffener. No. 1,221,005; Mar. 27; v. 236; p. 1186.
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Schlundt, Christian H., assignor of one-half to R. Kirk and one-half to H. Alford, Huntingburg, Ind. Spark-plug. No. 1,218,215; Mar. 6; v. 236; p. 114.
Schmid, Rudolf, Jr., West Allis, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Connector. No. 1,218,216; Mar. 6; v. 236; p. 115.
Schmidlin, Julius, Bergen, near Frankfort-on-the-Main, and M. Fischer, Frankfort-on-the-Main, Germany. Manufacture of chlorinated products of xylene, aldehydobenzoic acids, and dyestuffs therefrom. No. 1,219,166; Mar. 13; v. 236; p. 482.
Schmidt, Albert, assignor to Champion Ignition Company, Flint, Mich. Spark-plug. No. 1,219,590; Mar. 20; v. 236; p. 659.
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Schmidt, Herman C., assignor to Ideal Laundry Company, Spokane, Wash. Dry-wash-sorting rack. No. 1,219,591; Mar. 20; v. 236; p. 659.
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Schneider, Philipp, St. Louis, Mo. Carpet-fastener. No. 1,219,167; Mar. 13; v. 236; p. 482.
Schnug, Louis J. B., San Diego, Cal. Lap-joint for roofing. No. 1,220,463; Mar. 27; v. 236; p. 1004.
Schnurr, George, Farmington, Wash. Motor-sled. No. 1,220,278; Mar. 27; v. 236; p. 937.
Schoenky, August R., Somerville, assignor to The Reece Shoe Machinery Company, Boston, Mass. Machine for turning the lips of insoles. No. 1,220,691; Mar. 27; v. 236; p. 1081.
Schoenleber, Thomas R., Seattle, Wash. Film-feeding device for cameras. No. 1,219,672; Mar. 20; v. 236; p. 688.

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Scholtz, V. J. (See Hanssen, William H., assignor.)
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Scholz, Josef, Schenectady, N. Y. Cigarette-case. No. 1,218,705; Mar. 13; v. 236; p. 321.
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Schoonover, William J., Chicago, Ill. Washing-machine-operating mechanism. No. 1,220,366; Mar. 27; v. 236; p. 969.
Schramm, Joseph J., assignor of one-half to H. Kroemer, St. Louis, Mo. Collapsible seat for vehicles. No. 1,218,006; Mar. 6; v. 236; p. 41.
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Schreyer, Walter B., Detroit, Mich. Collapsible basket. No. 1,220,464; Mar. 27; v. 236; p. 1004.
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Schroyer, Harry H., Chicago, Ill., assignor to Acme Supply Company. Attaching and retaining means for vestibule-diaphragms and the like. No. 1,219,673; Mar. 20; v. 236; p. 688.
Schubert, Joseph, Middletown, Conn. Latch. No. 1,219,168; Mar. 13; v. 236; p. 482.
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Schuler, George, and E. Kraemer, Woodside, N. Y. Adjustable shade-roller. No. 1,220,567; Mar. 27; v. 236; p. 1040.
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Schulte, Henry J., Fullerton, Cal. Engine-starter. No. 1,220,692; Mar. 27; v. 236; p. 1082.
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Schwarz, Christine, Chicago, Ill. Garment-retainer. No. 1,220,896; Mar. 27; v. 236; p. 1151.
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Schwehm, Harry J. and E., Philadelphia, Pa. Weaving horsehair cloth. No. 1,219,674; Mar. 20; v. 236; p. 689.
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Scognamillo, Salvatore, New York, N. Y. Electrically-controlled valve mechanism for motors. No. 1,220,011; Mar. 20; v. 236; p. 804.
Scott, Clarence N., Houston, Tex. Explosion-hatch for oil-containers. No. 1,219,493; Mar. 20; v. 236; p. 624.
Scott, Henry L., Providence, R. I. Clamp. No. 1,219,593; Mar. 20; v. 236; p. 659.
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Scott, James G., Washington, D. C. Combination water-heater. No. 1,219,494; Mar. 20; v. 236; p. 624.
Scott, James G., Washington, D. C. Combination water-heater. No. 1,220,012; Mar. 20; v. 236; p. 804.
Scott, James G., Washington, D. C. Combination water-heater. No. 1,220,695; Mar. 27; v. 236; p. 1083.
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Scovel, John C., Jr., assignor to The Creamery Package Manufacturing Company, Chicago, Ill. Compressor. No. 1,218,903; Mar. 13; v. 236; p. 393.
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Seger, Charles G., Lyonville, S. D. Hay-sweep cleaner. No. 1,219,495; Mar. 20; v. 236; p. 625.
Segman, Alexander, New York, N. Y. Jewelry. No. 1,219,172; Mar. 13; v. 236; p. 484.
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Selby Patents Company. (See Selby, William H. and F. A., assignors.)
Selby, William H. and F. A., Moberly, assignors of seven-eighths to Selby Patents Company, Kansas City, Mo. Moving-picture machine. No. 1,219,403; Mar. 13; v. 236; p. 563.
Sellers, Elias H. (See Buckman, Edward A., assignor.)
Sellers, Richard C., Swarthmore, Pa. Calendar. No. 1,219,173; Mar. 13; v. 236; p. 484.
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Sembower, Charles A., *et al.* (See Egan, Charles E., assignor.)
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Semple, John B., Sewickley, Pa. Gun. No. 1,218,706; Mar. 13; v. 236; p. 321.
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Service, William F., Jersey City, N. J., assignor to Imperial Car Cleaner Company. Renovating car-cushions. No. 1,219,595; Mar. 20; v. 236; p. 660.
Sessions, Frank L., Lakewood, assignor to The Standard Welding Company, Cleveland, Ohio. Rim forming and flanging machine. No. 1,219,174; Mar. 13; v. 236; p. 484.
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Seubert Bearing Company. (See Seubert, Louis H., assignor.)
Seubert, Clara H., administratrix. (See Seubert, Louis H.)
Seubert, Louis H., deceased, New York, N. Y.; C. H. Seubert, administratrix, assignor to Seubert Bearing Company, Inc. Antifriction-bearing. No. 1,218,605; Mar. 6; v. 236; p. 247.
Severy, Melvin L., Arlington Heights, assignor to Severy Manufacturing Company, Boston, Mass. Electric switching device. No. 1,218,123; Mar. 6; v. 236; p. 82.
Severy, Melvin L., Arlington Heights, Mass. Sound-producing device. No. 1,218,324; Mar. 6; v. 236; p. 153.
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Seward, George A., Rome, Ga. Lamp-hook for cars. No. 1,219,354; Mar. 13; v. 236; p. 546.
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Sewell, William B., Agricultural College, Miss., assignor to Scientific Accounting Company, Wilmington, Del. Account-filing system. No. 1,219,175; Mar. 13; v. 236; p. 485.
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Shackelford, Orie, Fairmont, W. Va. Fountain-pen. No. 1,219,675; Mar. 20; v. 236; p. 689.
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Shannon, Oscar M., New York, assignor, by mesne assignments, to E. C. Stearns & Company, Syracuse, N. Y. Incinerating apparatus. No. 1,218,325; Mar. 6; v. 236; p. 153.
Sharp, Herbert E., Tropico, Cal. Automobile-turner. No. 1,220,028; Mar. 20; v. 236; p. 810.
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Sheehy, William E., assignor of one-half to T. Sheehy, Newfields, N. H. Self-lubricating bushing. No. 1,218,808; Mar. 13; v. 236; p. 360.
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Shepherd, Daniel W., Rupert, Idaho. Ore-separator. No. 1,218,809; Mar. 13; v. 236; p. 360.

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Sherwood, Harley L., Oregon City, Oreg. Concentrator. No. 1,219,048; Mar. 13; v. 236; p. 442.
Shevlin, Charles W., assignor to Climax Container Company, Chicago, Ill. Capping-die. No. 1,218,907; Mar. 13; v. 236; p. 394.
Shingler, Thomas, Detroit, Mich., assignor to Eastman Machine Company, Buffalo, N. Y. Cloth-cutting machine. No. 1,218,007; Mar. 6; v. 236; p. 41.
Shipp, Clarence C., Indianapolis, Ind. Reinforcing-roll for steam-radiator shields. No. 1,218,707; Mar. 13; v. 236; p. 321.
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Shorrock, Arthur, North Adams, Mass. Mixing-slab. No. 1,218,327; Mar. 6; v. 236; p. 154.
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Shotovsky, Karol, Cleveland, Ohio. Aerocycle. No. 1,220,368; Mar. 27; v. 236; p. 970.
Shuman, Frank, Philadelphia, Pa., Steam-engine. No. 1,218,219; Mar. 6; v. 236; p. 115.
Shutt, Edward W., Pueblo, Colo., assignor to American Clay Products Company, St. Louis, Mo. Combined receiving, discharging, and conveying device. No. 1,218,908; Mar. 13; v. 236; p. 395.
Siddens, Edgar C., Shattuck, Okla. Kitchen-indicator. No. 1,220,696; Mar. 27; v. 236; p. 1084.
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Siert, John H., assignor of one-fifth to A. H. Siert, Benson, and one-fifth to H. L. Jacobson, Omaha, Nebr. Laundrying-machine. No. 1,220,697; Mar. 27; v. 236; p. 1084.
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Silverman, Morris, assignor to L. A. Williams, Chicago, Ill. Skylight construction. No. 1,219,177; Mar. 13; v. 236; p. 485.
Silvius, Ellis T., Indianapolis, Ind., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,218,484; Mar. 6; v. 236; p. 205.
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Simpson, Frank, La Jolla, Cal. Voting-machine. No. 1,219,874; Mar. 20; v. 236; p. 758.
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Sisbower, George F., East Orange, N. J., and L. E. Pittoni, assignors to New York Couch Bed Company, New York, N. Y. Folding bed. No. 1,220,016; Mar. 20; v. 236; p. 806.
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Sjostrom, Peter, Maplewood, Mass., assignor to Victor Shoe Machinery Company, Lynn, Mass. Stitch-measurer for sewing-machines. No. 1,219,597; Mar. 20; v. 236; p. 661.
Skandora, Jakob, Racine, Wis. Coal-car. No. 1,220,018; Mar. 20; v. 236; p. 807.
Sleeth, Montgomery, Bellevue, assignor to Fort Pitt Bedding Company, Pittsburgh, Pa. Separating device. No. 1,218,960; Mar. 13; v. 236; p. 412.
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Smallwood, Frank S., Indianapolis, Ind. Counterbalanced cellar-door. No. 1,218,328; Mar. 6; v. 236; p. 154.
Smirk, Edward H., St. Annes-on-the-Sea, England. Composition fuel and fire-lighter. No. 1,219,178; Mar. 13; v. 236; p. 486.
Smith, Arthur W., New York, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,220,467; Mar. 27; v. 236; p. 1006.
Smith, Charles B., and L. L. Miller, Jackson, Tenn. Planter. No. 1,218,961; Mar. 13; v. 236; p. 412.
Smith, Charles F., Sunbury, Pa. Identification name-plate for umbrellas. No. 1,220,468; Mar. 27; v. 236; p. 1006.
Smith, Charles H. (See De Lappe and Smith.)
Smith, Charles H., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Fuse-block. No. 1,218,221; Mar. 6; v. 236; p. 116.
Smith, Cicero G., Palisade, Colo., assignor to Smith Spring Wheel Company. Spring-wheel for vehicles. No. 1,218,585; Mar. 6; v. 236; p. 240.
Smith, Cullen R., Fentress, Tex. Machine for cutting stalks. No. 1,219,676; Mar. 20; v. 236; p. 689.
Smith & Davis Manufacturing Company. (See Daily, Joseph F., assignor.)
Smith, Edward B., Kansas City, Mo. Road-drag. No. 1,220,898; Mar. 27; v. 236; p. 1151.
Smith, Edward W., and E. G. Steinmetz, Philadelphia, Pa. Retaining envelop or cover for storage-battery electrodes. No. 1,218,329; Mar. 6; v. 236; p. 155.
Smith, Elwyn P., assignor to The Mattatuck Manufacturing Company, Waterbury, Conn. Forming and assembling machine. No. 1,218,810; Mar. 13; v. 236; p. 360.
Smith, George N., Jr., Cleveland, Ohio. Prick attachment for pencils. No. 1,220,792; Mar. 27; v. 236; p. 1114.
Smith, George R., Highland Park, Mich. Internal-combustion-engine appliance. No. 1,218,126; Mar. 6; v. 236; p. 83.
Smith, Harold S., New Haven, Conn. Package-tie. No. 1,220,698; Mar. 27; v. 236; p. 1084.
Smith, Harry O., Kansas City, Mo. Fastener. No. 1,219,179; Mar. 13; v. 236; p. 486.
Smith, Henry A. (See Parker and Smith.)
Smith, Hine M., Sparta, Mich. Combination intake-manifold and heating-casing. No. 1,220,281; Mar. 27; v. 236; p. 938.
Smith, Hiram A., Paw Paw, Mich. Device for use in erecting silos. No. 1,218,008; Mar. 6; v. 236; p. 42.
Smith, Horace T., Cambridge, Mass. Door-check. No. 1,220,469; Mar. 27; v. 236; p. 1006.
Smith, Jesse A. B., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,219,598; Mar. 20; v. 236; p. 661.
Smith, Jesse C., Kansas City, Mo. Eraser. No. 1,220,282; Mar. 27; v. 236; p. 939.
Smith, John, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Edge-gage mechanism. No. 1,220,137; Mar. 20; v. 236; p. 853.
Smith, John F., and G. H. Williams, Seattle, Wash., assignors, by mesne assignments, to Safety First Brake Shoe Co., Inc. Forming brake-rings. No. 1,220,470; Mar. 27; v. 236; p. 1006.
Smith, Justus M., Oakhurst, N. J. Toy parachute. No. 1,218,330; Mar. 6; v. 236; p. 155.
Smith, Lambert G., *et al.* (See Hachmann, Frederick, assignor.)
Smith, Martin V., Hartford, assignor to J. E. Hamilton, Simsbury, Conn. Incandescent-lamp socket. No. 1,219,497; Mar. 20; v. 236; p. 625.
Smith, Mary O., and W. E. Frost, Auburn, Me.; said Frost assignor of one-fourth of the whole right to Aimé C. Levesque and J. A. Larose, Lewiston, Me. Needle-threading attachment for sewing-machines. No. 1,220,019; Mar. 20; v. 236; p. 807.
Smith, May R., Brooklyn, N. Y. Toilet-case. No. 1,218,222; Mar. 6; v. 236; p. 117.
Smith, Michael H., Woburn, Mass. Cord-fastening device. No. 1,218,811; Mar. 13; v. 236; p. 361.
Smith, Oscar L., assignor to S. D. Young, trustee, Grand Rapids, Mich. Show-case. No. 1,219,404; Mar. 18; v. 236; p. 563.
Smith, Oscar L., assignor to S. D. Young, trustee, Grand Rapids, Mich. Display device. No. 1,219,405; Mar. 13; v. 236; p. 564.
Smith, Persifor F., Jr., Toledo, Ohio. Locomotive-pilot. No. 1,220,146; Mar. 20; v. 236; p. 856.
Smith, Reuben W., Jr., Huron, Cal. Shaving-brush. No. 1,220,020; Mar. 20; v. 236; p. 807.
Smith, Robert R., assignor to Miller Lock Company, Philadelphia, Pa. Hat-rack. No. 1,219,784; Mar. 20; v. 236; p. 726.
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Smith, Squire J., assignor, by mesne assignments, to Patent Devices, Limited, Vancouver, British Columbia, Canada. Draft-excluder. No. 1,218,331; Mar. 6; v. 236; p. 155.
Smith, S. Wemyss. (See Zahner and Smith.)
Smith, Walter S. (See Hawley, Jesse G., assignor.)
Smith, William A., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Operating mechanism for rock-drills. No. 1,219,498; Mar. 20; v. 236; p. 626.
Smith, William H., Cleveland, Ohio. Faucet. No. 1,218,962; Mar. 13; v. 236; p. 412.
Smoldone, Daniel. (See Pecora and Smoldone.)
Smoot, Charles H., assignor to Rateau, Battu, Smoot Company, New York, N. Y. Centrifugal blower. No. 1,218,223; Mar. 6; v. 236; p. 117.

Smyrk, William A., London, England. Picture rail and hook. No. 1,220,021; Mar. 20; v. 236; p. 808.
Snell, Lyle K., assignor to Cadillac Motor Car Company, Detroit, Mich. Ventilator for automobile-bodies. No. 1,218,708; Mar. 13; v. 236; p. 321.
Snider, Otto G., Muncie, Ind. Weed-cutter. No. 1,219,875; Mar. 20; v. 236; p. 758.
Snyder, Howard F., assignor to The Maytag Company, Newton, Iowa. Transmission mechanism. No. 1,218,812; Mar. 13; v. 236; p. 361.
Snyder, John J., assignor to H. Royer, Chicago, Ill. Line-finder for type-writers. No. 1,218,709; Mar. 13; v. 236; p. 322.
Società Anonima Fiat-San Giorgio. (See Laurenti, Cesare, assignor.)
Societe Anonyme Des Etablissements Delaunay-Belleville, The. (See Radiguer, Charles, assignor.)
Société Anonyme pour l'Exploitation de Procédés Westinghouse-Leblanc. (See Leblanc, Maurice, assignor.)
Sokolov, Jacob, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,220,283; Mar. 27; v. 236; p. 939.
Solari, A. G., *et al.* (See Cowgill, Orph W., assignor.)
Solem, Adolph, Duluth, Minn., assignor of one-half to L. Solem. Metal weather-strip. No. 1,221,001; Mar. 27; v. 236; p. 1185.
Solem, Ludvik. (See Solem, Adolph, assignor.)
Soley, Frank, and E. Stackhouse, assignors to Miller Lock Co., Philadelphia, Pa. Rack. No. 1,219,785; Mar. 20; v. 236; p. 726.
Somers, Joseph E., Waterbury, Conn. Mold for casting brass bars. No. 1,219,180; Mar. 13; v. 236; p. 486.
Somerville, William E., Coal City, Ill. Cable-winding machine. No. 1,218,009; Mar. 6; v. 236; p. 42.
Sorensen, Niels C., Chicago, Ill. Tongs. No. 1,220,899; Mar. 27; v. 236; p. 1151.
Soss, Arthur, Seward, Nebr. Valve-operating mechanism. No. 1,218,010; Mar. 6; v. 236; p. 43.
Southwick, William S., Clinton, assignor to Clinton Wire Cloth Company, Boston, Mass. Loom. No. 1,218,710; Mar. 13; v. 236; p. 322.
Sowell, Ernest E. (See Sowell, John A. and E. E.)
Sowell, John A. and E. E., Sacramento, Cal. Grease-cup. No. 1,219,599; Mar. 20; v. 236; p. 662.
Sparks, Walter, New York, N. Y. Cutting-tool. No. 1,219,677; Mar. 20; v. 236; p. 689.
Sparling, Jacob L., Bay City, Mich., assignor to The Rail Joint Company. Joint-chair. (Reissue.) No. 14,272; Mar. 13; v. 236; p. 575.
Specht, Edward H., Manitowoc, Wis. Pipe-stem. No. 1,219,678; Mar. 20; v. 236; p. 689.
Spector, Samuel, Philadelphia, Pa. Bag for umbrellas, shoes, and other articles. No. 1,220,793; Mar. 27; v. 236; p. 1115.
Spelling, Thomas C., New York, N. Y. Necktie-fastener. No. 1,218,224; Mar. 6; v. 236; p. 118.
Spencer, George A., assignor of one-third to I. Glenn, Jackson, Mich. Rotary spring-fitting machine. No. 1,219,876; Mar. 20; v. 236; p. 758.
Spencer, John E., and A. C. Lillie, Los Angeles, Cal. Automobile-curtain window. No. 1,219,877; Mar. 20; v. 236; p. 759.
Spencer, Samuel M., Eutaw, Ala. Sectional post. No. 1,218,813; Mar. 13; v. 236; p. 361.
Spencer, Stephen R. (See Kone, George W., assignor.)
Spencer, Thomas, assignor to Helios Manufacturing Company, Philadelphia, Pa. Constant-voltage system. No. 1,220,370; Mar. 27; v. 236; p. 970.
Spencer, Thomas, assignor to Helios Manufacturing Company, Philadelphia, Pa. Constant-voltage system. No. 1,220,371; Mar. 27; v. 236; p. 971.
Spikes, Robert L., Farmville, N. C. Bean and pea harvester and separator. No. 1,218,011; Mar. 6; v. 236; p. 43.
Spiater, Henry E., assignor of one-half to J. V. McCall, Hay, Wash. Grain-tank. No. 1,219,786; Mar. 20; v. 236; p. 727.
Spiltdorf Electrical Company. (See Brackett, Ernest W., assignor.)
Spiltdorf Electrical Company. (See King, Jesse G., assignor.)
Spiltdorf Electrical Company. (See Libby, Albion D. T., assignor.)
Spiltdorf Electrical Company. (See Wilson, James M., assignor.)
Spranger, Frank and M., assignors to Spranger Rim and Wheel Company, Detroit, Mich. Demountable rim for vehicle-wheels. No. 1,220,471; Mar. 27; v. 236; p. 1007.
Spranger, Nicholas M. (See Spranger, Frank and N. M.)
Spranger Rim and Wheel Company. (See Spranger, Frank and N. M., assignors.)
Sprinchorn, Ulrich, assignor to Jamestown Curtain Rod Company, Inc., Jamestown, N. Y. Extensible curtain-rod. No. 1,220,900; Mar. 27; v. 236; p. 1152.
Springfield Valve Company. (See Keating, Robert M., assignor.)
Sproessig, Oscar. (See Franks and Sproessig.)
Sproul, John J., New York, assignor of one-half to A. Sundh, Hastings-upon-Hudson, N. Y. Elevator. No. 1,218,711; Mar. 13; v. 236; p. 323.
Sprung, Abraham, New York, N. Y. Adding-machine. No. 1,219,878; Mar. 20; v. 236; p. 759.
Squires, Arthur C., assignor of one-half to J. E. Wainwright, College Point, N. Y. Waterproof elastic fabric. No. 1,220,372; Mar. 27; v. 236; p. 971.
Squires, Charles W., Beverly, Mass. Circuit-closer for track-switches. No. 1,220,701; Mar. 27; v. 236; p. 1085.
St. James, Alfred, Brooklyn, N. Y. Simplex joint. No. 1,219,183; Mar. 13; v. 236; p. 487.
Staab, John F. (See Lawnin and Staab.)
Stackhouse, Edwin. (See Soley and Stackhouse.)
Standard Optical Company, The. (See Bader and Howland, assignors.)
Standard Parts Company, The. (See McIntyre, Michael M., assignor.)
Standard Pneumatic Action Co. (See Le Cato, John A., assignor.)
Standard Sanitary Manufacturing Company, The. (See Muckenhirn, Charles H., assignor.)
Standard Steel Car Company. (See Christianson, Andrew, assignor.)
Standard Welding Company, The. (See Schumann, Frank J., assignor.)
Standard Welding Company, The. (See Sessions, Frank L., assignor.)
Stanley, Ethel, *et al.* (See Stanley, Joseph, assignor.)
Stanley, Joseph, assignor of one-third to E. Stanley, one-third to E. B. Ayres, and one-third to I. B. Wike, Huntington, Ind. Automatic signaling apparatus for locomotives. No. 1,219,181; Mar. 13; v. 236; p. 487.
Stannard, S. Grant, Long Beach, Cal. Vehicle-elevator. No. 1,220,702; Mar. 27; v. 236; p. 1085.
Starke, Gustave, New York, N. Y. Inner-tube protector. No. 1,220,568; Mar. 27; v. 236; p. 1040.
Starr, Jesse B. (See Ramey, William R., assignor.)
Starr, John A., Knowles, Wis. Mail-catcher. No. 1,220,284; Mar. 27; v. 236; p. 940.
Starr Piano Company, The. (See Ireton, Artie F., assignor.)
States, George M., Des Moines, Iowa. Self-feeder for threshing-machines. No. 1,220,901; Mar. 27; v. 236; p. 1152.
Staude, Edwin G., assignor to E. G. Staude Manufacturing Co., Minneapolis, Minn. Variable-speed gearing. No. 1,220,373; Mar. 27; v. 236; p. 971.
Stawicki, Ludwik, Muskegon, Mich. Ash-sifter. No. 1,219,600; Mar. 20; v. 236; p. 662.
Stearns, Jason C., Worcester, Mass. Socket-piece for electric lamps. No. 1,218,485; Mar. 6; v. 236; p. 205.
Stearns, Willard W., Holyoke, Mass. Weft binding and cutting device for looms. No. 1,219,182; Mar. 13; v. 236; p. 487.
Stebbins, Carl G., and A. Gelow, assignors to The Warren Featherbone Company, Three Oaks, Mich. Treating keratin bodies. No. 1,219,787; Mar. 20; v. 236; p. 727.
Steckel, Abram P., Buffalo, N. Y. Internal-combustion motor. No. 1,220,285; Mar. 27; v. 236; p. 940.
Steele, Clarence M., Statesville, N. C. Die or former. No. 1,220,902; Mar. 27; v. 236; p. 1152.
Steen, Haifdan A., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Switch. No. 1,220,569; Mar. 27; v. 236; p. 1040.
Steinmetz, Edward G. (See Smith and Steinmetz.)
Steinmetz, Joseph A., Philadelphia, Pa. Destruction of submarines. No. 1,218,586; Mar. 6; v. 236; p. 240.
Steinmetz, Joseph A., Philadelphia, Pa. Artillery-ammunition package. No. 1,218,814; Mar. 13; v. 236; p. 362.
Steinmetz, Joseph A., Philadelphia, Pa. Torpedo and submarine guard. No. 1,219,879; Mar. 20; v. 236; p. 760.
Stemple, Wade H., Aurora, W. Va. Alternate driving-gearing for freezers. No. 1,220,903; Mar. 27; v. 236; p. 1153.
Stephens, David D., Louisville, Ala. Insect-catcher. No. 1,220,286; Mar. 27; v. 236; p. 941.
Stephens, Dewey D., Ainsworth, Iowa. Seeder and harrow. No. 1,218,712; Mar. 13; v. 236; p. 323.
Stephenson, Walter E., Roosevelt, N. Y. Motor-radiator air-draft control. No. 1,220,794; Mar. 27; v. 236; p. 1115.
Sterling Corporation, The. (See Longoria, Antonio, assignor.)
Stern, Hermann, Munich, Germany. Manufacture of diolefins, (isoprene,) caoutchouc, and caoutchouc-like substances. No. 1,218,332; Mar. 6; v. 236; p. 156.
Stern, Hermann, Munich, Germany. Production of caoutchouc-like bodies. No. 1,218,713; Mar. 13; v. 236; p. 323.
Sternbergh, George E., assignor to E. D. Porcheron, Montreal, Quebec, Canada. Door-hanger and the like. No. 1,219,601; Mar. 20; v. 236; p. 662.
Sterns, Edward, St. Louis, Mo., assignor to Efficiency Oil Corporation, Wilmington, Del. Vehicle-tire. No. 1,218,486; Mar. 6; v. 236; p. 205.
Stevens, Arthur L., Chicago, Ill. Annealing-furnace. No. 1,219,499; Mar. 20; v. 236; p. 626.
Stevens, Arthur L., Chicago, Ill. Regenerative furnace for annealing and like purposes. No. 1,219,500; Mar. 20; v. 236; p. 627.
Stevens, Arthur L., Chicago, Ill. Water-cooled valve. No. 1,219,501; Mar. 20; v. 236; p. 627.
Stevenson, Charles A., Edinburgh, and J. Moyes, Glasgow, Scotland. Signaling apparatus. No. 1,218,225; Mar. 6; v. 236; p. 118.
Stewart, John K., deceased, Chicago, Ill.; J. B. Stewart, executrix. Delivery means for melting-pots. No. 1,219,357; Mar. 13; v. 236; p. 546.
Stewart, John K., deceased, Chicago, Ill.; J. B. Stewart, executrix. Molten-metal feed for die-casting. No. 1,219,358; Mar. 13; v. 236; p. 547.

Stewart, John K., deceased, Chicago, Ill.; J. B. Stewart, executrix. Ladle for die-casting machines. No. 1,219,359; Mar. 13; v. 236; p. 547.
Stewart, Julia B., executrix. (See Stewart, John K.)
Stewart-Warner Speedometer Corporation. (See Kocourek, Henry, assignor.)
Sticklin, Louis J., Chehalis, Wash. Sprayer. No. 1,219,049; Mar. 13; v. 236; p. 442.
Stifel, Otto F. (See Cook, Eugene F., assignor.)
Stifel, Otto F., *et al.* (See Cowgill, Orph W., assignor.)
Stineman, William H. H., assignor of one-half to S. C. Pardee, Baltimore, Md. Wheel-fender. No. 1,219,602; Mar. 20; v. 236; p. 662.
Stock Quotation Telegraph Company, The. (See Hiltz, George S., assignor.)
Stoffel, John P., Los Angeles, Cal. Conveyer and cleaner. No. 1,220,703; Mar. 27; v. 236; p. 1085.
Stoft, Peter E., New York, N. Y. Electric barometer-switch. No. 1,219,679; Mar. 20; v. 236; p. 690.
Stokes, John S., Moorestown, N. J. Sealed wrapped package. No. 1,219,788; Mar. 20; v. 236; p. 727.
Stoltz, Edward P., Philadelphia, Pa. File-holder. No. 1,219,603; Mar. 20; v. 236; p. 663.
Stone & Company, J. (See Darker, Alfred H., assignor.) (Reissue.)
Stone, George E., Amherst, Mass. Tree surgery. No. 1,218,333; Mar. 6; v. 236; p. 156.
Stone, Mitchell, Philadelphia, Pa. Driving-belt. No. 1,220,795; Mar. 27; v. 236; p. 1116.
Stone, Stanley M., New York, N. Y. Hydraulic motor-driven air exhauster and compressor. No. 1,219,184; Mar. 13; v. 236; p. 488.
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Storle, Ole O. and G., Tacoma, Wash. Balanced exhaust-valve for explosive-engines. No. 1,218,487; Mar. 6; v. 236; p. 206.
Storms, Earl W., Buffalo, N. Y. Locking mechanism. No. 1,219,360; Mar. 13; v. 236; p. 548.
Straus, Eugene J., St. Louis, Mo. Water-bag. No. 1,219,502; Mar. 20; v. 236; p. 628.
Streeter, Perry H. (See Van Syc, William E., assignor.)
Streitelmeier, John E. (See Brown, Robert G., assignor.)
Strid, Sven J., Chicago, assignor of one-half to E. Carlson, Roseland, Chicago, Ill. Draft-rigging and buffer mechanism. No. 1,219,604; Mar. 20; v. 236; p. 663.
Strimple, Pierce J., Cleves, assignor of one-half to S. Struble, Cincinnati, Ohio. Car step and door operating mechanism. No. 1,220,905; Mar. 27; v. 236; p. 1153.
String, Benjamin T. (See Fefell, Henry H., assignor.)
Strode, Ralph, Mikkalo, Oreg. Weeder. No. 1,219,880; Mar. 20; v. 236; p. 760.
Stromberg-Carlson Telephone Manufacturing Company. (See Dean, William W., assignor.)
Stromberg-Carlson Telephone Manufacturing Company. (See Haubrich, Alexander M., assignor.)
Stromberg, Joel A., New Norway, Alberta, Canada. Automatic wrench. No. 1,218,488; Mar. 6; v. 236; p. 206.
Struble, Stanley. (See Strimple, Pierce J., assignor.)
Strzyczkowski, Julian, New York, N. Y. Laminated railway-tie. No. 1,219,503; Mar. 20; v. 236; p. 628.
Stuart, Hamilton C., St. Johnsbury, Vt. Gas-burner. No. 1,218,012; Mar. 6; v. 236; p. 43.
Stuart, John A., *et al.* (See Hill, Jesse H., assignor.)
Stuart, Joseph, assignor to Lobdell Car Wheel Company, Wilmington, Del. Steel car-wheel. No. 1,218,489; Mar. 6; v. 236; p. 207.
Stuewe, Oscar H. (See Marquardt and Stuewe.)
Stull, Herbert L., Stroudsburg, Pa. Snow-melting attachment for locomotives. No. 1,219,185; Mar. 13; v. 236; p. 489.
Stupar, Maximilian, assignor of one-half to H. S. Renton, Chicago, Ill. Aeroplane. No. 1,220,374; Mar. 27; v. 236; p. 972.
Stürcke, Adrianna, Ossining, N. Y. Laundry bluing. No. 1,219,186; Mar. 13; v. 236; p. 489.
Sturges, Clarence B., Fairfield, Conn., assignor to Weiss Engine Company, Wilmington, Del. Steam-supply for internal-combustion engines. No. 1,218,606; Mar. 6; v. 236; p. 248.
Sturm, Charles A., and G. R. Hurlbut, Portland, Oreg.; said Sturm assignor to said Hurlbut. Railway safety device. No. 1,218,816; Mar. 13; v. 236; p. 362.
Sturr, Charles W., Cincinnati, Ohio. Automobile-lock. No. 1,218,013; Mar. 6; v. 236; p. 43.
Sturrock, John, Chicago, Ill., assignor to International Harvester Company of New Jersey. Journal-bearing. No. 1,219,187; Mar. 13; v. 236; p. 489.
Styll, Harry H., and H. K. Parsons, Southbridge, Mass. Lens-slotting machine. No. 1,220,287; Mar. 27; v. 236; p. 941.
Sub-Surface Vacuum Development Company, The. (See Coach, Richard J., assignor.)
Subers, Lawrence A., East Cleveland, Ohio. Fabric and hose making machine. No. 1,220,288; Mar. 27; v. 236; p. 941.
Sudlab, Rachel, New York, N. Y. Detachable button. No. 1,219,188; Mar. 13; v. 236; p. 489.
Suess, Edmund L., Pittsburgh, Pa. Spark-plug. No. 1,220,472; Mar. 27; v. 236; p. 1007.
Sugg, Charles P., Spottsville, Ky. Safety device for elevators. No. 1,219,050; Mar. 13; v. 236; p. 443.
Sullivan Machinery Company. (See O'Rourke and Holdsworth, assignors.)
Sullivan Machinery Company. (See Willey, Frank E., assignor.)
Summer, Gustave, Chicago, Ill. Brush. No. 1,219,504; Mar. 20; v. 236; p. 628.
Summersgill, Richard, Kane, Pa. Window-glass apparatus. No. 1,220,906; Mar. 27; v. 236; p. 1153.
Sunbury Mfg. Co., The. (See Perfect, Charles A., assignor.)
Sundback, Gideon, Meadville, Pa., assignor to Hookless Fastener Company. Separable fastener. No. 1,219,881; Mar. 20; v. 236; p. 760.
Sunderland, Charles C., and R. D. Green, Trenton, N. J., assignors to John A. Roebling's Sons Company. Hoisting and similar sling. No. 1,218,714; Mar. 13; v. 236; p. 324.
Sundh, August. (See Sproul, John J., assignor.)
Sundh, August, Hastings-upon-Hudson, N. Y. Gate and hinge. No. 1,218,715; Mar. 13; v. 236; p. 324.
Sutter, John R., Kansas City, Mo. Money-transmitting envelop. No. 1,220,796; Mar. 27; v. 236; p. 1116.
Svanson, Sarah. (See Flint, Charles, assignor.)
Svenson, Charles W., assignor to The American Hardware Corporation, New Britain, Conn. Coaster-brake. No. 1,218,226; Mar. 6; v. 236; p. 118.
Swabb, George L., assignor to Heisler Locomotive Works, Erie, Pa. Locomotive. No. 1,220,570; Mar. 27; v. 236; p. 1041.
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Swanke, Herman J., Dodson, Mont. Draft-tree. No. 1,219,883; Mar. 20; v. 236; p. 761.
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Swanson, Frank A. (See Carlson and Swanson.)
Swanson, Gust O., Leadore, Idaho. Sled-runner attachment for vehicle-wheels. No. 1,218,128; Mar. 6; v. 236; p. 84.
Swartwood, Charles H., Everett, Mass. Puzzle. No. 1,218,014; Mar. 6; v. 236; p. 44.
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Sweeney, Henry and W. G., Fall River, Mass. Target. No. 1,220,022; Mar. 20; v. 236; p. 808.
Sweeney, Walter G. (See Sweeney, Henry and W. G.)
Swimmer, Robert, New York, N. Y. Sanitary curtainless soap and water spray. No. 1,220,704; Mar. 27; v. 236; p. 1085.
Swinford, Stanley, Hinton, Ky. Seed-planter. No. 1,219,361; Mar. 13; v. 236; p. 548.
Swinglehurst, Harry, Roxbury, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Cam mechanism for knitting-machines. No. 1,218,335; Mar. 6; v. 236; p. 156.
Swofford, Peter J., Wellington, Kans. Garment-hanger. No. 1,218,490; Mar. 6; v. 236; p. 207.
Symes, Henry, Mornington, near Dunedin, New Zealand. Automatic recording fire-alarm. No. 1,219,189; Mar. 13; v. 236; p. 490.
Symes, Henry, Mornington, near Dunedin, New Zealand. Variable-resistance, electromagnetic, drilling machinery. No. 1,219,190; Mar. 13; v. 236; p. 490.
Synck, Henry, and B. B. Rollman, assignors to New Idea Spreader Co., Coldwater, Ohio. Feeding mechanism. No. 1,218,491; Mar. 6; v. 236; p. 207.
Synthetic Patents Co. (See Heymann, Kothe, Dressel, and Ossenbeck, assignors.)
Synthetic Patents Co. (See Rietz, Erich, assignor.)
Synthetic Patents Co. (See Thomaschewski, Paul, assignor.)
Synthetic Patents Co. (See Weller, Max, assignor.)
Szczepaniak, Wladyslaw, *et al.* (See Pludowski, Aleksander, assignor.)
Szeremeta, Peter, Hammond, Ind. Rail-joint. No. 1,220,023; Mar. 20; v. 236; p. 808.
T. G. Hawkes & Co. (See Hawkes, Townsend D., assignor.)
Tactklan, Stephen, New York, N. Y. Protective device for brushes. No. 1,218,963; Mar. 13; v. 236; p. 413.
Tacy, Samuel H., Elkins Park, assignor to Pre-Heated Air Company, Philadelphia, Pa. Preheater-inlet. No. 1,220,473; Mar. 27; v. 236; p. 1007.
Taisey, Fred R., Lowell, assignor to The Lamson Company, Boston, Mass. Assorting device for carriers. No. 1,218,910; Mar. 13; v. 236; p. 395.
Talbott, Otho H. W., and W. F. Prettyman, Rockville, Md. Wheel-lock. No. 1,219,789; Mar. 20; v. 236; p. 727.
Talcott, Mancel W. (See Talcott, Walter O., assignor.)
Talcott, Walter O., assignor of one-half to M. W. Talcott, Providence, R. I. Belt-fastener. No. 1,218,227; Mar. 6; v. 236; p. 119.
Tallaksen, Selma E., Ridgefield Park, N. J. Clothes-line cleaner. No. 1,219,051; Mar. 13; v. 236; p. 443.
Tanaka, Kay T., Salt Lake City, Utah. Invisible shoe-fastener. No. 1,219,052; Mar. 13; v. 236; p. 443.
Tanner, Daniel R., La Grande, Oreg. Lumber-unloading mechanism. No. 1,220,375; Mar. 27; v. 236; p. 972.
Tanner, Daniel R., La Grande, Oreg. Lumber-handling mechanism for kiln-drying. No. 1,220,797; Mar. 27; v. 236; p. 1116.
Tanner, Daniel R., La Grande, Oreg. Lumber-stacker for kiln-drying. No. 1,220,798; Mar. 27; v. 236; p. 1117.
Tanner, Daniel R., La Grande, Oreg. Lumber-sorting mechanism. No. 1,220,799; Mar. 27; v. 236; p. 1117.

Tanzi, Aurelio, Philadelphia, Pa. Shaft set-screw. No. 1,220,024; Mar. 20; v. 236; p. 809.

Taralle, Julien, Geneva, Switzerland. Lock for bicycles. No. 1,218,336; Mar. 6; v. 236; p. 157.

Tarbox, John P., Washington, D. C. Method and system of selective character-display. No. 1,218,015; Mar. 6; v. 236; p. 44.

Tarbox, John P., Buffalo, N. Y. Display-registering system. No. 1,218,016; Mar. 6; v. 236; p. 44.

Tarrant Manufacturing Co. (See Tarrant, William P., assignor.)

Tarrant, William P., assignor to Tarrant Manufacturing Co., Saratoga Springs, N. Y. Street-cleaning apparatus. No. 1,219,505; Mar. 20; v. 236; p. 628.

Tatum, Charles A., New York, N. Y. Device for measuring glass. No. 1,218,492; Mar. 6; v. 236; p. 207.

Tautges, August, Aniwa, assignor of one-fifth to J. Lindner, Sr., and one-fifth to J. Lindner, Jr., Birnamwood, Wis. Door-structure for grain-cars and the like. No. 1,219,506; Mar. 20; v. 236; p. 629.

Taylor, Clarence W., assignor to Onlake Company, Chicago, Ill. Differential mechanism. No. 1,220,289; Mar. 27; v. 236; p. 942.

Taylor, Ellis, assignor of one-half to T. A. Howard, Sandersville, Miss. Mail-crane. No. 1,219,191; Mar. 13; v. 236; p. 490.

Taylor, Frank T., *et al.* (See Marion, Frank, assignor.)

Taylor, George H., Richmond, Va. Band-fastener. No. 1,218,337; Mar. 6; v. 236; p. 157.

Taylor, Guy O. (See Carrington, Fred W., assignor.)

Taylor, Horace V. S., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Ignition mechanism. No. 1,219,680; Mar. 20; v. 236; p. 690.

Taylor Instrument Companies. (See Apthorpe, William H., assignor.)

Taylor, Joseph, Oklahoma, Okla. Automatic sprinkler-head. No. 1,220,025; Mar. 20; v. 236; p. 809.

Taylor, Patillo M., Easley, S. C. Transmission mechanism. No. 1,218,493; Mar. 6; v. 236; p. 208.

Taylor, Robert G., Chicago, Ill. Adjustable table-top cover. No. 1,219,790; Mar. 20; v. 236; p. 728.

Tayte, Chester A. S., Salem, Mass. Book-rest. No. 1,220,705. Mar. 27; v. 236; p. 1086.

Teare, Lillan G., Duluth, Minn. Legging. No. 1,219,507; Mar. 20; v. 236; p. 629.

Tearney, John J., Toronto, and G. L. Alexander, Aurora, Ontario, Canada. Humidor. No. 1,220,376; Mar. 27; v. 236; p. 973.

Teehan, John F., Brockton, Mass. Arch-supporting shoe and making same. No. 1,218,911; Mar. 13; v. 236; p. 396.

Temple, Grant, Cleveland, Ohio. Rotary engine. No. 1,218,716; Mar. 13; v. 236; p. 324.

Templeman, James A., Anamosa, Iowa. Lubricating device. No. 1,218,129; Mar. 6; v. 236; p. 84.

Ten Brook, Ezra C., Lander, Wyo. Button-fastener. No. 1,220,138; Mar. 20; v. 236; p. 853.

Tengler, Frederick R., Schulenburg, Tex. Harrow. No. 1,218,338; Mar. 6; v. 236; p. 157.

Tennant, Melbourne R., Colorado Springs, Colo. Apparatus for producing ozone. No. 1,218,817; Mar. 13; v. 236; p. 362.

Ternstedt, Alvar K., assignor to Perfect Window Regulator Company, New York, N. Y. Mechanically-operated window. No. 1,218,130; Mar. 6; v. 236; p. 84.

Tesse, Felix J. C., La Varenne, St. Hilaire, France, assignor of one-half to G. Mallison, Eastbourne, England. Rotary-cylinder motor. No. 1,220,706; Mar. 27; v. 236; p. 1086.

Tessier, Joseph D., Worcester, Mass. Combination letter-sheet and envelop. No. 1,220,474; Mar. 27; v. 236; p. 1008.

Testrup, Nils. (See Rigby, Thomas, assignor.)

Tetzlaff, Max, Lankwitz, Germany. Pin-ticket. No. 1,220,907; Mar. 27; v. 236; p. 1154.

Tevander, Olof N., Chicago, Ill. Closure-applying machine. No. 1,219,791; Mar. 20; v. 236; p. 728.

Theobold, W. S., *et al.* (See Cotton, Caleb, assignor.)

Theriot, James C., Taft, Cal. Adjustable journal-box. No. 1,219,192; Mar. 13; v. 236; p. 491.

Thingstad, Ingvar A., Vergas, Minn. Fingering attachment for stringed instruments. No. 1,219,884; Mar. 20; v. 236; p. 761.

Thoma, Andrew, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y. Apparatus for filling shoe-bottoms. No. 1,218,017; Mar. 6; v. 236; p. 45.

Thomas, Carl C., Madison, Wis. Meter. No. 1,218,717. Mar. 13; v. 236; p. 325.

Thomas, Franklin C., *et al.* (See Fahrney, John J., assignor.)

Thomas, Harry C., Philadelphia, Pa. Cuff-button. No. 1,220,908; Mar. 27; v. 236; p. 1154.

Thomas, Martin E., assignor of one-fourth to J. H. Lott and one-fourth to I. A. Langston, Guymon, Okla. Wire-stretcher. No. 1,218,018; Mar. 6; v. 236; p. 45.

Thomas, Reinhold, Brockport, N. Y. Piano sounding-board. No. 1,218,019; Mar. 6; v. 236; p. 45.

Thomaschewski, Paul, Opladen, near Cologne, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y. Urea and thiourea compounds. No. 1,218,656; Mar. 13; v. 236; p. 303.

Thome, Anton, Glenwood Springs, Colo. Filtering apparatus. No. 1,218,818; Mar. 13; v. 236; p. 363.

Thompson, Charles B., Buffalo, N. Y., assignor to American Radiator Company, Chicago, Ill. Automatic draft control. No. 1,221,008; Mar. 27; v. 236; p. 1187.

Thompson, Henry H., Columbus, Ga. Driving-box. No. 1,220,909; Mar. 27; v. 236; p. 1154.

Thompson, James V., New Haven, Conn. Clothes-rack. No. 1,219,885; Mar. 20; v. 236; p. 761.

Thompson, John M., Buffalo, N. Y. Sewer-cleaner. No. 1,218,912; Mar. 13; v. 236; p. 396.

Thompson, Marshall F., and A. L. Townsend, Washington, D. C.; said Townsend assignor to said Thompson. Voting apparatus. No. 1,219,053; Mar. 13; v. 236; p. 444.

Thompson, Thomas A., assignor of one-half to P. J. Quinn, Butte, Mont. Envelop-sealing means. No. 1,218,494; Mar. 6; v. 236; p. 208.

Thompson, Wilfred. (See Morrison and Thompson.)

Thompson, William H. (See Jackson and Davis, assignors.)

Thomson, Albert R. (See Rinfrett, Napoleon, assignor.)

Thomson, Christian, Colville, Wash. Sketching and drawing apparatus. No. 1,218,964; Mar. 13; v. 236; p. 413.

Thomson, Elihu, Swampscott, assignor, by mesne assignments, to Thomson Spot Welder Company, Boston, Mass. Combined spot and butt welder. No. 1,220,997; Mar. 27; v. 236; p. 1183.

Thomson, John, New York, and F. A. J. Fitz Gerald, Niagara Falls, N. Y., assignors to John Thomson Press Company, Jersey City, N. J. Condenser in the metallurgy of zinc. No. 1,219,193; Mar. 13; v. 236; p. 491.

Thomson, John, New York, and F. A. J. Fitz Gerald, Niagara Falls, N. Y., assignors to John Thomson Press Company, Jersey City, N. J. Electric zinc-distilling furnace. No. 1,219,194; Mar. 13; v. 236; p. 491.

Thomson Spot Welder Company. (See Thomson, Elihu, assignor.)

Thordarson, Chester H., Chicago, Ill. Machine for making insulating elements. No. 1,220,377; Mar. 27; v. 236; p. 973.

Thordarson, Chester H., Chicago, Ill. Machine for making insulating elements. No. 1,220,378; Mar. 27; v. 236; p. 973.

Thorsby, Karl J., assignor to California Corrugated Culvert Company, Oakland, Cal. Flume. No. 1,219,681; Mar. 20; v. 236; p. 690.

Thrasher, Alvin, and J. B. Ozbirn, Iona, Okla. Brake-shoe and wear-plate. No. 1,219,195; Mar. 13; v. 236; p. 492.

Throop, Charles G., Chicago, Ill. Spraying-booth. No. 1,218,718; Mar. 13; v. 236; p. 325.

Throop, Damon R., Davis, Cal. Land-scraper. No. 1,220,379; Mar. 27; v. 236; p. 974.

Thurston, Fredrick A., Lynn, Mass. Buffing-machine. No. 1,218,339; Mar. 6; v. 236; p. 158.

Tibbetts, Milton, assignor to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,218,719; Mar. 13; v. 236; p. 325.

Tiemann, L. H., *et al.* (See Cowgill, Orph W., assignor.)

Tillmann, Charles F., Chicago, Ill. Plant-irrigating device. No. 1,218,228; Mar. 6; v. 236; p. 119.

Timkó, Joseph, New York, N. Y. Brush. No. 1,219,196; Mar. 13; v. 236; p. 492.

Timm, Hermann, Luverne, Minn. Steering apparatus for ships. No. 1,220,026; Mar. 20; v. 236; p. 809.

Timmis, Albert H., Harrow, assignor to Rubber Set Brush Co., Limited, London, England. Brush and manufacturing the same. No. 1,219,054; Mar. 13; v. 236; p. 444.

Tisman, Abraham, New York, N. Y. Automobile-bumper. No. 1,220,571; Mar. 27; v. 236; p. 1041.

Titanium Alloy Manufacturing Company, The. (See Barton, Louis E., assignor.)

Toledo Button Machine Company, The. (See Buehler, Albert, assignor.)

Toledo Button Machine Company, The. (See Waltz, Frank G., assignor.)

Toledo Parlor Furniture Company, The. (See De Does, Peter J., assignor.)

Toledo Scale Company. (See Burkholder, John D., assignor.)

Toledo Scale Company. (See Wetzel, Lewis C., assignor.)

Toles, Justin K., San Francisco, Cal. Water-heater. No. 1,218,965; Mar. 13; v. 236; p. 413.

Toll, William C., Rosendale, Wis. Sliding door. No. 1,220,910; Mar. 27; v. 236; p. 1154.

Tomlinson, John D., Rochdale, England. Machine used in the production of Suede cotton cloth. No. 1,218,131; Mar. 6; v. 236; p. 85.

Tomlinson, Thomas F., Lamberts Point, Va. Brake-rigging for rolling-stock. No. 1,218,720; Mar. 13; v. 236; p. 326.

Toney, Samuel, Clearfield, Pa. Combination track gage and level. No. 1,220,027; Mar. 20; v. 236; p. 809.

Tooker, John N. (See Knowlton, MacCorquodale, Wyckoff, Russell, and Tooker.)

Tooker, John N. (See Schroeder and Tooker.)

Toomey, Alfred E., Edmore, N. D. Grease and oil gun. No. 1,219,197; Mar. 13; v. 236; p. 492.

Torbinia Engineering Company (1916) Limited. (See King, Alick, assignor.)

Torre, Domenico D., Providence, R. I., assignor to The Anderson Candy Company. Candy-twisting machine. No. 1,218,340; Mar. 6; v. 236; p. 158.

Townsend, Arthur L. (See Thompson and Townsend.)

Townsend, Frederick B., Hinsdale, Ill., assignor to W. H. Miner, Chazy, N. Y. Ventilator for cars and the like. No. 1,220,290; Mar. 27; v. 236; p. 942.

Travis, Denison E. (See Heywood and Travis.)

Traylor, Fred W. (See Foster, Orval B., assignor.)

Treadwell, John P., Vaiden, Miss. Harrow. No. 1,220,475; Mar. 27; v. 236; p. 1008.

Treat, Ellis M. (See Graham, Andrew W., assignor.)

Tremain, Charles. (See Fargo, Arthur H., assignor.)

Trinks, Franz, Brunswick, Germany. Calculating-machine. No. 1,220,029; Mar. 20; v. 236; p. 810.

Trinks, Franz, Brunswick, Germany. Calculating-machine. No. 1,220,030; Mar. 20; v. 236; p. 811.

Trood, Samuel, New Castle, Pa., assignor to Industrial Development Company. Separating metal plates. No. 1,219,198; Mar. 13; v. 236; p. 493.

Troop, George W., assignor to The North & Judd Manufacturing Company, New Britain, Conn. Breast-chain terminal. No. 1,219,199; Mar. 13; v. 236; p. 493.

Trosien, Charles G., assignor of one-fourth to M. E. Welch and one-fourth to A. Pack, Pontiac, Mich. Diaphragm-horn. No. 1,218,229; Mar. 6; v. 236; p. 119.

Trott, Rolland S., Denver, Colo. Vehicle spring suspension. No. 1,218,819; Mar. 13; v. 236; p. 363.

Troutman, Phillip O., Sharon, Pa. Engine-valve. No. 1,220,291; Mar. 27; v. 236; p. 943.

Truitt, Clarence, Pomona, Cal. Electric oven. No. 1,218,341; Mar. 6; v. 236; p. 159.

Truitt, Clarence, Pomona, Cal. Steam-cooker and hot-plate. No. 1,219,200; Mar. 13; v. 236; p. 493.

Trussed Concrete Steel Company. (See Kane, Thomas H., assignor.)

Trussed Concrete Steel Company. (See Plumb and Weed, assignors.)

Trust, John F., Hagerstown, Md. Trolley-pole wheel. No. 1,220,800; Mar. 27; v. 236; p. 1118.

Tucker, Joseph W., Kissimmee, Fla., and W. A. McCool, Beaver Falls, Pa. Paving-brick. No. 1,220,292; Mar. 27; v. 236; p. 943.

Tucker, Joseph W., Kissimmee, Fla., and W. A. McCool, Beaver Falls, Pa. Making bricks and the like. No. 1,220,293; Mar. 27; v. 236; p. 943.

Tuhey, Daniel, Dayton, Ohio. Internal-combustion engine. No. 1,218,132; Mar. 6; v. 236; p. 85.

Tung-Lok Silo and Tank Company. (See Cronemeyer, Frederick W., assignor.)

Turner, Claud L., P. E. Whitehead, and S. C. Clarke, Gering, Nebr. Automatic air-coupling device for railway-trains. No. 1,219,055; Mar. 13; v. 236; p. 444.

Turner, Frank F., Little Falls, Minn. Hot-water furnace. No. 1,218,133; Mar. 6; v. 236; p. 85.

Turner, James R., Chicago, Ill. Temporary binder. No. 1,220,294; Mar. 27; v. 236; p. 944.

Turner, Leland M., Port Washington, Wis. Valve mechanism for gas-engines. No. 1,220,380; Mar. 27; v. 236; p. 974.

Turner, Walter V., Edgewood borough, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Trip-valve device for air-brakes. No. 1,218,721; Mar. 13; v. 236; p. 326.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Brake-valve device. No. 1,219,605; Mar. 20; v. 236; p. 663.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Brake-cylinder-pressure regulator. No. 1,219,606; Mar. 20; v. 236; p. 664.

Turpin, Herman L., Dallas, Tex. Rail-plate. No. 1,219,201; Mar. 13; v. 236; p. 493.

Tussing, Benjamin F., Fruitland, Idaho. Sizing-machine. No. 1,219,056; Mar. 13; v. 236; p. 445.

Twin Screw Pump Co. (See Holdaway, William S., assignor.)

Twombly Car Corporation. (See Twombly, Willard I., assignor.)

Twombly, Willard I., assignor by mesne assignments, to H. W. Jessup, trustee, New York, N. Y. Internal-combustion engine. No. 1,219,607; Mar. 20; v. 236; p. 664.

Twombly, Willard I., assignor to Twombly Car Corporation, New York, N. Y. Starting device for engines. No. 1,220,572; Mar. 27; v. 236; p. 1041.

Tyler, Hugh C., Columbus, Ohio. Vacuum-cleaner. No. 1,218,134; Mar. 6; v. 236; p. 86.

U-Need-A Starter Company. (See Hartung, Frank H., assignor.)

U. S. Light & Heat Corporation. (See Cartwright, David J., assignor.)

U. S. Safety Egg Carrier Co., The. (See Rodwell, George H., assignor.)

Uland, Harry, *et al.* (See Carmody, Harold J., assignor.)

Ujdur, Anton, Park City, Utah. Surgical splint. No. 1,220,476; Mar. 27; v. 236; p. 1008.

Ulven, Christian, St. Paul, assignor to Minneapolis Iron Store Company, Minneapolis, Minn. Flexible spring-coupling. No. 1,220,295; Mar. 27; v. 236; p. 944.

Underwood, Ernest E., and F. H. Reynolds, assignors to Eastman Kodak Company, Rochester, N. Y. Photographic camera. No. 1,218,135; Mar. 6; v. 236; p. 86.

Underwood Typewriter Company. (See Fengler, Hermann V., assignor.)

Underwood Typewriter Company. (See Kurowski, Alfred G. F., assignor.)

Underwood Typewriter Company. (See McLaughlin, John C., assignor.)

Underwood Typewriter Company. (See Roberts, Lyman R., assignor.)

Underwood Typewriter Company. (See Schubert, Joseph E., assignor.)

Underwood Typewriter Company. (See Smith, Jesse A. B., assignor.)

Underwriter Typewriter Company. (See Sokolov, Jacob, assignor.)

Underwood Typewriter Company. (See Wayrich, Alexander, assignor.)

Underwood Typewriter Company. (See Wernery, Lester A., assignor.)

Uni-Motion Door Handle Company. (See Lovdall, George F., assignor.)

Union Manufacturing Company. (See Church, Albert E., assignor.)

Union Special Machine Company. (See Chalman, John E., assignor.)

Union Special Machine Company. (See McNeil, Chester, assignor.)

Union Special Machine Company. (See Moffatt, James R., assignor.)

Union Switch & Signal Company, The. (See Wallace, Herbert A., assignor.)

United Iron Works Company. (See Roades, Weslie M., assignor.)

United Shoe Machinery Company. (See Alexander, Alexander M., assignor.)

United Shoe Machinery Company. (See Bates, Arthur, assignor.)

United Shoe Machinery Company. (See Bertrand, Frederic E., assignor.)

United Shoe Machinery Company. (See Bond, William A., assignor.)

United Shoe Machinery Company. (See Davenport, Herman A., assignor.)

United Shoe Machinery Company. (See Erickson, Edward, assignor.)

United Shoe Machinery Company. (See Farrell, Charles T., assignor.)

United Shoe Machinery Company. (See Hill, George S., assignor.)

United Shoe Machinery Company. (See Johnson, Albert E., assignor.)

United Shoe Machinery Company. (See Larsen, Lewis H., assignor.)

United Shoe Machinery Company. (See Latham, Albert, assignor.)

United Shoe Machinery Company. (See Pratt and Pegg, assignors.)

United Shoe Machinery Company. (See Prenzel, Adam H., assignor.)

United Shoe Machinery Company. (See Smith, John, assignor.)

United States Steel Corporation. (See McMurtry, George G., assignor.)

United States Wire Mat Company. (See Bennett, John L., assignor.)

United States Gypsum Company, The. (See Hennig, Charles F., assignor.)

United States Envelope Company. (See Heywood and Travis, assignors.)

Universal Lighting Systems Corporation. (See Moreton, Henry H., assignor.)

Universal Oxygen Company. (See Mueller and Rowlands, assignors.)

Universal Winding Company. (See Foster, George W., assignor.)

Universal Winding Company. (See Parks, Edward F., assignor.)

Urdang, Bernard. (See Hammond, Robert O., assignor.)

Uttmark, Fritz E., Brooklyn, N. Y. Mailing-carton. No. 1,219,886; Mar. 20; v. 236; p. 761.

Vacuum Hose Protector Company. (See Osley, Willard A., assignor.)

Valentine, Peter E., Caneyville, Ky. Brass-remover for journal-boxes. No. 1,220,911; Mar. 27; v. 236; p. 1154.

Van Dorn Coupler Company. (See Van Dorn, Herbert E., assignor.)

Van Dorn, Herbert E., assignor to Van Dorn Coupler Company, Chicago, Ill. Draft-gear. No. 1,218,722; Mar. 13; v. 236; p. 326.

Van Heuvel, Martin. (See Jones, Edward S., assignor.)

Van Horne, Charles R., Aberdeen, Wash. Self-propelled vehicle. No. 1,219,887; Mar. 20; v. 236; p. 762.

Van Syoc, William E., assignor of one-half to P. H. Streeter, Pueblo, Colo. Stove. No. 1,218,913; Mar. 13; v. 236; p. 397.

Vanadia, Anthony C., Flint, Mich. Fire-alarm box. No. 1,218,230; Mar. 6; v. 236; p. 120.

Vance, James M. (See McNeel and Vance.)

Vance, William G., Brooklyn, assignor of one-half to R. L. Young, New York, N. Y. Automobile-locking apparatus. No. 1,218,495; Mar. 6; v. 236; p. 209.

Vanderford, Cary M., San Fernando, Cal. Irrigating-valve. No. 1,220,296; Mar. 27; v. 236; p. 944.

Vanderhoof, Harold, San Francisco, Cal. Vacuum apparatus. No. 1,220,297; Mar. 27; v. 236; p. 945.

Vanderveld, Anthony, Grand Rapids, Mich., assignor to Clipper Belt Lacer Company. Mount for belt-hooks. No. 1,220,298; Mar. 27; v. 236; p. 945.

Vann, Millard N. (See Derrick and Vann.)

Vansize, William B., Brooklyn, N. Y. Recording correlated light and sound effects. No. 1,219,682; Mar. 20; v. 236; p. 691.

Varga, Paul, New York, N. Y. Apparatus for feeding articles to wrapping-tables or wrapping-machines. No. 1,220,801; Mar. 27; v. 236; p. 1118.

Varjebedian, Mesrob, Fresno, Cal. Curing figs for use in making a beverage. No. 1,218,914; Mar. 13; v. 236; p. 397.

Varley, Richard, Englewood, N. J. Starter system and apparatus for combustion-engines. No. 1,220,802; Mar. 27; v. 236; p. 1119.

Vaudreuil, Edward J., Eau Claire, Wis. Pea-vine threshing and hulling machine. No. 1,220,477; Mar. 27; v. 236; p. 1009.

Vaughan, Levin D., Philadelphia, Pa. Temperature-regulator. No. 1,220,281; Mar. 27; v. 236; p. 975.

Vavra, Emerick H., Chicago, Ill. Receptacle-lining. No. 1,218,723; Mar. 13; v. 236; p. 327.

Venden, Joseph O. (See Aerni and Venden.)

Vesta Accumulator Company. (See Morrison, William, assignor.) (Reissue.)

Victor Shoe Machinery Company. (See Sjostrom, Peter, assignor.)

Victor Talking Machine Company. (See Dennison, Wilburn N., assignor.)

Victor Talking Machine Company. (See English, John C., assignor.)

Viden, Samuel C., Milwaukee, Wis. Flag-holder. No. 1,220,299; Mar. 27; v. 236; p. 945.

Vincent, Jesse G., assignor to Burroughs Adding Machine Company, Detroit, Mich. Calculator. No. 1,218,136; Mar. 6; v. 236; p. 87.

Vinik, Mathias J., New York, N. Y. Finder for cameras. No. 1,218,342; Mar. 6; v. 236; p. 159.

Vögele, Heinrich, Mannheim, and K. Klensch, Ludwigshafen-on-the-Rhine, Germany. Turn-table. No. 1,220,031; Mar. 20; v. 236; p. 811.

Vollaud, Hugo R., St. Louis, Mo. Scenery-brace. No. 1,220,032; Mar. 20; v. 236; p. 812.

Vollmer, Charles F., Denver, Colo. Convertible chair and table. No. 1,220,300; Mar. 27; v. 236; p. 945.

Volquards, Marie, Visalia, Cal. Breast-pump. No. 1,220,707; Mar. 27; v. 236; p. 1087.

Von Kramer, Hans, Edgbaston, Birmingham, England. Means for the regulation or control of railway and like traffic. No. 1,219,508; Mar. 20; v. 236; p. 629.

Vore, Arthur R., Carraway, Fla. Shaving-brush. No. 1,220,033; Mar. 20; v. 236; p. 812.

Vorles, Louis H., New York, N. Y. Golf-club. No. 1,219,417; Mar. 13; v. 236; p. 568.

Vose, John R., Ashland, and W. J. Owens, Catlettsburg, Ky. Apparatus for cleaning motion-picture films. No. 1,218,137; Mar. 6; v. 236; p. 87.

Voss, W. L., *et al.* (See Kovacs, Alexander, assignor.)

Vosseler, William F., Cincinnati, Ohio. Beer-cooler. No. 1,218,724; Mar. 13; v. 236; p. 327.

Vulcan Machinery and Reduction Co. (See Hullinger, Ashton and B., assignors.)

W & E T Fitch Co., The. (See Nettleton, George R., assignor.)

Wachenheimer Bros. (See Wachenheimer and Davis, assignors.)

Wachenheimer, Harry, and E. L. Davis, Cranston, assignors to Wachenheimer Bros., Providence, R. I. Chain. No. 1,219,683; Mar. 20; v. 236; p. 691.

Wachter, Charles L., assignor to Lidgerwood Manufacturing Company, New York, N. Y. Button-stop for cables. No. 1,218,138; Mar. 6; v. 236; p. 87.

Waddington, E. C. (See Lindsey, Clinton, assignor.)

Wael, Henri, administrator. (See Montbarbon and Chédru.)

Waffenfabrik Mauser Aktiengesellschaft. (See Mauser, Paul, assignor.)

Waggoner, James W., Mountain View, Okla. Rail-joint. No. 1,219,057; Mar. 13; v. 236; p. 445.

Waggoner, William H., Jeanerette, La. Filter. No. 1,218,915; Mar. 13; v. 236; p. 397.

Wainwright, John E. (See Squires, Arthur C., assignor.)

Wajdié, Petar, Steelton, Pa. Machine for sewing leather articles. No. 1,219,684; Mar. 20; v. 236; p. 691.

Waldman, Ralph A., San Francisco, Cal. Milk-bottle case. No. 1,220,301; Mar. 27; v. 236; p. 946.

Waldmeier, Emile, Gulfport, Miss. Air-regulator for engine-manifolds. No. 1,219,202; Mar. 13; v. 236; p. 494.

Waldon, Sidney D., assignor to Packard Motor Car Company, Detroit, Mich. Carbureter. No. 1,220,478; Mar. 27; v. 236; p. 1009.

Walger, William H., Jr., Chicago, Ill. Awning. No. 1,218,725; Mar. 13; v. 236; p. 327.

Walker, Charles R. (See Wellington, James A., assignor.)

Walker, Harry, assignor of one-half to V. W. La Mont, Anaheim, Cal. Combination cap-opener, cigar-clipper, and burglar-key. No. 1,219,203; Mar. 13; v. 236; p. 494.

Walker, James L., Sommerville, S. C. Automatic train-stop. No. 1,218,496; Mar. 6; v. 236; p. 209.

Walker, John, Wolf Lake, Ill. Wire-clamp. No. 1,220,912; Mar. 27; v. 236; p. 1155.

Walker, John S., *et al.* (See Coates, George, assignor.)

Walker, William W., assignor to MacAndrews & Forbes Company, Camden, N. J. Fire-extinguishing composition. No. 1,219,509; Mar. 20; v. 236; p. 630.

Wall, William L., Philadelphia, Pa. Holder for eyeglasses and spectacles. No. 1,219,685; Mar. 20; v. 236; p. 692.

Wallace, Herbert A., Pittsburgh, assignor to The Union Switch & Signal Company, Swissvale, Pa. Rheostat. No. 1,220,573; Mar. 27; v. 236; p. 1042.

Wallace, Sidney C., Chicago, Ill. Umbrella and cane holder. No. 1,218,020; Mar. 6; v. 236; p. 45.

Wallberg, Frank, New York, N. Y. Combined receiver and detector for wireless use. No. 1,219,888; Mar. 20; v. 236; p. 762.

Wallem, Axel B., Cynwyd, assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Liquid-measuring apparatus. No. 1,218,726; Mar. 13; v. 236; p. 328.

Walpole, Franklin D., McKenzie, Tenn. Well-bucket. No. 1,218,497; Mar. 6; v. 236; p. 209.

Walsh, John L., assignor of one-half to T. J. Conley, Chicago, Ill. Wrench. No. 1,220,913; Mar. 27; v. 236; p. 1155.

Walters, Arthur L., Wadena, Iowa. Check-row attachment for planters. No. 1,218,820; Mar. 13; v. 236; p. 368.

Walther, Jacob, assignor to The Dayton Steel Foundry Company, Dayton, Ohio. Adjusting and lifting means. No. 1,218,021; Mar. 6; v. 236; p. 46.

Walton, John Q., Washington, D. C. Valve. No. 1,218,498; Mar. 6; v. 236; p. 210.

Waltz, Frank G., assignor, by mesne assignments, to The Toledo Button Machine Company, Toledo, Ohio. Button-feed control. No. 1,218,139; Mar. 6; v. 236; p. 88.

Waltz, Frank G., assignor to The Toledo Button Machine Company, Toledo, Ohio. Wire-release means for shoe-button-fastening machines. No. 1,220,574; Mar. 27; v. 236; p. 1042.

Wappler, Reinhold H., New York, N. Y. Electric machine. No. 1,218,022; Mar. 6; v. 236; p. 46.

Wapshare, Richard, Westward Ho, Bangalur, British India. Puncture-proof pneumatic tire. No. 1,220,914; Mar. 27; v. 236; p. 1155.

Ward, George W., Lone Mountain, Tenn. Cotton-picker. No. 1,219,204; Mar. 13; v. 236; p. 494.

Waring, Percy B., Warrington, England. Coin-controlled apparatus. No. 1,220,302; Mar. 27; v. 236; p. 946.

Warren Featherbone Co. (See Schloss, Joseph W., assignor.)

Warren Featherbone Company, The. (See Stebbins and Gelow, assignors.)

Wasenske, Henry W., Collinsville, Ill. Rotatable support for Christmas trees. No. 1,220,708; Mar 27; v. 236; p. 1087.

Waska, James, Chicago, Ill. Joist-lifter. No. 1,220,034; Mar. 20; v. 236; p. 812.

Watanabe, Ryusuke, Granger, Wyo. Tie-plate. No. 1,219,362; Mar. 13; v. 236; p. 548.

Waterloo Gasoline Engine Company. (See Witry, Louis W., assignor.)

Watkins, Thomas. (See Hunter and Watkins.)

Watson, Edward R., Indianapolis, Ind. Artillery-projectile. No. 1,220,803; Mar. 27; v. 236; p. 1119.

Watson, James S. (See Watson, William W. and J. S.)

Watson, Thomas S., Milwaukee, Wis. Coal-handling bridge. No. 1,220,804; Mar. 27; v. 236; p. 1119.

Watson, Wilbur J., Cleveland, Ohio. Centering for reinforced-concrete bridges, floors, and the like. No. 1,219,608; Mar. 20; v. 236; p. 665.

Watson, William W. and J. S., Kansas City, Mo. Machine for making and laying underground tile. No. 1,218,727; Mar. 13; v. 236; p. 329.

Watters, William E., Maywood, Ill. Grab-bucket. No. 1,218,343; Mar. 6; v. 236; p. 159.

Watts, Daniel J., assignor of one-fourth to L. J. Wright and one-fourth to R. C. Doenitz, Iron River, Mich. Combined powder-punch and blasting-fuse holder. No. 1,219,609; Mar. 20; v. 236; p. 665.

Waugh Draft Gear Company. (See Forsyth, George H., assignor.)

Waugh Draft Gear Company. (See Gallagher, Frederick S., assignor.)

Waymire, Lettie A., Oroville, Cal. Carving-fork. No. 1,220,479; Mar. 27; v. 236; p. 1010.

Wayrich, Alexander, Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Exhibition device. No. 1,218,231; Mar. 6; v. 236; p. 120.

Weaner, Cornelius, Rising Sun, Ohio. Railway-tie fastener. No. 1,220,035; Mar. 20; v. 236; p. 813.

Wear, Frank F., and B. M. Ely, assignors to The Alvey-Ferguson Company, Cincinnati, Ohio. Coffee-mill. No. 1,220,147; Mar. 20; v. 236; p. 857.

Weatherby, Joseph, assignor to Electric Ore Separator Company, New Cumberland, Pa. Method and apparatus for separating magnetic ores. No. 1,218,916; Mar. 13; v. 236; p. 398.

Webb, William E., Jr. (See Church and Webb.)

Weber, Eugene R., Rochester, N. Y. Cork-extractor. No. 1,219,510; Mar. 20; v. 236; p. 630.

Weber, Paul, New York, N. Y. Artificial eye. No. 1,219,058; Mar. 13; v. 236; p. 445.

Weber, Peter, Orange, assignor to New Jersey Patent Company, West Orange, N. J. Phonograph. No. 1,220,480; Mar. 27; v. 236; p. 1010.

Weber, Wilhelm, Hayingen, Germany. Means for tamping bore-holes charged with blasting compounds. No. 1,218,140; Mar. 6; v. 236; p. 88.

Webster, Arthur T., Peoria, Ill. Bed-pan. No. 1,218,023; Mar. 6; v. 236; p. 47.

Webster, Edwin A., Groveland, assignor, by mesne assignments, to Haimel Shoe Machinery Company, Lynn, Mass. Lip-turner. No. 1,219,792; Mar. 20; v. 236; p. 729.

Webster, John A., assignor to Autosales Gum and Chocolate Company, New York, N. Y. Coin-vending machine, (key.) No. 1,218,728; Mar. 13; v. 236; p. 329.

Wedge, Utley. (See Kee and Wedge.)

Wedge, Utley, Ardmore, assignor to Electro-Chemical Supply & Engineering Company, Philadelphia, Pa. Water and acid proof cement and making same. No. 1,220,575; Mar. 27; v. 236; p. 1043.

Wedge, William O., Center, Colo. Grapple. No. 1,220,481; Mar. 27; v. 236; p. 1010.

Weed, Clarence R. (See Plumb and Weed.)

Weed, Howard W., Stamford, Conn. Motor-cycle stand. No. 1,219,889; Mar. 20; v. 236; p. 762.

Weede, Charles R., Walton, Kans. Garment or shoe fastener. No. 1,218,499; Mar. 6; v. 236; p. 210.

Weigel, John, Boston, Mass. Signal apparatus. No. 1,220,036; Mar. 20; v. 236; p. 813.

Weiler, Max, Elberfeld, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y. Blue triphenylmethane dye. No. 1,218,232; Mar. 6; v. 236; p. 120.

Weisgerber, Edwin C., assignor to Equitable Meter Company, Pittsburgh, Pa. Thermal gas-cut-off valve. No. 1,218,729; Mar. 13; v. 236; p. 330.

Weiss, Carl W., Brooklyn, N. Y. Air-compressor. No. 1,219,511; Mar. 20; v. 236; p. 630.

Weiss, Carl W., Brooklyn, N. Y. Internal-combustion engine. No. 1,219,512; Mar. 20; v. 236; p. 631.

Weiss, Carl W., Brooklyn, N. Y. Air-distributer for internal-combustion engines. No. 1,220,805; Mar. 27; v. 236; p. 1120.

Weiss, Cornelius, Brooklyn, N. Y. Holding and gulding attachment for sewing-machines. No. 1,220,303; Mar. 27; v. 236; p. 946.

Weiss Engine Company. (See Sturges, Clarence B., assignor.)

Welch, Fred S., Pontiac, Mich. Pressure-generating device. No. 1,218,233; Mar. 6; v. 236; p. 121.

Welch, Mary E., *et al.* (See Trosien, Charles G., assignor.)

Weld, Herbert W., Chicago, Ill. Ornamental sheet-glass. No. 1,220,576; Mar. 27; v. 236; p. 1043.

Welffens, Emile J., Didsbury, assignor to Hans Renold Limited, Manchester, England. Belt-gearing attachment for roller-shafts. No. 1,220,304; Mar. 27; v. 236; p. 947.

Wellington, James A., assignor of one-half to C. R. Walker, Ensley, Ala. Garment-hanger. No. 1,220,382; Mar. 27; v. 236; p. 975.

Wellman, Harvey P., Oakland, Cal. Can-filling apparatus. No. 1,219,205; Mar. 13; v. 236; p. 494.

Wells, Alfred A. (See Ellis and Wells.)

Wells, Hewitt L., Washington, D. C. Reinforced concrete construction. No. 1,220,915; Mar. 27; v. 236; p. 1156.

Wells, Hewitt L., Washington, D. C. Form for concrete construction. No. 1,220,916; Mar. 27; v. 236; p. 1156.

Wells, Ralph J., Dayton, Ohio. Railway-tie. No. 1,218,141; Mar. 6; v. 236; p. 88.

Wendelken, Frederick S., Fort Collins, Colo. Sectional concrete structure. No. 1,220,305; Mar. 27; v. 236; p. 947.

Wendell, Carl A., Joliet, Ill. Drier. No. 1,218,024; Mar. 6; v. 236; p. 47.

Wengard, Carl T. (See Johnson, Hans O., assignor.)

Wensinger, Charles F., assignor to The Safe Storm Shield Company, Fremont, Ohio. Wind-shield. No. 1,219,513; Mar. 20; v. 236; p. 631.

Wentling, William H., Harrisburg, Pa. Automatic train-stop. No. 1,220,482; Mar. 27; v. 236; p. 1011.

Werner, Martin. (See Haupt and Werner.)

Werner, Lester A., Brooklyn, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,220,148; Mar. 20; v. 236; p. 857.

Wesner, George. (See Arbogast and Wesner.)

Wessel, George B., assignor of one-half to J. H. Luebbert, St. Louis, Mo. Cable-guard. No. 1,221,006; Mar. 27; v. 236; p. 1186.

West, Britton, assignor of one-half to C. R. Cooper, Chicago, Ill. Insole. No. 1,219,890; Mar. 20; v. 236; p. 763.

West Coast Iron Company, The. (See Lash, Horace W., assignor.)

Western Electric Company. (See Allen, Roy M., assignor.)

Western Electric Company. (See Bullard, Albert M., assignor.)

Western Electric Company. (See Clausen, Henry P., assignor.)

Western Electric Company. (See Hall, John A., assignor.)

Western Electric Company. (See Hartley, Ralph V. L., assignor.)

Western Electric Company. (See May, David T., assignor.)

Western Electric Company. (See Merritt, Benjamin F., assignor.)

Western Electric Company. (See Reeves, Frank N., assignor.)

Western Electric Company. (See Reynolds, John N., assignor.)

Western Electric Company. (See Roberts, John G., assignor.)

Western Electric Company. (See Wilbur, Ray S., assignor.)

Westinghouse Air Brake Company, The. (See Brown, Thomas R., assignor.)

Westinghouse Air Brake Company, The. (See Newell, Edward W., assignor.)

Westinghouse Air Brake Company, The. (See Parke, Frederic H., assignor.)

Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)

Westinghouse, Air Spring Company, The. (See Liebau, Richard, assignor.)

Westinghouse Electric and Manufacturing Company. (See Conrad, Frank, assignor.)

Westinghouse Electric and Manufacturing Company. (See Holst, Ole M., assignor.)

Westinghouse Electric and Manufacturing Company. (See Taylor, Horace V. S., assignor.)

Westinghouse Machine Company, The. (See Ostergren and Lundgren, assignors.)

Wettrich, George S., Highland Park, and E. E. Ammon, Detroit, Mich. Spring-retainer. No. 1,218,730; Mar. 13; v. 236; p. 330.

Wetzel, Lewis C., Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Company, Newark, N. J. Weighing-scale. No. 1,218,731; Mar. 13; v. 236; p. 331.

Weyland, John N., Muncie, Ind. Bag-holding device. No. 1,218,142; Mar. 6; v. 236; p. 89.

Wheatley, Scott A., La Grande, Oreg. Resilient wheel. No. 1,220,709; Mar. 27; v. 236; p. 1087.

Wheeler Automatic Machine Co. (See Wheeler, Omar A., assignor.)

Wheeler, Earl R., Columbus, Ohio. Motor-driven tractor-cultivator. No. 1,220,383; Mar. 27; v. 236; p. 976.

Wheeler, Edward A., Valier, Mont. Screen. No. 1,218,344; Mar. 6; v. 236; p. 160.

Wheeler, Fred H., and C. R. Holcomb, Chicago, Ill. Legging. No. 1,220,806; Mar. 27; v. 236; p. 1120.

Wheeler, Harvey C. (See Moffat, Albert S., assignor.)

Wheeler, Omar A., assignor to Wheeler Automatic Machine Co., Portland, Oreg. Automatic sewing-machine. No. 1,218,500; Mar. 6; v. 236; p. 211.

Wheeling Corrugating Company. (See Day, Edgar K., assignor.)

Wheeling Corrugating Company. (See Hunker, Martin L., assignor.)

Whelan, Roderick J., Elyria, Ohio. Machine for forming projectile shells. No. 1,218,143; Mar. 6; v. 236; p. 89.

Whipple, William E. (See Feldkamp, Payson, and Whipple.)

White, Clarence W., North Bennington, Vt. Child's toy vehicle. No. 1,220,038; Mar. 20; v. 236; p. 813.

White, David E., Winchester, Kans. Ladder-rung. No. 1,218,144; Mar. 6; v. 236; p. 89.

White, Harry B., assignor to The Gilliam Manufacturing Company, Canton, Ohio. Bow rest and clamping device. No. 1,218,966; Mar. 13; v. 236; p. 414.

White, Harry B., assignor to The Gilliam Manufacturing Company, Canton, Ohio. Bow rest and clamping device. No. 1,220,306; Mar. 27; v. 236; p. 947.

White, Henry P., Kalamazoo, assignor of one-half to M. E. Fuller, Detroit, Mich. Machine-hammer. No. 1,218,732; Mar. 13; v. 236; p. 331.

White Kerosene Fuel Company. (See White, Lewis B., assignor.)

White, Lewis B., Manson, assignor to White Kerosene Fuel Company, Norlina, N. C. Kerosene-vaporizer for automobile-engines. No. 1,220,039; Mar. 20; v. 236; p. 814.

White Motor Company, The. (See Melanowski, Leo, assignor.)

White, Percy E., Mansfield, Mass. Box. No. 1,219,610; Mar. 20; v. 236; p. 665.

White, Wallace, Lawrence, Mass. Machine for sizing and polishing rings. No. 1,220,917; Mar. 27; v. 236; p. 1156.

White, William W., American Falls, Idaho. Milk-can. No. 1,220,710; Mar. 27; v. 236; p. 1088.

Whitehead, Perry E. (See Turner, Whitehead, and Clarke.)

Whitin Machine Works. (See Nelson, Harmon O., assignor.)

Whitney, Gilbert C., New York, N. Y. Means for producing colored-light effects. No. 1,219,514; Mar. 20; v. 236; p. 631.

Whitney, William H., Greentown, Ind. Mail-catcher. No. 1,219,611; Mar. 20; v. 236; p. 666.

Whittelsey Company. (See Whittelsey, Henry N., assignor.)

Whittelsey, Henry N., Greenwich, Conn., assignor to Whittelsey Company, New York, N. Y. Liquid-fuel heater. No. 1,219,515; Mar. 20; v. 236; p. 632.

Whittelsey, Henry N., Greenwich, Conn., assignor to Whittelsey Company, New York, N. Y. Liquid-fuel heater. No. 1,219,516; Mar. 20; v. 236; p. 632.

Whittler, William L., Beverly, Mass. Shingle-stripper. No. 1,218,145; Mar. 6; v. 236; p. 90.

Whittingham, Gwendolin, Saratoga, Cal. Combination-garment. No. 1,218,501; Mar. 6; v. 236; p. 211.

Wicklund, Anton E., and J. B. Grobey, Middle River, assignors of one-third to I. C. Richardson, Thief River Falls, Minn. Reversible folding spring-seat. No. 1,220,577; Mar. 27; v. 236; p. 1043.

Wicks, Daniel E., Philadelphia, Pa. Vending-machine. No. 1,219,363; Mar. 13; v. 236; p. 549.

Widmayer, Daniel, Los Angeles, Cal. Combined window lock and supporter. No. 1,218,025; Mar. 6; v. 236; p. 48.

Wiechmann, Ferdinand G., New York, assignor to Fenoform Corporation, Hastings-upon-Hudson, N. Y. Production of anhydrous products from phenol and formaldehyde. No. 1,218,146; Mar. 6; v. 236; p. 90.

Wieseckel, George F., Hagerstown, and G. C. Schimpf, Curtis Bay, Md. Car-door fastener. No. 1,219,059; Mar. 13; v. 236; p. 445.

Wiggin, Fred A., Lawrence, Mass. X-ray tube. No. 1,218,026; Mar. 6; v. 236; p. 48.

Wigginton, George P., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Temporary binder or loose-sheet holder. No. 1,218,733; Mar. 13; v. 236; p. 331.

Wigginton, George P., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Temporary binder or loose-sheet holder. No. 1,218,734; Mar. 13; v. 236; p. 332.

Wike, I. B., *et al.* (See Stanley, Joseph, assignor.)

Wilbor, R. D. (See Jordan, Bennett E., assignor.)

Wilbur, Ray S., Jersey City, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, Testing system. No. 1,219,517; Mar. 20; v. 236; p. 633.

Wilcomb, Frank, assignor to Wildman Mfg. Co., Norristown, Pa. Overthrow guard-cam for knitting-machines. No. 1,220,018; Mar. 27; v. 236; p. 1157.

Wilcox, Charles E., Keen, Cal., assignor of one-third to Oil Well Supply Company, Pittsburgh, Pa., and one-third to W. G. Knapp, Alhambra, Cal. Well-boring apparatus. No. 1,220,919; Mar. 27; v. 236; p. 1157.

Wildman Mfg. Co. (See Pigeon, Albert M., assignor.)

Wildman Mfg. Co. (See Wilcomb, Frank, assignor.)

Wilgus, James W., *et al.* (See Hart, John W., assignor.)

Wilke, William F., La Fayette, Ind. Propelling mechanism. No. 1,218,027; Mar. 6; v. 236; p. 48.

Willard, Arthur G., Los Angeles, Cal. Top-closure for oil-well casings. No. 1,220,998; Mar. 27; v. 236; p. 1184.

Willard, Theodore A., Cleveland, Ohio. Separator for storage batteries and making the same. No. 1,218,967; Mar. 13; v. 236; p. 414.

Willcox & Gibbs Sewing Machine Co. (See Merritt, Arthur A., assignor.)

Wille, Henry V., assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Washout-plug. No. 1,219,206; Mar. 13; v. 236; p. 495.

Willens, George, assignor to Kineto Machine Company, Chicago, Ill. Stereopticon advertising-clock. No. 1,218,667; Mar. 6; v. 236; p. 248.

Willey, Frank E., Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Pressure-actuated valve. No. 1,219,410; Mar. 13; v. 236; p. 566.

Williams, Albert A. (See Khumber and Williams.)

Williams, Archie J., Covington, Ky. Wireless sounder. No. 1,220,920; Mar. 27; v. 236; p. 1157.

Williams Articulator Company. (See Williams, Charles E., assignor.)

Williams, Brown & Earle. (See Hoffman, Frederick H., assignor.)

Williams, Charles E., Chicago, Ill., assignor to Williams Articulator Company. Hearing aid. No. 1,219,411; Mar. 13; v. 236; p. 566.

Williams, Charles E., assignor to Bay State Tap & Die Company, Mansfield, Mass. Floating die-holder. No. 1,220,149; Mar. 20; v. 236; p. 858.

Williams, Edward, Edgbaston, Birmingham, England. Clutch. No. 1,219,207; Mar. 13; v. 236; p. 495.

Williams, Elisha R., Althelmer, Ark. Guard-rail brace. No. 1,219,612; Mar. 20; v. 236; p. 666.

Williams, Frank C., Philadelphia, Pa., assignor to The Safety Block Signal Company. Stopping mechanism for railway-cars. No. 1,218,587; Mar. 6; v. 236; p. 241.

Williams, Guy H. (See Smith and Williams.)

Williams, Henry, Chicago, Ill., assignor to Grand Rapids Show Case Company, Grand Rapids, Mich. Sectional furniture. No. 1,219,891; Mar. 20; v. 236; p. 763.

Williams, Henry L., Brookline, Mass. Desk. No. 1,218,821; Mar. 13; v. 236; p. 364.

Williams, Homer D., and W. Ahlen, Duquesne, Pa. Expansion-coupling. No. 1,220,483; Mar. 27; v. 236; p. 1011.

Williams, Jackson, Ekron, Ky. Wire-fence stretcher. No. 1,220,040; Mar. 20; v. 236; p. 814.

Williams, J. C. (See Hiatt, Orson H., assignor.)

Williams, Laurence L., Spring City, Pa. Cooking utensil. No. 1,219,686; Mar. 20; v. 236; p. 692.

Williams, Lynn A. (See Silverman, Morris, assignor.)

Williams, Oliver J., San Francisco, Cal., assignor to P. M. Gelatt, La Crosse, Wis. Thermometer for the cooling systems of internal-combustion engines. No. 1,220,150; Mar. 20; v. 236; p. 858.

Williams, Vincent A., Saugatuck, Conn. Automobile-speed-locking device. No. 1,218,028; Mar. 6; v. 236; p. 48.

Williams, Warren S., Pocatello, Idaho. Composition of matter for use in the treatment of floors. No. 1,219,060; Mar. 13; v. 236; p. 446.

Williams, William A., Barton, Ohio. Mine-car-dumping apparatus. No. 1,218,029; Mar. 6; v. 236; p. 49.

Willis, C. C. (See Parker and Smith, assignors.)

Willis, William E., Fairview, Okla. Ice-handling apparatus. No. 1,218,917; Mar. 13; v. 236; p. 398.

Wills, William M. *et al.* (See Payne and Gosnell, assignors.)

Wills, William M. *et al.* (See Payne, Wallace A., assignor.)

Wilppone, Moses, Aberdeen, Wash. Collapsible box or crate. No. 1,218,502; Mar. 6; v. 236; p. 211.

Wilson, Brice, *et al.* (See Hill, Jesse H., assignor.)

Wilson, Edgar H., Chartiers township, Allegheny county, and W. F. Clark, Coraopolis, Pa. Renewable fuse. No. 1,220,384; Mar. 27; v. 236; p. 976.

Wilson, Henry, Meadows, Idaho. Milk-pail. No. 1,218,147; Mar. 6; v. 236; p. 90.

Wilson, James M., assignor to Splitdorf Electrical Company, Newark, N. J. Igniting and lighting generator. No. 1,219,518; Mar. 20; v. 236; p. 633.

Wilson, James M., assignor to Splitdorf Electrical Company, Newark, N. J. Automatic switching mechanism. No. 1,219,519; Mar. 20; v. 236; p. 633.

Wilson, James M., assignor to Splitdorf Electrical Company, Newark, N. J. Electric generator. No. 1,219,520; Mar. 20; v. 236; p. 634.

Wilson, John A. L., Watseka, Ill. Coal-oil burner. No. 1,220,385; Mar. 27; v. 236; p. 976.

Wilson, Lee. (See Beatty, Edward T., assignor.)

Wilson, Richard T., assignor of one-half to A. E. Johnson, Hastings, Mich. Artificial fish-bait. No. 1,220,921; Mar. 27; v. 236; p. 1158.

Wilson, Rollans M., Prairie Grove, Ark. Internal-combustion engine. No. 1,218,345; Mar. 6; v. 236; p. 160.

Wilson, William W., Chicago, Ill., assignor, by mesne assignments, to Burroughs Adding Machine Company, Detroit, Mich. Printing-recorder for calculators. No. 1,218,346; Mar. 6; v. 236; p. 160.

Winchester Repeating Arms Co. (See Johnson, Thomas C., assignor.)

Winkelmiller, Oscar, Two Rivers, Wis. Detachable distributing-closure for mucilage-receptacles and the like. No. 1,218,735; Mar. 13; v. 236; p. 332.

Winkley, Albert F., Faribault, Minn. Making artificial limbs. No. 1,219,613; Mar. 20; v. 236; p. 667.

Winkley, Erastus E., Lynn, Mass. Automatic shoe-machine. No. 1,218,148; Mar. 6; v. 236; p. 91.

Winner, Ernest W., Paolo, Kans. Soil-pulverizer. No. 1,219,793; Mar. 20; v. 236; p. 729.

Winnigham, Marcenus M., assignor of one-fourth to P. Barnes, Seattle, Wash. Assorting-machine for canned goods. No. 1,220,922; Mar. 27; v. 236; p. 1158.

Winter, George J. (See Müller and Winter.)

Wireless Hinge Manufacturing Company Limited, The. (See Berry, George W., assignor.)

Wise, Anthony G., assignor to F. W. Adsit, Minneapolis, Minn. Soap-dispensing machine. No. 1,219,364; Mar. 13; v. 236; p. 550.

Wise, Otis J., Charleston, W. Va. Folding bed-table. No. 1,220,578; Mar. 27; v. 236; p. 1044.

Wishbone Steel Wheel Company of America, The. (See Carnahan, John W., assignor.)

Witmer, Roy C., Fitchburg, Mass. Cushion valve and seat. No. 1,218,030; Mar. 6; v. 236; p. 49.

Witry, Louis W., assignor to Waterloo Gasoline Engine Company, Waterloo, Iowa. Driving connection for magnetos. No. 1,218,822; Mar. 13; v. 236; p. 364.

Witt, Clarence W., Johnstown, Pa. Display-stand for electric-light lamps. No. 1,219,892; Mar. 20; v. 236; p. 764.

Witt, Harry L., and S. Lookman, Pittsburgh, Pa. Water-level alarm. No. 1,220,041; Mar. 20; v. 236; p. 814.

Wittemann, John, assignor of one-third to F. S. Hunt, Milwaukee, Wis. Universal joint. No. 1,219,521; Mar. 20; v. 236; p. 634.

Wittmann, George J. (See King and Wittmann.)

Wodzinski, Wincenty, *et al.* (See Pludowski, Aleksander, assignor.)

Wolna, Sylvester, Lost Creek, W. Va. Culinary boiler. No. 1,218,823; Mar. 13; v. 236; p. 365.

Wolna, Sylvester, Lost Creek, W. Va. Bolt and nut lock. No. 1,220,579; Mar. 27; v. 236; p. 1044.

Wolf, Linus, Chicago Heights, Ill. Welding-tool. No. 1,218,503; Mar. 6; v. 236; p. 212.

Wolf, Sayer & Heller. (See Clark, George, assignor.)

Wolfe, Charles C., Haydenville, Ohio, assignor to National Fire Proofing Company, Pittsburgh, Pa. Apparatus for surfacing bricks and tiles. No. 1,220,807; Mar. 27; v. 236; p. 1121.

Wolfe, Clinton M., Coeburn, Va., assignor of one-fourth to E. H. Miller, one-fourth to J. A. Newberry, and one-fourth to W. R. Culbertson. Churn. No. 1,220,923; Mar. 27; v. 236; p. 1159.

Wood, Frank W., Brooklyn, assignor to Charles Cory & Son, Inc., New York, N. Y. Centrally-controlled general-alarm system. No. 1,220,484; Mar. 27; v. 236; p. 1011.

Wood, Henry A. W., assignor, by mesne assignments, to Wood Newspaper Machinery Corporation, New York, N. Y. Stereotype-plate-shaving machine. No. 1,218,736; Mar. 13; v. 236; p. 333.

Wood Newspaper Machinery Corporation. (See Wood, Henry A. W., assignor.)

Wood, William T., Nashville, Tenn. Hydrocarbon-burner. No. 1,219,365; Mar. 13; v. 236; p. 551.

Woodbridge, Arthur L., Chicago, Ill. Stair structure. No. 1,219,614; Mar. 20; v. 236; p. 667.

Woodjard, Guy L., San Diego, Cal. Spring-oiler. No. 1,220,924; Mar. 27; v. 236; p. 1159.

Woods, Clinton E., assignor to American Graphophone Company, Bridgeport, Conn. Recorder-reproducer device. No. 1,218,918; Mar. 13; v. 236; p. 398.

Woodward, Edwin C., Dallas, Tex. Mixing concrete and the like. No. 1,218,347; Mar. 6; v. 236; p. 160.

Wooif, Isaac, Providence, R. I. Ventilator. No. 1,219,893; Mar. 20; v. 236; p. 764.

Woollacott, Albert H., Los Angeles, Cal. Dimmer attachment for automobile-lamps. No. 1,220,711; Mar. 27; v. 236; p. 1088.

Worthen, Frank F., Piermont, N. H. Mechanism for automatically controlling elevator-cars. No. 1,219,061; Mar. 13; v. 236; p. 446.

Worthington Pump and Machinery Corporation. (See Hewitt, William B., assignor.)

Wright, Charles X., Miami, Ariz. Lubricant-arrester. No. 1,220,712; Mar. 27; v. 236; p. 1088.

Wright, Harry S., Paris, Idaho. Thermometer-case. No. 1,218,031; Mar. 6; v. 236; p. 49.

Wright, James C., Colorado Springs, Colo., assignor of one-half to T. L. Rippey, Dallas, Tex. Rock-drill. No. 1,218,149; Mar. 6; v. 236; p. 91.

Wright, John E., New York, N. Y. Telegraph system. No. 1,219,522; Mar. 20; v. 236; p. 635.

Wright, Leonard J. *et al.* (See Watts, Daniel J., assignor.)

Wright, Morris S., Worcester, Mass. Pneumatic action for self-playing musical instruments. No. 1,218,150; Mar. 6; v. 236; p. 91.

Wright, Parvin, Vancouver, British Columbia, Canada. Electric induction-furnace. No. 1,218,151; Mar. 6; v. 236; p. 92.

Wright, Rea P., Washington, D. C., assignor to The American Wringer Company, Woonsocket, R. I. Pressure-roll release for clothes-wringers. No. 1,219,523; Mar. 20; v. 236; p. 635.

Wright, Rea P., Washington, D. C., assignor to J. F. Hemenway, New York, N. Y. Adjustable automatic pressure-roll release for clothes-wringers. No. 1,220,042; Mar. 20; v. 236; p. 815.

Wright, Rea P., Washington, D. C., assignor to J. F. Hemenway, New York, N. Y. Adjustable automatic pressure-roll release for clothes-wringers. No. 1,220,043; Mar. 20; v. 236; p. 815.

Wright, Rea P., Washington, D. C., assignor to J. F. Hemenway, New York, N. Y. Automatic pressure-roll release for clothes-wringers. No. 1,220,044; Mar. 20; v. 236; p. 816.

Wright, Rea P., Washington, D. C., assignor to J. F. Hemenway, New York, N. Y. Pressure-roll release for clothes-wringers. No. 1,220,045; Mar. 20; v. 236; p. 816.

Wright, Rea P., Washington, D. C., assignor to J. F. Hemenway, New York, N. Y. Pressure-roll release for clothes-wringers. No. 1,220,046; Mar. 20; v. 236; p. 817.

Wright, Rea P., Washington, D. C., assignor to J. F. Hemenway, New York, N. Y. Pressure-roll release for clothes-wringers. No. 1,220,047; Mar. 20; v. 236; p. 817.

Wright, Rea P., Washington, D. C., assignor to J. F. Hemenway, New York, N. Y. Automatic pressure-roll releasing device for clothes-wringers. No. 1,220,048; Mar. 20; v. 236; p. 818.

Wright, Rea P., Washington, D. C., assignor to J. F. Hemenway, New York, N. Y. Automatic pressure-roll release for clothes-wringers. No. 1,220,049; Mar. 20; v. 236; p. 818.

Wright, Rea P., Washington, D. C., assignor to J. F. Hemenway, New York, N. Y. Automatic pressure-roll release for clothes-wringers. No. 1,220,050; Mar. 20; v. 236; p. 819.

Wristen, Henry C., and J. W. Henderson, Dexter, N. Mex. Latch for double-acting pumps. No. 1,218,152; Mar. 6; v. 236; p. 92.

Wuest, Andrew, Olean, N. Y. Ventilator-damper. No. 1,219,615; Mar. 20; v. 236; p. 667.

Wunderlich, Jacob H., assignor to National Casket Co., Baltimore, Md. Burial-casket lid. No. 1,220,580; Mar. 27; v. 236; p. 1044.

Wyckoff, James H. (See Knowlton, MacCorquodale, Wyckoff, Russell, and Tooker.)

Wykle, Henry J., Metamora, Ill. Coin-operated mechanism for dispensing liquids. No. 1,219,894; Mar. 20; v. 236; p. 764.

Yale & Towne Manufacturing Company, The. (See Bock, Alfred C. O., assignor.)

Yanert, William, Purgatory, Alaska. Ax or similar tool. No. 1,219,895; Mar. 20; v. 236; p. 765.

Yanert, William, Purgatory, Alaska. Safety-signal for firearms. No. 1,219,896; Mar. 20; v. 236; p. 765.

Yarnall, David R., assignor to Nelson Valve Company, Chestnut Hill, Philadelphia, Pa. Non-heating valve hand-wheel. No. 1,218,032; Mar. 6; v. 236; p. 50.

Yates, John W., New York, N. Y. Sash-pivot. No. 1,218,348; Mar. 6; v. 236; p. 160.

Yirikian, John, New York, N. Y. Cone-shaped removable-bridge split attachment. No. 1,218,033; Mar. 6; v. 236; p. 50.

Yocum, Lincoln A., and W. A. Lewis, Wooster, Ohio. Moistener for internal-combustion engines. No. 1,220,307; Mar. 27; v. 236; p. 848.

Yoerg, Kraig J., *et al.* (See McCorkindale, William, assignor.)

Yost Electric Manufacturing Company. (See Gordon, David D., assignor.)

Young, Albert F., Brooklyn, N. Y. Suspending device for garments. No. 1,218,153; Mar. 6; v. 236; p. 93.

Young, Fay H., and G. A. Lewis, Rockford, Ill. Clothes-washing apparatus. No. 1,220,308; Mar. 27; v. 236; p. 949.

Young, John H., Randolph, assignor to Borden's Condensed Milk Company, New York, N. Y. Sheet-feeding machine. No. 1,218,034; Mar. 6; v. 236; p. 50.

Young, Leonard A., Highland Park, Mich. Seat-back spring. No. 1,218,234; Mar. 6; v. 236; p. 121.

Young, Robert L. (See Vance, William G., assignor.)

Young, Samuel D., trustee. (See Smith, Oscar L., assignor.)

Youngren, Alfred, and H. L. Lind, Barnum, Minn. Potato-planter. No. 1,218,919; Mar. 13; v. 236; p. 399.

Yurow, Andrew, New York, N. Y. Electric-railway system. No. 1,219,524; Mar. 20; v. 236; p. 636.

Zabriskie, Ann E., New York, N. Y. Hose-supporter. No. 1,220,925; Mar. 27; v. 236; p. 1159.

Zagelmeyer, Frank, Bay City, Mich. Cement-block mold. No. 1,218,737; Mar. 13; v. 236; p. 333.

Zahm, Edward, assignor to Zahm Manufacturing Company, Buffalo, N. Y. Testing filter-bodies. No. 1,218,154; Mar. 6; v. 236; p. 93.

Zahm, Edward, assignor to Zahm Manufacturing Company, Buffalo, N. Y. Filter. No. 1,218,738; Mar. 13; v. 236; p. 333.

Zahm Manufacturing Company. (See Zahm, Edward, assignor.)

Zahner, Edward J., Canton, Ohio, and S. W. Smith, Oklahoma, Okla. Partition construction. No. 1,219,208; Mar. 13; v. 236; p. 496.

Zane, Edmund L., U. S. Army. Pulling attachment for vehicles. No. 1,219,209; Mar. 13; v. 236; p. 496.

Zang, Joseph E. (See Klorer, Charles P., assignor.)

Zee Socket and Manufacturing Co., The. (See Both, Tonjes A. C., assignor.)

Zeiss, Firm of Carl. (See Bauerfeld, Walther, assignor.)

Zlener, Adolph O., New York, N. Y. Fountain-display. No. 1,218,969; Mar. 13; v. 236; p. 415.

Zimmer, Harry R., Los Angeles, Cal. Centrifugal separator and amalgamator. No. 1,220,051; Mar. 20; v. 236; p. 819.

Zimmerman, Henry, Rouleau, Saskatchewan, Canada. Stirrup. No. 1,219,525; Mar. 20; v. 236; p. 636.

Zimmerman, John F., Akron, Ohio. Machine for painting tire-casings. No. 1,218,155; Mar. 6; v. 236; p. 93.

Zittlosen Manufacturing Company. (See Schultz, Herman E., Jr., assignor.)

Zytklewicz, Adolf, Meriden, Conn. Flying-machine. No. 1,219,616; Mar. 20; v. 236; p. 668.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

A. Stein & Company. (See Stein, Albert, assignor.)
Aichele, George F., Fort Wayne, Ind. Grave-marker. No. 50,457; Mar. 20; v. 236; p. 869.
Alexander Smith & Sons Carpet Company. (See Parton, Henry W., assignor.)
Andrews, Fred L., Beaver, assignor to H. C. Fry Glass Company, Rochester, Pa. Glass article. Nos. 50,458–9; Mar. 20; v. 236; p. 869.
Auto Equipment Company, The. (See House, Olmsted, and Gumprecht, assignors.)
Baehr, Gustav A., assignor to H. Baehr, Baltimore, Md. Toy rattler. No. 50,460; Mar. 20; v. 236; p. 869.
Baehr, Hermine. (See Baehr, Gustav A., assignor.)
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Ceiling-canopy for lighting-fixtures. No. 50,493; Mar. 27; v. 236; p. 1189.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Loop for lighting-fixtures. No. 50,494; Mar. 27; v. 236; p. 1189.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Spindle for lighting-fixtures. No. 50,495; Mar. 27; v. 236; p. 1189.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Arm for a lighting-fixture. No. 50,496; Mar. 27; v. 236; p. 1189.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Wall-plate for a lighting-fixture. Nos. 50,497–8; Mar. 27; v. 236; pp. 1189–90.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Arm for lighting-fixtures. No. 50,499; Mar. 27; v. 236; p. 1190.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Hanger for lighting-fixtures. Nos. 50,500–1; Mar. 27; v. 236; p. 1190.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Ceiling-plate for a lighting-fixture. No. 50,502; Mar. 27; v. 236; p. 1191.
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Lighting-fixture. Nos. 50,503–4; Mar. 27; v. 236; p. 1191.
Berchtold, John A., Sigel, Ill. Button, badge, or similar article. No. 50,412; Mar. 6; v. 236; p. 253.
Blanchard, H. B. (See Crowley, James F., assignor.)
Bowden, Martin L., and Martin L., Jr., Brooklyn, N. Y. Ring or similar article. No. 50,461; Mar. 20; v. 236; p. 869.
Boyton, John C., Cleveland, Ohio. Electrical-conduit fitting. No. 50,462; Mar. 20; v. 236; p. 869.
Bridges, Charles E., Chicago, Ill. Automobile-heater. No. 50,505; Mar. 27; v. 236; p. 1191.
Campbell, Charles L., assignor to John C. Dettra & Company, Inc., Oaks, Pa. Pennant. No. 50,413; Mar. 6; v. 236; p. 254.
Cary, Floyd F., Fairhaven, Mass., assignor to The Fairpoint Corporation. Glass plate or similar article. No. 50,463; Mar. 20; v. 236; p. 870.
Computing Scale Company, The. (See Hopkinson, Joseph, assignor.)
Crowley, James F., assignor of two-fifths to H. B. Blanchard, Chariton, Iowa. Sign. No. 50,441; Mar. 13; v. 236; p. 575.
Dan Patch Novelty Company, The. (See Kehl, Frank E., assignor.)
De Vilbiss Manufacturing Company, The. (See De Vilbiss, Thomas A., assignor.)
De Vilbiss, Thomas A., assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio. Salt-cellar, bottle, or similar article. No. 50,414; Mar. 6; v. 236; p. 254.
De Vilbiss, Thomas A., assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio. Salt-cellar, bottle, or similar article. Nos. 50,466–7. Mar. 20; v. 236; pp. 870–1.
Dean, Sydney, Stoke-upon-Trent, England, assignor to William S. Pitcairn Corporation, New York, N. Y. Plate or similar article. No. 50,464; Mar. 20; v. 236; p. 870.
Dewey, William F., Kansas City, Mo. Stove. No. 50,465; Mar. 20; v. 236; p. 870.
Dickinson, Edward B. (See Piper, Alfred H., assignor.)
Doud, Louie N., Norwalk, Ohio. Slipper-tree and dress-hanger. No. 50,468; Mar. 20; v. 236; p. 871.
Eisemann, Peter J., Brooklyn, N. Y. Laundry-bag. No. 50,469; Mar. 20; v. 236; p. 871.
Elliott, Harry V., North Philadelphia, Pa. Badge, pin, or similar article of jewelry. No. 50,442; Mar. 13; v. 236; p. 575.
Fensterer, Walter J., Englewood, N. J. Light-transmitting glass article. No. 50,506; Mar. 27; v. 236; p. 1191.
Friedley-Voshardt Co. (See Mohrmann, Paul, assignor.)
Friedley-Voshardt Co. (See Wellman, Lester R., assignor.)
Furchgott, Mortimer C., assignor to Grain Products Company, St. Louis, Mo. Carton or other article of manufacture. No. 50,507; Mar. 27; v. 236; p. 1191.
Geisman, Samuel, New York, N. Y. Article of manufacture. No. 50,508; Mar. 27; v. 236; p. 1192.
Grain Products Company. (See Furchgott, Mortimer C., assignor.)
Grier, Frank L., assignor to The L. D. Caulk Co., Milford, Del. Mortar. No. 50,471; Mar. 20; v. 236; p. 871.
Griffin, Robert, assignor to The Robert Griffin Co., New York, N. Y. Cretonne, silk, tapestry, wall-paper, or print goods. No. 50,472; Mar. 20; v. 236; p. 872.
Griffin, Robert B., New York, N. Y. Wall-paper. No. 50,509; Mar. 27; v. 236; p. 1192.
Gross, Oliver, assignor to The Gross Photo Supply Company, Toledo, Ohio. Slip-under photo-mount. No. 50,443; Mar. 13; v. 236; p. 576.
Gross Photo Supply Company, The. (See Gross, Oliver, assignor.)
Gumprecht, William L. (See House, Olmsted, and Gumprecht.)
Gurney, Thomas N., Brooklyn, N. Y. Writing or printing paper. No. 50,415; Mar. 6; v. 236; p. 254.
H. C. Fry Glass Company. (See Andrews, Fred L., assignor.)
Healy, Frank D., Plattsburgh, N. Y. Pin, brooch, or similar article for personal wear. No. 50,416; Mar. 6; v. 236; p. 254.
Held, Bernard, Philadelphia, Pa. Shoe-fastener. No. 50,473; Mar. 20; v. 236; p. 872.
Heller, Samuel, New York, N. Y. Precious, semiprecious, or synthetic stone or an imitation thereof. No. 50,444; Mar. 13; v. 236; p. 576.
Hincks, Elizabeth T., Cambridge, Mass. Mitten. No. 50,445; Mar. 13; v. 236; p. 576.
Hopkinson, Joseph, assignor to The Computing Scale Company, Dayton, Ohio. Scale-casing. No. 50,417; Mar. 6; v. 236; p. 254.
House, Albert H., O. W. Olmsted, Windsor, and W. L. Gumprecht, assignors to The Auto Equipment Company, Hartford, Conn. Automobile-indicator. No. 50,418; Mar. 6; v. 236; p. 254.
Hoyt, Fred, Seattle, assignor to Universal High Power Telephone Co., King county, Wash. Combined jardinière and grafanola stand. No. 50,419; Mar. 6; v. 236; p. 255.
International Silver Co. (See Kintz, Robert R., assignor.)
J. H. White Manufacturing Company. (See Kahns, Walter R., assignor.)
Jacoby, Leo D., assignor to The Sanispoon Company, Boston, Mass. Paper spoon. No. 50,474; Mar. 20; v. 236; p. 872.
Johanson, Emil G., assignor to D. H. Roblin, Chicago, Ill. Prism-glass. No. 50,420; Mar. 6; v. 236; p. 255.
Johanson, Emil G., Chicago, Ill. Headlight-lens. No. 50,511; Mar. 27; v. 236; p. 1192.
John C. Dettra & Company. (See Campbell, Charles L., assignor.)
Johnson, John E., Lewisburg, W. Va. Poison-bottle. No. 50,421; Mar. 6; v. 236; p. 255.
Johnson, Stephens & Shinkle Shoe Company. (See Spalsbury, Charles B., assignor.)
Johnston, Alexander, assignor to The North British Rubber Co. Ltd., Edinburgh, Scotland. Golf-ball. No. 50,512; Mar. 27; v. 236; p. 1192.
Jones, Charles E., Chicago, Ill. Clamp for light-reflecting bowls. Nos. 50,513–14; Mar. 27; v. 236; p. 1192.
Jones, Charles E., Chicago, Ill. Candle-arm for light-reflecting bowls. No. 50,515; Mar. 27; v. 236; p. 1193.
Jones, Charles E., Chicago, Ill. Arm for chandeliers and brackets. Nos. 50,516–20; Mar. 27; v. 236; p. 1193.
Jones, Charles E., Chicago, Ill. Clamp and candle-arm for light-reflecting bowls. No. 50,521; Mar. 27; v. 236; p. 1194.
Jones, Charles E., Chicago, Ill. Hanger for light-reflecting bowls. Nos. 50,522–3; Mar. 27; v. 236; p. 1194.
Jordan, Howell, Los Angeles, Cal. Combined car-handle and shield. No. 50,446; Mar. 13; v. 236; p. 576.

Kahns, Walter R., Chicago, Ill., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y. Candle-cup for lighting-fixtures. No. 50,524; Mar. 27; v. 236; p. 1194.

Kahns, Walter R., Chicago, Ill., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y. Hanger-hook for light-reflecting bowls. No. 50,525; Mar. 27; v. 236; p. 1194.

Katz, Julius, Providence, R. I. Ring. No. 50,447; Mar. 13; v. 236; p. 576.

Kehl, Frank E., assignor to The Dan Patch Novelty Company, Connersville, Ind. Vehicle. No. 50,475; Mar. 20; v. 236; p. 872.

Kimpton, Charles F., assignor to R. H. Kimpton, Brooklyn, N. Y. Inkstand. Nos. 50,526–9; Mar. 27; v. 236; pp. 1194–5.

Kimpton, Ruth H. (See Kimpton, Charles F., assignor.)

Kintz, Robert R., assignor to International Silver Co., Meriden, Conn. Spoon. No. 50,422; Mar. 6; v. 236; p. 255.

L. D. Caulk Co., The. (See Grier, Frank L., assignor.)

Landwehr, Henry A., Los Angeles, Cal. Lighting-standard and lamp. No. 50,530; Mar. 27; v. 236; p. 1195.

Larrabee, William M., Waupun, Wis. Collar-button. No. 50,476; Mar. 20; v. 236; p. 872.

Mackemer, Ell M. (See Mackemer, Frank L. and E. M.)

Mackemer, Frank L., Peoria, and E. M. Mackemer, Galesburg, Ill. Automobile-body. No. 50,448; Mar. 13; v. 236; p. 577.

McDougall, Charles P., Frankfort, Ind. Paneled portion of articles of furniture. No. 50,456; Mar. 13; v. 236; p. 578.

Merrill, Elizabeth E., Los Angeles, Cal. Nurse-doll. No. 50,477; Mar. 20; v. 236; p. 872.

Mitchell Vance Company, The. (See Barrows and Strahan, assignors.)

Mohrmann, Paul, assignor to Friedley-Voshardt Co., Chicago, Ill. Bracket-back for lighting-fixtures. No. 50,531; Mar. 27; v. 236; p. 1196.

Mohrmann, Paul, assignor to Friedley-Voshardt Co., Chicago, Ill. Lighting-fixture. Nos. 50,532–3; Mar. 27; v. 236; p. 1196.

Moyer, Horace C., Oak Park, assignor to The Windsor Furniture Company, Chicago, Ill. Phonograph-cabinet. Nos. 50,478–84; Mar. 20; v. 236; pp. 873–4.

Murray, John W., Buffalo, N. Y. Glass dish. No. 50,485; Mar. 20; v. 236; p. 874.

Noke, Charles J., Stoke-upon-Trent, England, assignor to William S. Pitcairn Corporation, New York, N. Y. Plate or similar article. Nos. 50,423–4; Mar. 6; v. 236; pp. 255–6.

North British Rubber Co. (See Johnston, Alexander, assignor.)

Norwalk Tire and Rubber Company, The. (See Spence, David, assignor.)

Olmsted, Osmond W. (See House, Olmsted, and Gumprecht.)

Overton, Samuel E., South Haven, Mich. Corner-post for cabinets and other furniture. No. 50,425; Mar. 6; v. 236; p. 256.

Fairpoint Corporation, The. (See Cary, Floyd F., assignor.)

Parton, Henry W., assignor to Alexander Smith & Sons Carpet Company, Yonkers, N. Y. Rug. No. 50,426; Mar. 6; v. 236; p. 256.

Pelton, Clyde S., Cleveland Heights, assignor to The Perfection Spring Service Company, Cleveland, Ohio. Vehicle-heater casing. No. 50,534; Mar. 27; v. 236; p. 1196.

Perfection Spring Service Company, The. (See Pelton, Clyde S., assignor.)

Petty, R. C. (See Vaughn, William T., assignor.)

Phoenix Glass Company. (See Pickhardt, Harry, assignor.)

Picault, Edmond, Stoke-upon-Trent, England, assignor to William S. Pitcairn Corporation, New York, N. Y. Plate or similar article. No. 50,486; Mar. 20; v. 236; p. 874.

Pickhardt, Harry, New York, N. Y., assignor to The Phoenix Glass Company, Pittsburgh, Pa. Nitrogen-lamp unit. No. 50,427; Mar. 6; v. 236; p. 256.

Piper, Alfred H., Wolstanton, England, assignor to E. B. Dickinson, New York, N. Y. Plate or similar article. Nos. 50,428–30; Mar. 6; v. 236; pp. 256–7.

Pitts, Walter C., Philadelphia, Pa., assignor, by mesne assignments, to Solophone Company, Jersey City, N. J. Phonograph-cabinet. Nos. 50,449–50; Mar. 13; v. 236; p. 577.

Pittsburgh Lamp Brass & Glass Company. (See Yokel, Frank, assignor.)

Rice, Jesse L., New York, N. Y. Comb. No. 50,535; Mar. 27; v. 236; p. 1196.

Ridgway, Edward J., Staten Island, N. Y. Covered dish. No. 50,487; Mar. 20; v. 236; p. 874.

Robert Griffin Co., The. (See Griffin, Robert, assignor.)

Roblin, David H. (See Johanson, Emil G., assignor.)

Sanlspoon Company, The. (See Jacoby, Leo D., assignor.)

Skandora, Jakab, Flint, Mich. Automobile-radiator. No. 50,488; Mar. 20; v. 236; p. 874.

Solophone Company. (See Pitts, Walter C., assignor.)

Spalsbury, Charles B., St. Louis, Mo., assignor to Johnson, Stephens & Shinkle Shoe Company. Shoe. No. 50,451; Mar. 13; v. 236; p. 577.

Spence, David, assignor to The Norwalk Tire and Rubber Company, Norwalk, Conn. Tire-tread. No. 50,431; Mar. 6; v. 236; p. 257.

Stein, Albert, assignor to A. Stein & Company, Chicago, Ill. Display-cabinet for cartons. No. 50,452; Mar. 13; v. 236; p. 578.

Stimpson, Edwin B., Brooklyn, N. Y. Gromet. Nos. 50,432–5; Mar. 6; v. 236; pp. 257–8.

Strahan, George V. (See Barrows and Strahan.)

Strahan, George V., Newark, N. J. Automobile-body. Nos. 50,536–7; Mar. 27; v. 236; pp. 1196–7.

Terryberry, Herbert R., Grand Rapids, Mich. Badge. No. 50,470; Mar. 20; v. 236; p. 871.

Towle, Eugene A., St. Paul, Minn. Can or similar article. No. 50,453; Mar. 13; v. 236; p. 578.

Universal High Power Telephone Co. (See Hoyt, Fred, assignor.)

Vaughn, William T., Fort Smith, Ark., assignor of one-half to R. C. Petty, Brooken, Okla. Mandolin. No. 50,545; Mar. 27; v. 236; p. 1198.

Vidaver, Nellie R., New York, N. Y. Petticoat. No. 50,436; Mar. 6; v. 236; p. 258.

Vidaver, Nellie R., New York, N. Y. Petticoat. No. 50,489; Mar. 20; v. 236; p. 875.

Watanabe, Stanley M., Mountain View, Cal. Candy rabbit. No. 50,538; Mar. 27; v. 236; p. 1197.

Wellman, Lester R., assignor to Friedley-Voshardt Co., Chicago, Ill. Lighting-fixture. No. 50,539; Mar. 27; v. 236; p. 1197.

Wellman, Lester R., assignor to Friedley-Voshardt Co., Chicago, Ill. Bracket-back for lighting-fixtures. No. 50,540; Mar. 27; v. 236; p. 1197.

Wellman, Lester R., assignor to Friedley-Voshardt Co., Chicago, Ill. Lighting-fixture. Nos. 50,541–2; Mar. 27; v. 236; pp. 1197–8.

Wheaton, Fred E., Minneapolis, Minn. Badge or button. No. 50,455; Mar. 13; v. 236; p. 578.

Wheelock, Russel H., Dayton, Ohio. Pin-tray. No. 50,543; Mar. 27; v. 236; p. 1198.

Whitaker, John, North Wales, Pa. Frame for check-writing machines. No. 50,437; Mar. 6; v. 236; p. 258.

White, Clara A., Brooklyn, N. Y. Phonograph-cabinet. No. 50,544; Mar. 27; v. 236; p. 1198.

William S. Pitcairn Corporation. (See Dean, Sydney, assignor.)

William S. Pitcairn Corporation. (See Noke, Charles J., assignor.

William S. Pitcairn Corporation. (See Picault, Edmond, assignor.)

Windsor Furniture Company, The. (See Moyer, Horace C., assignor.)

Wolfer, Carlos E., Monte Vista, Colo. Font of type. No. 50,454; Mar. 13; v. 236; p. 578.

Yokel, Frank, assignor to Pittsburgh Lamp Brass & Glass Company, Pittsburgh, Pa. Combined lamp-standard and desk article. No. 50,438; Mar. 6; v. 236; p. 258.

Yokel, Frank, assignor to Pittsburgh Lamp Brass & Glass Company, Pittsburgh, Pa. Inkstand. No. 50,439; Mar. 6; v. 236; p. 259.

Yokel, Frank, assignor to Pittsburgh Lamp Brass & Glass Company, Pittsburgh, Pa. Combined desk-lamp and inkstand. No. 50,440; Mar. 6; v. 236; p. 259.

Yokel, Frank, assignor to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa. Back for blotters, paper-weights, or similar articles. Nos. 50,490–1; Mar. 20; v. 236; p. 875.

Ziganek, Ferdinand, Detroit, Mich. Tile-stove. No. 50,492; Mar. 20; v. 236; p. 875.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. S. Campbell Company, Boston, Mass. Hot-water bottles. No. 115,879; Mar. 20; v. 236; p. 885.

A. S. Rosenthal Company, New York, N. Y. Silk piece goods, silk and cotton fabrics, cotton piece goods, and handkerchiefs. No. 115,809; Mar. 6; v. 236; p. 279.

Acme Brick Company, Cayuga, Ind. Bricks made of clay and equivalent material. Nos. 115,910–11; Mar. 27; v. 236; p. 1215.

Alaska-Pacific Fisheries, Portland, Oreg. Canned salmon. Nos. 115,714–15; Mar. 6; v. 236; p. 277.

Alle Rhume Remedy Co., Rochester, N. Y. Internal remedy for rheumatism, liver, kidney, stomach, and bowel complaints. No. 115,873; Mar. 20; v. 236; p. 885.

American Encaustic Tiling Co. Ltd., Zanesville, Ohio; Maurer, N. J., and New York, N. Y. Wall, floor, and ceiling tiles for interior and exterior purposes. No. 115,717; Mar. 6; v. 236; p. 277.

American Hard Rubber Co., New York, N. Y. Hard-rubber compound for electrical purposes. No. 115,718; Mar. 6; v. 236; p. 277.

American Tar Products Company, Dover, Del., and Chicago, Ill. Bituminous-tar binder for roads. No. 115,912; Mar. 27; v. 236; p. 1215.

Amerise, Filomena, Hazleton, Pa. Macaroni. No. 115,913; Mar. 27; v. 236; p. 1215.

Anthony, Sam, Johnstown, Pa. Remedy for rheumatism. No. 115,914; Mar. 27; v. 236; p. 1215.

Appleton Company, Lowell, Mass. Cotton piece goods. No. 115,915; Mar. 27; v. 236; p. 1215.

Appleton Company, Lowell, Mass. Cotton piece goods. Nos. 115,916–22; Mar. 27; v. 236; p. 1215.

Arcady Farms Milling Company, Rondout, Ill. Dairy and stock feeds. No. 115,719; Mar. 6; v. 236; p. 277.

Atlanta Refining & Manufacturing Company, Atlanta, Ga. Oleaginous compound for use as a pastry-shortening. No. 115,923; Mar. 27; v. 236; p. 1215.

Austin, Nichols & Co. Inc., Brooklyn and New York, N. Y. Macaroni, preserved figs, ripe olives. No. 115,720; Mar. 6; v. 236; p. 277.

Autoyre Co., The, Oakville, Conn. Snap-fasteners. Nos. 115,721–2; Mar. 6; v. 236; p. 277.

Avalon Farms Company, The, Chicago, Ill. Certain named medicines and pharmaceutical preparations. No. 115,723; Mar. 6; v. 236; p. 277.

B. Altman & Co., New York, N. Y. Neckties. No. 115,716; Mar. 6; v. 236; p. 277.

Balstone, Cooke & Co., Ld., Manchester, England. Velvets, velvettas, velveteens, corduroys, &c. No. 115,924; Mar. 27; v. 236; p. 1215.

Barnett, Samuel & Sons, Ltd., London, England. Gramophones, phonographs, and records for the same. No. 115,901; Mar. 20; v. 236; p. 885.

Bastian-Blessing Company, The, Chicago, Ill. Regulating and reducing valves and other metallic valves for general purposes. No. 115,833; Mar. 13; v. 236; p. 591.

Batchelder Manufacturing Co., Inc., New York, N. Y. Bracelets, belt-buckles, link-buttons, lavallères, and brooches. No. 115,874; Mar. 20; v. 236; p. 885.

Beaver Company, The, Buffalo, N. Y. Decorated boxes. Nos. 115,875–6; Mar. 20; v. 236; p. 885.

Beaver Company, The, Buffalo and Beaver Falls, N. Y.; Roanoke Rapids, N. C.; Thorold and Ottawa, Ontario, Canada, and London, England. Window-backgrounds, office-partitions, folding, &c., screens, folding tables, shirt-waist boxes. No. 115,925; Mar. 27; v. 236; p. 1215.

Beekman Paper and Card Company, New York, N. Y. Writing and printing papers. No. 115,926; Mar. 27; v. 236; p. 1215.

Bell, Conrad & Company, Chicago, Ill. Coffee. Nos. 115,927–8; Mar. 27; v. 236; p. 1215.

Bendus-Cooper & Co. Inc., New York, N. Y. Metal-polish. No. 115,929; Mar. 27; v. 236; p. 1215.

Bennie, Banks A., Nashville, Tenn. Liniment for rheumatism. No. 115,724; Mar. 6; v. 236; p. 277.

Bogart, Charles C., Middletown, N. Y. Cigars. No. 115,726; Mar. 6; v. 236; p. 277.

Bogert & Greenbank, New York, N. Y. Wheat-flour. No. 115,930; Mar. 27; v. 236; p. 1215.

Boston Auto Gage Company, Boston, Mass. Gages. No. 115,834; Mar. 13; v. 236; p. 591.

Boston Electro Cleaner Co., Portland, Me., and Boston, Mass. Silver-polish. No. 115,933; Mar. 27; v. 236; p. 1215.

Boston Rubber Shoe Company, Boston and Malden, Mass. Boots and shoes having fabric uppers and rubber soles attached thereto by vulcanization. No. 115,835; Mar. 13; v. 236; p. 591.

Boykin, Daniel H., Los Angeles, Cal. Preparation for polishing buck, suède, calf, kid, canvas, or linen shoes. No. 115,934; Mar. 27; v. 236; p. 1215.

Bridgeport Brass Company, Bridgeport, Conn. Automobile and bicycle tire pumps. No. 115,728; Mar. 6; v. 236; p. 277.

Bristol-Myers Company, Brooklyn, N. Y. Liquid soap. No. 115,935; Mar. 27; v. 236; p. 1215.

British Milk Products Company Limited, The, London, England. Tonic food. No. 115,729; Mar. 6; v. 236; p. 277.

Brownstein-Louis Company, Los Angeles, Cal. Dress, negligée, work, and under shirts. No. 115,877; Mar. 20; v. 236; p. 885.

Bryant Electric Company, The, Bridgeport, Conn. Attachment-plug receptacles. No. 115,836; Mar. 13; v. 236; p. 591.

Buford & Owens, Madam's, Oklahoma, Okla. Hair-oil. No. 115,878; Mar. 20; v. 236; p. 885.

Bunte Brothers, Chicago, Ill. Candy. No. 115,937; Mar. 27; v. 236; p. 1215.

Burrell-Miller, Indianapolis, Ind. Poultry remedy. No. 115,730; Mar. 6; v. 236; p. 277.

Buss, Frank, St. Louis, Mo. Medical salve or ointment. No. 115,732; Mar. 6; v. 236; p. 277.

C. Kenyon Company, Brooklyn, N. Y. Waterproof fabrics used in the manufacture of waterproof garments. No. 115,971; Mar. 27; v. 236; p. 1216.

C. D. Pruden Company, The, Baltimore, Md. Steel portable buildings. No. 116,000; Mar. 27; v. 236; p. 1217.

C. E. Squires Co., The, Cleveland, Ohio. Steam-traps for heating apparatus, feed-water controllers for steam-boilers, &c. No. 115,867; Mar. 13; v. 236; p. 592.

C. F. Blanke Tea & Coffee Co., St. Louis, Mo. Rice. No. 115,725; Mar. 6; v. 236; p. 277.

Cabell Company, The, Baltimore, Md. Powdered egg. No. 115,733; Mar. 6; v. 236; p. 277.

Capa Drug Company, Washington, D. C. Remedies for treating certain named diseases and ailments. No. 115,938; Mar. 27; v. 236; p. 1215.

Chadron Ice & Creamery Co., Chadron, Nebr. Butter. No. 115,734; Mar. 6; v. 236; p. 277.

Charmax Cravat Co., New York, N. Y. Men's cravats, neckties, and scarfs. No. 115,939; Mar. 27; v. 236; p. 1216.

Cincinnati Iron & Steel Company, The, Cincinnati, Ohio. Engine, stud, and single-purpose lathes, drills, planers, and grinders. No. 115,844; Mar. 13; v. 236; p. 591.

Cipriano, Gandolfo, New York, N. Y. Feed-bags. No. 115,735; Mar. 6; v. 236; p. 277.

Clark Thread Company, The, Newark, N. J. Crochet hooks or needles. No. 115,940; Mar. 27; v. 236; p. 1216.

Clume, Philip J., Ottawa, Ill. Catamenial sacks. No. 115,880.; Mar. 20; v. 236; p. 885.

Cole, Nora, Allentown, Pa. Chemical ink-eraser. No. 115,845; Mar. 13; v. 236; p. 591.

Collins, John T. L., Brooklyn, N. Y. Monthly aeronautical journal. No. 115,736; Mar. 6; v. 236; p. 277.

Consolidated Company, Chicago, Ill. Certain named construction materials. No. 115,881; Mar. 20; v. 236; p. 885.

Conway & Hall, Sault Ste. Marie, Mich. Medicinal tablets for the treatment of anemic conditions of the blood. No. 115,737; Mar. 6; v. 236; p. 277.

Corning Glass Works, Corning, N. Y. Glass. No. 115,846; Mar. 13; v. 236; p. 591.

Cramer, Samuel, Philadelphia, Pa. Satins in the piece. No. 115,739; Mar. 6; v. 236; p. 277.

Crane, Clarence A., Cleveland, Ohio. Chocolate. No. 115,740; Mar. 6; v. 236; p. 277.

Curtice Brothers Co., Rochester, N. Y. Canned fruits and vegetables. No. 115,941; Mar. 27; v. 236; p. 1216.

Curtice Brothers Co., Rochester, N. Y. Certain named foods. No. 115,942; Mar. 27; v. 236; p. 1216.

Davis Carpenter & Co., Inc., New York, N. Y. Lenses for vault-light construction. No. 115,943; Mar. 27; v. 236; p. 1216.

Defiance Check Writer Corporation, Rochester, N. Y. Check-protectors. No. 115,741; Mar. 6; v. 236; p. 277.

Denmark Condensed Milk Company, The, Denmark, Wis. Condensed milk. No. 115,944; Mar. 27; v. 236; p. 1216.

Desmond-Stephan Manufacturing Co., The, Urbana, Ohio. Grinding material in the nature of an abrasive for grinding-wheel dressers. No. 115,945; Mar. 27; v. 236; p. 1216.

Detroit Marvel Brass Manufacturing Co., Detroit, Mich. Sewer-gas traps and plumbing connections. No. 115,847; Mar. 13; v. 238; p. 591.

Dional Syndicate, The, London, England. Antiseptic preparation for healing wounds, cuts, and abrasions and stopping bleeding. No. 115,848; Mar. 13; v. 236; p. 591.

Duane Laboratories, New York, N. Y. Paste for treatment of soft bleeding gums. No. 115,742; Mar. 6; v. 236; p. 277.

Durham Manufacturing Company, Muncie, Ind. Fireless stoves. No. 115,946; Mar. 27; v. 236; p. 1216.
E. Van Noorden & Co., Boston, Mass. Skylights. No. 116,020; Mar. 27; v. 236; p. 1218.
Earl Cowan Company, Los Angeles, Cal. Coffee. No. 115,738; Mar. 6; v. 236; p. 277.
Eastman, Gardiner & Company, Laurel, Miss. Yellow-pine lumber and timber. No. 115,882; Mar. 20; v. 236; p. 885.
Eastman Kodak Co., Rochester, N. Y. Photographic developers. No. 115,743; Mar. 6; v. 236; p. 277.
Eaton, Albert N., Omaha, Nebr. Metal culvert pipes or tubes. No. 115,947; Mar. 27; v. 236; p. 1216.
Elcaya Co., Inc., The, New York, N. Y. Toilet cream. No. 115,744; Mar. 6; v. 236; p. 277.
Elder Manufacturing Co., St. Louis, Mo. Men's and boys' knit and cut underwear. No. 115,948; Mar. 27; v. 236; p. 1216.
Electric Storage Battery Company, The, Philadelphia, Pa. Electric storage batteries or accumulators, their parts and supplies. No. 115,849; Mar. 13; v. 236; p. 591.
Elray Co., The, Chattanooga, Tenn. Electric flash-lights and dry batteries. No. 115,949; Mar. 27; v. 236; p. 1216.
Elysée Olive Oil Co., New York, N. Y. Olive-oil. No. 115,745; Mar. 6; v. 236; p. 278.
Entol Products Co. Inc., New York, N. Y. Antiseptic and healing lotion. No. 115,746; Mar. 6; v. 236; p. 278.
Essen Remedy Company, Newark, N. J. Medicine for indigestion. No. 115,883; Mar. 20; v. 236; p. 885.
F. Hoffman & Sons, Inc., Newark, N. J. Non-alcoholic carbounted beverage to be sold as a soft drink. No. 115,853; Mar. 13; v. 236; p. 591.
F. A. Hardy & Company, Chicago, Ill. Goggles and eye-protectors for use by X-ray specialists. No. 115,761; Mar. 6; v. 236; p. 278.
F. H. George & Company, Fort Wayne, Ind. Butter. No. 115,955; Mar. 27; v. 236; p. 1216.
F. H. Noble & Company, Chicago, Ill. Finger-rings. No. 115,897; Mar. 20; v. 236; p. 885.
Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Chemical compound having bactericide action and particularly useful for the treatment of gonorrhea. No. 115,747; Mar. 6; v. 236; p. 278.
Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Chemical compound for the treatment of tuberculous diseases. No. 115,884; Mar. 20; v. 236; p. 885.
Farley, Mary G., North Bergen, N. J. Depilatory. No. 115,950; Mar. 27; v. 236; p. 1216.
Fecher and McGavock, Inc., Chicago, Ill. Coffee. No. 115,951; Mar. 27; v. 236; p. 1216.
Feculose Company of America, Worcester, Mass. Adhesives, adhesive gums, adhesive sizings, including feculose. No. 115,885; Mar. 20; v. 236; p. 885.
Fesler, Geb. C. V., St. Louis, Mo. Remedy for coughs, colds, and la grippe. No. 115,952; Mar. 27; v. 236; p. 1216.
Frederick Stearns & Co., Detroit, Mich. Reconstructive tonic. No. 115,818; Mar. 6; v. 236; p. 280.
Gala Tea Co. Inc., Brooklyn, N. Y. Writing-paper. No. 115,953; Mar. 27; v. 236; p. 1216.
General Fireproofing Co., The, Youngstown, Ohio. Composition sheets for fireproofing in structural work. No. 115,954; Mar. 27; v. 236; p. 1216.
Geo. Borgfeldt & Co., New York, N. Y. Certain named paper and stationery. No. 115,931; Mar. 27; v. 236; p. 1215.
George Borgfeldt & Co., New York, N. Y. Solid alcohol. No. 115,727; Mar. 6; v. 236; p. 277.
George Borgfeldt & Co., New York, N. Y. Statuettes and ornamental heads and figures adapted to be applied to any article of manufacture. No. 115,932; Mar. 27; v. 236; p. 1215.
Gilmer, Elizabeth M., New York, N. Y. Newspaper and magazine articles, a magazine-section published periodically. No. 115,850; Mar. 13; v. 236; p. 591.
Gipps Brewing Co., Peoria, Ill. Beer. No. 115,956; Mar. 27; v. 236; p. 1216.
Gitterman & Co., Henry, New York, N. Y. Adhesively-united laminated fabrics for use as a shoe-cloth. No. 115,749; Mar. 6; v. 236; p. 278.
Glencrest Food Co., Chicago, Ill. Marmalades and jams. No. 115,750; Mar. 6; v. 236; p. 278.
Glessner, Otto A., Chicago, Ill. Germicide for the treatment of diseases of the mucous membrane and skin. No. 115,886; Mar. 20; v. 236; p. 885.
Globe Canning Co., Eastport, Me. Canned sardines. Nos. 115,751–3; Mar. 6; v. 236; p. 278.
Globe Canning Co., Eastport, Me. Canned sardines. Nos. 115,957–8; Mar. 27; v. 236; p. 1216.
Gluckauf Company, Inc., The, New York, N. Y. Suspenders. No. 115,754; Mar. 6; v. 236; p. 278.
Goldman Costume Company, New York, N. Y. Dresses. No. 115,755; Mar. 6; v. 236; p. 278.
Greenbaum, Joseph L., New York, N. Y. Gum tooth-wash. No. 115,852; Mar. 13; v. 236; p. 591.
Gresh & Sons, W. K., Norristown, Pa. Cigars. No. 115,756; Mar. 6; v. 236; p. 278.
Griffith Chemical Company, Freeport, Ill. Pharmaceutical preparation. No. 115,757; Mar. 6; v. 236; p. 278.
Habicht, Braun & Co., New York, N. Y. Desiccated cocoanut. No. 115,758; Mar. 6; v. 236; p. 278.
Hall & Ruckel, New York, N. Y. Depilatory powder. No. 115,759; Mar. 6; v. 236; p. 278.
Hampden Watch Company, Canton, Ohio. Watches and watch-movements. No. 115,888; Mar. 20; v. 236; p. 885.
Happy Farmer Tractor Co., The, Minneapolis, Minn., assignor to La Crosse Tractor Company, La Crosse, Wis. Tractors. No. 115,960; Mar. 27; v. 236; p. 1216.
Harbauer, George L., New York, N. Y. Beer. No. 115,760; Mar. 6; v. 236; p. 278.
Helmet Company, The, Cincinnati, Ohio. Chewing-gum. No. 115,961; Mar. 27; v. 236; p. 1216.
Hemrich Bros. Brewing Co., Seattle, Wash. Non-alcoholic beverage made from selected grains and sold as a soft drink. No. 115,962; Mar. 27; v. 236; p. 1216.
Hill-Smith Metal Goods Co., The, Boston, Mass. Repair parts for automobiles connected with the ignition systems. No. 115,963; Mar. 27; v. 236; p. 1216.
Höhn, Walter, New York, N. Y. Pregnancy-testers. No. 115,889; Mar. 20; v. 236; p. 885.
Holtite-Thistle Company, Inc., New York, N. Y. Men's, women's, and children's hats and caps. No. 115,762; Mar. 6; v. 236; p. 278.
Horlick, Alexander, Milwaukee, Wis. Bread, biscuits, crackers, wafers, cookies, candies, cocoa, chocolate. No. 115,965; Mar. 27; v. 236; p. 1216.
Hoyt Metal Company, St. Louis, Mo. Babbitt metal. No. 115,854; Mar. 13; v. 236; p. 591.
Hubbard Portable Oven Co., Chicago, Ill. Portable and other ovens. No. 115,966; Mar. 27; v. 236; p. 1216.
Hudson Mechanical Rubber Company, New York, N. Y. Canvas, rubber, leather, and combination canvas and rubber beltings. No. 115,763; Mar. 6; v. 236; p. 278.
Hugetz, Edward, New York, N. Y. Fountain and stylographic pens. No. 115,967; Mar. 27; v. 236; p. 1216.
Hugh Thompson Broom Corn Company, Kansas City, Mo. Brooms. No. 116,016; Mar. 27; v. 236; p. 1218.
Imperial Candy Co., Seattle, Wash. Chocolates and bonbons. No. 115,890; Mar. 20; v. 236; p. 885.
J. S. Brown Merc. Co., The, Denver, Colo. Certain named foods. No. 115,936; Mar. 27; v. 236; p. 1215.
James A. McAteer & Sons, Inc., Pittsburgh, Pa. Confectioners' powdered sugar. No. 115,979; Mar. 27; v. 236; p. 1217.
Jelol Company, The, New York, N. Y. Medicinal preparation of olive-oil. No. 115,764; Mar. 6; v. 236; p. 278.
John Campbell & Co., Inc., New York, N. Y. Chemicals, dyestuffs, and oils used in dyeing, bleaching, and finishing. Nos. 115,837–43; Mar. 13; v. 236; p. 591.
John Hoberg Co., The, Green Bay, Wis. Toilet-paper. No. 115,964; Mar. 27; v. 236; p. 1216.
John Wanamaker, New York, New York, N. Y. Golf-balls. Nos. 115,826–7; Mar. 6; v. 236; p. 280.
Johnson, Edward E., St. Paul, Minn. Pump-rod couplings. No. 115,968; Mar. 27; v. 236; p. 1216.
Kabo Corset Co., Chicago, Ill. Brassières and children's underwaists. No. 115,891; Mar. 20; v. 236; p. 885.
Keen Robinson and Company Limited, London, England. Groats. No. 115,765; Mar. 6; v. 236; p. 278.
Keen, Robinson & Company Limited, London, England. Prepared barley. No. 115,969; Mar. 27; v. 236; p. 1216.
Keith Paper Company, Turners Falls, Mass. Writing and printing papers. No. 115,970; Mar. 27; v. 236; p. 1216.
Kingan & Company, Limited, Belfast, Ireland, and Indianapolis, Ind. Fresh, cured, cooked, canned, and salted meats, sausages, lard, oleomargarin. No. 115,766; Mar. 6; v. 236; p. 278.
Kirkpatrick, Andrew, New York, N. Y. Carbureters. No. 115,767; Mar. 6; v. 236; p. 278.
Kovacs, Koloman, Duquesne, Pa. Remedies for certain named diseases and ailments. No. 115,972; Mar. 27; v. 236; p. 1216.
Kroneberger & Co., C. H., Baltimore, Md. Ground and whole-bean coffees. No. 115,769; Mar. 6; v. 236; p. 278.
Kuehnrich, P. Max, Los Angeles, Cal. Certain named foods. Nos. 115,770–2; Mar. 6; v. 236; p. 278.
La Crosse Tractor Company. (See Happy Farmer Tractor Co., The, assignor.)
La Guardias and Company, New York, N. Y. Hair-tonic. No. 115,773; Mar. 6; v. 236; p. 278.
La Manna, Azeona & Farnan, New York, N. Y. Canned sardines. No. 115,774; Mar. 6; v. 236; p. 278.
Lambertville Rubber Company, Lambertville, N. J. Rubber boots and shoes. No. 115,892; Mar. 20; v. 236; p. 885.
Lautz Bros. & Co., Buffalo, N. Y. Soap. No. 115,973; Mar. 27; v. 236; p. 1217.
Lesher, Whitman & Co. Inc., New York, N. Y. Certain named piece goods and dress fabrics. No. 115,975. Mar. 27; v. 236; p. 1217.
Levin, Emanuel J., New York, N. Y. Rompers or play-suits for children. No. 115,893; Mar. 20; v. 236; p. 885.
Lewey, Mary, New York, N. Y. Freckles, blackheads, and similar diseases of the skin. No. 115,976; Mar. 27; v. 236; p. 1217.
Lindsay, Robert G., New York, N. Y. Dolls. No. 115,775; Mar. 6; v. 236; p. 278.
Linograph Company, The, Augusta, Me., and Davenport, Iowa. Machines for composing matrices, type-setting, type and line casting, and the parts thereof. No. 115,977; Mar. 27; v. 236; p. 1217.

Linton, Robert H., New York, N. Y. Silk shirtings, all-wool flannels and worsteds. No. 115,776; Mar. 6; v. 236; p. 278.
Loose-Wiles Biscuit Co., New York, N. Y., and Kansas City, Mo. Cookies. No. 115,777; Mar. 6; v. 236; p. 278.
Loose-Wiles Biscuit Company, New York, N. Y., and Kansas City, Mo. Cakes. No. 115,978; Mar. 27; v. 236; p. 1217.
M. Uband & Co., New York, N. Y. Ladies' hats. No. 116,018; Mar. 27; v. 236; p. 1218.
M. K. Goetz Brewing Co., St. Joseph, Mo. Cereal food beverage sold as a soft drink. No. 115,959; Mar. 27; v. 236; p. 1216.
Macaroni Publishing Corporation, The, New York, N. Y. Monthly publication. No. 115,855; Mar. 13; v. 236; p. 591.
Macy & Co., R. H., New York, N. Y. Certain named canned goods. No. 115,778; Mar. 6; v. 236; p. 279.
Mallinson & Co., H. R., New York, N. Y. Silk piece goods. No. 115,779; Mar. 6; v. 236; p. 279.
Mallinson & Co., H. R., New York, N. Y. Silk piece goods. Nos. 115,856–7; Mar. 13; v. 236; p. 591.
Manhattan Electrical Supply Company, Jersey City, N. J., and New York, N. Y. Electric clocks and horological, astronomical, and nautical timepieces and parts and attachments therefor. No. 115,894; Mar. 20; v. 236; p. 885.
Manor & Co., J. D., New Market, Va. Wheat-flour. No. 115,981; Mar. 27; v. 236; p. 1217.
Margulies, Larry J., New York, N. Y. Ladies' ornamental collars. No. 115,780; Mar. 6; v. 236; p. 279.
Marple Bros., Philadelphia, Pa. Salted nuts. No. 115,982; Mar. 27; v. 236; p. 1217.
Marshall Field & Company, Chicago, Ill. Cotton threads and yarns. No. 115,748; Mar. 6; v. 236; p. 278.
Martinez Havana Co., New York, N. Y. Cigars. No 115,983; Mar. 27; v. 236; p. 1217.
Martins Birmingham, Limited, Birmingham, England. Golf-balls. No. 115,896; Mar. 20; v. 236; p. 885.
Maryland Rubber Company, Baltimore, Md. Certain named dental, medical, and surgical appliances. No. 115,984; Mar. 27; v. 236; p. 1217.
McCormick, James H., Comstock, Mich. Certain named pharmaceutical preparations. No. 115,980; Mar. 27; v. 236; p. 1217.
Mechanical Rubber Company, The, New York, N. Y.; Chicago, Ill., and Cleveland, Ohio. Friction-tape. No. 115,781; Mar. 6; v. 236; p. 279.
Micro Piston Ring Co., Inc., New York, N. Y. Piston-rings. No. 115,985; Mar. 27; v. 236; p. 1217.
Miller Rubber Company, The, Akron, Ohio. Double-thread-tire-repair patches, repair-boots. No. 115,986; Mar. 27; v. 236; p. 1217.
Mills, William, Birmingham, England. Certain named explosives, firearms, equipments, and projectiles. No. 115,987; Mar. 27; v. 236; p. 1217.
Mint Products Company, Incorporated, New York, N. Y. Chewing-gum, candy, sweetmeats, and confections. No. 115,895; Mar. 20; v. 236; p. 885.
Monahan Medicine Co., Asheville, N. C. Remedy for trachoma and other affections of the eyes. No. 115,782; Mar. 6; v. 236; p. 279.
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Mother's Macaroni Company, Minneapolis, Minn. Macaroni. No. 115,988; Mar. 27; v. 236; p. 1217.
Muller, Maclean & Co., Inc., New York, N. Y. Iron and brass wood-screws. No. 115,784; Mar. 6; v. 236; p. 279.
Murphy Oil Company, East Whittier, Cal. Lemons. No. 115,785; Mar. 6; v. 236; p. 279.
National Malleable Castings Company, The, Cleveland, Ohio. Iron and steel castings. No. 115,858; Mar. 13; v. 236; p. 591.
National Milling and Chemical Co., Philadelphia, Pa. Bleaching and water-softening compound. No. 115,786; Mar. 6; v. 236; p. 279.
Natski Medicine Company, Moweaqua, Ill. Blood-purifier. No. 115,787; Mar. 6; v. 236; p. 279.
New Orleans Coffee Co. Ltd., New Orleans, La. Syrup and coffee. No. 115,989; Mar. 27; v. 236; p. 1217.
New Orleans Coffee Co. Ltd., New Orleans, La. Rice. Nos. 115,990–1; Mar. 27; v. 236; p. 1217.
New York Belting and Packing Company, New York, N. Y. Machinery belting composed of rubber and fabric. Nos. 115,788–9; Mar. 6; v. 236; p. 279.
Nichols, Horace C., Brookline, Mass. Sewer and like traps, union sleeves, studs, and quarter-bends, tray legs and brackets. No. 115,859; Mar. 13; v. 236; p. 591.
Norris, Allister-Ball Company, The, Chicago, Ill. Annual catalogue or illustrated price-list for the jeweler's trade. No. 115,790; Mar. 6; v. 236; p. 279.
North Atlantic Metal Corporation, New York, N. Y. Babbitt and antifriction metals. No. 115,860; Mar. 13; v. 236; p. 592.
Nova Manufacturing Co., Inc., New York, N. Y. Electric-flash-light batteries and casings therefor. No. 115,992; Mar. 27; v. 236; p. 1217.
Nye, Alvin J., Orlando, Fla. Citrus fruits. No. 115,993; Mar. 27; v. 236; p. 1217.
Nye, Arthur J., Walla Walla, Wash. Soldering compound. No. 115,791; Mar. 6; v. 236; p. 279.
O-Mi Specialty Company, Chicago, Ill. Polish for the finger-nails. No. 115,994; Mar. 27; v. 236; p. 1217.
Obermeyer & Liebmann, Brooklyn, N. Y. Non-alcoholic beverages prepared from selected barley-malt, rice, and hops. No. 115,792; Mar. 6; v. 236; p. 279.
Odier, Robert A., Geneva, Switzerland. Lotions, pomades, and powders for use in the treatment of wounds. No. 115,793; Mar. 6; v. 236; p. 279.
Ohio Brass Company, The, Mansfield, Ohio. Trolley-wire clamps. No. 115,861; Mar. 13; v. 236; p. 592.
P. C. Knowlton Co., Inc., successors to Baldwin, Knowlton & Lake, Memphis, Tenn. Coffee, butter, and rice. No. 115,768; Mar. 6; v. 236; p. 278.
Pabst Brewing Company, Milwaukee, Wis. Non-alcoholic preparation. No. 115,862; Mar. 13; v. 236; p. 592.
Parkville Milling Company, Parkville, Mo. Wheat-flour. No. 115,995; Mar. 27; v. 236; p. 1217.
Pass & Seymour, Inc., Solvay, N. Y. Electric-lamp receptacles. No. 115,863; Mar. 13; v. 236; p. 592.
Peerless Novelty Manufacturing Company, Grand Haven, Mich. Crochet-hooks. No. 115,794; Mar. 6; v. 236; p. 279.
Peerless Rubber Manufacturing Company, New York, N. Y. Rubber and rubber-lined-fabric hose. No. 115,996; Mar. 27; v. 236; p. 1217.
Pennsylvania Textile Company, Boston, Mass., and New York, N. Y. Silk piece goods. No. 115,864; Mar. 13; v. 236; p. 592.
Perfect Notion Co., Inc., New York, N. Y. Compressed sanitary and sanitary napkins, sanitary aprons, bloomers, &c. No. 115,795; Mar. 6; v. 236; p. 279.
Pettitt, George A., Syracuse, N. Y. Eye-wash. No. 115,796; Mar. 6; v. 236; p. 279.
Phoenix Oil Company, The, Cleveland, Ohio. Soluble lubricating-oils. No. 115,797; Mar. 6; v. 236; p. 279.
Phoenix Oil Company, The, Cleveland, Ohio. Soluble lubricating and cutting oils. No. 115,997; Mar. 27; v. 236; p. 1217.
Piel Bros., Brooklyn, N. Y. Beer. No. 115,798; Mar. 6; v. 236; p. 279.
Pinkham, James R., Los Angeles, Cal. Grapes. No. 115,998; Mar. 27; v. 236; p. 1217.
Platt & Co., Inc., Baltimore, Md. Canned oysters. No. 115,799; Mar. 6; v. 236; p. 279.
Poland and Savage, Philadelphia, Pa. Remedy for epileptic fits and convulsions. No. 115,800; Mar. 6; v. 236; p. 279.
Port Morris Chemical Works, Inc., New York, N. Y. Decolorizing-powder. No. 115,801; Mar. 6; v. 236; p. 279.
Postex Cotton Mills, Post, Tex. Cotton piece goods, pillow-cases, sheets. No. 115,865; Mar. 13; v. 236; p. 592.
Pratt & Lambert, Incorporated, Buffalo, N. Y. Wood stains and fillers, varnishes, enamels, paints. No. 115,999; Mar. 27; v. 236; p. 1217.
Pratt-Low Preserving Company, Santa Clara, Cal. Certain named canned fruits and vegetables. No. 115,802; Mar. 6; v. 236; p. 279.
Puss'n Boots Confectionery Company. (See Ridean, Gilbert L., assignor.)
R. E. Taylor Corporation, New York, N. Y. House organ published monthly. No. 115,872; Mar. 13; v. 236; p. 592.
Rauch Cigar Company, Inc., Indianapolis, Ind. Cigars, cigarettes, and smoking-tobacco. No. 115,803; Mar. 6; v. 236; p. 279.
Reavis, Holland S., Houston, Tex. Monthly periodicals. No. 115,804; Mar. 6; v. 236; p. 279.
Reeves, Parvin & Co., Philadelphia, Pa. Canned fruits and vegetables. No. 116,001; Mar. 27; v. 236; p. 1217.
Reflex Ignition Co., The, Cleveland, Ohio. Spark-plugs. No. 115,805; Mar. 6; v. 236; p. 279.
Reinhold, Emil, Chicago, Ill. Motion-picture films. No. 116,002; Mar. 27; v. 236; p. 1217.
Reiss Brothers & Company, Chicago, Ill. Smoking-pipes and mouthpieces. No. 115,898; Mar. 20; v. 236; p. 885.
Republic Metalware Co., The, Buffalo, N. Y. Certain named hardware. No. 115,806; Mar. 6; v. 236; p. 279.
Rex Spinning Co., Gastonia, N. C. Fine combed yarns. No. 115,807; Mar. 6; v. 236; p. 279.
Rice & Wallenstein, New York, N. Y. Protective handles for hand-bags and other transportable articles. No. 116,003; Mar. 27; v. 236; p. 1217.
Ridean, Gilbert L., Oakland, Cal., assignor to Puss'n Boots Confectionery Company, Seattle, Wash. Candy and confections. No. 115,808; Mar. 6; v. 236; p. 279.
Robert Reiner Importing Co., The, Weehawken Heights, N. J. Certain named machines, parts thereof, and accessories therefor. No. 116,004; Mar. 27; v. 236; p. 1217.
Rosenberg-Neugass Co., Inc., New York, N. Y. Japanese crapes and Chinese silks in the piece. No. 115,899; Mar. 20; v. 236; p. 885.
Ruff's Brewing Co., Quincy, Ill. Malt beverage. No. 115,900; Mar. 20; v. 236; p. 885.
S. E. Goldmann Co., Inc., New York, N. Y. Cotton piece goods. No. 115,851; Mar. 13; v. 236; p. 591.
Saltz, David A., New York, N. Y. Hair-remover. No. 115,810; Mar. 6; v. 236; p. 280.
Samuels Shoe Company, St. Louis, Mo. Leather shoes. No. 115,811; Mar. 6; v. 236; p. 280.
Scholl Manufacturing Company, The, Chicago, Ill. Certain named pharmaceutical preparation. No. 115,866; Mar. 13; v. 236; p. 592.

Schuster Company, The, Cleveland, Ohio. Certain named foods. No. 116,005; Mar. 27; v. 236; p. 1217.
Sears and Nichols Canning Co., The, Chillicothe, Ohio. Certain named canned foods. No. 115,812; Mar. 6; v. 236; p. 280.
Sears, Roebuck and Co., Chicago, Ill. Leather shoes. No. 115,902; Mar. 20; v. 236; p. 886.
Seguin Milling & Powder Co., Seguin, Tex. Wheat-flour. No. 116,006; Mar. 27; v. 236; p. 1218.
Shane Bros. & Wilson Company, Philadelphia, Pa. Wheat-flour. No. 115,813; Mar. 6; v. 236; p. 280.
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Sherwin-Williams Co., The, Cleveland, Ohio. Medicinal linseed-oil for human and animal use and paranitranilin. No. 116,008; Mar. 27; v. 236; p. 1218.
Smidt, Lulah M., Los Angeles, Cal. Liquid and solid superfluous-hair remover. No. 115,814; Mar. 6; v. 236; p. 280.
Smith, Hogg & Co., New York, N. Y. Blankets. No. 115,815; Mar. 6; v. 236; p. 280.
South Texas Grain Company, Houston, Tex. Cornmeal, cream-meal, and grits. No. 115,816; Mar. 6; v. 236; p. 280.
Spitzer, Emil, Los Angeles, Cal. Candles and confections. No. 115,817; Mar. 6; v. 236; p. 280.
Star Eczema Co., Corsicana, Tex. Eczema remedy. No. 115,903; Mar. 20; v. 236; p. 886.
Steinwender-Stoffregen Coffee Co., St. Louis, Mo. Roasted coffee. No. 115,819; Mar. 6; v. 236; p. 280.
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Stiles, David W., La Fayette, Ga. Non-alcoholic beverage to be sold as a soft drink. No. 115,868; Mar. 13; v. 236; p. 592.
Sunset Soap Dye Company, New Rochelle, N. Y. Dyes. No. 116,009; Mar. 27; v. 236; p. 1218.
Sweet, Thomas J., Albion, N. Y. Canned fruits and vegetables, tomato catsup, apple-cider vinegar. No. 116,010; Mar. 27; v. 236; p. 1218.
Syme, Eagle & Co., Chicago, Ill. Canned sardines. No. 116,011; Mar. 27; v. 236; p. 1218.
Tasty Baking Company, Philadelphia, Pa. Bread, cake, and crackers. No. 115,821; Mar. 6; v. 236; p. 280.
Taylor-Logan Co. Papermakers, Holyoke, Mass. Ledger, record, bond, book and cover, &c., papers, envelops. No. 116,012; Mar. 27; v. 236; p. 1218.
Temperance Beverage Company, Chicago, Ill. Carbonated non-alcoholic soft drink. No. 116,013; Mar. 27; v. 236; p. 1218.
Theobald and Oppenheimer Company, Philadelphia, Pa., and New York, N. Y. Cigars. No. 116,014; Mar. 27; v. 236; p. 1218.
Thexton & Wright, Ld., Westminster, England. Men's overcoats. No. 116,015; Mar. 27; v. 236; p. 1218.
Tide Water Oil Co., New York, N. Y. Refined petroleum. No. 115,822; Mar. 6; v. 236; p. 280.
Tide Water Oil Co., New York, N. Y. Illuminating-oil. No. 116,017; Mar. 27; v. 236; p. 1218.
U. J. Ulery Co., New York, N. Y. Scissors, razors, pocket-knives, and steel table-cutlery. No. 116,019; Mar. 27; v. 236; p. 1218.
United States Lens Company, Geneva, N. Y. Spectacle-lenses. No. 115,869; Mar. 13; v. 236; p. 592.
Virginia Beverage Corporation, Salem, Va. Beverage carbonated and sold as a soft drink, and syrup for making same. No. 115,904; Mar. 20; v. 236; p. 886.
Virginia Manufacturing Co., Norfolk, Va. Wooden baskets, tills for shipping fruits and vegetables, and crates. No. 115,905; Mar. 20; v. 236; p. 886.
Viroculin Co., Waterbury, Conn. Medicinal preparation for treatment of the eyes. No. 115,906; Mar. 20; v. 236; p. 886.
W. J. Bush & Co. Incorporated, New York, N. Y. Glycerin substitutes. No. 115,731; Mar. 6; v. 236; p. 277.
W. T. Grant Company, New York, N. Y. Hosiery. No. 115,887; Mar. 20; v. 236; p. 885.
W. W. Lawrence & Company, Pittsburgh, Pa. Ready-mixed paints and enamels; also varnishes, japans. No. 115,974; Mar. 27; v. 236; p. 1217.
Wabash Chemical & Baking Powder Company, The, Wabash, Ind. Dessert-powder. No. 115,823; Mar. 6; v. 236; p. 280.
Waldes & Co., Prague-Wrschowitz, Austria-Hungary. Powder-paper. Nos. 115,824–5; Mar. 6; v. 236; p. 280.
Waldes & Co., Prague-Wrschowitz, Austria-Hungary. Cigarette-paper. No. 115,907; Mar. 20; v. 236; p. 886.
Warren Oil Company, Warren, Pa. Crude petroleum. No. 115,870; Mar. 13; v. 236; p. 592.
White Rock Mineral Springs Company, Waukesha, Wis., and New York, N. Y. Natural spring-water used as a beverage. No. 115,828; Mar. 6; v. 236; p. 280.
Wiese Packing Co., Seattle, Wash. Canned salmon. Nos. 116,021–2; Mar. 27; v. 236; p. 1218.
Williams, Epaula M., Terre Haute, Ind. Cough-syrup. No. 115,830; Mar. 6; v. 236; p. 280.
Wirthlin-Mann Company, The, Cincinnati, Ohio. Rubber belting, hose, packing, and tires. No. 115,829; Mar. 6; v. 236; p. 280.
Worthington Ball Company, The, Elyria, Ohio. Golf-balls. No. 115,831; Mar. 6; v. 236; p. 280.
Worumbo Manufacturing Company, Lisbon Falls, Me. Woolen goods in the piece. No. 115,908; Mar. 20; v. 236; p. 886.
Wright Wire Company, Worcester, Mass. Picture-cord, wire ropes and cables. No. 115,909; Mar. 20; v. 236; p. 886.
Wrigley & Company, Philadelphia, Pa. Tooth-paste. No. 115,832; Mar. 6; v. 236; p. 280.
Wuichet Fertilizer Company, The, Dayton, Ohio. Fertilizers. No. 116,023; Mar. 27; v. 236; p. 1218.
Yellow Pine Medicine Co., Montgomery, Ala. Composition to be applied to the human body to prevent mosquitos from stinging. No. 115,871; Mar. 13; v. 236; p. 592.
Zoes, Christ A., Chicago, Ill. Liquid shoe cleaner, polish, and dressing. No. 116,024; Mar. 27; v. 236; p. 1218.

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A. Schoenhut Company, The, Philadelphia, Pa. "Big Game Hunter." (For a Toy.) No. 19,993; Mar. 20; v. 236; p. 887.
Alden, Lucy, Saginaw, Mich. "Sanitary Tooth Picks." (For Toothpicks.) No. 19,941; Mar. 6; v. 236; p. 281.
Allen, John E., El Paso, Tex. "Allen's Herbal Hair Health Tonic." (For a Hair-Tonic.) No. 19,942; Mar. 6; v. 236; p. 281.
Beckley-Ralston Co., The, Chicago, Ill. "Canvas Back Patching Stock." (For Tire-Repair Material.) No. 19,959; Mar. 20; v. 236; p. 887.
Byrd, Atvill, Kansas City, Mo. "Plates for Stock Tags." (For Tags for Live Stock to Indicate That They Have Been Tested for Various Diseases.) No. 19,960; Mar. 20; v. 236; p. 887.
Caldwell Coffee Co., The, Duluth, Minn. "Gold Medal Steel Cut Coffee." (For Coffee.) No. 19,961; Mar. 20; p. 887.
Caldwell Coffee Co., The, Duluth, Minn. "Caldwell's Aroma Golden Blend Coffee." (For Coffee.) No. 19,962; Mar. 20; v. 236; p. 887.
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Caldwell Coffee Co., The, Duluth, Minn. "Aroma Gold Medal Coffee." (For Coffee.) No. 19,964; Mar. 20; v. 236; p. 887.
Caldwell Coffee Co., The, Duluth, Minn. "Moose Brand Coffee." (For Coffee.) No. 19,965; Mar. 20; v. 236; p. 887.
Caldwell Coffee Co., The, Duluth, Minn. "Caldwell's Dinner Cup Blend Coffee." (For Coffee.) No. 19,966; Mar. 20; v. 236; p. 887.
Central Mfg. Co., Kansas City, Mo. "Star Dust." (For Silver-Cleaner.) No. 19,967; Mar. 20; v. 236; p. 887.
Davis & Co., New York, N. Y. "Fountain Brand Bathing Soda." (For Bathing-Soda.) No. 19,968; Mar. 20; v. 236; p. 887.
Emze Cigar Co., Philadelphia, Pa. "Smokewell." (For Cigars.) No. 19,943; Mar. 6; v. 236; p. 281.
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Farley Candy Company, Chicago, Ill. "Br'er Rabbit." (For Candies.) No. 19,970; Mar. 20; v. 236; p. 887.
Geo. Wiedemann Brewing Company, The, Newport, Ky. "Quizz." (For a Non-Intoxicating Non-Malt Beverage.) No. 19,976; Mar. 20; v. 236; p. 887.
Goedecke Specialty Manufacturing Company, The, Cleveland, Ohio. "Snapfast." (For Garment-Fasteners.) No. 19,971; Mar. 20; v. 236; p. 887.
Hillberg, Charles R., Campello, Mass. "For Balm Emulsion." (For a Remedy for the Treatment of Coughs, Colds, Hoarseness, and all Affections of the Throat and Lungs.) No. 19,972; Mar. 20; v. 236; p. 887.
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John Royle & Sons, Paterson, N. J. "Red Label 'Cutters That Cut.'" (For Cutters.) No. 19,987; Mar. 20; v. 236; p. 887.
John Royle & Sons, Paterson, N. J. "Blue Label 'Cutters That Cut.'" (For Cutters.) No. 19,988; Mar. 20; v. 236; p. 887.
Jos. Schlitz Brewing Co., Milwaukee, Wis. "Famo." (For Non-Intoxicating Beverage.) No. 19,989; Mar. 20; v. 236; p. 887.
Korn Baking Co., The H., Davenport and Clinton, Iowa. "Betsy Ross." (For Bread.) No. 19,973; Mar. 20; v. 236; p. 887.
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Miller, Morris, Chicago, Ill. "Morris Miller's Original Liniment." (For Morris Miller's Original Liniment.) No. 19,977; Mar. 20; v. 236; p. 887.
Moeller & Zapp, Winona, Minn. "San Delco." (For Cigar-Boxes.) No. 19,978; Mar. 20; v. 236; p. 887.
Musher & Co., Baltimore, Md. "The Tea the Russians Drink." (For Tea.) No. 19,979; Mar. 20; v. 236; p. 887.
National Clock and Manufacturing Company, The, Chicago, Ill. "Wash-White." (For Clothes-Washing Compound.) No. 19,980; Mar. 20; v. 236; p. 887.
New England Oil, Paint & Varnish Co., Everett, Mass. "Bunker Hill Varnishes." (For Varnish.) No. 19,981; Mar. 20; v. 236; p. 887.
New York Golden Star Bread Co. Inc., New York, N. Y. "Adel's Rye Bread." (For Bread.) No. 19,982; Mar. 20; v. 236; p. 887.
Okolene Co., Los Angeles, Cal. "Okolene." (For a Solution for Poison-Oak Infection.) No. 19,983; Mar. 20; v. 236; p. 887.
Providence Specialty Company, Providence R. I. "Hydroproof-Racket-Lak." (For a Finishing Lacquer or Varnish.) No. 19,984; Mar. 20; v. 236; p. 887.
Purity Cream Cheese Co., The, Cleveland, Ohio. "Edelweiss." (For Cream-Cheese.) No. 19,985; Mar. 20; v. 236; p. 887.
Ritchie, Arch B., New Tazewell, Tenn. "Dixie Highway." (For Canned Tomatoes.) No. 19,944; Mar. 6; v. 236; p. 281.
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Saniwax Paper Co., Kalamazoo, Mich. "It's All." (For Bread.) No. 19,949; Mar. 6; v. 236; p. 281.
Saniwax Paper Co., Kalamazoo, Mich. "Eatsum." (For Bread.) No. 19,950; Mar. 6; v. 236; p. 281.
Saniwax Paper Co., Kalamazoo, Mich. "Meat-O-Wheat." (For Bread.) No. 19,951; Mar. 6; v. 236; p. 281.
Schreier, Herman, Sheboygan, Wis. "Cardinal." (For Non-Alcoholic Beverages.) No. 19,953; Mar. 6; v. 236; p. 281.
Schreier, Herman, Sheboygan, Wis. "Caramel." (For Non-Alcoholic Beverages.) No. 19,954; Mar. 6; v. 236; p. 281.
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Theo. Thomsen & Son, New York, N. Y. "Thomsen's Elk." (For Cigars.) No. 19,990; Mar. 20; v. 236; p. 887.
Tokalon, Inc., New York, N. Y. "Emazol." (For Mouth and Throat Wash.) No. 19,956; Mar. 6; v. 236; p. 281.
Val Blatz Brewing Co., Milwaukee, Wis. "Barma." (For a Non-Intoxicating Cereal Beverage.) No. 19,994; Mar. 20; v. 236; p. 887.
Van Landingham Co., C. E., Los Angeles, Cal. "Santa Barbara." (For Canned Sardines.) No. 19,995; Mar. 20; v. 236; p. 887.
Wagner, Henry, *et al.*, executor. (See Weinhard Estate, Henry.)
Wagner, Louise, *et al.*, executrix. (See Weinhard Estate, Henry.)
Waters, Dudley E., Grand Rapids, Mich. "Maryland Farms, Registered Holstein Milk." (For Milk.) No. 19,996; Mar. 20; v. 236; p. 887.
Weinhard Estate, Henry; L. and A. Wessinger, L. Wagner, P. Wessinger, and H. Wagner, executrixes and executors, Portland, Oreg. "Toko." (For a Non-Intoxicating Beverage.) No. 19,991; Mar. 20; v. 236; p. 887.
Weinhard Estate, Henry; L. and A. Wessinger, L. Wagner, P. Wessinger, and H. Wagner, executrixes and executors, Portland, Oreg. "Luxo." (For a Non-Intoxicating Beverage.) No. 19,992; Mar. 20; v. 236; p. 887.
Wessinger, Anna, *et al.*, executrix. (See Weinhard Estate, Henry.)
Wessinger, Louise, *et al.*, executrix. (See Weinhard Estate, Henry.)
Wessinger, Paul, *et al.*, executor. (See Weinhard Estate, Henry.)
Westenfelter, Charles W., Springfield, Ohio. "Denservo." (For Tooth-Paste.) No. 19,997; Mar. 20; v. 236; p. 887.
Woodard, Clarke & Co., Portland, Oreg. "U-Ar-Das Bath Tablets." (For Bath-Tablets.) No. 19,957; Mar. 6; v. 236; p. 281.
Wright, Gillman H., Fallon, Nev. "Nevada Honey." (For Extracted Honey.) No. 19,958; Mar. 6; v. 236; p. 281.

PRINTS.

Adams & Elting Co., Chicago, Ill. "Ad-El-Ite Motor Carbon Remover." (For Carbon-Remover.) No. 4,643; Mar. 20; v. 236; p. 888.

American Toilet Goods Co., Boston, Mass. "Jardin De Rose." (For Toilet Requisites.) No. 4,639; Mar. 6; v. 236; p. 281.

Armour Grain Company, Chicago, Ill. "Breakfast, Luncheon and Dinner Armour's Oats." (For Armour's Oats.) No. 4,644; Mar. 20; v. 236; p. 888.

Armour Grain Company, Chicago, Ill. "Armour's Oats." (For Armour's Oats.) No. 4,645; Mar. 20; v. 236; p. 888.

Brand, George, Brooklyn, N. Y. "The New Brand Vacuum Cleaner With Sweeper." (For Vacuum-Cleaners.) No. 4,646; Mar. 20; v. 236; p. 888.

Cream of Wheat Co., Minneapolis, Minn. "Here You Are." (For Wheat Breakfast Food.) No. 4,647; Mar. 20; v. 236; p. 888.

E. A. Mallory & Sons, Inc., Danbury, Conn. "Mallory Hats." (For Hats.) No. 4,642; Mar. 6; v. 236; p. 281.

Enos F. Jones Chem. Co., New York, N. Y. "Bocabelll." (For Soap.) No. 4,641; Mar. 6; v. 236; p. 281.

G. Mennen Chemical Co., Newark, N. J. "This Part Of Your Face Interests The House of Mennen." (For Mennen's Shaving-Cream.) No. 4,653; Mar. 20; v. 236; p. 888.

G. Mennen Chemical Co., Newark, N. J. "Mennen's Talcum For Men." (For Mennen's Talcum Powder.) No. 4,654; Mar. 20; v. 236; p. 888.

G. Mennen Chemical Co., Newark, N. J. "Mennen's Cold Cream Improves The Complexion." (For Cold-Cream.) No. 4,655; Mar. 20; v. 236; p. 888.

Geuder, Paeschke & Frey Co., Milwaukee, Wis. "No. 8 Cream City Dwarf Display Cut-Onts." (For Cream City Ware.) No. 4,640; Mar. 6; v. 236; p. 281.

Goodyear Tire & Rubber Company, The, Akron, Ohio. "Goodyear Service Station." (For Cushion-Tires.) No. 4,648; Mar. 20; v. 236; p. 888.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Krumbles—Whole Wheat Cereal—Krumbles is Kellogg's whole Durum Wheat Food—every single tiny shred is thoroughly toasted. The flavor is delicious." (For a Cereal Breakfast Food.) No. 4,649; Mar. 20; v. 236; p. 888.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Krumbles—The Strengthening Cereal—Better than any other wheat food, Krumbles gratifies the palate, satisfies the appetite and nourishes the body. Children like Krumbles." (For a Cereal Breakfast Food.) No. 4,650; Mar. 20; v. 236; p. 888.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Krumbles—A Good Winter Cereal—Krumbles is a strengthening winter cereal for children because of the richness of the Durum Wheat. Try it with hot milk." (For a Cereal Breakfast Food.) No. 4,651; Mar. 20; v. 236; p. 888.

Krebs, Stanley W., Wayne, Pa. "You Cant Get On Without It." (For Cresbo Crum Catcher, a Device Which Brings Bread-Box, Bread-Board, Place for Knife, and Receptacle to Catch or Save the Crums All Together.) No. 4,657; Mar. 20; v. 236; p. 888.

Lambert Pharmacal Co., St. Louis, Mo. "Listerine." (For Listerine.) No. 4,652; Mar. 20; v. 236; p. 888.

Potter Drug & Chemical Corp, Boston, Mass. "Cuticura Soap and Ointment." (For Cuticura Soap and Ointment.) No. 4,656; Mar. 20; v. 236; p. 888.

DISCLAIMER.

Cochrane, Albert P., New York, N. Y.; disclaimer filed by assignee, Jane Hartley Cochrane. Corner-piece. No. 1,195,910; disclaimer filed Mar. 17, 1917; v. 236; p. 895.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF MARCH, 1917.

[Abbreviations: "Gaz."=Official Gazette.]

Abrasive and polishing strip holder. E. J. Maloney. No. 1,220,658; Mar. 27; v. 236; p. 1070.

Account-filing system. W. B. Sewell. No. 1,219,175; Mar. 13; v. 236; p. 485.

Account-register, Revolving. J. Leckie. No. 1,218,785; Mar. 13; v. 236; p. 350.

Acetylene-generating apparatus. H. H. Mouton. No. 1,220,528; Mar. 27; v. 236; p. 1026.

Acid, Manufacture of hydrochloric. J. B. Garner and H. D. Clayton. No. 1,220,411; Mar. 27; v. 236; p. 985.

Acid, Producing sulfuric. P. Farup. No. 1,219,277; Mar. 13; v. 236; p. 519.

Adding-machine. B. K. Fisher. No. 1,220,737; Mar. 27; v. 236; p. 1097.

Adding-machine. A. Sprung. No. 1,219,878; Mar. 20; v. 236; p. 759.

Adding-machine attachment. S. M. Sirmans. No. 1,219,356; Mar. 13; v. 236; p. 546.

Addressing-machine. S. Elliott. No. 1,220,734; Mar. 27; v. 236; p. 1096.

Adhesive to wrapping-paper, Means for applying. M. Paridon and C. R. Harris. No. 1,217,989; Mar. 6; v. 236; p. 35.

Adjustable cutter. B. D. Ford. No. 1,218,992; Mar. 13; v. 236; p. 423.

Adjusting and lifting means. J. Walther. No. 1,218,021; Mar. 6; v. 236; p. 46.

Advertising device. J. R. Millward. No. 1,217,979; Mar. 6; v. 236; p. 32.

Advertising device, Electric. W. C. Gillespie. No. 1,219,933; Mar. 20; v. 236; p. 778.

Advertising device for cars, Animated. L. A. Molteni. No. 1,219,839; Mar. 20; v. 236; p. 745.

Aerial bomb. J. Kovács. No. 1,218,871; Mar. 13; v. 236; p. 383.

Aerial tramways, Grip for. F. C. Carstarphen. No. 1,218,373; Mar. 6; v. 236; p. 169.

Aerocycle. K. Shotovsky. No. 1,220,368; Mar. 27; v. 236; p. 970.

Aeroplane. C. B., Jr., and L. D. Forward. No. 1,218,387; Mar. 6; v. 236; p. 173.

Aeroplane. E. F. Gallaudet. No. 1,219,285; Mar. 13; v. 236; p. 521.

Aeroplane. M. Stupar. No. 1,220,374; Mar. 27; v. 236; p. 972.

Aeroplanes and the like, Apparatus for dispelling. M. H. Clarke and D. Maggiora. No. 1,219,703; Mar. 20; v. 236; p. 698.

Aeroplanes for wireless signaling, Antenna structure on. W. Hahnemann. No. 1,219,550; Mar. 20; v. 236; p. 646.

Agitating device. S. W. Lewis. No. 1,220,862; Mar. 27; v. 236; p. 1140.

Agricultural implement. L. Easton. No. 1,219,444; Mar. 20; v. 236; p. 607.

Agricultural implements, Raising and lowering device for. J. Parker. No. 1,217,995; Mar. 6; v. 236; p. 37.

Air accumulator and distributer, Warm-. J. L. Brown. No. 1,220,723; Mar. 27; v. 236; p. 1092.

Air and stuffed cushion, Combined. C. W. Meinecke. No. 1,218,291; Mar. 6; v. 236; p. 142.

Air-compressor. C. W. Weiss. No. 1,219,511; Mar. 20; v. 236; p. 630.

Air-conditioning apparatus. H. Bentz. No. 1,218,045; Mar. 6; v. 236; p. 55.

Air exhauster and compressor, Hydraulic motor-driven. S. M. Stone. No. 1,219,184; Mar. 13; v. 236; p. 488.

Air-purifying and ventilating device. W. D. Doty. No. 1,219,811; Mar. 20; v. 236; p. 735.

Air-spring, Variable-load. R. Liebau. No. 1,218,875; Mar. 13; v. 236; p. 384.

Airship. T. R. Macmechen and W. V. Kamp. No. 1,219,122; Mar. 13; v. 236; p. 467.

Airship. T. R. Macmechen and W. V. Kamp. No. 1,219,123; Mar. 13; v. 236; p. 467.

Airship. T. R. Macmechen and W. V. Kamp. No. 1,219,124; Mar. 13; v. 236; p. 468.

Airship. T. R. Macmechen and W. V. Kamp. No. 1,219,125; Mar. 13; v. 236; p. 468.

Airship. C. Peterson. No. 1,218,456; Mar. 6; v. 236; p. 196.

Airship or dirigible balloon. T. R. Macmechen and E. M. Fox. No. 1,219,121; Mar. 13; v. 236; p. 467.

Alarm: *See*—
Automobile-thief alarm.
Burglar-alarm.
Fire-alarm.
Incubator-alarm.
Low-water alarm.
Water-level alarm.

Alarm-box. C. A. Mahla. No. 1,218,198; Mar. 6; v. 236; p. 105.

Alarm system, Centrally-controlled general-. F. W. Wood. No. 1,220,484; Mar. 27; v. 236; p. 1011.

Alarm system, Pneumatic. F. T. Gracey and T. W. Lander. No. 1,219,723; Mar. 20; v. 236; p. 705.

Aldol, Manufacture of. W. Herrmann and M. Mugdan. No. 1,220,746; Mar. 27; v. 236; p. 1100.

Alidade, Navigator's. A. Lietz. No. 1,218,422; Mar. 6; v. 236; p. 185.

Alimentary products, Manufacture of. J. F. Desmarais. No. 1,220,205; Mar. 27; v. 236; p. 911.

Aluminum carbids, Producing. M. Barnett and L. Burgess. No. 1,219,797; Mar. 20; v. 236; p. 731.

Aluminum chlorid, Producing. M. Barnett and L. Burgess. No. 1,218,588; Mar. 6; v. 236; p.241.

Aminonaphthalene substances, Derivatives of substituted. B. Heymann, R. Kothe, O. Dressel, and A. Ossenbeck. No. 1,218,655; Mar. 13; v. 236; p. 302.

Ammunition package, Artillery-. J. A. Steinmetz. No. 1,218,814; Mar. 13; v. 236; p. 362.

Amusement and exercising apparatus. M. G. Rives. No. 1,220,363; Mar. 27; v. 236; p. 968.

Amusement apparatus. H. F. Maynes. No. 1,218,200; Mar. 6; v. 236; p. 109.

Amusement device. J. C Griesel. No. 1,220,980; Mar. 27; v. 236; p. 1177.

Anchor. A. V. Rowe. No. 1,218,211; Mar. 6; v. 236; p. 113.

Anhydrous products from phenol formaldehyde, Production of. F. G. Weichmann. No. 1,218,146; Mar. 6; v. 236; p. 90.

Animal-releasing device. M. Massard. No. 1,220,662; Mar. 27; v. 236; p. 1072.

Animal-trap. F. Benoit. No. 1,218,589; Mar. 6; v. 236; p. 242.

Animal-trap. A. Blakeslee. No. 1,218,514; Mar. 6; v. 236; p. 216.

Animal-trap. R. Harriman. No. 1,220,743; Mar. 27; v. 236; p. 1099.

Annealing-furnace. A. L. Stevens. No. 1,219,499; Mar. 20; v. 236; p. 626.

Anticreeper. F. A. Preston. No. 1,219,772; Mar. 20; v. 236; p. 721.

Antiskid device. W. McCleary. No. 1,218,430; Mar. 6; v. 236; p. 188.

Antiskid device for vehicle-wheels. G. L. Himmelberger. No. 1,218,657; Mar. 13; v. 236; p. 303.

Antiskidding device. N. Rinfrett. No. 1,217,999; Mar. 6; v. 236; p. 39.

Antiskidding device for use on automobile-wheels. C. E. Hershey. No. 1,219,397; Mar. 13; v. 236; p. 561.

Apparel, Wearing-. D. H. Hodes. No. 1,218,941; Mar. 13; v. 236; p. 406.

Arch-support. J. J. Keys. No. 1,219,331; Mar. 13; v. 236; p. 538.

Arch supporter, Os-calcis metatarsal-. G. Cornet. No. 1,219,257; Mar. 13; v. 236; p. 513.

Armature-banding machine. G. E. Austin and F. Lachance. No. 1,220,054; Mar. 20; v. 236; p. 820.

Articulated connection. W. A. Blackburn. No. 1,220,595; Mar. 27; v. 236; p. 1049.

Articulator. R. E. Hall. No. 1,218,178; Mar. 6; v. 236; p. 100.

Artillery carriage, Heavy-field-. H. F. Loomis. No. 1,220,246; Mar. 27; v. 236; p. 925.

Ash and garbage receptacle, Rotary. W. M. Sharp. No. 1,219,176; Mar. 18; v. 236; p. 485.

Ash-pit attachment. H. I. Rogers. No. 1,219,157; Mar. 13; v. 236; p. 479.

Ash-tray. J. H. Astruck. No. 1,220,167; Mar. 27; v. 236; p. 899.

Assembling-frame for machines. M. H. Flynn. No. 1,220,507; Mar. 27; v. 236; p. 1018.

Assorting apparatus. D. H. Parce. No. 1,217,988; Mar. 6; v. 236; p. 34.

Atomizer. J. J. Holland. No. 1,219,309; Mar. 13; v. 236; p. 530.
Atomizer for fluids. J. Patten. No. 1,219,994; Mar. 20; v. 236; p. 799.
Auto commissary and table. A. N. Himes. No. 1,219,101; Mar. 13; v. 236; p. 459.
Auto-rim forcer. G. A. E. Kaehler. No. 1,219,948; Mar. 20; v. 236; p. 784.
Autos, Mud-lug for propelling. E. P. Berry. No. 1,217,904; Mar. 6; v. 236; p. 7.
Automatic lock. R. N. Parker and H. A. Smith. No. 1,220,448; Mar. 27; v. 236; p. 998.
Automatic selecting-switch. J. G. Blessing. No. 1,218,048; Mar. 6; v. 236; p. 56.
Automatic wrench. J. A. Stromberg. No. 1,218,488; Mar. 6; v. 236; p. 206.
Automobile and the like heater. H. A. Bruggeman. No. 1,218,367; Mar. 6; v. 236; p. 167.
Automobile attachment. E. Maker. No. 1,218,947; Mar. 13; v. 236; p. 407.
Automobile-body ventilator. L. K. Snell. No. 1,218,708; Mar. 13; v. 236; p. 321.
Automobile-bumper. S. C. Rowland. No. 1,218,701; Mar. 13; v. 236; p. 319.
Automobile-bumper. A. Tisman. No. 1,220,571; Mar. 27; v. 236; p. 1041.
Automobile-chain fasteners, Spring-clip for. Z. E. Rice. No. 1,220,002; Mar. 20; v. 236; p. 801.
Automobile-curtain window. J. E. Spencer and A. C. Lillie. No. 1,219,877; Mar. 20; v. 236; p. 759.
Automobile demountable rim. J. S. Hemenway. No. 1,218,938; Mar. 13; v. 236; p. 405.
Automobile direction-indicators, Operating means for. J. M. Middleton and H. T. Shore. No. 1,219,757; Mar. 20; v. 236; p. 716.
Automobile-door-operating mechanism. H. E. Gustafson. No. 1,218,645; Mar. 13; v. 236; p. 299.
Automobile driving mechanism. B. A. Adler. No. 1,218,613; Mar. 6; v. 236; p. 251.
Automobile-engines, Kerosene-vaporizer for. L. B. White. No. 1,220,039; Mar. 20; v. 236; p. 814.
Automobile-fender, Automatic. J. Konluszewski. No. 1,219,113; Mar. 13; v. 236; p. 464.
Automobile friction steering device. I. Hanten. No. 1,220,104; Mar. 20; v. 236; p. 839.
Automobile-heater. T. C. Crouch. No. 1,219,924; Mar. 20; v. 236; p. 775.
Automobile hood and radiator cover. C. C. Anderson. No. 1,218,039; Mar. 6; v. 236; p. 53.
Automobile license-sign. H. Brewster. No. 1,219,236; Mar. 13; v. 236; p. 505.
Automobile-lift. B. S. and E. L. Benner. No. 1,218,510; Mar. 6; v. 236; p. 214.
Automobile-lock. C. O. Dick. No. 1,218,932; Mar. 13; v. 236; p. 403.
Automobile-lock. C. W. Sturr. No. 1,218,013; Mar. 6; v. 236; p. 43.
Automobile-locking apparatus. W. G. Vance. No. 1,218,495; Mar. 6; v. 236; p. 209.
Automobile-locking device. M. W. Boyce. No. 1,220,315; Mar. 27; v. 236; p. 951.
Automobile-locking device. G. R. Rompf. No. 1,219,488; Mar. 20; v. 236; p. 622.
Automobile safety-sign. V. Pavloff and Z. Orlzaroff. No. 1,218,308; Mar. 6; v. 236; p. 148.
Automobile-seat, Adjustable. L. Malone. No. 1,219,654; Mar. 20; v. 236; p. 681.
Automobile-speed-locking device. V. A. Williams. No. 1,218,028; Mar. 6; v. 236; p. 48.
Automobile-springs, Emergency device for. J. E. Allonby. No. 1,217,894; Mar. 6; v. 236; p. 3.
Automobile-steering-gear lock. R. C. Shepherd. No. 1,220,996; Mar. 27; v. 236; p. 1183.
Automobile-swing. S. M. Moore. No. 1,218,443; Mar. 6; v. 236; p. 192.
Automobile thief-alarm. W. H. Hanssen. No. 1,220,627; Mar. 27; v. 236; p. 1060.
Automobile-throttle-controlling mechanism. H. and A. D. Herrold. No. 1,218,939; Mar. 13; v. 236; p. 405.
Automobile towing connection. J. E. Funk. No. 1,220,214; Mar. 27; v. 236; p. 914.
Automobile-truck body. C. L. Cappel. No. 1,220,183; Mar. 27; v. 236; p. 904.
Automobile-turner. H. E. Sharp. No. 1,220,028; Mar. 20; v. 236; p. 810.
Automobiles, Antikicking device for. H. P. Miller. No. 1,219,759; Mar. 20; v. 236; p. 717.
Automobiles, Condenser for. J. B. High. No. 1,219,000; Mar. 13; v. 236; p. 426.
Automobiles, Differential mechanism for. H. W. Connell. No. 1,217,917; Mar. 6; v. 236; p. 11.
Automobiles from mud-holes, Device for pulling. L. H. Adamson. No. 1,219,210; Mar. 13; v. 236; p. 497.
Automobiles, Means for preventing rattling and lost motion of the steering-arms of Ford. M. Leader. No. 1,220,648; Mar. 27; v. 236; p. 1067.
Automobiles, Power-transmitting apparatus for. C. G. Polleys. No. 1,219,040; Mar. 13; v. 236; p. 440.
Automobiles, Recording device for. C. Bornmann. No. 1,218,364; Mar. 6; v. 236; p. 166.
Awning. W. H. Walger, Jr. No. 1,218,725; Mar. 13; v. 236; p. 327.
Awning-support. F. W. Burch. No. 1,218,591; Mar. 6; v. 236; p. 242.
Ax, Folding. E. Klepsch. No. 1,220,858; Mar. 27; v. 236; p. 1139.
Ax or similar tool. W. Yanert. No. 1,219,895; Mar. 20; v. 236; p. 765.
Axle construction for motor-vehicles, Rear-. C. W. Kelsey. No. 1,219,006; Mar. 13; v. 236; p. 428.
Axle, Wagon-. F. Reissner. No. 1,219,153; Mar. 13; v. 236; p. 478.
Azimuth-chronometer. H. S. Butterfield. No. 1,219,372; Mar. 13; v. 236; p. 553.
Back-rest, Folding. H. E. Butler. No. 1,219,437; Mar. 20; v. 236; p. 605.
Bag: *See*—
Feed-bag. Water-bag.
Hand-bag. Waterproof bag.
Bag for umbrellas, shoes, and other articles. S. Spector. No. 1,220,798; Mar. 27; v. 236; p. 1115.
Bag-frame. W. A. Hellmann. No. 1,220,224; Mar. 27; v. 236; p. 917.
Bag-holding device. J. N. Weyland. No. 1,218,142; Mar. 6; v. 236; p. 89.
Bagging and weighing granular and powdery substances, particularly cocoa powder, Machine for. J. Halsig. No. 1,219,302; Mar. 13; v. 236; p. 528.
Bait, Artificial fish-. R. T. Wilson. No. 1,220,921; Mar. 27; v. 236; p. 1158.
Balancing device. F. A. Nichols. No. 1,218,689; Mar. 13; v. 236; p. 314.
Baling hay, Means for. E. Faint. No. 1,218,175; Mar. 6; v. 236; p. 100.
Baling-press. W. E. Dees. No. 1,217,921; Mar. 6; v. 236; p. 13.
Baling-press. J. A. Marx. No. 1,220,870; Mar. 27; v. 236; p. 1142.
Ball cutter, Vegetable-. T. Kawakubo. No. 1,218,566; Mar. 6; v. 236; p. 234.
Ball goal, Basket-. H. C. Ohlson. No. 1,218,204; Mar. 6; v. 236; p. 110.
Band-clamp. J. G. Elkin. No. 1,219,273; Mar. 13; v. 236; p. 518.
Band-fastener. G. H. Taylor. No. 1,218,337; Mar. 6; v. 236; p. 157.
Bar: *See*—
Grate-bar. Mower finger-bar.
Bar and tubing feeding and severing means. E. Danner. No. 1,220,201; Mar. 27; v. 236; p. 909.
Bark extracts, Obtaining. D. C. Reynolds. No. 1,220,557; Mar. 27; v. 236; p. 1036.
Barometer-switch, Electric. P. E. Stoft. No. 1,219,679; Mar. 20; v. 236; p. 690.
Barrel-rack. W. B. Pavey and G. M. French. No. 1,220,450; Mar. 27; v. 236; p. 998.
Barrel-stand. W. H. Kelly. No. 1,220,640; Mar. 27; v. 236; p. 1064.
Barrels, Polishing-body for burnishing-. J. C. Andrews. No. 1,218,158; Mar. 6; v. 236; p. 94.
Basket. W. A. J. Lowe. No. 1,219,969; Mar. 20; v. 236; p. 791.
Basket, Collapsible. W. B. Schreyer. No. 1,220,464; Mar. 27; v. 236; p. 1004.
Basket, Sheet-metal. E. H. Derry. No. 1,218,632; Mar. 13; v. 236; p. 294.
Bath attachment, Shower-. A. F. Luzzi. No. 1,218,879; Mar. 13; v. 236; p. 386.
Batteries and making the same, Separator for storage. T. A. Willard. No. 1,218,967; Mar. 13; v. 236; p. 414.
Battery-cell of the mercuric-oxid type, Galvanic. J. N. Brönsted. No. 1,219,074; Mar. 13; v. 236; p. 450.
Battery construction, Storage-. D. J. Cartwright. No. 1,220,603; Mar. 27; v. 236; p. 1052.
Battery-depolarizer. M. E. Holmes. No. 1,218,772; Mar. 13; v. 236; p. 345.
Battery-holder. R. E. Cole. No. 1,218,056; Mar. 6; v. 236; p. 59.
Battery plate, Storage-. D. J. Cartwright. No. 1,220,604; Mar. 27; v. 236; p. 1053.
Bearing, Antifriction-. R. J. Koster. No. 1,220,345; Mar. 27; v. 236; p. 962.
Bearing, Antifriction-. L. H. Seubert. No. 1,218,605; Mar. 6; v. 236; p. 247.
Bearing, Ball-. F. A. Collins, Jr. No. 1,219,919; Mar. 20; v. 236; p. 773.
Bearing, Ball-. F. A. Collins, Jr. No. 1,219,920; Mar. 20; v. 236; p. 773.
Bearing, Ball-. F. A. Collins, Jr. No. 1,219,921; Mar. 20; v. 236; p. 774.
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Paper, Writing or printing. T. N. Gurney. No. 50,415; Mar. 6; v. 236; p. 254.
Pennant. C. L. Campbell. No. 50,413; Mar. 6; v. 236; p. 254.
Petticoat. N. R. Vidaver. No. 50,436; Mar. 6; v. 236; p. 258.
Petticoat. N. R. Vidaver. No. 50,489; Mar. 20; v. 236; p. 875.
Phonograph-cabinet. H. C. Moyer. Nos. 50,478–84; Mar. 20; v. 236; pp. 873–4.
Phonograph-cabinet. W. C. Pitts. Nos. 50,449–50; Mar. 13; v. 236; p. 577.
Phonograph-cabinet. C. A. White. No. 50,544; Mar. 27; v. 236; p. 1198.
Photo-mount, Slip-under. O. Gross. No. 50,443; Mar. 13; v. 236; p. 576.
Pin, brooch, or similar article for personal wear. F. D. Healy. No. 50,416; Mar. 6; v. 236; p. 254.
Pin-tray. R. H. Wheelock. No. 50,543; Mar. 27; v. 236; p. 1198.
Plate or similar article. S. Dean. No. 50,464; Mar. 20; v. 236; p. 870.
Plate or similar article. C. J. Noke. Nos. 50,423–4; Mar. 6; v. 236; pp. 255–6.
Plate or similar article. E. Picault. No. 50,486; Mar. 20; v. 236; p. 874.
Plate or similar article. A. H. Piper. Nos. 50,428–30; Mar. 6; v. 236; pp. 256–7.
Precious, semiprecious, or synthetic stone or an imitation thereof. S. Heller. No. 50,444; Mar. 13; v. 236; p. 576.
Ring. J. Katz. No. 50,447; Mar. 13; v. 236; p. 576.
Ring or similar article. M. L. and M. L. Bowden, Jr. No. 50,461; Mar. 20; v. 236; p. 869.
Rug. H. W. Parton. No. 50,426; Mar. 6; v. 236; p. 256.
Salt-cellar, bottle, or similar article. T. A. De Vilbiss. No. 50,414; Mar. 6; v. 236; p. 254.
Salt-cellar, bottle, or similar article. T. A. De Vilbiss. Nos. 50,466–7; Mar. 20; v. 236; pp. 870–1.
Scale-casing. J. Hopkinson. No. 50,417; Mar. 6; v. 236; p. 254.
Shoe. C. B. Spalsbury. No. 50,451; Mar. 13; v. 236; p. 577.
Shoe-fastener. B. Held. No. 50,473; Mar. 20; v. 236; p. 872.
Sign. J. F. Crowley. No. 50,441; Mar. 13; v. 236; p. 575.
Slipper-tree and dress-hanger. L. N. Doud. No. 50,468; Mar. 20; v. 236; p. 871.
Spoon. R. R. Kintz. No. 50,422; Mar. 6; v. 236; p. 255.
Stand, Combined jardinière and grafanola. F. Hoyt. No. 50,419; Mar. 6; v. 236; p. 255.
Stove. W. F. Dewey. No. 50,465; Mar. 20; v. 236; p. 870.
Stove, Tile-. F. Ziganek. No. 50,492; Mar. 20; v. 236; p. 875.
Tire-tread. D. Spence. No. 50,431; Mar. 6; v. 236; p. 257.
Toy rattler. G. A. Baehr. No. 50,460; Mar. 20; v. 236; p. 869.
Type, Font of. C. E. Wolfe. No. 50,454; Mar. 13; v. 236; p. 578.
Vehicle. F. E. Kehl. No. 50,475; Mar. 20; v. 236; p. 872.
Vehicle-heating casing. C. S. Pelton. No. 50,534; Mar. 27; v. 236; p. 1196.
Writing-machine frame, Check-. J. Whitaker. No. 50,437; Mar. 6; v. 236; p. 258.

ALPHABETICAL LIST OF TRADE-MARKS.

Abrasive for grinding-wheel dressers. The Desmond-Stephan Manufacturing Co. No. 115,945; Mar. 27; v. 236; p. 1216.

Adhesives, adhesive gums, adhesive sizings, including feculose. Feculose Company of America. No. 115,885; Mar. 20; v. 236; p. 885.

Alcohol, Solid. George Borgfeldt & Co. No. 115,727; Mar. 6; v. 236; p. 277.

Antiseptic preparation for healing wounds, cuts, and abrasions and stopping bleeding. The Dional Syndicate. No. 115,848; Mar. 13; v. 236; p. 591.

Automobiles connected with the ignition systems, Repair parts for. The Hill-Smith Metal Goods Co. No. 115,963; Mar. 27; v. 236; p. 1216.

Bags, Feed-. G. Cipriano. No. 115,735; Mar. 6; v. 236; p. 277.

Balls, Golf-. John Wanamaker, New York. Nos. 115,826–7; Mar. 6; v. 236; p. 280.

Balls, Golf-. Martins Birmingham Limited. No. 115,896; Mar. 20; v. 236; p. 885.

Balls, Golf-. The Worthington Ball Company. No. 115,831; Mar. 6; v. 236; p. 280.

Barley, Prepared. Keen, Robinson & Company Limited. No. 115,969; Mar. 27; v. 236; p. 1216.

Baskets, tills for shipping fruits and vegetables, and crates, Wooden. Virginia Manufacturing Co. No. 115,905; Mar. 20; v. 236; p. 886.

Batteries and castings therefor, Electric-flash-light. Novo Manufacturing Co. No. 115,902; Mar. 27; v. 236; p. 1217.

Batteries or accumulators, their parts and supplies, Electric storage. The Electric Storage Battery Company. No. 115,849; Mar. 13; v. 236; p. 591.

Beer. Gipps Brewing Co. No. 115,956; Mar. 27; v. 236; p. 1216.

Beer. G. L. Harbauer. No. 115,760; Mar. 6; v. 236; p. 278.

Beer. Piel Bros. No. 115,798; Mar. 6; v. 236; p. 279.

Belting of rubber and fabric, Machinery. New York Belting and Packing Company. Nos. 115,788–9; Mar. 6; v. 236; p. 279.

Beltings, Canvas, rubber, leather, and combination canvas and rubber. Hudson Mechanical Rubber Company. No. 115,763; Mar. 6; v. 236; p. 278.

Beverage and syrup for the manufacture of same, Carbonated. Virginia Beverage Corporation. No. 115,904; Mar. 20; v. 236; p. 886.

Beverage, Malt. Ruff's Brewing Co. No. 115,900; Mar. 20; v. 236; p. 885.

Beverage, Non-alcoholic. Hemrich Bros. Brewing Co. No. 115,962; Mar. 27; v. 236; p. 1216.

Beverage sold as a soft drink, Cereal food. M. K. Goetz Brewing Co. No. 115,959; Mar. 27; v. 236; p. 1216.

Beverage to be sold as a soft drink, Non-alcoholic. D. W. Stiles. No. 115,868; Mar. 13; v. 236; p. 592.

Beverage to be sold as a soft drink, Non-alcoholic carbonated. F. Hoffman & Sons. No. 115,853; Mar. 13; v. 236; p. 591.

Beverages, Non-alcoholic. Obermeyer & Liebmann. No. 115,792; Mar. 6; v. 236; p. 279.

Blankets. Smith, Hogg & Co. No. 115,815; Mar. 6; v. 236; p. 280.

Bleaching and water-softening compound. National Milling and Chemical Co. No. 115,786; Mar. 6; v. 236; p. 279.

Blood-purifier. Natski Medicine Company. No. 115,787; Mar. 6; v. 236; p. 279.

Boots and shoes having fabric uppers and rubber soles. Boston Rubber Shoe Company. No. 115,835; Mar. 13; v. 236; p. 591.

Boxes, Decorated. The Beaver Company. Nos. 115,875–6; Mar. 20; v. 236; p. 885.

Bracelets, belt-buckles, link-buttons, lavallières, brooches. Batchelder Manufacturing Co. No. 115,874; Mar. 20; v. 236; p. 885.

Brassières and children's underwaists. Kabo Corset Co. No. 115,891; Mar. 20; v. 236; p. 885.

Bread, biscuits, crackers, wafers, &c. A. Horlick. No. 115,965; Mar. 27; v. 236; p. 1216.

Bread, cake, and crackers. Tasty Baking Company. No. 115,821; Mar. 6; v. 236; p. 280.

Bricks made of clay and equivalent material. Acme Brick Company. Nos. 115,910–11; Mar. 27; v. 236; p. 1215.

Brooms. Hugh Thompson Broom Corn Company. No. 116,016; Mar. 27; v. 236; p. 1218.

Buildings, Steel portable. C. D. Pruden Company. No. 116,000; Mar. 27; v. 236; p. 1217.

Butter. The Chadron Ice & Creamery Co. No. 115,734; Mar. 6; v. 236; p. 277.

Butter. F. H. George & Company. No. 115,955; **Mar. 27; v. 236; p. 1216.**

Cakes. Loose-Wiles Biscuit Company. No. 115,978; Mar. 27; v. 236; p. 1217.

Candies and confections. E. Spitzer. No. 115,817; Mar. 6; v. 236; p. 280.

Candy. Bunte Brothers. No. 115,937; Mar. 27; v. 236; p. 1215.

Candy and confections. G. L. Ridean. No. 115,808; Mar. 6; v. 236; p. 279.

Canned foods. The Sears and Nichols Canning Co. No. 115,812; Mar. 6; v. 236; p. 280.

Canned fruits and vegetables. Curtice Brothers Co. No. 115,941; Mar. 27; v. 236; p. 1216.

Canned fruits and vegetables. Pratt-Low Preserving Company. No. 115,802; Mar. 6; v. 236; p. 279.

Canned fruits and vegetables. Reeves, Parvin & Co. No. 116,001; Mar. 27; v. 236; p. 1217.

Canned fruits and vegetables, tomato catsup, apple-cider vinegar. **T. J. Sweet. No. 116,010; Mar. 27; v. 236; p. 1218.**

Canned goods, Certain named. R. H. Macy & Co. No. 115,778; Mar. 6; v. 236; p. 279.

Canned oysters. Platt & Co. No. 115,799; Mar. 6; v. 236; p. 279.

Canned salmon. Alaska-Pacific Fisheries. Nos. 115,714–15; Mar. 6; v. 236; p. 277.

Canned salmon. Wiese Packing Co. Nos. 116,021–2; Mar. 27; **v. 236; p. 1218.**

Canned sardines. Globe Canning Co. Nos. 115,751–3; Mar. 6; v. 236; p. 278.

Canned sardines. Globe Canning Co. Nos. 115,957–8; **Mar. 27; v. 236; p. 1216.**

Canned sardines. La Manna, Azema & Farnan. No. 115,774; Mar. 6; v. 236; p. 278.

Canned sardines. Syme, Eagle & Co. No. 116,011; Mar. 27; v. 236; p. 1218.

Carburetors. A. Kirkpatrick. No. 115,767; Mar. 6; v. 236; p. 278.

Castings, Iron and steel. The National Malleable Castings Company. No. 115,858; Mar. 13; v. 236; p. 591.

Catalogue or illustrated price-list for the jeweler's trade, Annual. The Norris, Alister-Ball Company. No. 115,790; Mar. 6; v. 236; p. 279.

Catamenial sacks. P. J. Clune. No. 115,880; Mar. 20; v. 236; p. 885.

Check-protectors. Defiance Check Writer Corporation. No. 115,741; Mar. 6; v. 236; p. 277.

Chemicals, dyestuffs, and oils used in dyeing, bleaching, and finishing. John Campbell & Co. Nos. 115,837–43; Mar. 13; v. 236; p. 591.

Chocolate. C. A. Crane. No. 115,740; Mar. 6; v. 236; p. 277.

Chocolates and bonbons. Imperial Candy Co. No. 115,890; Mar. 20; v. 236; p. 885.

Cigarette-paper. Waldes & Co. No. 115,907; Mar. 20; v. 236; p. 886.

Cigars. C. C. Bogart. No. 115,726; Mar. 6; v. 236; p. 277.

Cigars. W. K. Gresh & Sons. No. 115,756; Mar. 6; v. 236; p. 278.

Cigars. Martinez Havana Co. No. 115,983; Mar. 27; v. 236; p. 1217.

Cigars. C. J. Stettler. No. 115,820; Mar. 6; v. 236; p. 280.

Cigars. Theobald and Oppenheimer Company. No. 116,014; Mar. 27; v. 236; p. 1218.

Cigars, cigarettes, and smoking-tobacco. Rauch Cigar Company. No. 115,803; Mar. 6; v. 236; p. 279.

Clocks and horological, astronomical, and nautical time-pieces and parts and attachments, Electric. Manhattan Electrical Supply Company. No. 115,894; Mar. 20; v. 236; p. 885.

Cocoanut, Desiccated. Habicht, Braun & Co. No. 115,758; Mar. 6; v. 236; p. 278.

Coffee. Beil, Conrad & Company. Nos. 115,927–8; Mar. 27; v. 236; p. 1215.

Coffee. Earl Cowan Company. No. 115,738; Mar. 6; v. 236; p. 277.

Coffee. Fecher and McGavock. No. 115,951; Mar. 27; v. 236; p. 1216.

Coffee and whole-bean coffee, Ground. C. H. Kroneberger & Co. No. 115,769; Mar. 6; v. 236; p. 278.

Coffee, butter, rice. P. C. Knowlton Co., successors to Baldwin, Knowlton & Lake. No. 115,768; Mar. 6; v. 236; p. 278.

Coffee, Roasted. Steinwender-Stoffregen Coffee Co. No. 115,819; Mar. 6; v. 236; p. 280.

Collars, Ladies' ornamental. L. J. Margulies. No. 115,780; Mar. 6; v. 236; p. 279.

Compound for the treatment of tuberculous diseases, Chemical. Farbwerke vorm. Meister Lucius and Brüning. No. 115,884; Mar. 20; v. 236; p. 885.

Compound having bactericide action, and particularly useful for the treatment of gonorrhea, Chemical. Farbwerke vorm. Meister Lucius & Brüning. No. 115,747; Mar. 6; v. 236; p. 278.

Construction materials, Certain named. Consolidated Company. No. 115,881; Mar. 20; v. 236; p. 885.

Cookies. Loose-Wiles Biscuit Co. No. 115,777; Mar. 6; v. 236; p. 278.

Cord, wire ropes, and cables, Picture-. Wright Wire Company. No. 115,909; Mar. 20; v. 236; p. 886.

Cornmeal, cream-meal, and grits. South Texas Grain Company. No. 115,816; Mar. 6; v. 236; p. 280.

Cotton piece goods. Appleton Company. Nos. 115,915–22; Mar. 27; v. 236; p. 1215.

Cotton piece goods. S. E. Goldman Co. No. 115,851; Mar. 13; v. 236; p. 591.

Cotton piece goods, pillow-cases, and sheets. Postex Cotton Mills. No. 115,865; Mar. 13; v. 236; p. 592.

Cough-syrup. E. M. Williams. No. 115,830; Mar. 6; v. 236; p. 280.

Crapes and Chinese silks in the piece, Japanese. The Rosenberg-Neugass Co. No. 115,899; Mar. 20; v. 236; p. 885.

Cravats, neckties, and scarfs, Men's. Charmax Cravat Co. No. 115,939; Mar. 27; v. 236; p. 1216.

Cream, Toilet. The Elcaya Co. No. 115,744; Mar. 6; v. 236; p. 277.

Crochet-hooks. Peerless Novelty Manufacturing Company. No. 115,794; Mar. 6; v. 236; p. 279.

Crochet hooks or needles. The Clark Thread Company. No. 115,940; Mar. 27; v. 236; p. 1216.

Culvert pipes or tubes, Metal. A. N. Eaton. No. 115,947; Mar. 27; v. 236; p. 1216.

Decolorizing-powder. Port Morris Chemical Works. No. 115,801; Mar. 6; v. 236; p. 279.

Dental, medical, and surgical appliances, Certain named. Maryland Rubber Company. No. 115,984; Mar. 27; v. 236; p. 1217.

Depilatory. M. G. Farley. No. 115,950; Mar. 27; v. 236; p. 1215.

Depilatory powder. Hall & Ruckel. No. 115,759; Mar. 6; v. 236; p. 278.

Dessert-powder. The Wabash Chemical & Baking Powder Company. No. 115,823; Mar. 6; v. 236; p. 280.

Dolls. R. G. Lindsay. No. 115,775; Mar. 6; v. 236; p. 278.

Dresses. Goldman Costume Company. No. 115,755; Mar. 6; v. 236; p. 278.

Drink, Carbonated non-alcoholic soft. Temperance Beverage Company. No. 116,013; Mar. 27; v. 236; p. 1218.

Dyes. Sunset Soap Dye Company. No. 116,009; Mar. 27; v. 236; p. 1218.

Egg, Powdered. The Cabell Company. No. 115,733; Mar. 6; v. 236; p. 277.

Electric flash-lights and dry batteries, The Elray Co. No. 115,949; Mar. 27; v. 236; p. 1216.

Embroidering-machines, jacquards, punching-machines and parts thereof, &c. The Robert Reiner Importing Co. No. 116,004; Mar. 27; v. 236; p. 1217.

Eraser, Chemical ink-. N. Cole. No. 115,845; Mar. 13; v. 236; p. 591.

Eye treatment, Medicinal preparation for. Viroculin Co. No. 115,906; Mar. 20; v. 236; p. 886.

Eye-wash. G. A. Pettitt. No. 115,796; Mar. 6; v. 236; p. 279.

Fabrics for use as a shoe-cloth, Adhesively-united laminated. H. Gitterman & Co. No. 115,749; Mar. 6; v. 236; p. 278.

Fasteners, Snap-. The Autoyre Co. Nos. 115,721–2; Mar. 6; v. 236; p. 277.

Feeds, Dairy and stock. Arcady Farms Milling Company. No. 115,719; Mar. 6; v. 236; p. 277.

Fertilizers. The Wulchet Fertilizer Company. No. 116,023; Mar. 27; v. 236; p. 1218.

Finger-nail polish. O-My Specialty Company. No. 115,994; Mar. 27; v. 236; p. 1217.

Fireproofing in structural work, Composition sheets for. The General Fireproofing Co. No. 115,954; Mar. 27; v. 236; p. 1216.

Flour, Wheat-. Bogert & Greenbank. No. 115,930; Mar. 27; v. 236; p. 1215.

Flour, Wheat-. J. D. Manor & Co. No. 115,981; Mar. 27; v. 236; p. 1217.

Flour, Wheat-. Morristown Flour Mills. No. 115,783; Mar. 6; v. 236; p. 279.

Flour, Wheat-. Parkville Milling Company. No. 115,995; Mar. 27; v. 236; p. 1217.

Flour, Wheat-. Seguin Milling & Power Co. No. 116,006; Mar. 27; v. 236; p. 1218.

Flour, Wheat-. Shane Bros. & Wilson Company. No. 115,813; Mar. 6; v. 236; p. 280.

Flour, Wheat-. Shane Bros. & Wilson Company. No. 116,007; Mar. 27; v. 236; p. 1218.

Food, Tonic. The British Milk Products Company. No. 115,729; Mar. 6; v. 236; p. 277.

Foods, Certain named. Curtice Brothers Co. No. 115,942; Mar. 27; v. 236; p. 1216.

Foods, Certain named. The J. S. Brown Merc. Co. No. 115,936; Mar. 27; v. 236; p. 1215.

Foods, Certain named. P. M. Kuehnrich. Nos. 115,770-2; Mar. 6; v. 236; p. 278.

Foods, Certain named. The Schuster Company. No. 116,005; Mar. 27; v. 236; p. 1217.

Freckles, blackheads, and similar diseases of the skin. M. Dewey. No. 115,976; Mar. 27; v. 236; p. 1217.

Friction-tape. The Mechanical Rubber Company. No. 115,781; Mar. 6; v. 236; p. 279.

Fruits, Citrus. A. J. Nye. No. 115,993; Mar. 27; v. 236; p. 1217.

Gages. Boston Auto Gage Company. No. 115,834; Mar. 13; v. 236; p. 591.

Gas traps and plumbing connections, Sewer-. Detroit Marvel Brass Manufacturing Co. No. 115,847; Mar. 13; v. 236; p. 591.

Germicide for the treatment of diseases of the mucous membrane and skin. O. A. Giessner. No. 115,886; Mar. 20; v. 236; p. 885.

Glass. Corning Glass Works. No. 115,846; Mar. 13; v. 236; p. 591.

Glycerin substitutes. W. J. Bush & Co. No. 115,731; Mar. 6; v. 236; p. 277.

Goggles and eye-protectors for use by X-ray specialists. F. A. Hardy & Company. No. 115,761; Mar. 6; v. 236; p. 278.

Gramophones, phonographs, and records for the same. Barnett Samuel & Sons. No. 115,901; Mar. 20; v. 236; p. 885.

Grapes. J. R. Pinkham. No. 115,998; Mar. 27; v. 236; p. 1217.

Grenades and bombs and their parts, fuses, projectiles, &c. W. Mills. No. 115,987; Mar. 27; v. 236; p. 1217.

Groats. Keen Robinson and Company. No. 115,765; Mar. 6; v. 236; p. 278.

Gum, candy, sweetmeats, and confections, Chewing-. Mint Products Company. No. 115,895; Mar. 20; v. 236; p. 885.

Gum, Chewing-. The Helmet Company. No. 115,961; Mar. 27; v. 236; p. 1216.

Hair-remover. D. A. Saltz. No. 115,810; Mar. 6; v. 236; p. 280.

Hair remover, Superfluous-. L. M. Smidt. No. 115,814; Mar. 6; v. 236; p. 280.

Hair-tonic. La Guardias and Company. No. 115,773; Mar. 6; v. 236; p. 278.

Handles for hand-bags and other transportable articles, Protective. Rice & Wallenstein. No. 116,003; Mar. 27; v. 236; p. 1217.

Hardware, Certain named. The Republic Metalware Co. No. 115,806; Mar. 6; v. 236; p. 279.

Hats and caps, Men's, women's, and children's. Holtite-Thistle Company. No. 115,762; Mar. 6; v. 236; p. 278.

Hats, Ladies'. M. Ufland & Co. No. 116,018; Mar. 27; v. 236; p. 1218.

Hosiery. W. T. Grant Company. No. 115,887; Mar. 20; v. 236; p. 885.

Hot-water bottles. A. S. Campbell Company. No. 115,879; Mar. 20; v. 236; p. 885.

Journal, Monthly aeronautical. J. F. L. Collins. No. 115,736; Mar. 6; v. 236; p. 277.

Knit and cut underwear, Men's and boys'. Elder Manufacturing Co. No. 115,948; Mar. 27; v. 236; p. 1216.

Lamp receptacles, Electric-. Pass & Seymour. No. 115,863; Mar. 13; v. 236; p. 592.

Lathes, drills, planers, and grinders, Engine, &c. The Cincinnati Iron & Steel Company. No. 115,844; Mar. 13; v. 236; p. 591.

Lemons. Murphy Oil Company. No. 115,785; Mar. 6; v. 236; p. 279.

Lenses for vault-light construction. Davis Carpenter & Co. No. 115,943; Mar. 27; v. 236; p. 1216.

Lenses, Spectacle-. United States Lens Company. No. 115,869; Mar. 13; v. 236; p. 592.

Liniment for rheumatism. B. A. Bennie. No. 115,724; Mar. 6; v. 236; p. 277.

Lotion, Antiseptic and healing. Entol Products Co. No. 115,740; Mar. 6; v. 236; p. 278.

Lotions, pomades, and powders for use in the treatment of wounds. R. A. Odler. No. 115,793; Mar. 6; v. 236; p. 279.

Lumber and timber, Yellow-pine. Eastman, Gardiner & Company. No. 115,882; Mar. 20; v. 236; p. 885.

Macaroni. F. Amerise. No. 115,913; Mar. 27; v. 236; p. 1215.

Macaroni. Mother's Macaroni Company. No. 115,988; Mar. 27; v. 236; p. 1217.

Macaroni, preserved figs, ripe olives. Austin, Nichols & Co. No. 115,720; Mar. 6; v. 236; p. 277.

Marmalades and jams. Glencrest Food Co. No. 115,750; Mar. 6; v. 236; p. 278.

Matrices, type-setting, type-casting, and line-casting and the parts thereof, Machines for composing. The Linograph Company. No. 115,977; Mar. 27; v. 236; p. 1217.

Meats, sausages, lard, oleomargarin, Fresh, cured, &c. Kingan & Company. No. 115,766; Mar. 6; v. 236; p. 278.

Medicine for indigestion. Essen Remedy Company. No. 115,883; Mar. 20; v. 236; p. 885.

Medicines and pharmaceutical preparations, Certain named. The Avalon Farms Company. No. 115,723; Mar. 6; v. 236; p. 277.

Metal and antifriction metal, Babbitt. North Atlantic Metal Corporation. No. 115,860; Mar. 13; v. 236; p. 592.

Metal, Babbitt. Hoyt Metal Company. No. 115,854; Mar. 13; v. 236; p. 591.

Metal-polish. Bendua-Cooper & Co. No. 115,929; Mar. 27; v. 236; p. 1215.

Milk, Condensed. The Denmark Condensed Milk Company. No. 115,944; Mar. 27; v. 236; p. 1216.

Mosquito-stinging preventive. Yellow Pine Medicine Co. No. 115,871; Mar. 13; v. 236; p. 592.

Neckties. B. Altman & Co. No. 115,716; Mar. 6; v. 236; p. 1217.

Newspaper and magazine articles, a magazine-section published periodically. E. M. Glimer. No. 115,850; Mar. 13; v. 236; p. 591.

Nuts, Salted. Marple Bros. No. 115,982; Mar. 27; v. 236; p. 1217.

Oil for human and animal use and paranitranilin, Medicinal linseed-. The Sherwin-Williams Co. No. 116,008; Mar. 27; v. 236; p. 1218.

Oil, Hair-. Madam's Buford & Owens. No. 115,878; Mar. 20; v. 236; p. 885.

Oil, Illuminating-. Tide Water Oil Co. No. 116,017; Mar. 27; v. 236; p. 1218.

Oil, Medicinal preparation of olive-. The Jelol Company. No. 115,764; Mar. 6; v. 236; p. 278.

Oil, Olive-. Elysée Olive Oil Co. No. 115,745; Mar. 6; v. 236; p. 278.

Oils, Soluble lubricating-. The Phoenix Oil Company. No. 115,797; Mar. 6; v. 236; p. 279.

Oils, Soluble lubricating and cutting. The Phoenix Oil Company. No. 115,997; Mar. 27; v. 236; p. 1217.

Organ published monthly, House. R. E. Taylor Corporation. No. 115,872; Mar. 13; v. 236; p. 592.

Ovens, Portable and other. Hubbard Portable Oven Co. No. 115,966; Mar. 27; v. 236; p. 1216.

Overcoats, Men's. Thexton & Wright. No. 116,015; Mar. 27; v. 236; p. 1218.

Paints and enamels, varnishes, japans, Ready-mixed. W. W. Lawrence & Co. No. 115,974; Mar. 27; v. 236; p. 1217.

Paper and stationery, Certain named. Geo. Borgfeldt & Co. No. 115,931; Mar. 27; v. 236; p. 1215.

Paper, Toilet-. The John Hoberg Co. No. 115,964; Mar. 27; v. 236; p. 1216.

Paper, Writing-. Gala Tea Co. No. 115,953; Mar. 27; v. 236; p. 1216.

Papers and envelops, Ledger, record, bond, book, and cover, &c. Taylor-Logan Co. Papermakers. No. 116,012; Mar. 27; v. 236; p. 1218.

Papers, Writing and printing. Beekman Paper and Card Company. No. 115,926; Mar. 27; v. 236; p. 1215.

Papers, Writing and printing. Keith Paper Company. No. 115,970; Mar. 27; v. 236; p. 1216.

Paste for treatment of soft bleeding gums. Duane Laboratories. No. 115,742; Mar. 6; v. 236; p. 277.

Pastry-shortening. Atlanta Refining & Manufacturing Company. No. 115,923; Mar. 27; v. 236; p. 1215.

Pens, Fountain and stylographic. E. Hugetz. No. 115,967; Mar. 27; v. 236; p. 1216.

Periodicals, Monthly. H. S. Reavis. No. 115,804; Mar. 6; v. 236; p. 279.

Petroleum, Crude. Warren Oil Company. No. 115,870; Mar. 13; v. 236; p. 592.

Petroleum, Refined. Tide Water Oil Co. No. 115,822; Mar. 6; v. 236; p. 280.

Pharmaceutical preparation. Griffith Chemical Company. No. 115,757; Mar. 6; v. 236; p. 278.

Pharmaceutical preparations, Certain named. J. H. McCormick. No. 115,980; Mar. 27; v. 236; p. 1217.

Pharmaceutical preparations, Certain named. The Scholl Manufacturing Company. No. 115,866; Mar. 13; v. 236; p. 592.

Photographic developers. Eastman Kodak Co. No. 115,743; Mar. 6; v. 236; p. 277.

Picture films, Motion-. E. Reinbold. No. 116,002; Mar. 27; v. 236; p. 1217.

Piece goods of cotton warp with worsted, &c., filling and dress fabrics of cotton, silk, &c. Lesher, Whitman & Co. No. 115,975; Mar. 27; v. 236; p. 1217.

Pipes and mouthpieces, Smoking-. Reiss Brothers & Company. No. 115,898; Mar. 20; v. 236; p. 885.

Piston-rings. Micro Piston Ring Co. No. 115,985; Mar. 27; v. 236; p. 1217.

Plug receptacles, Attachment-. The Bryant Electric Company. No. 115,836; Mar. 13; v. 236; p. 591.

Powder-paper. Waldes & Co. Nos. 115,824–5; Mar. 6; v. 236; p. 280.

Pregnancy-testers. W. Höhn. No. 115,889; Mar. 20; v. 236; p. 885.

Preparation, Non-alcoholic. Pabst Brewing Company. No. 115,862; Mar. 13; v. 236; p. 592.

Publication, Monthly. The Marconi Publishing Corporation. No. 115,855; Mar. 13; v. 236; p. 591.

Pump-rod couplings. E. E. Johnson. No. 115,968; Mar. 27; v. 236; p. 1216.

Pumps, Automobile and bicycle tire. Bridgeport Brass Company. No. 115,728; Mar. 6; v. 236; p. 277.

Remedies for rheumatism, headache, &c., lotions and creams, ointments, salves. K. Kovacs. No. 115,972; Mar. 27; v. 236; p. 1216.

Remedies for treating certain named diseases and ailments. Capa Drug Company. No. 115,938; Mar. 27; v. 236; p. 1215.

Remedy, Eczema. Star Eczema Co. No. 115,903; Mar. 20; v. 236; p. 886.

Remedy for coughs, colds, and la grippe. G. C. V. Fesler. No. 115,952; Mar. 27; v. 236; p. 1216.

Remedy for epileptic fits and convulsions. Poland and Savage. No. 115,800; Mar. 3; v. 236; p. 279.

Remedy for rheumatism. S. Anthony. No. 115,914; Mar. 27; v. 236; p. 1215.

Remedy for rheumatism, liver, kidney, &c., complaints, Internal. AlleRhume Remedy Co. No. 115,873; Mar. 20; v. 236; p. 885.

Remedy for trachoma and other eye affections. Monahan Medicine Co. No. 115,782; Mar. 6; v. 236; p. 279.

Remedy, Poultry. Burrell-Miller. No. 115,730; Mar. 6; v. 236; p. 277.

Rice. C. F. Blanke Tea & Coffee Co. No. 115,725; Mar. 6; v. 236; p. 277.

Rice. New Orleans Coffee Co. Nos. 115,990–1; Mar. 27; v. 236; p. 1217.

Rings, Finger-. F. H. Noble & Company. No. 115,897; Mar. 20; v. 236; p. 885.

Road-binder, Bituminous-tar. American Tar Products Company. No. 115,912; Mar. 27; v. 236; p. 1215.

Rompers or play-suits for children. E. J. Levin. No. 115,893; Mar. 20; v. 236; p. 885.

Rubber and rubber-lined-fabric hose. Peerless Rubber Manufacturing Company. No. 115,996; Mar. 27; v. 236; p. 1217.

Rubber belting, hose, packing, and tires. The Wirthlin-Mann Company. No. 115,829; Mar. 6; v. 236; p. 280.

Rubber boots and shoes. Lambertville Rubber Company. No. 115,892; Mar. 20; v. 236; p. 885.

Rubber compound for electrical purposes, Hard-. American Hard Rubber Co. No. 115,718; Mar. 6; v. 236; p. 277.

Salve or ointment, Medical. F. Buss. No. 115,732; Mar. 6; v. 236; p. 277.

Sanitary and sanitary napkins, sanitary aprons, bloomers, &c., Compressed. Perfect Notion Co. No. 115,795; Mar. 6; v. 236; p. 279.

Satins in the piece. S. Cramer. No. 115,739; Mar. 6; v. 236; p. 277.

Scissors, razors, pocket-knives, steel table-cutlery. U. J. Ullery Co. No. 116,019; Mar. 27; v. 236; p. 1218.

Screws, Iron and brass wood-. Muller, Maclean & Co. No. 115,784; Mar. 6; v. 236; p. 279.

Sewer and the like traps, union sleeves, studs, and quarter-bends, tray legs and brackets. H. C. Nichols. No. 115,859; Mar. 13; v. 236; p. 591.

Shirtings, all-wool flannels and worsteds, Silk. R. H. Linton. No. 115,776; Mar. 6; v. 236; p. 278.

Shirts, Dress, negligée, work, and under-. Brownstein-Louis Company. No. 115,877; Mar. 20; v. 236; p. 885.

Shoe cleaner, polish, and dressing, Liquid. C. A. Zoes. No. 116,024; Mar. 27; v. 236; p. 1218.

Shoe-polishing preparation. D. H. Boykin. No. 115,934; Mar. 27; v. 236; p. 1215.

Shoes, Leather. Samuels Shoe Company. No. 115,811; Mar. 6; v. 236; p. 280.

Shoes, Leather. Sears, Roebuck and Co. No. 115,902; Mar. 20; v. 236; p. 886.

Silk piece goods. H. R. Mallinson & Co. No. 115,779; Mar. 6; v. 236; p. 279.

Silk piece goods. H. R. Mallinson & Co. Nos. 115,856–7; Mar. 13; v. 236; p. 591.

Silk piece goods. Pennsylvania Textile Company. No. 115,864; Mar. 13; v. 236; p. 592.

Silk piece goods, silk and cotton fabrics, cotton piece goods and handkerchiefs. A. S. Rosenthal Company. No. 115,809; Mar. 6; v. 236; p. 279.

Silver-polish. Boston Electro Cleaner Co. No. 115,933; Mar. 27; v. 236; p. 1215.

Skylights. E. Van Noorden & Co. No. 116,020; Mar. 27; v. 236; p. 1218.

Soap. Lautz Bros. & Co. No. 115,973; Mar. 27; v. 236; p. 1217.

Soap, Liquid. Bristol-Myers Company. No. 115,935; Mar. 27; v. 236; p. 1215.

Soldering compound. A. J. Nye. No. 115,791; Mar. 6; v. 236; p. 279.

Spark-plugs. The Reflex Ignition Co. No. 115,805; Mar. 6; v. 236; p. 279.

Stains and fillers, varnishes, enamels, and paints, Wood. Pratt & Lambert. No. 115,999; Mar. 27; v. 236; p. 1217.

Statuettes and ornamental heads and figures adapted to be applied to any article of manufacture. George Borgfeldt & Co. No. 115,932; Mar. 27; v. 236; p. 1215.

Steam-traps for heating apparatus, feed-water controllers for steam-boilers, &c. The C. E. Squires Co. No. 115,867; Mar. 13; v. 236; p. 592.

Stoves, Fireless. Durham Manufacturing Company. No. 115,946; Mar. 27; v. 236; p. 1215.

Sugar, Confectioners' powdered. James A. McAteer & Sons. No. 115,979; Mar. 27; v. 236; p. 1217.

Suspenders. The Gluckauf Company. No. 115,754; Mar. 6; v. 236; p. 278.

Syrup and coffee. New Orleans Coffee Co. No. 115,989; Mar. 27; v. 236; p. 1217.

Tablets for the treatment of anemic conditions of the blood. Conway & Hall. No. 115,737; Mar. 6; v. 236; p. 277.

Threads and yarns, Cotton. Marshall Field & Company. No. 115,748; Mar. 6; v. 236; p. 278.

Tiles, Wall, floor, and ceiling. American Encaustic Tiling Co. No. 115,717; Mar. 6; v. 236; p. 277.
Tire-repair patches, repair-boots, Double-tread-. The Miller Rubber Company. No. 115,986; Mar. 27; v. 236; p. 1217.
Tonic, Reconstructive. Frederick Stearns & Co. No. 115,818; Mar. 6; v. 236; p. 280.
Tooth-paste. Wrigley & Company. No. 115,832; Mar. 6; v. 236; p. 280.
Tooth-wash, Gum. J. L. Greenbaum. No. 115,852; Mar. 13; v. 236; p. 591.
Tractors. The Happy Farmer Tractor Co. No. 115,960; Mar. 27; v. 236; p. 1216.
Trolley-wire clamps. The Ohio Brass Company. No. 115,861; Mar. 13; v. 236; p. 592.
Valves and other metallic valves for general purposes, Regulating and reducing. The Bastian-Blessing Company. No. 115,833; Mar. 13; v. 236; p. 591.
Velvets, velvettas, velveteens, corduroys, &c. Balstone, Cooke & Co. No. 115,924; Mar. 27; v. 236; p. 1215.
Watches and watch-movements. The Hampden Watch Company. No. 115,888; Mar. 20; v. 236; p. 885.
Water used as a beverage, Natural spring-. White Rock Mineral Springs Company. No. 115,828; Mar. 6; v. 236; p. 280.
Waterproof fabrics used in the manufacture of waterproof garments. C. Kenyon Company. No. 115,971; Mar. 27; v. 236; p. 1216.
Window-backgrounds, office-partitions, folding and sewing screens, &c. The Beaver Company. No. 115,925; Mar. 27; v. 236; p. 1215.
Woolen piece goods. Worumbo Manufacturing Company. No. 115,908; Mar. 20; v. 236; p. 886.
Yarns, Fine combed. Rex Spinning Co. No. 115,807; Mar. 6; v. 236; p. 279.

ALPHABETICAL LIST OF LABELS.

"Adel's Rye Bread." (For Bread.) New York Golden Star Bread Co. No. 19,982; Mar. 20; v. 236; p. 887.
"Allen's Herbal Hair Health Tonic." (For a Hair-Tonic.) J. E. Allen. No. 19,942; Mar. 6; v. 236; p. 281.
"Apropo." (For Cigars.) Ruy Suarez & Co. No. 19,952; Mar. 6; v. 236; p. 281.
"Aroma Gold Medal Coffee." (For Coffee.) The Caldwell Coffee Co. No. 19,964; Mar. 20; v. 236; p. 887.
"Barma." (For a Non-Intoxicating Cereal Beverage.) Val Blatz Brewing Co. No. 19,994; Mar. 20; v. 236; p. 887.
"Betsy Ross." (For Bread.) The H. Korn Baking Co. No. 19,973; Mar. 20; v. 236; p. 887.
"Big Game Hunter." (For a Toy.) The A. Schoenhut Company. No. 19,993; Mar. 20; v. 236; p. 887.
"Bite O." (For Bread.) Saniwax Paper Co. No. 19,948; Mar. 6; v. 236; p. 281.
"Blue Label 'Cutters That Cut.'" (For Cutters.) John Royle & Sons. No. 19,988; Mar. 20; v. 236; p. 887.
"Boone's Trail." (For Canned Tomatoes.) Ritchie Canning Co. No. 19,945; Mar. 6; v. 236; p. 281.
"Brer Rabbit." (For Candies.) Farley Candy Company. No. 19,970; Mar. 20; v. 236; p. 887.
"Bunker Hill Varnishes." (For Varnish.) New England Oil Paint & Varnish Co. No. 19,981; Mar. 20; v. 236; p. 887.
"Caldwell's Aroma Electric Cut Coffee." (For Coffee.) The Caldwell Coffee Company. No. 19,963; Mar. 20; v. 236; p. 887.
"Caldwell's Aroma Golden Blend Coffee." (For Coffee.) The Caldwell Coffee Co. No. 19,962; Mar. 20; v. 236; p. 887.
"Caldwell's Dinner Cup Blend Coffee." (For Coffee.) The Caldwell Coffee Co. No. 119,966; Mar. 20; v. 236; p. 887.
"Canvas Back Patching Stock." (For Tire-Repair Material.) The Beckley-Ralston Co. No. 19,959; Mar. 20; v. 236; p. 887.
"Caramel." (For Non-Alcoholic Beverages.) H. Schreier. No. 19,954; Mar. 6; v. 236; p. 281.
"Cardinal." (For Non-Alcoholic Beverages.) H. Schreier. No. 19,953; Mar. 6; v. 236; p. 281.
"Chick-Adee." (For Candies.) Farley Candy Company. No. 19,969; Mar. 20; v. 236; p. 887.
"Denservo." (For Tooth-Paste.) C. W. Westenfelter. No. 19,997; Mar. 20; v. 236; p. 887.
"Dixie Highway." (For Canned Tomatoes.) A. B. Ritchie. No. 19,944; Mar. 6; v. 236; p. 281.
"Eatsum." (For Bread.) Saniwax Paper Co. No. 19,950; Mar. 6; v. 236; p. 281.
"Edelweiss." (For Cream-Cheese.) The Purity Cream Cheese Co. No. 19,985; Mar. 20; v. 236; p. 887.
"Emazol." (For Mouth and Throat Wash.) Takalon, Inc. No. 19,956; Mar. 6; v. 236; p. 281.
"Famo." (For Non-Intoxicating Beverage.) Jos. Schlitz Brewing Co. No. 19,989; Mar. 20; v. 236; p. 887.
"Fir Balm Emulsion." (For a Remedy for the Treatment of Coughs, Colds, Hoarseness, and All Affections of the Throat and Lungs.) C. R. Hillberg. No. 19,972; Mar. 20; v. 236; p. 887.
"Fountain Brand Bathing Soda." (For Bathing-Soda.) Davis Co. No. 19,968; Mar. 20; v. 236; p. 887.
"Gold Medal Steel Cut Coffee." (For Coffee.) The Caldwell Coffee Co. No. 19,961; Mar. 20; v. 236; p. 887.
"Hebrew words reading: 'Tuv (good) venoolm (sweet) Kosher (Kosher) chamen (oil).'" (For Cotton-Seed Oil.) S. Leibsiger. No. 19,974; Mar. 20; v. 236; p. 887.
"Hydroproof-Racket-Lak." (For a Finishing Lacquer or Varnish.) Providence Specialty Company. No. 19,984; Mar. 20; v. 236; p. 887.
"Imperial." (For Non-Alcoholic Beverages.) H. Schreier. No. 19,955; Mar. 6; v. 236; p. 281.
"It's All." (For Bread.) Saniwax Paper Co. No. 19,949; Mar. 6; v. 236; p. 281.
"Justrite." (For Bread.) Saniwax Paper Co. No. 19,946; Mar. 6; v. 236; p. 281.
"Kleanrapt." (For Bread.) Saniwax Paper Co. No. 19,947; Mar. 6; v. 236; p. 281.
"Luxo." (For a Non-Intoxicating Beverage.) Henry Weinhard Estate. No. 19,992; Mar. 20; v. 236; p. 887.
"Maid Marion Dresses." (For Ladies' Dresses.) Marion Dress Co. No. 19,975; Mar. 20; v. 236; p. 887.
"Maryland Farms, Registered Holstein Milk." (For Milk.) D. E. Waters. No. 19,996; Mar. 20; v. 236; p. 887.
"Meat-O-Wheat." (For Bread.) Saniwax Paper Co. No. 19,951; Mar. 6; v. 236; p. 281.
"Moose Brand Coffee." (For Coffee.) The Caldwell Coffee Co. No. 19,965; Mar. 20; v. 236; p. 887.
"Morris Miller's Original Liniment." (For Morris Miller's Original Liniment.) M. Miller. No. 19,977; Mar. 20; v. 236; p. 887.
"Nevada Honey." (For Extracted Honey.) G. H. Wright. No. 19,958; Mar. 6; v. 236; p. 281.
"Okolene." (For a Solution for Poison-Oak Infection.) Okolene Co. No. 19,983; Mar. 20; v. 236; p. 887.
"Plates for Stock Tags." (For Tags for Live Stock to Indicate That They Have Been Tested for Various Diseases.) A. Byrd. No. 19,960; Mar. 20; v. 236; p. 887.
"Quizz." (For Non-Intoxicating Non-Malt Beverage.) The Geo. Wiedemann Brewing Company. No. 19,998; Mar. 20; v. 236; p. 887.
"Red Label 'Cutters That Cut.'" (For Cutters.) John Royle & Sons. No. 19,987; Mar. 20; v. 236; p. 887.
"San Delco." (For Cigar-Boxes.) Moeller & Zapp. No. 19,978; Mar. 20; v. 236; p. 887.
"Sanitary Tooth Pick." (For Toothpicks.) L. Alden. No. 19,941; Mar. 6; v. 236; p. 281.
"Santa Barbara." (For Canned Sardines.) C. E. Van Landingham Co. No. 19,995; Mar. 20; v. 236; p. 887.
"Smokewell." (For Cigars.) Emze Cigar Co. No. 19,943; Mar. 6; v. 236; p. 281.
"Snapfast." (For Garment-Fasteners.) The Goedecke Specialty-Manufacturing Company. No. 19,971; Mar. 20; v. 236; p. 887.
"Star Dust." (For Silver-Cleaner.) Central Mfg. Co. No. 19,967; Mar. 20; v. 236; p. 887.
"The Tea the Russians Drink." (For Tea.) Musher & Co. No. 19,979; Mar. 20; v. 236; p. 887.
"Thomsen's Elk." (For Cigars.) T. Thomsen & Son. No. 19,990; Mar. 20; v. 236; p. 887.
"Toko." (For a Non-Intoxicating Beverage.) Henry Weinhard Estate. No. 19,991; Mar. 20; v. 236; p. 887.
"U-Ar-Das Bath Tablets." (For Bath-Tablets.) Woodard, Clarke & Co. No. 19,957; Mar. 6; v. 236; p. 281.
"Wash-White." (For Clothes-Washing Compound.) The National Clock and Manufacturing Co. No. 19,980; Mar. 20; v. 236; p. 887.
"White Label 'Cutters That Cut.'" (For Cutters.) John Royle & Sons. No. 19,986; Mar. 20; v. 236; p. 887.

PRINTS.

"Ad-El-Ite Motor Carbon Remover." (For Carbon-Remover.) Adams & Elting Co. No. 4,643; Mar. 20; v. 236; p. 888.

"Armour's Oats." (For Armour's Oats.) Armour Grain Company. No. 4,645; Mar. 20; v. 236; p. 888.

"Bocabell." (For Soap.) Enos F. Jones Chem. Co. No. 4,641; Mar. 6; v. 236; p. 281.

"Breakfast, Luncheon and Dinner Armour's Oats." (For Armour's Oats.) Armour Grain Company. No. 4,644; Mar. 20; v. 236; p. 888.

"Cuticura Soap and Ointment." (For Cuticura Soap and Ointment.) Potter Drug & Chemical Corp. No. 4,656; Mar. 20; v. 236; p. 888.

"Goodyear Service Station." (For Cushion-Tires.) The Goodyear Tire & Rubber Company. No. 4,648; Mar. 20; v. 236; p. 888.

"Here You Are." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 4,647; Mar. 20; v. 236; p. 888.

"Jardin De Rose." (For Toilet Requisites.) American Toilet Goods Co. No. 4,639; Mar. 6; v. 236; p. 281.

"Krumbles — A Good Winter Cereal — Krumbles is a strengthening winter cereal for children because of the richness of the Durum Wheat. Try it with hot milk." (For a Cereal Breakfast Food.) Kellogg Toasted Corn Flake Co. No. 4,651; Mar. 20; v. 236; p. 888.

"Krumbles—The Strengthening Cereal—Better than any other wheat food, Krumbles gratifies the palate, satisfies the appetite and nourishes the body. Children like Krumbles." (For a Cereal Breakfast Food.) Kellogg Toasted Corn Flake Co. No. 4,650; Mar. 20; v. 236; p. 888.

"Krumbles—Whole Wheat Cereal—Krumbles is Kellogg's whole Durum Wheat Food—every single tiny shred is thoroughly toasted. The flavor is delicious." (For a Cereal Breakfast Food.) Kellogg Toasted Corn Flake Co. No. 4,649; Mar. 20; v. 236; p. 888.

"Listerine." (For Listerine.) Lambert Pharmacal Co. No. 4,652; Mar. 20; v. 236; p. 888.

"Mallory Hats." (For Hats.) E. A. Mallory & Sons, Inc. No. 4,642; Mar. 6; v. 236; p. 281.

"Mennen's Cold Cream Improves The Complexion." (For Cold-Cream.) G. Mennen Chemical Co. No. 4,655; Mar. 20; v. 236; p. 888.

"Mennen's Talcum For Men." (For Mennen's Talcum Powder.) G. Mennen Chemical Co. No. 4,654; Mar. 20; v. 236; p. 888.

"No. 8 Cream City Dwarf Display Cut-Outs." (For Cream City Ware.) Geuder, Paeschke & Frey Co. No. 4,640; Mar. 6; v. 236; p. 281.

"The New Brand Vacuum Cleaner With Sweeper." (For Vacuum-Cleaners.) G. Brand. No. 4,646; Mar. 20; v. 236; p. 888.

"This Part Of Your Face Interests The House Of Mennen." (For Mennen's Shaving-Cream.) G. Mennen Chemical Co. No. 4,653; Mar. 20; v. 236; p. 888.

"You Cant Get On Without It." (For Cresbo Crum Catcher, a Device Which Brings Bread-Box, Bread-Board, Place for Knife, and Receptacle to Catch or Save the Crums All Together.) S. W. Krebs. No. 4,657; Mar. 20; v. 236; p. 888.

DISCLAIMER.

Corner-piece. A. P. Cochrane. No. 1,195,910; date of patent Aug. 22, 1916; disclaimer filed Mar. 17, 1917; v. 236; p. 895.

CLASSIFICATION OF PATENTS

MARCH, 1917.

NOTE.—First number—class, second number—subclass, third number—patent number.

1— 18: 1,219,446
1,219,484
19: 1,218,649
56: 1,220,298
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274— 27: 1,219,934
30: 1,218,918
35: 1,220,638

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OFFICIAL GAZETTE

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UNITED STATES PATENT OFFICE.

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VOLUME CCXXXVII.

APRIL,

1917.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1917.

ERRATA.

1,221,144, page 50, fifth claim, line 5, after the word "means" insert the words *cooperating with the pulverizing element;* same claim, lines 6-7, strike out the words "coöperating with the pulverizing element."

1,225,290, page 103, claim, line 7, for the word "clearness" read *clearance.*

1,222,183, page 445, claim, line 2, for the word "supported" read *supporting.*

1,222,485, page 552, strike out all after number—heading, drawing, and claim and insert the word WITHDRAWN.

1,222,688, page 665, third claim, line 3, for the word "nozzles" read *nozzle.*

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Sept. 11, 1919

Patents Nos. 1,221,009 to 1,221,813.

THE

OFFICIAL GAZETTE

OF THE

United States Patent Office.

Pres. S. & D.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Trade-Marks	85—No.	116,025 to No.	116,109, inclusive.
Labels	None.		
Prints	None.		
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Total	910		

Norway—Extension of Time for Filing Applications and Payment of Fees on Account of the War.

DEPARTMENT OF STATE,
Washington, March 27, 1917.

The honorable the Secretary of the Interior.

SIR: Referring to the letter of the Commissioner of Patents of September 16 last and to Department's reply of October 3, 1916, I have the honor to enclose for your information a copy of a dispatch from the American Minister at Christiania and its original enclosures, showing the laws and regulations of Norway relating to the subject of the extension of privileges on account of the European war to applicants for patents.

I have the honor to be sir, your obedient servant,

For the Secretary of State:

FRANK L. POLK.
Counselor.

CHRISTIANIA, *January 25, 1917.*

The honorable the Secretary of State, Washington.

SIR: Replying to the Department's circular instruction of October 7, 1916, (file No. 811.542/36,) relative to the extension of privileges to applicants for patents on account of the European war, I have the honor to state that, in reply to a request which I addressed to the Royal Norwegian Minister for Foreign Affairs under date of November 2, 1916, embodying the contents of the above instruction, I received, under date of the 20th inst., a note enclosing a memorandum from the Office for the Protection of Industrial Property in Norway, copy and translation of which I enclose herewith. I likewise enclose, in duplicate, the different laws and resolutions referred to in the said memorandum.

I have the honor to be, sir, your obedient servant,

(Signed) A. G. SCHMEDEMAN.

MEMORANDUM:

Laws and regulations relative to patents, trade-marks, and models.

1. In accordance with the enclosed law of July 14, 1916, and the royal resolution of November 24, 1916, (enclosures 7–10,) the time allowed for the filing of applications for patents in article 4 of the Paris Convention has been extended until June 30, 1917, provided that it had not expired on July 29, 1914. According to the enclosed royal resolutions of July 14 and November 2, 1916, this privilege is extended at the present time, among others, to the citizens and subjects of the United States of America (enclosures Nos. 8 and 9).

2. By the laws of August 18, 1914, and June 18, 1915, as well as by the royal resolutions of June 18, 1915, January 7 and November 24, 1916, (enclosures 2–6,) an extended time of three months has been allowed for the payment of the increased annual fees for patents granted, so that the owners of patents for which the annual fee falls due in the period from and including December 31, 1916, have had or will have an extension of nine months for the payment of the increased annual fee. Besides, by royal resolution of November 24, 1916, (enclosure No. 6,) there has been arranged a decreasing extension of the time for the payment of increased fees, so that, for patents for which the annual fee falls due in the period from and including January 1 to and including June 29, 1917, the increased fee can be paid up to September 30, 1917.

The extension of the time for the payment of annual fees is granted to all owners of Norwegian patents without any reciprocity being required in the case of the owner being a subject of a foreign state.

3. The Patent Office is authorized, upon request, to extend the periods allowed for the handling of pending patent actions. During the present state of war an extension of one or several two monthly periods is given—also to American subjects and citizens.

The time allowed for the filing of protests against the granting of a patent (sec. 28 of the patent law) is not extended. The same relates to the time allowed for appealing to the second division of the Patent Office (sec. 31, part 2).

4. The time allowed for the working of a patented invention is not extended. (See law of July 2, 1910, secs. 9 and 49, enclosure No. 1, as well as the law of June 16, 1885, sec. 27.)

5. There is no time limit in Norway for the registering of transfers and licenses.

Neither is there any definite time limit for the bringing of lawsuits relative to patents.

The postponements of pending lawsuits are decided by the courts.

There is no Norwegian law in regard to the extension of patents.

6. No extensions of time have been arranged for trade-marks and models.

12898

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 30, 1917.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 31	Jan. 26	286
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Nov. 1	Jan. 23	515
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Feb. 19	Feb. 15	104
234	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Jan. 18	Mar. 16	235
167	5. Bookbinding; Harvesters; Jewelry; Music	Nov. 27	Feb. 12	260
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Nov. 21	Jan. 19	377
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Nov. 11	Dec. 1	678
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Oct. 13	Feb. 3	1050
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Sept. 14	Feb. 4	581
235	10. Carriages and Wagons	Oct. 17	Mar. 2	895
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus.	Dec. 26	Mar. 20	167
324	12. Journal-Boxes, Pulleys, and Shafting; Machine Elements	Jan. 2	Mar. 9	617
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Dec. 8	Feb. 26	545
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Dec. 6	Jan. 4	294
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Mar. 1	Mar. 12	240
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Nov. 10	Jan. 10	611
303	17. Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting.	Jan. 3	Mar. 7	207
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Lubrication; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Feb. 23	Feb. 16	261
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Nov. 8	Dec. 22	498
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Mar. 2	Mar. 8	214
182	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Dec. 14	Jan. 30	268
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 13	Jan. 31	538
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Oct. 21	July 25	369
144	24. Apparel; Apparel Apparatus; Sewing-Machines; Garment Supporters	Dec. 11	Mar. 2	329
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Feb. 15	Feb. 27	155
106	26. Electricity, Generation; Motive Power	Aug. 14	Feb. 1	603
375	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Feb. 24	Feb. 28	247
63	28. Internal-Combustion Engines	Sept. 20	Jan. 8	502
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Nov. 4	Jan. 2	419
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Dec. 18	Mar. 10	409
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Dec. 8	Jan. 4	288
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Sept. 2	Mar. 1	953
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Nov. 21	Feb. 24	382
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Sept. 12	Feb. 9	338
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet	Oct. 21	Feb. 7	718
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring	Dec. 13	Mar. 13	602
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	Sept. 15	Feb. 5	802
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Mar. 6	Mar. 12	144
321	39. Water Distribution	Nov. 14	Jan. 16	392
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Dec. 13	Mar. 6	522
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Nov. 28	Jan. 24	391
244	42. Electricity, Conductors; Railway Signaling; Electricity-Transmission to Vehicles	Sept. 30	Feb. 17	382
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Jan. 15	Feb. 1	165

Oldest new case, Aug. 14; oldest amended, July 25.
Total number of applications awaiting action 13,613

163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 25	Mar. 6	993
	Designs	Feb. 9	Mar. 6	337
	Labels and Prints	Mar. 17	Mar. 23	71

PATENTS

GRANTED APRIL 3, 1917.

1,221,009. BUTTON. WALTER T. ABEL, Waterbury, Conn., assignor to The Patent Button Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 28, 1916. Serial No. 94,089. (Cl. 24—108.)



1. A button provided with a hub and containing a locking key, said key provided with tapered sides with ribs extending thereacross in a direction substantially at right angles to the direction in which the button fastener is inserted in the button hub.

2. A button comprising a hub, and a locking key therein, said locking key formed with two inclined faces provided with ribs extending in a direction substantially at right angles to the direction in which the fastener is inserted in the hub, and a fastener adapted to be clamped between said key and the hub.

3. A button comprising a hollow hub, a locking key contained therein and provided with an inclined face, a fastener having a prong extending between the hub and the inclined face of the key, the inclined face of the key provided with corrugations thereon extending in a direction substantially at right angles to the said prong, said corrugations adapted to indent and corrugate the prong of the fastener when forcibly inserted between said key and hub, the transverse corrugations upon the key preventing the disengagement of the fastener when transversely rocked.

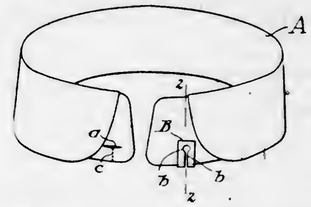
4. A button comprising a hollow hub, a locking key contained therein and provided with two inclined faces, a fastener consisting of a head and two spaced prongs, said prongs adapted to fit between the hub and the inclined faces of the locking key, said inclined faces of the locking key provided with corrugations extending in a direction substantially at right angles to the direction of the length of the prongs and adapted to indent the faces of said prongs as the fastener is forcibly inserted in the hub.

5. A button comprising a hollow hub, a locking key contained therein and provided with two inclined faces, a fastener consisting of a head and two spaced prongs, said prongs adapted to fit between the hub and the inclined faces of the locking key, said inclined faces of the locking key provided with corrugations extending in a direction substantially at right angles to the direction of the length of the prongs and adapted to indent the faces of said prongs as the fastener is forcibly inserted in the hub, said head provided with an opening intermediate the said prongs, rendering accessible the key and allowing it to be driven out of locking engagement with said prongs.

1,221,010. ATTACHMENT FOR NOTCHED COLLARS. PHILIP F. ACOCELLA, New York, N. Y. Filed May 13, 1916. Serial No. 97,225. (Cl. 24—202.)

1. An attachment for notched collars embodying two resilient legs united at their bases and adapted to embrace and frictionally grip the lower edge of the neckband of a notched collar, said legs being provided with juxtaposed slots substantially conforming in size and contour to the notch of the collar and extending toward the free ends of the legs from the bases thereof.

2. An attachment for notched collars embodying a bifurcated, resilient clip adapted to embrace and frictionally grip the lower edge of the neckband of a notched collar, the legs of said clip being provided with juxtaposed slots substantially conforming in size and contour to the notch of the collar and the slot in one leg forming a continuation of the slot in the other.



3. An attachment for notched collars embodying an elongated strip of resilient material provided with a longitudinally extending slot, said strip being bent upon itself midway of the length of the slot to form a clip the legs of which are provided with juxtaposed slots and which clip is adapted to straddle the neckband of the collar and be frictionally secured thereto with both slots in register with the notch of the collar.

1,221,011. CLASP-FASTENER. FRANK J. ANDERSON, Box Elder, Mont. Filed Mar. 23, 1916. Serial No. 86,140. (Cl. 24—233.)



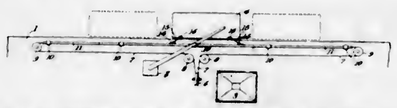
1. A clasp fastener comprising in combination, a base plate, a hook formed upon said base plate and overhanging the latter, a closing lever pivoted to the free end of said hook and adapted to swing over said plate, a leaf spring carried by the outer end of said closing lever and having its free end extending toward the base plate and the hook, the body of said leaf spring acting upon the end of said hook to tension the closing lever in its motion from open to closed position, and tending to yieldingly hold the closing lever in either its open or closed position.

2. A clasp fastener comprising in combination, a base plate, a hook formed upon said base plate and overhanging the latter, a closing lever pivoted to the free end of said hook and adapted to swing over said plate, a leaf spring extending from the free end of said closing lever toward said base plate, said spring bearing against the free end of said hook and riding thereabout in tensioned relation while the lever is being carried from open to closed position and acting to yieldingly hold the lever in either its open or closed position.

1,221,012. VESSEL MOORING AND POSITIONING APPARATUS. JAMES A. ANDERSON, New York, N. Y. Filed Nov. 11, 1916. Serial No. 130,747. (Cl. 114—230.)

1. In a vessel mooring and positioning device, the combination with a dock and a vessel to be positioned, of a plurality of mooring bitts movably mounted on the dock,

connections between said bitts and mooring bitts on the vessel, and means for shifting the bitts along the dock parallel with the edge thereof.



2. In a vessel mooring and positioning device, the combination with a dock and a vessel to be positioned, of a guideway mounted on the dock, a plurality of mooring bitts slidably mounted in said guideway, connections between said slidable bitts and mooring bitts on the vessel, and means for shifting the sliding bitts along the guideway.

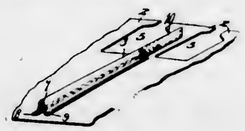
3. In a vessel mooring and positioning device, the combination with a dock and vessel to be positioned, of an endless traveling cable supported on sheaves on the dock, a plurality of mooring bitts carried by said cable, connections between said bitts and mooring bitts on the vessel, and means for operating the endless cable to shift the bitts carried thereby back and forth along the dock.

4. In a vessel mooring and positioning device, the combination with a dock and a vessel to be positioned, of a guideway mounted along the edge of the dock, a plurality of mooring bitts slidably mounted in said guideway, connections between said bitts and mooring bitts on the vessel, an endless cable supported on sheaves on the dock, connections between said cable and the sliding bitts, and means for operating the cable to shift the sliding bitts along the guideway.

5. In a vessel mooring and positioning device, the combination with a dock and a vessel to be positioned, of a tubular guideway mounted on the dock parallel with the edge thereof, the wall of the guideway facing the edge of the dock being slotted substantially throughout its length, an endless cable passing around sheaves mounted on the dock and through the tubular guideway, a plurality of mooring bitts attached to said cable and slidably confined within the tubular guideway, connections between said bitts and mooring bitts on the vessel extending through the slot in the guideway and means for operating the cable to shift the slidable bitts back and forth along the guideway.

[Claims 6 to 8 not printed in the Gazette.]

1,221,013. VENTILATING PLATE AND SPACER FOR ELECTRICAL APPARATUS. CARL B. AUEL, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 7, 1911. Serial No. 601,338. (Cl. 171—206.)



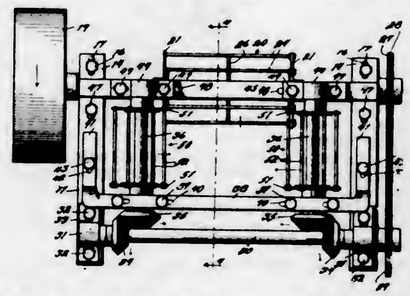
1. In a laminated structure, the combination with a plate, of a plurality of straight radial spacing fingers severally entirely disposed on one side of said plate and secured thereto, said fingers severally comprising a longitudinal V-shaped central portion and outer longitudinal side portions substantially at right angles to said central portion.

2. A ventilating device for magnetizable cores comprising a plate and a plurality of straight spacing fingers severally entirely disposed on and united to one side of said plate, each of said fingers comprising a long and narrow strip having a centrally located V-shaped longitudinal portion and outer longitudinal side flanges.

3. Ventilating means for laminated magnetizable core structures comprising a plate having a plurality of narrow radially projecting teeth, and a plurality of spacing fingers radially disposed upon the center lines of said teeth and welded to said plate, one end of each finger being V-shaped in cross section and having longitudinal side flanges, the other end having the sides of said V-shaped portion in intimate contact with each other and having no side flanges.

4. A spacing finger for laminated structures comprising a punched metallic member, one end of which is of V-shape section and provided with long side flanges and the other end having the side portions of said V-shaped member in intimate contact.

1,221,014. MACHINE FOR ROUGHENING CLAY RIBBON. CHARLES J. BARNETT, Neodesha, Kans. Filed Mar. 10, 1916. Serial No. 83,358. (Cl. 25—1.)



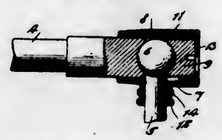
In a machine of the character described, a pair of upstanding beams; vertically adjustable bearings arranged upon the rear side of the beams near their upper ends; means for connecting the bearings with the beams; a substantially horizontal shaft journaled through the vertically adjustable bearings; a substantially horizontal reel carried by the shaft; a pulley secured to the shaft to drive it; a substantially horizontal upper strip secured to the forward side of the beams near their upper ends; bearings secured to the upper strip and adapted to be horizontally adjusted thereon; a substantially horizontal lower strip having upstanding extensions which are adjustably connected with the forward sides of the beams so that the lower strip may be raised and lowered; bearings carried by the lower strip and adapted to be adjusted horizontally thereon; substantially vertical spaced shafts journaled in the bearings carried by the upper and lower strips whereby said substantially vertical shafts are adjustable toward and away from each other; substantially vertical reels carried by the substantially vertical shafts; gears carried by the lower ends of the substantially vertical shafts; co-acting gears; a lower substantially horizontal shaft carrying the co-acting gears; vertically adjustable bearings receiving the lower shaft and connected with the forward side of the beams; and gearing between corresponding ends of the upper and lower shafts.

1,221,015. PROTECTOR AND LUBRICANT-RETAINER FOR THE JOINTS OF THE STEERING MECHANISM AND OTHER PARTS OF AN AUTOMOBILE. CHARLES W. BECK, Rockville Center, N. Y., assignor, by mesne assignments, to The Beck-Frost Corporation, Detroit, Mich., a Corporation of Michigan. Filed May 1, 1911, Serial No. 624,442. Renewed Aug. 18, 1916. Serial No. 115,678. (Cl. 74—17.)

1. A joint protector comprising a molded one-piece flexible elastic tubular device having a main portion and a subordinate portion extending outwardly at an angle to the main portion, said tubular elastic portions being normally smaller than the parts to be covered by them, whereby said tubular device will yieldingly clamp itself about the parts to be protected and will seal the joint between the connected parts.

2. The combination of a fore-and-aft rod, a steering rod connected thereto and a joint protector fitting closely over the fore-and-aft rod and the steering rod and comprising a molded one-piece tubular device having a main tubular portion adapted to receive the fore-and-aft rod, and a subordinate portion extending outwardly at an angle to the main portion and adapted to receive the steering rod, said tubular portions being normally smaller than the parts to be covered by them, whereby said portions will yieldingly clamp themselves in position and will seal the joint between the fore-and-aft rod and the steering rod.

3. A joint protector comprising a molded one-piece flexible elastic tubular device having a main portion and a flexible elastic integral tubular extension projecting a considerable distance outwardly from the main portion and permanently molded to form.

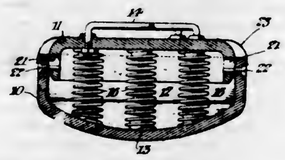


4. The combination with transversely jointed members detachably connected together, of a joint protector comprising transversely arranged socket portions engageable around the transversely arranged members respectively, said protector being formed of elastic material, and the walls of the socket portions thereof being continuous.

5. The combination with transversely jointed members detachably connected together, of a joint protector comprising transversely arranged socket portions engageable around the transversely arranged members respectively, said protector being formed of elastic material and the walls of the socket portions thereof being continuous, and means at the end of one of said socket portions for connecting said transversely arranged members together, there being an opening in said end of said socket portion positioning the connecting means in position to be accessible.

[Claims 6 to 8 not printed in the Gazette.]

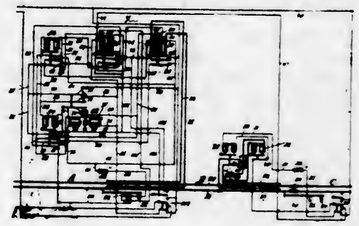
1,221,016. TRUSS. WILLIAM N. BEST, Brooklyn, N. Y. Filed June 28, 1916. Serial No. 106,326. (Cl. 128—26.)



A truss including two cup-shaped members having peripheral walls arranged to telescope one within the other and encircling a central chamber, one of said members constituting a base and the other presenting a bearing surface, the peripheral walls of said members having interengaging parts for limiting the movement of said members toward and from each other and the inner peripheral wall being curved inwardly at its free edge to permit a relative tilting of one member in respect to the other, a belt guide carried by and disposed substantially parallel to the said base, a sealing strip secured to each of said members along the free edge of the peripheral wall of the outer member and a plurality of springs within said chamber and tending to separate said members to the limiting extent.

1,221,017. RAILROAD SIGNALING SYSTEM. HENRY BEZER, Newark, N. J. Filed June 10, 1916. Serial No. 566,138. (Cl. 246—30.)

1. A railroad signaling system comprising a track circuit, means for producing a limited number of pulses in the track circuit including instruments progressively responsive to the individual pulses thus produced, a signal and means controlled by said instruments for operating said signal after the said limited number of pulses have been produced.



2. A railroad signaling system comprising a track circuit, means for producing a limited number of pulses in the track circuit including a plurality of circuit controlling instruments successively responsive to the pulses thus produced, a signal and means controlled by said instruments for operating said signal after the said limited number of pulses have been produced.

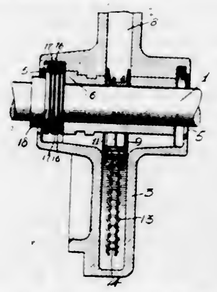
3. A railroad signaling system comprising a track circuit, means for producing a limited number of pulses in the track circuit controlled by the passage of a car on and off of said track circuit, a signal, and means controlled by said first mentioned means whereby the said signal is operated after the said limited number of pulses have been produced.

4. A railroad signaling system comprising a track circuit, means for producing a limited number of current reversals in the track circuit including instruments progressively responsive to the individual current reversals thus produced, a signal and means controlled by said instruments for operating said signal after the said limited number of current reversals have been produced.

5. A railroad signaling system comprising a track circuit, means for producing a limited number of current reversals in the track circuit including a plurality of circuit controlling instruments successively responsive to the current reversals thus produced, a signal and means controlled by said instruments for operating said signal after the said limited number of current reversals have been produced.

[Claims 6 to 40 not printed in the Gazette.]

1,221,018. LUBRICATING DEVICE. WILLIAM L. BLISS, Niagara Falls, N. Y., assignor by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed May 3, 1911. Serial No. 624,870. (Cl. 64—31.)

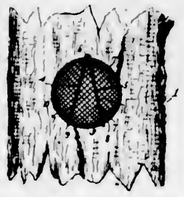


1. In combination, a rotatable shaft, a separable externally flanged oil ring loosely mounted on said shaft, the periphery of said ring between the flanges being provided with slots which extend over a considerable arc of the circumference, an oil well in which said flanges are ar-

ranged to rotate, a chain loosely hung upon said slotted tread, and means for directing to the shaft the oil picked up by the flanges in passing through said oil well and thrown off of the same by centrifugal action and said elongated slots serving to convey the oil picked up by said chain to the shaft at all speeds of rotation of the shaft.

2. In combination, an oil ring having flaring flanges the periphery of said ring between the flanges being slotted, the slots extending substantially around the entire circumference, a shaft extending through said ring, said ring bearing directly on said shaft and adapted to be driven frictionally thereby, an oil receptacle into which said ring is arranged to dip, a chain loosely hung upon the tread of said ring and extending downward into the oil well, and means for directing to the shaft the oil picked up by said ring, said elongated slots serving to direct the oil picked up by said chain to said shaft at all speeds of rotation of the shaft.

1,221,019. FOOD-HOLDING DEVICE FOR BIRDS. BEECHER S. BOWDISH, Demarest, N. J. Filed Jan. 30, 1915. Serial No. 5,186. (Cl. 119—51.)



1. A food-holding feeding device, for birds, comprising a wire base having legs adapted to be fastened to a tree or other support, the ends of said legs being turned to form bearings, a wire frame mounted in the bearings so as to swing freely therein, and a holding receptacle formed of wire mesh secured to the frame.

2. A food-holding feeding device for birds, comprising a wire frame having legs adapted to be fastened to a tree or other support, the ends of the legs being turned to form bearings, a wire frame mounted in the bearings, and a holding receptacle formed of wire mesh secured to the frame, the receptacle being formed with a semispherical food-holding portion.

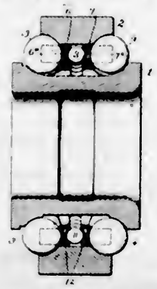
3. A food-holding device for birds, comprising a base made of wire bent to form legs and a latch, the legs being adapted to be fastened to a tree or other support, bearings on the legs, a wire frame mounted in the bearings so as to swing freely therein, and a holding receptacle formed of wire mesh secured to the frame.

4. A food-holding device for birds, comprising a two-part wire structure, one part being in the form of a semispherical wire mesh and pivotally secured to the other part, the two parts forming a holder from which all of the contents may be removed without separating the parts.

5. A food-holding device for birds, comprising a two-part wire structure, one part being formed of wire mesh retracted toward the bottom of the other part, the two parts hinged to each other forming a holder from which all of the contents may be removed by the birds without separating the parts.

1,221,020. CAGE FOR ANTIFRICTION-BEARINGS. FRED E. BRIGHT, Philadelphia, Pa., assignor to The Hess-Bright Manufacturing Company, a Corporation of Delaware. Filed July 22, 1914. Serial No. 852,343. (Cl. 64—59.)

1. In combination with an antifriction bearing consisting of inner and outer casing members and two series of interposed rolling elements, a cage for said bearing comprising two cage members arranged between the said rolling elements and adapted to space the same, and movable relatively to each other circumferentially, and antifriction devices between and engaging said cage members to maintain them in axially spaced relations.



2. In combination with an antifriction bearing consisting of inner and outer casing members and two series of interposed rolling elements, a cage for said bearing comprising two cage members arranged between the two series of rolling elements, and movable relatively to each other circumferentially, and antifriction balls between said cage members to maintain them in axially spaced relations.

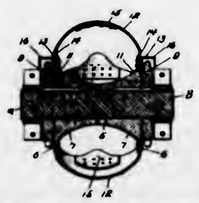
3. In combination with an antifriction bearing consisting of inner and outer casing members and two series of interposed rolling elements, a cage for said bearing comprising two cage members arranged between said rolling elements, and movable circumferentially relatively to each other and provided with pockets to receive the rolling elements, the adjacent edges of the said cage members being grooved circumferentially, and spacing devices mounted in said grooves to maintain the cage members in axially spaced relations.

4. In combination with an antifriction bearing consisting of inner and outer casing members and two series of interposed rolling elements, a cage for said bearing comprising two annular members arranged between said rolling elements, and movable circumferentially relatively to each other and formed to space the rolling elements, said cage members having a grooved raceway between them provided with a filling opening, and antifriction spacing devices adapted to be entered through the filling opening into said raceway and acting to maintain said cage members in axially spaced relations.

5. In combination with inner and outer casing members formed with two raceways, two series of rolling elements in said raceways, one of said casing members being provided with a filling opening situated between the raceways, a cage for said rolling elements comprising two annular members situated between the two series of rolling elements and movable circumferentially relatively to each other, and spacing devices between said members adapted to be introduced through said filling opening to maintain said members in axially spaced relations.

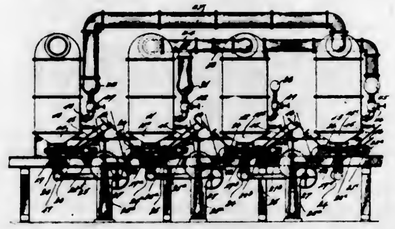
[Claim 6 not printed in the Gazette.]

1,221,021. DREDGE-CUTTER. JAMES FISHBURN BROWN, Bristol, England. Filed May 31, 1916. Serial No. 100,898. (Cl. 37—45.)



A dredge cutter comprising an axle, disks carried by the axle and provided at their inner sides with recesses, blades mounted upon the disks and having cutting edges extending transversely across the peripheries of the disks and side portions converging toward each other from the forward to the rear edges of the blades and having end portions snugly received in the recesses and securing devices passing transversely through the blades and disks.

1,221,022. METHOD OF EVAPORATING AQUEOUS SOLUTIONS. RAYMOND U. BUNKER, Yonkers, N. Y. Filed Dec. 8, 1913. Serial No. 805,372. (Cl. 127—18.)



1. The method of evaporating aqueous solutions in a series of vacuum chambers of varying temperatures, which consists in first boiling down the material to be concentrated, as, for instance, massecuite, in the coolest chamber, next boiling it in a second chamber at a higher temperature, then boiling it in a third chamber at still higher temperature, and finally boiling it in a fourth chamber, the said relation of said chambers being out of relation to the progression of vapors, and in which fourth chamber the temperature is lower than in the chamber preceding it.

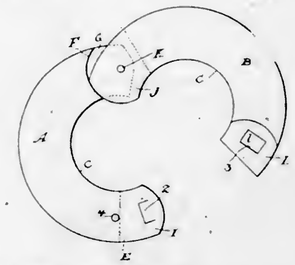
2. The method of evaporating aqueous solutions in a multiple effect continuous graining pan, which consists in boiling down charges of the material to be concentrated, for instance, massecuite, in the various chambers at different temperatures, passing the vapors step by step through the series of chambers, and advancing the charge from one chamber into another but into that chamber which is at the temperature to which the charge should be subjected for further concentration depending upon the existing stage of its evaporation, said vapors being passed through the chambers in such way that the last of said series of chambers in the order of advance of the charge is in a different relation to the order of progression of the vapors.

3. The method of evaporating aqueous solutions in a series of vacuum chambers of varying temperatures and vacuums, which consists in first boiling down the material to be concentrated, as for instance massecuite, in the coolest chamber, next, boiling it in a second chamber at a higher temperature and lower vacuum, then boiling it in a third chamber at still higher temperature and still lower vacuum, finally, boiling it in a fourth chamber in which the temperature is different from that of said third chamber, and passing the vapors through the series in such way that said fourth chamber is next to the last in the order of progression of vapors.

4. The method of evaporating aqueous solutions in a series of vacuum chambers, each of which is divided into a number of pockets having a vapor space in common, which consists in boiling the material to be concentrated, as for instance, massecuite, in separate batches in said pockets, conveying together the vapors passing off during ebullition, from the vapor space of one chamber to that of another chamber, and transferring the material to be concentrated as frequently as desired from one or the other of said pockets in one chamber to one or the other of the pockets of another chamber when the concentration is carried forward still farther, whereby the vacuum in any chamber is not disturbed.

5. The method of evaporating aqueous solutions in a series of vacuum chambers, each of which is divided into a number of pockets having a vapor space in common, which consists in charging any number of said pockets with liquor or syrup, then emptying a pocket of a second chamber of its charge of material to be concentrated, as massecuite, and transferring the same to the appropriate pocket of a third chamber, and then transferring the advancing material from a pocket of a first chamber to said emptied pocket of said second chamber, and repeating this procedure as to any of the pockets of the chambers without disturbing the contents of the pockets not involved in such transfer.

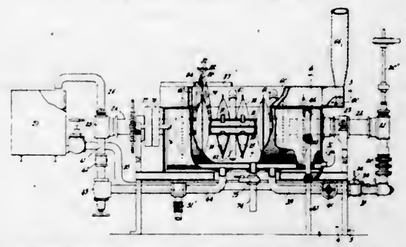
1,221,023. WASHER. FREDERICK FRAZER CAMERON, Ridgeclough, Alberta, Canada. Filed July 14, 1916. Serial No. 109,303. (Cl. 85—51.)



1. As a new article of manufacture, a washer comprising two segmental ring sections pivoted together at opposing ends, the free end of one section being provided with a slot and the free end of the other section being provided with a lug, stamped therefrom, said lug designed to be bent to extend into said slot when the said sections are closed together to form a lock.

2. As a new article of manufacture, a washer comprising two segmental ring sections each composed of two outer segmental ring members and a middle segmental ring member, the outer members of each section designed to extend beyond one end of each of the said middle members so as to form a slot at one end of each of the said segmental ring sections, and one end of each of the said middle members designed to project beyond the ends of said outer members, thus forming tongues, the tongue of one of said segmental ring sections positioned in the slot at one end of the other of the said segmental ring sections; a pivot passing through said last-mentioned tongue, and its associated parts to pivot said segmental ring sections together, and a pair of lugs stamped from the free end of one of the said segmental ring sections and designed to be bent into a slot formed in the tongue at the free end of the said other segmental ring section to provide a lock.

1,221,024. METHOD OF TREATING MILK. CHARLES H. CAMPBELL, New York, N. Y., assignor, by mesne assignments, to Borden's Condensed Milk Company, New York, N. Y., a Corporation of New Jersey. Filed July 25, 1913. Serial No. 781,081. (Cl. 99—5.)

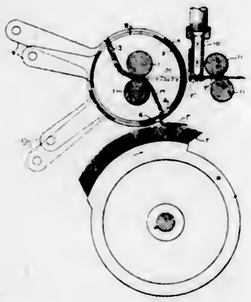


1. The method of treating a body of milk which comprises raising and maintaining its temperature above normal by aid of heat transferred thereto from a there-

with contacting rigid surface, and simultaneously, at frequently repeated, equally-timed-apart intervals, under cover of the milk, wiping from said surface therewith contacting or adhering thickening milk.

2. The method of treating a body of milk which comprises raising and maintaining its temperature above normal by aid of heat transferred thereto from a therewith contacting surface, and simultaneously, at frequently repeated intervals under cover of the milk, yieldingly wiping from said surface therewith contacting or adhering thickening milk, whereby said surface is kept uniformly and constantly cleared, heat transference therefrom promoted, and said contacting or adhering thickening portions of milk timely separated therefrom, and returned to the interior of said body, without being unduly exposed to atmosphere and without being coagulated, burned, or injuriously frictioned or compressed.

1,221,025. COTTON-COMBER. LEON W. CAMPBELL, Boston, Mass. Filed Apr. 23, 1915. Serial No. 23,335. (Cl. 19—6.)



1. In a machine of the class described, a combing device for a staple length, and suction means for supporting a previously combed staple length in effective piecing relation to the length combed by said combing device.

2. In a machine of the class described, a combing device for a staple length, and a suction nozzle for supporting a previously combed staple length in overlapping piecing relation to the length combed by said combing device.

3. In a machine of the class described, a combing device for the tip portion of a staple length, suction means for supporting a previously combed staple length in overlapping relation to the tip portion combed by said combing device, and means for presenting said tip portion to said previously combed length and for severing said tip portion from the main body of the staple length.

4. In a machine of the class described, a combing device, means for advancing a staple length thereto, means for supporting a previously combed length in overlapping relation to said advanced length to which it is to be pieced, means for moving said advanced length to said supported length and means for severing said advanced length from the main portion of the staple length.

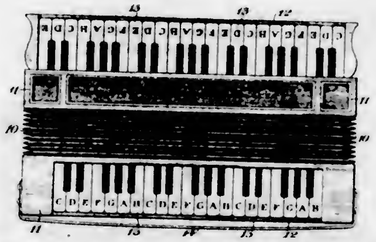
5. In a machine of the class described, a combing device, means for advancing a staple length thereto, a suction device for supporting a combed length in overlapping relation to said advanced length to which it is to be pieced, and means for piecing said lengths.

[Claims 6 to 26 not printed in the Gazette.]

1,221,026. ACCORDION. RAFFAELE CARBONARI, Chicago, Ill. Filed June 10, 1916. Serial No. 102,894. (Cl. 84—1.)

1. In an accordion, a playing keyboard at both sides thereof, said keyboards each comprising a series of piano keys, those controlling the bass notes being arranged at one side and those controlling the treble notes at the other side of the accordion.

2. In an accordion, a playing keyboard at both sides thereof, said keyboards each comprising a series of piano keys, those controlling the bass notes being arranged at one side and those controlling the treble notes at the other side of the accordion, and having their scales running in opposite directions.

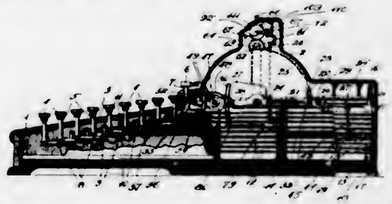


3. In an accordion, a playing keyboard at both sides thereof, said keyboards each comprising a series of piano keys, those controlling the bass notes being arranged at one side and those controlling the treble notes at the other side of the accordion, and having their scales running in opposite directions, and a strap encompassing one of said keyboards in a manner to permit the insertion of the operator's hand between for moving the bellows.

4. In an accordion, a playing keyboard at both sides thereof, said keyboards each comprising a series of keys like those of a piano, those controlling the bass notes being arranged at one side and those controlling the treble notes at the other side of the accordion and having their scales running in opposite directions, and a strap encompassing the front of the bass keyboard in such a manner as to permit the operator to insert his hand between for moving the bellows, said bass keyboard comprising a less number of keys than the treble keyboard.

5. In an accordion, a playing keyboard at both sides thereof, said keyboards each comprising a series of piano keys, those controlling the bass notes being arranged at the one side with the rising scale running toward the operator and those controlling the treble notes being arranged at the opposite side with the rising scale running away from the operator.

1,221,027. MULTIPLYING-MACHINE. JOHN P. CLULEY, St. Louis, Mo., assignor to Cluley Multiplier Company, Green Bay, Wis., a Corporation of Delaware. Filed Jan. 25, 1909. Serial No. 474,091. Renewed Oct. 23, 1911. Serial No. 656,217. (Cl. 235—82.)



1. A computing machine having multiplier and multiplicand keys, a movable member, means differentially adjustable along a given path and controlled by said multiplier keys, and means differentially adjustable along another given path and controlled by said multiplicand keys, said paths intersecting and said movable member having a differential movement determined by said intersection and being proportional to the product of any two numbers represented by the said keys.

2. In a computing mechanism, a determining member adapted to move about a pivotal axis from initial or zero position to successive angular positions, and means for moving from successive points along the line determining said initial position to said determining member along a plurality of parallel paths, whereby the travel along the said paths is proportional to their relative distances from said axis.

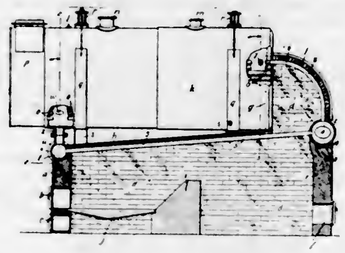
3. In a computing mechanism, a stop member adapted to move about a pivotal axis from initial or zero position to successive angular positions, and a member adapted to move from successive points along the line determining said initial position to said stop member along any one of a plurality of parallel paths, whereby the lengths of said paths are proportional to their relative distances from said axis.

4. In a computing mechanism, a stop member adapted to move about a pivotal axis from initial or zero position to successive angular positions, a member adapted to move from successive points along the line determining said initial position to said stop member along any one of a plurality of parallel paths, whereby the lengths of said paths are proportional to their relative distances from said axis, and multiplier keys for determining said angular positions.

5. In a computing mechanism, a stop member adapted to move about a pivotal axis from initial or zero position to successive angular positions, a member adapted to move from successive points along the line determining said initial position to said stop member along any one of a plurality of parallel paths, whereby the lengths of said paths are proportional to their relative distances from said axis, multiplier keys for determining said angular positions, and multiplicand keys for determining said successive points.

[Claims 6 to 38 not printed in the Gazette.]

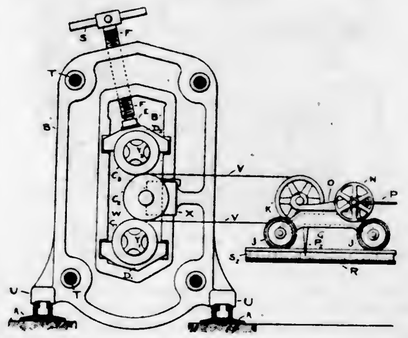
1,221,028. STEAM-BOILER. MARK R. COLBY, Portland, Oreg. Filed Dec. 27, 1915. Serial No. 68,954. (Cl. 122—102.)



1. In a boiler of the type described having an upper fire-tube section, the combination with said fire-tube section of a lower water-tube section comprising a transversely disposed drum located beneath the front end of said fire-tube section and spaced therefrom, a drum located at the rear end of the fire-tube section, said drums having greater length than the diameter of said fire-tube section, said lower water tube section connecting said drums along their full length and extending longitudinally beneath said fire-tube section, a connection between the lower portion of said fire-tube section and the forward drum, extension headers projecting laterally from the rear end of the fire-tube section and being in direct communication therewith, and arched water tubes connecting said rear drum with the fire-tube section approximately at the plane of the upper row of the fire tubes, the outer of said arched water tubes connecting with said extension headers.

2. In a boiler of the type described having an upper fire-tube section, the combination with said fire-tube section of a lower water tube section comprising a transversely disposed drum located beneath the front end of said fire-tube section and spaced therefrom, a drum located at the rear end of the fire-tube section, said drums having greater length than the diameter of said fire-tube section, said lower water tube section connecting said drums along their full length and extending longitudinally beneath said fire-tube section, independent conduits connecting the lower portion of said fire-tube section with the forward drum, extension headers projecting laterally from the rear end of the fire-tube section and being in direct communication therewith, and arched water tubes connecting said rear drum with the fire-tube section approximately at the plane of the upper row of the fire tubes, the outer of said arched water tubes connecting with said extension headers.

1,221,029. ROLLING-MILL. WILLIAM C. CORYELL, Youngstown, Ohio. Filed Aug. 21, 1915. Serial No. 46,654. (Cl. 80—5.)



1. A mill for rolling endless articles including boxes, a roll journaled in said boxes when in its operative position and removable transversely of its axis out of said operative position and out of engagement with said boxes, and a plurality of coöperating rolls for applying forces from a plurality of directions to coöperate with the force applied thereto by said boxes, to maintain said roll in proper operative position.

2. A mill for rolling endless articles including boxes, a roll journaled in said boxes when in its operative position and removable transversely of its axis out of said operative position and out of engagement with said boxes, a plurality of additional rolls for applying forces from a plurality of directions to coöperate with the force applied thereto by said boxes, to maintain said roll in proper operative position, and means for adjusting one of said additional rolls to allow of the removal and replacement of said roll.

3. A mill for rolling endless articles including boxes, a roll journaled in said boxes when in its operative position and removabe transversely of its axis out of said operative position and out of engagement with said boxes, a second roll coöperating with said removable roll to reduce the material worked upon, and a third roll combining with said second roll and said boxes to apply opposing forces to said removable roll, when in operation, from at least three directions to maintain said removable roll in proper operative position.

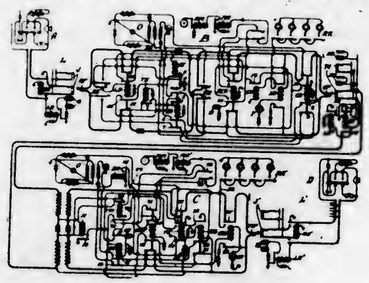
4. A mill for rolling endless articles including a removable roll adapted to receive the material to be worked upon, a second roll coöperating with said removable roll to reduce said material, bearings for engaging one side only of each of the journals of said removable roll, a third roll for coöperating with said bearings and said second roll to apply opposing forces to said removable roll, when in operation, from at least three directions to maintain said removable roll in proper operative position, and means for adjusting one of said rolls to allow of the removal and replacement of said removable roll.

5. A mill for rolling endless articles including two relatively adjustable rolls, a removable roll adapted to receive the material to be worked upon and positioned intermediately of said relatively adjustable rolls and out of alinement therewith, and means for preventing any movement tending to increase said non-alinement beyond a given point, whereby upon proper adjustment of said relatively

adjustable rolls said removable roll is held firm during operation by opposing forces applied to it from different directions.

[Claims 6 to 21 not printed in the Gazette.]

1,221,030. TELEPHONE SYSTEM. HIRAM D. CURRIER, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed July 27, 1914. Serial No. 853,285. (Cl. 179—49.)



1. A telephone system comprising telephone lines terminating at an operator's position, operators' cord circuits for interconnecting said lines, trunk circuits extending from said position to other operators' positions, an operator's telephone for the cord circuits and one for the trunk circuits, means for automatically connecting and disconnecting the cord operator's telephone and said cord circuits, and an orderwire key individual to each cord circuit whereby the cord operator's telephone may be connected in circuit with the trunk operator's telephone over a conversational circuit independent of that end of the cord circuit distant from the trunk.

2. A telephone system comprising telephone lines terminating at an operator's position, trunk circuits extending from said position to other operators' positions, cord circuits for interconnecting said lines or said lines and trunk circuits, an operator's telephone for the cord circuits and one for the trunk circuits, automatic means for connecting the cord operator's telephone with the cord circuits, telephone lines at said other operators' positions, and orderwire keys for said cord circuits for connecting the operator's telephone of a connected cord and a trunk over a conversational circuit including the cord and trunk but independent of that end of the cord distant from the trunk.

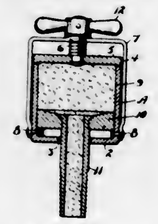
3. A telephone system comprising telephone lines terminating at an operator's position, trunk circuits extending from said position to other operators' positions, telephone lines, terminating at such other positions, cord circuits for interconnecting the first said lines or said lines and trunk circuits, an operator's telephone for the cord circuits, automatic means for connecting the cord operator's telephone with the cord circuits when they are used for local connections, and orderwire keys for said cord circuits whereby a cord operator may order up a connection from a line terminating at her position to a distant line over a cord and trunk circuit and prevent the subscriber at the calling line from hearing said order passed.

4. A telephone system comprising telephone lines terminating at an operator's position, trunk circuits extending from said position to another operator's position, telephone lines terminating at such other position, a cord circuit for interconnecting the first said lines or said lines and trunk circuits, an operator's telephone, automatic means for connecting and disconnecting said operator's telephone and said cord circuit when it is used to establish said first connections, and means whereby when a connection is to be extended from a calling line over a cord and a trunk circuit to a distant line, the cord operator may order up the connection to the distant line over a connected cord and trunk to the exclusion of the calling line.

5. A telephone system comprising telephone lines, a trunk circuit adapted for use in connecting said lines to other telephone lines, a cord circuit for interconnecting the first said lines or said lines and trunk circuit, an operator's telephone and means for automatically connecting it to the trunk when connection is made with the trunk by the cord when a connection is to be established between a calling line over a cord and trunk circuit to a distant line, and an orderwire key for the cord having circuit connections whereby the cord operator may communicate with the trunk operator over the connected cord and trunk to order up the connection to the distant line to the exclusion of the calling line.

[Claims 6 to 13 not printed in the Gazette.]

1,221,031. GREASE-CUP. WILLIAM W. DAVIS and WILLIAM W. MACDONALD, San Francisco, Cal. Filed Nov. 27, 1916. Serial No. 133,721. (Cl. 184—38.)



1. A grease cup including a bottom member, a casing threaded over said member, a cover for the casing, swingable means for connecting the cover to the casing, and rigid rotatable means between the cover and swingable means for fixedly and positively holding the cover in engagement with the casing and thereby holding the swingable means against movement.

2. In a grease cup, a bottom member, a casing threaded over said member, a cover for the casing, swingable means carrying the cover, and means for connecting the cover to the casing engageable with the bottom member to limit movement of the casing and bottom member in one direction.

3. A grease cup comprising a bottom member through which the grease is adapted to be discharged, an internally threaded cylindrical casing adapted to be screwed down over the bottom member, a bail pivotally secured to the cylinder, a screw passing through the bail, and a cover section for the cylinder carried by the screw.

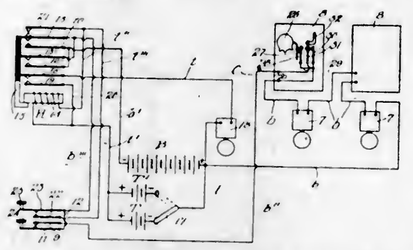
4. A grease cup comprising a bottom member through which the grease is adapted to be discharged, an internally threaded cylindrical casing adapted to be screwed down over the bottom member, a bail pivotally secured to the cylinder, a screw passing through the bail, and a cover section for the cylinder carried by the screw, said cover having a tapering peripheral seat engageable with a similar seat formed on the upper end of the cylinder.

5. A grease cup comprising an internally threaded, cylindrical casing, a bottom member adapted to be screwed down through the casing, means for limiting the downward movement of the bottom member, a seat formed on the upper end of the casing, a bail pivotally mounted on said casing, a cover adapted to engage the seat on the casing, and a screw passing through the bail adapted to move the cover into or out of engagement with the seat.

[Claim 6 not printed in the Gazette.]

1,221,032. LOCAL FIRE-ALARM SYSTEM. DAVID G. DEE, Chicago, Ill., assignor, by mesne assignments, to Rochester H. Rogers, Rochester, N. Y. Filed Dec. 19, 1914. Serial No. 878,037. (Cl. 177—367.)

1. In a fire alarm system, signal sending and receiving mechanisms in series, an alarm battery and a test battery, and means for establishing an alarm circuit through the signal sending and receiving mechanisms and the alarm battery, said means also establishing a test circuit through the signal sending mechanisms and the signal receiving mechanisms with the test battery when the alarm circuit is not established.



2. In an alarm system, signal sending and signal receiving mechanisms, an alarm battery, a test battery, connections between both the alarm and test batteries and the signal receiving and signal sending mechanisms, and means for establishing an alarm circuit through the alarm battery and the signal sending and receiving mechanisms, and also a normal test circuit through the test batteries and the signal sending and signal receiving mechanisms which is destroyed upon the establishment of said alarm circuit.

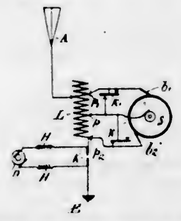
3. In an alarm system, signal sending and signal receiving mechanisms, an alarm source of current supply and a test source of current supply, connections between both sources of current supply and the signal sending and receiving mechanisms, and means for establishing a circuit with said connections including the alarm source of current supply and the signal sending mechanisms and signal receiving mechanisms, or the test source of current supply and the signal receiving or signal sending mechanisms.

4. In an alarm system, signal sending and signal receiving mechanisms, an alarm battery, a test battery, connections between both of said batteries and said signal sending and receiving mechanisms, and means for building up an alarm circuit from said connections including the alarm battery and the signal receiving and sending mechanisms, or building up a test circuit from said connections including the test battery and the signal sending and receiving mechanisms.

5. In an alarm system, signaling mechanism, a test battery, an alarm battery, a test alarm, connections between said batteries, test alarm and said signaling mechanism, and means for building up an alarm circuit from said connections including the signaling mechanism and alarm battery and excluding the test battery from said alarm circuit.

[Claims 6 to 23 not printed in the Gazette.]

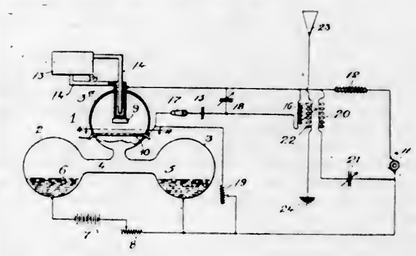
1,221,033. WIRELESS-TELEGRAPH SIGNALING SYSTEM. LEE DE FOREST, San Francisco, Cal., assignor to Radio Telephone & Telegraph Company, a Corporation of Delaware. Filed Dec. 6, 1911. Serial No. 664,135. (Cl. 250—9.)



1. In a system for multiplex wireless signaling, a radiating antenna system, key controlled circuits associated therewith, keys for controlling said circuits and means for automatically shunting said keys in succession.

2. In a system for multi-plex wireless signaling, a radiating antenna system, key controlled circuits associated therewith, keys for controlling said circuits, and means for automatically rendering each key operative in succession.

1,221,034. OSCILLATING-CURRENT GENERATOR. LEE DE FOREST, New York, N. Y., assignor to De Forest Radio Telephone and Telegraph Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 26, 1915. Serial No. 17,225. (Cl. 250—36.)



1. In a system for generating oscillating current, a work circuit, and means for generating and transmitting the generated oscillations to said work circuit comprising a vapor arc and a plurality of cold electrodes, each located at a relatively different distance from said arc and each directly conductively connected to said work circuit, and means for successively charging one of said cold electrodes.

2. In a system for generating oscillating current, a work circuit, and means for generating and transmitting the generated oscillations to said work circuit comprising a vapor arc and a plurality of cold electrodes, each located at a relatively different distance from said arc, a series oscillating circuit connecting said cold electrodes, and means for impressing an electromotive force upon the electrode in the space between said arc and the other cold electrode.

3. In a system for generating electrical oscillations, a work circuit, and means for generating and transmitting the generated oscillations comprising a vapor arc and a cold anode, a source of electromotive force in series relation between said vapor arc and anode, a second anode, and a series oscillating circuit connecting said anodes.

4. An oscillator for generating high frequency oscillations comprising an evacuated vessel and a vapor arc and two cold electrodes contained therein, a current source connected between one of said cold electrodes and the vapor arc, and a series oscillating circuit connected between said cold electrodes to set up an alternating current therebetween, a work circuit, and means to transmit the generated oscillations to said circuit.

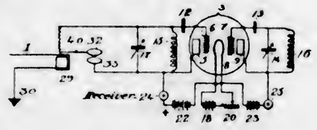
5. An oscillating system consisting of a vapor arc and a cold anode, a source of electromotive force in series circuit relation between said vapor arc and anode; a second anode, and a series oscillating circuit connecting said anodes, a work circuit, and means to transmit the generated oscillations to said work circuit.

[Claim 6 not printed in the Gazette.]

1,221,035. APPARATUS FOR USE IN WIRE OR RADIO COMMUNICATIONS. LEE DE FOREST, New York, N. Y., assignor to De Forest Radio Telephone and Telegraph Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 9, 1915. Serial No. 20,172. (Cl. 250—8.)

1. In a receiving system a normally oscillating audion, oscillating circuits associated therewith and connected between the cold electrodes thereof, and means controlled

by the received impulses for altering the period of oscillation of one of said oscillating circuits.



2. In a receiving system a normally oscillating audion, oscillating circuits associated therewith and connected between the cold electrodes thereof, and means controlled by the received impulses for altering the period of oscillation of one of said oscillating circuits and means for detecting said alteration of period.

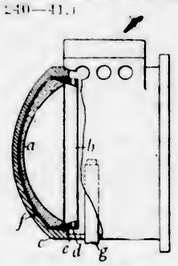
3. In a receiving system an oscillation generator, a plurality of oscillating circuits associated therewith and connected between the cold electrodes thereof, and means controlled by the received impulses for altering the period of oscillation of said oscillating circuits.

4. In a receiving system an oscillation generator, a plurality of oscillating circuits associated therewith and connected between the cold electrodes thereof, means controlled by the received impulses for altering the period of oscillation of said oscillating circuits and means for detecting said period alteration.

5. In a receiving system, a normally oscillating audion, oscillating circuits associated therewith and connected between the cold electrodes thereof, and means controlled by the received impulses for altering the period of oscillation of one of said oscillating circuits and a detecting circuit associated with said audion.

[Claims 6 to 13 not printed in the Gazette.]

1,221,036. LAMP FOR MOTOR-VEHICLES AND LIKE SERVICES. HENRY JOSEPH DEW, Chorlton-cum-Hardy, Manchester, England. Filed Mar. 15, 1916. Serial No. 84,380. (Cl. 240—41.)

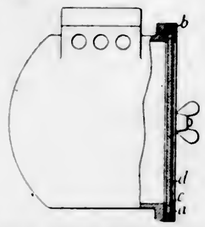


1. In lamps for motor vehicles and like services, in combination, reflecting lens or mirror having a tapered peripheral edge, a ring internally coned for positioning the lens and externally threaded for screwing into the lamp, tommy holes in said ring, and an elongated slot in the lamp body for providing access to said tommy holes, as set forth.

2. In lamps for motor vehicles and like services, in combination, an unmounted reflecting lens or mirror having a tapered peripheral edge, a recess in the interior of the back of the lamp shaped to receive said lens, packing material between said lens and lamp, a ring coned for positioning said lens and threaded for screwing into the lamp, tommy holes in an unthreaded part of said ring, and an elongated slot in the lamp body providing access to said tommy holes, as set forth.

1,221,037. LAMP FOR MOTOR-VEHICLES AND LIKE SERVICES. HENRY JOSEPH DEW, Chorlton-cum-Hardy, Manchester, England. Filed Mar. 15, 1916. Serial No. 84,381. (Cl. 240—41.)

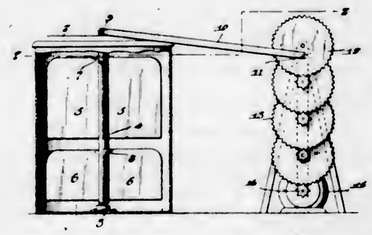
1. Glass holding means for the lamps of motor vehicles and for like services, comprising, in combination, a ring having an undercut annular recess, a glass, and a resilient material at the edge of the glass making the latter of larger diametral dimension than the inlet edge of said undercut recess, so that the glass with the resilient material therearound is sprung into position in the recess under pressure, as set forth.



2. Glass holding means for the lamps of motor vehicles and for like services, comprising in combination, a ring having an undercut annular recess at its rear side, means for securing said ring upon the lamp, a glass for insertion in said ring, and a strip of resilient material embracing the edge of said glass and making the diameter of the latter greater than that of the inlet edge of the said undercut recess, so that the glass with the resilient material therearound is sprung into position in the recess under pressure, as set forth.

3. Glass holding means for the lamps of motor vehicles and for like services, comprising in combination, a ring having a tapered annular recess decreasing in diameter toward the rear side of the ring, a glass for insertion in said ring, and a strip of resilient material embracing the edge of said glass and making the diameter of the latter greater than that of the inlet edge of the said tapered recess, so that the glass with the resilient material therearound is sprung into position in the recess under pressure, as set forth.

1,221,038. METHOD OF PREVENTING OR EXTINGUISHING FIRES IN OIL-TANKS. GEORGE W. EARLE, Hempstead, N. Y. Original application filed July 23, 1913, Serial No. 780,751. Divided and this application filed Oct. 25, 1916. Serial No. 127,669. (Cl. 169—11.)



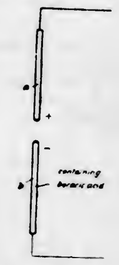
1. The method of preventing or extinguishing fires in oil tanks, which consists in imparting motion to the body of oil in such a manner as to maintain or reduce the temperature of the oil at the surface below its combustion point.

2. The method of preventing or extinguishing fires in oil tanks, which consists in agitating the oil so as to produce up and down currents to cause the oil at the surface to pass downward and the cooler oil below to take its place, whereby to maintain or reduce the temperature of the oil at the surface to a point below the combustion point.

3. The herein described process of preventing or extinguishing fires in oil tanks, which consists in agitating the body of oil within the tank.

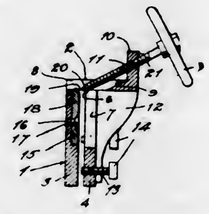
4. The herein described process of preventing or extinguishing fires in oil tanks, which consists in agitating the body of oil within the tank by an oscillating motion.

1,221,039. FLAME-ARC LAMP AND ELECTRODE THEREFOR. GEORG EGLY, Berlin-Treptow, Germany, assignor to Gebrueder Siemens & Co., Berlin-Treptow, Germany, a German Copartnership. Filed Nov. 26, 1915. Serial No. 63,626. (Cl. 176—136.)



A flame-arc lamp comprising in combination a negative electrode, containing as an essential ingredient a slag preventing admixture in the form of boracic acid evenly distributed throughout the mass of the said electrode, and a positive electrode containing luminous admixtures.

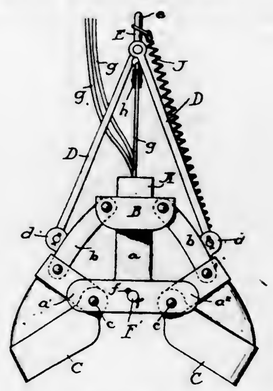
1,221,040. SAW-SET. JAMES A. FERGUSON, Plummer, Idaho. Filed June 20, 1916. Serial No. 104,702. (Cl. 76—60.)



A saw set comprising a plate, a downwardly extending guide plate at one edge of the first mentioned plate, a second guide plate extending downwardly from the first mentioned plate in parallel relation with the first mentioned guide plate, both guide plates being provided with inclined portions adjacent their upper edges, the rearmost guide plate having a recess formed therein, an anvil seated in the recess, the forward guide plate being provided with a recess extending downwardly from its upper edge and positioned in alinement with the recess in the rear guide plate, set screws carried by the front guide plate, an upwardly extending ear at the forward edge of the first mentioned plate, said ear being provided with a downwardly and rearwardly inclined threaded opening, a pressure screw extending through said opening and adapted to coöperate with the anvil in bending saw teeth and a hand wheel for rotating said pressure screw.

1,221,041. EXCAVATING-BUCKET. JAMES FLYNN, Brooklyn, N. Y. Filed Nov. 29, 1913. Serial No. 803,706. (Cl. 37—30.)

1. In an excavating bucket, the combination of a plurality of grab sections, a relatively stationary frame to which said sections are directly pivoted, means for closing the sections and lifting the bucket, a member mounted for sliding movement on the frame, link connections between said sliding member and the grab sections, whereby uniform movement of said sections is secured, a bail, to which a fall rope is adapted to be secured, positioned above the frame and separate therefrom, and links connecting each of the sections to the bail.



2. In an excavating bucket, the combination of a supporting frame, a plurality of grab sections pivoted thereto, a fall rope, a bail to which the fall rope is adapted to be secured, links connecting said bail with the respective sections of the bucket at points exterior of the points of pivoting of said sections, and accelerating means connected with the bail and with one of the grab sections for facilitating the dumping of the bucket.

3. In an excavating bucket, the combination of a supporting frame, a plurality of grab sections pivoted thereto, a fall rope, a bail to which the fall rope is adapted to be secured, links connecting said bail with the respective sections of the bucket at points exterior of the points of pivoting of said sections, and a spring secured at one end to the bail and at its other end to one of the grab sections, for the purpose of facilitating the dumping of the bucket.

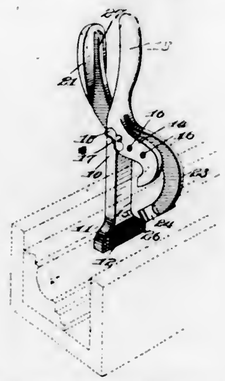
4. An excavating bucket embodying a rigid, relatively stationary frame provided with two substantially parallel legs, each having at its lower end oppositely extending arms, grab sections pivoted near the outer ends of said arms, whereby said sections are adapted for oscillating movement on axes exterior of the longitudinal medial line of the frame, a separate guide block mounted for sliding movement on each of the parallel legs of the frame, a link pivoted near the end of each block and also pivoted to one grab section for assuring uniform movement of the sections, and means for closing and lifting the bucket, in combination with a bail above the frame and separate therefrom, and link connections between the bail and each section exterior of the points of pivoting of the sections, whereby, when the bail is elevated by a fall rope secured thereto, the weight of the bucket is imposed upon the link for the purpose of operating the grab sections.

1,221,042. GRIPPING-TOOL. AUGUST J. FRANKELL, New York, N. Y. Filed June 23, 1915. Serial No. 35,963. (Cl. 145—1.)

1. In a device of the character described, the combination with a support of a body member having a jaw to engage one face of said support, a second jaw on said body member projecting over the upper edge of said support and opposing the aforesaid jaw by engaging the opposite face of said support, said body member provided with a slot intermediate its end, a member passed through said slot, a handle formed at one end of said member, an engaging foot carried at the other end of said member and operating within said support, and means to pivotally support said member, as and for the purpose specified.

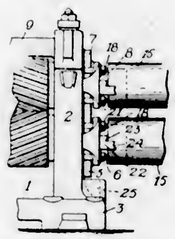
2. In a device of the character described, a body member, a handle formed at the upper end of said member, a

jaw formed at the other end of said body member, spaced arms formed intermediate the end of said body member having their free ends curved to form jaws to oppose the aforesaid jaw, said body member provided with a slot opening between said arms, a gripping member passed through said slot and operating between said arms, means



to adjustably support said gripping member, a hand grip formed at one end of said gripping member disposed in proximity to said first mentioned handle, and a retaining foot carried at the other end of said gripping member, as and for the purpose specified.

1,221,043. HOUSING FOR ROLLING-MILLS. JEROME R. GEORGE, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Nov. 3, 1915. Serial No. 59,472. (Cl. 64—10.)



1. The combination, with a housing of a bearing supported therein, a shaft in said bearing and a coupling slidable on said shaft, and removable means independent of said housing, providing a plurality of successive fulcrum points for the application of a lever to slide said coupling along said shaft.

2. The combination with a housing, of a bearing supported therein, a retaining device for said bearing adapted to make three-point contact with said bearing and said housing, and means for restraining said device against movement away from said housing intermediate its points of contact with said housing and bearing respectively.

3. The combination with a housing, of a bearing supported therein, a retaining device for said bearing adapted when in position to contact with said bearing at two points and with said housing at a single point, whereby to provide a three-point engagement for said device, and means disposed intermediate the points of contact with said housing and bearing respectively for restraining said device against movement away from said housing.

4. The combination, with a shaft, a bearing, and a coupling slidable on said shaft, of a retaining member for said bearing, providing a plurality of successive fulcrum points for the application of a lever to slide said coupling along said shaft.

5. The combination, with a shaft, a bearing, and a coupling slidable on said shaft, of a retaining member for said bearing, and a projection on said retaining member providing a series of successive axial supporting points for a lever, to slide said coupling along said shaft.

1,221,044. AUTOMOBILE-LOCK. MAXIMILLIAN R. GOLZ, Chicago, Ill. Filed Mar. 7, 1916. Serial No. 82,648. (Cl. 123—198.)



1. Locking mechanism for internal combustion engines, comprising a valve case adapted to be secured between a carbureter and intake manifold of an internal combustion engine, and having a port for establishing communication between said carbureter and intake manifold, a valve in said case movable across said port, a combination lock driving wheel and tumblers rotatively mounted in said case, a shaft for turning said driving wheel, and a valve actuating lever coöperating with said tumblers, said lever operating to automatically actuate the valve and uncover the port.

2. Locking mechanism for internal combustion engines, comprising a valve case adapted to be secured between a carbureter and intake manifold of an internal combustion engine and having a port for establishing communication between said carbureter and manifold, and valve sliding in said case and arranged to be moved across said port, combination lock driving wheel and tumblers rotatively mounted in said case, a shaft connected to said driving wheel whereby said driving wheel and tumblers may be turned and a spring-pressed lever pivotally mounted in said casing and having one end connected to said valve and the other adapted to coöperate with the tumblers and driving wheel.

3. Locking mechanism for internal combustion engines, comprising a valve case adapted to be secured between a carbureter and an intake manifold of an internal combustion engine, and having a port for establishing communication between the carbureter and intake manifold, a valve slidably mounted in said case and movable across said port, combination lock tumblers rotatably mounted in said case, each having a notch in its periphery and a valve actuated lever pivotally mounted in said case, one end of said lever being connected to the valve and the other end arranged to bear against the peripheries of the tumbler, and a spring, one end of which engages said lever and acts to move one arm thereof into the notches of the tumblers whenever said notches register with said arm of the lever.

4. Locking mechanism for internal combustion engines, comprising a valve case, having a port for establishing communication between the carbureter and intake manifold of an internal combustion engine, a valve in said case for covering and uncovering said port, combination lock driving wheel and tumblers rotatively mounted in said case and an automatically operating valve actuating device coöperating with said tumblers, said device forming one terminal of an ignition circuit, and a second terminal arranged for contact with said valve actuating device whenever the latter is moved to position opening the port.

5. Locking mechanism for internal combustion engines, comprising a valve case having a port for establishing communication between the carbureter and intake manifold of an internal combustion engine, a valve in said case for covering and uncovering said port, combination lock driving wheel and tumblers in said case, operation connections between said tumblers and said valve for actuating the valve, a distantly located knob and dial, a shaft connecting the driving wheel with said knob and ignition circuit closing means controlled by said driving wheel and tumblers.

[Claims 6 and 7 not printed in the Gazette.]

1,221,045. CONDENSER FOR REDISTILLING SPELTER. JOHN G. GRANBERG, Beckemeyer, Ill. Filed Dec. 8, 1916. Serial No. 135,852. (Cl. 266—19.)



1. A condenser having a fixed head provided with a series of openings at its drawing end.

2. A condenser constructed of ceramic material having an integral head at its drawing end, there being a continuously open charging and venting opening in said head, and a drawing opening in said head, and a ceramic plug for said drawing opening.

3. A condenser constructed of ceramic material having at its retort end an integral bridge and a down turned flange, and at its drawing end an integral head, there being charging and drawing openings formed in said head and a ceramic closure for said drawing opening.

4. In combination with a retort, a condenser having at its retort end a fixed bridge and a downturned flange arranged to prevent leakage between the abutting ends of the retort and condenser, and said condenser having a fixed head at its drawing end provided with a drawing opening and a charging opening.

1,221,046. CHEMICAL PRIMER FOR ZINC. JAMES H. GRAVELL, Philadelphia, Pa. Filed July 22, 1916. Serial No. 110,691. (Cl. 148—41.)

1. A chemical composition of matter for producing a coating on zinc comprising an admixture consisting of a free mineral acid and free phosphoric acid.

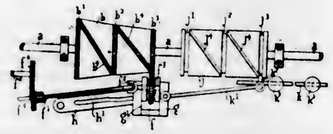
2. A chemical composition of matter for producing a coating on zinc comprising an admixture consisting of free mineral acid, free phosphoric acid, and a solvent.

3. A chemical composition of matter for producing a coating on zinc comprising an admixture containing a mineral acid and phosphoric acid dissolved in a solvent which of itself has no action on the metal.

4. A chemical composition of matter for producing a coating on zinc consisting of an admixture of free nitric acid, a solution of free phosphoric acid, and a solvent.

5. A chemical composition of matter for producing a coating on zinc consisting of an admixture of nitric acid and phosphoric acid dissolved in water.

1,221,047. VARIABLE-SPEED GEARING. ALBERT GROVES, Acton, London, England. Filed Sept. 19, 1916. Serial No. 120,968. (Cl. 74—58.)



1. In variable speed gearing, the combination of a plurality of toothed wheels of different diameters on the same axis, helical sets of teeth leading from the smaller to the larger toothed wheels and other helical sets of teeth leading from the larger to the smaller toothed wheels, the ends of all the helical sets of teeth being concentric with the toothed wheels, a toothed pinion in gear with the toothed wheels and helical sets of teeth, means for driving said toothed pinion and means for moving the toothed pinion in a path parts of which are parallel to the axis of the toothed wheels and parts of which are at an angle to the said axis, so that the toothed pinion may accurately gear with the toothed wheels and helical paths, substantially as set forth.

2. In variable speed gearing, the combination of a plurality of toothed wheels of different diameters on the same axis, helical sets of teeth leading from the smaller to the larger toothed wheels and other helical sets of teeth leading from the larger to the smaller toothed wheels, the ends of all the helical sets of teeth being concentric with the toothed wheels, a toothed pinion in gear with the toothed wheels and helical sets of teeth, a cradle in which the pinion is mounted, a slotted guide bar on which the cradle slides, a projection on the cradle entering the slot in the guide bar, and means for moving the cradle along the guide bar, substantially as set forth.

3. In variable speed gearing, the combination of a plurality of toothed wheels of different diameters on the same axis, helical sets of teeth leading from the smaller to the larger toothed wheels and other helical sets of teeth leading from the larger to the smaller toothed wheels, the ends of all the helical sets of teeth being concentric with the toothed wheels, a toothed pinion in gear with the toothed wheels and helical sets of teeth, a cradle in which the pinion is mounted, a slotted guide bar on which the cradle slides, a projection on the cradle entering the slot in the guide bar, a drum mounted upon the same shaft as the toothed wheels and having annular and helical grooves corresponding with the toothed wheels and helical sets of teeth, a sliding bar having a projection entering the said grooves, a link connecting the sliding bar and the cradle, and means for imparting longitudinal motion to the sliding bar, substantially as set forth.

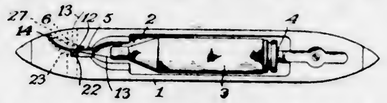
4. In variable speed gearing, the combination of a plurality of toothed wheels of different diameters on the same axis, helical sets of teeth leading from the smaller to the larger toothed wheels and other helical sets of teeth leading from the larger to the smaller toothed wheels, the ends of all the helical sets of teeth being concentric with the toothed wheels, a toothed pinion in gear with the toothed wheels and helical sets of teeth, a cradle in which the pinion is mounted, a slotted guide bar on which the cradle slides, a projection on the cradle entering the slot in the guide bar, a drum mounted upon the same shaft as the toothed wheels and having annular and helical grooves corresponding with the toothed wheels and helical sets of teeth, a sliding bar having a projection entering the said grooves, a link connecting the sliding bar and the cradle, a projection on the sliding bar, a pivoted change speed lever, and springs connecting the change speed lever with the said projection, substantially as set forth.

5. In variable speed gearing, the combination of a plurality of toothed wheels of different diameters on the same axis, helical sets of teeth leading from the smaller to the larger toothed wheels and other helical sets of teeth leading from the larger to the smaller toothed wheels, the ends of all the helical sets of teeth being concentric with the toothed wheels, a toothed pinion in gear with the toothed wheels and helical sets of teeth, a cradle made in two parts in one of which the pinion is mounted, a slotted guide bar on which the other part of the cradle slides, a projection on that part of the cradle carrying the pinion said projection entering the slot in the guide bar, and means for moving the cradle along the guide bar, substantially as set forth.

1,221,048. SELF-THREADING SHUTTLE. HUDSON W. HAKES, Millbury, Mass. Filed Oct. 12, 1912. Serial No. 725,389. (Cl. 139—46.)

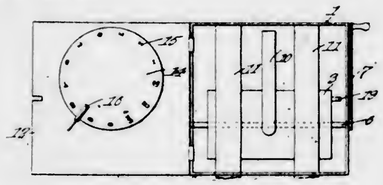
The combination with a loom shuttle providing a recess in alinement with its bobbin chamber, of a tubular thread guide disposed transversely to said recess, and having its

wall cut away intermediate its ends for connecting said interior with said recess, with a thread entering slit extending from said cut away portion to the end of said guide, said slit having oppositely inclined portions at the



bottom of the guide whereby to form a thread lock, the outer inclined portion being formed between two projecting prongs, one of which presents a convex edge extending past the vertical plane of the axis of said guide.

1,221,049. CHECK-MARKER. LEVI HAND, Minneapolis, Minn., assignor of one-half to Stephen C. W. Hall, Sioux Falls, S. D., and one-half to Alfred N. Munson, Minneapolis, Minn. Filed May 25, 1916. Serial No. 99,889. (Cl. 197—6.4.)



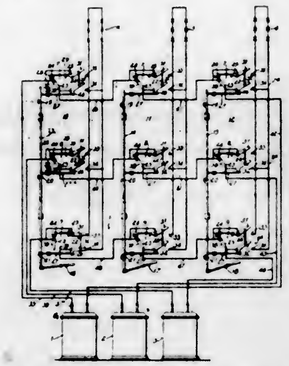
1. A device for marking checks, including a casing having opposed openings for the reception of a check, check deflecting means between the openings, resilient check holding means extending from one of the openings and bearing upon the deflecting means, a resilient lifting element bearing upon the deflecting means, a check being insertible between said lifting means and the holding means, a marking element movable to position above the lifting element, and means for successively actuating the lifting element to press a portion of a check against the marking element and to shift the check longitudinally.

2. A device for marking checks, including a casing having opposed openings for the reception of a check, check deflecting means between the openings, resilient check holding means extending from one of the openings and bearing upon the deflecting means, a resilient lifting element bearing upon the deflecting means, a check being insertible between said lifting means and the holding means, a marking element movable to position above the lifting element, means for successively actuating the lifting element to press a portion of a check against the marking element and to shift the check longitudinally, said means including a shaft and lifting cams upon the shaft for engaging the lifting element and the check respectively.

3. Check marking means including a deflector, a lifting element bearing upon the deflector, means for holding a check over the lifting element and deflector and pressing said check upon the deflector, a marking element, means for moving said element to position above the lifting element, and means for actuating the lifting element to press a portion of the engaged check against the marking element.

4. Check marking means including a deflector, a lifting element bearing upon the deflector, means for holding a check over the lifting element and deflector and pressing said check upon the deflector, a marking element, means for moving said element to position above the lifting element, a shaft, oppositely extending projecting portions thereon, and means for rotating the shaft to bring said projecting portions successively into engagement with the lifting element and the check, to successively press a portion of the check against the marking element and shift said check longitudinally.

1,221,050. CIRCUIT-INTERRUPTING SYSTEM. ALBERT L. HARVEY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 17, 1915. Serial No. 8,872. (Cl. 171—97.)



1. A circuit-interrupting system comprising a plurality of switch groups arranged in substantially vertical alinement, means for preventing the operation of more than one group at a time, said switch groups severally comprising a short-circuiting switch and a main switch, and means for so interlocking the said switches that the said short-circuiting switch must be opened before the main switch is permitted to close.

2. A circuit-interrupting system comprising a plurality of switch groups arranged in a plurality of substantially vertical sets, means for preventing the operation of more than one group of each vertical set at a time, said groups severally comprising two switches and means for preventing the operation of one until the other has operated.

3. A circuit-interrupting system comprising a plurality of switch groups arranged in a plurality of substantially alined sets and means for preventing the operation of more than one group in each alined set at one time.

4. A switch group for an electric circuit comprising a main double-pole switch, a single-pole switch and means for so interlocking the said switches that the single-pole switch must establish a short circuit before the double-pole switch is opened, and the double-pole switch must be closed before the single-pole switch can open the short circuit.

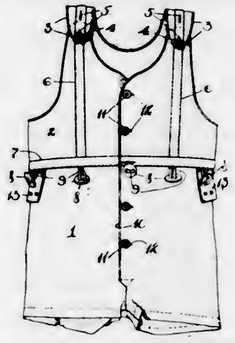
5. In a system of distribution, the combination with a plurality of transformers and a plurality of distributing circuits, of means for connecting any one of the said transformers to any one or more of the circuits, and means for preventing the paralleling of the transformers on any one distributing circuit.

[Claims 6 to 9 not printed in the Gazette.]

1,221,051. COMBINATION-GARMENT. LOUIS H. HAYS, Cleveland, Ohio, assignor to The Kaynee Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 6, 1915. Serial No. 38,043. (Cl. 2—144.)

1. In a garment of the character described, the combination of a drawer section and a waist section integral therewith, said garment having a vertical opening in front extending practically its entire length and a transverse opening in the rear just below the waist line, a vertical opening at each side communicating with such transverse opening so as to form a flap; adjustable shoulder straps for said waist; means for closing such front opening and flap, respectively; buttons spaced around the waist line for attaching an external garment; and a tab secured to such line at each side of the garment, adapted to have a garter, or the like, attached thereto.

2. In a garment of the character described, the combination of a drawer section and a waist section integral therewith, said garment having a vertical opening in front extending practically its entire length and a transverse opening in the rear just below the waist line, a vertical opening at each side communicating with such transverse opening so as to form a flap; adjustable shoulder straps for said waist; bands sewed to said waist and passing over such shoulder straps, respectively; another band similarly sewed around said waist and to the lower ends of said first-named bands; buttons and button-holes for closing such front opening and flap, respectively; buttons with loops securing the same at spaced intervals around said waist band, one such looped button serving also as a button to close such front opening; and a tab secured to such line at each side of the garment, adapted to have a garter, or the like, attached thereto.

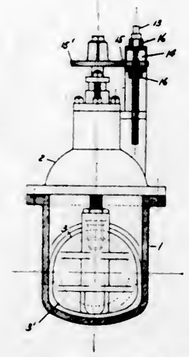


3. In a garment of the character described, the combination of a drawer section and a waist section integral therewith, said garment having a vertical opening in front extending practically its entire length and a transverse opening in the rear just below the waist line, a vertical opening at each side communicating with such transverse opening so as to form a flap; adjustable shoulder straps for said waist, a waist band sewed around the waist line, vertical bands sewed to said waist band and passing over said shoulder straps, buttons spaced around said waist band and said waist band for attaching an external garment, said bands adapted to carry the weight of the garment and such external garment from the shoulders; and means for closing such front opening and flap respectively.

4. In a garment of the character described, the combination of a drawer section and a waist section integral therewith, said garment having a vertical opening in front extending practically its entire length and a transverse opening in the rear just below the waist line, a vertical opening at each side communicating with such transverse opening so as to form a flap; adjustable shoulder straps for said waist, a waist band sewed around the waist line, vertical bands sewed to said waist band and passing over said shoulder straps, buttons spaced around said waist band for attaching an external garment, a tab secured to such waist band at each side of said garment, adapted to have a garter or the like attached thereto, said bands being adapted to put the weight of the garment, the external garment and garter upon the shoulders of the wearer; and means for closing such front opening and flap, respectively.

1,221,052. VALVE MECHANISM FOR GATE-VALVES. GEORGE J. HENRY, Jr., San Francisco, Cal. Filed Oct. 5, 1912. Serial No. 724,144. (Cl. 137—5.)

1. In a valve for fluid pressures, a valve seat in combination with a valve plate having a convex lower edge of larger radius than the remaining portion of the valve plate, forming thereby extended surface portions for engaging slidably over the valve seat, a stem provided with a screw thread, said screw thread engaging with a nut secured against rotation to the said valve plate and means mounted on the valve stem to prevent the valve plate being forced beyond a predetermined position.



2. In a valve for fluid pressures, a valve seat in combination with a valve plate having a convex lower edge of larger radius than the remaining portion of the valve plate, forming thereby extended surface portions for engaging slidably over the valve seat, a stem provided with a screw thread, said screw thread engaging with a nut secured against rotation to the said valve plate and means mounted on the valve stem to prevent the valve plate being forced beyond a predetermined position, and a valve body casing formed with pockets for receiving the ends of the convex lower portion of the valve plate.

3. A valve seat of circular form in combination with a valve plate, said plate of distorted circular form so as to provide a greater proportional bearing area during its movement across the face of said seat, a body casing formed for receiving the plate with pockets for those portions of the plate distorted from circular form, means for moving said plate across the face of said seat, means for arresting the movement of said plate before contact of the plate with the body, said means consisting of a stop on the valve moving member.

4. In a valve for fluid pressures, a valve disk movable on a valve seat, a stem mounted to shift said valve disk by means of a screw thread acting within a valve nut, said valve nut held against rotation in a socket formed in said valve disk and a lock nut for securing said valve nut in said socket.

5. In a valve for fluid pressures, a valve disk movable on a valve seat, a stem mounted to shift said valve disk by means of a screw thread acting within a valve nut, said valve nut held against rotation in a socket formed in said valve disk and a lock nut for securing said valve nut in said socket and forming with said valve disk means of adjusting said valve nut.

[Claims 6 to 15 not printed in the Gazette.]

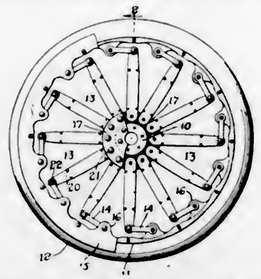
1,221,053. RESILIENT VEHICLE-WHEEL. WILLIAM R. HOPSON, Bridgeport, Conn. Filed July 1, 1914. Serial No. 848,345. (Cl. 152—28.)

1. A vehicle wheel having a hub, a rim, spokes radially disposed relative to the center of the wheel, pivots within the hub upon which the spokes turn, and springs within the spokes engaging the pivots to resist oscillation of said spokes.

2. A resilient wheel comprising a hub, a rim, links pivoted to the rim, spokes pivotally connected to the hub and to the links, a cam block rigidly secured to the pivotal connection of each spoke to the hub, and a spring within the spoke which acts against the cam block to resist oscillations of the spoke.

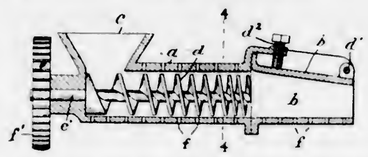
3. A resilient wheel comprising a hub, a rim, links pivoted to the rim, radial spokes pivotally connected to the

hub and to the links, an angular cam block rigidly secured to the pivotal connection of each spoke to the hub, and



leaf springs within the spokes acting against the cam blocks to resist oscillations of the spokes.

1,221,054. APPARATUS FOR CONTINUOUSLY PRESSING ICE FRAGMENTS INTO AN ENDLESS BAR. JOHN WESLEY HYATT, Pleasantdale, N. J. Filed Sept. 21, 1915. Serial No. 51,863. (Cl. 62—105.)



1. The machine for continuously pressing ice fragments into an endless bar, which comprises a cylinder having a tapering die at one end and a hopper at the opposite end, the die having a side-wall hinged at the end next the cylinder and provided with means for adjusting and supporting its opposite end, means to supply the hopper continuously with ice fragments, and a worm rotated within the cylinder and operating to compact the ice fragments and force them continuously through the die in the form of a continuous ice-bar.

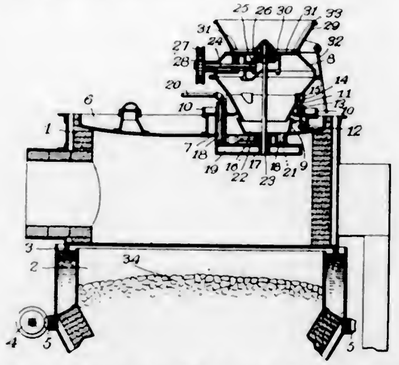
2. The machine for continuously pressing ice fragments into an endless bar, which comprises a cylinder having a tapering die at one end and a hopper at the opposite end, a worm rotated within the cylinder and having its pitch diminishing from the hopper to the said die, and means for continuously supplying ice fragments to the said cylinder.

3. The machine for making a continuous bar of ice, which comprises a cylinder having perforated walls and longitudinal grooves in such walls, and provided at one end with a hopper and at the opposite end with a tapering die, and a worm having its pitch diminishing from the hopper to the said die to knead and work together the ice fragments in their progress through the machine.

1,221,055. GAS-PRODUCER. GEORGE H. ISLEY, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed June 30, 1913. Serial No. 776,526. (Cl. 48—86.)

1. In a gas producer, a fuel section, a fuel feeding mechanism disposed eccentrically to said fuel section, comprising a hopper, and a shelf below said hopper offset toward the center of said fuel section and eccentric to said fuel section and to said hopper, and means for causing relative rotation between said fuel section and said fuel feeding mechanism.

2. A gas producer including a casing having a section for the fuel, a shelf horizontally eccentric to the casing, and a hopper above the shelf, the discharge opening of the hopper being horizontally eccentric to the shelf and the fuel section, means for causing relative rotation between said fuel section and said hopper and shelf, and means for crowding the fuel over the edges of said shelf.



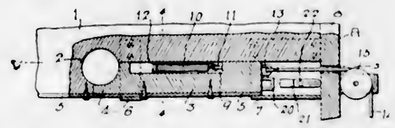
3. A gas producer including a casing having a section for the fuel, a shelf horizontally eccentric to the casing, a hopper above the shelf, the discharge opening of the hopper being horizontally eccentric to the shelf and the fuel section, means for causing relative rotation between said fuel section and said hopper and shelf, and rotating means, concentric with the discharge opening of the hopper, for crowding fuel over the edges of said shelf.

4. In a gas producer, a shelf, a hopper above the shelf, the discharge opening of the hopper being offset toward one side of the shelf, and rotating means concentric with said shelf for causing fuel resting on the shelf to pass over the edge thereof.

5. In a gas producer, a shelf, and a hopper above the shelf, and means for adjusting the lower end of the hopper relatively to the shelf.

[Claims 6 to 15 not printed in the Gazette.]

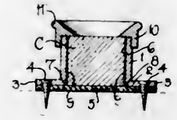
1,221,056. HORSE-RELEASER. HANS MAGNUS JACOBSON, Waterford, Wis. Filed Jan. 9, 1917. Serial No. 141,453. (Cl. 119—115.)



1. A horse releasing device including a notched strip having an edge thereof on one side of the notch cut-away, a slide mounted in said cut-away portion and terminating at its inner end in a tongue adapted to extend across the mouth of the notch, a spring engaging the slide to hold it in operative position, a guide casing engaging the outer end of the slide and providing a clearance space, an eye projecting from the rear end of the slide, a master lever located at a distance, a cable connection between the eye and the master lever, a keeper projecting from the rear end of the slide, a spring detent carried by the casing and mounted for engagement with the keeper to automatically lock the slide in an open position, and a plunger extending from the detent through one side of the casing for releasing the detent.

2. A horse releasing device including a notched strip having the edge thereof on one side of the notch cut-away, a slide mounted in said cut-away portion and terminating at its inner end in a tongue adapted to extend across the mouth of the notch, the inner edge of the slide being provided with a groove, a stop pin projecting from the strip into the groove for engagement with one end thereof to limit the outward movement of the slide, a spring housed within the groove and having opposite ends thereof connected to the pin and slide respectively, guide means for the slide, a master lever located at a distance, and a cable connection between the master lever and the slide.

1,221,057. CHALK-CUP. SAMUEL N. JENSON, Estancia, N. Mex. Filed Oct. 7, 1916. Serial No. 124,391. (Cl. 46—8.)



1. A chalk cup including a tubular member, a sleeve insertible within said tubular member and provided with inwardly directed penetrating members, said sleeve being provided with means coacting with the tubular member for preventing removal of the sleeve through one end of the tubular member.

2. A chalk holder comprising a tubular member provided adjacent one end with a groove, a sleeve insertible within said tubular member and provided with a flange seating within the groove of the tubular member, said sleeve being provided with engaging means.

3. A chalk holder comprising a tubular body having one end portion provided with an outstanding flange to afford an anchoring means, a sleeve provided with engaging means insertible within the tubular body, a removable cap engageable with the end portion of the tubular body remote from the flange, said cap being provided with an opening to afford a communication through the interior of the tubular member.

4. A chalk holder comprising a tubular body having one end portion provided with an outstanding flange to afford an anchoring means, a sleeve provided with engaging means insertible within the tubular body, a removable cap engageable with the end portion of the tubular body remote from the flange, said cap being provided with an opening to afford a communication through the interior of the tubular member, and a mat for closing the opposite end of the tubular member.

1,221,058. FERMENTATION OF SULFITE WASTE LIQUOR. AXEL VIDAR JERNBERG, Tidaholm, Sweden. Filed Feb. 6, 1917. Serial No. 146,978. (Cl. 195—20.)

1. An improved method of fermenting lyes obtained in the treatment of cellulose and the like with acid solutions consisting in adapting the lye for fermentation by the addition of a suitable quantity of calcium cyanamid ($CaCN_2$), corresponding to the want of nitrogen and the acidity of the lye, then adding a ferment and subjecting the lye to fermentation at a suitable temperature.

2. An improved method of fermenting lyes obtained in the treatment of cellulose and the like with acid solutions consisting in adapting the lye for fermentation by the addition of neutralizing means and a suitable quantity of calcium cyanamid ($CaCN_2$) corresponding to the need for nitrogen and the acidity of the lye, then adding a ferment and subjecting the lye to fermentation at a suitable temperature.

3. An improved method of fermenting lyes obtained in the treatment of cellulose and the like with acid solutions, consisting in adapting the lye for fermentation by the addition of a suitable quantity of calcium cyanamid ($CaCN_2$), previously treated with water, adding a ferment and subjecting the lye to fermentation at a suitable temperature.

4. An improved method of fermenting lyes obtained in the treatment of cellulose and the like with acid solutions consisting in adapting the lye for fermentation by the addition of a suitable quantity of calcium cyanamid ($CaCN_2$), previously treated with steam, adding a ferment and subjecting the lye to fermentation at a suitable temperature.

5. An improved method of fermenting lyes obtained in the treatment of cellulose and the like with acid solutions, consisting in adapting the lye for fermentation by the addition of neutralizing means and a suitable quantity of calcium cyanamid ($CaCN_2$), previously treated with water, adding a ferment and subjecting the lye to fermentation at a suitable temperature.

[Claim 6 not printed in the Gazette.]

1,221,059. HANGER FOR LIGHT-REFLECTING BOWLS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed Oct. 31, 1914. Serial No. 869,552. (Cl. 240—91.)



1. A hanger for bowls comprising a clamp having three fixed members which contact with one surface of a bowl, and an adjustable member adapted to contact with the other surface intermediate the three points.

2. A clamp of inverted U-shape, adapted to straddle the edge of a bowl, one member of which has three fixed points which contact with one surface of the bowl, an adjustable point mounted in the other member so located that its contacting point on the other surface of the bowl will be intermediate the three fixed points.

3. A hanger for light reflecting bowls comprising a clamp provided with three fixed members which contact with the outer surface of the bowl, and a member extending inside of the bowl having an adjustable contacting point mounted therein adapted to contact with the inner surface of the bowl at a point intermediate the three fixed points.

4. A clamp of inverted U-shape adapted to straddle the edge of a bowl having convex and concave surfaces, one member of which has three fixed points adapted to contact with the convex surface of the bowl, and an adjustable point adapted to contact with the concave surface of the bowl intermediate the three fixed points.

5. A hanger for light reflecting bowls comprising two downwardly depending members one of which extends down the outer surface of the bowl, and is provided with three fixed points of contact, said points being located on the arc of a circle, the other member extending downwardly within the bowl, a screw mounted therein, the end of which is adapted to contact with the inner surface of the bowl intermediate the point of contact of the three fixed points on the other member.

[Claims 6 to 10 not printed in the Gazette.]

1,221,060. CLOSET-SEAT HINGE. EARLDLEY C. B. JUDD, Chicago, Ill., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed Dec. 17, 1915. Serial No. 67,329. (Cl. 4—18.)

1. The combination of a water closet seat and a hinge therefor, said seat comprising a core of laminated wood and a veneer of hard vulcanized rubber thereon, and a metal plate embedded in the core and spaced from the inner surface of the top and bottom layers of said veneer, said plate having threaded openings to receive hinge members.

2. The combination of a water closet seat and a hinge therefor, said seat comprising a core and a veneer of hard vulcanized rubber thereon, and a plate embedded in the core and spaced from the inner surface of the top and bottom layers of said veneer and having spaced integral enlarged portions provided with threaded openings, and hinge members engaging said openings.

3. The combination of a water closet seat and a hinge therefor, said seat comprising a core of laminated wood and a veneer of hard vulcanized rubber thereon, a metal plate embedded within the core and spaced from the inner surface of the top and bottom layers of said veneer, said

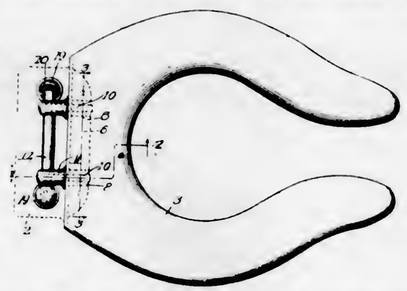


plate having spaced integral semi-cylindrical enlarged portions extending therefrom on the top and bottom thereof and provided with threaded openings, and hinge members engaging said openings.

1,221,061. GALVANIC CELL. MORDUCH L. KAPLAN, Brooklyn, N. Y., assignor to Beacon Miniature Electric Co., Inc., New York, N. Y., a Corporation of New York. Filed June 1, 1914. Serial No. 842,022. (Cl. 204—38.)

1. A process of preparing a dark brown hydrate of manganese peroxid adapted for use in galvanic cells of the Leclanché type, which comprises oxidizing a mixture of manganese hydroxid and a solution of a manganous salt with a hot solution of potassium permanganate.

2. A process of preparing a hydrate of manganese peroxid adapted for use in galvanic cells of the Leclanché type, which comprises oxidizing a mixture of manganous hydroxid and a manganous salt with potassium permanganate.

3. A process of preparing a hydrate of manganese peroxid adapted for use in galvanic cells of the Leclanché type, which comprises oxidizing a mixture of manganous hydroxid and a manganous salt with a powerful compatible oxidizing agent, comprising a soluble salt of a permanganic acid.

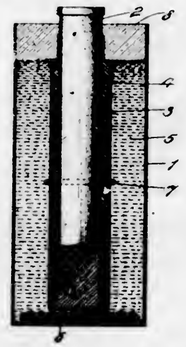
4. A process of preparing a hydrate of manganese peroxid adapted for use in galvanic cells of the Leclanché type which comprises treating a mixture of two equivalents of manganous hydroxid and one equivalent of a manganous salt with two equivalents of potassium permanganate.

5. A process of preparing a hydrate of manganese peroxid adapted for use in galvanic cells of the Leclanché type which comprises treating two equivalents of manganese hydroxid and one equivalent of manganous salt with a hot solution containing two equivalents of potassium permanganate.

1,221,062. GALVANIC CELL. MORDUCH L. KAPLAN, Brooklyn, N. Y., assignor to Beacon Miniature Electric Co., Inc., New York, N. Y., a Corporation of New York. Filed Nov. 20, 1914. Serial No. 873,137. (Cl. 204—38.)

1. In a dry battery, a depolarizing agent comprising a mixture of finely-divided carbon and incorporated but chemically uncombined therewith a larger proportion of manganese depolarizing material comprising a roasted compact substantially anhydrous artificial higher oxid of manganese product, substantially free from water-soluble bodies capable of causing local action and having less combined oxygen than corresponds to the formula MnO_2.

2. In a battery of the Leclanché type, a depolarizing agent comprising finely-divided graphite and therewith incorporated manganese depolarizing material comprising an ignited substantially anhydrous artificial higher oxid of manganese substantially free from water-soluble salts capable of causing local action; said oxid of manganese being present in the proportion of at least three parts to two parts of graphite.



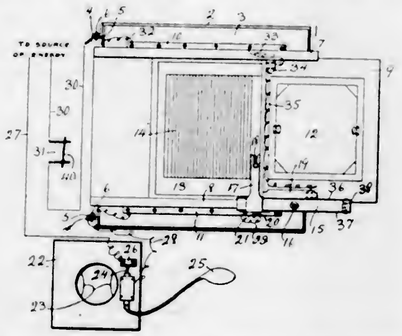
3. In a miniature dry battery, a depolarizing agent comprising about ten parts of finely-divided carbon and about seventeen parts of substantially anhydrous artificial manganese peroxid substantially free from bodies causing local action.

4. In a dry battery, a depolarizing agent comprising a mixture of finely-divided carbon and an excess of roasted substantially anhydrous and compact artificial higher oxid of manganese substantially free from bodies causing local action, being chemically uncombined with said carbon and having less combined oxygen than corresponds to the formula MnO_2.

5. In a galvanic cell, a depolarizing agent adapted for use in miniature batteries comprising finely-divided carbon and therewith-admixed manganese depolarizing material comprising a roasted compact substantially anhydrous artificial higher oxid of manganese product and some lower oxid of manganese.

[Claims 6 to 9 not printed in the Gazette.]

1,221,063. FLASH-LIGHT-IGNITION SYSTEM FOR CAMERAS. CHARLES A. LARE, Eugene, Oreg. Filed Feb. 11, 1916. Serial No. 77,716. (Cl. 67—31.)



1. The combination with a photographic camera including a plate holder movable into or out of an exposure position, of a flash ignition circuit having a gap, and means automatically acting to close said gap when the plate holder is in a position for exposure.

2. The combination with a photographic camera including a shutter, shutter operating mechanism, and a plate holder movable into or out of an exposure position, of a flash ignition circuit broken at two points, means automatically closing one of said breaks when the plate holder is in position for exposure, and means closing the other of said breaks when the shutter is in its fully open position.

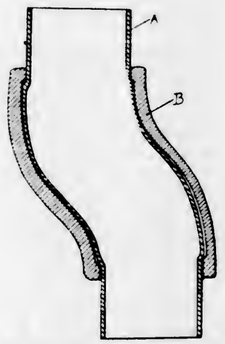
3. The combination with a photographic camera including a plate holder movable into or out of an exposure position, and a screen or curtain movable from in front of the plate holder to the rear thereof to a position to expose the plate, of an interrupted flash ignition circuit, and means acting automatically to close said circuit when the plate holder is in position for exposure and the screen or curtain has been fully withdrawn from in front of the plate.

4. The combination with a photographic camera including a shutter, a plate holder movable into or out of an exposure position, and a sliding screen movable into or out of a position to expose the plate in said holder, of a normally open flash ignition circuit, and means automatically closing said circuit upon the operation of the shutter after the plate holder has been shifted to its exposure position and the screen has been fully withdrawn from before the plate.

5. The combination with a photographic camera including a shutter, a plate holder movable into or out of an exposure position, and a screen or curtain movable from in front of the plate holder to a position to expose the photographic plate therein, of a flash ignition circuit broken at two points, means automatically closing one of said breaks in the circuit when the plate holder is in position for exposure and the screen or curtain has been fully withdrawn from in front of the plate, and means closing the other of said breaks in the circuit when the shutter is in its fully opened position.

[Claims 6 to 11 not printed in the Gazette.]

1,221,064. SANITARY CONNECTION. EDWARD H. LAWRENCE, Cameron, W. Va., and RAYMOND E. CRANE, Chicago, Ill. Filed Apr. 22, 1916. Serial No. 93,007. (Cl. 137—75.)



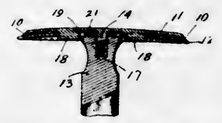
1. A tubular connection for sanitary fixtures comprising a hard brittle, non-absorbent outer shell, a flexible inner conduit fitted to said outer shell and extending beyond the ends of said outer shell.

2. A tubular connection for sanitary fixtures comprising a hard brittle, non-absorbent outer shell, a flexible inner conduit, means for securing said inner conduit in place in said outer shell.

3. A tubular connection for sanitary fixtures comprising a hard brittle, non-absorbent outer shell, a flexible water-tight inner conduit bent to conform to the inner shape of said outer shell, the ends of said inner conduit being arranged for direct connection with sanitary fixtures.

4. A tubular connection comprising a hard brittle, non-absorbent outer shell, a flexible water tight inner conduit formed to the inner contour of said outer shell, said outer shell being made to a different inside diameter at a point near its ends, substantially as described.

1,221,065. SAFETY-RAZOR. HARRY G. LUTZ, Geneva, N. Y. Filed Mar. 29, 1916. Serial No. 87,528. (Cl. 30—12.)



1. A safety razor comprising a blade, clamping members on opposite sides thereof, one of which forms the guard for the blade, a threaded stud attached to the outer clamping member and passing through coinciding openings in the blade and other clamping member, a handle having screw engagement with said stud, and lugs on one of the clamping members exterior to the handle and engaging slots in the blade, said slots extending outward from the blade opening and said lugs being spaced at their inner ends away from said threaded stud, and the screw-engaging portion of the handle entering the space between the inner ends of the lugs and the stud.

2. A safety razor comprising a blade, clamping members on opposite sides thereof, one of which forms the guard for the blade, a threaded stud attached to the outer clamping member and passing through coinciding openings in the blade and other clamping member, a handle having screw engagement with said stud, and lugs on one of the clamping members exterior to the handle and engaging slots in the blade, said slots extending outward from the blade opening and said lugs being spaced at their inner ends away from said threaded stud, and the screw-engaging portion of the handle entering the space between the inner ends of the lugs and the stud, and slots in the other clamping member and the blade being polygonal and provided with slits extending from its corners inward.

3. A safety razor comprising a blade, clamping members on opposite sides thereof, one of which forms the guard for the blade, a threaded stud attached to the outer clamping member and passing through coinciding openings in the blade and other clamping member, a handle having screw engagement with said stud, and lugs on one of the clamping members exterior to the handle and engaging slots in the blade and slots in the other member, and the end of the handle having a bearing against portions of said member between the slots therein, said slots extending outward from the blade opening, and said lugs being spaced at their inner ends away from said threaded stud, and the screw-engaging portion of the handle entering the space between the inner ends of the lugs and the stud.

1,221,066. DEVICE FOR CONTAINING AND APPLYING SHOE-POLISH. WALTER D. LYNCH, St. Paul, Minn. Filed July 31, 1916. Serial No. 112,371. (Cl. 15—46.)

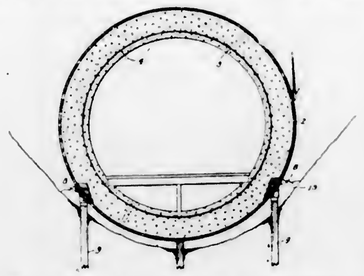


1. A device of the class described comprising a tube having a restricted opening formed in its top, a fabric cone carried by the tube, a felt washer having a central opening the same size as the top opening and positioned for receiving the cone, as and for the purpose set forth.

2. A device of the class described comprising a paste containing tube, the top of said tube having a restricted opening formed therein, a piece of fabric engaged in-

teriorly of the top and having a cone formed centrally thereof and projected through said opening, a felt washer associated with the tube and having an opening, said cone being projected into the opening of said washer, as and for the purpose set forth.

1,221,067. TUNNEL AND METHOD OF BUILDING SAME. DUNCAN D. MCBEAN, New York, N. Y. Filed Mar. 15, 1916. Serial No. 84,289. (Cl. 61—16.)



1. The method of constructing tunnels which consists in building a partial section of the tunnel with a closed bottom, floating said section in the water in an upright position in its partially completed state, building up and finishing the walls of the completed section while floating and when finished turning the section over onto its intended bottom and sinking it onto its prepared foundation.

2. The method of constructing tunnels, which consists in building a portion of a tunnel section with a closed bottom, floating such partially completed section in an upright position in the water, building up its walls to finish the section while thus floating, temporarily closing its upper end, turning it on its side and sinking it to its foundation.

3. The method of constructing reinforced concrete tunnels which consists in building a portion of a section of the tunnel on a movable platform with a closed end, sinking the platform in the water and floating the partially completed section off from the same in an upright position, then extending and finishing the section as far as desired while thus floating in the water, and when finished turning it over onto its intended bottom and sinking it to its prepared foundation.

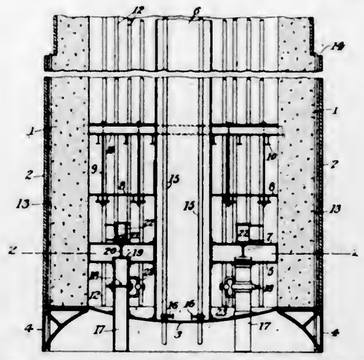
4. The method of constructing reinforced concrete tunnels, which consists in building portions of each section of the same on a movable platform and temporarily closing its lower end, sinking the platform in the water until the partially completed section floats off in an upright position, then finishing and extending the section as far as desired while thus floating, closing its upper end, turning it on its side and sinking it to a prepared foundation.

5. The method of constructing reinforced concrete tunnels, which consists in building a unit or sub-section of wooden sheathing upon a movable platform and temporarily closing its lower end, lining the wooden sheathing with reinforced concrete to a given height, then lowering the platform in the water until the partially completed section floats off in an upright position, then finishing and extending the section to such degree as may be desired while thus floating, closing its upper end, turning it on its side, and sinking it to a prepared foundation.

[Claims 6 to 9 not printed in the Gazette.]

1,221,068. METHOD OF BUILDING AND PLACING PIERS. DUNCAN D. MCBEAN, New York, N. Y. Filed Mar. 20, 1916. Serial No. 85,280. (Cl. 61—3.)

1. The method of constructing and installing piers and the like devices in the beds of rivers or other bodies of water, which consists in progressively building up masonry or composite tubes open at the top and closed at the bottom while the structure is sinking through the water and underlying material, admitting the water surrounding the structure to force the water bed material through valve controlled passages into compartments within the structure in proximity to its closed bottom, and from thence raising the material to the top of the structure, until the pier has sunk to the requisite depth.



2. The method of constructing and installing piers and the like devices in the beds of rivers or other bodies of water, which consists in progressively building up masonry or composite tubes open at the top and closed at the bottom while the structure is sinking through the water and underlying material, admitting the water surrounding the structure to force the water bed material through valve controlled passages into compartments within the structure in proximity to its closed bottom, from thence raising the material to the top of the structure until the pier has sunk to the requisite depth, and then depositing concrete or other suitable material under the structure as a foundation therefor.

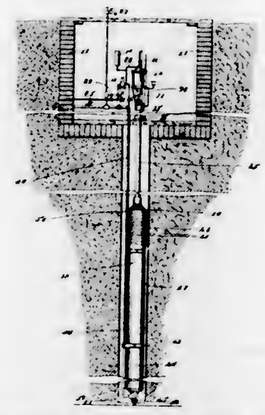
3. The method of constructing and installing piers and other like devices in the beds of rivers and other bodies of water, which consists in progressively building up walls inclosing a space open at the top and closed near the bottom of the structure and while the structure is sinking through the water and underlying material, admitting water surrounding the structure to force by hydrostatic pressure the water bed material through valve controlled passages into receptacles in the air space within the walls of the lower part of the structure above its closed bottom, then disposing of the material which has entered the receptacle through the air shaft until the structure has sunk to the requisite depth for a foundation.

4. The method of constructing a pier or other like structure in the bed of a river or other body of water, which consists in progressively building up masonry or composite walls inclosing a space open at the top and closed near the bottom, while the structure is sinking through the water and the underlying material, sinking the structure through the water bed by admitting the surrounding water in the water bed material through valve controlled pipes into normally closed receptacles in the lower part of the structure, then closing the pipe valves, opening the receptacles and removing the material from them through the air shaft until by the removal of underlying material the structure has been sunk to the proper level for a foundation.

5. The method of constructing and installing piers and other like devices in the beds of rivers or other bodies of water, which consists in progressively building up walls inclosing a space open at the top and closed near the bottom of the structure while the said structure is sinking, and when the bottom of the structure rests upon the material of the water bed admitting the surrounding water and water bed material through valve controlled pipes into compartments in the lower part of the structure, and removing it from the same through the air shaft, passing drills or tools through pipes extending through the structure to break up or loosen hard water bed material, and when by the removal of the underlying material the structure has been sunk to the requisite level depositing concrete under it through the pipes to form a solid foundation.

[Claims 6 to 21 not printed in the Gazette.]

1,221,069. LIQUID-ELEVATING APPARATUS. FELIX J. MCGUANE, Chicago, Ill. Filed July 20, 1912. Serial No. 710,599. (Cl. 103—8.)



1. A liquid elevator comprising an upper chamber and a lower chamber, a valve in the top of said upper chamber, a second valve in the bottom of said upper chamber controlling communication between said upper and said lower chamber, means whereby said valves are caused to open and close alternately, means for admitting liquid on top of the first valve, and means for admitting air to the lower chamber.

2. A liquid elevator comprising an upper chamber and a lower chamber, a valve in the top of said upper chamber for receiving liquid and discharging air, a second valve in the bottom of said upper chamber controlling communication between said upper and said lower chambers, means whereby said valves are caused to open and close alternately, means whereby air under pressure is supplied to said lower chamber and means for drawing liquid from bottom of said lower chamber.

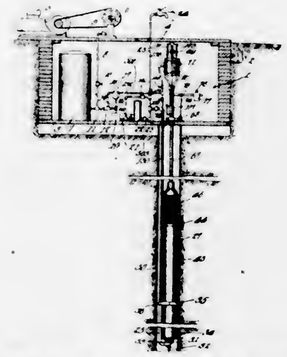
3. A liquid elevator comprising an upper chamber and a lower chamber, a valve in the top of said upper chamber for receiving liquid and discharging air, a throat coupling connecting said upper and said lower chambers, an air intake channel within the wall body of said throat coupling, discharging into said lower chamber, a second valve controlling communication between said upper and said lower chambers through said channel, means whereby said valves are caused to open and close alternately, and means for drawing off liquid from the bottom of said lower chamber.

4. A liquid elevator comprising an upper chamber and a lower chamber, a valve in the top of said upper chamber for receiving liquid and discharging air, a throat coupling connecting said upper and said lower chambers, an air intake channel within the wall body of said throat coupling, discharging into said lower chamber, a second valve controlling communication between said upper and said lower chambers through said channel, means whereby said valves are caused to open and close alternately, a liquid outlet in the bottom of said lower chamber, a liquid discharge pipe; an elbow coupling connected to said liquid discharge pipe, a ring gasket encircling said liquid outlet, the upper mouth of said elbow embracing said gasket, a yoke rigidly secured to bottom of said lower chamber and embracing said elbow coupling, a set screw in said yoke pressing against said elbow coupling whereby said elbow coupling is held firmly against the gasket.

5. A liquid elevator comprising an upper chamber and a lower chamber, a valve at the top of said upper chamber for receiving liquid and discharging air, a second valve at the bottom of said upper chamber controlling communication between said upper and said lower chambers, and a connecting rod uniting said valves for simultaneous movement.

[Claims 6 to 15 not printed in the Gazette.]

1,221,070. LIQUID-ELEVATOR. FELIX J. MCGUANE, Chicago, Ill. Filed Oct. 8, 1915. Serial No. 54,802. (Cl. 103—8.)



1. In a device of the class described, a fluid-pressure-actuated liquid-ejecting means embodying a liquid outlet conduit and a fluid pressure inlet conduit; a pressure storage tank in communication with the outlet conduit; an expansible element responsive to a diminution of pressure in the tank; a valve in the inlet conduit; an operative connection between the expansible element and the valve for opening the valve; and a cut-off device in the outlet conduit, the cut-off device being manipulable to permit the passage of liquid through the outlet conduit and to effect a diminution of pressure in the tank.

2. In a device of the class described, a fluid-pressure-actuated liquid-ejecting means embodying a liquid outlet conduit and a fluid-pressure inlet conduit; a rotary valve in the inlet conduit; a pinion operatively connected with the valve, a rack meshing into the pinion; an expansible element connected with the rack; means for establishing a communication between the expansible element and the outlet conduit; and a cut-off device in the outlet conduit.

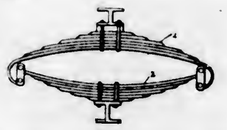
3. In a device of the class described, a fluid-pressure-actuated liquid-ejecting means embodying a liquid outlet conduit and a fluid-pressure inlet conduit; a rotary valve in the inlet conduit; a pinion operatively connected with the valve; a rack meshing into the pinion; an expansible element connected with the rack; a tank; means for establishing communication between the tank and the expansible element; means for establishing communication between the tank and the liquid outlet conduit; and a cut-off device in the liquid outlet conduit.

4. In a device of the class described, a fluid-pressure-actuated liquid-ejecting means embodying a liquid outlet conduit and a fluid-pressure inlet conduit; a rotary valve in the inlet conduit; a pinion operatively connected with the valve; a rack meshing into the pinion; a weight carried by the rack; a bellows operatively connected with the rack; a pressure storage tank; a communication between the pressure storage tank and the bellows; means for establishing communication between the storage tank and the liquid outlet conduit; and a cut-off device in the outlet conduit.

5. In a device of the class described, a fluid-pressure-actuated liquid-ejecting means comprising a casing; a fluid-pressure and liquid-controlling valve operating therein; a liquid outlet conduit leading from the casing; a fluid-actuated means for operating the valve, a fluid-pressure inlet conduit leading to the casing and to said means; an expansion tank communicating with the outlet conduit; a cut-off device in the outlet conduit; an expansible element; a connection between the expansible element and the tank; a valve in the inlet conduit; and means for operatively connecting the last specified valve to the expansible element.

[Claims 6 to 28 not printed in the Gazette.]

1,221,071. LAMINATED SPRING. ALBERT E. MCMANUS, Duluth, Minn. Filed Oct. 5, 1916. Serial No. 123,867. (Cl. 267—33.)

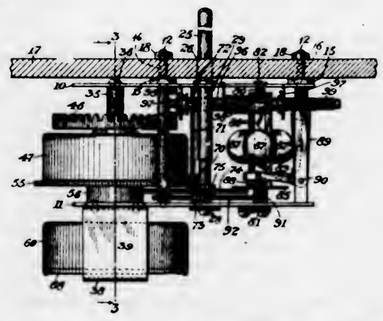


1. A spring comprising a plurality of superposed leaves, some of said leaves having a longitudinally directed bead formed upon their upper surfaces at one side, the upper edge of each such bead being spaced from the side of the respectively next superposed leaf.

2. A spring comprising a plurality of superposed leaves, some of said leaves being undercut at one side said undercut portion being spaced from the respectively next underlying one of said leaves.

3. A spring comprising a plurality of superposed leaves, each two adjoining ones of said leaves being adapted in cooperation with each other to form an open groove or channel at one side of said spring, the bottom of such channel being flush with upper face of the central portion of the lower one of the two leaves by which such channel is formed.

1,221,072. SPRING-MOTOR. HARRY B. MCNULTY, New York, N. Y., assignor to Wonder Talking Machine Company Inc., New York, N. Y., a Corporation of New York. Filed Jan. 28, 1916. Serial No. 74,785. (Cl. 185—37.)



1. In a spring motor, the combination with two substantially parallel plates, of a rotary spindle carried thereby, and means for rotating said spindle including a shaft carried by and substantially perpendicular to said plates and extending upon opposite sides of the plane of one of said plates, a pair of spring barrels surrounding said shaft upon opposite sides of said plate respectively, a driving spring in each of said barrels and a winding gear and a main driving gear surrounding said shaft between said plates.

2. In a spring motor, the combination with two substantially parallel plates, of a rotary spindle carried thereby, and means for rotating said spindle including a stationary shaft carried by and substantially perpendicular to said plates and extending upon opposite sides of the plane of one of said plates, a pair of spring barrels surrounding said shaft upon opposite sides of said plate respectively, a driving spring in each of said barrels, and a winding gear and a main driving gear surrounding said shaft between said plates.

3. In a spring motor, the combination with two substantially parallel plates, of a rotary spindle carried by said plates, and means for rotating said spindle including a stationary shaft substantially perpendicular to said plates and secured to and projecting from one of said plates toward and through the plane of the other of said plates, a sleeve loosely surrounding said shaft, a winding gear loosely surrounding said shaft between said plates, a spring barrel secured to said winding gear and loosely surrounding said sleeve between said plates, a spring connecting said spring barrel and said sleeve, a spring barrel loosely surrounding said sleeve outside of said plate, a spring connecting said second mentioned spring barrel and said sleeve, a driving gear arranged between said spring barrels and secured to said second mentioned spring barrel, transmission means between said driving gear and said spindle, and located between said plates, and means engaging the outer end of said shaft for holding the same in position.

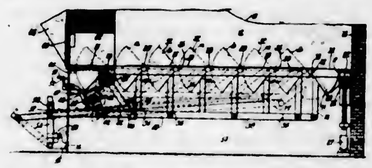
4. In a spring motor, the combination with a substantially vertical fixed shaft, of a sleeve loosely surrounding said shaft, a downwardly opening spring barrel loosely surrounding said shaft, a winding gear superimposed upon and secured to said barrel and loosely surrounding said shaft, a spring in said barrel and operatively connecting said barrel to said sleeve, a driving gear beneath and rotatable with respect to said barrel and loosely surrounding said sleeve, a spring barrel below and secured to said driving gear and loosely surrounding said sleeve, a spring in said last mentioned barrel operatively connecting the same to said sleeve, and means arranged beneath said last mentioned barrel to support the same and said sleeve.

5. In a spring motor, the combination with a substantially vertical fixed shaft, of a sleeve loosely surrounding said shaft, a downwardly opening spring barrel loosely surrounding said shaft at a point above said sleeve, a winding gear superimposed upon and secured to said barrel, and loosely surrounding said shaft, a spring in said barrel and operatively connecting said barrel to said sleeve, a driving gear beneath and rotatable with respect to said barrel and loosely surrounding said sleeve, a spring barrel below and secured to said driving gear and loosely surrounding said sleeve, a spring in said last mentioned barrel operatively connecting the same to said sleeve, and antifriction means surrounding said shaft and engaging the lower ends of said sleeve and said last mentioned barrel to support the same.

[Claim 6 not printed in the Gazette.]

1,221,073. FURNACE. VASIL MACKAY, Boston, Mass. Filed Feb. 18, 1914. Serial No. 819,320. (Cl. 110—39.)

1. A furnace having, in combination, a series of grate-



bars arranged in parallelism, each of said bars being pivotally supported to swing about an axis disposed adjacent to the rear sides of said grate-bars and extending transversely of said furnace, an arm depending from each of said grate-bars substantially forward of said axis, links connecting the arms of alternate grate-bars together and forming independently operable sets, a rod connected to each of said links, said rods extending forwardly through the front wall of said furnace, and an operating lever pivotally connected with each of said rods, whereby said alternate sets of grate-bars may be respectively operated either upwardly to feed fuel longitudinally of said grate or downwardly to dump said grate.

2. A furnace having, in combination, a series of grate-bars arranged in parallelism, each being pivotally supported to swing about an axis extending transversely of said furnace, an arm on each of said grate-bars, links connecting the arms of alternate grate-bars together and forming independently operable sets, a rod pivotally connected to each of said links, said rods extending forwardly to the front wall of said furnace and slidably engaging said wall, a plurality of teeth on said rods, a rotary shaft, means on said shaft adapted to alternately engage teeth on said rods to swing alternate sets of grate-bars successively upwardly step by step, and means to disengage said operating means from said teeth.

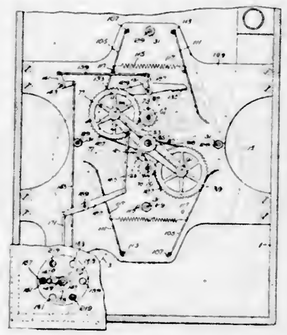
3. A furnace having, in combination, a series of grate-bars arranged in parallelism, each being pivotally supported to swing about a longitudinal axis extending transversely of said furnace, an arm on each of said grate-bars, links connecting the arms of alternate bars together and forming independently operable sets, a rod pivotally connected to the rear portion of each of said links, a plurality of teeth on said rods, a rotary shaft, a plurality of collars mounted on said shaft adapted to be moved thereon into and out of alinement with the teeth on said rods, said collars each having teeth thereon adapted to engage teeth on said rods and impart an intermittent upward swinging movement to said grate-bars, and means to move said collars and their teeth into and out of alinement with the teeth on their respective rods.

4. A furnace having, in combination, a series of grate-bars arranged in parallelism, each being pivotally supported to swing about a longitudinal axis extending substantially transversely of said furnace adjacent the rear sides of said bars, an arm on each of said grate-bars, links pivotally connecting the arms of alternate grate-bars together to form a plurality of sets of grate-bars, a rod pivotally attached to each of said links, a series of levers pivotally arranged at the front wall of said furnace, each of said levers being connected to one of said rods and adapted to be manually rocked outwardly to elevate the front sides of said grate-bars to feed fuel from the front toward the rear of said furnace, stops adapted to normally engage said levers to limit the inward movements thereof and aline the upper faces of said grate-bars one with the other, said stops adapted to be moved to permit an additional inward movement of said levers, whereby said grate-bars may be swung downwardly from their normal positions to discharge the fuel therefrom.

5. A furnace grate comprising a series of grate-bars arranged in parallelism, each being pivotally supported to swing about a longitudinal axis adjacent one side thereof, a plurality of supports extending longitudinally of said furnace adapted to support said grate-bars, plates extending transversely of said furnace adjacent to the opposite ends of said longitudinal supports, lugs on said plates forming recesses adapted to receive the ends of said longitudinal supports, and keys placed beneath said supports interlocking with said lugs and removably mounted thereon adapted to support said longitudinal supports within said recesses.

1,221,074. DRIVING AND SPEED-REGULATING MECHANISM FOR PHONOGRAPHS. STANLEY R. MACLANE, Boston, Mass. Filed Sept. 2, 1915. Serial No. 48,727. (Cl. 74—45.)

1. In a phonograph, the combination with a record support, of means to rotate said support including a pair of rotors, a flexible transmission member connecting the latter, means to operate said rotors to draw said member alternately in opposite directions to and from said rotors, and means to drive said support from the latter while said member is being drawn in either of said directions.



2. In a phonograph, the combination with a record support, of means to rotate said support including a pair of rotors, a flexible transmission member connecting the latter, means to operate said rotors to draw said member to and from the same, and means to drive said support from either of said rotors.

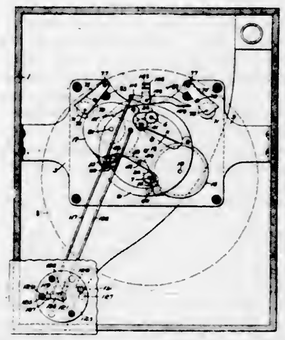
3. In a phonograph, the combination with a record support, of means to rotate said support including a pair of rotors, a flexible transmission member connecting the latter, and means to operate said rotors to draw said member to and from the same, said rotors having provision permitting them to be alternately driven by said transmission member to impart rotation to said support.

4. In a phonograph the combination with a support for a disk record, of mechanisms to positively drive said support with progressively varying speed, and means providing for the playing of successive records without interruption from said mechanisms.

5. In a phonograph, the combination with a record support, of means to rotate said support including a pair of rotors, and a member connecting the latter having provision for transmitting rotative movement from said motor to said support when wound on or unwound from either of said rotors.

[Claims 6 to 83 not printed in the Gazette.]

1,221,075. DRIVING AND SPEED-REGULATING MECHANISM FOR PHONOGRAPHS. STANLEY R. MACLANE, Boston, Mass. Filed July 7, 1916. Serial No. 108,064. (Cl. 74—45.)



1. In a phonograph, the combination with a motor driven shaft of a table driving shaft, and transmission means connecting them including a carrier, spools thereon, and a flexible tape extending between said spools at the same side of their axes.

2. In a phonograph, the combination with a motor driven shaft of a table driving shaft, and transmission means connecting them including a carrier, rotative elements thereon, and a flexible transmission member connecting said elements adapted to be wound to and from said elements on the same side of their axes.

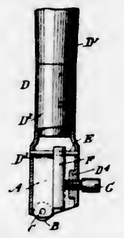
3. In a phonograph, the combination with driving and driven shafts of transmission means connecting the same including a carrier, rotative elements mounted thereon, and a flexible member connecting said elements for driving one from and in the same direction as the other.

4. In a phonograph, the combination with driving and driven shafts of transmission means connecting them including a carrier, spools mounted thereon, a flexible transmission member connecting said spools, and means on said carrier projecting between the heads of said spools to limit outward movement of the coil of said member wound thereon.

5. In a phonograph, the combination with driving and driven shafts of transmission means therefor including a carrier comprising spaced plates, shafts journaled in bearing therein, spools on said shafts, and a flexible transmission member connecting said spools and adapted to be wound to and from the same.

[Claims 6 to 28 not printed in the Gazette.]

1,221,076. MOUNTING FOR GLASS-CUTTERS. SAMUEL G. MONCE, Unionville, Conn. Filed Feb. 26, 1914, Serial No. 821,162. Renewed July 1, 1915. Serial No. 37,590. (Cl. 49—52.)



1. A glass cutting tool, comprising a holder or handle having a rectangular socket, a mounting carrying a cutting wheel and arranged in said socket, said mounting being of less size than the socket and having its sides fitting against the side walls of the said socket throughout its length, a clamp-bar permanently and loosely mounted to the socket between the mounting and an end wall of the socket, and a clamp-screw mounted in the socket and engaging the clamp bar to force it against the mounting.

2. In combination, a holder provided with a socket, a mounting formed from a piece of flat metal doubled up to provide spaced parallel members, an arbor held in the free ends of the said members, a glass-cutting wheel mounted to turn on the said arbor and extending between the said mounting, the latter fitting into the said socket, a pin in the said socket to limit the inward movement of the said mounting, a clamping bar in the said socket and engaging the said mounting to clamp the latter in position in the socket, the said clamping bar being mounted to slide on the said pin, and a set screw screwing in the said socket against the said clamping bar.

3. In combination, a holder provided with a socket, a mounting formed from a piece of flat metal doubled up to provide spaced parallel members, an arbor held in the free ends of the said members, a glass-cutting wheel mounted to turn on the said arbor and extending between the said mounting, the latter fitting into the said socket, a pin in the said socket to limit the inward movement of the said mounting, a clamping bar in the said socket and engaging the said mounting to clamp the latter in position in the socket, the said clamping bar being mounted to slide on the said pin and the said clamping bar being U-shape in cross section and having its side bars seated on the edges of the said mounting members, and a set screw screwing in the said socket against the said clamping bar.

4. A glass cutting tool, comprising a holder provided with a rectangular socket, a mounting carrying a cutting wheel and arranged in the socket, said mounting being of less size than the socket and having its sides fitting against the side walls of the said socket throughout its length, a stop for limiting the inward movement of the mounting, a clamp-bar permanently and slidably mounted in the socket at one side of the mounting, and a clamp-screw mounted in the socket and engaging the clamp bar to force it against the mounting.

5. A mounting for a glass cutter, consisting of a piece of narrow flat metal bent upon itself to form an elongated inverted U-shaped body having flat parallel members spaced a short distance apart, an arbor secured in the free ends of the members of the body, and a glass cutting wheel mounted to turn on the arbor and having its periphery projecting beyond the ends of said members, beyond the planes of the front and rear faces thereof.

1,221,077. ALKYLARYLAMIN PRODUCTION. GILBERT THOMAS MORGAN, London, England, assignor to Levinstein Limited, Manchester, England, a British Corporation. Filed June 1, 1916. Serial No. 101,037. (Cl. 23—24.)

1. A process of producing alkylarylamins which consists in bringing together in a suitable liquid medium of such a character as not to inhibit the formation of an anhydrobase a reducing agent, a primary aromatic amin and an aliphatic aldehyde, and heating the same.

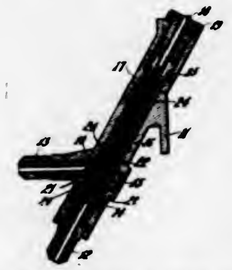
2. A process of producing alkylarylamins which consists in bringing together in a suitable liquid medium of such a character as not to inhibit the formation of an anhydrobase a reducing agent, anilin and an aliphatic aldehyde, and heating the same.

3. A process of producing methylanilin which consists in bringing together in a suitable liquid medium of such a character as not to inhibit the formation of an anhydrobase a reducing agent, anilin and formaldehyde solution, and heating the same.

4. A process of producing methylanilin which consists in bringing together in a suitable liquid medium of such a character as not to inhibit the formation of an anhydrobase caustic soda, zinc dust, anilin and formaldehyde solution, and heating the same.

5. A process of producing methylanilin which consists in bringing together in water caustic soda, zinc dust, anilin and formaldehyde solution, and heating the same.

1,221,078. OIL-PUMP INDICATOR. GEORGE W. MORRIS, Racine, Wis. Filed Apr. 17, 1915. Serial No. 21,956. (Cl. 116—31.)



1. In an oil pump indicator, a casing having a chamber with an inlet passageway leading thereto from the oil pump and having a second chamber with a passageway leading therefrom and a partition between the two chambers, a plunger fitting within a bore of the casing which extends through the partition, said plunger being movable under the influence of the pressure of the oil from the pump and having openings movable into and out of register with the second chamber for affording a free flow of lubricant through the plunger from the first chamber to the second chamber when the plunger is in the position

to which it is moved upon receiving an impulse from the pump.

2. In an oil pump indicator, a casing, a plunger slidably fitting therein, said casing having an oil inlet passageway for connection with an oil pump and an oil outlet passageway, the end of the plunger having an opening to communicate with the oil inlet passageway and there being openings near the end of the plunger to be moved into and out of register with the oil outlet passageway with the movements of the plunger, and a stem projecting from the casing and movable with the plunger.

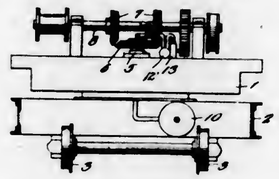
3. In an indicator for oil pumps, a tubular casing, a tubular plunger fitting therein with its upper end closed and constituting an air dome and its lower end open and communicating with an oil inlet passageway of the casing adapted for connection with the oil pump and having openings in its side walls movable into and out of register with an oil outlet passageway of the casing, and a stem projecting from the casing and moved by the plunger.

4. In an indicator for oil pumps, a tubular casing, a tubular plunger fitting therein with its upper end closed and constituting an air dome and its lower end open and communicating with an oil inlet passageway of the casing adapted for connection with the oil pump and having openings in its side walls movable into and out of register with an oil outlet passageway of the casing, and there being a small air vent opening in the side walls of the plunger above the said openings and communicating with the oil outlet passageway, and a stem projecting from the casing and moved by the plunger.

5. In an oil pump indicator, a casing, a plunger fitting therein and interrupting communication between an oil inlet passageway and an oil outlet passageway of the casing and adapted to be moved by the influence of pressure within the oil inlet passageway and having openings to establish communication between the oil inlet passageway and the oil outlet passageway when so moved, yielding means for cushioning the end movement of the plunger, and a stem projecting from the casing and moved by the plunger.

[Claim 6 not printed in the Gazette.]

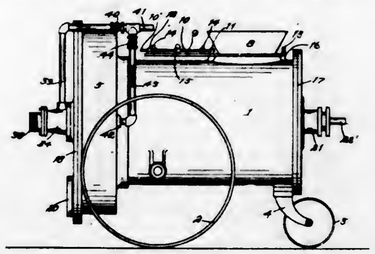
1,221,079. AIR-BRAKE FOR LOCOMOTIVE-CRANES. BENJAMIN MULLIN, Jersey City, N. J. Filed Mar. 14, 1916. Serial No. 84,200. (Cl. 188—1.)



The combination with a locomotive crane including a car body, of a king pin extending upwardly therefrom, a travel shaft rotatably mounted in the king pin, a rotatable base mounted on the king pin, mechanism for applying brakes to the car wheels, a pipe extending longitudinally through the travel shaft, and a pump mounted on the base rigidly and connected to the upper end of the pipe, the lower end of the pipe being connected to the brake applying mechanism.

1,221,080. PNEUMATIC CONVEYER. JOHN D. MURRAY, San Francisco, Cal., assignor of one-half to Thomas Scoble, San Francisco, Cal. Filed June 14, 1916. Serial No. 103,607. (Cl. 193—10.)

1. A pneumatic conveyer comprising a substantially cylindrical receptacle adapted to contain a quantity of the material to be conveyed, said receptacle having a portion of enlarged diameter at one end thereof; an axially disposed shaft within said receptacle; revolving devices carried by said shaft for advancing said material into the enlarged portion of said receptacle; a revolving member, having a series of peripherally disposed blades, carried by said shaft within the enlarged portion of said receptacle for conveying said material into a discharge chamber located in the peripheral region of said enlarged portion of the receptacle; and pneumatic pressure means for removing said material from said discharge chamber.



2. A pneumatic conveyer comprising a substantially cylindrical receptacle adapted to contain a quantity of the material to be conveyed, said receptacle having a portion of enlarged diameter at one end thereof; an axially disposed shaft within said receptacle; revolving devices carried by said shaft for advancing said material into the enlarged portion of said receptacle; a revolving member, having a series of peripherally disposed overhanging blades, carried by said shaft within said enlarged portion of the receptacle for conveying said material into a discharge chamber formed in the peripheral region of said enlarged portion of the receptacle by a segmental lineal extension of the wall of said receptacle; and pneumatic preasure means for removing said material from said discharge chamber.

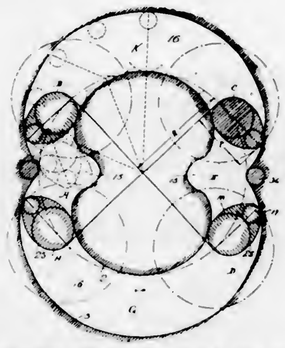
3. A pneumatic conveyer comprising a substantially cylindrical receptacle adapted to contain a quanity of the material to be conveyed, said receptacle having a portion of enlarged diameter at one end forming a feed drum to which the material is delivered from the receptacle; a segmental plate within said drum, spaced from and concentric with its peripheral wall to form therein an arcuate discharge chamber open at each end to the drum; a revolving series of spaced blades operating within the feed drum and passing through the arcuate discharge chamber, to convey the material in successive charges into said chamber, the space between adjacent blades being less than the length of said chamber, whereby in passing therethrough, adjacent blades form end walls for the chamber; an outlet connection communicating with said chamber; and pneumatic pressure means for removing the charge from the chamber through said outlet connection.

4. A pneumatic conveyer comprising a substantially cylindrical receptacle adapted to contain a quantity of the material to be conveyed, said receptacle having a portion of enlarged diameter at one end forming a feed drum to which the material is delivered from the receptacle, a segment of said receptacle wall being extended into said drum concentric with the peripheral wall of the drum, to form therein an arcuate discharge chamber open at each end to the drum; a revolving series of spaced blades operating within the feed drum and passing through the arcuate discharge chamber, to convey the material in successive charges into said chamber, the space between adjacent blades being less than the length of said chamber, whereby in passing therethrough, adjacent blades form end walls for the chamber; an outlet connection communicating with said chamber; and pneumatic pressure means for removing the charge from the chamber through said outlet connection.

1,221,081. EXPLOSION-ENGINE. THEOPHILUS F. NEILSON, Palisade, N. J. Filed Jan. 8, 1916. Serial No. 70,936. (Cl. 123—11.)

1. An explosion engine comprising a main shaft, a cylinder, and a plurality of rotary pistons positively secured to said shaft and adapted to rotate about said shaft in

said cylinder to rotate said shaft and means to successively form compression and explosion chambers within said cylinder between adjacent pistons.



2. An explosion engine comprising a main shaft, a cylinder, and a plurality of rotary pistons positively secured to said shaft and adapted to rotate about said shaft in said cylinder to rotate said shaft and means to successively form compression and explosion chambers within said cylinder between adjacent pistons, and means actuated by the rotation of said shaft for individually rotating said pistons.

3. An explosion engine comprising a main shaft, a stationary casing in which said shaft is journaled said casing provided with a cylinder chamber extending completely circumferentially around said shaft, a plurality of rotary pistons for said cylinder and adapted to travel therein and means to successively form compression and explosion chambers within said cylinder between adjacent pistons, and means actuated by the travel of said pistons for rotating said shaft.

4. An explosion engine comprising a main shaft, a stationary casing in which said shaft is journaled said casing provided with a cylinder chamber extending completely circumferentially around said shaft, a plurality of rotary pistons for said cylinder and adapted to travel therein and means to successively form compression and explosion chambers within said cylinder between adjacent pistons, and means actuated by the travel of said pistons for rotating said shaft, and means actuated by the rotation of said shaft for axially rotating each of said pistons about its individual axis.

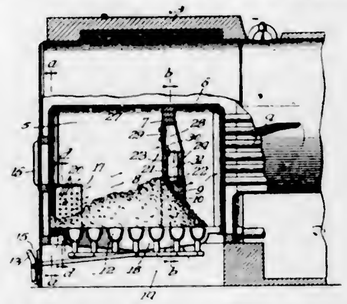
5. An explosion engine comprising a main shaft, a casing surrounding the same and provided with an irregular cylinder chamber therein, a plurality of eccentrically rotatable pistons mounted in said irregular cylinder chamber to travel therein around said shaft, and means associated with said pistons and actuated by their travel for rotating said shaft.

[Claims 6 to 20 not printed in the Gazette.]

1,221,082. FURNACE. ANDREW NILSON, Chicago, Ill., assignor to The Eureka Smokeless Furnace Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 14, 1916. Serial No. 78,089. (Cl. 110—65.)

1. A furnace structure having a fire box, combustion chamber and ash pit, a baffle wall structure interposed between said combustion chamber and fire box, a grate underneath both fire box and combustion chamber, said baffle wall having openings to permit the passage of gases from the fire box to the combustion chamber, means for supplying fresh air for mixing with the gases immediately to the rear of said openings, and means for supplying fresh air to the front portion only of said fire box above the grate.

2. A furnace structure having a fire box, combustion chamber and ash pit, a baffle wall structure interposed between said combustion chamber and fire box, a grate underneath both fire box and combustion chamber, said baffle wall having openings to permit the passage of gases from the fire box to the combustion chamber, means for supplying fresh air for mixing with the gases immediately to the rear of said openings, and means for supplying fresh air to the front portion only of said fire box above the grate, both of said means communicating with said ash pit.



3. A furnace structure having a fire box, combustion chamber and ash pit, a baffle wall structure interposed between said combustion chamber and fire box and extending downwardly to the normal top level of the fuel, a grate underneath both fire box and combustion chamber, said baffle wall having openings to permit the passage of gases from the fire box to the combustion chamber, means for supplying fresh air for mixing with the gases immediately to the rear of said openings, and means for supplying fresh air to the front portion only of said fire box above the grate.

4. A furnace structure having a fire box, combustion chamber and ash pit, a baffle wall structure interposed between said combustion chamber and fire box and extending downwardly to the normal top level of the fuel, said baffle wall having openings to permit the passage of gases from the fire box to the combustion chamber, means for supplying fresh air for mixing with the gases immediately to the rear of said openings, and means for supplying fresh air to the front portion only of said fire box above the grate, both of said means communicating with said ash pit.

5. A furnace structure having a fire box, combustion chamber and ash pit, a hollow baffle wall structure interposed between said combustion chamber and fire box and extending downwardly approximately to the normal top level of the fuel, said baffle wall having openings leading from said fire box into its hollow interior, means for supplying air to the interior of said baffle wall, means for directing the mixture from the interior of said baffle wall into the combustion chamber, and means for supplying air to the front portion only of said fire box above the grate.

[Claims 6 to 8 not printed in the Gazette.]

1,221,083. SOLID ELASTIC TIRE. ARTHUR NIXON, Rusholme, Manchester, England. Filed Apr. 27, 1915. Serial No. 24,323. (Cl. 106—23.)

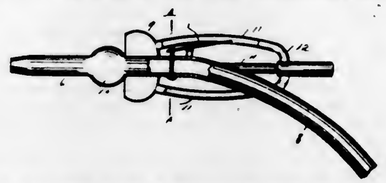
A solid elastic tire composed of a composition consisting of rubber, lithopone, sulfur, litharge and iron oxid in or about the proportions of rubber, 34 parts; lithopone, 50 parts; sulfur, 6 parts; litharge, 2 parts; and iron oxid, 2 parts.

1,221,084. SYRINGE. WARREN J. NORRIS, McLoud, Okla. Filed July 6, 1914. Serial No. 849,193. (Cl. 128—25.)

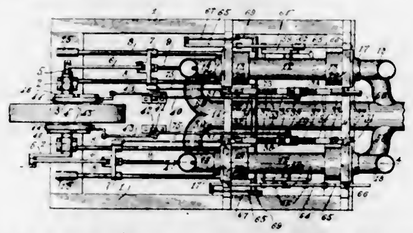
1. A syringe, comprising an injecting tube, a vacuum cup surrounding the tube, an enlargement in the body of the tube near the mouth of the cup, means for feeding the tube, and means for creating a vacuum in the cup.

2. A syringe, comprising an injecting tube, a vacuum cup surrounding said tube, a pump tube connected to the injecting tube, an enlargement in the body of the tube near the mouth of the cup, a suction tube leading from the cup, to exhaust the air from the cup.

3. A syringe, comprising an injecting tube, a vacuum cup surrounding the same, an enlargement of said tube at or near the cup, a pump tube, a valve intermediate the injecting and pump tubes, a suction tube leading from the vacuum cup and means to exhaust the vacuum cup.



1,221,085. WATER-DRIVEN ENGINE. JAMES O'GARA, Dayton, Ohio. Filed July 7, 1916. Serial No. 108,065. (Cl. 138—2.)



1. In a water engine, the combination with twin cylinders, pistons in said cylinders, and water inlet and outlet pipe connections communicating with the ends of said cylinders, of valves at opposite ends of said cylinders controlling the inlet of water to alternately drive said pistons in opposite directions, rotary exhaust valves in the ends of said cylinders, a shaft driven from said pistons, eccentrics driven from said shaft, connections between said eccentrics and the inlet valves whereby said valves are alternately opened and closed to admit and shut off the motive fluid, actuating means for said rotary valves comprising slotted actuators driven from said engine driven shaft, bell crank levers operated from said actuators, and connections between said bell-crank levers and said exhaust valves.

2. In a water engine, the combination with twin cylinders having pistons therein, and water inlet and outlet piping communicating with the ends thereof, a shaft driven from said pistons, flap valves hinged at the ends of said cylinders and controlling the water inlet to the cylinders, reciprocable slides driven from said shaft, actuating rods for said valves arranged to be alternately engaged and actuated by said reciprocable slides, crank connections between said rods and said valves, rotary exhaust valves in the ends of said cylinder, and operating connections between the engine driven shaft and said rotary valves whereby the cylinders are relieved of the motive fluid after it expends its force in driving the piston.

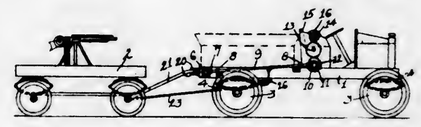
3. In a water engine, the combination with twin cylinders, water inlet and outlet pipe connections communicating with the ends of said cylinders, water driven pistons in said cylinders, a shaft driven by said pistons, of flap valves actuated from said shaft to alternately admit the motive fluid to said cylinders, cranks connected with said valves, connecting rods extending from said cranks in alinement with each other and controlled by springs to normally maintain the valves closed, reciprocating bumpers arranged between the ends of the valve-connecting rods and adapted to alternately engage said rods, and crank connections between said bumpers and said shaft.

4. In a water engine, the combination with twin cylinders having their ends connected with inlet and outlet water pipes, pistons within said cylinders, and a shaft driven from said pistons, of two flap valves hinged in the ends of each of said cylinders and controlling the admission of the motive fluid thereto, eccentrics driven by said shaft, levers connected to said eccentrics, connecting rods actuated by said levers, slides actuated by said connecting rods, and connections between said slides and said inlet valves.

5. In a water engine, the combination with twin cylinders having heads providing water inlet passages through the ends of said heads, and annular outlet passages through the sides of said heads, inlet pipes connecting with the ends of said heads and outlet or exhaust pipes connecting with the annular outlet passages in said heads, pistons in said cylinders, and a shaft driven by said pistons, of flap valves hinged in said heads and controlling the passage of water thereto, cranks connected to said valves, bumper rods connected to said cranks by link connections, a reciprocating member arranged between the ends of said rods to alternately engage the same, and connections between said reciprocating member and the shaft.

[Claim 6 not printed in the Gazette.]

1,221,086. DRAFT APPARATUS. LOUES T. OLSON, Detroit, Mich. Filed May 19, 1916. Serial No. 98,512. (Cl. 21—137.)



1. In a draft apparatus, a driven vehicle, a trailing vehicle, means for guiding said trailing vehicle from the driven vehicle, a cross bar on the driven vehicle, a shaft directly beneath said cross bar, a cable and a drum rotatable on the said shaft around which the said cable is wound, one end of the cable being secured to said cross bar and the other end of the cable being secured to the trailing vehicle.

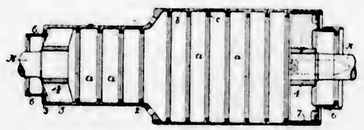
2. In a draft apparatus, a driven vehicle, a trailing vehicle, a cable connecting the said vehicles, a tongue on the said trailing vehicle, a screw shaft at the rear of the driven vehicle, a block on said screw shaft adapted to receive the tongue of the said trailer, means on said block allowing limited movement of the trailer tongue in relation thereto, a plurality of rods passing through said block on each side of the shaft, the bearing between the block and rods being greater in length than the bearings between the block and screw shaft, said rods preventing rotation of the block by rotation of the shaft, and means for rotating said shaft.

3. In a draft apparatus, a driven vehicle, a trailing vehicle, a cross bar on the driven vehicle, a shaft directly beneath said cross bar, a cable and a drum rotatable on the said shaft around which the said cable is wound, one end of the cable being secured to said cross bar and the other end of the cable being secured to the trailing vehicle, a screw shaft at the rear of the driven vehicle, a block on said screw shaft adapted to receive the tongue of the said trailer, means on said block allowing limited movement of the trailer tongue in relation thereto, a plurality of rods passing through said block on each side of the shaft, the bearing between the block and rods being greater in length than the bearing between the block and screw shaft, said rods preventing rotation of the block by rotation of the shaft, and means for rotating said shaft.

1,221,087. CONSTRUCTION OF TURBINE AND LIKE ROTORS. CHARLES ALGERNON PARSONS and ALFRED QUINTIN CARNEGIE, Newcastle-upon-Tyne, and STANLEY SMITH COOK, Wallsend, England; said Carnegie and Cook assignors to said Parsons. Filed Oct. 9, 1913. Serial No. 794,353. (Cl. 253—69.)

1. A rotor comprising channeled members bent into ring form, each with its ends welded, said ring shaped members

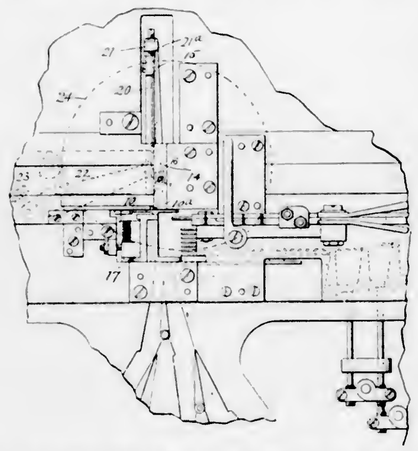
thereby having annular flanges and means for uniting a plurality of said members together to form a group, substantially as described.



2. A rotor comprising in combination a plurality of channel section elements united in a group, a further plurality of channel section elements of less diameter than the first mentioned elements united in a second group, elements having inwardly turned flanges connecting said groups of elements, and spiders connected to the free ends of said groups of elements.

3. A rotor comprising in combination a group comprising a plurality of chaunel section elements, means connecting said elements, a further group of channel section elements of less diameter than said first mentioned elements, means connecting said further group of channel section elements, elements having inwardly turned flanges between said groups of elements, and means connecting said inwardly turned flanges to said groups of elements.

1,221,088. MATRIX-DISTRIBUTING MECHANISM. DAVID PETRI-PALMEDO, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 9, 1915. Serial No. 44,520. (Cl. 199—7.)



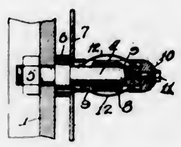
1. In matrix distributing mechanism, the combination of matrix supporting rails, a vertical stop member adjacent to but at a short distance beyond the ends of said rails, means for moving a line of matrices along said rails to carry the head matrix of said line against said stop member, and a spring-actuated vertically movable transfer blade, with a dog normally preventing the spring-induced descent of said transfer blade, and means for withdrawing said dog,—which means comprise a member which projects into the path of said matrix and is adapted to be moved thereby as said matrix moves toward and against said stop member.

2. In matrix distributing mechanism, the combination of matrix supporting rails, a vertical stop member adjacent to but at a short distance beyond the ends of said rails, means for moving a line of matrices along said rails to carry the head matrix of said line against said stop member, and a spring-actuated vertically movable transfer blade, with a dog normally preventing the spring-induced descent of said transfer blade, and means for withdrawing said dog,—which means comprise a rocking member having two lugs which project into the path of said head matrix near the upper and lower ends thereof and are both adapted to be engaged and moved equally by the head matrix when it is in a vertical position and just as it comes into engagement with said stop member.

3. In matrix distributing mechanism, the combination of matrix supporting rails, a vertical stop member adjacent to but at a short distance beyond the ends of said rails, means for moving a line of matrices along said rails to carry the head matrix of said line against said stop member, and a spring actuated vertically movable transfer blade, with a pivoted dog adapted to engage a shoulder fixed to said transfer blade, and thereby prevent the spring induced descent of said transfer blade, a lever which is centrally pivoted to said dog and has near its upper and lower ends lugs which are projected into the path of the upper and lower ends of the head matrix whereby said head matrix, if occupying a vertical position, will engage both ends of said lever and move both ends equally and therefore move with the dog to release said transfer slide blade.

4. In matrix distributing mechanism, the combination of matrix supporting rails, a vertical stop member adjacent to but at a short distance beyond the ends of said rails, means for moving a line of matrices along said rails to carry the head matrix of said line against said stop member and a spring actuated vertically movable transfer blade, with a dog normally preventing the spring induced descent of said transfer blade, and means for withdrawing said dog,—which means comprise a part which projects into the path of said matrix and is adapted to be moved thereby as said matrix moves toward and against said stop member, a pivoted matrix supporting lever having at its lower end a toe adapted to normally project part way across the gap between the ends of said distributing rails and stop member, and means connecting said lever with said dog whereby they must move in unison.

1,221,089. PAPER-CARRIER FOR WRAPPING-MACHINES. FRANK M. PIERCE, Chicago, Ill., assignor to Pierce Wrapping Machine Company, Chicago, Ill., a Corporation of Illinois. Original application filed Oct. 3, 1914, Serial No. 864,735. Divided and this application filed Oct. 4, 1915. Serial No. 54,098. (Cl. 242—130.)

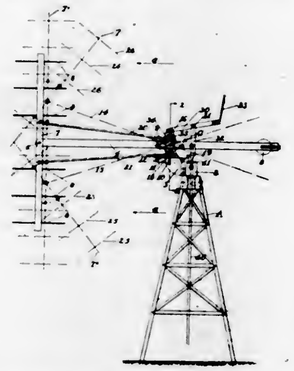


1. In a device of the class described the combination with a shuttle of a spindle mounted thereon, a collar integrally formed on said spindle, a supporting disk secured thereto, a sleeve on said spindle resting on said disk and having slots therein, resilient means engaging in said slots of said sleeve, and means for retaining said sleeve upon said spindle and adapted to receive a reel of paper inserted thereover to compress said resilient means whereby the same acts as a brake for the reel of paper to prevent spinning thereof on the device.

2. In a device of the class described a spindle, a collar integral therewith, a disk secured thereon, a sleeve on said spindle resting on said disk, a cap retaining said sleeve on said spindle, and resilient means engaged with said spindle adapted to contact the inner layer of a reel of paper mounted on said device to prevent spinning thereof thereon and yet permitting rotation of said reel on the device.

3. In a paper carrying device of the class described the combination of a shuttle and a spindle rigidly secured therein, a disk rigid on said spindle, a sleeve resting thereon having slots therein, a cap mounted on the outer end of said spindle and sleeve, a bolt projecting through said cap and threaded into said spindle to hold the sleeve in position, and a pair of resilient members disposed in said slots in opposite sides of said spindle acting to contact a reel of paper inserted on the device to prevent spinning of the reel thereon.

1,221,090. WINDMILL. JOHN C. PREWITT and CLARK HENDRICKS, Santa Margarita, Cal. Filed Mar. 11, 1916. Serial No. 83,507. (Cl. 170—7.)



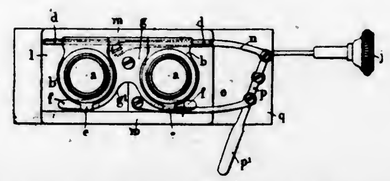
1. The combination with the walking beam and the pivotally supported sail frame mounted thereon, of means for automatically tilting the sail frame the moment the walking beam assumes a predetermined angle, said means including rods having one end of each connected with the sail frame at points above and below the pivot, tiltable tracks upon which the opposite ends of the rods are movable, diagonal links connecting the tracks to tilt them simultaneously, and a device for limiting the tilting movement.

2. The combination with a support, of a rotary head on the support, an arm pivotally mounted in said head, a sail frame pivotally mounted on one end of the arm, a counterweight on the opposite end of the arm, a plurality of sails rigidly secured in the sail frame, a track member secured to the arm, a second track member pivotally mounted below the arm, crossed links connecting the track members, a weighted roller mounted on each track member, and a link connecting each roller with the sail frame to automatically tilt the frame when predetermined positions of the arm are reached.

3. The combination with a support, of a rotary head on the support, an arm pivotally mounted in said head, a sail frame pivotally mounted on one end of the arm, a counterweight on the opposite end of the arm, a plurality of sails rigidly secured in the sail frame, a track member secured to the arm, a second track member pivotally mounted below the arm, crossed links connecting the track members, a weighted roller mounted on each track member, a link connecting each roller with the sail frame to automatically tilt the frame when predetermined positions of the arm are reached, and means for limiting the tilting movement of the sail frame.

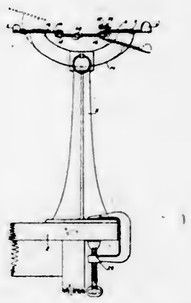
4. The combination with a support, of a rotary head on the support, an arm pivotally mounted in said head, a sail frame pivotally mounted on one end of the arm, a counterweight on the opposite end of the arm, a plurality of sails rigidly secured in the sail frame, a track member secured to the arm, a second track member pivotally mounted below the arm, crossed links connecting the track members, a weighted roller mounted on each track member, a link connecting each roller with the sail frame to automatically tilt the frame when predetermined positions of the arm are reached, a governor arm pivotally mounted above the main arm, a wind vane on one end of the governor arm, and a V-shaped projection on the other end of the arm engageable with one of the rollers to limit their movement.

1,221,091. MEANS FOR REGULATING THE EYE-PIECES OF STEREOSCOPES. JULES RICHARD, Paris, France. Filed Dec. 2, 1912. Serial No. 734,557. (Cl. 88—29.)



In a device for regulating the eyepieces of stereoscopes, the combination of a base plate, adjustable eye pieces, a post extending forwardly from the base plate and located between the eye pieces, a cross bar mounted upon the post and extending across the tops of the eye pieces, a forked member depending from the post and having its arms extending downwardly and outwardly and beneath the respective eye pieces, the space between the branches of the fork accommodating the nose of the user, a plate carried by each eye piece, said plate being provided at its top with a guide slidable upon the cross bar and at its bottom with another guide slidable upon the adjacent arm of the forked member, and means to move the eye pieces toward and away from one another.

1,221,092. SHOE-SUPPORT. EDWIN S. RIGDON, Berea, Ohio. Filed July 27, 1914. Serial No. 853,313. (Cl. 15—58.)

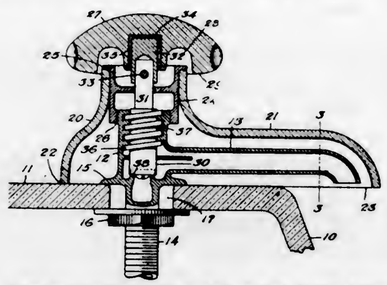


A device to hold shoes to be polished comprising a standard with an open slot vertically in its top, in combination with a foot-rest consisting of two separate horizontally disposed plates spaced apart at the middle of the device and a substantially crescent shaped support having said plates rigidly fixed upon its ends and adjustably mounted in said slot, clamps for the shoe on the under side of said plates and a rotatable adjusting screw connecting said clamps across the middle of said device and exposed between said plates to be gripped by hand to rotate the same and adapt said clamps to shoes of different sizes.

1,221,093. FAUCET-HOUSING. ALFRED ROGERS, Milton, Mass. Filed Apr. 13, 1915. Serial No. 21,098. (Cl. 137—4.)

1. The combination with a slab, and a faucet arranged in contiguous relation thereto, of a detachable faucet housing composed of non-corrodible material and comprising a body portion and a spout portion arranged to house

the body portion and spout portion, respectively, of the faucet, said housing being seated against said slab.

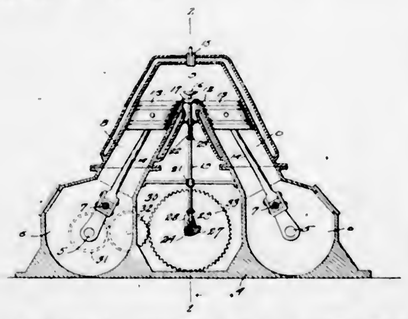


2. The combination with a slab, and a faucet arranged in contiguous relation thereto, of a faucet housing of non-corrodible material arranged to bear against said slab and to house said faucet, said housing having a tubular portion surrounding the valve stem of said faucet, and a handle of non-corrodible material carried by said valve stem, said handle having an annular groove and said tubular portion protruding into said groove.

3. The combination with a slab, and a faucet arranged in contiguous relation thereto, of a faucet housing a non-corrodible material arranged to bear against said slab and to house said faucet, said housing having a tubular portion surrounding the valve stem of said faucet, and a handle of non-corrodible material carried by said valve stem, said handle having a rim overlapping said tubular portion.

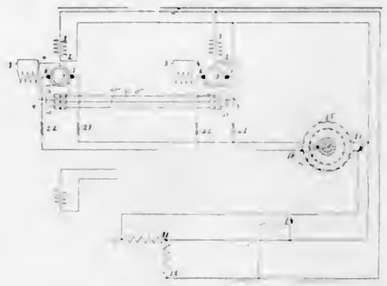
4. The combination with a faucet having an operating stem, of a faucet housing of non-corrodible material having an opening in which said stem is arranged, an operating handle of non-corrodible material, and means detachably connecting said handle and stem, said housing and handle having cooperative lapped portions arranged to conceal said connecting means.

1,221,094. INTERNAL-COMBUSTION ENGINE. ALBERT G. ROTH, Drake, N. D. Filed Jan. 2, 1913. Serial No. 739,769. (Cl. 123—53.)



In an internal combustion engine, in combination a pair of cylinders having a common combustion chamber and inclined therefrom in opposite directions, the inner opposed walls of said cylinders having a common vertex, crank shaft casings spaced upon a common base and respectively supporting said cylinders, pistons operable within said cylinders and adapted to have their pressure faces in longitudinal alinement with one another at the completion of an inward stroke and substantially flushed with said vertex, crank shafts operably connected to said pistons, valves mounted at the said vertex of the inner opposed walls of the cylinders and provided with valve stems depending between said cylinders into the space between said crank shaft casings, a cam shaft journaled horizontally between said casings and engaging said valve stems and means for transmitting motion from said crank shaft to said cam shaft.

1,221,095. MEANS FOR COLLECTIVELY ACTUATING AND CONTROLLING ALTERNATING-CURRENT MOTORS. JOSEPH LOUIS ROUTIN, Paris, France. Filed Mar. 26, 1915. Serial No. 17,164. (Cl. 172—293.)



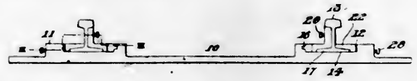
1. In combination a plurality of alternating current commutator motors, each having a rotor winding and a plurality of slip rings severally connected to equidistant parts of said winding, and each having two stator coils, one for neutralizing armature induction and one for driving the rotor, means electrically connecting the slip rings of the several motors, means for feeding current at variable pressure to the several rotors in parallel, said feeding means including resistances in series with the rotors, and means for feeding current at constant pressure, not in phase with the voltage of the first mentioned current, to the driving stator coils.

2. In combination a plurality of alternating current commutator motors, each having a rotor winding and a plurality of slip rings severally connected to equidistant parts of said winding, and each having two stator coils, one for neutralizing armature induction and one for driving the rotor, means for electrically connecting the slip rings of the several motors, a two phase current generator, means electrically connecting in parallel the driving stator coils to one phase winding of said generator, means including resistances electrically connecting in parallel the said rotors to the other phase winding of said generator, and means for varying the pressure of the current fed to said rotors from the second mentioned phase winding.

3. In combination a plurality of alternating current commutator motors, each having a rotor winding and a plurality of slip rings severally connected to equidistant parts of said winding, and each having two stator coils, one for neutralizing armature induction and one for driving the rotor, means electrically connecting the slip rings of the several motors, a two phase current generator, means electrically connecting in parallel the driving stator coils to one phase winding of said generator, means including resistances electrically connecting in parallel the said rotors to the other phase winding of said generator, means for varying the pressure of the current fed to said rotors from the second mentioned phase winding, and a phase transformer for altering the phase difference of the currents supplied by said phase windings.

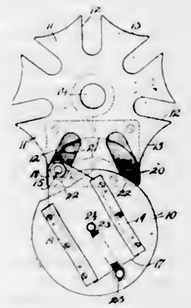
1,221,096. METALLIC TIE AND RAIL-FASTENER. FRANK SCHRAMKO and JOHN PRAZINKA, Johnstown, Pa. Filed Jan. 10, 1917. Serial No. 141,596. (Cl. 238—5.)

1. A device of the class described comprising a tie having spaced blocks thereon provided with transverse seats adapted for the reception of railway rails, angular abutments positioned in interlocking engagement with the adjacent inner faces of the seats overlying the base flange of the adjacent rail, securing means between the said abutments and the adjacent rail webs, locking plates within the said seats arranged opposite the said abutments and having serrated outer faces, an elongated follower for each of said plates having serrated faces adapted for interlocking engagement with the faces of the adjacently positioned plates, projecting screws for the said followers, and means attached to the said followers adapted for automatically retracting the latter upon the removal of said screws.



2. A device of the class deacribed comprising a tie having spaced blocks thereon arranged with transverse seats and with the portions of the blocks outwardly of the said seats provided with inwardly opening recesses, rails positioned within the said seats, abutments at one side of the rails within the seats, locking plates at the opposite sides of the rails within the said seats, a follower within each of the said recesses adapted for locking engagement with the adjacent one of said plates, locking screws for the said followers, and automatic return springs for the said followers operable when the said screws are released.

1,221,097. MECHANICAL MOVEMENT. CHARLES F. SCHWEITZER, Newark, N. J. Filed June 13, 1916. Serial No. 103,369. (Cl. 74—41.)



1. A mechanical movement comprising a rotating driving member having a pin thereon, a driven member in the path of the pin and adapted to be intermittently rotated thereby, and a fixed member for engaging the pin and giving it a movement eccentric to the movement of the driving member.

2. A mechanical movement comprising a driving member having a substantially even rotation, a driven member adapted to be intermittently rotated by contact with the driving member, and means for varying the speed of the driven member while it is operated by the driving member.

3. A mechanical movement comprising a rotating driving member having a pin thereon, said pin being movable toward and from the center of the member, a driven member having slots to receive the pin, and guiding means for regulating the position of the pin in said slots.

4. A mechanical movement comprising a rotating driving member, a movable pin on said member, a fixed member having guiding means for changing the path of travel of the pin so as to make it eccentric to the center of rotation of the driving member, and a slotted driven member to be engaged by the pin and intermittently rotated, the driven member being disposed so that it is engaged by the pin while the pin is guided by the fixed member.

5. A mechanical movement comprising a driving member adapted to continuously rotate, a slide on the driving member, a pin carried by the slide, means for moving the slide while the driving member is rotating, a driven member adapted to be engaged by the pin and thus adapted to be intermittently rotated.

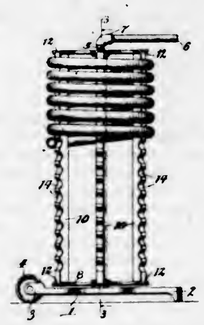
[Claims 6 to 9 not printed in the Gazette.]

1,221,098. FLY-TRAP. ORIE SHACKELFORD, Fairmont, W. Va. Filed Apr. 19, 1916. Serial No. 92,237. (Cl. 43—22.)



In a fly trap, a pan constituting a base and provided with a plurality of upwardly extending arms integral with the edge of said pan, a band being of a diameter substantially corresponding to the diameter of the pan and formed integral with the upper parts of the arms and being spaced above the pan, a glass globular inclosure having an annular flanged opening at its lower portion, the flange of which having a reduced portion and an adjoining annular recess and fitting within the band, a wire fabric cone shaped member having a small opening in its top portion, extending through the flanged opening, and into the interior of the inclosure, said wire fabric cone shaped member having its lower outer edge portion bent upwardly into the annular recess of the flange of the globular inclosure and within the band, said pan being dished annularly, said dish portion merging into a centrally arranged conical part extending partially into the wire fabric cone shaped member and substantially conforming to the contour of said fabric member and being arranged axially with the opening at the top of the fabric member.

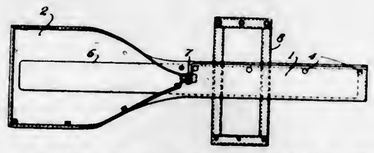
1,221,099. HOSE-REEL. ALBERT W. SHEAWOOD and GLENN D. REEDY, Buffalo, N. Y. Filed Aug. 9, 1913. Serial No. 783,976. (Cl. 242—87.)



A hose reel comprising a frame, and a hose receiving drum pivotally mounted on said frame, said frame being provided adjacent to one end of the drum with feet which project laterally in one direction and also with rollers which project laterally in the opposite direction, and said frame being also provided adjacent to the opposite

end of the drum with a handle which projects laterally in the same direction as said feet, whereby the reel may be rolled upon said wheels for easy transportation and it is also possible to rest said feet and handle on the ground for firmly anchoring the reel thereon against displacement when the hose is pulled off the drum or wound thereon.

1,221,100. ENVELOP FOR INNER TUBES. CHARLES F. SMITH, Brighton, and CLIFFORD A. WHITE, Somerville, Mass. Filed Oct. 4, 1915, Serial No. 53,988. Renewed Jan. 24, 1917. Serial No. 144,315. (Cl. 150—52.)

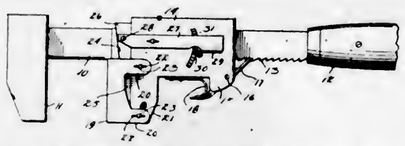


1. An envelop for inner tubes comprising a wrapper slightly longer than the flattened tube and more than double the width thereof, the sides of said wrapper being provided with openings for the valve stem; and fastening devices secured along the edges of said wrapper to connect the overlapping portions thereof when the tube has been inclosed therein.

2. An envelop for inner tubes comprising a wrapper somewhat longer than the tube, and of sufficient width to overlap at the edges, the sides of said wrapper being provided with openings for the valve; fastening devices for securing together the overlapping sides of the wrapper; and means for fastening the folds of said envelop together when the said envelop with a tube therein has been folded endwise.

3. An envelop for inner tubes comprising a strip of material slightly longer than the flattened tube, the said strip being sufficiently wide to overlap the tube and being provided with notches to embrace the valve; fastening devices for the overlapping ends of said wrapper; and a fastening flap secured to said wrapper between the middle and one end thereof, substantialy as and for the purpose described.

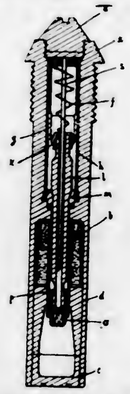
1,221,101. WRENCH. HERMAN SMITH, Maddock, N. D. Filed Aug. 2, 1916. Serial No. 112,764. (Cl. 81—140.)



1. In a wrench, a shank having a fixed jaw at one end, a sliding jaw comprising a pair of members one whereof is mounted on the shank, the other member including a work engaging face and spaced arms embracing the sides of the first member, said arms and first member being provided with coacting guide means, a wedge interposed between said members and movable to force the members apart, means to lock the first member in adjusted position on the shank, and means to adjust the wedge and hold it releasably in adjusted position.

2. In a wrench, a shank having a fixed jaw at one end, a sliding jaw comprising a pair of members one whereof is mounted on the shank, the other member including a work engaging face and spaced arms embracing the sides of the first member, said arms and first member being provided with coacting guide means, a wedge interposed between said members and movable to force the members apart, means to lock the first member in adjusted position on the shank, a spring lever pivoted intermediate its ends to the first member and having one end connected to the wedge, a pawl carried by the lever, and a ratchet formed on the side of the first member and releasably engaged by said pawl.

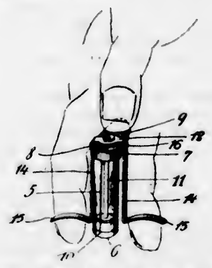
1,221,102. DETONATING-FUSE. BORIS NIKOLAEVITCH SOKOLOFF, Ridgefield Park, N. J., assignor to T. A. Gillespie Company, a Corporation of Delaware. Filed Sept. 18, 1916. Serial No. 120,771. (Cl. 102—39.)



1. In an impact fuse for explosive shells, in combination, a chamber containing a detonating charge, a longitudinally movable tubular percussion rod, having imperforate walls and having its body portion extending through the detonating chamber, an explosive cap attached to one end of the percussion rod and normally positioned outside of the detonating chamber, and a firing pin, removably attached to the striking end of the fuse and extending into the bore of said percussion rod, the inner or rearward end of the firing pin being inside the detonating chamber.

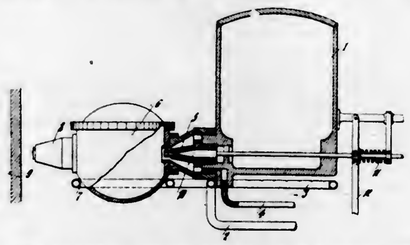
2. In an impact fuse for explosive shells, in combination, a detonating chamber containing a detonating charge, a longitudinally movable tubular percussion rod extending rearwardly through the chamber and having imperforate walls, means serving to normally hold the percussion rod against forward movement but releasable by the impact of starting the shell in the gun from which it is fired to permit such movement under the influence of the striking impact of the shell, an explosive cap carried on the inner or rearward end of the percussion rod in rear of the detonating chamber, and a firing pin removably connected to the forward end of the fuse, extending rearwardly into the tubular percussion rod and terminating inside the detonating chamber.

1,221,103. VACUUM SUCTION DEVICE. JOHN SORENSEN, Brooklyn, N. Y. Filed Aug. 15, 1916. Serial No. 114,941. (Cl. 128—9.)



A vacuum suction device comprising a pump cylinder, a piston movable therein, a cap and top plate for closing the upper end of the cylinder, a piston rod secured to the piston and projecting through said top plate, a cross head secured to the piston rod, oppositely disposed guide rods integral with said cross head and forming operating handles and means in said top plate for guiding the said guide rods.

1,221,104. PROCESS FOR MAKING COATINGS OF FUSIBLE SUBSTANCES. GEORG STOLLE, Berlin-Schöneberg, Germany. Filed Oct. 7, 1913. Serial No. 793,934. (Cl. 91—70.2.)



1. The process for coating an object with a fusible coating, which comprises volatilizing a coating material and projecting said volatilized coating material against the surface of the object by means of a compressed inert gas.

2. The process for coating an object with a fusible coating, which comprises volatilizing a coating material and projecting with violent impact said volatilized coating material against the surface of the object by means of a compressed inert gas.

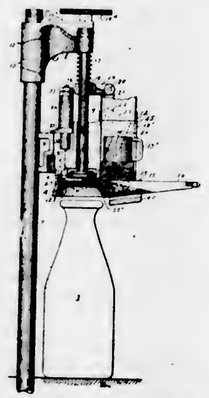
3. The process for coating an object with a fusible coating, which comprises partially volatilizing a coating material and projecting said volatilized coating material against the surface of the object by means of a compressed inert gas.

4. The process for coating an object with a fusible coating, which comprises simultaneously projecting volatilized coating material and a compressed inert gas mixed therewith against the object to be coated.

5. The process for coating an object with a fusible coating which comprises simultaneously and violently projecting volatilized coating material and a compressed inert gas mixed therewith against the object to be coated.

[Claims 6 to 8 not printed in the Gazette.]

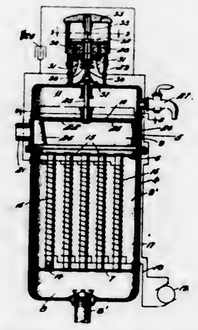
1,221,105. BOTTLE-CAPPING MACHINE. GUSTAV STRANDT, Milwaukee, Wis. Filed May 26, 1913. Serial No. 769,802. (Cl. 226—5.)



1. The combination with the actuating member of a bottle capper, of a cap retaining mouth piece provided with a plurality of annular grooves for the reception of the caps, said grooves being adapted to hold said caps in a proper position to enter the mouths of the bottles.

2. In a bottle capping machine of the described class, the combination of a vertical shaft, provided with a plurality of transverse notches for the reception of the end of a supporting plate, a cross head connected with said vertical shaft, a plate provided with an elongated slot slidably supported on said cross head, means for slidably securing said plate to said cross head, whereby the latter may be moved horizontally and caused to engage any one of the notches in said vertical shaft, all substantially as and for the purpose specified.

1,221,106. ELECTRIC WATER-HEATER. EMIL STRANSZKY, New York, N. Y. Filed Oct. 14, 1916. Serial No. 125,676. (Cl. 219—39.)



1. In an electric water heater, the combination of a vessel having a water receiving chamber and a water discharging chamber, a partition within the water discharging chamber providing an auxiliary discharging chamber communicating with the main discharging chamber, a water heating tube in the vessel connecting said water receiving and discharging chambers respectively, a coil of resistance wire around said tube, a circuit closing device for the resistance coil, a water discharge pipe leading from the main discharging chamber, an outlet pipe for said auxiliary water chamber, a rotatable valve for said discharge pipe and the passage to the auxiliary discharging chamber, and a common controlling device for said valve and the circuit closer, substantially as set forth.

2. In an electric water heater, the combination of a vessel having a water receiving chamber and a water discharging chamber, a partition in said discharging chamber providing an auxiliary water discharging chamber communicating with the main discharging chamber, an outlet pipe for said auxiliary discharging chamber, a water heating tube in the vessel connecting said receiving and discharging chambers respectively, a coil of resistance wire around said tube, a circuit closing device for the resistance coil, a water discharge pipe leading from the main discharging chamber, a rotatable valve comprising a flanged plate mounted in said main discharging chamber controlling the communication with said auxiliary chamber and having an inset flange portion adapted to register with said discharge pipe, and a common controlling device for said valve and the circuit closer, substantially as set forth.

3. In an electric water heater, the combination of a vessel having a water receiving chamber and a water discharging chamber, a partition in said discharging chamber providing an auxiliary water discharging chamber and having apertures communicating with the main discharging chamber, a water heating tube in the vessel connecting said chambers respectively, a coil of resistance wire around said tube, a circuit closing device for the resistance coil, a water discharge pipe leading from the main discharging chamber, a rotatable valve for said discharge pipe, said valve having an aperture for registering with said parti-

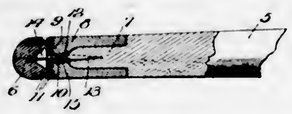
tion apertures respectively, and a common controlling device for said valve and the circuit closer, substantially as set forth.

4. In an electric water heater, the combination of a vessel having a water receiving chamber and a water discharging chamber, a partition plate in said discharging chamber providing an auxiliary discharging chamber, said partition plate having apertures therein of different sizes, a water heating tube in the vessel connecting said water receiving and discharging chambers respectively, a coil of resistance wire around said tube, a circuit closing device for the resistance coil, a water discharge pipe leading from the main discharging chamber, a rotatable valve having an opening for registering with said discharge pipe, and an aperture adapted to register with said partition apertures respectively, and a common controlling device for said valve and the circuit closer, substantially as set forth.

5. In an electric water heater, the combination of a vessel having head plates providing a water receiving chamber, a water discharging chamber, and an air-tight heating chamber between said water chambers; water tubes passing through said heating chamber and connecting said water chambers in communication, a partition plate in the discharging chamber providing an auxiliary discharging chamber, said partition plate having apertures therein of different sizes, coils of resistance wire around said tubes, a water discharge pipe leading from the main discharging chamber, a rotatable valve having an opening adapted to register with said discharge pipe and an aperture adapted to communicate with either aperture of said partition plate, a manually-actuated stem on which said valve is mounted, and a circuit closing device for the resistance coils mounted on said valve stem, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,221,107. BILLIARD-CUE-TIP FASTENING. DUDLEY J. SULLIVAN, Chicago, Ill. Filed Sept. 12, 1916. Serial No. 119,659. (Cl. 46—9.)



1. A fastener for cue tips comprising a ferrule closed at its outer end and having thereat a central screw-threaded opening, and a pin having a threaded shank adapted to be screwed into the aforesaid opening, said pin having a driving point at one end which projects into the ferrule, and the opposite end of the pin having a barb projecting from the outer end of the ferrule.

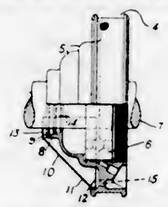
2. A fastener for cue tips comprising a ferrule closed at its outer end and having thereat a central screw-threaded opening, and a pin having a threaded shank adapted to be screwed into the aforesaid opening, the pointed end of the pin projecting into the ferrule, and the opposite end of the pin having a pointed barb projecting from the outer end of the ferrule, and provided with a widened base, said base being spaced from the outer end of the ferrule.

1,221,108. BEARING-HOUSING. EDWIN G. TIDLUND, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 6, 1915. Serial No. 38,175. (Cl. 64—22.)

1. A guard member for bearing housings comprising a semi-frusto-conical portion terminating at one end in a substantially semi-annular flange.

2. A pressed metal guard member for bearing housings comprising a semi-frusto-conical portion terminating at one end in a substantially semi-annular flange, the plane of which is at right angles to the axis of the said semi-frusto-conical portion.

3. A guard member for bearing housings comprising a semi-frusto-conical portion provided with inwardly extending ears upon the inclined edges thereof.



4. A guard member for bearing housings comprising a semi-frusto-conical portion provided with inwardly extending ears upon the edges thereof and terminating at one end in a substantially semi-annular flange.

5. The combination with a shaft and a bearing housing therefor comprising an annular supporting member and a plurality of concentric extensions integral therewith, of a guard member partially inclosing the said shaft and the said extensions and in engagement with the said annular supporting member and the said extensions.

[Claims 6 to 11 not printed in the Gazette.]

1,221,109. VEHICLE-SPRING. PHENNO L. TITUS, Petrolia, Pa. Filed July 12, 1916. Serial No. 108,900. (Cl. 267—33.)



1. A composite spring comprising a plurality of superposed leaves, the leaves being operatively engaged with each other at the middle of the spring but being uniformly spaced from and out of operative engagement with each other for the remainder of their length under normal conditions, whereby to secure end contact between the leaves and progressive flexure of the leaves as the spring is deflected.

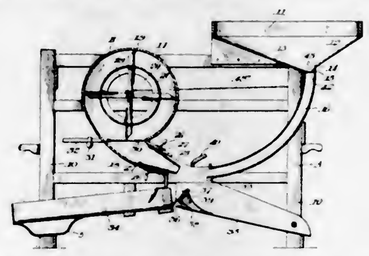
2. A composite spring comprising a plurality of superposed bowed leaves, the leaves being progressively shorter in one direction, and means disposed between the leaves at the middle of the spring for spacing said springs from each other uniformly throughout the remainder of their entire extent and out of operative engagement with each other under normal conditions whereby to cause end contact between the leaves and progressive flexure of the leaves under load.

3. A composite vehicle spring comprising a plurality of bowed leaves, the leaves becoming progressively shorter from the base leaf upward or downward, spacing members, spacing the leaves from each other at the middle of the spring, the leaves being so formed that under normal conditions the leaves are spaced from and out of operative engagement with each other, the extremities of one leaf will be initially engaged by the flexure of the leaf below, and the area of contact between the leaves will increase as the strain increases.

4. A composite vehicle spring comprising a plurality of superposed bowed leaves, the leaves being progressively shorter in one direction, one of said leaves constituting a base leaf and the other leaves each having a thickened portion at its middle engaging the next adjacent leaf, the remainder of the length of each leaf being spaced from the corresponding portion of the adjacent leaf throughout their entire extent under normal conditions, whereby the leaves will engage at their ends and be progressively flexed as strain comes upon the spring, and means for holding the leaves in engagement with each other.

5. A composite vehicle spring comprising a plurality of superposed bowed leaves, the leaves being progressively shorter in one direction, one of said leaves constituting a base leaf and the other leaves each having a thickened portion at its middle engaging the next adjacent leaf, the remainder of the leaf beyond this thickened portion being spaced from and out of operative engagement with the next adjacent leaf throughout its entire extent, whereby the leaves will be progressively flexed as strain comes upon the spring, the extremities of said thickened portion being beveled.

1,221,110. GRAIN-SEPARATOR. CHARLES ARGYLE TORRENCE, Regina, Saskatchewan, Canada. Filed Apr. 6, 1916. Serial No. 89,313. (Cl. 130—17.)



1. In a grain separator and in combination, a hopper, a curvilinear chute below the hopper, a fan having a curvilinear discharging conduit in alinement with the curvilinear chute, means for rotating the fan, and means for regulating the effective area of the stream of air discharged from the fan.

2. In a grain separator and in combination, a feed hopper, an angularly disposed skelper shoe located below the feed hopper, a valve box located between the hopper and the skelper shoe, a fan provided with the curvilinear discharge conduit designed to discharge a current of air across the top of the valve box, means for projecting the stock angularly through the stream of air and means for subdividing the throat of the valve box.

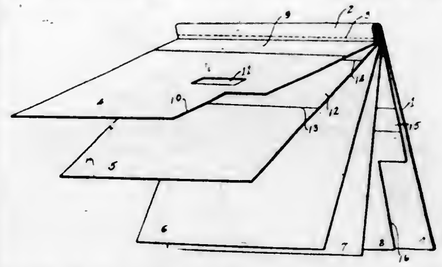
3. In a grain separator and in combination, a feed hopper, having the bottom formed with angularly disposed converging plates one of which has a curved lip, a curvilinear chute having its outer wall overlying the said lip, and a valve plate pivotally above the chute and engaging intermediate of its breadth with the said curved lip.

4. In a grain separator and in combination, a feed hopper, an angularly disposed skelper shoe located below the feed hopper, an angularly disposed waste chute adjacent to the said shoe and diverging therefrom, a valve box located between the waste chute and the skelper shoe, a fan provided with a curvilinear discharge conduit designed to project a stream of air across the top of the valve box, a valve pivotally mounted in the valve box, means for rotating the valve in a vertical plane and means for protecting the stock angularly through the stream of air delivered from the fan.

5. In a grain separator and in combination, a feed hopper, a skelper shoe located below the said hopper, a waste chute adjacent to the said shoe and diverging therefrom, a valve box located between the waste chute and skelper shoe, a fan located above the skelper shoe, a valve plate pivotally mounted in the valve box, cover strips hinged to the upper end of the valve plate and means for rotating the valve plate in a vertical plane.

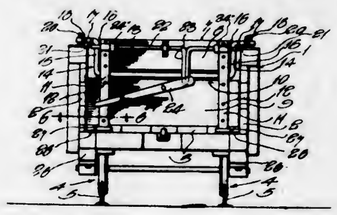
1,221,111. CARBON-PAPER FORM-BOOK. EDWARD B. TRAUB, Chicago, Ill., assignor of one-half to Edwin P. Phelps, Wilmette, Ill. Filed Oct. 21, 1915. Serial No. 57,125. (Cl. 11—23.)

The combination with a set of forms, of a plurality of sheets of carbon paper bound together along one edge to form a book and arranged so that said sheets are adapted to be inserted between said forms, certain of said sheets having portions cut out and certain of said sheets having portions free of carbon, said free portions being of substantially the same thickness as the carbonized portions of such sheet, all being arranged whereby portions of the



writing on the uppermost form are omitted from other forms underneath, substantially as described.

1,221,112. MINE-CAR DOOR. EMIL F. TUBACH, Bernice, Pa. Filed Sept. 5, 1916. Serial No. 118,544. (Cl. 105—15.)



1. The combination with a door opening, of a door therein, a crank extending from each side of said door and journaled in the side of said door opening, and a catch, said catch being released by pressure against the inside of said door.

2. The combination with a door opening, of a normally closed door therein, cranks extending from opposite edges of said door, said cranks being journaled in said door and in the sides of said door opening, means for holding said cranks to prevent the opening of said door, and a catch, said catch being released, when said means is disengaged from the cranks, by pressure from the inside of said door.

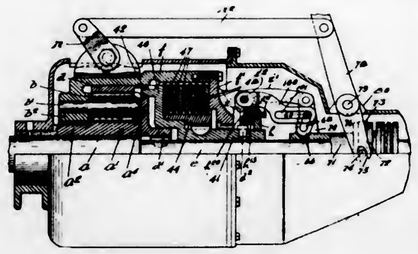
3. The combination with a door opening, of a normally closed door therein, cranks extending from opposite edges of said door, said cranks being journaled in said door and in the sides of said door opening, a hooked finger pivoted on said door to engage one of said cranks to hold the same against movement, and a catch on said door.

4. The combination with a door opening, of a normally closed door therein, cranks extending from opposite edges of said door, said cranks being journaled in said door and in the sides of said door opening, a rock shaft on the door, its ends extending beyond the same, catches on the ends of said shaft to engage said cranks to hold the same against movement, means to prevent rotation of said rock shaft, and a catch to aid in holding said door normally closed.

5. The combination with a door opening, having a two-part door therein, the adjacent edges of the parts of said door being spaced apart, a rotatable shaft disposed between said adjacent edges, means for retaining the two parts of said door together, said means also holding said shaft in operative position, cranks on the ends of said shaft, the free ends of said cranks being journaled in the sides of said door opening, and means for holding said cranks against movement.

[Claims 6 to 12 not printed in the Gazette.]

1,221,113. REVERSING-GEARING. HENRY A. TUTTLE, Taunton, Mass. Filed Feb. 21, 1916. Serial No. 79,545. (Cl. 74—34.)



1. In a reversing-gearing, a driving-shaft, a driven-shaft, gearing connecting said shafts, including a brake-mechanism to secure reverse drive, a clutch-mechanism to secure forward drive, actuating-means arranged to operate said mechanisms which is movable in one direction from normal to operate the clutch-mechanism, and in the other direction from normal to operate the brack-mechanism, and means arranged on one of the elements of the gearing, independently of the driven-shaft, to limit the movement of said actuating-means in a direction to operate the clutch-mechanism.

2. In a reversing-gearing, a driving-shaft, a driven-shaft, gearing connecting said shafts including a brake-mechanism to secure reverse drive, a clutch-mechanism to secure forward drive, a slidable element, means operatively connecting said element with the brake-mechanism and clutch-mechanism, means for sliding said element in one direction from normal for operating the clutch-mechanism, and means arranged between the gearing and slidable element, independent of the driven-shaft, for limiting its movement in such direction, said element being slidable in the opposite direction from normal by said means, to admit of operation of the brake-mechanism.

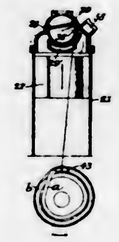
3. In a reversing-gearing, a driving-shaft, a driven-shaft, gearing connecting said shafts including a brake-mechanism to secure reverse drive, a clutch-mechanism to secure forward drive, a slidable element, means operatively connecting said element with the brake-mechanism and clutch-mechanism, means for sliding said element in one direction from normal for operating the clutch-mechanism, and slotted links connected at one end with said slidable element and at their other ends with a member, by which movement of said element in such direction is limited, sliding movement of said element in the opposite direction from normal being permitted to admit of the operation of the brake-mechanism.

4. In a reversing-gearing, a driving-shaft, a driven-shaft, gearing connecting said shafts including a brake-mechanism to secure reverse drive, a clutch-mechanism to secure forward drive, a slidable element, means operatively connecting said element with the brake-mechanism and clutch-mechanism, means for sliding said element in one direction from normal for operating the clutch-mechanism, links connected at one end with a member, said links being slotted to limit the movement of said element in a direction to operate the clutch-mechanism, and to permit movement of said element in the opposite direction from normal, to admit of operation of the brake-mechanism.

5. In a reversing-gearing, a driving-shaft, a driven-shaft, gearing connecting said shafts including a brake mechanism to secure reverse drive, a clutch-mechanism to secure forward drive, a slidable sleeve, means operatively connecting the sleeve with the brake-mechanism and clutch-mechanism, the operative connections with the clutch-mechanisms comprising pivoted levers and slotted links loosely connected together, and said sleeve being slidable in one direction from normal to operate the clutch-mechanism and in the opposite direction from normal to permit operation of the brake-mechanism, and slotted links connected at one end with said sleeve and at the other ends to a member, by which movement of said sleeve in a direction to operate the clutch-mechanism is limited, the slots in said links permitting movement of said sleeve in the opposite direction from normal.

[Claims 6 to 11 not printed in the Gazette.]

1,221,114. INTERNAL-COMBUSTION ENGINE. WILLARD IRVING TWOMBLY, New York, N. Y., assignor, by mesne assignments, to Henry W. Jessup, trustee, New York, N. Y. Filed Nov. 29, 1912. Serial No. 734,019. (Cl. 123—55.)



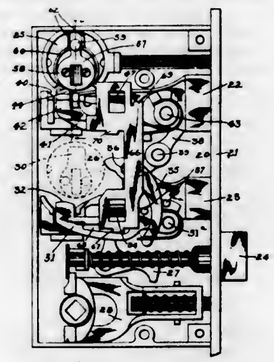
1. In a four-cycle gas engine, the combination with a crank-shaft, of a cylinder, a single valve chamber, a transverse rotary valve to control the fuel intake and the exhaust, walls at the head of said cylinder defining two ports extending from the cylinder proper respectively to substantially diametrically opposite sides of said valves, for the purpose described and a cam operated by said crank-shaft rotatable at the same speed thereof and means to connect the valve to be actuated by said cam.

2. In an internal combustion engine, the combination with the cylinder, a head on said cylinder, a transverse cylindrical valve in said head, an inlet at one end of said cylindrical valve, two ports laterally in said valve, one of said ports adapted to admit fuel from the interior of the valve into said cylinder and the other of said ports constituting a by-pass on one side of said valve, a valve seat in said head, an opening in one side of said seat to permit incoming and outgoing gases from and past said valve, walls in said cylinder head on the opposite side of said valve seat defining a port, whereby the pressure of gases within said cylinder is effective on substantially diametrically opposite sides of said valve, for the purpose described, and means for actuating said valve.

3. In an internal combustion engine, a cylinder, a separable cylinder head, a cylindrical transverse aperture in said head adapted for the reception of a valve, a tubular valve in said seat open at one end and a fuel supply duct communicating with said open end, a lateral opening in said valve and a lateral opening in said valve seat adapted to register therewith upon the oscillation of the valve, a lateral depressed wall on said tubular valve out of contact with the valve seat on part of its circumference and adapted to register with the transverse opening in the valve seat to permit the passage of exhaust gases, and an exhaust opening from said head to permit ultimate exit of said gases, a cooling jacket surrounding a section of the valve seat facing the cylinder proper, and a lateral aperture in the valve seat substantially diametrically opposite to the lateral aperture for gases, and means for oscillating said valve.

1,221,115. LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Mar. 13, 1915. Serial No. 14,124. (Cl. 70—93.)

1. In a lock, the combination of an inside bolt, an outside bolt, a lever connecting said bolts, a tumbler for the inside bolt, at least two tumblers for the outside bolt, means of connection between one of said last named tumblers and the tumbler of the inside bolt, means for operating the inside bolt, and means for operating the outside bolt including a key for releasing the tumbler of the inside bolt by said means of connection, and another key for said outside bolt inoperative to release the tumbler of said inside bolt; substantially as described.



2. In a lock, the combination of two bolts, a single tumbler carried by one of said bolts, a plurality of tumblers carried by the other bolt, a fence to coöperate with the first tumbler, a fence to coöperate with said plurality of tumblers, means for operating the bolt having said single tumbler, means of connection between said single tumbler and one of the tumblers of the other bolt, and a cylinder lock mechanism for operating such other bolt having a key for releasing said single tumbler by said means of connection, and another key which is incapable of releasing said single tumbler; substantially as described.

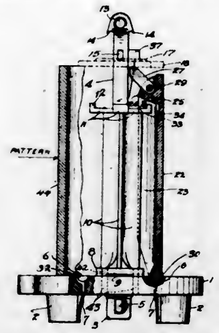
3. In a lock, the combination of an outside bolt, a fence, a plurality of tumblers for said bolt coöperating with said fence, a plurality of keys, a cylinder lock mechanism operated by one of said keys to give both of said tumblers complete actuations with respect to said fence, said cylinder lock mechanism when operated by another key being incapable of giving one of said tumblers a complete actuation, a tumbler connector actuated by said last named tumbler, and an inside bolt having a tumbler operatively connected with said tumbler connector; substantially as described.

4. In a lock, the combination of a bolt, a tumbler therefor, a tumbler connector for operating said tumbler, a second bolt having a plurality of tumblers, one of said tumblers adapted to actuate said tumbler connector and thereby the tumbler of said first bolt, a plurality of keys, and a cylinder lock mechanism adapted for actuation by said keys and constructed to depress to different degrees the tumbler of said second bolt which actuates said tumbler connector as different keys are used; substantially as described.

5. In a lock, the combination of an inside bolt, a tumbler therefor, a fence coöperating with said tumbler, a member connected with said tumbler to release the same from said fence, an outside bolt, a lever connection between said bolts, a plurality of tumblers for the outside bolt, one of said last-named tumblers adapted to actuate said tumbler-releasing member, two keys, and a cylinder lock mechanism adapted for actuation by said keys to protract and retract the outside bolt, said cylinder lock mechanism constructed to release the tumbler of the inside bolt by said releasing member as one of said keys is used, and being incapable of actuating said releasing member to release the tumbler of the inside bolt when another of said keys is used; substantially as described.

[Claims 6 to 28 not printed in the Gazette.]

1,221,116. COLLAPSIBLE CORE FOR INGOT-MOLDS. JOHN B. WALKER, Birmingham, Ala. Filed Mar. 27, 1916. Serial No. 86,920. (Cl. 22—173.)



1. In combination, a sectional collapsible core adapted for being rammed on a jarring machine, a drag on which the core is mounted and which is removable from the jarring machine, a center column carrying rigid stops adapted positively to limit the expanding movements of the core sections, and a common means to expand and fasten the expanded core sections in rigid immovable relationship to both column and drag.

2. In combination, a drag, core arbor, staves having bottom bearings to center them on the drag, a column rigidly mounted on the drag, means to limit the expanding movement of the staves, and a positive wedge lock means operative downwardly at an acute angle between the column and staves to hold the staves immovably on the drag in their expanded position.

3. A collapsible core arbor comprising, in combination, a plurality of staves, a drag on which the staves are mounted free for relative expanding and contracting movements, a central column mounted on the drag and carrying near its top a stave fastening means which includes stops to limit the outward movements of the staves, a top member adjustable on the column, and inclined connections interposed between said member and the staves and adapted to force the latter downwardly against the drag and outwardly against said stops.

4. In a collapsible core arbor, in combination, a plurality of staves, a drag, rocker bearings for mounting the staves on said drag, a central column connected to the drag and standing clear of the staves, positive means near the top of the staves to limit their outward movements, a wedge plate adjustable on the top of the column, and downwardly and outwardly sloping connections between said plate and staves, as and for the purposes described.

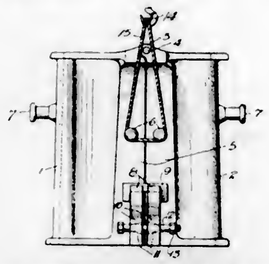
5. In a collapsible core arbor, in combination, a base, a plurality of staves mounted to rock on said drag, a central column connected to the drag and projecting above the staves, coöperating stops on the staves and column to limit the outward movements of the latter, rocker arms mounted at the top of the staves and inclined upwardly to rest against the column, and a wedge means on the column which engages and presses said arms downwardly and outwardly, as and for the purposes described.

[Claims 6 to 26 not printed in the Gazette.]

1,221,117. FLASK FOR INGOT-MOLDS. JOHN B. WALKER, Birmingham, Ala. Filed Dec. 13, 1916. Serial No. 136,642. (Cl. 22—96.)

1. A mold flask formed in vertical sections which are hingedly connected so that the sections can swing apart at a lower end of the flask, lugs near the lower ends of the flask sections, clamps engaging the tops of the lugs and adapted to hold the free ends of the flask sections together in assembled position, and lugs on the sections adapted to engage hoisting tackle and disposed in position thereon to adapt the weight of the flask, when sus-

pended by said lugs, to swing the sections apart when free of their holding means and expand the flask, substantially as described.



2. A mold flask formed in vertical sections which are hingedly connected so that the sections can swing apart at a lower end of the flask, detachable clamp means to hold the free ends of the flask sections together in assembled position, lugs on the sections adapted to engage hoisting tackle and disposed in position thereon to cause the weight of the flask, when suspended by said lugs, to tend to swing the sections apart and expand the flask, and stop means carried by the flask sections to limit their outward swing.

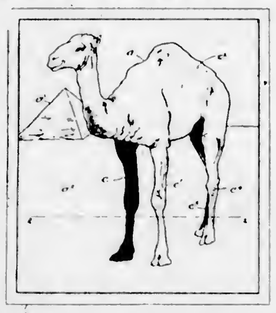
3. A flask for molds parted vertically to form sections hingedly connected near their upper ends, means to fasten the free lower ends of the flask sections together in assembled position, and pairs of juxtaposed lugs adapted to engage hoistening tackle, each pair comprising lugs on adjacent flask sections, substantially as described.

4. A flask for molds divided vertically into half sections, means to hingedly connect said sections so that their lower ends can swing apart, releasable means to fasten the sections together at their lower ends, and "lifting" lugs disposed near the middle and near each side edge of the upper portion of each flask section, substantially as and for the purposes described.

5. An ingot mold flask divided vertically into half sections which are hinged together at their upper ends and adapted to swing apart at their lower ends, means to limit the opening movement of the flask sections, and "lifting" lugs on each flask section adapted for engagement with hoist tackle, each section having a lug near each side edge and a lug substantially midway between its side lugs, the adjacent side lugs of the flask sections forming a juxtaposed pair adapted to be received in the bight of the hoist tackle.

[Claims 6 to 14 not printed in the Gazette.]

1,221,118. SAND PICTURE AND METHOD OF MAKING THE SAME. WALTER A. WARD, New York, N. Y. Filed Jan. 15, 1916. Serial No. 72,338. (Cl. 41—36.)



1. A new article of manufacture embodying a background and a bas-relief picture on said background, the picture being formed from non-vitreous sand adhesively secured to the background.

2. A new article of manufacture embodying a background and a bas-relief multi-colored picture on said background, the picture being formed from non-vitreous sand adhesively secured to the background, and wherein the tones or colors of the picture are produced in sands of different colors.

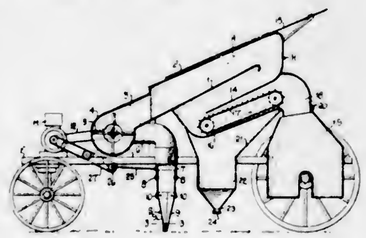
3. A new article of manufacture embodying an opaque background and a multi-colored picture on said background, the picture being formed from opaque non-vitreous sand adhesively secured to the background, and wherein the tones or colors of the picture are produced in sands of different colors.

4. A new article of manufacture embodying a picture, the objects shown therein being of their natural colors, said picture being covered with non-vitreous sand colored to correspond with the parts or portions of the picture covered, which sand is adhesively secured to the picture.

5. A new article of manufacture embodying a picture, the objects shown therein being of their natural colors, said picture being covered with non-vitreous sand colored to correspond with the parts or portions of the picture covered.

[Claims 6 to 14 not printed in the Gazette.]

1,221,119. SEED-HARVESTER. TYLER B. WATSON and JOHN J. BRASINGTON, Cheraw, S. C. Filed July 15, 1916. Serial No. 109,528. (Cl. 56—117.)



1. A harvester of the character described comprising an inclosed housing having its top perforate, an inclined bottom disposed within the housing, a conduit leading from the lower portion of the bottom and terminating in a substantially vertically disposed portion, a suction fan interposed in said conduit, a collecting head engaged with the vertically disposed portion of the conduit, and a slide member coacting with the perforate top.

2. A harvester of the character described comprising an inclosed housing having its top perforate, an inclined bottom disposed within the housing, a conduit leading from the lower portion of the bottom and terminating in a substantially vertically disposed portion, a suction fan interposed in said conduit, a collecting head engaged with the vertically disposed portion of the conduit, said collecting head including complemental sections having their upper extremities pivotally connected whereby the area of the entrance opening of the head may be regulated.

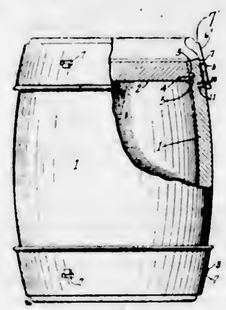
3. A harvester of the character described comprising an inclosed housing having its top perforate, an inclined bottom disposed within the housing, a conduit leading from the lower portion of the bottom and terminating in a substantially vertically disposed portion, a suction fan interposed in said conduit, a collecting head engaged with the vertically disposed portion of the conduit, and means for vibrating the head.

4. A harvester of the character described comprising an inclosed housing having its top perforate, an inclined bottom disposed within the housing, a conduit leading from the lower portion of the bottom and terminating in a substantially vertically disposed portion, a suction fan interposed in said conduit, a collecting head engaged with the vertically disposed portion of the conduit, a screening element positioned below the inclined floor, a straw carrier coacting therewith, and an apron interposed between the inclined floor and the straw carrier and upon which said floor discharges.

5. A harvester of the character described comprising an inclosed housing having its top perforate, an inclined bottom disposed within the housing, a conduit leading from the lower portion of the bottom and terminating in a substantially vertically disposed portion, a suction fan interposed in said conduit, a collecting head engaged with the vertically disposed portion of the conduit, a screening element positioned below the inclined floor, a straw carrier coacting therewith, an apron interposed between the inclined floor and the straw carrier and upon which said floor discharges, and a receptacle into which the screening element discharges.

[Claim 6 not printed in the Gazette.]

1,221,120. BARREL-CHIME. CARL H. WEGNER, GEORGE A. LOESCHER, and BENNETT PLOWRIGHT, Menasha, Wis., assignors to Menasha Cooperage Company, Menasha, Wis., a Corporation of Wisconsin. Filed Dec. 1, 1915. Serial No. 64,461. (Cl. 217—80.)



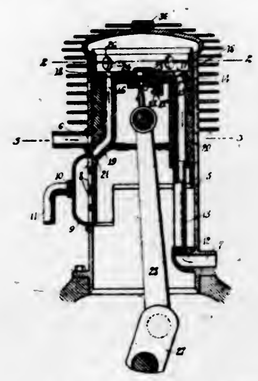
1. In a device of the described class, the combination of the side wall of a barrel, provided at each end with a chime groove, straight barrel heads extending across and secured at their marginal edges with said chime grooves at the respective ends of said side wall, a pair of annular chime members, each chime member being formed of a single piece of solid metal, and means for retaining said solid chime members upon the respective ends of a barrel.

2. In a device of the described class, the combination of an annular member, provided at its ends with chime grooves, barrel heads extending across and secured within said chime grooves at the respective ends of said member, a pair of annular chime members, each provided with a plurality of apertures, a plurality of flexible members, each provided at one end with an aperture for the reception of a staple, and staples, one leg of each of said staples being located in the aperture of one of said flexible members, both ends of said staple being driven into the exterior surface of said annular member, the opposite end of each flexible member being inserted through one of the apertures of a chime member and turned down against one side of said aperture, whereby said chime member is securely retained in place.

3. In a device of the described class, the combination of an annular member, provided at its respective ends with a chime groove, barrel heads extending across and secured within the chime grooves at the respective ends of said member, a pair of annular chime members, each chime member being formed of solid metal, and means for retaining said solid chime members upon the respective ends of said annular member, the respective ends of said annular member being provided with a rectangular chime groove while the portion of the heads engaging said grooves is provided upon one side with a beveled corner adapted as said chime members are driven in place to bear against and compress the corners of said rectangular grooves, whereby a tight joint is formed between said heads and the contiguous surface of said grooves, substantially as set forth.

4. In a device of the described class, the combination with the respective ends of a barrel, of a chime member formed of a single piece of solid metal and provided at its outer edge with an annular shoulder for the reception of a driving tool by which said chime member is driven firmly in place upon the respective ends of said barrel.

1,221,121. INTERNAL-COMBUSTION ENGINE. HUGO C. WELL, New York, N. Y. Filed May 17, 1912, Serial No. 697,852. Renewed May 1, 1915. Serial No. 25,298. (Cl. 123—47.)



1. In an engine, a cylinder having a port, a conduit disposed in and longitudinally of the cylinder, and communicating with the port, a piston having a port and a conduit communicating with the port, the second-mentioned conduit having a sliding engagement with the first-mentioned conduit, a valve member for commanding the port in the piston, and means for operating the valve member.

2. In an engine a cylinder a piston in the cylinder having ports, a valve member for commanding the ports, and means for directing a supply of cleansing fluid into the cylinder through one of the ports for carrying out of the other port the products of combustion.

3. In an engine a cylinder, a piston for moving in the cylinder and being provided with two scavenger ports, a valve member mounted to rotate on the piston for commanding the ports, and means for directing a supply of cleansing fluid into the cylinder through one of the ports, and carrying out of the other port the products of combustion.

4. In an engine a cylinder, a piston for reciprocating in the cylinder, and being provided with two scavenger ports a valve member for commanding the ports, means for directing a supply of cleansing fluid into the cylinder through one of the ports for carrying out of the other port the products of combustion, a piston rod, and means for operating the valve member by the piston rod.

5. In an engine, a cylinder having a port, a piston with a port and a valve member mounted to rotate on the piston for commanding the piston port, and having a rim with a port with which the cylinder port is adapted to communicate.

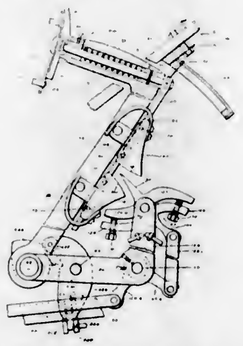
[Claims 6 to 16 not printed in the Gazette.]

1,221,122. CONTROLLING MECHANISM FOR AUTOMOBILES. BYRON BLISS WELLS and LESLIE WALTER LAPP, Columbus, Ohio; said Lapp assignor to said Wells. Filed Feb. 3, 1913. Serial No. 745,981. (Cl. 74—58.)

1. In an automobile, a clutch, a variable speed transmission mechanism, a selector mechanism, means carry-

ing the selector mechanism, and disconnecting the clutch, while the change of speeds of the transmission is effected.

2. In an automobile, a driving mechanism, a source of energy, means for disconnecting the driving mechanism from the source of energy, a driven mechanism, a series of gears for producing various ratios of speed between the driving mechanism and the driven mechanism, a selector mechanism, and a common means carrying the selector mechanism and operating the clutch and the variable speed gears, whereby the gear ratio cannot be changed until the clutch is disconnected.



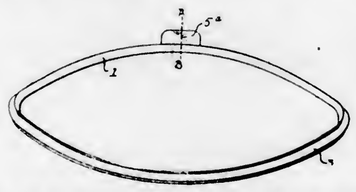
3. In an automobile, a source of energy, a propelling mechanism, a clutch, variable speed gears between source of energy and the propelling mechanism, an indicator for selecting the gears, and a common means carrying the indicator and being effective to change the gear ratio while the clutch is positively held in its disconnected position.

4. In an automobile, a clutch, a set of variable speed gears, part of which gears are positively driven when the clutch is connected, and other gears which normally are not engaged with the positively driven gears, an indicator, a common means for carrying the indicator and disconnecting the clutch and connecting the normally disengaged gears with the positively driven gears; the same common means holding the clutch positively out of engagement while the gears are being engaged.

5. In an automobile, a clutch, a driving shaft, a driven shaft, transmission elements interposed between the shafts, an indicator, a lever carrying the indicator and disconnecting the driving shaft from the driven shaft and again connecting the driving shaft to the driven shaft while the clutch is positively held in a disconnected position.

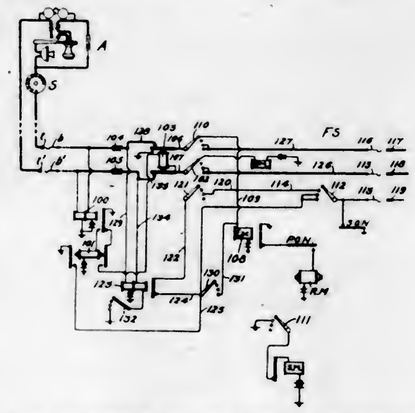
[Claims 6 to 21 not printed in the Gazette.]

1,221,123. EMBROIDERY-HOOP. EVELYN M. WESTHAVER, San Diego, Cal. Filed June 15, 1916. Serial No. 103,777. (Cl. 45—24.)



In a device of the class described, a rigid hoop member with a concave groove in its outer surface, an elastic member composed of a plurality of rubber bands in circular form adapted to fit snugly in the groove in said rigid hoop, an elastic fabric covering for said rubber bands, means for connecting the ends of said rubber bands and said covering together and means for covering said connecting means provided with extended ends adapted to facilitate the removal of said elastic member from said rigid hoop member.

1,221,124. MACHINE-SWITCHING TELEPHONE-EXCHANGE SYSTEM. SAMUEL B. WILLIAMS, Jr., Brooklyn, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Sept. 11, 1916. Serial No. 119,457. (Cl. 179—18.)



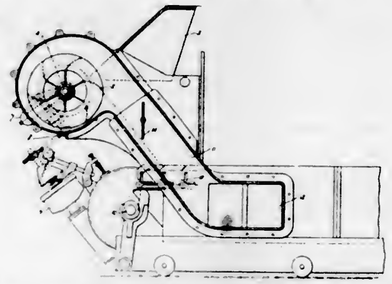
1. In a telephone exchange system, the combination with telephone lines, senders associated therewith, a selector adapted to be set thereby, means for associating said selector with said lines, a side switch for said selector including an escape magnet, a slowly operating release magnet for said selector, a circuit therefor including a contact of said escape magnet, means for operating said escape magnet to cause the side switch to effect the changeover operations during the setting of said selector, and means for preventing said escape magnet from maintaining said release circuit closed long enough to cause the energization of the release magnet, during the changeover operations.

2. In a telephone exchange system, the combination with telephone lines, senders associated therewith, a selector adapted to be set thereby, means for associating said selector with said lines, a side switch for said selector including an escape magnet, a slowly operating release magnet for said selector, a circuit therefor including a back contact of said escape magnet, means for operating said escape magnet to cause the side switch to effect the changeover operations during the setting of said selector, and means for preventing said escape magnet from remaining deënergized during the changeover operations long enough to cause the energization of the release magnet.

3. In a telephone exchange system, the combination with telephone lines, senders associated therewith, a selector adapted to be set thereby, a side switch therefor including an escape magnet, means for associating said selector with said lines, a slowly operating release magnet for said selector, a circuit therefor including a back contact of said escape magnet, a circuit closed while a sender is operating and adapted to energize said escape magnet, said magnet, upon the restoration of the sender, being deënergized to advance the side switch, a circuit for reënergizing said escape magnet when the side switch reaches the next position, a test circuit including said escape magnet and busy trunks, said circuit being opened when an idle trunk is reached to deënergize the escape magnet to advance the side switch, a circuit for reenergizing said magnet when the side switch reaches the next position, said circuit being controlled by the calling line.

4. The combination with telephone lines and a selector therefor provided with a slowly acting release magnet and with a side switch having an operating magnet for controlling the changeover operations, of a circuit for the release magnet including a contact of the side-switch magnet, and means for preventing said side-switch magnet from maintaining the release circuit closed during the changeover operations long enough to cause the energization of the release magnet.

1,221,125. AIR-SUPPLY TO MECHANICAL STOKERS. WILFRED ROTHERY WOOD, London, England. Filed May 13, 1915. Serial No. 27,872. (Cl. 110—40.)



1. In a furnace, the combination of a mechanical stoker, including a fuel support and a hopper, a fan or blower mounted adjacent the hopper whereby it is adapted to collect dust therefrom and withdraw heated air from adjacent the front of the furnace, and an air duct connecting the fan casing with a chamber below the fuel supporting surface of the stoker, all of said parts being bodily movable together from the furnace.

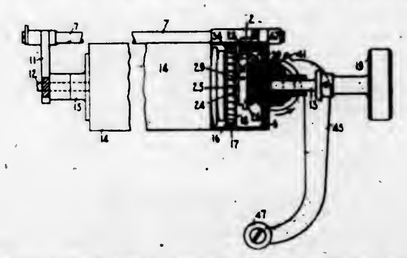
2. The combination of a mechanical stoker of the chain or endless grate type adapted to be bodily moved into and from a furnace, a hopper for supplying fuel to the grate, two fans supported on opposite sides of the hopper, gearing external to the stoker for driving the fans, and air ducts extending from the fan casings to a space beneath the fuel supporting surface of the grate, the hopper, fans and ducts being bodily movable with the stoker.

3. The combination of a mechanical stoker of the chain of endless grate type, a hopper for supplying fuel to the grate, two fans supported at opposite sides of the hopper, a shaft external to the grate adapted to drive both fans, air ducts permanently connecting the fan casings and a space beneath the fuel supporting surface of the grate, and means for actuating the grate and rotating the fan driving shaft, the grate, hopper, fans and air ducts being adapted to be moved bodily as a unitary structure relative to a furnace.

4. The combination of a mechanical stoker of the chain or endless grate type, a hopper for supplying fuel to the grate, two fans supported at opposite sides of the hopper, a shaft external to the grate adapted to drive both fans, air ducts permanently connecting the fan casings and a space beneath the fuel supporting surface of the grate, and means for actuating the grate and fan driving shaft including change speed devices whereby to vary the relative speeds of the fans and grate, all of said parts being movable bodily as a unitary structure relative to a furnace.

5. The combination of a mechanical stoker of the chain or endless grate type, a hopper for supplying fuel to the grate, two fans supported at opposite sides of the hopper, a shaft external to the grate adapted to drive both fans, a prime mover on said shaft, means for actuating the grate geared to said shaft, and air ducts leading from the fan casings to a space below the fuel supporting surface of the grate, all of said parts being movable bodily as a unitary structure relative to a furnace.

1,221,126. TYPE-WRITING MACHINE. CLIO B. YAW, Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Dec. 2, 1914. Serial No. 875,103. (Cl. 197—114.)



1. In a typewriting machine, the combination of a platen, a ratchet wheel connected thereto, a band-actuated pawl-carrier having separated arms, a pawl mounted between said arms and having one end lozenge-shaped so that one beveled portion formed thereby may coöperate with said ratchet wheel, and a fixed stop with which another beveled portion of said lozenge-shaped end may coöperate.

2. In a typewriting machine, the combination of a rotary platen, a line spacing ratchet wheel connected therewith, a pawl carrier mounted co-axially with said ratchet wheel, a pawl pivoted on said carrier at right angles to the carrier axis, hand actuated means for communicating an unvarying extent of rotary movement to said pawl carrier, spring means tending constantly to press said pawl toward said ratchet wheel, and adjustable means for varying the point in the stroke at which said spring means becomes effective, said adjustable means comprising a settable slotted plate and a projection on said pawl engaging said plate.

3. In a typewriting machine, the combination of a rotary platen, a line spacing ratchet wheel connected therewith, a cylindrical housing at one end of the platen and containing said ratchet wheel, a pawl carrier, a pawl thereon, means for actuating said pawl, and a pawl regulator mounted on said housing, said pawl carrier and said pawl being contained within said housing.

4. In a typewriting machine, the combination of a platen frame, a rotary platen, a line spacing ratchet wheel connected therewith, a cylindrical cap detachably mounted on said platen frame, a pawl carrier, a pawl thereon, a hand lever, and connections between said hand lever and said pawl carrier, said pawl carrier, said hand lever and said connections being mounted on said cap.

5. In a typewriting machine, the combination of a platen frame, a rotary platen, a line spacing ratchet wheel connected therewith, a cylindrical housing detachably mounted on said platen frame, a pawl carrier, a pawl thereon, a hand lever, and connections between said hand lever and said pawl carrier, said pawl carrier, said hand lever and said connections being mounted on said housing, and said pawl carrier and said pawl being contained within said housing.

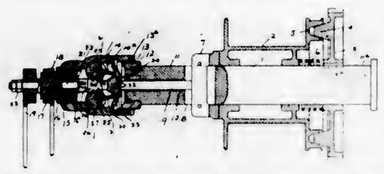
[Claim 6 not printed in the Gazette.]

1,221,127. FRICTION-CLUTCH MECHANISM. LEWIS EDWARD YOUNIE, Portland, Oreg. Filed Mar. 8, 1916. Serial No. 82,828. (Cl. 192—8.)

1. In a friction clutch mechanism, the combination of a shaft; a clutch on the shaft; and a friction device for actuating the clutch comprising a thrust block; a head having a thrust surface opposed to the block; a pin rocking on a transverse axis having a bearing on said thrust surface; a thrust link interposed between the pin and thrust block and having an eccentric bearing on the pin; and means operating on pin to rotate the pin.

2. In a friction clutch mechanism, the combination of a shaft; a clutch on the shaft; and a friction device for actuating the clutch comprising a thrust block; a head having a transverse cylindrical bore; a cylindrical rock-

ing pin having a socket bearing at one side and arranged in said transverse cylindrical bore; and a thrust link interposed between the pin and the block, one end of the link being seated in said bearing on said pin.



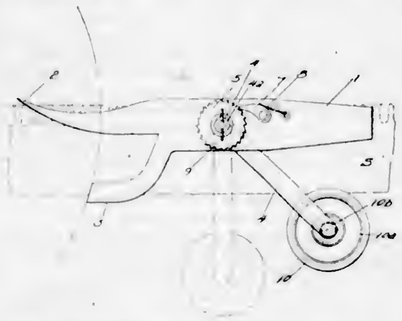
3. In a friction clutch mechanism, the combination of a shaft; a clutch on the shaft; and a friction device for actuating the clutch comprising a thrust block; a head having a thrust surface opposed to the block; a rocking pin having a bearing on said surface, said pin having an elongated eccentric bearing socket therein; and a thrust link interposed between the pin and the block, said link being seated in said bearing on said pin.

4. In a friction clutch mechanism, the combination of a shaft; a clutch on the shaft; and a friction device for actuating the clutch, comprising a thrust block; a head having a thrust surface opposed to the block; a pin rocking on a transverse axis having a bearing on said thrust surface; a thrust link interposed between the pin and thrust block and having an eccentric bearing on the pin; means operating on the pin to rotate the pin to carry the link near a line running from the center of the pin to the point of engagement between the link and the block; and a stop for limiting a further movement of the pin.

5. In a friction clutch mechanism, the combination of a shaft; a clutch on the shaft; and a friction device for actuating the clutch comprising a thrust block; a head having thrust surfaces opposed to the block; rocking pins, one each side of the axis of the head, said pins rocking on axes transverse to the axis of the head; thrust links having eccentric bearings on said pins and interposed between said pins and said block; and means operating on opposing sides of the pins for rocking the pins to actuate the clutch.

[Claims 6 and 7 not printed in the Gazette.]

1,221,128. UNDERCUTTER. JAMES R. ANDRUS, Woodland, Wash. Filed Sept. 14, 1914. Serial No. 861,578. (Cl. 143—163.)



1. An undercutter of the character described comprising a body having an upwardly curved prong adapted to be driven into a log and a heel portion adapted to engage the log at a point below said prong, and a bearing device adjustably mounted on said body for supporting a saw.

2. An undercutter of the character referred to comprising a body having an upwardly curved prong adapted to be driven into a log and a heel adapted to engage the log at a point below said prong, and a crank member adjustably secured to said body and provided with a bearing element adapted to support a saw during its operation.

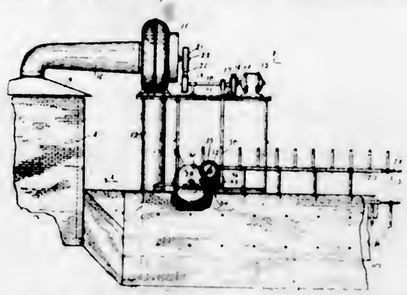
3. An undercutter of the character shown and described, comprising in combination, an integral body having a flat, upwardly curved prong adapted to be driven into a log, and an off-set heel portion adapted to engage the outside of the log at a point below said prong, whereby any downward strain on the outer end of said device tends to wedge said prong in said log and increase its friction hold therein, a saw supporting member pivotally supported on said device.

4. An undercutter of the character described comprising a body having an integral, flat, sharp, upwardly curved prong adapted to be driven into a log and an integral heel portion at a space from said prong adapted to engage the log at a point below said prong, and a saw supporting member mounted on the body.

5. A device of the character described comprising a body member split at one end and having one part formed into a flat, upwardly curved prong adapted to be driven into a log, and the other part extended downwardly and adapted to engage the log at a point below, and a saw supporting member mounted on the body.

[Claim 6 not printed in the Gazette.]

1,221,129. DRYING APPARATUS. CHARLES H. BENEDICT, Chicago, Ill. Filed Apr. 17, 1916. Serial No. 91,554. (Cl. 34—12.)



1. In a drying apparatus, the combination, with a furnace, of a drying chamber, means for conducting heated air through said chamber, and a conveyer running for portions of its length above and within said chamber for conducting the material to be dried through said chamber in a direction opposite from that of the heated air passing therethrough.

2. In a drying apparatus, the combination, with a furnace, of a drying chamber, means for conducting heated air through said chamber, an endless conveyer running for a portion of its length above said chamber and for a portion of its length within said chamber and carrying the material to be dried therethrough in a direction opposite to that of the heated air passing therethrough, and a conduit surrounding the sides and bottom of said chamber for conducting the products of combustion from the furnace to the chimney to heat said drying chamber.

3. In a drying apparatus, the combination, with a furnace, of a pit disposed adjacent thereto provided with fire brick walls, a conduit disposed within said pit and spaced from said walls to form a drying chamber and a heat conducting conduit between said chamber and said walls, a heat insulating covering for said drying chamber, means for passing air through said chamber from the front to the rear end thereof, means for conducting material through said chamber from the rear to the front end thereof, and means for conducting the waste gases from the furnace through said heat conducting conduit.

4. In a drying apparatus, the combination, with a furnace, of a pit disposed adjacent thereto provided with fire brick walls, a conduit disposed within said pit and spaced from said walls to form a drying chamber and waste furnace-gas conduit, a heat insulating covering for said drying chamber, a hood over said furnace, a conduit connecting said hood with the front portion of the pit, a fan within said conduit for delivering the heated air to the pit and driving it through said drying chamber, an endless conveyer running for a portion of its length in said drying chamber and carrying the material to be dried therethrough in a direction opposite to that of the heated air passing through the drying chamber, and a conduit connecting the combustion chamber of the furnace with the waste furnace-gas conduit.

5. In a drying apparatus, the combination with a furnace, of a drying chamber, means for heating the outside of the chamber by the products of combustion from the furnace, a conveyer traversing the length of the chamber for carrying the material to be dried therethrough and traversing the length of the chamber above the same for permitting the placing of articles to be dried thereon, and means for conducting heated air through the chamber in an opposite direction from that in which the material is carried.

[Claim 6 not printed in the Gazette.]

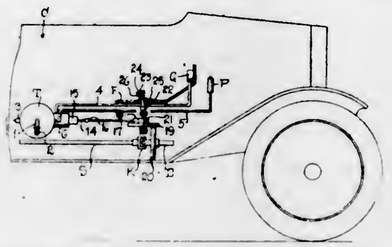
1,221,130. PROCESS OF MANUFACTURE OF ARTICLES FROM PLASTER OF PARIS. JOSEPH J. BENTZ, Los Angeles, Cal., assignor to Keystone Film Company, Los Angeles, Cal., a Corporation. Filed Nov. 1, 1915. Serial No. 59,074. (Cl. 18—47.5.)

1. The herein described process of making articles from plaster Paris which consists of first preparing a mold, then coating the interior of the mold with a coating compound composed of equal parts of stearic acid and linseed oil, then preparing plaster Paris with water to the consistency of flowing cream, then pouring the plaster Paris into the mold and out again, then repeating the pouring of the plaster Paris until the desired thickness of material has set on the mold and then removing the mold.

2. The herein described process of making articles from plaster Paris which consists of first preparing a mold, then coating the interior of the mold with a coating compound composed of equal parts of stearic acid and linseed oil, diluted with a suitable thinner, then preparing plaster Paris and a suitable coloring matter with water to the consistency of flowing cream, then pouring the plaster into the mold and out again, then repeating pouring of the plaster Paris until the desired thickness of material has set on the mold and then removing the mold.

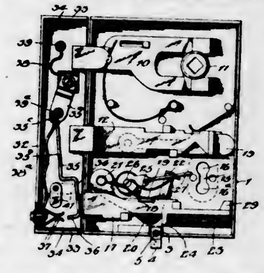
3. The herein described process of making articles from plaster Paris which consists of first preparing a mold of the desired shape; then coating the interior with a compound that will prevent liquid plaster Paris from permanently adhering to the same; then repeatedly pouring liquid plaster Paris into and out of the mold until the desired thickness of material has set on the mold; and then removing the mold.

1,221,131. AIR-COMPRESSOR. WILLIAM F. BLANCHET, Tampa, Fla. Filed July 17, 1916. Serial No. 109,760. (Cl. 230—27.)



In combination with the chassis of a motor-driven vehicle and a drive shaft therefor, a tank supported by the chassis and provided with a discharging means, a forwardly directed cylinder carried by the tank and in communication therewith, a piston mounted for rectilinear movement within the cylinder, a wheel fixed to the drive shaft, a disk rotatable about a vertical axis and positioned above the wheel, said disk being capable of vertical movement and adapted to contact with the periphery of the wheel, a foot lever in swiveled engagement with the disk at the axial center thereof and affording means for forcing the disk into contact with the wheel, automatic means for moving the disk away from the wheel, and an operative connection between the disk and the piston whereby said piston is reciprocated upon rotation of the disk.

1,221,132. LOCK. FRANK BLANKAVAG, Princeton, Wis. Filed July 22, 1915. Serial No. 41,302. (Cl. 70—74.)



1. A lock comprising a key actuated locking bolt, a supplemental normally retracted spring projected locking bolt having a stop, an angular tumbler pivoted independently of the bolt and having a stop normally contacting with the aforesaid stop to prevent projection of the supplemental bolt, a shoulder on said tumbler, and an inert one-piece key actuated trigger pivoted independently of the tumbler and having one end disposed in the path of a false key which may be used in an attempt to retract the main bolt, the shoulder of the tumbler being disposed in the path in which the trigger moves when actuated by such a key.

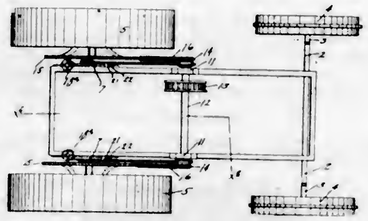
2. A lock comprising a casing, a main key actuated locking bolt slidable therein, a supplemental normally retracted spring projected locking bolt also mounted slidably in the casing parallel with the other bolt, an L-shaped tumbler pivoted at one of its ends to the casing between the bolts and having its other end directed laterally to form a shoulder, a stop projecting laterally from said L-shaped tumbler at approximately the angle thereof, another stop on the supplemental bolt for coöperation with the first named stop to retain this bolt normally retracted against the tension of its spring, a one-piece trigger pivoted at one end to the casing between the angularly related ends of the tumbler, said trigger extending across the end of said tumbler equipped with the shoulder and having its free end disposed in the path of a false key which may be used in an attempt to retract the main bolt, said shoulder being disposed on the path upon which said trigger moves when actuated by such a key.

1,221,133. TRACTOR-TRUCK. VITUS A. BOKER, Minneapolis, Minn. Filed Oct. 18, 1915. Serial No. 56,507. (Cl. 21—114.)

1. In a truck, the combination with a truck frame, of a radius arm pivoted to said truck frame and carrying a bearing plate at its free end, said bearing plate, at its outer edge having a worm gear segment, and an adjusting worm journaled in a bearing on said frame and engaging the worm gear segment of said bearing plate for adjusting the same vertically, a clamp for securing said frame and bearing plate in different set adjustments, and a wheel journaled to said bearing plate.

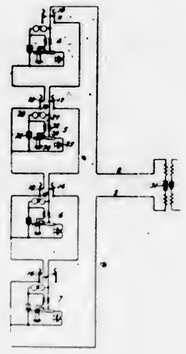
2. In a truck, the combination with a truck frame, of a radius arm pivoted to said truck frame and carrying a bearing plate at its free end, the said bearing plate, at its outer edge, having a worm gear segment, an adjusting

worm journaled in a bearing on said frame and engaging the worm gear segment of said bearing plate for adjusting the same vertically, a clamping bar anchored to said frame and engageable with said bearing plate to clamp



the same in different set adjustments, and a wheel journaled to said bearing plate.

1,221,134. SECRECY SYSTEM FOR EXTENSION AND PARTY-LINE TELEPHONES. CLIFFORD C. BRADBURY, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Jan. 27, 1915. Serial No. 4,641. (Cl. 179—31.)



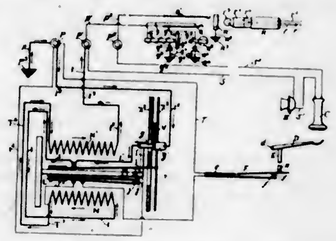
1. In a telephone system, line conductors, a plurality of subscribers' stations normally connectible thereto, and a key individual to each of said stations whereby the other stations may at will be isolated from said line conductors without interrupting the connection of the station individual to said key with said line conductors.

2. In a telephone system, line conductors, a plurality of subscribers' stations said stations being normally connectible individually or collectively to said line conductors, and a key at each of said stations for rendering said station alone connectible to said line conductors.

3. In a telephone system, line conductors, a plurality of subscribers' stations consecutively arranged, switch contacts at each of said stations and within the control of the subscriber at said station, each station being connectible to one of said line conductors through switch contacts controlled at the preceding station, and connectible to the other of said line conductors through switch contacts controlled at the succeeding station.

4. In a telephone system, a plurality of subscribers' stations, a central office and a pair of line conductors extending therefrom to said stations, one of said line conductors extending from the central office through said stations in one direction and the other extending from the central office through said stations in the opposite direction, a pair of normally closed switch contacts in each line conductor and individual to each station excepting the end stations, the subscriber's circuit at each of said stations other than the end stations being bridged from a point in one line conductor on the central office side of its normally closed contacts in that conductor to a point in the conductor on the central office side of its other normally closed contacts in that conductor, whereby the subscriber's circuit at that station will remain in bridge of the telephone line, and one of the limbs of the telephone line will be interrupted between the central office and all of the stations on one side of the bridged station and the other limb of the telephone line will be interrupted between the central office and all of the stations on the other side of the bridged station when the two sets of contacts for one station are interrupted.

1,221,135. TELEPHONE SYSTEM. ODILON BRISBOIS, Chicago, Ill., assignor to John H. Ware, Chicago, Ill. Filed June 12, 1916. Serial No. 103,135. (Cl. 179—6, 4.)



1. A telephone system comprising a central station and sub-stations, metallic conductors between said central station and said sub-stations, a signal, a battery, and an electric conductor at said central station arranged to form elements of electric circuits having additional elements at the respective sub-stations, said circuits normally closed at the central station and normally open at said sub-stations, means at the central station to open said circuit, coin boxes at sub-stations, a float bar, a coin arrester and a coin chute in each of said boxes, means to yieldingly hold said float bar and said coin arrester in neutral positions, said float bar adapted to obstruct and said arrester adapted not to obstruct the movement of a coin when in said neutral positions: said additional elements at the sub-station comprising a polarized relay and coin actuated means to close said circuit; whereby, on the deposit of a coin in the chute of a box at a determined sub-station, the circuit between said sub-station and said central station is closed, and said signal and polarized relay are energized, to indicate said closing and to move said coin arrester to obstruct a coin and prevent its delivery to the float bar and on the operating of said circuit opening means at the central station said circuit is opened and said coin arrester is released from its moved position to return to its neutral position, and said coin is discharged from said arrester and obstructed by said float bar.

2. A telephone system comprising sub-stations and a central station, coin boxes at said sub-stations, and a battery, a signal, a switch and means to open said switch at said central station, coin chutes, polarized relays, and float bars, in said boxes, coin arresters and coin controlled switches to said chutes, and electric conductors arranged to connect said sub-stations to said central station and form circuits in which said battery, signal, switches and polarized relays are elements, said switch at said central station being normally closed and said switches at said sub-stations being normally open, said substation switches arranged to be closed by a coin in the chute related thereto to close the circuit from the sub-station where said coin is deposited to said central station, means to yieldingly

hold said float bars and arresters in a neutral position, said float bars adapted to obstruct movement of a coin when in said neutral position, and said relay arranged to move said arresters from said neutral position when said circuits are closed, to obstruct the movement of a coin to said float bars.

3. A telephone system comprising a central station and sub-stations, metallic conductors between said central station and the respective sub-stations, a signal, a battery, a battery conductor, means to ground said conductor, and means to disconnect said ground at said central station, said signal, battery and conductor arranged to form elements in circuits extending to said sub-stations and there having additional elements therein, comprising a polarized relay and coin controlled means to ground said circuits, coin boxes at said sub-station, coin chutes, float bars, and coin arresting means connected to said float bars, said float bars adapted, when in neutral positions, to obstruct coins, and to be moved from said neutral positions by said relays, and said coin arresting means being arranged so that movement of the connected float bar in a determined direction from its neutral position moves said coin arresting means to obstruct a coin: whereby the deposit of a coin in a chute at a given sub-station closes the circuit between said station and said central station to energize the polarized relay therein, and arrest said coin and also to energize said signal at said central station, and on the opening of said circuit by disconnecting said ground at said central station, said float bar and coin arresting means return to a neutral position and permit the passage of said coin to said float bar.

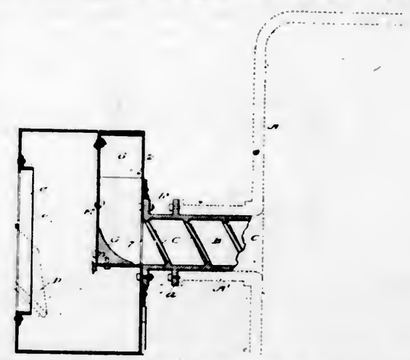
4. A telephone system comprising a central station and sub-stations, a signal at said central station and means adapted to make and to break an electric circuit at all of said stations, said central station connected to said sub-stations by electric conductors forming elements in circuits of which said signal and said means to make and to break said circuits are elements, the said circuit being normally closed at said central station and normally open at said sub-stations, means to energize said circuits, coin boxes at said sub-stations, a coin chute, a float bar, a polarized relay and means to arrest a coin before said coin is in contact with said float bar in each of said coin boxes, means to yieldingly hold said arresting means in a neutral position when said circuits are open, said relays arranged to move said arresting means from said neutral position on said circuits being closed and said means to make and to break said circuits at the sub-stations being arranged to be actuated by a coin in said chutes to close said circuits.

5. In a telephone system, the combination of talking and listening instrumentalities, signaling mechanism, a prepay box, a coin chute, an electric switch actuable by a coin in said chute, a float arm and a polarized relay in the prepay box, means to arrest a coin connected to said float arm, electric switches on said float arm, interconnections between said first named switch and between the switches on said float arm, respectively, and the signaling mechanism and said polarized relay arranged to cut out said signaling mechanism until a coin successively closes said switches and thereby successively arrests a coin and releases it to said float arm.

[Claims 6 to 8 not printed in the Gazette.]

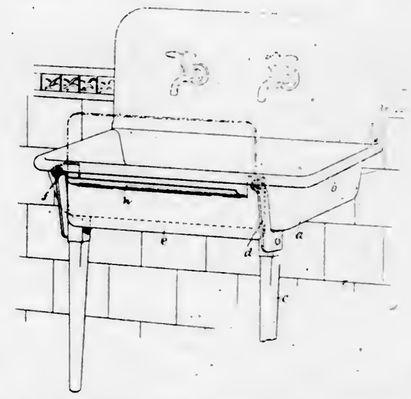
1,221,136. FEEDING-DRUM. WALKER J. BOUDWIN, Salt Lake City, Utah, assignor of one-half to The General Engineering Company, Salt Lake City, Utah, a Corporation of Utah. Filed Aug. 28, 1916. Serial No. 117,303. (Cl. 83—44.)

In a machine of the character described, the combination of a revoluble feeding drum, having a feed opening in one end and a tubular extension at the opposite end, said extension having longitudinal spiral conveying means; a lifting vane within the drum and fixed thereto and having a mouth or opening contiguous to the inner circumference of the drum, said vane having a radial substantially straight passage extending from the periphery of the drum to the axis thereof and connecting at the latter point with said tubular extension; and a removable block fitting in the angle between a side and the inner end of the lifting vane and extending over and reinforcing said end, and



having a curved inner face for deflecting the material and positively directing it into the inlet end of said extension.

1,221,137. SPLASH-BOARD FOR SINKS. THOMAS W. CARNEY, Clifton, N. J. Filed Feb. 10, 1917. Serial No. 147,807. (Cl. 4—36.)



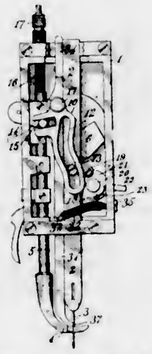
1. In combination, a sink structure and a splash-board pivoted thereto on a horizontal axis outward of one upright wall of said structure, said splash-board having limited pivotal movement from a position where it hangs pendent relatively to said axis to a position where it upstands therefrom.

2. In combination, a sink structure and a splash-board pivoted thereto on a horizontal axis outward of one upright wall of said structure, said splash-board having limited pivotal movement from a position where it hangs pendent relatively to said axis to a position where it upstands therefrom and having a lip projecting outwardly in the pendent position of the splash-board and adapted to overhang the margin of said wall in the upstanding position of said splash-board.

3. In combination, a sink structure and a splash-board pivoted thereto on a horizontal axis outward of one upright wall of said structure, said splash-board having limited pivotal movement from a position where it hangs pendent relatively to said axis to a position where it upstands therefrom and consisting of a piece of sheet material having the edge portion thereof which in pivotal movement of the splash-board remains always nearest said wall bent outwardly and thereby adapted to overhang said wall in the upstanding position of the splash-board.

4. In combination, a sink structure having a marginal outward flange on one upright wall thereof and a splash-board pivoted to said structure on a horizontal axis beneath the flange and hanging pendent, the pivotal part of said splash-board projecting forwardly, whereby the splash-board may be swung outwardly and upwardly and come to rest against the sink structure in an upstanding position.

1,221,138. SEWING-MACHINE MECHANISM. JOHN M. CHADWICK, Dayton, Ohio. Filed Jan. 17, 1916. Serial No. 72,413. (Cl. 112—8.)



1. In a device of the type specified, a horizontally movable needle feeding mechanism including a needle bar, resilient means for moving said mechanism in one direction, an actuator for moving said mechanism in the other direction, shiftable pins mounted on said actuator and in operative relation with said mechanism, and means for moving said actuator to bring one of said pins out of engagement with the needle bar and to thereby reverse the movement of said feeding mechanism.

2. In a device of the type specified, a horizontally movable needle feeding mechanism including a needle bar, resilient means for moving said mechanism in one direction, a shiftable pivotal plate, pins adapted to be placed in operative relation with said mechanism and mounted on said plate, and means for actuating said plate to bring one of said pins out of contact with the needle bar to reverse the motion of said feeding mechanism.

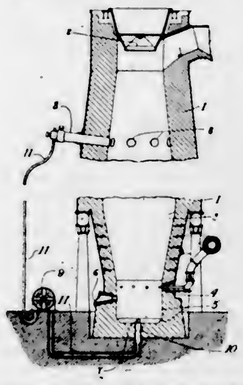
3. In a device of the type specified, a horizontally movable needle feeding mechanism including a needle bar, adjustable resilient means for moving said mechanism in one direction, a shiftable pivotal plate, pins adapted to be placed in operative relation with said needle bar and mounted on said plate below and above the pivot thereof, an actuating plate, means for connecting said plates, and means for moving said actuating plate.

1,221,139. APPARATUS AND METHOD FOR PRODUCING METALS OF IMPROVED QUALITY. HENRY M. CHANCE, Philadelphia, Pa. Filed June 12, 1916. Serial No. 103,170. (Cl. 204—63.)

1. Apparatus for producing metals comprising in combination a blast furnace, means whereby ore, flux and fuel may be introduced into said furnace, means for supplying air for combustion of said fuel, means for removing the reduced metal and the slag from said furnace, and means for passing an electric current through fused slag contained in said furnace.

2. Apparatus for producing metals comprising in combination a blast furnace, means whereby ore, flux and fuel may be introduced into said furnace, means for supplying air for combustion of said fuel, means for removing the reduced metal and the slag from said furnace, and means for passing an electric current through fused slag and metal contained in said furnace.

3. Apparatus for producing metals comprising in combination a blast furnace, means whereby ore, flux and fuel may be introduced into said furnace, means for supplying air for combustion of said fuel, means for removing the reduced metal and the slag from said furnace, and means for passing an electric current through material of the charge, through the fused slag and metal contained in said furnace.

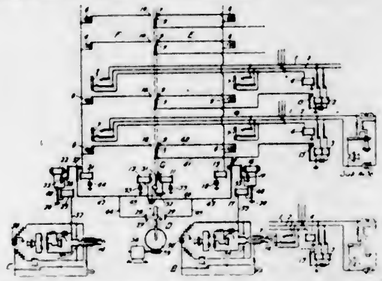


4. Apparatus for producing metals comprising in combination a blast furnace, means whereby ore, flux and fuel may be introduced into said furnace, means for supplying air for combustion of said fuel, means for removing the reduced metal and the slag from said furnace, and means for passing an electric current through fused slag contained in said furnace, said means consisting of a source of electric energy electrically connected to pole-pieces or electrodes which provide electrical contact with materials within said furnace.

5. The improvement in blast furnace construction which consists in the combination with said furnace of a source of electrical energy and conductors electrically connected through such source with terminal electrodes adapted to insure the passage of electric current from said source through fused slag and metal contained in said furnace.

[Claims 6 to 8 not printed in the Gazette.]

1,221,140. TELEPHONE SIGNALING SYSTEM. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed May 1, 1914. Serial No. 835,702. (Cl. 179—52.)



1. In a telephone exchange system, a switchboard, telephone lines terminating at a plurality of positions on said switchboards, an annunciator individual to each of said lines at each of the positions at which it terminates, and means operating at the expiration of a predetermined time interval to transfer the control of an annunciator from one position to another.

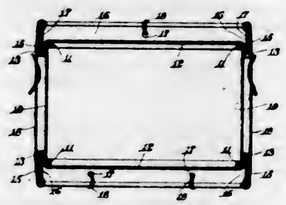
2. In a telephone exchange system, a multi-section switchboard, a subscriber's line circuit terminating in different sections of said switchboard, a line annunciator associated with each terminal of said line at the switchboard, and means for transferring an incoming subscriber's call from either of said sections to the other, said means comprising a switching device, said switching device being automatically operated when an operator plugs in to answer a call on her position.

3. In a telephone exchange system, a multi-section switchboard, a subscriber's line circuit terminating in different sections of said switchboard, a line annunciator associated with each terminal of said line at said switchboard, means for transferring an incoming subscriber's call from either of said sections to the other, said means comprising a switching device and an automatically operated time controlled circuit changing device controlling said switching device.

4. In a telephone exchange, a multi-section switchboard, subscribers' line circuits terminating in different sections of said switchboard, a line annunciator individual to each terminal of each of said lines at said switchboard, and means for effecting the equitable distribution of incoming calls originating over said subscribers' lines, said means including an automatically operating time-controlled circuit changing device whereby calls originating in a predetermined time interval may become apparent only upon a given one of said sections.

5. In a telephone exchange, a multi-section switchboard, subscribers' line circuits terminating in different sections of said switchboard, a line annunciator associated with each terminal of each of said lines at said switchboard, and means for distributing incoming calls, said means comprising a switching device, said device in one instance being conjointly controlled by contemporaneous acts on the part of the subscriber and the operator, in another instance by an automatically operated time-controlled circuit-changing device.

1,221,141. METHOD OF MAKING HEADS FOR DRUMS AND OTHER MUSICAL INSTRUMENTS. ATHERTON D. CONVERSE, Winchendon, Mass. Filed June 2, 1916. Serial No. 101,854. (Cl. 84—10.)



1. The method of making heads for drums and other musical instruments which consists in taking a circular disk of thin fibrous drum head meatrial, and sewing a cord to one face thereof adjacent the edge.

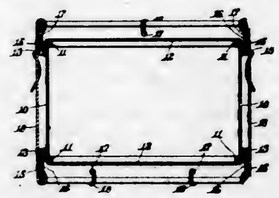
2. The method of making heads for drums and other musical instruments which consists in taking a circular disk of thin fibrous drum head material, and sewing a cord of twisted fiber to one face thereof adjacent the edge.

3. The method of making heads for drums and other musical instruments which consists in taking a circular disk of thin fibrous drum head material, sewing a cord to one face thereof adjacent the edge, and forming said disk under pressure into a cup-shape.

4. The method of making heads for drums and other musical instruments which consists in taking a circular disk of thin fibrous drumhead material; securing a projecting member to one face and adjacent the edge thereof; and then forming said disk into a cup-shape with said projecting member on the periphery of the cylindrical portion thereof.

1,221,142. DRUM. ATHERTON D. CONVERSE, Winchendon, Mass. Original application filed June 2, 1916. Serial No. 101,854. Divided and this application filed Sept. 16, 1916. Serial No. 120,904. (Cl. 84—10.)

1. A drum comprising a barrel having an inwardly turned flange at each end, said flange being cylindrical in cross section; a head at each end provided with a member secured by a row of stitches to the edge thereof and surrounding the periphery of said barrel; a stay hoop extending over the outer portion of each head and bearing directly against said member; and means for securing the stay hoop in adjusted position.



2. A drum comprising a barrel having an inwardly turned flange at each end, said flange being cylindrical in cross section; a head at each end provided with a flexible cord sewed to the edge thereof and surrounding the periphery of said barrel; a stay hoop extending over the outer portion of each head and bearing directly against said cord; and means for securing the stay hoop in adjusted position.

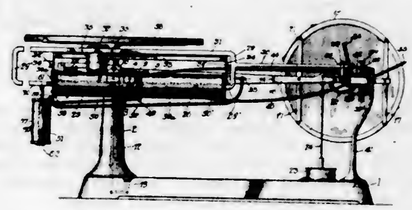
3. A drum comprising a barrel; a head provided with a cord secured by a row of stitches to its outer face adjacent the edge and stretched over each end of said barrel; a stay hoop extending over the outer portion of each head and positioned directly against said cord; and means for securing the stay hoop in adjusted position.

4. A drum comprising a barrel; ahead provided with a cord of twisted fiber secured by a row of stitches to its outer face adjecent the edge and stretched over each end of said barrel; a stay hoop extending over the outer portion of each head and positioned directly against said cord; and means for securing the stay hoop in adjusted position.

5. A drum comprising a barrel; a cup-shaped head having an outwardly extending peripheral member secured by a row of stitches to the cylindrical portion of said head adjacent the edge, said cylindrical portion surrounding the end of said barrel; a stay hoop positioned over said cylindrical portion directly against said peripheral member; and means whereby said hoop may be drawn toward the opposite end of said barrel to stretch said head.

[Claims 6 to 8 not printed in the Gazette.]

1,221,143. AUTOMATIC WEIGHING-SCALE. SAMUEL G. CRANE, Toledo, Ohio, assignor to Toledo Computing Scale Company, Newark, N. J., a Corporation of New Jersey. Filed June 9, 1913. Serial No. 772,574. (Cl. 73—101.)



1. In a scale of the class described, a beam a poise mounted for adjustment longitudinally of the beam, a solenoid, a switch in circuit therewith, the movable member of which is closed by the movement of the beam and a core for the solenoid connected to the poise.

2. In a weighing scale and in combination with the beam thereof, a poise adjustable longitudinally of the beam, a pair of solenoids, cores for the solenoids con-

nected to the poise for operating the same, a pair of switches one of which controls the circuit through one coil and the other of which controls the circuit through te other coil, the movable members of the switches being controlled by the movement of the beam.

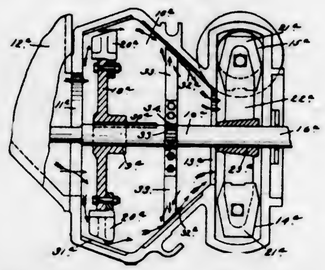
3. In a weighing scale and in combination with the beam thereof, a poise movable longitudinally of the beam, a pair of solenoids mounted on the beam, cores for said solenoids connected to the poise for operating the same, a pair of relatively stationary contacts, a pair of contact plates carried by the beam and arranged to engage the respective stationary contacts, connections from the contact strips on the beam to the respective coils and connections for completing the circuits.

4. In a weighing scale and in combination with the beam thereof, a poise adapted for adjustment longitudinally of the beam, a solenoid carried by the beam, a solenoid core therefor connected to the poise to operate the same, a stationary contact, a contact carried by the beam and adapted to engage with said stationary contact, connections from the contact on the beam to the solenoid and connections for completing a circuit through a source of electrical energy.

5. In a weighing scale and in combination with the beam thereof, a frame movable longitudinally of the beam, a poise connected to and carried by the frame, a solenoid coil through which one arm of the frame extends conatituting a movable core therefor, a stationary contact, a contact mounted on the beam to engage the same and connections from said contacts including the solenoid coil and a source of electrical energy.

[Claims 6 to 19 not printed in the Gazette.]

1,221,144. PULVERIZING APPARATUS. JOE CAITES, Chicago, Ill., assignor to Raymond Brothers Impact Pulverizer Company, Chicago, Ill., a Corporation of Illinois. Filed July 3, 1916. Serial No. 107,318. (Cl. 83–11.)



1. In pulverizing apparatus, the combination of a pulverizing chamber having a discharge opening and an interior conical surface convergent toward said opening, an impact pulverizing element in said chamber which is revoluble upon and adjustable lengthwise of the axis of said conical surface, and means for producing a draft of air through said chamber longitudinally thereof and in the direction toward said opening.

2. In pulverizing apparatus, the combination of a pulverizing chamber having interior, oppositely inclined, conical surfaces, an impact pulverizing element therein which is revoluble upon and adjustable lengthwise of the axis of said conical surfaces, and means for producing a draft of air longitudinally through said chamber.

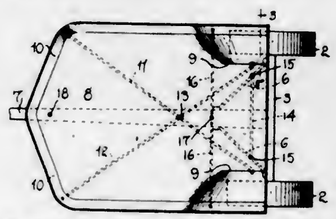
3. In pulverizing apparatus, the combination of a pulverizing chamber formed with a feed opening at one end and a discharge opening at the other, and with an interior conical surface which flares in the direction of the discharge opening, an impact pulverizing element within the space bounded by said conical surface and substantially narrower than said space measured by its axis which is revoluble upon and adjustable lengthwise of the axis of said conical surface, and means for producing a draft of air longitudinally through said chamber in the direction of the discharge opening.

4. In pulverizing apparatus, the combination with a pulverizing chamber formed with annular bounding surfaces having a common axis and standing at an angle to each other, an impact pulverizing element rovelubly arranged in said chamber and longitudinally adjustable on said axis, and means for producing a draft of air through said chamber.

5. In pulverizing apparatus, the combination of a pulverizing chamber having an interior conical surface, an impact pulverizing element therein which is revoluble upon and adjustable lengthwise of the axis of said conical surface, means for producing a draft of air through said chamber longitudinally thereof, and means coöperating with the pulverizing element for retarding the outward movement of the material along the bounding surface of the pulverizing chamber beyond the pulverizing element.

[Claims 6 to 9 not printed in the Gazette.]

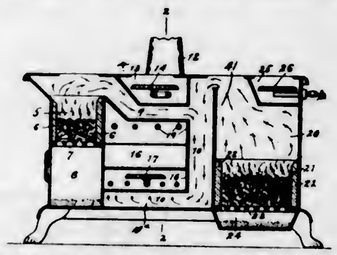
1,221,145. THRESHING-MACHINE. JOHN L. CLARK, Putney, S. D. Filed Mar. 29, 1916. Serial No. 87,548. (Cl. 248—30.)



1. In combination with a support, a member mounted upon the support, diagonally disposed braces having their opposite extremities secured to the member, the intermediate portions of said braces underlying the support, and an anchoring member disposed through the support and through the crossed portions of the diagonal braces for securing said member to the support.

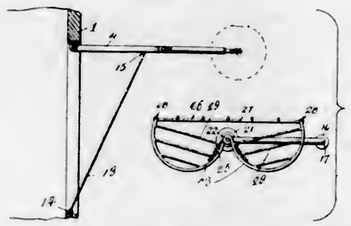
2. In combination with a support, a member mounted upon the support, diagonally disposed braces having their opposite extremities secured to the member, the intermediate portions of said braces underlying the support, an anchoring member disposed through the support and through the crossed portions of the diagonal braces for securing said member to the support, a transversely disposed brace having its opposite extremities secured to the member at opposite sides of the support and underlying the support, and a fastening member disposed through said transverse brace and the support for affording additional securing means for the member.

1,221,146. COMBINED COOKING AND HEATING STOVE. NICOLA COLUMBRO, Cleveland, Ohio. Filed Dec. 26, 1916. Serial No. 138,816. (Cl. 126—36.)



A stove having small and large fire pots at opposite ends, the large fire pot being located at the lower part of the stove with a heating compartment above the same, an oven between the fire pots, said oven being located closely adjacent to the small fire pot and being spaced from the large fire pot to form a down-flue leading from the upper end of said heating compartment, a bottom flue under the oven, communicating with the lower end of the down flue, a back flue behind the oven communicating with said bottom flue, a top flue over the oven, connecting the small fire pot and the upper end of the down flue, a gas burner under the stove top, above said top flue, and a gas burner under the stove top, above said heating compartment.

1,221,147. MAIL-CATCHING DEVICE. HORACE CRISLER, Doyleville, Ark., assignor of one-half to Joseph W. Sutherlin, Doyleville, Ark. Filed Oct. 20, 1915. Serial No. 56,952. (Cl. 258—20.)



1. A receiver for mail bags, including a supporting member, a receiving member comprising a pair of hinged arms carried by the supporting member, and a plurality of hingedly connected sections engaged with the outer sides of said arms for maintaining the latter in open position to receive a bag.

2. A receiver for mail bags, including a supporting member, a receiving cage comprising a pair of hinged arms, a plurality of hingedly connected sections engaged with the outer sides of said arms for maintaining the cage in open position to receive a bag, and means for automatically closing said cage upon the delivery of a mail bag thereinto.

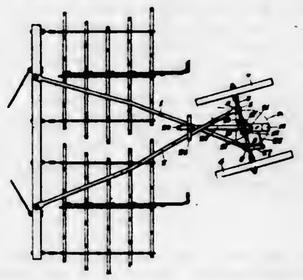
3. A receiver for mail bags, including a supporting member, a receiving frame comprising hingedly connected sections, a plurality of hingedly connected elements engaged with the outer sides of said frame for maintaining the latter in open position to receive a bag and resilient means for automatically closing said frame upon the delivery of the mail bag thereinto.

4. A mail bag receiver, including a supporting member, a staff rotatable about said supporting member, the mail bag receiving means secured to the upper portion of the staff, and a weight affixed to the lower extremity of said staff whereby said mail bag receiving means will be normally held in up-right position.

5. A mail bag receiver, including a supporting member, a staff rotatably mounted upon said supporting member, mail bag receiving means comprising a frame having hingedly connected sections, a plurality of hingedly connected elements engaged with the outer sides of said section whereby the frame will be maintained in open position to receive a bag, means for automatically closing said frame when the bag is delivered thereinto, and a weight affixed to the lower extremity of said staff whereby said mail bag receiving means will be normally held in up-right position.

1,221,148. RIDING ATTACHMENT FOR HARROWS. JOSEPH DAIN, Moline, Ill., assignor to Deere and Company, Moline, Ill., a Corporation of Illinois. Filed Aug. 4, 1916. Serial No. 113,104. (Cl. 55—91.)

1. A riding attachment for harrows comprising in combination, an axle having supporting wheels, means to connect the harrow and axle and to swing the axle at an angle to the harrow when the latter is turned, a seat pivotally supported on the axle, and means extending rearward of the axle and connected with the seat support to retain the latter in a parallel relation with the line of draft.



2. A riding attachment for harrows comprising in combination, an axle having supporting wheels, crossed draft bars pivotally connected to the harrow and axle and adapted to swing the axle at an angle to the harrow when the latter is turned, a seat pivotally supported on the axle, and means extending rearwardly of the axle and connected to one of said cross bars and the seat support to retain the latter in a parallel relation with the line of draft.

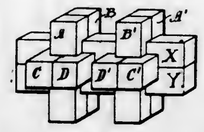
3. A riding attachment for harrows, comprising in combination, an axle having supporting wheels, crossed draft bars pivotally connected to the harrow and axle and adapted to swing the axle at an angle to the harrow when the latter is turned, a seat pivotally supported on the axle, and a link connecting one of said cross bars with the seat support to retain the latter in a parallel relation with the line of draft.

4. A riding attachment for harrows comprising in combination, an axle having supporting wheels, crossed draft bars pivotally connected to the harrow and axle and adapted to swing the axle at an angle to the harrow when the latter is turned, a seat pivotally supported on the axle, an arm connected to one of said cross bars and extending rearward of the axle, and a link connected to said arm and the seat support to retain the latter in a parallel relation with the line of draft.

5. A riding attachment for harrows, comprising in combination, an axle having supporting wheels, a seat pivotally supported on the axle, draft bars pivotally connected to the harrow and axle and adapted to swing the axle at an angle to the harrow when the latter is turned, and means connecting the seat support with one of said draft bars to retain the seat support in a parallel relation with the line of draft.

[Claim 6 not printed in the Gazette.]

1,221,149. PUZZLE. LOUIS PAUL D'AUTREMONT, Duluth, Minn. Filed Aug. 14, 1914. Serial No. 856,756. (Cl. 46—41.)



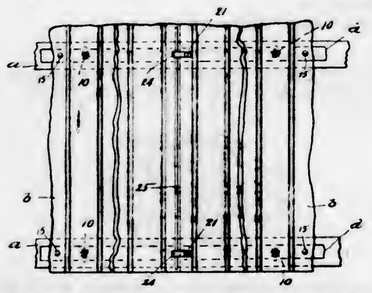
1. A puzzle comprising two companion longitudinals, two companion verticals and two companion laterals, the lower longitudinal having on its rear portion a cut which extends from its bottom face to its upper face, along the longitudinal a unit's length and forwardly into the longitudinal a half unit's depth, and a cut contiguous to the first mentioned cut, which second cut is located on the upper portion of the longitudinal and extends from the front face to the rear face of the longitudinal, along the

longitudinal a half unit's length and downwardly into the longitudinal a half unit's length, the upper longitudinal being provided on its under portion with a cut which extends from the front face to the rear face of the longitudinal, along the longitudinal a unit's length and upwardly into the said longitudinal a half unit's depth, one of said laterals having on its right portion a cut which extends from the upper face to the lower face, along said lateral two units' length and to the left into said lateral a half unit's depth, and a cut on its upper portion which extends from the right face to the left face, along the laferal a unit's length, and downwardly into said lateral a half unit's length, the other companion lateral being provided on its under portion with a cut which extends from its right face to its left face, along said lateral a unit's length and upwardly into said lateral one half unit's depth, and a second cut on its left portion which extends from its upper face to its lower face, along said lateral for two units' length and to the right into said lateral a half unit's depth, with the exception that there is left in said last mentioned cut a projection at the upper portion of said lateral which extends along the lateral a unit's length, one of said verticals being provided on its rear portion with a cut that extends from the right face to the left face of the vertical, along said vertical for two units' length and into said vertical a half unit's length, the other of said companion verticals being provided on its front portion with a cut that extends from the right face to the left face of said vertical along said vertical a unit's length and rearwardly into said vertical a half unit's length.

2. A puzzle having two sets of verticals, two sets of laterals, and one set of horizontals; the verticals being embraced by the laterals, the laterals being embraced by the horizontals, two of the lateral members being provided with a peg and a hole in the two adjacent lateral members to receive the protruding part of said peg when the puzzle is in closed position.

3. A puzzle having two sets of verticals, two sets of laterals, and a set of horizontals; the verticals being embraced by the laterals, and the laterals being embraced by the horizontals, the puzzle having a stationary metal peg inserted in two of the lateral members, the inner side of each of said pegs being within one half unit's distance of the inclosed vertical, said inclosed vertical being movable after the longitudinal pieces have been moved lengthwise and while the longitudinals are held stationary in said moved position.

1,221,150. BUILDING CONSTRUCTION. MEYER DAVIS, Pittsburgh, Pa., assignor to Asbestos Protected Metal Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 22, 1916. Serial No. 105,279. (Cl. 72—70.)



1. The combination with a concrete beam provided with fastening devices having one end anchored therein and having their other ends projecting therefrom, of a folded metal strip provided with openings in its leaves in alinement and through which the projecting ends of said fastening devices are extended, means coöperating with said projecting ends to secure said folded metal strips to the concrete beam, fastening devices carried by said folded metal strips and provided with heads located between the leaves of said folded strip and having shanks extended through the outer one of said leaves, and metal plates secured to said folded strip by said fastening devices.

2. The combination with a concrete beam, of a metal plate supported thereby, a folded strip between said plate and beam, a fastening device embedded in said beam and projecting above the same to secure said folded strip to said beam, and a separate fastening device to secure said plate to said folded strip.

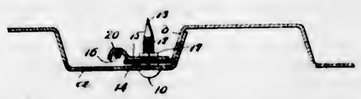
3. The combination with a concrete beam, of a metal plate supported thereby, a metal strip between said beam and plate, a fastening device anchored in said beam and coöperating with said strip to secure said strip to the latter, and a separate fastening device to secure said plate to said strip.

4. The combination with a concrete beam, of a corrugated metal plate supported thereby, a metal strip provided with substantially parallel leaves spaced apart and having holes in both of said leaves in alinement and provided with an additional hole in the outer one of said leaves, a fastening device extended through the holes in both of said leaves for securing the said metal strip to said beam, and a fastening device provided with a head located between the said leaves and extended through the said additional hole for securing the metal plate to said strip.

5. The combination with a concrete structure and a metal plate supported thereby, of a member interposed between said concrete structure and said metal plate, a fastening device anchored in said beam and cooperating with said intermediate member to secure the intermediate member to the concrete structure, and a separate fastening device to secure the metal plate to the intermediate member.

[Claim 6 not printed in the Gazette.]

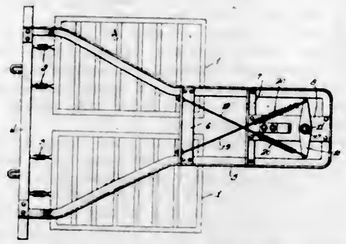
1,221,151. BUILDING CONSTRUCTION. MEYER DAVIS, Pittsburgh, Pa., assignor to Asbestos Protected Metal Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 22, 1916. Serial No. 105,280. (Cl. 72—70.)



1. In a building construction, in combination, a metal plate, a bolt extended through said metal plate and having a head located on one side of said metal plate and having its shank provided with a threaded portion and with a pointed end which project beyond the other side of said plate, a nut on said threaded portion of said shank coöperating with said head to secure the bolt to said plate, a second metal plate overlapping the first-mentioned plate and separated therefrom by said nut and through which the pointed end and shank of said bolt are extended, a clip on said bolt having one end bearing on the second metal plate and having its other end extended beyond the edge of the second-mentioned plate, and a nut on the threaded shank of the bolt to secure the said clip and the second-mentioned plate in fixed relation to the first-mentioned plate.

2. In a building construction, in combination, a metal plate, a bolt extended through said metal plate and having a head located on one side of said metal plate and having its shank provided with a threaded portion and with a pointed end which project beyond the other side of said plate, a nut on said threaded portion of said shank coöperating with said head to secure the bolt to said plate, a second metal plate overlapping the first-mentioned plate and separated therefrom by said nut and through which the pointed end and shank of said bolt are extended, and a nut on the threaded shank of the bolt to secure the second-mentioned plate in fixed relation to the first-mentioned plate.

1,221,152. RIDING-HARROW. MURL DE WITT, Mount Ayr, Iowa. Filed June 25, 1915. Serial No. 36,338. (Cl. 55—91.)



1. In a harrow cart, a frame including side longitudinal members, spaced transversely at their forward ends and connected by a frame bar, said side members converging rearwardly and provided at the rear portion with a supporting wheel mounted upon a vertical shaft whereby rotation of the wheel about horizontal and vertical axes is provided, resilient elements for resisting the rotation of said shaft in either direction, and harrow elements disposed beneath the frame and connected to said forward transverse frame bar.

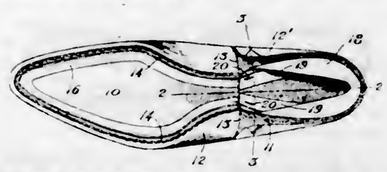
2. In a harrow cart, a frame including longitudinal side members spaced at their forward extremities and connected by a transverse frame bar, said side members converging rearwardly and provided at said rearward portions with a supporting wheel mounted in a bracket, having a vertical axis journaled in the frame, whereby said wheel may rotate above horizontal and vertical axes, a transversely extending bar connected at its intermediate portion to the shaft, cross springs secured at their forward ends to a rigid portion of the frame, and at their lower ends to the extremities of the bar, whereby rotation of said wheel in a horizontal plane is resisted in either direction, and harrow frames disposed beneath the frame, and connected to the forward transverse bar.

3. In a harrow cart, a frame including longitudinal side members, spaced at their forward ends and connected by a transverse frame bar, said side members converging rearwardly and formed with rearwardly extending parallel portions connected at their extremities with a transverse frame bar, transverse struts connecting the parallel members, a longitudinal casting connecting the rear transverse bar and one of the transverse struts having a bearing portion to receive a vertical shaft, an inverted U-shaped bracket supported at the lower end of the shaft, a supporting wheel mounted for rotation in said U-shaped bracket, a transverse arm connected at its intermediate portion to the upper end of the shaft, coil springs connected to the extremities of the arms, extending forwardly in crossed relation, and connected to a rigid portion of the frame, and harrow frames disposed beneath the main frame connected to the forward transverse bar.

4. In a harrow cart, a frame, a casting comprising a shank journaled in a bearing therefor rigid with the frame and an inverted U-shaped member mounted for turning movement relatively to the frame, a supporting wheel carried by said member, an equalizer arm rigid with the shank, and means including transversely disposed springs mounted to engage with the respective arm terminals and with the frame to yieldingly maintain said casting and the wheel carried thereby against movement in the manner stated.

1,221,153. TURNED SHOE AND METHOD OF MAKING THE SAME. MILTON L. DODGE, Newburyport, Mass. Filed Aug. 22, 1916. Serial No. 116,331. (Cl. 12—142.)

1. In the art of making "turn" shoes, the method comprising the steps of lasting the shoe and sewing the pulled-over portion of the upper to the sole, arranging a stiff molded counter-stiffener right side up on the heel portion of the shoe, anchoring the extremities of the counter-stiffener to the sole by driving fasteners through the flange of the counter stiffener and into the shank portion of the sole, turning the shoe, and anchoring the rear portion of the counter stiffener by driving metallic fasteners through the sole, around the margin of the heel-seat, and through said flange, and turning back and clenching the points of latter said fasteners.



2. In the art of making "turn" shoes, the method comprising the steps of lasting the shoe and sewing the pulled-over portion of the upper to the sole, arranging a stiff molded counter-stiffener right side up on the heel portion of the shoe, anchoring the extremities of the counter-stiffener to the sole by driving fasteners through the flange of the counter-stiffener and into the shank portion of the sole, turning the shoe, inserting a nail-receiving member in the heel portion of the shoe, and anchoring the rear portion of the counter-stiffener by driving metallic fasteners through the flange of the latter and through said nail-receiving member, and turning back and clenching the points of the latter said fasteners.

3. In the art of making "turn" shoes, the method comprising the steps of lasting the shoe and sewing the pulled-over portion of the upper to the sole, arranging a stiff molded counter-stiffener right side up on the heel portion of the shoe, anchoring the extremities of the counter-stiffener to the sole by driving nails through the flange of the counter-stiffener and into the sole, turning back and clenching the points of said nails, turning the shoe, and anchoring the rear portion of the counter stiffener by driving nails through the sole, around the margin of the heel-seat, and through said flange, and turning back and clenching the points of the latter said nails.

4. In the art of making "turn" shoes, the method comprising the steps of lasting the shoe and sewing the pulled-over portion of the upper to the sole, arranging a stiff molded counter-stiffener right side up on the heel portion of the shoe, anchoring the extremities of the counter-stiffener to the sole by driving nails through the flange of the counter-stiffener and into the shank portion of the sole, turning the shoe, and anchoring the rear portion of the counter stiffener by driving metallic fasteners through the sole, around the margin of the heel-seat, and through said flange, and turning back and clenching the points of said nails in an incision in the sole, turning the shoe, and anchoring the rear portion of the counter-stiffener by driving nails through the sole, around the margin of the heel-seat, and through said flange, and turning back and clenching the points of the latter said nails.

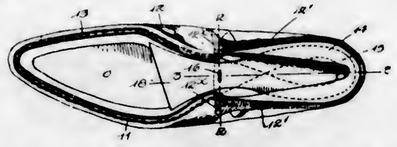
5. In the art of making "turn" shoes, the method comprising the steps of lasting the shoe and sewing the pulled-over portion of the upper to a sole that has a stitch-receiving channel, arranging a stiff molded counter-stiffener right side up on the heel portion of the shoe, anchoring the extremities of the counter-stiffener to the sole by driving nails through the flange of the counter-stiffener and through the channel-flap of the sole, turning back and clenching the points of said nails in the stitch-receiving channel of the sole, turning the shoe, and anchoring the rear portion of the counter-stiffener by driving nails through the sole, around the margin of the heel-seat, and through said flange, and turning back and clenching the points of the latter said nails.

[Claims 6 to 11 not printed in the Gazette.]

1,221,154. SHOE AND METHOD OF MAKING THE SAME. MILTON L. DODGE, Newburyport, Mass. Filed Nov. 6, 1916. Serial No. 129,659. (Cl. 12—142.)

1. In the art of making turn shoes, the method comprising the steps of lasting the shoe and securing the pulled-over portion of the upper to the sole, securing directly to the sole, and right side up, a stiff molded counter stiffener that has a heel-seat flange, by arranging the for-

ward extremities of such flange in lapped relation and driving a fastener through the sole and through such lapped portions of the flange, turning the shoe, and otherwise securing the counter stiffener by driving fasteners through the heel-seat margin of the sole and through said flange.



2. In the art of making turn shoes, the method comprising the steps of lasting the shoe and securing the pulled-over portion of the upper to the sole, arranging, right side up on the sole, a stiff molded counter stiffener that has a heel-seat flange, lapping the forward extremities of such flange, arranging a shank-stiffener so as to overlie such lapped portions of the flange, driving a fastener through the sole, through such lapped portions, and through said shank-stiffener, turning the shoe, and driving nails through the heel-seat margin of the sole, through said flange, and through said shank-stiffener.

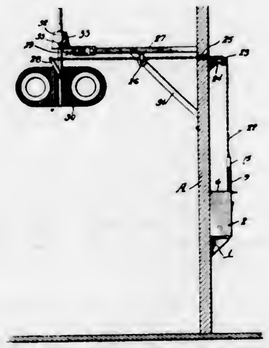
3. A shoe comprising a sole, an upper, a counter stiffener having a heel-seat flange the forward extremities of which are lapped, one over the other, and a fastener extending through such lapped portions of said flange and being anchored in said sole, whereby the forward portions of said counter stiffener are secured directly to the sole.

4. A shoe comprising a sole, an upper, a counter stiffener having a heel-seat flange the forward extremities of which are lapped, one over the other, a shank stiffener, and a fastener extending through such lapped portions of said flange, and through said shank-stiffener, and being anchored in said sole, whereby said shank-stiffener and the forward portions of said counter stiffener are secured directly to the sole and to each other.

5. A shoe having a counter stiffener therein, said counter stiffener having a heel-seat flange the forward portions of which are lapped one over the other, and fastening means extending through said lapped portions to secure the forward portions of the stiffener against spreading.

[Claims 6 to 8 not printed in the Gazette.]

1,221,155. TRAIN-ORDER SIGNAL. EMERY H. DODSON, Eleanor, Ill. Filed Mar. 10, 1916. Serial No. 83,356. (Cl. 246—44.)

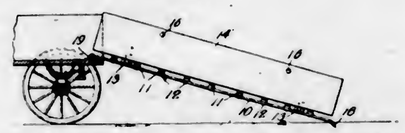


1. The combination of a train order signal, of an order-blank box, the said box having a vertically slidable closure, a bracket mounted on the top of the closure, a rod disposed vertically and mounted for sliding movement in the said bracket, means connecting the said train order signal with the said rod, and an expansion spring surrounding the said rod and engaged with the said bracket, the opposite end of the spring being engaged with the end of the said rod.

2. The combination of a train order signal, of an order-blank box, a closure for said order-blank box, a flexible element secured to said train order signal, a catch for said closure, a bracket mounted on said closure, a rod mounted for sliding movement in said bracket and connected to said flexible element, and resilient means mounted in said bracket and connected to said rod whereby said closure may be fully closed when said flexible element reaches its limit of movement.

3. The combination of a train order signal, of an order-blank box, a closure for said order-blank box, a flexible element secured to said train order signal, a catch for said closure, a bracket mounted on said closure, a rod mounted for sliding movement in said bracket and connected to said flexible element, an expansion coil spring arranged in said bracket and having one end engaging one end of said rod, said rod being secured to one end of said flexible element.

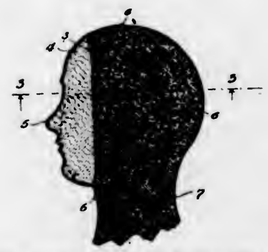
1,221,156. LOADING AND UNLOADING CHUTE. VIOLA E. DOTSON, Lenox, Iowa. Filed Feb. 28, 1916. Serial No. 81,029. (Cl. 119—82.)



1. A stock chute comprising a bottom member, side members hinged to the sides of the bottom member, said side members being movable outwardly to lie in the plane of the bottom with their edges abutting and movable inwardly to fold on said bottom, and means to hold the side members vertical.

2. A stock chute comprising a bottom member, side members hinged to the sides of the bottom member, said side members being movable outwardly to lie in the plane of the bottom with their edges abutting and movable inwardly to fold on said bottom, means to hold the side members vertical, and prongs projecting downward from one end of the bottom member to form support engaging means.

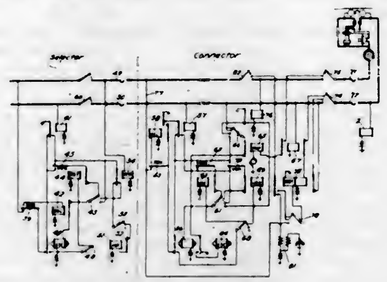
1,221,157. DOLL. CLARK H. DOWNEY, West Point, Ga. Filed Dec. 23, 1914. Serial No. 878,754. (Cl. 46—40.)



In the art of constructing a doll, disposing in a matrix, a chamois skin covering for the face portion, an adhesive, and an artificial stone portion, placing stone forming plastic material with the adhesive positioned between the materials while the adhesive and stone forming material are plastic, and forcing the materials against the skin sufficiently for causing the skin to conform to the matrix.

1,221,158. AUTOMATIC TELEPHONE SYSTEM. BERT G. DUNHAM, Hawthorne, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Jan. 31, 1916. Serial No. 75,337. (Cl. 179—18.)

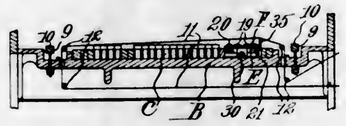
1. In a telephone system, a connector switch, a brush arranged to be included in the talking circuit at said switch, a test relay for said switch, means for joining said test relay to said brush, a ringing relay and a circuit for said ringing relay extending through said brush, and a contact of said test relay.



2. In a telephone system, a connector switch, a pair of brushes arranged to be included in the talking circuit at said switch, a test relay for said switch, means for joining said test relay to one of said brushes, a ringing relay, a circuit for said ringing relay extending through said brush, and a back contact of said test relay, a source of ringing current, and means for joining said source to the other of said brushes.

3. In a telephone system, a connector switch, a conductor terminating in a moveable contact for said switch both arranged to be included in the talking circuit switch, a test relay for said switch, means for joining said test relay to said movable contact, a ringing relay permanently connected to said conductor and a circuit for said ringing relay extending through said brush, and a contact of said test relay.

1,221,159. FILLING-IN ATTACHMENT FOR PRINTING-MACHINES. ERNEST DUSCHER, La Crosse, Wis., assignor, by mesne assignments, to Printograph Manufacturing Co., St. Paul, Minn., a Corporation of South Dakota. Filed Nov. 15, 1911. Serial No. 660,425. (Cl. 101—1.)



1. In a printing machine having a type bed, a platen movable across said bed and an inking ribbon between said parts, a supplementary type bed arranged across said main bed, a type holding plate adapted to be engaged by said supplementary type bed and to be guided into printing position and type held by said plate and having free vertical play whereby the type are adapted to stand in printing position on their lower ends upon said supplementary bed vertically independent of said plate.

2. In a printing machine, a supplementary type bed, a holder for type horizontally movable into and out of printing position upon said bed, said bed having a raised portion adapted to coact with a type in said holder to support it in printing position, and a lower portion adapted to permit the type to rest in non-printing position when off of said raised portion and means for automatically engaging said holder tending to prevent longitudinal movement thereof while resting over said raised position.

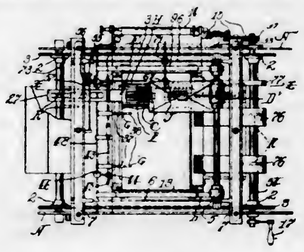
3. In a printing machine, a type bed adapted to support a changeable type form, means permanently attached to said bed for adjusting it in height upon a support, and means arranged adjacent said bed adapted to raise an ink ribbon clear of said type form, while the latter is being changed, for the purposes specified.

4. In a printing machine, a type bed adapted to support a changeable type form having inturned engaging hooks projecting down from its side edges, said bed having a receiving portion, an engaging portion adjacent said receiving portion adapted to receive said hooks as said form is advanced on said bed, and a raised surface portion on said engaging portion, a longitudinal guide carried by said bed below its surface, a plunger movable upon said guide and adapted to engage and advance a plate on said bed from said receiving portion toward said raised surface portion, and a spring adapted to retract said plunger into position to receive a new form.

5. In a printing machine, an auxilliary type bed, having a raised surface, a changeable type form adapted to slide into printing position on said raised surface, and a spring arm carried by said type bed, whose tendency is to move upwardly above said raised surface and automatically raise a ribbon above the plane of the printing surface of type on said raised surface, said arm being depressible to permit the ribbon impinging against the printing surface of said type.

[Claims 6 to 9 not printed in the Gazette.]

1,221,160. PRINTING-MACHINE. ERNEST DUSCHER, La Crosse, Wis., assignor, by mesne assignments, to Printograph Manufacturing Co., St. Paul, Minn., a Corporation of South Dakota. Filed July 8, 1912, Serial No. 708,108. Renewed Oct. 10, 1914. Serial No. 866,056. (Cl. 101—1.)



1. In a printing machine, a type form having a changeable portion, a flat bed on which said form is mounted, two platen rollers adapted to coöperate with type in said form to produce printing impressions from the entire form of type and from the changeable portion successively, a carrier adapted to move said platen elements orbitally over said type form, a plurality of skid rails mounted upon said bed and with which each of said platen rollers is adapted to coöperate and means for adjusting the height of each of said rails to independently vary the height of travel of said platen rollers coöperating with the type in said form, whereby an even printing impression is produced by all of the type in said form or said changeable portion and said rollers.

2. In a printing machine, a type form, a type block insertible in said form having longitudinal grooves in its sides, a filling in type holder having a plate slotted to receive type into engagement therewith and formed with inturned side edges adapted to slidingly engage said block in said grooves, a plurality of platen elements movable over said form and adapted to coöperate successively with type in the entire form and with type carried by said holder only and means for adjusting said platen elements evenly in height over the type in said form and carried by said holder.

3. A printing machine, comprising, in combinaation, a type bed, an inking ribbon above said bed, a platen adapted to coöperate with the type on said bed and said ribbon to print, a filling in holder for type horizontally movable above said bed, a filling in type block to receive said holder, said block having a raised portion adapted to co-act with type of said holder to support them in printing position, the lower portion of said block permitting said holder to rest in nonprinting position when off of said raised portion of said block, means for feeding said holder into printing position on said block and ejecting it therefrom, means for positioning sheets of printing material to print from the

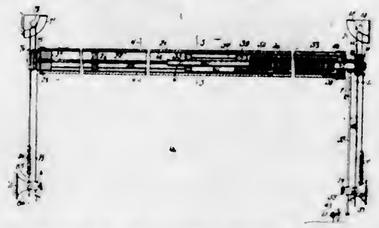
main body of type on said bed and means for positioning printing material over the filling in type holder on the raised portion of said block to print only from the type in said holder.

4. In a printing machine, three coöperating impression elements, one a stationary type form and the other two platen rollers arranged in series, a filling in type block placed in said form, a filling in type holder adapted to be removably placed on said block to print a name and post office of an addressee, means for feeding said holder into printing position on said block, and means for positioning printing material over the filling in type holder in printing position on said type block to print only from the type in said holder, one of said rollers coöperating with all of the type in said form and holder and the other only with type in said holder, to print.

5. In a printing machine, three coöperating impression elements comprising, two platen rollers carried in series, a type form containing a filling in type block, a filling in type holder adapted to be removably placed on said block to print the name and post office of an addressee, means for positioning sheets of printing material over said form to print from all of the type in said form and means for positioning envelops over said filling in type holder to print only from type in said holder, said rollers being adapted to follow each other and one having its surface coöperating with all of the type in said form and the surface of the other limited to coöperate only with type in said holder on said block.

[Claims 6 to 25 not printed in the Gazette.]

1,221,161. EXTENSION CURTAIN-ROLLER. OTTO EDWARD ENELL, Jersey City, N. J., assignor to Unique Specialty Co., Inc., New York, N. Y. Filed Sept. 20, 1915. Serial No. 51,558. (Cl. 156—27.)



1. In a roller of the character described the combination of a pair of outer tubes of pliable material and an inner tube located within each outer tube, the latter tubes telescoping with each other and means to lock the inner tubes together and to the outer tubes.

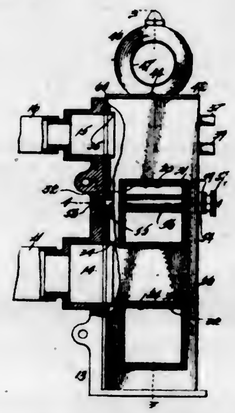
2. In a roller of the character described the combination of a pair of outer tubes of pliable material and of equal outside diameter with their walls completely closed, the inner diameter of one of said tubes somewhat greater than the other, an expansible inner tube with a longitudinal slot in its wall in each of said outer tubes, the latter tubes telescoping with each other and a plug in each inner tube to lock it in place.

3. In a roller of the character described the combination of a pair of outer tubes of pliable material and of equal outside diameter with their walls completely closed, the inner diameter of one of said tubes somewhat greater than the other, a metallic expansible inner tube having a longitudinal slot in its wall forced into each outer tube, the inner tubes telescoping with each other and a plurality of clamping plugs in each inner tube to lock the latter to the outer tubes and to each other.

4. In a roller of the character described the combination of a pair of outer tubes of pliable material and of equal outside diameter with their walls completely closed, an expansible inner tube within each outer tube locked to its outer tube, the latter tubes telescoping with each other and locked to each other, a telescopic shaft in the axial center of the roller, a pulley secured to each end of said shaft, an end bearing and clamping plug forced into the outer end of each inner tube, constituting bearings for the roller, means to locate the roller to different levels, and a cord wound around each pulley to maintain the axial center of the roller in a horizontal plane at different levels.

5. In a roller of the character described, in combination of a shaft in its axial center to turn thereon, an anchor and journal plug in the roller constituting a bearing for said shaft and clamped to the inner wall of the roller, an end bearing and clamping plug in the roller and at each end thereof, a tubular spring anchor supported on one end of said shaft and tightly supported in one of said clamping plugs, the other end of the shaft journaled in the clamping plug at the other end of the roller, a shifting bar having a rectangular end, the latter locked with said spring anchor, a spring within the roller with one end fastened to the anchor plug and the other end fastened to said spring anchor, a pulley fastened to each end of said shaft, a cord wound around each of said pulleys to maintain them at the same level when said roller is placed at different levels by means of the shifting bar, and means to maintain equal tension on each of said cords.

1,221,162. PNEUMATICALLY-OPERATED MUSICAL INSTRUMENT. JOHN P. EUSTIS, Newton, and ALBERT T. BROWN, Arlington, Mass., assignors to J. P. Eustis Manufacturing Company, Boston, Mass., a Corporation of Maine. Filed May 27, 1913. Serial No. 770,140. (Cl. 84—167.)



1. In a pneumatically operated musical apparatus, a wind-chest structure of sheet metal, the same comprising a wind-chest and hollow end cheeks joined thereto, the opposing inner walls of said end cheeks having outdrawn flanges into which the ends of said wind-chest fit.

2. In a pneumatically operated musical apparatus, a wind-chest structure of sheet metal, the same comprising a wind-chest and hollow end cheeks joined thereto, the opposing inner walls of said end cheeks having flanges into which the ends of said wind-chest fit, and flanged bushings inserted into the ends of said wind-chest.

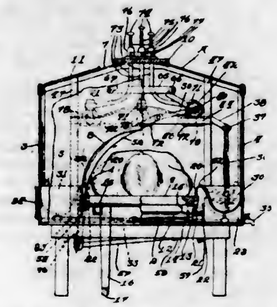
3. In a pneumatically operated musical apparatus, the combination with a wind-chest and hollow end cheeks, of a leak-tight and soldered joint between them, located at each end of said chest comprising three thicknesses, all of said parts of metal.

4. In a pneumatically operated musical apparatus, a hollow metallic wind-chest cheek, and metallic flanged cap plates inserted in each end thereof and permanently joined air-tight thereto.

5. In a pneumatically operated musical apparatus, the combination with a hollow metallic wind-chest cheek, of a transverse tube the ends of which abut against the opposite inner walls of said cheek, and metallic bushings inserted in the ends of said tube and secured to the outer walls of said cheek.

[Claims 6 to 19 not printed in the Gazette.]

1,221,163. BATHING APPARATUS. CHARLES SHEPHERD FRINK, Minneapolis, Minn. Filed Feb. 8, 1915. Serial No. 6,687. (Cl. 4—13.)



1. Apparatus of the class set forth, comprising, in combination, a housing having means therein for supporting a body to be treated, a reservoir for holding liquid in said housing adjacent to said body supporting means, and a wiper dipping into said liquid and movable out of said reservoir to sweep over and wet the surface of the body upon said body supporting means.

2. Apparatus of the class set forth, comprising, in combination, a housing having means therein for supporting a body to be treated, a reservoir for holding liquid in said housing adjacent to said body supporting means, a wiper dipping into said liquid, a support upon which said wiper is mounted, and means for reciprocating said support over said body supporting means and sweeping said wiper backwardly and forwardly over the surface of said body.

3. Apparatus of the class set forth, comprising, in combination, a housing having means therein for supporting a body to be treated, a reservoir for holding liquid in said housing adjacent to said body supporting means, a wiper dipping into said liquid, a support upon which said wiper is mounted, guiding means for directing said wiper support up and down as it travels over said body supporting means, and means for reciprocating said wiper support laterally of said housing and sweeping said wiper backwardly and forwardly over the surface of the body.

4. Apparatus of the class set forth, comprising, in combination, a housing having means therein for supporting a body to be treated, a reservoir for holding liquid in said housing adjacent to said body supporting means having a drip flange from its rim facing inwardly toward said body supporting means, a catch receptacle for drip from said flange and the adjacent edge of said body supporting means, and a wiper dipping into said liquid and movable out of said reservoir to sweep over and wet the surface of the body lying on its supporting means in said housing.

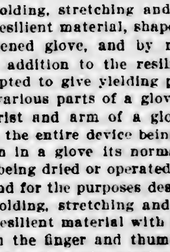
5. Apparatus of the class set forth, comprising, in combination, a housing having means therein for supporting a body to be treated, a reservoir for holding liquid in said housing adjacent each side of said body supporting means, a wiper supported above said body supporting means and movable to successively dip into the liquid contained in said reservoirs and sweep back and forth between said reservoirs over the surface of the body to be treated, and means for actuating said wiper.

[Claim 6 not printed in the Gazette.]

1,221,164. CARBURETER. LEVI S. GARDNER, Cedar Grove, La. Filed Sept. 4, 1914. Serial No. 860,136. (Cl. 261—121.)

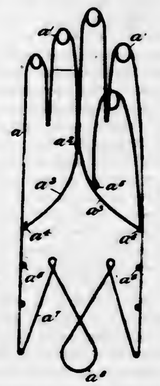
1. In a carbureter, a body member in the form of a Venturi tube, a constant level reservoir surrounding the lower end of said body member, an L-shaped delivery tube having one arm lying at the axis of the body member and terminating in the vicinity of the contracted neck thereof and having its other arm extending laterally to the side of the body member and communicating with said reservoir, and an air tube, smaller in diameter than the interior diameter of said delivery tube, extending at its lower end into the latter tube and having its upper end open.

2. In a carbureter, a body member in the form of a Venturi tube, a constant level reservoir surrounding the



lower end of said body member, an L-shaped delivery tube having one arm lying at the axis of the body member and terminating in the vicinity of the contracted neck thereof and having its other arm extending laterally to the side of the body member and communicating with said reservoir, and an L-shaped air tube, smaller in diameter than the delivery tube, having one arm projecting into the upper end of said delivery tube and having its other arm extending laterally to the side of the body member and communicating with the outside atmosphere.

1,221,165. GLOVE HOLDING, STRETCHING, AND SHAPING DEVICE. MANLY M. GILLAM, Flushing, N. Y. Filed Aug. 12, 1916. Serial No. 114,526. (Cl. 223—19.)



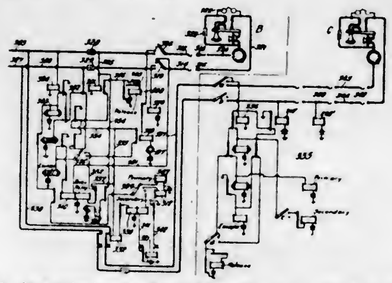
1. In a glove holding, stretching and shaping device a skeleton form of resilient material, shaped to resemble the outline of a flattened glove, and by means of integral springs acting in addition to the resiliency of the said skeleton form adapted to give yielding pressure in lateral directions to the various parts of a glove, with means for supporting the wrist and arm of a glove in a normally flattened position, the entire device being designed to produce and maintain in a glove its normal flattened shape throughout while being dried or operated upon in any way, substantially as and for the purposes described.

2. In a glove holding, stretching and shaping device a skeleton form of resilient material with integral elastic or spring elements in the finger and thumb portions, in the palmar portion and in the wrist portion additional to the resiliency of said skeleton form, the combined effect being to give lateral pressure to all parts of a glove, with means

for maintaining longitudinal shaping support at the same time and with means for extending the holding and shaping surface of said device posteriorly, substantially as and for the purposes described.

3. In a glove holding, stretching and shaping device a skeleton form of resilient material adapted to engage at the same time the various parts of a glove and exert lateral pressure on them; a coil spring at the anterior extremity of each finger form and of the thumb form, bow springs medially placed and so attached that under external pressure torsional resistance is developed in them, one or more V springs at the posterior extremity of said skeleton form, the said various springs adding to the resistance force of the said skeleton form when submitted to lateral pressure from the outside, means for maintaining longitudinal shaping support of the wrist and arm of said glove and means for extending posteriorly the glove holding and shaping area of the said skeleton form, substantially as and for the purposes described.

1,221,166. TELEPHONE-EXCHANGE SYSTEM. CHARLES L. GOODRUM, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Apr. 26, 1916. Serial No. 93,630. (Cl. 179—18.)



1. In a telephone exchange system, the combination with a calling and a called line, automatic selector and connector switches for establishing a connection between said line, and a third line, of an additional automatic switch, an electromagnetic responsive device associated with the last switch to said connection for operatively associating said aditional switch with said calling line, means operated by the response of the called party for preparing a circuit for said device, and means controlled by the calling party for closing said circuit and for setting said additional switch to bring said third line into the connection.

2. In a telephone exchange system, the combination with a calling and a called line, automatic selector and connector switches, a sender associated with said calling line adapted to control said switches to establish a connection including said lines, and a third line, of an additional automatic switch, an electromagnetic response device associated with the last switch to said connection for operatively associating said additional switch with said sender, means operated by the response of the called party for preparing a circuit for said device, and means including said sender controlled by the calling party for completing said circuit, whereby said additional switch may be set by said sender to bring said third line into the connection.

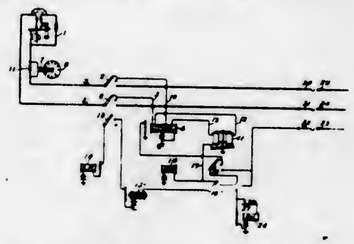
3. In a telephone exchange system, the combination with a calling and a called line, automatic selector and connector switches, a sender associated with said calling line adapted to control said switches to establish a connection including said lines, and a third line, of an additional automatic switch, a relay associated with the last switch of the connection for operatively associating said additional switch with said sender, an electromagnetic switch operated when the called party answers and adapted to prepare a circuit for said relay, and means including said sender for completing said circuit, whereby said additional switch may be set by said sender to bring said third party into the connection.

4. In a telephne exchange system, the combination with a calling and a called line, automatic selector and connector switches, a sender associated with said calling line adapted to control said switches to interconnect said lines, side switches therefor, and a third line, of an additional automatic switch, an electromagnetic responsive device associated with the last switch to said connection for operatively associating said additional switch with said sender, a circuit adapted to be closed to advance the connector side switch when the called party answers to prepare a circuit for said device, means for closing said circuit controlled by said sender, and a relay operated by the closure of said circuit for removing the control of said additional switch from the remaining lines.

5. In a telephone exchange system, the combination with a calling and a called line, automatic selector and connector switches, side switches therefor, and a third line, of an additional automatic switch, an electromagnetic responsive device associated with the last switch to said connection for connecting said additional switch to said calling line, a circuit adapted to be closed to advance the connector side switch when the called party answers to prepare a circuit for said device, and means for closing said circuit controlled by the calling party.

[Claims 6 to 8 not printed in the Gazette.]

1,221,167. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. CHARLES L. GOODRUM, Brooklyn, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Sept. 11, 1916. Serial No. 119,507. (Cl. 179—18.)



1. In a control circuit, a relay having a primary winding and a secondary winding in inductive relation thereto, a polarized stepping relay in circuit with said secondary winding, a stepping magnet controlled by said stepping relay, a release magnet, and a circuit therefor extending through a back contact of said first relay.

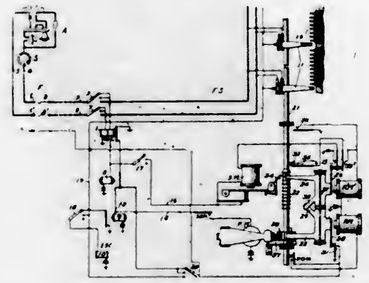
2. In a telephone exchange system, an automatic switch, an impulse circuit therefor, a polarized relay, a stepping magnet controlled thereby, a circuit for said relay, a relay arranged to inductively unite said circuits, a release magnet, and a circuit therefor, said circuit extending through a front contact of said last named relay.

3. In a telephone exchange system, an incoming line, outgoing lines, an automatic switch for interconnecting said lines, a relay having a primary winding in circuit with said incoming line and a secondary winding in inductive relation thereto, and an impulse sending device for transmitting impulses to said relay, means to control the operation of said switch by currents induced in said secondary winding by such impulses, said relay being maintained energized during the sending of impulses.

4. In a telephone exchange system, an incoming line, outgoing lines, an automatic switch for interconnecting said lines, controlling circuits therefor, a controlling switch including a plurality of wipers and contacts, an impulse sending device, a relay having two windings in inductive relation for controlling the setting of said automatic switch, and means including a back contact of said relay for preventing the release of said automatic switch in certain positions of said controlling switch.

5. An automatic switch, an impulse circuit therefor, a circuit controlling the operation of said switch, and means for inductively uniting said circuits, said means being arranged to prevent the release of said switch in certain stages of its operation.

1,221,168. TELEPHONE-EXCHANGE SYSTEM. CHARLES L. GOODRUM, Brooklyn, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Sept. 11, 1916. Serial No. 119,510. (Cl. 179—18.)

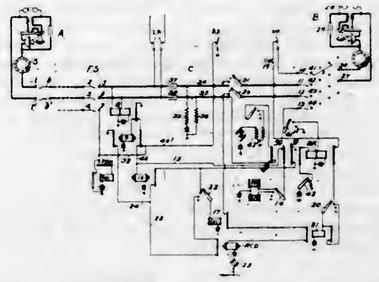


1. In a telephone exchange system, in combination with telephone lines, a selector, means for associating calling lines with said selector, trunk groups terminating in said selector, primary and secondary driving magnets for said selector, means for operating said primary magnet to set said selector in operative relation to a trunk group, automatic means for thereupon operating said secondary magnet to drive the selector over said group, means for stopping the selector on the first idle trunk, and means operated if no idle trunk is present for restoring said selector in operative relation to said trunk group and for again driving the same thereover.

2. In a telephone exchange system, in combination with telephone lines, a selector, a brush shaft therefor, means for associating a calling line with said selector, primary and secondary stepping magnets for said selector, primary and secondary holding pawls for said brush shaft, a release magnet adapted to withdraw both pawls, an auxiliary release magnet adapted to withdraw only the secondary pawl, trunk groups terminating in said selector, a sender for operating said primary magnet to set said selector in operative relation to a trunk group, automatic means for thereupon operating said secondary magnet to drive the selector thereover, means operative on the disestablishment of the connection to operate said release magnet to restore the brush shaft, means operated if the selector fails to find an idle trunk for operating said auxiliary magnet to withdraw the secondary pawl, and means for thereupon again operating the secondary magnet to drive the selector over the selected trunk group.

3. In a telephone exchange system, the combination with telephone lines, a selector, trunk groups terminating therein, primary and secondary stepping magnets for said selector, a driving circuit for said secondary magnet, primary and secondary holding pawls for said selector, a release magnet adapted to withdraw both pawls and an auxiliary release magnet adapted to withdraw only the secondary pawl, a sender for operating said primary magnet to set the selector in operative relation to a desired trunk group, means for thereupon closing said driving circuit to step the selector thereover, a testing magnet adapted to be operated upon the finding of the first idle trunk to open the circuit of said secondary magnet, means actuated when the selector reaches the end of the trunk group for operating the auxiliary release magnet, a locking circuit therefor, said magnet being adapted to withdraw the secondary pawl, to open the circuit of the secondary magnet and to close said locking circuit, and means for reclosing said driving circuit and for opening said locking circuit when the selector is restored to operative relation to the said trunk group to drive the brushes again over said group.

1,221,169. MACHINE-SWITCHING TELEPHONE-EXCHANGE SYSTEM. CHARLES L. GOODRUM, Brooklyn, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Sept. 11, 1916. Serial No. 119,511. (Cl. 179—27.)



1. In a telephone exchange system, the combination with restricted and non-restricted telephone lines, an automatic switch wherein said lines terminate, a sender adapted to set said switch on said lines, a source of signaling current, an operator's position, a telephone set and supervisory signal thereat, means for automatically connecting said source to non-restricted lines when the switch is set thereon, automatic means actuated when asid switch is set on restricted lines to prevent the connection of said source thereto and to operate said signal, manual means controlled by the operator for connecting her set in circuit with the calling line, and means controlled by the operator for connecting said source to the line.

2. In a telephone exchange system, the combination with restricted and non-restricted subscribers' telephone lines, an automatic switch wherein said lines terminate, senders associated with said lines adapted to set said switch thereon, a source of signaling current, an operator's position, a telephone set and supervisory signal thereat, means for automatically connecting said source to non-restricted lines when the switch is set thereon, automatic means actuated when said switch is set on restricted lines to prevent the connection of said source thereto and to operate said signal, means controlled by the operator for connecting her set in circuit with the calling line, and means controlled by the operator for connecting said source to the line or for releasing the switch.

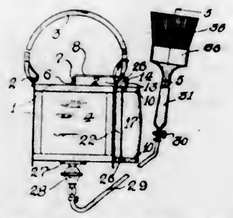
3. In a telephone exchange system, the combination with restricted and non-restricted subscribers' telephone lines, an automatic switch wherein said lines terminate, a side switch therefor, senders associated with said lines adapted to set said switch thereon, a source of signaling current, an operator's position, a telephone set and supervisory signal thereat, means actuated when said switch is set on an idle line for advancing said side switch to the next position to connect said source of signaling current to such line, a circuit closed in said position to include said source in circuit with the called line if such line is a non-restricted line, a relay actuated when said switch is set on a restricted line for interposing a break in said ringing circuit, a key controlled by the operator for connecting her set to the calling line, and a key for deënergizing said relay to close the ringing circuit.

4. In a telephone exchange system, the combination with restricted and non-restricted telephone lines, an automatic switch wherein said lines terminate, senders associated with said lines adapted to set said switch thereon, a source of signaling current, an operator's po-

sition, a telephone set and supervisory signal thereat, means for automatically connecting said source to idle non-restricted lines when the switch is set thereon, means actuated when said switch is set on restricted lines to prevent the connection of said source thereto and to operate said signal, means controlled by the operator for connecting her set in circuit with the calling line, means controlled by the operator for connecting said source to the line, a busy back signaling apparatus at said switch, and a relay operated if the non-restricted line is busy to prevent the operation of such signal and to connect said busy-back apparatus to the calling line.

5. In a telpehone exchange system, the combination with restricted and non-restricted telephone lines, of an automatic switch wherein said lines terminate, operator's equipment and a source of signaling current, means for automatically connecting said source to non-restricted lines when the switch is set thereon, automatic means actuated when said switch is set on restricted lines to prevent the connection of said source thereto, and means controlled by the operator for connecting said source to the line.

1,221,170. PRESSURE-FOUNTAIN PAINT-BRUSH. STANLEY GASPARAITIS, Chicago, Ill. Filed June 5, 1916. Serial No. 101,702. (Cl. 91—39.)



1. In a device of the class described the combination of a portable paint can, with an air-pump mounted to one side thereof, an elastic air cylinder mounted adjacent said pump and connected at its bottom with said pump and at its top with said paint can, a brush connected with the bottom of the pain can, controlling valves therefor, and means in the bottom of said elastic air cylinder adapted to admit air under pressure from said pump into said cylinder to force paint from said paint can through said brush when the controlling valves are open.

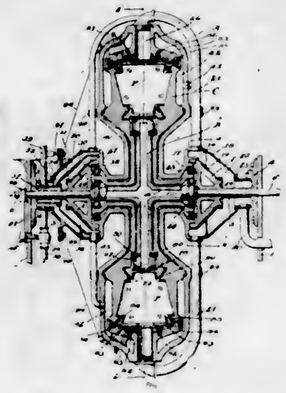
2. In a device of the class described the combination of a portable frame, a paint can removably supported therein, an air pump mounted on said frame, a paint brush connected with said paint can, controlling valves therefor, an air receptacle connected at its bottom with said pump and at its top with said paint can, an elastic cylinder forming the sides of said receptacle secured to the top and bottom thereof, and an air valve in the bottom of said receptacle adapted to admit air under presaure from said pump into said receptacle to force paint from said can through said brush when said controlling valves are open.

1,221,171. ROTARY INTERNAL-COMBUSTION ENGINE. STANTON D. GRIFFIN and EDWARD R. KIRK, Memphis, Tenn. Filed Aug. 1, 1916. Serial No. 112,571. (Cl. 123—11.)

1. The combination with a plurality of rotors turning in opposite directions on a common axis, of pistons relatively movable toward and away from each other, and means whereby each piston while moving in one direction drives one rotor and while moving in the opposite direction drives another rotor.

2. The combination with a plurality of rotors turning in opposite directions on a common axis, of pistons relatively movable toward and away from each other, and means whereby each piston while moving in one direction is attached to one rotor and while moving in the opposite direction is attached to another rotor.

3. The combination with a plurality of rotors turning in opposite directions on a common axis, of pistons relatively movable toward and away from each other, and means whereby each piston while moving in one direction is locked to one rotor and while moving in the opposite direction is locked to another rotor.



4. The combination with a plurality of rotors turning in opposite directions on a common axis, of pistons relatively movable toward and away from each other, and means whereby each piston while moving in one direction is attached to one rotor and while moving in the opposite direction is attached to another rotor, the arrangement being such that when one piston is attached to one rotor the coöperating piston is attached to an oppositely moving rotor.

5. The combination with a plurality of rotors turning in opposite directions on a common axis, of pistons relatively movable to ward and away from each other, and means whereby each piston while moving in one direction drives one rotor and while moving in the opposite direction drives another rotor, said rotors being geared together to turn simultaneously in opposite directions.

[Claims 6 to 10 not printed in the Gazette.]

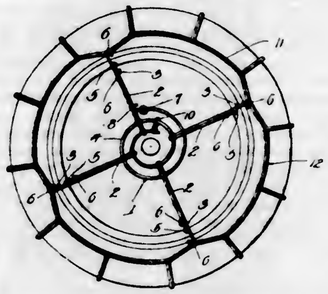
1,221,172. RIBBON-HOLDER. EDWARD E. HAMILTON, Northboro, Mass. Filed Mar. 4, 1916. Serial No. 82,017. (Cl. 24—81.)



1. As an article of manufacture, a ribbon holder comprising a complete hair ornament having means for securing it to the hair, and provided with a cruciform slot with one part extending longitudinally and having transverse extensions, and a ribbon holding member of bow-shaped form provided with two legs adapted to be pressed together to enter the longitudinal part of said slot, whereby by their natural resiliency they will be moved apart into the extensions, said legs having feet on their ends projecting behind the slot.

2. As an article of manufacture, a ribbon holder comprising a complete hair ornament having means for securing it to the hair, and provided with a longitudinal slot therethrough, and a ribbon holding member of bow-shaped form provided with two legs yieldingly connected together and adapted to enter said slot and be forced by the natural resiliency of the ribbon holding member against the sides of the slot to hold itself securely in position.

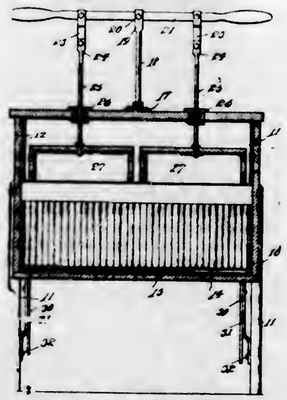
1,221,173. TIRE-CHAIN TIGHTENER. WILLIAM I. HARP, Galax, Va., assignor of one-half to Charles P. Waugh, Galax, Va. Filed Sept. 25, 1916. Serial No. 122,095. (Cl. 152—14.)



1. A tire chain tightener comprising a plurality of radial members for engagement at their outer ends with the side of said chain, and a spiral formed of a single resilient rod passing through the inner ends of said radial members to be turned in one direction for drawing said members inwardly and holding them under tension.

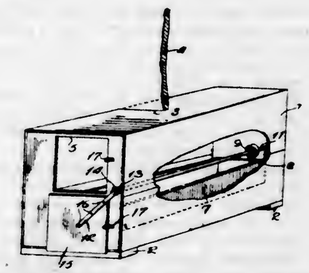
2. A tire chain tightener comprising a plurality of radial members for engagement at their outer ends with the side of said chain, a spiral formed of a single resilient rod passing through the inner ends of said radial members to be turned in one direction for drawing said members inwardly and holding them under tension, a link having its ends slidably mounted on two adjacent convolutions of the spiral, and stop means on both ends of said spiral for preventing said link from moving therefrom, said link serving to prevent the radial members from becoming detached from the spiral.

1,221,174. WASHING-MACHINE. GEARY E. HAWK and EMERY A. HAWK, Camden, N. J. Filed Apr. 14, 1916. Serial No. 91,214. (Cl. 68—19.)



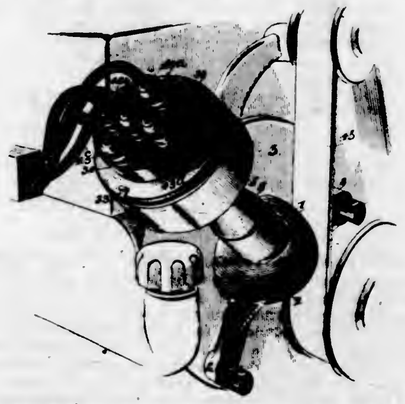
In a washing machine, the combination with a single undivided chamber provided with vertically corrugated side walls, of a pair of hollow pounder heads open throughout their bottoms and arranged within the chamber to provide suction means for alternately moving and acting upon the contents of said chamber, said heads collectively being of a size approximately corresponding to the inner sectional area of the chamber and means for alternately moving and guiding said heads vertically within said chamber.

1,221,175. AUTOMATIC TRAP-NEST. GEORGE A. HEATHERBELL, Deep Bay, Port Cygnet, Tasmania, Australia. Filed Jan. 17, 1916. Serial No. 72,598. (Cl. 179—50.)



An automatic trap nest including a rectangular casing having an entrance opening in the forward end adjacent the top and an exit opening in the opposite end thereof, a longitudinally arranged shaft rotatably mounted in the respective ends of the casing adjacent one side, a pulley wheel carried by the shaft adjacent the rear end, an elongated rectangular nest frame having one end pivoted to the inner surface of the forward end of the compartment slightly below the entrance opening and above the bottom of the casing, a cable connected to the free end of the nest frame and trained about and connected to the pulley wheel, an arm formed by bending the projecting end of the shaft at a right angle to the longitudinal axis thereof, a door connected to the arm and arranged exteriorly of the front end of the casing serving as a weight to normally maintain the nest frame in a raised position but adapted to close the entrance opening when a fowl his disposed its weight upon the nest frame, means for limiting the outward swinging movement of the door and for maintaining one edge of the door parallel with and beneath the bottom of the entrance opening, and means for limiting the upward swinging movement of the door to prevent the door from moving beyond the entrance opening.

1,221,176. AUTOMATIC SPARK-TIMER FOR INTERNAL-COMBUSTION ENGINES. JOSEPH J. HERZOG and WALTER M. MEDLOCK, Mobile, Ala., assignors of one-third to Lucious Geneve Adams, Mobile, Ala. Filed Nov. 24, 1915. Serial No. 63,216. (Cl. 123—117.)



1. An automatic spark timing device for internal combustion engines, comprising a rotatable contact wheel, and means for advancing or retarding the contact wheel, said

means including a lever secured to said contact wheel, a pair of centrifugal devices on opposite sides of said lever and arranged to engage the lever, the leverage exerted by said centrifugal devices decreasing as the centrifugal force increases.

2. An automatic spark timing device for internal combustion engines, comprising a contact wheel, a distributing arm, a lever for shifting said contact wheel and said distributing arm, centrifugal devices actuated by the engine shaft for moving the lever so as to shift the contact wheel and the distributing arm, the leverage exerted by said centrifugal devices increasing as the centrifugal force increases, and a series of stationary contacts arranged to be engaged by the distributing arm.

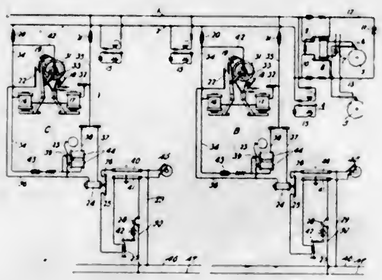
3. In an automatic spark timing device for internal combustion engines, a shaft, a pivoted centrifugal member secured to said shaft, a lever pivotally mounted on said shaft, a make and break wheel and a movable contact member connected with said lever and movable therewith, said centrifugal member having a cam surface arranged to engage said lever for shifting the latter relatively to the shaft upon which it is pivoted.

4. In an automatic spark timing device for internal combustion engines, a shaft, a pivoted centrifugal member secured to said shaft, a lever pivotally mounted on said shaft, a make and break wheel and a movable distributing arm connected with said lever and movable therewith, said centrifugal member having a cam surface arranged to engage said lever for shifting the latter relatively to the shaft upon which it is pivoted, the contour of the cam surface being such that as the centrifugal force increases the leverage exerted by the cam on the lever is decreased.

5. In an automatic spark timing device for internal combustion engines, a make and break wheel, a rotatable distributing arm, connections between said wheel and said arm for causing the two to move together, a rotatable shaft, a centrifugal device operated by said shaft, and means actuated by said centrifugal device for causing a relative movement between said make and break wheel and the said rotatable shaft.

[Claims 6 to 14 not printed in the Gazette.]

1,221,177. SELECTIVELY-OPERATED SYSTEM. RALPH N. HILL, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 21, 1914. Serial No. 826,366. (Cl. 171—97.)

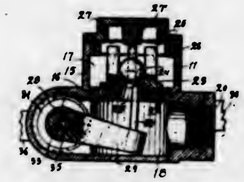


1. In a selective switching system, a central station, a plurality of power stations for supplying power to different sections of a power circuit, a line circuit connecting the central station with the several power stations, a circuit breaker individual to each power station for interrupting the section of the power circuit individual to that station, an energizing winding for said circuit breaker, a relay for connecting said winding and said section of the power circuit in parallel, a selectively operated device at each of said power stations, each independently operable over said line from the central office, a source of current at the central office for operating said selectively operated device and said relay, means for connecting said source of current to said selectively operated device, and means controlled by said selectively operated device to connect said source of current to said relay.

2. In a selective switching system, a central station, a plurality of power stations for supplying current to different sections of a power circuit, a line circuit connecting the central station with the several power stations, a switching device for interrupting the section of the power circuit individual to that station, electromagnetically actuated means for operating said switching device, a selectively operated device at each of said power stations each independently operable over said line from the central office, a source of current at the central office for operating said selectively operated device and said electromagnetically actuated means, means for connecting said source of current to said selectively operated device, and means controlled by said selectively operated device to connect said source of current to said electromagnetically actuated means.

3. In a selective switching system, a switching device, electromagnetic means to cause the automatic operation of said switching device, a remotely controlled step-by-step device for controlling said electromagnetic means, a remote control station, a source of current at said remote control station for actuating said electromagnetic means and said step-by-step device, means for connecting said source of current to said step-by-step device, and means controlled by said step-by-step device to connect said source of current to said electromagnetic means.

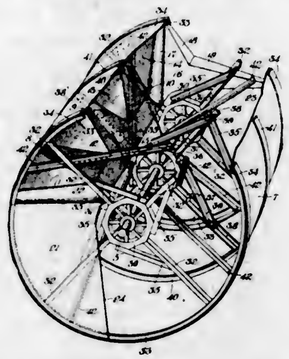
1,221,178. VALVE. JOHN H. HIMES, Milwaukee, Wis. Filed Mar. 15, 1915. Serial No. 14,540. (Cl. 137—103.)



1. A valve, comprising a casing divided by a partition to form an upper and a lower chamber, the upper chamber being provided with an inlet opening and the lower chamber with an outlet opening, said partition provided with a threaded opening and the casing having a threaded opening directly above the partition opening, a threaded cap for the threaded casing opening, a removable valve seat threaded in the partition opening and having upstanding valve guide means, a ball valve resting on the valve seat, and a rock-shaft extending through the casing and into the lower chamber and having a cranked arm on its inner end provided with an upward extension which engages the ball valve, and a weighted arm mounted on the outer end of the rock shaft which holds the cranked arm normally out of engagement with the ball valve.

2. A valve, comprising a casing having an upper inlet chamber and a lower outlet chamber, a removable valve and valve seat mounted between the two chambers, said valve seat being within the inlet chamber and threaded to the casing, a capped opening in the casing above the valve seat and through which the valve and valve seat may be removed, an extension bearing threaded into the casing of the lower chamber, a plug threaded into the casing of the lower chamber and having an inwardly extending bearing pin, a rock shaft extending through and journaled in the extension bearing and engaging the bearing pin and having a cranked arm on its inner end provided with an upstanding pin which may be swung through the valve seat opening and into engagement with the valve to move said valve from its seat, the rock shaft and its cranked arm being removable from the lower chamber through the casing opening which receives the extension bearing when said bearing is removed from the casing, and means for turning the rock shaft.

1,221,179. GAS-METER. CHARLES W. HINMAN and WALTER HIBBARD HINMAN, Winchester, Mass. Filed Apr. 27, 1916. Serial No. 93,874. (Cl. 73—1.)



1. In a gas meter the combination with a stationary casing of a revolving drum comprising a cylindrical shell having internal division walls, each wall comprising a plurality of alternate sections angularly disposed with relation to one another, and having their inner edges parallel to the axis of the drum, and a plurality of adjacent sections each being obliquely disposed relatively to the axis and to the other sections, and means for rotatably supporting the drum in the casing.

2. In a gas meter the combination with a stationary casing of a revolving drum comprising a cylindrical shell having internal division walls, each wall comprising a plurality of outer sections angularly disposed one to another, and an inner section parallel to the axis and extending substantially the length of the wall, and means for rotatably supporting the drum in the casing.

3. In a gas meter the combination with a stationary casing of a revolving drum comprising a cylindrical shell having internal division walls, each wall comprising a plurality of outer sections angularly disposed one to another, and an inner section extending substantially the length of the wall, and means for rotatably supporting the drum in the casing.

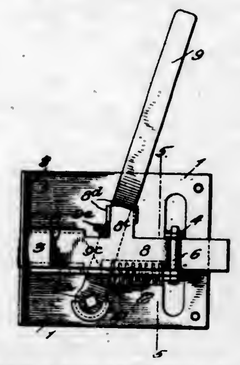
4. In a gas meter the combination with a stationary casing of a revolving drum comprising a cylindrical shell having internal division walls, each wall comprising a plurality of outer sections angularly disposed each to the others, and an inner plane section located in the plane of the axis and extending substantially the length of the wall, and being co-planar with one of the outer sections, and means for rotatably supporting the drum in the casing.

5. In a gas meter the combination with a stationary casing of a revolving drum comprising a cylindrical shell having internal division walls, each wall comprising a plurality of outer plane sections angularly disposed to one another, and parallel to the axis of the drum, adjacent outer plane sections each obliquely disposed to the axis and to the other sections, and an inner plane section coplanar with the axis and extending substantially the length of the wall, and means for rotatably supporting the drum in the casing.

[Claims 6 to 13 not printed in the Gazette.]

1,221,180. LATCH. LUTHER W. HOLLAND, Pleasant Hill, Mo., assignor to Holland Automatic Lock Co., Pleasant Hill, Mo., a Corporation of Missouri. Filed June 2, 1916. Serial No. 101,348. (Cl. 70—64.)

1. A latch comprising a base plate having an opening, a U-shaped detent having one end arranged to extend through the opening, a spring having one end engaging the opposite end of the U-shaped detent, a lever having one end pivotally mounted on said base plate and being pressed upon by the opposite end of said spring and a latch-bolt having a portion arranged to be engaged by said detent, and being loosely connected with said lever so as to move with the latter.



2. In a latch, a base plate having a laterally extending flange at one end provided with a lip punched from the flange to provide a bolt opening, said lip being bent into a plane parallel with the body portion of the plate and constituting a guide member, a U-shaped detent, a pivot pin for said detent carried by the plate and spaced therefrom, one end of said bolt passing between the pin and the plate, means carried by the bolt and arranged to be engaged by the detent for normally preventing the forward movement of the bolt, a lever having one end pivotally mounted on said base plate and being loosely connected with the bolt and a spiral spring arranged to bear at one end on said lever and at the other end on said U-shaped detent.

3. In a latch, a base plate having a pair of ears stamped therefrom and bent at right angles thereto to form a bearing, a pivot pin arranged to extend through the bearing, a detent pivotally mounted on said pivot pin, a lever pivotally mounted at one end on said base plate, a latch-bolt extending between said pivot pin and said base plate, said latch-bolt having a portion arranged to be engaged by said detent, a spiral spring disposed between said detent and said lever, one end of said detent being arranged to extend normally through the base plate.

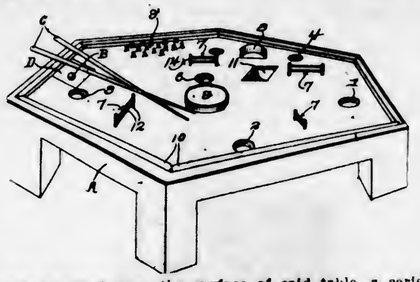
4. In a latch, a latch-bolt consisting of a single piece of metal bent at one end to form a cam-curve or bevel and being provided with a bent portion constituting a stop member, a base plate having a pair of ears struck up therefrom, a pivot pin carried by said ears and forming a guide for said bolt, a detent pivotally mounted on said pivot pin and arranged to extend normally through the base plate, a lever having one end pivotally mounted on said base plate, an extension carried by the bolt and arranged to loosely engage the lever, and a spiral spring having one end engaging the lever and the opposite end engaging the detent.

1,221,181. GAME-TABLE. RICHARD G. HOOPER, Delaware, Ohio. Filed July 31, 1916. Serial No. 112,323. (Cl. 46—61.)

1. In combination with a game table, having a cushion surrounding its periphery in close proximity with the surface of said table, a series of bars mounted upon the surface of said table, a pond formed in the surface of said table, a disk mounted upon the surface of said table, a series of apertures formed in the surface of said table, a woods arranged upon the surface of said table and a bunker mounted upon the surface of said table as and for the purpose set forth.

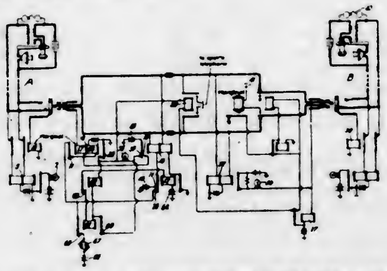
2. In combination with a table, having an elastic cushion surrounding its periphery in close proximity with

the surface of said table, a series of bars mounted upon the surface of said table and covered with elastic material, a plurality of posts supporting each of said series of bars, an elastic cushion substantially secured to each of said posts, a pond formed in the surface of said table,



a disk mounted upon the surface of said table, a series of apertures formed in the surface of said table, a woods arranged upon the surface of said table and a bunker mounted upon the surface of said table as and for the purpose set forth.

1,221,182. TELEPHONE-EXCHANGE SYSTEM. LEWIS H. JOHNSON, Bloomfield, N. J., assignor, by mesne assignment, to Western Electric Company, Incorporated, a Corporation of New York. Filed Apr. 7, 1915. Serial No. 19,791. (Cl. 179—73.)



1. In a telephone exchange system, a subscriber's line terminating at a central office, a link circuit thereat connected to said line, a line signaling device and a cut-off relay controlling said device associated with said line, a supervisory relay controlled over said line from the subscriber's station, a second relay, an energizing circuit therefor completed upon the deënergization of said supervisory relay in response to the restoration of the receiver to the switchhook, a locking circuit for said second relay completed upon the energization thereof and independent of said supervisory relay, a source of interrupted current, and a third relay conditioned for operation upon the energization of said second relay and operated upon the subsequent energization of said supervisory relay due to removal of receiver from switchhook to connect said source of interrupter current in circuit with said cut-off relay, whereby said line signaling device is caused to operate intermittently to furnish a distinctive signal.

2. In a telephone exchange system, a calling subscriber's line terminating at a central office, a line signaling device and a cut-off relay controlling said device associated with said line, a link circuit connected to said line, a supervisory relay energized upon connection of said link with said line and controlled from the subscriber's station, a sleeve relay associated with said link and energized upon the energization of said supervisory relay, a second relay conditioned for operation upon energization of said sleeve relay and operated upon the deënergization of said supervisory relay due to the restoration of receiver to switchhook, a locking circuit for said second relay established upon the energization thereof to place said second relay without the control of said supervisory relay, a source of interrupted current, a third relay conditioned for operation upon the energization of said second relay and operated upon a subsequent energization of said supervisory relay due to removal of receiver from switchhook for connecting said source of interrupted current in circuit with said cut-off relay, whereby said line signaling device is caused to operate intermittently to furnish a distinctive signal.

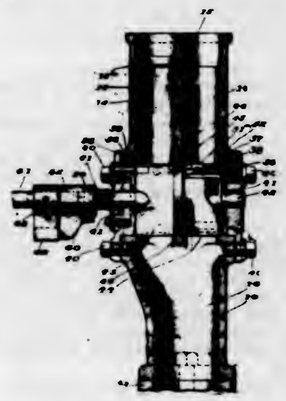
3. In a telephone exchange system, a subscriber's line terminating at a central office, a link circuit thereat connected with the line, a line signaling device and a cut-off relay controlling the signaling device associated with the line, a source of interrupted current, and means controlled from the connected substation for including said source of interrupted current in circuit with the cut-off relay to cause the intermittent operation of the line signaling device.

4. In a telephone exchange system, a subscriber's line terminating at a central office, a link circuit thereat connected with the line, a line signaling device and a cut-off relay controlling the signaling device associated with the line, a source of interrupted current, and a plurality of relays associated with the link circuit and controlled from the connected substation for including said source of interrupted current in circuit with the cut-off relay to cause the intermittent operation of the line signaling device.

5. In a telephone exchange system, a subscriber's line terminating at a central office, a link circuit thereat connected with the line, a line signaling device and a cut-off relay controlling the signaling device associated with the line, a source of interrupted current, and a relay associated with the link circuit conditioned for operation upon the restoration to the switchhook of the receiver at the connected substation, and operated upon the subsequent removal thereof for including said source of interrupted current in circuit with the cut-off relay to cause the intermittent operation of the line signaling device.

[Claims 6 and 7 not printed in the Gazette.]

1,221,183. CARBURETER. EDWARD A. JOHNSTON, Chicago, Ill., assignor, by mesne assignments, to International Harvester Corporation, a Corporation of New Jersey. Filed Jan. 4, 1913. Serial No. 740,108. (Cl. 261—18.)



1. In a carbureter for internal combustion engines, the combination of a member having a plurality of adjacent passageways therein, one for fuel and air and another for water and air, and means within said member for independently controlling the supply of fuel and air through one of said passageways and water and air through the other of said passageways.

2. In a carbureter for internal combustion engines, the combination of a member having a plurality of passageways therein, one for fuel and air and another for water and air, and a valve member within said member for independently controlling the supply of fuel and air through one of said passageways and water and air through the other of said passageways.

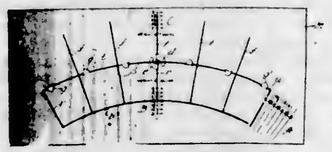
3. In a carbureter for internal combustion engines, the combination of a member having a passageway for fuel and air and another passageway for water and air, and a valve member having a plain portion and an irregular portion associated with said passageways for controlling proportionately and disproportionately under different load conditions the supply of fuel, water and air therethrough.

4. In a carbureter for internal combustion engines, the combination of a member having a passageway for fuel and air, and another passageway for water and air, and a valve member having different portions thereof to control proportionately and disproportionately under different load conditions the supply of fuel and air in one of said passageways and water and air in the other passageway.

5. In a carbureter for internal combustion engines, the combination of a member having a plurality of passageways, and simultaneously actuated fluid controlling valves in said passageways, one of said valves in one position preventing a fluid flow in one of said passageways and another of said valves permitting a fluid flow in another of said passageways, upon a movement of said valves said first mentioned valve permitting a flow of fluid in proportion to an increased flow permitted by said second mentioned valve, and upon a continued movement of said valves, said first mentioned valve permitting substantially the same flow of fluid while said second mentioned valve permits an increased flow of fluid.

[Claims 6 to 12 not printed in the Gazette.]

1,221,184. STOCK-MOUNT. JAMES G. JOHNSTON, Evanston, Ill., assignor to Warren Featherbone Company, Three Oaks, Mich., a Corporation of Michigan. Filed Nov. 15, 1915. Serial No. 61,530. (Cl. 211—34.)



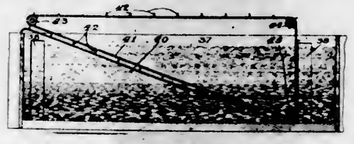
1. A mount for supporting stock articles which vary in size, said mount being in the form of a card or plate provided with means adaptable for individually securing to the mount articles of different size, and provided also with a scale so positioned thereon with reference to the securing means that when articles of different size are applied to the securing means each will coöperate with the scale to give indication of the size of the article.

2. A mount for supporting stock articles which come in different sizes, said mount being in the form of a card or plate having tongues formed integral therewith and arranged to individually receive such articles of different size and being provided with scale indications so positioned with reference to the receiving tongues that when an article is secured in place by such tongues it will coöperate with the scale indications to designate the article size.

3. A mount for collar supports in the form of a card or plate having tongues positioned to receive individually collar supports of different sizes and to secure them rigidly in place and having dimension indications positioned at various parts thereof to coöperate with the respective points of the mounted support to give indication of the support dimensions at such points.

4. A mount for skeleton frame collar supports which come in different sizes, said mount being in the form of a card or plate provided with tongues adapted to receive a support at the central point thereof and to interlock therewith to secure it in place, said mount having also size indications thereon so positioned with relation to the securing means that corresponding points of the mounted collar support will indicate thereon the size of the support at such points.

1,221,185. HAIR AND REFUSE REMOVER FOR DEHAIRING-MACHINES. ROBERT E. JORDAN, Chicago, Ill., assignor to The Allbright-Nell Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 27, 1916. Serial No. 74,535. (Cl. 17—11.)



1. In a device of the class described the combination with a dehairing machine, of a compartment at one side thereof, passage-ways affording communication between said compartment and the interior of said machine, an inclined perforated partition in said compartment, and means moving thereover to receive the refuse passed into said compartment and scrape the same upwardly over said partition to a point of discharge.

2. The combination with a dehairing machine comprising a tank, of a compartment at one side thereof, passageways affording communication between said compartment and the interior of the tank to permit a circulation of water therebetween, and means in said compartment to remove the hair and refuse carried thereinto by said circulating water.

3. In a device of the class described the combination with a tank of a hog dehairing machine, of a compartment at one side thereof, means permitting a circulation of water between said tank and said compartment, a perforated drain water partition in said compartment, and means moving thereover to remove the hair and refuse deposited thereon to a point of discharge by the circulation of water through said compartment and machine.

4. The combination with a carcass dehairing machine, of a compartment adapted to receive a flow of circulating water from said machine and permit return of the water into said machine, means within said compartment straining the circulating water therethrough, and mechanism operating over said means to remove the hair and refuse deposited thereon to a point of discharge.

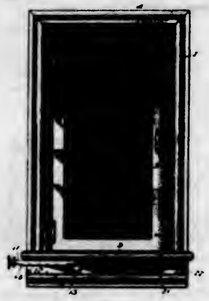
5. In a carcass dehairing machine means to receive water circulated therefrom and to return the same thereinto, and mechanism associated with said means for removing the hair and refuse from said circulating water carried in said means.

[Claims 6 and 7 not printed in the Gazette.]

1,221,186. WINDOW STRUCTURE. MAX N. KEELER, Urbana, Ill. Filed Apr. 14, 1915. Serial No. 21,272. (Cl. 16—22.)

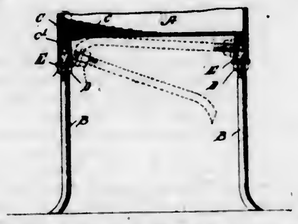
A window structure comprising a casement provided with a triangular recess, disposed with a base thereof forming an enlarged opening on the outer side of the casement, and the apex thereof forming a restricted opening upon the inner surface of the casement; a window hinged in proximity to the enlarged opening formed by said recess; and a window locking and actuating device comprising a swinging arm pivotally connected to said window at a point removed from its hinged connection to the casement; said arm being of a length approximately equal to the width of the casement and normally occupying a position within the recess; a portion of the free end of said arm protruding beyond the inner surface of the casement

when the window is in closed position; a rack arm having at one end a handle, and pivotally connected at its opposite end to the swinging arm; said rack arm normally occupying a position outside the restricted opening formed by said recess on the inner side of the casement, and in approximate alinement with said inner side for locking the window in its closed position; and a rack plate secured to the casement at an edge of the restricted opening in the triangular recess, and adapted to be engaged by the



rack arm when the latter occupies a position within the triangular recess to hold the window in a plurality of positions; said swinging arm having a longitudinal movement at its free end, in the triangular recess, approximately equal to the widest portion of said recess, said swinging being effected upon its point of connection with the rack arm as a pivot, when the rack arm is actuated to open the window.

1,221,187. KNOCKDOWN FORGE. HENRY B. KEIPER, Lancaster, Pa. Filed June 17, 1915. Serial No. 34,687. (Cl. 45—11.)



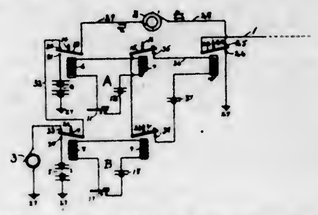
1. A foldable self-bracing leg for a "knock-down forge" or the like, comprising an angle-iron bracket adapted for attachment to the forge frame or body; and a rod pivoted at one end within the angle of said bracket and having an adjustable locking device thereon engaging the angular end of the bracket so as to lock the leg thereto in the plane thereof; said locking device being movable along the leg and adapted to engage one edge of the free end of said angle-iron when the leg is turned and lock the leg in a position substantially at right angles to said bracket.

2. In combination with a "knock-down forge" or the like, a foldable self-bracing leg consisting of an angle-iron bracket depending from the forge frame or body, a rigid arm or leg proper having a threaded end pivoted to said bracket within the angle thereof and adapted to be swung up underneath said body into position substantially at right angles to said bracket, and a nut screwed on said threaded end and adapted to engage the angular end of the bracket and lock the arm thereto in the plane thereof, and to engage one edge of the angle-iron when the arm is turned substantially at right angles to the bracket and lock said arm in the latter position.

3. A "knock-down forge" comprising a foldable frame or body and self-bracing foldable legs therefor consisting of angle-iron brackets secured to said body and having pendant portions and legs having threaded ends pivoted to said pendant portions; said legs having adjusting devices thereon adapted to engage the angular end of the bracket when the leg is in normal position and to engage the edge of the bracket when the leg is swung into a position substantially at right angles to the bracket, and to lock the leg in either position.

4. In combination with a portable forge, a foldable self-bracing leg comprising a bracket of angle-iron depending from the forge body or frame, an arm or leg proper pivotally secured at one end to said bracket in the plane thereof and adapted to be turned up under said body, substantially at right angles thereto, and means for locking said arm in either of said positions, said means consisting of a nut screwed upon said arm, and a washer interposed between said nut and the pivot bolt, said washer being adapted to engage the free end of the bracket when the arm is in normal position and to engage one edge of the bracket in another position of the arm and lock the leg in either position.

1,221,188. QUADRUPLEX TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed July 18, 1912, Serial No. 710,280. Renewed Dec. 30, 1916. Serial No. 139,968. (Cl. 178—55.)



1. In quadruplex telegraphy, the improvement, which consists in normally impressing upon the line alternations of comparatively high electromotive force to denote that no signal is transmitted, impressing alternations of different voltages for each half of each cycle to denote that one signal is transmitted and practically ceasing the alternations entirely to denote that two signals are simultaneously transmitted.

2. In quadruplex telegraphy, a line of transmission, two transmitting stations for each terminal of said line, two sources of alternations relating to both of said stations, a source of direct current for each of said stations, means for each of said stations to connect the source of direct current to one of said sources of alternations and means operatively related to both of said stations to ground the line directly.

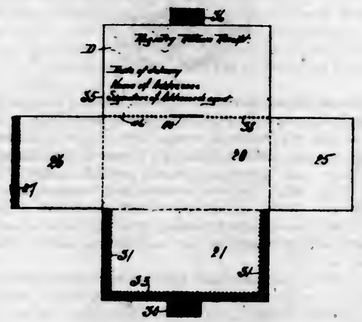
3. In quadruplex telegraphy, a line of transmission, two alternators connected normally in series with each other and with the line, two transmitting stations, a source of direct current for each of said transmitting stations, means for one of said transmitting stations to connect one of said alternators to one pole of the direct source of current, means for the second of said stations to connect the source of direct current with the opposite pole to said alternator and means adapted to be operated by both of said stations to disconnect the line from said alternator and ground the line directly.

4. In quadruplex telegraphy, two transmitting stations for each terminal of the line, each transmitting station comprising two electromagnets, a source of direct current and transmitting means, in combination with two alternators, a line of transmission connected thereto normally and an electromagnet adapted to break said connection of the line with the alternator and make a direct connection to the ground with said line.

5. In quadruplex telegraphy, a line of transmission, means to impress upon said line normally alternations of high electromotive force, two stations for said line, means at one station to reduce the electromotive force of the positive pulse of said alternations, means at the second station to reduce the negative pulse of said alternations and means relating to both stations to disconnect the line from said alternations entirely and connect said line directly with the ground.

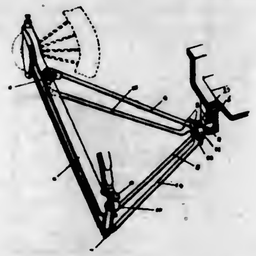
[Claims 6 to 11 not printed in the Gazette.]

1,221,189. REGISTRY-RETURN-RECEIPT ENVELOP. CAROLINE KITTLE, North Bergen, N. J. Filed July 8, 1915. Serial No. 38,718. (Cl. 229—73.)



An envelop comprising a pair of sections, one of said sections having a notch adjacent its edge and the other section having a tongue, the sections being folded over and secured together to form a pocket and the tongue entering the notch and secured to the adjacent section, a pair of flaps extending from the opposite edges of one of said sections and folded over the pocket with their ends fastened together and a flap detachably connected to said notched section, said last mentioned flap having a tongue.

1,221,190. RADIUS-ROD FOR AUTOMOBILES. BECKER CHR. KNUDSEN, Clinton, Iowa. Filed Apr. 17, 1913. Serial No. 761,859. (Cl. 21—182.)



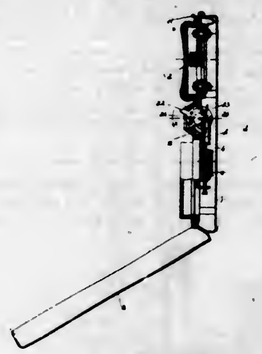
1. The combination with a V-shaped radius rod for motor vehicles, the crotch of said radius rod having a swivel connection with the transmission case of the motor vehicle and having its legs connected to the top of the front axle, of a sub-radius rod having an attachable and a detachable connection with the crotch of the radius rod and connected to the bottom of said front axle.

2. The combination with a V-shaped radius rod for motor vehicles, the crotch of said radius rod having a swivel connection with the transmission case of the motor vehicle and having its legs connected to the top of the front axle, of a V-shaped sub-radius rod having an attachable and detachable connection with the crotch of the radius rod and having its legs connected to the bottom of said front axle.

3. The combination with a V-shaped radius rod for motor vehicles, the crotch of said radius rod having a swivel connection with the casing of a power motive element of the motor vehicle and having its legs connected to the top of the front axle, of a sub-radius rod having a connection at one end to said radius rod near its crotch and at the other end to said axle.

4. The combination with a V-shaped radius rod for motor vehicles, the crotch of said radius rod having a swivel connection with a fixed part of the motor vehicle and having its legs connected to the top of the front axle, of a V-shaped sub-radius rod connected at one end to said radius rod near its crotch and at its other end to said axle.

1,221,191. APPARATUS FOR CHECKING A NUMBER OF TELEPHONE-CALLS. ENDRE KOLOSSVÁRY, Budapest, Hungary, assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed July 11, 1913. Serial No. 778,584. (Cl. 179—7.)



1. In a telephone hand set for operative association in a telephone circuit, a supporting plate, a transmitter and a receiver disposed thereon and a register mounted on said plate for operative association in said telephone circuit.

2. In a telephone hand set for operative association in a telephone circuit, a supporting plate, a transmitter and a receiver disposed thereon, a register fixed to the plate substantially between the transmitter and receiver for operative association in said telephone circuit, means for actuating the register, and a stop to limit the number of times the register may be operated.

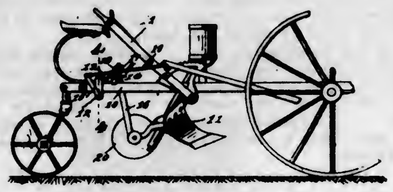
3. In a telephone hand set, a transmitter and a receiver, a supporting plate therefor, a register mounted on said supporting plate between said transmitter and receiver, an electroresponsive signal, a central-battery line circuit, means for jointly actuating said register and controlling the operation of said signal, and means for sealing the current conducting parts of said apparatus against unauthorized access thereto.

4. In a telephone hand set, a central-battery telephone line, a transmitter and a receiver, a supporting plate therefor, a register fixed approximately central on said plate between said transmitter and receiver, means for actuating said register, means for including the set with the line circuit, and electroresponsive means controlled by the register actuating means for producing current changes on said line circuit.

5. In a subscriber's portable telephone and call register, a supporting plate, a transmitter and receiver mounted thereon, a counting mechanism carried by said plate, a cord connected with the telephone apparatus and a plug on said cord, said supporting plate being provided with space within its margins for uniformly storing said cord and plug.

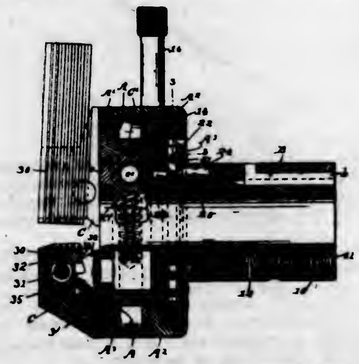
[Claims 6 to 9 not printed in the Gazette.]

1,221,192. LISTER. CARL LABS, Amherst, Nebr. Filed June 30, 1915. Serial No. 37,398. (Cl. 111—6.)



An attachment for a lister provided with a covering disk, consisting of an inverted U-shaped bracket arranged to be secured to the central longitudinal member of the lister frame and to have the extremities of the legs extend below said member, a transverse shaft journaled in the ends of said legs, a crank arm on one end of the shaft, an arm carried adjacent the other end of the shaft, a depending link adjustably connected to the second arm and arranged for connection to the disk, said link and second arm being provided with means whereby different points of the link may be connected to different points along the length of the second arm, and a second link pivotally connected to the crank arm and having its forward end adapted for connection to the furrow opener raising lever of the lifter.

1,221,193. CUTTER-HEAD. ABRAHAM B. LANDIS, Enfield, Pa. Filed Mar. 4, 1912, Serial No. 681,413. Renewed Feb. 24, 1917. Serial No. 150,845. (Cl. 10—96.)



1. A cutter-head comprising a body formed with grooves in its face extending at right angles to each other and intersecting, cutter-holders formed with heads adapted to be mounted and slide in said grooves, springs interposed between the head in one groove and the head in another groove at right angles therewith, a ring surrounding said head provided with a series of cams adapted to bear against the sliding heads opposite to said springs, means for turning said ring to close the die, and means for locking the parts with said die in closed position, substantially as set forth.

2. A cutter-head comprising a body formed with ways in its face extending tangentially and at right angles to each other, those extending in one direction intersecting and crossing those extending in the other direction, cutter-holders mounted to slide in said ways, means in said ways for normally holding said cutter-holders outwardly, means in operable relation with each of said cutter-holders adapted to operate them inwardly, and means for locking said parts in closed position, substantially as set forth.

3. A cutter-head comprising a body formed with intersecting ways in its face extending at right angles and tangentially to a circle the center of which is the axis of said head, cutter-holders mounted to slide in said ways, means interposed between said holders for normally sliding said holders outward, and means for forcibly sliding them inward, substantially as set forth.

1,221,194. LOCKING ATTACHMENT FOR BOLTS AND NUTS, WHEEL-CAPS, AND THE LIKE. GEORGE HENRY LANG, Auburn, Victoria, Australia. Filed Apr. 6, 1915. Serial No. 19,572. (Cl. 151—11.)

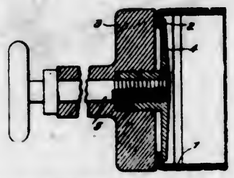


1. A locking attachment, for bolt and nut elements, comprising a spring catch of resilient material, the cross section of which is wide in comparison to its thickness, and having one end retained within a recess in the nut element, the other end projecting substantially radially inward toward the bolt element and adapted to engage a longitudinal slot in the latter, and a central portion connecting said ends, the nut member being provided with a longitudinal slot within which means may be inserted to raise the spring catch.

2. A locking attachment, for bolt and nut elements, comprising a spring catch of flat resilient material having one end retained within a recess extending across one corner of the nut element, the other end projecting substantially radially inward toward the bolt element and adapted to engage a longitudinal slot in the latter, and a central portion connecting said ends.

3. A locking attachment, for bolt and nut elements, comprising a spring catch of flat resilient material having one end retained within a recess extending across one corner of the nut element, the other end projecting substantially radially inward toward the bolt element and adapted to engage a longitudinal slot in the latter, and a central slightly curved portion connecting said ends and located in a recess extending inward from the circumferential surface of the nut element.

1,221,195. METHOD OF MAKING TUBULAR KNIVES. ALBERT LATHAM, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 19, 1916. Serial No. 98,615. (Cl. 76—101.)



1. A method of making tubular knives, which consists in forming a tubular shell, finishing a portion of the shell to a true cylindrical form, hardening the portion of the shell thus finished, finishing the unhardened portion of the shell to a true cylinder concentric with the hardened portion of the shell while the shell is held at the hardened portion, and finally grinding the hardened portion while the shell is held at the unhardened finished portion.

2. A method of making tubular knives, which consists in forming a shell having an inturned flange at one end, hardening a substantial portion of the shell extending from the edge opposite the flange, clamping the shell through engagement with the hardened portion and finishing the unhardened portions of the shell, and finally engaging the shell at the unhardened portions and grinding the hardened portions to finish the hardened portions of the shell and form a true cutting edge.

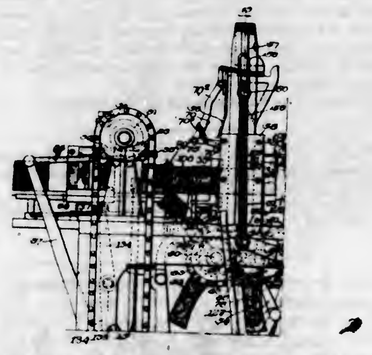
3. A method of making tubular knives, which consists in forming a substantially cylindrical shell, finishing the inner and outer surfaces of the shell to approximately the desired dimensions, hardening a substantial portion of the shell thus finished, engaging the shell by the hardened portion and truing the unhardened portions of the shell to conform with the hardened portions, and finally engaging the shell at the unhardened finished portions and grinding the hardened portions.

4. A method of making tubular knives, which consists in forming a shell having an inturned flange at one end, engaging the shell at the flange and operating upon the shell to form true cylindrical inner and outer surfaces, hardening the portion of the shell thus finished, centering the shell by engagement with the outer hardened surface and truing the unhardened portions to conform with the hardened surface.

5. A method of making tubular knives, which consists in forming a tubular knife shell, operating upon the shell to form true cylindrical inner and outer surfaces and to produce an annular recess at the inner surface, hardening the portion of the shell thus finished, forming true cylindrical surfaces upon the unhardened portions of the shell while the shell is held by engagement with the hardened portions, and finally forming a true cutting edge at one end of the hardened portion of the shell while the shell is held by the dened surface.

[Claim 6 not printed in the Gazette.]

1,221,196. ASSEMBLING AND BANDING MACHINE. RUSSELL W. LEWIS, Waukegan, Ill., assignor to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed Jan. 21, 1913. Serial No. 743,338. (Cl. 93—93.)



1. In a machine of the kind specified, a receptacle for assembled units, and means for feeding units into said receptacle comprising a chute for guiding the units, means for moving each unit along said chute into a position to fall by gravity into said receptacle, and means for imparting a blow to the rear edge of each unit to move said unit from the chute into said receptacle.

2. In a machine of the kind specified, a receptacle for the assembled units, means for feeding the units into said receptacle, means for moving the receptacle with its assembled units into a position removed from said feeding mechanism, a fixed stop against which the assembled units are moved in the last named position of said receptacle, said stop being arranged to compress the assembled units as they are brought against it, and means for withdrawing said stop after said units have been secured together in their compressed condition.

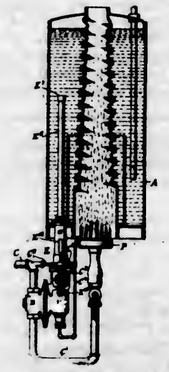
3. In a machine of the kind described, a receptacle for supporting the assembled units on their lower edges with their upper edges exposed, a reciprocating plunger, a pair of parallel plates supported on said plunger above the assembled units, with the lower edges of said plates divergent, means for interposing a band between said plates and the upper edges of the assembled units, and means for depressing said plates to fold the interposed band over the upper edges of the assembled units.

4. In a machine of the kind described, a receptacle for the assembled units, with their upper edges exposed, a pair a parallel plates held above the assembled units, having their lower edges divergent, said plates being spaced apart a distance equal to the desired thickness of the assembled units.

5. In a machine of the kind described, a banding mechanism comprising means for holding the object to be banded in a stationary position, a pair of reciprocating parallel plates having divergent edges adapted to slide over the object to be banded, said plates being spaced apart a distance less than the thickness of the object to which they are to be applied, whereby the latter is compressed.

[Claims 6 to 11 not printed in the Gazette.]

1,221,197. THERMOSTATIC GAS-VALVE MECHANISM. LUTHER D. LOVEKIN, Philadelphia, Pa. Filed July 15, 1912. Serial No. 709,355. (Cl. 126—351.)



1. In combination a main gas burner, a gas supply system, a main valve controlling the flow of gas from said system to said burner, and operating provisions for said main valve including a pressure chamber, a waste gas conduit leading from said chamber and a thermostatically actuated valve mechanism adapted to connect said chamber alternately to said gas supply system and to said waste pipe.

2. In combination a main gas burner, a gas supply system, a main valve controlling the flow of gas therefrom to said burner, and operating provisions for said main valve including a pressure chamber, a normally open restricted leakage vent leading from said pressure chamber, a second gas escape vent leading from said pressure chamber, and a thermostatically actuated valve mechanism adapted to cut off and establish communication between said pressure chamber and said system as the temperature to which said thermostatic mechanism is subjected approaches and recedes from one limit and adapted to open said second vent when said temperature receding from said limit reaches a second predetermined limit.

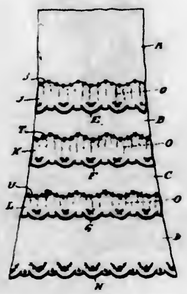
3. A thermostatic valve mechanism for controlling the supply of gas from a gas supply system to a gas burner comprising in combination, a main gas valve having inlet and outlet chambers and a port connecting them, and a valve member controlling said port and located on the outlet side thereof, a pilot valve mechanism comprising a pressure chamber, a restricted continuously open leakage channel leading therefrom, and thermostatically actuated means adapted to control communication between said pressure chamber and said gas supply system, and a flexible diaphragm separating said pressure chamber from said inlet chamber and connected to and operating said valve member.

4. A thermostatic valve mechanism for controlling the supply of gas from a gas supply system to a gas burner comprising in combination, a main gas valve having inlet and outlet chambers and a port connecting them, a valve member controlling said port and located on the outlet side thereof, a pilot valve mechanism comprising a pressure chamber and thermostatically actuated means adapted to alternately connect said pressure chamber to said gas supply system and to waste on predetermined variations in the temperature to which said thermostatically actuated means is exposed, and a flexible diaphragm separating said pressure chamber from the first mentioned inlet chamber and connected to and operating said valve member.

5. A thermostatic valve mechanism controlling the supply of gas from a gas supply system to a gas burner comprising in combination, a main gas valve having inlet and outlet chambers and a port connecting them, a valve member controlling said port and located on the outlet side of the outlet thereof, a pilot valve mechanism comprising a pressure chamber, a normally open restricted leakage vent opening therefrom, a second gas escape vent opening from said pressure chamber, and thermostatically actuated means adapted to cut off and establish communication between said pressure chamber and said gas supply system as the temperature to which said thermostatic mechanism is exposed approaches and recedes from one limit and adapted to open said second vent when said temperature receding from said limit reaches a second pre-determined limit.

[Claims 6 to 13 not printed in the Gazette.]

1,221,198. FLOUNCED SKIRT. CARL LUTZ, St. Gallen, Switzerland, assignor to Reichenbach & Co., New York, N. Y. Filed Dec. 7, 1916. Serial No. 135,625. (Cl. 2—42.)

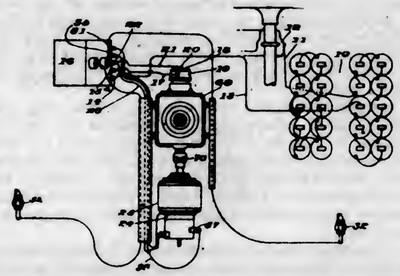


A flounced skirt comprising a series of separate strips of material having embroidered edges, the embroidered portions overlapping each adjacent strip to form flounces, said adjacent strips being secured directly to each other and embroidered on the outside along the lines at which they are joined to each other to further ornament the material and hide the points of joining, the portions of the strips underlying the flounces being shirred.

1,221,199. IGNITION SYSTEM. ROBERT MCCLENATHEN, Akron, Ohio, assignor, by mesne assignments, to International Harvester Corporation, a Corporation of New Jersey. Filed Feb. 13, 1913. Serial No. 748,132. (Cl. 123—148.)

1. In an ignition system, the combination of a source of current supply, a coil adapted to receive current therefrom, a plurality of selective timing devices through one of which current always passes when supplied to said coil under normal running conditions, and unitary means including a single switch for controlling the effectiveness of said timing devices.

2. In an ignition system, the combination of a source of power supply, a translating device adapted to receive power therefrom, selective timing device means through one of which power always passes when supplied to said translating device under normal running conditions, and a single switch for controlling the effectiveness of said timing device means.



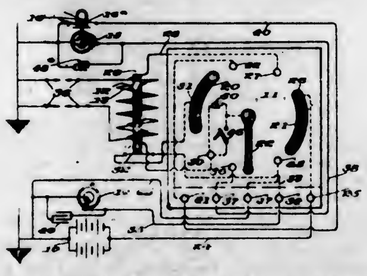
3. In an ignition system, the combination of a source of current supply, a translating device adapted to receive current therefrom, a plurality of timing devices by means of which current supply to said translating device may be affected, and a vibrator by means of which the circuit of the translating device may be made and broken as current passes through one of said timing devices.

4. In an ignition system, the combination of a source of current supply, a translating device adapted to receive current therefrom, a plurality of timing members by means of which current supply to said translating device may be affected, a vibrator by means of which the circuit of the translating device may be made and broken as current passes through one of said timing members, and means for controlling the effectiveness of said timing members.

5. In an ignition system, the combination of three selective circuits which a current may traverse for producing a spark, a plurality of timing members in said circuits, and means for controlling said circuits whereby one timing member always may be used in the active circuit during normal operating conditions.

[Claims 6 to 8 not printed in the Gazette.]

1,221,200. IGNITION SYSTEM. ROBERT MCCLENATHEN, Akron, Ohio, assignor, by mesne assignments, to International Harvester Corporation, a Corporation of New Jersey. Filed Feb. 20, 1913. Serial No. 749,634. (Cl. 123—148.)



1. In an ignition system, the combination of a source of current supply, a coil adapted to receive current therefrom, a plurality of timing devices, through one of which current always passes when supplied to said coil under normal operating conditions, and means adapted normally to prevent the passage of current to said coil through a certain one of said timing devices.

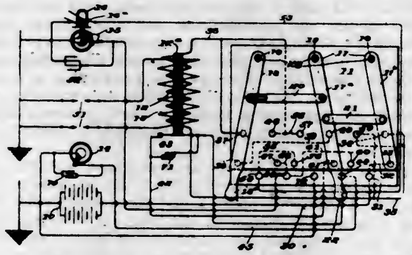
2. In an ignition system, the combination of a battery, a magneto, two timing members, a coil for spark purposes, means for controlling the production of a spark through the agency of said coil with said battery and one timing member, or with the same battery and the other timing member, or with said magneto and the second timing member, and positive means adapted normally to prevent the production of a spark through the agency of said battery and a certain one of said timing members.

3. In an ignition system, the combination of a battery, a magneto, a plurality of timing members, a coil for spark purposes, means for controlling the production of a spark through the agency of said coil with said battery and one of said timing members, or with the same battery and another of said timing members, or with said magneto and one of said timing members, and means adapted normally to prevent the production of a spark through the agency of said battery and a certain one of said timing members.

4. In an ignition system, the combination of a plurality of sources of current supply, a plurality of timing members, a coil for spark purposes, means for controlling the production of a spark through the agency of said coil with one of said sources and one of said timing members, or with the same source and another of said timing members, or with another of said sources and one of said timing members, and means adapted normally to prevent the production of a spark through the agency of one of said sources and a certain one of said timing members.

5. In an ignition system, the combination of a source of current supply, a coil adapted to receive current therefrom, a plurality of timing devices through which current supply of said coil may be effected, and positive means adapted normally to prevent the passage of current to said coil through a certain one of said timing devices.

1,221,201. ELECTRIC IGNITION SYSTEM. ROBERT MCCLENATHEN, Akron, Ohio, assignor, by mesne assignments, to International Harvester Corporation, a Corporation of New Jersey. Filed Feb. 20, 1913. Serial No. 749,635. (Cl. 123—148.)

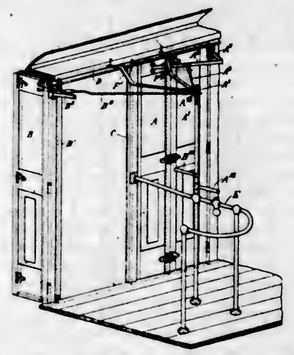


1. In an ignition system, the combination of a battery, a magneto, two timing members, a coil for spark purposes, a switch having two movable members for controlling the production of a spark through the agency of said coil with said battery and one of said timing members, or with the same battery and the other of said timing members, or with said magneto and the second timing member, current always passing through one of said timing members when supplied to said coil, and means causing one of said switch members to be moved with the other when the switch is moved from a position in which current from said battery is supplied to said coil through a certain one of said timing members.

2. In an ignition system, the combination of a source of current supply, a coil adapted to receive current therefrom, a plurality of timing devices through one of which current always passes when supplied to said coil, and a switch having two movable interlocked members, one of which controls current supply through said timing devices and the other of which controls the source of supply.

3. In an ignition system, the combination of a source of power supply, a translating device adapted to receive current therefrom, selective timing device members through one of which current always passes when supplied to said translating device, and switch means having movable interlocked members, one of which controls a circuit of said timing device members and another of which controls a circuit of said source of supply.

1,221,202. OPERATING MECHANISM FOR CAR-DOORS. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed Mar. 11, 1913. Serial No. 753,636. (Cl. 268—7.)



1. An operating mechanism for sectional doors, comprising a door formed of a supporting section and a wing section hinged together, a rectilinear guide for the wing section, an actuating lever having one end pivoted to said wing section, a fulcrum lever permanently pivoted at one end and having its free end pivotally attached to the free end of the actuating lever, and a push and pull device connected with said actuating lever at a point between its ends.

2. An operating mechanism for sectional doors, comprising a door formed of a supporting section and a wing section hinged together, a rectilinear guide for the wing section thereof, an actuating lever having one end pivoted to said wing section, a fulcrum lever permanently pivoted at one end and having its free end pivotally attached to the free end of the actuating lever, a push and pull device, a link connecting the push and pull device with said actuating lever and means for operating the push and pull device.

3. An operating mechanism for sectional doors, comprising a door formed of a supporting section and a wing section hinged together, a rectilinear guide for the wing section thereof, an actuating lever having one end pivoted to said wing section, a fulcrum lever permanently pivoted at one end and having its free end pivotally attached to the free end of the actuating lever, and a push and pull device directly connected with said operating lever between its ends.

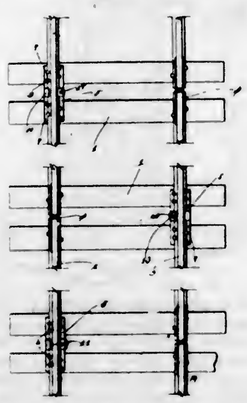
4. An operating mechanism for sectional doors, comprising a door formed of a supporting section and a wing section hinged together, a rectilinear guide for the wing section thereof, a guiding lever having one end pivoted to said ring section, a fulcrum lever permanently pivoted at one end and having its free end pivotally attached to the free end of the actuating lever, a push and pull device provided with a crank arm, and a link connecting said crank arm directly with said operating lever.

5. An operating mechanism for sectional doors, comprising a guide for the wing section thereof, a guiding lever having one end pivoted to said wing section, a fulcrum lever permanently pivoted at one end and having its free end pivotally attached to the free end of the actuating lever, a push and pull device provided with a crank arm, a link connecting said crank arm and said operating lever, and means whereby the crank arm may be moved to a dead center when the link is in a predetermined position.

1,221,203. RAIL-ANTICREEPER. PATRICK H. MCFADDEN, Spokane, Wash. Filed Feb. 14, 1916. Serial No. 78,166. (Cl. 238—4.)

1. In a rail anti-creeping device, a rail supporting chair adapted to rest upon the ties, means for securing the chair

to the ties, an upstanding flang intermediate of said securing means and integral with said chair, the inner face of the flange being arcuate in form, a gripping plate having its outer face arcuate to conform to said inner face, the inner face of said gripping plate having a longitudinal straight toothed or serrated grooved portion adapted to fit over and engage the edge of the rail base, and bolting means for securing the gripping plate to the rail chair.



2. In a rail anti-creeping device, a rail support adapted to rest upon the ties, means for securing the support to the ties, an upstanding flange intermediate of said securing means and integral with said support, the inner face of the flange being beveled, a gripping plate having a beveled outer face to conform to the beveled inner face of said flange, the inner face of the gripping plate being provided with a serrated grooved rail engaging portion, and vertically disposed bolting means for securing the gripping plate to the rail support.

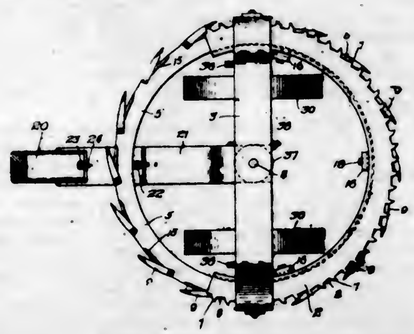
3. In a rail anti-creeping device, a rail support adapted to rest upon the ties, means for securing the support to the ties, an upstanding flange integral with said support, the inner face of the flange being beveled, a gripping plate having a beveled outer face to conform to and engage the beveled inner face of said flange, the inner face of the gripping plate being provided with a grooved overlapping rail engaging portion, and vertically disposed means for securing the gripping plate to the rail support.

4. In a rail anti-creeping device, a rail support adapted to rest upon the ties, means for securing the support to the ties, an upstanding flange integral with said support, the inner face of the flange being beveled, a gripping plate having a beveled outer face to conform to and engage the beveled inner face of said flange, the inner face of the gripping plate being provided with a grooved rail engaging portion, the under face of said gripping plate being supported slightly above and away from the rail support between the flange and rail, and vertically disposed means for securing the gripping plate to the rail support.

1,221,204. LAWN-MOWER. HUBERT H. MONTAGUE, Traverse City, Mich. Filed Apr. 10, 1916. Serial No. 90,053. (Cl. 56—45.)

1. In a machine of the character described, a stationary member having a horizontally-disposed shearing edge, a cooperating horizontally-revolving member having a shearing edge extending beyond the aforesaid shearing edge, the shearing edge on the stationary member following generally the arc of a circle having its center at the axis of rotation of the revolving member, and teeth projecting outwardly at intervals from the shearing edge of the said stationary member.

2. In a machine of the character described, a horizontal stationary member having a curved edge forming a shearing edge, teeth distributed at intervals along and projecting outwardly from said edge, and a coöperating horizontally-revolving member having a shearing edge extending beyond the aforesaid edge.



3. In a machine of the character described, a horizontal stationary member having a curved edge forming a shearing edge, teeth distributed at intervals along and projecting outwardly from said edge, and a coöperating horizontally-revolving member having a shearing edge extending beyond the aforesaid edge, the parts being so constructed and arranged that the movable shearing edge is gradually drawn inwardly relatively to each portion of the stationary shearing edge between each tooth and the next succeeding tooth when in shearing relation thereto.

4. In a machine of the character described, a stationary plate having an approximately arc-shaped outer edge forming a shearing edge, and a flat horizontally-revoluble ring lying against said plate and having a shearing edge projecting beyond the aforesaid edge and making an acute angle therewith, the arrangement being such that the revolving shearing edge is gradually drawn inwardly relatively toward the coöperating edge during a portion of each revolution.

5. In a machine of the character described, a stationary plate having an approximately arc-shaped outer edge forming a shearing edge, a flat horizontally-revoluble ring lying against said plate and having a shearing edge projecting beyond the aforesaid edge and making an acute angle therewith, the arrangement being such that the revolving shearing edge is gradually drawn inwardly relatively toward the coöperating edge during a portion of each revolution, and teeth projecting outwardly at intervals from said stationary shearing edge.

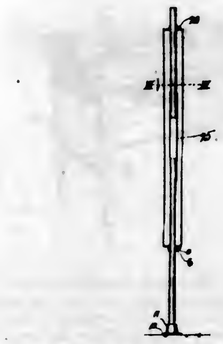
[Claims 6 to 20 not printed in the Gazette.]

1,221,205. PARTITION-SUPPORT. ADELBERT H. MOORE, and EDWARD F. MORTON, Kansas City, Mo., assignors to The Ell-Kay Mfg. Co., Kansas City, Mo., a Corporation of Missouri. Filed Aug. 23, 1915. Serial No. 46,859. (Cl. 189—38.)

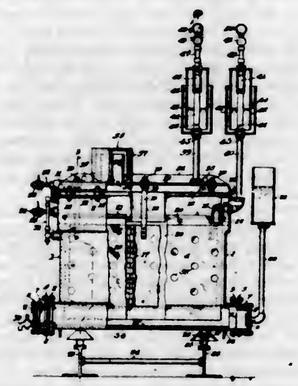
1. The combination with a housing, of a hollow anchor member fixed to the housing and inclosed thereby, separate standard members having free ends located within the housing and slidably projected into said anchor member, whereby the anchor member and housing may move over the separate standards, and whereby the standards are held in longitudinal alinement by the anchor member.

2. The combination with a housing, of a member, U-shaped in cross section, located within the housing, separate standard sections slidably mounted in opposite ends of the housing and in the U-shaped member, and means for fixing said sections in adjusted positions.

3. The combination with a housing having a longitudinal rib on one face, forming an enlargement of the housing chamber, a member, U-shaped in cross section, having its base fixed to the opposite side of the housing and having its side members projected into the chamber extension, caps on the ends of the housing, separate standard sections slidably mounted in said caps and in the U-member, and means for fixing the standard sections to the caps.



1,221,206. ELECTROLYZING APPARATUS. RUDOLPH J. J. MUELLER, Sheboygan, Wis., assignor to Universal Oxygen Company, Sheboygan, Wis., a Corporation of Wisconsin. Filed Aug. 16, 1915. Serial No. 45,611. (Cl. 204—1.)

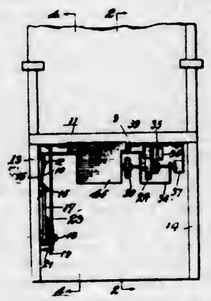


1. In electrolyzing apparatus the combination of a metal tank forming an electrode of one polarity, a metal cover of opposite polarity for the tank, an electrode electrically connected with the cover and depending therefrom into the tank, a diaphragm support interposed between and insulated from the tank and cover and formed integrally with a depending tubular gas conduit and hanger which is formed adjacent to its lower end with an external groove, a tubular diaphragm surrounding the cover electrode and consisting of material pervious to liquid and impervious when wet to gas, rods connected at the ends by yokes and coöperating therewith to clamp the diaphragm at its upper end in the groove of said hanger.

5. In electrolyzing apparatus the combination of a metal electrolyte tank having an outwardly projecting flange at the top and longitudinal partitions forming with the sides electrodes of one polarity, an arched metal cover for the tank having a corresponding flange, a metal diaphragm support fitting around its margin between the flanges of the tank and cover and formed integrally with depending gas conduits, insulating packing gaskets interposed between said support and the flanges of the tank and cover, which are drawn and held tightly together upon the gaskets by insulated bolts, metal electrode plates of opposite polarity depending from the cover into the tank through gas conduits in the diaphragm support, and tubular diaphragms surrounding the depending electrodes and secured at their upper ends to the lower ends of the gas conduits.

[Claims 6 and 7 not printed in the Gazette.]

1,221,207. SPUTUM-RECEIVER. FERDINAND MÜHLBACH, New York, N. Y. Filed Apr. 2, 1915, Serial No. 18,659. Renewed Jan. 18, 1917. Serial No. 143,187. (Cl. 4—38.)

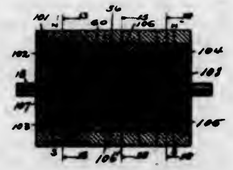


1. The combination with a container, of a reciprocatable frame for moving said container in one direction, a shaft in said container, a roller on said shaft for holding a web of fabric, a second shaft mounted in said frame, means for conveying motion between said shafts, a pinion on said second shaft, a rack adapted to be engaged by said pinion, means for causing engagement of said pinion with said rack when said frame moves in one direction, means for moving said container in the opposite direction, and means for causing disengagement of said pinion from said rack when said frame moves in the opposite direction.

2. The combination with a container, of means for moving said container in one direction into an operative position, means for returning said container into an inoper-

ative position, and a roller in said container for holding a web of fabric said roller being adapted to rotate when said container moves into its inoperative position.

1,221,208. MAGNETO. ALFONS H. NEULAND, San Francisco, Cal., assignor to Neuland Magneto Company, San Francisco, Cal., a Corporation of California. Filed July 21, 1913, Serial No. 780,133. Renewed Jan. 29, 1917. Serial No. 145,305. (Cl. 171—252.)



1. In a magneto, the combination of a plurality of circumferentially arranged toothed pole pieces arranged in pairs, the pairs being spaced apart longitudinally, circumferentially arranged magnets spanning from one pair of longitudinally spaced pole-pieces to the circumferentially adjacent pair, a rotatable shaft, a toothed rotor on said shaft, rotation of the rotor serving to shift the flux from the magnets from one pole-piece to a longitudinally adjacent pole-piece, whereby the reluctance of the flux path is maintained substantially constant and the flux parallel to the shaft is reversed and a coil arranged to be traversed by said reversing flux.

2. In a high tension, high frequency magneto, a plurality of permanent magnets having toothed pole-pieces, a rotor having a plurality of teeth adapted to move relatively to the pole-pieces in a plane adjacent said toothed pole-pieces, each successive pole-piece being of opposite polarity to the immediately preceding pole-piece and the teeth on the pole-pieces and on the rotor being arranged so that the rotor teeth are coincident successively with the teeth on the successive pole-pieces.

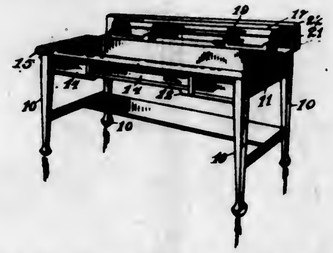
3. In a magneto, a plurality of magnets having circumferentially spaced toothed pole-pieces, pairs of said pole-pieces of opposite sign being spaced apart longitudinally, a toothed rotor arranged in the plane of each pole-piece pair arranged to rotate relatively to the pole-pieces, the teeth on the pole-pieces and rotors being arranged so that the teeth on each rotor coincide alternately with the teeth on the pole-pieces of each pair, so that when the teeth on one rotor coincide with the teeth on a pole-piece in one pair of one sign, the teeth on the other rotor coincide with the teeth on a pole-piece of opposite sign in the other pair, and a coil arranged intermediate the pole-pieces.

4. In a magneto, a plurality of permanent magnets producing a magnetic flux, toothed pole pieces on said magnets, a revoluble shaft arranged within said magnets, toothed rotors secured to said shaft, the teeth on the rotors being so arranged with relation to the teeth on the pole pieces that a plurality of successive teeth on each rotor are alined with a plurality of successive pole piece teeth and a plurality of successive teeth on each rotor are staggered with a plurality of successive pole piece teeth, the teeth being so arranged that rotation of the rotors serves to reverse the direction of the flux through said shaft and a coil surrounding the shaft at that part in which the flux is reversed.

5. In a magneto, a permanent magnet producing a magnetic flux, two toothed pole-pieces at each pole of said magnet, the pole-pieces of opposite sign occurring in the same plane, and the planes of the two poles being spaced apart longitudinally, a rotatable shaft arranged concentrically with respect to said pole-pieces, means for reversing the direction of the flux longitudinally through said shaft, and a coil surrounding said shaft and arranged between the planes of the two poles.

[Claims 6 to 11 not printed in the Gazette.]

1,221,209. COMBINATION TABLE-DESK. FLORIAN NIELSEN, Jamestown, N. Y. Filed Jan. 16, 1915. Serial No. 2,748. (Cl. 45—70.)



1. In a combination table-desk movable portions, a link connection between said movable portions to move said portions in conjunction with one another comprising a bracket attached to one of said portions, a first link pivotally attached to said bracket at one end, a second link having a stud thereon a spaced distance from one end, said first link pivotally attached to said stud in a lost motion slot, one end of said second link pivotally attached to the other of said movable portions of said table-desk, and the other end of said second link pivotally attached to a non-movable portion of said table-desk by a lost motion slot and pintle.

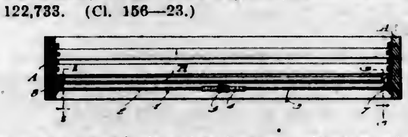
2. A combination table desk comprising a supporting frame having a compartment in its rear top portion, a top in two sections, the rear top section hinged on said frame to cover said compartment and to open rearwardly, a receptacle fitting within said compartment, link connection between each of the ends of said receptacle and a bracket arm on the underside of said rear top section to raise and lower said receptacle by raising and lowering said rear top section, and a shelf on the underside of said rear top section to limit the upward movement of said receptacle and to cover the space between said rear top section and said receptacle and form a shelf when in the raised position.

3. A table having a top composed of a relatively fixed front section providing a constant working surface and a similarly formed rear section the latter hinged at its rear so as to provide space between the rear front section and the rear section when the latter is raised about its said hinge, said sections being of equal length so as to conjointly form a uniform top for the table, the ends of the rear section forming table top ends for the rear of the top, and the rear side edge of the rear section forming the complete rear side edge for the table top, a vertically sliding receptacle movable through said space, and means actuated by the rear section for moving said receptacle up and down through said space according to the respective up and down movements of the rear section.

4. A table having a top composed of a relatively fixed front section providing a constant working surface, and a rear section, the latter hinged at its rear so as to provide space between the rear of the front section and the rear section when the latter is raised about its said hinge, a vertically sliding receptacle movable through said space, a shelf borne by the rear section, said shelf when the rear section is in vertical raised position being disposed horizontal and engageable with the top of the receptacle to provide a stop therefor, and means connected to the receptacle and rear section for moving said receptacle up and down through said space according to the respective up and down movements of the rear section.

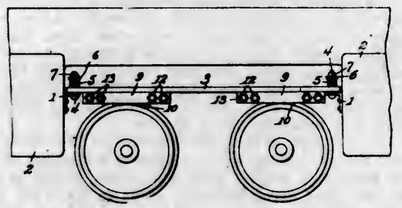
5. A table having a top composed of a front section and a rear section, said rear section being hinged, a receptacle movable upwardly from beneath the rear section, means operated by the rear section to move the receptacle, and a shelf borne by the rear section and engageable with the receptacle when the rear section and receptacle are in raised positions so as to provide a positive stop to limit the upward movement of the receptacle.

1,221,210. CURTAIN-FIXTURE. MARTIN H. PARICHAN, Manchester, N. H. Filed Sept. 28, 1916. Serial No. 122,733. (Cl. 156—23.)



A device of the class described comprising a pair of abutment members having transverse channels in their inner sides, the channel in one of said members extending completely across the same and having one of its ends offset out of longitudinal alinement with the major portion of the channel, an extensible rod having its ends bent laterally with respect to its intermediate portion and flattened, and disposed in the channels in said members, means for permanently securing the ends of said rods to said members, one of the latter being provided on its inner side with a circular recess adapted to rotatably receive the cylindrical stud of a shade roller, the portion of the end of said rod which is disposed adjacent the offset end of the channel in the other member being provided with a rectangular-shaped notch adapted to non-rotatably receive the rectangular-shaped stud of said roller.

1,221,211. TREAD-RESURFACING DEVICE FOR WHEELS. JOHN W. PEMBERTON, Wheeling, W. Va. Filed Nov. 27, 1916. Serial No. 133,589. (Cl. 51—4.)



1. A device for removing irregularities from the circumferential surfaces of car wheels, comprising a yieldable supporting member disposed in overlying relation to the wheel, a pair of oppositely facing longitudinally disposed flexible clamping members supported by said yieldable member, and an abrading block gripped between said clamping members and pressed against the uppermost surface of the wheel.

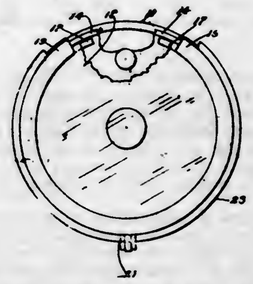
2. A device for removing irregularities from the circumferential surfaces of car wheels, comprising a yieldable supporting member disposed over the wheel, a pair of resilient bars disposed in opposing relation carried by said yieldable bar, an abrading block located between said resilient bars, and adjustable means for causing said resilient bars to assume clamping relation to said block.

3. A device for removing irregularities from the circumferential surfaces of car wheels, comprising a bar disposed horizontally over the wheel to be acted upon, means permitting said bar to yield with respect to said wheel, a pair of longitudinally disposed flexible clamping bars supported horizontally by said yieldable bar, and an abrading block disposed between said clamping bars intermediate the ends of the latter, said clamping bars yieldingly gripping and supporting said block against the topmost surface of the wheel.

4. A device for removing irregularities from the circumferential surfaces of car wheels, comprising a bar disposed longitudinally over the wheel to be acted upon, means permitting said bar to yield in a direction away from said wheel, a pair of supporting blocks carried by said bar at opposite sides of a central vertical line passed through said wheel, a pair of longitudinally disposed substantially parallel resilient clamping members having their ends bolted to opposite sides of said blocks, and an abrading block gripped between said clamping members.

5. A device for removing irregularities from the circumferential surfaces of car wheels, comprising a bar disposed longitudinally over the wheel to be acted upon, means permitting said bar to yield in a direction away from said wheel, a pair of supporting blocks carried by said bar at opposite sides of a central vertical line passed through said wheel, a pair of longitudinally disposed substantially parallel resilient clamping members having their ends secured to said blocks, an abrading block disposed between said clamping members, and means for causing the latter to assume clamping supporting relation to said abrading block.

1,221,212. AUTOMOBILE-LAMP. WILLIAM F. PERSONS, Lakewood, Ohio, assignor to The Guide Motor Lamp Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 18, 1916. Serial No. 126,264. (Cl. 240—41.)



1. In a lamp, the combination with a body portion, of a reflector arranged therein, a glass in advance of said reflector, a glass holding ring contacting with said glass, and an exterior clamping ring engaging and embracing an edge of the glass holding ring and body of the lamp.

2. In a lamp, the combination with a body portion, of a reflector positioned therein, a glass in advance of said reflector, a sheet metal glass holding ring contacting with said glass adjacent the outer edges thereof, and a divided exterior clamping ring adapted to engage the glass holding ring and lamp body.

3. In a lamp, the combination with a body portion, of a reflector positioned therein, a glass contacting with said reflector, a continuous flanged glass holding ring contacting with said glass, a divided exterior clamping ring adapted to engage said glass holding ring and the body of the lamp, and means for contracting said clamping ring upon said glass holding ring.

4. In a lamp, the combination with a body portion, of a reflector positioned therein, a glass in advance of said reflector, a flanged sheet metal glass holding ring contacting with said glass adjacent its outer edges, a divided exterior clamping ring adapted to engage the glass holding ring and lamp body, the ends of said divided ring being upset, and a screw working in said upset ends for drawing the same together.

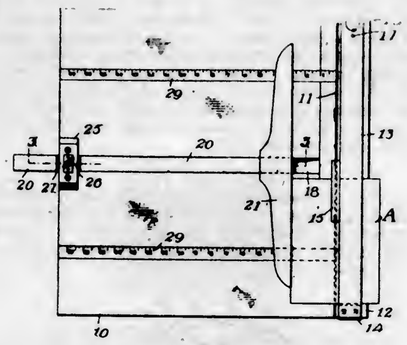
5. In a lamp, the combination with a body portion, of a reflector and glass positioned therein, a continuous glass holding ring adapted to embrace the outer edges of the lamp body and contact with the glass, and an exterior clamping ring adapted to engage the glass holding ring and lamp body.

[Claims 6 to 8 not printed in the Gazette.]

1,221,213. CREASING-BOARD. LEVI N. PLANTE, Worcester, Mass. Filed Apr. 17, 1916. Serial No. 91,682. (Cl. 93—1.)

1. As an article of manufacture, a creasing board provided with a stationary creasing strip extending slightly above the surface thereof and substantially throughout the width of the board, and a clamping plate pivotally

connected with the board to swing toward and from the plane thereof just beyond the creasing strip.



2. As an article of manufacture, a creasing board having a creasing strip extending above the surface thereof and located across the board, a clamping plate hinged to the board so as to swing on an axis located in the plane thereof at one edge and at right angles to said creasing strip, said clamping plate having an edge parallel with and adjacent to the creasing strip for guiding the creasing stick.

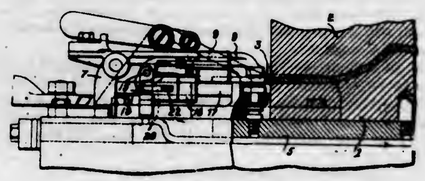
3. As an article of manufacture, a creasing board arranged to support a sheet and having a strip of metal arranged along the edge of the board proper and projecting up slightly above it, and means beyond the edge of the board proper for holding down a piece of paper or card board thereover.

4. As an article of manufacture, a creasing board provided with a creasing strip arranged near the edge of the board and projecting above its surface, means beyond the strip for holding a paper or cardboard thereon, and a T-square head parallel with said creasing strip and adjustable directly toward and from it.

5. As an article of manufacture, a creasing board provided with a projecting creasing strip arranged near the edge thereof, means beyond the strip for holding a paper or cardboard thereon, and a T-square head parallel with said creasing strip and adjustable directly toward and from it, said board having a groove therein for receiving the shank of said T-square.

[Claims 6 to 9 not printed in the Gazette.]

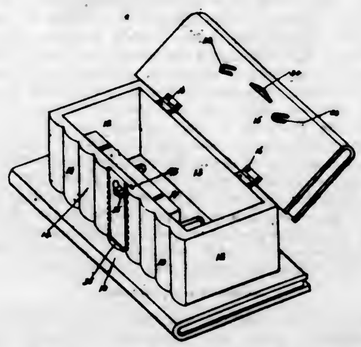
1,221,214. GAGE MECHANISM FOR SOLE-PRESSING MACHINES. EDWIN N. PREBLE, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 2, 1915. Serial No. 43,309. (Cl. 12—21.)



1. A sole pressing machine comprising coöperating sole pressing forms, an adjustable gage slide, a heel gage fulcrumed upon the slide and projecting over the surface of the sole supporting form, and means for maintaining the gage in yielding contact with the surface of the form.

2. A sole pressing machine comprising coöperating sole pressing forms, a gage slide adjustable with relation to the forms, a heel gage fulcrumed upon the slide and having a depending tail, and a spring-pressed plunger mounted in the slide and engaging with the tail to normally maintain the gage in contact with the surface of the sole supporting form.

1,221,215. CHEST AND MEANS FOR LOCKING THE SAME. GIOVANNI PULLARA, Pueblo, Colo. Filed Aug. 22, 1916. Serial No. 116,269. (Cl. 46—41.)



1. In a device of the class described, a base, a chest comprising a bottom, side and end walls, and a cover hinged to one of said walls, said chest being slidably mounted on said base to rest entirely thereon in normal position but to permit its front wall to project beyond said base in opening adjustment, a vertically sliding section in said front wall, and cover locking means concealed behind said vertically sliding section.

2. In a device of the class described, a base having a recess therein, a chest mounted thereon comprising a bottom, front, rear and end walls and a cover hinged to said rear wall, said cover having a recess in its lower face, sliding connections between said chest and said base whereby said chest in normal position rests entirely on said base and the front wall thereof projects beyond said base in opening adjustment, a vertically sliding section in said front wall which section is slightly longer than the height of said front wall and is adapted to be received into either of said recesses, and a cover locking means concealed behind said vertically sliding section.

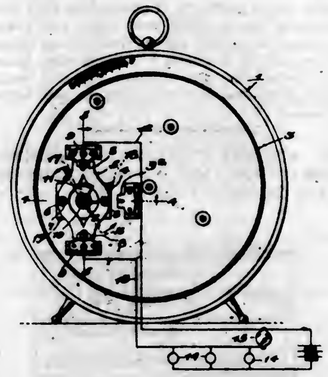
3. In a device of the class described, a locking means comprising a horizontally reciprocating locking bar, a casing therefor, a key opening in said casing having a slot formed as a continuation thereof, a pivoted gate normally concealing said slot, and a key adapted to engage said bar through said slot to reciprocate said bar.

4. In a device of the class described, a base having a recess therein, a chest mounted thereon comprising a bottom, front, rear and end walls and a cover hinged to said rear wall, said cover having a recess in its lower face, sliding connections between said chest and said base whereby said chest in normal position rests entirely on said base and the front wall thereof projects beyond said base in opening adjustment, a vertically sliding section in said front wall which section is slightly longer than the height of said front wall and is adapted to be received into either of said recesses, a cover locking means comprising a horizontally reciprocating locking bar, a casing therefor, a key opening in said casing having a slot formed as a continuation thereof, a pivoted gate normally concealing said slot and a key adapted to engage said bar through said slot to reciprocate said bar.

5. In combination with a chest having a secret removable section, locking means for said chest hidden from view by said removable section when said section is in place, said locking means comprising a key hole formed with a slot extension, and a pivoted gate normally concealing said slot.

1,221,216. TIME-CONTROLLED SWITCH. GEORGE R. PYPER, Midvale, Utah. Filed Jan. 17, 1916. Serial No. 72,591. (Cl. 161—27.)

1. In combination, a manually set time-controlled rotary shaft, a circuit closing member mounted thereon to be limited to a number of movements, a trio of stops spaced on an arc described around the shaft, and a hand key having a portion extending laterally from the shaft for contact with said stops, said key being pivoted to said shaft to allow it to be rocked manually in order to clear the intermediate stop.



2. In combination, a time-controlled rotary shaft, a circuit closing member mounted thereon to be limited to a number of movements, and means for limiting the rotation of said shaft to one movement, said means being releasable manually to permit further movement of the shaft.

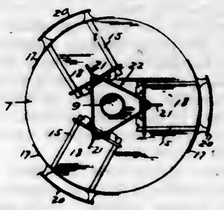
3. In combination, a time-controlled rotary shaft, a circuit closing member mounted thereon to be limited to a number of movements, a plurality of stops spaced apart on an arc described around the shaft, and a stop member carried by and extending from the shaft for engagement with said stops, said stop member being movably mounted to allow it to be manually shifted to clear one of said stops, thereby allowing further movement of the shaft.

4. In combination, a time-controlled rotary shaft, a pair of operative contacts spaced apart on an arc described around said shaft, a dummy contact also disposed on said arc, a double-ended circuit closing member mounted on said shaft and adapted to be manually set in engagement with the operative contacts, whereupon rotation of the shaft at the predetermined time will break the circuit and engage the aforesaid member with the dummy contact, and stop means for limiting this movement of the shaft, said means being manually releasable to permit the next rotation of the shaft to again engage the circuit closing member with the operative contacts to complete the circuit.

5. In combination, a time-controlled circuit closing member movable along a predetermined path and serving to complete an electric circuit at either end of said path, and means for limiting the movement of said member to a point between the ends of the path, whereby the circuit will remain broken, said means being manually releasable to allow the next movement of the circuit closing member to again complete the circuit.

1,221,217. FOOD-DISPENSER. MATTHEW QUINLIVEN and LUTHER SADLER, Miami, Ariz. Filed June 21, 1916. Serial No. 104,943. (Cl. 211—8.)

In a food dispenser, a base, a tray rotatably mounted therein, said tray having slots in its bottom, plates slidably mounted with relation to the tray having shoulders projecting through the slots, lugs extending downwardly from the said slides, a resilient member connecting the lugs of the several slides for exerting a pull on the said slides to return them to their normal positions, and means



on the tray for holding materials in position to be engaged by the shoulders of the plates.

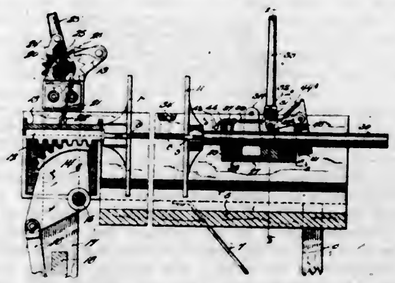
1,221,218. FLOOR-SCRUBBER. ISAIAH REID, Elizabeth City, N. C. Filed Sept. 28, 1914. Serial No. 863,879. (Cl. 15—51.)



1. A fountain floor scrubber comprising a comparatively heavy plate having compartments formed in the upper side of the plate, the bottom wall of each compartment being perforated, a scrubbing member secured to the under side of the plate, and means for supplying a fluid to one of said compartments, said fluid passing through the perforations of the bottom wall of said compartment to said scrubbing member.

2. A floor scrubber comprising top, side and end walls, a horizontal partition secured to the side and end walls to form a liquid chamber, a base, vertical flanges formed on the base for receiving the side and end walls, and said side and end walls resting upon the base, a vertical partition formed on the upper face of the base to form a pair of compartments, said base having a plurality of openings to each compartment, a scrubbing member secured to the base, and a valve secured to the horizontal partition for controlling fluid into one of the compartments.

1,221,219. CHEESE-PRESS. HUGO F. REINHOLD and ALFRED F. MEYER, Plymouth, Wis. Filed Apr. 3, 1916. Serial No. 88,429. (Cl. 100—55.)



1. In a cheese press the combination of a support member, a follower, a shaft extending from the follower, a spring urged grip plate on the shaft and connected with the support member for normally holding the shaft against retrograde movement and a grip plate connected with the member and adapted to engage said shaft to advance it.

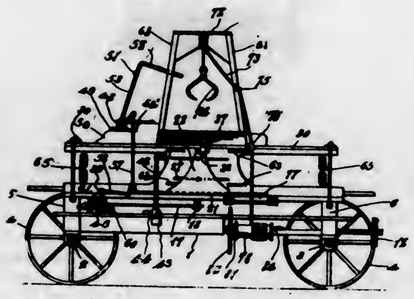
2. In a structure of the class described, the combination of a support member, a follower member, a shaft extending from the follower member, a grip block loosely mount-

ed on the shaft, a lever pivoted to the support member, a link pivoted to the lever and to an intermediate portion of the grip block and a spring secured to an end portion of the grip block and to the link.

3. In a structure of the class described, the combination of a support member, a follower member, a shaft projecting from the follower member, a grip block apertured loosely to the shaft, a grip plate carried by the block and apertured to receive the shaft, with its edges disposed inwardly of the edges of the block aperture, and said plate being shiftable to operatively disposed various edge portions with respect to the shaft.

4. In a structure of the class described, the combination of a support member, a follower member, a shaft projecting from the follower member, a grip plate carried by the support member and resiliently urged to a position holding the shaft against retrograde movement, means for advancing the shaft and means for locking the said grip plate to the support member in inoperative position.

1,221,220. HAY-PRESS. ANTONE J. RODRIGUE, Princeton, Cal. Filed July 3, 1915. Serial No. 37,863. (Cl. 100—3.)



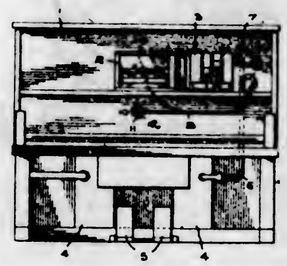
1. In a hay baler, the combination, of a baling chamber, a prime mover, a reciprocatory compressing head mounted in said chamber, a cross head connected to said compressing head, a pitman rod connected to said cross head, a beveled gear operatively connected to said prime mover, said pitman being eccentrically connected to said gear for reciprocating said head upon rotation of said gear, a feed table secured to said baling chamber, a plurality of feeding fingers carried by said table, a rod operatively connected to said feeding fingers, a finger carried by said rod, a plurality of upstanding pins carried by said beveled gear for engaging said finger for moving said feeding fingers forwardly toward said baling chamber for feeding hay into the chamber upon each side of said compressing head for compressing the hay upon each stroke of the head.

2. In a hay baler, the combination, of a baling chamber, a prime mover, a reciprocatory compressing head mounted in said chamber, a cross head connected to said compressing head, a pitman rod connected to said cross head, a beveled gear operatively connected to said prime mover, said pitman being eccentrically connected to said gear for reciprocating said head upon rotation of said gear, a feed table secured to said baling chamber, a plurality of feeding fingers carried by said table, a rod operatively connected to said feeding fingers, a finger carried by said rod, a plurality of upstanding pins carried by said beveled gear for engaging said finger for moving said feeding fingers forwardly toward said baling chamber for feeding hay into the chamber upon each side of said compressing head for compressing the hay upon each stroke of the head, a tamping arm, means operatively connected to said tamping arm for engagement with said upstanding pins for tamping the hay within said baling chamber prior to the compression of the hay by said compressing head.

3. In a hay baler, the combination, of a baling chamber, a prime mover, a bevel gear operatively connected to said prime mover, a feed table secured to said baling chamber, a plurality of feeding fingers carried by said table, a rod operatively connected to said feeding fingers, a finger carried by said rod, a plurality of upstanding pins carried by said bevel gear for engaging said finger for moving said feeding fingers forwardly toward said baling chamber for feeding hay into the chamber.

4. In a hay baler, the combination, of a baling chamber, a prime mover, a bevel gear operatively connected to said prime mover, a feed table secured to said baling chamber, a plurality of feeding fingers carried by said table, a rod operatively connected to said feeding fingers, a finger carried by said rod, a plurality of upstanding pins carried by said bevel gear for engaging said finger for moving said feeding fingers forwardly toward said baling chamber for feeding hay into the chamber, a tamping arm, means operatively connected to said tamping arm for engagement with said upstanding pins for tamping hay within said baling chamber.

1,221,221. SUCTION CLEANING ATTACHMENT FOR PLAYER-PIANOS. MAX ROTHFELD, Philadelphia, Pa. Filed Aug. 25, 1915. Serial No. 47,269. (Cl. 15—60.)



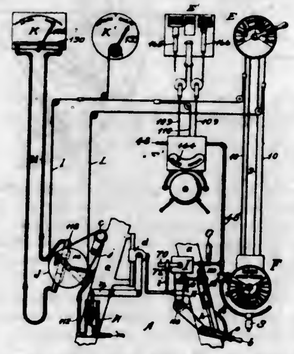
1. A vacuum cleaning nozzle made in two telescoping sections, each of said sections having an air duct extending therethrough, the telescoping portions of said sections uniting to form a dirt-collecting chamber which communicates with said ducts, one of said sections having a surface designed for engagement with the material to be cleaned and intersecting the duct therein, substantially as described.

2. A vacuum cleaning nozzle made in two telescoping sections, each of said sections having an air duct extending therethrough, the telescoping portions of said sections uniting to form a dirt-collecting chamber which communicates with said ducts, one of said sections having a concave surface which intersects the duct therein, the other of said sections having a duct-outlet portion for the attachment of a hose, substantially as described.

3. A vacuum cleaning nozzle made in two sections, one of said sections having an annular flange telescoping with an annular flange on the other of said sections, one of said flanges being longer than the other flange and abutting the opposite section to provide a dirt collecting chamber between the sections, a duct extending through each of said sections and communicating with said chamber, and a filtering member between said sections and positioned within said chamber, a surface on one of said sections for engagement with the material to be cleaned and intersecting the duct therein, the other of said sections having a duct-outlet portion for the attachment of a hose, substantially as described.

4. A vacuum cleaning nozzle made in two telescoping sections, each of said sections having an air duct extending therethrough, the telescoping portions of said sections uniting to form a dirt-collecting chamber which communicates with said ducts, and a filtering sheet stretched across said chamber transversely to said ducts, one of said sections having a surface designed for engagement with the material to be cleaned and intersecting the duct therein, substantially as described.

1,221,222. SHIP'S-ORDER TRANSMITTING AND RECEIVING APPARATUS. WALTER S. RUSH, New York, N. Y. Filed Apr. 12, 1911. Serial No. 620,618. (Cl. 116—31.)



1. The combination of a pair of instruments for sending and receiving ship's orders, two wires connecting the said instruments, a spring device for maintaining both the wires under a desired degree of tension, and alarm devices for indicating should the tension upon either wire become abnormal.

2. A pair of instruments for sending and receiving ship's orders, two wires connecting the said instruments, a pair of pulleys at one of the instruments with which the wires are respectively connected, a spring for maintaining the wires under tension, connected with the said pulleys and arranged to turn them in opposite directions, and alarm devices connected with both of the said pulleys and arranged to be operated by the movements thereof should either wire become too tight or too loose.

3. The combination of two instruments for sending and receiving ship's orders, one of them being provided with a radially disposed swinging arm, two wires connecting the said instruments, a pair of pulleys at the instrument having the said radial arm to which the wires are respectively connected, a spring connected with the said pulleys for maintaining the wires under tension, and connections between each of the said pulleys and the said radial arm whereby they are caused to turn together.

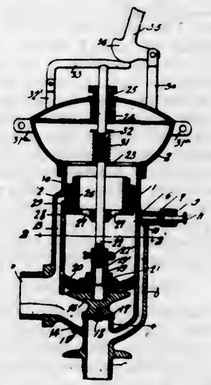
4. The combination of two instruments for sending and receiving ship's orders, one of them being provided with a radially disposed rotatable arm, two wires connecting the said instruments, a pair of pulleys at the instrument having the said radial arm, to which the wires are respectively connected, a spring connected with the pulleys for maintaining the wires under tension, and connections between each of the said pulleys and the said radial arm whereby they are caused to turn together, the said connections being movable along the arm thereby permitting one pulley to turn with reference to the other.

5. The combination of two instruments for sending and receiving ship's orders, one of them being provided with a radially disposed rotatable arm, two wires connecting the said instruments, a pair of pulleys to which the wires are respectively connected located at the instrument having the said arm, and supported so as to turn about the same axis as that about which the arm moves, a spring connecting the said pulleys for maintaining the wires under tension, and a pair of links having sliding connections at their inner ends with the said radial arm and being connected on opposite sides of the arm and at their outer ends with the said pulleys.

[Claims 6 to 27 not printed in the Gazette.]

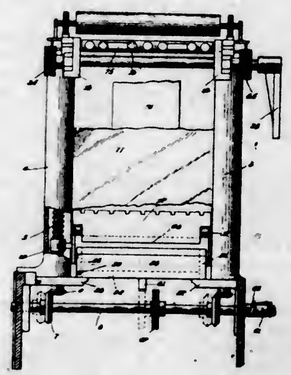
1,221,223. FLUSHING-VALVE. GEORGE H. RUSSELL, Florence, Ala. Filed Oct. 10, 1916. Serial No. 124,876. (Cl. 137—93.)

1. A flushing device embodying a casing having a water inlet nozzle at one end, and a water outlet, a valve slidable longitudinally within the casing and seatable against said nozzle, the casing having a by-pass port and a relief port located at different distances from said nozzle and having a by-pass establishing communication between the by-pass port and the inlet nozzle, a spring-pressed valve slidable longitudinally in the casing toward and away from the aforesaid valve for normally closing the relief port and movable to close the by-pass port, and means for sliding the second mentioned valve having a limited sliding connection with the first mentioned valve.



2. A flushing device embodying a casing having a water inlet nozzle at one end of reduced area and a water outlet adjacent to said end, a valve slidable within the casing and seatable against the nozzle, the casing having a relief port and a by-pass port at different distances from said nozzle, and having a by-pass establishing communication between the by-pass port and inlet nozzle, a spring pressed rod projecting from the other end of the casing and having a limited sliding connection with said valve, and a piston valve secured to said rod and slidable within the casing to normally close the relief port and to close the by-pass port when the rod is moved against its spring tension.

1,221,224. BUTTER-CUTTER. JOSEPH F. SCANLAN, New York, N. Y. Filed May 22, 1912. Serial No. 698,880. (Cl. 31—65.)



1. The combination with a butter cutter of a butter compressor, a platform common to both and adapted to be displaced parallel to itself, a second platform adapted

to be displaced in its own plane, and means for alternately displacing said platforms.

2. The combination with a butter cutter, of a butter compressor, a platform common to both and adapted to be displaced parallel to itself, a second platform adapted to be displaced in its own plane, a wall secured to said second platform and displacement therewith, a stationary wall substantially parallel to said displaceable wall, and means for alternately displacing said platforms.

3. The combination with a casing, of means within the casing for cutting butter, means without the casing for operating said butter cutting means, and means within the casing for compressing butter operated by said butter cutting operating means.

4. The combination with a butter cutter, of a butter compressor, a platform common to both and adapted to be displaced parallel to itself, a second platform adapted to be displaced in its own plane, means for alternately displacing said platforms, and means for determining the displacement of said first platform.

5. The combination with a butter cutter, of a butter compressor, a platform common to both and adapted to be displaced parallel to itself, a second platform adapted to be displaced in its own plane, means for alternately displacing said platform, and means for determining the displacement in one direction of said first platform.

[Claims 6 to 13 not printed in the Gazette.]

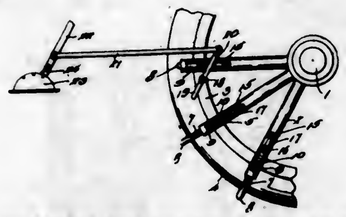
1,221,225. FLOOR-PROTECTING ATTACHMENT FOR FURNITURE. EDWARD SCHAUERMANN, Baltimore, Md., assignor to The Hold Fast Caster Cup Company, a Copartnership consisting of said Schauermann and George A. Ramming. Filed Feb. 4, 1915. Serial No. 6,110. (Cl. 155—33.)



The herein described floor protector to snap onto furniture casters comprising a cap composed of non-scratching material having a flat floor engaging bottom and provided in its top with a caster wheel receiving socket, said socket having a flat bottom and an upright side wall, and a retaining member formed from a plate of resilient sheet metal having a central portion conforming to the shape of the socket and fitting flat against the bottom thereof and with its edge engaging the side wall of said socket, rectangular spring clamping plates formed integral with the edge of said central plate portion at diametrically opposite points and inclined upwardly and inwardly at oblique angles to said central plate portion, said clamping plates projecting above the top of the cap and being of a length greater than the radius of the caster wheel inserted in said socket to provide for the effective clamping engagement of the upper extremities of said plates with a portion of the caster at points above the horizontal axis of the caster wheel, for the purpose set forth.

1,221,226. ANTISKIDDING DEVICE. ANTON SCHLOPMAN, Gladstone, N. D. Filed Aug. 18, 1916. Serial No. 115,732. (Cl. 21—209.)

1. A non-skidding wheel including a hub, hollow spokes extending radially therefrom, a rim connected to the spokes, non-skidding members arranged within the spokes, means for holding the members in an advanced position beyond the periphery of the rim, means for advancing and releasing the members, and means for automatically returning the members to a retracted position after being released.



2. A non-skidding wheel including a hub, spokes extending radially therefrom, a rim connected to the spokes, non-skidding members slidably mounted with respect to the spokes, projections on each of the non-skidding members, retaining means on the spokes for removably holding the members in an adjusted position, means engageable with the projections to advance the members and engageable with the retaining means to release the members, and means for automatically retracting the members subsequent to the release thereof.

3. A non-skidding wheel including a hub, hollow spokes extending radially therefrom, a pneumatic tire receiving rim carried laterally of the outer ends of the spokes, non-skidding members slidably mounted in each of the spokes and when advanced adapted to extend beyond the periphery of the tire on the rim, lugs projecting from the members and through the slots in the rim, retaining elements carried by each of the spokes for engagement with the members to hold them in adjustable position, means engageable with the lugs to advance the members and engageable with the retaining elements to release the members, and resilient means in the spokes for drawing the members into a retracted position when released.

1,221,227. SURGICAL SWAB. OTTO C. SCHULZ, Chicago, Ill., assignor to Bauer & Black, Chicago, Ill., a Corporation of Illinois. Filed Apr. 24, 1916. Serial No. 93,106. (Cl. 128—28.)



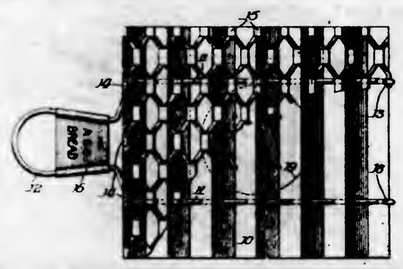
1. A surgical swab comprising an elongated friable liquid container having a constricted end, a pliable brush made of fabricated textile material embracing and secured to said container at the constricted end thereof, and means beyond said end confining the textile material to retain the end when broken, the portion of the textile material embracing said container being impregnated with a liquid resistant.

2. A surgical swab comprising an elongated liquid container, an impermeable wrapping inclosing the container, a pliable brush extending beyond one end of the container, and means for preventing portions of the container when broken from escaping to the brush.

3. A surgical swab comprising an elongated friable liquid container, a wrapper comprising a plurality of turns of textile fabric wound thereon, said wrapper being extended beyond one end of the container, and means for confining the wrapper adjacent said end of the container to form the projecting free end of the wrapper into a soft pliable brush for applying the liquid in the container when the latter is broken.

1,221,228. TOASTER. SAMUEL C. SHAFFNER, Chicago, Ill. Filed May 13, 1916. Serial No. 97,217. (Cl. 53—5.)

1. In a toaster, the combination of a sheet of corrugated metal, reinforcing rods extending through the corrugations of said sheet and formed into a supporting handle and retaining ends for said sheet, a separating member hinged at one edge to the edge of said sheet for keeping the toast from engagement with said corrugated sheet, and a combined advertising and reinforcing plate carried by said handle, said corrugated sheet having no unclosed openings therethrough.



2. In a toaster, the combination of a sheet of corrugated metal, reinforcing rods extending through the corrugations of said sheet and formed into a supporting handle and retaining ends for said sheet, a separating member hinged at one edge to the edge of said sheet for keeping the toast from engagement with said corrugated sheet, a combined advertising and reinforcing plate carried by said handle, said corrugated sheet having no unclosed openings therethrough, and a spreader secured centrally to the under surface of said corrugated sheet.

3. In a toaster, the combination of a sheet of corrugated metal, reinforcing rods extending through the corrugations of said sheet and formed into a supporting handle and retaining ends for said sheet, a separating member hinged at one edge to the edge of said sheet for keeping the toast from engagement with said corrugated sheet, and a combined advertising and reinforcing plate carried by said handle, said corrugated sheet having no unclosed openings therethrough, said separating member consisting of a sheet of metal having letters raised therefrom to form a desired advertisement for similarly marking the toast.

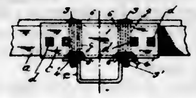
4. In a toaster, the combination of a sheet of corrugated metal, reinforcing rods extending through the corrugations of said sheet and formed into a supporting handle and retaining ends for said sheet, a separating member hinged at one edge to the edge of said sheet for keeping the toast from engagement with said corrugated sheet, and a combined advertising and reinforcing plate carried by said handle, said corrugated sheet having no unclosed openings therethrough, the ends of said reinforcing rods being bent into hooks to hold the free edge of said separating member in place on said sheet.

5. In a toaster, the combination of a sheet of corrugated metal, reinforcing rods extending through the corrugations of said sheet and formed into a supporting handle and retaining ends for said sheet, a separating member hinged at one edge to the edge of said sheet for keeping the toast from engagement with said corrugated sheet, and a combined advertising and reinforcing plate carried by said handle, said corrugated sheet having no unclosed openings therethrough, the ends of said reinforcing rods being bent into hooks to hold the free edge of said separating member in place on said sheet, said hooks permitting the ready removal of the edge of said member from engagement therewith.

1,221,229. CAR DEAD-BLOCK. CHARLES S. SHALLENBERGER, St. Louis, Mo., assignor to Commonwealth Steel Company, St. Louis, Mo., a Corporation of New Jersey. Filed Aug. 16, 1915. Serial No. 45,720. (Cl. 213—3.)

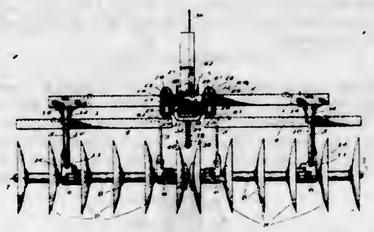
1. In a car underframe, the combination with the end sill, of a dead-block, a metallic bar arranged on each side of an upright portion recessed into the rear side of the said block, an upper horizontal portion overlapping and adapted to bear on the said sill and a lower horizontal portion underlying and adapted to bear against the underside of the said block, a draw-bar carry-iron, means for securing the said upper portion to the said sill and means for securing the carry-iron and the said lower portion and block together.

of the longitudinal center of the said frame and consisting



2. In a car underframe, the combination with the end sill, of a dead-block, a metallic bar arranged on each side of the longitudinal center of the said frame and consisting of an upright portion recessed into the rear side of the said block, an upper horizontal portion adapted to bear against the said sill, and a lower horizontal portion underlying and adapted to bear against the underside of the said block, a draw-bar carry-iron, means for securing the said upper portion to the said sill and means for securing the carry-iron and the said lower portion and blocks together.

1,221,230. DISK HARROW. CHARLES S. SHARP, Auburn, N. Y., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Aug. 1, 1912. Serial No. 712,630. (Cl. 55—81.)



1. In a harrow, a frame, gang frames pivotally mounted on said frame, a yieldably mounted vertically movable bracket carried on said frame and engageable with the adjacent ends of said gang frames, adjustable means for limiting the vertical movement of said bracket, and means operable from said frame for regulating pressure on the yieldably mounted bracket.

2. In a harrow, a frame, gang frames pivotally mounted on said frame, a vertically slidable bracket carried on said frame and engageable with the adjacent ends of said gang frames, adjustable means for limiting the vertical movement of said bracket, and spring pressed means normally holding said bracket in engagement with said gang frames adjustable from said frame.

3. In a harrow, a frame, gang frames pivotally mounted on said frame, a vertically movable bracket engageable with the adjacent ends of said gang frames, adjustable means for limiting the vertical movement of said bracket, a lever pivoted on said frame having one end engaging said bracket, and operative connections on said frame resiliently connected to the opposite end of said lever.

4. In a harrow, a frame, gang frames pivotally mounted thereon, a bracket slidably mounted on said frame having abutments thereon engageable with adjacent ends of said gang frames, adjustable stops on said frame for limiting the movement of said bracket, a horizontally disposed lever pivoted on said main frame intermediate its ends having one end engaging said bracket, a vertically disposed spring-pressed rod extending through the opposite end of said lever, and adjustable lever connections carried on said

frame and operatively connected to the upper end of said rod.

5. In a harrow, a frame having a plurality of openings therein, a guide block having an opening therein registering with one of said openings and a lug thereon protruding through the other of said openings, said guide block having a roughened outer face, a slotted stop member having a roughened face engageable with the roughened face of said block and adjustable with respect thereto, a slotted bracket member movable longitudinally of said block and engageable with said stop, and a bolt extending through the registering openings in said frame and block and the slots in said stop and bracket clamping said stop to said block and said block to said frame.

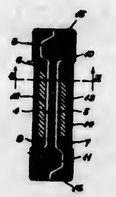
[Claims 6 to 12 not printed in the Gazette.]

1,221,231. SURGICAL SWAB. WILLIAM H. SHARP, Chicago, Ill., assignor to Bauer & Black, Chicago, Ill., a Corporation of Illinois. Filed May 3, 1916. Serial No. 95,014. (Cl. 128—28.)



A surgical swab comprising a friable liquid container, a pad inclosing said container, and a wrapping of textile fabric surrounding said pad and extending beyond the pad and folded upon itself to form an elongated handle, said handle being impregnated with a liquid resistant material to prevent absorption of the liquid thereby when the container is broken.

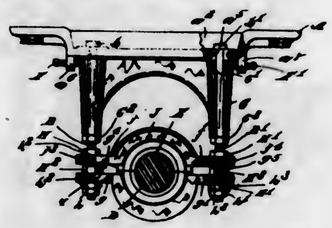
1,221,232. AUTOMATIC CUT-OUT. JOSEPH M. SHERMAN, Seattle, Wash. Filed May 1, 1916. Serial No. 94,829. (Cl. 175—276.)



1. In a cut-out of the class described, the combination with an inclosing case made of material that is a non-conductor of electricity and having end walls of metal, of two plates of electrical insulating material transversely disposed within said inclosing case and spaced from each other, said plates being provided each with two correspondingly spaced holes extending therethrough; two pieces of metal wire disposed to extend between said plates in lines parallel with, and spaced from, each other with their opposite end portions projected through respective ones of the holes of the adjacent one of said plates, one end portion of one of said wires being extended to and connected with the adjacent one of said end walls and one end portion of the other of said wires being extended to and connected with the other of said end walls; and two separated masses of metal disposed within said inclosing case between said plates, each of said masses being in metallic connection with a different one of said wires; and the metal of said masses being of a character to be fusible at a low temperature.

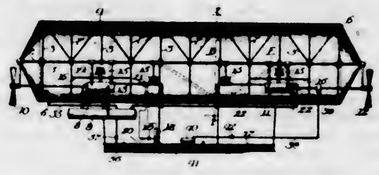
2. An electric cut-out of the class described which embodies an inclosing case made of non-conducting material and having metal end walls; and two separated masses of metal disposed within said inclosing case, one of said masses being electrically connected with one of said metal end walls while the other of said masses is electrically connected to the other of said end walls, the metal of said masses being fusible at a low temperature.

1,221,233. ADJUSTABLE SHAFT-HANGER. CARBY SHERWOOD, Lowell, Mass. Filed July 1, 1915. Serial No. 37,611. (Cl. 64—14.)



The combination of a bolt, a yoke slotted to receive said bolt and having a counterbore at the inner end of said slot, and a nut turning on said bolt and having a concentric, hollow cylindrical projection, to enter and fit said counterbore and to prevent a lateral movement of said yoke on said bolt in the direction of said slot.

1,221,234. AERIAL LOCOMOTION. CHARLES W. SIRCH, Los Angeles, Cal. Filed Sept. 14, 1908, Serial No. 452,983. Renewed June 9, 1916. Serial No. 102,801. (Cl. 244—6.)



1. In combination a central longitudinal compression member, a plurality of radial compression members extending from said central member, external tension members secured to the ends of said central member and passing over said radial members to form a rigid hollow truss or frame work and a gas containing envelop secured on the outside of said frame work.

2. In combination a central longitudinal compression member, said member comprising a metal tube, a plurality of radial compression members extending symmetrically from said central member, external tension members secured to the ends of said central member and passing over said radial members to form a rigid truss or frame work and a gas containing envelop secured to and substantially co-extensive with said frame work, said envelop inclosing said frame work.

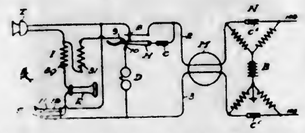
3. In combination a central longitudinal compression member, said member comprising a metal tube, a plurality of radial compression members extending substantially symmetrically from said central member, external tension members secured to the ends of said central member and passing over said radial members to form a rigid truss or frame work, a gas containing envelop secured to said frame work, said envelop having substantially pure air therein and heat radiating means within said envelop, said means supported by said tubular member for heating said air.

4. In combination a central, longitudinal tubular compression member, a plurality of longitudinal tension members secured to the ends of said compression member, a plurality of radially disposed struts between said tension and said compression members and an envelop inclosing the frame formed by said members.

5. In combination a central, tubular compression member, radial struts disposed about said member, tension members passing from end to end of said compression member and passing over said struts, a gas inclosing envelop secured to and substantially inclosing said frame, and a plurality of transverse partitions in said envelop, forming compartments.

[Claims 6 to 21 not printed in the Gazette.]

1,221,235. SUBSCRIBER'S TELEPHONE - CIRCUIT. ARTHUR BESSEY SMITH, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed July 19, 1915. Serial No. 40,716. (Cl. 179—81.)



1. In a telephone system, a subscriber's telephone station, a line for said station, a direct current bridge across said line at said station, said bridge containing a receiver and a transmitter, a reactive circuit for shunting said transmitter, a coil in said reactive circuit, a second coil inductively related thereto in the bridge, a condenser in said reactive circuit, another bridge circuit for said line at said station, means for substituting one bridge for the other across the line and for changing the condenser from said reactive circuit to said other bridge.

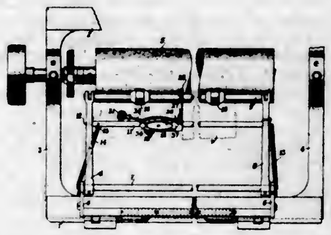
2. In a telephone system, a subscriber's telephone station, a line for said station, a direct current bridge across said line at said station, said bridge containing a receiver and a transmitter, a reactive circuit for shunting said transmitter, a coil in said reactive circuit, a second coil inductively related thereto in the bridge, a condenser in series with said first coil, another bridge circuit for said line at said station, means for substituting one bridge for the other across the line and for changing the condenser from said reactive circuit to said other bridge.

3. In a telephone system, a subscriber's telephone station, a line for said station, a direct current bridge across said line at said station, said bridge containing a receiver and a transmitter, a reactive circuit for shunting said transmitter, a coil in said reactive circuit, a second coil inductively related thereto in the bridge, a condenser in said reactive circuit, another bridge circuit for said line at said station, means for substituting one bridge for the other across the line and for changing the condenser from said reactive circuit to said other bridge, an automatic switch associated with said line, an impulse sender in series with said transmitter for operating the switch, and a source of current controlled through the medium of said switch for supplying said transmitter with talking current.

4. In a telephone system, a subscriber's telephone station, a line for said station, a direct current bridge across said line at said station, said bridge containing a receiver and a transmitter, a reactive circuit for shunting said transmitter, a coil in said reactive circuit, a second coil inductively related thereto in the bridge, a condenser in series with said first coil, another bridge circuit for said line at said station, means for substituting one bridge for the other across the line and for changing the condenser from said reactive circuit to said other bridge, an automatic switch associated with said line, an impulse sender in series with said transmitter for operating the switch, and a source of current controlled through the medium of said switch for supplying said transmitter with talking current.

1,221,236. TYPE-WRITING MACHINE. ARTHUR W. SMITH, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Nov. 24, 1915. Serial No. 63,234. (Cl. 197—142.)

1. In a typewriting machine, the combination of a platen, a denominational side gage, mechanism which when operated causes a denominational feeding movement of said gage lengthwise of the platen, and an automatically operating holding device which holds the side gage in set position after it has been fed.



2. In a typewriting machine, the combination of a platen, and a side gage contrivance adjustable as a whole lengthwise of the platen, said contrivance comprising a side gage proper and key operated means for feeding said side gage proper step-by-step through predetermined regular distances lengthwise of the platen without changing the location of said contrivance as a whole.

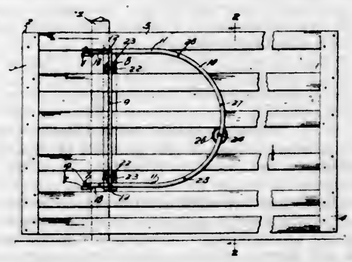
3. In a typewriting machine, the combination of a platen, and a denominational side gage contrivance settable at desired points along the platen, said contrivance comprising a key controlled side gage adjustable in a plurality of different positions for each point at which the contrivance as a whole may be set.

4. In a typewriting machine, the combination of a platen, a side gage adjustable step by step by the operation of a single key through regular predetermined distances lengthwise of the platen, and devices comprising an automatically operating detent for holding the side gage in adjusted positions.

5. In a typewriting machine, the combination of a platen, and a denominational side gage contrivance comprising a single side gage movable step by step through predetermined distances along the platen through the operation of a finger piece and detent devices for said gage.

[Claims 6 to 35 not printed in the Gazette.]

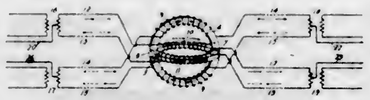
1,221,237. GATE-HANGER. CHARLES D. SMITH, Paris, Ill., assignor of one-half to Charles P. Brown, Paris, Ill. Filed May 24, 1916. Serial No. 99,625. (Cl. 39—83.)



1. In a device of the class described, a support; a frame hinged to the support; a roller; means for mounting the roller on the frame; and a gate mounted to swing with the frame on the support and including a bar mounted to slide on the roller; the frame being symmetrical with respect to a horizontal axle to provide for an inversion for an end for end reversal of the frame, thereby to suspend the gate for left hand swinging movement or for right hand swinging movement, and said means being duplicated to permit the roller to be disposed beneath the bar when the frame is inverted and turned end for end.

2. In a device of the class described, a frame comprising U-shaped parts including upper and lower arms, the arms of one part being longer than the arms of the other part; means for connecting the parts of the frame; a connection uniting the arms of one part; a gate slidable between the parts of the frame and comprising bars; a roller journaled on the outer end of the frame and engaged beneath one bar; a roller journaled on the connection and engaged beneath another bar; a roller journaled on the connection and engaged above a third bar; and a support to which the longer arms are terminally pivoted.

1,221,238. PHANTOM-CIRCUIT LOADING. JAMES BUCKNER SPEED, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Mar. 31, 1916. Serial No. 88,072. (Cl. 178—46.)



1. A core for inductance coils comprising two toroidal members intersecting on a common diameter.

2. A magnetic core for inductance coils comprising two toroidal members intersecting at right angles on a common diameter.

3. A magnetic core for inductance coils comprising four semi-toroidal sections meeting at their diametrically opposed extremities and spaced ninety degrees apart.

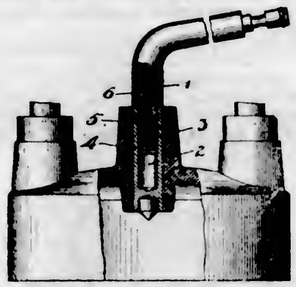
4. A loading unit adapted for use with two physical circuits and a derived phantom circuit comprising four semi-toroidal core sections meeting on a common diameter, and a winding on each of said sections, said windings being respectively adapted for inclusion in each of the conductors of said physical circuits.

5. A loading unit adapted for use with two physical circuits and a derived phantom circuit comprising two toroidal core members intersecting at right angles on a common diameter and forming four semi-toroidal core sections, a winding on each of said sections, the windings of two opposite core sections being respectively adapted for inclusion in the line conductors of one of said physical circuits, and the windings on the other two opposite core sections being respectively adapted for inclusion in the two line conductors of the other physical circuit, said windings being so disposed that when phantom circuit currents flow therein, the polarities developed in one toroid at the intersection of the two toroids are opposed to the polarities developed in the other toroid at said points of intersection.

1,221,239. ELECTRICAL CONNECTOR. CHARLES E. STAHL and JOHN F. CAVANAGH, Meriden, Conn., assignors to Connecticut Telephone & Electric Company, Inc., Meriden, Conn., a Corporation of Connecticut. Filed June 20, 1916. Serial No. 104,659. (Cl. 173—322.)

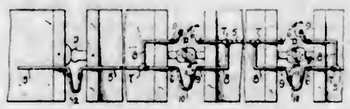
1. An electrical connector comprising a tubular socket member, a plug member arranged to slide freely into the bore of the socket member, a collapsible spring ring carried by and surrounding the plug member and arranged to frictionally engage the wall of the bore of the socket member to frictionally hold said parts in operative position, said plug having an annular groove, said spring ring being mounted at all times therein, a portion only of said ring projecting above the surface of said plug member.

2. An electrical connector comprising a tubular socket member, a plug member arranged to slide freely into the bore of the socket member, a collapsible spring ring carried by and surrounding the plug member and arranged to frictionally engage the wall of the bore of the socket member to frictionally hold said parts in operative position, and a sleeve-like extension at the rear end of the plug, said plug having an annular groove, said spring ring being mounted at all times therein, a portion only of said ring projecting above the surface of said plug member.



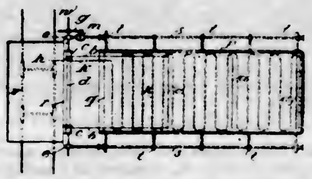
3. In an electrical connector for insulated wire, a plug member having a cylindrical inner end of relatively reduced and substantially uniform diameter forming a sleeve to project between a wire and its insulation, said plug having a bore extending longitudinally through said sleeve and into the outer end of the plug, the side wall of said outer end beyond the sleeve portion being relatively enlarged with respect to the sleeve and reduced in thickness intermediate of said enlarged portion to relatively weaken the same whereby the outer end of said plug at said reduced portion may be deformed inwardly to grip on said wire.

1,221,240. AIR-LINE-PIPE CONNECTION. LEWIS STEIDLE, Mauch Chunk, Pa. Filed Apr. 19, 1916. Serial No. 92,234. (Cl. 137—89.)



The combination with the pipe sections of an air brake system for railway trains, said pipe sections being disposed upon relatively opposite sides of the draw bars between adjacent coaches, an auxiliary pipe connected to the air supply pipe in spaced relation to its end and having an angularly disposed portion disposed in parallel relation to said supply pipe and projecting beyond the end of the coach and in line with the pipe section of the opposed coach, the projected portion of the auxiliary pipe being laterally and outwardly disposed, and a single flexible hose for interchangeable connection to either of the supply pipe sections on adjacent coaches and to the auxiliary pipe on the opposed coach.

1,221,241. METHOD OF DISINTEGRATING AND LADING HARD PITCH OR THE LIKE MATERIAL. CARL STILL, Recklinghausen, Germany. Filed Sept. 22, 1915. Serial No. 52,102. (Cl. 83—52.)



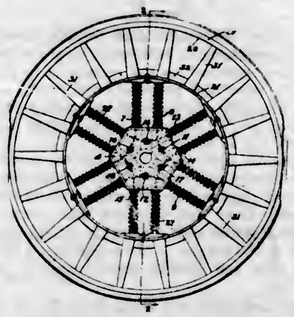
1. The method of disintegrating and lading hard pitch and the like material which consists in laying a chain in a meandering or serpentine line along the bottom of a container, inserting one or more scrapers into the container transversely to its longitudinal extent, running the pitch into the container, allowing it to set, tearing out the chain by mechanical means, whereby the pitch is broken up into pieces, and drawing the aforesaid scrapers by mechanical means toward the discharge end of the container, whereby the broken up pieces are discharged from the container into transports.

2. The method of disintegrating and lading hard pitch or the like material which consists in laying a chain in a meandering or serpentine line upon the bottom of a container, running the pitch into the container, allowing it to set, tearing out the chain by mechanical means, inserting one or more scrapers into the container transversely to its longitudinal extent, and drawing by mechanical means the scrapers toward the discharge end of the container for discharging the disintegrated pieces of pitch into transports.

3. The method of disintegrating hard pitch and the like material, which consists in placing a chain or the like in serpentine fashion over the bottom of a container in such manner that one end of it protrudes from said container, allowing the pitch to run into said container and set or harden, and tearing said chain from said pitch in a direction substantially in the plane of the bottom of said container, thereby disintegrating said pitch.

4. The method of disintegrating hard pitch and the like material, which consists in placing a chain or the like in serpentine fashion over the bottom of a container in such manner that one end of it protrudes from said container, allowing the pitch to run into said container and set or harden, coupling the protruding end of said chain with mechanical means whereby said chain is torn from said pitch in a direction substantially in the plane of the bottom of said container, thereby disintegrating said pitch.

1,221,242. WHEEL. ALBERT P. STOCKER, Struthers, Ohio. Filed June 8, 1914. Serial No. 843,663. (Cl. 152—39.)



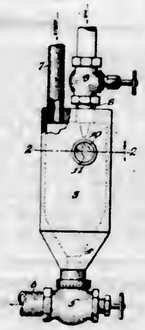
1. A wheel comprising a rim having the periphery thereof carrying a spoke structure, equally spaced thimbles secured to the inner sides of said rim and provided with sets of guides, a hexagon-shaped casing yieldably supported concentrically of said rim, flat springs extending from said casing and having the ends therof extending in the guides of said thimbles, coiled compression springs encircling the ends of said flat springs and said guides and interposed between said thimbles and the walls of said casing, side plates carried by said casing, and means for simultaneously securing said side plates to said casing, and said flat springs within the casing.

2. A wheel comprising a polygonal hub, two sets of flat spring spokes, each flat spring forming two of such spokes and being bowed with the bowed portion fixedly carried by and movable with the hub, said spokes projecting perpendicularly to the angular faces of the hub, each hub face having a pair of spaced-apart spokes projecting therefrom, the spokes of a pair being of the same set, a rim positioned on the projecting portions of the spokes, and compression springs encircling the flat springs and disposed between the rim and hub adapted to cushion relative movements of hub and rim on lines corresponding to the direction of length of the projecting portions of the spokes.

3. A wheel comprising a polygonal hub, two sets of flat spring spokes, each flat spring forming two of such spokes and being bowed with the bowed portion fixedly carried by and movable with the hub, said spokes projecting perpendicularly to the angular faces of the hub, the spokes of one set alternating with those of the other set, the spokes projecting from a single hub face being of the same set, a rim positioned on the projecting portions of the spokes, and compression members between the rim and hub adapted to cushion relative movements of hub and rim on lines corresponding to the direction of length of the projecting portions of the spokes.

4. A wheel comprising a hub, two sets of bowed springs having their intermediate portions secured to the hub, a rim, thimbles on the rim and loosely engaged by the ends of the springs, and a single bolt for removably securing two adjacent thimbles to the rim.

1,221,243. DOWN-DROP SIGHT-FEED LUBRICATOR. HERMAN W. STRECKER, St. Louis, Mo. Filed Nov. 12, 1915. Serial No. 61,036. (Cl. 184—96.)



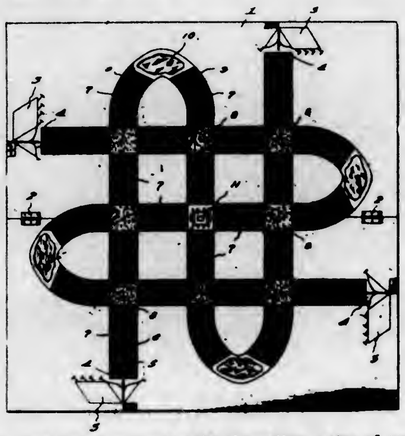
1. A lubricator for supplying heated oil to steam engine cylinders comprising a cylindrical steam chamber having a flat top and a conical bottom, a steam inlet at the top of said chamber, a valve governed oil inlet in the top of the steam chamber to allow the oil to drip therein, an opening formed in the steam chamber for observing the rate of flow of oil, and a valve governed outlet attached to the conical body of the lubricator for regulating the flow of oil to the cylinders, substantially as specified.

2. A lubricator for supplying steam heated oil to steam engine cylinders and the like, comprising a cylindrical steam chamber having a flat top and a truncated cone shaped bottom, a dry steam inlet at the top of said chamber, a valve controlled oil inlet for allowing a heavy oil to drip slowly therethrough in the top of the dry steam chamber, transparent opening formed in the dry steam chamber for observing the rate of drip of oil, and a valve governed outlet attached to the bottom of the lubricator for regulating the flow of heated oil to the cylinder under steam pressure, substantially as specified.

3. A lubricator for supplying heated oil to steam engine cylinders by means of live steam pressure comprising a cylindrical steam chamber having a flat top and a conical bottom, a steam inlet at the top of said steam chamber, a valve controlled inlet for allowing a heavy oil to slowly percolate into the steam chamber, a circular opening covered with transparent material for observing the rate of percolation, a pipe leading from the bottom of

the steam chamber to the engine cylinders and a valve located in the pipe for governing the flow of the heated oil, substantially as specified.

1,221,244. GAME APPARATUS. PETER J. SWARTWOOD, Mountaintop, Pa. Filed Feb. 13, 1915. Serial No. 7,989. (Cl. 46—63.)



A game board of rectangular formation, pairs of tents arranged adjacent each corner of the board, a pair of S-shaped lines of march located on the board and arranged to intercross each other and having their ends terminating adjacent the tents, a fort located at a point central of the ends of each of the S-shaped lines of march, rectangular fields of contrasting colors located at points of intercrossing of the S-shaped lines of march, and each S-shaped line of march being divided into four lines of march to receive game pieces comprising soldiers, and a chance controlled device to indicate the movement of the soldiers.

1,221,245. AUTOMOBILE-RIM PROTECTOR. EDWARD A. TORRANCE, Evansville, Ind. Filed Nov. 18, 1916. Serial No. 132,095. (Cl. 152—23.)



1. In an automobile wheel rim protector, a tread adapted to be fastened around the rim, means for connecting the end portions of the tread together, and cross braces and attaching devices carried at intervals by the tread which are provided at their end portions with hooks adapted to engage the rim.

2. In an automobile wheel rim protector, a tread adapted to be fastened around the rim, means for connecting the end portions of the tread together, and cross braces and attaching devices carried at intervals by the tread which are provided with hooks at their respective ends, one of which is adapted to engage the inner flange of the rim and the other the outer flange thereof.

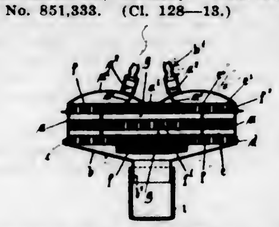
3. In an automobile wheel rim protector, the combination with a tread adapted to encircle the rim, of means for securing the end portions of said tread comprising plates arranged cross-wise of and carried by the respective end portions of the tread, a hook or catch carried by one of said plates and adapted to detachably engage the other of them, hinged bails carried by the other end portions of the plates, and a releasable catch or connector jointed to one of the bails and adapted to engage the other of them.

4. In an automobile wheel rim protector, the combination with a tread adapted to encircle the rim, of means for securing the end portions of said tread comprising plates arranged cross-wise of and carried by the respective end portions of the tread, a hook or catch carried by one of said plates and adapted to detachably engage the other of them, hinged bails carried by the other end portions of the plates, a releasable catch or connector jointed to one of the bails and adapted to engage the other of them, said connector having a hinged plate, and a flange and catch for locking said plate in closed position.

5. In an automobile wheel rim protector, the combination with a tread adapted to encircle the rim, of means for securing the end portions of said tread comprising plates arranged cross-wise of and carried by the respective end portions of the tread, means for detachably securing the plates together at one end, loops on the other ends of said plates, a releasable connector engaged with one of said loops, and a plate hinged to said connector and provided with a lip adapted for engagement by the remaining loop whereby the pressure thereof keeps the plate closed.

[Claim 6 not printed in the Gazette.]

1,221,246. RESPIRATOR. CARL TRAVERS, Frankenhois, near Mittelbexbach, Germany. Filed July 16, 1914. Serial No. 851,333. (Cl. 128—18.)



1. A respirator with short path for the inrushing and exhaled air comprising a receptacle, a plurality of parallel partitions tight within the receptacle in close proximity to each other and provided with rough, moist surfaces and a plurality of staggered openings, a fabric filter at the bottom of the receptacle, and nostril nipples arranged at the top of the same.

2. A respirator with short path for the inrushing and exhaled air comprising a receptacle, a plurality of parallel partitions tight within the receptacle in close proximity to each other and provided with fabric covered rough, moist surfaces and a plurality of staggered openings, a neck at the bottom of the receptacle, a fabric filter on the said neck, and movable nostril pieces at the top of the receptacle.

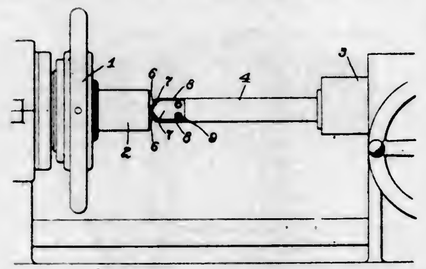
3. A respirator with one short path for both the inrushing and exhaled air comprising a receptacle, a plurality of parallel partitions tight within the receptacle in close proximity to each other and provided with rough, moist surfaces and a plurality of staggered openings, a fabric filter at the bottom of the receptacle, and nostril nipples arranged at the top of the same.

4. A respirator with one short path for both the inrushing and exhaled air comprising a receptacle, a plurality of parallel partitions tight within the receptacle in close proximity to each other and provided with fabric covered, rough, moist surfaces and a plurality of staggered openings a neck at the bottom of the receptacle, a fabric filter on the said neck, and movable nostril nipples arranged at the top of the receptacle.

5. A respirator with short path for the inrushing and exhaled air comprising a receptacle curved to fit the upper lip of the user, a hinged bottom portion on the receptacle, an air inlet thereon, a removable frame tight within the receptacle and composed of a plurality of partitions in close proximity to each other and provided with rough, moist surfaces and a plurality of small staggered openings thus forcing the inrushing air to impinge upon the moist surfaces of the frame, and two nostril nipples with flexible connections at the top of the receptacle for inhaling the purified and exhaling the vitiated air.

[Claim 6 not printed in the Gazette.]

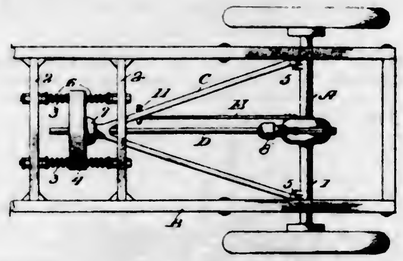
1,221,247. DRILLING, REAMING, AND CENTERING MACHINE. SAMUEL W. TRAYLOR, Allentown, Pa. Filed Nov. 27, 1915. Serial No. 63,839. (Cl. 77—65.)



1. The combined drilling and reaming tool consisting of a flat piece having a V-shaped end providing converging inclined drilling or cutting edges, said piece in rear of said drilling or cutting edges having inclined side edges diverging from each other, said inclined side edges merging at a low angle into parallel edges, the said low angle diverging inclined edges and the parallel edges serving as reaming means, substantially as described.

2. A combined drilling and reaming tool having inclined cutting edges meeting at a point at the longitudinal axial line of the tool, parallel finishing reaming edges in rear of the inclined cutting edges and lying in planes slightly out beyond points of termination of the inclined cutting edges and rough reaming edges lying intermediate the parallel reaming edges and inclined cutting edges, said intermediate roughing edges being only slightly inclined in respect to the parallel reaming edges, substantially as described.

1,221,248. VEHICLE SPRING SUSPENSION. ROLLAND S. TROTT, Denver, Colo. Filed Aug. 1, 1914. Serial No. 854,572. (Cl. 21—105.)



1. The combination with a vehicle frame and axle-housing, of load springs connected between said parts to permit movement of the axle-housing in the direction of the longitudinal extent of the frame, means extending from the axle-housing and connected with the frame to permit said movement and to hold the axle-housing against twisting or side movement, the connection between the axle-housing and load springs formed to permit turning movement of the axle-housing and resiliently connected with said first means to resiliently oppose said turning movement and to restore the parts to normal when the turning strain is released.

2. The combination with a vehicle frame and axle-housing, of load springs connected between said parts to permit movement of the axle-housing in the direction of the longitudinal extent of the frame, means connected between the axle-housing and frame to permit said movement of the axle-housing and to preclude twisting or side movement, the connection between the axle-housing and load springs formed to permit turning movement of the axle-housing, a and attaching devices carried at intervals by the tread torsion rod secured to the axle housing and resiliently connected with said means for holding the axle-housing against twisting movement to oppose the turning movement and to restore the parts to normal when the turning strain is removed.

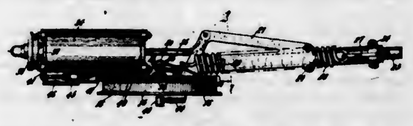
3. The combination with a vehicle frame and axle-housing, of load springs connected between said parts to permit movement of the axle-housing in the direction of the longitudinal extent of the frame, a reach connected between the axle-housing and frame to permit said movement and acting to preclude twisting or side movement of the axle-housing, the connection between the axle-housing and load springs formed to permit turning movement of the axle-housing, and means connected between the axle housing and the reach to resiliently oppose said turning movement and to restore the parts to their normal position when the turning strain is removed.

4. The combination with a vehicle frame and axle-housing, of load springs connected between said parts to permit movement of the axle-housing in the direction of the longitudinal extent of the frame, a reach connected between the axle-housing and frame to permit said movement and acting to preclude side or twisting movement of the axle-housing, the axle-housing mounted with respect to the springs and reach to have turning movement, and a torsion rod connected between the reach and the axle-housing to resiliently oppose said turning movement and to restore the axle-housing to its normal position when the turning strain is removed.

5. The combination with a vehicle frame and axle-housing, of load-springs connected between said parts to permit movement of the axle-housing in the direction of the longitudinal extent of the frame, a reach connected between the axle-housing and frame to permit said movement and to preclude side or twisting movement of the axle-housing, said axle-housing connected to have turning movement with respect to the load springs and the reach structure, a torsion rod secured to the axle-housing and a resilient connection formed between the free end of the torsion rod and the reach to oppose the turning movement of the axle-housing and to restore the parts to normal when the turning strain is released.

[Claims 6 to 10 not printed in the Gazette.]

1,221,249. TROLLEY. FRANK A. WASSON, Milwaukee, Wis., assignor to Wasson Engineering and Supply Company, Santa Rosa, Cal., a Corporation of California. Filed Aug. 11, 1915. Serial No. 44,850. (Cl. 191—90.)



1. In a trolley, a stationary base, a rotary base mounted thereon, a spring actuated trolley arm holder pivotally mounted on the rotary base, and pneumatic means actuated by a sudden upward movement of the trolley arm holder, as when the trolley leaves the wire, for preventing the rotary movements of the rotary base.

2. In a trolley, a rotary base, a suitably actuated trolley arm pivotally mounted on the rotary base, and fluid pressure means actuated by a sudden movement of the trolley arm, as upon the trolley leaving the wire, for preventing the rotary movements of the base.

3. In a trolley, a stationary base, a rotary base mounted thereon, a suitably actuated trolley arm pivotally mounted

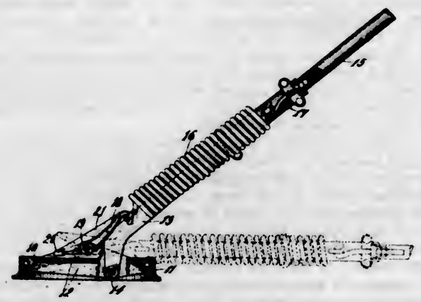
on the rotary base, and fluid pressure operated means carried by the rotary base for engaging the stationary base to prevent movements of the rotary base and actuated by a sudden movement of the trolley arm, as upon the trolley leaving the wire.

4. In a trolley, a stationary base, a rotary base mounted thereon, a trolley arm pivotally mounted on the rotary base, a brake cylinder mounted on the rotary base, a plunger working therein and adapted to engage the stationary base, and means actuated by a sudden movement of the trolley arm, as upon the trolley leaving the wire, for supplying compressed air to the brake cylinder to effect the engagement of the plunger with the stationary base.

5. In a trolley, a stationary base, a rotary base mounted thereon, a spring actuated trolley arm pivotally mounted on the rotary base, an air cylinder carried by the rotary base, a piston working therein and having connection with the trolley arm, a brake cylinder communicating with the air cylinder, and a plunger working in the brake cylinder and adapted to engage the stationary base for locking the rotary base upon the occurrence of a sudden movement of the trolley arm, as upon the trolley leaving the wire.

[Claims 6 to 10 not printed in the Gazette.]

1,221,250. TROLLEY-POLE. FRANK A. WASSON, Milwaukee, Wis., assignor to Wasson Engineering & Supply Company, Santa Rosa, Cal., a Corporation of California. Filed Mar. 25, 1916. Serial No. 86,538. (Cl. 191—68.)



1. A trolley pole having a suitable pivotal mounting, a swinging arm having a stop for limiting its movements, and a spring connecting the trolley pole with the arm, said stop serving to limit the movements of the arm beyond the swing thereof due to the movements of the trolley when engaged with the trolley wire.

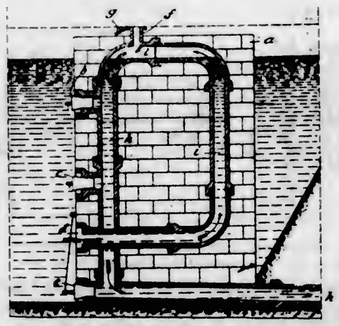
2. In a trolley, a base, a trolley pole pivotally mounted thereon, an arm also pivotally mounted on the base, a spring connecting the trolley pole with the arm, and a stop on the arm engaging the base to limit the swing of the arm.

3. In a trolley, a base, a trolley pole pivotally mounted on the base, a hook arm also pivotally mounted on the base, a coil spring connected to the trolley pole and engaged with the hook of the hook arm, and a stop lug on the hook arm for engaging the base and limiting the movements of the hook arm.

4. A trolley, comprising a base and a trolley pole pivotally mounted thereon, an arm also pivotally mounted on the base, a spring connected with the trolley pole and with the arm, and a stop for limiting the swinging movements of the arm when the trolley pole passes beyond its position for engagement with the trolley wire.

5. A trolley, comprising a suitably mounted rotatable base having an opening therein with vertical flanges at its edges extending above and below the level of the base, a trolley pole holder fitting between said flanges and pivotally connected therewith at a point below the level of the base, hooks on the trolley pole holder, springs connected with said hooks, hook arms engaged with the springs and pivotally mounted on the upstanding flanges above the level of the base, a stop lug projecting from each of the hook arms and adapted to engage the base when the trolley pole holder moves above its normal position, and a trolley pole mounted in the trolley pole holder.

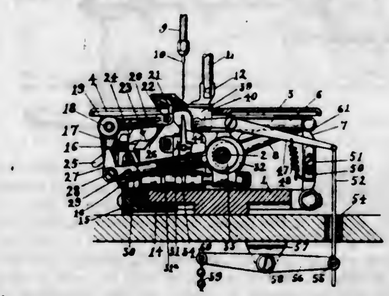
1,221,251. AUTOMATICALLY-WORKING POND-DRAINER. ARTHUR WEINHOLD, Mackranstädt, near Leipzig, Germany. Filed Dec. 4, 1916. Serial No. 135,056. (Cl. 61—5.)



1. Automatically working pond-drainer consisting of solid masonry, a pipe of fire-brick in said masonry, having the form of a loop, an inlet opening in said pipe situated at the ground of the pond and a plurality of sockets one of said sockets being arranged at the uppermost part of the pipe, and a flap-valve being provided in said pipe being controlled by the rising water, and a flap at said uppermost socket being controlled by hand and closing said socket air-tight.

2. Automatically working pond-drainer consisting of solid masonry, a pipe of fire-brick in said masonry, having the form of a loop, an inlet opening in said pipe arranged at the ground of the pond and a plurality of sockets, said sockets being arranged at different levels of the pond in order to be able to drain off the water unto certain different levels, said sockets being provided with plugs closing the same, one of said sockets being arranged at the uppermost part of the pipe said socket emerging from the normal level of the water and being provided with a flap being controlled by hand and closing the socket air-tight, a flap-valve being provided within the pipe being controlled by the rising water, for the purpose described.

1,221,252. TRIMMING MECHANISM FOR SEWING-MACHINES. JOHN P. WEIS, Nyack, N. Y., assignor to Lucius N. Littauer, Gloversville, N. Y. Filed Jan. 30, 1914. Serial No. 815,370. (Cl. 112—6.)



1. In a sewing machine for forming medallions, the combination of stitching mechanism for stitching together a plurality of plies of material, and a cutter located in

proximity to the needle for cutting out only a portion of the under ply of material, whereby the upper ply will cover or fill in the cut out portion and form a medallion or insertion, the stitching mechanism and cutter being so arranged that the latter cuts the work previously stitched as the stitching operation proceeds.

2. In a sewing machine, the combination of stiching mechanism for stitching together a plurality of plies of material, and a cutter located in proximity to the needle for cutting out only a portion of the under ply of material subsequent to the stitching thereof whereby the upper ply will cover or fill in the cut out portion and form a medallion or insertion.

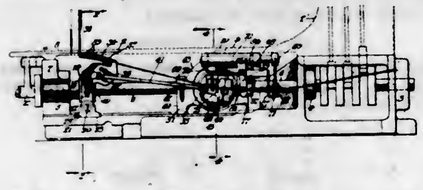
3. In a sewing machine, the combination of stitching mechanism including a needle for stitching together a plurality of plies of material, and a cutter located in the rear of the needle for cutting out only a portion of the under ply of material whereby the upper ply will cover or fill in the cut out portion and form a medallion or insertion.

4. In a sewing machine for forming medallions, the combination of stitching mechanism for stitching together a plurality of plies of material, and a cutter located in proximity to the needle for cutting out only from the body portion of the under ply of material to form an endless edge, whereby the upper ply will cover or fill in the cut out portion and form a medallion or insertion, the stitching mechanism and cutter being so arranged that the latter cuts the work previously stitched as the stitching operation proceeds.

5. In a sewing machine for forming medallions, the combination of stitching mechanism for stitching together a plurality of plies of material, a cutter located in proximity to the needle for cutting out only a portion of the under ply of material, whereby the upper ply will cover or fill in the cut out portion and form a medallion or insertion, the stitching mechanism and cutter being so arranged that the latter cuts the work previously stitched as the stitching operation proceeds, means for automatically actuating said trimming means, and means for throwing it into and out of operation.

[Claims 6 to 41 not printed in the Gazette.]

1,221,253. LOOPER MECHANISM FOR SEWING-MACHINES. JOHN P. WEIS, Nyack, N. Y., assignor to Lucius N. Littauer, Gloversville, N. Y. Filed July 13, 1915. Serial No. 39,535. (Cl. 112—5.)



1. In a sewing machine having a base provided with a slideway therein transversely thereof the combination of a driving shaft extending lengthwise of the arm of the machine, looper mechanism comprising a slidingly supported plate mounted in the slideway of the base, one or more loopers carried thereby, and means for shifting said plate transversely relatively to said shaft.

2. In a sewing machine, the combination of a driving shaft extending lengthwise of the arm of the machine, looper mechanism comprising a slidingly supported plate, one or more loopers carried thereby, means having a part thereof secured to the top side of said plate for shifting said plate transversely relatively to said shaft, and means for shifting said looper or loopers transversely relatively to the movement of said plate.

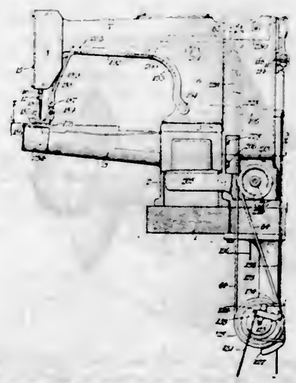
3. In a sewing machine, the combination of a driving shaft extending lengthwise of the arm of the machine, looper mechanism comprising a slidingly supported plate, one or more loopers carried thereby, said slide plate having secured to its upper side an upstanding, rigid bracket, means carried by said bracket for shifting said plate transversely relatively to said shaft, and means for shifting said looper or loopers transversely relatively to the movement of said plate, both of said shifting means having connection with the driving shaft.

4. In a sewing machine having a base provided with a slideway therein transversely thereof the combination of a driving shaft extending lengthwise of the arm of the machine, looper mechanism comprising a slidingly supported plate mounted in the slideway of the base, one or more loopers carried thereby, said slide plate having secured to its upper side an upstanding rigid bracket, means carried by said bracket for shifting said plate transversely relatively to said shaft, means for shifting said looper or loopers transversely relatively to the movement of said plate, and means for adjusting said loopers relatively to the plate.

5. In a sewing machine, the combination of a driving shaft extending lengthwise of the arm of the machine, looper mechanism comprising a slidingly supported plate, one or more loopers carried thereby, said plate having secured to the top side thereof an upstanding rigid fork, means located in said fork for shifting said plate transversely relatively to said shaft, means for shifting said looper or loopers transversely relatively to the movement of said plate, both of said shifting means having connection with the driving shaft, and means for adjusting said loopers relatively to the plate.

[Claims 6 to 55 not printed in the Gazette.]

1,221,254. SEWING-MACHINE. JOHN P. WEIS, Nyack, N. Y., assignor to Lucius N. Littauer, Gloversville, N. Y. Filed Dec. 2, 1915. Serial No. 64,630. (Cl. 112—29.)



1. In a sewing machine, the combination of a driving shaft, means for transmitting power thereto and including means for stopping and starting said shaft and comprising clutch mechanism including a driven clutch member connected with said shaft, a swinging stop coöperating with said driven clutch member to disengage the clutch mechanism and prevent further movement of the driven clutch member, and means for shifting said stop into and out of its operative position.

2. In a sewing machine, the combination of a driving shaft, means for transmitting power thereto and including means for stopping and starting said shaft and comprising clutch mechanism including a driven clutch member connected with said shaft, a swinging stop coöperating with a part of said clutch mechanism to disengage the same and prevent further movement of the driven clutch member, means for shifting said stop into and out of its operative position, and a buffer coöperating with said stop at a predetermined time.

3. In a sewing machine, the combination of a driving shaft, means for transmitting power thereto and including means for stopping and starting said shaft and comprising clutch mechanism connected with said shaft, means cooperating with a part of said clutch mechanism to disengage the same, means for shifting said last means into and out of its operative position, and means automatically op-

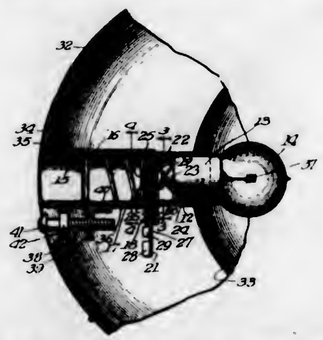
erative to hold the disengaging means in a predetermined position and also automatically operative to release said disengaging means.

4. In a sewing machine, the combination of a driving shaft, means for transmitting power thereto and including means for stopping and starting said shaft and comprising clutch mechanism connected with said shaft, a swinging stop coöperating with a part of said clutch mechanism to disengage the same, means for shifting said stop into and out of its operative position, a presser foot, means connected with said swinging stop for automatically operating said presser foot and automatically operative means for holding said stop in a predetermined position.

5. In a sewing machine, the combination of a driving shaft, means for transmitting power thereto and including means for stopping and starting said shaft and comprising clutch mechanism connected with said shaft, a swinging stop coöperating with a part of said clutch mechanism to disengage the same, means for shifting said stop into and out of its operative position, a presser foot, means connected with said swinging stop for automatically operating said presser foot, and independent means for operating said presser foot.

[Claims 6 to 85 not printed in the Gazette.]

1,221,255. CONNECTOR-SOCKET FOR ELECTRIC LAMPS OR THE LIKE. RICHARD H. WELLES, Kenosha, Wis., assignor to The Badger Brass Mfg. Co., Kenosha, Wis., a Corporation of Wisconsin. Filed May 19, 1916. Serial No. 98,498. (Cl. 173—328.)



1. In a socket of the class described, the combination of a tubular shell having an aperture in its side and intermediate its ends, the front end of said shell being arranged to receive an Ediswan base, a plate of insulating material transversely arranged in and slidable in said shell, said plate having an integral extension projecting through said aperture to prevent angular movement of said plate, a contact carried by said plate for engaging said base, a spring in said shell behind said plate for forcing said contact into engagement with said base, and a connecting clip extending from said contact outwardly through said aperture and locked against angular movement with reference to said plate.

2. In a socket of the class described, the combination of a tubular shell provided at its front end with means for locking a base inserted in said socket, said shell having intermediate its ends a side aperture, a plate of insulating material arranged transversely of and slidable in said shell, a contact carried by said plate for engaging said base, a coil spring in the rear of said shell for forcing said contact toward said base, insulating means between said spring and said contact, and an electrical connecting clip extending through said aperture into said shell, and permanently united to said contact, said plate, contact, and clip constituting an integral structure.

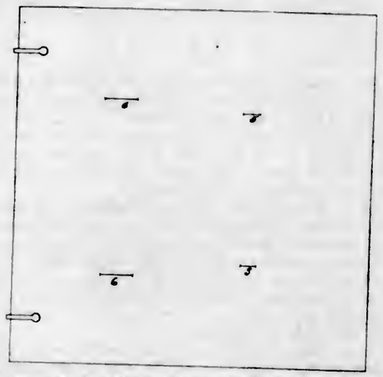
3. In a socket of the class described, the combination of a tubular shell provided at its front end with bayonet slots for locking an Ediswan base inserted in said socket, said shell having intermediate its ends an aperture in its side, a plate of insulating material arranged transversely in said shell, substantially filling the cross-section of said shell and having an integral extension projecting through said aperture, a contact carried by said plate for engaging said base, a coil spring of comparatively large diameter substantially filling the cross-section of said shell at the rear of said plate, having its rear end positioned in said shell and having its front end engaging said plate to force said contact into engagement with said base, and a connecting clip extending outwardly from said contact through said aperture and locked to said plate against relative angular movement.

4. In a socket of the class described, the combination of a shell having bayonet slots at its front end and a longitudinal slot in its side intermediate its ends, the rear end of said tube being flanged inwardly, an Ediswan base at the front end of said shell, a pair of plates of insulating material transversely disposed in said shell, one of said plates substantially filling the cross-section of said shell, and both of said plates having integral extensions projecting outwardly through said slot, a contact rivet carried centrally by said plates and uniting the same together, a coil compression spring of comparatively large diameter in the rear end of said shell, its external diameter being sufficient to substantially fill the interior of said shell, the rear end of said spring being positioned by said flange, and its front end engaging one of said plates to force said contact toward said base, and a connector interposed between said plates extending outwardly from said contact through said slot and locked to said plates to prevent relative transverse angular movement of said plates and said connector.

5. In a socket of the class described, the combination of a shell having bayonet slots at its front end and a longitudinal slot in its side intermediate its ends, an Ediswan base in the front end of said shell, a front plate of insulating material transversely disposed in said shell, slidable therein, and having an integral extension projecting outwardly through said slot, a rear insulating plate, a spring in the rear end of said shell engaging said rear plate and tending to force the same toward the base, an electrical connecting clip interposed between said plates and having an integral extension extending through said aperture, and a contact rivet extending through said first plate and said connecting clip and uniting the same permanently together and adapted to engage said base.

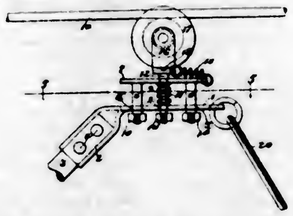
[Claim 6 not printed in the Gazette.]

1,221,256. HORSE-BLANKET. FREDUS H. WILCOX, North Bangor, N. Y. Filed Oct. 26, 1916. Serial No. 127,853. (Cl. 54—79.)



An improved horse blanket provided with two slits near the front end for the passage of the ends of the thills and with two slits a little farther back through which the hold-back straps may pass.

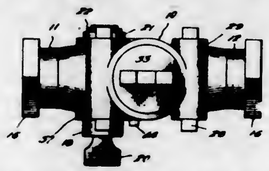
1,221,257. TROLLEY-HARP. ROBERT WILLIAMS, St. Louis, Mo., assignor of one-fourth to Charles Mathes, St. Louis, Mo. Filed Nov. 6, 1916. Serial No. 129,863. (Cl. 64—68.)



1. In a trolley-harp, a pair of superposed plates, the lower plate being provided transversely with a plurality of apertures, posts depending from the upper plate, said posts slidably fitting in the apertures of the lower plate, means on said posts beneath the lower plate for loosely securing said plates together, a spring interposed between said plates for yieldingly maintaining the same in spaced relation, said spring being coiled on one of the posts, a trolley-wheel supporting-member pivoted for rotation upon the upper plate, and springs positioned above the upper plate and engaging the upper plate and said supporting-member for yieldingly holding the supporting-member in normal position relatively to both the plates.

2. In a trolley-harp, a pair of superposed plates, the lower plate being provided transversely with a plurality of apertures, a socket-extension on the lower plate, said extension being adapted for engagement with a trolley-pole, posts depending from the upper plate, said posts slidably fitting in the apertures of the lower plate, nuts threaded on said posts beneath the lower plate for loosely securing the plates together, a coiled spring interposed between the plates for yieldingly maintaining the plates in spaced relation, said spring being coiled on one of the posts, a trolley-wheel supporting-member pivoted for rotary movement upon the upper plate, said supporting-member comprising a base-wall reinforced at its ends, and diverging coiled springs positioned above the upper plate and engaging the upper plate and the reinforced ends of the supporting-member for yieldingly holding the supporting-member in normal position relatively to both the plates.

1,221,258. COMBINED TURNING PLUG AND CHECK-VALVE. CHARLES M. WILSON, Elmira, N. Y. Filed Nov. 22, 1916. Serial No. 132,800. (Cl. 67—115.)



1. In a device of the character described, a casing having communicating ducts therein, a turning plug mounted to control communication through one of the ducts, a flap check valve for controlling communication through the other duct, and a latch member controllable by said turning plug to engage said flap valve and maintain the same in closed position when said turning plug is in the closed position.

2. In a device of the class described, a casing having alining extensions formed with ducts, a turning plug mounted in one of the ducts, a flap valve controlling communication through the other ducts, a latch arm to maintain said flap valve in closed position, said latch arm being pivoted adjacent the turning plug, and an extension carried by said plug to remove the same from engagement with said flap valve.

3. In a device as specified, the combination with a casing having a turning plug valve, of a flap check valve mounted in said casing, a latch arm pivoted in said casing above said plug and adapted to engage said flap valve, and a pin carried by said plug to move said arm out of engagement with said flap valve.

4. In a device as specified, the combination with a casing having a turning plug valve therein, of a flap check valve, a latch arm pivoted in said casing above said turning plug, said latch arm having an enlargement on its under face midway its length, a pin carried by the plug to engage said enlargement, said latch arm being adapted to engage said flap valve, to maintain the same in closed position, and said latch arm being provided with a recess on its under face to accommodate said pin to permit movement of the latch arm when the turning plug is in open position.

1,221,259. BINDER. LEMUEL H. WODDROP, Arcola, N. J., assignor to Robeson Process Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 4, 1916. Serial No. 135,074. (Cl. 22—188.)

1. A composition comprising powdered coal, a dried sulfite waste liquor preparation and bituminous matter.

2. A binding composition comprising powdered coal, a dried sulfite waste liquor preparation and pitch.

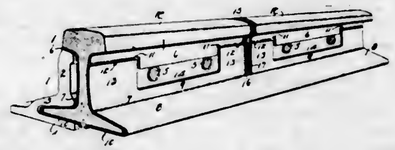
3. An article comprising an intimate mixture of bituminous coal, dry sulfite waste liquor, bituminous matter and granular material bound and united by said mixture.

4. An article comprising an intimate mixture of bituminous coal, dry sulfite waste liquor, bituminous matter and sand bound and united by said mixture.

5. As a composition for binding purposes, an intimate mixture of dry sulfite waste liquor, pitchy matter and an inert pulverulent material.

[Claim 6 not printed in the Gazette.]

1,221,260. INSULATED RAIL-JOINT. BENJAMIN WOLHAUPTER, New Rochelle, and BANCROFT G. BRAINE, New York, N. Y., assignors to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Dec. 23, 1914. Serial No. 878,710. (Cl. 239—5.)



1. An insulated rail joint including splice bar insulation comprising separate upper and lower insulation plates having a direct interlocking engagement and having complemental portions forming and bounding a bolt clearance space for the bolts in each rail, said clearance space being of an extent to receive a plurality of joint bolts for all normal spacings thereof.

2. An insulated rail joint including splice bar insulation comprising separate upper and lower insulation plates having a direct interlocking engagement and having complemental portions forming and bounding a bolt clearance space for the bolts in each rail, said clearance space being of an extent to receive a plurality of joint bolts for all normal spacing thereof, and means independent of the joint bolts for holding the interlocked plates against longitudinal displacement.

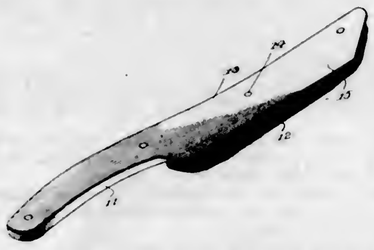
3. An insulated rail joint including splice bar insulation comprising an upper insulation plate provided adjacent the center of the joint with a retaining seat, and a lower insulation plate having an extension holding ear projecting through the space between the center joint bolts and interlocking with said seat, the said lower plate being cut away at one side of the ear to form a clearance for the joint bolts for all normal spacings thereof.

4. An insulated rail joint including splice bar insulation comprising an upper insulation plate provided with oppositely located retaining seats, and a lower insulation plate provided with oppositely arranged extension holding ears disposed at one side of the joint bolts and directly interlocked with the said seats of the upper plate, the lower plate being formed between said ears with a bolt clearance space of an extent to include two or more adjacent joint bolts in each rail.

5. An insulated rail joint including splice bar insulation comprising separate upper insulation plates for the separate rails, each provided with a retaining seat, and a lower insulation plate provided with a holding extension projecting through the space between the center bolts of the joint and interlocking with said seats of both of the upper plates.

[Claims 6 to 15 not printed in the Gazette.]

1,221,261. SCRAPER FOR CRUMB-BRUSHES. CAROLYN T. WORTH, Babylon, N. Y. Filed Oct. 28, 1914. Serial No. 869,086. (Cl. 65—12.)

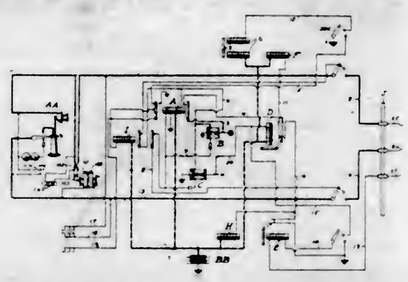


1. A scraper for attachment to crumb brushes of the type having a handle and provided with bristles arranged in concavo-convex form, said scraper comprising a flat plate adapted to be rigidly secured to and entirely cover the upper surface of the body of the brush and handle, one longitudinal edge of the plate being concave to conform to the concave side of the brush bristles and the opposite longitudinal edge of the plate at said brush bristles being extended laterally in a straight line beyond the convex side of the bristles to provide a straight longitudinally disposed scraping edge, the opposite ends of the laterally extended portion of the plate converging in the direction of and intersecting said scraping edge.

2. A scraper for attachment to crumb brushes of the type having a handle and provided with bristles arranged in concavo-convex form, said scraper comprising a flat metallic plate adapted to be rigidly secured to the upper surface of the body of the brush and said handle and having one longitudinal edge thereof concave to conform to the concave side of the brush bristles and its opposite longitudinal edge extended laterally in a straight line beyond the convex side of the bristles to form a straight longitudinally disposed scraping edge, the opposite ends of the laterally extended portion of and intersecting said straight lines in the direction of and intersecting said scraping edge, the end of the body of the plate at the head of the brush being curved and gradually merged into the adjacent converging end of the extended portion of said plate.

1,221,262. TELEPHONE-EXCHANGE SYSTEM. JOSEPH L. WRIGHT, Cleveland, Ohio, assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Oct. 31, 1914. Serial No. 869,670. (Cl. 179—18.)

1. In a telephone exchange system, subscribers' lines, connective means for the lines, means at the subscribers' stations to produce alternating current impulses of relatively low frequency for operating said connective means, additional means at the subscribers' stations to produce alternating current impulses of relatively high frequency, to produce changes in the circuits of the connective means, substantially as set forth.



2. In a telephone exchange system, the combination with an automatic switch, of an alternating current signaling device for controlling the operation of said switch, two conductors extending from said device to said switch normally closed during the operation of the signaling device and during the operation of said switch, substantially as set forth.

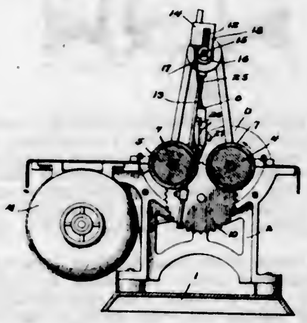
3. In a telephone exchange system, the combination with an automatic switch, of two conductors extending to said switch having an associated alternating current signaling device, means associated with said switch and responsive to the operation of said signaling device for controlling the action of said switch, said conductors being closed during the operation of said signaling device, substantially as set forth.

4. In a telephone exchange system, automatic switching mechanism and metallic line circuits, of devices associated with said automatic switching mechanism adapted to respond to alternating currents of different frequencies, means at the subscribers' stations to operate said devices over said line circuits to determine the positions to be assumed by said automatic switching mechanism, substantially as set forth.

5. In a telephone exchange system, the combination with an automatic switch, of an alternating current signaling device for controlling the operation of said switch, two conductors extending from said device to said switch normally closed during the operation of the signaling device and during the operation of the said switch, releasing means associated with said switch rendered operable when said conductors are opened, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,221,263. SHARPENER FOR RAZOR-BLADES. HARRY BENTON YOUNG, Cincinnati, Ohio. Filed Sept. 14, 1915. Serial No. 50,621. (Cl. 51—16.)



1. In a blade sharpening machine, the combination with a frame, of a pair of parallel drums mounted thereon with

a space between same, means for rotating said drums oppositely and toward each other, blade holders mounted opposite the space between the drums, means for oscillating the blade holders to alternately contact blades held thereon with the perimeters of the drums, and means for conveying the blade holders longitudinally of the drums in stepped stages during the oscillation of the holders while out of contact with the drums.

2. In a blade sharpening machine, the combination with a frame, of a pair of parallel drums mounted thereon having a space between same, means for rotating said drums oppositely and toward each other, a conveyer bar mounted on said frame opposite the space between the drums, blade holders carried on said conveyer, means for oscillating the blade holders to alternately contact blades held therein with the perimeters of the opposite drums, and means coacting with the drum rotating means and the said oscillating means for conveying the blade holders longitudinally of the drums in stepped stages during the oscillation of the holders while out of contact with the drums.

3. In a blade sharpening machine, the combination with a frame, of a pair of parallel drums mounted thereon having a space between same, means for rotating said drums oppositely and toward each other, a rocking conveyer bar mounted on said frame opposite the space between the drums, blade holders slidably carried on said conveyer, means for rocking said conveyer bar to oscillate the blade holders between the drums, and means coacting with the bar rocking means for advancing the blade holders longitudinally of the drums in stepped stages during the oscillation of the holders while out of contact with the drum.

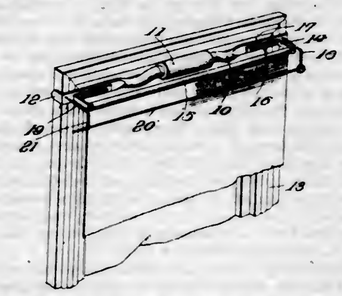
4. In a blade sharpening machine, the combination with a frame, of a pair of parallel drums mounted thereon having a space between same, means for rotating said drums oppositely and toward each other, a rocking conveyer-bar mounted on said frame opposite the space between the drums, blade holders slidably carried on said conveyer, a worm adjacent to said conveyer-bar in contacting relation with said blade holders, means for rocking said conveyer-bar to oscillate the blade holders between the drums, and means coacting with the bar-rocking means for actuating the worm for advancing the blade holders longitudinally on the rocking bar in stepped stages during the oscillation of the holders between the drums.

5. In a blade sharpening machine, the combination with a frame of a pair of parallel drums mounted thereon having a space between the same, a train of driving gears for rotating said drums oppositely and toward each other, a conveyer-bar journaled on said frame opposite the space between the drums, blade holders removably and slidably carried on said conveyer, a worm loosely mounted on said frame adjacent to said conveyer-bar in contacting relation with said blade holders, a shaft rigidly attached to said conveyer-bar at one end and pivoted on one of the driving wheels for imparting a lateral rocking motion to the conveyer-bar, a ratchet wheel rigidly carried on said worm, and a pawl carried on the bearings of said bar for intermittently engaging said ratchet wheel to actuate the worm for advancing the blade holders longitudinally on the rocking bar in stepped stages during the oscillation of the blade holders between the drums.

1,221,264. CURTAIN AND SHADE HANGER. HARVEY ABRAMS and HICKS C. ABRAMS, Long Pine, Nebr. Filed Oct. 4, 1915. Serial No. 54,025. (Cl. 156—23.)

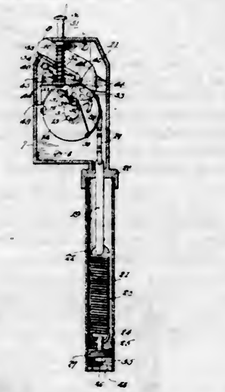
1. A device of the character described including a body portion, fixed arms extending therefrom with one of said arms provided with relatively straight downwardly converging gripping jaws, and a horizontally arranged curtain supporting rod pivotally connected at one extremity to the other of said arms to move in a plane at substantially right angles to the said arms with the rod movable to a position with the free end thereof wedged between said jaws.

2. A device of the character described including a body portion, arms fixed to the body portion to extend outwardly therefrom, one of said arms being provided with a hook having inwardly converging jaws, and a curtain support-



ing rod pivotally connected to the other of said arms with the rod movable to a position with the free end thereof wedged between the jaws of said hook.

1,221,265. COIN-CONTROLLED CHAIR. GEORGE A. ADAMS, San Jose, Cal. Filed Oct. 12, 1916. Serial No. 125,267. (Cl. 194—61.)



1. In a device of the class described, a casing; a shaft journaled in the casing; a disk secured to the shaft; a lever located along the side of the disk; a fulcrum whereby the lever is connected to the disk; a projection on the lever, the projection and the fulcrum coöperating to form a coin support; a coin chute discharging on said coin support; a rocking member carried by the casing and including a pawl coacting with the disk, and an arm disposed above the lever, the projection constituting means for advancing a coin beneath the arm to disengage the pawl from the disk, the disk and the lever being rotatable to effect a discharge of the coin; and means for operating the lever to cause the coin to disengage the pawl from the disk.

2. In a device of the class described, a casing; a shaft journaled in the casing; a disk secured to the shaft; a lever located along the side of the disk; a projection on the lever; a fulcrum whereby the lever is connected with the disk, the fulcrum and the projection coöperating to form a coin support; a coin chute discharging on said coin support; a rocking member carried by the casing and including a pawl coacting with the disk, and an arm disposed above the lever, the projection constituting a means for advancing a coin beneath the arm thereby to disengage the pawl from the disk, the disk and the lever being rotatable to effect a discharge of the coin; means for operating the lever to cause the coin to disengage the pawl from the disk; and yieldable means for securing a reverse rotation of the shaft.

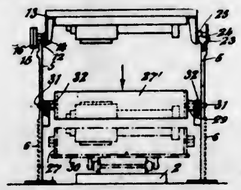
3. In a device of the class described, a casing; a shaft journaled in the casing; a disk secured to the shaft; a lever located along the side of the disk; a projection on the lever; a fulcrum whereby the lever is connected to the disk, the fulcrum and the projection coöperating to form a coin support; a coin chute discharging on said coin support; a rocking member carried by the casing and including a pawl coacting with the disk, and an arm disposed above the lever, the arm including a finger projecting into the coin chute, the projection constituting a means for advancing a coin beneath the arm thereby to disengage the pawl from the disk, the disk and the lever being rotatable to effect a discharge of the coin, and the finger coacting to prevent the advance of a second coin when the pawl is disengaged from the disk; and means for operating the lever to disengage the pawl from the disk, through the instrumentality of a coin.

4. In a device of the class described, a casing; a shaft journaled in the casing; a disk secured to the shaft; a rocking member mounted on the casing and including an arm, and a pawl coacting with the disk; a lever fulcrumed on the disk; means for discharging a coin on the lever; and means for operating the lever independently of the rotation of the disk and the shaft, thereby to advance the coin beneath the arm and to disengage the pawl from the disk.

5. In a device of the class described, a casing; a shaft journaled in the casing; a disk secured to the shaft; a rocking member mounted on the casing and including an arm, and a pawl coacting with the disk; a lever fulcrumed on the disk; means for discharging a coin on the lever; means for operating the lever independently of the rotation of the disk, thereby to advance a coin beneath the arm and to disengage the pawl from the disk; means for actuating the lever; and yieldable means for securing a reverse rotation of the shaft.

[Claim 6 not printed in the Gazette.]

1,221,266. MOLDING-MACHINE. FRIEDRICH AESCHBACH, Aarau, Switzerland. Filed Aug. 22, 1916. Serial No. 116,399. (Cl. 22—31.)



1. A molding-machine comprising, in combination, vertically movable supports, a turnover plate carried by said supports and adapted to take up a molding-box, means for turning over said plate, means on said supports adapting the latter to carry at a second place a molding-box and a carriege adapted to support a molding-box, said supports being adapted to put in the required exact manner the second molding-box on the first molding-box placed on said carriage by means of the turnover plate, substantially as described.

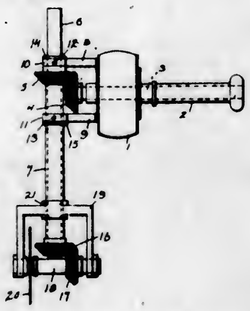
2. A molding-machine comprising, in combination, vertically movable supports, each provided at its upper end with a bearing, a turnover plate adapted to pivot in said bearings of the supports and carry a molding-box, means for turning over this plate, longitudinal slots in said supports, pins adapted to be inserted through said slots and act as trunnions for a molding-box, said slots being arranged in such a manner, that the molding-box trunnioned in said slots may be turned about the pins upon a displacement of the supports, and a carriage adapted to support a molding-box, said supports being adapted to put in the required exact manner the second molding-box on the first molding-box placed on said carriage by means of the turnover plate, substantially as described.

3. A molding-machine comprising, in combination, vertically movable supports, each provided at its upper end with a bearing, a turnover plate adapted to pivot in said bearings of the supports and carry a molding-box, means for turning over this plate, longitudinal slots in said supports, pins adapted to be inserted through said slots and act as trunnions for a molding-box, said slots being arranged in such a manner, that the molding-box trunnioned in said slots may be turned about the pins upon a displacement of the supports, means preventing a displacement of the molding-box trunnioned in said slots in the direction of its axis of rotation and a carriage adapted to support a molding-box, said supports being adapted to put in the required exact manner the second molding-box on the first molding-box placed on said carriage by means of the turnover plate, substantially as described.

4. A molding-machine comprising, in combination, vertically movable supports, each provided at its upper end with a bearing, a turnover plate adapted to pivot in said bearings of the supports and carry a molding-box, means for turning over this plate, longitudinal slots in said supports, pins adapted to be inserted through said slots and act as trunnions for a molding-box, said slots being arranged in such a manner, that the molding-box trunnioned in said slots may be turned about the pins upon a displacement of the supports, hooks adapted to be attached to said pins and fill out the spaces between the supports and the molding-box pivotally mounted on said pins and a carriage adapted to support a molding-box, said supports being adapted to put in the required exact manner the second molding-box on the first molding-box placed on said carriage by means of the turnover plate, substantially as described.

5. A molding-machine comprising, in combination, movable supports, each provided at its upper end with a bearing, means for imparting to these supports a simultaneous vertical movement, a turnover plate adapted to pivot in said bearings of the supports and carry a molding-box, means for turning over this plate, longitudinal slots in said supports, pins adapted to be inserted through said slots and to act as trunnions for a molding-box, said slots being arranged in such a manner, that the molding-box trunnioned in said slots may be turned about said pins upon a displacement of the supports, a shaking-plate adapted to act as a support for the turnover plate carrying a molding-box as well as for a molding-box into which the mold has been stamped and a carriage adapted to support a molding-box, said supports being adapted to put in the required exact manner the second molding-box on the first molding-box placed on said carriage by means of the turnover plate, substantially as described.

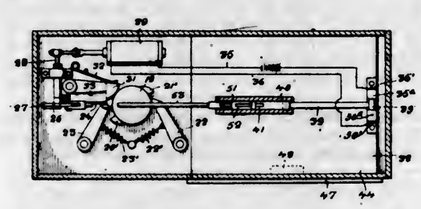
1,221,267. ELECTRIC SAW. SAMUEL A. ANDERSON, Jr., Louisville, Ky. Filed June 25, 1915. Serial No. 36,298. (Cl. 143—43.)



1. A portable saw comprising a hollow shaft, a U-shaped frame at one end of the shaft, a pair of brackets swivelly mounted to the opposite end of the shaft, set screws for holding the brackets in various adjusted positions with relation to the shaft, a saw arbor rotatably mounted between the arms of the U-shaped frame, a saw on the arbor adapted to be held in various planes with relation to the brackets according to the position the shaft is held by the set screws, a drive shaft rotatably mounted within the hollow shaft, bevel pinions on the drive shaft, a pinion on the saw arbor meshing with one of the pinions, a motor supported by the brackets, a bevel pinion on the motor shaft meshing with the other bevel pinion on the drive shaft and a handle extending axially from the motor and having the end of the motor shaft opposite that carrying the bevel pinion journaled therein to reinforce said handle.

2. A portable saw including a tubular shaft, a pair of collars mounted near one end of said shaft, a U-shaped frame mounted near the opposite end of the shaft, rings surrounding the collars, set screws threaded into the rings for engagement against the collars to hold the shaft in various adjusted positions with relation to the rings, arms extending radially from the rings, an electric motor supported at the outer ends of the arms, a handle attached to the side of the motor opposite that to which the arms are connected; the shaft of the motor being journaled in the handle, a pinion on the end of the shaft opposite that mounted within the handle, a drive shaft rotatably mounted within the tubular shaft, a bevel pinion near one end of said drive shaft meshing with the pinion on the motor shaft, a bevel pinion on the opposite end of the drive shaft and rotatably mounted in the frame, a saw arbor rotatably mounted between the arms of the frame, a bevel pinion carried by the saw arbor and meshing with the bevel pinion on the main drive shaft and a circular saw mounted on the saw arbor and adapted to be driven upon operation of the motor.

1,221,268. PAY-AS-YOU-ENTER GATE OR TURNSTILE. JOSEPH ANDREATTE, Oakdale, Cal. Filed Sept. 19, 1916. Serial No. 120,988. (Cl. 194—9.)



1. In a device of the class described, the combination of a shaft, a gate mounted for rotation thereon, a locking head carried by the shaft and provided with ratchet teeth and locking teeth, a pawl coöperating with the ratchet teeth and locking teeth to hold the gate on retrograde rotation, a pawl coöperating with the locking teeth for locking the gate against rotation in stated positions, said pawls being carried by the gate, means for retracting the second named pawl, means for locking said second named pawl in retracted position, and means for rendering said locking means inoperative at stated periods to permit the pawl to move into engagement with the locking teeth.

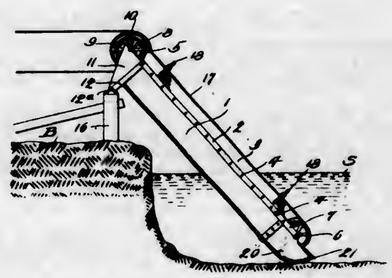
2. In a device of the class described, the combination of a shaft, a gate mounted for rotation thereon, a locking head carried by the shaft and provided with ratchet teeth and locking teeth, a pawl acting upon the ratchet teeth, a pawl acting upon the ratchet teeth for holding the gate against retrograde rotation, a pawl arranged for coöperation with the locking teeth to lock the gate in stated positions, said pawls being carried by the gate, means for retracting and releasing the second named pawl, a locking device for engaging and holding said second named pawl in released position after having been retracted and released by the aforesaid means, and means on the head for disengaging the locking device from the latch at predetermined points in the movement of the gate.

3. In a device of the class described, the combination of a shaft, a gate mounted for rotation thereon, a head carried by the shaft and provided with ratchet teeth and with locking teeth, a pawl coöperating with the ratchet teeth to hold the gate from retrograde rotation, a pawl coöperating with the locking teeth to lock the gate from movement in stated positions, said pawls being carried by the gate, means for retracting the second named pawl, a latch to engage and hold the same retracted, and cam devices on the locking head for engaging said latch and retracting the same to release the locking pawl at stated intervals.

4. In a device of the class described, the combination of a shaft, a gate mounted for rotation thereon, a locking head carried by the shaft and provided with ratchet teeth and locking teeth, a pawl coöperating with the ratchet teeth to hold the gate from retrograde rotation, a pawl coöperating with the locking teeth to lock the gate against motion in stated positions, said pawls being carried by the gate, means including a rock shaft for retracting and releasing the locking pawl, a latch to engage and hold the locking pawl released when so retracted and released by the aforesaid means, and cam devices on the locking head for engaging and retracting the latch at stated intervals to permit the return of the locking pawl to locking position.

5. In a device of the class described, the combination of a shaft, a gate mounted for rotation thereon, means for permitting the rotary motion of the gate in one direction and preventing rotation of the gate in the opposite direction, means for locking the gate against rotation in stated positions, said means including coöperating elements carried by the shaft and the gate, the means carried by the gate including a retractable element, means for retracting said element, and means for locking the same in retracted position; and means also carried by the shaft for rendering said last-mentioned locking means inoperative at stated periods.

1,221,269. WATER-ELEVATOR. AL ANDREWS, Moorcroft, Wyo., assignor of one-third to F. C. Hunter, one-third to M. B. Camplin, and one-third to Oscar Nelson, Sheridan, Wyo. Filed May 25, 1916. Serial No. 99,910. (Cl. 103—6.)

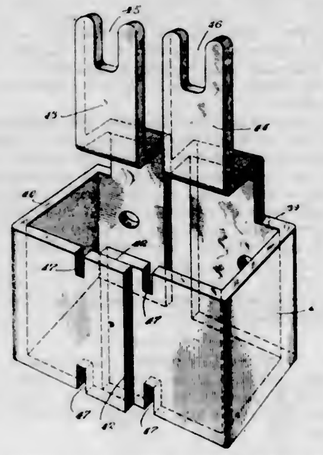


1. An elevator comprising a pipe, wheels disposed one at each end thereof, an endless belt trained around said wheels and having one of its reaches passing through said pipe, spaced disks secured transversely on said belt and having radial slots to permit them to pass around the wheels, an internal flange extending longitudinally of the pipe and adapted to fill said slots as the disks pass upwardly through said pipe, and a track extending longitudinally of said pipe on the exterior thereof for reception in said slots as the disks travel downwardly, whereby to prevent vibration of the upper reach of the belt and to guide the disks on to the lower wheel.

2. An elevator comprising a pipe formed of a single sheet of metal with its edges brought together and ex-

tended outwardly to provide spaced parallel flanges, a board extending longitudinally of the pipe and secured at its longitudinal center to said flanges, upper and lower wheels at the upper and lower ends of said board, an endless belt trained around said wheels and having its lower reach disposed in the pipe adjacent the lower edge of said board, the upper reach of said belt extending along the upper edge of said board, and a plurality of disks secured transversely on said belt, said disks having radial slots to permit traveling thereof around the aforesaid wheels, said slots of upwardly moving disks being filled by the lower half of the board to prevent leakage while the slots of the downwardly moving disks straddle the upper portion of said board whereby they are guided on to the lower wheel and whereby vibration of the upper reach of the belt is prevented.

1,221,270. THERMO-COUPLE. JACOB W. BARD, Springfield, Ill., assignor to Sangamo Electric Company, Springfield, Ill., a Corporation of Illinois. Filed Jan. 30, 1914. Serial No. 815,425. (Cl. 171—73.)



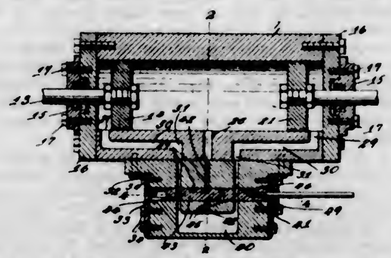
1. A thermo-couple, comprising two dissimilar integral metallic members joined together at one end, each of said members being notched to reduce its cross-sectional area intermediate the point of their juncture and its opposite end.

2. A thermo-couple, comprising flat integral strips of dissimilar metals joined together at one end and fashioned into an approximately open loop, each of said strips being notched to reduce its cross-sectional area intermediate the point of their juncture and its opposite end.

1,221,271. STEAM-CHEST. HANS H. BAUMGARN, Lemmon, S. D. Filed Nov. 30, 1915. Serial No. 64,354. (Cl. 136—8.)

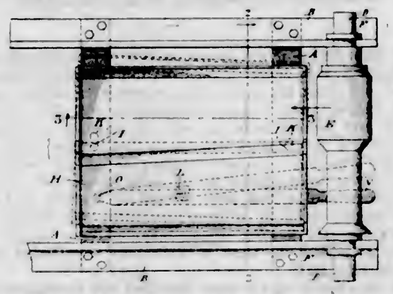
1. A steam chest of the class described comprising a casing, an elongated valve slidably mounted within said steam chest being formed wedge-shape in cross section and tapering toward the lower end thereof, said valve provided with a plurality of transversely extending apertures, said valve provided with a plurality of discharge ports formed upon one side thereof, said valve also provided with a pocket at the lower end thereof, said discharge ports communicating with said pockets, and the lower end of said steam chest being provided with a discharge steam outlet.

2. A slide valve of the class described comprising a steam chest, an elongated valve slidably mounted within said steam chest and tapering toward its lower end for causing said valve to at all times tightly seat within said steam chest, said valve provided with ports formed therein for controlling the admission and discharge of exhaust steam to and from said steam chest, and means formed in the lower end of said steam chest for conveying steam therefrom after the steam has passed through said slide valve.



3. A slide valve of the class described comprising a steam chest; said steam chest comprising an inner and outer portion, means for connecting said inner and outer portions together, a top plate carried by said outer portion and being removably secured thereto, said top plate provided with an inlet port, said outer portion provided with a steam inlet passage-way, said steam inlet passage-way provided with a plurality of side channels, said outer portion provided with a centrally located port, a slide valve mounted within said steam chest, said slide valve being wedge-shape in cross section and tapering toward the lower edge thereof, said valve provided with a plurality of steam inlet ports near one end, said valve also provided with a pair of auxiliary inlet ports near the opposite end, said valve also provided with an exhaust port formed near the end of said slide valve, and also being provided with a plurality of auxiliary exhaust ports formed in the slide valve between the primary inlet ports and the auxiliary inlet ports, said inlet ports extending entirely through said valve, said exhaust ports constituting channels in one face of said valve and communicating with the lower end of said valve, said valve provided with a cut-out portion upon the lower end thereof for communicating with said exhaust ports, and means for conveying the exhaust from said lower end of said valve.

1,221,272. SHINGLE-MAKING MACHINE. WILLIAM P. BECK and ALVIN C. BURNS, Birmingham, Ala. Filed July 10, 1916. Serial No. 108,467. (Cl. 25—43.)

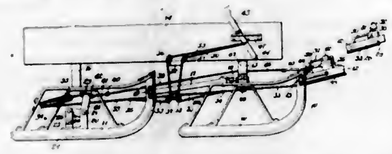


1. A machine for making shingles comprising a frame, a die plate and means for moving the same upon the frame, a mandrel adapted to roll upon the frame and cooperating with the plate to form the shingle.

2. A machine for making shingles consisting of a frame with upwardly projecting portions forming tracks, a mandrel having spindle ends movable and guided upon said projections, a plate upon the frame, and means for imparting a lateral movement to the plate to permit a proper pitch to be given to the shingles formed intermediate the plate and mandrel.

3. A machine for making shingles consisting of a frame with upwardly projecting portions forming tracks, a mandrel having spindle ends movable and guided upon said projections, a movable die plate, studs projecting from the plate and slots in the frame in which the studs are movable, a lever pivoted to the frame and having pivotal connection with the frame and plate and adapted to shift the latter.

1,221,273. AUTOMATIC VEHICLE-BRAKE. HERMAN BERGET, Keene, N. D. Filed Sept. 12, 1916. Serial No. 119,723. (Cl. 21—46.)



1. The combination with a vehicle including the running gear and draft tongue, of brake devices coacting with said running gear, a neck yoke movable relatively to said draft tongue, a guide device rigidly connected to said draft tongue and including a portion spaced therefrom, a draft appliance movable within said guide device, a stop member connected to said draft appliance and slidably engaging the spaced portion of the guide device, connecting means coupled respectively to said brake device and to said neck yoke, and connecting means coupled respectively to said draft appliance and to said brake device.

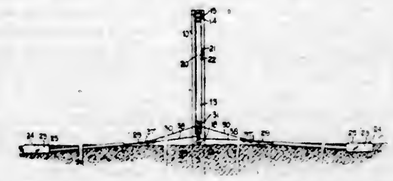
2. The combination with a vehicle including the running gear and draft tongue, of brake devices coacting with said running gear, a neck yoke movable relatively to said draft tongue, a guide device carried by said draft tongue, a draft appliance movable within said guide device, a stop member pivotally connected to said draft appliance and including projections slidably engaging said guide device, a pulling member slidable through said guide device and including an eye engaging the pivot of said stop member, a pulling member connected respectively to said neck yoke and to said brake device and operating to apply the brake when the neck yoke is moved rearwardly, and another pulling member connected respectively to said sliding pulling member and to said brake device and operating to release the brake when the draft device is moved forwardly.

3. The combination with a vehicle including the running gear and draft tongue, of a brake device coacting with said running gear, a draft appliance movable relatively to said draft tongue, a neck yoke movable relatively to said draft tongue, connecting means coupled respectively to said brake device and to said neck yoke, connecting means coupled respectively to said draft appliance and to said brake device, coacting levers pivotally connected relatively to said running gear, connecting means between one of said levers and the connecting means between the brake device and the neck yoke, and operating to apply the brake device, and connecting means between the other of said levers and the connecting means between the brake device and the neck yoke and operating to release the brake device.

4. The combination with a vehicle including the running gear and draft tongue, of brake devices coacting with said running gear, a draft appliance movable relatively to said draft tongue, a neck yoke movable relatively to said draft tongue, pulling means coupled respectively to said brake devices and to said neck yoke, pulling means coupled respectively to said draft appliance and to said brake device, coacting levers pivoted relatively to said running gear, a guide member associated with said levers and including lateral offsets with which said levers engage when in one position, connecting means coupled respectively to said brake pulling means and to one of said levers, and connecting means between said brake pulling means and the other of said levers.

5. The combination with a vehicle including the running gear and a draft tongue, of brake devices coacting with said running gear, a draft appliance movable relatively to said draft tongue, a neckyoke movable relatively to said draft tongue, a pull member connecting said neckyoke to said brake device and operating to apply the brake when the neckyoke is moved rearwardly, guide means for said pull member in vertical alinement with the king pin of the running gear, another pull member connecting the draft appliance to the brake devices and operating to release the brake devices when the draft appliance is moved forwardly, said last mentioned pull member being divided and passing upon opposite sides of the king pin.

1,221,274. AUTOMATIC FARM-GATE. ARTHUR BERRY, Springfield, Mo. Filed June 24, 1916. Serial No. 105,714. (Cl. 39—9.)



1. The combination with a gate and a latching device therefor, of treadle operated means disposed on both sides of the gate for operating said latching device, treadle operated means disposed on both sides of the gate and between the gate and the latch operating treadles for rotating the gate, and means for shifting one of said latch operating treadles out of operative position upon the prior operation of the corresponding gate rotating treadle.

2. The combination with a hingedly mounted gate, a pivoted latch member thereon, and a gate post having a keeper, of a pair of treadles disposed one on each side of the gate and in line with each other, levers to which the treadles are operatively connected, said levers being operatively connected to each other and to the gate latch, a pair of gate swinging treadles disposed one on each side of the gate, levers to which said gate swinging treadles are connected, said levers being operatively connected to each other and to the gate, the gate swinging treadles being disposed inward of the latch operating treadles, and means whereby the depression of one gate swinging treadle will shift the latch operating treadle on the same side of the gate into inoperative position.

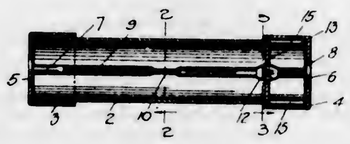
3. The combination with a hingedly mounted gate, a pivoted latch member thereon, and a gate post having a keeper, of a pair of latch operating treadles disposed one on each side of the gate and in line with each other and operatively connected to the gate latch and to each other, a pair of gate swinging treadles disposed on each side of the gate and operatively connected to the gate and to each other, the gate swinging treadles disposed inward of the latch operating treadles, and means whereby the depression of one of said latch operating treadles and the successive depression of the two gate swinging treadles coused by the passage of a vehicle through the gate and over the treadles will shift the last latch operating treadle to be operated into an inoperative position.

4. The combination with a hingedly mounted gate, a pivoted latch member thereon, and a gate post having a keeper, of a pair of gate swinging treadles disposed one on each side of the gate and in line with each other, levers connected to said treadles, operative connections between the levers and the gate for causing a swinging of the gate in one direction or the other upon the depression of one or the other of the treadles, a pair of latch operating treadles disposed one on each side of the gate outward of the gate swinging treadles, a shiftable member disposed below each latch operating treadle, a lever pivotally mounted upon the shiftable member for movement therewith and also movement independent thereof, links connecting the latch operating treadles to said levers, oper-

ative connections between said levers and the latch to cause the lifting of the latch upon a depression of certain of the treadles, and means operatively connecting each of the gate swinging treadles with the corresponding shiftable lever supporting member whereby a depression of the gate swinging treadle will act to shift said supporting member in a direction to raise the corresponding latch operating treadle to thereby release the latching member.

5. The combination with a hingedly mounted gate, a pivoted latch member thereon, and a gate post having a keeper, of a pair of gate swinging treadles disposed one on each side of the gate and in line with each other, leavers connected to said treadles, operative connections between the levers and the gate for causing a swinging of the gate in one direction or the other upon the depression of one or the other of the treadles, a pair of latch operating treadles disposed one on each side of the gate outward of the gate swinging treadles, a rotatable member mounted below each latch shifting treadle, a lever pivoted upon each rotatable member for movement therewith and independent movement with relation thereto, a link connecting each latch shifting treadle to one end of said lever, an operative connection from the other end of said lever to the latch, and a resilient lever operatively connected at one end to the corresponding gate swinging treadle and at its opposite end operatively connected to the corresponding rotatable member, the resiliency of said lever resiliently holding the rotatable member in a normal position, a depression of the gate swinging treadle acting to turn said resilient lever upon its fulcrum and shift the rotatable member in a direction to prevent the latch operating treadle from raising the latch.

1,221,275. CARTRIDGE-FUSE. WARREN F. BLEECKER, Washington, Pa. Filed Nov. 18, 1915. Serial No. 62,213. (Cl. 175—273.)



1. A cartridge fuse comprising a casing, a cap rotatably and slidably fitted upon an end thereof, a threaded pin extending inwardly from said cap in rigid connection therewith, and a tubular fuse, interiorly threaded at one of its ends to receive the threaded portion of said pin.

2. A cartridge fuse comprising an open-ended casing, caps rotatably fitted upon the ends thereof, threaded pins extending inwardly from said caps in rigid connection therewith, and a tubular fuse threaded at its ends to receive the threaded portions of said pins.

3. A cartridge fuse comprising an open-ended casing, caps rotatably fitted upon the ends thereof, said casing having opposite slots normally covered by one of said caps, threaded pins extending inwardly from said caps, a slotted member extending at its ends in said slot, and a fuse having threaded sockets coöperating with said pins and a flattened portion fitted in the slot of said member.

4. A cartridge fuse comprising an open-ended casing, caps rotatably fitted upon the ends thereof, threaded pins extending inwardly from said caps, a slotted member secured transversely of the casing, and a fuse having threaded sockets coöperating with said pins and a flattened portion fitted in the slot of said member.

5. A cartridge fuse comprising a casing, a cap rotatably fitted upon an end thereof, a pin having an outer threaded portion and an inner plain portion and extending inwardly from said cap in rigid connection therewith, and a fuse fixed in the casing and having a threaded socket to receive the threaded portion of said pin.

[Claims 6 and 7 not printed in the Gazette.]

1,221,276. SPRINKLER. GEORGE R. BOLANDER, Alameda, Cal. Filed Feb. 23, 1915, Serial No. 9,876. Renewed Nov. 1, 1916. Serial No. 129,040. (Cl. 137—30.)



1. A sprinkler comprising a pipe, a fitting carrying a step secured on the end thereof, a rubber sleeve carried by said fitting, a spherical faucet over which said sleeve is adapted to pass, means carried by the fitting to open a valve in said faucet, and a flaring ring to clamp the rubber sleeve to the faucet when the sprinkler is to be used.

2. In a sprinkler, a pipe, a fitting secured on the end of the pipe, and carrying a pair of ears and a step, a rubber sleeve secured to said fitting, a spherical faucet over which said rubber sleeve is adapted to pass, a flaring ring for pressing the rubber sleeve against the spherical faucet, rods connected with said ring and extending through the ears aforesaid, and a lever connected with the rods for locking the ring and rubber sleeve against the spherical faucet.

1,221,277. PRECAUTIONARY SIGN. EDGAR H. BOSTOCK, Nutley, N. J., assignor of one-half to Mansfield & Co., New York, N. Y., a Corporation of New York. Filed Feb. 15, 1916. Serial No. 78,412. (Cl. 40—134.)



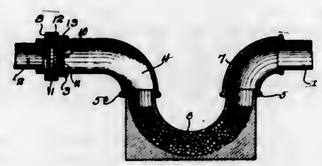
1. In combination with an electric lamp, a sign plate, a reflector hood attached to the front upper part of the said sign plate and open at the bottom, the said hood inclosing the said electric lamp, and indicating characters on the face of the said sign plate below the said hood and defined by a light absorbing substance, the said indicating characters having polished borders surrounded by depressed dull borders and being illuminated and rendered legible by the said electric lamp while the latter is burning and the rays of light emanating from the said burning lamp being absorbed by the substance to render the said characters legible in the dark after the said lamp is extinguished.

2. A sign, comprising a frame, the back of which has its front surface of a bright material, and a sign plate held in the frame and overlying the said bright surface, the sign plate being made of glass and provided on one face with recesses defining indicating characters, the recesses having polished borders surrounded by depressed dull auxiliary borders, a coating of dull paint covering the face of the glass intermediate the said auxiliary borders, and a luminous substance filling the said character indicating recesses.

3. A sign plate made of glass having recesses shaped to correspond to indicating characters and filled with luminous paint and auxiliary recess adjacent the first recesses and having dull surfaces, the portions between the recesses forming a border and polished and the portions of the plate between the auxiliary recesses being coated with a dull paint.

4. A sign plate formed of glass and provided with recesses shaped to correspond to indicating characters and filled with light absorbing material, and with narrow recesses surrounding the first recesses and having roughened bottoms, the portions of the plate surrounding the recesses having a dull surface.

1,221,278. GAS SAVER AND PURIFIER. JOHN A. BOWKUS, Grand Rapids, Mich. Filed Oct. 5, 1916. Serial No. 123,864. (Cl. 183—45.)



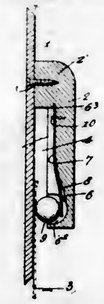
1. A gas purifier consisting of a block having a U shaped passage formed therein and adapted to contain purifying chemicals and its sides, ends and bottoms squared so that it may be set up independently on either side or either end or on its bottom, in combination with gas pipe sections detachably connected to said purifier at the ends of said passage in order that the latter may ordinarily form part of the gas conduit, though easily separable therefrom for setting up as stated.

2. In combination with two sections of a gas pipe, a rectangular block detachably attached thereto and provided with a curved chemical-containing passage normally forming part of the gas conduit and with an elongated flat bottom for greater security after said purifier has been detached and set up independently.

3. In combination with the sections of a gas pipe, a filter detachably held thereto and comprising a disk-form screen, an annular casing and holding washer and a chemical purifier also detachable from said pipes, but provided with a curved chemical containing passage normally forming part of the gas conduit, said purifier having an elongated flat bottom and broad elongated squared sides, in order that, when separated from the gas pipe, said purifier may be set securely apart on its side or bottom substantially as set forth.

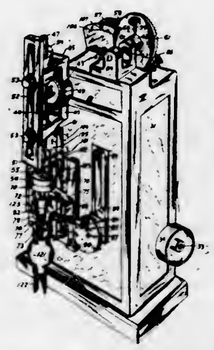
1,221,279. TOWEL-HOLDER. FREDERICK N. BRISLEY, Frederick, Okla. Filed Apr. 24, 1915. Serial No. 23,722. (Cl. 24—244.)

A towel holder including a supporting member, a housing extending from said member but having its lower end portion spaced therefrom, said housing having an elongated recess in the inner face of the end portion spaced from said member, said recess terminating short of the lower end of said housing to provide an end wall, said housing having an attaching portion adjacent the upper end of the recess, said attaching portion having a slot communicating with the recess, a spring of substantially the same length as the recess disposed in said recess and extending into said slot, a towel-engaging means disposed in said recess to engage the spring and be urged by it against the member, and a fastening means on said housing overlapping the spring at a greater distance from the



slot than the distance from the lower end of the spring to the lower end wall of the housing.

1,221,280. APPARATUS FOR GRINDING LENSES. JOHN BROCKBANK, Sydney, New South Wales, Australia. Filed Nov. 16, 1915. Serial No. 61,782. (Cl. 51—3.)



1. An apparatus for grinding lenses comprising a pair of spindles mounted upon a common axial line and adapted to carry on their opposing ends blanks, both spindles rotatable and one spindle adapted to move through an arc and the other to move axially and laterally all for the purposed as herein ascertained.

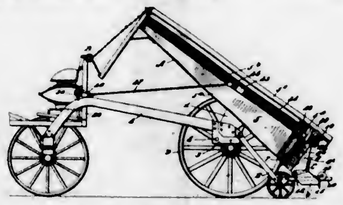
2. An apparatus for grinding lenses comprising upper and lower spindles mounted upon a common axial line and adapted to carry on their opposing ends blanks, a resilient spring for maintaining the contact of the blanks, means for inclining the upper spindle, means for imparting to said lower spindle a reciprocatory movement and means for pressing the lower blank against the upper one.

3. An apparatus for grinding lenses comprising upper and lower spindles mounted upon a common axial line and adapted to carry on their opposing ends blanks, a resilient spring for maintaining the contact of the blanks, means for inclining the upper spindle, a crank disk and connecting rod for reciprocating the lower spindle, and a resilient buffer against which one of said blanks is axially movable with its spindle under pressure of the other blank.

1,221,281. CHUTE-WAGON. J. GROVE BROWN, Groton, N. Y. Filed Sept. 22, 1914. Serial No. 862,957. (Cl. 21—20.)

1. In a chute wagon, a body having its sides flaring outwardly at their rear ends, a chute secured to the body and having its sides flaring outwardly from the ends of the body sides, and a gate extending across the rear end of the body and fitting against the rear ends of its sides.

2. In a chute wagon, a body having its sides flaring outwardly at their rear ends, a chute secured to the body and having its sides flaring rearwardly and outwardly from the rear ends of the body sides, a sliding and swinging gate extending across the rear end of the body, and a rearwardly extending supporting rail for the lower end of the gate arranged within the chute.



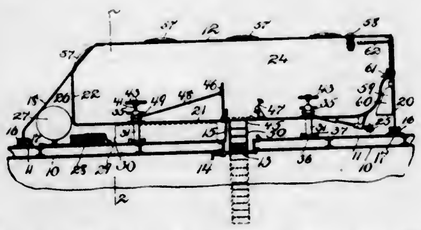
3. In a chute wagon, a body having its sides flaring outwardly at their rear ends, a chute secured to the body and having its sides flaring outwardly from the ends of the body sides, a swinging and sliding gate extending across the rear end of the body, and a supporting rail for the lower end of the gate arranged within the chute and inclined upwardly and rearwardly with respect to the floor of the body.

4. In a chute wagon, a body having its sides flaring outwardly at their rear ends, a chute secured to the body and having its sides flaring outwardly from the ends of the body sides, a sliding and swinging gate extending across the rear end of the body, and a plurality of partitions in the chute inclined upwardly and rearwardly with respect to the floor of the body and forming guide rails for the lower end of the gate.

5. In a chute wagon, a body having its sides flaring outwardly at their rear ends and thence turned forwardly, an angle bar secured to said forwardly turned parts and extending around the sides and floor of the body, a chute detachably connected to said angle bar, and a gate extending across the rear end of the body and adapted to fit against the outwardly flaring ends of its sides.

[Claims 6 and 7 not printed in the Gazette.]

1,221,282. LIFE-BOAT FOR SUBMARINES. WILLIAM BROWN, Newark, N. J. Filed May 5, 1916. Serial No. 95,556. (Cl. 114—16.7.)



1. The combination of a submarine with a life boat mounted on the submarine, means for securing and releasing the life boat, the submarine and the life boat having openings to allow communication between them, a closure for the opening in the life boat, and a connection to prevent the operation of the releasing means while the closure is open.

2. The combination of a submarine with a life boat mounted on the submarine, means for securing and releasing the life boat, the submarine and the life boat having openings to allow communication between them, a closure for the opening in the life boat, a latch on the releasing means to prevent its operation, and a connection between the latch and the closure to insure the closing of the opening in the life boat before the releasing means can be operated.

3. The combination of a submarine with a life boat mounted thereon, the life boat having a hull with depending walls, ways on the submarine to receive the walls, means forcing the life boat in position on the ways, means for forcing the life boat from the ways, the life boat having an opening therein communicating with the submarine, a door for said opening, and a latch connected to the door, the latch being adapted to lock the means for holding the life boat in position while the door is open.

4. The combination of a submarine with a life boat, the life boat having sides extending below the bottom of the hull of the life boat, and propelling means below said bottom and above the bottom edge of the sides.

5. The combination of a submarine with a life boat, the life boat having sides extending below the bottom of the hull of the life boat, and buoys attached to the submarine and normally resting in the space between the hull of the life boat and the submarine.

[Claims 6 to 11 not printed in the Gazette.]

1,221,283. MOLD-BOX. SIMON R. BRYGIDER, Oakland, Cal. Filed July 24, 1916. Serial No. 110,858. (Cl. 25—41.)



1. A mold box comprising a central body having a longitudinal rib and rigid cross ribs carried by said longitudinal rib spaced apart forming molding compartments, a swinging side hinged at the open ends of said ribs, grooves provided in the said sides adapted to engage the ends of said ribs, and a swinging bottom comprising a number of tongues secured to said swinging side and fitted between the said cross ribs.

2. A mold box comprising a longitudinal rib, cross ribs carried by said longitudinal rib spaced apart forming molding compartments open at the top, a swinging side hinged at the open ends of said ribs, a swinging bottom comprising a number of tongues secured to said side and fitted between said cross ribs and a pallet comprising a flat board provided at the bottom with a number of blocks adapted to close the top openings of said compartments and to enter the said compartments in order to compress the bricks.

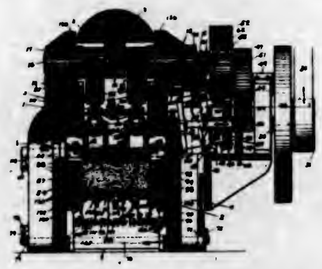
3. A mold box comprising a longitudinal rib, cross ribs carried by said longitudinal rib spaced apart forming molding compartments open at the top, a swinging side hinged at the open ends of said ribs, a swinging bottom comprising a number of tongues secured to said side and fitted between said cross ribs, a pallet comprising a flat board provided at the bottom with a number of blocks adapted to close the top openings of said compartments and on entering compress the bricks and means for releasing said pallet together with said bricks.

4. A mold box comprising a longitudinal rib, cross ribs carried by said longitudinal rib spaced apart forming molding compartments open at the top, a swinging side hinged at the open end of said ribs, a bottom comprising a number of tongues fitted between said cross ribs, a pallet provided with blocks adapted to compress the bricks, swinging arms carried by said swinging sides adapted to engage the said pallet from the bottom and clamping arms adapted to clamp said pallet from the top.

5. A mold box comprising a number of compartments closed on three sides, a swinging side adapted to close the open ends of said compartments, a swinging bottom secured to said swinging side, a pallet provided with a number of blocks adapted to enter the said compartments and to compress the bricks, swinging arms secured to said swinging sides, clamping arms hinged to said swinging arms and handles having a semi-circular cross section secured to said swinging and clamping arms in such a manner as to come opposite one another forming a single handle when brought together.

[Claims 6 to 9 not printed in the Gazette.]

1,221,284. MACHINE FOR PRESSING CONCRETE BLOCKS. SIMON R. BRYGIDER, Oakland, Cal. Filed Dec. 19, 1916. Serial No. 137,899. (Cl. 25—83.)



1. In a machine for pressing concrete blocks two side frames, a table placed between said side frames, two crank shafts provided with a plurality of crank pins mounted in bearings carried by said side frames, grooves cut in the inner faces of said frames, top plates carrying bearings supporting said shafts, fitted at their ends in said grooves, a platen, and a plurality of connecting rods joining said crank pins with said platen.

2. In a machine for pressing concrete blocks two side frames, a table placed between said side frames, a plurality of crank shafts mounted in bearings carried by said side frames, a plurality of crank pins provided on each of said crank shafts, journals provided between said crank pins, top plates secured to said side frames, bearings carried by said top plates, a platen, and a number of connecting rods joining said crank pins and said platen.

3. In a machine for pressing concrete blocks two side frames, a plurality of cross plates uniting said side frames at the bottom, supporting ribs cast integral with said side frames, shoulders provided on said cross plates fitted to rest upon said supporting ribs, a table resting upon said cross plates, a mold box resting upon said table, a platen placed above said mold box, and means for lowering down said platen.

4. In a machine for pressing concrete blocks two side frames, clamping ribs cast integral with said side frames, grooves provided in said clamping ribs, a table, ribs carried by said table fitting said grooves, a mold box containing material forming a block, adapted to be clamped between said side frames, and means for applying pressure upon said material.

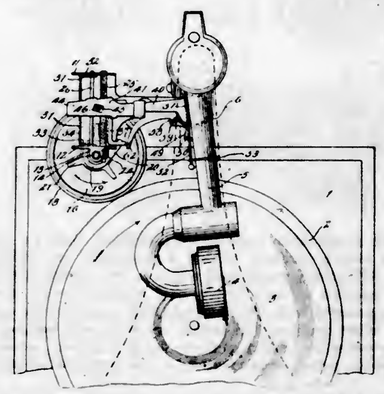
5. In a machine for pressing concrete blocks two side frames, a table placed between said side frames, a mold box, bearings provided on said side frames, swinging gate shafts mounted in said bearings, swinging gates formed with stiffening ribs at the top secured to said shafts, and swinging latch plates pivoted to said table at one end adapted to engage or disengage at the other end the bottom ends of the swinging gates, locking or unlocking said gates.

[Claims 6 to 14 not printed in the Gazette.]

1,221,285. BRAKE FOR TALKING-MACHINES. GUADALUPE BUELNA and ARTHUR E. BURSON, Santa Barbara, Cal., assignors to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Jan. 30, 1911. Serial No. 606,965. (Cl. 74—46.)

1. In combination, a rotating member and a traveling member, a rotating brake element, a stop for said brake element, means to hold said brake stop inoperative, and means controlled by said brake element to actuate said stop when movement of the traveling member has ceased.

2. In combination, a rotating member and a traveling member, a rotary brake element rotated by said rotating member, and means to maintain said brake element inoperative, said means being controllable by said brake element to stop said brake element.



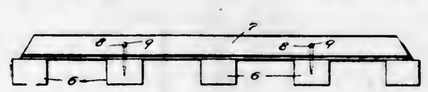
3. In combination, a rotating member and a traveling member, a rotary brake element, a stop for said element, and means controllable by said brake element for actuating said stop when said traveling member has ceased to move.

4. In combination, a rotating member and a traveling member, a brake element arranged to be rotated by said rotating member, and means to stop the rotation of said brake element when the traveling member has ceased to move, said means being controllable by said brake element.

5. In combination, a rotating member and a traveling member, a brake element arranged to be rotated by said rotating member, a stop for said brake element, means to actuate said stop, and means to hold said stop-actuating means in inoperative position, said means being controllable by said brake element to operate said stop-actuating means when the traveling member has ceased to travel.

[Claims 6 to 79 not printed in the Gazette.]

1,221,286. CATTLE-GUARD. SAMUEL W. BURCHARD, St. Louis, Mo. Filed May 19, 1914. Serial No. 839,650. (Cl. 256—17.)

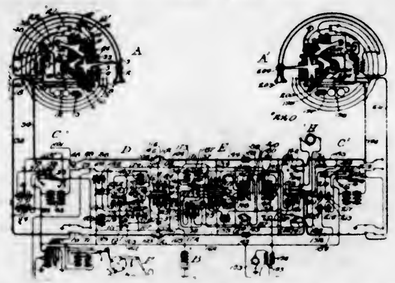


In a cattle guard, a solid body of bar formation, having a plane horizontal bottom surface, an inclined plane upper surface leading from the bottom surface and terminating at a point to one side of the transverse median line of the body, a second plane upper surface leading from said point in a direction opposed to and at an angle different from the first mentioned upper surface and terminating at a point overhanging the bottom surface and a plane surface inclining from said overhanging point to the bottom surface.

1,221,287. AUTOMATIC TELEPHONE TRUNKING-SWITCH AND SYSTEM THEREFOR. WILSON L. CAMPBELL, La Grange, Ill., assignor, by mesne assignments, to Automatic Electric Company, a Corporation of Illinois. Filed July 9, 1907. Serial No. 382,901. (Cl. 179—18.)

1. In a telephone system, a subscriber's line, an individual non-numerical switch therefor having a releasable

plunger-arm and a differentially-wound trip magnet, and trunks adapted to be selected by said switch.



2. In a telephone system, a subscriber's line, an individual switch therefor having a releasable plunger-arm and a diffentially-wound trip magnet, and trunks adapted to be selected by said switch, said magnet having windings connected with the line, adapted to neutralize each other when connected in series, whereby said magnet is unresponsive to battery current flowing in both sides of the line in series, or to ringing current projected over the line.

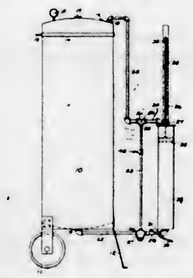
3. In a telephone system, a subscriber's line, an individual non-numerical trunking switch for said line, and trunks adapted to be selected by said switch, said switch provided with a differentially-wound magnet connected in the line and provided with means for initiating the operation of said switch to seize an idle trunk.

4. In a telephone system, a subscriber's line, an individual trunking switch for said line, trunks adapted to be seized by said switch, means for selecting the trunks ahead of the calls, and a differentially-wound magnet connected in the said line and provided with means for initiating the operation of said switch to seize the preselected trunk.

5. In a telephone system, a subscriber's line, an individual trunking switch for said line, trunks to be selected by said switch, the said switch comprising a releasing plunger-arm, a trip magnet normally bridged across the line, and means operated by said plunger-arm for opening the said bridge across the line.

[Claims 6 to 55 not printed in the Gazette.]

1,221,288. LIQUID-DISPENSING DEVICE. ORPHA P. CANADAY, Fort Wayne, Ind. Filed Feb. 4, 1916. Serial No. 76,100. (Cl. 221—103.)

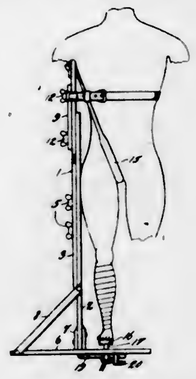


1. The combination with a storage tank for liquid, of a measuring cylinder having communication with the tank, a valve to control the latter communication, means for admitting air under pressure into the tank for forcing the liquid therefrom and into the cylinder, a floating piston within the cylinder adapted to be reciprocated in one direction by the incoming liquid, valve controlled means connected to the cylinder for admitting air under pressure into the cylinder for reciprocating the piston in the opposite direction to cause the liquid in the cylinder to discharge therefrom in measured quantities.

2. The combination with a tank for the storage of liquid having means for admitting therein air under pressure by which the liquid is discharged therefrom, of a measuring cylinder having communication at one end with the storage tank, a valve to control the latter communication, means connected to the opposite end of the cylinder for supporting air under pressure to the cylinder, a valve to control the said supply of air, a piston within the cylinder adapted to be reciprocated in one direction by the incoming liquid and to be reciprocated in the opposite direction for discharging the liquid from the cylinder by the air under pressure, means carried by the piston and cooperating with a fixed scale for indicating quantities of liquid discharged from the cylinder and means connecting the two valves for operating them simultaneously.

3. The combination with a storage tank for liquid, having means connected thereto for supplying air under pressure to the same, a cylinder having connection with the tank and adapted to be supplied with liquid therefrom, a piston in the cylinder, a three-way valve to control the supply of liquid to the cylinder and the discharge of the same therefrom, means connected to the cylinder for supplying air under pressure thereto for reciprocating the piston in one direction, a valve to control said connection and means connecting the two valves for operating them simultaneously.

1,221,289. SPLINT. ALONSO E. CLOUGH, Madison, S. D. Filed Aug. 2, 1916. Serial No. 112,773. (Cl. 128—52.)



1. An extension splint comprising a side brace member, said member being composed of two pieces adapted to be adjusted one upon the other, a bottom cross piece, said bottom cross piece extending an equal distance from each side of said side brace to prevent the patient to whom it is affixed from rolling, a perineal band secured to said side brace, a body strap for holding the top of said splint in position, a centering member adjustably secured to said side brace member and adjustable crosswise thereon, and means for extending a fractured limb.

2. An extension splint comprising a side brace member, a bottom cross piece, said bottom cross piece extending an equal distance from each side of said side brace, a perineal band secured to said side brace, a body strap adjacent the top of said side brace, means for centering said splint, said means comprising a centering member adjustably secured to said side brace and coöperating with said body strap, and means mounted in said bottom cross piece for extending a fractured limb.

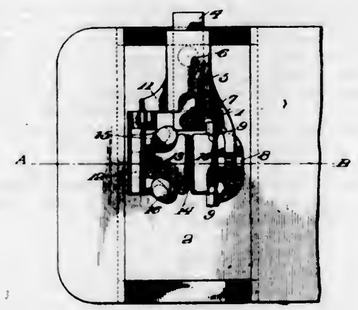
3. An extension splint comprising a side brace member, a bottom cross piece, a perineal band secured to said side brace, a body strap adjacent the top of said side brace, means for extending a fractured limb, a centering member having a plurality of apertures therein, said centering member being adapted to be adjusted horizontally of said side brace and held in adjusted positions by set screws passing through selected ones of said apertures, and said member when secured in position being adapted to cooperate with said body strap.

1,221,290. COLLAR-FASTENER. HILAIRE J. COMBAU, Hartford, Conn. Filed Apr. 13, 1911. Serial No. 620,841. (Cl. 24—101.)



A collar fastener adapted to secure a collar to a shirt neck-band and to be attached to the collar, comprising a rectangular thin metal band bent transversely and oppositely at two points to form oppositely projecting legs, the one side leg of which extends beyond the adjacent bend, and the other terminating with its adjacent bend, the clearness between said outside legs and the medial section being of a size to closely accommodate the thickness of material in a collar, and the width at the bends being substantially the same as the width of the band, whereby the bend is adapted to snugly fit a button-hole in the collar through which the end passes.

1,221,291. EMBROIDERING PRESSER-FOOT. ROBERT CORNELY, Paris, France. Filed June 28, 1913. Serial No. 776,413. (Cl. 112—13.)



1. In a sewing machine presser-foot, the combination of a plurality of material-driven independently revoluble members in yielding and frictional engagement with the material passing under said foot, the planes of rotation of the said members diverging in the direction of the feed, and a yielding tongue intermediate said members for maintaining said material flat.

2. In a sewing machine presser-foot, the combination of a plurality of material-driven independently revolving members non-positively engaging the material passing under said foot, the planes of rotation of said members diverging in the direction of the feed.

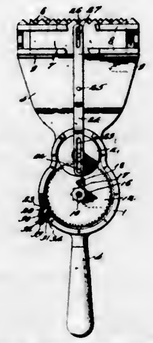
3. In a sewing machine presser-foot, the combination of a plurality of material-driven independently revolving members engaging the material passing under said foot, the planes of rotation of said members diverging in the direction of the feed.

4. In a sewing machine presser-foot, the combination of a plurality of material-driven independently yielding members engaging the material passing under said foot, the planes of rotation of said members diverging in the direction of the feed.

5. In a sewing machine presser-foot, the combination of a plurality of material-driven independently revolving and independently yielding members engaging the material passing under said foot, the planes of rotation of said members diverging in the direction of the feed.

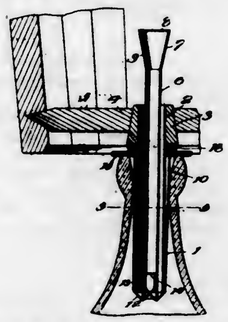
[Claims 6 to 25 not printed in the Gazette.]

1,221,292. ANIMAL-SHEARS. LUTHER H. CRIBBS, Dade City, Fla. Filed Aug. 24, 1916. Serial No. 116,575. (Cl. 30—1.)



An animal shearing device including a casing, a handle projecting therefrom, a stationary blade integral with and offset from a portion of the casing opposite to the handle, a movable blade coöperating with the stationary blade, guiding bars for the movable blade mounted on the stationary blade, a lever offset intermediate its ends and pivoted to the stationary blade having one end in loose connection with the movable blade and the other end arranged within the casing, a spring actuated gear rotatably mounted in the casing, a pawl pivotally mounted in the casing for engagement with the teeth on the gear for preventing rotation of the gear, a retaining catch for holding the pawl out of engagement with the gear to permit of rotation thereof, and a disk mounted in the casing and rotatable by the large gear and eccentrically connected to the inner end of the lever for imparting a reciprocatory movement to the movable knife.

1,221,293. APPARATUS FOR DRAWING LIQUIDS. MYRTLE E. CURL, Port Orford, Oreg. Filed Jan. 15, 1916. Serial No. 72,286. (Cl. 226—12.)



1. In apparatus of the class described, a discharge tube, a vent tube assembled therewith and having its lower end projecting below the lower end of the discharge tube, the vent tube being provided at its upper end with a valve element arranged to normally close the discharge tube and being provided further with a vent opening below the contacting portion of the said valve element.

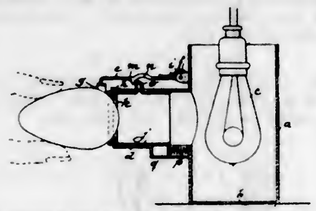
2. In apparatus of the class described, a discharge tube, a vent tube arranged within the discharge tube, a valve head carried by the said vent tube and arranged to normally seat by gravity in position to close the discharge tube, the vent tube being provided with a vent opening below the contacting portion of the said valve head, and means carried by the vent tube for engagement by a vessel to be filled.

3. In apparatus of the class described, a discharge tube, a vent tube arranged within the discharge tube and provided at its upper end with a head constituting a valve normally closing the discharge tube, the said vent tube being provided with a vent opening below the contacting portion of the said head, and a lifting member carried by the vent tube and having portions extending upwardly beside the discharge tube and arranged for engagement by a vessel to be filled.

4. In apparatus of the class described, a discharge tube, a vent tube arranged within the discharge tube and having a closed upper end arranged to normally close the said discharge tube, the vent tube being provided with a vent opening below the contacting portion of its said upper end, and a lifting member having a head frictionally held within the lower end of the vent tube and portions extending upwardly beside the discharge tube and provided with fingers arranged for engagement by a vessel to be filled.

5. In apparatus of the class described, a discharge tube, a vent tube arranged within the discharge tube and having a closed upper end arranged to normally close the said discharge tube, the vent tube being provided with a vent opening located below the contacting portion of its said upper end, and a lifting member formed from a single length of wire bent between its ends to form an open head frictionally fitted and held within the lower end of the said vent tube and to form spaced members extending beside and exteriorly of the discharge tube, the said members at their upper ends being bent upon themselves to form oppositely laterally projecting fingers for engagement by a vessel to be filled.

1,221,294. EGG-CANDLING DEVICE. MICHAEL J. DAVIS, Brooklyn, N. Y. Filed Dec. 15, 1916. Serial No. 137,108. (Cl. 99—6.)



1. The combination with an egg testing device, of means for printing inscriptions on the egg.

2. The combination with an egg candling device, of means mounted on the device for stamping inscriptions on the egg.

3. In an egg candling device, the combination with a peep hole for inserting an egg, of means coacting with the hole for stamping inscriptions on the egg.

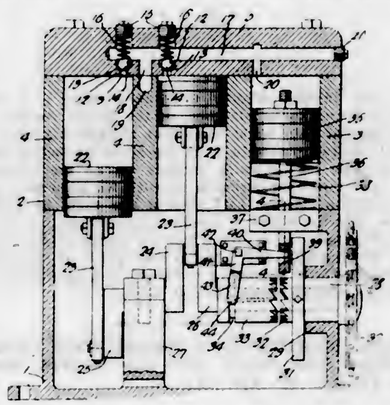
4. In an egg candling device, the combination with a cylindrical member having a peep opening for inserting an egg, and a swinging arm operated by the egg for stamping inscriptions thereon.

5. In an egg candling device, the combination with a cylindrical member having a peep opening for the insertion of an egg, a slide provided with an ink pad normally coacting with the member, and a swinging arm mounted on the device normally engaging the pad for stamping inscriptions on the egg.

[Claim 6 not printed in the Gazette.]

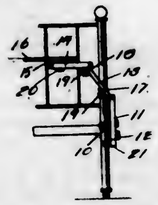
1,221,295. AUTOMATIC AIR-PUMP. GEORGE W. DOPKINS, Morris, Minn. Filed Feb. 12, 1916. Serial No. 77,943. (Cl. 230—27.)

An air pump having a crank case and a body attached thereto, said body being provided with a pump cylinder and another cylinder parallel therewith, the second mentioned cylinder communicating at its outer end with the outlet of the pump cylinder, a crank shaft mounted for rotation within the crank case, a piston working in the pump cylinder and connected to the crank shaft, a bracket at the inner end of the second mentioned cylinder, a piston working within the second mentioned cylinder and having a piston rod slidable through said bracket, an expansion spring between said bracket and second mentioned piston, a driving sleeve journaled in one wall of the crank case and having a clutch portion at its inner end, the crank shaft being journaled within said sleeve, a clutch



collar feathered upon the crank shaft to move into and out of engagement with said clutch portion, a bell crank having its elbow pivoted within the crank case, one arm of the bell crank being operatively engaged with the clutch collar and its other arm being operatively engaged with said piston rod, said piston rod projecting toward the crank shaft, and means carried by said bracket for holding the piston rod releasably in either of two positions.

1,221,296. TABLE ATTACHMENT FOR BEDS. CHARLES DRESEL, Brooklyn, N. Y. Filed July 7, 1914. Serial No. 849,593. (Cl. 45—82.)

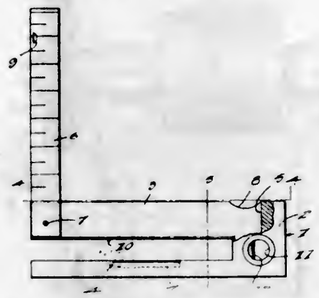


A table attachment for a bed comprising a rail clamping means including a standard, an arm pivotally mounted in the upper end of the standard, adjustable means carried by the standard and engaging the arm for varying the inclination of the arm, a leaf pivotally carried by the upper end of the arm and disposed normally in a horizontal position over the bed, adjustable means carried by the said leaf for engagement with the arm to vary the inclination of the leaf, a tray supporting table carried by the other end of the leaf, said leaf and arm being arranged to be swung on their pivots to dispose the said leaf beneath the bed, and a resilient detent carried by the standard for supporting engagement with the said leaf when the latter is in its lowered position.

1,221,297. COMPOUND TOOL. JAMES A. DUNAGAN, Taylors, S. C. Filed Feb. 18, 1916. Serial No. 79,209. (Cl. 33—82.)

In a compound tool of the class described, a body, said body being bifurcated to form a slot and a pair of parallel

legs of equal length, one of said legs being provided with a slot extending in a plane at right angles to said first mentioned slot, said second slot extending the whole length of said leg, a blade pivoted in said slotted leg and arranged to extend at right angles thereto to form a square



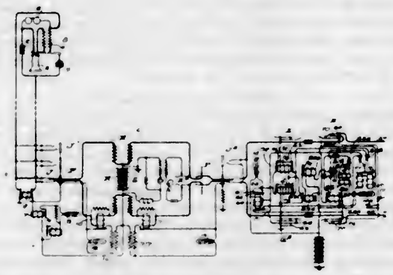
therewith, a leaf spring secured to the slotted leg to hold the blade in its folded position and at right angles to the leg, the bifurcated portion of the body being adapted to slip over a board to form a gage and the blade being adapted to provide a handle by which the device may be readily held.

1,221,298. SIGHT FOR FIREARMS. CHARLES B. DYGERT, Ilion, N. Y., assignor to Remington Arms and Ammunition Company, Ilion, N. Y., a Corporation of New York. Filed June 19, 1914. Serial No. 846,050. (Cl. 33—58.)



A gun sight comprising a spring leaf having means for securing the same to the gun at one end, and means for elevating the free end of the leaf including a wedge piece frictionally engaging the gun barrel, and arranged under the leaf in position to be held on the gun barrel by the leaf, said piece including a bow-shaped resilient clip extending on opposite sides of the leaf and astride the gun barrel, the clip having downwardly projecting strips or runners on its inner side at the outer ends thereof for frictionally engaging the barrel of the gun and for spacing the remaining under surface of the clip from the barrel, substantially as and for the purpose set forth.

1,221,299. SEMI-AUTOMATIC TELEPHONE SYSTEM. CHARLES J. ERICKSON, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 17, 1913. Serial No. 761,801. (Cl. 179—27.)



1. In a telephone system, subscribers' lines, means including an operator's cord circuit and an automatic switch for establishing a connection between two of said lines, a visual signal in said operator's cord, means for transmitting a busy tone current to the calling line when the called line is busy, and means including two tuned vibrating members operated by said busy current for operating said signal.

2. In a telephone system, subscribers' lines, means including an operator's cord circuit and an automatic switch for establishing a connection between two of said lines, a visual signal in said operator's cord, means for transmitting an intermittent busy tone current to the calling line when the called line is busy, and means including two tuned vibrating members operated by said busy current for intermittently operating said signal.

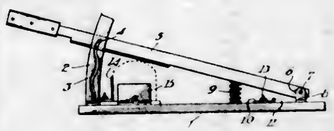
3. In a telephone system, subscribers' lines, means including an operator's cord circuit and an automatic switch for establishing a connection between two of said lines, a supervisory signal associated with said cord, means for operating said signal to indicate when a called subscriber answers and when disconnection is desired, a busy signaling machine associated with said switch for transmitting alternating current to the calling line when an attempt is made to connect with a busy line, and means including two tuned vibrating members controlled by said busy current for operating said signal.

4. In a telephone system, subscribers' lines, means including an operator's cord circuit and an automatic switch for establishing a connection between two of said lines, a supervisory signal associated with said cord, means for operating said signal to indicate when a called subscriber answers and when disconnection is desired, a busy signaling machine associated with said switch for intermittently transmitting alternating current to the calling line when an attempt is made to connect with a busy line, and means including two tuned vibrating members controlled by said busy current for intermittently operating said signal.

5. In a telephone system, a plurality of subscribers' lines, means for establishing a connection between two of said lines, said means including an operator's cord circuit, a trunk circuit adapted to be connected thereto and an automatic switch adapted to be connected to said trunk circuit, a signal in said cord, a busy signaling machine, means controlled thereby for transmitting a busy tone current to the calling line when the called line is busy, a relay bridged across said trunk circuit responsive to said busy signaling current, and means controlled by said relay for operating said signal.

[Claims 6 to 20 not printed in the Gazette.]

1,221,300. BREAD-CUTTER. NILS ERSNES, Antelope, Mont. Filed Dec. 12, 1914. Serial No. 876,926. (Cl. 146—12.)

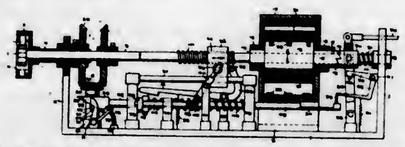


A bread cutter comprising a base, a reciprocating knife mounted on said base, and a plate slidably and adjustably secured to said base beneath said knife, said plate being formed with one upturned edge whereby the length of stroke of said knife may be varied.

1,221,301. AUTOMATIC ENGINE-STARTER. ALBERT SAMUEL FAULKNER, Ogden, Utah. Filed May 24, 1916. Serial No. 99,496. (Cl. 123—187.)

1. In a device of the class described, the combination with a crank shaft of an explosive engine, of a supporting frame, a starting shaft rotatably mounted in said frame, means for operatively connecting said starting shaft with the crank shaft, a wound spring for revolving the starting shaft in one direction, a spring actuated clutch for holding the starting shaft against rotation, means for releasing said clutch, means for holding said clutch in released

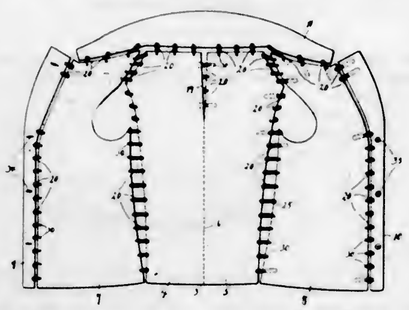
position for a predetermined time, means for subsequently reversing the rotation of the starting shaft for automatically rewinding said spring by the rotation of the said crank shaft, means for stopping the reverse rotation of said starting shaft, and means for releasing the said clutch holding means to permit the clutch to hold the spring in wound position.



2. In an engine starter, the combination with an engine crank shaft, of a rotatable shaft adapted to be connected thereto, a wound spring on said shaft and adapted to rotate said shaft, a clutch collar fixed to said shaft, a spring pressed clutch slidably mounted upon the rotatable shaft and adapted to normally engage the clutch collar to hold the latter against rotation, means for releasing said clutch, means for holding said clutch in released position for a predetermined time, means for subsequently reversing the rotation of the starting shaft, means for stopping the reverse rotation, and means for releasing the clutch holding means.

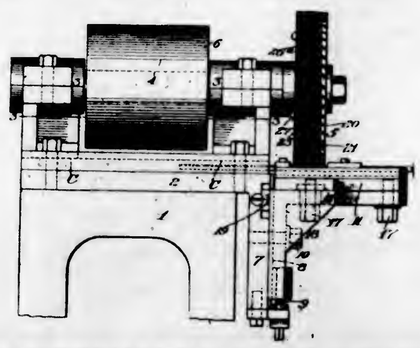
3. In an engine starter, the combination with an engine crank shaft, of a spring actuated rotatable shaft, means for holding the shaft against rotation, means for releasing and retaining the holding means in inoperative position, a ratchet wheel mounted on the rotatable shaft, a flanged sleeve rotatably mounted on the rotatable shaft, a pawl carried by the flanged sleeve and engaging said ratchet wheel, a beveled gear fixed to said sleeves, a bevel gear fixed to said rotatable shaft, a bevel pinion adapted to be thrown in and out of gear with both of said bevel gears simultaneously, and means operatively connected to said rotatable shaft and adapted to actuate said bevel pinion to cause the reverse rotation of said rotatable shaft.

1,221,302. TAILOR'S MEASURING OR FITTING COAT. JOSEPH W. FISCHER, Philadelphia, Pa. Filed May 12, 1916. Serial No. 97,035. (Cl. 33—15.)



A tailor's measuring or fitting coat comprising a back section consisting of two parts joined together throughout a portion of the length, measuring devices secured to the parts at intervals along the unjoined portion, front sections, measuring devices for joining said front sections to the back section, revers, measuring devices for joining said revers to the front sections, a collar, measuring devices for attaching said collar to the back and front sections, a sleeve consisting of front and back sections, permanently secured together along their front seam, measuring devices for joining said sections together along their back seam, said sleeves being permanently secured to the front sections throughout a portion of their circumference, and measuring devices for attaching said sleeve to the back section.

1,221,303. GEAR-CUTTING MACHINE. WILLIAM F. FOLMER, Rochester, N. Y., assignor to Eastman Kodak Co., Rochester, N. Y., a Corporation of New York. Filed Dec. 12, 1914. Serial No. 876,965. (Cl. 90—4.)



1. In a machine for cutting gear teeth, the combination with a support, of a cutting hob having helically arranged cutting teeth rotatably mounted on the support, and a work guide angularly adjustable with relation to the hob about an axis extending substantially radially through the periphery of the hob, one of said parts being movable about said axis as a center while the other remains fixed.

2. In a machine for cutting gear teeth, the combination with a support, of a rotatable cutter carried by the support, having cutting teeth on its periphery, a work guide for guiding a work piece across the periphery of the cutter, the work guide and cutter being relatively adjustable angularly about an axis extending substantially radially through the periphery of the cutter, and means for feeding the work piece.

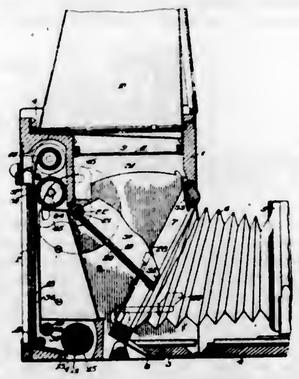
3. In a machine for cutting gear teeth, the combination with a support, of a rotatable cutter carried by the support having cutting teeth on its periphery, a work guide for guiding a work piece across the periphery of the cutter, the cutter and work guide being relatively adjustable angularly about an axis substantially perpendicular to the periphery of the cutter, and means for feeding the work piece.

4. In a machine for cutting gear teeth, the combination with a support, of a rotatable cutter carried by the support having cutting teeth on its periphery, a work guide for guiding a work piece across the periphery of the cutter, adjustable with relation to the cutter about an axis extending substantially radially through the periphery thereof, and means for feeding the work piece.

5. In a machine for cutting gear teeth, the combination with a support, of a rotatable cutter carried by the support and having cutting teeth on its periphery, a bracket carried by the support and movable toward the cutter and a work guide for guiding a work piece across the periphery of the cutter, said guide being angularly adjustable upon the bracket with relation to the cutter about an axis extending substantially radially through the periphery of the cutter, and securing means for holding the work guide in adjusted relation on the bracket.

1,221,304. REFLECTING-CAMERA. WILLIAM F. FOLMER, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 15, 1915. Serial No. 56,022. (Cl. 95—42.)

1. In a reflecting camera, the combination with a body having a focusing aperture and a movable focusing mirror having an operative position in the path of the light cone from the camera lens and an inoperative position in which it seals the focusing aperture, of a safety blind adapted to prevent the cone of light from reaching the focal plane of the camera, and connections between the mirror and blind for maintaining the latter closed when the mirror is moved away from the focusing aperture and for maintaining it open when the mirror is acting as a light seal for said aperture.



2. In a reflecting camera, the combination with a body having a focusing aperture and a movable focusing mirror having an operative position in the path of the light cone from the camera lens and an inoperative position in which it seals the focusing aperture, of a safety curtain in rear of the mirror and in front of the focal plane of the camera, rolls therefor, and connections between one of the rollers and the focusing mirror for maintaining the curtain closed when the focusing aperture is open and vice versa.

3. In a reflecting camera, the combination with a body having a focusing aperture and a pivoted focusing mirror having an operative position in the path of the light cone from the camera lens and an inoperative position in which it seals the focusing aperture, of a safety curtain in rear of the mirror and in front of the focal plane of the camera, wind up and tension rolls therefor, a gear on the wind up roll, a shaft for the focusing mirror, and a segment on said shaft meshing with the gear on the wind up roll to close the safety curtain when the mirror is swung to operative position and to open it when the mirror is moved to inoperative position.

1,221,305. SHADE FOR HEADLIGHTS. EDWARD GABEL, Utica, N. Y. Filed Oct. 27, 1916. Serial No. 128,108. (Cl. 240—48.4.)



1. In a shade for headlights, a ring formed in two parts united by a hinge, an annular chamber in said ring, a shade attached to said ring, and a bolt and thumb-nut for holding said ring in assembled position relative to the head light, whereby the shade will direct the light in a given location.

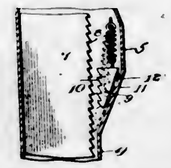
2. In a shade for headlights, a ring having an annular chamber and formed in two parts, united by a hinge, a shade attached to said ring, and a bolt and thumb nut for holding said ring in assembled position relative to said headlight, whereby the shade will direct the rays of light in a given location.

3. In a shade for headlights, a ring having a shade pivoted thereto, a slot in said shade, a bolt attached to said ring, said bolt projecting up through the slot in said shade, and a thumb nut mounted upon said bolt, whereby to hold said shade in adjusted position.

4. In a shade for headlights, a ring formed in two parts, a hinge uniting said parts, a shade pivoted to one of the parts of said ring, a slot in said shade, and a bolt and thumb nut for holding said shade in adjusted position relative to said ring.

5. In a shade for headlights, a ring formed in two parts, a hinge uniting said parts, flanges on said ring forming an annular chamber, a shade pivoted to said ring, a slot in said shade, and a bolt and thumb nut for holding said shade in adjusted position relative to said ring, whereby to cast the rays of light in any given direction.

1,221,306. ADJUSTABLE SCHOOL DESK AND SEAT. MARVIN L. GALL, Philippi, W. Va. Filed Apr. 6, 1916. Serial No. 89,441. (Cl. 155—34.)



1. In a device of the class described, a fixed standard section, a standard section telescopically fitting the first mentioned section, a wedge member coacting with the sections to lock the same at relative adjustment, a member mounted for movement upon one of the standard sections and having operative connection with the said wedge member and movable to withdraw the wedge member from active position, and means for holding the second mentioned member in such position.

2. In a device of the class described, a fixed standard section, a standard section telescopically fitting the first mentioned section, a wedge member coacting with the sections to lock the same at relative adjustment, a spring connected to the wedge member, and an actuating member to which the spring is connected, the said actuating member being movable to position to tension the said spring whereby to withdraw and support the wedge member out of active position.

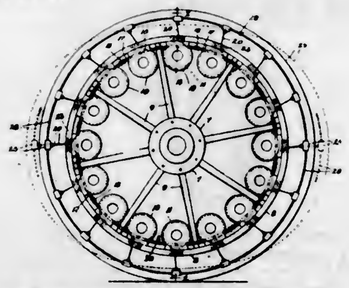
3. In a device of the class described, a fixed standard section, a standard section telescopically fitting the first mentioned section, a wedge member coacting with the sections to lock the same at relative adjustment, a spring connected to the wedge member, a retracting member to which the spring is also connected, the said retracting member being movable to position to tension the said spring, whereby the initial relative movement of the second mentioned section in one direction with relation to the first mentioned section will permit the spring to move the wedge member out of active position, and means for holding the retracting member in the said position to which it is moved.

4. In a device of the class described, a fixed standard section, a standard section telescopically fitting the first mentioned section, a wedge member arranged to coact with the sections to hold the second mentioned section against movement with relation to the first mentioned section in one direction, a lever pivotally mounted upon the first mentioned section, means for holding the lever in one of its positions of adjustment, and a spring connected to the lever and to the said wedge member.

1,221,307. RESILIENT WHEEL. MARCEL GODEFROY, New York, N. Y. Filed May 27, 1914. Serial No. 841,198. (Cl. 152—29.)

1. A resilient wheel comprising a hub, a flexible rim, a plurality of pneumatic receptacles, means for retaining the pneumatic receptacles between the hub and the rim, flexible means attached to the exterior rim and the pneumatic members whereby an elongation of the diameter of the wheel between any two points will produce a compression of the pneumatic members situated between those points, said flexible means preventing the flexible rim from contact with the other parts of the wheel.

2. A resilient wheel comprising a hub, a flexible rim, a plurality of pneumatic receptacles, means for retaining the pneumatic receptacles between the hub and the rim, flexible means attached to the exterior rim and the pneumatic members whereby a shortening of the diameter of the wheel between any two points will cause a compression of the pneumatic members in a direction at right angles to the shortening of the diameter of the wheel and allow an expansion of the pneumatic members situated between the two mentioned points, said flexible means preventing contact between the flexible rim and the rest of the wheel.



3. A resilient wheel comprising a hub, an exterior flexible rim, an interior rim fixedly attached to the hub and spaced from the exterior rim, a plurality of pneumatic receptacles fixedly attached to the interior rim, flexible means connecting the exterior rim with the pneumatic receptacles in such manner that the elongation of the diameter of the wheel at any point will compress the pneumatic receptacles connected to such point, said flexible means preventing the flexible rim from contact with the other elements of the wheel.

4. A resilient wheel comprising a hub, an exterior flexible rim, spider arms or spokes attached to the hub and the interior rim, the exterior rim being spaced from the interior rim, a plurality of receptacles at a fixed distance from the hub each containing a compressible pneumatic member, a flexible member attached to the exterior rim and attached to means whereby the elongation of the diameter of the wheel at any point will compress the pneumatic member upon which it operates, said flexible member suspending the flexible rim free from the other elements of the wheel.

5. A resilient wheel comprising a hub, an interior rim, an exterior flexible rim spaced from the interior rim, spokes integral with the hub and interior rim, a plurality of casings attached to the interior rim each containing a pneumatic flexible receptacle, a flexible member attached to the exterior rim and attached to a movable member within the receptacle carrying the pneumatic member in such a manner that the elongation of the diameter of the wheel will move said movable member causing a compression of the pneumatic receptacle, the flexible rim being spaced from the other elements of the wheel by the flexible connecting members.

[Claim 6 not printed in the Gazette.]

1,221,308. APPARATUS FOR TRANSMITTING IMPULSES OF CURRENT IN ELECTRIC CIRCUITS. CHARLES LANE GOODRUM and BERT G. DUNHAM, Rochester, N. Y., assignors, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 4, 1906. Serial No. 333,050. (Cl. 179—90.)

1. In an impulse transmitter, the combination with circuit contacts, a revoluble shaft, means for normally operating it in one direction, a setting dial, a handle piece engaging therewith and movable laterally relatively thereto, of a locking device adapted to coöperate with said handle to limit the rotary movement of the shaft in the other direction, a controlling device journaled on the shaft and coöperating with the circuit contacts, and means for imparting the rotary movement of the shaft to the controlling device when said shaft is released by the disengagement of the handle from the locking device.



2. In an impulse transmitter, the combination with circuit making and breaking members and a controlling device coöperating therewith, of an oscillatory dial, a handle piece coöperating therewith and movable laterally relatively thereto, locking devices coöperating with said handle to limit the movement of the dial in one direction and secure it against retrograde movement, means for rotating the dial in the opposite direction when the handle is unlocked, and connections between the dial and controlling device for operating the latter during the movement of the dial in one direction.

3. In an impulse transmitter, the combination with circuit making and breaking members and a controlling device coöperating therewith, of a revoluble dial provided with a plurality of apertures, a removable handle piece fitting said apertures, a relatively stationary stop and latch coöperating with the handle for limiting the movement of the dial and locking it in operated position, means for rotating the dial when the handle piece is released from the latch and pawl, and ratchet devices actuated by the dial for operating the controlling device during the return movement of the dial.

4. In an impulse transmitter, the combination with the supporting frame, a shaft journaled therein, a gear wheel and a disk having projections thereon both journaled on the shaft, a governor operated by the gear wheel, an operating dial secured to said shaft adapted to be rotated manually in one direction, a spring for returning said dial to its normal position, an arm mounted on said shaft, a pair of pawls carried thereon and coöperating with the gear wheel and disk, and spring contact members one of which is operated by the disk.

5. In an impulse transmitter, the combination with circuit making and breaking members, mechanism for operating them, a dial for actuating said mechanism having a plurality of apertures arranged circumferentially in its face, and a removable handle piece adapted to project through one or another of said apertures, of a casing, a stop thereon coöperating with said handle piece to limit the movement of the dial in one direction, and a locking device adapted to engage in front of said handle piece when the latter engages the stop.

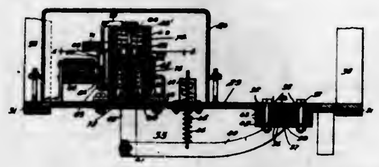
[Claims 6 and 7 not printed in the Gazette.]

1,221,309. AUTOMATIC TRAIN-CONTROL SYSTEM. EDWIN W. GORSUCH, Baltimore, Md. Filed Dec. 11, 1915. Serial No. 66,284. (Cl. 246—58.)

1. In a train control system, the combination with a partial circuit along the right of way and including a rail parallel to the track, of a train carried mechanism, including train governing mechanism, a swingingly mounted member for engagement with the parallel rail, a valve under the control of the member and for controlling the train governing mechanism, a spring actuated block for interposition between the member and the valve, and electrical means including a partial circuit carried by the train for coöperation with the first partial circuit for holding the block in opposition to the spring.

2. A train control mechanism, including a support for attachment to a train, a swingingly mounted shoe carried thereby, a valve connected to the air-brake system of the train carried by the support, means carried by the shoe for operating the valve, a spring actuated member for

disposition between the latter means and the valve, and electrically controlled means for holding the last member from between said means and the valve and for rendering the valve inoperative.



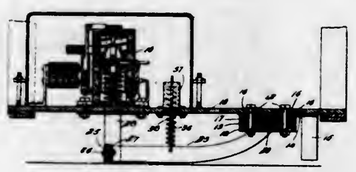
3. A train control mechanism, including a support for attachment to a train, a swingingly mounted shoe carried thereby, two valves mounted upon the train, said valves being mounted to operate alternately, means carried by the shoe for operating said valves, a train governing means controlled by said valves, and electrically controlled means for rendering one of the valves inoperative.

4. A train control mechanism, including a support for attachment to a train, a swingingly mounted shoe carried thereby, two valves, one of said valves being held open by the shoe and the other normally closed, spring and electrically operated means for disconnecting and connecting the other valve from and to the shoe, the first of said valves being connected to the air-brake system while the other exhausts to the atmosphere, and train governing means operably connected to said valves whereby at one time it is under pressure through the first valve and at the other time it is open to the atmosphere through the second valve.

5. A train control mechanism, including a suppport for attachment to a train, a swingingly mounted shoe carried thereby, two valves, one being normally open and the other normally closed, spring and electrically operated means for disconnecting and connecting the last valve to the shoe, said latter means being normally electrically operated, and when spring actuated causing the shoe to be connected to the last valve so that the first valve is permitted to close and the last valve is opened, and train governing means controlled by both of said valves, said means being in normal condition when the first valve is open and being in abnormal condition when the second valve is open.

[Claims 6 to 17 not printed in the Gazette.]

1,221,310. SHOE STRUCTURE FOR TRAIN-CONTROL SYSTEMS. EDWIN W. GORSUCH, Baltimore, Md. Original application filed Dec. 11, 1915, Serial No. 66,284. Divided and this application filed Aug. 16, 1916. Serial No. 115,213. (Cl. 246—59.)



1. In a train control apparatus, a support, two spaced curved arms connected by a journaling connection, a ramp abutting member abridging the opposite ends of said arms, and a U-shaped bridging member having its terminals connected to said curved arms.

2. In a train control apparatus, a suitable support, two spaced curved arms, a flat connection between the two arms at one end thereof, a bushing surrounding the connection and journaled to the support, a ramp abutting member bridging the opposite ends of the arms, and a U-shaped bridging member having its terminals connected to the arms.

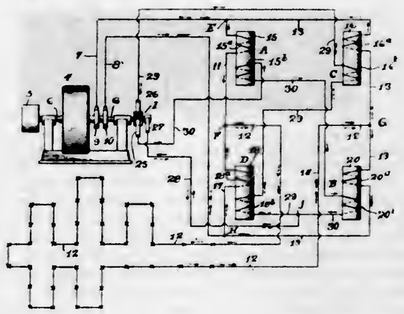
3. A ramp actuated shoe for train control systems, including two curved arms, a flat strip connecting the supporting ends of said arms, and a removable ramp engaging member of greater wear resisting material than the arms connected to the other ends of the arms.

4. A ramp actuated shoe for train control systems, including two curved arms, a flat strip connecting the supporting ends of said arms, a removable ramp engaging member of greater wear resisting material than the arms connected to the other ends of the arms, and a U-shaped member attached to both arms.

5. A ramp actuated shoe for train control systems, including two curved arms, a flat strip connecting the supporting ends of said arms, a removable ramp engaging member of greater wear resisting material than the arms connected to the other ends of the arms, and a U-shaped member having the terminals thereof connected to the curved arms adjacent the ramp engaging member.

[Claims 6 to 8 not printed in the Gazette.]

1,221,311. APPARATUS FOR OBTAINING DIRECT CURRENTS FROM ALTERNATING CURRENTS. LESLIE B. GRAHAM, East Chicago, Ind., assignor of one-third to himself, one-third to Albert H. Adams, Oak Park, Ill., and one-third to John L. Jackson, River Forest, Ill. Filed Oct. 7, 1915. Serial No. 54,508. (Cl. 175—364.)



1. An apparatus of the character described, comprising an alternating-current generator, an electrically-controlled resistance element interposed in the path of said generator current and acting to oppose the passage of current impulses of one sign therethrough, a secondary circuit for appropriately energizing said resistance element, and a commutator mounted on the generator shaft and acting to positively maintain synchronism between the impulses of the alternating current and the energization of said resistance element.

2. An apparatus of the character described, comprising an alternating-current generator, means for dividing current therefrom into two paths, electrically-controlled resistance elements interposed respectively in said paths and acting to oppose the passage of current impulses of opposite signs through said paths, respectively, secondary circuits for appropriately energizing said resistance elements, and means for maintaining synchronism between the impulses of the alternating current from said generator and the energization of said resistance elements.

3. An apparatus of the character described, comprising an alternating-current generator, means for dividing current therefrom into two paths, electrically-controlled resistance elements interposed respectively in said paths and acting to oppose the passage of current impulses of opposite signs through said paths, respectively, secondary circuits for appropriately energizing said resistance elements, and a commutator connected with the generator

shaft for maintaining synchronism between the impulses of the alternating current from said generator and the energization of said resistance elements.

4. An apparatus of the character described, comprising an alternating-current generator, means for dividing current therefrom into two paths, electrically-controlled resistance elements interposed respectively in said paths and acting to oppose the passage of current impulses of opposite signs through said paths, respectively, secondary circuits for appropriately energizing said resistance elements, means for maintaining synchronism between the impulses of the alternating current from said generator and the energization of said resistance elements, and a single load circuit connected with said paths.

5. An apparatus of the character described, comprising an alternating-current generator, means for dividing current therefrom into two paths, electrically-controlled resistance elements interposed respectively in said paths and acting to oppose the passage of current impulses of opposite signs through said paths, respectively, secondary circuits for appropriately energizing said resistance elements, a commutator connected with the generator shaft for maintaining synchronism between the impulses of the alternating current from said generator and the energization of said resistance elements, and a single load circuit connected with said paths.

1,221,312. ANIMAL-TRAP. LINWOOD L. GRAHAM, Cades, S. C. Filed Oct. 27, 1915. Serial No. 58,269. (Cl. 43—26.)



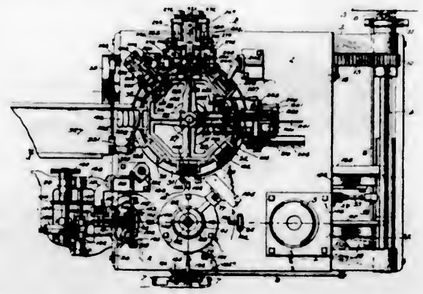
An animal trap comprising a cage-like body, a transverse partition mounted therein, a horizontal platform supported by the partition and having a hingedly connected section carried thereby, levers pivotally supported in the body and having their adjacent ends pivotally connected by a link, a trap door hingedly connected to one end of the body and adapted to have its free edge engaged with the end of one of the levers to hold the door in its open position, a bait pan carried by the other lever which when moved downwardly by the animal will rock the levers to release the door, and means operatively connecting the section and trap door for moving said door into engagement with the adjacent lever when the said section is tilted downwardly.

1,221,313. MACHINE FOR PACKAGING MATERIALS. GEORGE W. GWINN, New York, N. Y., assignor to Automatic Packing & Labeling Company, Durham, N. C., a Corporation of North Carolina. Filed Dec. 29, 1914. Serial No. 879,565. (Cl. 93—6.)

1. In a machine for packing material in containers, the combination of charge-feeding mechanism; automatic liner-forming mechanism; automatic mechanism for placing a charge of material in said liner and a container positioned over the liner; means for closing the container; and intermediate connections whereby the several mechanisms are caused to perform their operations in proper time and sequence without interference.

2. In a machine for packing material in containers, the combination of automatic means for forming a liner and closing one end thereof; automatic means for placing a charge of material in said liner and a container positioned over the liner; means for closing the other end of the liner; means for closing the container; and intermediate connections whereby the several mechanisms are caused to perform their operations in proper time and sequence without interference.

3. In a machine for packing material in a container having a hinged lid, the combination of automatic means for placing a charge of material in the container; means for placing an insert or coupon in the lid; and means for closing the lid upon the body of the container.

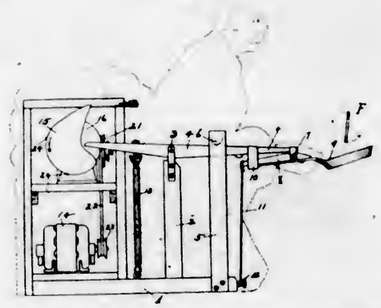


4. In a machine for packing material in containers, the combination of automatic means for forming a liner into tubular form; automatic means for closing the lower end thereof; automatic means for placing a charge of material in said liner and in a container positioned over the liner; means for closing the upper end of said liner; means for closing the container; and intermediate connections whereby the several means are caused to perform their operations in proper time and sequence without interference.

5. In a machine for packing material in a container having a hinged lid, the combination of automatic means for forming a liner into tubular form; automatic means for closing the lower end of the liner; automatic means for placing a charge of material in said liner and in a container positioned over the liner; means for closing the upper end of the liner; means for placing a coupon in the open lid; means for closing the lid; and intermediate connections whereby the several means are caused to perform their operations in proper time and sequence without interference.

[Claims 6 to 96 not printed in the Gazette.]

1,221,314. FIGURE TOY. WALTER L. HADLOCK, Portland, Oreg. Filed Nov. 15, 1916. Serial No. 131,565. (Cl. 46—40.)



1. In a device of the character referred to, a movably supported arm, a receptacle supported by said arm, an article in said receptacle, means for imparting a quick movement to said arm and said receptacle, whereby to toss the article in said receptacle and catch it again therein.

2. In a device of the character referred to, a movably supported arm, a receptacle supported by said arm, an article in said receptacle, means for mechanically and intermittently imparting a quick movement to said arm and said receptacle, whereby to toss the article in said receptacle and catch it again therein.

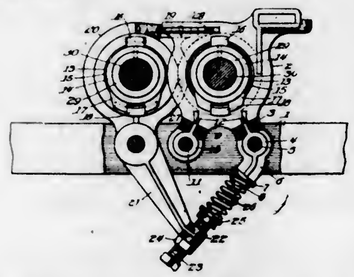
3. In a device of the character referred to, a movably supported arm, a receptacle supported by said arm, an article in said receptacle, means for moving said arm so as to lower said receptacle, and means for giving a quick upward movement to the outer end of said arm and to said receptacle, whereby to toss the article therein.

4. In a device of the character referred to, a movably supported arm, a receptacle supported by said arm, an article in said receptacle, means for moving said arm so as to lower said receptacle, and means for mechanically and intermittently giving a quick upward movement to the outer end of said arm and to said receptacle, whereby to toss the article therein.

5. In a device of the character referred to, a pivotally mounted arm, means for intermittently raising and releasing said arm, a receptacle pivotally connected to the outer end of said arm and moving therewith, and means for giving a quick movement to said receptacle relative to said arm, as said arm is released, for the purpose described.

[Claims 6 to 11 not printed in the Gazette.]

1,221,315. JOURNAL-BEARING. CLINTON A. HAGADONE, Western Springs, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Sept. 11, 1913. Serial No. 789,232. (Cl. 64—52.)



1. In a journal bearing, a supporting frame, and journal carrying brackets mounted side by side upon said frame, one of said brackets being permitted angular movement and directly engaging with the opposing bracket in a manner to limit such movement.

2. In a journal bearing, a supporting frame, opposing journal carrying brackets mounted side by side upon said frame, one of said brackets being permitted angular movement, and inter-engaging hooks carried by said brackets and operative in a manner to limit such movement.

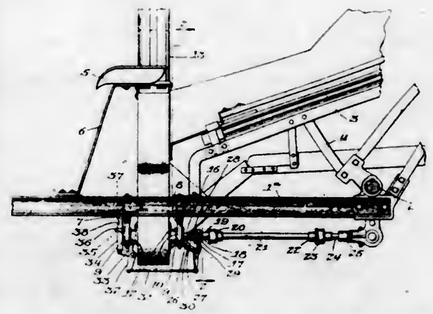
3. In a journal bearing, a supporting frame, journal carrying brackets mounted side by side thereon, one of said brackets being pivotally mounted and permitted angular movement, and a spring operative to yieldingly resist such movement in one direction, and interengaging parts carried by said brackets and operative to limit an angular movement in the same direction.

4. In combination, a frame, a plurality of bearing brackets carried thereon, one of said brackets being fixed with respect to the frame and the other being pivotally mounted thereon, coöperating rolls journaled in said brackets, means intermediate said brackets for yieldingly resisting movement of one of said rolls, and means for limiting the same movement.

5. In combination, a frame, a plurality of bearing brackets carried thereon, one of said brackets being fixed with respect to the frame and the other being pivotally mounted thereon, coöperating rolls journaled in said brackets, means for permitting a yielding movement of one of said rolls and brackets, and interengageable means carried by said brackets for limiting such movement.

[Claims 6 to 9 not printed in the Gazette.]

1,221,316. CORN HARVESTER AND HUSKER. CLINTON A. HAGADONE, Western Springs, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed July 26, 1915. Serial No. 41,972. (Cl. 56—113.)



1. A corn harvester and husker including, in combination, a wheel frame, an elevator including a conveyer trough, said trough having bearing boxes secured thereto, an elevator driving shaft journaled in said bearing boxes, clutch mechanism mounted upon said shaft, clutch shipping mechanism mounted upon said bearing boxes, and means for detachably connecting said bearing boxes with said wheel frame.

2. A corn harvester and husker including, in combination, a wheel frame, an elevator including a conveyer trough, said trough having bearing boxes secured thereto, an elevator driving shaft journaled in said bearing boxes, clutch mechanism mounted upon said shaft, clutch shipping mechanism mounted upon said bearing boxes, and means for detachably connecting said bearing boxes with said wheel frame, said means including bracket members having one end secured to said wheel frame and their opposite ends provided with forked members adapted to receive said bearing boxes.

3. A corn harvester and husker including, in combination, a wheel frame, an elevator including a conveyer trough, said trough having bearing boxes secured thereto, an elevator driving shaft journaled in said bearing boxes, clutch mechanism mounted upon said bearing boxes, and means for detachably connecting said bearing boxes with said wheel frame, said means including bracket members having one end secured to said wheel frame and their opposite ends provided with forked members adapted to releasably and rotatably receive said bearing boxes, and securing members received by openings in the ends of said bearing boxes and securing said bearing boxes in operative position.

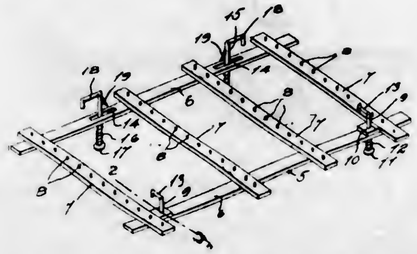
4. A corn harvester and husker including, in combination, a wheel frame, an elevator including a conveyer trough, said trough having bearing boxes secured to opposite sides thereof, said bearing boxes having peripheral channels, an elevator driving shaft journaled in said bearing boxes, a clutch mechanism mounted upon said shaft, clutch shipping mechanism mounted upon said bearing boxes, bracket members having one end secured to said wheel frame and their opposite ends provided with forked members adapted to be received by the channels upon said bearing boxes, and securing members received by openings in the ends of said forked members and securing said bearing boxes in operative position.

5. A corn harvester and husker including, in combination, a wheel frame, an elevator including a conveyer trough, said trough having bearing boxes secured to opposite sides thereof, said bearing boxes having peripheral channels, an elevator driving shaft journaled in said bearing boxes, a clutch mechanism mounted upon said shaft, depending arms integral with said bearing boxes, a clutch shipping lever pivotally mounted upon one of said

arms, having one end engaging with said clutch mechanism, a link having one end connected with the opposite end of said lever, a bell crank lever pivotally mounted upon the remaining arm, one arm of said lever connected with the opposite end of said link, a foot engaging member pivotally connected with the remaining arm of the bell crank lever, and means for detachably connecting said bearing boxes with said wheel frame.

[Claims 6 to 9 not printed in the Gazette.]

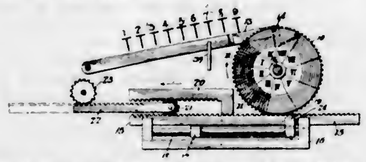
1,221,317. LATH-HOLDER. JOHN H. HALLER, Bucklin, Kans. Filed July 14, 1916. Serial No. 109,310. (Cl. 20—14.)



1. A lath holder comprising a frame including longitudinal members and transverse connecting members, a plurality of pins carried by said transverse connecting members, lath-engaging hooks carried by one of the longitudinal members, means normally tending to move the beak or angular end of said hooks toward said longitudinal member, spring actuated hooks carried by the other longitudinal member adapted to engage the studding of a building structure to secure the frame in position thereon, and laterally projecting teeth carried by the last-mentioned hooks.

2. A lath holder comprising a frame including longitudinal members and transverse connecting members, a plurality of pins carried by said transverse connecting members, lath engaging hooks carried by one of the longitudinal members, means normally tending to move the beak or angular end of said hooks toward said longitudinal member, spring actuated hooks carried by the other longitudinal member adapted to engage the studding of a building structure to secure the frame in position thereon, said spring actuated hooks being adjustably carried by said longitudinal member, as and for the purpose specified.

1,221,318. CALCULATING-MACHINE. CHRISTEL HAMANN, Friedenau, near Berlin, Germany, assignor to The Ch. Hamann, Mathematische Mechanisches Institut G. M. B. H., Berlin, Germany. Filed Apr. 20, 1912. Serial No. 691,991. (Cl. 235—79.)



1. In a calculating machine, product members on which the separate digits of partial products are represented, a counter comprising a plurality of denominations, and a differential connection comprising a member adapted to be actuated by a product member in accordance with the units of a partial product of one denomination, a second member adapted to be actuated at the same time as the first mentioned member in accordance with the tens of the partial product of next lower denomination, and a third member for registering on a denomination of said counter the sum of said units and tens.

2. In a calculating machine, a plurality of product members on which are represented the units and tens of partial products, a plurality of pairs of devices adapted to be positioned relatively to said members in accordance with the digits of a multiplicand, a member adapted to be actuated by one of said devices in accordance with the units of a partial product of one denomination, a member adapted to be actuated by another of said devices in accordance with the tens of the partial product of next lower denomination, and means for adding said units and tens and for registering their sum on a denomination of said counter.

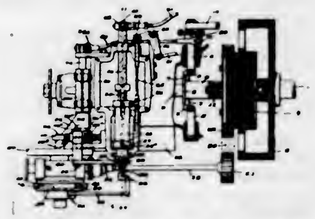
3. In a calculating machine, a plurality of product members, a counter, transmitting connections intermediate said product members and said counter, a plurality of devices adapted to be positioned relatively to said product members in accordance with the digits of a multiplicand, a plurality of banks of keys, and a plurality of levers operated by the keys of individual banks to position said devices and to position dials to indicate the multiplicand digits set up by said keys.

4. In a calculating machine, a plurality of movable members, a counter, a plurality of transmitting connections actuated in increasing number by said members to register on said counter, and a link for moving said members and for equalizing the increasing resistance to movement.

5. In a calculating machine, a pair of disks for each multiplicand digit wherein a disk of each pair is provided with projections arranged in nine groups representing the units of separate partial products and wherein the other disk of each pair is provided with projections representing the tens of partial products, a plurality of levers each provided with an abutment for the unit projections of a disk and an abutment for the tens projections of a disk, a counter, means for positioning each of said levers in accordance with a digit of the multiplicand, means for actuating said disks whereby the separate movements thereof are proportional to the separate digits of the predetermined partial products, and means for registering said partial products in proper denominational relation on said counter.

[Claims 6 to 15 not printed in the Gazette.]

1,221,319. POWER GEAR-SHIFTING MECHANISM. CHARLES G. HANNA, Syracuse, N. Y., assignor of one half to Adelbert Slocum, Syracuse, N. Y. Filed May 15, 1914, Serial No. 838,701. Renewed June 27, 1916. Serial No. 106,262. (Cl. 74—58.)



1. In a selective change speed transmission gearing, gear shifters, a member coacting with the shifters and having a selecting and shifting movement, power driven means for effecting the shifting movement, and manual means for effecting the selecting movement and controlling the shifting movement by the power driven means, substantially as and for the purpose described.

2. In a change speed transmission gearing, the combination of a member having a selective and shifting movement, a power shaft, normally idle power transmitting mechanism between the shaft and said member and including connecting means shiftable into and out of effective connection with said shaft and being normally out of effective connection therewith, and manual means for effecting the selecting movement of said member and controlling the shifting of the connecting means into effective position, substantially as and for the purpose set forth.

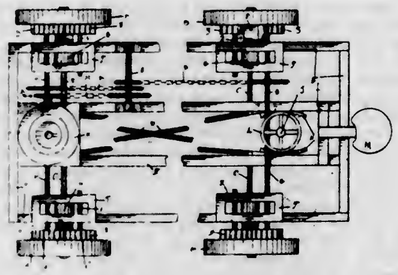
3. In a change speed transmission gearing, the combination of a rocking and axially movable selecting and shifting member, a power shaft, normally idle power transmitting mechanism between the shaft and said member to effect the shifting movement thereof, said mechanism including connecting means shiftable into and out of effective connection with the shaft and being normally out of effective connection therewith, and manual means for effecting the selecting movements of said shifting members and controlling the shifting movement of the connecting means into effective connection with the shaft to effect the shifting movement of said member, substantially as and for the purpose described.

4. In a change speed transmission gearing, a member having a selecting and shifting movement, a power driven shaft, normally idle power transmission mechanism between the shaft and said member including a clutch element shiftable into and out of connection with said shaft and being normally out of connection therewith, and manual means for effecting the selecting movement of said member, and controlling the movement of the clutch element into operative position to effect the actuation of the shifting mechanism, substantially as and for the purpose specified.

5. In a change speed gearing, a rocking and axially movable selecting and shifting member, a power shaft, normally idle power transmitting mechanism between the shaft and said member to effect the shifting movement thereof, said mechanism including a clutch element shiftable into and out of connection with the shaft and being normally out of connection therewith, and manual means for effecting the selecting movement of said member and controlling the movement of the clutch element into operative connection with the power shaft to control the shifting movement of said member, substantially as and for the purpose set forth.

[Claims 6 to 63 not printed in the Gazette.]

1,221,320. TRACTOR. MARTIN HANSEN, Salt Lake City, Utah. Filed May 24, 1916. Serial No. 99,554. (Cl. 21—114.)



1. In a self propelled vehicle the combination of four traction wheels; a stub axle for each wheel; an annular gear concentrically secured on each of said wheels; a wheel pivot for each of said gears; a frame mounted on said pivots; two reaches each of which is pivoted to the inner ends of one rear and one front axle; means to suspend said reaches from said frame and allow longitudinal movement thereof; a rack on the front portion of each of said reaches with the teeth turned inwardly; a gear whose teeth mesh with the teeth of said racks; and means to rotate said gear and thereby to move said axles on said pivots.

2. In a self propelled vehicle the combination of four traction wheels; a stub axle for each wheel; an annular gear concentrically secured on each of said wheels; a wheel pivot for each of said gears; a frame mounted on said pivots; two reaches each of which is pivoted to the inner ends of one rear and one front axle; means to suspend said reaches from said frame and allow longitudinal movement thereof; a rack on the front portion of each of said reaches with the teeth turned inwardly; a gear whose teeth mesh with the teeth of said racks; means to rotate said gear and thereby to move said axles on said pivots; said means consisting of a vertical shaft and a hand wheel on its upper end.

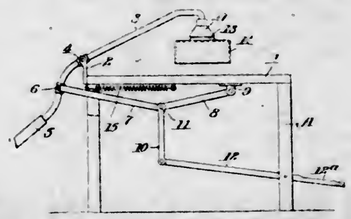
3. In a self propelled vehicle the combination of four traction wheels; a stub axle for each wheel and having a hole vertically therein; an annular gear concentrically secured on each of said wheels; a wheel pivot for each of said gears, each of said pivots consisting of a curved member having a hollow stud depending therefrom; a recessed base having a vertical hole concentrically in said recess and a transverse semi-circular channel in its underside to fit partially around said axle; and a bolt passed vertically through said pivot in alinement with the hollow stud and through said stud and the hole in said base and the hole in the contiguous axle; a frame mounted on said pivots; two reaches each of which is pivoted to the inner ends of one rear and one front axle; and means to simultaneously move one of said reaches longitudinally forward and the other backward and thereby to turn said gears on said pivots.

4. In a self propelled vehicle the combination of four traction wheels; a stub axle for each wheel, an annular gear concentrically secured on each of said wheels; a wheel pivot for each of said gears; means to turn each of said wheels and its connected gears on said pivots; a main frame mounted on said pivots and a tilting frame on each pivot; a power driven shaft mounted on said main frame; two shafts journaled on each of said tilting frames; means to impart the motion of said power driven shaft to one of said shafts mounted on said shifting frames; gear wheels secured on the outer end of said last mentioned shafts the teeth of one meshing with the teeth on the other, and the teeth of either adapted to engage and mesh with the teeth of said annular gear when said tilting frames are moved on their pivots; and means to move said tilting frames on their pivots.

5. In a self propelled vehicle the combination of four traction wheels; a stub axle for each wheel, an annular gear concentrically secured on each of said wheels; a wheel pivot for each of said gears; means to turn each of said wheels and its connected gears on said pivots; a main frame mounted on said pivots and a tilting frame on each pivot; two intermeshing gears mounted on each of said tilting frames; and cogs on said annular gears and on said last mentioned gear, elliptical in cross section and adapted to intermesh when brought into operative position.

[Claim 6 not printed in the Gazette.]

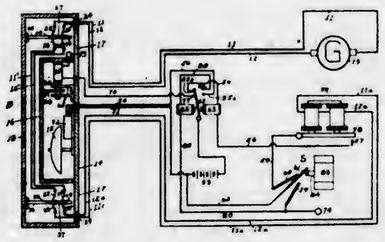
1,122,321. MEANS FOR BLOWING ICE-CREAM FROM MOLDS. LIONEL MANUEL HENDER, Baltimore, Md. Filed Jan. 31, 1917. Serial No. 145,682. (Cl. 107—7.)



1. The combination with an ice cream mold having a perforation in the bottom thereof, of a mechanism for blowing ice cream from the mold comprising a pipe for conveying air under pressure, a valve at the outlet of said pipe and having a stem projecting beyond the pipe, and a resilient bell-mouth surrounding the outlet of said pipe and projecting to approximately the end of the valve stem, said bell mouth adapted to engage the bottom of the mold and surround the perforation therein, and said stem adapted to engage the mold and open the valve.

2. The combination with an ice cream mold having a perforation in the bottom thereof, of a mechanism for blowing ice cream from the mold comprising a pipe for conveying air under pressure, a valve at the outlet of said pipe and having a stem projecting beyond the pipe, a resilient bell-mouth surrounding the outlet of said pipe and projecting to approximately the end of the valve stem, a treadle, and means operated thereby for pressing the bell-mouth against the bottom of the mold, said bell mouth adapted to surround the perforation in the bottom of the mold and said stem adapted to engage the mold and open the valve.

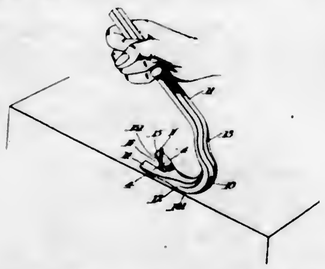
1,221,322. ELECTRIC LOCK. SIMON B. HESS, New York, N. Y. Original application filed June 3, 1915, Serial No. 31,831. Divided and this application filed Feb. 9, 1917. Serial No. 147,665. (Cl. 70—50.)



1. The combination of an inner casing, an outer casing, locking means for said inner casing, releasing means for said locking means, and disabling means for said releasing means controlled by said outer casing.

2. The combination of an inner casing, an outer casing, locking means for said inner casing, electromagnetic releasing means for said locking means, an energizing circuit for said releasing means, a manually operated switch in said energizing circuit, an automatically operated switch in said energizing circuit, and means controlled by said outer casing for operating said automatically operated switch.

1,221,323. EXTRACTOR FOR PULLING HEADLESS NAILS, SPIKES, AND THE LIKE. ENOCH HILL, Dallas, S. D. Filed Dec. 12, 1916. Serial No. 136,486. (Cl. 254—25.)



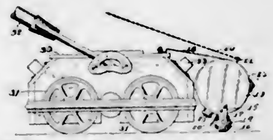
1. An extractor for pulling headless nails, spikes and the like comprising a claw consisting of two diverging fingers disposed in different planes, and a handle for said claw, said handle and claw being disposed in intersecting planes.

2. An extractor for pulling headless nails, spikes and the like comprising a claw consisting of two diverging fingers having opposed biting edges, said fingers being in different planes, and means for raising the claw and causing said biting edges to bite into opposite sides of the shank of a headless nail to be extracted, substantially as described.

3. An extractor for pulling headless nails, spikes and the like comprising a bar bent upon itself intermediate its ends to provide a long arm constituting a handle, and a short arm, said arms being in intersecting planes, the end of the short arm being provided with a claw consisting of two diverging fingers having opposed biting edges, one of said fingers having a flat bottom face and the other finger extending upwardly at an angle to said flat face, whereby said biting edges are disposed in intersecting planes, for the purpose described.

4. An extractor for pulling headless nails, spikes and the like comprising a bar bent upon itself nearer one end than the other to provide a long arm and a short arm, the long arm constituting a handle for the tool and the bend joining said arms being of a gradual curvature and constituting the fulcrum portion of the tool, and a claw at the end of the short arm consisting of two diverging fingers having opposed biting edges, said fingers and the edges thereof being in different planes.

1,221,324. WET-CLEANING ATTACHMENT FOR CARPET-SWEEPERS. FREDERICK HODSCHAR, Brooklyn, N. Y. Filed Jan. 9, 1915. Serial No. 1,289. (Cl. 15—60.)



1. An attachment for carpet sweepers comprising a fountain having means for connecting the same with the sweeper, said fountain being provided at the bottom thereof with small feed apertures, and a feed roller mounted adjacent said feed apertures and movable toward and away therefrom.

2. An attachment for carpet sweepers consisting of a fountain formed with feed apertures in the bottom thereof, ears having slots disposed at the ends of the fountain, and a feed roller journaled in said slots adapted to contact with the fountain at said apertures.

3. An attachment for carpet sweepers comprising a fountain having feed apertures, a feed roller mounted thereon adjacent to the feed apertures, hooks extending from the fountain and a chain attached thereto for lifting the same out of operative relation with the carpet.

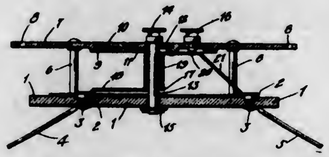
4. An attachment for carpet sweepers comprising a fountain having feed apertures, a roller mounted adjacent said feed apertures, a guard for preventing the slinging of liquid from the roller, and hooks extending from the fountain adapted to detachably hook the fountain to a sweeper.

5. An attachment for carpet sweepers comprising a fountain having minute feed apertures at the bottom thereof, a feeding element mounted adjacent said apertures and movable to and from said apertures to come into and out of wiping engagement therewith, said fountain being provided with a filling aperture located adjacent said feed apertures.

[Claim 6 not printed in the Gazette.]

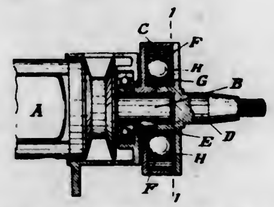
1,221,325. ELECTRIC SWITCH. MICHAEL HOFFMANN, Ivanhoe, Minn., assignor of one-half to Walter J. Dalton and one-sixth to Frank R. Kluczny, Ivanhoe, Minn. Filed Jan. 18, 1916. Serial No. 72,783. (Cl. 175—282.)

A switch comprising a supporting plate having a centrally opened recess, a dielectric plate held beneath the supporting plate, concentric rows of contacts arranged on the dielectric plate, one contact in each set forming the terminal of an electric circuit, a rotatable plate mounted in the recess of the supporting plate and having a centrally opened flanged recess, a turning knob on the rotatable plate, a rotatable staff having a knob, the staff being disposed coaxially with the supporting and dielectric plates, a bracket secured to the rotatable plate having a sleeve at one end circomposed on and spaced from the staff, the bracket having at the other end a contact arm adapted to engage one of the rows of the contacts, a second sleeve disposed between the first named sleeve and the



staff, the second sleeve being removably secured to the staff and including a contact arm for engaging the other of the rows of the contacts, a washer for the staff arranged to rest in the recess of the rotatable plate and support the knob of the staff, and a cotter pin for the staff to retain the staff, washer, and rotatable plate in position.

1,221,326. APPARATUS FOR ADJUSTING THE PERIOD OF ELECTRICAL IGNITION. GOTTLOB HONOLD, Stuttgart, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany. Filed July 1, 1912. Serial No. 706,866. (Cl. 123—117.)



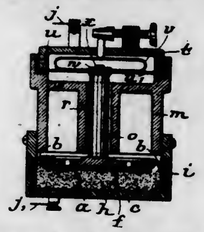
1. Apparatus for adjusting the period of electrical ignition for an internal combustion engine, comprising a rotatable member having radial guides, a coöperative member surrounding the other member, a spirally arranged spring attached to both members, and weights in said guides arranged to press against the spring in response to centrifugal action to angularly displace the members upon variation of speed.

2. The combination with a magneto electric generator having a rotatable shaft, of apparatus for adjusting the ignition period of the generator, comprising a rotatable driving member having radial guides, a coöperative driven member surrounding the other member and fastened on the generator shaft, a spiraly arranged spring attached to both members, and metal balls in said guides arranged to press the spring outwardly in response to centrifugal action to angularly advance the driven member relatively to the driving member upon increase of speed.

1,221,327. ELECTRICAL REGULATING DEVICE. GOTTLOB HONOLD, Stuttgart, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany. Filed Nov. 13, 1913. Serial No. 800,765. (Cl. 171—229.)

1. In a regulator for electric circuits, a container, a mass of finely divided resistance material therein, and a magnetically-responsive pressure member effective on the end plate being provided with a recess, said recesses being provided with ventilating means communicating with the resistance material for maintaining a uniform surface distribution of the resistance material during the movement of said pressure member.

2. In a regulator for electric circuits, a container, a mass of finely divided resistance material therein, and a magnetically-responsive pressure member effective on the mass to vary the resistance thereof and being provided with ventilating means preventing suction on the exposed surface of the resistance mass upon movement of said pressure member away therefrom.



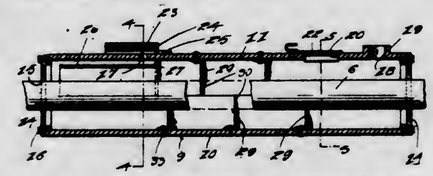
3. In a regulator for electric circuits, a mass of finely divided resistance material, a container therefor, and a magnetically-responsive pressure member effective on the mass to vary the resistance thereof, the surface of said mass which lies beneath said pressure member being exposed to the atmosphere.

4. In a regulator for electric circuits, a mass of finely divided resistance material, a container therefor, and a magnetically-responsive pressure member effective on the mass to vary the resistance thereof, the surface of said mass which lies beneath said pressure member being exposed to the atmosphere at a plurality of points.

5. In a regulator for electric circuits, a mass of finely divided resistance material, a container therefor, and a magnetically-responsive pressure member effective on the mass to vary the resistance thereof, said pressure member providing communication between the surface of said mass and the atmosphere.

[Claims 6 to 9 not printed in the Gazette.]

1,221,328. AIR HEATER AND DRIER. HENRY B. HUDEPOHL, Mount Healthy, Ohio. Filed Feb. 19, 1916. Serial No. 79,363. (Cl. 257—241.)

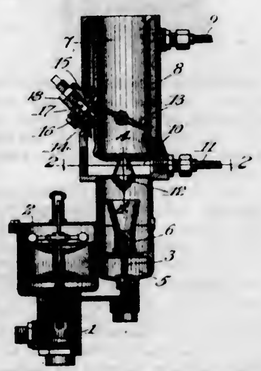


1. A device of the class described comprising a pair of semi-cylindrical sections having their lateral edges secured together, end plates secured to the sections, each end plate being provided with a recess, said recesses being adapted to fit around the exhaust pipe of the motor in connection with which the device is used, one of the sections being provided with a transverse row of inlet openings and having an outlet opening near its opposite end, a hood for partially inclosing the inlet opening, the open end of the hood being disposed rearwardly, a guard plate partially inclosing the openings and positioned on the inside of the sections to direct the inflowing air toward the rear end of the device and a plurality of baffle plates secured to each section to form a tortuous passage and assist in drying the air passing therethrough.

2. In a device of the class described, a pair of semi-cylindrical sections, one of the sections being provided with a row of transverse apertures near its rear end and having an outlet aperture near its forward end, the lateral edges of said sections being secured together, a hood partially inclosing the inlet openings and being secured to the exterior of the sections, the open end of the hood being disposed rearwardly, a guard plate secured to the interior of the sections immediately beneath the apertures, the open end of said guard plate being disposed rearwardly, end plates on the sections, said end plates being recessed to accommodate the exhaust pipe of the engine in connection with which the device is used, a plu-

rality of baffle plates within the device and secured to opposite sections to form a tortuous passage, the section having the inlet and outlet openings being provided with an auxiliary inlet opening and a sliding cover for closing said opening.

1,221,329. CARBURETER. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Original application filed Aug. 29, 1907. Serial No. 390,652. Divided and this application filed July 16, 1912. Serial No. 709,747. (Cl. 261—13.)



1. In a carbureter for hydrocarbon engines, the combination of a mixing chamber having a hot water tube extending thereacross and formed integral with the walls of the chamber, a throttle valve arranged in said chamber and adapted to control the flow of mixture therethrough, and a by-pass formed in the wall of said chamber and providing a restricted passage for mixture when the throttle valve is closed.

2. In a carbureter for hydrocarbon engines, the combination with a mixing chamber, of a valve therein, and a by-pass around said valve, said by-pass comprising two intersecting passages through the wall of the mixing chamber, one of said passages being provided with a removable plug and the other being provided with a removable and adjustable valve, whereby the by-pass may be controlled and readily cleaned.

3. In a carbureter for hydrocarbon engines, the combination with the mixing chamber of a gasolene nozzle discharging therein, an air intake for said chamber, a water-jacket for said chamber, a valve adapted to close the passage through said chamber, and a by-pass around said valve comprising two intersecting passages extending through from the interior of the mixing chamber to the exterior of the water-jacket, a removable plug in one of said passages, and an adjustable and removable valve in the other opening, for the purpose set forth.

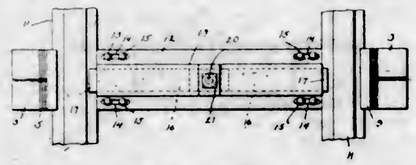
4. A carbureter for hydrocarbon engines comprising a mixing chamber and a throttle valve therein, the walls of said chamber having intersecting openings affording a by-pass around said throttle valve.

5. A carbureter for hydrocarbon engines comprising a mixing chamber and a throttle valve therein, the walls of said chamber having intersecting openings affording a by-pass around said throttle valve, and removable closing means in the outer ends of said openings whereby the openings may be reached for cleaning.

[Claim 6 not printed in the Gazette.]

1,221,330. RAILWAY-TIE AND FASTENER. ALFRED A. JENSEN, Merrill, Wis. Filed May 27, 1916. Serial No. 100,245. (Cl. 238—5.)

1. The combination with a rail tie body having rail engaging members located at the opposite ends thereof, and adapted to engage the outer sides of the rail, a housing interposed between the rail engaging members and having its opposite ends opened and spaced from the rail engaging members, means slidably mounted within the housing and operable through the ends thereof, and adapted when slid in one direction to engage the inner side of the flange of the rail, and means operable within the housing for moving the first mentioned means to operative position.



2. The combination with a rail tie body having a central recess therein, and a housing associated with the upper side of the tie body having its interior communicating with the recess, the upper wall thereof provided with an opening registering with the recess of the tie body, the said housing having its opposite ends open, rail engaging members slidably mounted within the housing and operable through the open ends of the housing, means comprising a vertically movable plate having inclined sides adapted when the plate is moved upwardly to engage the rail engaging members and move the members outwardly, the said plate being adapted when moved downwardly to be received by the recess in the tie body, so as to admit of the rail engaging members being moved inwardly, a threaded stem carried by the plate and slidably extending through the opening in the upper wall of the housing, and a nut turned on the stem.

1,221,331. DRAFT-YOKE. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chicago, Ill. Filed Mar. 15, 1913. Serial No. 754,530. (Cl. 213—42.)



1. In a yoke for draft rigging for railway cars, in combination, a yoke head adapted to be connected to a draw bar, and a yoke strap, said yoke strap being provided at each of its free ends with a T head engaging the yoke head, the said yoke head having forwardly extended lateral plates adapted to engage the inner faces of said T heads.

2. In a draft gear yoke, in combination, a hollow yoke head having top, bottom and side walls and open ends, the side walls being extended forwardly beyond the top and bottom walls, and a strap, the ends of said strap extending through the yoke head, each end being widened and thickened to form a T head and a rearwardly facing transverse shoulder with the arms of the T head adapted to engage said extended portions of the side walls of the yoke head, and the said transverse shoulders abutting against the forward edges of the top and bottom walls of the yoke head.

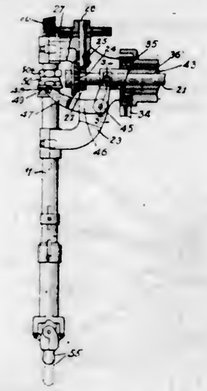
3. In a draft yoke, in combination, a U shaped loop having lateral projections at the ends of its side members, and a hollow, rectangular draw bar engaging member adapted to surround the draw bar and having forwardly facing shoulders for engaging said projections.

4. In a draft gear yoke, in combination, a yoke head having top, bottom and side walls, the side walls extending forwardly of the top and bottom walls and being of less vertical height than the distance between the top and bottom walls, a U shaped strap having its ends extended through the yoke head and being provided with lateral extensions bearing against the forward edges of the top and bottom walls of the yoke head and adapted to engage the edges of the forwardly extended portions of the side walls of the yoke head.

5. A yoke for draft riggings comprising a U shaped strap having the ends of the arms thereof provided with laterally extended shoulders and a hollow yoke head having shoulders coöperable with the shoulders of said arms, the yoke head being assembled with the strap by sliding the one longitudinally of the other.

[Claims 6 and 7 not printed in the Gazette.]

1,221,332. MANUFACTURE OF HOLLOW GLASS ARTICLES. AUGUST KADOW, Toledo, Ohio, assignor to The Westlake Machine Company, Toledo, Ohio, a Corporation of Ohio. Filed Dec. 28, 1916. Serial No. 139,422. (Cl. 49—20.)



1. In glass forming apparatus, the combination with means for holding a gather and for introducing air into the same; of mechanism for imparting reciprocating movements to the gather in the direction of its length of such predetermined number and speed as to elongate the gather.

2. In glass forming apparatus, the combination with gather holding means; of mechanism for imparting a series of short movements to the gather in the direction of its length to thereby elongate the gather.

3. In glass forming apparatus, the combination with gather holding means; and mechanism for imparting a series of short movements to the gather in the direction of its length to thereby elongate the gather, the holding means being provided with means for introducing air into the gather during the operation of elongating the same.

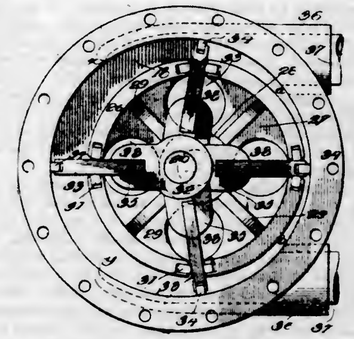
4. In glass forming apparatus, the combination of a rotating support, a blank holding spindle on said support adapted to be held in substantially vertical position with the blank downward, and mechanism whereby longitudinal movements are imparted to the spindle, while in the aforesaid position, to elongate the blank.

5. In glass forming apparatus, the combination of a rotating support, a blank holding spindle on said support adapted to be held in substantially vertical position with the blank downward, a cam, and connecting mechanism between the cam and spindle whereby longitudinal movements are imparted to the spindle, while in the aforesaid position, to elongate the blank; said spindle being provided with means for introducing air into the blank.

[Claims 6 to 12 not printed in the Gazette.]

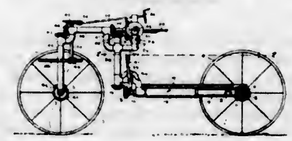
1,221,333. MOTOR OR PUMP. THOMAS A. KILLMAN, Nashville, Tenn., assignor to Killman Hydraulic Power Transmission Company, Tullahoma, Tenn., a Corporation of Tennessee. Filed Apr. 28, 1915. Serial No. 24,534. (Cl. 103—44.)

1. The combination of a cylindrical casing having an inlet and an outlet, a rotor mounted eccentrically within the casing and comprising a hub, a peripheral wall and an end plate connecting one edge of the peripheral wall with the outer end of the hub, the opposite edge of the peripheral wall being free and the inner end of the hub being disposed between the radial plane of the edges of the peripheral wall, a plurality of collars rotatably mounted concentrically upon the wall of the casing adjacent but opposed to the hub of the rotor, and blades extending from the respective collars through the rotor to bear upon the inner surface of the casing.



2. The combination of a stationary cylindrical casing, a rotary shaft extending through one end of the casing and eccentric thereto, a pin fixed in the opposite end of the casing and concentric therewith, said casing consisting of a head through which the shaft extends, a second head carrying the pin, and a peripheral wall extending from said second head and secured to the first-mentioned head, a plurality of blades loosely mounted on said pin and radiating therefrom, and a rotor comprising a hub fixed on the inner end of said shaft and having its inner end adjacent the inner end of the said pin, a peripheral wall extending between the ends of the casing concentric with said hub, an end plate connecting the outer end of the hub with one edge of the said peripheral wall, and ribs connecting the inner end of the hub with the opposite edge of the peripheral wall, said ribs being flared outwardly to accommodate the pivotal portions of the blades and the blades extending through and having sliding engagement with the peripheral wall.

1,221,334. DRIVING MECHANISM. GEORGE A. KING, Maple Falls, Wash. Filed Nov. 16, 1915. Serial No. 61,810. (Cl. 21—114.)



1. A vehicle of the class described, comprising the combination with a pair of axles, wheels connected thereto and gears connected to said axles, of a plurality of shafts interposed between said axles, coöperating gears carried by said shafts to impart motion to the gears of the axles, an adjustable shaft, a pair of spaced bevel gears carried by said shaft, a bevel gear carried by one of the connecting shafts, means to move the adjustable shaft to engage either of the gears carried thereby with the gear of the connecting shaft, an elongated pinion on said adjustable shaft, and means to impart power from a motor to said elongated pinion.

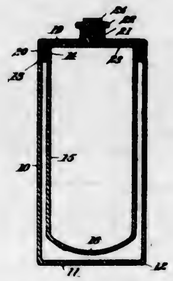
2. A vehicle of the class described comprising the combination with a front and rear axle, supporting wheels on said axle and gears fixed to said axle, of a plurality of ver-

tically and horizontally disposed shafts extending from the front to the rear axle, a plurality of beveled cogs at the meeting ends of said shafts and meshing with each other, means to engage or disengage one set of said beveled cogs whereby power will be connected to or disconnected from the rear axle, means to apply power to said connecting shafts to drive the supporting wheels, and additional means for reversing the movement of said wheels or disconnecting the driving power from the connecting shaft.

3. A vehicle of the class described, comprising the combination with a pair of axles, wheels connected thereto and gears connected to said axles, of a plurality of shafts interposed between said axles, coöperating gears carried by said shafts to impart motion to the gears of the axles, an adjustable shaft, a pair of spaced bevel gears carried by said shaft, a bevel gear carried by one of the connecting shafts, a ratchet lever to move the adjustable shaft to engage either of the gears carried thereby with the gear of the connecting shaft, an elongated pinion on said adjustable shaft and means to impart power from a motor to said elongated pinion.

4. A vehicle of the class described, comprising the combination with a front and rear axle, supporting wheels on said axle and gears fixed to said axle, of a plurality of vertically and horizontally disposed shafts extending from the front to the rear axle, a plurality of beveled cogs at the meeting ends of said shafts and meshing with each other, a ratchet lever to move one set of said beveled cogs into and out of engagement whereby power will be connected to or disconnected from the rear axle, means to apply power to said connecting shafts to drive the supporting wheels, and additional means for reversing the movement of said wheels or disconnecting the driving power from the connecting shaft.

1,221,335. VACUUM NURSING-BOTTLE AND NIPPLE THEREFOR. JAMES N. KLINE, Washington, D. C. Filed May 15, 1915. Serial No. 28,286. (Cl. 215—118.)



1. A vacuum nursing bottle comprising an outer member having a spun-in portion adjacent its open end and a flat bottom wall, a flange rising from said spun-in portion of said outer wall, an inner wall of uniform diameter throughout its length spaced from said outer wall and connecting with said flange and having a rounded bottom wall, and a cover for said bottle.

2. A vacuum nursing bottle comprising an outer member having a spun-in portion adjacent its open end and a flat bottom wall, an exteriorly threaded flange rising from said spun-in portion of said outer wall, an inner wall of uniform diameter throughout its length spaced from said outer wall and connecting with said flange and having a rounded bottom wall, and a cover threaded on said flange.

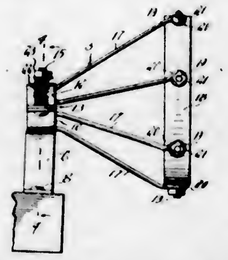
3. In combination, a vacuum nursing bottle comprising spaced members connected only at the open end portions thereof, the outer of said members having a flat bottom wall, the inner of said members being of a uniform diameter throughout its length and having a rounded bottom wall, a rigid cover for closing said bottle and having threaded connection therewith, and a flexible nipple formed with said cover.

4. In combination, a vacuum nursing bottle comprising spaced members connected only at the open end-portions thereof, the outer of said members having a flat bottom wall, the inner of said members being of a uniform diameter throughout its length and having a rounded bottom wall, a rigid cover for closing said bottle and having threaded connection therewith, a nipple integrally formed with said cover, and a protecting lining interiorly of said cover.

5. A vacuum nursing bottle comprising an outer member having a flat bottom wall, an inner member spaced from the outer member and connected with the latter at its open end, said member being of uniform width throughout its length, and having a rounded bottom wall spaced from the flat bottom wall of said outer member, and a cover for said bottle.

[Claim 6 not printed in the Gazette.]

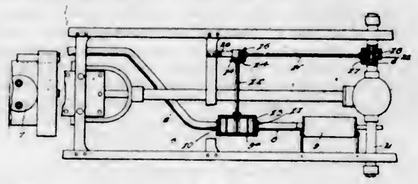
1,221,336. SEED-CORN TIPPER. GEORGE P. KOHLHAAS, Greene, Iowa. Filed Dec. 1, 1915. Serial No. 64,504. (Cl. 130—10.)



1. A corn tipper comprising in combination a split ring, means resiliently holding the sections of said split ring together, a closed annulus, a plurality of arms having their ends connected to said annulus and converging toward the split ring, the opposite ends of said arms being secured within said split ring, and each having an inwardly elevated projection, said projections forming an annular series of kernel engaging elements.

2. A corn tipper comprising in combination a bracket supported ring, a plurality of arms each having one extremity secured within the ring and extending thence in convergent relation to form an annular series of kernel engaging elements, an annulus of larger diameter than said ring, the free ends of said arms diverging uniformly from said kernel engaging elements and being secured at their extremities to said annulus.

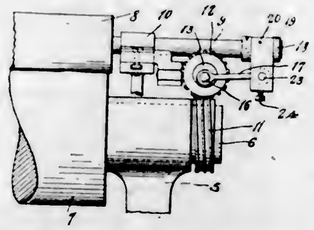
1,221,337. INTERNAL-COMBUSTION ENGINE. EDWARD P. KRILL, St. Louis, Mo. Filed Sept. 25, 1915. Serial No. 52,685. (Cl. 123—40.)



1. The combination with a motor vehicle including an internal combustion engine, a rear axle connected therewith, an exhaust pipe connected with the engine, and a muffler connected with said exhaust pipe, of a casing having inlet and outlet ports connected with the exhaust pipe intermediate the engine and muffler, a rotor mounted in the casing adapted during operation to force the products of combustion from the engine through the muffler, and driving connections between the rear axle and said rotor for operating the latter only during travel of the vehicle.

2. The combination with a motor vehicle including a chassis, an internal combustion engine supported upon the chassis, a rear axle connected with the engine, a housing tube receiving said rear axle, and an exhaust pipe connected with the engine, of a casing having inlet and outlet ports, a shaft rotatably mounted in said casing and extending exteriorly thereof, a rotor arranged in said casing and supported upon said shaft, a bearing member secured to said chassis supporting one end of said shaft, a countershaft rotatably supported in one end of said bearing member and supported at its opposite end in said housing tube, bevel gear wheels connecting the adjacent terminals of the first and second-mentioned shafts, the inlet and outlet ports of the casing being connected with said exhaust pipe, and bevel gear wheels connecting the rear axle with the second-mentioned shaft and being housed within the axle tube.

1,221,338. DOCTOR-VIBRATING DEVICE FOR PAPER-MACHINES. ALBERT H. KUNZELMAN, Chillicothe, Ohio. Filed July 1, 1916. Serial No. 107,056. (Cl. 92—49.)



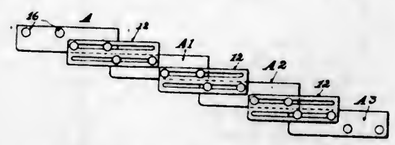
1. The combination with a press roller and a doctor, of a shaft arranged at right angles to the press roller and the doctor, means for rotating the shaft by the press roller, an eccentric pin secured to the shaft, a connecting rod pivoted to said pin, and a coupling secured to the doctor and having the connecting rod pivoted thereto for reciprocating the doctor on the press roller.

2. The combination with a press roller and a doctor, of a shaft arranged at right angles to the press roller and the doctor, means for rotating the shaft by the press roller, an eccentric pin secured to the shaft, a connecting rod pivoted to said pin, a coupling positioned on the doctor and having the connecting rod pivoted thereto, and a pair of relatively spaced collars secured to the doctor and disposed upon each side of the coupling for holding said coupling upon the doctor against relative movement thereto.

3. The combination with a press roller and a doctor, of a shaft arranged at right angles to the press roller and the doctor, means for rotating the shaft by the press roller, an eccentric pin secured to the shaft, a connecting rod pivoted to said pin, a pair of interfitting U-shaped members located upon the doctor, a pin carried by the leg portions of the U-shaped members and having a connecting rod pivoted thereto, and a pair of relatively spaced collars secured to the doctor and disposed upon each side of the U-shaped members for holding said members against sliding movement on the doctor.

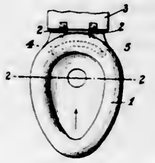
1,221,339. EXTENSION-DRAWER AND THE LIKE. HARRY H. LABADIE and BURTON B. BEERS, Chicago, Ill.; said Beers assignor, by mesne assignments, to The William Schweitzer Estate, Chicago, Ill. Filed Mar. 9, 1916. Serial No. 83,050. (Cl. 45—7.)

1. A series of superposed receptacles, there being at each end of each receptacle near the upper margin thereof and at one side of a vertical center line, two fixed studs, and additional studs near the lower margin and at the opposite side of said center line, said studs having heads, slides on opposite ends of said receptacles, there being in each slide two longitudinal slots, in parallel spaced relation, the upper one of said slots being constructed to engage the studs at the lower margin of said receptacle, and the lower one of said slots being constructed to engage the upper studs on the next lower receptacle, said latter slot having at one end an enlargement constructed to pass over the heads of the upper studs of the next lower receptacle, whereby the receptacles are slidably connected and removably attached to each other.



2. A series of superposed trays, said trays having two pairs of headed studs at opposing sides thereof, slides at opposing sides of said trays, said slides having longitudinal lots in parallel spaced relationship, the upper one of said slots engaging the lower pair of studs on one tray and the lower one of said slots engaging the upper pair of studs on the next lower tray, there being at one end of the lower slots enlargements adapted to pass over the heads of the upper pair of studs on the next lower tray.

1,221,340. TOILET-DISINFECTOR. ROBERT JOSEPH LEWERS, Newport News, Va. Filed Aug. 21, 1916. Serial No. 116,073. (Cl. 4—30.)



1. The combination with a water-closet having a seat movable in relation to the bowl, of a disinfecting device comprising an open pan connected to the underside of said seat, disinfectant absorbent means held within the pan.

2. A disinfecting device adapted to be removably secured to the underside of a water-closet seat comprising a pan having a channel and absorbent material supported above the channel.

3. A disinfecting device adapted to be removably secured to the underside of a water-closet seat comprising a pan, absorbent material therein, and pins penetrating said absorbent material.

4. A disinfecting device adapted to be detachably secured to the underside of a water-closet seat comprising a curved pan having upturned ends, said ends having open slotted portions for engaging supporting means in said water-closet seat.

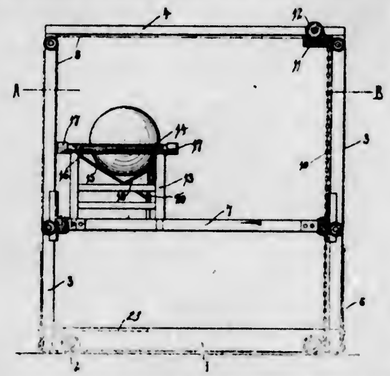
5. A disinfecting device adapted to be detachably secured to the underside of a water-closet seat comprising a pan having a central depression and horizontal shoulders and an absorbent pad supported within said pan.

[Claim 6 not printed in the Gazette.]

1,221,341. DEVICE FOR HANDLING LOAVES OF CHEESE. DAVID LOERTSCHER, St. Gallen, Switzerland. Filed Feb. 11, 1916. Serial No. 77,802. (Cl. 31—26.)

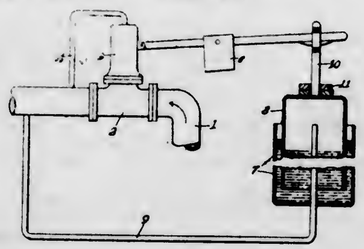
1. A device for handling loaves of cheese comprising a frame mounted on rollers, a stage movable in vertical direction on said frame, rollers arranged on said stage adapted to be brought below the loaves and to move the same to and from the stage, means co-acting with said rollers adapted to tilt the loaves.

2. A device for handling loaves of cheese comprising a frame mounted on rollers, a stage movable in vertical direction on said frame, rollers arranged on said stage adapted to be brought below the loaves and to move the same to and from the stage, a table, wings hinged to said table adapted to swing downward, stops arresting said wings adapted to hold the loaf in its vertical position.



3. A device for handling loaves of cheese comprising a frame mounted on rollers, a stage movable in vertical direction on said frame, rollers arranged on said stage adapted to be brought below the loaves and to move the same to and from the stage, means co-acting with said rollers adapted to tilt the loaves, a flexible band between said rollers, means to loosen and to stretch said band substantially as shown and described.

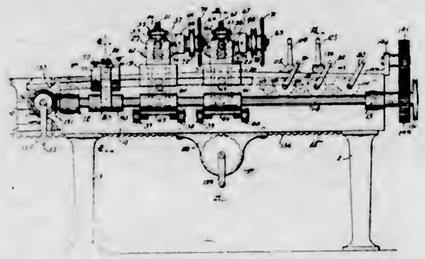
1,221,342. PRESSURE-REGULATOR. CHARLES W. MCLAUGHLIN, Buckhannon, W. Va., assignor of one-half to George I. Keener, Weston, W. Va. Filed Oct. 25, 1916. Serial No. 127,664. (Cl. 50—33.)



The combination with a gas conduit, a pressure regulator therefor including a controlling weight lever, and a pipe connecting said regulator with the gas conduit at the low pressure side of said regulator, of a gasometer including a tank and a bell therein located below the free end of said lever, a second pipe connected to the conduit at the low pressure side of the regulator and extending into the bell, and a depending bar secured to the lever and seating on the top of the bell.

1,221,343. SAW-FILING MACHINE. JOHN MACKINTOSH, Melrose, and WILLIAM P. CALLAHAN, Oakland, Cal. Filed Dec. 1, 1915. Serial No. 64,435. (Cl. 76—41.)

1. A saw filing machine comprising a rigid bed having curved guide ways, a saw clamp movable longitudinally through said curved guideways, a pair of revoluble saw files carried thereby, means to raise and lower the saw files to sharpen the teeth of a saw, means to adjust the position of the saw files to be capable of operating on different sized teeth, means to move the saw clamp through the machine step by step, means to adjust the step by step movement to correspond with the spacing of the teeth of the saw being operated on, and means to set the saw while being moved through the machine.



2. A saw filing machine comprising a rigid bed, a saw clamp movable longitudinally therethrough, slidable heads on the bed, a revoluble file carried by each head, means to adjust the position of the saw files to sharpen the teeth of a saw, means to raise and lower the saw files intermittently, a reciprocating saw set, means to move the saw clamp and saw carried thereby step by step through the machine, and means to adjust the step by step movement to correspond with the spacing of the size of the teeth of the saw.

3. A saw filing machine comprising a rigid bed having curved guideways, a saw clamp movable longitudinally through said curved guide ways, a pair of revoluble saw files supported upon the bed, means to adjust the angles of the saw files, means whereby the supports of the saw files may be shifted to accommodate different sizes of saw teeth, a saw, oppositely reciprocable saw sets, means to raise and lower the saw files and to oppositely reciprocate the saw sets, means to move the saw clamp through the machine step by step, and means to adjust the step by step movement to the spacing of the saw teeth.

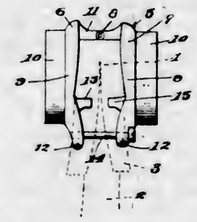
4. A saw filing machine comprising a rigid bed, a saw clamp movable longitudinally therethrough, a revoluble shaft on each side of the bed, gears connecting said shafts, a pair of revoluble saw files supported above the bed, levers pivotally connected to the bed on opposite sides thereof, pins extending downwardly from the saw file supports into contact with said levers, cams on the shafts whereby the levers are oscillated to raise and lower the saw files, means to move the saw clamp step by step through the machine, and means to adjust the step by step movement to the spacing of the saw teeth.

5. A saw filing machine comprising a rigid bed, a saw clamp slidable therethrough, supports on the bed for a pair of revoluble saw files, means to adjust the angle of the saw files, means to adjust the position of the supports for the saw files to accommodate different sizes of saw teeth, pins extending downwardly from the saw file supports, levers contacting with said pins for the operation thereof, cams in contact with the levers, means to rotate said cams to operate the levers to raise and lower the files, means to move the saw clamp and saw carried thereby step by step through the machine, the steps corresponding to the spacing of the saw teeth, a pair of transversely reciprocating saw sets, and means to reciprocate said saw sets to effect the setting of the teeth of the saw while the saw is moving through the machine.

[Claims 6 and 7 not printed in the Gazette.]

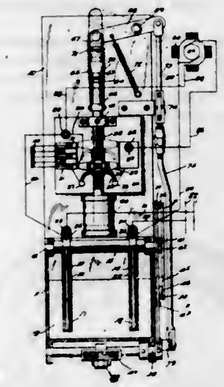
1,221,344. MALLET ATTACHMENT FOR HAMMERS. JOSEPH A. MARCOTTE, Babylon, N. Y. Filed July 11, 1916. Serial No. 108,624. (Cl. 145—29.)

1. In a mallet attachment for hammers, a pair of metallic rings, ears formed upon said rings, said ears being pivotally connected for hingedly connecting said rings and holding them in spaced relation to each other, fiber blocks carried by said rings and projecting outwardly therefrom, said fiber blocks adapted for positioning upon opposite sides of the hammer, ears formed upon said rings, certain of said ears being provided with internally screw threaded bores, the other of said ears provided with smooth bores, bolts extending through said bores for clamping said hinged rings upon a hammer.



2. In a mallet attachment for hammers, a pair of metallic rings, ears formed upon said rings, said ears being pivotally connected for hingedly connecting said rings and holding them in spaced relation to each other, fiber blocks carried by said rings and projecting outwardly therefrom, said fiber blocks adapted for positioning upon opposite sides of the hammer, ears formed upon said rings, certain of said ears being provided with internally screw threaded bores, the other of said ears provided with smooth bores, bolts extending through said bores for clamping said hinged rings upon a hammer, and spurs formed upon said rings and adapted for engagement with the hammer for preventing accidental slipping movement of the mallet attachment when attached to a hammer.

1,221,345. CONTROLLER. WILLIAM A. MARSCHKE and FREDRICH W. MARSCHKE, Indianapolis, Ind. Filed Dec. 24, 1915. Serial No. 68,498. (Cl. 200—6.)



1. A starter for electric motors, comprising the combination of a switch, a reciprocable member for varying the impressed electro-motive force, said reciprocable member being biased in a direction to increase said impressed electro-motive force, a releasable mechanical connection between said switch and said reciprocable member for moving said reciprocable member against its bias as said switch is moved from open to closed position, means for releasing said mechanical connection upon the closing of the switch so as to permit said reciprocable member to be moved by its bias to increase said impressed electro-motive force, and means for retarding the movement of said reciprocable member in the direction in which it is biased.

2. A starter for electric motors, comprising the combination of a switch, a reciprocable member for varying the impressed electro-motive force, said reciprocable member being biased in a direction to increase said impressed electro-motive force, a releasable mechanical connection between said switch and said reciprocable member for moving said reciprocable member against its bias as said switch is moved from open to closed position, means for releasing said mechanical connection upon the closing of the switch so as to permit said reciprocable member to be moved by its bias to increase said impressed electro-motive force, and means for retarding the movement of said reciprocable member in the direction in which it is biased.

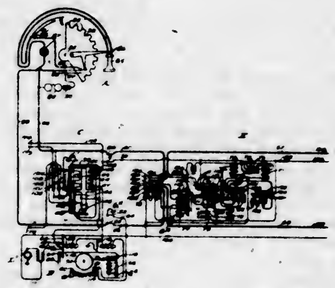
3. A starter for electric motors, comprising the combination of a switch, a reciprocable rod biased in one direction, retarding means for retarding the movement of said rod in the direction in which it is biased, means controlled by the position of said rod for varying the impressed electro-motive force, said rod being provided with a shoulder, a member movable as the switch is opened and closed and provided with a tooth for engaging said shoulder to move said rod against its bias as the switch is closed, and camming means for disengaging said tooth from said shoulder upon the closing of said switch.

4. A starter for electric motors, comprising the combination of a switch, a reciprocable rod biased in one direction, means controlled by the position of said rod for varying the impressed electro-motive force, said rod being provided with a shoulder, a member movable as the switch is opened and closed and provided with a tooth for engaging said shoulder to move said rod against its bias as the switch is closed, and camming means for disengaging said tooth from said shoulder upon the closing of said switch.

5. A starter for electric motors, comprising a switch, operating mechanism for producing a snap opening and closing of said switch, a reciprocable rod biased in one direction, means for retarding the movement of said rod in the direction in which it is biased, means controlled by the position of said reciprocable rod for controlling the impressed electro-motive force and producing maximum impressed electro-motive force when said rod is at its limit of movement in the direction in which it is biased, said rod being provided with a shoulder, a member connected with the operating mechanism for said switch and provided with a tooth for engaging said shoulder, said tooth and shoulder coöperating to move said rod against its bias as said switch-operating mechanism is moved to produce closing of the switch, and camming means for disengaging said tooth from said shoulder when said switch-operating mechanism reaches the position in which it causes the switch to snap closed.

[Claim 6 not printed in the Gazette.]

1,221,346. AUTOMATIC TELEPHONE SWITCHING APPARATUS. TALBOT G. MARTIN, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed May 2, 1911. Serial No. 624,568. (Cl. 179—181.)



1. In a telephone system, an automatic switch having bank terminals divided into groups, the groups being dis-

posed in parallel planes, movable arms having motion in one direction to find a group and motion in another direction to find a terminal in the selected group, a line relay for controlling the operation of said arms, an electromagnet, a trunk adapted by a single movement of the armature of said magnet to be connected with said arms, means for controlling the two sides of said trunk in series to control said relay, a local circuit governing the said second motion, normally closed contacts in said local circuit, which contacts are open during the said first motion, and means whereby said contacts are then closed to start the second motion.

2. In a telephone system, an automatic switch having bank terminals divided into groups, the groups being disposed in parallel planes, movable arms having motion in one direction to find a group and motion in another direction to find a terminal in the selected group, an electromagnet for producing the first motion, an electromagnet for producing the second motion, a relay, a line adapted by a single movement of the armature of said relay to be connected with said arms, means for controlling the two sides of said line in series to control one of said magnets, a local circuit governing the said second motion, normally closed contacts in said local circuit, which contacts are open during the said first motion, and means whereby said contacts are then closed to start the second motion.

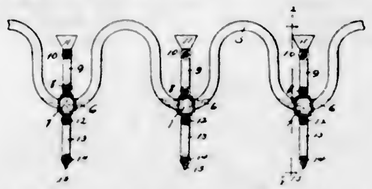
3. In a telephone system, an automatic switch having bank terminals divided into groups, the groups being disposed in parallel planes, movable arms having motion in one direction to find a group and motion in another direction to find a terminal in the selected group, electromagnet mechanism for producing said first and second motions, a relay, a trunk normally disconnected from said arms, adapted by a single movement of the armature of said relay to be connected with said arms, means for controlling the two sides of said trunk in series to control said relay, a local circuit governing the said second motion, normally closed contacts in said local circuit, which contacts are open during the said first motion, and means whereby said contacts are then closed to start the second motion.

4. In a telephone system, an automatic switch having bank terminals divided into groups, the groups being disposed in parallel planes, movable arms having motion in one direction to find a group and motion in another direction to find a terminal in the selected group, a line relay for controlling the operation of said arms, an electromagnet, a trunk adapted by a single movement of the armature of said magnet to be connected with said arms, means for controlling the two sides of said trunk in series to control said relay, a local circuit governing the said second motion, contacts in said local circuit, which contacts are open during the said first motion, means whereby said contacts are automatically closed upon the cessation of the first motion to start the second motion, other contacts in said local circuit, and means whereby said other contacts are automatically opened to stop said second motion when the said terminal is found.

5. In a telephone system, an automatic switch having bank terminals divided into groups, the groups being disposed in parallel planes, movable arms having motion in one direction to find a group and motion in another direction to find a terminal in the selected group, an electromagnet for producing the first motion, an electromagnet for producing the second motion, a relay, a line adapted by a single movement of the armature of said relay to be connected with said arms, means for controlling the two sides of said line in series to control one of said magnets, a local circuit governing the said second motion, contacts in said local circuit, which contacts are open during the said first motion, means whereby said contacts are automatically closed upon the cessation of the first motion to start the second motion, other contacts in said local circuit, and means whereby said other contacts are automatically opened to stop said second motion when the said terminal is found.

[Claims 6 to 42 not printed in the Gazette.]

1,221,347. GOLD-SAVING AMALGAMATOR. EARL P. MAYHEW, San Diego, Cal. Filed July 13, 1916. Serial No. 109,118. (Cl. 83—67.)



An amalgamator made up of a plurality of goose-neck sections connected end to end at their lowest portion by crosses, shut-off valves connected to the upper and lower outlets of said crosses, pipe sections projecting upwardly from the uppermost of said valves, pipe sections projecting downwardly from the lowermost of said valves, shut-off valves at the lower ends of the last named pipe sections and shut-off valves at the upper ends of the first named pipe sections.

1,221,348. SOUND-REPRODUCING STYLUS. JOHN C. MERCER, Pittsburgh, Pa. Filed Dec. 6, 1915. Serial No. 65,282. (Cl. 274—38.)

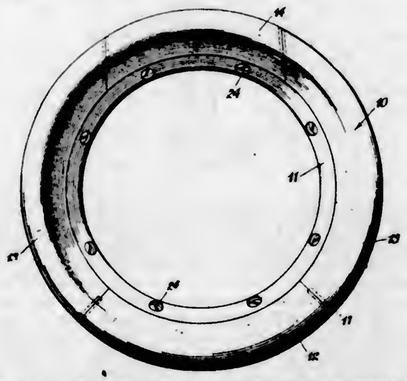


1. A sound reproducing stylus of bone free from a part of its organic constituent and having its operative point hardened.

2. A sound reproducing stylus formed of bone free from a part of its organic constituent and having an operative point of a density caused by structural shrinkage and by hardening.

3. The method of making a sound reproducing stylus from bone, which consists in dissolving the organic constituent of the bone, drying the bone to produce structural shrinkage, cutting the stylus from the bone and then hardening the operative point of the stylus.

1,221,349. COLLAPSIBLE CORE. ROBERT M. MERRIMAN, Akron, Ohio. Filed Dec. 30, 1916. Serial No. 139,884. (Cl. 18—45.)



1. A core including an annular body proper formed in sections, the ends of which abut one against the other, the inner walls of the sections being shaped so that when

the body is assembled two inner cylindrical surfaces of different diameters joined by an undercut shoulder are provided, a locking ring insertible within the body when the latter is assembled and having faces to engage the cylindrical faces of the locking ring and a bead to engage beneath the shoulder, and fastening means between the ring and each body section.

2. A core including an annular body proper formed in sections, the ends of which abut one against the other, the inner walls of the sections being shaped so that when the body is assembled two inner cylindrical surfaces of different diameters joined by an undercut shoulder are provided, a one piece locking ring insertible within the body when the latter is assembled and having faces to engage the cylindrical faces of the locking ring and a bead to engage beneath the shoulder, fastening means between the ring and each body section, and key and keyway connections between the abutting ends of the sections.

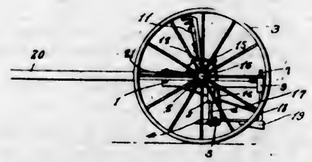
1,221,350. CLOSURE FOR BOTTLES, JARS, AND OTHER VESSELS. EMIL C. MILLER, Nutley, N. J., assignor to Sanitary Spout Company, a Copartnership consisting of said Miller and Albert M. Ayers, West Nutley, N. J. Filed Oct. 9, 1914. Serial No. 865,790. (Cl. 215—57.)



1. The combination with a bottle, of a plug-like stopper having a co-axial rotatable valve, said valve having a head portion lying over the end of said stopper, and a ring-like spout member encircling the upper portion of the stopper and held directly against the mouth of the bottle by said head portion on the valve, said stopper and spout member having registering discharge passages, and the valve being capable of controlling the discharge of liquid from the bottle through said passages.

2. The combination with a bottle, of a plug-like stopper having a co-axial rotatable valve, said valve having a head portion lying over the end of said stopper, and a ring-like spout member encircling the upper portion of the stopper and held directly against the mouth of the bottle by said head portion on the valve, said stopper and spout member having registering discharge passages, and also registering vent passages and the valve being capable of controlling the discharge of liquid from the bottle through said discharge passages and the ingress of air through said vent passages.

1,221,351. FARMING IMPLEMENT. MARION R. MILLER, Canyon, Tex. Filed Oct. 13, 1916. Serial No. 125,381. (Cl. 55—60.)



1. A farming implement of the class described including a frame provided at intervals at its rear portion with vertical guides, vertical guides located at the ends of the frame, a transverse cutter provided with rear and end vertical slides operating in the said guides, inclined draft bars connected with the rear slides and with the front portion of the frame, and means for raising and lowering the knife or cutter.

2. A farming machine of the class described including a wheeled frame provided with vertical guides, a transversely disposed knife arranged to operate at the surface of the ground for cutting weeds and provided with slides operating in the said guides, means for raising and lowering the knife and a slide member located in rear of the knife and tapered forwardly and adapted to pack the soil and permit the severed weeds to slide over it.

1,221,352. UNDERREAMER. EDWARD L. MILLS, Los Angeles, Cal. Filed Aug. 29, 1916. Serial No. 117,460. (Cl. 255—75.)



1. In an underreamer, the combination of a mandrel with a downwardly projecting tongue, recessed cutters vertically movable on and fitting around the tongue, and elevating means in the mandrel exterior of the tongue connecting with the cutters and adapted to move the cutters up on the tongue.

2. In an underreamer, the combination of a mandrel having a downwardly projecting tongue, cutters vertically movable on and substantially entirely surrounding the tongue, and elevating means in the mandrel exterior of the tongue connecting with the cutters and adapted to move the cutters up on the tongue.

3. In an underreamer, the combination of a mandrel having a downwardly projecting tongue with outwardly facing bearing faces and inwardly facing bearing faces, cutters vertically movable on the tongue substantially entirely surrounding the same and having surfaces bearing against said bearing faces of the tongue, and means to hold the cutters in their upper positions on the tongue.

4. In a nunderreamer, the combination of a mandrel having a downwardly projecting tongue with opposite outwardly facing bearing faces and with opposite inwardly facing bearing faces formed by the inner surfaces of overhanging edge portions of the tongue, cutters vertically movable on the tongue substantially entirely surrounding the same and having spreading surfaces adapted to bear against the outward faces of the tongue and having reentrant outwardly facing surfaces bearing against the inward faces of the tongue, and means to hold the cutters in their upper positions on the tongue.

5. In an underreamer, the combination of a mandrel having a downwardly projecting tongue, cutters vertically movable on the tongue, said cutters being recessed on their inner faces to fit around the tongue, and the cutters collectively substantially entirely surrounding the tongue, and elevating means in the mandrel exterior of the tongue connecting with the cutters and adapted to move the cutters up on the tongue.

[Claims 6 to 61 not printed in the Gazette.]

1,221,353. UNDERREAMER. EDWARD L. MILLS, Los Angeles, Cal. Filed Dec. 4, 1916. Serial No. 134,787. (Cl. 255—75.)

1. In an underreamer, the combination of a mandrel with a downwardly projecting cutter carrying tongue, recessed cutters surrounding the tongue and vertically mov-

able thereon, the lower end of the tongue being rounded and the bottoms of the recesses being rounded and facing upwardly and bearing upwardly against the lower rounded end of the tongue, and means to normally hold the cutters up on the tongue.



2. In an underreamer, the combination of a mandrel with a downwardly projecting cutter carrying tongue, recessed cutters surrounding the tongue and vertically movable thereon, the lower end of the tongue being rounded and the bottoms of the recesses being rounded and bearing upwardly against the lower rounded end of the tongue, a downward extension on the tongue having diagonal curved surfaces at its lower end adapted to engage the front edges of the curved bottoms of the cutter recesses when the cutters are lowered on the tongue, and the back walls of the cutter recesses having diagnoal curved surfaces adapted to be drawn over the curved lower ends of the tongue when the cutters are moved upwardly, and means to normally hold the cutters up on the tongue.

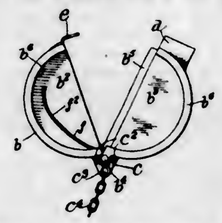
3. In an underreamer, the combination of a mandrel having a downwardly projecting tongue with opposite outwardly facing bearing faces and with opposite inwardly facing bearing faces formed by the inner surfaces of overhanging edge portions of the tongue, cutters vertically movable on the tongue substantially entirely surrounding the same and having spreading surfaces adapted to bear against the outward faces of the tongue and having reentrant outwardly facing surfaces bearing against the inward faces of the tongue, and means to normally hold the cutters in their upper positions on the tongue, the lower end of the tongue being curved and the cutters having upwardly facing correspondingly curved surfaces to bear upwardly against the lower curved end of the tongue.

4. In an underreamer, the combination of a mandrel having a downwardly projecting tongue with opposite outwardly facing bearing faces and with opposite inwardly facing bearing faces formed by the inner surfaces of overhanging edge portions of the tongue, cutters vertically movable on the tongue substantially entirely surrounding the same and having spreading surfaces adapted to bear against the outward faces of the tongue and having reentrant outwardly facing surfaces bearing against the inwardly facing bearing faces of the tongue, and means to hold the cutters in their upper positions on the tongue, said inwardly facing bearing faces of the tongue extending in curved formation across the lower end of the tongue, and said reëntrant bearing faces of the cutters extending in similar curved formation across the lower parts of the inner faces of the cutters.

5. In an underreamer, the combination of a cutter carrying tongue having vertical outward bearing surfaces and having inward bearing surfaces extending vertically along the sides of the tongue and across its bottom, and recessed cutters fitting around the tongue having surfaces at the back of the recesses bearing against the outward faces of the tongue and having reëntrant surfaces formed on overhanging front walls at the sides and bottoms of the recesses, said reëntrant surfaces adapted to bear against the inward bearing faces of the tongue, the bottom of the tongue and the bottoms of the recesses being curved from side to side.

[Claims 6 to 20 not printed in the Gazette.]

1,221,354. CLOSURE AND LOCK DEVICE FOR CONTAINERS. WILLIAM L. MITCHELL, Brooklyn, N. Y. Filed June 9, 1916. Serial No. 102,630. (Cl. 232—41.)



1. A lock device composed of separate parts hinged together, means for locking the separate parts together, tensional means for opening the separate parts when unlocked, and a device mounted on the hinge of the separate parts and adapted to limit the extent of the opening movement of said separate parts.

2. In a lock device of the class described, a cup-shaped casing composed of separate parts hinged together, the lower edge portions of which are provided with an inwardly directed annular bead, means for locking the separate parts together, means for opening the separate parts when unlocked, means for limiting the extent of the opening of said separate parts, and means connected with said last named means for anchoring said lock device at a predetermined point.

3. In a lock device of the class described, a cup-shaped casing composed of separate parts hinged together, the lower edge portions of which are provided with an inwardly directed annular bead, means for locking the separate parts together, means for opening the separate parts when unlocked, means for limiting the extent of the opening of said separate parts, and means connected with said last named means for anchoring said lock device at a predetermined point, one of the separate parts of said casing being provided with a tongue member which overlaps the other part of said casing when in their closed position.

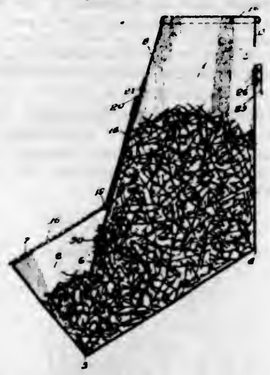
4. In a closure device for bottles having enlarged head portions, a casing composed of separate parts movably connected, means for locking said parts together on the enlarged head portion of said bottle, and means for preventing the detachment of said casing when the separate parts are locked together, one of the separate parts of said casing being provided with a tongue member which overlaps the other part of said casing when in their closed position.

5. In a lock device of the class described, a cup-shaped casing composed of separate parts hinged together, the lower edge portions of which are provided with an inwardly directed annular bead, means for locking the separate parts together, and tensional means for opening the separate parts when unlocked.

[Claim 6 not printed in the Gazette.]

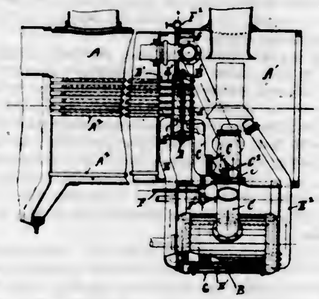
1,221,355. FEED-HOPPER. AARON B. MOE, Chicago, Ill., assignor to Otis & Moe Manufacturing Company, a Corporation of Illinois. Filed May 1, 1914. Serial No. 835,674. (Cl. 119—52.)

1. In a feed hopper, a back wall and a front wall diverging from the upper to the lower part of the feed hopper, a bottom wall extending from the lower edge of the back wall diagonally forward and downward, another bottom wall joining the lower edge of the first and extending diagonally upward and forward, the two bottom walls forming a trough and the front wall extending downwardly into such trough, with a restricted opening below it for the escape of feed into the forward part of the trough, and openings through the extended portion of the front wall to provide additional access to the feed in the hopper.



2. In a feed hopper, a back wall and a front wall diverging from the upper to the lower part of the feed hopper, a bottom wall extending from the lower edge of the back wall diagonally forward and downward, another bottom wall joining the lower edge of the first and extending diagonally upward and forward, the two bottom walls forming a trough and the front wall extending downwardly into such trough, with a restricted opening below it for the escape of feed into the forward part of the trough, openings through the extended portion of the front wall to provide additional access to the feed in the hopper, and a hinged cover over the upper edge of the trough.

1,221,356. APPARATUS FOR ELIMINATING CONDENSATION IN STEAM-ENGINE CYLINDERS. WALTER A. MOFFAT, Erie, Pa. Filed Feb. 11, 1915. Serial No. 7,501. (Cl. 121—105.)



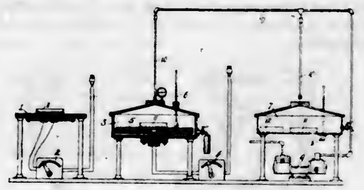
1. The combination of a tubular steam boiler, a superheater located adjacent to the discharge ends of the flues of said boiler, an engine cylinder, a steam jacket thereon, a steam connection from the discharge side of said superheater and said jacket, a steam escape pipe from said jacket, an exhaust pipe from said cylinder, a steam connection from said exhaust pipe to the intake side of said superheater, and means in said exhaust pipe to deflect a portion of the exhaust steam into said superheater, substantially as set forth.

2. The combination of a tubular steam boiler, a superheater header adjacent to the discharge ends of the flues of said boiler, superheater tubes extending from said header into the flues of said boiler, an engine cylinder, a steam jacket thereon, a steam connection from said superheater to said jacket, a steam escape pipe leading from said jacket, an exhaust pipe, a steam connection between said superheater and said exhaust pipe, and means within said exhaust pipe to deflect a portion of the exhaust steam into said superheater, substantially as and for the purpose set forth.

3. The combination of a steam boiler, a superheater so located as to be acted upon by the waste fire-gas, an engine cylinder, a steam jacket thereon, a steam connection from said superheater to said jacket, an escape pipe from said jacket, an exhaust pipe from said engine cylinder, a branch pipe leading from said exhaust pipe to said superheater, means in said exhaust pipe to deflect a portion of the exhaust steam into said branch pipe, and a non-return valve to prevent backward flow in said branch pipe, substantially as and for the purpose set forth.

4. In an apparatus of the character described, a steam generator, a steam superheating apparatus adjacent to the smoke discharge end of said generator, an engine cylinder, a steam receiving jacket thereon, an exhaust pipe from said engine cylinder, a branch pipe leading from said exhaust pipe to the intake side of said super-heating apparatus, whereby a portion of the exhaust steam from said exhaust pipe may be conducted into said superheater, a pipe leading from said superheater into said steam jacket, means independent of the exhaust from said engine cylinder to supply steam to said superheater, and means to conduct steam away from said steam jacket, substantially as and for the purpose set forth.

1,221,357. ART OF ESTIMATING THE SOLID CONTENT OF LIQUID FOOD PRODUCTS. JULIUS JOHN MOJONNIER, Oak Park, Ill., assignor to Mojonnier Bros. Co., Portland, Me., a Corporation of Maine. Filed Nov. 23, 1914, Serial No. 873,528. Renewed Jan. 31, 1917. Serial No. 145,815. (Cl. 23—30.)



1. The method of estimating the solids in liquids, which consists in briskly boiling a previously weighed sample of the liquid, then exposing it to an evaporating heat in a vacuum oven until a perfectly dry residue is produced, after which the dish containing the sample is placed in a vacuum cooling chamber and finally weighed.

2. The method of estimating the solids of liquids, which consists in briskly boiling a previously weighed sample of the liquid for a few minutes by a high heat, then exposing the sample to a relatively lower heat until a perfectly dry residue is produced, after which the dish containing the sample is placed in a cooling chamber and finally weighed.

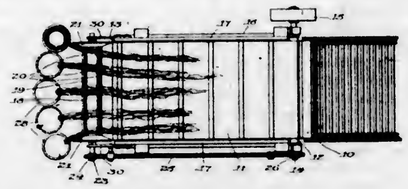
3. The method of estimating the solids in liquids, which consists in briskly boiling a previously weighed sample of the liquid, then exposing it to an evaporating heat in a vacuum oven until a perfectly dry residue is produced, after which the dish containing the sample is placed in a vacuum cooling chamber containing anhydrous sulfuric acid and finally weighed.

4. The method of estimating the solids in liquids, which consists in briskly boiling a previously weighed sample of the liquid, then exposing it to an evaporating heat in a vacuum oven until a perfectly dry residue is produced, after which the dish containing the sample is placed in a vacuum cooling chamber in intimate contact with a part thereof, and finally weighed.

5. The method of estimating the solids in liquids, which consists in subjecting a previously weighed sample of the liquid for a few minutes to a heat of approximately 180° centigrade, then exposing it to an evaporating heat of about 100° centigrade until a perfectly dry residue is produced, after which the dish containing the sample is placed in a cooling chamber and finally weighed.

[Claims 6 to 14 not printed in the Gazette.]

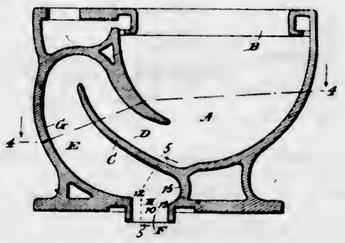
1,221,358. FIBER-TREATING MACHINE. THOMAS A. MORRIS, St. Paul, Minn., assignor, by mesne assignments, to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Oct. 31, 1913. Serial No. 798,450. (Cl. 19—6.)



1. In a fiber treating machine, the combination of a conveyer, and a corrugated drum for drawing fiber from any suitable source, said drum having beveled end portions for guiding the fiber over said drum onto said conveyer.

2. In a fiber treating machine, the combination of a conveyer, and means for drawing strands of fiber from sources located at various angles with respect to the longitudinal medial line of the conveyer and delivering the strands to the conveyer in parallel relationship.

1,221,359. WATER-CLOSET BOWL. CHARLES H. MUCKENHIAN, Detroit, Mich., assignor, by mesne assignments, to The Standard Sanitary Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Original application filed Feb. 16, 1911, Serial No. 608,869. Divided and this application filed Apr. 2, 1912, Serial No. 688,063. Renewed Feb. 6, 1917. Serial No. 146,988. (Cl. 4—22.)

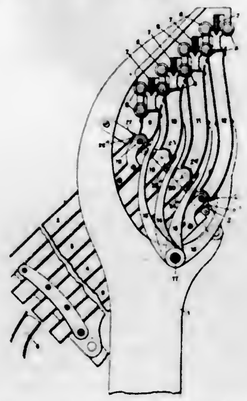


1. In a water closet bowl, in combination with an up leg discharge outlet, a down leg discharge outlet having an under run curve approaching at the lower part of said curvature to the horizontal and approaching at the ultimate discharge outlet an extension of the chamber of the outlet leg lying opposite the terminal of the under run thereof and having its surface occupying an approximately vertical position but curved from a point approximately in the plane of said horizontal termination of the under run to substantially constitute a continuation of the curve of said under run to deflect water impinging thereon upward and backward to initially form a water plug in the ultimate outlet, substantially as described.

2. In a water closet bowl, in combination with an up leg discharge outlet, a down leg discharge outlet having an under run curve, substantially horizontal at its lower part, an ultimate outlet in the under run arranged at an angle thereto, the outlet leg being formed with an extension lying beyond the terminal of the under run thereof and having its surface curved in an approximately vertical direction from a point approximately in the plane of said horizontal terminal of the under run to substantially constitute a continuation of the curve of said under run to deflect water impinging thereon upward and backward to initially form a water-plug in the ultimate outlet, the deflecting surface of the extension projecting downwardly slightly below the said terminal of the under run of the down leg.

3. In a water closet bowl, in combination with an up leg discharge outlet, a down leg discharge outlet, an ultimate outlet communicating with the lower end of the down leg discharge outlet, and an extension of the down leg discharge outlet having its inner wall curved and arranged beyond the ultimate outlet whereby water entering said extension will be directed upward and backward upon itself to initially form a water plug, substantially as described.

1,221,360. TYPOGRAPHICAL COMPOSING AND DISTRIBUTING MACHINE. CARL MUEHLEISEN, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Mar. 29, 1915. Serial No. 17,584. (Cl. 199—39.)



1. In a typographical machine, the combination of a plurality of magazines, a corresponding plurality of distributers, and magazine entrances leading from the distributers to the respective magazines and movable at will from their operative position, the said distributers being arranged stepwise one above another from front to rear of the machine to permit the free and unimpeded movement of the magazine entrances.

2. In a typographical machine, the combination of a plurality of magazines, a corresponding plurality of distributers secured rigidly to the fixed machine frame, and a corresponding plurality of magazine entrances leading from the distributers to the respective magazines and movable at will from their operative position, the said distributers being arranged stepwise one above another from front to rear of the machine to permit the free and unimpeded movement of the magazine entrances irrespective of the rigid attachment of the distributers to the fixed machine frame.

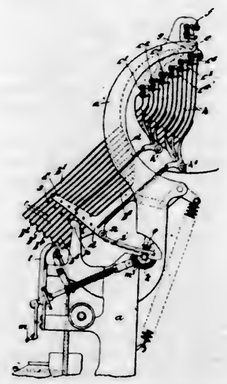
3. In a typographical machine, the combination of a plurality of magazines, a corresponding plurality of distributers, and magazine entrances leading from the distributers to the respective magazines and pivotally mounted so as to swing rearwardly from their operative position, the said distributers being arranged stepwise one above another from front to rear of the machine to allow the magazine entrances to clear them during the pivotal movement of the latter.

4. In a typographical machine, the combination of a plurality of magazines, a corresponding plurality of distributers arranged stepwise one above another from front to rear of the machine, magazine entrances leading from the distributers to the respective magazines, and separate pivoted supports for the several magazine entrances whereby they may be swung rearwardly from their operative position.

5. In a typographical machine, the combination of a plurality of magazines, a corresponding plurality of distributers arranged stepwise one above another from front to rear of the machine, magazine entrances leading from the distributers to the respective magazines, separate supports for the several magazine entrances, and a common pivot about which all the entrance supports are adapted to swing individually or collectively rearwardly clear of the distributers.

[Claims 6 to 18 not printed in the Gazette.]

1,221,361. TYPOGRAPHICAL COMPOSING AND DISTRIBUTING MACHINE. CARL MUEHLEISEN, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Nov. 21, 1916. Serial No. 132,648. (Cl. 199—16.)



1. In a typographical composing and distributing machine, the combination with a plurality of magazines angularly adjustable in the main frame to bring each of them into operative relationship to a common assembler plate entrance, of a plurality of distributers each adapted to separate matrices according to character and deliver them into one of the magazines, angularly adjustable with the magazines without disturbing the relationship between said distributers and magazines.

2. In a typographical composing and distributing machine, the combination with a plurality of magazines and a corresponding plurality of distributers, each adapted to separate matrices according to character and deliver them into its associated magazine, of a frame supporting the magazines and distributers, and pivots connecting the said frame to the main frame of the machine, so that the magazines, frame and distributers can move angularly about the pivots as one entity.

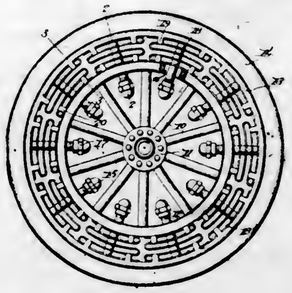
3. In a typographical composing and distributing machine, the combination with a plurality of magazines, a corresponding plurality of distributers, each adapted to separate matrices according to character and a corresponding plurality of magazine entrance channels each connecting one of the distributers with its respective magazine, of a frame supporting the magazines, distributers and magazine entrances, and pivots connecting the said frame to the main frame of the machine, so that the magazines, frame, distributers and magazine entrances can move angularly about the pivots as one entity.

4. In a typographical composing and distributing machine, the combination with a plurality of magazines angularly adjustable in the main frame to bring each of them into operative relationship to a common assembler plate entrance, of a corresponding plurality of distributers, each adapted to separate matrices according to character, and a corresponding plurality of magazine entrances each connecting one of the distributers with its respective magazine, the said distributers and magazine entrances being angularly adjustable with the magazines without disturbing their relationship mutually or with the said magazines.

5. In a typographical composing and distributing machine, the combination with a plurality of magazines, a corresponding plurality of distributers and a magazine entrance operatively connecting each distributer with its associated magazine, of a frame supporting the magazines and their distributers, pivots connecting the said frame to the main frame of the machine, so that the magazines can move angularly, and pivots connecting the magazine entrances to the movable frame so that the said entrances can move angularly with the frame and magazines and can be turned on their pivots out of operative position.

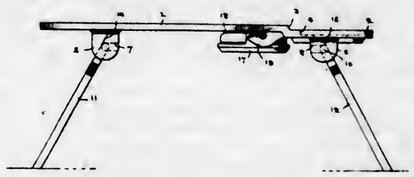
[Claims 6 to 14 not printed in the Gazette.]

1,221,362. RESILIENT WHEEL. BERNARD C. NADEAU, Fall River, Mass. Filed June 4, 1914. Serial No. 843,075. (Cl. 152—32.)



A resilient wheel including an inner rim, and an outer rim, springs positioned between said inner and outer rims and formed of flat resilient strips folded back upon themselves to provide a plurality of folds and having their folds extending substantially parallel between the inner and outer rims, ears extending from the inner and outer rims to engage the sides of the springs adjacent the ends thereof, and guiding pins carried by said outer rim and slidably passing through the springs and inner rim.

1,221,363. SHOE-SHINING STAND. LEWIS AUGUSTAS NESLER, Niles, Cal. Filed Nov. 27, 1915. Serial No. 63,834. (Cl. 15—58.)

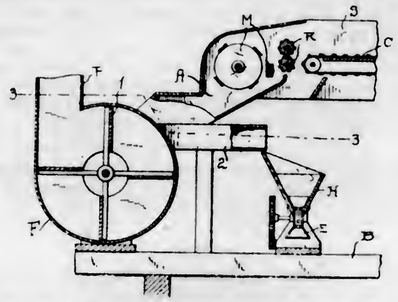


A shoe shining stand, comprising a body having a heel portion, ears depending from said body and heel portion in pairs, the lower ends of said ears being circular, said ears having horizontally disposed slots extending inwardly from one edge thereof to the axial center of said ears, said ears having inclined extensions on their inner faces, supporting legs, trunnions on said legs adapted to enter said slots, and shoulders on said legs adapted to engage the edges of the ears and retain said trunnions in engagement with said slots when the legs are in operative position.

1,221,364. CORN SNAPPER AND SHREDDER. CLARENCE W. NEU, Georgetown, Ohio. Filed Jan. 19, 1917. Serial No. 143,331. (Cl. 146—29.)

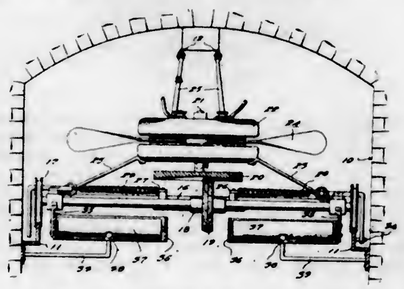
In combination with snapper rolls, an inclosed chute leading therefrom and a suction member coacting with the chute, a hopper positioned below the snapper rolls, and

a tubular member in communication with the chute and terminating in close proximity to the hopper at a point



thereabove, said tubular member serving as the air inlet for the suction member.

1,221,365. TRAVELING CEILING-FAN FOR TUNNEL-DRIERS. WILLIAM F. NORMAN, Nevada, Mo. Filed Feb. 28, 1916. Serial No. 81,064. (Cl. 230—1.)



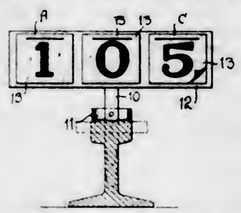
1. In a device of this character, the combination of a truck having a drive shaft, a motor frame supported upon the truck above the drive shaft, a slidable friction disk mounted upon the drive shaft for rotation therewith, a driving friction disk connected to the motor and frictionally engaging the first drive disk, a fan operably connected to the motor, two levers mounted upon the truck and disposed to have their inner ends upon opposite sides of the slidable disk, two additional levers disposed in opposite directions and mounted upon the truck at opposite sides of the truck, each of said levers being provided with a depending finger, and resilient connections between the opposite ends of the first two levers and the respective last mentioned levers, whereby the actuation of either one of the last mentioned levers will cause the shifting of the slidable disk.

2. In a device of this character, the combination of a truck having a drive shaft, a motor frame supported upon the truck above the drive shaft, a slidable friction disk mounted upon the drive shaft for rotation therewith, a driving friction disk connected to the motor and frictionally engaging the first drive disk, a fan operably connected to the motor, two levers mounted upon the truck and disposed to have their inner ends upon opposite sides of the slidable disk, two additional levers disposed in opposite directions and mounted upon the truck at opposite sides of the truck, each of said levers being provided with a depending finger, resilient connections between the opposite ends of the first two levers and the respective last mentioned levers, whereby the actuation of either one of the last mentioned levers will cause the shifting of the slidable disk, and a plurality of shifting louvers mounted below the truck and beneath the fan to receive the air currents from the fan.

3. The combination with a trackway, two projections one adjacent each end thereof, and current supplying means, of a truck mounted upon the trackway and having a drive shaft, an electric motor mounted upon the truck above the drive shaft, a trolley connection carried by the motor for engagement with the current supplying means, a fan connected to the motor, a friction disk also connected to the motor, a shiftable friction disk splined upon the drive shaft and having its periphery in contact with the first disk, a pair of shifting levers pivoted to the truck and having their inner ends one upon each side of the shiftable disk, two oppositely disposed levers pivoted to the sides of the truck, a depending finger carried adjacent the free end of each of the latter levers, a coil spring mounted upon each of the latter levers and limited in its outer movement by the finger, and a spring connected to the coil spring adjacent said finger and to the free end of its respective shifting lever, whereby as the finger engages one of the trackway projections the levers are operated to actuate the shifting disk.

4. The combination with a trackway, two projections one adjacent each end thereof, and current supplying means, of a truck mounted upon the trackway and having a drive shaft, an electric motor mounted upon the truck above the drive shaft, a trolley connection carried by the motor for engagement with the current supplying means, a fan connected to the motor, a friction disk also connected to the motor, a shiftable friction disk splined upon the drive shaft and having its periphery in contact with the first disk, a pair of shifting levers pivoted to the truck and having their inner ends one upon each side of the shiftable disk, two oppositely disposed levers pivoted to the sides of the truck, a depending finger carried adjacent the free end of each of the latter levers, a coil spring mounted upon each of the latter levers and limited in its outer movement by the finger, a spring connected to the coil spring adjacent said finger and to the free end of its respective shifting lever, whereby as the finger engages one of the trackway projections the levers are operated to actuate the shifting disk, two sets of pivoted louvers depending from the underside of the truck adjacent the motor and fan, and coöperative means carried by the respective louvers and by the trackway for shifting the louvers.

1,221,366. TIME-INDICATOR FOR RAILWAY-TRAINS. HARRY W. NUSBAUM, Mount Airy, Md. Filed Oct. 11, 1916. Serial No. 125,028. (Cl. 246—40.)

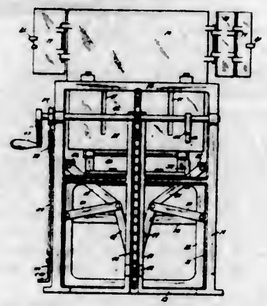


1. A time indicator for railway trains comprising a standard of thin sheet metal, and means mounted upon the standard for engaging a railway rail to support the standard in a vertical position, and pads attached to the standard and each comprising a plurality of leaves having time indicating numerals thereon.

2. A time indicator for railway trains comprising a standard of relatively thin pliable sheet metal, a cross bar of thin pliable metal, a back plate attached to the standard, and pads attached to the back plate and each comprising a plurality of leaves having time indicating numerals thereon.

1,221,367. CONCRETE-BLOCK MACHINE. JOSEPH H. OBERLE, Marshalltown, Iowa. Filed Dec. 27, 1915. Serial No. 68,886. (Cl. 25—41.)

1. In a concrete block machine, a frame, a mold box at the upper part thereof, a second frame mounted for vertical reciprocation on the first frame, a core supported on said second frame, a member mounted to slide vertically on the first frame, links pivoted thereto, and two pairs of links, the inner ends of each pair being pivoted to one of said first links, and the outer ends of each pair being pivoted respectively to the first and second frames, the outer ends of the respective pairs being pivoted on opposite sides of the machine, whereby when said vertically slidable member is reciprocated said links move the slidable frame up and down without binding of the parts.



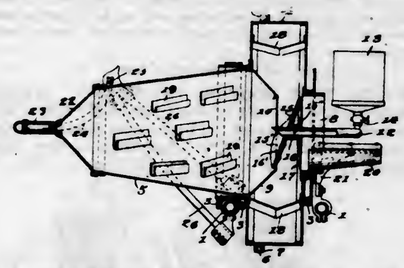
2. In a concrete block making machine, a frame, a mold box at the upper portion thereof, a second frame mounted for vertical reciprocation on the first frame, a collapsible and expansible core supported thereon, a pair of shafts, sprocket wheels mounted in alinement thereon, a chain on said wheels, means operatively connected with said chain and with said second frame, whereby the movement of the chain moves the second frame, coöperating means supported from one of said shafts and on said core, whereby when the second frame is raised the core is moved to expanded position, and means supported from said last mentioned shaft for coöperating with the last described means on the core for contracting the core before the second frame begins its downward movement.

3. In a machine of the class described, a frame, a mold box thereon, a second frame mounted for vertical reciprocation on said first frame, an expansible and collapsible core supported on said second frame having a bottom member, fixed upright end members, guide devices, horizontally slidable side members for coacting with said guide devices, vertically slidable end members, links pivoted to the respective slidable end members and to the respective side members, whereby the movement of said movable end members operates the side members, means for actuating said slidable members comprising a rock shaft on said bottom members, links fixed thereto and pivoted to the respective slidable end members, a lever fixed on said rock shaft, and means adapted to be actuated when said second frame is reciprocated for operating said lever.

1,221,368. CONCRETE-MIXER. ALFRED G. OLSEN, Elkhorn, Wis. Filed Feb. 6, 1915. Serial No. 6,583. (Cl. 83—73.)

1. In concrete mixing apparatus, the combination with a dry mixing drum and a wet mixing drum communicating therewith, of a chute for delivering material from the dry mixing drum to the wet mixing drum, the said chute being movable to and from a position effecting such delivery, the said chute being of less dimension in the direction across the dry mixing drum than the width of said dry mixing drum, and the wet mixing drum being formed with means coöperating with the chute for directing concrete material onto the chute when positioned with its uppermost portion adjacent that wall of the dry mixing drum remote from the wet mixing drum.

2. In concrete mixing apparatus, the combination with a dry mixing drum and a wet mixing drum communicating with and extending into the dry mixing drum, of a chute for delivering concrete material from the dry mixing drum to the wet mixing drum, the chute being movably mounted and adapted to be moved to and from a position for effecting such delivery and being dimensioned to extend substantially from that wall of the dry mixing drum remote from the wet mixing drum to the portion of the wet mixing drum extending into the dry mixing drum.



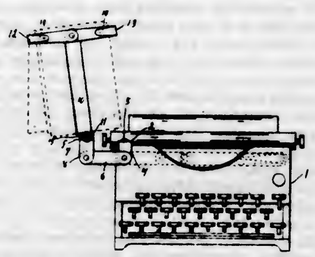
3. In concrete mixing apparatus, the combination with a dry mixing drum having an intake opening at one end, a wet mixing drum extending into the other end of the dry mixing drum and having an intake opening within the dry mixing drum, a feeding chute, and a movable support carrying the same and adapted to be moved for shifting the support through the intake opening of the wet mixing drum to and from a position across the dry mixing drum for delivering material from the dry mixing drum to the wet mixing drum.

4. In concrete mixing apparatus, the combination with a dry mixing drum, of a wet mixing drum communicating with one end of the dry mixing drum, a chute movable through the end of the wet mixing drum from within the wet mixing drum to within the dry mixing drum for delivering material from the latter to the former, and a movable shaft sustaining the chute and having its chute engaging portion shiftable through the end of the wet mixing drum.

5. In concrete mixing apparatus, the combination with a dry mixing drum and a wet mixing drum communicating with one end of the dry mixing drum, of a chute movable from within the wet mixing drum through the end thereof to within the dry mixing drum for delivering material therefrom to the wet mixing drum, and a door movable with the chute for closing the wet mixing drum when the chute is disposed therein.

[Claims 6 to 12 not printed in the Gazette.]

1,221,369. COPY-HOLDER. WILLIAM H. OSBORN, Louisville, Ky. Continuation of application Serial No. 834,728, filed Apr. 27, 1914. This application filed Nov. 22, 1915. Serial No. 62,693. (Cl. 120—28.)

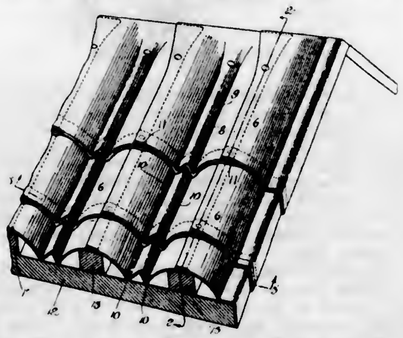


1. An angular attachment member comprising a horizontal and a vertical limb, a rectilinear strip pivotally connected to the vertical limb of said member and adapted to be swung in a vertical plane through a complete circle, an angular bracket pivotally attached by its vertical limb to the face of said strip at the free end thereof and adapted to be turned through a complete circle in a plane parallel with that through which said strip swings and an angular copy supporting member mounted on the hori-

zontal limb of said bracket and adapted to be turned through a complete circle in a plane at right angles to the plane in which the other members are movable.

2. In a copy holder, an L shaped bracket, an arm pivotally connected to one limb of said bracket, a second L shaped bracket pivotally connected by one limb to the opposite side and end of said arm, and an L shaped member pivotally mounted on the other limb of the second named bracket.

1,221,370. TILE ROOFING. FREDERICK C. OVERBURY, New York, N. Y., and HOWARD CARLETON PLATTS, Rutherford, N. J., assignors to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed Apr. 7, 1914. Serial No. 830,210. (Cl. 108—7.)



1. As a new article of manufacture, a roofing tile consisting of a blank of nonmetallic flexible waterproof material having a waterproof coating, said blank being bent to provide a central upstanding rib, and upwardly and outwardly curved side portions, and being adapted to be elongated or contracted laterally to vary the angularity of the rib and the curvature of said side portions.

2. As a new article of manufacture, a roofing tile consisting of a blank of nonmetallic flexible waterproof material having a weatherproof coating, said blank having a folded-under lower portion to appear thick in imitation of a clay tile, and a central upstanding rib and convexly curved side portions, one of said side portions having a fold to provide a flexibly connected lateral flap to lie thereunder, said blank being adapted to be elongated or contracted laterally.

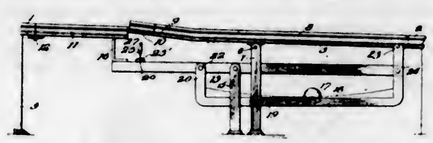
3. A roof comprising a supporting structure, a plurality of spaced bars thereon, a plurality of tiles formed of flexible waterproof material coated with a weatherproof substance, said tiles being arranged in overlapping horizontal rows, each tile having at one side edge a lateral folded-under flap in lapped engagement with the side marginal portion of the next adjacent tile, and fastenings passed through said flaps into said bars and covered by the body portions of the tiles, said tiles being formed with angular ribs located intermediate of said supports, and with side portions arching said supports.

4. A roof comprising a supporting structure, a plurality of parallel spaced bars or supports thereon and projecting from the surface thereof, and a plurality of flexible non-metallic fibrous weatherproof tiles having overlapping convexly curved side portions resting upon and fastened to said supports, and having upstanding angular ribs located between said supports.

1,221,371. GRAVITY-RAILWAY SYSTEM. DANIEL R. PARR, St. Louis, Mo. Filed July 28, 1916. Serial No. 111,860. (Cl. 104—223.)

1. In a gravity railway, the combination of a stationary track-way, a tilting platform section, a cradle, and means operable in said cradle to assist in tilting the platform section.

2. In a gravity railway, the combination of a stationary track-way, a tilting platform section, a cradle and weight means operable in said cradle to assist in tilting the platform section.



3. In a gravity railway, the combination of a stationary track-way, a tilting platform section, a cradle, weight means operable in said cradle to tilt the platform section, and a counter-weight associated with the platform for assisting in delivering a car or vehicle therefrom.

4. In a gravity railway, the combination of a stationary track-way, a tilting platform section, a cradle, weight means operable in said cradle to tend to tilt the platform and to assist in returning the same to normal position, a counter-weight associated with said platform, means for maintaining the platform in normal position, and manual means for assisting said weight to tilt the same.

5. In a gravity railway, the combination of a stationary track-way, a tilting platform section, a cradle, means operable in said cradle to assist in tilting the platform section, said means also serving to return the platform section to normal position, and latch means for maintaining said platform section in normal position, said latch means being adapted to be released by a cat when the same is run onto the platform section.

[Claims 6 to 8 not printed in the Gazette.]

1,221,372. TOBACCO-BAG ATTACHMENT. JOSEPH W. PEDEN, Grand Rapids, Mich. Filed Mar. 15, 1916. Serial No. 84,328. (Cl. 150—8.)



1. In a device of the character described, an inner member of metal having an opening therethrough, and a wall surrounding the opening and projecting at right angles from the body of said member, an outer member also having an opening therethrough and including a wall surrounding the opening, said wall on the outer member adapted to surround the wall on the inner member, a movable closure element to close said openings, and devices formed integral with said outer member adapted to detachably engage the body of the inner member, substantially as described.

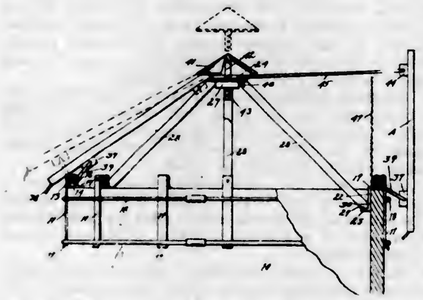
2. In a device of the character described, a plate having a central opening therein, a wall surrounding the opening and projecting at right angles from the plate, said wall having an inwardly extending groove formed therein, a second wall surrounding the first wall, spring devices formed integral with said second wall detachably engaging said plate, and a movable closure element to cover the openings at one end of said walls.

3. In a device of the character described, an inner member comprised of a plate having a central opening and a wall surrounding the opening and projecting at right angles from the plate, an outer member comprised of a plate also having a central opening with a wall around the opening projecting at right angles to the plate, said wall on the outer member adapted to surround the wall on the inner member, a movable closure element mounted on the wall of the outer member, and means on each end of the plate of said outer member to detachably engage with the ends of the plate of the inner member.

4. In a device of the character described, an inner member comprised of a plate having a central opening and a wall around the opening projecting at right angles to the plate, an outer member comprised of a plate also having a central opening with a wall around the opening projecting at right angles to the plate, said wall on the outer member adapted to surround the wall on the inner member, a movable closure element mounted on the wall of the outer member, and means on each end of the plate of said outer member to detachably engage with the ends of the plate of the inner member.

5. In a device of the character described, an inner member comprised of a plate having an opening and a wall around the opening projecting at an angle to the plate, an outer member including a plate also having an opening and a wall around the opening projecting at an angle to the plate, said wall on the outer member adapted to surround the wall on the inner member, and an extension at each end of the plate of the outer member bent downwardly and inwardly and then downwardly and outwardly, adapting said outer member for detachable connection to the inner member, substantially as described.

1,221,373. SILO-ROOF. CHARLES J. PERKINS, Manitou, Colo. Filed Mar. 11, 1915. Serial No. 13,742. (Cl. 20—1.41.)

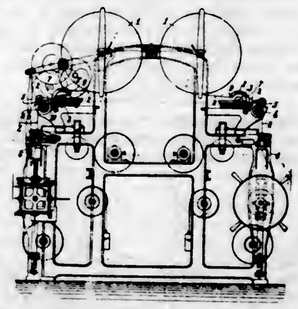


1. The combination of a circular structure with a conical roof therefor, comprised of substantially triangular sections arranged in succession around the structure, the alternate roof sections being arranged to overlap at their side edges the sections on each side thereof, said roof sections being extended beyond the circular structure at their lower ends and being pivoted on crank arms, whereby the sections may be swung upwardly and outwardly from the circular structure so that the lower outer ends of the sections do not interfere with each other when the sections are raised to substantially vertical position for filling the circular structure from the top.

2. In a device of the class described, the combination of a circular silo wall with a plurality of hanger brackets each comprising a horizontal portion adapted to rest on the top of the silo wall, bearing members, downwardly extending members adapted to engage the silo wall on the inside and outside thereof, and a hoop encircling said silo wall and engaging the downwardly extending bracket member for supporting the silo wall and holding the bracket member in position thereon, the downwardly extending portions of said brackets being provided with inwardly extending members adapted to receive and support rafters.

1,221,374. SPINNING-MACHINE FOR MAKING PAPER YARN. JOSEF PLICHTA, Uj-Pest, Hungary. Filed Feb. 28, 1914. Serial No. 821,720. (Cl. 28—21.)

1. In a spinning machine for the manufacture of paper yarn, twisting mechanism, feed-rollers for feeding strips of paper to the twisting mechanism, a moistening device arranged in advance of said feed rollers, and a tension device, said tension device being adapted to lead the paper strips to said feed-rollers either directly or with intermediate contact with said moistening device, said feed-rollers permitting of lateral access and removal of each individual paper strip to be fed thereby, whereby on breaking of a strip, the severed ends may be joined, the strip be disengaged from the feed-rollers to permit of twisting the ends together by hand, and be disengaged from the moistening mechanism and led to the feed-rollers and twisting mechanism in dry condition.



2. In a spinning machine for the manufacture of paper yarn, twisting mechanism, feed-rollers for feeding strips of paper to the twisting mechanism, a moistening device arranged in advance of said feed rollers, and a tension device, said tension device being adapted to lead the paper strips to said feed-rollers either directly or with intermediate contact with said moistening device, said feed-rollers permitting of lateral access and removal of each individual paper strip to be fed thereby, whereby on breaking of a strip, the severed ends may be joined, the strip be disengaged from the feed-rollers to permit of twisting the ends together by hand, and be disengaged from the moistening mechanism and led to the feed-rollers and twisting mechanism in dry condition, said moistening device comprising a roller on or below a tangent passing through the point of contact of the feed-rollers.

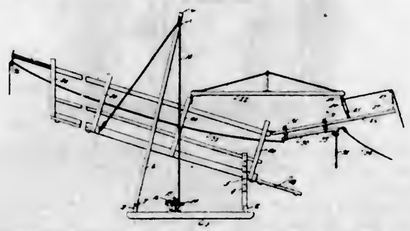
3. In a spinning machine for the manufacture of paper yarn, twisting mechanism, feed-rollers for feeding strips of paper to the twisting mechanism, a moistening device arranged in advance of said feed rollers, and a tension device, said tension device being adapted to lead the paper strips to said feed-rollers either directly or with intermediate contact with said moistening device, said feed-rollers permitting of lateral access and removal of each individual paper strip to be fed thereby, whereby on breaking of a strip, the severed ends may be joined, the strip be disengaged from the feed-rollers to permit of twisting the ends together by hand, and be disengaged from the moistening mechanism and led to the feed-rollers and twisting mechanism in dry condition, said tension device comprising guides arranged at different heights, the paper when passing over the higher and lower in the order named, being brought into contact with the moistening roller, and when passing over the lower and higher guide in the order named running to the feed-rollers clear of and without coming into contact with the moistening roller.

4. In a spinning machine for the manufacture of paper yarn, twisting mechanism, feed-rollers for feeding strips of paper to the twisting mechanism, a moistening device arranged in advance of said feed-rollers, a plurality of tension devices, said tension devices being adapted to lead the paper strips to said feed-rollers, either directly or with intermediate contact with said moistening device, said feed-rollers permitting of lateral access and removal of each individual paper strip to be fed thereby, whereby on breaking of a strip, the severed ends may be joined, the strip be disengaged from the feed-rollers to permit of twisting the ends together by hand, and be disengaged

from the moistening mechanism and led to the feed-rollers and twisting mechanism in dry condition, and means for simultaneously raising the tension devices whereby all of the paper strips may be removed at the same time from contact with the moistening rollers.

5. In a spinning machine for the manufacture of paper yarn, feeding rolls adapted to feed a plurality of paper strips, said feed rolls permitting of lateral access to each individual paper strip to be fed thereby, a moistening roll for moistening the paper before twisting, the paper to be twisted passing over the said moistening roll to the said feeding rolls, a tensioning device for each individual paper strip, each tensioning device comprising a lever for each strip, a rocking shaft on which said levers are mounted common to all said levers, two guiding rolls on each lever, said rolls guiding the strip in such manner, that the strip may pass in contact with the moistening device or lifted from the same.

1,221,375. HAY-STACKER. AUGUST RAISANEN and JOHN RAISANEN, Gackle, N. D. Filed Oct. 15, 1915. Serial No. 56,070. (Cl. 37—53.)



A device of the type described, including a tiltably-supported frame, having a runway supported thereon, said runway extending longitudinally thereof and itself having a tiltable extension, a bridge having one end supported upon said frame, distantly, and inwardly, from one end of the frame, the opposite end of said bridge overhanging said tiltable extension and means effecting connection between said bridge and said extension and providing for the tilting of the latter, said tiltable extension having mounted thereon a fork-equipped carriage, for travel upon said runway and its tiltable extension.

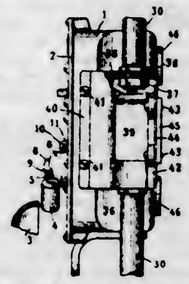
1,221,376. FUEL-FILTER FOR CARBURETERS. HANS RASMUSSEN, Royal, Iowa. Filed Aug. 3, 1915. Serial No. 43,483. (Cl. 210—16.)



1. In a fuel filter, a casing comprised of two parts detachably connected together, a rigid partition between the parts, having an opening through it, a filter device forming a partition mounted on one side of said partition, intake and discharge passages communicating with interiors of the respective casing parts, a stop on said rigid partition for holding part of said filter device spaced therefrom.

2. In a fuel filter, a casing comparatively thin from side to side, comprised of two parts screwed together and formed with opposite shoulders on their interiors at their open ends, a rigid partition received between said shoulders, having an opening through it, a filter device having its edge secured between said partition and one of said shoulders, a stop on said rigid partition for holding part of said filter device spaced from the partition, an intake passage communicating with the upper interior of the casing part having the filter device, a valve controlled, clean out passage in the lower part thereof, and a discharge passage communicating with the interior of the other casing part below the level of the opening in the rigid partition.

1,221,377. SIGNALING MECHANISM. HENRY E. REEVE, New York, N. Y. Filed Nov. 8, 1913. Serial No. 799,856. (Cl. 177—7.)



1. In a device of the character described, the combination of a casing having a chamber in one side thereof, a circuit terminal connected to the outer wall of said casing in said chamber, means for securing conduit sections in the ends of said chamber and a cover for said chamber detachably secured to said casing.

2. Electromechanical gong apparatus of the character described, comprising the combination of a casing having an undercut chamber in one side thereof, a circuit terminal connected in said chamber, means for securing conduit sections in the ends of said chamber and a cover for said chamber detachably secured to said casing.

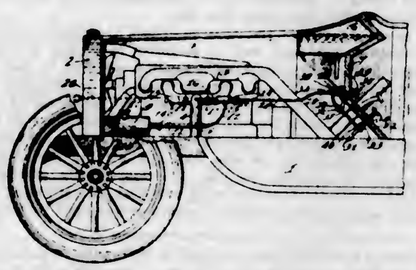
3. Electromechanical gong apparatus, comprising a casing containing the mechanism and having an undercut chamber extending along one vertical edge and means for looping and electrically connecting circuit wires in said chamber without cutting the wires.

4. Signal apparatus comprising, a casing having a chamber along a rear vertical corner, wall-straps secured to the bottom of the casing, a back plate for said chamber secured between said straps and said casing and a cover for said chamber.

5. Signal apparatus comprising a casing having a chamber along a rear vertical corner, wall-straps secured to the bottom of the casing, a back plate for said chamber secured between said straps and said casing, a cover for said chamber and means for securing conduit sections in the upper and lower ends of said chamber.

[Claims 6 to 9 not printed in the Gazette.]

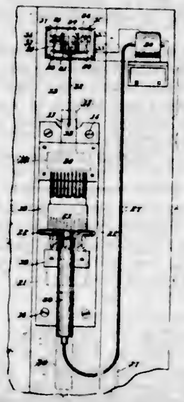
1,221,378. PRIMING MEANS FOR INTERNAL-COMBUSTION ENGINES. JAMES R. RICKETTS, Long Beach, Cal. Filed June 6, 1916. Serial No. 102,101. (Cl. 123—179.)



1. In a priming device for internal combustion engines, the combination with the engine and the fuel intake manifold therefor, and starting means for said engine, of a fuel tank arranged to permit the withdrawal of the fuel therefrom by suction and supported below said manifold, a combined air and fuel valve intermediate of and connected with said tank and said manifold, and an operating member for said valve extended to a point convenient to the operator and capable of operation independently of and with said starting means for simultaneously admitting air and fuel to the engine cylinders coincidently with the initial movement of the pistons.

2. In a priming device for internal combustion engines, the combination with the engine and the fuel intake manifold therefor, of a liquid fuel tank arranged to permit the withdrawal of the fuel therefrom by suction, said tank being supported at a point lower than the plane of said manifold, a combined air and fuel valve intermediate of and connected with said tank and said manifold for normally closing communication therebetween and for admitting desired quantities of air and fuel into the engine elements, the starting rod for cranking said engine, a rod connected with said valve and extended into the body of the vehicle for manually operating said valve, and a pivotally supported lever connected with said operating rod and with said starting rod for opening said valve coincidently with the operation of said starting rod for admitting fuel and air to the engine cylinders with the initial stroke of the pistons.

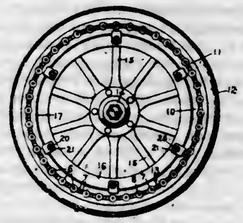
1,221,379. SHEEP-SHEARS HOLDER AND CONTROLLER. BERT ROOS, Idaho Falls, Idaho. Filed May 2, 1916. Serial No. 94,872. (Cl. 200—35.)



A device of the class described, comprising a wooden base block having a longitudinal groove therein, a metallic slide plate shiftably arranged within the said groove and having one end thereof outwardly projecting from the block and provided with a perforation, a power controlling cord attached to the said plate perforation, spaced retaining strips carried by the said block overlying the said plate, a clipper receiving bracket having resilient arms and base loops removably adjustably carried by the said plate between the said strips, and a bearing pad secured overlying the upper one of said strips and adapted for engaging the clipper blades when a clipper is arranged within the said bracket.

1,221,380. RESILIENT TIRE. ARTHUR L. RUNYAN, Waterloo, Iowa, assignor to Runyan Cushion Wheel Company, Omaha, Nebr., a Corporation. Filed Dec. 21, 1915. Serial No. 68,054. (Cl. 152—36.)

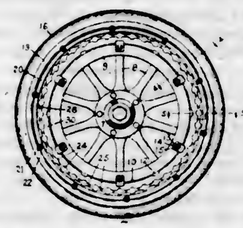
1. In a tire for vehicle wheels, an inner metal ring, an outer metal ring arranged concentrically with the inner, means for securing the inner ring on the rim of a wheel, a resilient tread-member on the outer ring, said rings having corresponding sphero-segmental recesses and cylindro-segmental lateral channels in the adjacent faces thereof, and soft resilient cushioning members disposed between the rings and fitting into said recesses and channels to connect the rings with each other yieldably.



2. In a tire for vehicle wheels, a metal ring having inwardly extending flanges at the sides thereof and provided in its outer face with sphero-segmental enlargement and cylindro-segmental channels intersecting said recesses laterally, means for securing said ring upon the rim of a wheel, a similar outer ring disposed concentrically with the inner and having outwardly extending flanges and provided with recesses and channels in its inner face corresponding with those of the inner ring, a resilient tread-member held between the flanges of the outer ring, and a series of soft resilient cushioning bodies disposed between the inner and outer rings, said bodies each having a central spherical part fitting into said recesses and lateral cylindrical parts fitting into said channels in the rings.

3. In a tire for vehicle wheels, a plurality of resilient units made of soft rubber, each comprising a cylindrical body having a central spherical enlargement and being axially perforate, a pair of metal rings disposed concentrically and provided in their adjacent faces with recesses fitting about the inner and outer sides of the resilient units to partially inclose the same and hold them under a predeterminable compression, the units and rings being thereby interengaged so that said units yieldably limit relative displacement of the rings laterally, circumferentially and radially and form the sole connection between the rings, means for detachably securing the inner ring onto the rim of a wheel, and a resilient solid tread-member mounted on the outer ring.

1,221,381. RESILIENT TIRE. ARTHUR L. RUNYAN, Waterloo, Iowa, assignor to Runyan Cushion Wheel Company, Omaha, Nebr., a Corporation. Filed Dec. 28, 1915. Serial No. 69,124. (Cl. 152—36.)



1. In a tire for vehicle wheels, the combination with a wheel-rim, and an outer non-deformable metal tread-rim having a solid tread of resilient material secured thereon, of a tire-body disposed intermediate of said wheel-rim and tread-rim and comprising a series of blocks of soft resilient material each having a central spherical portion and laterally projecting cylindrical portions, and inner and outer retaining-rings disposed respectively between the tire-body and the tread-rim and between the tire-body and wheel-rim and held in fixed lateral and circumferential relation thereto, the spherical and cylindrical portions of the resilient blocks being interengaged with parts

of the retaining-rings, and the wheel-rim and tread-rim being unconnected with each other except through the medium of said resilient blocks.

2. In a tire for vehicle wheels, the combination with a wheel-rim, and an outer tread-rim disposed about the wheel-rim in spaced radial relation thereto, of an outer pair of retaining-rings fitting within the tread-rim, flange-rings disposed at the lateral sides of said tread-rim and retaining-rings, means for clamping said flange-rings onto the tread-rim and for holding said retaining-rings in fixed lateral relation to each other and to the tread-rim, an inner pair of retaining-rings disposed upon the wheel-rim and having portions interengaging laterally therewith, means for pressing said pair of retaining-rings together laterally and removably securing them upon the wheel-rim, the inner and outer pairs of retaining-rings having recesses and transverse channels in the adjacent faces thereof, and a tire-body of resilient material held under compression between the inner and outer pairs of retaining-rings and fitting into the recesses and channels thereof to yieldably limit relative movement thereof laterally, circumferentially and radially of the wheel.

3. In a tire for vehicle wheels, a plurality of solid blocks of resilient material each having a central spherical portion, cylindrical laterally-extending end-portions and rectangular longitudinal side-pieces, said resilient blocks being disposed in an annular series with the side-pieces thereof contacting, pairs of retaining-rings disposed inside and outside the ring formed by said annular series of the blocks and having their adjacent faces formed to fit thereon, and means for pressing the retaining-rings of each pair laterally toward each other to compress the spherical portions of the resilient blocks.

1,221,382. PRODUCING PARTIALLY-HYDROGENIZED MONOCYCLIC HYDROCARBONS. OTTO SCHMIDT, Ludwigshafen-on-the-Rhine, and KARL HOCHSCHWENDER and THEODOR EICHLER, Mannheim, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Oct. 11, 1912. Serial No. 725,161. (Cl. 23—24.)

1. The process of producing partially hydrogenized monocyclic hydrocarbons by subjecting halogen substitution products of monocyclic paraffins in the condition of vapor to the action of a compound which will split off halogen hydrid while employing a temperature sufficient to effect the splitting off of the halogen hydrid.

2. The process of producing tetrahydrobenzene by subjecting vaporized chlorcyclohexane to the action of a compound which will split off halogen hydrid while employing a temperature sufficient to effect the splitting off of the halogen hydrid.

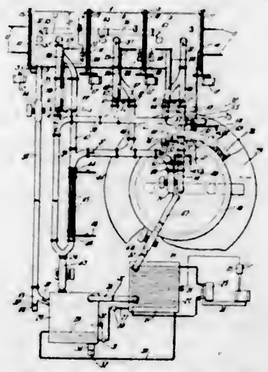
3. The process of producing tetrahydrobenzene by subjecting vaporized chlorcyclohexane to the action of barium chlorid at a temperature sufficient to effect the splitting off of the halogen hydrid.

1,221,383. PROCESS FOR DRYING ARTICLES AND APPARATUS FOR ACCOMPLISHING THE SAME. FREDERICK AVARD SECORD, St. John, New Brunswick, Canada, assignor of one-third to Alexander Pierce Paterson and one-third to Charles Henry Peters, St. John, New Brunswick. Filed Nov. 17, 1915. Serial No. 61,871. (Cl. 34—46.)

1. A process for drying clay which consists in placing said clay within a closed casing and then in circulating through said casing and in contact with said clay currents of air having a temperature artificially reduced to substantially 39.2° F. until the temperature of said clay is thus artificially reduced and then continuing the circulation of currents of air in contact with said clay until the moisture at the surface of said clay is removed.

2. A process for drying clay which consists, first in artificially reducing the temperature of said clay and second in removing moisture from the surface of said clay by applying currents of air to the surface thereof.

3. A process for drying clay which consists in placing the material to be dried within a closed casing, then in passing through said casing and in contact with said clay currents of air having a temperature artificially reduced to substantially 39.2° F. until the temperature of said clay is thus artificially reduced and then in artificially increasing substantially the temperature of said currents of air, whereby moisture is removed from the surface of said clay and from said casing.

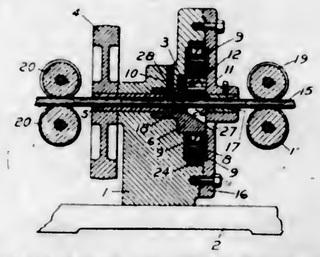


4. A process for drying clay which consists first in artificially reducing the temperature of said clay by applying currents of air of lower temperature than that of said clay to the surface thereof, and second in removing moisture from said clay by applying currents of air to the surface thereof.

5. A process for drying clay which consists first in artificially reducing the temperature of said clay by applying currents of air of lower temperature than that of said clay to the surface thereof and second in removing moisture from said clay by applying currents of air of increasing temperature to the surface thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,221,384. AUTOMATIC STRAIGHTENING-MACHINE. FRANK HENRY SLEEPER, Worcester, Mass., assignor to Sleeper & Hartley, Inc., Worcester, Mass., a Corporation of Massachusetts. Filed Jan. 15, 1914. Serial No. 812,247. (Cl. 153—48.)



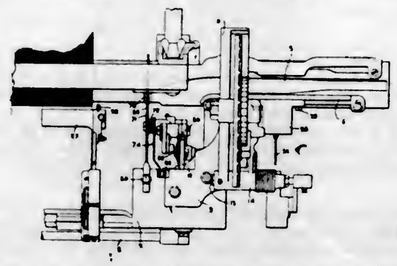
1. In a straightening machine the combination with a relatively fixed support for the object to be straightened, of a rotating die-head, a radially-movable die mounted in said head, means to reciprocate said die at a uniform predetermined speed to and from the axis of rotation, and means to feed the object to be straightened past said die.

2. In an automatic straightening machine and in combination, a main frame, an annular series of rolls mounted therein, a rotatable die-head mounted within and parallel with said series of rolls, a bending die mounted for reciprocal radial movement within said die-head, a die-hammer mounted for reciprocal radial movement within said die-head adjacent to said bending die, means to rotate said die-head so as to bring said hammer into successive contact with said rolls, and means to feed the material to be straightened at a uniform predetermined speed along the axis of rotation past said die.

3. In a straightening machine, in combination, a rotating die-head, a radially reciprocating die mounted therein, means to rotate said die-head, means to reciprocate said die at uniform, predetermined speed so as to deliver successive blows in the direction of the axis of rotation, and feeding devices operative along the axis of rotation of said die.

4. The herein described method of straightening an object which consists in subjecting said object to a series of bending blows delivered transversely of its longitudinal axis and around the periphery of said object at a uniform predetermined speed, and causing a uniform movement of the object being straightened in the direction of its longitudinal axis whereby the blows contact with the surface of the object in a spiral of substantially constant pitch.

1,221,385. FILLING-END-CLEARING MEANS FOR LOOMS. ALFRED E. STAFFORD, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Jan. 22, 1915. Serial No. 3,697. (Cl. 139—85.)



1. In an automatic weft replenishing loom, a hopper containing a supply of fresh filling carriers, means actuated upon the call for filling replenishment to transfer a filling carrier from the hopper to the boxed shuttle and discharge therefrom the spent filling carrier, a temple thread cutter, means to part the trailing filling of the filling carrier to be discharged adjacent the shuttle eye, a filling support, and means to seize the trailing filling midway the temple thread cutter and the shuttle-eye and draw it forward and then downward over the filling support and hold it distended from the cloth and in the field of operation of the temple thread cutter.

2. In an automatic filling replenishing loom, a temple thread cutter, filling parting means located adjacent the eye of the shuttle when in position for filling transfer, means located between the said temple thread cutter and filling parting means acting to seize the trailing filling and carry it forward, a serrated filling support located between the temple thread cutter and said seizing means, and means acting between said support and said seizing means to carry the filling end downwardly and hold it distended from the temple thread cutter over the said support and in the path of the lay whereby when the lay beats up a slight tension is placed upon the filling end extending from the fell.

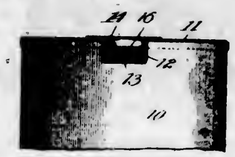
3. In an automatic filling replenishing loom, a temple thread cutter, a shuttle feeler, filling seizing means mounted on the shuttle feeler, a serrated supporting bar mounted on the breast beam and projecting rearwardly beneath the raceway, a thread adherent device located forward of the temple thread cutter below the path of the lay below the supporting bar and on the side thereof opposite the temple thread cutter, and a serrated carrying member movable from a position above the supporting bar downward to said adherent member, and means for causing the actuation of the said mechanism upon the call for filling replenishing whereby the trailing filling end from the ejected filling carrier is seized, carried back on said supporting bar and then carried downwardly into engagement with the said thread adherent device and thus held extending from the fell in the field of operation of the temple thread cutter and out of danger from being drawn back and woven into the shed.

4. In an automatic weft replenishing loom, a hopper containing a supply of fresh filling carriers, means actuated upon the call for filling replenishment to transfer a filling carrier from the hopper to the boxed shuttle and discharge therefrom the spent filling carrier, a temple thread cutter, means to part the trailing filling of the filling carrier to be discharged adjacent the shuttle eye, a filling support, and means operated upon transfer taking place to seize the trailing filling midway the temple thread cutter and the shuttle-eye and draw it forward and then downward over the filling support and hold it distended from the cloth and in the field of operation of the temple thread cutter.

5. In an automatic filling replenishing loom, a swinging shuttle feeler governed by the replenishing mechanism and provided with a slotted nose to receive the filling, a blade pivoted on the feeler and provided with a hooked end adapted when swung into closed position to close the slot in the nose and loosely retain the filling, means to move the shuttle feeler into operative position prior to a change of filling thereby to position the nose to receive the filling of the filling carrier to be ejected, and means to move the pivoted blade into closed position upon transfer taking place whereby upon the return of the shuttle feeler to normal position the filling loosely retained in the nose is carried forward out of danger from being drawn back and woven into the shed.

[Claims 6 and 7 not printed in the Gazette.]

1,221,386. CONTAINER AND PROCESS OF PASTEURIZING THE SAME. PETRARCH A. GODFREY STEERUP, Chicago, Ill., assignor to The W. K. Jahn Co., Chicago, Ill., a Corporation of Illinois. Filed July 26, 1916. Serial No. 111,473. (Cl. 99—8.)



1. The process of pasteurizing and sealing containers, which consists in applying to the vent-opening of the container before the latter is cool, a filter for micro-organisms, permitting the container to cool with such filter in place, and completely embedding that portion of the filter which may come into contact with the contents of the container in a sealing compound.

2. The process of pasteurizing and sealing package goods, which consists in inclosing such goods in a container having a vent-aperture, fitting over the vent-aperture a porous substance adapted to act as a filter for micro-organisms, heating the container to pasteurize or sterilize the same, cooling the container, and finally embedding such filter in a sealing compound which seals the said vent-opening.

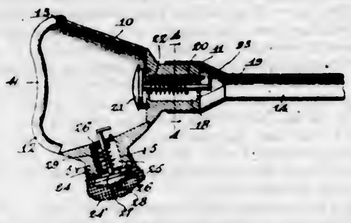
3. A sealed container comprising a body-portion having a vent-aperture through its wall, a filter-mass lying over the vent-aperture, and a sealing compound sealing the said vent-aperture and embedding the said filter-mass therein.

4. A sealed container comprising a body-portion having a cup-shaped depression in one wall thereof, there being a vent-aperture in the bottom of the cup, a filter-mass lying within the said cup, a sealing compound embedding the said filter-mass and closing the said vent-opening, and a cover-plate closing the open end of the said cup.

1,221,387. RESPIRATOR. J. ALPHONSE STE MARIE, Laprairie, Quebec, Canada. Filed July 11, 1916. Serial No. 108,741. (Cl. 128—13.)

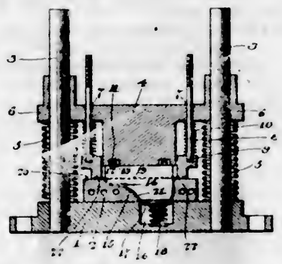
A respirator comprising a hood having an open end shaped to receive the nose and mouth of the user, nipples

formed as spaced points on and projecting outwardly from the hood, valve seats carried by the respective opposite ends of the nipples, valve stems operating through the nipples and having valves to engage the valve seats,



means arranged wholly within the nipples to maintain the valves normally seated, and coöperating means carried by the nipples and valve stems to limit the opening movement of the valves, each of the nipples including a cylindrical free projecting portion to receive a tube.

1,221,388. METHOD OF MAKING SHOES. SAMUEL STRAUSS, Los Angeles, Cal. Filed July 12, 1915. Serial No. 39,248. (Cl. 12—142.)



1. The method of making shoes, which method comprises soaking a piece of leather in water to make it pliable, applying forming dies to the wet leather to shape it into an upper having an outturned flange, inserting a last inside of said upper while said upper is wet, basting a sole to the flange and the flange to a collar while the upper is wet, stitching the flange and sole together around the inner edge of said collar while the upper is wet, removing the last from the upper, allowing the upper to dry out, and then ripping off the collar.

2. The method of making shoes, which method comprises soaking a piece of leather in water to make it pliable, applying forming dies to the wet leather to shape it into an upper having an outturned flange, inserting a last inside of said upper while said upper is wet, placing a band of stiff material on the top surface of the flange, basting a sole to the flange and the flange to the band and said band to a collar to hold them all together, stitching the flange and sole and band together around the inner edge of said collar, removing the last from the upper, allowing the upper to dry out, and then ripping off the collar.

3. The method of making shoes, which method comprises inserting a last into an upper having an outturned flange, drawing a collar over the upper against said flange, basting the collar and flange and a sole together, stitching the flange and sole together, removing the last, and finally removing the collar.

4. The method of making shoes, which method comprises soaking a piece of leather in water to make it pliable, applying forming dies to the wet leather to shape it into an upper having an outturned flange, inserting a last inside of said upper while said upper is wet, basting a sole to the flange while the upper is wet, stitching the flange and sole together while the upper is wet, and finally removing the last from the upper.

5. The method of making shoes, which method comprises soaking a piece of leather in water to make it pliable, holding the marginal portions of said piece of leather, pressing out the central portion of said piece of leather to form an upper and to form a flange outturned from said upper, fastening a piece of sole leather to a last, inserting said last in the upper thus pressing out so that the sole leather will extend in proximity to the outturned flange, fastening the sole to said flange, cutting said upper to make an opening therein, and then removing the last through said opening.

1,221,389. STENCIL. ALBERT E. STRIPPEL, New York, N. Y. Filed Sept. 11, 1913. Serial No. 789,305. (Cl. 101—134.)



1. A stencil comprising an oblong frame and a suitably treated long fiber fabric secured thereto with the fibers running longitudinally of the frame.

2. A stencil comprising an oblong frame and a single ply of suitably treated long fiber fabric secured thereto, with the fibers running longitudinally of the frame.

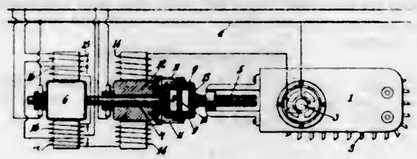
1,221,390. DIFFERENTIAL HOISTING AND LOWERING APPARATUS. LOUIS TABULO, London, England. Filed Dec. 10, 1912. Serial No. 736,023. (Cl. 57—116.)



1. A self-sustaining lower pulley block for differential hoisting and lowering apparatus comprising a pulley rotatably mounted within the frame of the block and formed with peripheral surfaces adapted to be gripped by the chain of the apparatus, a brake drum mounted by the side of said pulley, a free-wheel device operatively connecting said brake drum and pulley, a lever pivoted at its inner end to said frame, a brake band which is wound more than once around said brake drum anchored at one of its ends to said frame and connected at its other end to the outer end of said lever, and a load hook suspended from said lever at a point which is intermediate between the point at which said lever is pivoted to said frame and the point at which said brake band is connected to said lever and which corresponds to the difference between the diameters of the upper pulleys of the apparatus, substantially as described.

2. A self-sustaining lower pulley block for differential hoisting and lowering apparatus consisting of the combination of a pulley rotatably mounted within the frame of the block and formed with peripheral surfaces adapted to be gripped by the chain of the apparatus and with an eccentric boss, a brake drum of box section mounted by the side of said pulley, a free-wheel device operatively connecting said brake drum and pulley and comprising a ring of rollers bearing against the eccentric boss of said pulley and segmental pieces interposed between said rollers and the walls of said hollow brake drum and connected to said pulley by means of a slot in said pulley and a pin carried by one of the segmental pieces, a lever pivoted at its inner end to said frame, a brake band which is wound more than once around said brake drum anchored at one of its ends to said frame and connected at its other end to the outer end of said lever, and a load hook suspended from said lever at a point which is intermediate between the point at which said lever is pivoted to said frame and the point at which said brake band is connected to said lever and which corresponds to the difference between the diameters of the upper pulleys of the apparatus, substantially as described.

1,221,391. FEEDING DEVICE. LOUIS H. THELLEN, Brooklyn, N. Y. Filed May 20, 1915. Serial No. 29,382. (Cl. 171—312.)



1. The combination of a motor, a device driven by the motor with a load of varying value, means for feeding the device to its work, differential gearing, one part of said gearing operating the feeding means, a second motor for driving another part of said gearing, a third motor for driving a third part of said gearing, and connections whereby the field of the second motor is strengthened and the field of the third motor is weakened responsive to increases in load on the first motor to retard the feeding means.

2. The combination of a motor, a device driven by the motor with a load of varying value, means for feeding the device to its work, differential gearing, one part of said gearing operating the feeding means, a motor for driving another part of said gearing, means for independently driving another part of said gearing and connections whereby the field of the second motor is varied responsive to the variations in load on the first motor whereby upon an increase of load on the first motor the feeding means is retarded.

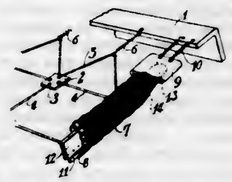
3. The combination of a motor, a device driven by the motor with a load of varying value, means for feeding the device to its work, differential gearing, one part of said gearing operating the feeding means, a motor for driving another part of said gearing, means for independently driving another part of said gearing and connections whereby the field of the second motor is strengthened responsive to an increase in load on the first motor to decrease the speed of the second motor, whereby upon an increase of load on the first motor the feeding means is retarded.

4. The combination of a motor, a device driven by the motor with a load of varying value, means for feeding the device to its work, differential gearing, one part of said gearing operating the feeding means, a motor for driving another part of said gearing, means for independently driving another part of said gearing and connections whereby the field of the second motor is weakened responsive to an increase in load on the first motor to increase the speed of the second motor, whereby upon an increase of load on the first motor the feeding means is retarded.

5. The combination of a work device, means for feeding the said device, differential gearing, one part of said gearing operating the feeding means, a motor for driving another part of said gearing, means for independently driving another part of said gearing and connections whereby the field of the motor is varied in accordance with the resistance offered said work device, whereby upon an increase in resistance offered the work device the feeding thereof is retarded.

[Claims 6 to 22 not printed in the Gazette.]

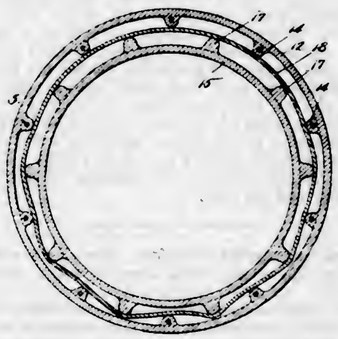
1,221,392. WIRE MATTRESS. FRANCIS M. TINKHAM, Springfield, Mass. Filed Oct. 15, 1915. Serial No. 55,961. (Cl. 5—39.)



1. A spring bed comprising, a frame having end rails to which a wire fabric is connected, said fabric having its opposite edge portions strengthened by means of coils of woven wire interlocked together, a core comprising a ribbon like member located within said coils and standing in a plane at right angles to the plane of the mattress fabric, and means for attaching the core to the ends rails, and preventing over turning of the core, whereby a truss-effect is produced for strengthening the side edge of woven wire and for serving as a guard for retaining the mattress in place.

2. A spring bed comprising a frame having end rails to which a wire fabric is connected, said fabric having its opposite side portions strengthened by means of coils interlocked together, a core comprising a ribbon like member located within said coils and disposed at right angles to the plane of the mattress, the ends of the core being bent at an angle to the body thereof, clips secured to the bent ends of the core and means for attaching the clips to the end rails and preventing over turning of the core.

1,221,393. RESILIENT WHEEL. FRANK A. TURNER, Boston, Mass., assignor of one-half to Joseph M. Jackson, Boston, Mass., and one-fourth to Arthur E. Kilham, Beverly, Mass. Filed Feb. 13, 1917. Serial No. 148,349. (Cl. 152—37.)



1. In a resilient wheel, in combination, a floating annular tire member of rigid material, having a series of spaced outer bearings, a rigid annular rim member, having a series of spaced inner bearings, alternating with said outer bearings, and an inextensible annular floating spring member interposed between said members in sliding contact with said bearings, said spring member normally maintaining the rim member substantially concentric with

the tire member, and the bearings of one member substantially central relatively to those of the other member, and being locally flexible by the action of a load on the rim member to form resilient inextensible torque-transmitting portions which yieldingly support the rim member and its load under all conditions of torque-transmission.

2. In a resilient wheel, in combination, a floating annular tire member of rigid material, having a series of spaced outer bearings, a rigid annular rim member, having a series of spaced inner bearings, alternating with said outer bearings, and an inextensible annular floating spring member interposed between said members in sliding contact with said bearings, said spring member normally maintaining the rim member substantially concentric with the tire member, and the bearings of one member substantially central relatively to those of the other member, and being locally flexible by the action of a load on the rim member to form resilient inextensible torque-transmitting portions which yieldingly support the rim member and its load under all conditions of torque-transmission, the said bearings being formed to normally maintain alternating outwardly and inwardly projecting waves in the spring member forming incipient torque-transmitting portions.

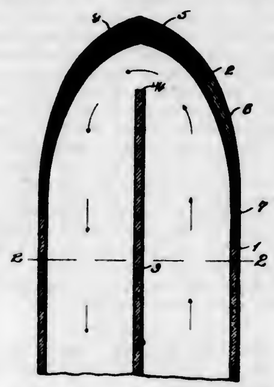
3. A resilient wheel comprising a floating annular tire member provided with a plurality of equally spaced outer bearings, a wheel body having its periphery provided with a plurality of equally spaced inner bearings alternating with the outer bearings, and an annular inextensible spring member interposed between the tire member and the wheel body and in slidable contact with the ends of all of said bearings, said spring member being free to creep circumferentially of the wheel body, whereby a limited relative radial movement of the tire member and the wheel body is permitted when a load is applied, and portions of the spring member are flexed between contiguous inner and outer bearings, the spring member and wheel body being free to move to a position eccentric to the tire member when said load is applied, the flexed portions of the inextensible spring member providing a driving connection between the bearings carried by the wheel body and the tire member.

4. A resilient wheel comprising a floating annular tire member provided with a plurality of equally spaced outer bearings, a wheel body having its periphery provided with a plurality of equally spaced inner bearings alternating with said outer bearings, the outer ends of the inner bearings being normally farther away from the center of the wheel than the inner ends of the outer bearings, and an annular inextensible spring member interposed between the tire member and the wheel body and in slidable contact with the ends of all of said bearings, said spring member being free to creep circumferentially of the wheel body, whereby a limited relative radial movement of the tire member and the wheel body is permitted when a load is applied, and portions of the spring member are flexed between contiguous inner and outer bearings, the spring member and the wheel body being free to move to a position eccentric to the tire member when said load is applied, said inextensible spring member possessing sufficient body to cause the flexed portions thereof to provide a resilient driving connection between the bearings carried by the wheel body and the rim.

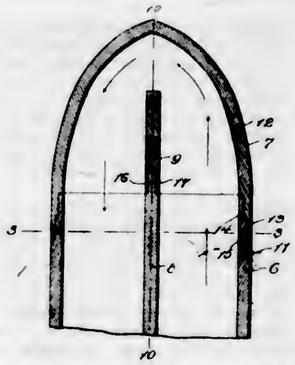
1,221,394. GARMENT-FORMER. JULIUS OTTO VON STETTEN, St. Louis, Mo. Filed June 16, 1916. Serial No. 104,136. (Cl. 223—17.)

1. In combination with a hollow hosiery former, formed with a longitudinal partition therein so as to establish fluid communication between the chambers formed by said partition, a hollow detachable toe portion, said toe portion secured to said hollow hosiery former by frictional contact, and means for precluding fluid communication between said hollow hosiery former and said detachable toe portion.

2. In combination with a hollow hosiery former, with its toe portion countersunk, formed with a longitudinal partition therein so as to establish fluid communication between the chambers formed by said partition, a hollow detachable toe portion of varying thickness, said toe portion secured to said hollow hosiery former proper by frictional contact, and means for precluding fluid communication between the said hosiery former and said detachable toe portion.



1,221,395. GARMENT-FORMER. JULIUS OTTO VON STETTEN, St. Louis, Mo. Filed June 16, 1916. Serial No. 104,137. (Cl. 223—17.)



1. In a device of the character described, a hollow garment former proper, and a hollow detachable toe, partitions formed in said hollow garment former proper and said hollow detachable toe respectively, and means for detachably securing said hollow garment former proper and said hollow detachable toe, whereby said partitions will be detachably secured so as to form continuous partitions.

2. In a device of the character described, a hollow detachable toe, a hollow garment former proper, said toe and former secured detachably by a scarf joint, a partition formed integral in said hollow garment former proper, a partition formed integral in said hollow detachable toe, a tongue and groove joint securing them detachably so that a steam tight juncture is made between said hollow garment former proper and said detachable toe and between said partitions.

3. In a device of the character described, in combination with a hollow garment former proper, a partition formed integral therewith, a hollow detachable toe, a partition formed integral therewith, but spaced apart from the toe extremity of said hollow detachable toe, and means for detachably securing said hollow garment former proper and said hollow detachable toe, whereby said partitions will be detachably secured so as to form a continuous partition, and two adjacent chambers in communication with each other in said hollow detachable toe will be formed.

4. In combination with a hollow garment former proper, a hollow detachable toe, longitudinal partitions formed integral in said hollow garment former proper and in said hollow detachable toe, and means for detachably securing said partitions so as to form longitudinal continuous chambers when said hollow detachable toe is secured to said hollow garment former proper and means located in said hollow detachable toe for establishing communication between said chambers.

1,221,396. BABY-CARRIAGE. EDWARD R. WAGNER, Milwaukee, Wis., assignor to E. R. Wagner Manufacturing Company, North Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 7, 1911. Serial No. 648,053. (Cl. 21—83.)



1. In a baby carriage the combination of a frame, inwardly folding wheel hangers consisting of rods revolubly connected with the sides of said frame parallel therewith and bent at right angles into parallel arms which are in turn bent at right angles into wheel spindles, inwardly, downwardly and forwardly inclined braces attached at their front ends to the front arms and adjacent to their rear ends to said rods beyond which they extend inwardly and provided adjacent to their front ends with keepers diverging rearwardly and inwardly therefrom, a handle pivoted to the rear end of said frame, and an inverted U-shaped stay lever pivoted to the sides of said frame and connected at its ends by links with said handle, said lever being adapted by coöperation with said inclined braces to automatically fold and unfold said hangers when the handle is folded and unfolded and when said hangers are unfolded to engage with said keepers and lock said front arms in place.

2. In a baby carriage the combination of a frame provided on the sides with depending brackets inwardly bent and notched at their lower ends, inwardly folding wheel hangers consisting of rods revolubly connected with said brackets parallel with the sides of said frame and bent into arms which are provided at their ends with wheel spindles and which when unfolded bear against said brackets and fit into the notches therein, and means for fastening said hangers in unfolded position.

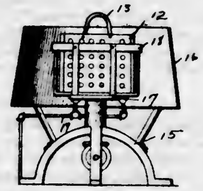
3. In a baby carriage the combination of a frame provided with depending brackets having inwardly bent and notched lower ends, inwardly folding wheel hangers consisting of rods revolubly connected with the inner sides thereof and bent adjacent thereto into arms which are provided at their ends with wheel spindles and which when unfolded bear outwardly against said brackets and fit into the notches therein, and U-shaped stays pivoted to the sides of the frame and adapted to lock said hangers in unfolded position.

4. In a baby carriage the combination of a frame, inwardly folding wheel hangers consisting of rods revolubly connected with the sides of said frame parallel therewith and having lateral wheel supporting arms, folding stays pivoted to the sides of said frame and adapted when unfolded to hold said wheel supporting arms in working position, a folding handle pivoted to said frame and connected by links with upwardly extended arms of the front stay, a rod connecting the lower part of the front stay with the lower part of the rear stay, a bail-shaped brace pivoted at its ends to said handle and guided by its cross piece between the hanger rods and the sides of the frame, and a latch pivoted to said frame and adapted by engagement with said handle brace to lock the handle and parts operatively connected therewith in working position.

5. In a baby carriage the combination of a frame, inwardly folding wheel hangers hinged to the sides of said frame, a folding stay pivoted to the frame and adapted when unfolded to hold said hangers in working position, a folding handle pivoted to the frame and operatively connected with said stay, a brace pivoted to said handle and guided in folding and unfolding between the sides of the frame and the wheel hangers, a spring pressed latch pivoted to the frame and adapted by engagement with said brace to lock the handle and parts connected therewith in working position, and a releasing lever pivoted to said stay and adapted to disengage said latch from said brace preparatory to folding the carriage.

[Claim 6 not printed in the Gazette.]

1,221,397. METHOD OF METAL-PLATING. EDWARD L. WATROUS, Des Moines, Iowa, assignor to E. L. Watrous Galvanizing Company, a Corporation of South Dakota. Filed May 3, 1909. Serial No. 493,584. Renewed Feb. 26, 1917. Serial No. 151,151. (Cl. 91—59.1.)



1. The method of treating metal articles, which consists in placing the articles loosely in a perforated receptacle, then immersing the receptacle containing the articles in a bath of molten zinc by supporting said receptacle in a furnace containing said molten zinc and permitting the articles to remain in the molten zinc until the zinc alloys with the surface metal of the articles, then bodily removing the receptacle containing the articles and instantly subjecting it to centrifugal action, meanwhile maintaining the zinc in a molten state by applying heat thereto, whereby the excess zinc is thrown off, and a smooth, uniform galvanization is effected.

2. The method of treating small iron articles of complex form which consists in placing said articles loosely in a receptacle provided with perforated sides, then immersing the articles while thus supported in a bath of molten zinc by supporting the receptacle in which the articles are contained in a furnace containing the molten zinc, and then heating and allowing the articles to remain until the zinc alloys with the surface metal of the articles, subsequently placing the receptacle and articles upon a rotatable support, while simultaneously heating the articles uniformly throughout and subjecting the receptacle and its contents to a centrifugal action whereby all excess zinc will be thrown off and a smooth uniform covering produced on the articles.

3. The method of galvanizing small articles which consists in placing the articles loosely in a perforated receptacle, then immersing said receptacle in a bath of molten zinc until the zinc alloys with the surface metal of the articles, then bodily removing the receptacle containing the articles and immediately subjecting it to rapid centrifugal action without removing the articles therefrom until the excess zinc is thrown off and a smooth, uniform galvanization is effected.

4. The method of galvanizing small articles which consists in placing said articles in a perforated receptacle,

in immersing said receptacle together with the articles in molten zinc until a thorough surface alloy between the articles and the zinc takes place, in then removing and subjecting the articles and receptacle together to centrifugal action, whereby from the beginning to the end of the process of galvanising, the articles are maintained in the same receptacle and therefore can never come in contact with a surface cooler than themselves.

5. The method of treating metal articles which consists in placing the articles loosely in a perforated receptacle, then immersing said receptacle in a bath of molten metal until said metal alloys with the surface metal of the articles, then bodily removing the receptacle containing the articles and immediately subjecting it to rapid centrifugal action without removing the articles therefrom until the excess coating metal is thrown off and a smooth uniform coating is effected.

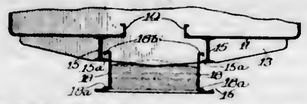
1,221,398. CIGAR-CASE HOLDER. WILLIAM B. WHITE, Des Moines, Iowa. Filed May 11, 1916. Serial No. 96,836. (Cl. 206—41.)



1. A cigar case comprising an elongated casing member, a cover member hinged thereto, the case member being provided with an upwardly and inwardly extending flange at its free edge opposite its hinged edge, and a curved resilient finger extending outwardly and into the case from said flange, said cover being arranged to overlap said flange.

2. A cigar case comprising an elongated case member, adapted to receive a cigar and having alined bearing members formed along one longitudinal edge, a cover member having alined spaced bearing members formed along one edge, a pintle extended through the bearing members of the case and of the cover member, a flat spring secured to two of the bearing members on the case, a cam-faced plate secured to the cover member and adapted to coact with said spring, so that when the cover member is open the spring will yieldingly hold it in such position, and when the cover member is closed, the spring will hold it against opening, said case having an inwardly and upwardly extending flange along its longitudinal edge opposite its side, and a resilient finger curved inwardly from the central portion of said flange for engaging and holding a cigar.

1,221,399. CAR-DIAPHRAGM. EDWARD E. WHITMORE, Chicago, Ill., assignor to The Curtain Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 11, 1917. Serial No. 141,748. (Cl. 105—61.)



1. In a metallic vestibule diaphragm for cars of the postal type having exposed end I-beams, a pair of side wall members and a cover member connected together to form an inverted U construction, the side wall members and cover member provided along their outer margins with means of attachment to the face plate, the side wall members provided along their inner margins with a flange for coöperating with the I beams of the car frame.

2. In a metallic vestibule diaphragm for cars of the postal type having exposed end I-beams, a pair of side wall members and a cover member rigidly connected together to form an inverted U construction, the side wall members and cover members provided along their outer margins with flanges for attachment to the face plate, the side wall members provided along their inner margins with flanges for coöperation with the flanges of the I-beam.

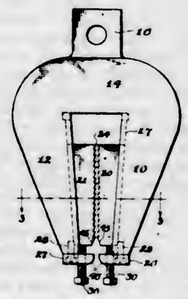
3. In a metallic vestibule diaphragm for cars of the postal type having exposed end I-beams, a pair of side wall members and a cover member connected together to form an inverted U-construction, the side wall members and cover member provided along their outer margins with a flange for attachment to the face plate, the side wall members provided along their inner margins with an outwardly turned flange for interlocking coöperation with the I-beams of the car frames, and the cover member having an outwardly turned flange for coöperation with upper end sheathing of the car as a baffle plate to exclude the elements.

4. In a metallic vestibule diaphragm for cars of the postal type having exposed end I-beams, a pair of side wall members and a cover member connected together to form an inverted U-construction, the side wall members and cover members provided along their outer margins with a flange for attachment to the face plate, the side wall members provided along their inner margins with an outwardly turned flange for interlocking coöperation with the I-beam of the car frames, and the cover member having an outwardly turned flange for coöperation with upper end sheathing of the car as a baffle plate to exclude the elements, the inner flanges of the side and cover members arranged to normally operate out of contact with the flanges of the I-beams and sheathing respectively.

5. In a metallic vestibule diaphragm with cars of the postal type, the combination with the structural end I-beams of the car extending beyond the car end and exposed for a vertical distance corresponding substantially to the height of the vestibule, and the upper end sheathing covering the I-beams above the height of the vestibule, of a pair of side wall members and a cover member connected together to form an inverted U-construction, the side wall members and cover member provided along their outer margin with means of attachment to the face plate, the side wall members provided along their inner margins with a flange for interlocking coöperation with the I-beams of the car frame, and the cover member having an outwardly turned flange for coöperation with the upper end sheathing of the car as a baffle plate to exclude the elements.

[Claims 6 to 10 not printed in the Gazette.]

1,221,400. GRIPPING DEVICE FOR WITHDRAWING SHEET-PILING. JESSE E. WILHELM and WILLIAM W. BONFIELD, Cleveland, Ohio, assignors to The Great Lakes Dredge & Dock Company, Chicago, Ill., a Corporation of New Jersey. Filed Feb. 3, 1916. Serial No. 75,941. (Cl. 57—9.)



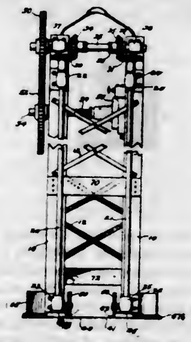
1. In a device of the character described, a body composed of a pair of downwardly extending arms and a connecting portion, means for attaching a pulling device to the connecting portion, downwardly converging surfaces on the inner sides of said arms, jaws slidably mounted on said surfaces, means for holding the jaws in position while permitting them to slide longitudinally of the arms, and screws carried by the body and adapted to engage the jaws to cause a movement of the body with relation to the jaws in a direction opposite to the pulling force.

2. In a device of the character described, a body composed of a pair of downwardly extending arms and a connecting portion, means for attaching a pulling device to the connecting portion, downwardly converging surfaces on the inner sides of said arms, jaws slidably mounted on said surfaces, inwardly extending shoulders at the lower ends of these arms, means for holding the jaws in position while permitting them to slide longitudinally of the arms, and screws extending through said shoulders and adapted to engage the lower ends of the jaws to cause a movement of the body with relation to the jaws in a direction opposite to the pulling force.

3. In a device of the character described, the combination of a bifurcated body opening downwardly, sides of the opening converging downwardly, jaws slidably mounted on these converging surfaces having adjacent gripping surfaces, means for attaching the body to a lifting device whereby the jaws may tightly engage a pile when lifting force is applied, and removable blocks secured at the lower portions of the arms and projecting toward each other into the mouth of the opening, adjacent edges of said blocks being separated to admit the pile to be pulled.

4. In a device of the character described, the combination of a bifurcated body having its substantially U-shaped opening, downwardly converging surfaces at the sides of said opening, longitudinal grooves in said surfaces, jaws slidably mounted on the surfaces and having tongues cooperating with the grooves, a slot parallel with each groove, means rigid with each of the jaws extending through said slots, and each of said means having a lateral projection slidably engaging the corresponding shoulder.

1,221,401. PILE-SAWING DEVICE. JESSE E. WILHELM and WILLIAM W. BONFIELD, Cleveland, Ohio, assignors to The Great Lakes Dredge & Dock Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 7, 1916. Serial No. 89,671. (Cl. 143—34.)



1. In a device of the character described, the combination with a frame, means for freely suspending the frame, a plurality of saws at the lower end of the frame adapted to engage the piece to be severed between two of the saws rotating in opposite directions, and means carried by the frame for driving the saws.

2. In a device of the character described, the combination with a frame, means for freely suspending the frame, a pair of saws at the lower end of the frame adapted to engage the piece to be severed, means carried by the frame for driving the saws in opposite directions, and guide members rigid with the frame and positioned adjacent the saws for guiding the frame to bring the saws into engagement at opposite sides of the members to be served.

3. In a submarine pile sawing device, the combination of a long comparatively narrow frame having a plurality of saws at its lower end, means carried by the frame for driving said saws in opposite directions, and means for freely suspending the frame so that the saws will lie in a substantially horizontal plane.

4. In a submarine pile sawing device, the combination of a long comparatively narrow frame, a pair of saws at the lower end of the frame, a shaft for each saw extending upwardly along the frame, driving mechanism carried by the frame adjacent its upper end, means for freely suspending the frame at its upper end so that the frame may normally depend from the suspending means in a position in which the saw shafts are substantially vertical.

5. In a device of the character described, the combination of a frame adapted to be suspended, a pair of cooperating saws, shafts for each of said saws, means for driving the saws in opposite directions, said saws extending substantially together, a plate lying substantially in the plane of the saws and secured to the frame and serving to support the piece severed by the saws, said means driving the saws being adapted to be quickly reversed driving the saws in opposite directions and serving to throw the severed piece away from the frame.

1,221,402. WHEEL-RIM. WILLIAM ERASTUS WILLIAMS, Chicago, Ill. Filed May 22, 1912. Serial No. 698,979. (Cl. 152—21.)



1. A two-part tire-receiving rim adapted to fit around a felly and consisting of a body member pressed inward near one margin to form an outwardly open annular groove alongside the plane of the felly, and a co-acting detachable flange member adjacent to said margin and provided with two parallel annular flanges, one in position to lie in said groove and the other in position to lie alongside the outer wall of said groove, said flange lying within the groove and said wall being cut away to form sets of teeth, the teeth of each set being arranged to pass between the teeth of the other set and to engage them by relative rotation.

2. The combination with an annular rim member having at one side tire retaining means and at the other side an inwardly extending outwardly open, circumferential groove with its free wall serrated to form a set of outwardly projecting teeth, of a coacting tire engaging rim member having a set of inwardly projecting teeth in position to pass between the teeth first mentioned and engage them by relative rotation and further having an inwardly projecting flange fitting against the outer side of said serrated wall and covering both sets of teeth.

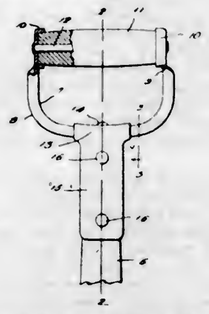
1,221,403. HANDLE. ALBERT L. ADAMS, Cedar Rapids, Iowa. Filed June 23, 1916. Serial No. 105,439. (Cl. 55—116.)

1. A hand hold including a U-shaped channel member, the flanges of which are upon the exterior and the upper ends of which flanges are inturned to form a housing, a hand-grip having its ends seated in said housings, and means for attaching the member to a handle.

2. A hand hold including a U-shaped channel member, the flanges of which are upon the exterior and the upper ends of which flanges are inturned to form a housing, said ends being each provided with an aperture, a hand-grip having its ends seated in the housings, a riveting rod piercing the hand-grip and openings, and means attached to the member for securing it to a handle.

3. The combination with a handle having two grooves in the end thereof, of a hand-hold having an attaching member for embracing the end of the handle, and a U-

shaped channel member formed so that the flanges of the same fit into the two grooves.

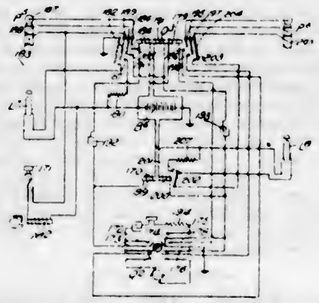


4. The combination with a handle having two grooves in the end thereof, of a hand-hold, including a handle embracing member having two resilient terminals and a connecting portion, a U-shaped channel member attached to the handle embracing member and having the flanges thereof extending outwardly, the flanges adjacent to the handle being seated in the grooves, and means for securing the handle embracing member upon the handle and holding the flanges so seated.

5. The combination with a handle having a groove in the end thereof, of a hand-hold including a member having two resilient handle embracing terminals, a U-shaped member attached to the connecting portion of the first member, a flange carried thereby for fitting in the groove of the handle, and means for securing the terminals of the first member to the handle and for seating the flange in the groove.

[Claims 6 and 7 not printed in the Gazette.]

1,221,404. TELEPHONE SYSTEM. WILLIAM AITKEN, London, England. Filed July 18, 1913. Serial No. 779,770. (Cl. 179—49.)



1. In a common battery telephone or like system, the combination of a calling line, a called line, an operator's cord circuit for effecting or completing connection between said calling line and said called line, a plug for said cord circuit and means for opening the conductors connected to said plug to break down the connection and to restore the lines to normal condition upon the talking set of one of the lines being disconnected from said line, all of the circuits of the cord being returned to normal without further operating act.

2. In a common battery telephone or like system, the combination of a calling line, a called line, an operator's cord circuit for effecting or completing connection between said calling line and said called line, a plug for said cord circuit and means for automatically opening the conductors connected to said plug to break down the connection and to restore the lines to normal condition upon the talking set of one of the lines being disconnected from said line, all of the circuits of the cord being returned to normal without further operating act.

3. In a common battery telephone or like system, the combination of a calling line, a called line, an operator's cord circuit for effecting or completing connection between said calling line and said called line, a plug for said cord circuit and means for automatically opening the conductors connected to said plug to break down the connection and to restore the lines to normal condition upon the talking set of the calling line being disconnected from said calling line, all of the circuits of the cord being returned to normal without further operating act.

4. In a common battery telephone or like system, the combination of a calling line, a called line, an operator's cord circuit for effecting or completing connection between said calling line and said called line, a plug for said cord circuit, conductors in said cord circuit connected to said plug and to springs, and electromagnetic means for separating said springs to open the connection to said plug to break down the connection and to restore the lines to normal condition upon the talking set of one of the lines being disconnected from said line, all of the circuits of the cord being returned to normal without further operating act.

5. In a common battery telephone or like system, the combination of a calling line, a called line, an operator's cord circuit for effecting or completing connection between said calling line and said called line, a plug for said cord circuit, conductors in said cord circuit connected to said plug and to springs and electromagnetic means for separating said springs to open the connection to said plug to break down the connection and to restore the lines to normal condition upon the talking set of the calling line being disconnected from said calling line, all of the circuits of the cord being returned to normal without further operating act.

[Claims 6 to 17 not printed in the Gazette.]

1,221,405. LOCKING DEVICE. HENRY ALINDER, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Nov. 29, 1915. Serial No. 64,590. (Cl. 24—201.)



1. In combination, an element having a recess affording an abutment, a second element insertible in said recess and having a shoulder engageable with said abutment to prevent separation of said elements in one direction, said recess affording a second abutment, and means secured to said second element and engageable with said second abutment to prevent separation of said elements in another direction.

2. In combination, an element having a recess enlarged at one portion to form an abutment, a second element insertible in said recess and having an enlarged portion engageable with said abutment to prevent separation of said elements in one direction, said recess having a second enlarged portion affording a second abutment, and means engageable with said second abutment to prevent separation of said elements in another direction.

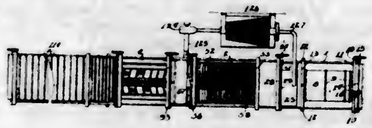
3. In combination, an element having a recess affording an abutment, a second element insertible in said recess and having a shoulder engageable with said abutment to prevent separation of said elements in one direction, and means secured to said second element and affording a second abutment located forwardly of said second element with reference to another direction in which separation of said elements is prevented.

4. In combination, an element having a recess provided with a plurality of enlarged portions extending at an angle to each other, a second element having an enlarged portion insertible within one of said enlarged recess portions, and means insertible in the other of said enlarged recess portions to lock said elements against relative movement.

5. In combination, an element having a recess provided with a pair of enlarged portions extending at an angle to each other, a second element having an enlarged end insertible within one of said enlarged recess portions, and a locking plate having a portion surrounding said second element, said locking plate being insertible in the other of said enlarged recess portions to lock said elements against relative movement.

[Claim 6 not printed in the Gazette.]

1,221,406. HOG SCRAPING, DEHAIRING, POLISHING, AND CLEANING MACHINE. WILLIAM B. ALLBRIGHT, Chicago, Ill. Filed Jan. 2, 1915. Serial No. 97. (Cl. 17—11.)



1. In a three stage mechanism for dehairing carcasses, one stage to wash and scald the carcasses, another to scrape and dehair the same, a third to scrub and polish the carcasses, coöperative means for automatically conveying the carcasses from one to another and through said respective stages, and means causing a flow of water to take place through the respective stages from one to the other thereof.

2. In a device of the class described a multi-stage scalding, dehairing, cleaning and polishing machine, a rotatable partially submerged cylinder in the first stage through which the carcass is passed, rotary and linearly acting partially submerged scraping and dehairing mechanisms in the second stage, partially submerged dehairing, cleaning and polishing mechanisms acting rotationally and linearly upon the carcass in the third stage, and means conveying the carcass through each of said stages and from one stage to the other.

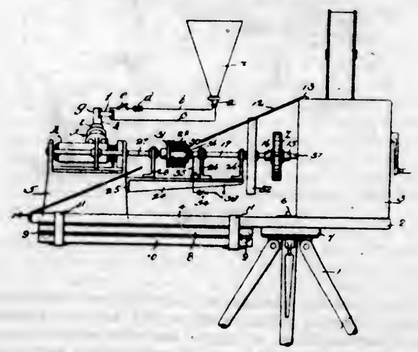
3. In a device of the class described a multi-stage dehairing and polishing machine for hogs, rotatable means in the first stage through which the hog is conveyed and scalded, mechanism for conveying the hog from the first stage to the second stage, vertically movable linearly movable scraping and dehairing mechanisms in the second stage, conveying means coacting therewith on which the carcass is supported and conveyed through said second stage, mechanism for conveying the carcass from the second stage to the third stage, and rotarily and linearly acting mechanism in the third stage for cleaning and polishing the carcass and removing the remaining traces of hair therefrom.

4. In a multi-stage machine of the class described a plurality of tanks, one for each stage of the operation, partitions between said respective tanks, means producing a flow to take place progressively from the last stage to the first stage of the machine, mechanism for moving the carcass through the respective three stages against the flow of the fluid in the tanks, and mechanism in each stage acting to dehair, clean and polish the carcass.

5. In a multi-stage dehairing machine of the class described means insuring a flow of water progressively from the last stage to the first stage of the machine, means moving a carcass through the machine progressively from the first stage to the last stage of the machine against the flow of water in the respective stages, and dehairing mechanisms in each stage of the machine acting upon the carcass to rotate, convey and dehair the same.

[Claims 6 to 13 not printed in the Gazette.]

1,221,407. APPARATUS FOR PRODUCING COMPANION AUDITORY AND VISUAL RECORDS FOR SIMULTANEOUS REPRODUCTION. EDWARD H. AMET, Redondo Beach, Cal. Original application filed Dec. 22, 1912, Serial No. 738,809. Divided and this application filed Apr. 21, 1913. Serial No. 762,553. (Cl. 88—16.2.)



1. In combination with a motion picture machine having a driven shaft, a sound recording machine having its drive shaft attached to and in alinement with said driven shaft; a non-vibration-transmitting mounting for the sound recording machine, said mounting consisting of hollow, spherical balls; and a non-vibration-transmitting coupling between the ends of said shafts.

2. In combination with a base, a motion picture machine thereon having a driven shaft; a sound recording machine on said base having its drive shaft attached to and in alinement with said driven shaft; a non-vibration-transmitting coupling between the ends of said shafts; and a non-vibration-transmitting mounting between said base and said sound recording machine, said mounting consisting of hollow, spherical balls.

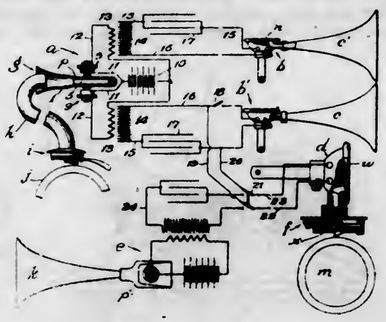
3. In combination with a base, a motion picture machine thereon having a driven shaft; a sound recording machine on said base having its drive shaft attached to and in alinement with said driven shaft; a non-vibration-transmitting coupling and a clutch between the ends of said shafts; and a non-vibration-transmitting and equally in all directions pressure-resisting mounting between said base and said sound recording machine.

4. An apparatus for producing companion motion pictures and sound records, comprising a base having integral therewith a hollow frame at one end; means between the hollow frame and the other end of the base for pivotally mounting said base; a motion picture machine mounted upon said base between said pivotal means and said last-named end; a non-vibration-transmitting mounting suspended from said base within said hollow frame, said mounting consisting of hollow, spherical balls; a sound recording machine mounted on said mounting; said machines being provided with shafts virtually in alinement with each other; and a non-vibration-transmitting means connecting said shafts for rotating them simultaneously.

5. In an apparatus for producing motion pictures and sound records, comprising a motion picture machine and a sound recording machine having telephonic means for receiving and transmitting sound to the record thereof; said machines being provided with shafts virtually in alinement with each other; a non-vibration-transmitting coupling between the ends of said shafts for driving said recording machine in synchronism with the motion picture machine; said machines being mounted on bases; one of said bases being suspended over the other; a non-vibration-transmitting mounting between one of said machines and one of said bases, said mounting consisting of hollow, spherical balls; and a pivotal support for the suspending base.

[Claim 6 not printed in the Gazette.]

1,221,408. MEANS FOR REPRODUCING VIBRATIONS. EDWARD H. AMET, Redondo Beach, Cal. Filed May 27, 1914. Serial No. 841,397. (Cl. 179—113.)



1. A vibration transmitter comprising non-resonant opposing vibrating rubber walls having an air containing space between them; a variable electrical resistance to be actuated by vibrations from said walls; and a spring-fork vibration collector and transmitter having flat parallel limbs compressing and flattening and holding said walls flat and in opposition to each other and connected with the variable electrical resistance for imparting the vibrations transmitted through said walls from said air-space.

2. A telephone transmitter including a pulsator having two soft rubber vibrating walls, means to simultaneously apply a sound wave vibration to both of said walls, variable electrical resistance, means comprising a resonant fork compressing both of said walls for imparting the movement of said pulsator walls to the variable electrical resistance for the electrical transmission of the vibrations set up in said walls.

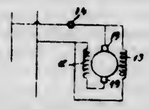
3. A telephone transmitter including a pulsator having two mutually opposed non-resonant flattened walls formed of soft rubber, means comprising a clamping fork of spring material compressing both of said walls for applying sound wave energy to the opposing walls, means for imparting the movement of said pulsator walls to variable electrical resistances for the electrical transmission of the vibrations of said walls.

4. A sound wave collecting pulsator comprising a non-resonant soft rubber housing having flexible walls, suitable means for collecting and directing into said pulsator sound waves to actuate said flexible walls, means comprising a resonant fork clamping said walls between its members for transforming vibrations of said walls into mechanical energy, and means for utilizing said mechanical energy for the reproduction of said sound waves.

5. The combination with a rubber tube having flattened portions throughout its length, said flattened portions acting as vibrating walls for the purpose of being actuated by sound wave impulses admitted, clamp means comprising a fork of resonant material embracing said flattened portions; and microphone variable resistance in connection with and operated by the members of said fork, the whole forming an electrical telephone transmitter.

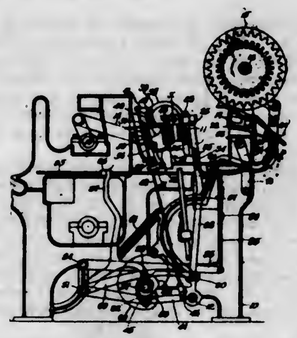
1,221,409. CONSTRUCTION OF ELECTRICALLY-DRIVEN CLOTH-CUTTING MACHINES. MORTON ARENDT, New York, N. Y., assignor to H. Maimin Company, Inc., New York, N. Y., a Corporation of New York. Filed June 7, 1916. Serial No. 102,203. (Cl. 171—223.)

1. In a portable electric motor of the commutator type for driving cloth cutting machines and the like, an armature, and a permanently connected field winding producing a series motor characteristic in starting and a shunt motor characteristic in normal operation, said field winding comprising series turns having sufficient self-induction to allow only an inexcessive inrush of current to the armature in starting and also comprising shunt turns providing sufficient magneto-motive force at normal excitation to maintain by itself a substantially magnetically saturated condition of the motor.



2. In a portable electric motor of the commutator type for driving cloth cutting machines and the like, an armature, and a permanently connected field winding producing a series motor characteristic in starting and a shunt motor characteristic in normal operation, said field winding comprising series turns having sufficient self-induction to allow only an inexcessive inrush of current to the armature in starting and also comprising shunt turns providing sufficient magneto-motive force at normal excitation to maintain by itself a substantially magnetically saturated condition of the motor, the armature ampere turns at normal load being of low value compared with the shunt field ampere turns at normal excitation.

1,221,410. WEFT-REPLENISHING LOOM. WILLIAM L. BARRELL, Lawrence, Mass. Filed Apr. 17, 1913. Serial No. 761,689. (Cl. 139—85.)



1. The combination with the shuttle box of a loom, of a bobbin magazine, a fixed support for engaging the bottom of a shuttle to support the shuttle in coöperative relation to said magazine for loading, means for transferring a bobbin from said magazine to a shuttle on said fixed support, and means for interchanging a shuttle on said support and a shuttle in said shuttle box.

2. The combination with the shuttle box of a loom, of a bobbin magazine, a support for holding a shuttle in coöperative relation to said magazine for loading, means for transferring a bobbin from said magazine to a shuttle on said support, and shuttle-changing mechanism having a shuttle transferring device and means for causing said device to transfer a loaded shuttle to said shuttle box and to transfer a spent shuttle to said support.

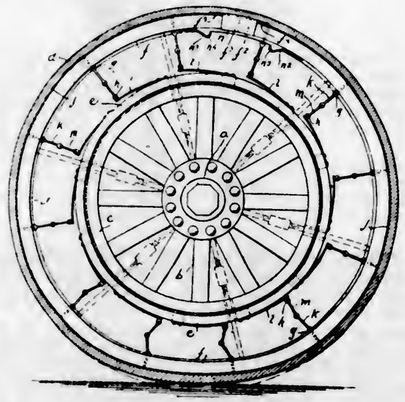
3. The combination with the shuttle box of a loom, of means for inserting a full bobbin in a shuttle outside said shuttle box, means for transferring the loaded shuttle from said bobbin-inserting means to said shuttle box, and means for engaging the bobbin thread, said transferring means and thread-engaging means being arranged to coöperate to thread the shuttle.

4. The combination with the shuttle box of a loom, of means for inserting a full bobbin in a shuttle outside said shuttle box, means for transferring the loaded shuttle from said bobbin-inserting means to said shuttle box, and means for engaging the bobbin thread to thread the shuttle while the shuttle is being transferred as aforesaid.

5. The combination with the shuttle box of a loom, of means for inserting a full bobbin in a shuttle outside said shuttle box, means for transferring the loaded shuttle from said bobbin-inserting means to said shuttle box, means for holding the loose end of the bobbin thread, and means for depressing the bobbin thread between the bobbin and said end-holding means to thread the shuttle in consequence of transferring the latter from said bobbin-inserting means to said shuttle box.

[Claims 6 to 22 not printed in the Gazette.]

1,221,411. RESILIENT WHEEL. EDWARD L. BAUMAN, Detroit, Mich. Filed Feb. 16, 1916. Serial No. 78,578. (Cl. 152—8.)



1. In a resilient wheel, the combination of a tire casing, an expanding band therefor, and a series of tension members holding said band in position, springs resisting the outer movement of said tension members, said springs being supported against inward movement, said tension members being constructed so as to yield to, and not resist, an inwardly acting force.

2. In a resilient wheel, the combination of a tire casing, an expanding band therefor, an inner band, springs each of which is secured at one end to said inner band and extends along the outer surface thereof, and a tension member secured to the free end of each of said springs and to said expanding band, said members being constructed so as to yield to and not resist an inwardly acting force.

3. In a resilient wheel, the combination of a tire casing, an expanding band therefor, an inner band, springs each of which is secured at one end to said inner band and extends along the outer surface thereof, and a tension member secured to the free end of each of said springs and to said expanding band, said tension member consisting of links jointed intermediate said bands.

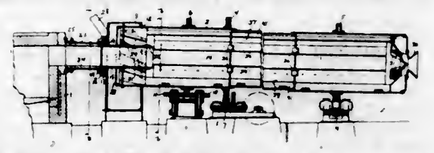
4. In a resilient wheel, the combination of a clencher tire casing, an expanding band therefor, a retaining band therefor, and flexible tension members extending between said bands adapted to elastically resist an outwardly acting force and to yield freely to an inwardly acting force.

5. In a resilient wheel, the combination of a tire casing, an expanding band therefor, an inner band, radially extending links jointed together intermediate said bands, said links being jointed to said bands respectively and an elastic means resisting an outwardly acting force on said links.

[Claim 6 not printed in the Gazette.]

1,221,412. DRIER. RICHARD BERNHARD, Milwaukee, Wis., assignor, by mesne assignments, to Worthington Pump and Machinery Corporation, a Corporation of Virginia. Filed Sept. 5, 1914. Serial No. 860,326. (Cl. 34—5.)

1. The combination with a revoluble shell of a plurality of transversely curved partitions connected with the shell and with each other to form a flue and drying chambers.



2. The combination with a revoluble shell of a plurality of transversely curved partitions connected with the shell and with each other to form a flue and drying chambers, each of said partitions being composed of sections with the ends of the sections forming such partition approximately in line with each other, and butt straps extending over the joints between adjacent sections and secured to one of said sections.

3. The combination with a revoluble shell of a plurality of transversely curved partitions movably secured to the shell and secured to each other to form a flue and drying chambers, each of said partitions being composed of sections with their ends approximately in line with each other, and butt straps extending over the joints between the sections and secured to one of the sections.

4. The combination with a revoluble shell of a plurality of transversely curved partitions composed of sections, each section being movably secured to the shell and secured to another section to form a flue and drying chambers, and means to close the joint between the ends of sections forming a partition while permitting relative movements between said ends.

5. The combination with a revoluble shell provided with partitions extending for a part of the length thereof to form a flue and drying chambers, of a pipe secured to said shell and communicating with said flue.

[Claim 6 not printed in the Gazette.]

1,221,413. NUT-LOCK. OSCAR J. BYHRE, Canton, Wis. Filed May 26, 1916. Serial No. 100,103. (Cl. 151—11.)



1. A nut lock comprising a bolt, a nut fitted upon said bolt, a boss or enlargement formed upon the outer face of said nut having a recess therein, a substantially U-shaped spring locking element engaged in said recess and having one end engaged with said bolt to lock the nut against rotation thereon, and a recessed screw fitted in said nut between one wall of the recess in the boss or enlargement and the bolt-engaging end of said spring locking element for withdrawing the latter from engagement with said bolt.

2. A nut lock comprising a bolt, a nut fitted upon said bolt, an integral enlargement or boss formed on said nut having a recess therein, a substantially U-shaped spring locking element engaged in said recess and including relatively long and short legs, teeth formed upon the inner terminal of the relatively long leg engaged with the screw threads of said bolt to lock the nut against rotational movement thereon, and a recessed screw fitted in said enlargement or boss between the relatively long legs and the adjacent wall of said recess for withdrawing said long leg from engagement with said bolt.

1,221,414. THERMAL-CONTROLLED SHUTTER. EDWARD CAHILL, New York, N. Y. Original application filed Sept. 8, 1915, Serial No. 49,598. Divided and this application filed Mar. 16, 1916. Serial No. 84,575. (Cl. 189—58.)

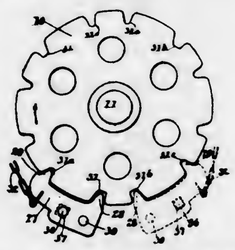
Thermal controlled locking means for shutters, including a notched wheel and a pawl having two teeth to en-

gage different notches in the wheel, one of said teeth being at the free end of the pawl and actively engaging its notch, the other tooth being at the pivoted end of the pawl and



serving as a means for throwing the pawl away from the notched wheel when the active tooth is released from its notch.

1,221,415. THERMAL-CONTROLLED SHUTTER. EDWARD CAHILL, New York, N. Y. Filed Mar. 16, 1916. Serial No. 84,576. (Cl. 189—58.)



Thermal controlled locking means for shutters, including a reversible ratchet wheel having in one portion of its periphery a series of notches inclined in one direction, and in another portion of its periphery a series of notches inclined in the opposite direction, and a pawl adapted in one position to engage one series of notches and when reversed to engage the other series of notches in the wheel.

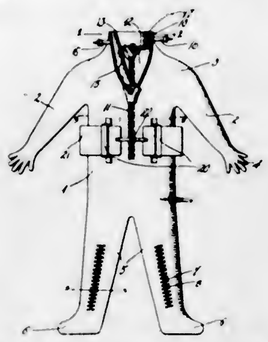
1,221,416. COAL-DUMP. CARL B. CHEEK, Enterprise, Iowa. Filed Nov. 22, 1915. Serial No. 62,830. (Cl. 214—11.)



1. A car dumping mechanism comprising a stationary platform, a revolving platform within said stationary platform and rotatable in one direction only on the horizontal axis, a car track section on each side of the platform parallel with the axis of revolution, a stop device extending through each rail of said track sections to prevent cars passing from said sections, a latch lever projecting above the rails of each track section, connections between each of said levers and the stop devices of the track section of the same side, and means for maintaining a car upon each track section during the rotation of the platform.

2. A car dumping mechanism comprising a stationary platform, a revolving platform within said stationary platform and rotatable in one direction only on a horizontal axis, a car track section on each side of the platform parallel with the axis of rotation, a rock shaft on each side of the platform extending transversely of the car track sections, a pair of trip levers extending through the platform at one end, the longer arms of said levers projecting in opposite directions, links connecting the shorter arms of the levers with the respective rock shafts and fingers carried by arms on said rock shafts projecting through the platform and through the rail to form stops for cars supported on said rails, and guard plates overlying the rails of said tracks in position to engage the wheels of the cars thereon for securing them to the track and maintaining the cars in position on the tracks during rotation of the platform.

1,221,417. LIFE-SAVING SUIT. CARL B. CHEEK, Enterprise, Iowa. Filed Dec. 28, 1915. Serial No. 69,090. (Cl. 9—20.)



1. A life saving suit comprising a body portion having integral arm and leg portions terminating respectively in integral gloves and feet covering, each of said leg portions being divided longitudinally and having secured to the edges of said division to prevent the entrance of water thereinto a flexible tongue, lacing means for drawing the edges of said divided portions together, a division extending from the waist line of the suit upwardly to the neck at the front thereof having a flexible tongue on the inner side secured at its edges to the edges of said opening, closure means for said divided portion and inflatable members within the suit at the neck thereof.

2. A life saving suit comprising a body portion, integral arm portions having integral gloves at the extremities thereof, leg portions having enlargements on the ends to receive the feet of the wearer, said suit being divided at the front from waist line upwardly to the neck, closure members on the edges of said division to secure the same together, an inner member secured at its ends to the body portion in rear of the division formed therethrough, said inner member being also vertically divided and having fastening members on the edges thereof, a flexible tongue secured at its edges to the edges of said inner member to prevent the passage of water into said suit, an inflatable member between the front of the suit and the inner member, and an inflatable member encircling the neck of the suit.

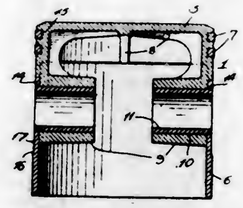
1,221,418. INCANDESCENT LIGHT FOR PROJECTION APPARATUS. EMERSON L. CLARK, Lakewood, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Oct. 17, 1912. Serial No. 726,204. (Cl. 176—16.)



1. In an incandescent light, a light emitting filament and a bulb surrounding the filament, the greater part of said bulb having a highly reflecting surface and the remaining part adapted to serve as a window.

2. In an incandescent light, a light emitting filament and a bulb surrounding the filament the greater part of the bulb having a highly reflecting surface on its interior, the remaining part of the bulb serving as a window for the emission of reflected light.

1,221,419. COMPOSITE PISTON. EDWARD W. CLARK, Los Angeles, Cal., assignor of one-half to Alvin Wells, Los Angeles, Cal. Filed Nov. 18, 1915. Serial No. 62,137. (Cl. 74—85.)



1. A two part piston having a body portion of light material and a wearing cylinder engaging portion of a larger diameter and of heavier material abutting thereon whereby the unequal expansion and contraction of the different materials employed will not be interfered with and means holding them fixed with respect to each other.

2. A composite piston made up of different materials of different hardness, the softer material being of less diameter than the harder, whereby the latter only will receive the wear and connecting members holding the said materials together.

3. A composite piston made up of materials of different specific gravity and a bearing member for rigidly holding them with respect to each other as a single piston without preventing expansion and contraction when hot and cold.

4. A composite piston comprising an integral head of comparatively light material and a wearing skirt portion of heavier material and bushings for connecting the same.

5. A composite piston having a head portion and bearing receiving bosses formed in an integral piece, a wearing skirt fitted thereon and wrist pin bushings inserted in said bosses and extending through the walls of said skirt for locking the piston parts together.

[Claims 6 to 11 not printed in the Gazette.]

1,221,420. DENTURE. ROBERT MEADE CRAIG, Wilkinsburg, Pa. Filed Dec. 11, 1914. Serial No. 876,665. (Cl. 32—9.)



1. In a denture, the combination with a porcelain body having a wedge shaped portion converging both from its occlusal end toward its gingival end and from its lingual side toward its labial side; of a metallic backing having flanges complementary to the wedge shaped portion of said body and engaged therewith; said backing comprising a pair of primarily separate substantially similar apposed members, united by a fusible element between them whereby the parts united are made larger; the interengaged portions of said body and backing being so constructed and arranged that said body may, if not otherwise prevented, be slid from said backing in the direction from its gingival end to its occlusal end, but not in the opposite direction; and a locking flange, in unitary relation with said backing, at the end of said backing remote from the jaw normally preventing said body from thus sliding; whereby it is necessary to bend said locking flange to remove said body.

2. In a denture, the combination with a porcelain body having a wedge shaped portion converging both from its occlusal and toward its gingival end and from its lingual side toward its labial side; of a metallic backing having flanges complementary to the wedge shaped portion of said body and engaged therewith; said backing comprising a pair of primarily separate apposed members, united by a fusible element between them whereby the parts united are made larger; the interengaged portions of said body and backing being so constructed and arranged that said body may, if not otherwise prevented, be slid from said backing in the direction from its gingival end to its occlusal end, but not in the opposite direction; and a locking element at the end of said backing remote from the jaw normally preventing said body from thus sliding; whereby it is necessary to bend said locking element to remove said body.

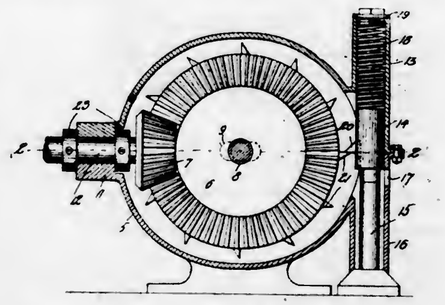
3. In a denture, the combination with a porcelain body having a wedge shaped portion converging from its occlusal end toward its gingival end; of a metallic backing having flanges complementary to the wedge shaped portion of said body and engaged therewith; said backing comprising a pair of apposed members, united by a fusible element between them whereby the parts united are made larger; the interengaged portions of said body and backing being so constructed and spaced that said body may be slid from said backing in the direction from its gingival end to its occlusal end, but not in the opposite direction.

4. In a denture, the combination with a porcelain body having a wedge shaped portion converging from its lingual side toward its labial side; of a metallic backing having flanges complementary to the wedge shaped portion of said body and engaged therewith; said backing comprising a pair of apposed members, united by a fusible element between them whereby the parts united are made larger; the interengaged portions of said body and backing being so constructed and spaced that said body may be slid from said backing in the direction from its gingival end to its occlusal end, but not in the opposite direction.

5. In a denture, the combination with a porcelain body having a wedge shaped portion converging from its lingual side toward its labial side; of a metallic backing having flanges complementary to the wedge shaped portion of said body and engaged therewith; said backing comprising a pair of apposed members, united by a primarily separate element between them whereby the parts united are made larger; the interengaged portions of said body and backing being so constructed and spaced that said body may be slid from said backing in the direction from its gingival end to its occlusal end, but not in the opposite direction.

[Claims 6 to 11 not printed in the Gazette.]

1,221,421. POWER-HAMMER. GLENN F. CROSIAR, Joliet, Ill. Filed Apr. 17, 1916. Serial No. 91,653. (Cl. 78—27.)

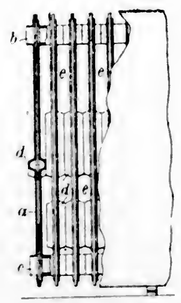


A power hammer comprising a sliding hammer head, a guide for the hammer head, a bevel gear having tappets on its periphery, a side abutment on the hammer head extending into the path of the tappets, a shaft carrying the bevel gear, a support for the shaft having a slot in which the shaft is adjustably mounted, said slot extending in a direction transverse to the hammer head, means for locking the shaft in the slot, and a bevel pinion in mesh with the bevel gear for driving the same.

1,221,422. RADIATOR. COMTE YVES DE LA POËZE, St.-Fulgent, France. Filed Jan. 13, 1915. Serial No. 2,062. (Cl. 257—151.)

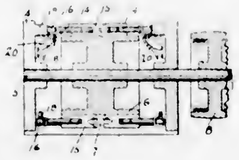
1. In a radiator comprising several chambers arranged side by side, said chambers being of triangular shape the

smallest side of which serves as a base for the radiator, ribs of different inclination being provided on the exterior of the said walls, which ribs form between them air circulation conduits inclined on two opposite walls gradually widening in the direction of the outlet for the hot air so as to present superposed outlet orifices.



2. In a radiator comprising several chambers arranged side by side, said chambers being of triangular shape the smallest side of which serves as a base for the radiator, diverging oblique ribs with different inclinations being provided on the exterior of the said walls, which ribs form between them air circulation conduits inclined on two opposite walls widening gradually in the direction of the outlet for the hot air, so as to present superposed outlet orifices and a vertical sheet of metal forming a screen arranged at the rear of the radiator with a perforated upper portion for guiding the hot air outwardly.

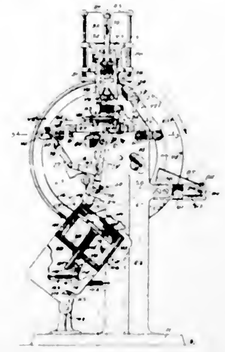
1,221,423. STICK-CANDY MAKING AND APPARATUS FOR SAME. ARTHUR E. DEMPSEY and OLIE STEINBAUGH, Council Bluffs, Iowa. Filed Apr. 20, 1914. Serial No. 833,186. (Cl. 107—20.)



1. Stick-candy making apparatus comprising a rotating wheel having a peripheral channel therein, pairs of plungers slidable longitudinally of the wheel in openings made therein at opposite sides of the peripheral channel, blades carried by said plungers and having V-shaped end-portions adapted to extend into the peripheral channel, the blades of each pair of plungers being adapted to overlap so that during movement toward each other the notches thereof form a progressively decreasing opening coincident with a part of the peripheral channel, and cams for actuating the plungers of each pair simultaneously and in opposite directions.

2. A machine for constricting a plastic candy-stick at uniformly-spaced intervals without severance of the stick at the constricted points, comprising a rotating wheel having a smooth annular peripheral channel, means for directing a continuous plastic stick into said channel at one side of the wheel, means for directing the stick out of the channel at the opposite side, a conveyer moving coördinately with the wheel and arranged to receive the continuous stick from the latter directing means, pairs of bifurcated elements mounted on the wheel at opposite sides of the channel, and means for moving said elements to overlapping relations to constrict the plastic stick without severing the same during its passage through the channel.

1,221,424. CIGAR-BANDING MACHINE. RICHARD F. DOWNEY, Milwaukee, Wis., assignor of six-tenths to Isidore M. Lederer, Milwaukee, Wis. Filed Oct. 6, 1915. Serial No. 54,459. (Cl. 131—61.)



1. A label applying machine including an article support, label bending means associated with the article support, a main wheel connected with the label bending means for operation thereof, a label magazine and a label carrying arm carried by the wheel for extracting a label from the magazine and carrying it adjacent the article support.

2. A label applying machine including an article support, means for clamping a label to the support, a main wheel connected with the clamping means for operation thereof, a label magazine and a label carrying arm carried by the wheel for extracting a label from the magazine, and carrying it adjacent the article support.

3. A label applying machine comprising a main wheel, an article support, a clamping and side bending mechanism connected with the wheel for operation thereby, an end bending mechanism having engagement with the wheel for operation thereby, a label magazine and a label carrying member carried by the wheel for extracting a label from the magazine and carrying it adjacent the article support.

4. A label applying machine including an article support, means for moving a label adjacent to said support, and means operative successively for holding a label to the article, for bending the label about the sides of the article, for bending and holding one end of the label inwardly, for bending the other end of the label inwardly to engage the first end and for retracting the means for bending the first named end of the label in a direction laterally with respect to its path of engaging movement.

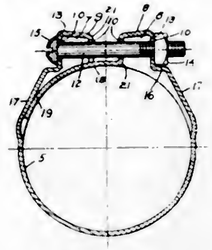
5. A label applying machine including an article support, a label magazine, a fluid supply means including a stationary container, and a label carrying member movable successively to engage said fluid supply means, to engage and extract a label from the magazine and to carry said label adjacent the article support.

[Claims 6 to 35 not printed in the Gazette.]

1,221,425. HOSE-CLAMP. ALBERT J. DREMEL, Racine, Wis. Filed June 3, 1916. Serial No. 101,472. (Cl. 137—28.)

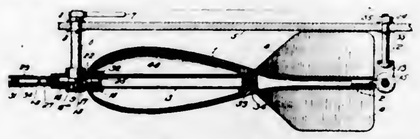
1. A hose clamp comprising a sheet metal band having struck up hollow box-like end portions, said box-like portions having front, rear, top and opposite side walls, the front and rear walls having alined apertures therein, and a clamping bolt passing through said apertures for drawing the ends of the band together.

2. A hose clamp comprising a sheet metal band having struck up hollow box-like end portions, said box-like portions having front, rear, top and opposite side walls, said front and rear walls having alined apertures therein, said band having embossed reinforcing ribs adjacent said end portions extending from intermediate portions of the band to the rear ends of said box-like end to form square shouldered bolt seats, one of the ends of said band carrying a tongue adapted to seat within the reinforcing rib of the



other end of the band, and a clamping bolt passing through said apertures for drawing the ends of the band together and the tongue to a position within said rib.

1,221,426. AERIAL TORPEDO. JOSEPH J. DUFFY, Brooklyn, N. Y., assignor of one-half to Gideon W. Carleton, Brooklyn, N. Y. Filed Apr. 8, 1916. Serial No. 89,756. (Cl. 244—1.)



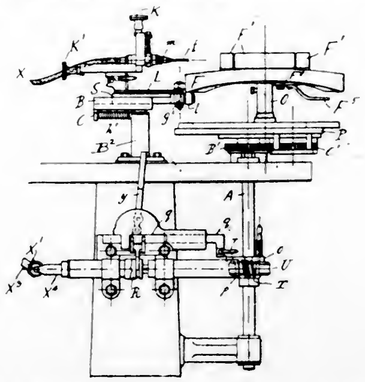
1. An aerial torpedo, a projection secured to the leading end of the torpedo and extending forward therefrom, a detonator impact firing means for acting on the detonator, supported in the said projection and extending well in advance of the torpedo, and means for suspending the torpedo arranged to engage with the said projection and to be interposed between the firing means and the detonator while the torpedo is suspended.

2. An aerial torpedo, a projection secured to the leading end of the torpedo, perforated longitudinally and formed with a recess intersecting the perforation, a detonator, an impact device supported by the said projection, extending forward therefrom and carrying a firing pin adapted to move through the longitudinal perforation in the said projection, and means for suspending the torpedo arranged to enter the recess in the projection and when therein to positively prevent the movement of the firing devices, the suspending devices being arranged when operated to disengage the said projection.

3. An aerial torpedo carrying a charge of explosive, a projection secured to the leading end of the torpedo, perforated longitudinally, a detonator supported in the inner end of the said projection, an impact device for firing the detonator, comprising a firing pin movable through the said perforation and a striking head at the forward end of the impact device, the impact device being relatively long whereby the striking head is a considerable distance in advance of the torpedo, and a collapsible tube connected at one end with the said projection and at the other with the striking head of the firing device arranged to hold the firing device rigidly in safety position under ordinary conditions of handling, but to collapse upon impact and permit the firing pin to act.

4. The combination with an aerial torpedo comprising a detonator and an impact-operated firing pin, of manually controlled means for supporting the torpedo and arranged when moved into a certain position to release the torpedo and permit it to fall, the suspending means being provided with a safety shield adapted to be interposed between the detonator and the firing pin when moved into position to support the torpedo, the shield being formed with a groove in which lies the end of the firing pin.

1,221,427. MACHINE FOR TRIMMING THE BRIMS OF HATS. FRANCESCO DURO, GIUSEPPE CRIVELLI, and FRANCESCO PAMPURO, Milan, Italy. Filed May 25, 1914. Serial No. 840,922. (Cl. 223—24.)



1. In a machine for trimming the brims of previously-shaped hats, the combination, with a hat holder having an elliptical gage whose size and shape corresponds precisely to those which the trimmed brim is to take, and means for rotating said gage; of a cutter; driving means therefor; and a cutter-carrying table having means coöperative with said gage for causing said table to move in an elliptical path which coincides with the curve desired for said brim, during the rotation of said gage.

2. In a machine for trimming the brim of previously-shaped hats, the combination, with a hat holder having an elliptical gage whose size and shape correspond precisely to those which the trimmed brim is to take, and means for rotating said gage; of a cutter; driving means therefor; and a cutter-carrying table having separate means engaging the periphery and lower face of said gage, the combined engaging action of said means on said gage causing said table to travel in an elliptical path which coincides with the curve desired for said brim, during the rotation of said gage.

3. In a machine for trimming the brims of previously-shaped hats, the combination, with a hat holder having an elliptical gage whose size and shape correspond precisely to those which the trimmed brim is to take, and means for rotating said gage; of a cutter; driving means therefor; and a cutter-carrying table having a roller engaging the under face of the gage, and a pair of rollers engaging the periphery of said gage, the combined engaging action of said rollers, on said gage causing said table to travel in an elliptical path which coincide with the curve desired for said brim, during the rotation of said gage.

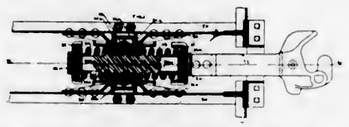
4. In a machine for trimming the brims of previously-shaped hats, the combination, with a hat holder having an elliptical gage whose size and shape correspond precisely to those which the trimmed brim is to take, and means for rotating said gage; of a cutter; driving means therefor; and a cutter-carrying table having means coöperative with said gage for causing said table to travel in an elliptical path which coincides with the curve desired for said brim, during the rotation of the gage, and for constantly maintaining the axis of the cutter normal to the curve of said gage throughout such rotation.

5. In a machine for trimming the brims of previously-shaped hats, the combination with a hat holder having an elliptical gage whose size and shape correspond precisely to those which the trimmed brim is to take, and means for rotating said gage; of a cutter; driving means therefor; and a cutter-carrying table having means engaging the under face of the gage, and separate means engaging the periphery of the gage, the combined action of the first- and second-named engaging means on said gage causing said table to travel in an elliptical path which coincides

with the curve desired for said brim, during the rotation of said gage, and the action of said second-named engaging means on said gage constantly maintaining the axis of the cutter normal to the curve of said gage throughout such rotation.

[Claims 6 to 10 not printed in the Gazette.]

1,221,428. SHOCK-RESISTING MECHANISM. KNUTE EDAHL, Chicago, Ill. Filed Feb. 7, 1914. Serial No. 817,147. (Cl. 213—64.)



1. In a device of the class described, means to receive and transmit buffing and pulling shocks, a male screw member, a female member coacting therewith to resist movement thereof, said female member being non-rotatably mounted and arranged for longitudinal movement under buffing or pulling shocks, and means to resist such movement of said female member.

2. In a device of the class described, means to receive and transmit buffing and pulling shocks, a male screw member, a female member coacting therewith to resist movement thereof, said female member being non-rotatably mounted and arranged for longitudinal movement under buffing or pulling shocks, and means to resist such movement of said female member, said last named means being arranged to increase the resistance afforded by said female member to movement of said male member.

3. In a device of the class described, means to receive and transmit shocks, a non-rotatably internally threaded female member mounted for longitudinal movement, a male member passing therethrough and in threaded engagement therewith whereby said female member will operate to resist longitudinal movement of said male member, and means to resist longitudinal movement of said female member.

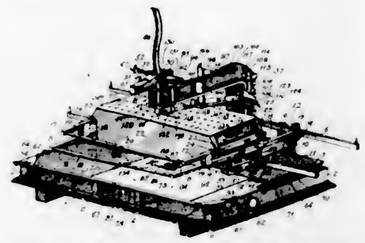
4. In a device of the class described, in combination means to receive and transmit shocks, a male screw member, a female member coacting therewith to resist movement thereof, said female member being arranged for longitudinal movement, means to resist movement of said female member, and means to normally return all of said mechanism to rest or neutral position, said last named means also being arranged to yieldingly resist movement of said mechanism from neutral position.

5. In combination with a car having oppositely disposed lug members, shock resisting mechanism located between said lug members, said mechanism comprising a screw member, a follower located at each end thereof, a casing mounted between said lug members, a female member mounted in said casing and coacting with said screw member to resist movement thereof, said female member being threaded to engage said screw member and comprising a plurality of segments.

[Claims 6 to 13 not printed in the Gazette.]

1,221,429. PRINTING-MACHINE. HJALMAR ELMBLAD, Chicago, Ill., assignor to The Printasign Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 18, 1915. Serial No. 9,114. (Cl. 197—1.)

1. A printing machine comprising, in combination, a type-case open upon one face to permit type to be projected therefrom, movable type yieldingly held in a normal position therein, means for movably supporting said type-case to permit universal movement thereof in a plane parallel to that of a printing surface, means for independently actuating each type to make an impression, a platen, means for moving a paper sheet in contact therewith, space determining means upon said case in predetermined relation to each type and differentially movable means interposed between said space-determining means and said paper moving means for actuating the latter.



2. A printing machine comprising, in combination, a type-case open upon one face to permit type to be projected therefrom, said case having a selecting member upon its upper face with openings therein for the passage of type-actuating means, movable type yieldingly held in a normal position within said case, means for movably supporting said type-case to permit a universal movement thereof in a plane parallel to that of a printing surface, a type-lever for actuating each type to make an impression, a platen in operative proximity to said type, means for moving a paper sheet while in contact with said platen, space determining means upon said selecting member bearing a predetermined relation to each type, a spacing lever interposed between said space determining means and said paper moving means and means for yieldingly connecting said spacing lever to said type-lever.

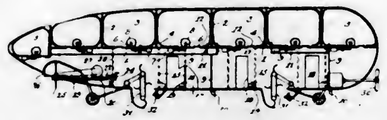
3. A printing machine, comprising, in combination, a type-case open upon one face to permit type to be projected therefrom, said case having a selecting-plate upon the opposite face with openings therein for the passage of type-actuating means, movable type yieldingly held in a normal position within said case, means for movably supporting said type-case to permit a universal movement thereof in a plane parallel to that of a printing surface, a type-lever for actuating each type to make an impression, a platen, means for moving a paper sheet in contact therewith, a spacing lever yieldingly interposed between said type-lever and said paper-moving means, one end of said lever being movable over the surface of said selecting-plate and space determining means upon said selecting-plate bearing a predetermined relation to each type, for arresting the movement of said spacing-lever before the completion of a full stroke of the type-lever.

4. A printing machine of the character described, comprising, in combination, a type-case having an open face from which type may be moved, movable type yieldingly held therein, means for movably supporting said case to permit a universal movement thereof in a plane parallel to that of a printing surface, whereby the various type may be brought to a printing position, said type being normally banked against a selecting-plate forming a part of the case, said plate having openings therein in registration with the respective type, means thereon for indicating the respective characters represented by said openings, a platen, and means for actuating said type in predetermined order through said openings.

5. A printing machine, comprising, in combination, a type-case having side walls and an opening from which the type may be projected, movable type yieldingly held therein, means for movably supporting said case to permit a universal movement thereof in a plane parallel to that of a printing surface, said case having a selecting plate against which the type may be normally banked, said plate having openings therein in registration with the respective type, means thereon for designating the relative positions in the case of the respective type-characters, a stationary platen, a plunger located opposite said platen and means for forcing said plunger through said openings to cause an impression to be made by the type brought into registration therewith.

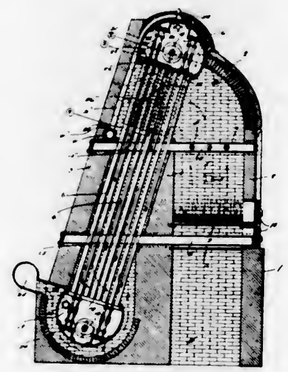
[Claims 6 to 12 not printed in the Gazette.]

1,221,430. AIRSHIP. ALFRED EXTRAND, Aberdeen, Wash. Filed Aug. 19, 1915. Serial No. 46,368. (Cl. 244—6.)



In an airship, a hull, a horizontal diaphragh extending longitudinally through the hull dividing the same into upper and lower compartments, transverse partitions extending across the upper compartment to subdivide the same into cells, means for filling the cells with a gas lighted than air, vertical longitudinal partitions extending along the lower compartment to form a passage-way, transverse partitions subdividing the lower compartment on opposite sides of the passage-way into state-rooms and air-chambers with each state-room communicating with an air-chamber, means for compressing air within the air-chambers, and means for controlling the communication between each state-room and its respective air-chamber to regulate the flow of compressed air from the latter to the former.

1,221,431. STEAM-BOILER. ROBERT FARIES, Decatur, Ill. Filed July 7, 1913. Serial No. 777,639. (Cl. 122—290.)



1. An apparatus of the character described including in combination, a combustion chamber and a boiler chamber or compartment communicating at their upper ends so that the hot gases and products of combustion enter the boiler chamber or compartment at the top thereof, drums mounted at the opposite ends of the boiler chamber or compartment, water tubes connecting said drums, circulating tubes positioned within the upper portions of said water tubes and communicating with the upper drum, said circulating tubes being considerably shorter that said water tubes so that the circulation occurs in the portion of the water tubes subjected to the hottest gases and products of combustion.

2. A steam boiler including in combination, a combustion chamber and a boiler chamber or compartment, a partition wall separating said combustion chamber from said boiler chamber or compartment except at their upper ends, drums mounted in the opposite ends of said boiler chamber or compartment, water tubes connecting said drums, means for supplying water to the lower drum, means for discharging steam from the upper drum, the general movement of the water being upward in said water tubes, means for providing an additional circulation of the water in the upper portion of the water tubes where they are subjected to the hottest gases and products of combustion, whereby the water accumulated in the steam drum is circulated in the upper portion of the water tubes.

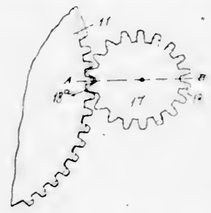
3. A steam boiler including in combination, a combustion chamber and a boiler chamber or compartment, a partition wall separating said combustion chamber from said boiler chamber or compartment except at their upper ends, drums mounted in the opposite ends of said boiler chamber or compartment, water tubes connecting said drums, means for supplying water to the lower drum, means for discharging steam from the upper drum, the general movement of the water being upward in said water tubes, means for providing an additional circulation of the water in the upper portion of the water tubes where they are subjected to the hottest gases and products of combustion, whereby the water accumulated in the steam drum is circulated in the upper portion of the water tubes, said means including tubes of smaller diameter than said water tubes and mounted within the upper portions of said water tubes, said second mentioned tubes being considerably shorter than said water tubes and communicating directly with the steam drum, said water tubes and said second mentioned tubes both opening into said steam drum.

4. In an apparatus of the character described, a combustion chamber and a boiler chamber or compartment communicating only at their upper end portions, a steam drum at the top of said boiler chamber or compartment and a water drum at the bottom thereof and spaced from the partition wall thereof, water tubes connecting said drums, the gases and products of combustion passing directly under and in contact with the bottom of said steam drum, thence downwardly between the water tubes and around the water drum to the discharge flue, smaller tubes in the upper portions of said first mentioned tubes and spaced therefrom and communicating with said steam drum to receive and return to the larger tubes surplus water in said steam drum, the bottom ends of said return tubes terminating at approximately the normal boiling point of the water in said larger water tubes, whereby a circulation is provided in the hottest portions of the water tubes.

5. In an apparatus of the character described, a steam drum and a water or mud drum, tube sheets forming part of the walls of said drums, water tubes connecting said tube sheets, brackets or supporting members secured to the opposite walls of said drums, a bar or member detachably connected to each set of brackets or supporting members, turn-buckles secured to said tube sheets and said bars or members for bracing the tube sheets.

[Claims 6 and 7 not printed in the Gazette.]

1,221,432. MEANS FOR GENERATING THE TEETH OF IRREGULAR GEARS. EDWIN R. FELLOWS, Springfield, Vt., assignor to The Fellows Gear Shaper Company, Springfield, Vt., a Corporation of Vermont. Filed Mar. 11, 1914. Serial No. 824,029. (Cl. 29—95.)



1. A cutter for gear cutting machines having a peripheral series of teeth, the cutting edges of which are shaped differently from one another and are located at different distances from the axis of rotation of the cutter.

2. A cutter for gear cutting machines having a series of peripheral tooth-like projections and adapted to generate and cut teeth in a blank, said tooth-like projections being arranged on a pitch line which is otherwise than concentric

with the axis about which the cutter is adapted to be rotated in generating tooth curves.

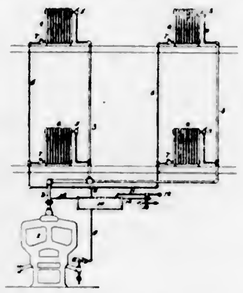
3. A cutter for generating and cutting teeth in an irregular gear, such cutter having formed cutting elements arranged in a curved irregular pitch line.

4. A planing cutter for generating and cutting teeth in an irregular gear, said cutter having tooth-like cutting elements on its periphery arranged on a curved line, being operable to cut in a substantially axial direction, and having an opening for receiving the spindle or arbor on which said cutter is adapted to be mounted, such opening being eccentric to the approximate center of curvature of a line passing through corresponding points in all the cutting elements.

5. A cutter construction for generating and cutting in a gear on an irregular pitch line teeth conjugate to a standard pinion, said cutter having peripheral cutting elements of which the cutting edges are generally similar to the outlines of standard gear teeth, but vary from exact identity with such teeth, and different elements being located at different distances from the axis of said cutter.

[Claims 6 to 10 not printed in the Gazette.]

1,221,433. METHOD OF STEAM-HEATING. JAMES LOGAN FITTS, Pensauken township, Camden county, N. J., assignor to Warren Webster & Company, a Corporation of New Jersey. Original application filed Jan. 5, 1910, Serial No. 536,504. Divided and this application filed May 28, 1913. Serial No. 770,293. (Cl. 237—12.)



1. The herein described method of operating a gravity system of steam heating, which consists in providing a predetermined static head on the return side for returning the water of condensation to the boiler said static head provided by maintaining a normal differential in pressures between the supply and return sides of the system with the return side open to the atmosphere whereby the steam may be delivered into the radiators under a predetermined normal difference in pressures between the supply and return sides thereof, causing the water and air to pass from the radiators into the return side of the system while substantially preventing the passage of steam, and automatically controlling and preventing the escape of air from the return side of the system into the atmosphere when said normal differential in pressures in the supply and return sides of the system is exceeded whereby the air and water are retained in the return side of the system to build up an abnormal pressure whenever the steam pressure on the supply side exceeds a predetermined normal pressure corresponding to the normal static head in the return side, the operation being such that the air pressure added to the pressure due to the static head is made to balance the steam pressure on the supply side, and a constant operative differential in pressures above atmospheric pressure is maintained in the supply and return sides of the system for different boiler pressures.

2. The herein described method of operating a gravity system of steam heating, which consists in providing a predetermined static head on the return side for returning the water of condensation to the boiler said static head provided by maintaining a normal differential in pressures between the supply and return sides of the system with the return side open to the atmosphere whereby the steam may be delivered into the radiators under a predetermined normal difference in pressures between the supply and return sides thereof, causing the water and air to pass from the radiators into the return side of the system while substantially preventing the passage of steam, automatically controlling the escape of air from the return side of the system into the atmosphere when the steam pressure becomes abnormal said control being under the regulation produced by said normal differential in pressures in the supply and return sides of the system in such manner that the air and water are retained in the return side of the system to build up an abnormal pressure whenever the steam pressure on the supply side exceeds a predetermined normal pressure corresponding to the normal static head in the return side, and automatically causing all of the air in the return side in excess of that necessary to maintain this balance of pressures in the two sides of the system to escape out of the system, whereby the air pressure added to the pressure due to the static head is made to balance the steam pressure on the supply side, and a constant operative differential in pressures above atmospheric pressure is maintained in the supply and return sides of the system for abnormal boiler pressures.

3. The herein described method of operating a gravity system of steam heating, which consists in supplying steam from a boiler to the radiators and normally returning the water of condensation from the radiators to the boiler by gravity and under atmospheric pressure, maintaining a static head in the return portion of the system for the purpose of balancing the normal pressure in the boiler, substantially preventing the flow of steam from the radiator on the return side of the system whereby a given normal pressure of air alone may be formed in the return part of the system between the radiator and down to the static head, and maintaining said differential of pressures between the normal boiler pressure and return air pressure for all abnormal boiler pressures by a variable communication with the atmosphere on the return side of the system at a point between the static head and the radiators, said communication controlled by the variation of pressures in the supply and return portions of the system and for all abnormal boiler pressures.

4. The herein described method of operating a gravity system of steam heating, which consists in supplying steam from a boiler to the radiators under a predetermined normal pressure and normally returning the water of condensation from the radiators to the boiler by gravity and under atmospheric pressure, causing the water and air from the radiators to pass into the return pipe but preventing the passage of steam thereto, normally permitting the escape of the air to the atmosphere and delivering the water to the boiler, maintaining a static head on the return side of the system by the water in the return pipes to counterbalance the predetermined normal pressure in the boiler, and automatically sealing the escape of air and water to the atmosphere from the return pipe under the control of an abnormal steam pressure created in the boiler.

1,221,434. COAL-CAR GUARD. CARL K. FREDERICK, Detroit, Mich. Filed Oct. 16, 1916. Serial No. 125,816. (Cl. 105—78.)



1. The combination with a car body, of foraminous guards arranged in parallelism with the side walls of the car body and adapted to be raised to cover the top of said car body, means connected to the lower edges of said guards adapted to raise the guards, and means connected to the ends of the guards at the upper edges thereof adapted to control lowering of said guards.

2. The combination with a car body, of foraminous guards arranged in parallelism with the side walls of said car body, and adapted to be raised to rest upon the end walls of said car body and provide a cover for the top of said car body, means connected to the lower ends of said guards adapted for raising and lowering said guards, and end arms connected to the ends of said guards at the upper edges thereof adapted for controlling the raising and lowering of said guards.

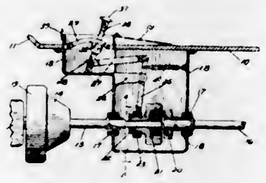
3. The combination with a car body having side walls and end walls, of guards in parallelism with the outer sides of said side walls and adapted to be raised and lowered on to said end walls to provide a cover for said car body, means operable on the end walls of the car body and attached to the lower edges of said guards for raising said guards, and hoisting devices on the end walls of said car body and having connection with the ends of said guards at the upper edges thereof adapted for controlling the movement of the upper edges of said guards.

4. The combination with a car body having side walls and end walls, of guides at the ends of the side walls of said car body, guards slidable in said guides normally in parallelism with the side walls of said car body, arms attached to said guards at the ends thereof, means on the end walls of said car body for raising and lowering the lower edges of said guards, and means on the end walls of said car body for raising and lowering said arms.

5. The combination with a car body having side walls and end walls, of vertical guides at the ends of said side walls, foraminous guards slidable in said guides and normally in parallelism with the side walls of said car body, hoisting devices on the end walls of said car body adapted for raising and lowering the lower edges of said guards, guides on the end walls of said car body, blocks slidable in said guides, arms connecting said blocks and the ends of said guards at the upper edges thereof, and means on the end walls of said car body for raising and lowering said blocks.

[Claim 6 not printed in the Gazette.]

1,221,435. THEFT-PREVENTING MECHANISM FOR AUTOMOBILES. JACOB FRYKBERG, Bridgeport, Conn. Filed July 24, 1916. Serial No. 110,904. (Cl. 74—81.)



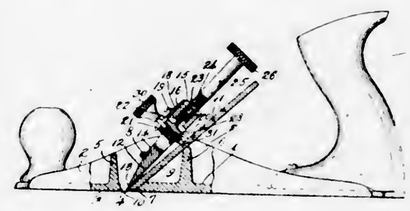
1. In a motor vehicle, the combination, with the power-plant of the vehicle and the clutch for connecting and disconnecting said power-plant and the wheel-driving mechanism, of a two-part propeller shaft, a clutch for connecting and disconnecting the parts of said shaft, and a lever for operating the movable member of said last-mentioned clutch, said lever comprising an incased and ordinarily inaccessible portion and a removable extension thereof projecting to accessible position, substantially as and for the purpose set forth.

2. In a motor vehicle, the combination, with the power-plant of the vehicle and the clutch for connecting and disconnecting said power-plant and the wheel-driving mechanism, of a two-part propeller shaft, a clutch for connecting and disconnecting the parts of said shaft, and a lever for operating the movable member of said last-mentioned clutch, said lever comprising an incased and ordinarily inaccessible portion and a removable extension thereof projecting to accessible position, the incased portion of said lever being provided with a head having a socket therein and one end of said extension being adapted to fit within said socket.

3. In a motor vehicle, the combination, with the power-plant of the vehicle and the clutch for connecting and disconnecting said power-plant and the wheel-driving mechanism, of a two-part propeller shaft, a clutch for connecting and disconnecting the parts of said shaft, a lever for operating the movable member of said last-mentioned clutch, said lever comprising an incased and ordinarily inaccessible portion and a removable extension thereof projecting to accessible position, the incased portion of said lever being provided with a head having a socket therein and one end of said extension being adapted to fit within said socket, a spring for yieldingly retaining said clutch members in disconnected condition, and means for checking said members in connected condition against the action of said spring.

4. In a motor vehicle, the combination, with the power-plant of the vehicle and the clutch for connecting and disconnecting said power-plant and the wheel-driving mechanism, of a two-part propeller shaft, a clutch for connecting and disconnecting the parts of said shaft, a lever for operating the movable member of said last-mentioned clutch, said lever comprising an incased and ordinarily inaccessible portion and a removable extension thereof projecting to accessible position, the incased portion of said lever being provided with a head having a socket therein and one end of said extension being adapted to fit within said socket, a spring for yieldingly retaining said clutch members in disconnected condition, and means for checking said members in connected condition against the action of said spring.

1,221,436. PLANE. JOHN W. GAEDE, Cleveland, Ohio. Filed Apr. 7, 1915. Serial No. 19,824. (Cl. 145—12.)



1. A plane having a bit support, an abutment opposite said support and forming therewith a seat, bit and cap members coöperating as a unit and lying in said seat, and bit and cap securing and interengaging devices carried by said unit for securing the unit in its seat and arranged to unpreventably maintain the assembled relation of the bit and cap while in their seat and until complete removal of the unit from said seat.

2. In a plane, a main body portion having a throat and a support for holding the bit member in its working plane, an abutment opposite said support and spaced therefrom, a bit member and a cap member lying in the space between the abutment and support, and means carried by said members for expanding them between the abutment and support in a direction normal to the plane of the bit and thereby securing them in place, said means being arranged to produce and unpreventably maintain interengaging relation between said members until removed together from said body portion.

3. A plane, comprising a body having a throated base, a bit support, and a rod opposite said support, a bit resting on said support and entering said throat and provided with a recess, a cap lying on said bit and having a seat to receive said rod, and a clamping screw carried by said cap and entering said recess, said screw when turned in one direction clamping the bit and cap in place, and means for preventing withdrawal of said screw from said recess while the bit and cap are in place in the body, whereby the bit and cap must be removed and inserted as a unit.

1,221,437. HAIR-WAVER. CARLOTTA M. GARRITY, Boston, Mass. Filed Apr. 6, 1916. Serial No. 89,342. (Cl. 132—18.)



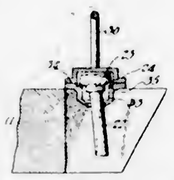
1. A hair waver comprising in combination two strips of malleable material, one a flat strip and the other a strip semi-circular in cross section contacting therewith, all being incased in a flexible casing.

2. A hair waver comprising in combination two strips of malleable material, one a flat strip and the other a strip concavo-convex in cross section contacting therewith, all being incased in a flexible casing.

3. A hair waver comprising in combination two strips of malleable material, one a flat strip and the other a strip semi-circular in cross section contacting therewith, all being incased in a flexible casing, with a filling disposed between said described strips.

4. A hair waver comprising in combination two strips of malleable material, one a flat strip and the other a strip concavo-convex in cross section contacting therewith, all being incased in a flexible casing, with a filling disposed between said described strips.

1,221,438. ROD-ROTATING TEE. LLOYD T. GAY, Taft, Cal. Filed July 1, 1916. Serial No. 107,483. (Cl. 255—14.)



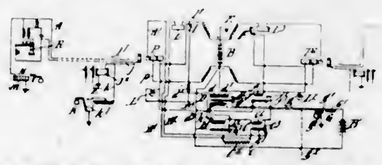
1. In an oil well pumping mechanism, a walking beam, means for oscillating said beam, a base plate secured to said beam, said base plate having a central opening therein, a grip pipe extending through said opening, a head formed on said grip pipe, a series of equally spaced movable ratchet teeth formed on the under side of said head, and two series of stationary ratchet teeth formed on said base plate about said central opening in a position to engage said movable ratchet teeth, one of said series of stationary ratchet teeth being offset with relation to the other so that the teeth of the two series alternately engage said movable ratchet teeth as said beam is oscillated.

2. In an oil well pumping mechanism; a walking beam; means for oscillating said beam; a base plate adapted to be secured to said beam and having a central opening therein; a grip pipe extending through said opening; a head formed on said grip pipe; a series of ratchet teeth formed on the under side of said head; and means on said base plate for cooperating with said ratchet teeth to rotate said head as said grip pipe oscillates in said base plate.

1,221,439. TELEPHONE SYSTEM. ERNEST GRAHAM GODFREE, Sandringham, near Melbourne, Victoria, Australia. Filed Sept. 30, 1915. Serial No. 53,336. (Cl. 179—9.)

1. In a telephone exchange system, substations, a central station, line circuits connecting said sub-stations with the central station, a call meter at a sub-station, an electro-magnetic exchange call meter, and a relay at the exchange having its energizing winding included in the energizing circuit of said exchange meter and controlling said sub-station meter over the line circuit of the associated sub-station.

2. In a telephone exchange system, sub-stations, a central station, line circuits connecting said sub-stations with the central station, call meters at said sub-stations, electro-magnetic call meters at the central office individual to the sub-stations, and a relay at the central station arranged to be energized in series with the winding of the central office meter of a given line to complete the circuit of the sub-station meter of that line over the associated line circuit.



3. In a telephone exchange system, sub-stations, a central station, line circuits connecting said substations with the central station, exchange circuits individual to each sub-station, exchange call meters individual to the substations and energizing circuits therefor, a single coil relay having its contacts included in the energizing circuit of an exchange call meter for control thereof and its energizing circuit controlled from another sub-station, a totalizing meter at the central station and an energizing circuit therefor, a multiple-winding relay at the central station operable only upon energization of all of its windings to open the energizing circuit of said exchange call meter, and means controlling the energization of one of the windings of said multiple-winding relays operable only upon the energization of the other of said multiple windings and said central station meters.

4. In a telephone exchange system, sub-stations, a central station, line circuits connecting said sub-stations with the central station, a subscriber's call meter situated at each sub-station and controlled over one member of the line circuit, a normally shunted resistance in the other member of said line circuit, a call meter at the central station, and a relay at the central station arranged to be energized upon the operation of said central station meter and operable to open said shunt and energize said subscriber's call meter over the first said member of the line circuit.

5. In a telephone exchange system, sub-stations, a central station, line circuits connecting said sub-stations with the central station, a central station call meter and energizing circuit therefor, means for closing said circuit for energizing said meter and causing it to operate, a multiple-winding relay operable only upon the energization of all of its windings and arranged to open the circuit of said meter, and a circuit-closing relay having its winding included in the energizing circuit of the meter and operable only upon operation of the meter to complete the energization of one of the windings of said multiple-winding relay after the other of said windings have become energized, said multiple-winding relay being arranged to maintain the meter circuit open during the energization of any one of its windings.

[Claims 6 to 10 not printed in the Gazette.]

1,221,440. FILLER-FORM FOR EMBROIDERY. JULIUS GOTTSCHALK, New York, N. Y. Filed Mar. 27, 1916. Serial No. 87,014. (Cl. 2—147.)



1. A washable filler form comprising an outer facing layer of stiffened wool felt fabric, a parchment paper backing united to said layer, and an adhesive arranged on the outer face of said backing.

2. A washable filler form comprising an outer facing layer of stiffened wool felt fabric, a parchment paper backing having an adhesive on its outer face, and a thick layer of dissolvable paste arranged between said facing and backing and compressed into uniting engagement with said facing and backing.

3. The process of making a washable filler form for embroidery which consists in first forming a composite sheet by coating one face of a layer of wool felt with a thick layer of dissolvable paste, then superposing said paste coated felt layer on a flexible backing, then compressing the so disposed layers until they are firmly united and the sheet formed thereby partially dried, then removing said sheet from compression and completing the drying thereof, and then cutting out forms of desired configuration from said sheet.

4. The process of making a washable filler form for embroidery which consists in first forming a composite sheet by coating a facing layer of stiffened wool felt with a thick layer of dissolvable paste, then superposing said stiffened paste coated felt layer on a parchment paper backing, then subjecting the so disposed layers to compression and an absorbing medium until the layers are firmly united and the sheet formed thereby partially dried, then removing said sheet from compression and completing the drying thereof, and then cutting out forms of desired configuration from said sheet.

1,221,441. CLEANING METALS AND PREVENTING THEM FROM CORRODING. JAMES H. GRAVELL, Philadelphia, Pa. Filed Nov. 15, 1916. Serial No. 131,394. (Cl. 148—41.)

1. A bath for cleaning metal and preventing it from corroding consisting of an admixture of calcium phosphate, sulfuric acid and water.

2. A bath for cleaning metal and preventing it from corroding consisting of an admixture of hydrocalcium phosphate, manganese dioxid and water.

3. The method of treating steel and iron which consists in treating it with an aqueous solution of hydrocalcium phosphate adapted to superficially dissolve the metal and clean it, substantially as described.

4. The method of cleaning steel and iron and preventing it from rusting which consists in treating the metal with an admixture of calcium phosphate, sulfuric acid and water.

5. The method of cleaning steel and iron and preventing it from rusting which consists in treating the metal with an admixture of hydrocalcium phosphate, manganese dioxid and water.

[Claims 6 and 7 not printed in the Gazette.]

1,221,442. CLEANING METALS AND PREVENTING THEM FROM CORRODING. JAMES H. GRAVELL, Philadelphia, Pa. Filed Dec. 26, 1916. Serial No. 138,992. (Cl. 148—41.)

1. A bath for cleaning metal and preventing it from corroding, consisting of an admixture of calcium phosphate, an acid salt capable of reacting with the said calcium phosphate to form hydrocalcium phosphate, and water.

2. A bath for cleaning metal and preventing it from corroding consisting of an admixture of calcium phosphate, sodium acid sulfate, and water.

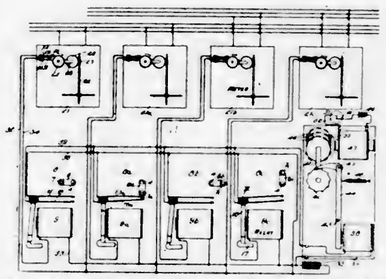
3. The method of cleaning steel and iron and preventing it from rusting, which consists in treating the metal with an admixture of calcium phosphate, sodium acid sulfate and water.

4. An ingredient for a bath for cleaning steel and iron and preventing it from rusting consisting of an admixture of calcium phosphate and an acid salt capable, in the presence of water, of reacting with the said calcium phosphate to form hydrocalcium phosphate.

5. An ingredient for a bath for cleaning steel and iron and preventing it from rusting consisting of an admixture of calcium phosphate and sodium acid sulfate.

[Claim 6 not printed in the Gazette.]

1,221,443. SYSTEM FOR RECORDING METER OPERATIONS. CHESTER I. HALL, Fort Wayne, Ind., assignor to Chicago Electric Meter Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 10, 1913, Serial No. 753,256. Renewed July 14, 1916. Serial No. 109,392. (Cl. 234—5.5.)



1. In a system for recording meter operation, the combination of individual contact mechanism to be actuated by each of a plurality of meters, a common recording mechanism having an electromagnetic actuating mechanism, and an impulse transferring mechanism for each meter comprising an electromagnet actuated by the meter contacts, and contact mechanism for controlling the actuating electromagnetic mechanism of the recording mechanism.

2. In a system for recording meter operation, the combination of individual contact mechanism to be actuated by each of a plurality of meters, a common recording mechanism having an electromagnetic actuating mechanism, and an impulse transferring mechanism for each meter comprising an electromagnet actuated by the meter contacts, contact mechanism for controlling the actuating electromagnetic mechanism of the recording mechanism, and devices for actuating the contacts of the impulse transferring mechanisms successively.

3. In a system for recording the actuations of a plurality of meters, the combination of contact mechanism for each meter, an electromagnet and controlling circuit connections for each contact mechanism, a locking device for each magnet, contacts for each magnet, recording mechanism having an electromagnetic actuating device, circuit connections extending from the contacts of each magnet to the actuating electromagnetic mechanism of the recording device, and devices for successively operating the contacts associated with each magnet and releasing the associated locking mechanism.

4. In a system for recording the actuations of a plurality of meters, the combination of contact mechanism for each meter, an electromagnet and controlling circuit connections for each contact mechanism, a locking device for each magnet, contacts for each magnet, recording mechanism having an electromagnetic actuating device, circuit connections extending from the contacts of each magnet to the actuating electromagnetic mechanism of the recording device, and devices for successively operating the contacts associated with each magnet and releasing the associated locking mechanism, the operation of each mag-

net serving to move its contacts into position to be actuated by said devices to operate the electromagnetic actuating mechanism of the recording mechanism.

[Claims 6 to 31 not printed in the Gazette.]

1,221,444. FLEXIBLE MOLDING. ASHTON HAMILTON, Brockton, Mass. Filed Aug. 31, 1916. Serial No. 117,940. (Cl. 155—43.)



1. A flexible molding comprising a strip of flexible material provided with cuts extended from one surface toward the opposite surface to form flaps which are spaced apart, and fastening devices having their lower ends extended through the uncut portions of the strip beneath said flaps, and means for securing said flaps in their original position on the strip to cover the heads of said fastening devices.

2. A flexible molding comprising a strip of flexible material provided with cuts extended from one surface toward the opposite surface to form flaps which are spaced apart, and fastening devices having their lower ends extended through the uncut portions of the strip beneath said flaps.

1,221,445. CONCRETE-WATERPROOFING POWDER. WILLIAM M. HARRISON, New Rochelle, N. Y., assignor to Noble C. Harrison, Trenton, N. J. Filed July 23, 1915. Serial No. 41,524. (Cl. 106—25.)

1. The herein described process of making a waterproofing composition, which consists in adding a solvent to a neutral glycerid of the fatty acids, mixing them as a solution intimately with a dry and powdered inert carrier, and slightly warming the mixture, during the mixing, so as to evaporate the volatile solvents without saponifying the glycerids, until a dry powder is left.

2. A method of producing a waterproofing composition, which consists in dissolving a neutral glycerid of the fatty acids, mixing the solution with a dry and powdered inert carrier, and evaporating the solution until a dry powder is left.

3. A method of making a waterproofing composition which consists in forming a dry powder comprising from 70 to 95 parts of a dry and powdered inert carrier, and from 5 to 25 parts of a neutral glycerid of the fatty acids in a non-saponified form, the said mixture being made by dissolving the said glycerid in a solvent, mixing the said carrier and the said solution and then evaporating the said solution until a dry powder is left.

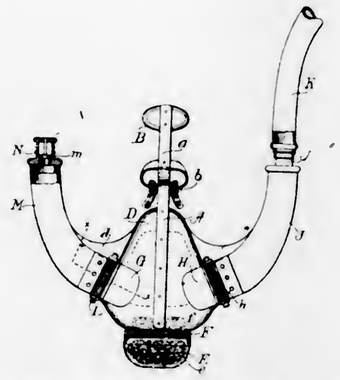
4. A concrete waterproofing powder, consisting of plastic clay and a neutral non-saponified glycerid of the fatty acids, intimately mixed to uniform consistency, and forming a dry powder, substantially as herein described.

5. A method of forming a mixture of a finely divided inert carrier and a water repelling substance, which consists in dissolving the said water repelling substance in a suitable solvent, mixing the said inert carrier with the solution thus formed, and then evaporating the said solvent until a powder is left, the temperature being throughout maintained below the temperature at which said water repellent is decomposed.

[Claim 6 not printed in the Gazette.]

1,221,446. PHYSICIAN'S MASK. HERBERT A. HECHT, Paterson, N. J. Filed Feb. 21, 1916. Serial No. 79,524. (Cl. 128—13.)

1. In a respirator mask, the combination with a central vertical support, of a nose-grip secured to the said support whereby the same may be attached to the nose of the wearer, a forehead pad connected with the said vertical support above the nose-grip, a mask attached to the said support, a disinfectant container attached to the said mask and having a valve opening toward the interior of the mask, and means communicating with the interior of the mask and provided with an outwardly-opening valve for discharging from the mask the exhalations of the wearer.



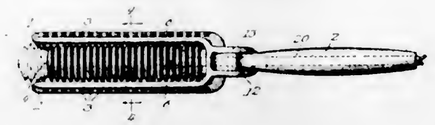
2. In a respirator mask, the combination with a mask constructed to cover the nose and mouth of the wearer, of a nose-grip arranged above the mask and connected therewith, a disinfectant container attached to the said mask and having a valve opening toward the interior of the mask, and means communicating with the interior of the mask and extending laterally and upwardly from the mask and provided at its extremity with an outwardly-opening valve for discharging from the mask the exhalations of the wearer.

3. In a respirator mask, the combination with a mask constructed to cover the nose and mouth, of a nose-grip arranged above the mask and connected therewith, a spring connected with and projecting above the nose-grip, a forehead pad attached to the upper end of the said spring, an air-disinfecting container connected with the bottom of the mask, a lining within the mask passing between the said container and the chin of the wearer, and a discharge valve.

4. In a respirator mask, the combination with a mask, of a disinfectant container connected with the mask and having a valve opening into the mask, the said mask having a discharge opening for the exhaled gases, a horn provided with an outwardly-opening valve at its outer end, and means for connecting the mouth of the said horn with the said discharge opening of the mask including a hinge connected with the mouth of the horn and whereon the horn may be moved into an open position and into a closed position thereby, when in its said open position, placing the said discharge opening of the mask in direct communication with the external air, and, in its said closed position directing the exhalations through the said horn.

5. In a respirator mask, the combination with a mask, of a disinfectant container connected with the mask and having a valve opening into the mask, the said mask having a discharge opening for exhaled gases located in the side portion of the mask, an external casing arranged over the said discharge opening of the mask and extending rearwardly, the said casing having a discharge opening, a horn provided with an outwardly-opening valve at its outer end, means for connecting the said discharge opening of the casing with the mouth of the horn including a hinge connected with the mouth of the horn whereon the horn may be moved into an open position and into a closed position thereby, when in its said closed position directing the exhalations through the said horn, and, in its said open position, placing the said discharge opening of the casing in direct communication with the external air.

1,221,447. HAIR-WAVER. MABEL A. C. HENDERSON, Chicago, Ill. Filed Oct. 25, 1916. Serial No. 127,516. (Cl. 132—18.)



1. A hair waver having a substantially flat frame adapted to lie flatwise to the head of the user, and a configurating matrix capable of engaging the strands of hair, said matrix being movable in a direction parallel to the plane of the frame.

2. A hair waver having a substantially flat frame adapted to lie flatwise to the head of the user, said frame having means arranged along the edges for engaging the strands of the hair, and means between the edges of the frame adapted to engage said strands, said means being movable relatively to the frame and parallel to the plane of the frame and in a direction transverse to the strands of hair.

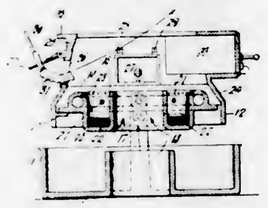
3. A hair waver having a main frame with two parallel rows of upstanding comb teeth adapted to engage strands of hair leading across from one row to the other, and a configurating element for the hair arranged between said rows of teeth, said configurating element being shiftable in a direction parallel to said rows.

4. A hair waver having two parallel rows of upstanding comb teeth forming combs, a hair-configurating element slidable in a direction parallel to said combs, and means for retaining the strands of hair in contact with said configurating element.

5. A hair waver having a main frame having two opposite edges adapted to engage the strands of hair, a convex matrix arranged between said edges and also adapted to engage the strands of hair, a bifurcated retainer having branches arranged between the matrix and each of the said edges of the frame, and means for producing relative movement between the matrix and the frame.

[Claims 6 to 12 not printed in the Gazette.]

1,221,448. BURNER. JULIUS C. HINZ, Detroit, Mich. Filed Mar. 22, 1916. Serial No. 85,764. (Cl. 158—53.)



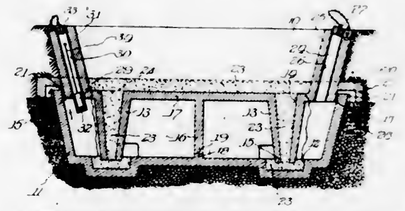
1. A duplex burner for hydrocarbon liquids comprising a vapor burner consisting of a horizontal tube having a series of vapor jets in its upper portion and an outlet port disposed below said burner jets and above the bottom of said tube, and an oil burner disposed adjacent to said vapor burner and adapted to receive the overflow thereof through said outlet port, said duplex burner being adapted to burn vapor and oil simultaneously, the oil burner serving to heat the vapor burner and vaporize more or less of the oil contained therein.

2. A duplex burner for hydrocarbon liquids comprising a central air flue, an oil burner surrounding said air flue, and a horizontal vapor burner surrounding the upper part of said oil burner and provided with a series of vapor jets in its upper portion and with a series of outlet ports disposed below said jets and above the bottom of said vapor burner and adapted to feed oil from said vapor burner to said oil burner.

3. A duplex burner for hydrocarbon liquids comprising a central air flue, an annular oil burner surrounding said air flue, and a horizontal annular vapor burner surrounding the upper part of said oil burner and provided with a series of vapor jets in its upper portion and with a series of outlet ports disposed below said jets and above the bottom of said vapor burner and adapted to feed oil from said vapor burner to said oil burner.

4. A duplex burner for hydrocarbon liquids consisting of an integral casting comprising a central air flue, an oil burner surrounding said air flue, a horizontal vapor burner surrounding the upper part of said oil burner and provided with a series of vapor jets in its upper portion and with a series of outlet ports disposed below said jets and above the bottom of said vapor burner and adapted to feed oil from said vapor burner to said oil burner, and supporting lugs on said vapor burner.

1,221,449. RECEPTACLE FOR CULTIVATING AND PRESERVING FLOWERS. CHARLES D. HITCHCOCK, Chicago, Ill. Filed Sept. 22, 1912. Serial No. 791,033. (Cl. 47—19.)



1. A device of the character described, embodying an open liquid reservoir, a receptacle, means for supporting the receptacle in a manner to constitute a closure for the reservoir, there being an overflow space from the reservoir between the walls of the receptacle and the reservoir, means forming a closure for the space and being shaped to form an outlet passage communicating with the said space, and provisions for conducting the liquid by capillary attraction from the reservoir and into the receptacle through the bottom of the latter.

2. A device of the character described, embodying separable sections and comprising an open liquid reservoir, a receptacle, means for supporting the receptacle in a manner to constitute a closure for the reservoir, there being an overflow space from the reservoir between the walls of the receptacle and the reservoir, means forming a closure for the space and being shaped to form an outlet passage communicating with the said space, and provisions for conducting the liquid by capillary attraction from the reservoir and into the receptacle through the bottom of the latter.

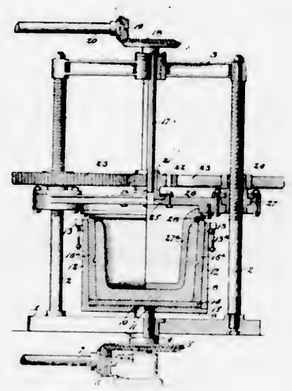
3. A device of the character described, embodying superposed receptacles, the lower one constituting a liquid reservoir, there being an overflow space between the receptacles, a shield for the overflow space, means for conducting the liquid from one of the receptacles to the other by capillary attraction, and one or more holders for the said means, connected with one of the receptacles and projecting into the other receptacle.

4. A device of the character described, embodying two receptacles one of which is supported above the other, the lower receptacle constituting a liquid reservoir, a tubular extension projecting from the bottom of the upper and extending into the lower receptacle and having communication with both, the lower receptacle having an open recess into which one end of the extension projects, said end terminating short of the bottom of the recess, and absorbent material arranged in the bottom of the upper receptacle, around the opening in the extension, within the extension and also in the said recess to surround the end of the extension in the recess.

5. A device of the character described, embodying two receptacles one of which is supported above the other, the lower receptacle constituting a liquid reservoir, a tubular extension projecting from the bottom of the upper and extending into the lower receptacle and having communication with both, the lower receptacle having an open recess into which one end of the extension projects, said end terminating short of the bottom of the recess, and granular material arranged in the bottom of the upper receptacle, around the opening in the extension, within the extension, and also in the said recess to surround the end of the extension in the recess, there being an overflow leading from the lower receptacle and between the receptacles.

[Claims 6 to 11 not printed in the Gazette.]

1,221,450. METHOD OF MAKING CLAY POTS OR CRUCIBLES. HALBERT K. HITCHCOCK, Tarentum, Pa. Filed July 28, 1913. Serial No. 781,550. (Cl. 25—156.)



1. The emthod of making clay pots or crucibles, consisting in inclosing a shaped hollow moist blank within an air-tight impervious mold with one surface of said blank in contact with said mold and subjecting its other surface to a partial vacuum to thereby free the blank from air bubbles or occluded gas.

2. The method of making clay pots or crucibles, consisting in inclosing a shaped hollow moist blank within an air-tight impervious mold with its entire outer surface in contact with said mold and withdrawing the air from the hollow cavity within the blank, thereby expanding air or gas bubbles contained within the blank and withdrawing them therefrom.

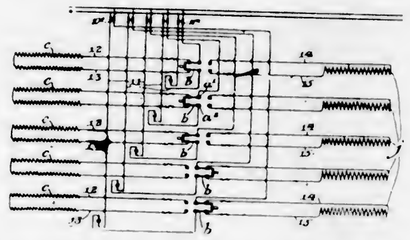
3. The method of making clay pots or crucibles consisting in inclosing a shaped hollow moist blank within an air-tight impervious mold with its entire outer surface in contact with said mold and subjecting the inner surface of said blank to a vacuum to thereby free the blank from air bubbles or occluded gas, and then subjecting the inner surface of said blank to uniform yielding pressure to compact the blank.

4 The method of making clay pots or crucibles, consisting in inclosing a shaped hollow moist blank within an air-tight mold and subjecting it to a partial vacuum to thereby free the blank from air bubbles or occluded gas and excess moisture, and subjecting the entire inner surface of the blank to uniform yielding pressure to thereby compact the blank equally throughout.

5. The method of making clay pots or crucibles, consisting in inclosing a shaped hollow moist blank within an air-tight mold and subjecting it to a partial vacuum to thereby free the blank from air bubbles or occluded gas and excess moisture, subjecting the entire inner surface of the blank to uniform yielding pressure to thereby compact the blank equally throughout, and allowing the blank to lie under pressure until it becomes thoroughly homogeneous.

[Claims 6 to 8 not printed in the Gazette.]

1,221,451. CONTROLLER DEVICE FOR ELECTRIC LIGHTING AND HEATING PURPOSES. FREDERICK H. HOFFMAN, Philadelphia, Pa., assignor to Williams, Brown & Earle, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 3, 1916. Serial No. 81,818. (Cl. 171—97.)



1. A controller device of the character described, comprising two sets of electric circuits, in one set of which circuits a rheostat is included and in the other set of said circuits, heating or drying means, a series of double throw switches arranged in one set of said circuits and adapted to be shifted into the other set of said circuits to establish thereby lighting and heating or drying circuits, without interfering with lighting while utilizing the diverted current for heating or drying purposes.

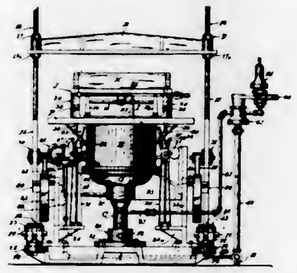
2. A controller device of the character described, comprising two sets of electric circuits, double pole switches therein, a rheostat or cartridge coils, included in one set of said circuits, heater or drying means in the other set of said circuits, a series of double throw switches in one set of said circuits and adapted to be shifted into the other set of said circuits to divert part of the current of said circuits to establish thereby lighting and heating or drying circuits, without interfering with lighting, while utilizing the diverted current, for heating or drying purposes.

3. A controller device of the character described, comprising two sets of electric circuits with double pole switches therein, a rheostat or cartridge coils provided with shiftable bands, included in one set of said circuits, heater or drying means, included in the other set of said circuits and a series of double throw switches arranged in one set of said circuits and adapted to be shifted into the other set of said circuits to establish thereby lighting and heating or drying circuits, without interfering with lighting, while utilizing the diverted current of said circuits, for heating or drying purposes.

1,221,452. MOLDING-MACHINE. JOHN LOUIS JOHNSON, Chicago, Ill., assignor to Illinois Malleable Iron Co., Chicago, Ill., a Corporation of Illinois. Filed July 14, 1916. Serial No. 109,316. (Cl. 22—25.)

1. In a machine of the nature described, the combination, of a base, a stationary piston mounted on said base, a cylinder constructed to movably engage said piston, a platen connected with said cylinder, a pattern plate mounted on said platen, a molding flask removably supported on said pattern plate, means for imparting to said pattern plate vibratory movement, and means for elevating said pattern plate at predetermined speed and means for lowering said pattern plate at a slower sped.

2. In a machine of the nature described, the combination, of a base, a stationary piston mounted on said base, a cylinder constructed to movably engage said piston, a platen connected to said cylinder, a pattern plate mounted on said platen, a molding flask removably supported on said pattern plate, means constructed to elevate said cylinder at predetermined speed, means constructed to lower said cylinder at a slower speed, means constructed to impart vibratory movement to said pattern plate at the commencement of its descent, and means for supporting said flask in its elevated position while the pattern plate is descending.



3. In a machine of the nature described, the combination, of a base, a stationary piston mounted on said base, a cylinder constructed to movably engage said piston, a platen connected to said cylinder, a pattern plate mounted on said platen, a molding flask removably supported on said pattern plate, means constructed to elevate said cylinder at predetermined speed, means constructed to lower said cylinder at a slower speed, means constructed to impart vibratory movement to said pattern plate at the commencement of its descent, and means for supporting said flask in its elevated position while the pattern plate is descending, the means for vibrating the pattern plate being entirely automatically operated.

4. In a machine of the nature described, the combination, of a base, a stationary piston mounted on said base, a cylinder constructed to movably engage said piston, a platen connected to said cylinder, a pattern plate mounted on said platen, a molding flask removably supported on said pattern plate, means constructed to elevate said cylinder at predetermined speed, means constructed to lower said cylinder at a slower speed, means constructed to impart vibratory movement to said pattern plate in two stages, once at the commencement of the ascent of said cylinder, and again at the commencement of the descent thereof, and means for supporting said flask in its elevated position while the pattern plate is descending.

5. In a machine of the nature described, the combination, of a base, a stationary piston mounted on said base, a cylinder constructed to movably engage said piston, a platen connected to said cylinder, a pattern plate mounted on said platen, a molding flask removably supported on said pattern plate, means constructed to elevate said cylinder at predetermined speed, means constructed to lower said cylinder at a slower speed, means constructed to impart vibratory movement to said pattern plate in two stages, once at the commencement of the ascent of said cylinder and again at the commencement of the descent thereof, and means for supporting said flask in its elevated position while the pattern plate is descending, said means for vibrating the pattern plate being entirely automatically operated.

[Claims 6 to 21 not printed in the Gazette.]

1,221,453. DETONATOR FOR ORDNANCE-SHELLS. JULIUS KELLER, Fond du Lac, Wis. Filed May 15, 1916. Serial No. 97,483. (Cl. 102—39.)

1. In a detonator, a ring having a notch therein, said notch being of generally rectangular form, a projection at one side of the notch, and a firing needle having a head adapted to lie in said notch, and the metal of said projection being adapted to be forced into contact with said head.

2. In a detonator, a ring having a notch therein, said notch being of generally rectangular form, projections at opposite sides of the notch, and a firing needle having a head provided with a dovetail portion, said dovetail portion being adapted to lie in said notch, and the metal of said projections being adapted to be forced into contact with said dovetail portion.



3. The process of assembling a detonator consisting in placing a needle within its tubular guide, holding the needle in axial relation to the guide with the head of the needle lying in a rectangular notch in the ring, said ring having projections at opposite sides of the notch, and forcing the metal of said projections into clamping contact with the needle head while the needle is being held in axial relation to the guide.

1,221,454. DETONATOR. JULIUS KELLER, Fond du Lac, Wis. Filed July 29, 1916. Serial No. 111,971. (Cl. 102—39.)



A detonator comprising a casing, a rod slidable axially of the casing, a detent for normally preventing movement of the rod, said detent comprising a base lying against the end of the rod and two arms lying at the sides of the rod, said arms being bent to provide yieldable locking projections, stationary portions in the casing against which said projections lie, and bosses integral with the arms and lying in depressions in the rod for centering and securing the detent to the rod.

1,221,455. MILK-TESTING BOTTLE. IRA HUNT KENDALL, Potsdam, N. Y. Filed Feb. 9, 1916. Serial No. 77,344. (Cl. 23—3.)

1. In a testing bottle, a reading tube having portions thereof of different diameters and graduated in opposite directions from the point of junction of said portions of different diameters.

2. In a testing bottle, a reading tube having portions thereof of different diameters, graduations on said tube, the graduations on one portion of said tube indicating integers and the graduations on the other portion of said tube indicating fractions of the integer.

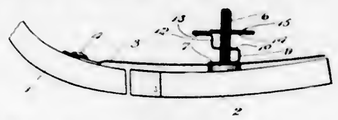
3. In a testing bottle, a reading tube having portions of different diameters, one of said portions of said tube being

graduated to indicate integers, the other portion of said tube being graduated to indicate fractions of the integer,



and a separate filling tube, permitting exertion of a pressure within said reading tube.

1,221,456. INTEGRAL NUT-LOCK, SPRING, AND WASHER. JACOB KERSTEN, Grand Rapids, Mich. Filed May 10, 1916. Serial No. 96,630. (Cl. 151—21.)



In a device of the character described a strip of flat resilient metal having a horizontal section at one end thereof, a vertical section bent from an end of said horizontal section and extended for a distance, a second horizontal section bent back over the first mentioned horizontal section and spaced therefrom, a vertical extension at the end of said second horizontal section extending therefrom for a distance and then bent outwardly and horizontally and extended in the same direction as the second horizontal section for a distance, and a third horizontal section bent back over the second horizontal section and spaced therefrom and extended a distance beyond the ends of said second horizontal section, terminating in a part turned back and lying against it, said horizontal sections all having alined openings and the third section and the part lying against it having said openings threaded to receive a bolt or screw.

1,221,457. COLOR-CARRIER FOR COLOR PHOTOGRAPHY. ISIDOR KITSEE, Philadelphia, Pa. Filed Sept. 13, 1916. Serial No. 119,905. (Cl. 18—48.)

1. In the process of producing color carriers for color photography the method which consists in securing a film out of which the carriers are to be produced onto a suitable base with the interposition of a material soluble in an agent not injuriously affecting said film, dividing said film into a series of individual parts and freeing said parts from said support with an agent not injuriously affecting said parts.

2. In the process of producing color carriers for color photography the method which consists in surfacing a suitable support with a material soluble in an agent not injuriously affecting the material out of which the color carriers are to be fashioned, securing to said material a film not soluble in the agent in which the surfacing material is soluble, coloring said film, dividing said film into a series of individual parts and freeing said parts from said support.

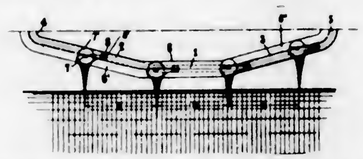
3. In the process of producing color carriers for color photography the method which consists in surfacing a suitable support with a material soluble in water, coating said surfacing material after being dried with a soluble cellulose in a manner so that said cellulose should produce a continuous film when dried, dividing said continuous film into required parts and freeing said parts from said support.

4. In the process of producing color carriers for color photography the method which consists in coating a suitable support, surfaced with a suitable material, with a colored solution in which a soluble cellulose is dissolved, in a manner so that said coating should form a continuous film when dry, dividing said film into a series of individual parts and removing said parts from said support.

5. As a new article of manufacture a support, a coating for said support, a celluloid film on said coating, said celluloid film divided into a number of individual parts.

[Claims 6 to 8 not printed in the Gazette.]

1,221,458. MOTOR-PLOW. CLAUS HINRICH KÖHN, Leipzig, Germany, assignor to M. Brockmann, Chemische Fabrik M. B. H., Leipzig-Eutritzsch, Germany, a Corporation of Germany. Filed Oct. 17, 1913. Serial No. 795,695. (Cl. 21—114.)



1. In a car for driving a plow, the combination with a frame, sprocket-wheels mounted therein, an endless chain meshing with the sprocket-wheels, and a plurality of anchors having blade like flukes and driven by the chain, of endless guide-ways in the frame, a plurality of members guided in one of the guide-ways, and a plurality of members guided in the other guide-way, each anchor being operatively connected with one of the former members and with one of the latter members, said members and guide ways coöperating to constrain said flukes to remain substantially vertical when entering and leaving the soil.

2. In a car for driving a plow, the combination with a frame, sprocket-wheels mounted therein, an endless chain meshing with the sprocket-wheels, and a plurality of anchors having blade like flukes and driven by the chain, of two pairs of endless guide-ways in the frame, a front axle and a rear axle carried by each anchor, rollers carried by each front axle and guided in one pair of guide-ways, and rollers carried by each rear axle and guided in the other pair of guide-ways, said rollers and guide ways coöperating to constrain said flukes to remain substantially vertical when entering and leaving the soil.

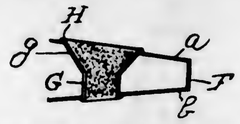
3. In a car for driving a plow, the combination with a frame, sprocket-wheels mounted therein, an endless chain meshing with the sprocket-wheels, and a plurality of anchors having blade like flukes and driven by the chain, of endless guide-ways in the frame, a plurality of members guided in one of the guide-ways, and a plurality of members guided in the other guide-way, each anchor being operatively connected with one of the former members and with one of the latter members, each guide-way having two end portions of short radius running into curved portions of long radius connected by rectilinear portions such that from the time the anchors bear on the ground until their withdrawal from the same, the horizontal distance between two flukes remains constant and the anchors enter into and are withdrawn from the ground in an approximately vertical direction, said members and guide ways coöperating to constrain said flukes to remain substantially vertical when entering and leaving the soil.

4. In a car for driving a plow, the combination with a frame, sprocket-wheels mounted therein, an endless chain meshing with the sprocket-wheels, and a plurality of anchors having blade like flukes and driven by the chain, of endless guide-ways in the frame, a plurality of members guided in one of the guide-ways, and a plurality of members guided in the other guide-way, each anchor being carried and guided by two of the former members and guided by one of the latter members, said members and guide ways coöperating to constrain said flukes to remain substantially vertical when entering and leaving the soil.

5. In a car for driving a plow, the combination with a frame, sprocket-wheels mounted therein, an endless chain meshing with the sprocket-wheels, and a plurality of anchors having blade like flukes and driven by the chain, of endless guide-ways in the frame, a plurality of pairs of axles each carrying an anchor guided in a pair of said guide-ways, and each anchor having an arm guided in another of said guide-ways.

[Claims 6 to 19 not printed in the Gazette.]

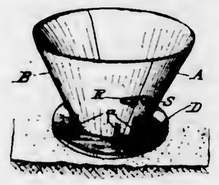
1,221,459. MOLDING DEVICE. LOUIS R. KRUG, Albany, N. Y., assignor to Burdick & Son, Albany, N. Y. Filed Feb. 8, 1917. Serial No. 147,375. (Cl. 22—160.)



1. A countersunk hinged tube, comprising a metallic plate bent upon itself, forming two portions slightly separated from each other; a tube having one end in an opening in one of the portions of said plate; an enlarged, flaring cup-shaped flange portion formed at the other end of said tube secured in an opening in the other portion of said plate; and a pattern provided with an opening into which said plate carrying said tube may be inserted and held during the molding process.

2. A thin metallic plate provided with an enlarged opening near one end and a smaller opening near the other end; said plate bent at right angles along a line between said openings and then bent along a line a short distance removed from the first mentioned line to such a position that the two major portions of the plate will be located one above and slightly removed from the other; a tube having a flaring cup-shaped enlarged portion at one end adapted to fit in the larger of said openings in the plate, the other end of said tube adapted to fit into the smaller of said openings, all substantially as described.

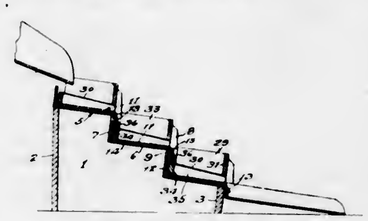
1,221,460. MOLD-FEEDER. JOZEF KUKLA, Buffalo, N. Y. Filed May 17, 1916. Serial No. 98,209. (Cl. 22—134.)



A downwardly converging frusto-conical mold feeder having two equal and complementary sections hinged together adjacent two contacting edges, one of said halves having a latch and the other a projection near the engaging edges opposite said hinge, the latch being adapted to engage the projection to lock the halves together, the bottom of each half having a laterally projecting semi-annular flange adapted to form a base for the device, the halves being so shaped as to form when in operative position for pouring a downwardly tapering frusto-conical space open at top and bottom.

1,221,461. AMALGAMATING APPARATUS. CHARLES C. LANE, Los Angeles, Cal. Filed Dec. 16, 1913. Serial No. 807,022. (Cl. 83—68.)

1. An amalgamator comprising a series of sloping supports arranged in pairs in step-like relation; a pan on each pair of supports each having a rear wall, side walls and a front down-hanging flange, the front flanges extending down over the rear wall of the forward pans respectively in succession and said pans each widening from back to front and the tail of each pan being inserted into and overlying the next pan; an amalgamating plate covering the floor of each pan and provided with an upturned rim at the back and a down-turned flange at the front, the ends of the amalgamating plates being cut obliquely to conform to the taper of the pans, said upturned rims fitting against the rear walls of the amalgamating pans respectively and said pans being uptiltable by pressure on the down-turned flanges; a foraminous floor above each pan; a frame above each foraminous floor having a front wall and forwardly converging side walls; and a support below each foraminous floor having a rear member and side members, said side members being downward extensions of the side walls of the pans.



2. An amalgamator comprising a series of sloping supports arranged in pairs in step-like relation; a pan on each pair of supports each having a rear wall, side walls and a front down-hanging flange, the front flanges extending down over the rear walls of the forward pans respectively in succession and said pans each widening from back to front and the tail of each pan being inserted into and overlying the next pan and each rear wall being lower than the side walls and having its edge formed into a trough; an amalgamating plate covering the floor of each pan and provided with an upturned rim at the back and a downturned flange at the front, the ends of the amalgamating plates being cut obliquely to conform to the taper of the pans, said upturned rims fitting against the rear walls of the amalgamating pans respectively and said pans being uptiltable by pressure on the down-turned flanges; a foraminous floor above each pan; a frame above each foraminous floor having a front wall and forwardly converging side walls; and a support below each foraminous floor having a rear member and side members, said side members being downward extensions of the side walls of the pans.

3. In an amalagamator, in combination, a series of amalgamating pans arranged in stepped relation to discharge one into another successively, said pans having an open front and converging side walls, and amalgamating plates removable from said pans and covering the bottom thereof, said amalgamating plates being retained in said pans by said converging side walls.

4. In an amalgamator, the combination with a stepped basic support, of a series of amalgamating pans arranged thereon, and discharging one into another successively, said amalgamating pans having detachable amalgamating plates in the bottom, and perforated screens above and spaced apart from the plates substantially as set forth; said plates and screens being stationary and having a common downward inclination.

5. In an amalgamator, the combination with a stepped basic support, of a series of amalgamating pans arranged thereon, said pans discharging one into another successively, and successively widening from back to front and from upper to lower pan, amalgamating plates in said pans, and distributing screens over said plates, substantially as set forth; said pans and screens being downwardly and forwardly inclined.

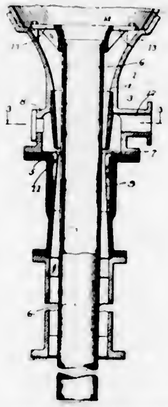
[Claims 6 to 8 not printed in the Gazette.]

1,221,462. SPIKE. JOSEPH N. LEBEL, Salem, Mass. Filed June 21, 1915. Serial No. 35,322. (Cl. 85—23.)



A spike having a channel formed longitudinally of its shank, the head of said shank having a chamber formed therein and communicating with the upper end of the channel, the side walls of the channel having vertically spaced openings formed therein, a bar slidable in the channel, the bottom of the channel being closed to limit the downward movement of the bar, an enlargement on the upper end of the bar for movement into said chamber, spurs pivotally connected to the bar and movable in the openings, laterally bent ears carried by the side walls of the channel for slidably engaging the bar to prevent accidental disengagement thereof from the channel.

1,221,463. ASPIRATOR. ALBERT P. LEONARD, New York, N. Y., assignor to Honolulu Iron Works Company, a Corporation of Hawaii. Filed Nov. 30, 1914. Serial No. 874,613. (Cl. 230—13.)



1. An aspirator including in combination a fall pipe receiving the condenser water, a contracted throat in the fall pipe, an air and gas inlet opening into the fall pipe adjacent to the throat, and an overflow pipe within the fall pipe with its intake above the throat.

2. An aspirator including in combination a fall pipe receiving the condenser water, an annular throat within the fall pipe, an annular air and gas inlet opening into the fall pipe about said throat, and an overflow pipe within the fall pipe and having its intake above the throat.

3. An hydraulic aspirator including in combination a pipe with a contracted throat, a gas inlet adjacent thereto, and an overflow pipe within, and having its intake above, said contracted throat.

4. In combination with a condenser, a fall pipe receiving the condenser water therefrom, a contracted throat in the fall pipe below the condenser, an air and gas inlet opening into the fall pipe adjacent to the throat, and a pipe supplying the air and gases to said inlet, said pipe being adapted to communicate with the air outlet of the condenser, and means for carrying away any surplus water from said throat.

5. In combination with a condenser, a fall pipe receiving the condenser water therefrom, a contracted throat in the fall pipe below the condenser, an air and gas inlet opening into the fall pipe adjacent to the throat, and a pipe supplying the air and gases to said inlet, said pipe being adapted to communicate with the air outlet of the condenser, and means within said pipe at said throat for diminishing the area at that point and conducting away any surplus water from said throat, and a pipe supplying the air and gases to said inlet, said pipe being adapted to communicate with the air outlet of the condenser.

[Claim 6 not printed in the Gazette.]

1,221,464. DISPLAY DEVICE FOR CAR-WEIGHTS. FREDERICK C. MAEGLY, Chicago, Ill. Filed Mar. 28, 1912. Serial No. 686,956. (Cl. 40—15.)



1. In a device of the class described, a frame to be attached to the side of a freight car, a carrier adapted to slide within said frame, display information cards adapted to fit within said carrier, said carrier having a crimp intermediate its sides and ends with a hole therethrough, said frame having a hole adapted to register with the hole in said crimp, and a seal adapted to pass through both said holes.

2. In a device of the class described, a frame to be attached to the side wall of a freight car, a sheet metal carrier to fit within said frame, said carrier being provided with means to receive and hold information cards, said frame having holes therethrough to display said cards, and means to automatically fasten and hold said carrier within said frame.

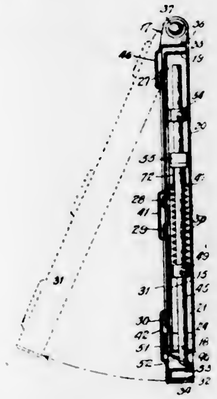
3. In a device of the class described, a frame to be attached to the side wall of a freight car, a sheet metal carrier to go within said frame, said carrier being crimped to form grooves to receive cards and said frame having holes to display said cards therethrough, and a leaf-spring attached to the wall of the freight car behind the said frame and adapted to engage one of said crimps when the carrier is in place therein.

4. In a device of the class described, a frame to be attached to the side wall of a freight car, a sheet metal carrier to go within said frame, said carrier being crimped to form grooves to receive cards, cards seated in said grooves, said frame having holes to display said cards therethrough, and a leaf spring attached to the wall of the freight car behind the said frame and adapted to engage one of said crimps when the carrier is in place therein, said carier having a hole behind one of said cards and in front of said leaf spring.

5. In a device of the class described, a sheet metal frame having its edges turned under and having large holes through its main part and smaller holes in the edges accessible through said large holes to attach the same to the side wall of a freight car in combination with a sheet metal carrier to go within said frame, said carrier being adapted to hold cards and display the same through the large holes in the frame.

[Claims 6 to 10 not printed in the Gazette.]

1,221,465. TARE-WEIGHT INDICATOR FOR FREIGHT-CARS. FREDERICK C. MAEGLY, Chicago, Ill. Continuation of application Serial No. 686,956, filed Mar. 28, 1912. This application filed May 2, 1913. Serial No. 765,015. (Cl. 40—13.)



1. In a device of the class described, an inner member to be attached to the side of the freight car, an outer member to overlie the inner member, cards clamped between the two members, said outer member having openings therethrough to display said cards, a concealed snap catch behind the inner member to lock the said two members together, and an inclosing casing behind said inner member, said inner member and said casing embracing said catch between them.

2. In a device of the class described, an inner member to be attached to the side of the freight car, an outer member to overlie the inner member, cards clamped between the two members, said outer member having openings therethrough to display said cards, a bolt behind the inner member adapted to latch the two members together, said inner member having a slot therein behind one of said cards, and a sliding block on said bolt adjacent to said slot.

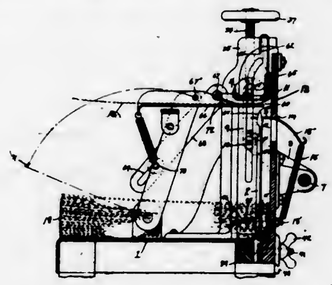
3. In a device of the class described, a card holder comprising a fixed part and a relatively movable part, one of said parts comprising means to support a card and the other part having an aperture therethrough to display said card, and means for locking said movable part in operative position with respect to the fixed part, said locking means being operable only through said aperture.

4. In a device of the class described, an inner member to be attached to the side of a freight car, an outer member to overlie the said inner member, cards clamped between the two members, said inner member having a recess and said outer member having an inward projection to register therewith, said cards lying on either side of said recess and projection and being spaced apart thereby, and said outer member having openings therethrough to display said cards.

5. In a device of the class described, a card holder adapted to be attached to a car, an information card carried by the holder, said holder comprising a fixed part and a relatively movable part, one of said parts having an opening therethrough to display said card, and means for locking said movable part in operative position, said locking means being located behind said card whereby it can be operated to release said movable part only after breaking said card.

[Claims 6 to 13 not printed in the Gazette.]

1,221,466. LOOSE-LEAF BINDER. OTTO C. MANTEUFEL, Milwaukee, Wis. Filed Nov. 23, 1912. Serial No. 733,031. (Cl. 129—22.)



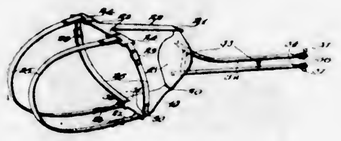
1. In a loose leaf binder of the described class, the combination of a base plate, a plurality of perforating needles removably secured to said base plate, a paper supporting platform, means for pivotally supporting said platform in a horizontal position on a plane above said perforating needles, means for automatically moving said paper supporting platform away from said needles after the latter have penetrated through the sheets of paper, means for forcing one or more sheets of paper simultaneously upon all of the needles of said series, means for detachably securing a binding cord to the free ends of said needles, and means for releasing the lower ends of said needles from their supporting base, preparatory to withdrawing them from the paper, whereby as such needles are withdrawn, the binding cord is drawn into the perforations preparatory to binding the paper together.

2. In a loose leaf binder of the described class, the combination of a base plate, a plurality of perforating needles removably secured to said base plate, a cutting head attached to the upper end of each of said needles, said cutting heads being provided upon one side with an aperture for the escape of refuse paper, means for forcing one or more sheets of paper simultaneously upon all of said cutting heads, means for automatically removing the refuse paper from said cutting heads as the latter are forced through the sheets of paper, means for retaining the points of said needles and cutting heads in alinement with each other as the paper is being forced thereon, means for detachably securing a binding cord to the free end of said needles, and means for releasing the lower ends of said needles from their supporting base preparatory to withdrawing them from the paper.

3. In a loose leaf binder, the combination of a base plate, a plurality of perforating needles removably secured to said base plate, a paper supporting platform, means for pivotally supporting said platform in a horizontal position on a plane above the perforating needles comprising the two vertical members and two pivotal bolts, which bolts are pivotally connected at their upper ends with the sides of said platform near its center, means for automatically moving said paper supporting platform away from said needles after the latter have penetrated through the sheets of paper, a cutting head attached to the upper ends of each of said needles, said cutting heads being provided upon one side with an aperture for the escape of refuse paper, means for automatically removing the refuse paper from said cutting heads as the latter penetrate the sheets of paper, a pressure plate provided with a plurality of apertures respectively registering with said needles, a rock shaft, an operating lever rigidly connected at one end to one end of said shaft at one end of said machine,

means for communicating motion from said rock shaft to said pressure plate and paper supporting platform, whereby as said lever is drawn forwardly the sheets of paper will be simultaneously forced upon the points of all of said cutting heads and said platform will be simultaneously drawn forwardly and away from said needles, means for securing a binding cord to the free ends of said needles, and means for releasing the lower ends of said needles from their supporting base preparatory to withdrawing them from the paper.

1,221,467. SWIMMING APPLIANCE. LAZO MARICICH, Chicago, Ill. Filed Jan. 9, 1917. Serial No. 141,406. (Cl. 9—18.)



1. A swimming appliance comprising a seat, abdominal and back plates hinged respectively to the front and rear ends of the seat, coupling members carried on opposite sides of the back plate, waist and shoulder straps carried by the coupling members, means for connecting said straps to the abdominal plate, a supporting frame carried by the seat, and a propeller and operating means therefor carried by said supporting frame.

2. A swimming appliance comprising a seat, abdominal and back plates hinged respectively to the front and rear ends of the seat, coupling members carried on opposite sides of the back plate, waist and shoulder straps carried by the coupling members, means for connecting said straps to the abdominal plate, spaced tubular bars extending from the seat, rods telescopically mounted in the outer ends of the bars, means for clamping the bars around the rods, and a propeller and operating means therefor carried by the rods.

3. A swimming appliance comprising a seat, abdominal and back plates hinged respectively to the front and rear ends of the seat, coupling members carried on opposite sides of the back plate, waist and shoulder straps carried by the coupling members, means for connecting said straps to the abdominal plate, spaced tubular bars extending from the seat, rods telescopically mounted in the outer ends of the bars, means for clamping the bars around the rods, said bars having slots and the rods having laterally projecting members seating in the slots, and a propeller and operating means therefor carried by the rods.

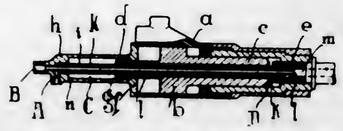
1,221,468. FOUNTAIN ATTACHMENT FOR PENS. MARIE HÉRISON MARUI and HYOKICHI MARUI, New York, N. Y. Filed Dec. 11, 1915. Serial No. 66,235. (Cl. 120—113.)



1. A fountain attachment for pens having a bowl and a hilt extending in a continuous line upon a general plane, and a resilient neck connecting said bowl and hilt, to allow the open edge of said bowl to be retained upon the surface of the concaved side of a pen as herein specified.

2. A fountain attachment for pens having a bowl provied with a tapered opening adapted to be closed by the adjacent portion of a pen, a hilt curved to correspond to the curvature of a pen and a resilient neck of reduced area connecting said bowl and hilt.

1,221,469. ROCK MACHINE-DRILL FOR OPERATING WITH FLUSHING-WATER. ROBERT MEYER, Mülheim-on-the-Ruhr, Germany. Filed June 5, 1912. Serial No. 701,935. (Cl. 121—20.)



1. A percussion machine drill comprising a casing, a hollow drill at one end of the same, a piston guided longitudinally in the casing to and from the drill, a water supply pipe terminating within the drill, means for supplying water to said water supply pipe at a pressure less than the flushing pressure, and a supply pipe for compressed air terminating within the drill, the said terminal of the said compressed air pipe being intermediate the terminal of the water supply pipe and the piston, the said compressed air driving said water into said drill at the flushing pressure.

2. A percussion machine-drill, comprising a casing, a hollow drill at one end of the same, a hollow piston guided longitudinally in the casing to and from the drill, a water supply pipe extending axially through the piston and terminating within the drill, and a compressed air pipe likewise extending axially through said piston and terminating in said space, the water pipe being co-axial with and arranged within the air pipe, said water pipe being connected at its rear end with the casing and said air pipe being connected at its rear end with the casing air tight from said water pipe.

3. A percussion machine-drill, comprising a hollow casing, a hollow drill at one end of the same, a cover at the other end, means for delivering a continuous stream of water under pressure in drilling direction at the longitudinal axis of the machine, a piston guided longitudinally in the casing to and from the drill, and having at its rear end a piston rod guided air tight in said cover, said water delivering means terminating within the drill, and means for delivering a continuous stream of compressed air in the same space in drilling direction at the longitudinal axis of the machine.

4. A percussion machine-drill comprising a hollow casing, a hollow drill at one end of the same, a piston guided longitudinally in the casing to and from the drill, a water supply pipe extending axially through the piston and terminating within the drill, and a compressed air pipe likewise extending axially through said piston and terminating in said space, said piston having a bore of larger diameter than said pipes therein, and said casing having behind the piston an outlet communicating with said bore.

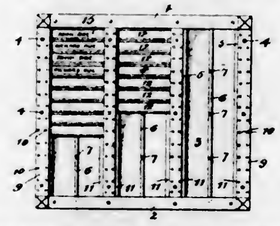
5. A percussion machine drill, comprising a casing, a hollow drill at one end of the same, a piston guided longitudinally in the casing to and from the drill, a water supply pipe terminating within the drill, and a supply pipe for compressed air terminating within the drill and connected to said casing away from the terminal of said water supply pipe, and a connecting pipe between the terminal of the said compressed air supply pipe and the space between the said drill and the said piston.

1,221,470. PEG-BOARD. ALBERT F. MILLER, New York, N. Y., assignor to Individual Specialties, Inc., New York, N. Y., a Corporation of New York. Filed Dec. 30, 1915. Serial No. 69,309. (Cl. 116—48.)

1. A peg board comprising a frame, a series of name plates, a ledge formed on the edge of said frame, resilient clips on the name plates and means within the frame for detachably engaging the clips and holding the name plates within the frame and against the ledge.

2. A peg board comprising a frame, a series of posts in said frame, a plurality of name plates, means for detachably securing said plates to said posts and a plurality of perforations on said frame for the reception of pegs.

3. A peg board comprising a frame, a series of upright posts within said frame, a plurality of name plates, means on said name plates for detachably securing them to the posts and a plurality of perforations in the frame for the reception of plugs adjacent the ends of the name plates.

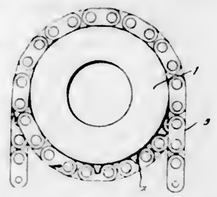


4. A peg board comprising a frame, a series of braces within said frame, posts secured in said frame, a plurality of name plates or signs and means on said name plates for detachably securing the same to the posts.

5. A peg board comprising a frame, a series of uprights within said frame, posts secured in the frame, a plurality of name plates for detachably securing the same to the posts and a plurality of perforations in the uprights for the reception of pegs.

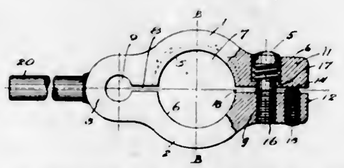
[Claims 6 to 9 not printed in the Gazette.]

1,221,471. MECHANICAL MOVEMENT. WILLIAM S. MILLER, Washington, D. C. Filed June 26, 1913. Serial No. 775,937. (Cl. 74—31.)



A device of the type described including a rotary member having its periphery provided with a plurality of sprocket teeth arranged to traverse the periphery spirally for engagement with a sprocket-chain, said spiral arrangement of teeth, holding the leads apart so that they will not contact each other at the point at which they pass one another, said spirally toothed sprocket rotary member being employed where it is desired to impart a reverse reciprocatory movement from a shaft to a shaft on which said spirally toothed member is keyed.

1,221,472. EXTERNAL METAL LAP. LORENCE S. RASMUSEN, Rock Island, Ill., and HERMAN B. CARLSON, Davenport, Iowa. Filed Feb. 28, 1916. Serial No. 81,006. (Cl. 51—4.)



1. A lap comprising a plurality of members integrally united with each other at one point and bearing parts of a normally cylindrical surface at another point, a spring remote from said point of union tending to distort the position of said members and press the parts of said surface toward the work, and a screw for adjusting the tension of said spring.

2. A lap comprising a plurality of members integrally united at one point and separated by normally open slots elsewhere, the members bearing parts of a normally cylindrical working surface, an expansive spring tending to distort the position of said members and alter the width of said slots, and means for adjusting the tension of said spring.

3. A lap comprising a plurality of members whose contiguous faces are provided with complementary arches, means holding said members relatively fixed in such positions that their arches produce a normally round work opening, and yielding means tending to press said members toward each other but permitting their separation, for the purpose set forth.

4. A lap comprising a plurality of members whose contiguous faces are slightly separated and provided with complementary arches, means holding said members relatively fixed in such positions that their arches produce a normally round work opening, yielding means tending to press said members toward each other but permitting their separation, and positive adjustable means for limiting the movements of said members in one direction.

5. A lap comprising a plurality of members whose contiguous faces are provided with complementary arches producing a normally round work opening, a spring tending to press said members toward each other and contract the size of said opening, and means for adjusting the tension of said spring, for the purpose set forth.

[Claims 6 to 21 not printed in the Gazette.]

1,221,473. BATHING-CAP. JUEL RILEY, Jordon, Minn., assignor of forty-nine one-hundredths to Sarah Abrams, San Francisco, Cal. Filed Oct. 11, 1915. Serial No. 55,205. (Cl. 2—106.)



1. A bathing cap having a pneumatic tube secured entirely around the edge thereof so as to make a watertight joint therewith and having tubes leading from the pneumatic tube each terminating in an enlargement or bulb adapted to fit within the outer ear to exclude water therefrom.

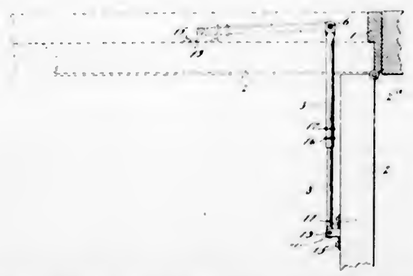
2. A bathing cap having a pneumatic tube secured entirely around the edge thereof so as to make a watertight joint therewith and means for inflating the interior of the cap.

3. A bathing cap having a pneumatic tube secured entirely around the edge thereof so as to make a watertight joint therewith and a check valve in the body of said cap.

1,221,474. HOLDER FOR SWINGING CLOSURES. OSCAR C. RIXSON, New Rochelle, N. Y. Filed Jan. 26, 1917. Serial No. 144,633. (Cl. 16—22.)

1. A holder for swinging closures comprising a tubular member having a slot therein, a rod freely slidable in said tubular member, means for pivotally securing said rod and member to a swinging closure and its frame, a split sleeve interposed between said rod and a slotted portion of said tubular member, and a clamping device surround-

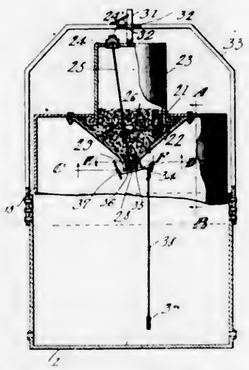
ing said tubular member and sleeve for drawing said sleeve into frictional engagement with said rod.



2. A holder for swinging closures comprising a strip of sheet material stamped to form a tubular member having a flattened end portion, a rod freely slidable in said tubular member, a split sleeve interposed between said rod and tubular member, and a clamping device surrounding said tubular member and sleeve for drawing said sleeve into frictional engagement with said rod.

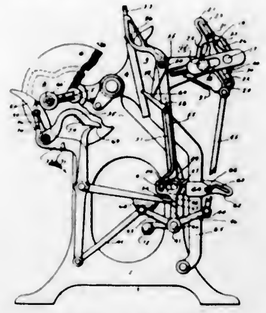
3. A holder for swinging closures comprising a strip of sheet material stamped to form a tubular member having a flattened end portion, a rod freely slidable in said tubular member, a split sleeve interposed between said rod and tubular member, a clamping device surrounding said tubular member and sleeve for drawing said sleeve into frictional engagement with said rod, and means for maintaining said sleeve in fixed relation to said tubular member.

1,221,475. CARBID-FEED FOR ACETYLENE-GENERATORS. ERNEST M. RODEBAUGH, Long Bottom, Ohio. Original application filed Mar. 27, 1914, Serial No. 827,697. Divided and this application filed May 29, 1915. Serial No. 31,211. (Cl. 48—36.)



In an acetylene generator, a carbid holder having an outlet opening in the bottom thereof and a filling opening in the top thereof, a yieldingly supported valve hinged within the outlet, a rod pivotally connected to and supported by said valve, said rod extending upwardly into the filling opening, a closure removably mounted in the filling opening and having a recess for the reception of the upper end of the rod, said closure holding the rod pressed downwardly and the valve normally in open position, and a spring within the carbid holder and connected to the bottom of said carbid holder and to the rod, for exerting an upward pull upon the rod when released from engagement with the closure.

1,221,476. COMBINED SAFETY AND THROW-OFF MECHANISM. CHARLES F. ROOT, Ravenna, Ohio, assignor of one-fourth to Byron O. Conn, Mansfield, Ohio. Filed May 20, 1915, Serial No. 29,389. Renewed Aug. 11, 1916. Serial No. 114,468. (Cl. 74—46.)



1. In a combined safety and throw-off mechanism having a movable work engaging element and an opposing element, driving means, means comprising a sliding wedge plate to connect the driving means to the work engaging element to drive and force same to complete its working movement toward the opposing element and exert a pressure upon work interposed between the elements, a controller, and automatic means connected to the controller to actuate the connecting means to prevent the work engaging element from completing its working movement, thereby leaving a gap between the elements when an obstruction extraneous to the work is interposed between the controller and the opposing element.

2. In a combined safety and throw-off mechanism having a movable work engaging element and an opposing element, driving means, means comprising a sliding wedge plate to connect the driving means to the work engaging element to drive and force the same to complete its working movement toward the opposing element and exert a pressure upon work interposed between the elements, a controller, automatic means connected to the controller to actuate the connecting means to prevent the work engaging element from completing its working movement, thereby leaving a gap between the elements when an obstruction extraneous to the work is interposed between the controller and the opposing element, and means to movably maintain the controller in a predetermined relation to the elements.

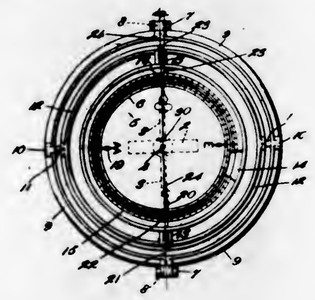
3. In a combined safety and throw-off mechanism for machines having a movable work engaging element and an opposing element, driving means comprising links having vertical and horizontal intersecting slots, a shaft provided with concentric studs which engage the horizontal slots, pins secured to the driving links in spaced relation from the concentric studs, plates provided with wedge members slidably fitted to the vertical slots, and connecting means to force between and withdraw the wedge members from between the pins and concentric studs of the shaft.

4. In a combined safety and throw-off mechanism for machines having a movable work engaging element and an opposing element, driving means comprising links having vertical and horizontal intersecting slots, a shaft provided with concentric studs which engage the horizontal slots, pins secured to the driving links in spaced relation from the concentric studs, plates provided with wedge members slidably fitted to the vertical slots, connecting means to force between and withdraw the wedge members from between the pins and concentric studs of the shaft, a cam secured to the connecting mechanism of the sliding wedge plates, a roller mounted upon the driving means, and a controller automatically operable upon meeting resistance to actuate the connecting mechanism to permit the roller to contact with the cam and thereby arrest the working movement of the work engaging element leaving a gap between the elements.

5. In combination with a pair of work engaging elements adapted to operate upon work interposed therebetween, one of said elements being movable toward the other, driving means connected to the movable element to drive it in unison therewith and to permit movement independent thereof, a sliding wedge plate secured to the driving means, means to automatically operate the sliding wedge plate to drive the movable element to the end of its working movement, a controller, and mechanism connecting the controller and sliding wedge plate which is operable to prevent the movable element from completing its working movement upon the controller being subjected to resistance.

[Claims 6 to 21 not printed in the Gazette.]

1,221,477. ATTACHMENT FOR GYROSCOPIC COMPASSES. GEORGE A. ROSSITER, Brooklyn, and JOHN E. BEATTIE, New York, N. Y., assignors to Franklin G. Carrie, New York, N. Y., executor of the estate of Mervyn E. Carrie. Filed Mar. 9, 1916. Serial No. 83,085. (Cl. 33—204.)



1. In a gyroscopic compass provided with a rotating element the combination of an axis adapted to remain substantially fixed in direction while the said element is rotating; a graduated circle having a portion of its divisions expanded in accordance with a selected speed and latitude and fixed to said axis; and a second graduated circle concentric with said first named circle adapted when said element is rotating to move in azimuth with relation to said first named circle, substantially as described.

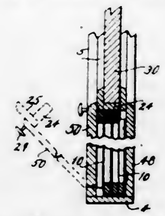
2. In a gyroscopic compass provided with a rotating element the combination of an axis controlled by said element; a graduated circle having one portion of its divisions expanded and another portion contracted in accordance with a selected speed and latitude and fixed to said axis; a second uniformly graduated circle located in close proximity to said first named circle; and means supporting said second circle adapted to turn the same in azimuth relatively to said first named circle, substantially as described.

3. In a gyroscopic compass provided with a rotating element, the combination of an axis controlled by said element; a graduated circle having one portion of its divisions expanded and another portion contracted according to a predetermined speed and latitude, and said circle being fixed to said axis; a second uniformly gradnated circle located in close proximity to said first named circle; and means supporting said second circle adapted to turn the same in azimuth relatively to said first named circle, substantially as described.

4. In a gyroscopic compass the combination of a rotating disk; a graduated circle having one portion of its divisions expanded and another portion contracted in a manner depending directly upon a selected speed and inversely upon a selected latitude, said circle controlled by said disk; a second uniformly graduated circle concentric to said first named circle; and gimbal mountings for said second circle adapted to move the same in azimuth relative to said first named circle, substantially as described.

5. In a gyroscopic compass the combination of a uniformly graduated circle; means to move said circle in azimuth; a circle having graduations expanded and contracted directly in accordance with a selected speed and course, and inversely in accordance with a selected latitude, and said circle located inside said uniformly graduated circle; and means by which said last named circle may be held substantially stationary while said first named circle is moved in azimuth, substantially as described.

1,221,478. DOOR. GEORGE SAITOS, Cleveland, Ohio, assignor of one-half to Charles Budy, Cleveland, Ohio. Filed Sept. 28, 1916. Serial No. 122,614. (Cl. 20—36.)



1. In a door, the combination of a frame having stiles, guideways on the inner sides of said stiles interrupted in the lower portion of the door, a plurality of panels adapted to be substituted for one another and fit in position in the door in said guideways and adapted to be removed by sliding them longitudinally thereof into said lower portion of the door, and a readily removable support adapted to engage the lower side of the panel in position.

2. In a door, the combination with stile members and cross members between said stiles leaving an open space between said members, of panel strips forming guideways on the inner sides of said members, a plurality of panels adapted to be substituted for one another and adapted to slidably fit in said guideways, a movable cross member extending between the side frame members, to support the panel in position, a space below said support into which the panel may be moved from the guideways when the support is withdrawn, and a movable front for said space adapted to allow the lateral withdrawal of a panel in said space.

3. The combination in a door of a substantially rectangular frame, laterally separated panels closing the lower portion of the frame and forming a receptacle, one of said panels being hinged to the frame to enable access to said receptacle, parallel guideways on the inner sides of the frame members above said receptacle, and a plurality of panels of different natures adapted to engage said guideways and close the frame portion above the receptacle, each of said panels being adapted to be substituted for one another.

4. The combination in a door of a substantially rectangular frame, separated panels closing the lower portion of the frame and leaving a receptacle space between them, means movably carrying one of these panels to open the receptacle, parallel panel strips forming guideways on the inner sides of the frame member above the receptacle, a plurality of panels adapted to have their edges slidably engaged by the strips and close the frame above the receptacle, there being a plurality of sets of said panels each set being adapted to be substituted for the other, the panels of each set being adapted to stand one above the other in said guideways or stand side by side in said receptacle.

5. The combination in a door of a substantially rectangular frame, separated panels closing the lower portion of the frame and leaving a receptacle between them, panel strips forming guideways in the frame above the receptacle, a plurality of panels each adapted to have their edges closely engaged by the guideways and to be substituted one for the other, and each being adapted to stand in said receptacle, means for hinging one of said first mentioned panels so that it may be opened to remove

the panel within the receptacle, a support carried by the hinged panel, and latching means for holding the hinged panel closed.

[Claims 6 to 12 not printed in the Gazette.]

1,221,479. TIRE-PLUG. ROBERT W. SAMPSON, Whitestone, N. Y., assignor of one-half to Louis Schwab, East Orange, N. J. Filed Feb. 10, 1916. Serial No. 77,373. (Cl. 152—26.)



1. In a tire plug, the combination of interior closing means embodying a rigid base carrying an elastic body and provided with a pointed, puncture-penetrating element at one end and a comparatively splayed counterbalancing element at the other end, exterior closing means, and cooperating clamping means.

2. In a tire plug, the combination of interior closing means embodying a rigid base carrying an elastic body and provided with a pointed, puncture-penetrating element and an opposed, extended and posteriorly broad counterbalancing element, exterior closing means and cooperating clamping means.

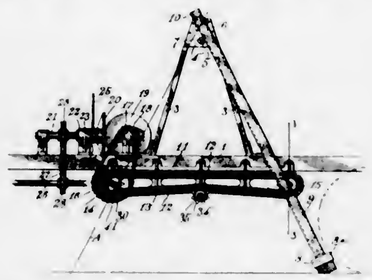
3. In a tire plug, the combination of interior closing means embodying a rigid base provided with an end terminating in an angular point forming a puncture-penetrating element, and having an angular marginal flange, and embedded in an elastic body, clamping means pivotally connected to the head, and coöperating, exterior closing means.

4. In a tire plug, the combination of interior closing means, embodying a rigid base provided with a puncture-penetrating element and an opposed, extended, counterbalancing element having a substantial opening therethrough and being embedded in an elastic body which yieldably fills said opening, exterior closing means, and coöperating clamping means.

5. In a tire plug, the combination of interior closing means embodying a rigid base provided with a puncture-penetrating element having a substantial opening therethrough and an opposed, extended counterbalancing element, said base being embedded in an elastic body which yieldably fills said opening, exterior closing means and coöperating clamping means.

[Claims 6 to 16 not printed in the Gazette.]

1,221,480. STREET-SWEEPING MACHINE. JACOB A. SCHROEDER, Piqua, Ohio, assignor to The Municipal Machine Manufacturing Company, Piqua, Ohio. Filed Aug. 16, 1916. Serial No. 115,129. (Cl. 15—17.)



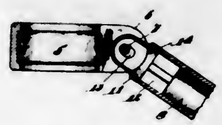
1. In a street-sweeping machine, the combination with a suitable frame, of a broom, a frame upon which said broom is supported, sprocket chains connected to said frame and adapted to impart to the broom movements in two horizontal planes one of which is its sweeping movement, means for guiding said chains in their travel, and means for driving said chains, substantially as described.

2. In a street-sweeping machine, the combination with a frame, of a broom, a frame supporting said broom having a pivotal and slidable connection with said frame, channel guides mounted on said frame, sprocket chains connected to said broom-frame, sprocket wheels for operating said chains, and rollers connected to said chains at the point of their connections with the broom-frame, said rollers being adapted to travel in the channel guides and to direct the movement of the broom, substantially as described.

3. In a street-sweeping machine, the combination with a frame, of a broom, an oscillating frame to which said broom is connected, sprocket chains to which said broom-frame is connected and by means of which a reciprocating movement is imparted to said broom, and means whereby the broom is elevated as it approaches a perpendicular position in its sweeping movement.

4. In a street-sweeping machine, the combination with a frame, of a broom approximately the width of said frame, an oscillating frame on which said broom is supported, chains connected with said broom-frame and actuating the same, sprocket wheels engaging said chains, and channel guides coöperating with the connections between the chains and the broom-frame in guiding said chains whereby the broom is given a reciprocating movement, and means for elevating the frame and the broom when the broom approaches a perpendicular position in its sweeping movement.

1,221,481. FENCE-POST-BRACE CONSTRUCTION. RICHARD A. SELWAY, Chicago, Ill. Filed Mar. 31, 1915. Serial No. 18,261. (Cl. 189—31.1.)



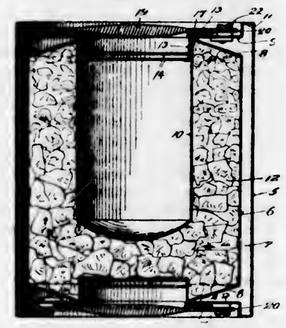
1. The combination of a member adapted to be secured to a fence post and provided with a pair of spaced lugs having circular outer ends, a pivot pin extending through said lugs, a brace, a head on said brace arranged between said lugs and there being a longitudinal slot in said head to receive said pin, and arcuate bearing surfaces on said head to engage the circular ends of said lugs, said slot being radially disposed with relation to said bearing surfaces, substantially as described.

2. The combination of a clamping member in the form of a contractible ring open at one side and provided with lugs adjoining said opening; a clamping bolt connecting said lugs; a brace; and a head arranged at the end of said brace, said head being provided with a lug fitting loosely between the lugs on said clamping member and provided with an elongated slot engaging said bolt, there being bearings at the sides of said head fitting against the ends of the lugs on said clamping member, substantially as described.

3. The combination of a clamping member in the form of a contractible ring open at one side and provided with lugs adjoining said opening, said lugs being circular at their outer end; a clamping bolt connecting said lugs; a brace; and a head arranged at the end of said brace, said head being provided with a lug fitting loosely between the lugs on said clamping member and provided with an elongated slot engaging said bolt, there being circular bearings at the sides of said head fitting against the circular ends of the lugs on said clamping member, substantially as described.

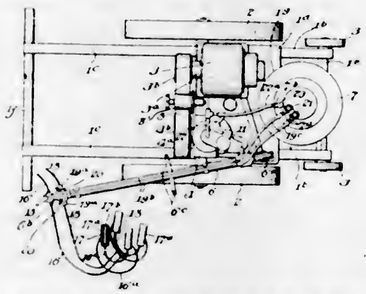
1,221,482. FREEZER. ROBERT H. SEXTON, New York, N. Y., assignor to William A. Sexton Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Feb. 28, 1916. Serial No. 80,920. (Cl. 220—147.)

1. In a freezer, the combination with a vessel having double walled sides, of a relatively small receptacle suspended from one end of said vessel and provided with an open mouth extending through the same, a removable cover for said mouth having its central portion depressed within the central surface of said end, an opening through the other end of said vessel to afford access to the interior thereof surrounding said suspended receptacle, and a removable cover for said second mentioned opening.



2. In a freezer, the combination with a vessel having double walled sides, of a relatively small receptacle suspended from one end of said vessel and provided with an open mouth extending through the same, a removable cover for said mouth having its central portion depressed within the central surface of said end, and provided with a bar extending across and beyond the central depressed portion to engage lugs carried by said vessel to hold said cover in place and to afford, in conjunction with said depressed portion, a space and handle for the hand to lift said vessel, an opening through the other end of said vessel to afford access to the interior thereof surrounding said suspended receptacle, and similar removable cover for said second mentioned opening.

1,221,483. MILKING-MACHINE. DAVID TOWNSEND SHARPLES and LAWRENCE P. SHARPLES, West Chester, Pa. Filed July 27, 1915. Serial No. 42,153. (Cl. 31—100.)



1. A milking machine comprising a milk receptacle, a teat device connected with said receptacle, a pump, and mechanism connecting said pump with said receptacle and device whereby milk can be drawn from said device into said receptacle, said mechanism comprising a vacuum chamber exhausted by the action of said pump, a pressure chamber into which fluid is forced by said pump, a valve for controlling communication between said chambers and said device, and means whereby said pump and valve are operated in synchronous relation.

2. A milking machine comprising a milk receptacle, a teat device connected with said receptacle, a pump, and mechanism connecting said pump with said receptacle and device, said mechanism comprising a vacuum passage, a pressure passage, a valve adapted for connecting said device with said vacuum passage, said pressure passage and the atmosphere periodically.

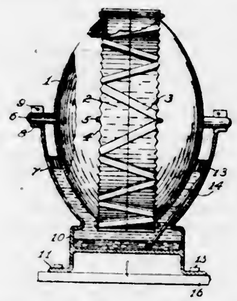
3. A milking machine comprising a receptacle, a teat device connected therewith, a pump having a piston, a valve and means whereby said valve is operated in synchronous relation to said piston and said teat device is subjected to suction and pressure.

4. A milking machine comprising a teat cup having a chamber provided with a pulsatory wall, a pump, and means comprising a valve whereby said pump applies suction, atmospheric pressure and superior pressure periodically to said chamber.

5. A milking machine comprising a teat cup, a pump, a valved pressure chamber charged by said pump, a valved vacuum chamber exhausted by said pump, and means comprising a rotary valve whereby said teat cup is connected periodically with said chambers.

[Claims 6 to 13 not printed in the Gazette.]

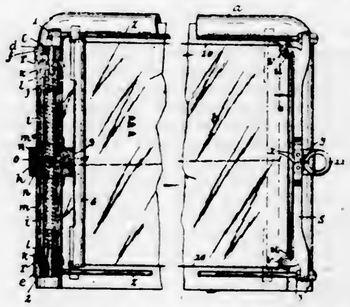
1,221,484. HOG-OILING DEVICE. GEORGE A. SHORES, Cedar Rapids, Iowa, assignor to Shores-Mueller Company, Cedar Rapids, Iowa. Filed Jan. 22, 1917. Serial No. 143,704. (Cl. 119—157.)



1. In a device of the character described, in combination, an open-top tank, and a rotatable body supported to partially dip therein, said body being in the form of an oblate spheroid having a raised circumferential annulus thereon.

2. In a device of the character described, in combination, an open-top tank, and a rotatable body supported to partially dip therein, said body being in the form of an oblate spheroid having a raised rugated circumferential annulus thereon.

1,221,485. CLEANER FOR WIND-SHIELDS AND THE LIKE. WILLIAM STEVENSON, Morristown, N. J. Filed Sept. 11, 1916. Serial No. 119,348. (Cl. 15—59.)



1. In combination, a frame including four frame members operatively connected together in substantially rectangular disposition, said frame having means to attach it to a glass-pane frame and one of said members including

a spindle extending parallel with the relatively opposite member, a squeegee movable across and guided by the first-named frame toward and from the spindle, a spring roller journaled in the member including said spindle and being coaxial with the latter, and flexible means wound on the roller and connected to the squeegee.

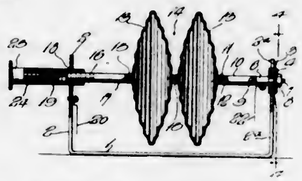
2. In combination, a frame including four frame members operatively connected together in substantially rectangular disposition, said frame having means to attach it to a glass-pane frame and one of said members including a spindle extending parallel with the relatively opposite member, a squeegee movable across and guided by the first-named frame toward and from the spindle, a spring roller revoluble coaxially with said spindle and having opposite extended hubs, the ends of said hubs having bearings in the member including the spindle, and a flexible means wound on the roller and connected to the squeegee.

3. In combination, a squeegee, a guiding frame for the squeegee including opposite members adapted to bear against relatively oppositely facing surfaces of opposite sides of the frame for the glass pane to be cleaned, and tension means connecting said members and adapted to force them in relatively opposite directions against said surfaces, thus to secure the guiding frame to the glass-pane frame, said squeegee being movable in the guiding frame from one toward the other of said members.

4. In combination, a squeegee, a guiding frame for the squeegee including opposite hook members adapted to hook over relatively oppositely facing surfaces of opposite sides of the frame for the glass pane to be cleaned, and tension means connecting said members and adapted to force them in relatively opposite directions against said surfaces, thus to secure the guiding frame to the glass-pane frame, said squeegee being movable in the guiding frame from one toward the other of said members.

5. In combination, a squeegee, a guiding frame for the squeegee including opposite members having hooks adapted to be hooked over relatively opposite faces of the sides of the frame for the glass-pane to be cleaned, and means to draw and hold said members against said sides with their hooks hooked over the latter, said squeegee being movable from one toward the other of said sides.

1,221,486. CIRCUIT-CLOSER. JESSE W. STUTTS, Florence, Ala. Filed Feb. 24, 1916. Serial No. 80,117. (Cl. 200—32.)



1. In a thermostatically controlled circuit closer, an upstanding contact plate having an opening, a horizontal contact rod passing through said opening for engagement with the wall thereof, an insulating sleeve surrounding a part of said rod and slidable in said opening, and a thermostat for sliding said sleeve from the opening to allow the aforesaid rod to contact with the wall of said opening.

2. In a thermostatically controlled circuit closer, a metallic support, a metal contact member above the same for engagement therewith, an insulating member secured to said metallic contact member and bearing normally on said support to hold the contact member in spaced relation thereto, and a thermostat connected with said contact member for shifting it to move the insulating member to allow said contact member to engage the support.

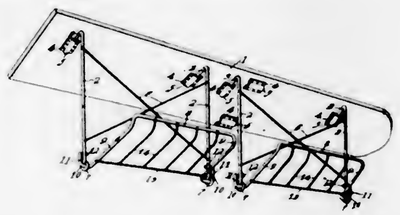
3. In a thermostatically controlled circuit closer, an upright contact plate having an opening, a horizontal contact rod for engagement with the wall of said opening, an insulating sleeve surrounding and secured to a part of said rod and slidable freely in said opening, and a thermostat connected with said rod for shifting the latter to move the insulating sleeve from the opening to allow said rod to contact with the wall of said opening.

4. In a thermostatically controlled circuit closer, a U-shaped metallic bracket, a thermostat between the arms of said bracket and secured at one end to one of said arms, the other arm of said bracket having an opening, a contact rod extending from the other end of the thermostat for engagement with the wall of said opening, and an insulating sleeve surrounding said rod and slidable freely within said opening, said sleeve being adapted to be moved from the opening by expansion of the thermostat to allow the aforesaid rod to engage the wall of the opening.

5. In a thermostatically controlled circuit closer, a metallic support, a contact member to engage the same, said contact member having an insulated portion normally resting on said support, and a thermostat for shifting said contact member to move its uninsulated portion into engagement with the support, said contact member and support having coacting shoulders to interengage and lock said contact member and support in engagement when the former is shifted by the thermostat.

[Claim 6 not printed in the Gazette.]

1,221,487. IRONING-BOARD ATTACHMENT. GEORGE H. TRIFTSHAUSER, Batavia, N. Y. Filed Oct. 19, 1916. Serial No. 126,584. (Cl. 68—10.)

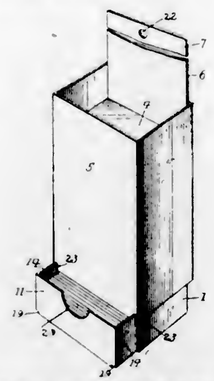


1. An ironing board attachment embodying hangers having portions extending at an angle from the upper end thereof to slip into engagement with keepers carried by an ironing board, and a shelf pivotally connected with the lower ends of said hangers.

2. An ironing board attachment embodying a pair of hangers attachable at their upper ends to an ironing board, and a shelf having arms, said arms and hangers having a pivotal connection including eyes carried by certain of said parts and pivot portions extending from the others and journaled through said eyes, said pivot portions having stops for supporting the shelf when swung downwardly.

1,221,488. ATTACHMENT FOR MATCH-BOXES. CALVIN H. TROUP, Bellefonte, Pa., assignor to The Pennsylvania Match Company, Inc., Bellefonte, Pa., a Corporation of Pennsylvania. Filed June 24, 1915. Serial No. 36,093. (Cl. 206—31.)

1. The combination, with a match box comprising a body and a slidable cover therefor, of an attachment constructed from a blank sheet having a foldable strip portion, a bottom portion, a front portion, side portions, and tabs on said side portions; said strip portion forming a match retainer when the box is used as a package and providing a support when used as a wall receptacle, said bottom, front, and side portions forming an open and squared boxing adapted to project horizontally beyond said body and provide a receiver for the matches, said sides having slots alongside the edges of said tabs adapted to engage with the box cover, whereby the lower edge of said box cover is engaged and said tabs rest against the inner surface thereof and form supporting members for said match receiver, and said bottom portions constructed to permit the folding of the receiver within the match box, substantially as set forth.



2. The combination, with a match box comprising a body and a slidable cover therefor, of an attachment constructed from a blank sheet having a foldable strip portion, a scored bottom portion of the same width and continuous with the strip portion, an end portion continuous with the bottom portion, side extensions on the end portion scored at relatively right angles and forming side portions and bottom sections, and tabs projecting from said side portions parallel with the strip portion, the blank between said side portions and tabs being cut away to provide slots; said strip portion forming a match retainer when the box is used as a package and providing a support when used as a fall receptacle, said bottom portions, front and side portions forming an open boxing adapted to project beyond said body and provide a receiver for the matches, the bottom sections adapted to overlie said bottom portion and receive therebetween an end wall of the box body, said tabs and the slots adapted to engage with the box cover and form supporting means for the match receiver, and said scored bottom portion permitting the folding of the receiver within the match box, substantially as set forth.

1,221,489. ELASTIC WEBBING. ARCHIBALD TURNER, Leicester, England. Filed Mar. 14, 1913. Serial No. 754,261. (Cl. 2—187.)



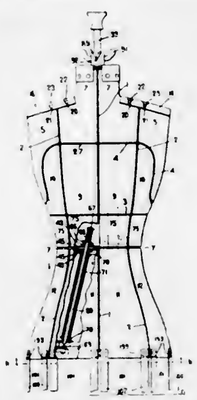
1. A new article of manufacture consisting of an elastic web reduced in elasticity at intervals of sections in the direction of its length by rows of stitches of non-elastic thread extending longitudinally of the web and applied only to those sections which are to be inelastic, said rows of stitches being inserted in the unstretched web.

2. As a new article of manufacture, a woven elastic web, series of stitches of nonelastic thread inserted in the unstretched web at intervals throughout its length thereby dividing it into alternating stitched and unstitched sections which are respectively inelastic and elastic, each of said series comprising a plurality of rows of stitches extending longitudinally of the web and being equal in length to the inelastic section, for the purpose described.

3. As a new article of manufacture, a narrow woven elastic web, stitches of non-elastic thread disposed in transversely spaced rows extending longitudinally of the web between the elastic portions of the latter, said rows of stitching being applied to the elastic web with spaced longitudinal portions thereof as applied, equal in length to the length of the corresponding elastic web portions normally unstretched whereby the non-elastic thread forming the rows of stitching will prevent stretching of the web at said portions to produce alternate inelastic and elastic sections.

4. As a new article of manufacture, a narrow woven elastic web, stitches of non-elastic thread disposed in transversely spaced rows extending longitudinally of the web between the elastic portions of the latter, said rows of stitching being applied to the elastic web with spaced longitudinal portions thereof, as applied, equal in length to the length of the corresponding elastic web portions normally unstretched whereby the non-elastic thread forming the rows of stitching will prevent stretching of the web at said portions to produce alternate inelastic and elastic sections, said rows of stitching being applied at substantially uniformly spaced distances to the unstretched elastic web portions to produce substantially uniformly corresponding alternate lengths of elastic and inelastic web sections, respectively.

1,221,490. ADJUSTABLE DRESS-FORM. CHARLES A. UFFORD, Boston, Mass. Filed May 28, 1913. Serial No. 770,292. (Cl. 223—18.)



1. In a dress form the combination with a waist and bust portion divided horizontally at the waist and vertically in a plurality of places, thereby to form hip sections and waist sections, of a hinge connection between each hip section and waist section, a horizontally-extending clamping plate hinged to each hinge connection and means for clamping said plates in adjusted relation to each other thereby to control the size of the waist.

2. In a dress form the combination with a waist and bust portion divided vertically to form a plurality of hip and waist sections each of which is made in two parts hinged together at substantially the waist line, of a central supporting member, slotted clamping plates adjustable radially and connected to the hinged connections of the hip and waist sections.

3. In a dress form the combination with a waist and bust portion divided vertically in a plurality of places to constitute a plurality of hip and waist sections each of which is made in two parts, a three-way hinged connec-

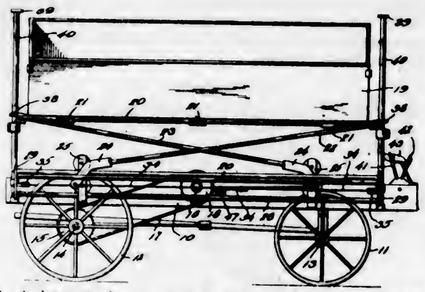
tion for each hip and waist section, each connection comprising three leaves two of which are secured to the two parts of the hip and waist sections and a radially extending clamping plate secured to the other leaf of each connection, and means for adjustably clamping said plates together.

4. The combination with a dress form divided horizontally at the waist and divided vertically in a plurality of places, of a supporting rod on which the dress form is supported, clamping plates secured to the sections at the waist, retaining plates secured to the sections at the hip and means separate from said rod and operable from below the hip sections for clamping both the retaining plates and the clamping plates in adjusted position.

5. The combination with a dress form divided vertically and horizontally in a plurality of places, of a slotted clamping plate secured to each section at the waist line, a slotted retaining plate secured to each section at the hip and a plurality of clamping screws extending through both plates and operable from below the hips for clamping said plates in adjusted position.

[Claims 6 to 19 not printed in the Gazette.]

1,221,491. HAY-STACKER. FRANK A. UHLS, Cheraw, Colo. Filed Aug. 31, 1916. Serial No. 117,923. (Cl. 254—8.)



1. A hay stacker comprising a vehicle body, a frame connected with said vehicle body and extending beyond the sides thereof, plates connected with said frame, bars connected with said plates and forming tracks, standards connected with said vehicle body, a receptacle slidably mounted upon said standards, supporting arms pivotally connected with said receptacle and terminating in yokes straddling said tracks, U-shaped carriages pivotally connected with said yokes and extending about said tracks, rollers carried by said carriages and resting upon said tracks, lines connected with the free end portions of said yokes, and means for drawing said lines to move said carriages along said tracks, and vertically adjust said receptacle upon said standards.

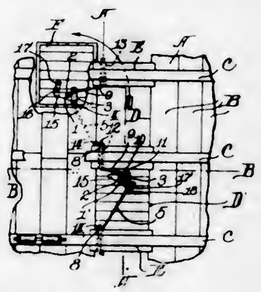
2. A hay stacker comprising a vehicle body, a frame connected with said vehicle body, tracks connected with said frame and extending longitudinally of the vehicle body, a shaft rotatably connected with said body, drums mounted upon said shaft, clutch sections carried by said shaft, sprocket wheels rotatably mounted upon said shaft and having their hubs provided with clutch sections for engaging the clutch sections of said shaft, supporting wheels, sprocket wheels carried by said supporting wheels, sprocket chains passing about the sprocket wheels of said shaft and supporting wheels, for transmitting rotary movement to the shaft when the sprocket wheels of the shaft are moved to engage the clutches mounted thereon, standards connected with said vehicle frame, a frame slidably connected with said standards, supporting arms pivotally connected with said last mentioned frame and pivotally connected with said carriages, and lines wound upon said drum for moving said carriages along said tracks and swinging said arms vertically.

3. A hay stacker comprising a vehicle body, a shaft rotatably carried by said vehicle body, drums mounted upon said shaft, clutch sections mounted upon said shaft, sprocket wheels rotatably mounted upon said shaft and having their hubs terminating in clutch sections for engagement with the clutch sections of the shaft, supporting wheels for said vehicle body, means for transmitting rotary movement from said supporting wheels to said sprocket wheels, a cross bar carried by said vehicle body, a bell crank lever pivotally connected with said cross bar, actuating levers for moving said sprocket wheels longitudinally of the shaft pivotally connected with said vehicle body, links connecting said levers with said bell crank lever, means for moving said bell crank lever to shift said sprocket wheels, tracks connected with said body, standards connected with said body, a receptacle slidably connected with said standards, supporting arms connected with said receptacle and slidably mounted upon said tracks, and lines connected with said supporting means and wound upon said drums.

4. A hay stacker including a vehicle body, tracks connected with said vehicle body, standards connected with said vehicle body, a receptacle slidably connected with said standards, supporting arms pivotally connected with said receptacle and slidably mounted upon said tracks, a rotatable shaft carried by said vehicle body, drums carried by said shaft, lines connected with said supporting arms and wound upon said drums, a brake drum mounted upon said shaft, a cross bar carried by said vehicle body, an arm pivotally connected with said vehicle body, a brake band connected with said cross bar and passed about said brake drum and connected with said arm, and means for moving said arm to apply said brake drum.

5. A hay stacker comprising a vehicle body, a frame connected with said vehicle body, telescoping standards connected with said vehicle body, tracks connected with said frame, a receptacle, a supporting frame for said receptacle slidably engaging said standards, supporting arms pivotally connected with said last mentioned frame, carriages connected with said supporting arms and slidably mounted upon said tracks, winding drums rotatably supported from the vehicle body, lines for moving said carriages longitudinally of said tracks, and swinging said supporting arms vertically to raise said receptacle, said lines being wound upon said drums, and means for rotating said drums.

1,221,492. SILO-DOOR HANGER. EUGENE J. WAHL, St. Paul, Minn., assignor to The Concrete Stave Silo Company, Minneapolis, Minn. Filed May 29, 1916. Serial No. 100,515. (Cl. 16—106.)



1. In a door hanger, comprising, means for supporting said door pivotally in the door frame, said means comprising arms which are pivotally connected to the top and bottom of said door frame, means for allowing said door to be turned upside down in a plane parallel to the door frome when the door is disengaged from the door frame, means for holding the door in upside down position, and means for allowing said door to be swung inwardly and to one side of the door opening when in said upside down position with its outer face adjacent the inner wall of the silo.

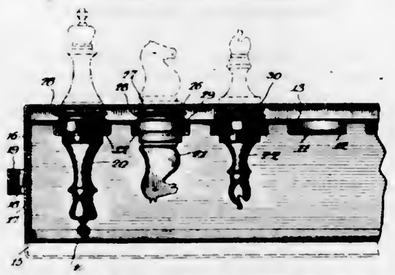
2. In a silo door hanger, comprising, a plate pivotally secured near the upper portion of the door, an arm freely journaled at one end to said plate and pivotally connected at the other end to the end of a second arm at the door frame, said second arm being freely journaled in the door frame on one end and pivotally connected to the end of said second arm at said plate, said arms being adapted to support said door while it is being opened or closed and said plate being adapted to hold it in a plane parallel to the door opening while being turned bottom side up and swung back with its outer face adjacent the inner wall of the silo.

3. In a silo door hanger, comprising, a plate pivotally secured to the upper portion of the door, arms connected to said plate and adapted to pivotally support said door in the door frame, a projection formed on said plate, a stop secured to said door, being adapted to engage one of said arms when said door is in closing position and to engage said projection when said door is turned upside down and in open position to hold said door perpendicular in open or closed position.

4. In a silo door hanger, comprising, a plate pivotally secured near the upper portion of the door, a bearing formed in said plate, an arm having one end projecting through and journaled in said bearing and the other end pivotally secured to a second arm, said second arm having one end secured to said projecting end of said first arm and the other end vertically journaled in the door frame; whereby said door can be opened by pushing inwardly far enough to clear the door opening and then rotated in a plane parallel to the door opening to upside down position and means for holding the door in upside down position, while it is swung to one side of the door opening by means of the supporting arms.

5. In a silo door hanger, comprising a plate pivotally secured near the upper portion of the door, supporting means freely journaled to said plate and pivotally connected to said door frame, whereby said door can be opened by pushing squarely inward and then rotated half a turn, means for holding said door in this rotated upside-down position or in vertical alinement to enter the door opening rightside-up when closing said door, substantially as described.

1,221,493. COMBINATION GAME BOARD AND PIECES. NORMAN T. WHITAKER, New York, N. Y. Filed Apr. 4, 1916. Serial No. 88,831. (Cl. 46—64.)



1. A game board comprising a casing having countersunk depressions in its upper face, the depressions being provided with openings, in combination with a game piece adapted to be arranged in each of the depressions to extend either within the casing or above the same.

2. A game board comprising a casing having countersunk depressions in its upper face, the depressions being provided with openings at the bottoms thereof, in combination with a game piece for each depression having an annular shoulder thereon to engage the bottom of a depression to support the game piece in playing position.

3. A game piece including a body, the body constituting a game piece for playing one game, and an annular member carried on the base of the body and constituting a second game piece for playing another game.

4. A checker piece having a chess man of the usual height and size connected to one end thereof, whereby said checker piece may be reversed to be used as a chess man.

5. A combined chess and checker piece having a common base, each piece having the usual height and shape, whereby said combined pieces may be used either as a checker piece or a chess man.

[Claims 6 to 8 not printed in the Gazette.]

1,221,494. DISPLAY APPARATUS. GEORGE M. WILEY, Los Angeles, Cal. Filed Sept. 2, 1914. Serial No. 859,923. (Cl. 46—37.)



1. A support, a mass of flaked material therein, a porous sheet, a perforated strip, and means to agitate said mass of material and cause a portion of the mass to lodge and be held on said sheet at points where the perforations in said strip occur.

2. A support, a mass of flaked material therein, a porous sheet, a strip in contact with said sheet and having designs cut out therefrom, and means to produce air currents to agitate said mass and cause an accumulation of particles of said material at points on said porous sheet where the designs in said strip occur.

3. An inclosure, a porous sheet therein forming a compartment, a mass of flaked material in said compartment, a strip in contact with said sheet having figures cut therefrom, and means to cause currents of air to pass through said cut out portions in said strip to disseminate said mass and cause adherence of a portion of the flakes on said porous sheet at points where such cut out portions in said strip occur.

4. An inclosure, a suitable background, a mass of flaked material in said inclosure, a pneumatic means to agitate said mass, and means for controlling said pneumatic means to cause a portion of said flaked material to lodge and be held on said background at definite points.

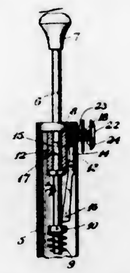
5. An inclosure, a porous background, a mass of flaked material in said inclosure, means to establish a circulation of air in front of said background to agitate said mass of flaked material, and means to cause the air to pass through said background at definite points only to cause an accumulation of and hold a portion of the flakes at such points during the passage of air therethrough.

[Claims 6 to 10 not printed in the Gazette.]

1,221,495. PNEUMATIC HAND CONTROL FOR TALKING-MACHINES. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of Virginia. Filed Sept. 11, 1914. Serial No. 861,192. (Cl. 74—93.)

1. The herein-described control for start-and-stop mechanism for talking-machines, comprising a reciprocable rod having an annular shoulder thereon, a sleeve surrounding said rod and carrying a spring-pressed lever one end of which is adapted to engage said shoulder to hold said rod against reverse movement, a casing surrounding said rod and sleeve and having a transverse slot with an intermediate enlargement and greater enlargements at the two ends thereof, a headed plunger-pin carrying a grooved

sleeve adapted to enter the greater end-enlargements aforesaid but not said intermediate enlargement, and a spring interposed between said sleeve and the head of said pin, whereby said pin can be at will secured in engagement with said lever to constitute either right-hand or left-hand releasing-means for the automatic catch provided by said lever and shoulder, and whereby said pin can also be engaged with said lever to lock said automatic catch in inoperative position.



2. The herein-described control for start-and-stop mechanism for talking-machines, consisting of the combination of a manually-actuated device comprising a rod having an annular shoulder thereon, a sleeve surrounding said rod and carrying a spring-pressed lever one end of which is adapted to engage said shoulder, a spring-pressed plunger engaging the other end of said lever for disengaging the same from said shoulder, and means for locking said lever against engagement with said shoulder.

3. The herein-described control for start-and-stop mechanism for talking-machines, consisting of the combination of a manually-actuated device comprising a rod having an annular shoulder thereon, a sleeve surrounding said rod and carrying a spring-pressed lever one end of which is adapted to engage said shoulder, and a spring-pressed plunger engaging the other end of said lever for disengaging the same from said shoulder.

4. The herein-described control for start-and-stop mechanism for talking-machines, comprising the combination of a manual device for actuating said start-and-stop mechanism, a catch brought into operation by the movement of said manual device and thereby maintaining the parts in position for the running-operation of said machine, a second manual device for releasing said catch, and means for preventing said catch from being brought into operation.

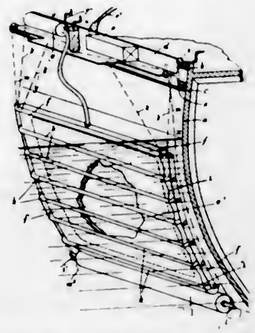
5. The herein-described control for start-and-stop mechanism for talking-machines, comprising a reciprocable rod having an annular shoulder thereon, a sleeve surrounding said rod and carrying a spring-pressed lever one end of which is adapted to engage said shoulder to hold said rod against reverse movement, a casing surrounding said rod and sleeve and having a transverse slot with an enlargement at each end thereof, and a plunger-pin adapted to enter either of the enlargements aforesaid, whereby said pin can be at will secured in engagement with said lever to constitute either right-hand or left-hand releasing-means for the automatic catch provided by said lever and shoulder.

[Claim 6 not printed in the Gazette.]

1,221,496. LEAK-OBTURATING DEVICE FOR SHIPS. FRÉDÉRIC WULLYAMOZ and GUSTAVE MEYER, Lausanne, Switzerland. Filed Sept. 19, 1916. Serial No. 120,966. (Cl. 114—227.)

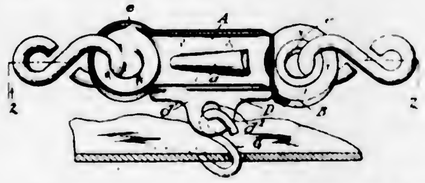
1. A leak stopper having a pneumatic frame, an obturating curtain carried by said frame and adapted to be placed against a surface to be repaired, and braces for said curtain and frame.

2. A leak stopper having a pneumatic frame, an obturating curtain connected to said frame and adapted to be placed against a surface to be repaired, and brace bars extending between opposite sides of said frame for supporting the same and the said curtain.



3. A leak stopper comprising a pneumatic frame, an obturating curtain connected to said frame and adapted to be placed against a surface to be repaired, brace bars extending along the inner side of said curtain between opposite parts of the said frame and extending through apertures provided therefor in the curtain adjacent the pneumatic frame and terminating at opposite sides of the said pneumatic frame and exteriorly thereof, and pads between the said curtain and the adjacent portions of the pneumatic frame for causing those portions of the curtain intermediate of the brace bars and adjacent the pneumatic frame to press against the latter.

1,221,497. FUSIBLE LINK. JOHN W. YATES, New York, N. Y. Filed Mar. 26, 1915. Serial No. 17,160. (Cl. 236—16.)



1. A fusible link embodying, in combination, two lapped side members secured together by fusible solder, and an attaching member for anchoring the link, said attaching member being independent of the side members and secured thereto by said solder.

2. A fusible link embodying, in combination, two lapped side members, an attaching member, for anchoring the link, positioned intermediate said side members, and fusible solder uniting the whole.

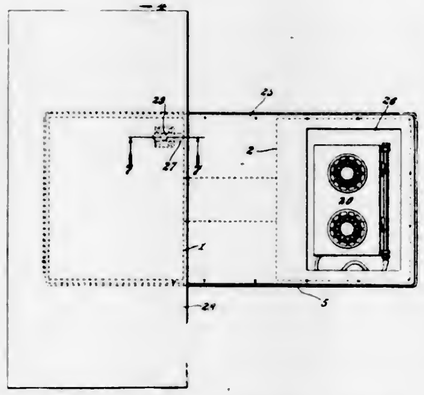
3. A fusible link embodying, in combination, two lapped side members, each of which is provided with a depression, said depressions registering so as to form a substantially closed chamber, a key member positioned within said chamber, and an attaching member, for anchoring the link, interposed between said side members and having a cut-out portion adapted to render the closed chamber free and unobstructed, all of which parts are rigidly secured together by fusible solder.

4. A fusible link embodying, in combination, two lapped side members provided at their distant ends with means for attaching them to the adjacent ends of a cable, or the like, and each of which side members is provided with a depression, said depressions registering so as to form a substantially closed chamber, a key member positioned within said chamber, an attaching member interposed between the side members and having a cut-out portion for rendering the chamber free and unobstructed, fusible solder uniting the side members and the attaching member, and means for securing the attaching member against shifting.

5. A fusible link embodying a pair of coöperating tension members, an attaching member, for anchoring the link, independent of said tension members, and fusible solder uniting the whole.

[Claims 6 to 11 not printed in the Gazette.]

1,221,498. COMBINATION DESK AND KITCHEN-CABINET. OTTO G. ZEASE, Mount Vernon, Ind. Filed Aug. 21, 1915. Serial No. 46,684. (Cl. 45—17.)



1. An article of furniture, comprising a vertical end cabinet having a main top formed and arranged to normally provide a seating space at one side of said cabinet, said cabinet being formed with a vertical stove receiving well or compartment opening through said top, a cover constructed and arranged to normally overlie said top for closing said compartment and adapting said article for use as a desk, and means connecting the cover on said top for movement to a position to overhang the sides and one end of said top to form a dining table.

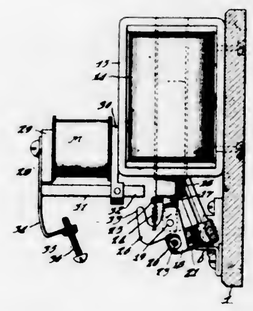
2. An article of furniture combining a desk, kitchen cabinet and dining table and comprising a pair of vertical end cabinet sections arranged to provide a seating space between them, a top connecting said sections, one of said cabinet sections being formed with a vertical, stove receiving well or compartment opening through said top, a cover coextensive with and constructed and arranged to normally overlie said top for closing said compartment and adapting said article for use as a desk, and means connecting the cover on said top for movement to a position to overhang the sides and one end of said top to form a dining table.

3. An article of furniture combining a flat top desk and a dining table, comprising a desk body, a unitary and uninterrupted cover mounted thereon to cover the same, and means connecting said cover to said body, constructed and arranged to permit said cover to move it to a position crosswise of said body and overhang the same along a plurality of its sides to provide seating spaces, substantially as described.

4. An article of furniture combining a flat top desk and a dining table, comprising a desk body, a unitary and uninterrupted cover mounted thereon to cover the same, and means connecting said cover to said body, constructed and arranged to permit said cover to move to a position crosswise of said body at one end thereof and overhang the same along three sides to provide seating spaces, substantially as described.

5. An article of furniture combining a flat top desk and a dining table, comprising a desk body, a unitary and uninterrupted cover mounted thereon to cover the same, and a combined pivotal and sliding connection between said cover and said body intermediate the ends of said cover and adjacent one side of said body, constructed and arranged to permit said cover to be moved to a position to overhang said body along a plurality of its sides and provide seating spaces, substantially as described.

1,221,499. ELECTRIC SWITCH. PAUL H. ZIMMER, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 6, 1911. Serial No. 658,868. (Cl. 175—267.)



1. In combination, an oscillatable bar, an operating arm and a switch contact arm carried thereby for movement therewith, a solenoid having a plunger terminating adjacent said operating arm for actuating the latter, a hook carried by said plunger for normally maintaining direct mechanical connection with said operating arm, and electro-responsive means for interrupting said connection under predetermined electrical conditions.

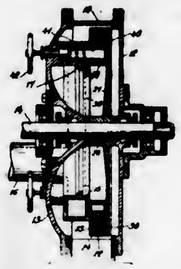
2. In combination, a switch contact arm and an operating arm mounted for joint oscillation, a solenoid for actuating the same, means carried by the solenoid plunger for directly connecting the same with said operating arm, and means for automatically interrupting said connection under predetermined conditions.

3. In combination, a switch contact arm, an operating arm therefor mounted for joint oscillation therewith, a solenoid for actuating said arm, releasable means carried by the plunger of said solenoid and biased to maintain direct operative connection with said operating arm, and electro-responsive means for tripping said connecting means under predetermined electrical conditions during energization of said solenoid.

4. In a circuit breaker, in combination, a switch arm and an operating arm mounted for joint oscillation, a solenoid, means carried by the plunger of said solenoid for normally maintaining a direct connection with said operating arm for actuating the latter, an overload magnet for tripping said connecting means, and controlling means for said solenoid operable to close said switch at will but insuring against automatic reclosure after the same has been tripped.

5. In combination, a vertically disposed supporting base, a switch operating arm pivotally mounted thereon, a solenoid mounted on said base above the pivotal point of said member, a direct operative connection between the plunger of said solenoid and said member comprising a catch on one biased to engage a shoulder on the other, an overload magnet having an armature member constituting means to trip said catch while said solenoid is energized, and adjustable means for calibrating the response of said armature member, said adjustable means, said armature member and said operative connection between the plunger of said solenoid and said switch being disposed perpendicularly with respect to said base and all accessible from below said solenoid and said magnet.

1,221,500. TURBINE-ENGINE. EMIL ANDERSON, New York, N. Y., assignor to The Universal Turbine Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 13, 1912. Serial No. 714,905. (Cl. 253—81.)



1. A turbine having a rotor with an annular trough-like structure open inwardly and divided into a plurality of parallel wave-like channels, and means for introducing motive fluid into said channels from the inside.

2. In a turbine, a rotor having an annular trough-like structure open inwardly, a plurality of rotor rings within said structure dividing it into a plurality of parallel wave-like channels, a member inside of said structure arranged to close a part of the open side thereof and constructed to form an expansion nozzle oblique to the radii of the rotor.

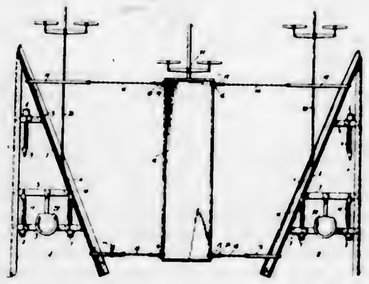
3. In a turbine, a rotor having an annular trough-like structure open inwardly, a plurality of rotor rings within said structure dividing it into a plurality of parallel wave-like channels, a valve chest inside of said structure arranged to close a part of the open side thereof and constructed to form a nozzle for introducing motive fluid into said channels in one direction and another nozzle for directing the fluid into said channels in the other direction, and a valve for controlling said nozzles.

4. In a turbine, a rotor having an annular trough-like structure open inwardly, a member inside of said structure arranged to close a part of the open side thereof and constructed to form a nozzle, and a flexible deflecting vane of sheet metal over another part of the open side of said structure.

5. In a turbine, a rotor having an annular trough-like structure open inwardly, a member inside of said structure arranged to close a part of the open side thereof and arranged to form an expansion nozzle oblique to the radii of the rotor, a movable deflecting vane projecting from said member over the open side of said structure, and an adjusting device for limiting the movement of said vane.

[Claims 6 to 11 not printed in the Gazette.]

1,221,501. GRADING APPARATUS. LYCURGUS ANDERSON, Lake Creek, Tex. Filed Apr. 13, 1915. Serial No. 21,093. (Cl. 37—5.)



1. Grading apparatus comprising a pair of substantially triangular sections each having a scraper blade, means for independently supporting said sections to travel on a road surface, means for connecting the sections transversely adjacent to both their forward and rear ends and with the blades thereof in reversely inclined relation, said connection including a carrier supported to travel on the ground independently of said grader sections, and means for independently adjusting the elevation of the forward and rear portions of the blade of each section.

2. Grading apparatus comprising a pair of substantially triangular sections each having a scraper blade, means for independently supporting the sections to travel on a road surface, means for flexibly connecting the sections transversely with the blades thereof converging toward their rear ends sand connecting means including a carrier supported on the ground independently of said grader sections, and means for independently adjusting the inclination both longitudinally and transversely of each section.

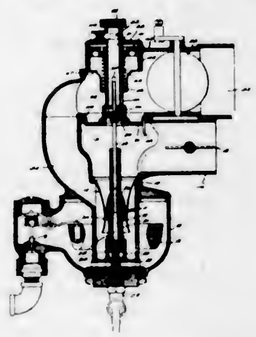
3. Grading apparatus comprising a pair of substantially trinangular sections each having a scraper blade on a diagonal side thereof, means for independently supporting the sections to travel on a road surface, a wheeled vehicle, and tension devices for flexibly connecting the sections to opposite sides of said vehicle with the blades of the sections converging toward their rear ends.

4. Apparatus of the character described comprising a pair of substantially triangular sections each having a scraping blade, means for independently supporting the sections to travel on a road surface, tension means for flexibly and adjustably connecting said sections transversely with their blades converging toward their rear ends, said connecting means including a carrier supported on the ground independently of the grader sections, and means for independently adjusting the elevation and the inclination both longitudinaly and transversely of each section.

5. In apparatus of the character described, the combination of a pair of grader sections, each comprising a frame carrying a scraper blade, and ground wheels arranged toward the front and rear of the frame and having means for individualy adjusting the height of the front and rear portions of the frame relatively to said wheels, and a wheeled carrier independent of and arranged between said sections and having means for connecting said sections at opposite sides thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,221,502. CARBURETER. EARL A. BESSOM, Indianapolis, Ind., assignor to The Wheeler-Schebler Carbureter Co., Indianapolis, Ind., a Corporation of Indiana. Filed Jan. 5, 1916. Serial No. 70,350. (Cl. 261—48.)



1. In a carbureter, the combination of a mixing chamber, alined fuel and air inlet valves, each of which has a tendency to move toward closed position, said air inlet valve being movable against such tendency by suction in the mixing chamber, said air inlet valve comprising a disk valve member and a tubular stem member, means for preventing said valve member and stem member from turning while permitting them to move longitudinally, an abutment having a screw-threaded mounting in said tubular stem member, a rotatable rod projecting into said tubular stem member and having a tongue and slot connection with said abutment, so that the turning of the rod also turns the abutment in its screw-threaded mounting, and a push rod bearing against said abutment and acting on said fuel valve.

2. In a carbureter, the combination of a mixing chamber, alined fuel and air inlet valves, each of which has a tendency to move toward closed position, said air inlet valve being movable against such tendency by suction in the mixing chamber, said air inlet valve comprising a disk valve member and a tubular stem member, means for preventing said valve member and stem member from turning while permitting them to move longitudinally, an abutment having a screw-threaded mounting in said tubular stem member, a rotatable rod projecting into said tubular stem member and having a tongue and slot connection with said abutment, so that the turning of the rod also turns the abutment in its screw-threaded mounting, a push rod bearing against said abutment and acting on said fuel valve, and a fixed guide sleeve surrounding said rotatable rod and on which said tubular stem member of said air valve has a sliding fit.

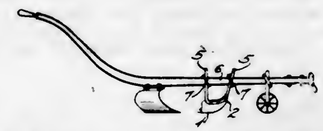
3. In a carbureter, the combination of a mixing chamber, alined fuel and air inlet valves, said air inlet valve comprising a disk valve member and a tubular stem member, means for preventing said valve member and stem member from turning while permitting them to move longitudinally, an abutment having a screw-threaded mounting in said tubular stem member, a rotatable rod projecting into said tubular stem member and having with said abutment a connection which permits relative longitudinal movement but transmits rotary movement from said rod to said abutment, so that the turning of the rod also turns the abutment in its screw-threaded mounting, and a push rod bearing against said abutment and acting on said fuel valve.

4. In a carbureter, the combination of a mixing chamber, alined fuel and air inlet valves, said air inlet valve comprising a disk valve member and a tubular stem member, means for preventing said valve member and stem member from turning while permitting them to move longitudinally, an abutment having a screw-threaded mounting in said tubular stem member, a rotatable rod projecting into said tubular stem member and having with said abutment a connection which permits relative longitudinal movement but transmits rotary movement from said rod to said abutment, so that the turning of the rod also turns the abutment in its screw-threaded mounting, a push rod bearing against said abutment and acting on said fuel valve, and a fixed guide sleeve surounding said rotatable rod and on which said tubular stem member of said air valve has a sliding fit.

5. In a carbureter, the combination of a mixing chamber, alined fuel and air inlet valves, said air inlet valve comprising a disk valve member and a tubular stem member, means for preventing said valve member and stem member from turning while permitting them to move longitudinally, an abutment having a screw-threaded mounting in said tubular stem member, a rotatable rod projecting into said tubular stem member and having with said abutment a connection which transmits rotary movement from said rod to said abutment, so that the turning of the rod also turns the abutment in its screw-threaded mounting, and a push rod bearing against said abutment and acting on said fuel valve.

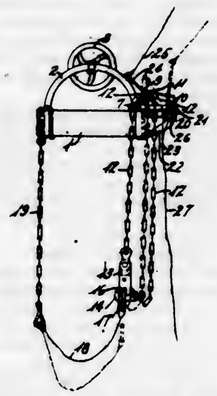
1,221,503. COLTER. MANUEL BOUZO, Habana, Cuba. Filed Apr. 12, 1916. Serial No. 90,551. (Cl. 97—6.)

1. An attachment for plows including a beam, comprising a U-shaped supporting member having two substantially vertical arms and an integrally formed, longitudinally disposed connecting member, U-shaped clips for detachably securing the arms to the plow beam, said supporting member being bifurcated below the point of attachment to the plow beam, a blade, and a plurality of nuts and bolts to detachably secure the blade within the bifurcation, said blade having its greatest width at its rear portion and being narrower and curved upwardly at its front portion.



2. An attachment for plows including a beam, comprising a supporting member including two upwardly directed arms for detachable connection to the plow beam, said arms being connected together by a horizontally disposed member formed integrally therewith, said connecting member and vertical arms being bifurcated below the point of attachment to the plow beam, and a blade detachably secured within said bifurcation, the aforesaid arms being offset intermediate their length whereby said blade is disposed in vertical alinement with said plow beam.

1,221,504. LOADING APPARATUS. MANUEL BOUZO, Habana, Cuba. Filed May 1, 1916. Serial No. 94,632. (Cl. 57—11.)



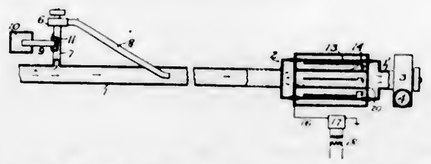
1. A carrier comprising a frame, a rockable bar carried by one side of the frame, means for locking the bar against rocking, means for unlocking the bar locking means, suspending means disposed around the bar, a locking member carried by the suspending means, a cooperating suspending means having one end secured to the frame and its other end connected to the locking member, and means for rocking the bar to unlock the locking member when the bar locking means is released.

2. A carrier comprising a frame, a bar rockably disposed on the frame, a plurality of chains disposed over the bar and connected therewith, a releasable lock secured on one end of each chain and connected to its opposite end, corresponding chains secured to the frame and having their free ends connected to the locks, an arm on the bar, a yoke arranged to pass over the arm and means for moving the yoke to release the arm.

3. A carrier comprising a frame, a bar rockably disposed on the frame, a plurality of chains disposed over the bar and connected therewith, a releasable lock secured on one end of each chain and connected to its opposite end, corresponding chains secured to the frame and having their free ends connected to the locks, an arm on the bar, a bracket off the frame between the sides

of which the arm is adapted to pass, a stop on the bracket in the path of movement of the arm, a yoke journaled on the bracket and arranged to engage over the arm, a lever on the yoke and a cord secured to the lever.

1,221,505. METHOD OF SEPARATING CERTAIN CONSTITUENTS FROM A GAS OR MIXTURE OF GASES. LINN BRADLEY, East Orange, N. J., and WALTER AUGUST SCHMIDT, Los Angeles, Cal., assignors to Research Corporation, New York, N. Y., a Corporation of New York. Filed July 23, 1914. Serial No. 852,719. (Cl. 183—114.)



1. The method of separating a constituent from a gas or mixture of gases which consists in distributing into such gas or mixture of gases suspended particles of solid material capable of reacting with such constituent to absorb the same and of forming a cloud or mist, and then precipitating such cloud or mist by subjecting the gas to the action of an electric field.

2. The method of separating a constituent from a gas or mixture of gases, which consists in mixing with such gas or mixture of gases a finely divided non-gaseous material capable of absorbing such constituent and of forming a cloud or mist of suspended particles containing such constituent, and then precipitating such cloud or mist by subjecting the gas containing the cloud or mist to the action of an electric field.

3. The method of separating a constituent from a gas or mixture of gases, which consists in injecting into such gas or mixture of gases, dust or solid particles capable of reacting with such constituent chemically or physically, to absorb the same, and of forming a cloud or mist containing such constituent, and then precipitating such cloud or mist by subjecting the gas containing such cloud or mist to the action of an electric field.

4. The method of separating a gaseous constituent from a mixture of gases which consists in injecting into such mixture, solid particles capable of suspension in the gases and of absorbing such constituent and of forming a cloud or mist of suspended particles, and then precipitating said cloud or mist by subjecting the gas containing such cloud or mist to the action of an electric field.

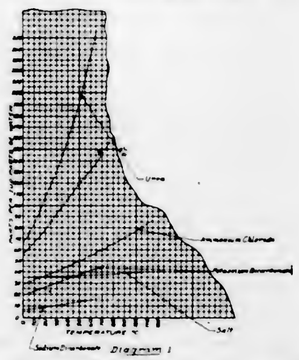
5. The method of separating a gaseous constituent from a mixture of gases, which consists in injecting into such mixture, solid particles in such manner as to form a cloud or mist of particles containing said constituent, and then precipitating such cloud or mist by subjecting the gas containing the cloud or mist to the action of an electric field.

[Claims 6 to 18 not printed in the Gazette.]

1,221,506. PROCESS OF PRODUCING THE BICARBONATE OF AN ALKALI OR ALKALINE-EARTH METAL. JOHN E. BUCHER, Coventry, R. I., assignor to Nitrogen Products Company, Providence, R. I., a Corporation of Rhode Island. Filed July 22, 1914. Serial No. 852,515. (Cl. 23—22.)

1. An improved process for producing the bicarbonate of an alkali metal, which comprises reacting upon the chlorid of said metal with a nitrogenous acid carbonate and with an alkali metal compound containing carbon united to nitrogen by a plurality of bonds, to reform said chlorid of said metal and to form said bicarbonate and a nitrogenous compound which, at the temperature of the operation, is much more soluble than said chlorid of said metal.

2. An improved process for producing the bicarbonate of an alkali metal, which comprises reacting upon the chlorid of said metal with a nitrogenous acid carbonate and with an alkali metal compound containing carbon united to nitrogen by a plurality of bonds, to reform said chlorid of said metal and to form said bicarbonate and a nitrogenous compound which, at the temperature of the operation, is much more soluble than said chlorid of said metal, and separating said chlorid from said soluble nitrogenous compound, in part at least, by crystallization of one of said last two mentioned substances.



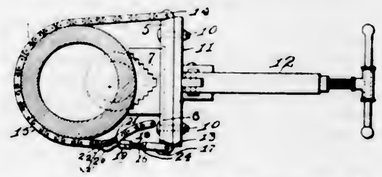
3. An improved process for producing the bicarbonate of an alkali metal, which comprises reacting upon the chlorid of said metal with a nitrogenous acid carbonate and with an alkali metal compound containing carbon united to nitrogen by a plurality of bonds, to reform said chlorid of said metal and to form said bicarbonate and a nitrogenous compound.

4. An improved process for producing the bicarbonate of an alkali metal, which comprises reacting upon a mineral acid salt of said metal with a nitrogenous acid carbonate and with an alkali metal compound containing carbon united to nitrogen by a plurality of bonds, to reform said salt and to form said bicarbonate and a nitrogenous compound, and separating said salt from said nitrogenous compound, in part at least, by crystallization of one of said last two mentioned substances.

5. An improved process for producing the bicarbonate of an alkali metal, which comprises reacting upon a mineral acid salt of said metal with a nitrogenous acid carbonate and with an alkali metal compound containing carbon united to nitrogen by a plurality of bonds, to reform said salt and to form said bicarbonate and urea.

[Claims 6 to 10 not printed in the Gazette.

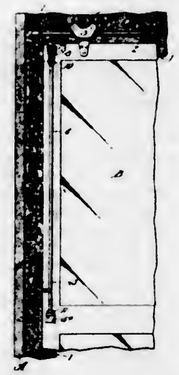
1,221,507. BASE FOR SUPPORTING VISES AND THE LIKE ON COLUMNS. LEO J. BUESSE, Webster Groves, Mo. Filed Nov. 1, 1915. Serial No. 59,044. (Cl. 81—19.)



A device of the class described comprising a flat base adapted to support a pipe vise having its one face provided with an elongated dove-tailed groove, a pair of perforated ears formed integral on two sides and arranged opposite to each other, a detachable jaw having its base dove-tailed to correspond with the dove-tailed recess in the plate, said jaw having a V-shaped recess whose surface is provided with teeth and which is designed to contact

with a post or pillar, a pair of clamping chains attached permanently to one pair of the perforated ears, an adjusting hook attached to the opposite perforated ears which hook is bifurcated and designed to grip the free ends of the chains, and means for adjusting the tension of the chain.

1,221,508. ELEVATOR-SHAFT-DOOR LATCH. EARL B. CHAPIN, St. Louis, Mo., assignor of one-third to Edwin Stark, East St. Louis, Ill., and one-third to Fenton G. Chapin, St. Louis, Mo. Filed Jan. 6, 1916. Serial No. 70,671. (Cl. 70—102.)

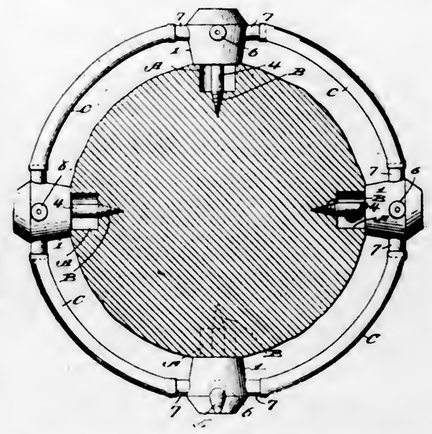


1. A latch for sliding doors, comprising a vertically-disposed shaft rotatably mounted in brackets on the door and having an operating handle adjacent the lower end thereof and an offset portion at its upper end, said offset portion having a vertical extension at the outer end thereof that extends upwardly above the top of the door, and a bracket rigidly secured to the door frame and having an integral lateral extension that lies above the door and in the same horizontal plane as said vertical extension, said lateral extension having one of its side edges straight and its opposite edge curved for the purpose described.

2. A latch for horizontally sliding elevator shaft doors, comprising a vertically-disposed rock shaft mounted on the door and extending from a point adjacent the upper edge of the door to a point within convenient reach of the operator of the elevator, said shaft having an integral offset at its upper end provided with a vertical extension, an abutment on said shaft adjacent the lower end thereof that coöperates with the inner face of the door to limit the movement of said shaft in either direction, a bracket on the door frame that coöperates with said extension to hold the door locked in its closed position, and a handle on said shaft for rocking the same so as to move said extension away from said bracket so as to unlock the door.

3. A latch for horizontally sliding doors, comprising a bracket secured to the door frame above the door and having a horizontal portion that lies across the top of the door, said horizontal portion having one of its side edges straight and its opposite side edge curved, a vertically-disposed rock shaft journaled in brackets on the inner side of the door and having a horizontal portion at the upper end thereof that lies under said bracket when the door is closed, said horizontal portion having an upright extension that coöperates with the side edges of said bracket, means on said shaft that coöperates with the inner face of the door for limiting the rotary movement of said shaft, a handle on said rock shaft for moving the same in one direction to such a position that the vertical extension on the horizontal portion thereof is out of engagement with said bracket, said handle being also utilized for moving the door bodily to its open position, and a spring for moving said rock shaft in the opposite direction.

1,221,509. SAP SPILE OR SPOUT. EDWARD CHESLEY, Swetnam, Va. Filed Apr. 29, 1913. Serial No. 764,454. (Cl. 47—11.)

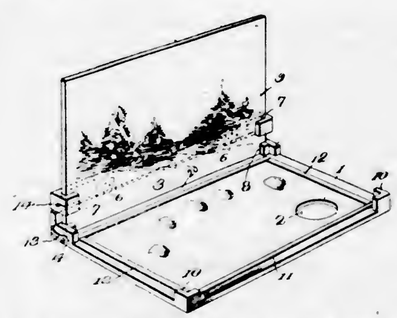


1. A sap spile comprising a cup-shaped member having a bluntly sharp inner edge, a projecting spout, a projecting apertured nipple located at a distance from said spout, and a concentric opening in its outer end.

2. A sap spile comprising a cup-shaped member having a bluntly sharp inner edge, a projecting spout, a pair of oppositely disposed apertured nipples located at opposite sides of said spout and a concentric opening in its outer end.

3. A sap spile comprising a cup-shaped member having a bluntly sharp inner edge, a projecting spout and a concentric opening in its outer end, in combination with a fastening screw of substantially greater length than said member and having a conical head to which said opening conforms and which engages in said opening to close the outer end of the member.

1,221,510. ARTIST'S SKETCHING KIT. FLORENCE CHRISTENSEN, New York, N. Y. Filed Feb. 21, 1916. Serial No. 79,585. (Cl. 41—4.)



1. In combination, a palette, and a folding easel mounted thereon adapted to hold a panel in position for work and also allow the same to overlie the palette and form a lid therefor, substantially as set forth.

2. In combination, a palette, and a folding easel mounted thereon comprising a strip secured to the palette and a strip hinged to said secured strip, said strips having members adapted to hold a panel in position for work and also allow the same to overlie the palette and form a lid therefor, substantially as set forth.

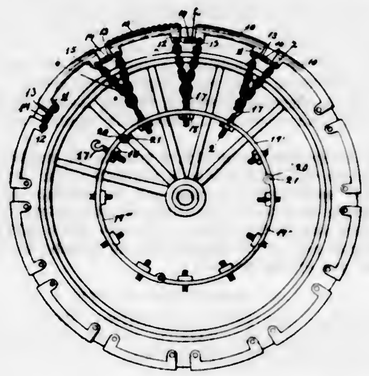
3. In combination, a palette, and a folding easel mounted thereon comprising a strip secured to the palette, a strip hinged to said secured strip, and members secured to said strip forming a pocket therewith adapted to hold a panel in position for work and also allow the same to overlie the palette and form a lid therefor, substantially as set forth.

4. In combination, a palette, a folding easel mounted thereon adapted to hold a panel in position for work and also allow the same to overlie the palette and form a lid therefor, and members secured to said palette to engage said panel and provide spacing means therefor, substantially as set forth.

5. In combination, a palette, a folding easel mounted thereon comprising a strip secured to the palette, a strip hingedly mounted on said secured strip, said strips having members adapted to hold a panel in position for work and also allow the same to overlie the palette and form a lid therefor, and cleats secured to the palette adjacent the easel and adapted to engage with the members on said hinged strip when the panel is folded to provide spacing means therefor, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette]

1,221,511. NON-SKIDABLE TIRE GUARD. LORENZO CIAFFONE, New York, N. Y. Filed Jan. 11, 1912. Serial No. 670,574. (Cl. 152—16.)

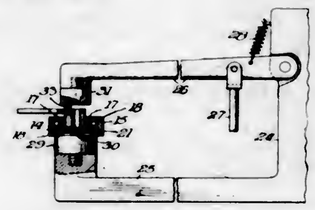


In combination with a tire, a guard therefor comprising a plurality of tread plates shaped to conform to the transverse configuration of said tire and disposed upon the periphery thereof, links flexibly connecting the tread plates together, a floating retaining device, adjustable means carried by said retaining device, and connecting devices arranged in pairs between said adjustable means and the tread plates, the connecting devices of each pair being attached at one end to a common point on the adjustable means while the other ends of said connecting devices are attached to the tread plates at common points with the links.

1,221,512. ELECTRIC WELDING APPARATUS. JOHN P. CLULEY, Green Bay, Wis. Filed Jan. 10, 1917. Serial No. 141,509. (Cl. 219—4.)

1. A work holder for electrical welding machines, comprising members adjustable about one of the parts to be welded and having means for confining the welding current to a predetermined portion thereof in combination with means for applying current to another of said members also at a predetermined area thereof.

2. A work holder for electrical welding machines, comprising means for holding one of the parts to be welded, means for pressing another of said parts against said first part, and means for positioning said first part on the welding machine, said holding and pressing means serving also to confine the welding current to a predetermined portion of said parts.



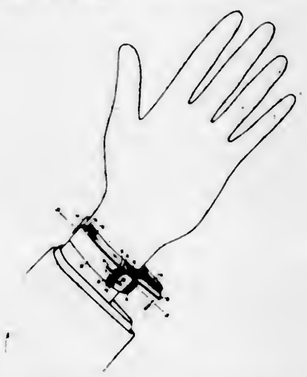
3. A work holder for electrical welding machines, comprising a pair of pivoted members each having a flange thereon constituting an electrical conducting member, a pair of handles for moving said members, and an insulating member for limiting the position of the work in said clamping members.

4. A work holder for electrical welding machines, comprising a pair of semi-circular conducting members pivoted together at one end, an insulating plate carried by one of said members, hollow handles passing through said members, and means connecting said handles to permit a cooling fluid to flow therethrough.

5. A tool holder for an arm and a hub comprising clamping members arranged to embrace said hub on a limited area only, an electrode which supports said tool holder and centers the same, and a second electrode conforming to the area on the arm which it is desired to weld, said electrode being arranged to press said arm against said hub during the welding operation.

[Claims 6 to 9 not printed in the Gazette.]

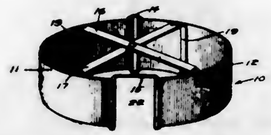
1,221,513. SHIELD OR PROTECTOR. ANTHONY E. COYNE, Marion, Ill. Filed June 13, 1916. Serial No. 103,519. (Cl. 2—95.)



1. In a protector of the class described, the combination with a frame formed in sections and means to hingedly secure said sections together, of a flexible lining within the frame and a non-porous covering for said lining and edges of the frame, the outer edge of said covering having a flange concave in cross section to form a channel, and an extension having a trough formed therein communicating with said channel, whereby water contacting said protector will be carried from the channel to said trough and discharged from the end of the extension.

2. In a protector of the class described, the combination with a frame formed in sections and means to hingedly secure the sections together and a spring adapted to normally hold the sections clamped around the wrist of the wearer, of a lining interiorly of said frame, a non-porous covering extending over said lining and over the ends of the frame, a flange at the outer end of the covering arranged to form a channel, and an extension on said flange having a trough formed therein communicating with said channel.

1,221,514. FOLDABLE CAMP-STOVE. WILLIAM L. CRAIN, Los Angeles, Cal. Filed Aug. 19, 1916. Serial No. 115,848. (Cl. 126—29.)



1. A foldable camp stove, comprising a pair of rectangular side wall sections made of flexible sheet metal hinged together at one end and connected at the other with a spacing member forming a fire opening, and a pair of pivoted gridirons provided at their ends with vertical legs of a height substantially of the height of said side walls, the length of said gridirons corresponding to the diameter of the side walls when the latter are in their extended circular position.

2. A foldable camp stove comprising a pair of side wall sections made of flexible sheet metal and hinged together and a pair of gridirons provided at their ends with vertical legs of a height substantially of the height of said side walls, the length of said gridirons corresponding to the diameter of the side walls when the latter are in their extended circular position.

3. A foldable camp stove comprising a pair of hinged side wall sections made of flexible sheet metal and provided with a fire opening, and a pair of gridirons provided at their ends with vertical legs, the length of said gridirons corresponding to the diameter of the side walls when the latter are in their extended circular position.

4. A foldable camp stove comprising a flexible metal stove, comprising a side wall made of a flexible metal sheet, means for keeping the ends thereof in spaced relation to form a fire opening, and a pair of gridirons provided at their ends with vertical legs of a height substantially of the height of the side wall, the length of said gridirons corresponding approximately to the diameter of the side wall when the latter is in its extended circular position.

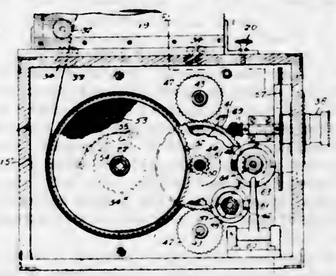
5. A foldable camp stove comprising a flexible metal stove comprising a side wall made of a flexible metal sheet, means for keeping the ends thereof in spaced relation to form a fire opening, and a pair of gridirons provided at their ends with vertical legs, the length of said gridirons corresponding approximately to the diameter of the side wall when the latter is in its extended circular position.

[Claim 6 not printed in the Gazette.]

1,221,515. MOTION-PICTURE APPARATUS. JAMES F. DAVIDSON, Marlow, Okla. Filed Oct. 14, 1914. Serial No. 866,651. (Cl. 88—17.)

1. An apparatus of the class described comprising a film supplying reel with a film thereon, a film take-up reel adapted to engage and wind the film thereon, means for unwinding the film from said supplying reel and advancing the same through the optical field of the apparatus, means including a flexible element engaging the said film reels and wound reversely thereon with respect to the film winding adapted to rotate the take-up reel during the unwinding of a film from the film supplying reel and rotating the film supplying reel for the rewinding of the film thereon, said flexible element being restricted to uni-directional movement with the supplying reel, and adapted to be moved freely in the opposite direction.

2. An apparatus of the class described comprising a film supplying reel, a flexible element receiving reel connected thereto and constricted to uni-directional rotation therewith and adapted to rotate freely in the opposite direction, a film take-up reel, and a flexible element supplying reel in engagement therewith, and means for advancing the film strip through the optical field of the apparatus.



3. An apparatus of the class described including an optical field, comprising a film supplying reel, a tape receiving reel, a ratchet and pawl connection therebetween, a film take-up reel, a tape receiving reel connected thereto and constricted to rotate therewith, and means adapted to intermittently advance a film through the optical field of said apparatus.

4. An apparatus of the class described comprising a film supplying reel and film thereon, a tape receiving reel and tape thereon, a ratchet and pawl connection therebetween, a film receiving reel, a tape supplying reel connected thereto, means adapted to engage a film carried by said film reels to propagate the same through the optical field of the apparatus, and resiliently mounted means engaging the film and tape adapted to form slack loops therein.

5. An apparatus of the class described, comprising manually driven film engaging feed and take-up wheels, a film advancing wheel adapted to draw the film through the optical field of the apparatus, a spring motor mechanically connected to said film advancing wheel adapted to exert a continuous torsional force thereupon, an escapement wheel mechanically connected to the film advancing wheel and provided with a zig-zag slot therein, and a cam operated oscillating lever engaging said slot mechanically driven with said feed and take-up film wheels and adapted to intermittently release, for the intermittent rotation of, the said film advancing wheel.

[Claim 6 not printed in the Gazette.]

1,221,516. MEDICINAL VAPORIZER. THOMAS A. DE VILBISS, Toledo, Ohio, assignor to The De Vilbiss Manufacturing Co., Toledo, Ohio, a Corporation of Ohio. Filed Dec. 6, 1915. Serial No. 65,435. (Cl. 167—3.)



1. In a vaporiser of the class described, a boiler, a nozzle projecting from the upper end of said boiler, a cup member suspended within said boiler and having its top portion closed to the interior of the boiler and open to said nozzle, a second cup member disposed within the

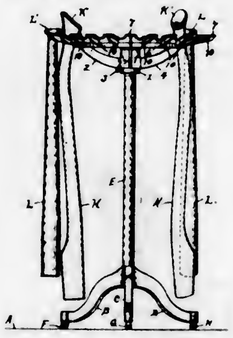
boiler and having its upper end in communication with the upper interior portion of the boiler and its lower end in communication with the lower end of said first cup member to cause steam to pass through said members to find an exit from the interior of the boiler to said nozzle.

2. In a vaporizer of the class described, a boiler, means for heating said boiler, a nozzle projecting from the upper end portion of the boiler, means disposed within the boiler and forming an angular passage having vertically disposed parts for containing a liquid, one end of said passage opening into the upper end portion of the boiler above the lower portion of said means and the other end of said passage being in communication only with the nozzle passage, said means closing the communication between the interior of the boiler and said nozzle except therethrough.

3. In a vaporizer of the class described, a boiler having a top opening, heating means for said boiler, a cup member suspended within the boiler with its open upper end in communication with the top opening, a second cup member carried by and inclosing a portion of said first member, said second cup member having its upper end in communication with the upper portion of the boiler and its lower end in communication with the lower end of the first cup member to permit the passage of steam successively through said members, and a nozzle coöperating with said first cup member to close the top opening of the boiler and having its discharge orifice in communication with the interior of said first member.

4. In a vaporizer of the class described, a boiler having a top opening, a cap for closing said opening and forming a discharge nozzle, a double chambered liquid receptacle suspended within the boiler from the top thereof and retained in position by said cap member, said receptacle comprising two separably connected members which have communication one with the other and coöperate to form an angular passage which opens at one end into the upper portion of the boiler and at its other end into said nozzle, said receptacle also closing communication between the boiler and nozzle except through the receptacle.

1,221,517. DISPLAY-STAND. ORIS K. DUNBAR, Centerville, Ind., assignor to The Toledo Rack & Level Company, Toledo, Ohio, a Corporation of Ohio. Filed Jan. 21, 1915. Serial No. 3,622. (Cl. 211—14.)



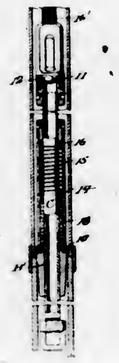
A display stand of the class described, comprising a base having a standard extending therefrom, a wheel revolubly mounted on the standard and embodying a hub, radial arms extending from the hub, a circular rim supported by the outer ends of said arms, a flange formed integral with and extending radially outwardly from the rim, said flange having a series of circumferentially arranged indentations, and reinforcing brackets formed integral with the circular rim and the said flange, one of said brackets disposed between each pair of indentations to reinforce the flange adjacent each indentation.

1,221,518. SURGICAL APPLIANCE. HENRY ARTHUR DYGERT, Philadelphia, Pa. Filed Oct. 8, 1915. Serial No. 54,879. (Cl. 128—28.)



In a surgical appliance for inducing the erection of the male generative organ a ring or loop of flexible rubber, ovate in shape, and of such construction as to readily allow torsion of the rounded end whereby the sides of the loop, which otherwise would not touch each other, are, throughout half of their length drawn closely together with considerable lateral pressure, but permitting, nevertheless, the full distention of the loop, in which state the angle, or V, end is always farther from the center of the circular outline of the fully distended appliance viewed as a whole, than are the other parts of the circumference thereof; and in combination therewith, an adjustable sheath, also of rubber, attached to the V end of the loop, by means of which the opening of the loop may be enlarged, or reduced, at the will of the wearer, and while the appliance is in use, all substantially as and for the purposes described herein.

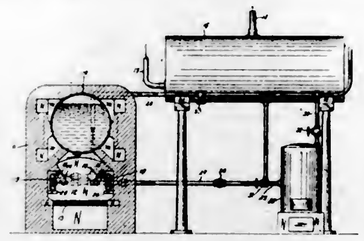
1,221,519. DEEP-WELL PUMP. JAMES M. EASTHAM, Shreveport, La. Filed Jan. 2, 1914. Serial No. 809,884. (Cl. 103—80.)



1. A deep well pump comprising a well casing formed with an inner annular shoulder, a piston adapted to operate within said casing provided with a valve, and a piston packing casing surrounding said piston and formed with a tapered soft metal portion through which said piston operates, said soft metal portion being adapted to be seated and compressed within said annular shoulder so as to bear closely upon said piston and form a packing therefor, substantially as set forth.

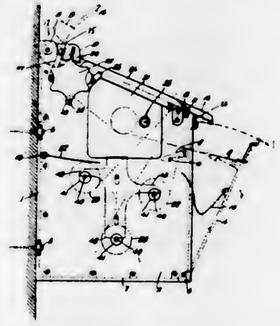
2. A deep well pump comprising a well casing formed with an internally projecting circumferential shoulder near its lower end, a piston adapted to operate within said casing formed with a valve at its upper end, a piston packing casing surrounding said piston and formed on its lower end with a tapered soft metal perforated tip through which said piston operates, said tapered soft metal tip being adapted to be seated and compressed within said internal circumferential shoulder so as to bear closely upon said piston and form a packing therefor, and an additional spring-pressed packing within said packing casing, substantially as set forth.

1,221,520. COMBINED BOILER AND WATER-HEATER. JOHAN ERDÖDI, New York, N. Y. Filed Dec. 31, 1915. Serial No. 69,617. (Cl. 122—20.)



In a water heater, the combination with a boiler furnace, of inclined baffle plates within said furnace forming with the sides thereof passages, said baffle plates being provided with apertures, an endless pipeline having its major portion disposed within said passages, the portion of the pipeline within said furnace being throughout its length in direct contact with the products of combustion as the latter rise from the grate of the furnace and before they come into contact with the boiler and two pipes leading from said pipeline.

1,221,521. AUTOGRAPHIC REGISTER. ADOLPH F. EUCHENHOFER, Dayton, Ohio, assignor to The Standard Register Company, Dayton, Ohio, a Corporation of Ohio. Filed July 6, 1915. Serial No. 38,059. (Cl. 11—36.)



1. In an autographic register, the combination of a casing for the machine, a feed roll for duplicate check strips, a gear actuated thereby, a fixed transverse spindle for removably mounting a record strip receiving roll, a gear on said roll to mesh with the gear first mentioned, an aperture in the casing, adjacent the end of the receiving roll and means for closing the said aperture, said parts being so proportioned that the aperture closing means lies against the transverse spindle, to hold the receiving roll in place.

2. In an autographic register, the combination of a casing for the machine, a feed roll, a gear connected thereto, a transverse spindle for removably mounting a record strip receiving roll, a gear on said roll to mesh with the gear first mentioned, an aperture in the casing, adjacent the end of the feed roll, a tensioning device for the feed roll, means for releasing the tensioning device located adjacent the aperture, the parts being so positioned that the aperture closing means lies against the transverse spindle, to hold the receiving roll in place.

3. In an autographic register, the combination of a casing therefor paper therein and paper feeding mechanism therein, tension devices adapted to hold said paper, a lever for releasing said tension, an aperture in the casing, said lever located at one side of the aperture, means for closing said aperture, and means on said closing means for contacting with the lever in tension releasing position to prevent closure of said means with the lever at such position.

4. In an autographic register, the combination of a casing for the machine, a driving mechanism, a record receiving roll, an aperture in the casing, a closure for the aperture, means for removably mounting the roll in the casing with its one end abutting the closure in the aperture, and means for operatively connecting the roll with the driving mechanism, for the purpose described.

5. In an autographic register, in combination with a casing for the machine, driving mechanism, a record receiving roll, an aperture in the casing, a closure for the aperture, a spindle in the casing on the opposite side from said aperture and extending across to the aperture, means for slidably mounting the roll on the spindle with its end abutting the closure and means for operatively connecting the roll with the driving mechanism, for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

1,221,522. ADJUSTABLE DRESS-FORM. CHARLES W. FARQUHARSON, Chicago, Ill., assignor to Model Form Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 13, 1913. Serial No. 806,358. (Cl. 223—18.)



1. A dress form comprising a molded body portion normally of natural contour and cut into a plurality of sections, each section being arranged to be grasped by the operator for independent adjustment, adjustable connecting devices connecting each section to an adjacent one so as to normally permit independent adjustment of each section, and means automatically acting upon the connecting devices during manipulation of the sections for maintaining the sections in adjustment.

2. A dress form comprising a molded body portion normally of natural contour and horizontally and vertically cut into a plurality of sections, connecting devices connecting adjacent ones of said sections whereby each section is independently adjustable, and resilient means yieldingly holding the connecting devices for firmly holding the sections when moved to desired positions.

3. A dress form comprising a body portion cut into a plurality of sections, yieldingly adjustable connecting devices connecting each section to an adjacent one so as to permit a normal independent adjustment of each section, means whereby each section may be grasped by the operator to effect such adjustment, and resilient means adjustable for varying the yielding function of the con-

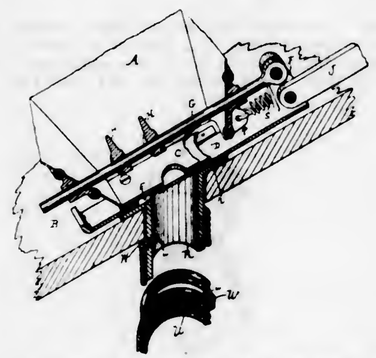
necting devices so as to cause a greater or less holding effect thereof.

4. A dress form comprising a molded body portion normally of natural contour and cut into neck intermediate and hip sections, adjustable connecting devices joined to the sections at contiguous edges, means whereby each section may be grasped by the operator to effect adjustment, and friction elements at joints of said connecting devices whereby the sections are normally yieldingly but firmly held so as to normally permit an independent adjustment thereof.

5. A dress form comprising a molded upper body portion normally of natural contour and horizontally and vertically cut to provide a plurality of sections, and independently operable spring pressed yieldingly held adjustable devices connecting each section to two other sections whereby each section is normally independently adjustable to vary the contour of the form and firmly held in adjusted position.

[Claims 6 and 7 not printed in the Gazette.]

1,221,523. SAND-BOX. PATRICK FLOOD, Albany, N. Y., assignor of one-half to Edward J. B. Murray, Albany, N. Y. Filed Dec. 27, 1916. Serial No. 139,171. (Cl. 105—178.)



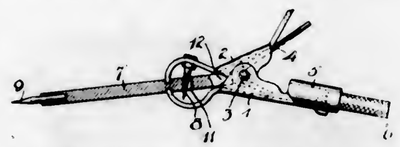
1. In a device for retaining and distributing sand on a railway, a box having a discharge orifice therein and adapted to be placed in a car; a sliding plate provided with an orifice adapted to register with the orifice in the sand box; a rod passing through the sand box; a series of projections on the rod within the sand box; and means for moving said sliding plate and said rod simultaneously, substantially as described.

2. In a track sanding device, a pipe extending through the bottom of a car; a conductor constructed in the form of a spiral spring, the spirals arranged closely together; a collar for supporting the spiral spring; and projections on said collar adapted to be inserted between adjacent spirals of the spring, substantially as described.

1,221,524. EXTENSION ATTACHMENT FOR TESTING-CLIPS. HARRY FRANKEL, New York, N. Y., assignor to Frankel Connector Company, Inc., New York, N. Y., a Corporation of New York. Filed Apr. 20, 1916. Serial No. 92,444. (Cl. 173—273.)

1. In a testing instrument, a clip element including jaws and a spring for normally closing said jaws, a sharp pin member carried by one of the jaws, a removable extension bar, the rear end of said extension engaging said clip, said extension having a passage to receive said pin, said extension being engaged by the jaws of said clip forward of said pin.

2. A testing instrument comprising a clip including two pivotally connected jaw members, a spring for normally forcing said jaw members into engagement, a pin carried by one of said jaws and directed toward the other jaw, a removable extension comprising a bar having a pointed front end, the rear end of said bar being arranged to engage said clip near its pivot, said bar having a passage therethrough for said pin forward of the rear end thereof, said jaws being arranged to engage said extension forward of the pin passage when the parts are assembled, and a transverse groove in the face of said bar forward of said pin passage and arranged to receive the edge of one of said jaws.

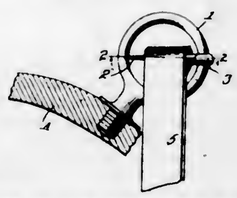


3. A testing instrument comprising a clip including two pivotally connected jaw members, a spring for normally forcing said jaw members into engagement, a pin carried by one of said jaws and directed toward the other jaw, a removable extension comprising a bar having a pointed front end, the rear end of said bar being arranged to engage said clip near its pivot, said bar having a passage therethrough for said pin forward of the rear end thereof, said jaws being arranged to engage said extension forward of the pin passage when the parts are assembled, the upper and lower surfaces of said extension having transverse grooves therein forward of said pin passage to receive the edges of both of said jaws.

4. A testing instrument comprising a clip including two pivotally connected jaw members, a spring for normally forcing said jaw members into engagement, a pin carried by one of said jaws and directed toward the other jaw, a removable extension comprising a bar having a pointed front end, the rear end of said bar being arranged to engage said clip near its pivot, said bar having a passage therethrough for said pin forward of the rear end thereof, said jaws being arranged to engage said extension forward of the pin passage when the parts are assembled, the upper and lower surfaces of said extension having transverse grooves therein forward of said pin passage to receive the edges of both of said jaws.

5. In a testing instrument of the character described, a spring clip including jaws, a detachable extension therefor comprising a bar, a sharp point at the forward end thereof and means carried by said jaws for detachably engaging said bar therewith intermediate its length and for holding the same substantially rigid therewith.

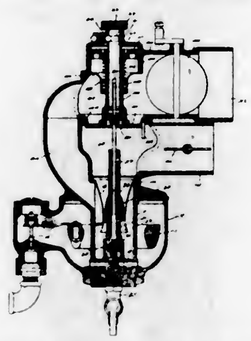
1,221,525. HARNESS-RING. LUTHER FRAZIER, Anthony, Kans. Filed July 25, 1916. Serial No. 111,268. (Cl. 54—64.)



1. The combination of an unobstructed ring adapted to be secured to a harness saddle and having an integral reduced portion, and a member provided with an integral eye mounted loosely about the reduced portion of the ring, said member being of a length greater than the interior diameter of the ring.

2. The combination of a saddle, an open ring secured on said saddle having an integral reduced portion, and a downwardly and inwardly inclined member loosely secured at its upper end about the reduced portion of the ring, said member being of greater length than the interior diameter of said ring and tapered toward its free end.

1,221,526. CARBURETER. JAMES B. FUNK, Indianapolis, Ind., assignor to The Wheeler-Schebler Carbureter Co., Indianapolis, Ind., a Corporation of Indiana. Filed Jan. 5, 1916. Serial No. 70,332. (Cl. 261—48.)



1. In a carbureter, the combination of a mixing chamber, a primary air and fuel supply passage leading into said mixing chamber from one direction, an auxiliary air supply passage leading into said chamber from the opposite direction, so that the fluids supplied from the two passages collide to produce a turbulence, a lateral outlet passage from such mixing chamber, an automatic valve controlling the flow of air through said auxiliary air inlet passage and opening toward said mixing chamber, a fuel valve controlling the supply of fuel to said primary air and fuel supply passage and opening by movement away from said mixing chamber, and a push rod projecting from one of said valves to the other so that the opening of the auxiliary air valve produces a corresponding opening of the fuel valve, said auxiliary air valve being provided with an adjustable abutment against which said push rod bears, to permit a relative adjustment of the positions of the two valves.

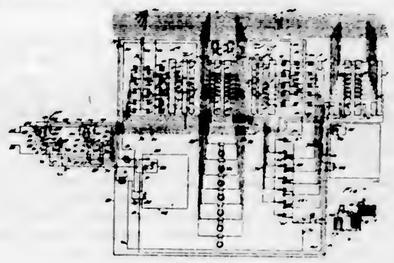
2. In a carbureter, the combination of a mixing chamber, a Venturi tube discharging upwardly into said mixing chamber, a fuel nozzle discharging within said Venturi tube, said Venturi tube being open at the bottom to receive a supply of primary air, said mixing chamber being provided at its upper end with a secondary air inlet opening through which secondary air is admitted downwardly into said mixing chamber so as to collide with said primary air and fuel discharged upwardly into said chamber from the Venturi tube, said mixing chamber also being provided with a lateral outlet opening, a downwardly opening automatic auxiliary air valve in said auxiliary air inlet opening, a downwardly opening fuel valve in said fuel nozzle, said two valves being in alinement, and a push rod projecting upwardly from said fuel valve and bearing against an abutment on said auxiliary air valve so that downward movement of the auxiliary air valve produces a corresponding downward movement of said fuel valve, said abutment being adjustable relatively to said auxiliary air valve.

1,221,527. ELEVATOR-SIGNAL. ROBERT H. GAYLORD, Pasadena, Cal., assignor to R. H. Gaylord Company, Los Angeles, Cal., a Corporation of California. Filed Oct. 26, 1915. Serial No. 57,918. (Cl. 177—336.)

1. In an elevator signal system, selective signal transmitters controlled by the operation of different cars and adapted to send signals consisting of electric impulses differentiated for each car and for up and down motion, and a single receiving means at a floor connected to receive such signals from all of said transmitters.

2. In an elevator signal system, signal transmitters controlled by the operation of different cars and adapted to send electric signal impulses differentiated for each car and for up and down movement of each car, and a single electromagnetic device connected to receive such signals from all of said transmitters.

3. In an elevator signal system, selective signal transmitters controlled by the operating of different cars, a single signal circuit for each floor adapted to receive signals from said selective signal transmitters, and a single signal receiving means included in each of said circuits and adapted to receive selective signals from all of said transmitters.

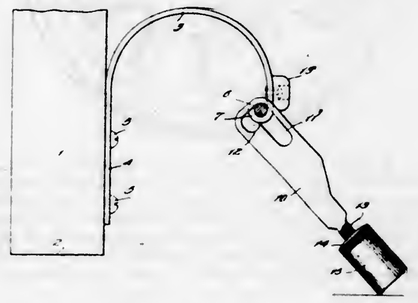


4. In an elevator signal system, signal transmitting means controlled by the operation of different cars to send selective signals, landing signal circuits connected to said transmitters and controlled thereby and comprising a single circuit for each landing, and a single signal receiving means included in each of said circuits and adapted to selectively receive signals from a plurality of said transmitters.

5. In an elevator signal system, a plurality of cars, a plurality of devices corresponding to different cars for transmitting selective signals, landing signal circuits connected to all of said transmitting devices and controlled thereby and comprising a single circuit for each landing, and a single signal receiving means in each of said circuits adapted to selectively receive signals from all of said transmitting devices.

[Claims 6 to 27 not printed in the Gazette.]

1,221,528. DOOR-HOLDER. JOHN F. GOLDING, Washington, D. C. Filed May 26, 1915. Serial No. 30,576. (Cl. 16—82.)



1. A door holder comprising a swingable leg having a floor-engaging foot, and a pivot for said leg, said holder having a flexible spring, and means whereby the spring is flexed temporarily during the first part of the closing movement of the door and whereby the leg automatically assumes an inoperative trailing position in either direction except during said time when the spring is flexed.

2. A door holder comprising a swingable leg having a floor-engaging foot, and a pivot for said leg, said holder having a flexible spring, and means whereby the spring is flexed temporarily as the leg assumes a vertical position during the first part of the closing movement of the door and whereby the leg automatically assumes a vertical position without flexure of the spring during the opening movement of the door and an inoperative trailing position in

either direction except during said time when the spring is flexed.

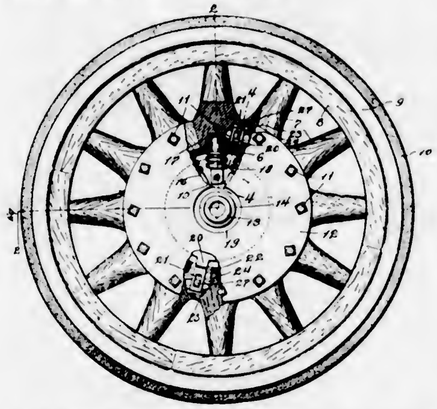
3. A door holder comprising a swingable leg having a floor-engaging foot, and a pivot for said leg, said holder having a flexible spring, and means whereby said leg causes the flexure of the spring as the pivot passes the vertical plane of the leg on the closing movement of the door and leaves the spring normal as the pivot passes said plane on the opening movement of the door.

4. A door holder comprising a swingable leg having a floor-engaging foot, and a pivot for said leg, said holder having a flexible spring, and a shoulder which causes the flexure of the spring as the pivot passes the vertical plane of the leg on the closing movement of the door and leaves said spring normal as the pivot passes said vertical plane on the opening movement of the door.

5. In a door holder, a swingable leg which is freely swingable to incline toward the door or to incline away from the door; a pivot for the leg; and means acting on said pivot and leg in combination therewith to cause the same to give temporary resistance during a small part only of the closing movement of the door and to be non-resistant during the opening movement of the door.

[Claims 6 to 11 not printed in the Gazette.]

1,221,529. AUTOMOBILE-WHEEL. THOMAS L. GOOD and THOMAS L. TANDY, Edwardsville, Ill., assignors of one-sixth to Henry P. Hotz, one-sixth to Orie T. Dunlap, one-sixth to Wm. M. Doeblin, and one-sixth to Charles W. Terry, Edwardsville, Ill. Filed Nov. 11, 1916. Serial No. 130,775. (Cl. 152—45.)

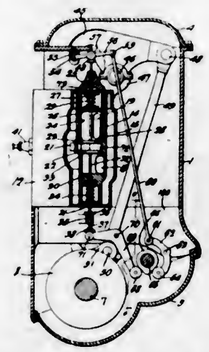


1. A wheel of the class described comprising a hub, a pair of hub rings secured to the hub, a plurality of spokes pivotally secured to said hub rings, a hub band having openings therethrough to receive said spokes, a plurality of extensile coil springs impinging said spokes and said band, a pair of check plates, a plurality of spokes rigidly connected with said cheek plates and a rim carried by said rigid spokes.

2. A wheel of the class described comprising a hub, a pair of hub rings secured to the hub, a plurality of spokes pivotally secured to said hub rings, a hub band having openings therethrough to receive said spokes, a plurality of extensile coil springs impinging said spokes and said band, a pair of check plates, a plurality of spokes rigidly connected with said cheek plates, devices secured to said cheek plates and having oppositely disposed curved slots and a pin and slot connection between said devices and said hub rings.

3. In a wheel of the class described a pair of hub rings, a pair of check plates, a means therebetween for permitting cushioned diametrical movements, radially arranged arms carried by at least one of said hub rings, each of said arms bearing a longitudinal slot, oppositely disposed sectors secured to said cheek plates and pins extended through the slots of said arms and said sectors, said pins being free to roll over the slot surfaces of said arms and sectors.

1,221,530. ENGINE. SYLVESTER O. GOULD, Marion, Ind. Filed Aug. 24, 1916. Serial No. 116,667. (Cl. 123—51.)

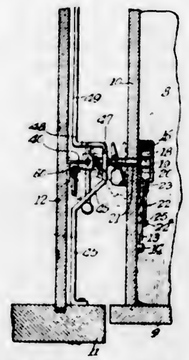


1. In an engine, a frame including a cylinder; a pair of pistons mounted for right line reciprocation in the cylinder; a walking beam fulcrumed intermediate its ends on the frame; a link forming a connection between one end of the walking beam and one of the pistons; a shaft journaled in the frame and including a crank; a connecting rod pivotally assembled with the crank and with the other of the pistons and having a rigid angular arm which projects in a direction parallel to the plane in which the connecting rod moves; and a pitman pivotally assembled with the other end of the walking beam and with the arm at the outer end of the arm.

2. In an engine, a casing and a cylinder carried by the casing; a web connecting the cylinder with the casing; a pair of pistons working in the cylinder; a valve casing having inlet and exhaust ports and provided with a combined inlet and exhaust port opening into the cylinder between the pistons; valves operating in the casing and located respectively between the exhaust port and the combined inlet and exhaust port, and between the inlet and the combined inlet and exhaust port; stems carried by the valves; a tappet coöperating with the stem of one valve; means on the web for supporting the tappet slidably; a lever fulcrumed on the web and coöperating with the tappet; a second lever fulcrumed on the web; means for operating the stem of the other valve from the second lever; and a shaft supported for rotation, and provided with a cam coöperating with the levers.

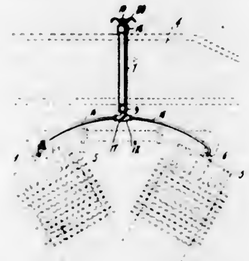
3. In an engine, a cylinder; a pair of pistons working therein; a valve casing having inlet and exhaust ports and provided with a combined inlet and exhaust port opening into the cylinder between the pistons, the casing having a partition and being provided with a shoulder, the shoulder and the partition lying on opposite sides of the combined inlet and exhaust port; a tubular valve seat in the casing and abutting against the shoulder, the valve seat having an exhaust port coinciding with the exhaust port of the casing, and having a transverse partition; a guide mounted in the casing and coöperating with one end of the valve seat to maintain the other end of the valve seat engaged with the shoulder; valves on opposite sides of the combined inlet and exhaust port and coöperating respectively with the seat and with the casing; stems carried by the valves, one stem being slidable in the partition of the valve seat and in the guide, the other stem being slidable in the partition of the casing; springs abutting at their inner ends, respectively, against the partition of the valve seat and against the partition of the casing, one of the springs being housed beneath the guide; abutments carried by the stems and engaging the outer ends of the springs; and means for actuating the valve stems.

1,221,531. SAFETY DEVICE FOR ELEVATORS. EDWARD E. GRAEBING, Chicago, Ill. Filed Dec. 11, 1915. Serial No. 66,282. (Cl. 187—49.)



In a device of the class set forth, a controller on the cage, a locking member adapted to be shifted by the act of shifting the controller, a pin slidably mounted in the wall of the cage and means for normally pressing it outwardly out of engagement with said locking member, a slidable bolt supported on the wall structure and adapted to aline with the aforesaid bolt when the car is at the landing, gravity means for normally holding this latter bolt back out of operative position, and means carried on the door for manually advancing this latter bolt to thereby cause the lock bolt to move inwardly into engagement with the aforesaid locking member.

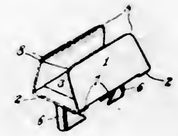
1,221,532. PRIMING DEVICE. JOHN C. GRAF, Hollister, Cal. Filed Aug. 9, 1916. Serial No. 114,049. (Cl. 123—187.5.)



1. In a priming device, the combination with an engine cylinder and the fuel tank for a motorcycle, of a tube in the tank, the tube having apertures therein, a fuel connection between the engine cylinder and the tube said connection terminating adjacent to the apertures, a plunger in the tube of lesser diameter than the tube to leave a fluid passage the plunger being adapted to normally close the mouth of the fuel connection, a spring normally seating the plunger, and finger pieces for unseating the plunger.

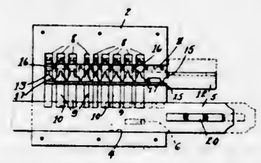
2. The combination with a fuel tank of a motorcycle and an engine cylinder, a tube in the tank, a fuel connection between the engine cylinder and the tube, said connection terminating at the tube within the tank, said tube having openings adjacent to the mouth of said connection, a plunger adapted to close the mouth of the connection, a spring on the plunger for holding it in such connection against the force of an explosion, finger pieces for unseating the plunger, and a valve in the fuel connection for severing communication between the tube and the connection.

1,221,533. AIR-DEFLECTOR. HARRISON R. GREGORY, St. Louis, Mo. Filed June 26, 1916. Serial No. 105,975. (Cl. 67—72.)



An improved air-deflector for lamp-burners, comprising an oblong hollow pyramid of metal, the sides of which are closed, and the top, ends and base of which are open and unobstructed, the air-entrance at the base being devoid of the usual depending supporting legs thereat; rigid flat cross-bars at the opposite ends of said base; and the opposite U-shaped wick-tube clamps rigidly fixed to the said cross-bars and extending toward the opposite clamps carried by the opposite cross-bar.

1,221,534. LOCK. MATHIAS HALVORSON, Hubbard, Oreg. Filed Dec. 14, 1916. Serial No. 136,984. (Cl. 70—76.)



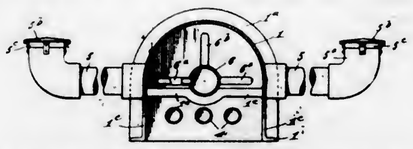
1. A lock comprising a front and back plate adapted to be secured together in juxta-relation to provide a housing for the lock mechanism, one of said plates being formed with a recess extending horizontally therethrough, and a multiplicity of vertically arranged recesses communicating with said horizontal recess, a bolt slidably disposed in said horizontal recess and having a plurality of notches formed therein, tumblers slidably disposed in said bolt for holding the latter in locking position, said housing having a horizontal key-way formed therein extending from one end thereof transversely through said tumblers, a key insertible in said key-way and having a multiplicity of lugs formed thereon arranged correspondingly to said tumblers, said key being adapted to be lifted in the key-way to bring said lugs in engagement with the tumblers for moving the tumblers out of engagement with the notches in said sliding bolt, and a plurality of pins laterally extending into said key-way and adapted to be variably arranged therein, said key having a plurality of recesses therein to receive said variably arranged pins, when the key is lifted, to permit the effective lifting movement of the key.

2. A lock comprising a housing, a bolt slidably extending through said housing, a multiplicity of tumblers slidably mounted in the housing in substantially parallel alinement, said housing having a key-way extending from one end thereof transversely through said tumblers, a plurality of projections laterally extending into said key-way and adapted to be variably arranged, a key insertible in the key-way and having a multiplicity of lugs arranged to engage said tumblers, said key being adapted to be shifted to bring the lugs into engagement with the tumblers whereby the latter are moved out of engagement with the sliding bolt, said key having a plurality of recesses therein adapted to receive said variably arranged projections to permit the effective lifting movement of the key.

1,221,535. GAS-BURNER. THEODORE A. HOLMBERG, Cleveland, Ohio. Filed Oct. 12, 1916. Serial No. 125,153. (Cl. 34—18.)

1. In a gas burner, a generator casing made up of a plurality of sections open at their bottoms and provided with heat distributing lateral pipes terminating in up-

wardly extending portions covered with spaced air distributing caps.



2. In a gas burner, a generator casing open at its bottom and provided at its sides with heat distributing laterals, a pipe provided with air distributing laterals in alinement with said heat distributing laterals, and gas burners in said casing above said open bottom of said casing and below said pipe and air distributing laterals.

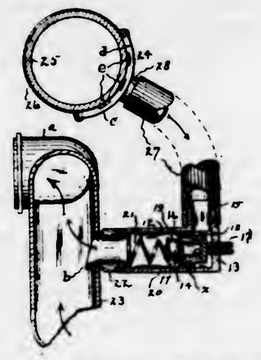
3. In a gas burner, a generator casing provided with heat distributing laterals, an air conduit pipe there in provided with air distributing laterals in alinement with and leading to said heat distributing laterals, and gas burner pipes in said generator casing below said air conduit pipe and heat and air distributing laterals.

4. In a gas burner, a flame inclosing generator casing provided with lateral heat distributing pipes, a central air conduit therein provided with laterals in alinement with and adapted to discharge air through said lateral heat distributing pipes, and gas burners in said casing below said air conduit and laterals whereby the latter are heated and the products of combustion are carried through said heat distributing pipe with the air discharged therein by said air discharging laterals.

5. In a gas burner, an elongated flame inclosing generator casing open at its bottom and provided with supporting legs, a series of lateral air distributing pipes extending from the sides of said casing, and an air conduit pipe in said casing provided with air distributing laterals in alinement with said lateral air distributing pipes, and upwardly extending air distributing pipes intermediate the latter and below the dome portion of said casing.

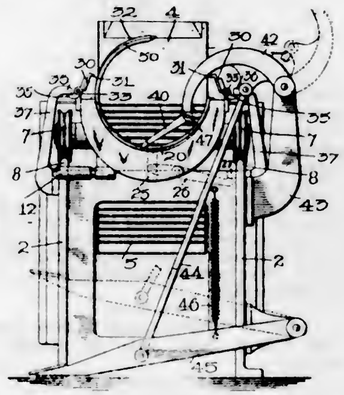
[Claims 6 and 7 not printed in the Gazette.]

1,221,536. ATTACHMENT FOR INTERNAL-COMBUSTION ENGINES. ARTHUR C. HOPKINS, Sioux Falls, S. D., assignor of one-half to Theron R. Bement, Sioux Falls, S. D. Filed June 2, 1916. Serial No. 101,317. (Cl. 123—124.)



An attachment for internal combustion engines, including an exhaust-manifold and an intake-manifold, a receptacle conformable to the exterior of said exhaust-manifold, with air-inlets in its side-walls, the inner edges of the walls of said receptacle being in contact with said exhaust-manifold thus providing a space or chamber between the receptacle and this latter, means for the retention of said receptacle upon the latter, a tubular housing in communication with said intake-manifold, a spring-pressed valve, a valve-seat forming tubular member having ports adapted to provide for the passage of heated air into said tubular member; said seat-forming tubular member being positioned within said tubular housing and slidable therein, said valve being held upon its seat by its pressure-applying spring, said valve-seat forming tubular member having an annular groove containing a packing for fitting the valve-seat tubular member fluid tight within said housing, means for adjusting the position of said valve-seat forming tubular member adapted to provide for controlling the tension of said spring, and a tubular member effecting connection between said receptacle and said tubular housing.

1,221,537. STEREOTYPE-CASTING BOX. CHARLES E. HOPKINS, New York, N. Y. Filed Aug. 18, 1911. Serial No. 644,874. Renewed June 22, 1916. Serial No. 105,237. (Cl. 22—2.)



1. In a stereotype casting box, the combination of two members together constituting the box, one movable toward and from the other, a cam pivoted on one of said members and having an eccentric groove, the portion of the groove of greatest eccentricity having an open mouth projecting toward the other member, and means carried by said other member for entering the open mouth of the groove and turning the cam as one member moves toward the other member.

2. In a stereotype casting box, the combination with a cope, of a drag movable against the cope, a cam pivoted on the cope and having an eccentric groove, the portion of the groove of greatest eccentricity having an open mouth projecting toward the drag, and means on the drag for entering the open mouth of the groove and turning the cam as the drag moves toward the cope.

3. In a stereotype casting box, the combination with an upright cope, of a drag movable from a substantially horizontal position part way between the top and bottom of the cope to a substantially upright position against the cope, a cam pivoted on the cope and having an eccentric groove, the portion of the groove of greatest eccentricity having an open mouth projecting toward the drag, and means on the drag for entering the open mouth of the groove and turning the cam as the drag moves toward the cope.

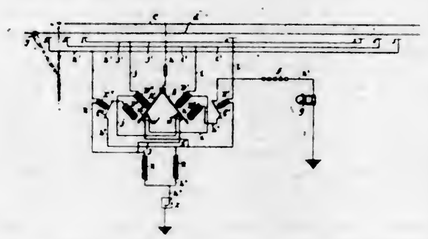
4. In a stereotype casting box, the combination of a cope, a drag supported in front of the cope and movable away from the cope to horizontal position, matrix clamps pivoted to the straight sides of the drag, and means whereby the clamps are caused to move on their pivots away from the drag as the drag turns to a horizontal position.

5. In a stereotype casting box, the combination of a cope, a drag movable toward and from the cope, a set of matrix clamps on the drag having extending fingers, and

means located in stationary position for engaging said fingers and opening the clamps when the drag is moving in a certain direction.

[Claims 6 to 17 not printed in the Gazette.]

1,221,538. SIGNAL APPARATUS. GEORGE JACKSON, Jr., Hohokus, N. J. Filed Feb. 26, 1915. Serial No. 10,697. (Cl. 246—36.)

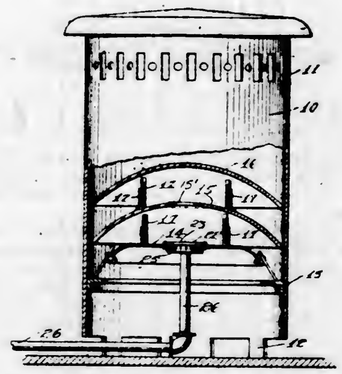


1. In combination, a railway, a vehicle movable thereover and having a circuit closer, a source of current having a conductor extending along the railway, a signal, a conductor *h* leading from the source conductor and having grounded branches *h' h"*, said branches respectively having normally open circuit-closing switches A A' both connected with conductor *h* and branch *h'* containing said signal, means to control the closing and opening movements of switch A including a grounded magnet-including conductor *i* having contacts 2 2 spaced from each other lengthwise of and arranged in circuit-closer-bridging relation to the source-conductor, and also including a grounded magnet-including conductor *l* having a contact 4 between contacts 2 2 and in circuit-closer-bridging relation to said source-conductor, and another magnet-including conductor *j* controlling switch A' and having contacts 1 1 between contacts 2 2 and each side of contact 4 and in circuit-closer-bridging proximity to said source-conductor, conductors *i* and *j* having breaks normally closed by switches A' and A, respectively.

2. In combination, a railway, a vehicle movable thereover and having a circuit closer, a source of current having a conductor extending along the railway, a signal, a conductor *h* leading from the source-conductor and having grounded branches *h' h"*, said branches respectively having normally open circuit-closing switches A A' both conected with conductor *h* and branch *h'* containing said signal, said branches further having normally closed breaks *c' c"* therein, respectively, means to cause closing movement of switch A including a grounded magnet-including conductor *i* having contacts 2 2 spaced from each other lengthwise of and arranged in circuit-closer-bridging relation to the source-conductor, means to break branch *h'* at *c'* including a grounded conductor *l* having a contact 4 between contacts 2 2 and in circuit-closer-bridging relation to said source-conductor, means to cause closing movement of switch A' including a grounded magnet-including conductor *j* having contacts 1 1 arranged each side of contact 4 and between contacts 2 2 and in circuit-closer bridging relation to the source-conductor, branches *h' h"* having electromagnetic means to hold switches A A' in closed position, and means to break branch *h"* at *c"* including a grounded conductor *k* having contacts 3 3 arranged one at each side of the other contacts and in circuit-closer-bridging relation to said source-conductor, conductors *i* and *j* having breaks normally closed by switches A' and A, respectively.

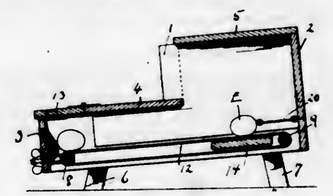
1,221,539. GAS-STOVE. CLAUDE R. JOHNSON, Neodesha, Kans. Filed Sept. 18, 1914. Serial No. 862,368. (Cl. 126—85.)

The combination with a casing and a burner mounted therein, of a baffle plate engaging the burner above the burner openings, an annular rim mounted in the casing, supporting members detachably engaged in the baffle plate and supported on the rim, the baffle plate being vertically adjustable on the supporting members, additional baffle plates arranged in the casing one above the other, sup-



porting members mounted on the baffle plates, and supporting members depending downwardly from the last mentioned baffle plates and adjustably engaged with the first named supporting members whereby the distance between any two of the baffle plates may be varied.

1,21,540. TRAP-NEST FOR HENS. JOHN A. JONES, Farmington, Me. Filed Sept. 11, 1916. Serial No, 119,572. (Cl. 119—48.)

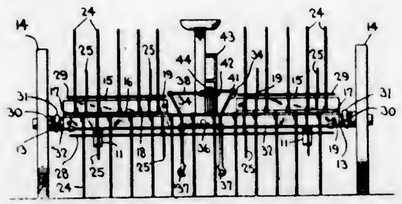


1. In a trap nest, the combination of a casing constructed to provide a single compartment forming a laying chamber and an egg receptacle, and an inclined and endless belt extending from said laying chamber to the egg receptacle over which the eggs are adapted to travel, said belt providing a support for the fowl and adapted to be shifted to have the egg supporting surface thereof cleaned, substantially as set forth.

2. In a trap nest, the combination of a casing constructed to provide an open laying chamber and a closed egg receptacle, and having an open bottom, a pair of rollers journaled in the casing, an endless and inclined belt mounted to move on said rollers providing a support for the fowl and adapted to support the eggs in traveling from said laying chamber to the receptacle, and means for shifting the belt to clean the surface thereof from the open bottom of the casing, substantially as set forth.

3. In a trap nest, the combination of a casing constructed with a raised open section providing a laying chamber and with a closed section forming an egg receptacle, a cross piece located in the laying chamber, a pair of rollers located respectively in the laying chamber and egg receptacle, an endless and inclined belt mounted to travel on said rollers and located adjacent the cross piece, said cross piece and the belt providing a support for the fowl, and a hand operated device for turning one of said rollers to shift the belt, substantially as set forth.

1,221,541. HAY-RAKE. JOHN W. KAHL, Otisco, Ind. Filed Sept. 18, 1916. Serial No. 120,774. (Cl. 56—65.)

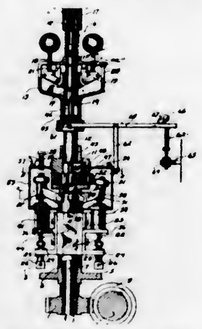


1. In an implement of the character set forth, the combination with a support, of a bar thereon, tines clamped between the bar and support, and clearer fingers secured to the bar.

2. In an implement of the character set forth, the combination with a frame, of an extensible axle member pivotally connected to the frame, wheels journaled on the axle member, clutches for directly connecting the wheels and axle member to cause the latter to turn with and be turned by the wheels, extensible tine carrying means carried by the axle member and fixed thereto so as to turn with said axle member when the axle member and tine carrying means are extended and the axle member is clutched to the wheels, and means for operating the clutch means.

3. In an implement of the character set forth, the combination with a frame, of a supporting member pivoted to the frame, axles slidably and non-rotatably mounted in the supporting member, wheels journaled on the axles, means for clutching the wheels to the axles to cause the same and the support to turn therewith, tines carried by the support and turning therewith when the wheels are clutched to the axles, sections hinged to the support and fixed to turn therewith and with the axles, tines carried by the sections, and operating mechanism for the clutch means.

1,221,542. GOVERNOR FOR FUEL-INJECTION PUMPS OF ENGINES OF THE SEMI-DIESEL OR LIKE TYPES. WILLIAM R. KAHLENBERG, Two Rivers, Wis., assignor to Kahlenberg Bros. Co., Two Rivers, Wis. Filed June 17, 1916. Serial No. 104,175. (Cl. 123—140.)



1. A governor comprising a main shaft structure, a cam block carried thereby and laterally movable, a shaft longitudinally carried by the main shaft structure and including a cam portion connected with the block, centrifugal governor arms carried by the main shaft structure and connected with the cam shaft and engine control means engageable by the cam block.

2. A governor comprising shaft sections connected by a cam block head, a cam block transversely slidable in the head, a cam shaft passed through one of the sections and extending into the head, a governor head splined on said section, a cam connection between the cam shaft and cam block and a connection between the governor head and cam shaft.

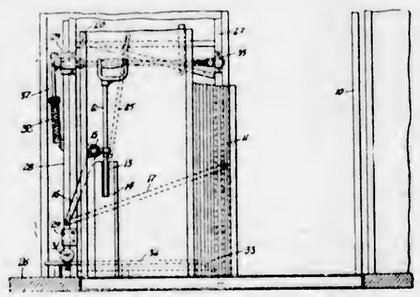
3. A governor comprising main shaft sections connected by a cam block head, a cam block transversely slidable in the head, a cam block actuating shaft passed through one of the main shaft sections and extending through the cam block head, a governor head splined on said main shaft section, the other section being provided with a socket receiving the cam block actuating shaft and forming a dash pot in conjunction therewith, an operative connection between the cam block actuating shaft and cam block, and a connection between the governor head and cam block actuating shaft.

4. A governor comprising a rotatable body, centrifugal governor arms carried thereby, pumps disposed at the sides of the rotatable member, pivoted rock-bars adapted to operatively engage the pumps, a movable cam member carried by the rotatable body to engage the rock-bars and connected with the governor arms, an oil casing surrounding the cam members and rock-bars, and plungers slidable through the casing to operatively engage the rock-bars.

5. A governor comprising a rotatable body, centrifugal governor arms carried thereby, pumps disposed at the sides of the rotatable member, pivoted rock-bars adapted to operatively engage the pumps, a movable cam member carried by the rotatable body to engage the rock-bars and connected with the governor arms, an oil casing surrounding the cam members and rock-bars, plungers slidable through the casing to operatively engage the rock-bars and means for holding said plungers in engagement with the rock-bars.

[Claims 6 to 11 not printed in the Gazette.]

1,221,543. ELEVATOR PROTECTIVE APPARATUS. WILLIAM KEATING, New York, N. Y. Filed Jan. 17, 1917. Serial No. 142,830. (Cl. 187—49.)



1. The combination with an elevator shaft having a door and a lock for holding the door shut, of a car having a gate, a control lever in the car, means for preventing the movement of the control lever in either direction except when the car gate is closed, and means for preventing the closing of the car gate at one of the floors of the shaft except when the shaft door is closed and locked.

2. The combination with an elevator shaft door having a bolt, means for holding the bolt in released position except when the door is closed, an interlocking rod operatively connected to the bolt, a car, a control lever therein, and an interlocking mechanism connected with the control lever and arranged to coact with the interlocking rod for preventing the movement of the control lever except when the shaft door is closed.

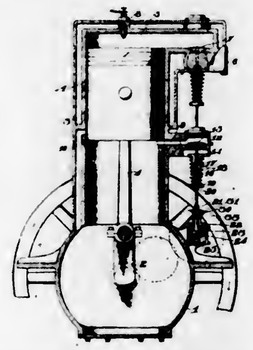
3. The combination with an elevator shaft door having a bolt, means for holding the bolt in released position except when the door is closed, an interlocking rod operatively connected to the bolt, a car, a controller therein, and means connected with the controller and arranged to coact with the interlocking rod for preventing the controller from being actuated except when the shaft door is closed.

4. The combination with an elevator shaft door, of a car, a control lever therein, a locking bar for the lever, a gate operatively connected to the locking bar and an interlocking lever also connected to the locking bar and means on the shaft door arranged to coöperate with the interlocking lever, to prevent the closing of the car gate when the shaft door is open.

5. The combination with an elevator shaft door, of a car, a control lever therein, a locking bar for the lever, a gate operatively connected to the locking bar and an interlocking lever also connected to the locking bar and means on the shaft door arranged to coöperate with the interlocking lever, to prevent the movement of either the car gate or the control lever when the shaft door is open.

[Claims 6 to 12 not printed in the Gazette.]

1,221,544. EXPLOSIVE-ENGINE. MARTIN C. KESSLER, Denver, Colo., assignor to The Kessler Motor Company, Denver, Colo. Filed Aug. 31, 1907, Serial No. 390,941. Renewed Aug. 12, 1916. Serial No. 114,623. (Cl. 123—76.)



1. In an explosive engine, the combination of a cylinder, crank-case, piston, a crank-shaft connected with the piston, means of communication between the crank case and cylinder controlled by the piston, an external air inlet port leading to the crank-case, a valve therein, means actuated by the crank-shaft for positively opening said valve on every alternate compression stroke of the piston, means for normally closing the valve with the other compression strokes, and controllable means for preventing and limiting the extent of said valve closure.

2. In an engine in which air is compressed in the crank case by the inward stroke of the engine piston, a crank case, means located in the air inlet port which supplies said crank case for opening the port to admit air into the crank case prior to its discharge into the cylinder with every inward stroke of the piston, and means for normally opening and closing said first-named means with alternate outstrokes of the piston, the extent of closure being capable of limitation and control.

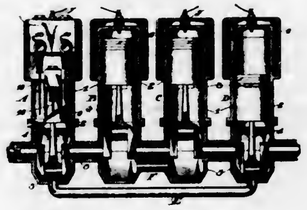
3. In an engine in which air is compressed by the piston in the crank case, means for admitting air into said crank case and means for discharging the compressed air in the crank case into the cylinder with each revolution of the crank shaft, said first-mentioned means capable of permitting the intake of air into the crank case only with the alternate revolutions of the crank shaft.

4. In an explosive engine, the combination of a cylinder, compression chamber, crank shaft and piston, the engine provided with a by-pass leading from the compression chamber to the cylinder, an external air inlet port leading to the compression chamber, a valve in said inlet which is normally held open with every alternate outstroke of the piston and normally closes with the intermediate outward stroke of the piston, and means within the control of the operator for opening and closing the valve.

5. In an explosive engine, the combination of a cylinder, compression chamber, crank shaft and piston, the engine provided with a by-pass leading from the compression chamber to the cylinder, an external air inlet port leading to the compression chamber, a valve therein which is held open with every alternate outstroke of the piston and closes with the intermediate outward strokes of the piston, and controllable means for regulating and varying the degree of closure of said valve on the intermediate alternate outward strokes of the piston.

[Claim 6 not printed in the Gazette.]

1,221,545. EXPLOSIVE-ENGINE. MARTIN C. KESSLER, Denver, Colo., assignor to Kessler Motor Company, Denver, Colo. Filed Sept. 12, 1907, Serial No. 392,520. Renewed Aug. 12, 1916. Serial No. 114,624. (Cl. 123—59.)



1. In an engine, the combination of a plurality of cylinders, pistons and crank-cases, certain of the crank-cases in communication with each other, means within the control of the operator for controlling the discharge of air compressed in the crank-cases, and means whereby the gas, compressed in a plurality of crank-cases may be delivered successively into the individual cylinders.

2. In an engine in which air is compressed in a plurality of crank cases by the simultaneous inward stroke of two engine pistons located on the same side of the crank shaft, the combination of cylinders, pistons, crank cases, means of communication between the crank cases and cylinders, and means for normally discharging the full crank case compression from the crank case alternately into the cylinders for scavenging said cylinders, said means being adjustable and controllable whereby to divide the supply of compressed air and simultaneously discharge it into both cylinders with each instroke of the pistons for both scavenging and augmenting.

3. In an engine in which air is compressed in a plurality of crank cases by the simultaneous inward stroke of two engine pistons located on the same side of the crank shaft, the combination of cylinders, pistons, crank cases, means of communication between the crank cases and cylinders, and means for normally discharging the full crank case compression alternately into the cylinders for scavenging said cylinders, said means being adjustable and controllable whereby to divide the supply of compressed air and simultaneously discharge it into both cylinders with each instroke of the pistons for both scavenging and augmenting, said means being also adjustable to cause the discharge of the full crank case compression first into one cylinder and then into the other for augmenting only.

4. In a four-cycle explosive engine, the combination of two or more cylinders located on the same side of a common crank shaft, pistons therein, crank cases, a crank shaft rotatable therein, connecting rods extending from the cranks to the pistons, means of communication between the crank cases and the cylinders, valves therein and means for controlling said valves whereby the proportion of fluid compressed for scavenging or augmenting is variable and within the control of the operator.

5. In an engine in which two pistons operate to compress air, crank-cases, cylinders, means of communication between the crank-cases and between the crank-cases and cylinders, and means for controlling and varying the volume of air delivered from the crank-cases to the cylinders, said means comprising valves and an extensible slide rod

in position to actuate each valve, these slide rods actuated alternately one at each revolution of the crank-shaft, and means for simultaneously lengthening one slide rod and shortening the other whereby one or the other or both are adapted to actuate a valve, and means for actuating the slide rods.

[Claim 6 not printed in the Gazette.]

1,221,546. THREAD-CUTTING THIMBLE. EUGENIA WEATHERLY KING, Birmingham, Ala. Filed Oct. 18, 1915. Serial No. 56,489. (Cl. 223—51.)

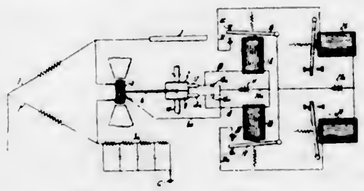


1. A thimble having an outwardly projecting thread cutter disposed substantially in a radial axial plane through the thimble, said cutter having a short front cutting edge facing toward the closed end of the thimble and having a rounded tip, said cutting edge forming a tangent to the curve of the tip, substantially as described.

2. A thimble having an integral outwardly projecting thread cutter thereon, said thread cutter lying in an axial plane longitudinally through the thimble and comprising a short cutting edge slightly inclined toward the closed end of the thimble, said cutter at the outer end of its cutting edge being rounded over on a short radius curve and inclined back toward the open end of the thimble, substantially as described.

3. A thimble having a lip punched up from its body portion, said lip having a short thread cutting edge thereof which faces toward the closed end of the thimble and projects from the thimble in a plane through its long axis and is inclined slightly toward the outer closed end of the thimble, and said lip having a rounded tip forming an uninterrupted continuation of said short edge.

1,221,547. TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed Nov. 29, 1913, Serial No. 803,753. Renewed Dec. 30, 1916. Serial No. 139,969. (Cl. 178—55.)



1. In telegraphy, the combination of a pair of local circuits, means in one of said circuits to translate positive pulses into readable characters, means in the other of said circuits to translate negative pulses into readable characters, a line relay, and an armature therefor arranged in response to positive pulses to close one of said circuits, and in response to negative pulses to close the other circuit, and when in zero position to close both circuits.

2. In telegraphy, the combination with a line of transmission, a line relay, a circuit operatively related to said line relay to translate pulses of one polarity received by said line relay, and a second circuit operatively related to said line relay adapted to translate pulses of opposite polarity received by said line relay, said line relay being arranged in its zero position to energize both of said circuits.

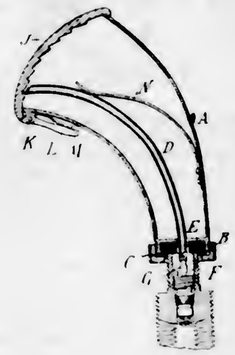
3. In telegraphy, a pair of receiving circuits, a translating device in each circuit, and a line relay responsive to pulses on the line and arranged upon receipt of impulses of one polarity to energize one of said circuits, upon receipt of pulses of the opposite polarity to energize the other circuit, upon receipt of pulses of both polarities to energize neither circuit, and in the absence of receipt of impulses of either polarity to energize both circuits.

4. In telegraphy, a pair of receiving circuits, signal translating devices in each circuit, a line relay responsive to pulses on the line, a vibrating armature therefor, and a pair of circuit terminals, one for each of said local circuits and so related to said vibrating armature that upon the receipt of pulses of opposite polarity said armature vibrates over both of said terminals, upon receipt of pulses of one polarity said armature pauses upon one of said terminals, upon receipts of pulses of the opposite polarity said armature pauses upon the other of said terminals, and in the absence of pulses said armature pauses in contact with both of said terminals.

5. The method of diplexing lines of transmission, which consists in causing the armature of a line relay to connect alternately with alternate parts of two conductors in quick succession to denote that no signal is received, causing said armature to connect for a comparatively long period of time with one of said conductors to denote that one signal is received, and causing said armature to remain stationary, thereby connecting with both of said conductors, to denote that two signals are received simultaneously.

[Claims 6 to 8 not printed in the Gazette.]

1,221,548. PRESSURE-GAGE. HENRY P. KRAFT, Ridgewood, and MAXIMILIAN CHARLES SCHWEINERT, West Hoboken, N. J. Filed Aug. 10, 1910, Serial No. 576,580. Renewed June 27, 1916. Serial No. 106,264. (Cl. 73—109.)



1. A pressure gage having a pressure member comprising a curved tube, one end of which is adapted to be connected with a source of pressure, and the other end of which is adapted to move as the tube straightens under pressure, and a fixed part past which said tube moves, said part and tube constituting a scale and indicating member, and means for holding said tube in its varying positions.

2. A pressure gage having a pressure member comprising a tube curved through an arc of approximately 90°, and adapted to straighten under pressure, means for indicating the pressures including said tube or a part of the indicating means, and means for holding said tube in its varying positions.

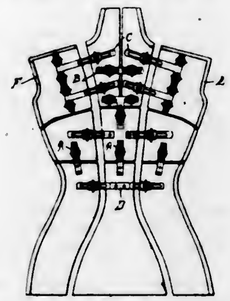
3. A pressure gage having a pressure member comprising a curved tube, one end of which is adapted to be connected with a source of pressure, and the other end of which is adapted to move as the tube straightens under pressure, and a fixed part past which said tube moves, said part and tube constituting a scale and indicating member, and means for holding said tube in its varying positions, said means comprising a ratchet bar.

4. A pressure gage having a pressure member comprising a curved tube, one end of which is adapted to be connected with a source of pressure, and the other end of which is adapted to move as the tube straightens under pressure, and a fixed part past which said tube moves, said part and tube constituting a scale and indicating member, and means for holding said tube in its varying positions, said means comprising a curved ratchet bar.

5. A pressure gage having a pressure member comprising a curved tube, one end of which is adapted to be connected with a source of pressure, and the other end of which is adapted to move as the tube straightens under pressure, and a fixed part past which said tube moves, said part and tube constituting a scale and indicating member, means for holding said tube in its varying positions, said means comprising a ratchet bar, and means for yieldingly holding said ratchet bar in position.

[Claims 6 to 10 not printed in the Gazette.]

1,221,549. ADJUSTABLE CONNECTING DEVICE FOR DRESS-FORMS. MICHAEL LUERY, THOMAS S. LEVIS, and BEN S. NELSON, Chicago, Ill., assignors to Model Form Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 26, 1913. Serial No. 803,121. (Cl. 223—18.)



1. An adjustable connecting device for dress forms comprising a corrugated sheet metal connecting strip, a body member supporting a pair of engaging elements adapted to ride upon the surface of said corrugations on one side of the strip, a second pair of engaging elements adapted to ride upon the surface of the corrugations on the other side of said strip, means for fastening said strip and body members to the form parts to be connected, and means for yieldingly holding said engaging elements to permit longitudinal adjustment of said strip.

2. An adjustable connecting device for dress forms comprising a sheet metal corrugated connecting strip, a body member supporting a pair of engaging elements adapted to ride upon the surface of said corrugations on one side of said strip, a second pair of engaging elements adapted to ride upon the surface of the corrugations on the other side of said strip, means for fastening said strip and body members to the form parts to be connected, and means for yieldingly holding said engaging elements to permit longitudinal adjustment of said strip, the last said means being adjustable whereby said engaging elements may be locked to prevent adjustment of the strip.

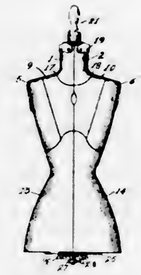
3. An adjustable connecting device for dress forms comprising a sheet metal corrugated connecting strip, a fixed device comprising engaging elements adapted to ride upon the opposite surfaces of said corrugations, a lock-nut, and resilient means between said nut and certain of said engaging elements whereby said nut may be adjusted so as to permit adjusting movement of the strip under opposing action of said elements or to lock said elements to prevent adjusting movement of said strip.

4. An adjustable connecting device for dress forms comprising an elongated connecting strip adapted to be attached to a section of the form at one end and having a slot extending lengthwise thereof, prong-shaped clamping elements engaging opposite surfaces of the connecting strip, a clamping screw adapted to be fastened to another section of the form and extending through said clamping elements and the strip slot, a lock-nut threaded upon said clamping screw, and resilient means positioned between the nut and the pronged clamping elements whereby said nut may be adjusted for varying the clamping tension acting upon said clamping elements.

5. In combination with two adjacent garment form sections, a connecting plate secured at one end to one of said sections, offset therefrom near said secured end and extending in a straight line from said offset over the proximate part of the other section, out of contact with said sections except at its secured end and with all other parts except at its clamping point hereinafter mentioned, a spacing member interposed between said connecting plate and the latter section, a spring pressed friction clamp bearing against said plate opposite to said spacing member and a stud attached to the latter section, passing through said plate, spacing member and clamp.

[Claim 6 not printed in the Gazette.]

1,221,550. ADJUSTABLE MODEL DRESS-FORM. MICHAEL LUERY, Chicago, Ill., assignor to Model Form Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 16, 1914. Serial No. 832,204. (Cl. 223—18.)



1. A dress form divided vertically through its neck from shoulder to shoulder and front to back so as to constitute four vertical divisions, vertical cuts through the shoulder to provide front and rear shoulder and intermediate sections, curved cuts at the base of the neck providing independent front and rear neck sections at each side, and connecting devices for said sections to permit independent adjustment thereof.

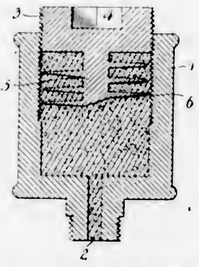
2. A dress form divided vertically through its neck and shoulders and front to back so as to constitute four vertical divisions, a horizontal cut through the form between the bust and waist, front and rear curved cuts dividing the neck and bust, vertical cuts through the shoulders so as to provide front and rear shoulder and intermediate sections, and connecting devices yieldingly connecting adjacent sections to permit independent adjustment thereof.

3. A dress form divided vertically through its neck from shoulder to shoulder and centrally from front to back, so as to comprise four neck sections, front and rear curved cuts at the base of the neck for dividing the neck sections from the adjoining bust, shoulder and back portions so as to provide front and rear shoulder and bust sections, horizontal cuts extending around the form between the shoulder and waist, and connecting devices for said neck and shoulder sections whereby said shoulder and bust sections may be adjusted independent of the neck sections.

4. A dress form divided vertically through its neck from shoulder to shoulder and centrally from front to back so as to comprise four vertical divisions, front and rear curved cuts at the base of the neck providing front and rear combined shoulder and bust sections at each side, horizontal cuts extending around the form between

the shoulder and waist, and connecting devices whereby any of the neck or body sections may be independently adjusted and held.

1,221,551. FORCE-FEEDER FOR GREASE-CUPS. FRED MASON, Springfield, Mo. Filed Apr. 24, 1916. Serial No. 93,187. (Cl. 184—48.)

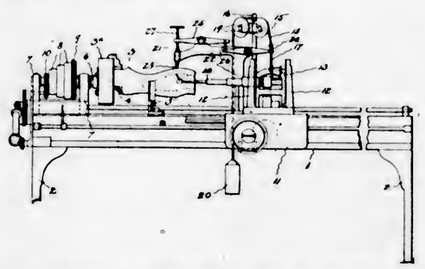


1. The combination with a feed plug for grease cups, of an anchoring screw carried by the inner end of said plug to thread into the grease in the cup to prevent accidental separation of the two.

2. The combination with a grease cup and a feed plug having a threaded connection therewith, of an anchoring screw carried by the inner end of said plug to thread into the grease in the cup to prevent accidental separation of the two, and a grease outlet from said cup.

3. The combination with a grease cup and a feed plug having a threaded connection therewith, of a stem projecting axially from the inner end of the plug, and a helical blade surrounding said stem to thread into the grease in the cup to prevent accidental separation of said cup and plug, and a grease outlet from said cup.

1,221,552. LATHE FOR TURNING IRREGULAR FORMS. JOHN J. MCCANN, Burlington, N. J. Filed July 27, 1915. Serial No. 42,151. (Cl. 142—15.)



1. In a device of the character described, means for supporting and rotating a portion of an artificial limb, a longitudinally-slidable carriage, a standard mounted on said carriage provided with a lever, a laterally-extending arm on said standard having a lever connected to the first-mentioned lever and provided with an adjustable follower slidable in the end of said arm for engagement with the outer surface of the limb, a vertically-slidable frame mounted on said carriage and provided with a rotatable boring cutter, a second standard mounted on said carriage provided with pulleys, a cable or chain connected to one end of said slidable frame and to the lever on the first-mentioned standard, and running over the pulleys and having its other end provided with a weight which counterbalances the weight of the vertically-slidable frame and thereby relieve and equalizes the pressure caused by the weight of the slidable frame on the follower.

2. In a device of the character described, means for supporting and rotating a portion of an artificial limb, a longitudinally-slidable carriage, means for holding said carriage after adjustment, a standard mounted on the front of said carriage provided with a laterally-extending pivoted lever, a laterally-extending arm having a lever pivoted thereto, above the first-mentioned lever, and connected therewith by a link and provided with a vertically-adjustable follower for engagement with the outer surface of the limb slidable vertically in the outer end of said arm, a vertically-slidable frame mounted in guides extending upward from said carriage and provided with a rotatable boring cutter, a second horizontally-pivoted standard on said carriage provided with a cross-piece or arm having pulleys, a cable or chain connected at one end to the said slidable frame and to the first-mentioned lever by means of a link, and running over the pulleys and having its other end provided with a weight of such weight that it counterbalances the weight of the slidable frame and thereby relieves and equalizes the pressure on the follower.

1,221,553. PROCESS OF REFINING SUGAR LIQUOR. JASPER A. MCCASKELL, Salt Lake City, Utah. Filed Aug. 17, 1915. Serial No. 45,900. Renewed Feb. 5, 1917. Serial No. 146,848. (Cl. 127—15.)

1. The process substantially as herein described of filtering and decolorizing liquids containing separable solids, said process consisting, essentially, in mixing a filtering medium of greater specific gravity than the foreign materials in said liquid, with said liquid and filtering the mixture to separate the liquid content thereof from the said filtering medium and to form a filter cake of said medium, utilizing the cake of separated filtering medium to filter out the solids normally in said liquid and to decolorize said liquid, and then disintegrating the cake and separating therefrom the associated lighter and valueless constituents and thereby preparing the filtering medium for re-use with another portion of original liquid to be filtered and decolorized.

2. The process substantially as herein described of filtering and decolorizing liquids containing separable solids, said process consisting, essentially, in mixing a filtering medium of greater specific gravity than the foreign materials in said liquid, with said liquid and filtering the mixture to separate the liquid content thereof from the said filtering medium and to form a filter cake of said medium, utilizing the cake of separated filtering medium to filter out the solids normally in said liquid and to decolorize said liquid, then washing the cake of remaining traces of the liquid, and then disintegrating the cake and separating therefrom the associated lighter and valueless constituents and thereby preparing the filtering medium for re-use with another portion of original liquid to be filtered and decolorized.

3. The process substantially as herein described of filtering and decolorizing liquids containing separable solids, said process consisting, essentially, in mixing a filtering medium of greater specific gravity than the foreign materials in said liquid, with said liquid and filtering the mixture to separate the liquid content thereof from the said filtering medium and to form a filter cake of said medium, utilizing the cake of separated filtering medium to filter out the solids normally in said liquid and to decolorize said liquid, washing the cake of remaining traces of the liquid, removing the cake, disintegrating the cake by the aid of a liquid, and then recovering the filtering medium constituent of the disintegrated cake by floating off therefrom the associated lighter and valueless constituents of said cake.

4. The process substantially as herein described of filtering and decolorizing liquids containing separable solids, said process consisting, essentially, in mixing a filtering medium of greater specific gravity than the foreign materials in said liquid, with said liquid and filtering the mixture to separate the liquid content thereof from the said filtering medium and to form a filter cake of said medium, utilizing the cake of separated filtering medium to filter out the solids normally in said liquid and to decolorize said liquid, then, while the cake is *in situ*, revivifying the filtering medium and utilizing the revivified medium for filtering and decolorizing additional liquid, then washing the cake of remaining traces of the revivifying agent, and finally, disintegrating the cake and separating therefrom the lighter and valueless constituents and thereby preparing the filtering medium for re-use with another portion of original liquid to be filtered.

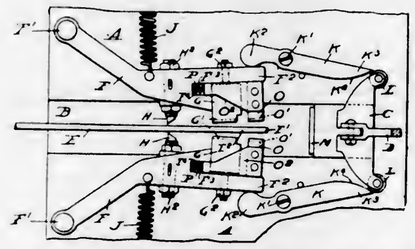
5. The process substantially as herein described of filtering and decolorizing liquids containing separable solids, said process consisting, essentially, in mixing a filtering medium of greater specific gravity than the foreign materials in said liquid, with said liquid and filtering the mixture to separate the liquid content thereof from the said filtering medium and to form a filter cake of said medium, utilizing the cake of separated filtering medium to filter out the solids normally in said liquid and to decolorize said liquid, then, while the cake is *in situ*, revivifying the filtering medium and utilizing the revivified medium for filtering and decolorizing additional liquid, then washing the cake of remaining traces of the revivifying agent, removing the cake from its filtering position, disintegrating said cake, and separating the filter content of the cake from the lighter valueless portions thereof by filtering off the latter.

[Claims 6 to 12 not printed in the Gazette.]

1,221,554. PROCESS OF REFINING SUGAR LIQUOR. JASPER A. MCCASKELL, Salt Lake City, Utah. Filed Aug. 17, 1915. Serial No. 45,901. Renewed Feb. 5, 1917. Serial No. 146,849. (Cl. 127—15.)

The process substantially as herein described of filtering and decolorizing sugar-liquor, said process consisting, essentially, in mixing bone-char having a specific gravity greater than that of the foreign material in said liquid with original sugar-liquor and filtering the mixture to separate the liquid content thereof from the bone-char; then washing the filter cake of bone-char in its filtering position to remove remaining traces of the sugar liquor; then separating the bone-char from the associated foreign agent of the cake by agitation and by the difference in the specific gravity of the bone-char and said foreign matter, and adding the separated bone-char to another portion of original sugar-liquor to be filtered; then adding another charge of bone-char to the separated filtrate obtained from the said filtering operation and filtering the mixture to obtain a decolorized filtrate and a filter cake composed of the added bone-char; washing the cake in its filtering position to remove remaining traces of the sugar-liquor; revivifying the bone-char; and finally, adding the revivified bone-char to another portion of the filtered sugar-liquor to be decolorized.

1,221,555. NAIL-MAKING MACHINE. DAVID H. MCCLELLAND, Pittsburgh, Pa. Filed Feb. 28, 1916. Serial No. 80,766. (Cl. 10—17.)



1. In a nail-making machine, a frame or table, a cross head carrying a heading die and mounted to reciprocate thereon, levers pivoted one at each side of the axis of reciprocation, cutters normally separated and disposed at opposite sides of said axis, one end of each lever being operatively connected to one of said cutters, and the opposite ends of the levers being formed to be wedged apart by the advance of the cross head, whereby the stock between the cutters is severed as the cross head advances for forming a head thereon.

2. In a nail-making machine, a frame or table, a cross head carrying a heading die and mounted to reciprocate thereon, levers pivoted one at each side of the axis of reciprocation, grippers normally separated and disposed at opposite sides of said axis, cutters associated with said grippers, respectively, one end of each of the said levers being operatively connected to one of said grippers with its associated cutter, and the opposite ends of the levers being formed to be wedged apart by the advance of the cross head, whereby the grippers are closed upon the stock and the cutters coöperate to sever the same as the heading die approaches the end of said stock for forming a head thereon.

3. In a nail-making machine, a frame or table, a cross head carrying a heading die and mounted to reciprocate thereon, a pair of gripping jaws disposed at opposite sides of the axis of reciprocation for holding the stock which is to be headed by the heading die, a swinging support upon which each of the gripping jaws is rigidly mounted, said supports being pivoted on the frame at respectively opposite sides of said axis of reciprocation at points such that lines from the gripping jaws to the pivots of their respective supports diverge oppositely from the axis of cross head reciprocation and beyond the limit of movement of the cross head toward the grippers, and means whereby said movement of the cross head effects an initial engagement of the grippers with the stock.

4. In a nail-making machine, a frame or table, a cross head carrying a heading die and mounted to reciprocate thereon, a pair of gripping jaws for holding the stock to be headed and disposed at opposite sides of the axis of reciprocation of the heading die, a pair of swinging arms by which said jaws are carried respectively, said arms being pivoted at opposite sides of the axis of reciprocation and at points beyond the limit of such movement of the cross head, said pivots being widely separated from each other so that lines from the gripping jaws to the pivots respectively diverge symmetrically about the axis of reciprocation whereby the grip of the jaws is increased by the impact of the heading die.

5. In a nail-making machine, a frame or table, a cross head carrying a heading die and mounted to reciprocate thereon, two pair of gripping dies normally separated along the axis of cross head movement and one of each pair normally disposed at either side of said axis, each pair being formed to completely encompass the stock when closed upon it, swinging supports each carrying one gripper of each pair, one gripper on each support being movable toward the other, said supports being pivoted on the frame at respectively opposite sides of the axis of cross head movement, so that lines from the gripping jaws to the pivots of their respective supports diverge oppositely from said axis and beyond the limit of said movement whereby the heading impact increases the gripping force, and means for moving the grippers into initial engagement with the stock.

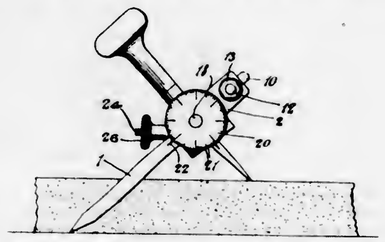
[Claim 6 not printed in the Gazette.]

1,221,556. TOOL-HOLDER. LYNN P. MCEACHRON, Hoosick Falls, N. Y. Filed Nov. 24, 1916. Serial No. 133,234. (Cl. 51—7.)

1. A device of the class described comprising a pair of legs, a connecting bar connecting the upper ends of said legs to provide a U-shaped frame, a shaft journaled to said legs, a sleeve secured centrally of said shaft, a tool socket rotatably supported in said sleeve, a dial carried by said tool socket and positioned exteriorly of said sleeve to indicate the various positions of the tools carried by the tool socket with relation to said sleeve.

2. A device of the class described comprising a pair of supporting legs, a connecting bar connecting the upper ends of said legs to provide a U-shaped frame, lugs extending inwardly from the legs near their upper ends, a

shaft rotatably mounted between the legs, bands surrounding the shaft near opposite ends, bolts extending through the lugs and through the bands to tighten the same on the shaft and thereby hold said shaft in various adjusted positions and a tool holder mounted centrally of the shaft for supporting tools to be sharpened.



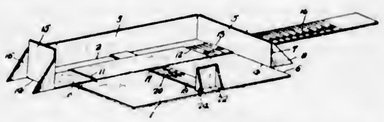
3. A device of the class described comprising a pair of legs, a connecting bar connected the upper ends of the legs to provide a U-shaped frame, the said legs being apertured slightly below the connecting bar, a shaft journaled in the apertures, a tool holder centrally of the shaft, means to hold the shaft in various adjusted positions and a dial at the end of the shaft to indicate the various degrees of adjustment.

4. A device of the class described comprising a pair of legs, a connecting bar connecting the upper end of the legs to provide a U-shaped frame, the said legs being apertured slightly below the connecting bar, a shaft journaled in the apertures, a tool holder centrally of the shaft, means to hold the shaft in various adjusted positions and a dial at the end of the shaft to indicate the various degrees of adjustment, means to adjust the tool holder on the shaft and a dial on the tool holder to indicate the various positions of the tool within the holder.

5. A device of the class described comprising a pair of legs, a connecting bar connecting the upper ends of said legs, a shaft journaled between the legs, a tool holder centrally of the shaft, a dial on one end of the shaft to indicate various positions of the tool holder, hubs formed on the shaft near opposite ends, lugs extending inwardly from the legs immediately beneath the hubs, bands surrounding the hubs and bolts extending through the bands and through the lugs to adjust the tension of the bands on the hubs and thereby hold the tool holder in various adjusted positions.

[Claims 6 and 7 not printed in the Gazette.]

1,221,557. FOOT-GAGE. THOMAS J. MADDEN, Cairo, Ill. Filed Sept. 15, 1916. Serial No. 120,388. (Cl. 33—3.)

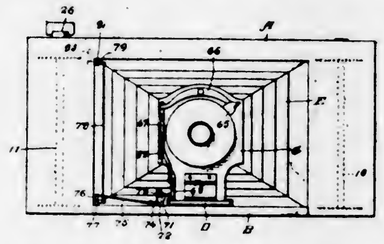


1. In a foot gage, the combination of a base plate having a longitudinal and a transverse series of slots therein, a length gage in the form of a strip slidable through one series of slots, and a width gage slidable through the other series of slots in the base plate, an end stop having a fixed relation to said plate, another end stop having a fixed relation to the length gage and shiftable therewith toward and away from the fixed end gage, a side stop having a fixed relation to the base plate, and another side stop having a fixed relation to the width gage, both of said gages being graduated for the purpose specified.

2. In a foot gage, the combination of a base plate having a longitudinal and a transverse series of slots therein, a length gage in the form of a strip slidable through one series of slots, and a width gage slidable through the other series of slots in the base plate, an end stop having a fixed relation to said plate, another end stop having a fixed relation to the length gage and shiftable therewith toward and away from the fixed end gage, a side stop having a fixed relation to the base plate, another side stop having a fixed relation to the width gage, both of said gages being graduated for the purpose specified, all of said stops being foldable to facilitate assemblage and obtain compactness.

3. In a foot gage, the combination of a base plate having a longitudinal and transverse series of slots therein, a length gage in the form of a strip slidable through one series of slots, and a width gage slidable through another series of slots in the base plate, an end stop having a fixed relation to said plate, another end stop having a fixed relation to the length gage and shiftable therewith toward and away from the fixed end gage, a side stop having a fixed relation to the base plate, another side stop having a fixed relation to the width gage, both of said gages being graduated for the purpose specified, all of said stops being foldable, and foldable braces adapted to sustain certain of said stops in perpendicular relation to the base plate.

1,221,558. AUTOMATIC FILM-WINDING MECHANISM FOR CAMERAS. HERBERT B. MEREDITH, McAlester, Okla. Filed Aug. 22, 1916. Serial No. 116,351. (Cl. 242—71.)

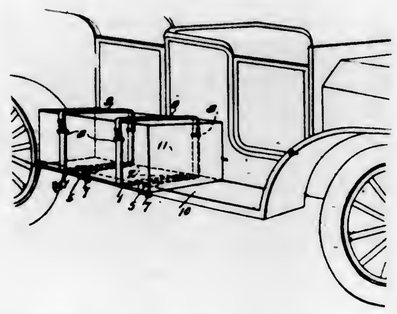


1. In a camera, a film-advancing motor comprising a spring-actuated drum, a film-winding shaft, a gear having a pawl and ratchet connection with said film-winding shaft normally loose thereon and geared to said drum, a clutch member journaled on said film-winding shaft, a spring-winding arbor on which said drum is journaled geared to said clutch member, a clutch rotatable with but slidable on said film-winding shaft and movable into and out of engagement with said clutch member, drum holding and releasing means, and clutch-shifting means actuated by the spring winding arbor after a predetermined number of revolutions.

2. In a camera, a film-advancing motor comprising a spring-actuated drum, a film-winding shaft, a gear having a pawl and ratchet connection with said film-winding shaft normally loose thereon and geared to said drum, a clutch member journaled on said film-winding shaft, a spring-winding arbor on which said drum is journaled geared to said clutch member, a clutch rotatable with but slidable on said film-winding shaft and movable into and out of engagement with said clutch member, drum holding and releasing means, clutch-shifting means actuated by the spring winding arbor after a predetermined number of revolutions, said drum holding and releasing means comprising a pivoted escapement arm, projections on the drum with which said arm coöperates, and connections by which said escapement arm is moved to release the drum, the clutch-shifting means comprising a clutch-operating fork operatively connected with said escapement arm.

3. An automatic film winder for cameras comprising a frame adapted to be secured to the camera body, a spring actuated drum journaled in the frame, lugs at predetermined points on the drum, means for engaging and releasing said lugs, means actuated by said drum for rotating a film spool within the camera body, a clutch means for throwing the spring winding arbor into and out of driving engagement with the drum, means for releasing the lug engaging means, and means coöperating with the clutch for winding the spring.

1,221,559. LUGGAGE-CARRIER. JOSEPH F. MERGEN, Tipton, and GEORGE W. HOOVER, Osborne, Kans. Filed Sept. 8, 1914, Serial No. 860,728. Renewed Aug. 30, 1916. Serial No. 117,802. (Cl. 224—29.)



1. A luggage carrier comprising in combination a pair of corresponding side members each consisting of a metal bar bent laterally at its lower end to provide a base portion disposed in a horizontal plane, the base portions of the said side members being arranged edgewise with respect to one another for relative longitudinal movement, a connection intermediate the said side members including a keeper embracing the base portions of the side members, a fastening securing said keeper to the base portion of one of the side members near the outer end of the latter, said last named side member being extended downwardly and inwardly to provide a spaced clamping arm parallel with the base portion and a set screw mounted on said clamping arm and coöperative with the fastening and in alinement with the connection between the said keeper and one of the side members for coöperation therewith in its clamping action.

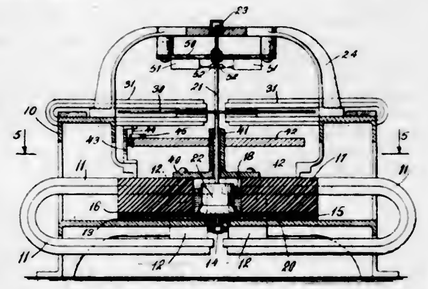
2. A luggage carrier attachment consisting of a pair of corresponding flat metal sections, each comprising an upright portion and a horizontal base portion, and said base portions being disposed side by side edgewise to one another, the base portion of one of said side members being formed with a downwardly and inwardly extending clamping arm spaced therefrom, a keeper fastened to the side member having the clamping arm and connecting the base portions of said side members together for free sliding movement with respect to each other, and a set screw carried by the clamping arm and coacting with said keeper to clamp the attachment to a running board or like part.

1,221,560. ELECTRIC METER. EDWIN H. MESSITER, Brooklyn, N. Y., assignor to Electric Weighing Company, New York, N. Y., a Corporation of New York. Filed Aug. 12, 1913. Serial No. 784,342. (Cl. 171—265.)

1. In a meter, a motor mechanism having a magnetic field, a damping mechanism having a magnetic field and arranged to oppose the effect of the motor mechanism and an adjusting device arranged to inversely vary the effective strength of said magnetic fields.

2. In a meter, a motor mechanism having a magnetic field, a damping mechanism having a magnetic field and arranged to oppose the effect of the motor mechanism, and a member of magnetic material arranged to divert a part of the lines of force of both of said magnetic fields, and means for adjusting the position of said member relatively to said fields.

3. In a meter, a motor mechanism having a magnetic field, a damping mechanism having a magnetic field and arranged to oppose the effect of the motor mechanism, and a member of magnetic material between said fields arranged to divert a part of the lines of force of both of said magnetic fields, and means for adjusting the position of said member toward one of said fields and away from the other field.



4. In a meter, a motor magnet, a damping magnet, and a member of magnetic material adjustably supported between said magnets and adapted to influence both magnets.

5. In a meter, a set of horizontally disposed motor magnets, a set of horizontally disposed damping magnets, and a vertically adjustable member of magnetic material between said sets of magnets and adapted to influence both sets of magnets.

[Claims 6 to 14 not printed in the Gazette.]

1,221,561. METAL COVERING FOR CAR OR VEHICLE BODIES AND METHOD OF PREPARING THE SAME. ALEXANDRE MEYER, Paris, France. Filed Feb. 7, 1912. Serial No. 676,092. (Cl. 91—73.)



1. The herein described method of preparing metal for use as a covering for car or vehicle bodies comprising cleaning a suitable blank, coating one surface of the blank with suitable oxid-resisting material, heating the coated blank to disclose flaws due to impurities or imperfections in the body thereof, treating the blank to prevent such flaws appearing in the finished article, shaping the blank for the particular use for which is is intended, subjecting the surface to be enameled to the action of a blast of abrasive material, applying to said surface a coating fusing only at a relatively high temperature, and subsequently applying a more readily fusible enamel coating.

2. The herein described method of preparing metal for use as a covering for car or vehicle bodies comprising treating and shaping a suitable blank to adapt it for the intended use and to receive an antioxid enamel coating, coating the entire surface which is to be enameled with an oxid-resisting material, applying to said surface a plastic coating, fusing at such a high temperature that the coated sheet or plate may be subsequently heated and rolled to straighten it without damage to said coating, and subsequently applying a more readily fusible enamel coating.

3. The herein described method of preparing metal for use as a covering for car or vehicle bodies comprising treating and shaping a suitable blank to adapt it for the intended use and to receive an antioxid enamel coating, coating the entire surface which is to be enameled with an oxid-resisting material, applying to said surface a plastic coating fusing only at a relatively high temperature, impressing suitable designs on or in said layer, and thereafter applying a second enamel coating.

4. The herein described method of preparing metal for use as a covering for car or vehicle bodies, comprising ap-

plying to a suitable blank an anti-oxid layer having a coefficient of expansion substantially the same as that of the blank, and superimposing on said layer, first, a layer of enamel the fusing point of which is relatively high and thereafter an enamel layer the fusing point of which is relatively low.

3. The herein described method of preparing metal for use as a covering for car or vehicle bodies comprising treating and shaping a suitable blank to adapt it for the intended use and to receive a coating of enamel, fixing to the surface of the blank to be enameled a reinforcing means, coating said surface and reinforcing means with an oxid resisting material, and thereafter applying a second enamel coating.

[Claims 6 to 8 not printed in the Gazette.]

1,221,562. PROCESS FOR MANUFACTURE OF PANELS MADE OF ENAMELED OR VITRIFIED SHEET METAL DESIGNED TO BE USED AS COVERING MEANS FOR RAILWAYS, CARRIAGES, TRAMWAYS, AUTOMOBILES, AND THE LIKE. ALEXANDRE MEYER, Paris, France. Filed Jan. 29, 1913. Serial No. 745,047. (Cl. 91—73.)



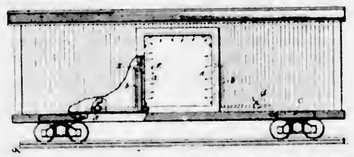
1. The herein described method of preparing enameled metal plates in which a perfect molecular equilibrium exists between the metal plate and enamel coating comprising applying to the plate more than two superimposed layers of enamel, the alternate layers being respectively fusible at a relatively high and relatively low temperature.

2. As an article of manufacture, a metal plate coated on one face with enamel, said coating being in molecular equilibrium with the metal of the plate and being formed by an anti-oxid layer applied directly to the metal and more than two superposed layers of enamel, the alternate layers being respectively fusible at a relatively high and relatively low temperature.

3. A metal sheet or plate having a surface provided with an enamel coating comprising a surface provided with an enamel coating comprising a plurality of layers, the primary one having a coefficient of expansion substantially the same as that of the metal sheet, and the superimposed layers being fusible at different temperatures and alternately arranged.

4. A metal sheet or plate having a surface provided with an enamel coating comprising a plurality of layers, alternately fusible at relatively high and relatively low temperatures, and a metal reinforcing means embedded in said coating.

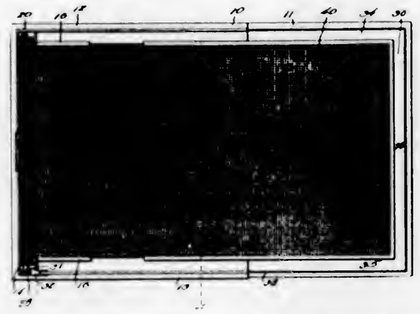
1,221,563. ROBBER-PROOF RAILWAY-CAR. GEORGE W. MEYERS, U. S. Army. Filed Jan. 25, 1917. Serial No. 144,566. (Cl. 105—75.)



1. In combination with a railway car having a doorway, a pipe surrounding the doorway and having perforations directed toward the door opening, a gas tank on the car and a pipe connecting the same to said perforated pipe, and manually controlled means in this connecting pipe for controlling the supply of gas to the perforated pipe.

2. In combination with a railway car having a doorway, a pipe mounted in the doorway and having perforations directed toward the door opening, a gas tank at each end of the car and a pipe connecting each tank with said perforated pipe, and a manually controlled device in each of these connecting pipes, these devices being located at opposite ends of the car, whereby a person in the car may control the admission of gas to the perforated pipe from either end of the car.

1,221,564. WINDOW-SCREEN. HENRY D. MILLS, Inwood, N. Y. Filed Nov. 25, 1916. Serial No. 133,414. (Cl. 156—38.)



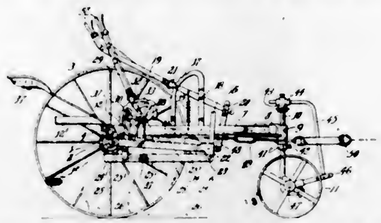
1. A window screen including relatively movable frame sections, said frame sections being formed of sheet metal with the members thereof of double thickness having one face thereof pressed outward to form a rib, the ribs of the frame section being interengaged to form guides when the frame sections are moved relatively to adjust the screen, a spring roller mounted upon one section, a screen section mounted within the frame, wrapped about the roller at one end, and having its opposite end secured to the opposite frame section, whereby to automatically take up or pay out the screen material as the frame sections are moved toward or away from each other, and releasable means for retaining the roller against movement subsequent to adjustment of the screen sections.

2. A window screen, including relatively movable frame sections, opposed ribs formed on one section having alined openings, one of said openings being circular and the other rectangular extending to the edge of the rib, a spring roller having a cylindrical trunnion at one end adapted to enter said circular opening, and a rectangular trunnion at the opposite end adapted to enter laterally a rectangular opening, a ratchet wheel secured to the spring roller, adjacent the end having the rectangular trunnion, a keeper pivotally secured to one rib for engaging the rectangular trunnion, to retain the same in place, and a pawl formed of spaced connected members adapted to straddle the rib to engage opposite sides thereof and to be pivotally connected thereto, the free end of the pawl having a lateral extension, to form a finger grip, and for engaging between the teeth of the ratchet to retain the same against rotation, said pawl in this position engaging the keeper to retain the same against displacement.

1,221,565. CULTIVATING IMPLEMENT. RICHARD ALBERT MINTERN, Horsham, Victoria, Australia. Filed Sept. 28, 1916. Serial No. 122,662. (Cl. 97—34.)

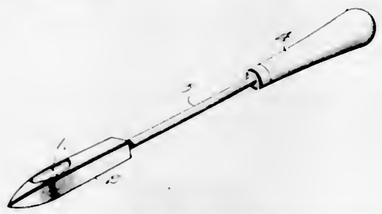
1. A cultivating implement having a rigid T-shaped frame, a frame pivotally supported from said T-frame for supporting cultivating means, means for adjusting the free end of said pivoted frame with respect to said T-frame, a guide member carried by said pivoted frame and embracing the longitudinally extending part of said T-frame for bracing said pivoted frame against lateral stresses, and braces extending from the top of said guide to the sides of said pivoted frame at its free end.

2. A cultivating implement having a rigid T-shaped frame, a frame pivotally supported from said T-frame for supporting cultivating means, means for adjusting the free end of said pivoted frame with respect to said T-frame, a guide member carried by said pivoted frame and embracing the longitudinally extending part of said T-frame for bracing said pivoted frame against lateral stresses, said T-frame having a relatively wide cross part between the wheels and said pivoted frame being of substantially the same width as the T-frame whereby a large area may be



cultivated at one passage of the implement, and a strap T fixed to the top of said guide member, the ends of which extend to the outer sides of said pivoted frame at its free ends and are fixed thereto, thereby forming braces for the pivoted frame.

1,221,566. SOLDERING-IRON. FREDERICK MOENCH, Rushville, Ill. Filed Nov. 23, 1915. Serial No. 62,964. (Cl. 113—105.)

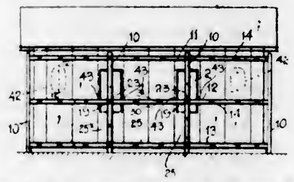


1. In a soldering iron, a body portion of relatively light material, and an outer plating of zinc.

2. In a soldering iron, a body portion of relatively high conductivity, and an outer layer or plating of zinc.

3. In a soldering iron, a metallic body portion, and an outer coating or plating of zinc.

1,221,567. MOLD FOR CONCRETE STRUCTURES. WILLIAM A. P. MONCURE, Ballsville, Va. Filed Aug. 2, 1916. Serial No. 112,760. (Cl. 25—131.)



1. A mold for concrete buildings including inner and outer supporting structures, each of said structures being formed of longitudinal and vertical framing members detachably connected to each other, inner and outer mold sections detachably connected to each other and to said framing members, and means for bracing the framing members and the mold sections, said means detachably connecting the inner framing members and mold sections to the outer framing members and mold sections.

2. In a mold for concrete buildings, mold sections supporting structures, each comprising longitudinal members and vertical members, the longitudinal members and vertical members being apertured where they intersect, braces extending transversely across the mold and through said apertures, each of said braces being slotted, key wedges disposed in said slots and mold sections detachably supported on said members.

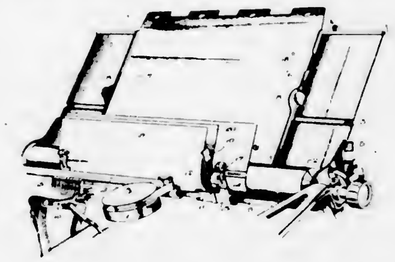
3. A mold for concrete buildings including inner and outer mold section supporting structures, each structure comprising longitudinally and transversely extending frame members detachably connected to each other and vertical supporting uprights, means for detachably connecting the outer and inner structures to each other and spacing them from each other, comprising rigid sections extending transversely across the inner supporting structure, across the space between the outer and inner structures and beyond the outer structure, means detachably locking the braces to said structures, inner and outer mold sections, and means for detachably locking the mold sections to each other and to said supporting structures.

4. A mold for concrete buildings including a plurality of inner and outer rectangular frames disposed in horizontal planes, a plurality of vertical uprights, inner and outer mold sections detachably connected to said frames and to each other, and rigid braces extending transversely across certain of the inner frame sections and through the space between the inner and outer frame sections and detachably engaging with the inner and outer vertical uprights and locking the vertical uprights to the frames.

5. A mold for concrete buildings including outer and inner vertical supporting members, a plurality of outer and inner longitudinally extending beams disposed in superposed relation, outer and inner mold sections detachably connected to certain of said beams, and braces passing through said vertical members, certain of the horizontal beams and through said mold sections, and means for detachably locking the horizontal braces to the vertical beams and locking the vertical beams against the horizontal beams.

[Claims 6 and 7 not printed in the Gazette.]

1,221,568. ATTACHMENT FOR ADDING-MACHINES AND TYPE-WRITERS. FOREST H. MONTGOMERY, East Orange, N. J. Filed Mar. 30, 1916. Serial No. 87,814. (Cl. 197—127.)



1. In a printing machine having a platen, the combination with a freely projecting vertical alinement paper guide disposed adjacent the front of said platen and adapted to serve as an abutment for an edge of one or more outer sheets of a narrower width than the under sheet, at the front of the platen, and means for holding an under sheet or sheets against the platen, outside or beyond the edges of the outer narrower sheet independently of the outer sheet, whereby the outer sheet may be freely adjusted alined and guided by the paper guide independently of the under sheet.

2. In a printing machine having a platen, a freely projecting vertical alinement paper guide disposed adjacent the front of said platen and adapted to serve as an abutment for an edge of that portion of the paper which is at the front of the platen, and a paper finger connected to the paper guide said paper guide being innermost in relation to the paper finger whereby the paper finger is adapted to bear on the under sheet while the paper guide engages the edge of an outer sheet.

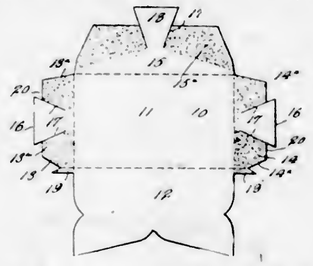
3. In a printing machine having a platen, a freely projecting vertical alinement paper guide disposed adjacent the front of said platen and adapted to serve as an abutment for an edge of that portion of the paper which is at the front of the platen, and a paper finger connected to the paper guide, said paper guide being innermost in relation to the paper finger whereby the paper finger is adapted to bear on an under sheet while the paper guide engages the edge of an outer sheet, the alinement paper guide and paper finger being adjustable as a unit in the direction of the length of the platen.

4. In a printing machine having a platen, the combination with a vertical alinement paper guide serving as an abutment for the edge of the paper, of a number printing device comprising means for printing a number at one side of the said paper guide and means for printing a sign or symbol at the other side of the paper guide in spaced relation to the number which is printed.

5. In a printing machine having a platen, the combination with a vertical alinement paper guide serving as an abutment for the edge of the paper, of a number printing device comprising means adapted for simultaneously printing a number at one side of the said paper guide and for printing a sign or symbol at the other side of the paper guide in spaced relation to the number.

[Claims 6 to 12 not printed in the Gazette.]

1,221,569. ENVELOP. ESSIE H. MOORE, Pittsburg, Tex. Filed Jan. 28, 1916. Serial No. 74,862. (Cl. 229—82.)

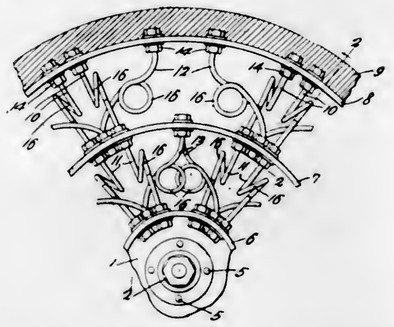


In an envelop, a blank formed to provide a front, a back, sides and a sealing flap, flared extensions formed with the sides by slitting the same, a portion of said extensions projecting beyond the edges of the sides, and a flared extension formed with the sealing flap and projecting beyond the edge of said sealing flap, the projecting edges of the said flared extensions being coated with a securing substance, said extensions of said sides and said sealing flap being adapted to lie beneath and having their projecting edges sealed to the said back when the back is folded rearwardly upon the front, with the sides bearing against the back on its outer face and the said sealing flap bearing against the back on its outer face and against the portions of said edges, and reinforcements formed with the sides and back portions of the blank and serving to reinforce the corner portions of the envelop.

1,221,570. RESILIENT WHEEL. ABRAHAM MORGAN, Independence, Mo. Filed Aug. 9, 1916. Serial No. 113,973. (Cl. 152—29.)

1. A resilient wheel comprising inner, intermediate and outer bands, the intermediate and outer bands being resilient, and springs between and attached to the bands, some of the springs being disposed substantially parallel to the median plane of the wheel and the others being disposed transversely.

2. A resilient wheel embodying bands, one surrounding the other, and pairs of radial springs disposed between and terminally attached to the bands, the springs of each pair being in reversed position and crossed, and other springs between and terminally attached to the bands and disposed substantially parallel to the median plane of the wheel.



3. A resilient wheel embodying bands, one surrounding the other, pairs of compound-curved springs between and terminally attached to the bands and having coils between the oppositely curved portions, the springs of each pair being in reversed crossed position, and other compound-curved springs disposed between and terminally attached to the bands, the last mentioned springs having coils between their oppositely curved portions, and the last mentioned springs being disposed substantially parallel to the median plane of the wheel.

1,221,571. CEMENT. HAROLD H. MORGAN, Chicago, Ill., assignor to George S. Johnston Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 18, 1915. Serial No. 15,298. (Cl. 87—17.)



1. As a new article of manufacture, a cement of the character described comprising a grog composed of particles graduated in sizes and percentages of the different sizes to give substantially the minimum percentage and size of voids through which shellac will flow in molten state, in combination with shellac flushed through said grog in percentage substantially correct to fill said voids and coat the particles of the grog, whereby shellac is present throughout the mass of the cement in substantially the thinnest possible layers or plates corresponding to the sizes of the grog particles used.

2. As a new article of manufacture, a cement comprising a grog composed of particles of different sizes, said particles being present substantially in the correct sizes and percentages of the different sizes to give the minimum percentage and size of voids through which shellac will flow in molten state, in combination with shellac flushed through the mass of the grog in substantially the correct percentage to fill the voids and coat the particles of the grog, whereby the shellac is present throughout the body of the cement in substantially the thinnest possible layers or plates corresponding to the sizes of the grog particles used, to thereby give to the shellac the quality of ductility.

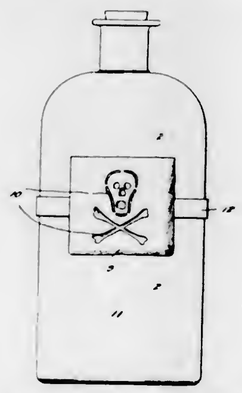
3. As a new article of manufacture, a cement for joining crystals to metallic mountings, said cement being composed of a grog made up from particles of different sizes, with the percentages of the different sizes adjusted to give substantially a minimum percentage and size of voids through which a selected cementitious material will flow in molten state, in combination with the selected cementitious material flushed through the grog in substantially the correct percentages to fill the voids and coat the grog particles, whereby the cementitious material possesses the quality of ductility.

4. As a new article of manufacture, a cement for joining crystals to metallic mountings, said cement being composed of a grog having particles of different sizes, said particles of different sizes being present substantially in the correct percentages for the different sizes to give the minimum percentage and size of voids through which a selected cementitious material will flow in molten state, in combination with a selected cementitious material flushed through the body of the grog, the cementitious material being present substantially in the correct percentage to fill the voids and coat the particles to give a desired thickness of layers or plates of cementitious material throughout the body of the cement, whereby the cementitious material possesses the quality of ductility.

5. As a new article of manufacture, a cement composed of a grog made up from particles of material, some of which will pass a 200 mesh screen, some of which will pass a 100 mesh screen, all of which will pass a 50 mesh screen, and substantially all of which will be sustained by a screen of selected mesh, the particles which will pass said screen being present in substantially the correct percentages to give a minimum percentage of voids in the grog through which a cementitious material will flow in molten state, in combination with said cementitious material flushed through the body of the grog and present in substantially the correct percentage to fill the voids and coat the particles of the grog.

[Claims 6 to 8 not printed in the Gazette.]

1,221,572. POISON-LABEL. HAROLD D. MORTON, Mitchell, Nebr. Filed June 13, 1916. Serial No. 103,423. (Cl. 40—4.)

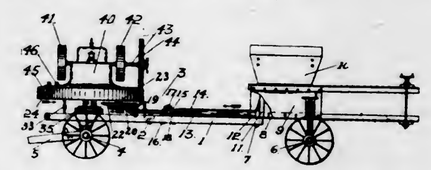


A label for bottles, including a stenciled opaque and elastic pocket removably mounted on the bottle, and a transparent phosphorus containing vial removably and frictionally engaged in the pocket so as to be retained against accidental displacement.

1,221,573. HAY-PRESS. RAYMOND C. MOTT and JESSE ALEXANDER, Clinton, Ind. Filed Sept. 23, 1912. Serial No. 721,933. (Cl. 100—8.)

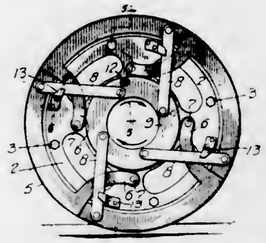
1. In a hay-press motor, a revoluble turntable mounted upon a pivot-column, having secured thereupon an engine provided with a driving gear, an angularly-fixed flanged engine-bed, concentrically surrounding said turntable, superficially provided with an annular gear adapted to mesh with said crown driving gear in such manner as to reactively cause the revolution of said turntable with said engine, upon operation of the latter; and geared members adapted to transmit the power from said turntable to a member designed to be driven by said hay-press motor.

2. In a hay-press motor, a revoluble turntable, with a dependent flange, having interiorly secured thereon segmental internal gears; an engine secured upon said turntable provided with a driving gear on the drive shaft thereof adapted to revolubly actuate said turntable; an angularly-fixed engine-bed, having a continuous up-turned annular flange thereon concentrically surrounding said turntable, said flange being provided superficially with an annular gear adapted to mesh with said driving gear, so as to reactively revolve said turntable with said engine, upon operation of the latter; a geared member journaled upon said fixed engine bed, adapted to transmit the engine power from said turntable by meshing with said internal gears on the flanges thereof to the member designed to be actuated by said motor; and geared members comprising a worm for transmitting the driving power from said geared member on said engine-bed to the member designed to be actuated by said hay-press motor.



3. In a hay-press motor, a revoluble turntable with a dependent flange supported on a central pivot-column; an engine having a driving gear secured upon said revoluble turntable; an angularly-fixed flanged engine-bed, concentrically surrounding said turntable, provided superficially with an annular gear adapted by the meshing thereof with said driving gear to impart reactive revolution to said turntable with said engine upon operation of the latter; a central segmental gear, secured inferiorly to said turntable upon said pivot column, adapted to intermittently engage a quick-return pinion, mounted upon the upper end of a telescope-shaft journaled in said flanged engine-bed; a bevel gear upon the lower end of said telescope-shaft, adapted to mesh with a bevel pinion, for causing quick return of the member to be driven by said motor; segmental internal gears on said dependent turntable flange; a power pinion, secured upon the upper end of the sleeve of said telescope-shaft in a plane below said quick-return pinion, adapted to be intermittently driven by meshing with said internal gears; a power bevel gear secured upon the lower end of the sleeve of said telescope-shaft; a bevel pinion adapted to mesh with said bevel gear; and, on the shaft of said bevel pinion, a screw coöperating with a sliding nut, adapted to transmit therethrough the power of said motor to the member designed to be actuated by same.

1,221,574. COLLAPSIBLE WHEEL-FLANGE. ROBERT L. MUNSON, Detroit, Mich. Filed Nov. 23, 1916. Serial No. 133,043. (Cl. 105—149.)



1. The combination with a wheel, of an annular frame secured to the inner face thereof, a series of flange sections

each having at one end a curved arm pivoted to the frame, a link pivoted to the opposite end of each flange section, a ring rotatably connected with the frame and coaxial with the wheel, the inner ends of the links being pivoted to the ring to permit the flange to be expanded beyond the periphery of the wheel or within the periphery of the wheel, and the flange sections abutting at their ends when expanded beyond the periphery of the wheel, means for locking the flanges in either position, the ends of the flange sections being beveled to lap upon each other, a holding lug on the frame for engagement by the links when the flange sections are expanded to prevent lateral movement of the link away from the wheel, each link when in engagement with the lug lapping over the curved arm of the succeeding section.

2. The combination with a wheel, of an annular frame secured to the inner face thereof, a series of flange sections each having at one end a curved arm pivoted to the frame, a link pivoted to the opposite end of each flange section, a ring rotatably connected with the frame and coaxial with the wheel, the inner ends of the links being pivoted to the ring to permit the flange to be expanded beyond the periphery of the wheel or within the periphery of the wheel, and the flange sections abutting at their ends when expanded beyond the periphery of the wheel, means for locking the flanges in either position, the ends of the flange sections being beveled to lap upon each other.

3. The combination with a wheel, of an annular frame secured to the inner face thereof, a series of flange sections each having at one end a curved arm pivoted to the frame, a link pivoted to the opposite end of each flange section, a ring rotatably connected with the frame and coaxial with the wheel, the inner ends of the links being pivoted to the ring to permit the flange to be expanded beyond the periphery of the wheel or within the periphery of the wheel, and the flange sections abutting at their ends when expanded beyond the periphery of the wheel, and means for locking the flanges in either position.

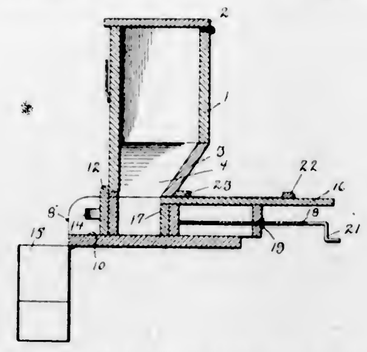
4. The combination with a wheel, of an annular frame detachably connected to one face thereof, a series of flange sections each having at one end a lateral arm pivoted to the frame, said sections being arc shaped and forming a complete circle when abutted at their ends and a circle whose external diameter is greater than that of the wheel, a link pivoted to the opposite end of each flange section, an operating member mounted to rotate on the wheel to which the inner ends of the links are connected, for simultaneously expanding or contracting the flange, and means for holding the ring in either position.

5. The combination with a wheel, of a frame for connection therewith, a flange supported by the frame at one face of the wheel, and consisting of a series of sections forming a perfect circle of greater external diameter than the wheel when the ends of the sections abut, a connection between the sections and the frame for permitting said sections to be expanded with their ends abutting or contracted with the ends lapping, and an operating member on the wheel for expanding and contracting the sections.

[Claim 6 not printed in the Gazette.]

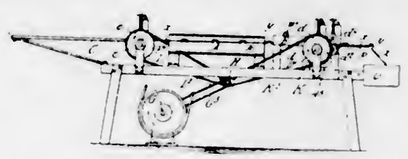
1,221,575. DISPENSING-BIN. BASCOMB J. MYERS, Lancaster, S. C., assignor to E. B. Donnald, Goldville, S. C. Filed Aug. 3, 1914. Serial No. 854,810. (Cl. 221—105.)

In combination, a trough, a hopper communicating at its lower end with said trough, a funnel secured to communicate with the lower portion of said trough remote from said hopper, a bottomless drawer mounted for sliding movement in said trough beneath said hopper and over said funnel, a plate mounted for sliding movement upon the top of said drawer, a block depending from the forward edge of said plate into said drawer, a screw member extending from the rear end of said drawer and connected at its end to said block whereby the latter and said plate may be adjusted longitudinally of said drawer, a stop on said plate projecting above the same for engagement with said hopper, and the distance be-



tween said stop and said block being equal to that between said block and the innermost edge of said funnel.

1,221,576. MANUFACTURE OF TEMPERED SAW-BLADES. CHARLES NAPIER, Springfield, Mass., assignor to Napier Saw Works, Inc., Springfield, Mass., a Corporation of Massachusetts. Filed Mar. 11, 1915. Serial No. 13,689. (Cl. 266—4.)



1. In a machine for tempering saw blades, in combination, an endwise open heating oven and a cooler forthereof, a pair of draft rolls, geared together, forward of the cooler, a pair of tension rolls, geared together, to the rear of the oven, a support and guideway for blades to the rear of the tension rolls, a driving shaft having a sprocket wheel thereon, a countershaft having a sprocket wheel around which and the first named sprocket wheel a sprocket chain is provided, and said countershaft having second and third sprocket wheels, one of which has a greater number of teeth than the other, a sprocket wheel on one of the draft rolls, and a sprocket wheel on one of the tension rolls, and sprocket chain around the second and third mentioned sprocket wheels of the countershaft, one forwardly extended to engagement around the draft roll sprocket and the other rearwardly extended to engagement around the tension roll sprocket.

2. In a machine for tempering saw blades, in combination, an endwise open heating oven and a cooler forwardly thereof, two pairs of gear connected draft rolls forward of the cooler, a pair of gear connected tension rolls to the rear of the oven, a horizontal support for blades to the rear of the tension rolls, having a shallow longitudinally extending blade guiding channel, formed, in its base, with a narrower longitudinal channel, a driving shaft having a sprocket wheel thereon, a countershaft having a sprocket wheel around which and the first named sprocket wheel the sprocket chain is provided, and said countershaft having two additional sprocket wheels, one of which has a greater number of teeth than the other, a sprocket wheel on one of the draft rolls and a sprocket wheel on one of the tension rolls, and sprocket chains around the second and third mentioned sprocket wheels of the countershaft, one forwardly extended to running engagement around the draft roll sprocket and the other rearwardly extending to engagement around the tension roll sprocket, one pair of the draft rolls being gear connected with the other pair of draft rolls.

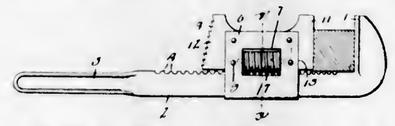
3. In a machine for tempering saw blades, a heating oven through which the blades pass, means for drawing the blades through the oven under tension, and temporary means for connecting the blades in a chain, said connecting means being self-detaching when the tension is relieved and the blades unsupported.

4. In a machine for tempering saw blades which are connected in chain formation for self detachment when the same are free from tension, a heating oven opened at both ends through which the chain of blades pass, means arranged at one end of the oven for pulling the blades through the oven, and means arranged at the opposite end of the oven for exerting a dragging action on the chain of blades to hold the same under tension and from detachment.

5. In a machine of the character described, an oven opened at both ends, a trough arranged at the exit end of the oven, a downwardly discharging conduit spaced above the trough, drawing means arranged beyond the trough, tensioning means arranged in advance of the entrance end of the oven, a drive shaft, means positively connecting the latter to the drawing means, and other means positively connecting the shaft to the tensioning means for driving the latter slower than the drawing means.

[Claims 6 and 7 not printed in the Gazette.]

1,221,577. WRENCH. WILLIAM NESS, Spring Grove, Pa. Filed May 19, 1914. Serial No. 839,568. (Cl. 81—162.)



In a wrench, a stationary jaw having an angular toothed shank, a carriage comprising a substantially rectangular sheet of metal adapted to be bent upon itself to provide parallel spaced sides, and each of the sides having a registering rectangular opening, members comprising jaws having their sides depressed to receive the outer corners of the sides of the carriage, means for securing the said corners within the said depressions of the jaws to arrange the sides flush with the sides of the jaws, and a screw member having its ends provided with trunnions which are received in depressed bearings in the confronting ends of the jaws, said screw being arranged within the referred to openings in the sides of the carriage and adapted to coöperate with the teeth of the shank of the stationary jaw.

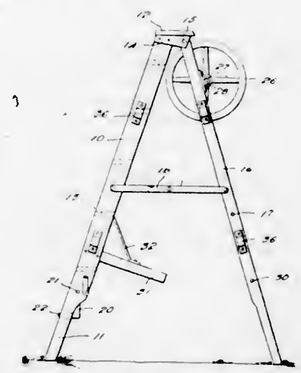
1,221,578. FOUNTAIN-COMB. EDWARD O'CONNELL, Detroit, Mich. Filed Mar. 10, 1916. Serial No. 83,394. (Cl. 132—4.)



1. A fountain comb having tubular teeth, a reservoir to supply liquid to the teeth, a plunger in the reservoir to exert pressure on the liquid therein, a sleeve nut on which the plunger is mounted for longitudinal movement, a screw shaft to operate the sleeve nut and a spring on said sleeve nut to move the plunger in one direction and cause the same to exert pressure on the contents of the reservoir.

2. A fountain comb having tubular teeth, a reservoir to supply liquid to the teeth, a plunger in the reservoir to exert pressure on the liquid therein, a sleeve nut on which the plunger is mounted for longitudinal movement, a screw shaft to operate the sleeve nut and a spring on said sleeve nut to move the plunger in one direction and cause the same to exert pressure on the contents of the reservoir, and knobs in the ends of the reservoir, one forming a stopper, the other knob being swivelly mounted in the bore of the reservoir and attached to said screw shaft.

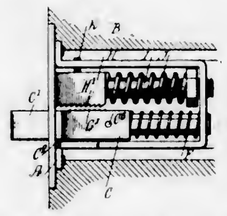
1,221,579. WHEELBARROW STEP-LADDER. IRA P. OLDS, Santa Rosa, Fla. Filed Feb. 1, 1916. Serial No. 75,616. (Cl. 21—68.)



1. A structure of the character described, comprising swingingly connected ladder and prop sections, a wheel journaled on the prop section near the pivotal connection of said section with the ladder section, pivotally jointed braces swingingly connected to said sections and a swinging step supported in the ladder section beyond the series of permanent steps thereof and having stops for limiting the swinging movement thereof.

2. A structure of the character described comprising spaced side strips, a plurality of permanent steps arranged between the same, a head piece fixed to the side strips, leg strips pivotally connected to the head piece, hinge jointed braces connected to said strips, wheel barrow legs carried by the first named strips, means on said first named strips and engageable with the other strips for holding the same in close parallel relation to each other, a wheel journaled upon the last named strips near the head piece, L-shaped arms pivoted to the first named strips for swinging movement, a step carried by said arm and movable therewith, means for limiting the movement of the last named step, and standard receiving cleats mounted upon the strips, one of the permanent steps being cut away to form a clearance for the wheel.

1,221,580. DOOR-BUFFER. DOCTOR FRANKLIN OLIVER, Oakland, Cal. Filed July 19, 1911. Serial No. 639,412. Renewed Sept. 27, 1916. Serial No. 122,579. (Cl. 16—77.)



1. A door buffer, comprising a latch bolt, a light resistance device for the bolt, a heavy resistance device, and

a connecting member moving bodily with the said light resistance device and normally out of engagement with the said heavy resistance device, the said connecting member moving into engagement with the said heavy resistance device on forcibly actuating the light resistance device when slamming the door.

2. A door buffer, comprising a latch bolt, resistance devices, one acting on the bolt and provided with a light spring and the other adjacent the bolt and provided with a heavy spring, and a connecting member carried by the said light spring resistance device and out of engagement with the said heavy spring resistance device on gently closing the door, the said connecting member moving into engagement with the said heavy spring resistance device on forcibly actuating the said light spring resistance device when slamming the door.

3. A door buffer, comprising a latch bolt, a light spring pressing the same, a heavy spring resistance device adjacent the said latch bolt, and a connecting member carried by the said latch bolt and normally inactive on gently closing the door, the said connecting member being movable on the latch bolt and adapted to engage the said heavy spring resistance on forcibly actuating the said latch bolt when slamming the door.

4. A door buffer, comprising a latch bolt, a light spring pressing the said bolt to hold it in projected position, a connecting member mounted to slide lengthwise and upward on the latch bolt, and a heavy resistance device adjacent the said latch bolt and adapted to be engaged by the said connecting member on forcibly actuating the latch bolt when slamming the door.

5. A door buffer, comprising a latch bolt, a light spring pressing the said bolt to hold it in projected position, a connecting member mounted to slide lengthwise and upward on the latch bolt, a slide adjacent to the said latch bolt and adapted to be engaged by the said connecting member, and a heavy spring pressing the said slide.

[Claims 6 to 11 not printed in the Gazette.]

1,221,581. MATCH-HOLDER. JOHN FRANCIS O'MALLEY, New York, N. Y. Filed May 31, 1916. Serial No. 100,797. (Cl. 206—31.)



A holder for a book of matches, comprising a back member having a pocket at one end for the reception of the bound end of said book said pocket being provided with an orifice giving access to the striking surface of said book, and having a safety pocket at its other end for the heads of said matches, said pockets being of relatively slight depth whereby the book is exposed for the greater part of the flap thereof.

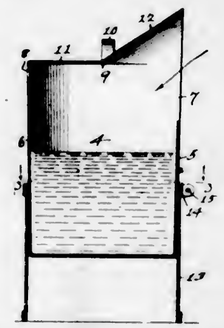
1,221,582. TOWEL, NAPKIN, AND DRAPERY HANGER. JOHN ALBIN OSTMAN and BROR ALGOT ANDERSON, Chicago, Ill. Filed Nov. 13, 1916. Serial No. 131,110. (Cl. 24—253.)

A hanger formed out of a single length of wire for its body portion and a single length of wire for a lever portion, said body portion consisting of a pair of prongs with abutting pivot lugs thereon which constitute a fixed jaw member, and also consisting of a coöperative fixed jaw member formed with an eye therein and of suspension loops adapted to engage a fixed part to support said hanger, said lever or movable member portion pivoted on said lugs and provided with a projecting portion movable between said prongs into and out of the space between said fixed jaw members as a movable jaw to form together with said coöperative jaws a pair of gripping jaws engageable with a portion of fabric entered between said fixed



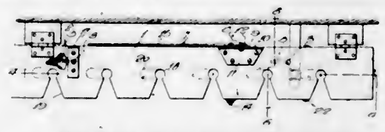
jaws, and a spring normally holding said lever or movable member portion pressed against the eye in the coöperative fixed jaw member.

1,221,583. MILK-PAIL. WILLIAM G. PARMELE, Chetopa, Kans. Filed June 13, 1916. Serial No. 103,450. (Cl. 31—14.)



A milk pail provided with a flat vertical side having a filler opening therein and with a closed top composed of a horizontal seat member and a member inclined upwardly to meet said vertical side above said filler opening.

1,221,584. ARTICLE-HOLDING RACK. SHELBY PATRICK, Durango, Colo. Filed Apr. 3, 1916. Serial No. 88,561. (Cl. 211—14.)

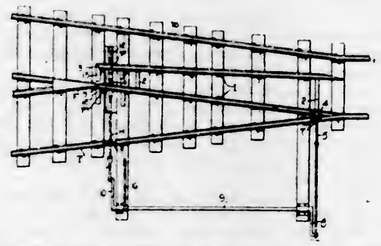


1. In a device of the class described, a stationary member, a slidable member coacting therewith, both having a plurality of pockets, said pockets having openings extended through the edges of said members to form entrances thereto, said members being slidable to move the openings in the pockets into and out of alinement to unlock or lock the articles held in said pockets, an angle member secured to said stationary member, a bell crank lever pivoted thereto, one arm thereof being connected to the movable member to shift the same, a locking plate on said stationary member, and means for securing the free end of said lever to said locking plate, whereby to hold the members in locked position.

2. In a device of the class described, a stationary member, a slidable member coacting therewith, each having a plurality of pockets, said pockets having openings extended through the edges of the members to form entrances

thereto, a U-shaped member secured by its arms to the stationary member and surrounding the slidable member, a bolt carried by the stationary member, the slidable member having an elongated socket to receive said bolt, and means for moving the slidable member to dispose the openings into the pockets into and out of alinement with each other to lock or unlock articles held in said pockets, said bolt being engaged by the ends of said socket to limit the movement of the slidable member.

1,221,585. SWITCH. JAMES M. PHINOUS, Pamplin, Va., assignor to William H. Davis, Havaco, W. Va. Filed Apr. 26, 1916. Serial No. 93,733. (Cl. 104—12.)



1. A switch mechanism including a frog, pivotally mounted points coacting with the frog, means for causing the points to move in unison and in the same direction, and locking lugs coacting with the points for holding said points in operative position, the throwing means for the points serving to elevate the points above the locking lugs so that said points may travel thereby.

2. A switch mechanism including a frog, points coacting with the frog and mounted for rocking movement, said points coacting with the opposite sides of the frog, means for causing said points to move in unison and in the same general direction, and a throw member underlying the points and provided with recesses in which the points are seated.

3. A switch mechanism including a frog, points coacting with the frog and mounted for rocking movement, said points coacting with the opposite sides of the frog, means for causing said points to move in unison and in the same general direction, a throw member underlying the points and provided with recesses in which the points are seated, the bases of said recesses being provided with reversely related cams, and locking lugs coacting with the points, the cams of the recesses of the throw member serving to elevate the points above the locking lugs.

4. A switch including a frog, a point coacting therewith, locking lugs for holding the point in operative position relative to the frog, and a throw member for the point operable to move the point relative to the frog and vertically relative to the locking lugs.

1,221,586. DENTAL-FLOSS HOLDER. ARTHUR W. POWELL, Taylorville, Ill. Filed Jan. 24, 1916. Serial No. 73,767. (Cl. 132—12.)



1. A dental-floss holder comprising a handle portion and two prongs, each prong having a length of a coil of spring-wire mounted thereon and secured at its outer end to the tip only of the prong.

2. A dental-floss holder comprising a single length of wire bent and coiled upon itself to form a handle portion and two prongs, and a section of coiled spring-wire surrounding the end portion of each prong and secured at its outer end to the tip only of the prong.

1,221,587. STAMP-MOISTENER. CHARLES MANVILLE PRATT, Towanda, Pa. Filed Jan. 6, 1917. Serial No. 140,911. (Cl. 15—66.)



1. In a stamp moistener, a handle adapted to contain moistening liquid and provided with a member having an opening, spring controlled means within said member and projecting through said opening and flexible means applied to said spring controlled means for feeding the liquid.

2. In a stamp moistener, a handle adapted to contain moistening liquid and provided with a detachable member having an opening, spring controlled means within said detachable member and projecting through said opening, flexible means applied to said spring controlled means for feeding liquid and means for securing said flexible means to the spring controlled means.

3. In a stamp moistener, a member adapted to contain liquid and having an opening, a spring controlled ball therein projecting through said opening, a covering for said spring controlled ball extending into said liquid containing member and a rod adapted to have the ends of said cover secured thereto.

4. In a stamp moistener, a member adapted to contain liquid and provided with a detachable member having an opening, a reciprocatable resilient ball within said detachable member projecting through said opening, flexible means on said ball for feeding liquid and elastic means for securing said flexible means to said ball.

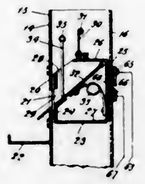
5. In a stamp moistener, a member adapted to contain liquid and having an opening, spring controlled means therein projecting through said opening, a covering for said spring controlled means extending into said liquid containing member and means for securing the ends of said covering.

[Claims 6 and 7 not printed in the Gazette.]

1,221,588. LETTER-CONVEYER. AURELIO A. PUCCINI, Corona, and DOMINICK EVANGELIST, New York, N. Y. Filed Apr. 17, 1915. Serial No. 22,089. (Cl. 214—12.)

1. In a letter conveyer, a chute adapted to be arranged in a building so as to be disposed from a station to an apartment therein, the said chute having an inlet at the station, and having an outlet leading into the apartment, a box slidably mounted in said chute and provided with an inlet for receiving an article inserted through the inlet of the chute and an outlet for discharge of the article through the outlet of the chute, a spring retained plate inside the box for supporting the article when received therein, means for raising and lowering said box, and means for causing the plate in the box to be yieldingly

moved for discharging the article simultaneously with the outlet of the box being registered with the outlet of the chute.



2. In a letter conveyer, a chute adapted to be arranged in a building so as to be disposed from a station to an apartment therein, the said chute having an inlet at the station, and having an outlet leading into the apartment, a box slidably mounted in said chute and provided with an inlet for receiving an article inserted through the inlet of the chute and an outlet for discharge of the article through the outlet of the chute, a spring retained plate within the box and having one edge thereof hingedly attached thereto when received therein, means for lowering and raising said box, and means adapted to contact with said plate for causing it to be yieldingly moved for discharging the article simultaneously with the outlet of the box being registered with the outlet of the chute.

3. In a letter conveyer, a chute adapted to be arranged in a building so as to be disposed from a station to an apartment therein, the said chute having an inlet at the station, and having an outlet leading into the apartment, a box slidably mounted in said chute and provided with an inlet for receiving an article inserted through the inlet of the chute and an outlet for discharge of the article through the outlet of the chute, a spring actuated plate retained transversely inside the box for supporting the article, means for raising and lowering said box, means for causing the plate in the box to be yieldingly moved for discharging the article simultaneously with the outlet of the box being registered with the outlet of the chute, together with means for automatically cutting off said raising and lowering means when the box has arrived at either the inlet or the outlet of the chute.

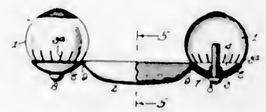
4. In a letter conveyer, a chute adapted to be arranged in a building so as to be disposed from a station to an apartment therein, the said chute having an inlet at the station, and having an outlet leading into the apartment, a box slidably mounted in said chute and provided with an inlet for receiving an article inserted through the inlet of the chute and an outlet for discharge of the article through the outlet of the chute, a spring actuated plate retained transversely inside the box for supporting the article when received therein, means for raising and lowering said box, and a finger mounted in said chute and adapted to contact with the plate in said box for causing same to be yieldingly moved for discharging the article simultaneously with the outlet of the box being registered with the outlet of the chute.

5. In a letter conveyer, a chute, a carrier mounted within said chute, said carrier having an inlet and an outlet, a plate within said carrier and hingedly connected thereto, resilient means engaging said plate whereby it is adapted to act as a yielding support for an article inserted within the carrier, means for causing said carrier to travel back and forth in said chute, and means for engaging said plate at a predetermined point in the travel of the carrier, whereby said plate will be swung downwardly and the article resting thereon will be permitted to pass through the outlet in the carrier.

[Claim 6 not printed in the Gazette.]

1,221,589. EYE FOR DOLLS. DAVID PUDLIN, New York, N. Y. Filed Nov. 10, 1916. Serial No. 130,546. (Cl. 46—40.)

1. The combination of a set of eyes, with a connecting piece comprising a central channeled bar, and terminal fastening means for the eyes, the connecting piece being bendable at the ends of the bar.



2. The combination of a set of eyes, with a connecting piece comprising a channeled bar and terminal seats for the eyes, and means for fastening the eyes to the seats, the connecting piece being bendable at the juncture of the seats with the bar.

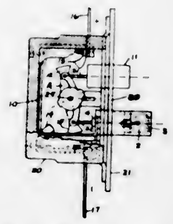
3. The combination of a set of eyes, with a connecting device comprising a single piece of metal shaped with shallow end sockets and a channeled bar, and fasteners securing the eyes to the said sockets.

4. The combination of a set of eyes, with a connecting device comprising a single piece of metal shaped with shallow end sockets and a channeled bar, and fasteners securing the eyes to the said sockets, there being bendable portions between the sockets and bar for permitting the eyes to be adjusted.

5. The combination of a set of hollow eyes and a connecting device comprising a bar and shallow end sockets into which the eyes fit, nuts within the eyes, and bolts passing through the sockets and eyes and engaging the said nuts.

[Claims 6 to 12 not printed in the Gazette.]

1,221,590. INDICATING ELECTRIC SWITCH. JOSEPH RAISO, Cleveland, Ohio. Filed Mar. 4, 1915. Serial No. 12,135. Renewed Jan. 11, 1917. Serial No. 141,915. (Cl. 175—293.)



1. The combination with an electric switch, of an illuminating lamp controlled by said switch, a pilot lamp illuminating said switch, means comprising a selenium cell associated with said switch for automatically causing said pilot lamp to light when said illuminating lamp is extinguished, additional means for causing said pilot lamp to be extinguished when said illuminating lamp is lighted.

2. The combination with an electric switch, of an illuminating lamp controlled by said switch, a push button actuating said switch containing a pilot lamp, means comprising a selenium cell associated with said switch for automatically causing said pilot lamp to light when said illuminating lamp is extinguished, additional means for causing said pilot lamp to be extinguished when said illuminating lamp is lighted.

3. The combination with an electric switch, of a push button actuating said switch, a pilot lamp mounted within said push button, automatic means comprising a selenium cell for causing said lamp to light when said push button is in its normal position, additional means for causing said lamp to become extinguished when said push button is depressed.

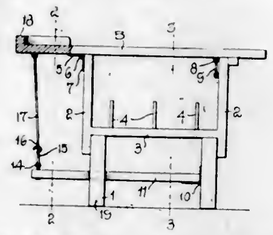
4. The combination with an electric switch, of a push button actuating said switch, of a pilot lamp mounted within said button, of means comprising a selenium cell for controlling the illumination of said lamp, of means controlled by said push button for in turn controlling the action of said selenium cell.

5. The combination with an electric switch, of a pilot lamp associated with and for indicating the location of said switch, means for illuminating said lamp, means comprising a selenium cell for controlling the illuminating of the pilot lamp, additional means for preventing the illumination of said lamp.

[Claims 6 to 11 not printed in the Gazette.]

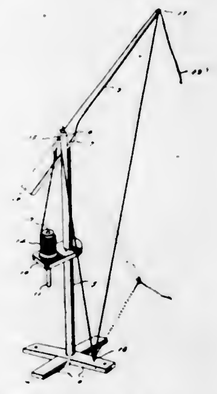
1,221,591. [WITHDRAWN.]

1,221,592. IRONING-TABLE. WILLIAM REID, Macclesfield, N. C. Filed Dec. 23, 1916. Serial No. 138,588. (Cl. 68—10.)



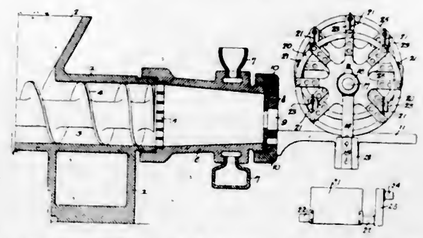
A device of the character described comprising vertically disposed supporting members, a board hingedly connected with the upper portion of one of said members and adapted to rest upon the upper extremities of the members, said board extending outwardly beyond one of the members, an arm disposed longitudinally of the board and hingedly engaged with the supporting member remote from the pivotally mounted portion of the board, said arm terminating below the outwardly extended portion of the board, and a connection between the outwardly extended portion of the board and the free end portion of the arm whereby said board is rocked in a vertical direction upon depression of the arm.

1,221,593. TWINE-HOLDER. JACKSON B. RICHARDSON, Fisk, Mo. Filed July 3, 1915. Serial No. 37,902. (Cl. 242—144.)



In a twine holder adapted to be secured to either the floor or ceiling of a room, a standard, a take-up lever pivotally secured to one end thereof, a weight on one end of said lever, a supporting shelf secured intermediate the ends of the standard, extending outwardly therefrom, said shelf having an aperture therein adjacent the free end thereof, a spool adapted to be positioned on either face of said shelf to accord with the positioning of the device as a whole and having its bore alined with said aperture, and a pin having one end thereof tapered to frictionally and removably engage the walls of the aperture and the bore of the spool, whereby said spool is readily held on either face of said shelf.

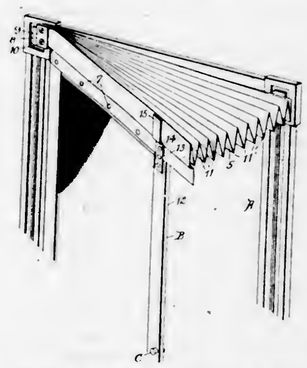
1,221,594. MACHINE FOR CUTTING PLASTIC MATERIALS. WILLIAM H. RICHMAN, Philadelphia, Pa. Filed June 5, 1914. Serial No. 843,238. (Cl. 25—110.)



1. The combination in a machine for cutting plastic materials of a table; a rotary frame mounted adjacent thereto and having a series of bearings; a second frame mounted eccentrically to the first frame; a series of flat blades having cutting edges; journals connected to said blades adjacent their cutting edges respectively and operative in the bearings of the first frame; and a series of crank arms respectively connecting the blades with the second frame.

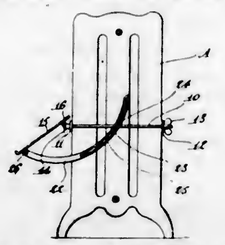
2. The combination in a machine for cutting plastic materials of a supporting structure including a table; a standard; a shaft mounted in the standard, a rotary frame including two side members mounted on the shaft; plates forming knives mounted at their ends in bearings provided on said side members; a crank arm on the shaft; a crank arm connected to each of the knives; and a second frame mounted on said shaft-carried crank arm and connected to all of the knife crank arms.

1,221,595. CANOPY FOR DOORS. JOHN CALVIN RIGGS, Berkeley, Cal. Filed Oct. 8, 1915. Serial No. 54,798. (Cl. 156—14.)



A canopy for swinging doors embodying a flexible piece of material, a U-shaped clip embracing the thickness of the material for securing one end thereof to the door to permit of the same being extended over the door upon the opening of the latter to assume a downwardly and forwardly inclined position, a member connected with the door at a point adjacent the free edge thereof and provided with an outwardly bent portion, the outwardly bent portion of said member projecting above the upper edge of the door and serving to close and support the canopy upon the swinging of the door to a closed position.

1,221,596. FOOT-REST. EUGENE RILEY, Woodriver, Ill. Filed Apr. 22, 1916. Serial No. 92,898. (Cl. 155—9.)



1. A device of the class described comprising rods passed horizontally between the sections of a radiator, means for holding each of said rods fixed relatively thereto, a foot rest pivotally mounted upon the forward ends of said rods, a lug projecting laterally from each rod, and notched arms pivotally connected to said rest and adapted to engage said lugs to hold the foot rest in different inclined positions.

2. A device of the class described comprising rods passed horizontally between the sections of a radiator, means for holding each of said rods fixed relatively thereto, a foot rest pivotally mounted upon the forward ends of said rods, a lug projecting laterally from each rod, and arcuate shaped arms pivotally connected to said rest, each of said arms having a longitudinal slot receiving said lugs and notches for engagement therewith to hold the foot rest in different inclined positions with respect to the radiator.

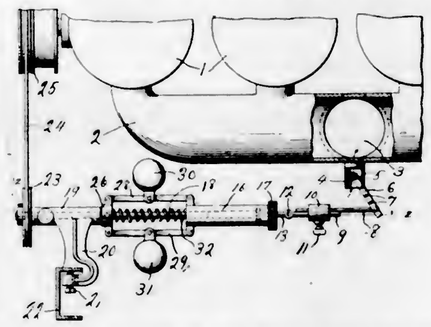
3. A device of the class described comprising rods horizontally disposed between the sections of a radiator, a cross piece carried by each rod for engagement with the front of the radiator, a similar cross piece adjustably mounted on the opposite end of the rods for engagement with the opposite side of the radiator, a nut adjustably mounted on the rod for holding the last mentioned cross pieces in adjusted position, a foot rest pivotally mounted upon the forward ends of said rods, a lug projecting laterally from each rod, and notched arms pivotally connected to said foot rest and adapted to engage said lugs to hold the rest in different inclined positions.

4. A device of the class described comprising a foot rest, supporting rods pivoted at one end to said foot rest, one of said rods together with its pivot being adjustable laterally toward and away from the other of said rods, means for holding said parts in adjusted position, said rods adapted to be passed horizontally between the sections of the radiator, means for holding the said rods fixed relatively thereto, a lug projecting from each rod, and notched arms pivotally connected to the foot rest and adapted to engage said lugs to hold the rest in different inclined positions.

5. A device of the class described comprising a foot rest, supporting rods pivotally connected at one end to said foot rest and adapted to be passed horizontally between the sections of the radiator, a lug projecting laterally from each of said rods, notched arms pivotally connected to said rest and adapted to engage said lugs to hold the foot rest in adjusted position, one of said rods and its associated arm being connected to the foot rest for adjustment toward and away from the other of said corresponding parts, means for holding the adjustable rod and arm in a fixed position, and means for holding the rods fixed relatively to the radiator.

1,221,597. AUTOMATIC AIR DEVICE FOR GAS-ENGINES. CHARLES A. RIVERS, El Paso, Tex. Filed Aug. 23, 1915. Serial No. 46,944. (Cl. 264—15.)

The combination with a pivoted valve and an arm connected thereto, of a link connected to said arm and including a pair of relatively shiftable rods, a clamp associated with said rods to hold the same in adjusted position to vary the length of the link, a headed stem connected to the other end of said link, a slidable hollow sleeve having a recess at one end thereof for receiving the head on said stem, a removable plug fitted in the end of said sleeve for confining said head in place therein, a rotary shaft having one end projecting into said hollow



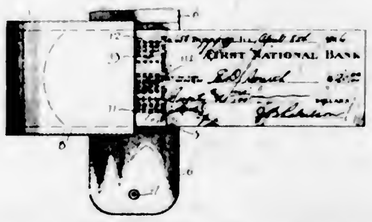
sleeve, means for rotating said shaft, a centrifugal governing mechanism connected between said shaft and sleeve for shifting the latter and the associated parts to rock said valve, and a spring coiled about said shaft and opposing the action of said centrifugal governor, substantially as described.

1,221,598. ALMOND-HULLER. EDGAR A. ROBERTS, Folsom City, Cal. Filed Oct. 20, 1916. Serial No. 126,740. (Cl. 146—14.)



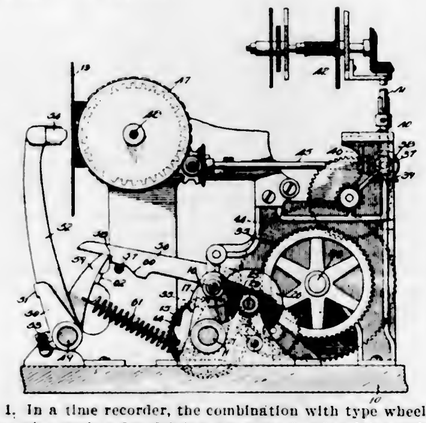
In an almond huller, a conical thimble having its reduced end, upon one of its sides, extended and the said extension being bent upon itself over the thimble and substantially in a line with the plane of the thimble to provide a knife member and the said thimble upon the side thereof provided with the said knife having angularly arranged substantially cone-shaped outwardly extending projections, the outer edges of which being roughened, all as and for the purpose set forth.

1,221,599. SAFETY-CHECK. JAMES B. ROBERTSON, Bushnell, Ill. Filed Apr. 19, 1916. Serial No. 92,116. (Cl. 11—13.)



A safety check or warrant comprising a blank having a negotiable form thereon and a series of amounts disposed in parallel lines at substantially right angles to the longitudinal edge thereof and adjacent one end of said form, the line of amounts farthest from the end of the form upon which the same is printed being extended into and over the authority to pay, said amounts being adapted to be detached from the blank except the amount nearest the negotiable form, whereby when the latter amount is detached the authority to pay the check is defaced and destroyed.

1,221,600. WORKMAN'S TIME-RECORDER. TOREY ROSS, Chicago, Ill. Filed Feb. 1, 1915. Serial No. 5,405. (Cl. 234—41.)



1. In a time recorder, the combination with type wheels, a motive spring for driving them, and a hand lever for causing prints to be made by the type wheels, of a shaft, a friction drive mounted upon the shaft and consisting of two disks having their faces in frictional contact with each other, connections from the hand lever to one disk for driving it, and connections from the other disk to the spring for winding it.

2. In a time recorder, the combination with type wheels, a motive spring for moving them, and a hand lever for causing prints to be made by the type wheels, of a friction drive consisting of two members in frictional contact with each other, devices for adjusting the degree of frictional contact between said members, connections from the hand lever to one member for driving it, and other connections from the other member to the spring for winding it.

3. In a time recorder, a shaft, two friction members mounted upon the shaft, a spring acting to hold said members in contact with each other, means for adjusting the tension of said spring, manually operated connections for turning one of said members, a motive spring for the recorder, and connections from the other of said members to the motive spring for winding it.

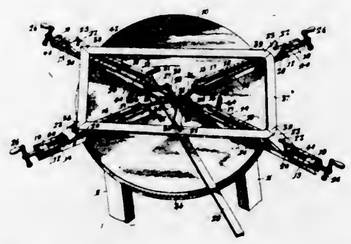
4. In a time recorder, the combination with type wheels, a motive spring for driving them, and a hand lever for causing prints to be made by the type wheels, of a friction drive consisting of two members, connections from the hand lever to one member for driving it, means by which said member may be driven independently of said hand lever, and other connections from the other member to the motive spring for winding it.

5. In a time recorder, the combination with type wheels, a motive spring for driving them, and a hand lever for causing prints to be made by said type wheels, of a shaft, two gears mounted upon said shaft, a spring serving to hold said gears in frictional contact with each so that power may be conveyed from one gear to the other, connections from the hand lever to one of said gears for driving it, and other conections from the other gear to the motive spring for winding it.

[Claims 6 and 7 not printed in the Gazette.]

1,221,601. CLAMP FOR MIRROR AND PICTURE FRAMES. GLEN MELFORD ROWLAND, Portland, Oreg. Filed Dec. 21, 1915. Serial No. 68,065. (Cl. 144—292.)

1. A clamp comprising relatively movable guides, a clamping element in each guide, a pair of crossed arms movable relatively to each other whereby they can be adjusted according to the movement of the guides, connections between said crossed arms and said clamping elements, and means connected to said arms to turn the same simultaneously to contact the clamping elements.



2. A clamp comprising a table, radial guides arranged upon the table for arcuate adjustment toward and from each other, a rotary member pivotally mounted centrally upon the table, an operating handle connected to the member for turning the same, a clamping element in each of said guides, links connecting the opposing clamping elements to said member in pairs to draw the elements inwardly upon the turning of the member, and means providing for simultaneous adjustment of a pair of the link connections with said member into line with said guides when adjusted.

3. A clamp comprising a table, a pair of opposed fixed radial guides on the table, a pair of opposed adjustable radial guides connected together and pivoted centrally upon the table, an adjustable peg carried by the table for engagement with one of the adjustable guides to hold the same from movement when adjusted, a pair of crossed arms pivoted centrally upon the table, one arm being adapted to normally lie in longitudinal alinement with the fixed guides, and the opposite arm being adapted to normally lie in line with the adjustable guides, clamping elements in the guides, links connecting the clamping elements to the opposite ends of said arms, means for adjustably connecting said arms together, and a lever connected to said arms to turn the same simultaneously about said central pivot, whereby to move said clamping elements simultaneously inward.

4. A clamp comprising a body, guides radiating from the central portion of the body, rotatable means pivoted centrally upon the body, clamping elements connected to said rotatable means adapted to be simultaneously drawn toward the center of the body upon the rotation of said means, and clamping plates mounted to freely turn on said clamping elements for automatic adjustment against the corners of the frame and having angular and curved notches in their opposite ends for engagement respectively with the angular and rounded corners of the frame.

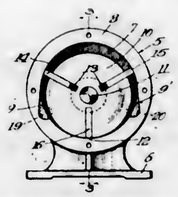
5. A clamp comprising a body, opposed pairs of guides relatively adjustable and radiating on the body, clamping elements slidable in the guides and being arranged in pairs for movement toward and from each other, an arm arranged in longitudinal alinement between each pair of guides and having connection at its opposite ends with said clamping elements, a pivot pin connecting the intermediate crossed portions of said arms whereby they can be adjusted relatively to each other, and a lever connected to said arms to rotate the same simultaneously about said pivot pin, and to contract all of said clamping elements simultaneously.

[Claims 6 to 8 not printed in the Gazette.]

1,221,602. PUMP. CARL RUNQUIST, Chicago, Ill., assignor of one-half to Oscar G. Arfstrom, Berwyn, Ill. Filed Jan. 28, 1916. Serial No. 74,730. (Cl. 230—30.)

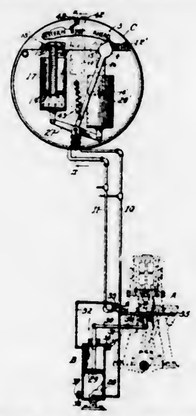
A rotary pump comprising a body part having a cylindrical opening with parallel end walls, a cylindrical vane-carrying rotor mounted eccentrically within the cylindrical

opening and in peripheral contact with the cylinder wall on a line parallel with its axis, said casing having a port formed in the peripheral wall of the cylinder at each side of the line of contact, each said port having a uniform axially extending cross section of semi-cylindrical formation at its lower portion merging into an upwardly ex-



tending wall substantially tangential to the peripheral wall of the rotor inclosing cylinder, and ducts leading axially through an end wall of the casing with their inner ends registering with the semi-cylindrical portion of each port.

1,221,603. INDICATING APPARATUS FOR ENGINES. WALTER S. RUSH, New York, N. Y. Filed Mar. 15, 1913. Serial No. 754,642. (Cl. 116—31.)



1. In an engine-indicating apparatus, the combination of a pump operated in synchronism with the engine, a closed receiver connecting with the pump whereby the latter may build up pressure as the speed of the engine increases, an index for showing the movements of the engine, and means operated by said pressure for moving the index in extent according as the pressure is greater or less.

2. In an apparatus for indicating the movements of an engine, the combination with the engine, of a pump operated in synchronism with the engine, a closed receiver connected with the pump whereby the latter may build up pressure as the speed of the engine increases, devices for indicating the movements of the engine, and means operated by the said pressure for moving the indicating devices in extent according as the pressure is greater or less.

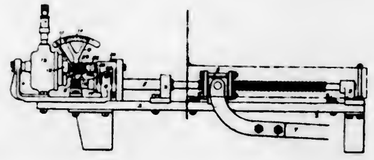
3. In an apparatus for indicating the movements of an engine, the combination of an index, a framework, containing a closed chamber, a body of liquid in such chamber, a cylinder and piston communicating with the said chamber so that the body of liquid therein acts upon the piston, connecting means between the movable element of the piston and cylinder and the index, a pump moving in synchronism with the movements of the engine, and fluid connections between the pump and the said closed chamber.

4. In a device for indicating the movements of an engine, the combination with the engine, of an index for showing both the speed and the direction of movement of the engine, a pump operated in synchronism with the engine and connections between the pump and index through which the former acts upon the latter, including a switch valve for changing the relations of the connections whereby the pump is arranged to move the index in one direction when the engine is turning forward and in another direction when it is reversing, and also to give to the said index additional supplemental movements to indicate the speed of the engine.

5. In an apparatus for indicating the movements of an engine, the combination with the engine, of an index for showing both the speed and direction of movement of the engine, a pump operated in synchronism with the engine, closed receivers connected with the pump whereby the latter may build up therein respectively plus and minus pressures, fluid-controlled means including bodies of liquid operated by the said pressures and connected with the index, and arranged to move the latter in one direction when the engine turns forward and in another direction when it is reversed, and fluid connections between the pump and the said closed receivers, including a switch valve permitting the plus and minus pressure-producing parts of the pump to be put alternately into communication respectively with the said closed receivers, accordingly as the valve is adjusted.

[Claims 6 to 11 not printed in the Gazette.]

1,221,604. SCREW-REVERSE VALVE MECHANISM FOR LOCOMOTIVES. KENNETH RUSHTON, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 8, 1915. Serial No. 65,792. (Cl. 121—98.)



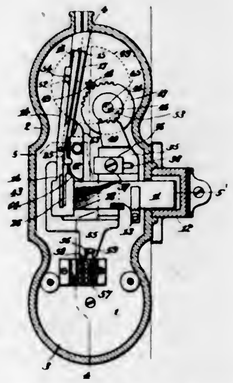
1. The combination in a reverse gear for locomotives, of a shaft for controlling the reverse mechanism; a motor; a shaft driven thereby; a hand operated shaft; an intermediate shaft; and a swinging bearing for said intermediate shaft arranged to be brought in line with either the motor driven shaft or the hand shaft.

8. The combination in a reverse gear for locomotives, of a screw shaft for controlling the reverse mechanism; a bearing for the shaft having two lugs thereon; a swinging bearing mounted on the screw shaft at said bearing; an intermediate shaft carried by the swinging bearing; a pinion on said intermediate shaft; a gear wheel on the screw shaft with which the pinion meshes; a perforated projection on the swinging bearing; power and hand means for turning said intermediate shaft; and a bolt for securing said swinging bearing to either of the lugs on the main bearing.

3. The combination in a reverse gear for locomotives, of a screw shaft; a motor driven shaft; a detachable hand operated shaft; a swinging bearing; and an intermediate shaft carried thereby and arranged to be shifted either in line with the power driven shaft or the hand operated shaft and to be coupled to either shaft so that in the event of an accident to the power mechanism the reverse mechanism can be operated by hand.

1,221,605. COIN-CONTROLLED LOCK MECHANISM. GEORGE F. RUSSELL, Hoboken, N. J. Filed June 23, 1916. Serial No. 105,487. (Cl. 194—74.)

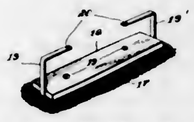
1. In a coin controlled lock, a bolt mounted for sliding movement, a frame supporting the bolt and movable independently thereof, an indicator operatively connected with the frame, means carried by the bolt for locking the indicator, and manually operable means for engaging the coin to move the bolt and release the indicator and move the frame whereby the indicator is operated.



2. In a coin controlled lock, a bolt mounted for sliding movement, a frame supporting the bolt and movable independently thereof, an indicator operatively connected with the frame, a coin chute carried by the bolt for locking the indicator, and manually operable means for engaging the coin to move the bolt and release the indicator and move the frame whereby the indicator is operated.

3. In a coin controlled lock, a bolt mounted for sliding movement, a coin holder carried by the bolt, a frame supporting the bolt and movable independently thereof and having a finger located in the path of the coin holder, an indicator operatively connected with the frame, means carried by the bolt for locking the indicator and manually operable means for engaging the coin to move the bolt and release the indicator and move the frame whereby the indicator is operated.

1,221,606. BRUSH. DAVID L. SADLER, Booneville, Miss. Filed Nov. 7, 1916. Serial No. 130,030. (Cl. 15—54.)

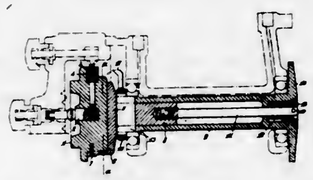


The combination with a reservoir having securing bolts at each end thereof, of a brush provided at each end with right angular brackets adapted to embrace the ends of the reservoir and having open ended slots therein for engagement with the securing bolts, for the purpose of removably securing said brush to the reservoir.

1,221,607. MOUNT FOR MAGNETO-DISTRIBUTERS. EMILE JEAN JULES SALMSON, Billancourt, France, assignor to Societe Des Moteurs Salmson (Systeme Canton-Unne), Billancourt, France. Filed Mar. 27, 1916. Serial No. 87,142. (Cl. 123—149.)

1. A mount for magneto distributers comprising a revolving brush holder, a supply contact terminal for the secondary current provided in said brush holder, a driving shaft, a socket in which is centered the brush holder and which in turn is centered in the driving shaft against which it is pressed elastically, a key locking the socket and driving shaft together, and a collar arranged between the framing and the socket, substantially as described and for the purpose set forth.

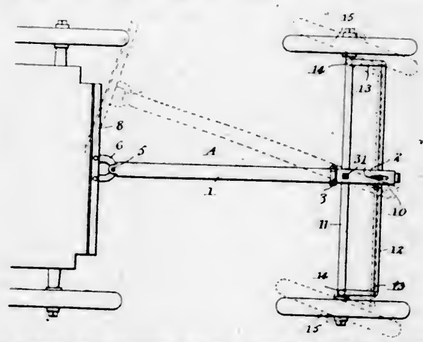
2. A mount for magneto distributers comprising a revolving brush holder, a supply contact terminal for the secondary current provided in said brush holder, a driving shaft, a socket in which is centered the brush holder and which in turn is centered in the driving shaft, said socket having a circular segment cut away opposite the brush, a key locking the socket and driving shaft together, and a collar arranged between the framing and the socket and provided with a pointed arm situated opposite the brush, substantially as described and for the purpose set forth.



3. A mount for magneto distributers comprising a revolving brush holder pierced at its center with a blind hole, a contact terminal for the secondary current arranged in said blind hole, a brush formed of a nickel stem fluted at its flat end and screwed into the contact terminal for the purpose of holding the latter in place, said brush being mounted so as to revolve at a short distance from the contact pieces of the distributer body, a driving shaft, a socket in which is centered the brush holder and which in turn is centered in the driving shaft, said socket having a circular segment cut away opposite the brush, a key locking the socket and driving shaft together, and a collar arranged between the framing and the socket and provided with a pointed arm situated opposite the brush, substantially as described and for the purpose set forth.

4. A mount for magneto distributers comprising a revolving brush holder, a supply contact terminal for the secondary current provided in said brush holder, a driving shaft, a socket formed of a cup shaped member with a cylindrical central extension inserted into the driving shaft, said socket having a circular segment cut away opposite the brush, a key locking the socket and driving shaft together, a collar arranged between the framing and the socket and provided with a pointed arm situated opposite the brush, a rod pinned at one of its ends in the central extension of the socket, a washer pinned at the other end of said rod, and a coiled spring bearing against said washer and against the driving shaft, substantially as described and for the purpose set forth.

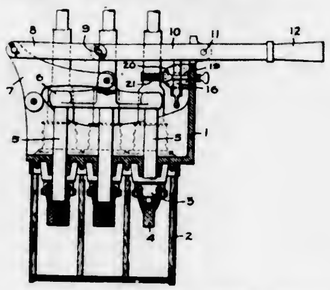
1,221,608. TOWING AND STEERING DEVICE. ALBERT SCHROEDER, Huron, S. D. Filed Nov. 6, 1915. Serial No. 60,059. (Cl. 21—137.)



A towing and steering device of the class described comprising a draw bar embodying sections arranged in longi-

tudinal alinement with each other, a horizontal pivot bolt pivotally connecting said sections together, one of said sections being provided adjacent to one end with a hole and also provided with a longitudinal slot, a clip adapted to be secured in fixed relation to the front axle of a trailing vehicle and having a journal fitting the hole in the draw bar, and another clip adapted to be fixedly secured to the tie rod of the steering gear of the trailing vehicle and having a journal receivable in the slot of the draw bar, the shorter section of the draw bar being formed at both ends with a knuckle to receive said pivot bolt and render said section reversible end for end, for the purpose specified.

1,221,609. AUTOMATIC SWITCH. ELMER H. SCHWARZ, New York, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 27, 1912. Serial No. 699,848. (Cl. 175—267.)



1. An electric switch comprising links pivoted to form an actuating toggle which is underset on either side of dead center, one of said links having a recess, relatively movable coöperating contacts brought into engagement by the straightening of said toggle and held in engagement during movement of said toggle over dead center, and a latch mounted to engage said recess and having an engaging portion narrower than said recess, whereby said toggle is stopped on either side of dead center in an underset position.

2. An electric switch comprising relatively movable cooperating contacts, an actuating toggle for closing said contacts when passing through its dead center position and collapsible on either side of dead center for opening said contacts, an operating handle directly connected to said toggle for moving said toggle from either collapsible position slowly through its dead center position, a latch normally operative to restrain said toggle in circuit closing position, said toggle carrying a latch engaging means movable with said toggle to normally engage said latch and permit a limited movement of said toggle on either side of dead center but to normally hold said toggle in an underset position whereby said toggle collapses to open the switch when said latch is removed.

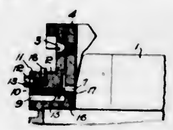
3. An electric switch comprising relatively movable cooperating contacts, an actuating toggle for closing said contacts when passing through dead center position and collapsible either side of dead center for opening said contacts, an operating handle directly connected to said toggle for moving said toggle simultaneously with said handle from either collapsible position slowly through its dead center position, a latching member normally biased to latching position to restrain said toggle in circuit closing position, said toggle carrying a latching recess which normally coöperates with said latching member to permit a limited movement of said toggle on either side of dead center but to normally hold said toggle in an underset position, and means for removing said latching member to permit said toggle to collapse and open said contacts.

4. An electric switch comprising relatively movable cooperating contacts, an actuating toggle for closing said contacts when passing through its dead center position and collapsible either side of dead center for opening said contacts, an operating handle for simultaneously moving therewith said toggle from either collapsible position slowly through its dead center position, a latching member normally biased in a position to restrain said toggle in circuit closing position, said toggle carrying a latching recess with which said latching member normally engages to form a lost motion connection with said toggle and permit limited movement of said toggle on either side of dead center and to normally hold said toggle in an underset position on either side of dead center whereby said toggle collapses to open the switch when said latch is removed.

5. An electric switch comprising links pivoted to form an actuating toggle adapted to be underset on either side of its dead center, relatively movable coöperating contacts held in engagement while said toggle is in either underset position, an electromagnetically controlled latch for holding said toggle in either of its underset positions, and an operating handle rigidly connected to one of said links and assuming a mid position when the switch is closed and an extreme position on either side of said mid position when the switch is open.

[Claim 6 not printed in the Gazette.]

1,221,610. CAM MECHANISM FOR KNITTING-MACHINES. ROBERT W. SCOTT, Philadelphia, Pa., assignor to Scott & Williams, Inc., Philadelphia, Pa., a Corporation of New Jersey. Filed June 30, 1911. Serial No. 636,278. (Cl. 66—21.)



1. Cam mechanism for knitting machines comprising in combination a movable stitch cam having an attachment fixed thereto and movable therewith, for contact with the needles thrown beyond the active face of the stitch cam, to preserve uniform draft upon the needles.

2. Cam mechanism for knitting machines comprising in combination a movable stitch cam having an attachment fixed to and movable therewith, and means to adjust said attachment relatively to the stitch cam and into a position to contact with the needles thrown beyond the active face of the stitch cam, to preserve uniform draft upon the needles.

3. Cam mechanism for knitting machines comprising in combination a cam cylinder, a cam bracket supported thereon, and radially movable with respect thereto, a stitch cam secured to said bracket, elevating cams on said cylinder cooperating with said stitch cam and a needle support or platform unyieldingly secured to said bracket and underlying the nose of said stitch cam.

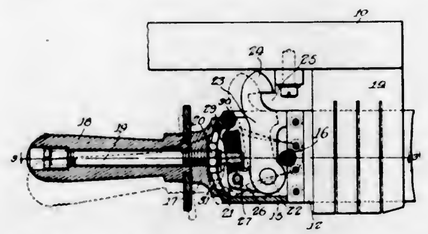
4. Cam mechanism for knitting machines comprising in combination a single stitch cam movable into and out of contact with the needles, a pair of elevating cams cooperating therewith, and a needle support or platform held in fixed relation with respect to said stitch cam adjacent the nose thereof, and overlying portions of said elevating cams when the stitch cam is in its operative position, thereby to receive the impact of needle draft.

5. Cam mechanism for knitting machines comprising in combination a cam cylinder, a radially movable cam bracket mounted thereon, a single stitch cam secured to said bracket, a pair of needle elevating cams having portions of their needle guiding edges removed, and a needle platform or support secured to said bracket and extending to a point underlying the nose of said stitch cam, the inner edge of said platform or support being received by said elevating cams at the point where portions of their guiding edges are removed.

[Claims 6 to 10 not printed in the Gazette.]

1,221,611. LOCKING-SWITCH. EDSON O. SESSIONS, Chicago, Ill. Filed July 10, 1916. Serial No. 108,302. (Cl. 175—282.)

1. In a locking switch, the combination of a pair of posts, a switch blade pivoted to one of said posts, contact clips carried by the other post for engaging said blade in its closed position, a housing carried by the free end of said blade, a locking latch pivotally supported in and extending from said housing, a catch carried by said other post for engaging said latch to retain said blade in its closed position, and an operating handle pivotally supported on said housing and extending therethrough to engage said latch to move said latch from engagement with said catch when said handle is operated to open said switch.



2. In a locking switch, the combination of a pair of posts, a switch blade pivoted to one of said posts, contact clips carried by the other post for engaging said blade in its closed position, a housing carried by the free end of said blade, a locking latch pivotally supported in and extending from said housing, a catch carried by said other post for engaging said latch to retain said blade in its closed position, and an operating handle pivotally supported on said housing and extending therethrough to engage said latch to move said latch from engagement with said catch when said handle is operated to open said switch, said latch being in the form of a bell crank lever having a long arm provided with a hook for engaging said catch and a short arm lying in the path of the handle extension to be operated thereby.

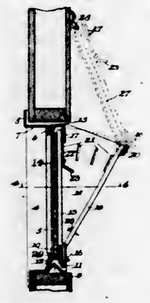
3. In a locking switch, the combination of a pair of posts, a switch blade pivoted to one of said posts, contact clips carried by the other post for engaging said blade in its closed position, a housing carried by the free end of said blade, a locking latch pivotally supported in and extending from said housing, a catch carried by said other post for engaging said latch to retain said blade in its closed position, an operating handle pivotally supported on said housing and extending therethrough to engage said latch to move said latch from engagement with said catch when said handle is operated to open said switch, said latch being in the form of a bell crank lever having a long arm provided with a hook for engaging said catch and a short arm lying in the path of the handle extension to be operated thereby, and a coil spring tending to hold said latch in its engaging position.

4. In a locking switch, the combination of a pair of posts, a switch blade pivoted to one of said posts, contact clips carried by the other post for engaging said blade in its closed position, an inclosed box shaped housing secured to the free end of said blade, said housing having a cylindrical end wall, two rods supported by said housing substantially parallel with the pivotal axis of said blade, a yoke pivotally supported on one of said rods outside of and around the cylindrical end of said housing, a locking latch pivotally supported within the housing upon the other of said rods and extending through said housing, a catch carried by said other post for engaging said latch when the switch blade is closed, and an operating handle secured to said yoke and extending through said housing to engage and release said latch when said handle is operated.

5. In a locking switch, the combination of a pair of posts, a switch blade pivoted to one of said posts, contact clips carried by the other post for engaging said blade in its closed position, an inclosed box shaped housing secured to the free end of said blade, a locking latch pivotally supported in and extending from said housing, two rods supported by said housing substantially parallel with the pivotal axis of said blade, a yoke pivotally supported on one of said rods outside of and around the cylindrical end of said housing, a locking latch pivotally supported within the housing upon the other of said rods and extending through said housing, a catch carried by said other post for engaging said latch when the switch blade is closed, and an operating handle secured to said yoke and extending through said housing to engage and release said latch when said handle is operated, said latch being in the form of a bell crank lever having a long arm provided with a hook for engaging said catch and a short arm lying in the path of the handle extension to be operated thereby.

[Claims 6 to 14 not printed in the Gazette.]

1,221,612. SHEET-METAL VENTILATION-WINDOW. DARIUS E. SHRAUGER, Atlantic, Iowa. Filed Aug. 11, 1916. Serial No. 114,402. (Cl. 189—64.)



1. In a sheet-metal ventilation window, a sill composed of a single strip having a portion bent to form an upstanding weathering ridge, and jambs each made of a strip having an intermediate longitudinal portion bent upon itself to form a sash-stop the lower end of which is spaced upwardly from the weathering ridge of said sill, in combination with a detached rocking sash, and a sash bottom rail composed of a strip bent upon itself in cross-section to form an inwardly and downwardly inclined longitudinal lip and an outwardly and downwardly inclined lip spaced therefrom to form a longitudinal groove adapted to straddle the weathering ridge of the sill in the spaces below the lower ends of said stops.

2. In a sheet-metal ventilation window, a sill consisting of a single strip having a portion bent to form an angular upstanding longitudinal ridge to weather the sill, jambs having intermediate portions bent upon themselves to form sash stops, inwardly-disposed extensions on the inner edges of the jambs, and a bar fastened across the space between said extensions, in combination with a sash having a longitudinal groove in its bottom rail adapted to straddle the ridge of the sill and rock thereon to pivot the sash to swing back and forth between said stops and said cross-bar.

3. In a sheet-metal ventilation window, a sill having a longitudinal upstanding weathering ridge, and jamb-extensions to form inwardly standing cheeks having radially disposed slots, in combination with a sash having a longitudinally-grooved bottom rail to straddle the weathering ridge of the sill to pivot the sash at the bottom, and latch-buttons pivoted on the sash to engage the slots in the cheeks.

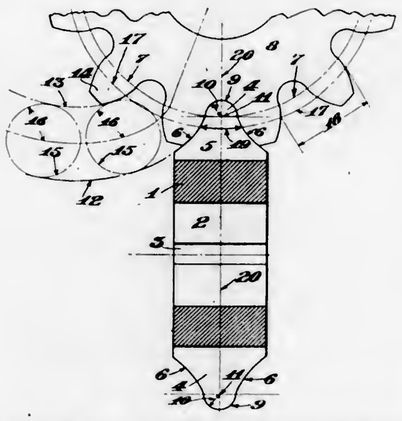
4. In a sheet-metal ventilation window, triangular cheeks disposed inwardly from the jambs, flanges on the lower inner edges of the cheeks to stiffen them and form sash stops, and a cross-bar fastened to span the space between the cheeks, in combination with a detached sash, fitted for insertion between the cheeks, and a hook on the back of the sash to engage the cross-bar.

5. In a sheet metal ventilation window, a sill having an upstanding weather ridge, jambs having sash stops, triangular cheeks disposed inwardly in the planes of the jambs and having radial slots, and perforated flanges bent on the lower inner edges of the cheeks to stand under the space therebetween, in combination with a detached sash having a groove to pivotally seat it on the weather-ridge

on the sill or at different heights on pins selectively seated in the perforations of said flanges, and latches on the sash to engage the radial slots.

[Claims 6 to 8 not printed in the Gazette.]

1,221,613. FORMED MILLING-CUTTER. OLIVER G. SIMMONS, Detroit, Mich. Filed July 17, 1916. Serial No. 109,624. (Cl. 29—103.)



1. A rotary gear cutter having the cutting surfaces of its teeth in the form of true involute curves of an extent at least equal to the depth of the teeth to be cut when measured from the periphery of the gear to its root circle, and with a lead substantially equal to the perimeter of the imaginary base circle of the gear to be cut.

2. A rotary gear cutter having teeth, each of which is provided with cutting surfaces in the form of true involute curves of an extent at least equal to the depth of the teeth to be cut when measured from the periphery of the gear to its root circle, and with a circular cutting surface, the curve of which connects the curves of said involute-curved cutting surfaces.

3. A rotary gear cutter having teeth, each of which is provided with cutting surfaces in the form of true involute curves of an extent at least equal to the depth of the teeth to be cut when measured from the periphery of the gear to its root circle, and with a circular cutting surface, the curve of which connects the curves of said involute-curved cutting surfaces, said involute curves of the teeth being based upon a pressure angle of 22½ degrees.

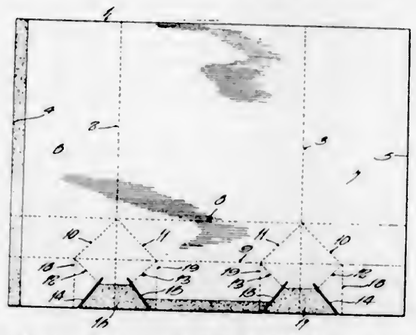
4. A rotary gear cutter having teeth, each of which is provided with cutting surfaces in the form of true involute curves, each curve having a lead substantially equal to the perimeter of the corresponding imaginary base circle of the gear to be cut.

5. A rotary gear cutter having teeth, each of which is provided with cutting surfaces in the form of involute curves, each curve having a lead substantially equal to the perimeter of the corresponding base circle of the gear to be cut and having an extent at least equal to the depth of the teeth to be cut when measured from the periphery of the gear to its root circle.

[Claims 6 and 7 not printed in the Gazette.]

1,221,614. PAPER BAG. EDWARD N. SIMONEAUX, New Orleans, La., assignor of one-half to Joseph Vicknair, New Orleans, La. Filed Dec. 21, 1916. Serial No. 138,248. (Cl. 229—60.)

1. A paper bag comprising a blank cut and creased to fold into bag form with the edges of its bottom overlapping and adhesively secured forming a longitudinal seam, complete one piece flaps extending toward each other longitudinally of said edges, and overlapping both sides of the seam formed by said edges, and adhesively secured thereto with the free ends of said flaps abutting.



2. A paper bag comprising a rectangular blank folded to form a flat tube with its side edges overlapping and adhesively secured, one end of said tube having two pairs of inwardly converging slits, the slits of each pair being adjacent to each other forming complete one piece truncated triangular flaps adapted, when the blank is folded to form the bag, to extend toward each other with their free ends abutting, the bottom edges of said bag being overlapped and adhesively secured, said flaps extending longitudinally of and lapping said edges.

1,221,615. SHOCK-ABSORBER FOR PNEUMATIC TOOLS. WILLIAM CULROSS SIMPSON, Jr., and JOHN PORTER BARBOUR, Livingston, Mont. Filed Apr. 12, 1916. Serial No. 90,781. (Cl. 121—20.)



1. In a pneumatic tool, the combination with a handle having a depending internally threaded sleeve, and a barrel externally threaded at its upper end, of a connecting member having an outer externally threaded wall engageable within the sleeve of the handle and provided with inwardly projecting radially disposed set screws, a second connecting member having a depending internally threaded sleeve to receive the upper end of the barrel and provided with an upper reduced cylinder slidably interfitting the wall of the first connecting member and having longitudinal grooves into which the inner ends of the said set screws project to guide and limit the relative movements of the connecting members, said first connecting member having a reduced piston slidably interfitting the cylinder of the second connecting member, and said connecting members having registering air ports communicating with the handle and with the barrel and also communicating with the space between the inner end of said piston and the inner end of the cylinder, all for the purpose described.

2. In a pneumatic tool, the combination with a handle having a depending internally threaded sleeve, and a barrel externally threaded at its upper end, of a connecting member having an outer externally threaded wall engageable within the sleeve of the handle, a second connecting member having a depending internally threaded sleeve to receive the upper end of the barrel, and provided with an upper reduced cylinder slidably interfitting the wall of the first connecting member, said first connecting member having a reduced piston slidably interfitting the cylinder of the said second connecting member, and said connecting members having registering air ports communicating with the handle and with the barrel and also communicating with the space between the inner end of said piston and the inner end of the cylinder, all for the purpose described.

3. In a pneumatic tool, the combination with a handle having a depending internally threaded sleeve, and a barrel externally threaded at its upper end, of a connecting member having an outer externally threaded wall engageable within the sleeve of the handle, a second connecting member having a depending internally threaded sleeve to receive the upper end of the barrel and provided with an upper reduced cylinder slidably interfitting the wall of the first connecting member, said first connecting member having a reduced piston slidably interfitting the cylinder of the said second connecting member, and said connecting members having registering air ports communicating with the handle and with the barrel and also communicating with the space between the inner end of said piston and the inner end of the cylinder, all for the purpose described, and means whereby to guide and limit the relative movement of the said connecting members.

4. In a pneumatic tool, the combination with a handle having a depending internally threaded sleeve, and a barrel externally threaded at its upper end, of a connecting member having an outer externally threaded wall engageable within the sleeve of the handle, a second connecting member having a depending internally threaded sleeve to receive the upper end of the barrel and provided with an upper reduced cylinder slidably interfitting the wall of the first connecting member, said first connecting member having a reduced piston slidably interfitting the cylinder of the said second connecting member, and said connecting members having registering air ports communicating with the handle and with the barrel and also communicating with the space between the inner end of said piston and the inner end of the cylinder, said ports of the first connecting member projecting axially through its said piston.

5. In a pneumatic tool, the combination with a handle, and an operating barrel, of a connecting member attached to the said handle and provided with diametrically opposed inwardly projecting guide members, a second connecting member attached to the said barrel and having an upper reduced cylinder slidably interfitting the first connecting member and having diametrically opposed longitudinal slots receiving the inner ends of said guide members, said first connecting member having a reduced piston slidably interfitting the cylinder of the second connecting member, and said connecting member having registering air ports communicating with the handle and with the barrel and also communicating with the space between the inner end of said piston and the inner end of said piston cylinder, all for the purpose described.

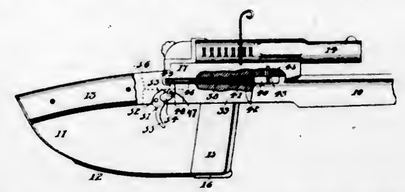
[Claim 6 not printed in the Gazette.]

1,221,616. TRIGGER MECHANISM FOR AUTOMATIC FIREARMS AND PISTOL-SWORDS. ANTON SOLMAN and ALBIN SLIWINSKI, Pittsburgh, Pa. Filed Sept. 7, 1916. Serial No. 118,841. (Cl. 42—53.)

1. A pistol sword including a sword and hilt integrally formed, a cradle formed integral with the sword and hilt, an automatic pistol supported in said cradle, a trigger pivoted to the hilt, and connections between the trigger and pistol firing mechanism.

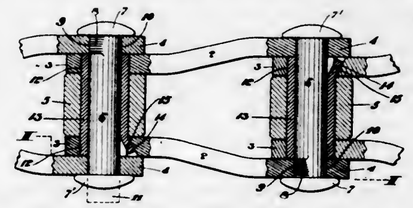
2. A pistol sword including a sword element comprising an integrally formed hilt, a cartridge casing, and a cradle superposed upon said cartridge casing, an automatic pistol mounted in the cradle, and trigger mechanism for the pistol carried by the hilt.

3. A pistol sword including a sword element having a hilt, and a cradle carried thereby, an automatic pistol mounted in the cradle, a trigger pivoted to the hilt, and a tensioned longitudinally shiftable rod connecting the trigger and the pistol firing mechanism.



4. A pistol sword including a sword element having a hilt, a cradle carried thereby, an automatic pistol mounted in the cradle, a trigger pivoted to the hilt, a tensioned longitudinally shiftable rod, means connecting the forward end of the rod to the firing mechanism of the pistol, and means connecting the rear end of the rod to the trigger.

1,221,617. CONVEYER-CHAIN. ALEXANDER M. SORBER, Newell, Pa., assignor to Pittsburgh Coal Washer Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 7, 1914. Serial No. 830,146. (Cl. 74—32.)



In a chain joint of the class described, the combination of a pair of laterally spaced links having their terminals at one end spaced apart for clearance of a roller, each of said terminals having a circular bushing opening and the opening of one of said links having a lateral recess, a cylindrical bushing having a central bolt cavity fitting by its ends in said openings flush with the outer faces of the link terminals and having at one end a longitudinally slitted pressed out lug engaging said lateral recess, a link member having outer link terminals embracing said first named link terminals and provided with pin engaging holes registering with the bushing cavity, one of said outer link terminals having a lateral squared recess coextensive with the diameter of the pin hole and both of said outer terminals confining said bushing against longitudinal movement, a central pin extending through said outer link terminals and the bushing and having terminal retaining heads and provided with a laterally squared shoulder engaging the squared recess of the outer link terminal, and a roller rotatably mounted on the bushing betwen the inner link terminals, substantially as set forth.

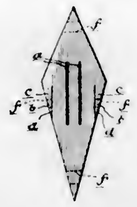
1,221,618. CEMENT. FREDERICK W. SPERR, Jr., Oakmont, and ROBERT J. MONTGOMERY, Tarentum, Pa., assignors to H. Koppers Company, Pittsburgh, Pa., a Corporation of Maine. Filed Mar. 7, 1916. Serial No. 82,616. (Cl. 106—8.)

1. A cement mixture, comprising silica, hard silica bats, fire clay and feldspar.

2. A cement mixture, comprising 15 to 25 per cent. of fire clay, feldspar not exceeding 7 per cent., and silica.

3. A cement mixture, comprising approximately 25 per cent. of fire clay, 35 per cent. of silica, 35 per cent. of silica bats, and 5 per cent. of feldspar.

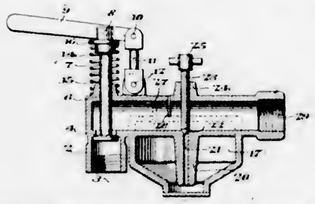
1,221,619. BAIL-EAR FOR PAILS. HARRISON L. STALEY, Martinsville, Ind., and WALTER B. SIMMONS, Richmond, Va., assignors to Wilts Veneer Company, Richmond, Va., a Corporation of North Carolina. Filed Apr. 28, 1916. Serial No. 94,159. (Cl. 217—126.)



1. A bail ear for buckets, consisting of a diamond shaped plate, pointed at its upper and lower ends, said ends being bent inwardly to form entering points whose flat faces face upwardly, said plate being provided with a pair of slits approximately in its center, the metal between the slits being bent outwardly to form a loop for the bail eye, said plate being provided with side slits extending from the lower converging edges of the plate upwardly into the body of the plate, to thereby form sharpened tabs, the points of these tabs being bent backwardly to form entering points whose flat sides face upwardly.

2. A sheet metal bail ear approximately diamond shaped and provided with a loop for engagement with the bail eye and having its upper and lower ends sharpened and bent inwardly to form entering points, said plate being provided with vertical slits extending from its converging lower edges upwardly into the body of the plate, thereby forming side tabs, these tabs having their sharpened free points bent backwardly to form entering points, the line of bending being below the upper ends of the slits, for the purpose set forth.

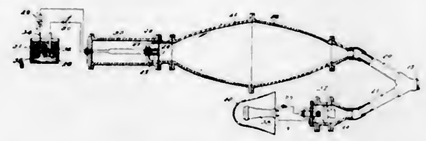
1,221,620. PRIMER FOR INTERNAL-COMBUSTION ENGINES. DARIUS A. STEININGER, Laporte, Ind. Filed Aug. 6, 1914. Serial No. 855,488. (Cl. 123—180.)



In a primer for internal combustion engines, a compressed air conduit, a spring seated admission valve for said conduit, a bowl located below said conduit and extended laterally to the side of the conduit where it is provided with a filling orifice adapting it to be filled with a priming agent, a regulating valve the stem of which extends diametrically and downwardly through said conduit and is operable from above the top thereof for admitting the priming agent from said bowl to said conduit, said valve having a conical face acting to spread the priming agent, the primer being formed with a passage leading from the upper portion of said conduit into the upper portion of said bowl, a stationary deflector arranged back of the entrance to said passage and obstructing only the upper portion of said conduit, and means for opening said admission valve.

1,221,621. SIGNALING APPARATUS. WILLIAM H. STEVENS, Altoona, Pa. Filed Apr. 18, 1916. Serial No. 91,860. (Cl. 179—1.)

1. In combination in signaling apparatus, a transmission conduit containing a gas, a transmitter diaphragm positioned so as to impart, when vibrated, pulsations to the gas, a closed resonating tube in communication with the diaphragm on the side remote from the conduit, and a receiver for the pulsations.

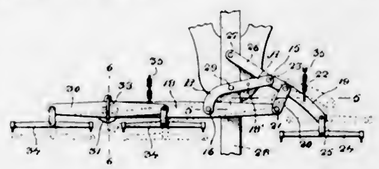


2. In combination in signaling apparatus, a train brake pipe containing air under operating pressure, and a mechanically operated sound producing means and a receiver connected thereto at separated points, whereby pulsations may be imparted to the compressed air in the pipe by the sound producing means and transmitted to the receiver.

3. In combination in signaling apparatus, a train brake pipe containing air under operating pressure, a mechanically operated sound producing means connected to the pipe and constructed to give vibrations to the air in the pipe of a frequency such as to produce a musical tone, and a receiver connected to the pipe at a point remote from the sound producing means and adapted to receive the pulsations of air from the pipe and reproduce the musical tone.

4. In combination in signaling apparatus, a train brake pipe containing air under operating pressure, mechanically operated means for giving the air in the pipe vibrations of a frequency such as to produce a musical tone, an electromagnetic transmitter having a diapragm in contact with the compressed air of the pipe at a point remote from the vibration producing means, a sound producing mechanism located adjacent said electromagnetic transmitter, and electrical connection from the transmitter whereby the vibrations of the transmitter diaphragm cause the actuation of the sound producing means.

1,221,622. DRAFT-EQUALIZER. JOHN H. STICKELL, Williamson, Pa. Filed May 21, 1915. Serial No. 29,573. (Cl. 21—76.)



An implement tongue, a bracket supported thereon and extending at both sides thereof, said bracket having a forwardly extending arm adjacent to one side of the tongue, and said bracket and arm having terminal lugs, a pivot member extending through the lugs of the bracket, a brace connecting the pivot member with the tongue, a lever fulcrumed on the pivot member and having a swingletree connected therewith, a lever fulcrumed between the lugs of the arm, said lever having long and short arms, the short arm extending transversely across the tongue, a link connecting the short arm of the last mentioned lever with the first mentioned lever, and a doubletree carried by the long arm of the last mentioned lever.

1,221,623. BRAKE FOR VEHICLES. GEORGE STICKNEY, Carlton, Oreg. Filed Apr. 27, 1916. Serial No. 93,889. (Cl. 21—8.)

1. In a brake for vehicles, two pairs of transverse frame members, one pair disposed in advance of the other pair, and each pair adjustable relatively to the other pair, means connecting the forward pair of transverse frame members with the rear pair, shoe members mounted on the transverse frame members, and means for mounting the frame members on a vehicle.



2. In a brake for vehicles, two pairs of transverse frame members, one pair disposed in advance of the other, and the transverse members in each pair being adjustable relatively to each other, means for securing the forward pair of transverse frame members in adjusted position relatively to the rear pair, shoe members mounted on the frame members, and means for mounting the frame members on a vehicle.

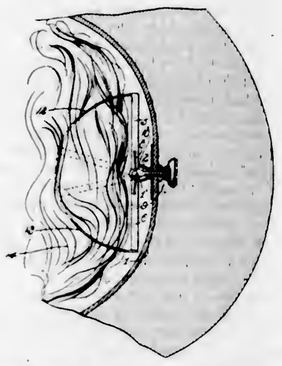
3. In a brake for vehicles, two frame members each having orifices spaced apart, the frame members being adjustable relatively to each other and an orifice in one frame member being in registry with an orifice in the other frame member, a bolt disposed in the orifices which register with each other for holding the frame members together, shoe members secured in the other orifices and means for mounting the frame members on a vehicle.

4. In a brake for vehicles, frame members, each with orifices, disposed to form a rectangular frame, orifices in each frame member registering with orifices in adjacent frame members, bolts disposed in the registering orifices for holding the frame members together, shoe members secured in the other orifices, and means for mounting the frame on a vehicle.

5. In a brake for vehicles, a frame having shoe members, two arms extending from the frame, a shaft to which the arms are journaled, a lever mounted on the shaft, a link articulated to the lever, and means for articulating the lever to the arms.

[Claims 6 and 7 not printed in the Gazette.]

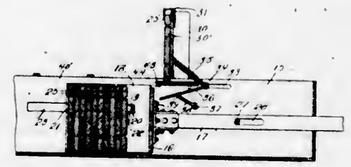
1,221,624. HAT-PIN. MORRIS STRICKLER, Jersey City, N. J. Filed July 6, 1916. Serial No. 107,739. (Cl. 132—25.)



1. In a hat pin of the character described, a pair of bars pivotally connected together, each of said bars having hair engaging prongs, means for moving said prongs to an open position, a sliding rod connected to said bars at the point of the pivotal mounting of said bars, a pair of stationary abutments limiting the movement of said bars, and a nut acting on said sliding rod for moving the same in such a direction that the rod will move said bars against said abutments and thereby swing the bars from an open position to a closed position.

2. In a hat pin of the character described, a pair of bars pivotally connected together, each of said bars having a prong, a threaded rod connected with said bars by the same pivotal member used in connecting the bars, a spring acting on said bars for normally holding the same in an open position, an apertured clamping plate through which said rod extends, a nut fitting on to said rod and acting on a hat for clamping the hat against said clamping plate, and a stationary abutment on each side of said rod connected with said clamping plate, said abutments being spaced apart so that when said nut is turned in one direction the rod will pass through the clamping plate and draw the connected ends of said bars into a position between said abutments and thereby swing the prongs toward each other.

1,221,625. BALING-PRESS. EMERY E. SUTTON and JAMES W. BAKER, Jr., Sikeston, Mo. Filed Sept. 27, 1916. Serial No. 122,524. (Cl. 100—24.)



1. In a baling press, a press box, a reciprocating plunger, and a partition block container operatively connected with the plunger for sliding reciprocatory movement in the press box.

2. In a baling press, a press box, a reciprocating plunger, a partition block container fitted for reciprocation in the press box, and a connection between the plunger and the container whereby the plunger may move a predetermined distance independently of the container.

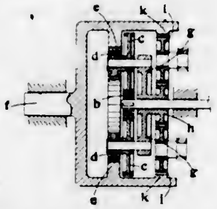
3. In a baling press, a press box having longitudinally slotted side walls, a partition block container fitted in the press box, and spring catch members carried by the container and operable through the slots in the side walls of the press box, said spring catch members having beveled front portions and abrupt rear wall portions, the side walls of the container being provided with notches through which the spring catches normally project.

4. In a baling press, a press box having longitudinally slotted side walls, a partition block container fitted in the press box, and spring catch members carried by the container and operable through the slots in the side walls of the press box, said spring catch members having beveled front portions and abrupt rear wall portions, the side walls of the container being provided with notches through which the spring catches normally project, in combination with a reciprocating plunger operatively connected with the container.

5. In a baling press, a press box having longitudinally slotted side walls, a partition block container fitted in the press box, and spring catch members carried by the container and operable through the slots in the side walls of the press box, said spring catch members having beveled front portions and abrupt rear wall portions, the side walls of the container being provided with notches through which the spring catches normally project, in combination with a reciprocating plunger operatively connected with the container; the plunger being capable of a limited predetermined movement independently of the container.

[Claims 6 to 11 not printed in the Gazette.]

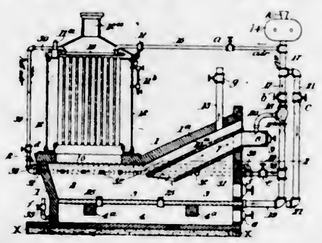
1,221,626. PLANET DRIVING-GEAR. CARL TADEY, Wetter-Ruhr, Germany, assignor to Deutsche Maschinenfabrik Aktiengesellschaft, Duisburg, Germany. Original application filed Dec. 23, 1912, Serial No. 738,237. Divided and this application filed July 17, 1914. Serial No. 851,569. (Cl. 74—34.)



1. Planet driving gear, comprising: a low speed shaft, and a high speed shaft; two internally toothed rims connected with the low speed shaft; a planet gear connection between one of said rims and the high speed shaft; and means driven from the other of said rims to revolve said planet gear connection about the high speed shaft.

2. Planet driving gear, comprising: a low speed shaft, and a high speed shaft; two internally toothed rims connected with said low speed shaft; a planet gear engaging one of said rims; a gear wheel rotatable with said high speed shaft, and a gear wheel engaging the same and rotatable with said planet gear wheel; and means to revolve said planet gear wheel about said high speed shaft, and consisting of a gear wheel mounted to rotate about a fixed axis, and engaging the other of said rims, a gear wheel rotatably mounted upon said high speed shaft and engaging the said rim-engaging gear wheel, and a frame driven by said gear wheel rotatable upon the high speed shaft and upon which frame are rotatably mounted said planet gear wheel and the gear wheel driven thereby.

1,221,627. PROCESS OF GENERATING HEAT. WALTER THOMAS and ALBERT E. MAINWARING, Nanaimo, British Columbia, Canada. Original application filed July 9, 1914, Serial No. 849,924. Divided and this application filed Sept. 17, 1914, Serial No. 862,238. Renewed Dec. 14, 1916. Serial No. 137,058. (Cl. 110—25.)



1. In the generation of heat, the process which consists in coking or charring a separate body of fuel and liberating the rich hydrocarbon vapors and gases, and drawing off such vapors and gases and mixing them with air and forcing the mixture in jets at localized points directly into a body of incandescent coked fuel, thereby decomposing the mixture into fixed gases, mixing air therewith and producing perfect combustion, whereby low-grade fuel may be used and a high heat obtained.

2. In the generation of heat, the process which consists in generating or liberating hydrocarbon vapors and gases from a body of fuel, drawing off such vapors and gases by a blast of high pressure air, and passing the mixture in jets at localized points into a body of incandescent fuel, thereby producing perfect combustion of the fuel and gases and causing the earthy and mineral matter to be reduced to separate masses of clinker.

3. In the generation of heat, the process which consists in coking or charring a separate body of fuel and generating hydrocarbon vapors and gases, burning the resulting coke to form a body of incandescent fuel, drawing off the hydrocarbon vapors and gases by a blast of high pressure air from the first body of fuel and forcing them in jets partly above, and partly into, the body of incandescent fuel, thereby producing perfect combustion of the fuel and gases.

4. The process of generating heat which consists in charring or coking a separate body of fuel and generating hydrocarbon vapors and gases, drawing off and injecting such vapors and gases in separate jets at localized points directly into a body of highly heated or incandescent fuel resulting from the previous charring or coking operation, and into a combustion chamber above the fuel and supplying air thereto for causing complete combustion, whereby low-grade fuel may be utilized and perfect combustion produced.

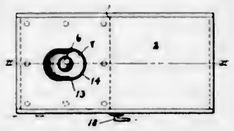
5. In the generation of heat, the process which consists in generating or liberating hydrocarbon vapors and gases from a separate body of fuel, drawing off such vapors and gases by a blast of high pressure air, and forcing the mixture in streams into a combustion chamber above the body of incandescent fuel, thereby producing perfect combustion of the fuel and gases.

1,221,628. GIG-SADDLE. CHRISTIAN THOMSEN, Hartford, Kans. Filed Sept. 30, 1916. Serial No. 123,151. (Cl. 54—41.)



A pad for gig saddles including a concave plate, spaced ears projecting from the inner surface thereof, and disks of comparatively soft material arranged adjacent the inner and outer faces of the plate and connected to the outer ends to cover the plate.

1,221,629. EGG-TESTER. WILBUR B. TIMBERLAKE, Jackson, Mich. Filed July 16, 1914. Serial No. 851,340. (Cl. 99—6.)



1. In an egg testing device, the combination of an inclosing casing in one wall of which is an opening, a flexible, yielding, light-excluding septum extending across the said opening, in which is a hole over which an egg may be placed, an electric illuminator within the casing opposite the said hole in the septum, and yielding circuit-closing means for the circuit of the illuminator, bearing against the said septum and arranged to be moved to close the circuit when an egg is placed against the septum.

2. In an egg testing device, the combination of a casing in one wall of which is an opening, a flexible yielding perforated septum extending across the said opening in the casing, an electric illuminator within the casing, yielding circuit closing means for controlling the circuit of the illuminator, and movable independently of the casing, such circuit closing means bearing against the septum so as to be moved therewith to close the circuit when an egg is put in position to be tested.

3. The combination of an inclosing casing, an electric lamp therein, the wall of the casing being perforated opposite the lamp, an open electric circuit including a source of electric supply and the said lamp, a circuit closer for the said circuit comprising a flexible arm freely movable independently of the casing and carrying a loop substantially concentric with the said opening in the wall of the casing the loop being shaped to receive an egg that is to be tested and arranged to be moved to close the circuit when an egg is placed for testing.

4. In an egg testing device, the combination of a casing, one wall of which is perforated, an electric lamp and surrounding reflector arranged in the said opening, an elastic arm constituting a part of the electric circuit of the lamp and supporting it and the reflector, such arm being arranged to yield when an egg is placed in position for testing, and a contact plate constituting another part of the electric circuit arranged to be engaged by one of the terminals of the lamp when it and the reflector are moved on an egg being put in position for testing.

5. In an egg testing device, the combination of a casing, one wall of which is perforated, an opaque, perforated, flexible cover placed across the said opening, an electric lamp and surrounding reflector arranged inside the said cover with the edge of the reflector resting against it, a source of electric supply supported within the casing, an elastic arm secured to and supporting the said reflector and lamp and holding it against the cover, the arm being connected with one terminal of the source of electric supply, and a contact plate arranged opposite the lamp with which one terminal thereof engages when the lamp and reflector are moved inwardly, the said contact plate being connected with the other terminal of the source of electric supply.

[Claims 6 to 9 not printed in the Gazette.]

1,221,630. CONDIMENT-HOLDER. AUGUST G. TRAUTMAN, Brooklyn, N. Y. Filed Oct. 10, 1916. Serial No. 124,836. (Cl. 65—45.)

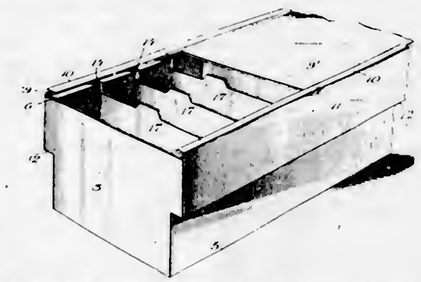


1. The herein described cap for condiment holders, the same comprising a flat perforated crown having marginal means for attachment to the body of the holder, a flat disk overlying said crown and of a size to normally close the perforations therein, an upstanding pin rising rigidly from the center of said crown, the disk having a single central hole appreciably larger than said pin, and means at the upper end of the pin larger than said hole for preventing the removal of the disk, the disk being mounted on the pin beneath said means so as to slide, to rotate, and to rock with respect to the crown and with its lower face normally closing the perforations therein.

2. The herein described cap for condiment holders, the same comprising a flat crown perforated throughout and having a marginal flange for engagement with the body of the holder, a pin rising rigidly from the center of said crown and having an enlarged head at its upper end, and a flat disk of a size to overlie the perforated area of said crown and having a single central hole appreciably larger than said pin and smaller than its head, whereby the disk is permitted to slide, to rock, and to rotate on the shank of the pin beneath its head relative to said crown but normally lies upon the latter and closes its perforations.

1,221,631. FILING DEVICE. SILAS EDGAR TROUT, Philadelphia, Pa. Filed Sept. 15, 1913. Serial No. 789,863. (Cl. 129—16.)

1. A filing device comprising a receptacle having sides, and extended portions thereof in spaced relation thereto, to form receptacle supporting members; means formed integral with said sides for supporting spacer elements; spacers carried by said means; and a cover retaining instrumentality disposed on said extended portion.



2. A filing device comprising a receptacle having extended portions thereof arranged in spaced relation to surfaces of the receptacle, to form supporting members and spacer lug inclosures.

3. A filing device comprising a receptacle having sides, and extended portions disposed in spaced relation to said sides; said receptacle being constructed for supporting spacer elements.

4. A filing device comprising a receptacle having extended portions arranged in spaced relation to surfaces of the sides of the receptacle to form supporting members therefor; means on the receptacle for supporting spacer elements; and spacers carried by said means.

5. A filing device comprising a receptacle having extended portions arranged in spaced relation to surfaces of the sides of the receptacle to form supporting members; means on the receptacle for supporting spacer elements; spacers carried by said means; and a cover retaining instrumentality on said receptacle.

[Claims 6 to 19 not printed in the Gazette.]

1,221,632. INTERMEDIATE SOLE FOR SHOES. HANS CHR. TYSSE, Manistee, Mich. Filed July 7, 1915. Serial No. 38,516. (Cl. 36—28.)



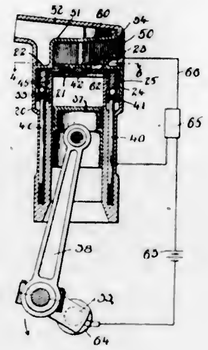
In a shoe, an inner sole, an outer sole, and an intermediate sole comprising a plurality of individual wire strands bent to form a plurality of helices, the several convolutions constituting each helix being interlocked with the convolutions of the adjacent helices, said intermediate sole forming a cushion support for the inner sole and a means for spacing the inner and the outer sole, substantially as described.

1,221,633. INTERNAL-COMBUSTION ENGINE. WILLIAM H. UPTON and HENRY C. STOLL, New York, N. Y. Filed Apr. 12, 1915. Serial No. 20,806. (Cl. 123—80.)

1. In an internal combustion engine, a cylinder provided with superposed heads spaced one above the other and provided with segmental ports therein, said upper head having a pocket therein and said lower head having an opening in line with said pocket, an ignition device seated in said pocket, a valve rotatably engaged between said heads provided with a segmental port to register with the ports in the heads, means for rotating said valve and intake and exhaust conduits communicating with the ports in the upper cylinder head.

2. In an internal combustion engine, a cylinder provided with superposed heads spaced one above the other and provided with segmental ports therein, said upper head

having a pocket and said lower head having an ignition opening in line with said pocket, an ignition device seated in said pocket, a valve rotatably engaged between the cylinder heads provided with segmental ports to register with the ports in the heads, means for rotating said valve, means for operating the ignition device when the segmental ports in the valve register with the ignition opening in the lower cylinder head and intake and exhaust conduits communicating with the ports in the upper cylinder head.



3. In an internal combustion engine, a cylinder provided with superposed spaced heads having four equidistantly spaced segmental intake ports and four equidistantly spaced segmental exhaust ports therein, a valve rotatably engaged between said heads provided with four equidistantly spaced segmental slots therein, an intake conduit communicating with the four intake ports, an exhaust conduit communicating with the four exhaust ports, a crank shaft, a piston in the cylinder connected with said crank shaft, means operated by said crank shaft for rotating the valve once to each eight revolutions of the crank shaft and an ignition device operable at every quarter-revolution of the valve.

4. In an internal combustion engine, a cylinder provided with superposed spaced heads having a plurality of equidistantly spaced intake ports and the same number of equidistantly spaced exhaust ports therein, a valve rotatably engaged between said heads provided with equidistantly spaced ports equal in number to the number of intake ports in the cylinder head, an intake conduit communicating with the intake ports, an exhaust conduit communicating with the exhaust ports, a crank shaft, a piston in the cylinder connected with the crank shaft, means for rotating the valve once to a number of revolutions of the crank shaft corresponding to twice the number of ports in the valve and an ignition device operable at every second revolution of the crank shaft.

5. In an internal combustion engine, a cylinder provided with superposed spaced heads having segmental ports therein, a valve rotatably engaged between said heads provided with segmental ports to register with the ports in the heads, a ball race for supporting the valve, spring supports for said ball race and means for rotating the valve.

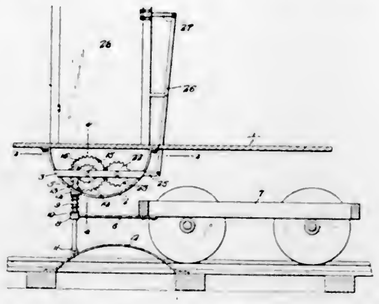
[Claims 6 to 10 not printed in the Gazette.]

1,221,634. CIGAR. HARRY R. VAN DEVENTER, Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J., a Corporation of New Jersey. Filed Oct. 26, 1915. Serial No. 57,966. (Cl. 131—52.)



An article of manufacture comprising a cigar, a match embedded in the butt end thereof, a waterproof covering for said match, and a tail formed of said covering and extending through the butt of the cigar for the purpose specified.

1,221,635. AUTOMATIC DOOR-LOCKING DEVICE. JOHN VON FRIELING and HENRY VON FRIELING, Gaylord, Kans. Filed Oct. 31, 1916. Serial No. 128,792. (Cl. 105—265.)



1. An automatic locking device comprising a plurality of gears, means for automatically revolving said gears in one direction only to operate a locking bolt.

2. In combination with a car, a ramp located in the path of said car, a vertical spring pressed rack bar operated by said ramp, gears operated by said bar, and adapted to turn only in one direction and a locking means operated by said gears.

3. In combination with a car, a ramp located in the path of said car, a vertical spring pressed rack bar operated by said ramp, gears operated by said rack bar, a ratchet mechanism for said gears, a pitman operated by said gears, and a pivoted lever connected to said pitman for locking and unlocking a door.

1,221,636. PROCESS OF CLEANING WHEAT AND OTHER GRAINS. ARNOLD C. VON HAGEN, Kansas City, Mo. Filed Mar. 3, 1916. Serial No. 81,799. (Cl. 83—28.)

1. The process of treating wheat or other grain which consists in adding powdered alkali thereto, then moistening to partially dissolve the alkali while in contact with the grain, and finally treating the grain to remove the alkali with the material adhering to or absorbed thereby.

2. The process of treating wheat or other grain which consists in adding powdered lime thereto, then moistening to partially dissolve the lime while in contact with the grain, and finally treating the grain to remove the lime with the material adhering to or absorbed thereby.

3. The process of treating wheat or other grain which consists in adding a dry alkali and moisture thereto, the moisture operating to partially dissolve the alkali, and then treating the grain to remove the alkali with the material adhering to or absorbed thereby.

4. The process of treating grain which consists in subjecting the grain to the action of a dry alkali in the presence of a quantity of liquid insufficient to dissolve the alkali and applied to the grain separately from the alkali, said liquid operating to moisten the alkali, and bring the same into intimate contact with the surface of the grain.

1,221,637. AIR SYSTEM FOR FORCING LIQUIDS. CHARLES A. WAITZ, Rouseville, Pa. Filed Dec. 6, 1915. Serial No. 65,164. (Cl. 103—8.)

1. In an air system for forcing liquids, the combination of a barrel; means for supplying air under pressure to the barrel to move the liquid; a discharge conduit for the liquid leading from the barrel; a check valve in the conduit to prevent a return flow of liquid; a float valve closing the entrance to the conduit to the air; and an air cushion in the conduit between the float valve and the check valve.

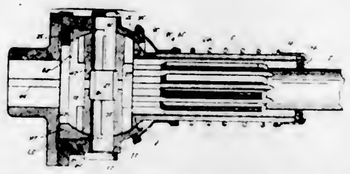
2. In an air system for forcing liquids, the combination of a barrel; means for supplying air under pressure to the barrel to move the liquid; a discharge conduit for the liquid leading from the barrel; a check valve in the conduit to prevent a return flow of liquid; a float valve closing the entrance to the conduit to the air; and an air cushion in the conduit between the float valve and the check valve, the entrance to the air cushion being in the direction of the flow of liquid to subject the air in the air cushion to the momentum of the passing liquid.



3. In an air system for forcing liquids, the combination of a barrel; means for supplying air under pressure to the barrel to move the liquid; a discharge conduit for the liquid leading from the barrel; a check valve in the conduit to prevent a return flow of liquid; a float valve closing the entrance to the conduit to the air; and an air cushion in the conduit between the float valve and the check valve, said air cushion comprising a fitting forming a portion of the conduit and a closed tube extending upwardly from the fitting, said tube having lateral openings extending from its lower end.

4. In an air system for forcing liquids, the combination of a float chamber; means for supplying air under pressure to the chamber; a discharge conduit leading from the chamber; a valve seat at the entrance to the conduit; and a one-piece cylindrically shaped glass float having crowned ends, one of the ends forming a valve surface, the wall of the float back of the surface being thickened.

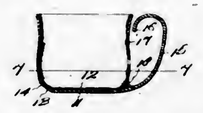
1,221,638. UNIVERSAL JOINT. FREDERICK G. WALKER, Detroit, Mich. Filed May 31, 1916. Serial No. 100,771. (Cl. 74—19.)



1. A universal joint comprising a socket member, a ball member therein, a bearing member screwed in said socket member against said ball member and inclosed by said socket member, and means carried by said bearing member adapted to lock said member in said socket member.

2. In a universal joint, the combination with a socket member, and a ball member extending therein, of a bearing member in said socket member against said ball member and having a yieldable portion, and means carried by said bearing member adapted to spring the yieldable portion of said bearing member to lock said member in said socket member.

1,221,639. SANITARY DRINKING-CUP. ELINOR C. WALSH, Helena, Mont. Filed May 2, 1913. Serial No. 765,094. (Cl. 65—13.)

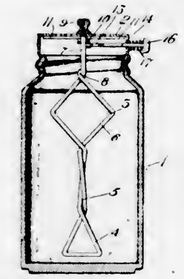


1. As a new article of manufacture a sanitary drinking cup having its body portion formed of a single integral piece of metal provided with a flat bottom and rounded curves connecting said bottom with the side walls, and with a handle integral with and projecting from the said cup, the surfaces of the handle and the body of the cup merging into each other in curved lines, whereby a cup with a smooth surface is formed without crevices or other dirt-receiving cavities.

2. As a new article of manufacture, a sanitary drinking cup having its body portion formed of a single integral piece of metal shaped with rounded curves to provide curved side walls terminating in a flat base, a reinforcing disk of slightly less diameter than said flat base rigidly attached on the outer face of the latter having its peripheral edge inclined to extend flush with the outer face of said annular rounded edge portion, a curved handle formed integral with said reinforcing disk, and curved connections between said handle and cup merging smoothly into the plane of both, the whole cup being free from any sharp depressions, angles, or corners, adapted to collect dirt, grease, or other adherent matter, substantially as described.

3. As a new article of manufacture, a sanitary drinking cup formed of a single integral piece of thin metal shaped with rounded curves on the side, terminating in a flat bottom, and a reinforcing disk of heavier metal secured to said flat bottom and having its peripheral edge shaped to form a smooth surface with the exterior of said flat bottom, the said reinforcing disk being provided with a laterally-projecting lug bent to form a curved handle, the upper end of which is spaced apart from the side wall of the cup, and the angle of divergence between the handle and the cup being filled in with non-absorbent material, and shaped in a rounded curve, the whole cup being free from any sharp depressions, angles, or corners, adapted to collect dirt, grease, or other adherent matter, substantially as described.

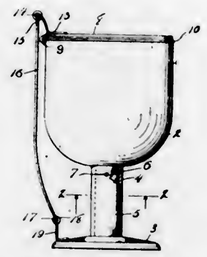
1,221,640. SALT-SHAKER. CARL ANTON WIKLUND and ERNEST RUDOLPH PETERSON, New York, N. Y. Filed Sept. 20, 1916. Serial No. 121,278. (Cl. 65—57.)



A salt shaker comprising a receptacle, a perforated cap mounted on the receptacle and provided in the side thereof with an opening, an agitator within the receptacle and comprising a single length of wire bent intermediate its ends to provide spaced loops, a bearing sleeve disposed below the under side of said cap, a laterally extending arm formed on said bearing sleeve, one extremity of the agitator being journaled within said bearing sleeve, and means hav-

ing pivotal connection at one end with said arm and the other end protruding through the opening of the cap an appreciable distance therebeyond for oscillating said agitator.

1,221,641. GLASS. JOSEPH WILLIAMS, Cherokee, Kans., assignor of one-third to John E. Walker, Pittsburg, Kans. Filed Mar. 10, 1915. Serial No. 13,396. (Cl. 65—60.)



1. A glass including two sections slidably associated with each other, closing means mounted on one of the sections, and means for automatically operating the closing means with the moving of the sections relatively to each other.

2. A glass including two slidably connected sections, said sections having together the configuration of a wine glass, a cover mounted on one of the sections, and means connecting the cover to the other section for automatically operating the cover simultaneously with the relative moving of the sections.

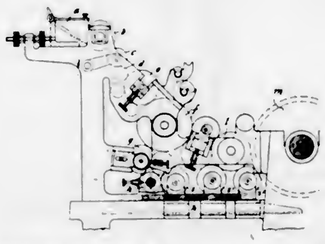
3. A glass including a body, a base for supporting the body to slide vertically, a cover pivotally mounted on the body, and means for connecting the cover and the base for automatically raising and lowering the cover simultaneously with the raising and lowering of the body from and to the base.

4. A glass including a body section, a sleeve depending centrally therefrom, a base section, an upstanding rod on the base engaging the sleeve to support the body and guide the vertically sliding movement of the body, a cover for closing the body and means for automatically actuating the cover simultaneously with the raising and lowering of the sections.

5. A glass including two slidably connected sections, means for guiding and supporting the sections during vertical sliding movement, a closure pivoted to one section, and a connecting rod associated with the closure and with the lower section for simultaneously actuating the closure upon relative movement of the sections.

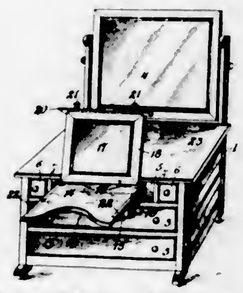
[Claims 6 and 7 not printed in the Gazette.]

1,221,642. COLOR-APPLYING MECHANISM FOR PRINTING-MACHINES. CARL WINKLER, Berne, Switzerland. Filed Nov. 6, 1915. Serial No. 59,966. (Cl. 101—356.)



In a printing machine, the combination of a reciprocating form, color rolls for applying color to the form, a rubbing roll adjacent the front color roll, a color trough, and rolls for transferring the color from the trough to the rubbing roll, said rubbing roll being arranged close to the form with its axis approximately in horizontal alinement with the axis of the front color roll, whereby fresh color will be so applied to the color applying roll that the said roll will have to turn but a short distance to apply the color to the form, thereby insuring the color being applied to the whole of the form.

1,221,643. COMBINATION DRESSER AND DRESSING AND WRITING TABLE. WALTER J. WOOD, Atlanta, Ga. Filed Feb. 8, 1915. Serial No. 6,842. (Cl. 45—70.)



1. In a dresser or like piece of furniture, provided with an upright series of drawers and a slidable plane shelf independent of the drawers, and located lower than the top of the dresser, said shelf being normally housed within the dresser and movable therefrom into extended relation thereto and provided with a mirror hinged directly to the upper face of the shelf near the rear edge thereof and foldable face downwardly flat against the shelf toward the front thereof and in such position movable with the shelf into and out of the dresser, said mirror being also movable into an upstanding position of use when the shelf is extended.

2. A dresser or other piece of furniture provided with a top and an upright series of drawers below the top, and a slidable plane shelf located immediately below the top of the dresser and normally housed therein and having a mirror hinged directly to the upper face of the shelf near the rear thereof, and foldable flat down on to the shelf toward the front thereof, said mirror being adapted to be moved on its hinge connection with the shelf into an upright position of use when the shelf is withdrawn from the dresser.

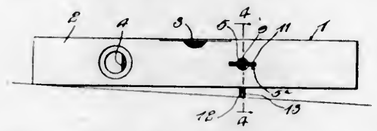
3. A dresser or other piece of furniture provided with a slidable plane shelf mounted in the dresser lower than the top of said dresser, and a mirror hinged to the upper surface of the shelf near the rear of the latter and foldable on to the shelf toward the front and also movable into an upright position of use when the shelf is in the withdrawn position, said shelf having an inset front edge to accommodate the body of the user and the mirror having its hinge connection with the upper surface of the shelf at such distance from the front edge of the shelf as to reach thereto when the mirror is folded down upon the shelf.

4. A dresser or like piece of furniture, provided with a slidable plane shelf located lower than the top of the dresser and movable therefrom into extended relation thereto, and a mirror hinged at one edge to the top of the shelf near the rear end of the latter and foldable down upon the shelf toward the front edge of said shelf, said mirror having the edge remote from the hinged edge provided with a finishing molding of a width to cover the front edge of the shelf when the mirror is folded down thereon.

5. A dresser or like piece of furniture provided with a slidable plane shelf located lower than the top of the

dresser and movable therefrom into extended relation thereto, and a mirror hinged at one edge to the top of the shelf near the rear end of the latter and foldable down upon the shelf toward the front edge of said shelf, said mirror having the edge remote from the hinged edge provided with a finishing molding of a width to cover the front edge of the shelf when the mirror is folded down thereon, said molding having manipulating handles on the side thereof remote from the mirror, and said molding being of a width to hide the outer edges of the shelf and mirror when the shelf is moved into the dresser with the handles exposed for manipulation.

1,221,644. LEVEL. JOHN WOODS, Unity, Me. Filed May 18, 1916. Serial No. 98,424. (Cl. 33—214.)



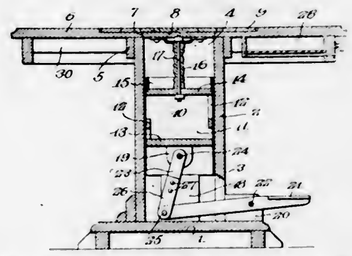
A tool comprising a bar provided with a level glass, said bar having near one end an aperture opening through its opposed sides, and having in one edge a transverse cavity, three parallel transversely spaced bores being formed through said bar between said aperture and cavity, the central bore being of greater diameter than the others, a bolt mounted slidably in said central bore and adapted to project from the aforesaid bar, said bolt having at its outer end a cross head for reception in said cavity when said bolt is retracted, a pair of parallel arms extending from the ends of said cross head and received slidably in the remaining bores, and a circular nut threaded on said bolt and disposed rotatably in said aperture.

1,221,645. COUPLING FOR PUMP-RODS. CHRISTIAN ZEHR, Berne, Ind. Filed May 10, 1916. Serial No. 96,611. (Cl. 103—62.)



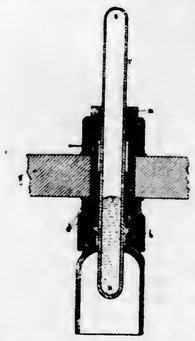
A coupling for pump rods comprising a bracket having means for connecting the same with a pump casing, and having upright laterally spaced arms, said arms being provided with upper and lower guides for the pump rod, and a pumping bar arranged on the opposite side of the pump rod from the handle and having upper and lower laterally extending arms provided with openings for the pump rod, said bar being movable between the guides and having means for permitting a windmill and a pump jack to be connected therewith, the lowermost arm of the bar being extended between the uprights, a pump handle pivoted to the pump rod between the arms, a link pivotally connecting the handle to the extended arm of the bar, said link and that portion of the pump handle between the pivotal connection of the link and that of the pump rod being adapted to aline to form a rigid joint to connect the pumping bar with the pump rod, and the pivoted end of the pump handle being at the upper arm of the pumping bar when the parts are so alined.

1,221,646. CONVERTIBLE TABLE. WILLIAM H. ZIMMERMANN, Jr., Richmond, Va. Filed Jan. 31, 1914. Serial No. 815,738. (Cl. 45—122.)



A table comprising a base, a hollow pedestal upstanding therefrom, a top mounted on said pedestal and provided with a centrally arranged opening having its walls sloping toward the interior of the pedestal, a closure for said opening, a rectangular frame slidably mounted within the pedestal for vertical movement, said frame having its top surface formed into a tray, a standard interposed between the tray and closure, a bolt passing through the said standard and through the tray for connecting the tray to the lower end of the standard and the closure to the upper end thereof, a cross piece connected with said tray and provided with spaced lugs, a link pivotally connected between the lugs of the cross piece, a lever pivoted above said base and having one end pivotally connected to the opposite end of said link for moving the closure above the opening and disposing the top edge of the tray flush with the surface of the top.

1,221,647. ELECTRODE OF METALLIC VAPOR-RECTIFIERS OR OTHER APPARATUS. ALBERT AICHELE, Baden, Switzerland, assignor to Aktiengesellschaft Brown Boveri & Cie., Baden, Switzerland. Filed Jan. 19, 1914. Serial No. 813,102. (Cl. 176—43.)

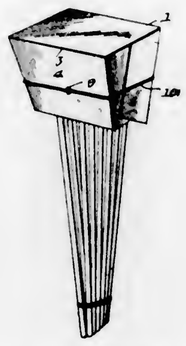


1. A metal vapor rectifier including a metal wall, an anode projecting on both sides of said wall but insulated therefrom, and comprising a single metal tube sealed at both ends and containing mercury under diminished pressure.

2. A metal vapor rectifier including a metal wall, an anode projecting on both sides of said wall but insulated

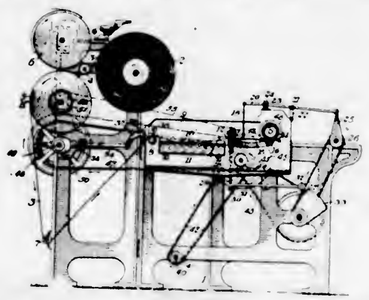
therefrom, said anode comprising a single metal tube sealed at both ends, mercury in said tube under diminished pressure, a part of said tube adapted to condense mercury vapor and return the condensed vapor to the liquid mercury.

1,221,648. BROOM-CASE. LUKE F. ALDRICH, Greenup, Ill. Filed Oct. 29, 1915. Serial No. 58,637. (Cl. 206—46.)



The combination with a bundle of brooms, of a case formed from a single substantially square blank of material scored to provide a top having side walls and end walls formed upon each of the side walls, said blank being recessed centrally and scored upon opposite sides to provide flaps which are adapted to be folded inwardly to lie between the underside of the top and the brooms, the scoring between the side and end walls and flaps being angularly disposed to provide a casing, which, when folded is formed of tapered side and end walls open at its tapered end and means for securing the case to the brooms.

1,221,649. MANUFACTURE OF PAPER CARTONS. ROBERT FLEMING ARNOTT, Upper Montclair, N. J., assignor to I. L. Myers, New York, N. Y. Filed Mar. 22, 1913. Serial No. 756,141. (Cl. 93—S1.)



1. The method of forming stiff-walled paper cans, consisting in winding directly on a mandrel a plurality of wraps of paper, and finally stiffening the wall and consolidating the previously wound layers of paper by winding one or more final wraps under a tension considerably greater than the first wraps, substantially as described.

2. The method of forming stiff-walled waterproof paper cans, consisting in applying a waterproofing material to a strip of paper, winding a plurality of wraps of such waterproof strips directly around a mandrel, and finally stiffening the wall, consolidating the previously wound layers and more completely spreading the waterproofing material by winding one or more final wraps under a tension considerably greater than the first wraps, substantially as described.

3. The method of forming stiff-walled waterproofed paper cans, consisting in saturating a strip of paper with paraffin or the like, winding a plurality of wraps of such saturated strips directly around a mandrel, and finally stiffening the wall, consolidating the previously wound layers and more completely spreading the paraffin by winding one or more final wraps forming the outer plies of the can under a considerable tension, substantially as described.

1,221,650. GARDEN AND LAWN TOOL. HENRY A. ATKINS and THEODOR FRAUDSEN, Moline, Ill. Filed Dec. 18, 1916. Serial No. 137,501. (Cl. 55—39.)



1. A device of the class described, comprising a telescopic handle; a tool secured to one end of said handle; a tool concealed within said handle adjacent to said first-named tool, and adapted to protrude therefrom when said handle is contracted; and means for holding said handle normally in extended position.

2. A device of the class described, comprising a telescopic handle; a pair of grubbing tools projected laterally from one end thereof in opposite directions; a tool concealed within said handle adjacent to said first-named tool and adapted to protrude therefrom when said handle is contracted; and means for holding said handle normally in an extended position.

3. A device of the class described, comprising a cylindrical handle; a cylindrical section telescopically movable therein and provided with a housing at its outer end; a cutting tool concealed in said housing and adapted to protrude therefrom when said cylindrical member is telescoped within said handle; and means for holding said handle and cylindrical section in extended position.

4. A device of the class described, comprising a cylindrical handle; a cylindrical section telescopically movable therein and provided with a housing at its outer end; a cutting tool located in said housing and adapted to protrude therefrom when said handle sections are telescoped; a grubbing tool carried on the end of said housing adjacent to said cutting tool; and means for holding said handle sections normally in an extended position.

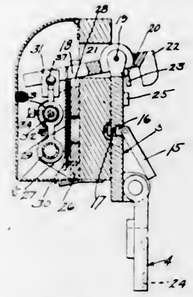
5. A device of the class described, comprising a cylindrical handle; a cylindrical section telescopically movable in said handle and provided with a housing at its outer end; a cutting tool concealed within said housing and adapted to protrude therefrom when said handle sections are contracted; cleaners yieldably mounted at the end of said housing, separable by said cutting tool; means for holding said handle sections normally in extended position; and means for locking said handle sections in a contracted position.

[Claim 6 not printed in the Gazette.]

1,221,651. RELEASING DEVICE. CHARLI AXELSSON, Lakeville, Minn., assignor of thirty-five one-hundredths to William F. Prehall, Lakeville, Minn. Filed Mar. 4, 1916. Serial No. 82,104. (Cl. 119—115.)

1. In a device of the kind described, the combination with a fixed lock plate and a movable lock plate connected by a hinge joint for folding movement, the latter onto the former, a lock device releasably connecting the movable lock plate to the fixed lock plate, and a lock pin for an animal tying device adapted to be held between said two plates, said movable lock plate having a passageway for the animal tying device.

2. In a device of the kind described, the combination with a fixed lock plate and a movable lock plate connected by a hinge joint for folding movement, the latter onto the former, and having co-incident passageways, of an animal tying device having a link insertible into said passageways, a lock pin insertible through the link of the tying device and arranged to be held between the lock plates, a lock lever for holding the movable lock plate folded onto the fixed lock plate, and means for operating the lock lever to release the movable lock plate.



3. In a device of the kind described, the combination with a fixed lock plate and a movable lock plate connected by a hinge joint for folding movement, the latter onto the former, and having co-incident passage-ways, of an animal tying device having a link insertible into said passage-ways, a lock pin insertible through the link of the tying device and arranged to be held between the lock plates, a lock lever for holding the movable lock plate folded onto the fixed lock plate, means for operating the lock lever to release the movable lock plate, and a kicker pin on the lock lever for imparting the initial movement to the movable lock plate.

4. In a device of the kind described, the combination with a fixed lock plate and a movable lock plate connected by a hinge joint for folding movement, the latter onto the former, and having co-incident passage-ways, of an animal tying device having a link insertible into said passage-ways, a lock pin having a pivoted head swiveled to the fixed lock plate, insertible through the link of the tying device and arranged to be held between the lock plates, a lock lever for holding the movable lock plate folded onto the fixed lock plate, and means for operating the lock lever to release the movable lock plate.

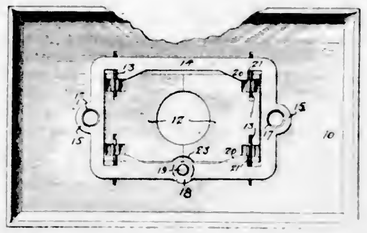
5. In a device of the kind described, the combination with a fixed lock plate and a movable lock plate connected by a hinge joint for folding movement, the latter onto the former, and having co-incident passage-ways, said fixed lock plate having a pin seat, of an animal tying device having a shoulder equipped link insertible into said passage-ways with its shoulder arranged to be engaged by the opening of the movable lock plate, a lock pin having a pivoted head swiveled to the fixed lock plate, insertible through the link of the tying device and arranged to be held in the pin seat by the movable lock plate, a lock lever for holding the movable lock plate folded onto a fixed lock plate, and means for operating the lock lever to release the movable lock plate.

[Claims 6 to 10 not printed in the Gazette.]

1,221,652. FACE-PLATE FOR FLUSH RECEPTACLES. HARRY U. BALEAU, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Sept. 12, 1916. Serial No. 119,743. (Cl. 173—330.)

1. A face plate for electrical receptacles having an aperture, a hinged door normally obstructing said aperture, a strap secured to the inner face of said plate and having a portion extending into the area of said aperture in position to engage said door on opening and arrest it in a position substantially at right angles to the plane of the plate.

2. A face plate for electrical receptacles having an aperture, a hinged door normally obstructing said aperture, a strap secured to the inner face of the plate and having stops engaging the door to limit both its opening and its closing movement.



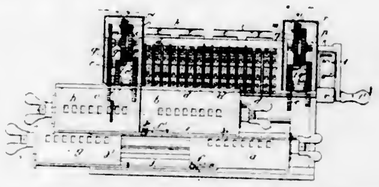
3. A face plate for electrical receptacles having an aperture, a hinged door normally obstructing said aperture, a strap secured to the inner face of the plate and having stops engaging the inner face of the door to limit both its opening and its closing movement.

4. A face plate for electrical receptacles having an aperture, a hinged door normally obstructing said aperture, a strap secured to the inner face of the plate and having stops extending into the area of the aperture and engaging the door to limit both its opening and its closing movement.

5. A face plate for electrical receptacles having an aperture, a hinged door normally obstructing said aperture, a frame surrounding the aperture on the inner side of the face plate and having stops engaging the door to limit both its opening and its closing movement.

[Claim 6 not printed in the Gazette.]

1,221,653. CALCULATING-MACHINE ESPECIALLY DEVISED FOR GEODETIC MEASUREMENTS. JACOB BALTISSER, Basel, Switzerland. Filed Feb. 16, 1917. Serial No. 149,056. (Cl. 235—75.)



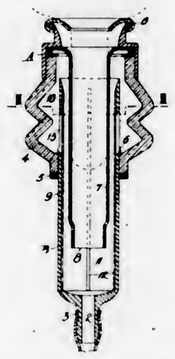
1. In calculating machines, a plurality of groups of adjustable driving members for the adjustment of calculation figures, a corresponding number of result-calculators, angularly displaced with regard one to another relatively to said groups and arranged to be operated by the said groups of driving members having been adjusted, a common actuating device to move said groups of driving members for the transmission of their adjustment upon the result-calculators and means to allow of relative displacement between the said groups of driving members and result-calculators for the purpose of interchanging relative coöperation between them, substantially as described.

2. In calculating machines, a plurality of groups of adjustable driving members for the adjustment of calculation figures, a corresponding number of result-calculators, angularly displaced with regard one to another relatively to said groups and arranged to be operated by said groups of driving members having been adjusted, a common actuating device to move said groups of driving members for the transmission of their adjustment upon the result-calculators, switching means between said actuating device and said groups of driving members for allowing the latter to be moved in opposite directions, and interconnecting means between said switching means and groups of driving mem-

bers to produce on switching simultaneous angular displacement of said groups corresponding to the angle of displacement of the result-calculators, substantially as described.

3. In calculating machines, a plurality of groups of adjustable driving members for the adjustment of calculation figures, a corresponding number of result-calculators arranged to be operated by said groups of driving members having been adjusted, a corresponding number of counting mechanism associated with said result-calculators, a common actuating device to move said groups of driving members for the transmission of their adjustment upon the result-calculators and to also move said counting mechanisms, and means to allow of relative displacement between the said groups of driving members and result-calculators for the purpose of interchanging relative cooperation between them, substantially as described.

1,221,651. MILKING-MACHINE. HAWORTH WILLIAM BARTRAM, Melbourne, and ALEXANDER GILLIES, Heidelberg, Victoria, Australia. Filed Dec. 6, 1915. Serial No. 65,321. (Cl. 31—102.)



1. In milking machines having cups of the kind specified, a cup incorporating means having alternating vertical motion and adapted to lift when suction is in the cup to exert pressure on the teat.

2. In milking machines having cups of the kind specified, a cup incorporating means having alternating vertical motion and when suction is in the cup exerting pressure on the teat, in combination with means to guide and maintain the teat in position within the cup.

3. In milking machines having cups of the kind specified, a cup incorporating means having alternating vertical motion and when suction is in the cup exerting pressure on the teat, in combination with a yielding teat shield.

4. In milking machines having cups of the kind specified, a cup comprising an upper casing and a rigid sleeve reciprocating vertically and adapted to lift when suction is in the cup to exert pressure on the teat and to move downwardly when air is in the cup to remove such pressure, in combination with a yielding teat shield.

5. In milking machines having cups of the kind specified, a cup comprising an upper casing and a rigid sleeve reciprocating vertically and adapted to lift when suction is in the cup to exert pressure on the teat, spring means exerting a downward pressure on said sleeve to remove such pressure from the teat when air is in the cup, in combination with a yielding teat-shield.

[Claims 6 to 17 not printed in the Gazette.]

1,221,655. TOOL-HANDLE. THOMAS S. BENISON, East Flat Rock, N. C. Filed Dec. 28, 1916. Serial No. 139,400. (Cl. 145—61.)

1. A tool handle having a bore in its end and having lateral bores or branches extending from the first named bore, and a metallic cap covering said end and having an integral shank extending into the central bore and filling said bore, and integral branches extending into and filling up the lateral or branch bores.

2. A tool handle having a bore in its end and having lateral branch bores extending from the first named bore to the exterior of the handle, and an integral metal cap covering the butt end of the handle and having an integral shank extending into and filling the bore and integral branches extending into and filling up the lateral bores or branches, said cap, shank and branches being cast upon the handle.



3. The method of reinforcing tool handles which consists in forming a bore in the handle with branch bores extending radially therefrom to the exterior of the handle and then casting metal into said central bore and the branch bores and over the butt end of the handle to form a cap therefor.

4. A tool handle having a bore in its end and having lateral branch bores extending from the first named bore to the exterior of the handle, a metal cap covering the butt end of the handle and having an integral shank extending into and filling the bore and integral branches extending into and filling up the lateral bores or branches, the butt end of the handle having recesses and the cap having integral studs projecting into said recesses, said cap, shank, branches and studs being cast in one piece upon the handle.

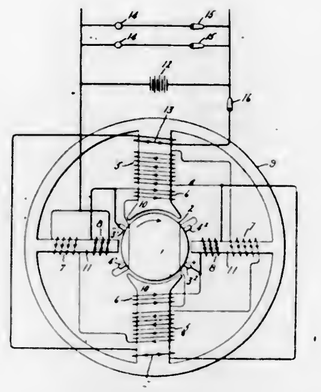
1,221,656. SHOE-LACE CLASP. EDWARD BENSON, Miami, Ariz. Filed Feb. 10, 1916. Serial No. 77,445. (Cl. 24—119.)



1. A shoe lace clasp comprising a pair of opposite pivotally connected clamping jaws located one above the other, one of the jaws having spaced apertures through which the ends of the lace are adapted to be passed to anchor the clasp to the shoe, and the other jaw having a central bow-knot receiving aperture on opposite sides of which the first-mentioned apertures are located.

2. A shoe lace clasp comprising a pair of opposite pivotally connected clamping jaws located one above the other, one of the jaws having spaced apertures through which the ends of the lace are adapted to be passed to anchor the clasp to the shoe, and the other jaw having a central bow-knot receiving aperture on opposite sides of which the first-mentioned apertures are located, the first-mentioned jaw also having bottom indentations at its ends.

1,221,657. DYNAMO-ELECTRIC MACHINE. SVEN R. BERGMAN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 28, 1914. Serial No. 874,407. (Cl. 171—315.)

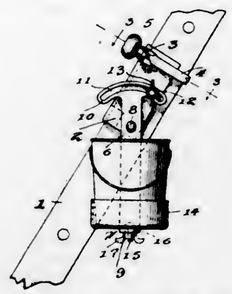


1. In a variable speed dynamo electric machine, an armature provided with a commutator, load and auxiliary brushes bearing on said commutator, a main field winding adapted to be supplied with substantially constant excitation, an auxiliary field winding opposing said main field winding and connected between said auxiliary and said load brushes, a field winding connected in series with said armature for opposing the armature reaction, and a second auxiliary field winding adapted to be supplied with substantially constant excitation for producing a field for the armature conductors located between said auxiliary and said load brushes.

2. In a variable speed dynamo electric machine, an armature provided with a commutator, load and auxiliary brushes bearing on said commutator, main field poles, auxiliary field poles, a main field winding on said main field poles adapted to be supplied with substantially constant excitation, an auxiliary field winding on said main field poles opposing said main field winding and connected between said auxiliary and said load brushes, a commutating field winding on said auxiliary field poles connected in series with said armature for opposing the armature reaction, and an auxiliary field winding on said auxiliary field poles adapted to be supplied with substantially constant excitation for producing a field for the armature conductors located between said auxiliary and said load brushes.

3. In combination, a storage battery, a dynamo-electric machine adapted to operate both as a motor from said storage battery and a generator to charge the same, said dynamo electric machine comprising an armature provided with a commutator, load and auxiliary brushes bearing on said commutator, main field poles, auxiliary field poles, a main field winding on said main field poles connected to said storage battery, a series field winding on said main field poles connected in series with said armature and so as to assist said main field winding when said machine operates as a motor, an auxiliary field winding on said main field poles opposing said main field winding connected between said auxiliary and said main brushes, a commutating field winding on said auxiliary field poles connected in series with said armature for opposing the armature reaction, and an auxiliary field winding on said auxiliary field poles connected to said storage battery for producing a field for the armature conductors located between said auxiliary and said load brushes.

1,221,658. ARTICLE-SUPPORT FOR LADDERS. WILLIAM O. BERRY, Caro, Mich. Filed Apr. 4, 1916. Serial No. 88,932. (Cl. 248—19.)

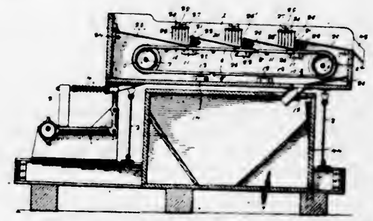


1. A device of the class described comprising a bar, a threaded stud formed on said bar, means for securing the bar to the side rail of a ladder, a bracket pivotally mounted on the bar, said bar having a slot formed therein, said stud extending through said slot, and a nut provided on said stud and engageable with the walls of said slot whereby the bracket will be locked against movement, and a receptacle carried by said bracket.

2. A device of the class described comprising a bracket having a vertical arm and a horizontal arm, said bracket adapted to be pivotally mounted upon the side rail of a ladder, said vertical arm being provided with an arcuate shaped slot, means mounted in said slot for locking the bracket in adjusted position, and a receptacle carried by the horizontal arm of said bracket.

3. A device of the class described comprising an angle bar, a clamping member carried by the angle bar whereby the bar may be secured to the side rail of a ladder, a bracket having a vertical and horizontal arm connected at their ends, said vertical arm being pivotally mounted upon said bar, a head formed on the upper end of said bar and provided with a slot, means mounted on said bar and working within said slot for locking the bracket against movement, and a receptacle detachably mounted upon the free end of the horizontal arm.

1,221,659. CONCENTRATOR. CHARLES EDWARD BEYER, Mazatlan, Mexico. Filed Apr. 16, 1915. Serial No. 21,701. (Cl. 83—88.)



1. A concentrator comprising a receptacle provided with a working deck, said deck having a series of longitudinally spaced concentrated pockets provided with bottom outlets, an endless belt having its upper stretch arranged to travel below said outlets and normally closing the same against the escape of the material, said belt being provided at intervals with portions constructed to permit discharge of the material from the outlets, means acting upon the upper stretch of the belt for supporting and guiding said stretch with relation to the outlets, means acting upon the lower stretch of the belts to hold the same from depression, and a resiliently mounted scraper acting upon the upper surface of the lower

2. A concentrator having its deck or platform divided by riffles into a plurality of working sections, the surface of the bottom of each section being inclined downward toward the outlet end of the machine, a discharge screen at the bottom of each outlet section, and an endless conveyer or apron moving in contact with the underside of and controlling the discharge of the material through the screens.

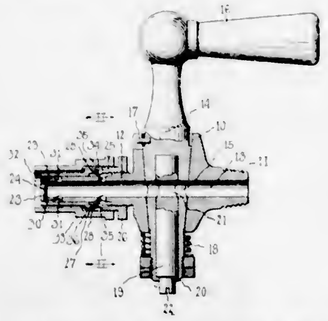
3. A concentrator having a deck or table formed by a series of downwardly and forwardly inclined surfaces, riffles adjacent the lower forward ends of said surfaces and forming therewith pockets, screens at the base portions of the pockets, and an endless apron moved in rubbing contact with the undersides of the screens for controlling the discharge of the material through said screens.

4. A concentrator having a series of riffles, inclined conducting plates between the riffles and spaced therefrom to form pockets, screens at the base portions of the pockets formed by the plates and riffles, and a moving element traveling in rubbing contact with the under sides of said screens for controlling the discharge of the material through said screens.

5. A concentrator having a table formed of a plurality of inclined surfaces, riffles spaced therefrom to form pockets and screens at the base portions of the pockets formed between said inclined surfaces and riffles, an endless apron normally closing said screens and movable in contact therewith and provided with outlets for controlling the discharge of the material therethrough, and means for imparting intermittent motion to the apron.

[Claims 6 to 11 not printed in the Gazette.]

1,221,660. GAS-REGULATING VALVE. ARTHUR W. BICE, Windsor, Ontario, Canada. Filed Jan. 12, 1916. Serial No. 72,083. (Cl. 67—121.)



1. The combination of a nipple having a jet opening in the end thereof and a plurality of separately adjustable members each providing a separate lateral gas passage from the nipple to supply gas around the jet issuing from the jet opening, certain of said members being formed to restrict the flow at a distance from the discharge end of its passage and another to restrict the flow adjacent the discharge end of its passage.

2. The combination of a nipple having a jet opening in the end thereof, an inner sleeve adjustable upon the nipple and providing an annular gas passage around the end of the nipple communicating with the interior of the nipple, and an outer sleeve upon the inner sleeve forming an annular gas passage between the sleeves communicating with the interior of the nipple, said sleeves being separately adjustable to open and close said passages and formed, the one to restrict the flow at a distance from the discharge end of the passage and the other to restrict the flow adjacent to the discharge end of its passage.

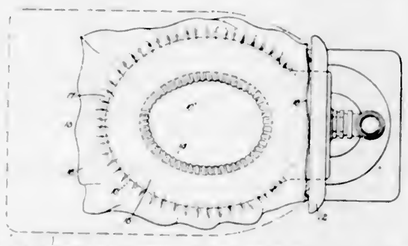
3. The combination of a nipple having a jet opening in the end thereof, a sleeve adjustable longitudinally upon the nipple into and out of engagement with the end thereof, said sleeve providing an annular gas passage around the end of the nipple communicating with the interior thereof and opened and closed by the adjustment of the sleeve into and out of engagement with the end of the nipple, and a second sleeve longitudinally adjustable upon said sleeve and forming an annular gas passage between said sleeves open at the end of said passage, said second sleeve being formed to restrict the flow of gas through said passage between the sleeves by an adjustment of said sleeve.

4. The combination of a tubular nipple having a jet opening at its discharge end, a sleeve adjustable upon said nipple and forming an annular gas passage around the nipple extending to the end thereof and communicating with the interior of the nipple, said sleeve being provided with an annular flange to engage the end of the nipple and close said passage when the sleeve is adjusted longitudinally, and an outer sleeve adjustable upon said sleeve and forming an annular gas passage between the sleeves open at the outer end thereof and communicating with the interior of the nipple at the inner end of said passage, said outer sleeve being formed intermediate the ends of said passage between the sleeves to open and close said passage by an adjustment of said outer sleeve.

5. The combination of a tubular nipple having a jet opening at the discharge end, a sleeve longitudinally adjustable upon said nipple and forming an annular gas passage around the nipple extending to the end of the nipple and communicating with the interior of the nipple near said discharge end, said sleeve being provided with an inwardly extending flange having an outwardly inclined inner side to engage the end of the nipple and close said passage, and an outer sleeve upon said first sleeve forming an annular gas passage between the sleeves open at the discharge end of the sleeves and communicating with the interior of the nipple at the inner end of said passage, said sleeves being formed with opposed annular shoulders intermediate the ends of the passage between said sleeves adapted to be brought into engagement with each other by a relative adjustment of said sleeves to close said gas passage and regulate the flow.

[Claims 6 to 8 not printed in the Gazette.]

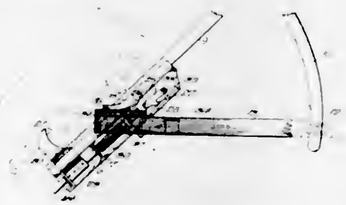
1,221,661. HYGIENIC TOILET-SEAT COVER. MARTH BLOCH, New York, N. Y. Filed Dec. 20, 1916. Serial No. 138,072. (Cl. 4—38.)



In a toilet seat cover of the character set forth, a single sheet of material having a hole therethrough, and rear, side and front extensions adapted to lie against the lid and adjacent to the sides and front of the toilet, said sheet being provided with spaced concentric zones of ruffles conforming respectively to the inner and outer edges of the seat and serving to automatically position the same and hold it in place upon the seat, the sheet between the zone of ruffles being flat and smooth and conforming to the smooth upper surface of the seat.

1,221,662. SLIDING-HORN KICK-BACK DUMP. THADDEUS MORTON BOGGS, Monongahela, Pa. Filed Apr. 28, 1915. Serial No. 24,507. (Cl. 214—11.)

1. In a device of the class described, the combination of a platform adapted to be tilted into dumping position, a track way provided on the platform, a pair of horns each arranged adjacent the rear end of one rail of the track way and in such manner as to reciprocate longitudinally of the platform, a shaft to which each horn is connected, cross pieces carried by the platform through which the shafts slidably extend, a spring carried by each shaft and adapted when the shaft is shifted rearwardly to be placed being provided with a dog adapted to coact with the rack bar in maintaining the shaft in position against the tension of the spring, a pair of trippers associated with the platform bar in maintaining the shaft in position against the tension spring, a pair of trippers associated with the platform and being actuable so as to be moved out of normal position against the action of gravity, and a roller associated with each pawl and adapted when the platform is moved into tilting position to engage one of the trippers whereby to allow passage of the roller beyond the tripper, said trippers adapted when the platform is moved into normal position to be engaged by the rollers for lifting the pawls out of engagement with the rack bars whereby to allow retraction of the horns.



2. A mine car dumping device including a tilting platform having a trackway provided thereon for receiving a mine car, a horn arranged adjacent one end of the trackway and mounted on the platform for sliding movement longitudinally with respect to the trackway and adapted to be shifted in one direction by engagement of the mine car wheel therewith, a shaft with which the horn is connected, a spring mechanism operably connected with the shaft adapted to place the horn under tension when it is shifted by the car wheel, means for restraining the horn against the tension of the spring mechanism, and means for automatically tripping said restraining means as the platform moves into normal position whereby to release said horn.

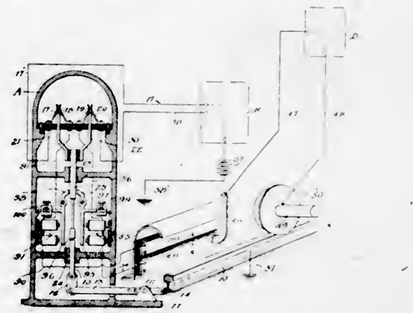
3. A mine car dumping device including a tiltable platform provided with means for receiving a mine car thereon, a horn slidably mounted on the platform adapted to be engaged by a wheel of the mine car to be shifted out of normal position, the platform adapted to simultaneously move into position for dumping the car, a spring means associated with the horn adapted to be placed under tension when the horn is shifted into abnormal position, means for restraining the spring means under tension while the platform is in tilted position, and means automatically operating for releasing the spring means upon movement of the platform into normal position whereby to release the horn.

4. A device of the class described including a platform adapted to be tilted into dumping position, a pair of horns mounted on the platform for sliding movement and being operable independently of each other and adapted to be shifted by the wheels of a mine car upon movement of the latter onto the platform, a tensioning means associated with each horn and adapted to be actuated whereby to place the horns under tension when in shifted position, means for restraining the horns under tension while the platform is in dumping position, and means for releasing said restraining means upon movement of the platform into normal position.

5. A device of the class described including a tilting platform, a horn slidably movable relatively thereto, a shaft connected with the horn and movable therewith, spring means operably connected with the shaft and adapted to be placed under tension when the horn is shifted relatively to the platform, a pawl and ratchet mechanism operating to restrain the shaft in position against the tension of the spring when the horn is moved, and a trip mechanism adapted to automatically coact with the pawl and ratchet mechanism in releasing the latter upon movement of the platform into normal position.

[Claims 6 to 9 not printed in the Gazette.]

1,221,663. TRACK INSTRUMENT. CLINTON L. BOPP, Hawkeye, Iowa. Filed Mar. 14, 1914. Serial No. 824,730. (Cl. 246—35.)



1. In a signaling device, a switch, a circuit connected therewith, means for retaining the switch closed, a deflectable rail, and means for operating the switch by the vibration of the rail and preventing subsequent vibration from being communicated to the switch until the latter has been opened, said means last mentioned including a plurality of abutting members movable together, one of said members being also movable independently of the other and out of contact therewith.

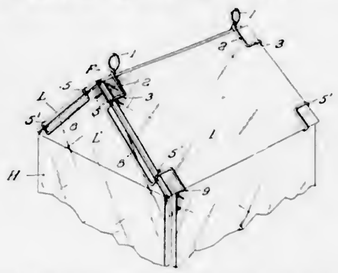
2. In a signaling device, a housing, a plunger reciprocably mounted within the housing, means to reciprocate the plunger, a switch located within the housing, a second plunger in alinement with the first named plunger adapted to engage the first plunger and having a reduced portion to form a shoulder, a plug carried by the second named plunger adapted to close the switch as the first named plunger is raised, an electromagnet mounted within the housing, a pivoted catch normally held away from said shoulder, a circuit including the switch and electromagnet, means to close said circuit as the first named plunger is raised to close the said switch, said electromagnet adapted when the circuit is closed to move the catch under the shoulder to hold the second named plunger in raised position, said shoulder and catch being positioned to hold the second plunger out of contact with the plunger first mentioned.

3. In a signaling device a housing, a plunger, means to reciprocate said plunger vertically, a second plunger adapted to engage the first plunger and having a reduced portion defining a shoulder, a pivoted catch adapted to engage said shoulder and move from said shoulder, a switch located within the housing, a plug carried by the second plunger adapted to close the switch when the first named plunger engages and raises the second plunger, an electro-magnet located adjacent said catch, a circuit including the switch and electro-magnet, means to close said circuit when the switch is closed, said electro-magnet adapted to move the catch to engage the shoulder when the circuit is closed, said shoulder and catch being positioned to hold the second plunger out of contact with the plunger first mentioned, and gravity controlled means adapted to move said catch away from the shoulder when said circuit is broken.

4. In a device of the class described, a switch and a circuit connected therewith, a rail and mechanism for operating the switch by the vibration of the rail including a plunger and a reciprocable member for actuating the plunger by impact, retaining means for the plunger and

switch, said plunger being thrown out of engagement with said member at times and held out of engagement by said retaining means.

1,221,664. LIGHT-HOLDER. EDMUND S. BOYER, Exeter, N. H. Original application filed June 28, 1915, Serial No. 36,821. Divided and this application filed May 25, 1916. Serial No. 99,853. (Cl. 47—22.)



1. A frame for holding an end light over one end of a growth promoting housing, said frame being formed of wire bent to substantially correspond with the shape of said end of the housing and being also bent to form two sets of spring clips, one of said sets extending at right angles to the plane of the frame and being adapted to engage said end of the housing and grip it under tension while the other set is disposed substantially in said plane and similarly serves to hold said end light under tension.

2. A frame for holding an end light over one end of a growth promoting housing, said frame being constructed of a single wire bent to substantially conform to the shape of said end of the housing, said wire being also bent to form two sets of spring clips, one set extending at right angles to the plane of the frame to receive said end of the housing and the other set being disposed substantially in said plane to hold the edges of the end light.

3. A frame for holding an end light over one end of an arch-like growth promoting housing, said frame being constructed of a single wire bent into substantially arch shape to conform to the shape of the housing, the two halves of said wire being bent to form spring clips extending at right angles to the plane of the frame for engagement with the end of the housing and being further bent to provide other spring clips disposed substantially in said plane to hold the end light, the free ends of said halves being bent to form seats to receive the lower edges of the housing.

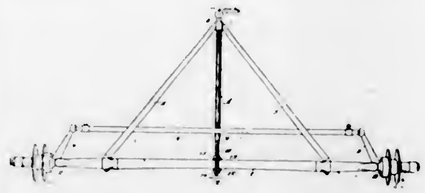
4. A frame for holding the ends of a plurality of lights assembled in the form of an arch-like growth promoting housing, said frame being constructed of a single wire bent into substantially arch shape to conform to the contour of said housing, the two halves of said wire being bent laterally to form spring clips extending at right angles to the plane of the frame to receive the ends of the lights and the free ends of said halves being bent to provide seats for the lower edges of the housing.

5. The combination with a plurality of panes of transparent material disposed in angular relation to form a polysided housing, and an end light closing one end of said housing, of a frame constructed of a single piece of wire bent to conform substantially to the form of the housing, the two halves of said wire being bent laterally to form spring clips receiving the ends of said transparent panes and being further bent to form additional clips receiving the edges of the end light.

[Claim 6 not printed in the Gazette.]

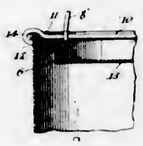
1,221,665. FRONT-AXLE BRACE. ROBERT BRITTAIN, Downsville, N. Y. Filed Oct. 10, 1916. Serial No. 124,787. (Cl. 21—182.)

1. A front axle brace rod attachment for automobiles, comprising a single-piece member in the form of a rod having bifurcated front and rear ends, the front bifurcations being provided with axle-engaging clamping members, there being a drop in the bar immediately behind the front bifurcations.



2. A brace attachment of the class described comprising a rod having its rear end formed with upper and lower bifurcations and its front end formed with upper and lower threaded bifurcations, clamping pieces on the threaded bifurcations for engaging an axle, and nuts on the threaded bifurcations for clamping the said pieces to the axle.

1,221,666. CAN ATTACHMENT. JOSEPH W. BRONNER, Baltimore, Md. Filed Jan. 21, 1916. Serial No. 73,392. (Cl. 220—61.)



The combination with a can formed with an annular member defining a bead at the outer edge of the can and including a U-shaped flanged member extending inwardly from the edge, of a cover having a depressed top and a flange passing over the top of the flange first mentioned, a bar passing across the top of the can and across the flange of the cover and having turned-over end portions engaging the bead, and a handle pivotally connected with the bar and having its ends positioned within the flange of the cover, said flange preventing the displacement of the handle on the bar.

1,221,667. MANUFACTURE OF ALCOHOLS. BENJAMIN T. BROOKS and HARRY ESSEX, Pittsburgh, Pa., assignors to Gulf Refining Company, Pittsburgh, Pa., a Corporation of Texas. Filed Mar. 22, 1916. Serial No. 85,957. (Cl. 23—24.)

1. The method of producing high boiling monohydric alcohols which comprises heating the corresponding chlorin compounds with a mixture of methyl alcohol and a formate.

2. The process of producing artificial fusel oil which comprises heating a mixture of a monochlorinated low boiling gasolene fraction with a methyl alcohol and a formate.

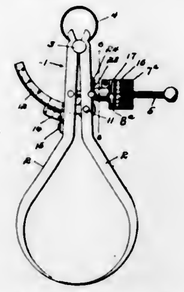
3. The method of producing high boiling monohydric alcohols which comprises heating the corresponding chlorin compounds with a mixture of methyl alcohol and a formate under pressure.

4. The process of producing artificial fusel oil which comprises heating a mixture of a monochlorinated low boiling gasolene fraction with methyl alcohol and a formate under pressure.

5. The method of producing high boiling monohydric alcohols which comprises heating the corresponding chlorin compounds with a mixture of methyl alcohol and a formate under pressure at a temperature between 140° and 190° C.

[Claims 6 to 9 not printed in the Gazette.]

1,221,668. MEASURING INSTRUMENT. EARL BRUNTON, St. Louis, Mo. Filed Mar. 25, 1916. Serial No. 86,626. (Cl. 33—148.)



1. In a measuring instrument including a pair of associated legs movable toward and from each other, said legs being provided with slots, leg adjusting means, means cooperating with the adjusting means for indicating degrees of adjustment thereof, a scale member pivotally mounted within the slot of one leg and adjustable through the slot in the other leg, and a second scale member fixedly mounted upon the second-named leg and arranged for sliding engagement with said movable scale member.

2. In a measuring instrument including a pair of associated legs movable toward and from each other, leg adjusting means, means coöperating with the adjusting means for indicating degrees of adjustment thereof, a scale carried by one of the legs and coöperating with the other leg to denote the distance between the legs, and a second scale carried by one of the legs and coöperating with the first-named scale to indicate different degrees of adjustment.

3. In a measuring instrument including a pair of associated legs movable toward and from each other, said legs being provided with slots, leg adjusting means, a scale member pivotally mounted within the slot of one leg and adjustable through the slot in the other leg, and a second scale member fixedly mounted upon the second-named leg and arranged for sliding engagement with said movable scale member.

4. In a measuring instrument including a pair of associated legs movable toward and from each other, leg adjusting means, means coöperating with said adjusting means for indicating degrees of adjustment thereof, a scale carried by one of the legs and coöperating with the other leg to denote the distance between the legs, an indicating member upon the inner surface of the second-named leg for coöperation with the graduations of said scale.

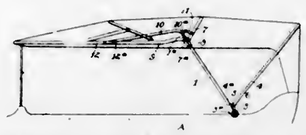
5. In a measuring instrument including a pair of associated legs movable toward and from each other, an adjusting screw pivotally connected with one of the legs and slidable through the other leg, a nut upon said screw, and a follower coöperating with said nut, said follower being pivotally connected with the adjacent leg of the instrument and provided with a longitudinal slot or bifurcation, and means for relatively adjusting the walls of the bifurcation.

[Claim 6 not printed in the Gazette.]

1,221,669. TOP FOR MOTOR-VEHICLES AND THE LIKE. MAX BUCH, Detroit, Mich., assignor to Henry E. Edwards, Jackson, Mich. Filed July 11, 1916. Serial No. 108,646. (Cl. 21—62.)

1. In a vehicle top, a standard pivotally connected with a vehicle body and having a hollow part, a bow supporting member pivoted to said standard and having an extension in line with said hollow part, and a spring within said hollow part acting between said standard and member.

2. A vehicle top having bow or standard members pivotally connected, spring means acting between said members and tending to separate them, an outrigger bow, a link connecting the same to one of said members, bell crank mechanism carried by one of said members, and operatively connected with the outrigger bow, and a link from said bell crank mechanism to the other member, whereby said spring also acts indirectly on the outrigger bow.



3. In a vehicle top, a main standard having a hollow portion, a bow arm pivoted to the rear of said standard, spring means within said hollow part tending to swing said bow arm relative to said standard, an outrigger bow arm, links connecting said outrigger bow arm with said standard, one of said links having an extension, and a link connecting said extension with said bow arm.

4. A vehicle top having a standard adapted to be pivotally supported from a vehicle body, rear main and supplemental bow arms pivoted respectively at or near the lower and upper ends of said standard, an outrigger bow, a pair of links supporting said outrigger bow from said standard and one of said links being operatively connected to said upper supplemental bow, and spring means within the standard acting on said rear main and supplemental bow arms.

5. A vehicle top having a standard adapted to be pivotally supported from a vehicle body, rear main and supplemental bow arms pivoted respectively at or near the lower and upper ends of said standard, an outrigger bow, bell crank mechanism supporting said outrigger bow from said standard and operatively connected to said upper supplemental bow, said standard being hollow throughout its length, and spring means located in said hollow standard and arranged to act on said main and supplemental bow arms.

[Claims 6 to 8 not printed in the Gazette.]

1,221,670. REGISTER FOR CASH-RECEIPTS AND THE LIKE. HENRY BUCHANAN, Sheffield, England. Filed Nov. 7, 1916. Serial No. 130,060. (Cl. 235—31.)



1. A portable autographic recorder comprising in combination a casing convenient for carriage in the hand and having a slot therein, rolls of paper strip rotatably mounted in said casing parallel to one another, means, comprising preliminary printing rollers, for intermittently feeding the strips from said rolls beneath the aforesaid slot, a writing table beneath said slot for facilitating autographic entries on the upper of said strips, secondary printing mechanism for printing changeable data on the lower of said strips while stationary on said table, ink ribbons for enabling the autographic entries and secondary printing to be effected in manifold, means for sever-

ing said strips, a receptacle within the casing for receiving the severed portions of the lower strip, and means for guiding the severed portions of the upper strip outside the casing, substantially as hereinbefore set forth.

2. A portable autographic recorder comprising in combination a casing convenient for carriage in the hand and having a slot therein, rolls of paper strip rotatably mounted in said casing parallel to one another, said rolls having spool axles, a hinged cover on the casing, plates in said casing having recesses for receiving the said spool axles, plates on said cover adapted to co-act with the aforesaid plates, means, comprising preliminary printing rollers, for intermittently feeding the strips from said rolls beneath the aforesaid slot, a writing table beneath said slot for facilitating autographic entries on the upper of said strips, secondary printing mechanism for printing changeable data on the lower of said strips while stationary on said table, ink ribbons for enabling the autographic entries and secondary printing to be effected in manifold, means for severing said strips, a receptacle within the casing for receiving the severed portions of the lower strip, and means for guiding the severed portions of the upper strip outside the casing, substantially as hereinbefore set forth.

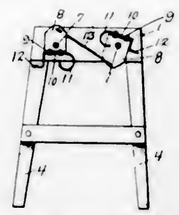
3. A portable autographic recorder comprising a casing convenient for carriage in the hand, means for feeding paper strips, preliminary printing mechanism, means for permitting autographic entries on one of said strips, secondary printing mechanism for printing on one of said strips with changeable data and comprising a number of printing disks, a common shaft for said disks, means for moving said shaft relatively to said strips, ink ribbons for enabling the autographic entries and secondary printing to be effected in manifold, and a hinged frame fitted with rollers for carrying said ribbons, said frame being adapted to be moved about its hinge to permit of access to the said secondary printing mechanism, and means for intermittently feeding said ribbons around the rollers on said frame, substantially as hereinbefore set forth.

4. A portable autographic recorder of the character described comprising a casing of elongated form, and containing within it, means for supporting rolls of paper strip parallel to one another, rollers for feeding and preliminarily printing said strips from said rolls, and means for permitting autographic entries, secondary printing mechanism for printing changeable matter, cutting mechanism, and a receptacle for severed strip, said means and mechanism being situated substantially in consecutive order, an operating handle on the outside of said casing, and means operatively connecting said handle to the aforesaid feeding rollers, preliminary and secondary printing mechanism, substantially as and for the purpose hereinbefore set forth.

5. In a portable autographic recorder of the character described comprising a casing adapted to be held in the hand and containing means for feeding a plurality of parallel superposed paper strips, preliminary printing means for printing on one of the uppermost of said strips, secondary printing mechanism for printing on the lowermost of said strips, means for permitting autographic entries on the uppermost of said strips, means for duplicat-liminarily printing said strips from said rolls, and means ing said entries and secondary printing on the strips not directly receiving said autographic entries or secondary printing, means for severing the strips, means for guiding the severed portions of the uppermost strip outside the casing, a removable receptacle inside the casing, and means for guiding the severed portions of the lower strips into said receptacle, substantially as and for the purpose hereinbefore set forth.

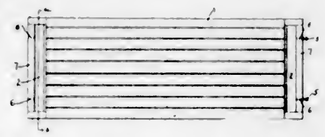
1,221,671. BAG-HOLDER. LEWIS D. BURTCH, Baraboo, Wis., assignor of one-half to Charles H. Hackett, Baraboo, Wis. Filed Sept. 16, 1915. Serial No. 51,082. (Cl. 83—26.)

A bag holder comprising spaced frames, shafts supported by the frames and arranged in spaced parallel relation, bars having ears pivotally connected to the shafts, one of said ears terminating in a hand lever, links pivotally connecting the ears to swing the bars in opposite directions when the lever is shifted, devices fixed to the



bars, said devices having hooks formed upon one of their ends and fingers upon their other end, as and for the purpose set forth.

1,221,672. SECTIONAL GREENHOUSE. THOMAS J. CALLAHAN, Dayton, Ohio. Filed Nov. 13, 1916. Serial No. 130,970. (Cl. 20—2.)



1. In a sectional building, a pair of side members, each side member being provided with a lateral groove near each end thereof, a pair of end members, a tongue extending from each end of said end members, to enter a groove in a respective side member, additional side members having grooves similar to the original ones, and means operable within the grooves for removably connecting the free grooved ends of the original or other additional side members.

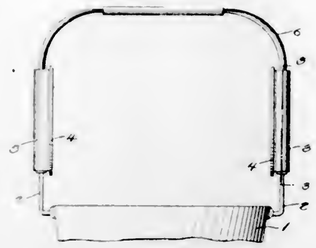
2. In a sectional building, a pair of side members, each side member being provided with a lateral groove near each end thereof, a pair of end members, a tongue extending from each end of said end members, to enter a groove in a respective side member, additional side members having grooves similar to the original ones, and fastening elements having head portions within the grooves, for removably connecting the free grooved ends of the original or other additional side members.

3. In a sectional building, a pair of side members, each side member being provided with a vertical recessed portion at each end thereof, an end piece secured to each end of said side members to form with each recessed portion a lateral groove, a pair of end members, a tongue extending from each end of said end members, to enter a groove in a respective side member, additional side members having grooves formed similarly to the original ones, the end piece of each side member provided with bolt holes which extend to said grooves, bolts adapted to be inserted in said holes to connect the free grooved ends of the original or other additional side members, and nuts adapted to be applied to said bolts, within the grooves, to draw the adjacent side members tightly together.

1,221,673. MILK-PAIL. ERNEST L. CANTY, Augusta, Me. Filed Mar. 21, 1916. Serial No. 85,668. (Cl. 73—46.)

1. In combination with a pail and a bail for the pail, dials supported by the pail and provided with a rotatable indicator, and means connected to the said bail and associated with the said dials for rotating the said indicator arm when the pail is lifted by the bail.

2. In combination with a pail and a bail for the pail the ends of the bail being disconnected from the pail, arms attached to opposite sides of the pail, housings carried by the said arms and adapted to receive the ends of the said bail, and means disposed within the housings and coöperating with the ends of the said bail for indicating the weight of the contents of the pail when the same is lifted by the said bail.

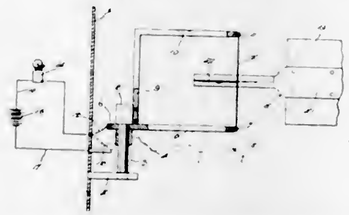


3. In combination with a pail and a bail for the pail, said bail having racks formed on its free ends, housings pivotally connected to the rim of the bail, and means mounted in said housings including pinions engaging with said rack for weighing the contents of said pail.

4. In combination with a pail and a bail for the pail; housings pivotaly mounted on the pail at opposite sides thereof, and having dials secured thereto, a bail having its ends extended into said housings, and provided with serrations at their ends, and means mounted in said housings including pinions engaging with said serrations for weighing the contents of said pail.

5. In combination with a pail and a bail for the pail, a housing pivotally connected to the pail, a coil spring encircling one end of the said bail, the said spring bearing against one end of the said housing, a pin carried by the bail for receiving the opposite end of the spring, a rack formed on the end of the said bail, a pinion rotatably mounted within the housing and adapted to mesh with the said rack, the said housing also carrying a dial having an indicator arm associated with the said pinion.

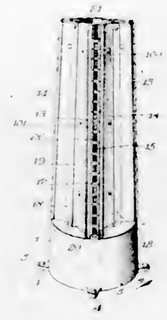
1,221,674. TRAIN-SIGNAL. ARQUIMEDES CAPITAN, David, Canal Zone. Filed Mar. 8, 1916. Serial No. 82,882. (Cl. 246—25.)



In a circuit closer of the class described, a bracket, a standard on said bracket, an arm secured to the upper end of the standard, a parallel arm slidable on the standard, a contact carried by the parallel arm, a stationary contact and readily destructible means for holding the slidable arm upwardly and the contacts away from each other.

1,221,675. HOG-OILING DEVICE. ROBERT W. CARSON, Rossville, Ind. Filed Nov. 4, 1914. Serial No. 870,285. (Cl. 119—157.)

1. In a device for the purpose set forth, a reservoir, sprocket wheels within the reservoir, means for preventing the movement of the sprocket wheels in one direction, a vertical casing upon the reservoir, said casing comprising a plurality of connected sections, each of said sections having one of its faces arranged adjacent the outer face of the reservoir, each of said sections being provided with a vertically arranged chain channel, endless chains trained over the sprocket wheels, each of said chains having its outer lead arranged in one of the chain channels, and a sprocket upon each of the sections for each of the endles chains.



2. In a device of the class set forth, a liquid containing reservoir, a casing arranged over the reservoir and communicating therewith, said casing having outer faces which are arranged flush with the outer faces of the reservoir, and which are provided with vertically arranged channels, and said channels communicating with the reservoir, and sprocket wheels within the casing and the reservoir, a ratchet wheel upon the sprocket in the reservoir, a gravity pawl engaging the sprocket wheel, and a sprocket chain for the wheels having its outer lead arranged in the channel of the casing.

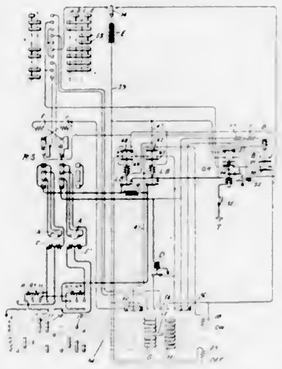
3. In a device for the purpose described, a reservoir having a closed bottom and a partially closed top, the open portion of the top having its edges formed with oppositely arranged arcuate flanges and having rectangular openings extending outwardly between each pair of flanges, a casing made up of sections, each including side arcuate members and a straight connecting member, means for securing the members to the flanges, means for connecting the members, the straight face of each of the members having its outer face channeled and provided with an opening adjacent its top, and said channels communicating with the rectangular openings in the reservoir, a sprocket wheel journaled adjacent the opening in the outer face of each of the sections, a sprocket wheel journaled to the rear of each of the rectangular openings in the reservoir, each of the last mentioned sprocket wheels being provided with a ratchet wheel, a gravity pawl engaging the ratchet wheel, an endless chain upon the opposite sprockets, and said chain having its outer lead arranged within the channel in the face of the connecting member of the sections.

4. In a device for the purpose set forth, a reservoir, sprocket wheels within the reservoir, means for preventing the movement of the sprocket wheels in one direction, a vertical casing upon the reservoir, sprocket wheels journaled adjacent the top of said casing, chains having their outer leads arranged adjacent the outer face of the reservoir and engaging with each of the sprocket wheels within the reservoir and with each of the sprocket wheels journaled in the casing, and toothed cleaning wheels journaled in the casing and arranged between the aforementioned sprocket wheels.

5. In a hog oiling device, an oil casing, sprocket wheels, vertically disposed endless chains trained over the sprocket wheels and communicating with the casing and having their outer leads disposed on the outer face of the said casing, and means for preventing the movement of the chains in one direction.

[Claims 6 and 7 not printed in the Gazette.]

1,221,676. PNEUMATICALLY-OPERATED CAM-CONTROLLER. FRANK E. CASE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 11, 1915. Serial No. 33,496. (Cl. 172—179.)



1. Means for controlling electric motors comprising a plurality of unit switches each consisting of a stationary contact and a movable switch arm normally in open position and arranged to open and close the motor circuit, a cam shaft provided with cams for actuating said switch arms in a predetermined order, electropneumatic means for operating the cam shaft in two directions, a master controller and connections whereby the cam shaft is rotated step by step in response to movement of the master controller to successively close the switches.

2. Means for controlling electric motors comprising a plurality of unit switches each consisting of a stationary contact, a movable switch arm normally in open position and arranged to open and close the motor circuit, a cam shaft provided with cams for actuating said switch arms in a predetermined order, electropneumatic means for operating the cam shaft, a master controller, and electrically controlled line switch arranged to be closed in the first position of the master controller and connections whereby the electropneumatic means is operated when the line switch is closed so as to operate the cam shaft one step and close the motor circuit.

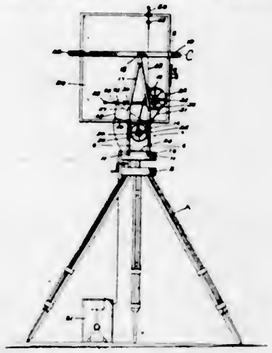
3. Means for controlling electric motors comprising a plurality of switches normally in open position and arranged to open and close the motor circuit, a cam shaft provided with cams for actuating said switches in a predetermined order, electropneumatic means for operating the cam shaft, a line switch for controlling the motor circuit, a master controller and connections whereby the line switch is closed on the first step of the master controller and the cam shaft is rotated one step to close the motor circuit and upon movement of the master controller to the second position, the cam shaft is rotated step by step to sucessively close the switches.

4. Means for controlling electric motors comprising a plurality of switches normally in open position and arranged to open and close the motor circuit, a cam shaft provided with cams for actuating said switches in a predetermined order, electropneumatic means for operating the cam shaft, two line switches for controlling the motor circuit, a master controller and connections whereby one line switch is closed on the first step of the master controller and the cam shaft is rotated one step to close the motor circuit and upon the movement of the master controller to the second position, the second line switch is closed and the cam shaft is then rotated step by step to successively close the switches.

5. Means for controlling electric motors comprising a controller for the motor circuit, pneumatic operating means therefor having a piston and cylinder for each direction of movement, means for simultaneously admitting operating fluid to both cylinders, and means whereby the controller is moved by the movement of one piston with reference to the other while the operating fluid is admitted to the cylinders.

[Claims 6 to 10 not printed in the Gazette.]

1,221,677. MOTION-PICTURE-CAMERA SUPPORT. WILLIAM A. P. CATHCART, Honolulu, Hawaii. Filed Jan. 4, 1916. Serial No. 70,329. (Cl. 248—47.)



A camera support comprising a rotatable base, L-shaped brackets each having the short limb secured to the base, uprights, each having the lower extremity adjustably connected to a bracket, a frame secured to the upper ends of the uprights and including adjustable connected members and pivots for connecting the upper portion of the camera to the frame.

1,221,678. TELEPHONE DESK SET. CHARLES L. CHISHOLM, Marysville, New Brunswick, Canada, assignor to Chisholm Transmitter & Telephone Instruments Company. Filed Apr. 24, 1911. Serial No. 623,065. (Cl. 179—147.)



1. A telephone desk set comprising a basic member, a post carrying a transmitter and erected on the basic member to one side of the center and closely adjacent to the margin thereof, a telephone hook carried by and projecting from the post in overlying relation to the basic member, and a telephone receiver adapted to the hook and when sustained by the latter hanging with its lower end close to the basic member and substantially within the area defined thereby and with its longitudinal center line substantially in line with the center of said basic member.

2. A telephone desk set comprising a transmitter and receiver, a portable support therefor consisting of a basic member having a side extension, a post erected on said side extension, a stem rising from the post and carrying the transmitter, and a receiver hook carried by and projecting from the post toward that side of the basic member remote from the side extension to permit the receiver when on the hook to override the basic member substantially central thereto.

3. A telephone desk set having a basic member and a transmitter and receiver supporting post thereon located at substantially the edge of the basic member and displaced from that side of said basic member remote from the post to an extent substantially that of the diameter of the hearing end of the telephone receiver.

4. A telephone desk set having a hollow base of substantially circular contour with a flat top and a side offset, a hollow post erected on the offset, a stem erected on the post and carrying the transmitter, and a telephone hook carried by the post and projecting therefrom toward that side of the base remote from the offset in position to support a receiver with its hearing end overriding the flat top of the base in close relation to and within the bounds thereof.

5. A telephone desk set having a hollow base of substantially circular contour with a flat top and a side offset, a hollow post erected on the offset and carrying a transmitter, and a receiver hook carried by the post and projecting therefrom toward that side of the base remote from the offset in position to support a receiver with the hearing end overriding the flat top of the base substantially concentric therewith.

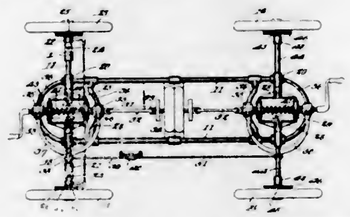
[Claims 6 to 8 not printed in the Gazette.]

1,221,679. BURGLAR-TRAP. ADOLF CHODAKOVSKI, Philadelphia, Pa. Filed Jan. 29, 1917. Serial No. 145,142. (Cl. 43—23.)



In a burglar trap having a base plate, opposed pivoted jaws and spring means for closing said jaws; a trigger mechanism consisting of a trigger plate provided with laterally projecting lugs, lugs on said jaws underlying the plate lugs when the trap is set, said lugs coöperating to form fulcra for the trigger plate, journal lugs on the trigger plate, journal brackets on the base plate having slots receiving the journal lugs and extending upwardly and forwardly toward the first-mentioned lugs, a downturned end on the trigger plate engaging the base plate and limiting the movement of the trigger plate about the axis of the journal lugs, and stops on the jaws engaging the base plate to limit the opening movement of said jaws.

1,221,680. DRIVE-GEARING. WILLIAM K. CLEVELAND, Tampa, Fla., assignor of one-half to C. W. Kennon, Hillsborough county, Fla. Filed July 24, 1916. Serial No. 110,941. (Cl. 74—26.)



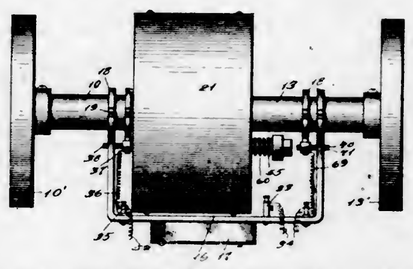
1. The combination of a drive shaft, axially alined and spaced driven shafts extending transversely of the drive shaft on opposite sides thereof, friction disks on the inner ends of the driven shafts, friction wheels between the disks on opposite sides of the center thereof, said wheels being slidably mounted on the drive shaft and turning therewith, a spring between the friction wheels for yieldingly holding the same spread outward from the center of the disks, bearings for the drive shaft on opposite sides of the center of the disks, curved guides on which the bearings are slidably mounted, the curves being on an arc having for its center a point coinciding with the center of the disks, and midway between the same, and means for shifting the bearings on the guides.

2. The combination of a drive shaft, axially alined and spaced driven shafts extending transversely of the drive shaft on opposite sides thereof, friction disks on the inner ends of the driven shafts, friction wheels between the disks on opposite sides of the center thereof, said wheels being slidably mounted on the drive shaft and turning therewith, a spring between the friction wheels for yieldingly holding the same spread outward from the center of the disks, bearings for the drive shaft on opposite sides of the center of the disks, curved guides on which the bearings are slidably mounted, the curves being on an arc having for its center a point coinciding with the center of the disks, and midway between the same, and means for shifting the bearings on the guides.

3. The combination of a drive shaft, axially alined and spaced driven shafts extending transversely of the drive shaft on opposite sides thereof, friction disks on the inner ends of the driven shafts, friction wheels between the disks on opposite sides of the center thereof, said wheels being slidably mounted on the drive shaft and turning therewith, resilient means for yieldingly holding the friction wheels spread outward from the center of the friction disks, shiftable bearings for the drive shaft, and means for shifting the bearings to swing the drive shaft transversely between the friction disks and alternately engage the friction wheels with the friction disks.

4. The combination of a drive shaft, axially alined and spaced driven shafts extending transversely of the drive shaft on opposite sides thereof, friction disks on the inner ends of the driven shafts, friction wheels between the friction disks on opposite sides of the center thereof, said friction wheels being slidably mounted on the drive shaft and turning therewith, a spring between the friction wheels for yieldingly holding the same spread outward from the center of the disks, the diameter of the friction wheels being less than the space between the faces of the disks, and said faces being plane, bearings for the drive shaft on opposite sides of the center of the disks, curved guides on which the bearings are slidably mounted, the curves being on an arc having for its center a point coinciding with the center of the disks, and midway between the same, and means for shifting the bearings on the guides.

1,221,681. ELECTRICAL HORSE-POWER-COMPUTING MACHINE. BERT E. CLOUGH, Battle Creek, Mich. Filed Mar. 4, 1916. Serial No. 82,263. (Cl. 73—15.)



1. In apparatus of the character described, a rotatable member, a coacting member rotatable with the first named member and with relation thereto, yielding means connecting the members to oppose the turning movement of one member with relation to the other, a rheostat comprising contact segments carried by one member and a contact element carried by the other member, a wattmeter comprising current and pressure coils, a circuit connected with the rheostat and including the current coils of the wattmeter, a rheostat carried by one member, centrifugal means actuated by one member to operate the last named rheostat,

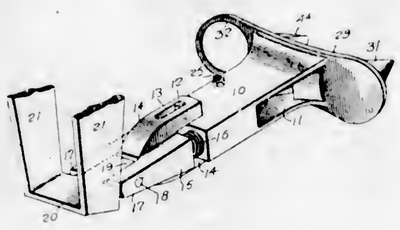
and a circuit connected with the second named rheostat and including the pressure coils of the wattmeter.

2. In apparatus of the character described, means for determining the torque of a prime mover, a rheostat operated by the means, a wattmeter comprising current and pressure coils, a circuit connected with the rheostat and including the current coils of the wattmeter, means for determining the speed of rotation of the prime mover, a second rheostat operated by the speed determining means, and a circuit connected with the second named rheostat and including the pressure coils of the wattmeter.

3. In apparatus of the character described, a rotatable shaft, a sleeve rotatably mounted upon a portion of the shaft, an attaching member carried by the shaft, an attaching member carried by the sleeve, a torque coil spring connecting the sleeve and shaft, a supporting member carried by the sleeve and rotatable therewith, contact segments carried by the supporting member, a plurality of resistance coils carried by the supporting member and connected with the contact segments, a contact element carried by the shaft to be rotated thereby and to engage with the contact segments, a pendant frame pivoted upon the shaft and sleeve and grounded to one side of the resistance coils, a contact ring carried by the shaft and having electrical connection with the contact element, a second contact element carried by the pendant frame and engaging the ring, and a source of current having one pole connected with the second named contact element and the other pole with the pendant frame.

4. In apparatus of the character described, a rotatable member, a coacting rotatable member adapted to turn with relation to the first named rotatable member, a support carried by one rotatable member, a plurality of sets of resistance coils carried by the support, a set of contact plates carried by the support and connected with one set of coils, a contact member connected with the first named rotatable member and adapted to contact with the contact plates, indicating mechanism, a circuit connected with the contact member, the last named set of resistance coils and the indicating mechanism, a second set of contact plates carried by the support and connected with the other set of coils, a centrifugally operated device carried by the support and having a contact member to contact with the second named set of contact plates, and a circuit connected with the second named contact plates, the second named set of coils, and the indicating mechanism.

1,221,682. AIR-COUPLING. JAMES GATLING COFFIELD, Norfolk, Va., assignor of one-third to William C. Coffield, Norfolk, Va., and one-third to William H. Coffield, Edenton, N. C. Filed Apr. 20, 1916. Serial No. 92,466. (Cl. 188—13.)



1. In a train pipe coupling, the combination of a pair of coupling heads, each having guiding and connecting means, and each provided at its rear end with a vertically swinging connecting block and having pivot members movably associated with said block permitting limited longitudinal and laterally swinging movement of the heads with respect to said block and springs interposed between each of the said heads and its respective connecting block, for the purpose described.

2. In a train pipe connection, the combination of a pair of coupling heads, each of said coupling heads having guiding and connecting means and having vertically projecting trunnions at its rear end in line with its longitudinal axis, a connecting block pivoted to swing vertically and having upper and lower forwardly projecting and longitudinally slotted arms receiving the trunnions of the said heads, and springs interposed between the rear end of the head and the forward end of the said connecting block, for the purpose described.

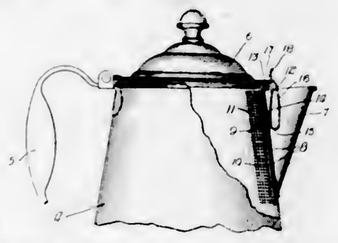
3. In a train pipe connection, the combination of a pair of coupling heads, each of said coupling heads having guiding and connecting means and having vertically projecting trunnions at its rear end in line with its longitudinal axis, a connecting block pivoted to swing vertically and having upper and lower forwardly projecting and longitudinally slotted arms receiving the trunnions of the said heads, and springs interposed between the rear end of the head and the forward end of the said connecting block, for the purpose described, said springs being located upon relatively opposite sides of the longitudinal axis of the head and the block.

4. In a train pipe connection, the combination of a pair of coupling heads, each of which coupling heads is provided with guiding means at its forward end and with a cavity, and a laterally and longitudinally shiftable connecting member within the cavity of the head, and a spring controlling longitudinal shifting movement of the said connecting member and normally holding the latter at one side of the cavity of the head.

5. In a train pipe connection, the combination of a pair or coupling heads, each of which is provided at its forward end with guide members and has a cavity therein, a laterally and longitudinally shiftable connecting member within the cavity, provided with longitudinal bores, and with laterally opening ports in one side communicating with the forward ends of the said bores, said connecting member being provided with a longitudinally slotted opening adjacent its rear end and with a portion at one side of said opening opposing a portion of the said head, a pivot bolt extending vertically through the head and through the said slotted opening of the connecting member, and a spring interposed between the said opposing portions of the head and connecting member, for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

1,221,683. STRAINER. ALBERT COHN and LOUIS H. DEBS, Chicago, Ill. Filed Mar. 7, 1916. Serial No. 82,649. (Cl. 53—3.)

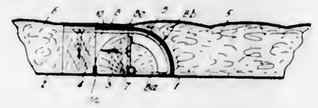


1. A strainer of the kind described, embodying, in combination, a sheet of strainer material adapted to fit against the side of a receptacle, and a holder for the strainer formed of spring material and arranged to hold the strainer against the receptacle, the holder comprising companion arms secured to the strainer and looped around to overlie one edge of the receptacle and clamp thereupon whereby the strainer is held firmly against the receptacle, the clamping portions of the holder being upturned to provide a spring catch for the lid of the receptacle, the acting end of the catch being rounded to facilitate movement of the lid in one direction only, substantially as described.

2. A strainer of the kind described, embodying, in combination, a sheet of strainer material adapted to fit against the side of a receptacle, and a holder secured to the strainer and arranged to hold the same tightly against the receptacle, the holder being formed of spring material bent to clamp over an edge of the receptacle, whereby the strainer is firmly held in place, the holder being provided with an upturned portion arranged to engage with the lid of the receptacle to constitute a spring catch therefor, substantially as described.

3. A device of the kind described embodying in combination a strainer adapted to fit upon a receptacle, and a holder for the strainer arranged to hold the same in position upon the receptacle, the holder being provided with a member arranged to engage with the receptacle lid to constitute a catch therefor, substantially as described.

1,221,684. CONCEALED-HINGE CONSTRUCTION FOR DOORS, &c. WILLIAM H. COLLIER, Nashville, Tenn. Filed May 29, 1916. Serial No. 100,462. (Cl. 16—5.)



1. The combination with a door-frame and door-post, of a hinge comprising a fixed leaf secured to the door-post, and a movable leaf hinged to the fixed leaf and having a portion extending away from the door-frame in the closed position of the door and merging into a curved portion adapted to swing around and close to the door-post as the door opens, such curved portion of the hinge leaf merging into a further portion extending past and close to the door post, and secured to the door-frame.

2. The combination with a door-frame and door-post, of a hinge comprising a fixed leaf secured to the door-post, and a movable leaf hinged to the fixed leaf and having a portion extending away from the door-frame in the closed position of the door and merging into a curved portion adapted to swing around and close to the door-post as the door opens, such curved portion of the hinge leaf merging into a further portion extending past and close to the door-post, and secured to the door-frame, said door-post having a recess providing clearance for the swing of such movable leaf.

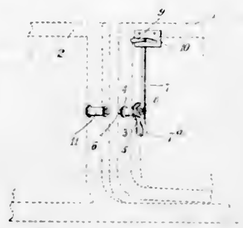
3. The combination with a door-frame and door-post, of a hinge comprising a fixed leaf secured to the door-post and a movable leaf hinged to the fixed leaf and having a portion extending away from the door frame in the closed position of the door, and merging into a substantially circularly curved portion subtending an angle of approximately ninety degrees, and adapted to swing around and close to the door-post as the door opens, such curved portion of the hinge leaf merging into a further straight portion extending past the door post in a direction substantially parallel to the door and secured to the door-frame.

4. The combination with a door-frame and door-post, of a hinge comprising a fixed leaf secured to the door-post and a movable leaf hinged to the fixed leaf and having a portion extending away from the door-frame in the closed position of the door, and merging into a substantially circularly curved portion subtending an angle of approximately ninety degrees, and adapted to swing around and close to the door-post as the door opens, such curved portion of the hinge leaf merging into a further straight portion extending past the door-post in a direction substantially parallel to the floor and secured to the door-frame, the door-frame being approximately circularly curved where said movable hinge leaf swings about it, to provide clearance for the swing of that leaf.

5. The combination with a door-frame and door-post, of a hinge comprising a fixed leaf secured to the door-post, and a movable leaf hinged to the fixed leaf and having a portion extending away from the door-frame in the closed position of the door and merging into a curved portion adapted to swing around and close to the door-post as the door opens, such curved portion of the hinge leaf merging into a further portion extending past and close to the door-post, and secured to the door-frame, and a fixed shield inclosing the curved portion of such swinging hinge leaf.

[Claims 6 and 7 not printed in the Gazette.]

1,221,685. DOOR-LATCH. WILLIAM H. COLLIER, Brentwood, Tenn. Filed July 20, 1916. Serial No. 110,303. (Cl. 70—42.)



1. A latch such as described comprising a bolt-socket, a bolt slidably mounted therein, and an operating bar of rectangular section fitting within a slot in the rear end of said bolt and connected to said bolt, and, below the point of such connection, twisted into a plane at right angles to its plane where connected to such bolt, the so twisted portion of the lever being provided with means for holding it in place, the structure comprising spring means tending to project the bolt.

2. A latch such as described comprising in combination a bolt socket, a bolt slidably mounted therein, and an operating lever for said bolt consisting of a U-spring, one arm of which is extended to form the operating lever, the other arm of such spring adapted to be secured to a fixed support, the extended arm of said spring being connected to the bolt and adapted to actuate it.

3. A latch such as described comprising in combination a bolt socket, a bolt slidably mounted therein and having a rearwardly projecting slotted portion, and an operating lever for said bolt consisting of a bar of rectangular section fitting within the said slot in the rear end of said bolt and connected to said bolt, and below the point of such connection, twisted into a plane at right angles to its plane where connected to such bolt, and thereafter bent into a U-spring, and means for anchoring the said spring.

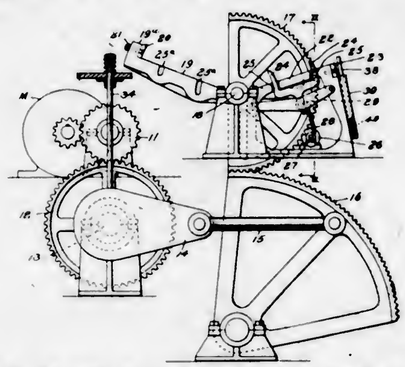
4. A latch such as described comprising in combination a bolt socket, a bolt slidably mounted therein and having a rearwardly projecting slotted portion, and an operating lever for said bolt consisting of a bar of rectangular section fitting within the said slot in the rear end of said bolt and connected to said bolt, and below the point of such connection, twisted into a plane at right angles to its plane where connected to such bolt, and thereafter bent into a U-spring, said spring having an aperture through which said bolt socket passes, and said bolt socket having means for anchoring the spring.

5. A latch such as described comprising in combination a bolt socket, a bolt slidably mounted therein, an operating lever, means carried by the bolt engaging the rear of said operating lever, and spring means tending to press said bolt forward; the construction being such that because of the engagement of the bolt with the rear of the operating lever, the bolt may retreat and subsequently advance without movement of such operating lever.

1,221,686. MACHINE FOR FOLDING AND SHEARING SHEET METAL. OLIVER P. COLLINS, McKeesport, Pa., assignor of one-third to Thomas Y. Cross and one-third to Byrd Reese Fee, Pittsburgh, Pa. Filed July 13, 1915. Serial No. 39,611. (Cl. 153—16.)

1. A machine of the class described comprising a stationary table provided at its end with a resiliently mounted guard device, a movable member hinged to the table and adapted to fold thereupon, driving means adapted to actuate the movable member, independently actuated

laterally movable arms located inwardly of the table edges adapted to aline and resiliently grip metal sheets upon the stationary table, fluid actuated means for operating said arms simultaneously in opposite directions, and a knife fixed on the movable member, whereby to simultaneously fold the sheets and shear their ends.



2. A machine for folding and shearing metal sheets composed of a stationary table provided at its end with a resiliently mounted guard device, a movable member adapted to lie in open position in approximately the same plane as the table and to fold thereupon, a knife fixed on the outer edge of the stationary table, a coacting knife on the outer edge of the movable member, driving means adapted to actuate the movable member, and fluid actuated laterally operable lever mechanism having laterally movable arms extending upwardly through the table adapted to engage the sheets edgewise and hold them in a fixed true position on the table and movable member, whereby the plates may be simultaneously folded and their ends sheared.

3. In a machine for simultaneously folding and shearing metal plates, the combination of a stationary table member, a movable member adapted to supplement the table in receiving the metal plates and to fold thereupon, means for actuating the movable member, a knife on the outer edge of the movable member, forks adapted to engage the metal plates laterally whereby to bring them into true position with relation to each other and with relation to the folding member and table, and fluid operated actuating means for said forks, whereby to simultaneously fold the plates and shear their ends squarely.

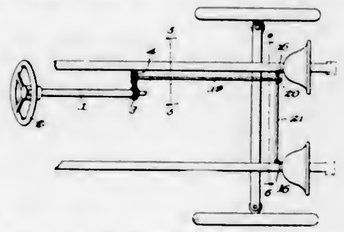
4. In a machine for folding and shearing sheet metal, a stationary table provided with laterally arranged clearance slots, a resiliently mounted guard device at one end of said table, a movable folding platen hinged to the stationary table having means adapted to fold it over upon said table, slidably mounted arms extending upwardly through the clearance slots of the stationary table, and means for simultaneously moving said arms toward or from each other.

5. A machine for folding and shearing metal plates composed of a stationary table, a movable member adapted to lie in open position in approximately the same plane as the table and to fold thereupon, driving means to actuate the movable member, forks adapted to work through slots in the table and to grip the metal plates, air pressure operated means to actuate the forks, and a knife on the folding member, whereby metal plates of varying size may be simultaneously folded and their ends sheared.

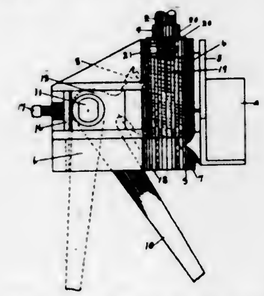
[Claims 6 and 7 not printed in the Gazette.]

1,221,687. AUTOMATIC HEAD-LAMP CONTROL. HARRY COOPER, Gwinner, N. D. Filed Sept. 12, 1916. Serial No. 119,739. (Cl. 240—62.)

The combination with the steering shaft of a motor vehicle, of a pair of headlamps, posts therefor mounted to turn on substantially vertical axes, arms projecting from said posts, a rod connecting said arms, a gear on said steering shaft, a second gear meshing therewith and driven thereby, and a motion transmitting member connected at one end to said second gear and having its other end coöperating directly with said connecting rod for turning the lamps simultaneously with the steering wheels of the vehicle.



1,221,688. SELF-LOCKING MECHANISM FOR STEERING WHEEL-SHAFTS OF AUTOMOBILES. STEPHEN A. COWART, Midlothian, Tex. Filed Apr. 23, 1915. Serial No. 23,291. (Cl. 74—79.)

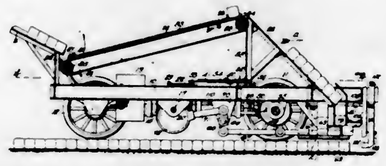


1. A self-locking steering mechanism comprising a single piece housing having two compartments communicating with each other, a steering shaft journaled in one compartment and a worm pinion rigid therewith, a segmental worm gear mounted in the other compartment and having a steering crank integral therewith, and an adjustable bearing for said segmental gear and crank consisting of a pivot bolt or shaft and adjustable bearing blocks having bosses projecting within said housing, said housing having elongated openings to receive said bosses, and means connected with said housing for holding said bearing blocks at different adjustments.

2. A self-locking steering mechanism comprising a single piece housing having two compartments communicating with each other, a steering shaft carrying a worm pinion journaled in one compartment and a steering crank having a segmental worm gear rigid therewith mounted in the other compartment, and adjustable bearing members for said worm gear consisting of a pair of blocks mounted on the outside of said housing having bosses projecting in said housing, said housing having elongated openings for movement of said bosses, and having guiding flanges for said bearing blocks, and set screws connected with said housing for adjusting said bearing blocks.

1,221,689. PAVING-MACHINE. PATRICK STANISLAUS COYNE, Kansas City, Mo. Filed Apr. 7, 1916. Serial No. 89,558. (Cl. 94—6.)

1. A paving machine provided with a table, a delivery device for successively delivering transverse rows of paving blocks to said table, a pusher movable over said table for pushing a row of blocks forwardly off the table onto the bed of a road way, a cut-off carried by said pusher and adapted to separate the pushed row of blocks from the next row, and an alining and hammering device for alining the blocks in a row on the road bed and to hammer the same in place.



2. A paving machine provided with a paving block laying device, and delivery means for delivering rows of paving blocks to the said laying device, the said delivery means having shifting devices for shifting the rows of paving blocks transversely to cause the paving blocks of successive rows to break joints.

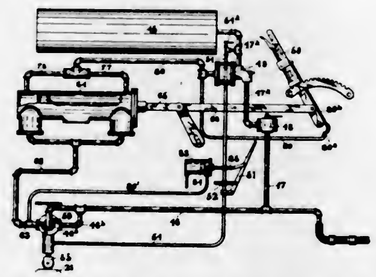
3. A paving machine, comprising a truck provided with a motor, a chute mounted on the truck and adapted to contain at least one row of paving blocks, a table fixed on the truck and extending a distance below the said chute for a row of blocks to drop from the chute onto the table, and a reciprocating pusher operating over the said table and adapted to push a row of blocks off the table onto the bed of the roadway.

4. A paving machine, comprising a truck provided with a motor, a chute mounted on the truck and adapted to contain at least one row of paving blocks, a table fixed on the truck and extending a distance below the said chute for a row of blocks to drop from the chute onto the table, a reciprocating pusher operating over the said table and adapted to push a row of blocks off the table onto the bed of the roadway, and an alining and hammering device mounted on the said truck and adapted to aline the row of blocks on the bed of the roadway and to hammer the same in position thereon.

5. A paving machine, comprising a truck provided with a motor, a chute mounted on the truck and adapted to contain at least one row of paving blocks, a table fixed on the truck and extending a distance below the said chute for a row of blocks to drop from the chute onto the table, a reciprocating pusher operating over the said table and adapted to push a row of blocks off the table onto the bed of the roadway, an alining and hammering device mounted on the said truck and adapted to aline the row of blocks on the bed of the roadway and to hammer the same in position thereon, and means to actuate the said hammering device in unison with the said pusher.

[Claims 6 to 9 not printed in the Gazette.]

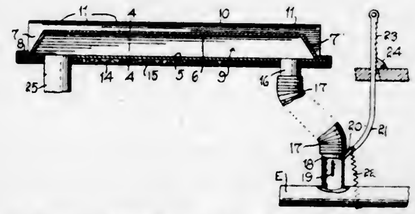
1,221,690. SAFETY DEVICE FOR RAILWAYS. JOHN S. CRAWFORD, New London, Conn. Filed Mar. 16, 1915, Serial No. 14,797. Renewed Oct. 26, 1916. Serial No. 127,829. (Cl. 246—59.)



1. A safety device of the type described, including an engineer's reversing lever, latching means for said lever, means for the retention of said latching means in operative position, a compressed air supply means, and means for establishing communication between said latching means and said compressed air supply means, comprising a compressed air chamber arranged upon said engineer's reversing lever, said latching means having its rod member equipped with a piston positioned within said compressed air chamber, the resultant piston rod being adapted to provide for direct engagement with said latch retaining means and a tubular air conducting member communicating with said compressed air chamber of said latching means, said tubular air conducting member having a flexible tubular connection with said compressed air supply means.

2. A safety device of the type described, including a compressed air supply, an air receiver in communication therewith, means for controlling the air supply therebetween and means for delivering the air supply, comprising a valve block for controlling the passage of air through said delivery means, a rod connected with said valve block and carrying a shoe engaging member, a piston whose rod is rigid with the aforesaid rod, a pipe communicating with said compressed air supply, and a valve for manually controlling the air supply through said pipe to said piston.

1,221,691. HEATER FOR AUTOMOBILES. JAMES R. CREIGHTON, Cambridge, Ill. Filed Jan. 3, 1916. Serial No. 69,923. (Cl. 257—136.)



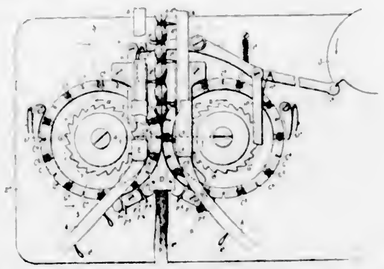
1. A heater of the character described comprising spaced top and bottom plates, said top plate having marginal flanges permanently welded to the edges of the bottom plate, a perforated radiator plate open at its ends extending over and in spaced relation to the top plate, said radiator plate having downwardly projecting, longitudinal flanges engaged upon the longitudinal edges of the top plate, an insulating sheet engaged upon the bottom face of the bottom plate, a sheet metal plate extending over the insulating sheet and having marginal portions thereof bent upwardly and inwardly upon the longitudinal flanges of the radiator plate to retain the latter in place, and means for supplying a heating medium to the space between said top and bottom plates.

2. A heater of the character described including spaced top and bottom plates, said top plate being permanently welded at its edges to the bottom plate, a perforated radiator plate arranged over the top plate in spaced relation thereto and having downwardly projecting flanges engaged upon the edge of said top plate, an insulating sheet engaged upon the bottom face of the base plate, a metal sheet covering said insulating sheet and having its edges upwardly and inwardly bent and crimped upon the edges of said radiator plate to secure the latter in place, and an inlet pipe for the heating medium connected to one end of the base plate and an outlet pipe connected to the opposite end of said plate.

1,221,692. FEED DEVICE FOR SEWING-MACHINES. WILLIAM CRONENBERG, Brooklyn, N. Y., assignor to Morris Bernhard Co., New York, N. Y. Filed Nov. 11, 1914, Serial No. 871,503. Renewed Oct. 3, 1916. Serial No. 123,605. (Cl. 112—24.)

1. In combination, with stitch-forming mechanism having a looper and a needle bar having up and down and sidewise oscillating movements, an intermittently actuated feed device coacting with the said stitch-forming mecha-

nism and having means for intermittently feeding a bunch of strands to the said stitch-forming mechanism, the said feed device having spaced hooks adapted to be engaged by fringe loops on a fringe body to feed the latter in unison with the said bunch of strands to the said stitch-forming mechanism for the latter to sew a loop to the said bunch of strands and to loop the sewing thread around the bunch of strands.



2. In combination with stitch-forming mechanism having a looper and a needle bar having up and down and sidewise oscillating movements, an intermittently actuated feed device coacting with the said stitch-forming mechanism and having means for intermittently feeding a bunch of strands to the said stitch-forming mechanism, the said feed device having spaced combined hooks and needle plates, of which the hooks are adapted to be engaged by fringe loops on a fringe body and the sewing needle is adapted to pass through the needle plate, a central guide for guiding the bunch of strands to the said feeding device, and a side guide for the passage of the fringe body and open at its inner side for the passage of the fringe loops.

3. In combination with stitch-forming mechanism, a pair of intermittently revolving feed wheels coacting with the said stitch-forming mechanism, the said feed wheels having peripheral grooves for feeding a bunch of strands between them, the said feed wheels being provided along the peripheries with spaced combined hooks and needle plates, of which the hooks are adapted to be engaged by the fringe loops and the sewing needle is adapted to pass through the needle plate.

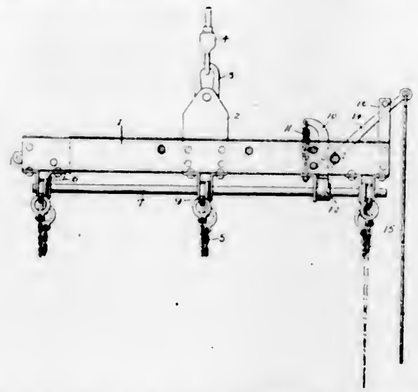
4. In combination with stitch-forming mechanism, a pair of intermittently revolving feed wheels coacting with the said stitch-forming mechanism, the said feed wheels having peripheral grooves for feeding a bunch of strands between them, and the said feed wheels being provided along the peripheries with spaced combined hooks and needle plates, of which the hooks are adapted to be engaged by the fringe loops and the sewing needle is adapted to pass through the needle plate, the combined hooks and needle plates of the said feed wheels being arranged alternately.

5. In combination with stitch-forming mechanism, a pair of intermittently revolving feed wheels coacting with the said stitch-forming mechanism, the said feed wheels having peripheral grooves for feeding a bunch of strands between them, the said feed wheels being provided along the peripheries with spaced combined hooks and needle plates, of which the hooks are adapted to be engaged by the fringe loops and the sewing needle is adapted to pass through the needle plate, the combined hooks and needle plates of the said feed wheels being arranged alternately, and needle plates intermediate the said combined hooks and needle plates.

[Claims 6 to 18 not printed in the Gazette.]

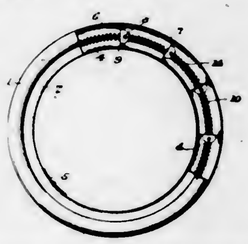
1,221,693. UNLOADING-SLING FOR DERRICKS. OLIVER CROSBY, St. Paul, Minn., assignor to American Hoist & Derrick Company, St. Paul, Minn., a Corporation of Minnesota. Filed Nov. 14, 1912. Serial No. 731,249. (Cl. 57—11.)

1. In an unloading sling, the combination of a beam, means for suspending the same from a suitable hoisting mechanism, a shaft extending longitudinally of said beam, and a plurality of hooks loosely mounted on said shaft, a plurality of hooks attached to said shaft and adjacent said loosely mounted hooks, a dog attached to said shaft, a latch engaging said dog to hold said second mentioned hooks in a load-carrying position and a manually-operated trip for shifting said latch to release said dog, said attached hooks being shaped to free the sling when said shaft holding means is released.



2. In a device of the class described, the combination of a beam, a shaft extending longitudinally of said beam, a plurality of hooks loosely mounted on said shaft and adapted to support a load when depending directly from said shaft, a plurality of hooks fixed to said shaft, said hooks being adapted to support a load and shaped to release said load when depending directly from said shaft, means for locking said shaft with said last mentioned hooks in a load supporting position, and a manually operatable device for releasing said lock.

1,221,694. STEEL AUTO-TIRE. CHRIS DAM and JOHN E. MARKLEY, Gordon, Nebr. Filed May 23, 1916. Serial No. 99,370. (Cl. 152—37.)

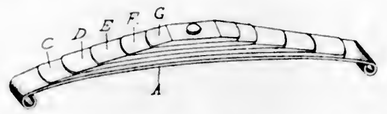


1. A tire comprising a casing and including a continuous tread portion, an inner sectional portion, slidably engaging members located within said tread and sectional portions, a ring within said casing and longitudinally arranged springs encircling said ring and positioned between said slidably engaging members.

2. A tire comprising a casing and including a continuous tread portion, an inner sectional portion, transversely arranged slidably engaging members secured to the side walls of the inner sectional portion and to the inner wall of the tread portion and cushioning springs within said casing.

3. A tire comprising a casing and including outer and inner slidably engaging portions, slidably engaging members located within the said casing, a ring also within said casing, said ring passing through the slidably engaging members and cushioning springs arranged upon said ring and abutting the slidably engaging members.

1,221,695. LEAF-SPRING. ERNEST G. DANN, Chicago, Ill. Filed Aug. 31, 1914. Serial No. 859,472. (Cl. 267—33.)



1. A compound leaf spring composed of superposed leaves having their surfaces of contact one with another provided with facings of non-corrosive metal integrally united with the metal composing the leaves.

2. A compound leaf spring composed of superposed leaves having their surfaces of contact one with another provided with facings of non-corrosive metal integrally united with the metal composing the leaves by being forced against the leaves while in molten condition.

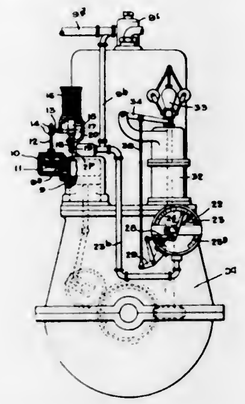
3. A compound leaf spring composed of superposed steel leaves having their surfaces of contact one with another provided with facings of a metal softer than steel and of a lubricating character integrally united with the steel composing the leaves.

4. A compound leaf spring composed of superposed steel leaves having their surfaces of contact provided with integral facings of non-corrosive metal of a lubricating character.

5. A laminated structure comprising laminæ of yieldable material and a surface of lubricating material interposed between each contacting air of laminæ and integrally united with one of them.

[Claims 6 and 7 not printed in the Gazette.]

1,221,696. INTERNAL-COMBUSTION ENGINE. CHARLES DAY, GEORGE EDWARD WINDELER, and PETER GRANT, Hazel Grove, near Stockport, England, assignors to General Electric Company, a Corporation of New York. Filed Nov. 10, 1915. Serial No. 60,672. (Cl. 123—103.)



1. The combination with an internal combustion engine and a compressor for applying air thereto for injecting fuel into it, of a valve controlling the admission of air to the inlet of the compressor, and means responsive to the load on the engine and the pressure of the air delivered by the compressor for positioning said valve.

2. The combination with an internal combustion engine and a compressor for supplying air thereto for injecting fuel into it, of a valve controlling the inlet of the compressor, a device which moves in response to the pressure on the delivery side of the compressor, a second device which moves in response to variations in the load on the engine, and means controlled by said two devices for positioning the valve.

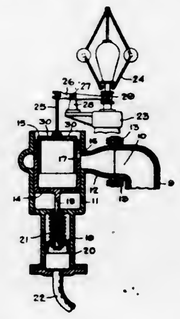
3. The combination with an internal combustion engine and a compressor for supplying air thereto for injecting fuel into it, of a valve in the inlet of the compressor, an electromagnet for controlling the position of said valve, an electric circuit connected with said electromagnet, and means responsive to the load on the engine and the pressure on the delivery side of the compressor for opening and closing said circuit.

4. The combination with an internal combustion engine, and a compressor for supplying air thereto for injecting fuel into it, of a valve in the inlet of the compressor, and means for regulating it to vary the delivery pressure of the compressor in accordance with the load on the engine, said means comprising an electric contact with is positioned by the load on the engine, a coöperating contact which is positioned by the delivery pressure of the compressor, an electric circuit which is controled by said contacts, and means in said circuit for opening and closing said valve.

5. The combination with an internal combustion engine having a governor, and a compressor for supplying air for injecting fuel into the engine, of a valve in the inlet of the compressor, an electroresponsive device for positioning it, an electric circuit in which said device is included, a pair of contacts movable relative to each other for opening and closing said circuit, a pressure responsive device which is moved in response to the pressure on the delivery side of the compressor for moving one of said contacts, and means connecting the other contact to said governor.

[Claim 6 not printed in the Gazette.]

1,221,697. INTERNAL-COMBUSTION ENGINE. CHARLES DAY, GEORGE EDWARD WINDELER, and PETER GRANT, Hazel Grove, near Stockport, England, assignors to General Electric Company, a Corporation of New York. Filed Mar. 16, 1916. Serial No. 84,709. (Cl. 123—104.)



1. The combination with an internal combustion engine and a compressor for supplying air thereto for injecting fuel into it, of a plurality of valves for controlling the admission of air to the inlet of the compressor, means responsive to the load on the engine for positionining one of said valves, and means responsive to pressure of the air delivered by the compressor for positioning another of said valves.

2. The combination with an internal combustion engine and a compressor for supplying air thereto for injecting fuel into it, of a valve casing associated with the admission end of the compressor and having two valves therein which mutually control the admission of air to the compressor, means responsive to the load on the engine for positioning one of said valves, and means responsive to the pressure of the air delivered by the compressor for positioning another of said valves.

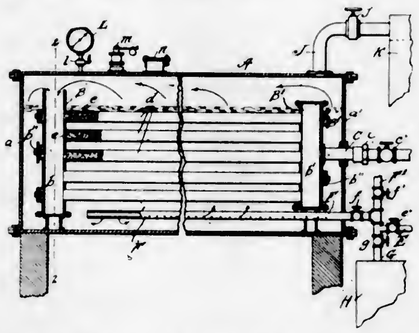
3. The combination with an internal combustion engine and a compressor for supplying air thereto for injecting fuel into it of a plurality of valves for controlling the admission of air to the inlet of the compressor, means responsive to the load on the engine for positioning one of said valves, and means responsive to the pressure of the air delivered by the compressor for positioning another of said valves, said last named valve being arranged to completely cut off the admission of air to the compressor when the pressure exceeds a predetermined value.

4. The combination with an internal combustion engine and a compressor for supplying air thereto for injecting fuel into it, of a valve casing connected to the inlet of the compressor and having an opening communicating therewith, two valves in the casing which slide one within the other and have openings which are arranged to register with each other and with the opening in the valve casing, and means connected with the valves and responsive respectively to the load on the engine and to the pressure of the air delivered by the compressor for positioning said valves to bring the openings in them into and out of alinement.

5. The combination with an internal combustion engine and a compressor for supplying air thereto for injecting fuel into it, of a valve casing connected to the inlet of the compressor and having an opening communicating therewith, two valves in the casing which slide one within the other and have openings which are arranged to register with each other and with the opening in the valve casing, means connected with one of said valves for positioning it in accordance with the load on the engine, and means connected with the other for positioning it in accordance with the pressure of the air delivered by the compressor, said last named means being adapted to position the valve to completely cut off the admission of air to the compressor when the pressure exceeds a predetermined value.

[Claims 6 and 7 not printed in the Gazette.]

1,221,698. PROCESS OF TREATING MINERAL OILS FOR INCREASING THE YIELD OF LIGHT-GRAVITY OILS. DAVID T. DAY, Washington, D. C. Filed May 3, 1913, Serial No. 765,372. Renewed Feb. 23, 1917. Serial No. 150,618. (Cl. 196—26.)



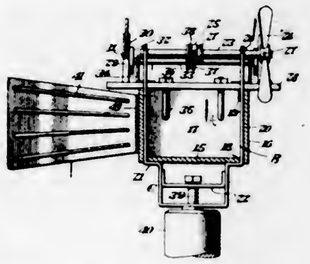
1. In the treatment of mineral oils to increase the yield of light gravity oils, the process, which consists in adding sulfur or a sulfur compound to a heavy oil, such as gas oil or other distillate having a higher boiling point than gasolene, and subjecting such oil under a cracking temperature and at a pressure greater than the atmospheric pressure, to distillation, and adding sulfur at intervals during the distillation, whereby the cracking of the heavier oils is facilitated and increased, resulting in the production of an increased percentage of gasolene.

2. In the treatment of mineral oils to increase the yield of light gravity oils, the process, which consists in adding sulfur or sulfur compounds to a comparatively heavy hydrocarbon oil, subjecting the same to distillation at a cracking temperature and at a regulated pressure greater than the atmospheric pressure, for facilitating the cracking operation, mixing hydrogen carrying gas or vapor with the hot oil vapors of distillation in the still and passing the mixed vapors and gas through porous absorptive contact substances or a catalytic agent for improving the quality and increasing the percentage of light gravity oils.

3. In the treatment of mineral oil to increase the yield of light gravity oil, the process, which consists in adding sulfur to the oil, subjecting the same to distillation for facilitating the cracking operation, passing streams of hydrogen carrying gas or vapor up through the body of oil being distilled, superheating the resulting mixture of hydrogen and oil vapors under pressure in contact with porous absorptive substances and thereby causing hydrogen to combine with the unsaturated oil.

4. In the treatment of mineral oils, the process which consists of introducing sulfur compounds, especially sulfureted hydrogen into oil distillates for the purpose of preventing oxidation of the distillate by the sulfuric acid used in refining said distillate, and subsequently eliminating the sulfur by blowing and agitating with air or hydrogen.

1,221,699. MECHANICAL TOY. MILLIE M. DEIBEL, Youngstown, Ohio. Filed Dec. 19, 1916. Serial No. 137,847. (Cl. 46—14.)



1. In a device of the class described, a box having a bottom and side members, said bottom being provided with slots adjacent to the side members, and said side members being provided with keepers alining with the slots, a yoke having limbs that are offset to produce shoulders, said limbs adapted to engage the slots and keepers and said shoulders adapted to support the bottom of the box, and a pivotal support for said yoke.

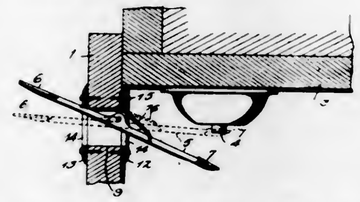
2. In a device of the class described, a box having a bottom and side members, said bottom being provided with slots adjacent to the side members, and said side members being provided with keepers alining with the slots, a yoke having limbs that are offset to produce shoulders, said limbs adapted to engage the slots and keepers and said shoulders adapted to support the bottom of the box, and a pivotal support for said yoke, a shaft supported for rotation by the limbs of the yoke above the box, moving figures supported on the box, a wind wheel carried by the shaft, and means for transmitting motion from the wind wheel to the moving figures.

3. In a device of the class described, a box having a bottom and side members, said bottom being provided with slots adjacent to the side members, and said side members being provided with keepers alining with the slots, a yoke having limbs that are offset to produce shoulders, said limbs adapted to engage the slots and keepers and said shoulders adapted to support the bottom of the box, and a pivotal support for said yoke, a shaft supported for rotation by the limbs of the yoke above the box, moving figures supported on the box, a wind wheel carried by the shaft, and means for transmitting motion from the wind wheel to the moving figures, and a tail vane detachably mounted and supported on one side member of the box.

4. In a device of the class described, a base consisting of a rectangular box, hook bolts connected with the ends of the box and having nuts, lid members adapted to extend lengthwise of the box and also to be supported transversely of the box across the ends thereof, said lid members carrying movable figures adapted to be accommodated within the box when the lid members are inverted, and means for driving the moving figures; the lid members being provided with apertures adjacent to one side edge and adjacent to the end edges thereof for engagement with the bolts.

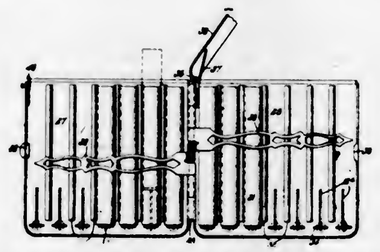
5. A device of the class described comprising a box, a supporting yoke detachably connected therewith, a vane detachably connected with the box, a driving shaft carrying a wind wheel detachably connected with and adapted to be journaled upon the limbs of the yoke, and lid members having moving figures permanently connected therewith and adapted to be accommodated within the box when the lid members are inverted, the yoke, the vane, the shaft and the wind wheel being also proportioned to be accommodated within the box, and means for securing the lid members in various positions with relation to the box.

1,221,700. SCREEN-DOOR ATTACHMENT. CHARLES M. DEICKE, Baltimore, Md. Filed Aug. 23, 1916. Serial No. 116,409. (Cl. 116—35.)



The combination with a casing, a signal bell fixed thereon, and a swinging screen door having a transverse slot, of a push lever pivoted in said slot and adapted, when the door is closed against the casing, to project horizontally over the bell, and an angular plate spring secured to the screen door and its free end bearing horizontally upon the inner end of the push lever and holding it normally out of range of contact with the bell, as shown and described.

1,221,701. CIGARETTE-CASE. WILLIAM DIETZ, Brooklyn, N. Y. Filed Mar. 2, 1916. Serial No. 81,661. (Cl. 206—41.)

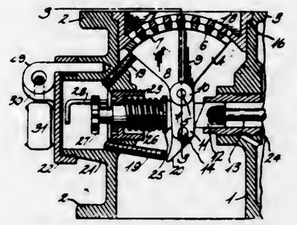


1. A cigarette case in two companion portions, a plurality of guides spaced apart in one portion of the case for spacing apart a plurality of cigarettes while exposing the sides of the cigarettes when the companion portions are opened, a plurality of plungers disposed each between neighboring guides, and means for operating the plungers.

2. A cigarette case in two halves hinged together along their sides and with one set of ends open, a lid hinged to one of the said halves at its said side and adjacent the open end, the lid extending beyond the said half when in closed position for closing the open ends of the two halves, a plurality of guides in the case for spacing apart a plurality of cigarettes, there being a plurality of slots in the case one at each guide, and a plurality of plungers disposed in the guides respectively and having operating means extending through the slots.

3. A cigarette case in two companion portions, a plurality of guides spaced apart in one portion of the case for spacing apart a plurality of cigarettes while exposing the sides of the cigarettes when the companion portions are opened, there being a plurality of slots in the case each disposed between neighboring guides, a plurality of plungers disposed each between neighboring guides, and operating means for the plungers extending through the slots.

1,221,702. VALVE CONSTRUCTION. THEODORE DOUGLAS, Scarboro, N. Y. Filed Apr. 12, 1916. Serial No. 90,652. (Cl. 137—7.)



1. The combination of a casing having a conduit therethrough, a seat extending across said conduit and having a plurality of openings, a valve having a plurality of openings, the openings of the valve and the openings of the seat contracting toward each other so as to afford a Venturi-tube effect, the combined area of openings being less than that of the cross-sectional area of the conduit, whereby a fluid mixture passing through the valve and seat will have its ingredients retarded to an extent inversely proportionate to their relative masses, thus producing a uniform distribution of the ingredients of the mixture, and means for causing relative movement of the valve and seat to put the openings of the valve and seat into and out of registry, whereby the valve may also act as a regulating valve.

2. A member constituting a valve seat, comprising a ring-shaped element provided with a supporting flange, and a curved web inclosed by said element having a plurality of openings therein.

3. A member constituting a valve seat, comprising a ring-shaped element provided with a supporting flange, and a curved web inclosed by said element, said web having a plurality of openings therein, and a central stiffening rib extending across the web.

4. A valve comprising a plate having a curved face with a plurality of openings therein, a web projecting from the plate, a bearing carried by the web, means projecting from the bearing for enabling the valve to be actuated, and means adjacent the web and the projecting means to permit the range of movement of the valve to be adjusted.

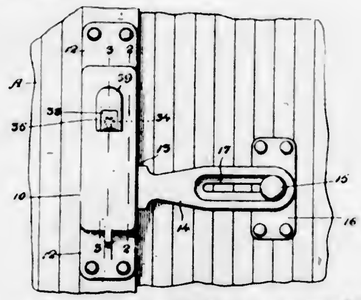
5. A valve comprising a plate having a curved face with a plurality of openings therein, a web projecting from said plate, a bearing supported by the web, a pair of arms extending from the bearing away from the web, and an operating member engaged by the outer ends of said arms, and having a lug projecting beyond the ends of said arms.

[Claims 6 to 15 not printed in the Gazette.]

1,221,703. DOOR-LOCK. GEORGE R. DUBÉ, New Bedford, Mass. Filed Dec. 29, 1916. Serial No. 139,624. (Cl. 70—31.)

1. A lock mechanism for sliding doors embodying a casing, a yieldably supported bolt arranged therein, a hasp carried by the door and having a notch at one end to auto-

matically receive said bolt when the hasp enters the casing, said bolt having a slot therein, a key carrying a stem, and a pivotally mounted actuating element normally disposed in a slot in said stem, and capable of assuming an angular position relative thereto upon insertion of the key within the casing, said actuating element entering the slot in said bolt to retract the latter with the turning of said key, and means disposed in the path of said actuating element to return the latter to normal position with the removal of the key from the casing.



2. A lock mechanism for sliding doors embodying a casing, a yieldably supported bolt arranged therein, a hasp carried by the door and having a notch at one end adapted to automatically receive said bolt when the hasp enters the casing, said bolt having a slot therein, a key carrying a stem, a pivotally mounted actuating element, a spring pressed sleeve slidably mounted upon the stem for normally holding the actuating element within a slot in said stem, said actuating element being released from said sleeve and capable of assuming an angular position with respect to the stem upon insertion of the key within the casing, said actuating element entering said slot in the bolt to retract the latter upon turning of the key, and means disposed in the path of said actuating element to automatically return the latter to normal position with the removal of the key from the casing.

1,221,704. MOVING-PICTURE-FILM WIPER. EDWIN DUCHER, Jersey City, N. J. Filed Aug. 16, 1916. Serial No. 115,214. (Cl. 15—8.)



1. An apparatus as characterized comprising a service socket; a standard adapted for mounting in said socket; a frame arm; a plurality of spring backs mounted on said arm; a plurality of pads mounted on said backs; a shaft for said arm; a yielding spring operatively connected with said arm for normally moving the same to its inactive position; and means for arresting said arm in its inactive position.

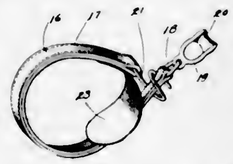
2. An apparatus as characterized comprising a frame arm; a plurality of oppositely bowed pads mounted on said arm, said pads being disposed in spaced relation and embodying each a spring back, socket brackets rigidly mounted on said arm and extended from the side thereof, and a fabric covering for said back, said covering extending around the ends of said back to be held in said brackets; and resilient means for normally holding said arm in position transverse to the direction of travel of a film when passing therethrough.

1,221,705. ADJUSTABLE PIPE-HANGER. WILBEY C. DUKE, South Richmond, Va. Filed May 15, 1914, Serial No. 838,832. Renewed Sept. 15, 1916. Serial No. 120,418. (Cl. 248—31.)



A pipe hanger comprising a substantially inverted U-shaped member having alined openings in the opposite leg portions, and an opening in the top thereof, a pipe ring having a supporting rod rising therefrom and provided with an opening for registry with said alined openings, a bolt passing through said opening for adjustably and pivotally supporting said rod between said leg portions, and a fastening element extending upwardly through the opening in the top of said member as described.

1,221,706. SECURING DEVICE. SOLA B. DUNN, Chicago, Ill. Filed July 24, 1915. Serial No. 41,764. (Cl. 54—71.)



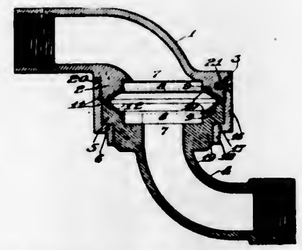
1. In a hopple, a flexible element, a spiral member secured to one end of said element and adapted to engage it detachably between its ends to form a sliding engagement therewith, a relatively fixed support, and connections between said support and the other end of said flexible element opposite said spiral member.

2. In a casting harness, a leather strap, a spiral metal member secured to one end of said strap and adapted to engage it detachably between its ends to form a sliding engagement therewith, a relatively fixed support, and adjustable means for drawing said strap and the parts secured thereby toward said relatively fixed support.

3. In a casting harness, a relatively fixed support, a band adapted to be looped around an object to be secured, an engageable member secured to one end of said band and arranged to form a sliding engagement with the body of said band at any desired point between its ends, and means engaging the end of said band opposite said engageable member for adjusting the position of said band and the object secured thereby with respect to said relatively fixed support.

4. In a casting harness, a surcingle adapted to extend around the body of a horse, a shoulder strap adapted to be connected at its ends to said surcingle, a strap adapted to extend around a leg of said horse, a spiral engageable member secure to one end of said strap and adapted to detachably engage and form a sliding engagement with an intermediate part of the strap, a sheath secured to said strap and located inwardly of said engageable member, and cable and pulley connections between said surcingle and the end of said strap opposite said engageable member.

1,221,707. PIPE-COUPLING. VOTAW S. DURBIN, St. Louis, Mo. Filed Feb. 7, 1916. Serial No. 76,609. (Cl. 137—34.)



1. A pipe coupling comprising coupling members having two substantially cylindrical walls the ends whereof abut together, said members being held together in rotative relation, the opposing ends of said members being each provided with an enlarged recess surrounding its bore, and with an outer recess surrounding said first-named recess, and an expansible washer interposed between the coupling members and housed in said outer recesses and extending over the joint formed at the abutting ends of said cylindrical walls, said washer being subject to the pressure of the medium passing through the coupling.

2. A pipe coupling comprising coupling members having substantially cylindrical walls the ends whereof abut together, said members being held together in rotative relation, the opposing ends of said coupling members being each provided with an annular recess surrounding its bore, and with an outer inclined recess surrounding said annular recess and terminating at said abutting ends, a washer interposed between the coupling members and having annular side members seated in the respective inclined recesses of the coupling members, said washer having a peripheral portion covering the joint formed at the meeting faces of the coupling members, said washer being subject to the pressure of the medium passing through the coupling, and a sleeve engaging the outer faces of said cylindrical walls and having means for holding said members together.

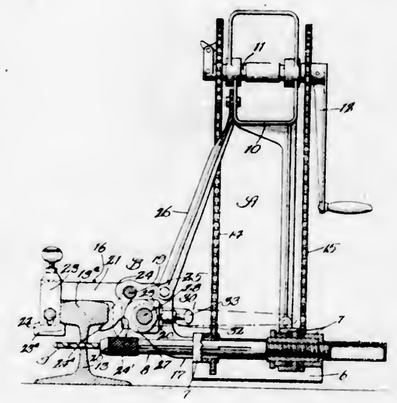
3. A pipe coupling comprising coupling members having substantially cylindrical walls the end faces whereof are in juxtaposition, the ends of said members having oppositely disposed inclined faces coöperating to form a washer-seat surrounded by said cylindrical walls, an expansible washer of substantially V-shape cross-section having diverging extensions received on said seat, said members having substantially alining outer cylindrical faces terminating at said end faces, a sleeve engaging said cylindrical faces for connecting said members, the pressure of a fluid passing through said coupling operating to force said washer against said seat, said end members having annular shoulders projecting adjacent the edges of the said diverging extensions of said washer to prevent the fluid from forcing itself under said edges.

4. A pipe coupling comprising coupling-members having substantially cylindrical walls the end faces whereof are in juxtaposition, the ends of said members having oppositely disposed inclined faces coöperating to form a washer-seat surrounded by said cylindrical walls, an expansible washer of substantially V-shape cross section having diverging extensions received on said seat, said members having substantially alining outer cylindrical faces terminating at said end faces, a sleeve engaging said cylindrical faces for connecting said members, the pressure of a fluid passing through said coupling operating to force said washer against said seat, said members having annular shoulders projecting adjacent the edges of said diverging extensions to prevent the fluid passing through said coupling from forcing its way under the edges of said extensions.

5. A pipe coupling comprising coupling members having substantially cylindrical walls the end faces whereof are in juxtaposition, the ends of said members having oppositely disposed inclined faces coöperating to form a washer seat surrounded by said cylindrical walls, an expansible washer of substantially V-shape cross section having diverging extensions received on said seat, said members having outer cylindrical faces terminating at said end faces, a sleeve engaging said cylindrical faces for connecting said members, the pressure of a fluid passing through said coupling operating to force said washer against said seat, the ends of said members having annular shoulders projecting adjacent the edges of the said diverging extensions of said washer to prevent the fluid from forcing itself under said edges.

[Claim 6 not printed in the Gazette.]

1,221,708. RAIL-DRILLING MACHINE. WALTER C. DYER, Chicago, Ill., assignor to Buda Company, Chicago, Ill., a Corporation of Illinois. Filed July 18, 1916. Serial No. 109,894. (Cl. 77—9.)



1. The combination with the drill carrying base of a rail drilling machine, of a frame extending forwardly of said base whereby to straddle the rail head, said frame having outer rail gripping means and embodying a frame portion intermediate said means and said drill carrying base provided with inner rail head gripping elements pivotally mounted therein for movement toward the rail, and a camming device operatively mounted in said portion for actuating said elements.

2. In a rail drilling machine, the combination of a frame comprising side members and having oppositely disposed inner and outer rail gripping elements, the inner gripping element being mounted in said frame for movement to take up an operative rail head engaging position, a cam device for actuating said inner gripping element and having a shaft extending through one of said side members, and an operating lever therefor terminally mounted on said shaft at one side of said frame.

3. In a rail drilling machine, the combination of a frame having an outer rail gripping element, a movable inner rail gripping element and an independently movable camming element therefor disposed rearwardly thereof, said frame formed with bearings for both of said movable elements, and said camming element provided with

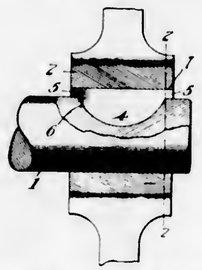
a shaft extension, and an operating lever for said camming element mounted on said shaft extension.

4. In a rail drilling machine, the combination of a frame embodying side frame members disposed at right angles to the plane of the rail and adapted to engage the outer face of the rail, an inner rail gripping element and a co-acting camming element therefor, said elements provided with shafts journaled in said side frame members and having their axes disposed in substantial parallelism with the plane of the rail, said camming element constructed and arranged to engage the other said element at a point below its axis, and means for operating said camming element.

5. In combination with the drill carrying base of a rail drilling machine, of a frame extending forwardly of said base to straddle the rail head, said frame having outer rail gripping means and an inner rail gripping element movably mounted therein for movement toward the rail, a rearwardly disposed actuating member for said inner rail gripping element capable of operatively advancing said element to rail gripping position, said frame formed with an extended bearing for said member and within which said member is adjustably mounted in juxtaposition with said inner gripping element.

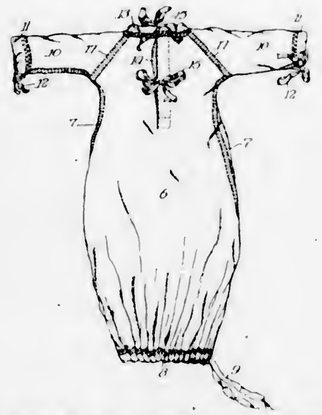
[Claims 6 to 8 not printed in the Gazette.]

1,221,709. KEY. FRANK J. DYETT, Ilion, N. Y. Filed Aug. 14, 1914. Serial No. 856,796. (Cl. 74—8.)



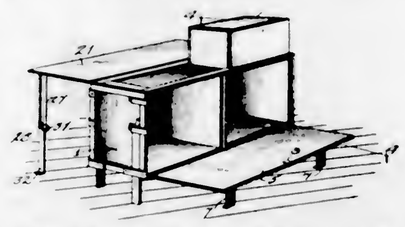
A key, comprising a substantially semicircular shaped lip having a body connected thereto formed with overhanging ends, said lips and body being of a uniform width.

1,221,710. CHILD'S SLEEPING-GARMENT. GEORGE F. EARNSHAW, Chicago, Ill., assignor to Earnshaw Knitting Co., Chicago, Ill., a Corporation of Illinois. Filed June 9, 1915. Serial No. 33,034. (Cl. 2—145.)



An article of the character described comprising an infant's sleeping garment of full length, the same possessing a body portion having sleeves, a neck opening, and an open lower end provided with means for closing the same below the feet of the infant, said body part being formed in part of continuous elastic material extending over and around the shoulder portions to render the latter seamless and relatively unrestrained throughout so as to give and prevent downward pulls incident to pressure of the feet of the infant against the closed end of the garment from being transmitted to the shoulders of the infant, in combination with means for tying the garment about the neck of the infant, and relatively inelastic oblique seams extending from the neck to approximately the arm pits for transmitting the pulling strains to the neck portion of the garment as the elastic limit of the shoulder portions thereof is reached.

1,221,711. MESS AND ICE BOX. CHARLES C. EDWARDS, Phoenix, Ariz. Filed Aug. 28, 1916. Serial No. 117,199. (Cl. 190—12.)

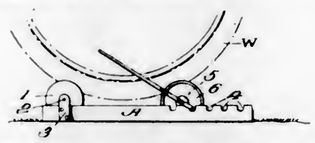


1. A device of the character specified, comprising a box having a transverse partition dividing the box into a storage compartment and a refrigerating compartment, the front of the said box being open and a door hinged to the box at the front and closing the front, legs slidably connected with the rear wall and the end walls of the box for supporting the box in elevated position, means in connection with the legs and box for holding the legs extended, means for limiting the extending movement of each leg, a leg hinged to the door and holding the door in horizontal position when the door is open, a table adapted to fit over the front wall of the box or to extend in the plane of the top from the rear wall, and having means for detachably engaging the box at either point, said table having at its outer edge extensible and contractible members forming legs when the table is in extended position, and forming clamps for securing the table to the box when said table is superposed on the door.

2. A device of the character specified comprising a box having a transverse partition dividing the box into a storage compartment and a refrigerating compartment, the front of the said box being open and a door hinged to the box at the front and closing the front, a table corresponding in size to the front of the box, and means in connection with the table and the box for hinging the table adjacent to the hinged connection of the door or at the upper side of the rear wall of the box, said table having extensible legs for supporting it in horizontal position.

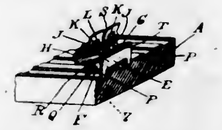
3. A device of the character specified comprising a box having a transverse partition dividing the box into a storage compartment and a refrigerating compartment, the front of the said box being open and a door hinged to the box at the front and closing the front, the box having an opening in its top at the ice compartment, a door for closing the opening, means in connection with the door and the box and inaccessible from the exterior of the box for holding the door closed, an ice pan adapted to seat within the door opening at the top, the box having means for supporting the pan in the opening, and a cover of non-heat conducting material fitting over the ice pan and closing said door opening, said pan and cover being of a size to fit within the box.

4. A device of the character specified comprising a box having a transverse partition dividing the box into a storage compartment and a refrigerating compartment, the front of the said box being open and a door hinged to the box at the front and closing the front, the box having an opening in its top at the ice compartment, a door for closing the opening, and means in connection with the door and the box and inaccessible from the exterior of the box, for holding the door closed.



5. A device of the character specified comprising a box having a door opening in its top and a door for closing the opening, means inaccessible from the exterior of the box for holding the door closed, an ice pan adapted to seat within the opening and to provide a space between the opening and the pan, the box having means for supporting the pan in such position, and a cover for the opening, seated on the box about the opening, said pan and cover being seated within the box when the door is closed.

1,221,712. JACK. JOHN C. ELZY and FREDERICK MESSENGER, St. Paul, Minn. Filed Dec. 28, 1916. Serial No. 139,259. (Cl. 254—131.)



1. A jack comprising a frame having one unobstructed end, wherein and through which to receive a wheel to be lifted, said frame provided with an anti-friction roller at the other end, and a roller detachably connected with the unobstructed end, whereby said detachable roller may be inserted beneath the wheel, and means for raising and lowering one at least of said rollers beneath the wheel to be lifted, whereby to throw the weight of the latter upon both rollers to raise the wheel from the ground or floor.

2. A jack comprising a frame having two rollers, one detachable, the detachable roller carried upon a U-shaped lever, the ends of which are in the form of bearings, and the handle serving to swing the roller in the arc of a circle against the wheel to be lifted, whereby the wheel is raised and supported upon the two rollers and capable of being turned thereon.

3. A jack comprising a U-shaped frame having a roller journaled at one end, and open notches at the other, in combination with a U-shaped lever, the ends of which form bearings, and upon the center of which a roller is mounted, said lever adapted to be detachably mounted in oppositely located notches and swung so that the axis of the roller moves in the arc of a circle, and to be locked by the lever passing its dead-center.

1,221,713. SPRING FASTENING DEVICE. ERNEST BENJAMIN FAHNESTOCK, Brooklyn, N. Y. Filed Oct. 4, 1911. Serial No. 652,679. (Cl. 173—259.)

1. A spring fastening device for electrically connecting a plurality of conducting wires, comprising a plurality of independently operatable spring parts arranged side by side and electrically connected, each part adapted to hold firmly a conducting wire, thrust therethrough transversely of the spring parts of the fastening device, thereby maintaining an electric circuit between the wires so held, and means for preventing interference with the operation of one spring part by the insertion of a wire transversely in the other spring part.

2. A spring fastening device for electrically connecting a plurality of conducting wires, comprising a body member, a plurality of independently operatable spring members arranged side by side and electrically connected, a plurality of resistant members coöperating with the spring members and means for preventing interference with the operation of one spring member by the insertion of a wire transversely of the body member of the fastening device in the other spring member.

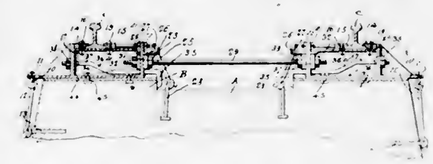
3. A spring fastening device for electrically connecting a plurality of conducting wires, comprising a plurality of independently operatable electrically connected parts, each adapted to hold firmly a conducting wire, thereby maintaining an electric circuit between the wires so held, and a dividing partition between the two parts of the fastening device, whereby interference with the operation of one part by the insertion of a wire in the other part is prevented.

4. A spring fastening device for electrically connecting a plurality of conducting wires, comprising a body member, a plurality of independently operatable spring members electrically connected, a plurality of resistant members coöperating with the spring members, and a dividing partition between the two spring members, whereby interference with the operation of one spring member by the insertion of a wire in the other spring member is prevented.

5. A spring fastening device, comprising a supporting member adapted to stand at approximately right angles to a support, a body member attached to said supporting member, thereby being maintained out of contact with said support, said body member being longitudinally slotted at its free end and looped on itself to form two independently operatable spring members lying side by side.

[Claims 6 to 16 not printed in the Gazette.]

1,221,714. RAIL-TIE. IRA S. FISHER, Molino, Mo. Filed Nov. 11, 1916. Serial No. 130,844. (Cl. 238—6.)



1. A rail tie consisting of a pair of opposed sections each being formed of a single casting having upper, lower and opposite end walls, the said upper wall being disposed below the upper ends of the end walls, rail fastening plates mounted on the upper wall of the section, one of the pair of rail fastening plates mounted on the upper wall of the section, one of the plates engaging the inner surface of one of the end walls, and a stem carried by the other plate of the pair and adjustable through the other end wall of the section, for the purpose specified.

2. A rail tie consisting of a pair of opposed sections each being formed of a single casting having upper, lower and opposite end walls, the said upper wall being disposed below the upper ends of the end walls, rail fastening plates mounted on the upper wall of each section, one of the plates on each section engaging the inner surface of one of the end walls, the other plate having an elongated slot therein, a bolt extending through the elongated slot in the last-mentioned plate and through the upper wall of the section, and means adjustably connecting the last-mentioned plate to the other end wall of the section.

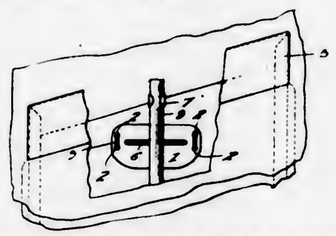
3. A rail tie consisting of opposed sections, each being formed of a single casting having upper, lower and opposite end walls, an extension formed on the lower end of one of the end walls and having an opening therein, a second extension formed on the other end wall, adjacent the upper end thereof, and having an opening therein, and a reinforcing web having connection with one of the extensions and the adjacent end wall.

4. A rail tie formed of a pair of opposed sections, each of the sections being formed of a single casting having upper, lower and opposite end walls, the opposing walls of the sections having openings therein, a pair of parallel rods interposed between the sections and having their opposite ends threaded and received by the openings in the opposing walls of the sections, and means for normally preventing a relative movement between the rail sections and the rods.

5. In a railway roadbed construction, the combination with a ballast, of a rail tie mounted on the ballast and formed of opposed sections, each of the sections having an upper, a lower and an opposite end wall, extensions formed on the end walls of both sections, upwardly extending rods connected to the extensions on the sections, and rods secured to the ballast and having connection with the lower ends of the first-mentioned rods.

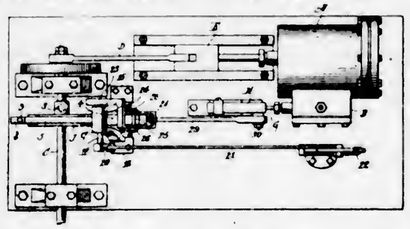
[Claim 6 not printed in the Gazette.]

1,221,715. PEN AND PENCIL CLIP HOLDER. ZEBULUN S. FLOYD, West Marion, S. C. Filed Aug. 31, 1915. Serial No. 48,307. (Cl. 2—151.)



As an article of manufacture a pocket attachment comprising an elongated plate, means for securing the ends of the plate to the rear wall of a pocket, and an elongated rib projecting from one side of the plate, said rib extending longitudinally of the plate between said fastening means for engagement by the heads of one or more pen or pencil clips.

1,221,716. REVERSING-GEAR FOR STEAM-ENGINES. PHILIZA H. FONTAINE, Petersburg, N. D. Filed May 24, 1915. Serial No. 30,143. (Cl. 121—98.)



In reversing gear for steam engines, the combination of a rotary crank shaft, a centrally pivoted link, a slotted arm projecting from said link and embodying parallel bars in spaced relation to each other formed integrally with the link, an eccentric on the crank shaft, an eccentric-actuated runner slidable in said slotted link arm and directly engaging said parallel bars whereby an oscillatory movement is imparted to said arm and link, and a detachable cross bar at the end of said slotted arm connecting the parallel bars thereof to admit of slidable assemblage of the runner and link arm.

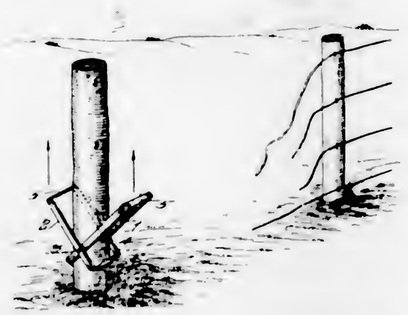
1,221,717. SUPPORTING DEVICE. WILLIAM A. FORSTER, Port Huron, Mich. Filed Aug. 16, 1916. Serial No. 115,288. (Cl. 24—225.)

A device of the character described comprising a one piece resilient wire structure bent to provide curved diverging arms extending in the same plane and adapted to lie flat against the inside of a garment near its edge, an eye at the end of each of said arms adapted to secure the same to the garment, a loop formed where said arms converge, the structure at said loop being adapted to be bent about the edge of the garment to form a resilient hook adapted to extend over the outside of the garment, and adapted to engage a button-hole, said hook being provided



with a bulged portion for preventing the same from accidentally disengaging from the button-hole and with an inwardly curved portion adapted to engage the edge of an adjacent garment part and confining the same in a flat, smooth manner against the first-named garment part, said hook being provided with a U-shaped tongue curved outward for guiding the second-mentioned garment part therein, substantially as described.

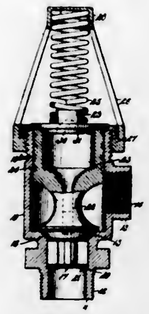
1,221,718. STAKE-PULLER. RAY STEWART FOX, Blue Earth, Minn. Filed Nov. 17, 1916. Serial No. 131,846. (Cl. 57—9.)



A device of the character specified comprising a pair of open substantially rectangular frames fitting one within the other, the side members of the frame being pivotally connected to permit the frame to move into register with each other or with their planes at an angle to each other, the said members having teeth at one end and facing in the opposite direction, and having the end members at the other end concavo-convex, and arranged with the convex surface inward to form handles, said teeth being adapted to grip an object where upward traction is exerted on the handles, the pivotal connection between the frame being near the end having the teeth.

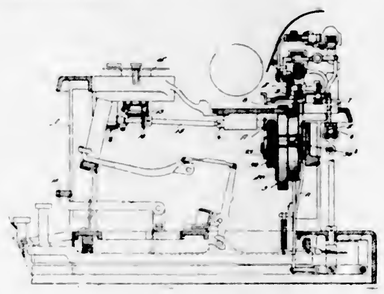
1,221,719. RELIEF-VALVE. CHARLES F. FRITCH, Detroit, Mich. Filed Apr. 11, 1916. Serial No. 90,342. (Cl. 137—53.)

1. A relief valve including a casing having an inlet adapted for connection with a boiler and a discharge outlet, said casing having furthermore, a valve seat between the inlet and outlet, and having a cylindrical form beyond the outlet, a valve adapted to rest on said seat, said valve having a stem formed with a piston fitting the cylinder of the casing, and made hollow at the rear end, a cap on the said stem and fitting in the hollow rear end thereof, said cap having an annular flange extending laterally beyond the piston and overlapping the casing to deflect leaking steam outwardly, a compression spring seated on said cap, and a yoke over said spring and against which the spring abuts at the opposite end from the cap, the said yoke having threaded engagement with the valve casing to vary the pressure of the spring.



2. A valve including a casing having an inlet and an outlet, and a valve seat between said inlet and outlet, the casing furthermore, being formed with a cylinder beyond the outlet, a valve adapted to rest on said seat, the said valve having a stem formed with a piston fitting fluid-tight in the said cylinder, a cap on the piston at the outer end thereof outside of the casing, said cap having an annular lateral flange extending beyond the piston and overlapping the cylinder of the casing, a spring seating at one end on said cap outside of the valve casing, and means engaging said valve casing and against which means the opposite end of the spring abuts.

1,221,720. TYPE-WRITING MACHINE. CARL GABRIELSON, Syracuse, N. Y., assignor to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Sept. 24, 1913. Serial No. 791,568. (Cl. 197—169.)



1. In a typewriting machine, the combination of a carriage, means constantly tending to move the carriage in one direction, carriage escapement devices, means for releasing the carriage from said escapement devices, ribbon spools, connections between the carriage impelling means and ribbon spools for feeding the ribbon from one spool to the other, and means controlled by said releasing means for automatically changing the rate of movement of the ribbon relatively to the speed of the carriage.

2. In a typewriting machine, the combination of a carriage, means constantly tending to impel the carriage in one direction, carriage escapement devices, means for releasing the carriage from its escapement devices, ribbon spools, a ribbon driving shaft connected with the carriage impelling means, and mechanism controlled by the releasing means for reducing the speed of rotation of the ribbon driving shaft.

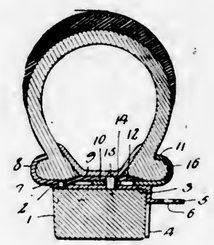
3. In a typewriter, the combination of a carriage, means constantly tending to move the carriage in one direction, carriage escapement devices, a ribbon, devices for feeding the ribbon longitudinally connected with the carriage impelling means, and means for releasing the carriage from the control of the escapement devices and means for simultaneously effecting an adjustment to cause the ribbon to travel at less than its normal speed.

4. In a typewriter, the combination of a carriage, means constantly tending to move the carriage in one direction, two ribbon spools, means connected with the carriage impelling means for positively rotating the ribbon spools alternately, means for releasing the carriage from the escapement devices, and means for propelling the positively driven ribbon spool at a reduced speed when the carriage is thus released.

5. In a typewriting machine, the combination of a carriage, means constantly tending to move the carriage in one direction, escapement devices normally controlling movement of the carriage by said impelling means, means for releasing the carriage from the control of the escapement devices, two ribbon spools, and connections between the carriage impelling means and the ribbon spools, for positively rotating the spools alternately, including means whereby the positively driven spool will be turned at one speed when the escapement devices are controlling movement of the carriage and means whereby it will be turned at a different speed when the carriage is released from control of the escapement devices.

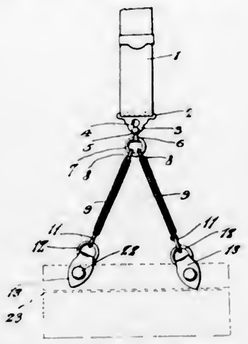
[Claims 6 to 23 not printed in the Gazette.]

1,221,721. VEHICLE-WHEEL. EMIL GASPER, Grass Valley, Cal. Filed Jan. 18, 1916. Serial No. 72,809. (Cl. 152—21.)



In a wheel, the combination with the hub, spokes and felly, of a rim surrounding the said felly and comprising a bottom annular section secured to the felly and having one side edge flanged inwardly and stamped to form outwardly projecting lugs spaced apart equal distances around the wheel and arranged at right angles to the flange and formed with openings, respectively, a divided rim surrounding the first mentioned rim and comprising a stationary section secured to the first mentioned rim and having the outer edge projecting beyond the felly and flanged upwardly and inwardly to form a clencher edge, and the inner edge portion offset outwardly from said first rim and spaced apart therefrom, and a movable section surrounding the rim portion of the first mentioned rim and removable therefrom and having the inner edge disposed within the space between the first named rim and the inner edge of the first named section and the outer edge flanged upwardly and inwardly to form a clencher edge, pins within the space between said first mentioned rim and the offset inner edge of the said first named section and spaced apart about the felly, the inner edge portion of said movable section being formed with transverse slots opening onto the inner edge of said section and longitudinal slots contiguous to the inner ends of said transverse slots respectfully, said slots being adapted to receive said pins to lock the sections of said divisional rim in rim formation, the clencher edge of the second named section being formed with notches contiguous to said lugs respectively to accommodate a tool passed through the opening in a lug.

1,221,722. SUSPENDERS. HERMIT E. GREGG, Portland, Oreg. Filed Jan. 14, 1916. Serial No. 72,094. (Cl. 241—27.)



1. In suspender construction, the combination with the ends of the shoulder straps having pivoted guides thereon, of rings carried by the guides, substantially elliptical shaped links carried by the rings, and resilient connecting devices carried by the links.

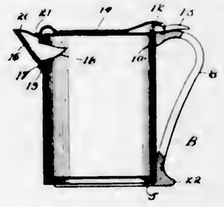
2. A connecting device of the class described comprising a vertically disposed and contractile spring, a substantially elliptical shaped link carried by the lower end of the spring, a ring carried by the link, a strap extending through the ring and having its ends extended to provide jaws, a stud carried by one of the jaws and a socket carried by the other jaw for receiving the stud and the first-mentioned jaw when the jaws are locked in position.

1,221,723. TELESCOPIC MAST. MARCEL GUICHARD, Paris, France, assignor to Société d'Electricité Mors, Paris, France. Filed Oct. 7, 1911. Serial No. 653,406. (Cl. 248—3.)



In a telescopic mast, a plurality of tubes capable of sliding in each other, the upper tube being closed at its upper end and the lower tube being closed at its lower end, means held in the lower ends of the inner tubes and engaging the outer tubes and forming fluid tight joints between the tubes in all positions of the said tubes relative to each other, means connected with the lower tube adjacent its lower end for admitting compressed air to the interior of the mast to extend the same, stays secured to the closed top of the upper tube and adapted to cause the tubes to re-enter one another slightly when the mast is inclined, the lower tube having a flat outer surface at its closed lower end to rest on the ground, and a conical point at said end adapted to enter the ground to permit the mast to incline under wind pressure, short tube sections arranged loosely between the tubes, rings secured on the lower ends of the tubes surrounded by said tube sections, and on which the lower ends of said tube sections rest, the outer diameter of said rings being less than the inner diameter of the outer tubes to permit an easy sliding movement, and collars screwing on the upper ends of the tubes surrounding the tube sections, the said collars having inwardly extending ledges arranged to permit of slight play between the inner tubes and said ledges, the ledges being adapted to be engaged by the upper ends of said tube sections when the mast is extended to limit the upward movement of the tubes relative to each other, the said tube sections serving to maintain the tubes within each other a sufficient distance to insure the rigidity of the mast.

1,221,724. CAN OPENER AND HOLDER. JOHN H. HAACK and ERICK MIETOFF, Los Angeles, Cal. Filed Sept. 4, 1914. Serial No. 860,307. (Cl. 221—23.)



1. A device of the class described comprising a substantially Y-shaped base having resilient clamping jaws at the free ends of the limbs thereof, a handle rising from the base at the juncture of the limbs thereof, the said handle being provided with an abutment at its lower end to engage the side of said can, a lever pivoted to the upper end of the handle, a clamping arm pivoted to the lever, a pouring spout at the free end of said arm and coöperating therewith for the clamping of said can when positioned upon the base, and inwardly convergent can opening blades at the rear of said spout and adapted to penetrate the side of the can below the top thereof on the clamping of said can by the arm for establishing communication between the can and the spout.

2. A device of the class described comprising a substantially Y-shaped base having resilient clamping jaws at the free ends of the limbs thereof, a handle rising from the base at the point of juncture of the limbs thereof, the said handle being provided with an abutment at its lower end to engage the side of said can, a lever pivoted to the upper end of the handle, a clamping arm pivoted to the lever, a pouring spout formed at the free end of the said arm and coöperating therewith for the clamping of said can when positioned upon the base, inwardly convergent can opening blades at the rear of said spout and adapted to penetrate the side of the can below the top thereof on the clamping of said can by the arm for establishing communication between the can and the spout, and a compressible washer mounted at the rear of the spout and about the said can opening blades.

1,221,725. MULTIPLE PAN. HARRY J. HAIGH, New York, N. Y. Filed Sept. 10, 1915. Serial No. 49,881. (Cl. 53—6.)



1. A multiple pan, composed of a plurality of pans with wing extensions and a flange on one end, a connecting bar

extending from one pan to another, a plurality of holding pieces secured to the connecting bar and extending down between the ends of the pans and the wings as wide as the pan, at some point above the lower edge, but decreasing in width downward from that point, and held in place by the flange extending outward from the end of the pan and over the connecting bar, all substantially as set forth.

2. A multiple pan, composed of a plurality of pans with wing extensions and a flange on one end, a connecting bar, extending about the entire series, a plurality of holding pieces secured to the connecting bar and extending down between the ends of the pans and the wings as wide as the pan, at some point above the lower edge, but decreasing in width downward from that point, and held in place by the flange extending outward from the end of the pan and over the connecting bar, all substantially as set forth.

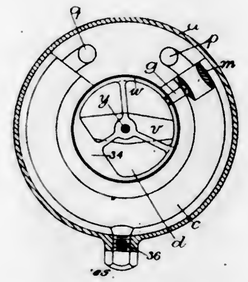
3. A multiple pan, composed of a plurality of pans with wing extensions and a flange on the end, a connecting bar, extending from one pan to another, a plurality of holding pieces corresponding in shape with the ends of the pans and double in number to the pans, secured to the connecting bar and extending down between the ends of the pans and the wings as wide as the pan, at some point above the lower edge, but decreasing in width downward from that point, and held in place by the flange extending outward from the end of the pan and over the connecting bar, all substantially as set forth.

4. A multiple pan, composed of a plurality of pans with wing extensions and a flange at the upper end and the upper side, a connecting bar extending from one pan to another, a plurality of holding pieces secured to the connecting bar and extending down between the ends of the pans and the wings as wide as the pan, at some point above the lower edge, but decreasing in width downward from that point, and held in place by the flange extending outward from the end of the pan and over the connecting bar, said pans being also held together by fastenings uniting the side flanges, all substantially as set forth.

5. A multiple pan, composed of a plurality of pans with wing extensions and flanges, one at the upper end and one at the upper side, a connecting bar extending from one pan to another, a plurality of holding pieces secured to the connecting bar and extending down between the ends of the pans and the wings as wide as the pan, at some point above the lower edge, but decreasing in width downward from that point, and held in place by the flange extending outward from the end of the pan and over the connecting bar, said pans being also held together by means of eyelets extending through registering apertures in the side flanges lapped one over the next, all substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,221,726. LIQUID-METER. WILLIAM WILSON HAMILL, Glasgow, Scotland. Filed Nov. 5, 1914. Serial No. 870,494. (Cl. 73—167.)



1. A meter for the measurement of liquids comprising a case, a channel within said case adapted for the flow of liquid through it, an annular vane supported in said channel with its axis coincident with the axis of the channel whereby the liquid can flow through the said vane and by frictional force due to the flow displace the vane axially within said channel, the liquid passage remaining of constant area in all positions of the vane, means for resisting the displacement of said vane, and means for indicating the displacement of said vane.

2. A meter for the measurement of liquids comprising a case divided into two chambers, namely a channel adapted for the flow through it of the liquid to be measured and a main chamber, means to flood the main chamber with the liquid to be measured, an annular vane supported in said channel with its axis coincident with the axis of the channel whereby the liquid can flow through said vane, and by frictional force due to the flow displace the vane axially within said channel, means for resisting the displacement of said vane, a damper attached to said vane and located in said main chamber, and means for indicating the displacement of said vane.

3. A meter for the measurement of liquids comprising a case divided into two chambers, namely a channel adapted for the flow through it of the liquid to be measured and a main chamber, means to flood the main chamber with the liquid to be measured, an annular vane supported in said channel with its axis coincident with the axis of the channel whereby the liquid can flow through said vane, and by frictional force due to the flow displace the vane axially within said channel, means for resisting the displacement of said vane, a buoyant damper attached to said vane and of less specific gravity than the liquid to be measured, said damper being located in said main chamber, and means for indicating the displacement of said vane.

4. A meter for the measurement of liquids comprising a case, a channel within said case adapted for the flow of liquid through it, an annular vane supported in said channel with its axis coincident with the axis of the channel whereby the liquid can flow through the said vane and by frictional force due to the flow displace the vane axially within said channel, a spring resisting the displacement of the said vane, one end of said spring being connected to said vane, a member attached to the other end of said spring, means for adjusting said member, means for indicating the position of adjustment of said member, and means for indicating the displacement of said vane.

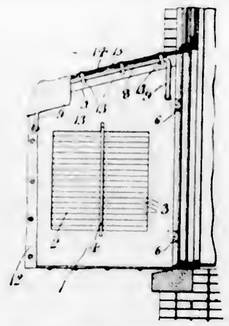
5. A meter for the measurement of liquids comprising a case divided into two chambers, namely a channel adapted for the flow through it of the liquid to be measured and a main chamber, means to flood the main chamber with the liquid to be measured, an annular vane supported in said channel with its axis coincident with the axis of the channel whereby the liquid can flow through the said vane and by frictional force due to the flow displace the vane axially within said channel, a spring resisting the displacement of the said vane, one end of said spring being connected to said vane, a member attached to the other end of said spring, means for adjusting said member, means for indicating the position of adjustment of said member, a damper attached to said vane and located in said main chamber, and means for indicating the displacement of said vane.

1,221,727. WINDOW-TENT. GLENNA E. HARRIS, Springfield, Ohio. Filed Jan. 7, 1916. Serial No. 70,822. (Cl. 98—31.)

1. In a window tent, vertical side walls adapted to be secured to the opposite sides of a window frame and projecting therefrom in parallelism, a sheet of fabric spanning the space between the upper edges of said side walls and connected to the window sash, guide bars extending above and parallel with the upper edges of the side walls, the ends of said guide bars being extended downwardly and connected to the side walls, and a plurality of cross rods secured to said last mentioned sheet of fabric and slidably connected to said guide rods, whereby the fabric may be gathered to partially uncover the top of the tent.

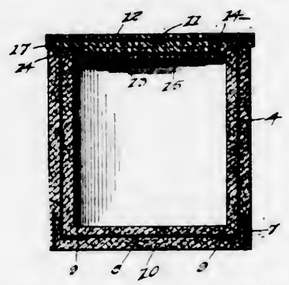
2. In a window tent, a pair of vertical side walls, guide bars extending above and parallel with the upper edges of the side walls, the ends of said guide bars being extended downwardly and inwardly and connected to the side walls, the central and depending portions of the guide bars being

spaced outwardly a slight distance from the planes of the side walls, a plurality of cross rods slidably secured at their ends to the central portions of said guide bars, and a



sheet of fabric connected to said cross rods and extending downwardly from the outer sides of the guide bars below the upper edges of the side walls and spaced from said walls.

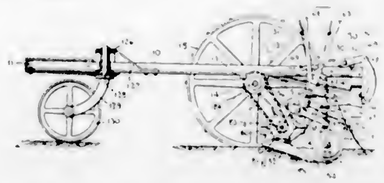
1,221,728. CONCRETE TANK. JOHN F. HARRIS, Wilmington, N. C., assignor to Cement Products Company, Wilmington, N. C., a Corporation of North Carolina. Filed Apr. 28, 1915. Serial No. 24,518. (Cl. 72—13.)



1. A molded concrete tank comprising a side and bottom wall, a reinforcing element of sheet metal lathing embedded in the side wall and extending to a point below the upper side of the bottom wall, a flange on the lower end of said element, said flange extending beyond the side wall into and embedded in the bottom wall, a reinforcing disk of metal lathing embedded in the bottom wall, said disk extending beyond the bottom wall into the side wall and resting upon the said flange, and a wide metal hoop embedded in the side wall in spaced relation to the reinforcing element therein, said hoop extending from the lower end of the side wall to a point above said flange and disk, said flange and the overlapping portion of the disk increasing the thickness and strength of the reinforce at the juncture of the side and bottom walls and at points in both directions beyond the juncture, and said hoop reinforcing the lower edge of the side wall and a portion of the side wall extending from its lower edge to a point above the flange and disk to prevent the side and bottom walls from cracking at a point below the reinforcing elements.

2. A molded concrete tank comprising a side and bottom wall, a reinforcing element embedded in the side wall, a reinforcing element embedded in the bottom wall, and a wide metal hoop embedded in the side wall in spaced relation to the reinforcing element therein, said hoop extending from the lower end of the side wall to a point above the reinforcing element embedded in the bottom wall, and said hoop preventing the lower portion of the bottom wall and the lower portion of the side and bottom walls from cracking at a point below the reinforcing elements.

1,221,729. POTATO-HARVESTER. GUY M. HATFIELD, Fort Smith, Ark. Filed Aug. 18, 1913. Serial No. 785,303. (Cl. 55—109.)



1. A potato harvester comprising a wheel mounted frame, a share carried by the frame, soil casing disks located at the sides of the share, means for raising and lowering the disks and means for moving the disks toward or away from each other.

2. A potato harvester comprising a wheel mounted frame, a share carried by the frame, disks connected to the share and located at the opposite sides thereof, means for raising and lowering the disks with relation to the share and means for moving the disks laterally toward or away from the share.

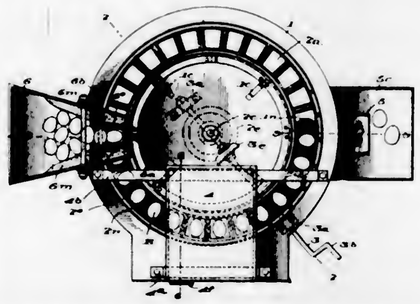
3. A potato harvester comprising a wheel mounted frame, a share carried by the frame, arms pivotally connected with the share, disks carried by the arms and located at the opposite sides of the share, a lever fulcrumed upon the share, bars pivotally connected with the lever and pivotally connected with the arms, another lever fulcrumed upon the share, a link connected with the last mentioned lever and having a bar provided with openings which receive the first mentioned bars.

4. In combination a wheel supported frame, guides depending from said frame, lifting bars movably mounted between said guides, a shaft connected to said lifting bars, links secured at one end to said shaft, a rock shaft, stub arms extending from said rock shaft said links secured to said stub arms, and a digging share secured to said lifting arms.

5. In combination a wheel supported frame, guides depending from said frame, lifting bars movably mounted between said guides, a shaft connected to said lifting bars, links secured at one end to said shaft, a rock shaft, stub arms extending from said rock shaft said links secured to said stub arms, a digging share secured to said lifting bars, knuckles secured to said lifting bars, carrying arms secured to said knuckles, and soil casting disks secured to said carrying arms.

[Claim 6 not printed in the Gazette.]

1,221,730. EGG-INSPECTING MACHINE. MATTIE R HATFIELD, Wichita, Kans. Filed Aug. 18, 1916. Serial No. 115,622. (Cl. 99—6.)



1. In an egg testing apparatus the combination of a support, a movable member mounted thereon provided with pockets for receiving eggs, a discharge opening in the

support through which the eggs escape from the pockets, and means for operating said member, with a sight box through which the eggs are passed, and an illuminating device whereby the condition of the eggs passing through the box can be determined.

2. An egg testing machine comprising a table, a member rotatably mounted on said table having an annular series of pockets adapted to receive eggs, said table having an opening for the discharge of eggs from the pockets, and a sight box mounted above this member and through which the eggs are passed as the member is rotated.

3. An egg testing machine comprising a support, a movable member having pockets adapted to receive eggs, a sight box and means for operating said movable member; a feed hopper having a movable part provided with an opening adapted to register with the pockets, and means for oscillating the movable part to cause the eggs to be discharged from the feeder into the pockets.

4. In an egg testing apparatus the combination of a stationary support, a rotatable member mounted on the table provided with pockets for receiving eggs; said support having an opening through which the eggs escape from the pockets, means for rotating said member, and a sight box through which the eggs are passed.

5. An egg testing machine comprising a table, a member rotatably mounted on said table having an annular series of pockets adapted to receive eggs, said table having an opening for the discharge of eggs from the pockets, and a sight box mounted above this member and through which the eggs are passed as the member is rotated, with manually operable means for rotating said member, and means for feeding eggs to the said member.

[Claims 6 to 9 not printed in the Gazette.]

1,221,731. RAIL-JOINT. CHARLES B. HAYTON, Ceres, Va. Filed Jan. 9, 1917. Serial No. 141,466. (Cl. 238—6.)

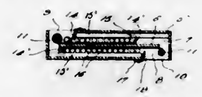


1. In combination with two alining rails and ties upon which the rails rest, of a joint chair for the rails, said chair including a base which is secured to two of the ties and which underlies the rails, said base having its longitudinal edges formed with laterally extending fingers provided with elongated openings, said chair also including removable side members which are adapted to engage with the opposite sides of the rails and which have openings to receive the fingers of the base plate and wedge members passing through the elongated openings in the fingers and contacting with the side members to force the side members toward the rails.

2. In a device for the purpose set forth, the combination with two alining rails, and ties upon which the rails rest, of a joint chair for connecting the rails, said chair including a flat base member resting upon the ties and underlying the rails and secured to the said ties, said base having its upper longitudinal corners formed with extensions providing tongues, laterally extending fingers upon the tongues having elongated openings, said joint chair also including removable side members which have their upper portions shaped to engage with the sides of the rails and to be secured to the said rails, the lower portions of the sides having their inner faces longitudinally grooved to receive the tongues of the base and being provided with openings through which the fingers of the base project, and slit wedge members passing through the said openings and contacting with the side members for forcing the side members into engagement with the rails.

3. The combination with two alining rails, of a joint chair for connecting the rails, said joint chair including a base plate upon which the rails rest, said plate having its longitudinal sides each formed with a tongue, each of said tongues having a laterally extending finger, said joint chair also including removable sides having their inner faces shaped to snugly engage with the sides of the rails, said members having longitudinal grooves to receive the tongues and having openings through which the fingers of the base pass, and means passing through the tongues and contacting with the side plates for securing the side plates to the base plate and connecting the said side plates with the base plate.

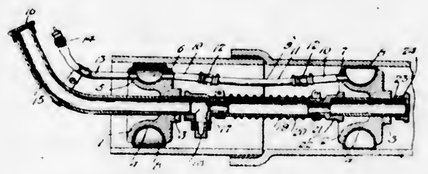
1,221,732. MATCH-BOX. FRANK HEESH, Lake Como, Pa. Filed July 19, 1916. Serial No. 110,220. (Cl. 206—21.)



1. A match box including a casing having an outlet opening adjacent one end thereof, a match feeding bar mounted in the casing, a flexible strip connected to the bar, means for operating the strip to move the bar and feed and deliver matches through the outlet opening, means for guiding the match feeding bar and for spacing the heads of the matches from the wall of the casing to prevent accidental ignition thereof during the actuation of the operating means, and means for retarding matches mounted adjacent the opening.

2. A match box including a casing having an outlet opening adjacent one end thereof, a match feeding bar mounted in the casing and provided with a groove, a flexible strip connected to the feeding bar for receiving a single layer of matches, a roller operatively mounted in the casing adjacent the outlet opening and having the flexible strip connected thereto and windable thereabout to consequently actuate the feed bar so as to deliver matches from the opening, a strip mounted longitudinally of the inner surface of one wall of the casing and engageable by the groove in the match feeding bar for guiding the bar during movement and arranged for spacing matches from the wall of the casing to prevent accidental ignition thereof during the operation of the roller, and a resilient match retarding member mounted adjacent the outlet opening for allowing only one match to be delivered at a time.

1,221,733. TEST-PLUG. WATT A. HENDERSON, Birmingham, Mich. Filed Aug. 28, 1916. Serial No. 117,348. (Cl. 137—77.)



1. A test plug comprising a pair of collars, a flexible tube connecting the collars together and communicating with the space between the collars and pipe sections establishing communication between said tube and a point beyond said collars, and a hollow flexible ring encircling each of said collars and having a valve controlled inlet.

2. A test plug comprising a pair of collars, a flexible tube connecting the collars together and communicating with the space between the collars and pipe sections establishing communication between said tube and a point beyond said collars, a pair of hollow flexible rings encircling said collars one of which is provided with a valve controlled inlet, and a flexible hose establishing communication between the rings.

3. A test plug comprising a pair of collars each having an annular groove, a hollow flexible ring mounted in the

groove of each collar, a flexible hose establishing communication between the rings, a valve controlled pipe communicating with one of the rings, a pipe section passing through and having screw threaded engagement with each collar, a joint having screw threaded engagement with one of the sections and having an outlet port, and a flexible tube establishing communication between said joint and the other pipe section.

1,221,734. DRAIN-PIPE REAMER. ANTHONY HOCHBERG, Wilkes-Barre, Pa. Filed July 27, 1916. Serial No. 111,703. (Cl. 182—2.)



In a tool of the character described, the combination of a body having a plurality of outwardly inclined arms integrally connected at their inner ends, and a hub secured to the outer ends of the arms and provided with a threaded bore, said hub being further provided with a neck portion threaded oppositely to the said bore; a flanged sleeve threaded into the bore of said hub; a coupling nut threaded on the neck portion of the hub and having a flange engaging the flange of said sleeve; a cable secured in the sleeve and nut; and a plurality of oppositely disposed cutting and boring blades mounted at the apex of said body.

1,221,735. PROCESS OF PICKLING METAL ARTICLES. ADDISON F. HOFFMAN and WILLIAM M. PARKIN, Pittsburgh, Pa. Filed Dec. 5, 1916. Serial No. 135,260. (Cl. 148—42.)

1. In the pickling of metals, the step of subjecting such articles to the action of a bath containing a scale-removing agent and a small quantity of neutralized sulfite waste liquor.

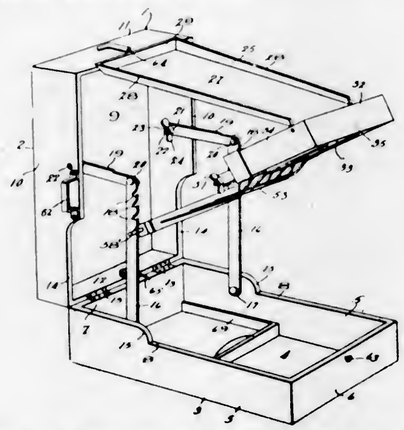
2. The process which comprises neutralizing sulfite waste liquor with basic calcium compounds, removing insoluble matters, and thereafter adding a relatively small quantity of the same to an acid pickle.

3. A pickle containing acid and sulfite-free waste sulfite liquor ingredients.

4. A process which comprises subjecting waste sulfite liquor to a treatment capable of freeing the same from materials which would upon treatment with acids, liberate sulfurous acid, and thereafter adding a relatively small amount of such treated waste sulfite liquor to an acid pickling bath.

1,221,736. PORTABLE NAIL-DISTRIBUTER. ROBERT B. HOLLAND, North Yakima, Wash. Filed Nov. 7, 1916. Serial No. 130,082. (Cl. 1—6.)

1. A portable nail distributer comprising a sectional receptacle, supporting arms pivotally secured in one section of the receptable, links pivotally secured to the upper ends of the arms and adjustably secured to the upper section, a hopper hingedly secured to the upper section, a chute carried by the hopper, guideways attached to the chute and having their forward ends associated with the arms, and means for adjusting the arms and chute and hopper to various angled positions.



2. A nail distributer comprising a receptacle including hinged sections, supporting arms pivotally mounted in the lower section, links pivotally connected to the upper ends of the supporting arms and adjustably secured to the upper section, a hopper hingedly secured to the upper section and depending therefrom, a chute hingedly secured to the forward end of the hopper and comprising a plurality of nail guideways each having a flange projecting beyond the nail guiding portion and a rod arranged to extend transversely through the flanges, said rod being arranged to coöperate with the flanges to adjust the width of the guideways.

3. A nail distributer comprising a sectional casing, arms and links pivotally secured to the sectional casing and means for holding the arms and links in various angled positions, a hopper hingedly secured in the casing to one section thereof, a chute, guideways carried by the chute and associated with the arms, and means for adjusting the hopper and chute at various angled positions with relation to one another.

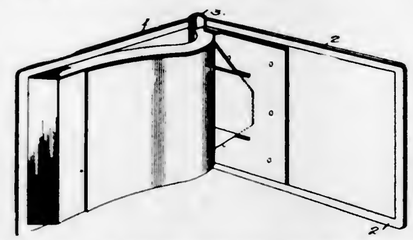
4. A nail distributer comprising a hinged sectional casing, a hopper hingedly secured in the casing, a chute carried by the hopper, a plurality of guideways carried by the chute, and means carried by said casing and coöperating with the guideways for holding the guideways, hopper and chute in various angled positions with relation to one another.

5. A nail distributer comprising a hinged sectional casing including top and bottom sections, a pair of arms pivotally secured by their lower ends to the opposite sides on the inner faces of the lower section, a pair of links having one of their ends pivotally secured to the upper ends of the arms, their free ends adjustably secured to the opposing faces of the side walls of the upper section of the casing, the upper forward front edges of the arms provided with spaced notches, a hopper hingedly secured to the upper section, a chute hingedly secured to the forward edge of the hopper, a plurality of guideways attached to the chute, and means in the free ends of the guideways coöperating with the notches of the arms for holding the chute and hopper in various angled positions with relation to the upper section of the casing.

[Claims 6 to 8 not printed in the Gazette.]

1,221,737. REMOVABLE BOOK-COVER. WILLIAM ROY HORCHKISS, St. Paul, Minn. Filed Oct. 12, 1916. Serial No. 125,206. (Cl. 11—11.)

1. A binder comprising a front and a back cover and a flexible connection between the same, and a plate secured to the inner face of the back adjacent to the hinge connection, said plate having a resilient tongue intermediate its ends at the edge adjacent to the hinge connection and extending toward the said hinge connection, and having holding flanges at each side of the tongue at the said edge and at its ends adjacent to the first-named flange for engaging the bound end of a filler.



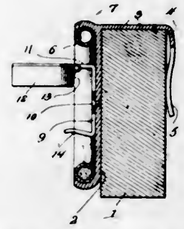
2. A binder comprising covers and the flexible connection between the same, a plate secured to the inner face of one cover adjacent to the hinged connection and having a resilient tongue at the edge adjacent to the hinge connection and extending toward the same, the plate having flanges for engaging the sides and end of a filler.

3. A binder comprising covers and the flexible connection between the same, a plate secured to the inner face of one cover adjacent to the hinged connection and having a resilient tongue intermediate its ends at the edge adjacent to the hinge connection and extending toward the same.

4. A binder comprising a cover having secured to the inner face of one portion thereof a resilient tongue extending inward toward the hinge of the cover and having on the said portion at the hinged connection upwardly extending flanges for engaging the end and sides of a filler.

5. A binder comprising a cover having secured to the inner face of one portion thereof a plate, the plate being provided with a resilient integral tongue extending toward the hinge of the cover at approximately the center of the plate.

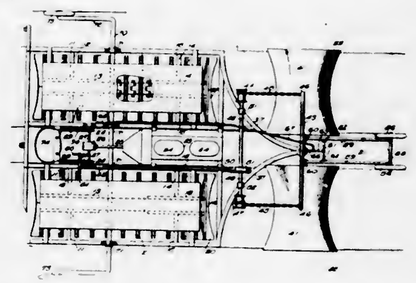
1,221,738. LEVEL DEVICE. JOSEPH F. ISOM, Augusta, Ga. Filed Dec. 27, 1913. Serial No. 809,011. Renewed Aug. 25, 1916. Serial No. 116,936. (Cl. 33—207.)



1. The combination with a level stock, of a level device comprising a flat body adapted to be positioned against one side face of the stock, means for securing the body detachably to the stock, a holding member mounted upon the outer face of the body medially thereof for movement parallel to the plane of the face of the body, and a magnetic compass hinged to one terminal of the holding member and adapted to be swung to a position at right angles to the flat body for obtaining latitude in leveling operations.

2. The combination with a level stock, of a level device having a flat body adapted to be positioned against one side face of the stock, means for securing the body detachably to the stock, a holding member mounted upon the outer face of the body medially thereof for movement in a plane parallel to the face of the body, a magnetic compass hinged to one terminal of the holding member and adapted to be swung outwardly of and to a position at right angles to the flat body for obtaining latitude in leveling operations, and means for retaining the holding member in the latter mentioned position.

1,221,739. TRACTOR. ALBERT WILLIAM JACOBS, Yutan, Nebr. Filed Aug. 4, 1915. Serial No. 43,548. (Cl. 21—114.)



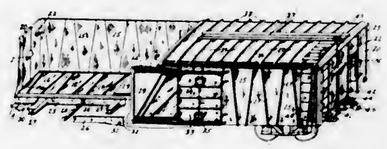
1. In a tractor, a frame, two drums rotatably mounted on the frame one in front of the other, there being openings in the sides of the drums at their peripheries, a belt disposed around the drums and having two rows of studs spaced apart and extending laterally for seating themselves in the openings with the rotation of the drums, and means to rotate one of the drums.

2. In a tractor, a frame, two drums disposed side by side and spaced apart, means disposed around the drums and having their outer edges curved transversely to engage the ground to move the frame forward, two spools disposed in alinement with the drums and spaced apart substantially the same distance as the drums are spaced apart, the outer surfaces of the spools being arched transversely an axle on which the spools are mounted, the axle being pivoted to the frame on a vertical axis, and means for rotating the axle.

3. In a tractor, a frame, two drums rotatably mounted on the frame one in front of the other, there being openings in the sides of the drums at their peripheries, a belt disposed around the drums and having two rows of studs spaced apart for seating themselves in the openings with the rotation of the drums, means to rotate one of the drums, a car disposed between the drums and having a roller for pressing downwardly against the belt, and resilient means for holding the car down relatively to the frame.

4. In a tractor, a frame having sides converging upwardly and forwardly, two drums spaced apart one at each side of the body of the frame and journaled in bearings therein, an inverted U-shaped axle for spanning a furrow and having outwardly bent terminals, and two spools one mounted on each terminal, the axle being pivoted for rotating on a vertical axis at the front of the frame.

1,221,740. CAR. HENRY W. JACOBS, Topeka, Kans., and EDWARD D. LEVY, Springfield, Mo. Filed Nov. 1, 1915. Serial No. 59,126. (Cl. 105—192.)



1. A car of the class described, having walls composed of sheet metal sections disposed vertically, the longitudinal sides and upper ends of the sections being flanged

outwardly, with the flanges of adjacent sections secured together, vertically disposed Z-bars arranged at the corners of the car with one leg of each bar arranged parallel with the flange of the side wall section and secured thereto, while the intermediate portion of the bar is arranged parallel with the flange of the end wall section and secured thereto so as to have the other leg of the Z-bar overlap the flange of the end wall section, the flanges of the end wall sections being secured together with intervening T-bars so as to have the head of the T-bars on the outside and overlapping the adjacent flanges, and Z-bars arranged at the upper ends of the walls, with the intermediate portion of the bars extending parallel with and secured to the flanges at the upper ends of the sections so as to have one leg of the Z-bar depend and overlap the flange at the upper end of the wall sections.

2. A car of the class described, having walls composed of sheet metal sections disposed vertically, the longitudinal sides and upper ends of the sections being flanged and disposed outwardly with the flanges of adjacent sections secured together, vertically disposed Z-bars arranged at the corners of the car so that one leg of each bar is parallel with the flange of the side wall section and secured thereto while the intermediate portion of the bar is arranged parallel with the flange of the end wall section and secured thereto, while the other leg of the Z-bar overlaps the flange of the end wall section, the flanges of the end wall sections being secured together with intervening T-bars the heads whereof are arranged on the outside and overlapping the adjacent flanges, Z-bars arranged at the upper ends of the walls so as to have the intermediate portion of the bars parallel with and secured to the flanges of the upper ends of the sections while one leg of the Z-bar depends and overlaps the flange at the upper end of the wall sections, the inner surface of the wall sections being provided with recesses having means whereby merchandise may be secured in place.

3. A car having walls composed of sheet metal sections disposed vertically, the sections being composed of triangulated plates whose longitudinal sides incline in opposite directions, the longitudinal sides and upper ends of the respective sections being flanged and disposed outwardly, the side and end walls being secured together by means of vertically disposed bars having longitudinal sides extending parallel with the flanged sides of the side and end wall sections, Z-bars arranged transversely of the upper ends of the wall sections, with the intermediate portions of the bars arranged parallel with and secured to the flanges at the upper ends of the sections, while a portion of the Z-bars overlap the flanges at the upper ends of the sections.

4. A car having walls composed of sheet metal sections disposed vertically, with the longitudinal sides and upper ends of the sections flanged and disposed outwardly, the side and end walls being secured together by means of vertically disposed bars having longitudinal sides extending parallel with the flanged sides of the side and end wall sections, Z-bars arranged transversely of the upper ends of the wall-sections with the intermediate portions of the bars arranged parallel with and secured to the flanges at the upper ends of said wall-sections so as to have one leg of the Z-bar overlap the flanges at the upper ends of said sections, the inner surfaces of the wall-sections being provided with recesses having means whereby merchandise may be secured thereto.

5. A car having walls composed of sheet metal sections disposed vertically and composed of triangulated plates whose longitudinal sides incline in opposite directions, the longitudinal sides and upper ends being flanged and disposed outwardly, the side and end walls being secured together by means of vertically disposed bars having longitudinal sides extending parallel with the flanged sides of the side and end wall sections, Z-bars arranged transversely of the upper ends of the wall-sections with the intermediate portion of the bars extending parallel with and secured to the flanges at the upper ends of said sections, while a portion of the Z-bars depends and overlaps said flanges, the inner surfaces of the wall-sections being recessed and provided with means in said recesses for securing merchandise thereto.

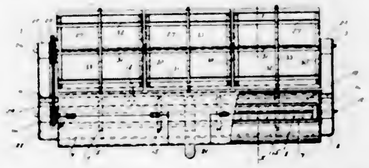
[Claims 6 to 9 not printed in the Gazette.]

1,221,741. PACKAGE-TIE. JOHN D. JOHNSON, Aurora, Nebr. Filed Dec. 4, 1915. Serial No. 65,109. (Cl. 24—169.)



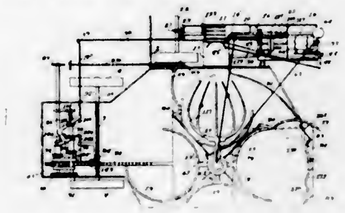
A tie buckle consisting of a flat metal plate provided with a slot in one end to which one end of a tie strap is adapted to be permanently connected, said plate having additional spaced parallel slots respectively opening upon the opposite longitudinal edges of said plate at one of their ends, for the insertion of the strap therein in a lateral direction, from opposite sides of the plate, said plate at the inner end of one of said slots being angularly bent to provide an obliquely disposed transverse end portion having teeth or serrations on its outer edge for biting engagement with the terminal of the strap, the body of the buckle plate and said end portion extending in relatively different angular planes with respect to the tie strap.

1,221,742. FERTILIZER-DISTRIBUTER. CHARLES R. KELLY, Cambridge Springs, Pa. Filed Feb. 3, 1916. Serial No. 75,976. (Cl. 55—21.)



In a fertilizer distributer, a frame, a roller shaft supported in the frame, a roller for covering the fertilizer after it has been dropped on the ground, said roller being formed of a series of similar sections mounted on the said shaft, each roller section having radial digging blades which extend longitudinally of it, and having also a single projecting annular tire secured to the tops of the said blades at the middle part of their length.

1,221,743. SHOCKING ACCESSORY FOR HARVESTING-MACHINES. JOHN G. KERST, Springfield, Ill. Filed July 27, 1914, Serial No. 853,253. Renewed Aug. 18, 1916. Serial No. 115,680. (Cl. 56—121.)



1. In a shocking accessory for a grain harvester, the combination of a horizontal longitudinally extending bundle receiving trough positioned to receive the grain bundles from the harvester, a moving conveying belt positioned at the discharge end of said trough and traveling at right angles to the receiving trough to engage the butt-end of the bundles and to actuate them downward and outward toward a bundle shocking floor, said bundle receiving trough comprising a curved longitudinal wall adjacent the belt about which the bundles may be turned, a bundle shocking floor, and automatic means for shocking the grain bundles delivered from said trough to said floor, substantially as described.

2. In a shocking accessory for a grain harvester, the combination of a horizontal longitudinally extending bundle receiving trough positioned to receive the grain bundles from the harvester, conveyer means for delivering the grain bundles from the trough to a bundle receiving platform, a bundle receiving platform positioned to receive the bundles from the delivery means, an arm supporting said bundle receiving platform pivoted to allow the platform to be actuated downward by the weight of a grain bundle deposited thereon, said arm provided with an extension adapted to engage means for setting in motion a bundle placing device upon the actuation of the platform, and a bundle placing device and means for actuating the same for the delivery of the grain bundles consecutively to the grain shock, substantially as described.

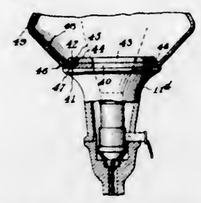
3. In a shocking accessory for a grain harvester, the combination of a bundle receiving platform positioned to receive the bundles of grain from a harvester in a substantially vertical position with the butt-end down, a bundle placing device comprising a swinging arm, a bundle basket slidably attached thereto, a second arm attached to the bundle basket to actuate the basket longitudinally along the swinging arm, and means for swinging said arms and the bundle basket to deposit the bundle in the grain shock, substantially as described.

4. In a shocking accessory for a grain harvester, the combination of a bundle placing device comprising a swinging arm, a bundle basket slidably attached thereto, a second arm attached to the bundle basket to actuate the basket longitudinally along the swinging arm, and actuating means for said arms comprising a revoluble drum, cam grooves in said drum, vibrating levers adjacent the drums, and stub pins in said levers engaging the cam grooves on said drum, links pivoted to said levers, a bell-crank engaged to one of said links and to the swinging lever, a pivoted lever engaged to the other of said links and to the second arm attached to the bundle basket, and means for revolving the drum at the predetermined points in the operation of the accessory, substantially as described.

5. In a shocking accessory for a grain harvester, the combination of a bundle placing device comprising a swinging arm, actuating means for said swinging arm comprising a revoluble drum, a cam groove in said drum, a vibrating lever pivoted adjacent the drum, a stub pin in said lever engaging the cam groove on said drum, a link pivoted to said lever, a bell-crank engaged to said link and in operative engagement with the swinging arm, a drive shaft for said drum, a continuously rotating shaft in line therewith, a clutch means for engaging the two shafts, said clutch means comprising a stationary head, the continuously rotating shaft rotating in said stationary head, a ratchet wheel on the engaging end of the continuously rotating shaft, a second clutch head spaced from the stationary head and fixed to the drum shaft, a recess in said second clutch head provided with ratchet teeth, a catch pivoted in the stationary head and adapted to span between the ratchet teeth in the second clutch head and the ratchet gear on the continuously moving shaft, an arcuate sliding pivoting block in the stationary head providing pivoting means for the catch, a weighted lever fixed to said catch, a pin in said weighted lever adapted to enter an arcuate groove in the stationary head, a lock pin protruding through the head to prevent the weighted lever from actuating the catch into the engaged position between the rotating ratchet and the ratchet teeth in the second clutch head, said lock pin in operative relation to a pivoted arm supporting a bundle receiving platform, and a bundle receiving platform supported by a pivoted arm in position to actuate the lock pin from its locking position, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

1,221,744. SHADE-HOLDER. HERBERT KIENZLE, New York, N. Y. Filed July 15, 1916. Serial No. 109,426. (Cl. 240—81.)



1. An electric lamp fixture comprising a lamp socket receiving member and a globe supporting member both composed of an insulating material, the globe supporting member coöperating with the socket receiving member to form a complete closure for a metallic electric lamp socket, a flange at the upper end of said socket receiving member, there being an annular recess adjacent thereto to form a seat for the lower end of the globe supporting member, the flange extending into such globe supporting member.

2. In combination with a hollow lamp standard, an electric lamp socket of an electric lamp fixture comprising a lamp socket receiving member and a globe supporting member, a dowel pin on said socket receiving member extending into the upper end of the hollow lamp support, an enlarged body portion on said socket receiving member above said dowel pin having a socket for receiving said lamp socket the remaining portion of said body portion and the dowel pin being provided with a continuous bore for the passage of electric cords.

3. In combination with a hollow lamp standard, an electric lamp socket and electric cords connected to said socket, of an electric lamp fixture comprising a lamp socket receiving member and a supporting member, a dowel pin on said socket receiving member extending into the end of the hollow lamp standard, the lamp socket being supported by said lamp socket receiving member, there being a passage through said socket receiving member coöperating with the hollow standard to accommodate said electric cords.

4. In combination with a hollow lamp standard, an electric lamp socket and electric cords connected to said socket, of an electric lamp fixture comprising a lamp socket receiving member and a supporting member, a dowel pin on said socket receiving member extending into the end of the hollow lamp standard, the lamp socket being supported by said socket receiving member, there being a passage through said socket receiving member coöperating with the hollow standard to accommodate said electric cords, and a seat formed at the upper end of said supporting member for the reception of a suitable globe.

5. In combination with a hollow lamp standard, an electric lamp socket and electric cords connected to said socket, of an electric lamp fixture comprising a lamp socket receiving member and a supporting member, a dowel pin on said socket receiving member extending into the end of the hollow lamp standard, the lamp socket being supported by said socket receiving member, there being a passage through said socket receiving member cooperating with the hollow standard to accommodate said electric cords, the socket receiving member and supporting member being composed of wood and completely inclosing the lamp socket to properly insulate the same.

[Claims 6 to 8 not printed in the Gazette.]

1,221,745. CAN-OPENER. LUKE KIRAL, New York, N. Y. Filed July 28, 1916. Serial No. 111,889. (Cl. 30—3.)

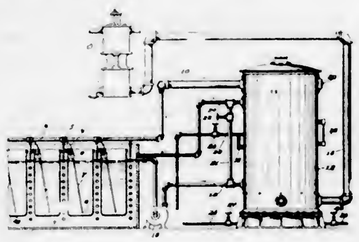
A can opener comprising a hollow handle provided with a clamping screw and also provided with a cutter at right angles to the handle and having a threaded stud engaged in a threaded opening in the handle and arranged substantially opposite the inner end of the screw, and an arm

slidably fitted in the handle and having a pivoting point at its outer end the arm being also arranged between the opposing ends of the set screw and threaded stud and in



contact therewith so that when the arm is clamped by the set screw the arm is also clamped against the inner end of the threaded stud and thereby it more firmly secures the cutter in place on the handle.

1,221,746. APPARATUS FOR MANUFACTURING ICE. WILLIS B. KIRKPATRICK, Baltimore, Md., assignor to Independent Ice Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Mar. 25, 1916. Serial No. 86,532. (Cl. 62—159.)



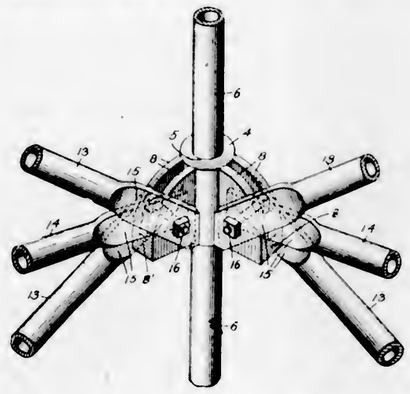
1. In an apparatus for making can ice by the air agitation method, a brine tank, ice cans in the brine, drop pipes near the centers of the cans, air headers leading to the drop pipes, means for supplying air under pressure, means for cooling the brine, a dehydrater consisting of a coil submerged in water and having connections to the brine tank, means for circulating the brine through the coil and passing the air in finely divided particles through the water surrounding the coil, and means for reducing the pressure of the air as it enters the cans.

2. In an apparatus for making can ice by the air agitation method, a brine tank, ice cans in the brine, drop pipes, air headers leading to the drop pipes, means for supplying air under pressure, means for cooling the brine, a dehydater through which the air is passed before entering the headers consisting of a coil submerged in water and having connections to the brine tank, means for circulating the brine through the coil and passing the air through the water around the coil, and means for reducing the pressure of the air as it enters the cans.

3. In an apparatus for making can ice by the air agitation method, a brine tank, ice cans in the brine, drop pipes near the centers of the cans, air headers leading to the drop pipes, means for supplying air under pressure, means for cooling the brine, the dehydrater through which the air is passed having a passage for brine with connections to the brine tank, and means for passing the brine through the passage, the dehydrater containing a quantity of fresh water as a heat transfer medium, and means for breaking the air up into finely divided particles.

4. In an apparatus for making can ice by the air agitation method, a brine tank, ice cans in the brine, drop pipes near the centers of the cans, air headers leading to the drop pipes, means for supplying air under pressure, means for cooling the brine, the dehydrater through which the air is passed consisting of a coil with connections to the brine tank, means for passing the brine through the coil, the dehydrater containing a quantity of fresh water as a heat transfer medium, and means for introducing the air beneath the coil, a perforated plate between the coil and the end of the air pipe for breaking up the air and distributing it through the water around the coil.

1,221,747. DERRICK. ADELBERT DAVIS KIGHTLINGER, Washington, Pa. Filed Apr. 16, 1915. Serial No. 21,627. (Cl. 189—19.)



1. A joint construction of the class described comprising a connecting member having a post socket and a pair of laterally extending wings, a plurality of bracing members having flat terminals one lying between and the others against said wings, and a single holding bolt extending through all of said wings and terminals.

2. A joint construction of the class described comprising a connecting member having oppositely disposed post sockets and a pair of laterally extending wings, post members inserted by their terminals in said sockets, a plurality of bracing members having flat terminals one lying between and the others against said wings, and a single holding bolt extending through all of said wings and terminals.

3. In a joint construction, a connecting member having oppositely disposed vertically arranged post sockets and a pair of laterally arranged wings spaced apart and joined at one end by a connecting web, post members inserted by their terminals in said sockets, a plurality of bracing members having flat terminals, one lying between said wings and abutting by its end against the connecting member and bearing by its edge against said connecting web, the others lying against said wings and abutting by their ends against the connecting member, and a single holding bolt extending through all of said wings and terminals.

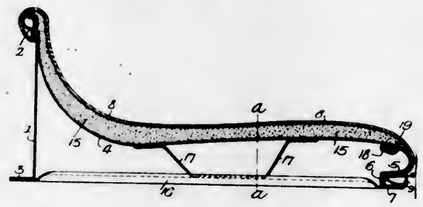
4. In a derrick, the combination of base, top and intermediate corner joint members having sockets and sets of pairs of brace attaching wings, vertically arranged corner post members engaging said sockets, brace members converging toward said joint members having assembled flattened terminals one lying between and the others against said wings, and a single holding bolt extending through each pair of wings and all of its associated terminals.

5. In a derrick, the combination of sets of base members, top members, and intermediate corner joint members provided with shouldered sockets and sets of pairs of brace attaching wings, corner post members having their terminals engaging said sockets, and girt and brace members extending horizontally and diagonally between adjacent base, top, and intermediate corner joint members respectively and provided with converging assembled flattened terminals one lying between and the others against said wings and connected to said wings by a single bolt extending through each pair of wings and set of terminals.

[Claim 6 not printed in the Gazette.]

1,221,748. CAR-SEAT. GEORGE B. KOHLER, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 1, 1915. Serial No. 37,509. (Cl. 155—25.)

1. The combination in a seat structure, of a frame having a recess at one edge at or near the bottom of the seat structure, said frame being bent to form a lip at the outer edge of the recess; a cover extending over the seat frame and into the recess; and a retaining bar adapted to be forced into the recess and arranged to clamp the cover to the frame, said bar being held in position by the lip at the outer edge of the recess.



2. The combination in a seat structure, of a frame having a recess at one edge; a covering for the seat extending over the seat structure and into the recess, the lower flange of the frame, which forms the recess, having an upturned lip; a retaining bar having a right angled body portion; and a spring member, the spring member being arranged to spring back of the lip when the retaining bar is in the recess so as to hold the seat covering to the frame.

3. The combination in a seat structure, of a frame having a longitudinal recess at its lower edge, the lower flange of the frame forming the recess being upturned at its outer edge to form a lip and perforated at intervals; a seat cover adapted to the recess; and a retaining bar having a spring member engaging the lip when the bar is forced into the recess so as to hold the cover material to the frame, the bar being released by inserting a tool through the openings in the lower flange of the frame in order to force the spring member of the retaining bar out of engagement with the lip.

4. The combination in a seat structure, of a metallic frame having a recess at its lower edge to receive the edge of the fabric; means for holding the fabric in the recess and having an inturned upper flange forming a hook portion; a cushion-supporting plate having an end shaped to interlock with the hook portion of the flange of the said frame; and cushion material mounted between said plate and the fabric.

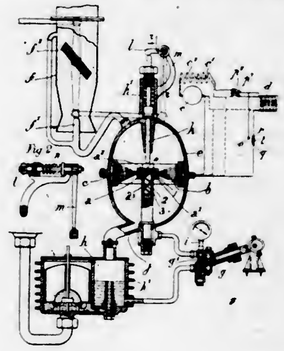
5. The combination in a seat structure, of a metallic frame having a longitudinal recess at its outer edge formed by bending the plate from which the frame is made and having a lip at the outer edge of the lower flange which forms the recess; a cover for the seat having its edge extending into the recess; a retaining bar having a right angled section and an inturned spring member arranged to be located in the recess between the cover material and the lip, a portion of the retaining bar extending over the lip; perforations in the bottom flange in line with the spring member of the retaining bar, so that a tool can be inserted in the openings to release the retaining bar; and means for retaining the opposite end of the cover in position on the frame.

1,221,749. CARBURETER. RENÉ EDMOND LAHAUSSOIS, Paris, France. Filed Mar. 13, 1915. Serial No. 14,287. (Cl. 48—65.)

1. A fuel vaporizing apparatus comprising, a heating surface, a fuel atomizer to direct the atomized fuel upon said heating surface, means controlling the supply of fuel to the atomizer, and automatically operated means for supplying a heating medium to said surface in amounts proportionate to the supply of fuel to the atomizer.

2. A fuel vaporizing apparatus comprising, a heating surface, a fuel atomizer to direct the atomized fuel upon said heating surface, means for placing the fuel under pressure and for controlling the amount supplied to the atomizer, and means coöperating with said first means for supplying a heating medium to said surface in amounts proportionate to the amount of fuel atomized.

3. A fuel vaporizing apparatus, comprising a heating surface, a fuel atomizer to direct the atomized fuel upon said surface, a pump for supplying the fuel to the atomizer under pressure, an electrical means coöperating with said pump for supplying a heating medium to said surface in amounts proportionate to the amount of fuel atomized.

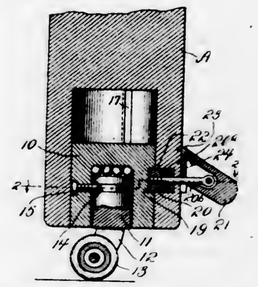


4. A fuel vaporizer comprising, a vaporizing chamber, an atomizer in the chamber for atomizing the fuel in a circular spray, means for controlling the supply of fuel to the atomizer, a substantially annular heating surface in the chamber encircling said atomizer and in the plane of said spray, and electrical means for heating said surface proportionately with the amount of fuel atomized.

5. A fuel vaporizer comprising a vaporizing chamber, an atomizer in said chamber including a tubular member having one end chamfered and to which the fuel is supplied, a rod slidably disposed within said tube and having an enlarged end formed with a chamfered portion, the chamfered portions of said rod and tube coöperating to form a Venturi nozzle, and a heated surface disposed in said chamber and arranged in the plane of the spray atomized by said nozzle.

[Claims 6 to 8 not printed in the Gazette.]

1,221,750. FURNITURE-CASTER. ABRAHAM LINCOLN LAIRD, Coal City, Ind. Filed Jan. 3, 1917. Serial No. 140,428. (Cl. 16—165.)

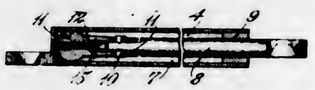


1. A device of the class described comprising a caster carrying member slidably fitted within the leg of an article of furniture, said member being provided with a recess, a stem slidable through an opening in the leg, a spring pressed locking element carried by the stem and adapted to be projected within the recess of said member when the latter assumes an active position, a knob carried by the projected extremity of the stem and pivotally mounted thereon, and capable of assuming an inclined or a horizontal position, and said knob coöperating with said leg when in horizontal position to hold the locking element retracted in an inactive position.

2. A device of the class described comprising a caster carrying member slidably fitted within the leg of an article of furniture, means for guiding said member in its adjustments, said member being provided with a recess, a stem slidable through an opening in said leg, a spring pressed locking element carried by the stem and adapted to be projected within the recess of the member when the latter assumes an active position, a knob pivotally mounted upon the projected extremity of said stem and having an inclined end portion, said leg having a notch to receive the edge of said knob when the latter is in one of its adjusted positions, whereby said locking element is held retracted in an inactive position.

3. A device of the class described comprising a caster carrying member slidably fitted within the leg of an article of furniture, means for guiding said member in its adjustments, said leg having a recess, a stem slidable through an opening in the leg, a locking element carried by the stem and operating within said recess, said member having a recess adapted to register with the recess in the leg when said member is in active position, means for manipulating the locking element and holding the latter in an inactive position within the recess of the leg, and a spring arranged within said recess and bearing against the locking element to project the latter into the recess of said member, when said locking element is released from the last mentioned means.

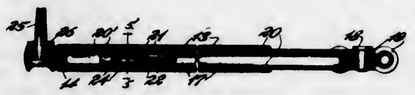
1,221,751. WINDOW-ADJUSTING ROD. ALFRED M. LANE, St. Louis, Mo., assignor to Monarch Metal Weather Strip Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 30, 1915. Serial No. 53,274. (Cl. 16—22.)



1. A retaining prop for holding swinging frames in adjusted position consisting of a tubular casing having means for pivotally securing one end, a rod slidable in the free end of the casing and having means for pivotally securing its outer end, the inner end of the rod having oppositely arranged friction shoes loosely secured thereto, the free ends of said friction shoes projecting beyond the inner end of said rod and approaching each other at their extremities, and means confined in the space between the free ends of said shoes between their extremities and the extremity of said rod for maintaining said shoes in frictional contact with the inner walls.

2. A retaining prop for holding swinging frames in adjusted position consisting of a tubular casing having means for pivotally securing one end, a rod slidable in the free end of the casing and having means for pivotally securing its outer end, the inner end of the rod having oppositely arranged friction shoes loosely secured thereto, the inner extremities of said friction shoes projecting beyond the inner end of said rod and having shoulders on their inner sides near their extremities, and a V-shaped flat spring arranged in the space between said shoulders and the extremity of said rod for maintaining said shoes in frictional contact with the inner walls in said tubular casing.

1,221,752. CASEMENT-WINDOW STAY. ALFRED M. LANE, St. Louis, Mo., assignor to Monarch Metal Weather Strip Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 30, 1916. Serial No. 139,772. (Cl. 16—22.)

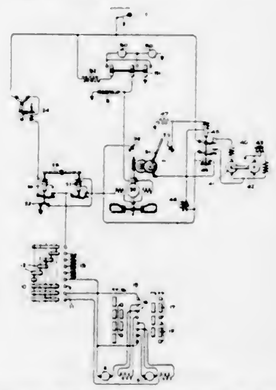


1. A window prop comprising two telescoping tubular members, the inner end of the inner member having similarly shaped openings through its wall disposed on opposite sides of its longitudinal axis, friction shoes with their outer faces conforming in shape to the inner face of the wall of the outer telescoping member disposed in said openings, said friction shoes having pivot bearing surfaces on their inner faces, and spring means located between said friction shoes for pressing them apart, said spring means having pivot portions engaging the pivot bearing portions of said friction shoes.

2. A window prop comprising two telescoping tubular members, the inner end of the inner member having rectangular openings through its wall disposed on opposite sides of its longitudinal axis, rectangular friction shoes with their outer faces conforming in shape to the inner face of the wall of the outer telescoping member disposed in said openings, said friction shoes having parallel ends which fit between the circumferential ends of said openings and having flat inner faces which are wider than said openings and which project across the longitudinal sides of said openings to guide them in said openings for outward radial movement and limit their inward movement, and spring means located between said friction shoes for pressing them apart.

3. A window prop comprising two telescoping members, the inner end of the inner member being hollow and having openings through its wall disposed on opposite sides of its longitudinal axis, friction shoes disposed in said openings, said friction shoes having their outer faces conforming in shape to the inner face of the wall of the outer telescoping member, and spring means located between said friction shoes for pressing them apart, said spring means and said friction shoes being provided with notches and lugs, respectively, on their adjacent faces for holding them in alinement in said inner member.

1,221,753. ELECTRIC LOCOMOTIVE. CARL W. LARSON, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Apr. 6, 1916. Serial No. 89,339. (Cl. 171—314.)

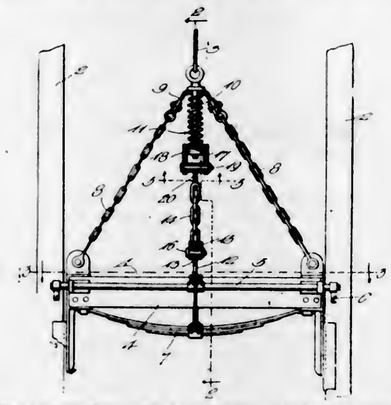


1. An electric locomotive, comprising a trolley, a storage battery, a traction motor, switches for connecting said motor to the trolley and the storage battery, means for preventing simultaneous closure of said switches, a voltage reducing means, a connecting device for connecting said reducing means to said trolley and said battery, and means responsive to the electrical condition of said battery controlling said latter connecting device.

2. An electric locomotive comprising a trolley, a storage battery, a traction motor, an electromagnetic switch responsive to the trolley voltage for connecting the motor to the trolley, an electromagnetic switch arranged to be energized from the battery by the opening of said first mentioned switch, to thereby connect the motor to the battery, a motor generator set, means for connecting the same between the trolley and the battery to deliver current to the battery at a reduced voltage, and an ampere hour meter in circuit with said battery controlling said connecting means.

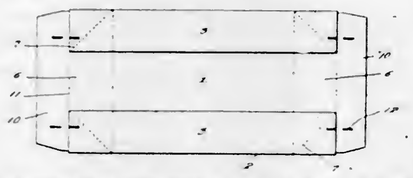
3. An electric locomotive comprising a trolley, a storage battery, a traction motor, means for connecting said motor to either said battery or said trolley, a motor generator set adapted to be connected between said trolley and said battery to charge the latter when said traction motor is being supplied from said trolley and an ampere hour meter arranged to control the connection of said motor generator set to the trolley and battery.

1,221,754. MINE-ELEVATOR CAGE. OSCAR GILBERT LEE and FRANCIS MARION OSBORNE, Washington, Pa. Filed Oct. 16, 1916. Serial No. 125,921. (Cl. 187—87.)



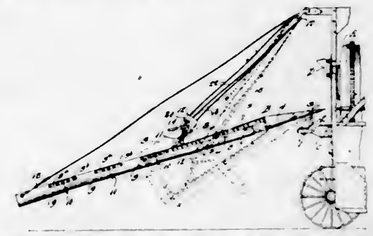
The combination with an elevator cage having a single hoisting cable, chains secured to the head beam of said cage, a top bolt connecting the chains and cable, a safety catch for said cage, a spring to operate the same, a vertical rod extending upwardly from the head beam of cage and having its lower end connected with the spring, of a chain vertically disposed when the cage is in operation and extending between the vertical rod and top bolt, a clevis connecting the lower end of said chain with the upper end of the vertical rod, a nut on the lower end of the top bolt, and an additional clevis adjacent the lower end of the top bolt adapted to lock the nut thereon in position and connecting said bolt with the upper end of the chain.

1,221,755. FOLDING BOX. CHRISTIAN S. LEHMAN, Lawn, Pa. Filed Aug. 24, 1916. Serial No. 116,718. (Cl. 229—31.)



A folding box formed from a blank including a body, foldable end walls extending therefrom, side walls foldable so that their outer portions overlie the outer portions of the end walls, the outer portions of the side walls being foldable on diagonal creases when the end walls are folded, retaining flaps extending from the outer edges of the end walls and foldable to embrace the folded outer portions of the side walls, and bendable fasteners each having one end anchored in the blank to hold the extreme outer portions of the side and end walls to each other and having the opposite end anchored in the retaining flap so as to be bendable with the retaining flap for clamping the folded outer portions of the side walls between the flaps and end walls.

1,221,756. HAND-OPERATED CHUTE. ERICH H. LICHTENBERG, Milwaukee, Wis., assignor to Koehring Machine Company, Milwaukee, Wis. Filed Apr. 20, 1916. Serial No. 92,491. (Cl. 193—39.)



1. In combination, a supporting structure, a delivery chute movably connected with the supporting structure and comprising a plurality of sections, a shaft mounted on one of the sections of the chute, means connected with the shaft, and with the supporting structure and connected with another of the sections of the chute for moving the latter to vary the discharge point of the chute, means operable from said shaft for moving the chute to maintain the discharge point thereof a uniform distance from the ground incident to the varying of the location of the discharge point by the previously mentioned means, and means for operating said shaft.

2. In combination, a supporting structure, a chute movably mounted thereon, means for lengthening and shortening said chute to vary the location of its discharge point, and at the same time maintaining the chute in a position at which the said discharge point will be a uniform distance from the ground, said means including a shaft mounted on the chute, a cable operable by said shaft to lengthen and shorten the chute, another cable operable by said shaft to move the chute bodily, and means for operating the shaft.

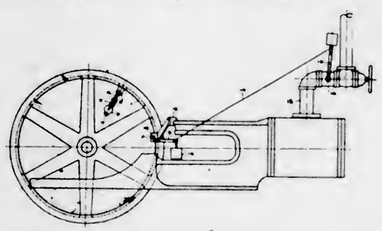
3. In combination, a supporting structure, a chute movably mounted thereon, means for lengthening and shortening said chute to vary the location of its discharge point, and at the same time maintaining the chute in a position at which the said discharge point will be a uniform distance from the ground, said means including a shaft mounted on the chute, a cable connected with said shaft and with the supporting structure and with the chute, and operable by the shaft to lengthen or shorten the chute, a second cable connected with said shaft and cooperative with the supporting structure whereby to effect bodily movement of the chute as an incident to its lengthening and shortening by operation of said shaft, and means for operating the shaft.

4. In combination, a supporting structure, a chute movably mounted thereon, means for lengthening and shortening said chute to vary the location of its discharge point, and at the same time maintaining the chute in a position at which the said discharge point will be a uniform distance from the ground, said means including a shaft mounted on the chute, a drum fixed to said shaft, a cable connected with said drum to wind and unwind relative thereto, said cable having connection with the supporting structure and also connected with the chute so as to lengthen and shorten the latter on operation of the drum by said shaft, a second drum on said shaft, a second cable adapted to wind and unwind with respect to the last named drum and having operative connection with the supporting structure and with the chute whereby to move the later bodily simultaneously with the lengthening and shortening action of the same, a handle for operation of said shaft, and means for locking the shaft in predetermined positions.

5. In combination, a supporting structure, a chute movably mounted thereon and comprising a main section connected at one end with the supporting structure, a plurality of sections pivotally connected with each other and the innermost of which is pivotally connected with the main section, a windlass shaft mounted on the main section adjacent to its outer end, a drum on said shaft, a cable adapted to wind and unwind with respect to said drum, and connected with the outermost section of the chute, a sheave on the supporting structure about which said cable passes, a second sheave on the supporting structure, a second cable adapted to wind about said shaft in one direction and passing around the second sheave aforesaid back to the shaft with which it is again connected and adapted to wind in an opposite direction from that just mentioned, a handle for the shaft, and releasable means for locking the shaft against movement.

[Claim 6 not printed in the Gazette.]

1,221,757. AUTOMATIC SAFETY-STOP FOR ENGINES. CLARENCE B. LITTLE, Dayton, Ohio, assignor to The Brownell Company, Dayton, Ohio, a Corporation of Ohio. Filed Oct. 28, 1916. Serial No. 128,295. (Cl. 74—94.)

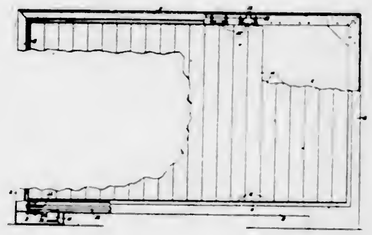


1. In an automatic safety stop for engines, the combination with the fly-wheel of an engine and the inlet valve located in the intake pipe of said engine, of a stem carried by said fly-wheel, a weight slidingly mounted on said stem, a coil spring mounted on said stem and holding said weight in its normal or innermost position, a tappet pin carried by said weight and movable therewith, a release lever arranged to be engaged by said tappet pin when the speed of the fly-wheel is sufficient to overcome the force of said spring holding said weight, a weighted lever normally held by said release lever and adapted to be released when the tappet pin engages said release lever, an arm connected to the pivot of an intake valve, and a connection between said arm and said weighted lever, substantially as specified.

2. In an automatic safety stop for engines, the combination with the fly-wheel of an engine and the inlet valve located in the intake pipe of said engine, of a stem mounted on said fly-wheel, a weight slidingly supported on said stem, a coil spring mounted on said stem and holding said weight in its innermost or normal position, a tappet pin supported on said weight parallel with the stem, means for guiding said tappet pin in its movement with said weight, a release lever having an end arranged in the path of said tappet pin to be engaged thereby, a spring engaging said release lever, and means controlled by said release lever whereby the inlet valve of the engine may be closed at times, substantially as specified.

1,221,758. CHANGEABLE DISPLAY-BOARD. JOHN LOCKE, White Plains, N. Y. Filed Mar. 10, 1916. Serial No. 83,292. (Cl. 40—76.)

1. In a changeable display board, the combination of a series of similar prismatic rotary elements, each element having a plurality of plain faces, similar faces of all of the elements being adapted to lie in the same plane constituting a display field over the whole of which a bill or the like may be pasted and subsequently cut between adjacent elements, a rigid member extending along one end of all of the elements, similar crank members connected to the ends of the elements just mentioned and journaled in said rigid member, means to support the other ends of the elements for rotation, a pair of toothed disks arranged in the same plane and connected to those ends of the end elements of the series remote from the rigid member, and an endless band having projections serving to rotate the said disks intermittently and causing thereby the rotation of the end elements of the series and from them through the rigid member causing the simultaneous rotation of all of the elements so as to present a new series of faces to the display field.



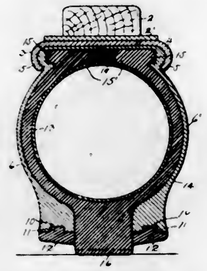
2. In a changeable display board, the combination of a series of prismatic closely arranged parallel elements journaled for rotation around axes lying in the same plane, a pair of toothed disks connected to the end elements, a rigid member connecting all of the elements to cause them all to move simultaneously or to be held stationary together, an endless band operating in a plane adjacent the plane of the disks, a series of fingers extending from the band and adapted to intermittently engage the teeth of the disks to rotate the same intermittently, and locking means serving to hold the disks stationary when not intended to be moved, said locking means being releasable by said band fingers at the time movement of the elements is to take place.

3. In a changeable display board, the combination of a series of closely arranged parallel prismatic elements journaled for rotation around axes lying in the same plane, a pair of toothed disks connected to the end elements of the series and lying in a plane perpendicular to the plane of the axes, said disks having holes therethrough, gravity pins serving to automatically drop into said holes to lock and hold the disks from rotation, an endless band operating in a plane parallel to the plane of the disks, fingers carried by the band and projecting therefrom across the plane of the disks for engagement with the teeth thereof, said fingers having cam-shaped heads serving to automatically lift the locking pins to release the disks, and means to cause all of the intermediate elements to be moved positively and simultaneously with the rotation of the end elements from the disks.

1,221,759. TIRE FOR AUTOMOBILES. JAMES B. LYNCH, Syracuse, N. Y. Filed Jan. 25, 1917. Serial No. 144,415. (Cl. 152—10.)

1. An automobile tire comprising a hollow spring metal casing composed of circular half-sections normally spaced apart at their peripheral edges, said sections having bead-flanges for interlocking engagement with parts of a demountable rim, and having plane-flanges overlying similar portions of said rim, an inflatable inner tube and a flexible shoe covering said tube, said shoe having an annular tread rib extending through and beyond the peripheral edges of said case-sections and normally held in close contact therewith by the spring tension of the said sections.

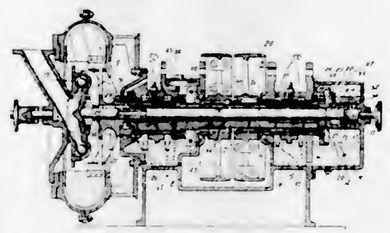
2. The combination with the pneumatic tube and the shoe, said shoe having an annular resilient rib, and a demountable rim, of a hollow circular casing composed of spring metal in two parts, said parts normally spaced at their peripheral edges to receive said annular rib and adapted to be interlocked with the demountable rim and to exert their tension for constantly holding their peripheral margins against said resilient rib, and a plurality of auxiliary resilient tread bands overlying the peripheral margins of the parts of said casing parallel to said annular rib.



3. The combination with the pneumatic tube and the shoe, said shoe having an annular resilient rib, and a demountable rim, of a hollow metal casing composed of opposite circular half-sections normally spaced apart at their peripheral edges to receive said annular rib, said sections being flexible and their peripheral edges tending to approach each other for gripping the said annular rib and having annular grooves arranged parallel to said annular rib, said sections having bead-flanges for interlocking with parts of the demountable rim, and a pair of auxiliary resilient treads overlying the peripheral faces of said case-sections and having tongues for entering said annular grooves.

4. An automobile tire including the inner tube, a shoe covering said tube and having an annular resilient tread rib adapted to support the load of the automobile when the inner tube is properly inflated, and a hollow metal casing comprising two oppositely curved sections composed of spring metal, said sections having bead-flanges for interlocking with a demountable rim and having their peripheral edges spaced apart for receiving said annular tread rib, the peripheral edges of said sections overlaid with flexible tread-bands disposed parallel to and contacting with said annular tread rib adapted to support the weight of the automobile when the inner tube becomes deflated.

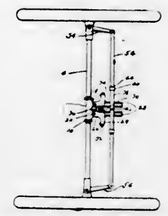
1,221,760. DRIVING MECHANISM FOR GRINDING-MILLS. EDWARD F. MCCOOL, Victor, Colo., assignor to The McCool Mfg. & Trading Co., Victor, Colo., a Corporation of Colorado. Filed July 26, 1915. Serial No. 42,084. (Cl. 74—14.)



1. In a grinding mill, a hollow shaft, a second shaft eccentrically mounted therein, and means for applying power to the second shaft to rotate the latter on its own axis and to permit orbital travel with the hollow shaft, the second shaft having parts connected to rotate therewith and in frictional contact with the opposite extremities of the hollow shaft to impart rotary movement to the latter.

2. In a grinding mill, a hollow shaft, a second shaft eccentrically mounted therein, means for positively rotating the second shaft on its own axis and to permit orbital travel with the hollow shaft, and means fixedly carried on said second shaft frictionally engaging said hollow shaft for imparting rotary movement to the latter.

1,221,761. AUTOMATIC SAFETY STEERING DEVICE. CHARLES L. MCGREW, Kansas City, Mo. Filed Mar. 26, 1915. Serial No. 17,239. (Cl. 21—200.)



1. In a safety steering device, the combination with the axle and steering rod, of a bracket secured to the axle and provided with a stop and with pivot lugs projecting toward said rod, a pair of levers having forged portions pivotally connected to said pivot lugs, a spring inclosed within the forked portions of said levers and acting to hold said levers normally in engagement with said stop, and means providing a floating connection between the free ends of said levers and said steering rod.

2. In a safety steering device, the combination with the axle and steering rod, of a bracket provided with a stop and secured to the axle, a pair of levers each pivoted at one end to the said bracket and provided with housing portions intermediate said bracket and rod, means providing a floating connection between the free ends of said levers and said rod, and an extension spring inclosed within the housing portions of said levers and connected thereto for holding the levers in yielding engagement with said stop.

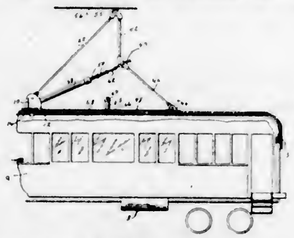
3. A safety steering device comprising, in combination, a bracket provided with vertically spaced pivot lugs projecting horizontally therefrom, a pair of levers having forked portions pivotally connected to said pivot lugs, a stop lug carried by said bracket and projecting between said levers, a spring inclosed within the forked portions of said levers and acting to hold their lower forked portions normally in engagement with said stop lug, and a yoke member having rolling engagement with the free ends of said levers.

4. In a safety steering device, the combination with the axle and steering rod, of a bracket mounted upon the axle and provided with vertically spaced pivot lugs projecting toward said rod, a pair of levers having forked portions pivotally connected to said pivot lugs, a stop lug extending in downwardly offset relation from the lower of said pivot lugs and projecting in between the lower forked portions of said levers, a spring connecting said levers and housed within the forked portions thereof, said spring acting to hold the lower forked portions of the levers normally in engagement with said stop lug, and means providing a floating connection between the free ends of said levers and said steering rod.

1,221,762. CURRENT-COLLECTOR FOR ELECTRIC CARS. JOSEPH MCMILLAN, Glendale, and CLARENCE V. GREENAMYER, Los Angeles, Cal. Filed July 15, 1915. Serial No. 39,956. (Cl. 191—65.)

1. In combination a car; a current collector mounted thereon, said collector comprising a contact member adapted to engage an overhead feed wire; hinged members carrying said contact member, one of the ends of said hinged members being pivotally connected to the car and the other ends carrying said contact member; a bracing guide pivotally connected to the car and to the contact member; and pneumatically operated means applied at

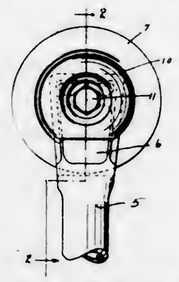
the joint between said hinged members adapted to force the contact member against an overhead feed wire.



2. In combination a car; a toggle mounted thereon; a contact member adapted to engage an overhead feed wire carried by said toggle; a brace pivotally mounted on the car and connected to said contact member; an air cylinder mounted on the car; a piston in said cylinder operatively connected to said toggle at its central joint whereby when air is admitted into said cylinder said toggle causes said contact member to press on an overhead feed wire.

3. In a current collector for electric cars having an overhead feed wire, a contact member; supporting and bracing means for said member, said supporting means being hingedly jointed near the center thereof and pneumatically operated means connected to said supporting means at the joint therein adapted to exert a pressure upwardly on said contact member from a point directly below said contact member under ordinary running conditions.

1,221,763. TROLLEY. JOSEPH MCMILLAN, Glendale, and CLARENCE V. GREENAMYER, Los Angeles, Cal. Filed Mar. 6, 1916. Serial No. 82,356. (Cl. 64—66.)



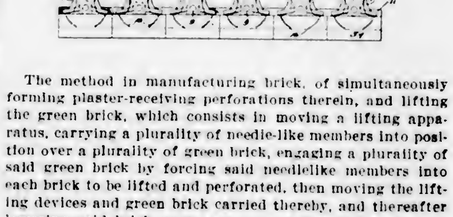
1. A trolley harp guard comprising plates secured upon the axle of the trolley wheel, said plates having the edges curved to lie within and close to the flange of the trolley wheel and being chambered at the central portions to receive and protect the fastening means on the ends of the axle of the trolley wheel.

2. In a trolley harp guard, plates mounted at the sides of the trolley wheel, said plates having edges the upper portions of which lie close to and within the flanges of the trolley wheel and the central portions being adapted to protect the ends of the axle of the trolley wheel from engaging the span wires in case the wheel accidentally leaves the feed wire.

1,221,764. SIDEHILL GANG-PLOW. JAMES G. B. MANSFIELD, Gorda, Cal. Filed Aug. 16, 1916. Serial No. 115,176. (Cl. 97—27.)

1. In a side hill gang plow, a pair of movably connected frames, a reversible combined mold board and plow share on each operable by contact with the soil on turning the frames, and a draft-operated means for relatively moving the frames to position one share with its mold board in advance of the other.

2. In a side hill gang plow, a pair of movably connected frames, a reversible mold board and plow share on each operable by contact with the soil on turning the frames, a movably mounted wheel on each frame, and means for shifting the wheels relative to their respective frames on relative movement between the latter.



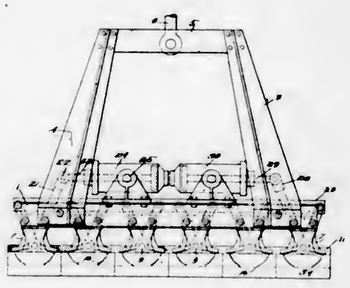
3. In a side hill gang plow, a pair of plow share supporting frames, cross links connecting the same for relative movement, one of said links extending beyond the frames at each end, a block pivoted on each end of said link, a rack on each block, a lever coöperating with each rack, a crank axle journaled in each frame, wheel on each axle, and links connecting the axles to the levers.

4. A side hill gang plow comprising a pair of pivotally connected frames, a moldboard and share reversibly mounted adjacent the rear end of each frame, and means adjusting the wheels relative to the frames by and during relative movement between the frames, an adjutsable supporting wheel mounted near the forward end of each frame.

5. A side hill gang plow comprising a pair of frames, cross-links pivotally connecting said frames, a moldboard and share reversibly mounted adjacent the rear end of each frame, a pivotally mounted cross ball connecting the mold boards, a second cross-ball pivotally connecting the rear ends of the frames, and means for securing said cross balls against movement with relation to each other.

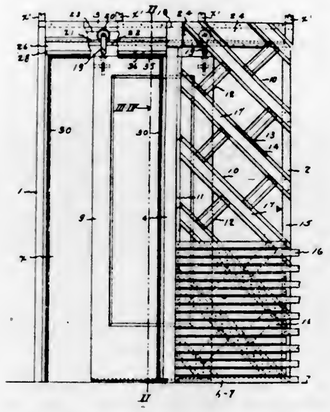
[Claims 6 to 10 not printed in the Gazette.]

1,221,765. METHOD OF LIFTING AND PERFORATING BRICK. RAYMOND C. PENFIELD, New York, N. Y. Filed Nov. 29, 1912. Serial No. 733,979. (Cl. 25—1.)



The method in manufacturing brick, of simultaneously forming plaster-receiving perforations therein, and lifting the green brick, which consists in moving a lifting apparatus, carrying a plurality of needle-like members into position over a plurality of green brick, engaging a plurality of said green brick by forcing said needlelike members into each brick to be lifted and perforated, then moving the lifting devices and green brick carried thereby, and thereafter lowering said brick upon a support and withdrawing the needle-like members leaving the plaster-receiving recesses formed therein.

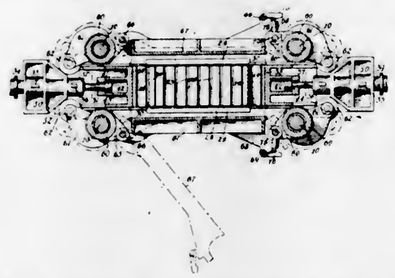
1,221,766. SLIDING-DOOR STRUCTURE. ELMER C. PITCHER, San Francisco, Cal. Filed Aug. 13, 1914. Serial No. 856,701. (Cl. 20—19.)



1. A sliding door structure including a frame having side studs joined by a top plate; a side jamb attached to said top plate intermediate of said studs; oblique bridges attached to said side jamb and one of said studs, and struts interposed between said bridges.

2. A sliding door structure including a frame having side studs joined by a top plate; side jambs on opposite sides of said plate between said studs; oblique bridges attached to said jambs and one of said studs; and bridges attached to said top plate and the said stud and struts interposed between said bridges.

1,221,767. PRESS. HORACE T. ROWLEY, New York, N. Y., and FREDERICK SCHRANZ, Camden, N. J., assignors to Standard Compress and Warehouse Corporation, Richmond, Va., a Corporation of Virginia. Filed Mar. 5, 1915. Serial No. 12,242. (Cl. 100—19.)



1. In a compress, the combination with a pair of end platens arranged to be separated to a maximum distance materially greater than the length of the bale to be compressed, the width of said end plates being substantially that of the compressed bale, and a pair of side platens each having a length greater than the distance between the end platens when separated to the maximum distance, of means for first moving the side platens toward each other into contact with the sides of the end platens while the latter are at said maximum distance apart, means for thereafter moving the end platens toward each other to a minimum distance apart while in contact with the side platens, a main platen arranged to enter and fill the space between the side platens and end platens while the latter are at their respective minimum distances apart, and means for moving said main platen to compress the bale after the side and end platens have compressed it.

2. In a compress, the combination with a pair of end platens arranged to be separated to a maximum distance materially greater than the length of the bale to be compressed, the width of said end plates being substantially that of the compressed bale, and a pair of side platens each having a length greater than the distance between the end platens when separated to the maximum distance, of means for first moving the side platens toward each other into contact with the sides of the end platens while the latter are at said maximum distance apart, means for thereafter moving the end platens toward each other to a minimum distance apart while in contact with the side platens, a main platen arranged to enter and fill the space between the side platens and end platens while the latter are at their respective minimum distances apart, said main platen having a concaved pressing surface, and means for moving said main platen to compress the bale after the side and end platens have compressed it.

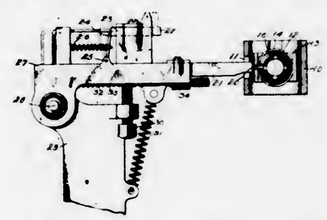
3. In a compress, the combination with a pair of end platens, a pair of side platens, a pair of plungers each loosely connected to the corresponding end platens, and heads provided with cam surfaces secured to each plunger, of angularly movable members each provided with arms arranged to be actuated by the corresponding cam surfaces, and connections between the angularly movable members and the side platens whereby the side platens are moved by said angularly movable members.

4. In a compress, the combination, with a pair of side platens, of angularly movable platen-operating members arranged to engage each end of said side platens and to move them toward and from each other, and power means for operating said angularly movable members.

5. In a compress, the combination, with a side platen, a pair of angularly movable platen-operating members to one of which one end of said side platen is hinged, means for detachably connecting the other end of the side platen to the other angularly movable member, and power means for swinging the angularly movable members, whereby the side platen is moved.

[Claims 6 to 11 not printed in the Gazette.]

1,221,768. WEFT-DETECTOR FOR LOOMS. EPPA H. RYON, Waltham, Mass., assignor to Crompton & Knowles Loom Works, Worcester, Mass., a Corporation of Massachusetts. Filed Aug. 2, 1915. Serial No. 43,089. (Cl. 139—85.)



1. A weft detector for looms having, in combination, an actuating device controlling a transfer mechanism, a plurality of individual detecting members each comprising a sliding rod having a portion positioned to engage the bobbin, and a second portion normally positioned to directly engage said actuating device and to independently render the device operative, said detecting members being separately slidable from normal position by engagement with an unexhausted weft supply on the active bobbin.

2. A weft detector for looms having, in combination, an actuating device controlling a transfer mechanism, a plurality of individual detecting members each independently operable to indicate substantial exhaustion of the weft supply in the active shuttle, means independent of said members for moving said actuator, and a support for said members which prevents movement of said members with

said actuator when engaged thereby, said members having portions positioned normally in the path of said actuator and directly rendering said actuator effective when engaged thereby and said members being separately and independently removable from such position by engagement with an unexhausted weft supply in the active shuttle.

3. A weft detector for looms having, in combination, an actuating device controlling a transfer mechanism, and a plurality of individual detecting members each independently effective to render said actuating device operable to renew the weft supply in the active shuttle, said members having portions positioned normally in the path of said actuator and being separately and independently removable from operative position by engagement with an unexhausted weft supply on the active bobbin, and said bobbin having a plurality of spaced openings therein adapted to coöperate with said members after the removal of the weft thereover and thereby permitting certain of said members to remain in normal position to render said actuating device operative.

4. A weft detector for looms, comprising a plurality of independently movable detecting members each adapted to indicate absence of weft on the active bobbin, a support for said members, means for yieldingly forcing all of said members outward toward the bobbin and an actuating device controlling a transfer mechanism, said actuating device being under the control of said detecting members and being rendered operative by any one of said detecting members which remains in its outward position during the extreme forward movement of the weft carrier independently of the position of the remaining detecting members and of their support.

5. A weft detecting device having, in combination, an actuating device, a plurality of individual detecting members, a locking bar rigidly connected to each member, and yielding means to normally position each of said bars in the path of said actuating device, said detecting members being in position for engagement by a bobbin in an active shuttle having a plurality of holes extending radially through its cylindrical wall, thereby permitting a detecting member entering one of said holes to remain in outer position with its locking bar extending into the path of said actuating device during the extreme forward movement of the bobbin.

[Claims 6 to 8 not printed in the Gazette.]

1,221,769. ALLOY. HUGH S. COOPER, Cleveland, Ohio, assignor to The Cooper Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 30, 1916. Serial No. 128,404. (Cl. 75—1.)

1. An alloy comprising zirconium and a preponderating amount of nickel and cobalt, the zirconium content being not less than about two per cent. and not more than about forty per cent. of the composition.

2. A cutting tool composed of a self-hardening alloy containing two per cent. to forty per cent. of zirconium together with a preponderating amount of nickel.

3. An alloy comprising zirconium and a preponderating amount of a metal having the properties of nickel or cobalt, with the addition of a small amount of one or more of the metals of the chronium group not exceeding thirty five per cent. of the composition.

4. An alloy comprising zirconium and a preponderating amount of a metal having the properties of nickel or cobalt.

5. An alloy consisting of a metal having the properties of nickel or cobalt, and two to thirty per cent. of zirconium.

[Claims 6 to 18 not printed in the Gazette.]

1,221,770. ARTICULATORY JOINT. FREDERICK W. SAWORSKI, Boston, Mass. Filed May 4, 1916. Serial No. 95,443. (Cl. 220—12.)

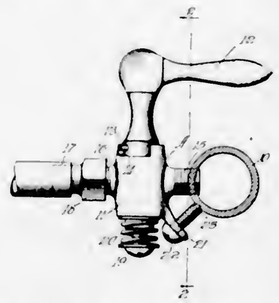
1. The articulatory joint herein described, comprising two transversely separable joint-members articulated together, and a semi-circular dead-center spring connected at its extremities, respectively, to said members, which exerts its force on said members to hold them in open and closed position, and which also holds them in articulated relation.



2. The articulatory joint herein described, comprising two joint members, one having an angular projection on its meeting edge, and the other having projections on its meeting edge adapted for interengagement with said angular projection, whereby said members are articulated together and held in longitudinal relation to each other, and a semicircular interlocking spring, the extremities of which are connected, respectively, with said members to exert its force on said members and holds them interlocked in articulated relation.

3. The articulatory joint herein described, comprising two joint members, one having an angular projection on its meeting edge, and the other an interengaging projection on its meeting edge for coöperation with said angular projection, whereby said members are articulated together, and held in longitudinal relation to each other, limiting stops arranged on said members for limiting their opening and closing movement, and a semicircular interlocking spring, the extremities of which are connected, respectively, with said members, and which exerts its force on said members and holds them interlocked in articulated relation.

1,221,771. GAS-COCK. LOUIS K. SCHWALL, Chicago, Ill. Filed Mar. 29, 1915. Serial No. 17,696. (Cl. 137—7.)



1. A gas cock or the like comprising a hollow body portion provided with a valve chamber and a threaded nipple by which it is adapted to be attached to a pipe or the like, and means for preventing accidental bodily turning of said cock when the same is attached to the pipe, said means including a lug formed integrally with said body portion, and a member adjustably carried by said lug and adapted to engage and be tightened against said pipe.

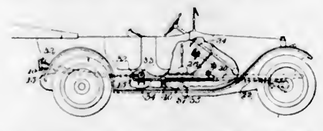
2. A gas cock or the like comprising a hollow body portion provided with a valve chamber and a threaded nipple by which it is adapted to be attached to a pipe or other member, and means for preventing accidental bodily turning of said body when the same is attached to the pipe or other member, said means including a set screw adapted to be tightened against said pipe or other member into which the cock is threaded.

3. A gas cock or the like comprising a hollow body portion provided with a valve chamber and a threaded nipple by which it is adapted to be attached to a pipe or other member, and means for preventing accidental bodily turning of said body when the same is attached to the pipe or other member, said means including a lug formed integrally with said body portion adjacent said nipple, and a set screw adjustably threaded in said lug and adapted to be tightened against said pipe or other member.

4. An article of manufacture comprising a member having a lateral extension adapted to be inserted into a pipe or the like for attaching said member thereto, said member being provided with adjustable means for securely holding it in proper position relatively to said pipe or other member to which it is attached, said adjustable means including an integral lug, and a set screw adjustably threaded therein.

5. In a gas cock or the like, the combination with a hollow body portion having a valve associated therewith, a handle for operating said valve, said body having a threaded portion by which it is adapted to be attached to a pipe or other member, an integral lug on said body on the same side as said threaded portion, and an adjustable set screw threaded in said lug and adapted to engage said pipe or other member.

1,221,772. AUTOMOBILE SIGNALING DEVICE. CHARLES H. SHIPMAN, San Francisco, Cal. Filed June 17, 1916. Serial No. 104,305. (Cl. 116—31.)



1. In an automobile signaling device, a casing, a rotatable member therein, a flexible shaft secured at one end to the member, a pinion fixed on the opposite end of the shaft, a slidably mounted rack meshing with the pinion and provided with a rod extension, a cross head on the rod extension, and independently operable means connected with each end of the cross head for sliding the rack.

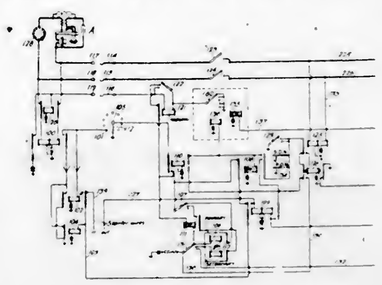
2. In an automobile signaling device, a casing, a rotatable member therein, a flexible shaft secured at one end to the member, a pinion fixed on the opposite end of the shaft, a slidably mounted rack meshing with the pinion and provided with a rod extension, a cross head on the rod extension, means for operating the rack having slidable connection with the cross head, and other means for operating the rack also having connection with the cross head.

3. In an automobile, a signaling device including a rotary part, a rack carried by the automobile for sliding movement, a flexible shaft connected at one end to the rotary part, a pinion on the opposite end of the shaft meshing with the rack, a cross head fixed to the rack, and a plurality of operating means each slidable relative to the other and having connection with the cross-head for operating the rack.

4. In an automobile, the combination with the steering gear, of a signaling device including a slidable rack, a cross head fixed thereon, a rod connected to the steering gear and slidably connected to the cross head for sliding the rack upon movement of the steering gear, resilient means on the rod rendering the slidable connection yieldable, and manually operable means connected to the cross head and operable independently of the steering gear to move the rack in one direction, said resilient means acting to move the rack in the opposite direction.

1,221,773. TELEPHONE-EXCHANGE SYSTEM. ARTHUR B. SPERRY, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed May 1, 1916. Serial No. 94,672. (Cl. 179—18.)

1. In a telephone exchange system, the combination with a calling and a called line, automatic switching means, a sender associated with said calling line adapted to control said switching means to establish a talking circuit including said lines, and a third line, of means whereby the calling party may operate said automatic switching means to include said third line in said talking circuit, and means for causing said lines to test busy.



2. In a telephone exchange system, the combination with a calling and a called line, automatic switching means, a sender associated with said calling line adapted to control said switching means to establish a talking circuit including said lines, and a third line, of means whereby the calling party may operate said automatic switching means to include said third line in said talking circuit, means for causing said lines to test busy, and means for automatically releasing said switching means.

3. In a telephone exchange system, the combination with a calling and a called line, automatic switching means, a sender associated with said calling line adapted to interconnect said lines over said switching means, and a third line, of means controlled by the coöperation of the calling and called parties for operating said automatic switching means fo include said third line in the connection, and means for causing said lines to test busy.

4. In a telephone exchange system, the combination with a calling and a called line, a sender in said calling line, a train of automatic switches adapted to be set thereby to interconnect said lines, and a third line, of another train of automatic switches adapted to connect said third line in circuit with said interconnected lines, and an electromagnetic switch adapted to be operated by said sender to associate the first switch of said second train of switches with said calling line only upon the receipt of a predetermined number of impulses, whereupon the remaining switches may be operated by said sender to bring said third line into the connection.

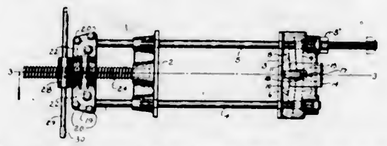
5. In a telephone exchange system, the combination with a calling and a called line, a sender in said calling line, a train of automatic switches adapted to be set thereby to interconnect said lines, and a third line, of another train of automatic switches adapted to interconnect said third line with said interconnected lines, and an electromagnetic switch adapted to be operated by said sender after the calling and called lines are interconnected to associate the first switch of said second train of switches with said calling line upon the receipt of a predetermined number of impulses, whereby said sender may operate the remaining switches of the train to bring a third party into the connection.

[Claims 6 to 12 not printed in the Gazette.]

1,221,774. CLAMP. JOHN M. TAYLOR, Hartford, Conn. Filed Nov. 23, 1915. Serial No. 63,046. (Cl. 144—289.)

1. A clamp comprising a support, a jaw slidable on the support, a locking member directly supported by the jaw, spring means acting against the locking member to cause the latter to engage the support and thereby lock the jaw in an adjusted position, means independent of the work engaging portion of the jaw for moving the locking member to releasing position, a second jaw on the support, and manually operable means for causing the movement of the second jaw toward and from the first jaw.

2. A clamp comprising a pair of parallel rods, a chambered jaw slidable on the rods, locking plates in the chambered jaw having openings for the respective rods, springs acting constantly against the locking plates to hold the same in locking position, a part independent of the work engaging portion of the jaw supported outside the jaw and provided with means extending into the jaw to act against the locking plate to move the same to releasing position on movement of said part, a second jaw slidable on the rods, and means for moving the second jaw toward and from the first jaw.



3. A clamp comprising a pair of parallel guide rods, a chambered jaw supported for slidable adjustment by the rods, plates in the chambered jaw perforated for the passage of the respective rods, springs inclosed by the jaw, acting constantly against the respective plates at their outer portions to normally force the plates yieldingly into locking engagement with the respective rods, the plates between their ends fulcruming against the jaw, a bifurcated member straddling the outer portion of the jaw, said jaw having a slot in its outer portion and the bifurcated member having a projecting portion extending into the jaw to engage the inner ends of the locking plates to move said locking plates to releasing position on a predetermined movement of the bifurcated member, a second jaw through which the rods pass, and means for moving the second jaw toward and from the first jaw.

4. A clamp comprising supporting and guide rods disposed in parallelism, a jaw slidable on said rods, means for locking said jaw in a predetermined position, a second jaw slidable on the rods toward and from the other jaw, a bridge piece in section to receive the rods, and means for fastening the sections of the bridge-piece together and for also holding the rods in place therebetween, a nut rotatively supported by the bridge piece between the sections thereof, the nut being peripherally grooved between its ends and the bridge piece having means extending into the groove of the nut to prevent movement of the latter in the direction of its axis of rotation, and a manually operable screw threaded through the nut and having a rigid connection with said second jaw.

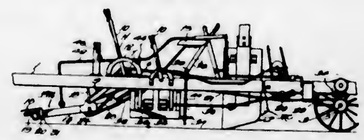
5. A clamp comprising a pair of parallel rods, a chambered jaw slidable on the rods, locking plates in the chambered jaw having openings for the respective rods, springs acting against the outer ends of the locking plates and tending constantly to maintain the same in locking relation with the respective rods, the plates between their ends fulcruming against the jaw, the work engaging portion of the jaw being in constant fixed relation with the plate fulcrum parts of the jaw, means carried by the jaw to act against the inner portions of the plates to move the plates to releasing position, a second jaw carried by said rods, and manually operable means for moving said second jaw toward and from the companion jaw.

[Claim 6 not printed in the Gazette.]

1,221,775. BEET-TOPPING MACHINE. GARRISON C. THAYER, Bartlesville, Okla. Filed Apr. 13, 1916. Serial No. 90,946. (Cl. 55—107.)

1. In a beet topping mechanism, the combination of a portable frame and a vertically movable frame, a pivotal mounting for the latter to permit its front end to move vertically, means for raising and lowering said pivotal mounting and locking it in adjusted position, a beet topper mounted on said vertically movable frame, and means for tilting said frame vertically around its pivotal mounting at the will of the operator.

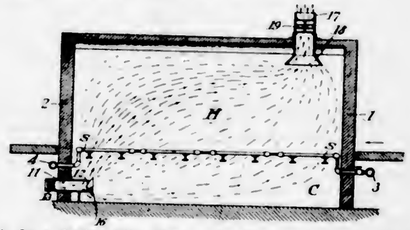
2. In a beet topping mechanism, the combination of a portable frame, a transverse rock shaft mounted thereon, rigid crank arms depending from said rock shaft, an auxiliary frame pivoted to said crank arms for vertical oscillation, means for rocking said shaft and holding it in adjusted position to raise and lower the auxiliary frame, a beet topper mounted on said auxiliary frame, and means at the control of the operator for tilting said auxiliary frame around its pivotal mounting.



3. In a beet topping mechanism, the combination of a portable frame, a transverse rock shaft mounted thereon, a number of rigid crank arms depending from said rock shaft, an auxiliary frame pivotally connected with said crank arms, means for turning said rock shaft and locking it in adjusted position to vary the height of the auxiliary frame, a beet topper mounted on said auxiliary frame, driving means for said topper including a driven member rotatably mounted on the rock shaft, a shaft mounted on the auxiliary frame adjacent the pivot of the latter, and a sprocket chain leading from said driven member to said shaft, and means for tilting the auxiliary frame around its pivotal mounting.

4. In a beet topping mechanism, the combination of a portable frame and an auxiliary frame, a beet topping cutter disposed at the front end of said auxiliary frame, a conveyer mounted on said frame and leading rearwardly from said cutter, a pivotal mounting for said auxiliary frame, means for adjusting said pivotal mounting vertically and locking it in adjusted position, and means for tilting said auxiliary frame around said pivotal mounting at the will of the operator.

1,221,776. DRYING-KILN. PERRY W. TURNER, Myndus, N. Mex. Continuation of application Serial No. 31,498, filed June 1, 1915. This application filed Sept. 20, 1915. Serial No. 51,565. (Cl. 34—19.)



1. In a drying kiln, the combination of a drying chamber, a cold air chamber therebelow, heating pipes between the chambers, an air supply for the cold chamber, baffling means therefor and a discharge flue passing through the roof of the drying chamber near one end thereof and terminating in an enlarged inlet below the top of said chamber.

2. In a drying kiln, the combination of a drying chamber, a cold air chamber therebelow, heating pipes between the chambers, an air supply flue for the cold chamber, a rotary regulating device therein, a diffusing device for said flue, a larger discharge flue for the drying chamber and a rotary regulating device therein.

3. In a drying kiln, the combination of a drying chamber, a cold air chamber therebelow, heating pipes between the chambers, a supply flue for the cold chamber, a rotary bladed regulating device therein, a discharge flue for the drying chamber and a rotary bladed regulating device therein.

4. In a drying kiln, the combination of a drying chamber, a cold air chamber therebelow, heating pipes between the chambers, a supply flue for the cold chamber, an automatic rotary bladed regulating device in the flue rotating in a transverse plane thereof, a baffling device at the rear end of the flue, a discharge flue at the top of the drying chamber and an automatic rotary bladed regulating device therein rotating in a transverse plane of said flue.

5. In a drying kiln, the combination of a drying chamber, a cold air chamber therebelow, heating pipes between the chambers, a supply flue for the cold air chamber, a rotary bladed regulating device in said flue, a discharge flue for the drying chamber terminating therein below the top of the chamber and a rotary bladed regulating device in said discharge flue.

[Claims 6 to 21 not printed in the Gazette.]

1,221,777. COMBINATION-TOOL. AUGUST UNEY, Oakland, Cal. Filed May 5, 1915. Serial No. 25,959. (Cl. 33—89.)



1. A combination tool of the character described comprising a body having spaced apart longitudinal strips connected by an abutment shoulder, a movable strip shaped to fit between the longitudinal strips on said body, and complemental means carried by the body and said movable strip for selectively holding the latter against said abutment shoulder or against the ends of said longitudinal strips.

2. A combination tool of the character described comprising a body having spaced apart longitudinal strips connected at one end by an abutment shoulder, said body being provided with a recess located beyond the other ends of said strips, a movable strip shaped to fit between the longitudinal strips of said body and provided with lugs extending into said recess, and means cooperating with said lugs to selectively hold the movable strip against said abutment shoulder or against the ends of said longitudinal strips.

3. A combination tool of the character described comprising a body having spaced apart longitudinal strips connected at one end by an abutment shoulder, said body being provided with a recess located beyond the other ends of said strips, a movable strip shaped to fit between the longitudinal strips of said body and provided with lugs extending into said recess, a slotted plate extending over said recess and having undercut portions positioned to be selectively engaged by said lugs, and means for engaging said lugs to prevent relative movement of said body and said movable strip.

4. A combination tool of the character described comprising a body having an abutment shoulder and a recess spaced therefrom, spaced apart abutment shoulders contiguous to said recess, a slidable strip having lugs positioned to enter said recess, and means coöperating with said lugs and said recess, to selectively hold the movable strip against the first mentioned abutment shoulder or against said spaced apart abutment shoulders.

5. A combination tool of the character described comprising a body having an abutment shoulder and a recess spaced therefrom, spaced apart abutment shoulders contiguous to said recess, a slidable strip having lugs positioned to enter said recess, a slotted plate extending over said recess, and spaced apart lugs attached to said movable strip and positioned to selectively engage said slot, and means for engaging either lug to prevent relative movement of said movable strip and the said body.

[Claims 6 and 7 not printed in the Gazette.]

1,221,778. NOSE-PROTECTOR. ABNER H. WADHAMS, Torrington, Conn., assignor to Schroeder Brothers Manufacturing Company, a Copartnership consisting of Hugo F. Schroeder, Ernest E. Schroeder, Richard F. W. Schroeder, Gustave A. Schroeder, Jr., and Arthur E. R. Schroeder. Filed Dec. 4, 1916. Serial No. 134,831. (Cl. 128—13.)



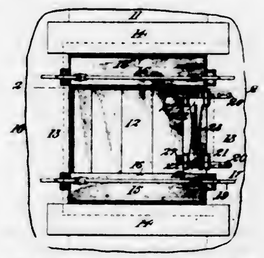
1. In a device of the class described a clip, a coiled spring tending normally to close the jaws of the clip, and a support for a shield to cover the nostrils of the nose, having a pin to extend through the coiled portion of the spring.

2. A device of the class described comprising a clip, the jaws of which are adapted to embrace the septum of the human nose, and a support for a shield to cover the nostrils, operatively connected with the clip and comprising two lobes to embrace the nose exteriorly.

3. A device of the class described comprising a clip of comparatively soft material, and a spring tending constantly to close the jaws of the clip toward each other, the jaws being adapted to engage the septum of the human nose, and a support for a shield to close the nostrils, the support comprising two loops which diverge upwardly, and a pin uniting the loops, the pin extending through the coiled portion of the spring to pivotally connect the clip and the support.

4. A device of the class described comprising a clip and a coiled spring tending constantly to close the jaws of the clip toward each other, said jaws being adapted to engage the septum of the human nose from opposite sides thereof, a support comprising two loops, and a pin connecting the terminal portions of the loops, two connected terminal portions of the loop having an eye to removably receive the pin and the pin extending through the coiled portion of the spring, the loops diverging upwardly, to straddle the nose, the clip having manipulating portions extending below the pin, and a fabric shield of cellular material, lying upon the support and slotted for the passage of said jaws.

1,221,779. MOUNTING FOR SILO-DOORS. ERIC J. WAHLBERG, Fort Bragg, Cal., assignor to Atlas Tank Manufacturing Company, Fort Bragg, Cal., a Corporation of California. Filed Oct. 24, 1916. Serial No. 127,401. (Cl. 16—106.)

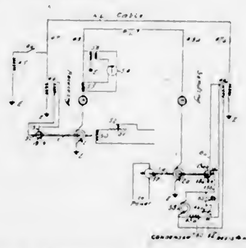


1. A hinge for silo doors composed of a vertical member having a cross arm on each end thereof, jamb straps

pivotally connected with one end of each respective cross arm, links pivotally connected at one end with the respective other ends of the cross arms, and door straps pivotally connected to the other respective ends of the swinging links, said member in open position to the door being engageable with the inner side edge of the jamb.

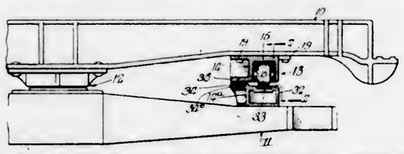
2. A hinge for silo doors composed of a vertical member, jamb straps pivotally connected with the respective ends of said member, links also pivotally connected at one end with the respective ends of said member, and door straps pivotally connected to the opposite respective ends of the links.

1,221,780. PHOTOTELEGRAPHIC MACHINE. GEORGE WALD, U. S. Army. Filed Oct. 28, 1914. Serial No. 869,038. (Cl. 178—13.)



The method of reproducing sketches and photographs by electric impulses transmitted from a distance and controlled by a transmitting subject by causing the electric impulses to rupture and thereby produce burned holes in an insulating and protecting glue covering a metallic record, thus reproducing the subject in the form of a photolithographical plate as described.

1,221,781. ANTIFRICTION-BEARING. ARNOLD A. WEIGEL, Chicago, Ill., assignor to Edwin S. Woods, Chicago, Ill.; Albert G. Welch, executor of said Edwin S. Woods, deceased, assignor to Albert G. Welch, trustee. Filed Sept. 22, 1913. Serial No. 791,022. (Cl. 64—64.)



1. An antifriction bearing comprising in combination with oscillating members between which said bearing is interposed, a casing fixed to one of said oscillating members, an antifriction element having trunnions located in said casing, means providing spaced bearing rails in said casing upon which the trunnions of said antifriction element are adapted to bear, said casing having a fixed bearing lug, a second bearing lug fixed on the other one of said oscillating members, said bearing lugs protecting said antifriction element from load when said oscillating members are in their normal relative positions.

2. An antifriction bearing comprising in combination with upper and lower oscillating members between which said bearing is interposed, an antifriction element having trunnions, means carried by said upper oscillating member providing spaced bearing rails upon which the trunnions of said antifriction element bear and travel in a plane at approximately right angles to the plane of said oscillating members, said means including a fixed bearing lug located in a plane to one side of the plane of said spaced bearing rails and a second bearing lug fixed on said lower oscillating member, said bearing lugs being adapted to engage each other and transmit load independent of the antifriction element when said oscillating members are in the same vertical plane.

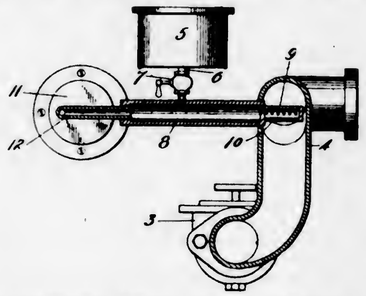
3. An antifriction bearing comprising in combination with upper and lower oscillating members between which said bearing is interposed, an antifriction element having trunnions, a casing carried by said upper oscillating member, means providing spaced bearing rails in said casing upon which the trunnions of said antifriction element bear, said casing including a fixed lug providing a downwardly facing bearing surface, means providing an upwardly facing bearing surface on said lower oscillating member, said upwardly facing bearing surface being normally engaged with the downwardly facing bearing surface on said casing and transmitting load betwen said oscillating members independently of the antifriction element when said oscillating members are in their normal relative positions.

4. An antifriction bearing comprising a casing adapted to be attached to one of a pair of oscillating members, a bearing block adapted to be attached to the other one of the said pair of oscillating members, said bearing block having upwardly facing bearing surfaces, arranged in different horizontal planes, an antifriction element in said casing, one of said bearing surfaces on said bearing block being associated with said antifriction element, said antifriction element being adapted to travel longitudinally in said casing and bear upon the associated bearing surface of said bearing block when transmitting load, said casing having a fixed lug intermediate its ends which provides a downwardly facing bearing surface adapted to engage the other of said bearing surfaces on said bearing block, said lug on said casing being adapted to transmit load to said bearing block independent of the antifriction element when said oscillating members are in their normal relative position.

5. In an antifriction bearing, a casing open at the bottom, an antifriction element longitudinally movable therein, and a filler block opening at one end capable of insertion through the open bottom of said casing, said filler-block being constructed to receive the antifriction element at one end before its introduction into the casing and to suspend said antifriction element within the casing.

[Claims 6 to 11 not printed in the Gazette.]

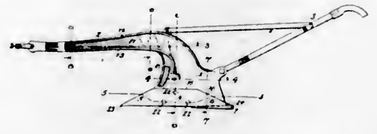
1,221,782. PRIMING ATTACHMENT FOR INTERNAL-COMBUSTION ENGINES. LE ROY WERTS, Milford, Mo. Filed July 17, 1916. Serial No. 109,814. (Cl. 123—180.)



The combination with an internal combustion engine having an intake manifold, a mixing tube having one end projecting into the manifold and provided with fine jet orifices facing longitudinally of the manifold, an air pump connected to the opposite end of said tube, a gasolene tank having a pipe terminating in a fine discharge orifice in communication with the said tube, and a valve for controlling said pipe.

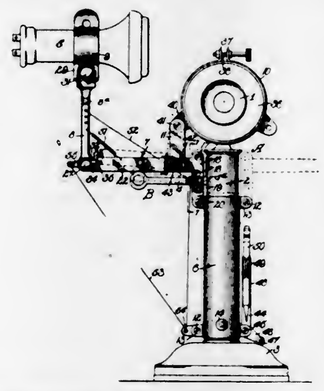
1,221,783. PLOW. LOUIS WIARD, Batavia, N. Y., assignor to Wiard Plow Company, Batavia, N. Y., a Corporation of New York. Filed Jan. 19, 1914. Serial No. 813,103. (Cl. 97—17.)

A plow having a support for a landside provided with a bolt hole and a boss around said hole, a landside which is reversible side for side and provided with a slot hole and recesses on its oposite sides around said bolt hole, and a



bolt for securing the landside to said standard, either recess adapted to fit said boss or said bolt head.

1,221,784. RECEIVER-HOLDING ATTACHMENT FOR TELEPHONES. JOHN F. WILLIAMS, New York, N. Y. Filed Oct. 5, 1916. Serial No. 123,883. (Cl. 179—147.)



1. The combination of a telephone including a stand, a fork, a transmitter, a sleeve movably mounted on the stand, a bracket carried by the sleeve and having means engageable with the fork on the telephone, whereby the movement of the sleeve with respect to the stand actuates the fork, and a receiver carried by the bracket.

2. The combination of a telephone including a stand, a fork, a transmitter, a sleeve movably mounted on the stand, a bracket carried by the sleeve and having means engageable with the fork on the telephone, whereby the movement of the sleeve with respect to the stand actuates the fork, a receiver carried by the bracket, and a detachable connection between the bracket and sleeve.

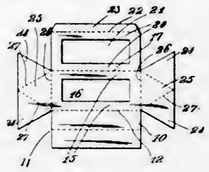
3. The combination of a desk telephone including a base, a column thereon, a transmitter on the column, and a fork extending from the column, a sleeve mounted on the column, a bracket connected with the sleeve, means movable with the sleeve for actuating the fork, and a receiver carried by the bracket.

4. The combination of a desk telephone including a base, a column thereon, a transmitter on the column, and a fork extending from the column, a sleeve mounted on the column, a bracket connected with the sleeve, means movable with the sleeve for actuating the fork, and means adapted to hold the sleeve fixed with respect to the column for rendering the sleeve inoperative.

5. The combination of a desk telephone including a base, a column thereon, a transmitter on the column, and a fork extending from the column, a sleeve mounted on the column, a bracket connected with the sleeve, means movable with the sleeve for actuating the fork, and a device mounted on the sleeve and engageable with the base of the telephone for raising and lowering the sleeve by the movement of the device.

[Claims 6 to 8 not printed in the Gazette.]

1,221,785. PAPER BOX. WALLACE M. WILLIAMS, Brooklyn, N. Y. Filed Apr. 15, 1916. Serial No. 91,281. (Cl. 229—22.)



1. In a prismatic paper box, an integral blank forming the three main sides thereof, one or more of said sides being apertured, a single element projecting from each end of one of said sides, said end elements having oblique diverging edges, creased to fold on angular lines, forming three equilateral triangles receivable within the box when expanded, and colored transparent panels secured to said sides over the apertures therein.

2. In a prism shaped paper box composed of a single blank, an imperforate base and a pair of sides, a tab formed with one of said sides, said tab being secured to said base, single end elements extending from the central portion of said blank, said elements having angular side edges increasing in width toward their outer ends, and creases formed in said elements whereby they may be folded, said elements being adapted to expand and frictionally engage within the completed box.

3. In a paper box of triangular cross section made from a single integral blank, a pair of sides having openings therethrough, transparent coverings over the openings, an imperforate bottom and a pair of end elements, said end elements being foldable into three equal triangular sections engageable by reason of their expansion with the interior of the box.

1,221,786. DRAWING IMPLEMENT. FERDINAND A. ALTENEDER, Glenside, Pa. Filed May 3, 1916. Serial No. 95,283. (Cl. 33—104.)



1. An implement of the class described, comprising a body of transparent flexible material having opposite parallel plane surfaces with a guiding edge and a longitudinal channel extending parallel with said edge and intermediate of said plane surfaces, but terminating short of each end thereof; said channel tapering, in an arcual curve, at each end, from its inner to its outer side; and an opaque substance secured in said channel; whereby said body is solidly homogeneous at the ends of said edge, and said edge is transparent at its ends and opaque intermediate thereof, throughout the extent of said channel.

2. An implement of the class described, comprising a body of transparent material having opposite parallel plane surfaces with a guiding edge and having a longitudinal channel extending parallel with said edge and intermediate of said plane surfaces, but terminating short of each end thereof; said recess tapering, in an arcual curve, at each end, from its inner to its outer side; and an opaque substance secured in said channel; whereby said body is solidly homogeneous at the ends of said edge, and said edge is transparent at its ends and opaque intermediate thereof, throughout the extent of said channel.

3. An implement of the class described, comprising a flexible transparent body having a guiding edge and a recess in said guiding edge, terminating short of each

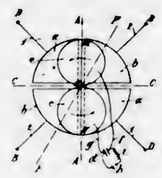
end thereof, and tapered at each end; and an opaque substance secured in said recess.

4. An implement of the class described, comprising a flexible transparent body having a guiding edge and a recess in said guiding edge, terminating short of each end thereof; and an opaque substance secured in said recess.

5. An implement of the class described, comprising a transparent body having a guiding edge and a recess in said guiding edge, terminating short of each end thereof, and tapered at each end, and an opaque substance secured in said recess.

[Claims 6 and 7 not printed in the Gazette.]

1,221,787. APPARATUS FOR DIRECTED WIRELESS TELEGRAPHY AND TELEPHONY. ETTORE BELLINI, Enghien-les-Bains, France. Filed June 19, 1915. Serial No. 35,103. (Cl. 250—11.)



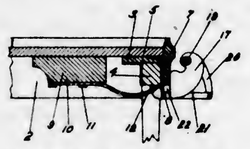
1. An apparatus for directed wireless telegraphy or telephony comprising in combination aerials for the reception or transmission of directed waves, fixed conductive plates arranged about an axis, diametrically opposite each other in pairs, the number of pairs being equal to the number of directed aerials, and the two plates of each pair being connected to one of the aerials,—a rotary system of conductive plates mechanically connected together and adapted to rotate about the axis of the fixed system,—and a high frequency apparatus to which the rotary system of conductive plates is connected, substantially as described and for the purpose set forth.

2. An apparatus for directed wireless telegraphy or telephony comprising in combination aerials for the reception or transmission of directed waves,—fixed conductive plates arranged about an axis in a plane,—diametrically opposite each other in pairs, the number of pairs being equal to the number of aerials, and the two plates of each pair being connected to one of the aerials,—a rotary system of conductive plates parallel to the fixed plates and mechanically connected together, said system rotating about the axis of the fixed system and the outline of the said movable plates being given by the equation

$$\rho = \rho_0 \sqrt{\cos.\ \alpha}$$

with cos. α positive, ρ being a radius vector, ρ_0 the radius vector maximum and α the angle between these two radii vectors,—and a high frequency apparatus to which the rotary system of conductive plates is connected, substantially as described and for the purpose set forth.

1,221,788. TRAY. GEORGE EDWIN BILTON, Toronto, Ontario, Canada, assignor of one-half to Norman Cecil Maynard, Toronto, Ontario, Canada. Filed May 18, 1916. Serial No. 98,474. (Cl. 45—11.)



1. In a tray, a frame, a top secured to said frame, a plurality of legs rigidly connected by cross bars and hinged to said tray in sets, spring latch mechanisms for maintaining said legs in their extended positions, members adapted to depress the springs of said latches and disengage them from their fastenings and toggle-joint mechanism operatively connected with said members.

2. In a tray, a frame, a top secured to said frame, folding legs secured under said top, spring latch mechanism for maintaining said legs in their extended positions, latch opening members, toggle-joints pivotally connected to said opening members and tray handles having rotative members rigidly secured to the toggle joint sections.

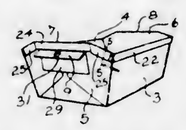
3. A tray, a frame extending downwardly from said tray, transverse leg supports hinged to the under side of said tray and carrying legs and swinging outwardly against said frame, spring members locking said leg supports to said frame, releasing members secured to said leg supports and slotted to receive said springs, handle brackets secured to the tray ends, grips rotatably mounted in said brackets and having arms rigid therewith and extending downwardly therefrom and links joining said arms to said releasing members.

4. A tray, a frame extending downwardly from said tray, transverse leg supports hinged to the under side of said tray and carrying legs and swinging outwardly against said frame, spring members secured to the underside of said tray and locking said leg supports to said frame when said legs are in their upright positions, releasing plates loosely mounted on said leg supports and slotted to receive said springs, levers connected to said plates, handle brackets secured to the tray ends, grips rotatably mounted in said brackets and having arms rigid therewith and extending downwardly therefrom and links joining said arms to said levers.

5. A tray, a frame extending downwardly from said tray, transverse leg supports hingedly secured to the under side of said tray and carrying legs, spring members secured to the under side of said tray and holding said legs to their upright positions, releasing plates loosely mounted on said leg supports and engaging said springs, curved lugs extending outwardly from said releasing plates and projecting beyond the edges of said leg supports, lever handles, and links pivotally connecting said lever handles and said lugs.

[Claims 6 and 7 not printed in the Gazette.]

1,221,789. TOTE-BOX. ROBERT S. BROWN, New Britain, Conn., assignor to The New Britain Machine Company, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 12, 1916. Serial No. 71,664. (Cl. 220—111.)



1. A box having sides and ends all of which are flared, the ends between the sides having portions which extend upwardly above the upper edges of the sides, the sides having integral tabs fitted against the outer faces of the ends, the upwardly-extending portions of the ends being on upwardly converging slants commencing at the corners of the box and the upper sides of the tabs being correspondingly converged, the sides having down-turned exterior lips extending unbrokenly therealong and also along the respective tabs, those parts of the lips which are on the tabs being on a slant corresponding to the other slants and the upwardly converging parts of the ends having exterior lips bent over the lips of the tab pieces.

2. A box having sides and ends all of which are flared, the ends between the sides having portions which extend upwardly above the upper edges of the sides, the sides having integral tabs fitted against the outer faces of the ends, the upwardly-extending portions of the ends being on upwardly converging slants commencing at the corners of the box and the upper sides of the tabs being correspondingly converged, the sides having down-turned exterior lips extending unbrokenly therealong and also along the respective tabs, those parts of the lips which are on the tabs being on a slant corresponding to the other slants and the upwardly converging parts of the ends having exterior lips bent over the lips of the tab pieces, the intermediate portions of the ends having down-turned exterior lips between the other lips thereof fitted against the outer faces of the said ends.

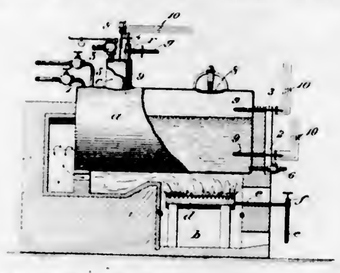
3. A box having sides and ends all of which are flared, the ends between the sides having portions which extend upwardly above the upper edges of the sides, the sides having integral tabs fitted against the outer faces of the ends, the upwardly-extending portions of the ends being on upwardly converging slants commencing at the corners of the box and the upper sides of the tabs being correspondingly converged, the sides having down-turned exterior lips extending unbrokenly therealong and also along the respective tabs, those parts of the lips which are on the tabs being on a slant corresponding to the other slants and the upwardly converging parts of the ends having exterior lips bent over the lips of the tab pieces, the intermediate portions of the ends having down-turned exterior lips between the other lips thereof fitted against the outer faces of the said ends, and handles for the ends having attaching portions fitted under the intermediate lips of the ends.

4. A box having sides and ends, all of which are flared, the ends having portions which extend above the upper edges of the sides, the sides having end tabs and lips continuous along the upper edges of the sides and end tabs, said tabs being fitted against the ends, the lip portions of the tabs converging upwardly and the terminal portions of the ends having correspondingly converging parts coinciding with the converging portions of the respective tabs.

5. A box having sides and ends, all of which are flared, the ends having portions which extend above the upper edges of the sides, the sides having end tabs and lips continuous along the upper edges of the sides and end tabs, said tabs being fitted against the ends, the lip portions of the tabs converging upwardly and the terminal portions of the ends having correspondingly converging parts coinciding with the converging portions of the respective tabs, the converging portions of the ends having lips bent over the lips of the tabs.

[Claim 6 not printed in the Gazette.]

1,221,790. OBTAINING PRODUCTS FROM PETROLEUM BY DECOMPOSITION OF COMPONENT HYDROCARBONS THEREOF. HORACE P. CHAMBERLAIN, Buffalo, N. Y., assignor to Standard Oil Company of New York, New York, N. Y., a Corporation of New York. Filed Oct. 20, 1913. Serial No. 796,310. (Cl. 196—25.)



1. The process of obtaining hydrocarbon products by decomposition of hydrocarbons, which process consists in operating upon an oil that contains hydrocarbons with viscosities intermediate seventy seconds and one hundred and seventy seconds at 100° F. and also liquid hydrocarbons with higher viscosities in the relative proportions of not less than ten per cent. by volume of hydrocarbons of either kind to not exceeding ninety per cent. of hydrocarbons of the other kind and that is free from still wax and like heavy matters of sticky character and from elements yielding the same or coke by distilling such oil at decomposing temperatures under a superatmospheric pressure of not less than thirty pounds per square inch, substantially as described.

2. The process of obtaining hydrocarbon products by decomposition of hydrocarbons, which process consists in operating upon an oil that contains paraffin wax and also liquid hydrocarbons with viscosities too great for normal constituents of burning oil (kerosene) in the relative proportions of not less than four nor more than ninety per cent. of paraffin wax to not more than ninety six per cent. nor less than ten per cent. of said liquid hydrocarbons and that is free from still wax and like heavy matters of sticky character and from elements yielding the same or coke by distilling such oil at decomposing temperatures under a superatmospheric pressure of not less than thirty pounds per square inch, substantially as described.

3. The process of obtaining hydrocarbon products by decomposition of hydrocarbons, which process consists in subjecting to distillation at decomposing temperatures under a superatmospheric pressure of not less than thirty pounds per square inch the heavy paraffin distillate which is collectable in an appropriate distillation of crude petroleum of a character to yield paraffin wax, which is free from still wax and like heavy matters of sticky character and from elements yielding the same or coke, and which consists of hydrocarbons with viscosities ranging from below one hundred and seventy seconds at 100° F. to above two hundred and ninety seven seconds at 100° F., upward of ten per cent. by volume of said hydrocarbons having viscosities intermediate seventy seconds and one hundred and seventy seconds at 100° F., substantially as described.

4. The process of obtaining hydrocarbon products by decomposition of hydrocarbons, which process consists in distilling crude petroleum approximately to the point at which the distillate would no longer be free from still wax or like heavy matters of sticky character, collecting distillate up to this point from a point so early in the run that hydrocarbons with viscosities intermediate seventy seconds and one hundred and seventy seconds at 100° F. represent upward of ten per cent. by volume of the so collected distillate, and subjecting the so collected distillate to distillation at decomposing temperatures under a superatmospheric pressure of not less than thirty pounds per square inch, substantially as described.

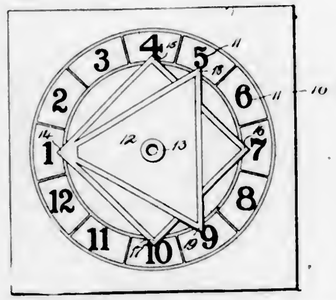
5. The process of obtaining hydrocarbon products by decomposition of hydrocarbons, which process consists in distilling crude petroleum approximately at least to dryness, collecting distillate in such complete distillation in distinct portions, one of them containing the runnings to approximately the point at which the so collected distillate would be no longer free from still wax and like heavy matters of sticky character from a point so early in the run that hydrocarbons with viscosities intermediate seventy seconds and one hundred and seventy seconds at 100° F. represent upward of ten per cent. by volume of the so collected distillate, and the other of them comprising the subsequent runnings, distilling these subsequent runnings approximately at least to dryness with collection by itself of distillate free from still wax and like heavy matters of sticky character, mixing this latter distillate with said first portion of distillate from the crude oil run, and subjecting the mixed distillates to distillation at decomposing temperatures under a superatmospheric pressure of not less than thirty pounds per square inch, substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

1,221,791. DIAL FOR GAMES AND THE LIKE. HARRY COOK, Newark, N. J. Filed Nov. 9, 1915. Serial No. 60,477. (Cl. 46—56.)

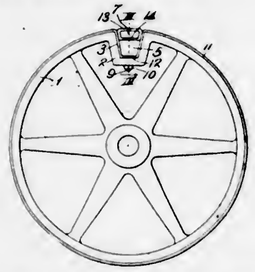
1. In a device of the class described, the combination of a dial having characters arranged in a circle thereon,

and a pointer pivoted to turn on said dial, said pointer having the form of two symmetrical superimposed angular figures differing in the number of their angular points and having one angular point in common.



2. In a device of the class described, the combination of a dial comprising a face plate having characters thereon, and a pointer pivoted on the face plate, the pointer having its outline formed by a square and triangle placed with an angle of each at one point in the periphery.

1,221,792. LAGGING-FASTENER FOR PULLEYS. WALTER W. COSBY, Birmingham, Mo. Filed Oct. 2, 1916. Serial No. 123,438. (Cl. 64—45.)



1. The combination with a pulley having a transverse peripheral groove, lagging fitting around the pulley and against the walls of the groove, a wedge block fitting in the groove, a lagging-covered clamping strip fitting in the groove outward of the wedge block and against the portions of the lagging around the pulley which fit against the side walls of the groove, and means for causing the clamping strip to clamp the wedge block within the groove and the lagging around the pulley tightly upon the same.

2. The combination with a pulley, having a transverse peripheral groove, lagging fitting around the pulley and against the inner walls of the groove, a wedge block fitting in the groove, a bolt extending through the wedge block and the bottom wall of the groove in the pulley, and a retaining device engaging the inner end of the bolt and the inner side of the bottom wall of the groove to draw the bolt inward and hold it in its adjusted position and through such action draw the wedge block down into the groove and cause it to clamp the lagging within the groove tightly in position.

3. The combination with a pulley, having a transverse peripheral groove, lagging fitting around the pulley and against the inner walls of the groove, a wedge block fitting in the groove, a clamping strip covered with lagging arranged in the groove outward of the wedge block, a bolt extending through the said strip, wedge block and the inner wall of the groove, and means engaging the bolt and the inner wall of the groove to draw the former inward and thereby cause the covered strip to clamp upon the wedge block and the latter to clamp the lagging within the groove firmly against the walls of the latter.

4. The combination with a pulley, having a transverse peripheral groove, lagging fitting around the pulley and against the inner walls of the groove, a wedge block fitting in the groove, a clamping strip covered with lagging arranged in the groove outward of the wedge block, a bolt extending through the said strip, the covering thereof, the wedge block, the lagging within the said groove, and the inner wall of the groove, and a bolt clamping and retaining device engaging the bolt and the inner wall of the groove to cause the wedge to seat in the groove, and the covered strip to be clamped against the outer side of the wedge block and the outer portions of the lagging within the groove.

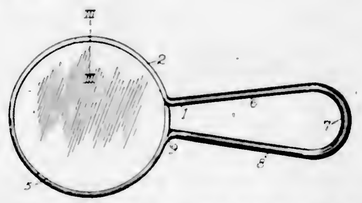
1,221,793. BRICK-SETTER WITH SELF-ACTING GRIPPING-FINGERS. HOLLIS B. CRUM, Chicago, Ill., assignor to Raymond C. Penfield, Chicago, Ill. Filed Mar. 7, 1912. Serial No. 682,166. (Cl. 57—9.)



1. Brick lifting apparatus of the kind described, comprising a plurality of parallel lifting fingers adapted to be positioned under a stack of brick, each finger having a rigid portion and a top portion yieldingly sustained on said rigid portion and adapted to be self-seating against a brick stack independently of each adjacent finger, pivoted expansible side clamping members carried by each finger and means to expand said side members by the relative movement of the top portion with said rigid portion of the lifting finger.

2. Brick lifting apparatus of the kind described, comprising a lifting frame with a plurality of spaced-apart, brick-engaging fingers, extending from said frame and adapted to be positioned under a brick stack, each finger including a rigid portion and a top portion, yielding means to sustain said top portion on said rigid portion at a plurality of points, whereby an independent longitudinal and self-seating action of each yielding top portion relatively to its rigid portion is provided, when the apparatus is lifted independently of each adjacent lifting finger, yielding side members carried by said top portion, and means consisting in wedge members to move each expansible side member through the depression of the top portion on its rigid portion during initiation of the brick lifting movement.

1,221,794. LENS-FRAME. GEORGE H. DAY, Southbridge, Mass. Filed Mar. 9, 1915. Serial No. 13,239. (Cl. 88—39.)



1. In a device of the character described, the combination with a lens, of a one-piece frame and handle therefor, comprising a grooved portion adapted to extend circumferentially of and retain the lens in position, and a handle portion integral with one end of the lens frame thus formed, said handle being shaped in a spring loop and having its opposite end secured to the end of the frame but spaced from the free end, the resiliency of the looped handle tending to decrease the size of the space inclosed by the lens frame whereby the spring of the handle serves to resiliently secure the lens in position within its frame, substantially as described.

2. A one-piece magnifier frame and handle, comprising a grooved annular member in the form of a substantially closed ring adapted to receive a lens, and a handle integral with one end of the ring and formed into a spring loop united with the opposite or free end of the ring a distance from the end thereof, the normal diameter of the ring being less than that of the lens to be received therein, whereby the lens may be inserted in its frame by separation of the ends of the spring looped handle member, while releasing of the handle member will cause it to spring inward and grippingly secure the lens within the frame, substantially as illustrated.

3. In a magnifier, the combination with a lens, of a rim encircling and resiliently engaging the lens, and a spring looped handle integral with one end of the lens rim and bent outward substantially at right angles thereto and extending reversely inwardly and attached to the free end of the rim at a distance from the end thereof, the integral point of merger of the handle and rim having a socket formed therein adapted to receive the free terminus of the rim as inwardly actuated by the resiliency of the handle, whereby the completed structure possesses a smooth and uninterrupted rim from which the lens may be removed by forcing apart of the ends of the looped handle member, substantially as illustrated.

1,221,795. LUBRICATOR. ORSON W. DOOLITTLE, Glenside, Pa. Filed June 9, 1916. Serial No. 102,782. (Cl. 184—69.)

1. In a lubricator, a casing formed of a single casing, including a chamber for lubricant, having a screw threaded inlet at the upper end thereof, a conical valve chamber, below said first chamber, a vertical passageway between said two chambers, a vertical passageway from said valve chamber, terminating in a screw threaded outlet at the bottom of said casing, and a lateral vent from said valve chamber through the wall of said casing; a conical plug valve, rotary on a horizontal axis in said valve chamber, having a handle at one end, a cylindrical plunger chamber in coaxial position in said plug, terminating in a screw threaded socket at the other end of said plug, and two ports axially spaced in said plunger chamber, extending transversely to the plug axis and leading respectively to said passageways, and a vent port, axially spaced between said other ports in said plug, extending transversely to said axis and adapted to register with said casing vent; a spherical plunger in said plunger chamber, adapted to be horizontally reciprocated by fluctuations in fluid pressure between said passageways; a screw in said socket, forming an adjustable abutment for said plunger, limiting the extent of reciprocation of the latter with respect to said ports; a washer encircling the socket end of said plug and movable axially thereon; means connecting said plug and washer to turn together; and a single nut engaging said screw and bearing upon said washer; whereby said nut jams said screw in adjusted position in said plug and holds the latter in adjusted position in said casing.

2. In a lubricator, a casing formed of a single casing, including a chamber for lubricant, having an inlet at the upper end thereof, a conical valve chamber, below said first chamber, a vertical passageway between said two chambers, a vertical passageway from said valve chamber, terminating in a screw threaded outlet at the bottom of said casing, and a lateral vent from said valve chamber through the wall of said casing; a removable closure for said inlet; a conical plug valve, rotary on a horizontal axis in said valve chamber, a plunger chamber in coaxial position in said plug, terminating in a screw threaded socket at one end of said plug, and two ports axially spaced in said plunger chamber, extending transversely to the plug axis and adapted to respectively register with said passageways; a vent port extending transversely to said axis and adapted to register with said casing vent; a plunger in said plunger chamber, adapted to be horizontally reciprocated by fluctuations in fluid pressure between said passageways; a screw in said socket, forming an adjustable abutment for said plunger, limiting the extent of reciprocation of the latter with respect to said ports; a washer encircling the socket end of said plug and movable axially thereon; means connecting said plug and washer to turn together; and a single nut engaging said screw and bearing upon said washer; whereby said nut jams said screw in adjusted position in said plug and holds the latter in adjusted position in said casing.

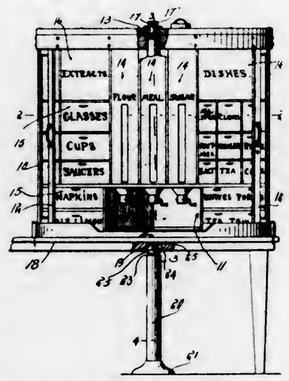
3. In a lubricator, a casing formed of a single casing, including a chamber for lubricant, having an inlet at the upper end thereof, a conical valve chamber, below said first chamber, a vertical passageway between said two chambers, a vertical passageway from said valve chamber, terminating in a screw threaded outlet at the bottom of said casing; a removable closure for said inlet; a conical plug valve, rotary on a horizontal axis in said valve chamber, a plunger chamber in coaxial position in said plug, terminating in a screw threaded socket at one end of said plug, and two ports axially spaced in said plunger chamber, extending transversely to the plug axis and adapted to respectively register with said passageways; a plunger in said plunger chamber, adapted to be horizontally reciprocated by fluctuations in fluid pressure between said passageways; and an adjustable abutment for said plunger, limiting the extent of reciprocation of the latter with respect to said ports.

4. In a lubricator, a casing including a chamber for lubricant, having an inlet, a valve chamber, below said first chamber, a passageway from said valve chamber, terminating in an outlet from said casing; a plug valve, rotary on a horizontal axis in said valve chamber, a plunger chamber in said plug, terminating in a screw threaded socket at the other end of said plug, and two ports axially spaced in said plunger chamber, extending transversely to the plug axis and adapted to respectively register with said passageways; and a plunger in said plunger chamber, adapted to be horizontally reciprocated by fluctuations in fluid pressure between said passageways.

5. A valve casing including a conical valve chamber and passageway leading to and from it; a conical plug valve in said chamber having a plunger chamber terminating in an axial screw socket at one end of said plug, ports, axially spaced in said chamber, adapted to respectively register with said passageways; a plunger in said plunger chamber, adapted to be reciprocated by fluctuations in fluid pressure between said passageways; a screw in said socket, forming an adjustable abutment for said plunger, limiting the extent of reciprocation of the latter with respect to said ports; a washer encircling the socket end of said plug and movable axially thereon; means connecting said plug and washer to turn together; and a single nut engaging

said screw and bearing upon said washer; whereby said nut jams said screw in adjusted position in said plug and holds the latter in adjusted position in said casing.

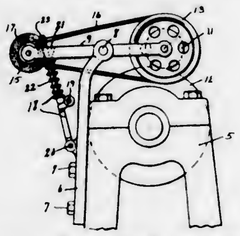
1,221,796. KITCHEN-CABINET. WILLIAM E. EGBERT, Cleveland, Okla. Filed Aug. 11, 1915. Serial No. 44,976. (Cl. 45—16.)



1. The combination with the apertured top of a table, of a supporting leg for a rotating cabinet comprising a standard having a seat in the upper end, an anti-friction bearing disposed in the seat, a vertical screw having a head provided with a seat receiving the upper portion of the bearing, an adjustable sleeve engaged on the upper portion of the screw and extending through the apertured top and adapted to rotatably support the lower portion of the cabinet, and a locking means carried by the screw between the head and sleeve.

2. The combination with an apertured support and a rotary drum having a depending central trunnion, of a supporting leg comprising a vertical post having a socket in its upper end, a ball seated in the socket, a vertical bolt having a downwardly disposed head formed with a socket for the reception of the upper portion of the ball, an internally threaded sleeve engaged for vertical adjustment on the bolt and receiving the said trunnion in the upper end thereof, and extending through the aperture of the support, and a nut engaged on the bolt below the sleeve.

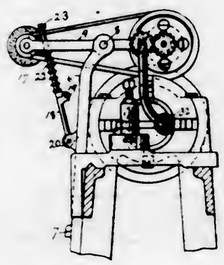
1,221,797. TOOL-GRINDING ATTACHMENT FOR LATHES. CLARENCE V. GREENAMYER, Los Angeles, Cal., assignor of one-half to Joseph McMillan, Glendale, Cal. Filed Sept. 1, 1916. Serial No. 117,987. (Cl. 51—7.)



1. A lathe attachment comprising a standard adapted to be attached to the headstock of a lathe; a shaft frame pivotally mounted on said standard; shafts mounted in said shaft frame, one at each end thereof; a contact wheel on one of said shafts and a grinder wheel on the other of said shafts; a belt pulley on each of said shafts; a belt connecting said belt pulleys; a jointed brace hingedly connected to said standard and passing upwardly through the shaft frame, the pivot of the joint in said brace being between the standard and the center line of the brace; and a spring coiled around the upper member of the brace and bearing against the shaft frame and adapted to cause the contact wheel to bear against the cone pulley when in engagement therewith.

2. A lathe attachment comprising a standard adapted to be attached to the headstock of a lathe; a shaft frame pivotally mounted on said standard; shafts mounted in said shaft frame, one at each end thereof; a contact wheel on one of said shafts and a grinder wheel on the other of said shafts; a belt pulley on each of said shafts; a belt connecting said belt pulleys; and a brace adapted to hold said contact wheel engaging a cone wheel of the lathe or disengaged therefrom.

1,221,798. GRINDING ATTACHMENT FOR LATHES. CLARENCE V. GREENAMYER, Los Angeles, Cal., assignor of one-half to Joseph McMillan, Glendale, Cal. Filed Oct. 4, 1916. Serial No. 123,663. (Cl. 51—7.)



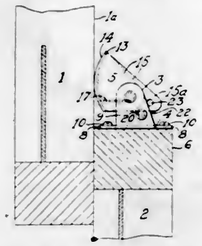
1. A lathe attachment comprising a shaft frame adapted to be attached to the head stock of a lathe; a shaft revolubly mounted in said frame; a contact wheel on said shaft; a pinion on the shaft carrying the contact wheel; a stub shaft detachably secured to said shaft frame; a pinion on said stub shaft meshing with said first pinion; an arm adapted to be secured in the tool post of the lathe; a shaft mounted in said arm; a grinding disk mounted on said last shaft; and a flexible coupling connecting said last shaft with said stub shaft.

2. A lathe attachment comprising a standard adapted to be attached to the headstock of a lathe; a shaft frame pivotally mounted on said standard; a shaft mounted in said shaft frame; a contact wheel on said shaft; a jointed brace hingedly connected to said standard and passing upwardly through said shaft frame, the pivot of the joint in said brace being between the standard and the center line of the brace; a spring coiled around the upper member of the brace and bearing against the shaft frame and adapted to cause the contact wheel to bear against the cone pulley when in engagement therewith; a pinion on the shaft carrying the contact wheel; a stub shaft detachably secured to said shaft frame; a pinion on said stub shaft meshing with said first pinion; an arm adapted to be secured in the tool post of the lathe; a shaft mounted in said arm; a grinding disk mounted on said last shaft; and a flexible coupling connecting said last shaft with said stub shaft.

1,221,799. SASH-LOCK. JOHN HOLTZMAN, New York, N. Y., assignor of one-half to Benjamin Roman, New York, N. Y. Filed May 6, 1915. Serial No. 26,257. (Cl. 16—19.)

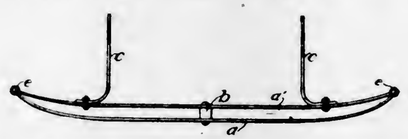
1. A sash lock having the combination of a base adapted to be secured to the lower window sash, a friction cam fulcrumed on said base having a convex surface eccentric to the fulcrum adapted to frictionally engage the upper sash, means to press said cam against the upper sash, and a screw threading through said base having its shank interposed to arrest movement of said cam whereby it will lock it in operative position.

2. A sash lock having the combination of a base adapted to be secured to the lower window sash, a friction cam fulcrumed on said base having a convex surface eccentric to the fulcrum adapted to frictionally engage the upper



sash, means to press said cam against the upper sash, and a screw threading through said base having its shank interposed to arrest movement of said cam whereby it will lock it in operative position and also in inoperative position.

1,221,800. AUTOMOBILE-BUMPER. THOMAS A. HOOVER, Fresno, Cal. Original application filed Jan. 24, 1912, Serial No. 673,140, now Patent No. 1,191,306, dated July 18, 1916. Divided and this application filed July 12, 1916. Serial No. 108,818. (Cl. 213—39.)



1. A spring bumper comprising a pair of transversely extending spaced bars integrally united at their ends and having inherent yielding qualities substantially throughout their length, and means adapting this bumper for attachment to cars having varying widths of frame members.

2. A spring bumper comprising a front and rear spring bar, said bars being interspaced and positioned parallel with relation to each other, and means securing the outer ends of the bars together.

3. A bumper comprising a pair of spring bars disposed parallel with each other and having their outer ends united, said bars being bent near their outer ends, and a block interposed between the bars.

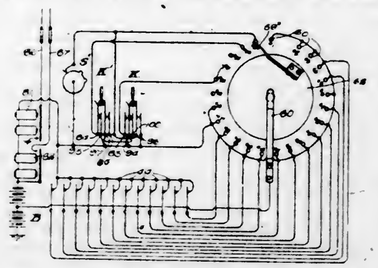
4. A spring bumper embodying a pair of spaced continuous bars set on edge and integrally connected at their ends, and means formed independent of the bars for attaching the bumper to a vehicle, said means being formed to engage opposite sides of the bar that lies adjacent the vehicle and engaging in the space between the bars.

5. A spring bumper embodying a pair of integral continuous straight spaced bars arranged in parallelism and having their ends curved, the extremities of the bars being formed into tubular terminals and lying flat and in contacting relation at the inner sides of said tubular terminals, rivets extending through the tubular terminals to reinforce the latter, and brackets formed independently of the bars for attaching same to a vehicle, said brackets having parts which grip one of the longitudinal edges of the inner bar, and opposite side faces of said inner bar and being disposed in the space between the bars.

[Claims 6 and 7 not printed in the Gazette.]

1,221,801. SELECTIVE SIGNALING SYSTEM. JOHN A. HULIT, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 16, 1912. Serial No. 684,114. (Cl. 177—342.)

1. In a code impulse sending device, a single dial, means for sending different codes of impulses by different operations of said dial, each operation transmitting a plurality of groups of impulses, said means including a code setting device automatically set by the operation of said dial.



2. In combination, a line and an impulse sending device, means for sending codes of impulses over said line, each code consisting of a plurality of groups of impulses, means for selectively varying the codes, said means including a dial, the variations of the codes obtained through the medium of the dial.

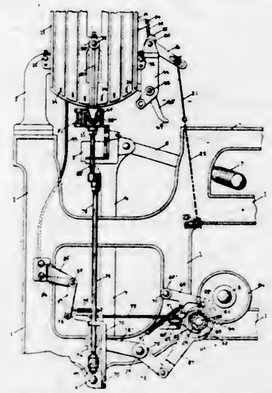
3. In a signaling system, an impulse generator adapted to generate impulses, an impulse spacer which splits up the impulses generated at each operation of the generator into groups, and a separate circuit for each impulse generated.

4. In a signaling system, a calling device, an impulse generator having a separate circuit for each impulse generated, impulse-controlling apparatus associated with each circuit, and a dial for operating the circuit-controlling apparatus.

5. In a signaling system, a calling device, an impulse transmitter having a separate circuit for each impulse generated, an impulse-controlling apparatus associated with each circuit, and a dial for operating the circuit-controlling apparatus.

[Claims 6 to 33 not printed in the Gazette.]

1,221,802. WEFT-REPLENISHING LOOM. GEORGE F. HUTCHINS, Worcester, and EPPA H. RYON, Waltham, Mass., assignors to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Nov. 11, 1912. Serial No. 730,552. (Cl. 139—85.)



1. In a weft replenishing loom, the combination with a stationary magazine, carrying bobbins, and a bobbin conveyer, movable under said magazine to receive a bobbin therefrom, and a portion of said conveyer adapted to enter the shuttle with a bobbin, and to move with the lay, of a vertically moving shuttle box, adapted to extend under said magazine, and carrying a shuttle having an opening

therethrough, and means for operating said shuttle box, to receive a bobbin from said conveyer.

2. In a weft replenishing loom, the combination with a stationary magazine, carrying bobbins, and a bobbin conveyer, movable under said magazine to receive a bobbin therefrom, and a portion of said conveyer adapted to enter the shuttle with a bobbin, and to move with the lay, and a yielding connection to said conveyer, of a vertically moving shuttle box, adapted to extend under said magazine, and carrying a shuttle having an opening therethrough, and means for operating said shuttle box, to receive a bobbin from said conveyer..

3. In a loom, a lay, a set of shifting shuttle boxes adapted to receive a plurality of shuttles containing filling carriers wound with distinctive filling, filling supplying mechanism adapted to contain filling carriers of distinctive or contrasting filling, said mechanism being under filling control to present fresh filling carriers one after another to complete exhaustion of said distinctive or contrasting filling carriers of at least one distinctive or contrasting character of filling of said filling supplying mechanism, combined with filling carrier replenishing mechanism for all of the filling carriers in said filling supplying mechanism, whereby to effect replenishment of all said plurality of shuttles, and including means to raise one of a plurality of shuttles at one side only of the loom from its operative position to an abnormal changing position, to effect at said side of the loom the substitution of a fresh filling carrier of the proper distinctive or contrasting filling pertaining to said raised running shuttle in place of the running filling carrier in said shuttle.

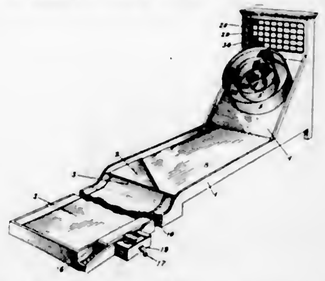
4. In a loom, a lay, a set of shifting shuttle boxes adapted to receive a plurality of shuttles containing filling carriers respectively wound with filling of different color, filling supplying mechanism adapted to contain filling carriers of said different colors, said mechanism being under filling control to present fresh filling carriers one after another to complete exhaustion of all of said filling carriers of at least one color of filling of said filling supplying mechanism, combined with filling carrier replenishing mechanism for all of the said filling carriers in said filling supplying mechanism, whereby to effect replenishment of all said plurality of shuttles with appropriate colors therefor, and including means to raise one of a plurality of shuttles at one side only of the loom from its operative position to an abnormal changing position, to effect at said side of the loom the substitution of a fresh filling carrier of the proper color of filling pertaining to said raised running shuttle in place of the running filling carrier in said shuttle.

5. In a drop box loom, in combination, a lay, a plurality of shuttles carried by said lay, distinctive bobbins for each shuttle, means for holding said distinctive bobbins, said means being under filling control to present a fresh bobbin of the required kind at the transfer point upon substantial exhaustion of the running shuttle, and means for transferring each kind of bobbin to its particular shuttle, said means including mechanism to raise one shuttle at one side of the loom to an abnormal position to thereby replenish said shuttle.

[Claims 6 and 7 not printed in the Gazette.]

1,221,803. GAME APPARATUS. HUGH JOHNSTON, Toronto, Ontario, Canada. Filed Aug. 28, 1916. Serial No. 117,376. (Cl. 46—59.)

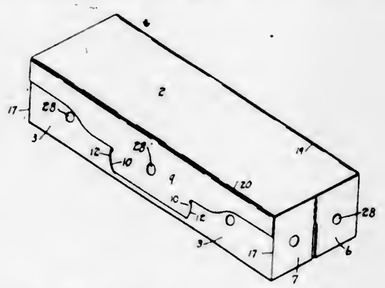
1. A game apparatus comprising a ball track inclined upwardly and formed intermediate of its length to traject a ball at an object, a target formed of an upwardly sloping wall at the end of said inclined track, said wall being a spring cushion and having holes set apart and inclosed by circular walls of different diameters, an inner inclined wall having corresponding holes, slotted tubes joining said inner and outer sloping walls, electrical switch mechanisms, mounted on said inner wall, each having a pivoted arm projecting into said tubes, a scoring mechanism electrically connected to said switch mechanisms, and a ball adapted to operate said scoring mechanism on passing through any one of said holes.



2. A game apparatus comprising a ball track inclined upwardly from the delivery end and having a sharp rise intermediate of its length forming a trajectory bump and an oblique ball guide on the upper reach adjacent to said bump and leading to a ball race on one side of the lower reach, a casing secured to the outer wall of said ball race and communicating therewith, a rocker arm pivoted within said casing and having an operating handle rigidly secured thereto and projecting through a slot in said casing, a ball stop secured to one end of said rocker arm a dividing finger secured to the upper end of said rocker arm, and a target mounted on a wall at the upper end of said upper reach and having holes for the passage of the ball, said wall terminating above said upper reach to permit the return of the balls to said ball race.

3. A game apparatus comprising a ball race, a raised target having holes therethrough, an inner wall under said target having corresponding holes, electrical switch apparatus mounted on said inner wall adjacent to said holes and each formed of a cylindrical member in sections and contacts electrically connected and secured to said sections respectively in spiral arrangement and coacting with a corresponding number of fixed spring contacts, each of said cylindrical members being operated by a pawl and ratchet mechanism actuated by a lever arm pivotally secured and extending into a ball path and a scoring mechanism contained in a case having front apertures and formed of electro-magnets suitably energized and electrically connected to said switch apparatus and number plates pivotally secured and supported and released by said electro-magnets.

1,221,804. EGG-CARRYING PACKAGE. WILLIAM C. KITT, Cincinnati, Ohio. Filed Nov. 13, 1916. Serial No. 131,134. (Cl. 229—29.)



1. In an egg carrying package, a foldable box, locking devices in the ends of said box, said locking devices extending inward to form supports, an egg tray, said egg tray fitting in said box, and suspended on said supports.

2. In an egg carrying package, a foldable box, the ends whereof are provided with flaps capable of being folded and extending inwardly into the box to form extensions, an egg tray, said egg tray fitting in said box on said extensions and suspended therefrom.

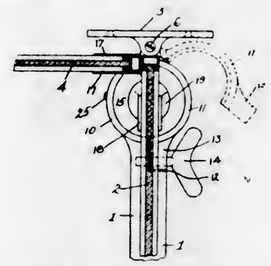
3. In an egg carrying package, a box, an egg carrying tray, said egg carrying tray suspended in said box from the ends thereof, and means in said egg carrying tray for suspending, cushioning and locking the eggs therein.

4. In an egg carrying package, a foldable box provided with ends having inward extensions, an egg tray, said egg tray formed of a number of V-shaped troughs, said egg tray suspended on said inward extensions, the walls of said V-shaped troughs provided with rounded slots largest at their upper extremity and narrowed so as to meet at the bottom and form oppositely disposed slots for holding the eggs.

5. In an egg carrying package, a foldable box provided with ends having inward extensions, an egg tray, said egg tray formed of a number of V-shaped continuous parallel troughs, said egg tray suspended on said inward extensions, the walls of said V-shaped troughs provided with continuous slots running from one wall to the other so as to be oppositely disposed, said slots and V-shaped troughs supporting the eggs.

[Claims 6 and 7 not printed in the Gazette.]

1,221,805. WIND-SHIELD. CLARENCE P. CHAMBERLIN, Detroit, Mich. Filed Apr. 9, 1915. Serial No. 20,142. (Cl. 21—148.)



1. In a windshield construction, a pair of oppositely positioned supporting standards each provided with an aperture near the upper end, a wind shield section having cone shaped trunnions, a bearing member removably secured to each standard at the aperture each having a cone shaped recess to receive the companion trunnion, a storm shield section having trunnions concentric with said cone shaped trunnions rotatable on said bearing member, a binding screw passing through each bearing member in threaded engagement with the cone shaped trunnion, each standard having a semicircular portion formed to receive the concentric trunnions, and a complementary semicircular binding member pivoted to each standard adapted to releasably hold the concentric trunnions in set position, the two sections being removable as a unit from the standards.

2. In a wind-shield for vehicles, a hinge member consisting of a support having an externally threaded ring portion upon one side thereof, the opposite side of the support consisting of a part secured to the ring and a part hinged to the said part, the two last named parts, when in closed relation, having a cone-shaped aperture and an annular recess adjacent the said threaded ring portion, an apertured trunnion having a coned outer surface and an annular external flange adapted to fit the corresponding portions of the support, said coned trunnion having a portion for attaching to a storm-shield section, the said hinged portion of the support being provided with a screw for insertion in a threaded aperture in the fixed companion portion for binding the apertured trunnion in adjusted position, a cap on the externally threaded ring member having a cone shaped recess positioned within the apertured trunnion, a second coned trunnion member adapted for mounting in said cone-shaped recess and having means for attaching to a wind-shield section, and a screw member carried by said cap in threaded relation with the second trunnion member whereby it may be drawn into the cone-shaped recess to frictionally hold said member in its adjusted position.

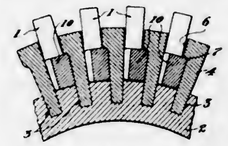
3. A wind-shield comprising a frame-work, a plurality of wind-shield sections supported thereby adapted to be set in vertical relation, the upper section being capable of adjustment at an angle with the frame, and a storm-shield section mounted to extend forwardly of said upper section and limited in its range of adjustment from parallelism to a position at a right angle therewith, the said upper section being supported in a manner to provide a stop for the storm shield section when turned at a right angle thereto, and independent means for locking the several sections in adjusted position.

4. A wind shield comprising vertical side frames, a plurality of wind shield sections supported thereby, the upper section being provided with a cone shaped trunnion on each side thereof and the frames being apertured at the upper end, a bearing member secured to each side frame having a cone shaped recess for the trunnions, a storm shield section having trunnions concentric with the first named trunnions freely rotatable on said bearing members and adapted to be received in the frame aperture, and independent means for frictionally holding the several trunnions and respective sections in adjusted relation.

5. A wind shield comprising two vertical frame members, a plurality of wind shield sections supported thereby, the upper section having a cone shaped trunnion on each side thereof and the frames near the upper end being apertured, bearing members secured to each frame at the aperture having a cone shaped recess for the said trunnion, a storm shield section having flanged trunnions concentric with the first named trunnions and freely rotatable on said bearing member, the aperture in the frame being adapted to receive the flanged trunnions, a removable member engaging the last named trunnions and adapted to frictionally hold the trunnions and attached shield in adjusted position, and means for frictionally holding said upper section in adjusted position.

[Claims 6 to 10 not printed in the Gazette.]

1,221,806. NEEDLE-CARRIER AND NEEDLE FOR KNITTING-MACHINES. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Aug. 31, 1914. Serial No. 859,349. (Cl. 66—21.)



1. In a knitting machine the combination of needles having an offset portion with a needle carrier having inserted spacing walls for guiding the needles on the surface of said carrier, each wall having a surface interlocking with said offset portion of a needle to prevent movement of the needle away from the carrier.

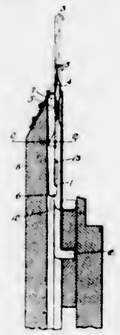
2. In a knitting machine a needle carrier having thereon spacing walls each having one plane surface and one surface presenting an overhanging shoulder, in combination with independently movable needles held between said walls each having a lateral offset in engagement with one of said shoulders.

3. A needle carrier for knitting machines having therein a system of parallel grooves, and inserted walls in said grooves each having an offset surface parallel with the direction of their greatest length, said surface being spaced away from the surface of the carrier and overhanging the space between adjacent bars.

4. As an article of manufacture an insert or wall for inserted-wall needle-carriers for knitting machines, consisting of a bar having a longitudinal shoulder on one face parallel with and near one edge thereof.

5. As an article of manufacture an insert or wall for inserted-wall needle-carriers for knitting machines, consisting of a bar having at its ends a formation enabling it to be held in place, and having a longitudinal shoulder on one face parallel with and near one edge thereof.

1,221,807. NEEDLE MECHANISM FOR KNITTING-MACHINES. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Mar. 9, 1916. Serial No. 83,185. (Cl. 66—5.)



1. The combination with a knitting machine needle having a slotted shank grooved at the back and a hook opening on the face thereof, of a sliding hook-closing member adapted to slide on the back of said needle, said member having a long narrow tongue normally housed within said groove and adapted to be moved forward and outward by a cam surface on said needle through said slot and into closing relation to said hook upon relative movement of said needle and said member in one direction.

2. A knitting machine needle having a shank ending in a hook opening on one face of the shank, in combination with a member having a relatively long thin hook-closing tongue movable in a groove on the other face of the needle shank, said needle having therein an opening having a cam end adapted to move said tongue into position to close said hook on relative movement of said member toward the hook end of said needle, whereby the needle is adapted to have its hook end moved to a much greater distance than necessary for knitting through a yarn loop on its shank without introducing into said loop parts tending to enlarge the same.

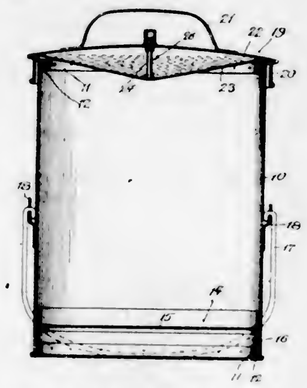
3. A knitting machine needle having a slotted shank and a hook opening on one face thereof, and a sliding hook-closing member adapted to slide on the other or back face of said needle, said member having a spring tongue adapted to be bent by one margin of said slot into closing relation to said hook upon relative movement of said needle and said member in one direction.

4. In a knitting machine, the combination of a hooked needle having a shank and an opening therein with a carrier having a groove for said needle, a groove at the bottom of the needle groove for frictionally holding a hook-closing member, and a hook-closing member in said latter groove having a long thin tongue adapted to pass through the opening in the needle shank into closing relation with the needle hook, and means permitting movement of said needle relatively with respect to said member respectively to effect such passage and closure, and to hold said tongue parallel with the needle shank and withdrawn from the hook.

5. In a knitting machine, the combination of a needle having a hook and a shank, having an opening therein near said hook, with a carrier having a groove for said needle, a groove at the bottom of the needle groove for frictionally holding a hook-closing member, and a hook-closing member in said latter groove having a tongue adapted to enter and pass through said opening in the needle shank into closing relation with said needle hook, and means independent of said opening for positively moving said hook-closing member with said needle at the extremes of the movement of said needle.

[Claim 6 not printed in the Gazette.]

1,221,808. GARBAGE-CAN. ADOLF P. WITTE, Chicago, Ill., assignor of one-half to Maurice S. Dick, Chicago, Ill. Filed Mar. 15, 1916. Strial No. 84,492. (Cl. 220—56.)

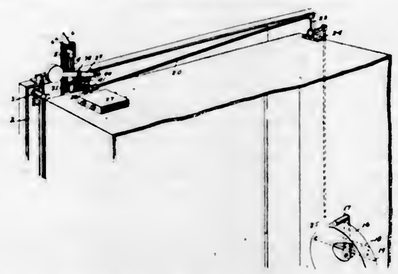


1. A garbage can having a detachable cover formed with top and bottom walls inclosing a liquid disinfectant receiving chamber, having an opening in its bottom wall, a valve tube secured to and extending between the top and bottom walls, and over the opening, said tube having an opening in its side and having a downwardly tapered discharge opening, and a valve stem having a tapered end coöperating with said tapered discharge opening to restrict the discharge of the liquid contents, said valve stem being threaded in said tube, whereby it may be adjusted toward and away from the discharge opening, to permit a continuous drip of the disinfectant through said opening.

2. A garbage can having a removable cover formed with a top piece, and an inverted cone like bottom piece secured thereto, and forming therewith a liquid disinfectant receiving chamber, a valve tube secured to and extending between the top and bottom pieces at the apex of the cone, said tube opening out through its side and having a discharge opening through the bottom piece, and a valve stem threaded in said tube and normally spaced away from and having an end coöperating with said discharge opening to restrict a continuous flow through said discharge opening.

1,221,809. SAFETY-LOCK FOR ELEVATOR SYSTEMS. WILLIAM T. DUNFORD, New York, N. Y., assignor to Shurloc Elevator Safety Company, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 25, 1915. Serial No. 16,931. (Cl. 187—47.)

1. In an elevator safety system, a landing door, and a projection thereon, in combination with a car, a device pivoted on the car and having two spaced portions adapted to be engaged by said projection on the door-opening and closing movements, respectively, whereby the device is shifted alternately in opposite directions, a mechanical controller lock on the car and connected with said device for preventing or permitting starting of the car according to the position of the landing door, and a weighted lever fulcrumed upon the car on an axis distinct from the pivotal axis of said device operative thereon to hold the same and said connected mechanism in a shifted position.



2. An elevator safety system, comprising a landing door element, a device pivotally mounted on the car and having spaced contact portions in order to be shifted alternately in opposite directions by said landing door element, a controller lock, connections between said device and controller lock, and means comprising an inclined track and a roller, one of which is mounted on said device, and a weighted lever carrying the other, whereby the device and controller lock are held in shifted position.

3. In an elevator safety system, a landing door element, a device pivotally mounted on the car shiftable alternately in opposite directions by said element, said device comprising vertically disposed angularly-spaced hinged leaves and an inclined track, and a weighted lever bearing a roller to rest on said track, combined with suitable means on the car operated by said device for preventing and permitting starting according to the position of the landing door.

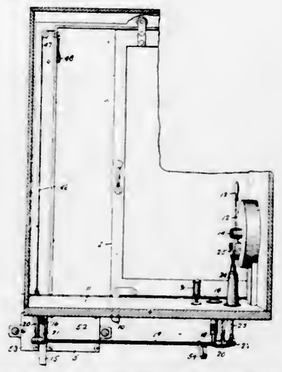
4. In an elevator safety system, a landing door element, a device pivotally mounted on the car shiftable alternately in opposite directions by said element, said device comprising vertically disposed angularly-spaced hinged leaves and a track, approximately one-half of the track being substantially horizontal and the other half being downwardly inclined, and a weighted lever bearing a roller to rest on said track, combined with suitable means on the car operated by said device for preventing and permitting starting according to the position of the landing door.

5. In an elevator safety system including a landing door, a car, and suitable means for preventing starting of the car, mechanism for controlling said means by the opening and closing of the landing door comprising, in combination with a landing door element, vertically disposed hinged leaves on the car, a spring urging said leaves apart, a separate pivoted member confining said leaves, an inclined track and a roller, one of which is carried by said member, a weighted element bearing the other, and a connection from the pivoted member for operating the means first mentioned.

1,221,810. ELEVATOR SAFETY SYSTEM. WILLIAM T. DUNFORD, New York, N. Y., assignor to Shurloc Elevator Safety Company, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 25, 1915. Serial No. 16,932. (Cl. 187—49.)

1. In an elevator safety system, a landing door, a lock for the landing door constructed to prevent opening thereof when the door is within a predetermined distance of closing, car mechanism comprising a movable shoe on the car for releasing said door lock, suitable means on the car for preventing starting of the same, and an operator's device for operating the said means and simultaneously actuating said shoe to unlock the door, a detent at the landing for holding said car mechanism while the landing door is unlocked, and door-controlled means for keeping the detent out of engagement with the car mechanism substantially throughout the range of door movement within the said predetermined distance.

2. In an elevator safety system, a landing door, a lock for the landing door constructed to prevent opening thereof when the door is within a predetermined distance of closing a movable shoe on the car for releasing said door lock, suitable means on the car for preventing starting of the same, an operator's device for operating the said means and simultaneously actuating said shoe to unlock the door, an automatic detent for holding said shoe in the actuated position while the landing door is unlocked, a projection on the door, and a continuous arm connected with the detent and arranged for said projection to ride upon substantially throughout the movement of the door with said predetermined distance so as to hold said detent out of engagement with the shoe.



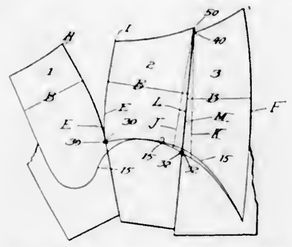
3. In an elevator safety system, a landing door, a projection thereon, a lock having two locking portions cooperating with said projection to lock the door against opening at two positions, namely closed position and a position a predetermined distance therefrom, car mechanism comprising a movable shoe on the car for releasing said door lock, suitable means on the car for preventing starting, and an operator's device for operating the said means and simultaneously actuating said shoe to unlock the door, an automatic detent for holding said car mechanism while the landing door is unlocked, and a continuous arm connected with the detent and arranged for said projection to ride upon substantially throughout the movement of the door within said predetermined distance so as to hold said detent out of engagement with the car mechanism.

4. In an elevator safety system, a landing door, a lock for the landing door constructed to prevent opening thereof when the door is within a predetermined distance of closing, a movable shoe on the car for releasing said door lock, suitable means on the car for preventing starting of the same, an operator's device for operating the said means and simultaneously actuating said shoe to unlock the door, an automatic detent for holding said shoe in the actuated position while the landing door is unlocked, a projection on the door, and a bell-crank lever having one arm connected with said detent and a long lateral arm presenting a continuous riding surface engaged by the said door projection substantially throughout the movement of the door within said predetermined distance to hold said detent out of engagement with the shoe.

5. In an elevator safety system, a landing door, a lock for the landing door constructed to prevent opening thereof when the door is within a predetermined distance of closing, a movable shoe on the car for releasing said door lock, suitable means on the car for preventing starting of the same, an operator's device for operating the said means and simultaneously actuating said shoe to unlock the door, a slidable detent bolt at the landing to hold said shoe, a spring for projecting said detent bolt, a bell-crank lever, and a link connecting one arm of the bell-crank with said bolt, the other arm extended laterally sufficiently to be engaged by the door projection substantially throughout the movement of the door within said predetermined distance so as to hold said bolt retracted.

[Claims 6 to 14 not printed in the Gazette.]

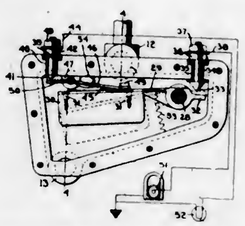
1,221,811. METHOD OF DESIGNING CORSET-STAYS. HUGH MALCOLM MCCORMICK, Chicago, Ill., assignor to Uplift Corset Company, Phoenix, Ariz., a Corporation of Arizona. Filed Nov. 4, 1914. Serial No. 870,281. (Cl. 2—73.)



1. The method of designing a corset stay for corsets, constituting one of a pair of such stays, which consists in outlining on suitable material a four-sided area having the top and bottom edges converging toward the front edge, the rear edge having a height substantially equal to the distance from the waist line to the lower part of the corset, the length of said area being slightly less than the distance from a line between the side and the rear edge of the corset, to the front edge thereof, dividing said area into a plurality of sections on lines running from the top to the bottom, curving certain of the vertical edges thereof and providing the bottom of the combined areas with a concave edge.

2. The method of constructing corset stays for corsets, which consists in preparing a four-sided sheet having one edge substantially equal to the distance from the waist line of the corset to the bottom thereof and having top and bottom edges converging toward the front edge, the length of said sheet being less than the distance from a line between the side and the rear edge of the corset, to the front edge thereof, curving inwardly the top and bottom of said sheet, dividing said sheet into three sections on lines substantially parallel to the front and rear edges thereof, reproducing said sections on another sheet but enlarged to allow for seams, goring the adjacent lower corners of the front and middle sections to produce a convexity of the adjacent areas, rounding the outside of the rear section to allow for the curve in the corset, increasing the middle and rear sections in width from the top diagonally downwardly along their adjacent edges, to partially offset the decrease in the length of the lower edge caused by cutting out said gores, arranging said three sections side by side in contact at the bottom, and continuing the curve of the first section along the base of the other two sections to produce a smooth curve to the extreme opposite corner, substantially as illustrated.

1,221,812. SAFETY OIL-GAGE FOR INTERNAL-COMBUSTION ENGINES. JOHN C. MCMURRAY, East Boston, Mass. Filed Mar. 18, 1916. Serial No. 85,195. (Cl. 123—165.)



1. An automatic safety controller for an internal combustion engine having an electrical ignition system and provided with a lubricating system including an oil containing reservoir, said controller comprising an auxiliary receptacle, means for supporting the same below the normal level of the oil in said reservoir, means for permitting free communication between said reservoir and said auxiliary receptacle whereby said receptacle will be normally filled and the same level of oil maintained therein as in the reservoir when the level of the oil in the reservoir falls below the top of the auxiliary receptacle, an insulated electrical terminal for the ignition circuit having a contacting member extending into said auxiliary receptacle, a float in said receptacle, an electrically grounded lever having its long arm connected to said float and its short arm positioned to engage said terminal contacting member upon the settling of the float, whereby the ignition system of the engine will be rendered ineffective and the engine stopped when the oil in the reservoir has sunk to a predetermined level.

2. An automatic safety indicator and controller for an internal combustion engine having an electrical ignition system and provided with a lubricating system including an oil containing reservoir; said indicator and controller comprising an auxiliary receptacle adapted to be secured to said reservoir and to communicate therewith, insulated electrical terminals projecting into said receptacles, one of said terminals being connected to a signaling device and the other terminal to the ignition circuit of the engine, a float in said receptacle, means operable by said float adapted to engage the terminal of said signal circuit and thereby continuously to maintain the signal, an electrically grounded arm secured to said float and adapted upon exhaustion of oil to a predetermined level to engage the terminal of the ignition circuit and render the same ineffective.

3. An automatic safety indicator and controller for an internal combustion engine having an electrical ignition system and provided with a crank case containing oil, said indicator and controller comprising a detachable auxiliary receptacle freely communicating with said crank case, whereby the same level of oil is maintained in said receptacle and said crank case, insulated electrical conductors connected respectively to a signaling device and to the ignition system, and having contact members extending into said receptacle, a float in said receptacle and independent electrically grounded levers operable by the settling of said float to predetermined levels, one of said levers being adapted to engage the contact member of the signaling device and thereby maintain a circuit through the signaling device and the other lever operable upon further settling of the float to engage the contact member of the terminal of the ignition system and render ineffective the ignition system.

4. An automatic safety indicator for lubricating systems of internal combustion engines comprising an auxiliary receptacle having a float chamber adapted to be positioned in communicative relation to a lubricant receptacle, said auxiliary receptacle consisting of two hollow complementary casing members having suitably insulated electrical terminals adapted to be connected in different electric circuits, a float having a pivotally mounted arm adapted operatively to engage one of said terminals and means also operable by said float when the same descends below predetermined levels adapted to engage the other terminal whereby a plurality of signals may be given as the level of the oil falls.

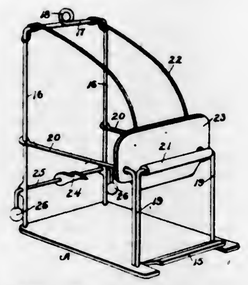
5. An automatic safety indicator and controller for the lubricating systems of internal combustion engines comprising an auxiliary receptacle having a float chamber adapted to be positioned in communicative relation to the lubricant receptacle, said auxiliary receptacle comprising two hollow complementary casing members, insulated electrical terminals adapted to be connected in different electric circuits clamped between the adjacent edges of said casing members said terminals having sharp ends extending into the float chamber, a float in said chamber and means operable by said float when the same descends below predetermined levels successively to engage the sharp edges of said terminals whereby a plurality of signals may be given as the level of the oil falls.

[Claims 6 to 10 not printed in the Gazette.]

1,221,813. [WITHDRAWN.]

REISSUES.

14,279. BAG-HOLDER. ARTHUR D. BACK, Juneau, Alaska. Filed Dec. 3, 1913. Serial No. 804,525. Original No. 1,038,474, dated Sept. 10, 1912, Serial No. 681,676, filed Mar. 5, 1912. (Cl. 211—2.)



1. A bag holder comprising a frame including a base, a back, a front, and sides, a shield or follower, said frame including means on which said shield or follower is loosely and slidably mounted to move in a direction parallel to the base, a spring secured to the frame and slidably engaging the shield or follower, and a latch device mounted on the frame in a position below the shield or follower, said spring adapted to project with its lower end below said follower when said spring is compressed into engagement with said latch.

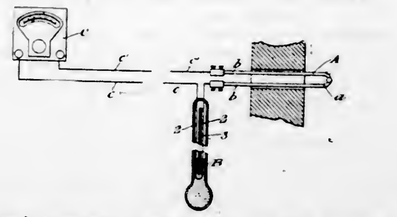
2. A bag holder comprising a base, a back, a front, and side members, the front member having a bag opening of greater area than the area of the bottom of the bag, a lip projecting upwardly and forwardly from the base at the front opening and extending beyond the plane of the front opening and a spring compressed follower for engaging the bags to press the folded bottoms through said opening and against said lip whereby the folded bottom of the exposed bag will open up and lie in a direction to hold the upper edge of the folded bottom of the bag away from the bag proper to facilitate grasping.

3. A bag holder comprising a frame including back, front, and side bars, a shield or follower loosely and slidably mounted on two of said side bars, said frame having an opening in the front through which the lower or bottom ends of the bags are adapted to be pressed, a spring secured to said frame and engaging the back of said follower, means for slidably connecting said spring to said follower, said connecting means lying at a place above the plane of the side bars on which said follower is mounted whereby said follower will be tilted backward from a vertical plane to thereby cause said follower to bulge the bag bottoms through said front opening, and a restraining lip on the bottom of said holder to engage the lower ends of the bag bottoms and hold the same backwardly while the upper ends of the bag bottoms are opened outwardly at the "bulge" to facilitate grasping.

14,280. TEMPERATURE-COMPENSATING DEVICE FOR THERMO-ELECTRIC MEASURING INSTRUMENTS. WILLIAM H. BRISTOL, Middlebury, Conn., assignor to The Bristol Company, Waterbury, Conn., a Corporation of Connecticut. Filed Dec. 15, 1916. Serial No. 137,250. Original No. 783,503, dated Feb. 28, 1905, Serial No. 237,026, filed Dec. 15, 1904. (Cl. 73—32.)

1. The combination with a thermo-electric generator used as a pyrometer or thermometer and an indicating or recording instrument, of automatic means for compensating for changes of temperature at the so-called cold or outer ends of said thermo-electric generator.

2. The combination with a thermo-electric generator used as a pyrometer or thermometer and an indicating or recording instrument, of an automatic temperature-compensating device located in series in the circuit and in close proximity to the so-called cold or outer ends of said thermo-electric generator.

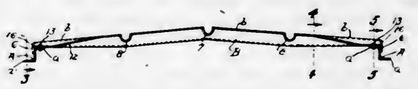


3. The combination with a thermo-electric generator used as a pyrometer or thermometer and an indicating or recording instrument, of an electric resistance changing device operating automatically under variations of temperature and located in proximity to the so-called cold or outer ends of said thermo-electric generator to compensate for changes of temperature at said ends.

4. The combination with a thermo-electric generator used as a pyrometer or thermometer and an indicating or recording instrument, of a temperature-compensating device located in series in the circuit and in close proximity to the so-called cold or outer ends of said thermo-electric generator.

5. The combination with a thermo-electric generator used as a pyrometer or thermometer and an indicating or recording instrument, of a temperature-compensating device included in series in the circuit and located in close proximity to the so-called cold or outer ends of said thermo-electric generator, the said compensating device consisting of a resistance in a liquid thermometric device

14,281. CARLINE FOR CAR-ROOF FRAMES. JOSEPH A. COSTELLO, Cleveland, Ohio, assignor to Cleveland Car Specialty Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Feb. 21, 1916. Serial No. 79,767. Original No. 1,033,548, dated July 23, 1912, Serial No. 693,095, filed Apr. 25, 1912. (Cl. 108—5.6.)



1. A metal carline comprising a trough adapted to bridge the space between the side plates of a car-roof-frame and provided with two downwardly projecting flanges which are arranged at opposite ends respectively and transversely of the carline, which trough is reduced in depth toward said flanges and has its end-portions gradually enlarged in width toward said flanges, said trough being widest at said flanges and provided at the top with two laterally and outwardly projecting flanges which are arranged at opposite sides respectively and extend longitudinally of the trough and have their outer portions depressed along the end-portions of the trough.

2. A metal carline comprising a trough adapted to bridge the space between the side plates of a car-roof-frame and provided with two downwardly projecting flanges which are arranged at opposite ends respectively and transversely of the carline, which trough is reduced in depth toward said flanges and provided at the top with two laterally and outwardly projecting flanges which are arranged at opposite sides respectively and extend longitudinally of the trough and are larger in width along the end-portions of the trough than between said end-portions and have their outer portions depressed along the end-portions of the trough and adapted to be seated on the side plates of a car-roof-frame.

3. A metal carline comprising a trough adapted to bridge the space between the side plates of a car-roof-frame and provided with two downwardly projecting

flanges which are arranged at opposite ends respectively and transversely of the carline, which trough is reduced in depth toward said flanges and provided at the top with two laterally and outwardly projecting flanges which are arranged at opposite sides respectively and extend longitudinally of the trough and have their outer portions depressed along the end-portions of the trough, the depressed portions of each longitudinal flange of the trough being arranged diagonally of the adjacent side of the trough and having their outer end-portions adapted to be seated on the side plates of a car-roof-frame.

4. A metal carline comprising a trough adapted to bridge the space between the side plates of a car-roof-frame and provided with two downwardly projecting flanges which are arranged at opposite ends, respectively of the carline, which trough is reduced in depth and enlarged in width toward said flanges and provided at the top with two laterally and outwardly projecting flanges which are arranged at opposite sides respectively and extend longitudinally of the trough and have their outer portions depressed along the end-portions of the trough and adapted to be seated on the side plates of a car-roof-frame, the first-mentioned flanges extending transversely of the carline to the longitudinal edges of the depressed portions of the second-mentioned flanges.

5. The combination, with the two laterally spaced side plates of a car-roof-frame, of a metal carline comprising a trough bridging the space between and mounted on and attached to said side plates and provided at each end with a downwardly projecting flange which overlaps the outer side of and constitutes a lateral abutment for the adjacent side plate, which trough is reduced in depth toward said flanges and provided at the top with two laterally and outwardly projecting flanges which are arranged at opposite sides respectively and extend longitudinally of the trough and have their outer portions depressed along the end-portions of the trough and seated on the side plates, the first-mentioned flanges extending transversely of the carline to the longitudinal edges of the depressed portions of the second-mentioned flanges.

6. The combination, with the two laterally spaced side plates of a car-roof-frame, of a metal carline comprising a trough bridging the space between and mounted on said side plates and provided at each end with a downwardly projecting flange which overlaps the outer side of and constitutes a lateral abutment for the adjacent side plate, which trough is reduced in depth toward said flanges and provided at the top with two laterally and outwardly projecting flanges which are arranged at opposite sides respectively and extend longitudinally of the trough and have their outer portions depressed along the end-portions of the trough, the depressed portions of the second-mentioned flanges being seated on and secured to the side plates.

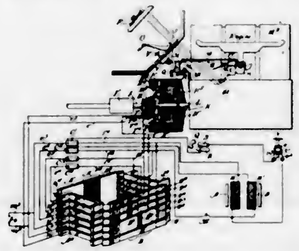
7. A metal carline comprising a trough adapted to bridge the space between the side plates of a car-roof-frame, which trough is provided at the top with two laterally and outwardly projecting flanges which are arranged at opposite sides respectively and extend longitudinally of the trough and have portions thereof depressed along the end-portions of the trough to form bearing members, the depressed parts of each longitudinal flange of the trough being arranged diagonally of the adjacent side of the trough and having their outer end-portions adapted to be seated on the aforesaid side plates, said bearing members of each end-portion of the carline and the bottom of the adjacent end-portion of the trough being connected together at the outer extremity of said bottom and having their lower surfaces arranged in the same plane horizontally.

8. A metal carline having each end-portion thereof provided with three seating surfaces which are spaced transversely of the carline and arranged to rest on a side plate of a car-roof-frame, said carline comprising a trough which is adapted to bridge the space between the side plates of said car-roof-frame and has the lower surface of its bottom forming the intermediate of the aforesaid seating surfaces, said trough being provided at the top with two laterally and outwardly projecting flanges which are arranged at opposite sides respectively and extend longitudinally of the trough and have portions thereof depressed along the end-portions of the trough, there being an air-space formed between each depressed portion of each longitudinal flange and the adjacent side of the trough, which air-space extends to and is closed at the adjacent outer extremity of the trough.

9. The combination, with the two laterally spaced side plates of a car-roof-frame, of a metal carline which comprises a trough bridging the space between and extending over and attached to said side plates and is provided next above each side plate with three seating surfaces which are spaced longitudinally of said side plate and connected together at the outer side of said side plate, said trough being provided at the top with two laterally and outwardly projecting flanges which are arranged at opposite sides respectively and extend longitudinally of the trough and have portions thereof depressed along the end-portions of the trough, the depressed parts of said flanges being arranged diagonally of the sides of the trough and having their outer end-portions forming the outer of the aforesaid seating surfaces.

10. The combination, with the two laterally spaced side plates of a car-roof-frame, of a metal carline which comprises a trough bridging the space between and extending over and attached to said side plates and is provided over each side plate with three seating surfaces which are spaced longitudinally of said side plate, said trough being provided at the top with two laterally and outwardly projecting flanges which are arranged at opposite sides respectively and extend longitudinally of the trough and have portions thereof depressed along the end-portions of the trough, the depressed parts of said flanges being arranged diagonally of the sides of the trough and having their outer end-portions forming the outer of the aforesaid seating surfaces, and there being an air-space formed between each depressed portion of each of said flanges and the adjacent side of the trough, which air-space extends to the outer side of the adjacent side plate.

14,282. POWER-TRANSMISSION SYSTEM. WILLIAM MORRISON, Chicago, Ill., assignor to Vesta Accumulator Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 9, 1916. Serial No. 119,304. Original No. 1,148,788, dated Aug. 3, 1915, Serial No. 861,770, filed Sept. 15, 1914. (Cl. 171—315.)



1. A power-transmission system, comprising a variable speed engine, a driving shaft connected to the engine and a driven shaft connected to the load, a dynamo-electric clutch comprising a rotatable armature and a rotatable field magnet, one connected to the driving shaft and the other to the driven shaft, a circuit controller for the dynamo circuits, and coördinated means for controlling the gas-supply to the engine and for operating the controller.

2. A power-transmission system, comprising a variable speed engine, a driving shaft connected to the engine and a driven shaft connected to the load, a dynamo-electric clutch comprising a rotatable armature and a rotatable field magnet, one connected to the driving shaft and the

other to the driven shaft, a circuit controller for the dynamo circuits, and coördinated means arranged to simultaneously supply gas to the engine and operate the controller.

3. A power-transmission system, comprising a variable speed engine, a driving shaft connected to the engine and a driven shaft connected to the load, a dynamo-electric clutch comprising a rotatable armature and a rotatable field magnet, one connected to the driving shaft and the other to the driven shaft, a circuit controller for the dynamo circuits, and coördinated means arranged to simultaneously supply gas to the engine and operate the controller, said gas-supplying means arranged to thereafter control, as desired, the speed of the engine and thereby control the power transmitted to the driven shaft through the clutch.

4. A power-transmission system comprising a variable speed engine, a driving shaft connected to the engine and a driven shaft connected to the load, a dynamo-electric clutch comprising a rotatable armature and a rotatable field magnet, one connected to the driving shaft and the other to the driven shaft, a circuit controller for the dynamo circuits, a throttle lever for controlling the supply of gas to the engine, and means connected to said lever for operating the controller.

5. A power-transmission system comprising a variable speed engine, a driving shaft connected to the engine and a driven shaft connected to the load, a dynamo electric clutch comprising a rotatable armature and a rotatable field magnet, one connected to the driving shaft and the other to the driven shaft, a storage battery comprising a plurality of cell units, a circuit controller constructed and arranged to connect the field coils and cell units in multiple relation, a throttle lever for controlling the supply of gas to the engine, and means connected to said lever for operating the controller.

6. A power transmission system comprising a variable speed engine, a driving shaft connected to the engine and a driven shaft connected to the load, a dynamo-electric clutch comprising a rotatable armature and a rotatable field magnet, one connected to the driving shaft and the other to the driven shaft, an electromagnetically actuated circuit controller for the dynamo circuits, a throttle lever for controlling the supply of gas to the engine, and a switch connected to said lever to open and close the controller circuit.

7. A power-transmission system, comprising a variable speed engine, a driving shaft connected to the engine and a driven shaft connected to the load, a dynamo-electric clutch comprising a rotatable armature and a rotatable field magnet, one connected to the driving shaft and the other to the driven shaft, an electromagnetically actuated circuit controller for the dynamo circuits, a throttle lever for controlling the supply of gas to the engine, a switch connected to said lever to open and close the controller circuit, and a second switch in said controller circuit.

8. A power-transmission system, comprising a variable speed engine, a driving shaft connected to the engine and a driven shaft connected to the load, a dynamo-electric clutch comprising a rotatable armature and a rotatable field magnet, one connected to the driving shaft and the other to the driven shaft, a circuit controller constructed and arranged to control the dynamo circuits, a valve for supplying gas to the engine, a hand throttle lever flexibly connected to the valve, a spring-retracted foot throttle lever positively connected to said valve, and controller operating means arranged to be operated by either lever.

9. A power-transmission system, comprising a variable speed engine, a driving shaft connected to the engine and a driven shaft connected to the load, a dynamo-electric clutch comprising a rotatable armature and a rotatable filed magnet, one connected to the driving shaft and the other to the driven shaft, an electromagnetically actuated circuit controller for the dynamo circuits, a foot throttle lever for controlling the supply of gas to the engine, a switch connected to said lever to open and close the controller circuit, and a second switch in said controller circuit, the foot throttle lever and the second switch being sufficiently far apart to require separate actuation.

10. A power-transmission system comprising a variable speed engine, a driving shaft connected thereto, a driven load shaft and a dynamo electric clutch whereof the rotatable field and rotatable armature are connected one to said driving shaft and one to said driven shaft, one of said rotors having movably connected thereto parts adapted to be actuated by centrifugal force, and the other rotor having a member with which said parts are adapted slidingly to engage, said parts being so proportioned that the centrifugally produced friction between said parts and member when in engagement produces a clutching action, and means for breaking the dynamo-circuits, whereby, when said circuits are broken while the automobile is running, the said clutch action will cause the engine to act as a compressor brake.

11. A power transmission system for automobiles comprising a variable speed gas-engine, a driving shaft connected to the engine, a driven shaft connected to the load, a dynamo electric clutch comprising a rotatable armature and a field magnet rotatable within said armature, one connected to the driving shaft and one to the driven shaft, a commutator ring, brushes on the field magnet bearing outwardly against the commutator ring, the brushes being so proportioned that the centrifugally produced pressure will effect a clutching action, and means for breaking the dynamo circuits, whereby, when the said circuits are broken, while the automobile is running, the said clutching action will cause the engine to act as a compressor brake.

12. The combination of a variable speed gas engine, a driving shaft, a driven shaft, clutching mechanism between said shafts, a throttle lever for the gas engine, and means controlled by the movement of said lever in a direction to increase the fuel supply to the engine for rendering said clutching means effective.

13. The combination of a variable speed gas engine, a driving shaft, a driven shaft, clutching mechanism between said shafts, a throttle lever for the gas engine, and means controlled by the movement of said lever in the same direction for varying the fuel supply to the engine and for controlling said clutching means.

14. The combination of a variable speed gas engine, a driving shaft, a driven shaft, clutching mechanism between said shafts, a throttle lever for the gas engine, and means controlled by the initial movement of said lever in a direction to increase the fuel supply to the engine for rendering said clutching means effective.

15. The combination of a variable speed gas engine, a driving shaft, a driven shaft, clutching mechanism between said shaft, a throttle lever for the gas engine, and means controlled by the movement of said lever in a direction to decrease the fuel supplied to the engine for rendering said clutching means ineffective.

16. The combination of a variable speed gas engine, a driving shaft, a driven shaft, clutching mechanism between said shafts, a throttle lever for the gas engine, and means whereby said clutching means is rendered effective and ineffective by movement of said lever near the end of the stroke of said lever in its control of the fuel supplied to the engine.

17. The combination of a variable speed engine, a driving shaft, a driven shaft, electromagnetic clutching means between said shafts, a throttle lever for the engine, and means controlled by said lever for rendering said electromagnetic clutching means effective and ineffective.

18. The combination of a variable speed engine, a driving shaft, a driven shaft, clutch mechanism between said shafts comprising electromagnetic and centrifugally-operated mechanical means, a throttle lever for the engine, and means controlled by said lever for causing the electromagnetic portion of said clutch mechanism to be effective and ineffective.

19. A power-transmission system comprising a variable speed gas engine, electrical power transmitting means, and coördinated means for controlling the amount of fuel supplied to the engine and for rendering said electrical means effective and ineffective for transmitting power.

20. A power-transmission system comprising a variable speed engine, electrical power transmitting means, a throt-

tle lever for the engine, and means operated by said lever for rendering said electrical means effective and ineffective for transmitting power.

21. A power-transmission system comprising a variable speed gas engine, electrical power transmitting means, and coördinated means for controlling the amount of fuel supplied to the engine, and for making and breaking a circuit determining the operation of said electrical means.

22. A power-transmission system comprising a variable speed engine, electrical power transmitting means, a throttle lever for the engine, an automatic controller for controlling the circuits of said electrical means, and means controlled by the throttle lever for causing the operation of said controller.

23. A power transmission system comprising a variable speed gas engine, a driving shaft connected to the engine, a driven shaft connected to the load, electromagnetic means for transmitting energy from the driving to the driven shaft, and coördinated means for controlling the amount of fuel supplied to the engine and for interrupting the circuit of said electromagnetic means.

24. A power-transmission system comprising a variable speed engine, a driving shaft, a driven shaft, a dynamo-electric clutch between said shafts, said dynamo having a rotatable field and a rotatable armature, a centrifugally acting clutch between the armature and field, a storage battery in circuit, and a switch in said circuit.

25. A power-transmission system comprising a variable speed engine, a driving shaft, a driven shaft, a dynamo-electric clutch between said shafts, a storage battery in circuit with said dynamo, a circuit controller constructed and arranged to connect the dynamo and storage battery in multiple relation, a separate switch in said battery circuit, a throttle lever for controlling the supply of gas to the engine, and means connected to said lever for operating the controller.

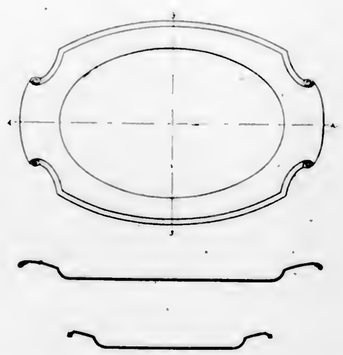
DESIGNS.

50,546. HANDLE FOR A SPOON OR ANALOGOUS UTENSIL. GROSVENOR N. ALLEN, Oneida, N. Y. Filed Dec. 12, 1916. Serial No. 136,575. Term of patent 7 years.



The ornamental design for a handle for a spoon or analogous utensils as shown.

50,547. PLATTER, TRAY, OR SIMILAR ARTICLE. GEORGE E. BALL, Stratford, Conn., assignor to Whiting Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Feb. 9, 1917. Serial No. 147,725. Term of patent 14 years.



The ornamental design for a platter, tray or similar article, as shown.

50,548. EMBROIDERY. EMIL BERGER, Brooklyn, N. Y., assignor to Boulevard Lace & Embroidery Company, Inc., West New York, N. J., a Corporation of New York. Filed Jan. 30, 1917. Serial No. 145,535. Term of patent 3½ years.



The ornamental design for embroidery substantially as shown.

50,549. RING OR SIMILAR ARTICLE. MARTIN L. BOWDEN and MARTIN L. BOWDEN, Jr., Brooklyn, N. Y. Filed Feb. 7, 1917. Serial No. 147,264. Term of patent 7 years.



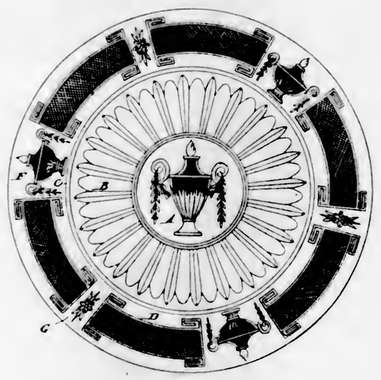
The ornamental design for a ring or similar article as shown.

50,550. GLASS PLATE OR SIMILAR ARTICLE. FLOYD F. CARY, Fairhaven, Mass., assignor to The Pairpoint Corporation, a Corporation of Massachusetts. Filed Jan. 7, 1916. Serial No. 70,883. Term of patent 7 years.



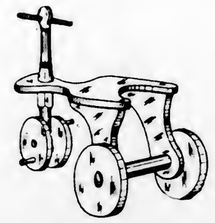
The ornamental design for a glass plate or similar article, substantially as shown and described.

50,551. GLASS PLATE OR SIMILAR ARTICLE. FLOYD F. CARY, Fairhaven, Mass., assignor to The Pairpoint Corporation, a Corporation of Massachusetts. Filed Oct. 30, 1916. Serial No. 128,625. Term of patent 7 years.



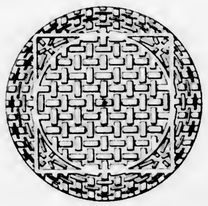
The ornamental design for a glass plate or similar article as shown and described.

50,552. VELOCIPEDE FOR THE USE OF CHILDREN. HOMER W. CASE, Pittsburgh, Pa., assignor to Pittsburgh Toy Vehicle Company, Pittsburgh, Pa. Filed Jan. 16, 1917. Serial No. 142,770. Term of patent 3½ years.



The ornamental design for a velocipede for the use of children, as shown.

50,553. GOLF-BALL. JAMES PRINGLE COCHRANE, Edinburgh, Scotland. Filed Jan. 31, 1917. Serial No. 145,806. Term of patent 7 years.





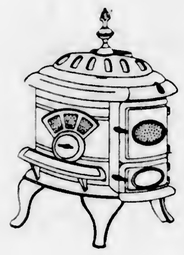
The ornamental design for a golf ball, as shown.

50,554. CANDY-CONTAINER. LAURA M. COOLIDGE, Chicago, Ill., assignor to Bunte Brothers, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1917. Serial No. 140,330. Term of patent 14 years.



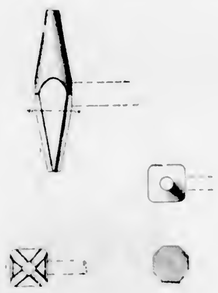
The ornamental design for a candy container as shown.

50,555. STOVE. CLARENCE R. GRAHAM, Oakland, Cal. Filed Dec. 16, 1916. Serial No. 137,466. Term of patent 7 years.



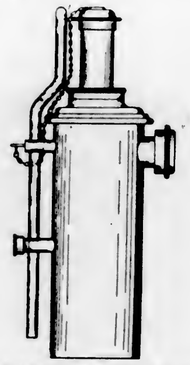
The ornamental design for a stove, as shown.

50,556. HAMMER-HEAD. JOHN H. HILDEBRANDT, Salina, Kans. Filed Dec. 8, 1916. Serial No. 135,913. Term of patent 3½ years.



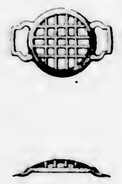
The ornamental design for a hammer head, as shown.

50,557. BLOW-TORCH. CHARLES R. LAMBERT, Detroit, Mich., assignor to The Clayton & Lambert Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 8, 1916. Serial No. 82,933. Term of patent 14 years.



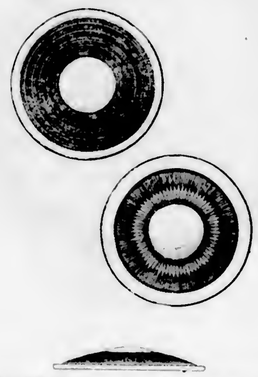
The ornamental design for a blow torch, substantially as shown.

50,558. PROTECTOR FOR ARTICLES TO BE WORN ON THE WRIST. SAMUEL JOSEPH LEVI, Birmingham, England. Filed Nov. 8, 1916. Serial No. 130,279. Term of patent 7 years.



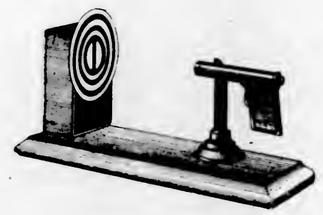
The ornamental design for a protector for articles to be worn on the wrist, as shown.

50,559. LENS FOR MOTOR-CAR LAMPS. LUCIEN B. MARTIN, Lancaster, Ohio, assignor to The Lancaster Glass Company, Lancaster, Ohio, a Corporation of Ohio. Filed July 24, 1915. Serial No. 41,793. Term of patent 7 years.



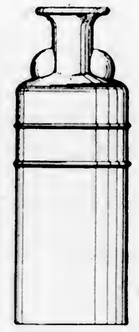
The ornamental design for a lens for motor car lamps, as shown.

50,560. TOY SAVINGS-BANK. SAMUEL SIEGEL, New York, N. Y. Filed Jan. 27, 1917. Serial No. 145,002. Term of patent 14 years.



The ornamental design for a toy saving bank, substantially as shown.

50,561. POISON-BOTTLE. JESSE JAMES SPARGO, Albion, N. Y. Filed Nov. 9, 1916. Serial No. 130,478. Term of patent 3½ years.



The ornamental design for a poison bottle, as shown.

TRADE-MARKS

PUBLISHED APRIL 3, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 69,755. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WANDERER-WERKE VORM. WINKLHOFER & JAENICKE AKTIENGESELLSCHAFT, Schönau, near Chemnitz, Germany. Filed Apr. 12, 1913.

Continental

Particular description of goods.—Type-Writers, Type-Writer Parts, Type-Writers Combined with Calculating-Machines, Type-Writers Combined with Envelop-Feeders, Type-Writer Copy-Holders, Type-Writer Key-Protectors, Type-Writer Rolls, Type-Writer Release, Type-Writer Tabulators, Type-Writer Keys, Flat-Impression Type-Machines, Polytype Writing-Machines, Ribbon-Winding Machines, Ribbon-Inking Machines, Machines for Cutting Glass Plates, Knife Erasers, Free-Moving Crown-Gear, Connecting-Rods, Air-Pumps, Mechanical Motors, Oil-Pumps, Address-Printing Machines, Letter-Carriages, Folding-Machines, Gumming-Machines, Binding-Machines, Envelop Filling and Sealing Machines, Letter-Opening Machines, Automatic Article-Delivering Devices Comprising Coin-Controlled Machines, Type-Writer and Adding-Machine Tools, Gut Strings for Type, and the Following Tools—Namely, Bit-Braces, Pliers, Files, Shears, Bits, Chisels, Vises, Wrenches, Hammers, Lathes, Formers, Mortising-Machines, Saws, Pocket-Knives, Scissors, Screw-Drivers, Planes, Pipe-Cutters, Stocks and Dies, Boring-Machines; Planing, Shaping, and Slotting Machines; Drills, Thread-Cutting Machines, Milling-Machines, Grinding-Machines, Sawing-Machines, Wood-Planing Machines, Cutting and Punching Machines, Forging-Machines, Molding and Casting Machines.

Claims use since January, 1903.

Ser. No. 83,971. (CLASS 38. PRINTS AND PUBLICATIONS.) S. S. KRESGE Co., Detroit, Mich. Field Jan. 20, 1915.



Particular description of goods.—Catalogues; Folders; Printed Books; Valentines; Post-Cards, Sheet-Music.

Claims use since Jan. 1, 1914.

Ser. No. 84,194. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RICHARD HUDNUT, New York, N. Y. Filed Jan. 29, 1915.

NYRA

Particular description of goods.—Perfume, Toilet Water, Headache-Cologne, Smelling-Salts, Creams for the Skin, Sachet-Powder, Face-Powder, Talcum Powder, Bath-Powder, Bath-Salts, Toilet Cerate, Almond-Meal, Lip-Rouge, and Dentifrices.

Claims use for perfume since Sept. 18, 1914, and other articles since Jan. 23, 1915.

Ser. No. 85,315. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE MONITOR STOVE & RANGE Co., Cincinnati, Ohio. Filed Mar. 22, 1915.

CALORIC

Particular description of goods.—Hot-Air Furnaces.

Claims use since Feb. 17, 1914.

Ser. No. 86,867. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE C. NELSON SMITH COMPANY, Milwaukee, Wis. Filed May 24, 1915.

D-O-D

Particular description of goods.—Medicines and Specifics Prepared for the Treatment of the Following Diseases: Barber's Itch, Burns, Cuts, Scalds, Cholera Morbus, Colic, Chilblains, Diphtheria, Eczema, Hives, Rashes, and other Skin Diseases, Gonorrhea, Sores; Aching, Tired, Sore, Sweaty, and Bad-Smelling Feet; Hog-Cholera and the Prevention Thereof; Colic, Cuts, Galls, and Fistula in Horses; Bloat, Cuts, and Wounds in Cattle; Mange in Dogs; Cholera, Pip, and Roup in Chickens; Deodorants, Disinfectants, Germicides, and Mouth-Wash, Gangrene, and Leucorrhea.

Claims use since the year 1898.

Ser. No. 87,507. (CLASS 17. TOBACCO PRODUCTS.) PUPULIDY BROTHERS, New York, N. Y. Filed June 22, 1915.



The word "Cigarettes" is not claimed as part of our trade-mark.

Particular description of goods.—Cigarettes.

Claims use since May 29, 1915.

Ser. No. 87,522. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ECONOMIC PRODUCTS, INC., New York, N. Y. Filed June 23, 1915.



Particular description of goods.—A Metal-Polish for Use on Automobile-Trimmings, Harness-Trimmings, Door-Knobs, and Brass.

Claims use since Jan. 2, 1915.

Ser. No. 88,822. (CLASS 39. CLOTHING.) S. H. KRESS & COMPANY, New York, N. Y. Filed Aug. 26, 1915.

KIDDIES

Particular description of goods.—Hosiery.

Claims use since Aug. 7, 1915.

Ser. No. 89,689. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FREDERICK PINER, Los Angeles, Cal. Filed Oct. 6, 1915.



Particular description of goods.—A Silver-Polish.

Claims use since Sept. 4, 1915.

Ser. No. 90,535. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THOMAS GASKELL ALLEN, London, England. Filed Nov. 9, 1915.

FABROGLAZ

Particular description of goods.—Light Shades and Screens Made Principally but Not Wholly of Glass.

Claims use since Apr. 15, 1915.

Ser. No. 91,429. (CLASS 39. CLOTHING.) S. H. KRESS & COMPANY, New York, N. Y. Filed Dec. 13, 1915.

KIDDIES

Particular description of goods.—Hosiery.

Claims use since Aug. 14, 1915.

Ser. No. 91,938. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) LYON & HEALY, Chicago, Ill. Filed Jan. 5, 1916.

INSPIRATION

Particular description of goods.—Cornets, Trombones, Altos, Melophones, Baritones, Basses, and Saxophones.

Claims use since Apr. 17, 1915.

Ser. No. 92,304. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SAMSTAG & HILDER BROS., New York, N. Y. Filed Jan. 21, 1916.

SANDOW

Particular description of goods.—Toilet-Pins, Hooks, Eyes, Safety-Pins, Shoe-Laces, Corset-Laces, Snap-Fasteners, Dressing-Combs.

Claims use since about January, 1900.

Ser. No. 92,425. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SAMSTAG & HILDER BROS., New York N. Y. Filed Jan. 26, 1916.

LADY DAINTY

Particular description of goods.—Corset-Laces, Lingerie-Braid, Toilet-Pins, Safety-Pins, Soutache Braids, Pincushions, Doll-Cushions.

Claims use since about February, 1912.

Ser. No. 92,716. (CLASS 39. CLOTHING.) LEHMAN BROS. INC., New York, N. Y. Filed Feb. 8, 1916.



Particular description of goods.—Chemises Made of Woven Material.

Claims use since about Dec. 15, 1915.

Ser. No. 95,393. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) DAVOL RUBBER COMPANY, Providence, R. I. Filed May 24, 1916. Under ten-year proviso.

"HOUSEHOLD"

Particular description of goods.—Atomizers, Breast-Pipes, Breast-Pumps, Breast-Shields, Syringes, Surgical and Invalid Cushions, Complexion-Bulbs, Cupping-Cups, Face-Bottles, Fountain-Syringe Bags, Head-Bands, Surgeons' Rubber Gloves, Ice-Bags, Invalids' Rings, Irrigating-Tubes, Nipple-Shields, Nipples, Nursing-Bottle Fittings, Pile-Pipes, Pillow-Vents, Powder-Blowers, Reducing-Belts, Stomach-Tubes, Teething-Pads, Teething-Rings, Throat Water-Bags, Umbilical Belts, Travelers' and Invalids' Urinals, Vaporizers, Water-Bags, Rubber Hot-Water Bottles, and Water Invalid-Rings.

Claims use since July, 1877.

Ser. No. 95,591. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FORT DODGE GROCERY CO., Fort Dodge, Iowa. Filed June 2, 1916.



Particular description of goods.—Canned Fruits, Canned Oysters, Canned Vegetables, Coffee, Spices, Tomato Catsup, Olives, Breakfast Cereals, Canned Salmon, Canned Shrimp, Canned Lobster, Corned Fish, Tea, Flavoring Extracts for Foods, Chilli Sauce, Fruit Preserves, Fruit Jellies, Fruit Jams, and Pickles.

Claims use since Apr. 15, 1916.

Ser. No. 96,755. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NAVE-MCCORD MERCANTILE CO., St. Joseph, Mo. Filed July 22, 1916.

BUMBLE BEE

Particular description of goods.—Canned Fruits, Canned Vegetables, Canned Pork with Beans in Tomato Sauce, Dried Fruits, Macaroni, Spaghetti, Vermicelli, Peanut-Butter, Canned Table-Syrup, Tea, Canned Milk, Vinegar, Coffee, Sweet Pickles, Vanilla Extract, Food-Flavoring Syrup Extract, Olives, Spices, Mince-Meat, Rice, Tomato Catsup, Prepared Mustard, Jams, Jellies, Pancake-Flour, Honey, Tapioca, Oysters, and Sardines.

Claims use since Feb. 1, 1906.

Ser. No. 97,017. (CLASS 39. CLOTHING.) LITTAUER BROTHERS, New York, N. Y. Filed Aug. 1, 1916.



Particular description of goods.—Fabric Gloves.

Claims use since Mar. 15, 1916.

Ser. No. 97,954. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARICATTE ET CIE., Indianapolis, Ind. Filed Sept. 12, 1916.

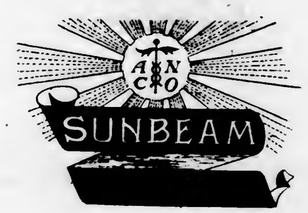
Treko

Comprising the word "Treko."

Particular description of goods.—Perfumes, Toilet Waters, Rouge, Face-Creams, Face and Sachet Powders, and Dental Cream.

Claims use since 1897.

Ser. No. 98,071. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AUSTIN, NICHOLS & CO., INC., Brooklyn and New York, N. Y. Filed Sept. 19, 1916.



Particular description of goods.—Salt, Bluing.

Claims use since Oct. 4, 1901, on salt; since about July 3, 1908, on bluing.

Ser. No. 98,278. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAX W. WEINBERG, Newark, N. J. Filed Sept. 27, 1916.



Particular description of goods.—A Preparation for the Treatment of Infantile Paralysis, Rheumatism, Headache, Toothache, Fainting Spells, Nervousness, Kidney and Liver Troubles, Hay-Fever, Asthma, Bronchitis.

Claims use since Aug. 1, 1916.

Ser. No. 98,416. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DANIEL LOWENSTEIN, New York, N. Y. Filed Oct. 4, 1916.

MICHARME

Particular description of goods.—Cream Face-Powder, Liquid Rouge, Compact Rouge, Compact Face-Powder, Nail-Enamel Cake, Face-Powder, Perfume, and Toilet Water.
Claims use since December, 1911.

Ser. No. 98,487. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) W. D. ALLEN MANUFACTURING COMPANY, Chicago, Ill. Filed Oct. 7, 1916.

MIKADO

Particular description of goods.—Machinery-Belting Formed of Textile Fabric.
Claims use since about Aug. 15, 1916.

Ser. No. 98,650. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GEORGE S. A. CASSIMUS, St. Louis, Mo. Filed Oct. 14, 1916.

CASSENE

Particular description of goods.—A Liquid for Cleaning Varnished and Enameled Surfaces.
Claims use since about Oct. 14, 1914.

Ser. No. 98,702. (CLASS 38. PRINTS AND PUBLICATIONS.) THE NATIONAL PETROLEUM PUBLISHING COMPANY, Cleveland, Ohio. Filed Oct. 16, 1916.

National Petroleum News

Particular description of goods.—A Monthly Periodical.
Claims use since February, 1909.

Ser. No. 98,772. (CLASS 27. HOROLOGICAL INSTRUMENTS.) NORTH AMERICAN WATCH CO. INC., Mansfield, Ohio. Filed Oct. 19, 1916.

Nawco

Particular description of goods.—Clocks and Watches and the Works for the Same.
Claims use since July 18, 1916.

Ser. No. 99,171. (CLASS 38. PRINTS AND PUBLICATIONS.) GEORGE W. MAY, Morgantown, W. Va. Filed Nov. 8, 1916.

Army and Navy

No claim being made to the words "Magazine Agency."
Particular description of goods.—Catalogues of Newspapers and Periodicals.
Claims use since Jan. 1, 1916.

Ser. No. 99,344. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RAUL CARLOS ETCHEVERRY, Buenos Aires, Argentina. Filed Nov. 17, 1916.

ALTOSINA

Particular description of goods.—A Preparation for Curing Aphthæ and Aphthous Fever.
Claims use since about Dec. 15, 1915.

Ser. No. 99,520. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELBERT S. GLASS, Cleveland, Ohio. Filed Nov. 24, 1916.

Ru-Ex

Particular description of goods.—Preparations for the Treatment of Eczema, Rheumatism, Lumbago, Swollen Joints, Sprains, Cold in Chest, and Headaches.
Claims use since the 1st of June, 1916.

Ser. No. 99,604. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES H. MURRAY, New York, N. Y. Filed Nov. 28, 1916.

Co-oP

Particular description of goods.—Apple-Butter, Allspice, Asparagus, Buckwheat, Butter, Beef-Fat, Bread, Black Pepper, Biscuits, Bran-Flour, Bottled Fruits, Bottled Preserves, Bottled Vegetables, Bottled Soups, Cinnamon, Cloves, Canned Soups, Canned Boneless Chicken, Canned Oysters, Confections, Currants, Citron, Cornmeal Candies, Chocolate, Chocolate Pastes, Canned Hominy, Canned Sauer-Kraut, Cotton-Seed Oil, (Substitute For Lard,) Cakes, Coffee, Cocoa, Clam-Chowder, Celery-Salt, Canned Salt, Canned Corn, Cherries, Corn-Starch, Canned Milk, Canned Cream, Canned Vegetables, Canned Fruits, Cheese, Chow-Chow, Chilli Sauce, Canned Fish, Canned Salmon, Canned Tuna-Fish, Canned Shrimps, Canned Fish-Flakes, Canned Fish-Balls, Canned Fried Fish-Cakes, Canned Lobster, Canned Crab-Meat, Canned Mackerel, Canned Anchovies, Canned Sardines, Corn Flakes, Cream of Wheat, Cracked Wheat, Dried Fruits, Dried Beans, Dried Lima Beans, Dried Milk, Dessert-Jellies, Dried Vegetables, Dressed Poultry, Eggs, Egg-Noodles, Evaporated Milk, Fruit Jellies, Fruit Preserves, Fermented Milk.

Fresh Apples, Flavoring Extracts, Fresh Onions, Fig Paste, Fig Jam, Pressed Figs, Spiced Fruits, Ground Coffee, Grape-Fruit, Ginger-Root, Guava Jelly, Horse-Radish, Hominy-Grits, India Relish, Ice-Cream, Ice-Cream Biscuits, Jamaica Ginger, Jams, Jelley-Powders, Lettuce, Lemons, Lard, Lemon Flavoring, Macaroni, Mince-Meat, Marshmallow Paste, Malted Milk, Margarin, Mace, (Ground;) Marmalades, Maple-Syrup, Maple-Sugar, Mustard, Sweet Milk, Buttermilk, Milk-Chocolate, Nuts, Nutmegs, Olives, Olive-Oil, Oatmeal, Oranges, Beans, Pickles, Prepared Mustard, Pearl-Barley, Popcorn, Peanut-Butter, Prepared Potatoes, Pretzels, Pies, Peas, Pumpkins, Pineapples, Pears, Plums, Peppers, Cayenne Pepper, Paprika, Peeled Potatoes, Pancake-Flour, Preserved Vegetables, Prunes, Potatoes, Rice, Rolled Wheat, Rolled Oats, Raisins, Salad-Dressings, Spaghetti, Split Peas, Self-Rising Flour, Salted Peanuts, Shredded Cocoanut, Table-Syrup, Sago, Spices, Sweet Potatoes, Canned Succotash, Canned and Fresh String-Beans, Canned and Fresh Spinach, Sage, Smoked Salmon, Smoked Halibut, Smoked Herrings, Salt Herrings, Salmon, Canned and Fresh Tomatoes, Tomato Catsup, Taploca, Tangerines, Tomato Soup, Thyme, Turmeric, Tomato Paste, Vinegar, Vermicelli, Vanilla Flavoring, Fresh Vegetables, Vegetable Cooking-Oil, Wheat-Flour, Worcester Sauce, Wheat Flakes, White Pepper, Yeast.
Claims use since Nov. 26, 1916.

Ser. No. 99,636. (CLASS 12. CONSTRUCTION MATERIALS.) UNITED STATES SPOT GROUND CORPORATION, Omaha, Nebr. Filed Nov. 29, 1916.

WALLPEDS

Particular description of goods.—Grounds.
Claims use since June 15, 1916.

Ser. No. 99,637. (CLASS 12. CONSTRUCTION MATERIALS.) UNITED STATES SPOT GROUND CORPORATION, Omaha, Nebr. Filed Nov. 29, 1916.

FLOORPEDS

Particular description of goods.—Grounds.
Claims use since June 15, 1916.

Ser. No. 99,678. (CLASS 38. PRINTS AND PUBLICATIONS.) THE FARMERS' REVIEW, Chicago, Ill. Filed Dec. 2, 1916.

BETTER BUSINESS

The words "Better Business."
Particular description of goods.—A House Organ Published Intermittently.
Claims use since April, 1916.

Ser. No. 99,692. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) TUBE BRUSH CO., Boston, Mass. Filed Dec. 2, 1916.

KAXO

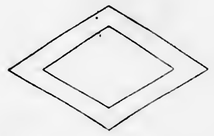
The word "Kaxo."
Particular description of goods.—A Brush for Polishing Shoes.
Claims use since Nov. 1, 1915.

Ser. No. 99,712. (CLASS 32. FURNITURE AND UPHOLSTERY.) ELINOR LUCY KINLOCH, Chelsea, London, England. Filed Dec. 4, 1916.



Particular description of goods.—Household Furniture—Namely, Chests of Drawers, Bureaus, Beds, Wardrobes, Washstands, Cabinets, Screens, Chairs, Bookcases, Corner Cupboards, Settees, Boot-Cupboards, and Tables.
Claims use since July, 1916.

Ser. No. 99,780. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) UNITED STATES LACQUER COMPANY, Brooklyn, N. Y. Filed Dec. 7, 1916.



No claim being made to the words "United States Lacquer Company."
Particular description of goods.—Lacquer and Thinners.
Claims use since Sept. 1, 1916.

Ser. No. 99,795. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. H. MICHAELS CO., New York, N. Y. Filed Dec. 8, 1916.

Sterling Point

Particular description of goods.—Fresh Oysters.
Claims use since Nov. 20, 1916.

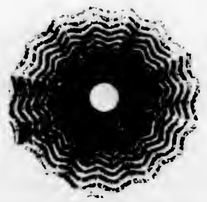
Ser. No. 99,833. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) ASBESTOS FIBRE & RUBBER CO., Trenton, N. J. Filed Dec. 11, 1916.

MEPHISTO



Particular description of goods.—Compressed-Fiber Sheet-Packing.
Claims use since Oct. 20, 1916.

Ser. No. 100,038. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JOHN CHATILLON & SONS, New York, N. Y. Filed Dec. 19, 1916.



Particular description of goods.—Weighing-Scales.
Claims use since Dec. 29, 1908.

Ser. No. 100,052. (CLASS 39. CLOTHING.) ARBETTER & RICHMAN, St. Louis, Mo. Filed Dec. 20, 1916.

GIANT

Particular description of goods.—Overalls and Jumpers.
Claims use since about Jan. 1, 1900.

Ser. No. 100,145. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM A. MCLEOD, South Bend, Ind. Filed Dec. 23, 1916.

STARS

Particular description of goods.—Cathartics.
Claims use since October, 1916.

Ser. No. 100,155. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JEAN WALLACE BUTLER, Chicago, Ill. Filed Dec. 26, 1916. Under ten-year proviso.



Particular description of goods.—Almond Skin-Cerate, Dandruff-Lotion, Flesh-Rejuvenator, Marshmallow Skin-Paste, Emollient Skin-Tonic, Dandruff-Salve, Antiseptic Steaming Fluid for Facial Steam-Bath, Orris and Lilac Milk, Petrol Depilatory, Face-Bleach, Eyebrow-Pencil, Cuticle-Cream, Nail-Paste, Freckle-Eradicator, Cinchona Hair-Tonic, Nail-Bleach, Acne-Lotion, Skin-Cleansing Lotion, Freckle-Cream, Eczema-Salve, Disappearing Massage-Cream, Persian Face-Pack, Dermatological Powder, Rouge, Acacia Lotion, Hand-Whitener, Skin Astringent Tonic, Massage-Cream, Brilliantine, Neptune Bath-Salts, Cake-Rouge, Talcum Powder, Perfumes, Lip-Salve, Face-Powder.
Claims use since the year 1893.

Ser. No. 100,190. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE J. SEIDENSPINNER, Cincinnati, Ohio. Filed Dec. 26, 1916.

Exitus

Particular description of goods.—A Liniment for Rheumatism, Scalds, Burns, Sprains, and Backache.
Claims use since the second week of October, 1916.

Ser. No. 100,217. (CLASS 33. GLASSWARE.) JEANNETTE GLASS CO., Jeannette, Pa. Filed Dec. 28, 1916.

LAZALITE

Particular description of goods.—Sidewalk Glass Lights.
Claims use since Aug. 8, 1916.

Ser. No. 100,249. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE H. CURRIER, Chicago, Ill. Filed Dec. 30, 1916.

SULSAGE



The picture being fanciful.
Particular description of goods.—A Compound for Making a Hair Darkener and Rejuvenator.
Claims use since Dec. 1, 1914.

Ser. No. 100,331. (CLASS 38. PRINTS AND PUBLICATIONS.) EARL STUDIOS, INC., New York, N. Y. Filed Jan. 3, 1917.



Particular description of goods.—A Magazine Issued Semimonthly.
Claims use since Dec. 13, 1916.

Ser. No. 100,339. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ROCHESTER BUTTON COMPANY, Rochester, N. Y. Filed Jan. 3, 1917.

ROBULITE

Particular description of goods.—Buttons for Attachment to Wearing-Apparel.
Claims use since Oct. 15, 1916.

Ser. No. 100,438. (CLASS 43. THREAD AND YARN.) MAYS MILLS, INC., Mayworth, N. C. Filed Jan. 8, 1917.



Particular description of goods.—Carded and Combed Cotton Yarns.
Claims use since Nov. 1, 1916.

Ser. No. 100,512. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) CORDO-HYDE COMPANY, Brockton, Mass. Filed Jan. 10, 1917.

Cordo-Hyde

Particular description of goods.—Shoe Strings and Lacings, Tapes, and Galloons.
Claims use since Sept. 1, 1916.

Ser. No. 100,522. (CLASS 11. INKS AND INKING MATERIALS.) MEUSER & MEUSER, Chicago, Ill. Filed Jan. 10, 1917.

PYRAMID

Particular description of goods.—Duplicating-Inks.
Claims use since June 6, 1914.

Ser. No. 100,524. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUSSIA CEMENT COMPANY, Gloucester, Mass. Filed Jan. 10, 1917.

CHIC CHUK

The representation of a chicken being disclaimed.
Particular description of goods.—Poultry Food.
Claims use since Oct. 1, 1916.

Ser. No. 100,560. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STERLING PRODUCTS COMPANY, INC., Brooklyn, N. Y. Filed Jan. 12, 1917.

Ernsto

No claim being made to the word "Salts."
Particular description of goods.—A Dry Acid Salt Used as a Cleaning Agent for Iron Stains and as a Sour and Mordant for Washing-Blues in Laundry Processes.
Claims use since Mar. 5, 1913.

Ser. No. 100,625. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN LEWIS, Iron River, Mich. Filed Jan. 15, 1917.



A portrait of Elizabeth Lewis.
Particular description of goods.—A Preparation for the Treatment of Rheumatism.
Claims use since June 30, 1916.

Ser. No. 100,682. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PERIN, INC., New York, N. Y. Filed Jan. 17, 1917.

Odo'stroy

Comprising the word "Odo'stroy."
Particular description of goods.—A Deodorant.
Claims use since Jan. 2, 1917.

Ser. No. 100,736. (CLASS 39. CLOTHING.) JOHN H. BROWN, Marseilles, Ill. Filed Jan. 19, 1917.

UNIVERSAL

No claim being made to the exclusive use of the word "Best" appearing upon the specimens filed.
Particular description of goods.—Rubber Heels.
Claims use since Dec. 1, 1916.

Ser. No. 100,832. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE TRACY COMPANY, INC., New London, Conn. Filed Jan. 22, 1917.

EVACURANS

No claim being made to the exclusive use of the word "Tracy."

Particular description of goods.—A Preparation for Use in the Treatment for Constipation.

Claims use since Feb. 24, 1908.

Ser. No. 100,833. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE TRACY COMPANY, INC., New London, Conn. Filed Jan. 22, 1917.

Resorsans

No claim being made to the exclusive use of the word "Tracy."

Particular description of goods.—A Preparation for Use in the Treatment for Indigestion.

Claims use since Oct. 8, 1906.

Ser. No. 100,834. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE TRACY COMPANY, INC., New London, Conn. Filed Jan. 22, 1917.

No claim being made to the exclusive use of the word "Tracy."

Particular description of goods.—Tablet Triturates, Compressed Tablets, and Chemical Elements in Lozenge Form for Medicinal, Analytical, and Antiseptic Uses.

Claims use since February, 1906.

Ser. No. 100,835. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE TRACY COMPANY, INC., New London, Conn. Filed Jan. 22, 1917.

No claim being made to the exclusive use of the word "Tracy" or to the words "Gas Eliminant."

Particular description of goods.—A Preparation for Use in the Treatment for Dyspepsia.

Claims use since Aug. 5, 1911.

Ser. No. 100,892. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HELBURN LEATHER COMPANY, Salem, Mass. Filed Jan. 24, 1917.

WITCHCRAFT

Particular description of goods.—Textiles—Namely, Shoe-Cloth.

Claims use since Jan. 15, 1917.

Ser. No. 100,912. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE CONSOLIDATION COAL CO., Baltimore, Md. Filed Jan. 25, 1917.

CONSOLIDATION

Particular description of goods.—Coal.

Claims use since about Jan. 1, 1917.

Ser. No. 100,960. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE HILL PUMP VALVE COMPANY, Chicago, Ill. Filed Jan. 26, 1917.

UTILITY

Particular description of goods.—Automobile-Heaters Utilizing the Exhaust from Explosive-Engines.

Claims use since about October, 1912.

Ser. No. 101,018. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) LOOVA A. RANIVILLE, Grand Rapids Mich. Filed Jan. 29, 1917.

OLOTAN

Particular description of goods.—Leather Belting.

Claims use since on or about Sept. 15, 1916.

Ser. No. 101,028. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) ALBERT WISS, Peekskill, N. Y. Filed Jan. 29, 1917.

NOSOL

Particular description of goods.—Finger-Rings, Lavalliéres, Bracelets, and Brooches.

Claims use since the 23d day of December, 1916.

Ser. No. 101,052. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VINELAND PRESERVING COMPANY, Jersey City, N. J. Filed Jan. 30, 1917.

SCOLLOPONI

Particular description of goods.—Macaroni.

Claims use since Jan. 2, 1917.

Ser. No. 101,060. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CANTRELL & DAWSON, Guymon, Okla. Filed Jan. 31, 1917.

Yma

No claim being made to the word "Kola."

Particular description of goods.—A Soft Drink.

Claims use since Sept. 14, 1916.

Ser. No. 101,066. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AURELIUS S. HINDS, Portland, Me. Filed Jan. 31, 1917.

Cre-mis

Particular description of goods.—Talcum Powder.

Claims use since December, 1916.

Ser. No. 101,094. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) GOLDSMITH, STERN & CO., New York, N. Y. Filed Feb. 1, 1917.

Pin-Kee

Particular description of goods.—Finger-Rings.

Claims use since the 27th day of January, 1917.

Ser. No. 101,130. (CLASS 17. TOBACCO PRODUCTS.) ERNST LINDEN, Hamilton, Ohio. Filed Feb. 2, 1917.

EAST HIGH

Particular description of goods.—Cigars.

Claims use since Jan. 30, 1917.

Ser. No. 101,154. (CLASS 12. CONSTRUCTION MATERIALS.) OLIVER BROTHERS, INC., New York, N. Y. Filed Feb. 3, 1917.

O-BRO.

Particular description of goods.—Fire-Brick, Lining for Furnaces, Smelters, Boilers, Cupolas, and Stoves.

Claims use since Jan. 31, 1917.

Ser. No. 101,181. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERICK STEARNS & CO., Detroit, Mich. Filed Feb. 5, 1917.

CHIN CHIN

Particular description of goods.—Perfumes.

Claims use since Dec. 15, 1916.

Ser. No. 101,184. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TROY CHEMICAL CO., Binghamton, N. Y. Filed Feb. 5, 1917.

BAG-VIGOR

Particular description of goods.—Veterinary Ointment.

Claims use since November, 1916.

Ser. No. 101,234. (CLASS 12. CONSTRUCTION MATERIALS.) HENRY H. MATHEWS, Boston, Mass. Filed Feb. 8, 1917.

Empire

Particular description of goods.—Roofing-Slate.

Claims use since 1900.

Ser. No. 101,278. (CLASS 39. CLOTHING.) STERNFELD AND POLIN, Philadelphia, Pa. Filed Feb. 9, 1917.

Edna

Particular description of goods.—Ladies' Shirt-Waists.

Claims use since Jan. 1, 1917.

Ser. No. 101,283. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GREEN ASH, East Gadsden, Ala. Filed Feb. 10, 1917.

"R S M"

Particular description of goods.—A Preparation for Treatment of Kidney and Blood Diseases.

Claims use since Sept. 15, 1914.

Ser. No. 101,301. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) RUGGLES-COLES ENGINEERING CO., New York, N. Y.; Chicago, Ill., and York, Pa. Filed Feb. 10, 1917. Under ten-year proviso.

RUGGLES-COLES

Particular description of goods.—Driers for Driving Off Free Moisture from Various Materials.
Claims use since 1893.

Ser. No. 101,324. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE COLONIAL TYRE & RUBBER CO. INC., New York, N. Y. Filed Feb. 12, 1917.

COLONIAL

No claim being made to the word "Tyres."
Particular description of goods.—Rubber Tires for Automobiles and Other Vehicles.
Claims use since June, 1915.

Ser. No. 101,375. (CLASS 17. TOBACCO PRODUCTS.) THE WEIDEMAN CO., Cleveland, Ohio. Filed Feb. 14, 1917.

THE



Particular description of goods.—Cigars.
Claims use since Nov. 13, 1915.

Ser. No. 101,389. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) COLUMBIA ELECTRIC NOVELTY CORPORATION, New York, N. Y. Filed Feb. 15, 1917.



Particular description of goods.—Electric Batteries and Flash-Lights.
Claims use since Nov. 11, 1916.

Ser. No. 101,418. (CLASS 39. CLOTHING.) F. BERG & Co., Orange, N. J. Filed Feb. 16, 1917. Under ten-year proviso.



Particular description of goods.—Hats for Men.
Claims use since 1892.

Ser. No. 101,443. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERICK DISINFECTANT CO., Atlanta, Ga. Filed Feb. 17, 1917.

HIFLASH

Particular description of goods.—An Antiseptic Floor-Dressing.
Claims use since December, 1916.

Ser. No. 101,451. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MACANDREWS & FORBES COMPANY, Camden, N. J. Filed Feb. 17, 1917.



Particular description of goods.—Dyewood Extracts.
Claims use since about Feb. 1, 1917.

Ser. No. 101,464. (CLASS 39. CLOTHING.) THE WARNER BROS. CO., Bridgeport, Conn. Filed Feb. 17, 1917.

LEADER

Particular description of goods.—Corsets.
Claims use since May 15, 1911.

Ser. No. 101,467. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WILBRAHAM SPRINGS COMPANY, Springfield, Mass. Filed Feb. 17, 1917.

AERO

Particular description of goods.—Carbonated Soft Drinks and Syrup Therefor.
Claims use since Feb. 8, 1917.

Ser. No. 101,476. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE BLEECKER COMPANY, Hempstead, N. Y. Filed Feb. 19, 1917. Under ten-year proviso.



Particular description of goods.—Cleaning Fluids.
Claims use since on or before 1893.

Ser. No. 101,477. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE BLEECKER COMPANY, Hempstead, N. Y. Filed Feb. 19, 1917. Under ten-year proviso.

EASY CLEANING FLUID

Consists of the words "Easy Cleaning Fluid," which is generally displayed on a yellow or orange background.
Particular description of goods.—Cleaning Fluids.
Claims use since on or before 1893.

Ser. No. 101,490. (CLASS 39. CLOTHING.) FRANK W. HOWARD, New York, N. Y. Filed Feb. 19, 1917.

EMERGENCY

Particular description of goods.—Rain-Coats.
Claims use since Jan. 20, 1917.

Ser. No. 101,522. (CLASS 37. PAPER AND STATIONERY.) THE UNION PAPER & TWINE COMPANY, Cleveland, Ohio. Filed Feb. 19, 1917.



Particular description of goods.—Printing, Writing, and Wrapping Paper.
Claims use since Feb. 1, 1917.

Ser. No. 101,527. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) RIMAL ZIEVE, Minneapolis, Minn. Filed Feb. 19, 1917. Under ten-year proviso.



FRUIT NECTAR COMPOUND

Particular description of goods.—A Fruit and Vegetable Compound for Flavoring Soft Drinks.
Claims use since about the 1st of October, 1894.

Ser. No. 101,533. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROSS J. ELSON, New Haven, Ind. Filed Feb. 20, 1917.

Robust-O

Particular description of goods.—Tonic for Horses and Live Stock.
Claims use since Oct. 20, 1916.

Ser. No. 101,572. (CLASS 39. CLOTHING.) MARION DRESS CO., New York, N. Y. Filed Feb. 21, 1917.

Maid Marion

Particular description of goods.—Ladies' Dresses.
Claims use since Jan. 15, 1916.

Ser. No. 101,580. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE S. SHEARER CO., Sinking Spring, Pa. Filed Feb. 21, 1917.



Particular description of goods.—A Remedy for La Grippe, Hay-Fever, Asthma, Bronchitis, Coughs, and Stomach Troubles.
Claims use since Oct. 1, 1916.

Ser. No. 101,584. (CLASS 12. CONSTRUCTION MATERIALS.) THE WARING-UNDERWOOD COMPANY, Philadelphia, Pa. Filed Feb. 21, 1917.

IDEAL

Particular description of goods.—Preformed Expansion Joint Strips for Asphalt or Equivalent Material for Use in Paving and other Structural Work.
Claims use since about Aug. 12, 1913.

Ser. No. 101,594. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ADOLFO ENRIQUE BESOSA, New York, N. Y. Filed Feb. 23, 1917.

RENALURICAS

Particular description of goods.—A Medicine in Tablet Form for the Treatment of Kidney and Bladder Disorders.
Claims use since Jan. 1, 1917.

Ser. No. 101,599. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. F. DAVIS, St. Louis, Mo. Filed Feb. 23, 1917.

R.-N.-M.

Particular description of goods.—Medicine for Rheumatic Pains, Gout, and Lumbago.
Claims use since about the middle of November, 1916.

Ser. No. 101,620. (CLASS 39. CLOTHING.) MORRIS R. SILVERMAN, New York, N. Y. Filed Feb. 23, 1917.

Silverleaf

Particular description of goods.—Women's, Misses', Juniors', and Girls' Suits and Coats.
Claims use since Jan. 1, 1917.

Ser. No. 101,630. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE VANOLA COMPANY, Winston-Salem, N. C. Filed Feb. 23, 1917.

Vanola

Particular description of goods.—Cough-Drops.
Claims use since July 1, 1915.

Ser. No. 101,632. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WILLOW SPRINGS BREWING CO., Omaha, Nebr. Filed Feb. 23, 1917.

Te-To

Particular description of goods.—A Non-Intoxicating Cereal Beverage Sold as a Soft Drink.
Claims use since Jan. 26, 1917.

Ser. No. 101,658. (CLASS 27. HOROLOGICAL INSTRUMENTS.) I. OLLENDORFF CO., New York, N. Y. Filed Feb. 24, 1917.

ARISTOCRAT

Particular description of goods.—Watchcases and Watch-Movements.
Claims use since May, 1916.

Ser. No. 101,659. (CLASS 27. HOROLOGICAL INSTRUMENTS.) I. OLLENDORFF CO., New York, N. Y. Filed Feb. 24, 1917.

DIPLOMAT

Particular description of goods.—Watchcases and Watch-Movements.
Claims use since May, 1916.

Ser. No. 101,697. (CLASS 37. PAPER AND STATIONERY.) HENRY LINDENMEYR & SONS, New York, N. Y. Filed Feb. 26, 1917.

NEW ERA

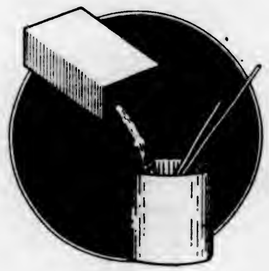
Particular description of goods.—Printing-Paper and Writing-Paper.
Claims use since Jan. 20, 1917.

Ser. No. 101,716. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) THE TRAUB MANUFACTURING COMPANY, Detroit, Mich. Filed Feb. 26, 1917.

PATRICIAN

Particular description of goods.—Finger-Rings.
Claims use since Feb. 1, 1917.

Ser. No. 101,754. (CLASS 16. PAINTS AND PAINTERS' MATERIAL.) THE PEERLESS THINNER COMPANY, Baltimore, Md. Filed Feb. 27, 1917.



Particular description of goods.—Paint-Thinning Materials.
Claims use since May 10, 1915.

Ser. No. 101,807. (CLASS 39. CLOTHING.) TREO COMPANY INC., New York, N. Y. Filed Feb. 28, 1917.

TREOTONE

Particular description of goods.—Corsets and Brassières.
Claims use since Feb. 10, 1917.

Ser. No. 101,812. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE WAGNER MANUFACTURING COMPANY, Sidney, Ohio. Filed Feb. 28, 1917.

Paul Revere

Particular description of goods.—A Metal Saucepan.
Claims use since Nov. 16, 1916.

Ser. No. 101,826. (CLASS 39. CLOTHING.) THE BOSS MANUFACTURING COMPANY, Kewanee, Ill. Filed Mar. 2, 1917.

PRESTO

Particular description of goods.—Gloves and Mittens.
Claims use since Nov. 10, 1916.

Ser. No. 101,936. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) NORTH WESTERN COMPANY, Chicago, Ill. Filed Mar. 6, 1917.

SNOW BALL

Particular description of goods.—A Soft Drink or Beverage.
Claims use since on or about the 24th day of February, 1917.

Ser. No. 101,945. (CLASS 48. MALT EXTRACTS AND LIQUORS.) UNITED BREWERIES CO., Chicago, Ill. Filed Mar. 6, 1917.

SNOW BALL

Particular description of goods.—Beer.
Claims use since on or about the 24th day of February, 1917.

TRADE-MARK REGISTRATIONS GRANTED

APRIL 3, 1917.

116,025. IRON CASTINGS. THE ADVANCE FOUNDRY CO., Dayton, Ohio.
Filed November 25, 1916. Serial No. 99,529. PUBLISHED JANUARY 30, 1917.

116,026. CERTAIN NAMED FOODS. ALFALFA PRODUCTS COMPANY, Waukegan, Ill.
Filed July 17, 1916. Serial No. 96,611. PUBLISHED NOVEMBER 14, 1916.

116,027. CLOTHES-WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed November 3, 1916. Serial No. 99,055. PUBLISHED JANUARY 30, 1917.

116,028. LUBRICANTS. APEX MANUFACTURING CO., Providence, R. I.
Filed October 26, 1916. Serial No. 98,894. PUBLISHED JANUARY 30, 1917.

116,029. LADIES' AND MISSES' DRESSES, BUNGALOW-APRONS, MIDDY-BLOUSES, AND WASH-SKIRTS. THE B. K. MFG. CO., Michigan City, Ind.
Filed December 16, 1916. Serial No. 99,979. PUBLISHED JANUARY 30, 1917.

116,030. CAMBRICS, NAINSOOKS, AND MUSLINS IN THE PIECE. BALTIMORE BARGAIN HOUSE, Baltimore, Md.
Filed December 8, 1916. Serial No. 99,785. PUBLISHED JANUARY 30, 1917.

116,031. PILE-OINTMENT. E. D. BLAISDELL, Minneapolis, Minn.
Filed December 18, 1916. Serial No. 99,998. PUBLISHED JANUARY 30, 1917.

116,032. COMPOSITION ROOFING. THE BLOUNT LUMBER CO., Lacona, N. Y.
Filed October 16, 1916. Serial No. 98,715. PUBLISHED JANUARY 30, 1917.

116,033. ORNAMENTAL FIGURES FOR USE ON VARIOUS ARTICLES AND STRUCTURES WHEREVER APPROPRIATE. GEO. BORGFELDT & CO., New York, N. Y.
Filed October 6, 1916. Serial No. 98,460. PUBLISHED JANUARY 30, 1917.

116,034. SMOKING-PIPES. THE BREECHLOADER PIPE COMPANY, INC., New York, N. Y.
Filed November 17, 1916. Serial No. 99,335. PUBLISHED JANUARY 30, 1917.

116,035. MOTION-PICTURE FILMS. THE BRITISH FILM STOCK COMPANY LIMITED, London, England.
Filed November 21, 1916. Serial No. 99,429. PUBLISHED JANUARY 30, 1917.

116,036. RHEUMATIC REMEDIES. THE BROMO REMEDY CO., Chicago, Ill.
Filed June 23, 1916. Serial No. 96,077. PUBLISHED JANUARY 30, 1917.

116,037. LINIMENT FOR THE RELIEF OF CERTAIN NAMED AILMENTS. ANTONIO CENTANNI, Chicago, Ill.
Filed May 24, 1916. Serial No. 95,410. PUBLISHED JANUARY 30, 1917.

116,038. CHEMICAL COMPOUND FOR CLEANING AND THAWING PIPES AND FOR REMOVING RUST AND STAIN. THE CHAMBERLAIN COMPANY, Pittsburgh, Pa.
Filed November 24, 1916. Serial No. 99,515. PUBLISHED JANUARY 30, 1917.

116,039. MEDICINAL TONIC, BLOOD AND TISSUE BUILDER. FREDERICK WILLIAM CLEMENTS, Rochester, N. Y.
Filed December 4, 1916. Serial No. 99,699. PUBLISHED JANUARY 30, 1917.

116,040. ELECTRIC-LIGHT CARBONS. C. CONRADTY, Nuremberg, Germany.
Filed November 29, 1916. Serial No. 99,639. PUBLISHED JANUARY 30, 1917.

116,041. MUCILAGE. THE CUSHMAN & DENISON MANUFACTURING COMPANY, New York, N. Y.
Filed December 15, 1915. Serial No. 91,508. PUBLISHED JANUARY 30, 1917.

116,042. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. DAVIS & GECK, INC., Brooklyn, N. Y.
Filed May 11, 1916. Serial No. 95,072. PUBLISHED JANUARY 30, 1917.

116,043. TOOTH POWDER AND PASTE. JOSEPH C. DEVLIN, Lynn, Mass.
Filed December 1, 1916. Serial No. 99,651. PUBLISHED JANUARY 30, 1917.

116,044. APPLIANCES FOR CLEANING BOILERS. DIAMOND POWER SPECIALTY COMPANY, Detroit, Mich.
Filed July 15, 1916. Serial No. 96,579. PUBLISHED JANUARY 30, 1917.

116,045. APPLIANCES FOR CLEANING BOILERS. DIAMOND POWER SPECIALTY COMPANY, Detroit, Mich.
Filed July 15, 1916. Serial No. 96,580. PUBLISHED JANUARY 30, 1917.

116,046. CHEMICAL PREPARATION FOR CERTAIN NAMED PURPOSES. DURKEE-ATWOOD CO., Minneapolis, Minn.
Filed October 16, 1916. Serial No. 98,687. PUBLISHED JANUARY 30, 1917.

116,047. DYES. DYE PRODUCTS COMPANY OF THE UNITED STATES, Philadelphia, Pa.
Filed December 14, 1916. Serial No. 99,926. PUBLISHED JANUARY 30, 1917.

116,048. BAKING-POWDERS. THOMAS L. EVANS, Houston, Tex.
Filed December 11, 1916. Serial No. 99,843. PUBLISHED JANUARY 30, 1917.

116,049. PHARMACEUTICAL PREPARATION IN THE FORM OF POWDER AND TABLETS FOR THE RELIEF OF INDIGESTION. FAIRCHILD BROS. & FOSTER, New York, N. Y.
Filed December 14, 1916. Serial No. 99,936. PUBLISHED JANUARY 30, 1917.

116,050. PERFUMES, TOILET WATERS, FACE-CREAMS, FACE-POWDERS, AND TALCUM POWDERS. FANON & GALLAGHER DRUG CO., Kansas City, Mo.
Filed December 13, 1916. Serial No. 99,889. PUBLISHED JANUARY 30, 1917.

116,051. REGULATING DEVICES FOR PLAYER-PIANOS AND PIANO-PLAYERS. J. & C. FISCHER, New York, N. Y.
Filed February 10, 1915. Serial No. 84,427. PUBLISHED JANUARY 23, 1917.

116,052. PIANOS. JESSE FRENCH AND SONS PIANO COMPANY, Newcastle, Ind.
Filed December 14, 1916. Serial No. 99,933. PUBLISHED JANUARY 23, 1917.

116,053. PIANOS. JESSE FRENCH AND SONS PIANO COMPANY, Newcastle, Ind.
Filed December 14, 1916. Serial No. 99,934. PUBLISHED JANUARY 23, 1917.

116,054. APPARATUS FOR SUPPLYING MOISTURE TO THE CYLINDERS OF GAS-ENGINES. ARTHUR A. FRIESTEDT, Chicago, Ill.
Filed December 23, 1916. Serial No. 100,138. PUBLISHED JANUARY 30, 1917.

116,055. CEMENT TO BE USED AS A BOND FOR FIRE-BRICK STRUCTURES. WILLIAM J. GRAVERT, INC., Long Island City, N. Y.
Filed November 28, 1916. Serial No. 99,600. PUBLISHED JANUARY 30, 1917.

116,056. DECORATIVE DESIGN-FORMS OF FELT OR FABRIC FOR APPLIQUÉ WORK. GRUNDY & MARTEN, San Francisco, Cal.
Filed May 15, 1916. Serial No. 95,144. PUBLISHED JANUARY 30, 1917.

116,057. SELF-THREADING SHUTTLES FOR LOOMS. HUDSON W. HAKES, Millbury, Mass.
Filed December 16, 1916. Serial No. 99,982. PUBLISHED JANUARY 30, 1917.

116,058. LENS-TESTING INSTRUMENTS. F. A. HARDY & COMPANY, Chicago, Ill.
Filed December 6, 1916. Serial No. 99,747. PUBLISHED JANUARY 30, 1917.

116,059. CERTAIN NAMED ATTACHMENTS FOR INTERNAL-COMBUSTION ENGINES. ROBERT HIKISH, Tuckahoe, N. Y.
Filed December 21, 1916. Serial No. 100,079. PUBLISHED JANUARY 30, 1917.

116,060. PREPARATIONS FOR THE TREATMENT OF CERTAIN NAMED DISEASES. L. A. HOWARD COMPANY, Minneapolis, Minn.
Filed November 24, 1916. Serial No. 99,522. PUBLISHED JANUARY 30, 1917.

116,061. CULTIVATORS AND PARTS THEREOF. INTERNATIONAL HARVESTER COMPANY OF NEW JERSEY, Chicago, Ill.
Filed December 7, 1916. Serial No. 99,765. PUBLISHED JANUARY 30, 1917.

116,062. NEWSPAPER-SECTION. INTERNATIONAL NEWS SERVICE, New York, N. Y.
Filed November 29, 1916. Serial No. 99,625. PUBLISHED JANUARY 30, 1917.

116,063. RUBBER HEELS. GEO. E. KEITH COMPANY, Brockton, Mass.
Filed December 13, 1916. Serial No. 99,893. PUBLISHED JANUARY 30, 1917.

116,064. STEEL AND BRASS DIES. KELLER MECHANICAL ENGRAVING COMPANY, Brooklyn, N. Y.
Filed December 8, 1916. Serial No. 99,793. PUBLISHED JANUARY 30, 1917.

116,065. CORRUGATED-PAPER TABLE-MATS. KENTUCKY CORRUGATED PAPER COMPANY, Louisville, Ky.
Filed November 11, 1916. Serial No. 99,250. PUBLISHED JANUARY 30, 1917.

116,066. LAVATORIES. KOHLER CO., Kohler, Wis.
Filed December 8, 1915. Serial No. 91,312. PUBLISHED JANUARY 30, 1917.

116,067. CITRUS FRUITS. LEE COUNTY PACKING COMPANY, Fort Myers, Fla.
Filed December 15, 1916. Serial No. 99,963. PUBLISHED JANUARY 23, 1917.

116,068. CANDIES. LOVELL & COVEL COMPANY, Boston, Mass.
Filed April 10, 1915. Serial No. 85,851. PUBLISHED JUNE 8, 1915.

116,069. UNION-SUITS, UNDERSHIRTS, DRAWERS, AND PAJAMAS MADE OF TEXTILE MATERIAL. PHILIP A. LUCKETT, Salisbury, Md.
Filed December 12, 1916. Serial No. 99,872. PUBLISHED JANUARY 30, 1917.

116,070. ANTISEPTIC POWDER FOR THE TREATMENT OF EXUDATIONS OF THE SKIN. JOHN L. MCKENNA, New York, N. Y.
Filed December 16, 1916. Serial No. 99,987. PUBLISHED JANUARY 30, 1917.

116,071. TREATMENT FOR THE HAIR AND SCALP AND FOR ECZEMA. JOHN L. MCKENNA, New York, N. Y.
Filed December 16, 1916. Serial No. 99,988. PUBLISHED JANUARY 30, 1917.

116,072. PIPE-CLEANING SUBSTANCE. W. B. MCVICKER COMPANY, New York, N. Y.
Filed November 13, 1916. Serial No. 99,278. PUBLISHED JANUARY 30, 1917.

116,073. WOVEN AND KNITTED SILK AND CRAPE PIECE GOODS. H. R. MALLINSON & CO., New York, N. Y.
Filed November 29, 1916. Serial No. 99,628. PUBLISHED JANUARY 16, 1917.

116,074. BLOOD-MODIFYING PREPARATION. MARION STOCK REMEDY COMPANY, Ocala, Fla.
Filed September 7, 1916. Serial No. 97,841. PUBLISHED JANUARY 30, 1917.

116,075. LACE AND DRAPERY CURTAINS. MARTIN MANUFACTURING COMPANY, Newton, Mass.
Filed December 1, 1916. Serial No. 99,657. PUBLISHED JANUARY 30, 1917.

116,076. DEVICES FOR REGULATING THE SUPPLY OF AIR TO CARBURETERS OF AUTOMOBILE-ENGINES. MYLE MAYKER COMPANY, Chicago, Ill.
Filed October 16, 1916. Serial No. 98,697. PUBLISHED JANUARY 30, 1917.

116,077. PERFUMERY, TOILET WATERS, FACE-POWDERS, AND PASTES. THE NEW YORK SHIELD COMPANY, New York, N. Y.
Filed October 3, 1916. Serial No. 98,390. PUBLISHED JANUARY 30, 1917.

116,078. STILL WATER, SPARKLING OR CARBONATED WATER, GINGER-ALE, AND TONICS AND SOFT DRINKS. NORSCOT MOUNTAIN SPRING CO., Boston, Mass.
Filed October 11, 1916. Serial No. 98,665. PUBLISHED JANUARY 30, 1917.

116,079. READY-MIXED PAINTS. OAKLEY VARNISH CO., Los Angeles, Cal.
Filed November 22, 1916. Serial No. 99,470. PUBLISHED JANUARY 30, 1917.

116,080. ELEVATORS. OTIS ELEVATOR COMPANY, Jersey City, N. J., and New York, N. Y.
Filed December 14, 1916. Serial No. 99,943. PUBLISHED JANUARY 30, 1917.

116,081. CERTAIN NAMED RESISTANT CHEMICAL WARE FOR LABORATORY USE. PACIFIC PLATINUM WORKS, Los Angeles, Cal.
Filed October 2, 1916. Serial No. 98,372. PUBLISHED JANUARY 30, 1917.

116,082. PEPTIC COAGULANT. PARKE DAVIS & CO., Detroit, Mich.
Filed December 2, 1916. Serial No. 99,687. PUBLISHED JANUARY 30, 1917.

116,083. DISINFECTANT, ANTISEPTIC, GERMICIDE, INSECTICIDE, AND DEODORANT. PASTEUR LABORATORIES OF AMERICA, New York, N. Y.
Filed November 29, 1916. Serial No. 99,632. PUBLISHED JANUARY 2, 1917.

116,084. PREPARATION FOR ELIMINATING CARBON IN GAS-ENGINE CYLINDERS. THE E. L. PATCH CO., Boston, Mass.
Filed December 2, 1916. Serial 99,676. PUBLISHED JANUARY 30, 1917.

116,085. READY-MIXED WHITE LIQUID PAINTS AND ENAMELS. PATTON PAINT COMPANY, Milwaukee, Wis.
Filed November 8, 1916. Serial No. 99,175. PUBLISHED JANUARY 30, 1917.

116,086. ZITHERS. THE PHONOHARP COMPANY, East Boston, Mass.
Filed December 21, 1916. Serial No. 100,082. PUBLISHED JANUARY 30, 1917.

116,087. RAZOR HONERS AND STROPPERS. R. & H. MANUFACTURING CORPORATION, Detroit, Mich.
Filed December 26, 1916. Serial No. 100,180. PUBLISHED JANUARY 30, 1917.

116,088. CIGARS, CIGARETTES, AND SMOKING-TOBACCO. RAUCH CIGAR COMPANY, INC., Indianapolis, Ind.
Filed October 6, 1916. Serial No. 98,482. PUBLISHED JANUARY 30, 1917.

116,089. PERIODICALS PUBLISHED MONTHLY. HOLLAND S. REAVIS, Houston, Tex.
Filed November 20, 1916. Serial No. 99,426. PUBLISHED JANUARY 30, 1917.

116,090. CERTAIN NAMED CUTLERY FOR HOUSEHOLD USE. THE REPUBLIC METALWARE CO., Buffalo, N. Y.
Filed December 27, 1916. Serial No. 100,208. PUBLISHED JANUARY 30, 1917.

116,091. MIDDY-BLOUSES AND CHILDREN'S DRESSES. RICE-STIX DRY GOODS COMPANY, St. Louis, Mo.
Filed November 11, 1916. Serial No. 99,259. PUBLISHED JANUARY 30, 1917.

116,092. CERTAIN NAMED CLOTHING FOR ADULTS AND BABIES. SCHUYLKILL SILK MILLS, Reading, Pa.
Filed October 9, 1916. Serial No. 98,529. PUBLISHED JANUARY 30, 1917.

116,093. TOILET-PAPER. SIMON S. SELIG, Jr., Atlanta, Ga.
Filed March 21, 1916. Serial No. 93,748. PUBLISHED APRIL 11, 1916.

116,094. CERTAIN NAMED ARTICLES MADE IN PART OF OR PLATED WITH PRECIOUS METAL. CHARLES H. SHERMAN, North Attleboro, Mass.
Filed March 2, 1916. Serial No. 93,245. PUBLISHED JANUARY 23, 1917.

116,095. RUBBER AND FABRIC CASINGS OR SHOES FOR PNEUMATIC TIRES. THE STANDARD TIRE AND RUBBER MANUFACTURING COMPANY, Cleveland, Ohio.
Filed August 24, 1916. Serial No. 97,604. PUBLISHED JANUARY 30, 1917.

116,096. GLOVES. SUEDETEX GLOVE COMPANY, INC., New York, N. Y.
Filed December 16, 1916. Serial No. 99,993. PUBLISHED JANUARY 30, 1917.

116,097. BUILDING-BRICK. SUMTER BRICK WORKS, Sumter, S. C.
Filed December 7, 1916. Serial No. 99,776. PUBLISHED JANUARY 30, 1917.

116,098. GAS-PRODUCERS. THE SUPER GAS PRODUCER SALES COMPANY, St. Paul, Minn.
Filed April 1, 1916. Serial No. 94,047. PUBLISHED JANUARY 30, 1917.

116,099. CIGARS. THEOBALD AND OPPENHEIMER COMPANY, Philadelphia, Pa., and New York, N. Y.
Filed August 21, 1916. Serial No. 97,470. PUBLISHED JANUARY 30, 1917.

116,100. FARM-PAPER ISSUED MONTHLY. THE THRESHERMEN'S REVIEW COMPANY, St. Joseph, Mich.
Filed April 19, 1916. Serial No. 94,557. PUBLISHED JANUARY 30, 1917.

116,101. REMEDY FOR DANDRUFF, ECZEMA, AND FALLING HAIR. TINAS COMPANY, Detroit, Mich.
Filed December 13, 1916. Serial No. 99,904. PUBLISHED JANUARY 30, 1917.

116,102. SHEET-MUSIC. TRIANGLE MUSIC PUB. CO., New York, N. Y.
Filed October 2, 1916. Serial No. 98,377. PUBLISHED JANUARY 30, 1917.

116,103. CARRIAGE-ROBES. THE WALLACE & SMITH COMPANY, Laporte, Ind.
Filed May 19, 1916. Serial No. 95,284. PUBLISHED JANUARY 30, 1917.

116,104. CORSETS. THE WARNER BROTHERS COMPANY, Bridgeport, Conn.
Filed December 13, 1916. Serial No. 99,907. PUBLISHED JANUARY 30, 1917.

116,105. ANIMAL DIPS AND DISINFECTANTS. WEST DISINFECTING COMPANY, New York, N. Y.
Filed December 19, 1914. Serial No. 83,427. PUBLISHED JANUARY 30, 1917.

116,106. HAIR-TONIC. LOUIS P. WICKLAND, Genoa, Ohio.
Filed October 27, 1914. Serial No. 82,222. PUBLISHED JANUARY 30, 1917.

116,107. DAILY SUGAR-PAPER. WILLETT & GRAY, New York, N. Y.
Filed November 22, 1916. Serial No. 99,484. PUBLISHED JANUARY 30, 1917.

116,108. WEEKLY SUGAR-PAPER. WILLETT & GRAY, New York, N. Y.
Filed November 22, 1916. Serial No. 99,485. PUBLISHED JANUARY 30, 1917.

116,109. COTTON PIECE GOODS. WILTON MANUFACTURING COMPANY INC., New York, N. Y.
Filed November 7, 1916. Serial No. 99,156. PUBLISHED JANUARY 30, 1917.

TRADE-MARK REGISTRATIONS RENEWED.

14,216. COCOA AND CHOCOLATE. C. J. VAN HOUTEN & ZOON, Weesp, Holland.
Registered March 29, 1887. Renewed March 29, 1917.

14,217. COCOA AND CHOCOLATE. C. J. VAN HOUTEN & ZOON, Weesp, Holland.
Registered March 29, 1887. Renewed March 29, 1917.

14,364. SOAP POWDER. CURTIS DAVIS & CO., Cambridge, Mass.; Lever Brothers Company, a Corporation of Maine, assignee.
Registered May 10, 1887. Renewed May 10, 1917.

14,441. SOAP FOR LAUNDRY, TOILET, AND GENERAL PURPOSES. LEVER BROS., Warrington, county of Lancaster, England; Lever Brothers Company, a Corporation of Maine, assignee.
Registered May 24, 1887. Renewed May 24, 1917.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE ANDERSON.

Decided February 26, 1916.

PATENTABILITY—UNPATENTABLE COMBINATION.

Where the art showed, substantially, applicant's mechanism for holding open and effecting the closure of swinging doors and it was also common to have the operation of doors thermally controlled, *Held* that claims covering the thermal control of that particular mechanism were unpatentable.

APPEAL from Examiners-in-Chief.

CONTROLLING DEVICE FOR SWINGING DOORS.

Messrs. Gillson & Gillson for the applicant.

NEWTON, *First Assistant Commissioner:*

This is an appeal from a decision of the Examiners-in-Chief affirming the action of the Primary Examiner as to claims 1, 2, and 8, which are as follows:*

1. In a controlling device for swinging doors, in combination, a pair of pivotally connected parts having a spring actuated relative swinging movement for closing the door, a stud mounted on one of said parts, a detent movably mounted on the other of said parts, said detent coöperating with the stud to hold the first mentioned parts against the said spring actuated relative movement when advanced and arranged to be withdrawn by a more forcible initial movement between said parts, a spring acting to advance the detent and a thermally controlled anchor for the spring.

2. In a controlling device for swinging doors, in combination, a pair of pivotally connected parts having a spring actuated relative swinging movement for closing the door, a stud adjustably mounted on one of said parts, a detent movably mounted on the other of said parts, said detent coöperating with the stud to hold the first mentioned parts against the said spring actuated relative movement when advanced and arranged to be withdrawn by a more forcible initial movement between said parts, a spring acting to advance the detent and a thermally controlled anchor for the spring.

8. In a controlling device for swinging doors, in combination, a pair of pivotally connected parts having a spring actuated relative swinging movement for closing the door, a stud mounted on one of said parts, a detent movably mounted on the other of said parts, said detent coöperating with the stud to hold the first mentioned parts against the spring actuated relative movement when advanced and arranged to be withdrawn by a more forcible initial movement between said parts, a spring acting to advance the detent and two anchoring means, one connecting the spring to the part on which the detent is mounted and the other securing the stud to the part on which it is mounted, one of said anchoring means being thermally controlled.

The references are: Moody, No. 777,800, December 13, 1904; Voight, No. 1,011,287, December 12, 1911.

The rejected claims cover a controlling device for holding open swinging doors, but which upon the development of a proper amount of heat, as in case of fire, is released and the door allowed to close.

Claim 1, for example, is clearly met by Voight, except that Voight's spring 8, which controls his detent 10, has no "thermally controlled anchor." In order to meet this claim, therefore, it would only be necessary to make the screws that hold the spring 8 of some metal that would melt on the application of heat, so as to release the detent 10. In view of the very common practice of having doors thermally controlled, and controlled, too, by a fastening that can be withdrawn by a forcible initial movement, one of which is shown, for example, in Moody, it is held that applicant's claim 1 is too broad.

The Henry patent, No. 987,722, March 28, 1911, of record in this case, shows every feature, including the "adjustably" mounted stud, (Henry's stud 8, carried by the adjustable collar 7,) except the "thermally controlled anchor." If Henry's screw or screw-head, Figure 4, was of fusible metal, that patent would practically meet claims 2 and 8. These claims seem to be no more allowable than count 2 of interference No. 36,120, and for reasons stated in my decision refusing that count it must be held that present claims 2 and 8 must be refused.

The decision of the Examiners-in-Chief is affirmed.

* This application has eventuated into Patent No. 1,179,834.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Seventh Circuit.

GOLD *et al. v.* GOLD.

Decided October 3, 1916.

1. PATENTS—SUIT TO OBTAIN PATENT—EFFECT OF PATENT OFFICE DECISION.

While the decision of the Court of Appeals of the District of Columbia in an interference proceeding is not conclusive in a subsequent suit by the defeated applicant to obtain the issuance of a patent under Revised Statutes, section 4915, (Comp. St., 1913, sec. 9460,) even though the evidence is the same, the district court must be convinced that it furnishes no substantial support for the decree before it will be justified in overturning the same.

2. SAME—PATENT OFFICE DECISION.

This rule is applicable whether the controversy bears on the credibility of witnesses and the weight of evidence or on questions peculiar to patent laws, such as the construction and scope of the patent application.

3. SAME—SUIT TO OBTAIN PATENT—ISSUES AND PROOF.

In a suit under Revised Statutes, section 4915, to obtain the issuance of a patent the issue is not limited to the question of priority of invention between the parties; but to entitle complainant to a decree he must fully establish his right to the patent.

4. SAME—SAME—HOSE-COUPLER.

Complainant in a suit under Revised Statutes, section 4915, *Held* not to have established his right to a patent to the invention covered by the Gold patent, No. 948,667, for a coupler for hose for connecting the steam-heating pipes of railway-cars.

APPEAL from the District Court of the United States for the Eastern Division of the Northern District of Illinois.

Mr. Otto R. Barnett for the appellants.

Mr. Arthur C. Fraser and *Mr. William A. Redding* for the appellee.

Before KOHLSAAT, MACK, and ALSCHULER, Circuit Judges.

MACK, *Cir. J.:*

Appellee brought suit under Revised Statutes, section 4915, (Comp. St., 1913, sec. 9460,) to obtain Letters Patent. The invention is for an improvement upon the "Sewall" or straight-port coupler for connecting the lengths of rubber hose for steam-heating pipes of railway-cars, so that, while not preventing their unlocking when the cars separate, it shall prevent accidental uncoupling. A lock thus affording sufficient resistance to prevent accidental uncoupling is called an impositive lock.

The district court not only granted the prayer of the bill, but it also declared appellant Gold's patent as to the five claims in question void. Furthermore, it annulled his patent in respect to three other claims, as to which priority had been granted him in the Patent Office, by an order which, because unappealed, made this matter *res adjudicata* as between the parties thereto.

Appellant Gold was the senior applicant. He filed in April, 1902; appellee, in June, 1903. Before interference proceedings were begun, certain of this appellant's claims not involved in the interference, and which had been rejected on the ground that his application afforded no basis for claiming an impositive lock, were allowed on *ex parte* appeal; one Examiner-in-Chief dissenting. Subsequently, after he had had access to appellee's files through an interference proceeding, and had added the new claims, the interference proceedings, which resulted in the decree herein attacked, were instituted as to these eight claims. Appellee then moved to dissolve the interference, on the ground that appellant Gold's application did not cover the invention of these claims. This motion was denied by the Examiner, and on appeal the Examiners-in-Chief left the question open to be determined on the evidence at the final hearing.

On final hearing of the interference, the Examiner awarded priority to appellant Gold on three claims, but to appellee on the five claims here in issue. The decision, however, turned on another point than that of the scope of the application. On appeal, the majority of the Examiners-in-Chief held that appellant Gold had no right to claim the impositive lock under his original application, and for that reason affirmed as to the five claims. For the same reason, the Commissioner of Patents again affirmed their decision. In each instance, appellant was awarded priority as to the three other claims. As to these three, no further appeal was taken, but on appeal as to the five claims the Court of Appeals of the District of Columbia reversed the Commissioner.

(1) These claims were held to be covered by the application and priority was awarded to appellant Gold. (34 App. D. C., 229.) Thereupon Letters Patent No. 948,667 were granted to him on February 8, 1910. But for section 4915, this determination would be *res adjudicata*. Under this act, however, the losing party may renew the contest and endeavor to establish his right to a patent *de novo*. If, in addition to the evidence presented in the interference proceedings, new and additional evidence be given in court, due weight must be accorded thereto. But we cannot assent to appellants' argument that, if the evidence in court and in the interference proceedings is identical, the decision in *Morgan* v. *Daniels* (153 U. S., 120; 14 Sup. Ct., 772; 38 L. Ed., 657) makes the final decision in the interference proceedings conclusive, and requires a dismissal of the bill without any consideration of the evidence; for, though some of the statements in the opinion may support this view, the action of the court in this and in subsequent cases in discussing the evidence negatives such an interpretation of the duty of the court.

The final decision in the interference proceedings, while not conclusive, is nevertheless of the utmost importance. The court of appeals acts therein as the highest patent tribunal; like the Patent Office officials, its members acquire a wide experience in these intricate questions, the solution of which demands expert knowledge and training. Moreover, unlike the *ex parte* grant of patents, interference proceedings are contested between parties in interest, and, while conducted by administrative officials, are quasi-judicial in their nature.

The district court, in this statutory proceeding to review the decree rendered in a contested case by a court, acting as the final expert administrative governmental department, exercises a jurisdiction somewhat analogous to, though broader than, that exercised by a court of equity on a bill to set aside a judgment at law—broader, in that the evidence may go to the merits of the original controversy; but, though a reëxamination of the evidence is not precluded, the court must be thoroughly convinced that it furnishes no substantial support whatever for the decree before the conclusions reached by the Court of Appeals of the District of Columbia will be overturned.

(2) And while this seems obvious enough, when the reëxamination involves merely a weighing of the evidence and a consideration of the credibility of witnesses, as in the ordinary priority of invention cases, it is equally true when questions peculiar to the patent law, such as the construction and scope of the patent application, are involved. For it is just such questions that the administrative tribunal is preëminently qualified to solve. Even then, of course, the court is not absolved from the duty of examination; but, unless it be perfectly clear that the final expert administrative body, the court of appeals, erred, relief should not be granted under section 4915. On a careful consideration of the record, we hold that the sound construction of the application is not free from doubt. The varying conclusions by the several administrative officials would alone raise this doubt; but, far from finding the decree of the court of appeals without support in the record, if it were essential for us to determine the question as an original proposition, we should agree with the conclusions therein reached for the reasons given in the opinion rendered by that court.

(3) But even a contrary conclusion on the construction of appellant Gold's patent application would not necessarily result in a decree in favor of appellee. For in the interference proceedings, if it be finally held that one of two applicants covers, but the other does not cover, the invention in his application, the former must be successful, not necessarily because of any inherent right, but because of the complete absence of right in the losing party. In other words, the issue in the interference proceedings is priority as between the inventions covered by the two applications; if one fails to cover it, the other is necessarily successful. But, as the Commissioner of Patents pointed out, the decision on the interference issue does not determine the right to the patent. In the further *ex parte* consideration of the successful party's application, actual priority of invention must be established. An earlier reduction to practice, whether by a third person or by the unsuccessful contestant in the interference case, will prevent the grant of a patent. And so, too, in a case under section 4915; the issue is not limited to priority of the invention covered by the two applications. To obtain a decree for a patent, the complainant must fully establish his right thereto.

(4) But in this case the Court of Appeals of the District of Columbia has found that appellant Gold made and publicly exhibited a device embodying the invention a year before appellee had reduced his invention to practice by filing his application and that appellee saw and examined the device at that time; in other words, that irrespective of the application, appellant Gold, and not appellee, was the inventor of the device covered by claims 1 to 5. If this finding be correct, then appellee would under no circumstances be entitled to Letters Patent.

We deem it unnecessary to review the evidence; for, while it is conflicting, that offered by appellee tending to support his claim of conception and communication to appellant Gold in 1892, and reduction to practice in 1901, or early in 1902, as well as his charge, both that the device exhibited by appellant in June, 1902, was merely a subsequently abandoned experiment, and that it did not embody the essential feature of the invention, yet, in the light of appellant Gold's contradictory testimony on each of these points, we cannot hold that the court of appeals was clearly wrong in its conclusions or that they lack substantial support in the record. On the contrary, any conclusion other than that reached by the court of appeals, namely, that appellee's reduction to practice cannot be carried back of his filing date, and that appellant Gold fully embodied the invention in an operative device in June, 1902, and thereby reduced it to practice before appellee, even if the application of April, 1902, failed to disclose the invention of these claims, would be subject to the gravest doubt.

It follows, therefore, that the decree must be reversed, and the cause remanded, with directions to dismiss the bill.

ADJUDICATED PATENTS.

(U. S. D. C.) The Hotton design patent, No. 47,244, for a design for a shower-pan, *Held* valid and infringed. *Friedley-Voshardt Co.* v. *Reliance Metal Spinning Co.*, 238 Fed. Rep., 800.

(U. S. D. C.) The Miner patent, No. 668,655, for a draft-rigging, claims 4 and 5 *Held* not anticipated, valid, and infringed. *Miner* v. *T. H. Symington Co.*, 238 Fed. Rep., 806.

(U. S. D. C.) The Miner patent, No. 668,656, for a draft-rigging, *Held* valid and infringed as to claim 8 and claim 2 *Held* void for want of novelty. *Miner* v. *T. H. Symington Co.*, 238 Fed. Rep., 806.

(U. S. D. C.) The O'Connor patent, No. 829,728, for a draft-rigging, *Held* valid and infringed. *Miner* v. *T. H. Symington Co.*, 238 Fed. Rep., 806.

Disclaimer.

835,120.—*Henry Livingstone Sulman, Hugh Fitzalis Kirkpatrick-Picard,* and *John Ballot,* London, England. ORE CONCENTRATION. Patent dated November 6, 1906. Disclaimer filed March 28, 1916, by the assignee, *Minerals Separation, Limited.*

"Your petitioner, therefore, for the purpose of complying with the requirements of the law in such case made and provided, and of disclaiming those parts of the thing patented which your petitioner does not choose to claim or hold by virtue of said Letters Patent No. 835,120, does hereby disclaim from claims 9, 10 and 11 of said Letters Patent No. 835,120, any process of concentrating powdered ores excepting where the results obtained are the results obtained by the use of oil in a quantity amounting to a fraction of one per cent. on the ore."

Adverse Decisions in Interference.

PATENT NO. 1,118,490.

On February 16, 1917, a decision was rendered that David S. Hulfish was not the first inventor of the subject-matter covered by claim 15 of his Patent No. 1,118,490, subject, "Automatic telephone systems," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,166,480.

On March 1, 1917, a decision was rendered that Harry J. Perkins was not the first inventor of the subject-matter covered by claims 5, 6, and 7 of his Patent No. 1,166,480, subject, "Reverse-gear mechanism," and no appeal having been taken within the time allowed such decision has become final.

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 10, 1917.

Arthur C. Northrop, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Winfield Jones, Riggs Building, Washington, D. C., for registration of a trade-mark and trade-mark registered November 22, 1892, No. 22,008, to Arthur C. Northrop, Waterbury, Conn., and a notice of such declaration sent by registered mail to the said Arthur C. Northrop at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Arthur C. Northrop, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD, *First Assistant Commissioner.*

[Vol. 237. No. 1.]

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 237—No. 2. TUESDAY, APRIL 10, 1917. Price—$5 per year.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Issue of April 10, 1917.

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Labels	23—No.	19,998 to No.	20,020, inclusive.
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929

Publication of Claims.

(ORDER No. 2,309.)

DEPARTMENT OF THE INTERIOR.
UNITED STATES PATENT OFFICE.
Washington, D. C., March 15, 1917.

Hereafter each Examiner on passing a case for issue will select claims, from one to five in number, illustrative of the feature or features of the invention, for printing in the Official Gazette. This does not apply to reissue applications.

He will endorse on the last line of the front page of the file-wrapper the claim or claims so selected, as "O. G. claims 1, 3, and 7."

THOMAS EWING,
Commissioner.

Cancelation Notice.

DEPARTMENT OF THE INTERIOR.
UNITED STATES PATENT OFFICE.
Washington, D. C., April 5, 1917.

Margaretha Schmitt, her assigns or legal representatives, take notice:

A cancelation proceeding has been instituted by this Office upon the application of August Underberg and Anna Underberg, of 6020 South Paulina street, Chicago, Ill., to effect the cancelation of the trade-mark registration of Margaretha Schmitt, No. 682 Hart street, New York, N. Y., registered December 26, 1899, No. 33,946, and the notice of such proceeding sent by registered mail to said Margaretha Schmitt at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Margaretha Schmitt, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will proceed as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 30, 1917.

James A. Harris, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Winter Haven Packing Co., of Winter Haven, Fla., for registration of a trade-mark and trade-mark registered October 20, 1885, No. 12,674, to James A. Harris, of Citra, Fla., and a notice of such declaration sent by registered mail to said Harris at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Harris, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 31, 1917.

Albert Schnell, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Jacob Mellcow, 144 West One hundred and thirteenth street, New York, N. Y., for registration of a trade-mark and trade-mark registered July 22, 1890, No. 18,191, to Albert Schnell, of St. Louis, Mo., and a notice of such declaration sent by registered mail to said Schnell at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Schnell, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

ADJUDICATED PATENTS.

(U. S. D. C.) The Flora patent, No. 907,586, for a wire-bound box, *Held* valid, but not infringed. *Wirebounds Patents Co.* v. *Chicago Mill & Lumber Co.*, 238 Fed. Rep., 929.

(U. S. D. C.) The Inwood and Lavenberg reissue patent, No. 12,725, (original No. 799,854,) for a wire-bound box, *Held* valid and infringed. *Wirebounds Patents Co.* v. *Chicago Mill & Lumber Co.*, 238 Fed. Rep., 929.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 6, 1917.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Feb. 3	Jan. 27	274
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Nov. 6	Jan. 23	507
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Feb. 19	Mar. 15	146
234	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Jan. 26	Mar. 23	249
167	5. Bookbinding; Harvesters; Jewelry; Music	Nov. 27	Feb. 12	267
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Nov. 22	Jan. 31	377
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Nov. 29	Dec. 9	693
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Oct. 23	Feb. 9	1019
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Sept. 16	Mar. 22	538
235	10. Carriages and Wagons	Oct. 24	Mar. 13	890
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus.	Dec. 26	Mar. 20	170
324	12. Journal-Boxes, Pulleys, and Shafting; Machine Elements	Jan. 15	Mar. 9	638
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Dec. 8	Mar. 7	549
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Dec. 29	Jan. 4	285
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Mar. 7	Mar. 12	242
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Nov. 13	Jan. 10	610
303	17. Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting.	Jan. 3	Mar. 7	200
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Lubrication; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Feb. 23	Feb. 26	258
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Nov. 9	Jan. 2	506
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Mar. 7	Mar. 10	206
182	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Dec. 14	Feb. 9	267
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 13	Jan. 31	555
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Sept. 18	July 25	350
144	24. Apparel; Apparel Apparatus; Sewing-Machines; Garment Supporters	Dec. 12	Mar. 2	327
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Mar. 2	Mar. 9	147
105	26. Electricity, Generation; Motive Power	Aug. 19	Feb. 1	603
375	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Mar. 1	Mar. 8	241
63	28. Internal-Combustion Engines	Sept. 20	Jan. 15	528
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Dec. 5	Jan. 3	419
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Jan. 8	Mar. 22	433
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Dec. 14	Jan. 17	283
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Sept. 12	Mar. 1	936
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Nov. 21	Mar. 2	373
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Sept. 30	Mar. 7	345
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet	Oct. 23	Feb. 7	751
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring	Dec. 21	Mar. 21	605
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	Sept. 27	Feb. 20	792
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Mar. 9	Mar. 16	168
321	39. Water Distribution	Dec. 4	Jan. 31	395
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 16	Mar. 6	513
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Dec. 4	Feb. 2	409
244	42. Electricity, Conductors; Railway Signaling; Electricity-Transmission to Vehicles	Oct. 25	Feb. 19	358
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Jan. 15	Feb. 28	151

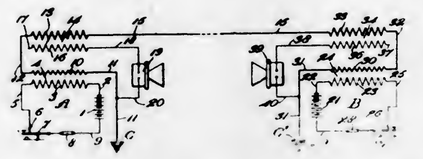
Oldest new case, Aug. 19; oldest amended, Jan. 4.
Total number of applications awaiting action..... 18,573

163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Feb. 2	Mar. 16	1229
	Designs	Feb. 17	Mar. 12	323
	Labels and Prints	Mar. 24	Mar. 26	94

PATENTS

GRANTED APRIL 10, 1917.

1,221,814. ELECTRIC-TELEGRAPH SYSTEM. CHARLES ADAMS-RANDALL, Boston, Mass. Filed Mar. 6, 1916. Serial No. 82,456. (Cl. 178—66.)



1. In a telegraph system the combination of a main line circuit provided with stations; an induction coil and a compound-wound reproducing coil at each of said stations, each of said coils having one of its windings included in said main line circuit; a local receiving circuit including a receiver and another winding of said compound-wound coil at each station, said receiving circuit having one of its terminals open to the atmosphere; and a physically disconnected transmitting circuit including a battery, a telegraph key and the other winding of said induction coil at each station, substantially as described.

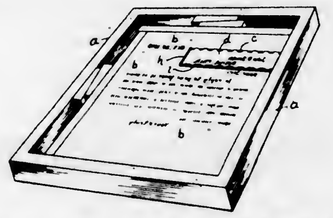
2. In a telegraph system, the combination of a main line circuit including a receiver; a compound wound reproducing coil having a plurality of windings one of which windings is included in said main line circuit; an induction coil; a local circuit including one of the windings of said induction coil and another of the windings of said compound-wound coil, and having one of its terminals open to the air; and a second local circuit including the other winding of said induction coil, a battery and a telegraph key, substantially as described.

3. In a telegraph system the combination of a main line circuit including a receiver and having one of its terminals open to the air; a compound-wound reproducing coil provided with a plurality of windings, one of which windings is included in said main line circuit; an induction coil; a local circuit including one of the windings of said induction coil and another of the windings of said compound-wound coil; a condenser and an adjustable resistance in said local circuit; and a second local circuit including the other winding of said induction coil, a battery and a telegraph key, substantially as described.

4. In a telegraph system the combination of a tertiary coil; a grounded main line circuit including one of the windings of said coil; a local transmitting circuit including another of the windings of said coil, a battery and a telegraph key; and a local receiving circuit including another winding of said coil and a receiver, and having one of its terminals open to the atmosphere, substantially as described.

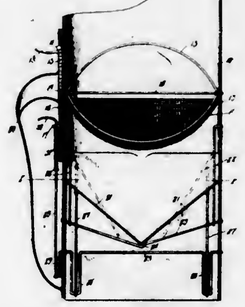
1,221,815. PRINTING APPARATUS. REED ADAMS, Lapeer, Mich. Filed Nov. 4, 1915. Serial No. 59,534. (Cl. 101—382.)

The combination of a form having a space therein, a block having magnetic qualities adapted to occupy said space with its face below the printing surface of said form, and a series of interchangeable plates adapted to be held in place on the face of said block by the magnetism of the same, each of said plates having a printing surface adapted



to come into the same plane as the printing surface of said form.

1,221,816. FLOUR-SIFTER. CHRIS ANDERSON, Pickert, N. D. Filed Aug. 15, 1916. Serial No. 115,077. (Cl. 83—60.)



1. A sifter comprising a body portion, a screening in said body portion, an agitator positioned above said screening, guiding rods mounted in said body portion beneath said screening, closures slidably connected with said guiding rods, a supporting yoke for said closures bent intermediate its length to provide a seat to engage the free edge portion of one of said closures with the closures in overlapping relation when closed, a crank shaft rotatably mounted in said body portion beneath said yoke, rods extending from said crank shaft and connected with said closures, one end of said crank shaft extending through said body portion and bent to provide a handle, an actuating plunger slidably connected with said body portion and connected with the crank handle of said crank shaft, and resilient means yieldably holding said plunger in a lowered position to retain said closures in a set position.

2. A sifter comprising a body portion, a screening in said body portion, an agitator in said body portion above said screening and including a shaft extending through the

wall of said body portion, means for rotating said shaft to operate said agitator, a yoke extending through said body portion beneath said screening, guide rods extending from said yoke and connected with said body portion, closure plates positioned in said body portion beneath said screening and limited in their downward movement by said yoke and slidably connected with said guide rods, a crank shaft extending through said body portion, actuating rods connected with said crank shaft and connected with said closure plates for moving the same to an open position, and means for rotating said crank shaft to open and close said closure plates.

3. A sifter comprising a body portion, a screening in said body portion, agitating means positioned above said screening in said body portion, closure plates slidably mounted in said body portion beneath said screening and having their free ends extending in overlapping relation when in a closed position, means in said body portion for limiting the downward movement of said closure plates and supporting the same in a closed position, a crank shaft having offsets, actuating rods connected with the offsets of said crank shaft and with said closure plates for moving the same to an open position when the offsets are swung upwardly and moving the closure plates to a closed position when the offsets are moved downwardly, and means for rotating said crank shaft to move the closures to an open and to a closed position.

4. A sifter comprising a body portion, a screening in said body portion, an agitator in said body portion above said screening, closures movably mounted in said body portion beneath said screening, actuating means for said agitator including a trigger, actuating means for said closures including a plunger provided with a trigger, and a handle for said body portion having its upper end between said triggers.

5. A sifter comprising a body portion having a handle, a screening for said body portion, an agitator in said body portion including an actuating stem extending through said body portion, closures movably mounted in said body portion beneath said screening, actuating means for said closures including a crank shaft extending through said body portion, an operating plunger for the actuating means of said closures positioned beneath the upper end portion of said handle, and operating means for said agitating means including a finger engaging element positioned above the upper end of said handle.

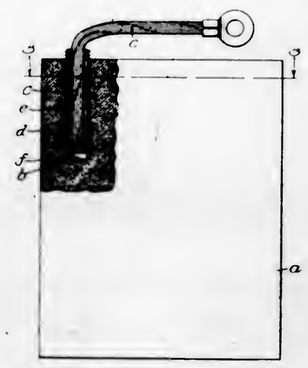
1,221,817. GUTTER FOR STABLES. WILLIAM ARMSTRONG, Wadena, Minn. Filed June 16, 1916. Serial No. 104,121. (Cl. 57—13.)



A dumping receptacle comprising a plurality of depending chains divided at their lower ends, one of said divided chain ends being attached to the receptacle below one of its upper edges, a slidable rod carried on the opposite edge having latch members for engaging the unsecured divided members of said chains, and a lever for reciprocating said slidable rod and latch members for simultaneously releasing the chains from one edge of the receptacle to dump the contents thereof.

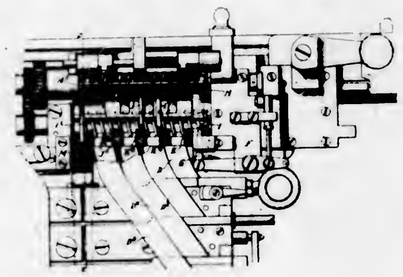
1,221,818. ELECTRIC-CURRENT BRUSH STRUCTURE. OLIVER E. BECKER, Chicago, Ill. Filed Oct. 27, 1913. Serial No. 797,409. (Cl. 200—26.)

An electric current brush structure including a contact element having a threaded bore; a conducting wire formed of strands for including said contact element in circuit; and a threaded sleeve whose bore receives one end of the conducting wire and whose threads are greater in extent than the threads in the bore of the contact element whereby the threads of the sleeve complete the formation of



the threads in the threaded bore of the contact element as the threaded sleeve is turned home in the contact element.

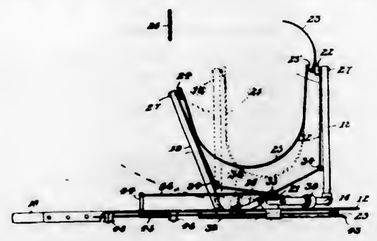
1,221,819. TYPOGRAPHICAL MACHINE. RICHARD M. BEDELL, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Nov. 29, 1913. Serial No. 803,651. (Cl. 199—41.)



1. Font distributing mechanism including a font-distributer bar provided with primary distributing portions and with an auxiliary distributing portion adapted to receive alien type or matrices not distributable by the primary portions, said bar being also formed with intermediate blank portions, a series of selecting bridges underlying the blank portions between the primary portions, receptacles for receiving the matrices distributed by the primary portions, and an independent receptacle for receiving the alien type or matrices from the auxiliary portion.

2. Font distributing mechanism including a font-distributer bar formed with a plurality of primary distributing portions and with an auxiliary distributing portion adapted to receive alien matrices not distributable by the primary portions, said bar being also formed with intermediate blank sections, a series of selecting bridges underlying the blank sections, a series of tubes for receiving the matrices distributed by the primary portions, and an independent chute for receiving the alien matrices from the auxiliary portion; the auxiliary distributing portion being of greater supporting surface than that of the primary portion to present a bridging surface that overlaps the chute.

1,221,820. WHEAT-SHOCKING ATTACHMENT FOR HARVESTERS. WALTER D. BLAIR and HERMAN C. RAASCH, Red Lake Falls, Minn. Filed June 10, 1916. Serial No. 102,911. (Cl. 56—121.)



1. A shocker for harvesters comprising a frame having a depressed end portion provided with projecting braces, a substantially circular track carried by the end of the frame above the level of the said depressed portion, pulley wheels upon said braces, guard plates overlying the said wheels connecting said track and braces, the free outer ends of said braces being depressed and positioned substantially opposite the said plates, radially projecting arms pivoted upon said depressed portion of the frame, a dumping sheaf receiver upon the said arms, and an operating cord secured to one of the said arms arranged upon the said wheels when the device is normally positioned and being removable therefrom and returnable thereto between said plates and brace ends during the operation of the device.

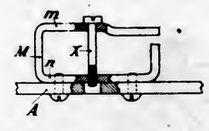
2. A shocker for harvesters comprising a frame having a depressed end portion, a substantially circular track carried by the end of the frame above the level of the said depressed portion, pulley wheels upon the depressed end portion of the frame, radially projecting arms centrally pivoted upon the said frame, anti-friction rollers upon the said arms positioned upon the said track, an expansion spring for the said arms, an operating cord secured to one of the said arms arranged upon the said wheels when the device is normally positioned and removable therefrom during the operation of the device, normally horizontal hands pivoted upon the free ends of the said arms, a flexible receiving apron secured between the said hands, resilient fingers carried by one of the said hands, a trip cord secured to the free ends of the said hands, and operative connections between the said trip cord and operating cord.

3. A grain shocker for harvesters comprising a frame, a track having a depressed portion mounted upon the free end of the said frame, a pivot bolt upon the said frame, diverging arms radially arranged with respect to the said track mounted upon the said pivot bolt, hinge joints in the said arms, rollers upon the said arms mounted upon the said track, upright end portions carried by the said arms, normally horizontal hands pivoted upon the free ends of the said upright portions, a flexible receiving apron secured between the said hands, resilient fingers carried by one of the said hands, a trip cord secured to the free ends of the said hands, and simultaneously actuated operating means for said arms in operative relations with respect to the said cord.

1,221,821. CALIBRATING ELECTRIC METERS. OTTO TITUS BLÁTHY, Budapest, Hungary. Filed Dec. 15, 1914. Serial No. 877,419. (Cl. 171—34.)

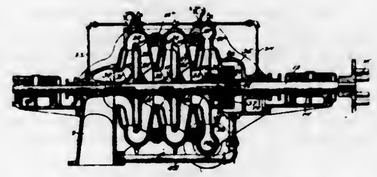
1. An electric meter having a rotating part; a brake disk mounted on said rotatable part; a permanent magnet between the pole pieces of which said disk revolves; and a screw engaging both legs of the magnet and adapted to regulate the distance between the pole surfaces more or less owing to the resiliency of the magnet.

2. An electric meter having a rotating part; a brake disk mounted on said rotatable part; an easily removable permanent magnet between the pole pieces of which said



disk revolves; and a screw engaging both legs of the magnet and adapted to regulate the distance between the pole surfaces more or less.

1,221,822. CENTRIFUGAL PUMP. LARS W. BODINSON, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed June 22, 1911. Serial No. 634,734. (Cl. 253—188.)



1. A centrifugal pump, comprisign a pump-shaft, an impeller mounted thereon, a chamber in which said impeller rotates, a passage leading from the impeller chamber to a pressure chamber, and means operated by movement of the pump-shaft toward the pump inlet to enlarge the area of the inlet to said passage and reduce the area of the outlet from said pressure chamber, and vice versa.

2. A centrifugal pump, comprising a pump-shaft, an impeller mounted thereon, a chamber in which said impeller rotates, a passage leading from the impeller chamber to a pressure chamber, means operated by movement of the pump-shaft toward the pump inlet to enlarge the area of the inlet to said passage and reduce the area of the outlet from said pressure chamber, and vice versa, and a pipe for conducting the fluid discharged from said pressure chamber to the pump inlet.

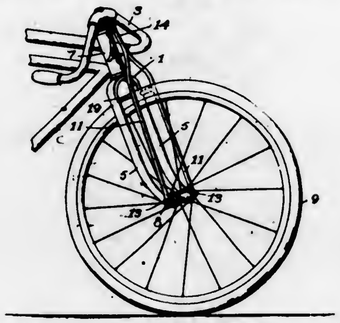
3. A centrifugal pump, comprising a pump-shaft, an impeller mounted thereon, a chamber in which said impeller rotates, a partition at one side of said chamber having a passage therethrough, and means at opposite sides of said partition forming a variable inlet to said passage and a pressure chamber into which said passage discharges, said means being movable with the pump-shaft to inversely vary the area of the inlet to said passage and the outlet from said pressure chamber.

4. A centrifugal pump, comprising a pump-shaft, an impeller mounted thereon, a chamber in which said impeller rotates, a partition at one side of said chamber having a passage therethrough, means at opposite sides of said partition forming a variable inlet to said passage and a pressure chamber into which said passage discharges, said means being movable with the pump-shaft to inversely vary the area of the inlet to said passage and the outlet from said pressure chamber, and a pipe for conducting fluid discharged from said pressure chamber to the pump inlet.

5. A centrifugal pump, comprising a pump-shaft, an impeller mounted thereon, a chamber in which said impeller rotates, a passage leading from the impeller chamber to a pressure chamber, and means mounted on the pump-shaft and operated by movement thereof toward the pump inlet to enlarge the area of the inlet to said passage and reduce the area of the outlet from said pressure chamber, and vice versa.

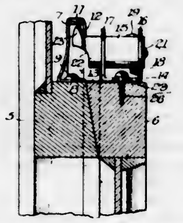
[Claims 6 to 21 not printed in the Gazette.]

1,221,823. TRUSS FOR BICYCLE OR MOTOR-CYCLE FRAMES. THOMAS F. BOWKER, Fitchburg, Mass., assignor to Mary Elizabeth Johnson, trustee. Filed Mar. 30, 1915. Serial No. 18,164. (Cl. 208—102.)



A truss adapted for detachable connection with the front fork of a bicycle comprising members having means for attachment to the front axle, means connected to the upper part of the truss for detachable connection with the upper part of the fork, and struts connected with the intermediate part of the truss member each having a free end formed to firmly engage a member of the front fork.

1,221,824. SASH-LOCK. JAMES H. BOYE, Chicago, Ill., assignor to James H. Boye Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 22, 1916. Serial No. 110,671. (Cl. 16—144.)



1. In a sash lock, the combination of a keeper adapted to be mounted on a sash, a support adapted to be mounted upon an adjacent sash, a rotatable and longitudinally movable member carried by said support, means for moving said member longitudinally into position beneath said keeper upon initial rotary movement thereof, means on said member for lifting said keeper vertically upon further rotary movement of said member, and means on said member for drawing said keeper toward said support after the vertical movement of said keeper has been completed.

2. In a sash lock, the combination of a keeper, a support adapted to be mounted adjacent to said keeper, a member mounted in said support so as to be capable of rotary and longitudinal movements, a shoulder on one end of said member for imparting a direct vertical thrust to said keeper, and a cam flange on said member in proximity to said shoulder for drawing the keeper toward said support subsequently to the lifting thrust action of said shoulder.

3. In a sash lock, the combination of a keeper, a support adapted to be mounted adjacent to said keeper, a cylinder mounted in said support with capacity for both rotary and endwise movement, an eccentric shoulder on one end of said cylinder for imparting a direct lifting movement to said keeper, a cam flange on said cylinder in proximity to said shoulder for drawing the keeper toward said support subsequently to the lifting action of said shoulder, an operating handle on the other end of said cylinder, and coöperating cam devices on said support and cylinder respectively for effecting an endwise movement of the latter simultaneously with its rotary movement.

1,221,825. SENSITIVE PHOTOGRAPHIC FILM. JACQUES EDWIN BRANDENBERGER, Paris, France, assignor to La Societe dite "La Cellophane," Paris, France. Filed Feb. 24, 1915. Serial No. 10,274. (Cl. 95—9.)

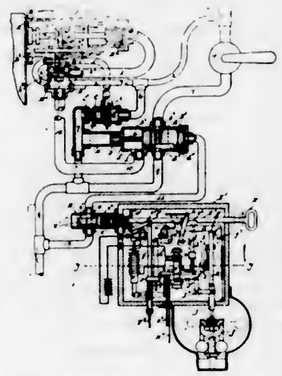


1. A composite photographic film, comprising two separately-constructed, outer films, and an intermediate stratum or layer containing sensitive material disposed between the inner surfaces of said films, said outer films and said intermediate stratum being united face to face throughout their entire extent; at least one of said outer films being constructed of cellulose, and being transparent and permeable to the liquids employed in photography.

2. A composite photographic film, comprising three separately-constructed, coördinate films united face to face throughout their entire extent; at least one of the two outer films being constructed of cellulose, and being transparent and permeable to the liquids employed in photography, and intermediate the film being constituted by a continuous transparent sensitized sheet.

3. A composite photographic film, comprising three separately-constructed, coördinate films united face to face throughout their entire extent; at least one of the two outer films being constructed of cellulose, and being transparent and permeable to the liquids employed in photography, and the intermediate film being constituted by a continuous transparent strip of cellulosic material impregnated with a sensitizing liquid and a transparent adhesive.

1,221,826. SAFETY DEVICE FOR RAILROADS. CLAYTON A. BROOKS, Girard, Pa. Filed Feb. 10, 1914. Serial No. 817,802. (Cl. 246—59.)



1. In an apparatus of the character described, a throttle-valve-stem, a latch-block slidably mounted thereon, an operating lever operatively connected therewith, cylinder and piston mechanism adapted to move said valve-stem to close said throttle-valve; cylinder and piston mechanism adapted to release said latch-lock from engagement with said valve-stem, an air-duct from the last mentioned cylinder to the first mentioned cylinder having the entrance thereinto from the last mentioned cylinder so located as to be uncovered by the piston therein, and valve-mechanism adapted to admit air into the last mentioned cylinder, substantially as described.

2. In an apparatus of the character described, a throttle valve-stem having a transverse notch therein, a latch-block slidably mounted on said valve-stem with which the throttle operating lever is connected, a latch on said block so as to prevent said block from sliding on said valve-stem, a cylinder, a piston therein adapted to operate against the end of said valve-stem, a cylinder secured transversely to said valve-stem, an air duct leading from the last mentioned cylinder to the valve-stem operating cylinder, a piston and piston-rod in said transverse cylinder, a plate parallel with said throttle-valve-stem secured on the end of said piston-rod and adapted to raise said latch out of said notch when its connected piston is operated, said last mentioned piston being adapted to act as a valve to open communication from its cylinder into said air duct, and valve mechanism, to admit air into said last mentioned cylinder, substantially as set forth.

3. In an apparatus of the character described, a valve-stem having a notch therein, a latch-block slidably mounted thereon and connected with the throttle operating lever, a yoke having the arms thereof parallel with said valve-stem, a cylinder supported by said yoke, concentric with said valve-stem, a piston in said cylinder, a latch pivoted in said latch-block above said valve-stem, an arm on said latch, a spring pressed rod engaging said arm and slidably mounted on the side of said latch-block, a cylinder secured to one arm of said yoke, and having an opening in the wall thereof, a piston in said cylinder adapted to uncover said opening on its upward movement, a piston rod secured thereto and extending upward through said yoke arm, a plate on the upper end of said piston-rod adapted to engage said spring-pressed rod and raise the same to operate said latch, an air duct leading from said opening in the wall of said cylinder to the cylinder concentric with said valve-stem, substantially as and for the purpose described.

4. In an apparatus of the character described, a throttle-valve-stem, a slidable block thereon, latch mechanism for securing said block non-slidably on said valve-stem, a throttle operating lever connected with said latch mechanism, piston mechanism to operate said latch mechanism, an air duct communicating with the main train pipe, valve mechanism controlling the air passage in said duct operatable by said piston mechanism, piston mechanism adapted to operate said throttle-valve-stem, an air duct forming communications between said piston mechanism, and valve mechanism to admit air to said piston, substantially as described.

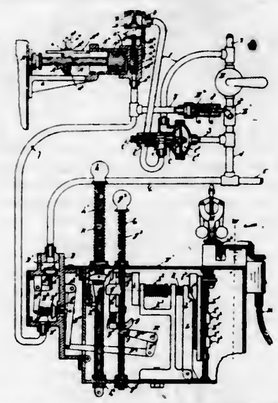
5. In an apparatus of the character described, piston mechanisms for disconnecting the engineer's throttle operating lever, closing the throttle-valve and reducing the pressure in the train pipe, pneumatically actuated valve mechanism for admitting air to said piston mechanisms, and valve mechanism for controlling admission and exhaust of air to and from said pneumatically actuated valve mechanism, substantially as and for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,221,827. SAFETY APPARATUS FOR RAILROADS. CLAYTON A. BROOKS, Girard, Pa. Filed Nov. 16, 1914. Serial No. 872,401. (Cl. 246—59.)

1. In an apparatus of the character described, a throttle-valve stem having a notch therein, a latch-block slidably mounted theron, a latch-bolt slidably mounted in said block and adapted to enter the notch in said valve-stem, a yoke secured on said latch-block, to support the outer end of said latch-bolt, a shoulder on said latch-bolt, a spring between said yoke and said shoulder to normally maintain said latch-bolt in said notch, a rock-lever adapted to engage said shoulder to raise said latch-bolt out of engagement with said notch, and pneumatic mechanism to operate said rock-lever substantially as set forth.

2. In an apparatus of the character described, a throttle-valve stem, cylinder and piston mechanism adapted to actuate said valve-stem to close the valve connected therewith, a piston valve adapted to be actuated by air to admit air to said cylinder and piston mechanism, a stem on said piston-valve, an air escape valve communicating with the train air pipe adapted to be engaged and opened by the stem on said piston-valve, and means to admit air to said piston-valve when desired, substantially as described.



3. In an apparatus of the character described, a throttle-valve-stem, cylinder and piston mechanism to actuate said valve-stem to close the valve connected therewith, a valve-housing having a valve-chamber therein, an inlet valve to admit air into said chamber, a spring pressed outlet valve in said chamber at right angles to said inlet valve to allow air to exhaust therefrom, lever mechanism adapted to close said exhaust valve and open said inlet valve, means to supply air to said inlet valve, and means to conduct air from said valve-chamber to said cylinder and piston mechanism, substantially as set forth.

4. In an apparatus of the character described, a valve mechanism comprising substantially a chamber, a valve seated exterior to said chamber to admit air thereinto, a spring pressed valve seated within said chamber at right angles to said inlet valve adapted to permit air to escape therefrom, a lever mounted within said chamber and connected with each of said valves and adapted to close said exhaust valve and open said admission valve, and means to operate said lever, substantially as set forth.

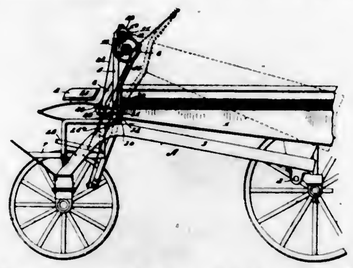
5. In an apparatus of the character described, a cylinder and piston mechanism for closing the throttle-valve of a locomotive, a pneumatic valve adapted to be actuated to admit air to said cylinder and piston mechanism, an air-escape valve adapted to be opened by said pneumatic valve, means to admit air to said pneumatic valve, a diaphragm chamber, an air connection from the train pipe to said diaphragm chamber and therefrom to said air-escape valve, a diaphragm in said chamber, a valve in said chamber adapted to be actuated by said diaphragm to close said valve, a spring adapted to actuate said valve in the opposite direction, means to adjust the tension of said spring, and an air connection between the opposite side of said diaphragm chamber and the main source of air supply, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,221,828. DUMPING-WAGON. J GROVE BROWN, Groton, N. Y. Filed Sept. 26, 1914. Serial No. 863,739. (Cl. 21—20.)

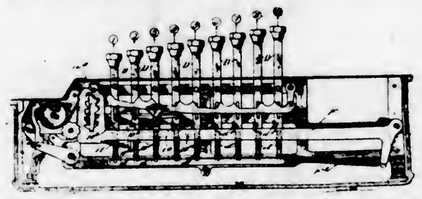
In an endwise dumping vehicle, a frame, a windlass supported upon the front end thereof, an endwise tilting

body, an upright secured to the front of the body, oppositely winding chains or cables on the windlass connected, respectively, to upper and lower parts of the up-



right, a lock for locking the body, in its lowered position, to the frame, a brake for the windlass, a manually operable lever, and connections between said lever and said lock and brake for releasing the lock and brake.

1,221,829. ADDING-MACHINE. ROY L. BUMB, Chicago, Ill., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 8, 1913. Serial No. 783,701. (Cl. 235—82.)



1. In a machine of the class described the combination of a registering lever; a series of keys with stems constructed and arranged to act upon said lever at increasing distances from the latter's pivot and with lost motion between the lever and certain of said key stems which act at the greater distances; and compensating means for the said certain key stems only, said means acting while said lost motion between said certain key stems and the lever is being taken up, whereby to create substantially uniform resistance to the depression of said certain key stems though displacement of the lever by them is less proportionately to the extent of their depression than is displacement of said lever by other key stems proportionate to similar extent of depression of the latter, such other key stems acting independently of said compensating means.

2. In a machine of the class described the combination of a registering lever; a series of keys with stems constructed and arranged to act upon said lever at increasing distances from the latter's pivot and with lost motion between the lever and certain of said key stems which act at the greater distances; and compensating means for the said certain key stems only, said means offering resistance thereto while said lost motion between the said certain key stems and the lever is being taken up, whereby to create substantially uniform resistance to the depression of said certain key stems though displacement of the lever by them is less proportionately to the extent of their depression than is displacement of said lever by other key stems proportionate to similar extent of depression of the latter, such other key stems acting independently of said compensating means.

3. In a machine of the class described, the combination of a spring-held registering lever, a series of depressible spring-upheld keys with stems constructed and arranged to act upon said lever in opposition to its spring at increasing distances from its pivot and with lost motion between the levers and certain of said key stems which act at the greater distances, and compensating spring-means applied to such key stems only and offering resistance to their depression while the lost motion between them and the lever is being taken up, whereby to create substantially uniform resistance to the depression of said certain key stems though displacement of the lever by them is less proportionately to the extent of their depression than is displacement of said lever by other key stems proportionate to similar extent of depression of the latter, such other key stems acting independently of said compensating means.

4. In a machine of the class described, the combination of a spring-held registering lever, a series of depressible spring-upheld keys with stems constructed and arranged to act upon said lever in opposition to its spring at increasing distances from its pivot and with lost motion between the lever and certain of said key stems which act at the greater distances, an arm pivoted on said lever, and a spring upholding said arm for engaging with the said certain key stems only.

1,221,830. SAFETY JEWEL-BOX. JOSEPH EDWARD BURRELL, Winnipeg, Manitoba, Canada. Filed Apr. 16, 1915. Serial No. 21,853. (Cl. 211—12.)

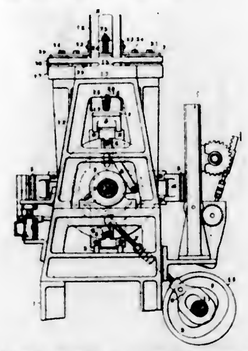


1. A safety jewel box comprising a box like casing having an entrance opening in the top thereof, a flexible, sectional, slidable shutter closing the entrance opening, a pair of cables connected to the forward end of the shutter, a pair of rotatably mounted pulleys located beneath the rear end of the shutter and to which the cables are fastened, guide pulleys for the cables, springs attached to the first mentioned pulleys and effecting a pull in the cables to retain the shutter normally closed, means permanently connecting the first mentioned pulleys with the rear end of the shutter and pressure operated means for rotating the pulleys against the action of the springs and effecting the opening of the shutter and the winding of the same on the pulleys.

2. A safety jewel box comprising, a box like casing having an entrance opening in the top thereof, a flexible, sectional, slidable shutter closing the entrance opening, a pair of cables connected to the forward end of the shutter, a pair of rotatably mounted pulleys carried by the casing and located beneath the rear end of the shutter and to which the cables are fastened, guide pulleys for the cables, springs attached to the pulleys and effecting a pull in the cables to retain the shutter normally closed, means permanently connecting the rear end of the shutter to the periphery of the pulleys, a shiftable carriage mounted on the forward end of the box, a pressure lever for shifting the carriage, a second pair of pulleys connected to the former pulleys, cables connecting the latter pulleys with the carriage and suitably located guide rollers carrying the latter cables and arranged to effect, in the shifting of the carriage, the pulling of the latter cables to rotate the pulleys and open the shutter against the action of the springs and wind the shutter on the former pulleys.

1,221,831. LABELING-MACHINE. ROBINSON BURT, Buffalo, N. Y., assignor to F. N. Burt Company, Limited, Buffalo, N. Y., a Corporation of Ontario, Canada. Original application filed July 10, 1913, Serial No. 778,255. Divided and this application filed Mar. 7, 1916. Serial No. 82,526. (Cl. 101—39.)

1. In a device of the character described, in combination, a plurality of fingers spaced apart for the support of labels therebetween, a movable carrier to which said fingers are connected, a frame supporting said carrier, devices on said carrier and frame adapted to coöperate to guide the said movable carrier relative to said frame, and hand-operated means connected to said carrier adapted to adjust the latter relative to said frame and hold it in stationary position relative thereto.



2. In a device of the character described, in combination, a plurality of fingers spaced apart for the support of labels therebetween, a movable carrier to which said fingers are connected, a frame supporting said carrier, devices on said carrier and frame adapted to coöperate to guide the said movable carrier relative to said frame, and resilient means adapted to press said carrier against said frame.

3. In a device of the character described, in combination, a plurality of fingers spaced apart for the support of labels therebetween, a movable carrier to which said fingers are connected, a frame supporting said carrier, devices on said carrier and frame adapted to coöperate to guide the said movable carrier relative to said frame, hand-operated means connected to said carrier adapted to adjust the latter relative to said frame and hold it in stationary position relative thereto, and resilient means adapted to press said carrier against said frame.

4. In a device of the character described, in combination, a plurality of fingers spaced apart for the support of labels therebetween, a movable carrier to which said fingers are connected, a frame supporting said carrier, devices on said carrier and frame adapted to coöperate to guide the said movable carrier relative to said frame, and a manually operable rotary shaft threadedly connected to said frame and swiveled to said carrier.

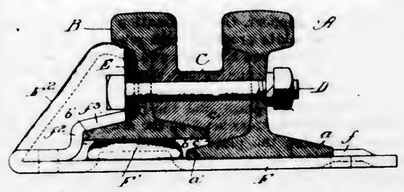
5. In a device of the character described, in combination, a plurality of supporting fingers spaced apart for the support of labels therebetween, a movable carrier, and separate supporting brackets for certain of said fingers connected to said carrier and adjustable thereon in planes generally parallel to the plane of the labels.

[Claims 6 to 15 not printed in the Gazette.]

1,221,832. RAIL-SUPPORTING DEVICE. EDWIN G. BUSSE, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed July 24, 1916. Serial No. 111,084. (Cl. 238—18.)

1. A brace plate for railway rails formed of a single piece of metal having a lower portion adapted to extend beneath and support one rail and having adjacent thereto a hollow arched portion rising from said plate and of less width than said plate, the crown of said arched portion forming a raised seat for a supplemental rail and being materially narrower than the base of said supplemental rail, said brace plate having at the outer side of said arched portion a raised brace adapted to extend over the base flange and engage the upper part of said supplemental rail.

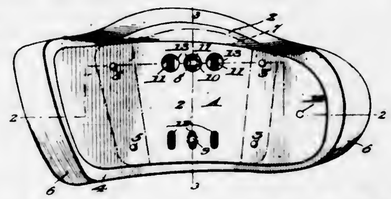
2. A brace plate for railway rails formed of a single plate of metal and comprising a base having a struck up portion forming a raised seat for a supplemental rail and having adjacent thereto a flat portion forming a seat for the main rail, said metal plate being folded inwardly upon itself and bent upwardly at the end adjacent said raised seat to form a brace adapted to engage the base flange and upper portion of the supplemental rail.



3. A brace plate for railway rails formed of a single plate of metal and comprising a base having a struck up portion forming a raised seat for a supplemental rail and having adjacent thereto a flat portion forming a seat for the main rail, said metal plate being folded inwardly upon itself and bent upwardly at the end adjacent said raised seat to form a brace adapted to engage the base flange and upper portion of the supplemental rail and said plate being provided outside said main rail seat with an integral struck up part adapted to engage the base flange of the main rail.

4. The combination with a main and a supplemental rail of a brace plate having a lower portion adapted to extend beneath and support the main rail and having adjacent thereto a raised portion of less width than the plate from which it is raised and adapted to extend beneath and support the base of the supplemental rail, said brace plate having also at the outer side of said raised portion a brace adapted to engage the base flange and upper portion of the supplemental rail, a filler block extending between the main and supplemental rails, and a bolt passing through said main and supplemental rails and through said filler block and serving to unite said parts.

1,221,833. ARCH-SUPPORT. JAMES MARION CALLAHAN, Washington, D. C. Filed Mar. 20, 1915. Serial No. 15,824. (Cl. 36—71.)



1. In an arch support, the combination with a covering and a metal plate connected together at one end, of a pad interposed between the plate and covering and capable of longitudinal movement, said plate and covering being disconnected at their other terminal to permit of the insertion of the pad therebetween, and means for holding the pad in its different longitudinally adjusted positions.

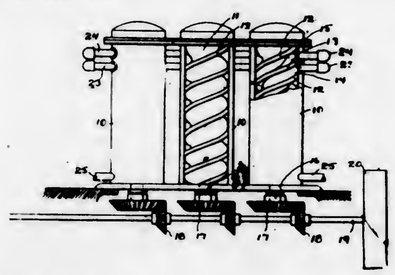
2. In an arch support, the combination with a covering and a slotted metal plate connected together at one end, of a pad interposed between the plate and covering and capable of longitudinal movement, said plate and covering being disconnected at their other terminal to permit of the insertion of the pad therebetween, and means carried by the pad adapted to be inserted through the slots in the plate for fastening the pad to the plate.

3. An arch support comprising a main plate arched lengthwise, an auxiliary plate secured thereto, said plates being slotted, and a pad provided with studs adapted to enter the slots in said plates, one of the studs capable of being turned in the slots to fasten the pad to one of said plates.

4. An arch support comprising a main plate, an auxiliary plate, an insole or covering secured to one of said plates with one end of the insole or covering free or disconnected, and a pad inserted between one of said plates and the insole or covering and detachably fastened to one of said plates.

5. In an arch support, the combination with a covering and a plate, said plate provided with rows of openings, of a pad interposed between the plate and covering, and studs connected to the pad, one of the studs provided with a cross-head, said last mentioned stud adapted to be inserted in an opening in the plate, and the pad given a quarter turn for causing the cross-head of the stud to engage the plate for fastening the plate and pad together, and the other stud adapted to enter an opening of another row of openings for holding the pad against lateral movement.

1,221,834. SCREW-ENGINE. GEORGE H. CHAPPELL, Englewood, N. J. Filed Feb. 17, 1916. Serial No. 78,991. (Cl. 253—142.)



1. An engine of the kind described comprising a screw piston, a cylinder or casing for the piston, a spiral stationary partition following the course of the piston blade and forming two chambers the length of the piston, means for admitting pressure fluid to either chamber, and a suitable exhaust for the cylinder.

2. An engine of the kind described comprising a cylinder, a piston rotating within the cylinder and having a spiral blade fitting against the cylinder wall, a spiral partition secured to the cylinder wall and following the piston blade thereby forming two chambers, and an inlet and exhaust for both chambers of the cylinder.

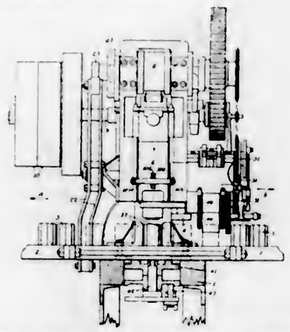
3. An engine comprising a cylinder, a piston turning on a longitudinal axis within the cylinder, a spiral blade on the piston, chambers extending the length of the blade and on opposite sides thereof, and means for admitting pressure fluid to and exhausting it from said chambers.

4. An engine comprising a cylinder, a piston journaled in the cylinder ends and having a shaft projecting from the cylinder, a spiral blade on the piston, a stationary partition following the blade and forming two chambers between the partition and the blade, means for admitting pressure fluid to each chamber, and means for exhausting said fluid from each chamber.

5. An engine comprising a cylinder, a rotary piston journaled in the cylinder, a spiral blade on the piston, a stationary partition spaced apart from the blade, means for admitting pressure fluid between the partition and blade, and means for exhausting the pressure fluid from the cylinder.

1,221,835. APPARATUS FOR MAKING AND SECURING BOX LIDS AND BOTTOMS. WILLIAM RICHTER COMINGS, Wharncliffe, Wimbledon Park, and EDWARD JOHN HALL, Catford, England. Filed Nov. 5, 1914. Serial No. 870,501. (Cl. 93—55.)

1. Means for supporting and successively presenting box blanks to a plurality of mechanisms for operating thereon comprising a plurality of separate and disconnected mandrels, means for intermittently advancing said mandrels, and means for positively holding said mandrels stationary during the operation of said mechanisms, said holding means comprising a shiftable member and means for projecting said member between and into contact with two adjacent mandrels.



2. Means for supporting and successively presenting box blanks to a plurality of mechanisms for operating thereon comprising an endless raceway, a plurality of mandrels provided with bases guided in said raceway so that each base is normally in contact with another base, and means for intermittently advancing said mandrels comprising an intermittently rotated sprocket wheel, the teeth of which are adapted to extend between adjacent mandrels.

3. Means for supporting and successively presenting box blanks to a plurality of mechanisms for operating thereon, comprising an endless raceway, a plurality of mandrels provided with bases guided in said raceway so that each base is normally in contact with another base, and means for intermittently advancing said mandrels comprising an intermittently rotated sprocket wheel, the teeth of which are adapted to extend between adjacent mandrels, and a brake for controlling the rotation of the sprocket wheel.

4. Means for supporting and successively presenting box blanks to a plurality of operative mechanisms comprising an endless raceway, a plurality of mandrels provided with bases guided in said raceway so that each base is normally in contact with another base, means for intermittently advancing said mandrels comprising an intermittently rotated sprocket wheel, the teeth of which are adapted to extend between adjacent mandrels, and means for positively holding the mandrels stationary during the operation of said mechanisms, said holding means comprising a shiftable member and means for projecting said member between and into contact with two adjacent mandrels.

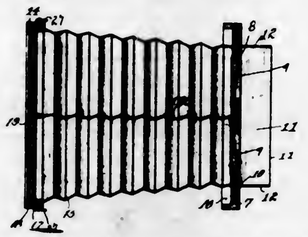
5. Means for supporting and successively presenting box blanks to a plurality of operative mechanisms arranged in a straight line comprising an endless raceway provided with a straight line portion adjacent said mechanisms, a plurality of mandrels provided with bases guided in said raceway so that each base is normally in contact with another base, and means for intermittently advancing said mandrels comprising an intermittently rotated sprocket wheel, the teeth of which are adapted to extend between adjacent mandrels.

[Claims 6 to 16 not printed in the Gazette.]

1,221,836. FOLDING STEREOSCOPE. EARL R. CULDEN, Chicago, Ill. Filed Mar. 18, 1915. Serial No. 15,190. (Cl. 88—29.)

1. A device of the class described comprising a viewing frame; a picture holder; flexible walls connecting the edges of the holder and frame; a flexible partition having its ends connected with the holder and frame; and adjustable means connecting the holder and frame and adapted to maintain said holder and frame in parallel relations at different distances apart.

2. A device of the class described comprising a frame having view apertures therein; a picture holder spaced from the frame at one side thereof; substantially light-tight walls connecting the edges of the holder and frame; and a flexible hood on said frame and adapted to be folded over the viewing apertures to close the latter.



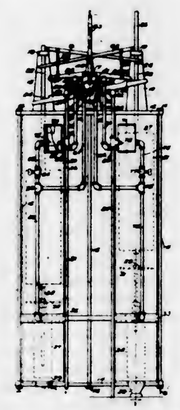
3. A device of the class described comprising a frame having two sight apertures therein; a picture-holder spaced from the frame; substantially light-tight walls inclosing a chamber between the frame and the holder; and a partition extending between the holder and frame and dividing the chamber into two compartments, each of the compartments having a sight aperture at one side thereof.

4. A device of the class described comprising a frame having two sight apertures therein; a picture-holder substantially parallel with the frame; substantially light-tight collapsible walls connecting the edges of the frame and the holder and inclosing the space between the holder and frame; and a collapsible partition extending between the frame and holder and secured to two of said walls dividing the chamber into two compartments, each compartment having a sight aperture at one side and a portion of said holder at another side.

5. A device of the class described comprising a frame having view openings therein; a picture-holder; a bellows connected at its ends to the edges of the frame and holder; a rod extending across the picture-holder; a collapsible partition connected at its edges to said rod, frame and two sides of the bellows and dividing the space in the bellows into two compartments, each compartment having a view aperture at one end and a portion of the picture holder at its other end.

[Claims 6 to 14 not printed in the Gazette.]

1,221,837. WATER-LIFT. CHARLES FRANKLIN COUVE, Aurora, Ill. Filed Aug. 5, 1915. Serial No. 43,791. (Cl. 103—8.)



1. In a water lifter, the combination of a pneumatic pump to be located in a well, and mechanism located above the surface of the earth for supplying compressed air alternately to different portions of said pump, so that one portion is discharging while another portion is being filled with water, the said mechanism including a plurality of cylinders, floats within said cylinders, a pneumatic valve for controlling the air supply and shifting the floats alternately, a rocking shaft connected with said valve for actuating the same, a rocking lever connected rigidly to said rocking shaft, hook levers for holding the rocking lever in different positions, and connections from each of said floats to one of said hook levers and to the rocking lever for actuating said valve.

2. In a controlling apparatus for operating a water lift, the combination of a valve core provided with a number of ports, one of said ports being an inlet port and another being a discharge port, a shutter engaging said core and adapted to open and close some of said ports without interfering with the action of said inlet port and said discharge port, a rocking shaft connected with said shutter for actuating the same, a rocking lever connected rigidly to said rocking shaft and provided with lugs, hook levers provided with hooks for engaging said lugs in order to hold said rocking lever in different positions, a plurality of float mechanisms, connections from each of said float mechanisms to one of said hook levers and to one end of said rocking lever for the purpose of enabling said float mechanisms to control the rocking of said rocking lever and said shutter, throttle valves connected pneumatically to said stationary core and communicating with said ports thereof, said throttle valves being controllable by air passing through some of said ports, and air pipes connected with said throttle valves and extending into a well for the purpose of displacing water therein.

3. A controller for operating water lifts comprising a stationary core provided with a number of ports, one of said ports being an inlet port and another an exhaust port, a pipe for supplying air to said inlet port, a shutter engaging said stationary core and movable relatively thereto, said shutter having such form as to control the opening and closing of some of said ports when said shutter is moved into different positions, a rocking shaft connected with said shutter, a rocking lever connected with the said shaft, hook levers for engaging the rocking lever to hold the same in different positions, and float mechanisms including vertically movable guide rods for controlling the hook levers and the rocking lever, valve chests, connections from some of said ports to some of said valve chests, sliding valves mounted within said valve chests, and an air pipe connected with each of said valve chests and extending into a well, said air pipes being controllable by said sliding valves within said valve chests.

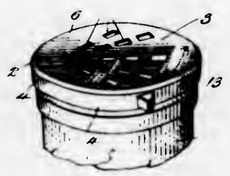
4. In a controlling mechanism of the character described, the combination of a pneumatic valve, a rocking lever for actuating said valve, a cylinder, a float mounted within said cylinder, connections from said float to said rocking lever for enabling movements of the float to actuate said valve, a partition mounted within said cylinder and provided with ports, a second cylinder smaller than said first mentioned cylinder mounted upon said partition and extending downwardly therefrom, means controllable by said valve for discharging air into said first mentioned cylinder at a point below said partition so as to displace a liquid therein contained and to cause said liquid to pass through said second mentioned cylinder and said ports, a float mounted within said first mentioned cylinder and controllable by said liquid, and connections from said float to said valve.

5. In a pump, the combination of a well casing, a longitudinal member mounted therein and having the general form of a cylinder, said longitudinal member being divided into compartments, valve fixtures located within said longitudinal member and normally separating said compartments, means for admitting a liquid into the different compartments of said longitudinal member, air pipes extending downward within the cylinder and having ports in their walls opening into some of said compartments, the terminals of said pipes leading to other compartments, the terminal of one of the air pipes opening into the upper part of a compartment, and the terminal of the other pipe extending downward below the terminal of the first men-

tioned air pipe and communicating through a port in one of said valve fixtures with another compartment, and mechanism for alternately admitting charges of air through said pipes into some of the compartments in order to displace charges of water from said compartments.

[Claims 6 to 12 not printed in the Gazette.]

1,221,838. DISPENSING-CONTAINER. FIRMAN R. CRIST, Clayton, N. J. Filed Mar. 10, 1915. Serial No. 13,425. (Cl. 65—45.)

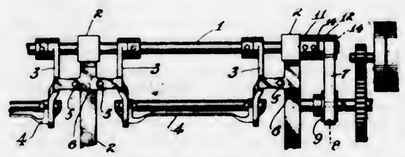


1. A device as specified, including a lid member, a closure member pivoted to said lid member at a point eccentric to the center of said lid, said lid and closure members having a plurality of complementally formed apertures radially extending from the pivot point of said closure member as a center and registrable at times, means for limiting the movement of said closure member, means carried by the lid and in engagement with the closure member to actuate the same, means associated with said actuating means to return the closure member to normal closed position, and means for limiting the movement in said direction.

2. The combination with a dispensing container having an apertured lid and an opening in one side thereof, a closure pivoted to said lid at a point eccentric to the center thereof, apertures in the closure corresponding to the apertures of said lid, and a substantially right angularly bent spring arm connected to the closure and the container and having the intermediate portion thereof extending through the opening in the container side, whereby, the closure can be moved to open position by an inward pressure.

3. The combination with a dispensing container having an apertured lid and an opening in one side thereof, a closure pivoted to said lid at a point eccentric to the center thereof, apertures in the closure corresponding to the apertures of said lid, a substantially right angularly bent spring arm connected to the closure and the container and having the intermediate portion thereof extending through the opening in the container side, whereby, the closure can be moved to open position by an inward pressure, and a plurality of lugs carried by the spring in proximity of the intermediate portion engageable with the inner face of said container side for limiting the outward movement of the arm.

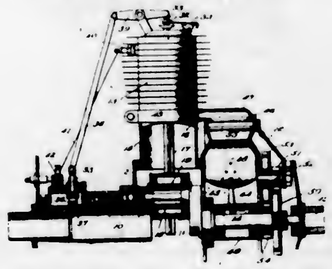
1,221,839. TOP-COMB MOTION. FRANK L. CROCKETT, North Uxbridge, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Aug. 12, 1916. Serial No. 114,501. (Cl. 19—6.)



1. A top comb motion for combing machines, comprising the combination of the top comb shaft carrying the top combs thereon and means for oscillating said shaft, of an elastic coupling between said means and the top comb.

2. A top comb motion for combing machines, comprising in combination with the top comb shaft having the top combs thereon and quick depression mechanism for said combs, of an elastic shaft coupling between said mechanism and the top combs.

1,221,840. ROTARY GAS-ENGINE. PAUL DANIELL Jamaica, N. Y., assignor to Moses Ely, New York, N. Y., and CHARLES FULLER, Port Washington, N. Y. Filed June 11, 1912, Serial No. 702,963. Renewed Dec. 19, 1916. Serial No. 137,914. (Cl. 123-44.)



1. In combination with the rotatably mounted cylinders and pistons of an engine of the class described, a blower casing fixed to said cylinders so as to rotate therewith, baffle plates within said casing, revoluble blades within said casing, means for causing said casing and blades to revolve in opposite directions, and means for conveying gases through said blower to said cylinders, substantially as described.

2. In combination with the rotatably mounted cylinders and pistons of an engine of the class described, a crank chamber, a central abutment composed of two shafts one of which is hollow and a bridge between them within the crank chamber of the engine, a revoluble blower-casing mounted on one of said shafts and opening on one side into said crank chamber, revoluble blades within said casing, gas inlet connections between said casing and the cylinders respectively, and means for causing said casing and blades to revolve around said abutment in opposite directions, substantially as described.

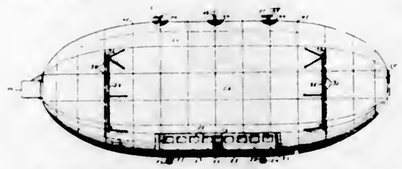
3. In combination with the rotatably mounted cylinders and pistons of an engine of the class described, said cylinders having inlet ports surrounded by suitable inlet chambers; a blower casing arranged to rotate with said cylinders and having peripheral openings, means for conveying gases from said openings to said inlet chambers respectively, rotatably mounted blades within said casing, and means for causing said blades to rotate in a direction opposite to the direction of rotation of said cylinders, substantially as described.

4. In combination with the rotatably mounted cylinders and pistons of an engine of the class described, a central abutment upon which said cylinders are mounted, a fixed pinion thereon, a blower casing rotatably mounted on said abutment, planetary gears carried by said casing one of which meshes with said pinion, fan blades within said casing rotatably mounted on said abutment, and a pinion fixed to said fan blades and meshing with one of said planetary gears, substantially as described.

5. In combination with the rotatably mounted cylinders and pistons of an engine of the class described, a combined aspirator and blower for supplying air and fluid fuel to said cylinders, comprising fan blades, and means for automatically rotating said fan blades in a direction opposite to that of the rotation of said cylinders and around the same axis of rotation at such a speed as substantially to counteract the gyroscopic shifting effect of said cylinders, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,221,841. AIRSHIP. WILLIAM JAMES DE LA MARE, Des Moines, Iowa. Filed Sept. 2, 1915. Serial No. 48,628. (Cl. 244—5.)

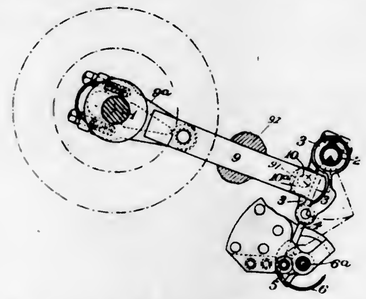


1. An air ship, comprising a gas-containing body, said body being formed of a frame covered with plates, said body tapering to a knife edge at its top, bottom and both ends, together with propelling and steering means for said body.

2. An air ship, comprising a gas-containing body, said body being attenuated to a bevel edge at its top, bottom and both ends, a set of vertical propellers mounted at each end of said body and adapted for selective operation to drive said body in opposite directions, a rudder mounted at each end of said body, a set of horizontal propellers mounted beneath said body and adapted to propel the same upwardly, and means for selectively operating said sets of propellers.

3. An air ship, comprising a gas-containing body, said body being attenuated to a bevel edge at its top, bottom and both ends, a set of vertical propellers mounted at each end of said body, a rudder mounted at each end of said body, a set of horizontal propellers mounted beneath said body, and means for selectively operating said sets of propellers.

1,221,842. SEWING-MACHINE. MARK THOMAS DENNE, Rushden, England. Filed Sept. 22, 1914. Serial No. 863,020. (Cl. 112—20.)



1. In a sewing machine, the combination with a curved needle and its needle-carrying segment, of a curved awl and its awl-carrying segment, means for supporting said segments for oscillatory movement about different axes, an actuating cam, and connections between said cam and both of said segments by which oscillatory movement is given to each segment from said cam.

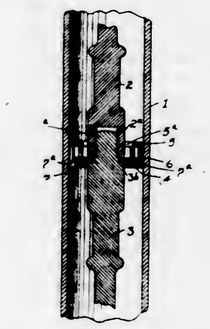
2. In a sewing machine, the combination with a curved needle and its needle-carrying segment, of a curved awl and its awl-carrying segment, means for supporting said segments for oscillatory movement about different axes, a cam, a connection between said cam and the needle-carrying segment by which the latter is given its oscillatory movement, a second connection between said cam and the awl-carrying segment by which it is given an oscillatory movement through a smaller angle than the oscillatory movement of the needle-carrying segment.

3. In a sewing machine, the combination with a curved needle and its needle-carrying segment, of a curved awl and its awl-carrying segment, means for supporting said segments for oscillatory movement about different axes, a common actuating member for both segments, an operative connection between said actuating member and each segment, which includes links pivoted to the segments and extending substantially tangential to the arc of movement of the segments.

4. In a sewing machine, the combination with a curved needle and its needle-carrying segment, of a curved awl and its awl-carrying segment, means for supporting said segments for oscillatory movement, a presser-foot supported to turn about the axis of movement of the awl-carrying segment, an actuating member, connections between said member and each of said segments, the connection to the awl-carrying segment having means to oscillate the presser-foot.

5. In a sewing machine, the combination with a curved awl and its awl-carrying segment, of means to sustain said awl for oscillating movement, a presser-foot mounted for turning movement about the axis of movement of the awl-carrying segment, actuating means for the awl-carrying segment comprising a lever and a link connecting said lever with said segment, said lever having an extension, and means by which said extension operates the presser-foot to release the work as it is fed by the awl.

1,221,843. PUMP-VALVE. EDWARD F. DIERKS, San Diego, Cal. Filed Apr. 3, 1916. Serial No. 88,442. (Cl. 103—63.)

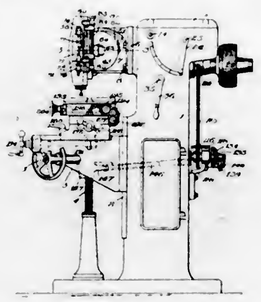


1. In a device of the class described, the combination with a conventional casing and sucker rods of a ring secured between the two connecting sections of said sucker rod, a pair of rings secured together by means of a plurality of connecting pieces disposed on opposite sides of said ring, the upper one being provided with a plurality of passage ports in its inner edge and the lower one provided with a plurality of passage ports in its outer edge.

2. In a device of the class described, the combination with the conventional well casing and sucker rod of a ring slightly smaller than the inner surface of said casing secured in the joint between two sections of said pump rod, a pair of rings spaced apart on opposite sides of said ring, the upper one provided with a plurality of slots in its inner edge and the lower one provided with means for permitting the passage of oil between a portion of said ring and said casing.

3. In a device of the class described, the combination of a casing, a sucker rod comprising a socket portion internally threaded and a threaded shank portion adapted to screw therein, a ring secured between the end of said socket portion and said shank portion considerably smaller in diameter than the inner surface of said casing, a ring mounted in said casing above said first mentioned ring provided with means for permitting the passage of liquid at its inner edge, another ring mounted below said first mentioned ring provided with a plurality of notches in its outer surface adapted to permit the passage of liquid and means for connecting the last two mentioned rings together.

1,221,844. COMBINED SHAPING AND MILLING MACHINERY. ROY B. DOW, Rochester, N. Y., assignor to Cochrane-Bly Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 29, 1913. Serial No. 809,199. (Cl. 29—30.)



1. A machine of the kind described, comprising a support, a work table movably mounted thereon, a reciprocating tool head and a rotary tool head mounted on said support with provision for adjustments to permit either head to be brought into operative relation to the work table at will, a common drive mechanism for the tools in both said heads, and an operative connection from said drive mechanism for moving said table, said connection having an intermediate portion arranged to transmit an intermittent feed for shaping, or a constant feed for milling, at will.

2. A machine of the kind described comprising an upright column support, a mounting secured at the front thereof for angular adjustment in a given plane, said mounting having a central web-like portion supporting adjacent flanges having bearing surfaces to receive opposite swivel heads for angular adjustment in planes at an angle to the plane of mounting adjustment, a shaper head and a milling head adjustably fixed to the respective bearing surfaces, said shaper head having a shaper ram engaged in slide ways at the front thereof, and said milling head having a milling slide bearing a milling spindle secured in slide ways at the front thereof, and a common driving means arranged to operate tools in either of said heads in any position of angular adjustment thereof.

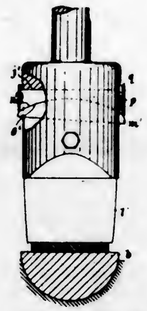
3. A machine of the kind described comprising a column support and a mounting block bearing cutter head mechanism secured thereto for angular adjustment in a given plane, said mounting block having a sleeve member concentric with its axis of adjustment extending back into the column support, a worm wheel fixed to said sleeve member and a worm having an outwardly projecting operating shaft engaged with said worm wheel for effecting adjustment of said mounting block, and a power drive shaft extended through said sleeve and mounting block concentric with the axis of adjustment thereof.

4. A machine of the kind described comprising an upstanding column support, a mounting bearing tool head mechanism secured at the upper portion thereof with provision for angular adjustment in a given plane, and driving mechanism including change gear devices mounted and housed in the upper portion of the columns for operating said tool heads, the upper portion of the column support being formed as an oil tight box in which the driving and change gears are held.

5. A machine of the kind described, comprising a support, shaping and milling heads mounted thereon, a common drive having connections for operating each of said heads, a work table and a connection from said common drive to said work table, said connection having a pawl and ratchet device incorporated therewith and selectively operable to convert rotary driving motion into intermittent feed movement of the table for shaping said connection to the work table also including a constant drive train for milling feeds.

[Claims 6 to 9 not printed in the Gazette.]

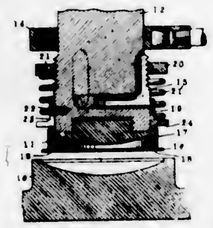
1,221,845. FILE AND RASP CUTTING TOOL. THOMAS F. DOWNEY, Paterson, N. J. Filed May 2, 1916. Serial No. 94,888. (Cl. 76—17.)



1. A chisel for a file or rasp cutting machine consisting, in combination, of a stock member, a cutter member freely movable pivotally in its own plane in the stock member, said members having in the plane of the cutter member abutting surfaces resisting the back thrust of the cutter member in the stock member and one of said surfaces following a curve whose concave side is toward the cutting end of the chisel, and a threaded device for holding the cutter member arranged in the stock member and bearing thrustwise against one face of the cutter member.

2. A chisel for a file or rasp cutting machine consisting, in combination, of a stock member and a cutter member freely movable pivotally in its own plane in the stock member and including a blade member and a gib member, the gib member being arranged between the blade member and stock member and having its upper and lower faces contacting with opposite faces of the stock and blade members, one of the faces named being curved transversely of the blade member, and said gib being shiftable laterally in the plane of the blade member independently of the same and the stock member.

1,221,846. METHOD OF SHAPING PAPER. ALEXANDER H. DREUX, Buffalo, N. Y., assignor to F. N. Burt Company, Limited, Buffalo, N. Y., a Corporation of Ontario, Canada. Filed Jan. 8, 1916. Serial No. 70,932. (Cl. 18—56.)



1. The method of doming, comprising simultaneously stretching the inner portion of a moist paper blank while holding the outer portion of the blank, bending it into convex form and applying pressure to the opposite faces of its inner portion, and hot pressing the same.

2. The method of doming, comprising simultaneously stretching the inner portion of a laminated moist paper blank while holding the outer portion of the blank, bending it into convex form and applying pressure to the opposite faces of its inner portion, and hot pressing the same.

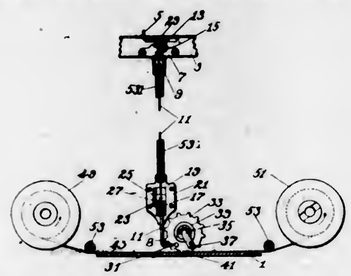
3. The method of doming, comprising simultaneously stretching the moist flanged head of a paper box, bending the head into concavo-convex form, and hot pressing the head, said stretching, bending, and hot pressing being performed while maintaining the flange dimension.

4. The method of doming, comprising simultaneously stretching the moist flanged head of a paper box while maintaining the flange dimension, bending the head into concavo-convex form, hot pressing the head, and maintaining the flange in contact with said head.

5. The method of doming, comprising bending the moist laminated, flanged head of a paper box into concavo-convex form so as to stretch the head in lines extending transversely of the flange and transversely of said lines while maintaining the flange dimension, and hot pressing said head.

[Claims 6 and 7 not printed in the Gazette.]

1,221,847. CAMERA. ANSHELM B. ELMSTROM, Swampscott, and JOSEPH A. MCDONALD, Auburndale, Mass. Filed Apr. 24, 1915. Serial No. 23,739. (Cl. 95—31.)



1. The combination with a camera having a member manipulation of which exposes a film, of a mechanism normally set to lock said member after manipulation thereof, a wheel having teeth which enter holes in said film whereby, when said film is wound up, said wheel is turned, and means operated by the turning of said wheel after said member has been locked to free said member and reset said locking mechanism.

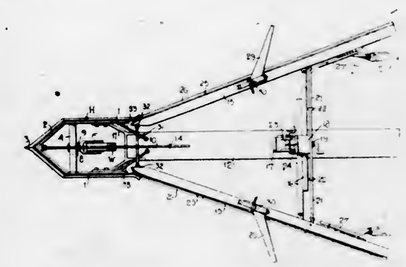
2. The combination with a camera having a member manipulation of which exposes a film, of mechanism normally set to lock said member after manipulation thereof, and a wheel connected with said locking mechanism and adapted to engage said strip and be turned in one direction when said film is wound up, and a spring for turning said wheel in the opposite direction.

3. The combination with a camera having a member manipulation of which exposes a film, of a rod normally set to lock said member after manipulation thereof, there being a hook on said rod, a wheel having teeth which enter holes in said film whereby when said film is wound up said wheel is turned, and a pin carried by said wheel and arranged to engage said hook and reset said rod.

4. The combination with a camera having a member manipulation of which exposes a film, of a rod normally set to lock said member after manipulation thereof, there being a hook on said rod, a wheel having teeth which enter holes in said film whereby when said film is wound up said wheel is turned, a pin carried by said wheel and arranged to engage said hook and reset said rod and yielding means for returning said wheel to its original position.

1,221,848. EXCAVATING-MACHINE. JULIUS ENGELBRECHT, Boone, Colo. Filed June 26, 1916. Serial No. 106,009. (Cl. 97—12.)

1. A device of the character described comprising a head provided with digging means, a slide disposed rearwardly of the head, side scraping members pivotally engaged with the rear portion of the head at opposite sides of the slide and adapted for lateral swinging movement and for vertical swinging movement, an upright carried by the slide, a plate slidably engaged with the upright, means carried by the upright for imparting upward movement to the plate, inwardly disposed arms carried by the side members slidably engaged with the plate and whereby said side members are swung upwardly upon upward movement being imparted to the plate, inwardly disposed racks carried by the side members and in overlapping relation, a gear wheel rotatably supported by the plate intermediate the overlapping portions of the racks and in mesh with said racks, and means for rotating the gear wheel whereby said side members are swung laterally in unison but in opposite directions.



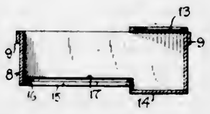
2. A device of the character described comprising a head provided with digging means, a slide disposed rearwardly of the head, side scraping members pivotally engaged with the rear portion of the head at opposite sides of the slide and adapted for lateral swinging movement and for vertical swinging movement, an upright carried by the slide, a plate slidably engaged with the upright, means carried by the upright for imparting upward movement to the plate, inwardly disposed arms carried by the side members slidably engaged with the plate and whereby said side members are swung upwardly upon upward movement being imparted to the plate, inwardly disposed racks carried by the side members and in overlapping relation, a gear wheel rotatably supported by the plate intermediate the overlapping portions of the racks and in mesh with said racks, means for rotating the gear wheel whereby said side members are swung laterally in unison but in opposite directions, and a brace bar interposed between the pivoted ends of the side members and pivotally engaged therewith.

1,221,849. CHROMIUM COMPOUNDS OF AZO DYESTUFFS CONTAINING GROUPS ABLE TO BE CHROMATED, AND A PROCESS OF MAKING THE SAME. GADIENT ENGI, FRITZ STRAUB, and ARMIN GROB, Basel, Switzerland, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Filed July 6, 1916. Serial No. 107,804. (Cl. 8—1.)

1. The herein described process for the manufacture of chromium compounds of azo dyestuffs containing groups able to combine with chromium, consisting in treating the said azo dyestuffs with a hot solution of a chromite.

2. As new products the described chromium compounds of azo dyestuffs constituting deep colored powders giving with water intensely colored solutions which undergo not any essential change on addition of sodium carbonate or of soda lye and dyeing animal fibers in acid baths.

1,221,850. BABY-JUMPER. JESSIE M. ERWIN, Billings, Mont. Filed July 10, 1916. Serial No. 108,129. (Cl. 155—45.)

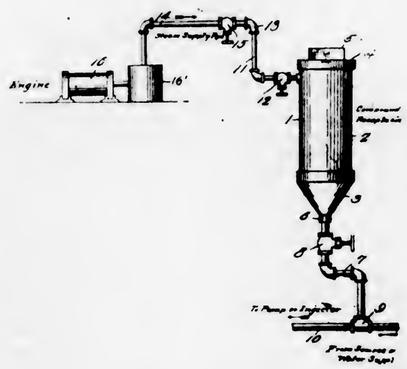


1. In a baby jumper, a chair having a rectangular body, the bottom of which is open for the greater portion of its length and a bottom wall extending the remaining portion

of the length of said body and below the plane of said opening, and a removable seat adapted to be arranged within the body and over said opening and having leg receiving apertures.

2. In a baby jumper, a chair having side and end walls and horizontal top and bottom walls secured to said side walls at one end thereof, the top and bottom of the chair being open for the remaining portion of its length, cleats secured to the side walls of the chair above the plane of said bottom wall, and a removable seat supported by said cleats to entirely cover the open bottom of the chair, said seat consisting of a rigid frame and a canvas sheet secured thereto provided with leg receiving apertures.

1,221,851. BOILER-COMPOUND FEEDER. JOHN W. ETIENNE, Clarion, Iowa. Filed June 30, 1916. Serial No. 106,900. (Cl. 210—19.)



A device for containing and supplying a solid soluble water-purifying agent to steam boilers and the feed water supply connections thereof, comprising a cylindrical vertically disposed receptacle, open at the top for the reception of the purifying agent, a closure for said open top of the receptacle, a conical discharge member detachably connected at its enlarged portion with the base of the receptacle and having its reduced portion formed with an outlet, a water supply pipe disposed below said outlet, a discharge pipe leading from said outlet to the water supply pipe, said discharge pipe having a controlling valve therein, steam supplying means, a steam supply pipe leading therefrom and connected with the top of the receptacle below and independently of said closure for supplying steam thereto, whereby the steam and the water condensation therefrom are adapted to percolate downward through the solid soluble purifying material within the receptacle and dissolve and carry portions thereof through the outlet into the discharge pipe, and a controlling valve in the line of the steam supply pipe.

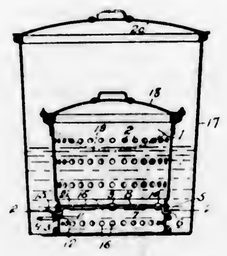
1,221,852. CONVERTIBLE LIFE-BELT. ALBERTO GERLEY, Buenos Aires, Argentina. Filed July 15, 1915. Serial No. 40,013. (Cl. 9—19.)



1. In a life belt, the combination with a belt containing an air chamber, of a gas producing capsule and means to perforate the same, such means consisting of a mechanism contained in the buckle of the belt.

2. In a life belt, the combination of an inflatable belt, of a buckle comprising a cylindrical casing, closed at the ends, a punch positioned below said casing, a cam engaging the lower end of said punch and means for rotating said cam whereby the punch will be projected upward and will perforate the base of the cylindrical casing.

1,221,853. COOKING UTENSIL. GEORGE HARFORD, Kansas City, Mo. Filed Jan. 2, 1917. Serial No. 140,069. (Cl. 53—1.)



1. A cooking utensil having a body having a wired lower end, the wire having a projecting U-shaped bend, the body having a slot extending upwardly from its lower edge in register with said bend and having a lateral offset above said wire, a bottom member insertible into and removable from the lower end of said body, the body at the side opposite the slot having a hole, the bottom member having a slot adapted to register with the slot in the body, and a spring wire secured to the under side of the bottom member so as to have one stationary end and one end laterally flexible, the stationary end being adapted to enter said hole, and the laterally flexible end being extended through the slot in the bottom member and adapted to pass through said bend and enter the first named slot and said lateral offset.

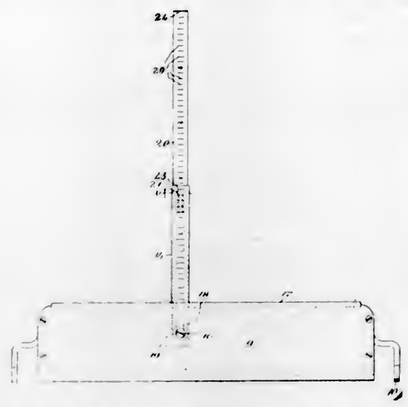
2. A cooking utensil having a perforated body provided with a wired lower end, the wire having a laterally outwardly extending U-shaped bend, the body having a slot extending upwardly from its lower edge in register with said bend, the slot having a lateral offset above said wire, a bottom member insertible into and removable from the lower end of the body and provided with a perforated top and perforations in its sides below the body, the bottom member having a slot adapted to register with the slot in the body, and a spring wire fastened to said bottom member so as to have one stationary end adapted to extend through one of the perforations in the body and having a flexible end extending through the slot in the bottom member and adapted to pass through said bend and to enter said slot in the body and said lateral offset.

1,221,854. GAGE FOR SETTING PAPER IN TYPEWRITERS. EDWARD B. HESS, Brooklyn, N. Y., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Apr. 15, 1916. Serial No. 91,288. (Cl. 197—140.)

1. In a typewriting machine, a paper table having a turned or flanged upper edge in combination with an indicator bar pivotally connected with the table and having stops adapted to engage the flange, and limit the pivotal movement of the bar.

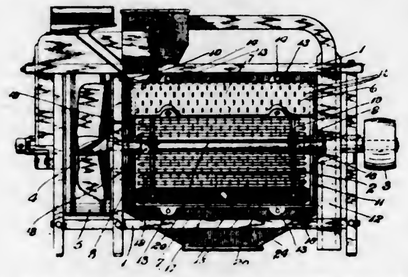
2. In a typewriting machine, a paper table in combination with an indicator bar pivotally connected with the rear side of the table and having stops for limiting the pivotal movement of the bar and for holding it in either a horizontal position behind the table or in a vertical position above the upper edge of the table.

3. In a typewriting machine a paper table in combination with an indicator bar having a section pivotally connected with the rear side of the table and adapted to move from a horizontal position behind the table to a vertical position above the table, means for limiting the pivotal



movement of the bar section, and another bar section telescoping with that first mentioned.

1,221,855. GRAIN-SCOURING APPLIANCE. LEVI HICKS, Holland, Mich., assignor to Invincible Grain Cleaner Company, Silver Creek, N. Y. Filed Apr. 21, 1915. Serial No. 22,951. (Cl. 83—30.)



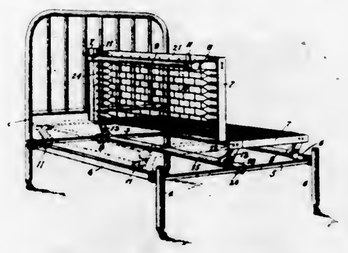
1. In a grain scouring machine, a scouring casing having a plurality of depressions the sides of which are roughened and lie at an angle to the inner surface of the casing, a shaft extending through the casing, arms projecting radially from the shaft, and beating bars secured at the ends of the arms, said bars being comparatively wide and thin, having sides and edges formed with abrading projections and positioned so that the width of a bar is at right angles to the inner surface of the casing, substantially as described.

2. In a grain scouring machine, a scouring casing having a plurality of depressions formed on its inner surface, the surfaces at the depressions being roughened, comparatively wide and thin, beating bars positioned lengthwise of the casing and adjacent the inner surface thereof and extending inwardly therefrom, and abrading projections formed on the sides and edges of said bars, said projections on the side being located diagonally across the surface of said sides, substantially as described.

3. In a grain scouring machine, a scouring casing having a plurality of conical depressions formed on the inner surface thereof, the surfaces at the depressions being roughened, a plurality of comparatively wide and thin beating bars, each having abrading projections on the sides and edges thereof, positioned lengthwise of the casing and adjacent the inner surface thereof, the edges of said bars being located directly opposite the inner surface of the casing and the sides of the bars at right angles thereto, and means to rotate said bars, substantially as described.

4. In a grain scouring machine, a scouring casing having a plurality of depressions formed on its inner surface, the sides of the depressions being roughened and formed at an obtuse angle to the inner surface of the casing, substantially as described.

1,221,856. BED. EDWIN J. HICKSON, Butler, Pa. Filed May 12, 1915. Serial No. 27,487. (Cl. 5—65.)



1. The combination of a bedstead frame including opposite end rails, a bed bottom formed in sections, supporting devices interposed between the sections and to which the latter are hinged, a tubular reach bar connecting the supporting devices, arms movable longitudinally in the extremities of the reach bar but non-rotatable therein, and means for clamping said arms to the end rails of the bedstead frame.

2. The combination of a bedstead frame including opposite end rails, a bed bottom, brackets depending from the bottom and formed with reach bar sockets, the socket ends formed with angular openings, a reach bar having its ends entered in said bracket sockets, arms angular in cross-section adapted to enter the angular sockets and on which the latter have a sliding fit, and clamps carried by the outer extremities of the arms for securing the same to the end rails of the bedstead frame.

3. A bed bottom comprising transverse opposite end bars, a filling between and coupled to said bars, opposite side depressed rigid longitudinal reach bars at their ends rigidly coupled to said end bars at the four corners of the bed bottom, rigid center supporting brackets depending from said end bars, a rigid depressed longitudinal center reach bar at its ends fixed to said center brackets, and supporting means projecting outwardly from said center brackets and adapted to rest on the end rails of the bedstead and comprising an elongated arm adjustable longitudinally and recessed at its outer end to fit down on a bedstead end rail against slipping transversely therefrom in either direction, said arm being angular in cross section and fitting in said bracket against turning.

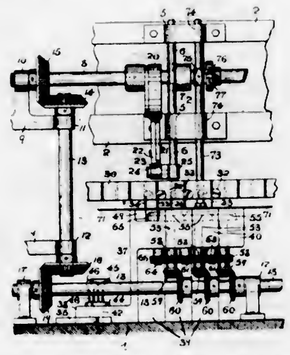
4. A bed bottom comprising transverse end bars, a flexible filling between and coupled to said bars, supporting brackets depending from said bars, reach bars fixed to and connecting said brackets, said brackets provided with supports to rest on the bedstead frame, a pair of said brackets formed with sockets and one of said reach bars being tubular and at its ends fixed in said sockets, one of said sockets having an angular orifice alined with said tubular reach bar, one of said supports being formed by an arm angular in cross section and fitted in said orifice against turning and adjustable longitudinally of said tubular reach bar and at its outer end recessed to receive and fit on an end rail of the bedstead frame.

5. A bed bottom consisting of transverse end bars, and supports therefor comprising depending brackets, a tubular reach bar fixed to and connecting said brackets, one of said brackets having an opening alined with said reach bar, a supporting arm fitting said opening against turning and adjustable therethrough and extending longitudinally into said reach bar and at its outer end formed to fit on

and project under the end rail of a bedstead frame and having shoulders to prevent endwise slipping in either direction from said rail.

[Claim 6 not printed in the Gazette.]

1,221,857. QUILTING-MACHINE. AUGUST HILDT, Jersey City, N. J., assignor to New Jersey Quilting Co., a Corporation of New Jersey. Filed Mar. 1, 1916. Serial No. 81,316. (Cl. 112—14.)



1. In a machine of the class described, a work-support, comprising a series of adjacent members, said members being slidable rearwardly with respect to the line of feed, a looper mounted in each member, each looper being adapted to receive a thread-bobbin, a plurality of sewing needles, means coöperating with said needles for producing reciprocatory movements of said needles, and mechanism coöperating with said loopers for rotating the said loopers.

2. In a machine of the class described, a work-support, comprising adjacent members, said members being slidable rearwardly with respect to the line of feed, spindles mounted in each member, bobbin-containing loopers mounted upon some of said spindles, a plurality of sewing needles, means coöperating with said needles for producing reciprocatory movements of said needles, and means coöperating with said spindles for rotating the same and with the said loopers.

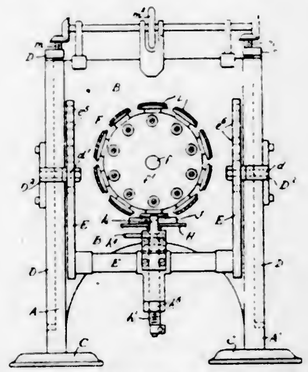
3. In a machine of the class described, a work-support, comprising adjacent members, said members being slidable rearwardly with respect to the line of feed, spindles mounted in each member, bobbin-containing loopers mounted upon some of said spindles, a plurality of sewing needles, means coöperating with said needles for producing reciprocatory movements of said needles, intermeshing gear-wheels mounted upon said spindles, bevel-gears also mounted upon some of said spindles, a main driving shaft, and bevel-gears upon said main shaft in mesh with the bevel-gears of said spindles.

4. In a machine of the class described, in combination with the frame-work of the machine, a work-support, comprising adjacent members, said members being slidable rearwardly with respect to the line of feed, spindles mounted in each member, bobbin-containing loopers mounted upon some of said spindles, intermeshing gear-wheels mounted upon said spindles, bevel-gears also mounted upon some of said spindles, a main driving shaft, bevel-gears upon said main driving shaft in mesh with the bevel-gears of said spindles, a bracket-member carried by said frame-work, bearing portions connected with said bracket-member, a rod slidably mounted in said bearing-portions, a cross-bar secured upon the lower portion of said rod, needle-bars carried by said cross-bar and needles attached to said needle-bars, means connected with said rod for producing reciprocatory movements of the latter, and mechanism between the said rod-reciprocating means and the main driving shaft and operated from said main driving shaft for actuating the said rod-reciprocating means.

5. In a quilting machine, a bed-plate, and a work-support slidably mounted upon said bed-plate, said work-support comprising a series of adjacent members, each member being adapted to be moved in a rearward direction with respect to the line of feed so as to clear the work.

[Claims 6 to 12 not printed in the Gazette.]

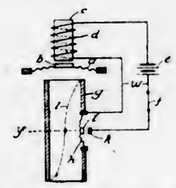
1,221,858. APPARATUS FOR PRODUCING TORIC LENSES. WALTER HOLLANDS, London, England. Filed Sept. 17, 1913. Serial No. 790,228. (Cl. 51—3.)



1. In a machine for producing toric lenses, the combination with a rotatable lens carrier having provision for supporting lenses for movement in a circular path, of a non-rotatable tool carrier pivotally mounted to swing about an axis extending at right angles to that of the lens carrier, a tool fixedly supported by the tool carrier in position to engage the lens on the lens carrier, and means for oscillating the tool carrier in such timed relation with the rotation of the lens carrier that movement of the tool across the path of movement of the lens on the lens carrier is varied for successive rotations of the lens carrier.

2. A machine for producing toric lenses by grinding comprising a lens carrier rotating in a circular path, means to adjust the carrier to thereby change the length of radius of the circular path, a grinding tool to contact with the lens as the latter is rotated, a carrier to fixedly support the grinding tool, means to support the tool carrier to permit it to be swung in an arc of a circle across the path of movement of the lens and means to adjust the tool carrier relatively to its support.

1,221,859. SIGNAL-HORN. GOTTLOB HONOLD, Stuttgart, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany, a Corporation of Germany. Filed Apr. 7, 1915. Serial No. 19,846. (Cl. 177—7.)



1. In a signal horn, a vibratile diaphragm, operating mechanism for the diaphragm, a source of power supply, a horn in proximity to the diaphragm, and a vibratile controller carried by the horn and vibrated by air waves generated by the diaphragm, said controller effecting a rapidly interrupted flow from the source of power supply to the operating mechanism.

2. In a signal horn, a vibratile diaphragm, operating mechanism for the diaphragm, a source of power supply, a tuned vibratile controller synchronously vibrated by the air waves generated by the diaphragm and effecting a rapidly interrupted flow from the source of power supply to the operating mechanism.

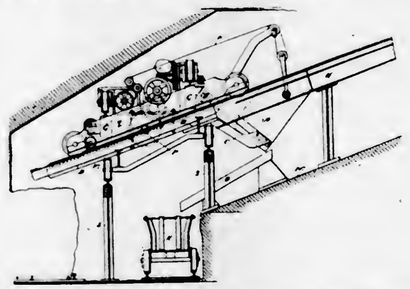
3. In a signal horn, an electromagnet, a vibratile diaphragm magnetically responsive to the electromagnet, a source of current supply, a horn in proximity to the diaphragm, a vibratile controller carried by the horn and vibrated by air waves generated by the diaphragm, and circuit connections including coöperative disengaging contacts one of which is carried by the controller to effect a rapidly interrupted flow from the source of current supply to the winding of the electromagnet.

4. In a signal horn, a vibratile diaphragm, operating mechanism for the diaphragm, a source of power supply, a horn having one end in proximity to the diaphragm, and a vibratile controller covering the other end of the horn, said controller being vibrated by air waves generated by the diaphragm and effecting a rapidly interrupted flow from the source of power supply to the operating mechanism.

5. In a signal horn, a vibratile diaphragm, operating mechanism for the diaphragm, a source of power supply, a horn in proximity to the diaphragm, and a vibratile controller vibrated by air waves generated by the diaphragm and effecting a rapidly interrupted flow from the source of power supply to the operating mechanism, the controller being tuned with the diaphragm and being arranged to interrupt the flow from the source whenever the diaphragm is actuated by the operating mechanism.

[Claim 6 not printed in the Gazette.]

1,221,860. MINING SYSTEM. GEORGE GRIFFIN HUGHES and JOHN FLACK MCDUFFIE, Bessemer, Ala. Filed Jan. 3, 1912. Serial No. 669,294. (Cl. 37—51.)



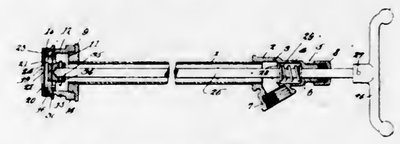
1. In a system of the character described, a slope, headers and rooms, tracks in same, a second track adjacent a plurality of said rooms and on a level with the entering end of said room tracks, means mounted on said second track capable of passing from one room to another and entering each room for taking material therefrom and means mounted on said first named track, for receiving and conveying said material to the surface.

2. In a system of the character described, a slope, headers and rooms, tracks in same, a second track in said headers, and on a level with the entering end of said room track, means mounted upon said second track capable of being moved longitudinally of said headers, longitudinally of said rooms and transversely of said rooms for removing material from any portion of any of said rooms and means for receiving and conveying said material to the surface.

3. In a system of the character described the combination of a slope, headers and rooms, a track therein, a second track in said headers, the entering end of the room tracks being on a level with said second track, power-propelled means mounted on said second track adapted to be moved longitudinally of said headers, sections of track carried by said first means and adapted to be alined with the room tracks, a bridge mounted on said sections of track and adapted to be moved off said tracks and onto the room tracks and longitudinally of said rooms, a trolley carried by said bridge and mounted on a track also carried by said bridge, said trolley being adapted to be moved on the bridge tracks transversely of said rooms and a bucket carried by said trolley and adapted to remove material from any point of any of said rooms.

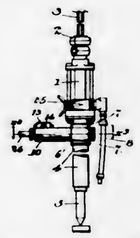
4. In a system of the character described, a slope, headers and rooms, a track in same, a second track in said headers, the entering end of the room tracks being on a level with said second track with the main portion of said room track at an incline to said second track and means capable of entering on said room track and removing material from said rooms.

1,221,861. SPRAY-GUN. JOHN C. HULL, Gasport, N. Y. Filed Dec. 13, 1916. Serial No. 136,696. (Cl. 137—80.)



A spray gun comprising a barrel; a casing carried by the barrel and including inner and outer members defining a chamber, the outer member having a discharge orifice, and the inner member having ports discharging into the chamber and against the outer member beyond the periphery of the discharge orifice; a rotary valve coöperating with the inner member and having ports which move into and out of coincidence with the ports of the inner member when the valve is rotated, the ports of the valve including inclined surfaces imparting a whirling motion to the liquid proceeding through the ports into the chamber, the ports of the inner member and of the valve being of such a relative size that, at times, the inclined surfaces of the ports of the valve may be housed behind the inner member, thereby to permit the liquid to traverse the ports in straight lines toward the outer member.

1,221,862. DRILLING-MACHINE. CHARLES A. HULTQUIST, Los Angeles, Cal. Filed Dec. 2, 1916. Serial No. 134,726. (Cl. 121—10.)

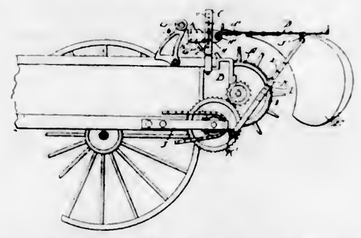


1. The combination with the body of a drilling machine, of a collar fastened to said body, a casing surrounding said collar and journaling the body of the drilling machine, a pair of cylinders connected to the casing, a valve device to admit operating fluid alternatively to the cylinders, and pistons in the cylinders connected with said collar.

2. The combination with the body of a drilling machine, of a casing provided with bearings to journal said body, a collar fastened to said body and interposed between the adjacent ends of said bearings, cylinders connected with the casing, pistons in the cylinders, and rods pivoted to the pistons and to the collar to operate said collar.

3. The combination with the cylinder of a drilling machine, of a collar fastened to said cylinder, bearings to journal said cylinder, cylinders connected with said bearings, pistons in the cylinders connected with the collar, and a valve device to admit an operating fluid to the last named cylinders alternatively.

1,221,863. WIDE-SPREADING DEVICE FOR FERTILIZER-DISTRIBUTERS. GEORGE G. HUNT, Plano, Ill., assignor to The Independent Harvester Company, Plano, Ill., a Corporation of Illinois. Filed Mar. 25, 1916. Serial No. 86,540. (Cl. 111—40.)



1. In a fertilizer distributer, in combination with a revoluble beater, a spreading device comprising a plurality of blades which at operative position depend at the rear side of the beater in approximately vertical planes divergent rearward from the beater, and means for supporting such blades rigidly in such divergent positions.

2. In a fertilizer distributer, in combination with a revoluble beater, a spreading device comprising a plurality of blades which at operative position depend at the rear side of the beater in approximately vertical planes divergent from each other in the general direction of its discharge; a support for the blades from which they depend, said support being mounted movable with respect to the beater support for carrying the blades toward and from the beater, and means for securing such device in the desired position within the range of such movement.

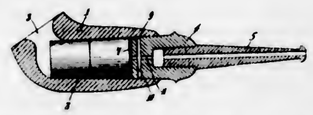
3. In a fertilizer distributer in combination with a revoluble beater, a spreading device comprising a plurality of blades and means for supporting them at the discharge side of the beater, said blades at opposite sides of a fore-and-aft vertical plane midway in the length of the beater being oppositely divergent from said plane, and being also oppositely deflected from the vertical planes respectively in which their upper edges are secured.

4. In a fertilizer distributer in combination with a revoluble beater, a spreading device comprising a plurality of blades and means by which they are supported depending rearward of the discharge side of the beater, said means comprising supporting members extending up from the distributer frame forward of said discharge side, and a member from which the blades depend, pivotally mounted upon said supporting members, said pivotally mounted member extending rearward above the beater and beyond the same for carrying said blades pivotally connected at both ends, and braces extending from the outer or rear portion of said pivoted member to the distributer frame for completing the support of said member.

5. In a fertilizer distributer in combination with a revoluble beater, a spreading device comprising a plurality of blades and means by which they are supported depending rearward of the discharge side of the beater, said means comprising supporting members extending up from the distributer frame forward of said discharge side, and a member from which the blades depend, pivotally mounted upon said supporting members; said pivotally mounted member extending rearward above the beater and beyond the frame for carrying said blades, and braces pivotally connected at both ends extending from the outer or rear portion of said pivoted member to the distributer frame for completing the support of said member; means by which said pivoted member is adjusted up and down at its pivotal connection with said supporting members, and means for correspondingly adjusting said braces.

[Claims 6 and 7 not printed in the Gazette.]

1,221,864. SMOKING-PIPE. JAMES A. IRVING, New York, N. Y. Filed Dec. 31, 1915. Serial No. 69,542 (Cl. 131—12.)



1. A smoking pipe comprising a body part formed with a pipe bowl tapering from its inner end toward its outer end, said body part being formed with a restricted draft passage communicating with the outer smaller end of the pipe bowl, and a pipe stem adapted to fit the inner larger end of the bowl and to form a plunger adapted to force the tobacco charge into the tapered bowl, whereby said charge will be condensed and packed.

2. A smoking pipe comprising a body part formed with a pipe bowl tapering from its inner end toward its outer end, said body part being formed with a laterally extending restricted draft passage communicating with the outer smaller end of the pipe bowl, and a tapered pipe stem adapted to fit the inner larger end of the bowl to form a plunger adapted to force the tobacco charge into the tapered bowl, whereby said charge will be condensed and packed.

3. A smoking pipe comprising a body part formed with a pipe bowl extending from its inner end toward its outer end, said body part being formed with a laterally extending restricted draft passage communicating with the outer end of the pipe bowl, and a pipe stem adapted to fit the inner end of the bowl to form a plunger adapted to force the tobacco charge into the bowl, whereby said charge will be condensed and packed.

4. A smoking pipe comprising a body part formed with a bowl having a restricted lighting and draft passage at one end and a charging opening at its other end, said bowl tapering from the charging opening toward the lighting opening, and a stem fitting within and closing the charging opening, whereby said stem will serve as a plunger to compress and pack the tobacco charge.

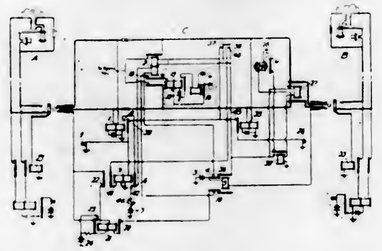
5. A smoking pipe comprising a body part formed with a tobacco chamber and a restricted draft and lighting passage extending inwardly from the forward end of the body part and communicating with the forward end of the tobacco chamber, and a pipe stem fitting in and closing the inner or rear end of the pipe bowl, said stem being formed with a longitudinally extending smoke passage and with transverse smoke-collecting grooves on its inner face, and also with grooves connecting the outer ends of these transverse grooves with the longitudinally extending smoke passage.

[Claims 6 and 7 not printed in the Gazette.]

1,221,865. TELEPHONE-EXCHANGE SYSTEM. LEWIS HOWES JOHNSON, Bloomfield, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 7, 1915. Serial No. 32,683. (Cl. 179—10.)

1. In a telephone exchange system, subscribers' lines terminating at a central office, a link circuit thereat for interconnecting said lines, an operator's telephone set, a relay controlled from a connected substation and actuated when the answering end of said link circuit is connected to a calling line to telephonically connect said operator's telephone set with the calling line, and a registering device at the central office for recording the number of calls answered by an operator, said registering device operating upon the actuation of said listening relay.

2. In a telephone exchange system, subscribers' lines terminating at a central office, a link circuit thereat for interconnecting said lines, an operator's telephone set, a relay controlled from a connected substation and actuated when the answering end of said link circuit is connected to a calling line to telephonically connect said operator's telephone set with the calling line, a registering device at the central office for recording the number of calls answered by an operator, said registering device operating upon the actuation of said listening relay, and relay mechanism actuated upon the operation of said registering device to disconnect said registering device from said link circuit.



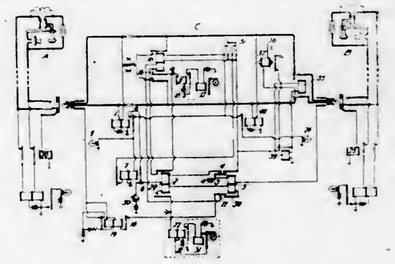
3. In a telephone exchange system, calling and called subscribers' lines terminating at a central office, a link circuit thereat interconnecting said lines, recall signaling means associated with the answering end of said link circuit, means controlled by the restoration of the calling subscriber's receiver to and a subsequent removal thereof from the switchhook for causing the automatic operation of said recall signaling means to furnish a signal to the operator, a registering device at the central office, a relay controlled by said second named means for conditioning said registering device for operation, and electromagnetic mechanism controlled by the disconnection of the calling end of said link circuit from the called line for causing the operation of said conditioned registering device, whereby said device registers the recall.

4. In a telephone exchange system, calling and called subscribers' lines terminating at a central office, a link circuit thereat interconnecting said lines, recall signaling means associated with the answering end of said link circuit, means controlled by the restoration of the calling subscriber's receiver to and a subsequent removal thereof from the switchhook for causing the automatic operation of said recall signaling means to furnish a signal to the operator, a registering device at the central office, a relay controlled by said second named means for conditioning said registering device for operation, and electromagnetic mechanism controlled by the disconnection of the calling end of said link circuit from the called line for causing the operation of said conditioned registering device, whereby said device registers the recall, the operation of said registering device causing the actuation of said relay to disconnect said registering device from said link circuit.

1,221,866. TELEPHONE-EXCHANGE SYSTEM. LEWIS HOWES JOHNSON, Bloomfield, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed June 7, 1915. Serial No. 32,684. (Cl. 179—9.)

1. In a telephone exchange system, telephone lines terminating at a central office, link circuits thereat for interconnecting said lines, a registering device common to and normally associated with the link circuits for recording the number of connections completed by an operator, and a circuit for said registering device closed upon the connection of the answering end of one of the link circuits with a calling telephone line and the connection of the calling end thereof with another telephone line.

2. In a telephone exchange system, telephone lines terminating at a central office, link circuits thereat for interconnecting said lines, a registering device common to and normally associated with the link circuits for recording the number of connections completed by an operator, and a circuit for said registering device open at two points, said circuit being closed at one point when the answering jack of one of the link circuits is connected to a calling telephone line and closed at the other point upon connection of the calling end of said link circuit with another telephone line.



3. In a telephone exchange system, telephone lines terminating at a central office, link circuits thereat for interconnecting said lines, a registering device common to and normally associated with the link circuits for recording the number of connections completed by an operator, electromagnetic mechanism associated with the answering end of one of the link circuits actuated upon connection of the answering end with a calling telephone line for conditioning said registering device for operation, and electromagnetic mechanism associated with the calling end of said one link circuit actuated upon connection of the calling end with another telephone line for causing the operation of said conditioned registering device.

4. In a telephone exchange system, telephone lines terminating at a central office, a link circuit thereat for interconnecting said lines, a registering device at the central office for recording the number of connections completed by an operator, electromagnetic mechanism associated with the answering end of said link circuit actuated upon connection of the answering end with a calling telephone line for conditioning said registering device for operation, electromagnetic mechanism associated with the calling end of said link circuit actuated upon connection of the calling end with another telephone line for causing the operation of said conditioned registering device, and relay mechanism actuated upon the operation of said registering device to disconnect said registering device from said link circuit.

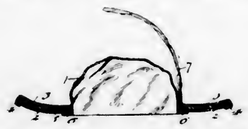
5. In a telephone exchange system, subscribers' lines terminating at a central office, a link circuit thereat for interconnecting said lines, a registering device at the central office for recording the number of connections completed by an operator, a supervisory relay in the answering end of said link circuit controlled from a connected substation and actuated when the answering end of said link is connected to a calling line, a relay operated upon the actuation of said supervisory relay for conditioning said registering device for operation, and a relay in the calling end of said link actuated upon the connection of the calling end with another telephone line for causing the operation of said conditioned registering device.

[Claims 6 to 9 not printed in the Gazette.]

1,221,867. HAT FOR DOLLS AND OTHER PURPOSES. CARRIE M. KELLER, Fort Worth, Tex. Filed May 12, 1916. Serial No. 96,961. (Cl. 2—108.)

As a new article of manufacture, a hat composed of a brim constituting a frame for the hat, a lining for said

brim, a covering for said brim attached thereto and having a flange turned over the outer edge thereof and attached to said lining, and a crown secured to said brim and having a flange bent under said lining and attached thereto.



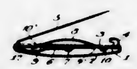
1,221,868. TYPE OR MATRIX. DAVID SHERWOOD KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Aug. 14, 1914. Serial No. 856,763. (Cl. 199—64.)



1. An integral type or matrix formed with a sustaining portion of less thickness than that of its body and definitely located in a plane passing vertically through its center of gravity whereby such center of gravity of the matrix and the plane of the combination will be in the same vertical line.

2. An integral type or matrix having distributing teeth formed in a portion of less thickness than that of its body and definitely located in a plane passing through its center of gravity, whereby the matrix when suspended by such distributing teeth will be in a direct vertical plane and in alinement with the plane of the teeth.

1,221,869. BROOCH. CLIFFORD G. KING, Providence, R. I. Filed Sept. 3, 1912. Serial No. 718,188. (Cl. 24—161.)



1. In a pin, a pin-tongue of spring material bent upon itself and comprising an upper and a lower arm, a plate and a spring-bridge associated with said plate, said spring-bridge being independent of said pin-tongue and adapted to coöperate therewith.

2. In a pin, a pin-tongue of spring material bent upon itself and comprising an upper and a lower arm, a back-plate and a spring-bridge associated with said back-plate, said spring-bridge being independent of said pin-tongue and adapted to coöperate therewith.

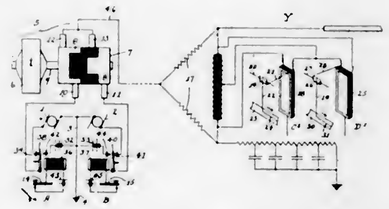
3. In a pin, a front-plate, a back-plate provided with two slots near its ends, a pin-tongue of spring material bent upon itself and comprising an upper and a lower arm, and a bridge of spring material bent upon itself and comprising an upper and a lower arm, said bridge passing through said slots and the lower arm of said pin-tongue being in engagement with the lower arm of said bridge.

4. In a pin, a pin-tongue of spring material bent upon itself and comprising an upper and a lower arm, a plate and a spring bridge associated with said plate, said spring bridge being independent of said spring tongue, and the ends of said tongue and bridge being in operative engagement.

5. In a pin, a front-plate, a back-plate provided with two slots near its ends, a pin-tongue of spring material bent upon itself and comprising an upper and a lower arm, and a bridge of spring material bent upon itself and comprising an upper and a lower arm, said bridge passing through said slots and the lower arm of said pin tongue having a downwardly-turned projection fitting into a slot in the lower arm of said bridge.

[Claim 6 not printed in the Gazette.]

1,221,870. TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed June 4, 1914. Serial No. 842,895. Renewed Dec. 30, 1916. Serial No. 139,970. (Cl. 178—63.)



1. In telegraphy, the method which consists in normally impressing upon the line pulses of alternate polarity, thereby vibrating two line relays at the distant receiving station and cause the same to record vibratory lines, depressing the positive pulses and thereby causing one line relay to cease vibrating and record straight lines to translate one message, depressing the negative pulses and thereby causing the second line relay to cease vibrating and record straight lines to translate a second message, and depressing pulses of both polarities and thereby causing both line relays to record straight lines and translate simultaneously two messages.

2. In telegraphy, a line of transmission, two vibratory recording relays inserted in said line, means at the transmitting station to normally vibrate both of said relays and cause the same to record vibratory lines, means at the transmitting station to cause a cessation of said vibrations of one relay and cause the same to record straight lines to translate one message, and means at the transmitting station to produce a cessation of the vibrations of both of the relays and cause both to record straight lines to simultaneously translate two messages.

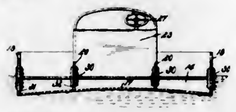
3. In telegraphy, a line of transmission, two recording vibratory relays inserted in said line, one of said relays being responsive to the arrival of positive pulses to record a vibratory line and the other of said relays being responsive to the arrival of negative pulses to record a vibratory line, and means at the transmitting station to depress either or both the negative and positive pulses and thereby cause either or both of said line relays to cease vibrating and record straight lines to denote the arrival of signals.

4. A quadruplex system comprising for each terminal of the line two transmitting and two receiving stations, means at the transmitting stations of each terminal to normally impress upon the line pulses of alternate polarity and of comparatively high electromotive force, means at the receiving stations of each terminal to normally record vibratory lines through the arrival of said pulses; means at the transmitting stations of each terminal to depress the pulses of said high electromotive force, and means at the receiving stations of each terminal to record straight lines through the cessation of said pulses of high electromotive force.

5. In a system of telegraphy, a transmitting station and means for said transmitting station to impress upon the line normally pulses of alternate polarity, a transmitting key and electromagnetic means to depress, through the operation of said key, pulses of positive polarity, in combination with means at the receiving station to record normally vibrations on one side of an imaginary zero line, and means at said receiving station to record straight lines during the cessation of said positive pulses.

[Claims 6 and 7 not printed in the Gazette.]

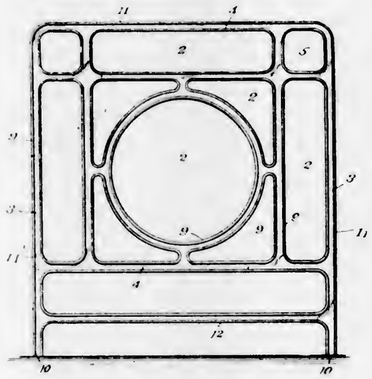
1,221,871. GLIDING BOAT. DUVAL LA CHAPELLE, Nyack, N. Y. Filed Apr. 25, 1916. Serial No. 93,407. (Cl. 114—66.5.)



1. In a gliding boat, the combination of transversely extending pontoons, some of the pontoons having a transverse dimension corresponding to the width of the deck and each of the pontoons having its bottom surface curved upwardly transversely of the hull bottom, and means to connect the pontoons to the deck structure.

2. In a gliding boat, the combination of a series of transversely extending pontoons, each pontoon having its bottom surface provided with a downwardly and rearwardly curved front edge, said curve merging into a surface having straight elements from front to rear but curved upwardly transversely, and means holding the several pontoons in operative position with respect to one another.

1,221,872. BEDSTEAD. MAURICE LACHMAN, New York, N. Y., assignor to General Welded Products Co., New York, N. Y., a Corporation of New York. Filed Mar. 27, 1916. Serial No. 86,951. (Cl. 5—4.)



1. An end frame for metal bedsteads comprising complementary metal plates having registering openings and spacing members inserted between said plates and locked thereto by turned over edges of the spacing members.

2. An end frame for metal bedsteads comprising complementary metal plates having portions removed to form posts and connecting rails and spacing members inserted between said plates and locked thereto.

3. An end frame for bedsteads comprising complementary metal plates each having registering openings and spacing members interposed between said plates and forming walls around said openings, said spacing members being locked to said plates.

4. A tubular end frame for metal bedsteads comprising two complementary metal plates each having registering openings and continuous spacing members having the same shape as the openings and interposed between said plates to form walls around said openings, said spacing members being locked to said plates by turned over metal of the spacing members.

5. A tubular end section for metal bedsteads comprising two complementary metal plates having a plurality of openings intermediate the edges and continuous spacing members interposed between and interlocked with said plates and forming walls around said openings.

[Claims 6 to 10 not printed in the Gazette.]

1,221,873. PROCESS OF PRODUCING ALLOYS. ISADOR LADOFF, Wilkinsburg, Pa., assignor of thirty one-hundredths to Walter D. Edmonds, Boonville, N. Y. Filed Oct. 12, 1915. Serial No. 55,418. (Cl. 75—1.)

1. The method of producing an alloy which comprises mixing the oxids of its constituent metals, incorporating with the mixture a compound the reducing temperature of which is lower than that of one of said oxids, and subjecting the charge, in a reducing atmosphere, to temperature below the melting points of said metals but sufficiently high to inaugurate, and maintaining such temperature sufficiently long to insure, reduction of said oxids.

2. The method of producing an alloy which comprises mixing the oxids of its constituent metals, incorporating with the mixture another oxygen compound the reducing temperature of which is lower than that of one of said oxids, and subjecting the charge, in a reducing atmosphere, to temperature below the melting points of said metals but sufficiently high to inaugurate, and maintaining such temperature sufficiently long to insure, reduction of said oxids.

3. The method of producing an alloy which comprises mixing the oxids of its constituent metals, incorporating with the mixture an oxygen compound of arsenic, and subjecting the charge, in a reducing atmosphere, to temperature below the melting points of said metals but sufficiently high to inaugurate, and maintaining such temperature sufficiently long to insure, reduction of said oxids.

1,221,874. METHOD OF MAKING ALLOYS. ISADOR LADOFF, Wilkinsburg, Pa., assignor of thirty one-hundredths to Walter D. Edmonds, Boonville, N. Y. Filed Feb. 25, 1916. Serial No. 80,393. (Cl. 75—1.)

1. The method of making high speed tool steel which comprises preliminary producing at a single heat, a quaternary alloy of a ferro metal with tungsten, chromium and vanadium, and of which alloy the said tungsten, chromium and vanadium constitute, in their aggregate, not less than fifty per cent., and thereafter melting the said alloy in a bath of ferro metal not comprised in said alloy.

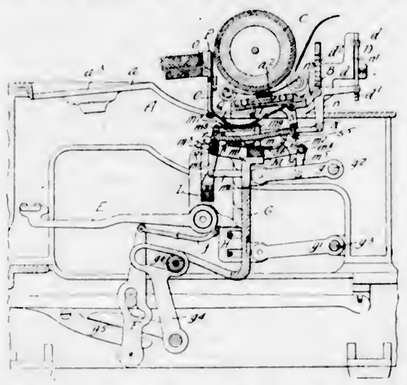
2. The method of making high speed steel which comprises commingling with a ferrometal or its oxid oxids of tungsten, chromium, and vanadium, reducing said oxids to metallic state at temperatures below that of the melting points of their respective metals, and thereafter melting the resulting alloy in a bath of molten ferro-metal.

3. An alloy comprising a ferro-metal, tungsten, chromium and vanadium, and of which its aggregate of tungsten, chromium and vanadium constitutes over fifty per cent.

1,221,875. TYPE-WRITING MACHINE. EMMIT G. LATTA, Syracuse, N. Y. Original application filed Apr. 12, 1912, Serial No. 690,355. Divided and this application filed Jan. 30, 1914. Serial No. 815,399. (Cl. 197—97.)

1. In a typewriting machine, the combination with a platen and a series of pivoted type-bars, of a support for the type-bars which is shiftable to place the type-bars in different printing relations to the platen, a one-piece curved universal bar which shifts with said support and is arranged to be actuated by the several type-bars as they approach the platen, a device to be actuated at each type stroke which is mounted in fixed position, and an operating connection connected to said device and to said universal bar constructed and arranged to produce like action of said device in both positions of said support, substantially as set forth.

2. In a typewriting machine, the combination with a platen carriage, a series of pivoted type-bars, and a device to be actuated at each type stroke, of a support for the type-bars which is shiftable to place the type-bars in different case printing relations to the platen, a one-piece curved universal bar which is arranged to be actuated by the direct impact of the several type-bars as they approach the platen and is shiftable with the type-bar support, and means connected to the universal bar and to said device constructed and arranged to correspondingly operate said device in the different printing positions of the type-bars.



3. In a typewriting machine, the combination with a platen, and a series of type-bars arranged to strike the front of the platen of a universal bar arranged to be actuated by the type-bars as they approach the platen, a rock shaft having downwardly extending arms connected to the universal bar, an upwardly extending arm on the rock shaft, a lever pivoted in a fixed position and having a downwardly extending arm in rear of said rock shaft arm, and a link connected to the rock shaft arm and to said lever arm, substantially as set forth.

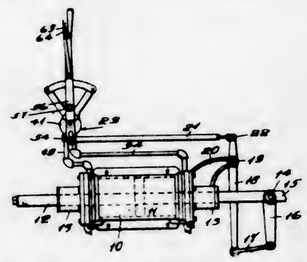
4. In a typewriting machine, the combination with a platen, and a series of type-bars arranged to strike the front of the platen, of a universal bar arranged to be actuated by the several type-bars, a rock shaft having downwardly extending arms connected to the universal bar, a lever pivotally supported in a fixed position and having a downwardly extending arm, an upwardly extending arm on said rock shaft, a link connected to said upwardly extending arm and to said downwardly extending lever arm, and means for shifting the type-bars, universal bar, and rock shaft in a way to change the location of the front end of said link from a position below its rear end to a position equally distant above its rear end, substantially as set forth.

5. In a typewriting machine, the combination with a platen carriage, a series of pivoted type-bars, and a device to be actuated at each type stroke, of a shiftable support for the type-bars, a universal bar which is arranged to be actuated by the several type-bars as they approach the platen and is shiftable with the type-bar support, a rock shaft mounted on said shiftable support and having arms connected to the universal bar, and means connecting said rock shaft to said device to correspondingly operate the same in the different printing positions of the type-bars.

[Claims 6 to 22 not printed in the Gazette.]

1,221,876. FLUID-PRESSURE-OPERATED VALVE-GEAR-SHIFTING MECHANISM. SAMUEL H. LEWIS, Richmond, Va. Filed Jan. 10, 1917. Serial No. 141,686. (Cl. 121—98.)

1. In apparatus of the character described, the combination with a cylinder, of a piston mounted to reciprocate therein, means for connecting the piston with the valve gear of a steam engine, a valve mechanism for controlling the inlet and exhaust of fluid pressure to and from the opposite ends of the cylinder, a manually operated shifting lever connected with the valve mechanism for actuating the same, means connecting one end portion of the lever with the piston, a stationary quadrant arranged in proximity to the other end portion of the lever, and means for locking the last named end portion of the lever with the stationary quadrant so that such end portion cannot move longitudinally of the quadrant and providing a pivot upon which such lever is adapted to turn.

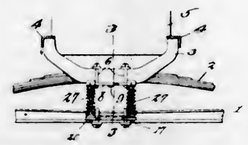


2. In apparatus of the character described, the combination with a cylinder, of a piston mounted to reciprocate therein, means for connecting the piston with the valve gear of a steam engine, valve mechanism for controlling the inlet and exhaust of fluid pressure to and from the opposite ends of the cylinder, a manually operated shifting lever connected between its ends with the valve mechanism for actuating the same, means connecting the lower end of the manually operated lever with the piston, a stationary quadrant arranged in proximity to the upper portion of the lever, and means for locking the upper portion of the lever with the stationary quadrant so that the lever cannot be shifted longitudinally of the quadrant and providing a pivot upon which the lever is adapted to turn.

3. In apparatus of the character described, the combination with a cylinder, of a piston mounted to reciprocate therein, means for connecting the piston with the valve gear of a steam engine, valve mechanism for controlling the inlet and exhaust of fluid pressure to and from the opposite ends of the cylinder, a manually operated shifting lever, connecting means between the valve mechanism and the manually operated shifting lever, a guide for the manually operated shifting lever having connection therewith between its ends, means connecting the lower end of the manually operated shifting lever with the piston, a stationary quadrant arranged in proximity to the upper end of the manually operated shifting lever, and means for locking the upper portion of the lever with the stationary quadrant so that the lever cannot be shifted longitudinally of the quadrant and providing a pivot upon which the lever is adapted to turn.

4. In apparatus of the character described, the combination with a cylinder, of a piston mounted to reciprocate therein, means for connecting the piston with the valve gear of a steam engine, a valve casing having means of communication with the opposite ends of the cylinder, a pivoted valve arranged within the valve casing, a manually operated lever arranged near the valve casing, a gear connected with the valve, a gear carried by the manually operated lever and engaging the first named gear, a guide pivotally connected with the valve casing and pivotally connected with the lever upon one side of the gear carried thereby, means connecting the lower end of the manually operated lever with the piston, a stationary quadrant arranged near the upper portion of the lever, and means for locking the upper portion of the lever with the quadrant so that the lever cannot be shifted longitudinally of the quadrant and providing a pivot upon which the lever is adapted to turn.

1,221,877. SHOCK-ABSORBER. JESUS M. LÓPEZ, C. Piedras Negras Coah, Mexico. Filed Nov. 18, 1916. Serial No. 132,120. (Cl. 21—200.)



1. The combination with the running gear, the body and the steering rod of a vehicle, of a spring interposed between the body and the running gear and constituting a shock absorber, the spring having an elongation; and means carried by the steering rod for engaging the elongation of the spring positively whereby the spring will constitute a returning means for the rod.

2. The combination with the running gear, the body and the steering rod of a vehicle, of a helical spring interposed between the body and the running gear and constituting a shock absorber, the spring having an elongation; and means carried by the steering rod for engaging the elongation of the spring positively whereby the spring will constitute a returning means for the rod.

3. The combination with the running gear, the body and the steering member of a vehicle, of a helical spring interposed between the body and the running gear and constituting a shock absorber, the spring having an elongation; a rod extended through the spring; and means for connecting the rod with the running gear and the body, to permit a swinging movement of the rod transversely of the body but to restrain the rod against swinging movement longitudinally of the body; and means carried by the steering member for engaging the elongation of the spring positively whereby the spring will constitute a returning means for the rod.

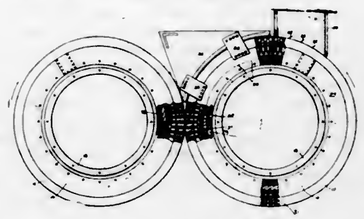
4. A shock absorber comprising upper and lower members; a rod slidable longitudinally in one of said members and tiltable in a single plane in said member; means for pivotally connecting the rod with the other of said members, for swinging movement in said plane; and a helical spring interposed between the said members and surrounding the rod, the spring terminating in an extended arm prolonged for positive engagement with a steering rod.

5. A shock absorber comprising an upper plate; rods pivoted to the upper plate for swinging movement in a single plane; a lower plate receiving the rods slidably and for swinging movement in said plane; an arched guide carried by the lower plate; helical springs surrounding the rods and having their upper ends secured to the upper plate, the lower ends of the helical springs bearing on the lower plate and terminating in arms extended through the guide and prolonged beyond the lower plate, the arms being adapted to engage a projection on a steering rod for governing the movement of the steering rod.

[Claims 6 and 7 not printed in the Gazette.]

1,221,878. BRIQUETING-MACHINE. JOHN F. LOVEJOY, New Rochelle, N. Y., assignor of one-half to Abe Stein, New York, N. Y. Filed Apr. 9, 1913. Serial No. 759,911. (Cl. 25—77.)

1. A machine for briqueting powdered coal or the like including, in combination: a frame, a pair of stationary spaced apart bearings mounted rigidly in said frame, a pair of rotary barrels mounted on said bearings, constructed and arranged with their peripheries mutually substantially tangent, means for simultaneously rotating said barrels in opposite directions, the first of said barrels being provided with substantially radial pockets, a plunger movable radially in each pocket, an interior device in the first barrel for controlling each plunger movement, the same constructed and timed to give the plunger a forcible movement against the material in the pocket as the pocket approaches the point of tangency with the second barrel, and a series of compressing members carried around with the second barrel, each arranged and shaped to enter a pocket in the first barrel as the point of tangency is approached and to apply a compressing force on the material in the pocket simultaneously with the compressing movement of the aforesaid plunger in such pocket.



2. A machine for briqueting powdered coal or the like including, in combination: a frame, a pair of stationary spaced apart bearings mounted rigidly in said frame, a pair of rotary barrels mounted on said bearings, constructed and arranged with their peripheries mutually substantially tangent, means for simultaneously rotating said barrels in opposite directions, the first of said barrels being provided with substantially radial pockets, a plunger movable radially in each pocket, an interior device in the first barrel for controlling each plunger movement, the same constructed and timed to give the plunger a forcible movement against the material in the pocket as the pocket approaches the point of tangency with the second barrel, a series of compressing members carried around with the second barrel, each arranged and shaped to enter a pocket in the first barrel as the point of tangency is approached and to apply a compressing force on the material in the pocket simultaneously with the compressing movement of the aforesaid plunger in such pocket, means for filling each pocket as it revolves, and means for temporarily covering and uncovering the outer end of each pocket between filling position and place of tangency, said plunger controlling device constructed to move the plunger outward while the pocket is so covered to preliminarily pack the material before the final compressing between said plunger and compressing member.

3. A machine for briqueting powdered coal or the like including, in combination: a frame, a pair of stationary spaced apart bearings mounted rigidly in said frame, a pair of rotary barrels mounted on said bearings, constructed and arranged with their peripheries mutually substantially tangent, means for simultaneously rotating said barrels in opposite directions, the first of said barrels being provided with substantially radial pockets, a plunger movable radially in each pocket, a stationary cam track in the first barrel for controlling each plunger movement, the same constructed and timed to give the plunger a forcible movement against the material in the pocket as the pocket approaches the point of tangency with the second barrel, a series of loose rollers between the plungers and cam, and a series of compressing members carried around with the second barrel, each arranged and shaped to enter a pocket in the first barrel as the point of tangency is approached and to apply a compressing force on the material in the pocket simultaneously with the compressing movement of the aforesaid plunger in such pocket.

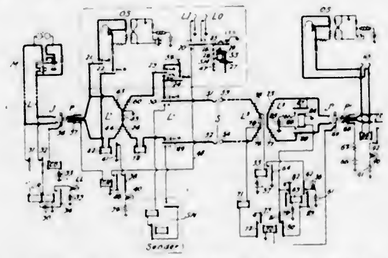
4. A machine for briqueting powdered coal or the like including, in combination: a frame, a pair of stationary spaced apart bearings mounted rigidly in said frame, a pair of rotary barrels mounted on said bearings, constructed and arranged with their peripheries mutually substantially tangent, means for simultaneously rotating said barrels in opposite directions, the first of said barrels being provided with substantially radial pockets, a plunger movable radially in each pocket, an interior device in the first barrel for controlling each plunger movement, the same constructed and timed to give the plunger a forcible movement against the material in the pocket as the pocket approaches the point of tangency with the second barrel, a series of compressing members carried around with

and a series of compressing members carried around with the second barrel, each arranged and shaped to enter a pocket in the first barrel as the point of tangency is approached and to apply a compressing force on the material in the pocket simultaneously with the compressing movement of the aforesaid plunger in such pocket, said plunger controlling device further constructed and timed to move each plunger outward after the pocket has pressed the tangency point for ejecting the briquet, and to retract the plunger to its full extent to permit filling the pocket before the compressing movement of the plunger.

5. A machine for briqueting powdered coal or the like including, in combination: a frame, a pair of stationary spaced apart bearings mounted rigidly in said frame, a pair of rotary barrels mounted on said bearings, constructed and arranged with their peripheries mutually substantially tangent, means for simultaneously rotating said barrels in opposite directions, the first of said barrels being provided with substantially radial pockets, a plunger movable radially in each pocket, an interior device in the first barrel for controlling each plunger movement, the same constructed and timed to give the plunger a forcible movement against the material in the pocket as the pocket approaches the point of tangency with the second barrel, a series of compressing members carried around with the second barrel, each arranged and shaped to enter a pocket in the first barrel as the point of tangency is approached and to apply a compressing force on the material in the pocket simultaneously with the compressing movement of the aforesaid plunger in such pocket, said compressing members being substantially radially movable in the second barrel, and a stationary device or cam in the second barrel for controlling such members constructed and timed to advance each member against the material in each pocket in the first barrel simultaneously with the final compressing movement of the plunger therein.

[Claims 6 and 7 not printed in the Gazette.]

1,221,879. SEMI-AUTOMATIC TELEPHONE SYSTEM. ALBEN E. LUNDELL, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed June 24, 1916. Serial No. 105,582. (Cl. 179—27.)



1. A telephone system comprising telephone lines, link-circuits for extending calling lines, automatic switches for connecting said link-circuits, operator's sending mechanism for controlling the operation of said automatic switches, a second operator's equipment associated with a link-circuit beyond said switch from the calling line, means for displaying a signal before the second operator when the calling line circuit has been extended to her position, means whereby the second operator may efface said signal, and means whereby the first operator may subsequently display a different signal before said second operator.

2. In a telephone system, telephone lines, a set of link-circuits for extending the circuits of said lines, a second set of link-circuits, automatic switches for connecting a link-circuit of the first set to a link-circuit of the second set, operator's sending mechanism adapted to be placed in circuit with link-circuits of said first set to control the operation of said switches, a second operator's equipment available for connection to the link-circuits of said second set, means responsive to the operation of said switch to display a signal before said second operator, means under the second operator's control for effacing said signal, and means under the first operator's control for displaying a further signal before said second operator whenever said first signal is effaced.

3. In a telephone system, telephone lines, link-circuits for uniting said lines into conversational circuits, automatic switches for use in establishing such circuits, an operator's equipment associated with said link-circuits at one point, a second operator's equipment associated with said link-circuits at another point, two signals before said second operator, means for displaying one of said signals in response to the operation of an automatic switch, means under the control of the second operator for effacing said one signal, and means subsequently under the control of the first operator for displaying said other signal.

4. In a telephone system, trunk lines, automatic switch mechanism for connecting corresponding strands of trunks to extend a circuit, a trunk relay, a battery and connections whereby said relay is energized over said extended trunk circuit, a signal displayed in response to the energization of said relay, a cut-off relay for effacing said signal, means for locking up said cut-off relay through contacts of said trunk relay, a repeating relay, a second trunk relay, a second signal operated by said second trunk relay, battery and connections for actuating said second trunk relay over another portion of the extended trunk circuit to display said second signal in response to the energization of said repeating relay, and circuit connections whereby said repeating relay is energized in response to a de-energization of said first trunk relay.

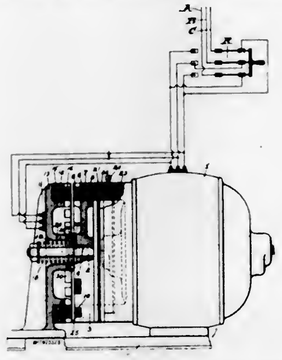
5. In a telephone system, a trunk a trunk relay connected thereto, means for energizing said relay over said trunk, a trunk signal displayed in response to the energization of said trunk relay, a cut-off relay having a locking connection through contacts of said trunk relay, a plug and a jack for connecting to said trunk, a control relay in circuit with a ring of said jack, battery connections to the mating contact of said plug whereby said control relay is energized upon the connection of said plug and jack, a repeating relay, a path for current through said cut-off and repeating relays through contacts of said control relay, battery and connections adapted to be connected to said jack tip and sleeve contacts by said repeating relay, a second trunk relay in bridge of the tip and sleeve contacts of said plug whereby the latter relay is energized in response to the energization of the former, and a second signal displayed in response to the energization of said second trunk relay.

1,221,880. ALTERNATING-CURRENT MAGNET-BRAKE. WILLIAM D. LUTZ, Allendale, N. J., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 15, 1913. Serial No. 754,464. (Cl. 74—70.)

1. In brake apparatus, the combination with an induction motor, a motor frame therefor having a friction collar positioned therein, an alternating current electromagnet, an armature therefor rotatable with the motor and out of engagement with the friction collar when in its attracted position, and movable to frictionally engage with the friction collar when the electromagnet is de-energized, and a spring for pressing the armature against the said friction collar.

2. In brake apparatus, the combination with an induction motor, a motor frame therefor having an end frame screw-threaded to receive a friction collar, a motor shaft, a multiphase alternating current electromagnet having windings mounted in stationary or fixed position, an armature positioned on said shaft and movable longitudinally to frictionally engage the said friction collar and thereby effect the retardation of the motor, when the current supply is cut off the motor and electromagnet windings, and movable out of engagement with the friction collar when the motor and magnet windings receive current.

3. In brake apparatus, the combination with an induction motor, a motor frame having a friction collar adjustable therein, a motor shaft, an armature keyed thereto by a feather and frictionally engaging said friction collar to effect the retardation of the motor, an alternating current electromagnet positioned to permit its pole faces to attract its armature, when the former receives an electric current, and thereby disengage the armature from the said friction collar, and means for limiting the longitudinal movement of the armature toward its attracted position.

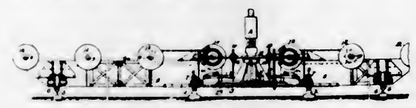


4. In brake apparatus, the combination with an induction motor, a motor frame therefor having an end frame, a friction collar adjustable therein, a lock nut therefor, an alternating current electromagnet having its windings mounted in a stationary or fixed position, an armature therefor keyed to the said shaft and movable longitudinally thereon out of engagement with the friction collar when the magnet windings are excited, a ball bearing interposed between the electromagnet and the armature, to limit the movement of the same to its attracted position, and a spring to press the armature against the friction collar, when the magnet windings are unexcited.

5. In a brake apparatus, the combination with an induction motor, a motor frame therefor having a screw threaded end frame, a friction collar adjustable therein, a lock nut positioned in said frame and engaging said collar to hold the latter against rotation, a multiphase alternating current electromagnet comprising a stationary frame having laminated poles thereon and having windings held in fixed position thereon, a motor shaft, an armature keyed thereto and engaging said friction collar when in its unattracted position, a spring for pressing the armature against the friction collar when the windings are unexcited, a ball bearing for limiting the movement of the armature to its attracted position, and means for regulating the air gap between the armature and the said electromagnet.

[Claims 6 to 8 not printed in the Gazette.]

1,221,881. MECHANISM FOR FEEDING SHEET METAL TO PUNCHING-MACHINES. HENRY LYSHOLM, Woodbury, N. J. Filed Mar. 17, 1916. Serial No. 84,775. (Cl. 164—86.)



1. A machine for operating upon sheet metal, and a plurality of parallel guide tracks part of which are arranged at one side of the machine and part at the other side, combined with a unitary carriage having supporting wheels guided upon the plurality of tracks and having a gap at one side to fit around the machine, a plurality of parallel shafts upon the carriage at each side of the machine, a plurality of parallel narrow feeding wheels secured to each shaft for supporting the sheet to be operated upon, manually controlled means on the carriage for rotating the shafts and wheels which are immediately at each side of the machine and manually controlled means also on the carriage for feeding the carriage along the guide tracks, the entire operative means for the wheels and shafts and also for feeding of the carriage being upon and moving with the carriage itself.

2. A machine for operating upon sheet metal, and a plurality of parallel guide tracks part of which are arranged at one side of the machine and part at the other side, combined with a carriage having supporting wheels guided upon the plurality of tracks, said carriage having a gap at its side to fit around the machine, a plurality of parallel shafts upon the carriage at each side of the machine, a plurality of parallel narrow feeding wheels secured to each shaft for supporting the sheet to be operated upon, manually controlled means on the carriage for rotating the shafts and wheels which are immediately at each side of the machine manually controlled means on the carriage for raising and lowering the rotated shafts and wheels which are adjacent to the machine for adjusting the level of the sheet supported by the wheels, and manually controlled means on the carriage for feeding the carriage along the guide tracks, the entire operative means for the wheels and shafts and also for feeding the carriage being upon and moving with the carriage itself.

3. A machine for operating upon sheet metal, and a plurality of parallel guide tracks part of which are arranged at one side of the machine and part at the other side, combined with a carriage having supporting wheels guided upon the plurality of tracks, a plurality of parallel shafts upon the carriage at each side of the machine, a plurality of feeding wheels secured to each shaft for supporting the sheet to be operated upon, manually controlled means on the carriage for rotating the shafts and wheels which are immediately at each side of the machine, manually controlled means for feeding the carriage along the guide tracks, and means forming a connection between the carriage and machine whereby the time of action of the latter may be under the control of the operator on the carriage.

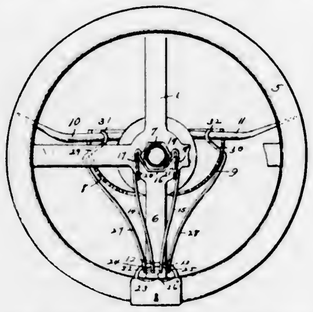
4. A machine for operating upon sheet metal, and a plurality of parallel guide tracks part of which are arranged at one side of the machine and part at the other side, combined with a carriage having supporting wheels guided upon the plurality of tracks, a plurality of parallel shafts upon the carriage at each side of the machine, a plurality of feeding wheels secured to each shaft for supporting the sheet to be operated upon, manually controlled means on the carriage for rotating the shafts and wheels which are immediately at each side of the machine, manually controlled means for feeding the carriage along the guide tracks, manually controlled means for raising and lowering the feeding and guide wheels at each side of the machine, and an operator's platform carried by the carriage in front of the machine and upon which all of the manually controlled means are grouped so as to be within easy reach of the operator without materially shifting his position.

5. A machine for operating upon sheet metal and a plurality of parallel guide tracks part of which are arranged at one side of the machine and part at the other side, in combination with a carriage supported and traveling upon said guide tracks and extending on each side of the machine, the carriage having a gap in its side approximately midway of its length by which it is enabled to straddle the machine, a plurality of parallel shafts journaled on the carriage at each side of its gap, a plurality of narrow supporting wheels upon each of the shafts a part of which wheels are arranged beyond the sides of the carriage, means coupling the shafts located immediately upon each side of the gap for rotating them, hand operable means on and movable with the carriage for operating said means for rotating the shafts and their wheels in either

direction, and manually operable means for raising and lowering the shafts next to the gap in the carriage while leaving the remaining shafts and their wheels at the normal level.

[Claims 6 to 12 not printed in the Gazette.]

1,221,882. LOCK FOR AUTOMOBILES. ROBERT M. MCMAHAN and JOHN B. MAUGER, Potts Grove, Pa. Filed July 17, 1916. Serial No. 109,740. (Cl. 70—90.)



1. A locking device for automobiles comprising a member formed of a single piece of metal and shaped to provide portions which underlie the spark and throttle lever segments, hooks extending upwardly from said portions which engage over the spark and throttle levers, portions extending rearwardly from the first named portions and steering wheel engaging means carried by the last named portions.

2. A locking device of the character described formed of a single and continuous piece of wire bent to provide spark and throttle lever engaging hooks, bends extending from said hooks adapted to pass beneath the spark and throttle lever segments, portions extending rearwardly from said bends and a transverse loop connecting the rear ends of the last named portions and adapted to embrace one of the spokes of the steering wheel.

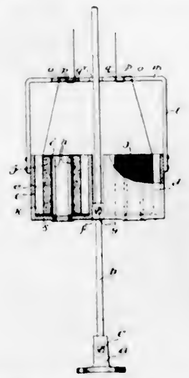
3. A locking device of the character described formed of a single and continuous piece of wire bent to provide spark and throttle lever engaging hooks, bends extending from said hooks adapted to pass beneath the spark and throttle lever segments, portions extending rearwardly from said bends and a transverse loop connecting the rear ends of the last named portions and adapted to embrace one of the spokes of the steering wheel and additional loops between said portions and the transverse loop, said additional loops serving to receive a locking element.

4. A locking device of the character described formed of a single and continuous piece of wire bent to provide spark and throttle lever engaging hooks, bends extending from said hooks adapted to pass beneath the spark and throttle lever segments, portions extending rearwardly from said bends and a transverse loop connecting the rear ends of the last named portions and adapted to embrace one of the spokes of the steering wheel, additional loops between said portions and the transverse loop, said additional loops serving to receive a locking element and a member engaging the nut of the steering wheel and extending rearwardly from said nut and provided with eyes registering with said additional loops.

5. A locking device of the character described formed of a single and continuous piece of wire bent to provide spark and throttle lever engaging hooks, bends extending from said hooks adapted to pass beneath the spark and throttle lever segments, portions extending rearwardly from said bends, a transverse loop connecting the rear ends of the last named portions and adapted to embrace one of the spokes of the steering wheel, additional loops between said portions and the transverse loop, said additional loops serving to receive a locking element and a steering wheel locking means formed of a single and continuous piece of wire bent at its bight portion to form a nut engaging socket then bent to form a wheel hub engaging portion, then bent to form rearwardly extending portions having terminal eyes to register with the additional loops of the spark and throttle lever locking member.

[Claim 6 not printed in the Gazette.]

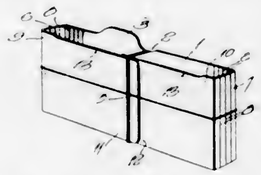
1,221,883. THREAD-STAND. JOHN MAITLAND, Swampscott, Mass. Filed Jan. 7, 1915. Serial No. 937. (Cl. 242—139.)



1. A thread stand consisting of a cup open at one end and having a transverse wall at the other end, retaining rods fixed in said wall and projecting thence toward said open end, being adapted to enter a headless thread tube and being set at such a distance apart as to bear forcibly against the inner walls of such tube and produce frictional resistance to removal of the tube, a guide overlying the open end of the cup, and a support on which the cup is mounted.

2. A thread stand comprising a supporting post, a slide mounted adjustably on said post, cup shaped holders forming a part of said slide located on opposite sides of said post, a retainer mounted centrally in each of said holders comprising rods secured in the bottom of the holder in position parallel to the axis thereof, and a rod bent to provide ends approximately parallel to the axes of the holders which are secured to the outer sides of the respective holders, and having a cross piece provided with eyes over the open end of each holder.

1,221,884. GUIDE-FILE. HOMER V. MARTIN, Lincoln, Nebr. Filed Mar. 9, 1916. Serial No. 83,151. (Cl. 129—16.7.)

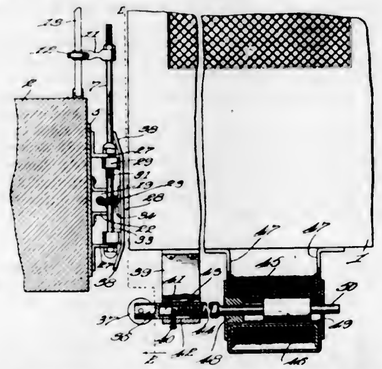


1. A guide file comprising a main wall having a centrally disposed notch in its upper edge, a tab on said edge adjacent one end, end flaps on said wall vertically scored for adjusting their widths, overlapping tongues on the extremities of said flaps disposed parallel with the main wall, a string wrapped exterior to the guide file, means on said main wall directly below the notch in the upper edge for securing the ends of said string, and the end portions

of said tongues having notched upper edges disposed in a single plane with the lowermost point of the notch in the main wall, whereby the portion of the spring across the top of the guide file will be held in the notch against lateral movement.

2. A guide file comprising a main wall having a centrally disposed notch in its upper edge, a tab on said upper edge adjacent one end, a bottom flap on the lower edge of said wall, end flaps on said wall vertically scored for adjusting their widths, the bottom flap of said wall being horizontally scored for adjusting its width corresponding to the width of the end flaps, overlapping tongues on the extremities of said flaps disposed parallel with the main wall, a string wrapped exterior to the guide file, means on said main wall directly below its notch for securing the ends of said string, the end portions of said tongues on the end flaps having notched upper edges disposed in a single plane with the lowermost point on the notch in the main wall, whereby the portion of the string across the top of the guide file will be held in the notch against lateral movement.

1,221,885. SAFETY ELEVATOR MECHANISM. JOHN A. MARTIN, Spokane, Wash., assignor of one-half to John H. Woodard, Spokane, Wash. Filed Aug. 11, 1915. Serial No. 44,895. (Cl. 187—50.)



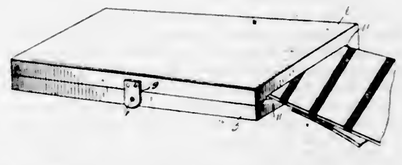
1. In combination, an elevator shaft including a landing and a door, an elevator car, a door locking means mounted on said landing and including a rotary spindle having a locking arm engaging the door to hold the latter against opening movement and adapted to be actuated by the door when the same is opened, a latch plate mounted on said spindle, a bolt for locking said latch plate in a door holding position, a pivoted mounted releasing plate operatively connected with said bolt, means carried by said car for actuating said releasing plate to free said door, a controller for said car, and means on said car and actuated by said latch plate when the latter is operated by opening movement of the door to lock said controller, substantially as described.

2. In combination, an elevator shaft including a landing and a door, an elevator car, door-locking means mounted on said landing and including a rotary spindle having a locking arm engaging and serving to hold the door against opening movement but adapted to be actuated by the door when the latter is opened, said spindle also having mounted thereon a latch plate provided at its engaging end with a lug; a bolt engaging said latch plate to lock the same, and having an overhanging end engaging said lug, a releasing member for said bolt, means carried by said car for actuating said releasing member to free the door, a controller for said car, and means on said car for actuation by said latch portion when the latter is operated by opening movement of the door to lock said controller, substantially as described.

3. In combination, an elevator shaft including a landing and a door, an elevator car, door locking means mounted on said landing and including a rotary spindle having a backing arm engaging and serving to hold the door against opening movement, said spindle also having a latch-plate provided at its engaging end with a lug; a bolt engaging said latch plate to lock the same, and having an overhanging end engaging said lug, a releasing member for said bolt, and means carried by the car for actuating said releasing member to free the door, substantially as described.

4. In combination with a car, a car landing, and a landing door, of a car movement control lever, electrically actuated means carried by the car for locking said lever in neutral or inoperative position to prevent movement of the car, an engaging device carried by the car to control said lever locking means, and a device mounted on said landing adapted to engage said engaging device of the car upon opening movement of said door, said landing device including a spring controlled rotary spindle having a door engaging arm and a swinging member adapted to engage said engaging device of the car.

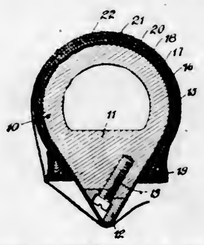
1,221,886. TIE-PRESS. AUBREY MATTHEWS, Fitzgerald Ga. Filed Apr. 11, 1916. Serial No. 90,435. (Cl. 100—57.)



1. A tie press, comprising in combination, a pair of hinged recessed elements, opposing compressible pads seated in the recesses, and a device for positioning and holding ties between said pads, the corresponding edges of said elements being recessed to receive the positioning device.

2. A tie press, comprising in combination, a pair of elements having recesses formed in their opposing faces, compressible pads carried in said recesses and adapted to be wholly contained therein when the edges of the elements are brought together, and a two-armed device for positioning ties between said elements before they are compressed.

1,221,887. METHOD OF MAKING FOUR-PLY LOCK-CORD TIRES. ROBERT M. MERRIMAN, Akron, Ohio. Filed Dec. 30, 1916. Serial No. 139,885. (Cl. 154—14.)



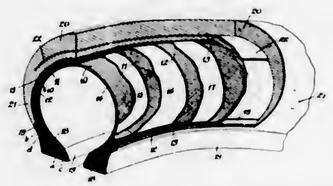
1. The method of building up a tire casing upon its core, which consists in winding a plurality of inner plies of cord helically about the core, one upon the other, each ply being wound at an angle of substantially 45° to the axis of the core and each ply being wound at an angle of substantially 90° to another adjacent ply, in positioning beads at the sides of the core and against the ply, in winding a further ply of cord about the partially built

up tire, core and beads, in severing the convolutions of the cord of the last ply and folding the free end portions thereof inwardly about the outer faces of the beads and across the bases thereof to abut against the last ply wound previous to the placing of the beads, in severing the convolutions of the cord forming the last ply wound previous to the placing of the beads and folding the free ends of the strands forming such ply outwardly across the bases of the beads and upwardly along the outer side walls of the beads, and in then winding a further cord ply, severing it and folding its ends downwardly about the outer faces and inwardly across the bases of the beads, severing the outermost unsevered ply of those plies wound previous to the placing of the beads and folding the free ends of such ply outwardly against the bases and upwardly along the outer side walls of the beads and in continuing this operation until the first cord ply wound about the core has been severed and its ends folded about the beads.

2. The method of building up a cord tire casing upon its core, which consists in winding a ply of cord helically about the core at an angle of substantially 45° to the axis of the core, in winding a second cord ply over and at a reverse angle to the first ply, in placing beads against the sides of the second ply, in winding a third cord ply about the second ply and beads, in severing the convolutions of the third ply in spaced relation to each bead and folding the resultant free ends of the convolutions downwardly against the outer sides and inwardly across the bases of the beads, in severing the convolutions of the second cord ply along the inside of the core and midway between the beads and in folding the free ends of such convolutions outwardly across the bases and upwardly along the outer side walls of the beads, in winding a fourth cord ply about and at a reverse angle to the third cord ply, in severing the fourth cord ply and folding its ends in the manner followed with the third cord ply, and in severing the first cord ply and folding its ends about the beads in the manner followed in connection with the second cord ply.

3. The step in the building up of a tire casing about its core, which consists in winding a ply of cord helically about the core at an angle to the axis thereof, in positioning beads at the sides of the core and against the ply, in winding a further ply of cord helically about the core and beads and at an angle substantially reverse to the first, in severing the convolutions of the second cord ply and folding the free end portions thereof inwardly about the outer faces of the beads and across the bases thereof to abut against the first ply wound, in severing the convolutions of the cord forming the first ply wound, and in folding the free ends of the strands forming such ply outwardly across the bases of the beads and upwardly along the outer side walls of the beads.

1,221,888. FOUR-PLY LOCK-CORD TIRE. ROBERT M. MERRIMAN, Akron, Ohio. Filed Dec. 30, 1916. Serial No. 139,886. (Cl. 152—13.)



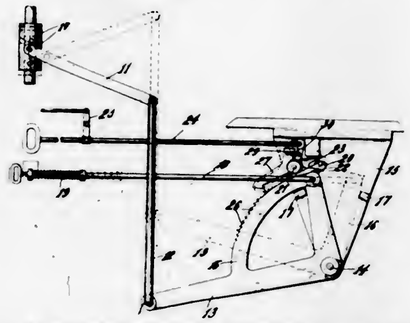
1. In a four-ply cord tire, four superimposed cord plies, and beads interposed between the two inner and two outer plies at each side, the free ends of the third ply from the inside of the tire being passed across the outer faces and bases of the beads, the free ends of the second ply from the inside being passed outwardly across the bases of the beads and upwardly along the outer sides thereof, the free ends of the outer ply being passed downwardly over the side faces and inwardly across the bases of the beads and the free ends of the inner ply being passed outwardly across the bases of the beads and upwardly along the side faces thereof.

2. In a four-ply cord tire, four superimposed cord plies, and beads interposed between the two inner and two outer plies at each side the free ends of the third ply from the inside of the tire being passed across the outer faces and bases of the beads, the free ends of the second ply from the inside being passed outwardly across the bases of the beads and upwardly along the outer sides thereof, the free ends of the outer ply being passed downwardly over the side faces and inwardly across the bases of the beads and the free ends of the inner ply being passed outwardly across the bases of the beads and upwardly along the side faces thereof, and chafing strips having their inner edges secured to the inner faces of the bead portions of the tire in substantially the level of the bases of the beads proper and having their outer edges extending into the side walls of the tire to points above the upper edges of the beads proper.

3. In a multiple ply cord tire, a plurality of superimposed plies of cord, and beads interposed between certain of the plies at either side of the tire, the free ends of the plies at either side of each bead being alternately passed inwardly across the base of the bead and outwardly across the base of the bead and up the outer sides thereof, the innermost ply at each side being the last to be passed about the bead.

4. In a multiple ply cord tire, a plurality of superimposed plies of cord, and beads interposed between certain of the plies at either side of the tire, the free ends of the plies at either side of each bead being alternately passed inwardly across the base of the bead and outwardly across the base of the bead and up the outer sides thereof, the free ends of the plies extending inwardly across the base of the beads, terminating immediately below the inner edges of the beads and those passed upwardly along the outer sides of the beads, terminating adjacent the upper edges of the beads.

1,221,889. AUTOMATIC SAFETY-STOP. GEORGE J. MEYER, Milwaukee, Wis. Filed Nov. 22, 1915. Serial No. 62,705. (Cl. 74—46.)



1. An automatic safety stop for machinery, comprising a biased clutch operating member, a dog engaging the clutch operating member for holding it against its tendency to move, a second dog adapted to engage the clutch operating member to restrain its movement in the anti-biased direction and having connection with the first mentioned dog for holding it in its engaging position while the first mentioned dog is in its disengaging position, and automatic tripping means for moving the first mentioned dog out of its engaging position.

2. An automatic safety stop for machinery, comprising a biased clutch operating member, and a suitably operated anchor pawl having one arm adapted to engage the clutch operating member to normally hold it against movement in its bias direction and having the other arm adapted to engage the clutch operating member to hold it against movement in its anti-bias direction.

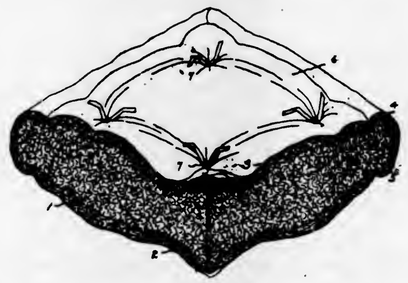
3. An automatic safety stop for machinery, comprising a biased clutch operating member, and a suitably operated anchor pawl with its arms yielding in relation to each other and alternately engaging the clutch operating member, the engagement of one arm serving to oppose the movement of the clutch operating member in its bias direction and the engagement of the other arm serving to oppose the movement of the clutch operating member in its anti-bias direction.

4. An automatic safety stop for machinery, comprising a biased clutch operating member, a pair of dogs connected together with limited play between them, and suitably controlled means for alternately moving the dogs into positions of engagement with the clutch operating member, the engagement of one of the dogs serving to oppose movement of the clutch operating member in the bias direction and the engagement of the other dog serving to oppose movement of the clutch operating member in the anti-bias direction.

5. An automatic safety stop for machinery, comprising a spring actuated clutch operating lever, a dog engaging the lever for holding it against the action of its spring, means for disengaging the dog, and a second dog having connection with the first mentioned dog and engaging the clutch operating lever to prevent its movement in the opposite direction, the connection between the dogs serving to withdraw the second dog from its engaging position when the first mentioned dog returned to its engaging position.

[Claims 6 to 10 not printed in the Gazette.]

1,221,890. QUILT AND MATTRESS. JOHN R. MILLAR, Oakland, Cal., assignor to California Cotton Mills Company, San Francisco, Cal., a Corporation of California. Filed Nov. 24, 1915. Serial No. 63,221. (Cl. 5—13.)



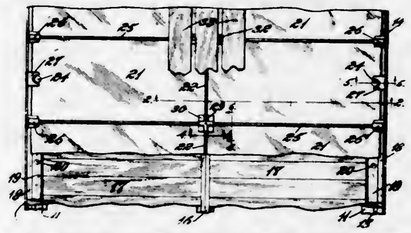
A pad including a core of woolen fibers; a retaining layer of cotton fibers forming a loose bat and surrounding the core; a fabric cover; and ties passing through said pad.

1,221,891. CAR-ROOF. CLINTON C. MURPHY, Chicago, Ill., assignor to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed Oct. 1, 1914. Serial No. 864,372. (Cl. 108—5.)

1. A car roof comprising roof sheets extending from ridge to eaves with the middle points of their eaves ends pivotally secured on top of the car near the eaves, said roof sheets being independently movable along the ridge, and connected by loose joints.

2. A car roof comprising roof sheets arranged crosswise of the car and secured to the car for pivotal movement about their eaves ends, said roof sheets being movable lengthwise of the car at the ridge, and loosely joined at their side edges.

3. A car roof comprising roof sheets extending from ridge to eaves and having their side margins connected by slidable joints, said sheets having a pivotal bearing on top of the car near the middle points of their eaves ends, the ridge ends of said roof sheets being provided with upstanding flanges, and ridge caps of inverted channel shape straddling the ridge flanges of sheets on opposite sides of the ridge and spaced therefrom to permit movement of the roof sheets lengthwise of the car and to limit crosswise movement thereof, said ridge caps permitting mutual crosswise movement of said sheets and restraining their independent crosswise movement.



4. A car roof comprising roof sheets extending from ridge to eaves and having their side margins connected by seams providing for relative endwise movement and with their ends pivotally secured on top of the car near the eaves, the ridge ends of said roof sheets being provided with upstanding inverted U-shape flanges, cover strips over said flanges permitting sidewise movement thereof, said flanges and cover strips forming a floating ridge seam which responds to and mutually restrains the transverse movement of the roof sheets, and means for holding down said roof sheets at their eaves and ridge corners.

5. A car roof comprising roof sheets extending from ridge to eaves and having their side margins connected by seams providing for relative endwise movement and with their ends secured on the car near the eaves against movement toward the eaves, the ridge ends of said roof sheets being provided with upstanding inturned horizontal flanges, ridge caps having side margins with their lower edges turned in and hooked under said flanges for sidewise engagement and disengagement, and means for holding down said roof sheets and ridge caps.

[Claims 6 to 11 not printed in the Gazette.]

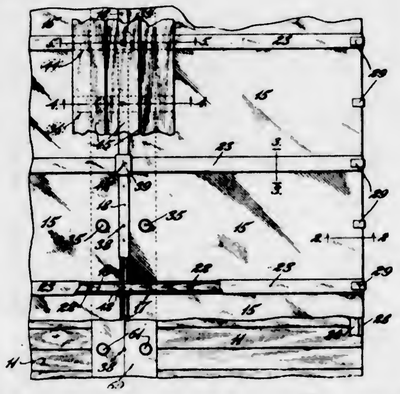
1,221,892. CAR-ROOF. CLINTON C. MURPHY, Chicago, Ill., assignor to P. H. Murphy Company, Parnassus, Pa., a Corporation of Pennsylvania. Filed July 12, 1915. Serial No. 39,252. (Cl. 108—5.)

1. A car roof comprising metal roof sheets extending from ridge to eaves, said roof sheets being connected at the ridge by a flexible seam comprising longitudinal cover strips, a metal strip positioned along the ridge and on each side thereof, said ridge strip being wider than said cover strips and extending under the body portions of the roof sheets beyond the edges of the cover strips and between the ridge ends of the roof sheets continuously from end to end of the car.

2. A car roof comprising metal roof sheets extending from ridge to eaves, said roof sheets being connected at the ridge by a flexible seam, a metal strip fixed in position along the ridge and lapping under the body portions of the roof sheets on each side thereof, said ridge strip being wider than said seam and extending under and between the ridge ends of the roof sheets continuously from end to end of the car and having means engaging said roof sheets for maintaining them in central alinement on the roof.

3. A car roof comprising metal roof sheets extending from ridge to eaves, said roof sheets having pivot recesses at their ridge ends and being connected at the ridge by a flexible seam, a metal strip positioned along the ridge and on each side thereof, said ridge strip being wider than

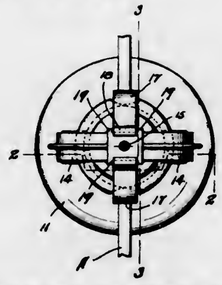
said flexible seam and extending under and between the ridge ends of the roof sheets continuously from end to end of the car and provided with pivots engaging the pivot recesses of said roof sheets.



4. A car roof comprising metal roof sheets extending from ridge to eaves, said roof sheets having bosses at their ridge ends and being connected at the ridge by a flexible seam, a metal strip positioned along the ridge and on each side thereof, said ridge strip being wider than said flexible seam and extending under the bosses and between the ridge ends of the roof sheets continuously from end to end of the car, and cross members straddling the ridge and arranged over the bosses of opposite roof sheets to hold them down on said ridge strip, said cross strips and ridge strip being secured to the car at the ridge by means passing between the ridge ends of the roof sheets.

5. A car roof comprising metal roof sheets extending from ridge to eaves, said roof sheets having bosses at their ridge ends and being connected at the ridge by a flexible seam, a metal strip positioned along the ridge and on each side thereof, said ridge strip extending under and between the ridge ends of the roof sheets continuously from end to end of the car and having bosses registering with the bosses of said roof sheets, and cross members straddling the ridge and arranged over the bosses of opposite roof sheets to hold them down on said ridge strip, said cross strips and ridge strip being secured to the car at the ridge by means passing between the ridge ends of the roof sheets.

1,221,893. SAFETY REPAIR DEVICE FOR HIGH-VOLTAGE TRANSMISSION-LINES. GEORGE S. NEELEY, Overland Park, Mo., assignor of one-half to Thomas O. Moloney, St. Louis, Mo. Filed Sept. 30, 1915. Serial No. 53,394. (Cl. 173—313.)



1. In a device of the class described, a substantially inverted U-shaped yoke the lower ends of the legs of which are adapted to engage a wire carrying insulator, a wire gripping member suspended from the central portion of said yoke, and means coöperating with said yoke and gripping member to cause the yoke to grip the insulator and said gripping member to clamp the line wire against said insulator.

2. In a device of the class described, a substantially inverted U-shaped yoke the lower ends of the legs of which are adapted to engage a wire carrying insulator, a wire clamping member loosely connected to said yoke, and an adjustable member on the yoke and adapted to bear on said wire clamping member to cause the same to grip a wire and to simultaneously cause the yoke to grip the insulator.

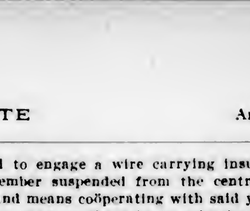
3. In a device of the class described, a substantially inverted U-shaped yoke the lower ends of the legs of which are adapted to engage a wire carrying insulator, a wire gripping member loosely connected to said yoke, and a set screw seated in the yoke and bearing on said wire gripping member.

4. The combination with grooved wire carrying insulator, of a yoke provided with hooks adapted to engage in the groove in said insulator, a wire gripping member loosely connected to said yoke, and means coöperating with said yoke and member for simultaneously causing the gripping member to clamp the wire against the insulator and causing said yoke to grip the insulator.

5. The combination with a wire carrying insulator of a member having hooks adapted to engage said insulator, a wire gripping member having sliding connection with said first mentioned member, and means coöperating with the two members for simultaneously causing the first mentioned member to grip the insulator and the second mentioned member to clamp the wire against said insulator.

[Claims 6 and 7 not printed in the Gazette.]

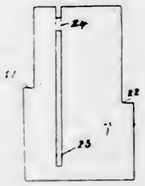
1,221,894. SAFETY REPAIR DEVICE FOR HIGH-VOLTAGE TRANSMISSION-LINES. GEORGE S. NEELEY, Overland Park, Mo., assignor of one-half to Thomas O. Moloney, St. Louis, Mo. Original application filed Sept. 30, 1915, Serial No. 53,394. Divided and this application filed July 19, 1916. Serial No. 110,189. (Cl. 173—313.)



In a repair device of the class described, the combination with an insulator, of an inverted cup-shaped member removably positioned on top of said insulator, a jaw integral with the top of said cup-shaped member, which jaw is provided in one of its side faces with a wire receiving notch, a dove-tailed rib formed on the inverted cup-shaped member in front of and at right angles to the wire receiving notch, a jaw arranged for sliding movement on the dove-tailed rib, a pair of side members integral with said sliding jaw, a transverse member connecting the outer ends of said members, and an eccentric pivotally mounted on the dove-tailed rib between the sliding jaw and the transverse member for moving said jaw toward and away from the fixed jaw.

1,221,895. ADJUSTING AND RECORD CARD AND THE LIKE. GEORGE WILLIAM ODELL, Westmount, Quebec, Canada. Original application filed Aug. 26, 1914, Serial No. 858,591. Divided and this application filed Feb. 19, 1916. Serial No. 79,451. (Cl. 234—41.)

1. In an adjusting and record card for adjusting a recording machine, a piece of sheet material having clippings made from opposite sides and of different lengths forming shoulders, one of said shoulders engaging in setting said recording machine and the other forming a stop in setting operations, and an irregularity of the surface intermediate of its width.



2. A device of the class described, comprising a card having shoulders formed at different depths in its length by clippings, adapted to be cut at different times, said shoulders being on opposite sides and a further cutting in the card intermediate of its width, adapted to form a means of selecting in the use of the card.

3. An adjusting and record card for adjusting a recording machine clipped at each side from one end only forming a central body portion for insertion into said recording machine to receive the record, the shoulder at the end of one clipping acting as an engaging element and the other shoulder as a stop, said clipping of the card reducing said card in measurements to three distinct widths throughout its length.

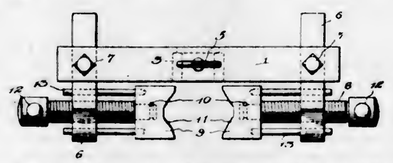
1,221,896. TOBACCO-RECEPTACLE. MARSHALL H. PAGE, San Francisco, Cal. Filed Apr. 20, 1916. Serial No. 92,397. (Cl. 206—38.)



1. A tobacco receptacle comprising a flat box having an opening in one edge and in one side, a slide covering one opening, and a flat paper receptacle forming the cover for the side opening.

2. A tobacco receptacle comprising a flat box having an opening in one edge and in one side, a slide covering the edge opening, a flat hinged paper receptacle forming the cover for the side opening in the tobacco receptacle, a hinged cover for the paper receptacle, and a spring adapted to retain both the paper receptacle and its cover in the closed position.

1,221,897. DEVICE FOR HOLDING, CENTERING, AND STEADYING TAPS. JAMES C. PALL, Bridgeport, Conn. Filed Sept. 20, 1916. Serial No. 121,207. (Cl. 10—147.)



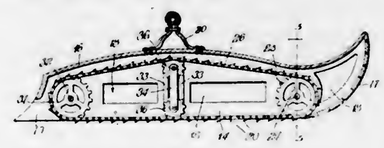
1. In a device of the character described, a plate having a central opening and spaced end openings, the central opening having a counterbored portion to form a shoulder, an internally threaded bushing seated on the shoulder and adapted to receive a tapping tool, means to hold the bushing seated, a support slidable in each end opening of the plate and provided with a threaded opening in its outer end, a set screw in the plate engaging each support to hold the plate adjusted thereon, a clamping screw in the opening of each support, a jaw swiveled on the inner end of each screw, and rearwardly extending steadying rods fixed to the jaws and slidably engaged with the respective supports.

2. In a device of the character described, a plate having a central opening and spaced end openings, the central opening having a counterbored portion to form a shoulder, an internally threaded bushing seated on the shoulder and adapted to receive a tapping tool, means to hold the bushing seated, a support slidable in each end opening of the plate and provided with a threaded opening in its outer end, a set screw in the plate engaging each support to hold the plate adjusted thereon, and coöperating jaws adjustable on the supports.

3. In a device of the character described, a plate having a central opening and spaced end openings, the central opening having a counterbored portion to form a shoulder, an internally threaded bushing seated on the shoulder and adapted to receive a tapping tool, means to hold the bushing seated, a support slidable in each end opening of the plate and provided with a threaded opening in its outer end, a set screw in the plate engaging each support to hold the plate adjusted thereon, a clamping screw in the opening of each support, and jaws on the screws having coöperating serrated jaw faces.

4. In a device of the character described, a plate having openings near its ends and an opening intermediate said end openings, a support slidable in each end opening and provided with a threaded opening in its outer end, means for adjustably securing each support to said plate, a clamping screw in the opening of each support, clamping jaws carried by the inner ends of the screws, and an interiorly threaded bushing detachably secured within said intermediate opening and adapted to receive a tapping tool.

1,221,898. SLED. PER W. PALM, Baudette, Minn. Filed May 9, 1916. Serial No. 96,397. (Cl. 208—162.)



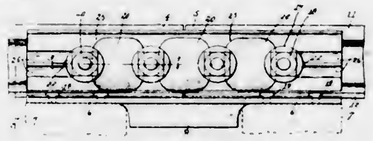
1. In a bicycle sled, a runner consisting of side plates provided with longitudinal flanges on their opposed faces at their lower edges, spacing elements secured to and between the said side plates and extending along the upper edges and the front ends thereof and curved rearwardly to merge into the lower edges of the same, a propelling element disposed longitudinally of the runner between the said longitudinal flanges, and means for imparting motion to said propelling element.

2. In a bicycle sled, the combination of a runner, a driving element housed therein, and means for imparting motion to said driving element, said driving element consisting of pairs of links, some of said links being provided with ground-engaging teeth, and some of said links being provided with pivoted eccentric ground-engaging dogs, the links carrying the dogs having their ends disposed between and pivoted to the ends of the pairs of links provided with teeth.

3. In a bicycle sled, the combination of a runner consisting of side plates and spacing blocks secured to and extending between the side plates at the front ends thereof and along the upper edges of the same, cleats disposed on the inner faces of the side plates at about the center of the same, vertical slots being formed in the side plates between the cleats, gear wheels mounted between the side plates at the front and rear ends thereof, hangers slidably fitted between said cleats, idlers carried by the upper and lower ends of the said hangers and having shafts playing in the slots in the side plates, an endless driving chain

passing around the said gear wheels and engaged by said idlers, and means for imparting motion to one of said gear wheels.

1,221,899. RAIL-JOINT. ALPHONSO T. PALMER, Cicero, Ill. Filed May 29, 1916. Serial No. 100,488. (Cl. 239—9.)



1. A rail joint comprising a pair of abutting rail ends having the usual heads, webs and flanges; fish-plates on opposite sides of the rail ends; bolts passing through said rail ends and fish-plates; and leaf springs between and engaging said bolts on one of the fish-plates, said springs being curved laterally of the rail ends and having their strengths diminished gradually from their central portions toward their lateral edges.

2. A rail joint comprising a pair of abutting rail ends having the usual heads, webs and flanges; fish-plates on opposite sides of the rail ends; bolts passing through said rail ends and fish-plates; and leaf springs between and engaging said bolts on one fish plate, said springs being substantially rectangular with their corners cut away rendering the springs stronger in their central portions than at their lateral edge portions.

3. A rail joint comprising a pair of abutting rail ends having the usual heads, webs and flanges; fish-plates at opposite sides of the rail ends; bolts passing through said rail ends and fish-plates; curved leaf springs between the bolts on one fish-plate having their central portions curved laterally with respect to the rail ends away from the fish-plate, the corner portions of the springs being cut away to render opposite edge portions of the springs more flexible than the central portions, and nuts threaded on the bolts clamping the springs against the fish-plates.

4. A rail joint comprising a pair of abutting rail ends having the usual heads, webs and flanges; fish-plates on opposite sides of the rail ends; bolts passing through said rail ends and fish-plates; leaf springs disposed between said bolts on one of the fish-plates and engaging the top sides of the flanges at one side of the rail ends; and a head on one of the fish-plates limiting upward movements of the springs.

5. A rail joint comprising a pair of abutting rail ends having the usual heads, webs and flanges; fish plates at opposite sides of the rail ends; bolts extending through the rail ends and fish plates; leaf springs disposed between said bolts on one of said fish plates; and nuts threaded on the bolts holding the springs against said fish plate, there being grooves in the fish plate under said springs permitting the free passage of air under said springs when the latter are brought tightly against said fish plate.

[Claims 6 to 9 not printed in the Gazette.]

1,221,900. BOX. LYNDON C. PALMER, Buffalo, N. Y., assignor to F. N. Burt Company, Limited, Buffalo, N. Y., a Corporation of Ontario, Canada. Filed Jan. 8, 1916. Serial No. 70,933. (Cl. 229—6.)



1. In a device of the character described, in combination, a box, a frangible head having a stiff flange fitting the flange of the box, and a removable reinforcing head beneath and supporting said frangible head.

2. In a device of the character described, in combination, a box, a frangible head having a stiff flange fitting the flange of the box, a removable reinforcing head beneath and supporting said frangible head, and a lid overlying said frangible head and said reinforcing head, and having a flange fitting the first mentioned flange.

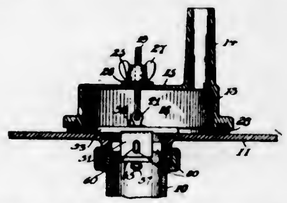
3. In a device of the character described, in combination, a box, a cover for the material in the box, a folded sealing fabric connecting the box and cover and adapted to prevent the escape of material from the box where so connected, and a brace lying on the fold of said fabric.

4. In a device of the character described, in combination, a box, a cover for the material in the box, a folded sealing fabric connecting the box and cover and adapted to prevent the escape of material from the box where so connected, and a cover stiffening member extending into the fold of said fabric.

5. In a device of the character described, in combination, a box, an imperforate frangible cover for the material in the box, and a foldable sealing fabric connecting the box and cover inside the box and adapted to prevent the escape of material from the box where connected to the box.

[Claims 6 to 12 not printed in the Gazette.]

1,221,901. DRAIN-PIPE AND BASIN-TRAP FLUSHER ATTACHING DEVICE. ROBERT H. PEARCH, Elmira, N. Y. Filed Dec. 10, 1915. Serial No. 66,179. (Cl. 137—70.)

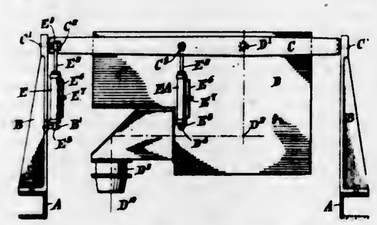


1. A flusher attaching means adapted for seating within the end of a pipe, comprising a cross-bar positioned transversely of the end of a pipe when operatively arranged, a cylindrical female member having a transverse slot in one end overlying the said cross bar and inwardly thereof, the said female member having an axially arranged conical bore and provided with radially positioned transverse guide openings and also with longitudinally arranged fluid passages, the said openings and passages communicating with the said bore, a conical male member slidably arranged within the said bore and having oppositely positioned dove-tail slots in the inclined sides thereof, and being provided further with a threaded central bore, engaging jaws slidably positioned through the side openings of the said female member and having flanges upon their inner ends slidably arranged within the said slots of the said male member, an operating screw for the said male member having threaded engagement with the bore thereof and journaled through the said cross bar, and an attaching ring upon the outer end of the said screw.

2. A flusher casing attaching means adapted for seating within the end of a pipe, comprising a cylindrical female member, the said female member having an axially arranged bore and longitudinally arranged fluid passages, a conical male member slidably arranged within said bore and having bearings in the inclined sides thereof and being further provided with a threaded central bore, engaging jaws slidably positioned through the sides of the said female member and having their inner ends slidably arranged within the said bearings, an operating screw for the said male member having threaded engagement with the bore thereof, and an attaching ring upon the said screw.

3. A flusher head anchoring means comprising in combination with a pipe end, a cross bar positioned transversely of the said pipe end, a cylindrical female member positioned within the said pipe and having a transverse slot in one end thereof overlying the said cross-bar, the said female member having a conical axially arranged bore communicating with the said slot and being further provided with radially arranged side guide openings communicating with the said bore, a conical male member shiftably arranged within the said bore and having oppositely positioned dove-tail grooves in its slanting sides positioned adjacent the said openings when the device is assembled, pipe-engaging jaws slidably positioned in the said openings and having inclined flanges on their inner ends slidably positioned within the said slots, the said male member having a threaded central bore, the said male and female members having alining longitudinal fluid passages therethrough, an operating screw for the said male member threaded in the said bore of the said male member and journaled through the said cross piece, and an attaching ring upon the outer end of the said screw.

1,221,902. CAMERA-MOUNTING. NIELS PEDERSEN, Philadelphia, Pa., assignor to Arthur Brock, Jr., Philadelphia, Pa. Filed May 6, 1916. Serial No. 95,891. (Cl. 95—12.5.)



1. The combination with a movable support, of a camera connected thereto by a suspension permitting a universal gravity adjustment of the camera relative to said support as the latter moves relative to a vertical line through the center of suspension, and means acting between the camera and support and adapted to damp out pendulum like oscillations of the camera while yielding to permit the camera to adjust itself to slower movements of said support relative to said vertical line.

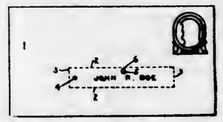
2. The combination with a movable support, of a camera connected thereto by a suspension permitting a universal gravity adjustment of the camera relative to said support as the later moves relative to a vertical line through the center of suspension, and means acting between the camera and support and adapted to damp out pendulum like oscillations of the camera while yielding to permit the camera to adjust itself to slower movements of said support relative to said vertical line, said means including provisions for adjusting its motion retarding effect.

3. In combination, a camera and a mounting therefor comprising a gimbal frame to which the camera is pivotally connected, supports to which said gimbal frame is pivotally connected to turn about an axis at right angles to the axis of the pivotal connection between the camera and frame, a yielding damping device connecting said support and gimbal frame and a yielding damping device connecting the camera and gimbal frame.

4. In combination, a camera and a mounting therefor comprising a gimbal frame to which the camera is pivotally connected, supports to which said gimbal frame is pivotally connected to turn about an axis at right angles to the axis of the pivotal connection between the camera and frame, a yielding damping device connecting said support and gimbal frame and a yielding damping device connecting the camera and gimbal frame, each damping device including a cylinder, a piston working therein and means providing a restricted communication between the opposite ends of the cylinder.

5. The combination with the frame of an aeroplane of a camera connected thereto by a suspension permitting a uniform gravity adjustment of the camera, and means acting between the camera and aeroplane frame and adapted to damp out pendulum oscillations of the camera while yielding to permit the camera to adjust itself to movements of the aeroplane toward and away from a position of even keel.

1,221,903. IDENTIFYING MAILING-CARD. EDWIN G. PICKERING, Montgomery county, near Dayton, Ohio. Filed Dec. 21, 1916. Serial No. 138,255. (Cl. 40—25.)



1. A mailing card containing a separable part adapted to receive a name, an aperture provided in the upper middle portion of said separable part, terminating in a wide slot, and a fastening element attached within a button hole of the addressee's coat, said element having a cranked portion adapted to be forced into said slot after the head of said element has been passed through the aperture, to firmly hold the separable part of the card in a horizontal position on the coat of the addressee.

2. A mailing card containing a separable part adapted to receive a name, an aperture provided in the upper middle portion of said separable part, terminating in a wide rectangular slot, and a pin attached within a buttonhole of the addressee's coat, said pin having a horizontally-flattened cranked portion adapted to be forced into said slot after its head has been passed through the aperture, to firmly hold the separable part of the card in a horizontal position on the coat of the addressee.

3. A mailing card containing a separable part adapted to receive a name, an aperture provided in the upper middle portion of said separable part, terminating in a narrow slot, and a fastening element attached within a buttonhole of the addressee's coat, said element having a cranked portion adapted to be forced into said slot after the head of said element has been passed through said aperture, to firmly hold the separable part of the card in a horizontal position on the coat of the addressee.

4. A mailing card containing a separable part adapted to receive a name, an aperture provided in the upper middle portion of said separable part, terminating in an elongated narrow slot, and a pin attached within a button hole of the addressee's coat, said pin having a vertically-flattened cranked portion adapted to be forced knife-like into said slot after its head has been passed through the aperture, to firmly hold the separable part of the card in a horizontal position on the coat of the addressee.

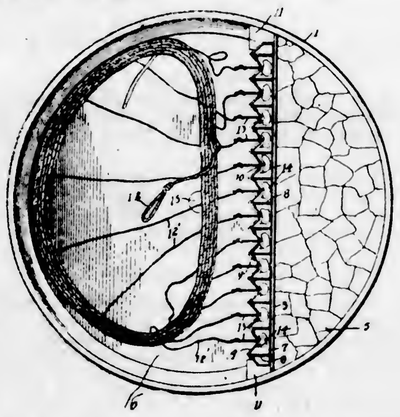
1,221,904. TRAWL-TUB. LOUIS POTIER, Yarmouth, Nova Scotia, Canada. Filed Jan. 8, 1917. Serial No. 141,121. (Cl. 43—28.)

1. A trawl tub comprising a receptacle, a perforated partition for dividing said receptacle into compartments, and bait holding compartments formed adjacent said partition.

2. A device of the character described comprising a tub, a partition arranged within said tub, a plurality of compartments formed adjacent said partition, and means whereby baited hooks may be arranged within said compartments.

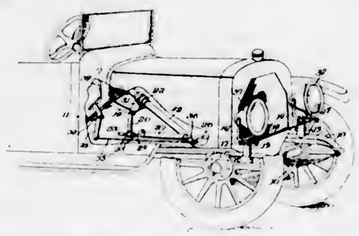
3. A trawl tub comprising a receptacle, a perforated partition for dividing said receptacle into refrigerating and trawl line holding compartments and a plurality of vertically arranged compartments arranged adjacent said partition.

4. A trawl tub comprising a receptacle, a perforated partition dividing said receptacle into compartments, a plurality of vertical compartments arranged adjacent said partition, and each of said compartments having a vertically arranged slot communicating therewith for the purpose set forth.



5. A trawl tub comprising a receptacle, a perforated plate for dividing said receptacle into compartments, a plurality of vertically arranged curved plates extending from said partition, a vertically extended post substantially pear shaped in cross section carried within each of said first mentioned plates for forming compartments and the edges of said plates being held in spaced relation to form vertically extending slots communicating with said compartments for the purpose set forth.

1,221,905. HEADLIGHT-STEERING MECHANISM. CHARLES H. QUARLES and GARNET W. SAVIN, Charlottesville, Va. Filed Sept. 13, 1916. Serial No. 119,920. (Cl. 240—61.)



1. A headlight steering mechanism including rotatably mounted lamp receiving brackets, an operating rod therefor, a casing carried by said rod, a stub rod slidable within the said casing, means connected to the said stub rod and operatively engaged with the steering mechanism of the vehicle, opposed springs housed within the casing and bearing between the stub rod and the said casing with the said means operable to shift the operating rod for rotating the said brackets as the vehicle is steered, and manually operable means connected to the said operating rod for rotating the said brackets independently of said first mentioned means with the said springs adapted to return the brackets to position for actuation by the said first mentioned means.

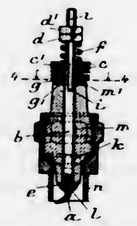
2. A headlight steering mechanism including rotatably mounted lamp receiving brackets, an operating rod therefor provided with a casing, a stub rod slidable within the said casing, a stop sleeve loosely receiving said stub rod, opposed yieldable means arranged within the casing and bearing between the stub rod, the casing, and said sleeve, actuating means connected to the stub rod and operatively engaged with the steering mechanism of the vehicle for automatically rotating the said brackets as the vehicle is steered, manually operable means connected to said operating rod for shifting the operating rod against the tension of said yieldable means to rotate the said brackets independently of said actuating means, and locking means for the sleeve operable to engage said stub rod to establish a rigid connection between the said actuating means and the said operating rod.

3. A headlight steering mechanism including rotatably mounted lamp receiving brackets, an operating rod therefor provided with a casing, a stub rod slidably received within said casing and provided with a head, opposed yieldable means arranged within the casing and operatively bearing between the said head and opposite extremities of the casing, actuating means connected to said stub rod and operatively engaged with the steering mechanism of the vehicle for automatically rotating said brackets as the vehicle is steered, a manually operable lever, and a connection between the said lever and the said operating rod for shifting the operating rod against the tension of said yieldable means to rotate the said brackets independently of said actuating means.

4. A headlight steering mechanism including rotatably mounted lamp receiving brackets, an operating rod therefor provided with a casing, a stub rod slidable within the casing, a stop sleeve loosely receiving said stub rod, opposed yieldable means arranged within the casing and bearing between the stub rod, the casing and said sleeve, actuating means connected to the stub rod and actively engaged with the steering mechanism of the vehicle for automatically rotating said headlights as the vehicle is steered, manually operable means connected to said operating rod for shifting the said operating rod against the tension of said yieldable means to rotate the brackets independently of said actuating means, and a locking pin for the said sleeve, arranged with the said pin operable to engage said stub rod to establish a rigid connection between the said actuating means and the said operating rod.

5. A headlight steering mechanism including rotatably mounted lamp receiving brackets, an operating rod therefor provided with a casing, a stub rod slidable within said casing, a stop sleeve loosely receiving said stub rod, opposed yieldable means bearing between the stub rod, the casing and said sleeve, a worm carried by the steering post of the vehicle and a rock lever engaged with said worm and connected with said stub rod for automatically rotating the said brackets as the vehicle is steered.

1,221,906. SPARK-PLUG. MAX RALL, Paris, France, assignor to the Firm of Robert Bosch, Stuttgart, Germany. Filed July 3, 1914. Serial No. 849,004. (Cl. 123—169.)



1. In a spark plug, an insulating sleeve, and a sparking electrode comprising a sparking part of non-oxidizable metal and a support therefor extending through the sleeve and engaging said sparking part, said support embodying metal having a coefficient of thermal conductivity considerably higher than that of the sparking part, and also having a cross section throughout its length considerably greater than the average cross section of the sparking part.

2. In a spark plug, an insulating sleeve, and a sparking electrode comprising a sparking part of non-oxidizable metal and a support therefor extending through the sleeve and engaging said sparking part, said support embodying metal having a coefficient of thermal conductivity considerably higher than that of the sparking part, and also having a cross section throughout its length considerably greater than the average cross section of the sparking part, the sparking part being substantially of conical form with its base engaging the support.

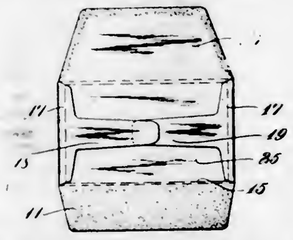
3. In a spark plug, an insulating sleeve, and a sparking electrode comprising a sparking part of non-oxidizable metal and a copper support therefor extending through the sleeve and engaging said sparking part, the support having a cross section throughout its length considerably greater than the average cross section of the sparking part.

4. In a spark plug, an insulating sleeve, a sparking electrode comprising a sparking part of non-oxidizable metal and a support therefor extending through the sleeve and embodying metal having a coefficient of thermal conductivity considerably higher than that of the sparking part, and a radiation member in contact with the support and having a large exposed surface for dissipating the heat therefrom.

5. In a spark plug, an insulating sleeve, a sparking electrode extending through the sleeve and terminating in a sparking part, and a radiation member mounted on the other end of the electrode in contact therewith and comprising a plurality of disks having alternately larger and smaller diameters and being made of metal of a high coefficient of thermal conductivity.

[Claims 6 to 8 not printed in the Gazette.]

1,221,907. ENVELOP. FRANK ROGALSKI, Detroit, Mich. Filed Oct. 30, 1916. Serial No. 128,398. (Cl. 229—80.)

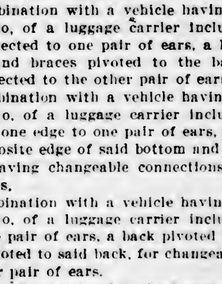


In an envelop, a blank provided with foldable flaps along both its longitudinal edges, one of said flaps being covered over its entire inner area with gum and the other along its marginal edges, end flaps formed with said blank having narrow extending projections engageable when folded to form a bar across the back of the envelop, said entirely gummed flap being adapted to adhere to the bar thus formed subsequently to sealing the outer flap.

1,221,908. AUTOMATIC PLATFORM FOR STREET-CARS. EVERETT C. RUDD, Mount Vernon, N. Y. Filed Sept. 25, 1916. Serial No. 122,027. (Cl. 105—84.)

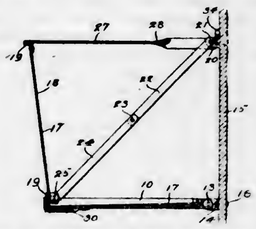
1. In combination with the sliding door of a car, the platform of the car having an opening formed therein, a platform section pivotally mounted in the opening, a cable connecting the section and door and serving to hold the section in a plane with the platform when the door is closed, and permitting the section to swing downwardly when the door is opened.

2. In combination with the sliding door of a car, the platform of the car having an opening formed therein, a platform section pivotally mounted in the opening, a rack bar carried by the door, a pinion in mesh with the rack bar, means for rotating the pinion to slide the door and rack bar simultaneously, a cable connecting the platform section and door to normally hold the section in a plane with the platform, and a bar pivotally associated with the car and capable of being swung downwardly when the door is opened as and for the purpose set forth.



3. In combination with the sliding door of a car, the platform of the car having an opening therein, a platform section hingedly mounted in the opening, means connecting said section and door whereby opening and closing of the latter will serve to lower and raise the section, and means preventing access to the platform section when the same is raised, said means being connected with and operable by the door to permit of access between the car and said platform section when the latter is in lowered position.

1,221,909. LUGGAGE-CARRIER. EDGAR B. RUPP, Kittanning, Pa. Filed June 3, 1915. Serial No. 31,943. (Cl. 224—29.)



1. The combination with a vehicle having pairs of ears secured thereto, of a luggage carrier foldable upon itself and having permanent pivotal connections with one pair of ears, and connections pivoted to the foldable part of said carrier and disengageable from the other pair of ears to permit folding of the carrier.

2. The combination with a vehicle having pairs of ears secured thereto, of a foldable luggage carrier having permanent pivotal connections with one pair of ears, and disengageable connections with the other pair, yielding abutments on said vehicle to prevent contact of said carrier, with the vehicle when folded, and means for locking the luggage carrier in folded position.

3. The combination with a vehicle having pairs of ears secured thereto, of a luggage carrier including a bottom pivotally connected to one pair of ears, a back pivoted to the bottom, and braces pivoted to the back and disengageably connected to the other pair of ears.

4. The combination with a vehicle having pairs of ears secured thereto, of a luggage carrier including a bottom pivoted along one edge to one pair of ears, connections between the opposite edge of said bottom and the other ears, and a back having changeable connections with the last mentioned ears.

5. The combination with a vehicle having pairs of ears secured thereto, of a luggage carrier including a bottom pivoted to one pair of ears, a back pivoted to said bottom, and braces pivoted to said back, for changeable connections with the other pair of ears.

[Claims 6 to 13 not printed in the Gazette.]

1,221,910. TELEPHONE-BOOTH DOOR. RICHARD A. RUTHERFORD, Brooklyn, N. Y. Filed Oct. 1, 1912. Serial No. 723,273. (Cl. 20—3.5.)



1. A booth comprising rectangular side, upper and lower walls, one of said side-walls being provided with a passageway, a door having a curved outer surface for closing said passageway, means for moving said door sidewise about an axis eccentric to its axis of generation and a jamb to limit movement of the door in one direction.

2. A booth of rectangular section having side and end walls and provided with a passageway on one side, a curved door for closing said passageway, an arm rigidly attached to the door and pivotally mounted to swing about an axis parallel to the axis of generation of the door the outer surface of the door at its lateral edges being equidistant from the pivotal axis and the distance between said axis and other points of said outer surface being less than at said edges, a side of the passageway being adapted to be tightly abutted by the rear edge of the door when said door is closed and by the forward edge when the door is open.

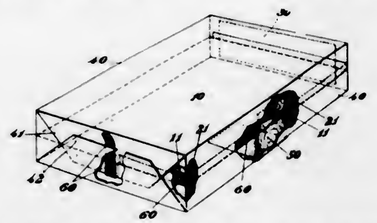
3. A booth of rectangular section having side and end walls and provided with a passageway on one side, a curved door for closing said passageway, an arm rigidly attached to the door and pivotally mounted to swing about an axis parallel to the axis of generation of the door the distance from the pivotal axis to the outer surface at the rear edge of the door being greater than the distance from said axis to all other points in said outer surface lying between the rear and forward edges, a side of the passageway being adapted to be tightly abutted by the rear edge of the door when said door is closed.

4. In combination, a rectangular sectioned chamber comprising side, upper and lower walls, one of the side walls thereof being provided with a passageway and the upper and lower walls being provided with arcuate slots, a door having a cylindrical surface, and pivotally mounted arms located above and below said upper and lower walls respectively, the pivotal points thereof being in an axis slightly eccentric to the axis of generation of the cylindrical surface of said door, said arms being provided with portions which project through said slots and are rigidly secured to said door, whereby said door is supported by said arms to move in a path about said pivotal axis for closing and opening said passageway.

5. In combination, a rectangular sectioned booth comprising side, upper and lower walls, one of said side walls thereof being provided with a passageway, and said upper wall being provided with an arcuate slot, inwardly extending posts at the sides of said passageway, a door having a cylindrical surface, and a pivotally mounted arm located above said upper wall, the pivotal point thereof being slightly eccentric to the axis of generation of the cylindrical surface of said door, said arm being provided with a portion which projects through said slot and is rigidly secured to said door, whereby said door is supported by said arm to move in a path about said pivotal point to and from a position in which the door is free from contact with said posts and a position in which the door is in close contact with said posts.

1,221,911. OPENING DEVICE FOR WRAPPED BOXES. BASIL RUYSDAEL, New York, N. Y. Filed Dec. 31, 1915. Serial No. 69,695. (Cl. 229—51.)

1. A wrapped package comprising a box body having an upright flange, a cover therefor having a downright flange inclosing the upright flange of said body, a wrapper inclosing said members, and a band disposed between said flanges and provided with a downward extension between the body of the box and the inner flap of the wrapper, an upward extension between the inner and outer flaps of the wrapper and a tab projecting above said outer flap.



2. A wrapped package comprising a box body having an upright flange, a cover therefor having a downright flange inclosing the upright flange of said body, a wrapper inclosing said members, a label over said wrapper at one end of said package, a stamp over said wrapper across the joint between said cover and body, and a band disposed between said flanges along the label end of the package, along the stamp side thereof and along a portion of the opposite end thereof, said band being provided at the last named end with a downward extension between the body of the box and the inner flap of the wrapper, an upward extension between the inner and outer flaps of the wrapper and a tab projecting above said outer flap.

1,221,912. TIRE-PLUG. ROBERT WILLIAM SAMPSON, Whitestone, N. Y., assignor of one-half to Louis Schwab, East Orange, N. J. Filed Aug. 17, 1916. Serial No. 115,373. (Cl. 152—26.)



1. In a puncture closer for pneumatic tires, the combination of a metal head having a hollow interior between a closed back and a substantially uniform, integral upper face provided with a shank-accommodating opening into the hollow interior, a clamping shank and a coöperating clamping cap.

2. In a puncture closer for pneumatic tires, the combination of an elliptical, metal head having a hollow interior between a closed back and a substantially uniform, integral upper face provided with a shank accommodating opening into the hollow interior, a clamping shank and a coöperating clamping cap.

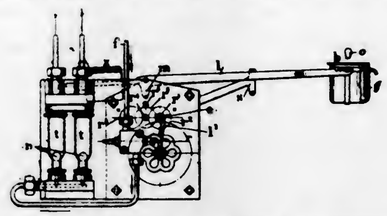
3. In a puncture closer for pneumatic tires, the combination of an elliptical, metal head having a hollow interior between a closed back and a substantially uniform, integral upper face provided with a shank accommodating opening into the hollow interior, a clamping shank and a discal, coöperating clamping cap.

4. In a puncture closer for pneumatic tires, the combination of a hollow, metal head the upper surface of which is substantially uniform and integral and is provided with a shank accommodating opening therethrough, said head being formed of a back plate and a face plate forming an air-tight connection therewith, a clamping shank and a coöperating clamping cap.

5. In a puncture closer for pneumatic tires, the combination of a metal head having a back formed by an imperforate back element and a substantially uniform, integral face formed by an element having a shank admitting opening therethrough, the said face element and back element forming between them a shank-holding hollow, a clamping shank and a coöperating clamping cap.

[Claims 6 to 9 not printed in the Gazette.]

1,221,913. DENSITY-REGULATOR FOR THE ATOMIZING OF WATER UNDER PRESSURE AND OF STEAM IN LEAD CHAMBERS. LUIGI SANTA, Turin, Italy. Filed Aug. 21, 1913. Serial No. 786,048. (Cl. 137—4.)



1. In regulating devices for acid plants; the combination of a balance lever; a cup thereon; a clockwork controlled by the balance lever; and a valve controlled by the clockwork.

2. In regulating devices for acid plants; the combination of a balance lever; a cup thereon; a clockwork controlled by the balance lever; and a valve controlled by the clockwork, said cup being provided with an overflow device communicating with said cup near the bottom thereof.

3. In regulating devices for acid plants, the combination of a balance lever; a cup thereon; a clockwork controlled by the balance lever; and a valve controlled by the clockwork, said cup being adjustable longitudinally of the balance lever.

4. In a regulating device for acid plants, the combination of a valve; an eccentric adapted to operate said valve; a clockwork for rotating the eccentric; a balance lever provided with a cup thereon; and means interposed between the lever and the clockwork for releasing the clockwork to rotate the cam through a half revolution each time the lever moves from one extreme position to the other.

5. In a regulating device for acid plants, the combination of a valve; an eccentric adapted to operate said valve; a clockwork for rotating the eccentric; a balance lever provided with a cup thereon; a pair of stop levers each having a cam projection thereon; a pair of wheels rotated by the clockwork at the same speed and each having a smooth crown provided with a recess adapted to be engaged by one of the respective cam projections, the recesses so located that when one receives the corresponding cam projection the other recess is diametrically opposite its corresponding cam projection; and means on said balanced lever for raising one stop lever or the other as the balance lever moves from one extreme position to the other.

[Claim 6 not printed in the Gazette.]

1,221,914. BAKER'S PEEL. LEON SCHLAGER, New York, N. Y. Filed Sept. 13, 1915. Serial No. 50,548. (Cl. 107—67.)



1. A baker's peel comprising a blade member having upstanding ridges formed at the marginal and longitudinal edges thereof, a socket portion for the handle, one half of which is integral with the blade and the other half of which is attached thereto, strengthening ribs formed in the portions of the socket, and means for attaching the handle to the socket.

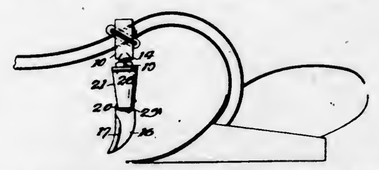
2. A baker's peel formed entirely of sheet metal comprising a blade portion having curved longitudinally tapering ridges bent over from the material thereof at the longitudinal edges, a socket portion one half of which is integral with the blade and the other half attached thereto, and reinforcing means extending longitudinally and transversely of the socket portion.

3. A baker's peel formed entirely of sheet metal comprising a blade portion having curved longitudinally tapering ridges bent over from the material thereof at the longitudinal edges, a socket portion one half of which is integral with the blade and the other half attached thereto, and reinforcing means extending longitudinally and transversely of the socket portion.

4. A baker's peel formed from a single sheet of thin metal, stiffening members at each side of the sheet, a transverse groove formed in the sheet, a longitudinal groove formed in the sheet, a member having a transverse and a longitudinal groove to be secured to the top of the peel to strengthen the peel and form a handle holding device.

5. A baker's peel formed of a single sheet of metal, the edges thereof bent over to form stiffening means, one end of said peel being pressed out to form a longitudinal and transverse groove, a member formed of the same material having grooves corresponding to the grooves in the peel, and means for securing a handle therein.

1,221,915. COLTER. WILLIAM SCHUMAKER, Detroit, Mich. Filed Dec. 4, 1916. Serial No. 134,985. (Cl. 97—6.)



1. In a device of the class described, a stock adapted to be coupled to a support and having a socket at one end and intermediate bearings spaced apart, a colter device supported in said socket, and a roller member mounted for rotation on said bearings.

2. In a device of the class described, a stock adapted to be coupled to a support and having bearings spaced apart with a socket in one of said bearings, a colter device including lateral supporting shoulders and a reduced portion to be received in said socket, and a roller member mounted for rotation on said bearings and supported by said shoulders.

3. In a device of the class described, a stock adapted to be coupled to a support and having bearings spaced apart with a socket in one of said bearings, a colter device including a reduced portion to enter said socket and lateral supporting shoulders, one of said shoulders having a guard lip, and a roller member mounted for rotation on said bearings and rearwardly of said guard lip and supported by said shoulders.

4. In a device of the class described, a stock having a socket and intermediate bearings and a laterally enlarged portion adapted to be coupled to a support, said stock being threaded between the lateral enlargement and the bearings, a colter device supported in said socket, a roller member mounted for rotation upon said bearings, and a clamp nut engaging the threaded portion of the stock and operating to hold said roller in position.

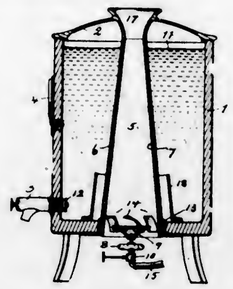
5. In a device of the class described, a stock having intermediate bearings and adapted to be coupled to a support, a colter device connected to said stock and including bearing shoulders, a roller device mounted for rotation upon said bearings, a wear member between said colter shoulders and the roller device, a wear member between said roller and the support engaging portion of the stock, and means engaging said last mentioned wear member for holding the roller in position relative to the stock.

[Claims 6 and 7 not printed in the Gazette.]

1,221,916. EVAPORATIVE COOLER. ALBERT W. SMITH, Washington, D. C. Filed Mar. 28, 1916. Serial No. 87,339. (Cl. 62—154.)

1. In an evaporative cooler, the combination with a water tank, of a moist walled vaporizing chamber, and means for

supplying a current of superheated air to said chamber, said superheated air acting to absorb the vapor formed on the walls of said chamber.



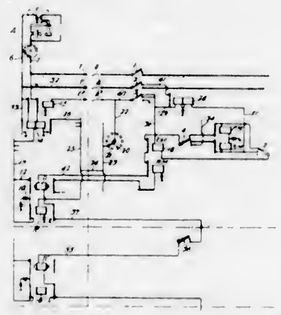
2. In an evaporative cooler, the combination with a water tank, of a moist walled vaporizing chamber, and air heating means at the bottom of said chamber for supplying a current of superheated air thereto, said superheated air acting to absorb the vapor formed on the walls of said chamber.

3. In an evaporative cooler, the combination with a water tank, of a moist walled vaporizing chamber, and stationary means for superheating and whirling the air as it enters said chamber, and also means for progressively accelerating the whirling motion of the air during its passage through said chamber, and thus retarding its outflow therefrom until fully charged with vapor.

4. In an evaporative cooler, the combination with a water tank, of a moist walled vaporizing chamber, air heating means at the bottom of said chamber, and air whirling means also at the bottom thereof, said chamber being conical in form and acting to progressively accelerate the whirling motion of the air during its passage through said chamber, and thus to retard its outflow therefrom until fully charged with vapor.

5. In an evaporative cooler, the combination with a water tank, of a moist walled vaporizing chamber, an air heating device at the bottom of said chamber, and an air distributer with air rotating vanes also at the bottom thereof, said chamber being conical in form and acting to progressively accelerate the whirling motion of the air during its passage through said chamber, and thus to retard its outflow therefrom until fully charged with vapor.

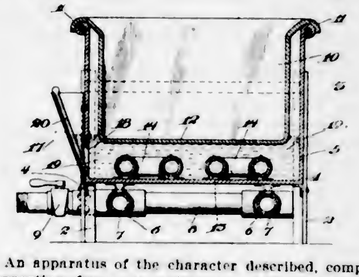
1,221,917. TELEPHONE-EXCHANGE SYSTEM. ARTHUR B. SPERRY, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Sept. 2, 1916. Serial No. 118,250. (Cl. 179—18.)



1. In a telephone exchange system, the combination with a group of telephone lines, line relays therefor, an automatic finder switch apportioned to said group, driving means for said switch, means for rendering said driving means operative including the line relays of such group, a second group of lines, line relays therefor, means controlled by any of said line relays for actuating said driving means, and means operated when said finder is moving under control of a line in said second group for preventing the operation of the line relays of the group to which said finder is apportioned.

2. In a telephone exchange system, the combination with a group of telephone lines, line relays therefor, a source of current with which said line relays are normally connected, an automatic finder switch apportioned to said group, driving means for said switch, means for rendering said driving means operative including the line relays of such group, a second group of lines, line relays therefor, means controlled by any of said line relays for actuating said driving means, and a relay operated when said finder is being set from said second group to remove the connection of said source of current from the line relays of the group to which said finder is apportioned.

1,221,918. CHOCOLATE-COOLER. PAUL STALDER, Philadelphia, Pa. Filed Dec. 2, 1915. Serial No. 64,682. (Cl. 257—208.)



1. An apparatus of the character described, comprising a supporting frame, a casing removably seated in the frame, a receptacle removably suspended in the casing and spaced therefrom, a heater below the casing, and a cooler inside the casing, said casing having an opening therein adjacent its bottom, and means forming a passage leading to said opening, substantially as described.

2. An apparatus of the character described, comprising a supporting frame, a casing removably seated in the frame, a receptacle removably suspended from the upper edge of the casing and spaced therefrom at its sides and bottom, a heater secured below the bottom of the casing, and a cooler positioned within the casing below the receptacle, said casing having an opening therein adjacent its bottom, and a spout leading upwardly from said opening, substantially as described.

3. An apparatus of the character described, comprising a supporting frame structure, a casing removably seated in the frame, a receptacle removably suspended from the upper edge of the casing and spaced therefrom at its sides and bottom, and a heater secured to the lower face of the bottom of the casing and having a portion projecting outwardly through an opening in the supporting frame, and a cooler secured to the upper face of the bottom of the casing and having a portion projecting through an opening in the supporting frame, whereby the receptacle may be bodily lifted from the casing and the casing may be bodily lifted from the supporting frame, substantially as described.

4. An apparatus of the character described, comprising a supporting frame, a casing removably seated in the frame, a receptacle removably suspended from the upper edge of the casing and spaced therefrom at its sides and bottom, a heater secured below the bottom of the casing, a cooler positioned within the casing below the receptacle, said casing having an opening adjacent its bottom, an inclined spout secured to the side of the casing and having its interior in communication with said latter opening, the top edge of said spout being at a higher level than the top of the opening, said spout forming means for supplying water to the casing and as a means for inserting a thermometer to ascertain the temperature of the water, substantially as described.

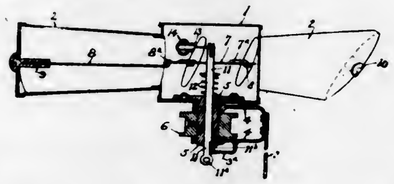
1,221,919. DEVICE FOR CONCEALING TELEPHONE SETS. LILLIAN A. STRASBURGER, New York, N. Y. Filed July 20, 1916. Serial No. 110,295. (Cl. 45—105.)



1. A hood for telephone sets of the desk type, comprising a frame having means for attaching it to the transmitter pedestal, and a top and walls carried by the frame for inclosing the sets, one wall being a curtain movable to expose the instrument for use, the opposite wall comprising a parted hanging and a device supported outside said parted hanging and having drapery concealing the parting.

2. In a hood for telephone sets of the desk type, the combination of a frame comprising an upright portion provided with means for attachment to the transmitter pedestal, said frame having a forward extension at the top, a device supported in forwardly projecting relation from said upright portion beneath the overhang of said forward extension, and hangings carried by and concealing said frame, the front hangings being carried rearward from the front of said extension, forming a canopy and thence descending behind the said device.

1,221,920. ALARM OR SIGNAL APPARATUS. IRA E. STEMP, Cleveland, Ohio, assignor of one-third to Herbert Hastings, Rochester, N. Y. Filed May 19, 1914. Serial No. 839,510. (Cl. 116—1.)



1. In a signaling apparatus, a rotatably mounted fan including a hollow hub, a diaphragm suspended within said hub and adapted to be rotated with the latter, diaphragm vibrating mechanism within said hub, and means for movably supporting and operating said diaphragm vibrating mechanism.

2. In a signaling apparatus, a fan provided with a hollow hub and a hub driving member, a shaft axially mounted within said hub and hub driving member, diaphragm vibrating mechanism within said hub adapted to be operated by said shaft, and a diaphragm suspended within and adapted to be rotated with said hub.

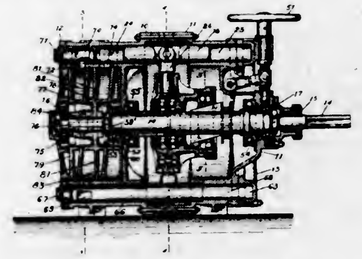
3. In a signaling apparatus, a rotatably mounted fan including a hollow hub carrying fan blades, a diaphragm member suspended within and adapted to be rotated with said hollow hub, a diaphragm vibrating member within said hub, and means for moving one of said members into vibrative relation to the other.

4. In a signaling apparatus, a fan comprising a hollow hub portion carrying fan blades, a diaphragm suspended within said hub portion and adapted to be rotated with the latter, a contact member within said hub portion in close proximity to said diaphragm, and means for bringing said diaphragm and contact member into vibrative relation to each other.

5. In a signaling apparatus, a fan comprising a hollow hub member carrying fan blades, a diaphragm mounted within said hub and adapted to be rotated with the latter, a contact member within said hub, means for supporting said contact member within said hub and in close proximity to said diaphragm, and means for bringing said diaphragm and contact member into vibrative relation to each other.

[Claims 6 to 23 not printed in the Gazette.]

1,221,921. FLUID MOTOR OR PUMP. AUGUST SUNDH, Hastings-upon-Hudson, N. Y., assignor to Otis Elevator Company, a Corporation of New Jersey. Filed Apr. 19, 1913. Serial No. 762,215. (Cl. 103—85.)



1. In a pump, a casing, a shaft adapted to rotate in said casing, a plurality of cylinders axially and symmetrically disposed about said shaft and in fixed relation to the casing, plungers in the cylinders, a tilting head carried by anti-friction bearings on the shaft, operative connections between said head and plungers, an eccentric associated with said head and shaft and adapted to effect an oscillatory movement of the head upon a rotation of the shaft, and means for varying the eccentricity of said eccentric thereby to vary the length of stroke of the said plungers.

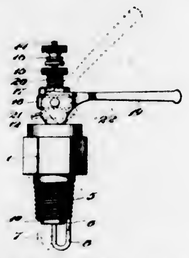
2. In a pump, a casing, a shaft arranged for rotation in the casing, a plurality of cylinders axially and symmetrically disposed about said shaft and in fixed relation to the casing, plungers in the cylinders, a non-rotatable member carried in bearings on the shaft and connected to the plungers, means for effecting an oscillatory movement of said member when the shaft is rotated, and means comprising an adjustable eccentric driven from the shaft for varying the degree of oscillatory movement of said member independently of the shaft to effect a variable length of stroke of said plungers.

3. In a pump, a casing, a shaft arranged to rotate in the casing, a plurality of cylinders axially and symmetrically disposed about said shaft and in fixed relation to the casing, plungers in the cylinders, a tilting head connected to said plungers and adapted to be tilted with respect to said shaft, a wedge associated with said head and shaft for varying the angle of tilt of said head whereby the rotation of the shaft will effect a reciprocation of said plungers by the said head, and means for varying the position of said wedge to control the length of stroke of the plungers.

4. In a pump, a casing, a shaft arranged to rotate in the casing, a plurality of cylinders axially and sym-

metrically disposed about said shaft and in fixed relation to the casing, plungers in the cylinders, a tilting head having a sliding connection with said plungers and adapted to be tilted with respect to the shaft, a wedge associated with said head and shaft for varying the angle of tilt of said head, and means for changing the position of the wedge to vary the length of stroke of the plungers independently of the shaft.

1,221,922. SPARK-PLUG. WILLIAM S. THOMAS, Lock Haven, Pa., assignor of one-half to James E. Buzzard, Lock Haven, Pa. Filed Feb. 3, 1916. Serial No. 76,027. (Cl. 123—169.)



1. The combination of a spark plug, of a body portion having a bore extending therethrough, a tube extending into and having a diameter smaller than the bore thus providing an annular passage around said tube and extending to the outer surface of the body portion, said body portion having a recess at its innermost end, said recess being of larger diameter than and intersecting said bore, an electrode secured to said tube and having a ring thereon normally fitting said recess and cutting off communication between the bore and the recess, and a single member operative to turn said tube and to raise and lower the tube to move the ring into and out of fitting engagement with said recessed part of the body portion to permit the bore to be brought into open communication with the recess, substantially as described.

2. The combination in a spark plug, of a body portion having a bore extending therethrough, a tube extending into and having a diameter smaller than the bore thus providing an annular passage around said tube and extending to the outer surface of the body portion, said body portion having a recess at its innermost end, said recess being of larger diameter than and intersecting said bore, an electrode secured to said tube and having a ring thereon normally fitting said recess and cutting off communication between the bore and the recess, and a member pivotally supported on said tube and having a cam designed to engage the body portion and thereby move said tube longitudinally to open and close said bore with respect to the recess, substantially as described.

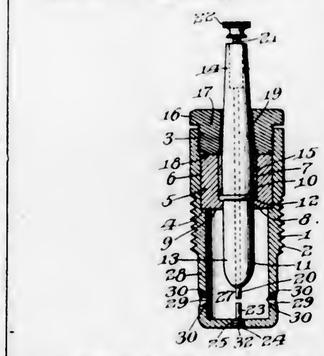
3. The combination in a spark plug, of a body portion having a bore extending therethrough, a tube extending into and having a diameter smaller than the bore thus providing an annular passage around said tube and extending to the outer surface of the body portion, said body portion having a recess at its innermost end, said recess being of larger diameter than and intersecting said bore, an electrode secured to said tube and having a ring thereon normally fitting said recess and cutting off communication between the bore and the recess, said tube being screw-threaded at its outer end, a nut fitting said screw-threaded portion, a lever pivoted on said nut and having a cam operative to move the tube longitudinally when the lever is moved on its pivot, substantially as described.

4. In a spark plug, the combination with a body having a longitudinal bore, and a recess in one end larger than the bore, and a beveled seat connecting the recess and bore, of a tube located in the bore, a ring located in the recess and adapted to engage the seat, a movable electrode projecting through the tube and the ring, a stationary electrode on the body, means for turning the movable electrode relatively to the stationary electrode, said means also adapted to move the movable electrode longitudinally to move the ring away from its seat and permit priming liquid to be poured through the bore of the body, substantially as described.

5. In a spark plug, the combination with a body having a longitudinal bore, and a recess in one end larger than the bore, and a beveled seat connecting the recess and bore, of a tube located in the bore, a ring located in the recess and adapted to engage the seat, a movable electrode projecting through the tube and the ring, a stationary electrode on the body, a lever supported by the tube and having a cam portion for engagement with the body, said lever being adapted to move the tube longitudinally and also adapted to turn the tube, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,221,923. SPARK-PLUG. WILLIAM S. THOMAS, Lock Haven, Pa., assignor of one-half to James E. Buzzard, Lock Haven, Pa. Filed Aug. 10, 1916. Serial No. 114,133. (Cl. 123—169.)



1. A spark plug comprising a hollow body portion closed at one end and having perforations adjacent said end, electrodes positioned within said hollow body portion, means for retaining the electrodes, said body portion having perforations adjacent said closed end, said perforations being tapered inwardly to produce continuous sharp edges, said edges being formed by the insertion of the perforations and the inner wall of the body portion, substantially as described.

2. A spark plug comprising a hollow body portion closed at one end and having perforations adjacent said end, electrodes positioned within said hollow body portion, means for retaining the electrodes, said body portion having perforations adjacent said closed end, said perforations being substantially elliptical in shape and being tapered inwardly to produce continuous sharp edges at their points of intersection with the inner surface of said body portion, substantially as described.

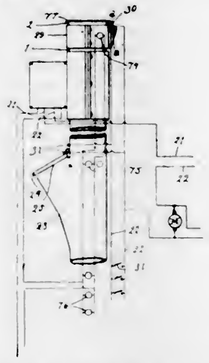
3. A spark plug including a casing having an opening terminating in a shoulder, a jacket fitting said opening and abutting said shoulder, said jacket having a hole through its inner end and a recess of larger cross section than and intersecting said hole to provide a shoulder, an electrode-insulating member extending through said hole, said member having a projection resting on said shoulder of the jacket, said recess extending to the opposite end of the jacket and being of sufficient cross section throughout its entire length to permit said projection to be free to move into or out of it, cement filling the space between said member and the inner wall of the recess, and means having a portion in engagement with said jacket to impart thrust thereto to firmly seat said jacket against the shoulder in the casing, said latter portion being free of the recess, substantially as described.

4. A spark plug including a casing having an opening terminating in a shoulder, a jacket fitting said opening and abutting said shoulder, said jacket having a hole through its inner end and a recess of larger cross section than and intersecting said hole to provide a shoulder, an electrode-insulating member extending through said hole, said member having a projection resting on said shoulder of the jacket, said recess extending to the opposite end of the jacket and being of sufficient cross section throughout its entire length to permit said projection to be free to move into or out of it, cement filling the space between said member and the inner wall of the recess, a nut having a threaded stem fitting said casing, said stem having a portion in engagement with said jacket to impart thrust thereto to firmly seat said jacket against the shoulder in the casing, said latter portion being free of the recess, substantially as described.

5. A spark plug including a casing having an opening terminating in a shoulder, a jacket fitting said opening and abutting said shoulder, said jacket having a hole through its inner end and a recess of larger cross section than and intersecting said hole to provide a shoulder, an electrode-insulating member extending through said hole, said member having a projection resting on said shoulder of the jacket, said recess extending to the opposite end of the jacket and being of sufficient cross section throughout its entire length to permit said projection to be free to move into or out of it, cement filling the space between said member and the inner wall of the recess, a nut having a threaded stem fitting said casing, said stem having a portion in engagement with said jacket to impart thrust thereto to firmly seat said jacket against the shoulder in the casing, said latter portion being free of the recess, said nut having an opening, said insulating member having an outwardly projecting portion extending through said opening and spaced therefrom, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,221,924. INDICATING SYSTEM FOR PNEUMATIC CONVEYERS. ALBERT F. THOMPSON and HENRY T. FREE, Kansas City Mo. Filed Dec. 13, 1915. Serial No. 66,499. (Cl. 243—36.)



1. In an indicating system for pneumatic tube conveying apparatus, a tube, means to convey packages through said tube, indicating lamps, means to light said lamps when a package is inserted in said tube, and means operated by the air driving said packages whereby said lamps are extinguished as said packages pass through said tube.

2. In an indicating system for pneumatic tube conveying apparatus, a pneumatic tube conveying apparatus, means actuated upon the insertion of a package in said apparatus for operting indicating devices at all desired locations, and means to indicate before the insertion of a package when the apparatus is in operative condition.

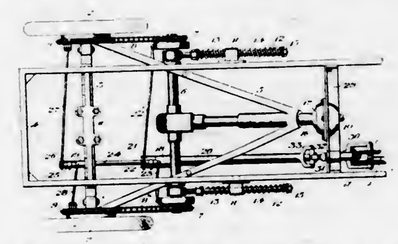
3. In an indicating system for pneumatic tube conveying apparatus, a pneumatic tube conveying apparatus, lamps, means whereby said lamps will be lighted during the insertion of a package in said apparatus, means whereby said lamps will be immediately extinguished on the insertion of a package provided said apparatus is operative, and means whereby said lamps will continue to burn after the insertion of the package provided said apparatus is inoperative.

4. In an indicating system for pneumatic tube conveying apparatus, a receiving tube, an opening in said tube, a swinging door controlling said opening, a plurality of electrically lightable lamps, a plurality of orifices in said tube to receive packages, means operatable whereby the insertion of a package in either of said orifices said lamps are lighted, means operatable by said door whereby said lamps are extinguished, and said door positioned and arranged to operate only when packages are traversing said tube.

5. In an indicating system for pneumatic tube conveying apparatus, a tube, means by which indicating signals are registered at a plurality of locations when a package is inserted in said tube, and means by which a partial vacuum in said tube will retract the registration of said signal.

[Claim 6 not printed in the Gazette.]

1,221,925. CONTROL MECHANISM FOR MOTOR-VEHICLES. ROLLAND S. TROTT, Denver, Colo. Filed Mar. 6, 1913. Serial No. 752,391. (Cl. 21—90.)



1. In a motor vehicle having the axles mounted to have resilient movement in a direction parallel with the line of draft as well as the usual vertical movement, a control composed of an extensible torsion rod, means mounted on the frame for operating the torsion rod muscularly, and means connected to the torsion rod and mounted on the axle for transmitting movement to the part to be operated.

2. In a motor vehicle, a speed control composed of an extensible torsion rod, means mounted to move with the frame for operating the torsion rod manually, or pedally, and means mounted to move with the axle and connected to the torsion rod for transmitting movement or force to the part to be operated.

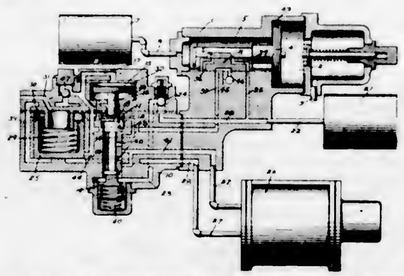
3. In a motor vehicle, a brake control composed of an extensible torsion rod, means on the frame for operating the torsion rod within the control of the operator, and means on the axle connected to the torsion rod to operate the brakes.

4. In a motor vehicle having the axles mounted to have resilient movement in a direction parallel with the line of draft, wheels mounted on the axles, means for actuating the wheels, and an extensible torsion rod connected at its one end with the actuating means and having its opposite end in a position to be controlled by the operator.

5. In a motor vehicle having the axles mounted to have resilient movement endwise of the frame, wheels mounted on the axles, actuating means mounted to move with the axles, an extensible torsion rod connected at its one end with the actuating means, and means connected with the opposite end and secured to the frame to be operated for controlling the actuating means.

[Claims 6 to 8 not printed in the Gazette.]

1,221,926. BOOSTER-VALVE FOR AIR-BRAKES. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed July 3, 1915. Serial No. 37,892. (Cl. 188—15.)



1. In a fluid pressure brake, the combination with a brake cylinder, auxiliary reservoir, and an additional source of fluid under pressure, of means operating in a service application of the brakes for supplying fluid from said additional source of fluid under pressure to the brake cylinder and adapted upon a predetermined increase in brake cylinder pressure to cut off the supply from the additional source and open communication for supplying fluid from the auxiliary reservoir to the brake cylinder.

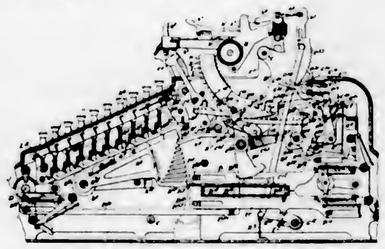
2. In a fluid pressure brake, the combination with a brake cylinder, auxiliary reservoir, and an additional source of fluid under pressure, of means operating upon a service application of the brakes for first supplying fluid from the additional source of fluid under pressure to the brake cylinder with communication from the auxiliary reservoir cut off and then adapted upon a predetermined increase in brake cylinder pressure to cut off the supply from the additional source and open communication for supplying fluid from the auxiliary reservoir to the brake cylinder.

3. In a fluid pressure brake, the combination with a brake pipe, brake cylinder, auxiliary reservoir, supplemental reservoir, and a valve device operated upon a gradual reduction in brake pipe pressure for supplying fluid from the auxiliary reservoir to the brake cylinder, of means for first supplying fluid from the supplemental reservoir to the brake cylinder with communication from the auxiliary reservoir to the brake cylinder cut off and then adapted to cut off the supply from the supplemental reservoir to the brake cylinder and open communication for supplying fluid from the auxiliary reservoir to the brake cylinder.

4. In a fluid pressure brake, the combination with an auxiliary reservoir, brake cylinder, and a supplemental reservoir normally charged with fluid under pressure, of a valve mechanism, operated by flow of air from the auxiliary reservoir in applying the brakes for opening communication from the supplemental reservoir to the brake cylinder and means operated upon a predetermined increase in brake cylinder pressure for opening communication from the auxiliary reservoir to the brake cylinder and for effecting the operation of said valve mechanism to cut off the supply of fluid from the supplemental reservoir to the brake cylinder.

5. In a fluid pressure brake, the combination with a brake cylinder, auxiliary reservoir, a supplemental reservoir normally charged with fluid under pressure, a brake pipe, and a valve device operated upon a reduction in brake pipe pressure for supplying fluid from the auxiliary reservoir to the brake cylinder, of a valve mechanism operated by the flow of fluid from the auxiliary reservoir in applying the brakes for opening communication from the supplemental reservoir to the brake cylinder and means normally closing communication from the auxiliary reservoir to the brake cylinder and operated upon a predetermined increase in brake cylinder pressure for opening said communication and for varying the fluid pressure on said valve mechanism to operate same and thereby cut off communication from the supplemental reservoir to the brake cylinder.

1,221,927. CALCULATOR. JESSE G. VINCENT and NELSON WHITE, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 24, 1909. Serial No. 519,459. (Cl. 235—60.)



1. In a machine of the character described, the combination of a set of pinions denominationally arranged, rack bars with their racks on opposite sides of said pinions and arranged in pairs for adjacent pinions, means for engaging and disengaging racks and pinions and reciprocating the rack bars to advance a pinion by initial movement of a rack of a pair and advance the adjacent pinion by return movement of the other rack of said pair, a set of indexing plates for each pair of rack bars, each plate being formed with a double series of differentially graduated stops for the bars to encounter, keys for the plates of a set respectively, initial stop plates one for each set of indexing plates and releasable by the keys, means for variously limiting movement of the indexing plates released by the keys, a third set of racks carried by one of the said sets of bars, a second set of pinions, means for engaging and disengaging the same and said third set of racks, and means for varying the relative periods of engagement and disengagement of racks and pinions last mentioned and of those first mentioned.

2. In a machine of the character described, the combination of a set of pinions denominationally arranged, rack bars with their racks on opposite sides of said pinions and arranged in pairs for adjacent pinions, means for engaging and disengaging racks and pinions and reciprocating the rack bars to advance a pinion by initial movement of a rack of a pair and advance the adjacent pinion by return movement of the other rack of said pair, manipulative amount-determining means including indexing devices to differently measure excursions of rack bars of the same pair, a third set of racks carried by one of the said sets of bars, a second set of pinions, means for engaging and disengaging the same and said third set of racks and means for varying the relative periods of engagement and disengagement of racks and pinions last mentioned and of those first mentioned; together with transfer mechanisms comprising mounting for the several racks permitting one-step movement thereof independent of the bars, and detents for releasing the racks said detents tripped by the pinions.

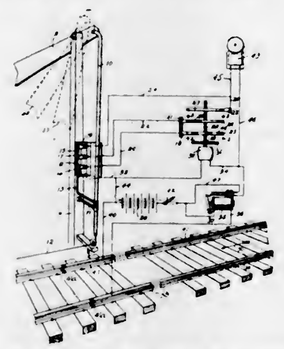
3. In a machine of the character described, the combination of a set of pinions denominationally arranged, rack bars with their racks on opposite sides of said pinions and arranged in pairs for adjacent pinions, means for engaging and disengaging racks and pinions and reciprocating the rack bars to advance a pinion by initial movement of a rack of a pair and advance the adjacent pinion by return movement of the other rack of said pair, manipulative amount-determining means including indexing devices to differently measure excursions of rack bars of the same pair, a third set of racks carried by one of the said sets of bars, a second set of pinions, and means for engaging and disengaging the same and said third set of racks and means for varying the relative periods of engagement and disengagement of racks and pinions last mentioned and of those first mentioned; together with type carriers connected to the bars carrying said third set of racks.

4. In a machine of the character described, the combination of a set of pinions denominationally arranged, rack bars with their racks on opposite sides of said pinions and arranged in pairs for adjacent pinions, means for engaging and disengaging racks and pinions and reciprocating the rack bars to advance a pinion by initial movement of a rack of a pair and advance the adjacent pinion by return movement of the other rack of said pair, manipulative amount-determining means including indexing devices to differently measure excursions of rack bars of the same pair, a third set of racks carried by one of the said sets of bars, a second set of pinions, and means for engaging and disengaging the same and said third set of racks; together with a key and connections for reversing the order of engagement between first-mentioned racks and pinions whereby the latter remain in mesh during initial movement of bars with racks turning the pinions backward while the third set of racks is disengaged from its pinions.

5. In a machine of the character described, the combination of a set of pinions denominationally arranged, rack bars with their racks on opposite sides of said pinions and arranged in pairs for adjacent pinions, means for engaging and disengaging racks and pinions and reciprocating the rack bars to advance a pinion by initial movement of a rack of a pair and advance the adjacent pinion by return movement of the other rack of said pair, manipulative amount-determining means including indexing devices to differently measure excursions of rack bars of the same pair, a third set of racks carried by one of the said sets of bars, a second set of pinions, and means for engaging and disengaging the same and said third set of racks; together with a key and conections for reversing the order of engagement between first-mentioned racks and pinions whereby the latter remain in mesh during initial movement of bars with racks turning the pinions backward while the third set of racks is disengaged from its pinions, and means for reengaging the first set of pinions with said first mentioned racks after the latter have returned to normal.

[Claims 6 to 25 not printed in the Gazette.]

1,221,928. SIGNALING APPARATUS FOR RAILROADS. WILLIAM L. WATERS, Milwaukee, Wis. Filed Mar. 6, 1914. Serial No. 822,797. (Cl. 246—21.)



1. In a system of railroad signaling, the combination of a semaphore, switching mechanism, means connecting said switching mechanism with the semaphore arm, current interrupters connected with said switching mechanism, a motor, a source of power for starting said motor and current interrupters upon the approach of a train, and sounding devices coöperating with said current interrupters.

2. In a system of railroad signaling, the combination with a semaphore and a section of railway protected thereby, of an audible alarm arranged in the section on the approach side of the semaphore, means operable by an approaching train to actuate the alarm, and means actuated by the semaphore to control the frequency of the audible alarm to indicate the position of the semaphore.

3. In a signaling system for railways, a track relay, a circuit for said relay, a visual signal capable of giving a plurality of indications by the positions thereof, signaling means controlled by said circuit to give a distinctive audible signal corresponding to each position of the visual signal, a plurality of signal controlling means and a selecting element controlled in accordance with the movement of said visual signaling means to select the proper signal controlling means to give a distinctive signal corresponding to the indicating position of said visual signal.

4. In a signaling system for railways, a semaphore arm having a plurality of positions, signaling means capable of giving a plurality of distinctive audible signals corresponding to the positions of said semaphore arm, a plurality of circuit controlling said signaling means, switch means operating in accordance with the semaphore arm to select the corresponding audible signal controlling circuit and a track relay governing the energization of the circuit selected.

5. In a signaling system for railways, a semaphore arm having a plurality of indicating positions, audible signaling means, controlling circuits governing said audible signaling means to give a distinctive indication corresponding to the positions of said semaphore arm, selecting means for selecting the circuit to be energized and a track relay controlling the energization of the circuit selected.

[Claims 6 to 11 not printed in the Gazette.]

1,221,929. PROCESS FOR MANUFACTURING LEATHER. FRIEDRICH WILHELM WEBER, Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Filed Sept. 11, 1915. Serial No. 50,154. (Cl. 149—5.)

1. The process of tanning hides, consisting in first preparing the hides in any suitable manner, then soaking them in a solution of a zinc salt and of a tanning liquor, said liquor consisting of a solution of a chromium salt, and subsequently neutralizing the hides in a solution containing a phosphate.

2. The process of tanning hides, consisting in first preparing the hides in any suitable manner, then soaking them in a solution of a zinc salt and of a tanning liquor, said liquor consisting of a solution of a chromium salt, and subsequently treating the hides with a solution containing a phosphate and hydrogen peroxid.

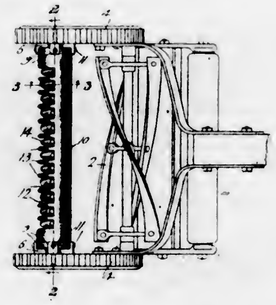
3. The process of tanning hides, consisting in first preparing the hides in any suitable manner, then soaking them in a solution of a zinc salt and of a tanning liquor, said liquor consisting of a solution of a chromium salt, and subsequently treating the hides with a solution containing a diphosphate and a peroxid sufficient to neutralize the diphosphate.

4. The process of tanning hides, consisting in preparing the hides in any suitable manner, then soaking them in a solution of a zinc salt and of a tanning liquor, said liquor consisting of a solution of a chromium salt, passing the hides into a solution of a diphosphate and a peroxid sufficient to neutralize the diphosphate, rinsing the hides thus treated and acting with fat on the oxygen retained in the pores of the hides while in the wet state.

5. The process of tanning hides, consisting in first preparing the hides in any suitable manner, then soaking them in a solution of a zinc salt and of a tanning liquor, said liquor consisting of a solution of a chromium salt having in the maximum 2 molecules of chromium oxid bound to three molecules of sulfuric acid and in the minimum four molecules of chromium oxid to 5 molecules of sulfuric acid, and subsequently neutralizing the hides in a solution containing a phosphate.

[Claims 6 to 25 not printed in the Gazette.]

1,221,930. LAWN-MOWER ATTACHMENT. FREDDERICK W. WEIBEL, Harvard, Ill. Filed June 5, 1916. Serial No. 101,791. (Cl. 56—19.)



1. A lawn mower attachment embodying a transverse guard having a series of cutters, means for attaching the ends of said guard to the side plates of an ordinary lawn mower, and a rotary helical cutter assembled with said guard to coöperate with the aforesaid cutters and having means at one end adapted to be operatively connected with one of the ground wheels of the lawn mower at the outer sides of the said plates.

2. A lawn mower attachment embodying a tubular guard having slots providing cutters, means for attaching the ends of said guard to the side plates of a lawn mower, a helical cutter rotatable within said guard to provide a shearing action with the aforesaid cutters, and means for operatively connecting one end of the helical cutter with one ground wheel of the lawn mower.

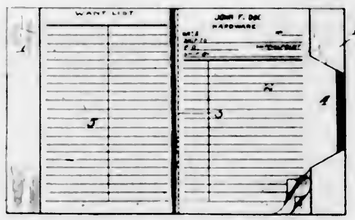
3. A lawn mower attachment embodying a pair of bearings attachable to the side plates of an ordinary lawn mower between the ground wheels at the outer sides of said plates, a transverse guard having its ends attached to said bearings to be carried thereby, said guard having a series of cutters, and a helical cutter coöperating with the aforesaid cutters and having terminal trunnions journaled in said bearings.

4. A lawn mower attachment embodying bearings applicable to the side plates of a lawn mower, a tubular guard having its ends attached to said bearings and having slots providing cutters, a helical cutter rotatable snugly within said guard and having terminal trunnions journaled in said bearings, and means for operatively connecting one trunnion with one ground wheel of the lawn mower.

5. A lawn mower attachment embodying a pair of plates having outstanding bearings insertible through apertures in the side plates of a lawn mower, means for clamping the bearings in place relative to said side plates, a transverse tubular guard having its ends abutting the first mentioned plates, means for attaching the first mentioned plates and terminals of the guard together, said guard having vertical slots providing vertical cutters, a helical cutter rotatable snugly within the guard and having terminal trunnions journaled in said bearings, and a pinion secured upon one trunnion to mesh with the internal gear teeth of one ground wheel of the lawn mower.

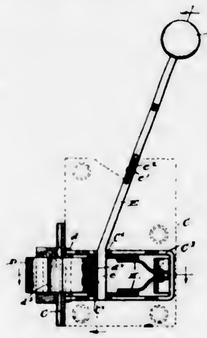
1,221,931. ORDER-BOOK AND COMBINATION PAGE AND ENVELOP THEREFOR. LOUIS WESSEL, Jr., Chicago, Ill., assignor to American Loose Leaf Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 10, 1915. Serial No. 49,970. (Cl. 11—23.)

An order book, comprising alternately fixed and detachable sheets, a gummed tab on each of said detachable sheets projecting beyond the fixed sheets and adapted to seal said detachable sheets when folded into envelop form, said tab at each end terminating short of the length of the sheet to provide a rectangular portion at each end of said sheet adapted to be folded, and said



fixed sheets being formed blank upon one side to receive a carbon copy of the matter written upon the superposed detachable sheet and upon their other sides being adapted to receive memoranda as to further orders.

1,221,932. LATCH. JOHN F. WHITE, Chicago, Ill. Filed June 29, 1916. Serial No. 106,687. (Cl. 70—64.)



1. In a lock for vehicle doors and the like, the combination with a pivoted locking bolt, of a fixed bearing member, and a movable member adapted to be moved toward the bolt through its engagement with the said fixed member and be wedged between the said fixed member and the bolt to lock the bolt in any locking position.

2. In a lock for vehicle doors and the like, the combination with a carrying part, of a pivoted locking bolt thereon, and means for locking the bolt against backward movement comprising a surface inclined toward the bolt, and a movable member interposed between said surface and and the bolt.

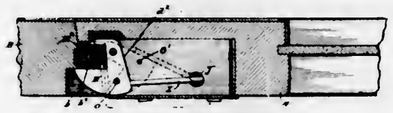
3. In a lock for vehicle doors and the like, the combination with a frame, of a rocking bolt pivoted therein, and means for locking the bolt in any locking position that it may assume, comprising a member movable toward the bolt and a fixed member with which said movable member engages for positively causing the movable member to advance toward the bolt and to retain the bolt in its forward locking position.

4. In a door lock the combination with a frame, of a rocking bolt therein, and a trip member for securing the bolt in locked position, a spring for operating the trip in one direction, and a wedging surface for moving the trip toward the bolt.

5. In a door lock the combination with a frame and a rocking bolt therein, of means for locking the bolt in its extreme locking position and means coöperating with said first mentioned means for causing the bolt to move inward when in an unlocked position.

[Claims 6 to 12 not printed in the Gazette.]

1,221,933. LOCK. JOHN F. WHITE, Chicago, Ill. Filed June 29, 1916. Serial No. 106,688. (Cl. 70—43.)



1. In a lock of the character described, a pivoted bolt member having means for causing the same to move to different locking positions and to unlocking position upon manual operation, and a spring operated bolt locking member comprising means for differentially engaging and locking the bolt in its different locking positions.

2. A lock including a rotary bolt, a spring actuated arm arranged in rear of the bolt for slidingly engaging the same to force the bolt into proper locking position and for retaining the same in said position.

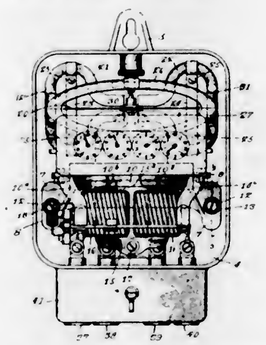
3. A lock including a rotatably mounted bolt, said bolt having at its rear a substantially straight portion and a spring actuated arm for slidably engaging said portion to properly position the bolt in locking position and for securing the same in said position.

4. A lock including a rotatably mounted bolt member, said bolt member having a substantially straight rear edge part, a grooved part interposed between the edge part and the locking part thereof, and a spring actuated arm pivotally supported and having its free ends arranged to engage the said straight part of the bolt to progressively advance the locking part of the bolt and to secure the same in position and also adapted to engage the grooved part of the bolt to cause the locking part thereof to finish its rearward movement and to be there retained.

5. A lock including a rotatably mounted bolt member, the said bolt member having a rear surface part arranged beyond the pivot thereof, and a spring actuated arm having a portion thereof arranged to engage said bolt part for setting the locking part of the bolt into proper locking position and for securing the same in said position.

[Claims 6 to 15 not printed in the Gazette.]

1,221,934. ELECTRICITY-METER. OTIS WHITE, Springfield, Ill., assignor to Sangamo Electric Company, Springfield, Ill., a Corporation of Illinois. Filed Jan. 30, 1914. Serial No. 815,401. (Cl. 171—265.)



1. In an electricity meter, the combination of a base, a mercury chamber casing, a ring-plate secured to the bottom of said casing, a bracket connected with said ring-plate and adapted to be secured to the base, a magnet coöperating with said mercury chamber and extending through said ring-plate, and an insulating post secured to the base, said magnet being adapted to be secured to said post.

2. In an electricity meter, the combination of a base, a mercury chamber casing, a ring-plate secured to the bottom of said casing, a bracket formed integral with said ring-plate and adapted to be secured to the base, a magnet coöperating with said mercury chamber and extending through said ring-plate, and an insulating post secured to the base, said magnet being adapted to be secured to said post.

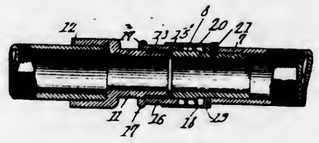
3. The combination with a mercury-chamber casing and an armature shaft of a frame composed of upper and lower separable members, the lower member being mounted upon the mercury-chamber casing, a damping disk mounted on the armature shaft between the members of said frame, and a bearing carried by the upper member of said frame and adapted to receive the upper pivot of the armature-shaft.

4. In an electricity meter, the combination of a base, a mercury chamber casing, a bracket having a ring-plate secured at the bottom of said casing, a frame mounted on and secured to said mercury chamber casing, said frame being composed of separable upper and lower members, and a bearing for the upper end of said armature shaft, said bearing being carried by the upper chamber of said frame.

5. The combination with a mercury chamber casing and an armature shaft, of a frame composed of upper and lower separable members, the lower member forming a cover for the mercury chamber, and a bearing carried by the upper member of said frame and adapted to receive the upper pivot of the armature shaft.

[Claims 6 to 10 not printed in the Gazette.]

1,221,935. HOSE-COUPLING. TILMAN WHITE, Berkeley, Cal., assignor of one-half to Eli E. Dryden and one-half to Thomas W. Morgan, Jr., Oakland, Cal. Filed May 16, 1914. Serial No. 839,081. Renewed Sept. 5, 1916. Serial No. 118,549. (Cl. 137—28.)



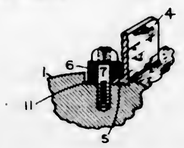
A hose coupling embodying a pair of mating tubular members, one having arcuate tongues projecting from one end, the tongues projecting from the periphery of the said member and having inner transverse grooves lying outside of the periphery of the said member, the other member having arcuate lips projecting from its periphery and adapted to pass between the said tongues when the members are assembled and to enter the said grooves when the members are rotated relative to one another, a sleeve surrounding and secured to the first mentioned member, a ring slidable upon the first mentioned member and received by the sleeve and having arcuate tongues projecting from under the sleeve between the aforesaid tongues to lock the said lips within the grooves, and a coiled wire spring housed between the sleeve and first mentioned member to project the ring, the ring being yieldable to retract the tongues from the said grooves.

1,221,936. BLADED CYLINDER. ROBERT F. WHITNEY, Winchester, Mass. Filed Aug. 7, 1916. Serial No. 113,422. (Cl. 149—16.)

1. A bladed cylinder for hide and leather working machinery comprising, in combination, a cylinder proper furnished with a plurality of peripheral studs; and a plurality of flanged blades loosely mounted on the studs and confined thereon by cushioning means.

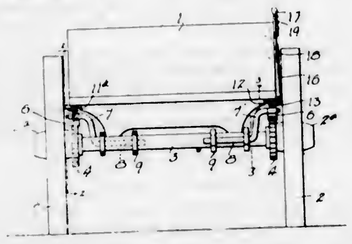
2. A bladed cylinder for hide and leather working machinery comprising, in combination, a cylinder proper furnished peripherally with a plurality of fixed blades and with a plurality of studs; and a plurality of flanged

blades loosely mounted on the studs and confined thereon by cushioning means.



3. In a bladed cylinder of the character described, a stud disposed on the periphery of the cylinder; and a flanged blade loosely mounted on the stud and confined thereon by cushioning means.

1,221,937. VEHICLE-BRAKE. JOZIAS WIELAND, Central Lake, Mich. Filed Feb. 15, 1916. Serial No. 78,352. (Cl. 21—8.)



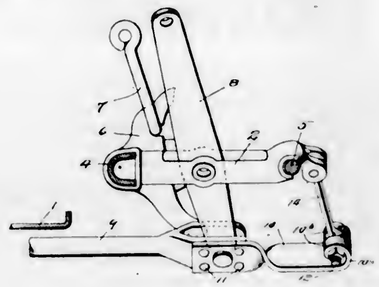
1. A wheel locking device for vehicles, including independent annular racks applied to the hubs of the respective rear wheels and having the teeth thereof inclined in opposite directions, a pair of outwardly and upwardly extended bracket arms projecting from the opposite end portions of the rear axle and terminating in horizontally disposed spindles which overhang the ranks of the respective wheels, oppositely extending pawls pivotally mounted upon the spindles of the respective brackets and arranged for coöperation with the respective racks, yielding means normally holding the pawls in inoperative position, crank arms projecting from the pivot ends of the pawls, a transverse lever pivotally mounted between its ends and having its ends operatively connected to the crank arms of the respective pawls, and means for swinging the transverse lever to simultaneously lower the pawls into inoperative position against the action of the before mentioned yielding means.

2. A wheel locking attachment for standard vehicles, including an annular rack formed in independent abutting segmental sections and adapted to be assembled around one of the rear wheel hubs, a bar extending longitudinally of the rear axle and fitting against the same, one end of the bar being formed with an upwardly curved bracket terminating in a spindle which overhangs the rack, clips fitting around the bar and axle and securing the bar in position, a pawl pivotally mounted upon the spindle and arranged for engagement with the rack to lock the wheel, yielding means normally holding the pawl in inoperative position, and means for lowering the pawl into operative position.

1,221,938. BRAKE-BEAM-SUPPORTING ATTACHMENT. CHARLES HAINES WILLIAMS, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 14, 1917. Serial No. 148,553. (Cl. 188—70.)

1. In a brake rigging, a third point support attachment including an extension member arranged for attachment at one extremity to the brake lever connecting rod and supporting at its other extremity an upwardly directed link having pivotal connection with the brake beam.

2. In a brake rigging, a third point connection including a resilient extension member arranged for connection at one extremity to a brake lever connecting rod and equipped at its other extremity for oscillatory connection with the associated brake beam.



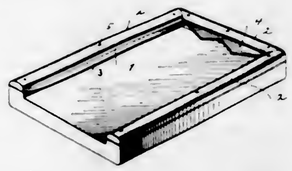
3. In a brake rigging, a third point connection including an extension member arranged for attachment at one extremity to the brake lever connecting rod in such position that its other extremity projects beyond the brake beam substantially on the axis of said rod, said extension member having oscillatory connection at said other extremity with the brake beam.

4. In a brake rigging, a third point supporting connection including an extension member arranged to be detachably affixed at one extremity to the brake lever connecting rod whereby it extends from said rod substantially on the axis thereof, and a link forming an oscillatory connection between the associated brake beam and the other extremity of said extension member.

5. In a brake rigging, the combination of a brake beam, a brake lever operatively connected thereto, a brake rod operatively connected to the said lever, an extension member connected to the rod at its connection to the lever, and a third point supporting member pivotally connecting the brake beam and the extension member.

[Claim 6 not printed in the Gazette.]

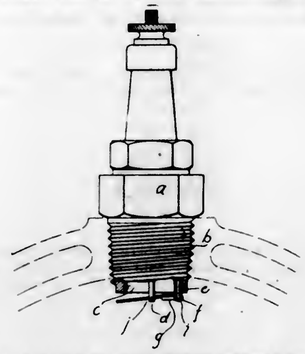
1,221,939. SOAP-HOLDER. JOHN WIRTH, New York, N. Y. Filed Aug. 5, 1916. Serial No. 113,208. (Cl. 68—11.)



A soap holder comprising an oblong plate, a fixed rim extending along three sides of the plate while the fourth side is open, a pair of blades projecting inwardly from the two longitudinal members of the rim, and a serrated blade extending inwardly from the transverse member of the rim.

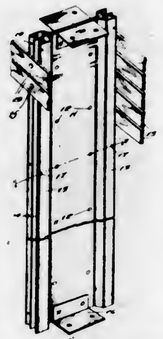
1,221,940. SPARK-PLUG. LEON ALONZO WITTER, Jackson, Mich., assignor of one-half to Gustave A. Weber, Jackson, Mich. Filed Nov. 1, 1916. Serial No. 128,997. (Cl. 123—169.)

The combination with a spark plug provided with a hollow, an electrode concentric with said hollow, a movable electrode adapted to open and close said hollow and to be actuated by the gases in the cylinder, said second electrode being provided with an aperture surrounding said first



electrode and having its walls within sparking distance of the same.

1,221,941. METALLIC STUD. WILLIAM H. WITTY, FRED F. EBY, and WARREN S. MEADER, Pocatello, Idaho. Filed May 19, 1916. Serial No. 98,544. (Cl. 189—34.)

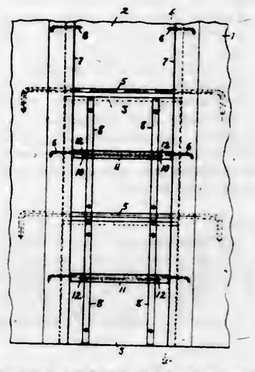


A metallic stud, comprising a substantially flat inner plate, outer plates arranged upon opposite sides of the inner plate and having their edges bent into outwardly bulging hollow flanges, each flange having outer and inner nail guide faces disposed at an actute angle with relation to the inner plate, the outer nail guide face having its free edge arranged adjacent the inner plate at a point spaced a substantial distance from the free edge of such inner plate for providing a substantially triangular recess whereby the nail will be readily guided between the hollow flange and the inner plate; and spaced elements securing the inner and outer plates together.

1,221,942. SILO-DOOR. ALVA W. WOODWARD, Bluffton, Ind. Filed Jan. 15, 1916. Serial No. 72,233. (Cl. 20—1.4.)

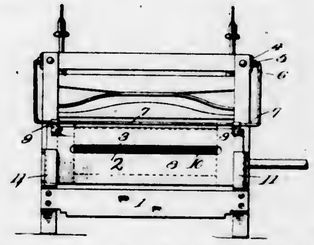
1. In combination with a silo proper having an opening therein and oppositely disposed studs at the sides of the opening, a door, a U-shaped iron pivotally secured to the door with its back adjacent thereto, and an angle-iron adjustably secured to the swinging ends of the U-shaped iron, its ends being adapted to engage the studs respectively and secure the door in position.

2. In combination with a silo having an opening therein and series of doors for closing the opening, a series of studs extending from the walls of the silo and arranged in oppositely disposed pairs, and a hinged member for each door adapted to engage the corresponding pair of studs and hold the door in position and form a step extending across the opening.



3. In combination with a silo having an opening therein, a series of doors for closing the opening, a series of studs arranged in opposite pairs and extending into the opening from the adjacent walls of the silo, a hinged U-shaped iron on each door, and means in connection with each iron adapted to engage the corresponding pair of studs and secure the door and form a step extending across the opening.

1,221,943. REVERSIBLE FINGER-GUARD FOR CLOTHES-WRINGERS. REA P. WRIGHT, Washington, D. C., assignor to The American Wringer Company, Woonsocket and Providence, R. I., a Corporation of Rhode Island. Filed Oct. 2, 1916. Serial No. 123,382. (Cl. 68—32.)



1. A reversible finger guard, for a clothes wringer, comprising a pivotally mounted supporting member, a slotted guard board carried by said pivotally mounted member, and keepers carried by the frame of the wringer for holding said guard board in position upon said wringer.

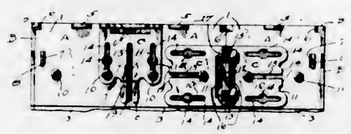
2. In a clothes wringer, the combination with a frame thereof, of plates secured to said frame having apertured bosses, of a bail provided with trunnions mounted in said apertured bosses, a slotted guard board pivotally connected to said bail, and keepers secured to the frame of said wringer for holding said guard board in adjusted position.

3. A clothes wringer, having a frame provided with side bars, plates secured to the upper ends of said side bars provided with apertured bosses, a substantially U-shaped bail having trunnions pivotally mounted in said bearings, a guard-board connected to said bail by straps, and keepers secured to the side bars of said frame adapted to receive said board for holding said board in position in respect to the rolls of the wringer.

1,221,944. JUNCTION OR OUTLET BOX. WILLIAM WERDACK, St. Louis, Mo. Filed Feb. 3, 1915. Serial No. 5,903. (Cl. 247—5.)

1. In a box of the class described, a suitably stiff metallic main section comprising a rear wall and a pair of ap-

proximately parallel side walls, each of said side walls being provided with an aperture, a separate substantially rigid metallic section adapted to removably fit at approximately right angles upon, and overlie, the side edges of said rear wall and both said side walls and provide an end wall for said main section, and a pair of oppositely disposed approximately rigid tongues offset from one face of said end-wall-section adapted to endwise removably project into the apertures of, and thereby engage with, said side walls to detachably lock said sections operatively together, said tongues each extending approximately longitudinally of said end-wall-section and said end-wall-section being movable edgewise into and out of operative position relatively to said main section.



2. In a box of the class described, an approximately U-shaped suitably stiff metallic main section integrally including and providing a rear wall and a pair of approximately parallel side walls, each of said side walls being provided with a slot adjacent its side edge, a separate substantially rigid metallic section adapted to removably fit at approximately right angles upon, and overlie, the side edges of said rear wall and both said side walls and provide an end wall for said main section, and a pair of oppositely disposed approximately rigid tongues on said end-wall-section adapted to endwise removably project into said slots and thereby engage with said side walls to detachably lock said sections operatively together, said tongues being integrally offset inwardly from one face, and each extending approximately longitudinally of said end-wall-section and said end-wall section being movable edgewise into and out of operative position relatively to said main section.

3. In a box of the class described, a metallic main section comprising a rear wall and a pair of approximately parallel side walls, each of said side walls being provided with an aperture and an inwardly-presented lip, a separate substantially rigid metallic section adapted to removably fit upon, and overlie, the side edges of said rear wall and both said side walls and provide an end wall for said main section, approximately rigid offset tongues on said end-wall-section adapted to endwise removably project into said apertures and thereby engage with said side walls to detachably lock said sections operatively together, said end-wall-section being movable edgewise into and out of operative position relatively to said main section, and inwardly-presented lugs on said end-wall-section adapted to removably fit upon and engage with said lips when said end-wall-section is in operative position upon said main section.

4. In a box of the class described, the combination with a metallic main section, said main section including a rear wall and a pair of side walls, of a separate metallic end-section, said sections being so constructed as to detachably engage one with the other and interlock by snap action, said end-section being movable edgewise into and out of operative engagement with the main section and when in operative engagement with the main section overlying the side edges of said rear wall and both said side walls.

5. In a box of the class described, a suitably stiff metallic main section including and providing a rear wall and a pair of side walls, each of said side walls being provided with an aperture, a separate substantially rigid metallic section adapted to removably fit upon, and overlie, the side edges of said rear wall and both said side walls and provide an end wall for said main section, and a pair of oppositely disposed approximately rigid inwardly offset tongues on said end-wall section adapted to removably endwise project into said apertures and thereby engage with said side walls to detachably lock said sections operatively together, said end-wall-section being movable approximately obliquely edgewise relatively to said main section and the metal of said main section being sprung in the operative engagement with and disengagement from said side walls of said tongues.

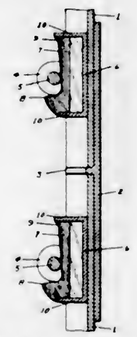
[Claims 6 to 11 not printed in the Gazette.]

1,221,945. LAWN-SPRINKLER. FLETCHER WILMER YONGE, Tampa, Fla. Filed May 20, 1916. Serial No. 98,829. (Cl. 137—86.)



A tubular nozzle, a semi-spherical casing connected and communicating therewith, said casing being positioned mainly at one side of the nozzle and said casing having a central opening in the top portion thereof, a detachable bottom plate for said casing, said bottom plate having an upwardly bulged portion and an upwardly extending guide, a conical member guided by the guide and having a threaded stem extending through the bottom plate, the tip portion of the cone extending into the opening of the casing, a lock nut on the threaded stem, and a thumb piece on the stem accommodated within the cavity formed by the upwardly bulging portion of the bottom plate.

1,221,946. JOINT. GEORGE P. YOUMANS, Galesburg, Mich., assignor to Kalamazoo Tank and Silo Co., Kalamazoo, Mich. Filed Nov. 23, 1914. Serial No. 873,472. (Cl. 189—19.)



1. In a structure of the class described, the combination of angle-iron frame sections, a coupling member angled to receive the said frame sections and having a transverse rib-like abutment for the ends of the frame sections and pairs of forwardly projecting ears at each side of the abutment, cross pins carried by said ears, and clamping members disposed behind the said cross pins and angled on their rear sides to fit into the angles of said frame sections and having forwardly projecting tapered flanges engaging said pins and terminating at their ends in forwardly projecting stops coacting with said cross pins to retain the clamping members when the frame sections are removed, the ends of the flanges being united by cross webs.

2. In a structure of the class described, the combination of angle-iron frame sections, a coupling member angled to receive the said frame sections and having a transverse rib-like abutment for the ends of the frame sections and pairs of forwardly projecting ears at each side of the abutment, cross pins carried by said ears, and clamping members disposed behind the said cross pins and angled on their rear sides to fit into the angles of said frame sections and having forwardly projecting tapered flanges engaging said pins.

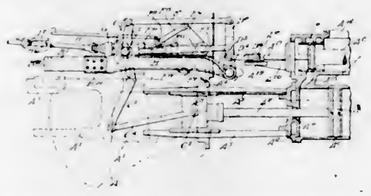
3. In a structure of the class described, the combination of angle-iron frame sections, an angled coupling member in which the ends of said frame sections are disposed, said coupling member being provided with cross members, and clamping members disposed behind the said cross members and angled on their rear sides to fit into the angles of said frame sections and having forwardly projecting tapered flanges engaging said cross members and terminating at their ends in forwardly projecting stops coacting with said cross members to retain the clamping members when the frame sections are removed, the ends of the flanges being united by cross webs.

4. In a structure of the class described, the combination of angle-iron frame sections, an angled coupling member in which the ends of said frame sections are disposed, said coupling member being provided with cross members, and clamping members disposed behind the said cross members and angled on their rear sides to fit into the angles of said frame sections and having forwardly projecting tapered flanges engaging said cross members.

5. In a structure of the class described, the combination of angle-iron frame sections, a coupling member angled to receive the said frame sections and having a transverse rib-like abutment for the ends of the frame sections and pairs of forwardly projecting ears at each side of the abutment, cross pins carried by said ears, and tapered clamping members disposed in the angles of said frame sections behind the said cross pins to coact therewith.

[Claims 6 to 8 not printed in the Gazette.]

1,221,947. LOCOMOTIVE VALVE-GEAR. OTIS W. YOUNG, Chicago, Ill., assignor to Pyle-National Electric Headlight Company, Chicago, Ill., a Corporation of New Jersey. Filed Oct. 2, 1914. Serial No. 864,552. (Cl. 121—98.)



1. A steam engine valve gear comprising valve actuating and reversing devices and their supporting and connecting parts, arranged in a permanent, unitary group, removably mounted on the engine in combination with valve, engine and control connections, adapted to be varied to fit the group to engines of varying designs.

2. A steam engine valve gear comprising valve actuating and reversing devices and their supporting and connecting parts, arranged in a permanent, unitary group, removably mounted on the engine in combination with valve, engine and control connectios, adapted to be varied to fit the group of engines of varying designs and an intermediate frame between the group and the engine frame.

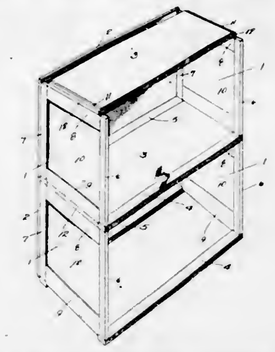
3. A steam engine valve gear comprising valve actuating and reversing devices and their supporting and connecting parts, arranged in a permanent, unitary group removably mounted on the engine in combination with valve, engine and control connections consisting each of a link pivotally connected at one end with the working parts and at the other with the engine, valve and control, said connections adapted to be varied to fit the group to engines of varying designs.

4. A steam engine valve gear comprising valve actuating and reversing devices and their supporting and connecting parts, arranged in two permanent, unitary groups mounted one on each side of the engine in combination with valve, engine and control connections adapted to be varied to fit the group to engines of varying designs, and two cross-shafts and connections whereby each shaft is connected to the engine at one side and to the valve at the other, said shafts having the same rotational axis.

5. A steam engine valve gear comprising valve actuating and reversing devices and their supporting and connecting parts, arranged in two permanent, unitary groups one on each side of the engine, removably mounted on the engine in combination with valve, engine and control, connections adapted to fit the groups to engines of varied design and frames intermediate each group and the engine and two cross-shafts mounted on said frames and connections whereby each is connected to the engine at one end and to the valve at the other end.

[Claims 6 to 82 not printed in the Gazette.]

1,221,948. SECTIONAL FURNITURE CONSTRUCTION. SAMUEL D. YOUNG, Grand Rapids, Mich., assignor to Grand Rapids Show Case Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Apr. 27, 1914. Serial No. 834,612. (Cl. 45—78.)



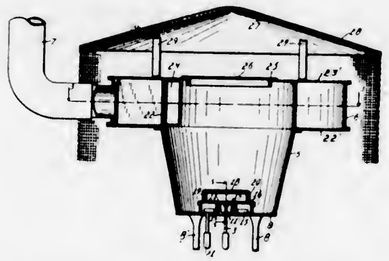
1. In a device of the character described, a section comprised of end, back, top and bottom members, said bottom members being spaced apart and located at the front and back of the section with their upper surfaces a short distance above the lower edges of the end members, and said top member comprised of an element having the same thickness except at the ends thereof as the bottom members, said ends each having a portion cut away of a depth equal to the distance the lower edges of said end members extend below the upper surfaces of the bottom members and of a width equal to the thickness of the end members at the lower edges thereof.

2. In a device of the character described, a section comprised of two end members, a back and top member and two bottom members, said bottom members being located at the front and back of the section and spaced apart, and said top member having its front edge located back of the front of the section a distance equal to the width of the front bottom member and its rear edge located forward of the back of the section a distance equal to the width of the back bottom member, and said back member at its upper edge reaching a short distance above the upper edges of the end members and at its lower edge terminating short of the lower surface of the back bottom member a distance equal to the projection of the upper edge of said back member above the end members.

3. In a device of the character described, sections positioned one above the other, the upper section including two spaced apart end members and two spaced apart bottom members located at the front and rear of the end members respectively and with the front and rear edges of the end and bottom members flush with each other, and the lower section including similarly spaced end members and a top member lying thereabove having a thickness except at the ends equal to the thickness of the bottom members of the section above, said ends having a portion cut away of a width equal to the thickness of the

end members and of slight depth, the front and rear edges of the top member being located back of the forward edge and in front of the rear edge of the end members, respectively, distances equal to the widths of the front and rear bottom members, and said end members of the upper section extending below the upper surfaces of the bottom members thereof a distance equal to the depth of the portions cut away at the ends of the top member on the lower section.

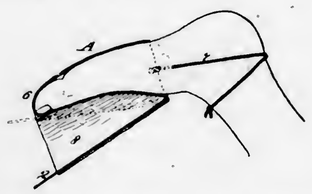
1,221,949. TOBACCO-DRIER. WAYNE H. YOUNG, Lowell, Mich. Filed Mar. 13, 1915. Serial No. 14,185. (Cl. 34—18.)



1. In a structure of the class described, the combination of a burner, a heating drum surrounding said burner, an annular flue surrounding the upper part of said drum and communicating therewith, a cover supported upon the top of said flue and having its upper surface provided with a layer of heat insulating material, and a wire gauze screen surrounding said flue and drum and carried by said cover.

2. In a structure of the class described, the combination of a burner, a heating drum surrounding said burner, an annular flue surrounding the upper part of said drum and communicating therewith, and a cover supported upon the top of said flue and having its upper surface provided with a layer of heat insulating material.

1,221,950. SWIMMING APPARATUS. ANTHONY K. ZAWADZKI, San Francisco, Cal. Filed July 5, 1916. Serial No. 107,549. (Cl. 9—21.)

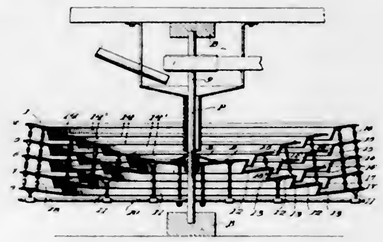


1. A swimming appliance composed of a member formed for wear on a limb of the body, said member having a channel diverging at its outer end anw which in swimming position extends lengthwise of the member borne by the limb and terminating at its inner end in a water trapping pocket which pocket faces in the direction of the swimming stroke and is of a width substantially equal to that of the inner end of the channel.

2. A swimming appliance composed of a member formed for wear over the toes of the foot, and a channel formed on said member and extending longitudinally of the foot and over the toes thereof in normal position of the latter and under the toes in swimming position thereof, said channel being closed at its inner end and flaring from its said inner end outwardly to form a relatively large entrance to the channel.

3. A swimming appliance composed of a member formed for wear over the toes of the foot, and a channel formed on said member and extending longitudinally of the foot and over the toes thereof in normal position of the latter and under the toes in swimming position thereof, said channel being closed at its inner end, and a member extended out beyond the channel bottom and extending beyond the toes.

1,221,951. CENTRIFUGAL TABLE. HENRY ADAMS, Stamford, Conn. Filed Jan. 9, 1914, Serial No. 811,201. Renewed Oct. 21, 1916. Serial No. 127,032. (Cl. 233—41.)



1. A centrifugal table adapted to have rotary movement imparted thereto and comprising a concentric series of independent annular planes each inclined outward and upward from the preceding and disposed at a higher level in progressive order from the center outward, and each having on its inner edge a lip inclined downwardly and toward the center of the table, each lip being so located with respect to the annular plane arranged within said lip that the material projected centrifugally from said plane will impinge on said lip intermediate its upper and lower edges.

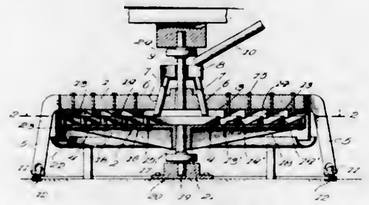
2. A centrifugal table adapted to have rotary movement imparted thereto and comprising a central imperforate portion inclined upwardly and outwardly from its center to its periphery and a concentric series of independent annular planes arranged around said central portion and each having on its inner edge a lip inclined downwardly and toward the center of the table, each lip being so located with respect to the annular plane arranged within said lip that the material projected centrifugally from said plane will impinge on said lip intermediate its upper and lower edges.

3. A centrifugal table adapted to have rotary movement imparted thereto and comprising a central imperforate portion inclined upwardly and outwardly from its center to its periphery and a concentric series of independent annular planes arranged around said central portion and each having on its inner edge a lip inclined downwardly and toward the center of the table, each lip being so located with respect to the annular plane arranged within said lip that the material projected centrifugally from said plane will impinge on said lip intermediate its upper and lower edges, and a series of step-like planes arranged in planes below said central portion and decreasing in height from the center toward the periphery of the table, and downwardly and inwardly inclined risers each connecting the outer edge of one plane with the inner edge of the next plane below it.

4. A centrifugal table adapted to have rotary movement imparted thereto and comprising a central imperforate portion inclined upwardly and outwardly from its center to its periphery and a concentric series of independent annular planes arranged around said central portion and each having on its inner edge a lip inclined downwardly and toward the center of the table each lip being so located with respect to the annular plane arranged within said lip that the material projected centrifugally from said plane will impinge on said lip intermediate its upper and lower edges, and a series of step-like planes arranged in planes below said central portion and decreasing in height from the center to the periphery of the table, and downwardly and inwardly inclined risers each connecting the outer edge of one plane with the inner edge of the next plane below it, and a plurality of series of independent planes arranged between said upper and lower series, the intermediate series of planes decreasing in number from the upper toward the lower series.

[Claims 6 to 8 not printed in the Gazette.]

1,221,952. CENTRIFUGAL PULVERIZER. HENRY ADAMS, Stamford, Conn. Filed Apr. 6, 1914, Serial No. 829,938. Renewed Oct. 21, 1916. Serial No. 127,033. (Cl. 83—7.)



1. A centrifugal pulverizer comprising a pair of rotatably mounted vertically spaced tables provided on their opposed faces with laterally spaced concentric annular detachably mounted grinding elements in the form of ribs triangular in cross section, those on one table being arranged opposite the spaces between those on the other, means for feeding material to the lower table, and means for rotating said tables.

2. In a centrifugal pulverizer, the combination with a support and an annular track thereon; of a table mounted for rotation on said support, an additional table spaced above the aforesaid table and having outwardly inclined legs thereon, rollers on the lower ends of said legs and received on said track to rotatably support the last mentioned table thereon, the inner opposed faces of said tables having annular concentric grinding ribs removably secured thereto, said ribs being triangular in cross section and those on one table being arranged opposite the spaces between those on the other, means for feeding material to the lower table and means for rotating said tables.

1,221,953. TEMPORARY BINDER. EGMONT B. ARNOLD, Milwaukee, Wis. Filed Nov. 11, 1915. Serial No. 60,972. (Cl. 129—38.)

1. A temporary binder comprising a hinged fold-engaging bar having a hook at its free end, a locking post provided with a lock housing, a lock rotatable therein, said housing post and lock being complementally slotted for interlocking engagement with the hook of the bar.

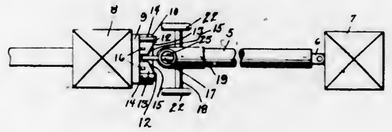
2. A temporary binder comprising a locking post having an end housing, said post and housing being complementally slotted, a hinged fold-engaging bar having an end portion adapted to enter said slots, and a lock rotatable in the housing provided with a slot that permits the entrance of the bar and adapted to be rotated to prevent withdrawal of said bar.



3. A temporary binder comprising a hinged fold-engaging bar having an end hook, a locking post having an end housing, the post and housing being complementally slotted for the reception of the hook-portion of the bar, and means within the housing for preventing release of the bar from said slotted portion of the post and housing.

4. A temporary binder comprising a hinged fold-engaging bar, a locking post having a lock housing extending transversely of the outer end thereof, the housing being centrally circumferentially slotted and such slot being extended into the post, a locking bar rotatable in the housing and provided with means for permitting the free end of the bar to enter the slotted portion of the housing and post and with means for preventing release of said free end of the bar.

1,221,954. GATE-LATCH. WILLARD E. ARNOLD, Portland, N. D. Filed June 2, 1916. Serial No. 101,364. (Cl. 70—28.)



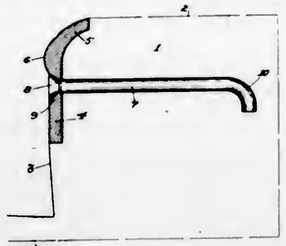
1. A gate latch, comprising in combination with a swinging gate and a post, of a base plate carried by said post and having its lower portion shaped into an outstanding convex cam surface, a pair of oppositely extending locking levers pivoted to the face of the base plate and having their free ends resting upon said convex cam surface and forming therewith a latching space, upturned flanges formed upon the outer edges of said levers, providing retaining abutments for said locking space, a latch bar pivotally carried by said base and adapted to ride below either of said levers to be engaged between said flanges and means for lifting said latch bar over said locking levers to open the gate.

2. A gate latch comprising in combination, with a gate and a post, a base plate on said post having its lower portion shaped into an outstanding upwardly curved convex cam surface, levers pivoted upon said base plate and inclining downwardly toward one another and having their free ends resting upon said cam surface at its uppermost portion, said levers consisting of comparatively wide plates and having their outer edges upturned to form opposing retaining flanges which coöperate with said cam surface to provide a locking space, and a latch bar pivotally carried by said gate to ride over said cam surface below said levers into said locking space, and means for lifting said bar upwardly out of engagement with said base to open the gate.

1,221,955. CURB-BAR. NICHOLAS A. BECKER, South San Francisco, Cal. Filed Aug. 28, 1915. Serial No. 47,777. Renewed Feb. 19, 1917. Serial No. 149,654. (Cl. 94—2.)

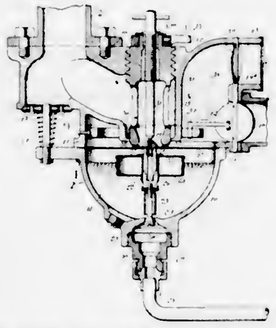
A rolled metallic protecting guard for composite structures comprising a straight wall or body member for pro-

tecting the front wall surface of the structure, an enlarged upwardly projected inwardly curved head member formed integral with the body member for overlying the corner edge and top wall surface of the composite structure, said head member being of greater thickness than the body member and said increased thickness providing an over-



hanging section projected outwardly beyond the face of the front wall or body member of the guard, and an anchor detachably secured to and extended transversely through the body member of the guard for positioning within the structure to be protected and to lie in a plane parallel with the top wall surface thereof.

1,221,956. CARBURETER. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 17, 1913. Serial No. 761,771. (Cl. 261—39.)

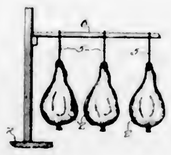


1. A carbureter comprising a fuel reservoir, a fuel passage leading therefrom, means including a chamber surrounding said fuel passage for supplying air to said fuel passage, and thermostatic means for regulating the temperature of the air supplied comprising a flexible thermostatic element extending around said fuel passage and located in said chamber.

2. A carbureter comprising a fuel reservoir, a fuel passage leading therefrom, means including a chamber surrounding said passage for supplying air to said fuel passage, and thermostatic means for regulating the temperature of the air supply comprising a flexible thermostatic element located in said chamber.

1,221,957. PICKLING, CURING, TREATING, AND HANDLING MEAT FOOD PRODUCTS. ALONZO NEWTON BENN, Chicago, Ill. Filed June 21, 1916. Serial No. 104,996. (Cl. 99—1.)

1. A process for curing and treating meats which consists in applying curing materials to the meat, inclosing the meat in a stockinet, thus binding the material in place, then applying pressure on the meat to change its form and maintaining the pressure during the curing, then removing the surplus curing materials, then opening the stockinet and applying a secondary curing or treating material, then closing the stockinet and binding the material to the meat, then retaining the meat for a time for action on the part of the curing or treating material while the stockinet is in place and then handling and shipping the meat while still inclosed in the stockinet.



2. A process of curing and treating meats which consists first in applying curing material to the meat, then inclosing the meat and material in a stockinet, then applying pressure to the meat, then removing the surplus material by dissolving the same in a soaking vat while the stockinet is in place, then opening the stockinet and adding additional curing or treating material and then closing the stockinet and thus holding the material in contact with the meat by means of the stockinet for a sufficient length of time for the added material to act on the meat.

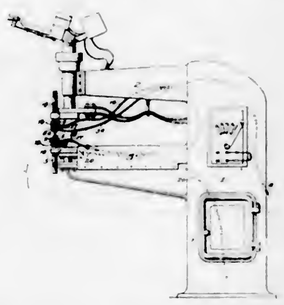
3. A process of curing meats which consists in applying curing material to the fresh meat and then inclosing the meat and curing material in a stockinet and retaining the same therein until the meat is sufficiently cured to smoke and to cook without smoking.

4. A process of curing meats which consists in applying material to the fresh meat and then inclosing the meat and curing material in a stockinet and retaining the same therein until the meat is sufficiently cured to smoke and to cook without smoking and shipping the meat while so contained in the stockinet.

5. A process of treating and curing meats which consists in applying curing or treating material to the meats and then inclosing both in a stockinet and holding the same therein while the material acts on the meat and then removing the surplus material by solution in a soaking vat while the stockinet is in place and then handling and shipping the same without removing the stockinet.

[Claims 6 to 17 not printed in the Gazette.]

1,221,958. WATER-COOLED WELDING-ELECTRODE. HARRY O. BERNARD, Birmingham, Ala. Filed July 23, 1913. Serial No. 780,725. (Cl. 219—4.)



1. The method of cooling welding electrodes, which consists in surrounding said electrodes with a cooling medium which is brought into direct contact therewith.

2. The method of cooling welding electrodes, which consists in circulating a cooling fluid entirely around and in direct contact with the electrode.

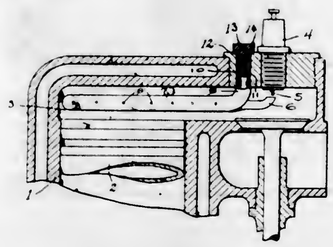
3. A cooling means for welding electrodes, comprising a member coöperating with the electrode, and between which member and the exterior surface of the electrode is completely confined a cooling medium which is brought into direct contact with the electrode.

4. A cooling jacket for welding electrodes, comprising a casing surrounding the electrode, said casing being so constructed that the cooling medium contained therein is retained in direct contact with the exterior surface of said electrode.

5. A cooling means for welding electrodes, comprising a jacket surrounding the electrode and forming an annular chamber about the same, a stuffing box at each end of the jacket for providing water-tight connections between said jacket and the electrode, and connections between said chamber and a water supply system.

[Claims 6 to 15 not printed in the Gazette.]

1,221,959. CARBON-REMOVING MEANS FOR INTERNAL-COMBUSTION ENGINES. ROBERT C. BERRY, Indianapolis, Ind. Filed June 9, 1916. Serial No. 102,728. (Cl. 123—198.)



1. An internal combustion engine having means operatively associated with the piston and explosion cylinder for inducing a concentrated flow of flame against the inner surface of the combustion chamber by the force of the explosion in the cylinder.

2. An internal combustion engine having a draft inducing opening leading from the combustion chamber and having means for directing a flow of flame produced by the explosion in the cylinder and induced by said opening against the spark plug and adjacent surface of the combustion chamber.

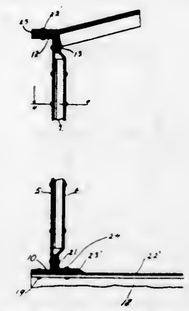
3. An internal combustion engine having a valve controlled opening adapted to establish communication between the combustion chamber and the atmosphere, conduit means communicating with said opening and also being open at points adjacent the portions of the engine from which carbon is to be removed and operable upon the explosion of a charge to produce an induced current of flame against said portions to thereby concentrate such flame at such parts and burn off the carbon.

4. In an internal combustion engine, in combination with a spark plug, a conduit having an open end terminating adjacent the terminals of the spark plug and adapted to induce a draft of flame against the same, means of communication between said conduit and the atmosphere adapted to establish a suction draft upon the conduit, and a valve for controlling said atmospheric means of communication.

5. In an internal combustion engine, means for removing carbon from the spark plug, consisting of a conduit having an open end terminating adjacent the spark plug, a conduit communicating with the atmosphere, and also with the first conduit, and means of communication between the cylinder and said second conduit whereby an induced draft of flame will be drawn against the spark plug through said conduits and through said means into the atmosphere upon the explosion stroke of the engine.

[Claim 6 not printed in the Gazette.]

1,221,960. UPPER FRAMING FOR INSULATED STEEL RAILWAY-CARS. HARRY F. BETHUNE and RICHARD J. O'NEILL, Denver, Colo. Original application filed July 31, 1913, Serial No. 782,345. Divided and this application filed Sept. 28, 1914. Serial No. 863,889. (Cl. 105—192.)



1. An insulated car, the side and end members of which are composed of spaced apart plates, the bottom edge of the side members having the tongue of T-shaped irons secured between the plates thereof, the vertical ends of the side and end members having one member of angle irons secured between said plates, fastening devices adapted to be passed through said T-irons and the platform of the car for securing said side members to the car, angle irons engaging the angle irons of said side and end members on the exterior of the car, and fastening devices passing through the angle irons of said side and end members and the last named angle irons.

2. An insulated car, comprising side and end members composed of separated plates, T-irons having their legs received between said plates of the side members at the bottom edge of the latter, angle irons having one member thereof received between the said plates of the side and end members at the ends of the latter, the T-irons adapted to be secured to the floor of the car, and second angle irons secured to the angle irons of said side and end members of said car.

3. An insulated car whose sides and end members are composed of separated plates, angle irons arranged between said plates and serving to space the latter apart, angle irons having one member thereof secured between the plates of the side members at the upper edge of the latter, a roof engaging with the other member of said angle irons, and the last named member of said angle irons being horizontally disposed.

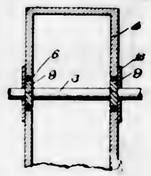
4. An insulated car, comprising side and end members composed of spaced apart plates, T-irons having their legs received between said plates of the side members at the bottom edge of the latter, angle irons having one member thereof received between said plates of the side and end members at the ends of the latter, the T-irons adapted to be secured to the floor of the car, second angle irons secured to the angle irons of said side and end members of the car, and angle irons having one member thereof secured between the plates of the side members of the car at the upper edge of the latter.

1,221,961. ELEVATOR-HEAD. GRABILL J. BICKHART, Hilbert, Wis. Filed May 24, 1916. Serial No. 99,575. (Cl. 64—52.)

1. An elevator head having vertical openings in its sides, vertical dovetail ribs arranged adjacent to the vertical openings, and bearing sections each having a dovetail way receiving one of the ribs.

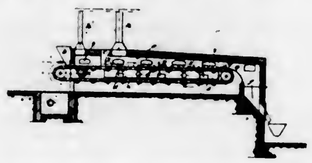
2. An elevator head having vertical openings in its sides, vertical dovetail ribs arranged adjacent to the vertical openings, bearing sections each having a dovetail way receiving one of the ribs, and springs extending into the ways and bearing on the ribs.

3. An elevator head having vertical openings in its sides, plates having vertical dovetail ribs arranged adjacent to the vertical openings, bearing sections having on their outer faces plates provided with dovetail ways adapted to receive the ribs, the plates attached to the bearing sections having openings therein, and springs extending through such openings and adapted to bear on the ribs.



4. An elevator head having vertical openings in its sides, plates having vertical dovetail ribs arranged on the edges of the vertical openings, bearing sections having plates attached to their outer faces, dovetail ways formed with the plates and adapted to receive the ribs, and boards having openings therein arranged on the outer faces of the elevator head and overlapping the ends of the bearing sections.

1,221,962. PROCESS FOR SINTERING FINE OXID ORE AND METALLURGICAL PRODUCTS. HEINRICH BITTMANN, Frankfort-on-the-Main, Germany, assignor to Dwight & Lloyd Sintering Company, Inc., New York, N. Y., a Corporation of Delaware. Filed July 16, 1914. Serial No. 851,419. (Cl. 75—73.)

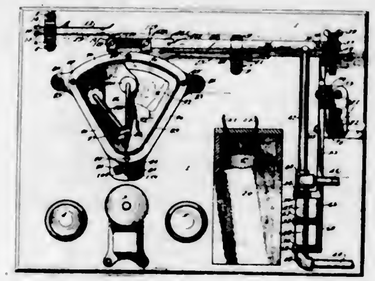


1. The herein described process of treating metal oxid ores that are initially in a fine condition to form therefrom coherent, thin, agglomerated or sintered masses suitable for blast furnace treatment, its consisting in forming in superposed relationship to each other a layer of carbon fuel and a layer of the ore to be treated, causing the layer of fuel to actively burn under the influence of a current of combustion-supporting gas supplied thereto, thereby generating heat and producing carbon oxid gases, forcing the products of combustion from the said burning fuel layer and the gaseous bodies mixed therewith through the ore layer and causing reactions to take place among the metallic oxid particles thereof under the influence of the heat and the carbon oxid gases, whereby the ore masses are caused to cohere and form agglomerated masses.

2. The herein described process of treating metal oxid ores that are initially in a fine condition to form therefrom coherent, thin, agglomerated or sintered masses suitable for blast furnace treatment, it consisting in forming a layer of ignited carbonaceous fuel, applying thereto a layer of oxid ore to be treated, causing air to pass through the said superposed layers to maintain combustion in the fuel layer, thereby generating heat and producing carbon oxids, and causing these carbon oxids and the gaseous bodies mixed therewith to pass through the superposed ore layer and causing the metal oxids in the latter, due to heat and the presence of the carbon oxids produced by the burning of the fuel layer, to cohere and form agglomerated sintered masses.

3. The herein described process of treating metal oxid ores that are initially in a fine condition to form therefrom coherent, thin, agglomerated or sintered masses suitable for blast furnace treatment, it consisting in forming a layer of ignited carbonaceous fuel, subjecting this layer to an air current whereby it is brought to a condition of active combustion, then applying thereto a layer of the ore to be treated, and continuing the passage of air upwardly through the said superposed layers and causing the heat generated by the combustion of the ore layer and the carbon oxid gases produced thereby to pass through and act upon the ore mass, whereby the metallic oxids are caused to cohere and form agglomerated or sintered masses of the ore.

1,221,963. WATER-INDICATING MEANS FOR STEAM-BOILERS. WILLIAM C. BLUNDELL, Los Angeles, Cal. assignor of one-half to Mary R. Blundell, Los Angeles, Cal. Filed Feb. 7, 1916. Serial No. 77,101. (Cl. 177—351.)



1. A water indicating system for steam boilers including a series of visible mechanically actuated signals arranged at the boiler and adapted to be operated when the water in the boiler reaches certain levels, visible electric signal means capable of operation therewith, and audible electric signal means connected with one of said mechanical signals for sounding the alarm for a predetermined stage of the water in said boiler.

2. A water indicating system for steam boilers and the like including a series of visible mechanically actuated signals at the boiler for indicating different stages of the water therein, means intermediate of the boiler and said signals for operating the signals to correspond with the rise and fall of the water in said boiler, and auxiliary electric signal means operable by and with said mechanical signals.

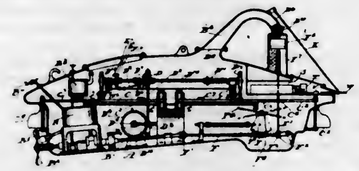
3. A water indicating system for steam boilers including visible mechanical signals at the boilers indicating different stages of the water therein, means intermediate of the boiler and said signals for operating the signals when the water rises and falls to certain points, and auxiliary electric signal means coöperating with the mechanical signals for producing an alarm at points remote from the boiler.

4. A water indicating system for steam boilers including coöperatively associated visible mechanical and electric signals at the boiler for indicating different stages of the water therein, expansion tubes commonly connected with the steam and water portions of said boiler, there being a single tube for each of said signals, and means intermediate of said tubes and said signals for moving the signals to correspond to the expansion of the tubes.

5. A water indicating system for steam boilers including visible mechanical signals and expansion tubes having a common connection with the steam and water portions of the boiler and arranged to indicate different stages of the water therein, one of said signals being for high and one for low water, and electric signal means connected with and arranged for operation by said high and low water signals.

[Claims 6 to 25 not printed in the Gazette.]

1,221,964. AUTOMATICALLY-CONTROLLED FLOATING MINE. LOUIS A. BOCKSTAHLER, Lakewood, Ohio. Filed Jan. 2, 1915. Serial No. 88. (Cl. 114—23.)



1. In combination with the hull of a vessel, and steering rudders at the bow and stern thereof, of pivoted devices in said hull and operatively connected with said rudders, said pivoted devices coöperating by their inertia to prevent displacement of the bow and stern of the vessel when subjected to sudden lateral shock.

2. In combination with the hull of a vessel and cooperating bow and stern rudders therefor, of horizontally swinging stabilizers operatively connected with said rudders.

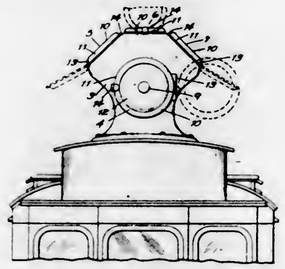
3. In combination with the hull of a vessel and cooperating bow and stern rudders therefor, of horizontally swinging stabilizer levers, said levers weighted at their outer ends and operatively connected with said rudders.

4. In combination with the hull of a vessel, and rudders pivoted respectively at the bow and stern thereof, of horizontally swinging stabilizing levers having weighted outer extremities, and pivoted in said hull, and gear connections between said stabilizers and their respective rudders.

5. In a dirigible vessel, in combination, a hull, bow and stern rudders therefor, a tiller arm for each rudder, each arm having a gear segment thereon, a horizontally swinging stabilizer having a segmental geared edge and engaging with the gear segment upon said stern tiller arm, a similar horizontally swinging stabilizer for the said bow rudder, and an idler operatively connecting said bow tiller and stabilizer, said stabilizer weighted, and the bow stabilizer additionally weighted to overcome the weight of the tiller arm for the bow rudder.

[Claims 6 to 9 not printed in the Gazette.]

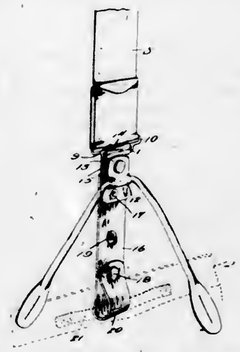
1,221,965. COMBINED HEAD AND SIGNAL LAMP. ELMER J. BOOS, Cincinnati, Ohio. Filed July 10, 1916. Serial No. 108,371. (Cl. 240—22.)



1. A combined head and signal lamp comprising a casing, a series of lamps mounted in the casing, one of said lamps facing front to cast a shaft of light in a substantially horizontal forward direction in front of the vehicle equipped therewith, and each of the remaining lamps being located in a vertical plane extending transversely of the vehicle, one of said lamps being adapted to cast a shaft of light vertically and the remaining lamps being adapted to cast shafts of light at angles thereto and in the vertical plane.

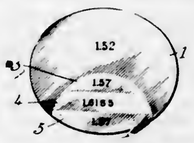
2. In a combined head and signal lamp the combination of a casing, a series of lamps mounted in the casing and means for controlling the illumination of the lamps, one of said lamps facing front to cast a shaft of light in a substantially horizontal forward direction in front of the vehicle equipped therewith, and each of the remaining lamps being located in a vertical plane extending transversely of the vehicle, one of said lamps being adapted to cast a shaft of light upwardly and the remaining lamps being adapted to cast shafts of light at angles to the second shaft, to each side thereof, and in the transversely extending vertical plane.

1,221,966. DRAWERS-SUPPORTER. LEWIS W. BROWN, Norfolk, Va. Filed Feb. 5, 1915. Serial No. 6,374. (Cl. 241—28.)



The combination with the runner of a suspender comprising three parallel bars and two loops, of a webbing secured to the upper bar, a cast-off secured to the lower bar, and a metallic strip depending from the middle bar, parallel with the cast-off and provided at its upper end with an overlapping portion deflected over the upper end of the cast-off, passing around the middle bar, thence through the loop below said bar, the end of the overlapping portion being disposed between the strip proper and the cast-off, and the intermediate portion of the overlapping member being retained by the lower bar and said cast-off.

1,221,967. BIFOCAL. LUCIAN W. BUGBEE, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Oct. 26, 1916. Serial No. 127,810. (Cl. 88—54.)



1. A multifocal lens, comprising an upper distance portion, a reading portion, and a pair of intermediate distance portions disposed one on each side of the reading portion.

2. A multifocal lens, comprising a major portion and a segment, the segment including a central portion of glass of one index of refraction and an outer portion on each side of the central portion having glass of a different index of refraction from both the major blank and the central portion of the segment.

3. A segment for a bifocal lens, comprising a central near vision portion and intermediate distance portions on each side thereof.

4. A multifocal lens, comprising a major portion with a countersink, and a button secured in the countersink, said button having the central portion thereof removed and a portion of a different index of refraction from that of the button substituted for said central portion.

1,221,968. AUTOMATIC TRAIN-STOP SYSTEM. JERONIMO CANNON, Nashville, Tenn., assignor of one-half to Barney Levitan, Nashville, Tenn. Filed Oct. 1, 1915. Serial No. 53,615. (Cl. 246—58.)



1. In an automatic train stop system, the combination with a track having two pairs of conductors extending alongside thereof and insulated from each other and the ground, of a car traveling over the track having thereon a source of electrical energy, an air brake system on the car including a vent valve, means urging the vent valve to an open position, a latch mechanism holding the vent valve closed against said urging means, an electromagnet having its armature operatively connected with said latching means, said armature when energized holding the latching means in an operative position, means connecting the source of energy in circuit with said magnet and also in circuit with one of said pairs of conductors, a second electro-magnet, means operated by the second electro-magnet for cutting out the first electro-magnet from circuit with the source of energy, and means for connecting the second electro-magnet with the other pair of conductors.

2. In an automatic train stop system, the combination with a track having two pairs of conductors extending alongside thereof and insulated from each other and from the ground, of a car traveling over the track, an air brake system on the car including a vent valve, a vent valve operating means including a rotatable element operatively connected to the vent valve, a spring urging the rotatable element in a direction to open the vent valve, a member mounted upon the rotatable element, a keeper with which said member is engageable against the action of said spring, an electro-magnet, a latch operatively connected to the armature of said electro-magnet and engaging the said member, the movement of said armature when the electro-magnet is energized causing the release of said member from its engagement with the keeper, a source of energy mounted on the car and electrically connected in circuit with said electro-magnet and with one pair of said conductors, a second electro-magnet connected in circuit with the other pair of conductors, and means actuated by the movement of the armature of the second electro-magnet upon the energizing thereof acting to prevent the passage of current to the first-named electro-magnet to thereby deënergize it and cause the release of said rotatable element and the opening of the vent valve.

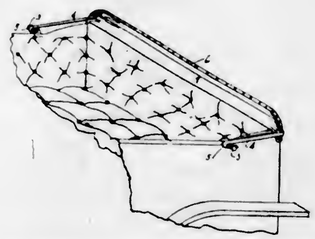
3. In an automatic train stop system, the combination with a track having two pairs of conductors extending alongside thereof and insulated from each other and the ground, of a car traveling on the track, an air brake system mounted on the car and including a vent valve, a casing mounted on the car, a rotatable element mounted within the casing operatively connected to the vent valve, a spring urging the rotation of said element in one direction, a keeper mounted on the casing, a member mounted upon the rotatable element and engageable with said keeper to hold the vent valve closed, an electro-magnet including an armature, a latch connected to the armature and adapted to be connected to said keeper engaging member to release it from the keeper upon the energizing of the magnet, a source of energy on the car electrically connected in circuit with said magnet and with one pair of said conductors, a second electro-magnet normally electrically connected to the other pair of conductors and including an armature, means mounted on the armature for preventing the flow of current from the battery through the first-named electro-magnet upon the energizing of the second-named electro-magnet, said means including a conducting member adapted to short circuit the first-named electro-magnet, and means coacting with the rotatable member short circuiting the second-named electro-magnet upon a rotation of said member in a direction to open the valve.

4. In an automatic train stop system, the combination with a track having two pairs of conductors extending alongside thereof and insulated from each other and the ground, of a car traveling on the track, an air brake system mounted on the car and including a vent valve, a casing mounted on the car, a rotatable element mounted within the casing operatively connected to the vent valve, a spring urging the rotation of said element in one direction, a keeper mounted on the casing, a member mounted upon the rotatable element and engageable with said keeper to hold the vent valve closed, an electro-magnet including an armature, a latch connected to the armature and adapted to be connected to said keeper engaging member to release it from the keeper upon the energizing of the magnet, a source of energy on the car electrically connected in circuit with said magnet and with one pair of said conductors, a second electro-magnet normally electrically connected to the other pair of conductors and including an armature, means mounted on the armature for preventing the flow of current from the battery through the first-named electro-magnet upon the energizing of the second-named electro-magnet, said means including a conducting member adapted to short circuit the first-named electro-magnet, and means coacting with the rotatable member short circuiting the second-named electro-magnet upon a rotation of said member in a direction to open the valve.

5. In an automatic train stop system, the combination with a track, of a vehicle traveling thereon, an air brake system mounted on the vehicle and including a vent valve, means urging the vent valve to an open position, normally energized means for holding the vent valve in its closed position and normally connected in circuit with a source of energy, conductors extending parallel to the track, trolleys on the vehicle engaging said conductors and disposed in circuit with said source of energy, and means disposed along the track acting to close a circuit through said conductors to thereby short circuit said vent valve holding means to thus release the holding means and permit the vent valve to be opened.

[Claims 6 to 9 not printed in the Gazette.]

1,221,969. EXTENSION SEAT-BACK FOR AUTOMOBILES. HARRY D. CHANDLER, Seattle, Wash. Filed June 16, 1915. Serial No. 34,326. (Cl. 21—42.)

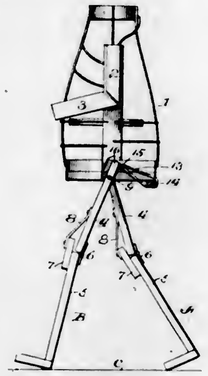


1. In an automobile extension seat back, the combination of an extension back means, whereby the back of a seat is made higher, and means for removably and swingably attaching the said back to the body of an automobile, said back means including a cushion attached to a rest member which fits the top of the back of the seat, said attaching means including forwardly extending arms which terminate in hooks adapted to engage the top supporting bracket of the vehicle.

2. An attachment for the seat of an automobile or the like, including a cushion adapted to rest upon and be supported by the top of the seat back, arms extending downwardly and forwardly from the ends of said cushion and means for detachably securing the arms to the automobile structure, said means constituting the sole connection between the cushion and the seat.

3. The combination with a vehicle seat having an upstanding back, of a cushion removably resting upon said back, forwardly extending arms at the ends of the cushion, and means for securing said arms to the sides of the vehicle structure and constituting the sole connection between the cushion and the seat.

1,221,970. WALKING DOLL. HARRY H. COLEMAN, New York, N. Y. Filed Feb. 20, 1917. Serial No. 149,903. (Cl. 46—40.)



1. A walking figure toy having a body, legs having hip and knee joints, resilient means adapted to cause the legs to normally move forwardly, and resilient means for the knee joints adapted to cause the sections of the legs to straighten out.

2. A walking figure toy having a body, legs having universal hip joints, resilient means coöperating with the universal hip joints adapted to cause the legs to normally move forwardly and also to move outwardly at the hip joints.

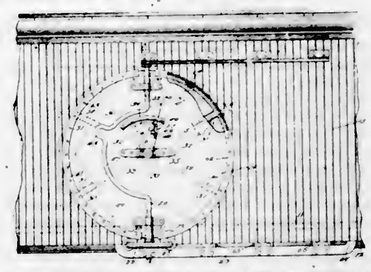
3. A walking figure toy having a body, legs having universal hip joints and also provided with knee joints, resilient means coöperating with the universal hip joints adapted to cause the legs to normally move forwardly and also to move outwardly at the hip joints, and resilient means for the knee joints adapted to cause the sections of the legs to straighten out.

4. A walking figure toy having a body, legs, pins or the like connecting the legs to the body, said legs being provided with enlarged openings through which said pins loosely pass to thereby articulate the legs for universal movement at the hips, and elastic devices coöperating with the legs and tending normally to move the legs forwardly and outwardly.

1,221,971. CAR-DOOR. ALFRED COPONY, Chicago, Ill., assignor of one-half to Charles R. Cooper, Chicago, Ill. Filed Sept. 10, 1915. Serial No. 49,932. (Cl. 20—23.)

1. The combination with a car having a circular door frame, of a circular door therefor, said door being provided with movable arcuate sealing means adjacent its periphery, and means for moving said sealing means toward said frame, said sealing means comprising two adjacent arcuate sealing portions moved in substantially opposite directions with respect to each other by the movement of said sealing means toward the frame.

2. The combination with a car having a circular door frame, of a circular door therefor, said door being provided with movable arcuate sealing means adjacent its periphery, and means for moving said sealing means toward said frame comprising a member rotatably mounted on said door and links connecting said rotatable member and said sealing means, said sealing means comprising two adjacent arcuate sealing portions moved in substantially opposite directions with respect to each other by the movement of said sealing means toward the frame.



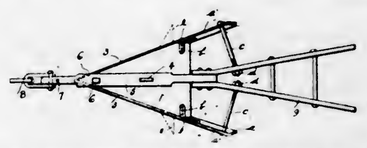
3. The combination with a car having a circular door frame, of a circular door therefor, said door being provided with movable arcuate sealing means adjacent its periphery, and means for moving said sealing means toward said frame comprising a member rotatably mounted on said door and links connecting said rotatable member and said sealing means, and a lever for actuating said rotatable member, said sealing means comprising two adjacent arcuate sealing portions moved in substantially opposite directions with respect to each other by the movement of said sealing means toward the frame.

4. The combination with a car having a floor and a circular door-frame, the lower portion of the opening of which extends below the floor, of a circular door for said door-frame provided with a movable arcuate sealing member adjacent its periphery, and means for moving said member toward said frame.

5. The combination with a car having a door frame, of a door therefor, said door being provided with a movable sealing member adjacent its periphery, and means for moving said member toward said frame comprising a lever mounted on said door, a track, a carriage movable on said track, a swinging member mounted on said carriage on which said door is mounted to move into and out of said frame, said swinging member and lever being so constructed and located that when the lever is operated to hold the sealing member in sealing position it will also hold the swinging member in position to hold the door in the frame.

[Claims 6 and 7 not printed in the Gazette.]

1,221,972. DITCHING-PLOW. ADOLPHE CORDEAU, Ste. Madeleine, Quebec, Canada, assignor of one-half to Joseph Mizael Authier, St. Hilaire, Quebec, Canada. Filed Feb. 24, 1916. Serial No. 80,159. (Cl. 97—12.)



1. In combination with a plow, a plurality of cutting members secured to the sides of the share of the plow adjacent its rear end and supplementary cutting members on the edges of the share in advance of the said cutting members.

2. In combination with a plow the share of which is formed with a plurality of upturned lugs having forward

cutting edges, a plurality of wall cutting members hinged to the share to the rear of the lugs, and means for adjustably retaining the cutting members.

3. The combination with a plowshare, of cutting lugs formed integral therewith and adapted to extend substantially at right angles thereto, said lugs having forward cutting edges, cutting members arranged at the rear of said lugs and connected to said share, and said cutting members extending upwardly beyond said lugs for the purpose set forth.

1,221,973. MANUFACTURE OF AGGLUTINATED RICE-KERNELS. ANDREW BRUCE CRESAP, Manila, Philippine Islands. Filed July 21, 1916. Serial No. 110,490. (Cl. 99—11.)

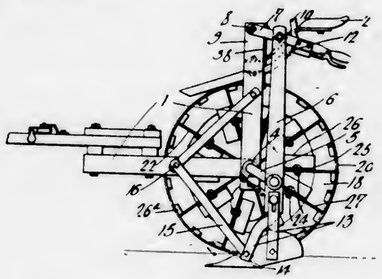
1. As a new article of manufacture, hulled, unripe rice kernels, toasted and left coherent in their own gluten, substantially as described.

2. As a new article of manufacture, hulled, unripe rice kernels, toasted and left coherent in their own gluten with vegetable oil addition, substantially as described.

3. The process of preparing unripe rice kernels which consists in roasting the garnered grains until the hulls become crisp, pounding or rolling to remove the hulls and finally toasting the exposed kernels to afford gluten excess that is coherent between cold granules.

4. The process of preparing unripe rice kernels which consists in roasting the garnered grains until the hulls become crisp, pounding or rolling to remove the hulls and with vegetable oil addition finally toasting the exposed kernels to afford gluten excess that is coherent between cold granules.

1,221,974. SEPARATOR. JONAS H. CROWSON, Texarkana, Tex. Filed June 28, 1916. Serial No. 106,510. (Cl. 97—38.)



1. The combination with a cylindrical screen mounted to roll upon the ground, said screen including end rings for direct engagement with the ground, of a plow at one end of and adapted to direct a furrow slice into the screen, adjustable means within said screen for directing material from one end to the other of said screen, and crushing means loosely mounted within the screen.

2. The combination with a plow, of a cylindrical screen, end rings outstanding from the screen and adapted to roll along the ground and to support the screen out of contact with the ground, one of said rings being arranged to receive a furrow slice from the plow, means within said ring for directing the furrow slice into the screen, and means within the screen and the other ring for directing the material longitudinally of the screen and out of that end thereof remote from the plow.

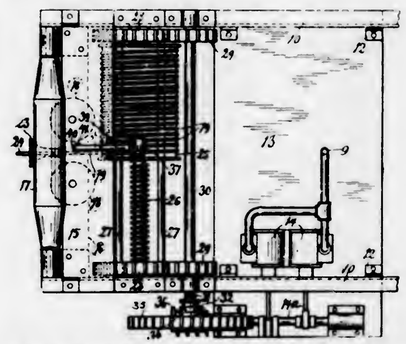
3. The combination with a plow, of a cylindrical screen, end rings outstanding therefrom and adapted to roll upon the ground at one side of the plow, radial blades within each ring, means connected to one of the blades for directing material from the plow and through one of the rings and into the screen, and means within the screen for directing the material from one end to the other of the screen.

4. The combination with a plow, of a separator including an endless screen, rings connected to and supporting the ends of the screen and adapted to roll upon the ground, one of said rings constituting means for receiving loose soil from the plow, means within said ring for directing the loosened soil into the screen, and means within the screen for directing the loosened soil longitudinally of the screen.

5. The combination with a plow, of a separator including a tubular screen, supporting rings at the ends thereof for engaging and rolling along the ground, one of said rings being adapted to receive loosened soil directly from the plow, means within said ring for directing the loosened soil into the screen, means within the screen for directing portions of the loosened material longitudinally of the screen, and a revoluble crushing element loosely mounted within the screen.

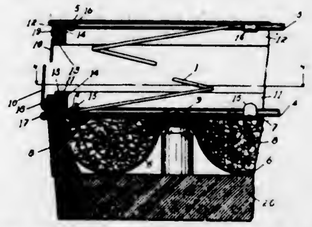
[Claims 6 to 11 not printed in the Gazette.]

1,221,975. TRACTION-ENGINE. GEORGE CUFF, Poynette, Wis. Filed Apr. 24, 1913. Serial No. 763,294. (Cl. 242—158.)



In an attachment for traction engines, a frame, a screw fixed with its ends in the frame, a gear wheel journaled upon each end of the screw, a cable drum centrally threaded upon the screw and having in its heads apertures, a series of bars loosely fitted in said apertures and secured with their ends in the said gear wheels, thus leaving the drum slidable on the bars, a shaft journaled in the frame parallel to the drum, two gear pinions fixed on the shaft and meshing one with each of the gear wheels, and means for rotating the shaft alternately in opposite direction.

1,221,976. CUSHION STRUCTURE. FRANK P. D'ARCY, Kalamazoo, Mich. Filed June 23, 1916. Serial No. 105,354. (Cl. 155—43.)



1. The combination with the springs, of a support therefor comprising top and bottom frames, top and bottom upholstery frames embracing said top and bottom support frames respectively, and provided with tacking strips and with tongues engaging said support frames, the tongues of the top upholstery frame being directed downwardly and removably engaged with the top support frame, the tongues of the lower upholstery frame being directed upwardly and folded over the bottom support frame, and an upholstery cushion comprising top and backing portions, with filling between, and a skirt portion, arranged with their edges superimposed over the top upholstery frame and secured thereto by tacks driven into the tacking strip thereof, the lower edge of the skirt being secured to the bottom upholstery frame by tacks driven into the tacking strip thereof.

2. The combination with the springs, of a support therefor comprising top and bottom frames, top and bottom upholstery frames embracing said top and bottom support frames respectively and provided with tacking strips and with tongues engaging said support frames, the tongues of the top upholstery frame being engaged with the top support frame, the tongues of the lower upholstery frame being engaged with the bottom support frame and a covering comprising a top and skirt, arranged with their edges superimposed over the top upholstery frame and secured thereto by tacks driven into the tacking strip thereof, the lower edge of the skirt being secured to the bottom upholstery frame by tacks driven into the tacking strip thereof.

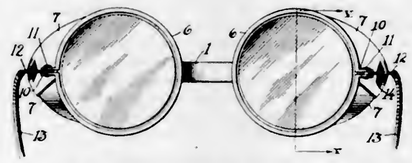
3. The combination with the springs, of a support therefor comprising top and bottom frames, top and bottom upholstery frames connected to said top and bottom support frames respectively and provided with tacking strips, and a covering comprising a top and skirt, arranged with their edges superimposed over the top upholstery frame and secured thereto by tacks driven into the tacking strip thereof, the lower edge of the skirt being secured to the bottom upholstery frame by tacks driven into the tacking strip thereof.

4. The combination with the springs, of a support therefor comprising top and bottom frames, an upholstery cushion comprising a top portion and a skirt portion, and top and bottom upholstery frames disposed within said skirt portion and secured thereto and provided with tongues engaging said top and bottom support frames, the tongues of the top upholstery frame being directed downwardly and removably engaged with the top support frame, the tongues of the lower frame being engaged over the bottom support frame with the springs under slight compression.

5. The combination with the springs, of a top frame therefor, an upholstery frame channel-shaped in cross section embracing said spring frame and provided with integral tongues adapted to removably engage said top frame and with a tacking strip clamped in said upholstery frame channel, and an upholstery cushion comprising top and a skirt arranged with their edges superimposed over said upholstery frame and secured thereto by tacks driven into the tacking strip thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,221,977. EYE-PROTECTOR. GEORGE H. DAY, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Jan. 13, 1916. Serial No. 71,962. (Cl. 2—149.)



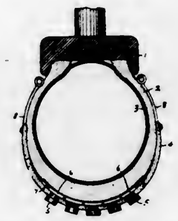
1. An eye protector, including a rim having a folded edge, a bridge member having an end clamped beneath said folded edge, a shield section on each side of the bridge member having a portion clamped beneath said edge, and attaching ears formed from the rim and folded portion adjacent the shield member, whereby connection of the ears brings the shield sections into overlapping operating relation, substantially as illustrated.

2. A rim for an eye protector, having the rear portions thereof reversely bent to provide a forwardly opening channel, and flexible shield members having their edges fitting and secured within said channel and extending reversely over the inner face of the rim.

3. In an eye protector, the combination with a metallic rim having one edge formed into a lens receiving groove and the opposite edge reversely or forwardly bent to form a channel opening in the direction of the groove, of a non-metallic fitting for the protector having an attaching portion fitting and secured within the forwardly opening channel of the rim and having the main portion of the fitting extending in a direction away from the lens receiving groove and disposed to fit between the metallic rim and the face of the wearer to prevent contact between the rim and face at the point of attachment of the fitting.

4. In an eye protector, a metallic strip having a V-shaped grooved portion at one edge thereof engaging the lens bevel and having at the opposite edge a reversely bent portion forming a channel opening toward the lens groove, a second portion of the mounting fitting within the channel and secured therein by crimping of the metallic sides, said material being reversely bent to form a double seam joint, and means for securing the parts together to maintain the double seam joint.

1,221,978. TIRE-PROTECTOR. HARRY R. DECKER, Houston, Tex. Filed June 10, 1912. Serial No. 702,687. (Cl. 152—16.)



A tire protector composed of a thin, flexible covering secured over the tread of a tire casing and having a plurality of orifices therethrough arranged in circumferential and transverse rows, a plurality of plugs, each having a cylindrical body and a thin, flat base, polygonal in shape, said bases contacting with one another and forming a continuous layer around the tread of the casing, a thin fabric interposed between said bases and the tread of the casing to which said bases are secured, the bodies of said plugs extending through said orifices and beyond the covering, the projecting end of each plug being enlarged and formed into a head.

1,221,979. PROCESS OF MAKING FERTILIZER FROM PEAT. JOHN JOSEPH ARTHUR DE WHALLEY, Lee, England, assignor to The Molassine Company Limited, East Greenwich, England. Filed Mar. 2, 1916. Serial No. 81,687. (Cl. 71—6.)

1. A peat product for use in horticulture and agriculture consisting principally of dark peat which has been treated with an amount of ammonia which is at least sufficient for neutralizing the free acids in the peat, and an ingredient adapted to prevent production of acidity in the mass during use substantially as set forth.

2. A peat product for use in horticulture and agriculture consisting principally of dark peat containing an amount of ammonia at least sufficient for neutralizing the free acids, and in addition of calcium carbonate substantially as set forth.

3. A peat product for use in horticulture and agriculture consisting principally of dark peat treated with an amount of ammonia at least sufficient for neutralizing the free

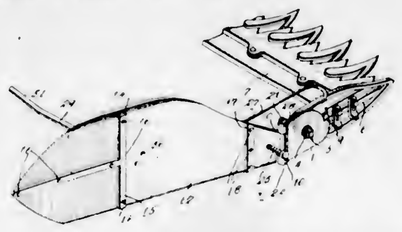
acids, an addition of calcium carbonate adapted to prevent production of acidity during use, and a small quantity of a mineral body substantially as set forth.

4. Process of manufacturing a peat product for use in horticulture and agriculture consisting in treating peat with ammonia in at least sufficient quantities only for neutralizing the free acids, mixing calcium carbonate with the treated mass substantially as set forth.

5. Process of manufacturing a peat product for use in horticulture and agriculture consisting in mixing with the peat an ammonium salt and a reagent adapted to react with said salt for the production of ammonia, said salt and reagent being in predetermined quantities for producing an amount of ammonia which is at least sufficient for neutralizing the free acids in the peat, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,221,980. DIVIDING-BOARD FOR MOWING-MACHINES. ADOLPHUS A. DORSEY, Newport, Neb. Filed Jan. 4, 1916. Serial No. 70,235. (Cl. 56—30.)



1. In a dividing board of the class described, the combination of a body, said body being formed of sheet metal and provided with a longitudinally extending horizontal flange at its lower portion, said body being provided with a bent over portion at its upper portion, reinforcing strips carried upon said body, whereby said reinforcing strips, said bent over portion and said flange will efficiently reinforce said body for preventing the dividing board from becoming bent or losing its correct shape when in use.

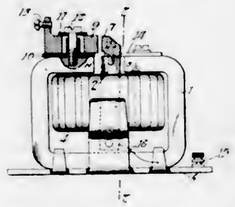
2. In a device of the class described, the combination of a finger bar, a casting pivotally mounted in a vertical plane upon the head of said finger bar, a dividing board pivotally secured to said casting, means for supporting said dividing board upon said casting, means for normally retaining said dividing board in a set position, and a U-shaped guard finger provided with an eye secured to said bolt, said guard finger extending above the upper portions of said casting, and having its free end extending inwardly toward the inner portions of said dividing board whereby the pivoted portions of said dividing board when the same is secured to said casting will be protected from falling grain since this guard finger will direct falling grain inwardly upon the portion of a field which has just been mowed and prevent the same from becoming entangled in the pivoted portions of said dividing board.

3. In a device of the class described, the combination of a dividing board, means for securing said dividing board to the finger bar of a mowing machine, a supporting block fixedly mounted upon said dividing board and provided with a recess, a clamp fixedly mounted upon said dividing board in proximity to said supporting block, a guard arm passing through said clamp and extending into the recess of said supporting block, said guard arm provided with an annular groove, a set screw passing through said clamp and into said annular groove whereby said guard arm will be held against displacement and retained in an adjusted set position.

4. In a device of the class described, the combination of a casting, means for pivotally mounting said casting in a vertical plane upon a finger bar head, means for limiting the pivotal movement of said casting in one direction, eyes formed upon the rear end of said casting in spaced relation with respect to each other, a dividing board having a sleeve formed upon its forward end, said sleeve fitting between said eyes, a bolt passing through said eyes and sleeve for pivotally supporting said dividing board, an L-shaped bracket formed upon said casting intermediate said eyes, said bracket being spaced from the inner surface of said dividing board, said board having an opening opposite said bracket, a stem carried by said bracket and extending through said opening, two coil springs carried by said stem one bearing upon each side of said dividing board for yieldably retaining said board in a set position.

5. In a device of the class described, the combination of a finger bar, a casting pivotally mounted in a vertical plane upon said finger bar, a dividing board secured to said casting, a bolt carried by said casting and engaging said dividing board for pivotally supporting said dividing board, means for yieldably retaining said dividing board in one position, and means carried by said bolt and being spaced from the connecting portion of said casting and dividing board so as to protect the same from falling grain.

1,221,981. ALTERNATING-CURRENT RECTIFIER. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Dec. 30, 1911. Serial No. 668,611. (Cl. 175—365.)



1. In an alternating current rectifier, means for producing magnetic flux, a plurality of armatures adapted to vibrate in the field of said flux and provided with contacts for opening and closing a circuit, the said contacts being connected in series when in circuit-closing position, and an actuating coil surrounding said armatures, substantially as described.

2. In an alternating current rectifier, a plurality of armatures provided with contacts for opening and closing a circuit, the said contacts being connected in series-parallel when in circuit closing position, and an actuating coil for the armatures, substantially as described.

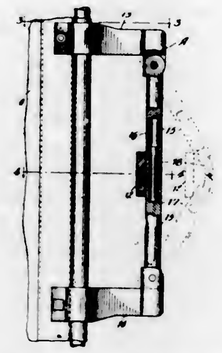
3. In an alternating current rectifier, a plurality of armatures capable of independent vibration and provided with contacts for opening and closing a circuit, the said contacts being connected in series-parallel when in circuit closing position, and an actuating coil for the armatures, substantially as described.

4. In an alternating current rectifier, a plurality of armatures provided with contacts for opening and closing a circuit, the said contacts being connected in series-parallel when in circuit closing position, and an actuating coil surrounding the armatures, substantially as described.

5. In an alternating current rectifier, a plurality of armatures capable of independent movement and provided with contacts for opening and closing a circuit, the said contacts being connected in series-parallel when in circuit closing position, and an actuating coil surrounding the armatures, substantially as described.

1,221,982. VESTIBULE-CURTAIN FOR RAILWAY-CARS. PLATO G. EMERY, Chicago, Ill. Filed Sept. 22, 1914. Serial No. 862,898. (Cl. 105—266.)

1. The combination of a curtain mounted on the spring-actuated roller, of a handle applied to the free edge of said curtain, said handle including a pivoted member having a socket therein adjacent to and in alinement with another socket of the handle and an element extending between said sockets preventing said pivoted member from swinging under normal pulls on the handle but adapted to yield and permit said member to swing under excessive pull on the handle, substantially as specified.



2. A device of the character described including, in combination: a vestibule curtain mounted on a spring-actuated roller; and a handle applied to the free edge of said curtain, said handle including two pivoted members having alined sockets at their free ends and an element within said sockets for preventing said pivoted members from swinging under normal pulls on the handle but adapted to yield and permit said members to swing and separate under excessive pull on the handle, substantially as specified.

3. A device of the character described including, in combination: a vestibule curtain mounted on a spring actuated roller; and a handle applied to the free edge of said curtain, said handle including a pivoted member and an element extending from the free end of said member engaging a part of the handle and preventing said member from movement under normal pulls but permitting said pivoted member to swing under excessive pull, substantially as specified.

4. A device of the character described including, in combination: a vestibule curtain mounted on a spring actuated roller; and a handle applied to the free edge of said curtain, said handle including two separable members and means connecting their free ends to retain the curtain in open position under normal pull and permitting the release and separation of said members under excessive pull on the handle, substantially as specified.

5. A device of the character described including, in combination: a vestibule curtain mounted on a spring actuated roller; and a handle applied to the free edge of said curtain, said handle including movable members separable to permit release of the curtain, adjacent edges of said members being connected in sufficient security to withstand normal pulls on the handle and permitting separation of said members under excessive pull on the handle, substantially as specified.

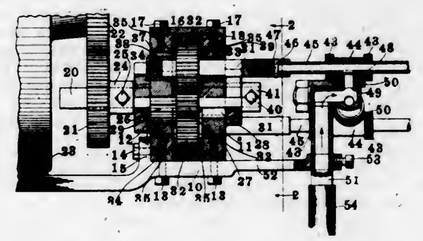
[Claim 6 not printed in the Gazette.]

1,221,983. FENCE-POST. LEWIS H. FELKER, Huron, S. D. Filed Oct. 27, 1915. Serial No. 58,204. (Cl. 256—52.)

A fence post formed of sheet metal and having flat faces, longitudinal series of outstruck apertured ears on one of said faces, all of the apertures being in alinement, and a locking member extending along a straight line through the apertures in all of the ears, each end of the locking member being looped about the adjacent end ear and constituting means for engaging the upper and lower strands respectively of a fence fabric extending between the locking member and post, the terminals of the member being wrapped about the member and extended toward each other between the end ears.



1,221,984. TUBE-CLEANER. ALBERT F. FROUSSARD, St. Louis, Mo. Filed Dec. 23, 1914. Serial No. 878,675. (Cl. 83—64.)



1. In a tube cleaner, the combination with a driving shaft, of cleaner rods, means for adjusting said cleaner rods toward and away from said driving shaft, and gearing for driving said cleaner rods from said driving shaft.

2. In a tube cleaner, the combination with a driving shaft, of a plurality of cleaner rods arranged around said shaft and each adapted to enter a different tube, means for adjusting said rods radially toward and away from said driving shaft, and gearing communicating the movement from said driving shaft to said cleaner rods.

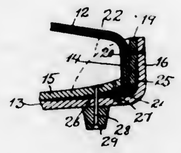
3. In a tube cleaner, the combination with a driving shaft, of a plurality of cleaner rods arranged around said driving shaft, means for adjusting said rods radially toward and away from said shaft, and a water distributing device, said device being provided with arms radially adjustable and communicating with said cleaner rods.

4. In a tube cleaner, the combination with a driving shaft, of a cleaner rod, one of said parts being provided with a plurality of gear wheels, means for shifting one of said parts longitudinally, a gear wheel on the other of said parts, and means for varying the distance between said parts.

5. In a tube cleaner, the combination with a driving shaft, of a plurality of cleaner rods, each being provided with a gear wheel, a plurality of gear wheels on said driving shaft, means for shifting said driving shaft longitudinally, and means for adjusting said cleaning rods toward and away from said driving shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,221,985. FOOT-BALL SHOE. DANIEL J. GOLDEN, Brockton, Mass., assignor to Walter T. Stall, Charles H. Dean, and Daniel J. Golden, Copartners doing business under the firm-name of Golden Sporting Shoe Company, Brockton, Mass. Filed Dec. 21, 1916. Serial No. 138,164. (Cl. 36—77.)



1. A foot ball shoe comprising an upper, a box toe having a flat forward end, an outer sole having a longitudinal extension bent up across the toe portion of the upper, a wedge piece interposed between the toe portion of the upper and the extension of the outer sole, and fastenings securing the outer sole extension, the wedge piece and the toe portions of the upper and box toe together.

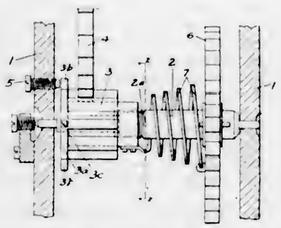
2. A foot ball shoe comprising an upper, a box toe having a flat forward end, an outer sole having a longitudinal extension bent up across the toe portion of the upper, a wedge piece interposed between the toe portion of the upper and the extension of the outer sole, and fastenings securing the outer sole extension, the wedge piece and the toe portions of the upper and box toe together, the outer sole being provided also with lateral extensions bent up and united to the ends of the longitudinal extension.

3. A foot ball shoe comprising an upper, a box toe having a flat forward end, an outer sole having a longitudinal extension bent up across the toe portion of the upper and the extension of the outer sole, fastenings securing the outer sole extension, the wedge piece and the toe portions of the upper and box toe together, and a flanged metal reinforcing piece applied to the inner surfaces of the outer sole and longitudinal extension.

4. A foot ball shoe comprising an upper, an outer sole having a longitudinal extension bent up across the toe portion of the upper, and fastenings securing the said extension to the toe portion of the upper, the outer sole being provided also with lateral extensions bent up and united to the ends of the longitudinal extension.

5. A foot ball shoe comprising an upper, an outer sole having a longitudinal extension bent up across the toe portion of the upper, fastenings securing the said extension to the toe portion of the upper, and a flanged metal reinforcing piece applied to the inner surfaces of the outer sole and longitudinal extension.

1,221,986. EQUALIZER FOR MAINSPRING-DRIVES. FERDINAND GUNDORPH, Portland, Oreg. Filed Nov. 12, 1914, Serial No. 871,651. Renewed Dec. 26, 1916. Serial No. 139,048. (Cl. 58—48.)



1. In combination with a driving member and a driven member, a pinion driven by said driving member, means for shifting said pinion bodily, a spring for driving said driven member connected therewith and with said pinion, and adapted to be intermittently tensioned by the turning of said pinion, and means for intermittently stopping said pinion.

2. In combination with a spring-driven driving member, a driven member, a second spring for driving said driven member, and means movable bodily longitudinally of its axis of rotation operated by said driving member for intermittently tensioning said second spring for driving said driven member.

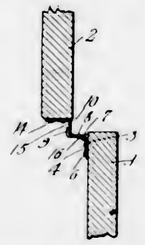
3. In combination with a driving gear adapted to be driven by a main spring, an escape-wheel having an arbor threaded at one end, a second spring for driving said escape wheel, a pinion threaded to turn on said arbor driven by said driving gear and connected with said second spring for tensioning the same, and means for intermittently stopping and holding said pinion against movement circumferentially.

4. In a device of the character referred to, in combination, a driving gear, an arbor provided with a threaded portion and revolubly mounted, a pinion loosely threaded on said arbor and adapted to be driven by said driving gear, an escape-wheel secured to said arbor, a small spring secured to said escape-wheel and to the pinion and adapted to drive said escape-wheel, and means for intermittently stopping said pinion.

5. In a device of the character referred to, in combination, a main-spring-driven gear, an arbor revolubly mounted and provided with a threaded portion, a pinion loosely threaded on said arbor and meshing with said gear, said pinion having a plurality of stops arranged circumferentially thereof at a space apart, a driving spring attached at one end to said pinion and at its other end connected to drive said arbor, whereby said arbor is turned to move said pinion thereon, longitudinally thereof, and a stop adapted to be engaged by the stops on said pinion when said pinion is in one position longitudinally of said arbor, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

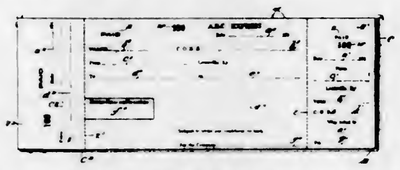
1,221,987. HINGE. JULIA L. HARRIS, Englewood, Tenn. Filed Aug. 24, 1916. Serial No. 116,682. (Cl. 16—104.)



1. A hinge comprising main and auxiliary members, the main member having an outstanding ledge provided with a tongue located in the same plane as the ledge, the tongue terminating in an angularly disposed finger; an auxiliary member provided with an offstanding flange having angularly disposed projections located on opposite sides of the tongue, the projections coöperating with the ledge to limit the opening movement of the hinge, and the finger coöperating with the flange to limit the lateral separation of the hinge members when the hinge is opened.

2. In a device of the class described, coöperating elements comprising a receptacle and a lid, one of said coöperating elements being provided with a main hinge member having an outstanding ledge equipped with a tongue located in the same plane as the ledge, the tongue terminating in an angularly disposed finger; the other of said coöperating elements being provided with an auxiliary member equipped with an outstanding flange having angularly disposed projections located on opposite sides of the tongue, the projections coöperating with the ledge to limit the opening movement of the hinge, the finger coöperating with the flange to limit the lateral separation of the hinge members when the hinge is open, the above specified hinge members being duplicated upon opposite sides of the receptacle and the lid, to permit a bodily upward lifting of the lid, and to permit a swinging opening of the lid in opposite directions.

1,221,988. MANIFOLD RECEIPT, WAY-BILL, AND DELIVERY-RECORD BOOK FOR EXPRESS COMPANIES. WILLIAM LINVEL HENRY, Louisville, Ky. Filed Oct. 14, 1912. Serial No. 725,629. (Cl. 11—19.)



1. A combined manifold receipt and record form, comprising a top sheet with studs at each end, the right end stub being detachable from the top sheet and the top sheet detachable from the left hand stub, a folded leaf lying beneath the top sheet, one of the folds being detachable from the other folds, the upper part of the folded leaf being shorter than the lower part of the folded leaf and indicia printed on the several sheets and stubs and registering when the sheets and stubs are super-posed.

2. A combined manifold receipt and record form, comprising two sheets, each sheet composed of similar divisions with printed indicia on each division registering with printed indicia on the opposing divisions, the lower sheet having two leaves, the upper one of which is detachable from and shorter than the lower one so that it does not cover the left hand end division of the lower sheet.

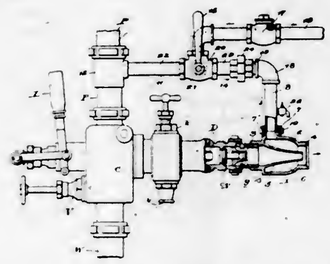
3. A combined manifold receipt and record form, comprising a top sheet, with a detachable stub at the right hand end and a stub at the left hand end from which the top sheet can be detached, the stub at the right end being gummed to form a sticker to be applied to a package, and a folded leaf provided with a left-hand stub and detachable from the left hand stub and lying beneath the top sheet, one of the leaves of the folded sheet being shorter than the other leaf so that it does not cover the left-hand stub.

4. A combined manifold receipt and record form, comprising a receipt form, a way-bill form and a delivery sheet form, the receipt form and the delivery form being provided with stubs at each end having appropriate registering indicia, and a way-bill form arranged to lie between the other forms and detachably secured to the delivery sheet portion and extending only to the left hand stub attached thereto.

5. A combined manifold receipt and record form, comprising a receipt form, a way-bill form and a delivery form being provided with stubs at each end having appropriate registering indicia, the way-bill form being arranged to lie between the other forms and being integral with and detachably secured to the delivery sheet form and extending only to the left hand stub attached thereto, the receipt form being provided with a driver's stub having appropriately designated spaces for the reception of the driver's record of the shipment.

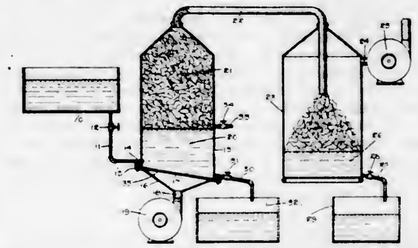
1,221,989. HEATING ATTACHMENT FOR FEED-WATER INJECTORS. EDWARD A. HILL, Norwalk, Ohio. Filed Dec. 6, 1915. Serial No. 65,316. (Cl. 122—442.)

In combination with a pipe for connection with a superheater unit of a boiler, of a valve-controlled water supply pipe, a valve-controlled steam supply pipe, an injector arranged between said pipes and having a delivery tube communicating therewith and provided with a check valve arranged in advance of said tube, an auxiliary injector connected at one end with said first mentioned injector in advance of said check valve and adapted to be connected at its other end with the boiler feed water tube, a steam supply pipe connecting said auxiliary injector with said first mentioned steam supply pipe above said first mentioned injector, a superheated steam supply pipe connected with said auxiliary injector connecting pipe and with the pipe for connection with the superheater unit of the boiler and having a check valve therein,



and a three way valve located at the junction of said superheated steam supply pipe with the auxiliary injector connecting pipe, whereby said superheated steam supply pipe or said second mentioned injector steam supply pipe may be cut off when desired or both of them, to provide for the supply to the boiler of feed water at three different temperatures.

1,221,990. PROCESS OF OBTAINING STARCH. HIRAM C. HOLDEN, Pittsburgh, Pa., assignor to Washburn Crosby Company, Minneapolis, Minn., a Corporation of Minnesota. Filed July 3, 1916. Serial No. 107,297. (Cl. 127—23.)



1. The process of separating impurities such as gluten and fibrous material from starch liquor which consists in causing the starch liquor to froth, thereby entangling said impurities in the froth, and removing the froth and said entangled impurities from the liquor by applying suction to the froth.

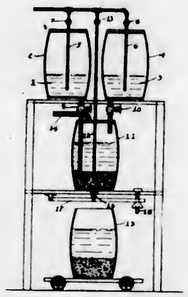
2. The process of separating impurities such as gluten and fibrous material from starch liquor which consists in causing the starch liquor to froth by forcing a blast of air through the same, thereby entangling said impurities in the froth, and applying suction to the froth to remove the same from the starch liquor and cause the froth to disintegrate.

3. The process of separating impurities such as gluten and fibrous material from starch liquor which consists in passing a multiplicity of fine streams of air into the starch liquor under pressure, thereby causing a voluminous froth and entangling said impurities therein, applying suction to the froth to remove the same from the starch liquor, and collecting said froth in a receptacle apart from the starch liquor.

4. The process of separating impurities such as gluten and fibrous material from starch liquor which consists in introducing the starch liquor into a receptacle, simultaneously introducing air under pressure through the

said receptacle to the starch liquor into the receptacle and withdrawing air by suction from said starch liquor, thereby causing a voluminous froth to be formed and the entanglement of the impurities therein and causing the removal of said froth with said impurities from said receptacle.

1,221,991. METHOD OF MAKING BATTERY-DEPOLARIZERS. MAJOR E. HOLMES, Lakewood, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Aug. 25, 1913. Serial No. 786,366. (Cl. 204—38.)

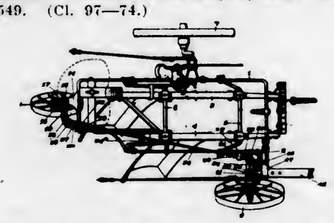


1. The process of preparing an oxid depolarizer, which consists in agitating pulverized carbon in an oxidizing solution and adding a metallic salt capable of reacting with said solution to precipitate an oxid in intimate contact with the carbon particles.

2. A process of preparing a battery depolarizer which consists in soaking pulverized conducting material in a solution of potassium permanganate, adding a solution of a manganese salt to precipitate manganese peroxid in intimate contact with the particles of said material, admitting steam prior to and during the precipitation, and removing the precipitate from the solution.

3. The process of preparing a battery depolarizer which consists in mixing together hot solutions of manganous chlorid and potassium permanganate with pulverized graphite whereby manganese peroxid is precipitated in intimate contact with the particles of the graphite, admitting steam prior to and during the precipitation, removing the precipitate from the mother liquor and calcining it to drive off the water of hydration.

1,221,992. SULKY-PLOW. OTIS W. HOWARD, Moline, Ill., assignor to Deere and Company, Moline, Ill., a Corporation of Illinois. Filed Aug. 9, 1915. Serial No. 44,549. (Cl. 97—74.)



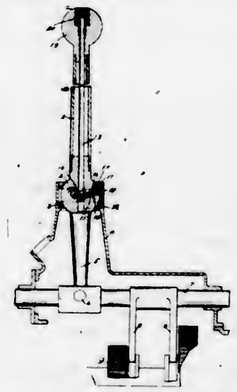
1. In a plow having front and rear caster wheels, crank axles on which said wheels are journaled and having vertical spindles rotatable in bearings on the plow, a laterally projecting loosely supported arm on the spindle of the front crank axle, a draft device connected to said arm, a similar arm rigidly mounted on said spindle and connected with the first mentioned arm, a laterally projecting arm rigidly mounted on the spindle of the rear crank axle, a steering rod connecting said arms to swing both wheels simultaneously, and means to rotate the steering rod to vary the angle of one wheel with the other irrespective of the draft device.

2. In a plow having front and rear caster wheels, crank axles on which said wheels are journaled and having vertical spindles rotatable in bearings on the plow, a laterally projecting arm rigidly mounted on the spindle of the front crank axle, a similar arm loosely supported on said spindle and connected with the first mentioned arm and having a draft device connected therewith, a laterally projecting arm rigidly mounted on the spindle of the rear crank axle, a steering rod connecting said arms to simultaneously swing said wheels in opposite directions, and means to rotate the steering rod to vary the angle of one wheel with the other irrespective of the draft device.

3. In a plow having front and rear caster wheels, crank axles on which said wheels are journaled and having vertical spindles rotatable in bearings on the plow, a laterally projecting arm having a sleeve rigidly mounted on the spindle of the front crank axle, a similar arm loosely supported on said sleeve and connected with the first mentioned arm, a draft device attached to said loosely supported arm, a laterally projecting arm rigidly mounted on the spindle of the rear crank axle, a steering-rod connecting the front and rear arms to swing both wheels simultaneously by movement of the draft device, and means to rotate the steering rod to vary the angle of one wheel with the other irrespective of the draft device.

4. In a plow having front and rear caster wheels, crank axles on which said wheels are journaled, said crank axles having vertical spindles rotatable in bearings on the plow, a laterally projecting arm rigidly mounted on the spindle of the front crank axle, a similar arm loosely supported on said spindle, a draft device attached to the latter arm, a sleeve pivotally supported on the latter arm having a threaded surface, a traveler on said sleeve and having threaded engagement therewith, a link connecting said traveler with the first mentioned arm, an arm rigidly mounted on the spindle of the rear crank axle and having a steering rod connected with said arm, the steering rod projecting through said sleeve and adjustably connected thereto, said rod adapted to swing both wheels by operation of the draft device, and means to rotate the steering rod to vary the angle of one wheel with the other irrespective of the draft device.

1,221,993. LOCK MECHANISM FOR AUTOMOBILES. GEORGE C. JENSEN, Oakland, Cal. Filed Sept. 21, 1916. Serial No. 121,381. (Cl. 70—90.)



1. In combination with a lever having a stationary fulcrum member, a longitudinally disposed member within said lever adapted for manual lineal movement to operative position and for automatic lineal movement in a reverse direction to inoperative position, devices associated with the lower end of said lineally movable member and adapted to be moved transversely of the lever into operative position by the movement of said member into operative position, said devices when in operative position projecting beyond said lever and engaging directly with said stationary fulcrum member to prevent movement of said lever, lock controlled means for retaining said lineally movable member in operative position, and means for automatically returning the same to operative position on the release of said locking means.

2. In combination with a movable lever having a stationary fulcrum member, a longitudinally disposed member having lineal sliding movement within said lever, devices movable transversely of said lever and associated with the lower end of said lineally movable member and adapted to be actuated by the movement thereof to project beyond the same and to engage directly with said stationary fulcrum member to prevent movement of said lever, said fulcrum member concealing the projecting portions of said devices, lock controlled means for retaining said lineally movable member in operative position and means for restoring said lineally movable member to normal position on the release of said locking means.

3. In combination with a movable lever and an associated stationary member, a longitudinally disposed rod positioned within said lever and adapted for lineal movement therein, said rod carrying an inclined face, a transversely movable member positioned within said lever and having its inner end positioned for engagement by the inclined face of said lineally movable rod, means carried by the stationary member associated with said lever for engagement by the outer end of said transversely movable member, and lock controlled means for retaining said lineally movable rod in operative position.

4. In combination with a movable lever fulcrumed for universal swinging movement within a substantially spherical socket, a longitudinally disposed rod carried within said lever and adapted for lineal movement therein, said rod having a tapered lower end, a transversely movable pin carried within said lever in the region of the fulcrum thereof, said pin having its inner end abutting against the tapered lower end of said lineally movable rod, and having its outer end adapted for projection beyond the surface of said lever for engagement with said socket member to prevent movement of said lever, and lock controlled means for retaining said lineally movable rod in operative position.

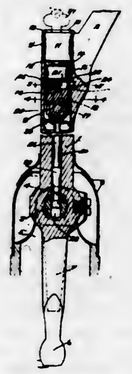
5. In combination with a lever provided with a substantially spherical portion fulcrumed for universal swinging movement within a substantially spherical socket formed of two members one of which is in the form of a removable ring, locking devices carried within said spherical portion of said lever and adapted for movement laterally thereof into operative position to project beyond the surface of said spherical portion at a point beneath the under surface of said removable ring to engage directly with the socket member to lock said lever against all operative movement relatively thereto, and lock controlled means for retaining said locking devices in operative position.

[Claim 6 not printed in the Gazette.]

1,221,994. AUTOMOBILE LOCK MECHANISM. GEORGE C. JENSEN, Oakland, Cal. Filed Oct. 31, 1916. Serial No. 128,706. (Cl. 70—90.)

1. In combination with a movable lever and an associated stationary member; a lineally movable member, within said lever, adapted to engage said stationary member for locking the lever thereto; a latch member carried by said lineally movable member for automatically retaining the same in locking position by engagement with said lever and rotatably mounted lock controlled means capable of movement relative to said latch for releasing the same.

2. In combination with a movable lever and an associated stationary member; a lineally movable member, within said lever, adapted to engage said stationary member for locking the lever thereto; a transversely movable latch member carried by said lineally movable member and provided with a beveled face for automatically retaining the same in locking position; and lock controlled means capable of movement to engage said face for engaging and releasing said latch member.



3. In combination with a fulcrum member and a lever carried thereby and adapted for movement relative thereto; a lineally movable member associated with said lever and adapted to engage said fulcrum member to lock said lever thereto; a latch member carried by said lineally movable member for retaining the same in locking position, and rotatable lock controlled means for releasing said latch member.

4. In combination with a fulcrum member having a socket, a lever carried by said fulcrum member and adapted for movement relative thereto; a lineally movable bolt associated with said lever and adapted to enter said socket to lock said lever to said fulcrum member; a transversely movable latch member carried by said bolt for retaining the same in locking position; an axially rotatable lock controlled means carried by said lever for releasing said latch member.

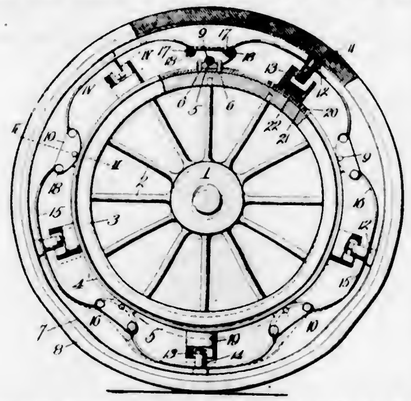
5. In combination with a fulcrum member, and a lever carried thereby and adapted for movement relative thereto; a lineally movable member associated with said lever and adapted to engage said fulcrum member to lock said lever thereto; a latch member carried by said lineally movable member for retaining the same in locking position; and rotatable lock controlled means surrounding said lineally movable member and through which said latch extends for releasing said latch member.

[Claims 6 and 7 not printed in the Gazette.]

1,221,995. RESILIENT WHEEL. WILLIAM W. JONES, Maryville, Mo., assignor of one-fifth to Roy E. Gearhart and one-fifth to Fleming Carpenter, Maryville, Mo. Filed Sept. 2, 1915. Serial No. 48,720. (Cl. 152—32.)

A resilient wheel, comprising an inner member and an outer member surrounding the inner member, bolts extending radially inward from the outer member at equidistant points, collars secured on said bolts and bearing against the inner face of the said outer member, outwardly bowed springs fitting midway their length upon said bolts and against said collars, nuts secured on the inner ends of said bolts, washers on the bolts and clamped by said nuts against said springs to clamp the same against the inner ends of said collars, bearing blocks secured on the said inner member at the circumferential surface thereof, rock frames mounted on said blocks and secured at their opposite ends to the adjacent ends of adjacent springs, socket members secured to the inner member and receiving the said nuts and the inner ends of the said bolts and washers; the sockets being elongated circumferentially to

accommodate limited circumferential movement of the said inner member independent of the said outer or sur-



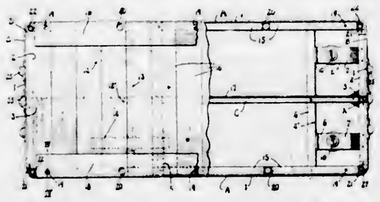
rounding member, and rubber buffers secured in said sockets to receive the impact from the inner ends of the said radial bolts and the nuts thereon.

1,221,996. CLASP. JULIUS KAHN, Jersey City, N. J., assignor to Pacific Novelty Company, New York, N. Y., a Corporation of New York. Filed Oct. 16, 1916. Serial No. 125,863. (Cl. 132—22.)



A clasp having a flat member, said member being bent upon itself at one end to form a loop, a recess formed in the upper edge of said loop, the flat member being bent upon itself at its other end to form a locking tongue for engagement with the recess, said tongue being twisted so that its flat sides are vertical, a hump formed on the upper edge of said tongue and a plurality of teeth formed in said hump.

1,221,997. TRUCK. FRANK G. KOEHLER, St. Louis, Mo. Filed Mar. 16, 1916. Serial No. 84,603. (Cl. 21—65.)



1. A truck having a frame including a pair of side sills and a pair of end sills all of which are formed by a single angle bar bent to form a single rectangular marginal frame member, a longitudinal sill connecting said end sills, and transverse members connecting said side sills at points between said end sills.

2. A truck having a frame including a pair of side sills and a pair of end sills all of which are formed by a single angle bar bent to form a single rectangular marginal frame member, said single angle bar having a vertical flange forming the outer edge of the frame and a horizontal flange extending inwardly from the lower edge of said vertical flange, a longitudinal center sill connecting said end sills, the ends of said longitudinal center sill being connected to said horizontal flange, and transverse members connecting said side sills, the ends of said transverse members being secured to said horizontal flange.

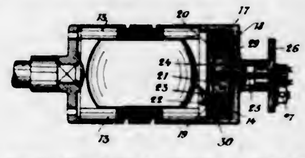
3. A truck having a frame including side and end sills, a transverse frame member parallel with said end sills, bearing members connecting said transverse frame member to one of said end sills, and a wheel-carrying device fitted to each of said bearing members.

4. A truck having a frame including side and end sills, each of said end sills being provided with a horizontal flange, a transverse frame member parallel with said end sills, said transverse frame member having a vertical flange, bearing members connecting the vertical flange of said transverse frame member to the horizontal flange of one of the end sills, and a wheel carrying device fitted to each of said bearing members.

5. A truck having a frame including side and end sills, a longitudinal sill parallel with said side sills, side and intermediate bearings secured to said side and intermediate sills, an axle fitted to said bearings, and wheels carried by said axle.

[Claims 6 to 12 not printed in the Gazette.]

1,221,998. ELECTRICAL CONDENSER FOR IGNITION-CURRENT GENERATORS. FRANZ KRATZ, Stuttgart, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany. Filed Jan. 30, 1914. Serial No. 815,478. (Cl. 123—149.)



1. The combination with an ignition current generator, of a condenser having two electrodes insulated from each other and projecting individually on the two lateral sides of the condenser, and electrical conducting members positioned on opposite sides of the condenser and having flat surfaces engaging the oppositely projecting electrodes thereof.

2. The combination with an ignition current generator, of a condenser having two electrodes insulated from each other and projecting individually on the two lateral sides of the condenser, the outer and inner surfaces of the condenser being of oval form, and electrical conducting members positioned on opposite sides of the condenser and having flat surfaces engaging the oppositely projecting electrodes thereof.

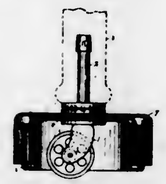
3. The combination with an ignition current generator having a cover with an internal recess, and a condenser mounted in said recess and having two electrodes insulated from each other and projecting individually on the two lateral sides of the condenser, of an insulated plate in contact with the electrode of the condenser which projects on one side thereof, a nut within the core of the condenser elastically connected to said plate, an insulated interrupter contact, and a bolt passing through said contact and engaging said nut whereby said plate will be pressed against the condenser to force the electrode projecting on the other side thereof into electrical contact with the wall of said recess.

4. The combination with an ignition current generator having a cover with an internal recess, and a condenser mounted in said recess and having two electrodes insulated from each other and projecting individually on the two lateral sides of the condenser, of an insulated plate in contact with the electrode of the condenser which projects on one side thereof, a nut within the core of the condenser, said plate having an elastic tongue which is secured to said nut, an insulated interrupter contact, and a bolt passing through said contact and engaging said nut whereby said plate will be pressed against the condenser to force the electrode projecting on the other side thereof into electrical contact with the wall of said recess.

5. The combination with an ignition current generator having a cover with an internal recess, and a condenser mounted in said recess and having two electrodes insulated from each other and projecting individually on the two lateral sides of the condenser, of an insulated plate in contact with the electrodes of the condenser which projects on one side, and a spring plate insulated from the insulated plate and designed to press the insulated plate into contact with the condenser so as to force the other electrode of the condenser into contact with the wall of said recess, said spring plate being connected to the cover by a bayonet joint; substantially as described.

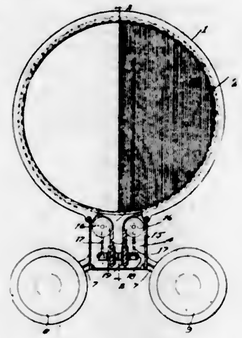
[Claims 6 to 10 not printed in the Gazette.]

1,221,999. INSECT-GUARD. RICHARD F. KREITER, Houston, Tex. Filed Aug. 31, 1915. Serial No. 48,319. (Cl. 45—15.)



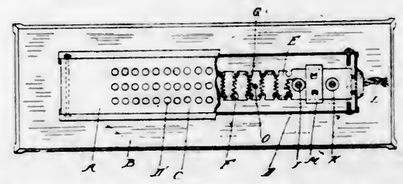
The combination with a supporting leg, of a horizontal plate, two annular flanges spaced apart and depending therefrom, one within the other, a cup shaped member attached to said leg and whose rim projects up between said flanges and the free edge of which is spaced from the plate, the free edge of the inner flange extending nearly to the bottom of the cup shaped member.

1,222,000. INDICATOR FOR VEHICLES. CARL R. KRONE, Oakland, Cal. Filed July 19, 1915. Serial No. 40,649. (Cl. 40—70.)



A signaling device for vehicles comprising a relatively narrow casing having a metallic semicircular colored face portion and a circular signal member disposed behind said face plate for rotary movement, means for supporting said signal comprising a forwardly projecting part engaging the center thereof and secured to the rear portion of the casing, the said signal member having one half of its area colored to correspond with the color of the semicircular face portion, the other half thereof when exposed producing with the colored face plate a contrasting whole, and means for moving the signal member upon its support whereby the same forms with the colored face portion a solidly colored figure, for the purpose described.

1,222,001. ELECTRICAL HEATING UNIT. ROBERT KUHN and ARCHIE OAKES, Detroit, Mich., assignors to Frank Kuhn, Detroit, Mich. Filed July 9, 1914. Serial No. 849,939. (Cl. 219—22.)



1. An electrical heater comprising an insulator strip having notched opposite edges, a metallic reinforcement secured to said strip and extending longitudinally on one side thereof, and a register looped back and forth across the opposite side of said strip from the reinforcement with the bends of the loops engaging said notches and extending beneath the portions intermediate the same.

2. An electrical heater comprising an insulator strip having a metallic reinforcement of lesser width extending longitudinally on one side thereof, the opposite edges of said strip being notched, and a resistor looped back and forth upon the opposite side of said strip from the reinforcement with the bends of the loops extending through said notches and beneath the portions intermediate the same.

3. An electrical heater comprising an insulator strip having notched opposite edges, a metallic reinforcement of lesser width secured to said strip and extending longitudinally and centrally on one side thereof, and a resistor formed of a continuous coil looped back and forth across the opposite side of said strip from the reinforcement with the bends of the loops passing through said notches and beneath the ends of the portions intermediate the same.

4. An electrical heater comprising an insulator strip having notched opposite edges, a metallic reinforcement of lesser width extending centrally and longitudinaly of said strip on one side thereof, a resistor formed of a continuous coil looped back and forth across the other side of said strip from the reinforcement with the bends of the loops passing through said notches, terminals connected to one end of said strip, and a return-connection from one end of the resistor to the terminal adjacent to the opposite end thereof.

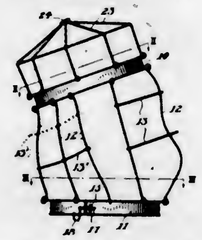
5. An electrical heater comprising an insulator strip having notched opposite edges, a resistor formed of a continuous coil looped back and forth around the notched edges and extending centrally across said strip on one side only, and a reinforcing member positioned on the opposite side of said strip and spaced from the edges thereof a sufficient distance to avoid contact with the resistor.

1,222,002. BASE-BALL MASK. JOSEPH LAJCAK, Erie, Colo. Filed May 29, 1916, Serial No. 100,586. Renewed Mar. 7, 1917. Serial No. 153,166. (Cl. 2—193.)

1. A head mask comprising an upper and a lower band, a wire dome carried by said upper band, upright bars connecting the two bands with the bars at the rear of the mask of less length than the bars at the front thereof, transverse bars carried by the said upright connecting bars, the transverse bar carried by the rear upright connecting bars being shiftably arranged thereon, the upper band being of split formation, wire and socket connections for the end of said upper band, the said lower band being formed in two portions hinged together, and fastening means for securing the ends of said lower band together.

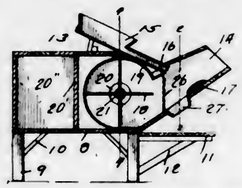
2. A head mask comprising an upper split band and a lower split band, the upper band being tilted upwardly

at the front thereof, upright bars connected at their ends to said bands, means for securing the ends of the respective bands together, transverse bars carried by the upright



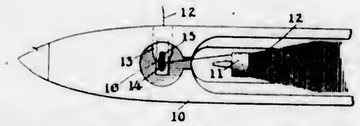
bars at the front of the mask, and a transverse bar slidably mounted on the upright bars at the rear of the mask.

1,222,003. DEVICE FOR STRIPPING THE LEAVES FROM FRUIT. CHARLES E. LANNIN, Old Mission, Mich. Filed Nov. 15, 1915. Serial No. 61,600. (Cl. 130—17.)



In a device of the type set forth, the combination with a casing, of an air drum arranged in said casing, an air inlet in said casing, comunicating with said drum, an air outlet hood connected to said drum, a fan blower mounted in said drum, operable means on said casing for driving said fan blower, a hopper arranged on said casing, said hood having an opening adjacent one end of said hopper and adapted for the passage of material therethrough, and having an outlet opening, a screen positioned in said hood between the outlet opening and the drum and clear of the path of fruit passing from the hopper, and a pad of soft material fixed to the bottom of the outlet hood and projecting therenbove at the edge of the first-mentioned opening remote from the drum.

1,222,004. GUIDE-EYE FOR SHUTTLES. JOSEPH N. LE VASSEUR-BELISLE, Worcester, Mass. Filed Feb. 26, 1916. Serial No. 80,555. (Cl. 139—46.)



In a shuttle, an elongated substantially cylindrical guide eye having a plurality of openings therein, wool or other suitable material secured within said openings, said material extending into or engaging the opening through which the weft passes.

1,222,005. TOY. ALFRED L. LOOMIS, Tuxedo Park, N. Y. Filed July 22, 1915. Serial No. 41,219. (Cl. 46—56.)

1. A toy having two spindles and means rotating the same, a cord forming a bight and having one of its ends attached to one of said spindles and its other end to the other of said spindles and arranged to wind up upon one of said spindles while unwinding from the other, and a racer attached in the bight of said cord.

2. A toy having two spindles and means rotating the same, a cord forming a bight and having one of its ends attached to one of said spindles and its other end to the other of said spindles and arranged to wind up upon one of said spindles while unwinding from the other, a racer attached in the bight of said cord, and spring means attached to said racer and tending to draw said cord tight.



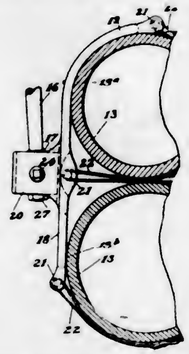
3. A toy having a relatively large spindle and a relatively small spindle and means for rotating said spindles, a cord forming a bight and having one of its ends attached to one of said spindles and its other end attached to the other of said spindles and arranged to wind up upon one of said spindles while unwinding from the other, a racer attached in the bight of said cord, and spring means attached to said racer tending to draw said cord tight.

4. A toy having a relatively large spindle and a relatively small spindle, and means for rotating said spindles so that the peripheral velocity of the small spindle is equal to or slightly greater than the peripheral velocity of the large spindle, a cord forming a bight and having one of its ends attached to one of said spindles and its other end to the other of said spindles and arranged to wind up upon one of said spindles while unwinding upon the other, a racer attached in the bight of said cord, and spring means attached to said racer for drawing said cord tight.

5. A toy having a plurality of belts stretched between rotatable drums, a plurality of racers resting upon said belts, two spindles and means for rotating the same, a plurality of cords each having one of its ends attached to one of said spindles and its other end attached to the other of said spindles, and having a bight passing around a portion of each of said racers.

[Claims 6 to 18 not printed in the Gazette.]

1,222,006. MOTOR-VEHICLE. ALLEN LOOMIS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 25, 1912. Serial No. 727,801. (Cl. 224—29.)



1. A tire bracket comprising a supporting member having a trunnion, a tire holding member, and an eccentric piece connecting said tire holding member to said trunnion.

2. A tire bracket comprising a supporting member having a trunnion, a tire holding member having a cylindrical part surrounding said trunnion, and an eccentric bushing between said trunnion and said cylindrical part.

3. A tire bracket comprising a supporting member having a trunnion, a tire holding member having a cylindrical part surrounding said trunnion, and a bushing mounted eccentrically on said trunnion and supporting said tire holding member by said cylindrical part.

4. A tire bracket comprising a supporting member having a trunnion, a tire holding member, and an eccentric bushing connecting said members, said bushing being also mounted diagonally on said trunnion.

5. A tire bracket comprising a supporting member, a tire holding member thereon having two adjacent tire contacting faces for a pair of tires arranged side by side, and a connection between said supporting member and said tire holding member at the middle of the latter for adjusting said tire holding member to move one of said faces relatively closer to the center of the tires than the other.

[Claims 6 to 13 not printed in the Gazette.]

1,222,007. CABLEWAY. CHARLES MCGUIRE, Seattle, Wash. Filed May 29, 1916. Serial No. 100,600. (Cl. 104—133.)



1. A cableway system comprising a two part trackway cable, anchorages for the ends of said cable, elevated supports spaced intermediate the ends of the cable, and cable supports each comprising an arm suspended from an elevated support and a bar pivoted upon the lower ends of said arm to swing in a vertical plane and recessed for supporting engagement with the cable from beneath.

2. A cableway system comprising a two part trackway cable, anchorages for the ends of said cable, elevated supports spaced intermediate the ends of the cable, and cable supports each comprising an arm suspended from an elevated support and having a transversely extending head provided with a horizontally projecting pivot pin at each end, and a bar pivoted upon each pin and having a recessed upper surface adapted to receive a cable, and means for limiting the pivot action of said bars within small angles.

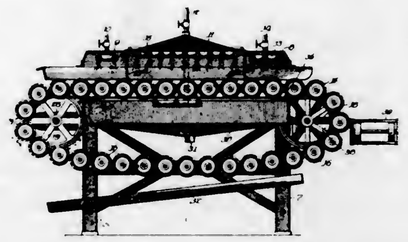
3. A cableway system comprising a trackway cable having adjacent and parallel outward and inward runs, elevated supports for the ends of the cableway, elevated supports spaced intermediate said end supports, cable suspending means comprising a bar suspended from said intermediate elevated supports and having transversely and horizontally extending pivot pins, a bar pivoted upon said pins at each side the suspending bar and having a longitudinal cable receiving groove in its upper edge and a cableway carriage having two upwardly extending arms and sheaves journaled on the inner sides of said arms and adapted to travel on the cableway.

4. A cableway system comprising a trackway cable having adjacent and parallel outward and inward runs, anchorages for the ends of the cableway, a carriage having two sets of wheels adapted to travel on the two parts of the cableway, elevated supports spaced intermediate the ends of the cableway, cable supports suspended from said elevated supports, said cable supports and the carriage having, one two arms spaced outside the cables and the other a central bar extending between the cables, and two bars rockingly pivoted upon the cable supports and longitudinally grooved to form sets for receiving the cables.

5. A cableway system comprising elevated head and tail supports, a trackway cable fixed by one end to the head support, a sheave on the tail support through which the cable passes, a sheave on the head support through which the other end of the cable passes, whereby two parallel runs are formed, and means for taking up and letting out the latter end of the cable, a carriage having running sheaves engaging both runs of the cable and means for traversing the carriage.

[Claim 6 not printed in the Gazette.]

1,222,008. CLEANER AND SCALDER. JOHN C. MCINTYRE, Hoopeston, Ill., assignor to Sprague Canning Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 11, 1914. Serial No. 876,648. (Cl. 146—14.)



1. In an apparatus for treating fruits and vegetables, the combination with means for delivering a plurality of jets of cleansing fluid, of an endless conveyer for carrying the fruit or vegetables through the jets, and means whereby the individual fruit or vegetable is caused to have its stem and bud ends alternately presented to the direct action of said jets during its travel.

2. In an apparatus for treating fruits and vegetables, the combination with means for delivering a plurality of jets of cleansing fluid, of an endless conveyer for carrying the fruit or vegetables through said jets, and means whereby the individual fruit or vegetable is revolved during its travel in a manner such that its stem end and bud end is each alternately presented to the direct action of said jets during its revolution.

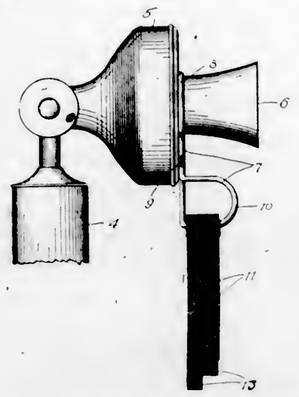
3. In an apparatus for treating fruits or vegetables, the combination with means for supplying softening media, of a conveyer for carrying the fruit or vegetables through said softening media, and said conveyer being provided with means whereby an attrition action is caused on the skin of the individual fruit or vegetable.

4. In an apparatus for treating fruits and vegetables, the combination with means for delivering a plurality of jets of softening fluid, of an endless conveyer for carrying the fruit and vegetables through the sprays, said conveyer being provided with means for causing the individual fruit or vegetable to revolve as it passes through the jets to present its stem and bud ends alternately to the direct action of said jets, said conveyer being also provided with means serving to cause an attrition on the skin of the fruit or vegetable.

5. In an apparatus for treating fruits and vegetables, the combination with means for delivering a plurality of jets of cleansing fluid, of an endless conveyer, a plurality of substantially parallel horizontal rolls carried by said conveyer, and means whereby said rolls are caused to rotate on their own axes during a portion of their travel, said jets being directed in planes substantially perpendicular to the axis of said rolls.

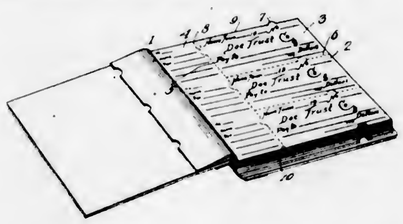
[Claims 6 and 7 not printed in the Gazette.]

1,222,009. TELEPHONE-DIRECTORY. THOMAS C. MCNEILL, Chicago, Ill. Filed June 24, 1911, Serial No. 635,159. Renewed Aug. 19, 1916. Serial No. 115,918. (Cl. 40—1.)



A device of the class described, comprising a ball formed of a single piece of wire, said ball being provided with a pair of substantially parallel side members, a loop arranged to engage a telephone mouthpiece, and a pair of arms connecting the ends of said loop with the upper ends of said side members, said loop being generally semicircular in shape but so arranged that the bottom opening through which the telephone mouthpiece is passed is of a width less than the greatest diameter of said loop, each of said side members being provided with a card carrying loop at the free end thereof, each of said card carrying loops consisting of two straight portions substantially perpendicular to said side members, a round portion connecting said two straight portions and a third straight portion lying in a right line continued from said side members and a plurality of index cards each having apertures in two corners for the insertion of said card carrying loops.

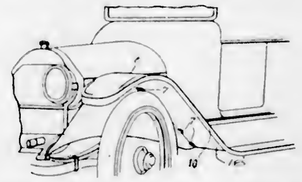
1,222,010. PRINTED INSTRUMENT. JAMES EDWARD MACK, Bay Brook, N. Y. Filed Dec. 16, 1915. Serial No. 67,194. (Cl. 11—13.)



1. In a cryptographic check system, a plurality of checks of a form to be used in a pack, each check having edge tabs, the location of each tab upon its edge representing a certain numerical value, there being not more than one tab upon each edge, the tabs of different checks being differently located upon the respective edges thereof, whereby the tabs of different checks denote different numerical values distinguishing the various individual accounts represented by the checks from each other.

2. In a cryptographic check system, a plurality of checks of a form to be used in a pack, each check having edge tabs, the location of each tab upon its edge representing a certain numerical value, there being not more than one tab upon each edge, the tabs of different checks being differently located upon the respective edges theeof, and the tabs of different values upon like edges of the checks when arranged in a pack being spaced equally from center to center thereof along such edges, whereby the tabs of different checks denote different numerical values distinguishing the various individual accounts represented by the checks from each other.

1,222,011. DETACHABLE LINING FOR VEHICLE MUD-GUARDS. THOMAS S. MAXWELL, Cleveland, Ohio. Filed May 16, 1916. Serial No. 97,943. (Cl. 21—23.)



1. A detachable lining for a mud guard, having an upper portion shaped to conform to and covering the under side of the mud guard, and having at its inner edge a depending extension, and provided with means for detachably connecting the same to the mud guard.

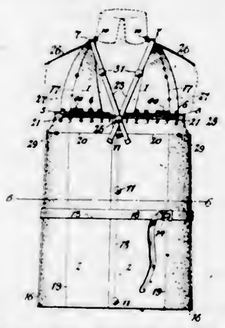
2. The combination with a mud guard having angular projections at one edge, of a detachable lining adapted to fit the under surface of the mud guard, and engageable with said projections at one edge, and having catches at the opposite edge to engage the mud guard.

3. The combination with a mud guard having inclined tongues at one edge thereof, and recesses at the opposite edge, of a detachable lining for the mud guard, engageable with said tongues at one edge and having catches engageable in said recesses at the opposite edge.

4. The combination with a mud guard having means at one edge to engage a lining, of a lining engaged at one edge with said means, and having spring catches at the opposite edge engageable with said mud guard to hold the lining in position.

5. The combination with a mud guard having inclined projections at one edge and a depending flange at the opposite edge, of a removable lining adapted to fit the under side of said mud guard and engageable at one edge with said projections, and having spring fasteners at the other edge engageable with said flange.

1,222,012. GARMENT-BALANCING DEVICE. AUGUSTUS MEAS, Niagara Falls, N. Y. Filed May 23, 1911. Serial No. 629,016. (Cl. 33—15.)



1. A device for balancing garments comprising a section adapted to rest on the shoulder, and a clasp adapted to be fitted and pivotally connected with said section at the shoulder point.

2. A device for balancing garments comprising two front sections adapted to be applied to the front side of the body of the person to be fitted, two rear sections adapted to be applied to the rear side of said body, a pivotal connection between each front section and the corresponding rear section, and adapted to be mounted in a fixed position at the adjacent shoulder point of the person, and a tie extending from one of said pivotal connections to the other.

3. A device for balancing garments comprising front and rear sections adapted to be applied to the front and rear sides of the body of the person to be measured, the opposing outer edges of the front and rear sections being parallel with the median line and at right angles to the depth of scye line, whereby the opposing outer edges of the companion front and rear sections will diverge more or less when applied to a conical body and enable the angle of the conical form of the body to be determined.

4. A device for balancing garments comprising two upper front sections provided with means for pivotally supporting the same at the shoulder points of the body of the person to be fitted, two upper rear sections provided with means for pivotally supporting the same on the body at said shoulder points, two lower front sections adapted to be connected with each other on the inner edges thereof and each slidably connected with one of the upper front sections along a horizontal line at the depth of scye, and two lower rear sections adapted to be connected with each other on the inner edges thereof and each slidably connected with one of the upper rear sections along a horizontal line at the depth of scye, the outer edge of each lower section being parallel with the median line and said median line and outer edge of each lower section being arranged at right angles to the depth of scye line thereof, whereby the opposing outer edges of the lower front and rear sections on the same side of the body will diverge when applied to a conical body and enable the angle of the conical form of the body to be determined.

5. A device for balancing garments comprising two upper sections provided with means for pivotally supporting the same at the shoulder points of the body of the person to be fitted, two lower sections which are adapted to be connected with each other and each of which is slidably connected with one of said upper sections so as to permit the same to be adjusted horizontally relatively to each other, and means for drawing the lower front and rear sections against the body to be measured comprising a belt passing around the front sections and having two sections which have their inner ends adjustably connected together while their outer ends are connected respectively with the rear sections.

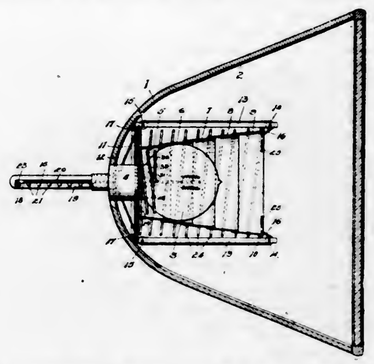
[Claims 6 to 14 not printed in the Gazette.]

1,222,013. AUTOMOBILE-HEADLIGHT DIMMER. FREDERICK H. MICHELSON, Denver, Colo. Filed Sept. 7, 1915. Serial No. 49,146. (Cl. 240—45.)

1. In an automobile head-light dimmer, the combination with an electric-light globe and a reflector, of a tubular collapsible dimmer and resilient means engaging said globe and said dimmer for holding the dimmer in position against the reflector.

2. In an automobile head-light dimmer, the combination with an electric-light globe and a reflector, of a tubular collapsible dimmer mounted to surround the rear portion of the globe when in a collapsed position, resilient means for holding the dimmer against the reflector and in position around the electric-light globe and means for retaining said dimmer in any desired extended position around the electric-light globe.

3. In an automobile head-light dimmer, the combination with an electric-light globe and a reflector, of a collapsible tubular dimmer, means for supporting said dimmer around the electric-light globe either in extended or collapsed position and in engagement with the reflector adjacent the rear of the electric-light globe, means for opening said dimmer into any desired extended position around the electric-light globe, means for holding said dimmer in any desired extended position around the globe and means for collapsing said dimmer and retaining the same in a collapsed position around the rear portion of the globe.

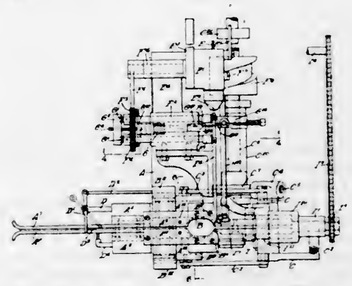


4. A head-light dimmer comprising a cup-like body consisting of a plurality of tapered rings, means for collapsing said body, and means for extending said body to any desired open position.

5. The combination with an electric-light globe and an automobile head-light reflector, of a head-light dimmer comprising a base having a central opening, an inner tapered ring secured to said base, said ring being adapted to be engaged by the electric-light globe for holding the base in engagement with the reflector for holding the dimmer in position, an outer tapered ring, and a plurality of intermediate tapered rings, said outer ring and said intermediate tapered rings being capable of being collapsed over the inner ring and adapted when in an extended position to retain said extended position until collapsed.

[Claims 6 to 31 not printed in the Gazette.]

1,222,014. MACHINE FOR WIRE-TYING BAGS. REGINALD R. MILLER, Chicago, Ill., assignor to Bates Valve Bag Company, Chicago, Ill., a Corporation of West Virginia. Filed Dec. 26, 1914. Serial No. 878,992. (Cl. 140—93.)



1. In a bag tying machine, means for puckering the open mouth of a bag, means for feeding out a wire and forming a head thereon, means for feeding out and cutting off the wire and forming a head on the other end thereof, means for feeding the blank thus formed to and around the puckered mouth of the bag crossing said ends and twisting them one on the other to tighten them on the bag.

2. In a bag tying machine, means for puckering the open mouth of a bag, means for feeding out a wire and forming a head thereon, means for feeding out and cutting off the wire and forming a head on the other end thereof, means for feeding the blank thus formed to and around the puck-

ered mouth of the bag, and twisting the two ends of the blank one on the other to tighten the tie on the bag.

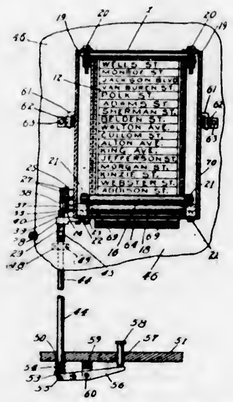
3. In a bag tying machine, means for puckering the neck of the bag, operating means for feeding wire, cutting it off, forming it, feeding it around the puckered neck of the bag and twisting it to tighten it, all by successive steps.

4. In a bag tying machine, a guide, means for puckering the neck of the bag, operating means for feeding wire, cutting it off, forming it, feeding it around the puckered neck of the bag and twisting it to tighten it, all by successive steps, and guiding means.

5. In a bag tying machine, a guide, means for puckering the neck of the bag, operating means for feeding wire, cutting it off, forming it, feeding it around the puckered neck of the bag and twisting it to tighten it, all by successive steps, and driving means, and means responsive to the passage of the bag along the guide for connecting said driving means with the operating means.

[Claims 6 to 9 not printed in the Gazette.]

1,222,015. STREET OR STATION INDICATOR. CHARLES W. MOORE, South Bend, Ind. Filed Feb. 15, 1915. Serial No. 8,435. (Cl. 40—99.)

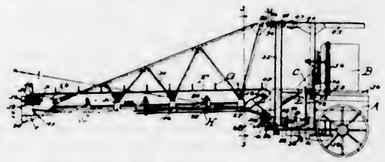


1. In a street or station indicator, the combination with a casing, an indicator apron, and rolls for supporting said apron, of a wheel connected with one of said rolls, an annular series of pins on said wheel, a vertically movable bar, a member swiveled to said bar, a pawl pivoted to said swiveled member and adapted to coöperate with the annular series of pins to propel the wheel carrying said pins, a double-ended spring secured to said swiveled member and engaging the pawl and the bar, whereby the pawl will be retained in operative relation to the wheel to drive the same in one direction or the other when the bar is raised, and means for raising said bar.

2. In a street or station indicator, the combination with a casing having an opening in its front, and an endless indicator apron movable past said opening, of rolls for supporting and guiding said apron, one of said rolls provided with means coöperable with the apron to move the latter, a pinion carried by said last-mentioned roll, a gear meshing with said pinion, an annular series of pins carried by said gear, a vertically movable bar, a single pawl adjustably mounted on said bar, said pawl adapted to enter between the pins on said gear and having a cam face to engage one of said pins to propel said gear, and means for moving said bar vertically for actuating the pawl to turn said gear in one direction or the other for actuating the apron in one direction or the other.

3. In a street or station indicator, the combination with a casing having an opening in its front, an endless indicator apron movable past said opening, supporting rolls for the apron, and a driving roll, of a pinion on the driving roll, a gear meshing with said pinion, an annular series of pins on said gear, a vertically movable bar, a pawl, a swivel mounting for said pawl attached to the upper end of said bar, said pawl coöperable with the annular series of pins to move the gear and the apron in one direction or the other, and a spring device attached to said swivel mounting and engaging said bar to normally prevent swiveling of the pawl, for holding said swiveled pawl in one or another position of adjustment to control the direction of movement of said gear and apron, and means for moving said pawl-carrying bar vertically.

1,222,016. APPARATUS FOR DISTRIBUTING CONCRETE. ALFRED D. MOSBY, Chicago, Ill., assignor to Marsh-Capron Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 18, 1915. Serial No. 2,890. (Cl. 193—8.)



1. In apparatus of the character described, the combination of a distributing trough consisting of trough sections spaced apart so as to provide discharge openings at intervals, trough like gates, and means for supporting the same either in position to close the openings between said trough sections or in an inclined position to permit the discharge of concrete through said openings, the edges of said gates remote from the point at which the concrete enters the trough being flush with the edges of the adjacent trough sections respectively when said gates are in closed position and the opposite edges of the gates overlapping the edges of the trough sections engaged thereby; said last-mentioned edges being adapted to assume a position under the trough when the gates are in their open position.

2. In apparatus of the character described, the combination of a distributing trough having a discharge opening, a trough like gate pivoted to the trough and provided on opposite sides with depending arms, a cross rod fixed to said arms, bell cranks pivotally mounted on opposite sides of said trough, and links connecting said cross rod and bell cranks all arranged so that by manipulation of the bell cranks the gates may be held either in an inclined position below said discharge opening or in position to close said opening.

3. In apparatus of the character described, the combination of a distributing trough having a discharge opening, a trough like gate pivoted to the trough and provided on opposite sides with depending arms, a cross rod fixed to said arms, bell cranks pivotally mounted on opposite sides of said trough, and links connecting said cross rod and bell cranks all arranged so that by manipulation of the bell cranks the gates may be held either in an inclined position below said discharge opening or in position to close said opening with the edge of the gate remote from the point at which the concrete enters the trough flush with the adjacent edge of the trough and the opposite edge of the gate overlapping the trough.

4. In apparatus of the character described, the combination of a distributing trough, a feed hopper at one end of said trough, means for conveying the material through said trough comprising an endless chain, buckets thereon adapted to move through said trough, and a deflecting member in the hopper which causes the material to enter the trough through the sides thereof.

5. In apparatus of the character described, the combination of a distributing trough, a feed hopper at one end of said trough, means for conveying the material through said trough comprising an endless chain, buckets thereon adapted to move through said trough, and a deflecting member in the hopper which causes the material to enter the trough through the sides thereof, said member formed with a curved surface along which the edges of the buckets move when picking up material entering said trough.

[Claims 6 to 10 not printed in the Gazette.]

1,222,017. TRIAL-FRAME. ARNOLD MOSELEY, London, England. Filed June 24, 1914. Serial No. 847,134. (Cl. 88—20.)



1. The combination with a trial frame, of a bracket carried thereby, having notches to receive lenses, a foot portion formed on the bracket and depending to provide a rest, an inclined spindle formed on the bracket and projecting forwardly and upwardly therefrom, and a friction wheel mounted on the spindle in position to engage a lens, said wheel having a tapered hub for frictionally and wedgingly engaging the lens resting thereagainst, the length of the foot of the bracket being such as to hold the wheel out of engagement with the support for the frame, substantially as described.

2. The combination with a trial frame, of an inclined spindle carried thereby, a friction wheel rotatably mounted on the spindle, and an abutment adjacent the wheel, whereby pressure on the upper portion of the wheel will cause the same to slide downwardly on the spindle into frictional locking engagement with the abutment.

3. An attachment for a trial frame, comprising a rest, an inclined spindle carried by the rest, a friction wheel mounted on the spindle comprising an actuating rim, and a taper hub, and a friction coating for the taper hub to prevent slipping of a member in engagement therewith.

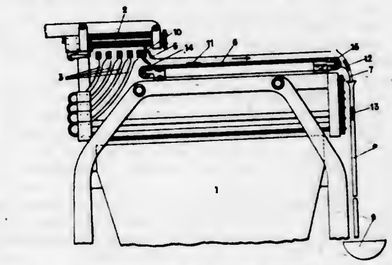
4. The combination with a trial frame, including a lens receiving guide and a spindle adjacent the guide, of a wheel rotatably mounted on the spindle and having a portion extending into the lens receiving space to engage the edge of the lens, and a friction coating for the wheel to prevent slipping of the lens when in engagement therewith.

5. The combination with a trial frame, of a bracket carried thereby and comprising a depending portion for engagement with a support, an inclined spindle integral with the bracket, a friction wheel rotatably mounted on the spindle and located out of engagement with the support, a bracket having a projecting portion above the spindle and disposed to frictionally engage and retard movement of the friction wheel on the spindle when the wheel is pressed toward the main portion of the bracket.

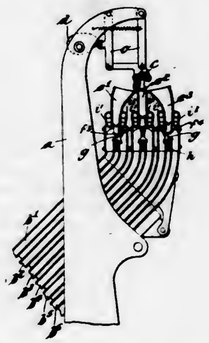
1,222,018. DISTRIBUTING MECHANISM OF TYPOGRAPHICAL COMPOSING-MACHINES. CARL MUEHLEISEN, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Apr. 14, 1915. Serial No. 21,421. (Cl. 199—34.)

1. In a typographical machine, the combination with a primary distributing mechanism adapted to separate matrices according to font, and receptacles for receiving the matrices separated by the primary mechanism, of a sorts-disposing mechanism adapted to dispose of matrices undistributed by the primary mechanism and including an independent receptacle located at a point distant from the distributing mechanism, and means for conveying the matrices to said distant receptacle comprising a conveyer and a chute interposed between the conveyer and the receptacle to receive the matrices from the conveyer and discharge them into the independent receptacle.

2. In a typographical machine, the combination with a primary distributing mechanism adapted to separate matrices according to font, receptacles for receiving the matrices separated by the primary mechanism, of a sorts-disposing mechanism adapted to distribute matrices undistributed by the primary mechanism and including an independent receptacle located at a point distant from the distributing mechanism, and means for conveying the matrices to said distant receptacle including a conveyer traveling in an approximately horizontal plane, and a vertically disposed chute interposed between the conveyer and the receptacle to receive the matrices from the conveyer and discharge them into the independent receptacle.



1,222,019. DISTRIBUTING MECHANISM OF TYPOGRAPHICAL COMPOSING-MACHINES. CARL MUEHLEISEN and CHRISTIAN AUGUSTUS ALBRECHT, Berlin, Germany, assignors to Mergenthaler Linotype Company, a Corporation of New York. Filed Nov. 25, 1916. Serial No. 133,449. (Cl. 199—40.)



1. In a typographical machine, the combination with a flat longitudinally channeled matrix magazine, a distributer, and a series of intermediate channels, one for each of those of the magazine, for guiding the distributed matrices endwise into the magazine, of means located in the intermediate channels for positively propelling the matrices therethrough.

2. In a typographical machine, the combination with a flat longitudinally channeled matrix magazine, a distributer, and a series of intermediate channels leading from the distributer to the corresponding channels of the magazine, and through which the matrices pass endwise by gravity from one to the other, of propelling means located in the channels and adapted to engage the matrices as they pass therethrough.

3. In a typographical machine, the combination of a magazine, a matrix distributer, a conductor for guiding the matrices on their edges in an endwise direction from the distributer to the magazine, and two continuously rotating bands arranged at opposite sides of the conductor to engage the matrices on their opposite edges as they pass to the magazine.

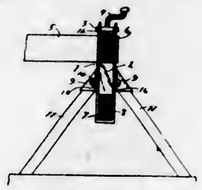
4. In a typographical composing machine, the combination with a plurality of matrix magazines and a cor-

responding plurality of different fonts of matrices, the matrices of different fonts having their feet of respectively different contour, of a matrix distributer, a series of channels or conductors to receive the distributed matrices and leading to the entrances of adjacent magazines, a movable tongue between the entrances of said adjacent magazines, capable of deflection in opposite directions to guide the distributed matrices into one or other of said magazines, and means on the tongue coöperating with the feet of the matrices to so deflect the tongue.

3. In a typographical composing machine, the combination with a plurality of matrix magazines and a corresponding plurality of different fonts of matrices, the matrices of different fonts having their feet of respectively different contour, of a movable tongue between the entrances of adjacent magazines, capable of deflection in opposite directions to guide the matrices into one or other of said magazines, means on the tongue coöperating with the feet of the matrices to so deflect the tongue, a channel conducting matrices to the entrances of adjacent magazines, and means in the channel adapted to positively propel the matrices therethrough.

[Claims 6 to 15 not printed in the Gazette.]

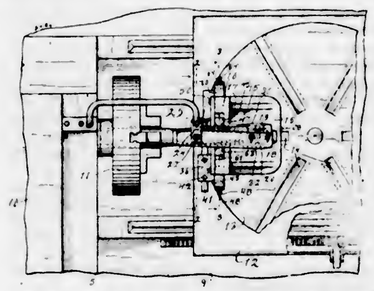
1,222,020. STREET-BARRICADE. FRANK W. MYERS, Owosso, Mich. Filed Oct. 30, 1916. Serial No. 128,590. (Cl. 256—64.)



1. In a street barricade, a body, sheet metal straps secured to said body to form a loop above, and a loop below the body, a clamping screw and clamping plate mounted in the upper end of the upper loop, a triangular socket secured to each side of the body, legs removably mounted in said sockets, and rails mounted in the loops.

2. In a street barricade, a wooden body, metal straps secured to the sides of the body to form loops above the body at right angles with each other, triangular sockets secured to the sides of the body, a clamping screw and a clamping plate secured together and mounted in the upper end of the metal forming the loops, legs removably mounted in the sockets, and means for securing the sockets and the straps firmly to the body.

1,222,021. LATHE TAPER ATTACHMENT. CHARLES NORDSTROM, Milwaukee, Wis. Filed Aug. 18, 1916. Serial No. 115,637. (Cl. 82—17.)



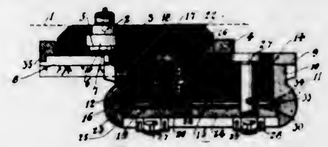
1. A lathe taper attachment comprising a movable support, a taper guide device slidably mounted thereon comprising a relatively fixed member and a pair of adjustable taper guide members, a tool holder slidably mounted on said support and operatively connected to one of said taper guide members, and a work-backing member slidably mounted on said support opposite to the tool holder and operatively connected to the other taper guide member.

2. A lathe taper attachment comprising a movable support, a taper guide device comprising a relatively fixed member and a pair of adjustable taper guide members, a tool holder movably mounted on said support and operatively connected to one of said taper guide members, and a work-backing member movably mounted on said support opposite to the tool holder and operatively connected to the other taper guide member.

3. In a lathe taper attachment, a taper guide device comprising a fixed member, a pair of taper guide members pivotally connected to said fixed member, and means for adjusting said members at an angle to said fixed member.

4. In a lathe taper attachment, a taper guide device comprising a fixed member, a pair of taper guide members pivotally connected to said fixed member, and means for simultaneously adjusting said taper guide members at an angle to said fixed member.

1,222,022. CONNECTOR FOR ELECTRICAL TERMINALS. CHRISTIAN F. PAUL, Jr., Peekskill, N. Y., assignor of one-half to Cyril G. Ballin, New York, N. Y. Filed Sept. 20, 1912. Serial No. 721,364. (Cl. 173—324.)



1. In a connector for electrical terminals in combination, separate holders having electrical terminals therein, coacting tongue and groove guiding devices upon said holders for guiding said holders one upon the other in a substantially straight path transversely of said terminals for bringing said terminals into register, said tongue and groove guiding devices arranged in converging relation so as to have a wedging action when forced together.

2. In a holder for electrical terminals, in combination a casing, a block of insulation therein separable into sections, one or more electrical terminals adapted to be held between said sections when the latter are clamped together, said terminals comprising a two part hollow shell and a plug slidable therein, and means for clamping said sections together.

3. In a holder for electrical terminals, in combination a casing, a block of insulation therein separable into sections, one or more electrical terminals adapted to be held between said sections when the latter are clamped together, said terminals comprising a two-part hollow shell and a spring-pressed plug slidable therein, and means for clamping said sections together.

4. In a connector for electrical terminals in combination, separate holders each comprising a metallic casing with a body of insulation therein to provide a substantially horizontal face and adapted to slide one upon the other, interlocking portions at the lateral edges of said casings for guiding the holders in their sliding movement one upon the other, one or more electrical terminals mounted in the insulation at the face of each holder and arranged to move vertically toward one another for making contact when said terminals are in register, said terminals being provided with means so that when said terminals come in contact they prevent the relative sliding movement of said holders.

5. In a connector for electrical terminals in combination, separate holders each comprising a metallic casing with a body of insulation therein to provide a substantially horizontal face and adapted to slide one upon the other, interlocking portions at the lateral edges of said casings for guiding the holders in their sliding movement one upon the other, one or more electrical terminals mounted in the insulation at the face of each holder and arranged to move vertically toward one another for making contact when said terminals are in register, the terminals of one holder having sockets and the terminals of the other holder having projections adapted to enter said sockets so that said terminals when they come in contact act to prevent the relative sliding movement of said holders.

[Claims 6 to 12 not printed in the Gazette.]

1,222,023. BOOK-MARKING DEVICE. GROVER PERRY, Chicago, Ill. Filed May 6, 1915. Serial No. 26,418. (Cl. 11—12.)



1. In combination, a plurality of leaves, a flexible member embracing said leaves and a marker element, said marker provided with a tapering end for raising the flexible member whereby the marker may be inserted thereunder and deposited between said leaves, said marker also provided with a notch behind the tapering section for latching the marker in place under the flexible member, said notch having a side rising above the notch to prevent the flexible member from passing beyond the notch, thereby insuring the latching of the marker.

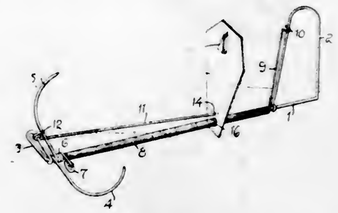
2. In combination, a plurality of leaves, a flexible member embracing said leaves and a plurality of marker elements, each marker provided with a tapering end for raising the flexible member whereby the marker may be inserted thereunder and deposited between said leaves, each marker also provided with a notch behind the tapering section for latching the marker in place under the flexible member whereby all the markers may be lined up.

3. In combination, a plurality of leaves, a flexible member embracing said leaves, a plurality of strip marker elements, each marker provided with a tapering end for raising the flexible member whereby the marker may be inserted thereunder and deposited between said leaves, each marker also provided with a notch behind the tapering section for latching the marker in place under the flexible member, whereby all the markers may be lined up and each marker provided also with a notch near the other end whereby the marker may be latched at the other end by said flexible member.

4. In combination, a plurality of leaves, a flexible member embracing said leaves and a plurality of marker elements, each marker provided with a tapering end for raising the flexible member whereby the marker may be inserted thereunder and deposited between said leaves, each marker also provided with a notch behind the tapering section for latching the marker in place under the flexible member, whereby all the markers may be lined up and a sliding latch left permanently looped around the flexible member for unlatching the marker elements.

5. A strip book-marker to go between the leaves of a book, a notch near the end of the strip, said notch having a side at an angle to the length of the strip, a flexible member across the leaves near the binding for engagement with said notch, said side acting as a stop for said flexible member, a tapering point for said strip whereby the ends of the strip having said notch may be inserted under the flexible member to latch the strip in position, and a notch near the other end of the strip having a side at an angle with the length of the strip, said flexible member extending across the other end of the book for engagement with said second notch, said side of said second notch acting as a stop for said flexible member.

1,222,024. TRAP. JUDSON C. PEWTHER, Oswego, Oreg. Filed Sept. 25, 1916. Serial No. 122,089. (Cl. 43—23.)



1. A trap comprising a rod having a jaw at one end, a spring coiled around the rod, a jaw operatively mounted on the rod for rotation thereabout and engaged by one end of the spring, means for detachably holding the ends of the rod and the spring remote from the jaws from relative movement and the spring under tension, and animal releasable means for holding the jaws open against the tension of the spring.

2. In a trap, a pair of coacting jaws operatively pivoted to each other, one of the jaws having a rod forming its pivotal axis, the rod having a radial arm, a coiled spring surrounding the rod operatively engaging at one end with the opposite jaw and at its other end formed with a radial arm having means for detachably engaging the first named arm, the arm and the adjacent end of the spring being rotatable completely around said rod, and animal releasable means for holding the jaws open against the tension of the spring.

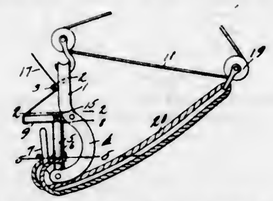
3. In a trap, a pair of coacting movable jaws, a spring connected at one end to one jaw, a latch adapted to hold the jaws in open position and against relative movement, a member at the other end of the spring adapted to be rotated a plurality of times to place said spring under variable tension, and means connected to and movable with the other jaw for engaging said member and holding it from reverse rotation under the tension of the spring.

4. A trap of the class described comprising an elongated member provided at one end portion with a laterally directed jaw and at its opposite end portion with an extension, a second jaw coacting with the first named jaw and provided with a barrel through which the elongated member is loosely directed whereby said second jaw is capable of pivotal movement, a lateral extension carried by the barrel, a spring encircling the elongated member and secured at one end portion to the extension of the barrel, the opposite end portion of the spring being provided with an extension detachably engageable with the extension of the elongated member whereby the tension of the spring may be varied, and releasable means for maintaining the second jaw in set position.

1,222,025. HALF-HITCH SLING-LOCK. THEODORE PINSKE, Gary, Minn. Filed June 23, 1916. Serial No. 105,460. (Cl. 57—11.)

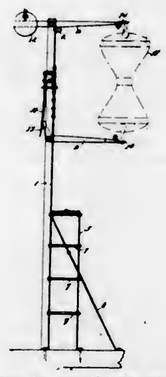
A sling hook comprising a body, a block pivoted to said body and including arms arranged in parallel relation, fingers extending from said arms longitudinally thereof, a shaft mounted in said body, a locking trip pivoted to said shaft and engaging said block to retain the same locked, a spring coiled about said shaft and engaging said trip to normally retain the same in locking position, means carried by said body and arranged in the path of move-

ment of said trip to limit its movement in one direction, and a sling rope adapted to have its ends coiled about



the arms and fingers of said block whereby to retain said rope in operative position when the block is locked.

1,222,026. MAIL-CRANE. HENRY H. POLLOCK, Carnegie, Pa. Filed Jan. 12, 1916. Serial No. 71,621. (Cl. 258—23.)



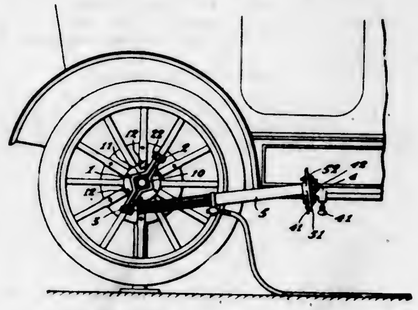
1. In combination in a mail bag crane, a pair of spaced frame members, an upper arm pivoted to the upper ends thereof, a lower arm pivoted between the members and provided with an end at an angle thereto projecting to the rear of the frame members when the arm is in horizontal position, and a leaf spring lying to the rear of the frame members and pressing upon the said end of the arm when the arm is in horizontal position.

2. In combination in a mail bag crane, a pair of spaced frame members, an upper arm pivoted to the upper ends thereof, a lower arm pivoted between the members and provided with an end at an angle thereto projecting upwardly between the frame members when the arm is in horizontal position, and a leaf spring secured at its upper end to the frame members with its lower free end pressing upon the said end of the arm when the arm is in horizontal position.

1,222,027. PUMP ATTACHMENT FOR AUTOMOBILES. HORACE G. POTTER, Seattle, Wash. Filed Jan. 19, 1916. Serial No. 73,064. (Cl. 230—27.)

1. A power pump attachment for automobiles, comprising a member provided with means for securing it upon the foot board of the automobile and a pivot pin mounted for axial adjustment thereon and extending horizontally outward from the car, a frame provided with means for securing it to a wheel of the car, a crank pin mounted for axial adjustment thereon, and two pivot blocks provided, one with means for securing it upon a pump base and the other with means for securing it to a pump piston rod, and means for securing each block in fixed position upon it pivot pin.

2. A power pump attachment for automobiles comprising a base provided with means for clamping it upon the foot board of a car and having a pin-receiving socket positioned to hold a pin in horizontal position extending transversely of the car, a pivot pin fitting said socket, means for securing the pin in axial adjustment in said sockets, a frame provided with means for securing it upon a car wheel and a pin-receiving socket, a crank pin and



means for holding it in axially adjusted position in said socket, two bearing members, one secured upon the outer end of said crank pin and the other upon the pivot pin, and means for securing one of said bearing members to a pump cylinder and the other to the pump piston rod.

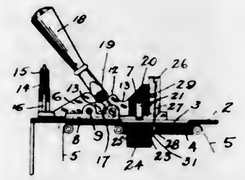
1,222,028. GUN-CLEANER. JOHN B. PAOCTOR, Butler, Ind. Filed Dec. 5, 1916. Serial No. 135,173. (Cl. 42—91.)



1. A gun-cleaner comprising a body member having its lower end semi-circular in cross section, its upper end being round in cross section and adapted to be secured to a gun rod, a member semi-circular in cross section secured thereto by means of screws having heads engaging counter-bores in the first mentioned member, spring means consisting of a series of springs disposed between said members and normally holding them apart, thereby forming a supply chamber for grinding or polishing material, said springs having apertures in one of their ends through which the shanks of said screws pass, their other ends engaging pins in the body member, and bulged portions on said springs engaging said movable member, thereby providing a uniform pressure upon said movable member throughout its length.

2. A gun-cleaner comprising a body member having its lower end semi-circular in cross section, its upper end adapted to be secured to a gun rod, a radially movable member semi-circular in cross section secured thereto, said members having supply passages from their inner surfaces leading to their peripheries, grooves connecting said aforementioned passages, said members being normally held spaced apart by means of a series of springs, thereby forming a supply chamber for grinding or polishing material, means on the lower end of said movable member for preventing downward flowing of the grinding or polishing material except in contact with the bore of the gun barrel and means for limiting the outward movement of said movable member.

1,222,029. STAMPING DEVICE. JOHN T. QUIGLEY, San Francisco, Cal., assignor, by mesne assignments, to Costmeter Company, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 19, 1912. Serial No. 678,676. (Cl. 234—41.)



1. A stamping device comprising a member pivoted to a support intermediate its ends, one end of said member being slotted to receive printing dies, a spring engaging the member operating to hold the printing dies normally elevated, a cam surface on said member, and a lever provided with a roller engaging said surface, the central part of said surface being farthest removed from the fulcrum of the lever.

2. A stamping device comprising a hand operated lever, a spring pressed rocking member having a cam surface, the ends of which are equidistant from the fulcrum of the lever and the intermediate portion being further removed from the fulcrum of the lever, printing dies arranged in said member and a spring for normally holding the member in such position that the printing dies are elevated, and means on the lever engaging said cam surface.

3. A tape marking device comprising a casing having an aperture therein, a tape adapted to be fed past said aperture, a platen over which the tape passes at the aperture, a perforating device facing the platen, a key holder also facing the platen, a removable key to fit said holder and provided with identifying characters, and means for moving the key and perforator on the one hand relatively to the platen on the other hand to simultaneously perforate and mark the intermediate tape.

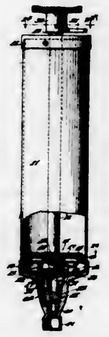
4. A tape marking device comprising a casing having an aperture therein, a tape adapted to be fed past said aperture, a platen over which the tape passes at the aperture, a perforating device facing the platen, a key holder also facing the platen, a removable key to fit said holder and provided with identifying characters, and means for moving the key and perforator on the one hand relatively to the platen on the other hand always a given distance to simultaneously perforate and mark the intermediate tape.

5 A tape marking device comprising a casing having an aperture therein, a tape adapted to be fed past said aperture, a platen over which the tape passes at the aperture, a perforating device facing the platen, a key holder also facing the platen, a removable key to fit said holder and provided with identifying characters, and means for moving the key and perforator on the one hand relatively to the platen on the other hand always under a given pressure to simultaneously perforate and mark the intermediate tape.

[Claims 6 to 9 not printed in the Gazette.]

1,222,030. AIR-PUMP FOR GASOLENE-TANKS. GEORGE E. RAYMOND, Los Angeles, Cal. Filed Dec. 22, 1914. Serial No. 878,625. (Cl. 230—27.)

1. In combination a pump cylinder, a piston rod, a piston thereon in said cylinder, a head on the lower end of said cylinder having an open connection at the bottom thereof to said tank, and a pressure opening, a valve member in said head having a pump opening connecting with said cylinder, and a tank opening, a check valve in said pump opening, and means on said piston rod for operating said valve member to bring the openings therein into and out of communication with the pressure opening in said head.



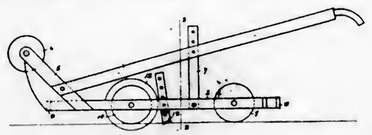
2. In combination a pump cylinder, a piston rod, a piston on said rod, a head on the lower end of said cylinder having an open connection to said tank and having a pressure opening, a valve member in said head, having a pump opening in communication with said cylinder and a tank opening therein, a check valve in said pump opening, said valve member having a socket in the upper end thereof, a block on the lower end of said piston rod adapted to enter said socket, means on said block for engaging said valve member when said block is in said socket, and external means for determining the position of said valve member.

3. In combination a pump cylinder, a piston rod, a piston on said rod, a head on the lower end of said cylinder having an open communication to said tank and an air outlet opening, a valve member in said head having a pump opening in communication with said cylinder and a tank opening therein, a check valve in said pump opening, elastic means for holding said valve member in said head, said valve member having a socket in the upper end thereof, a block on the lower end of said piston rod adapted to enter said socket, said head having a pressure opening therein adapted to connect the pump opening and tank opening in said valve member in communication, and means on said block adapted to engage said valve member when said block is in said socket, to place said pressure opening in communication with the tank opening and the pump opening in said valve member, in neutral position, or to place said tank opening in communication with said outlet opening in said head.

4. In combination a pump cylinder, a piston rod, a piston thereon, a head on the lower end of said cylinder having a pressure opening therein and an air outlet opening, a valve member in said head having a pump opening and a tank opening, a check valve in said pump opening, means for elastically retaining said valve member in said head, and means on said piston rod whereby said valve member may be rotated to open communication from said tank to said cylinder, or to said air outlet, or in position to seal said tank.

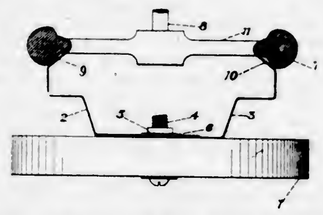
5. In combination a pump cylinder, a piston rod, a piston thereon, a head on the lower end of said cylinder having a conical opening therein in alinement with said cylinder, a valve member in the conical opening in said head, having a socket in the upper end thereof, elastic means for retaining said valve member therein, a block on the lower end of said rod adapted to enter said socket, means on said block adapted to engage said valve member when said block is in said head to rotate said valve member about the axis of said head, and a check valve in said valve member for said pump cylinder.

1,222,031. LAWN-TRIMMER. JOHN RIAL and WILLIAM C. HODDE, Brenham, Tex. Filed Oct. 16, 1916. Serial No. 125,857. (Cl. 97—28.)



A device of the character described including a frame composed of side and end members, bearing members upstanding from the front end of the frame, a roller mounted between said bearing members, support rollers mounted upon one of said side members, a cutting disk carried by one of said rollers, a cutting blade secured to the opposite side member and being vertically adjustable and whose free end is formed into a cutting edge said blade declining from its point of anchorage and extending across to the plane of the cutting disk and following said disk.

1,222,032. SPRING ATTACHMENT DEVICE. JOSEPH A. ROBISON, Little Rock, Ark., assignor of one-half to John F. Hammett, Little Rock, Ark. Filed Jan. 9, 1915. Serial No. 1,408. (Cl. 74—6.)



1. The combination with a motor or fly wheel, of an auxiliary wheel, resilient arms carried by the auxiliary wheel and having their free ends terminating in hook portions adapted to embrace the inner periphery of the wheel to which the auxiliary wheel is applied, and means for adjusting the arms with relation to the auxiliary wheel.

2. The combination with a motor or fly wheel, of an auxiliary wheel having a central hub, resilient arms having elongated openings, one of said arms having a graduated portion, the hub of the auxiliary wheel being provided with a graduated portion coöperating with the graduated portion of the resilient arm, whereby the resilient arms may be adjusted with relation to each other, and a bolt extending through the elongated openings of the resilient arms and hub for holding the same in engagement with each other, the free ends of said resilient arms adapted to embrace the inner periphery of the wheel to which the auxiliary wheel is applied for securing the same thereto.

1,222,033. MANUFACTURE OF PRODUCTS ADAPTED TO PRECIPITATE GLUE OR LIKE SUBSTANCES. ADOLF RÖMER, Stuttgart, Germany, assignor to the Firm of Deutsch-Koloniale Gerb- & Farbstoff-Gesellschaft M. B. H., Karlsruhe, Germany. Filed July 6, 1914. Serial No. 849,332. (Cl. 23—24.)

1. A process of making glue-precipitating substances which comprises condensing an active methylene-containing substance with a naphthalene sulfonic acid containing a substituent increasing the reactivity of the naphthalene nucleus in a non-alkaline solution containing a large proportion of water.

2. A process of making glue-precipitating substances which comprises condensing an active methylene-containing substance with a naphthalene sulfonic acid containing a substituent increasing the reactivity of the naphthalene nucleus in a dilute solution of another acid.

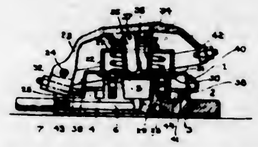
3. The process of making glue-precipitating substances which comprises condensing an active methylene-containing substance with an oxy-naphthalene sulfonic acid in a non-alkaline solution containing a large proportion of water.

4. A process of making glue precipitating substances which comprises condensing formaldehyde with an oxy-naphthalene mono-sulfonic acid in a non-alkaline solution containing a large proportion of water.

5. A process of making glue-precipitating substances which comprises condensing an active methylene-containing substance with a naphthalene sulfonic acid containing a substituent increasing the reactivity of the naphthaline nucleus in the proportions of 2 molecular weights of the naphthalene sulfonic acid to so much of the active methylene containing substance as will furnish about from 1 to 2 atomic group weights of active methylene.

[Claims 6 to 25 not printed in the Gazette.]

1,222,034. CONTROLLING DEVICE. CHARLES SCHIFFL, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed July 20, 1910. Serial No. 572,796. (Cl. 230—27.)



1. In a device of the class described, the combination with a cylindrical member and a plunger coacting therewith, of a pivoted inverted cup-shaped member partially inclosing the said cylindrical member and plunger and adapted to impart relative movement thereto, substantially as described.

2. In a device of the class described, the combination with air compressing means comprising a cylindrical member and a plunger coacting therewith, of a pivoted inverted cup-shaped member partially inclosing the said cylindrical member and plunger and adapted to produce a relative movement in one direction between the same, and resilient means for producing a relative movement in the opposite direction between said cylindrical member and plunger, substantially as described.

3. In a device of the class described, the combination of a stationary member, a movable hollow plunger coacting with said member and provided centrally thereof with a thimble the bottom of which extends to a point substantially in line with the forward end of said plunger, resilient means for resisting movement of said plunger in one direction axially of said stationary member, and means for moving said plunger against the action of said resilient means, said second named means being applied at the bottom of said thimble, substantially as described.

4. In a device of the class described, the combination of a stationary member, a movable hollow plunger coacting with said stationary member and provided centrally thereof with a thimble the bottom of which extends to a point substantially in line with the forward end of said plunger, resilient means for resisting movement of said plunger in one direction axially of said stationary member, and a foot lever for moving said plunger against the action of said resilient means, said foot lever being applied at the bottom of said thimble, substantially as described.

5. In a device of the class described, the combination of a stationary member, a movable plunger coacting with said stationary member, resilient means for resisting movement of said plunger in one direction axially of said stationary member, and a cup-shaped foot lever partially inclosing said stationary member and plunger, and adapted to move said plunger against the action of said resilient means, said lever being applied to said plunger at a point substantially in line with its forward end, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

1,222,035. TUB-COVER. WILFRED B. SCHOTT, West Salem, Ohio. Filed June 1, 1915. Serial No. 31,577. (Cl. 217—76.)

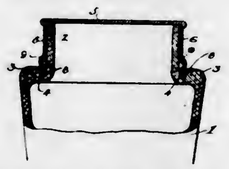


1. A flexible cover for tubs comprising a top portion, having substantially the contour of the tub top, an inwardly foldable and continuous band secured to the periphery of said top portion, a flexible strap secured across said band and extended a distance beyond the free edge of said band, a link in the extended terminus of said strap, and means for tightening said cover around said tub top and for securing the same thereto, substantially as set forth.

2. In a flexible cover for receptacles, the combination with a top portion, an inwardly foldable and continuous band depending around said top portion, a pair of flexible straps secured across said band on opposite sides thereof, respectively, said straps extended beyond the free edge of said band, links in the ends of said straps, respectively, and means for attaching said straps to the receptacle, and for tightening said band thereon, substantially as set forth.

3. A flexible canvas cover for tubs, comprising in combination, a cover top, an inwardly foldable band depending from said top, having a wide hem on its border and its opposite ends overlapped and secured together across said band, a series of eyelets in said hem, a flexible strap secured across said band over the junction of said ends, terminating with a link below said band, and a cord passed through said eyelets to pucker and tighten said band around the top of a tub, and secure it thereto substantially as set forth.

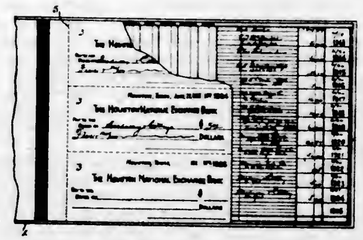
1,222,036. MEANS FOR CLOSING JARS. WILLIAM L. SCHREIBER, Philadelphia, Pa. Filed Jan. 9, 1915. Serial No. 1,290. (Cl. 215—82.)



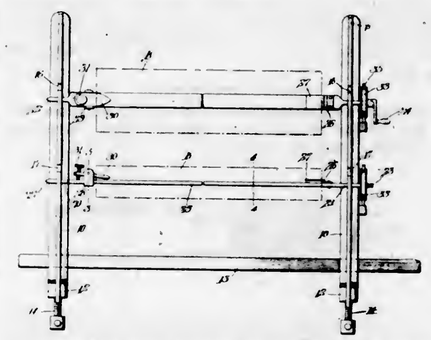
The combination of a jar and a cap, said jar having an external shoulder and a neck and having an annular recess between the neck and shoulder, and said cap having a flange to extend into said recess and terminate short of the bottom thereof, said flange having a fusible sealing material secured thereto so that when the jar is heated, said material will be displaced and will flow from the cap into the recess of the jar and will seal the joint.

1,222,037. CHECK-BOOK. PETER W. SCHWANDER, Houston, Tex. Filed Sept. 20, 1915. Serial No. 51,669. (Cl. 11—15.)

A device of the character described consisting of a plurality of sheets each separated by perforated lines into sections containing check data, a plurality of consecutively arranged stub sheets all lying together and being underneath the perforated sheets and projecting beyond the free edge of the latter, all of said sheets being bound together in book form and the underlying sheets being ruled into journal form and the projecting portion thereof forming the ordinary check stub, each stub sheet having a perforated line near the binding margin along which it may be readily detached.



1,222,038. CLOTH-WINDING MACHINE. JOSEPH W. SCHWARTZ, New York, N. Y. Filed Nov. 12, 1915. Serial No. 61,096. (Cl. 242—61.)



1. A portable cloth winding machine which is readily taken apart and also readily reassembled comprising a pair of separate portable standards each of which has a jaw at its lower end to fit the edge of a table and means for clamping each standard to a table independently of the other, said standards having notches or recesses within the vertical edges thereof to form bearings, bolt supporting spindles supported above one another in said notches, and means whereby the spindles are held in said notches or bearings and also prevented from turning too freely in their bearings when the cloth is unwound.

2. A cloth winding machine comprising a pair of separate standards having jaws at their lower ends to receive the edge of a table and means on said jaws for clamping the standards to the table, said standards having notches therein forming bearings in those edges thereof, which face away from the table upon which they are clamped, bolt supporting spindles mounted one above the other in said notches and having flat parts intermediate the standards adapted to fit against the flat cores of bolts of cloth, one end of each spindle being pointed and each spindle being equipped with a fixed stop plate at one end of the flat portion thereof and an adjustable pivoted pointed clamping stop plate at the other end of the flat portion thereof, said stop plates being adapted to engage the side of the core opposite the side engaged by the flat portion of the spindle whereby each core is clamped between the spindle on one side and the stop plates on the

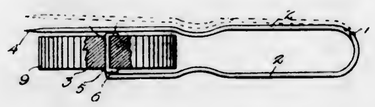
other side, means whereby the spindles are held in said notches or bearings and also prevented from turning too freely in their bearings when the cloth is unwound and means whereby said spindles may be engaged to be turned to wind the cloth onto the bolts supported thereon.

3. A cloth winding machine comprising a pair of standards having bearings therein, bolt supporting spindles rotatably mounted in said bearings, and means for preventing said spindles from turning too freely in their bearings when the cloth is unwound from said bolts comprising a wheel fixed on each of the spindles and a spring adapted to frictionally engage the wheel to prevent it from turning too freely, and also to hold the spindle in its bearings.

4. A spindle for a cloth winding machine comprising a bar, a stop near one end thereof, a yoke fitting the other end of said bar and adjustable lengthwise thereof, a clamping stop pivoted intermediate its ends on said yoke, one end of said pivoted stop being adapted to assist in holding a bolt of cloth on said bar and against the other stop, and a threaded device for engaging the other end of said pivoted stop to clamp or release it.

5. A cloth winding machine which is readily taken apart and also readily assembled so that it may be readily carried from place to place as desired, said machine comprising a pair of portable standards having means whereby they may be clamped to a support at different distances apart as desired, said standards being provided with bearings, and bolt supporting spindles mounted one above the other in said bearings, said bolt supporting spindles being readily removable from and replaceable in said bearings so that bolts of cloth may be readily removed from and replaced on said spindles and also in order that the machine may be readily taken down and set up.

1,222,039. PIE-CRIMPER. EDWARD W. SCRIBNER, Friday Harbor, Wash. Filed June 22, 1916. Serial No. 105,230. (Cl. 107—49.)

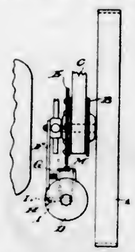


In a device of the class described, the combination of a wheel, said wheel provided with transversely extending teeth upon its outer periphery, a handle adapted to be formed from a single strand of wire, said handle being adapted to be bent intermediate its ends, a cutting point provided upon one end of said handle, said pointed end adapted to be sprung away from said wheel so that pie may be crimped as close to the center as desired, a stub axle formed upon the outer end of said handle, a retaining lip extending parallel with the adjacent edge of said wheel provided upon one end of said axle, and an eye loop formed upon the other end of said axle and adapted to extend parallel with the adjacent edge of said wheel, whereby any tendency to wabbling on the part of the wheel will be obviated.

1,222,040. HORN. MICHAEL SUTTER, Chicago, Ill. Filed Mar. 22, 1913. Serial No. 756,157. (Cl. 116—1.)

1. The combination in an automobile of a fan, a shaft for supporting said fan, a bearing for said shaft, a driving pulley on said shaft for driving said fan, suitably connected with a driving mechanism, a sectional-toothed wheel mounted rigid with said pulley and separate from the fan, a horn associated with said wheel, an arm for supporting said horn and electromechanical means for drawing said horn into engagement with said wheel for sounding the former while the latter is rotating, said horn mounted on said arm, said arm secured to the bearing of said shaft.

2. The combination in an automobile of a shaft, a bearing for said shaft, a fan mounted thereon and a driving pulley on said shaft for driving said fan, together with a section-toothed wheel on said pulley separate from



the fan, a mechanical horn, an arm for supporting said horn, and electromechanical means for operating said horn while the said shaft is rotating by bringing the horn into engagement with said wheel, said arm secured to the bearing of said shaft.

1,222,041. CONVEYER TROLLEY-TRACK AND TROLLEY THEREFOR. ARTHUR L. SHAW, Chicago, Ill. Filed May 20, 1916. Serial No. 98,856. (Cl. 104—181.)

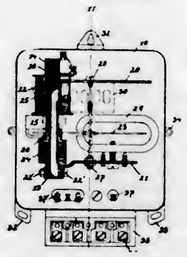


1. A swinging trolley track comprising two parallel angle bars having two of their vertically disposed confronting flanges held together in spaced-apart relation at suitable intervals, the out-turned flanges of said bars in a horizontal plane providing the trolley support of the track; eye bolts having their threaded shanks longitudinally adjustable in the space provided between the bars and having nuts on their threaded shanks adjacent the lower edges of said vertical flanges whereby to vertically adjust the track at suitable intervals, and similar bolts having eyes or hooks for engagement with the eyes of the track bolts and having adjustable check nuts whereby to vertically adjust and fix said bolts in adjusted positions.

2. In combination with spaced apart angle bars to provide a trolley track, of substantially rectangular perforated spacing blocks, 9, substantially as wide as the flanges it engages; rivets, 10, to hold the structure together; eye bolts, 21, having their shanks threaded to permit practicable vertical adjustment of the track; nuts, 24, on said bolts to support the track; bolts, 16, having threaded shanks 18, for adjustable nuts, 19, and having eyes or hooks, 17, for engagement with the eyes or hooks, 22, of the bolts, 21, to support the track and to permit it to swing from a vertical plane.

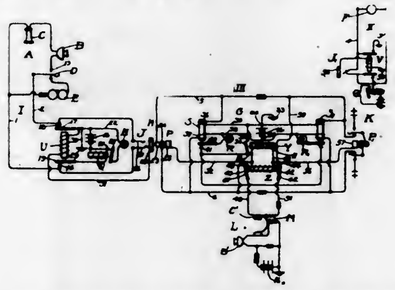
1,222,042. ELECTRIC METER. KONRAD ROBERT SINGER, Nuremberg, Germany, assignor to Siemens Schuckert Werke, Gesellschaft mit beschrankter Haftung, a Corporation of Germany. Filed Mar. 24, 1915. Serial No. 16,720. (Cl. 171—34.)

In an electric meter of the Ferraris type a supporting means for the meter mechanism consisting of a base plate, an angularly shaped and braced sheet metal member having the like sides of its two legs fastened substantially at right angles to said plate and adapted to carry on one of its legs the fixed magnets of the meter mechanism, and a second



sheet metal member, connecting the free end of said carrying leg with said plate and supporting conjointly with the other leg the rotatable member of the meter.

1,222,043. TELEPHONE SYSTEM. FRANK M. SLOUGH, Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y., a Corporation of New York. Filed Aug. 17, 1914. Serial No. 857,038. (Cl. 179—58.)



1. In a telephone system, the combination of a main station, a plurality of substations, telephone lines connecting the main station and the substations, link conductors at the main station for connecting the telephone lines together, supervisory apparatus associated with said link conductors, an operator's set at the main station, means for controlling the connection of the operator's set to the link conductors including a relay provided with a winding, means including a portion of said supervisory apparatus to create at the terminals of said relay winding different electrical potentials when the link conductors are connected to one line, and means to create at the terminals of said relay winding the same electrical potential when the link conductors are connected to a plurality of telephone lines.

2. In a telephone system, the combination of a main station, a plurality of substations, telephone lines connecting the substations to the main station, a cord circuit at the main station adapted to be connected to one or more lines, supervisory apparatus associated with said cord, an operator's set at the main station, means for connecting the operator's set to the talking strands of the cord circuit, a relay controlling the connection of the operator's set to the cord circuit, means for energizing said relay when the cord circuit is connected to one telephone line and means including a portion of said supervisory apparatus for shunting the flow of electrical current from said relay when the cord circuit is connected to a plurality of telephone lines.

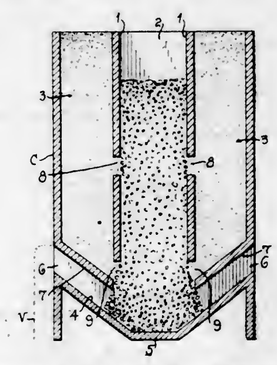
3. In a telephone system, the combination of a main station, a plurality of substations, telephone lines connecting the substations to the main station, a cord circuit at the main station adapted to be connected at each end to a telephone line, supervisory apparatus associated with said cord circuit, an operator's set at the main station, means to connect the operator's set to the cord circuit, a relay controlling the connection of the operator's set to the cord circuit, means for completing a circuit through said relay and a portion of said supervisory apparatus when one end of the cord circuit is connected to a telephone line and means for creating a shunt about said relay when each end of the cord circuit is connected to a telephone line.

4. In a telephone system, the combination of a telephone line and a cord circuit, switching means for connecting the telephone lines to the cord circuit, supervisory apparatus including a pair of supervisory relay windings, an operator's set, means to connect the operator's set to the cord circuit, a relay controlling said means, a pair of circuits having a source of current in common, each of said circuits including one of said supervisory relay windings leading through one of the switching means for connecting the cord to a telephone line and a bridge of said circuits including said relay.

5. In a telephone system, the combination of telephone lines and a cord circuit, switching means for connecting each end of the cord to a telephone line, a pair of supervisory relay windings associated with said cord circuit, an operator's set, means to connect the operator's set to a telephone line, a relay controlling said means, a pair of circuits, each of which includes a supervisory relay winding and contacts of one of said switching means, and a bridge of said circuits including said relay.

[Claims 6 to 13 not printed in the Gazette.]

1,222,044. DISINFECTING APPARATUS. ULYSSES JOSEPH SMITH, Reading, Pa. Filed Oct. 3, 1916. Serial No. 123,527. (Cl. 167—3.)



1. A device providing a ventilating passageway arranged for communication with the chamber of a mausoleum and the like comprising an outer casing and inner walls to provide a central chamber for disinfecting material to be fed into said ventilating passageway with side chambers having openings at their bases and at points intermediate their heights in communication with said central chamber whereby the ventilating passageway and the central chamber above the disinfecting material are sealed by sand or other granular material contained within the side chambers after the disinfecting material in the central chamber has been consumed.

2. A device providing a ventilating passageway arranged for communication with the chamber of a mausoleum and the like comprising an outer casing and inner walls to provide a central chamber for disinfecting material to be fed into said ventilating passageway with side chambers having openings at their bases and at points intermediate their heights in communication with said central chamber whereby the ventiating passageway and the central chamber above the disinfecting material are sealed by sand or other granular material contained within the side chambers after the disinfecting material in the central chamber has

been consumed, said ventilating passageway at opposite sides of the central chamber being disposed upwardly.

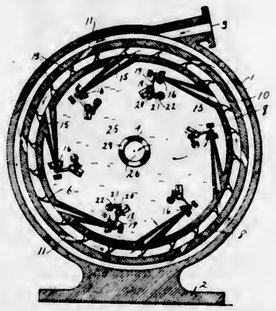
3. A device providing a ventilating passageway arranged for communication with the chamber of a mausoleum and the like comprising an outer casing and inner walls to provide a central chamber for disinfecting material to be fed into said ventilating passageway with side chambers having openings at their bases in communication with said central chamber whereby the ventilating passageway is sealed by sand or other granular material contained within the side chambers after the disinfecting material in the central chamber has been consumed.

1,222,045. CASTER. JOHN SORILO, Meadville, Pa. Filed Jan. 4, 1917. Serial No. 140,527. (Cl. 16—151.)



A caster comprising a dome member, a ball member positioned therein, and anti-friction members arranged between the dome member and ball member, including a circular rod having anti-friction balls loosely journaled thereon and washers fixed to said rod at opposite sides of the balls for spacing the balls.

1,222,046. ROTARY ENGINE. ROBERT A. STEWART, Milwaukee, Wis. Filed Apr. 27, 1916. Serial No. 93,840. (Cl. 253—140.)

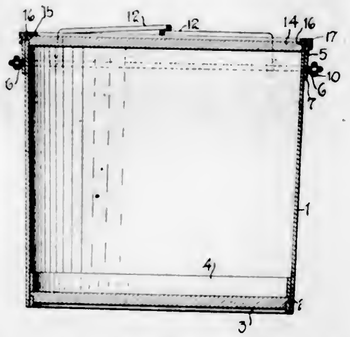


1. A rotary engine comprising the combination of an outer casing, a stationary annular nozzle wall provided with nozzle apertures, a hollow rotary member mounted to revolve within said nozzle wall, and provided with an annular set of impact receiving vanes, a set of nozzle ducts leading inwardly through the peripheral wall of said rotary member, and a set of buckets resiliently mounted within said rotary member and adapted to close the outlets of said nozzle ducts, together with means for delivering motive fluid into said casing, and means for discharging it from within said hollow rotary member.

2. A rotary engine including a rotary member provided with an interior cavity, a set of nozzles extending into said cavity at a tangent to a circle concentric with the outer wall and coincident with the nozzle outlets, and a set of buckets resiliently supported within said cavity and adapted to normally seat against the discharge ends of the nozzles, together with means for delivering motive fluid through said nozzles and allowing it to escape from said cavity after being discharged into the respective buckets.

3. A rotary engine comprising the combination of a cylindrical casing having a double walled periphery, and provided with an annular fluid receiving chamber between said walls, the inner wall being also provided with nozzle ducts leading to the interior, a rotary member mounted within said casing and having a cylindrical wall concentric with the peripheral walls of the casing, a set of bucket flanges projecting outwardly from the cylindrical wall of the rotary member, a set of nozzle buckets projecting inwardly from the cylindrical wall of the rotary member at a tangent to a circle concentric thereto, and which includes the inner ends of said nozzle duct, a set of buckets resiliently supported from one side wall of the rotary member and normally closing the inner ends of said nozzle ducts, means for delivering motive fluid through the outer peripheral wall of said casing, and a hollow shaft supporting the rotary member and extending through the casing, said shaft having apertures within the rotary member communicating with the interior thereof, whereby the motive fluid may be permitted to escape through said shaft.

1,222,047. BUCKET-CLOSURE. JOHN STRANGE, Neenah, Wis. Filed Aug. 3, 1915. Serial No. 43,363. (Cl. 217—89.)



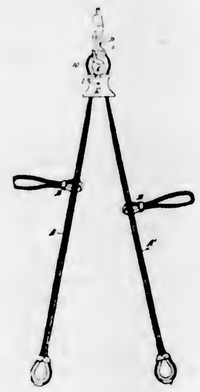
1. In a closure for buckets, a cover provided with an annular shoulder on its inner surface, adapted to fit within the body of the pail, and having an extension extending over the upper edge of the body of the pail, an angular shaped annular rim seated on the top of said cover, a wire hoop provided with bent portions secured on the body portion of the pail adjacent its upper edge, a plurality of wires extending across said cover and having their ends secured in said bent portions of the hoop, substantially as described.

2. In a bucket closure, a cover, a hoop having bent portions secured on the body portion of the bucket, a plurality of wires extending across the cover, and having their ends inserted through the bent portions in the hoop and bent upon said hoop, said wires being provided with a plurality of notches adapted to permit said wires to bend over said hoop, and cause the breaking off of the ends when said wires are released from the hoop.

3. In a bucket or pail of the character described, a wire hoop secured upon said bucket at its upper edge, means for retaining said hoop on the pail, said hoop being provided with bent portions, a cover adapted to fit over the body portion of the bucket, an annular shaped metal annular ring, seated on the outer edge of said cover, a plurality of cross wires extending across the cover and having their ends inserted through the bent portions in the hoop, said end portions of the wires being provided with a plurality of notches adapted to permit of their bending around the hoop, and cause the severing of the ends of the wires when released from the hoop, as and for the purpose set forth.

4. In a bucket or pail sealing device of the character described, the combination of an angular shaped band adapted to seat upon the edge of a bucket cover, sealing wires having a plurality of notches formed near their ends, a wire hoop having bent portions adapted to receive and retain the ends of the wires, as and for the purpose set forth.

1,222,048. WIRE-ROPE SLING AND THE LIKE. CHARLES C. SUNDERLAND, Trenton, N. J., assignor to John A. Roebling's Sons Company, a Corporation of New Jersey. Filed June 17, 1914, Serial No. 845,546. Renewed Aug. 25, 1916. Serial No. 116,935. (Cl. 57—11.)



1. A wire rope sling having a plurality of loops each formed of double wire rope with its two parts side by side, and a single eye at the hoisting end consisting of a metal thimble having grooves side by side for the ropes of the loops, and having at its inner end a squeezer separate from and secured to the thimble with outwardly curved surfaces extending along the ropes, said squeezer consisting of a continuous ring inclosing the inner ends of the thimble and secured to the thimble between the rope grooves and constructed to permit the ropes to slide on the thimble under strain.

2. A wire rope sling having a loop formed of double wire rope with its two parts side by side, and an eye at the hoisting end consisting of a metal thimble having grooves side by side for the rope of the loop, and having at its inner end a squeezer separate from and secured to the thimble with outwardly curved surfaces extending along the rope, said squeezer consisting of a continuous ring inclosing the inner ends of the thimble and secured to the thimble between the rope grooves and constructed to permit the rope to slide on the thimble under strain.

3. A rope thimble having a plurality of rope grooves side by side, and a squeezer separate from and secured to the thimble with outwardly curved surfaces extending along the ropes, said squeezer consisting of a continuous ring inclosing the inner ends of the thimble and secured to the thimble between the rope grooves and constructed to permit the ropes to slide on the thimble under strain.

4. A rope thimble having a rope groove and a squeezer separate from and secured to the thimble with outwardly curved surfaces extending along the rope, said squeezer consisting of a continuous ring inclosing the inner ends of the thimble and secured to the thimble between the rope grooves and constructed to permit the rope to slide on the thimble under strain.

1,222,049. OPHTHALMIC MOUNTING. EDGAR D. TILLYER, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed June 26, 1916. Serial No. 106,026. (Cl. 88—54.)



1. In a lens, the combination of a medium adapted to retard certain rays outside the visible spectrum and a medium adapted to retard a selected portion of the visible rays.

2. In an ophthalmic mounting, a lens having the property of selective retardance of wave lengths both greater than and less than those of the visible spectrum and having the property of selective retardance of predetermined rays only of the visible spectrum.

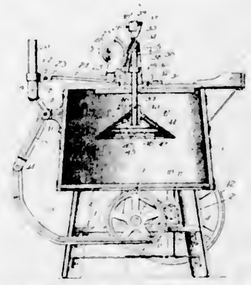
3. An ophthalmic lens, comprising a transparent base medium and separate metallic elements deposited thereon in the form of a film, one of said elements having the power of selective reflection as to infra red rays and another of said elements having the power of selective reflection as to ultra violet rays.

4. An ophthalmic lens, comprising a medium having the properties of selective absorption of a predetermined portion of the visible spectrum, a second medium having the properties of selective reflection as to infra red rays, and a third medium having the property of selective reflection as to ultra violet rays, whereby said lens will reflect both ends of the visible portion of the spectrum and will absorb a selected or predetermined portion or excess of the visible spectrum, substantially as described.

5. An ophthalmic lens formed from apparently uncolored transparent material but embodying a medium which will refuse to transmit wave lengths greater than those of the visible spectrum, and a second medium which will refuse to transmit selected portions of the visible spectrum.

[Claims 6 and 7 not printed in the Gazette.]

1,222,050. WASHING-MACHINE. WILLIAM H. VOSS, Davenport, Iowa. Filed Oct. 19, 1914. Serial No. 867,334. (Cl. 74—50.)



1. In apparatus of the class described, a support, a member hinged thereto, a shaft in said member, a spiral gear mounted upon said shaft, a gear segment mounted upon said member for coöperating with said spiral gear and actuating means for oscillating said gear segment mounted upon the support.

2. In apparatus of the class described, a support, a member hinged to said support, a bracket on said hinged

member, a shaft slidable and revoluble in said bracket, a guide on said bracket, a flange on said shaft continuously engaging said guide, a manually operable means for reciprocating said shaft, the engagement between the guide and flange causing a rotation of the shaft.

3. In apparatus of the class described, a support, a member hinged to said support, a bracket on said hinged member, a shaft slidable and revoluble in said bracket, a guide on said bracket, a flange obliquely mounted and on said shaft continuously engaging said guide, a fly wheel and gearing associated therewith, connections from said gearing for reciprocating said shaft.

4. In apparatus of the class described, a support, a hinged member on said support, an oscillating and reciprocating shaft in said hinged member, a spiral rack on said shaft, a guide on said hinged member engaging said rack, an oscillating gear segment in engagement with said rack, and an actuator for said gear segment on said support.

5. In apparatus of the class described, a support, a hinged member mounted on the support, a reciprocatory shaft in said hinged member, a curved member on said shaft, an actuator acting directly on said curved member to reciprocate the shaft, and connection between said curved member and the hinged member to cause simultaneous oscillation of said shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,222,051. **EXPLOSIVE PROJECTILE.** ENID S. WALES, Detroit, Mich., assignor of one-half to Henrietta W. K. Pierce, Detroit, Mich. Filed June 24, 1916. Serial No. 105,528. (Cl. 102—29.)



1. An explosive projectile carrying wire coils detachably secured on the exterior and adapted to be distributed in various directions by the destruction of the projectile and a stem having rifling bands thereon detachably engaged by the head.

2. An explosive projectile comprising a stem, a chambered head detachably mounted on the stem carrying an explosive charge, projections detachably and breakably secured to the head having outer conoidal caps within which wire coils are laid with the inner ends thereof secured to the projectile body.

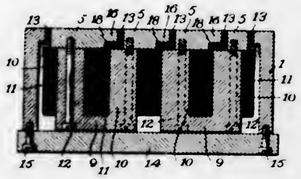
3. An explosive projectile comprising a stem, a chambered head detachably secured on the stem, hollow stems, projections detachably and disruptably secured to the head, hollow conoidal caps secured on the stems with the open faces thereof toward the body and wire coils laid in the conoidal caps with one extremity of each attached to the head.

4. An explosive projectile comprising a stem, a chambered head on the stem, projections secured to the head each comprising a hollow stem in communication with the head and an outer conoidal cap with the open face thereof toward the head and wire coils secured within the caps and attached at the inner extremities thereof to the head.

5. An explosive projectile having a chambered head with exterior wire carrying means secured thereto by weakened connections adapted to be severed by the explosion of the head.

[Claims 6 to 9 not printed in the Gazette.]

1,222,052. **MAGNETIC CHUCK.** OAKLEY S. WALKER, Worcester, Mass., assignor to O. S. Walker Co., Worcester, Mass., a Corporation of Massachusetts. Filed July 23, 1914. Serial No. 852,701. (Cl. 175—21.)



1. A magnetic chuck comprising a shell, and a plurality of pole pieces overlapping the walls of said shell and having interlocking engagement with said shell.

2. A magnetic chuck comprising a shell, and a plurality of pole pieces having their ends overlapping and interlocked with the walls of said shell.

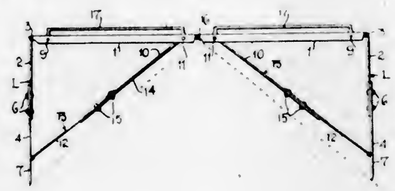
3. A magnetic chuck comprising a shell, and a plurality of pole pieces supported at their ends upon two opposite walls of said shell, said pole pieces interlocking with said walls and thereby constituting tie bars to prevent the outward springing of said walls of the shell.

4. A magnetic chuck comprising a shell, and a plurality of pole pieces supported between two opposite walls of said shell and having interlocking tongue and groove connections with said walls.

5. A magnetic chuck comprising a plurality of pole pieces constituting a work holding face, and a plurality of core members suspended from said pole pieces.

[Claims 6 to 8 not printed in the Gazette.]

1,222,053. **SCAFFOLD.** FRANK W. WATSON, Cedar Falls, Iowa. Filed July 1, 1916. Serial No. 107,086. (Cl. 20—86.)



A scaffold structure comprising two beams, a leg at each end of each beam and a brace connecting each leg to its beam, the leg and brace at one end of each beam being detachable, and means for detachably connecting such ends of the two beams together whereby either two platform supports or a single gable spanning support may be provided.

1,222,054. **SHINGLE-BUNDLE.** WILLIAM C. WEEKS, Union Bay, British Columbia, Canada. Filed May 27, 1915. Serial No. 30,805. (Cl. 206—47.)

1. A shingle bundle, having a binding bar extending transversely across the bundle, and a nail container secured along one edge of said bar, and lying substantially within an extension of the outer plane of the bar.

2. A shingle bundle, having a binding bar extending transversely across the bundle, and a nail container composed of a sheet having its edges secured to the bar, and lying substantially within the plane formed by the outer face of the bar and the outer edge of the shingles.

3. The combination with the binding bar of a shingle package of a sheet of metal bent into U-shape and having its edges secured to the binding bar and its central bend spaced away from the edge of the bar, the edges of said

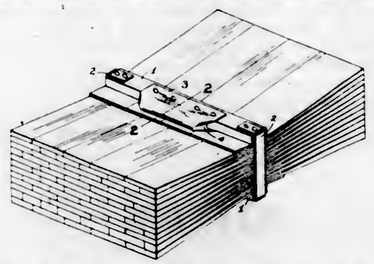
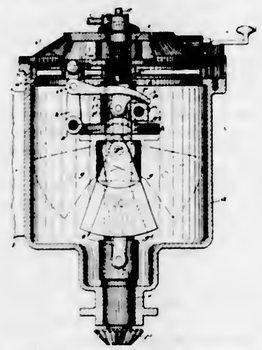


plate at the ends of the container thus formed being bent inward to close said ends.

1,222,055. **FUEL-GOVERNOR FOR INTERNAL-COMBUSTION ENGINES.** CARL W. WEISS, Brooklyn, N. Y. Filed Aug. 18, 1916. Serial No. 115,644. (Cl. 123—140.)



1. In an oil engine, injector pumps for the oil, an actuating member for the pumps, transmission elements interposed operatively between the actuating member and the pumps, said transmission elements including a shoe engaged operatively by the actuating member and the pump plungers, and a shaft about which the shoe turns freely, and governor devices for changing automatically the position of the actuating member to change the strokes of the pumps.

2. In an oil engine, injector pumps for the oil, an actuating member for the pumps, transmission elements interposed operatively between the actuating member and the pumps, said transmission elements including a shoe engaged operatively by the actuating member, a lever between each pump plunger and each shoe, and supporting shafts about which the shoe and the lever turn freely, and governor devices for changing automatically the position of the actuating member to change the strokes of the pumps.

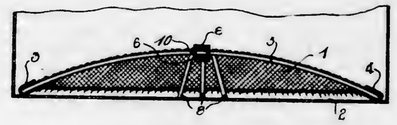
3. In an oil engine, injector pumps for the oil, an actuating member for the pumps, a curved shoe engaged operatively with the actuating member, a curved lever with the curved face of which engages the curved face of the shoe, the faces being struck off along eccentric curves, and a lever and shoe having supporting shafts about which they turn freely, and governor devices for changing automatically the position of the actuating member to change the point of engagement of the shoe with the lever.

4. In an oil engine, a casing for the governor devices, a vertically disposed governor shaft within said casing, injector pumps for the oil, a cam-disk feathered on the shaft, a curved shoe supported hingedly within the casing and provided with a roller which rests in the face of the cam-disk, a curved lever interposed operatively between the shoe and the pump plungers, said lever having its curved face in engagement with the curved surface of the shoe at a tangential point, supporting shafts for the lever and the shoe disposed at opposite sides of said tangential point, and governor devices for moving the cam-disk axially to change said tangential point of engagement.

5. In an oil engine, a casing for the governor devices, a vertically disposed governor shaft mounted within the casing, a cam-disk feathered on the shaft, governor weights pivotally supported on the shafts and provided with cams at their free ends on which the cam-disk rests, a sliding collar on the governor shaft, links between the collar and the respective weights to limit their outward movement, and transmission elements between the cam-disk and the pump plungers, said transmission elements including curved members engaged respectively with the cam-disk and the pump plungers and with each other at a tangential point, whereby axial movement of the cam-disk under the influence of the weights will serve to shift the said tangential point of engagement.

[Claims 6 to 10 not printed in the Gazette.]

1,222,056. **SUPPLEMENTAL BOTTOM FOR COOKING UTENSILS.** JAMES J. WESLEY, Phoenix, Ariz. Filed Nov. 18, 1915. Serial No. 62,172. (Cl. 53—8.)

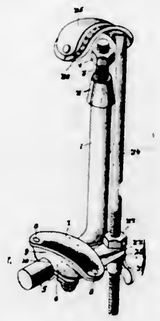


A supplemental bottom for pots and pans comprising a circular convex screen wire member, a metal reinforcing band crimped around the edge of said member on both faces thereof, arcuate bracing bars extending transversely across the lower face of said member in contact therewith and extending in planes at right angles to each other, said bars intersecting each other at the center of the circular member and having their ends housed between the members of said band, inverted U-shaped legs arranged at the intersection of said cross bars, the cross bars of the legs intersecting each other and arranged at right angles, the cross bar of each leg being arranged parallel and in contact with one of the brace bars forming a reinforce therefor, said legs having their ends diverging and the terminals thereof arranged in alinement with the reinforced edge of the wire screen member, and a clip comprising a rectangular plate disposed on the outer face of the screen wire member and provided at the corners thereof with prongs which extend through the screen wire member at the angles of the intersecting brace bars and legs and are bent around said bars and legs for rigidly connecting them together and to the screen wire member.

1,222,057. **BOW REST AND CLAMPING DEVICE.** HARRY B. WHITE, Canton, Ohio, assignor to The Gilliam Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Mar. 3, 1915. Serial No. 11,882. (Cl. 21—61.)

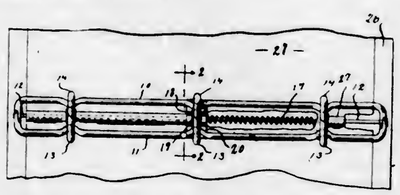
1. In a device of the character described, the combination of a supporting rod, a bracket mounted upon said supporting rod, downwardly disposed walls provided upon said bracket, said walls being provided with recesses adapted to contact with the upper side of the supporting rod, inwardly disposed shoulders provided upon said walls, a curved clamping plate provided with notches adapted to register with said shoulders, means for drawing the free end of said clamping plate toward said bracket, a rest provided upon the upper face of said bracket and arranged to support the bows of a vehicle top and a clamp carried by said bracket and arranged to cooperate with the rest to support the bows.

2. In a device of the character described the combination of a supporting rod, a bracket mounted upon said supporting rod, downwardly disposed walls provided upon said bracket, said walls being provided with recesses adapted to contact with the upper side of the supporting rod, inwardly disposed shoulders provided upon said walls, a curved clamping plate provided with a straight portion



arranged to be placed between said shoulders, portions of said clamping plate arranged to rest upon said shoulders, means for drawing the free end of said clamping plate toward said bracket, a rest upon the upper face of said bracket arranged to support the bows of a vehicle top and a clamp carried by said bracket and arranged to cooperate with the rest to support the bows.

1,222,058. LOOSE-LEAF BOOK. RALPH G. WHITLOCK, Los Angeles, Cal. Filed Mar. 11, 1916. Serial No. 83,653. (Cl. 129—17.)



1. In a device of the character described, a skeleton back frame comprising two sections; deformed ring members constructed in two sections forming companion pieces secured to the frame members; and means to pivotally connect the ring sections.

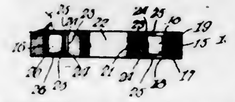
2. In a device of the character described a rectangular skeleton back frame comprising two members; deformed ring members constructed in two sections forming companion pieces secured to the frame members; means to pivotally connect the ring sections; and means to hold the ring members open or closed.

3. In a device of the character described, a rectangular skeleton wire back frame comprising two members; deformed ring members constructed in two sections forming companion pieces secured to the frame members; means to pivotally connect the ring sections above the plane of the lower edges of the frame members; locking means to hold the ring members in either their open or closed position.

4. In a device of the character described, a rectangular skeleton back frame composed of two wire members hingedly connected at their ends at a point above the plane of the lower edges of the side members; ring members secured to said wire members, a spring to normally hold the ring members closed; and locking means secured to said wire members adapted to hold the ring members in a closed or open position.

5. In a device of the character described, a back frame comprising two parallel wire members; and deformed ring members secured to said wire members, said ring members being arranged in pairs and having shanks hingedly connected at a point above the plane of the lower edges of the back members.

1,222,059. ANTI-FRICTION-BEARING. LUDWIG W. ZAAR, Chicago, Ill. Filed Apr. 21, 1916. Serial No. 92,575. (Cl. 64—61.)

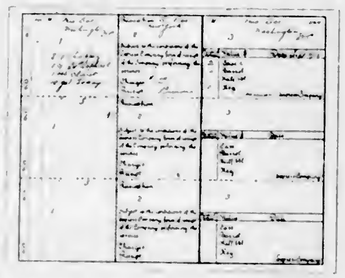


1. In an anti-friction bearing device, the combination with an inner and an outer retaining member, of a plurality of rollers movably interposed between said members, said rollers being of two sets of different diameters and arranged alternately with respect to one another and each set of rollers having an independent bearing track or guide-way in the retaining members.

2. In an anti-friction bearing device, the combination with an inner and an outer retaining member located in substantially concentric relation and having annular grooves and flanges on their adjacent surfaces, of a plurality of large rollers and a plurality of smaller rollers movably interposed between said members and arranged alternately with respect to one another, the set of larger rollers having its bearings in said grooves and the set of smaller rollers having its bearings on said flanges of the retaining members.

3. In an anti-friction bearing device, the combination with an inner and an outer retaining member located in substantially concentric relation and both having an annular groove and a pair of flanges on their adjacent surfaces, of a plurality of large cylindrical rollers, and a plurality of smaller cylindrical rollers having reduced cylindrical portions at their ends, said rollers movably interposed between said retaining members and arranged alternately with respect to one another, the set of larger rollers having its bearings in said grooves and the set of smaller rollers having its bearings on said flanges of the retaining members.

1,222,060. ENTRY-SHEET FOR ARTICLES OF MERCHANDISE. LUCIEN ARDIN, New York, N. Y. Filed Aug. 13, 1914. Serial No. 856,521. (Cl. 11—19.)



In a combined loose leaf label, shipping receipt, and merchant's sales record, a pair of sheets, the upper sheet of each pair being formed of a plurality of detachable stub portions and a plurality of detachable label portions, said stub portions having appropriate lines for the entry of the several articles of merchandise thereon, and serving as a check upon the merchant when inserted within the parcel to be shipped, each of said label portions being formed of two integral sections, one of said sections to form a receipt with the signature of the carrier's agent,

and the other of said sections being provided with a plurality of columns for the entry of the several parcels therein, appropriate lines for the identification of the consignee, the label to be attached to one of the parcels to be shipped, the lower sheet of each pair being divided into the same number of sections as in the upper sheet, each of said latter sections being a duplicate record of the upper sheet, said lower sheet having an intermediate section for the recording of the sale price of the several items of merchandise, and a duplicated record of the carrier agent's signature.

1,222,061. PAVING-BLOCK. EDWIN J. BARTELLS, Seattle, Wash., assignor to Pacific Creosoting Company, Seattle, Wash., a Corporation of Washington. Filed Jan. 10, 1916. Serial No. 71,332. (Cl. 94—8.)

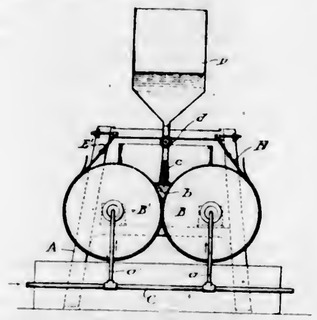


1. As an improvement in wooden pavements, a plurality of wooden blocks having individually, contacting sides provided with diagonally arranged concaved grooves extending throughout said sides from bottom to top, whereby the opposite diagonal or crossing grooves filled in with concrete or plastic material will have an interlocking action.

2. A wooden paving block having chosen vertical sides provided with a series of grooves of curved cross section extending in parallelism with the grain of the wood from the bottom edge to the top edge of said block, said grooves being disposed so that the curved cross sectional lines of adjacent ones of said grooves shall intersect each other whereby is provided a ridge whose apex is sharp and whose base is of a width equal to the distance between the apexes of adjacent ones of said ridges.

3. A paving block formed of material capable of expansion and contraction having chosen portions of the outer sides provided with continuous depressions divided by sharpened ridges.

1,222,062. FOOD PRODUCT AND PROCESS OF MAKING THE SAME. ROY H. BENT and WYNN C. BENT, Antwerp, N. Y. Filed Aug. 13, 1915. Serial No. 45,297. (Cl. 99—5.)



1. The herein described food product, consisting of dry, homogeneous particles or flakes containing a dried lacteal product and a dried edible vegetable extract.

2. The herein described food product, consisting of dry, homogeneous particles or flakes containing dried milk and a dried succulent vegetable.

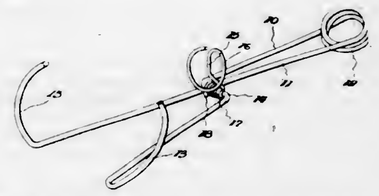
3. The herein described food product, consisting of dry, homogeneous particles or flakes containing dried milk and evaporated tomatoes.

4. The herein described food product, consisting of dry, homogeneous particles or flakes containing dried milk and dried tomato extract.

5. The herein described food product, consisting of dry, homogeneous particles or flakes containing dried milk, dried tomato extract and sugar.

[Claims 6 to 10 not printed in the Gazette.]

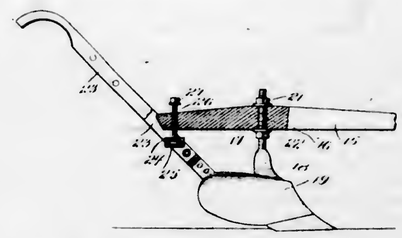
1,222,063. ANIMAL-TRAP. CLARENCE E. BITTLE, Harlan, Iowa, assignor to Omar P. Wyland, Harlan, Iowa. Filed June 6, 1916. Serial No. 102,014. (Cl. 43—23.)



1. A device of the character described including crossed arms, coacting jaws carried thereby, yieldable means associated with the said arms and normally acting thereon to urge the said jaws toward each other, one of the said arms being formed with a lateral shoulder, and a trigger pivotally connected to said shoulder and engaging the other arm at the point of intersection of the said arms for holding the jaws in spaced relation.

2. A device of the character described including cross arms, coacting jaws carried thereby, yieldable means associated with the said arms and normally acting thereon to urge the said jaws toward each other, and a trigger having a sleeve mounted upon one of said arms to pivotally support the trigger with the said sleeve extending transversely with respect to the arms adjacent the point of intersection thereof and provided with a stop lug engaging the other of said arms for holding the said jaws in spaced relation, the said sleeve supporting the stop lug in position to hold the outer extremities of said arms relatively wide apart.

1,222,064. PLOW. LEE O. BOBO, Fresno, Cal. Filed Mar. 24, 1914. Serial No. 826,945. (Cl. 97—21.)



In a device of the class described, in combination, a plow beam, a pair of connected handles having a cross bar secured between them at their lower ends and horizontally disposed said cross bar being formed with a socket, an adjusting screw having a head adapted to turn in said socket in a horizontal plane and positioning said screw vertically, said beam having a threaded opening in which said screw is threaded, a head formed upon the outer end of said screw, a plow standard secured to said handle and provided with a vertically disposed threaded shank, said beam having an unthreaded opening through which said shank projects, and a pair of nuts threaded upon said

threaded shank and clamped upon the upper and lower edges of said beam to position said beam horizontally, said screw being held against displacement from said socket.

1,222,065. SMOKELESS POWDER AND PROCESS OF MAKING SAME. JAMES MADISON BROWN, Johnson City, Tenn. Filed Mar. 4, 1915. Serial No. 12,024. (Cl. 52—1.)

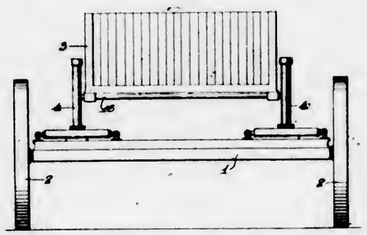
1. The process of making smokeless powder which consists in preparing a solution of from 8% to 16% of rosin and linseed oil; mixing over 59% of ammonium perchlorate with said solution; adding about 5% to 10% sulfur to said mixture; adding substantially 27% to 14% of a finely divided carbohydrate to the mixture and suitably forming the mass into grains, substantially as described.

2. The process of producing a smokeless powder which consists in preparing a solution consisting of from 8% to 12% rosin and boiled linseed oil; mixing substantially 60% ammonium perchlorate in said solution; adding from 5% to 10% sulful to the mixture; and adding substantially 27% to 18% of grain flour to the mass thus produced, substantially as described.

3. The process of producing a smokeless powder which consists in preparing a solution consisting of 12% of a solution of rosin and boiled linseed oil; mixing 60% ammonium perchlorate in said solution; adding 5% sulfur to said mixture; and adding 23% grain flour to the mass thus produced, substantially as described.

4. The herein described new smokeless powder consisting of a mixture of finely divided ammonium perchlorate, sulfur, and grain flour bound together by a coating consisting of rosin and linseed oil, substantially as described.

1,222,066. VEHICLE-SPRING. JOHN F. BROWN and ALPHONSO HUMPHREYS, Casa Grande, Ariz. Filed July 31, 1916. Serial No. 112,327. (Cl. 267—43.)

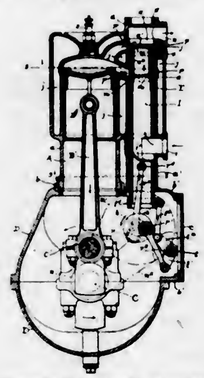


1. In a vehicle spring, the combination with an axle and a vehicle body, of a cross bar for supporting one end of the body, casings arranged horizontally at the extremities of the axle, vertical casings slidably mounted in the horizontal casings and arranged to slidably receive the ends of the bar, resilient means arranged to the vertical casings and positioned above and below the bar for absorbing shocks transmitted thereto, and other resilient means mounted adjacent the respective extremities of the horizontal casings for coöperating with the vertical casings for absorbing lateral shocks.

2. In a vehicle spring the combination with the axles and the body of the vehicle, of cross bars for supporting the body, horizontally arranged casings mounted adjacent the respective extremities of the axles and each provided with a slot, vertically arranged casings having slots therein for slidably receiving the ends of the bar, connecting elements one of which is connected to the bottom of a vertical casing and slidably mounted in a horizontal casing, rods anchored in the elements and positioned in the vertical casings for also slidably receiving ends of the bar, springs mounted in the vertical casings and arranged above and below the ends of the bar for absorbing vertical jolts transmitted thereto, means for regulating the compression of the springs, other rods arranged in the horizontal casings and mounted on the axles, other springs arranged in the horizontal casings and positioned upon opposite connecting elements for absorbing lateral shocks, and means for regulating the compression of the horizontally arranged springs.

3. In a vehicle spring the combination with the axles and body of a vehicle, of supporting means for the body, vertically arranged casings for slidably receiving the ends of the supporting means, non-synchronizing resilient means in the casings for absorbing shocks for reducing vibration of the body to a minimum; horizontally arranged casings mounted adjacent the extremities of the axles for slidably mounting the vertical casings, and resilient means arranged in the horizontal casings and having a non-synchronizing action on the vertical casings for absorbing lateral shocks imposed on the vehicle body.

1,222,067. INTERNAL-COMBUSTION ENGINE. WALTER F. BROWN, New London, Conn. Filed Feb. 13, 1912. Serial No. 677,317. (Cl. 123—75.)



1. In a self-contained internal combustion engine, provided with a main or working cylinder having independent inlet and exhaust ports, a bored valve-chest having therein suitable main supply and outlet nozzles, arranged to communicate with ports registering with the cylinder's ports, and a main shaft, the combination therewith of a piston mounted in said cylinder, means connecting the piston and main shaft for driving the latter, a pair of suitably ported, tubular intake and exhaust piston-valves mounted one within the other in said valve-chest, means actuated by the main shaft to cause a double reciprocation of the intake valve during a plurality of revolutions of said shaft, and means, including a wrist-plate-motion-device for reciprocating the exhaust-valve and varying its speed at certain times with relation to the intake valve during each cycle of operations, constructed and arranged whereby the intake gases are adapted to flow through the ports of the said valves into the main inlet port of the cylinder when they are in juxtaposition, the arrangement also permitting the waste or exhaust gases to pass out freely from the cylinder through its main exhaust port, when the latter is uncovered, and past the outer closed end of the exhaust-valve, direct into the valve-chest and its outlet nozzle.

2. In an internal combustion engine, the combination with a main cylinder, a valve-chest having intake and exhaust nozzles, inlet and exhaust connection between the cylinder and valve-chest, a working piston in the cylinder and a driving shaft operatively connected with the piston, of a pair of tubular intake and exhaust valves arranged one within the other, and disposed in the valve-chest, there being an annular space formed in the outer valve and the inner valve telescoping said space at its discharge end, and means for operating the valve, substantially as described.

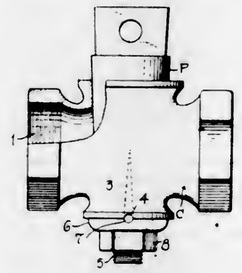
3. In an internal combustion engine, the combination with the main cylinder having independent intake and exhaust ports and a bored valve-chest integral with the cylinder, of annular intake and exhaust valves slidably fitting each other and said valve-chest arranged to receive and discharge the inlet and exhaust gases, means, including a wrist-plate motion device, for controlling and varying the character of the movements of said exhaust-valve at predetermined times at varying speed ratios, and means for actuating said wrist-plate device.

4. In an internal combustion engine, the combination of a water-jacketed main cylinder, a suitably driven main piston mounted therein, a water-jacketed valve-chest provided with spaced apart water-jacketed intake and exhaust ports communicating with the cylinder, said valve-chest having main inlet and exhaust passages for the supply and waste gases, respectively, vertically disposed tubular intake and exhaust piston-valves slidably mounted one within the other in said valve-chest, said valves being laterally apertured for the flow of gases therethrough, the intake valve being innermost and in continuous open communication with said main inlet passage of the valve-chest, means for actuating the intake-valve, and means, including a wrist-plate motion device, for actuating the exhaust-valve.

5. In an internal combustion engine, the combination of a main cylinder having a valve-chest integral therewith provided with outer intake and exhaust-openings or nozzles, and also having independent main exhaust and inlet ports in direct communication with the cylinder and valve-chest, a pair of endwise movable tubular exhaust and intake piston-valves disposed in the valve-chest, one valve mounted within the other, the exhaust-valve being the outermost, the upper end of the last-named valve being continuously closed, means for imparting a double reciprocatory movement to the intake valve during two revolutions of the main shaft, and means in continuous connection with the exhaust-valve for actuating the latter to produce an accelerated opening and closing effect and at the same time imparting to it a comparatively long dwell in its open and closed positions.

[Claims 6 to 18 not printed in the Gazette.]

1,222,068. COCK. JAMES A. BUMP, Malta, Ohio. Filed Dec. 30, 1916. Serial No. 139,806. (Cl. 137—7.)

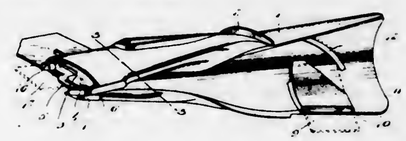


1. A cock consisting of a casing provided with a passageway, a turn plug rotatably supported by said casing and intersecting said passageway, said plug being provided with a port adapted to register with the passageway of the casing when the plug is in one position, said plug serving to close the passageway when adjusted in a second postion, the opposed faces of the passageway of the casing being provided with grooves leading to the atmosphere, said grooves being of such a length as to afford communication with the port of the turning plug when said plug is in closed adjustment.

2. A cock consisting of a casing provided with a passageway, a turn plug rotatably supported by said casing and intersecting said passageway, said plug being provided with a port adapted to register with the passageway of the casing when the plug is in one position, said plug serving to close the passageway when adjusted in a second position, the opposed faces of the passageway of the casing being provided with grooves leading to the atmosphere, said grooves being of such a length as to afford communication with the port of the turning plug when said plug is in closed adjustment, and means for holding said washer in applied position upon the plug.

3. A cock consisting of a casing provided with a passageway, a turn plug rotatably supported by said casing and intersecting said passageway, said plug being provided with a port adapted to register with the passageway of the casing when the plug is in one position, said plug serving to close the passageway when adjusted in a second position, the opposed faces of the passageway of the casing being provided with grooves leading to the atmosphere, said grooves being of such a length as to afford communication with the port of the turning plug when said plug is in closed adjustment, a washer mounted upon an end portion of the plug and provided in its inner face with grooves adapted to communicate with the grooves of the casing, and means for holding said washer in applied position upon the plug, the face of the casing opposed to the washer being provided with grooves in register with the grooves of the washer.

1,222,069. FOLDING DEVICE FOR SEWING-MACHINES. JOHN E. CHALMAN, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 1, 1913. Serial No. 764,918. (Cl. 270—35.)



1. A folding guide including outer and inner spaced guiding walls forming a recess between them for guiding and folding a strip, the inner wall having an opening therein through which a lining strip may be carried into the recess and guided between the upper and lower faces of the folded strip.

2. A folding guide including outer and inner spaced guiding walls forming a recess between them for guiding and folding a strip, the inner wall having an opening therein through which a lining strip may be carried into the recess, and having at its delivery end a guiding tongue beneath which the lining is guided on its way to the needles.

3. A folding guide including outer and inner spaced guiding walls forming a recess between them for guiding and folding a strip, the inner wall having an opening therein through which a lining strip may be carried into said recess, an inverting guide attached to the outer face of the inner wall for guiding and inverting the lining strip.

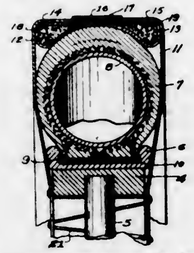
4. A folding guide including spaced guiding walls forming a recess between them for guiding and folding a strip, the inner wall having an opening therein through which a lining strip may be carried into said recess, an inverting guide attached to the outer face of the inner wall for guiding and inverting the lining strip, and a guide for the strip attached to the outer face of the inner wall between the edge thereof and the inverting guide.

5. A folding guide including spaced guiding walls, said guiding walls tapering toward the delivery end to form upper and lower walls with a recess between for the passage of the body fabric, a second guiding device arranged at a right angle to the first named guiding recess, and an inverting device for the strip which passes through the

right angle guiding device, said inverting device being located to guide the strip above the body fabric in its passage through the folding guide.

[Claim 6 not printed in the Gazette.]

1,222,070. SHOE FOR TIRES. WILLIAM L. CHRISTIAN and PHILIP BARKER, Los Angeles, Cal. Filed Dec. 6, 1915. Serial No. 65,267. (Cl. 152—17.)



1. A shoe for tires, comprising a flexible belt adapted to extend peripherally about a tire, said belt formed with a collapsible pocket projecting from one surface and extending longitudinally of the belt, removable filling in said pocket of a character to adjustably conform to tires of different curvatures, said pocket adapted to be disposed against the concave portion of the tire, and means for detachably securing the belt to said tire.

2. A shoe for tires, comprising a flexible belt adapted to extend peripherally about a tire, said belt formed with complementary collapsible pockets projecting from one surface and extending longitudinally of the belt, removable filling in said pockets of a character to adjustably conform to tires of different curvatures, said pockets adapted to be disposed across the concave portion of the tire whereby a flat tread surface is formed, and means for detachably securing the belt to the tire.

3. A shoe for tires, comprising a belt adapted to extend peripherally about a tire, said belt including a ply of flexible material, complementary pockets disposed upon one surface and extending longitudinally of said belt, each pocket formed by folding a strip of flexible material upon itself and securing the latter to said ply, removable filling in said pockets of a character to adjustably conform to tires of different curvatures, said pockets adapted to be disposed against the concave portion of the tire whereby a flat tread surface is formed, and means for detachably securing the belt to the tire.

1,222,071. SAFETY-VALVE. GEORGE HALL CLARK, Cambridge, Mass., assignor to Crosby Steam Gage & Valve Company, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 9, 1916. Serial No. 77,318. (Cl. 137—53.)



1. In a safety valve, the combination of a disk and a base shaped to provide a standard orifice.

2. In a safety valve, the combination of a disk and a base shaped to provide a standard orifice of substantially equal orificial area at throat and lips when the disk is at its predetermined full lift.

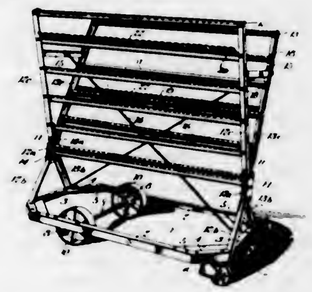
3. In a safety valve, the combination of a disk and a base shaped to provide a standard orifice of substantially equal orificial area at throat and lips when the disk is at its predetermined full lift, said orifice modified by an enlargement extending toward the lips from a region between throat and lips.

4. In a safety valve, the combination of a disk and a base, shaped to provide a standard orifice, said disk and base provided with a seat of mutual engagement close to the throat of said standard orifice.

5. In a safety valve, the combination of a disk and a base, shaped to provide a standard orifice of substantially equal orificial area at throat and lips when the disk is at its predetermined full lift, said disk and base provided with a seat of mutual engagement close to the throat of said standard orifice.

[Claims 6 to 22 not printed in the Gazette.]

1,222,072. POULTRY-RACK. GEORGE COLLIS, Clinton, Iowa; Florence Mary Collis, executrix of said George Collis, deceased, assignor to The Collis Company, Clinton, Iowa, a Corporation of Iowa. Filed Sept. 29, 1914. Serial No. 864,116. (Cl. 211—14.)



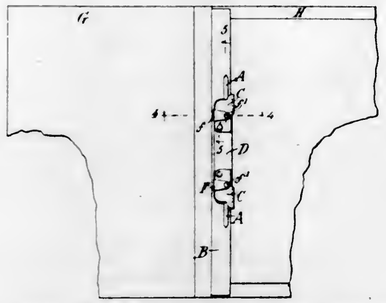
1. As an article of manufacture, a leg-engaging member for poultry-racks comprising a looped body-portion, plate-engaging portions offset from said body-portion, angulated ends, a sustaining-structure therefor including a bar and removable clamping-plate thereon provided with a series of elongated, open-ended recesses adapted to receive the plate-engaging portions of the leg-engaging members, and bolt-and-nut devices for securing said plate to the sustaining-structure.

2. A rack-structure comprising a supporting-member, a clamping-plate secured thereto, said plate being provided with a plurality of spaced-apart open-ended recesses; and a plurality of holder-elements, each having arms in spaced relation, closed at one end and open at the other end; said arms being offset intermediate their ends, having angulated portions at their ends and secured between the angulated and offset portions in the recesses in the clamping-plate.

3. A rack-structure comprising a supporting-member, a clamping-plate secured thereto, said plate being provided with a plurality of spaced-apart open-ended recesses; and a plurality of holder-elements, each having arms in spaced relation, closed at one end and open at the other end; said arms being offset intermediate their ends, having angulated portions at their ends and secured between the angulated and offset portions in the recesses in the clamping-plate, the offset portions bearing against the edges of the recesses at one end thereof and the angulated portions bearing against the opposite edges.

4. A rack-structure comprising a support; a clamping member secured thereto; said clamping member having a plurality of offset portions which form with said support, when attached thereto, a series of open-ended recesses; and a series of holding-elements each having a resilient, looped, body portion at one end and arms in spaced relation open at the other end; said arms being offset intermediate their ends, having angulated portions at their ends, and having portions adapted to engage the sides of the recesses, disposed between the offset and angulated portions, the arms of said holding elements being adapted to be sprung into the recesses and forced out into bearing engagement with the sides thereof by the resiliency of the looped portions of the holding elements.

1,222,073. FILE, BINDER, OR THE LIKE. WILLIAM A. COOKE, Jr., Brooklyn, N. Y. Filed Apr. 26, 1915. Serial No. 24,087. (Cl. 129—7.)



1. A binder or file comprising a binding strip, a bendable prong coacting with the binding strip, a clamp for the bendable prong, and perforation means on said clamp.

2. A binder or file comprising a bendable prong, a binding strip over which the prong is bent, a cover, and a part distant from the cover, adapted to overlie the bendable prong, and perforation means on said part.

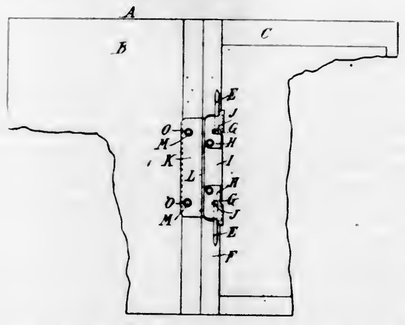
3. A binder or file, comprising a cover having a binding strip, bendable filing prongs, openings in said binding strip for said prongs, and perforation-means independent of said cover mounted upon said binding strip, having means adapted to guide a user in passing a pointed instrument through a piece of paper, said guide means being adapted to lie coincident with an opening in said binding strip.

4. A binder or file, comprising a binding strip, filing prongs or filaments, adapted to be bent to close them, and meant for retaining said filing prongs in closed position, said retaining means having perforation-means thereon.

5. A binder or file, comprising a binding strip, filing prongs or filaments, adapted to be bent to close them, and means for retaining said filing prongs in closed position, said retaining means having a part adapted to overlie a sheet of paper and having perforation-means thereon.

[Claims 6 and 7 not printed in the Gazette.]

1,222,074. FILE, BINDER, OR THE LIKE. WILLIAM A. COOKE, Jr., Brooklyn, N. Y. Filed Apr. 26, 1915. Serial No. 24,088. (Cl. 129—7.)



1. In a file, binder or the like, the combination of a cover, binding means having an aperture adapted to admit a pencil or the like, and a member supplemental to the binding means and additional to the cover movable into and out of position above the latter, said member having an aperture which in one position alines with that of the binding means.

2. In a file, binder or the like, the combination of a cover, binding means having an aperture adapted to admit a pencil or the like, and a member supplemental to the binding means and additional to the cover and hinged to the latter, said member being adapted to be folded over the binding means and being provided with an aperture which, in such folded position, alines with the aperture in the binding means.

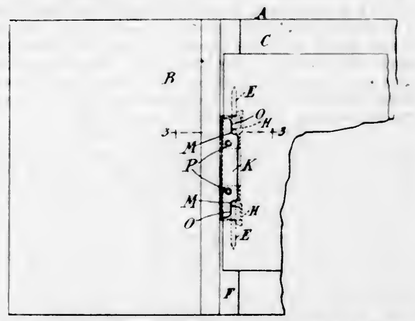
3. In a file, binder or the like, the combination of binding means having an aperture adapted to admit a pencil or the like, and a member supplemental to the binding means and hinged to the latter, said member being adapted to be folded over the binding means and being provided with an aperture which in such folded position alines with the aperture in the binding means, and said member comprising a flap hinged to the file.

4. A file, binder or the like, having filing prongs, a clamp for holding said filing prongs, a clamp for holding said filing prongs in position, said clamp having an aperture adapted to admit a pencil or the like, and a supplemental means adapted to be moved over said clamp, said supplemental means having an aperture adapted to aline with the aperture in the clamp.

5. A file, binder or the like, having filing prongs, a clamp for holding said filing prongs in position, said clamp having an aperture adapted to admit a pencil or the like, and a supplemental means adapted to be moved over said clamp, said supplemental means having an aperture adapted to aline with the aperture in the clamp, and a member carrying said supplemental means comprising a flap hinged to the binding means.

[Claims 6 and 7 not printed in the Gazette.]

1,222,075. FILE, BINDER, OR THE LIKE. WILLIAM A. COOKE, Jr., Brooklyn, N. Y. Filed Apr. 26, 1915. Serial No. 24,089. (Cl. 129—7.)



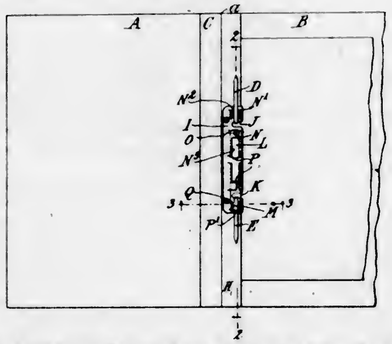
1. A file, binder or the like having a cover, and binding means comprising filing prongs and means for clamping the prongs, and a perforating device comprising a plate independent of the cover fixed to the binding means and adapted to receive the sheet to be filed beneath it, said plate having recesses adapted to guide a pencil or the like by which such sheet may be perforated.

2. A file, binder or the like having filing prongs and clamps for said prongs, said clamps having apertures, and a plate fixed above said clamps and adapted to receive the sheet of paper to be filed beneath it, said plate having recesses in alinement with said apertures and adapted to guide a pencil or the like in perforating the sheet.

3. A file, binder or the like having filing prongs and a pair of pivoted clamps for said prongs, said clamps having apertures, a plate above said clamps, said plate having recesses adapted to guide a pencil or the like in perforating the sheet to be filed.

4. A file, binder or the like comprising filing prongs, clamps for said prongs, a plate on which said clamps are mounted, and a guiding plate formed integrally with said first named plate and having recesses adapted to guide a pencil or the like in perforating the sheet of paper to be filed.

1,222,076. LETTER-FILE OR THE LIKE. WILLIAM A. COOKE, Jr., Brooklyn, N. Y. Filed Apr. 26, 1915. Serial No. 24,092. (Cl. 129—25.)



1. A binder or file for sheets of paper and the like having covers, flexible prongs attached to one cover, a guard secured to the other cover having openings for said prongs, projections on said guard extending toward each other and providing ways, a pair of slides mounted in said ways and adapted, when moved in opposite directions, to respectively cover or uncover the bent ends of said prongs, each slide having finger-pieces at both ends whereby the said slides are adapted to be moved to open or closed position together by one hand.

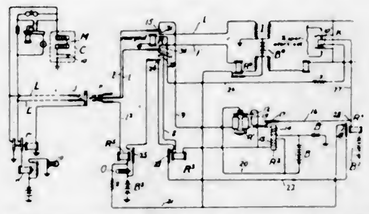
2. A file or binder for sheets of paper and the like, comprising a flexible prong, a guard having an open slot adapted to receive said prong, and lugs struck up from the face of said guard, said lugs serving as stops for preventing lateral displacement of the prong when the prong is bent down on said guard, a slide adapted to be moved over said prong when said prong is bent down on said guard, said lugs also serving as a slideway for said slide.

3. A file or binder for sheets of paper and the like, comprising a flexible prong, a guard having an open slot adapted to receive said prong, and lugs struck up from the face of said guard, said lugs serving as stops for preventing lateral displacement of the prong when the prong is bent down on said guard, a slide adapted to be moved over said prong when said prong is bent down on said guard, said lugs N, N^3 and said first mentioned lugs serving as a slideway for said slide, and lugs N, N^3 struck up from the face of said guard, one of said lugs having a projection O adapted to limit movement of said slide.

4. A file or binder for sheets of paper and the like, comprising a flexible prong, a guard formed of sheet material bent over to U-shape, said guard having an open slot adapted to receive said prong, and lugs struck up from the face of said guard, said lugs serving as stops for preventing lateral displacement of the prong when the prong is bent down on said guard, a slide adapted to be moved over said prong when said prong is bent down on said guard, said lugs also serving as a slideway for said slide.

1,222,077. FRAUD-DETECTING TELEPHONE TOLL SYSTEM. VOLNEY D. COUSINS, Oakland, Cal., assignor to American Telephone and Telegraph Company, Boston, Mass., a Corporation of New York. Filed Mar. 2, 1916. Serial No. 81,710. (Cl. 179—6.3.)

1. In a telephone toll system, the combination with a central station, a substation and a line connecting the stations, of a toll device at the substation, a signal at the central station, and means including said signal for detecting attempts to simulate the effect of the toll device.



2. In a telephone toll system, the combination with a central station, a substation and a line connecting the stations, of a toll device at the substation, a supervisory signal at the central station, and means including said signal for detecting attempts to simulate the effect of the toll device.

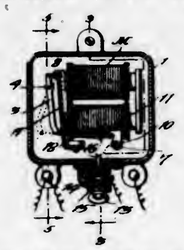
3. In a telephone toll system, the combination with a central station, a substation and a line connecting the stations, of a toll device at the substation, a signal at the central station operable legitimately by the toll device and fraudulently independently of said device, and means whereby the legitimate and fraudulent operation differently affect the signal.

4. In a telephone toll system, the combination with a central station, a substation and a line connecting the stations, of a toll device at the substation, a signal at the central station operable legitimately by the toll device and fraudulently independently of said device, and means including an operator-controlled device whereby the legitimate and fraudulent operation differently affect the signal.

5. In a telephone toll system, the combination with a central station, a substation and a line connecting the stations, of a toll device at the substation, a connecting circuit at the central station for switching the line and a disconnection signal in the connecting circuit controlled by the substation switch hook and by the toll device.

[Claims 6 to 24 not printed in the Gazette.]

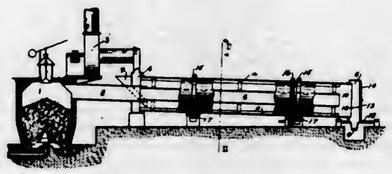
1,222,078. SIGNALING DEVICE FOR AUTOMOBILES. ERNEST CECIL COX, Newport News, Va. Filed Apr. 19, 1916. Serial No. 92,223. (Cl. 177—330.)



1. In an automobile signal, a magnet, an armature therefor, a rock shaft a stop arm carried thereby, means for energizing the magnet, means connected with said armature for moving said rock shaft, a signal carried by the shaft and arranged to move with it, and means arranged to be engaged by said stop arm for cushioning the movement of the rock shaft, said cushioning means comprising a pin arranged to be engaged by said stop arm, a spring arranged to bear against said pin, an electric lamp having its base bearing on the opposite end of the spring, and circuit connections for causing the lamp to be lighted when the stop arm engages the pin.

2. In a signaling device for automobiles, a magnet, means for energizing the magnet at will, an armature for said magnet, a rock shaft, a signal device carried by the rock shaft, lever and link connections between said armature and said rock shaft for rocking the latter, a stop arm carried by said rock shaft, a movable pin arranged to be engaged by said stop arm, a spring for cushioning the pin, an electric lamp having connections with the spring at the opposite end from the pin, a spring carried by the rock shaft and arranged to be placed under tension during the movement of the armature for restoring the parts when said armature is released, and circuit connections arranged to be established through the electric lamp on the engagement of the pin by the stop arm.

1,222,079. METHOD OF AND APPARATUS FOR DRYING MATERIALS. GEORGE B. DAMON, Belvidere, N. J., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Aug. 2, 1915. Serial No. 43,703. (Cl. 263—33.)



1. The method of drying material which comprises, utilizing heated combustible gas derived from a source independent of the material to heat the material, and burning said gas and further heating the material with the products of combustion.

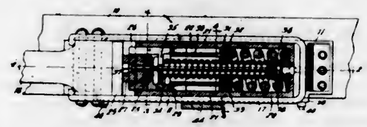
2. The method of drying material which comprises, utilizing heated combustible gas to indirectly heat the material, and subsequently burning said gas and directly additionally heating the material with the products of combustion.

3. The method of drying material which comprises, passing the material through a conduit, producing a flow of heated combustible gas derived from a source independent of the material along the material to heat the same, and burning said gas and further heating the material with the products of combustion.

4. The method of drying material which comprises, passing the material through an inclosed conduit, producing a continuous flow of heated combustible gas through said conduit to preliminarily heat said material, burning the gas and passing the products of combustion along the material to further heat the same.

5. In combination, means for furnishing a continuous supply of hot combustible gas, means for conveying said gas in proximity to the material to be dried, means for producing combustion of said gas, and means for conveying the products of combustion along the material.

1,222,080. DRAFT-RIGGING FOR RAILWAY-CARS. CHARLES E. DATH, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 23, 1914. Serial No. 868,156. (Cl. 213—64.)



1. In a draft rigging for railway cars, the combination with tandem stop castings, of a longitudinally movable friction shell, friction elements and springs within said shell, a front follower, a rear follower, a front intermediate follower, and a removable, rear intermediate follower extending transversely through said shell intermediate the ends thereof and arranged to coöperate with one set of intermediate stops on said stop castings, said rear intermediate follower being movable rearwardly under buff.

2. In a railway draft rigging, the combination with tandem stop castings, of a longitudinally movable combined friction shell and spring casing, friction elements and springs within said shell and casing, a removable intermediate follower extended transversely through said shell, and a plunger extending between said friction elements and said removable follower.

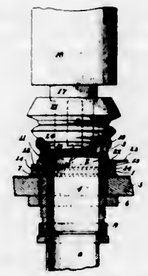
3. In a draft rigging for railway cars, the combination with tandem stop castings, of a combined friction cylinder and spring casing having shoulders coöperating with one set of end stops and one set of intermediate stops on said castings, and two removable followers coöperable with the remaining sets of end and intermediate stops on said stop castings.

4. In a draft rigging for railway cars, the combination with tandem stop castings, of a slidably mounted combined friction cylinder and spring casing, friction shoes and a wedge mounted within the friction cylinder, a spring mounted within the spring casing, a rear intermediate follower extending through said combined cylinder and casing and intermediate the same and engaging the front end of said spring, and a hollow block extending between the rear ends of the friction shoes and the front face of said intermediate follower, said block being detachable with respect to said follower.

5. In a draft rigging of the character described, the combination with a friction shell, of friction shoes and a spreader therefor coöperable with said shell, a main spring and a secondary spring, the latter acting directly on the shoes under both buff and draft, and means intermediate the main spring and said shoes arranged to transmit the movement of the shoes to said main spring under buff only.

[Claims 6 and 7 not printed in the Gazette.]

1,222,081. REPLACEABLE VALVE-SEAT FOR FLUSH-TANKS. WALLINGFORD C. DEMILT, Brooklyn, N. Y. Filed Mar. 15, 1916. Serial No. 84,319. (Cl. 137—21.)

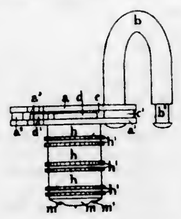


1. A removable annular valve-seat provided with a set-screw or screws for securing the same upon an annular thimble or member; such valve-seat being provided with a central female screw thread and having annular gasket grooves in the base.

2. A removable annular valve-seat provided with three equilaterally located set-screws passing through the peripheral wall for securing the same in position upon an annular thimble or member; such valve-seat being provided with a central female screw thread, and having annular gasket grooves in the base.

3. A removable annular valve-seat provided with three equilaterally located set-screws passing through the peripheral wall for securing the same in position upon an annular thimble or member; such valve-seat being provided with a central female screw thread; having annular gasket grooves in the base; also having an outer central annular peripheral groove; and an annular valve-seat-face of rounded contour in cross-section.

1,222,082. PERMUTATION-PADLOCK. EUGÈNE MAURICE OCTAVE DESCALLES, Paris, France. Filed Apr. 27, 1914. Serial No. 834,813. (Cl. 70—19.)



1. The combination with a lock having a bow arresting bolt plate, a spindle integral with said bolt plate, a rod normally preventing the rotation of said spindle, arresting members comprising superposed plates provided with notches, means for turning said plates around said spindle to position the notches therein to receive said rod to permit the rotation of the spindle.

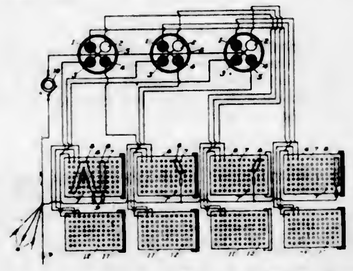
2. In a lock of the class described, the combination of a spindle, a rod normally preventing the rotation of said spindle, arresting or locking members for said spindle comprising superposed plates provided with notches, rings inclosing each of the locking or arresting plates and formed with internal teeth between any two of which a tooth of the plate may be engaged to connect the plate and the ring.

3. In a permutation lock, arresting or locking members comprising superposed plates provided with notches and teeth, rings inclosing the locking or arresting plates and each formed with internal teeth between any two of which a tooth of the plate it encircles may be engaged to connect said plate and ring, and a spring controlled pawl adapted to engage between the teeth of each ring, one of the teeth being shaped to lock said pawl in one point in one direction of rotation to furnish simultaneously an indication of the degree of rotation through which the ring has been turned, and a starting point for the rotation in one direction.

4. In a permutation lock, the combination with a spindle, a rod normally preventing the rotation of said spindle, arresting or locking members comprising superposed plates provided with notches and teeth, rings inclosing each of the locking plates and formed with internal teeth between any two of which a tooth of the plate which it encircles may engage to render said plate integral with its ring, a spring controlled pawl to engage between the teeth of each ring one of said teeth being shaped to lock said pawl in one point in one direction of rotation to furnish simultaneously an indication of the degree of rotation through which the ring has been turned, and a starting point for the rotation in one direction, and means for displacing the different arresting plates parallel to the spindle so that their teeth cease to be in contact with the teeth of the rings, thus permitting the rotation of the rings with respect to the plates in order to change the combination of the lock.

1,222,083. DISPLAY APPARATUS. FRED G. DICKERSON, Chicago, Ill. Filed Dec. 2, 1915. Serial No. 64,784. (Cl. 177—350.)

1. Display apparatus including a plurality of sets of differing display elements, display elements in each of said plurality of sets being similar to display elements in the other sets; individual circuits for the display elements; a plurality of contact boards carrying terminals individual to the circuits of the display elements, which terminals are distributed among the boards, each board carrying terminals that belong to similar display elements; current conducting patterns for engaging a plurality of terminals upon each board and provided with means for effecting the inclusion thereof and the terminals engaged thereby in circuit; additional boards having terminals in multiple with the terminals on the aforesaid boards; and means cooperating with the terminals of the latter board in also controlling the circuits of the display elements.



2. Display apparatus including a plurality of sets of differing display elements, display elements in each of said plurality of sets being similar to display elements in the other sets; individual circuits for the display elements; a plurality of contact boards carrying terminals individual to the circuits of the display elements, which terminals are distributed among the boards, each board carrying terminals that belong to similar display elements; current conducting patterns for engaging a plurality of terminals upon each board and provided with means for effecting the inclusion thereof and the terminals engaged thereby in circuit; additional boards having terminals in multiple with the terminals of the aforesaid boards; and circuit closing means cooperating with the terminals on the latter boards in also controlling the circuits of the display elements.

3. Display apparatus including display elements; circuits for the display elements; a plurality of contact boards; multiply related terminals for each circuit, said contact boards carrying multiply related terminals that are distributed among them; current conducting patterns for engaging a plurality of terminals upon one of the boards and provided with means for effecting the inclusion thereof and the terminals engaged thereby in circuit; and means cooperating with the terminals upon the other board in also controlling the circuits of the display elements.

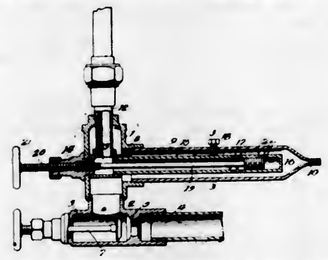
4. Display apparatus including display elements; circuits for the display elements; a plurality of contact boards; multiply related terminals for each circuit, said contact boards carrying multiply related terminals that are distributed among them; current conducting patterns for engaging a plurality of terminals upon one of the boards and provided with means for effecting the inclusion thereof and the terminals engaged thereby in circuit; and circuit closing means cooperating with the terminals upon the other board in also controlling the circuits of the display elements.

5. Display apparatus including display elements; circuits for the display elements; a contact board carrying terminals of said circuits; current conducting patterns for engaging a plurality of terminals upon said board; and circuit closing means separably related to said patterns for engaging the same to include them and the terminals engaged thereby in circuit.

[Claims 6 and 7 not printed in the Gazette.]

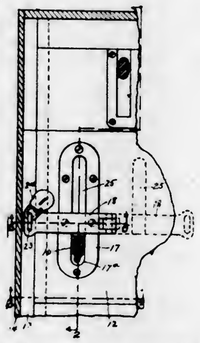
1,222,084. BURNER. CHARLES DONALDSON, Brookville, Pa. Filed Nov. 2, 1916. Serial No. 129,178. (Cl. 158—109.)

1. In a burner of the class described, a body having an air inlet, a burner tube extending from the body, a valve for controlling the admission of air through said inlet, a fuel tube, a union to which the inner end of the tube is connected, the said tube extending within the burner tube and provided in its wall with a discharge orifice, a member having a portion fitted through the wall of the body and into the other end of the said union, a valve stem adjustably fitted through the said member and extending into the fuel tube, a valve head at the end of the stem movable within the fuel tube with relation to the said discharge orifice therefrom to control the discharge of fuel through the orifice, and a fuel supply pipe leading into the body and communicating with the branch of the said union.



2. In a burner of the class described, a body having an air inlet, a burner tube extending from the body, a fuel supply pipe leading into the body, a fuel tube to which the pipe is connected, the said fuel tube extending within the burner tube and having a discharge orifice, a valve for controlling the flow of fuel through the orifice, and centering screws adjustably threaded through the wall of the burner tube at points in the circumference thereof and bearing at their inner ends against the said fuel tube.

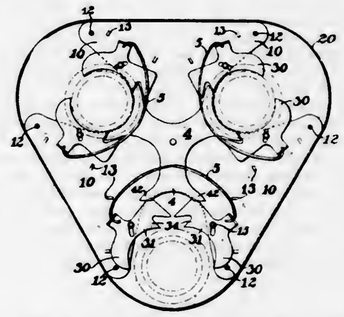
1,222,085. LEVER-LOCKING MEANS FOR MOTOR-VEHICLES. JOSEPH T. DONOVAN and JOSEPH A. TIGHE, Boston, Mass. Filed Dec. 7, 1916. Serial No. 135,594. (Cl. 70—90.)



1. In a motor vehicle which includes a body having a floor, and a controlling lever extending through and adapted to oscillate in a slot in said floor, the floor including a removable section containing said slot and constituting a cover for mechanism below the floor, the combination with said body, floor section, and lever, of a hasp having a hinge connection at one end with said section at one side of the slot, and formed at its swinging end to extend beyond the floor section and engage locking means on the body, a locking member inseparably connected with the body independently of said section at the opposite side of the slot, and adapted to engage the swinging end of said hasp, the hasp being adapted to extend across the slot and confine the lever in its operative position at one end of the slot, separable locking connections between said member and the swinging end of the hasp whereby both the hasp and the removable floor section may be simultaneously locked to the body, the said section, when locked, constituting an element of means for locking the lever in its operative position, and means carried by the hasp for obstructing the slot when the hasp is in its operative position.

2. In a motor vehicle which includes a body having a floor, and a controlling lever extending through and adapted to oscillate in a slot in said floor, the floor including a removable section containing said slot and constituting a cover for mechanism below the floor, the combination with said body, floor section, and lever, of a hasp having a hinge connection at one end with said section at one side of the slot, and formed at its swinging end to extend beyond the floor section and engage locking means on the body, a filling member attached to and extending crosswise of the hasp between its hinged and swinging ends, and formed to closely fit and fill the slot from one end thereof nearly to the opposite end, leaving sufficient space at the opposite end for occupancy by the lever when the latter is at one extreme of its movement, the filling member being carried by the hasp to and from its operative position, and adapted to lie with the hasp on the floor in an inoperative position, a locking member inseparably connected with the body independently of said section at the opposite side of the slot, and adapted to engage the swinging end of said hasp, the hasp being adapted to extend across the slot and confine the lever in its operative position at one end of the slot, and separable locking connections between said member and the swinging end of the hasp whereby both the hasp and the removable floor section may be simultaneously locked to the body, the said section, when locked, constituting an element of means for locking the lever in its operative position, the filling member and lever so obstructing the slot when the hasp is locked that the insertion, in said slot, of an effective tampering instrumentality, is prevented.

1,222,086. BOTTLE-HOLDING DEVICE. ARTHUR F. ERICKSON, Seattle, Wash. Filed Sept. 21, 1916. Serial No. 121,389. (Cl. 232—41.)



1. A bottle holder having a plurality of bottle holding and locking devices and a common controlling member for all said devices having supporting engagement with all the bottles, and adapted to be acted upon by the weight of one bottle to release another.

2. A bottle holder having a plurality of bottle holding and locking devices and a locking member connecting all said devices and mounted to have a limited vertical movement, said locking member having supporting engagement with all the bottles, and adapted to be depressed by the weight of one bottle to lock said bottle and to release another bottle.

3. A bottle holder having a plurality of bottle holding and locking devices and a controlling member for all said devices having a central support permitting a slight rocking, said controlling member having supporting engagement with all the bottles and being adapted to rock under the weight of the other bottles to release a bottle when the weight of this bottle is removed.

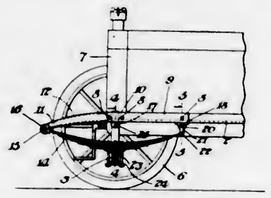
4. A bottle holder provided with a plurality of means for receiving and holding bottles, each of said means including pivoted levers adapted to embrace a bottle neck, a locking plate centrally supported to have a limited vertical movement and having an arm for each bottle holding means adapted, when down, to lock the pivoted

levers which hold said bottle, the arms of said locking plate being positioned to be depressed into locking position by a bottle.

5. A bottle holder provided with a plurality of means for supporting and holding a bottle by its neck, each of said means comprising two levers centrally pivoted and adapted to embrace the bottle neck, and a locking member centrally supported to have a limited vertical rocking movement and having an arm adapted to be interposed between said pivoted locking levers to prevent their release of the bottle, said arms being positioned to be depressed by the weight of the bottles.

[Claims 6 to 10 not printed in the Gazette.]

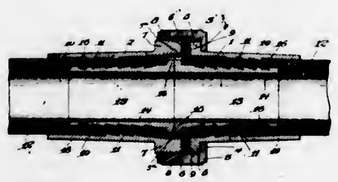
1,222,087. SPRING-ATTACHING MEANS FOR AUTOMOBILES. HARRY EVANS, Bryn Mawr, Pa. Filed Oct. 14, 1916. Serial No. 125,542. (Cl. 267—31.)



1. A bracket comprising a horizontally extending rearward portion adapted to be secured to the side of the forward end of a side bar of an automobile frame, a downwardly extending forward portion, a laterally extending part adapted to engage the forward end of the side bar of an automobile frame and a laterally extending part adapted to engage the bottom of the side bar of an automobile frame.

2. The combination of a side bar of an automobile frame, a bracket secured to the bar and having its forward end portion extending forwardly and downwardly from the forward end of the bar and having its rearward portion provided with a plurality of laterally extending parts engaging the bottom of the bar and abutting against the forward end of the bar, and a leaf spring extending beneath the bar and having its rearward end connected to one of said laterally extending parts which engages the bottom of the bar and having its forward end attached to the forward end of the bracket.

1,222,088. HOSE-COUPLING. HARRY N. EVANS, Sr., Philadelphia, Pa., assignor of two-thirds to Adam M. Joyce and Benjamin H. Green, Philadelphia, Pa. Filed Dec. 2, 1915. Serial No. 64,605. (Cl. 137—28.)



The combination in a hose coupling, of two outer sleeves having internal hose engaging threads therein, one sleeve having an annular flanged end, one end of the other sleeve being provided with external screw-threads, a gasket interposed between said ends, a coupling member having internal screw-threads for engagement with said external screw-threads and having a portion movable into engagement with said flange to compress the gasket, one of said sleeves having a projecting annular flange designed to slidably fit within the other of said sleeves and extending transversely to said gasket, said gasket fitting around said latter flange, and two internal sleeves provided with external hose engaging beveled beads and each having a flange designed to form abutments for the ends of the hose, the end portions of the hose being adapted to extend between said external and internal sleeves, substantially as described.

1,222,089. ADVERTISING-CARD HOLDER FOR CAR AND OTHER SEATS. JOHN J. FERRY, Englewood, N. J. Filed Nov. 23, 1916. Serial No. 132,933. (Cl. 40—10.)



1. In a device of the class described, a card-holder adapted to be attached to a seat-back, having means on either side for the reception of a card; a securing end-member, secured upon either end of the card-holding member; and means for removably securing the end members upon the top of the seat-back so as to secure the same in position thereon.

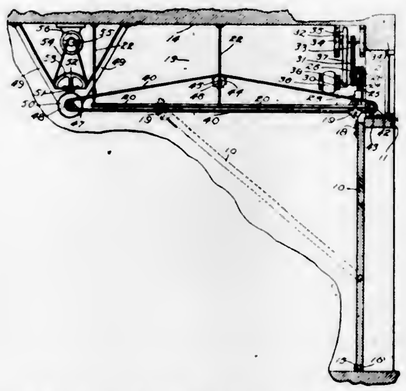
2. In a device of the class described, a card-holder adapted to be attached to a seat-back, having an upper and a lower card holding slot in either side for the reception of the upper and lower edges of a card; a securing end-member secured upon either end of the card-holding member; and means for removably securing the end members upon the top of the seat-back so as to secure the same in position thereon.

3. In a device of the class described, a card-holder adapted to be attached to a seat-back, comprising a central elongated hollow-body, flared at the bottom to fit snugly longitudinally on the top of the seat-back, having on either side an upper and a lower card-receiving slot; securing end members superposed upon the ends of the card-holding member, and means for removably securing the end-members upon the top of the seat-back so as to secure the end-members and the central longitudinal card-holding member in position thereon.

4. In a device of the class described, a card-holder adapted to be attached to a seat-back, comprising a central elongated hollow-body, flared at the bottom to fit snugly longitudinally on the top of the seat-back, securing end-members superposed upon the ends of the card-holding member, and means for removably securing the end-members upon the top of the seat-back so as to secure the end-members and the central longitudinal card-holding member in position thereon; said card-holding-member being bent up of sheet metal with a flaring-bottom to fit the seat-back; the bottom edges being reversely bent backward upon the flared-portion, and a bottom card receiving slot being left between the end of such reversed portion and the side wall or face of the card-receiving holder; and a card securing top plate having downwardly depending side lugs between which and the top-portion of the side walls or faces of the card-holder card securing slots are left, secured to the top of the card-holding member.

5. In a device of the class described, a card-holder adapted to be attached to a seat-back, having means on either side for the reception of a card; a securing end-member secured upon either end of the card-holding member; having a perforate inwardly extending substantially central securing-lug fitting upon the top of the seat-back; a securing-bolt or screw passing through such securing-lug into the seat-back, through the end of the top-plate of the card-holding-member and the top-plate of the securing end-member; and a threaded securing nut upon the upper end of the securing-bolt or screw.

1,222,090. ELECTRICALLY-OPERATED TROLLEY-DOOR. THOMAS W. FINDLEY, Minneapolis, Minn. Filed July 6, 1915. Serial No. 38,346. (Cl. 172—152.)



1. A device for raising a weight having an extended surface and for shifting the position of said surface from vertical to horizontal during the raising operation, comprising a lifting member secured to a lower portion of said weight and a shifting member secured to an upper portion of the weight, and means for differentially and simultaneously operating said lifting member and shifting member.

2. A device for raising a weight having an extended surface and for shifting the position of said surface from vertical to horizontal during the raising operation, comprising a lifting member secured to a lower portion of said weight and a shifting member secured to an upper portion of the weight, an electric motor for operating the lifting member, an electric motor for operating the shifting member, and a source of current supply connecting both of said motors in series whereby the relative speeds of the motors are governed to accord with the differential rate of movement of the points of attachment of the lifting and shifting devices, respectively, with the weight through the corresponding variation in the resistance to be overcome by the respective motors.

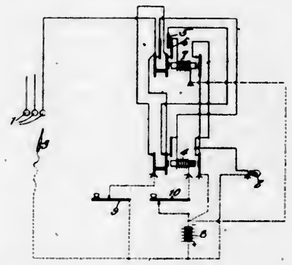
3. A device for raising and lowering a weight having an extended surface and for shifting the position of said surface from vertical to horizontal, and vice versa, during said operations, comprising a lifting member secured to a lower portion of said weight and a shifting member secured to an upper portion of the weight, means for differentially and simultaneously operating said lifting member and shifting member in either direction, and means for terminating either the lifting or lowering action of said operating means at a fixed limit of movement of the weight in either direction.

4. A device for raising and lowering a weight having an extended surface and for shifting the position of said surface from vertical to horizontal, and vice versa, during said operations, comprising a lifting member secured to a lower portion of said weight and a shifting member secured to an upper portion of the weight, means for differentially and simultaneously operating said lifting member and shifting member in either direction, means for terminating the action of said operating means including a member which when moved to one position terminates the lifting action and when moved to another position terminates the lowering action of said operating means, and means movable with the weight for actuating said member.

5. A device for raising and lowering a weight having an extended surface and for shifting the position of said surface from vertical to horizontal, and vice versa, during said operations, comprising a lifting member secured to a lower portion of said weight and a shifting member secured to an upper portion of the weight, a pair of series electric motors for operating the lifting member and the shifting member, respectively, a switch which when moved to one position terminates the raising action of said motors and which when moved to another position terminates the lowering action of the motors and fingers on the weight positioned to engage and move said switch to its respective positions when the weight is fully raised and is fully lowered.

[Claims 6 to 11 not printed in the Gazette.]

1,222,091. DISPLAY APPARATUS. WILLIAM A. FRICKE, Oak Park, Ill., assignor of one-half to Fred G. Dickerson, Chicago, Ill. Filed Mar. 16, 1914. Serial No. 824,914. (Cl. 177—349.)



1. Display apparatus including a transmitting board that contains a plurality of contact terminals and provided with circuit closing contacting means for coöperation with said terminals to effect operation of the display apparatus; a display board having display elements; circuits individual to the display elements for governing their operation and each having and being individual to a contact terminal upon the transmitting board; electromagnets for effecting the operation of the display elements and individual thereto and the circuits that govern the same; means for holding the display elements in set display condition upon restoring the altered controlling circuits; and additional electro-magnets individual to the aforesaid electro-magnets and whose energizing circuits are controlled by the aforesaid magnets and which second magnets, when operated, serve to remove control of the first magnets from the second magnets, the second magnets being individual to the display elements and in controlling relation thereto, when operated, to the exclusion of the means for holding the display elements in set display condition.

2. Display apparatus including a transmitting board that contains a plurality of contact terminals and provided with circuit closing contacting means for coöperation with said terminals to effect operation of the display apparatus; a display board having display elements; circuits individual to the display elements for governing their operation and each having and being individual to a contact terminal upon the transmitting board; electromagnets for effecting the operation of the display elements and individual thereto and the circuits that govern the same; means for maintaining the armatures of the magnets in the positions to which they are moved to maintain the associate display elements in set display condition; and additional electro-magnets individual to the aforesaid electro-magnets and whose energizing circuits are controlled by the aforesaid magnets and which second magnets, when operated, serve to remove control of the first magnets from the second magnets, the second magnets being individual to the display elements and in controlling relation thereto, when operated, to the exclusion of the means for holding the display elements in set display condition.

3. Display apparatus including a transmitting board that contains a plurality of contact terminals and provided with circuit closing contacting means for coöpera-

tion with said terminals to effect operation of the display apparatus; a display board having display elements; circuits individual to the display elements for governing their operation and each having and being individual to a contact terminal upon the transmitting board; electro-magnets for effecting the operation of the display elements and individual thereto and the circuits that govern the same; locking circuits for the magnets which are closed thereby when such magnets are energized; and additional electro-magnets individual to the aforesaid electro-magnets and whose energizing circuits are controlled by the aforesaid magnets and which second magnets, when operated, serve to remove control of the first magnets from the second magnets, the second magnets being individual to the display elements and in controlling relation thereto, when operated, to the exclusion of the means for holding the display elements in set display condition.

4. Display apparatus including a transmitting board that contains a plurality of contact terminals and provided with circuit closing contacting means for coöperation with said terminals to effect operation of the display apparatus; a display board having display elements; circuits individual to the display elements for governing their operation and each having and being individual to a contact terminal upon the transmitting board; electro-magnets for effecting the operation of the display elements and individual thereto and the circuits that govern the same; means for holding the display elements in set display condition upon restoring the altered controlling circuits; and additional electro-magnets individual to the aforesaid electro-magnets that serve, when operated, to remove control of the first magnets from the second magnets, the second magnets being individual to the display elements and in controlling relation thereto, when operated, to the exclusion of the means for holding the display elements in set display condition.

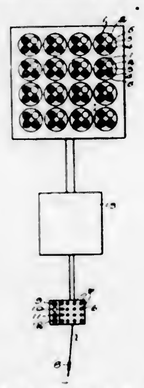
5. Display apparatus including a transmitting board that contains a plurality of contact terminals and provided with circuit closing contacting means for coöperation with said terminals to effect operation of the display apparatus; a display board having display elements; circuits individual to the display elements for governing their operation and each having and being individual to a contact terminal upon the transmitting board; electro-magnets for effecting the operation of the display elements and individual thereto and the circuits that govern the same; means for maintaining the armatures of the magnets in the positions to which they are moved to maintain the associate display elements in set display condition; and additional electro-magnets individual to the aforesaid electro-magnets that serve, when operated, to remove control of the first magnets from the second magnets, the second magnets being individual to the display elements and in controlling relation thereto, when operated, to the exclusion of the means for holding the display elements in set display condition.

[Claim 6 not printed in the Gazette.]

1,222,092. DISPLAY APPARATUS. WILLIAM A. FRICKE, Chicago, Ill., assignor of one-half to Fred G. Dickerson, Chicago, Ill. Filed May 3, 1915. Serial No. 25,356. (Cl. 177—349.)

1. Display apparatus including a plurality of sets of differing display elements, display elements in each of said plurality of sets being similar to display elements in the other sets; circuits for the display elements; and switching apparatus for selecting sets of display elements and display elements in selected sets, said switching apparatus being inclusive of switches one for each set of display elements to enable its selection and other switches, one for each plurality of similar display elements to enable its selection.

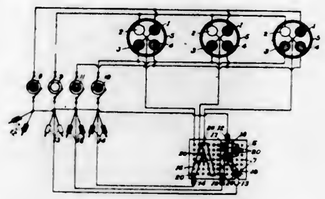
2. Display apparatus including a plurality of sets of differing display elements, display elements in each of said plurality of sets being similar to display elements in the other sets; circuits for the display elements; switching mechanism for selecting sets of display elements and display elements in selected sets, said switching mechanism being inclusive of switches one for each plurality of similar display elements; a relay for each display element governed by the switch pertaining thereto; an additional relay common to the relays of each set pertaining to each set of display elements; a contact terminal individual to such relay; and circuit changing means coöperatively related with each such contact and coöperating with the switches selected for use and the common relays related thereto to operate the relay or relays pertaining to the selected display elements in selected sets.



3. Display apparatus including a plurality of sets of differing display elements, display elements in each of said plurality of sets being similar to display elements in the other sets; circuits for the display elements; switching mechanism for selecting sets of display elements and display elements in selected sets, said switching mechanism being inclusive of switches one for each plurality of similar display eelments; a relay for each display element governed by the switch pertaining thereto; an additional relay common to the relays of each set pertaining to each set of display elements; a contact terminal individual to such relay; circuit changing means coöperatively related with each such contact and cooperating with the switches selected for use and the common relays related thereto to operate the relay or relays pertaining to the selected display elements in selected sets; and another relay provided for each of the sets of display elements and common to the relays pertaining thereto for excluding the relays pertaining to unselected display elements.

4. Display apparatus including a plurality of sets of differing display elements, display elements in each of said plurality of sets being similar to display elements in the other sets; circuits for the display elements; switching mechanism for selecting sets of display elements and display elements in selected sets, said switching mechanism being inclusive of switches one for each plurality of similar display elements; a relay for each display element governed by the switch pertaining thereto; an additional relay common to the relays of each set pertaining to each set of display elements; a contact terminal individual to such relay; circuit changing means coöperatively related with each such contact and cooperating with the switches selected for use and the common relays related thereto to operate the relay or relays pertaining to the selected display elements in selected sets; another relay provided for each of the sets of display elements and common to the relays pertaining thereto for excluding the relays pertaining to unselected display elements; and a further relay provided for each of the sets of display elements and common to the relays pertaining thereto for excluding the first aforesaid additional relay to exclude the operated relay or relays to which such additional relay is common.

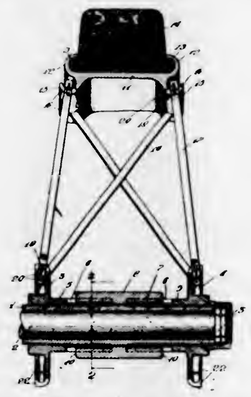
1,222,093. DISPLAY APPARATUS. WILLIAM A. FRICKE, Chicago, Ill. Filed Dec. 2, 1915. Serial No. 64,785. (Cl. 177—350.)



1. Display apparatus including a plurality of sets of differing display elements, display elements in each of said plurality of sets being similar to display elements in the other sets; contact terminals for the sets of display elements; sources of current, similar display elements in the sets having one thereof; and means for connecting any of the sources of current with selected contact terminals.

2. Display apparatus including a plurality of sets of differing display elements, display elements in each of said plurality of sets being similar to display elements in the other sets; contact terminals for the sets of display elements, each set of display elements having a contact terminal common to the display elements of such set and connected with one terminal of each of these display elements; sources of current, similar display elements in the sets having one thereof which is connected with the remaining terminal of each of such similar display elements; and means for including any source of current in circuit with selected contact terminals.

1,222,094. METALLIC-SPOKED WHEEL. FRANKLIN A. FROMMANN, Chicago, Ill., assignor to Olive Frommann, Chicago, Ill. Filed Mar. 3, 1913. Serial No. 751,883. (Cl. 21—69.)



1. A wheel including a tubular member equipped upon its respective end portions with right and left-hand threads, a pair of spoke-carrying members threaded respectively upon the said portions of the tubular member and presenting tubular extensions toward each other and an actuating member carried by the tubular member and non-rotatably engaging the said extensions of the spoke-carrying members, the said engagement enabling the actuating member upon rotation thereof with respect to the said tubular member to rotate the spoke-carrying members in unison with each other.

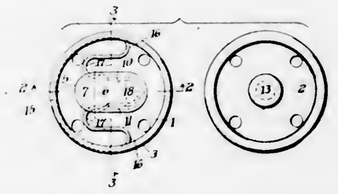
2. A hub for vehicle wheels comprising a tube shaft and equipped at its respective ends with reverse threads, a pair of spoke-carrying members threaded respectively upon the said ends of the tube, said members equipped at their inner ends with key ways: and a sleeve mounted upon the said tube intermediate of the said members and equipped with key formations engaging the said keyways upon both of the latter, the said engagement enabling a rotating of the sleeve upon the tube to rotate said members in unison so as simultaneously to tighten the spokes upon both sides of the wheel.

3. A hub for vehicle wheels comprising a tube equipped at its respective ends with reverse threads, and with a cylindrical portion intermediate of the said threads, a pair of spoke-carrying members threaded respectively upon the said ends of the tube, and a sleeve mounted upon the cylindrical portion of the tube, the said sleeve and members equipped with coöperating formations to prevent relative rotation thereof about the axis of the said shaft, the said reverse threads coöperating with said formations to cause a separation of said members upon the rotating of the sleeve upon the tube.

4. A hub for vehicle wheels comprising a sleeve provided at respective ends with right-hand and left-hand screw-threads, a pair of spoke-carrying rings threaded respectively, upon the said threaded ends, and means arranged between said rings adapted to prevent relative rotation thereof and causing them to rotate in unison for tightening or loosening the spokes.

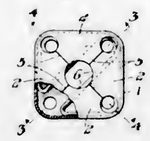
5. A hub for vehicle wheels comprising a sleeve provided at respective ends with right-hand and left-hand screw-threads, a pair of spoke-carrying rings threaded respectively, upon the said threaded ends, and means arranged between said rings adapted to prevent relative rotation thereof and causing them to rotate in unison for tightening or loosening the spokes, and means for locking one of said rings against rotation and thereby preventing rotation of the other ring.

1,222,095. GARMENT-HOOK. WILLIAM J. GALT, Jr., Philadelphia, Pa., assignor to The De Long Hook and Eye Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 20, 1915. Serial No. 15,688. (Cl. 24—224.)



A garment fastener comprising ball and socket members said socket member consisting of a single integral plate having a hollow closed projection formed therein said projection including enlarged and reduced portions, the enlarged portion being adapted to permit insertion of the head of the said ball member into the said hollow projection and the said reduced portion which is situated at one side of the said enlarged portion constituting a throat into which the neck portion of said ball may be moved after the said ball and neck portion have been inserted into the said hollow projection, and the enlarged part of said projection having oppositely disposed openings in the sides thereof and the said plate also having a circular flange-like portion at its outer edge, a bent spring having a portion which is seated against a portion of said flange and other portions, which extend across said openings, the ends of said other portions of spring occupying positions on opposite sides of the reduced portion of said projection, substantially as described.

1,222,096. SNAP-FASTENER. WILLIAM J. GALT, Jr., Philadelphia, Pa., assignor to The De Long Hook and Eye Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 8, 1915. Serial No. 38,655. (Cl. 24—218.)



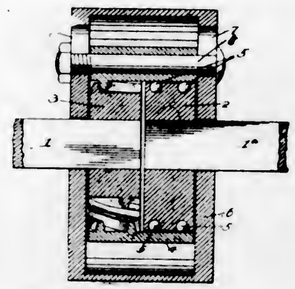
1. A snap fastener comprising a socket member of polygonal shape consisting of a sheet metal member having projections extending inwardly from the edges of the said member toward the center thereof and constituting a side of the said member in opposing parallel relation to the other side of the said member, the said member having thread openings situated at the corners thereof and also having a central opening to receive the head of a ball member, and a spring consisting of a relatively long open loop, the ends of the sides of which are bent outwardly and forwardly, said spring having the closed end of said loop situated in a corner between two adjacent converging edges and the outwardly and forwardly extending ends of the sides of the said spring being situated upon opposite sides of a diagonally disposed corner and in contact with adjacent converging edges upon opposite sides of the said last-mentioned corner.

2. The socket member of a snap fastener, the said member consisting of sheet metal having projections extending inwardly from the edge of the said member toward the center thereof and constituting a side of the said member in opposing relation to the other side of the said member, the said member having a central opening to receive the head of a ball member, and a spring consisting of a relatively long open loop, the ends of the sides of which are bent outwardly and forwardly, said spring having the closed end of said loop situated between the sides of the said member adjacent to a portion of the edge thereof and the said outwardly and forwardly extending ends of the sides being situated adjacent to oppositely disposed edge portions of the said member, and the sides of the said open loop portion of said spring extending across portions of the said central opening, substantially as described.

3. The socket member of a snap-fastener, the said member consisting of sheet metal and having opposing sides connected at their outer edges, said member having a central opening to receive the head of a ball member, and a spring consisting of a relatively long open loop portion, the ends of the sides of which are bent outwardly and forwardly, said spring having the closed end of said loop situated between the opposing sides of said member adjacent to a portion of the edge thereof and the said outwardly and forwardly extending ends of the sides being situated adjacent to oppositely disposed edge portions of the said member, and the sides of the said open-loop portion of said spring extending across portions of the said central opening, substantially as described.

4. The socket member of a snap-fastener, the said member consisting of sheet metal and having opposing sides connected at their outer edges, said member having a central opening to receive the head of a ball member and a spring comprising a relatively long open loop, said spring having the closed end of said loop situated between the opposing sides of said member adjacent to a portion of the edge thereof and having its opposite ends situated adjacent to oppositely disposed edge portions of the said member, and the sides of the said spring extending across portions of the said central opening, substantially as described.

1,222,097. DIFFERENTIAL OR COMPENSATING GEARING. EDWIN J. GOULD, San Diego, Cal. Filed Nov. 23, 1914. Serial No. 873,514. (Cl. 74—7.)



1. A transmission gear comprising in combination axle sections, a gear and an eccentric adapted to be mounted on said axle sections and means coöperating with said gear and eccentric to constitute an interlocking driving device.

2. A transmission gear comprising in combination a gear and an eccentric mounted for movement independent of each other and means coöperating with and serving to constitute with said gear and eccentric an interlocking driving device.

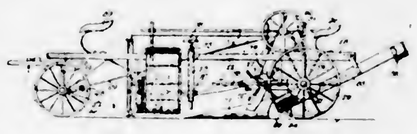
3. A transmission gear comprising in combination a gear and an eccentric adapted to be mounted on coaxial, independent axle sections, and means coöperating with said gear and eccentric for causing them to have different motions in unison.

4. A transmission gear embodying axle sections, an eccentric fast upon one section, a pinion on the other section and an internally toothed gear meshing with said pinion and forming a guide for the eccentric.

5. A transmission gear embodying axle sections, an eccentric fast upon one section, a pinion fast upon the other section and an internally toothed gear meshing with said pinion and forming a guide for the eccentric and a casing in which said internal gear is radially movable.

[Claims 6 to 12 not printed in the Gazette.]

1,222,098. BEET-LIFTING MACHINE. JAMES B. HANCOCK, Cedaredge, Colo. Filed Jan. 29, 1916. Serial No. 75,142. (Cl. 55—9.)

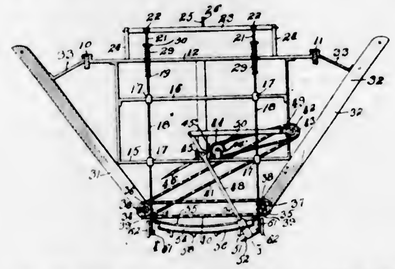


1. A beet digging machine including a frame, and digging means carried by said frame, said digging means including supporting posts mounted in said frame for vertical adjustment, plow beams, collars loosely mounted upon said posts and pivotally connected with said plow beams, heads upon said posts supporting said collars, means for vertically adjusting the rear end portions of said plow beams and releasably holding the same in an adjusted position, plow blades carried by said plow beams, a conveyer carried by said frame back of said plow blades, and means for moving beet roots from said plow blades onto said conveyer.

2. A beet digging machine including a frame, a conveyer carried by said frame, digging means in front of said conveyer, said digging means including plow beams, plow blades carried by said plow beams, a sweep positioned between said plow beams and having its axle journaled thereto, and means for rotating said sweep to move beets from said plow blades onto the conveyer.

3. A beet digging machine including a frame, a conveyer carried by said frame, plow beams mounted in said frame in spaced relation, plow blades carried by said plow beams, a shaft extending transversely between the rear end portions of said plow beams and rotatably supported thereby, a sweep mounted upon said shaft, and means for rotating said sweep to move beet roots from said plow blades onto said conveyer.

1,222,099. BEET-TOPPING MACHINE. JAMES B. HANCOCK, Cedaredge, Colo. Filed July 19, 1916. Serial No. 110,165. (Cl. 55—107.)



1. A beet topping machine including a frame, a driven shaft, conveyer troughs carried by said frame, conveyer belts traveling in said troughs, a shaft rotatably mounted between said troughs, a sweep carried by said shaft, cutting means mounted in front of said troughs for severing the beet tops from the beet roots, means for transmitting rotary motion from said driven shaft to said conveyer belts, and means for transmitting rotary motion to said second shaft to rotate said sweep and move the severed beet tops onto a selected one of said conveyer belts.

2. A beet topping machine including a frame, a shaft rotatably mounted in said frame, a conveyer mounted in said frame, a sweep carried by said shaft for moving severed beet tops onto said conveyer when the shaft is rotated, a rocker bar mounted upon said shaft for oscillating movement thereon, cutting means mounted upon said rocker bar, means for rotating said shaft, and means for oscillating said rocker bar.

3. A beet topping machine including a frame, a shaft mounted in said frame, a rocker bar mounted upon said shaft for oscillating movement, a cutting knife slidably mounted upon said rocker bar, means for supporting said cutting means upon said rocker bar, and means for oscillating said bar to swing said cutting means into and out of an operative position.

4. A beet topping machine comprising a frame, a driving shaft rotatably carried by said frame, a driven shaft rotatably carried by said frame, a sweep carried by said driven shaft, a rocker bar rotatably mounted upon said driven shaft, means for transmitting rotary movement from said driving shaft to said driven shaft, means for transmitting oscillating movement from said driving shaft to said rocker bar, supporting rods carried by said frame, a track connected with said supporting rods, shoes carried by said supporting rods and track, and a cutting blade provided with a guiding roller engaging said track, said blade being slidably connected with said rocker bar.

5. A beet topping machine comprising a frame, a rocker shaft connected with said frame, fingers extending from said rocker shaft, hangers pivotally connected with said fingers, supporting rods slidably connected with said hangers, resilient means yieldably holding said supporting rods in a normal position, means for moving said rocker shaft for vertically adjusting said supporting rods, shoes slidably connected with the lower end portions of said supporting rods, a cross bar having its end portions extending above said shoes, pins extending from the end portions of said cross bar, springs mounted upon said pins and yieldably holding said shoes in their lowered position, a plate connected with said cross bar between said supporting rods and extending in spaced relation thereto and provided with a longitudinally extending slot, guiding shoes carried by said plate, a driven shaft carried by said frame, a sweep carried by said driven shaft, a rocker bar pivotally mounted on said driven shaft, a cutting knife positioned beneath the shoes of said plate and having a shank extending through the slot thereof, a roller carried by said shank and extending between said plate and cross bar, the shank of said cutting knife being slidably mounted upon the lower end portion of said rocker bar, means for rotating said driven shaft from said driving shaft, and means for transmitting oscillating movement from said driving shaft to said driven shaft.

[Claim 6 not printed in the Gazette.]

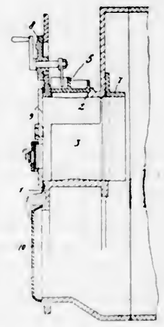
1,222,100. CLOTH FOR FILTER-PRESSES. HUGO HENRY HANSON, Boston, Mass., assignor to Berlin Mills Company, Berlin, N. H., a Corporation of Maine. Filed July 8, 1916. Serial No. 108,250. (Cl. 91—68.)

1. A filter cloth for filtering liquids, said cloth being impregnated with a material resistant to caustic alkali, whereby the component threads are rendered non-corrosive.

2. A filter cloth for filtering liquids, said cloth consisting of a textile fabric, the threads of which are impregnated with a substance resistant to caustic alkali.

3. A filter cloth for filtering liquids, said cloth consisting of a textile fabric, the threads of which are impregnated with rubber.

1,222,101. FURNACE-FRONT. JAMES HOWDEN HUME, Glasgow, Scotland, assignor to James Howden & Company, Limited, Glasgow, Scotland. Filed Oct. 30, 1916. Serial No. 128,450. (Cl. 158—1.)

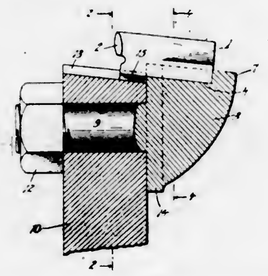


A front for a forced draft furnace consisting of a single integral casting providing the entire front and affording a single preliminary mixing chamber having a firing entrance at its front end, the top and side walls of said chamber being provided with air ports opening directly into said chamber, and adjustable valves, one at the top and one at each side of said chamber, for controlling the admission of air thereto.

1,222,102. TOOL-HOLDER. PER F. HOLMGREN, Brooklyn, N. Y. Filed Apr. 18, 1916. Serial No. 91,883. (Cl. 29—98.)

1. A machine tool comprising, in combination, a tool-proper, a holder therefor, a support for said holder having a portion of its periphery of star-wheel configuration adapted to be engaged by said tool-proper to permit of angular adjustment of said tool and holder, and a complementary part formed on said tool-proper adapted to engage said star-wheel portion and to retain the holder in its angular adjustment.

2. A machine tool comprising, in combination, a tool-proper, a holder therefor having a socket adapted to receive the tool proper, a support of star-wheel configuration in which said holder is rotatably mounted on an axis coincident with the axis of the star-wheel, the said socket in the holder being in alinement with the periphery of the star-wheel, the said tool having a portion thereof projecting from the said socket adapted to project over and engage the teeth of the star-wheel to retain the said holder against rotation.



3. A machine tool comprising, in combination, a tool-proper, a holder therefor having a socket of less length than the tool-proper adapted to receive the latter, a support of star-wheel configuration in which said holder is rotatably mounted on an axis coincident with the axis of the star-wheel, the said socket in the holder being in alinement with the periphery of the star-wheel, to cause portion of the tool projecting from the said socket to project over and engage the teeth of the star-wheel to retain the holder against rotation.

4. A machine tool comprising, in combination, a support, a holder for a tool-proper adjustably mounted in said support, said holder having on one face a dovetail socket tapering in width from front to rear and an abutment wall formed integral with the holder at the rear of said socket adapted to engage the tool-proper to prevent jamming of the same in the socket and to receive the strain of the work, a tool-proper having its sides shaped in correspondence with the walls of the socket adapted to be inserted therein and held by said abutment wall in engagement with said support to retain said holder in position.

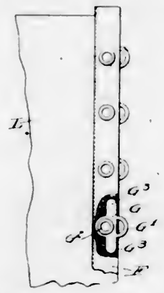
5. A machine tool comprising in combination, a tool proper, a holder therefor, a support in which said holder is rotatably mounted, said holder being adapted to rigidly support the tool proper independently of the said support, and inter-engaging parts on said support and tool proper whereby the holder is retained against rotary movement on its support.

[Claims 6 to 9 not printed in the Gazette.]

1,222,103. LACING-FLY FOR CORSETS. CHARLES B. HOWD, Chicago, Ill. Filed July 15, 1912. Serial No. 709,354. (Cl. 24—203.)

1. A lacing fly for corsets comprising a flexible fabric sheath and separate lacing fittings secured therein, each of said fittings comprising an engageable terminal which protrudes from one longitudinal edge of the sheath, and a lacing eye back of the terminal within the sheath, said terminal and eye being in line with each other directly transverse to the edge of the sheath from which the said terminal protrudes.

2. A lacing fly for corsets comprising a flexible fabric sheath and separate lacing fittings secured therein, each of said fittings comprising a terminal which protrudes from one longitudinal edge of the sheath adapted for engagement to pull the ensheathed part of the fitting to that edge, and oppositely-extended wings back of the protruding terminal engaged with the fold of the sheath at the edge through which the terminal protrudes, and having also an eye back of the fold-engaging edge of said wings, said eye and the protruding terminal being in line with each other directly transverse to said edge of the wings.



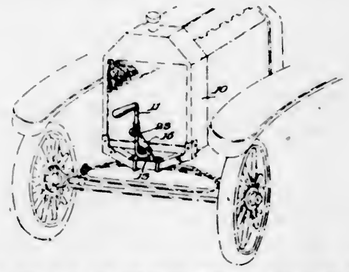
3. A lacing fly fitting consisting of a piece of stiff material adapted to be infolded in a sheath and having a substantially straight edge adapted to be stopped at the fold of such sheath, and comprising a terminal projecting from said edge and adapted to protrude from the fold of an inclosing sheath and to be engaged for pulling said edge into such fold, and a lacing eye at the opposite side of said edge from said terminal in line therewith directly transverse to said edge.

4. A lacing fly fitting comprising a terminal and a lacing eye and straight-edged means by which it is adapted to be engaged with a sheath at a fold thereof with the terminal projecting from the fold and in line with the eye transverse to the fold, said terminal being adapted to be engaged for pulling the fitting into the fold.

5. A lacing fly fitting having an extended substantially straight edge and a terminal projecting from said edge adapted to be engaged for pulling in the direction in which it projects, and a lacing eye directly opposite the terminal back of said edge.

[Claims 6 to 8 not printed in the Gazette.]

1,222,104. CRANK-HOLDING ATTACHMENT FOR MOTOR-VEHICLES. JOHN H. HUNT, Flat River, Mo. Filed Oct. 13, 1915. Serial No. 55,663. (Cl. 21—90.)



1. A device of the character described including a base, an arm shiftable upon the base, and a gripping member carried by the arm and extending obliquely thereto, the base being adapted for operative attachment to a motor with the arm extending radially of the axis of the motor crank and adapted for movement to engage the said gripping member with the crank for holding the crank against turning movement with the said gripping member seating flatly against the crank and extending longitudinally thereof.

2. A device of the character described including a base, an arm shiftable upon the base, and an open gripping member carried by said arm and provided with a reinforc

ing member forming coacting guide lugs, the base being adapted for operative attachment to a motor with the arm extending radially of the axis of the motor crank and adapted for movement to engage the said lugs upon opposite sides of the crank for directing the gripping member into engagement with the crank to hold the crank against turning movement.

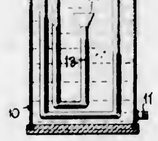
3. A device of the character described including a base, an arm shiftable upon the base, and a channel-shaped gripping member carried by the arm and provided with a reinforcing rib forming coacting guide lugs upon the open side of the gripping member, the gripping member being longitudinally slit to form coacting gripping fingers, the base being adapted for operative attachment to a motor with the arm extending radially of the axis of the motor crank and adapted for movement to engage the said guide lugs upon opposite sides of the crank for directing the said gripping member into engagement with the crank to hold the crank against turning movement with the said gripping fingers confronting the crank upon opposite sides thereof.

4. A device of the character described including a base, an arm carried thereby, a gripping member carried by the said arm, and means normally urging the arm to inactive position upon the base, the base being adapted for operative attachment to a motor with the gripping member yieldably engaging the motor crank and with the said means acting against the tension of the gripping member upon the crank to move the arm to a position to disengage the said gripping member and free the crank.

5. The combination with a motor having a crank, of a crank holder therefor including an arm, a gripping member carried thereby and adapted to yieldably engage the crank for holding the crank against turning movement, and means associated with the said arm and acting thereon against the tension of said gripping member to disengage the said gripping member and free the crank.

[Claims 6 to 8 not printed in the Gazette.]

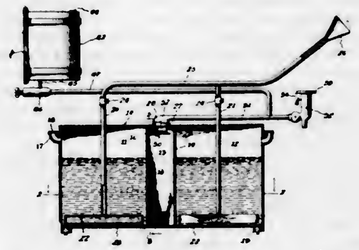
1,222,105. WATER-HEATER. ROBERT J. KAHRER, Newark, N. J. Filed Feb. 19, 1916. Serial No. 79,384. (Cl. 237—19.)



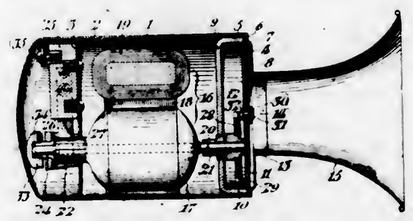
As a new article of manufacture, a water heating tank provided adjacent its lower end with an induction opening, and an eduction pipe entering the tank through the top thereof and extending in close proximity to the lower end of the tank, said pipe being then extended at right angles then directed upwardly, then disposed transversely toward the first portion of the pipe, said pipe being then extended downwardly and continuing in a transversely disposed portion extending toward the upwardly directed portion of the pipe, said pipe being then disposed vertically and terminating substantially at the center of the tank and having its end open, said open end being flared, the portions of the pipe within the tank occupying the same vertical plane.

1,222,106. VAPORIZER FOR GAS-ENGINES. EDWARD KELLY and EARL REYNOLDS, Bradley Beach, N. J., assignors of one-fifth to Frederick Newman, Manasquan, N. J. Filed Apr. 1, 1916. Serial No. 88,407. (Cl. 261—124.)

A vaporizer for internal combustion engines including a tank divided into fuel and fuel mixture chambers in communication with each other, an air supply pipe extending into the fuel chamber and below the liquid level therein, a suction head extending into the fuel mixture chamber of the tank, and a pipe leading from the suction head to supply the fuel mixture to the engine, the suction head being substantially spherical in shape and formed with a series of encircling openings, a concavo-convex baffle member secured to the head below the openings with its concave face directed downwardly, and a strainer across the head between its openings and the pipe connected thereto.



1,222,107. HORN. ARTHUR ATWATER KENT, Philadelphia, Pa. Filed June 17, 1911. Serial No. 633,651. (Cl. 177—7.)



1. In a horn the combination of a casing, a motor having a field winding on one side and an armature on the other side of a plane passing through the longitudinal axis of said casing, a shaft on which said armature is mounted, the axis of said shaft being parallel to and out of alinement with the longitudinal axis of said casing, a disk provided with corrugations on its face and adjacent its periphery mounted on said shaft, and a diaphragm mounted in said casing and provided with a projection at its center extending into the rotative path of the corrugations on said disk.

2. In a horn the combination of a casing, a motor having a field winding substantially on one side, and an armature substantially on the other side of a plane passing through the longitudinal axis of said casing, a shaft on which said armature is mounted, the axis of said shaft being parallel and out of alinement with the longitudinal axis of said casing, a disk provided with corrugations on its face and mounted on said shaft, a diaphragm mounted in said casing and provided at its center with a projection extending into the path of the corrugations on said disk, and means to adjust said shaft longitudinally to bring said corrugations on said disk into proper operative relation to said projection on said diaphragm.

3. In a horn the combination of a casing substantially symmetrical in transverse section, a diaphragm, a cap fitting within one end of said casing and provided with a seat for said diaphragm, a head fitted within said cap, and also provided with a seat for said diaphragm, said cap and said head engaging only the extreme peripheral faces of said diaphragm, and forming chambers on opposite sides

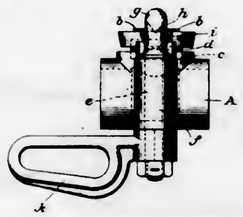
of said diaphragm, an opening in the front of said cap, and a sound amplifier projecting from said opening.

4. In a horn the combination of a casing substantially symmetrical in transverse section, a diaphragm, a cap fitting within one end of said casing, and provided with a seat for said diaphragm, a head fitted within said cap and also provided with a seat for said diaphragm, said cap and said head engaging only the extreme peripheral faces of said diaphragm, and forming chambers on opposite sides of said diaphragm, an opening in the front of said cap, a sound amplifier projecting from said opening, a motor shaft in said casing, a journal in said head for said shaft, and means, mounted on said shaft and within the said chamber between said head and said diaphragm, to vibrate said diaphragm.

5. In a horn the combination of a cylindrical casing, a cap having a cylindrical flange and a shoulder to form a diaphragm seat, a diaphragm mounted on said seat with the extreme periphery of one of its faces in engagement with said seat, a head having a cylindrical flange forced within said flange on said cap, the end of said flange being narrow to form a seat for the opposite side of said diaphragm, said diaphragm being clamped between said cap and said head, and engaging said seats at the extreme peripheral portions of its opposite faces.

[Claim 6 not printed in the Gazette.]

1,222,108. SAFETY DEVICE FOR RAILWAY-CARS. JAMES DAVID KING, Meridian, Miss., assignor to The Queen City Safety Appliance Company, Meridian, Miss. Filed Jan. 27, 1916. Serial No. 74,645. (Cl. 188—2.)



1. In a safety attachment for railway cars, a brake controlling train pipe, a pivoted valve closing an opening in the same, a member having one end directly engaging said valve to hold it closed, and means connected to the opposite end for oscillating said member to positively disengage it from the valve to allow the valve to open, substantially as described.

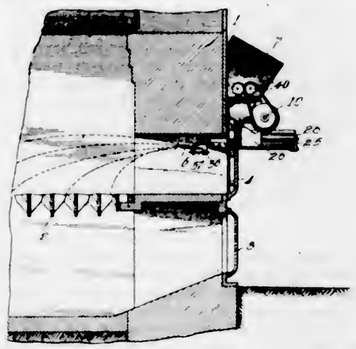
2. In a safety attachment for railway cars, a brake controlling train pipe, a valve closing an opening therein, a vertically arranged spindle having a hooked end directly engaging and holding the valve closed and means for oscillating the spindle to allow the valve to open, substantially as described.

3. In a safety device for railway cars, a pipe section having formed thereon ears, a valve pivoted between said ears and closing an opening in the pipe section, a bracket also carried by the pipe section and an oscillating spindle carried thereby having a hooked end engaging the valve, and an arm connected to said spindle for oscillating it, substantially as described.

1,222,109. AUTOMATIC FURNACE-STOKER. GEORGE A. KOHOUT, Chicago, Ill., assignor to Kersto Corporation, Chicago, Ill. Filed Apr. 30, 1915. Serial No. 24,943. (Cl. 110—114.)

1. An automatic stoker having a fuel reservoir, a charge receptacle, movable means for feeding fuel from said reservoir to said charge receptacle, said feeding means including a plurality of different sized pockets, a piston for discharging said fuel from said charge receptacle, and a universally adjustable deflecting plate in the path of said discharged fuel.

2. An automatic stoker having a fuel reservoir, a charge receptacle, movable means for feeding fuel from said reservoir to said charge receptacle, said feeding means including a plurality of different sized pockets, a spring controlled piston for discharging said fuel from said charge receptacle, and a universally adjustable deflecting plate in the path of said discharged fuel.



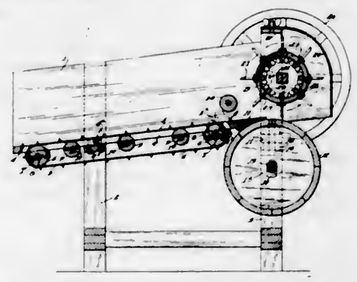
3. An automatic stoker having a fuel reservoir, a charge receptacle, movable means for feeding fuel from said reservoir to said charge receptacle, said feeding means including a plurality of different sized pockets, spring controlled means for discharging said fuel from said charge receptacle, and a universally adjustable deflecting plate in the path of said discharged fuel, said spring controlled means including a piston, recoil springs for said piston, a cam plate movable with said piston, and driving means for actuating said cam plate.

4. An automatic stoker having a fuel reservoir, a charge receptacle, means for feeding different predetermined amounts of fuel from said reservoir to said receptacle, a piston for discharging said fuel from said receptacle, and a deflecting plate in the path of said discharged fuel.

5. An automatic stoker having a fuel reservoir, a charge receptacle, means for depositing different predetermined amounts of fuel from said reservoir to said charge receptacle, and a piston having a uniform stroke for discharging said fuel from said charge receptacle, the distance of throw depending upon the amount of deposited fuel.

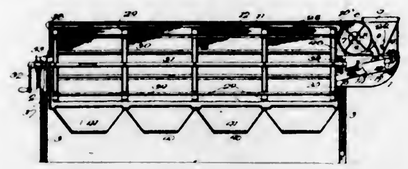
[Claim 6 not printed in the Gazette.]

1,222,110. FEED-CUTTER. ELIAS LAHTI, McMurray, Wash. Filed Nov. 18, 1915. Serial No. 62,153. (Cl. 146—29.)



In a feed cutter comprising a trough having cutting mechanism at one of its ends, a floor fulcrumed in said trough and adjustable with relation thereto and having a cutter bar secured thereto at its front end, a conveyer carried by and adjustable with said floor, and means connecting said trough and floor for releasably retaining said members in adjusted relation.

1,222,111. SEED-GRADER. GROVER C. LEACH, Bangs, Tex. Filed June 13, 1916. Serial No. 103,486. (Cl. 130—16.)



1. A machine for the purpose set forth comprising a foraminous cylinder, means for rotating the same, an imperforate arched cover disposed over and spaced from said cylinder and concentric therewith, means for closing one end of the space between the cover and the cylinder, deflectors extending from the longitudinal edges of the cover to the sides of the cylinder, and means for delivering an air blast at the opposite end of the cover into the space between the same and the cylinder.

2. A machine for the purpose set forth comprising a supporting frame, a hopper mounted thereon, a foraminous cylinder rotatably mounted in the frame, a cover extending longitudinally above and spaced from the cylinder, a fan casing, a fan within said casing, means for rotating the fan and the cylinder, and spouts leading from the fan casing, one of said spouts directing a blast across the mouth of the hopper and the other directing a blast into the space between the cover and the cylinder.

3. In a machine for the purpose set forth, the combination of a supporting frame, a foraminous cylinder rotatably mounted therein and having a rim at one end, a shaft mounted transversely upon the frame adjacent said end of the cylinder, a roller mounted on said shaft and frictionally engaging said rim, means for holding the rim in engagement with said roller, means for rotating the cylinder, a fan, a hopper, an agitator in the hopper, and means for operating said fan and said agitator from said transverse shaft.

1,222,112. PROCESS FOR PRODUCING CITRATE SOLUBLE PHOSPHATES. JACOB G. LIPMAN, New Brunswick, N. J. Filed Feb. 17, 1916. Serial No. 78,841. (Cl. 71—7.)

1. The herein described process for making citrate soluble phosphates from phosphate rock which consists in mixing finely divided sulfur, phosphate rock and fertile soil and oxidizing the sulfur by bacterial action to combine with the phosphate rock and form citrate soluble phosphates.

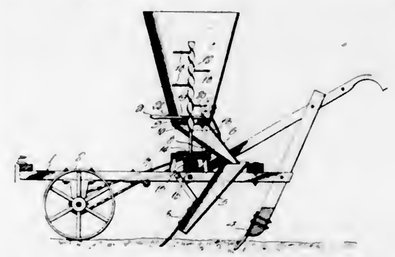
2. The herein described process for making citrate soluble phosphates from phosphate rock, which consists in mixing finely ground sulfur, ground phosphate rock, fertile soil and manure and oxidizing the sulfur by the bacterial action of the soil to a form adapted to combine with the phosphate rock and thereby form citrate soluble phosphates.

3. The herein described process for making citrate soluble posphate which consists in mixing ground phosphate rock, ground sulfur, fertile soil and rotted manure, adding water to the mixture in suitable amounts to keep the mixture moist, oxidizing the sulfur by the bacterial action of the soil and thereby setting free acids, which are adapted to combine with the phosphate rock and form citrate soluble phosphate.

4. The herein described process for making citrate soluble phosphate from phosphate rock, which consists in mixing 10 parts of finely ground phosphate rock, one to four parts of finely ground sulfur, five to twenty parts of fertile soil and five to ten parts of well rotted manure, then adding water to moisten the mixture, and oxidizing the sulfur by bacterial action to a form adapted to combine with the phosphate rock to form citrate soluble phosphate.

5. The herein described process for making citrate soluble phosphates which consists in mixing finely ground sulfur, finely ground phosphate rock, fertile soil and manure, mixing the above mixture with a bacterially active mixture and thereby oxidizing the sulfur to an acid to combine with the phosphate rock and form citrate soluble phosphate.

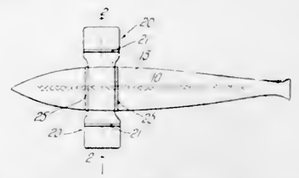
1,222,113. PEANUT-PLANTER. THOMAS DEWITT LITTLE, Dothan, Tex. Filed Aug. 7, 1916. Serial No. 113,661. (Cl. 111—34.)



1. A peanut planter comprising a portable frame, a hopper mounted thereon and having in its bottom a delivery opening, means for conducting the peanuts from this opening into the earth, a vertically disposed peanut lifting worm in said hopper for moving the nuts therein upwardly to prevent clogging of the delivery opening, and means for driving said worm.

2. A peanut planter comprising a portable frame, a hopper mounted thereon and having a delivery opening in its bottom, means for conducting the nuts from said opening into the earth, a vertical peanut lifting worm disposed in said hopper and having its lower end positioned in the delivery opening, means for driving said worm in a direction to cause the same to move the nuts upwardly to prevent clogging of said opening, and radiating fingers carried by said worm for loosening the nuts in the hopper.

1,222,114. SURF DIVING AND SKIMMING DEVICE. JOHN P. MCCARTY and FRITZ W. FALCK, Los Angeles, Cal.; said Falck assignor to R. Gordon Matzene, Los Angeles, Cal. Filed Feb. 16, 1916. Serial No. 78,600. (Cl. 9—21.)



1. A surf diving and skimming device, embodying an elongated float adapted to support a person's body, and a pair of buoyant fins projecting laterally from the body in opposite directions and flexible with relation thereto, said fins being located near one end of the body and adapted to be manipulated by a person using the device.

2. A surf diving and skimming device, embodying an elongated hollow inflatable body, and a pair of hollow inflatable fins projecting laterally from the body and flexible with reintion thereto.

3. A surf diving and skimming device, embodying an elongated hollow inflatable body of substantially fish shape,

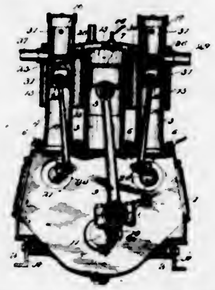
and a pair of hollow inflatable fins projecting laterally from the body near its forward end vertically flexible with relation to the body.

4. A surf diving and skimming device, embodying an elongated hollow inflatable body, and a pair of hollow inflatable fins projecting laterally from the body and flexible with relation thereto, the interior of the body and the interior of the fins being in communication.

5. A surf diving and skimming device, embodying an elongated hollow inflatable body, and a pair of hollow inflatable fins projecting laterally from the body, the interior of the body and the interior of the fins being in communication.

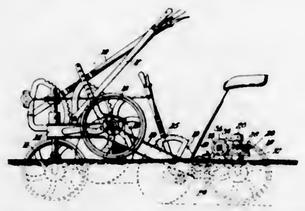
[Claims 6 to 9 not printed in the Gazette.]

1,222,115. PISTON-VALVE. WILLIAM H. MCINTYRE, Toledo, Ohio, assignor of one-fourth to Frank M. Sala and four-twentieths to George W. Core. Filed Jan. 10, 1914, Serial No. 811,387. Renewed June 2, 1916. Serial No. 101,391. (Cl. 123—86.)



In an explosive gas engine, the combination of an explosion chamber, and cylindrical valve-chambers having communicating ports, intake and exhaust ports in alinement with said communicating ports, a piston in the explosion cylinder, cylindrical valves fitted to the valve-chambers, said valves having ports extending directly therethrough, a main crank-shaft, valve-cranks, said cranks geared to said main crank-shaft in a ratio of two to one, connecting-rods extending from the cranks to the piston and valves, and the cranks so arranged with respect to one another that the port of each valve is in registry with the corresponding ports when its crank is passing dead center and when the main crank-shaft is off dead center.

1,222,116. PLOWING-MACHINE. CHARLES H. MCKEE, Pittsburgh, Pa. Filed Aug. 30, 1912. Serial No. 717,967. (Cl. 97—73.)



1. An improvement in tilling machines comprising a frame, a horizontally swinging arm pivoted to the rear portion of said frame, a rear furrow wheel carried by said arm, means carried by said arm for raising and lowering the frame, and means carried by said arm for horizontally angling said furrow wheel.

2. An improvement in tilling machines comprising a frame, a horizontally swinging arm pivoted to the rear portion of said frame, an axle having a portion connected with said arm, a rear furrow wheel mounted on said axle, means carried by said arm for raising and lowering the rear end of said frame, and means carried by said arm for horizontally angling said furrow wheel.

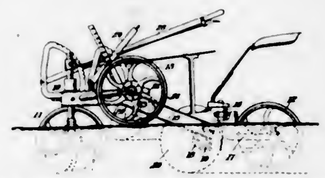
3. An improvement in tilling machines comprising a frame, a horizontally swinging arm pivoted to the rear portion of said frame, an axle having a member connected with said arm and provided with a threaded portion, a rear furrow wheel mounted on said axle, a nut carried by said arm and engaging the threaded portion of said axle to raise and lower the frame, and means carried by said arm for horizontally angling said furrow wheel.

4. An improvement in tilling machines comprising a frame, means for supporting the forward end thereof, a rearwardly extended arm pivotally connected to said frame to swing on a vertical axis, a rear furrow wheel axle having an extension projecting vertically through said arm, a rear furrow wheel carried by said axle, means carried by said arm and coöperating with the extension of said axle for raising and lowering said frame, means connected with said extension for swinging said axle horizontally, and means for actuating said axle-swinging means.

5. An improvement in tilling machines comprising a frame, means for supporting the forward end thereof, a rearwardly extended arm pivotally connected to said frame to swing on a vertical axis, a rear furrow wheel axle having a threaded extension projecting through said arm, a rear furrow wheel carried by said axle, a nut carried by said arm and engaging said threaded extension to raise and lower the frame, means connected with said threaded extension to swing said axle, and means for actuating said axle-swinging means.

[Claims 6 to 21 not printed in the Gazette.]

1,222,117. TILLING-MACHINE. CHARLES H. MCKEE, Pittsburgh, Pa. Filed Nov. 29, 1912. Serial No. 734,148. (Cl. 97—40.)



1. A tilling machine having a plurality of rotary disks mounted in succession, with each disk in advance of higher than, and of less diameter than the next following disk, each disk having the active portion of its cutting edge as close to the unplowed ground as the active portion of the cutting edge of the next preceding disk or closer.

2. A tilling machine having a plurality of independently supported rotary disks mounted in succession, with each disk in advance of, higher, of less diameter, and more dished than the next succeeding disk, whereby the larger disk may be set as close to the unplowed ground as the smaller disk, or closer.

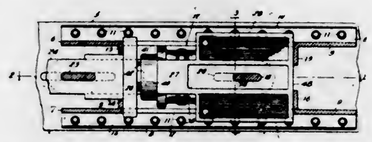
3. A tilling machine having a plurality of independently supported rotary disks mounted in succession with the support of each disk in advance of, higher than, and partly to the land side of its next following disk, each disk being more dished than the next following disk, each disk having the active portion of its cutting edge as close to the unplowed ground as the active portion of the cutting edge of the next preceding disk or closer.

4. A tilling machine having a plurality of independently supported rotary disks mounted in succession with the support of each disk in advance of, higher, and partly to the land side of the next following disk, each disk being of less diameter than the next following disk, whereby the larger disk may be set as close to the unplowed ground as the smaller disk, or closer.

5. A tilling machine having a plurality of independently supported rotary disks mounted in succession with the support of each disk in advance of, higher than, and partly to the land side of the next following disk, each disk being of smaller diameter and more dished than the next following disk, whereby the larger disk may be set as close to the unplowed ground as the smaller disk, or closer.

[Claims 6 to 8 not printed in the Gazette.]

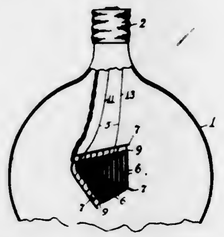
1,222,118. DRAFT-RIGGING FOR RAILWAY-CARS. WILLIAM H. MINER, Chazy, N. Y. Filed Apr. 18, 1914. Serial No. 832,688. (Cl. 213—42.)



1. In a draft rigging for railway cars, the combination with draft members, draw-bar, draft links and a key connecting the draft links to the draw-bar, of stop members, a friction shell having friction elements therein, a spring case secured to said shell, the spring case having vertically twin arranged springs therewithin, and a transversely extending key, the key passing through the case and between the springs, through the draft links and through the draft members.

2. In a draft rigging for railway cars, in combination, draft members, a draw-bar, draft links, a coupler key connecting the draft links to the draw-bar, stop members secured to the draft members, a shell, friction elements and spring elements within the shell, the spring elements being in vertical twin arrangement, the key passing through the draft links, the shell, and the draft members, and being interposed between the spring elements in the shell.

1,222,119. FILAMENT FOR INCANDESCENT BULBS. ALBERT S. MOFFAT, Belmont, Mass., assignor to Kunz-Wheeler-Moffat Company, a Corporation of Massachusetts. Filed Dec. 23, 1915. Serial No. 68,303. (Cl. 176—40.)



1. An electric bulb having a filament composed of sets of helices, each set comprising several closely disposed parallel helices in a single plane, the plane of each set being oblique to the line from the center of the filament to the point being illuminated, and the helices nearest said point being the farthest from said line.

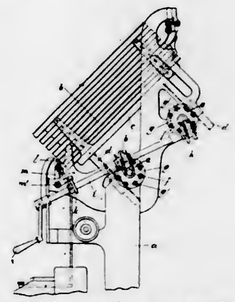
2. An electric bulb having a filament composed of a plurality of straight helices in parallel planes disposed to approximate a hollow pyramid.

3. An electric bulb having a filament disposed to form in contour a hollow pyramid having its base rectangular and open toward a rectangular object to be illuminated.

4. An electric bulb having a filament wound in a long helix, and the helix disposed to form a hollow pyramid, the base of the pyramid being rectangular and open.

5. An electric bulb having a filament wound in a long helix, the helix being disposed to form a hollow pyramid, and supporting means for the filament, the supporting means comprising four wire arms supported parallel with and spaced from the corners of the pyramid, and insulated hooks joining the corners of the pyramid to said arms.

1,222,120. MULTIPLE-MAGAZINE TYPOGRAPHICAL COMPOSING-MACHINE. CARL MUEHLEISEN, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Dec. 5, 1916. Serial No. 135,252. (Cl. 199—20.)



1. In a multiple-magazine typographical composing machine, the combination with a column of magazines, and a worm-wheel in operative connection therewith to shift said column, of a worm coöperating with the worm-wheel, and a flat surface on said worm, with which the teeth or studs of the worm-wheel engage at the commencement of the magazine-shifting operation, so that the worm can be partially rotated without shifting the magazines.

2. In a multiple-magazine typographical composing machine, the combination with a column of magazines, and a worm-wheel in operative connection therewith to shift said column, of a worm coöperating with the worm-wheel, a flat surface on said worm enabling the worm to be partially rotated without shifting the magazines, escapement rods adapted to actuate escapements on the magazines and devices operating conjointly with the worm disengaging the escapement rods from and engaging them with the escapements during the periods at which the worm rotates without shifting the magazines.

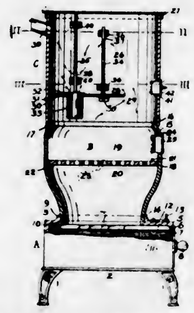
3. In a multiple-magazine typographical composing machine, the combination with a column of magazines, and a worm-wheel in operative connection therewith to shift said column, of a worm coöperating with the worm-wheel, a flat surface on said worm enabling the worm to be partially rotated without shifting the magazines, escapement rods adapted to actuate escapements on the magazines and a cam operatively fast to the worm operative to disengage the escapement rods from and engage them with the escapements during the periods at which the worm rotates without shifting the magazines.

4. In a multiple-magazine typographical composing machine, the combination with a column of superposed magazines, a magazine frame supporting said column, a toothed rack attached to said magazine frame, a spur wheel engaging the rack and a worm-wheel operatively fast to the spur wheel, of a worm coöperating with the worm-wheel, a flat surface on said worm enabling the worm to be partially rotated without shifting the magazines, escapement rods adapted to actuate escapements on the magazines and a cam operatively fast to the worm operative to disengage the escapement rods from and engage them with the escapements during the periods at which the worm rotates without shifting the magazines.

1,222,121. HEATING-STOVE. JOSEPH MULICK, Stoyestown, Pa. Filed Dec. 13, 1916. Serial No. 136,587. (Cl. 126—58.)

1. A heating stove comprising a normally closed ash pan receptacle, means to provide a combustion chamber

and an ash-pit, means to provide a heating chamber, a horizontally disposed semi-circular plate within the heating chamber and having a direct draft pipe extending therethrough, and spaced vertical baffles supported by said plate, an outlet provided for the heating chamber, said direct draft pipe positioned below and opening toward said outlet, and said receptacle having means for controlling the draft.



2. A heating stove comprising a normally closed ash pan receptacle, means to provide a combustion chamber and an ash-pit, means to provide a heating chamber, a horizontally disposed semi-circular plate within the heating chamber and having a direct draft pipe extending therethrough, and spaced vertical baffles supported by said plate, an outlet provided for the heating chamber, said direct draft pipe positioned below and opening toward said outlet, said receptacle having means for controlling the draft, one of said baffles disposed in a plane centrally with respect to said pipe.

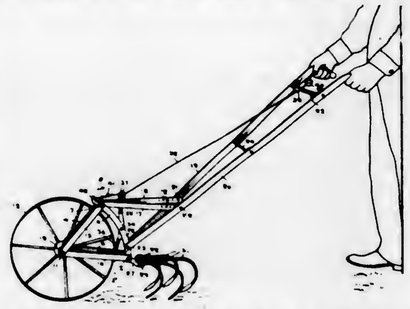
3. A heating stove comprising a normally closed ash pan receptacle, means to provide a combustion chamber and an ash-pit, means to provide a heating chamber, a horizontally disposed semi-circular plate within the heating chamber and having a direct draft pipe extending therethrough, and spaced vertical baffles supported by said plate, an outlet provided for the heating chamber, said direct draft pipe positioned below and opening toward said outlet, said receptacle having means for controlling the draft, one of said baffles having its upper edge and the other having its lower edge cut away in a semi-circle, that baffle having its lower edge cut away of greater height than the other baffle.

4. A heating stove comprising means to provide a combustion chamber, means to provide a heating chamber and having an outlet, a horizontally disposed semi-circular plate arranged within said heating chamber intermediate its upper and lower ends and having a direct draft pipe extending therethrough adjacent to the rear thereof, and spaced vertical baffles supported by said plate, one of said baffles having its upper edge and the other its lower edge cut away in a semi-circle, that baffle having its lower edge cut away of greater height than the other baffle and arranged at the rear of the latter.

5. A heating stove comprising a heating chamber having a smoke outlet, baffles supported within said heating chamber, and a direct draft pipe supported by the means for supporting the baffles and arranged within the heating chamber at the rear thereof and below the baffles.

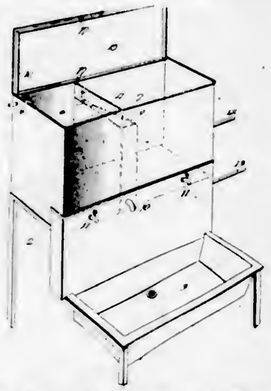
1,222,122. WHEEL-PLOW. CAMILLO SIVORI NORCROSS, Bushnell, Ill. Filed May 3, 1916. Serial No. 95,168. (Cl. 97—42.)

The combination with a hand cultivator plow comprising a frame consisting of two frames secured together in opposed spaced relation, a wheel rotatably mounted in the forward end of said frame, handles operatively secured to said frames, and brace bars connecting said handles to the forward end portions of said frames, of a scraper arm pivotally mounted intermediate its ends between said frames and brace bars, a scraper blade carried by the lower end of said arm, a retractile spring connecting the upper end of said scraper arm with the forward end portions of said frames, an operating rod slidably mounted upon the plow handles and connected to the upper end of



said scraper arm, and a finger ring fixed to the upper end of said rod whereby the rod may be actuated by hand to move the scraper blade into engagement with the periphery of the plow wheel.

1,222,123. TANK. DAVID J. NYSEWANDER, Toledo, Ohio. Filed Oct. 28, 1916. Serial No. 128,285. (Cl. 137—21.)

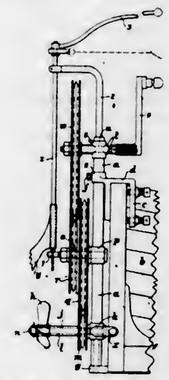


1. An apparatus for the purpose set forth comprising a tank, a partition within the tank dividing the same into a cold water compartment and a hot water compartment, a second partition within the hot water compartment and of less height than the first-mentioned partition, an outlet from each compartment, an outlet from the space between the two partitions, an inlet entering the cold water compartment, and means for establishing flow through the higher partition and over the lower partition from the cold water compartment into the hot water compartment.

2. An apparatus for the purpose set forth comprising a tank, a partition within the tank, an inlet at one end of the tank, an outlet from the tank at each side of the partition, an overflow outlet at one side of the partition, and a lid hinged to the tank and having a depending marginal flange adapted to fit within the tank and provided with notches adapted to fit over the upper edge of the partition.

1,222,124. PROPULSION OF BOATS. GIOVANNI BATISTA PARIETTI, Richmond, England, assignor of one-half to Albert Bruna, Westminster, England. Filed May 13, 1915. Serial No. 27,851. (Cl. 115—18.)

1. In a manually operated boat propelling mechanism, a light framing comprising a vertical cylindrical pillar, clamping means on the upper part of said framing for securing the latter to a boat, securing means on the lower part of said pillar adapted to be fastened to a lower part of the boat, speed ratio gearing supported by said pillar, a horizontal driving shaft on the upper end of said pillar operative upon a shaft of said gearing, a propeller mounted on a high speed shaft of said gearing and a bearing for said shaft at the lower end of said pillar.



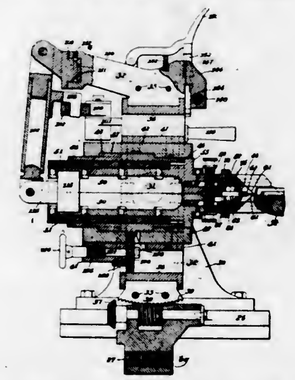
2. Manually operated boat propelling mechanism comprising a light framing embodying a vertical tubular member, a vertical tube rotatably supported in said member, a toothed sector on said tube, a spring operated toothed member on said framing and normally engaging said sector, said toothed member being instantly releasable from said sector, clamping means on the upper part of the said tubular member for securing it to a boat, speed ratio gearing mounted on said tube, a horizontal driving shaft operative upon said gearing, a propeller on a high speed shaft of said gearing, and a horizontal bearing on the upper end of said tube for supporting said driving shaft.

3. Manually operated boat propelling mechanism comprising a light framing embodying a vertical tubular member, a vertical tube rotatably supported in said member, a toothed sector comprising an arc exceeding one hundred and eighty degrees, a spring-operated member pivoted on said framing and carrying a tooth adapted to normally engage teeth of said sector, said member being instantly releasable from said sector, clamping means on the upper part of said tubular member for securing it to a boat, speed ratio gearing mounted on said tube, a horizontal driving shaft operative upon said gearing, a propeller on a high speed shaft of said gearing, and a horizontal bearing on the upper end of said tube for supporting said driving shaft.

4. Manually operated boat propelling mechanism comprising a light framing embodying a vertical tubular member, a clamp on the upper end of said member for securing it to a boat, a vertical hollow tube rotatably supported in said member, locking means operative to secure said tube in any position to which it may be turned, a vertical shaft rotatable in said tube, hand driving mechanism comprising a horizontal driving shaft mounted on said tube and operative upon said vertical shaft, a propeller shaft mounted at the foot of said tube and having driving connection with said vertical shaft, and a latch operative upon said locking means.

5. Manually operated boat propelling mechanism comprising a light framing embodying a vertical tubular member, a clamp on the upper end of said member for securing it to a boat, a vertical tube rotatably supported in said member, a horizontal arc secured to the upper end of said tube, a releasable locking device on said framing adapted to have locking engagement with said arc, a vertical shaft rotatable in said tube, a horizontal hand-driven shaft mounted on the upper end of said tube and geared with the upper end of said vertical shaft, a horizontal propeller shaft mounted in the lower end of said tube and geared with the lower end of said vertical shaft, a thrust bearing for said propeller shaft on said tube, and a latch operative upon said locking means.

1,222,125. LASTING-MACHINE. ANGELO PERRI, Groveland, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Mar. 11, 1916. Serial No. 83,540. (Cl. 12—14.)



1. In combination, a trunnioned circular bearing, a hollow shell revoluble on said bearing, a wiper device, a carrier for giving wiping movements thereto, said carrier and wiper device supported by and revoluble with said shell, and means for angularly adjusting said carrier on said shell, said shell being capable of inversion by its revolution on said bearing, whereby the wiper device may be bodily inverted and its angle of action reversed.

2. In combination, a wiper device of unsymmetrical contour, connections for advancing the same toward the shoe, and an invertible supporting member, said wiper device being fitted at an angle to the axis of inversion of said member, whereby inversion reverses both the wiper contour and the angle of advance.

3. In combination, a wiper device, actuating means therefor, an advancing and retreating carrier for said device and means, a carriage on which the carrier is mounted for its movements, and means for bodily rotating said carriage into an inverted position about a longitudinal axis; said carrier adapted to operate at an angle to the axis of carriage rotation; whereby inversion reverses its angle of action.

4. In combination, a wiper device, actuating means therefor, an advancing and retreating carrier for said device and means, a carriage on which the carrier is mounted for its movements, means for bodily rotating said carriage into an inverted position about a longitudinal axis, and means for adjusting the angle of carrier movement relatively to the axis of rotary inversion.

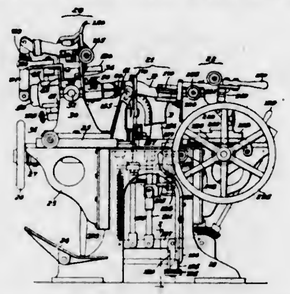
5. In combination, a set of wiper plates, an advancing and retreating carrier therefor, means to relatively swing the plates during carrier movements, means for bodily inverting said plates, carrier and swinging means, comprising a carriage revoluble about a longitudinal axis and to which said carrier is movably fitted, a revoluble supporting member for the carriage, and means for angularly shifting the carriage, carrier and wiper plates relatively to said supporting member.

[Claims 6 to 25 not printed in the Gazette.]

1,222,126. LASTING-MACHINE. ANGELO PERRI, Groveland, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed May 11, 1916. Serial No. 96,748. (Cl. 12—14.)

1. In combination, a shoe holding jack comprising both heel and toe engaging members, said jack bodily swing-

able transversely to bring the shoe toe apex into a given longitudinal line, and a toe wiping mechanism bodily swingable about a center located in said longitudinal line.



2. In combination, a shoe holding jack swingable transversely to bring the shoe toe apex into a given longitudinal line, and a toe wiping mechanism bodily swingable about a center located in said longitudinal line and approximately at the toe wiper contour apex.

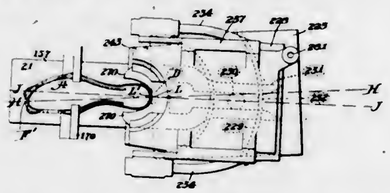
3. In combination, a shoe holding jack swingable transversely about a center approximately at the apex at the heel end of the shoe to bring the shoe toe apex into a given longitudinal line, and a toe wiping mechanism bodily swingable about a center located in said longitudinal line and approximately at the toe wiper contour apex.

4. In combination, a shoe holding jack swingable transversely about a center approximately at the apex at one end of the shoe to bring the shoe apex at the other end into a given longitudinal line, and a wiping mechanism at the latter end bodily swingable about a center located in said longitudinal line and approximately at the wiper contour apex, said wiping mechanism having its direction of wiping action in line with said wiper contour apex, and being bodily invertible to reverse both the contour and the angle of action when changing from rights to lefts.

5. In combination, a shoe holding jack swingable transversely approximately about the shoe heel apex to bring the shoe toe into a predetermined line, and a heel wiping mechanism swingable about the heel wiper contour apex, to adjust its line of action to the shoe.

[Claims 6 to 34 not printed in the Gazette.]

1,222,127. LASTING-MACHINE. ANGELO PERRI, Groveland, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed May 15, 1916. Serial No. 97,516. (Cl. 12—14.)



1. In combination, a shoe holding jack transversely swingable about an axis substantially at the apex of the heel of a shoe held therein, a heel wiping mechanism transversely swingable about an axis substantially at the apex of its wiping contour and laterally tiltable, and connections actuated by the swinging of the jack for controlling both the swing and the tilt of the heel wiping mechanism.

2. In combination, a shoe holding jack transversely swingable about an axis substantially at the apex of the heel of a shoe held therein, a laterally tiltable heel wiping mechanism, and connections actuated by the swinging of the jack for controlling the tilt of the heel wiping mechanism.

3. In combination, a shoe holding means, a heel wiping mechanism transversely swingable and laterally tiltable, and connections actuated by the swinging movement of the heel wiping mechanism for effecting the tilting of the heel wiping mechanism.

4. In combination, a set of wiper plates, and mountings therefor to permit tilting and swinging movements, including a transversely swingable carriage, a laterally tiltable carriage, and a longitudinally tiltable member or shell, at least two of which adjust about axes passing through the apex of the wiper plate contour.

5. In combination, a set of wiper plates, and mountings therefor to permit tilting and swinging movements, including a transversely swingable carriage, a laterally tiltable carriage, and a longitudinally tiltable member or shell, all three of which adjust about axes passing through the apex of the wiper plate contour.

[Claims 6 to 15 not printed in the Gazette.]

1,222,128. LUBRICATING COMPOUND. LYMAN DEE PETTIT, St. Joseph, Mich. Filed Sept. 18, 1916. Serial No. 120,851. (Cl. 87—9.)

1. The herein described lubricating compound consisting of refined petroleum oil 42 parts, lime water 36 parts, a mixture of resin, kerosene and red engine oil 16 parts, a mixture of graphite and red engine oil 3 parts and a mixture of paraffin wax and kerosene 3 parts.

2. The herein described method of making lubricating compounds consisting in heating a mixture of refined petroleum oil and lime water to approximately 110° Fahrenheit, adding thereto a mixture of resin, kerosene and red engine oil heated to a temperature of approximately 125° Fahrenheit, adding a mixture of graphite and red engine oil and then adding a mixture of paraffin wax and kerosene heated to a temperature of approximately 125° Fahrenheit, the temperature of the whole mixture being raised to between 125° and 160° Fahrenheit..

1,222,129. UPHOLSTERING-TOOL. JOHN POLKOWSKI, New York, N. Y. Filed Jan. 17, 1916. Serial No. 72,554. (Cl. 1—47.)

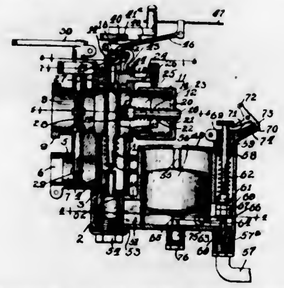


1. In an upholstering tool, a casing having an inlet and an outlet for tacks, a receiver of U-shaped cross-section seated within said casing with its open side adjacent the tack inlet, means for yieldingly holding a tack within said receiver, and means for ejecting said tack from said receiver and out of the casing outlet.

2. In an upholstering tool, a casing having an inlet and an outlet for tacks, a receiver of U-shaped cross-section seated within said casing with its open side adjacent the tack inlet, said receiver being provided with two oppositely disposed resilient fingers adapted to yieldingly hold a tack therein, and means for ejecting said tack from said receiver and out of the casing outlet.

3. In an upholstering tool, a casing having an inlet and an outlet for tacks, a receiver of U-shaped cross-section seated within said casing with its open side adjacent the tack inlet, said receiver having the lower portion of each side wall cut away from the rear wall and bent toward each other thereby providing two oppositely disposed resilient fingers adapted to yieldingly hold a tack within said receiver, and means for ejecting said tack from said receiver and out of the casing outlet.

1,222,130. CARBURETER. CHARLES L. RAYFIELD, Chicago, Ill. Filed Aug. 23, 1912. Serial No. 716,617. (Cl. 261—49.)



1. A carbureter of the class described embracing an upright mixing chamber and automatically and mechanically controlled laterally directed air inlet ports communicating therein, a float feed chamber adjustably and eccentrically connected therewith, and communicating therein, and a needle valve controlling the communication between the same.

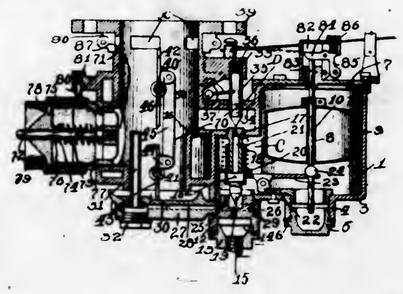
2. A carbureter embracing a mixing chamber, a mechanically adjustable needle valve therein, an upper throttle valve, a lower air inlet valve, a shaft to which both are secured to operate the same simultaneously, connections between the throttle valve and the needle valve acting to open said needle valve proportionately with the degree of opening of the throttle valve and air valve, an automatic air inlet valve mounted in an inlet to said mixing chamber alined with the passage controlled by said throttle valve, and a float feed chamber eccentrically, adjustably and sealingly connected to said mixing chamber to admit fuel to said needle valve.

3. A carbureter embracing an upright mixing chamber, a float feed source of hydro-carbon supply opening through the bottom thereof and adjustably and eccentrically connected therewith, a needle valve controlling the same, a throttle shaft journaled parallel the axis of the mixing chamber, a throttle valve secured thereon near the top of the mixing chamber, an air valve below the throttle valve and above the bottom of the mixing chamber, a lever for operating said valves simultaneously, operative connections for opening said needle valve proportionately with the opening of the throttle and air inlet valves, and an automatic air inlet valve arranged substantially in alinement with the throttle valve.

4. A device of the class described embracing a vertical mixing chamber, a float feed chamber eccentrically and adjustably connected therein, a needle valve positioned to control said source of supply, a throttle valve and an air valve rigidly connected together, connections between the throttle valve and needle valve, and a single lever connected to simultaneously open the throttle, the air valve, and the needle valve proportionately.

1,222,131. CARBURETER. CHARLES L. RAYFIELD, Chicago, Ill. Filed Aug. 28, 1912. Serial No. 717,541. (Cl. 261—49.)

1. In a carbureter a mixing chamber, a hydrocarbon supply chamber, connected butterfly valves in the mixing chamber, a throttle lever connected therewith, a needle valve controlling the hydrocarbon flow to the mixing chamber, operative connections between the same and the throttle for actuating the same, an automatic air inlet valve opening into the mixing chamber and between the butterfly valves, and a throttle operated auxiliary air valve mounted on the wall of the mixing chamber above said valves and controlling ports therethrough and operative connections between the same and the throttle valve for opening the same progressively as the throttle is opened.



2. In a carbureter a mixing chamber having air posts opening therethrough and extending peripherally around adjacent the manifold connection, connected valve closures extending circumferentialy around said mixing chamber and rotatably movable to control the opening of said ports, butterfly valves mounted within said mixing chamber, a fuel supply valve and operative connections between said butterfly valves, said valve closures and said fuel supply valves whereby said closures are actuated to progressively increase the port openings as said butterfly valves are opened, and said fuel valve is also progressively opened therewith.

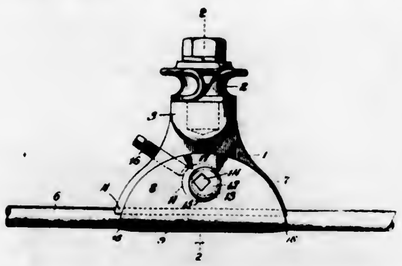
3. In a carbureter a mixing chamber, a plurality of ports opening therethrough and disposed peripherally therearound adjacent the manifold connection, a rotatable closure for said ports, a plurality of butterfly valves mounted within said mixing chamber, an air inlet to said mixing chamber between said butterfly valves, an automatic valve therefor, one to control the outlet therefrom and the other to control the inlet of air thereto, and operative connections between said butterfly valves and valve closures whereby the port openings are varied with the actuation of said butterfly valves.

4. In a carbureter the mixing chamber, a float feed chamber, a needle valve controlling the connection between the float feed chamber and mixing chamber, a normally open hydrocarbon jet communicating with the float feed chamber and delivering upwardly into the mixing chamber, a cup supported below the bottom of the mixing chamber, and through the bottom of which said jet extends, upper and lower connected throttle valves mounted in the mixing chamber, the one above and the other below the top of said jet, an automatic air valve opening into the mixing chamber between said throttle valves, an auxiliary air valve opening into said mixing chamber near the manifold connection therefor on the posterior side of the throttle, adjustable connections between said auxiliary valve and the throttle mechanism, and connecting to open said auxiliary valve progressively with the opening of the throttle valves.

5. In a carbureter of the class described an annular auxiliary air valve, controlling peripheral openings into the mixing chamber closely adjacent the manifold connection, butterfly valves controlling the flow through said mixing chamber, and operative connections on the exterior of the carbureter for imparting rotational movement to said auxiliary valve with the adjustment of the butterfly valves.

[Claims 6 to 17 not printed in the Gazette.]

1,222,132. CLAMPING DEVICE FOR TROLLEY AND OTHER PURPOSES. SAMUEL ARTHUR REDDING, Atlanta, Ga. Filed June 19, 1916. Serial No. 104,610. (Cl. 191—43.)



1. A clamp for trolley wires and other purposes, comprising a body member constituting one member of the clamp, a clamping member constituting the other member of the clamp and adapted to coöperate with the body member, and a rotatable connecting member mounted on one part of the clamp and having eccentric portions engaging the other member of the clamp, whereby on turning the third member in either direction about its axis of rotation the clamping member may be drawn into clamping relation to the body member.

2. A clamp for trolley wires and other purposes, comprising a body member, a clamping member having opposed sides adapted to embrace the body member, and a rotatable block seated in the body member and having end projections extending through the sides of the clamping member, said projections being provided with eccentric portions engaging the side walls of the clamping member to draw the latter toward the body member into clamping engagement with an object lodged therebetween.

3. A clamping device for trolley wires and other purposes, comprising a body member and a clamping member of sheet form having spaced opposed side walls adapted to embrace the body member, and an eccentric device carried by the body member and engaging the side walls of the clamping member to move the latter into and out of clamping relation to the body member.

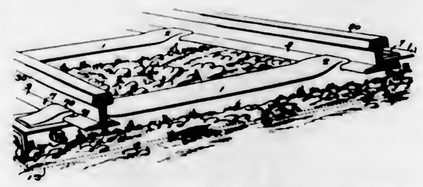
4. A clamping device for trolley wires and other purposes, comprising a body member and a clamping member of sheet form having spaced opposed side walls adapted to embrace the body member, and an eccentric device carried by the body member and engaging the side walls of the clamping member to move the latter into and out of clamping relation to the body member, said clamping member having eccentric seating portions for the side walls of the clamping member.

5. A clamping device for trolley wires and other purposes, comprising a body member adapted to engage the device to be clamped, a clamping member of sheet form bent upon itself to form two opposed side walls in embracing relation to the body member and adapted to clamp the article against the body member, the side walls of the clamping member and the body member having passages therethrough, and a rotatable block seated in the body member and provided with projections extending through the side walls of the clamping member and having grooves therein to receive said side walls where passing through them with the grooves in eccentric relation to the axis of rotation of the block.

[Claims 6 to 11 not printed in the Gazette.]

1,222,133. STEEL CROSS-TIE AND RAIL-CLAMP. JOSEPH SHERMAN REED, Winnfield, La. Filed Jan. 18, 1917. Serial No. 143,089. (Cl. 238—5.)

1. In a combined rail tie and rail clamping means, the combination with a hollow metallic tie having a pair of opposing integral clamping members adapted for receiving the adjacent inner base flanges of a pair of rails, each of the ends of the tie having a longitudinally extended upper and a longitudinally extended lower seat portion, the upper and lower seat portions being in longitudinal alinement, and an aperture in the tie body connecting the said seat portions; of a clamp device including a head portion having a member for clamping over the outer base flange of the rail, a body portion for fitting into the upper seat in the tie and in endwise abutment with the end wall of the said upper seat, said body including a tread portion adapted for being engaged by the rail base and an extension adapted for being slipped through the aperture in the tie that connects the upper and lower seats and with the outer end thereof adapted for resting up in the undercut seat when the parts are at their operative position, the said body portion and the corresponding opposite walls of the sides of the upper seat portion having alining cross apertures and a bolt and nut connection for coöperating with the said apertured portions of the seat and the body of the tie as set forth.

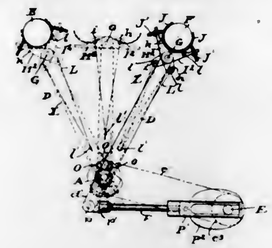


2. In a combined rail tie and rail clamping means, the combination with a hollow metallic tie having a pair of opposing integral clamping members adapted for receiving the adjacent inner base flanges of a pair of rails, each of the ends of the tie having a longitudinally extended upper and a longitudinally extended lower seat portion, the upper and lower seat portions being in longitudinal alinement, and an aperture in the tie body connecting the said seat portions; of a clamp device including a head portion having a member for clamping over the outer base flange of the rail, a body portion for fitting into the upper seat in the tie and in endwise abutment with the end wall of the said upper seat, said body including a tread portion adapted for being engaged by a rail base and an extension adapted for being slipped through the aperture in the tie that connects the upper and lower seats and with the outer end thereof adapted for resting up in the undercut seat when the parts are at their operative position, the said body portion and the corresponding opposite walls of the sides of the upper seat portion having alining cross apertures and a bolt and nut connection for coöperating with the said apertured portions of the seat and the body of the tie as set forth.

3. A combined metallic railway tie and rail clamp comprising a hollow body having a pair of oppositely disposed integral rail clamps for engaging the inner adjacent flanges of the opposite rails, the outer ends of the tie each having an elongated seat in the top and a similar seat in the bottom, the two seats being in a longitudinal alinement and a diagonally projected aperture that connects the top and bottom seats, a clamp having a jaw for fitting over the outer base flange of the rail, and a body portion adapted for seating in the top seat of the rail, said clamp also including an inclined member adapted for projecting through the inclined aperture in the tie and a forwardly extended end for fitting into the seat in the under side of the tie and means for holding the clamp positioned in the said upper and lower seats and in the inclined aperture.

1,222,134. MACHINE FOR MAKING FIBROUS CONTAINERS. WILLIAM F. REGAN, Brooklyn, N. Y., assignor, by mesne assignments, to Empire Paper Bottle Company, a Corporation of New Jersey. Filed Nov. 19, 1913. Serial No. 801,820. (Cl. 93—36.)

1. In a machine of the class described, the combination with a plurality of forming mechanisms, one of which is operable to preliminarily form the desired article and the other of which subsequently manipulates the article, of a transfer mechanism having a traversing movement intermediate said forming mechanisms, said transfer mechanisms embodying opening and closing jaws operating to grip the article during said traversing movement.



2. In a machine of the class described, the combination with a plurality of forming mechanisms, one of which is operable to preliminarily form the desired article and the other of which subsequently manipulates the article, of an opening and closing transfer device having a traversing movement intermediate said forming mechanism, said transfer device embodying relatively movable jaws operating to frictionally grasp the article externally thereof during the traversing movement.

3. In a machine of the class described, the combination with a plurality of forming mechanisms, one of which is operable to preliminarily form the desired article and the other of which subsequently manipulates the article, of a transfer device embodying relatively movable jaws, means for imparting a traversing movement to said transfer device, and means for opening and closing said jaws of the transfer device whereby it is adapted to forcibly retain the article during said traversing movement.

4. In a machine of the class described, the combination with a mandrel upon which a tubular container is to be formed, and a second mandrel, upon which said tubular container is subsequently treated, of automatic transfer mechanism operable intermediate said mandrels, said transfer mechanism embodying coöperating jaws and means for imparting movement to said jaws for opening and closing them.

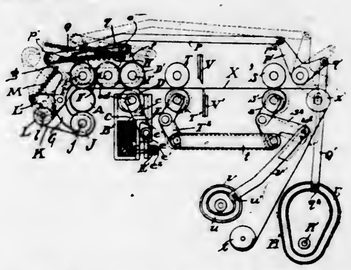
5. In a machine of the class described, the combination with a forming mandrel, and a second mandrel upon which a tubular container is to be treated, of automatic transfer mechanism coöperating with and movable between said mandrels, said transfer mechanism embodying a swinging carrier, coöperating jaws supported by said swinging carrier, and means operating in unison with the movement of the carrier for opening and closing the jaws.

[Claims 6 to 16 not printed in the Gazette.]

1,222,135. NECK-FORMING MECHANISM FOR PAPER-BOTTLE MACHINES. WILLIAM F. REGAN, Brooklyn, N. Y., assignor, by mesne agreements, to Empire Paper Bottle Company, a Corporation of New Jersey. Filed Nov. 19, 1913. Serial No. 801,823. (Cl. 93—36.)

1. In a paper container machine, the combination with a mandrel upon which is adapted to be formed a container with a crimped mouth portion, of feed means for directing to the crimped material of said mouth portion a separate strip of material the width of which is equal substantially to the crimped mouth portion of the container whereby the separate strip is adapted to be wound externally upon the crimped mouth portion of the container, and pressure mechanism including coöperating rolls and a band positioned in the path of feed of said separate strip, said pressure mechanism coöperating with said mandrel for applying pressure to the separate strip and to the crimped material of the container mouth during the winding of the separate strip thereon.

2. In a paper container machine, the combination with a mandrel upon which is adapted to be formed a container with a crimped mouth portion, of feed means for directing to the crimped material of said mouth portion a separate strip of material the width of which is equal substantially to the crimped mouth portion of the container whereby the separate strip is adapted to be wound externally upon the crimped mouth portion of the container, coöperating pressure rolls and an endless band positioned to partially envelop that part of said mandrel adapted to contain the crimped mouth of the container, said rolls and band operating to apply pressure to the crimped material and to the separate strip while winding the latter upon the crimped material, and means for bodily shifting the pressure rolls and band relatively to the path of feed of the separate strip.



3. In a paper container machine, the combination with a mandrel upon which is adapted to be formed a container with a crimped mouth portion, of an intermittently-operated feed mechanism for directing to the crimped material of the container mouth a definite length of narrow material the width of which is equal at least to the crimped material of the container mouth, whereby the narrow material is adapted to be wound externally upon the crimped material present upon the mandrel, pressure mechanism partially enveloping that part of the mandrel to which the narrow strip is directed, and means for shifting said pressure mechanism relatively to the mandrel whereby the pressure mechanism is adapted to be withdrawn from contact with the coiled strip and the container on the mandrel is free from the pressure exerted by said pressure mechanism.

4. In a device of the class described, the combination with a container-forming mandrel, of strip feeding rolls, pressure rolls, a flexible band in coöperative relation to the mandrel and the pressure rolls for wrapping a strip upon a crimped neck of the container and for exerting pressure upon said crimped neck and the strip, and automatic mechanism for shifting the strip feeding rolls, the pressure rolls and the flexible band relative to the path of the strip.

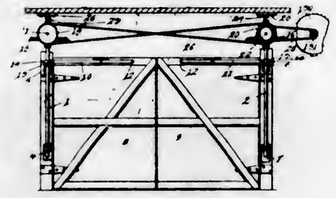
5. In a device of the class described, the combination with a mandrel, of strip feeding rolls for feeding a strip into position to be coiled upon the crimped neck of material wound on the mandrel, coöperating rolls and a flexible band positioned relatively to the mandrel for compacting the crimped material and for exerting pressure upon a strip to be wrapped around said crimped material, and means for simultaneously shifting said strip-feeding rolls and the coöperating rolls and band relative to the path of the strip.

[Claims 6 to 16 not printed in the Gazette.]

1,222,136. ELECTRICALLY-OPERATED DOOR. JOHN C. REYNOLDS, Binghamton, N. Y. Filed July 10, 1913. Serial No. 778,404. (Cl. 268—9.)

1. The combination with a door, of an electrically operated mechanism for opening and closing the door, said mechanism including a motor, means operatively connecting said motor to said door, a reversing switch interposed in said motor circuit, electrical means for operating said switch, a motor control device interposed in the said motor circuit and mechanically connected to the said motor, said motor control device being adapted to close a circuit

through the electrical means automatically and simultaneously with the movement of the door into open position, said electrical switch operating means being adapted to move the said switch into neutral position when the circuit through it is closed, and electrical means adapted to move the said switch in the reverse position for reversing the direction of the current through the motor when the door is to be swung from closed to open position.



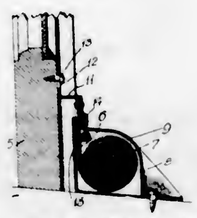
2. The combination with a door having an electrically operated mechanism for opening and closing said door, said mechanism including a motor, means to operatively connect the motor to the door, a reversing switch interposed in the motor circuit, electrical means for controlling the reversing switch, a motor control device connected to the shaft of the motor, and operated thereby, said motor control device being adapted to control the operation of the electrical switch closing means to cause the same to be thrown into position to operate the motor in opposite directions, and electrical means independent of the first mentioned electrical means and controlled by the operator whereby the reversing switch may be manually controlled.

3. The combination with a door, of an electrically operated mechanism for opening and closing said door, said mechanism including a motor, a reversing switch interposed in the motor circuit, said reversing switch having a pivoted contact arm, contacting plates secured to one end of the contact arm and adapted to coöperate with a plurality of spring contacts carried by the frame of the switch, a single contact plate carried by the opposite end of the contact arm, a plurality of contacts carried by the frame of the switch and adapted to coöperate with the last mentioned single contact, means connecting the first mentioned plurality of contacts with a suitable source of power supply, and with the motor, a brake mechanism operatively connected with the shaft of the motor and controlled by one set of the first mentioned contacts, a motor control mechanism operated by the contact and means to swing the arm on its pivot to the desired position and thereby complete the circuit through the motor.

4. The combination with a door, of an electrically operated mechanism therefor, said mechanism including a motor, a reversing switch interposed in the motor circuit, said reversing switch comprising a frame, a plurality of contacts at one end of said frame, a plurality of contacts at the opposite end of said frame, an arm pivotally mounted in the frame, contacting plates carried by one end of the arm and adapted to coöperate with the first mentioned contacts in the frame, a single contact formed on the opposite end of the arm and adapted to coöperate with the second mentioned contact, a solenoid carried by the frame and operatively connected with the arm whereby the same may be swung into its several positions, and means connected to the second mentioned contact in the frame to control the operation of the arm, whereby the reversal of the direction of the motor travel may be effected.

5. The combination with a door, of an electrically operated mechanism for controlling the movement of the door, said mechanism including a motor, a motor brake operatively connected with the motor, a solenoid for controlling the operation of the motor brake, an automatic reversing switch interposed in the motor circuit and adapted to control the operation of the motor and the solenoid, simultaneously, a pair of solenoids controlling the operation of the reversing switch, and means controlled by the operation of the motor and mechanically connected thereto for throwing the reversing switch automatically into the desired position.

1,222,137. WINDOW-SCREEN. LOUIS RICARD, Detroit, Mich., assignor of one-half to Telesphore St. Denis, Windsor, Ontario, Canada. Filed July 21, 1916. Serial No. 110,577. (Cl. 156—39.)



The combination with a window frame having a sill, stiles and a sash, of a casing on said frame sill provided with a longitudinal slot at the upper inner edge thereof, a normally wound-up screen in said casing and having an end therof extending through the slot of said casing, a guide roller in said casing at the slot thereof and maintaining said screen out of contact with the walls of the slot of said casing, a Z bar detachably connected to said sash and permanently attached to said screen, said Z bar having an offset portion extending over and in front of the front wall of the slot of said casing, and hooks carried by said stiles adapted to engage said screen and hold said screen unwound independently of said sash.

1,222,138. PROCESS FOR MAKING MATRICES. ERNST R. RICHARDS, Chicago, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Nov. 15, 1916. Serial No. 131,362. (Cl. 41—25.5.)



1. The process of making a matrix for use in the treatment of a printing plate, which comprises taking an impression of such printing plate with a resist-repelling liquid upon a chalk-coated sheet, taking an impression from a smooth surface over the entire plate impression with a resist, subjecting the sheet to an etching agent capable of loosening the chalk coating underlying the first impression, and rinsing and drying the sheet.

2. The process of making a matrix for use in the treatment of a printing plate, which comprises taking an ink impression of such printing plate upon a chalk-coated sheet, taking an impression from a smooth surface over the entire plate impression with an ink which is repelled by the first mentioned ink, subjecting the sheet to an etching agent capable of acting upon the chalk coating underlying the first impression, and rinsing and drying the sheet.

3. The process of making a matrix for use in the treatment of a printing plate, which comprises taking an impression of such printing plate with resist-repelling material upon a chalk-coated sheet, taking an impression from a smooth surface over the entire plate impression with a resist, subjecting the sheet to an etching agent capable of attacking the resist-repelling material and the underlying chalk-coating, and rinsing and drying the sheet.

4. The process of making a matrix for use in the treatment of a printing plate, which comprises taking an impression of such printing plate with grease-repelling ink upon a chalk-coated sheet, taking an impression from a smooth surface over the entire plate impression with a grease ink, subjecting the sheet to an etching agent capable of attacking the grease-repelling ink and the underlying chalk-coating, rinsing and drying the sheet, mounting the sheet upon a suitable backing and baking the sheet.

1,222,139. PHONOGRAPHIC STYLUS. FRED RIES, Chicago, Ill. Filed Apr. 10, 1916. Serial No. 90,102. (Cl. 274—38.)



1. As an article of manufacture, a phonograph stylus having its attenuated portion formed of vegetable ivory.

2. As an article of manufacture, a phonograph stylus formed entirely of vegetable ivory.

1,222,140. AEROPLANE-FUSELAGE STRUCTURE. WILLIAM C. ROBINSON, Grinnell, Iowa. Filed Mar. 27, 1916. Serial No. 87,115. (Cl. 244—31.)

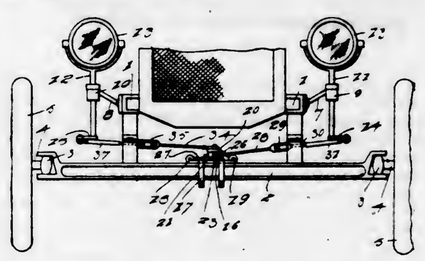


1. In an aeroplane fuselage, the combination of longitudinal fuselage members, a series of transverse struts, a series of plates between said longitudinal members and said struts, each plate being provided with one portion to enter between a vertical strut member and one of the longitudinal members, and also a portion to enter between one of the horizontal strut members and a longitudinal member, said plate also being provided near its central portion with openings, a transverse tension wire in said openings, said plate also being provided with openings near the central portions of both of its members, longitudinal tension wires extended through said openings, and screws extended through both members of said plate into the said longitudinal member, the heads of said screws projecting from the outer surface of the plate, and said strut members being provided with recesses to receive said screw heads.

2. In an aeroplane fuselage, the combination of four longitudinal fuselage members, a series of strut members extending transversely of the fuselage, means for connecting the fuselage members, said means comprising a series of plates, each comprising two portions at right angles to each other and each plate being provided near its center with two openings on opposite sides of the center and each side of said plate being also provided with two openings, screws passed through the plate and into the longitudinal fuselage member with their heads projecting beyond the plates, said strut members being arranged with their ends resting on said plates and being provided with recesses to receive said screw heads, a series of transverse tension wires passed through the openings near the center of said plates, means for connecting together and adjusting the tension of said transverse wires, a series of longitudinal tension wires, each being extended first under the plates and then outwardly through one of the openings and then inwardly through another opening, and means for connecting together and adjusting the tension of said longitudinal tension wires, for the purposes stated.

3. In an aeroplane fuselage, the combination of four longitudinal fuselage members, a series of strut members extending transversely of the fuselage, means for connecting the fuselage members, said means comprising a series of plates, each comprising two portions at right angles to each other and each plate being provided near its center with two openings on opposite sides of the center and each side of said plate being also provided with two openings, screws passed through the plate and into the longitudinal fuselage member with their heads projecting beyond the plates, said strut members being arranged with their ends resting on said plates and being provided with recesses to receive said screw heads, a series of transverse tension wires passed through the openings near the central portions of both of its members, longitudinal tension wires extended through said openings, and screws extended through both members of said plate into the said longitudinal member, the heads of said screws projecting from the outer surface of the plate, and said strut members being provided with recesses to receive said screw heads, a series of transverse tension wires, each being extended first under the plates and then outwardly through one of the openings and then inwardly through another opening, means for connecting together and adjusting the tension of said longitudinal tension wires, and a metal rod inserted in the corner of each of said plates between the said central openings thereof, and secured thereto and having the transverse tension wires passed around, for the purposes stated.

1,222,141. DIRIGIBLE AUTOMATIC HEADLIGHT. BERT A. RODEFER, Astoria, Oreg., assignor of one-half to JESSE W. MURPHY, Astoria, Oreg. Filed July 14, 1916. Serial No. 109,321. (Cl. 240—62.)



1. In combination, an automobile including a chassis having a front axle and a connecting rod, of a pair of lamp standards rotatably mounted on the chassis, a plate secured to the axle, a pair of arms pivotally secured to the plate and overlying the connecting rod, means carried by the connecting rod for an engagement with the arms, and means for connecting the arms with the lamp standards to turn the lamp standards.

2. In combination, an automobile including a chassis having a front axle and a connecting rod, of a pair of lamp standards journaled to the chassis, headlights carried by said lamp standards, a plate detachably secured to the front axle, a pair of arms pivoted to said plate and overlying the connecting rod, a vertical arm secured to the connecting rod and positioned between said arm, and means for connecting the arm with the lamp standard to turn the headlights.

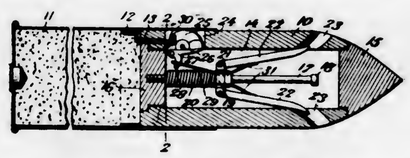
3. In combination, an automobile including a chassis having a front axle and a connecting rod, of a pair of lamp standards journaled to the chassis, headlights carried by said lamp standards, crank arms carried by the lamp standards, a plate detachably secured to the axle, a pair of arms pivoted to the plate and overlying the connecting rod, means for connecting the connecting rod with the arms, means for connecting the arms with the crank arms of the lamp standards to turn the headlights, and means con-

nected to the arms and to the plate for returning said arms to their normal position.

4. In combination, an automobile including a chassis having a front axle and a connecting rod, of a pair of lamp standards journaled to the chassis, headlights carried by the lamp standards, a plate detachably secured to the front axle and having its ends bent to form eyes, a pair of arms pivoted to said plate and overlying the connecting rod, a vertical arm carried by the connecting rod and positioned between the arms, springs connected to the eyes and to the arms for holding said arms into engagement with the vertical arm, and means for connecting the arms with the lamp standard to turn the headlights.

5. In combination, an automobile including a chassis having a front axle and a connecting rod, of a pair of lamp standards journaled to the chassis, headlights carried by said lamp standards, a pair of arms pivoted to the front axle and overlying the connecting rod, means for connecting the arms with the connecting rod, means for holding the arms in their normal position, adjustable rods pivoted to said arms, crank arms carried by the lamp standards, cylindrical members carried by the crank arms to receive the adjustable arms, and coil springs positioned within the cylindrical members and bearing against the adjustable rods to prevent vibration of the lamp standards.

1,222,142. PROJECTILE. MARCIANUS F. ROSSI, San Jose, Cal. Filed Apr. 7, 1916. Serial No. 89,642. (Cl. 102—26.)



1. A hollow projectile having arms therein adapted to be projected through openings in the sides of the same, and means pivotally mounted within the projectile and rotatable through a slot in the side thereof for holding said arms within the projectile until after the discharge of the latter from a gun, and further by engaging a rifling groove to rotate the projectile while passing through the gun.

2. A hollow projectile, and cutting arms therein, movable longitudinally thereof to cause their extension through the side wall of the projectile, resilient means for forcing said arms forward, a trip mechanism in the projectile for holding the arms retracted, a cartridge shell, and means therein for locking the trip mechanism in operative position.

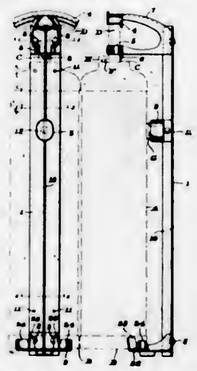
3. A hollow projectile and a cartridge shell therefor, in combination with a plurality of cutting arms within the projectile and adapted to be projected through the side walls thereof, a longitudinally movable member within the projectile to which said cutters are pivoted, means tending to force said member forwardly, and a tripping means in the projectile held in locked position by the cartridge shell to hold the arms retracted.

4. A hollow projectile containing a longitudinally movable member and cutter arms pivoted thereto adapted to be withdrawn into the shell or extended through openings in the wall thereof, resilient means for moving said member into position to project said cutters, and tripping means including an eccentrically pivoted plate within a slot in the side of the projectile and adapted to hold the arms retracted when said projectile is loaded into a cartridge case.

5. In a projectile having a chamber therein, and a cartridge case for said projectile, an axially disposed stem within said chamber, a collar slidable on said stem, cutter arms pivoted to said collar and adapted to be projected through openings in the side of the projectile, a spring tending to force said collar into position to extend said arms, a trip device adapted to bear against said cartridge case for holding the collar retracted and the cutter arms within the projectile, and a fixed pin within the cartridge case projecting through the base of the projectile to lock the trip device immovable and out of contact with the cartridge case.

[Claims 6 and 7 not printed in the Gazette.]

1,222,143. HOLDING DEVICE FOR FIRE-EXTINGUISHERS. FRANK F. ROWELL, Bayside, N. Y., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed Apr. 24, 1915. Serial No. 23,763. (Cl. 248—20.)



1. A holding device for portable fire extinguishers and the like comprising in combination a back bar of a length approximating that of the extinguisher, a foot clip projecting from the lower end thereof, adapted to grasp the bottom of the extinguisher, a holder for the handle, and a bifurcated spring clip for the piston rod of the fire extinguisher extending from the upper end of the back bar, said clip being provided with a projecting lug adapted to strike a projection on one side of the extinguisher, and prevent the piston rod entering the clip when the extinguisher is presented to the holder with said projection on the inside.

2. A holding device for portable fire extinguishers and the like, comprising in combination a back bar, a spring foot clip projecting from the lower end of the back bar and provided with upwardly extending lips to engage recesses in the bottom of the extinguisher, a handle clip extending from the upper end of the back bar recessed on its under surface, and a socket piece on the face of the back bar, adapted to engage a filling cap on the side of the extinguisher, having a recess whose vertical dimension is greater than the diameter of the cap whereby the necessary vertical motion of the extinguisher to free the handle from its clips is permitted while the cap is seated in the socket piece.

3. A holding device for portable fire extinguishers and the like, comprising in combination a back bar, a spring foot clip projecting from the lower end of the back bar and provided with upwardly extending lips to engage recesses in the bottom of the extinguisher, a handle clip extending from the upper end of the back bar recessed on its under surface, and a socket piece on the face of the back bar, adapted to engage a filling cap on the side of the extinguisher, having a recess whose vertical dimension is greater than the diameter of the cap whereby the necessary vertical motion of the extinguisher to free the handle from its clips is permitted while the cap is seated in the socket piece, together with a bifurcated spring clip adapted to engage the piston rod of the extinguisher provided with a downwardly projecting lug at its inner edge.

1,222,144. DENTIFRICE. WILLIAM M. RUTHRAUFF, Chicago, Ill. Filed Oct. 2, 1916. Serial No. 123,211. (Cl. 167—9.)

1. A calcifying dentifrice comprising a soluble calcium salt adapted to permeate the minute spaces in the tooth surface and be there transformed and deposited by the saliva in the form of the natural cementing substance of the tooth, in combination with an agent for more effectively causing the solution to permeate and completely fill up such spaces.

2. A calcifying dentifrice containing the calcium salts of which the teeth are composed, held in solution by an acid, so as to be converted by the saliva into the natural cementing substance of the tooth and deposited in the external spaces of the tooth, sealing up these spaces and thereby causing a calcification or solidification of the tooth's surface; and an agent possessing hygroscopic action by which the calcifying solution may be more effectively introduced into the external enamel spaces of the tooth, by virtue of the affinity of said hygroscopic vehicle for the residual moisture of the tooth's structure; and an abrasive which will not chemically interfere with said calcifying action.

3. A calcifying dentifrice containing tribasic calcium phosphate, of which the teeth are composed, held in solution by hydrochloric acid, so as to penetrate into the external spaces of the enamel and dentin and there be converted by the saliva into tribasic calcium phosphate and deposited, sealing up these spaces, glycerin, a hygroscopic agent, by which the calcifying solution may be more effectively introduced into the external enamel spaces of the tooth, and calcium phosphate, an abrasive agent, which will not chemically interfere with said calcifying action.

4. A calcifying dentifrice containing a calcium salt held in solution by an acid capable of being neutralized by the saliva to deposit the calcium salt in combination with a hygroscopic medium to augment the penetrative power of the solution into the interprismatic spaces of the teeth, and a proteolytic enzym which, activated by the acid, performs tooth cleaning functions prior to the deposit of calcium salts in the interprismatic spaces of the teeth.

5. A dentifrice comprising tribasic calcium phosphate in excess in combination with an acid, a hygroscopic medium and a proteolytic enzym.

[Claims 6 and 7 not printed in the Gazette.]

1,222,145. PERMUTATION-PADLOCK. JOSHUA E. RYON, Desdemona, Tex. Filed Jan. 29, 1915. Serial No. 5,101. (Cl. 70—112.)



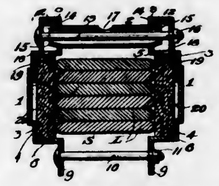
1. A padlock including a casing, a shackle having one end pivotally mounted within the casing, an arcuate lever pivotally mounted within the casing, a projection formed on said lever, a tumbler rigidly mounted on one end of said arcuate lever for removable engagement with the free end of the shackle for holding the shackle in engagement with the casing, a spring having its respective ends in engagement with the connected end of said shackle and the free end of said arcuate lever for holding said tumbler in engagement with the shackle before actuation and for facilitating the outward movement of the shackle after actuation, and actuating means rotatably mounted within the casing for engagement with said projection for removing said tumbler from engagement with said shackle.

2. A padlock including a casing, a shackle having one end pivotally mounted within the casing, an arcuate lever pivotally mounted within the casing, a projection formed on said arcuate lever, a tumbler rigidly mounted on one end of said arcuate lever for removable engagement with the free end of the shackle, a spring having the respective ends in engagement with the free end of said arcuate lever and the connected end of the shackle for holding the tumbler in engagement with the shackle before actuation and for facilitating the outward movement of the shackle from the casing when actuated, a disk rotatably mounted within the casing and positioned adjacent said arcuate lever, a smaller disk eccentrically mounted adjacent the periphery of said larger disk, means for rotating said larger disk for setting said eccentrically mounted disk, and means for rotating said eccentrically mounted disk for moving the same into engagement with said projection for moving said tumbler from engagement with said shackle.

3. A padlock including a casing, a shackle having one end pivotally mounted within the casing, retaining means movably mounted within the casing for removable engagement with the shackle, a supporting disk rotatably mounted within the casing, a small disk eccentrically mounted upon the supporting disk, and means for rotating the eccentrically mounted disk for moving the same into engagement with the retaining means for releasing the shackle from the casing.

4. A padlock including a casing, a shackle having one end pivotally mounted therein, an arcuate lever pivotally mounted within the casing, a projection extending laterally from the arcuate lever, a tumbler rigidly connected to one end of said arcuate lever for engagement with the free end of the shackle for removably holding the same in engagement with the casing, resilient means within the casing for engagement with the free end of the arcuate lever and the connected end of the shackle before actuation and for facilitating the outward movement of the shackle from the casing after actuation, a tubular shaft rotatably mounted in the casing, a supporting disk rigidly mounted on the inner end thereof, another disk eccentrically mounted adjacent the periphery of the supporting disk, an actuating disk on the outer end of the tubular shaft for facilitating the rotation of the supporting disk for setting the eccentrically mounted disk, a stub shaft journaled within said tubular shaft, means on the inner end of the stub shaft for imparting a rotary motion to the eccentrically mounted disk, an actuating disk rigidly mounted on the outer end of the stub shaft for imparting a rotary motion thereto and consequently moving said eccentrically mounted disk into engagement with said projection for removing said tumbler from said shackle, and pointers extending from the peripheries of said actuating disks for facilitating the setting and actuation of the disks.

1,222,146. VEHICLE-SPRING LUBRICATOR. THEODORE C. SCHULTZE, Grand Rapids, Mich. Filed Feb. 12, 1917. Serial No. 148,130. (Cl. 184—1.)



1. A device of the class described comprising a pair of lubricators, a hollow ear on one end of each, a tubular reservoir connecting said hollow ears and communicating with the interior thereof, and a bolt connecting the ears for holding the parts together.

2. A device of the class described comprising a pair of lubricators, a hollow ear on each, each of said ears having an opening in its inner face, a tubular reservoir having tapered ends disposed in said openings and communicating with the interior of said ears, and a bolt connecting the ears for holding the parts together.

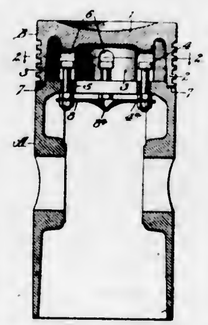
3. A device of the class described comprising a pair of lubricators, a hollow ear on one end of each, each of said ears having alined openings in its inner and outer faces, a cylindrical tubular reservoir having its inner ends disposed in inner adjacent openings in its ears, and a bolt extending through said openings and the reservoir for holding the lubricators and the reservoir together.

4. A device of the class described comprising a pair of lubricators, a hollow ear on one end of each, a tubular

reservoir connecting said ears and communicating with the interior thereof, a bolt connecting the ears for holding the lubricator and reservoir together, a supplemental reservoir in each of said lubricators formed by pressing the face of the same outwardly, and a passageway connecting each of said hollow ears with the adjacent supplemental reservoir.

5. A device of the class described comprising a pair of lubricators, each formed of a substantially rectangular casing, their upper and lower ends being wider than the sides, an ear formed on each end of each casing, a chamber connected with one ear of each casing, each of said chambers having alined openings formed in its inner and outer walls, a cylindrical tubular reservoir having tapered ends disposed in the openings in the inner walls of said chambers, a bolt extending through said alined openings and the reservoir, a second bolt connecting the other ears and a lubricating pad disposed in each of said casings, said pad being thicker than the width of the sides of the casing.

1,222,147. PISTON FOR OIL-ENGINES. HANS R. SETZ, St. Louis, Mo. Filed Mar. 16, 1916. Serial No. 84,562. (Cl. 74—85.)



1. A piston provided with a removable upper part supported in such a manner that the downward stresses exerted on the center of the top wall of same are neutralized by the downward stresses exerted on said top wall adjacent the periphery of same.

2. A piston provided with a body portion and a removable upper part rigidly mounted on said body portion, said upper part having a side wall portion that is free to expand and contract longitudinally of the piston.

3. A piston, comprising a body portion and a removable upper part rigidly connected to said body portion and supported in such a manner that the center and peripheral portions of same are free to expand and contract longitudinally of the piston.

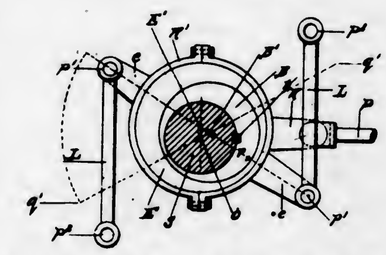
4. A piston provided with a removable upper part having an annular side wall whose lower edge is spaced slightly away from the body portion of the piston, and a bearing for said upper part located intermediate said side wall and the center of said upper part.

5. A piston provided with a removable upper portion that has an annular side wall and a top wall that forms the crown of the piston, the lower edge of said annular side wall being spaced slightly away from the body portion of the piston, and an integral bearing member on the underside of said top wall that engages the body portion of the piston some distance inwardly from the annular side wall of said upper portion.

[Claims 6 to 15 not printed in the Gazette.]

1,222,148. VARIABLE-DELIVERY FUEL-PUMP FOR INTERNAL-COMBUSTION ENGINES. JAMES A. SEYMOUR, Auburn, N. Y. Filed Sept. 30, 1914. Serial No. 864,222. (Cl. 123—140.)

1. In a variable delivery fuel pump for internal combustion engines in combination, a centrifugal shaft governor mounted upon a shaft rotating at a speed having a fixed ratio to the speed of the engine, a reciprocating pump plunger, a bearing for an eccentric carried by said governor shaft, an eccentric movably mounted on said bearing to vary its eccentricity relative to said governor shaft by causing the center of the eccentric to move in an approximately radial line toward the center of the shaft from its position of maximum throw to a position coinciding with the center of the shaft and operably connected to said pump plunger, connecting means from said governor for controlling the position of said movable eccentric on its bearing, the ratio of the distance between the center of said eccentric and the center of said bearing, to the radius of said bearing being such that a substantial amount of the turning moment of the movable eccentric on its bearing due to the reactive thrust from said pump plunger is counteracted by the action of friction between said movable eccentric and its bearing.



2. In a variable delivery fuel pump for internal combustion engines in combination, a centrifugal shaft governor mounted upon a shaft rotating at a speed having a fixed ratio to the speed of the engine, a reciprocating pump plunger, a bearing for an eccentric carried by said governor shaft, an eccentric movably mounted on said bearing to vary its eccentricity relative to said governor shaft by causing the center of the eccentric to move in an approximately radial line toward the center of the shaft from its position of maximum throw to a position coinciding with the center of the shaft and operably connected to said pump plunger, connecting means from said governor mounted to rotate with said shaft for controlling the position of said movable eccentric on its bearing, the ratio of the distance between the center of said eccentric and the center of said bearing, to the radius of said bearing being such that a sufficient amount of the turning moment of the movable eccentric on its bearing due to the reactive thrust from said pump plunger is counteracted by the action of friction between said movable eccentric and its bearing to prevent the reactive thrust from said pump plunger from disturbing the effective operation of said governor.

3. In a variable delivery fuel pump for internal combustion engines in combination, a centrifugal shaft governor mounted upon a shaft rotating at a speed having a fixed ratio to the speed of the engine, a reciprocating pump plunger, a bearing for an eccentric carried by said governor shaft, an eccentric movably mounted on said bearing to vary its eccentricity relative to said governor shaft by causing the center of the eccentric to move in an approximately radial line toward the center of the shaft from its position of maximum throw to a position coinciding with the center of the shaft and operably connected to said pump plunger, the distance between the center of said eccentric and the center of said bearing being not over one-half the radius of said bearing, and connecting means from said governor for controlling the position of said movable eccentric on its bearing.

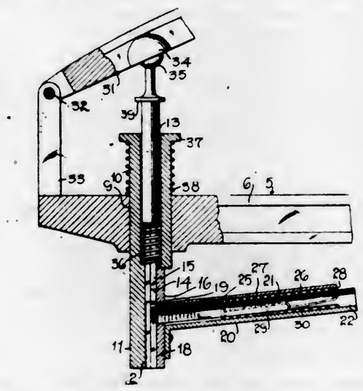
4. In a variable delivery fuel pump for internal combustion engines in combination, a centrifugal shaft governor mounted upon a shaft rotating at a speed having a fixed ratio to the speed of the engine, a reciprocating pump plunger, a fixed eccentric on said shaft serving as a bearing for a movable eccentric, said movable eccentric

mounted on said fixed eccentric so as to vary its eccentricity relative to said governor shaft by causing the center of the eccentric to move in an approximately radial line toward the center of the shaft from its position of maximum throw to a position coinciding with the center of the shaft and being operably connected to said pump plunger, and connecting means from said governor for controlling the position of said movable eccentric on its bearing.

5. In a variable delivery fuel pump for internal combustion engines in combination, a centrifugal shaft governor comprising weighted members movably mounted upon a shaft, said shaft rotating at a speed having a fixed ratio to the speed of the engine, a reciprocating pump plunger, an eccentric fixed on said shaft serving as a bearing for a movable eccentric, said movable eccentric mounted on said fixed eccentric so that its eccentricity relative to the governor shaft may be varied by causing the center of the eccentric to move in an approximately radial line toward the center of the shaft from its position of maximum throw to a position coinciding with the center of the shaft, said movable eccentric being operably connected to said pump plunger and connecting means between said movable weighted members and said movable eccentric for controlling the position of said movable eccentric on its bearing.

[Claims 6 to 9 not printed in the Gazette.]

1,222,149. STAPLING-MACHINE. ALONZO F. SHAFER, Moore, W. Va. Filed Mar. 4, 1916. Serial No. 82,212. (Cl. 1—3.)



1. In a stapling machine, the combination of an axially movable sleeve, a reciprocating plunger operating therein, a plate detachably secured to one side of said sleeve and having a channel in its inner face and an opening communicating with said channel, a saddle plate having one of its ends disposed within said opening, said plate being adapted to support a plurality of staples, and a spring-pressed follower mounted upon the saddle plate to urge the staples successively into the channel of the first named plate for engagement by the plunger in its downward movement.

2. In a stapling machine, the combination of a sleeve, a reciprocating plunger operating therein, said sleeve having a longitudinal extension, a plate detachably secured upon said extension and having a guide channel in its inner face to receive the plunger and an opening in said plate communicating with said channel, a laterally projecting saddle plate mounted upon said first named plate and extending into said opening, said saddle plate being adapted to support a plurality of staples, a cover plate for the staples also engaged at one of its ends in the opening of the first named plate, and a spring pressed follower mounted upon the saddle plate to urge the staples successively into the channel of the first named plate for engagement by the plunger in its downward movement.

3. In a stapling machine, the combination of a sleeve having a longitudinal extension formed on one end provided with a guide channel, a plunger operating in said sleeve and having a stem engaged in said guide channel, a plate detachably secured to said extension and having a channel in its inner face in which the plunger stem is slidably engaged, said plate also having an opening therein communicating with said channel, and a staple magazine carried by said plate to feed the staples successively into the said channel for engagement by the plunger stem in its downward movement.

4. In a stapling machine, the combination of a sleeve having a longitudinal extension formed on one end provided with a guide channel, a plunger operating in said sleeve and having a stem engaged in said guide channel, a plate detachably secured to said extension and having a channel in its inner face in which the plunger stem is slidably engaged, said plate also having an opening therein communicating with said channel, a laterally extending, downwardly inclined plate carried by said first named plate, a staple support mounted upon the inclined plate and having one of its ends disposed in the opening of the first named plate, and a spring-pressed follower mounted upon said support to urge the staples successively into the channel of the first named plate for engagement by the plunger stem in its downward movement.

5. In a stapling machine, the combination of a sleeve having a longitudinal extension formed on one end provided with a guide channel, a plunger operating in said sleeve and having a stem engaged in said guide channel, a plate detachably secured to said extension and having a channel in its inner face in which the plunger stem is slidably engaged, said plate also having an opening therein communicating with said channel, a laterally extending, downwardly inclined plate carried by said first named plate, a staple support mounted upon the inclined plate and having one of its ends disposed in the opening of the first named plate, a spring-pressed follower mounted upon said support to urge the staples successively into the channel of the first named plate for engagement by the plunger stem in its downward movement, and means connected to the follower to co-act with the inclined plate to hold the follower in a retracted position against the action of its spring.

[Claim 6 not printed in the Gazette.]

1,222,150. FRUIT-LADDER. BYRON L. SIMMONS, Walla Walla, Wash. Filed Feb. 2, 1915. Serial No. 5,707. (Cl. 228—15.)

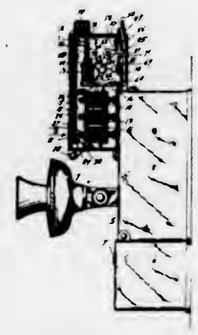


In a device of the class described, the combination with a base, a ladder supported on the base, a carrier having upper and lower bars for slidably engaging the side rails of the ladder, basket supporting frames associated with said bars and extending beyond the side rails of the ladder, said frames being spaced a distance equal to the width of the ladder to provide a passage, and means for raising and lowering the carrier on the ladder.

1,222,151. PAY-TELEPHONE ELECTRIC RECORDER. ALVINZA F. SIPPERLEY, Denver, Colo.; Susie Sipperley administratrix of Alvinza F. Sipperley, deceased. Filed Oct. 9, 1915. Serial No. 54,992. (Cl. 234—33.5.)

1. In a device of the class described, the combination of a record member mounted to rotate, electro-magnetic means for permanently recording on said member, other

electro-magnetic means imparting a step by step movement to the said member after the record has been made thereon, and coin actuated means for simultaneously making and breaking the circuit through the two electro-magnetic means.



2. In a device of the class described, the combination of a record member mounted to rotate, electro-magnetic devices for permanently recording on said member, a second electro-magnetic device for imparting a step by step movement to said member after the record has been made thereon, said second device being arranged in series with the first mentioned device, and coin actuated means for simultaneously making and breaking the circuit through both sets of devices.

3. In a device of the class described, the combination of a record member mounted to rotate, a number of independently operable electro-magnetic devices arranged to print on said member as the said devices are energized, a second electro-magnetic device arranged to impart a step-by-step movement to the record member after each printing act, and means for simultaneously making and breaking the circuit through any one of the first named electro-magnetic devices and the second named electro-magnetic device, a part of said circuit make-and-break means projecting into the path of a coin during its travel through the instrument.

4. A device of the class described including a casing having a number of coin chutes, movable contacts arranged to project into the passages through said chutes, solenoids connected in operative relation with the said contacts, the latter being actuated by coins inserted in the said chutes and arranged to close circuits through the respective solenoids, a member rotatably mounted and arranged to receive marks or prints as the plungers of the solenoids are actuated during the closing of their respective circuits to engage said member, an electro-magnet located in the circuit of each solenoid, and means operable by said magnet for imparting a step-by-step movement to the record member for the purpose of bringing a new printing surface into line with the making or printing device of any solenoid after the latter has performed the printing or marking act.

5. A device of the class described including a casing having a number of coin chutes, a record disk divided into zones and mounted to rotate, electro-magnetic devices each arranged to print in a different zone on said disk, a second electro-magnetic device located in the circuit of each of the printing electro-magnetic devices, for imparting a step-by-step movement to the record disk after each printing act, and means for making and breaking the circuit through each of the electro-magnetic printing devices and the electro-magnetic device for imparting rotary movement to the record disk, a part of the circuit make-and-break means projecting into each coin chute and into the path of a coin passing therethrough.

[Claim 6 not printed in the Gazette.]

1,222,152. PENCIL AND PROCESS FOR MAKING THE SAME. CHARLES A. SMITH, Philadelphia, Pa., assignor to Blaisdell Paper Pencil Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 15, 1916. Serial No. 137,072. (Cl. 120—83.)



1. A pencil having a body composed of adhering laminated coils of partially decomposed sheeted material.

2. A pencil having a body composed of sheeted wood fiber paper having the fibers partially decomposed and wound upon a core, the coils of the paper being fixed together by an adhesive material applied between them so as to form a solid body.

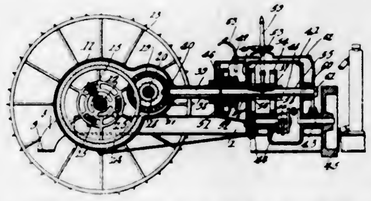
3. A pencil having a body composed of wood fiber paper having the fiber partially decomposed and adapted to be cut, said body comprising laminations permanently fixed together.

4. The process of making pencils which consists in treating a sheet of fibrous material with a substance capable of breaking down the fiber more or less and winding the sheet of treated material upon a core so as to form a body incasing the same.

5. The process of making pencils which consists in treating a sheet of wood fiber paper with an acidulated solution adapted to effect a condition whereby the paper is more readily cut, winding the sheet of treated paper upon a core so as to form a body incasing the same, and applying an adhesive to the sheet in process of winding so as to cause the wound coils to adhere together.

[Claim 6 not printed in the Gazette.]

1,222,153. GEARING. HENRY J. SMITH, Minneapolis, Minn., assignor to H. J. Smith Tractor Company, county of Hennepin, Minn., a Corporation of Minnesota. Filed May 3, 1915. Serial No. 25,574. (Cl. 74—59.)



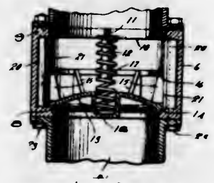
1. Transmission gearing including alining shafts, means for transmitting motion from one of said shafts, gears mounted to rotate on the other one of said shafts, drive gears meshing with the respective gears on the second mentioned shaft, means for coupling said second shaft to either of the gears thereon, said gears being designed to rotate the second shaft at different speeds, coöperating clutch members upon the respective shafts, and means for shifting said second shaft longitudinally to uncouple it from the first named shaft.

2. Transmission gearing including a shaft mounted to slide and rotate, gears revoluble with respect to the shaft, separate drive gears meshing with the respective gears on said shaft, means for coupling the shaft to either of the gears thereon to drive the shaft at either of two speeds, a clutch member at one end of the shaft, and means for shifting the shaft longitudinally to move the clutch member out of its normal position.

3. Transmission gearing including a shaft mounted to slide and rotate, gears revoluble about the shaft, separate drive gears meshing with the respective gears on said shaft, means for coupling the shaft to either of the gears thereon to drive the shaft at either of two speeds, a clutch member at one end of the shaft, means for shifting the shaft longitudinally to move the clutch member out of its normal position, a driven shaft alining with the first mentioned shaft, and a clutch member normally engaged by the clutch member on the end of the first named shaft.

4. Transmission gearing including a shaft mounted to slide and rotate, gears revoluble about the shaft, separate drive gears meshing with the respective gears on said shaft, means for coupling the shaft to either of the gears thereon to drive the shaft at either of two speeds, a clutch member at one end of the shaft, means for shifting the shaft longitudinally to move the clutch member out of its normal position, a driven shaft alining with the first named shaft, a clutch member normally engaged by the clutch member on the end of the first named shaft, and an oil containing housing inclosing the first named shaft, the gears and the clutch members.

1,222,154. CHECK-VALVE. MICHAEL SMOLENSKY, Cleveland, Ohio. Filed May 31, 1916. Serial No. 100,943. (Cl. 137—52.)

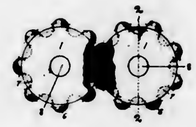


1. A check valve comprising a cylindrical casing provided with means at its ends for connecting the same between pipe sections said casing having at one end an inwardly projecting flange with a valve seat at its inner edge, and having at the opposite end an inwardly projecting flange threaded at its inner edge, said flanges abutting the pipe sections, a retainer ring screwed into the threaded flanges, spaced guide ribs extending between said flanges, and a valve movable along said ribs, to and from the seat.

2. A valve comprising a casing having a seat and spaced guide ribs extending lengthwise of the casing and rearwardly from the seat and forming passages therebetween, and a valve member comprising a disk coöperating with the seat, a ring behind the disk and adapted to bear against the ribs, and a series of spaced ribs extending between the disk and the ring, said ribs being set at an angle to radial lines, to rotate the valve as it operates.

3. A check valve having a cylindrical casing with interior bosses spaced apart and provided with guides for a valve disk, the bosses being bored lengthwise to receive fastening devices for attaching the casing between pipe sections.

1,222,155. GEARING. CHARLES BREWSTER STEELE, New York, N. Y. Filed May 22, 1908. Serial No. 434,395. Cl. 74—41.)



1. A gear consisting of a member provided with spherical projections and depressions capable of engagement with a facsimile member.

2. A gear consisting of a beveled base provided with spherical projections and depressions.

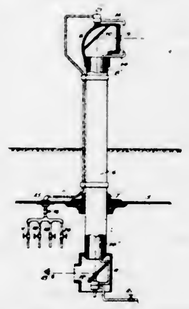
3. A beveled gear provided with spherical projections and depressions.

4. A gear consisting of a curvilinear base provided with spherical projections and depressions.

5. A gear consisting of a base adapted for frictional contact provided with spherical projections and depressions.

[Claims 6 to 13 not printed in the Gazette.]

1,222,156. CLEANING PERISCOPE-GLASSES. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed Oct. 4, 1916. Serial No. 123,795. (Cl. 114—16.)



1. The combination with a periscope tube having a head revoluble about the tube's axis, of a pipe arranged to discharge against the periscope glass and having a swivel joint in the axis of rotation permitting the discharging end portion to rotate with said head.

2. The combination with a submarine, of a periscope having a head revoluble about a vertical axis, a pipe leading from within the vessel to position for discharging against the exterior of the periscope glass and having in the axial line of the head's rotation a joint allowing the terminal segment of the pipe to revolve with the head while delivering fluid.

3. The combination with a submarine, of a periscope tube having a head revoluble about the tube's axis and further having internal light-deflecting means, of a pipe, outside the tube, leading from the interior of the submarine and arranged to discharge against the periscope glass, a second tube leading from said interior upward inside the tube alongside the path of the light therein and thence outward to discharge against said glass, each of said pipes having a swivel joint allowing the terminal portion to rotate with said head.

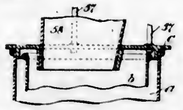
4. The combination with a submarine having a periscope provided with a head revoluble about an axial line passing through the central portions of the reflecting surfaces, of a pipe leading from the interior of the submarine to position for discharging against the exterior of the periscope glass and swiveled in said line above said head, a second pipe swiveled in said line and leading upward in the periscope tube and outward at the head to position for discharging against said glass, and means for at will supplying fluid under pressure to each of said pipes.

5. The combination with a submarine, of a periscope tube having its upper portion revoluble about the tube's axis, of a pipe leading from the interior of the submarine, discharging against the periscope glass and having a swivel joint allowing its terminal portion to rotate with said upper portion, and means for at will supplying said pipe with various fluids, combined or otherwise.

1,222,157. EARTH-CLOSET. CHARLES H. STEPHENSON, Lynn, Mass. Filed Nov. 23, 1909. Serial No. 529,629. (Cl. 4—32.)

1. A portable earth closet comprising an open top container, a ring top resting upon the upper edge thereof and provided with a flange adjacent its edge to engage the wall of said container to prevent relative movement of the two, said ring top being also provided with a skirt extending into said container, a hopper having its lower end

fitting within said skirt, and a seat plate supported by said ring top, independently of the hopper and located over the top thereof.



2. A portable earth closet comprising an open top container, a ring top resting upon the upper edge thereof and provided with a flange adjacent its edge to engage the wall of said container to prevent relative movement of the two, said ring top being also provided with a skirt extending into said container, a hopper having its lower end fitting within said skirt, a seat plate, and strut rods connecting said ring top and said seat plate.

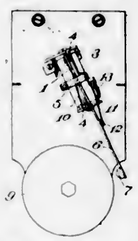
3. A portable earth closet comprising an open top container, a ring top resting upon the upper edge thereof and provided with a flange adjacent its edge to engage the wall of said container to prevent relative movement of the two, said ring top being also provided with a hinged cover having a skirt extending into the container, a hopper having its lower end fitting within said skirt, and a seat plate supported by said cover independently of the hopper, and located over the top thereof.

4. A portable earth closet comprising an open top container, a ring top resting upon the edge thereof and provided with a flange adjacent its edge to engage the wall of said container to prevent relative movement of the two, said ring top being also provided with a hinged cover member provided with a skirt extending into said container, a seat plate, and strut rods connecting said seat plate and the hinged cover portion of said ring top.

1,222,158. ALUMINUM-SOLDERING COMPOUND. CHARLES A. STEWART, Carson City, Nev. Filed May 13, 1916. Serial No. 97,414. (Cl. 75—1.)

A soldering alloy of the class described, comprising tin 69.07 parts, lead 28.77 parts, zinc 1.44 parts, and silver .72 part.

1,222,159. ELECTRIC BELL. MICHISUYE SUWA, Tokyo, Japan. Filed July 3, 1915. Serial No. 37,968. (Cl. 177—7.)

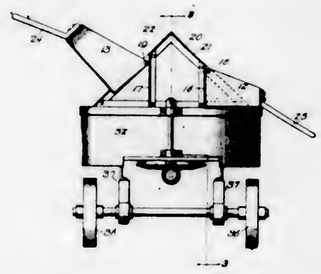


1. In an electric bell, an electro-magnet, a core, pole shoes on said core, said pole shoes being provided with angular extensions located in planes parallel to the axis of the core, and an armature oscillatorily mounted intermediate its ends, the ends of said armature being adapted to engage with opposite sides said angular polar extensions.

2. In an electric bell, the combination with an electro-magnet of a core, polar projections on said core bent in direction toward each other and located in planes parallel to the longitudinal axis of the core, one of said polar projections being longer than the other polar projection, and an armature oscillatably mounted between said polar projections, opposite ends of said armature being each in opposition to one of said polar projections, the center portion of said armature being in constant contact with the said longer polar projection.

3. In an electric bell, the combination of an electro-magnet, a core, polar projections on the core, bent portions on the polar projections extending toward each other in different planes parallel to the longitudinal axis of the core, and an armature comprising a straight strip of metal having supporting pins near its center portion, the ends of the armature to engage with opposite sides of the bent portions, one of said bent portions being in continuous contact with the center portion of the armature.

1,222,160. CHARGING OR MEASURING DEVICE. JOHN A. SVENSON, Pittsburgh, Pa., assignor of one-half to Jesse J. Shuman, Pittsburgh, Pa. Filed Feb. 18, 1911, Serial No. 609,404. Renewed Sept. 14, 1916. Serial No. 120,190. (Cl. 83—44.)



1. The combination of an open top container, a triangular framework mounted upon the upper edge thereof, roof plates mounted on said framework and sloping downwardly in opposite directions, each of said plates having an opening therein, a vertical wall extending downwardly from the inner edge of each of said openings, and charging receptacles each having an open side arranged to be closed by one of said vertical plates, each receptacle being pivoted at its upper corner adjacent to said plate, whereby the receptacle may be swung upwardly away from said plate to discharge its contents into said container.

2. The combination with a relatively shallow container having means to support it close to the ground, of a framework mounted upon the upper edge of said container, a roof secured to said framework and completely closing the upper end of said container, said roof having an opening therein, and a charging receptacle fitting closely in said opening and pivotally mounted in said framework, the bottom wall of said receptacle when in normal position being substantially flush with the upper edge of said container.

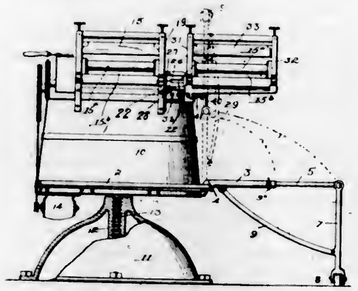
3. The combination with a relatively shallow container having means to support it close to the ground, of a framework mounted upon the upper edge of said container, a roof secured to said framework and covering said container, said roof having a downwardly sloping portion provided with an opening, a charging receptacle fitting in said opening and pivotally mounted in said framework, the bottom of said receptacle when in normal position being substantially flush with the upper edge of said container, and said receptacle being shallower at its outer side than at its inner side, and a handle secured to said receptacle for swinging it to discharge the contents into said container.

4. A charging or measuring device comprising a frame including a vertical plate and a box having an open top and an open side, said box being positioned so that said plate normally closes said open side, and means pivotally connecting the upper corners of said box to said frame at a point adjacent to said vertical plate.

5. A charging or measuring device comprising a box having an open top and an open side, said box being pivoted at its upper corners adjacent to said open side, a stationary plate closing said open side when the box is in its normal position, and a handle on said box for swinging said box upwardly away from said plate to discharge its contents.

[Claims 6 and 7 not printed in the Gazette.]

1,222,161. WRINGER-SUPPORT. JOHN C. THOMPSON, Cincinnati, Ohio. Filed Dec. 12, 1912. Serial No. 736,412. (Cl. 68—32.)



1. In a device of the class described, a gear casing, a horizontal bearing formed thereon having a shaft, a vertical opening in said casing forming a bearing for a vertical shaft, a shaft in said last named opening, a horizontal beveled gear on the upper end of said shaft, said gear casing being provided with a lower horizontal slot extending from its outer edge to a point past the vertical opening in said gear casing, said gear casing being provided also with an upper horizontal slot to receive a wringer roll shaft, a wringer supporting member provided with sockets to receive the upright end members of a wringer and having an arm received in the lower horizontal slot in said gear casing in which arm said shaft is rotatably mounted, said wringer supporting member being capable of swinging motion around said gear casing.

2. In a device of the class described, a support, a vertical shaft mounted therein, said support having a pair of slots adapted respectively to receive a shaft, and a supporting arm capable of swinging in a horizontal plane, a shaft extended through one slot, gearing devices for transmitting motion from the vertical to the horizontal shaft and a support for the second shaft having an arm extended into the other slot rotatably mounted on the vertical shaft and supported by the portions of the first support above and below the second slot.

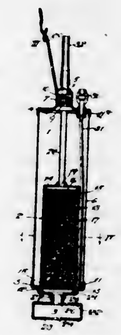
3. In a device of the class described, a gear casing, a horizontal bearing formed thereon having a shaft, a vertical opening therein forming a bearing for a vertical shaft, a shaft in said last named opening, a horizontal beveled gear on the upper end of said shaft said gear casing being provided with a lower horizontal slot extending from its outer edge to a point past the vertical opening in said gear casing, said gear casing being also provided with an upper horizontal slot to receive a wringer roll shaft, a wringer supporting member provided with sockets to receive the upright end members of a wringer and having an arm received in the horizontal slot in said gear casing in which arm said shaft is rotatably mounted, said wringer supporting member being capable of swinging motion around said gear casing, said gear casing being provided near one side with an opening which communicates with the second described horizontal slot in said casing and is of suitable size to permit the passage of a shaft having a beveled gear thereon.

4. In a device of the class described, a gear casing, a horizontal bearing formed thereon for a shaft, a vertical opening in the lower portion thereof, forming a bearing for a vertical shaft, a shaft in said last named opening, a horizontal beveled gear on the upper end of said shaft within said casing, said gear casing being provided with a horizontal slot extending from its outer edge to a point past the vertical opening in said gear casing, a wringer supporting member provided with sockets designed to receive the lower ends of the vertical members of a wringer, said wringer supporting member having formed thereon a horizontal arm received in said horizontal slot in said gear casing and having an opening formed therein in which said vertical shaft is rotatably mounted, said casing and said supporting member being so formed as to permit said supporting member to swing in a horizontal plane on said vertical shaft as a pivot.

5. In a device of the class described, a gear casing, a horizontal bearing formed thereon for a shaft, a vertical opening in the lower portion thereof, forming a bearing for a vertical shaft, a shaft in said last named opening a horizontal beveled gear on the upper end of said shaft within said casing, said gear casing being provided with a lower horizontal slot extending from its outer edge to a point past the vertical opening in said gear casing, a wringer supporting member provided with sockets designed to receive the lower ends of the vertical members of a wringer, said wringer supporting member having formed thereon a horizontal arm received in said horizontal slot in said gear casing and having an opening formed therein in which said vertical shaft is rotatably mounted, said casing and said supporting member being so formed as to permit said supporting member to swing in a horizontal plane on said vertical shaft as a pivot, a gear case covering detachably mounted on said gear casing, said casing and cover being provided with an upper horizontal slot to receive a shaft and with an opening at one end thereof of suitable size and shape to permit a shaft having a beveled gear on the end thereof to be removed from said casing and cover.

[Claim 6 not printed in the Gazette.]

1,222,162. PORTABLE WATER-FILTER. JAMES F. TINLEY, Brooklyn, N. Y. Filed Sept. 28, 1916. Serial No. 122,654. (Cl. 210—17.)



1. A portable filter comprising a reservoir having an outlet and a manually controlled air inlet, a filtering chamber within said reservoir, and a strainer chamber forming a base communicating with said filtering chamber.

2. A portable filter comprising a reservoir having an outlet and a manually controlled air inlet, a check valve in said outlet, a filtering chamber within said reservoir, and a strainer chamber forming a base communicating with said filtering chamber.

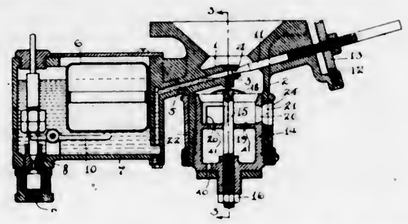
3. A portable filter comprising a reservoir having an outlet and a manually controlled air inlet, a check valve in said outlet, a filterating chamber provided with an outlet near the top of said reservoir and in close proximity to said check valve, and a strainer chamber forming a base communicating with said filtering chamber.

4. A portable filter comprising a reservoir having an outlet and a manually controlled air inlet, a check valve in said outlet, a filtering chamber provided with an outlet near the top of said reservoir and in close proximity to said check valve, and a strainer chamber forming a base communicating with said filtering chamber, said strainer chamber having a perforated top and a drain hole in its bottom.

5. A portable filter comprising a reservoir having removable upper and lower heads, an outlet and a manually controlled air inlet in said upper head having a pipe extended downwardly within the reservoir to a point in close proximity to the lower head, and a filtering chamber secured in said lower head and extending upwardly in said reservoir, said lower head having an opening communicating with said filtering chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,222,163. CARBURETER. JAMES J. TRACY, Cleveland, Ohio. Filed July 28, 1914. Serial No. 853,654. (Cl. 261—40.)



1. In a device of the character described, the combination of a casing having air-inlet openings in its sides; a fuel supply nozzle projecting into said casing from one side at a point beyond such openings having regard to the direction of the flow of air from said openings through said casing, said nozzle being formed with a discharge opening directed oppositely to such direction of air flow; and a needle valve mounted in said casing so as to be reciprocable longitudinally of the same and adapted to control such nozzle opening, said valve being provided just below its point with a flaring head having a convex face directed toward such opening.

2. In a device of the character described, the combination of a casing having air-inlet openings in its sides; a fuel supply nozzle projecting into said casing from one side at a point beyond such openings having regard to the direction of the flow of air from said openings through said casing, said nozzle being formed with a discharge opening directed oppositely to such direction of air flow; a needle valve mounted in said casing so as to be reciprocable longitudinally of the same and adapted to control such nozzle opening, said valve being provided just below its point with a flaring head having a convex face directed toward such opening; and a valve, operable conjointly with said first-named valve, adapted to control such air-inlet openings.

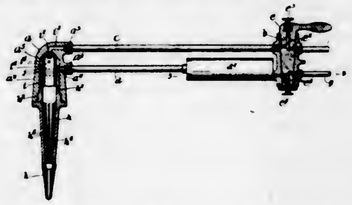
3. In a device of the character described, the combination of a casing having air inlet openings in its sides; a fuel supply nozzle projecting into said casing from one side at a point beyond such openings having regard to the direction of the flow of air from said openings through said casing, said nozzle being formed with a discharge opening directed oppositely to such direction of air flow; a needle valve mounted in said casing so as to be reciprocable longitudinally of the same and adapted to control such nozzle opening, said valve being provided just below its point with a flaring head having a convex face directed toward such opening; and a shell mounted within said casing so as to be movable conjointly with said valve, said shell being adapted to control such air-inlet openings.

4. In a device of the character described, the combination of a casing having air-inlet openings in its sides; a fuel supply nozzle projecting into said casing from one side at a point beyond such openings having regard to the direction of the flow of air from said openings through said casing, said nozzle being formed with a discharge opening directed oppositely to such direction of air flow; a shell in said casing having threaded engagement therewith so as to be reciprocable longitudinally thereof upon being rotated, said shell being adapted to control such air-inlet openings incidentally to such rotation; and a needle valve carried by said shell and adapted to control such nozzle opening, said valve being provided just below its point with a flaring head having a convex face directed toward such opening.

5. In a device of the character described, the combination of a casing having air-inlet openings in its sides; a fuel supply nozzle projecting into said casing from one side at a point beyond such openings having regard to the direction of the flow of air from said openings through said casing, said nozzle being formed with a discharge opening directed oppositely to such direction of air flow; a shell in said casing having threaded engagement therewith so as to be reciprocable longitudinally thereof upon being rotated, said shell being adapted to control such air-inlet openings incidentally to such rotation; and a needle valve adjustably supported by said shell and adapted to control such nozzle opening, said valve being provided just below its point with a flaring head having a convex face directed toward such opening.

[Claims 6 to 13 not printed in the Gazette.]

1,222,164. CONTROLLING-VALVE FOR ACETYLENE CUTTING AND WELDING TORCHES. WALTER W. VON TODENWARTH, Rahway, N. J. Filed July 25, 1916. Serial No. 111,106. (Cl. 158—27.4.)

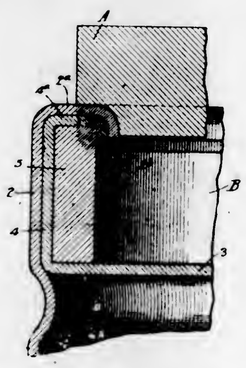


In a device of the class described, a ported valve device and a torch head, acetylene gas and oxygen pipes connected with said valve device, a main key valve rotatably mounted in said valve device and provided with ports or passages which correspond with the ports in said valve device, needle valves adjustably mounted in said main key valve and adapted to control the passage of acetylene gas and oxygen through said ports or passages, and means in said main key valve for permitting the passage of acetylene gas through one of said ports or passages in advance of the passage of oxygen through the other.

1,222,165. METALLIC RECEPTACLE AND METHOD OF WELDING THE SAME. FREDERICK G. WACKER, Chicago, Ill., assignor to Charles H. Wacker, Chicago, Ill. Filed July 26, 1916. Serial No. 111,355. (Cl. 219—4.)

1. A barrel chime construction comprising a barrel body having a rim, a closure or head having a rim fitting within the body rim, a chime ring fitting within the head rim, the latter rim being double flanged with the innermost flange fitting over the top of the chime ring and the outermost flange fitting partly over the inner side thereof, and the body rim being similarly double flanged to fit over the flanges of the head rim, the said outermost flanges and a portion of said innermost flanges of the two rims being electrically welded together by current passed through said flanges, whereby the flanges are brought to a welding heat by resistance.

2. A barrel chime construction comprising a barrel body having a rim, a closure or head having a rim fitting within the body rim, a chime ring fitting within the head rim, the latter rim being double flanged with the innermost flange fitting over the top of the chime ring and the outermost flange fitting partly over the inner side thereof, and the body rim being similarly double flanged to fit over the flanges of the head rim, the outermost flanges and a portion of the innermost flanges of the two rims together with the upper inner edge of the chime ring being electrically welded together by current passed through said flanges and the ring, whereby said parts are brought to a welding heat by resistance.



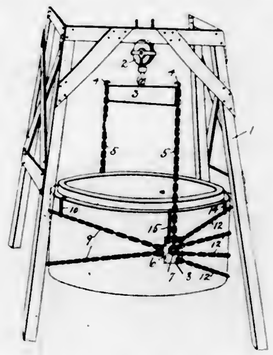
3. The method of electrically welding a chime structure which includes coöperating body and head flanges, said method consisting of applying to such flanges an electric roll having a portion fitting upon and corresponding to the shape of said flanges and applying a second roll to said structure, thereby causing a continuous and successive welding of the flanges in a circular direction.

4. The method of electrically welding a chime structure which includes coöperating body and head flanges, and also includes a reinforcing ring over which said flanges extend, said method consisting of applying to such flanges an electric roll having a portion fitting upon and corresponding to the shape of said flanges, and also applying a second electric roll to said ring, thereby causing a continuous successive welding of the flanges in a circular direction.

5. The method of electrically welding a chime structure which includes coöperating body and head flanges, said method consisting in applying to such flanges with pressure an electric welding tool having a portion corresponding to the final shape of such flanges thereby simultaneously welding and shaping such flanges.

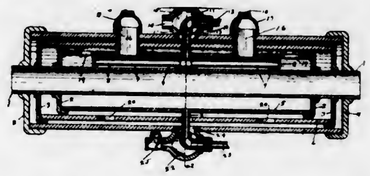
1,222,166. DEVICE FOR HANDLING SEWER-PIPE SECTIONS. FREDERICK H. WEAVER, Baltimore, Md. Filed Oct. 6, 1914. Serial No. 865,252. Renewed Sept. 13, 1916. Serial No. 119,980. (Cl. 57—9.)

In a device for handling sewer pipe sections, the combination of two plates 8 each having a trunnion 7 projecting from one side thereof, a hook 15 pivoted to each plate and adapted to take over the edge of the pipe section, two chains 9 connecting said plates, a hook 10 secured to the upper one of said chains and adapted to take over the edge of the pipe section, a number of chains 11 each having one end connected to one of said plates and their free ends provided with hooks, a number of chains 12 each having one end connected to the other plate, a hoop 14 on the chains 12 adapted to take over the edge of the pipe section to hold it in position thereon, a beam 3, and two chains 5 suspended from said beam and each having a ring 6 on its



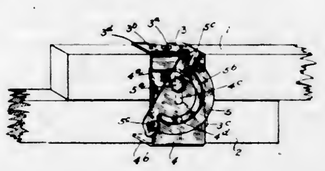
lower end adapted to take over the trunnions on said plates.

1,222,167. GAS-GENERATOR. THEODORE T. WEBER, Columbus, Ohio, assignor to The Ohio Gas Generator & Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed July 20, 1914. Serial No. 851,847. (Cl. 48—107.)



A gas generator comprising a central pipe, a plurality of end plates of different diameters on opposite ends of said pipe, a plurality of cylinders of different diameters connecting said end plates to form a plurality of chambers, a connection for feeding hydrocarbon to the innermost chamber formed, a connection for also supplying air to said chamber, said innermost chamber being adapted to be heated, and connections for withdrawing the gas after circulating it around the remainder of the chambers and mixing an additional supply of air therewith.

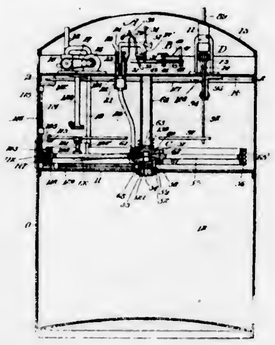
1,222,168. MEASURING DEVICE. CHARLES WILDER, East San Diego, Cal., assignor of one-half to George W. Thompson, San Diego, Cal. Filed Jan. 25, 1915. Serial No. 4,164. (Cl. 33—143.)



In a device of the class described, the combination of an L shaped piece provided with a slot therein and a circular lug projecting therefrom, another L shaped metallic piece slidable relatively thereto by means of a rivet engaging said slot and means for sliding and holding these two

pieces relatively to each other comprising a metallic piece provided with a semi-circular slot therein adapted to fit over said circular lug and to slide thereon, pivotally and irremovably mounted on said rivet eccentrically to said slot.

1,222,169. COIN-CONTROLLED APPARATUS FOR INFLATING TIRES. ELBERT R. WINSLOW, Kearney, Nebr. Filed Mar. 31, 1916. Serial No. 88,004. (Cl. 194—3.)



1. In an apparatus of the character described, a casing, an air storage chamber in the casing, a wheel rotatably mounted in the casing above said chamber, a flexible tube connected to the wheel and having valved communication with said storage chamber, a door for the casing, and a coin controlled locking means operable upon the insertion into the casing of a coin of the proper denomination to open said door and to operate the valved communication between the flexible tube and said chamber.

2. In an apparatus of the character described, a casing, an air storage chamber in the casing, a wheel rotatably mounted in the casing above said chamber, a flexible tube connected to the wheel and having valved communication with said storage chamber, a door for the casing, and a coin controlled locking means operable upon the insertion into the casing of a coin of the proper denomination to open said door and to operate the valved communication between the flexible tube and said chamber, a pull on the tube rotating the wheel and thereby permitting withdrawal of the tube from the casing through the door opening.

3. In an apparatus of the character described, a casing, an air storage chamber in the casing, a wheel rotatably mounted in the casing, a flexible tube connected to the wheel and having valved communication with said storage chamber, a door for the casing, a coin controlled means operable upon the insertion into the casing of a coin of the proper denomination to open said door and to operate the valved communication between the flexible tube and said chamber, a pull on the tube rotating said wheel and permitting withdrawal of the tube from the casing through the door opening, and means for rotating the wheel in the reverse direction upon the release of said tube to draw the tube into the casing and onto the wheel through the door opening.

4. In an apparatus of the character described, an air storage chamber in the casing, a wheel rotatably mounted in the casing, a flexible tube connected to the wheel and having valved communication with said storage chamber, a door for the casing, means for locking said door in closed position, and means operable to open said valve and to unlock the door and to swing the same to open position, a pull on the tube rotating said wheel and permitting the tube to be withdrawn from the casing through the door opening.

5. In an apparatus of the character described, an air storage chamber in the casing, a wheel rotatably mounted in the casing, a flexible tube connected to the wheel and having valved communication with said storage chamber, a door for the casing, means for locking said door in closed position, means operable to open said valve and to unlock the door and to swing the same to open position, a pull on the tube rotating said wheel and permitting the tube to be withdrawn from the casing through the door opening, means to rotate the wheel in the opposite direction upon release of said tube and thereby draw the tube into the casing onto the wheel through said door opening.

[Claims 6 to 32 not printed in the Gazette.]

1,222,170. REFRIGERATING APPARATUS. FRED W. WOLF, Chicago, Ill., assignor, by mesne assignments, to Isko, Incorporated, Detroit, Mich., a Corporation of Michigan. Filed May 9, 1914, Serial No. 837,500. Renewed June 9, 1916. Serial No. 102,804. (Cl. 62—116.)



1. A refrigerating unit adapted to be applied to a refrigerator box having an opening in one wall thereof, comprising a base adapted to bear against the said wall of the refrigerator box and to close the opening therein, a compressor, a motor for driving the same and a condenser, all supported on said base, an expansion coil extending from said base and adapted to be inserted through the said opening in the wall of the refrigerator box, means connecting said expansion coil in supporting relation to said base, and conduits extending through said base and operatively connecting said condenser and said compressor with said expansion coil.

2. A refrigerating unit adapted to be applied to a refrigerator box having an opening through the top wall thereof, comprising a base adapted to bear against said top wall of the refrigerator box and to close the opening therethrough, a compressor, a motor for driving the same, and an air cooled condensing coil, all supported on said base, an expansion coil depending from said base and adapted to be inserted through the said opening in the top wall of said refrigerator box, means connecting said expansion coil in supporting relation to said base, and conduits extending through said base and operatively connecting said condensing coil and said compressor with said expansion coil.

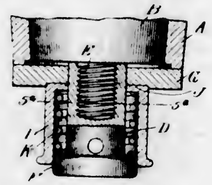
3. A refrigerating unit adapted to be supported on the top of a refrigerator box having an opening therethrough, comprising a base, adapted to rest on the top wall of said refrigerator box and to close the opening therein, and an insulation pad fixed to the bottom of said base adapted to engage the top wall of said box and to effectually seal said opening, a compressor, an electric motor for driving said compressor, and an air cooled condensing coil, all arising from and attached to said base, an expansion coil depending from and supported by said base, said expansion coil being adapted to be inserted through the opening in the top wall of said refrigerator box, and conduits extending through said base and operatively connecting said condensing coil and said compressor with said expansion coil.

4. A refrigerating unit adapted to be supported on the top of a refrigerator box having an opening therethrough, comprising a base, adapted to rest on the top wall of said refrigerator box and to close the opening therein, a compressor, an electric motor for driving said compressor, an expansion coil depending from and supported by said base, said coil being arranged in a series of nests of pipes, a plurality of vertically arranged bars attached to and depending from said base, said bars engaging each of said series of nests of pipes, means for attaching the expansion coil to said bars, said expansion coil and bars being adapted to be inserted through the said opening in the top of said refrigerator box, and conduits extending through said box and connecting said condenser coil and said compressor with said expansion coil.

5. A refrigerating unit adapted to be applied to and removed bodily from a refrigerator, comprising a base, a compressor and a motor mounted thereon and arranged in driving connection, an expansion coil suspended beneath the base and connected through the base with said compressor, and a condensing coil supported on the base and connected with the compressor and through the base with the expansion coil.

[Claims 6 to 16 not printed in the Gazette.]

1,222,171. TURNING PLUG. CHARLES F. WRAY, Rochester, N. Y., assignor to National Brass Manufacturing Co., Rochester, N. Y., a Corporation of New York. Filed Feb. 16, 1914. Serial No. 819,131. (Cl. 137—7.)



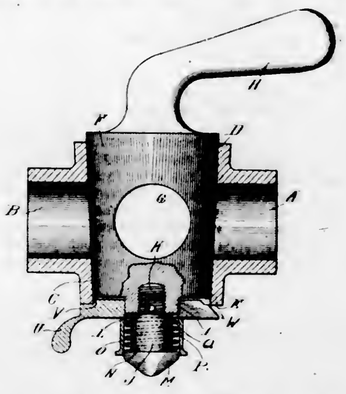
1. The combination with a valve body, of a rotary plug having a reduced lower end, a removable locking disk slotted to engage said reduced end of the plug and adapted to be positioned against the valve body, said disk being recessed on its under surface, and a collar yieldably supported on said reduced end of the plug and adapted to engage the recessed portion of the locking disk.

2. The combination with a valve body, of a rotary plug having a reduced lower end, a removable locking disk slotted to engage said reduced end of the plug and adapted to be positioned adjacent to the valve body, said disk being recessed on its under surface, a shoulder on the end of the reduced portion of the plug, a collar arranged on the plug above said shoulder and having an interiorly disposed flange near its top, a spring positioned between said shoulder on the plug and the flange on the collar, a cam surface formed on the upper face of said flange, and a projection on the plug adapted to engage said cam surface.

3. The combination with a valve body, of a rotary plug, a locking plate having a slot extending from its edge for engagement with the plug and removably disposed against the valve body and between it and one end of the plug, a collar movably mounted on the plug having engagement with said locking plate, and a spring surrounding the plug in engagement with and actuating said collar.

1,222,172. TURNING PLUG. CHARLES F. WRAY, Rochester, N. Y., assignor to National Brass Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 18, 1914. Serial No. 877,845. (Cl. 137—7.)

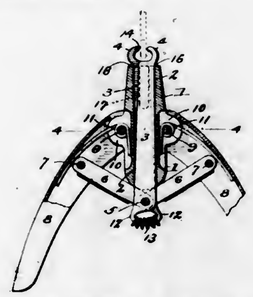
1. The combination with a valve body, of a rotary plug having a reduced lower end, a removable locking member slotted to engage said reduced end of the plug and adapted to be positioned against the valve body, said locking member being recessed on its upper surface to engage the valve body, a shoulder at the end of the reduced portion of the plug, a follower arranged on the plug above said shoulder and having an inwardly directed flange at its top, and a spring positioned between said shoulder on the plug and the flange on the follower.



2. The combination with a valve body, of a rotary plug, a locking member slotted to engage the plug, said locking member being disposed between the valve body and the lower end of the plug and provided with a handle or projection whereby it can be positioned or removed, a follower arranged on the plug and engaging said locking member, and a spring coöperating with the follower.

3. The combination with a valve body, of a rotary plug, a locking member slotted to engage the plug, said locking member being disposed between the valve body and the lower end of the plug and provided with a handle or projection whereby it can be positioned or removed, a follower arranged on the plug and engaging said locking member, and a spring coöperating with the follower, the follower embodying a housing for the spring.

1,222,173. COTTER-PIN EXTRACTOR. JOHN A. ANDERSON, Bridgeport, Conn., assignor of one-half to Orville Morton, Bridgeport, Conn. Filed Sept. 19, 1916. Serial No. 120,936. (Cl. 81—1.)



1. A cotter pin extractor, comprising a head having a channey-way and a recess formed therein, said recess being adapted to receive the eye of a cotter pin, extracting arms slidably retained in said head having their outer ends terminating in cam surfaces adapted to engage the sides of said channel-way, handle members pivotally connected to said head and to the inner ends of said arms, springs engaging said handle members and springs engag-

ing said extracting arms for holding them in a normally open position.

2. A cotter pin extractor comprising a head having a longitudinal opening or channel-way formed therein, extracting arms slidably retained in said opening or channel-way having their outer ends terminating in jaws, the outer faces of said jaws providing cam surfaces, and operating handles pivotally connected to said head and operatively connected to said arms, whereby, as the handle members of the extractor are forced toward each other, the said jaws will be caused to enter the eye of the cotter pin and thereafter to exert a pulling or extracting movement upon the cotter pin.

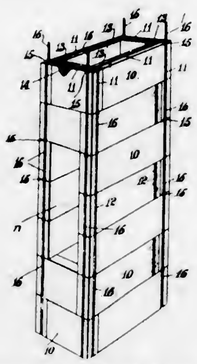
3. A cotter pin extractor, comprising a head having a longitudinally arranged opening or channel-way formed therein and slots opening through the outer end of said longitudinal opening or channel-way, arms slidably retained in said opening or channel-way having their outer ends terminating in jaws, the outer faces of said jaws providing cam surfaces, operating handles pivotally connected to said head and operatively connected to said arms, and means associated with the inner ends of said arms for holding the outer ends thereof in an open position when the handle members of the extractor are in an open or extended position.

4. A cotter pin extractor, comprising a head having a longitudinal opening or channel-way formed therein, extracting arms slidably retained in said opening or channel-way having their outer ends terminating in jaws, the outer faces of said jaws providing cam surfaces adapted for engagement with the outer edges of the opening or channel-way of the head, whereby to contract the said jaws and cause them to engage the eye of a cotter pin and thereafter to withdraw the cotten pin as the arms are drawn into said head, and handle members operatively connected to the inner ends of said arms, as and for the purpose specified.

5. A cotter pin extractor, comprising a head having a longitudinal channel-way and provided with recesses in its upper and lower surfaces, said recesses adapted to receive the eye of a cotter pin, extracting arms movably retained in said head having their outer ends terminating in gripping jaws, the outer surfaces of said jaws being curved to provide cam surfaces adapted to engage the walls of said channel-way whereby to close the said gripping jaws when the extracting arms are drawn into said head, handle members operatively connected to said head and to the inner ends of said extracting arms, and independent springs for normally holding said arms and said handle members in a normally open position.

[Claims 6 to 10 not printed in the Gazette.]

1,222,174. BUILDING CONSTRUCTION. CHARLES R. BALLNER, Jamaica, N. Y. Filed July 16, 1914. Serial No. 851,267. (Cl. 72—16.)



1. A structure for shafts, walls and the like, embodying therein blocks each having grooved edges and a grooved face and means for uniting said blocks, said means comprising an anchor having a shank portion lying in one of the grooved edges, a spike portion entering said grooved edge, and a loop portion registering with one of the grooves in the face of the block, and a separate dowel passing through each loop portion and lying in the groove in the face of the block, whereby one dowel is adapted to bridge and bond two adjacent blocks.

2. A structure for shafts, walls and the like, embodying therein blocks laid in courses, each of said blocks being rectangular in shape and having grooved edges and a grooved face, an anchor having a sharp end and a straight shank lying in the edge groove of one block and a loop at the other end of the anchor registering with the face groove in an adjacent block, and a separate dowel passing through each loop and having one half its length in the face groove of one block and the other half of its length in the corresponding face groove of an adjacent block.

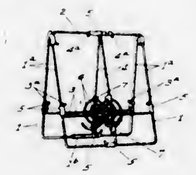
3. A structure for shafts, walls and the like, embodying therein blocks laid in courses, each of said blocks having grooves in its edges and a groove in the face of the block near one end thereof, the face groove in one block being alined with the edge groove in an adjacent block, anchors between adjacent blocks, each anchor having a straight shank lying in an edge groove of one block and a loop registering with the alined grooves of two adjacent blocks, and a separate dowel passing through each loop and lying partly in the face groove of one of the two adjacent blocks, and partly in the edge groove of the other adjacent block.

4. A dumbwaiter shaft of substantially rectangular configuration, embodying a series of blocks laid in courses, each block having grooved edges and a groove in the face of the block near one end thereof, anchors uniting said blocks and courses to each other, certain of said anchors extending at right angles to each other and each thereof comprising a straight shank portion fitting snugly in the edge groove of one block and a loop portion registering with two alined grooves of adjacent blocks, said loop portions being adjacent the corners of the shaft and in position at right angles to each other, and separate dowels passing through said loops and bridging the joints of adjacent blocks.

5. A dumbwaiter shaft embodying therein a series of courses of blocks each of which has a grooved edge and grooves in one face thereof, said face grooves being adjacent the ends of the block, certain of said courses being bonded or breaking joints whereby the edge groove of one block will aline with a face groove of one adjacent block, anchors for said blocks, each of said anchors including a loop registering with said alined edge and face grooves, and a separate dowel passing through each loop and bridging the joint between adjacent blocks.

[Claims 6 and 7 not printed in the Gazette.]

1,222,175. AUXILIARY SEAT-BACK. MAYO A. BOBRICK, Cleveland, Ohio. Filed Apr. 28, 1916. Serial No. 94,112. (Cl. 155—25.)



1. In an auxiliary seat-back, a rectangular frame bent upon itself intermediate its ends forming relatively movable base supporting loops and upwardly converging sides, and reinforcing spring connected members interposed between said loops.

2. In an auxiliary seat-back, a frame comprising a single length of wire forming V-shaped connected sides terminating in base supporting loops, cross wires arranged within said loops, and a coiled spring interposed between and connected to the intersecting portions of said cross wires.

3. An auxiliary seat-back, comprising a single length of wire bent upon itself forming V-shaped sides terminating in base supporting loops, cross wires arranged within and connected to the base portions of the latter, a coiled spring interposed between and connected to the intersecting portions of said cross wires to cushion said base supporting loops.

1,222,176. TATTING-SHUTTLE. JAMES H. BOYE, Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 10, 1915. Serial No. 60,742. (Cl. 66—10.)



1. A tatting shuttle comprising a pair of bows, a link pivotally connected therewith and provided with a laterally projecting trunnion at its free end, and a spool demountably carried by said trunnion.

2. A tatting shuttle comprising a pair of bows, a link pivotally connected therewith and provided with a laterally projecting, expanding trunnion, and a spool demountably carried by said trunnion.

3. A tatting shuttle comprising a pair of resilient bows having their end portions connected, a link pivotally connected therewith and adapted to be sheathed between the bows, said link provided at its free end with a laterally projecting trunnion adapted to be held between said bows by the resilience of the bows, and a spool mounted on said trunnion.

4. A tatting shuttle comprising a pair of resilient bows, one of which is provided with a spool-centering device, a link pivotally connected with one of the bows and provided with a laterally projecting trunnion, and a spool carried by said trunnion.

5. A tatting shuttle comprising a pair of resilient bows, having connected extremities, one of the said bows being provided with a spool-centering device, a link pivotally connected with one of said bows, and equipped with a laterally projecting trunnion, and with a thumb-piece, and a spool mounted on said trunnion.

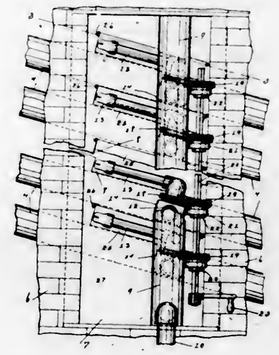
[Claim 6 not printed in the Gazette.]

1,222,177. SOOT-EJECTOR FOR STEAM-BOILERS. WILLIAM J. BRADLEY, Troy, N. Y., assignor to Monarch Steam Blower Company, Troy, N. Y., a Corporation. Filed Feb. 7, 1912. Serial No. 675,963. (Cl. 122—392.)

1. In a soot-ejector, and in combination, a vertical supply-pipe having an offset; a nozzle having an offset rotatively mounted upon said offset on the supply-pipe, said nozzle having an inclined axis of rotation; and means for rotatively moving said nozzle.

2. In a soot-ejector, and in combination, a vertical supply-pipe having an offset; a nozzle having an offset rotatively mounted upon said offset on the supply-pipe; and nozzle-rotating mechanism also mounted upon said offset on the supply-pipe.

3. In a soot-ejector, and in combination, a vertical supply-pipe; a plurality of nozzles rotatively mounted in connection with said supply-pipe, said nozzles having inclined axes of rotation; and means whereby said nozzles are rotatively moved upon their respective inclined axes.

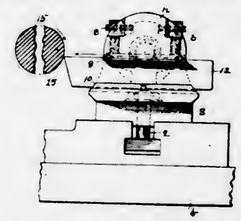


4. In a soot-ejector, and in combination, a vertical supply-pipe; a plurality of offsets therefrom; a plurality of nozzles having offsets rotatively mounted upon the respective offsets on the supply-pipe, said nozzles having inclined axes of rotation; and means mounted upon the respective offsets on the supply-pipe for rotating the respective nozzles.

5. In a soot-ejector, and in combination, a vertical supply-pipe; a plurality of offsets therefrom; a plurality of nozzles having offsets rotatively mounted upon the respective offsets on the supply-pipe, said nozzles having inclined axes of rotation; a vertical shaft mounted in bearings upon offsets on the supply-pipe; and intermeshing beveled gears on said shaft and on the respective nozzle-offsets.

[Claims 6 to 21 not printed in the Gazette.]

1,222,178. TOOL-HOLDER FOR AUTOMATIC MACHINES. BENJAMIN T. BROWAND, Cleveland, Ohio. Filed July 14, 1916. Serial No. 109,252. (Cl. 82—36.)



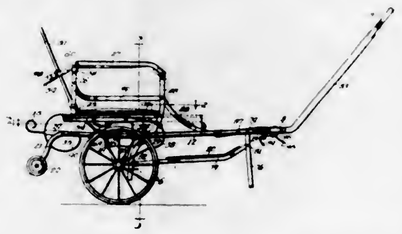
1. A tool holder for automatic machines having opposite bearings to engage a tool therein and a support in which said holder is adapted to be rotarily inverted, the said bearings being off the center of rotation, whereby the tool can be inverted on opposite sides of the stock to be cut.

2. A tool holding mechanism as described, comprising a substantially right angled support having an annular seat in its vertical portion and a holder having a hub at its side rotatably clamped in said seat and provided with opposite side bearings and shouldered projections between said bearings, and set screws through the top of said support adapted to engage one of said projections on opposite sides and rigidly engage the holder in said support.

3. In tool holders for automatic machines, a support having an upright portion having an annular seat, a tool holder having a hub at one side of the center thereof and provided with opposite bearings and opposite rib like pro-

jections between said bearings, and set screws oppositely through the wall of said support adapted to engage both sides of one or the other of said projections and lock said holder against rotation, and means through said support engaged centrally in said hub to secure the hub in place.

1,222,179. CHILD'S COLLAPSIBLE SULKY. REINHARDT H. BROWN, Laporte, Ind. Filed Jan. 3, 1916. Serial No. 69,792. (Cl. 21—83.)



1. In a child's collapsible vehicle, the combination with a main frame, of a pair of collapsible wheel frames pivoted thereto, wheels journaled on said wheel frames, a folding hand lever fulcrumed on the main frame, connections between the wheel frames and hand lever for erecting the former as the latter is swung to its open position, and springs for automatically collapsing the wheel frames when the hand lever has been folded and the wheels are raised from the ground.

2. In a child's collapsible vehicle, the combination with a main frame, of a pair of collapsible wheel frames pivoted thereto, wheels journaled on said wheel frames, a pair of side frames pivoted above the wheel frames, a folding hand lever fulcrumed on the main frame, connections between the wheel frames, side frames and hand lever for erecting said frames as the lever is swung to its open position, and springs for automatically collapsing the wheel frames when the hand lever has been folded and the wheels are raised from the ground.

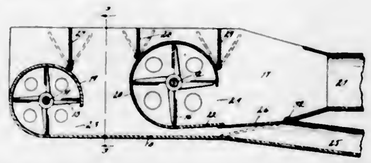
3. In a child's collapsible vehicle, the combination with a main frame, of a pair of collapsible wheel frames pivoted thereto, wheels journaled on said wheel frames, a standard fulcrumed beneath the forward end of the main frame, a folding hand lever fulcrumed on the main frame, connections between the wheel frames, the standard and hand lever for erecting the wheel frames and standard as the lever is swung to its open position, and springs for automatically collapsing the wheel frames when the hand lever has been folded and the wheels are raised from the ground.

4. In a child's collapsible vehicle, the combination with a main frame, of a pair of collapsible wheel frames pivoted thereto, wheels journaled on said wheel frames, a foot rest pivotally supported beneath the forward end of the main frame, a folding hand lever fulcrumed on the main frame, connections between the wheel frames, the foot rest and hand lever for erecting the wheel frames and foot rest as the lever is swung to its open position, and springs for automatically collapsing the wheel frames when the hand lever has been folded and the wheels are raised from the ground.

5. In a child's collapsible vehicle, the combination with a main frame, of a pair of collapsible wheel frames pivoted thereto, wheels journaled on said wheel frames, a back rest pivoted above the rear of the wheel frames, a folding hand lever fulcrumed on the main frame, connections between the wheel frames, back rest and hand lever for erecting the wheel frames and back rest as the lever is swung to its open position, and springs for automatically collapsing the wheel frames when the hand lever has been folded and the wheels are raised from the ground.

[Claims 6 to 30 not printed in the Gazette.]

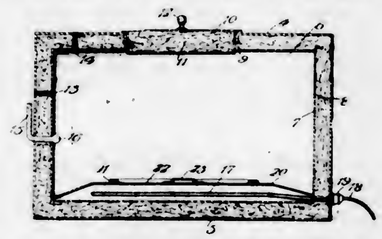
1,222,180. PNEUMATIC STACKER MECHANISM. WILLIAM S. BERTON, Ames, Iowa. Filed Mar. 7, 1916. Serial No. 82,768. (Cl. 193—21.)



1. A stacker device comprising a receptacle, a fan casing in one end thereof, open toward the other end thereof, a second fan casing spaced from the first fan casing and from the bottom of said receptacle, and open on its side away from the first casing, said casing being spaced from the top of said receptacle, fans in said casings, pivoted members extending upwardly from said casings, adapted to form partitions in a variety of positions, said receptacle forming chaff and straw compartments on opposite sides of said second casing, with a passage beneath said second casing connecting said compartments, a discharge pipe leading from the straw compartment, a discharge pipe leading from said passage, and a swinging closure device designed in one position to shut off communication between said passage and said straw compartment and in another position to shut off communication between said passage and said second discharge pipe.

2. In a device of the class described, a casing, a fan casing therein spaced from the bottom of said first casing, a second fan casing therein spaced from said first fan casing, a partition member extending upwardly from said first fan casing within said first casing for dividing said first casing into two compartments on opposite sides of the first fan casing, said fan casings, being arranged with discharge openings in their lower portions for discharging air into the lower parts of the respective compartments, a discharge pipe leading from the compartment farthest from said second fan casing, discharge openings in said last mentioned compartment, a movable closure device adapted in one position to close one of said last openings, said movable closure device being adapted when in such position to shut off communication between said compartments, and to permit egress from the compartment containing the second fan casing, and fans in said casings.

1,222,181. ELECTRICALLY-HEATED FIRELESS COOKER. CARLYLE B. CARMAN, Saltsville, Ohio. Filed July 20, 1916. Serial No. 110,322. (Cl. 219—35.)

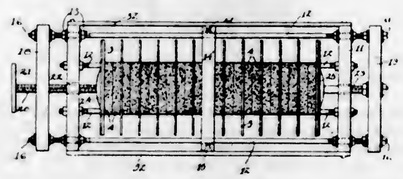


1. A fireless cooker of the class described including a substantially rectangular shaped body, a flooring correspondingly shaped to the bottom of said body and adapted to be position thereon, said flooring having a raised central portion with an opening therein, an electrically controlled heating unit placed beneath said raised portion of the flooring, and a closure for the opening in the flooring whereby articles to be cooked may be placed directly on the heating unit, or positioned above the same.

2. The combination with a fireless cooker including a substantially rectangular shaped body having a double wall

construction with a heat retaining filler placed therebetween, excessive heat outlet means associated with said body, said body having an opening in its top wall, a removable closure for the same, of an electrically controlled heating unit arranged on the bottom inner wall of said body, a current supply means therefor, a flooring on said body having a central raised portion disposed over the heating unit, and a removable closure in said raised portion disposed in alinement with the opening in the top of the body.

1,222,182. COMPRESSION-RHEOSTAT. EMERSON L. CLARK, Lakewood, Ohio, assignor to National Carbon Company, a Corporation of New Jersey. Original application filed May 31, 1912, Serial No. 700,558. Divided and this application filed May 19, 1915. Serial No. 29,051. (Cl. 219—51.)



1. A resistor element consisting of a metallic radiating plate and a block of carbon adjacent to the surface of the plate and fastened eccentrically thereto.

2. In electric rheostats, a radiating plate having punched lugs extending from both sides thereof and a resistance block held in place on each side of said plate by said lugs.

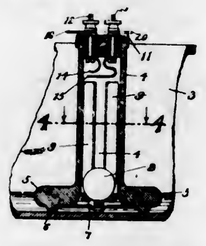
3. In electric rheostats, a radiating plate having punched lugs and a block of resistance material retained in place by said lugs.

4. In electric rheostats, a radiating plate consisting of iron, a coating of difficultly oxidizable metal thereon and a block of resistance material rigidly fastened to the plate.

5. In an electric rheostat, the combination of end plates, connecting means joining said plates, resistance blocks, radiating plates rigidly fastened to said blocks, said blocks and plates resting and pivoting on certain of said means and means for forcing the blocks into contact.

[Claims 6 to 9 not printed in the Gazette.]

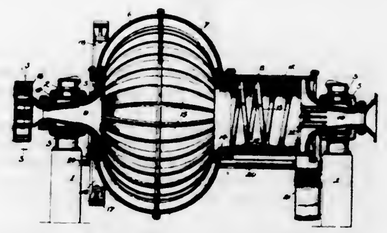
1,222,183. ALARM DEVICE FOR LIQUID-LEVELS. ADA COHEN, Chelsea, Mass. Filed Sept. 28, 1914. Serial No. 863,931. (Cl. 200—34.)



A gridiron tubular column member having an open end at the top of the same, and a webbed float supported end and an outwardly projected and weighted stabilizing flange at the bottom of the same; a floating and buoyant ball member; and an exposed insulated cap member adapted to fit in the top end of said column member and provided with contact members projecting therefrom, substantially as shown.

1,222,184. GRINDING-MILL. DAVID COLE, Tucson, Ariz. Filed Apr. 28, 1913. Serial No. 764,135. (Cl. 83—9.)

1. In a grinding mill the combination of a rotatable grinding chamber; means for feeding water and material to be ground to the grinding chamber; a water conveying sorting chamber turning with the grinding chamber and in free axial communication therewith, said sorting chamber having a free axial overflow opening above the bottom of said chamber and at a point remote from the grinding chamber for producing an outflowing water current through the sorting chamber to carry ground material from the grinding chamber; and backwardly feeding conveying means in the sorting chamber for conveying back to the grinding chamber material precipitated from said outflowing water current.



2. In a grinding mill the combination of a rotatable grinding chamber; means for feeding water and material to be ground to the grinding chamber; a water conveying sorting chamber turning with the grinding chamber and in free axial communication therewith, said sorting chamber having a free axial overflow opening above the bottom of said chamber and at a point remote from the grinding chamber for producing an outflowing water current through the sorting chamber to carry ground material from the grinding chamber; and a backwardly feeding helical conveying rib on the walls of said sorting chamber for conveying back to the grinding chamber material precipitated from said outflowing water current.

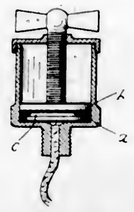
3. In a grinding mill the combination of a member rotatable on a substantially horizontal axis and provided with a grinding chamber and a communicating water conveying sorting chamber of less diameter arranged in axial alinement, and further provided with an axial overflow discharge opening leading from said sorting chamber at a point remote from the grinding chamber and above the bottom of the sorting chamber; and means for feeding to said grinding chamber water and material to be ground.

4. In a grinding mill the combination of a rotatable member provided with a grinding chamber, a sorting chamber of less diameter than the grinding chamber and a free overflow discharge opening leading from the sorting chamber at a point remote from the grinding chamber said chambers being in free communication with each other and in substantially horizontal axial alinement; means for feeding water and material to be ground to said grinding chamber; and backwardly feeding conveying means mounted in said sorting chamber and operable by the rotation of said rotatable member for conveying back to said grinding chamber solid material precipitated from said water in its flow through the sorting chamber to said discharge opening.

5. In a grinding mill the combination of a rotatable member provided with a grinding chamber, a sorting chamber of less diameter than the grinding chamber and a free overflow discharge opening leading from the sorting chamber at a point remote from the grinding chamber, said chambers being in free communication with each other and in substantially horizontal axial alinement; means for feeding water and material to be ground to said grinding chamber; and a backwardly feeding helical conveyer member fixedly mounted in said sorting chamber to turn therewith, for conveying back to said grinding chamber solid material precipitated from said water in its flow through the sorting chamber to said discharge opening.

[Claims 6 to 8 not printed in the Gazette.]

1,222,185. GREASE-CUP. LLOYD G. COPEMAN, Flint, Mich. Filed Aug. 24, 1916. Serial No. 116,709. (Cl. 184—38.)

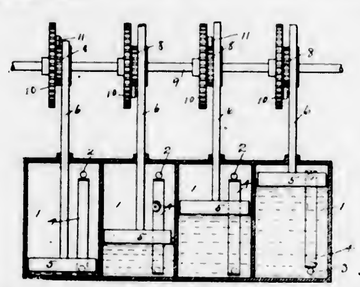


1. The combination of a grease cup having a plunger, and means on the plunger for picking up a collapsed grease capsule.

2. A grease cup comprising a barrel, a plunger therein, and means on the inner end of the plunger in the way of a sidewise opening recess into which the grease capsule is forced upon the collapsing thereof so that when the plunger is drawn back the grease capsule follows the same.

3. The combination of a grease cup provided with a barrel, a plunger therein provided with an inner end slightly spaced from the walls of the barrel and provided with an annular recess between the lower and the upper end, the same operating to support the outer end of the collapsed grease capsule for drawing the same out of the barrel with the plunger.

1,222,186. POWER MECHANISM. CHARLES L. CULBERT, Baltimore, Md. Filed Sept. 8, 1914. Serial No. 860,516. (Cl. 253—18.)

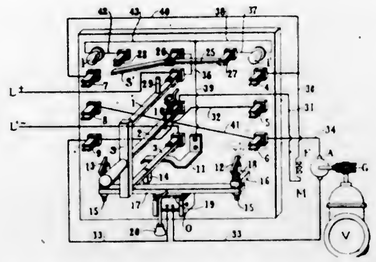


A power mechanism comprising a plurality of tanks each having an inlet and an outlet, an independently-operated float in each of said tanks, a rack connected to each of said floats and projecting through the top of the tanks, a shaft mounted above said tanks, a number of cog-wheels fast on said shaft and each in mesh with one of said racks, a slide valve in each tank having its upper and lower ends bent at right angles and adapted to contact with the floats to open and close the inlet and outlets, whereby two or more of said racks will be operated simultaneously.

1,222,187. CONTROLLER. WILLIAM ROY DAVIS, Springfield, Ill., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 3, 1913. Serial No. 758,569. (Cl. 175—282.)

1. In combination, a circuit controller having a plurality of operative positions and a neutral position and position indicating means for said controller controlled exclusively thereby, said means being responsive, upon the return of said controller to neutral position, to indicate the operative position last occupied thereby.

2. In combination, a circuit controller having a plurality of operative positions and a neutral position, a plurality of electro-responsive position indicating devices for said controller and selective circuit controlling means for said devices controlled exclusively by said controller to indicate, upon the return of said controller to neutral position, the last operative position occupied thereby.



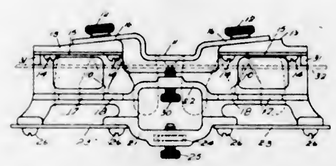
3. In combination, a circuit controller having a plurality of operative positions and a neutral position, electro-responsive position indicating devices for said controller and selective circuit controlling means for said devices controllable by a single movable element of said controller to effect indication by the selective energization of said devices the position last occupied by said controller upon return thereof toward initial position.

4. In combination, a circuit controller having a plurality of operative positions and being biased to a neutral position, means for retaining said controller in its operative positions and automatically releasing the same under certain conditions and means exclusively under the control of said controller to indicate, upon the return thereof to neutral position, the position last occupied thereby.

5. In combination, a circuit controller including a movable part, a plurality of position indicating devices therefor, and means operable by said movable part of said controller to effect selection of said indicating devices upon movement of said controller to its different operative positions and to effect operation of the selected device upon return movement of said controller.

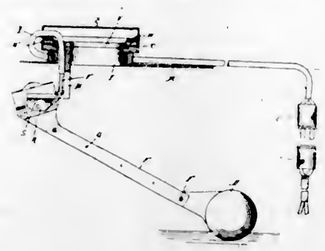
[Claims 6 to 15 not printed in the Gazette.]

1,222,188. CROSSCUT-SAW-TOOTH GAGE. CHRISTIANO C. DE AVILA and ALFRED M. REMINGTON, Fitchburg, Mass., assignors to Simonds Manufacturing Company, Fitchburg, Mass., a Corporation of Massachusetts. Filed Oct. 18, 1916. Serial No. 126,311. (Cl. 76—46.)



A cross-cut saw-tooth gage, consisting of a frame having a depression at the middle portion of its upper edge with flanges at either side thereof, and a saw-tooth bearing plate secured beneath each flange, the upper surfaces of the flanges having the same angle of inclination to the bearing plates and longitudinally thereof, in planes the extensions of which are parallel, a gage plate the ends of which rest upon the inclined surfaces of the flanges and are respectively inclined at the same angle therewith, and an intermediate portion of the gage plate coincident with the depression in the frame and which is parallel with the said bearing plates and is provided with a longitudinal slot through which the raking teeth may protrude, to gage the amount to be removed therefrom when the gage is used.

1,222,189. FLOAT-CONTROLLED ELECTRIC INDICATOR. SIMON DEUTSCH, Detroit, Mich. Filed June 3, 1915. Serial No. 32,006. (Cl. 200—34.)



1. The combination with a liquid fuel tank provided with a fill aperture, of a float-controlled electric indicator assembly for attachment to said tank, comprising a pivotal float arm, a mounting therefor within and to one side of the fill aperture, a sealed electric switch carried by said float arm, and unbroken external electrical connections for said switch.

2. The combination with a liquid fuel tank provided with a fill aperture, of an attachable float-controlled electric indicator therefor, comprising a pivotal float arm insertible through the fill opening of the tank, a bushing for said fill opening, means upon said bushing and to one side of the fill aperture pivotally carrying said float arm, a sealed electric switch mounted on said float arm, and unbroken electrical external connections leading from said switch out through said fill opening.

3. The combination with a liquid fuel tank provided with a fill aperture, of a float-controlled electric indicator assembly, for attachment to said tank, comprising a bushing for engagement with the fill opening, a depending and laterally-extending arm on said bushing and to one side of the fill opening, a float arm pivotally mounted in said depending arm, a float carried by said float arm, a sealed electric switch mounted on said float arm, and unbroken external electrical connections extending from said switch out through said bushing.

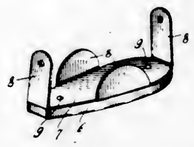
4. The combination with a liquid fuel tank, of an electric indicator assembly attachable thereto, comprising a threaded bushing for engagement with the threaded fill nipple of the tank, an arm depending from said bushing to one side of the fill nipple and extending laterally, a float arm pivotally mounted on the lateral extension of said bushing arm, a float adjustably connected to said float arm, a sealed electric switch mounted on said float arm, unbroken external electrical connections extending from said switch out through said bushing, means permitting a relative rotative movement of said threaded sleeve and bracket arm, locking means for holding said parts from rotation, and a cap for closing the opening in said bushing.

5. The combination with a liquid fuel tank provided with a fill opening, of a float-controlled electric indicator assembly for attachment to said tank, comprising a float mounted within and to one side of said fill opening, an electric switch, external electrical connections for said switch, and means actuated by said float for operating said switch.

[Claims 6 and 7 not printed in the Gazette.]

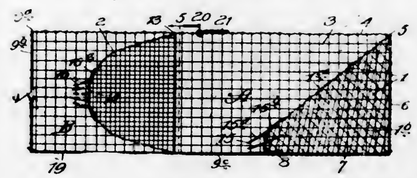
1,222,190. RECOIL-PAD FOR FIREARMS. WILLIAM F. DIMELOW, New York, N. Y. Filed May 10, 1915. Serial No. 27,091. (Cl. 42—74.)

A recoil pad for the butt of firearms comprising a rigid base plate seating against the butt end of the stock, and having marginal gripping members detachably securing the base plate to said end of the stock in contact therewith, said gripping members being located at the ends of the base plate to engage the top and bottom of the stock, and the base plate also having resilient



gripping members at the sides to engage the sides of the stock.

1,222,191. TRAP. JOSEPH H. DODSON, Chicago, Ill. Filed May 6, 1914. Serial No. 836,829. (Cl. 43—24.)



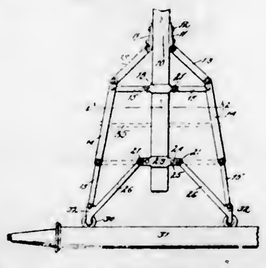
1. A trap comprising a body portion composed of wire fabric, a fabric funnel dividing the same into an ante-chamber and a confining chamber, a rod bent to form a large U-shaped member and a small U-shaped member joined by obliquely extending base-members, the large U-shaped member having joined thereto the front end of the fabric comprising the body of the trap, and a fabric funnel having its rear end connected with the large U-shaped member, the lower edges of its sides connected with the oblique base members and its front portion connected with the small U-shaped member.

2. A trap comprising a front frame member consisting of a large U-shaped member, and a small U-shaped member and oblique base members joining the lower extremities of the arms of said U-shaped members, a frame member comprising a rear U-shaped member having its arms bent to afford longitudinal base members, a wire fabric U-shaped in cross-section having its front end connected to the large U-shaped member of the front frame and having its rear ends connected to the rear end frame member, and having the lower edges of its side members connected to said longitudinal base members, a fabric funnel dividing the trap into an ante-chamber and a confining chamber, a fabric funnel connected with the front frame member, and pointed wire guards secured to the fabric of said last mentioned funnel and to the small U-shaped part of the front frame member.

1,222,192. ADJUSTABLE TONGUE-HOLDER. FRANK J. DULTMEIER, Manning, Iowa. Filed Mar. 13, 1916. Serial No. 83,795. (Cl. 21—36.)

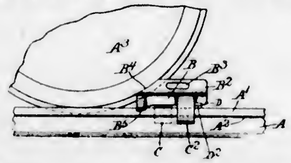
1. The combination of a tongue with a pair of plates secured on opposite sides thereof, spaced forwardly from the rear end of said tongue, links pivoted to said plates and extended rearwardly and outwardly therefrom, channel-bar members pivoted to the rear ends of said links and extending rearwardly said members opening toward the tongue, arms pivoted within said channel members near the forward ends thereof and extending toward the tongue, having at their inner ends forked resilient ends, clamps on the upper and lower side of said tongue having ends extending laterally from the tongue, the ends of the upper and lower clamps receiving between them said forked ends, bolts extended through the ends of the clamps and said forked ends, nuts on said bolts, similar arms pivoted in said channel members, near their rear ends, similar clamp members on the rear end of said tongue, arms having forked resilient ends secured between the projecting

ends of said last described clamps, said last arms extending rearwardly and having at their rear ends spaced ears to receive the rear forked ends of said second arms, said third described arms having at their rear ends parallel downwardly extending members, and locking means for connecting said downwardly extending members on each third described arm.



2. In a device of the class described, the combination of a tongue having an angular rear end with a pair of spaced opposite side members, links pivoted to the forward ends of said side members, and pivoted with relation to the tongue, means for adjustably connecting the forward and rearward ends respectively, of said side members with the tongue, said means including clamps capable of longitudinal adjustment on said tongue, means for connecting said clamps with said side members, one of said clamps comprising an upper clamp member extending transversely across the tongue above the tongue, and a lower clamp member extending transversely across the tongue below the tongue, said clamp members having on their surfaces adjacent to the tongue means for engaging the sides of the tongue, whereby the clamp members will be automatically held in proper position transversely of the tongue when assembled, and adjusted, each clamp member having projecting ends provided with pluralities of openings, divider arms operatively connected with the side members, having forked, spaced, resilient inner ends received between the projecting ends of the clamp members on opposite sides of the tongue, bolts extended through the projecting ends of the clamp members on each side of the tongue and through the forked ends of said divider arms for pivotally connecting said forked ends with said clamp members for permitting adjustment of the clamp members toward and from each other and for adjusting said clamp members according to the size of the tongue, and for gripping the tongue in any position and for permitting the clamp members to be drawn toward each other and pressing said forked ends toward each other in case of shrinkage of the tongue, said bolts being adapted to be selectively placed in different holes in said clamps for securing further adjustment.

1,222,193. RAIL-CLAMP. PIERPONT E. DUTCHER, Milwaukee, Wis., assignor to Bucyrus Company, South Milwaukee, Wis., a Corporation of Wisconsin. Filed June 23, 1916. Serial No. 105,471. (Cl. 104—228.)



1. A rail clamp comprising a body portion adapted normally to overlie and be in parallelism with the head of the rail, and means for holding it in place and for forcing one end thereof into thoroughly continuous contact with the top of the rail, this means comprising clamping hooks adapted to engage the under side of the rail and a wedge adapted to be inserted between the body and the rail on the side of the hook removed from the rail contacting end of the body.

2. A rail clamp comprising a body portion adapted normally to overlie and be in parallelism with the head of the rail, a rail head contacting member projecting downwardly therefrom and adapted to make a smooth continuous contact with the upper surface of the rail and means for holding the clamp in position with the rail contacting members firmly clamped against the upper surface of the rail, said means comprising a series of rail engaging hooks and a wedge adapted to be thrust between the body of the clamp and the rail at a point removed from the contacting member.

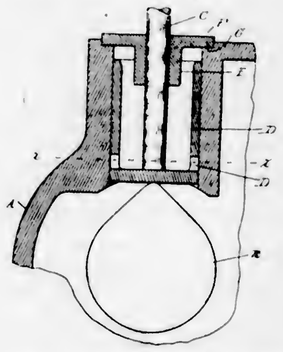
3. A rail clamp comprising a body portion adapted normally to overlie and be in parallelism with the head of the rail, a rail head contacting member projecting downwardly therefrom and adapted to make a smooth continuous contact with the upper surface of the rail, means comprising a lug extending downwardly from such contacting member to engage one side of the rail and comprising hooks engaging the bottom and sides of the head of the rail for clamping the clamp body in position on the rail.

4. A rail clamp comprising a body portion adapted normally to overlie and be in parallelism with the head of the rail, the hooks projecting downwardly from either side thereof and having inclined upper surfaces adapted to engage the lower side of the head of the rail, one of said hooks being adapted to fit snugly and closely on the rail and having its inclined surface of substantially the same inclination as the under surface of the rail, the other having its upwardly inclined surface more sharply inclined than the under surface of the rail.

5. A rail clamp comprising a body portion adapted normally to overlie and be in parallelism with the head of the rail, the hooks projecting downwardly from either side thereof and having inclined upper surfaces adapted to engage the lower side of the head of the rail, one of said hooks being adapted to fit snugly and closely on the rail and having its inclined surface of substantially the same inclination as the under surface of the rail, the other having its upwardly inclined surface more sharply inclined than the under surface of the rail, and means for raising the clamp upwardly away from the rail to bring said hooks into firm and rigid engagement with the under side of the rail.

[Claims 6 to 13 not printed in the Gazette.]

1,222,194. VALVE-ACTUATING MECHANISM. OWEN M. NACKER, Detroit, Mich., assignor of one-half to Alanson P. Brush, Detroit, Mich. Filed June 19, 1916. Serial No. 104,533. (Cl. 121—97.)



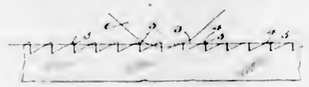
1. In an engine, the combination with a casing and a cam therein, of a valve rod actuated by said cam passing through an enlarged bore in said casing, a cup member slidably engaging said bore and having its bottom portion forming an enlarged bearing for the cam and a seat for said rod, and a detachable cap for the upper end of said bore constituting a bearing for said rod.

2. In an engine, the combination with a casing, of a cam therein, a valve rod actuated by said cam, extending through an enlarged bore in said casing, a cup member slidably engaging said bore and the bottom forming an enlarged bearing for the cam, said rod projecting downward within said cup and resting centrally upon said bottom, a detachable cap for closing the upper end of said bore, and a bearing for said rod integral with said cap and projecting downward within said cup.

3. In an engine, the combination with a casing, of a cam therein, a valve rod actuated by said cam passing through an enlarged cylindrical bore in said casing, a cup member having cylindrical walls slidably engaging said bore and the bottom forming an enlarged bearing for said cam, said cup being provided with a drain aperture exposed beneath said bore in the depressed position of the cup, and a cap for said bore having a depending portion within said cup forming a bearing for said rod.

4. In an engine, the combination with a casing and a cam-shaft therein, of a valve-actuating member in the form of a cup slidably engaging an aperture in said casing and operatively engaging said cam-shaft, said cup having a laterally-opening drain aperture, uncovered in its downward position of adjustment and sealed by said casing in its upward position of adjustment.

1,222,195. PROCESS FOR RESHARPENING SAW-BLADES. WILLIAM M. FOGLE, Dansville, N. Y. Filed May 31, 1916. Serial No. 100,757. (Cl. 76—25.)



1. The method of resharpening the teeth of used saw blades which consists in first cutting away portions of all of the teeth to be sharpened, and then cutting away portions of alternate of the teeth.

2. The method of resharpening the teeth of used saw blades which consists in first removing portions of all of the teeth, and then cutting away portions of each individual tooth to be sharpened.

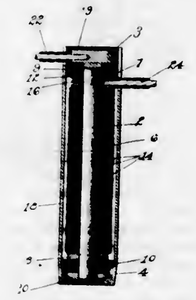
3. The method of resharpening the substantially triangularly shaped teeth of used saw blades which consists in cutting away portions of the angular edges of the teeth to be sharpened.

4. The method of resharpening the teeth of used saw blades which consists in cutting away portions of alternate of the teeth, and simultaneously reducing the height of the teeth between the alternately cut away teeth.

1,222,196. ELECTRICAL HEATING RESISTANCE. FREDERICK M. FURBER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 16, 1914. Serial No. 832,268. (Cl. 219—67.)

1. In a resistance unit, the combination of an insulating body, a rod supporting said insulating body over substantially its entire length, a conducting collar mounted on the rod at each end of the insulating body, a tenuous resistance wire wound on the body and fastened to said collar without substantial bending, an insulating member having a substantially greater cross sectional area than said body mounted on each end of the rod outside the collar, and a member having a bore making a close fit with said insulating members, enveloping said insulating members, collars and body, the collars and body being supported by said insulating members out of contact with said last named member.

2. In a resistance unit, the combination of a rod, an insulating body through which said rod extends, a member of insulating material mounted on said rod at each end of said body, heads on said rod near opposite ends of the unit to secure said body and members on the rod, a resistance wire wound on said body, a shell inclosing said body and extending at each end of the unit beyond the heads of said rod, said members being constructed to support said shell out of contact with the resistance wire on said body, and an insulating filling in each end of said shell covering said heads.



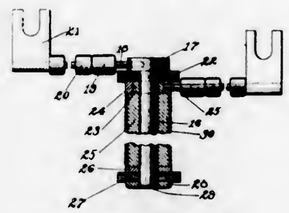
3. In a resistance unit, the combination of a rod, an insulating body on said rod, a metallic collar on said rod at each end of said body, heads on opposite ends of said rod, an insulating member mounted between each of said heads and the adjacent conducting collar, said heads serving to hold said body, collars and insulating members compressed tightly together, a resistance wire wound on said body and having its opposite ends connected, respectively, to said metallic collars, terminals for said wire electrically connected, respectively, with said collars, and a metallic outer shell for said unit mounted on said insulating members and extending at each end of the unit beyond the heads of said rod, said shell being supported by said members out of contact with said wire.

4. In a resistance unit, the combination of a rod, a cylindrical insulating body encircling said rod and supported thereby, a resistance wire wound on said body, a conducting collar on said rod at each end of said body, said collars being connected, respectively, to the opposite ends of said resistance wire, one of said collars being in electrical connection with said rod and the other being electrically insulated from said rod, terminals for said resistance wire connected, respectively, to the latter collar and to said rod, heads on opposite ends of said rod, an insulating washer mounted between each of said heads and the adjacent collar, said washers being of larger diameter than said body, a metallic shell inclosing said body and extending at each end of the unit beyond the heads of said rod, said shell being supported by said insulating washers out of contact with said resistance wire, and an insulating filling in the ends of said shell covering the heads of said rod.

5. In a resistance unit, the combination of a rod, mica washers strung on said rod to form an insulating body having a cylindrical exterior surface, heads on said rod holding said washers compressed tightly between them, said body having a helical groove in its peripheral surface, a resistance wire wound in said groove, and a metallic collar at each end of said body with its surface substantially flush with the surface of said body, each of said collars having a groove formed therein that constitutes substantially a continuation of the groove of said body, and said wire being carried at the ends of said coil from the groove in the body into the grooves in the respective collars and secured therein.

[Claim 6 not printed in the Gazette.]

1,222,197. ELECTRIC UNIT. FREDERICK M. FURBER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Feb. 19, 1915, Serial No. 9,343. Divided and this application filed June 28, 1915. Serial No. 36,721. (Cl. 219—63.)



1. An electric unit comprising a non-conducting core and an interior member supporting the core upon the structure with which the unit is associated, said member having substantially the same thermal co-efficient of expansion as said core.

2. An electric unit comprising a lava core and an interior steel supporting member for said core.

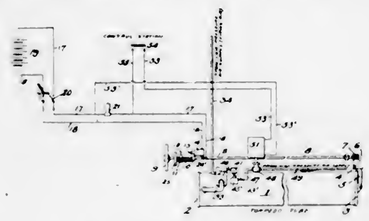
3. An electric unit comprising a non-conducting core, a resistance wire carried thereon, and an interior member supporting the core upon the structure with which the unit is associated, said member having a thermal expansibility substantially equal to that of said core.

4. An electric unit comprising a non-conducting core, and an interior member supporting the core upon the structure with which the unit is associated, said member being substantially co-extensive with said core, said core and supporting member having substantially the same thermal co-efficient of expansion.

5. An electric unit comprising a non-conducting core, resistance wire carried on said core, terminal elements for said wire, said core and terminal elements being under resilient compression.

[Claims 6 to 15 not printed in the Gazette.]

1,222,198. TORPEDO-FIRING CONTROL AND SIGNAL APPARATUS FOR TORPEDO-BOATS. EDWARD GERALD GALLAGHER, Bridgeport, Conn., assignor to The Lake Torpedo Boat Company of Maine, Bridgeport, Conn., a Corporation of Maine. Filed Sept. 14, 1915. Serial No. 50,634. (Cl. 114—238.)



1. Torpedo firing control apparatus, comprising in combination with means for operating the outboard cover of a torpedo tube and means to supply firing air to said tube, a source of electrical energy, a solenoid operated valve controlling the admission of firing air to the torpedo tube, the windings of the solenoid being in the circuit of the source of electrical energy, a control switch arranged in the circuit, a signal lamp also arranged in the circuit in parallel relation with the windings of the solenoid, and normally open contacts in the circuit adapted to be closed through and by the means for operating the outboard cover of the tube, for the purposes specified.

2. Torpedo firing control apparatus, comprising in combination with means for operating the outboard cover of a torpedo tube and means to supply firing air to said tube, a source of electrical energy, a solenoid operated valve controlling the admission of firing air to the torpedo tube, the windings of the solenoid being in the circuit of the source of electrical energy, a control switch arranged in the circuit, a signal lamp also arranged in the circuit, and normally open contacts in the circuit adapted to be closed through and by the means for operating the outboard cover of the tube, whereby to energize the signal lamp and render it possible to energize the windings of the solenoid, for the purposes specified.

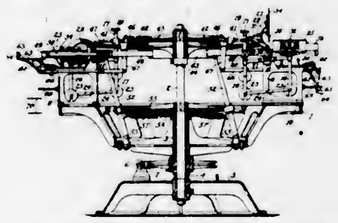
3. Torpedo firing control apparatus, comprising in combination with means for operating the outboard cover of a torpedo tube and means to supply firing air to said tube, a solenoid operated valve controlling the admission of firing air to said tube, a source of electrical energy in circuit with the windings of the solenoid, a signal lamp arranged in said circuit, a control switch also arranged in the circuit, and normally open contacts in said circuit adapted to be closed through and by the means for operating the outboard cover of the tube, as specified, the circuit of the solenoid windings being in parallel relation with the signal lamp and across the terminals of the lamp whereby the windings receive energy from the same source of energy as the signal lamp.

4. Torpedo firing control apparatus, comprising in combination with means for operating the outboard cover of a torpedo tube and means to conduct firing air to the tube, a source of electrical energy, a solenoid operated valve controlling the admission of firing air to said torpedo tube, the windings of the solenoid being arranged in the circuit of the source of electrical energy, normally open contacts also arranged in the circuit and adapted to be closed only when the outboard cover of the torpedo tube is open, a lamp arranged in the circuit and adapted to be energized only when said contacts are closed, and a control switch also arranged in said circuit, the arrangement being such that the windings of the solenoid may be energized only when the signal lamp is energized and the control switch is closed.

5. A signal device for torpedo firing tubes, comprising in combination with manually operated means for operating the outboard cover of a torpedo tube, a source of electrical energy, normally open contacts arranged in the circuit of the source of electrical energy adapted to be closed by said outboard cover operating means only when said outboard cover is in its extreme open position, a control switch arranged in circuit with the source of electrical energy, and a signal lamp also arranged to be energized only when said outboard cover of the torpedo tube is in its extreme open position and when said contacts are closed, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

1,222,199. PACKAGE-FILLING MACHINE. KARL GAMMEL, Cleveland, Ohio, assignor to The Cleveland Macaroni Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 24, 1912. Serial No. 699,488. (Cl. 100—57.)



1. A package filling machine comprising a receptacle to contain the goods to be packed, a pivoted package supporter having periodic movement to and from the receptacle, means for ejecting the goods from the receptacle into the supported package and means for ejecting the package from the supporter when said supporter is moved away from the receptacle.

2. A package filling machine comprising a receptacle for containing the goods to be packed, a pivoted package supporter, means for swinging the package supporter vertically to and from the receptacle, and means for transferring the goods from the receptacle to the supported package, when the latter is brought to the receptacle, the bottom of said supporter adapted to form a prolongation of the bottom of the receptacle when in package transferring position and means for engaging the package when the supporter is removed from its package transferring position to eject the package from the supporter.

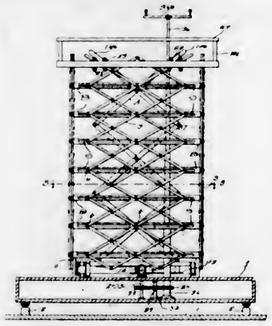
3. A package filling machine comprising a receptacle for containing the goods to be packed, a pivoted package supporter, means for swinging the package supporter to and from the receptacle, means for transferring the goods from the receptacle to the supported package when the latter is brought to the receptacle, and means disposed in the line of movement of the supporter for removing the package from the supporter when moved from the receptacle.

4. A package filling machine comprising a receptacle for the goods, removable ends and cover for the receptacle, means for moving the ends into an inoperative position, and means coöperatively actuated from said last named means for removing the goods from the receptacle when the cover is moved to the receptacle and the ends away.

5. A package filling machine comprising a receptacle for the goods, removable end walls for the receptacle, means for removing the goods through one end of the receptacle, said means entering through the other end when the end walls are removed and mechanism operatively connected to said end walls and to said removing means for periodically actuating the same in unison.

[Claims 6 to 22 not printed in the Gazette.]

1,222,200. EXTENSION-TOWER. JOSEPH V. GRANDINETTI, Patchogue, N. Y. Filed Dec. 4, 1915. Serial No. 65,046. (Cl. 227—16.)

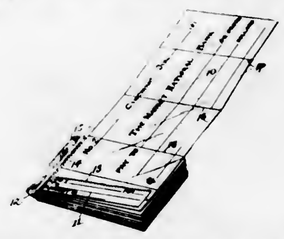


1. A device of the class described including an extension tower having a platform and lazy-tongs supporting the platform and means for operating the lazy-tongs including slidable rack bars, a pinion meshing with the rack bars, means for rotating the pinion and counterbalancing means connected with the rack bars and operated by the sliding movement of the same for counter-balancing the extension tower to assist in raising and lowering the same.

2. A device of the class described including an extension tower having a platform and lazy-tongs supporting the platform and means for operating the lazy-tongs including slidable rack bars, a pinion meshing with the rack bars, means for rotating the pinion, and means for counterbalancing the extension tower consisting of flexible connections attached to the slidable rack bars, weights, secured to the flexible connections and guide pulleys receiving the flexible connections.

3. A device of the class described including an extension tower comprising side lazy-tongs, a diagonal actuating lazy-tong, and a rectangular guide frame provided at its sides with guides and having a diagonal guide, said guides receiving certain of the levers or members of the lazy-tongs between the pivots of the same.

1,222,201. CHECK-BOOK. JULES GLAENZER, New York, N. Y. Filed Dec. 14, 1916. Serial No. 137,001. (Cl. 11—17.)

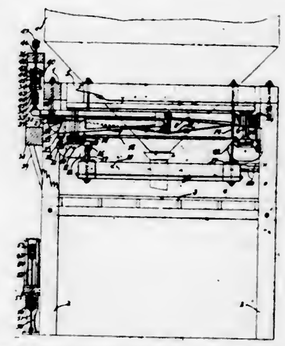


1. A check-book, comprising a plurality of leaves bound together, each leaf consisting of a check and stub, and a binding strip connected to the stub and along a portion only of one edge of the body of the check.

2. A check-book, comprising in combination a plurality of superposed leaves, each leaf consisting of a binding strip, a stub extending therefrom at one end, and a check connected along a perforated or scored line at one end to one edge of the stub and along a similar line to a portion of one edge of the binding-strip, the main body of the check extending beyond said binding strip and adapted to be folded upon itself; and means for securing the binding strips together.

3. In a check-book, the combination of a plurality of narrow binding strips; means for securing the same together along one long edge thereof; a relatively long and narrow stub extending in the direction of its length outwardly from the other and free long edge of each binding strip adjacent one end thereof, and at right angles to said edge, each face of the stub being provided with indicia and spaces for entries necessary to the indication of the correct bank balance; and a check extending laterally from the inner long edge of each stub and beyond the corresponding binding strip, the lines of connection between said check and the stub and binding strip being perforated or scored, and the check being folded upon itself and overlying the stub.

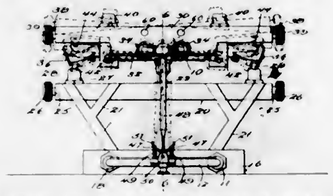
1,222,202. HOPPER-SCALE. RUDOLF GRUNDMAN, Chicago, Ill. Filed Feb. 5, 1915. Serial No. 6,318. (Cl. 73—121.)



A weighing scale comprising a main frame, secondary frame located beneath said main frame and suspended

therefrom, multiplication levers pivotally suspended from said main frame, secondary levers located directly beneath said multiplication levers and pivotally mounted on said secondary frame, a platform pivotally supported by said secondary levers, means for pivotally connecting the outer ends of said secondary levers to said multiplication levers, said multiplication levers having pivotal connections for operating a scale beam.

1,222,203. DENTAL OCCLUDING-FRAME. RUPERT E. HALL, Houston, Tex. Filed Jan. 28, 1914. Serial No. 815,020. (Cl. 32—1.)



1. A dental occluding frame comprising model supporting frames, and pivotal means connecting the frames together and restricting them to relatively rock upon an axis in the medial line posteriorly of the bases.

2. A dental occluding frame comprising model-supporting frames; means pivoting the frames together at the medial line posteriorly of the bases; and means coöperative with said pivoting means providing a simultaneous rocking upon the pivot of one of the frames both in a horizontal and a vertical plane.

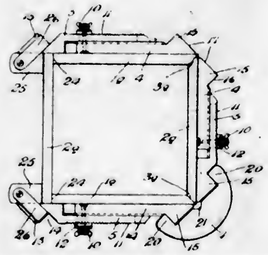
3. A dental occluding frame comprising a base frame; an upper frame pivoted to the base frame upon a medial line; and cams carried by one of said frames, one being adapted to ride up and the other down as the upper frame is moved upon its pivot and being restricted by said pivot to move correspondingly.

4. A dental occluding frame comprising a base frame; supporting relatively adjustable pins carried by the base frame; an upper frame; inclined cams carried by the upper frame bearing upon the pins; and central pivoting means to cause one cam to ride upwardly upon its pin as the other moves downwardly upon its pin.

5. A dental occluding frame comprising a base frame; pins extending upwardly from the base frame and adjustable to vary the interval between such pins; a superposed frame; inclined cams carried by the superposed frame bearing upon the pins; means arranged to adjust the cams to vary the interval to correspond to the interval of the pins; and a central pivot intermediate the pins.

[Claims 6 to 9 not printed in the Gazette.]

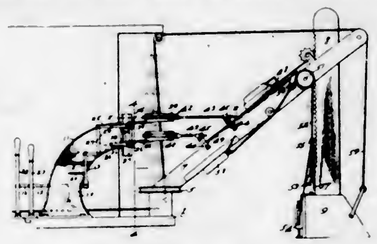
1,222,204. CLAMP. NEILS C. HANSEN, Grand Rapids, Mich., assignor to William A. Berkey Furniture Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Sept. 27, 1915. Serial No. 52,861. (Cl. 144—292.)



1. In a clamp an extensible member comprised of two bars lying one against the other, one of said bars having lengthwise grooves formed on one side in which similarly positioned ribs on the other bar seat, one of said bars also having a slot formed lengthwise therein, a pin secured to the other bar extending through the slot in the first bar, a series of uniform projections on the first bar, a block formed with a plurality of notches adapted to receive the projections located on the pin, a nut threaded on to the end of the pin, and angular projections at the ends of the extensible member, one on each bar and extending in the same direction, substantially as described.

2. In a clamp, an extensible member comprised of two bars lying one against the other, said bars having coacting longitudinal grooves and ribs on their adjacent inner sides, and one of said bars also having a longitudinal slot therein, a plurality of consecutive transverse projections of the same size and shape on the outer side of said bar, a pin passing through the second bar and the slot in the first bar, a block having a plurality of transverse notches in its inner side adapted to receive the projections on said first bar, said pin also extending therethrough, a nut threaded on to the end of the pin, and a head having a width equal to the combined widths of the two bars located at one end of said first bar and provided with a notch having sides located at an angle to each other in its outer side, said head at its end being cut at an incline to the width thereof, said second bar on its inner side adjacent one end also having a notch with sides located at an angle to each other and with its end cut at an incline to the width thereof, substantially as described.

1,222,205. OPERATING MECHANISM FOR STEAM-SHOVELS. ELWOOD HAWKINS, Atlantic City, N. J. Filed Dec. 10, 1915. Serial No. 66,086. (Cl. 37—16.)



1. In a device of the class described, a platform, a boom carried by said platform, an engine carried by said boom, a standard carried by said platform, operating levers carried by said platform, connecting rods carried by said standard connected with the said operating levers, rocking arms carried by the said connecting rods, sliding members to coact with the said rocking arms, the said sliding members being carried by means attached to the standard, ring members carried by said sliding members and coacting with said band members to form a swinging joint, the said bands being connected with means to operate said engine.

2. The combination with the swinging boom of a steam shovel, of a standard mounted upon the platform of said boom, a vertically disposed rail carried by said standard, a plurality of levers slidably mounted at one of their ends upon said rail, means connected with said levers for actuating them, supports mounted upon said swinging boom, means pivotally mounted upon one of said supports and connected with one of said levers adapted to control the lid operating mechanism of the bucket of said boom, and means pivotally mounted upon the other of said supports and connected with the other of said levers adapted to control the auxiliary engine mounted upon said boom.

3. The combination with a swinging boom mounted upon a platform and provided with a shovel and an auxiliary engine upon said boom, of a standard mounted upon said platform, a rail mounted upon said standard, levers slidably mounted upon said rail, means connected with said levers for operating them, said levers being formed with a laterally flanged ring member and a band loosely mounted thereon, said ring members being disposed above the axial center of said swinging boom, means connected with one of said levers for controlling said auxiliary engine, and means connected with the other of said levers for controlling the dumping mechanism of said shovel.

4. In an excavator, the combination with a main platform having a swinging boom, a dipper and arm carried thereby and an engine to operate the arm, of a rod connecting with the throttle of said engine, a lever on the platform, link members connected with said lever, a crosshead and guide connected with said link members, and a swivel connection interposed between said rod and said crossheads to control the engine regardless of the position of the boom.

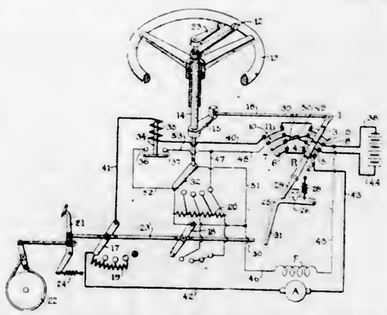
5. In an excavator, the combination with a main platform having a swinging boom, a dipper arm and a dipper carried thereby, said dipper having a swinging door, latch means for said door, of automatic means on said dipper arm connecting with said boom to unlock said door when the boom and dipper arm are relatively moved, a counterweight, means to lock said automatic means when the boom and dipper arm are relatively moved for unlocking the door, and means connected with said locking means to operate the same from said platform regardless of the position of the boom.

1,222,206. CREAM-CUP. OSCAR F. HELWIG, Chicago, Ill., assignor to Standard Die & Specialty Company, Chicago, Ill. Filed Feb. 26, 1912. Serial No. 679,817. (Cl. 65—28.)



A device of the class described for removing cream from the top of a milk bottle comprising a truncated conical cup of suitable size to fit loosely within the mouth of a milk bottle, and having an aperture in its bottom, a closure for said aperture arranged within the cup, a stiff practically rigid inverted L-shaped handle for said cup formed of a channeled strip of metal integral with the cup and extending upwardly from the edge thereof, said handle having a vertical lower portion which merges at its lower extremity in the cup side, and a horizontal top portion which extends outwardly from the upper extremity of the vertical lower portion, said vertical lower portion having a short longitudinal guide slot formed therein in proximity to and below the juncture with the horizontal top portion, a wire having its lower end secured to the closure and its upper portion bent laterally outward and extended through the guide slot and then bent upon itself at its outer extremity to form a hook, and a flat spring secured at its outer end to the under surface of the top portion of the handle and extending beneath said horizontal portion to near its juncture with the vertical portion, said spring having an aperture near its inner end through which the hook end of the wire is removably fitted.

1,222,207. MOTOR-CONTROLLER. CLARK T. HENDERSON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 2, 1914. Serial No. 869,839. (Cl. 172—179.)



1. In a controller for motor vehicles, in combination, foot-controlled means to stop the driving motor at will, hand-controlled means to stop the motor at will and means acting upon operation of said hand means to necessitate operation of both of said means to restart the motor.

2. In a controller for motor vehicles, in combination, foot-controlled means to start and stop the driving motor, hand-controlled means to stop the motor and means acting upon operation of said hand-controlled means to necessitate the operation of both of said means and in a definite sequence to restart the motor.

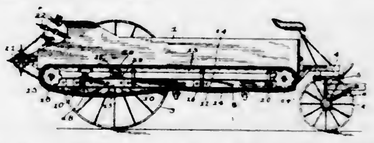
3. In a motor vehicle controller, in combination, foot-controlled means to start and stop the driving motor, hand-controlled means to stop the motor and means acting upon operation of said hand-controlled means to necessitate operation of said foot-controlled means, then operation of said hand-controlled means and then further operation of said foot-controlled means to restart the motor.

4. In a controller for motor-operated vehicles, in combination, foot-operated means operable to interrupt the circuit of the driving motor but biased to circuit closing position, hand-operated means also included in the motor circuit and operable to interrupt said circuit and means acting upon interruption of the motor circuit by said hand-operated means to restrict reclosure of the motor circuit to said foot-operated means.

5. In a controller for motor vehicles, in combination, foot-operated means for controlling the continuity of the circuit and the speed of the driving motor and normally standing in a running position, a hand-operated device operable to interrupt the motor circuit and means restricting reëstablishment of the motor circuit to said foot-operated means.

[Claims 6 to 20 not printed in the Gazette.]

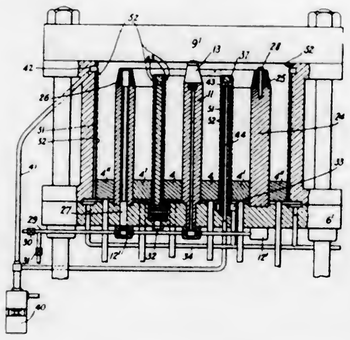
1,222,208. FERTILIZER-DISTRIBUTER. JOHN F. RUDE, Liberty, Ind. Filed Mar. 21, 1914. Serial No. 826,258. (Cl. 111—40.)



A fertilizer distributer having a load carrying body, a traveling apron supported in said body, rear driving wheels, a transverse continuous axle mounted in said wheels, an apron supporting frame hung from said axle below the same and comprising longitudinal side sills and cross beams, brackets rising from said frame to above the level of the axle, rails supported on said brackets above the axle and extending in the same plane throughout their

lengths, apron carrying chains on said rails, front and rear sprocket wheels for the chains at the ends of the frame, said apron having the delivering stretch thereof lying in the same continuous plane from sprocket to sprocket.

1,222,209. APPARATUS FOR EXPRESSING LIQUID FROM MATERIALS. JOHN WILLIAM HINCHLEY, London, England. Filed Sept. 25, 1916. Serial No. 122,127. (Cl. 44—3.)



1. Apparatus for expressing liquid from materials comprising a cylinder having a wall comprising a strainer, a compression piston in said cylinder, means having an orifice for conducting hot gaseous fluid into said cylinder, the position of the said strainer and orifice being such that the flow of gaseous fluid is in a direction substantially at right angles to the direction of motion of the piston.

2. Apparatus for expressing liquid from materials comprising a cylinder having a wall comprising a long strainer for discharging expressed liquid and gaseous fluid, means having orifices for conducting hot gaseous fluid into said cylinder, said orifices being near the cylinder end, and a short strainer over said orifices for admitting gaseous fluid and discharging expressed liquid.

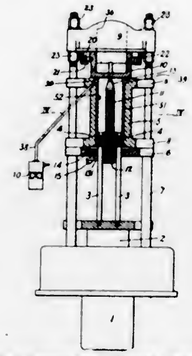
3. Apparatus for expressing liquid from materials comprising a cylinder having a wall comprising a long strainer for discharging expressed liquid and gaseous fluid, a tube having orifices for conducting hot gaseous fluid into said cylinder, said orifices being near the cylinder end, and a short strainer over said orifices for admitting gaseous fluid and discharging expressed liquid.

4. Apparatus for expressing liquid from materials comprising a plurality of concentric cylinders, having walls comprising strainers, the outermost of which cylinders is provided with a head and with a bottom plate, compression pistons in said cylinders, a plurality of concentric means having orifices for conducting hot gaseous fluid into said cylinders, the positions of the strainers and orifices being such that the flow of gaseous fluid is in a direction substantially at right angles to the direction of motion of the pistons, and all the cylinders except the outermost extending from the bottom plate to points at substantial distances from the head.

5. Apparatus for expressing liquid from materials comprising a cylinder having a wall comprising a strainer provided with a perforated liner, a compression piston in said cylinder bearing against said liner means having an orifice for conducting hot gaseous fluid into said cylinder, the position of the said strainer and orifice being such that the flow of gaseous fluid is in a direction substantially at right angles to the direction of motion of the piston.

[Claims 6 and 7 not printed in the Gazette.]

1,222,210. PROCESS FOR EXPRESSING LIQUID FROM PEAT. JOHN WILLIAM HINCHLEY, London, England. Filed Sept. 25, 1916. Serial No. 122,128. (Cl. 44—3.)

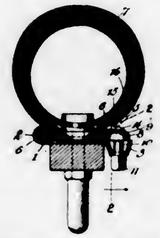


1. Process for expressing liquid from peat comprising subjecting the peat at the ordinary temperature to evenly distributed pressure, admitting after the application of said pressure a current of hot gaseous fluid and cutting off the same and thereafter subjecting the peat to a higher degree of pressure than that existing during the admission of the fluid.

2. Process for expressing liquid from peat comprising subjecting the peat at the ordinary temperature to evenly distributed pressure continuously increasing up to a final limit, admitting after the application of said pressure a current of hot gaseous fluid and cutting off the same before the pressure has reached its final limit.

3. Process for expressing liquid from peat comprising subjecting the peat at the ordinary temperature to evenly distributed pressure, admitting after the application of said pressure a current of hot gaseous fluid and cutting off the same and thereafter subjecting the peat to a higher degree of pressure than that existing during the admission of the fluid and forcing the liquid through strainers and forcing liquid down the backs of the strainers to prevent the latter from being choked up.

1,222,211. TIRE-FASTENING DEVICE. FRANK P. JOHNSON, Danville, Pa. Filed Dec. 7, 1915. Serial No. 65,580. (Cl. 152—21.)



1. In a tire fastening device, a rim, a tire-retaining ring detachably mounted on the rim and interlocking therewith, and a locking device for the ring having a locking portion movable from a position in line with the ring to a position transverse thereto, said locking portion when in the first-mentioned position being disposed in such close relation to the outer casing of the tire that it is held solely by the latter from moving to the second position.

2. In a tire fastening device, a rim, a tire-retaining ring detachably mounted on the rim and interlocking therewith, and a locking device for the ring having a locking

head of greater length than width, said locking device being rotatable on an axis substantially radial to the rim and provided with parts coacting with the head and rim to hold the locking device against movement lengthwise of its axis of rotation, and said head having the face toward the rim movable over the latter in close relation thereto with one long side of the head engaged by the outer casing of the tire when the head is in ring-locking position, whereby the head is maintained in said ring-locking position solely by the outer casing of the tire.

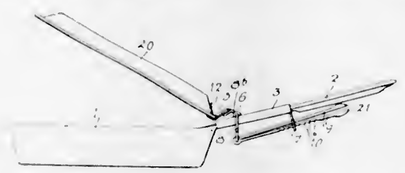
3. In a tire fastening device, a rim, a recessed tire-retaining ring detachably mounted on the rim and interlocking therewith, and a locking device for the ring having a locking portion movable in the recessed part of the ring from a position in line with the ring to a position transverse thereto, said locking portion when in the first-mentioned position serving to lock the ring to the rim and then disposed in such close relation to the outer casing of the tire that it is held solely by the latter from moving to the second position.

4. In a tire fastening device, a rim, a tire-retaining ring detachably mounted on the rim and interlocking therewith, and a locking device revolubly mounted on the rim to rotate around an axis which is radial to the rim, said locking device being at all times held against movement lengthwise of its axis of rotation and having a locking head which is carried by the rotary movement thereof into and out engagement with the tire-retaining ring, and in the locked position intersects the tire seat of the ring and bears against the outer casing so as to be held solely thereby from turning.

5. In a tire fastening device, a rim, a tire-retaining ring detachably mounted on the rim and interlocking therewith, a locking device revolubly mounted on the rim to rotate around an axis which is radial to the rim, said locking device being at all times held against movement lengthwise of its axis of rotation and having a locking portion carried by the rotary movement thereof into and out of locking engagement with the tire-retaining ring, and said locking portion having a range of rotative movement of substantially 90° from the locked to the unlocked position and when in its normal locked position being arranged in juxtaposition to the outer casing of the tire so as to be held solely thereby from turning.

[Claims 6 to 15 not printed in the Gazette.]

1,222,212. COVER FOR COOKING UTENSILS. THOMAS H. JORDAN, Milton, W. Va. Filed Jan. 25, 1917. Serial No. 144,418. (Cl. 53—7.)



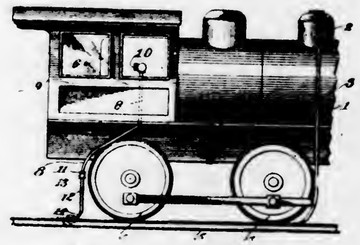
1. A cover operating attachment for frying pans, including a sleeve adapted to be fitted upon the frying pan handle, said sleeve being provided at the top thereof with a bearing and at the bottom with a downwardly extending guide ear, a looped wire extending under the sleeve and having one end thereof projected transversely over the top of the sleeve and journaled within the bearing, the extremity of the said end of the looped wire being bent laterally, a cover engaging clip rigid with the said laterally bent extremity of the wire, and an operating plunger arranged under the sleeve, said plunger being connected to the looped wire and passing slidably through the guide ear.

2. A cover operating attachment for frying pans, including a sleeve adapted to be fitted upon the frying pan handle, the top of the sleeve being provided with transversely alined spaced bearing sleeves, while the bottom of the sleeve is provided with a guide ear, a wire looped around the bottom of the sleeve and having the ends thereof extended inwardly from the top of the sleeve in alinement with each other and journaled within the bearing sleeves, the extremities of the wire being bent laterally, a cover engaging clip rigidly engaged by the said laterally bent extremities of the wire, and an operating plunger connected to the looped lower portion of the wire and extending slidably through the guide ear.

3. A cover operating attachment for frying pans, including a sleeve adapted to be fitted upon the frying pan handle, said sleeve being provided at the top thereof with transversely alined spaced bearing sleeves and at the bottom thereof with a guide ear, a wire looped around the bottom of the sleeve and having the ends thereof extended inwardly over the top of the sleeve in alinement with each other and journaled within the bearing sleeves, a cover engaging clip rigid with the ends of the looped wire, and an operating plunger connected to the lower portion of the wire and passing slidably through the guide ear, said plunger being bifurcated and the arms of the bifurcation having a resilient action and one thereof being notched for engagement with the edges of the opening in the guide ear to lock the plunger in operative position.

4. A cover operating attachment for frying pans, including a sleeve adapted to be fitted upon the frying pan handle, said sleeve being provided at the top thereof with transversely alined spaced bearing sleeves and at the bottom thereof with a downwardly extending perforated guide ear, a wire looped around the bottom of the sleeve and having the ends thereof extended inwardly over the top of the sleeve in alinement with each other and journaled within the bearing sleeves, the looped portion of the wire being crimped downwardly to provide a crank arm, while the extremities of the wire are extended laterally, a cover engaging clip rigidly applied to the laterally extended ends of the wire, and an operating plunger connected to the crimped portion of the looped wire and passing slidably through the guide ear, said operating plunger being formed with a resilient notched arm arranged for engagement with the edges of the perforation of the guide ear to lock the plunger in operative position.

1,222,213. RAILROAD-TRACK SAND-REMOVER. JOHN BERRY KELLY, Birmingham, Ala., assignor of one-half to Z. A. Douglas, Birmingham, Ala. Filed Nov. 27, 1916. Serial No. 133,730. (Cl. 104—153.)

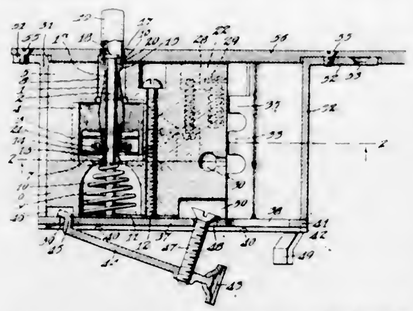


The combination with a locomotive and its sanding equipment, of a pipe line leading from the boiler of the locomotive, a valve therein to control the flow of water under pressure through said pipe, and jet nozzles connected to the pipe and disposed one immediately behind each rear driving wheel of the locomotive and at an angle so as to deliver the water jet rearwardly against the rail tread and clean the same of sand immediately behind the driving wheels.

1,222,214. ELECTRIC SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 29, 1911. Serial No. 630,119. (Cl. 175—284.)

1. In an electric switch, a movable cam having the conformation of a double frustum positioned base to base, a

fixed shaft upon which said cam is arranged to be reciprocated, means for insulating said cam from said shaft and a relatively movable contactor operated upon movement of said cam.



2. In an electric switch, in combination, a fixed spindle, a cam member reciprocable thereon, means for operating said cam, means biasing the same in one direction, a reciprocable contactor and an energy storing operative connection between said cam member and said contactor for reciprocating the latter with a snap movement in a direction opposite to movement of the cam member for making and breaking an electric circuit.

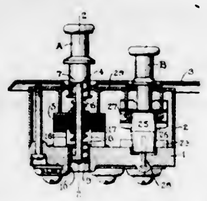
3. In an electric switch device, a two part base, a snap switch mechanism inclosed therein including a reciprocating cam member, and a contactor arranged to move upon said cam member, terminal contacts for said contactor and a single means for holding the parts of said base together and positioning said cam member.

4. In an electric switch device, a two part base, a push button snap switch mechanism inclosed therein including a spindle, a reciprocating cam member and a movable contactor, and means for holding the parts of said base together and said spindle in position in the same.

5. An electric switch including a fixed spindle, a cam member arranged to reciprocate thereon, a flanged member between one end of said cam and the end of said spindle, and an operating member for said cam crimped to said flanged member.

[Claims 6 to 8 not printed in the Gazette.]

1,222,215. CIRCUIT-CONTROLLER. CHARLES J. KLEIN, Milwaukee, Wis. Filed Oct. 3, 1914. Serial No. 864,801. (Cl. 171—97.)



1. In combination, current supplying means, a pair of translating devices, and a circuit controller therefor having three pairs of stationary contacts and two movable contactors to electrically connect said contacts in different combinations, said contactors being operable independently for selectively establishing two different circuit connections for said devices and also for disconnecting said devices from circuit.

2. In combination, battery current supplying means, a pair of translating devices, and a circuit controller therefor comprising two independently operable switches, one having four contacts and having two-position means to electrically connect said contacts in pairs and to electrically connect a single pair thereof for selectively effecting two different circuit connections for said devices and the other switch having a pair of contacts and having means to bridge the same for establishing circuit connection to said devices in either condition of said first mentioned switch.

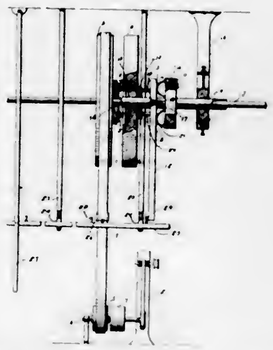
3. In combination, a source of current, translating devices, and a circuit controller therefor having four contacts alined to provide three make-and-break points, and having a two position reciprocable contactor operable to connect different combinations of said contacts selectively for establishing series and parallel circuits including said devices.

4. In combination, a source of current, translating devices, and a circuit controller therefor having three pairs of contacts and having means to electrically connect said contacts in different combinations, said means being operable by two independently movable operating members to establish either series or parallel circuit connections for said translating devices and also to disconnect the latter from circuit.

5. In combination, a current supply, translating devices, a circuit controller therefor having three pairs of contacts, means to electrically connect one pair of said contacts for establishing circuit to said devices and means movable to two positions for selectively connecting said other contacts in different combinations for effecting either series or parallel connection of said devices.

[Claims 6 and 7 not printed in the Gazette.]

1,222,216. BELT-SHIFTING DEVICE. ERNEST ROBERT KRESSE, Brooklyn, N. Y. Filed Aug. 25, 1915. Serial No. 47,372. (Cl. 64—4.)



1. In a belt shifting device of the character described the combination with a continuously rotating line shaft having a fast pulley mounted thereon, and a belt on said pulley, of a fixed supporting sleeve surrounding the line shaft, a loose pulley slidably mounted on the sleeve, means for shifting the belt from the fast pulley to the loose pulley and vice versa and for simultaneously moving the loose pulley toward the fast pulley, and a fixed or fast rotating sleeve mounted on the line shaft and arranged to engage and partially rotate the loose pulley and provided with means for yieldably urging the loose pulley backwardly whereby the same is automatically returned to its normal position.

2. In a belt shifting device of the class described, the combination with a continuously rotating line shaft having a fast pulley mounted thereon, and a belt on said pulley, of a stationary sleeve surrounding the line shaft, a loose pulley mounted on the sleeve and movable toward and from the fast pulley and adapted to receive the belt therefrom, means for shifting the belt from the fast pulley to the loose and from the loose pulley to the fast pulley and for simultaneously moving the loose pulley toward the fast pulley and a collar or member fixed to the line shaft and arranged to engage and partially rotate the loose pulley and provided also with springs for automatically moving the loose pulley backwardly to its normal position on the stationary sleeve.

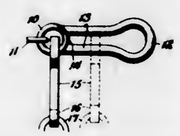
3. In a belt shifting device of the class described, the combination with a continuously rotating line shaft having a fast pulley mounted thereon, and a belt on said pulley, of a stationary supporting member extending longitudinally of the line shaft, a loose pulley slidably mounted on the supporting member, said loose pulley being of substantially the same diameter as the fast pulley, means for shifting the belt from the fast pulley to the loose pulley and from the loose pulley to the fast pulley, a lever provided with means for moving the loose pulley toward the fast pulley, a supporting collar mounted on the said supporting member and having the lever fulcrumed on it, said supporting collar being provided at opposite sides of the fulcrum point of the lever with springs for automatically returning the lever to a neutral position.

4. In a belt shifting device of the class described, the combination with a continuously rotating line shaft having a fast pulley mounted thereon, and a belt on said pulley, of a stationary supporting member extending along the line shaft, a loose pulley mounted on the said member, and movable toward and from the fast pulley, belt shifting means for moving the belt to and from the fast pulley, a lever provided with means for moving the loose pulley toward the fast pulley simultaneously with the operation of the belt shifting means, the latter being provided with means for actuating the said lever and for releasing the same and means for automatically returning the lever to a neutral position.

5. In a belt shifting device of the class described, the combination with a continuously rotating line shaft having a fast pulley mounted thereon, and a belt on said pulley, of a supporting sleeve mounted in a stationary position around the line shaft, a loose pulley slidable on the sleeve toward and from the fast pulley, a fast rotating collar mounted on the said shaft in the path of the loose pulley and adapted to partially rotate the same, a slidable collar mounted on the sleeve, a lever arranged to actuate the sliding collar for moving the loose pulley toward the fast pulley and belt shifting means for moving the belt toward and from the fast pulley and for simultaneously actuating the said lever.

[Claims 6 to 9 not printed in the Gazette.]

1,222,217. COUPLING FOR CHAINS, &c. JAMES F. KUHN, Easton, Pa., assignor of one-half to Allen C. Fellencer, Allentown, Pa. Filed July 31, 1916. Serial No. 112,347. (Cl. 24—201.)



1. A coupler formed of an eye member and a hook member, the eye member having a reduced inner end which provides an entrance to the eye member, and the hook member having an aperture through which the eye member is passed, and a throat leading from the aperture outwardly, said throat having a width less than the main portion of the eye member, so as to prevent its separation therefrom, but having a greater width than the reduced end of the eye member, so as to allow the disconnection of the hook member from the eye member when the hook member is moved into registry with the reduced end of the eye member, the opposite walls of said throat engaging with said eye member so as to hold the hook member from turning as it is moved along the eye member.

2. A coupler comprising a hook member and an eye member, the eye member being formed of an attaching ring, and a ring or loop projecting therefrom, the attaching ring being made of material having a less thickness than the ring or loop, and being located at one end of the ring or loop, and the hook member having an aperture to receive the bar of the ring or loop, and an entrance throat in communication with the aperture and leading outwardly to the periphery of the hook member, the width of the throat being less than the thickness of the material of the ring or loop but greater than the thickness of the attaching ring, so as to prevent the separation of the hook member from the eye member while the hook member is on the ring or loop, but allowing its disconnection from the eye member when the hook member has come into registry with the attaching ring.

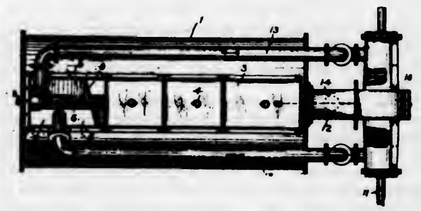
3. A coupler comprising an eye member and a hook member, the eye member being formed of a pair of rings or loops joined together so that one closes the entrance to the other, one of the rings or loops being made of material of less thickness than the other, and a hook member having an aperture of a diameter to receive the bar of the ring or loop which is of greater thickness, said aperture permitting the hook member to be slid along the bar of said loop from one end to the other, and an entrance throat to the aperture leading outwardly to the periphery of the hook member, said entrance throat being of a width to prevent the separation of the hook member from the eye member while the hook member is on the ring or loop of greater thickness, but allowing the disconnection of the hook member from the eye member when the hook member has been brought into registry with the ring or loop of reduced thickness.

4. A coupler comprising an eye member and a hook member, the eye member being made up of a loop and a ring which are in longitudinal alinement and are united, the ring closing the entrance to the loop and being made of material thinner than the same and located at one end of the loop, and the hook member being provided with an aperture to receive the loop, and a throat communicating gith and leading from the aperture outwardly to the periphery of the hook member, said throat being of a width to prevent the disconnection of the hook member from the eye member while the hook member is on the loop of the eye member, but allowing its removal from the eye member when the hook member is brought into conjunction with the ring of the eye member.

5. A coupler comprising a ring adapted for attachment to the end of a chain, a loop made of material thicker than the ring and extending outwardly from the latter and having its ends spread apart and secured to the ring, a hook member having an aperture therein to receive the loop therethrough, and having at one side of the aperture and in communication therewith a flaring throat with a contracted inner end, the width of the throat and its contracted portion being sufficient to permit the passage of the attaching ring therebetween for separating and interlocking the hook member and the ring and loop.

[Claims 6 to 9 not printed in the Gazette.]

1,222,218. PULPING APPARATUS. HERMAN L. KUTTER, Hamilton, Ohio. Filed Feb. 1, 1917. Serial No. 145,855. (Cl. 92—20.)



1. Pulping apparatus comprising, a macerator provided with an inlet and an outlet and with macerating mechanism adapted for propelling stuff from the inlet to the out-

let, a shell provided with an outlet-opening and provided also with an inlet-opening, a conduit placing the outlet-opening of the shell in communication with the inlet of the macerator, a conduit leading from the outlet of the macerator to the inlet-opening of the shell, means for discharging the contents of the shell and macerator, and a spiral conveyer disposed within the shell and adapted to force the contents of the shell to the outlet leading to the macerator, combined substantially as set forth.

2. Pulping apparatus comprising, a macerator provided with an inlet and an outlet and with macerating mechanism adapted for propelling stuff from the inlet to the outlet, a shell of circular cross-section provided with an outlet-opening and provided also with an inlet-opening, a conduit placing the outlet-opening of the shell in communication with the inlet of the macerator, a conduit leading from the outlet of the macerator to the inlet-opening of the shell, means for discharging the contents of the shell and macerator, and a spiral conveyer disposed within the shell and having a diameter substantially equal to the interior of the shell, combined substantially as set forth.

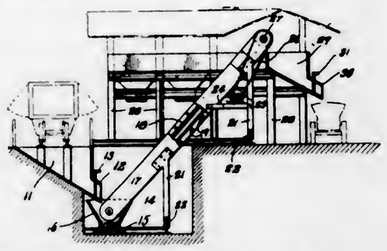
3. Pulping apparatus comprising a macerator provided with an inlet and an outlet and with macerating mechanism adapted for propelling stuff from the inlet to the outlet, a shell of circular cross-section provided with an outlet-opening and provided also with an inlet-opening, a conduit placing the outlet-opening of the shell in communication with the inlet of the macerator, a conduit leading from the outlet of the macerator to the inlet-opening of the shell, means for discharging the contents of the shell and macerator, and a spiral conveyer disposed within the shell and having a diameter substantially equal to the interior of the shell, the terminal end of the conveyer being adapted to sweep near the terminal end of the interior of the shell and pass the outlet-opening therein, combined substantially as set forth.

4. Pulping apparatus comprising, a macerator provided with an inlet and an outlet and with macerating mechanism adapted for propelling stuff from the inlet to the outlet, a shell provided with an outlet-opening and provided with an opening extending longitudinally in its top, a removable covering closing the major portion of the top-opening of the shell but leaving an open inlet at the initial end of the shell, a conduit placing the outlet-opening of the shell in communication with the inlet of the macerator, a conduit leading from the outlet of the macerator to the open-inlet of the shell, means for discharging the contents of the shell and macerator, and a spiral conveyer disposed within the shell and adapted to force the contents of the shell to the outlet leading to the macerator, combined substantially as set forth.

5. Pulping apparatus comprising, a macerator provided with an inlet and an outlet, a shell having an outlet communicating with the inlet of the macerator and provided also with an inlet-opening, a conduit placing the outlet-opening of the shell in communication with the inlet of the macerator, a conduit leading from the outlet of the macerator to the inlet-opening of the shell, means for discharging the contents of the shell and macerator, and mechanism for forcing stuff from the shell into the macerator at substantially the rate at which the macerator delivers stuff to the shell, combined substantially as set forth.

1,222,219. APPARATUS FOR UNLOADING AND DISTRIBUTING MATERIALS. WILLIAM A. LAFONT, St. Louis, Mo. Filed Jan. 20, 1916. Serial No. 73,120. (Cl. 193—20.)

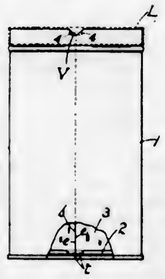
1. In an apparatus of the class described, the combination with a pit formed in the ground below a railway track and an adjacent deeper pit formed to the side of the railway track, of a discharge spout leading from the boot of the first mentioned pit into the deeper pit, a gate normally closing the lower end of said spout, a base plate fixed in the bottom of said pit, a receptacle pivotally mounted on said base plate immediately beneath the discharge end of said spout, a series of storage bins arranged on the opposite side of the deeper pit from the first mentioned pit, which storage bins are concentrically disposed with respect to the axis of the receptacle, track rails positioned between the row of bins and the receptacle, which rails are concentrically disposed with respect to the axis of said receptacle, a framework mounted for rolling movement upon said track rails, and an inclined elevator carried by said rolling framework, the lower end of which elevator is positioned within the pivotally mounted receptacle and the upper end of which elevator travels in a path above the tops of the bins.



2. In an apparatus of the class described, the combination with a pit formed beneath a railway track, which pit is provided with a discharge outlet and an adjacent deeper pit into which said outlet discharges, of a pivotally mounted receptacle located in said deeper pit beneath said outlet, a base plate fixed in the bottom of the pit and serving as a support for the receptacle, a series of storage bins positioned a substantial distance above the plane occupied by the railway track and arranged in an arcuate row which is concentric with the receptacle, a discharge chute leading outwardly from each bin, a gate in each of said chutes, an elevator frame connected to and leading from said receptacle to a plane above the storage bins, an endless conveyer arranged for operation in said frame, means carried by the frame for driving said endless conveyer, rolling supports for the upper portion of the elevator frame and rails for said rolling supports, said rails being concentric with the axis of the pivotally mounted receptacle.

1,222,220. [WITHDRAWN.]

1,222,221. BOX-LINER. CLARENCE LILE, Granite City, Ill., assignor to Superior Products Company, Granite City, Ill., a Corporation of Illinois. Filed Mar. 29, 1916. Serial No. 87,490. (Cl. 220—98.)

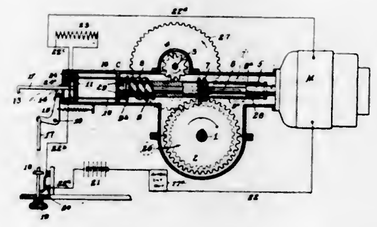


1. A box wall-liner comprising a flexible sheet insertible into the box and having its opposite ends brought into abutting relation, and means in the box at one end of the seam thus formed for drawing said ends into firm engagement.

2. In combination with a box closed at one end, an end liner provided with a marginal dove-tail recess or groove, a wall-liner comprising a flexible sheet disposed along the inner walls of the box and proportioned to have its free ends come into opposed relation when the sheet is deposited in the box, and suitable tongue sections at adjacent terminals of the free ends aforesaid jointly forming a tongue engaging the dove-tail recess aforesaid.

3. In combination with a box closed at one end, an end liner provided with a marginal dove-tail recess having side walls sloping toward the base of the recess, a wall liner comprising a sheet disposed along the inner walls of the box and proportioned to have its free ends come into contiguous and opposed relation when the sheet is deposited in the box, and suitable tongue sections at adjacent terminals of the free ends of the wall liner forming jointly a tongue insertible into the recess aforesaid, the sides of the tongue being beveled to conform to the slope of the sides of the recess.

1,222,222. AUTOMOBILE-STARTER. PAUL M. LINCOLN, Pittsburgh, Pa. Filed Feb. 26, 1913, Serial No. 750,805. Renewed June 30, 1916. Serial No. 106,957. (Cl. 74—36.)



1. The combination with an engine driven shaft and a motor and motor shaft, of devices adapted to drive the engine shaft by means of the motor shaft and devices to drive the motor shaft by means of the engine shaft when it becomes active, such devices including a shiftable gear sleeve having engagement in a plurality of positions with a plurality of gears connected to the engine shaft.

2. A gearing device for connecting an electric machine to an engine shaft so as to alternately drive and be driven thereby, comprising an engine shaft, two gears connected thereto, the motor shaft and a sliding sleeve on the motor shaft provided with two worms adapted to alternately engage said two gears connected to the engine shaft.

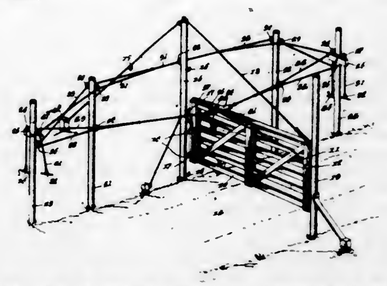
3. Gearing for connecting an engine shaft and a motor shaft for alternately driving the engine shaft by the motor and the motor by the engine shaft, comprising the engine shaft, a motor shaft having a splined sliding sleeve thereon, carrying a plurality of worms and operative gearing connected to the engine shaft and engaging said worms in alternation, substantially as described.

4. The combination with the shaft of an explosion engine, and the shaft of a dynamo-electric machine, of a train of gears connecting the engine shaft so as to be driven by the motor shaft, and a second train of gears connecting the engine shaft so as to drive the motor shaft, such gearing including, as a common element, a sliding gear sleeve splined on the motor shaft, substantially as described.

5. The combination with an engine shaft, of two gears fixed thereon, a dynamo-electric machine shaft, a sleeve splined thereon having a worm engaging one of the engine shaft gears and another worm, a supplementary gear connecting said second worm with the second gear on the engine shaft upon shifting of the sliding sleeve, and means to simultaneously shift the sleeve to start the engine shaft by means of the electric machine but automatically releasing and shifting the gearing upon active motion of the engine shaft.

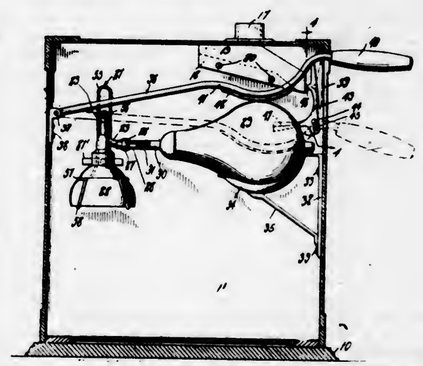
[Claim 6 not printed in the Gazette.]

1,222,223. GATE. THOMMAS W. MCGRATH, Silverton, Oreg. Filed July 14, 1916. Serial No. 109,367. (Cl. 39—41.)



A gate and actuating mechanism comprising a gate carrying post, a gate pivotally connected with said gate carrying post, a latch movably connected with said gate to releasably hold the gate in a closed position, a lever arm pivotally connected with said gate and having a transversely extending slot, a pin extending from the gate through the slot to limit the swinging movement of the lever arm, flexible means leading from said lever to said latch for moving the latch to a releasing position, supporting posts positioned upon opposite sides of said gate carrying post, and actuating lines carried by said gate carrying post and supporting posts and connected with said lever for moving the latch and then swinging the gate.

1,222,224. PERFUME-VENDING MACHINE. JOHN F. MCNEIL, Phoenix, Ariz. Filed Feb. 1, 1916. Serial No. 75,584. (Cl. 194—92.)



1. In a vending machine of the character described, a housing, a holder arranged in said housing, a perfume atomizer to be carried by said holder, the spout of said atomizer communicating exteriorly of said housing, a pneumatic bulb associated with said atomizer, means to support said bulb, an actuating lever pivoted at one end in said housing, the free end of said actuating lever projecting exteriorly of said housing, an engaging plate on said actuating lever to bear against said bulb whereby the same may be compressed upon the depression of the free end of the actuating lever, a rack bar fixed to said housing, means carried by said actuating lever to normally engage with said rack bar to prevent actuation of said lever, and means to become operative upon the positioning of a coin in said housing to shift said last mentioned means upon actuation of said lever whereby the lever may be moved into a position to compress said bulb, as and for the purpose specified.

2. In a vending machine of the character described, a housing, a holder detachably arranged in said housing, a perfume atomizer carried by said holder, the spout of said atomizer communicating exteriorly of said housing, a pneumatic bulb associated with said atomizer, means to support said bulb, an actuating lever pivoted at one end in said housing, the free end of said actuating lever projecting exteriorly of said housing, an engaging plate on said actuating lever to normally bear against said bulb whereby the latter may be compressed upon the depression of said actuating lever, a rack bar fixed to said housing, a collar movably mounted on said actuating lever, a pawl projecting from one side of said collar to normally engage with said rack bar whereby movement of said actuating lever will be prevented, the extension on said collar extending oppositely to said pawl, a lever pivotally mounted in said housing, an abutment on said lever, a coin chute associated with said housing, said abutment normally lying at the end of said coin chute, whereby upon the positioning of a coin in said chute, said abutment will be acted upon to shift said last mentioned lever into a position whereby said extension will ride upon the upper end of the same during the depression of said actuating lever thereby drawing said pawl out of engagement with the rack teeth of said rack bar and permitting said actuating lever to be moved into position to compress said bulb, as and for the purpose specified.

3. In a vending machine of the character described a housing, an atomizer formed in said housing and including a pneumatic bulb, an actuating lever pivoted at one end in said housing and having its free end projecting exteriorly of said housing, said actuating lever bearing against said bulb to compress the bulb upon depression of the free end of the actuating lever, a rack bar affixed to said housing, means carried by said actuating lever to normally engage said rack bar and prevent actuation of said lever, and means to become operative upon the positioning of a coin in said housing to shift said last mentioned means upon actuation of said lever whereby the lever may be moved to a position to compress the bulb.

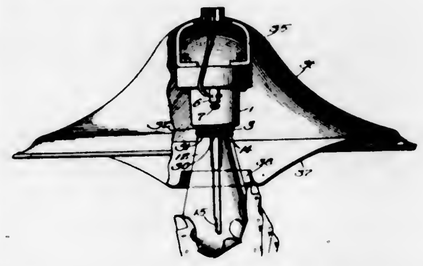
4. In a vending machine of the character described a housing, a bulb in said housing, an actuating lever pivoted at one end in said housing with its free end projecting exteriorly of the housing, the lever bearing against said bulb for compressing the bulb upon depression of said actuating lever, a rack bar in said housing, a pawl mounted upon said actuating lever to normally engage the rack bar and prevent downward movement of the lever, said pawl being provided with a handle extension, a coin chute associated with said housing, a lever pivotally mounted in said housing and having an abutment normally lying at the end of the coin chute whereby a coin passing through said chute will engage the abutment to shift the last mentioned lever into position whereby the handle extension of the pawl will ride upon the upper end portion of the last mentioned lever during compression of the actuating lever and move the pawl out of engagement with the rack.

5. In a vending machine a housing, a pneumatic bulb mounted in said housing, a rack bar in said housing, a stop lever movably mounted in the housing, an actuating element movably mounted in the housing for engagement with the bulb to compress the bulb upon movement of the actuating element in one direction, the stop lever normally extending adjacent a coin chute for engagement by a coin to move the stop out of its normal position, and a pawl movably connected with the actuating element to engage the rack and prevent movement of the lever to an operative position with respect to the bulb, the stop lever when swung out of its normal position engaging the pawl to swing the same out of engagement with the rack and permit the actuating element to be moved into operative engagement with the bulb.

[Claim 6 not printed in the Gazette.]

1,222,225. LAMP-SOCKET. ARTHUR C. MCWILLIAMS, Chicago, Ill. Filed Apr. 14, 1916. Serial No. 91,016. (Cl. 175—276.)

1. For use in series electric lighting, the combination of a metallic shell having an external thread for screwing into a lighting socket, said shell being adapted to make electric connection with the outer terminal of an electric lamp, a center contact for engaging the center terminal of the lamp, said center contact being fastened to but insulated from the shell, and a spring pressing toward a part of said shell for holding a dielectric in position, the spring being in electric connection with said center contact, and said spring, when the parts are assembled, being free from the adjacent parts of the device.



2. In a device of the class described, a shell screwing into a lighting socket, a center contact fastened to but insulated from said shell, a spring electrically connected to said center contact and pressing toward some part of said shell for holding a dielectric, and means for securely attaching the shell to the base of an incandescent electric lamp whereby the shell and parts attached thereto may be unscrewed from the socket by rotatively manipulating the lamp only.

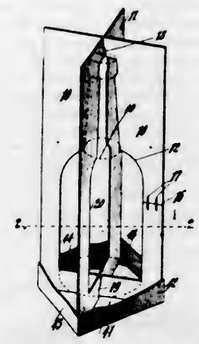
3. In a device of the class described, a metallic shell having an external thread for screwing into a lighting socket, a clamp for securely attaching the shell to the base of an electric lamp whereby the shell may be unscrewed from the socket by grasping the lamp and imparting a rotary movement thereto, said shell being in electric connection with the outer contact of the lamp when the lamp is in place in the shell, a center contact fastened to but insulated from said shell, for engaging the center contact of the lamp, and a spring fastened to but insulated from said shell, the free portion of the spring pressing radially outward toward some portion of the shell for holding a dielectric in position.

4. In a device for electric lighting, an externally threaded shell for receiving the base of the lamp, said shell screwing into the lighting socket and being in electric connection with the outer contact of the lamp when the lamp is in place, a center contact mounted on but insulated from said shell, said center contact engaging the center contact of the lamp when the latter is in place, a dielectric, a backing for said dielectric, and a spring for exerting constant pressure upon said dielectric to press it against its backing, said spring and the backing being electrically connected, one to the shell and the other to the first mentioned center contact.

5. In a device for series electric lighting, a shell for receiving the base of the lamp, said shell having an external thread for screwing into a lighting socket and being in electric connection with the outer contact of the lamp when the lamp is in place, a center contact mounted on but insulated from said shell, said center contact engaging the center contact of the lamp when the latter is in place, a dielectric, a backing for said dielectric, and a spring for exerting constant pressure upon said dielectric to press it against its backing, said spring and the backing being electrically connected, one to the shell and the other to the first mentioned center contact, said spring being free of surrounding objects when the parts are assembled, whereby it may exert uniform pressure upon the dielectric regardless of the position of the lamp in the shell or of the shell in the socket.

[Claims 6 to 12 not printed in the Gazette.]

1,222,226. CONTAINER. CORNELIUS F. MADIGAN, Brooklyn, N. Y. Filed Mar. 23, 1914. Serial No. 826,621. (Cl. 217—26.)



1. A container comprising flexible webs interlocking in angular relation and provided respectively with cutouts disposed on the axis of intersection of said webs and jointly forming a skeleton receptacle corresponding to the peripheral contour of the article to be inclosed.

2. A container comprising flexible webs interlocking in angular relation and provided respectively with cutouts disposed on the axis of intersection of said webs and jointly forming a skeleton receptacle corresponding to the peripheral contour of the article to be inclosed, and a casing inclosing said interlocked webs.

3. A container comprising a rectangular casing, and separable flexible interlocking webs disposed at right angles to each other diagonally of said casing and provided with cutouts disposed on the axis of intersection of said webs and jointly forming a skeleton receptacle corresponding to the peripheral contour of the article to be inclosed.

4. A container comprising a rectangular casing and separable flexible interlocking webs disposed at right angles to each other diagonally of said casing and provided with cutouts disposed on the axis of intersection of said webs and jointly forming a skeleton receptacle corresponding with the shape of the article to be inclosed, the axis of the interlocking webs being substantially coincident with the axis of the article.

5. A container comprising webs, each having a cutout corresponding to the shape of the article to be inclosed, said webs being arranged angularly to each other with the axes of the two webs substantially coincident with the axes of the cutouts, and means holding said two webs in fixed angular position to each other.

[Claims 6 and 7 not printed in the Gazette.]

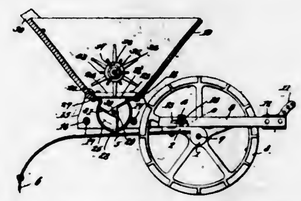
1,222,227. CONTAINER. CORNELIUS F. MADIGAN and THOMAS WEBSTER, Brooklyn, N. Y. Filed May 26, 1915. Serial No. 30,499. Renewed Sept. 29, 1916. Serial No. 122,942. (Cl. 217—34.)



1. A container of the character described comprising a series of cells, a separable flat sheet of flexible material covering the bottom of said container and provided with upward embossed yielding bulges extending into the lower ends of said cells, and a separable flat sheet of flexible material covering the top of said container and having a series of downward embossed yielding bulges extending into the tops of said cells, said upward and downward yielding bulges engaging the opposite ends of the eggs and being automatically adjustable within the cells to the different lengths of the eggs.

2. A container comprising a series of containing cells having laterally yieldable double walls whereof the members are spaced apart, a separable flat flexible sheet provided with upward embossed yielding bulges extending into the lower ends of said cells, and a separable flat flexible sheet covering the top of said container and having a series of downward embossed yielding bulges extending into the tops of said cells, said downward and upward embossed bluges of said flat sheets engaging the opposite ends of the eggs and automatically adjusting themselves within the cells to the varying lengths of the eggs.

1,222,228. COTTON-SEED PLANTER. MCCASLAN Y. MANLEY, Newnan, Ga. Filed July 18, 1916. Serial No. 109,954. (Cl. 111—7.)



1. In a cotton seed planter and the like, the combination with a hopper, a wheel supported frame, and side boards connecting the hopper to the frame, said hopper having an outlet opening in the bottom thereof, of a segmental housing between the side boards and in communication with said outlet opening, said housing having an opening in the bottom thereof, a shaft extending through the housing and side boards and concentric with the housing, blades revoluble with the shaft and dividing the interior of the housing into separate pockets, each blade being tangent to the shaft, agitating means within the hopper, and means operated by the forward movement of the frame for rotating the agitating means and blades simultaneously.

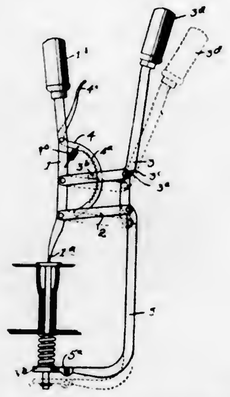
2. The combination with a wheel supported frame, of a hopper, side boards connecting the hopper to the frame, said hopper having an opening in the bottom thereof, means extending into the opening for varying the width of the opening, a segmental housing interposed between the side boards for receiving material from said opening, said housing having a discharge opening in the bottom thereof, a shaft extending transversely through the housing and concentric therewith, blades revoluble with the shaft and dividing the housing into separate pockets, each blade being tangent to the shaft, a shaft extending transversely through the hopper, agitating means thereon, certain of said means being movable into the outlet opening of the hopper, and means operated by the supporting wheel for simultaneously rotating the blades and agitating means.

1,222,229. VALVE-RELEASING DEVICE. ROBERT L. MAPSON, San Diego, Cal., assignor of one-half to Lorenzo Sperbeck, La Mesa, Cal. Filed Mar. 20, 1916. Serial No. 85,263. (Cl. 29—87.1.)

1. In a device of the class described, the combination of a stationary or supporting member adapted to fit the top end of a valve stem, a handle on the upper end for supporting it in a normally vertical position, link members pivotally mounted thereon and spaced apart from each other, a movable member spaced apart from said stationary member and pivotally mounted between said links in their spaced relation and means for moving said movable member upwardly and downwardly relatively to said stationary member.

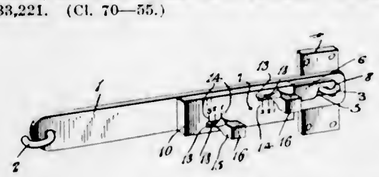
2. In a device of the class described, the combination of a stationary or supporting member adapted to fit the top

end of a valve stem, a handle on the upper end for supporting it in a normally vertical position, link members pivotally mounted thereon and spaced apart from each other, a movable member spaced apart from said stationary member and pivotally mounted between said links in their spaced relation and means for moving said movable member upwardly and downwardly relatively to said stationary member and means for locking said movable member in certain relative position to said stationary member.



3. In a device of the class described, the combination of a stationary or supporting member adapted to fit the top end of a valve stem, a handle on the upper end for supporting it in a normally vertical position, link members pivotally mounted thereon and spaced apart from each other, a movable member spaced apart from said stationary member and pivotally mounted between said links in their spaced relation provided with adjustable means for fitting different sized washers and means for moving said movable member upwardly and downwardly relatively to said stationary member and means for locking said movable member in certain relative position to said stationary member.

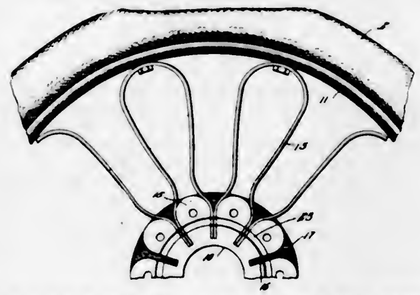
1,222,230. PERMUTATION HASP-LOCK. HENRY E. MILLER, Moro, Ark. Filed Nov. 24, 1916. Serial No. 133,221. (Cl. 70—55.)



1. The combination with a hasp of a locking member pivotally mounted intermediate of its ends to one face of the hasp, said locking member provided in its upper and lower longitudinal edges with recesses, the side walls of which are curved, a casing secured to the hasp and partially inclosing said locking member, said casing provided in its inner face with a pair of recesses, said front wall of the casing being provided with slots communicating with the recesses, sliding blocks mounted in the recesses, removable lugs carried by the sliding blocks and adapted to aline with the openings in the locking member and means extending through the slots of the casing and connected to the sliding blocks for moving the lugs into and out of registration with the openings in the locking member.

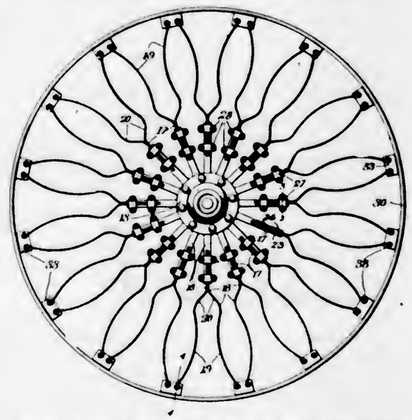
2. The combination with a hasp of a locking member pivotally secured to one face of the hasp, said locking member provided in its upper and lower longitudinal edges with recesses, the walls of the recesses being curved, a casing secured to the face of the hasp and partially covering the locking member, the rear face of the casing being provided near its upper and lower longitudinal edges adjacent its opposite ends with recesses, said casing being provided with slots communicating with the recesses, slide blocks slidably mounted in the recesses, removable lugs carried by the slide blocks and adapted to aline with the recesses in the locking member, sliding members extending through the slots of the casing movable on the outer face of the casing and connected to the slide blocks for moving the lugs into and out of registration with the recesses in the locking members and characters on the face of the casing.

1,222,231. WHEEL-HUB. AUGUSTA V. MITCHELL, Washington, D. C. Filed June 20, 1913. Serial No. 774,888. (Cl. 152—50.)



In a wheel hub, the combination with a body member having radial projections thereon at regular intervals separated to form slots between them having straight parallel sides, the slots being closed at one end, the outer ends of the projections being rounded on a curve in the plane of the wheel, of a removable plate closing the other end of said slots and spring spokes having straight ends and being bent to lie slightly over and against the outer curved ends of said projections.

1,222,232. WHEEL FOR ARTILLERY-CARRIAGES. AUGUSTA VIRGINIA MITCHELL, Washington, D. C. Filed Apr. 14, 1914. Serial No. 831,790. (Cl. 152—50.)



1. In a wheel of the class described, the combination of a rim, a hub, a member having arms provided with spoke receiving recesses and notches at the edges of said recesses, clamping flanges mounted on the hub and securing said member thereto, spring spokes having their outer ends secured to said rim, and their inner ends fitting said recesses and provided with notches which correspond to the notches in said arms, and means for retaining said spokes in the recesses comprising devices which extend transversely of the arms across the recesses and the spokes therein, said devices fitting in the notches in said arms and spokes and locking the latter to the hub.

2. In a wheel of the class described, the combination with a hub construction having radial recesses therein in the form of grooves open at one side and end only, and notches at the open sides of said recesses, of flat spring metal spokes fitting tightly within said recesses and having notches along the edge thereof adjacent the open side of said recesses registering with the notches in the hub, and means for retaining the spokes in place comprising a member fitting the notches in the hub and the notches in the edges of the spokes and a device connected to the ends of the member and passing around the grooved portion of the hub and the spokes therein.

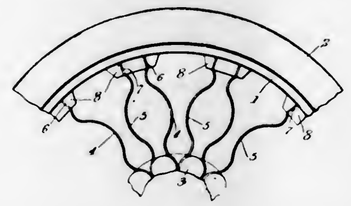
3. In a wheel of the class described, the combination with a hub provided with radial arms having recesses therein in the form of grooves open at the side, of flat spring metal spokes having parts at their inner ends fitting tightly within said recesses and adapted to be inserted from the side of the hub, each of said arms on the hub having a plurality of notches therein and each spoke having a corresponding number of notches registering with the notches in the arms, and devices coöperating with the notched portions of the spokes and arms to lock the spokes to the hub.

4. In a wheel of the class described, the combination with a hub construction having radial recesses therein in the form of grooves terminating at their inner ends in sockets, of flat spring metal spokes fitting in said grooves and extending into and fitting tightly within said sockets the inner ends of said spokes being cut away on a curve on the side fitting in the bottom of said grooves, and means for rigidly securing said spokes in said grooves near the outer ends of said grooves.

5. In a wheel of the class described, the combination with a hub, of securing flanges on said hub, and spokes fitting between said flanges, the end of each spoke having a flat portion provided with a curved edge at its inner end.

[Claims 6 to 15 not printed in the Gazette.]

1,222,233. SPRING-SPOKE WHEEL. AUGUSTA V. MITCHELL, Washington, D. C. Filed July 8, 1914. Serial No. 849,813. (Cl. 152—50.)



1. In a wheel of the class described including a hub and felly, of spokes made of spring metal strips arranged in pairs, the spokes of each pair being bent on a gradual curve toward each other at the hub and then on a gradual curve outward away from each other, then inward toward each other and then outward away from each other whereby there will be two reverse curves without sharp angles in each spoke between the hub and the felly, the radius of curvature in each instance being greater than the amount of the lateral bends.

2. In a wheel of the class described including a hub and felly, of spokes made of spring metal strips arranged in pairs, the spokes of each pair being bent on a gradual curve toward each other at the hub and then on a gradual curve of considerably greater radius outward away from each other and then inward toward each other and then outward away from each other at the rim on a curve similar to that at the hub, the said spoke being without sharp bends from one end to the other.

3. In a wheel of the class described including a hub and felly, of spokes made of spring metal strips arranged in pairs, the spokes of each pair having therein a plurality of gradual reverse bends, the bends in the spokes of each pair corresponding but facing in opposite directions and the center of one of said bends being midway between the hub and the felly.

1,222,234. VERTICALLY-ADJUSTABLE POST. FRANK X. MÜLLER, Buffalo, N. Y. Filed July 26, 1916. Serial No. 111,491. (Cl. 254—98.)



1. A vertically adjustable post comprising a tubular column, open at its upper end, an interiorly-threaded collar having a peripheral flange at an intermediate point of its height superimposed on the upper end of the column and also having end portions adapted to be disposed in the column, and a screw extending through and engaging the thread of the collar.

2. In means for the purpose described, the combination of a suitable support, a collar arranged on said support and interiorly threaded and having a radially disposed bore the outer portion of which is threaded, a screw extending through the collar and engaging the thread thereof, a soft metal plug arranged in the inner portion of the radial bore of the collar, and a set screw bearing in the outer portion of said bore and also bearing at its inner end against said plug, whereby said plug is enabled to prevent setting of the parts.

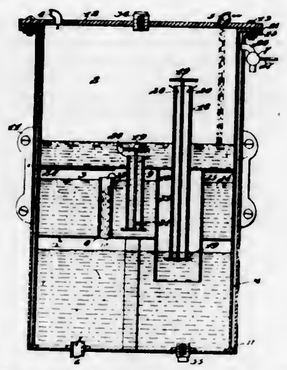
1,222,235. FUEL-FEEDING DEVICE FOR AUTOMOBILES. WILLIAM H. MUZZY, Detroit, Mich. Filed Apr. 1, 1915, Serial No. 18,533. Renewed Mar. 1, 1917. Serial No. 151,831. (Cl. 158—36.)

1. In a fuel feeding system the combination with an elevated vacuum tank, of a supply tank, a suction pipe for creating a vacuum in the vacuum tank, a gasolene supply pipe for the vacuum tank, an air vent for the vacuum tank arranged to be covered and uncovered by the fuel in the supply tank, a movable dam in the air vent for obstructing passage in one direction only, and means connecting the vacuum tank and the supply tank.

2. In a fuel feeding system the combination with an elevated vacuum tank, of a supply tank, a suction pipe for creating a vacuum in the vacuum tank, a gasolene supply pipe for the vacuum tank, a vertical air vent pipe for the vacuum tank arranged to be covered and uncovered by the fuel in the supply tank, a dam in the vent pipe comprising a rod with disks on its opposite ends to contact with the ends of the pipe, and means connecting the vacuum tank and supply tank.

3. In a fuel feeding system the combination with an elevated vacuum tank, of a suction pipe for the same, a gasolene supply pipe for said tank, an air vent for the vacuum tank opened and closed by the liquid in the supply tank, an intermediate tank, a pipe connecting the

vacuum tank and intermediate tank, a movable dam in said pipe and means connecting the intermediate tank and the supply tank.

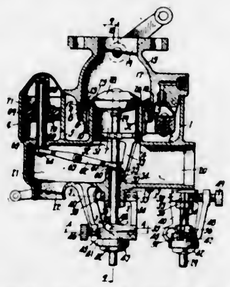


4. In a fuel feeding system the combination with an elevated vacuum tank, of a suction pipe for the same, a gasolene supply pipe for said tank, an independent supply tank, an air vent for the vacuum tank opened and closed by the liquid in the supply tank, and an independent intermediate tank, the vacuum tank resting on the intermediate tank and both of said tanks inclosed in the supply tank.

5. In a fuel feeding system the combination with an elevated vacuum tank, of a suction pipe for the same, a gasolene supply pipe for said tank, a supply tank, an air vent for the vacuum tank opened and closed by the liquid in the supply tank, an intermediate tank, a pipe from the vacuum tank to the intermediate tank, a movable dam in this pipe, means connecting the intermediate tank and the supply tank, and a movable dam in the air vent.

[Claims 6 to 11 not printed in the Gazette.]

1,222,236. CARBURETER. CHARLES L. NEDOMA, Detroit, Mich., assignor of one-half to Frank M. Hawley, Detroit, Mich. Filed Mar. 2, 1916. Serial No. 81,590. (Cl. 261—40.)



1. A carbureter comprising means for forming an air passage, a fuel reservoir, a plurality of fuel passages in communication with said reservoir, said passages opening into said air passage through the wall thereof, means for regulating the size of the free opening through the fuel passages, said means being operative at the discharge ends of said passages, a suction controlled air valve, and means whereby a movement of the air valve is made to control the opening regulating means for the fuel passages.

2. A carbureter comprising means for forming an air passage, a fuel reservoir, a plurality of fuel passages in communication with said reservoir, said passages opening into said air passage through the wall thereof at substantially the same level, means for regulating the free communication of the passages with the reservoir, said means being operative at the discharge end of said reservoir, a suction controlled air valve, said valve being shaped to deflect the air current over the ends of the fuel passages in a thin sheet, and means whereby a movement of the air valve controls the communication regulating means for the fuel passages.

3. A carbureter comprising means for forming an air passage circular in cross section, a fuel reservoir, a plurality of fuel passages in communication with said reservoir, said passages opening into said air passage through the wall thereof, a rotary fuel valve for regulating the free communication of the passages with the reservoir, a seat with which the fuel valve coöperates a suction controlled air valve, and means whereby the air valve rotates the fuel valve to control the flow of fuel without approaching or receding from said seat.

4. A carbureter comprising means for forming an air passage circular in cross section, a fuel reservoir, a plurality of fuel passages in communication with said reservoir, said passages opening into said air passage through the outer wall thereof, a rotary tubular fuel valve having passages therethrough corresponding to the fuel passages for determining the free opening through said fuel passages, a suction controlled air valve arranged to approach and recede from the discharge ends of the passages, and means whereby the air valve controls the rotary fuel valve.

5. A carbureter comprising in combination a tubular casing forming an air passage, a fuel jet leading to the air passage, a fuel valve conforming to the wall of the air passage for regulating the size of the free opening through the fuel jet, a suction controlled air valve, and means whereby a movement of the air valve is made to cause a simultaneous movement of the fuel valve whereby the size of the opening through the jet is determined.

[Claims 6 to 27 not printed in the Gazette.]

1,222,237. BROOM. WARREN PARKER NEWELL and CHARLES WALTER CARMAN, Hamburg, Iowa. Filed Aug. 3, 1916. Serial No. 112,975. (Cl. 15—19.)

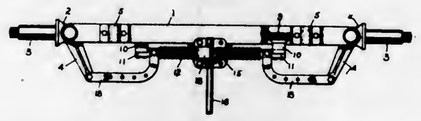


1. A device of the class described comprising a broom body of suitable material, a band surrounding the same intermediate its ends, a yoke having its sides pivotally connected with the ends of said band, a cross arm pivoted to each side and adapted to swing across the opposite edges of the yoke, said arms having expansible and contractible free ends adapted to be positioned in the opposite sides of the yoke.

2. A device of the class described comprising a broom body of suitable material, a band surrounding the same intermediate its ends, a yoke having its sides pivotally connected with the ends of said band, a cross arm including a pair of spring wires secured intermediate their ends and diverging outwardly therefrom, the extremities of one end of said wires being bent laterally and pivotally mounted in openings in the sides of the yoke, the opposite extremities of the wires having laterally outwardly bent extremities, and said ends adapted to be compressed and be positioned in elongated slots in the opposite sides of the yoke.

3. A device of the class described comprising a broom body of suitable material, a band surrounding the same intermediate its ends, a substantially U-shaped member having its head portion formed with upturned edges, handle securing means intermediate the ends of said head, substantially tubular flattened side bars for said member with laterally extending upper extremities secured in the ends of the head portion, said side bars having their lower ends pivotally connected with the opposite ends of the band that surrounds the broom body, a locking cross bar pivoted in the diagonally opposite edges of the side bars, and a filler in each side bar to hold the cross bars in operative position.

1,222,238. STEERING DEVICE FOR AUTOMOBILES. ZERN NIELSEN, Omaha, Nebr. Filed Oct. 12, 1916. Serial No. 125,149. (Cl. 21—198.)



1. A steering device of the specified class, comprising a channeled axle having steering-knuckle arms; a pair of sliding guides seated in the axle; a distance bar connecting the guides; links connecting the bar with the arms; and means for moving the distance bar endwise.

2. A steering device of the specified class, comprising a longitudinally channeled axle, provided with steering knuckles having arms; a pair of slidable guide blocks retentively seated in the axle channel; a distance bar rigidly connecting the block; a pair of links between the distance bar and the knuckle arms respectively; a worm thread on the distance bar; a worm gear mounted in a fixed position on the axle and meshing with the worm thread; and manually operable means for rotating the worm gear.

3. A steering device of the specified class, comprising a bar axle provided with steering knuckles having arms; a pair of sliding guides carried by the axle; a distance bar connecting the guides; links between the distance bar and the arms; and gearing for moving the distance bar endwise.

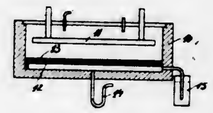
4. A steering device of the specified class, comprising a bar axle provided with steering knuckles having arms; a pair of sliding guide blocks mounted on the axle; a distance bar connecting the guide blocks and provided with a worm thread; gearing for moving the connecting bar endwise; and a pair of links between the distance bar and the knuckle arms respectively.

5. A steering device of the specified class, comprising a bar axle provided with steering knuckles having arms; a pair of sliding guides carried by the axle; a distance bar carried by the guides; gearing for moving the distance bar endwise; and link connections between the distance rod and the free ends of the knuckle arms.

[Claims 6 and 7 not printed in the Gazette.]

1,222,239. ELECTROLYSIS OF ALKALINE HALOIDS. KARL OCHS, Charlottenburg, Germany, assignor to Siemens & Halske, A. G., Berlin, Germany, a Corporation of Germany. Filed Aug. 26, 1913. Serial No. 786,687. (Cl. 204—58.)

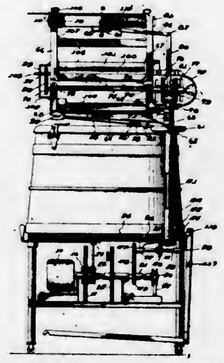
1. The process for electrolyzing alkaline haloids in cells with horizontal diaphragms which consists in controlling the continuous discharge of the generated hydrogen gas so as to cause said gas to permanently fill the whole cathode space below the diaphragm with constant pressure, and drawing off the hydroxid solution from the bottom of said space so as to only form a thin layer on said bottom, thereby generating an aerostatic counter-pressure to the hydrostatic pressure of the electrolyte above the diaphragm.



2. In an apparatus for electrolyzing alkaline haloids, an anode chamber, a cathode chamber, a horizontal diaphragm between said chambers, a discharge for the hydroxid solution from the bottom of said cathode chamber, a discharge for the hydrogen from the upper portion of said cathode chamber below said diaphragm, and means for controlling the pressure in said cathode chamber so as to counteract the hydrostatic pressure of the electrolyte above said diaphragm.

3. In an apparatus for electrolyzing alkaline haloids, an anode chamber, a cathode chamber, a horizontal diaphragm between said chambers, a discharge for the hydroxid solution from the bottom of said cathode chamber, a discharge for the hydrogen from the upper portion of said cathode chamber below said diaphragm, and a valve in said discharge for the hydrogen, for controlling the pressure in said cathode chamber so as to counteract the hydrostatic pressure of the electrolyte above said diaphragm.

1,222,240. COMBINED WASHING AND WRINGING MACHINE. HARRY L. OGG, Newton, Iowa, assignor to Automatic Electric Washer Company, Newton, Iowa, a Corporation. Filed May 6, 1916. Serial No. 95,887. (Cl. 68—32.)

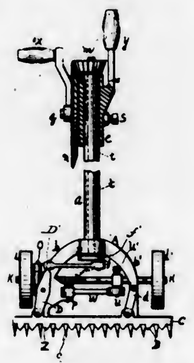


1. In a machine of the class described, a bearing socket provided with a supporting shoulder, a tubular upright bearing member seating at its lower end within said socket and resting upon the shoulder, a bracket bracing the upper portion of the said tubular bearing member, a rack member mounted upon the bracket, an arm extending from the said tubular bearing member, wringer mechanism supported by the arm, an operating shaft rotatably mounted within the bearing member, gear connection between the said shaft and the said wringer mechanism, and a pawl carried by the said arm and engaging the said rack member.

2. In a machine of the class described, a supporting and bearing device including a socket member, an upright tubular bearing member supported at its lower end

for rotation in the socket member, a bracket rotatably supporting the upper end of the said bearing member, a head supported by the bracket and having an annular flange provided at intervals with notches, the upper end of the bearing member extending above the said head, a supporting arm secured upon the said upper end of the bearing member, wringer mechanism supported upon the said arm, a pawl mounted upon the underside of the arm and engaging at its end interchangeably in the said notches, a handle member at the outer end of the arm, connection between the handle member and the pawl for actuating the latter, a shaft journaled in the bearing member, means for rotating the said shaft, and gear connection between the upper end of the shaft and the wringer mechanism.

1,222,241. LAWN-MOWER AND LAWN-TRIMMER. WILLIAM S. PATERSON and MAY H. PATERSON, Oakland, Cal., assignors of one-half to George R. Andrews, Fresno, Cal. Filed May 12, 1914. Serial No. 838,115. (Cl. 56—19.)



1. In a lawn mower, the combination of a frame consisting of a tube terminating at the bottom in a member with two branches, a shaft journaled in said handle, means for communicating motion thereto, a cutter bar rigidly attached to said member with the branches, guards on said cutter bar having lateral interstices therein in a common plane, a serrated cutter blade movable within said interstices, means for transmitting motion from said shaft to the serrated cutter blade, a truck consisting of an axle and a wheel on each end thereof, a hinged member connecting one of said branched members with the adjacent end of the axle, a block slidably disposed on the axle, an arm pivoted at one end to said block and at the other end of the branch hinged to the axle, and means for attaching said block to said axle.

2. In a lawn mower, the combination of a frame consisting of a tube terminating at one end in a member with two branches, a shaft journaled in said handle, means at the upper end of said shaft for communicating rotary motion to the shaft, a cutter bar having guards with interstices therein attached to the member with the branches, a cutter blade movable within such interstices, means for transmitting motion from said shaft to the cutter blade, a truck consisting of an axle, with a wheel on each end thereof, hinged means for attaching the axle to one of the branches, and means for fastening the branch not thus hinged, to said axle.

1,222,242. CLOTHES-DRIER. DANIEL H. PAYNE and EVYLEN C. WOODWORTH, Boyes Springs, Cal. Filed Aug. 4, 1916. Serial No. 113,137. (Cl. 68—34.)

1. In a clothes drier structure, a longitudinally extensible vertically arranged suspending post composed of a plurality of telescopically connected sections, an attaching plate attached to the upper end of the uppermost of said sections, a rack carried by the lower end of the lowermost of said sections, a pin carried by the upper end of the lowermost of said sections, a cord connected to said pin and extending upwardly through the sections, a pulley rotatably carried by said attaching plate, said cord extending over said pulley and downwardly therefrom upon the outside of said sleeve, a collar mounted upon the lowermost of said sections, a plurality of hooks pivotally carried by the uppermost of said sections and adapted for engaging said collar for holding said sections in a telescoped position, said hooks having inwardly extending lugs formed upon their inner edges, the edges of said lugs being inclined to permit of the riding of the periphery of said collar thereover, rings carried by the outer surface of the upper ends of said sections, stops carried by said sections and adapted for engagement with said rings for limiting the downward or extensible movement of said sections, said stops formed by the indented portions of said sections.



2. In a clothes drier structure, a longitudinally extensible vertically arranged suspending post composed of a plurality of telescopically connected sections, an attaching plate attached to the upper end of the uppermost of said sections, a rack carried by the lower end of the lowermost of said sections, a pin carried by the upper end of the lowermost of said sections, a cord connected to said pin and extending upwardly through the sections, a pulley rotatably carried by said attaching plate, said cord extending over said pulley and downwardly therefrom upon the outside of said sleeve, a collar mounted upon the lowermost of said sections, a plurality of hooks pivotally carried by the uppermost of said sections and adapted for engaging said collar for holding said sections in a telescoped position, said hooks having inwardly extending lugs formed upon their inner edges, the edges of said lugs being inclined to permit of the riding of the periphery of said collar thereover, rings carried by the outer surface of the upper ends of said sections, stops carried by said sections and adapted for engagement with said rings for limiting the downward or extensible movement of said sections.

3. In a clothes drier structure, a longitudinally extensible vertically arranged suspending post composed of a plurality of telescopically connected sections, an attaching plate attached to the upper end of the uppermost of said sections, a rack carried by the lower end of the lowermost of said sections, a pin carried by the upper end of the lowermost of said sections, a cord connected to said pin and extending upwardly through the sections, a pulley rotatably carried by said attaching plate, said cord extending over said pulley and downwardly therefrom upon the outside of said sleeve, a collar mounted upon the lowermost of said sections, a plurality of hooks pivotally carried by the uppermost of said sections and adapted for engaging said collar for holding said sections in a telescoped position, said hooks having inwardly extending lugs formed upon their inner edges, the edges of said lugs being inclined to permit of the riding of the periphery of said collar thereover, rings carried by the outer surface of the upper ends of said sections, stops carried by said sections and adapted for engagement with said rings for limiting the downward or extensible movement of said sections, said stops formed by the indented portions of said sections.

1,222,243. MANUFACTURE OF GLASSWARE. KARL E. PEILER, Hartford, Conn., assignor to Hartford-Fairmont Company, Canajoharie, N. Y., a Corporation of New York. Filed June 24, 1915. Serial No. 36,082. (Cl. 49—62.)



1. The method of severing molten glass, which consists in forming a reduced neck in the glass and passing an electric current through the neck lengthwise thereof.

2. The method of severing a column of molten glass which consists in reducing its cross-section approximately at the desired point of severance, and passing an electric current lengthwise through the column and the said reduced portion.

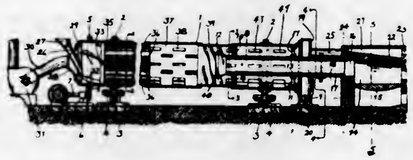
3. The method of separating a gather of molten glass from a supply of the glass, which consists in forming a reduced neck in the glass between the gather and its supply, and passing an electric current through the neck lengthwise thereof.

4. The method of detaching a gather from a supply of molten glass, which consists in partly separating the gather from the supply, leaving a connecting neck of reduced cross-section between them, and passing an electric current lengthwise of the connecting neck from the gather to the supply, or vice versa.

5. The method of forming and separating successive gathers of molten glass from a supply of such glass, which consists in partly detaching the successive gathers from the supply to form a reduced neck between them, and passing an electric current through the said neck lengthwise thereof.

[Claims 6 to 12 not printed in the Gazette.]

1,222,244. MECHANICAL ROTARY DRIER. WILLIAM E. PRINDLE, London, Ohio, assignor to Buckeye Drier Company, London, Ohio, a Firm composed of William E. Prindle and H. M. Chaney. Filed Aug. 5, 1915. Serial No. 43,786. (Cl. 34—6.)



1. A rotary drier comprising an outer cylinder provided adjacent its front end with a hot air outlet, means for feeding material to the front end of said cylinder, a hot air producer, an inner cylinder within and in communication with said outer cylinder and communicating at its rear end with said producer, said inner cylinder extending into the rear portion only of said outer cylinder a distance to prevent direct contact of the heated gases with the material after it has passed through said outer cylinder a distance to be in a comparatively dry state, a suction device connected to said hot air outlet to cause a flow of hot air in a direction opposite to the travel of the material through said outer cylinder, and means for permitting an inflow of air into the rear of said outer cylinder and in the space between it and said inner cylinder.

2. A rotary drier comprising an outer cylinder provided adjacent its front end with a hot air outlet, means for feeding material to the front end of said cylinder, a hot air producer, an inner cylinder within and in communication with said outer cylinder and communicating at its rear end with said producer, said inner cylinder extending into the rear portion only of said outer cylinder a distance to prevent direct contact of the heated gases with the material after it has passed through said outer cylinder a distance to be in a comparatively dry state, a suction device connected to said hot air outlet to cause a flow of hot air in a direction opposite to the travel of the material through said outer cylinder, and auxiliary means for introducing heated air from said furnace into the rear portion of the space formed between said inner and outer cylinders.

3. A rotary drier comprising an outer cylinder provided adjacent its front end with a hot air outlet, means for feeding material to the front end of said cylinder, a hot air producer, an inner cylinder within and in communication with said outer cylinder and communicating at its rear end with said producer, said inner cylinder extending into the rear portion only of said outer cylinder a distance to prevent direct contact of the heated gases with the material after it has passed through said outer cylinder a distance to be in a comparatively dry state, a suction device connected to said hot air outlet to cause a flow of hot air in a direction opposite to the travel of the material through said outer cylinder, a hot air space other than its combustion chamber formed in said hot air producer independent of the operation of said producer, and a conduit connecting said space and the space formed between said inner and outer cylinders.

4. A rotary drier comprising an outer cylinder provided adjacent its front end with a hot air outlet, means for feeding material to the front end of said cylinder, a hot air producer, an inner cylinder within and in communication with said outer cylinder and communicating at its rear end with said producer, said inner cylinder extending into the rear portion only of said outer cylinder a distance to prevent direct contact of the heated gases with the material after it has passed through said outer cylinder a distance to be in a comparatively dry state, a refractory lining for said inner cylinder, a suction device connected to said hot air outlet to cause a flow of hot air in a direction opposite to the travel of the material through said outer cylinder, and means for permitting an inflow of air into the rear of said outer cylinder and in the space between it and said inner cylinder.

5. A rotary drier comprising a rotatable outer cylinder provided with a hot air outlet, a feed means communicating with the interior of said cylinder, an inner cylinder in communication with and within said outer cylinder, a hot air producer connected to one end of said inner cylinder, and means for preventing the cascading of the material in front of the open end of said inner cylinder as said outer cylinder rotates.

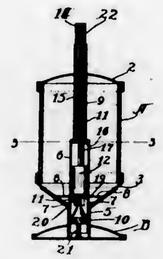
[Claims 6 to 16 not printed in the Gazette.]

1,222,245. MEASURING-CONTAINER. JOHN SCHMOLLER, St. Paul, Minn. Filed June 30, 1916. Serial No. 106,821. (Cl. 221—102.)

1. An article of the class described, comprising a container having an outlet opening, a measuring plunger slidably positioned in said opening and formed with a finger engageable part projecting beyond the top of the container, and a stand for said container, said stand being provided with a portion normally engaged with and preventing said plunger being depressed when said plunger is in position upon the stand.

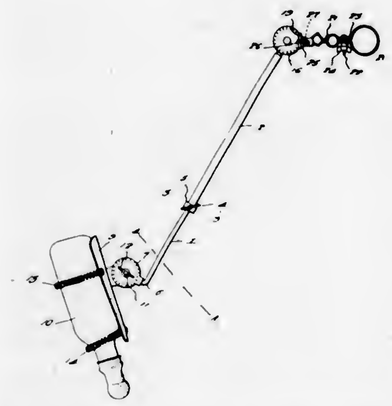
2. An article of the class described, comprising a container having an outlet opening, a measuring plunger slidably positioned in said opening and formed with a finger engageable part projecting beyond the top of the container, and a stand for said container, said stand be-

ing provided with an upwardly projecting stop forming an abutment for said plunger to prevent the same being de-



pressed when the said container is in position upon the stand.

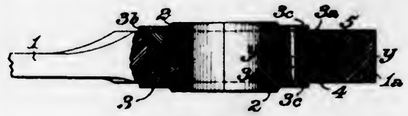
1,222,246. ADJUSTABLE NURSING-BOTTLE HOLDER. FREDERICK H. SCHUMACHER, Jersey City, N. J. Filed Aug. 22, 1916. Serial No. 116,292. (Cl. 248—20.)



A bottle holder comprising an elongated arcuate plate forming a bottle support, looped coiled springs secured to each end of the said plate and adapted to encircle a bottle, a hollow supporting rod, a second rod adapted to slide and rotate within the first mentioned rod, means for adjustably clamping the two rod sections, a rotatable clamping joint comprising complementary jaws secured to the said arcuate plate and the second mentioned rod respectively, an adjustable clamp comprising hinged plates and having a lip upon its inner end, and a second rotatable clamping joint comprising jaws secured to the above mentioned lip and the outer end of the above mentioned hollow rod respectively.

1,222,247. LOCOMOTIVE SIDE ROD. HAL R. STAFFORD, Plainfield, N. J., assignor to Economy Devices Corporation, New York, N. Y., a Corporation of New York. Filed Nov. 23, 1916. Serial No. 132,976. (Cl. 64—55.)

1. The combination of a locomotive side rod, having a substantially rectangular opening in one of its stub ends; a pair of crank pin brasses, fitted in said opening and turned cylindrically in a vertical plane; a correspondingly bored inner bearing block, interposed between the inner end of the opening and the adjacent crank pin brass; an outer bearing block having a cylindrically bored inner surface abutting on the adjacent crank pin brass; means for imposing pressure on the outer bearing block; and adjusting means, interposed between said block and the stub end.



2. The combination of a locomotive side rod, having a substantially rectangular opening in one of its stub ends, the outer portion of said opening being deeper than the inner, thereby forming upper and lower shoulders; a pair of crank pin brasses, fitted in the inner portion of said opening and turned cylindrically in a vertical plane; a correspondingly bored inner bearing block, interposed between the inner end of the opening and the adjacent crank pin brass; an outer bearing block, fitted in the outer portion of the opening and having a cylindrically bored inner surface abutting on the adjacent crank pin brass; means for imposing pressure upon the outer bearing block; and adjustable liners, interposed between said block and the shoulders of the stub end opening.

1,222,248. SPRING-SHACKLE FOR VEHICLES. ELIAL M. STAPLES, Elizabeth, N. J. Filed Aug. 24, 1916. Serial No. 116,660. (Cl. 267—19.)



1. In an adjustable shackle mechanism for vehicles having forward and rear leaf springs, a bell crank connected to the forward spring and having pivotal link connections with the vehicle frame, a bell crank connected to the rear spring and having pivotal connection with another rear spring, auxiliary springs attached to said bell cranks, and means for regulating the tension of said auxiliary springs.

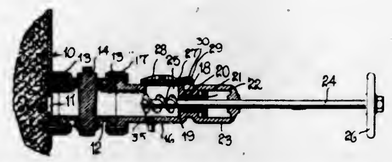
2. An adjustable shackle connected to the springs of a vehicle for varying the tension of the springs, a rock shaft with spring-pressed connections between the same and the shackle, and means for rocking the shaft.

3. An adjustable shackle connected to the springs of a vehicle for varying the tension of the springs, a rock shaft, a bar secured to the rock shaft, springs connecting said bar with the shackle, and means for rocking the shaft.

4. An adjustable shackle connected to the forward and rear springs of a vehicle, a part of each shackle means comprising bell cranks, each having arms of different lengths, a rock shaft, spring-actuated connections between the same and the longer arm of each bell crank, and means for rocking the shaft.

1,222,249. SAMPLING DEVICE FOR PULP-DIGESTERS. PHIL S. TUTTLE, Johnsonburg, Pa. Filed July 31, 1916. Serial No. 112,382. (Cl. 83—15.)

1. A device for withdrawing samples comprising a casing open at one end and having an opening in its side, a valve adjacent the open end of the casing and shiftable into position to either open or close a passage-way through the casing, and a rod longitudinally movable through the casing and through the valve when it is open and having on its extremity means for engaging material to be withdrawn.



2. A device for withdrawing samples comprising a casing open at one end, a rod rotatable and reciprocatable in said casing, the rod being longer than the casing and having on its inner end a screw, packing means surrounding the rod where it passes through the casing, a valve located adjacent the open end of the casing and shiftable into position to either open or close a passage-way through the casing, said casing having an opening adjacent its outer end, a cover normally closing said opening, and means for drawing said cover into tight engagement with the casing.

3. A device for withdrawing samples comprising a casing composed of two sections, one of said sections being open at both ends and abutted against one end of the other section, the first named section constituting a valve casing, the other section being provided with an opening and with a packing chamber, a rod rotatable and reciprocatable through the packing chamber of the last named section and through the valve when the latter is open, said rod being longer than the casing, a cover for the opening, and means for clamping the cover to the casing.

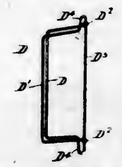
4. A device for withdrawing samples including a casing made in two sections, one of said sections being open at opposite ends and constituting a valve chamber, the other section being abutted at one end against said valve chamber and at its outer end being formed with a packing chamber with a yoke extending beyond the packing chamber, said casing section being also formed with an opening in its side wall, a rod passing through the yoke through the packing chamber and through the casing and having a length greater than the full extent of the casing and yoke and being reciprocatable and rotatable within the casing, a gland nut having its head disposed within the yoke and engageable with the packing chamber, a cover normally closing said opening and having means whereby it may be urged into tight engagement therewith, and a valve in the valve section of the casing shiftable to establish or disestablish communication through the casing.

5. The combination with a container, of means for withdrawing sample material from the container comprising a casing having its inner end permanently attached to and opening into the container, the outer end of the casing being formed with an opening in its wall, a valve disposed adjacent the inner end of the casing and adapted to be shifted to either close or open communication through the casing, a longitudinally shiftable and rotatable rod extending through the casing and having a screw on its inner end, said rod being adapted to pass through the opening of the valve when the latter is in open position, and a cover mounted upon the casing and normally closing the opening and means for holding the cover in tight engagement with the casing.

[Claim 6 not printed in the Gazette.]

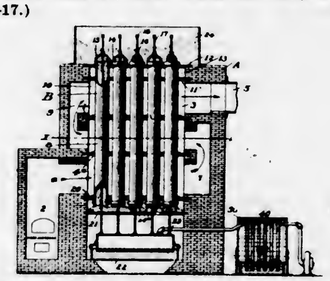
1,222,250. DEVICE FOR HOLDING PROTECTORS UPON THE EDGES OF COATS, &c. JOSEPH R. WATERS, Princess Anne, Md. Filed Apr. 8, 1916. Serial No. 89,908. (Cl. 24—261.)

A device for holding a protector over the edges of coats, consisting of a single piece of wire having a straight shank portion bent to form oppositely disposed loops, the wire at corresponding ends of the loops being bent to form resilient ball-shaped portions, each end of the wire bent



to form an eye engaging the straight shank portion of the wire intermediate the loops.

1,222,251. FURNACE. WILLIAM W. WHITTON, Oakland, Cal. Filed June 21, 1916. Serial No. 104,876. (Cl. 266—17.)



1. In an ore roasting furnace, a main heating chamber and a fire-box, a plurality of open ended retort tubes extending through the heating chamber, a perforated pipe extending through each retort tube and means connecting said pipes with a condenser, means for retaining the ore in the retort tubes while being heated, and said means permitting removal of the heated ore from the lower open end of the retort tubes without removing said perforated pipe.

2. In an ore roasting furnace, a main heating chamber and a fire-box, a plurality of frames, each having a plurality of rectangular openings formed therein, a plurality of open ended retort tubes extending through the heating chamber and the rectangular openings formed in the frames, and a pair of inclosing plates fitting each rectangular shaped opening to form a closure around each tube.

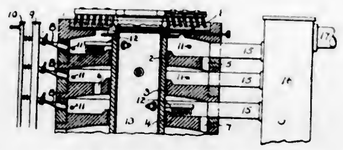
3. In an ore roasting furnace, a main heating chamber and a fire-box, a plurality of frames, each having a plurality of rectangular openings formed therein, a plurality of removably mounted open ended retort tubes extending through the heating chamber and the rectangular openings formed in the frames, a pair of inclosing plates fitting each rectangular shaped opening to form a closure around each tube, a fixed perforated pipe extending through each retort tube and means connecting said pipes with a condenser.

4. In an ore roasting furnace, a main heating chamber and a fire box, a plurality of open ended retort tubes extending through the heating chamber, a perforated pipe extending through each retort tube, means connecting said pipes with a condenser, an ore bin surrounding the upper open ends of the retort tubes to permit a continuous delivery of ore, and a receiving plate spaced from, and mounted below, the lower open ends of the tubes.

5. In an ore roasting furnace, a main heating chamber and a fire-box, a plurality of frames, each having a plurality of rectangular openings formed therein, a plurality of open ended retort tubes extending through the heating chamber and the rectangular openings formed in the frames, a pair of inclosing plates fitting each rectangular shaped opening to form a closure around each tube, an ore bin surrounding the upper open ends of the retort tubes to permit a continuous delivery of ore, and a receiving plate spaced from, and mounted below, the lower open ends of the tubes.

[Claims 6 to 9 not printed in the Gazette.]

1,222,252. PROCESS OF DESULFURIZING ORES. HOWARD F. WIERUM, Upper Montclair, N. J., assignor to The Sulphur Syndicate Limited, London, England, a Corporation of England. Filed Sept. 15, 1913. Serial No. 789,921. Renewed Sept. 15, 1916. Serial No. 120,423. (Cl. 75—60.)



1. A process of desulfurizing sulfid ores and mattes, which comprises mixing the same with a carbonaceous material, and heating said mixture to a temperature of 700 to 900° C. by the direct action of a flame, in the presence of steam in amount sufficient to decompose any carbon oxysulfid formed, and while agitating said mixture.

2. In the process of desulfurizing sulfid ores and mattes, the step of subjecting a mixture of said sulfid in the form of fines, and a carbonaceous material, to a temperature of between 700 and 900° C. while in the presence of steam, and while agitating said mixture.

3. In the process of desulfurizing finely divided sulfid ores and mattes, the step of subjecting a layer of a mixture of said material with a carbonaceous fuel, to the action of a heating flame, at a temperature at which substantially all the sulfur content thereof will distil in elemental form, and while agitating said layer.

4. A process of desulfurizing sulfid ores and mattes, which comprises subjecting the same at a temperature of from 700 to 900° C. to the action of a flame in the presence of a carbonaceous fuel, and in the presence of steam, and continuing said flame treatment after said carbonaceous fuel has substantially all been eliminated.

5. A process of desulfurizing pyrrhotite or other sulfid ores or mattes, which comprises subjecting the same to the action of a flame in the presence of a carbonaceous fuel at a temperature of between 700 and 900° C. while agitating the same in the presence of steam, and continuing said flame treatment after substantially all said fuel has burned away.

[Claim 6 not printed in the Gazette.]

1,222,253. METHOD OF STERILIZING SOIL FOR TOBACCO-PLANT BEDS, &c. WILLIAM T. YOUNG and JAMES CHAPMAN, Allensville, Ky. Filed Feb. 19, 1917. Serial No. 149,525. (Cl. 47—36.)

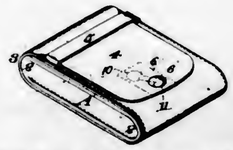


1. The herein described method of preparing soil for tobacco plant beds and the like, which consists in piling unslaked lime on the soil, saturating the lime with water, piling the surface soil over the slaking lime to form a mound, and finally, after the completion of the slaking process, leveling the mound.

2. The herein described method of preparing beds for tobacco plants and the like, which consists in dividing the bed into sections, placing at the center of each section a pile of unslaked lime, pouring water on said pile, scraping the surface soil in said section to form a mound extending over the pile of slaking lime, and finally leveling the mound.

1,222,254. RECEPTACLE FOR CIGARETTE-WRAPPERS AND TOBACCO. SHERWOOD H. ADAMS, San Francisco, Cal., assignor to John Rothschild, San Francisco, Cal. Filed Sept. 13, 1915. Serial No. 50,369. (Cl. 206—41.)

1. In a device of the character described, a rectangular containing case having an open end, a trough-forming flap secured to one side of the case for closing the open end and engaging the opposite side, and a stationary guide strap extending over the flap and fixed to the last side of the case substantially opposite the point at which the flap is secured to the first side for forming a trough of substantially uniform width at all times.



2. A containing case having an open end, a closure flap on one side extending across the open end to close the latter and overlap the other side, a headed pin carried by the flap, and a slotted member slidably receiving the pin for defining the movements of the flap and having an entrance opening at one end and an angular offset at the opposite end.

3. A containing case having an open end, a closure flap secured on one side of the case and extending across the open end and overlapping the other side, and means slidably connecting the free end of the flap to the case to lock the flap in closed position and limit its sliding movement in each direction to thereby positively hold the free end of the flap against sliding from over the open end of the case.

4. A containing case having an open end, a closure flap on one side extending across the open end to close the latter and overlap the other side, and a pin and slot connection between the free end of the flap and the case for limiting the sliding movement of the flap on the case, and a guide strap fixed to the last side of the case at a point substantially opposite to where the flap is secured to the first side of the case and between the open end thereof and the pin and slot connection for controlling the width of the trough formed by the flap.

5. In a device of the character described, an open ended case, a trough-forming flap secured to one side of the case for closing the open end of the latter and engaging the opposite side slidably to vary the capacity and size of the trough formed, and a stationary guide strap on the case between which two the flap is slidable for maintaining substantial uniformity in width of the variable trough formed by the flap.

[Claim 6 not printed in the Gazette.]

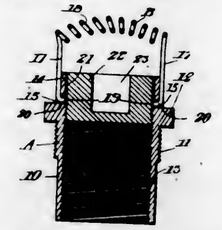
1,222,255. STANDARD FENCE-STAY ANCHOR-ROD AND LIGHTNING-ROD. LEWIS ALVERSON, Omaha, Nebr. Filed Aug. 14, 1916. Serial No. 114,912. (Cl. 256—35.)



As an article of manufacture, fence post and line anchoring stays, one member including a straight body member and a spiral member, coiled about the straight member and inclosing all line wires of a fence between it and said straight member and the other member including similar body and spiral members buried in the earth, and the first mentioned member being extended down to and engaging said buried member between the straight and spiral members.

1,222,256. GREASE-CUP. JOHN H. ARSENEAULT, Shediac, New Brunswick, Canada. Filed May 29, 1916. Serial No. 100,708. (Cl. 184—48.)

1. A grease cup of the class described two or more orifices therethrough, a plug making threaded engagement with the grease cup, and a U-shaped locking member pivotally mounted on the grease cup and adapted to be sprung into engagement with the plug.

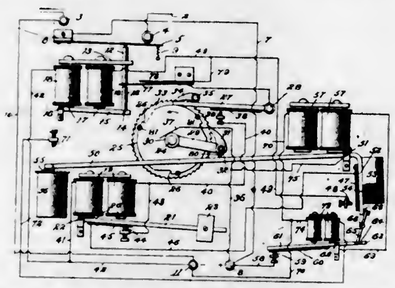


2. A grease cup of the class described having two or more radially extending orifices therethrough, a plug making threaded engagement with the grease cup and a U-shaped locking member having the free ends of its parallel arms offset and rotatably engaging the orifices and adapted to be sprung into engagement with the plug.

3. A grease cup of the class described having two or more recesses in its periphery and two or more radially extending orifices extending into the said recesses, a plug making threaded engagement with the grease cup, and a U-shaped locking member having the free ends of its parallel arms offset and rotatably engaging with the orifices and adapted to be sprung into engagement with the plug.

4. A grease cup of the class described having one or more recesses in its periphery and two or more radially extending orifices extending into the said recesses, a plug making threaded engagement with the grease cup, a U-shaped locking member having its parallel arms connected by a spiral spring, the free ends of the parallel arms being offset to rotatably engage with the orifices and being provided with tapered points adapted to be sprung into engagement with the plug.

1,222,257. STORAGE-BATTERY CHARGER. CHARLES AUTH, Brooklyn, N. Y., assignor to Emma Louise Auth, Brooklyn, N. Y. Filed Jan. 22, 1915. Serial No. 3,776. (Cl. 171—314.)



1. A device of the character described, comprising circuit connections for uniting a high tension system to a low tension system for charging the latter, said connections including a normally open switch, means operated by the low tension system for closing said switch, means for testing the tension in said low tension system, and means operated by the current in said low tension system for throwing said testing means into and out of circuit with said low tension system.

2. A device of the character described comprising circuit connections for uniting a high tension system to a low tension system for charging the latter, said connections including means for testing the tension of said low tension system, and means for periodically connecting and disconnecting said testing means with said low tension system.

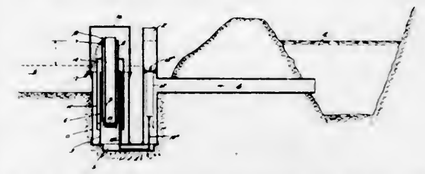
3. A device of the character described comprising circuit connections for uniting a high tension system to a low tension system for charging the latter, said connections including a normally open switch, electro-responsive means for closing said switch, a circuit for energizing said electro-responsive means, including a switch, a test electro-responsive device operatably related to the last said switch, and means for connecting said device with the low tension system.

4. A device of the character described comprising circuit connections for uniting a high tension system to a low tension system for charging the latter, said connections including a normally open switch, electro-responsive means for closing said switch, a circuit for energizing said electro-responsive means, including a switch, a test electro-responsive device operatably related to the last said switch, and means for connecting said device with the low tension system, said connecting means including a timing device for periodically establishing the connection between said low tension system and electro-responsive device.

5. A device of the character described comprising circuit connections for uniting a high tension system to a low tension system for charging the latter, said connections including a normally open switch, electro-responsive means for closing said switch, a circuit for energizing said electro-responsive means, including a switch, a test electro-responsive device operatably related to the last said switch, a circuit for connecting said electro-responsive device with said low tension system, said circuit being provided with a switch, and a timing device for controlling the last said switch.

[Claims 6 to 17 not printed in the Gazette.]

1,222,258. CONSTANT-FLOW MODULE. JEROME E. BARBEAU, Colfax, Cal. Filed Dec. 14, 1914. Serial No. 877,115. (Cl. 61—46.)



1. In a water flow regulating apparatus, a floating discharge member having a float chamber formed therein, a source of variable head water supply, an air trap submerged in said source of water supply, the air pressure in said trap varying with a change in head in the source of supply, and a connection formed between said trap and the float chamber.

2. In a water flow controlling apparatus, a discharge member, a bell-like air float carrying said discharge member, a source of variable head water supply, an air compressing device connected with and actuated by the variable head of water supply, and a pipe connecting said air compressing device with the bell like air float.

3. A water controlling module comprising an open mouthed stand pipe in communication with a source of variable supply, and a discharge structure having fluid flow connection with the stand pipe, including a telescoping part, an air containing bell connected to said part for rendering it buoyant, a water seal for the bell, and an adjustable air drum in said pipe in air communication with the bell for the equalization of pressure in both.

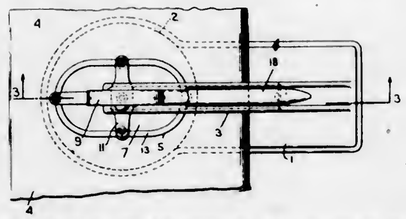
4. A water controlling module comprising an open mouthed stand pipe in communication with a source of variable supply, and a discharge structure having fluid flow connection with the stand pipe, including a telescoping part, an air containing bell connected to said part for rendering it buoyant, a water seal for the bell maintained by the water discharged, and an adjustable air drum in said pipe in air communication with the bell for the equalization of pressure in both.

5. A water controlling module comprising an open mouthed stand pipe in communication with a source of variable supply, and a discharge structure having fluid

flow connection with the stand pipe, including a telescoping part, an air containing bell connected to said part for rendering it buoyant, a water seal for the bell, and an adjustable air drum in said pipe in air communication with the bell for the equalization of pressure in both, the water rising to a common level in the source, in the head pipe and in the moving part of the discharge structure.

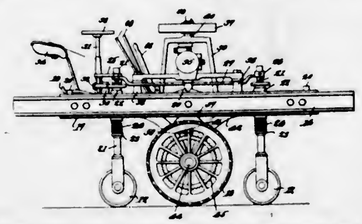
[Claims 6 to 9 not printed in the Gazette.]

1,222,259. DEVICE FOR REPAIRING PNEUMATIC TIRES. GEORGE W. BOYNTON, Boston, Mass. Filed Jan. 23, 1917. Serial No. 144,039. (Cl. 18—18.)



In a device of the class described, the combination with a frame presenting a work-supporting portion and overhanging arm, of a cam pivotally mounted in said overhanging arm and provided with an operating handle, a patch-pressing element, a follower interposed between the cam and the patch-pressing element, and a spring arm secured at one end to the frame and at the other end to the follower and yieldingly holding the follower against the cam.

1,222,260. TRACTOR. ALVIN BROWN, Plainfield, Ill. Filed May 15, 1916. Serial No. 97,621. (Cl. 21—114.)



1. A tractor comprising a main frame, steering and traction wheels for said frame, a steering gear for the steering wheels, driving means for the traction wheels, an auxiliary frame, and a ring carried by said auxiliary frame, the main frame being located inside the ring and said ring forming a circular track on which the main frame is slidably mounted to permit relative turning movement of the frames.

2. A tractor comprising a main frame having radial arms carrying rollers at their outer ends, an auxiliary frame having a circular track on which the rollers are mounted to permit the frames to turn relative to each other in a horizontal plane, steering wheels and traction wheels for the main frame, a steering gear connected to the steering wheels, and driving means for the traction wheels.

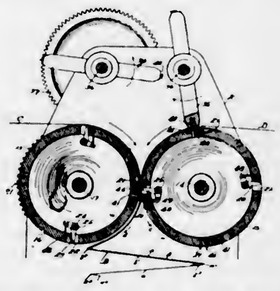
3. A tractor comprising a frame, traction wheels and swiveled front and rear wheels supporting the frame, driving means for the traction wheels, means for imparting motion to the respective traction wheels in opposite directions simultaneously, and an auxiliary frame carried by the main frame, said frames being connected to turn relative to each other in a horizontal plane.

4. A tractor comprising a frame, traction wheels for said frame, countershafts carried by the frame and geared to the respective traction wheels, an axle on which the traction wheels are loosely mounted, a drive shaft, a gearing between the drive shaft and the countershafts for driving the respective countershafts simultaneously in opposite directions, and in the same direction, and a gearing between the axle and one of the countershafts.

5. A tractor comprising a frame, traction wheels supporting the frame, a drive shaft, a gearing between the drive shaft and the traction wheels for driving the respective traction wheels simultaneously in opposite directions and in the same direction, an axle on which the traction wheels are loosely mounted, and a gearing between the drive shaft and the axle.

[Claims 6 and 7 not printed in the Gazette.]

1,222,261. MECHANISM FOR INTERLEAVING PAPER. HORACE P. BROWN and CLARENCE L. JOHNSTON, Oakland, Cal. Filed Dec. 9, 1914. Serial No. 876,344. (Cl. 101—43.)



1. Mechanism for interleaving sheets which consists of a pair of parallel proximate rollers, folding means on said rollers for folding sheet sections two-ply, means for cutting the sheets successively from a plurality of webs, means on each roller for transferring thereto the trailing edge of each sheet section from its respective roller, and means on each roller for engaging the leading edge of the web adjacent, the cut edge and in advance of the line of fold for drawing the web around with the roller.

2. Mechanism for interfolding sheets which consists of a pair of parallel proximate rollers, folding means on said rollers for folding sheet sections two-ply, means for cutting the sheets successively from a plurality of webs, means on each roller for transferring thereto the trailing edge of each sheet section from its respective roller, and means on each roller for engaging the leading edge of the web adjacent the cut edge and in advance of the line of fold for drawing the web around with the roller, said engaging means comprising fixed pins adapted to pierce the web.

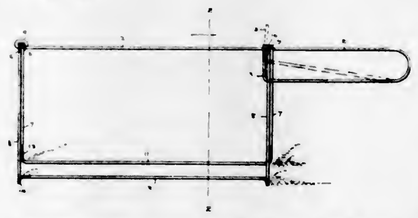
3. Mechanism for interfolding sheets which consists of a pair of parallel proximate rollers, folding means on said rollers for folding sheet sections two-ply, means for cutting the sheets successively from a plurality of webs, means on each roller for transferring thereto the trailing edge of each sheet section from its respective roller, and means on each roller for engaging the leading edge of the web adjacent the cut edge and in advance of the line of fold for drawing the web around with the roller, said engaging means comprising fixed pins adapted to pierce the web approximately at the time of cutting action.

4. Mechanism for interfolding sheets, which consists of a pair of parallel proximate rollers, folding means on said rollers for folding sheet sections two-ply, means for cutting the sheets successively from a plurality of webs, means on each roller for transferring thereto the trailing edge of each sheet section from its respective roller comprising reciprocating pins, and means on each roller for engaging the leading edge of the web adjacent to the cut edge and in advance of the line of fold for drawing the web around with the roller, said engaging means comprising fixed pins adapted to pierce the web approximately at the time of cutting action.

5. Mechanism for interfolding sheets, which consists of a pair of parallel proximate rollers, folding means on said rollers for folding sheet sections two-ply, means for cutting the sheets successively from a plurality of webs, means on each roller for transferring thereto the trailing edge of each sheet section from its respective roller comprising reciprocating pins, and means on each roller for engaging the leading edge of the web adjacent to the cut edge and in advance of the line of fold for drawing the web around with the roller, said engaging means being adapted to pierce the web approximately at the time of cutting action.

[Claims 6 to 18 not printed in the Gazette.]

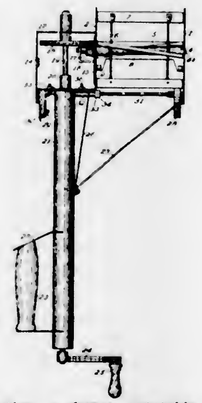
1,222,262. UTENSIL-LIFTER. FRED A. BRUNDAGE, Belmont, N. Y. Filed Jan. 28, 1916. Serial No. 74,816. (Cl. 65—32.)



1. A lifting device comprising a handle bar having an eye at one end and an elongated loop at the opposite end, said loop having a hook member engaging the handle bar, gripping arms arranged in pairs having eyes at one end adapted to engage parts of the handle bar, gripping bars integral with said pairs of gripping arms, said arms at their connection with the gripping bars having inwardly curved sections, one pair of arms having oppositely bowed portions adapted to be engaged by the hook carrying portion of the loop whereby when said portion of the loop is moved upwardly the gripping parts will be separated.

2. A lifting device comprising a handle bar having a loop portion at one end thereof, gripping arms arranged in pairs and pivoted to said handle bar, one bar of said loop member passing between one pair of the gripping arms, said latter gripping arms having bowed portions adjacent their pivotal ends whereby when the bar of the loop passing between said gripping arms is moved upwardly said gripping arms will be separated.

1,222,263. LAWN-MOWER. TIELKO K. BUNGER, Wellsburg, Iowa. Filed Dec. 30, 1916. Serial No. 139,748. (Cl. 56—19.)



1. In combination, a frame, rotatable cutting-blades mounted therein, pluralities of oppositely-placed bearing sockets located in said frame, the sockets on one side being round, those on the opposite side with angular walls, a sectional axle whose parts have a screw and thread adjustment connection to permit of lengthening or shortening it, the journal of one axle-part being round to fit interchangeably the round bearing-sockets on the same side, and the journal of the other part being angular to fit the angular sockets on the opposite side non-rotatively.

2. In combination, a frame, rotatable cutting-blades mounted therein, pluralities of oppositely-placed bearing sockets located in said frame, the sockets on one side being round, those on the opposite side being squared, a two-part axle, one part having an interiorly-threaded socket, the other part having an exteriorly-threaded end adjustably seated in said socket, a lock-nut on said threaded end, the journal of the socketed axle-part being interchangeably rotatably seated in the round bearing-sockets, the outer end of the other axle-part being squared to interchangeably and non-rotatably fit in any of the said squared bearing-sockets, and traveling-wheels rotatably mounted on said axle-parts.

3. In combination, a frame, rotatable cutting-blades mounted therein, pluralities of bearing sockets oppositely-placed in said frame, the sockets on one side being round, those on the opposite side square, a two-part axle, one part having an interiorly-threaded socket, the other part having an exteriorly-threaded end adjustably seated in said socket, a lock-nut on said threaded end, the journal of the socketed axle-part being rotatably mounted in any of the round bearing-sockets, the outer end of the other axle-part being squared and seated interchangeably non-rotatably in any of the said square sockets, traveling-wheels rotatably mounted on said axle-parts, a circumferentially dentated disk removably mounted on the journal of said socketed axle-part and having an annular rim fitting about the circumferential periphery of the traveling-wheel thereon, and means for detachably securing said disk to said traveling-wheel.

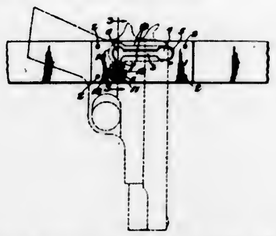
4. In combination, a boxing, a shaft rotatably mounted in said boxing and extending through one wall thereof, a crank on the outer end of said shaft, a bevel-gear on said shaft within said boxing, a side-plate spaced from said boxing, bearings on said boxing and said side-plate, a shaft rotatably mounted in said bearings, extending into said boxing, a bevel-pinion on said shaft within said boxing in mesh with said bevel-gear, cutting-blades mounted on said shaft, an adjustable shear-plate connected between said boxing and said side-plate coöperating shearingly with said cutting-blades successively when the blades are rotated with said shaft, and means for transportation mounted between the lower parts of said boxing and said side-plate.

5. In combination, a boxing, a shaft rotatably mounted in said boxing and extending through one wall thereof, a crank on the outer end of said shaft, a bevel-gear on said shaft within said boxing, a side-plate spaced from said boxing, bearings on said boxing and said side-plate, a shaft rotatably mounted in said bearings, extending into said boxing, a bevel-pinion on said shaft within said boxing in mesh with said bevel-gear, cutting-blades mounted on said shaft, a shear-plate connected between said boxing and said side-plate adapted to coöperate shearingly with said cutting-blades successively when the blades are rotated with said shaft, and means for transportation mounted between the lower parts of said boxing and said side-plate, a cover removably mounted upon said boxing, means for detachably securing said cover to said boxing, and a cover fixedly connected between the upper parts of said boxing and said side-plate over said cutting-blades.

1,222,264. HOLDER FOR FIREARMS. CHARLES G. CABANNE, St. Louis, Mo., assignor of twenty-four one-hundredths to Thomas Lonergan and twenty-four one-hundredths to James E. Rutledge, St. Louis, Mo. Filed June 24, 1916. Serial No. 105,770. (Cl. 224—1.)

1. A fire-arm holder, comprising a headed stud attached to the fire-arm, a plate adapted to be applied to a belt including a longitudinal slot, an enlargement for the insertion of the stud connected with the slot, a vertical slot, the union of the horizontal slot and the vertical slot being en-

larged to permit the turning of the stud in the slots, and a socket at the base of the vertical slot for pivotally supporting the stud, substantially as specified.



2. A fire-arm support, comprising a plate, adapted to be applied to a belt, having an opening to receive an enlarged head of a stud applied to the fire-arm, a constricted slot extending longitudinally from said opening having an enlargement at the opposite end thereof, and a vertical slot extending from said enlargement and of less width than the diameter of said opening terminating in an enlarged opening, substantially as specified.

3. A fire-arm support, comprising a stud attached to the fire-arm, a suspension plate having a slot therein coöperating with the stud to permit the movement of the fire-arm when the fire-arm is in one position, a socket for supporting the stud, and a connection between the socket and the slot requiring the fire-arm to be positioned at a different angle before passing through said connection, substantially as specified.

4. A fire-arm holder, comprising a plate having a stud-receiving slot therein, a slot disposed at an angle relative to and opening into said first-named slot, a stud-receiving socket into which said last-named slot opens, a stud attached to the fire-arm having a shank oblong in cross section and of greater width than the width of the slot, adapted to pass edgewise through said slots into said socket when the wider sides of the shank are substantially parallel with the side walls of the slots, but retained against displacement from said socket when the width of the shank is substantially transverse of the width of the said last-named slot, and a head on said stud larger than the socket and having a diameter greater than the width of the slot.

5. A fire-arm support, comprising a plate having two intersecting slots therein disposed at an angle to each other, a relatively enlarged socket at the end of one of said slots, a stud attached to the fire-arm having a shank oblong in cross section and of greater width than the width of the slots and movable edgewise therethrough when the width of the shank extends in the direction of the length of the slots, said stud being turnable in said socket and being so positioned on said fire-arm that when seated in said socket the shank will be held by the weight of the fire-arm at a substantial angle relative to the width of the adjacent slot, preventing displacement of the shank from said socket.

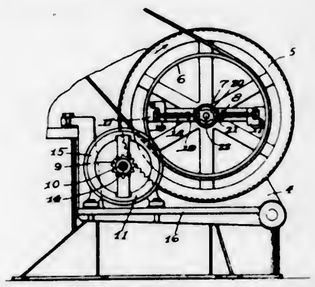
[Claims 6 to 10 not printed in the Gazette.]

1,222,265. DRIVING MECHANISM FOR LINOTYPE-MACHINES. ALLAN J. CLINE, Chicago, Ill., assignor to Cline Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 12, 1915. Serial No. 39,355. (Cl. 74—36.)

1. In a driving device for linotype machines, the combination of a main drive-gear, a pulley fixedly connected therewith, said gear having helical teeth, a driven member, and means for connecting said drive gear intermittently with the driven member, with an electric motor and a pinion operated by said motor and provided with helical teeth which mesh with the teeth of said gear.

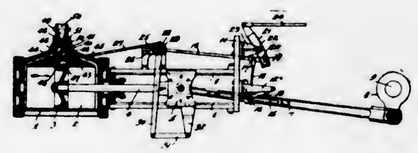
2. In a driving device for linotype machines, the combination of a main drive-gear, a pulley fixedly connected therewith, said gear having helical teeth, a driven member and means for connecting said drive gear intermittently with the driven member, with an electric motor and a pinion operated by the motor and provided with helical teeth which mesh with the teeth of said gear, said teeth being formed at an angle of substantially fifteen degrees.

3. In a driving device for linotype machines, the combination of a main drive-gear, a pulley fixedly connected therewith, said gear having helical teeth, a driven member, a clutch-member carried by said drive-gear for intermittently connecting said drive-gear with the driven member, and an electric motor and a pinion operated by the motor and provided with helical teeth which mesh with the teeth of said gear.



4. In a driving device for linotype machines, the combination with a main drive-gear and a pulley fixedly connected therewith, said gear having helical teeth, of an electric motor having an armature shaft, a pinion mounted on said armature shaft and provided with helical teeth which mesh with the teeth of said gear, and bearings for the armature shaft at different distances from said pinion and at the same side of the plane of said gear, the inclination of the teeth of said pinion being such that any end thrust will be toward the bearing of said armature shaft that is farthest from the pinion.

1,222,266. STEAM-ENGINE VALVE AND VALVE-GEAR. WILLIAM CHARLES COAN, Cleveland, Ohio, assignor to The Universal Valve and Valve Gear Co., Cleveland, Ohio, a Corporation of Ohio. Filed June 8, 1916. Serial No. 102,501. (Cl. 121—99.)



1. In a steam engine, a cylinder, a piston and connecting rod, a valve controlling the steam supply and exhaust, and a valve gear, comprising an arm swinging about a relatively fixed pivot, a link pivotally connected to said arm, a block connected to said link, guideways for said block on said connecting rod whereby the block slides in the connecting rod and imparts lateral motion to said link as the rod reciprocates, and means whereby the lateral motion of said link operates said valve.

2. In a steam engine, a cylinder, a piston and connecting rod, a valve controlling the steam supply and exhaust, and a valve gear, comprising an arm swinging about a relatively fixed pivot, a link pivotally connected to said arm, a block connected to said link, guideways for said block on said connecting rod whereby the block slides in the connecting rod and imparts lateral motion to said link as the rod reciprocates, a relatively stationary quadrant, a quadrant block reciprocating therein and operated by said link, and means connecting said quadrant block to the valve for operating the same.

3. In a steam engine, a cylinder, a piston and connecting rod, a valve controlling the steam supply and exhaust, and a valve gear, comprising an arm swinging about a relatively fixed pivot, a link pivotally connected to said arm, a block connected to said link, guideways for said block on said connecting rod whereby the block slides in the connecting rod and imparts lateral motion to said link as the rod reciprocates, a relatively stationary quadrant, a quadrant block reciprocating therein and operated by said link, means connecting said quadrant block to the valve for operating the same, and means for varying the inclination of said quadrant.

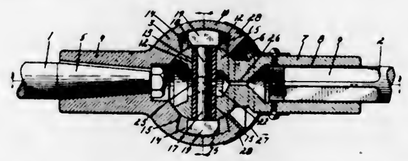
1,222,267. SALIVA-EJECTOR. ALBERT B. COSAD, Piedmont, Cal. Filed Jan. 31, 1916. Serial No. 75,279. (Cl. 32—33.)



1. A saliva ejector comprising a tube with a longitudinal partition dividing the tube into two passageways which connect at the head end of the tube, an injector opening in the head opening into both passageways, one passageway forming a saliva duct and the other passageway closed except for an air vent between the ends of the tube.

2. A saliva ejector comprising a tube with a longitudinal partition dividing the tube into two passageways communicating at the head end of the tube, and an injector opening in the head opening into each passageway, one passageway forming a saliva duct and the other an air duct.

1,222,268. UNIVERSAL JOINT. SAMUEL DOUGLASS, Kalamazoo, Mich., assignor to William Kromdyk, Jr., Kalamazoo, Mich. Filed June 19, 1916. Serial No. 104,441. (Cl. 74—19.)

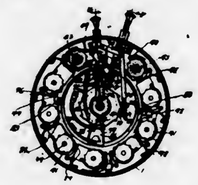


1. In a universal joint, the combination of a socket member formed of detachably connected transverse sections and provided with internal segmental bearing ways disposed oppositely and longitudinally across the joint of the sections, side bearing plates for said ways, the end walls of the ways being converged inwardly so that the plates are retained thereby, a ball member having a journal pin opening alined with said bearing ways and a lubricant chamber opening into the socket, said ball member being a bearing fit within said socket member, a bushing arranged in said bearing pin opening and provided with lubricant openings opening to said lubricant chamber, a journal pin having segment-like bearing heads at its ends disposed within said bearing ways of said socket member, said pin being formed of sections adapted to be introduced from opposite ends of the bushing and having a pin and socket joint.

2. In a universal joint, the combination of a socket member formed of detachably connected transverse sections and provided with internal segmental bearing ways disposed oppositely and longitudinally across the joint of the sections, side bearing plates for said ways, the end walls of said ways being converged inwardly so that the plates are retained thereby, a ball member having a journal pin opening alined with said bearing ways, a journal pin having segment-like bearing heads at its ends disposed within said bearing ways of said socket member, said pin being formed of sections adapted to be introduced from opposite ends of said bearing pin opening.

3. In a universal joint, the combination of a socket member provided with internal segmental bearing ways disposed oppositely and longitudinally, a ball member having a journal pin opening alined with said bearing ways and a lubricant chamber opening into the socket, said ball member being a bearing fit within said socket member, a bushing arranged in said bearing pin opening and provided with lubricant openings opening into said lubricant chamber, and a journal pin having segment-like bearing heads at its ends disposed within said bearing ways of said socket member, said pin being formed of separable sections adapted to be introduced from opposite ends of the bushing.

1,222,269. INDICATOR. GODFREY EACRET, San Francisco, Cal. Filed July 14, 1914. Serial No. 850,869. (Cl. 235—112.)



1. A device of the character described, comprising a plurality of trip indicators, a totals indicator, pawl and ratchet mechanism for operating the totals indicator, pawl and ratchet mechanism for operating all of the trip indicators one at a time, said last mentioned pawl and ratchet mechanism being movable from one trip indicator to another into operative relation therewith, means for shifting said pawl and ratchet mechanism from one trip indicator to another, and a single actuating means for the pawl and ratchet mechanism for the totals indicator and the pawl and ratchet mechanism of the trip indicators.

2. A device of the character described, comprising a plurality of trip indicators, each trip indicator including a ratchet wheel, operating means for all of said trip indicators including a pawl movable from one to another of said ratchet wheels into operative relation therewith, pawl and ratchet mechanism for actuating the said pawl, and means for shifting the pawl from one to another of the ratchet wheels.

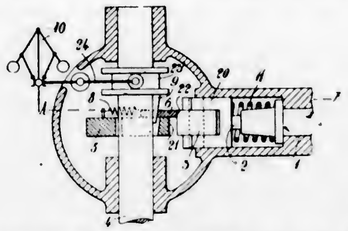
3. An indicator comprising a plurality of trip indicating mechanisms, means for operating said mechanisms one at a time, means for moving said operating mechanism from one to another of said indicating mechanisms, and means for restoring said indicating mechanisms to normal position on the disengagement of said operating means from engagement with the last of said indicating mechanisms.

4. An indicator comprising a plurality of trip indicating mechanisms, means for operating said mechanisms one at a time, means for moving said operating mechanism from one to another of said indicating mechanisms, means for retaining said indicating mechanisms in their adjusted position on the removal of the operating means therefrom, means for restoring said indicating mechanisms to normal position on the release of said retaining means, and means for releasing said retaining means on the disengagement of said operating means from the last of said indicating mechanisms.

5. A device of the character described, comprising a plurality of trip indicators, each trip indicator including a ratchet wheel, operating means for all of said trip indicators including a rotatable support, an arm mounted on said support, a pawl carried by the arm, means for turning the support to move the arm with its pawl from one of the said ratchet wheels to another, said arm being rotatable relative to its support, and actuating means for the arm.

[Claims 6 to 13 not printed in the Gazette.]

1,222,270, FUEL-PUMP OF INTERNAL-COMBUSTION ENGINES. FREDRIC EDHOLM, Eskilstuna, Sweden. Filed Feb. 14, 1917. Serial No. 148,695. (Cl. 123—140.)

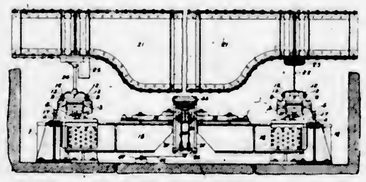


1. In an internal combustion engine, a fuel pump regulating mechanism, comprising a rotating member effecting the delivery strokes of the fuel pump, a member adjustably attached to said rotating member and controlling the suction strokes of the fuel pump, and a governor controlling the position of the latter member in relation to the said rotating member.

2. In an internal combustion engine, a fuel pump regulating mechanism comprising a rotating cam disk having a flattened portion and effecting the delivery strokes of the pump, a member adjustably journaled to said cam disk and controlling the length of the suction strokes of the pump, and a centrifugal governor controlling the position of said member in relation to the flattened portion of the cam disk.

3. In an internal combustion engine, a fuel pump regulating mechanism, comprising a rotating cam disk effecting the delivery strokes of the pump, a curve-shaped member journaled to said cam disk and controlling the length of the suction strokes of the pump, a governor, and a wedge-formed member operated by the governor and adjusting said curve-shaped member in relation to the rotating cam disk.

1,222,271. RAILROAD TRACK-SCALE. ALBERT HAMILTON EMERY, Stamford, Conn. Filed Dec. 31, 1915. Serial No. 69,665. (Cl. 73—121.)



1. In a scale, a bed, a pair of levers placed end to end in one plane, a chair for each of said levers, a plate fulcrum securely attached to each of said levers and to its chair, a loading block for each lever, a plate fulcrum securely attached to each of said levers and its loading block, a second lever, a loading block for said second lever, a plate fulcrum securely attached to said second lever and its loading block and two plate fulcrums securely attached to said loading block of said second lever and to the inner ends of said pair of levers.

2. In a plate-fulcrum scale, a lever and three plate-fulcrums securely attached thereto, the fulcrum at the end of the longer arm of the lever having its flexible part much longer proportionally than the others, so that the flection due to changes of length of the lever, caused by temperature changes, will not injure said fulcrum.

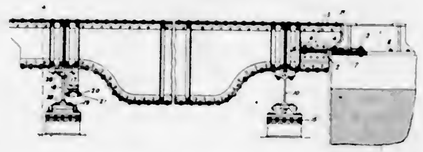
3. In a plate-fulcrum scale, a pair of levers placed end to end in one plane, a second lever placed at right angles thereto, a loading block for said second lever, a plate fulcrum securely attaching said loading block and lever and a pair of plate fulcrums securely attached to said loading block and to the inner ends of said pair of levers and means whereby said fulcrums are connected to said loading block and to said levers.

4. In a scale, a pair of levers, a second lever at right angles to said pair of levers, a loading block between said pair of levers and said second lever and plate-fulcrums connecting said loading block to said pair of levers and to said second lever.

5. In a scale, a bed, a pair of levers, a loading block for each lever, a plate fulcrum securing each of said loading blocks to its own lever, a bar rigidly fastened to these two loading blocks to keep them from tipping, and a pair of chairs which support these levers at their fixed points, said chairs being rigidly secured to said bed, and a plate fulcrum securely attaching each of said chairs to its respective lever.

[Claims 6 to 25 not printed in the Gazette.]

1,222,272. SCALE-PLATFORM CHECK AND SUPPORT. ALBERT HAMILTON EMERY, Stamford, Conn. Filed Jan. 21, 1916. Serial No. 73,378. (Cl. 73—121.)



1. In a track scale, a bridge constituting the main platform of the scale, a large wide horizontal flexible stay-plate, one end of which is rigidly secured to one end of the bridge and the other end is rigidly secured to the foundations, in combination with a long horizontal stay rod placed at right angles to the bridge near its other end, one end of said rod being rigidly secured to the bridge while the other end of said rod is rigidly secured to the foundations.

2. In a track scale, a bridge constituting the main platform of the scale, a large wide horizontal stay plate, one end of which is rigidly secured to one end of the bridge and the other end is rigidly secured to the foundations, said stay plate being thinned for a short distance near each end to increase its flexibility vertically, in combination with a long horizontal stay rod placed at right angles to the bridge near its other end, one end of said rod being rigidly secured to the bridge while the other end of said rod is rigidly secured to the foundations.

3. In a scale, a bridge constituting the main platform of the scale, a horizontal stay securely fixed to the scale foundations and to one end of said bridge securely fixing it against horizontal motion, a suitable support under said end of the bridge, and rolling supports under the other end of said bridge.

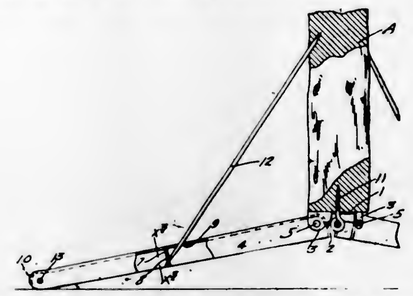
4. In a scale, a bridge constituting the main platform of the scale, a horizontal stay securely fixed to the scale foundations and to one end of said bridge to secure it against horizontal motion, a suitable support under said end of the bridge, rolling supports under the other end of said bridge, a pair of first levers, loading platforms for said first levers, upon which said supports rest, and plate fulcrums connecting said loading platforms and levers.

5. In combination with a track scale platform, a horizontal stay plate firmly secured to one end of said platform and adapted to prevent horizontal motion of that end of the platform in any direction, a suitable support for said end of the platform, a set of supporting rollers under the other end of the platform, and a transverse horizontal stay secured to said other end of the platform and to the scale foundations, and adapted to permit longitudinal motion of this said other end of the platform but fixing it against lateral motion.

[Claims 6 and 7 not printed in the Gazette.]

1,222,273. CHRISTMAS-TREE STAND. GEORGE W. EVERTS, Minneapolis, Minn. Filed Apr. 2, 1915. Serial No. 18,737. (Cl. 248—37.)

1. A Christmas tree stand comprising a head having means for securing it to the base of a tree trunk or the like, legs pivoted to said head for folding movements in planes radiating from a line that intersects said head at a right angle, and brace rods anchored to said legs at their lower ends and provided with axially projecting sharp upper ends adapted to be forced into the tree trunk by the weight of the load on said head.



2. A Christmas tree stand comprising a head having means for securing it to the base of a tree or the like, legs pivoted to said head for folding movements in planes radiating from a line that intersects said head at a right angle, and brace rods detachably seated at their lower ends in the intermediate portions of said legs and provided with sharp axially projecting upper ends adapted to be forced into the trunk of a tree by the weight of the load on said head.

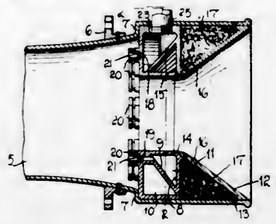
3. A Christmas tree stand comprising a head having means for securing it to the base of a tree trunk or the like, legs pivoted to said head for folding movements in planes radiating from a line that intersects said head at a right angle, brace rods anchored to said legs at their lower ends and provided with axially projecting sharp upper ends adapted to be forced into the tree trunk by the weight of the load on said head, the said legs being arranged to fold together to form an inclosed casing for the said brace rods, when the latter are detached, the said head closing one end of said casing, and means at the free ends of said legs for closing the other end of said casing.

4. A tree stand comprising a head having means for attaching it to the base of a tree trunk, channel-shaped metal legs pivoted to said head for folding movements in planes radiating from a line intersecting the central portion of said head at a right angle, the said legs having down-pressed perforated ears and perforations adjacent thereto, and brace rods adapted to be inserted at their lower ends through the perforations of said legs and into the perforated ears thereof, the said rods at their upper ends having sharp points adapted to be forced into the said tree trunk.

5. A tree stand comprising a head having means for attaching it to the base of a tree trunk, channel-shaped metal legs pivoted to said head for folding movements in planes radiating from a line intersecting the central portion of said head at a right angle, the said legs having down pressed perforated ears and perforations adjacent thereto, and brace rods adapted to be inserted at their lower ends through the perforations of said legs and into the perforated ears thereof, the said rods at their upper ends having sharp points adapted to be forced into the said tree trunk, the said legs at their free ends having stop flanges, and the said ears thereof having perforations through which the said brace rods are adapted to be passed, whereby the said brace rods may be secured within said legs when said legs are folded together.

1,222,274. STEAM-BLOWER. CHARLES S. FARRER, Dunmore, Pa. Filed Aug. 11, 1916. Serial No. 114,389. (Cl. 230—13.)

1. In a steam blower, the combination of a nozzle, a one-piece steam ring within said nozzle having means for delivering steam longitudinally through the nozzle in two series of jets of different volume, the delivery jets being located in the same plane transversely of the ring, and means for independently controlling the supply of steam to said series of jets.



2. In a steam blower, the combination of a nozzle, a steam ring within said nozzle having two series of delivery jets, the delivery ends of said jets being located in the same transverse plane with respect to the nozzle, and means for independently controlling the supply of steam to said series of jets.

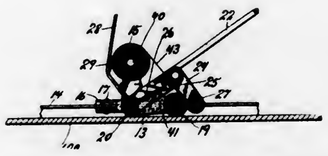
3. In a steam blower, the combination of a nozzle, a steam ring within said nozzle having two circular series of delivery jets, there being a greater number of jets in one series than in the other, and means for independently controlling the supply of steam to said series of jets.

4. In a steam blower, the combination of a nozzle, a steam ring within said nozzle having two circular series of delivery jets, there being a greater number of jets in one series than in the other, the series having the lesser number of jets being located nearer the longitudinal central line of the nozzle than the jets in the other series, and means for independently controlling the supply of steam to said series of jets.

5. In a steam blower, the combination of a nozzle, a steam ring within said nozzle having spaced groups of delivery jets, one jet in each group being located nearer the longitudinal center line of the nozzle than the remaining jets, and means for independently controlling the supply of steam to the said differently located jets in each series, whereby the steam may be delivered in varying volumes under maximum pressure through the nozzle.

[Claims 6 to 18 not printed in the Gazette.]

1,222,275. DUPLICATING-MACHINE. FREDERICK FRANCIS FECHER, Brooklyn, N. Y., assignor to Beck Duplicator Company, a Corporation of New York. Filed Oct. 25, 1913. Serial No. 797,282. (Cl. 101—11.)



1. A duplicating machine comprising a duplicating surface, devices adapted to bring paper into contact with said duplicating surface; said devices comprising a roller adapted to hold a roll of paper, a second roller adapted to maintain said paper in contact with said duplicating surface while an impression is transferred from said surface to said paper, said paper being wound around said second roller after having received said impression and stored thereupon; and means adapted to move said devices across said duplicating surface.

2. A duplicating machine, comprising a duplicating surface, devices adapted to bring paper into contact with said duplicating surface; said devices comprising a roller

adapted to hold a roll of paper, tensional devices adapted to prevent the too rapid unwinding of said paper, a second roller adapted to maintain said paper in contact with said duplicating surface while an impression is transferred from said surface to said paper, said paper being wound around said second roller after having received said impression and stored thereupon; and means adapted to move said devices across said duplicating surface.

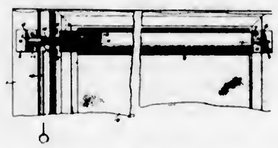
3. A duplicating machine, comprising a duplicating surface, devices adapted to bring paper into contact with said duplicating surface; said devices comprising a roller adapted to hold a roll of paper, a second roller adapted to maintain said paper in contact with said duplicating surface while an impression is transferred from said surface to said paper, said paper being wound around said second roller after having received said impression and stored thereupon; tensional means adapted to bear against said second roller to prevent the paper thereon from slipping, and means adapted to move said devices across said duplicating surface.

4. In a duplicating machine, the combination with a duplicating surface and a guide, of a member adapted to roll on said guide, and devices mounted on said rolling member adapted to bring paper into contact with said duplicating surface; said devices comprising a roller adapted to hold a roll of paper, a second roller adapted to maintain said paper in contact with said duplicating surface while an impression is transferred from said surface to said paper, said paper being wound around and stored upon said second named roller after it has received the impression; and means adapted to move said rolling member across said duplicating surface.

5. In a duplicating machine, the combination with a duplicating surface, and a guide, of a movable member, adapted to run on said guide; a member mounted on said movable member adapted to bear a roll of paper, and a roller mounted on said movable member adapted to bring said paper into contact with said duplicating surface, while an impression is transferred from said surface to said paper, said paper being wound around said roller after having received the impression and stored thereupon.

[Claims 6 to 17 not printed in the Gazette.]

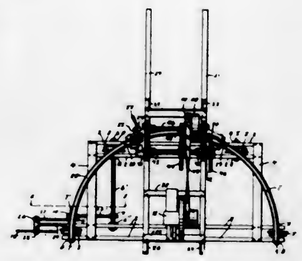
1,222,276. SHADE-ROLLER. CHARLES M. FERGUSON, Victorville, Cal. Filed May 21, 1915. Serial No. 29,617. (Cl. 156—34.)



A device as specified including a roller, a drum associated with one end of the roller, a bracket for engagement with the window casing and provided with a stud to engage said drum, a tube movably mounted upon the interior of said drum for conction with said stud, an elastic element mounted in said drum and engaged in said tube to normally force said tube into engagement with said stud for holding the roller in a stationary position, the latter being movable when pressure is exerted upon the shade, a bracket for engagement with the opposite end of the roller, and an operating cable associated with said drum to rotate said roller for winding the shade on the latter.

1,222,277. LOADING-MACHINE. CHARLES F. FIFIELD, Hastings, Mich., assignor of one-half to Herman Bessmer, Hastings, Mich. Filed May 17, 1915. Serial No. 28,618. (Cl. 193—6.)

1. In a structure of the class described, the combination of truck frame side members, the outer side member being longer than the inner, wheels mounted on said side members, the distance between the outer wheels being substantially greater than the distance between the wheels on the inner side member, axles for said wheels mounted on said side member sills, a segmental track disposed upon said side members above said wheels, a super frame swiveled on said outer side member, wheels on said super frame traveling on said track, and a lock for said super frame.



2. In a structure of the class described, the combination of truck frame side members, the outer side member being longer than the inner, wheels mounted on said side members, the distance between the outer wheels being substantially greater than the distance between the wheels on the inner side member, axles for said wheels mounted on said side member sills, a segmental track disposed upon said side members above said wheels, a super frame swiveled on said outer side member, and wheels on said super frame traveling on said track.

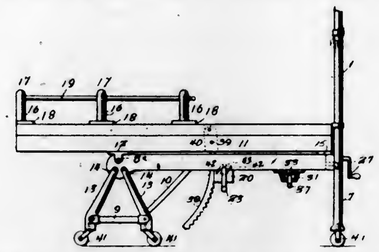
3. In a structure of the class described, the combination of truck frame side members, the outer side member being longer than the inner, wheels mounted on said side members, the distance between the outer wheels being substantially greater than the distance between the inner wheels, a segmental track mounted on said truck frame above said wheels, and a super frame swiveled on said outer side member and provided with wheels traveling on said track.

4. In a structure of the class described, the combination of a truck frame comprising side members, the outer member being longer than the inner, wheels mounted on said side members, the distance between the outer wheels being substantially greater than the distance between the inner wheels, a segmental track mounted on said truck frame above said wheels, and a super frame swiveled on said frame and provided with wheels traveling on said track.

5. In a structure of the class described, the combination of truck frame side members comprising pairs of longitudinal sills disposed to receive the wheels between them, the outer side member being longer than the inner, wheels disposed between the sills of said side members, the outer wheels being at the ends of the outer side member, the inner wheels being disposed in a spaced relation to the ends of the inner side member, cross bars connecting said side members, said cross bars being disposed on the outer side of the inner wheels and on the inner side of the outer wheels, axles for said wheels mounted on said side member sills, a segmental track disposed upon said side members above said wheels, and a super frame swiveled on the outer side members and provided with wheels traveling on said track.

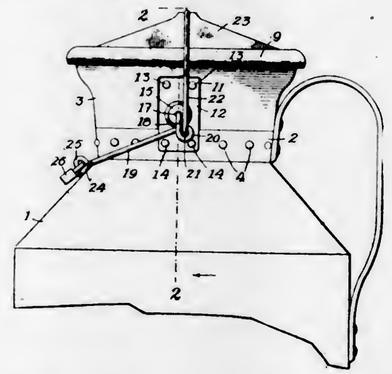
1,222,278. WORM-GEAR-DISENGAGING MECHANISM. GEORGE FILLION, Sr., Lake Linden, Mich.; Salome Fillion administratrix of said George Fillion, Sr., deceased. Filed June 30, 1914. Serial No. 848,205. (Cl. 74—36.)

The combination with a support, of a driven shaft journaled therein, a gear on said shaft, a drive shaft provided with a gear meshing with the first named gear, a bearing for said drive shaft including a block slidably engaged with the support and having a recess therein, a bracket secured to the support adjacent said bearing, a cam head rotatably supported in the bracket and engaged in the recess of the block, and means for operating the cam head



to raise and lower the block and in turn the drive shaft to throw said gears out of and into mesh.

1,222,279. MILK-CAN. JOHN WILLIS FOWLER, Henniker, N. H.; Herbert E. Fowler administrator of said John Willis Fowler, deceased. Filed Feb. 24, 1916. Serial No. 80,104. (Cl. 31—78.)

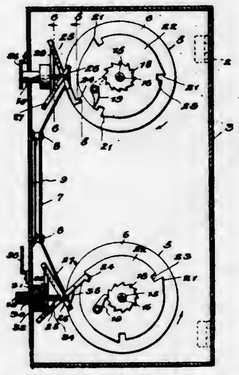


1. The combination with a sheet metal body, of a cast metal neck attached at its lower edge to the metal body and having its upper edge increased in thickness and provided with an interior annular rib extending upwardly, and an outer rib spaced from said interior rib but having its face at a higher elevation than said interior rib, and a cover having a rib on its lower surface resting on said interior rib and extending over said outer rib, with a depending lip on its outer edge.

2. The combination with a sheet metal body, of a cast metal neck attached at its lower edge to said body and having recessed sides, ears attached to said neck and held in said recesses, a cover resting on said neck, means pivotally held in said ears for retaining the cover on said neck, and means on the body of the can below said neck for engaging said cover retaining means.

1,222,280. STATION-INDICATOR. WILLIAM E. FRENCH, Clintwood, Va. Filed Oct. 28, 1915. Serial No. 58,407. (Cl. 40—91.)

1. In a station indicator, the combination of a pair of spaced parallel rollers, a display ribbon having its opposite ends wound thereon, independent springs for rotating the two rollers, two series of circumferentially spaced stops movable one series with each roller, a pair of buttons movable one toward each series of stops, transverse sliding shoes at the inner ends of said buttons, oblique tracks on which one end of each of the shoes travels, oblique levers against which the other ends of said shoes bear slidably, said levers being adapted for coöperation with the aforesaid stops, latch devices for preventing retraction of either button when depressed, and means for throwing either spring out of action.



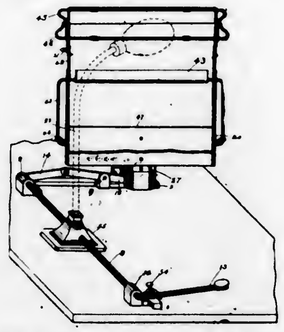
2. In a station indicator, the combination of a pair of spaced parallel rollers, a display ribbon having its opposite ends wound thereon, independent springs for rotating the two rollers, two series of circumferentially spaced stops movable one series with each roller, a pair of buttons movable one toward each series of stops and having bores opening through their inner ends, pins slidable in said bores, fixed oblique tracks crossing the pins, oblique levers crossing the tracks at their points of engagement with the pins, said levers being adapted for coöperation with the stops, fulcrums passed through the tracks, the levers and the pins, transverse shoe plates contacting with the inner ends of the buttons and having slots receiving the pins, the ends of said plates being in sliding contact respectively with the levers and the tracks, springs on the pins for retaining the shoe plates in contact with the buttons, additional springs for retaining the levers in contact with the shoe plates, means for preventing retraction of either button when depressed, and means for throwing either spring out of action.

1,222,281. HAT-FASTENER. DELIA G. FULCERI, North Weymouth, Mass. Filed June 30, 1916. Serial No. 106,930. (Cl. 132—25.)



A hat fastener comprising an elongated guide member offset at its ends to provide feet and perforated whereby to be engaged flexibly with a hat, the one edge of said guide member having a slot therein with a constricted opening forming substantially a latch, a comb operating through said guide member and having its end teeth slotted longitudinally and closed at both ends, pins mounted transversely in said guide member and entering said slotted teeth to limit the movement of said comb in one direction, the teeth of the comb in the latter position being entirely within said guide member and isolate from the hair and a stud upstanding from the head of said comb and adapted to be engaged with the slotted latch in said guide member, to limit the movement of the comb in the opposite direction and retain the same in effective position.

1,222,282. COPY-HOLDER. ERLO H. GRAY and LEON C. GRAY, Rochester, N. Y. Filed Feb. 7, 1912. Serial No. 676,020. (Cl. 120—29.)



1. In a copy holder, the combination of an upright channel, a traveler working therein, spring pressed friction devices supported in said channel for retaining said traveler at any desired height in said channel, means for releasing the frictional engagement between said spring pressed devices and said traveler to permit the downward movement of the traveler, a friction spring carried on said traveler and engaging with said channel, by which the downward movement of said traveler is retarded.

2. The combination in a copy holder of a support, a traveler mounted to move thereon, said traveler having the shape of a channel, a link reciprocating on said support, cams at the upper end thereof, rollers placed between said cams and the channeled sides of said traveler, said rollers being clutched between said cams and the traveler upon each upward movement of the link, causing the link, rollers and the traveler to move upward in unison.

3. The combination in a copy holder of a support, a traveler mounted to move thereon, said traveler having the shape of a channel, a link reciprocating on said support, cams at the upper end thereof, rollers placed between said cams and the channeled sides of said traveler, said rollers being clutched between said cams and the traveler upon each upward movement of the link, causing the link, rollers and the traveler to move upward in unison, pins carried on said support on which said rollers may rest when the link is depressed, said pins making said clutch inoperative and permitting the downward movement of the traveler.

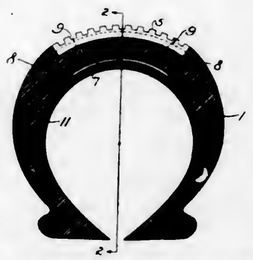
4. In a copy holder, the combination of a channeled support, a link for reciprocating therein, projections on the sides of said link for engaging with the channeled sides of said support, by which said link is held in position, a pivoted friction device on said channeled support normally pressing against the flanges of said channel, a cam on said link for engaging with said friction device and moving it out of contact with said flanges.

5. In a copy holder, the combination of a channeled support, a link for reciprocating therein, projections on the sides of said link for engaging with the channeled sides of said support, by which said link is held in position, a pivoted friction device on said channeled support normally pressing against the flanges of said channel, a cam on said link for engaging with said friction device and moving it out of contact with said flanges, means for moving said link abnormally to move said friction devices away from said flanges.

[Claims 6 to 8 not printed in the Gazette.]

1,222,283. VEHICLE-TIRE. MAX GRAY and BENJAMIN HARRIS, New York, N. Y. Filed Aug. 28, 1916. Serial No. 117,246. (Cl. 152—16.)

1. In a vehicle tire, the combination of an outer shoe having a series of recesses in its outer surface and a series of recesses in its inner surface, a corrugated tread, encircling said outer shoe having projections in its under surface adapted to fit into the recesses in the outer surface of the outer shoe, a series of anchor plates adapted to fit into the recesses in the inner surface of the shoe and means for attaching the corrugated tread to said anchor plates.



2. In a vehicle tire, the combination of an outer shoe having a series of recesses in its outer surface, a series of recesses in its inner surface and a series of radial holes, a corrugated tread encircling said outer shoe having projections in its under surface adapted to fit into the recesses in the outer surface of the outer shoe, a series of anchor plates adapted to fit into the recesses in the inner surface of the shoe, threaded pins rigidly fixed to said anchor plates adapted to fit into the radial holes in the outer shoe and means for attaching the corrugated tread to said anchor plates, comprising screws passing through holes in said tread and engaging with said threaded pins.

3. In a vehicle tire, the combination of an outer shoe having a series of recesses in its outer surface and a series of recesses in its inner surface, a corrugated tread encircling said outer shoe consisting of a plurality of independent sections, each of said sections having projections in its under surface adapted to fit into the recesses in the outer surface of the outer shoe, a series of anchor plates adapted to fit into the recesses in the inner surface of the shoe and means for attaching the corrugated tread to said anchor plates.

4. In a vehicle tire, the combination of an outer shoe having a series of recesses in its outer surface and a series of recesses in its inner surface, a metal tread encircling said outer shoe having projections in its under surface adapted to fit into the recesses in the outer surface of the outer shoe, a series of anchor plates adapted to fit into the recesses in the inner surface of the shoe and means for attaching the metal tread to said anchor plates.

5. In a vehicle tire, the combination of an outer shoe having a series of recesses in its outer surface and a series of recesses in its inner surface, a metal tread encircling said outer shoe consisting of a plurality of independent sections, each of said sections having projections in its under surface adapted to fit into the recesses in the outer surface of the outer shoe, a series of anchor plates adapted to fit into the recesses in the inner surface of the shoe and means for attaching the metal tread to said anchor plates.

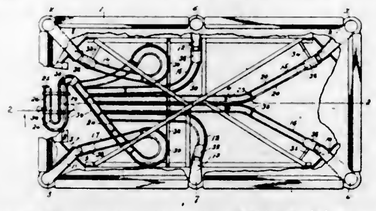
[Claims 6 and 7 not printed in the Gazette.]

1,222,284. POOL-BALL COLLECTOR. FRANK P. GRODE, Kansas City, Mo. Filed Aug. 16, 1915. Serial No. 45,814. (Cl. 46—12.)

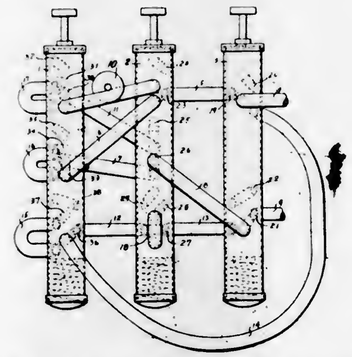
1. In a pool ball collector, a pool table having pockets, an inclined receiving ball runway, and inclined runways leading respectively from all of said pockets and discharging downwardly and obliquely into said receiving runway at different points respectively.

2. In a pool ball collector, a pool table having corner and side pockets, an inclined receiving ball runway, two ball runways respectively leading from two corner pockets and discharging in a downwardly direction into said receiving runway, each of said two runways forming a loop, and ball runways respectively leading from the other pockets and discharging in a downward direction into said receiving runway.

3. In a pool ball collector, a pool table having pockets, an inclined S-shaped receiving ball runway, and runways leading respectively from all of said pockets and discharging at different places into said receiving runway and in directions leading downwardly toward the discharge end of said receiving runway.



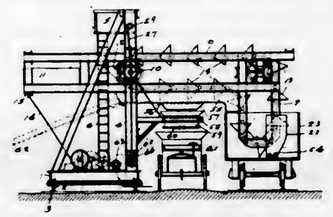
1,222,285. WIND INSTRUMENT. DAVID HAMBLEN, Jr., Newton, Mass. Filed Aug. 29, 1916. Serial No. 117,470. (Cl. 84—8.)



A wind musical instrument having three piston-valves, the depression of the first piston lowering the harmonics two semitones, the second one semitone, and the third four semitones, a pipe-loop 14—36—12—27—13, a second pipe-loop 10—30—11, and supplementary pipe loops 15, 17, and 18; said first pipe-loop beginning and ending in valve 3 and passing through valves 1 and 2 so that when the pistons of valves 1 and 3 are both depressed supplementary pipe-loop 15 is added; the pipe-loop 15 having sufficient length to lower two additional semitones the harmonics that have been lowered four semitones by the addition of pipe-loop 14—36—12—27—13; and so that when the pistons of valves 2 and 3 are both depressed supplementary pipe-loop 18 is added; the pipe-loop 18 having sufficient length to lower one additional semitone the harmonics that have been lowered four semitones by the addition of pipe-loop 14—36—12—27—13; the second pipe-loop beginning and ending in valve 2 passing through valve 1 so that when the pistons of valves 1 and 2 are both depressed supplementary pipe-loop 17 is added; the pipe-loop 17 having sufficient length to lower two additional semitones the harmonics that have been lowered one semitone by the addition of pipe-loop 10—30—11.

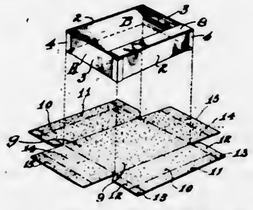
1,222,286. COAL-HANDLING MACHINE. WILLIAM EDWARD HAMILTON, Columbus, Ohio. Filed May 2, 1914, Serial No. 835,841. Renewed Mar. 8, 1917. Serial No. 153,463. (Cl. 193—3.)

An unloading machine comprising a main frame having guide ways and vertically adjustable bearing blocks slidable therein, a driving shaft journaled in the blocks, a boom pivoted on said shaft having an endless conveyer thereon operated from the shaft, slidable bearing blocks on the boom receiving the driving shaft and a screw for



horizontally adjusting said blocks for taking up slack of the conveyer, a receiving trough on the boom, and a delivery hopper and outlet gate attached to the trough.

1,222,287. WRAPPED BOX. JAMES B. HARRISS, Newark, N. J., assignor to P. Lorillard Company, New York, N. Y., a Corporation of New Jersey. Filed June 22, 1916. Serial No. 105,191. (Cl. 229—40.)



1. A box comprising a body portion including a bottom section and side and end walls rigid therewith, a cover for the body portion having a flange folded back to lie against the top face of the cover, and a wrapper adhesively attached to the walls of the box and to the cover thereof, said wrapper overlying the folded flange of the cover.

2. A wrapped box including a box and a wrapper therefor, said box comprising a body portion and a cover portion, one of said portions having a flange at one edge thereof overlying an exterior face of the box and forming an exterior shoulder when the box is closed, the said wrapper being adhesively attached to the box in a manner to overlie the shoulder-forming flange, the latter constituting a ripping flange along which the wrapper may be broken to allow the wrapped box to be opened.

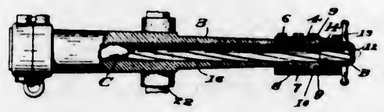
3. A box having a body portion including a bottom section, side walls and end walls, a cover for the body portion of the box and separable therefrom, said cover having a depending hinge flange at one edge thereof adapted to hingedly connect the cover with the body portion of the box, said cover also having a flange at one edge folded back against the top face of the cover to form a ripping flange for opening the box and a wrapper adhesively attached to all of the walls of the box and adapted to overlie and secure the flange in its folded position against the cover when the box is closed.

4. A box comprising a body portion including a bottom section and side and end walls, a cover for the body portion having a flange folded back against the top face of the cover to constitute a ripping flange for opening the box, and a wrapper adhesively attached to all of the walls of the box and including marginal side flaps and end flaps adapted to lap over and be adhesively attached to the top of the box when the latter is closed and sealed, the end marginal flaps and one of the side marginal flaps overlying the ripping flange of the cover.

1,222,288. PROJECTILE. TAKEBE HASE, San Francisco, Cal. Filed Oct. 10, 1916. Serial No. 124,771. (Cl. 102—26.)

1. The combination with the barrel of a gun and the projectile which is adapted to be discharged by the gun,

of a holder secured on the outer end of the barrel, a hollow separate rider projectile supported by the holder in alinement with the muzzle of the barrel, rifles formed interior of the rider projectile, means for insuring a positive alinement of said rifling with relation to the rifling in the gun barrel, and means for temporarily securing said rider projectile against turning and endwise movement when inserted in the holder.



2. The combination with the barrel of a gun and the projectile which is adapted to be discharged by the gun, of a holder secured on the outer end of the barrel, a hollow separate rider projectile supported by the holder in alinement with the muzzle of the barrel, rifles formed interior of the rider projectile, means for insuring a positive alinement of said rifling with relation to the rifling in the gun barrel, means for temporarily securing said rider projectile against turning and endwise movement when inserted in the holder, a plurality of radially disposed arms on the rider projectile, and latch members on said projectile adapted to lock the main projectile against removal after it has entered.

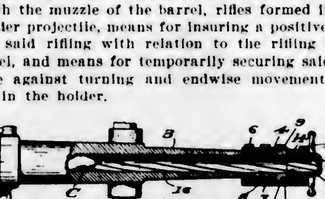
3. In combination with a gun barrel, a rider projectile, means to secure said rider projectile to the outer end of the barrel, and means connected to the rider projectile and engageable with the periphery of the fired projectile and over the rear end wall of the fired projectile for anchoring the rider to the fired projectile.

4. In combination with a gun barrel, a rider projectile formed hollow to receive the fired projectile therein, a holder for securing the rider to the barrel, and means borne by the rider and located outwardly beyond the interior of the rider and having parts extending inwardly thereof to engage over the rear end of the fired projectile to lock the rider thereto.

5. In combination with a gun barrel, a rider projectile formed hollow to receive the fired projectile therein, a holder for securing the rider to the barrel, and spring arms secured to the rider outwardly beyond the interior thereof and having parts projecting within the rider interior to engage over the rear end of the fired projectile to lock the rider thereto.

[Claims 6 to 9 not printed in the Gazette.]

1,222,289. VALVE TESTER AND GRINDER. BERT HEWITT, San Rafael, Cal. Filed Apr. 5, 1916. Serial No. 89,224. (Cl. 73—51.)



1. In combination, a chamber open at one end adapted to be fitted over the valve, a clamping bar on the closed end of said chamber, said clamping bar having slotted ends, bolts received in said slots, for attachment to the walls of the valve seat, whereby to secure the chamber in air-tight engagement with said walls, and means for supplying air under pressure to said chamber to determine the fit of the valve upon its seat.

2. In combination, a chamber open at one end adapted to be fitted over a valve, a member hinged on the closed end of said chamber, a clamping bar removably seated on said closed end for attachment to the walls of the valve seat, whereby to secure the chamber in air-tight engagement with said walls, means for supplying air under pressure to said chamber to determine the fit of the valve upon its seat, said valve having means to receive the hinged member when the chamber is inverted, whereby the valve may be turned in its seat for grinding.

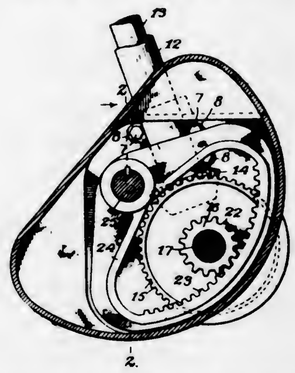
3. The method of testing lifting valves which consists in establishing an air-tight chamber around the head of the valve, supplying air to said chamber, and then moving the valve from its seat into the pressure chamber, and determining from the amount of resistance offered by the valve to such movement the fit of the same.

4. The method of testing the fit of a puppet valve in its seat, which consists in supplying air under pressure over the head of the valve and around the seat of the same tending to seat said valve, and determining from the amount of leakage occurring past the valve the closeness of fit of the same.

5. In combination, a pneumatic tester comprising an air chamber detachably fitted over the valve, means for supplying air under pressure to said chamber for determining the fit of the valve, and co-acting means on said chamber and said valve for turning and grinding the valve and its seat.

[Claims 6 and 7 not printed in the Gazette.]

1,222,290. STEERING-GEAR FOR VEHICLES. ARTHUR O. HIGINBOTHAM, Worcester, Mass., assignor to Charles B. Foster and Company, Worcester, Mass., a Copartnership consisting of Charles B. Foster, Arthur O. Higinbotham, and Jerome R. George. Filed Aug. 6, 1914. Serial No. 855,522. (Cl. 74—79.)



1. In a steering gear, a steering rod, a rotatable pinion having a fixed axis of rotation, means operatively connecting said rod and pinion, and a rocking member carrying an internal gear in mesh with said pinion.

2. In a steering gear, a steering rod, a rotatable pinion having a fixed axis of rotation, means operatively connecting said rod and pinion, and a pivotally supported member having teeth in mesh with the teeth of said pinion.

3. In a steering gear, a steering rod, a rotatable pinion having a fixed axis of rotation, means operatively connecting said rod and pinion, and a pivoted member having a segmental internal gear meshing with the teeth of said pinion.

4. In a steering gear, a steering rod, a rotatable pinion having a fixed axis of rotation, bevel gearing operatively connecting said rod and said pinion, and a member pivoted on one side of the axis of said pinion, and having teeth in engagement with said pinion on the opposite side of the axis of said pinion.

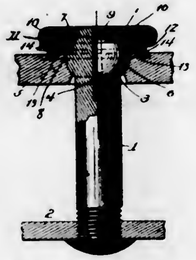
5. In a steering gear, a steering rod, a gear carried thereby, a second gear in mesh with said first gear, a pinion carried by the hub and said second gear, said pinion having a fixed axis of rotation, and a rocking member disposed in surrounding relation to said pinion and having an internal gear meshing with said pinion.

1,222,291. RECOIL-PAD FOR FIREARMS. STEPHEN A. Huntley, Omaha, Nebr., assignor to The Huntley Manufacturing Company, Omaha, Nebr., a Corporation of Nebraska. Filed Mar. 8, 1915. Serial No. 12,807. (Cl. 42—74.)



A recoil pad for shot guns and like fire arms braced from the shoulder when discharged, comprising a plurality of soft rubber pads, a plurality of attenuated, non-elastic members, said non-elastic members being fixed face to face to said pads, and said pads and non-elastic members being positioned to alternate with each other, whereby the relative innermost pad will take up the resultant maximum pressure or expansion from the gun discharge recoil or shock and the intermediate and outermost pads will successively neutralize the remainder of the shock pressure or expansion as set forth.

1,222,292. STAY-BOLT STRUCTURE FOR BOILERS. CHARLES HYLAND, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed Feb. 26, 1916. Serial No. 80,689. (Cl. 85—1.5.)



1. In a stay bolt structure, the combination with a boiler sheet and a stay bolt having a head mounted therein, of a flexible metal cap secured at one edge to the boiler sheet and secured at its other edge to the head of the bolt and normally pressing against the same in a direction parallel to the axis of the bolt.

2. In a stay bolt structure, the combination with a boiler sheet and a stay bolt having a head mounted therein, of an annular flexible cap encircling the bolt head and welded at its respective edges to the boiler sheet and to said bolt head.

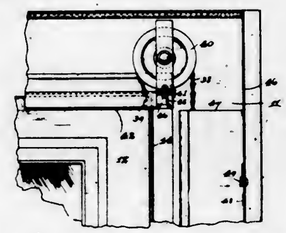
3. In a stay bolt structure, the combination with a boiler sheet and a stay bolt having a head mounted therein, said head having an annular shoulder, of an annular flexible cap having one edge bearing against the shoulder on the bolt head, and means securing the other edge of said annular flexible cap to the boiler sheet.

4. In a stay bolt structure, the combination with a boiler sheet and a stay bolt having a head mounted thereon, said head having an annular shoulder, of an annular flexible cap having one edge bearing against the shoulder on the bolt head and welded to the latter the other edge of said annular flexible cap being welded to the boiler sheet.

5. In a stay bolt structure, the combination with a boiler sheet and a stay bolt having a head mounted in said boiler sheet, said boiler sheet having an annular groove in its outer face surrounding the bearing of the bolt head, of an annular flexible cap having one edge secured in the annular groove in the boiler sheet and having its other edge bearing against the head of the stay bolt.

[Claims 6 and 7 not printed in the Gazette.]

1,222,293. METAL WINDOW-FRAME. ORLA H. IMAN, Chicago, Ill., assignor to Voigtmann & Co., Chicago, Ill., a Corporation of Illinois. Filed Nov. 13, 1914. Serial No. 871,922. (Cl. 189—75.)



In a window frame of the class described, the combination of an outer casing having a hollow top and a pair of hollow sides, the bottom wall of the hollow top being permanently fixed in position in the casing and the opposed inner walls of the hollow sides being removably mounted in said casing, said hollow top being extended outwardly at each end beyond the inner walls of said sides and being provided with apertures constituting communicating passages between said hollow top and said hollow sides, the ends of the bottom wall of said hollow top projecting beyond said removable side walls and constituting supports for the pulley brackets, said apertures being large enough to permit removal of said brackets through said apertures.

1,222,294. HINGE. PERRY C. JAMES, Sciota, Ill. Filed May 11, 1916. Serial No. 96,860. (Cl. 21—148.)

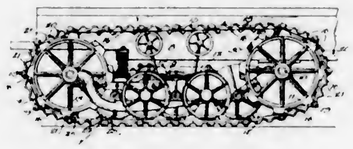


1. In a hinge, a connector having at each of its ends a cup provided with oppositely arranged slots, spring arranged each in a corresponding pair of said slots, a pair of links each of which has at one of its ends a cup facing and telescoped with one of the connector-cups, bolts having each a head bearing on the outer face of the cup of the adjacent link, its stem passed through corresponding apertures in the adjacent spring and connector-cup, and nuts each of which engages one of said stems and bears on the adjacent spring.

2. In a hinge, a connector having at one of its ends a cup provided with oppositely arranged slots, a spring arranged in a corresponding pair of said slots, a link having at one of its ends a cup facing and telescoped with one of the connector cups, a bolt having a head bearing on the outer face of the cup of the link, its stem passed through corresponding apertures in the spring and connector-cup, and a nut which engages said stem and bears on the spring.

3. In a hinge, a connector having at one of its ends a cup provided with oppositely arranged slots and provided also with a series of notches, a spring arranged in a corresponding pair of said slots, a link having at one of its ends a cup facing and telescoped with one of the connector cups, said link having a series of bosses each of which is adapted to enter one of said notches, a bolt having a head bearing on the outer face of the cup of the link, its stem passed through corresponding apertures in the spring and connector-cup, and a nut which engages said stem and bears on the spring.

1,222,295. TRACTOR CHAIN TREAD. GEORGE C. JETT, Gary, Ind. Filed May 20, 1916. Serial No. 98,747. (Cl. 21—114.)



1. In a traction device, the combination of a plurality of associated tread members having weight bearing webbed portions severally formed at each end with draft means and hinge elements, and pivotal connecting means for adjacent hinged ends of said portions, said draft means having driven faces projecting upwardly from the web of said portions at points adjacent said means.

2. In a traction member, the combination of a sprocket wheel having a sprocket tooth formed with plane driving faces disposed at an angle to the radial line of the wheel, and a chain tread comprising pivotally connected tread shoes provided at each side of the line of pivotal connection with corresponding relatively movable driven faces adapted to be engaged by said driving faces.

3. In a traction member, the combination of a sprocket wheel and a chain tread device respectively provided with angularly disposed plane driving and driven draft elements, one of said elements having a guide flange adapted to engage the other of the said elements.

4. A traction shoe provided with a bearing wheel track portion and a driven face portion disposed to one side of said track and having its face disposed at an angle to the plane of said track portion.

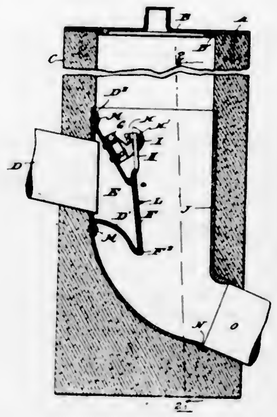
5. In a traction member, the combination of a sprocket wheel provided with a sprocket tooth having driving faces, and a pair of associated tread shoes formed with adjacent portions constituting driven faces adapted to be engaged by the driving faces of the said sprocket tooth.

[Claims 6 to 23 not printed in the Gazette.]

1,222,296. SEWER-TRAP. BEN BUREELL JOHNSON, Evansville, Ind. Filed Apr. 21, 1915. Serial No. 22,906. (Cl. 182—14.)

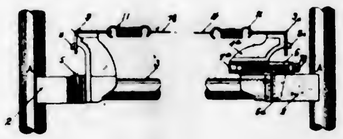
1. A sewer box comprising an inclosing wall of masonry, a discharge pipe leading therefrom, a delivery pipe leading thereto, a chute embracing the delivery end of the delivery pipe, means for securing the chute to the said wall, supporting members detachably connected to the chute, said supporting members having rearwardly inclined bearing surfaces, a door for closing the chute, said door having slotted arms to receive the supporting members, and members on the said arms engaging the said supporting members constituting a hinge.

2. A sewer box comprising an inclosing wall of masonry, a discharge pipe leading therefrom, a delivery pipe leading thereto, a chute embracing the delivery end of the delivery pipe and having its outer end beveled with its lower edge extending beyond the upper edge forming an inclined seat for a door, means for securing the chute to the said wall, supporting members detachably connected to the chute, said supporting members having rearwardly inclined bearing surfaces, a door for closing the chute, said door having relatively long slotted arms to receive



the supporting members, and members on the said arms engaging the said supporting members constituting a hinge for the door.

1,222,297. MECHANICAL MATTRESS-TIGHTENER. ROBERT JOY, San Francisco, Cal. Filed Nov. 29, 1915. Serial No. 63,976. (Cl. 5—69.)



In a mechanical mattress fastener, a bed frame having side rails and end socket parts supported by the frame posts, brackets secured to the side rails and engaging with the socket parts, one of said brackets comprising a fixed section and an adjustable slide extension, the fixed section having a horizontally disposed sleeve part open at one end and closed at its opposite end which latter end extends beyond the body portion of the fixed section, the adjustable slide extension having an elongated tubular bearing slidable in the sleeve part and removable therefrom by longitudinal movement only, a screw arranged in the closed end of the sleeve part and engaged in the tubular bearing for sliding the latter in the sleeve part, and a lug carried by the fixed section for engaging in the socket part of the bed frame and underlying the extended end of the sleeve part.

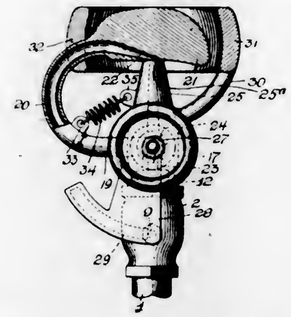
1,222,298. DRINKING-FOUNTAIN. BENNETT KAMINSKY, Indianapolis, Ind. Filed June 2, 1913. Serial No. 771,138. (Cl. 137—109.)

1. In a drinking fountain, a discharge nozzle, a pivoted element movable to and from said nozzle and arranged to discharge water upon and against said nozzle, and manually operated means for moving and adjusting said pivoted element and maintaining it clear of the nozzle when desired to permit the discharge from the nozzle and render the same accessible for drinking purposes.

2. In a drinking fountain, a water discharge nozzle, and a shield movable to and from said nozzle and having a port for discharging water upon said nozzle.

3. In a drinking fountain, a water discharge nozzle, a guard in proximity thereto, and means movable in said guard for discharging water upon and against said nozzle.

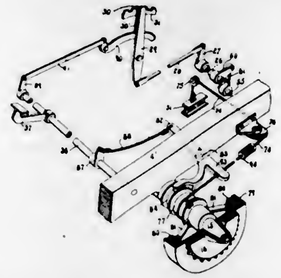
4. In a drinking fountain, a water discharge nozzle, a guard in proximity to said nozzle, and a shield movable in said guard to and from said nozzle and provided with a port for discharging water upon and against said nozzle.



5. In a drinking fountain, a valve casing, valves mounted therein, a discharge nozzle carried by said valve casing, and means movable to and from said nozzle and simultaneous with the movement of one of said valves for discharging water upon and against said nozzle.

[Claims 6 to 27 not printed in the Gazette.]

1,222,299. TRACTION-PLOW. HENRY W. KARDELL, St. Louis, Mo. Original application filed May 23, 1913, Serial No. 769,356. Divided and this application filed June 25, 1914. Serial No. 847,346. (Cl. 97—70.)



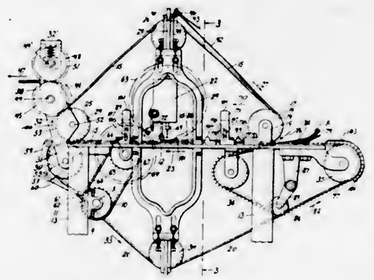
1. In a plow, the combination of a frame, a plow member pivotally mounted with respect to the frame, an adjustable plow holding device mounted on the frame forming a support for the plow member, including means for locking the plow holding device to prevent the plow member from being lifted, a power shaft, a plow lifting device separate from said plow holding device, a rock-shaft, means operably connected to the rock-shaft for unlocking the plow holding device, and a shifter operably connected to the rock-shaft to couple the plow lifting device to the power shaft after the plow holding device has been unlocked.

2. In a plow, the combination of a frame, a plow member pivotally mounted with respect to the frame, an adjustable plow holding device mounted on the frame forming a support for the plow member, including means for locking the plow holding device to prevent the plow member from being lifted, a power shaft, a plow lifting device separate from said plow holding device, a lever-operated rock-shaft, means operably connected to the rock-shaft for unlocking the plow holding device and embodying a pivoted crank lever, means for coupling the power shaft to the plow lifting device, and means for transmitting movement from the rock-shaft to the coupling means so as to unlock the plow holding device and thereafter couple the power shaft to the plow lifting device.

3. In a plow, the combination of a frame, a plow member pivotally mounted with respect to the frame, an adjustable plow holding device mounted on the frame forming a support for the plow member, including means for locking the plow holding device to prevent the plow member from being lifted, a power shaft, a drive clutch member secured to the power shaft, a plow lifting device including a driven clutch member adapted to engage the drive clutch member to provide for the transmission of power from the power shaft to the plow lifting device, a clutch shifter for actuating the driven clutch member, a lever-operated rock-shaft, a releasing device for unlocking the plow holding device; means for transmitting movement from the rock shaft to the releasing device to unlock the plow holding device and means for transmitting movement from the rock shaft to the clutch shifter so as to couple the clutch members after the releasing device has been actuated.

4. In a plow, the combination of a frame, a plow member pivotally mounted with respect to the frame, an adjustable plow holding device mounted on the frame forming a support for the plow member, including means for locking the plow holding device to prevent the plow member from being lifted, a power shaft, a drive clutch member secured to the power shaft, a lever-operated rock-shaft, a releasing device for unlocking the plow holding device, means for transmitting movement from the rock-shaft to the releasing device, and a plow lifting device including a driven clutch member adapted to engage said drive clutch member, a winding drum operable by the driven clutch member, a flexible member connected to the plow member and adapted to be wound onto the drum to lift the plow member and a clutch shifter for actuating the driven clutch member; and means for transmitting movement from the rock shaft to the clutch shifter to provide for the transmission of power to the winding drum and flexible member after the releasing device has been actuated.

1,222,300. APPARATUS FOR MAKING FEATHER BOAS AND THE LIKE. CHARLES L. KAUFMAN, Englewood, N. J., assignor to Alexander Arbib, New York, N. Y. Filed Jan. 22, 1913. Serial No. 743,660. (Cl. 112—24.)



1. Apparatus of the kind described, including sewing means, means for supporting a collection of feathers or the like and carrying it through the field of operations of the sewing means, said supporting means including a plurality of sidewisely disposed belts longitudinally spaced apart and having co-extensive paths of travel which are parallel and in a substantially horizontal plane thereby to establish between said belts and in said plane an auxiliary path of travel, said sewing means being located in said plane between said belts, and an auxiliary belt guided for horizontal travel in the same direction traveled by said

plurality of spaced apart belts and in said auxiliary path, said auxiliary belt entering the said horizontal plane at a point ahead of the commencement of said co-extensive paths of travel, then traveling in said horizontal plane toward said auxiliary path, then traveling in said auxiliary path co-extensively with said plurality of spaced apart belts, and then, at a point ahead of said sewing means, diverging downwardly from said horizontal plane.

2. Apparatus of the kind described, comprising sewing means, means for supporting a line of feathers or the like and transporting it through the field of operations of the sewing means, said supporting means being provided with a portion traversing a predetermined point whereat feathers or the like may be fed, guiding means for said supporting means, and a resiliently mounted roller located above and transversely of the path of movement of the transporting means and under which roller a flexible cord may pass to be guided into substantial parallelism with the line of transportation of said supporting means, said parallelism between said predetermined point of feed and a predetermined point in said line of transportation beyond said sewing means extending in a common plane with said supporting means.

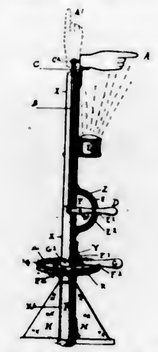
3. In apparatus of the kind described, comprising sewing means, translatable means for supporting a line of feathers or the like and transporting it through the field of operations of the sewing means, guiding means for a portion of said line, means adapted to feed simultaneously with the transportation of said line a cord or the like adapted to bear against a part of said portion, whereby said portion will be interposed between said guiding means and said cord, said guiding means including a roller located above and transversely of said portion and in advance of the sewing means, and a member adapted to approach said guiding instrumentality angularly in the direction of the transportation of said line and adapted to pad down the portion of the line passing therebeneath.

4. In apparatus of the kind described, comprising sewing means, translatable means for supporting a line of feathers or the like and transporting it through the field of operations of the sewing means, guiding means for a portion of said line, means adapted to feed simultaneously with the transportation of said line a cord or the like adapted to bear against a part of said portion, whereby said portion will be interposed between said guiding means and said cord, said guiding means, including a roller located above and transversely of said portion and in advance of the sewing means, and a presser finger adapted to approach said guiding instrumentality angularly in the direction of the transportation of said line and adapted to pad down the portion of the line passing therebeneath.

5. In apparatus of the class described, in combination; an endless conveyer belt supported for lengthwise movement within a substantially vertical plane and having a length thereof lying within a substantially horizontal plane; a similar belt similarly supported within said vertical plane and also having a length thereof lying within a substantially horizontal plane but at a different level from and contacting with the similarly-lying length of said first-mentioned belt; a pair of similar belts lying within a vertical plane substantially parallel to said first-mentioned vertical plane, one of said pair of belts being supported similarly to said first mentioned belt and the other of said pair of belts being supported similarly to said second-mentioned belt, and said pair of belts having respectively contacting lengths similar to the contacting lengths respectively of said first-mentioned belt and of said second-mentioned belt, and which lengths lie respectively in substantially the same horizontal planes within which lie respectively the contacting lengths of said first-mentioned belt and of said second-mentioned belt; a single endless conveyer belt supported within a substantially vertical plane lying between the two vertical planes aforesaid; and means adapted simultaneously to drive said belts; the vertical plane within which is supported said last-mentioned belt interlapping the vertical planes within which lie certain of the four first-mentioned belts.

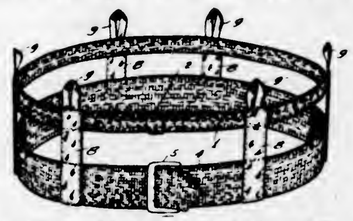
[Claims 6 and 7 not printed in the Gazette.]

1,222,301. AUTOMOBILE AND VEHICLE SIGNALING DEVICE. JOHN L. M. KELLY, Trenton, N. J. Filed Sept. 17, 1913. Serial No. 790,282. (Cl. 116—31.)



The combination with a vehicle, of an indicator pointer swiveled to turn on a vertical axis to preindicate the course and to swing on a horizontal axis to indicate the stationary condition, and means for operating the pointer on either or both of its axes.

1,222,302. BELT. GILBERT KING, Pittsburgh, Pa. Filed July 28, 1916. Serial No. 111,843. (Cl. 241—9.)

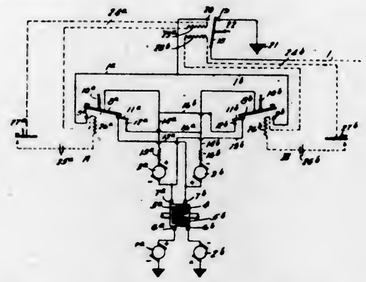


1. A belt comprising an upper and a lower belt member, means for connecting the ends of said members together, the connecting means of one belt member being independent of the means for the other belt member, a plurality of spaced vertically disposed fabric casings having their lower end portions permanently secured to the outer face of said lower member and their upper end portions permanently secured to the outer face of the upper belt member, and vertically disposed loops having their lower ends secured within the top of said casing and projecting above the upper edge of said upper belt member.

2. A belt comprising an upper and a lower belt member, means for connecting the ends of said members together, the connecting means of one belt member being independent of the means for the other belt member, a plurality of spaced vertically disposed fabric casings having their lower end portions permanently secured to the outer face of said lower belt member and their upper end portions permanently secured to the outer face of the upper belt member, and vertically disposed loops having their lower ends secured within the top of said casing and projecting above the upper edge of said upper belt member, said casings having their lower ends flush with the lower edge of the lower belt member and their upper ends flush with the upper edge of the upper belt element.

1,222,303. QUADRUPLEX TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed Feb. 25, 1915, Serial No. 10,520. Renewed Dec. 30, 1916. Serial No. 139,971. (Cl. 178—55.)

1. The method of quadruplexing a line with capacity, which consists in impressing on the line uni-directional pulses or current to denote the transmission of a single message, impressing upon the line alternations to denote two simultaneous messages, and equalizing the values of the received pulses or current to compensate for the greater losses due to the line capacity when transmitting alternations.



2. The method of quadruplexing a line with capacity, which consists in impressing on the line at one time uni-directional pulses or current and at other times impressing on the line true alternations, and equalizing the intensity of the received pulses or current to compensate for the greater line losses when alternations are impressed on the line.

3. The method of quadruplexing a line with capacity, which consists in at one time impressing upon the line uni-directional pulses or current and at other times impressing upon the line true alternations, and decreasing the intensity of the uni-directional pulses or current below the intensity of the alternations in order to equalize their values at the receiving station.

4. The method of quadruplexing a line with capacity, which consists in impressing upon the line at one time uni-directional pulses or current and at other times true alternations, the alternations being of a higher value than the uni-directional pulses or current in order to equalize their value at the receiving station.

5. The method of quadruplexing a line with capacity, which consists in impressing upon the line uni-directional pulses of predetermined value to denote a single message, and impressing upon the line alternations of a higher value than the value of the uni-directional pulses to denote two simultaneous messages.

[Claims 6 and 7 not printed in the Gazette.]

1,222,304. MANUFACTURE OF BREAD. HENRY A. KOHMAN, TRUMAN M. GODFREY, and LAUREN H. ASHE, Pittsburgh, Pa., assignors to Ward Baking Company, New York, N. Y., a Corporation of New York. Filed Aug. 16, 1916. Serial No. 115,153. (Cl. 99—10.)

1. In the manufacture of leavened bread, the method of economizing in the amount of yeast normally employed, which consists in treating nitrogenous material to convert it into a form in which it is rich in nitrogen available as yeast food in a starchy medium and low in carbohydrates, incorporating the converted material with the flour, yeast and other ingredients of the dough batch, and fermenting the mixture; substantially as described.

2. In the manufacture of leavened bread, the method of economizing in the amount of yeast normally employed, which consists in treating nitrogenous material containing calcium to convert it into a form in which it is rich in nitrogen and calcium both available as yeast food in a starchy medium, incorporating the converted material with the flour, yeast and other ingredients of the dough batch, and fermenting the mixture; substantially as described.

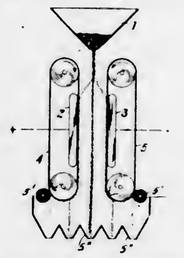
3. In the manufacture of leavened bread, the method of economizing in the amount of yeast normally employed, which consists in incorporating with the flour, yeast, and other ingredients of the dough batch to be fermented, milk material whose nitrogen and calcium constituents are in available condition to serve as yeast food in a starchy medium and fermenting the batch; substantially as described.

4. In the manufacture of leavened bread, the method of economizing in the amount of yeast normally employed, which consists in incorporating with the flour, yeast, and other ingredients of the dough batch to be fermented, a casein material in available condition to serve as yeast food in a starchy medium, and fermenting the batch; substantially as described.

5. In the manufacture of leavened bread, the method of economizing in the amount of yeast normally employed, which consists in incorporating with the flour, yeast, and other ingredients of the dough batch to be fermented, cheese in available condition to serve as yeast food in a starchy medium, and fermenting the batch; substantially as described.

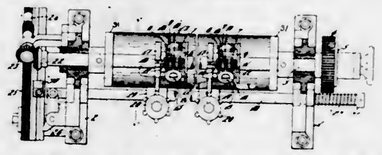
[Claim 6 not printed in the Gazette.]

1,222,305. ELECTROSTATIC SEPARATOR FOR INFLAMMABLE MATERIALS. JAKOB KRAUS, Brunswick, Germany. Filed Oct. 27, 1914. Serial No. 868,859. (Cl. 83—49.)



An electrostatic separator, comprising an electrode consisting of a poor conductor of electricity, means for causing the material to be treated to pass within the field of attraction of said electrode, and a dielectric conveyer movable between said electrode and the path of the material to prevent the material from reaching the electrode and to carry the attracted particles out of the electrostatic field.

1,222,306. NUMBERING MECHANISM. ALBERT KRAUTH, Hamilton, Ohio, assignor to Krauth & Benninghofen, a Copartnership composed of Albert Krauth and Christian Benninghofen, Hamilton, Ohio. Filed July 1, 1912. Serial No. 706,976. (Cl. 101—77.)



1. In a device of the class described, a type disk carrier member, a series of type disks mounted thereon, lying in a plane transverse to the rotation of the carrier, a disk of the series provided with teeth circumferentially arranged, a toothed wheel mounted on said carrier, and rotating therewith, having its teeth engaged with the teeth of the type disk, a stationary toothed member mounted in the path of said toothed wheel to engage the same in the rotary movement of the carrier for consecutively advancing the type disk to shift its type characters into and out of a printing position.

2. In a device of the class described, a rotative carrier, a series of type disks as a unit eccentrically located upon said carrier, and relatively progressively imparting periodical consecutive advance motion from one thereof as a

prime mover, a circumferential series of teeth projecting from said prime mover of the series, a non-rotatable toothed member projected coaxially with said carrier, and a toothed motion imparting member as an intermediate planetarily mounted upon said carrier, intermeshed with the teeth of said prime mover, adapted to be engaged by said non-rotative toothed member, intermittently in each carrier cycle to partially rotate said intermediate member.

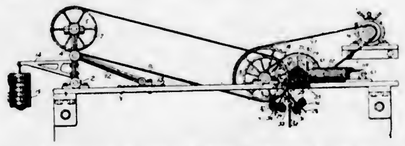
3. In a device of the class described, a frame, a shaft journaled thereon, a carrier concentrically fixed upon said shaft, a series of numbering wheels mounted on said carrier on an axis transverse to that of said shaft, one numbering wheel of the series functioning as a prime mover for the series and provided with a circumferential series of teeth projected therefrom, an actuator journaled upon said carrier engaged with the teeth of said prime mover, and means for intermittently coöperating with said actuator in a carrier cycle, to partially rotate said numbering wheels for a concentric setting of the type characters thereof.

4. In a device of the class described, a frame, a shaft journaled thereon, a rotative carrier on said shaft, a series of type wheels mounted on said carrier, on an axis transverse to that of said shaft, one wheel of the series functioning as a prime mover, a rotative actuator on said carrier connecting with said prime mover and a stationary member projected into the orbit of said actuator to partially rotate the same in each carrier cycle.

5. In a device of the class described, a pair of coacting rotative members, a numbering device mounted upon one of said members to coöperate with the other member, and including transmission means for changing the type into and out of printing position, a supporting member parallel with the axis of said member carrying said numbering devices, and a member connected to said supporting member having a rigid detent projected to coöperate with the transmission means of said numbering device at a determined point in the numbering device cycle about the axis of said carrying member, for determinately moving said transmission means.

[Claims 6 to 13 not printed in the Gazette.]

1,222,307. MACHINE FOR REMOVING CORSET-STEELS AND THE LIKE. LOUIS LAVECK and ALPHONSE M. ROY, Fulton, N. Y. Filed June 6, 1916. Serial No. 101,993. (Cl. 51—12.)



1. In a machine of the character described, the combination with a bed, of a feed roller transversely arranged upon the bed, a revoluble abrading device adjacent to the feed roller, means for revolving the abrading device more rapidly than the feed roller revolves and in the same direction, means arranged upon the said bed and constructed to laterally spread a layer of fabric upon the bed while the fabric is fed to the said abrading device, means for directing the steels from the abraded fabric in one direction, and means for drawing the fabric in another direction.

2. In a machine of the character described, the combination with a bed, of a feed roller transversely arranged upon the bed, a revoluble abrading device adjacent to the feed roller, means for revolving the said abrading device and the said feed roller in the same direction and for revolving the abrading device more rapidly than the feed roller, means arranged upon the said bed and constructed to feed fabric upon the bed toward the feed roller and at the same time to spread the fabric laterally, means for directing the steels from the abraded fabric in one direction, and means for drawing the fabric in another direction.

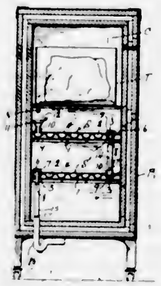
3. In a machine of the character described, the combination with a bed, of a feed roller transversely arranged upon the bed, a revoluble abrading device adjacent to the feed roller, the said bed terminating near the said abrading device, means for revolving the said abrading device and the said feed roller in the same direction and for revolving the abrading device more rapidly than the said feed roller is revolved, means arranged upon the said bed and constructed to laterally spread a layer of fabric upon the said bed while the fabric is fed to the said abrading device, and means arranged beneath the said bed and arranged to draw the fabric downwardly over the end of the bed and from the said abrading device.

4. In a machine of the character described, the combination with a bed, of a feed roller transversely arranged upon the bed, a revoluble abrading device adjacent to the feed roller, the said bed terminating near the said abrading device, means for revolving the said abrading device and the said feed roller in the same direction and for revolving the abrading device more rapidly than the feed roller is revolved, means arranged upon the said bed and constructed to feed fabric upon the bed toward the feed roller and at the same time to spread the said fabric laterally, and means arranged beneath the said bed and arranged to draw the said fabric downwardly over the end of the bed and from the said abrading device.

5. In a machine of the character described, the combination with a bed, of a feed roller transversely arranged upon the bed, a revoluble abrading device adjacent to the feed roller, the said bed terminating near the said abrading device, means for revolving the said abrading device and the said feed roller in the same direction and for revolving the abrading device more rapidly than the said feed roller is revolved, means arranged below the said abrading device and feed roller for directing the steels in one direction, and means for drawing the fabric in another direction.

[Claims 6 to 12 not printed in the Gazette.]

1,222,308. SHELVING FOR REFRIGERATORS. FLORENCE P. LAYMAN, New York, N. Y., assignor to Sanitary Refrigerator & Heater Company, Portage, Pa., a Corporation of Delaware. Filed Apr. 3, 1915. Serial No. 18,992. Renewed Sept. 7, 1916. Serial No. 118,945. (Cl. 62—53.)



1. As a new article of manufacture, a shelving comprising two superimposed members, the lower member being provided with a duct coacting with the upper member to afford a channel, the upper member being provided with an opening in communication with the channel, said opening being defined by an upstanding flange, a cap member coacting with said flange and affording a chamber above the upper member, and an overflow pipe extending through said channel and into the chamber.

2. As a new article of manufacture, a shelving comprising two superimposed members, the lower member being provided with a duct coacting with the upper member to afford a channel, the upper member being provided with

an opening in communication with the channel, said opening being defined by an upstanding flange, a cap member coacting with said flange and affording a chamber above the upper member, and an overflow pipe extending through said channel and into the chamber, said overflow pipe being operatively engaged with the lower member.

3. As a new article of manufacture, a shelving comprising two superimposed members, the lower member being provided with a duct coacting with the upper member to afford a channel, the upper member being provided with an opening in communication with the channel, said opening being defined by an upstanding flange, a cap member coacting with said flange and affording a chamber above the upper member, and an overflow pipe extending through said channel and into the chamber, said overflow pipe being operatively engaged with the lower member and disposed therethrough.

1,222,309. WELT-INNERSOLE. ARCHILL J. LE CLAIR, Haverhill, Mass. Filed Feb. 5, 1917. Serial No. 146,661. (Cl. 36—22.)



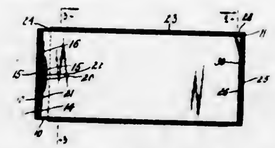
1. A welt-inner-sole comprising a sole-shaped inner-section, an outer-section connected thereto and having the edge of its shank and fore-part portions disposed at a substantial distance within the corresponding portion of the inner-section, to form a correspondingly extending shoulder, and a strip of textile fabric having one edge-portion stitched to the outer-section and extending from between said sections about said shoulder, throughout the length thereof, so that its other edge-portion overlies the outer side of said outer-section, to provide a lip for the attachment of the welt.

2. A welt-inner-sole comprising a sole-shaped inner-section, and an outer section connected thereto and having the edge of its shank and forepart disposed at a substantial distance within the edge of the corresponding edge-portions of the inner-section, to provide a correspondingly extending shoulder, and a strip of textile material having one edge-portion stitched to the outer section at the side thereof next the inner-section, throughout the length of and adjacent said shoulder and shaped in U-form thereabout, so that its opposite edge portion extends over the outer surface of the outer section to form a lip.

3. A welt-inner-sole comprising a sole-shaped inner-section, and a similarly shaped outer section connected thereto and having the edge of its shank and forepart portions disposed at a substantial distance within the erge of the corresponding edge portions of the inner-section, to provide a correspondingly extending shoulder, a strip of textile material, extending throughout the length of said shoulder and about same with one edge-portion between said sections and the other overlying the outer side of the outer-section, and stitches extending through said outer-section and the portion of the strip interposed between said sections and terminating at the side of the inner-section next to the outer section.

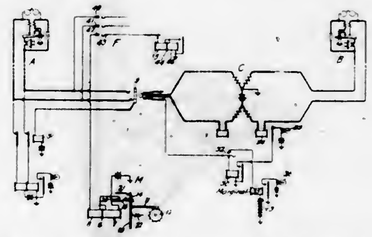
4. A welt-inner-sole comprising a sole-shaped inner-section, an outer-section, connected thereto, having its shank and forepart portions covered, from edge to edge, with a sheet of textile material adhesively connected thereto and having the edge of said portions disposed at a substantial distance within the corresponding edge portions of the inner-section, to form a correspondingly extending shoulder, and a strip of textile fabric having one edge-portion stitched to the outer section, and to the textile-covering thereon, adjacent said shoulder and extending from between said sections about said shoulder, throughout the length thereof, so that its other edge-portion overlies the outer side of said outer-section, to provide a lip.

1,222,310. PHOTOGRAPHIC CAMERA. MICHAEL LICHTMAN, New York, N. Y. Filed May 13, 1915. Serial No. 27,856. (Cl. 95—11.)



A photographic camera comprising a casing made of two telescoping sections adapted to be disengaged, at will, from each other, the inner section being provided in its front end with an exposure opening, a lens in operative relation to said opening, a shutter coöperating with said lens, the outer casing section having a transverse slot in its top portion near its rear end, and a plate rack upon the inner face of the rear end of said outer section in alinement with said slot, the top portion of said inner section closing normally the transverse slot in said outer section.

1,222,311. MESSAGE-REGISTER CIRCUITS. ALBEN E. LUNDELL, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Oct. 2, 1916. Serial No. 123,314. (Cl. 179—8.)



1. A telephone system comprising a telephone line, a service meter therefor, a double wound electromagnet and armature therefor for operating the meter, an operating circuit for the electromagnet, means for completing the operating circuit, a short circuit for one winding of the electromagnet established upon operation of the electromagnet, a holding circuit for the electromagnet established upon the subsequent opening of the operating circuit, and means coöperating with the armature upon the establishment of the holding circuit to move the armature into an intermediate position and open the short circuit.

2. A telephone system comprising a telephone line, a service meter therefor, a double wound electromagnet and armature therefor for operating the meter, an operating circuit for the electromagnet, means for completing the operating circuit, a short circuit for one winding of the electromagnet established upon operation of the electromagnet, a holding circuit for the electromagnet established upon the subsequent opening of the operating circuit, and a spring coöperating with the armature upon the establishment of the holding circuit to move the armature into an intermediate position and open the short circuit.

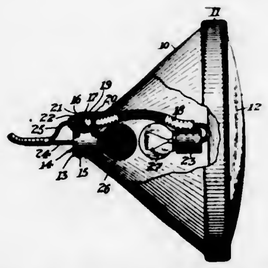
3. A telephone system comprising a telephone line, a service meter therefor, an electromagnet and armature therefor for operating the meter, a normally open operating circuit for the electromagnet, means for closing the operating circuit, means actuated upon the movement of the armature for decreasing the resistance of the operat-

ing circuit, a holding circuit for the electromagnet established upon the subsequent opening of the operating circuit, and means coöperating with the armature upon the establishment of the holding circuit to move the armature into an intermediate position and to again actuate the second-mentioned means to increase the resistance of the holding circuit.

4. A telephone system comprising a telephone line, a service meter therefor, a double wound electromagnet and armature therefor for operating the meter, an operating circuit for the electromagnet, means for completing the operating circuit, a short circuit for one winding of the electromagnet established upon operation of the electromagnet, a holding circuit for the electromagnet established upon the subsequent opening of the operating circuit, and means operating upon the establishment of the holding circuit to open the short circuit.

5. A telephone system comprising a telephone line, a service meter therefor, a double wound electromagnet and armature therefor for operating the meter, an operating circuit for the electromagnet, means for completing the operating circuit, a short circuit for one winding of the electromagnet established upon operation of the electromagnet, a holding circuit for the electromagnet established upon the subsequent opening of the operating circuit, and a spring coöperating with the armature upon the establishment of the holding circuit to open the short circuit.

1,222,312. VEHICLE-LAMP. CHARLES MCKEEVER, Jersey City, N. J., assignor of one-third to William H. Dickinson and one-third to Clem B. Mears, New York, N. Y. Filed Apr. 7, 1916. Serial No. 89,515. (Cl. 240—41.)



1. A vehicle lamp comprising a casing, a light fixed in position therein, a bracket adjustably mounted in said casing, and a light secured in said bracket so as to face the first aforesaid light when the said lights are in position.

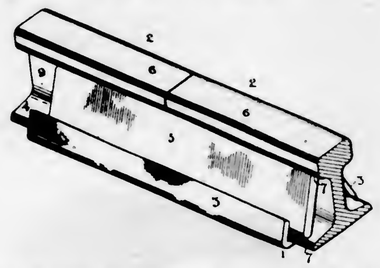
2. A vehicle lamp comprising a casing, a socket fixed therein, a light in said socket, a bracket adjustably and removably mounted in said casing, a socket mounted on the said bracket, and a light in said second socket so placed as to face the light in the fixed socket.

3. A vehicle lamp comprising a casing of conical configuration, a socket fixed in the smaller end of the casing, a bracket adjustably mounted in said socket and extending into said casing, and a socket mounted on the said bracket, the said sockets being adapted to receive lights which when in place assume directly opposite positions therein.

4. A vehicle lamp comprising a casing of conical configuration, a socket in the smaller end of the said casing, a lug associated with said socket, a bracket adjustably connected in the said lug and extending into the said casing, a socket mounted on the said bracket, and lights in the said sockets which are so placed that the lights assume directly opposite positions in the lamp in the axial center thereof.

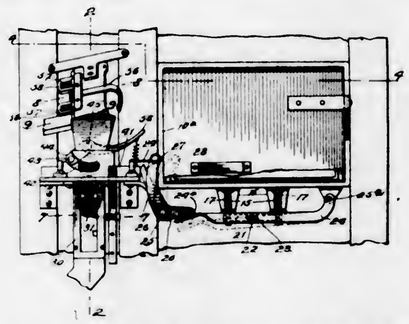
5. A vehicle lamp comprising a casing of conical configuration, a light socket fixed in the smaller end thereof, a lug associated with the said socket and having an aperture therein, a support bracket screw threaded at one end at which it passes through the said aperture in the lug, a collar on the bracket adapted to bear against one side of the lug, nuts turned down on the end of the bracket against the opposite side of said lug to secure the same in position, a socket fixed on the opposite end of the bracket in the interior of the lamp, and lights in the said sockets so placed as to lie in directly opposite positions in the axial center of the lamp.

1,222,313. RAIL-JOINT. LIONEL WILLIAM MACER, Pilgrims Rest, Transvaal, South Africa. Filed June 23, 1915. Serial No. 35,763. (Cl. 239—6.)



In a rail joint or support, the combination with a rail length having a head and flat base, of a sole plate or sleeper having upwardly directed members substantially fitting to the rail base, and locking means formed of a flat plate driven in with its edges engaging respectively the underside of the head and the angle formed between the rail base and said upwardly directed members.

1,222,314. VENDING-MACHINE FOR ARTICLES OF FOOD AND THE LIKE. SOREN MADSEN, New York, N. Y. Filed Sept. 28, 1915. Serial No. 52,986. (Cl. 232—1.)



1. A vending machine embodying a container, a front door for said container hinged to swing outwardly, a rear door for said container hinged to swing in a direction opposite to the front door, means for releasably latching said front door, means for releasing said latching means, an arm attached to the front door, another arm attached to the rear door and a traveling connection between said arms arranged to permit independent movement of said doors during the major portion of the cycles of movement thereof and a common movement during a minor portion of such cycle of movement.

2. A vending machine embodying a container, a front door for said container hinged to swing outwardly, a rear door for said container hinged to swing in a direction opposite to the front door, means for releasably latching said front door, means for releasing said latching means, an arm connected to the front door, another arm connected to the rear door and a slot and pin connection between said arms arranged to permit independent movement of said front and rear doors during the major portion of the opening and closing movements thereof and a common movement of the front door during a minor portion of the closing movement of the same.

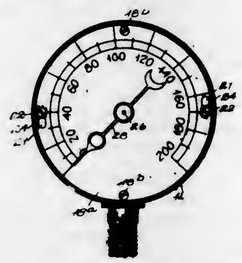
3. A vending machine embodying a container, a front door for said container hinged to swing outwardly, a rear door for said container hinged to swing in a direction opposite to the front door, means for releasably latching said front door, means for releasing said latching means, a guide slot in one side of the container, a pin mounted in said slot, an arm disposed at one side of said guide slot and having at one end a connection with the front door and at the other end a slot connection with said pin, another arm disposed at the opposite side of said guide slot and having a connection at one end with the rear door and a slot connection at the other end with said pin, the said arms, pin and slots being so arranged as to permit an independent movement of the doors during the major portions of the cycles of movement thereof and a common movement during a minor portion of such cycles of movement, whereby the front door may, by the movement of the rear door, be moved from a closed but unlatched position into latching position.

4. A vending machine embodying a food container, a front door suitably mounted at one side of said container, a rear door at the opposite side thereof, latching mechanism for said front door, releasing means for said latching mechanism and means actuated simultaneously with said releasing means for blocking the opening movement of the rear door.

5. A vending machine embodying a food container, a front door suitably mounted at one side of said container, a rear door at the opposite side thereof, latching mechanism for said front door, means for normally forcing said latching mechanism into latching position, releasing means for said latching mechanism, means actuated simultaneously with said releasing means to block the opening movement of the rear door, said means being movable by the operator to free the path of movement of the door and to reset said latching mechanism and releasing means.

[Claims 6 and 7 not printed in the Gazette.]

1,222,315. PRESSURE-GAGE. COLEMAN J. MANNING, Medford, Mass., assignor to American Steam Gauge & Valve Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 26, 1916. Serial No. 127,799. (Cl. 73—109.)



1. A pressure gage comprising, in combination, an annular casing wall or curb, a dial plate rotatively adjustable to a limited extent on said curb, a pointer-carrying shaft extending through the center or axis of movement of the dial plate, and pressure-controlled shaft-rotating mechanism including a member carried by and adjustable with the dial plate and acting when the dial plate is rotatively adjusted to cause a rotative change in the position of the shaft and pointer and thereby correct aberrations of the pointer, means being provided for securing the dial plate to the curb in any position to which it may be adjusted.

2. A pressure gage comprising, in combination, an annular casing wall or curb having an internally enlarged end portion forming an annular internal shoulder near one end of the curb, a dial plate mounted in said enlargement in sliding contact with said shoulder, said dial plate being provided with slots and the curb with set screws adapted to secure the dial plate to the curb in various adjusted positions, a pointer-carrying shaft extending through the center or axis of movement of the dial plate, and pressure-controlled shaft-rotating mechanism including a member carried by and adjustable with the dial plate and acting when the dial plate is rotatively adjusted to cause a rotative change in the position of the shaft and pointer and thereby correct aberrations of the pointer.

3. In a pressure gage, in combination, an annular casing wall or curb, a dial plate rotatively adjustable to a limited extent relatively to said curb, a pointer-carrying shaft extending through the center or axis of movement of the dial, a Bourdon tube attached to the curb, a fulcrum stud located at one side of the axis of the dial plate, fulcrum stud-supporting means attached to the dial plate, a two-armed lever mounted to oscillate on said fulcrum stud, one arm of said lever having an arcuate rack meshing with a pinion on the pointer-carrying shaft, and a link connecting the other arm of said lever with the free end of the Bourdon tube, the lever being movable on said fulcrum stud by the Bourdon tube to rotate the shaft, and also movable by lateral adjustments of the fulcrum stud caused by rotative adjustments of the dial plate to correct aberrations of the pointer due to deviations of the Bourdon tube from the standard form, means being provided for securing the dial plate to the curb at various rotative adjustments.

4. In a pressure gage, in combination, an annular casing wall or curb having an internally enlarged end portion forming an annular internal shoulder near one end of the curb, a dial plate rotatably mounted in said enlargement in sliding contact with said shoulder, said dial plate being provided with slots, and the curb with set screws adapted to secure the dial plate to the curb in various adjusted positions, a pointer-carrying shaft extending through the center or axis of movement of the dial, a Bourdon tube attached to the curb, a fulcrum stud located at one side of the axis of the dial plate, fulcrum stud-supporting means attached to the dial plate, a two-armed lever mounted to oscillate on said fulcrum stud, one arm of said lever having an arcuate rack meshing with a pinion on the pointer-carrying shaft, and a link connecting the other arm of said lever with the free end of the Bourdon tube.

1,222,316. VALVE AND THE LIKE. WINFRED MATTHEWMAN, Ingleton, England. Filed June 24, 1916. Serial No. 105,555. (Cl. 137—32.)

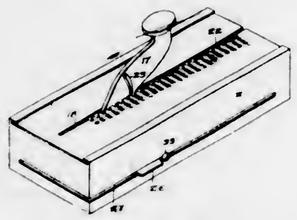


1. A check valve comprising a casing having an inlet and an outlet and provided with an intermediate valve seat, and a movable valve member having a seating face for contact with the said seat and provided with a passage adapted to establish communication between the outlet and inlet, the effective surface area of the valve member which is exposed at the outlet side of the said seat when the valve member is seated being greater than the like surface area at the inlet side of the seat, the casing being provided with a port which is distinct from the outlet and inlet and is situated so that it will be closed by the valve member in its seated position.

2. A valve comprising a body having a passage therethrough and having a conical end and a collar disposed around the body, a packing ring disposed around the body adjacent the collar.

3. In combination with a casing having a bore formed as a seat and a port intermediate of the seat portion, a valve disposed in the bore and provided with a control passage and a conical head arranged in one position to cover the port and in another position to uncover the port and a collar disposed on the valve and a spring disposed on one end of the valve.

1,222,317. CHECK-PROTECTOR. GEORGE W. MAXWELL, San Francisco, Cal., assignor, by mesne assignments, to Security Manufacturing Company, San Francisco, Cal., a Corporation of California. Filed Mar. 8, 1916. Serial No. 82,842. (Cl. 101—93.)



1. In a device of the character described, a casing, a flat die plate arranged in the casing, a carriage movable over said die plate provided with a check guide extending through a slot in the side of the casing, a platen carried by said carriage and a lever engaging said platen and extending through a slot in the top of the casing.

2. In a device of the character described, a casing having a longitudinal slot therein provided with indentations along its edge, a die plate having a plurality of spaced impression surfaces corresponding to said indentations arranged in the casing, a carriage movable over said die plate, a platen carried by the carriage, a lever engaging the platen and extending through said slot, and a projection on the lever adapted to enter said indentations to center the platen over a selected impression surface.

3. In a device of the character described, a casing, a die plate having a plurality of impression surfaces arranged in the casing, a carriage movable over the die plate, a platen carried by the carriage, said casing being provided with a slot having numbered indentations corresponding to the impression surfaces, a lever engaging the carriage and bearing against said platen and extending through said slot and a tapered projection on the lever adapted to enter said indentations.

4. In a device of the character described, a casing having a slot provided with numbered indentations, a die plate provided with a plurality of impression surfaces corresponding to said indentations arranged in said casing below said slot, a carriage movable over said die plate, a platen carried by the carriage, a handle for moving the carriage and depressing the platen projecting through said slot and means in said handle adapted to engage a selected indentation in said slot to center the platen over the corresponding impression surface.

5. In a device of the character described, a casing having a slot provided with indentations along its edge, a die plate provided with impression surfaces corresponding to said indentations arranged in said casing, a carriage movable over said die plate, a platen carried by the carriage, means for moving the carriage and depressing the platen projecting through the slot, identifying characters arranged adjacent the said indentations and means on said carriage-moving means adapted to engage a selected indentation to position the platen over the corresponding impression surface.

[Claims 6 and 7 not printed in the Gazette.]

1,222,318. CASING-FEEDER. BENDIX MILLER, Oakland, Cal., assignor of one-half to C. A. Bright, Oakland, Cal. Filed Nov. 22, 1916. Serial No. 132,784. (Cl. 17—6.)

1. In a sausage casing feeder, a pair of shafts having casing engaging rolls thereon, handles loosely surrounding the shafts, intermeshing crowned spur gears on the shafts, hollow projections on each handle formed to conjointly provide hollow cylindrical members which latter extend outwardly in diametrical relation to the handles, bearing caps inclosing the peripheries of the cylindrical members and having interior studs which project into the interiors of the respective hollow cylindrical members, a set screw for each cap extending through the cap, one of the projections and into the stud, a cap for each handle overlying the respective gears, one of the shafts projecting through the cap of its handle, and means to drive said shaft.



2. In a sausage casing feeder, a pair of shafts having casing engaging rolls thereon, handles loosely surrounding the shafts, intermeshing crowned spur gears on the shafts, hollow projections on each handle formed to conjointly provide hollow cylindrical members which latter extend outwardly in diametrical relation to the handles, bearing caps inclosing the peripheries of the cylindrical members and having interior studs which project into the interiors of the respective hollow cylindrical members, means to secure the caps in position, and means to drive one of the shafts.

3. In a sausage casing feeder, a pair of closely related handles adapted to be gripped by and held directly in the hands of the operator, a shaft loosely mounted in each handle, a casing engaging roll borne by each shaft, means to drive the shafts in unison, and means to pivotally connect the handles to allow same to approach or recede from one another as desired, by pressure exerted by the hands on or against the handles.

4. In a sausage casing feeder, a pair of closely related handles adapted to be gripped with and held directly in the hands of the operator, means borne by the handles to engage opposite sides of the casing to feed the latter, and means to actuate the feeding means.

5. In a sausage casing feeder, a plurality of adjustable means to engage opposite sides of the casing to feed the latter, means to actuate the feeding means, and manual means for enabling the feeding means to be supported in feeding position in the hands of the operator and adjusted to regulate the degree of engagement of each feeding means with the casing while so held.

1,222,319. GAS-TORCH. RUDOLPH J. J. MUELLER, Sheboygan, Wis., assignor to Universal Oxygen Company, Sheboygan, Wis., a Corporation of Wisconsin. Filed Jan. 7, 1915. Serial No. 899. (Cl. 158—27.4.)



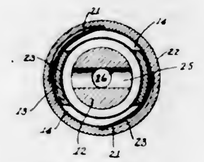
1. In a gas torch the combination of a handle provided at one end with a coupling head and at the other end with a valve case, and having longitudinal gas passages connected with corresponding passages in said head and case, a nozzle, a tubular shank having longitudinal passages connecting the nozzle with the corresponding passages in the valve case, independently adjustable regulating valves controlling the gas passages in the valve case and located side by side, and a stop valve fitted in said case close to the regulating valves and adapted to simultaneously open or close said passages.

2. In a gas torch the combination of a handle having longitudinal gas passages and provided at one end with a valve case having passages communicating with the passages in the handle, a tubular shank connected with the handle and having a mixing chamber and passages connecting said chamber with the corresponding passages in the valve case, a nozzle connected with said shank in communication with the mixing chamber, independently adjustable valves fitted side by side in said case for separately regulating the supply of gases therethrough to the nozzle, and a stop valve fitted in said case close to the regulating valves and adapted to simultaneously open or close the gas passages without disturbing the adjustment of the regulating valves.

3. In a gas torch the combination of a handle having longitudinal gas passages and provided at one end with a valve case having passages communicating with the passages in the handle, a tubular shank detachably connected at one end with the handle and having passages communicating with the corresponding passages in the valve case, a nozzle detachably connected with the other end of said shank in communication with the gas passages therein, independently adjustable regulating valves separately controlling the gas passages in the valve case, and a stop valve adapted to simultaneously open and close said passages independently of the regulating valves.

4. In a gas torch the combination of a handle provided with longitudinal gas passages, a nozzle having a shank provided with passages communicating with the passages in the handle at one end thereof, a flexible pipe having corresponding longitudinal gas passages, and a coupling comprising two separable members, one attached to the other end of the handle and the other to said pipe, and having registering passages communicating with the passages in the handle and pipe respectively, and a nut swiveled on one member and threaded on the other.

1,222,320. CHUCK. CARL PAULI, Sound Beach, Conn., assignor to Garwood Company, Garwood, N. J., a Corporation of New Jersey. Filed Nov. 4, 1916. Serial No. 129,408. (Cl. 29—145.)



1. The combination with the lower tubular end of a drill actuator casing, of a chuck having an annular recess; and substantially flat springs protruding through said tubular end to engage the annular recess of said chuck to secure said chuck in place.

2. The combination with the lower tubular end of a drill actuator casing, of a chuck having an annular recess; substantially flat springs protruding through said tubular end to engage the annular recess of said chuck to secure said chuck in place; and means for actuating said springs to bring them either into or out of engagement with said recess.

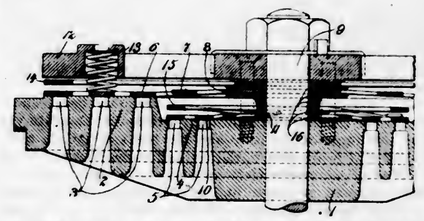
3. The combination with a casing, of a chuck extending into said casing; substantially flat springs anchored to said casing; and means for actuating said springs into and out of chuck-locking position.

4. The combination with a casing, of a chuck extending into said casing, there being openings in said casing; a substantially flat spring anchored at the ends in said casing; and means for actuating the central portions of said flat spring into and out of registry with the casing-openings to lock or release the chuck.

5. The combination with a casing, of a chuck extending into said casing, there being openings in said casing, and there being an annular recess in said chuck registering with said openings when the chuck is in place in the casing; a plurality of substantially flat springs anchored at the ends in said casing; and means for actuating the central portions of said springs into and out of registry with the casing openings, to lock or release the chuck.

[Claims 6 to 10 not printed in the Gazette.]

1,222,321. VALVE FOR COMPRESSORS AND PUMPS. ARTHUR E. PETERS, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Nov. 17, 1914. Serial No. 872,591. (Cl. 103—66.)



1. In a pump valve, a valve grid having a plurality of concentric ports of different diameters therethrough, a valve controlling a larger outer port, said valve having internal spring arms secured to said grid and a smaller valve controlling a smaller inner port.

2. In a pump valve, a valve grid having a plurality of concentric ports of different diameters therethrough, a valve controlling a larger outer port, said valve having internal spring arms secured to said grid and a smaller valve controlling a smaller inner port said smaller valve having spring arms secured to said grid.

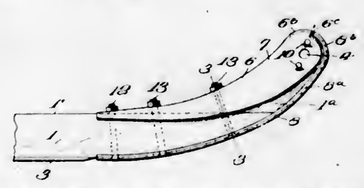
3. In a pump valve, a valve grid having a plurality of ports of different diameters and a plurality of plate valves of different diameters controlling said ports, said valves having internal spring arms secured to a common central support.

4. In a pump valve, a valve grid having a plurality of concentric seats on different planes and a plurality of concentrically mounted spring plate valves of different diameters on said seats, the smaller of said valves and seats being beneath the larger.

5. In a pump valve, a circular valve grid having an outer ported valve seat, and an inner ported valve seat in a central depression in said grid, a circular spring plate valve on said outer seat, and a smaller spring plate valve on said inner seat.

[Claims 6 to 10 not printed in the Gazette.]

1,222,322. BOB-SLED RUNNER. DAVID PLATTNER and RODNEY H. YALE, Lincoln, Nebr., assignors to Plattner-Yale Manufacturing Company, Lincoln, Nebr., a Corporation of Nebraska. Filed Sept. 2, 1916. Serial No. 118,237. (Cl. 21—48.)



1. In a bob sled runner, a runner body, and a metal nose therefor comprising a lower longitudinal section having a longitudinal bottom wall fitting the lower edge of the front portion of said body and forming the shoe therefor and

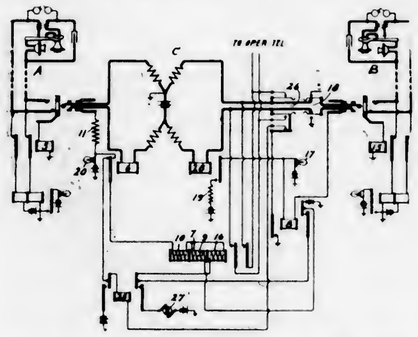
having a longitudinal vertical side wall fitting one vertical side face of said body, and an upper longitudinal section having a longitudinal vertical side wall fitting the other vertical side face of said body and having a longitudinal top wall engaging the top edge of said body, the longitudinal edges of said vertical walls at the front ends of the sections abutting against the inner faces of said bottom and top walls to form the eye of the nose, and securing bolts passing through said body and rigidly clamping said bottom and top walls thereto and the front ends of said sections together.

2. A bob sled runner comprising a runner body, a nose piece thereon, a metal nose composed of a pair of longitudinal sections, each section being approximately L-shape in cross section, and a longitudinal series of vertical bolts passing upwardly through one of said sections, the runner body, the nose piece and the other section and rigidly uniting the nose to the body and clamping said sections against the top and bottom edges of the body and nose piece, one section fitting one vertical side face of the body and the other section fitting the opposite vertical side faces and piece of the body.

3. A bob sled runner comprising a runner body, and a metal nose therefor longitudinally fitting the opposite vertical side faces of the body and the top and bottom edges thereof and projecting upwardly and forwardly therefrom and rigidly secured thereto and forming a front eye, said nose composed of upper and lower longitudinal sections rigidly clamped together, one section forming one side wall and a portion of the edge wall of said eye and the other section forming the other side wall and the remainder of the edge wall of said eye.

4. A bob sled runner comprising a runner body and its nose piece, and a metal nose therefor fitting the opposite side faces and top and bottom edges of the front end portion of the body and its nose piece and securing means passing through said body and nose piece and rigidly holding the nose to the top and bottom edges thereof, said nose being composed of upper and lower longitudinal sections, each approximately L-shape in cross section, the upper section forming the top wall and one side wall of the nose, the lower section forming the other side wall and the bottom wall of the nose, said top and bottom walls terminating in approximately abutting transverse edges at the front end of the nose, the edges of said side walls at the front end of the nose abutting the inner faces of said top and bottom walls.

1,222,323. TELEPHONE-EXCHANGE SYSTEM. ARTHUR RAYNSFORD, New York, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Sept. 11, 1916. Serial No. 119,487. (Cl. 179—73.)



1. A telephone exchange system comprising telephone lines, a link circuit for interconnecting the lines, an operator's telephone set, a listening relay controlling the connection of the operator's telephone to the link circuit, a supervisory relay, a third relay, an energizing circuit therefor including a winding of the listening relay established upon the deënergization of a supervisory relay, a locking circuit for the third relay established upon the energization thereof for rendering this relay independent of the supervisory relay, a signaling device, and interrupter mechanism brought into circuit with the signaling device by the energization of the third relay and the subsequent energization of the supervisory relay.

2. A telephone exchange system comprising telephone lines, a link circuit for interconnecting the lines, an operator's telephone set, a listening relay controlling the connection of the operator's telephone set to the link circuit, a supervisory relay, a third relay, an energizing circuit therefor including a winding of the listening relay established upon the deënergization of the supervisory relay, a signaling device, and interrupter mechanism brought into circuit with the signaling device by the energization of the supervisory relay following the energization of the third relay.

3. A telephone exchange system comprising telephone lines, a link circuit for interconnecting the lines, an operator's telephone set, a listening relay controlling the connection of the operator's telephone set to the link circuit, a supervisory relay, a third relay, an energizing circuit therefor established by the deënergization of the supervisory relay, a signaling device, interrupter mechanism, and a circuit including the signaling device, a winding of the listening relay and an interrupter mechanism established by the subsequent energization of the supervisory relay when the third relay is energized.

4. A telephone exchange system comprising telephone lines, a link circuit for interconnecting the lines, an operator's telephone set, a listening relay controlling the connection of the operator's telephone set to the link circuit, a supervisory relay, a third relay, an energizing circuit therefor established by the deënergization of the supervisory relay, a locking circuit for the third relay established upon the energization thereof, a signaling device, interrupter mechanism, a circuit including the signaling device, a winding of the listening relay, and interrupter mechanism established by the subsequent energization of the supervisory relay when the third relay is energized.

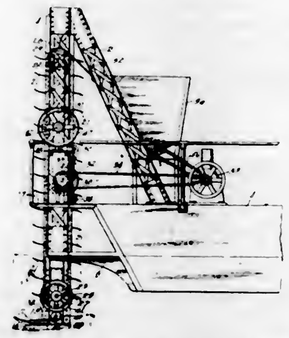
5. A telephone exchange system comprising telephone lines, a link circuit for interconnecting the lines, an operator's telephone set, a listening relay controlling the connection of the operator's telephone set to the link circuit, a supervisory relay, a third relay, an energizing circuit therefor including a winding of the listening relay established upon the deënergization of the supervisory relay, a locking circuit for the third relay established upon the energization thereof, a signaling device, interrupter mechanism, and a circuit including the signaling device, a winding of the listening relay and the interrupter mechanism established by the subsequent energization of the supervisory relay.

1,222,324. KELP-HARVESTER. WILLIAM D. RICHARDSON, Chicago, Ill., assignor to Swift and Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 3, 1915. Serial No. 64,798. (Cl. 56—70.)

1. A harvesting machine of the class described, comprising a float, a conveyer operatively secured in a vertical position relatively thereto and having a frame slidably mounted on said float, means for shifting the lower end of said conveyer frame to different elevations with respect to said float, said conveyer being mounted so as to discharge in the same vertical plane at all times, and means located adjacent the conveyer and operated from the float for cutting the material to be harvested.

2. A harvesting machine of the class described, comprising a float, a conveyer operatively secured in a vertical position relatively thereto and having a frame slidably mounted on said float, means for shifting the lower end of said conveyer frame to different elevations with respect to said float, said conveyer being mounted so as to discharge in the same vertical plane at all times, and means carried at the lower end of said conveyer for cutting the material to be harvested.

3. A harvesting machine of the class described, comprising a float, a conveyer operatively secured in a vertical position relatively to said float, means for cutting the material to be harvested, and means for moving said conveyer in a vertical plane relatively to said float.

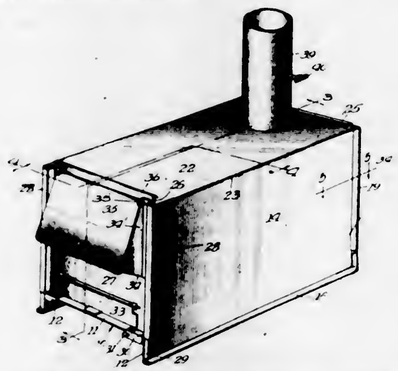


4. A harvesting machine of the class described, comprising a float, a conveyer mounted on said float to move longitudinally in a vertical plane relatively thereto, and a cutter mounted on the lower end of said conveyer, said conveyer being mounted so as to discharge in the same vertical plane when in different positions with respect to its float.

5. A harvesting machine of the class described comprising a float, a conveyer slidably mounted on said float, a cutter mounted on the lower end of said conveyer, and means for moving said conveyer in a vertical plane relatively to said float.

[Claims 6 to 11 not printed in the Gazette.]

1,222,325. STOVE. ROBERT R. ROBERTSON, La Grange, and GEORGE F. HAUF, Chicago, Ill., assignors to Robertson Brothers Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 17, 1916. Serial No. 78,838. (Cl. 126—9.)



1. In a collapsible sheet metal stove, the combination of a base member and side members, and end member in vertical sliding engagement with the side members, and means carried by the bottom member for engagement with the end member to prevent vertical displacement thereof.

2. In a collapsible sheet metal stove, the combination of separable base member and side walls, a grate adapted to rest upon the base, but of a length less than the base, and end walls slidably engaging the side walls and having portions thereof formed inwardly to rest upon the base and to prevent endwise displacement of the grate.

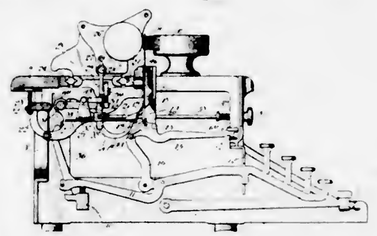
3. In a collapsible stove, the combination of a base member having its longitudinal sides turned down at right angles to form longitudinally extending supporting legs, the marginal edge portion of each leg being formed outwardly and doubled back to form a channel, side members having their lower marginal edge portions flanged outwardly for longitudinal sliding coöperation with the base channels, said side members bearing against the outer faces of the leg, and a top member joining the upper edge of the side members and securing them in spaced relation.

4. In a collapsible stove, the combination of a base member having its longitudinal sides turned down at right angles to form longitudinally extending supporting legs, the marginal edge portion of each leg being formed outwardly and doubled back to form a channel, side members having their lower marginal edge portions flanged outwardly for longitudinal sliding coöperation with the base channels, said side members bearing against the outer faces of the legs, each side member having its ends flanged outwardly, end members having channels formed at their vertical edges for vertical sliding coöperation with the end flanges of the side members, and a top member joining the upper edges of the side members and securing them in spaced relation.

5. In a collapsible stove, the combination of a base member having its longitudinal sides turned down at right angles to form longitudinally extending supporting legs, the marginal edge portion of each leg being formed outwardly and doubled back to form a channel, side members having their lower marginal edge portions flanged outwardly for longitudinal sliding coöperation with the base channels, said side members bearing against the outer faces of the legs, each side member having its ends flanged outwardly, end members having channels formed at their vertical edges for vertical sliding coöperation with the end flanges of the side members, the upper edges of the sides being flanged outwardly, and a top member having channels formed at it longitudinal edges for longitudinal sliding coöperation with the top flanges of the side members, one end of the top member extending over the upper end of one end member when in place, and the other end of the top member cut away to permit unobstructed vertical movement of the other end member.

[Claims 6 to 8 not printed in the Gazette.]

1,222,326. TYPE-WRITER RIBBON-VIBRATOR. ALVAH C. ROEBUCK, Woodstock, Ill., assignor to Woodstock Typewriter Company, Woodstock, Ill., a Corporation of Illinois. Filed Apr. 25, 1914. Serial No. 834,555. (Cl. 197—157.)



1. In a typewriter ribbon vibrator, a ribbon frisket, a slotted arm for moving the same, and a single rotatable shaft with an eccentric projection directly engageable in the slot for controlling the movement and varying the initial position of the arm.

2. In a typewriter ribbon vibrator, a frisket, a slotted arm for moving the frisket, a shaft with an eccentric pin extending at right angles to and directly engageable in the slot of the arm and varying the initial position, and means for oscillating the shaft.

3. In a typewriter ribbon vibrator, an oscillatable vibrator arm having a slot therein, a rotatable shaft with

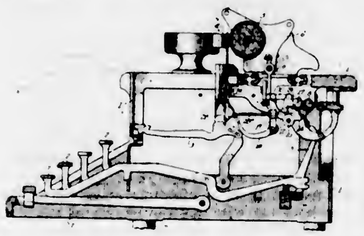
an eccentric pin to directly engage in the slot of the arm, and means for rotating the shaft to vary the initial position of the arm.

4. In a typewriter ribbon vibrator, the combination with an oscillatable pivotally mounted vibrator arm formed with a slot, of a rotatable member having an eccentric pin extending at right angles from and adapted to engage in the slot for varying the initial position of the arm, and means for rotating the member to vary the position of the arm.

5. In a typewriter ribbon vibrator, the combination with a pivotally mounted arm, of an eccentrically adjustable means for varying the position of the arm, a shaft for rotating the said means, another shaft longitudinally movable with respect to the first named shaft, means for limiting the movement of the second shaft, and means to allow the second shaft to be moved longitudinally whereby it may be rotated free of the stop.

[Claims 6 to 9 not printed in the Gazette.]

1,222,327. RIBBON-VIBRATOR. ALVAH C. ROEBUCK, Woodstock, Ill., assignor to Woodstock Typewriter Company, Woodstock, Ill., a Corporation of Illinois. Filed Apr. 25, 1914. Serial No. 834,556. (Cl. 197—157.)



1. In a ribbon vibrator, a pivoted platen shift frame, an oscillatable ribbon frisket supported thereby, an eccentric rotatable in the frame for varying the position of the frisket, a pinion connected to the eccentric, and a rotatable toothed segment meshing with the pinion to rotate it.

2. In a ribbon vibrator, a pivoted shift frame, a shaft extending parallel with the axis of the frame, a gear segment fixed on the shaft, a ribbon frisket connected for operation to said segment, and a knob at the end of the shaft for rotating it.

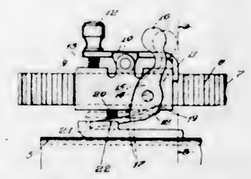
3. In a ribbon vibrator, a shift frame comprising two bars about one of which the frame is pivoted, the other constituting a shift rail, a shaft mounted in the frame parallel with said bars, a ribbon frisket supported by the frame and oscillated with it, a gear connection between the inner end of said shaft and the ribbon frisket for varying the position of the latter, and a knurled extremity at the other end of the shaft protruding from the side of the frame by means of which the position of the frisket is varied.

4. In a ribbon vribrator, a shift frame having parallel bars about one of which the frame is pivoted, a ribbon frisket supported by the frame intermediate the ends thereof, eccentric means for varying the position of the frisket with respect to the frame, a pinion connected to said means, a shaft extending parallel with said bars and mounted in the frame, a toothed segment engaging the pinion, a knurled head for rotating the shaft, and means for holding the shaft in any rotated position, comprising a toothed member secured to the shaft.

5. In a ribbon vibrator, a pivoted shift frame, a ribbon frisket supported thereby, an eccentric rotatable in the frame for varying the position of the frisket, a pinion connected to the eccentric, a gear segment meshing with the pinion, a shaft to which the segment is secured, the shaft being rotatable in the frame, a stop projecting in the frame adjacent the shaft, and a collar securable to the shaft having a flattened portion engageable by the said stop to limit the rotation of the shaft in both directions.

[Claims 6 to 17 not printed in the Gazette.]

1,222,328. TYPE-WRITER MARGIN-RELEASE. ALVAH C. ROEBUCK, Woodstock, Ill., assignor to Woodstock Typewriter Company, Woodstock, Ill., a Corporation of Illinois. Filed Oct. 19, 1914. Serial No. 867,318. (Cl. 197—70.)



1. In a typewriter, the combination with a frame and a movable carriage, of a fixed stop in connection with the frame, and an adjustable margin stop in connection with the carriage, having a releasable lever pivoted on the margin stop and formed with an abutment to engage the fixed stop and movable out of engaging position to permit writing in the margin without losing the adjustment of the margin stop.

2. In a typewriter, the combination with a movable rack bar, of a frame with respect to which the rack bar is movable, a fixed stop in connection with the frame, and a margin stop adjustable on the rack bar comprising a body portion with an angular notch, and a lever pivoted to the body having an arm with an abutment to engage in the notch and to engage the stop on the frame.

3. In a typewriter, the combination with a movable rack bar, of a frame with respect to which the rack bar is movable, a fixed stop in connection with the frame, and a margin stop adjustable on the rack bar comprising a body portion with an angular notch and a lever pivoted to the body having an arm for engaging the stop on the frame and formed with an abutment to engage in the notch and rotatable out of position to engage the fixed stop on the frame.

4. In a typewriter, the combination with a frame and a movable rack bar, of a releasable margin stop having means for adjusting its position with respect to the rack bar and having a pivoted lever formed with an abutment which engages the stop and limits the movement of the lever in a direction away from the stop, and a fixed stop in connection with the frame for engaging the lever to limit the movement of the rack bar.

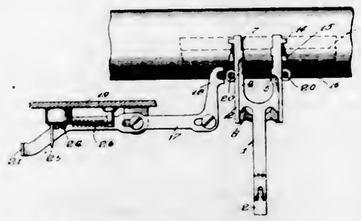
5. A typewriter margin stop with means for adjusting the position of the stop and comprising a body portion with an angular notch, and a releasing lever pivoted to the body with an arm extending therefrom and formed with an angular abutment adapted to engage in the notch whereby the impact of the stop will be communicated directly to the body of the stop and not to the pivots of the lever.

[Claims 6 to 14 not printed in the Gazette.]

1,222,329. TYPE-WRITER RIBBON-VIBRATOR. ALVAH C. ROEBUCK, Woodstock, Ill., assignor to Woodstock Typewriter Company, Woodstock, Ill., a Corporation of Illinois. Filed Oct. 28, 1914. Serial No. 868,977. (Cl. 197—170.)

1. In a typewriting machine, the combination with a vibratory arm, of a forked ribbon guide connected to the arm with a flexible extremity by which it is adjusted, and stops in connection with the forked portions of the guide to limit the movement of the guide with respect to the arm.

2. In a typewriting machine, the combination with a vibratory arm, of a ribbon guide consisting of two parts one connected to the arm and the other flexible and slidably adjustable upon the first part, one of the members being formed with forked extremities having stops to engage the other member and limit the movement of the slidable member with respect to the member connected to the arm.



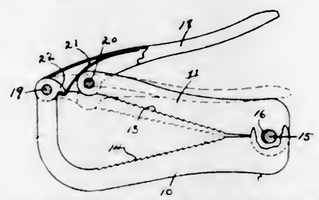
3. In a typewriting machine, the combination with a vibratory arm, of a ribbon guide consisting of two parts one slidable with respect to the other and the other connected to the arm, and releasable interengaging forked extremities in connection with both of the members one of which is flexible and may be sprung, by which the slidable member may be adjusted and held with respect to the other member.

4. In a typewriter ribbon vibrator, the combination with a vibratory member, a ribbon holder member slidable thereon and having a resilient extremity which engages with the other member and which may be sprung with respect to the other member for sliding it into a different position with respect thereto.

5. In a typewriter ribbon vibrator, the combination with a vibratory member, of a ribbon holding member slidable thereon, each of the members being formed with an extremity and the extremities being formed with interengaging means for holding the slidable member in any adjusted position with respect to the other member, and the extremity of one of the members being adapted to be sprung with respect to the other for releasing it from engagement with the other whereby the slidable member may be adjusted to another position.

[Claims 6 to 16 not printed in the Gazette.]

1,222,330. NUTCRACKER. HERBERT J. SAUVAGE, Chicago, Ill. Filed Apr. 28, 1915. Serial No. 24,394. (Cl. 146—3.)



1. A nut cracker comprising coöperating jaws pivotally connected at one end, a lever, and means fixedly connecting one end of said lever with the other end of each of the members, two of said parts also having a loose connection.

2. A nut cracker comprising coöperating jaws adjustably and pivotally connected at one end, a lever, and means fixedly connecting one end of said lever with the other end of each of the members.

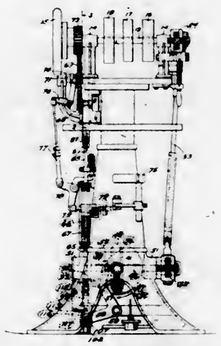
3. A nut cracker comprising coöperating jaws loosely connected together at one end of said jaws, a lever, and means pivotally connecting said lever with the other end of each of the members.

4. A nut cracker comprising coöperating jaws, pivotally connecting together at one end, a lever, means fixedly connecting one end of said lever with the other end of each of the members, and means tending normally to separate the jaws, two of said parts also having a loose connection.

5. A nut cracker comprising coöperating jaws, means slidably and pivotally connecting together one end of said jaws, a lever, means fixedly connecting one end of said lever with the other end of each of the members, and a spring arranged adjacent the point of connection of the lever with the end of the jaws and operating on the lever to normally move the latter in a direction to separate the jaws.

[Claims 6 to 10 not printed in the Gazette.]

1,222,331. STOP MECHANISM. AUGUST R. SCHOENKY, Somerville, Mass., assignor to Reece Shoe Machinery Company, Boston, Mass., a Corporation of Maine. Filed Mar. 29, 1915. Serial No. 17,590. (Cl. 74—46.)



1. A stop mechanism comprising in combination with the working shaft of the machine, transmitting means for causing power-drive of the shaft forwardly or reversely, a main stopping mechanism adapted to discontinue the drive and stop the shaft in a suitable position, and means put into action automatically by the adjustment of the stopping mechanism to stopping adjustment for causing power-drive of the shaft for a suitable extent in a reverse direction, said means comprising a power-driven constantly moving but normally inoperative device adapted to be rendered operative upon the stoppage of forward drive to briefly adjust said transmitting means for reverse driving.

2. A stop mechanism comprising in combination with a power shaft and the working shaft of the machine, a power transmitter adapted to forward, reverse or stopping adjustments, a main stopping mechanism adapted to adjust the transmitter to zero and stop the shaft, and means put into action automatically by the adjustment of the transmitter to zero for causing power-drive of the shaft for a suitable extent in a reverse direction, said means comprising a power-driven constantly moving but normally inoperative device adapted to be rendered operative upon the stoppage of forward drive to briefly adjust said transmitting means for reverse driving.

3. A stop mechanism comprising in combination with a power shaft and the working shaft of the machine, a face friction gear or analogous power transmitter between said shafts having full speed, intermediate and stopping adjustments, connections for automatically progressively adjusting said transmitter to zero to stop the shaft in a suitable position, and means put into action automatically by the adjustment of the transmitter to stopping adjustment for causing the temporary adjustment of the transmitter to driving adjustment and thereby causing the power-drive of the shaft for a suitable extent in a suitable direction.

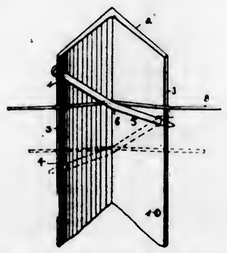
4. A stop mechanism comprising in combination with a power shaft and the working shaft of the machine, a face friction gear or analogous power transmitter between said shafts having full speed, intermediate and stopping adjustments, connections for automatically progressively adjusting said transmitter to zero to stop the shaft in a suitable position, and means put into action automatically by the adjustment of the transmitter to stopping adjustment for

causing the temporary adjustment of the transmiter to driving adjusment and thereby causing the power-drive of the shaft for a suitable extent in a suitable direction; said means comprising a constantly oscillating adjusting member normally inoperative but adapted to be coupled to adjust the transmitter when the shaft is stopped.

5. A stop mechanism comprising in combination with a power shaft and the working shaft of the machine, a face friction gear or analogous power transmitter between said shafts having full speed, intermediate, stopping and reverse adjustments, connections for automatically progressively adjusting said transmitter to zero to stop the shaft in a suitable position, a constantly-oscillating normally-inoperative adjusting member, and a coupling device adapted, when the transmitter has attained zero adjustment, to couple said member and thereby effect a brief adjustment of the transmitter to and from reverse adjustment.

[Claims 6 to 19 not printed in the Gazette.]

1,222,332. WIRE-FASTENING DEVICE. WILLIAM BURNS SHRIVER and ALBERT WADE SHRIVER, Ashland, Ohio. Filed Apr. 20, 1914. Serial No. 833,303. (Cl. 256—48.)



A fence post having opposed sides and perforations at intervals through the said sides closed all around the same, and the said perforations at one side being substantially midway between the perforations at the opposite side in horizontal disposition, in combination with a wire fastener engaged at its ends in oppositely disposed holes at different elevations respectively.

1,222,333. FIRE-ALARM SYSTEM. CHARLES ZELL SMITH, South Bethlehem, N. Y. Filed Mar. 31, 1915. Serial No. 18,217. (Cl. 177—355.)



1. In an alarm system, a series of alarms located at different points, a series of circuit closers operated at said points, and means for actuating all of the alarms from any one of the circuit closers, comprising a series of motors located at said points, having rotary circuit breakers to actuate the alarms.

2. In an alarm system, a series of alarms located at different points, a series of heat actuated automatic circuit closers operated at said points, and means for actuating all of the alarms from any one of the circuit closers, comprising a series of motors located at said points, having rotary circuit breakers to actuate the alarms.

3. In an alarm system, a series of alarms located at different points, a series of heat actuated automatic and manually operated circuit closers operated at said points, and means for actuating all of the alarms from any one of the circuit closers, comprising a series of motors located at said points, having rotary circuit breakers to actuate the alarms.

4. In an alarm system, a series of alarms located at different points, a series of circuit closers operated at said points, means for actuating all of the alarms from any one of the circuit closers, comprising a series of motors located at said points, having rotary circuit breakers to actuate the alarms, and a central station having an alarm and a test switch adapted to test the operation of the alarms of the system.

5. In an alarm system, a series of alarms located at different points, a series of heated actuated automatic circuit closers operated at said points, means for actuating all of the alarms from any one of the circuit closers, comprising a series of motors located at said points, having rotary circuit breakers to actuate the alarms, and a central station having an alarm and a test switch adapted to test the operation of the alarms of the system.

[Claim 6 not printed in the Gazette.]

1,222,334. BLOCK. STEPHEN M. SMITH, Boise, Idaho. Filed Sept. 5, 1916. Serial No. 118,571. (Cl. 254—194.)



1. In a block of the character described, in combination, supporting plates between which a sheave is mounted, two transverse members pivotally mounted on one of said plates and adapted to be locked to the other and between which members a rope may be clamped, and a fastening device engaging one of said members.

2. In a block of the character described, in combination, supporting plates between which a sheave is mounted, two transverse members pivotally mounted upon one of said plates, a locking device upon the other of said plates adapted to co-act with the free end of one of said transverse members to hold the same in place and a swiveled hook mounted upon one of said transverse members.

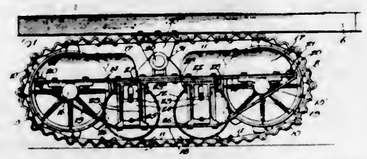
3. In a block of the character described, in combination, supporting plates between which a sheave is mounted, a pair of transverse members independently and pivotally mounted upon one of said plates, a locking device carried by the other of said plates adapted to coact with the free end of one of said transverse members thereby to hold the other transverse member in place, and a fastening member secured to one of said transverse members.

4. In a block of the character described, in combination, supporting plates between which a sheave is mounted, a pair of transverse members independently and pivotally mounted upon one of said plates, one of which has an opening at its free end, a pair of ears on the other of said plates having openings therein adapted to register with the opening in the free end of one of said transverse members, and a locking device adapted to be inserted in said registering openings to hold one transverse member in place, one of said plates having a notched recess adapted to receive the other of said transverse members.

5. In a block of the character described, in combination, supporting plates between which a sheave is mounted, a pair of transverse members independently and pivotally mounted upon one of said plates one of which has an opening at its free end, a pair of ears on the other of said plates having openings therein adapted to register with the opening in the free end of one of said transverse members, and a locking device adapted to be inserted in said registering openings to hold the transverse member in place, one of said plates having a notched recess adapted to receive the other of said transverse members, said transverse members having registering cutaway portions on their adjacent surfaces to permit a rope to be clamped therebetween.

[Claims 6 to 8 not printed in the Gazette.]

1,222,335. TRACTOR-TRUCK. WILLIAM N. SMITH, Chicago, Ill. Filed June 5, 1916. Serial No. 101,679. (Cl. 21—150.)



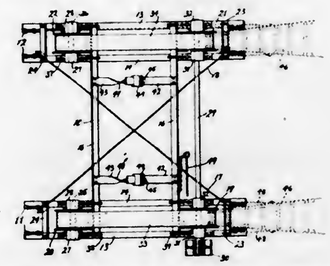
1. In a tractor, the combination of a pair of sprocket wheels, an endless chain tread passed about said wheels, a supporting truck for said wheels, embodying connected side sections at each side of the wheels, each section comprising frame members centrally spaced apart intermediately between the wheels, a weight bearing wheel adapted to roll on the lower stretch of said endless chain tread, and a self-contained journal box fixedly associated with and intermediately between the frame members in each of said sections, said journal boxes formed with a closed walled body portion internally provided with bearing members for the axle of the bearing wheel.

2. In a tractor, the combination of a pair of sprocket wheels, an endless chain tread passed about said wheels, a supporting truck for said wheels comprising side sections disposed at the sides of said wheels, each section embodying an upper frame member and a lower frame member terminally connected with said upper member and centrally spaced therefrom, self-contained journal boxes in said sections and serving to space the upper and lower frame members in each section, weight bearing wheels adapted to roll on the lower stretch on said endless chain tread, said journal boxes interiorly provided with bearing members for said weight bearing wheels, and bolt means for securing said boxes to said frame members.

3. In a tractor, the combination of a frame provided with a driving axle, a sprocket wheel on said axle and an idler wheel, an endless chain tread passed about said wheels and having an inner track portion, a truck having a main body portion between the wheels and forked cantaliver ends in which the wheels are journaled, said main body portion pivotally mounted in the frame and said truck comprising horizontal top and terminally arched base members centrally spaced apart to form said main body portion, self-contained journal boxes in said main body portion and disposed intermediately between said top and base members, bearing wheels having their axles in said journal boxes and bearing on the track portion in the lower stretch of the endless chain tread, and fastening elements extending through said journal boxes into said main body portion.

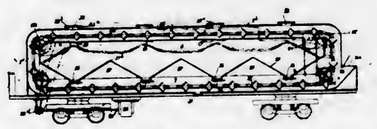
1,222,336. POWER-TRANSMISSION DEVICE. WILEY W. STEPHENS, Aurora, Ill., assignor to Stephens-Adamson Mfg. Co., a Corporation of Illinois. Filed Sept. 16, 1915. Serial No. 50,967. (Cl. 21—90.)

1. In a power transmission device, in combination, a portable frame constructed in the form of a sled with each of its runners comprising a pair of rigidly connected laterally separated side members, a set of connected pulleys mounted between the two side members of each runner to serve as a table for supporting one of the power-driven wheels of a motor vehicle and to be driven by the rotation of the wheel thus supported, a power transmitting wheel carried by the frame, operative connection between the pulleys of both of the said sets and the power transmitting wheel, and a clamp carried by the frame for engagement with a part of a motor vehicle when its power driven wheels are supported by the pulleys.



2. In a power transmission device, in combination, a portable frame constructed in the form of a sled with each of its runners comprising a pair of rigidly connected laterally separated side members, pulleys supported between the two side members of each runner adjacent its opposite ends, a belt turning over the pulleys in each runner and extending in horizontal lengths between said pulleys, a shaft extending transversely through the frame and connecting one of the pulleys in one runner with one of the pulleys in the other runner, and a power transmitting wheel mounted on said shaft.

1,222,337. VEHICLE FOR WASTE MATERIAL. EDWARDS B. STUART, Chicago, Ill. Filed Apr. 9, 1914. Serial No. 830,575. (Cl. 193—20.)



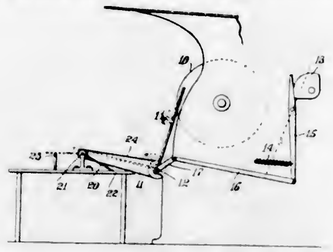
A vehicle for waste material, comprising a body part constructed to provide a storage receptacle, an inclosed continuous conduit extending along the bottom, up each end and across the top of said storage receptacle, said storage receptacle having an inlet opening in the top thereof providing communication with said conduit, and an outlet opening in the bottom thereof providing communication with said passageway, an endless conveyer mounted in said conduit, and means for actuating said conveyer for carrying material along said conduit.

1,222,338. SHEET-FOLDER. DAVID G. WAGNER, New York, N. Y. Filed Oct. 6, 1915. Serial No. 54,323. (Cl. 270—61.)

1. Apparatus for folding sheets as the same are delivered from a printing machine, comprising a folding fly positioned to receive each sheet with its fold line extending over the axis of the fly and operating to fold each sheet on said fold line, means for actuating the fly including a slip connection, and a stop for limiting the return movement of the fly.

2. Apparatus for folding sheets, comprising a folding fly mounted to oscillate between a substantially horizontal receiving position and a substantially horizontal delivery position, means for delivering the sheets to be folded to the fly with the fold line of each sheet lying over the axis of the fly, a table for receiving the folded sheets from the fly, means for actuating the fly comprising a slip connection, and a stop for limiting the return movement of the fly.

3. The combination with a sheet delivery fly, of a folding fly mounted with its axis parallel to the axis of the delivery fly in position to receive the sheets directly from the delivery fly and operating to fold the sheets backward toward the delivery fly, and operating means whereby the folding fly is caused to make its holding movement during the return movement of the delivery fly.

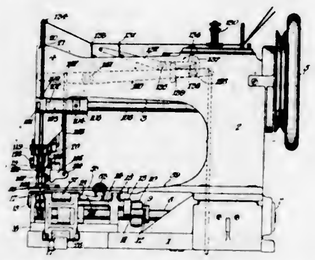


4. The combination with a sheet delivery fly mounted to oscillate between a position for receiving a downwardly moving sheet to a substantially horizontal delivery position, of a folding fly to which the sheets are delivered directly by the delivery fly and which is mounted to oscillate between substantially horizontal receiving and delivery positions to fold and deliver the sheets, the axis of the folding fly being parallel to the axis of the delivery fly, and operating means whereby the folding fly is caused to make its folding movement during the return movement of the delivery fly.

5. The combination with a sheet delivery fly, of a folding fly mounted to receive the sheets from the delivery fly and operating to fold and deliver the sheets, means for causing the folding fly to oscillate between its receiving and delivering positions including a slip connection, and a stop for limiting the return movement of the folding fly.

[Claims 6 and 7 not printed in the Gazette.]

1,222,339. SEWING-MACHINE. JOHN P. WEIS, Nyack, N. Y., assignor to Lucius N. Littauer, Gloversville, N. Y. Filed Aug. 5, 1916. Serial No. 113,222. (Cl. 112—8.)



1. In a sewing machine the combination with stitching mechanism, of feeding mechanism comprising a feed consisting of a feed dog having a slot for the reception of a work rib projecting at an angle to the side portions of the work, and a pair of feeding portions at opposite sides of said slot for feeding the work at opposite sides of the rib.

2. In a sewing machine the combination with stitching mechanism, of feeding mechanism comprising a feed consisting of a feed dog having a slot for the reception of a work rib projecting at an angle to the side portions of the work, and a pair of serrated portions at opposite sides of said slot for feeding the work at opposite sides of the rib, one of said serrated portions lower than the other to accommodate different thicknesses of the work.

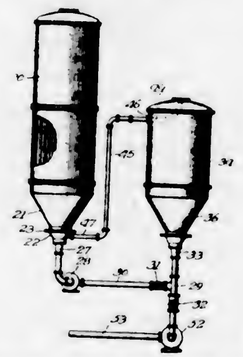
3. In a sewing machine, the combination with stitching mechanism, of feeding mechanism comprising a top feed consisting of a pivotally supported member, a feed foot supported thereby for shiftable movement therewith and movement relatively thereto, a lever connected with said feed foot, a rock shaft connected with one end of said lever, and a rotary shaft connected with the other end thereof for giving a four-motion elliptical movement to said feed foot.

4. In a sewing machine, the combination with stitching mechanism, of feeding mechanism comprising a top feed consisting of a pivotally supported member, a spring-pressed feed foot supported thereby for shiftable movement therewith and movement relatively thereto, a lever connected with said feed foot, a rock shaft connected with one end of said lever, and a rotary shaft connected with the other end thereof for giving a four-motion elliptical movement to said feed foot.

5. In a sewing machine, the combination with stitching mechanism, of feeding mechanism comprising an under feed consisting of a feed dog having a slot for the reception of a rib of the work and a pair of feeding portions, a coöperating top feed comprising a pivotally supported member, a feed foot supported thereby for shiftable movement therewith and movement relatively thereto, a lever connected with said feed foot, a rock shaft connected with one end of said lever, and a rotary shaft connected with the other end thereof for giving a four-motion elliptical movement to said feed foot.

[Claims 6 to 49 not printed in the Gazette.]

1,222,340. EVAPORATING PROCESS AND APPARATUS. FRANK G. WHEELER, Appleton, Wis., assignor to Bleach Process Company, Appleton, Wis., a Corporation of Wisconsin. Filed June 17, 1916. Serial No. 104,297. (Cl. 127—18.)



1. The improved step in the process of removing a solute from a solution thereof, which consists in acting upon the solution to remove a portion of the solvent whereby the solute is caused to crystallize, and causing the solution carrying the crystals to flow upwardly in a stream which increases in area and decreases in velocity, thereby causing the crystals to become suspended in the low velocity part of the stream because of their higher specific gravity.

2. The improved step in the process of removing a solute from a solution thereof, which consists in acting upon the solution to remove a portion of the solvent whereby the solute is caused to crystallize, and then causing the solution carrying the crystals to flow upwardly in a stream which increases in area and decreases in velocity, thereby causing the crystals to become suspended in the low velocity part of the stream because of their higher specific gravity, and removing the clear liquor above the suspended crystals to be re-treated as many times as desired.

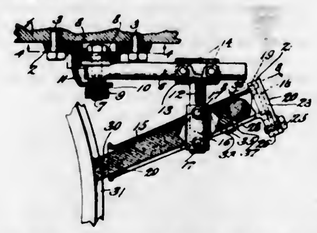
3. The improved step in the process of removing a solute from a solution containing two different solutes, which consists in subjecting the solution to combined low pressure and heat and thereby removing a portion of the solvent and causing one of said solutes to crystallize, removing the solution from the influence of the heat and low pressure, causing it to flow upwardly in a stream which increases in area and decreases in velocity, thereby causing the crystals to become suspended in the low velocity portion of the stream, due to their high specific gravity, and subsequently returning the clear liquor to be re-treated by the heat and pressure means.

4. The improved step in the process of removing common salt from a solution of common salt and sodium hydrate, which consists in evaporating the solution to crystallize out the salt and at the same time circulating the solution, part of the circulation path being upwardly directed and relatively enlarged in cross sectional area and reduced in velocity, whereby the crystals of salt, by virtue of their high specific gravity, are caused to become suspended in said enlargement.

5. In an apparatus of the class described, the combination of a separating receptacle having at its low end a downwardly tapering part terminating in a bottom inlet port, and an effect communicating with the top of said receptacle and having an outlet for conducting concentrated crystal-bearing liquor to the receptacle inlet.

[Claims 6 to 16 not printed in the Gazette.]

1,222,341. WHEEL-FLANGE LUBRICATOR. TIMOTHY J. WHOLEY, Philadelphia, Pa. Filed June 9, 1916. Serial No. 102,644. (Cl. 184—3.)



1. A lubricator, comprising a casing having a sleeve presented at an angle to the longitudinal axis of said casing, a shoe having limited longitudinal movement in the casing, a stick of lubricant carried by said shoe, a roller in rear of said shoe, and means engaging said sleeve to support said casing.

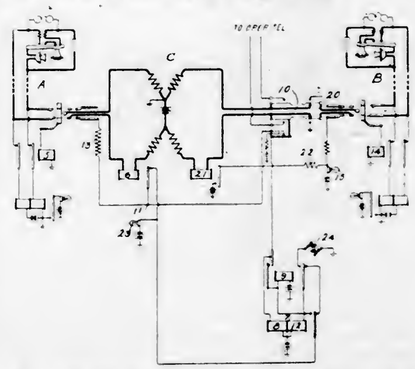
2. A lubricator, comprising a casing having a lug at one end and a slot extending through a wall of the casing and said lug, a closure to interlock with the casing, a shoe within the casing having a lug to enter said slot, and a stick of lubricant carried by said shoe whereby said shoe and stick of lubricant may be removed as a unit from said casing.

3. A lubricator, comprising a casing having a lug at one end and a slot extending through a wall of the casing and said lug, a closure to interlock with the casing, a shoe within the casing having a lug to enter said slot, and a stick of lubricant carried by said shoe whereby said shoe and stick of lubricant may be removed as a unit from said casing upon the removal of said closure.

4. A lubricator, comprising a casing having its forward end open and side flanges at its rear end, a closure to interlock with said side flanges, a fastening device for said closure, a shoe having limited longitudinal movement in the casing, a stick of lubricant secured to said shoe, and means to support said casing.

1,222,342. TELEPHONE-EXCHANGE SYSTEM. RAY S. WILBUR, Jersey City, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a Corporation of New York. Filed Sept. 11, 1916. Serial No. 119,482. (Cl. 179—73.)

1. A telephone exchange system comprising a telephone line, a link circuit connected with the line, a supervisory relay therefor controlled over the line, a primary relay operating upon the energization of the supervisory relay, a secondary relay conditioned for operation by the operation of the primary relay and operated by the deënergization of the supervisory relay, means for intermittently operating the primary relay brought into circuit therewith by the operation of the secondary relay, a signaling device, and an operating circuit for the signaling device intermittently closed by the intermittent operation of the primary relay when the supervisory relay is energized.



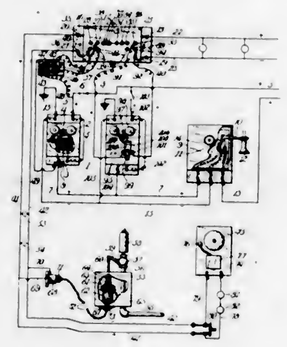
2. A telephone exchange system comprising a telephone line, a link circuit connected therewith, a supervisory relay therefor controlled over the line, a primary relay operating upon the energization of the supervisory relay, a secondary relay conditioned for operation by the operation of the primary relay and operated by the deënergization of the supervisory relay, means for intermittently operating the primary relay brought into circuit therewith by the operation of the secondary relay, a signaling device, and an operating circuit for the signaling device intermittently closed by the intermittent operation of the primary relay when the supervisory relay is energized.

3. A telephone exchange system comprising a telephone line, a link circuit connected with the line, a supervisory relay therefor controlled over the line, a primary relay operating upon the energization of the supervisory relay, a secondary relay conditioned for operation by the operation of the primary relay and operated by the deënergization of the supervisory relay, means for intermittently operating the primary relay brought into circuit therewith by the operation of the secondary relay, a signaling device, and an operating circuit for the signaling device jointly controlled by the supervisory relay and the intermittently operating primary relay.

4. A telephone exchange system comprising a telephone line, a link circuit connected therewith, a supervisory relay therefor controlled over the line, a primary relay, a secondary relay, an energizing circuit therefor jointly controlled by the primary and supervisory relays, a locking circuit for the secondary relay established upon the energization thereof, means for intermittently operating the primary relay brought into circuit therewith upon the energization of the secondary relay, a signaling device, and an operating circuit for the signaling device jointly controlled by the supervisory relay and the intermittently operating primary relay.

5. A telephone exchange system comprising a telephone line, a link circuit connected therewith, a supervisory relay therefor controlled over the line, a primary relay, a secondary relay, an energizing circuit therefor jointly controlled by the primary and supervisory relays, means for intermittently operating the primary relay brought into circuit therewith upon the energization of the secondary relay, a signaling device, and an operating circuit for the signaling device partially established by intermittent energization of the primary relay and completely established by the energization of the supervisory relay.

1,222,343. EXTENSION TELEPHONE-SIGNAL. PEARL J. WIRES, Indianapolis, Ind., assignor of one-half to August B. Gooley, Indianapolis, Ind. Filed July 19, 1915. Serial No. 40,658. (Cl. 177—335.)



1. An extension telephone-signal including a terminal board having two sockets, a high-potential electrical circuit connected to one of the sockets, an extension-signal circuit connected to the other of the two sockets, a signaling-device to be actuated through the extension-signal circuit, and means for electrically connecting the two sockets together.

2. An extension telephone-signal including a terminal board having two sockets, a high-potential electrical circuit, a device for connecting the electrical circuit with one of the sockets, an extension-signal circuit connected to the other of the two sockets, a signaling-device to be controlled through the extension-signal circuit, and means for connecting the two sockets electrically together.

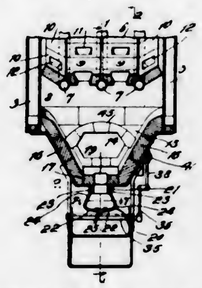
3. An extension telephone-signal including a terminal board having two sockets, a high-potential electrical circuit, a device for connecting the electrical circuit with one of the sockets, an extension-signal circuit connected with the other of the two sockets, a sound-producing device having controlling means adapted to be controlled through the extension-signal circuit, and means for electrically connecting the two sockets together.

4. An extension telephone-signal including a terminal board, two terminal sockets secured in the middle portion of the board, a terminal binding post secured to the board, a high-potential circuit wire connected with the two terminal sockets and the binding post, a plurality of terminal-extension sockets secured to the board near one end thereof and electrically connected together, a plurality of terminal-extension sockets secured to said board near the opposite end thereof and electrically connected together, a bridge having two plugs for connecting one of either of the plurality of terminal-extension sockets with one of the two terminal sockets, a plurality of extension-signal sockets spaced apart and secured to said board, an extension-circuit wire connected to said extension-signal sockets, two branch wires having each a plug thereon, one plug to be inserted into one of the extension-signal sockets, the remaining plug to be inserted into the remaining one of either of the plurality of terminal-extension sockets, and means for electrically connecting the two branch wires together.

5. An extension telephone-signal including a whistle, a valve for the whistle having an operating-lever, a supported solenoid magnet, an armature movable in the magnet and connected with the operating-lever, an extension-signal circuit connected with the magnet, a high-potential lighting circuit, and means for electrically connecting the extension-signal circuit and the lighting circuit together.

[Claims 6 and 7 not printed in the Gazette.]

1,222,344. FIRING-CHAMBER FOR POWDERED FUEL. WALTER D. WOOD, Allentown, Pa., assignor to Fuel Saving Company, Allentown, Pa., a Corporation of Pennsylvania. Original application filed Nov. 11, 1915, Serial No. 60,827. Divided and this application filed June 22, 1916. Serial No. 105,121. (Cl. 110—28.)



1. The combination of a firing chamber having an inlet for receiving the fuel laden vehicle, a horizontally-projecting auxiliary arch directly above the inlet for the purpose of carrying the fuel into the firing chamber for a certain distance beyond the inlet, an inclined arch having a rear opening which is located above said auxiliary arch, said inclined arch being composed of water tubes and a series of bricks supported thereon, and said arch being provided at intervals with transverse openings to allow the flame to pass through the arch at certain points, together with plugs adapted to be placed in said openings to enable them to be staggeered or otherwise related as desired.

2. The combination of a firing chamber having an inlet for receiving the fuel-laden vehicle, a horizontally projecting auxiliary arch directly above the inlet for the purpose of carrying the fuel into the firing chamber for a certain distance, and an inclined arch having a rear opening which is located above said auxiliary arch, said inclined arch being composed of water tubes and series of bricks supported thereon, said bricks being provided with central openings in order that the arch may thus furnish transverse passages for the flame, and plugs for said openings to enable the openings to be staggered or otherwise related as desired.

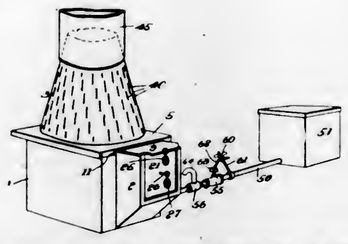
3. The combination with a firing chamber having a depressed auxiliary chamber provided with an inlet opening for receiving a stream of powdered fuel, of a horizontally projecting transversely curved arch at the top of said inlet for guiding the stream of fuel into the firing chamber for a short distance beyond the inlet, and an inclined arch in the firing chamber composed of inclined tubes and series of bricks supported thereon, some of said bricks being formed with central inclined apertures so that the arch may provide transverse passages at certain points for the discharge of the flame, together with inclined plugs adapted to be placed in said apertures so that some will be closed and others opened as desired.

1,222,345. PROCESS OF MAKING ETHYL TRIACETYLGALLATE. KURT ZIMMERMANN, Elberfeld, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y., a Corporation of New York. Filed Jan. 5, 1914. Serial No. 810,464. (Cl. 23—24.)

1. The process of making ethly triacetylgallate which comprises boiling ethyl gallate for about 2 hours with substantially more than the theoretical equivalent of acetic anhydrid, and then isolating the resulting ethly triacetylgallate.

2. The process of making ethyl triacetylgallate which comprises boiling about, 10 parts of ethyl gallate for about 2 hours with 16.5 parts of acetic anhydrid, precipitating the resulting ethyl triacetylgallate by pouring the mixture into cold water, and recrystallizing said ester from alcohol.

1,222,346. OIL-BURNING HEATER. WILLIAM C. ADAMS, Upland, Cal. Filed July 1, 1916. Serial No. 107,185. (Cl. 158—91.)



1. A heater comprising a fuel vaporizing chamber, a combustion chamber located above said fuel chamber, means for supplying oil to said vaporizing chamber, a pocket communicating with said fuel vaporizing chamber, a damper for controlling the admission of air into said pocket, a deflector in said pocket for deflecting the air admitted into said pocket into said vaporizing chamber and to deflect the vaporized fuel in said vaporizing chamber into said combustion chamber, and an air nozzle within said combustion chamber for supplying air to the combustion chamber to support combustion of the vaporized fuel which passes into said combustion chamber.

2. A heater comprising a fuel vaporizing chamber, a combustion chamber located above said vaporizing chamber, means for supplying oil to said vaporizing chamber, means for supplying air to said vaporizing chamber, a removable vapor deflecting plate between said vaporizing chamber and said combustion chamber, said combustion chamber communicating with said vaporizing chamber at the side of said plate to allow the vaporized fuel to be deflected by said deflecting plate from said vaporizing chamber into said combustion chamber, and an air nozzle within said combustion chamber for supplying air to said combustion chamber to support combustion of the vaporized fuel in said chamber, said combustion chamber and said nozzle being removable from the heater to permit removal of the deflecting plate from the vaporizing chamber.

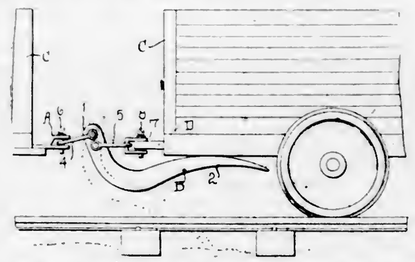
3. A heater comprising a vaporizing chamber, a combustion located above said vaporizing chamber and communicating therewith, a pocket communicating with said vaporizing chamber, a damper for controlling the admission of air into said pocket, a deflecting plate in said pocket for deflecting said air into the vaporizing chamber and for deflecting the vaporized fuel in said vaporizing chamber into said combustion chamber, a nozzle in said combustion chamber for supplying air thereinto to support combustion of the vaporized fuel in said combustion chamber, and a door in said pocket, said damper, said door and said deflecting plate being removable from said pocket to permit cleaning of the heater.

4. A heater comprising a fuel vaporizing chamber, a combustion chamber arranged above said vaporizing chamber, means for supplying oil to said vaporizing chamber, said vaporizing chamber provided with ports to admit air to support combustion of the vaporized fuel which passes from said vaporizing chamber into said combustion chamber, said ports being arranged spirally of said combustion chamber.

5. A heater comprising a fuel vaporizing chamber, a combustion chamber located above said vaporizing chamber, means for supplying oil to said vaporizing chamber, means for supplying air to said vaporizing chamber, the walls of said combustion chamber being provided with ports for the admission of air into the chamber, and an air nozzle within said combustion chamber, said ports in the wall of said combustion chamber and said nozzle being adapted to supply air into the combustion chamber to support combustion of the vaporized fuel passing from said vaporizing chamber into said combustion chamber, the ports in said nozzle being arranged spirally thereof, and the ports in the wall of said combustion chamber being arranged spirally of said chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,222,347. BRAKE. DAVID L. AINSLEY, Mammoth, Pa. Filed Oct. 14, 1916. Serial No. 125,694. (Cl. 188—76.)

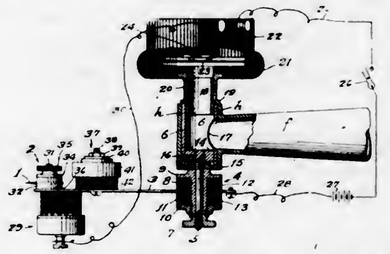


1. In combination with adjacent cars, a brake dog interposed between said cars and substantially in the form of an L with the foot portion thereof upwardly directed, and means pivotally engaged with the foot of the dog at longitudinally spaced points adapted to be coupled to the adjacent cars.

2. In combination with adjacent cars, a brake dog interposed between said cars and substantially in the form of an L with the foot portion thereof upwardly directed, and means pivotally engaged with the foot of the dog at longitudinally spaced points adapted to be coupled to the adjacent cars, the stem of the brake dog being rearwardly disposed and adapted to contact with the lower structure of the rear car when the same is in normal position.

3. In combination with adjacent cars, a brake dog substantially L-shaped in form, the foot thereof being upwardly directed and the stem rearwardly disposed and of a length to extend beneath the body of the rear car, links pivotally engaged with the foot of the dog at longitudinally spaced points, said links being oppositely directed and adapted to be coupled to the car.

1,222,348. ELECTRIC TELEPHONE TALKING-MACHINE. EDWARD H. AMET, Redondo Beach, Cal. Filed July 17, 1916. Serial No. 109,816. (Cl. 179—100.1.)



1. The combination with a talking machine tone arm and a style connected thereto, of an electrical transmitter connected to and carried by the style and tone arm and arranged to receive impulses from the style; a telephone receiver mounted on and carried by said tone arm and acoustically connected to the tone arm; and electrical connections connecting the electrical transmitter with the telephone receiver.

2. In an electrical telephone talking machine the combination with a style arm; of a style mounting thereon; a style carried by said mounting; a telephone transmitter on said style arm: a support for one end of said style arm,

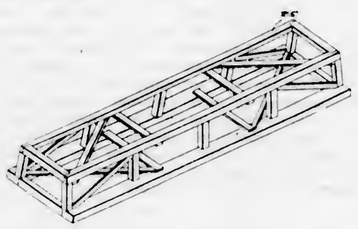
the other end of said arm being free, and a weight non-resonantly mounted on the style arm between the style and the support.

3. In an electrical telephone talking machine the combination with a style arm; of a style mounting thereon; a style carried by said mounting; a telephone transmitter on said style arm; a support for one end of said style arm, the other end being free, and a weight non-resonantly mounted on the style arm between the style and transmitter on the one side of said weight, and the support on the other side.

4. In an electrical telephone talking machine, a style arm; non-resonant means for supporting one end of said style arm, the other end of said arm being free; and a style at the free end of the style arm, a telephone transmitter at the free end of the style arm; and a non-resonantly mounted weight on the style arm between said style and transmitter on the one hand, and the non-resonant support on the other hand.

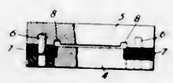
5. The combination with a tone-arm, of a telephone receiver carried by said tone-arm, means to transmit sound-wave impulses from said receiver to said tone-arm, a style arm connected to said tone-arm and having a free end; a style at the free end of the style arm; a telephone transmitter at the free end of the style arm; and a weight between the transmitter and style on the one hand and the style arm support on the other hand.

1,222,349. FORM FOR CONCRETE CONSTRUCTION. HUGH J. BAKER, Indianapolis, Ind., assignor to The Concrete Forms Company, Indianapolis, Ind., a Corporation. Filed Sept. 23, 1916. Serial No. 121,869. (Cl. 25—131.5.)



A mold construction for making concrete flooring and the like including trussed cribs, sheet metal coverings therefor, said cribs being tapered so as to be readily removable from the concrete after it is set, and laterally extending flanges on the lower portion of each of said cribs, said flanges being adapted to abut the flanges of the adjacent cribs so as to form a self-supporting bottom for the concrete formed therein.

1,222,350. PROTECTOR. HAROLD GILLESPIE BANDFIELD, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Mar. 8, 1915. Serial No. 12,802. (Cl. 175—30.)



1. A protector comprising a pair of electrodes, one of said electrodes comprising a conducting member, the other of said electrodes comprising a body of conducting material and a body of non-conducting material in fixed relation therewith, the opposing conducting surfaces of said electrodes when placed in opposition to each other being in relatively different planes, whereby an air gap is formed therebetween.

2. A protector comprising a pair of electrodes, one of said electrodes comprising a conducting block having a depressed portion, the other of said electrodes comprising bodies of conducting and non-conducting material in fixed relation to each other and in the same plane, whereby when the electrodes are placed in opposition to each other said depressed portion is electrically distinct from said other electrode and positively separated therefrom by a definite and fixed air gap.

3. A protector comprising a pair of electrodes, one of said electrodes comprising a body of conducting material having sections of insulating material molded therein, the other of said electrodes comprising a conducting member having portions adapted to bear on said insulating sections, whereby said electrodes are electrically distinct from each other and the opposing conducting surfaces are separated by a definite air gap.

4. A protector comprising a pair of electrodes, one of said electrodes comprising a conducting block having a depressed portion, the other of said electrodes comprising a body of conducting material having insulating material molded therein adapted to provide a bearing surface for said conducting block, whereby when the electrodes are placed in opposition said depressed portion is electrically distinct from said other electrode and positively separated therefrom by a definite and fixed air gap.

1,222,351. PACKING FOR SLEEVE-VALVES OF ENGINES. CHESTER T. BANGS, Ottawa, Ill. Filed Mar. 18, 1914. Serial No. 825,455. (Cl. 137—115.)



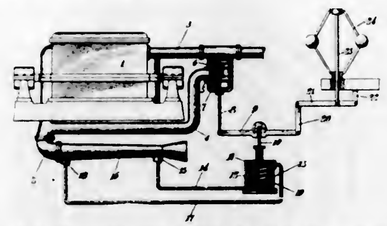
1. In a packing for sleeve valves, the combination of a pair of inner contractile packing rings, the peripheries of which have a common taper, an outer contractile follower ring of a length approximating the combined length of said inner rings and formed with a tapering bore corresponding with the aforesaid taper of the inner rings and means for holding the outer and inner rings from independent longitudinal movement, substantially as set forth.

2. In a packing for sleeve valves, the combination of a pair of inner contractile packing rings, the peripheries of which have a common taper, an outer contractile follower ring of a length approximating the combined length of said inner rings and formed with a tapering bore corresponding with the aforesaid taper of the inner rings, and an annular housing inclosing said outer and inner rings and having an inturned annular flange at one end, substantially as set forth.

1,222,352. REGULATING MECHANISM FOR CENTRIFUGAL COMPRESSORS AND PUMPS. OTTO BANNER, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 22, 1913. Serial No. 743,433. (Cl. 230—24.)

1. In a centrifugal compressor, an inlet and discharge line for said compressor, a demand measuring device in the inlet line of said compressor, a blow off valve in the discharge line of said compressor and a conduit for leading the blown off air back to the inlet of said compressor between the compressor and the demand measuring device so that only the air passing out through the discharge line to the demand shall be measured by said demand measuring device

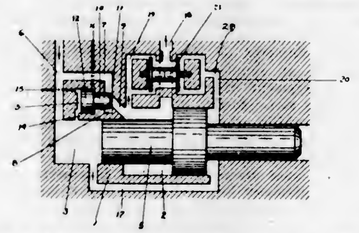
2. In a centrifugal compressor, an inlet and discharge line for said compressor, a demand measuring device in the inlet line of said compressor, a blow off valve in the discharge line of said compressor, a conduit for conveying the blown off air back to the inlet of said compressor, between said compressor and said demand measuring device, and means for regulating the amount of air passed through said blow off valve.



3. In a centrifugal compressor, an inlet and discharge line for said compressor, a demand measuring device in the inlet line of said compressor, a blow off valve in the discharge line of said compressor, a conduit for conveying the blown off air back to the inlet of said compressor, between said compressor and said demand measuring device, and means for regulating the amount of air passed through said blow off valve in accordance with the amount of fluid passing through said demand measuring device.

4. In a centrifugal compressor, an inlet and discharge line for said compressor, a demand measuring device in the inlet line of said compressor, a blow off valve in the discharge line of said compressor, a conduit for conveying the blown off air back to the inlet of said compressor, between said compressor and said demand measuring device, and means for regulating the amount of air passed through said blow off valve in accordance with the amount of fluid passing through said demand measuring device and the pressure of the fluid in said discharge line.

1,222,353. VALVE FOR PERCUSSIVE TOOLS. LEWIS C. BAYLES, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 6, 1915. Serial No. 12,680. (Cl. 121—20.)



1. In a fluid operated percussive tool, a cylinder, a piston therein having two rear pressure surfaces and one forward pressure surface, means for admitting fluid to the cylinder to exert a constant pressure on one of said rearward surfaces, a conduit independent of the piston for conveying fluid to exert an intermittent pressure on the other of said rear pressure surfaces, a valve controlling said conduit, a conduit controlled by said piston for conveying fluid to exert an intermittent pressure on the forward surface of said piston and exhaust means for the intermittently supplied portions of the cylinder.

2. In a fluid operated percussive tool, a cylinder, a piston therein having two rear pressure surfaces and one forward pressure surface, means for admitting fluid to the cylinder to exert a constant pressure on one of said rearward surfaces, a conduit independent of the piston for conveying fluid to exert an intermittent pressure on the other of said rear pressure surfaces, a valve controlling said conduit, a conduit controlled by said piston for conveying fluid to exert an intermittent pressure on the forward surface of said piston and exhaust means for the intermittently supplied portions of the cylinder, comprising an independent exhaust valve.

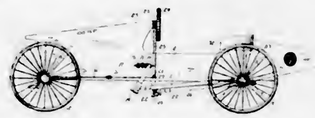
3. In a fluid operated percussive tool, a cylinder having a larger forward bore and a smaller rearward bore, a piston having a head fitting said larger bore and a shank fitting said smaller bore, an inlet for admitting fluid constantly to the rear end of said smaller bore, a passage independent of the piston from said inlet to the rear end of said larger bore, a valve controlling said passage to admit fluid to the rear end of said larger bore only near the rearward end of the piston stroke, means for conveying fluid intermittently to the forward end of said larger bore, and means for exhausting the intermittently supplied portions of the cylinder.

4. In a fluid operated percussive tool, a cylinder having a larger forward bore and a smaller rearward bore, a piston having a head fitting said larger bore and a shank fitting said smaller bore, an inlet for admitting fluid constantly to the rear end of said smaller bore, a passage independent of the piston from said inlet to the rear end of said larger bore, a valve controlling said passage to admit fluid to the rear end of said larger bore only near the rearward end of the piston stroke, means for conveying fluid intermittently to the forward end of said larger bore, and means for exhausting the intermittently supplied portions of the cylinder comprising an independent exhaust valve.

5. In a fluid operated percussive tool, a cylinder having a larger forward bore and a smaller rearward bore, a piston having a head fitting said larger bore and a shank fitting said smaller bore, said piston having two rearward pressure surfaces and a forward pressure surface, means for admitting fluid constantly to exert a pressure on one of said rearward pressure surfaces, a passage independent of the piston from the constant pressure portion of the cylinder to convey fluid to exert pressure on the other of said rearward pressure surfaces, a valve controlling said passage, means for moving said valve to open said passage near the end of the rearward stroke of said piston, and to close said passage after said piston has traveled forward a short distance on its forward stroke, means for intermittently conveying fluid to the forward end of the cylinder and means for exhausting said intermittently supplied cylinder portions.

[Claims 6 to 9 not printed in the Gazette.]

1,222,354. VELOCIPEDE. WILLIAM JOHN BEACH, New Haven, Conn., assignor to The Beach Manufacturing Co., New Haven, Conn., a Corporation. Filed Nov. 18, 1916. Serial No. 132,010. (Cl. 208—30.)



1. A four wheeled vehicle comprising a profile body of thin material, said body mounted upon front and rear axles, and means for imparting motion to one of said axles.

2. A four wheeled vehicle having a profile body of thin material, front and rear axles upon which said body is mounted, the rear axle provided with cranks, pedals mounted on the said body, and pitmen connecting said pedals with said cranks.

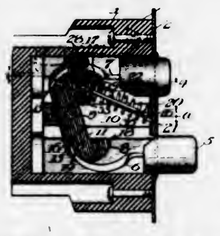
3. A four wheeled vehicle having a profile body of thin material, front and rear axles upon which said body is mounted, a rear axle provided with cranks, said body formed with a longitudinal slot, brackets on opposite sides of the body and connected to the body through said slot, pedals connected with the said brackets and depending from opposite sides of the body, and pitmen, adjustably connected with said pedals and with said cranks.

4. A four-wheeled vehicle comprising a profile body of thin material, front and rear axles on which said body is mounted, the rear axle formed with cranks, pedals mount-

ed on the said body, pitmen connecting said pedals with said cranks, the front axle pivotally connected with the body, a steering wheel mounted on the body, and a cord connecting with said wheel, the ends of the cord extending through the body in opposite directions and into engagement with the opposite ends of the front axle, whereby by turning the wheel the said front axle may be turned.

5. A four wheeled vehicle having a profile body of thin material, a front axle to which the body is pivotally connected, a rear axle on the center of which the rear of the body bears, the said rear axle formed with two cranks, pedals mounted on said body, and pitmen connecting the said pedals with the said cranks.

1,222,355. SWITCH. SAMUEL BUCHSBAUM, Chicago, Ill. Filed Oct. 18, 1915. Serial No. 56,400. (Cl. 175—293.)



1. A device of the class described having a pair of contact making elements, one of which is movable, a pair of relatively movable members, means provided upon one of said members whereby the other member may slide upon said first aforesaid member, one of said members being provided with a contact making element, the other of said relatively movable members abutting a stationary member, and a spring re-acting between the ends of the relatively movable members.

2. A device of the class described having a swinging member, a pair of contact making elements, one of which is secured to said swinging member, one end of said swinging member abutting a stationary member, said member being longitudinally extensible.

3. A device of the class described having a pair of contact making elements, one of which is movable, a pair of swingingly mounted relatively movable members, one of said members having said contact making element provided thereon, and the other of said relatively movable members abutting a stationary member.

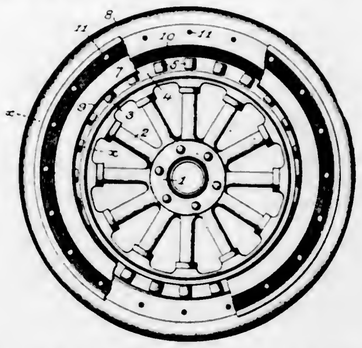
4. A device of the class described having a pair of contact making elements, one of which is movable, means for moving said last mentioned contact element toward and away from the other contact making element, said means including a rotatable member, a swinging member provided with said contact making element extending between said rotatable member and a stationary member, one end of said member abutting said stationary member.

5. A device of the class described having a pair of contact making elements, one of which is movable toward and away from the other contact making element, a pair of swingingly mounted relatively movable members, one of said members having a contact making element provided thereon, the other of said members abutting a stationary member, means securing said members together, and a spring re-acting between the ends of said relatively movable members.

[Claims 6 to 10 not printed in the Gazette.]

1,222,356. VEHICLE-WHEEL. WILLIAM J. BUSSE, Chicago, Ill. Filed Dec. 6, 1915. Serial No. 65,221. Renewed Aug. 23, 1916. Serial No. 116,546. (Cl. 21—151.)

1. In a vehicle wheel, the combination of an inner wheel member, and an outer tread member having an internal diameter greater than the peripheral diameter of the inner wheel member, one member having a series of radially disposed rollers and the other member having an annular recess for operative engagement with said rollers, substantially as set forth.



2. In a vehicle wheel, the combination of an inner wheel member, and an outer tread member having an internal diameter greater than the peripheral diameter of the inner wheel member, one member having a central annular fin and a series of radially disposed rollers journaled in said fin, and the other member having an annular recess for operative engagement with said rollers, substantially as set forth.

3. In a vehicle wheel the combination of an inner wheel member, and an outer tread member having an internal diameter greater than the peripheral diameter of the inner wheel member, one member having a central annular fin and a series of radially disposed rollers journaled in staggered relation in said fin, and the other member having an annular recess for operative engagement with said rollers, substantially as set forth.

4. In a vehicle wheel, the combination of an inner wheel member provided with a series of radially disposed rollers on its periphery, and an outer annular tread member, the internal diameter of which is greater than the peripheral diameter of the inner wheel member, and formed with an annular recess in its inner face for operative engagement with the series of rollers aforesaid, substantially as set forth.

5. In a vehicle wheel, the combination of an inner wheel member provided with a series of radially disposed rollers on its periphery, and an outer annular tread member, the internal diameter of which is greater than the peripheral diameter of the inner wheel member, and formed with an annular recess in its inner face for operative engagement with the series of rollers aforesaid, the series of rollers having a staggered relation, substantially as set forth.

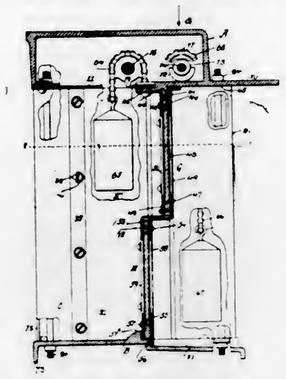
[Claims 6 and 7 not printed in the Gazette.]

1,222,357. METAL WINDOW-FRAME. HARRY E. CAMPBELL, New York, N. Y. Filed Apr. 19, 1915. Serial No. 22,315. (Cl. 189—75.)

1. A metal window-frame, comprising a closed box-shaped lintel separable from the remaining members of said frame, and a ledge on the front face of said lintel extending outwardly beyond said frame to serve as a support for a window-cap or masonry.

2. A metal window-frame, comprising a closed-box-shaped lintel separable from the remaining members of said frame, the bottom wall of said lintel being extended outwardly on the front face thereof beyond the said frame to serve as a support for a window cap or masonry.

3. A metal window-frame, comprising two tubular side members forming jambs and closed at their ends by said lintel and said sill when assembled, each member consisting of an outer wall, side walls and an inner wall formed in three vertical sections, the middle section being free and separated by clearances from the outer sections, and means for supporting said middle section on said outer wall.

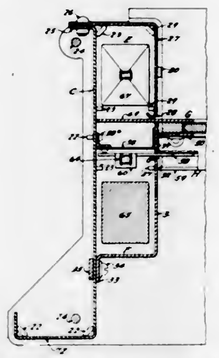


4. A metal window-frame, comprising two tubular side members forming jambs and closed at their ends by said lintel and said sill when assembled, each member consisting of an outer wall, side walls and an inner wall formed in three vertical sections, the middle section being free and separated by clearances from the outer sections, and means for dividing the interior of each of said box-shaped side members into two vertical compartments and for supporting said middle section on said outer wall.

5. A metal window-frame, comprising side plates C, and on each plate a hollow jamb formed of two plates secured to said side plate at their edges, extending at right angles to said plate parallel to one another, and then bent toward one another parallel to said side plate, a partition secured at its edge to said side plate and having its opposite edge free, and a plate supported on the free edge of said partition and disposed between the edges of the bent over portions of said first-named plates, there being clearances between the opposite edges of said partition plate and the adjacent edges of said bent over plates.

[Claim 6 not printed in the Gazette.]

1,222,358. METAL WINDOW FRAME AND SASH. HARRY E. CAMPBELL, New York, N. Y. Original application filed Apr. 19, 1915, Serial No. 22,315. Divided and this application filed Aug. 19, 1915. Serial No. 46,355. (Cl. 189—73.)



1. A metal window-frame, comprising a lintel, a sill and two tubular side members forming jambs, the said side members each having a vertical opening extending through its inner wall, a sash slidable in said frame, and plates laterally projecting from said sash and entering said side members through said openings.

2. A metal window-frame, comprising a lintel, a sill and two tubular side members forming jambs, the said side members each having a vertical opening extending through its inner wall, a sash slidable in said frame, and plates laterally projecting from said sash and entering said side members through said openings and having their outer edges in sliding contact with the outer walls of said side members.

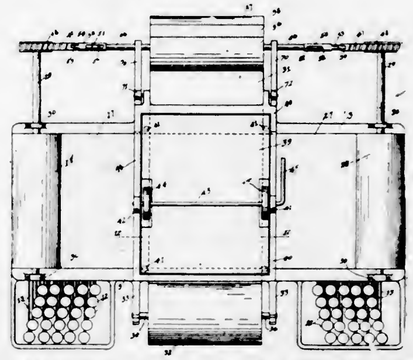
3. A metal window-frame, comprising a lintel, a sill and two tubular side members forming jambs, the said side members each having two vertical openings in its inner walls, an upper sash and a lower sash slidable in said frame, laterally projecting plates on said sashes entering said side members through said openings in said side members, and a vertical partition in each side member disposed between said laterally projecting plates.

4. A metal window-frame, comprising a box-shaped upper transverse member and two tubular side members forming jambs, the said side members each having two vertical openings extending through its inner wall, an upper sash and a lower sash slidable in said frame, laterally projecting plates on said sashes entering said side members through said openings, a vertical partition in each side member disposed between said openings and dividing each side member into two compartments, counterweights in said compartments, pulleys within said upper member, and flexible suspension means passing over said pulleys and connected to said counter-weights and said laterally projecting plates on said sashes.

5. A metal window-frame, comprising a lintel, a sill and two tubular side members forming jambs, the said side members each having a vertical opening extending through its inner wall, a sash slidable in said frame, plates laterally projecting from said sash and entering said side members through said openings, and means for varying the width of said openings.

[Claims 6 to 14 not printed in the Gazette.]

1,222,359. COUNTING AND LISTING MACHINE. CHARLES E. CHAPMAN, Springfield, Ill. Filed July 22, 1915. Serial No. 41,403. (Cl. 101—90.)



1. In a listing machine, a shaft, a type disk having printing type thereon and mounted on said shaft, an actuating lever pivoted at its outer end and extending at right angles to said shaft, the inner end of said lever positioned to operate in an arc adjacent said disk, the inner end of said lever provided with a horizontal slot, a telescoping tapered catch pin projecting from said slot, a spring in said slot normally pressing said pin outward, teeth on said disk in engagement with the outer end of said pin, and a finger key and bar in operative engagement with said lever.

2. In a listing machine, a shaft, a type disk having printing type thereon and mounted on said shaft, an actuating lever pivoted at its outer end and extending at right

angles toward said shaft, the inner end of said lever positioned to operate in an arc adjacent the disk, spaced apart stops positioned to limit the travel of said lever in each direction, teeth on the disk in engagement with the inner end of said lever, a spring fixed to a stationary point on the machine to normally actuate said lever to the limit of its travel in one direction, and a finger key and bar in operative engagement with said lever whereby the lever may be manually actuated to the limit of its travel in the opposite direction.

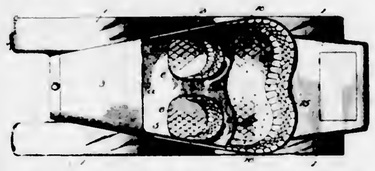
3. In a listing machine, a shaft, a type disk having printing type thereon mounted on said shaft, an actuating lever pivoted at its outer end and extending at right angles toward said shaft, the inner end of said lever positioned to operate in an arc adjacent the disk, teeth on said disk in engagement with the inner end of said lever, a bar pivoted at its inner end, a link pivotally engaged to the bar and to the actuating lever, and a finger key on said bar providing means for manually actuating the actuating lever and disk.

4. In a listing machine, a shaft, a plurality of type disks having printing type thereon and mounted loosely on said shaft, key means for rotating said disks, spacing disks keyed to said shaft between each of said type disks, a radial tooth projecting from each of said spacing disks, a pin projecting from one face of each of said type disks in the path of the radial tooth on the adjacent spacing disk, said pin positioned to actuate said spacing disk and shaft upon the rotation of the disk, and a manually operable crank disk fixed on one end of said shaft whereby said shaft and thereby the type disks may be counter-rotated when resetting the machine.

5. In a listing machine, parallel shafts, a plurality of type disks having printing type thereon and mounted loosely on said shafts, key means for rotating said disks, spacing disks keyed to said shaft between each of said type disks, a radial tooth projecting from each of said spacing disks, a pin projecting from one face of each of said type disks in the path of the radial tooth on the adjacent spacing disk, said pin positioned to actuate said spacing disk and shaft upon the rotation of the disk, a chain of gears operatively connecting said parallel shafts, and a manually operable crank disk fixed on one end of one of said shafts whereby the shafts and type disks may be counter-rotated when resetting the machine.

[Claims 6 to 11 not printed in the Gazette.]

1,222,360. AUTOMOBILE-SEATING. CHARLES B. CHATFIELD, Grand Rapids, Mich. Filed July 17, 1916. Serial No. 109,683. (Cl. 21—42.)



1. A vehicle body of the "chummy" type, having front chairs with a central longitudinal intervening aisle, and a rear divan extending transversely across the body closely behind the chairs and having a continuous seat and back bulged forwardly behind said aisle to provide an advanced center seating portion for one person and arranged rearwardly behind said chairs to provide rearward end seating portions for two persons, substantially as described.

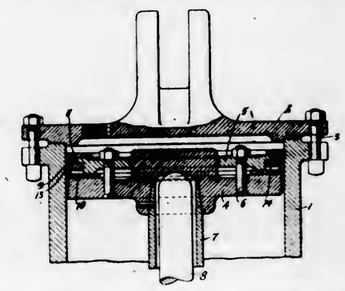
2. A vehicle body having "chummy" seating capacity for five persons and provided with a pair of alined front chairs mounted on reduced pedestals, and a continuous-seat rear divan extending transversely across the body immediately in rear of said chairs and bulged forwardly at its central portion and rearwardly at its end portions.

3. An automobile body having a divan to seat three persons extending transversely across the body and formed with a continuous seat having a front seat line concaved at its end portions and convexed at its central portion and forming a continuous compound curve and a continuous back having forwardly extending flaring ends, and concavities and a convexity corresponding approximately to the concavities and convexity of said front line of the seat, substantially as described.

4. An automobile body of the "chummy" type having a front side door, a pair of front chairs with an intervening longitudinal aisle for passage of passengers to the space behind said chairs, and a divan extending transversely across the body behind said chairs and having a continuous seat and corresponding back, both back and seat being bulged forwardly at the center to support a passenger in an advanced central position with foot and leg room in said aisle, said divan being formed to support passengers behind said chairs, respectively, with foot and lower limb room below the same and with their shoulders out of alinement with the shoulders of said centrally arranged passenger.

5. An automobile having a divan extending transversely across the body and convexed forwardly at the central portions of its back and seat and concaved rearwardly at the opposite end portions of its back and seat with the ends of the back curving forwardly at the ends of the seat, said back being continuous throughout its length with said central convexity merging into said concavities, said seat being continuous, with a continuous front seat line having the central convexity merging into said end concavities, whereby a central advanced position is provided for one passenger and rearward forwardly and inwardly facing positions are provided for two passengers, substantially as described.

1,222,361. PISTON-PACKING EXPANDER. GEORGE CHRISTENSON, Jamaica, N. Y., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed Aug. 21, 1916. Serial No. 116,094. (Cl. 121—108.)



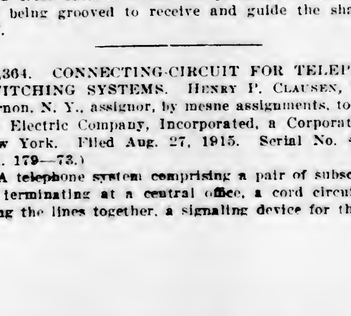
1. The combination with the usual piston structure and band of flexible packing thereon, of a spring split-ring expander arranged within said packing provided with an interior circumferential groove, and a circumferential projection on the piston structure fitting into said groove and adapted to serve as a guide and retainer for the spring ring.

2. The combination with the usual piston head, piston follower, and cup leather packing having its inner edge clamped between the two, of a spring split-ring within the cylindrical portion of the packing, said ring having a circumferential groove in its interior surface, and said piston follower having a circumferential tongue fitting into said groove.

1,222,362. PISTON-PACKING EXPANDER. GEORGE CHRISTENSON, Jamaica, N. Y., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed Aug. 21, 1916. Serial No. 116,095. (Cl. 121—108.)

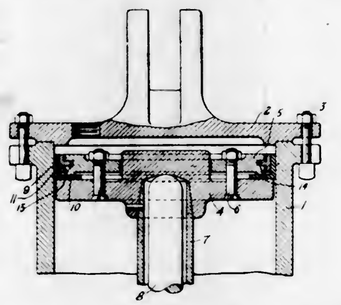
1. The combination with the usual piston structure and band of flexible packing thereon of a split-ring, of channeled cross section having its concave side toward the center arranged within said packing and two spring split-rings mounted in the inner concave side of the channeled ring, the piston structure having a radially projecting guide extending between said spring rings.

2. The combination with the usual piston head, piston follower and cup leather packing having its inner edge clamped between the two, of a sheet metal split-ring of channeled cross section having its concave side toward the center arranged within the cylindrical portion of said packing and two spring-split-rings located within the first



mentioned ring, said piston follower having a circumferential tongue of proper cross section to fit between the two spring-rings and said tongue and spring-rings filling the inner concave portion of the first mentioned ring when the parts are assembled.

1,222,363. PISTON-PACKING EXPANDER. GEORGE CHRISTENSON, Jamaica, N. Y., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed Aug. 21, 1916. Serial No. 116,096. (Cl. 121—108.)

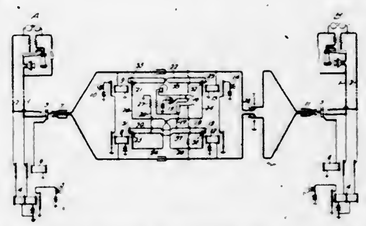


1. The combination with the usual piston structure and band of flexible packing thereon, of a spring split-ring of T-shaped cross section within said packing, the shank of the T projecting radially inward and the piston structure being grooved circumferentially to receive said shank.

2. The combination with the usual piston head, piston follower and cup leather packing having its inner edge clamped between the two, of a spring split-ring of T-shaped cross section within the packing, the piston follower being grooved to receive and guide the shank of the T.

1,222,364. CONNECTING-CIRCUIT FOR TELEPHONE SWITCHING SYSTEMS. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Aug. 27, 1915. Serial No. 47,675. (Cl. 179—73.)

1. A telephone system comprising a pair of subscribers' lines terminating at a central office, a cord circuit connecting the lines together, a signaling device for the cord circuit, and an operating circuit for the signaling device controlled over one connected subscriber's line and completed by the disconnection of the cord circuit from the other line.



2. A telephone system comprising two telephone lines, a link circuit connecting the lines together, a signaling device for the link circuit, and an operating circuit for the signaling device controlled over one connected line and completed by the disconnection of the link circuit from the other line.

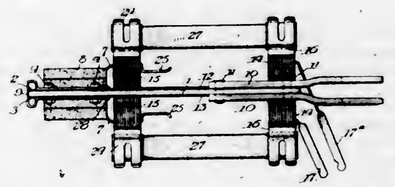
3. A telephone system comprising two subscribers' lines, a cord circuit connecting the lines together, a relay for each end of the cord circuit energized over the respective connected subscribers' lines, a tone producing device, and an energizing circuit for said device containing contacts of the relays.

4. A telephone system comprising two telephone lines, a link circuit connecting the lines together, a tone producing device for the link circuit, and an energizing circuit for the tone producing device controlled over one connected line and completed by the disconnection of the link circuit from the other line.

5. A telephone system comprising two telephone lines, a link circuit connecting the lines together, a relay for each end of the link circuit energized over the respective connected lines, a tone producing device, and an energizing circuit for said device containing contacts of the relays.

[Claims 6 to 8 not printed in the Gazette.]

1,222,365. PROTECTOR. WALLACE L. COOK, Chicago, Ill. Filed Mar. 27, 1916. Serial No. 86,907. (Cl. 175—30.)



1. A protector having a metallic base plate, a pair of strips of insulating material mounted on opposite sides of said base plate, contact elements insulatingly carried by said strips, an insulating sleeve projecting through said base plate, and retaining means extending from said strips into said insulating sleeve to hold said strips upon said base plate.

2. A protector having a metallic base plate, a pair of strips of insulating material mounted on opposite sides of said base plate, contact elements insulatingly carried by said strips, a strain insulator projecting through said base plate, and retaining means extending from said strips into said strain insulator to hold said strips upon said base plate.

3. A protector having a metallic base plate, a pair of strips of insulating material mounted on opposite sides of said base plate near one extremity thereof, contact elements insulatingly carried by said strips, an insulating

sleeve projecting through said base plate, retaining means extending from said strips into said insulating sleeve to hold said strips upon said base, a second pair of strips of insulating material mounted upon opposite sides of said base plate near the other extremity thereof, a second insulating sleeve projecting through said base plate, retaining means extending from said second pair of strips into said last aforesaid insulating sleeve to hold said strips upon said base plate, and fuse elements connecting corresponding contact elements of the first and second pair of strips.

4. A protector having a metallic base plate, a pair of strips of insulating material mounted on opposite sides of said base plate near one extremity thereof, contact elements insulatingly carried by said strips, a strain insulator projecting through said base plate, retaining means extending from said strips into said strain insulator to hold said strips upon said base, a second pair of strips of insulating material mounted upon opposite sides of said base plate near the other extremity thereof, a second strain insulator projecting through said base plate, retaining means extending from said second pair of strips into said last aforesaid strain insulator to hold said strips upon said base plate, and fuse elements connecting corresponding contact elements of the first and second pair of strips.

5. A protector having a metallic base plate, a pair of strips of insulating material mounted on opposite sides of said base plate, contact elements insulatingly carried by said strips, a strain insulator projecting through said base plate, retaining means extending from said strips into said strain insulator to hold said strips upon said base plate, soldering clips extending from said contact elements, and sheets of insulation upon the opposite sides of said base plate.

[Claims 6 to 8 not printed in the Gazette.]

1,222,366. HAND-CONTROLLED SAFETY-KNIFE. MALCOLM CURRY, Holyoke, Mass., assignor to The American Thread Company, New York, N. Y., a Corporation of New Jersey. Filed May 24, 1916. Serial No. 99,480. (Cl. 30—9.)

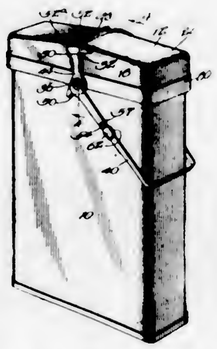


1. In a safety knife the combination of a flat blade-member having a cutting edge along its front portion, a member constituting a guard therefor having an opening extending through the front thereof and along the cutting edge of said blade-member to its point, the plane of said blade-member passing through said opening, one of said members being movable to expose said cutting edge of said blade-member through said opening, an elongated handle adapted to be grasped by the hand and to which the other of said members is rigidly connected, a spring for returning said movable member to normal position, said movable member having a surface remote from the end of said cutting edge which is farthest from the handle, and located in the plane of said blade-member, for receiving pressure of the thumb of the hand holding said handle, to move said movable member from normal position, so that said cutting edge of said blade-member is exposed in front of said guard-member.

2. In a safety knife the combination of an elongated handle adapted to be grasped by the hand, a blade-member projecting from one end thereof and rigidly connected thereto, the front edge of said blade-member having a cutting portion, a guard-member having an opening in the front portion thereof, said opening lying in the plane of said blade-member and extending to the point thereof, said guard-member being movable so as to expose the cutting portion of the front edge of said blade-member through said opening, a spring for returning said guard-member when so moved, the part of said guard-member in proximity to said handle projecting farther in front of said front edge than the part adjacent to the point of said blade-member, so as to have a surface for receiving the pressure of the thumb of the hand holding said handle to move said guard-member, so that the cutting edge of said blade-member projects through the opening in the front of said guard-member.

3. In a safety knife the combination of an elongated handle adapted to be grasped by the hand, a blade-member projecting from one end thereof and rigidly connected thereto, the front edge of said blade-member having a cutting portion, a guard-member having an opening in the front portion thereof, said opening lying in the plane of said blade-member and extending to the point thereof, said guard-member being movable so as to expose the cutting portion of the front edge of said blade-member through said opening, a spring for returning said guard-member when so moved, the part of said guard-member in proximity to said handle projecting farther in front of said front edge than the part adjacent to the point of said blade-member, so as to have a surface for receiving the pressure of the thumb of the hand holding said handle to move said guard-member, so that the cutting edge of said blade-member projects through the opening in the front of said guard-member.

1,222,367. FASTENER FOR BOX-CLOSURES. LYMAN C. DAVIDSON, Chicago, Ill. Filed June 3, 1916. Serial No. 101,474. (Cl. 70—3.)



1. In a device of the class described, a case and a cover to be secured together, means for drawing one of said members toward the other, and a metallic spring device located in an inclosed chamber formed in one of said parts to be secured together resisting the operation of said drawing means, for the purposes described.

2. In a device of the class described, the combination of a case and cover to be secured together, means for drawing said members together, one located on each side of the device, metallic spring devices located on opposite sides of one of said members to be secured together simultaneously resisting the operation of said drawing means.

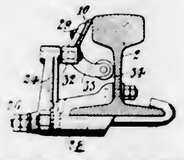
3. In a device of the class described, the combination of a case and cover to be secured together, means for drawing said members together, one located on each side of the device, metallic spring devices located on opposite sides of one of said members, to be secured together, simultaneously resisting the operation of said drawing means, and a single operating means for simultaneously manipulating said drawing means.

4. In a device of the class described, a case and a cover to be secured together, means for drawing one of said members toward the other, and a spring device located and movable within an inclosed chamber formed in one of said parts to be secured together, having a connecting means extending outside said chamber engaging and resisting the operation of said drawing means, for the purposes described.

5. In a device of the class described, the combination of a case and cover to be secured together, means for drawing said members together, one located on each side of the device, spring devices located and movable in inclosed chambers in walls on opposite sides of one of said members to be secured together simultaneously resisting the operation of said drawing means.

[Claims 6 to 21 not printed in the Gazette.]

1,222,368. DETECTOR-BAR. LEONARD DAY, New York, N. Y., assignor to Federal Signal Company, a Corporation of New York. Filed July 26, 1911. Serial No. 640,597. (Cl. 246—57.)



1. A longitudinally moving detector bar; a pivotal support for said bar adapted to move longitudinally therewith; and means for causing said bar to tilt inward on its pivotal support against the side face of a wheel.

2. A longitudinally moving detector bar adapted to move into two detecting positions, one position being against the tread of a wheel and another position being against the side face of a wheel and horizontal pivots on which the bar is mounted so as to have the capacity, during its movement, to tilt against the side face of a wheel.

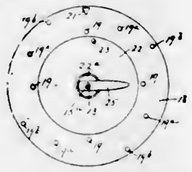
3. A longitudinally moving detector bar adapted to move into two detecting positions, one position being against the tread of a wheel and another position being against the side face of a wheel; a pivotal support for said bar adapted to move longitudinally therewith; and means for causing said bar to tilt inward on its pivotal support against the side face of a wheel.

4. A longitudinally moving detector bar; means for exerting an upward thrust on said bar; and means for causing said bar to tilt inward against the side face of a wheel in response to said upward thrust, said means comprising one or more arms carried by said bar and arranged to engage the under side of the rail head.

5. A detector bar; pivotal supports therefor; lifting means for said pivotal supports; and means for tilting the bar inward against the side face of a car wheel in response to said lifting means.

[Claims 6 to 13 not printed in the Gazette.]

1,222,369. WATCH READABLE BY TOUCH. HARRIE E. DUNCAN, Waltham, Mass., assignor to Waltham Watch Company, Waltham, Mass., a Corporation of Massachusetts. Filed Aug. 17, 1916. Serial No. 115,510. (Cl. 58—126.)

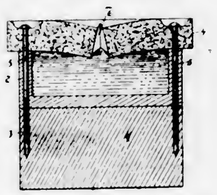


1. A time piece comprising essentially an annular dial having fixed touch-readable hour indicia on its face, a revolving touch-readable hour indicator movable in a circular path concentric with and of smaller diameter than the inner edge of the dial, and a revolving touch-readable minute indicator movable in a circular path concentric with and of smaller diameter than the path of the revolving hour indicator, and separated from the inner edge of the dial by a space into which the hour indicator projects when said indicators are in radial alinement, each revolving indicator being constantly exposed and its position determinable by touch at all times.

2. A time piece comprising essentially an annular dial having fixed touch-readable hour indicia on its face, a rotary plate located in and substantially filling the opening surrounded by the dial and provided with a touch-readable hour indicator movable in a circular path concentric with and of smaller diameter than the inner edge of the dial, and a revolving touch-readable minute indicator movable in a circular path concentric with and of smaller diameter than the path of the revolving hour indicator, and separated from the inner edge of the dial by a space into which the hour indicator projects when said indicators are in radial alinement, each revolving indicator being constantly exposed and its position determinable by touch at all times, the said rotary plate and the inner edge of the dial constituting finger guides whereby the revolving hour indicator may be located.

3. A time piece comprising essentially an annular dial having fixed touch-readable hour indicia on its face, a revolving touch-readable hour indicator movable in a circular path concentric with and of smaller diameter than the inner edge of the dial, and a revolving touch-readable minute indicator movable in a circular path concentric with and of smaller diameter than the path of the revolving hour indicator, and separated from the inner edge of the dial by a space into which the hour indicator projects when said indicators are in radial alinement, the dial indicia being composed of a single series of spaced projections denoting the hour divisions on the watch face and arranged in groups, the members of which are located at different radial distances from the edges of the annular dial, whereby the respective hours are indicated by the circumferential positions of their projections and a radial distance thereof from the edge of the dial.

1,222,370. GREASING DEVICE FOR BAKERS' USE. GUSTAF EMANUELSON, New Haven, Conn. Filed June 26, 1915. Serial No. 36,547. (Cl. 65—12.)

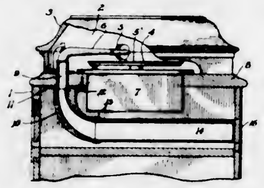


A greasing device for bakers' use comprising a rectangular box having a flat bottom and open at the top, and adapted to contain greasing material, a pad secured to the upper edges of the box and projecting beyond the walls thereof, said pad formed with a central longitudinal slot permitting the central portion of the pad to drop into the box.

1,222,371. TALKING-MACHINE. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Sept. 4, 1907. Serial No. 391,399. Renewed Feb. 5, 1912. Serial No. 675,646. (Cl. 274—9.)

1. In a talking machine, the combination with an amplifier comprising a hollow stationary sound conveying bracket of relatively non-vibratory construction provided with an opening at one end and a plurality of openings at its other end, of a sound box communicating with said first mentioned opening and a plurality of spaced resonators communicating with the said plurality of openings respectively.

2. In a talking machine, the combination with an amplifier comprising a hollow stationary sound conveying bracket of relatively non-vibratory construction having an opening at one end and a series of openings at its other end forming sockets, of a series of spaced resonators wholly supported in said sockets, and a sound box communicating with the opening in the other end of said bracket.



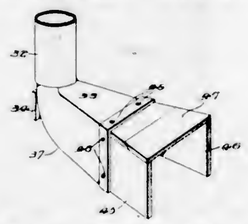
3. In a talking machine, the combination with an amplifier comprising a hollow stationary sound conveying bracket of relatively non-vibratory construction having an opening at one end and a series of openings at its other end forming sockets, of a series of spaced tubes wholly supported in said sockets, and a sound box communicating with the opening in the other end of said bracket.

4. In a talking machine, the combination with a sound reproducer, of an amplifier comprising a rigid hollow bracket of relatively non-vibratory construction having one end communicating with said reproducer and flaring from said end, and a plurality of independent tubular resonators communicating with the other end of said bracket.

5. In a talking machine, the combination with a cabinet, of a rigid hollow non-vibratory bracket rigidly secured to said cabinet and depending downwardly therein, said bracket being provided with an inlet at its upper end, and the lower end of said bracket being substantially oblong transversely, a sound reproducer communicating with the upper end of said bracket through said inlet, and a plurality of resonators communicating with the lower end of said bracket.

[Claims 6 to 17 not printed in the Gazette.]

1,222,372. TALKING-MACHINE. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Mar. 24, 1911. Serial No. 616,663. (Cl. 274—2.)



1. A talking machine comprising a cabinet including a sounding board forming an exterior wall thereof, and hollow sound amplifying means arranged within said cabinet and having that side facing toward said board spaced from said board and open substantially throughout its length, said amplifying means being also provided with an open delivery end.

2. A talking machine comprising a sounding-board, and hollow sound conducting means having an open side facing toward and spaced from said board and an open delivery end.

3. A talking machine comprising a compartment, including an upwardly extending front wall provided with an outlet, an upwardly extending back wall, a top wall, and a sounding-board forming the major portion of the bottom of said compartment, actuating means carried by said top wall, hollow sound conducting means extending within said inclosure and secured to and entirely supported by said back wall and extending freely through said top wall, and sound reproducing means arranged above said top wall and communicating with said sound conducting means.

4. A talking machine comprising an inclosure, including a sounding-board forming a part of the exterior thereof, hollow sound conducting means having a delivery and projecting freely within said inclosure and spaced from said sounding-board and arranged to deliver sound waves in a direction substantially parallel to said sounding-board, and having an opening in a longitudinal side thereof arranged to direct sound waves against said sounding-board, sound reproducing means arranged outside of said inclosure and communicating with said sound conducting means, a rotary record support arranged outside of said inclosure to coöperate with said sound reproducing means, and actuating mechanism for said support arranged within said inclosure but outside of said sound conducting means.

5. A talking machine comprising a cabinet providing a compartment having a top wall, and a sounding-board forming a bottom wall thereof, a rotary record support arranged above said top wall and carried thereby, actuating means for said support depending from said top wall in said compartment, sound reproducing means arranged above said support, a rigid sound conveyer secured to said cabinet, independently of said top wall, and extending substantially from the plane of said top wall and into proximity with said sounding-board, said sound conveyer communicating at its upper end with said sound reproducing means, and sound amplifying means, including a sounding-board, arranged to receive sound waves from the lower end of said sound conveyer, and arranged to deliver sound waves directly against said first mentioned sounding-board, and also directly through an outlet provided therefor in said cabinet.

[Claims 6 to 10 not printed in the Gazette.]

1,222,373. CLOSURE. HARRY M. EPSTEIN, New York, N. Y., assignor to Charles F. Glanz, Philadelphia, Pa. Filed Nov. 4, 1916. Serial No. 129,525. (Cl. 220—63.)



1. In combination with a nozzle or passage having a tapered wall, a closure having an upwardly extending and tapered flange adapted to seat in the tapered opening of said nozzle or passage and be wholly within the plane of the outer edge thereof, said flange having inwardly extending means integral therewith for coöperative engagement with a prying tool.

2. In combination with a nozzle or passage having a tapered wall, a closure for said nozzle having an annular wall adapted to seat within said nozzle, said closure being provided with inwardly projecting means forming an engaging portion for a prying tool designed to lift the closure from its seat.

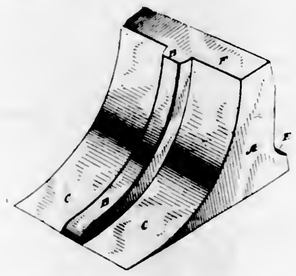
3. In combination with a nozzle or passage having a tapered wall, a closure for said nozzle having a tapered annular wall corresponding substantially therewith and adapted to seat within said nozzle, and a flange carried by said closure and forming an engaging portion for a prying tool designed to lift the closure from its seat.

4. In combination with the nozzle of a can having a tapered wall, a closure for said nozzle comprising a cup-like member having an annular wall shaped to provide annular engaging portions for contact with the nozzle, and an integral annular flange to strengthen the wall of the closure and form an engaging portion for a prying tool designed to lift the closure from its seat.

5. In combination with the nozzle of a can having a tapered wall, a closure for said nozzle comprising a cup-like member having an annular wall shaped to provide annular engaging portions for contact with the nozzle, and an inwardly projecting annular flange to strengthen the wall of the closure and form an engaging portion for a prying tool designed to lift the closure from its seat.

[Claims 6 to 9 not printed in the Gazette.]

1,222,374. CHOCK-BLOCK. EDWARD S. EVANS, Richmond, Va. Filed June 17, 1916. Serial No. 104,179. (Cl. 21—8.)



A chock-block having a wheel-abutting face, and a projecting rib on said face intermediate the sides of the block.

1,222,375. CHECK-BOOK-STUB HOLDER. MARCUS P. ENLINE, Dallas, Tex. Filed Aug. 1, 1916. Serial No. 112,623. (Cl. 11—12.)



1. A check book stub holder made of stiff sheet metal comprising a shank, means at its lower end for attaching it to the book, and an integral tongue extending from the upper end of the shank, bent down, and normally contacting with the shank, for the purpose set forth.

2. A check book stub holder made of stiff sheet metal comprising a shank, means at its lower end for attaching it to the book, and an integral tongue consisting of a strip extending from the upper end of the shank and having a thumb piece within its length, the remote end of the tongue normally contacting with the shank to form a clip, for the purpose set forth.

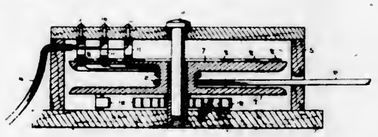
3. A device for use in a check book comprising a curved claw having toes at its lower end adapted to be inserted in the binding of the stubs and upright projections from the tips of the toes for holding them in place, a shank rising integrally from the other end of the claw, and means for holding the used stubs open.

4. A device for use in a check book comprising a claw having at its lower end toes for entering the binding of the book, projections whereof some rise from the toes near their tips and others depend from such toes at other points, a shank extending from the other end of the claw, and means for holding the used stubs open.

5. A check book stub holder made of stiff sheet metal comprising a shank, an integral claw at its lower end adapted to enter the binding of the book, and a clip carried by the upper end of the shank and bent into normal contact therewith, for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,222,376. ATTACHMENT FOR TELEPHONES. CHARLES W. FERGUSON, Bower, W. Va. Filed Nov. 9, 1915, Serial No. 60,503. Renewed Mar. 7, 1917. Serial No. 153,169. (Cl. 173—367.)



An attachment for telephones, comprising a rotatably mounted reel upon which the wires from the telephone are to be wound, one flange of said reel having a channel therein for the reception of the ends of said telephone wires and disposing the same out of the path of the winding portions of the wires, contact plates carried by the reel to which the ends of said wires are attached, means to rotate said reel in one direction, a casing for said reel, a plurality of contact fingers engaging said contact plates under tension, said fingers being substantially S-shape, the contacting faces of said fingers being curved, whereby said fingers will have rocking action on said contact plates when the reel is rotated, said contact fingers engaging with the line wires of the telephone.

1,222,377. IDENTIFICATION DEVICE FOR TOOTH-BRUSHES AND THE LIKE. BRADFORD B. FLINT, Saranac Lake, N. Y. Filed Nov. 13, 1915. Serial No. 61,376. (Cl. 40—10.)



1. The combination with an article having one or more recesses formed in the surface thereof, the walls of the recess or recesses being perpendicular to the bottom thereof, of a rigid identification disk conforming to and seating within the recess or recesses and held solely therein by frictional engagement with the walls of the recess, said disk being of a thickness less than the depth of the corresponding recess and having its exposed face located in a plane below the surface in which the recess is formed and provided with a designating character.

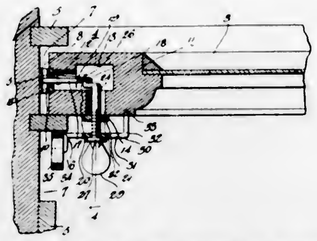
2. The combination with an article having one or more recesses formed in the surface thereof, the walls of the recess or recesses being perpendicular to the bottom thereof, of a rigid identification disk conforming to and seating within the recess or recesses and held solely therein by frictional engagement with the walls of the recess, said disk having its exposed face provided with a designating character.

1,222,378. COMBINED WINDOW-LOCK AND DRAFT-STOP. WILLIAM HENRY FORESTER, Portage la Prairie, Manitoba, Canada, assignor of one-half to Thomas A. Watson, Grand View, Manitoba, Canada. Filed Sept. 13, 1916. Serial No. 119,932. (Cl. 16—119.)

1. In a device of the class described, in combination, a window frame having sash grooves therein, keeper plates connected with said frame and arranged within said grooves, a sash mounted to slide in said grooves and having openings therein, locking pins disposed in said openings and engageable with said keeper plates, locking pin operating keys mounted in said sash and connected with said pins, and clamping members for contact with said window frame connected with said sash and keys.

2. In a device of the class described, in combination, a window frame having sash grooves therein, keeper plates connected with said frame and arranged in said grooves, a sash mounted to slide in said grooves and having openings in the sides thereof, locking pins slidably mounted in said openings, keys mounted to turn in the sides of said sash, clamping members for contact with said window frame carried by said keys and connected with said sash.

and crank arms on said keys arranged within said openings and connected with said locking pins.

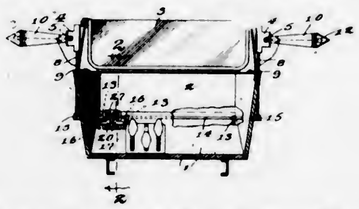


3. In a device of the class described, in combination, a window frame having sash grooves therein, keeper plates connected with said frame and arranged in said grooves, a sash mounted to slide in said grooves and having openings in the sides thereof, locking pins slidably mounted in said openings and engageable with said keeper plates, clamping members for contact with said frame connected with the sides of said sash, keys passing through said clamping members and mounted to turn within the sides of said sash, crank arms on said keys arranged within said openings, and spring latches on the locking pins connecting said pins with the crank arms.

4. In a device of the class described, in combination, a window frame having sash retaining strips thereon, keeper plates on said frame arranged within said strips, a sash mounted to slide in said frame and having openings in the sides thereof, locking pins for engagement with said keeper plates carried by the sash, plates connected with the sides of said sash, keys having shanks adjustably mounted in said plates and connected with said pins, bars on said shanks, arms on said bars for connection with said sash, and rollers on said bars for contact with said retaining strips.

5. In a device of the class described, in combination, a window frame having sash retaining strips thereon, keeper plates on the frame arranged between said strips, a sash mounted to slide in said frame and having openings in the sides thereof, locking pins engageable with said keeper-plates arranged within the sides of said sash, plates connected with the sides of said sash, keys having shanks adjustably mounted in said plates and connected with said pins, shoulders on said keys, bars on said shanks adapted for contact with said shoulders, arms on said bars, sash engaging fingers on said arms, heads on the bars, and rollers mounted to turn on said heads and engageable with the retaining strips on the window frame.

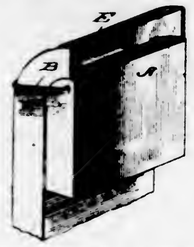
1,222,379. DIRECTION-INDICATING APPARATUS FOR MOTOR-VEHICLES. ERVINE H. FRANCE, Detroit, Mich. Filed Mar. 25, 1916. Serial No. 86,638. (Cl. 116—31.)



1. In a signal apparatus of the class described, a signal blade mounted for swinging movement, a shaft in operable relation with said blade, a pivotally mounted pedal, an arm mounted on said shaft, a link connection between said pedal and said arm, a bar pivoted on said pedal and adapted to bear against said shaft and having a depression engageable with said shaft when said pedal is depressed for locking the mechanism in signaling position, a spring connected to said bar and said pedal whereby said bar is held against said shaft, a second spring adapted to hold the mechanism in its non-signaling position, and a rod pivotally mounted on said bar and extending upwardly through a hole in said pedal.

2. In a signaling apparatus of the class described, a signal blade mounted for swinging movement, a segment gear mounted thereon, a rack mounted for movement in a slide and engaging said segment gear, a rod affixed to said gear, a shaft, an arm mounted on said shaft and having its outer end pivotally connected to said rod, a pivotally mounted pedal, a second arm mounted on said shaft, a link connection between said pedal and said second arm, a bar pivoted on said pedal and adapted to bear against said shaft and having a depression engageable with said shaft when said pedal is depressed for locking the mechanism in signaling position, a spring connected to said bar and said pedal whereby said bar is held against said shaft, a second spring adapted to hold the mechanism in a non-signaling position, and a rod pivotally mounted on said bar and extending upwardly through a hole in said pedal.

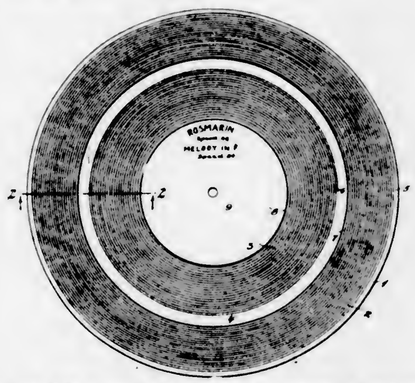
1,222,380. MOISTENER-TANK FOR HEATERS. ALBERT L. FRANKEBERGER, Bloomington, Ill. Filed Nov. 11, 1916. Serial No. 130,751. (Cl. 126—313.)



1. A moistener-tank open at the top and provided with hooks on its inner surface for attachment to a support, and having a hinged bail which swings around said support, whereby to removably hold the tank close to its support.

2. The combination with a heater chimney having a curved discharge elbow at the top, with perforations or orifices on the inner curvature thereof, of a tank fitted to said curvature and having an open upper end, whereby it communicates with the interior of the chimney adjacent to its discharge, and means for removably fastening and binding said tank to the chimney.

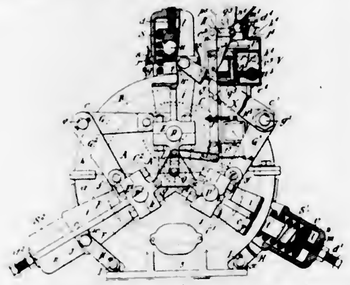
1,222,381. TALKING-MACHINE RECORD. EDWARD T. FRANKEL, New York, N. Y. Filed Mar. 22, 1916. Serial No. 85,923. (Cl. 274—42.)



1. A disk record having separate concentric portions provided with sound grooves recorded at different rotative speeds.

2. A disk record having spiral sound record grooves occupying different concentric portions on the face of the disk, there being an ungrooved circular portion on the face between the grooved areas, the said grooves being recorded at different rotative speeds, and the rotative speed for each groove being maintained uniform from beginning to end.

1,222,382. MACHINE FOR CRUSHING OR GRINDING. GEORGE H. FRASER, Brooklyn, N. Y. Filed Mar. 16, 1905, Serial No. 250,474. Renewed July 3, 1916. Serial No. 107,467. (Cl. 83—9.)



1. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, a movable and rotatable crushing roll within, eccentric to and disposed near the upper part of said die, having a crushing face reciprocal to that of the latter, means for revolving one of said parts, a non-rotative pivotally mounted member on which said roll is mounted, and means below the axis of said roll for pressing said roll upwardly to resist a crushing pressure from the inner face of said die.

2. In combination, an annular crushing die revolving in an approximately vertical plane having an internal crushing face, a movable and rotatable crushing roll within and eccentric to, and disposed near the upper part of said die, having a crushing face reciprocal to that of the latter, means for revolving one of said parts, a non-rotative movable member on which said roll is mounted, and means at the side of said roll for supporting and pressing said member upwardly to resist a crushing pressure from the inner face of said die.

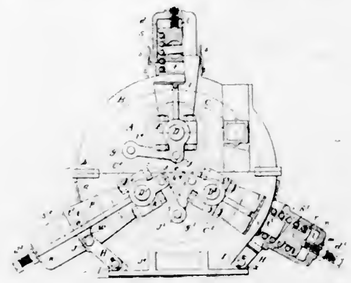
3. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, a movable and rotatable crushing roll within, eccentric to and disposed near the upper part of said die, having a crushing face reciprocal to that of the latter, means for revolving one of said parts, a movable member on which said roll is mounted, and movable means crossing said die and rotatively carrying said roll therein, and means at each side of said roll for pressing it upwardly to resist a crushing pressure from the inner face of said die.

4. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, a movable and rotatable crushing roll within, eccentric to and disposed near the upper part of said die, having a crushing face reciprocal to that of the latter, means for revolving one of said parts, a movable member on which said roll is rotatively mounted, and means inwardly of said die for pressing said roll upwardly to resist a crushing pressure from the inner face of said die.

5. In combination, an annular crushing die revolving in a vertical plane and having an internal crushing face, a movable and rotatable crushing roll within, eccentric to and disposed near the upper part of said die, having a crushing face reciprocal to that of the latter, means for revolving one of said parts, a non-rotative movable member carrying said roll, and means below said roll for pressing said roll upwardly toward said die to resist a crushing pressure from the inner face of the latter.

[Claims 6 to 101 not printed in the Gazette.]

1,222,383. MACHINE FOR CRUSHING OR GRINDING. GEORGE H. FRASER, Brooklyn, N. Y. Original application filed Mar. 16, 1905. Serial No. 250,474. Renewed July 3, 1916. Serial No. 107,467. Divided and this application filed June 29, 1915. Serial No. 36,964. (Cl. 83—9.)



1. The combination with a revolving annular die and a crushing roll therein having bearings at the opposite sides of said die, of a guide for said bearings comprising a pivotal shaft extending through the interior of said die and mounted to oscillate on an axis parallel with that of said die.

2. The combination with a revolving annular die and a crushing roll therein having bearings at the opposite sides thereof, of a shaft mounted on an axis parallel with that of said die and extending through the latter, and links connected to said shaft at opposite sides of said die and connected to said bearings for guiding the latter.

3. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, a rotatable crushing roll within and eccentric of said die, disposed near the upper part thereof and having a peripheral crushing face reciprocal to the inner face of the latter, two rotatable crushing rolls movable toward and from each other within and eccentric of said die, disposed near the lower part thereof, and each having a peripheral crushing face reciprocal to the inner face of the latter, means for revolving one of said parts, non-rotative members on which said lower rolls are rotatably mounted respectively, movable toward and from each other to move said lower rolls, and downward divergently acting means intermediate of the axes of two of said rolls engaging the inner side of said non-rotative members respectively, acting against said non-rotative members for pressing said lower rolls outwardly toward the inner face of said die to generate a crushing pressure toward the latter.

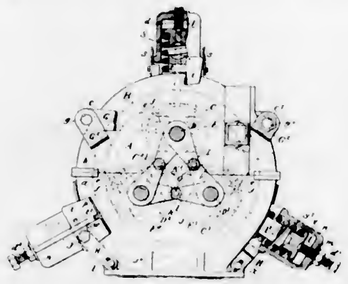
4. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, two rotatable crushing rolls within and eccentric of said die, each having a peripheral crushing face reciprocal to the inner face of the latter, means for revolving one of said parts, non-rotative members movable toward and from each other on which said rolls are rotatively mounted respectively, and means inwardly of and intermediate of and acting against two of said non-rotative members for pressing said rolls outwardly away from one another toward the inner face of said die to generate a crushing pressure toward the latter.

5. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, two rotatable crushing rolls within and eccentric of said die, each having a peripheral crushing face reciprocal to the inner face of the latter, means for revolving one of said parts, non-rotative means movable toward and from one another on which said rolls are rotatively mounted respectively, and means for pressing said non-rotative means outwardly away from one another mounted inwardly of the periphery of said die at the inner side of said non-rotative means respectively, and acting against said non-rotative means respectively for pressing

said rolls outwardly away from one another toward the inner face of said die to generate a crushing pressure toward the latter.

[Claims 6 to 30 not printed in the Gazette.]

1,222,384. MACHINE FOR CRUSHING OR GRINDING. GEORGE H. FRASER, Brooklyn, N. Y. Original application filed Mar. 16, 1905, Serial No. 250,474. Renewed July 3, 1916, Serial No. 107,467. Divided and this application filed June 29, 1915. Serial No. 36,965. (Cl. 83—9.)



1. The combination with a revolving annular die and a plurality of crushing rolls therein, and means for driving one of said parts relatively to the others, of non-rotary means on which said rolls are rotatively mounted, and means in the plane of the axes of two of said rolls for transmitting the inward strain of said rolls directly from one to the other.

2. The combination with a revolving annular die and a plurality of crushing rolls therein and means for driving one of said parts relatively to the other, of movable non-rotary means on which said rolls are rotatively mounted, and a movable connection between the shafts of said rolls for transmitting the inward stress of one to another.

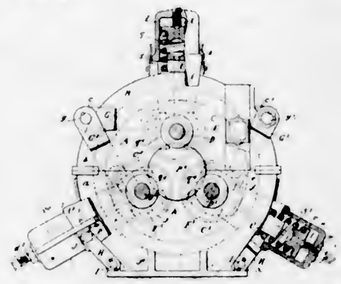
3. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, two rotatable crushing rolls movable downwardly and outwardly away from one another within and eccentric of said die and each having a peripheral crushing face reciprocal to the inner face of said die, means for revolving one of said parts, axles or studs on which said rolls are mounted respectively, non-rotary means carrying said axles or studs respectively, and compression means disposed intermediate of said non-rotary means and in a horizontal plane parallel with the plane of said axles or studs holding said rolls outwardly away from one another to resist a crushing pressure from the inner face of said die.

4. The combination with an annular die and a plurality of crushing rolls therein, of means for driving one of said parts relatively to the others, non-rotary means connecting two of said rolls together and a compression roll between said crushing rolls.

5. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, two rotatable crushing rolls within and eccentric of said die and each having a peripheral crushing face reciprocal to the inner face of said die, one mounted near the upper part of said die and the other mounted near the lower part thereof and movable downwardly and outwardly therein, means for revolving one of said parts, axles or studs on which said rolls are mounted respectively, non-rotary means carrying said axles or studs respectively, and compression means disposed intermediate of said non-rotary means and in an inclined plane parallel with the plane of said axles or studs for holding said lower roll downwardly to resist a crushing pressure from the inner face of said die reacting upwardly toward said upper non-rotary means.

[Claims 6 to 15 not printed in the Gazette.]

1,222,385. MACHINE FOR CRUSHING OR GRINDING. GEORGE H. FRASER, Brooklyn, N. Y. Original application filed Mar. 16, 1905, Serial No. 250,474. Renewed July 3, 1916, Serial No. 107,467. Divided and this application filed June 29, 1915. Serial No. 36,966. (Cl. 83—9.)



1. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, two rotatable crushing rolls movable toward and from each other within and eccentric of said die, each having a peripheral crushing face reciprocal to the inner face of said die, means for revolving one of said parts, a casing affording a crushing chamber and having a wall at the side of said parts, axles or studs on which said rolls are mounted respectively, non-rotary means carrying said axles or studs respectively, and expansively acting means disposed exteriorly of said wall and intermediate of said axles or studs pressing said rolls outwardly away from one another to generate a crushing pressure toward the inner face of said die.

2. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, two rotatable crushing rolls movable toward and from each other within and eccentric of said die, each having a peripheral crushing face reciprocal to the inner face of said die, means for revolving one of said parts, a casing affording a crushing chamber for said parts and comprising a wall at the side thereof, axles or studs on which said rolls are mounted respectively, non-rotary members carrying said axles or studs respectively, expansively acting means disposed at the side of said rolls outwardly of said wall intermediate of said non-rotary means and pressing said axles or studs outwardly away from one another to press said rolls outwardly to generate a crushing pressure toward the inner face of said die, and a third roll within said die.

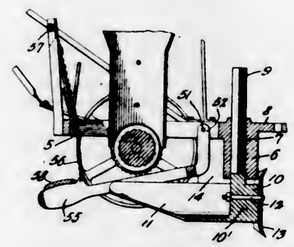
3. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, two rotatable crushing rolls within an eccentric of said die, and each having a peripheral crushing face reciprocal to the inner face of said die, means for revolving one of said parts, axles or studs movable toward and from each other on which said rolls are mounted respectively, non-rotary means on which said axles or studs are mounted respectively, and expansively acting means at the side of said rolls and intermediate of said axles or studs pressing the latter outwardly away from one another to generate a crushing pressure toward the inner face of said die.

4. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, two rotatable crushing rolls movable toward and from each other within and eccentric of said die and each having a peripheral crushing face reciprocal to the inner face of said die, means for revolving one of said parts, axles or studs on which said rolls are mounted respectively, movable downwardly and outwardly away from each other, non-rotary means carrying said axles or studs, and expansively acting means disposed at the side of said rolls and intermediate of said non-rotary means and acting to press said rolls downwardly and outwardly away from one another to generate a crushing pressure toward the inner face of said die.

5. In combination, an annular crushing die revolving in an approximately vertical plane and having an internal crushing face, three rotatable crushing rolls within and eccentric of said die and each having a peripheral crushing face reciprocal to the inner face of said die, one of said rolls mounted near the upper part of said die and the others of said rolls movable toward and from each other and mounted near the lower part thereof, means for revolving one of said parts, a casing affording a crushing chamber for said parts and comprising a wall at the side thereof, axles or studs on which said rolls are mounted respectively, non-rotary means carrying said upper roll, movable non-rotary means carrying said lower rolls respectively, and pressing means disposed at the side of said rolls exteriorly of said wall intermediate of said non-rotary means acting downwardly and outwardly to press said lower rolls outwardly away from one another to generate a crushing pressure toward the inner face of said die and reacting upwardly toward said upper non-rotary means to resist such pressure.

[Claims 6 to 15 not printed in the Gazette.]

1,222,386. UNIVERSAL SEED-PLANTER. JOHN A. GARDNER, Grifton, N. C. Original application filed Aug. 8, 1916, Serial No. 113,712. Divided and this application filed Oct. 17, 1916. Serial No. 126,116. (Cl. (111—11.)

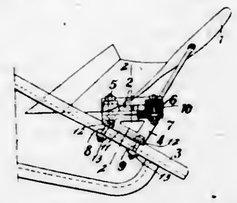


1. A universal seed planter, including a combined furrow opener and seed distributer adjustably supported by the frame and having a relatively heavy portion terminating in an angular trough, the rear portion of the bottom of which is cut away to provide two seed directing wings, and a removable furrow forming blade detachably connected to the heavy portion at the opposite side to the wings.

2. A universal seed planter, including a frame, a casting mounted at the forward end thereof and provided with an irregular bore, an irregular shank mounted therein for vertical adjustment and having formed integral with the lower end thereof a relatively heavy portion terminating in an angular trough, the bottom of which is cut away to provide seed directing wings, a seed distributing member mounted in the frame and emptying between said wings, and a manually adjustable covering member consisting of an integral pair of arms having apertured hanging lugs and covering blades.

3. The combination in a universal seed planter of a frame, a furrow forming member adjustably mounted on the front end thereof and having rearwardly extending spaced seed distributing wings, a rod mounted transversely on the frame, a combined covering and earth packing member swingingly connected to said rod, the latter including two arms having substantially L-shaped terminals journaled upon the rod, a covering blade formed at the free terminal of each arm, and an earth packing member constituting a hood connected to the upper edges of the blade and spanning the space therebetween.

1,222,387. MOTOR-PLOW. CARL GLEICHE, Berlin, Germany, assignor to Stock Motorpflug Gesellschaft Mit Beschränkter Haftung, Berlin, Germany, a Corporation of Germany. Filed Dec. 29, 1914. Serial No. 879,433. (Cl. 97—69.)



1. In a plow, a plow-frame having an oblique beam, blocks shiftable on said beam lengthwise and each having its outer vertical face in a plane parallel to the direction in which the plow is adapted to travel, plows secured to said blocks at the outer surfaces of the blocks, clamping devices for securing said blocks to the beam at different points of its length, and means on said blocks to relieve said clamping devices of the stress exerted by the plows.

2. In a plow, a plow-frame having an oblique beam, blocks shiftable on said beam lengthwise and each formed with upper and lower flanges embracing the beam, and each having its outer vertical face in a plane parallel to the direction in which the plow is adapted to travel, clamping devices for securing said blocks to the beam at different points of its length, and plows secured to said outer vertical faces of the said blocks.

3. In a plow, a plow-frame having a beam, a block slidable lengthwise of the beam, but held against turning thereon, said block having a face in a plane parallel to the direction in which the plow is adapted to travel, and a plow-share connected with said block rigidly at said face.

1,222,388. STALK-CHOPPER. WILLIAM L. GLENN, Lebanon, Colo. Filed Aug. 17, 1916. Serial No. 115,477. (Cl. 55—60.)



1. In a stalk chopper, the combination with a framework, and means for adjusting the same vertically at front and rear; of a triangular cutting apparatus divided on transverse lines into sections, and means for adjustably supporting said sections beneath the framework.

2. In a stalk chopper, the combination with a framework, and means for adjusting the same vertically at front and rear; of a triangular cutting apparatus divided on transverse lines into sections, each section pivoted at its front end beneath the frame work, and means for adjusting its rear end vertically with respect thereto.

3. In a stalk chopper, the combination with a framework, and means for adjusting the same vertically at front and rear; of a triangular cutting apparatus divided on transverse lines into sections, each including a transverse plate and oblique blades along its edges, and means for adjusting the angle of the plates to a horizontal.

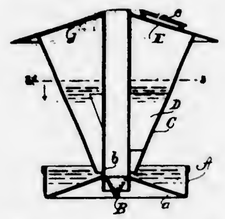
4. In a stalk chopper, the combination with a main frame mounted on supports at front and rear; of a cutting apparatus substantially triangular in contour and composed of a series of transverse plates, rearwardly diverging blades along their side edges, a cutting point at the front edge of the foremost plate, means for pivotally supporting the front edge of each plate from the framework, leavers connected with the rear edge of each plate,

a rod connecting all of the levers, and a hand lever for moving said rod.

5. In a stalk chopper, the combination with a framework and supports for the front and rear ends of said framework; of a series of transverse plates underlying said frame, blades carried by the side edges of said plates and having their cutting edges diverging to the rear, the front end of each blade standing directly in rear of the rear end of the blade next forward, short beams secured to said plates and pivotally mounted at their front ends upon said frame, links rising from the rear ends of said short beams, and lever mechanism for raising or lowering said links at will.

[Claims 6 to 11 not printed in the Gazette.]

1,222,389. STOCK-FEEDER AND WATER-FOUNTAIN. WALTER J. GOELZER, Bloomington, Ill., assignor of one-half to John H. Wood, Bloomington, Ill. Filed Mar. 23, 1916. Serial No. 86,205. (Cl. 119—52.)



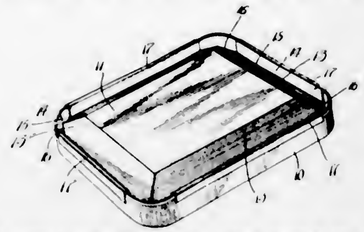
1. In a stock feeder and water fountain, the combination with a central tube, of a cover arranged near the top of the tube, the said tube passing centrally through the said cover, an inverted conical body arranged below the cover and concentrically with respect to the tube, the said tube passing through the said body, means for supporting the said body on the tube, the said supporting means being arranged within the said body and attached to the said tube, the mouth of the said body at the bottom being larger than the said tube, and a pan arranged below the said body and constructed to rest upon the ground, the said tube passing through the said pan and being connected therewith.

2. In a stock feeder and water fountain, the combination with a central tube, of a hollow body, the said tube passing downwardly through the said body, means for supporting the said body upon the tube, the said body being open around the tube at the bottom of the body, the top of the said body being closed airtight, the said tube passing upwardly through the closed top of the said body and having an airtight junction therewith, a base pan constructed to rest upon the ground and having its sides extending upwardly higher than the open bottom of the said body, the said tube passing downwardly through the said pan and having a watertight junction therewith, and a stake adapted to be driven into the ground and passing through the tube to prevent the fountain from being overturned.

1,222,390. MEAT-SUPPORT. RALPH GORHAM, Winfield, and CLARENCE G. CARY, Zearing, Iowa. Filed Apr. 3, 1916. Serial No. 88,698. (Cl. 65—53.)

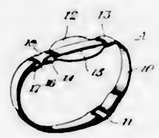
1. A meat support comprising a receptacle, a cover therefor having a raised center with channels communicating with the receptacle for directing the unconfined blood flowing from the meat upon said center into said receptacle, and flanges formed on one wall of each channel to overlie the upper edge of the receptacle for holding the members associated.

2. A meat support comprising a receptacle, a cover therefor having a raised center and downwardly inclined edge portions, a wall rising from the lower extremity of each inclined edge portion and defining with the latter a channel, and said walls terminating short of the side and ends of the cover to provide openings at the corners



of the latter for directing the unconfined blood flowing from the meat from the channels into the receptacle, and means for supporting the cover on the receptacle.

1,222,391. WATCH-STRAP. EDWARD CRUIKSHANK GRANT, Ottawa, Ontario, Canada. Filed Nov. 2, 1916. Serial No. 129,217. (Cl. 224—4.)

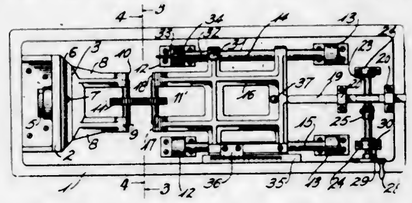


1. A device of the class described, comprising a strap, a link on one end of the strap through which the other end of the strap passes, a watch guard having tubular guide members slidably engaging with the strap and catch means on the free end of the strap adapted to engage one of the tubular members.

2. In a device of the class described, comprising a strap, a guard member adjustably mounted on the strap, a link formed on one end of the strap through which the other end of the strap is designed to pass and a catch member adjustably mounted on the free end of the strap designed to engage with the guard member.

3. In a device of the class described, comprising a strap, a link on one end of the strap through which the other end of the strap is designed to pass, a catch member having a pair of parallel arranged slots on one end designed to engage with the free end of the strap and a guard member slidably mounted on the strap including means adapted to engage with the hook member.

1,222,392. GEAR-TESTING MACHINE. GEORGE S. GREEN and ADOLPH W. OSWALD, Muskegon, Mich. Filed June 5, 1916. Serial No. 101,820. (Cl. 73—51.)



1. In a gear testing mechine the combination of a holder for a master gear, a holder for the gear to be tested, one of said holders being movable relatively toward and away from the other, said two holders having their axes parallel and in line with the path of movement of the axis of the movable holder, means for supporting said movable holder, and means for applying pressure to said movable holder at a point lying substantially in the plane of the gear carried thereby.

2. In a gear testing machine the combination of a holder for a master gear, a holder for the gear to be tested, one of said holders being movable relatively toward and away from the other, along a straight line, said two holders having their axes parallel and in the plane of the path of movement of the movable holder, means for supporting said movable holder, and means for applying pressure to said movable holder at a point lying substantially in the plane of the path of travel of the axis of said movable holder, said supporting means consisting of parallel cylindrical rods, whose centers lie in substantially said plane, and pass through portions of said movable holder.

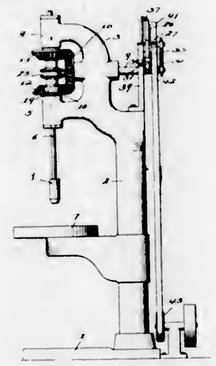
3. In a gear testing machine the combination of a normally fixed holder for a master gear, a holder for the gear to be tested, said second holder being movable toward and away from said first holder along a straight line, said two holders having their axes parallel and in the plane of the path of movement of said second holder, means for supporting said movable holder, and means for applying pressure to said movable holder at a point lying substantially in the plane of the path of travel of the axis of said movable holder and in the plane of the master gear, said supporting means consisting of parallel cylindrical rods whose centers lie substantially in the plane of said path and pass through portions of said movable holder.

4. In a gear testing machine, the combination of a holder for a master gear, a holder for a gear to be tested, one of said holders being movable toward and away from the other, the second holder being provided with open bushings to receive the ends of a shaft carrying the gear to be tested, means for indicating variations in the relative positions of said holders.

5. In a gear testing machine, the combination of a holder for a master gear, a holder for a gear to be tested, one of said holders being movable toward the other, a dial indicator fixed relatively to one of said holders, and an abutment fixed relatively to the other of said holders and coöperating with said dial indicator, and mechanical means tending to move said movable holder toward the other holder.

[Claims 6 to 12 not printed in the Gazette.]

1,222,393. DYNAMOMETER TRANSMISSION DEVICE. JOHN C. GREEN, Hackettstown, N. J. Filed May 20, 1916. Serial No. 98,877. (Cl. 74—59.)



1. A dynamometer for automatically measuring the amount of resistance to be sustained by a driven element, and for interrupting the operation of such element, comprising a pivoted dynamometer frame subject to a reaction acting to rock it corresponding to the resistance to operation met with by the driven element, a starting and stopping device through which said element is driven, said device being operative by rocking movement of the dynamometer frame, and means for applying forces of different amounts to said dynamometer frame whereby the amount of resistance to be sustained by the driven element may be measured or predetermined.

2. A driving element, a driven element, means for transmitting motion between said elements, and a dynamometer embodying means for measuring, and varying as desired, the amount of resistance to be sustained by the driven element and operative automatically to actuate the motion transmitting means and thereby free the driven element of driving effort when a measured or definite amount of resistance to its operation is met with.

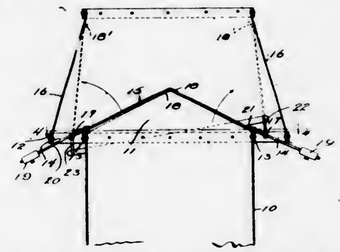
3. A driving means, a driven element, a motion-transmitting connection between the driving means and the driven element, a device controlling the connection between the driving means and the driven element, and a dynamometer embodying means for measuring, and varying as desired, the amount of resistance to operation to be sustained by said driven element and operative automatically when such resistance is met with to actuate said controlling device and thereby disconnect the driven element from its driving means.

4. In a machine, a driving means, a device for disconnecting the driving means, and a dynamometer embodying means for measuring the amount of resistance to operation to be sustained by the machine and operative automatically on said device to disconnect the machine from its driving means when the machine meets with a measured or predetermined amount of resistance and to reconnect the machine to its driving means when the amount of resistance to the operation of the machine is less than such measured amount.

5. In a machine, a driving means, a device for connecting and disconnecting the driving means, and a dynamometer adapted to transmit motion between said machine and its driving means and subject to a reaction corresponding to the resistance to operation met with by the machine, the dynamometer embodying means for measuring the amount of such resistance to be sustained by the machine and operative automatically on said controlling device to disconnect the machine from its driving means when a measured or predetermined amount of resistance to operation is met with by the machine and to reconnect the machine to its driving means when the amount of resistance met with by the machine is less than such measured amount.

[Claims 6 to 18 not printed in the Gazette.]

1,222,394. COWL. THADDEUS S. GRIMES, Columbus, Ga., assignor to Lummus Cotton Gin Company, Columbus, Ga., a Corporation of Georgia. Filed Oct. 21, 1915. Serial No. 57,154. (Cl. 98—4.)



1. A cowl comprising in combination a flue, valve members positioned to close the top of the flue and to swing open to a substantially vertical position, and a housing surrounding the upper end of the flue and the valve, presenting an opening in the top approximating the opening in the flue and serving to limit the opening movement of the valve.

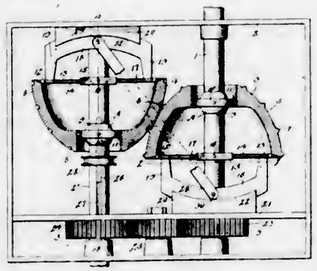
2. A cowl comprising in combination a flue, leaf valves pivoted adjacent the outer edges of the flue and closing at substantially a central line of the flue and adapted to swing open upwardly to approximately a vertical position, and a housing surrounding the upper end of the flue and the valves and presenting an opening approximating the area

of and in substantial registry with the flue, and serving to limit the open-movement of the leaves.

3. A cowl comprising in combination a flue, a housing surrounding the upper end of the flue and having an upper opening approximating in area and registering with the opening of the flue, and valve members hinged without the area of the flue and adapted to open wholly within the housing.

4. A cowl comprising in combination a flue, a housing surrounding and spaced away from the upper end of the flue and contracted inwardly to provide an opening approximating the area of and in registry with the flue, and valve members hinged within the housing and without the area of the flue and adapted to swing open upwardly into engagement with the housing.

1,222,395. TRANSMISSION-GEARING. DENVER GROOMS, Marshall, Mich. Filed May 9, 1916. Serial No. 96,381. (Cl. 74—41.)



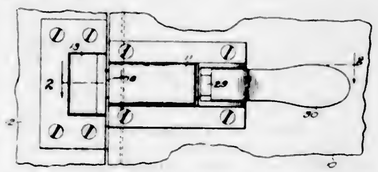
1. In transmission gearing, the combination of a driving shaft and a driven shaft both mounted in fixed bearings and arranged in parallel and spaced relation to each other, reversely disposed gears each substantially hemispherical in shape and one of which is permanently keyed to its shaft while the other is adapted to be connected to and disconnected from its shaft, one of said gears being formed with several series of projecting teeth, the other gear being provided with corresponding series of sockets to receive said teeth, and a yoke operatively connecting said gears to cause the outer faces thereof to roll in contact with each other in shifting from one speed to another.

2. In transmission gearing, the combination of a driving shaft and a driven shaft both mounted in fixed bearings and arranged in parallel and spaced relation to each other, reversely disposed gears each substantially hemispherical in shape and one of which is permanently keyed to its shaft while the other is adapted to be connected to and disconnected from its shaft, one of said gears being formed with several series of projecting teeth, the other gear being provided with corresponding series of sockets to receive said teeth, a yoke operatively connecting said gears to cause the outer faces thereof to roll in contact with each other in shifting from one speed to another, and supporting bearings for the larger ends of said gears.

3. In transmission gearing, the combination of a driving shaft and a driven shaft both mounted in fixed bearings and arranged in parallel and spaced relation to each other, reversely disposed gears each substantially hemispherical in shape and one of which is permanently keyed to its shaft while the other is adapted to be connected to and disconnected from its shaft, one of said gears being formed with several series of projecting teeth, the other gear being provided with corresponding series of sockets to receive said teeth, a yoke operatively connecting said gears to cause the outer faces thereof to roll in contact with each other in shifting from one speed to another, supporting bearings for the larger ends of said gears, and means for guiding said gears in their rocking relation to the respective shafts.

4. In transmission gearing, the combination of a driving shaft and a driven shaft both mounted in fixed bearings and arranged in parallel and spaced relation to each other, reversely disposed gears each substantially hemispherical in shape and one of which is permanently keyed to its shaft while the other is adapted to be connected to and disconnected from its shaft, one of said gears being formed with several series of projecting teeth, the other gear being provided with corresponding series of sockets to receive said teeth, a yoke operatively connecting said gears to cause the outer faces thereof to roll in contact with each other in shifting from one speed to another, a reversing gear fast on the driving shaft, another reversing gear normally loose on the driven shaft, an idler gear between said reversing gears, and a key shiftable lengthwise of the driven shaft to engage either the driven speed gear or the reversing gear thereon.

1,222,396. ANTIRATTLER DOOR-LOCK. CARL JOHN HAGSTROM, Glen Cove, N. Y., assignor to Anna E. Hagstrom, Glen Cove, N. Y. Filed July 22, 1915. Serial No. 41,268. (Cl. 70—43.)



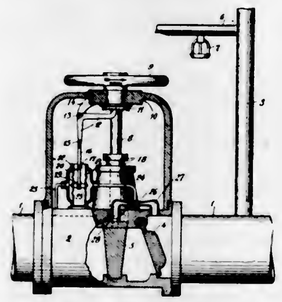
1. In a door lock of the character set forth, the combination of a casing, a bell crank catch pivoted in one end of the casing, the free end portion of the catch being adapted to house within the casing or to swing beyond the same, a keeper coöperating with the catch when projected, a tubular bolt within the casing coöperating with the catch member to move it around its pivot, a spring acting upon the bolt to move it in one direction, a finger piece acting against the bolt to move it in the opposite direction against the force of the spring, and means associated with the keeper to cause the catch to be projected automatically.

2. In an anti-rattler door lock, the combination of a casing, a bell crank catch pivoted to one end of the casing, a tubular spring pressed bolt pivoted to one end of the catch tending to hold the same in either of its extreme positions with its free end either housed within the casing or projected outwardly therefrom, a keeper adapted to receive said free end of the catch, and a stationary actuator adapted to be engaged by said free end of the catch to cause it to swing outwardly into engagement with the keeper.

3. In a door lock, the combination of a casing, a bell crank catch pivoted in one end of the casing, a fixed abutment adjacent the other end of the casing, a tubular bolt within the casing, pivoted at one end to one end of the catch, the other end of the bolt being bifurcated and straddling said abutment, a block fitted slidably within the tubular bolt and bearing at one end against the abutment, a coil spring located within the bolt abutting at one end against the other end of said block and tending to cause the bolt to swing the catch around its pivot to project the free end thereof forcibly outward beyond the casing, the bolt, however, being movable when its axes are crossed and beyond the line joining the centers of the catch pivot and abutment, whereby the catch may be held retracted within the casing, another bell crank pivoted in the casing and having one end adapted to engage the bolt against the force of the spring to throw the catch in one direction around its pivot, associated with the casing and including a projecting actuator serving to engage the free end of the catch and cause it to swing in the opposite direction around its pivot into resilient interlocking engagement with the keeper.

1,222,397. AUTOMATICALLY-LOCKING SHUT-OFF VALVE. JOHN R. HAMILTON, Yonkers, N. Y., assignor to Sypho-Chemical Sprinkler Corporation, Croton-on-Hudson, N. Y., a Corporation of New York. Filed Aug. 18, 1915. Serial No. 46,130. (Cl. 169—23.)

1. In automatic shut-off valves, a valve casing, a shut-off valve mounted in said casing, a check valve mounted in said casing adjacent said shut-off valve, an operating device for said shut-off valve, a locking device connected to said operating device and comprising a locking ratchet and coöperating locking lever, a diaphragm control device connected to the locking lever of said locking device and having a suction diaphragm, a Venturi passage arranged in a by-pass around said check valve and in communication with said suction diaphragm, an opposed pressure diaphragm connected to said suction diaphragm and in communication with said valve casing behind said check valve to thereby effect the release of said locking device when the flow occurs past said check valve.



2. In automatic shut-off valves, a valve casing, a shut-off valve mounted in said casing, a check valve mounted in said casing adjacent said shut-off valve, an operating device for said shut-off valve, a locking device connected to said operating device and comprising a locking ratchet and coöperating locking lever, a diaphragm control device connected to the locking lever of said locking device and having a suction diaphragm, a Venturi passage arranged in a by-pass around said check valve and in communication with said suction diaphragm, an opposed pressure diaphragm connected to said suction diaphragm and in communication with said valve casing behind said check valve to thereby effect the release of said locking device when the flow occurs past said check valve.

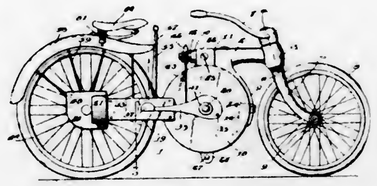
3. In automatic shut-off valves, a valve casing, a shut-off valve mounted in said casing, a check valve mounted in said casing adjacent said shut-off valve, an operating device for said shut-off valve, a locking device connected to said operating device, a diaphragm control device connected to said locking device and having a suction diaphragm, a Venturi passage arranged in a by-pass around said check valve and in communication with said suction diaphragm to thereby effect the release of said locking device when the flow occurs past said check valve.

4. In automatic shut-off valves, a valve casing, a shut-off valve mounted in said casing, a check valve mounted in said casing adjacent said shut-off valve, an operating device for said shut-off valve, a locking device connected to said operating device and comprising a locking ratchet and coöperating locking lever and a diaphragm control device connected to said locking device and connected to said valve casing adjacent said check valve to thereby effect the release of said locking device when the flow occurs past said check valve.

5. In automatic shut-off valves, a valve casing, a shut-off valve mounted in said casing, a check valve mounted in said casing adjacent said shut-off valve, an operating device for said shut-off valve, a locking device connected to said operating device and a diaphragm control device connected to said locking device and connected to said valve casing adjacent said check valve to thereby effect the release of said locking device when the flow occurs past said check valve.

[Claims 6 to 10 not printed in the Gazette.]

1,222,398. BICYCLE-FRAME. MERRELLON F. HARDNETT, Atlanta, Ga. Filed Dec. 2, 1916. Serial No. 134,698. (Cl. 208—93.)



1. In a bicycle, a frame comprising a front member having a bearing for a front fork and also having a rearwardly extending arm, and a downwardly extending arm; a pair of side members each having a head, a rearwardly extending arm and a bearing member at the rear end of said arm, said heads being secured to said arms of the front member; a driving shaft mounted in the heads, a rear wheel arranged between and having an axle mounted in the bearing members and power transmitting connections between the driving shaft and the rear axle.

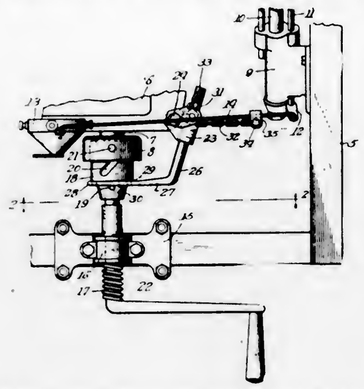
2. In a bicycle, a frame comprising a front member having a bearing for a front fork and also having a rearwardly extending arm, and a downwardly extending arm; a pair of side members each having a head, a rearwardly extending arm and a bearing member at the rear end of said arm, said heads being secured to said arms of the front member; a driving shaft mounted in the heads, a rear wheel arranged between and having an axle mounted in the bearing members and power transmitting connections between the driving shaft and the rear axle, ratchet gears on the driving shaft, pedal levers pivotally mounted on the driving shaft and each having a pawl engaging one of the ratchet gears, an oscillating lever pivotally mounted on the rearwardly extending arm of the front frame member, and connections between said oscillating member and said pedal levers.

3. In a bicycle, a frame comprising a front member having a bearing for a front fork and also having a rearwardly extending arm and a downwardly extending arm, said rearwardly extending arm having recesses in opposite sides and said downwardly extending arm having an opening; a pair of side members each having a head provided with an upwardly extending lug in one of the recesses of said rearwardly extending arm, and with a forwardly extending lug arranged in the opening in the downwardly extending arm, a bolt securing the upwardly extending lugs to the rearwardly extending arm, said side members being also each provided with an arm extending rearwardly from its head and with a bearing member at the rear end of the arm; a driving shaft mounted in the heads, a rear wheel arranged between and having an axle mounted in the bearing members and power transmitting connections between the driving shaft and the rear axle.

1,222,399. AUTOMATIC SPARK-ADJUSTING ATTACHMENT. ANDREW P. HAWN, Goodland, Ind., assignor to The H. & D. Company, Goodland, Ind., a Corporation of Indiana. Filed Dec. 9, 1916. Serial No. 135,935. (Cl. 123—186.)

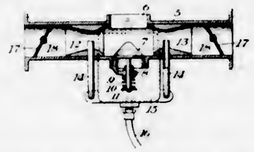
The combination with a gas engine and its spark timer, of a starting crank normally disconnected from the engine shaft but adapted to be shifted into connection therewith, a block, a pulley journaled on said block, a cord passing around said pulley and connected at one end with said timer, and a bar slidable through said block, said bar being connected at its inner end with the other end of said cord and being interposed at its outer end in the path of said crank to be shifted thereby when the crank is brought into connection with the engine shaft,

such shifting causing shifting of the cord and operation of the spark timer to a safe position to prevent back-



firing of the engine when the crank is turned to start the engine.

1,222,400. CARBURETER. VICTOR R. HEFTLER, Detroit, Mich., assignor to Société anonyme du Carburateur Zenith, Lyon, France, a Corporation of France. Filed Oct. 31, 1914. Serial No. 869,582. (Cl. 261—23.)

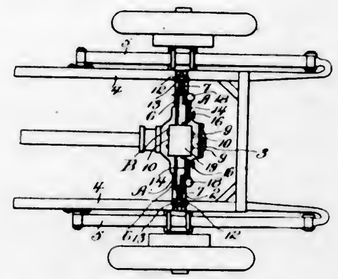


1. A carbureting device, comprising a casing, said casing having a through bore, there being an air chamber intermediate the ends of said casing, an air supply communicating with said chamber, there being a carbureting chamber on each side of said chamber within the bore, a float chamber, and gasolene feed tubes extending from said float chamber to each carbureting chamber beyond the air chamber; substantially as described.

2. A carbureting device, comprising a casing having a through bore, there being an air chamber intermediate the ends of said casing, an air supply communicating with said chamber, there being a carbureting chamber on each side of said air chamber, a Venturi tube in each carbureting chamber within the through bore, said casing being so arranged that the tubes can be entered through the ends thereof, a float chamber, means for supporting said float chamber on the casing, gasolene feed tubes extending from said float chamber to each carbureting chamber beyond the air chamber, and throttle valves within the bore of said casing, said throttle valves being located beyond the Venturi tubes; substantially as described.

3. A carbureting device, comprising a casing having a through bore, there being an air chamber intermediate the ends of said casing, an air supply communicating with said chamber, there being a carbureting chamber on each side of said air chamber, a Venturi tube in each carbureting chamber within the through bore, said casing being so arranged that the tubes can be entered through the ends thereof, a float chamber, means for supporting said float chamber on the casing, gasolene feed tubes extending from said float chamber to each carbureting chamber beyond the air chamber, throttle valves within the bore of said casing, and means for connecting the opposite ends of said casing to the engine supply channels; substantially as described.

1,222,401. STABILIZER FOR VEHICLES. HERBERT HESS, Huntington, N. Y. Filed June 7, 1916. Serial No. 102,358. (Cl. 267—5.)



1. The combination with a vehicle axle, and a vehicle body yieldingly supported in relation thereto, of body stabilizing means interposed between said body and axle and serving to cause a uniform up and down movement of the body in relation to the axle, said stabilizing means embodying equalizing telescopic members each pivotally related to the body and axle, and means enforcing an equal and simultaneous movement of said equalizing members.

2. The combination with a vehicle axle, and a vehicle body yieldingly supported in relation thereto, of body stabilizing means interposed between said body and axle and serving to cause a uniform up and down movement of the body in relation to the axle, said stabilizing means embodying equalizing telescopic members each pivotally related to the body and axle, and means enforcing an equal and simultaneous movement of said equalizing members, the joint between the axle and said equalizing members being of the universal type.

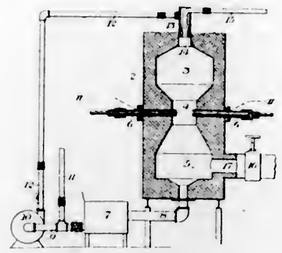
3. The combination with a vehicle axle, and a vehicle body yieldingly supported in relation thereto, of body stabilizing means interposed between said body and axle and serving to cause a uniform up and down movement of the body in relation to the axle, said stabilizing means embodying equalizing members each having a jointed relation to the body and axle, and means enforcing an equal and simultaneous movement of said equalizing members, each of said equalizing members having selfcontained cushioning means.

4. The combination with a vehicle axle, and a vehicle body yieldingly supported in relation thereto, of body stabilizing means interposed between said body and axle and serving to cause a uniform up and down movement of the body in relation to the axle, said stabilizing means embodying telescopic equalizing members each having a jointed relation to the body and axle, and means enforcing an equal and simultaneous movement of said equalizing members, each of said equalizing members being provided with cushioning means to resist the telescopic action thereof in proportion to the load imposed on the body-supporting means.

1,222,402. METHOD AND APPARATUS FOR FRACTIONATING HYDROCARBONS. LEON E. HIRT, Charleston, W. Va. Filed July 21, 1915. Serial No. 41,109. (Cl. 204—64.)

1. The herein described method of fractionating hydrocarbon oils, which consists in subjecting an oil in the form of a spray or mist to the action of an electric arc within a closed chamber or retort, maintaining a controllable pressure in said chamber or retort and conducting off and condensing the oil vapors thus produced in said chamber or retort, substantially as described.

2. The herein described method of fractionating hydrocarbon oils, which consists in subjecting an oil to the action of an electric arc within a closed chamber or retort, maintaining a controllable pressure in said chamber or retort, and conducting off and condensing the oil vapors thus produced in said chamber or retort, substantially as described.



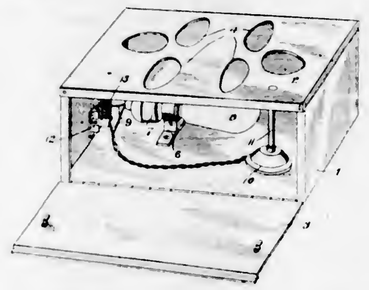
3. The herein described method of fractionating oils, which consists in subjecting an oil in the presence of hydrogen to the action of an electric arc in a closed chamber or retort, to thereby fractionate the oil and produce a reaction between the hydrogen and the oils, and conducting away the oil vapors thereby produced and condensing the same into a liquid; substantially as described.

4. The herein described method of fractionating oils, which consists in subjecting oil mixed with steam to the action of an electric arc in a closed chamber or retort, whereby the steam is decomposed and the liberated H_2 enters into reaction with the oils to form a compound thereof, and maintaining a controlled pressure in the retort or chamber to thereby control the character of said compound; substantially as described.

5. The herein described method of fractionating oils, which consists in subjecting an oil in the presence of hydrogen to the action of an electric arc in a closed chamber or retort, to thereby fractionate the oil and cause a reaction between the oil and the hydrogen, controlling the pressure in the retort or chamber during the operation, and conducting off the oil vapors thereby produced and condensing the same substantially as described.

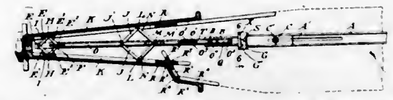
[Claims 6 to 10 not printed in the Gazette.]

1,222,403. EGG-TESTER. CHRIS W. HOLMES, Staples, Minn., assignor of one-half to John Alfred Larson, Staples, Minn. Filed Oct. 6, 1916. Serial No. 124,126. (Cl. 99—6.)



An egg tester comprising a body having a hinged side and a pivotally mounted top provided with apertures, a bracket adjustably mounted in the body, a spring interposed between the bracket and the top and bearing loosely at its ends against the same, an electric light bulb located in the body, a button located in the body, said button and bulb being connected in open circuit with a source of electricity, and a post carried by the top and having its end normally spaced from the button.

1,222,404. ADJUSTABLE AXLE-PATTERN GAGE. WILLIAM D. IRWIN, Livingston, Mont. Filed May 8, 1916. Serial No. 96,135. (Cl. 33—193.)



1. A device for determining the right pitch for a plumb spoke on wagon wheels using various shaped skeins, consisting of an extension bar and support therefor, straight edges with adjustable toggle link connections between the same and said extension bar adapted to conform to the pitch of the skein, levers connected to said toggle links for operating the same to throw the straight edges into different adjusted positions, and means for holding the levers in adjusted positions.

2. A device for determining the right pitch for a plumb spoke on wagon wheels using various shaped skeins, consisting of an extension bar and support therefor, straight edges with adjustable toggle link connections between the same and said extension bar adapted to conform to the pitch of the skein, levers connected to said toggle links for operating the same to throw the straight edges into different adjusted positions, means for holding the levers in adjusted positions, and means for indicating the adjustment of the straight edges.

3. A device for determining the right pitch for a plumb spoke on wagon wheels using various shaped skeins, consisting of an extension bar and support therefor, straight edges with adjustable toggle link connections between the same and said extension bar, adjustable straight edges pivoted together and connected to one of the first referred to straight edges, and means for holding the straight edges in different adjusted positions.

4. A device for determining the right pitch for a plumb spoke on wagon wheels using various shaped skeins, consisting of a slotted extension bar and support therefor, sets of toggle links pivoted together, one pair of links of each set having stationary pivotal connection with the extensible bar and the other pair of each set having sliding pivotal connection with the bar, straight edges having sliding pivotal connections with said toggle links, means for actuating said links, and means for holding the straight edges in different adjusted positions.

5. A device for determining the right pitch for a plumb spoke on wagon wheels using various shaped skeins, consisting of a slotted extension bar and support therefor, sets of toggle links pivoted together, one pair of links of each set having stationary pivotal connection with the extensible bar and the other pair of each set having sliding pivotal connection with the bar, straight edges having sliding pivotal connections with said toggle links, means for actuating said links, levers connected to the links which have sliding pivotal connection with the bar, and means for holding said bars in different adjusted positions.

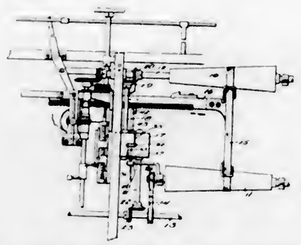
[Claims 6 to 9 not printed in the Gazette.]

1,222,405. ATTACHMENT FOR SPEEDER STOP-MOTIONS. EARNEST L. JACKSON, Columbus, Ga., assignor of six-tenths to Richard C. Deignan, Columbus, Ga. Filed Mar. 18, 1916. Serial No. 85,203. (Cl. 118—3.)

1. The combination with a speeder involving a cone drive, of clutch mechanism connected with the opposite sides of such drive, means to shift the clutch mechanism from high to low speed at each reciprocation of the cone belt, and means to throw the clutch mechanism into operation when the lower cone drops.

2. The combination with a speeder involving a cone drive, of shafts intergeared with the upper and lower cone drive mechanism, gears carried by the shafts normally free to rotate upon such shafts, speed change mechanism, means to actuate the speed change mechanism from the reciprocation of the cone rack, clutches adapted to connect the gearing with the shafts, and means actuated

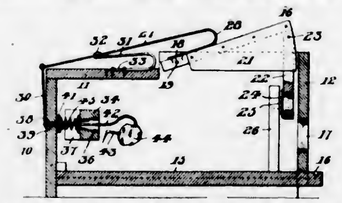
when the lower cone drops to throw such last-named clutches into engagement.



3. The combination with a speeder involving a cone drive, of shafts intergeared with the top cone driving mechanism and with the mechanism driven by the bottom cone respectively, intergeared gearing carried by the shafts and normally free to rotate thereon, speed changing mechanism actuated from the cone rack, clutches adapted to connect the gearing with the shafts, a lever adapted to actuate the clutches, and means carried by the lower cone for actuating the lever when the cone drops.

4. The combination with a speeder involving a cone drive, of normally inactive gearing interposed between the cones, means to change the speed connection to correspond approximately with the speed change of the cone drive, and means to throw the normally inactive gearing into action to drive the mechanism when the cone belt breaks.

1,222,406. ANIMAL-TRAP. MIKE JAKAB, Woodland, Me. Filed Oct. 12, 1916. Serial No. 125,233. (Cl. 43—19.)



1. An animal trap comprising a casing having end walls, a rear wall, and a front wall, transverse partitions dividing the trap into independent sections, a sliding tray for each section, a top wall extending over the rear portion of the casing, a longitudinal rod extending through said partitions and end walls at the forward edge of the top walls, a cover wall for each section pivotally mounted on said rod between adjacent partitions and end walls, a swinging trap door suspended from said cover wall, the said front wall and trap door having registering openings therein, a screen covering the opening in the trap door, a U-shaped metal bar carried by said swinging cover, a U-shaped spring fixed to the casing cover and to said metal bar for normally holding the swinging cover and trap door in closed position, a bait hook in each section, means for supporting the same and coöperating means carried by the bait hook and the U-shaped metal bar carried by the swinging cover for holding the trap door in open position.

2. An animal trap comprising a casing having end walls, a rear wall, and a front wall, transverse partitions dividing the trap into independent sections, a sliding tray for each section, a top wall extending over the rear portion of the casing, a longitudinal rod extending through said partitions and end walls at the forward edge of the top wall, a swinging cover for each section mounted on said rod, means carried by said cover adapted to extend rearwardly of said casing, tension means interposed between the cover wall of the casing and said means for normally holding the swinging cover lowered, a trap door carried by said swinging cover and bait mechanism arranged within each section adapted to engage the means extending rearwardly of the casing for holding the trap door in open position.

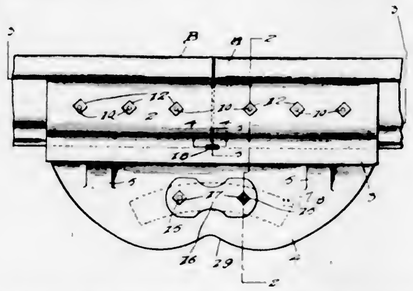
3. An animal trap including a casing, a sliding tray for the lower end thereof, a portion of the cover wall being stationary and the remaining portion being swingingly mounted, a trap door carried by the swingingly mounted cover portion of the casing and extending within the front wall thereof, means carried by the stationary and movable cover portions of the casing for normally holding the trap door lowered, and means within said casing adapted to engage the aforesaid means for holding the trap door elevated in set position.

4. An animal trap including a casing, the cover wall of said casing including fixed and movable parts, side plates carried by the movable part, a trap door carried by said side plates and moving in a vertical plane spaced rearwardly of the front wall of the casing, a reversely bent metal bar secured to the movable part of the cover and extending rearwardly of the fixed part thereof, a spring carried by the fixed part of the cover and engaging said metal bar normally holding the trap door in closed position and bait mechanism within the casing adapted to engage the metal bar for holding the trap door in open set position.

5. An animal trap including a casing, a swinging cover section therefor, a trap door carried by the cover section, a rearwardly extending arm carried by the cover section, a spring engaging said arm normally to hold the trap door in closed position, a bait bar extending transversely of the rear end of said trap, the said bar having a cone shaped socket in the front side thereof and a rectangular socket registering therewith in the rear side thereof, the rear wall of the casing having an opening therein registering with the said sockets, a bait hook extending through the cone-shaped socket, a block secured to the rear end of the bait hook, a rod extending rearwardly of said block through the rear wall opening, and means carried by the rearwardly extending arm adapted for engagement with said rod for holding the trap door in open set position.

[Claim 6 not printed in the Gazette.]

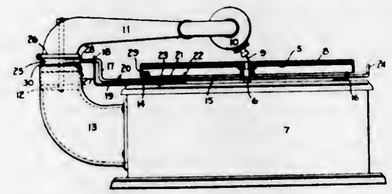
1,222,407. RAIL-JOINT. THOMAS G. JOYCE, Scranton, Pa. Filed June 20, 1916. Serial No. 104,696. (Cl. 239—10.)



1. A rail joint comprising a pair of splice bars, bridge pieces depending from the splice bars, one of the bridge pieces having an arcuate shaped recess on the inner face thereof, an arcuate shaped projection carried by the inner face of the other bridge piece and adapted to be received by the recess in the first-mentioned bridge piece.

2. A rail joint comprising a pair of splice bars, bridge pieces formed on and depending from the splice bars and located inwardly of the outer longitudinal edges of the splice bars, a lug carried by the outer side of one of the bridge pieces and spaced below the adjacent splice bar and terminally lying flush with the outer longitudinal edge of the adjacent splice bar, bolts extending through the bridge pieces and the lug, and nuts turned on the bolts and disposed in advance of the terminal of the lug and the outer longitudinal edge of the adjacent splice bar.

1,222,408. AUTOMATIC STOP FOR SOUND-REPRODUCING MACHINES. OSCAR H. KARCH, Rochester, N. Y. Filed July 24, 1912, Serial No. 711,303. Renewed Sept. 19, 1916. Serial No. 121,066. (Cl. 74—46.)



1. An automatic stop for gramophones having, in combination with a rotary part and an oscillatory part of a machine, a brake for arresting the movement of said rotary part, and a spring for throwing the brake into operation; means for holding the brake normally out of operation and for throwing it into operation at a predetermined point in the movement of said oscillatory part, said means comprising two controlling-members provided with means by which they are connected, respectively, with the brake and with said oscillatory part and by which they are held in coöperative relation and caused, as the result of their relative movement due to the movement of the oscillatory part, to release the brake at said predetermined point; said controlling-members having parts which interlock when the brake is released as aforesaid, whereby the controlling-members are temporarily locked against said relative movement; and said connecting means between one of the controlling-members and the part with which it is connected, being frictional and yieldable, in the general direction of said relative movement of the controlling-members, to a force greater than that encountered in the operative movement of the mechanism, so that the mechanism may have a preliminary adjusting-movement, to predetermine the point of operation of the brake, by manual movement of the oscillatory part while the brake is in action and the controlling-members are interlocked as aforesaid.

2. An automatic stop for gramophones having, in combination with a rotary part and an oscillatory part of a machine, a brake for arresting the movement of said rotary part, and a spring for throwing the brake into operation; two coöperating controlling-members including a cam having a surface substantially concentric with the axis of oscillation of the oscillatory part, and an abrupt recess in said surface, and a cam-follower having an extremity which engages the cam and which may enter said recess and thereby interlock with the cam when the parts reach the proper relative position; one of said controlling-members being provided with means by which it is connected with the brake, whereby the brake is normally held in inoperative position but is released for operation when the cam-follower enters said recess in the cam; and the other controlling-member being provided with means by which it is connected with the oscillatory part, whereby a movement is imparted to the latter controlling-member, relative to the former controlling-member, in consequence of the movement of the oscillatory part; said connecting means including a frictional device yieldable, in the general direction of said relative movement, to the resistance, to such relative movement, due to the engagement of the cam-follower with the notch in the cam, whereby one of the controlling-members may have a preliminary adjustment, to predetermine the time of release of the brake, by manual movement of the oscillatory part while the brake is in operative position.

3. An automatic stop for gramophones and the like having, in combination with a rotary part and an oscillatory part of a machine, a cam adapted to be mounted upon, and to oscillate with, said oscillatory part, the cam having a cam-surface co-axial with the oscillatory part and provided with a recess; a brake-member having a brake-shoe adapted to engage and arrest said rotary part and an extremity adapted to engage said cam-surface, means for supporting the brake-member upon the machine, the brake-member being movable, thereon, toward and from the cam-member, a spring tending constantly to force the brake-member toward the cam, whereby the brake is thrown into operation when said extremity of the brake-member enters the recess in the cam; and yielding frictional means normally retaining the cam in adjusted position on the oscillatory part, the engagement of the brake-member with said recess serving to lock the cam against oscillation in either direction with the oscillatory part, so that the cam-member may be adjusted by manual movement of the oscillatory part.

4. An automatic stop for gramophones and the like having, in combination with a rotary part provided with a depending peripheral flange, and an oscillatory part movable about an axis parallel with the axis of rotation of the rotary part; a resilient split collar adapted to clasp the oscillatory part and provided with a peripheral cam-surface having a notch, a brake-member mounted to slide beneath the rotary part and having a brake-shoe, to engage the inner surface of said flange, and an extremity engaging said cam-surface, and a spring tending constantly to force the brake-member in a direction to cause the brake-shoe to operatively engage the flange, such movement being normally prevented by engagement of said extremity with the cam-surface but being permitted when the notch in the cam-surface receives the extremity of the brake-member.

1,222,409. VACUUM SHUTTLE-OPERATING MECHANISM FOR LOOMS. HARRY H. KELLEY, Atlanta, Ga. Filed Mar. 31, 1916. Serial No. 88,101. (Cl. 139—69.)



1. In a loom, the combination of a lay, shuttle throwing mechanism including a pair of oppositely mounted slidable cylinders, pistons mounted to operate in the cylinders, a rod connecting the pistons, means associated with each cylinder to lock same in set position, and operating means for operating the pistons to simultaneously set one cylinder and lock same and form a partial vacuum in the companion locked cylinder and release the lock controlling the latter cylinder to throw the shuttle across the lay.

2. In a loom, the combination of a frame, a lay, partial vacuum shuttle throwing mechanism carried by the lay including a reciprocating piston rod and slidable cylinders, means for locking each cylinder, a power shaft mounted in the frame, and a system of levers between the shaft and the piston rod for operating the latter to simultaneously slide one cylinder to set position and lock same and to unlock the other cylinder and form a partial vacuum therein.

3. In a loom, the combination of a frame, a lay a reciprocating piston rod mounted on the lay, a piston on each opposite end of the piston rod, a pair of slidable cylinders mounted on the lay, and in which the pistons operate, hollow cylindrical bearings in which the ends of the cylinders engage to cushion said cylinders, means controlled by the movement of the piston rod for locking one cylinder in operative position and releasing the opposite cylinder to permit a partial vacuum formed therein to throw a shuttle across the lay, and means for continuously reciprocating the piston rod.

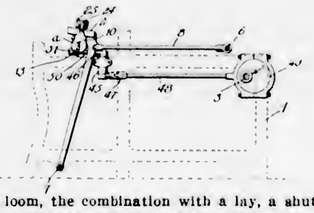
4. In a loom, the combination of a lay, partial vacuum forming means at the opposite ends of the lay to throw the shuttle across said lay, including a reciprocating piston rod, a lock for each partial vacuum forming means, and trip rods carried by the piston rod, each trip rod

having two flanges to cooperate with the adjacent lock, and means for reciprocating the piston rod, each movement of the latter setting one cylinder and the trip locking same and simultaneously forming a vacuum in the other cylinder and actuating the trip releasing same to throw the cylinder.

5. In a loom, the combination of a lay, a pair of slidable cylinders oppositely mounted on the lay, a shuttle engaging head extending from each cylinder, a hollow cylindrical bearing in which the end of each cylinder slides, said cylindrical bearing having openings and forming a cushion for the cylinder, a valve in the end of each cylinder, a piston in each cylinder, a rod connecting the two pistons, toggle levers between the respective cylinder and its hollow cylindrical bearing, means carried by the piston rod for setting one set of toggle levers to lock one cylinder and to release the other of toggle levers to permit a partial vacuum in the cylinder to throw the shuttle across the lay, and means for reciprocating the piston rod.

[Claims 6 to 14 not printed in the Gazette.]

1,222,410. COMPRESSED-AIR SHUTTLE-OPERATING MECHANISM FOR LOOMS. HARRY H. KELLEY, Atlanta, Ga. Filed Mar. 31, 1916. Serial No. 88,102. (Cl. 139—69.)



1. In a loom, the combination with a lay, a shuttle operating device at each end of the lay, each device comprising a hollow bracket connected to a source of compressed air, a hollow fixed piston extending inwardly from the hollow bracket, a cylinder mounted to reciprocate over the piston, an arm extending from the cylinder to throw the shuttle on the lay, locking levers holding the cylinder in set position, a rod between the two cylinders to engage and move the latter to set position, means for reciprocating the rod, and means carried by the rod to simultaneously release the locking levers to release the cylinder for the compressed air to act thereon and throw the shuttle and to engage the other locking levers to set same in locked position to hold the cylinder in set position.

2. In a loom, the combination with a lay, a shuttle operating device at each end of the lay, each device comprising a hollow bracket connected to a source of compressed air, a hollow fixed piston extending inwardly from the hollow bracket and formed on one end with a head, a cylinder having a packing head at its outer end, said cylinder and packing head mounted on the hollow piston, the packing head having a vent opening communicating with a space formed between the hollow piston and the cylinder, said cylinder having openings located near the outer end and communicating with the space, levers to lock the cylinder in set position, means between the two cylinders to alternately engage and move same to set position, and devices carried by said means to simultaneously act on the levers coöperating with one cylinder to release same and cause the compressed air to act on said cylinder and throw the shuttle, and to act on the levers of the other cylinder to move same to locked position to hold the cylinder in set position.

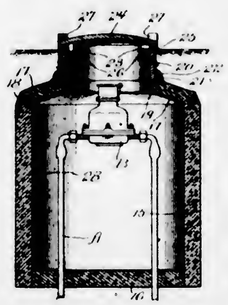
3. In a loom, the combination of a lay, a compressed air shuttle throwing device at each end of the lay, means for locking each shuttle throwing device in set position, a constantly reciprocating element interposed between the two shuttle throwing devices to positively engage one of same in each movement of its reciprocation, and means carried by said reciprocating element to simultaneously release one locking means to release one shuttle throwing device and to engage and lock the other locking means to hold the companion shuttle throwing device in set position.

4. In a loom, the combination of a lay, a fixed hollow piston at each end of the lay, means for supplying each hollow piston with compressed air, a cylinder slidably mounted over the piston, a bearing on the lay adjacent the inner end of each cylinder, a rod mounted in the bearings, locking toggle levers between each respective cylinder and adjacent bearing to lock the cylinder in set position, means for reciprocating the rod, and trips carried by the rod, said trips upon each movement of the reciprocation of the rod simultaneously engaging the toggle levers, holding one cylinder to release same to throw the shuttle and engaging the other locking toggle levers to lock the companion cylinder in set position.

5. In a loom, the combination of a lay, a fixed hollow piston at each end of the lay, means for supplying each hollow piston with compressed air, a cylinder slidably mounted over the piston, a bearing on the lay adjacent the inner end of each cylinder, a rod mounted in the bearings, locking toggle levers between each respective cylinder and adjacent bearing to lock the cylinder in set position, a bell crank lever on one side of the loom, a radius rod pivoted to the bell crank lever and the reciprocating rod near the opposite side of the loom, means for operating the bell crank lever, and trips carried by the reciprocating rod, said trips upon each movement of the reciprocation of the rod simultaneously engaging the toggle levers holding one cylinder to release same to throw the shuttle and engaging the other locking toggle levers to lock the companion cylinder in set position.

[Claims 6 to 10 not printed in the Gazette.]

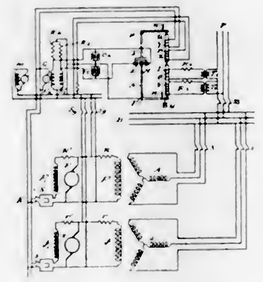
1,222,411. METER-BOX. THOMAS J. KERFOOT, Bluffton, Ind. Filed Apr. 27, 1916. Serial No. 93,982. (Cl. 72—11.)



1. A meter box of the character described having a cylindrical neck member of cast iron provided at its upper edge with diametrically opposed inwardly extending lugs, and a cast iron lid having a downwardly extending flange surrounding the neck, downwardly extending diametrically opposed hooks, and upwardly extending diametrically opposed lugs coinciding with said hooks, the inwardly extending lugs of the neck member and the hooks of the lid having beveled engaging faces, and the upwardly extending lugs of the lid having inclined end walls coinciding with the heels of the hooks, and substantially vertical end walls coinciding with the points of the hooks.

2. In a meter box, the combination of a cylindrical body having bottom and top walls, said body and walls being formed of plastic material and said top wall being dome-shaped and having a central opening, the wall of said opening terminating at its upper portion in an annular recess and a shoulder surrounding the same, an annular rib formed upon said top wall and surrounding said shoulder, said rib being provided with an annular recess on its inner side overhanging the shoulder, a metallic lining reinforcing the body and walls of the box and having a flange projecting upwardly into and reinforcing the wall of said central opening, a cast metallic neck member seated at its lower edge within the annular recess and bearing against the shoulder, said neck member being provided with an annular bead overhanging the shoulder and engaging the annular recess in the annular rib, and a lid or cover detachably engaging the edge of said neck member.

1,222,412. VOLTAGE-REGULATOR. CHARLES H. KICKLIGHTER, Pasadena, Cal., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 29, 1910. Serial No. 584,558. (Cl. 171—225.)



1. The combination with a generator having an exciting field winding and means for supplying current to said winding, of an auxiliary dynamo electric machine connected therewith and adapted by virtue of its relation thereto to control the strength of the field set up by said exciting field winding, a differential winding for said auxiliary machine, and means to cause either of said differential windings to preponderate, said means being normally disposed in neutral position to cause said differential windings to normally neutralize each other.

2. The combination with a generator having an exciting field winding and means for supplying current to said winding of an auxiliary dynamo electric machine connected thereto and adapted by virtue of its relation therewith to control the strength of the field set up by said exciting field winding, a differential winding for said auxiliary machine having regulating resistances, and contact devices normally disposed in neutral or out of contact position and arranged to control either of said resistances.

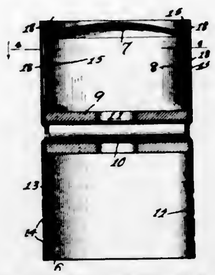
3. A regulator for a dynamo electric mechine having a plurality of regulating resistances, comprising in combination, a pivoted member carrying a pair of contacts one connected to each resistance, and a second pivoted member carrying another contact and movable relatively to the first member to control said resistances, said members being mechanically connected.

4. A regulator for a dynamo electric machine having a plurality of regulating resistances, comprising in combination, a movable fork provided with a pair of contacts, and a second member mechanically connected with said fork and provided with a coöperating contact movable between the contacts of said fork, said contacts being connected to and controlling said resistances.

5. The combination with a plurality of generators, of a set of mains to which said generators are connected, exciting field windings for said generators, electric mechines for supplying current to said field windings, each machine having a field winding, a single auxiliary electric machine, each of the field windings for said electric machines being connected in series with said auxiliary electric machine, and means for automatically controlling the auxiliary electric machine whereby the latter simultaneously controls the strength of field set up in all of said exciting field windings.

[Claims 6 and 7 not printed in the Gazette.]

1,222,413. PISTON. JAMES T. KING, Highland Park, Mich. Filed June 21, 1916. Serial No. 104,975. (Cl. 74—85.)



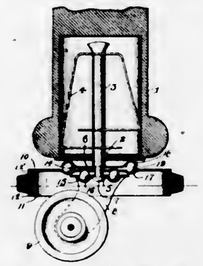
1. A piston, comprising a shell and a sleeve thereover, a portion of said sleeve being formed of overlapping leaf members presenting a substantially unbroken surface continuous to the walls of a cylinder and expanding into close contact with said walls.

2. A piston, comprising a shell and a sleeve thereover, a portion of said sleeve being formed of independent leaf members, one of which is dentated to form tongues and the other of which is recessed to receive the respective tongues, to present a smooth outer surface to the walls of a cylinder.

3. A piston comprising a cylindrical member having overlapping leaf members for a portion of its length, one of said leaf members being dentated to form tongues and the other of said leaf members being recessed to receive the respective tongues, to present a smooth exterior to the walls of a cylinder.

4. A piston, comprising a shell of less diameter at its top than at its bottom, and a sleeve fitted on said shell at its larger diameter and encircling said shell at its lesser diameter though removed therefrom, said sleeve being formed at its top of overlapping leaf members one of which is dentated to form tongues and the other of which is recessed to receive the respective tongues, whereby said sleeve presents a smooth exterior to the walls of a cylinder.

1,222,414. CASTER. OTTO A. KLINSMANN, Fargo, N. D. Filed July 25, 1916. Serial No. 111,284. (Cl. 16—73.)

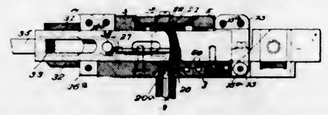


A guard member for casters or the like comprising a disk formed with a ball receiving channel to provide a bearing, and having a peripheral portion projected wholly to one side of the disk, a flange on each edge of said peripheral portion and a buffer secured between edge flanges of such peripheral portion.

1,222,415. CASTING-MACHINE FOR ELEMENTS OF PRINTING-FORMS. AMOS L. KNIGHT, Philadelphia, Pa., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Oct. 3, 1914. Serial No. 864,894. (Cl. 199—1.)

1. An apparatus for casting type metal elements for printing forms, embodying means for confining molten

metal, in contact with a surface of a previously congealed portion of the element being cast whereby the two portions are caused to unite by fusion, means for intermittently advancing the element with relation to the confining means as succeeding increments congeal, and means for forcibly injecting molten metal within the confining means to form succeeding increments of the element.



2. An apparatus for casting type metal elements for printing forms embodying means for confining a body of molten metal in contact with a surface of a previously congealed portion of the element being cast, whereby the two portions are caused to unite by fusion, means for intermittently advancing the element as succeeding increments congeal, means for intermittently injecting molten metal within the confining means, and means for directing the incoming metal along the face of the previously congealed portion of the element.

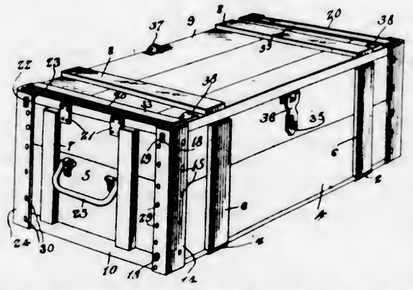
3. An apparatus for casting type metal elements for printing forms embodying a mold having a cavity in which the metal congeals, said cavity being open at one side for the exit of the congealed metal and provided with an opening for the entrance of molten metal, means for advancing the metal toward the exit side of the cavity to form a space in rear of the same, and means for injecting molten metal into such space.

4. An apparatus for casting type metal elements for printing forms embodying a mold having a cavity in which the metal congeals, said cavity being open at one side for the exit of the congealed metal and provided with an opening for the entrance of molten metal, means to retain the congealed metal in position to form one wall of the cavity and a reciprocatory blade for advancing the congealed metal to form a space for the reception of a succeeding increment of molten metal.

5. An apparatus for casting type metal elements for printing forms embodying a mold having a cavity in which the metal congeals, said cavity being open at one side for the exit of the congealed metal and provided with an opening for the entrance of molten metal, means to retain the congealed metal in position to form one wall of the cavity, a reciprocatory blade movable in the cavity for advancing the congealed metal, and means for injecting molten metal in the space left by the rearward movement of the blade.

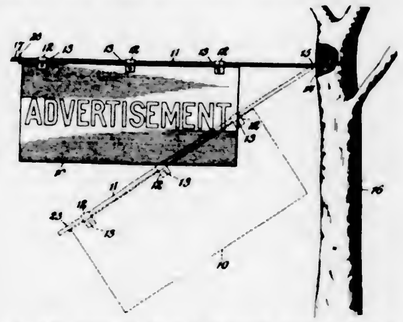
[Claims 6 to 37 not printed in the Gazette.]

1,222,416. KNOCKDOWN BOX. GABRIEL KRBAVAC, Avery, Iowa. Filed Aug. 24, 1914. Serial No. 858,288. (Cl. 217—12.)



A knockdown box including a bottom having its peripheral edge grooved, front, rear and end walls having their lower ends grooved defining tongues which are seated in the groove of the bottom, end strips, said end strips being substantially L-shaped and each having one of its flanges secured to one end of the under side of the bottom, the remaining flange engaging an edge of an end wall, corner strips, said corner strips being substantially L-shaped in cross section and each having one flange secured to an end wall of the box, and the remaining flange to the front or rear wall, said front wall being pivotally secured to one flange of each of the end strips, a cover, means carried by the cover securing the same to the upper edges of the rear, front and end walls.

1,222,417. SIGN. ERNEST KREHER, Tampa, Fla. Filed Jan. 6, 1916. Serial No. 70,637. (Cl. 40—128.)



1. A sign provided with a piercing portion having a bendable connection with the sign and adapted to be driven into a support at any convenient driving angle, the bendable portion permitting the sign to be moved to and maintain the desired display angle after the piercing portion has been driven into the support.

2. A sign comprising a body portion and a rod or arm carrying the body portion and of greater length than said body portion, said rod being provided with a piercing member at one end and adapted to receive blows of a driving implement at the other end, and the piercing portion and rod being joined by a bendable connection capable of maintaining the position to which it is bent, whereby the piercing portion may be driven into a support at an inclination and the rod may then be moved about the bendable portion as an axis into a desired angle for the display of the sign.

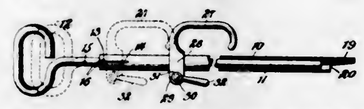
3. A sign comprising an arm or rod, a body portion carried by and in the installed position depending from the arm or rod, and a piercing point at one end of the rod adapted to be driven into a support by blows delivered against the other end of the rod, said piercing point having a bendable connection with the rod capable of maintaining the position to which it is bent, whereby the piercing point when in alinement with the rod may be driven into the support at a convenient driving angle and the rod may then be bent into another angle with relation to the support for the proper display of the sign body.

4. A sign comprising a body portion, and a supporting arm or rod therefor terminating at one end in a piercing point having a bendable connection with the rod capable of maintaining the position to which it is bent, and said piercing point initially alining with the rod, whereby the piercing point may be driven into a support by pressure applied lengthwise of the rod with the latter at any convenient angle of application to the support when the piercing point is entering the support, and the arm and body portion being adapted to be subsequently moved at the connection between the rod and piercing point into the desired display angle.

5. A sign comprising a body portion and a carrying member therefor terminating at one end in a piercing point and connected to the carrying member by a localized bendable portion capable of maintaining the position to which it is bent, whereby the piercing point may be driven into a support by blows applied to the carrying member with the latter at any convenient angle, and the carrying member may be then moved about the localized bendable portion into another angle of display without curving or distorting the carrying member.

[Claims 6 to 14 not printed in the Gazette.]

1,222,418. SIGN-APPLYING TOOL. ERNEST KREHER, Tampa, Fla. Filed Jan. 6, 1916. Serial No. 70,638. (Cl. 1—47.)



1. A tool for applying a sign provided with a supporting rod having a penetrating prong at one end, comprising a tube having one end adapted to receive that end of the supporting rod remote from the prong to hold the remainder of the rod in projected relation to the tube with the prong high up against a support and with the tube and rod in substantial alinement, said tube having at the rod receiving end an elongated lip in alinement with the tube and extending circumferentially of the tube where joining the latter for a fractional portion of the circumference of the tube, and thereby providing an abrupt shoulder on and substantially radial of the rod receiving end of the tube and extending circumferentially of said tube and said lip and shoulder constituting an abutment and an engaging portion, respectively, for the supporting rod when the tube is at an angle to said rod, to bend the latter by an upward thrust of the tube subsequent to driving the penetrating prong into the support, and a hammer rod reciprocable in the tube for striking that end of the supporting rod lodged in the tube whereby to drive the piercing point into the support, and said hammer rod having the end remote from the striking end projecting beyond the corresponding end of the tube and there provided with a hand-hold.

2. A tool for applying a sign provided with a supporting rod having a penetrating prong at one end, comprising a tube having one end adapted to receive that end of the supporting rod remote from the prong to hold the sign high up against a support with the tube and supporting rod in substantial alinement, a handle on the end of the tube remote from that receiving the supporting rod, said handle being adjustable lengthwise of the tube, and a hammer rod reciprocable in the tube and projecting beyond the second-named end of the tube and there provided with a handle, the extent of adjustment of the handle lengthwise of the tube being sufficient to permit a wide separation of the hands of the operator in holding the tool and reciprocating the handle.

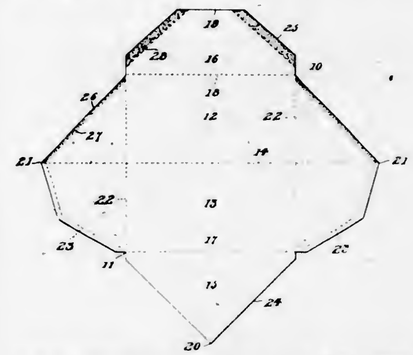
3. A tool for applying a sign provided with a supporting rod having a penetrating prong at one end thereof, comprising a tube having one end adapted to receive that end of the supporting rod remote from the prong with the tube and rod in substantial alinement, a reciprocable hammer rod in the tube projecting from the end of the latter remote from the first-named end and there provided with a handle, the tube and rod having coacting means for temporarily holding the rod at the point of full inward movement into the tube, and a handle on the tube having clamping means for binding the tube on to the rod to fixedly hold the hammer rod against withdrawal from the tube.

4. A tool for applying a sign provided with a supporting rod having a penetrating prong at one end, comprising a tube having one end adapted to receive that end of the supporting rod remote from the prong, a reciprocable hammer rod within the tube for delivering blows to the supporting rod, and a handle member on the tube having a gripping portion extending lengthwise of the tube.

5. A tool for applying a sign provided with a supporting rod having a penetrating prong at one end, comprising a tube having one end adapted to receive that end of the supporting rod remote from the prong, a reciprocable hammer rod within the tube for delivering blows to the supporting rod, and a handle member on the tube having a gripping portion extending lengthwise of the tube, said handle member being adjustable lengthwise of the tube and provided with means for clamping the handle member to the tube in different positions of adjustment.

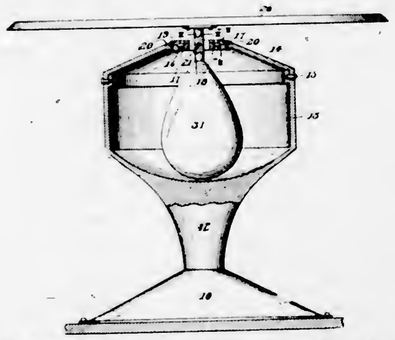
[Claims 6 to 9 not printed in the Gazette.]

1,222,419. SAFETY-ENVELOP. JOHN B. KRYSTEK, Bow Island, Alberta, Canada. Filed Aug. 24, 1916. Serial No. 116,756. (Cl. 229—75.)



A safety envelop comprising an oblong body centrally foldable upon itself, inwardly foldable side flaps and a pointed end flap adapted for overlying the said side flaps carried by the said body, the said end flap being adhesively secured to the said side flaps with normally free edges forming receiving pockets between the said end and side flaps, the said body and side flaps being centrally folded with the said flaps positioned outermost when the envelop is in its secured position, the marginal edge of the pointed flap being adhesively secured to the adjacent face of the body at the addressing side of the envelop, and a truncated sealing flap at the opposite end of the said body having foldable marginal edges adhesively secured within the said pockets at the other side of the envelop.

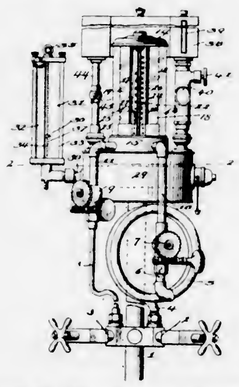
1,222,420. SELF-LEVELING TABLE. ANDREW KURUNCZI and MICHAEL BALINT, Detroit, Mich. Filed Nov. 11, 1916. Serial No. 130,766. (Cl. 114—195.)



In a self-leveling table, a hollow base having an opening in its upper wall, the said upper wall being removably secured to the base, a supporting ring having oppositely disposed pivot pins mounted in the wall of said

opening with the pins resting in sockets in the upper wall, a stub shaft extending transversely of said ring at right angles to the pivot pins and loosely journaled therein, a retaining ring carried by the upper wall for securing the supporting ring in position, a standard supported on said stub shaft, a pin extending through the shaft and standard, a table top carried by the upper end of said standard, and a pendulous weight carried by the lower end thereof and extending into the hollow base.

1,222,421. APPARATUS FOR ADMINISTERING ANESTHETICS. DAVID LAMBERT, New York, N. Y. Filed June 10, 1915.. Serial No. 33,327. (Cl. 128—13.)



1. Apparatus for administering anesthetics comprising a mixing chamber adapted to deliver the anesthetic to the patient, means for supplying the constituents of the anesthetic to said chamber, means for individually regulating the rates of flow of such constituents to said chamber, means for indicating directly the rates of flow of such constituents, and means for indicating directly the rate of flow of the anesthetic from said chamber to the patient.

2. Apparatus for administering anesthetics comprising a mixing chamber, means for supplying the constituents of the anesthetic thereto, a heating device operative upon one of the constituents of the anesthetic as the latter flows to said mixing chamber, the source of supply of said latter constituent being free from the influence of said heating device, and pressure reducing means at the outlet of the heating device.

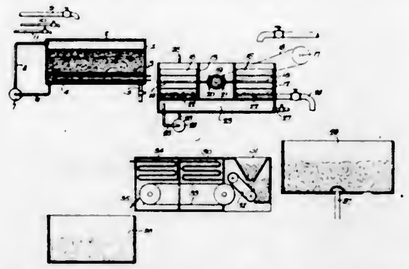
3. Apparatus for administering anesthetics comprising a mixing chamber, means to contain a source of supply of an anesthetic, a heating device active on the anesthetic as the latter flows from its source of supply to said mixing chamber, and a pressure controlling and suppl, regulating valve located between the outlet of said heating device and said mixing chamber.

4. Apparatus for administering anesthetics comprising a chamber adapted to deliver an anesthetic to the patient, means for supplying either of two different kinds of anesthetics to said chamber, means for individually regulating the supply of either of said anesthetics, means for indicating the rate of flow of each of said anesthetics to said chamber, and means for indicating directly the rate of flow of anesthetic from said chamber.

5. Apparatus for administering anesthetics comprising a chamber adapted to deliver an anesthetic to the patient, means for supplying either of two different kinds of anesthetics to said chamber, means for individually regulating the rates of flow of said anesthetics to said chamber, means for indicating the rate of flow of each of said anesthetics, and means at the outlet of said chamber operative by the flow of fluid for measuring and indicating the rate of flow of the anesthetics which are being supplied.

[Claims 6 and 7 not printed in the Gazette.]

1,222,422. METHOD OF TREATING COTTON-WASTE, &c. HERBERT S. LANDELL, Philadelphia, Pa., assignor to Anglo-American Cotton Products Corporation, New York, N. Y., a Corporation of New York. Filed Sept. 14, 1915. Serial No. 50,688. (Cl. 8—12.)



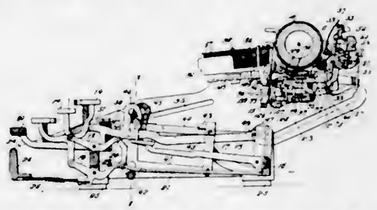
1. A method which consists in treating cotton waste successively with an alkali and an acid; agitating the material in a body of water and permitting the foreign material to simultaneously settle out of said body of water; and finally drying the material.

2. The method which consists in circulating boiling caustic soda through a body of cotton waste; washing said material to remove the caustic soda; circulating acid through the material; washing said material to remove the acid; shredding the material; and finally drying it.

3. The method which consists in treating cotton waste successively with an alkali and an acid; agitating said material in the upper portion of a body of water and allowing the foreign material to settle in an unagitated portion of said water; drawing off said latter portion with the foreign bodies; removing the material from the water; and finally drying it.

4. The method which consists in treating cotton waste successively with an alkali and an acid; shredding said material in a body of water and allowing the foreign material to settle out of the same; removing said material from the water; mechanically removing the majority of the water held by the material; and finally exposing the material to heat to complete the drying.

1,222,423. TYPE-WRITING MACHINE. EMMIT G. LATTA, Syracuse, N. Y., assignor to Corona Typewriter Company, Inc., a Corporation of New York. Filed Apr. 1, 1916. Serial No. 88,287. (Cl. 197—186.)



1. In a typewriting machine, the combination of a two-part frame having one part movable relative to the other and slidably held thereon, a platen carriage, escapement mechanism, ribbon mechanism including means for vibrating a ribbon and for feeding the same lengthwise, all mounted upon the movable part of the frame, and printing instrumentalities mounted upon the other part of the frame to adapt said printing instrumentalities and platen carriage to be brought into closer relation to make the machine compact when not in use.

2. In a typewriting machine, the combination of a two-part frame having one part movable relative to the other and slidably held thereon, a platen carriage, and ribbon mechanism mounted upon the movable part of the frame, and printing instrumentalities mounted upon the other part of the frame.

3. In a typewriting machine, the combination of a two-part frame having one part movable relative to the other and slidably held thereon, a platen carriage, escapement mechanism, ribbon mechanism including means for vibrating a ribbon and for feeding the same lengthwise, all mounted upon the movable part of the frame, and a keyboard mounted upon the other part of the frame.

4. In a typewriting machine, the combination of a two-part frame having one part movable relative to the other and slidably held thereon, a platen carriage, escapement mechanism, ribbon mechanism including means for vibrating a ribbon and for feeding the same lengthwise, and a universal bar all mounted upon the movable part of the frame, a keyboard mounted upon the other part of the frame, and type adapted to be moved toward the platen carriage as each key is depressed.

5. In a typewriting machine, the combination of a frame having relatively slidable parts adapted to move one within the other fore and rear of the machine to shorten its length in one position thereof, a platen carriage, escapement mechanism, ribbon instrumentalities, and a universal bar all mounted upon the movable part of said frame, and a keyboard mounted on the other part of said main frame, said keyboard, carriage, escapement mechanism, ribbon instrumentalities all maintaining an upright position while in a normal operative position and while the parts are moved relatively to shorten the machine and make the same compact.

[Claims 6 to 10 not printed in the Gazette.]

1,222,424. SYRINGE. HENRY LAURENT, East Rutherford, N. J., assignor to Becton, Dickinson & Co., Rutherford, N. J., a Corporation of New Jersey. Filed Dec. 9, 1916. Serial No. 135,920. (Cl. 128—25.)

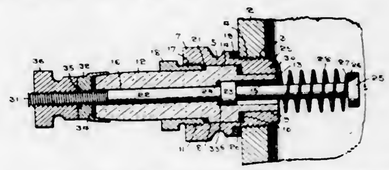


1. In a syringe, a barrel and a plunger adapted to reciprocate in the barrel, the plunger having a head made of a single piece of flexible and compressible material, the head being provided with integral circumferential ridges spaced apart on the peripheral face of the plunger head, the ridges being under compression in the barrel and each ridge having like tapering sides terminating in an annular edge common to both sides to cause each ridge to flex in the opposite direction in which the plunger travels at the time in the barrel.

2. In a syringe, a glass barrel and a plunger adapted to reciprocate in the said barrel, the plunger having a head made of a single piece of soft rubber, the head being provided with integral circumferential ridges of which two are located at the ends of the head and one is arranged intermediate the said end ridges, the ridges being under compression in the barrel and being approximately A-shaped in cross section to cause the ridges to flex in the opposite direction in which the plunger travels at the time in the barrel.

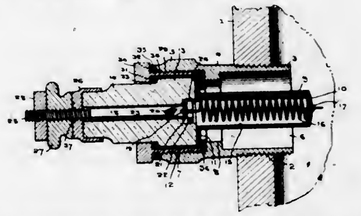
3. As an article of manufacture, a plunger head made of a single piece of soft rubber and provided on its peripheral face with spaced integral circumferential ridges, each approximately A-shaped in cross section to allow the ridges to flex in opposite directions in lines parallel to the axis of the plunger head.

1,222,425. ELECTRICAL VAPORIZER. JOHN HENRY LEPPER, Mason City, Iowa. Filed June 27, 1916. Serial No. 106,178. (Cl. 219—38.)



A vaporizing device adapted to be positioned in an opening in the manifold of an engine, said vaporizer including a plug, an insulating core having one of its ends extending into the plug, said core having a central bore, a metallic core positioned within the central bore whereby its free end extends beyond the end of the plug, an enlarged head supported on one end of the metallic core, a heating coil surrounding the metallic core and supported in spaced relation therewith, one end of said heating coil being embedded in the enlarged head, the opposite end of the coil being embedded in the end of the plug, whereby the entire surface of the heating coil is exposed to the atmosphere of the engine manifold.

1,222,426. HEATING MEANS FOR CARBURETERS. JOHN HENRY LEPPER, Mason City, Iowa. Filed June 27, 1916. Serial No. 106,179. (Cl. 219—38.)



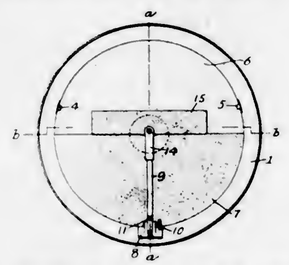
1. In combination with a carbureter bowl having a threaded opening, a heating device comprising a housing having a threaded extension positioned in the threaded opening of the carbureter bowl, an annular shoulder formed within the housing, an insulating core in the housing, a casing positioned in the housing and having a portion thereof engaging the shoulder, one end of the casing extending beyond the inner end of the housing and terminating within the carbureter bowl, a conducting element extending through the core, a heating element within the casing, one of the ends of the heating element making connection with the conducting element, the opposite end thereof extending through the casing, and means cooperating with the annular shoulder for holding the casing in position in the housing.

2. In combination with a carbureter bowl having a threaded opening, a heating device comprising a housing having an internal shoulder formed intermediate the length thereof, a cylindrical heater element having a shoulder, positioned in the housing and spaced from the interior walls thereof to form a chamber, means coöperating with the shoulders for holding the heater element in position, an insulating core having a central metallic core positioned in one end of the heater element, a heating coil within the cylindrical heater element, one end of the coil extending through the heater element, and an en-

larged head for holding the opposite end of the heating coil in engagement with the central metallic core.

3. In a device of the character described, the combination with a carbureter bowl containing a liquid fuel, of a housing secured through a wall of said carbureter bowl, an insulating core having one end partially positioned within said housing, a metallic casing also partially positioned within said housing and having one end embracing that portion of the insulating core within said housing for supporting said casing in suspended position, an insulating lining within said casing, a metallic locking ring embracing that portion of said metallic casing upon said insulating core, a metallic core within said insulating core, a heating coil within said casing having one of its ends projecting through the closed end of said casing and secured to the metallic portion thereof, and its opposite end secured upon one end of said metallic core, and means for connecting the opposite end of said metallic core to a source of electrical supply for establishing a circuit through said heating coil and the metallic parts in interconnection therewith for energizing said coil for rendering the same active for heating said liquid fuel.

1,222,427. HEADLIGHT. JOHN WESLEY LEWELLEN, Ridal, and FRANK P. HOMER, Aldan, Pa. Filed Sept. 21, 1915. Serial No. 51,841. (Cl. 240—48.4.)



1. The combination with a concave reflector of a source of light; a main screen of which a portion only is transparent; and an auxiliary screen of translucent material mounted in front of said transparent portion of the main screen; the height of said auxiliary screen being sufficient to cut off rays of light reflected in lines extending above a horizontal plane passing through the axis of the reflector.

2. The combination with a concave reflector of a source of light therefor; a main screen of which a portion only is transparent; and an auxiliary screen of translucent material mounted in front of said transparent portion of the main screen; the length of said auxiliary screen being at most insufficient to cut off direct rays of light from the source to the outermost side portion of the reflector.

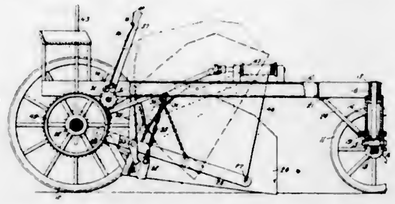
3. The combination with a concave reflector of a source of light; a main screen of which one portion is transparent and the other portion is translucent; with an auxiliary screen of translucent material mounted in front of the transparent part of the main screen and extending to a height sufficient to cut off practically all rays of light reflected above a horizontal plane passing through the focus of the reflector while permitting passage of those rays of light reflected parallel with or downwardly toward said plane.

4. The combination with a concave reflector of a source of light; a main screen therefor; and an auxiliary screen mounted in front of the main screen but adjustable forwardly to permit removal of the latter.

5. The combination with a concave reflector of a main screen; a standard pivotally mounted in front of said screen and adjustable on its pivot from such position through an angle of substantially 90 degrees; with an auxiliary screen carried by said standard.

[Claims 6 and 7 not printed in the Gazette.]

1,222,428. WHEELED SCRAPER. MOSES V. LIDDELL, Brooklyn, N. Y. Filed Aug. 20, 1912, Serial No. 715,960. Renewed Sept. 11, 1916. Serial No. 119,601. (Cl. 37—33.)



1. In a machine of the character set forth, the combination of a frame, a device movably connected to the frame, supporting wheels, an axle connected to and extending between a pair of said wheels, a power wheel secured to said axle; a two-part sleeve surrounding said axle and wheel, means to connect the power wheel to that portion of the sleeve surrounding the same, a pair of drums connected to said device, and power connections between the parts of the sleeve on opposite sides of the power wheel and said drums whereby, when the axle is rotated, the device will be hoisted.

2. In a machine of the character set forth, the combination of a frame, supporting wheels therefor, an axle extending between and connected to two of said wheels for rotation thereby, a device to be hoisted connected to the frame, a pair of drums, flexible connections between the drums and said device, and means between said axle and said drums for rotation thereof, said means including a power wheel secured rigidly to the central portion of the axle, a two-part sleeve surrounding the power wheel and axle, connections between the two parts of the sleeve and the drums, and means to connect the power wheel to the portions of the sleeve surrounding the same.

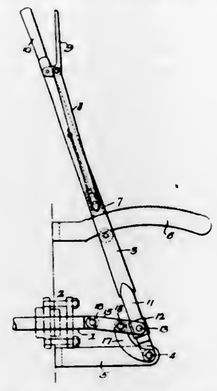
3. In a machine of the character set forth, the combination of a frame, a device to be hoisted connected to the frame, supporting means for the frame comprising wheels, an axle connected to a pair of said wheels and adapted to be rotated thereby, a pair of drums secured upon opposite sides of the frame on parallel axes, flexible connections between the drums and said device for hoisting the latter, and means to rotate the drums from said axle, said last mentioned means including a power wheel secured to the axle, a two-part sleeve surrounding the axle and wheel, means to rotate the sleeve from said wheel, and power connections between the several drums and the two parts of the sleeve.

1,222,429. LEVER MECHANISM FOR OPERATING THROTTLE-VALVES. MORRIS LINTON, Moorestown, N. J., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 22, 1916. Serial No. 132,840. (Cl. 74—39.)

1. The combination in means for operating a throttle valve, of a valve stem; a bracket; a lever pivoted to the bracket; a block slidably mounted on the lever; a link connecting the block with the valve stem; and a bar pivotally connected to the link between the valve stem and the block and mounted on the pivot forming the fulcrum of the lever.

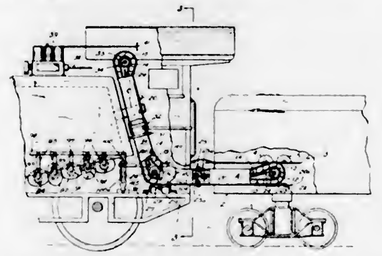
2. The combination in means for operating a throttle valve, of a valve stem; an operating lever having a fixed fulcrum pin and having a rounded portion directly above the fulcrum; a block adapted to slide on the rounded portion of the lever and having trunnions; two links engaging the trunnions and pivotally connected to the valve rod; and a bar located between the two links and pivotally connected thereto and pivoted on the fulcrum pin on which the lever is mounted.

3. The combination in means for operating a throttle valve, of a valve stem; an operating lever having a fixed fulcrum; a block mounted to slide on the lever; a link connecting the block with the valve stem; and a bar



connected to the link between the valve stem and the block and pivoted at a fixed point at or near the fulcrum.

1,222,430. LOCOMOTIVE-STOKER. NATHAN MARPLE LOWER, Jarrettown, Pa., assignor to Locomotive Stoker Company, Schenectady, N. Y., a Corporation of Pennsylvania. Filed Jan. 20, 1912. Serial No. 672,334. (Cl. 110—114.)



1. The combination of a locomotive fire box, and a tender therefor, of a transfer conveyer therebetween and extending along one side of the locomotive and tender, a second conveyer for carrying fuel transversely to the transfer conveyer from the tender, a third conveyer arranged to receive fuel from the transfer conveyer and carry it transversely to the fire box, and connections from said transfer conveyer to said second and third named conveyers for driving the same.

2. The combination of a locomotive fire box, a tender therefor, means for transferring fuel from the tender to the fire box, comprising a conveyer between the tender and the fire box, a pair of crushing rolls, a rotatable conveyer for transferring fuel from the crushing rolls to the first named conveyer, the said transfer conveyer and crushing rolls being driven by said first named conveyer, means for reversing the direction of rotation of said crushing rolls, and yielding doors mounted under the crushing rolls.

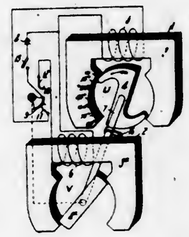
3. The combination of a locomotive fire box, a tender therefor, means for transferring fuel from the tender to the fire box, comprising a conveyer, crushing rolls, a shaft connected to the conveyer and arranged to drive the crushing rolls, a second conveyer mounted on the shaft, ratchet connections between said second conveyer and the shaft, and a reverse gear connection between said first named conveyer and the shaft, and yielding doors mounted under the crusher.

4. The combination of a locomotive fire box provided with a plurality of fuel supply openings, a cylinder opposite each opening having a movable plunger therein arranged when operated to forcibly inject fuel into said fire box and scatter the same over the fire thereof, and supply mechanism for simultaneously delivering fuel to all of said plungers.

5. The combination of a locomotive fire box provided with a plurality of horizontally spaced fuel supply openings, a cylinder opposite each opening having a movable plunger therein arranged when operated to forcibly inject fuel into said fire box and scatter the same over the fire thereof, a horizontally disposed fuel supply conduit above said plungers, and chutes leading therefrom to said plungers for delivering fuel thereto.

[Claims 6 to 16 not printed in the Gazette.]

1,222,431. ELECTROMAGNETIC APPARATUS. DANIEL J. MCCARTHY, Wilkinsburg, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Feb. 19, 1914. Serial No. 819,750. (Cl. 175—336.)



1. In combination, two motor devices each comprising a fixed field member and a movable armature, one armature being Z-shaped and the other a straight bar, means for operatively connecting said armatures, means for constraining said armatures to oscillation through a limited angle such that in one extreme position the torque exerted on the Z-shaped armature is at maximum value and the torque exerted on the bar armature is at minimum value, and that in the other extreme position the torque exerted on the Z-shaped armature is at minimum value and the torque exerted on the bar armature is at maximum value.

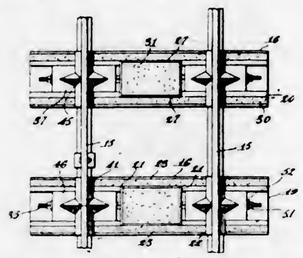
2. In combination, two motor devices each comprising a fixed field member and a movable armature, one armature being Z-shaped and the other a straight bar, means for operatively connecting said armatures, means for constraining said armatures to oscillation through a limited angle such that in one extreme position the torque exerted on the Z-shaped armature is at maximum value and the torque exerted on the bar armature is at minimum value, and that in the other extreme position the torque exerted on the Z-shaped armature is at minimum value, and means for energizing only the motor device comprising the Z-shaped armature from the first-mentioned extreme position of the armatures to an intermediate position, and for energizing the other motor device from such intermediate position to the other extreme position, the device comprising the Z-shaped armature being deënergized after the other motor device becomes energized.

3. In combination, two motor devices each comprising a fixed field member and a movable armature, one armature being Z-shaped and the other a straight bar, means for operatively connecting said armatures, means for constraining the armatures to movement through a limited angle such that the torque exerted on the Z-shaped armature decreases while the armatures are moving from one extreme position to the other, the angular relation of the bar armature to its field member and to the other armature being such that the torque exerted thereon by

its field member increases during the said movement and reaches maximum value at the latter extreme position.

4. In combination, two motor devices each comprising a fixed field member and a movable armature, one armature being Z-shaped and the other a straight bar, means for operatively connecting said armatures, means for constraining the armatures to movement through a limited angle such that the torque exerted on the Z-shaped armature decreases while the armatures are moving from one extreme position to the other, the angular relation of the bar armature to its field member and to the other armature being such that the torque exerted thereon by its field member increases during the said movement and reaches maximum value at the latter extreme position, the pole-pieces of the field member with which the bar armature is associated being cut away so that they exert no counter torque on the bar armature.

1,222,432. RAILWAY CONSTRUCTION. MICHAEL P. MCNULTY, Whitney, N. C. Filed July 10, 1916. Serial No. 108,419. (Cl. 238—5.)



1. A tie comprising a substantially U-shaped metallic member having its sides each comprising a pair of spaced members, a plastic filler between the spaced members comprising the sides, blocks in the tie, means for adjusting the blocks longitudinally of the tie, and rail engaging means associated with the said blocks.

2. A tie comprising a substantially U-shaped metallic member having its sides each comprising a pair of spaced members, a plastic filler between the spaced members comprising the sides, U-shaped reinforcing rods having their arms embedded in the filler and their connecting portions arranged upon the bottom of the tie, blocks in the tie at the ends thereof, means for adjusting the blocks longitudinally of the tie, means for holding the blocks in such adjusted position, and rail engaging means associated with the said blocks.

3. A tie comprising a substantially U-shaped metallic member having its sides each comprising a pair of spaced members, a plastic filler between the spaced members comprising the sides, blocks in the tie, means for adjusting the blocks longitudinally of the tie, rail engaging means associated with the blocks, and guide means upon said rail engaging means co-acting with the inner side walls of the tie.

4. A tie comprising a substantially U-shaped metallic member having its sides each comprising a pair of spaced members and having spaced central partitions, a plastic filler between the partitions and the spaced members comprising the sides, blocks in the tie, means for securing the blocks in contact with the partitions, and rail engaging means secured upon said blocks.

5. A tie comprising a substantially U-shaped metallic member having its sides comprising each two spaced members, transverse partitions in the tie, connecting members for the partitions, a plastic filler between the said partitions and the connecting members therefor, a plastic filler between the members comprising the sides, blocks in the ties, means for securing the blocks in the tie and into contact with the partitions, and rail engaging means associated with said blocks.

[Claims 6 to 11 not printed in the Gazette.]

1,222,433. DYE COMPOSITION. EDITH O'NEIL MACDONALD, St. Regis Falls, N. Y. Filed Dec. 11, 1916. Serial No. 136,313. (Cl. 8—6.)

1. As a new product, a material containing a dye which dye is obtainable by extraction of the coloring matter from autumnal colored leaves of a hardwood tree, and which is substantially free from its naturally associated fibrous tissue.

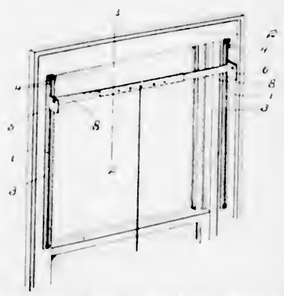
2. As a new dye, a composition comprising the coloring matter substantially free from its naturally associated fibrous tissue, of the autumnal colored leaves of a hardwood tree, said coloring matter dyeing wool and silk shades having good fastness to light and washing.

3. As a new dye, a water extract of the coloring matter of the autumnal colored leaves of a hardwood tree, said coloring matter dyeing wool and silk shades having good fastness to light and washing.

4. As a new dye, a composition comprising the coloring matter, substantially free from its naturally associated fibrous tissue, of brown maple leaves, said coloring matter dyeing wool and silk generally brown shades having good fastness to light and washing.

5. As a new dye, a water extract of the coloring matter of brown maple leaves, said extract characterized by dyeing wool and silk brown shades having good fastness to light and washing.

1,222,434. CURTAIN-BRACKET. SARAH A. MACEY, Las Animas, Colo. Filed Sept. 22, 1916. Serial No. 121,637. (Cl. 156—27.)

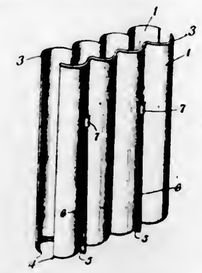


1. In combination with a window casing, of a curtain bracket therefor, said bracket including members arranged upon the vertical stiles of the casing and having inturned spring flanges, the brackets each having its inner end provided with oppositely disposed angularly arranged spring wings which are adapted to be engaged by the spring flanges when the bracket members are inserted within the vertical members between the flanges thereof and the connecting members for the brackets.

2. In a curtain roller supporting means, guide plates having spaced angularly disposed spring flanges upon one of their faces, bracket members constructed each from a piece of spring material and bent upon itself and having its ends outturned to provide oppositely disposed angular wings which are adapted to co-act with the flanges of the guide members when the brackets are arranged upon the guide members, angular members formed upon the brackets and extending toward each other, each of said angular members comprising a spring plate having its ends bent to provide angular flanges, and one of the angular members adapted to telescope within the other angular member.

1,222,435. CIGAR-CASE. LEONARD D. MARTIN, Marinette, Wis. Filed Sept. 6, 1916. Serial No. 118,736. (Cl. 206—41.)

1. A cigar case comprising a pair of longitudinally corrugated inclosing members, and yieldable connecting devices secured to the outer sides of the inclosing members between the corrugations of the same whereby when the case is collapsed the said devices will seat in the spaces between the corrugations and the ridges of the corrugations in one member will seat in the troughs of the corrugations in the other member.



2. A cigar case comprising a pair of cigar inclosing members, and yieldable connecting devices secured to the outer sides of said members and passing across the members at one end thereof, said members being otherwise free and independent of each other throughout their extent.

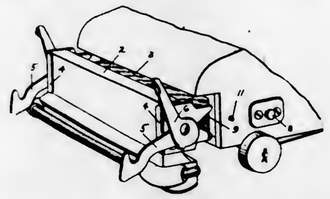
3. A cigar case comprising a pair of cigar inclosing members, and a U-shaped spring having its arm disposed on the outer sides of said members and having their extremities secured to said members but being otherwise free of the same.

4. A cigar case consisting of a pair of cigar inclosing members having eyes on their outer sides, and a U-shaped spring extending across the members at one end thereof and having its arms disposed at the outer sides of said members and their extremities secured in said eyes.

5. A cigar case consisting of a pair of longitudinally corrugated members having the troughs of their corrugations opposed, and U-shaped springs having their arms disposed at the outer sides of the said members between the corrugations of the same and secured at their extremities to said members.

[Claim 6 not printed in the Gazette.]

1,222,436. VACUUM-CLEANER. FRANCIS C. MASON, Grand Rapids, Mich., assignor to Bissell Carpet Sweeper Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Dec. 6, 1915. Serial No. 65,345. (Cl. 15—60.)

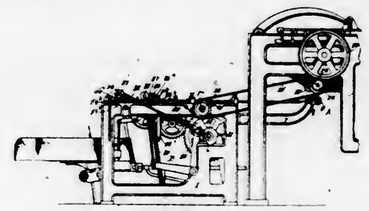


1. In a suction cleaner or sweeper, the combination of a casing, a suction nozzle on the front end thereof, corner plates on said nozzle and extending rearwardly beyond the same, a V guide notch cut in said rearwardly extending portions and terminating in a slot, a centering pin on the side walls of the casing upon which either edge of the said notch may ride bringing the nozzle to a true centered position with respect to the casing when the said pin engages the said slot, and a means for locking the nozzle to the casing as described.

2. In a suction cleaner or sweeper, the combination of a casing, a suction nozzle on the front end thereof, corner plates on said nozzle with rearwardly extending portions, said portions beveled on their lower edges, pins on the side walls of the casing upon which the said beveled portions may ride bringing the nozzle to a true centered position with respect to the casing, and a suitable means for locking the nozzle to the casing as described.

3. In a suction cleaner or sweeper, the combination of a casing, a suction nozzle on the front side thereof, suitable guide and centering plates on said nozzle, suitable centering pins on the said casing adapted to engage the said centering plates and bring the nozzle to a true centered position with respect to the casing, and a means for locking the nozzle to the casing.

1,222,437. PAPER-BENDING MACHINE. CHARLES W. MEARS, Cleveland, Ohio. Filed Mar. 14, 1913. Serial No. 754,279. (Cl. 92—70.)



1. In an apparatus of the character set forth, the combination, with a pair of clamping members, of paper conveying means adapted to carry paper between and beyond said members, a gage for limiting the projection of the paper beyond the clamping members, means for bringing said members into clamping engagement with the paper therebetween, means for bending or flexing the projecting ends of the clamped paper, means for separating the clamping members after the bending or flexing operation, means for moving the gage out of the path of the paper, and means whereby a driving connection between the paper and the conveyer may be obtained after the separation of the clamping members and the removal of the gage.

2. In an apparatus of the character set forth, the combination of paper bending or flexing mechanism, feed rollers coöperating therewith to convey the paper beyond said mechanism, a stacking receptacle beyond said rollers, and means for moving the paper along said receptacle.

3. In an apparatus of the character set forth, the combination of a pair of paper clamping members, a yieldingly supported roller, means for moving the clamping members across said roller, said clamping members being provided each with a lateral projection adjacent to the end proximate to said roller and adapted to engage the roller to limit the movement thereof by its yielding support.

4. In paper bending or flexing mechanism, the combination, with a pair of paper clamping members, of a pair of roller supporting arms, a roller journaled in said arms in position to engage the paper projecting from the clamping members, arms projecting angularly from the first mentioned arms, surings coöperating with the last mentioned arms, and means for oscillating the paper clamping members.

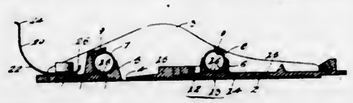
5. In an apparatus of the character set forth, the combination of a pair of clamping members, a paper conveyer extending between said members and movable therebetween, means for clamping paper between said members with the ends projecting, means adapted to engage said projecting ends for the purpose of bending or flexing the same, and a stop adapted to limit the movement of the paper through the said members by the conveyer.

[Claims 6 to 25 not printed in the Gazette.]

1,222,438. SELF-LUBRICATING PLANE. FRANK MERAY, New York, N. Y. Filed June 30, 1915. Serial No. 37,293. (Cl. 145—18.)

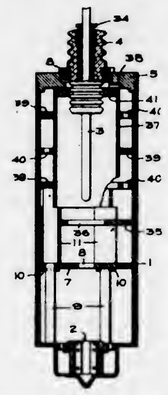
In a surfacing plane, a body provided with the usual opening for the reception of a cutting blade, upstanding sides formed upon said body along the marginal edges of the base, upstanding portions formed upon the upper sur-

face of said body and extending from one of the upstanding sides to the other, said portions being positioned one in front of and one rearwardly of said opening, said upstanding portions being provided with concaved recesses formed in their upper surfaces, lubricant retaining tanks removably mounted in said recesses, said upstanding portions and



said plane body being provided with a plurality of vertical and angularly extending ducts communicating with the face of the body in alining rows longitudinally and transversely of the face of the body.

1,222,439. ELECTRIC SWITCH. EZRA B. MERRIAM, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 23, 1911. Serial No. 634,950. (Cl. 175—283.)



1. A circuit interrupting device comprising a vessel, a pressure retaining chamber containing oil and having a vent in one wall thereof, current carrying terminals normally in electrical connection in said chamber and separable to break the circuit in said chamber, and deflecting members in the space between said vent and the top of said vessel provided with openings out of alinement for compelling the oil discharged from said vent to flow in a tortuous path.

2. An oil switch comprising a vessel containing oil, relatively movable coöperating contacts mounted to separate in said vessel beneath the oil, a pressure retaining chamber surrounding the point of separation of said contacts and having a vent in one wall thereof through which one of said contacts passes out of said chamber when the switch opens, an oil intercepting chamber closed at one end and mounted in said vessel in alinement with said vent with its open end adjacent said vent to receive oil discharged from said vent.

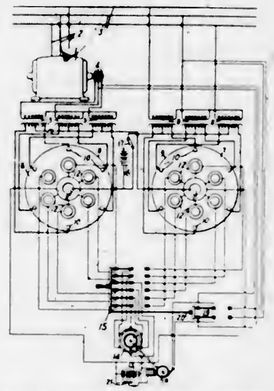
3. An oil switch comprising an oil vessel, a pressure retaining chamber in said vessel containing oil and having a vent in the upper wall thereof, relatively movable coöperating contacts mounted to separate in said chamber, an oil intercepting chamber closed at its upper end and mounted in said vessel in alinement with said vent with its open lower end adjacent said vent, one of said contacts being mounted to separate from its coöperating contact in said pressure retaining chamber and to move up out of said pressure retaining chamber through said vent into said oil intercepting chamber as the circuit is opened.

4. An oil switch comprising a substantially closed vessel containing oil and having therein a pressure retaining chamber with a vent in one wall thereof, an oil intercepting chamber closed at one end and mounted in said vessel with its open end adjacent the vent of said pressure retaining chamber to catch the oil ejected from said vent, relatively movable coöperating contacts mounted to separate in said pressure retaining chamber and to draw an arc through said vent into said oil restraining chamber as the circuit is opened, and vents to the atmosphere from the space between said oil restraining chamber and the walls of said vessel.

5. An oil switch comprising a vessel containing oil, relatively movable coöperating contacts mounted to separate in said vessel, immovable means located in said vessel to confine the oil put under pressure by the arc and to direct it against the arc to extinguish it, and plates mounted in said vessel above said immovable means provided with openings adjacent the walls of said vessel and out of alinement with each other for intercepting and baffling the oil directed against the arc to extinguish it.

[Claims 6 to 12 not printed in the Gazette.]

1,222,440. FREQUENCY-CHANGING SYSTEM. FRIEDRICH W. MEYER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 24, 1915. Serial No. 16,687. (Cl. 172—281.)



1. A reversible frequency-changing system comprising two vapor-arc devices, each of which is adapted to operate either as a rectifier or as a de-rectifier, and a unidirectional-current circuit connecting the two vapor-arc devices, a device for determining the frequency of the output of a de-rectifier, and means for associating said device with either of said vapor-arc devices in accordance with the direction of energy transfer.

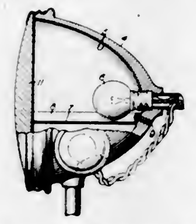
2. The combination with two alternating-current systems of different frequency, of energy transferring apparatus connected therebetween comprising two vapor-arc devices, each of which is adapted to operate either as a rectifier or as a de-rectifier, a device for determining the output frequency of a vapor-arc device when operating as a de-rectifier, and means for associating said device with either of said vapor-arc devices in accordance with the direction of energy transfer between said two systems.

3. A reversible frequency-changing system comprising two vapor-arc devices each of which is provided with a plurality of anodes, a cathode, and with magnetic arc-rotating means for forcing an arc therein to impinge upon said anodes at a predetermined rate, a unidirectional current circuit connecting said two devices, exciting means for energizing said arc rotating means, and means for connecting said exciting means to either of said arc-rotating means in accordance with the direction of energy transfer through said system.

1,222,441. FURNITURE-POLISH. LUTHER P. MILBURN, Boulder, Colo. Filed June 15, 1916. Serial No. 103,720. (Cl. 134—24.)

The herein described composition of matter for a furniture polish, consisting of linseed oil, vinegar, acetic acid, and a pungent vegetable oil, in substantially the proportions stated.

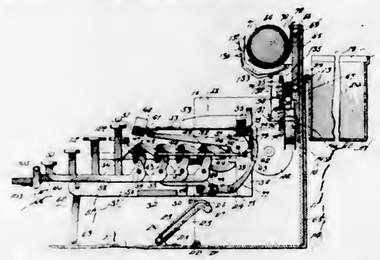
1,222,442. TAIL-LIGHT. ALBERT W. MORFORD, New Monmouth, N. J. Filed Dec. 12, 1916. Serial No. 136,443. (Cl. 240—46.)



1. A light of the class described presenting a parabolic reflector, a source of light in the focus of the reflector, a second source of light below the first and within the reflector, a partition separating the two sources, a transparent member closing the reflector and presenting a colored portion to the second-mentioned source of light, and means associated with said second source of light for producing a light beam laterally of the reflector.

2. In a light of the class described, a housing presenting a parabolic reflector, a source of light in the focus thereof, a second source of light within the reflector below the first, a partition having a curved edge in the form of a parabola, a flange bordering the curved edge of the partition and adapted to engage the reflector to separate the two sources of light within the reflector, a transparent member closing the reflector and presenting a colored portion beyond the partition for the second mentioned source of light, said housing having a lateral tubular extension alining with the second source of light and a transparent member closing said tubular portion.

1,222,443. TYPE-WRITING MACHINE. CHARLES PHILO MOSHER, Brooklyn, N. Y., assignor to Corona Typewriter Company, Inc., a Corporation of New York. Filed Oct. 16, 1915. Serial No. 56,242. (Cl. 197—186.)



1. In a visible typewriting machine in which the typebars are each operated by a separate key-operated lever and have an upward and rearward movement, a platen carriage, a case forming a support for the platen carriage and comprising a main section, a top section, a member hinged to the main case section, and a support for a universal keyboard including type-bar operating key levers and spacing and platen shift levers, type-bars carried by said keyboard support, said keyboard support being connected to said hinged member and adapted to fold upward and rearward to place the keyboard keys in close relation to the platen carriage to make the machine more compact and adapted to be inclosed within the top section of the case when the latter is in its transporting condition.

2. In a visible typewriting machine in which the typebars are each operated by a separate key-operated means, a case forming a support for the platen carriage and comprising a main section, a keyboard member hinged to the main case section, and a foldable support for a universal keyboard including type-bar operating keys, and spacing and platen shift levers, type-bars carried by said support, said keyboard support being adapted to fold upward and rearward to place the keys in close relation to the platen carriage to make the machine more compact and adapted to be inclosed within the case when the latter is in its transporting condition.

3. In a visible typewriting machine in which the typebars are each operated by separate key-operated levers, a case forming a support for the platen carriage and comprising a main member, and a supporting keyboard member pivotally held to the main member and forming a support for a universal keyboard including type-bar operating key levers and spacing and platen shift levers, typebars carried by said supporting keyboard member, said keyboard being adapted to be brought into close relation to the platen carriage to make the machine compact and to be entirely inclosed within the case.

4. In a visible typewriting machine in which the typebars are each operated by separate key-operated means and have an upward and rearward movement, a case forming a support for the platen carriage and comprising a main section, a top section, and a foldable keyboard member pivoted to the main case section and forming a support for key-operated levers and type-bars said typebars and key-operated levers being maintained in their same operative relation in both the folded and unfolded position of the keyboard member.

5. In a visible typewriting machine in which the typebars are each connected to and operated by separate key-operated means and have an upward and rearward movement, a case forming a support for the platen carriage and comprising a main member, a front member hinged to the main member, and a foldable supporting keyboard member held to the main member and connected to the front hinged member and forming a support for a standard keyboard including type-bar operating key levers and spacing and platen shift levers, type-bars carried by said foldable supporting keyboard member, said foldable support being adapted to move the keys of the key levers into close relation to the platen carriage to make the machine more compact and adapted to be inclosed within the case when the latter is in its transporting condition.

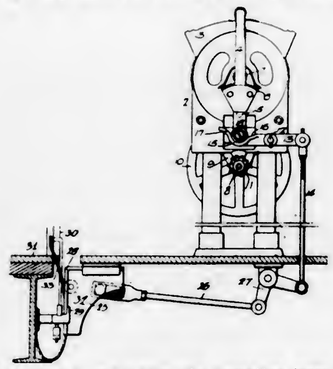
[Claims 6 to 51 not printed in the Gazette.]

1,222,444. INTERLOCKING MECHANISM FOR ELEVATORS. JOHN S. MUCKLÉ and THOMAS H. STRALEY, Philadelphia, Pa., assignors to Standard Elevator Interlock Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 25, 1913. Serial No. 802,956. (Cl. 187—49.)

1. The combination in an operating device for elevator interlocking mechanism, of a stand; an operating lever pivoted to the stand and connected to the means for stopping and starting the elevator car, said operating lever having an extension; a lever also pivoted to the stand; and a rod connected to one arm of said lever and extending to the interlocking mechanism of the car, the other arm of the lever having a depression for the reception of the extension of the operating lever, the two levers being so arranged in respect to each other that when the operating lever is in the central position the extension is in the depression of the other lever and when the operating lever is moved to either side of the center it will depress the arm of the lever, which is connected to the interlocking mechanism.

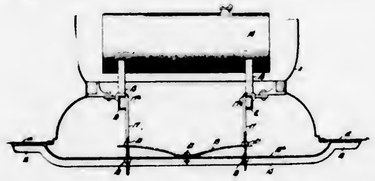
2. The combination in an operating device for elevator interlocking mechanism, of a car; a stand mounted thereon; an operating lever pivoted to the stand and arranged to assume either a central position or a position at either side of the center, said lever being connected to the means

for stopping and starting a car and having an extension beyond its pivot; a roller on the extension; a lever pivoted to the stand; a rod connected to one arm of the lever and to the interlocking mechanism of the elevator, the other arm having a depression and having a bearing on each side



of the depression so that when the operating lever is in the central position it is located in the depression and when the operating lever is moved to either side of the center the roller will assume a position on either one of the bearings and will depress said arm of the interlocking lever.

1,222,445. SHOCK-ABSORBING BODY-BRACE FOR AUTOMOBILES. ROY MERL MUSGROVE, Spanish Fork, Utah, assignor of one-half to E. D. Cruise, Kansas City, Kans. Filed Apr. 5, 1916. Serial No. 89,030. (Cl. 21—55.)

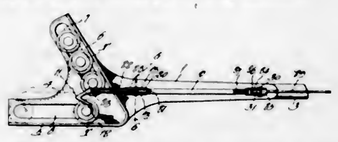


1. The herein described attachment for automobiles including a bar adapted to be positioned beneath the body of an automobile and of a length to engage at its ends with the under sides of the running boards of the automobile, hanger rods supporting said bar and formed with means to connect the hangers with the frame of an automobile, the lower ends of said rods being threaded, and nuts on the threaded ends of the rods beneath the said bar, a brace above the bar and secured at its center thereto, the ends of the brace having holes through which the said hangers extend, and nuts on the hangers above the said brace.

2. The herein described attachment for automobiles, the same including hangers having means at the upper ends thereof to suspend the same from the frame of an automobile, a transverse pressure bar carried by the hangers, said bar being of a length to extend laterally beneath the running boards of the automobile to exert pressure thereon, a transverse element secured between its ends to the said pressure bar, the said ends being above and spaced from the pressure bar, the said hangers extending through the said ends, and means to vary the distance between the ends of the transverse element and the pressure bar.

1,222,446. TARGET-THROWING DEVICE. JAMES W. NAPIER and CHARLES H. NAPIER, Duquesne, Pa. Filed Nov. 9, 1916. Serial No. 130,401. (Cl. 124—3.)

1. A target throwing device comprising a slightly inclined flat plate, a pair of substantially straight rails on said plate, said rails being disposed at an acute angle to each other, the intersection of said rails being at the lower side of said plate, and a target projecting member, one of said rails coacting with said member to guide the target while being projected, the other rail and the plate forming an automatic target feeding member.



2. A target throwing device comprising a slightly inclined flat plate, a pair of substantially straight rails on said plate, said rails being disposed at an acute angle to each other, the intersection of said rails being at the lower side of said plate, a longitudinally movable target projecting bar disposed parallel to one of said rails and coacting therewith, said rail guilding a target while being projected, the other rail and the plate forming an automatic target feeding member, and means for moving said bar.

3. A target throwing device comprising a slightly inclined flat plate, a pair of substantially straight rails on said plate, said rails being disposed at an acute angle to each other, the intersection of said rails being at the lower side of said plate, a longitudinally movable target projecting bar disposed parallel to one of said rails and coacting therewith, the outer end of said bar being bent into V-shape, the apex thereof extending outwardly, a laterally bent finger on the free end of said V-shaped portion to engage a target, and means for projecting said bar.

4. In a device of the class described, a target holder, a support therefor, a pair of spaced ears on the support, a longitudinal movable target projecting bar slidable between said ears, said bar having a stop thereon, a dog pivoted between said ears and over said bar for engagement with said stop, and means for projecting said bar.

5. In a device of the class described, a target holder, a support therefor, said support being longitudinally slotted, a longitudinally movable target projecting bar, a guide at the inner end of said support slidably receiving said bar, an ear extending from said bar and disposed in said slot, whereby said bar will be guided during its movement, means for holding said bar in retracted position, and means for projecting said bar.

[Claims 6 to 12 not printed in the Gazette.]

1,222,447. BALL-RETAINER. WILLIAM W. NEIGHBOUR, Spartanburg, S. C. Filed Nov. 18, 1916. Serial No. 132,148. (Cl. 64—59.)



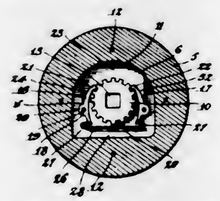
1. A ball retainer comprising a ring, an annular flange formed on said ring around its outer periphery, said flange being arranged at an acute angle to said ring, said ring being provided with openings, flanged ball seats formed in said openings, the flanges of the seats projecting upon the side of the ring opposite that of the annular flange.

2. A ball retainer comprising a ring, an annular flange carried by said ring and arranged at an acute angle thereto, said ring being formed with ball receiving openings, and means whereby balls are retained within the openings out of contact with the edges thereof.

3. A ball retainer comprising a ring formed with an inclined annular surface having ball receiving openings therein and an annular flange carried by said ring and arranged at an acute angle thereto.

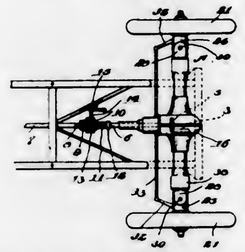
4. A ball retainer comprising a ring having ball receiving openings therein, an annular ball retaining flange carried by said ring and arranged at an acute angle thereto, said ring being provided with ball receiving-openings, and means formed upon the edges of said openings and coöperating with said flange for retaining balls within the openings out of contact with the edges of said openings.

1,222,448. TOOL-HOLDER. ROBERT NELSON, Minneapolis, Minn. Filed Feb. 25, 1916. Serial No. 80,467. (Cl. 145—75.)



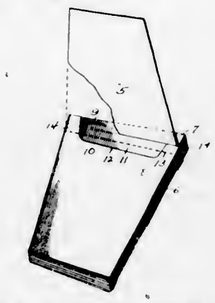
A tool holder embodying a recessed head, a tool socket member having a toothed flange, a solid retaining plate connecting the toothed flange of the socket member within the recess of the head, and provided with a slot, a pair of dogs pivotally connected in the recess of the head, a spring mounted in the recess of the head for holding the dogs in contact with the toothed flange of said tool socket member, and a bar having its opposite ends curved inwardly to provide the same with hooked terminal portions, said bar being arranged in the recess of the head for horizontal sliding movement, means connected with said operating member and protruding through the slot of the plate for causing the hooked ends of said operating member to alternately engage with the tails of the dogs and throwing one of said dogs out of contact with the teeth of the flange, and forcing the spring taut against the opposite pawl for permanently retaining the same in engagement with the teeth.

1,222,449. FRONT-WHEEL DRIVE. WILLIE W. NELSON and LEE MCDONAL, Monticello, Miss.; said McDonal assignor of his entire right to Walter W. Weathersby, Brookhaven, Miss. Filed Aug. 9, 1916. Serial No. 114,016. (Cl. 21—90.)



In front wheel driving mechanism for motor vehicles, a rotary front axle, a front axle housing, steering knuckles pivotally connected to the opposite ends of said housing, wheel spindles journaled in said knuckles and having steering wheels fast thereon, driving means between said axle and spindles, means to admit of the spindles being rocked at an angle to the front axle without disturbing the driving relation between said axle and spindles, and front and rear housing plates for inclosing said driving means, each of said housing plates embodying sections hinged together, one section having a fixed relation to the steering knuckle and the other section having a sliding relation to the front axle housing.

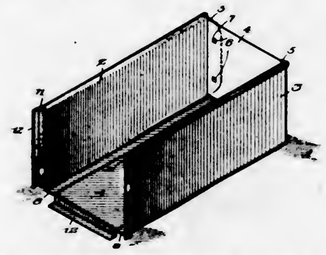
1,222,450. DRINKING-CUP AND CONTAINER. SAMUEL H. NUCKOLLS, Atlanta, Ga. Filed Nov. 15, 1916. Serial No. 131,465. (Cl. 206—57.)



1. A device of the character described, comprising a plurality of drinking cups of paper arranged in superimposed relation, covers upon the opposite sides of said drinking cups, binding strips uniting said covers, binding members passing through said drinking cups and weakened portions extending across said drinking cups to render the outer portions thereof detachable from the portions that are connected to the pad, each of said drinking cup comprising a front wall and a rear wall, one of said walls being centrally cutaway, said cutaway portion extending below said line of perforations so that along the center of the cup the perforations extend through only one of the walls of the cups but extend through both of the walls of the cups adjacent the outer edges thereof.

2. In a device of the character described, the combination with a plurality of containers folded to flat form and arranged in pad formation, and covers for said pad, each of said containers comprising front and rear walls, one of said walls being centrally cutaway and each of said containers being provided with a line of perforations extending thereacross in a plane above the lower edge of said cutaway portion.

1,222,451. FURNITURE-DRAWER. ENOCH OHNSTRAND, Syracuse, N. Y., assignor to U. S. Steel Furniture Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 28, 1912. Serial No. 728,124. (Cl. 45—7.)

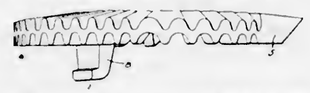


1. In combination in a drawer for furniture, a body having angled flanges on the forward ends of its bottom and side walls, said flanges extending outwardly with reference to said walls and then forwardly; and a front wall embodying an inner and an outer section, the outer section having a marginal pocket formed by portions extending rearwardly and inwardly, said pocket receiving the flanges on the side and bottom walls of the body, and the inner section coöperating with the inner face of the body and having a portion fitted in that portion of the marginal pocket along the upper edge of the front section.

2. In combination in a drawer for furniture, a body having angled flanges on the forward ends of its bottom and side walls, said flanges extending outwardly with reference to said walls and thence forwardly parallel with said

walls; and a front wall formed of an inner and an outer section, the outer section having a marginal pocket formed by portions extending rearwardly and inwardly, said pocket receiving the angled flanges on the side and bottom walls of the body, and said inner section having straight flanges on its vertical side and bottom edges and an angled flange along its upper edge, the angled flange extending forwardly at right angles to the plane of the section, thence upwardly parallel with the plane of the section, and thence forwardly at right angles to the plane of the section, the last-named forwardly extending portion and the outwardly extending portion being received within that portion of the marginal pocket along the upper edge of the front section.

1,222,452. TWYER-BLOCK. JAMES A. O'NEILL, New York, N. Y., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed May 11, 1915. Serial No. 27,469. (Cl. 110—44.)



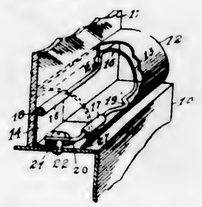
1. A twyer block for underfeed stokers, comprising a hollow member, the under discharge edge of which is provided with air discharge channels and the upper edge of which above said channels is wrinkled or corrugated.

2. A twyer block for underfeed stokers, comprising a hollow member provided with channels extending through the sidewalls thereof for discharging air and having its upper surface above said channels formed with ridges and valleys.

3. Twyer blocks for underfeed stokers for forming with similar blocks fuel supporting and air supplying means for use between the stoker retorts, each twyer block comprising a hollow member provided with rear and forward channels extending through the sidewalls thereof and being adapted to discharge more air into the retorts than toward the rear of the stoker, and each block having its surface above said channels wrinkled or corrugated.

4. A fuel supporting twyer block for underfeed stokers, comprising a flat member provided with a downwardly inclined flange extending around the front and lateral edges thereof and having corrugations formed in each face thereof.

1,222,453. RESILIENT HOLDING-CLIP. OTHO M. OTTE, Jamestown, N. Y. Filed July 17, 1916. Serial No. 109,644. (Cl. 189—89.)



1. A clip for moldings, including a member having a base and a web the outer sides of each of which are bent to form eyes, said base having a central cut-out, a wire element having longitudinal parts engaged in the respective eyes, and transverse parts connecting the longitudinal parts, the longitudinal part of the wire adjacent the base having a central inward bend in register with said cut-out and having outward molding engaging bends on opposite sides of the central bend, a screw extending through said cut-out and central bend, and molding engaging bends formed on the transverse parts of the wire.

2. A clip for moldings including a sheet metal member, and a wire element formed independently of the member, said wire element being bent to form molding engaging grips, and means to secure said element to said member to allow said element with its grips to yield.

3. A clip for moldings including a supporting member, and a wire member formed independently of the supporting member and bent to form molding engaging parts, and means to secure the wire member to the supporting member to yieldingly support the molding engaging parts.

4. A clip for moldings including a right-angled support, a wire member having an upper part connected at one end to the top of the support and having a lower part connected at one end to the bottom of the support, said member having a part connecting the opposite ends of said upper and lower parts thereof, and molding engaging grips formed on said wire member.

5. In a molding clip, a supporting member, a strand of wire bent in the form of a loop, and means to secure the wire loop to said member, said loop being bent to form yieldable molding engaging grips.

[Claims 6 and 7 not printed in the Gazette.]

1,222,454. PNEUMATIC CARPET-CLEANER. EDWIN E. OVERHOLT, Washington, D. C., assignor to Modern Compressed Air Cleaning Company, a Corporation of the District of Columbia. Filed May 29, 1907. Serial No. 376,372. (Cl. 15—60.)



1. In pneumatic carpet cleaners, a casing having a blast chamber and an auxiliary chamber coöperating therewith to catch the dust escaping at the bottom of the blast chamber, both chambers having open bottoms adapted to rest on the carpet, which forms a bottom for the chambers while the machine is at work, said chambers being closed against the passage of air from one chamber into the other, except through the pile of the carpet underneath the dividing walls of the chambers; the blast chamber being arranged for the introduction of air thereinto, and each chamber being provided in its wall with an independent air outlet for the escape of the dust-laden air of each chamber separately from the casing; and each chamber being provided at its outlet with means for receiving an individual dust receptacle.

2. A device of the character described, comprising a blast chamber and an auxiliary chamber coöperating therewith to catch the dust escaping at the bottom of the blast chamber; and dust-receiving and straining means; said chambers being completely separated from each other by their inclosing walls, and having open bottoms adapted to rest on the carpet; means for delivering a blast of compressed air into the blast chamber to raise the dust out of the carpet into said chambers and expel the same therefrom; each chamber having for its dust-laden air a separate outlet delivering into a common dust receptacle; and means for preventing the passage of air from the dust receiving means into the auxiliary chamber while the machine is at work.

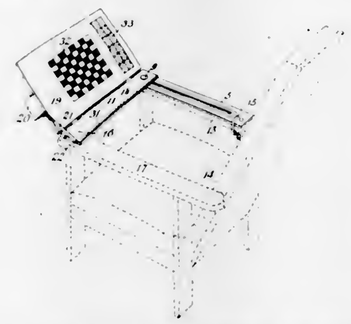
3. In pneumatic carpet cleaners, an open-bottomed casing adapted to rest on the carpet and having a primary and an auxiliary dust chamber, the carpet forming a bottom for the chambers while the machine is at work; means for delivering a blast of compressed air upon the carpet in the primary chamber, thereby producing a materially greater pressure in the primary chamber than in the auxiliary chamber; the primary chamber being closed against communication with the auxiliary chamber and having an independent outlet at a point above its bottom leading to the exterior of the casing, for relieving the pressure in the chamber and for the discharge of all its dust from the casing except the small portion filtering through the pile of the carpet underneath the bottom of its walls into the auxiliary chamber; said auxiliary chamber also having an independent outlet for the escape of its dust.

4. In pneumatic carpet cleaners, an open-bottomed casing adapted to rest on the carpet and having a primary and an auxiliary dust chamber; means for raising the dust out of a carpet into said chambers and for expelling the same from the casing; each of said chambers being provided with an independent air-outlet leading from the interior of that chamber through the wall thereof to the exterior of the casing and means for reducing the pressure in the auxiliary chamber below atmospheric pressure, and below the pressure of the primary chamber.

5. In pneumatic carpet cleaners, a casing having a primary and an auxiliary dust chamber, said chambers being open-bottomed and non-communicating with each other; means for raising the dust out of a carpet and expelling the same from the casing; means for maintaining an air pressure greater than atmospheric pressure in the primary chamber, and less than atmospheric pressure in the auxiliary chamber; said primary chamber having means for the discharge of its dust from the casing without emptying the same into the auxiliary chamber.

[Claims 6 to 22 not printed in the Gazette.]

1,222,455. TABLE. GEORGE HORATIO PACKWOOD, Sr., Tampa, Fla. Filed July 9, 1914. Serial No. 849,915. (Cl. 45—82.)

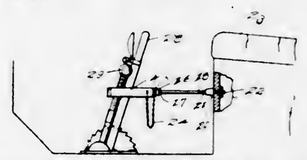


1. In a device of the character described, the combination of a table section adapted to be superposed upon one arm of a chair, a guide element carried by said table section, a complementary guide element adapted to be carried by a chair arm and coöperatively connected with the first mentioned guide element to pivotally and slidably connect the table section with the chair arm to permit the table section to move longitudinally and transversely of the arm, whereby one longitudinal edge of said table section may be disposed at the outer longitudinal edge of the chair arm, and said edge of the table section may be disposed at the front of the chair arm and at right angles thereto when the table section is extended away from the front of the chair arm, a second table section hinged to the aforesaid edge of the first table section and adapted to depend from the first table section when said first table section is superposed longitudinally over the chair arm, and means for holding the second table section in adjusted position relative to the first table section.

2. In a device of the character described, an elongated base adapted to be superposed upon one arm of a chair, a table section having one edge of approximately equal length with said base, guide means connecting one end of said table section with said base to permit the table section to rotate and also to move longitudinally of the base from end to end, whereby one edge of the said table section may be disposed at the outer edge of the base when said table section is disposed above and longitudinally of the base, and whereby the aforesaid edge of the table section may be disposed at the front of the base and at right angles thereto when the table section is extended away from the front of the base, a second table section hinged to aforesaid edge of the first table section and adapted to depend from the first table section when said first table section is disposed longitudinally over the base, and means for holding the second table section in adjusted position relative to the first table section.

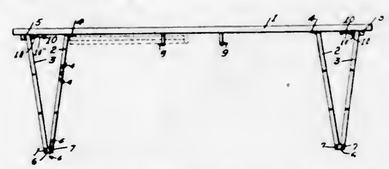
3. In a table, a base having a guideway, a table section pivoted in the guideway, a second table section hinged to the first table section, an arm pivoted to one of the table sections and having a slot with a recess and a pin on the other table section disposed in the slot and adapted to move into the recess, whereby one section may be swung and held relatively to the other section, there being an orifice in the arm and a bolt on one of the table sections for engaging the arm at the said orifice.

1,222,456. AUTOMOBILE-LOCK. GEORGE H. PEAKE, Creede, Colo. Filed Aug. 25, 1916. Serial No. 116,867. (Cl. 70—90.)



An automobile lever lock comprising a pair of telescoping members, one of said members comprising a connecting bar and spaced tubular extensions, the other of said members comprising a connecting bar and spaced extensions which are adapted to telescope into the tubular members of the first named member, a transversely arranged bolt carried by the first named member, said last named member comprising a recess into which said bolt is fitted for holding the members against separation, a flexible chain connected to each of said members to prevent separation of the same, and a connecting rod secured to one of said members securing the same to an automobile.

1,222,457. FOLDING TABLE-STANDARD. PERRY A. PEER, Comstock, Mich. Filed Dec. 22, 1915. Serial No. 68,117. (Cl. 45—11.)



1. The combination with a table top, of a pair of standard members comprising uprights connected at their upper ends by top pieces formed integrally therewith, a base piece having upturned ends to which the lower ends of said uprights are pivotally connected side by side so that said standard members may be collapsed upon each other or their upper ends spread apart, a hinge connecting the top piece of one standard member to the under side of the table top so that the standard may be collapsed and swung against the under side of the table top, a stop for the top piece of the other standard member positioned to support the standard in its erected position with the top piece against the under side of the table, a pivoted catch adapted to engage such a top piece when positioned against said stop, and a plate on which said catch is pivoted provided with a cam acting on said catch as it is swung to engaging position clamping it upon said top piece.

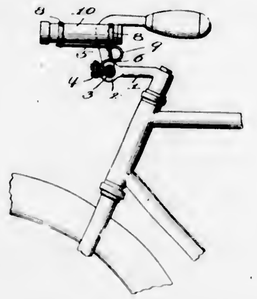
2. The combination with a table top, of a pair of standard members comprising uprights connected at their upper

ends by top pieces formed integrally therewith, said uprights being converged toward the centers thereof, braces connecting the adjacent central portions of said uprights, a base piece having upturned ends to which the lower ends of said uprights are pivotally connected side by side so that said standard members may be collapsed upon each other or their upper ends spread apart, a hinge connecting the top piece of one standard member to the under side of the table top so that the standard may be collapsed and swung against the under side of the table top, and means on said table top engaging the top piece of the other standard member whereby the standard is supported in its erected position.

3. The combination with a table top, of a pair of standard members comprising uprights connected at their upper ends by top pieces formed integrally therewith, a base piece having upturned ends to which the lower ends of said uprights are pivotally connected side by side so that said standard members may be collapsed upon each other or their upper ends spread apart, a hinge connecting the top piece of one standard member to the under side of the table top so that the standard may be collapsed and swung against the under side of the table top, and means on said table top engaging the top piece of the other standard member whereby the standard is supported in its erected position.

4. The combination with a table top, of a pair of standard members comprising uprights connected at their upper ends by top pieces, said uprights being pivotally connected at their lower ends so that the standards may be collapsed upon each other or their upper ends spread apart, a hinge connection for the top piece of one standard with the under side of the table top so that the standard may be collapsed against the under side thereof, a stop for the top piece of the other standard member positioned to support the standard in its erected position with the top piece against the under side of the table, said stop and hinge being positioned so that the lower ends of the uprights lie in a plane centrally between their upper ends when the standards are erected, a pivoted catch adapted to engage such top piece when positioned against said stop, and a plate on which said catch is pivoted provided with a cam acting on said catch as it is swung to engaging position clamping it upon said top piece.

1,222,458. HOLDER FOR LAMPS OR HEADLIGHTS. JOHN A. PETERSON, Alameda, Cal. Filed Mar. 7, 1916. Serial No. 82,683. (Cl. 210—58.)

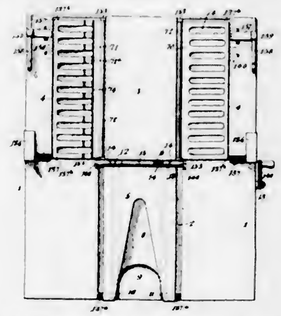


1. An electric-battery-lamp holder for bicycles or motorcycles comprising an elongated base provided with upright lamp clamps and with an under-turned attachment arm extending from one end thereof which provides for the springing or yielding of the base in consequence of the vibration of the cycle frame.

2. An electric-battery-lamp holder for bicycles or motorcycles comprising an elongated base provided with upright lamp clamps and having at its rear end a regularly curved depending bow terminating in a relatively short attachment arm disposed under said base.

3. An electric battery lamp holder for bicycles or motorcycles comprising an elongated base provided with upright lamp clamps and with an under-turned attachment arm adapted for retaining engagement by the usual clamping nut which secures the handle bar at the center thereof in the usual handle bar clamping sleeve at the upper end of the front fork.

1,222,459. MACHINE FOR FOLDING PAPER. WEBSTER MONROE PHILLIPPIE, Newbern, N. C. Filed July 6, 1915. Serial No. 38,236. (Cl. 270—61.)



1. In a paper folding machine, a folding leaf movable in a direction to double the paper sheet upon itself and there hold it, another folding leaf movable in a direction transverse to the direction of movement of the first leaf to produce a fold in the leaf of less than half its width, a holding finger movable into position to hold the second folded portion of the sheet in the folded condition for the return of the second folding leaf to normal position, a third folding leaf movable in a direction opposite to the second folding leaf to produce a third folded portion of the sheet in overlying relation to the second folded portion, and a second holding finger for retaining the third folded portion in position and permitting the return of the third leaf to normal position.

2. A machine for folding sheets of paper into smaller compass, comprising a movable primary folding leaf, oppositely movable secondary folding leaves opening in sequence and having the direction of movement transverse to that of the primary folding leaf, and holding fingers also movable in sequence and in the same direction and to a like extent to the movement of the primary folding leaf, each holding finger coöperating with and following a respective one of the secondary folding leaves in the order of movement.

3. A machine for folding sheets of paper, comprising a support for the paper sheet, clamp members for engaging the paper sheet on opposite sides at points about midway of its length, a primary folding leaf movable with relation to the sheet to fold it upon itself intermediate of its length, a folding leaf in position to engage the paper sheet first folded by the first leaf and fold it from one side upon said leaf, a holding finger movable with relation to the second folded leaf to engage and hold the second folded portion of the paper to permit the return of the second folding leaf to normal position, a third folding leaf movable oppositely to the second folding leaf for producing a third fold in the paper upon the second folded portion, and a second holding finger to hold the third fold upon the second fold for permitting the third folding leaf to return to normal position.

4. A machine for folding paper sheets, comprising a folding member for engaging a sheet and folding it upon itself transversely of its length, other folding members for folding the primarily folded sheet in opposite directions upon itself and upon the first folding member, means for holding the folded sheet on the first folding member and permitting the return of the other folding means to initial position and for the return of the first folding means with the folded sheet thereon to the initial position of the first-folding means.

5. A machine for folding sheets of paper, comprising a receptacle to support the sheet of paper to be folded, clamp means for engaging the paper sheet in substantially the line of the first fold, means for doubling the paper sheet upon itself in the line of the clamp means and for holding the paper temporarily in such position, oppositely movable folding means for folding the doubled sheet from opposite sides upon itself and timed to operate in succession, and holding fingers timed to operate each subsequent to a respective one of the second-named folding means for holding the folds thus produced while the second-named folding means are returned to initial position.

[Claims 6 to 21 not printed in the Gazette.]

1,222,460. EARTH-AUGER. DAVE T. PHILLIPS, Celina, Tex. Filed Aug. 9, 1916. Serial No. 114,015. (Cl. 255—67.)



1. In an earth auger, a bit provided at its upper end with a socket and laterally extending lugs at diametrically opposite sides.

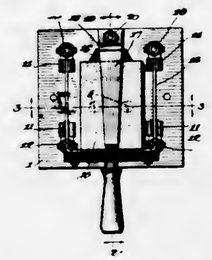
2. In an earth auger, a bit having at its upper end an internally threaded socket provided with laterally extending lugs at diametrically opposite sides, an axial shaft threadedly engaging the socket wings of semi-circular cross section each having at its lower end a cutting member, radial bars secured on said cutting members and having forked ends, and pivot members connecting the forks with the lugs of the socket member.

3. In an earth auger, a bit having a socket at its upper end, an axial shaft engaging said socket, wings hingedly connected with the socket, each wing having at its upper end a laterally extending arm provided with an upwardly extending finger near the free end thereof, a flanged collar fixed on the axial shaft and having notches in opposite sides thereof, and a cap slidable on the shaft above the flanged arm and adapted for engagement therewith.

4. In an earth auger, a bit having a socket at its upper end, an axial shaft engaging said socket, wings hingedly connected with the socket, each wing having at its upper end a laterally extending arm provided with an upwardly extending finger near the free end thereof, a flanged collar fixed on the axial shaft and having notches in opposite sides thereof, and a cap slidable on the shaft above the flanged arm and adapted for engagement therewith, the axial shaft having at its upper end a transversely disposed handle.

1,222,461. LIGHTNING-ARRESTER FOR TELEPHONES. LEE H. PIERSON and HERMAN C. WILLITZ, Janesville, Wis. Filed June 8, 1916. Serial No. 102,558. (Cl. 175—30.)

1. In a lightning arrester of the class described, the combination of a base, said base being provided with a comparatively deep pocket, said base being further provided with a countersunk ledge formed at a distance from the outer surface of said base and also spaced from the inner surface of said pocket, line carbons carried by said pocket in spaced relation, said carbons being adapted to be connected to a main line or circuit, switch means carried upon said base, means electrically connecting said switch means to said line carbons, a carbon fitting over the outer portions of said pocket and resting snugly upon said ledge, whereby said last-mentioned carbon will be held against side displacement, said last mentioned carbon being adapted to be connected to the ground, means for removably holding said ground carbon in position upon said ledge, said switch means being adapted to open and close a circuit, said last-mentioned carbon being adapted to receive excessive electricity from said first-mentioned carbons for causing the excessive electricity to be discharged into the ground.



2. In a device of the class described, the combination of a base having a deepened pocket formed therein, said base being further provided with a ledge formed at a distance from the surface of said base, carbons fixedly carried within said pocket in spaced relation, said carbons being adapted to be connected to a main line or circuit, said carbons terminating at a distance from said ledge, a carbon positioned upon said ledge, a spring arm carried by said base and bearing upon said last-mentioned carbon for removably holding the same upon said ledge, whereby said spring arm will hold said last-mentioned carbon from falling and said base will hold the last mentioned carbon from side displacement, said ground carbon being spaced from said first-mentioned carbons, a ground circuit means connected to said spring arm, whereby when excessive electricity passes over the device the excessive charge will pass over said first-mentioned carbons and will jump the space between said first-mentioned carbons and said last-mentioned carbon passing over said last mentioned carbon to said spring arm into said last-mentioned means to be directed into the ground.

3. In a device of the class described, the combination of a base having a deepened pocket formed therein, said base being further provided with a ledge formed at a distance from the surface of said base, carbons fixedly carried within said pocket in spaced relation, said carbons terminating at a distance from said ledge, a carbon positioned upon said ledge, a spring arm carried by said base and bearing upon said last-mentioned carbon for removably holding the same upon said ledge, whereby said spring arm will hold said last-mentioned carbon from falling and said base will hold the last-mentioned carbon from side displacement, said ground carbon being spaced from said first-mentioned carbons, a switch means carried upon said base and being connected to said line carbons, a ground circuit means connected to said spring arm, whereby, when an excessive charge of electricity passes over the device the excessive charge will pass over said first-mentioned carbons and will jump the space between said first-mentioned carbons and said last-mentioned carbon passing over said ground carbon to said spring arm into said last-mentioned means to be directed into the ground, and means for facilitating the discharge of crumbled or burnt carbon from within said pocket there-

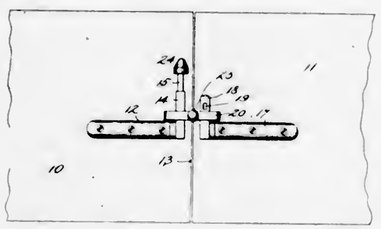
by insuring an unobstructed space between said first-mentioned carbons and said last-mentioned carbon at all times.

4. In a device of the class described, the combination of a base having a deepened pocket formed therein, said base being further provided with a ledge formed at a distance from the surface of said base, carbons fixedly carried within said pocket in spaced relation, said carbons terminating at a distance from said ledge, a carbon positioned upon said ledge, a spring arm carried by said base and bearing upon said last-mentioned carbon for removably holding the same upon said ledge, whereby said spring arm will hold said last-mentioned carbon from falling and said base will hold the last-mentioned carbon from side displacement, said ground carbon being spaced from said first-mentioned carbons, a switch means carried upon said base and being connected to said first-mentioned carbons, a ground circuit means connected to said spring arm, whereby when an excessive charge of electricity passes over the device the excessive charge will pass over said first-mentioned carbons and said last-mentioned carbon passing over said last-mentioned carbon to said spring arm into said last-mentioned means to be directed into the ground, said base being provided with a slanting wall extending from the outer surface thereof to a point adjacent the inner portions of said pocket, whereby a space will be provided between said slanting wall and said last-mentioned carbon, thereby allowing the burnt or crumbled carbon within said pocket to be passed along the slanting wall and be discharged, thus insuring at all times a space between said first-mentioned carbons and said last-mentioned carbon.

5. In a lightning arrester of the class described, the combination of a base, said base having a comparatively deep pocket, said base also having a countersunk ledge formed at a distance from its outer surface and also spaced from the inner surface of said pocket, carbons carried within said pocket, said carbons being adapted to be connected to a main line or circuit, a carbon resting upon said ledge, said last-mentioned carbon being spaced from said first-mentioned carbons, said last-mentioned carbon being adapted to be connected to the ground, whereby an excessive charge of electricity passing over said first-mentioned carbons will jump the space between said first-mentioned carbons and said last-mentioned carbon so as to pass over said last-mentioned carbon and be directed into the ground.

[Claims 6 to 13 not printed in the Gazette.]

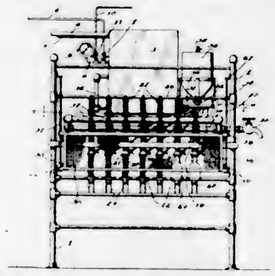
1,222,462. LATCH-LOCK. JOHN PINDROH, Mulberry, Kans. Filed Dec. 29, 1916. Serial No. 139,610. (Cl. 16—44.)



1. A door or gate fastening comprising a pair of tapering co-acting bars arranged in a horizontal line with their thicker ends adjacent, one of said bars being attached to the gate to be secured, an upright post on the thicker end of each of said bars, said posts being arranged in parallel, a link adapted to fit over said posts and hold the same together, a finger piece on said link for lifting the same, a standard on one of said posts, about which said link may be turned when disengaged from the opposite post, and means for preventing the disengagement of the link from the standard.

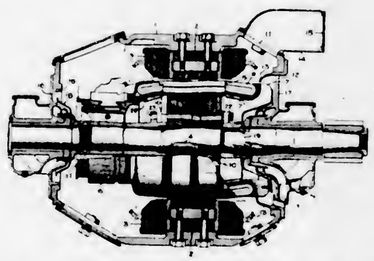
2. A door or gate fastening comprising a bar adapted to be secured to a gate, a similar co-acting bar for attachment to a companion door or gate or to a fixed member, a post of rectangular cross section extending upwardly from adjacent ends of said bars and arranged in parallel, a standard continuous from the upper end of one of said posts having a threaded stem on its end, an opening being formed in the other bar, a link having spaced openings therein of the same shape as the cross section of the posts adapted to fit snugly over said posts when the gate or gates are closed, and a cap nut adapted to be secured on said threaded stem to hold said link against removal from said standard when disengaged from the opposite post.

1,222,463. BOTTLE-FILLING APPARATUS. ACHILLE PINNOLA, Ravena, N. Y. Filed June 23, 1915. Serial No. 35,829. (Cl. 226—15.)



A bottle filling apparatus including a frame, a series of fixed depending filling nozzles at the front of the frame, a liquid reservoir at the upper rear portion of the frame, a series of bottle supports disposed beneath the nozzles for coöperation therewith, vertically swinging levers pivotally mounted on the frame and carrying said supports and having operating handles projecting outwardly therefrom, springs for moving the levers in an upward direction toward the nozzles, a horizontal transverse feed pipe communicating with the reservoir, a horizontal transverse distributing pipe communicating at its ends with the feed pipe, the latter being centrally in communication with said reservoir, and valved filling tubes leading from said distributing pipe to the respective nozzles.

1,222,464. DYNAMO-ELECTRIC MACHINE. EDWARD D. PRIEST, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 18, 1912. Serial No. 671,903. (Cl. 172—36.)



1. In a dynamo electric machine, an inclosing casing provided with inlet and outlet openings therein at one end only, and with means for separating said openings, a field magnet provided with field windings, a shaft having bearings in said casing, an armature mounted on said shaft and provided with a commutator structure at one end, said armature and commutator structure having longitudinally extending air passages therethrough, and

a fan member at the end of said armature away from said commutator structure and arranged to draw air into said dynamo electric machine through said inlet opening, over the field windings, over the exterior surfaces of the armature and commutator, through the longitudinally extending passages in the commutator structure and armature, and to exhaust the air out through said outlet opening.

2. In a dynamo electric machine, an inclosing casing provided with inlet and outlet openings therein at one end only, and with means for separating said openings, a field magnet provided with field windings, a shaft having bearings in said casing, an armature mounted on said shaft and provided with a commutator structure, said armature and commutator structure having longitudinal air passages extending therethrough, and an end head at the end of said armature away from said commutator for supporting the armature windings, said end head having vanes arranged to act as a centrifugal blower to draw air into said dynamo electric machine through the inlet opening, over the field windings, over the exterior surfaces of the armature and commutator, through the longitudinal passages in the commutator structure and armature, and to exhaust the air out through said outlet opening.

3. In a dynamo electric machine, an inclosing casing provided with inlet and outlet openings therein at one end only and with a diaphragm for separating said openings, a field magnet provided with field windings, a shaft having bearings in said casing, an armature mounted on said shaft provided with a commutator structure at one end, said armature and commutator structure having longitudinally extending air passages therethrough, and a fan member at the end of said armature away from said commutator structure and arranged to draw air into said dynamo electric machine through said inlet opening, over the field windings, over the exterior surfaces of the armature and commutator, through the longitudinally extending passages in the commutator structure and armature, and to exhaust the air out through said outlet opening.

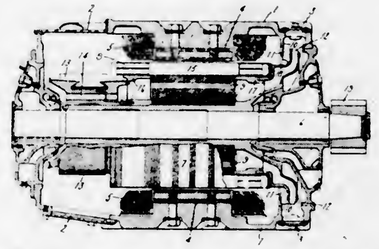
4. In a dynamo electric machine, an inclosing casing provided with separate inlet and outlet openings therein at one end, a field magnet provided with field windings, a shaft having bearings in said casing, an armature mounted on said shaft provided with longitudinal air passages extending through the laminations thereof, a commutator structure at one end of said armature having air passages extending longitudinally therethrough and forming with the passages through the armature laminations a continuous air duct, a fan member arranged to draw air into said dynamo electric machine through said inlet opening, over the field windings, over the exterior surface of the armature and commutator, through said air duct and to discharge the air through said outlet opening, and means for separating said outlet opening from the inlet opening.

5. In a dynamo electric machine, an inclosing casing provided with separate inlet and outlet openings therein at one end, a field magnet provided with field windings, a shaft having bearings in said casing, an armature mounted on said shaft provided with longitudinal air passages extending through the laminations thereof, a commutator structure at one end of said armature having air passages extending longitudinally therethrough and forming with the passages through the armature laminations a continuous air duct, an exhaust fan located between said air duct and the outlet opening, and a flange on said casing coöperating with a member carried by said shaft to separate said outlet opening from the inlet opening.

[Claims 6 to 8 not printed in the Gazette.]

1,222,465. DYNAMO-ELECTRIC MACHINE. EDWARD D. PRIEST, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 5, 1914. Serial No. 864,975. (Cl. 172—286.)

1. A dynamo electric machine comprising an inclosing casing provided with inlet and outlet openings in opposite ends thereof, field magnet poles projecting from said casing, field windings on said poles, a shaft having bearings in said casing, an armature mounted on said shaft and provided with a commutator structure at one end, said armature and commutator structure having longitudinally extending communicating air passages therethrough, inner and outer radial fan members carried by said armature shaft at one end of said armature, said inner fan member extending beyond the periphery of the armature and adapted to draw air into the dynamo electric machine through said inlet opening or openings and to force it over said field windings between said field poles and over the exterior surfaces of said commutator and armature and out through said outlet opening, said outer fan member having an intake opening communicating only with the passages in the armature and commutator structure, and a flange carried by said casing adjacent to said outlet opening or openings coöperating with the periphery of said inner fan member at the inner end thereof.



2. A dynamo electric machine comprising an inclosing casing provided with inlet and outlet openings in opposite ends thereof, field magnet poles projecting from said casing, field windings on said poles, a shaft having bearings in said casing, an armature mounted on said shaft provided with a commutator structure at one end, said armature and commutator structure having longitudinally extending communicating air passages therethrough, inner and outer radial fan members carried by said armature shaft at the end of said armature away from said commutator structure, said inner fan member extending beyond the periphery of the armature and adapted to draw air into the dynamo electric machine through said inlet opening or openings and to force it over said field windings between said field poles and over the exterior surfaces of said commutator and armature and out through said outlet opening, said outer fan member having an intake opening communicating only with the passages in the armature and commutator structure, and a flange carried by said casing adjacent to said outlet opening or openings coöperating with the periphery of said inner fan member at the inner end thereof.

3. A dynamo electric machine comprising an inclosing casing provided with inlet and outlet openings in opposite ends thereof, field magnet poles projecting from said casing, field windings on said poles, a shaft having bearings in said casing, an armature mounted on said shaft provided with a commutator structure at one end, said armature and commutator structure having longitudinally extending communicating air passages therethrough, an end head at the end of said armature away from said commutator, said end head having a flange extending beyond the periphery of the armature, inner and outer radial fan members, one mounted on one side of said flange and the other mounted on the other side of said flange, said inner fan member being adapted to draw air into the dynamo electric machine through said inlet opening or openings and to force it over said field winding between said field poles and over the exterior surfaces of said commutator and armature and out through said outlet opening, said outer fan member having an intake opening communicating only with the passages in the armature and commutator structure, and a flange carried by said casing adjacent to said outlet opening or openings coöperating with the

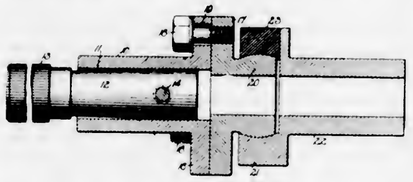
periphery of said inner fan member at the inner end thereof.

4. A dynamo electric machine comprising an inclosing casing provided with inlet and outlet openings in opposite ends thereof, field magnet poles projecting from said casing, field windings on said poles, a shaft having bearings in said casing, an armature mounted on said shaft and provided with a commutator structure at one end, said armature and commutator structure having longitudinally extending communicating air passages therethrough, radial fan members carried by said armature shaft at one end of said armature, one of said fan members extending beyond the periphery of the armature and adapted to draw air into the dynamo electric machine through said inlet opening or openings and to force it over said field windings between said field poles and over the exterior surfaces of said commutator and armature and out through said outlet opening, another of said fan members having an intake opening communicating only with the passages in the armature and commutator structure, and a flange carried by said casing between said outlet opening or openings and said field windings coöperating with the periphery of said first mentioned fan member.

5. A dynamo electric machine comprising an inclosing casing provided with inlet and outlet openings in opposite ends thereof, field magnet poles projecting from said casing, field windings on said poles, a shaft having bearings in said casing, an armature mounted on said shaft provided with a commutator structure at one end, said armature and commutator structure having longitudinally extending communicating air passages therethrough, radial fan members carried by said armature shaft at the end of said armature away from said commutator structure, one of said fan members extending beyond the periphery of the armature and adapted to draw air into the dynamo electric machine through said inlet opening or openings and to force it over said field windings between said field poles and over the exterior surfaces of said commutator and armature and out through said outlet opening, another of said fan members having an intake opening communicating only with the passages in the armature and commutator structure, and a flange carried by said casing between said outlet opening or openings and said field windings coöperating with the periphery of said first mentioned fan member.

[Claim 6 not printed in the Gazette.]

1,222,466. ADJUSTABLE FLOATING-REAMER HOLDER. ROBERT RAULTON, Valley Falls, R. I. Filed Oct. 18, 1916. Serial No. 126,251. (Cl. 77—55.)



1. A reamer and reamer-holder including a reamer support having a bore for the reamer shank, a reamer having a shank fitting said bore snugly at the rear end and having clearance forward of said rear end for floating movement in the holder, a ball flange on the face of which the said support is variously adjustable in a plane parallel with said face, a socket element receiving said ball and having means to secure the same in a turret, said socket including a ball clamp adapted to rigidly clamp the ball of said ball flange in adjusted position.

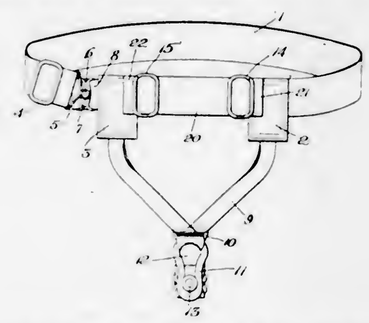
2. A reamer and reamer holder including a reamer support having a bore to receive a reamer shank, a reamer having a shank fitting said bore snugly at the rear end and having clearance forward of said rear end for floating movement in the holder, a transverse pin extending through the said holder and reamer shank, a ball flange on the face of which the said support is variously adjustable in a plane parallel with said face, a socket element receiving said ball and having means to secure the same in a turret, said socket including a ball clamp adapted to rigidly clamp the ball of said ball flange in adjusted position.

3. A reamer holder including a reamer support having a bore adapted to receive the shank of a reamer, a ball flange on the face of which the support is variously adjustable in a plane parallel with the said face, and a socket element receiving said ball and having means to secure the same in a turret, said socket including a ball clamp adapted to rigidly clamp the ball of said ball flange in adjusted position.

4. A reamer holder including a reamer support having a bore adapted to receive the shank of a reamer, a transverse pin in said holder adapted to secure the reamer shank thereto, a ball flange on the face of which the support is variously adjustable in a plane parallel with said face, and a socket element receiving said ball and having means to secure the same in a turret, said socket including a ball clamp adapted to rigidly clamp the ball of said ball flange in adjusted position.

5. A reamer holder including a reamer support having a bore to receive a reamer, a flange, means to fasten the support to said flange for variously adjusting the same in a plane parallel with said face, means to secure the holder in a turret, elements forming a universal connection between said flange and said last-mentioned means, and means to prevent movement of the said universal elements to hold the same in a given adjustment.

1,222,467. GARTER. LEO L. ROGERS, Boston, Mass., assignor to E. C. Moore, New York, N. Y. Filed Aug. 16, 1916. Serial No. 115,320. (Cl. 241—6.)

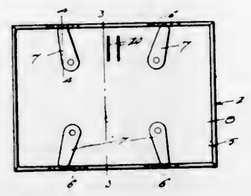


1. As an article of manufacture, a garter comprising a non-resilient leg-encircling member, a pad at each end of said member, a depending strip united to said pads, a stocking clasp carried by said strip and a reversible and detachable double elastic member adjustably secured to each pad at the ends of the non-elastic member, thereby providing elasticity to the said member.

2. As an article of manufacture, a garter comprising a non-resilient leg-encircling member, a pad at each end of said member carrying engaging devices, a double strip depending from said pads and carrying a stocking clasp jointly and slidably thereon, a clasp on each of said pads and a reversible double elastic member adjustably secured to said clasps, in combination with means to detach the non-resilient member intermediate its ends.

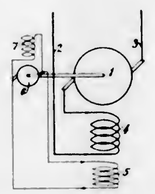
1,222,468. SIGN-HOLDER. LOUIS ROSEN, Jacksonville, Fla. Filed Sept. 23, 1916. Serial No. 121,747. (Cl. 40—156.)

A sign holder comprising a substantially rectangular frame, a flange formed on said frame, a glass plate within the frame and resting upon the flange, said frame having its sides bent back upon themselves and the ends bearing against the glass plate and having a plurality of slots therein, a base positioned within said frame, spring



tongues pivoted to the base and in engagement with the slots to retain the base in the frame.

1,222,469. VARIABLE-SPEED ELECTRIC MOTOR. EMANUEL ROSENBERG, Altrincham, England, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 9, 1911. Serial No. 653,714. (Cl. 171—224.)



1. The combination with a compound wound direct current motor, of an exciter for one of the windings of said motor, the speed of which varies with that of the motor and which is itself excited by current from a winding connected as a shunt to its armature.

2. The combination with a direct current motor having a series field magnet winding, a winding supplied with current from a source of constant voltage, and a third winding of an exciter for said third winding the speed of which varies with that of the motor and which is itself excited by current from a winding connected as a shunt to its armature.

3. The combination with a direct current motor having a plurality of field magnet windings, one of which is in series relation to its armature, of an exciter for another of said field magnet windings, the speed of which varies with that of the motor and which is itself excited by current from a winding connected as a shunt to its armature.

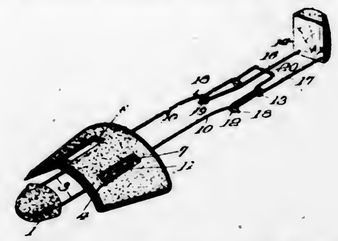
4. The combination with a direct current motor having a plurality of field magnet windings, one of which is in series relation to its armature, of an exciter for another of said windings having a field winding connected as a shunt to its armature and operating at speeds corresponding to the speeds of the motor.

5. The combination with a compound wound electric motor, of an exciter for one of the field windings of the motor that has a field winding connected as a shunt to its armature and the speed of which varies with that of the motor.

[Claim 6 not printed in the Gazette.]

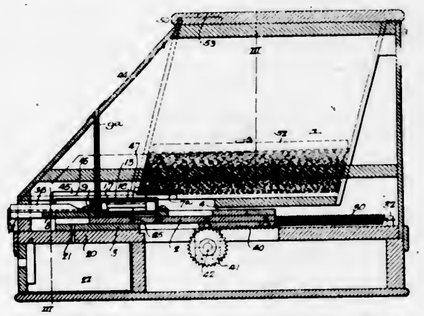
1,222,470. SHOE-TREE. WALDO A. ROSS, Washington, D. C. Filed Oct. 2, 1916. Serial No. 123,426. (Cl. 12—128.)

A shoe tree comprising a plate, a toe member pivoted to said plate, a wire loop pivoted to the rear end of the plate having eyes intermediate its ends, a counter-member having forwardly extending arms and laterally turned



ends passing through the eyes, and lugs carried by the laterally turned ends on the inside of the eyes.

1,222,471. VENDING APPARATUS. HARRY RUBENSTEIN, Philadelphia, Pa.; said Rubenstein assignor to himself, Jacob Edgar Seifert, and Joseph Wagner, Jr., Philadelphia, Pa. Filed Aug. 5, 1916. Serial No. 113,381. (Cl. 194—79.)



1. The combination, in a vending machine, of a receptacle for flat units in superposed position, an outwardly movable slidably mounted bottom for said receptacle, movable members carried at the ends of said slidable bottom for engaging the vendible units to withdraw the same upon the outward movement thereof, and means for placing said engaging members in the operative or unit-engaging position when moved in one direction and for withdrawing the sliding bottom with said members in operative engagement with the lowermost vendible unit whereby the latter may be extracted, when moved in the opposite direction.

2. The combination, in a vending machine, of a receptacle for flat units in superposed position, an outwardly movable slidably mounted bottom for said receptacle, movable members normally inactive carried at the ends of said slidable bottom for engaging the vendible units to withdraw the same upon the outward movement thereof, and slidable means for simultaneously placing said engaging members in the operative or unit-engaging position when moved in one direction and for withdrawing the slidable bottom with said members in the operative position when moved in another direction; said members moving with the slidable bottom and carrying out the lowermost vendible unit.

3. The combination, in a vending machine, of a casing adapted to receive superposed vendible units, an outwardly movable slidably mounted bottom for said casing, means tending to hold said bottom in one position, article-engaging members normally inactive carried at the ends of said sliding bottom, means for placing said engaging members in the operative engaging position, and a handle for operating said sliding bottom after the insertion of a

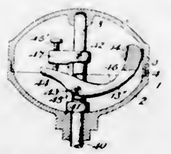
coin; said coin serving to lock the handle, engaging members and sliding bottom whereby the latter may be pulled out by the handle; the article engaging members carrying out one of the vendible units.

4. The combination, in a vending machine, of a casing adapted to receive superposed vendible units, a sliding bottom for said casing, means tending to hold said bottom in one position, article-engaging members normally inactive carried by said sliding bottom, means for placing said engaging members in the operative position and for locking the same in such position after the insertion of a coin, a handle, means for holding the handle when the latter is withdrawn, and means for imparting parallel movement to the ends of the sliding bottom.

5. In a vending machine, the combination of a casing receiving vendible units, a sliding bottom frame for the same, pivotally mounted engaging members carried by said bottom frame having arms adapted to engage vendible units to withdraw the same, means for turning said engaging members upon their pivots, said members being connected so that movement imparted to one will be transmitted to the other, and a torsion spring carried by one of said engaging members for moving both to the inoperative position.

[Claims 6 to 11 not printed in the Gazette.]

1,222,472. MASSAGE APPARATUS. JOHN SABATINO, New York, N. Y. Filed Apr. 24, 1914. Serial No. 834,137. Renewed Sept. 7, 1916. Serial No. 118,943. (Cl. 128—16.)



1. In a massage device of the character described, a housing, a power shaft extending into said housing, a pivotally mounted arm carried by said shaft and also rotated by said shaft, said arm being heavier at one end than the other, and a traveling member arranged on said shaft and rotated thereby, said traveling member being independently rotatable so as to move independently of said power shaft for adjusting the position of said arm.

2. In a massage device of the character described, a casing, said casing being provided with an exterior bearing box on one side, and an interior bearing box on the opposite side, a power shaft extending through said exterior bearing box and into the interior bearing box, an arm pivotally connected with said power shaft within said housing, a rotatable traveling member coacting with said arm for adjusting the position thereof, and a weight arranged on the end of said arm.

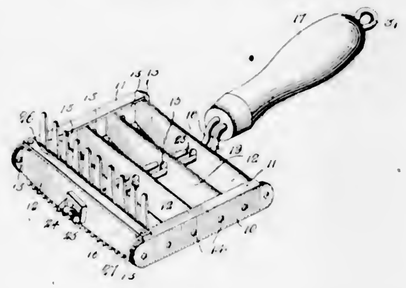
3. In a massage device of the character described, a power shaft, a housing surrounding one end of said power shaft, said housing being journaled on the power shaft at two points, a notch arranged in said power shaft interiorly of the housing, a pivotally mounted arm arranged in said notch, said arm being provided with an extension on one end and an enlargement on the opposite end, and an adjusting member engaging said extension, said adjusting member being rotatable and movable longitudinally of said power shaft.

4. In a massage device of the character described, a casing, a rotatable shaft having one end projecting into said casing, a pivotally mounted arm connected with the shaft in the casing, said arm being formed with an enlargement at one end, and an extension on the opposite end, and a rotatable traveling member connected with said power shaft and engaging said extension for adjusting said arm and varying the vibratory action of the arm and weight.

5. In a massage apparatus of the character described, a rotatable power shaft, a pivotally mounted arm formed heavier on one side of its pivotal point than the other, means connecting said power shaft and said arm whereby said power shaft will rotate said arm, and a rotating traveling member engaging the lighter end of said arm for adjusting the position of the arm so as to move the heavier end of the arm nearer said shaft and thereby vary the centrifugal action of the arm.

[Claims 6 to 10 not printed in the Gazette.]

1,222,473. ADJUSTABLE CURRYCOMB. WHITNEY W. SAUNDERS, Eyremore, Alberta, Canada. Filed Oct. 10, 1916. Serial No. 124,875. (Cl. 119—88.)



1. In a currycomb, the combination of a set of straight edged blades, a set of toothed edged blades, a rotatable handle, an eccentric connection between one set of blades and the handle at one side of the axis of rotation of the latter, a second eccentric connection between the opposite set of blades and the handle at the opposite side of said axis of rotation thereof, and means for holding said blades for relative sliding movement in substantially parallel planes.

2. In a currycomb, the combination of a plurality of alternately arranged straight edged and toothed blades, the straight edged blades being provided with pivotal openings and vertical slots, the toothed blades being provided with oppositely disposed vertical slots and pivotal openings therethrough, and a handle provided with a pair of substantially parallel rods extending through said slots and said pivotal openings for connection with the blades, the handle being adapted to be twisted to rock the rods in the pivotal openings and shift the blades alternately into operative position.

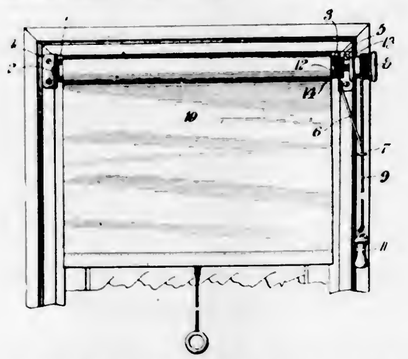
3. In a currycomb, the combination of a plurality of straight-edged blades, a plurality of toothed edged blades, means for holding said blades for relative sliding movement in substantially parallel planes, a rotatable handle, an eccentric connection between one side of said handle and one set of said blades, and a second eccentric connection between the opposite side of said handle and the opposite set of said blades.

4. In a currycomb, the combination of a plurality of alternately arranged straight edged and toothed blades, said blades being provided with alternately registering pivotal openings and vertical slots, a handle, and a pair of rods extending from the handle and having connection with said blades to support the same, one of said rods being pivotally mounted in the pivotal openings of one set of blades and extending through the slots registering therewith, and the opposite rod extending through the slots of the opposite blades and having pivotal connection with the opposite blades registering therewith, said handle being adapted to be twisted to rock said rods in the pivotal openings of the alternately arranged blades to advance the alternate sets one at a time into operative position.

5. A currycomb including a frame having fixed straight edged blades therein, toothed blades slidably mounted in the frame for engagement against said straight-edged blades, a supporting handle, an eccentric pivoted connection between said handle and said slidable blades, and a separate pivotal connection between said handle and said fixed blades.

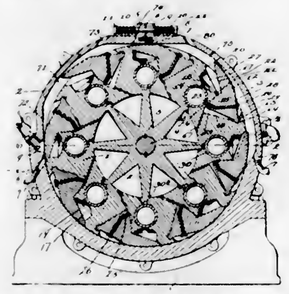
[Claims 6 and 7 not printed in the Gazette.]

1,222,474. WINDOW-SHADE ROLLER. GRANVILLE E. SCOTT, Foreman, Ark., assignor of one-half to William F. Anderson, Foreman, Ark. Filed May 12, 1916. Serial No. 97,140. (Cl. 156—34.)



In a device of the class described, the combination with spaced brackets having arms thereon and a shade roller having spindles at the ends thereof engaged by said arms, of a spring-pressed disk on one of said spindles engaging the outer face of one of said arms, a second disk on said spindle engaging the inner face of the arm on said bracket and bearing against an end on said roller, said disks being of convex-concavo shape in cross section and having their convex faces arranged in opposed relation to facilitate the passing of the arm on said bracket between the disks when the shade roller is being mounted in the brackets.

1,222,475. ROTARY INTERNAL-COMBUSTION ENGINE. CHARLES W. SEARS, Omaha, Nebr. Filed Apr. 19, 1916. Serial No. 92,184. (Cl. 123—17.)



1. An internal combustion engine comprising a rotor having a combustion chamber therein, a stator, means carried by the rotor for compressing an explosive charge, means for introducing a compressed charge from said compressing means into said combustion chamber and operative subsequently to interrupt communication between the charge compressing means and said chamber, and means for causing said charge when exploded to act in a peripheral direction upon the rotor.

2. An internal combustion engine comprising a rotor, a stator, a combustion chamber in the rotor, means for igniting an explosive charge in said chamber, means for confining a compressed explosive charge in said chamber prior to ignition thereof, and charge compressing means for introducing a compressed explosive charge into the combustion chamber and having means for cutting it off from communication with said chamber prior to ignition of such charge.

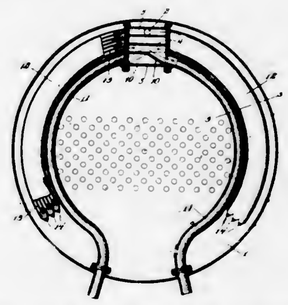
3. An internal combustion engine comprising a rotor, a stator, a combustion chamber in the rotor, means for igniting an explosive charge in said chamber, means for confining a compressed charge in said chamber and operative to cause its release and ignition, and charge compressing means for supplying a compressed explosive charge for said chamber and adapted to be put out of communication with said chamber prior to the explosion of such charge in the combustion chamber.

4. An internal combustion engine comprising a rotor, a stator, a chamber being provided in the periphery of the rotor, charge compressing means carried by the rotor for supplying a compressed explosive charge to said chamber, means for confining such charge in said chamber, and means for igniting the charge in said chamber after communication between the latter and the compressed charge-supplying means has been interrupted.

5. An internal combustion engine comprising a drum having a combustion chamber, a wheel rotatably fitting in said drum and having a chamber in its periphery, means for compressing and supplying an explosive charge to the chamber in the wheel, and a member movable into a position to cover and thereby confine such charge in the latter chamber and subsequently movable into a position to cause such charge to enter the combustion chamber of the drum

[Claims 6 to 25 not printed in the Gazette.]

1,222,476. STEAM-BOILER SUPERHEATER. CHARLES SEYMOUR, Little Rock, Ark. Filed Oct. 6, 1916. Serial No. 124,163. (Cl. 122—465.)

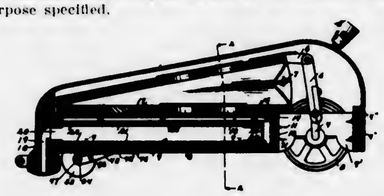


A smoke box superheater comprising a steam box connected to the steam pipe leading from the boiler and to the curved pipe connected to the engine cylinders and formed to provide chambers, and superheaters between the curved pipes and the outside sheet of the boiler and in open communication with said steam box and the pipes in the smoke box and each formed with longitudinally extending curved partitions, alternate partitions terminating short of one end of the casting and the remaining partitions terminating short of the other end of the casting to form intercommunicating passages, said passages forming a circuitous path for the same whereby the latter may be delivered through the curved pipes to the drive cylinders of the engine.

1,222,477. VACUUM-CLEANER. JOHN W. SHANAHAN and FRANCIS C. MASON, Grand Rapids, Mich., assignors to Bissell Carpet Sweeper Company, Grand Rapids, Mich. Filed Aug. 17, 1914. Serial No. 857,134. (Cl. 15—60.)

1. In a vacuum cleaner, the combination of a suitable casing provided with a suction nozzle toward the front thereof, carrying wheels toward the front end of said cas-

ing revoluble on the end of a suitable axle beneath the same, a rock shaft beneath the said casing, arms connecting said rock shaft to said axle, adjusting levers with suitable transverse slots therein, pins on said rock shaft arms extending into said slots, adjusting means on the side of said casing for adjusting said levers, and springs secured to the underside of said casing connecting to the said rod axles to urge the said carrying wheels yieldingly downward, all coacting substantially as described for the purpose specified.

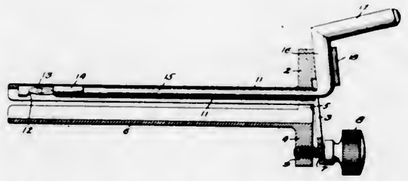


2. In a vacuum cleaner, the combination of a suitable casing provided with a suction nozzle toward the front thereof, carrying wheels toward the front end of said casing revoluble on the end of a suitable axle beneath the same, a rock shaft beneath the said casing, arms connecting said rock shaft to said axle, adjusting levers with suitable transverse slots therein, pins on said rock shaft arms extending into said slots, adjusting means on the side of said casing for adjusting said lever, and spring means to urge the said carrying wheels yieldingly downward, all coacting substantially as described for the purpose specified.

3. In a vacuum cleaner, the combination of a suitable casing provided with a suction nozzle toward the front thereof, carrying wheels toward the front end of said casing revoluble on the end of a suitable axle beneath the same, a rock shaft beneath the said casing, arms connecting said rock shaft to said axle, an adjusting lever, and adjusting means on the side of said casing for adjusting said lever, all coacting substantially as described for the purpose specified.

4. In a vacuum cleaner, the combination of a suitable casing provided with a suction nozzle toward the front thereof, carrying wheels toward the front end of said casing revoluble on the end of a suitable axle beneath the same, a rock shaft beneath the said casing, arms connecting said rock shaft to said axle, and spring means to urge the said carrying wheels yieldingly downwardly, all coacting substantially as described for the purpose specified.

1,222,478. SPECULUM. PHILIP A. SHEAFF, Philadelphia, Pa. Filed May 10, 1916. Serial No. 96,585. (Cl. 128—24.)



1. A speculum consisting of two elongated substantially semi-cylindrical dilating members having laterally projecting portions at one end and a connecting fulcrum in a transverse plane including said portions; and means for swinging one of said members on said fulcrum to separate the distant parts of the members, the parts of said dilating members adjacent their laterally projecting portions being so placed relatively to the fulcrum as to be substantially without dilating action when their distant ends are separated.

2. A speculum consisting of two elongated substantially semi-cylindrical dilating members; semi-annular pivotally engaged plates respectively mounted on one pair of the adjacent ends of said members and lying in a plane including their pivotal line when the dilating members are in their normal positions; and means operative on said plates for separating the adjacent ends of said members distant from said plates.

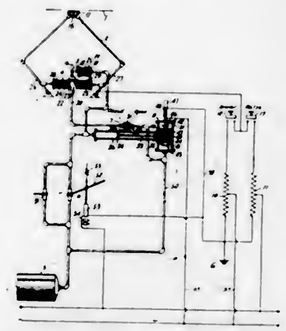
3. A speculum consisting of two elongated dilating members each having a substantially semi-annular plate at one end extending at right angles and in pivotal engagement with the other plate; and means for swinging one of said members on its pivot relatively to the other to separate their distant ends.

4. A speculum consisting of two elongated substantially semi-cylindrical dilating members each having a laterally projecting plate mounted on one end; a portion of the diametrical edge of one of the plates being concave and the corresponding edge of the other being convex to coact with said first plate as a fulcrum; with means for swinging said plates on such fulcrum to separate their distant ends.

5. A speculum consisting of two elongated substantially semi-cylindrical dilating members each having a laterally projecting semi-annular plate mounted on one end; a portion of the diametrical edge of one of the plates being concaved and the corresponding part of the other edge being convexed to coact with said first plate as a fulcrum; with means acting to hold said members together and also adjustable to swing one of them on its fulcrum so as to separate their distant ends.

[Claims 6 to 10 not printed in the Gazette.]

1,222,479. CONTROL SYSTEM. KARL A. SIMMON, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 10, 1915. Serial No. 44,751. (Cl. 191—65.)



1. The combination with a pneumatically-lowered pantograph trolley adapted to normally engage a trolley conductor, of a valve for governing the supply of air to said trolley, and an electrically-controlled pneumatically-actuated device for operating said valve.

2. The combination with a pneumatically-lowered trolley normally maintained in engagement with a trolley conductor, means for supplying air to actuate said trolley, a valve adapted to control the supply of air thereto, and an auxiliary pneumatically-actuated device for operating said valve, of an electro-magnetically-operated valve for controlling the operation of said auxiliary device, said electro-magnetically-operated valve receiving its energization from said trolley conductor.

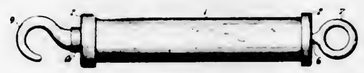
3. The combination with a pantograph trolley adapted to engage a trolley conductor, pneumatic means for lowering said trolley, means for supplying air to actuate said pneumatic means, a main valve for governing the supply of air thereto, and a pneumatically-actuated device for operating said valve, said device being adapted to open said valve at substantially the middle of its travel, of an electro-magnetically-controlled auxiliary valve energized from said trolley conductor for admitting air temporarily to the pneumatically-actuated device, whereby the main air valve is opened to cause said trolley to be lowered.

4. The combination with a normally raised pantograph trolley, and pneumatic means for lowering said trolley, of a valve for governing the operation of said pneumatic means, an auxiliary electrically-controlled fluid-actuated device associated with said valve and adapted to cause said valve to be opened when temporarily energized, said electrically-controlled device being supplied with energy from said trolley conductor.

5. The combination with a pantograph trolley normally adapted to engage a trolley conductor, and a fluid-actuated device for lowering said trolley, of electromagnetically-controlled fluid-operated means receiving energy from said trolley conductor for governing the supply of air to said lowering device, said lowering device being adapted to continue to lower said trolley after the trolley has left the trolley conductor.

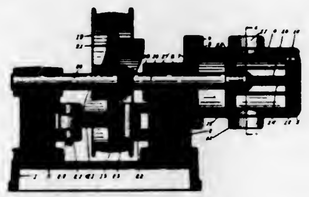
[Claims 6 to 12 not printed in the Gazette.]

1,222,480. TOW-LINE CONNECTOR. GUY WINDOW SMITH, Oakland, Cal. Filed June 20, 1916. Serial No. 104,771. (Cl. 267—11.)



A tow line connecter comprising a cylinder, caps closing the ends of said cylinder, a relatively small cylinder within the first-mentioned cylinder and having one end projecting through one of said caps, a draw rod in the last-mentioned cylinder and having one end thereof projecting through the other cap, a coiled expansion spring within the first-mentioned cylinder surrounding said relatively small cylinder and having one end abutting the cap through which the said small cylinder projects, a collar on the inner end of said small cylinder engaging the other end of said cylinder, a second spring surrounding said draw rod and having one end in engagement with the cap through which the draw rod projects, a nut on the inner end of said draw rod engaging the remaining end of said second-named spring, the outer end of said draw rod being formed with an eye, and a hook connected to the outer end of said relatively small cylinder.

1,222,481. PUMP. KARL D. SMITH, Battle Creek, Mich., assignor to Union Steam Pump Company, Battle Creek, Mich. Filed Oct. 24, 1914. Serial No. 868,397. (Cl. 103—78.)



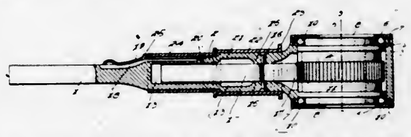
1. In a structure of the class described, the combination of a base provided with a pair of pedestals, a cylinder closed at its outer end and having an outwardly projecting flange at its inner end and opposed centrally disposed ports, a cylinder head having a central bearing arranged in one of said pedestals, the cylinder and head being removably secured to the pedestal by bolts arranged through the flange of the cylinder and the cylinder head, a piston comprising a pair of disk-like heads connected by a longitudinal wall having flanges on its edges fitting the walls of the cylinder, the width of the flange being greater than the diameter of the cylinder ports, said heads having peripheral ports on opposite sides of the said wall, a reciprocating and rotatable piston shaft, a pulley mounted on said shaft between said pedestals, cams on said pulley, and rollers on said pedestals coacting with said cams whereby the shaft is reciprocated as the pulley is rotated to reciprocate and rotate the piston.

2. In a structure of the class described, the combination of a pair of pedestals, a cylinder closed at its outer end and having opposed centrally disposed ports, a cylinder head having a central bearing arranged in one of said pedestals, the cylinder and head being removably secured to one pedestal, a piston comprising a pair of disk-like heads connected by a longitudinal wall having flanges on its edges fitting the walls of the cylinder, the width of the flanges being greater than the diameter of the cylinder ports, said heads having ports on opposite sides of the said wall, a reciprocating and rotatable piston shaft, a pulley mounted on said shaft between said pedestals, cams on said pulley, and rollers on said pedestals coacting with said cams, all coacting for the purpose specified.

3. In a structure of the class described, the combination of a pair of pedestals, a cylinder having opposed ports, a piston comprising a pair of heads connected by a longitudinal partition wall, said heads having ports on opposite sides of the said wall, a reciprocating and rotatable shaft mounted on said pedestals, a pulley mounted on said shaft between said pedestals, cams on said pulley, and rollers on said pedestals coacting with said cams whereby the shaft is reciprocated as the pulley is rotated to reciprocate and rotate the piston.

4. In a structure of the class described, the combination of a base provided with a pair of pedestals, a cylinder, a piston coacting with said cylinder, a reciprocating and rotatable shaft for said piston, a pulley mounted on said shaft between said pedestals, cams on said pulley and rollers on said pedestals coacting with said cams whereby the shaft is reciprocated as the pulley is rotated to reciprocate and rotate the piston.

1,222,482. WRENCH. WILLIAM B. SMITH, Wesleyville, Pa. Filed Mar. 25, 1916. Serial No. 86,640. (Cl. 81—61.)

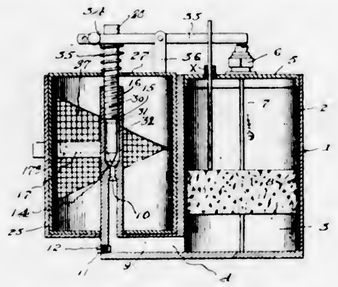


A wrench comprising a shank having a slot opening out through one end thereof, a handle formed on the other end of the shank, a cylindrical head formed on the first mentioned end of said shank and having an opening in the wall thereof coöperating with the opening in the shank, a barrel journaled in said head, annular rings secured to each end of the head to retain the barrel therein, annular flanges formed on the barrel adjacent each end and adapted to coöperate with the rings to form raceways, ball bearings located in the raceways, said barrel provided with a squared opening to receive a nut, a plurality of rack teeth formed centrally of and on the periphery of the barrel, a pair of inwardly directed shoulders formed on the walls of the slot of the shank, a pin extending through the shoulders and the shank, a dog journaled on said pin adjacent one end thereof to provide one end of greater weight than the other for forming a gravity actuated dog, and the shorter end of said dog being reduced to engage the teeth to lock the barrel against rotation in one direction.

1,222,483. CARBURETER. GRANTLEY N. SQUIRES, Greenport, N. Y. Filed Sept. 22, 1914. Serial No. 862,976. (Cl. 261—49.)

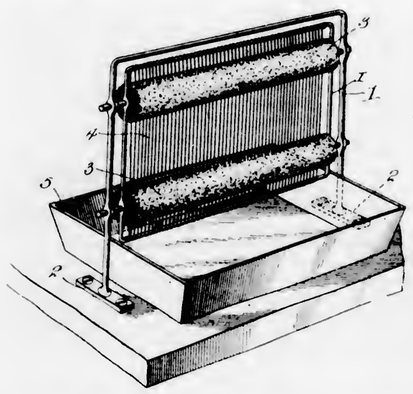
1. A carbureter comprising a float chamber, a vertically disposed hollow cylinder, the side wall of said cylinder having opposed inlet and outlet openings, a vertically

disposed hollow cylindrical valve rotatably mounted in said cylinder and having opposed inlet and outlet openings, the outlet opening being triangular with one of its sides disposed vertically, means for conveying hydro-carbon from the float chamber to a point in close proximity to the angle of said outlet opening opposite said vertical side, means for controlling the supply of hydro-carbon to the first named means, and means for simultaneously operating the said valve and controlling means.



2. A carbureter comprising a float chamber, a vertically disposed hollow cylinder closed at its lower and open at its upper end, the wall of said cylinder having opposed inlet and outlet openings, a vertically disposed hollow cylindrical valve rotatably mounted in said cylinder and constituting a closure for the open end thereof, said valve having opposed inlet and outlet openings, the outlet opening being triangular with one of its sides disposed vertically, means for conveying hydro-carbon from the float chamber to a point in close proximity to the angle of said outlet opening opposite said vertical side, means for controlling the supply of hydro-carbon to the first named means, a spring surrounding the outer end of the second named means and engaging the upper side of the cylindrical valve for normally holding said valve against accidental rotation, and means for simultaneously operating the said valve and controlling means.

1,222,484. COMB-CLEANER. ALBERT SVENSON, Englewood, N. J. Filed June 16, 1916. Serial No. 104,049. (Cl. 132—17.)



A comb cleaner comprising an outer frame, spaced brushes having shafts journaled therein, an inner frame supported by the shafts of the brushes, and wires mounted on the inner frame and disposed transversely across the brushes and the space between the same.

1,222,485. ~~LIQUID FUEL COMPOSITION AND PROCESS OF MAKING THE SAME.~~ ARTHUR W. ANNBERG, Minneapolis, Minn., assignor of one-half to Frederick C. Fisk, Williamsville, N. Y. Filed June 23, 1916. Serial No. 105,396. (Cl. 44—8.)

WITHDRAWN.

1. A liquid fuel for internal combustion engines and similar purposes comprising kerosene, anthracene and carbon bisulfid.

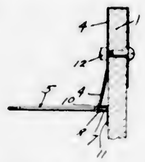
2. A liquid fuel for internal combustion engines and similar purposes comprising kerosene, anthracene, carbon bisulfid and as much water as the mixture will take up.

3. A liquid fuel for internal combustion engines and similar purposes comprising kerosene, carbon bisulfid and anthracene, the anthracene being present in the amount of about two ounces per gallon and the carbon bisulfid in the amount of about six ounces per gallon.

4. The process of making a liquid fuel for internal combustion engines and like purposes which comprises dissolving anthracene in carbon bisulfid and mixing the solution with kerosene.

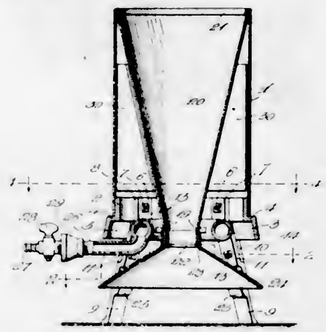
5. The process of making a liquid fuel for internal combustion engines and like purposes which comprises mixing anthracene with carbon bisulfid in the presence of moisture and dissolving the solution so formed in kerosene.

1,222,486. BOTTLE-HOLDER. JOHN AUGUST SWANSON, Minneapolis, Minn. Filed May 3, 1915. Serial No. 25,193. (Cl. 248—20.)



A bottle holder comprising a saddle bracket, and a yoke, said saddle bracket having a stop shoulder, a stop plate, and a pair of spring arms, having formed thereon hinge lugs, said yoke being made from a single piece of wire, bent at its ends to form trunnions, and bent upon itself, at its intermediate portion, to form a spring yoke, adapted to be sprung into engagement with the neck of a bottle, the trunnions of said yoke being mounted in said hinge lugs and being bent to form lugs, engageable with said stop shoulder to support the yoke in an operative position and engageable with said stop plate to yieldingly hold the yoke in its two extreme positions.

1,222,487. GAS-HEATER. JOHN H. SWIHART, Beaver Falls, Pa. Filed May 16, 1916. Serial No. 97,810. (Cl. 126—90.)



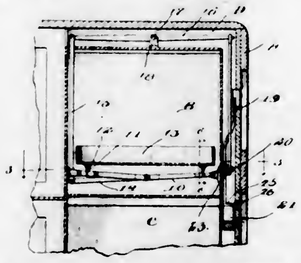
1. A gas heater of the character specified comprising a perforated casing, a supporting band or ring closely fitting

the lower end of the casing and provided with an outwardly flared depending portion, a gas burner of circular outline and provided in its top with vertical discharge ports or openings, arranged horizontally within the outwardly flared depending portion of the supporting band or ring, a supply tube leading to the burner, supporting legs for the casing and supporting ring, a downwardly flared hollow drum or tube arranged vertically within the casing, a deflector supported by the supporting legs and connected with the lower end of said drum or tube, the deflector in turn supporting said tube, a plurality of spacing lugs formed on the inner edge of the burner for centering the lower end of the heating drum or tube and interlocking means formed at the outer edge of the burner and in the inner faces of the supporting legs whereby the burner is removably supported by said legs.

2. A gas heater of the character specified comprising a perforated casing, a supporting band or ring closely fitting within the lower end of the casing and provided with an outwardly flared depending portion, a gas burner of circular outline and provided in its top with vertical discharge ports or openings arranged horizontally within the downwardly flared depending portion of the supporting band or ring, a supply tube leading to the burner, supporting legs for the casing and supporting ring, a downwardly flared hollow drum or tube arranged vertically within the casing, a deflector supported by the supporting legs and connected with the lower end of said drum or tube, the deflector in turn supporting said tube, a plurality of spacing lugs formed on the inner edge of the tube, interlocking means formed at the outer edge of the burner for centering the lower end of the heating drum or burner and in the inner faces of the supporting legs whereby the burner is removably supported by said legs and a pair of flat vertical wings secured to the outer surface of the heating drum or tube within the casing at diametrically opposite points to prevent cross drafts within the casing.

3. A gas heater of the character specified comprising a perforated casing, a supporting band or ring closely fitting within the lower end of the casing and provided with an outwardly flared depending portion, a gas burner of circular outline, arranged horizontally within the depending portion of said band or ring, supporting legs formed with offset upper end portions to receive and support said band or ring, said offset portions provided in their inner faces with horizontal recesses, a downwardly flared hollow drum arranged vertically within the casing, a deflector supported by said supporting legs and connected with the lower end of said drum or tube, a plurality of spacing lugs formed on the inner edge of the burner for centering the lower end of the heating drum and radial lugs formed on the outer edge of the burner and received by the recesses in the offset upper end portions of the supporting legs whereby said burner is supported.

1,222,488. REFRIGERATOR-SCALE. OTTO E. TALLMAN, Englevale, N. D. Filed Apr. 1, 1916. Serial No. 88,277. (Cl. 73—29.)



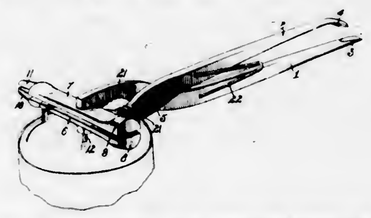
1. In a refrigerator having an ice compartment, of a scale platform located therein, a fulcrum beam supporting the platform, a rocking beam movably supported within

the body of the refrigerator and having connection with the fulcrum beam, a dial mounted on the body of the refrigerator without the same, an indicator traversable over the dial and having connection with the rocking beam, and a balancing weight adjustably connected with the indicator.

2. In a refrigerator having an ice compartment, of a scale platform located therein, a fulcrum beam supporting the platform, a rocking beam movably supported within the body of the refrigerator and having connection with the fulcrum beam, a dial mounted on the body of the refrigerator without the same, an indicator traversable over the dial and having connection with the rocking beam, a balancing weight adjustably connected with the indicator, and a tray removably supported upon the platform.

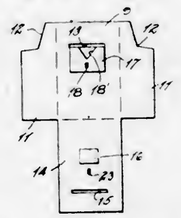
3. In a refrigerator having an ice compartment, of a scale platform located therein, a fulcrum beam supporting the platform, a rocking beam movably supported within the body of the refrigerator and having connection with the fulcrum beam, a dial mounted on the body of the refrigerator without the same, an indicator traversable over the dial and having connection with the rocking beam, a balancing weight adjustably connected with the indicator, a tray removably supported upon the platform, the said platform being provided with notches forming seats, and legs on the tray engageable in the seats.

1,222,489. COMBINATION-PLIERS. LOUIS TERZAGHI, New York, N. Y. Filed July 26, 1916. Serial No. 111,410. (Cl. 81—47.)



A pair of pliers of the character described, comprising a pair of handles pivotally connected together, a jaw arranged on each handle extending laterally therefrom whereby a T-shaped structure is produced, each of said jaws having a flat face, said flat faces being positioned to come in contact when the jaws are closed, and each of said jaws being also provided with a rounded thickened portion on the back at each end and a projection at one end, the rounded thickened portions and one end of the jaws acting as a hammer when the jaws are together and the projections acting as pliers.

1,222,490. ENVELOP-FASTENER. ADOLF THEIMER, New York, N. Y. Filed July 15, 1916. Serial No. 109,488. (Cl. 229—78.)



1. The combination with an envelop including a sealing flap, of a tongue formed on said flap and having a slot therein, said tongue being inserted within the envelop when the sealing flap is folded, a casing secured within the envelop, a frame slidably mounted within said casing,

and means formed on the frame to pass through the slot in the tongue when the frame is moved downwardly to lock the tongue against withdrawal.

2. The combination with an envelop including a sealing flap, of a tongue formed on said flap and having an elongated slot therein, said tongue being inserted within the envelop when the sealing flap is folded, a casing mounted within the envelop and provided with an elongated slot to receive the tongue, a frame slidably mounted within the casing, a substantially V-shaped tongue carried by the upper end of the frame to pass through the slot of the tongue upon the downward movement of the frame, and means for moving the frame downwardly within the casing to lock the tongue of the sealing flap against withdrawal from the envelop.

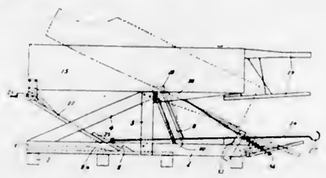
3. The combination with an envelop including a sealing flap, of a tongue formed on said flap and having an elongated slot therein, said flap being inserted within the envelop when the sealing flap is folded, a casing secured within the envelop and having an elongated slot therein to receive the tongue, a frame slidably mounted within said casing, a V-shaped tongue formed on the upper end of the frame and adapted to pass through the slot in the tongue of the sealing flap when said flap is moved downwardly, means for moving said frame downwardly, and means for locking said frame against movement when it has been moved downwardly within the casing to lock the tongue of the sealing flap against withdrawal from the envelop.

4. The combination with an envelop including a sealing flap, of a tongue formed on said flap and having a slot therein, said tongue being inserted within the envelop when the sealing flap is folded, a casing mounted within the envelop and provided with an elongated slot to receive the tongue, a block mounted within the casing, a frame slidably mounted upon the block within the casing, a substantially V-shaped tongue formed on the upper end of the frame and adapted to pass through the slot of the tongue of the sealing flap when the frame is moved downwardly, a cord secured to the lower end of the frame and extending exteriorly of the envelop for pulling the frame downwardly within the casing to lock the tongue upon the sealing flap against withdrawal from the envelop, and means for locking the frame against movement.

5. The combination with an envelop including a sealing flap, of a tongue formed on said flap and having a slot therein, said tongue being inserted within the envelop when the sealing flap is folded, a casing secured within the envelop and provided with an elongated slot to receive the tongue, a block secured within the casing and provided with a substantially V-shaped recess adjacent the elongated slot of the casing, a frame mounted on the block and slidable within the casing, a substantially V-shaped tongue formed on the upper end of the casing adapted to pass through the slot in the tongue of the sealing flap and move into the V-shaped recess of the block when the frame is moved downwardly, means for moving the frame downwardly, and means for locking the frame against movement.

[Claims 6 and 7 not printed in the Gazette.]

1,222,491. ORE-SEPARATOR. ALLONZO O. THOMAS, Rollinsville, Colo. Filed Mar. 27, 1916, Serial No. 87,044. Renewed Mar. 10, 1917. Serial No. 154,007. (Cl. 83—88.)



1. In a separator, the combination with a base including a notched sill and a pair of uprights; of a box extending across said uprights, means for tilting it, a leg pivoted to the box and having a toe adapted to engage the notch in the sill when the box is tilted in one direction only, and a trip rod for swinging the leg and its toe.

2. In a separator, the combination with a pair of sills having uprights at their midlength, and a rocker whose body inclines toward said uprights; of a box extending across the rocker and provided with means for rocking it thereover, and bumpers secured to the box in such position that one bumper strikes its upright before the other bumper strikes its upright.

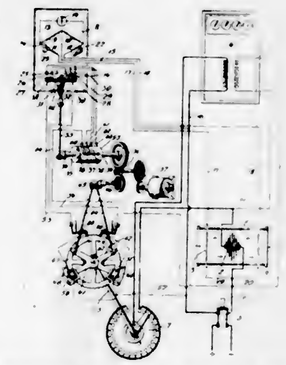
3. In a separator, the combination with a pair of sills having uprights at their midlength and grooves forward of said uprights, and a rocker whose lower end rests in said grooves and whose body inclines to the rear toward said uprights; of a box extending across the uprights and rocker and provided with means for rocking it over the latter and drawing it away from the uprights, and bumpers secured beneath the box in such position that when it is restored to horizontal one bumper strikes its upright before the other bumper strikes its upright.

4. In a separator, the combination with a pair of sills, upright stops rising therefrom and braced, and a rocker mounted at its lower end on said sills and having a channel across its upper end; of a box extending across said stops, a cross bar beneath its bottom having a rib engaging said channel, means for rocking the box, and bumpers fast beneath said bottom and adapted to strike the stops at different times when the box settles back to its normal position.

5. In a separator, the combination with a pair of sills, upright stops rising therefrom, a box extending over them and having pendant bumpers adapted to contact with them, a cross bar between said bumpers, and a rib along its bottom; of a rocker mounted on the sills forward of the tops and inclined toward them with its upper end engaging said rib, a rock rod connected with said cross bar, and pedal mechanism for drawing on said rod.

[Claims 6 to 26 not printed in the Gazette.]

1,222,492. FLUID-METER. CARL CLAPP THOMAS, Madison, Wis. Filed May 12, 1911. Serial No. 626,679. (Cl. 73—167.)



1. The method of determining the rate of flow of fluids, which consists in imparting heat to a moving current of the fluid to thereby raise the temperature of said fluid, automatically regulating the imparting of said heat so as to keep constant one of the two factors, namely, the rate at which heat is imparted or the temperature rise produced, and determining the other of said factors.

2. The method of determining the rate of flow of fluids, which consists in passing a moving current of the fluid into heating proximity to electric resistance means, passing electric current through said resistance means and thereby heating the fluid, automatically regulating the flow of said heating current so as to keep constant one of the two factors, namely, rate at which heat is imparted or the temperature rise produced, and determining the other of said factors.

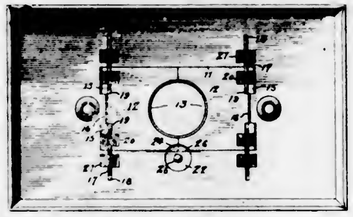
3. The herein described method of determining the rate of flow of fluids, which consists in imparting heat to a moving current of the fluid, automatically regulating the rate at which said heat is imparted so as to maintain a constant temperature rise independent of varying rates of flow of said fluid, and determining the heat so imparted.

4. The herein described method of determining the rate of flow of fluids, which consists in passing a moving current of said fluids into heating proximity to electric resistance means, passing electric current through said resistance means and thereby heating the fluid, automatically regulating the flow of said heating current so as to maintain a constant temperature rise independent of varying rates of flow of said fluid, and determining the heat so imparted.

5. Apparatus such as described comprising in combination a conduit, heating means therein, temperature responsive means on opposite sides of said heating means, means controlled by said temperature responsive means for regulating automatically the amount of heat dissipated in said conduit to maintain constant the temperature rise produced and means for measuring the heat imparted.

[Claims 6 to 36 not printed in the Gazette.]

1,222,493. FACE-PLATE FOR FLUSH RECEPTACLES. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Sept. 9, 1916. Serial No. 119,296. (Cl. 173—330.)



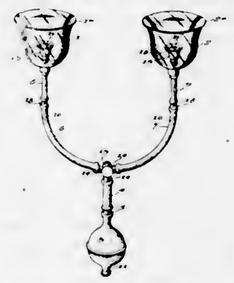
A face plate for flush receptacles having a central aperture and a door normally obstructing the same, a stop tongue projecting from the body of the plate into said aperture and legs on the door straddling said stop tongue and hinged to the door body in such position that said stop tongue engages the outer face of the door and halts the latter at right angles to the plane of the face plate, substantially as described.

1,224,494. BUST-DEVELOPER. JAMES F. THOMAS, Clarinda, Iowa. Filed Aug. 24, 1916. Serial No. 116,721. (Cl. 128—9.)

1. In a device of the class described, a pair of suction cups arranged one within the other, and suction producing means connected with said cups whereby first one and then the other may be brought into operation, and a part and its surrounding area first distended to the desired extent and then said part further distended independently of its surrounding area.

2. The combination of a pair of cups arranged one within the other, an air exhaust pipe extending through the closed end of the outer cup and having an air tight sliding engagement therewith, said pipe carrying the inner cup and opening into it through its closed end, whereby the air may be first exhausted from the outer cup for expanding the breast and then the inner cup engaged with the nipple and the air exhausted therefrom, and means connected with said pipe for exhausting the air from said cups.

3. A bust developer comprising a breast encircling cup having an aperture in its closed end, a tube mounted to slide in air tight relation in said aperture, a nipple incasing cup mounted in the first mentioned cup and carried by said tube, said nipple cup having a salve retaining chamber on its inner face, and means connected with said tube for exhausting the air from said cups.



4. The combination with a bust developing cup, of a bulb having a tube leading therefrom and connected with said cup, a flap cut out longitudinally from the under side of the body of said tube, the side edges of said flap diverging rearwardly from its free end to a predetermined point and then converging, forming a flexible valve having a narrow neck with a wide head adapted to open and close on the raising and lowering of the bulb forming a large aperture when opened for quickly relieving the suction in the cup.

1,222,495. VELVET, CORD, AND LIKE PILE CUTTING DEVICE. JOHN THOMASON, Warrington, England. Filed Feb. 13, 1917. Serial No. 148,440. (Cl. 26—9.)



1. In velvet, cord and like pile cutting devices, in combination, a stationary frame, a carrier pivotally mounted in the latter, a blade holder pivotally mounted in said carrier, a blade in said holder, a locking clip pivoted upon said stationary frame and having one portion extending in a direction transversely to and behind and clear of the blade in the path of the portion of the fabric being operated upon and having another portion at right angles to the first portion and extending rearwardly alongside of the carrier and over a part of the said carrier, and a spring acting to raise the carrier when released by said clip, as set forth.

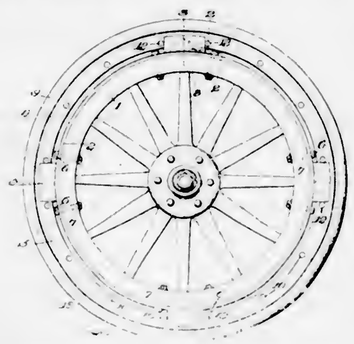
2. In velvet, cord and like pile cutting devices, in combination, a stationary frame, a carrier pivotally mounted in the latter, a blade holder pivotally mounted in said carrier, a blade in said holder, the said holder being eccentrically disposed with relation to its pivot and having a downwardly projecting cam-like portion in front of its pivot riding normally upon the surface of the fabric and tending to move the blade clear of the latter, a locking clip pivoted upon said stationary frame and having one portion extending behind and clear of the blade in the path of the portion of the fabric being operated upon and having another portion extending over a part of the carrier, and a spring acting to raise the carrier when released by said clip, as set forth.

3. In velvet and like pile cutting devices, in combination, a stationary frame, a carrier pivotally mounted in the latter, a blade holder pivotally mounted in said carrier, a blade, a guide for said blade, a slotted stud adapt-

ed to pass through an aperture in said holder and to receive said guide and blade, a nut on said stud for locking it in the holder and clamping the guide and blade in position, a locking clip pivoted upon said stationary frame and having one portion extending transversely to and behind and clear of the blade in the path of the portion of the fabric being operated upon to be moved by contact with said fabric and having another portion extending over a part of the carrier, and a spring acting to raise the carrier when released by said clip, as set forth.

4. In velvet, cord and like pile cutting devices, in combination, a stationary frame, a carrier pivotally mounted in the latter, a blade holder pivotally mounted in said carrier, a blade in said holder, an electrical make-and-break device, one member of which is on the fixed frame and the other member of which is on the pivoted holder to move therewith when the holder turns about its pivot and also when the holder moves bodily with the carrier to thereby control the circuit, locking means to hold the carrier to its work, said locking means being operated to release the carrier by the contact of the fabric therewith and means for throwing the carrier to inoperative position when released by the locking means, substantially as described.

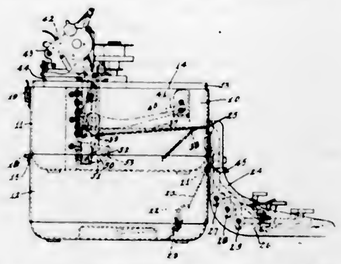
1,222,496. RESILIENT TIRE. WILLIAM P. TIGHE, Newark, N. J., assignor of seventy one-hundredths to (Mrs.) Elizabeth Estes, Newark, N. J. Filed July 25, 1916. Serial No. 111,202. (Cl. 152—36.)



The combination of a wheel rim, a band substantially U-shape in cross section having its side flanges spaced from and located around the rim, the flanges having opposite cut away portions, spaced blocks of rubber interposed between the rim and band and confined by the walls of the cut away portions, and the ends of said blocks being flush with the sides of the band, the blocks being frictionally confined against normal movement between the band and rim but capable of yielding circumferentially and subsequently slipping to a limited degre on the rim under undue load strain, side plates bolted to the sides of the flanges and overlapping the sides of the rim, bolts extending through the side plates and the flanges to hold the tire on the rim, certain of said bolts being located adjacent the opposite ends of each block to brace the latter, and means on the rim spaced from the ends of the blocks to limit the slipping movement of the blocks on said rim.

1,222,497. TYPE-WRITING MACHINE. BENJAMIN W. TUCKER, South Orange, N. J., assignor to Corona Typewriter Company, Incorporated, a Corporation of New York. Filed Feb. 21, 1914. Serial No. 820,244. Renewed Oct. 17, 1916. Serial No. 126,185. (Cl. 197—186.)

1. In a visible typewriting machine in which the type-bars are each operated by a separate key-operated lever and have an upward and rearward movement and in which the platen carriage always remains in the path of movement of the type-bars, a case forming a support for the platen carriage and comprising a main section, a top section, and a supporting keyboard member hinged to the main case section and forming a support for a universal keyboard including type-bar operating key-levers, spacing and platen shift levers, said keyboard support being adapted to fold upward and rearward into close relation to the platen carriage to make the machine more compact and adapted to be inclosed within the case when the latter is in its transporting condition.



2. In a visible typewriting machine in which the type-bars are each operated by a separate key-operated means and in which the platen carriage always remains in the path of movement of the type-bars, a case forming a support for the platen carriage and comprising a main section, and a supporting keyboard member hinged to the main case section and forming a support for a universal keyboard including type-bar operating keys, spacing and platen shift levers, said keyboard support being adapted to fold upward and rearward into close relation to the platen carriage to make the machine more compact and adapted to be inclosed within the case when the latter is in its transporting condition.

3. In a visible typewriting machine in which the type-bars are each operated by separate key-operated levers, a case forming a support for the platen carriage and comprising a main member, a cover, and a supporting keyboard member hinged to the main member and forming a support for a universal keyboard including type-bar operating key-levers, spacing and platen shift levers, said keyboard being adapted to be brought into close relation to the platen carriage to make the machine compact and to be entirely inclosed within the case.

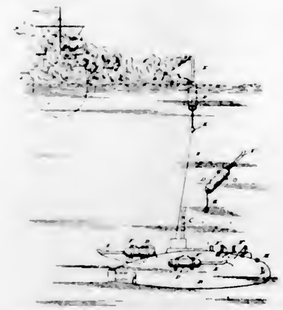
4. In a visible typewriting machine in which the type-bars are each operated by separate key-operated means and have an upward and rearward movement and in which the platen carriage always remains in the path of movement of the type-bars, a case forming a support for the platen carriage and comprising a main section, a top section, and a supporting keyboard member hinged to the main case section and forming a support for the type-bar operating key-levers.

5. In a visible typewriting machine in which the type-bars have an upward and rearward movement, a case comprising a main section forming a support for the platen carriage and type-bars, a detachable top section adapted to be held to the main section at either the upper or lower portion thereof, in the former position serving as an inclosing top and in the latter position as an extension of the main section and as a support for the mechanism contained in the said main section, a support for a universal keyboard adapted to fold upward and rearward within the inclosure formed by the main section and in close relation to a platen carriage, and means whereby the top section and main section may be held together.

[Claims 6 to 47 not printed in the Gazette.]

1,222,498. SUBMARINE WARFARE. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed Mar. 22, 1916. Serial No. 86,036. (Cl. 114—16.)

1. The method of attacking hostile floating craft which consists in providing a submarine with a great volume of gas unsuitable for ordinary respiration and discharging the gas, by means operated by persons within the submarine while the latter is submerged, into the open atmosphere just above the surface of the water and near the vessel to be attacked.



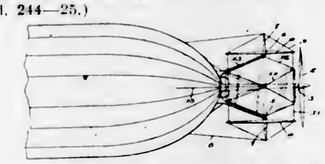
2. The combination with a submarine, of a gas tank secured upon the exterior of the submarine and adapted to hold a large supply of incapacitating gas, and means controlled by those within the submarine for allowing said gas to pass rapidly into the free air above the submerged submarine.

3. The combination with a submarine, of a large gas tank secured externally thereto and containing a great volume of incapacitating gas, means controlled from within the submarine for opening the tank, and means for freeing the tank and allowing it to rise to the water's surface.

4. The combination with a submarine provided with external gas tanks containing a large volume of incapacitating gas, of electric means operable from within the submarine to open the tanks and to free them and allow them to float to the water's surface while the submarine remains submerged.

5. The combination with a submarine of a large external gas tank releasably held upon the submarine and provided at one end with a normally closed pipe simultating a submarine's periscope, and means for maintaining said pipe in substantially vertical position when the released tank floats at the surface of the water.

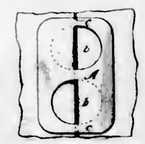
1,222,499. STEERING AND PROPELLING MEANS FOR DIRIGIBLE AIRSHIPS. RUSSELL R. WATERMAN, Pasadena, Cal. Filed Apr. 25, 1916. Serial No. 93,425. (Cl. 244—25.)



1. In a steering, controlling and propelling mechanism for dirigible balloons, the combination of a balloon frame, a tractor propeller, a pair of vertically movable elevator planes arranged in rear of the propeller, a plurality of laterally movable vertical rudder planes between the superposed horizontal rudder planes, the sets of planes being disposed in the path of the air flowing from the propeller, and controlling means for the sets of planes.

2. In a steering, controlling and propelling mechanism for dirigible balloons, a balloon frame, a tractor propeller at the front of the balloon frame, a pair of vertically swinging superposed horizontal elevator planes upon the balloon frame in rear of the propeller, means connecting said elevator planes for movement in the same direction in unison, means for operating said planes, a series of vertically disposed laterally swinging rudder planes between the elevator planes, means for connecting said laterally swinging planes in unison, and means for controlling said planes, the said vertical laterally movable planes being provided in front and rear of their pivots with sloping surfaces whereby the planes are adapted to be coaxially mounted and the elevator planes rendered movable to wide angles of adjustment.

1,222,500. SHEET-MUSIC AND LOOSE-LEAF BINDER. HARRY BERNARD WATERS, Denver, Colo. Filed Sept. 18, 1916. Serial No. 120,892. (Cl. 24—67.)



A binder or fastener composed of a single piece of pliable material, cut in oblong shape, adapted to be folded evenly lengthwise, thereby forming two opposite wings and having tongues cut on opposite wings extending from the fold outwardly and having the inner faces of the wings and tongues coated with adhesive.

1,222,501. PRESS-ROLL FOR PAPER-MAKING MACHINES. JOSEPH ATWOOD WHITE, Philadelphia, Pa., assignor to The Moore and White Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 1, 1916. Serial No. 134,307. (Cl. 92—49.)



1. The combination in a press roll, of a shaft; a shell mounted thereon and forming the body of the roll, said shell bearing upon the shaft some distance from each end; and couplings connecting the shell with the shaft.

2. The combination in a press roll, of a shaft having bearing portions some distance from its ends; a shell loosely mounted on the bearing portions; and couplings at each end of the roll connecting the shell with the shaft.

3. The combination in a press roll, of a hollow shell; a shaft extending through the shell and projecting at each end and having trunnions at the ends, said shaft being greater in diameter at the center than at the ends, the shell having bearings on the shaft some distance from the ends; and coupling sleeves connecting the shaft with the shell.

4. The combination in a press roll, of a hollow shell forming the body of the roll; a shaft extending through the shell and having a trunnion at each end; two rings secured to the shaft, each ring being located some distance from the end of the roll; a ring secured to the shell near each end; and a tubular coupling connecting the two rings so that the shell is driven through the couplings from the shaft.

5. The combination in a press roll, of a tubular shell; a shaft considerably less in diameter than the interior of the shell and having two rings secured thereto some distance from the end of the shell, the periphery of each ring being rounded and the bearing portion of the shell being flat; tubular couplings connecting the shell near its outer end with the rings on the shaft so that the shell will turn with the shaft, but will have a slight movement thereon.

1,222,502. RECORDING ATTACHMENT FOR A LIQUID-DISPENSING APPARATUS. ALBERT FRANKLIN WILEY, Humboldt, Kans. Filed Sept. 22, 1916. Serial No. 121,620. (Cl. 234—34.)

1. The combination of a pump, a movable record sheet having ordinate rulings disposed lengthwise of the sheet and corresponding to intervals of time, a continuously

moving pen arranged to traverse the ordinate rulings and inscribe a record corresponding to actual time intervals, and means actuated by the operation of the pump in one direction for advancing the sheet from beneath the pen to inscribe a record parallel to the ordinate rulings, the length of the record corresponding to the extent of the operation of the pump.



2. The combination of a pump, having a reciprocating part, a continuously moving pendulously supported clock-controlled pen, a record sheet arranged in contact with the pen to receive an inscribed record of time intervals, the record sheet having ordinate rulings arranged lengthwise thereof, and means joined with the moving parts of the pump for imparting the movement of said part in one direction to the record sheet whereby the record sheet is moved relatively to the pen to inscribe a record parallel to the ordinate rulings.

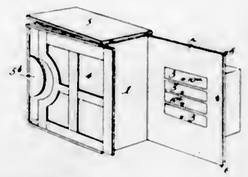
3. The combination of a pump having a reciprocating part, a record sheet adapted to be moved and having ordinate rulings corresponding to time intervals arranged lengthwise thereof, a pen arranged to traverse the ruling and inscribe a record corresponding to actual intervals of time, feeder rollers for the sheet, means for rotating the rollers, and clutch mechanism joined with the moving part of the pump whereby the last named means becomes susceptible to rotational movement during a portion of a complete operation of the moving part of the pump to advance the sheet relatively to the pen and inscribe a record.

4. The combination of a pump, a record sheet having ordinate rulings arranged lengthwise thereof, a pen arranged to traverse the rulings and mark time intervals, gear mechanism adapted to advance the sheet lengthwise, a clutch for rotating the gearing, a cable connected to the clutch, and an arm connected to the pump and joined to the cable to impart rotational movement to the clutch and gearing in one direction, when the arm performs an up-stroke thereby advancing the sheet relatively to the pen, said pen inscribing a record parallel to the ruling then resting to leave a dot, while the arm performs its down-stroke.

5. The combination of a pump, a record sheet having ordinate rulings arranged lengthwise thereof and corresponding to time intervals, a tension device for the sheet, feeder rollers for the sheet, gearing for the rollers, a clutch adapted to rotate the gearing and feed rollers in one direction, an arm connected, to the pump and joined to the cable, and a cable drum receiving one bight of the cable, the drum surrounding the clutch to impart rotational movement to the feed rollers in one direction when the arm performs an up stroke, the clutch and gear mechanisms being inoperative on the down-stroke.

[Claims 6 to 8 not printed in the Gazette.]

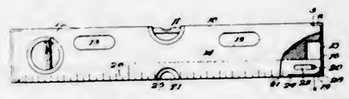
1,222,503. COMBINED SEWING-MACHINE CABINET AND LAP-BOARD. MARGARET ELIZABETH BEEDLE WILLIAMS, Western Port, Md. Filed Aug. 1, 1911. Serial No. 641,849. (Cl. 45—27.)



1. A sewing machine table comprising a closed cabinet having a door at one side thereof hinged to swing in a horizontal direction, and drawers mounted on one side of said door and movable through the door to permit withdrawal from either side thereof.

2. A sewing machine table comprising a closed cabinet and a door at one side thereof hinged to swing in a horizontal direction, a rectangular frame secured on the inner side of said door, and drawers mounted to slide in said frame and through the door to permit withdrawal from either side thereof.

1,222,504. COMBINED LEVEL AND SQUARE. THOMAS M. WOODELL, Glenwood, N. C., assignor of one-half to Edgar A. Woodell, Greensboro, N. C. Filed July 24, 1916. Serial No. 111,021. (Cl. 33—88.)

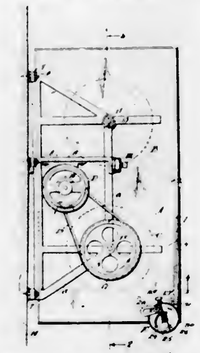


1. A device of the class described comprising a body having a longitudinally directed seat opening through one edge thereof and a socket communicating with the seat and opening through the contiguous end of the body, a closure member for the socket and the adjacent end of the seat, a pivot extending through the body at the juncture of the seat and socket, a blade operating in the seat and socket and having a longitudinally directed slot through which the pivot passes, said blade being foldable within the seat when in withdrawn position and engaging in the socket and bearing against the closure member when in projected position.

2. A device of the class described comprising a body having a longitudinally directed seat opening through one edge thereof and a socket communicating with the seat and opening through the contiguous end of the body, a closure member for the socket and the adjacent end of the seat and having an inwardly directed off-set provided with an inwardly opening slot, a pivot extending through the body at the juncture of the seat and socket, a blade operating in the seat and socket and having a longitudinally directed slot through which the pivot passes, said blade being foldable within the seat when in withdrawn position and engaging in the socket and bearing in the slot of the closure and against the body of the same when in projected position.

3. A device of the class described comprising a body having a longitudinally directed seat opening through one edge thereof and a socket communicating with the seat and opening through the contiguous end of the body, a closure member for the socket and the adjacent end of the seat and having an inwardly directed off-set provided with an inwardly opening slot, a pivot extending through the body at the juncture of the seat and socket, a blade operating in the seat and socket and having a longitudinally directed slot through which the pivot passes, and a stop shoulder spaced from its slotted end, said blade being foldable within the seat when in withdrawn position and engaging in the socket and bearing in the slot of the closure and against the body of the same with the stop shoulder of the blade engaging the closure at the inner end of its slot.

1,222,505. MOVING-PICTURE-FILM-REWINDING APPARATUS. WILLIAM O. WORMAN, Ogden, Utah. Filed May 12, 1916. Serial No. 97,001. (Cl. 242—70.)



1. A film rewinding apparatus comprising a supporting structure, axles thereon, reels on the axles, a motor for driving one of the axles, a cut-out switch for the motor, and means located in the path of the free end of the rewound film for operating the said cut-out switch.

2. A film rewinding apparatus comprising a box, axles therein, reels on the axles, an electric motor connected with one of the axles for driving the same, a cut-out switch for the motor circuit and including a movable contact, and a member connected with the movable contact and arranged in such a position that the free end of the rewound film will strike the member and open the switch.

3. In a film rewinding apparatus, a winding reel, a motor for driving the same, a cut-out switch for the motor, and means located adjacent the reel and connected with the switch for operating the same by a blow from the free end of the rewound film, said means being normally out of contact with the film.

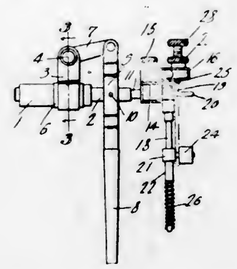
4. A film rewinding apparatus comprising a box, a reel therein on which the film winds, a motor for driving a reel, a cut-out switch included in the circuit of the motor and having a movable element, and a member connected with the element and disposed within the box in a position to be struck by the free end of the rewound film.

5. A film rewinding apparatus comprising a box, a reel therein on which the film winds, a motor for driving the reel, a cut-out switch included in the circuit to the motor and having a movable element, a member connected with the element and disposed within the box in a position to be struck by the free end of the rewound film, and magnetic means for holding the movable element of the cut-out switch in closed circuit position, with a force less than the force of the blow imparted by the free end of the film.

1,222,506. AUTOMATIC LENS-DRILLING ATTACHMENT. GEORGE G. WORSTALL, Toms River, N. J. Filed May 23, 1916. Serial No. 99,418. (Cl. 77—63.)

1. A lens drilling device embodying guiding means, adjusting means for a lens, a pair of lens holding members movable along the guiding means, spring means for moving one of said members away from the adjusting means, and spring means for moving the other member toward the adjusting means, said spring means moving said members toward one another, and the second mentioned spring means being of greater tension than the first mentioned spring means to move said members and the lens carried thereby toward the adjusting means.

2. A lens drilling device embodying a head, a lens adjusting screw carried thereby, guide rods pivoted to said head, a pair of lens holding members slidable upon said rods, and spring means for moving said members toward one another and for moving them toward said adjusting screw.



3. A lens drilling device embodying a head, an adjusting screw carried thereby guide rods connected to said head, a pair of lens holding members slidable upon said rods, spring means for moving one of said members away from the adjusting screw, and spring means for moving the other member toward the adjusting screw, said spring means moving said members toward one another and the second mentioned spring means being of greater tension than the first mentioned spring means to move said members when holding a lens toward the adjusting screw.

4. A lens drilling device embodying a spindle having a lens rest, a head adjustable thereon, guiding means pivotally connected with said head, and lens holding means carried by said guiding means for adjustably supporting a lens.

5. A lens drilling device embodying a spindle having a lens rest, a head adjustable thereon having an outstanding lug, an adjusting screw carried by said lug, a pair of guide rods pivotally connected with the head, pair of lens holding members slidable upon said rods, spring means for moving one of said members away from the adjusting screw, and spring means for moving the other member toward the adjusting screw, said spring means moving said members toward one another and the second mentioned spring means being stronger than the first mentioned spring means to move said members when holding a lens toward the adjusting screw.

[Claims 6 and 7 not printed in the Gazette.]

1,222,507. METHOD OF REMOVING BUSHINGS FROM SPINDLE-BEARINGS. RALPH E. YAECKEL, Nanticoke, Pa. Filed Oct. 16, 1915. Serial No. 56,259. (Cl. 29—88.2.)



The method of removing one of a pair of spaced apart bushings extending into opposite ends of a spindle bearing which consists in inserting one end of a punch having its said end split through one of the said bushings, in-

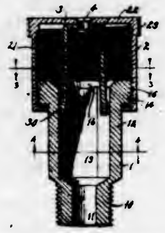
serting a tool through the other bushing and into the split end of said punch to expand the latter within the bearing between the bushings, and in striking the outer end of the punch to force its inner expanded end against the inner end of the last mentioned bushing and to drive the latter out of the bearing.

1,222,508. LIFE-SAVING VEST. MIKE ZAWADA, Cleveland, Ohio. Filed Sept. 1, 1915. Serial No. 48,545. (Cl. 9—20.)



In a life saving vest, an outer elastic wall having arm openings formed therein and spaced strain relieving openings, an inner non-elastic wall secured to said outer wall and having openings registering with the aforesaid openings, inwardly directed air reservoirs formed from the said inner wall, and horizontally spaced, vertical partitions within the said air reservoirs dividing them into individual compartments, and air retaining means communicating with said compartments.

1,222,509. GREASE-CUP. OSCAR ZERK, Cleveland, Ohio, assignor, by mesne assignments, to George W. Bowen, Auburn, N. Y. Filed July 31, 1913. Serial No. 782,177. (Cl. 184—48.)



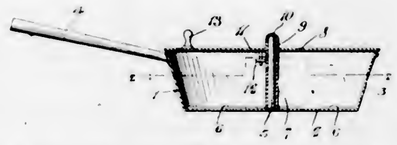
In a grease cup, the combination of a base having a stem formed with similarly shaped angular interior and exterior surfaces to provide a wrench hold and an interior ratcheting surface, a cap threading on the base, and a spring tongue carried by the cap and rotatable therewith and pressing at its free end against the inner angular face of the bore of the base, substantially as and for the purpose set forth.

1,222,510. WIRE CLOTHES-PIN. ADDIE I. ZIEGLE, North Yakima, Wash. Filed Sept. 11, 1916. Serial No. 119,480. (Cl. 24—139.)



A clothes pin composed of a single piece of spring wire and including gripping jaws formed by extending the ends of the wires longitudinally in parallel relation and each folded inwardly upon itself and then again outwardly and then inwardly to form outer parallel, laterally spaced side members with inner members arranged between them, the members being in contact and in transverse alinement to form flat comparatively wide substantially solid opposed clamping jaws, one of the outer members of each jaw being offset laterally at its inner end to receive the connected inner ends of the inner members, the terminals of the wire being at the ends of the other outer members of the jaws and bent around the inner ends of the offset outer jaw members, the jaws having transverse longitudinally spaced corrugations, the corrugations of one jaw being arranged opposite those of the other and the free ends of the jaws flared.

1,222,511. CORN-POPPER. WILLIAM H. M. ZSCHIESCHE, Bartlett, Tex. Filed Mar. 37, 1916. Serial No. 88,008. (Cl. 53—4.)



1. A corn popper comprising a receptacle, a handle secured to said receptacle, a vertical standard secured to the bottom of the receptacle, an agitating blade journaled on said standard, a cover journaled on the upper end of the standard, and means for connecting the cover to the agitator for rotating said agitator upon turning of the cover.

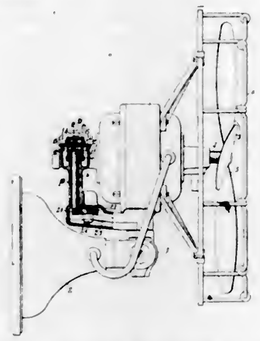
2. A corn popper comprising a receptacle, a handle secured to said receptacle, a standard secured to the bottom of the receptacle and extending to a point above the top edges thereof, an agitating blade provided with an opening intermediate its ends to receive the standard, a collar secured to said agitating blade and surrounding the standard, a cover journaled on the upper end of the standard, and means for connecting the cover to the collar for rotating the agitating blade upon turning of the cover.

3. A corn popper comprising a receptacle, a handle secured to said receptacle, a vertical standard secured to the bottom of the receptacle and extending to a point beyond the top edge of the receptacle, an agitating blade provided with an opening intermediate its ends to receive the standard, a collar secured to the agitating blade and surrounding the standard, a cover, a sleeve secured centrally of the cover and receive the upper end of the standard to rotatably support and relatively space the cover from the top edge of the receptacle, and means for connecting the cover to the collar for rotating the agitating blade upon turning of the cover.

4. A corn popper comprising a receptacle, a handle secured to said receptacle, a standard secured to the bottom of the receptacle and extending to a point above the upper edge of the receptacle, an agitating blade provided with an opening intermediate its ends to receive the standard, a collar secured to the agitating blade and surrounding the standard, a cover journaled on the upper end of the standard, a pin secured to the under face of the cover and extending downwardly therefrom, a horizontally disposed pin secured to the upper end of the collar and adapted to be engaged by first mentioned pin for turning the agitating blade upon rotating the cover.

1,222,512. DRIVING CONNECTION FOR MOTOR-DRIVEN FANS. CHRISTIAN AALBORG, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 1, 1912. Serial No. 674,801. (Cl. 192—22.)

1. A driving connection comprising a shaft provided with a gear member secured to one end thereof, a second gear member loosely surrounding the other end of said shaft and provided with a tubular extension, a sleeve secured to said shaft and located within said extension, the said sleeve being provided with a transverse opening and the said extension being provided with corresponding side recesses and two balls and an interposed spring located in said opening, said balls being normally held in said side recesses.



2. A driving connection comprising a longitudinally movable shaft provided with a gear member secured to one end thereof, a second gear member loosely surrounding the other end of said shaft and provided with a tubular extension, a sleeve secured to said shaft and located within said extension, the said sleeve being provided with a transverse opening and the said extension being provided with corresponding side recesses, other corresponding side recesses located adjacent to sleeve, two balls and an interposed spring located in said opening, said balls being normally held in said side recesses, and a handle for withdrawing said sleeve from said extension to cause engagement of said balls with said second named recesses.

1,222,513. COMBINATION STRIPPING AND SPLITTING PLIERS. SOLOMON E. AARON, Boston, Mass. Filed Mar. 14, 1916. Serial No. 84,209. (Cl. 81—9.5.)



1. In a tool of the class described, the combination with a pair of pliers, the outer edges of whose jaws are provided with transverse notches, and an adjustable stop between the handles of the pliers; of a pair of splitter blades whose shanks are mounted in two of said notches and whose active edges meet alongside the jaws when said stop is closed, and a pair of guide members whose shanks are mounted in the other notches and whose ends also meet when said stop is closed.

2. In a tool of the class described, the combination with a pair of pliers, and an adjustable stop between their handles; of a pair of splitter blades whose shanks are secured to the outer edges of the jaws and whose inner ends are bent over one side of the same with their active edges contacting when said stop is closed, and a U-shaped guide cut through its bend into two members also meeting when said stop is closed, the shank of each member being secured to the outer edge of one jaw and its body carried over the side thereof.

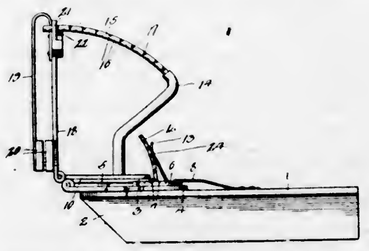
3. In a tool of the class described, the combination with a pair of pliers, and an adjustable stop between their handles; of a pair of splitter blades secured to the jaws and bent over to one side of the same with their active edges contacting when said stop is closed, and a U-shaped guide cut through its bend into two members adapted to coact when said stop is closed, the shank of each member being secured to one jaw and its body extending into the bend of said U.

4. In a tool of the class described, the combination with a pair of pliers, and an adjustable stop between their handles; of a pair of splitter blades whose shanks are secured to the outer edges of the jaws and whose inner ends are bent over one side of the same with their active edges contacting when said stop is closed, and a U-shaped guide cut through its bend into two members also meeting when said stop is closed, the shank of each member being secured to the outer edge of one jaw and given a double bend to produce a shoulder extending over the side of the jaw, and its body extending from such shoulder into the bend of said U.

5. In a tool of the class described, the combination with a pair of pliers, and adjustable means for limiting the closing movement of the jaws; of a pair of right angular blades whose coacting edges stand along one side of the pliers, a U-shaped guide cut through its bend into two coacting members also standing along one side of the pliers, and means for permitting adjustment of the shanks of said blades and members transversely of the jaws.

[Claims 6 to 8 not printed in the Gazette.]

1,222,514. MITER-BOX. HERBERT ABRAMSON, Benson, Minn. Filed Aug. 29, 1916. Serial No. 117,509. (Cl. 143—88.)

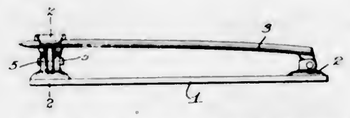


1. A miter box of the class described comprising a base, an adjustable plate mounted upon said base at one end thereof, a pivot stud passed through said plate and base and forming a pivot about which said adjustable plate may be swung, a notched bar on said plate at the inner end thereof, a spring arm having one end secured to said base, an ear on one end of said arm engaged with said notched bar to hold said plate in adjusted position, a second plate mounted upon the first mentioned plate, a hinged connection between the inner edge of said adjustable plate and the corresponding edge of the second named plate, a notched bar upstanding from the second named plate and yieldably mounted, a tooth formed on the second named plate engageable with said notched bar to hold the second named plate in adjusted position, and saw guides carried by said second named plate.

2. A miter box of the class described comprising a base, an adjustable plate mounted upon said base at one end thereof, a pivot stud passed through said plate and base and forming a pivot about which said adjustable plate may be swung, a notched bar on said plate at the inner end thereof, a spring arm having one end secured to said base, an ear on the other end of said arm engaged with said notched bar to hold said plate in adjusted position, a second plate mounted upon the first mentioned plate, a hinged connection between the inner edge of said adjustable plate and the corresponding edge of the second named plate, a notched bar upstanding from the second named plate and yieldably mounted, a tooth formed on the second named plate engageable with said notched bar to hold the second named plate in adjusted position, saw guides carried by said second named plate, a hinged connection between said saw guides and the second named plate whereby the saw guides may be swung to the desired angle, and means carried by the second named plate and engaging said saw guides to hold the latter in adjusted position.

3. A miter box including a base, a pivoted plate upon the base at one end thereof and having its inner end widened and of an arcuate formation, an arched notched bar upon the said arcuate end of the plate, a spring pressed member carried by the base and engaging between the notches of the bar, a second plate hingedly secured to the first mentioned plate and having an extending tooth, a spring pressed notched bar engaging with the tooth, an arm secured to the said plate and having a curved notched bar of an arcuate formation projecting rearwardly therefrom, a saw guide including a rigid arm and a spring arm, a hinged connection between the rigid arm and the second mentioned plate, guide means upon the saw guide for the notched arcuate arm, and spring pressed means carried by the rigid arm of the saw guide and engaging with the notches of the said arcuate arm.

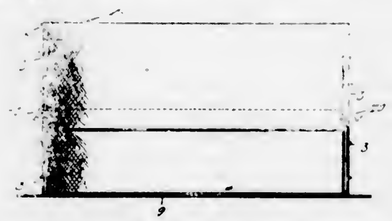
1,222,515. SAFETY-CATCH. STEAD A. ASQUITH, Waterloo, Iowa. Filed Jan. 26, 1916. Serial No. 74,458. (Cl. 24—137.)



1. A safety catch comprising a flat hook having its side edges provided with angularly extending ears for forming a pivot space between the ears, a pivot pin extending across the said space and mounted in the said ears, a catch member mounted upon the said pin and including a bell crank lever having one end engageable with the terminal of the said hook, and resilient means in the form of a flat spring integrally formed with and bent from the opposite end of the said bell crank lever for holding the said lever in position to close the space between the pin and the terminal of the said hook.

2. A safety catch comprising a flat hook having its side edges provided with angularly extending ears for forming a pivot space between the ears, a pivot pin extending across the said space and mounted in the said ears, a catch member mounted upon the said pin and including a bell crank lever having one end engageable with the terminal of the said hook, resilient means in the form of a flat spring integrally formed with and bent from the opposite end of the said bell crank lever for holding the said lever in position to close the space between the pin and the terminal of the said hook, the said hook including a base having its surface engaged by the said flat spring, the straight portion of the hook being provided with an opening for the reception of the end of the said flat spring.

1,222,516. GRAIN-BIN. DANIEL F. BEEGLE, Waltsburg, Wash. Filed Apr. 14, 1916. Serial No. 91,255. (Cl. 150—49.)

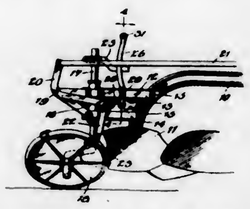


1. A bin of the class described comprising, a body formed of a plurality of superposed and flexible sections, each consisting of an outer shell and a lining located on the inner side of the shell, and means for detachably connecting the sections to each other.

2. A bin of the class described comprising, a body formed of a plurality of superposed flexible sections, each consisting of an outer shell and a lining positioned on the inner side of the shell, the lower edges of the linings on the sections extending below the lower edges of the sections and the lower edge of the lining on one section extending into the interior of the next adjacent lower section.

3. A bin of the class described comprising, a flexible bottom wall, a shell removably mounted on the bottom wall, a lining located on the inner surface of the shell, and an extension carried by the lower end of the lining and resting on the upper side of the bottom wall.

1,222,517. LIFTING MECHANISM FOR PLOWS. JOHN H. BERRYHILL, FREDERICK E. HAND, and LESLIE A. THOMAS, Evansville, Ind., assignors to The Vulcan Plow Company, Evansville, Ind., a Corporation of Indiana. Filed Oct. 23, 1916. Serial No. 127,252. (Cl. 97—36.)



1. The combination with a plow beam, of a caster spindle mounted vertically slidable and rotatable relative thereto, means for raising and lowering the plow relative to the spindle, guide means engaging the spindle when the plow is in lowered position to prevent rotation of the spindle, and having a divergent throat permitting the castering of the spindle when the plow is in raised position.

2. The combination with a plow embodying a beam, of a caster spindle carried thereby and vertically slidable and rotatable relative thereto, means to raise and lower the plow relative to the caster spindle, guides carried by the plow spaced apart at varying distances, and an arm carried by the spindle introduced between the guides so proportioned that when the plow is in lowered position the arm is positioned between the narrower portion of the guides and when in a raised relation is positioned between the wider portion of the guides.

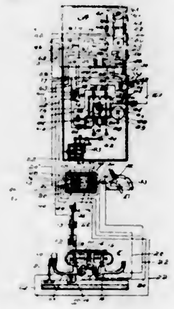
3. The combination of a plow beam, a sleeve rigidly connected therewith and spaced therefrom, a caster spindle mounted in the sleeve and adapted to rotate relative thereto and slide vertically therein, means to raise and lower the plow relative to the caster spindle, guides carried by the beam and spaced apart, the interval of spacing being greater midway of such guides, and an arm carried by said spindle introduced between said guides so positioned that when the plow is in lowered position the arm is retained within the narrower interval between the guides and when in a relatively raised position is retained within the wider interval of said guides.

4. The combination of a plow beam, a sleeve rigidly secured to and spaced rearwardly from said beam, a caster spindle mounted in said sleeve and free to rotate and slide vertically, guides secured to said beam and spaced apart, each of said guides embodying a rod curved outwardly adjacent its middle portion, and an arm secured to the spindle extending into the interval between the guides, all being so proportioned that when the plow is in lowered position the arm is embraced in the narrower interval between the guides and when in a relatively raised position is embraced within the wider interval between said guides.

5. A plow embodying a plow beam and its bottoms, a caster wheel and its spindle, said spindle slidably and rotatively connected to the plow beam, means for raising the plow relative to the wheel and spindle, and fixed guide means for permitting the swinging of the spindle and wheel in their intermediate position on the beam, and for locking them in the extreme positions.

[Claims 6 to 9 not printed in the Gazette.]

1,222,518. ELECTRIC SIGNAL FOR RAILWAYS. CLINTON L. BOPP, Waterloo, Iowa. Filed Mar. 14, 1912. Serial No. 683,848. (Cl. 246—58.)



1. In a train controlling and signaling device, an air brake valve, an electromagnet, a battery, a pivoted armature normally held upwardly, a contact carried by the armature, a circuit including said battery, electromagnet, contact and armature, means controlled by the electromagnet adapted to open the air brake valve when the electromagnet is deënergized, means for breaking said circuit when the train engages an obstruction, said armature adapted to drop as the circuit is broken, a signal carried by the armature adapted to display danger when the armature descends, and a circuit and danger signal included therein, said circuit last named being closed when said magnet is deënergized and the armature descends.

2. In a signal apparatus having electrical connection with a wheel of a train, an electro-magnet, a pivotally mounted armature adapted to be attracted thereby, a danger signal carried by the armature and adapted to be displayed when the armature is released by the electro-magnet, a battery, a stationary contact for the armature, a circuit including the battery, the armature, the contact and the electro-magnet adapted to be closed when the armature is attracted by the electro-magnet, an electrically energized danger signal, a second stationary contact for the armature, a second circuit including the battery, the armature, the second contact and said last named danger signal adapted to be closed when the armature is released by the electro-magnet and thereby energize the last named danger signal when the danger signal carried by the armature is displayed, and means to break the circuit including the electromagnet.

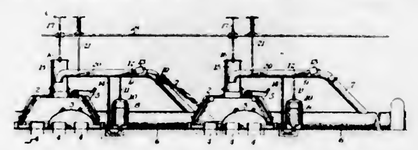
3. In an electrical signaling and controlling device for trains, an air brake controlling apparatus, a signal, independent means electrically operated for retaining said signal at safety, means for mechanically operating the air brake controlling apparatus after a predetermined interval following the initial operation of the mechanical means, and including a rack and a retarded gravity device and electrical means for controlling said mechanical operation, the controlling means being energized when the signal is retained at safety.

4. In an electrical signaling and controlling device for trains, an air brake controlling apparatus, a signal, independent means electrically operated for retaining said signal at safety, means for mechanically operating the air brake controlling apparatus after a predetermined interval following the initial operation of the mechanical means, electrical means for controlling said mechanical operation, and means for energizing the controlling means last mentioned when the means for retaining the signal at safety are energized.

5. In an electric signaling system, a magnet and armature and a normally closed circuit for the magnet including the armature thereof, a signal carried by the armature at safety when the magnet is energized and at danger when the armature is released, a second circuit arranged to be closed when the armature is released upon opening the first circuit, an electrically operated danger signal in the second circuit for indicating danger when the second circuit is completed and when the signal carried by the armature is carried at danger.

[Claim 6 not printed in the Gazette.]

1,222,519. AIR-CONTROL SYSTEM FOR FURNACES. WILLIAM H. BRADLEY, Pittsburgh, Pa. Filed Feb. 29, 1916. Serial No. 81,131. (Cl. 236—6.)



1. The combination with a valve chamber or casing of a reversing regenerative furnace, of an air supply pipe arranged to deliver air to said chamber or casing, means for forcing air through said pipe, a control valve in said pipe, an actuating device for said valve, and means whereby pressure changes in the pipe between the valve and furnace effect the operation of said device; substantially as described.

2. The combination with a valve chamber or casing of a reversing regenerative furnace, of an air supply pipe arranged to deliver air into said chamber or casing, means for forcing air through said pipe, a control valve in said pipe, a pressure device operatively connected to said valve, and a pressure connection leading to said device from the pipe between the valve and the furnace; substantially as described.

3. The combination with a valve chamber or casing of a reversing regenerative furnace, of an air supply pipe arranged to deliver air into said chamber or casing, means for forcing air through said pipe, a control valve in said pipe, a pressure device operatively connected to said valve, and pressure connections leading to said device from the pipe between the control valve and the furnace, together with an auxiliary controlled valve in said pipe between the first mentioned valve and the furnace; substantially as described.

4. The combination with a valve chamber or casing, of an air supply pipe arranged to deliver air into said chamber or casing, means for forcing air through said pipe, a control valve in said pipe, a pressure device operatively connected to said valve, a pressure connection leading to said device from the pipe between the valve and the furnace, said valve casing also having another air inlet and a manually controlled valve therefor; substantially as described.

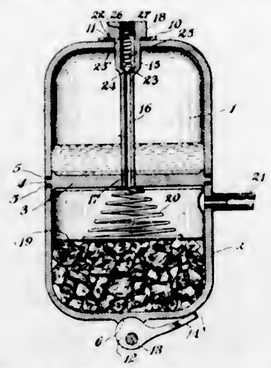
5. The combination with the valve casings of a plurality of reversing regenerative furnaces, of an air supply pipe or main common to all furnaces and having branch pipes, a blower for continuously forcing air through the trunk one of said branch pipes leading to the valve casing of each furnace, a control valve in each of the branch pipes, a separate pressure device for actuating each valve, each of said pressure devices having a pressure connection leading thereto from the delivery side of said valve; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,222,520. PNEUMATIC-TIRE INFLATER. MATT RUZZARD, Fenton, Mich. Filed Nov. 28, 1916. Serial No. 133,997. (Cl. 48—4.)

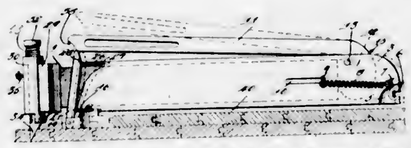
An acetylene gas generator comprising a pair of vessels, a partition between said vessels, gas discharge means for

one of the vessels, a tube extending through the other vessel and the partition and detachable from the latter to permit the flow of water from said vessel to the other



vessel, a valve to close said tube, a spring to hold said valve in closed position, and means to vary the tension of said spring.

1,222,521. FLOOR-CLAMP. CHESTER C. CARL, Fairfield, Iowa. Filed Apr. 17, 1916. Serial No. 91,730. (Cl. 254—16.)



1. In a device of the class described, the combination of a plunger, means for anchoring said plunger in a set position, a frame slidably mounted upon said plunger, means for normally urging said frame in one direction along said plunger, a lever pivotally mounted upon said frame, said lever provided with a cam, said cam engaging the end of said plunger, whereby when the lever is swung said cam by bearing upon the end of said plunger will urge the frame in one direction for moving a board, a dog pivotally mounted upon said frame, said dog provided with a longitudinal slot formed therein, said plunger extending through said slot, said dog being provided with a biting edge, means for normally urging said dog in one direction, whereby when the frame is moved to an adjusted set position along said plunger the biting edge of said dog will bite into or frictionally bear upon said plunger for holding said frame and plunger from moving to a closed position, and means for releasing said dog from its binding action for permitting the frame and plunger to move to closed positions.

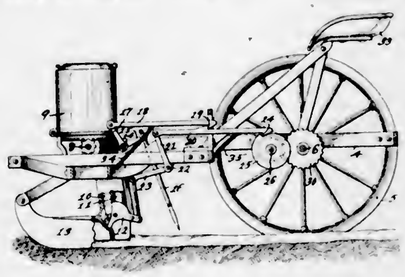
2. In a device of the class described, the combination of a plunger, means for anchoring said plunger in a set position, a frame slidably mounted upon said plunger, means for normally urging said frame in one direction along said plunger, a lever pivotally mounted upon said frame, said lever provided with a cam, said cam engaging the end of said plunger, whereby when the cam is swung said cam by bearing upon the end of said plunger will urge the frame in one direction for moving a board, a dog pivotally mounted upon said frame, said dog provided with a longitudinal slot formed therein, said plunger extending through said slot, said dog being provided with a biting edge, means for normally urging said dog in one direction, whereby when the frame is moved to an adjusted position along said plunger the biting edge of said dog will bite into or frictionally bear upon said plunger for holding said frame and plunger from moving to closed positions, said dog provided with a beveled upper end, said lever being provided with a curved shoulder, whereby when the lever is released it will fall to its normal position so as to cause the curved shoulder to ride upon the beveled end of said dog, thereby swinging the dog from its biting action, whereby the plunger and frame will be released so that they may move to their normal positions.

3. In a device of the class described, the combination of a plunger, means for anchoring said plunger in a set position, a frame slidably mounted upon said plunger, means for automatically urging said frame in one direction, a dog pivotally mounted upon said frame and engaging said plunger, a biting edge formed upon said dog for frictionally binding upon said plunger, thereby holding said frame in a set position, and said second-mentioned means being adapted to engage said dog for moving said dog and thereby permitting said frame to move on said plunger.

4. In a device of the class described, the combination of a plunger, means for anchoring said plunger in a set position, a frame slidably mounted upon said plunger, a cam lever pivotally mounted upon said frame and engaging said plunger, whereby as said lever is swung in one direction said frame may be moved along said plunger, a dog pivotally mounted upon said frame, said dog having a biting edge frictionally binding upon said plunger for holding said frame in a set position, and said lever being adapted to engage said dog for moving said dog and thereby release said frame from its set position upon said plunger.

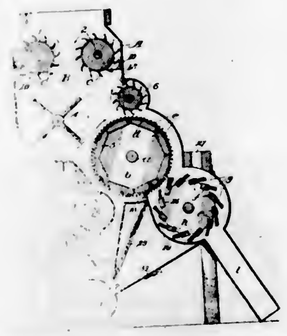
5. In a device of the class described, the combination of a plunger, means for anchoring said plunger in a set position, a frame slidably mounted upon said plunger, a cam lever pivotally mounted upon said frame and engaging said plunger, whereby as said lever is swung in one direction said frame may be moved along said plunger, a dog pivotally mounted upon said frame, said dog having a biting edge frictionally binding upon said plunger for holding said frame in a set position, said dog having a beveled upper end, said lever having a curved shoulder at its free end, said dog being in the path of travel of said lever as said lever swings to a closed position, whereby said curved shoulder will strike upon the beveled end of said dog, thereby swinging said dog and thus causing said dog to release its binding engagement upon said plunger, whereby said frame may be free to move upon said plunger.

1,222,522. PLANTER-MARKER. EMMETT T. CARNS and ALFRED R. BISHOP, Murray, Iowa. Filed June 17, 1916. Serial No. 104,188. (Cl. 111—24.)



A device of the class described, comprising a frame, a rotatable axle therein, wheels secured to said axle, a shouldered cam rotatable with said axle, a rock shaft, arms thereon, marker rods carried by said arms, a crank arm, a hooked bar pivoted to said crank arm, a supplemental rock shaft, arms thereon, seed dropper valves in operative connection therewith, and a supplemental hooked arm having a shoulder intermediate its length and in operative connection with said supplemental rock shaft, said supplemental hooked bar being intermittently engaged by said cam to actuate said valves, and said first named hooked bar being engaged by the shoulder on said supplemental hooked bar to intermittently actuate said marker rods.

1,222,523. COTTON-GIN FEEDER. JAMES H. CARY, Memphis, Tenn. Filed July 6, 1916. Serial No. 107,766. (Cl. 13—12.)



1. In a cotton gin feeder, the combination with a frame, feeding devices therein and a rotary beater disposed in a plane below said devices, of a drum below said feeding devices and rotating in opposition to said beater, said drum having its periphery armed with rows of spikes which incline in the direction of the rotation of the drum, a suction trunk connecting with the interior of the frame having independent branches one leading to each side of the drum, each of said branches terminating in an enlarged chamber at the upper end, and a separating device in each of said chambers adjacent the periphery of said drum.

2. In a cotton gin feeder, the combination with a frame, a toothed drum mounted thereon and devices for feeding material to the drum, of a suction trunk opening into the interior of the frame and having an enlarged inlet end disposed adjacent one side of the lower portion of the drum, a foraminous suction roller in the inlet end of said suction trunk and forming between itself and the drum a passage for foreign matter and any cotton associated therewith, said roller adapted to pneumatically separate the passing cotton and hold the same on its exterior, while permitting the foreign matter to enter the suction trunk, said roller rotating toward said drum and adapted to present the adhering cotton to the action of the teeth thereof.

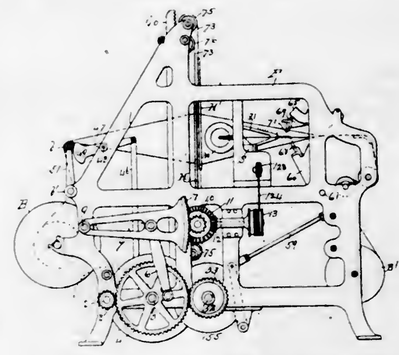
3. In a cotton gin feeder, the combination with a frame, a toothed drum mounted therein and devices for feeding material to the drum, of a suction trunk opening into the interior of the frame and having an enlarged inlet end disposed adjacent one side of the lower portion of the drum, a foraminous suction roller in the inlet end of said suction trunk and forming between itself and the drum a passage for foreign matter and any cotton associated therewith, said roller adapted to pneumatically separate the passing cotton and hold the same on its exterior, while permitting the foreign matter to enter the suction trunk, said roller rotating toward said drum and adapted to present the adhering cotton to the action of the teeth thereof, and a direction board between the feeding devices and said roller adapted to direct the material into the passage between the drum and roller.

4. In a cotton gin feeder, the combination with a frame, a toothed drum mounted therein and devices for feeding material to the drum, of a suction trunk opening into the interior of the frame and having an enlarged inlet end disposed adjacent one side of the lower portion of the drum, a foraminous suction roller in the inlet end of said suction trunk and forming between itself and the drum a passage for foreign matter and any cotton associated therewith, said roller adapted to pneumatically separate the passing cotton and hold the same on its exterior, while permitting the foreign matter to enter the suction trunk, said roller rotating toward said drum and adapted to present the adhering cotton to the action of the teeth thereof, and an adjustable direction board opposing the drum and adapted to direct the material into and to regulate the size of the passage between the drum and roller.

5. In a cotton gin feeder, the combination with a frame, a toothed drum mounted therein and devices for feeding material to the drum, of a suction trunk opening into the interior of the frame and having an enlarged inlet disposed adjacent one side of the lower portion of the drum, a rotary cleaner brush operating in said inlet portion of the suction trunk adjacent said drum and adapted to dislodge the cottom carried by the teeth thereof, said brush rotating in a direction opposite to the rotation of the drum and having brush material on its periphery arranged tangentially thereto whereby said material passes the drum while in a rearwardly inclined position, and a separating screen forming the bottom of the chamber in which the brush rotates, and guarding the upper end of the air trunk, said frame having a discharge passage for cotton leading from the brush chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,222,524. LOOM. ABEL E. CHERNACK, Providence, R. I. Filed Sept. 30, 1913. Serial No. 792,635. (Cl. 139—18.)



1. A loom having heddles, a reed, a shuttle and a stationary raceway for the shuttle, said raceway consisting of separate upper and lower guide bars with bearing faces transversely slotted to receive the warps, and means outside the shed for driving the shuttle through the warps.

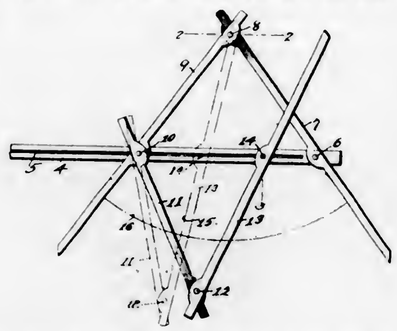
2. A loom having heddles and a shuttle and a stationary raceway therefor, consisting of upper and lower guide bars with bearing faces transversely slotted to receive the warps, said shuttle having rollers, a driving piece having rollers to bear against the rollers on the shuttle, separate means to impart positive rotary motion to both sets of rollers, and means to reciprocate the driving piece.

1,222,525. INSTRUMENT. JAMES ALEXANDER CLARKE, Devon, Pa. Filed Apr. 18, 1916. Serial No. 91,929. (Cl. 33—75.)

1. An instrument of the class described, comprising a base bar provided with a longitudinal slot, a pivot at one end of said base bar, a side bar mounted on said pivot, a second pivot on the outer end of said side bar, a supplemental side bar mounted on said second pivot, a third pivot carried by said supplemental side bar and slidable in said slot, a leg bar mounted on said third pivot, a fourth pivot at the outer end of said leg bar, an arm mounted on said fourth pivot, and a pin carried by said arm and slidable in said slot.

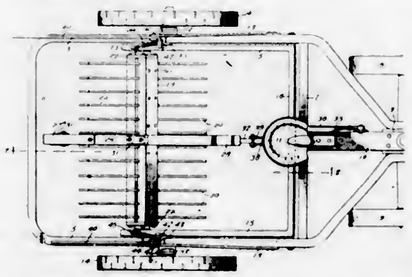
2. An instrument of the class described, comprising a base bar provided with a longitudinal slot, a pivot at one end of said base bar, a side bar mounted on said pivot, a second pivot on the outer end of said side bar, a supplemental side bar mounted on said second pivot, a third pivot carried by said supplemental side bar and slidable in said

slot, a leg bar mounted on said third pivot, a fourth pivot at the outer end of said leg bar, an arm mounted on said fourth pivot, and a pin carried by said arm and slidable



in said slot, said first and second pivots, second and third pivots, third and fourth pivots, and fourth pivot and pin, being equidistant from each other.

1,222,526. REVOLVING RAKE. ARCHIE R. CLAYTON, North Fork, Nev. Filed Feb. 26, 1914. Serial No. 821,167. Renewed Feb. 24, 1917. Serial No. 150,818. (Cl. 56—81.)



1. A device of the class described comprising a wheel supported main frame, a secondary frame pivoted within the same, a shaft rotatably carried by the secondary frame, rake teeth carried by the said shaft, said teeth extending on both sides of said shaft and having their ends beveled to present substantially parallel end surfaces to the ground, a beam carried by said shaft and extended at right angles thereto and to said teeth, straps carried by said beam, said straps comprising runners, a rod, a frame slidably supporting said rod, a lever for operating said rod, said rod adapted to engage one end of said beam, when the opposite end thereof is adjacent the ground, for holding said teeth in spaced relation with the ground, uprights carried by said main frame, braces supporting said uprights, levers pivoted to said braces and chains connecting said levers with said secondary frame for raising or lowering the latter.

2. A device of the class described comprising a wheel supported frame, a secondary frame pivoted thereon, a tooth carrying shaft pivoted in said secondary frame, said shaft comprising a pair of timbers provided with registering transversely disposed grooves, arms positioned centrally in said grooves and extending to each side of said timbers, for forming the rake teeth, said timbers being secured together for securing said arms in place, and a beam extending through said timbers at right angles thereto, and to said arms, straps for bracing the portion of said beams extending on each side of said timbers to said timbers, one of the brace straps of each section of the beam being extended around the end of the beam and then bulged outwardly therefrom to form runners, said runners connected to said timbers, and yokes connected to the sections of said beam adapted to brace said runners.

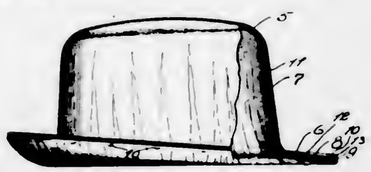
3. A rake including a rake head, said rake head comprising timbers, rake teeth carried thereby, a beam carried by the timbers and extending on opposite sides thereof, straps connecting the beam extensions with said timbers, certain of said straps being extended around the ends of the beam and bulged outward to form runners, and means for bracing the runners.

1,222,527. HAT-LINING. LEON COHEN, St. Louis, Mo. Filed July 30, 1914. Serial No. 854,048. (Cl. 2—32.)



In combination with a hat crown, a lining constructed of flexible material, means for securing the lining adjacent its lowermost margin to the hat crown; a second means, removed from the lower margin of the lining for securing the lining to the crown, a fold in said lining between said securing means, securing means in said fold next adjacent the body of the lining, and an elastic element in said fold for the purposes stated.

1,222,528. HAT-PROTECTOR. LEON COHEN, St. Louis, Mo. Filed Sept. 2, 1915. Serial No. 48,717. (Cl. 2—108.)



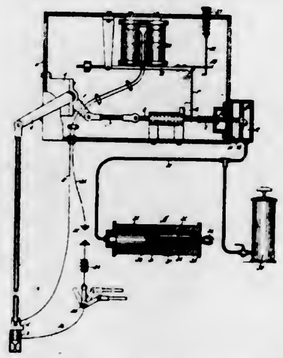
1. A protector for hats, comprising two sheets of impervious material, one of which is conformed to fit and cover the interior of a hat crown and the lower surface of the brim, the other conformed to fit the exterior of the hat crown and upper surface of the brim, and means for holding the outer edges of the two sheet margins in conformity with the margin of the hat brim.

2. A protector for hats constructed of impervious and imperforate material, and shaped to conform with the crown and brim of the hat, and to cover both the exterior and interior of the hat, and an element carried by the protector for designating the material of the hat covered by the protector.

3. A hat protector comprising an element constructed of imperforate material and shaped to conform with the hat crown and brim and arranged to be placed within the hat crown and underlying the hat brim; a second element constructed of imperforate material shaped to conform with the hat, a portion of which is arranged to cover the outside of the hat crown and overlying the hat brim, and means for uniting the margins of said elements.

1,222,529. TRAIN-STOP. HERBERT B. COLSTEN, Great Bend, Pa. Filed Apr. 1, 1916. Serial No. 88,304. (Cl. 246—58.)

1. In an apparatus of the class described, the combination of a device for stopping a train, a controller for such device including a movable element, a member adapted to be actuated by a stationary roadside device, a part adapted to be interposed between the said member and the said element for the actuation of the latter by the former, electrical means adapted to be energized under clear traffic conditions to hold the said part retracted from between the said member and element and for permitting the part to be interposed between the member and element under danger traffic conditions, and manually actuated means for withdrawing the part from between the member and element after the train has been stopped.

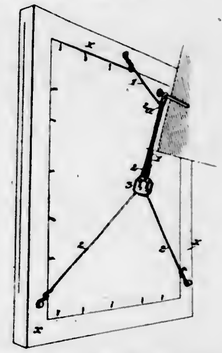


2. In a train stop of the class described, the combination of a third rail, a source of current, and a switch adapted to connect the said source with the third rail under clear traffic conditions and to disconnect the source from the rail under danger conditions, with a train carried apparatus for controlling the stopping of a train, said apparatus including a stop device, a controller therefor including a movable element, a mechanism adapted to engage the third rail for receiving motion therefrom and for electrical connection therewith, said mechanism including a movable member associated with the said element of the controller, a block adapted to be interposed between the said member and element for causing the movement of the latter by the former, electrical means adapted to hold the block away from the element and member, a connection between the electrical means and said mechanism, a connection between the electrical means and the said source of current, and a manually actuated device for restoring the block to normal position, whereby the movement of the mechanism unaffects the controller.

3. In a train stop of the class described, the combination of a third rail, a source of current, and a switch adapted to connect the said source with the third rail under clear traffic conditions and to disconnect the source from the rail under danger conditions, with a train carried apparatus for controlling the stopping of a train, said apparatus including a stop device, a controller therefor including a movable element, a mechanism adapted to engage the third rail for receiving motion therefrom and for electrical connection therewith, said mechanism including a movable member associated with the said element of the controller, a block adapted to be interposed between the said member and element for causing the movement of the latter by the former, electrical means adapted to hold the block away from the element and member, a connection between the electrical means and said mechaniam, a connection between the electrical means and the said source of current, and a manually actuated device for removing the block from between the member and element after the train has been stopped.

4. In a train stop, the combination of a third rail forming an electrical contact and shaped to impart movement to a train-carried contact shoe, a source of current connected with the rail, a switch between the said source and rail and adapted to be closed under clear traffic conditions and open under danger conditions, with a train-carried stop apparatus comprising a shoe adapted to engage said third rail, an electromagnet connected with the shoe and connected with the said source, a train stop device, a controller therefor, actuating means connected with the shoe to receive motion therefrom, a member adapted to be interposed between the actuating means and controller for actuating the latter, said member being connected with the movable element of the electromagnet and adapted to be held by the electromagnet when energized in a position whereby the actuating means is prevented from operating the controller, and a device for removing the member from coöperative relation with the actuating means after the same has operated the controller.

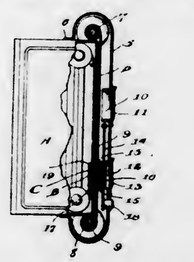
1,222,530. PICTURE AND MIRROR HANGER. JOHN J. COOK, Monroe, La. Filed July 12, 1916. Serial No. 108,870. (Cl. 40—145.3.)



1. The improved hanger for pictures and mirrors comprising a plate having holes, and two suspending cords of different lengths, the longer one being doubled and looped at its middle and passing through the plate, and the shorter one passing through the loop of the longer one and attached to said plate, as shown and described.

2. The combination with a picture frame, of a hanger comprising two suspending cords of different lengths, and a metal plate having opposite holes through which the strands of the longer cord pass and are attached to the lower portion of the frame, the shorter cord being attached to the said plate and passing through a loop formed on the upper end of the longer cord, as described.

1,222,531. AUTOGRAPHIC ATTACHMENT FOR CAMERAS. SAMUEL C. COOPER, Nunda, N. Y. Filed Nov. 23, 1915. Serial No. 63,000. (Cl. 95—1.1.)



1. The combination with a camera body having an opening therein, of a support within the camera body for a film when traversing said opening, a shell fitted upon the camera body and having spaced openings, doors on said shell for normally closing said openings, spools arranged in said shell, a translucid inscription receiving strip carried by and adapted to be wound on and unwound from the spools, respectively, and movable across the

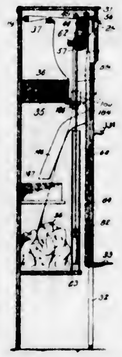
openings in the shell and camera body, and means within the shell for pressing the strip contiguous to the film within the camera body.

2. The combination with a camera body having an opening therein, of a support within the camera body for a film when traversing said opening, a shell fitted upon the camera body and having spaced openings, doors on said shell for normally closing said openings, spools arranged in said shell, a translucid inscription receiving strip carried by and adapted to be wound on and unwound from the spools, respectively, and movable across the openings in the shell and camera body, means within the shell for pressing the strip contiguous to the film within the camera body, and a colored panel pervious to light carried by the said means and registering with the opening in the camera body.

3. The combination with a camera body having an opening therein, of a support within the camera body for a film when traversing said opening, a shell fitted upon the camera body and having spaced openings, doors on said shell for normally closing said openings, spools arranged in said shell, a translucid inscription receiving strip carried by and adapted to be wound on and unwound from the spools, respectively, and movable across the openings in the shell and camera body, means within the shell for pressing the strip contiguous to the film within the camera body, and a colored panel pervious to light carried by the said means and registering with the opening in the camera body, and means for rotating one of the spools.

4. The combination with a camera body having an opening therein, of a support within the camera body for a film when traversing said opening, a shell fitted upon the camera body and having spaced openings, doors on said shell for normally closing said openings, spools arranged in said shell, a translucid inscription receiving strip carried by and adapted to be wound on and unwound from the spools, respectively, and movable across the openings in the shell and camera body, means within the shell for pressing the strip contiguous to the film within the camera body, a colored panel pervious to light carried by the said means and registering with the opening in the camera body, means for rotating one of the spools, and a finger engaging member carried by said means and extended without the shell for access thereto to permit the operation of the same.

1,222,532. APPARATUS FOR CONTROLLING USE OF TOWELS. ROBERT S. CORLETT, Evanston, Ill., assignor to Jacques Rousso, Chicago, Ill. Filed Jan. 5, 1912. Serial No. 669,543. (Cl. 45—32.)



1. In a device of the class described, a cabinet, means in said cabinet to support a long towel, said cabinet having a slot in the wall thereof, a bar back of said slot, a set of needles coacting with said bar and acting normally to engage said towel, and means to release said needles and feed said towel over said bar and out through said slot.

2. In a device of the class described, a cabinet, two rollers within said cabinet, a cross bar in front of said rollers and within the cabinet, said cabinet having a slot in its wall in front of said cross bar, said rollers being adapted to support a long towel passing around the rollers and in front of said cross bar, means to actuate the upper roller so as to feed slack towel out through said slot, and means to act in alternation therewith to draw the slack towel back into the cabinet by the operation of the other roller.

3. In a device of the class described, a cabinet, means in said cabinet to support a long towel, said cabinet having a slot in the wall thereof, a bar back of said slot, a set of needles coacting with said bar and acting normally to engage said towel, means to release said needles and feed said towel over said bar and out through said slot, means acting after a definite length of towel has been fed out to restore said needles to engaging position, and means to withdraw said length of towel through said slot and past said bar at the side thereof opposite said needles.

4. In a device of the class described, a cabinet, a roller within said cabinet around which a long towel is adapted to pass, an arm pivoted adjacent said roller, a cross bar pivoted on said arm, rollers mounted on said cross bar, and a spring coacting with said arm to press said last named rollers evenly against the first named roller.

5. In a device of the class described, a cabinet, a long towel within the same, two rollers around which said towel passes, a sprocket wheel loosely mounted on the shaft of one roller, a clutch to lock said sprocket wheel to said shaft, a chain passing over said sprocket wheel, means actuated with the initial movement of the chain to throw the clutch into engagement, and means actuated by the terminal movement of the chain to draw the clutch out of engagement.

[Claims 6 to 12 not printed in the Gazette.]

1,222,533. COIN-CONTROLLED TOWEL-SERVICE APPARATUS. ROBERT S. CORLETT, Evanston, Ill., assignor to Jacques Rousso, Chicago, Ill. Filed Mar. 5, 1912. Serial No. 681,786. (Cl. 194—37.)



1. In a coin-controlled device, a chamber, a delivery member mounted therein, an actuating member adapted to operate said delivery member, a handle member, coin-actuated means to control the actuation of the actuating member by said handle member, and means to prevent the actuation of said delivery member except by said actuating member, said last-named means being released by the operative engagement of said actuating member with the delivery member.

2. In a coin controlled device, a delivery member, a carriage member, means carried by said carriage member to operate said delivery member, means acting normally to prevent operation of said delivery member, said first named means being arranged to release said second named means when said carriage member is operated, and coin controlled means to permit operation of said carriage member.

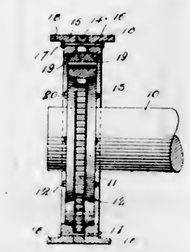
3. In a coin-controlled device, a chamber, a delivery member mounted therein, an intermediate member adapted to operate said delivery member, a handle member, means to permit actuation of said intermediate member by the handle member, and means acting normally to retain said intermediate member in inoperative position relative to said chamber, said means being arranged to release the intermediate member upon being actuated by a coin.

4. In a device of the class described, a delivery member, an intermediate member, means by which said intermediate member operatively engages said delivery member, coin controlled means for permitting movement of said intermediate member from normal position to extreme position, and means to prevent said intermediate member from being again moved to said extreme position until it has been returned to normal position.

5. In a device of the class described, a delivery member, an intermediate member adapted to operate said delivery member, a handle member, coin actuated means for permitting operation of said intermediate member by said handle member, means to support the coin during said operation, a coin receptacle, and means to discharge the coin from said support into said receptacle.

[Claims 6 to 12 not printed in the Gazette.]

1,222,534. ROLLER-BEARING. LEO H. CORMIER, Brooklyn, N. Y. Filed Oct. 10, 1916. Serial No. 124,895. (Cl. 64—60.)



1. In a roller bearing, the combination with a shaft, of a fixed casing surrounding the shaft and provided with an internal bearing surface and an internal rack, pinions in the casing bearing on said surface and engaging said rack, a gear wheel keyed on said shaft for engagement with said pinions, and a roller adapted for securement against the side of said gear wheel and for engagement with said pinions to support the shaft.

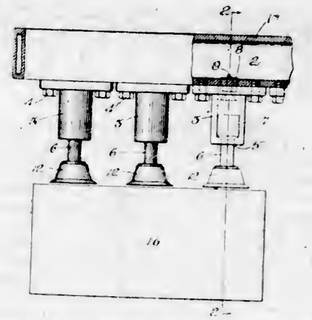
2. In a roller bearing, the combination with a shaft, of a fixed casing surrounding the shaft and provided with an internal rack and an internal bearing surface, pinions arranged in the casing bearing against said internal bearing surface and having teeth for engagement with said internal rack, a gear wheel detachably keyed on said shaft for intermeshing engagement with the pinions, and a roller carried upon the side of said gear wheel and adapted for engagement with the bearing portions of said pinions for supporting the shaft.

3. In a roller bearing, the combination with a shaft, of a gear keyed upon the shaft, a roller carried by the shaft adjacent to the gear, a plurality of pinions arranged about the gear and the roller and having roller and toothed portions engaging said roller and the gear, and a casing surrounding the shaft and the pinions and being adapted to retain the latter from longitudinal displacement from the roller, said casing comprising an intermediate ring having an internal rack engaging the teeth of the pinions, and end rings having inwardly inclined bearing surfaces engaging the roller portions of the pinions.

4. In a roller bearing, the combination with a shaft, of a gear wheel keyed to the shaft, a pair of rollers secured against the opposite sides of the gear wheel for rotation therewith and provided with peripheral bearing surfaces inclined toward the gear wheel, a plurality of pinions meshing with the gear wheel and arranged in planetary fashion thereabout, said pinions being provided upon their opposite ends with outwardly tapering bearing surfaces adapted for engagement with said rollers, and a longitudinally separable casing surrounding the shaft and the pinions, said casing provided in its opposite ends with internal inwardly inclined bearing surfaces adapted to receive the opposite ends of the pinions thereagainst to support the pinions and to retain the same from longitudinal shifting in the casing.

5. In a roller bearing, the combination with a shaft, a gear keyed to the shaft, rollers secured to the opposite sides of the gear, a plurality of pinions meshing with the gear and arranged in planetary fashion thereabout, and a casing surrounding said pinions and said shaft, said casing comprising intermediate and end rings, said intermediate ring having an internal rack adapted to mesh with said pinions, said end rings provided with bearing surfaces adapted to engage the opposite ends of the pinions to support the same and to hold the pinions, the gear wheel, and the shaft from longitudinal shifting, and means for detachably securing said rings together.

1,222,535. APPARATUS FOR HANDLING BRICK. HOLLIS B. CRUM, Chicago, Ill., assignor to Raymond C. Penfield, Chicago, Ill. Filed Nov. 25, 1913. Serial No. 802,936. (Cl. 59—9.)



1. A apparatus for handling a plurality of individual bricks comprising a movable lifting frame carrying a plurality of elastic vacuum cups, means to initiate a vacuum connected with all of said cups, each cup being mounted on a holder and having automatic means in the holder for each cup adapted to open the vacuum creating pressure directly on each cup when it is sealed against a contacting surface and to prevent air leakage to the vacuum creating means in case of non-sealing of its cup.

2. Apparatus for handling brick, comprising a lifting frame carrying a plurality of plungers adapted for a limited sliding movement in said frame, a vacuum cup on each plunger, means to create and maintain a partial vacuum in all said cups to seal each cup against a contacting brick surface and automatic means to prevent air leakage through a non-sealed cup and plunger.

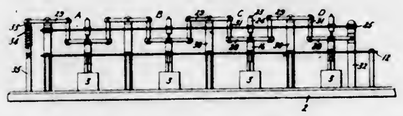
3. Apparatus for handling brick through suction applied to the top surface of the brick to lift the same, comprising a lifting frame carrying a plurality of elastic vacuum cups, means to create a partial vacuum connected with each cup, each of said cups being independently mounted on the carrier and adapted to be independently sealed to and seated on separate bricks, and automatic means to prevent air leakage through an unsealed vacuum cup to the others carried by said apparatus.

4. Apparatus for handling brick, adapted to engage the top surface of brick and lift the same by suction, means to maintain a partial vacuum connected with said apparatus and permitting movement of the apparatus while maintaining said partial vacuum, a plurality of vacuum cups carried by said apparatus, each cup being adapted to

effect an air-tight seal on the surface of the brick upon contacting therewith, said carrier being of sufficient weight to automatically deflate each vacuum cup when lowered onto the brick surface, said weight and partial deflation of each cup effecting a partial sealing of said cups to the brick surface.

5. Apparatus for handling a plurality of brick comprising a lifting frame including a large number of relatively small vacuum cups in pre-arranged spacing whereby a plurality of cups will be in position to contact with each brick to be lifted, means to create and maintain a partial vacuum through the apparatus and each vacuum cup during the brick lifting operation, each of said vacuum cups being yieldingly mounted in a frame, whereupon lowering of said frame upon a plurality of brick will automatically tend to partially seal each vacuum cup at the brick surface with which it contacts, whereby a relatively low vacuum creating force will complete the sealing of each cup, each cup having a check valve in combination therewith, adapted to automatically shut off air leakage through a non-sealing cup.

1,222,536. PROTECTIVE DEVICE FOR SYSTEMS OF DISTRIBUTION. ARCHIBALD H. DAVIS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 13, 1914. Serial No. 824,570. (Cl. 175—294.)



1. In a system of distribution having a plurality of circuits, a switch in each circuit, tripping mechanism for each switch responsive to changes in the electrical characteristics of said circuits, and interconnecting means for holding said tripping mechanism mechanically balanced in normal inoperative position when the electrical characteristics of their respective circuits are substantially similar but allowing any of said tripping mechanisms to respond to changes in the electrical characteristics of their respective circuits and move into tripping position without disturbing the mechanical balance of the other mechanisms.

2. In a system of distribution having a plurality of circuits, a switch in each circuit, an electroresponsive tripping mechanism for each switch energized from each of said circuits, and means interconnecting said tripping mechanisms for mechanically balancing said mechanisms against movement when the energization of said tripping mechanisms is substantially equal but allowing any mechanism more strongly energized to move into tripping position without disturbing the mechanical balance of the other mechanisms.

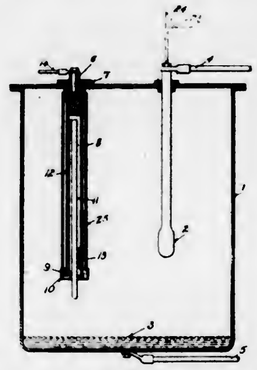
3. In a system of distribution having a plurality of circuits connected in parallel, a switch in each circuit, an electroresponsive tripping mechanism for each switch responsive to abnormal conditions on each of said circuits, and means interconnecting said tripping mechanism for holding said mechanisms inoperative but in mechanical equilibrium when the energization of said mechanisms is substantially equal and allowing any mechanism more strongly energized to move into operative tripping position without disturbing the equilibrium of the other mechanisms.

4. In a system of distribution having a plurality of circuits connected in parallel, a switch in each circuit, a tripping circuit for each switch, relays responsive to changes in the electrical characteristics of said plurality of circuits for energizing said tripping circuits, and interconnecting means for holding said relays mechanically balanced in normal circuit opening position when the electrical characteristics of their respective circuits are substantially similar but allowing any of said relays to respond to changes in the electrical characteristics of their respective circuits to move into circuit closing position without disturbing the mechanical balance of the other relays.

5. In a system of distribution having a plurality of circuits connected in parallel, a switch in each circuit, a tripping circuit for each switch, relays controlling each tripping circuit energized from each of said plurality of circuits, and interconnecting means for mechanically balancing the pull of said relays against each other when the energization of said relays is substantially equal but allowing any relay having a stronger pull to move into circuit closing position without disturbing the mechanical balance of the other relays.

[Claims 6 to 22 not printed in the Gazette.]

1,222,537. KEEP-ALIVE ANODE. DAVID C. DAVIS, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 11, 1914. Serial No. 837,725. (Cl. 175—354.)



1. In vapor electric apparatus, the combination with an evacuated container, of a liquid electrode therein, a consumable solid electrode adjacent thereto, and means for automatically compensating for the consumption of said solid electrode.

2. In vapor electric apparatus, the combination with an evacuated container, of a liquid electrode therein, a solid electrode, comprising a substantially vertical rod of refractory conducting material, having its lower end adjacent to the liquid electrode, means for maintaining an arc between the two electrodes, and means for automatically feeding the refractory electrode downwardly in accordance with the consumption thereof.

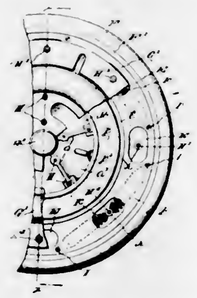
3. In vapor electric apparatus, the combination with an evacuated container, of a liquid electrode therein, a solid electrode, comprising a substantially vertical rod of refractory conducting material, having its lower end adjacent to the liquid electrode, and means for automatically maintaining an arc of substantially constant length between the two electrodes.

4. In vapor electric apparatus, the combination with an evacuated metallic container having an opening in the wall thereof, of a conducting member passing through said opening, an insulating gas-tight joint between said member and the wall of the container, a liquid electrode within the container, and a consumable solid electrode adjacent thereto, said solid electrode being carried by said conducting member and being automatically adjustable with relation thereto in accordance with its rate of consumption.

5. In vapor electric apparatus, the combination with an evacuated container having an opening therein, of a conducting member passing through said opening, a tubular extension on said conducting member within the container, a refractory conducting rod projecting from said tubular member, a feed member of comparatively low melting point within said tubular member and attached to the refractory rod, and a refractory stop member carried by the end of the tubular member and acting as a rest for the end of the feed member.

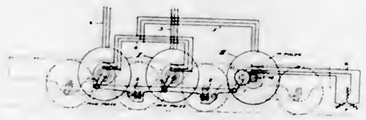
[Claim 6 not printed in the Gazette.]

1,222,538. VEHICLE-WHEEL. FERNANDO RAMIREZ DE DAMPIERRE, Madrid, and JUSTO GONZALO, Valencia, Spain. Filed Dec. 14, 1914. Serial No. 877,234. (Cl. 152—35.)



In a wheel for vehicles, the combination with a hub member and a pneumatic tire mounted thereon, of a rigid metal ring secured to said pneumatic tire and adapted to grip same, a continuous hollow metal ring fitting over said first-mentioned ring and adapted to slide tangentially thereon, a rim and tire rigidly secured on said hollow metal ring, plates secured to said hub member on each side thereof and projecting over and inclosing said pneumatic tire, said first-mentioned ring and said hollow metal ring, bolts passing through openings in said hollow metal ring, and connecting said plates, and coil springs mounted in said hollow metal ring and connected at one end to said bolts and at the other end secured to said hollow metal ring, whereby the tangential slipping of said hollow metal ring relative to said hub is permitted, substantially as described.

1,222,539. ELECTRIC MOTOR SYSTEM. COLOMAN DE KANDÓ, Budapest, Hungary, assignor, by mesne assignments, to Westinghouse Machine Company, a Corporation of Pennsylvania. Filed June 21, 1904, Serial No. 213,620. Renewed June 24, 1915. Serial No. 36,152. (Cl. 172—274.



1. The combination with the wheels of a vehicle, groups of motors, one group having a different number of motors from that of the other group, one group containing a primary induction motor, and another group containing a secondary induction motor, at least one group being composed of a plurality of motors having both their primaries and their secondaries connected in parallel, means for connecting the secondary of one group of motors with the primary of the other group, means for mounting the parallel connected motors, for mechanical connection, and means for positively coupling in fixed electrical angular relation the rotor parts of the parallel connected motors.

2. In combination with the wheels of a vehicle, primary and secondary induction motors, one group containing a primary motor, and another group containing a secondary motor, the groups being composed of different numbers of motors, at least one group being composed of a plurality of motors having both their primaries and their secondaries connected in parallel, means for connecting the secondary of one group of motors with the primary of the other group, and means for positively coupling in fixed electrical angular relation the rotor parts of the parallel connected motors.

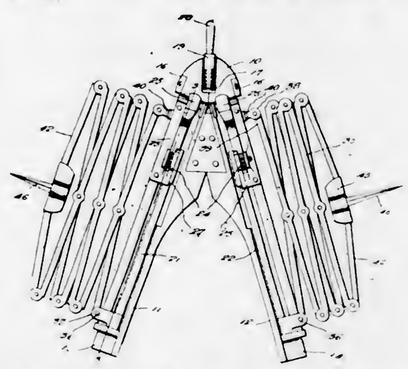
3. In combination, a plurality of induction motors divided into two groups, each group containing a different number of motors, one group containing a primary induction motor, and the other containing a secondary induction motor, the motors of at least one group having their primaries and secondaries connected in parallel, means for connecting the secondary of one group with the primary of the other group, and means for positively coupling in fixed electrical angular relation the rotor parts of the parallel connected motors.

4. In combination with a group of primary induction motors having their primaries connected in parallel and their secondaries connected in parallel, a second group containing a smaller number of induction motors than is contained in the first mentioned group, means for connecting the secondary of the first mentioned group with the primary of the second group and means for positively coupling in fixed angular electrical relation the rotor parts of the motors of the first mentioned groups.

5. The combination with a plurality of induction motors having stator primaries connected in parallel and rotor secondaries connected in parallel and another induction motor having its primary connected to the secondaries of the first induction motors, of means for positively coupling the rotor parts of said first motors in fixed angular relation.

[Claims 6 to 13 not printed in the Gazette.]

1,222,540. WEAPON. THOMAS DELIGIANES, Rock Island, Ill. Filed July 11, 1916. Serial No. 108,762. (Cl. 74—5.)



1. A device of this character, including a supporting member, a shaft mounted for oscillation therein, means for oscillating the shaft, a lazy tong connected to said shaft and pivotally carried thereby, one member of the inner end thereof being slidably connected to the shaft and the other member being pivoted at a fixed point, and coöperating means carried by the shaft and the latter member of the lazy tong whereby the lazy tong is projected or retracted.

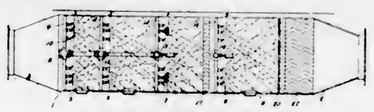
2. A device of this character, including a supporting member, a shaft mounted for oscillation therein, means for oscillating the shaft, a lazy tong connected to said shaft and pivotally carried thereby, one member of the inner end thereof being slidably connected to the shaft and the other member being pivoted at a fixed point, coöperative means carried by the shaft and the latter member of the lazy tong whereby the lazy tong is projected or retracted, and a blade carried by the outer free end of the lazy tong.

3. A device of this character, including a supporting member, a shaft mounted for oscillation therein, means for oscillating the shaft, a lazy tong connected to said shaft and pivotally carried thereby, one member of the inner end thereof being slidably connected to the shaft and the other member being pivoted at a fixed point, a rack bar slidably mounted in the shaft and operably connected to the fixed pivot of the lazy tong, and manually controlled means for actuating the rack bar to project and retract the lazy tong.

4. A device of this character, including a supporting member, a shaft mounted for oscillation therein, means for oscillating the shaft, a lazy tong connected to said shaft and pivotally carried thereby, one member of the inner end thereof being slidably connected to the shaft and the other member being pivoted at a fixed point, a rack bar slidably mounted in the shaft and operably connected to the fixed pivot of the lazy tong, manually controlled means for actuating the rack bar to project and retract the lazy tong, and a blade carried by the outer free end of the lazy tong.

5. A device of this character including two divergent supporting members, a connecting member therefor at one end, two shafts, one journaled in each of said supporting members, a coöperative gearing mounted in the connecting member and operably connected to the shafts, whereby both of said shafts are oscillated in unison, a weapon carrying lazy tong connected to each shaft, and coöperable means connected to each shaft and each lazy tong for retracting or projecting each lazy tong.

1,222,541. COMPRESSED-AIR WASHER. BENJAMIN C. DONHAM, Glen Ridge, N. J., assignor to Spray Engineering Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 6, 1915. Serial No. 65,214. (Cl. 261—115.)



1. An air washer comprising a conduit for the air, and means to pass liquid in different conditions of fineness of sub-division into said air, and including means to effect atomization of the liquid, but retaining it in a condition of free moisture, whereby foreign particles may be precipitated by such free moisture.

2. An air washer comprising a conduit for the air, and means to pass liquid in successively finer conditions of sub-division into said air, and including means whereby the liquid in its finest condition of sub-division is retained as free moisture for the precipitation of foreign particles.

3. An air washer comprising a conduit for the air, means to discharge finely divided liquid throughout the cross section of said conduit and in the direction of movement of said air and means subsequently to discharge finely divided liquid in diagonal paths toward the center of the air stream.

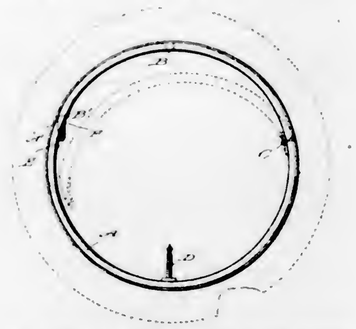
4. An air washer comprising a conduit for the air, two sets of means for discharging finely divided liquid throughout said air, one of said means having atomizing screens, a liquid removing device interposed therebetween and separate supply connections for said discharging means.

5. An air washer comprising a conduit for the air, two sets of means for discharging finely divided liquid throughout said air, a liquid removing device interposed therebetween, a liquid removing device succeeding said means and separate supply connections for said discharging means.

[Claims 6 to 20 not printed in the Gazette.]

1,222,542. DEMOUNTABLE RIM. JOSEPH W. DRUMMOND, Chillicothe, Ohio. Filed Dec. 22, 1915. Serial No. 68,137. (Cl. 152—21.)

1. A rim formed of hinged sections having beveled meeting free ends provided with V-shaped interlocking portions constituting part of said beveled meeting ends and automatic clamping means, including members carried by said rim ends and relatively engageable when said interlocking rim portions are engaged, and a spring latch for locking said members in engaged position.



2. A rim formed of hinged sections having beveled free ends provided with relatively engaging shouldered portions, and automatic clamping means for preventing relative movement of said free ends in any direction and maintaining shouldered portions in engaged relation, said clamping means consisting of oppositely bent hook members mounted upon the inner peripheries of the said rim sections adjacent the said beveled free ends and being movable to operative position when said shouldered portions are engaged.

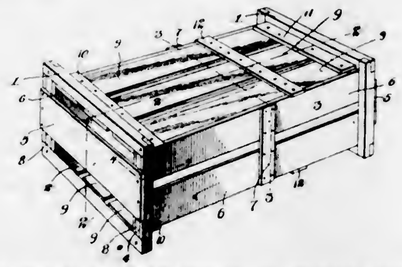
3. A rim formed of hinged sections having their free ends beveled and provided with relatively engaging shouldered portions, automatically interlocking hooks carried by said sections adjacent their free ends whereby to prevent the sections from pulling apart and a spring latch for automatically securing said hooks in engaged position.

4. A vehicle wheel rim comprising sections having hinged connections with one another and having beveled free meeting extremities, tongues adjacent to the free extremities of the rim sections having interlocking oppositely bent hooks, and a latch member for automatically locking said hooks against displacement carried by one of said tongues.

5. A vehicle wheel rim comprising sections having a hinged connection with each other and having beveled free meeting extremities, tongues adjacent to the free extremities of the rim sections having interlocking hooks, and a spring catch on one of said tongues adapted to engage the other tongue for the purpose of retaining the hooks of the tongues in interlocked relation.

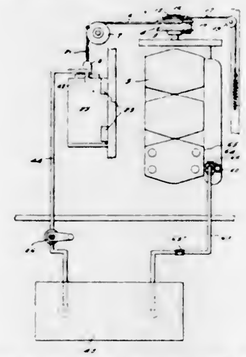
[Claim 6 not printed in the Gazette.]

1,222,543. CONTAINER. LEWIS C. DUNN, San Antonio, Tex. Filed Apr. 20, 1916. Serial No. 92,464. (Cl. 217—43.)



A container of the class described comprising end frames, each having grooves in opposite sides; side members having flanges at their ends on their outer sides for engagement in said grooves, and top and bottom members adapted to be arranged between the side members, within the end members and having cleats on their outer sides, one near one end and one at an intermediate point to project over and engage the side members, each top and bottom member also having a shorter cleat near the opposite end adapting said end to be sprung inwardly, between the side members and so that said short cleat may be moved inwardly and outwardly through one of the end members, in assembling or disassembling the container.

1,222,544. COMPRESSION-STARTER FOR COMBUSTION-ENGINES. WALFRID S. EKLUND and WILLIAM E. PAYNE, Donner, La. Filed Apr. 3, 1915. Serial No. 19,001. (Cl. 123—179.)



1. A starting device of the class described including a drum, means for transmitting motion from the drum to the shaft of the engine, a starting cable connected with the drum and adapted to rotate the latter, a cylinder, a piston operating in the cylinder and provided with a hollow piston rod connected with the starting cable, said piston rod having an exhaust port, a valve carried by the piston for controlling the passage of fluid pressure from one side of the piston head to the other, an exhaust valve for controlling the passage of fluid pressure through the hollow piston rod, and means for automatically operating the valve to produce a continuous reciprocation of the piston head and the piston rod.

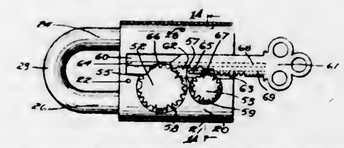
2. A starting device of the class described including a cylinder, a piston head operating within the cylinder and provided with a hollow piston rod having an exhaust port, a check valve carried by the piston head for controlling the passage of fluid pressure from one side of the said head to the other, an exhaust valve for controlling the passage of fluid pressure through the hollow piston rod, means for automatically operating the said valve to produce a continuous reciprocation of the piston head and the piston rod and means for transmitting motion from the piston rod to the shaft of an engine.

3. A starting device of the class described including a cylinder, a piston operating within the cylinder and provided with a check valve for controlling the passage of fluid pressure from one face of the piston to the other, an exhaust valve for controlling the exhaust of fluid pressure from the cylinder, said exhaust valve being carried by the piston and means located at opposite ends of the cylinder for automatically operating said valves to produce a continuous reciprocation of the piston, and means for transmitting motion from the piston to the shaft of an engine.

4. A starter of the class described including a cylinder, a piston head operating in the cylinder, and provided with opposite check valves for controlling the passage of pressure from one side of the piston head to the other, a hollow piston rod extending from the piston head and provided with an exhaust port, an exhaust valve connected with the check valves and arranged to control the passage of fluid pressure through the hollow piston rod and means located at opposite ends of the cylinder for automatically operating the said valves to produce a continuous reciprocation of the piston head, and means for communicating motion from the piston rod to the shaft of an engine.

5. A starter of the class described including a cylinder, a piston head operating in the cylinder and provided with a hollow piston rod forming an exhaust passage and having an exhaust port, check valves carried by the piston head for controlling the passage of fluid pressure from one side of the piston head to the other, a plate or member connecting the check valves, an exhaust valve connected with the said plate or member and arranged to control the passage of fluid pressure through the hollow piston rod and springs located at opposite ends of the cylinder and arranged to automatically operate the valves to produce a continuous reciprocation of the piston head.

1,222,545. LOCK. WILLIAM GROSS, Minneapolis, Minn., assignor to Safety Lock Company, Minneapolis, Minn., a Corporation of South Dakota. Filed Nov. 1, 1915. Serial No. 58,946. (Cl. 70—108.)



1. A lock comprising a body portion having a key-receiving passageway formed with a ridge extending along the same, a movable locking member, means for holding said locking member against movement, and means including a gear and a key for operating said gear when the key is inserted in the passageway for releasing said locking member, said gear lying flush with the top of the ridge and extending entirely across the passageway to said ridge.

2. A lock comprising a body portion having a key-receiving passageway formed with a ridge extending along the same, a movable locking member, means for holding said locking member against movement, and means including a gear and a key for operating said gear when the key is inserted in the passageway for releasing said locking member, said gear being engaged by the key below the top of the ridge and extending entirely across the passageway to said ridge and into a semicircular recess formed in the side of the ridge.

3. A lock comprising a body portion having a key-receiving passageway formed with a ridge extending along the same, locking means, and means for releasing the same including a rotatable member in the plane of said passageway extending into said passageway and to the ridge.

4. A lock comprising a body portion having a key-receiving passageway formed with a ridge extending along the same, locking means, and means for releasing the same including a rotatable member extending into said passageway and into a recess formed in the side of the ridge.

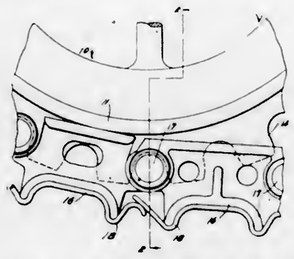
5. A lock comprising a body portion having a key-receiving passageway formed with a ridge extending along the same, said ridge having a semicircular recess formed in its side, locking means, and means for releasing the locking means including a rack edged key for insertion in the passageway and a coöperating gear extending into said passageway and recess.

[Claims 6 to 16 not printed in the Gazette.]

1,222,546. BELT-TRACTOR. WILLIAM F. HAMILTON, Ventura, Cal. Filed Dec. 9, 1914. Serial No. 876,297. (Cl. 21—114.)

1. In a tractor, the combination of a tractor belt, having a series of links connected together by pivot pins, a pair of driving sprockets around which said belt passes, said sprockets engaging the pivot pins of the links, means

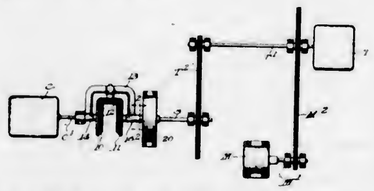
on said sprockets overhanging the spaces between the teeth thereon for engaging and supporting the links to maintain the pins out of contact with the bottom walls of the recesses between the sprocket teeth on said sprockets, and a series of bearing rollers on which the lower leaf of said belt is supported in alinement with the lower face of said means, whereby the sprockets and rollers support the tractor.



2. In a tractor, the combination of a tractor belt, comprising a series of connected sprocket links and pivot pins forming connections between the adjacent links, a pair of sprocket wheels around which said belt passes, said sprocket wheels having laterally extending flanges overhanging the spaces between the teeth thereon engaging the links of the tractor belt to maintain the pins out of contact with the bottom walls of the spaces between the sprocket teeth on said wheels, and a series of bearing rollers on which the lower leaf of said belt is supported in alinement with the lower faces of the flanges on said wheels, whereby the wheels and rollers support the tractor.

3. In a tractor, the combination of a tractor belt, comprising a series of links connected together by pivot pins, a pair of sprockets around which said belt passes, said sprockets having laterally extending annular flanges on the opposite sides of the sprocket teeth thereon, overhanging the spaces between the teeth and engaging and supporting the tractor belt to maintain the pivot pins on said belt out of contact with the bottom walls of the recesses between the sprocket teeth, and a series of bearing rollers on which the lower leaf of said belt is supported in alinement with the lower faces of the flanges on said wheels, whereby the sprockets and rollers support the tractor.

1,222,547. SYNCHRONIZING DEVICE. WILLIAM B. JACKSON, Chicago, Ill., assignor of one-half to Dugald C. Jackson, Chicago, Ill. Filed May 19, 1913. Serial No. 768,561. (Cl. 172—230.)

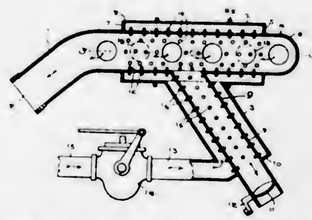


1. In a device of the class described, a controlling motor and a controlled motor, and first means, driven from both said motors and oppositely actuated thereby so as to be stationary in its normal position when the motors are running synchronously, and second means, for increasing and decreasing the speed of said controlled motor, and power means whereby when said first means are moved from normal position due to the controlled motor getting ahead of the controlling motor, said second means will be put in operation to progressively decrease the speed of the controlled motor to cause said first means to move back to said normal position, and whereby when said first means are moved from normal position due to the controlled motor getting behind the controlling motor said second means will be put in operation to progressively increase the speed of the controlled motor to cause said first means to move back to said normal position.

2. In a device of the class described, a controlling motor and a controlled motor, and first means, driven from both said motors and oppositely actuated thereby so as to be stationary in its normal position when the motors are running synchronously, and second means, for increasing and decreasing the speed of said controlled motor, and electromotive means for actuating said second means, and a third means, whereby when said first means are moved from normal position due to the controlled motor getting ahead of the controlling motor a circuit will be established which will cause said electromotive means to progressively actuate said second means to decrease the speed of the controlled motor to cause said first means to move back to said normal position, and whereby when said first means are moved from normal position due to the controlled motor getting behind the controlling motor a circuit will be established which will cause said electromotive means to progressively actuate said second means to increase the speed of the controlled motor to cause said first means to move back to said normal position.

3. In a device of the class described, a controlling motor and a controlled motor, and first means, driven from both of said motors and actuated thereby so as to be stationary in an intermediate normal position when the motors are running in perfect synchronism and so as to move in one direction when the controlled motor increases in speed and to move in the other direction when it decreases in speed relatively with the controlling motor, second means, for increasing and decreasing the speed of said controlled motor, and third means whereby, when said first means is moved from its intermediate position due to the controlled motor getting behind in speed, said first means in conjunction with said third means will put into operation said second means to tend to continuously decrease the speed of the controlled motor until the controlled motor has made up the revolutions which it has lost, when the first means will have returned to its intermediate normal position, and whereby when said first means is moved from its intermediate position due to the controlled motor getting ahead in speed, said first means in conjunction with said third means will cause said second means to tend to continuously increase the speed of the controlled motor until the controlled motor has lost the revolutions which it had gained over the controlling motor when the first means will again be in its intermediate normal position.

1,222,548. KEROSENE-VAPORIZER. ALEXIS L. LAMAR, Pittsburg, Kans. Filed July 15, 1916. Serial No. 109,437. (Cl. 257—241.)

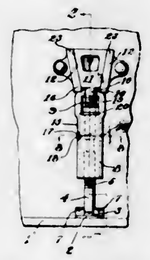


1. An engine manifold comprising an intake manifold consisting of a horizontally disposed manifold pipe, and an extension pipe extending downwardly from the horizontal section, a hydrocarbon intake pipe connected to the lower end of said depending extension, said intake manifold being provided with outlet openings, an exhaust manifold disposed through and within the intake manifold in spaced relation to the walls thereof, an exhaust pipe extension disposed through and in spaced relation to the walls of the depending section of the intake manifold, and a valve arranged in the lower end of said exhaust pipe extension adapted to control the heat radiating efficiency of the exhaust manifold within the intake manifold.

2. An engine manifold comprising an intake manifold having outlet openings therein, an extension pipe projecting from said intake manifold, a hydrocarbon supply pipe connected to said extension, an exhaust manifold disposed through and in spaced relation to the walls of the intake manifold inlet, arms projecting laterally from the exhaust manifold through said intake manifold, and exhaust pipe extension extending through and in spaced relation to the walls of the intake extension, and heat radiating means carried by said exhaust manifold and exhaust extension pipe.

3. An engine manifold comprising an intake manifold, consisting of a horizontally disposed manifold, and an extension pipe extending downwardly from said horizontal manifold, a hydrocarbon intake pipe connected to the lower end of said depending extension, said intake manifold being provided with outlet openings, an exhaust manifold disposed through and in spaced relation to the walls of the intake manifold, an exhaust pipe extension disposed through and in spaced relation to the walls of the depending section of the intake manifold, heat radiating pins disposed on the inner and outer surfaces of the exhaust manifold and the exhaust depending section, and a valve arranged in the lower end of said exhaust pipe depending section, adapted to be actuated to control the heat radiating efficiency of said exhaust manifold, exhaust depending section, and heat radiating pins carried thereby.

1,222,549. FASTENER FOR AUTOMOBILE-HOODS. EVERARD T. LARK, New Hanover, Ill. Filed Oct. 19, 1916. Serial No. 126,509. (Cl. 70—3.)



1. A fastener comprising co-acting head and socket members, a screw member for producing engagement thereof, and means carried by the screw member adapted to engage the socket member to prevent operation of the screw member.

2. A fastener comprising coacting head and socket wedge members, a rotatable member for producing engagement thereof, and means carried by one of the members adapted to engage one of the other members to prevent rotation of one of said members.

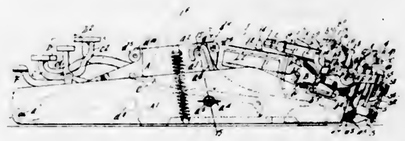
3. A fastener comprising head and socket wedge members, a screw member, a rotatable member adapted to act with said screw member to produce engagement of the said wedge member, and means carried by the rotatable member surrounding a portion of the head member and adapted to engage the socket member to prevent rotation of the rotatable member.

4. A head and socket fastener comprising a socket member borne by the member to be fastened, a head member adapted to engage the same, a pivoted member carrying the said head member, screw means to draw the fastening members into engagement, and means operatively associated with the screw means and socket member to prevent operation of the screw means.

5. A fastener comprising a socket member borne by the member to be fastened, a head member adapted to engage the same, a pivoted member carrying the said head member, screw means to draw the fastening members into engagement, a keeper straddling the screw means and having an angular upper end slotted to inclose a portion of the head member and adapted for engagement with the socket member whereby to prevent operation of the screw means.

[Claims 6 to 12 not printed in the Gazette.]

1,222,550. TYPE-WRITING MACHINE. EMMIT G. LATTA, Syracuse, N. Y., assignor to Corona Typewriter Company, Inc., a Corporation of New York. Filed Nov. 2, 1911, Serial No. 658,153. Renewed Oct. 14, 1916. Serial No. 125,702. (Cl. 197—186.)



1. In a typewriting machine, the combination with a series of upwardly and rearwardly movable type bars, a platen, and a carriage therefor, of a stationary frame on which the type bars are mounted, a support for the carriage which is mounted on the stationary frame to move in a substantially upright position substantially directly downward to lower the carriage while retaining it upright from an elevated operative position to an inoperative position materially below its operative position.

2. In a typewriting machine, the combination with a series of upwardly and rearwardly movable type bars each having a plurality of type, a platen, a carriage therefor, and means for shifting the type bars relative to the platen for printing different case characters, of a stationary frame on which the type bars are mounted, a support by which the carriage is normally supported in a relatively fixed elevated operative position and which is mounted on the stationary frame to move downwardly in a substantially upright position with the carriage upright thereon to lower the carriage to an inoperative position materially below its operative position for collapsing the machine to smaller dimensions.

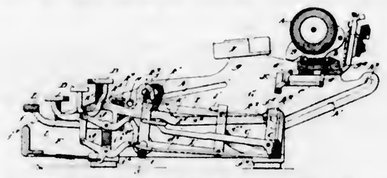
3. In a typewriting machine, the combination with printing instrumentalities, a platen, and a carriage therefor, of a stationary frame supporting the printing instrumentalities, a support by which the carriage is normally supported in an elevated operative position above and in rear of the printing instrumentalities and which is mounted on the stationary frame to move downwardly while retaining the carriage substantially upright to lower the carriage from its operative position to an inoperative position in rear of the printing instrumentalities for collapsing the machine to smaller dimensions.

4. In a typewriting machine, the combination with printing instrumentalities, a platen, and a carriage therefor, of a stationary frame supporting the printing instrumentalities, a support by which the carriage is normally supported at an elevation above the printing instrumentalities and which is mounted on the stationary frame to move substantially directly downward while retaining the carriage substantially upright to a position to place the carriage in an inoperative position at substantially the same elevation as the printing instrumentalities.

5. In a typewriting machine, the combination with printing instrumentalities, a platen, and a carriage therefor, of a stationary frame on which said printing instrumentalities are shiftably mounted for printing different case characters; and a frame which supports said carriage and is movable relative to said other frame to support the platen in an operative position above said printing instrumentalities and to lower the carriage while retaining it upright to an inoperative position in rear of said printing instrumentalities, substantially as set forth.

[Claims 6 to 51 not printed in the Gazette.]

1,222,551. TYPE-WRITING MACHINE. EMMIT G. LATTA, Syracuse, N. Y., assignor to Corona Typewriter Company, Inc., a Corporation of New York. Continuation of application Serial No. 669,980, filed Jan. 8, 1912. This application filed Jan. 17, 1916, Serial No. 72,488. Renewed Oct. 14, 1916. Serial No. 125,708. (Cl. 197—186.)



1. In a typewriting machine, the combination with a stationary frame, printing instrumentalities, a platen, and a carriage therefor, of a support for said carriage which is adapted to hold the platen in operative relation to said printing instrumentalities and is slidably mounted on the stationary frame for moving the platen carriage forwardly into an inoperative position for reducing the dimensions of the machine, substantially as set forth.

2. In a typewriting machine, a two-part frame composed of a stationary part and a part arranged to slide directly upon said stationary part without substantial pivotal movement for collapsing the machine to reduce its dimensions, substantially as set forth.

3. In a typewriting machine, the combination of a two-part frame composed of a stationary part and a part arranged to slide in an upright position on the stationary part for collapsing the machine to reduce its dimensions, both vertically and horizontally, a platen carriage supported by said sliding frame part, and printing instrumentalities supported by said stationary frame part, substantially as set forth.

4. In a typewriting machine, the combination of a two-part frame composed of a stationary part and a part arranged to slide on said stationary part in an upright position down a forward incline for collapsing the machine to reduce its dimensions, a platen carriage supported by said sliding frame part, and printing instrumentalities supported by said stationary frame, substantially as set forth.

5. In a typewriting machine, the combination with printing instrumentalities, a platen, and a carriage therefor, of a support for said carriage which is adapted to hold the platen in operative relation to said printing instrumentalities and is slidably mounted to move with the carriage in an upright position thereon, forwardly to an inoperative position relative to the printing instrumentalities, substantially as set forth.

[Claims 6 to 65 not printed in the Gazette.]

1,222,552. TRUCK-BOLSTER. ELMYR A. LAUGHLIN, Chicago, Ill. Filed June 19, 1916. Serial No. 104,531. (Cl. 105—107.)



1. In a bolster, the combination of a pair of spaced longitudinally extending compression members; and tension members arranged between and connected with said compression members and crossing each other in the direct plane of horizontal strain to form a truss, substantially as described.

2. In a bolster, the combination of a pair of spaced longitudinally extending compression members; tension members arranged between and connected with said compression members and crossing each other in the direct plane of horizontal strain to form a truss; and a center plate connected with said compression members and acting as a strut for the truss, substantially as described.

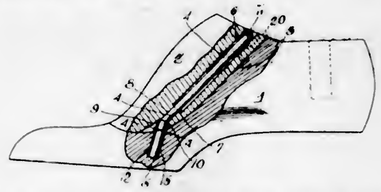
3. In a bolster, the combination of a pair of spaced longitudinally extending compression members; tension members arranged between and connected with said compression members and crossing each other in the direct plane of horizontal strain to form a truss; and a center plate extending between and connected with the central portion of said compression members at the upper sides thereof and acting as a strut for the truss, substantially as described.

4. In a bolster, the combination of a main frame; means at the ends of said frame for carrying the load; and longitudinally extending truss members for reinforcing said frame against horizontal strains, said members being connected intermediate their ends with the central portion of said frame and being crossed and connected at their ends with the ends of said frame, substantially as described.

5. In a bolster, the combination of a main frame; means at the ends of said frame for carrying the load; and longitudinally extending truss members for reinforcing said frame against horizontal strains, said members being connected intermediate their ends with the central portion of said frame, said end portions of said members being crossed and connected together at the points of crossing, and the terminals of said members being connected with the ends of said frame, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,222,553. LAST. ARTHUR M. LEIGHTON, Melbourne, Quebec, Canada, assignor to Boston Last Company, Boston, Mass., a Corporation of Maine. Filed Dec. 26, 1914. Serial No. 879,060. (Cl. 12—137.)



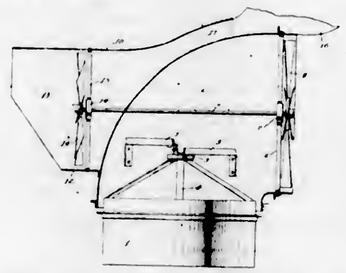
1. A last having a removable instep block, a flexible member secured to the last at its forepart and slidingly secured to said instep block, said block having a recess therein lengthwise of the said block and substantially of equal length to the length of said flexible member, and means within the recess in said block to limit the sliding movement of the member.

2. A last having a removable instep block, a flexible connecting member uniting said block and last, and a tubular dowel fitted within said last acting as a stop for the lower portion of said instep block and to receive a portion of the connecting means, said dowel being arranged to be expanded after it is fitted within its socket, by the spreading action of a securing nail driven therethrough into the last.

1,222,554. VENTILATOR. HERMAN H. LIND, Lakewood, Ohio, assignor to The Ohio Blower Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 6, 1914. Serial No. 829,756. (Cl. 98—7.)

1. In a ventilator, an air shaft, a cowl rotatable with respect to said shaft and having a discharge opening arranged to be turned away from the wind, a shaft journaled within said opening and projecting through the front wall of the cowl, an exhaust fan driven by said shaft and located in the air passageway, a driving fan on said shaft in front of said cowl, and a hood surrounding the last mentioned fan, said hood having an inlet mouth opposite said driving fan and an outlet mouth surrounding said exhaust opening, the outlet opening of said hood being so arranged that the rush of wind therepast will create a suction thereon.

2. In a ventilator, an air shaft, a hood rotatable with respect thereto, said hood having a receiving mouth arranged to face the wind and a discharge opening arranged to be turned away from the wind, an exhaust fan located in operative relation to said air shaft, a driving fan journaled within said receiving mouth, and operative connections between said fans, the outlet opening of said hood being so arranged that the rush of wind therepast will create a suction thereon.



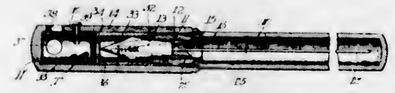
3. In a ventilator, a hood adapted to be pivoted upon a vertical axis above an air shaft, said hood having a circular inlet mouth arranged to face the wind and having an elongated outlet mouth arranged in the form of an annular segment arranged to be turned away from the wind, an air discharge duct having an inlet end adapted to communicate with the air shaft to which the device is applied and having an outlet end located within the space defined by the outlet mouth of said hood, an exhaust fan in said air duct, a driving fan in said inlet mouth, and means whereby said second fan may drive said first fan.

4. In a ventilator, a hood adapted to be pivoted upon a vertical axis above an air shaft, said hood having a substantially circular inlet mouth arranged with its axis substantially horizontal, and an elongated outlet mouth arranged substantially upon the arc of a circle coaxial therewith, the diameter of said outlet mouth being greater than that of said inlet mouth, an air duct carried by said hood and having an inlet end adapted to communicate with the air shaft to which the device shall be applied and having an outlet end substantially concentric within the outlet mouth of said hood, a shaft journaled substantially along the axis of said mouths, an exhaust fan carried by said shaft in the outlet end of said duct, a driving fan carried by said shaft inside the inlet mouth of said hood, and means for maintaining said inlet mouth facing the direction from which the wind blows.

5. In a ventilator, the combination of an air shaft, a rotary cowl, a horizontal shaft journaled in said cowl and projecting centrally through the exhaust end thereof, a hood partly surrounding the cowl and having a circular front or receiving end concentric with said shaft, said hood having a narrow elongated outlet mouth partly surrounding said cowl at a point short of its exhaust end, an exhaust fan on said shaft in the discharge portion of the cowl, a driving fan on said shaft within the receiving end of said hood, and a vane carried by said cowl for maintaining said last named fan turned toward the wind.

[Claim 6 not printed in the Gazette.]

1,222,555. FOUNTAIN-PEN. ALEXANDER P. MCARTHUR, Chicago, Ill. Filed Sept. 2, 1913. Serial No. 787,592. (Cl. 120—50.)



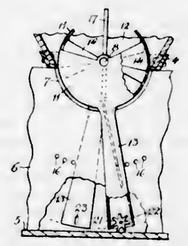
1. In a fountain pen, the combination with the barrel and feed bar, said feed bar having therein a feed channel and a drain channel leading from said feed channel to the side of the feed bar and terminating at the side of the feed bar in a recess leading to the butt end of the bar, of a conducting ribbon connected with and carried by the feed bar and leading from said recess at the side of the feed-bar into the barrel.

2. In a fountain pen, the combination of a barrel having a feed-bar-bore, a feed bar within the bore, said feed bar having therein a feed channel in its upper side for underlying a pen point and a drain channel formed in said feed bar and leading from the feed channel to the ink reservoir, the opposite walls of said drain channel being substantially flat and lying in downwardly converging inclined planes, the bottom boundary of said drain channel extending in a non-angular unbroken line from the bottom of the feed channel to the opposite wall of the feed bar bore, affording a surface for the presence of a continuous film by which the residual ink in the fed bar channel will be led away and the said feed bar channel left empty when the pen is inverted to non-use condition.

3. In a fountain pen, the combination with the pen point, of the barrel having a feed-bar-bore, a feed-bar within the bore, said feed-bar having therein a feed channel in one side terminating at its rear end in advance of the rear end of the pen point and a drain channel leading from the rear end of the feed channel to the wall of the bore at the opposite side of the feed bar, the walls of the drain channel being substantially flat and lying in planes inclined to each other with the line of intersection extending from the rear end of the feed channel to a point near the rear end of the feed bar and at the side opposite to the feed channel, and a conducting ribbon connected with and carried by the feed bar with its forward portion lying within the drain channel and contacting with the intersection walls thereof at the line of intersection.

4. In a fountain pen, the combination of a barrel having a feed-bar-bore, a feed bar within the bore, said feed bar having therein a feed channel in its upper side underlying a pen point and a drain channel formed in said feed bar and leading from the feed channel to the ink reservoir, the bottom boundary of said drain channel extending in a non-angular unbroken line from the bottom of the feed-channel to the opposite wall of the feed-bar-bore, affording a surface for the presence of a continuous film by which the residual ink in the feed bar channel will be led away and the said feed bar channel left empty under non-use conditions.

1,222,556. STOCK-FEEDER. JOSEPH K. MCCORMICK, Union county, Ind. Filed Jan. 15, 1917. Serial No. 142,420. (Cl. 119—54.)



1. A stock feeder comprising a container supported at a fixed elevation and formed with a discharge opening, a hollow feeder formed with a depending spout and journaled to oscillate within said opening, and an agitator movably secured at a fixed point and depending within the spout.

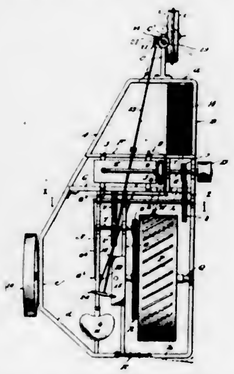
2. A stock feeder comprising a bin formed with a hopper bottom terminating in a rectangular frame, a pair of similar cylinders journaled to turn freely and independently within the frame and in axial alinement, each of said cylinders being formed with a depending spout of gradually increasing size and with an inlet opening in its top wall in communication with the interior of the bin, and adjustable means for limiting the movement of the spouts with the cylinders.

3. A stock feeder comprising a rectangular frame supported at a fixed elevation, a hollow cylindrical feeder journaled to turn freely therein and formed with an inlet opening and with a depending spout of gradually increasing size, and an agitator pivotally secured at a fixed point and depending within the spout.

4. A stock feeder comprising a rectangular frame supported at a fixed elevation, a hollow cylindrical feeder journaled to turn therein and formed with a top inlet opening and with a depending spout, and a force feeder in the form of a pinion removably journaled within the lower end of the spout and movable vertically therein.

5. A stock feeder comprising a floor, a bin supported thereover and formed with a discharge opening, similar cylindrical feeders journaled to oscillate independently within said opening, each formed with a depending spout terminating near the floor, and adjustable means for limiting the movements of the respective spouts and feeders.

1,222,557. TRACTOR. GEORGE MCFARLAND and CECIL F. LOOMIS, Peoria, Ill. Filed July 30, 1914. Serial No. 854,176. (Cl. 21—114.)



1. In a tractor, in combination, a frame and a traction wheel supporting the same including a gear fixed relatively to it, a motor mounted upon the frame forward of the traction wheel, a speed reducing gear train intermediate the gear of the traction wheel and that of the motor and operatively engaging both, the weight of the motor and gearing being disposed close to the said wheel.

2. In a tractor, in combination, a traction wheel, a main frame mounted thereon, a gear fixed relatively to said wheel, a motor forward of the wheel parallel to its face, a speed reducing gear-set interposed between the motor and the wheel and operatively engaging both, the said motor and the said gear-set being disposed adjacent the traction wheel whereby in the operation of the machine the weight of the said motor, the gearing and the frame are substantially balanced upon and supported by said traction wheel.

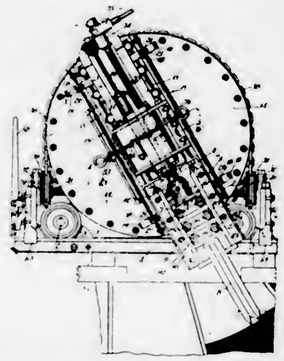
3. In a tractor, in combination, a main frame, a traction wheel supporting said frame including a gear fixed relative to it, a motor lying forward of said wheel parallel to its face, a speed reducing gear-set and a reversing gear-set interposed between the said gear and the motor and operatively engaging both, the two sets and the motor being disposed upon the frame at said traction wheel so that the center of gravity of the weights of the parts mentioned are substantially balanced upon the latter.

4. In a tractor, in combination, a main frame, a traction wheel supporting said frame including a gear fixed relative to it, a motor lying forward of said wheel parallel to its face, a speed reducing gear-set and a reversing gear set interposed between the said gear and the motor and operatively engaging both, the two sets and the motor being disposed upon the frame at said traction wheel so that the center of gravity of the weights of the parts mentioned are substantially balanced upon the latter, a second wheel at one side of the frame, and a front steering wheel at the forward side of said frame.

5. In a tractor, the combination with its main frame, and a traction wheel including a gear, of a secondary frame structure extending transversely of the main frame forward of the wheel, a motor mounted on said secondary frame and having its shaft disposed parallel to the face of the wheel, a reducing gear-set and a reversing gear-set mounted upon the machine frame and interposed between the motor and the traction wheel and operatively engaging both, portions of the gearings being disposed at opposite sides of the traction wheel, the motor and the said gearing being disposed with reference to the wheel whereby in the operation of the motor in the field the weights are thrust upon and substantially balanced upon the said wheel.

[Claims 6 to 8 not printed in the Gazette.]

1,222,558. STONEWORKING-MACHINE. HENRY H. MERCER, Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 18, 1909. Serial No. 484,125. (Cl. 125—2.)



1. A channeling machine having a wheeled truck, cutting appliances, a swinging support upon which said cutting appliances are mounted, a driving member for imparting swinging movement thereto, said driving member being mounted adjacent one of the truck wheels, and cone-shaped friction means for securing said driving member to a truck wheel or releasing the same at will.

2. In a channeling machine the combination with a wheeled truck of cutting appliances thereon, a motor for driving the truck, governing means for maintaining the speed of the motor constant, and means for controlling the action of the governing means during the action of the machine to adapt the travel of the truck to the character of the work.

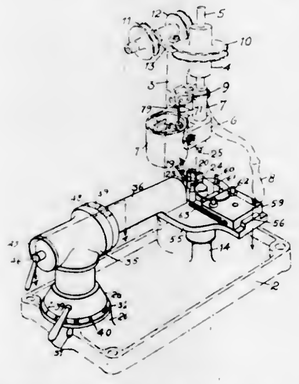
3. In a channeling machine the combination with a tool and tool actuating means, of a motor, connections between the motor and the tool for swinging the latter lengthwise the channel groove, governing means for maintaining the speed of the motor constant, and means for controlling the action of the governing means to vary the velocity of the tool in its swinging movement.

4. In a corner cutter the combination with cutting appliances of a swinging support on which the same are secured, motive means connected to swing the said support, and controlling means for controlling the speed of swinging movement, said controlling means being adapted to be set to any one of a plurality of graded positions to secure different speeds.

5. In a channeler the combination with cutting appliances of a swinging support for the same, a motor connected to swing said support, a speed governor therefor, and controlling means to adjust said governor to any one of a plurality of speeds.

[Claims 6 to 12 not printed in the Gazette.]

1,222,559. DRILL. JEREMIAH MOFFITT, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Jan. 9, 1915. Serial No. 1,437. (Cl. 77—63.)



1. In a machine of the character described, the combination with a lens holder, of a lens positioning pin having a conical surface projecting above the normal position of the lens in the holder, whereby when the holder is moved toward the pin the lens will ride upward on said conical surface and be correctly supported in operative position on the apex of said cone.

2. In a machine of the character described, the combination with a base and a drill carried thereby, of a work supporting post disposed in axial alinement with the drill and having an inclined front surface, a work holder movable toward said post, lens rests on the holder at a point lower than the upper edge of the inclined surface, said means allowing relative upward movement of the lens, whereby when the holder is moved inwardly the inclined surface will cam the lens upward into position to rest on the highest point thereof, substantially as and for the purpose described.

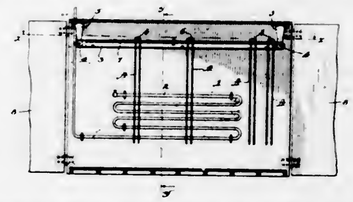
3. In a machine of the character described, the combination with a base and a drill supported thereby, of a work support mounted for rotative movement about the axis of the drill, an adjustable stop carried by the support for engaging the edge of the lens, a lens holder mounted for swinging movement toward and away from the work support, and means for laterally shifting the swinging lens holder, the pivotal mounting of the work support and stop permitting the same to automatically accommodate itself to the edge of the work or lens irrespective of the lateral adjustment of the latter.

4. In a machine of the character described, the combination with a base and a drill supported thereby, of a lens carriage standard rising from the base, a lens carriage pivotally engaging the standard and provided with a work supporting bed, lens retaining pins rising from the bed and provided with shoulders on which a lens may rest, a clamp slide mounted on the bed, means for forcing the slide into operative position, and rack and sector mechanism for shifting the clamp slide into inoperative position.

5. In a lens drill, the combination with a base and a drill support carried thereby, of a drill carried by the support, a pivotally mounted standard rising from the support, means for locking the standard in desired rotatably adjusted position, and a lens carriage pivotally mounted on the standard eccentric to the axis thereof, whereby rotation of the standard serves to laterally shift the carriage to regulate the operative position of the drill relative to the major geometric axis of the lens operated on thereby.

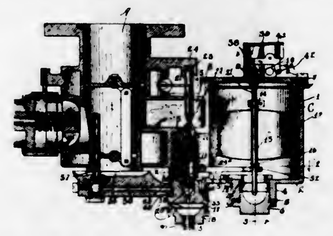
[Claims 6 to 14 not printed in the Gazette.]

1,222,560. DRYING-CHAMBER FOR RUGS. WALTER E. OLSON, Chicago, Ill. Original application filed May 20, 1914, Serial No. 839,830. Divided and this application filed Dec. 18, 1915. Serial No. 67,609. (Cl. 34—12.)



In an apparatus for drying rugs or like articles, a chamber; doors at opposite ends of said chamber whereby said chamber may be tightly closed; a heating element in said chamber; and endless conveying means at the upper end of said chamber for supporting the rugs and conveying the same through said chamber, substantially as described.

1,222,561. FLOAT FEED MECHANISM FOR CARBURETERS. CHARLES L. RAYFIELD, Chicago, Ill. Filed Sept. 1, 1911. Serial No. 647,191. (Cl. 137—104.)



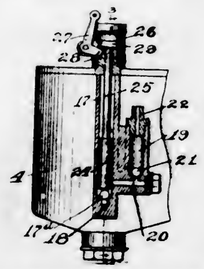
1. In a device of the class described, a casing having alined apertures in the top and bottom thereof, respectively, a small chamber extension formed on one side of said casing, a plug threaded into the lower end thereof affording a valve seat, an inlet needle valve mounted in said extension adapted to co-act with said seat to open and close the inlet to the casing, an outlet from said casing mounted in the upper end of the extension thereof and alined with the inlet thereto, a stem mounted in the casing, a float adjustable on said stem for different fixed positions thereon, and a lever pivoted on the lower portion of said casing and operatively connected with said stem, one end of said lever projecting into the extension to co-act with the inlet needle valve, and the other into a position to be actuated by said stem to cause opening of the needle valve when the float is lowered.

2. In a device of the class described a casing having alined apertures in the top and bottom thereof, a small chamber extension on one side of said casing, a plug threaded into the lower end thereof affording a valve seat, an inlet needle valve mounted in said extension adapted to co-act with said seat to open and close the inlet to said casing, an outlet from said casing in the upper end of said extension chamber, a stem mounted within said casing projecting through the alined apertures thereof, a bracket member extending into one of said alined apertures, a float adjustable on said stem, and a lever pivoted on said bracket adapted to effect actuation of said inlet valve by movement of said stem.

3. In a device of the class described a casing, an extension chamber formed integral therewith at one side thereof with the top wall of said chamber lower than the top wall of said casing, alined inlet and outlet passages in the respective bottom and top walls of said extension chamber affording an inlet and outlet respectively for the casing, said casing having apertures alined with one another in the top and bottom walls thereof, a float stem mounted axially in said casing extending through said apertures, a float adjustably mounted upon said stem, an inlet valve mounted in said extension chamber adapted to control the inlet passage thereof, and operative connections between said stem and said valve to cause opening of said valve with a lowering of said float.

4. In a float feed mechanism for carbureters, a casing, an inlet thereto, a needle valve controlling said inlet, a spring normally impelling said needle valve toward closed position, a pivoted lever having sliding connection with said needle valve operating when one end thereof is moved upwardly on said needle valve to elevate the same toward open position, a stem slidable through the other end of said lever, means secured on said stem to limit the sliding relation between said stem and lever to support said stem on said lever, and a float in said casing adjustable into different positions and secured on said stem.

1,222,562. CARBURETER-PRIMER. CHARLES L. RAYFIELD, Chicago, Ill. Filed Sept. 26, 1913. Serial No. 791,956. (Cl. 123—180.)



1. The combination with a carbureter of a priming device comprising a chamber in communication with the interior of the float chamber of the carbureter, and a pipe line communicating into the manifold of an engine in which the carbureter is connected beyond the throttle valve of the carbureter, a secondary chamber with which said pipe line is in communication, a check valve controlling the flow from the float chamber into said first mentioned chamber, a check valve controlling the flow from said first mentioned chamber into said secondary chamber, a passage leading from said last mentioned check valve communicating laterally in said first mentioned chamber, and a pump or piston slidably mounted in said first mentioned chamber adapted in its lower position of movement to close said passage communicating laterally into said first mentioned chamber, and seating upon said first mentioned check valve to insure the same remaining closed.

2. The combination with the float chamber of a carbureter, of an upright auxiliary chamber associated therewith, a piston movable therein, a second auxiliary chamber communicating laterally with said first mentioned auxiliary chamber with the flow thereto adapted to be cut off by the side wall of said piston, and piping connections between said second auxiliary chamber and the manifold of a gasolene engine.

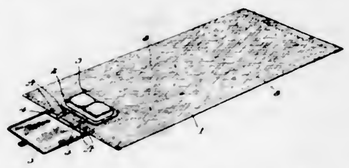
3. In a device of the class described the combination with the float chamber of a carbureter, of a long upright cylindrical chamber associated therewith and communicating thereinto, a valve controlling communication between said float chamber and said auxiliary chamber, a piston slide valve member movable in said second mentioned chamber, and another upright auxiliary chamber connected through the side wall with said first mentioned auxiliary chamber and also connected with the intake manifold of a gasolene engine adapted to receive a charge of fuel passed from said float chamber through said first chamber into said second chamber and to be drawn into the manifold by the draft of the engine.

4. In a device of the class described a cylinder, a piston movable therein, a check valve controlling the inlet through said cylinder to prevent a reverse flow through said inlet, a chamber in communication with said cylinder, a check valve in said chamber to prevent reverse flow from said chamber into said cylinder, said piston disposed to control the flow from said cylinder into said chamber, and a pipe connecting said chamber with the manifold pipe of an internal combustion engine.

5. In a device of the class described the combination with the float feed chamber of a carbureter, of an upright cylinder cast integral therewith and communicating with the interior of said float feed chamber, a ball valve in the lower end of said cylinder preventing a reverse flow from said cylinder into said chamber, a piston movable vertically in said cylinder, an upright auxiliary chamber formed integral with said cylinder, a horizontal passage affording communication between said auxiliary chamber and said cylinder and adapted to be closed by said piston, a ball valve preventing reverse flow from said auxiliary chamber into said cylinder, and a pipe connecting said auxiliary chamber and the intake manifold of a gasolene engine.

[Claims 6 and 7 not printed in the Gazette.]

1,222,563. GROUND-MAT. NATHAN ROSENBERG, Chicago, Ill., assignor of one-half to Charles Schaefer, Chicago, Ill. Filed Feb. 2, 1915. Serial No. 5,716. (Cl. 5—3.)

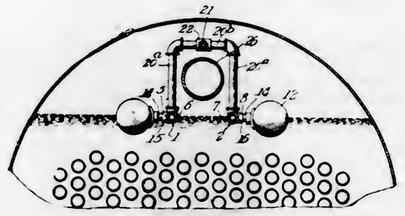


1. A device of the class described comprising a flexible sheet; a collapsible cushion provided at the upper side of said sheet at one end thereof and adapted, when collapsed, to be wrapped in said sheet; means connecting said cushion to said sheet so as to permit of said cushion assuming a position on said sheet or beyond the adjacent edge thereof; and a casing connected with said edge of said sheet upon which said cushion is adapted to rest, when in a position extending beyond said edge of the sheet, said casing being adapted to inclose said sheet when in folded condition, substantially as described.

2. A device of the class described comprising a flexible sheet; a collapsible cushion provided at the upper side of said sheet at one end thereof and adapted, when collapsed, to be wrapped in said sheet; flexible straps loosely connecting one edge of said cushion with said edge of said sheet so as to permit of said cushion assuming a position on said sheet or beyond the adjacent edge thereof; and a casing connected with said edge of said sheet upon which said cushion is adapted to rest, when in a position extending beyond said edge of the sheet, said casing being adapted to inclose said sheet when in folded condition, substantially as described.

1,222,564. BOILER-SKIMMER. NORBERT SCHREIBER and RAPHAEL ROSENTHAL, Lincoln, Ill. Filed June 12, 1915. Serial No. 33,658. (Cl. 122—389.)

1. A boiler skimmer comprising side members provided with intake openings and a cross member connecting said side members between the ends thereof, floats for supporting said side and cross members, an outlet pipe pivotally connected with said cross member, and a drain pipe to which said outlet pipe is pivotally connected.



2. A boiler skimmer comprising longitudinally extending side members provided with intake openings and an elevated cross member extending between and connected to said side members, floats for supporting said side and cross members, and an outlet pipe pivotally connected with said elevated cross member.

3. A boiler skimmer comprising longitudinally extending side members provided with intake openings, a cross member extending between and connected with said side members, and elevated between its ends, floats for supporting said side and cross members, an outlet pipe pivotally connected with the elevated portion of said cross member, and a drain pipe to which said outlet pipe is pivotally connected.

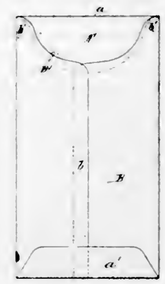
4. The combination with a locomotive boiler of a skimmer located therein, said skimmer having longitudinally extending side members and a cross member having an elevated portion connected with said side members between the ends thereof, said cross member being extended over the dry pipe of said locomotive boiler, floats for supporting said side and cross members, a discharge pipe pivotally connected to said cross member, a valve in said discharge pipe, a throttle valve and lever and a mechanical connection for actuating said discharge valve when said throttle valve and lever are operated.

5. The combination with a locomotive boiler of a skimmer located therein, said skimmer having longitudinally extending side members and a cross member having an elevated portion connected with said side members between the ends thereof, said cross member being extended over the dry pipe of said locomotive boiler, floats for supporting said side and cross members, a discharge pipe pivotally connected to said cross member, a valve in said discharge pipe, a throttle valve and lever and a mechanical connection for actuating said discharge valve when said throttle valve and lever are operated, and an outlet pipe interposed between said skimmer cross member and said discharge pipe, said outlet pipe being pivotally connected at one end to said cross member of the skimmer and at the other end to said discharge pipe.

[Claims 6 to 10 not printed in the Gazette.]

1,222,565. DRINKING-CUP. JOHN EDWARD SHERMAN, Worcester, Mass. Filed Apr. 27, 1914. Serial No. 834,578. (Cl. 229—53.)

A tubular, flexible, paper, drinking cup made from a single sheet of paper the two opposite edges of which overlap and are gummed together to form a flattened tube, said tube being closed at one end, one side of its open end having a curved recess whereby the opposite edge of said open end will be exposed and may be utilized to open the cup from its flattened position the end of said curved edge serving as side walls for said cup when in use and said opposite portion having a straight edge and being of double thickness whereby said edge may be applied to the mouth without danger of cutting the lip, the longest portion of said recessed side being equal in length to



the opposite side whereby when in use the liquid will be confined and directed to the mouth.

1,222,566. PACKAGE FOR PAPER DRINKING-CUPS. JOHN AMES SHERMAN and JOHN EDWARD SHERMAN, Worcester, Mass. Filed Sept. 1, 1914. Serial No. 859,704. (Cl. 206—57.)



1. The device above described comprising a container having a slot extending substantially the entire width thereof along one of its bottom edges and notches in each wall adjacent said slot, said container being provided with means to support articles out of register with said slot and in register with said notches.

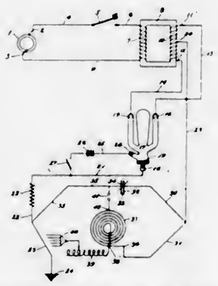
2. The device above described comprising a sealed container having vertical sides and a slot along one of its bottom edges, cups located in said container, means for holding said cups out of register with said slot and in slanted relation, comprising a floor extending from the rear edge of said container nearly to its forward edge, said floor being thicker at its rear edge than at its forward edge whereby the lowermost cups will engage the front vertical wall of said container above said slot, and notches in the edges of said slot whereby the lowermost of said cups may be grasped, pulled into register with said slot and withdrawn therethrough.

3. The device above described comprising a sealed container made of destructible material, having a slot along one of its bottom edges and notches in each wall adjacent to said slot, and a cup support on the inner side of the bottom thereof located to deliver cups to said slot, said container being provided with a slit in its rear wall adapted to receive a supporting means, in combination with a protecting strip attached to the rear inner wall of said container and loosely covering said slit.

1,222,567. TRANSMITTING APPARATUS FOR WIRELESS-TELEGRAPH STATIONS. FREDERICK G. SIMPSON, Seattle, Wash. Filed Nov. 24, 1915. Serial No. 63,311. (Cl. 250—17.)

1. In a transmitting apparatus for radio telegraph stations, the combination with a trigger circuit which in-

cludes a condenser and a spark-gap connected in series with each other, of an oscillating circuit which includes an earth connection, said condenser, a variable inductance and an antenna connected in series with each other; and a charging circuit which includes the secondary coil of an alternating current transformer and a mercury valve having two anodes and one cathode, said secondary coil being connected at its neutral point with said oscillating circuit at a point thereon between said condenser and said variable inductance, the opposite ends of said secondary coil being each connected to a different one of said anodes while said cathode is connected to said oscillating circuit at a point between said earth connection and said condenser.



2. In a transmitting apparatus for radio telegraph stations, the combination with a trigger circuit and an oscillating circuit, of a charging circuit connected with said trigger circuit and with said oscillating circuit, which charging circuit includes the secondary coil of an alternating current transformer, a neutral tap conductor connecting the neutral point of said secondary coil directly with a conducting wire forming a part of both said trigger circuit and said oscillating circuit; and a valve comprising an electrolytic rectifier interposed between each of the two terminals of said secondary coil and one point on said oscillating circuit.

3. In a transmitting apparatus for radio telegraph stations, the combination with a trigger circuit and an oscillating circuit, of a charging circuit connected with said trigger circuit and with said oscillating circuit, which charging circuit includes the secondary coil of an alternating current transformer, a neutral tap conductor connecting the neutral point of said secondary coil directly with a conducting wire forming a part of both said trigger circuit and said oscillating circuit; and a rectifying valve interposed between each of the two terminals of said secondary coil and the same point on said oscillating circuit.

4. A transmitting apparatus for wireless telegraph stations, which embodies an oscillating circuit which includes an antenna, a variable inductance, all of the convolutions of a spiral conductor, and a condenser; a trigger circuit associated with said oscillating circuit, which trigger circuit includes a spark-gap and that portion of said oscillating circuit within which is disposed only a portion of said spiral conductor and said condenser; and a charging circuit which includes a secondary coil of an alternating current transformer, a neutral tap conductor connecting said secondary coil with said trigger circuit and said oscillating circuit, and a mercury valve having two anodes connected each to a different one of the terminals of said secondary coil and having one cathode connected to said oscillating circuit.

5. A transmitting apparatus for wireless telegraph stations, which embodies an oscillating circuit which includes an antenna, a variable inductance, all of the convolutions of a spiral conductor, and a condenser; a trigger circuit associated with said oscillating circuit, which trigger circuit includes a spark-gap and that portion of said oscillating circuit within which is disposed only a portion of said spiral conductor and said condenser; and a charging circuit which includes a secondary coil of an alternating current transformer, a neutral tap conductor connecting said secondary coil with said trigger circuit and said oscillating circuit, and a valve comprising an electrolytic rectifier interposed between each of the terminals of said secondary coil and the same point on said oscillating circuit.

1,222,568. BOOK-INDEX. LOUIS R. SMITH, Denver, Colo., assignor to The Universal Indexing Company, Colorado Springs, Colo., a Corporation of Colorado. Filed Mar. 23, 1914. Serial No. 826,679. (Cl. 11—7.)



1. A book index comprising well defined spaces each extending transversely entirely across the edge of the book and suitably spaced longitudinally, and in which are located subject matter indicia, transverse spaces arranged adjacent and parallel with the first named spaces and in which are located sections marking the edges of the sets of leaves of the book containing the subjects matter to which the indicia located in the first named spaces respectively relate, the said sections being transversely spaced.

2. A book index comprising well defined spaces each extending transversely entirely across the edge of the book and in which are located appropriate subject matter indicia, the said spaces being longitudinally separated, marks on the edges of the sets of leaves to indicate the classification of the various subjects matter of the book, the said marks being arranged in well defined transverse spaces parallel with the indicia spaces, the said marks being transversely spaced and the groups of indicia in the spaces therefor consisting of non-consecutively arranged characters to permit the transverse spacing of the subject matter markings on the edges of the various sets of leaves containing the respective subjects matter of the book.

3. A book index occupying a rectangular area on the edge of the book, the said area being divided into a number of transverse spaces which are longitudinally separated, each of said spaces extending entirely across the edge of the book and containing indicia non-consecutively arranged to designate the various subjects matter of the book, the edges of the sets of leaves containing the respective subjects matter being designated by marking the same within the transverse spaces interposed between and adjacent the indicia spaces, the said markings being transversely spaced and arranged adjacent the indicia to which they respectively relate.

4. A book index occupying a rectangular area on the edge thereof, the said area being subdivided into well defined distinguishable sets of transverse spaces alternately arranged, and each space extending entirely across the edge of the book, one set of spaces containing groups of non-consecutively arranged indicia designating the various subjects matter of the book, while the other set of spaces contain markings formed on the edges of the set of leaves containing the respective subjects matter of the book, these subject matter markings being arranged adjacent the indicia in the other spaces to which they respectively relate.

5. A book index occupying a rectangular area on the edge thereof, the said area being transversely subdivided into two sets of well defined, distinguishable and alternately arranged parallel spaces, and both sets extending entirely across the edge of the book, the individual spaces of one set respectively containing groups of non-consecutively arranged characters and the individual spaces of the other set respectively containing transversely spaced leaf edge markings, the various markings covering the edges within the said space of the various sets of leaves containing the respective subjects matter of the book, the said markings being arranged adjacent the characters to which they relate in the other set of spaces.

1,222,569. VENTILATING SYSTEM FOR TUNNELS AND THE LIKE. DENTON K. SWARTWOUT, Cleveland, Ohio, assignor to The Ohio Blower Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 4, 1914. Serial No. 875,524. (Cl. 98—28.)



1. In a ventilating system for tunnels, the combination of a movable partition that is adapted to separate the tunnel into two compartments, and a forced-draft apparatus arranged to suck air out of one of the compartments and exhaust it into the other.

2. In a ventilating system for passageways of the character described, the combination of a movable partition that is adapted to separate a passageway into compartments, one of the compartments having an inlet opening and the other an outlet opening, and a forced-draft apparatus that is arranged to suck air into the compartment having the inlet opening, and expel the air through the compartment having the exhaust opening.

3. In a ventilating system for passageways of the character described, the combination of a movable partition that is adapted to separate a passageway into compartments, one of the compartments having an inlet opening that is remote from said partition and the other an outlet opening that is also remote from said partition, and a forced-draft apparatus that communicates with both compartments in proximity to the movable partition and operates to suck air through the compartment having the inlet opening and to expel it through the compartment having the outlet opening.

4. In a ventilating system of the character described, the combination of a passageway having a plurality of openings, movable partitions adapted to separate the sections of the passageway between adjacent openings into two compartments, and a forced-draft apparatus located in the vicinity of each of the movable partitions and arranged to suck air from the compartment on one side thereof and exhaust it into the compartment on the opposite side thereof, the forced-draft apparatuses that are located adjacent to consecutive partitions operating in opposite directions.

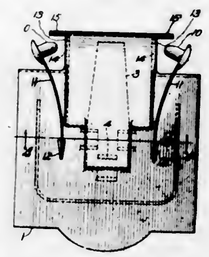
5. In a ventilating system of the character described, the combination of a passageway, a movable partition adapted to divide the passageway into two compartments, and a forced-draft apparatus located adjacent to the partition arranged to suck air from one side thereof and exhaust it on the opposite side thereof.

[Claim 6 not printed in the Gazette.]

1,222,570. LID FOR JOURNAL-BOXES FOR RAILWAY-CARS. WILLIAM ERASTUS WILLIAMS, Chicago, Ill. Filed July 9, 1915. Serial No. 38,914. (Cl. 64—23.)

1. A lid of the class described having ears provided with hinge pintle holes and also having pliable arms each bearing a stud to serve as a pintle when the arms are properly bent to bring the stud into place.

2. A lid having ears provided with alining pintle perforations and further having arms rigidly connected at one end with the lid and at their other free ends provided with studs in position to project through said perforations, respectively, when the arms are properly bent.



3. A lid of the class described having pintle studs carried on pliable arms integrally connected to the lid, primarily out of proper pintle position and arranged to move into such position when the arms are suitably bent.

4. A lid of the class described having pintle studs carried on pliable arms integrally connected to the lid, primarily out of proper pintle position and arranged to move into such position when the arms are properly bent, and means for securing said studs in proper pintle position.

5. A lid of the class described provided with pintle studs arranged upon integral pliable arms to swing to proper pintle positions when the arms are properly bent, and with pliable lugs in position to be bent into place for holding said pintle studs in such proper position.

[Claims 6 to 9 not printed in the Gazette.]

1,222,571. CONTAINER. HENRY PRICE BALL, Brooklyn, N. Y., assignor to S. Sternau & Co., a Copartnership composed of Sigmund Sternau & Lionel Strassburger, Brooklyn, N. Y. Filed Dec. 10, 1915. Serial No. 66,041. (Cl. 220—92.)

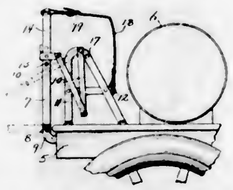


As a new article of manufacture, a container adapted to carry a fuel and to be detachably secured to a suitable holder to constitute therewith a lamp, said container being formed of a material and constructed to resist damage thereof by heat, and a cover for normally inclosing the contents of the container adapted to be opened to expose a flame opening, the body of the container being contoured to present approximately longitudinally disposed internal and external relatively raised and depressed portions, adapted to allow for expansion and contraction and constituting in part holder engaging means.

1,222,572. LUGGAGE-CARRIER FOR ROADSTERS. EMIL BERSBACH, Chicago, Ill., assignor to Richard J. Jacker, Oak Park, Ill. Filed June 1, 1912. Serial No. 701,454. (Cl. 224—29.)

1. In a device of the class described, in combination with a horizontal portion of a vehicle, uprights secured on the horizontal portion at each side each comprising a vertical member and an inclined member provided with a perforation near its upper end, a swinging platform pivotally connected to the horizontal portion to occupy either a horizontal position or a vertical position, jointed braces connecting the free end of said swinging platform to the upper ends of said uprights, a second swinging platform pivotally

connected to the free end of said first named swinging platform to occupy a position in the same plane with said first named platform or a position at right angles thereto and its side members arranged in vertical planes outside the said uprights, whereby the said parts can be locked in a folded position by a padlock placed in the perforation provided in one of said uprights.



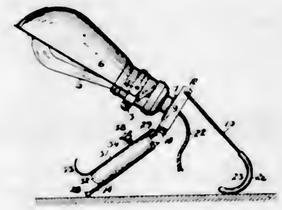
2. In a device of the class described, in combination with a horizontal portion of a vehicle, a pair of uprights secured on the horizontal portion one near each side, a swinging platform pivotally connected to the horizontal portion to occupy either a horizontal position or a vertical position, jointed braces connecting the free end of said swinging platform to the upper ends of said uprights, a second swinging platform pivotally connected to the free end of said first named platform to occupy a position in the same plane with said first named platform or a position at right angles thereto and provided with side members in vertical planes immediately outside said uprights, means at the pivotal connection between said second named platform and said first named platform for limiting the movement of said second named platform about its pivot and means for locking the side members of said second named platform to said uprights.

3. In a device of the class described, in combination with a horizontal portion of a vehicle, spaced uprights secured on the horizontal portion, a swinging platform pivotally connected to the horizontal portion to occupy either a horizontal position or a vertical position, suitable braces connecting the free end of said swinging platform to the upper ends of said uprights, a second swinging platform or extension pivotally connected to the free end of said first named swinging platform to occupy a position in the same plane with said first named platform or a position at right angles thereto and its side members arranged in vertical planes beside said uprights whereby the said parts can be locked in a folded position by securing a side member of said second named swinging platform or extension to its adjacent upright.

4. In a device of the class described, in combination with a horizontal portion of a vehicle, a pair of spaced uprights secured on the horizontal portion, a platform pivotally connected to the horizontal portion to occupy either a horizontal position or a vertical position, suitable braces connecting the free end of said platform to the upper ends of said uprights, a second platform pivotally connected to the free end of said first named platform to occupy a position in the same plane with said first named platform or a position at right angles thereto and provided with side members in vertical planes beside said uprights, means at the pivotal connection between said second named platform, and said first named platform for limiting the movement of said second named platform about its pivot and means for securing a side member of said second named platform to one of said uprights.

5. In a device of the class described, in combination with a horizontal portion of a vehicle, a platform pivotally connected to said horizontal portion to occupy either a horizontal position or a vertical position, a pair of spaced uprights secured on said horizontal portion, suitable braces connecting the upper ends of said uprights with the free end of said platform to support the latter in its horizontal position and permit its being swung to its vertical position, a second platform pivotally connected to the free end of said first named platform to occupy a position in the same plane with said first named platform or a position at right angles thereto and means at the pivotal connection between the said two platforms for limiting the movement of said second named platform about its pivot, the parts being so connected and arranged that the platforms can be made to occupy any one of the four following positions: (1) with both platforms in the same horizontal plane; (2) with the first named platform in a horizontal position and the second named platform in a vertical position; (3) with both platforms in a vertical position; and (4) with said first named platform in a vertical position and said second named platform in a horizontal position.

1,222,573. PORTABLE INCANDESCENT LAMP. MARTIN CLAUSSEN and WILLIAM A. MCKAY, San Francisco, Cal. Filed Mar. 3, 1915. Serial No. 11,722. (Cl. 240—53.)



1. In combination with a lamp socket, a base therefor, and an outwardly flaring loop for supporting said base, pivotally connected therewith and frictionally held at any desired angle therewith and having a substantially straight middle portion to form a support upon a flat surface.

2. In combination with a lamp socket, a base therefor, and an outwardly flaring loop for supporting said base, pivotally connected therewith and bent to form shoulders, and a cover plate secured to said loop above said shoulders.

3. In combination with a lamp socket, a base therefor, and an outwardly flaring loop for supporting said base, pivotally connected therewith and frictionally held at any desired angle therewith, said loop being bent to form shoulders, and a cover plate secured to said loop above said shoulders.

4. In combination with a lamp socket, a base therefor, a device for supporting said base, pivotally connected therewith and frictionally held at any desired angle therewith, a cover plate secured to said device, and a suction cup attached to said plate.

5. In combination with a lamp socket, a base therefor, a device for supporting said base, pivotally connected therewith, frictionally held at any desired angle therewith, and a cover plate secured to said device and bent at its outer end to form a groove or receptacle.

[Claims 6 to 12 not printed in the Gazette.]

1,222,574. MACHINE FOR FORMING HEELS AND TOES OF HORSESHOES. WILLIAM B. MILLER, Pittsburgh, Pa. Filed Sept. 15, 1913. Serial No. 789,781. (Cl. 219—4.)

1. In a machine for forming the heels and toes upon horse shoes, the combination of a frame, a platform movable on the top of said frame, a platform adjustably mounted on said frame opposite said first mentioned platform, means carried by the first mentioned platform for holding a calk or toe piece, means for conveying an electric current to said toe piece, a support mounted upon the adjustable platform for holding the horse shoe blank, means for conveying an electric current to the heel and toe of said blank for the purpose of raising the same to a welding temperature, means for advancing the toe piece into contact with the blank for the purpose of electrically welding the same thereto, and means for turning the separate ends of the blank to form the heels.

2. In a machine for forming the heels and toes upon horse shoes, the combination of a frame, a platform movable on the top of said frame, a platform adjustably mounted on said frame opposite said first mentioned platform, means carried by the first mentioned platform for holding a calk or toe piece, means for conveying an electric current to said toe piece, a support mounted upon the adjustable platform for holding the horse shoe blank, means for conveying an electric current to the heel and toe of said blank for the purpose of raising the same to a welding temperature, means for advancing the toe piece into contact with the blank for the purpose of electrically welding the same thereto, and means for turning the separate ends of the blank to form the heels.

3. In a machine for forming the heels and toes of horseshoes, the combination of a frame, a pair of platforms mounted upon the frame and movable toward and away from each other, a large copper block upon each of the platforms, means for clamping a horseshoe blank against one of the copper blocks, means for clamping a toe calk against the other copper block, means for conveying electric currents through the said members and the respective copper blocks, and means for moving the platforms toward each other to force the toe calk against the horseshoe blank.

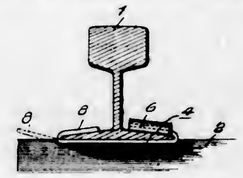
4. In a machine for forming the heels and toes of horseshoes, the combination of a frame, a pair of platforms mounted upon the frame and movable toward and away from each other, a large copper block mounted upon each of the platforms, means for clamping a horseshoe blank against one of the copper blocks, means for clamping a toe calk against the other copper block, means for conveying an electric current through each of the members and the respective copper block to heat the members to the welding temperature, means for conveying an electric current through the heel ends of the horseshoe blank, means for moving the platforms toward each other to force the toe calk against the horseshoe blank, and means for bending the heel ends of the horseshoe blank.

5. In a machine for forming the heels and toes of horseshoes, the combination of a frame, a platform movable on said frame, a platform adjustably mounted upon the frame opposite the first mentioned platform, a copper block mounted upon the first mentioned platform, a bracket mounted upon said platform, an insulated lever arm pivoted at one end to the bracket, a lever pivoted to the bracket above the free end of the insulated lever and provided with a cammed surface at its lower end, said cammed surface engaging the free end of the insulated lever to hold a calk or toe piece in electrical contact with the copper block, means for conveying an electric current to the copper block, means upon the adjustably mounted platform for holding a horseshoe blank, means for conveying an electric current to said blank, and means for advancing the toe piece into engagement with the blank for the purpose of electrically welding the same.

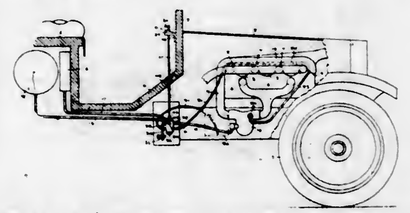
[Claim 6 not printed in the Gazette.]

1,222,575. RAILROAD-STAKE. WILLIAM P. NEWKIRK, Portsmouth, Ohio, assignor of one-fourth to C. L. Crooks, one-eighth to W. D. Isgreg, and one-eighth to James B. Campbell, Pueblo, Colo. Filed Aug. 8, 1916. Serial No. 113,733. (Cl. 40—16.)

Grade and elevation indicating means for railroads, consisting of a strip of metal disposed transversely beneath a rail, and having its end portions rebent to overlie the base flanges of the rail, one of the bent ends being elongated lengthwise of the rail and having its terminal portions folded to form upper guides for an indicia bearing plate.

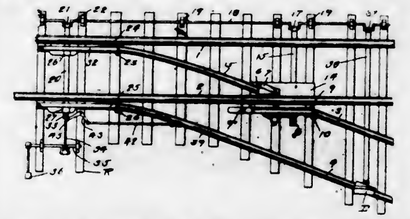


1,222,576. MOTOR-HYDROCARBON-SUPPLY DEVICE. HORACE L. PATTERSON, Otisville, N. Y., assignor to The Adapto Mfg. Co., Inc., Otisville, N. Y., a Corporation of New York. Filed May 20, 1916. Serial No. 98,754. (Cl. 123—25.)



In a motor vehicle, the combination with the engine, exhaust manifold, and the carbureter thereof, of a hood disposed over said exhaust manifold, a hot air pipe leading from said hood to said carbureter, a hydrocarbon supply pipe for the carbureter, a water supply tank, a water pipe leading from said tank through said hood and then downwardly to the carbureter, and means for controlling the admission of water to said pipe, the water in its passage through the water pipe disposed within the hood adapted to be converted into steam and conveyed to the carbureter.

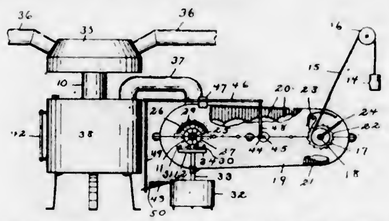
1,222,577. RAILWAY-SWITCH. JAMES D. PERKINS, Atlanta, Ga., assignor to The Railway Appliance Mfg. Co., Fulton county, Ga. Filed Apr. 28, 1915. Serial No. 24,492. (Cl. 104—118.)



1. The combination with two main track rails, of a siding section composed of two siding rails spaced apart from the main track rails, a switch tongue attached to the end of one of the siding rails outside of a main track rail and normally lying parallel thereto, a rail section between the main track rails, and normally lying parallel therewith, a cam disposed adjacent to the main rail, a roller on said switch tongue for elevating the same, a connecting bar attached at one end to the tongue, and a rock shaft for shifting said connecting bar for moving the pivoted tongue into the adjacent main rail and into engagement with the rail section between the track.

2. The combination with two main track rails, of a siding section composed of two siding rails spaced apart from the main track rails, a switch tongue attached to the end of one of the siding rails outside the main track rail and normally lying parallel thereto, a rail section between the main track rails, means for moving the pivoted tongue onto the adjacent main rail and in engagement with the rail section between the track, said means including a cam located adjacent the main track rail, a roller carried by the pivoted switch tongue and adapted to ride over the cam plate to elevate the tongue, a connecting bar attached at one end to the tongue, and a rock shaft for shifting the connecting bar.

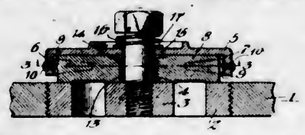
1,222,578. HOUSEHOLD HEATING DEVICE. ZODECK PERLIN, Middletown, Conn., assignor of one-half to The Mattes Plumbing Company, Middletown, Conn., a Copartnership composed of Jacob Mattes and Samuel Mattes, both of said Middletown. Filed Mar. 27, 1916. Serial No. 87,033. (Cl. 126—116.)



1. A household heating device comprising in combination a casing having an opening in the side wall, a blower housed in the said casing adjacent the said opening, a water chamber connected to the said casing, a delivery drum connected to the said water chamber, means for operating the said blower, and an open flame heating apparatus positioned adjacent the said opening, on the outer side of the said casing, and suitable for heating directly air admitted to the said opening.

2. A household heating device comprising in combination a flame heating apparatus, a blower positioned to receive air heated by the said apparatus, a water chamber, a distributer connected to the said water chamber and also communicating with the said blower, a weight, and suitable mechanism for operatively connecting the said weight to the said blower.

1,222,579. PUMP-VALVE. JAMES R. PRATT, Buffalo, N. Y., assignor to Lake Erie Manufacturing Co. Inc., Buffalo, N. Y., a Corporation of New York. Filed July 27, 1916. Serial No. 111,735. (Cl. 103—66.)



1. A pump valve comprising a casing provided with a depending rim, a valve-face arranged in said casing and spaced from said rim to permit expansion of the valve-face relatively to the rim, and yieldable means interposed between said rim and the valve-face for removably retaining the latter in place.

2. A pump valve comprising a casing provided with a depending rim, a valve-face seated in said casing, and retaining springs secured to said rim and engaging the periphery of the valve-face.

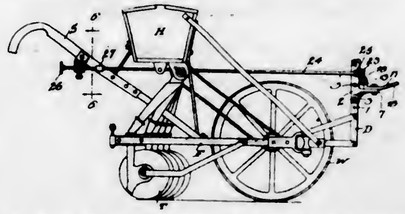
3. A pump valve comprising a casing provided with a depending rim, a valve-face arranged in said casing and provided in its periphery with grooves, and retaining springs applied to the inner side of said rim and engaging said grooves for removably retaining the valve-face therein.

4. A pump valve comprising a casing provided with a depending rim, a valve-face removably arranged in said casing and provided in its periphery with circumferential grooves, and curved retaining springs secured between their ends to the inner side of said rim and having their end portions seated in said grooves.

5. A pump valve comprising a casing provided with a depending rim, a fibrous valve-face seated within said rim and spaced therefrom to permit expansion of the valve-face relatively to the rim, said valve-face being provided in opposite sides of its periphery with grooves having flat bottoms, and approximately semi-circular retaining springs secured to the inner side of said rim and having their free ends arranged in said grooves.

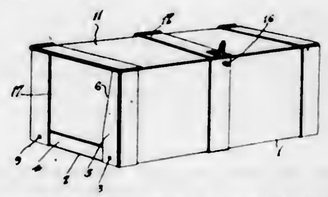
[Claim 6 not printed in the Gazette.]

1,222,580. ADJUSTABLE CLEVIS FOR AGRICULTURAL IMPLEMENTS. EMERY J. RATEKIN, Rushville, Ind., assignor to Albert G. Shauck and Earl D. McFall Arlington, Ind. Filed Apr. 24, 1916. Serial No. 93,237. (Cl. 97—4.)



A device of the class described comprising a one-piece attaching member in the form of a vertically disposed channel iron whose side flanges are adapted to receive therebetween a vertical standard of an implement and are formed with openings to receive attaching bolts, a rigid one-piece horizontal arm formed integrally with and extending laterally from the body of said attaching member at the lower end thereof and having an integral vertically disposed stud on its upper side and at its outer end, a horizontal stud formed integrally with said body of the attaching member and extending therefrom above the aforesaid arm, a gear segment mounted for horizontal oscillation on the vertically disposed stud and having means for the attachment of a draft tree, a pinion rotatably mounted on said horizontal stud and meshing with said segment, a bearing formed integrally with one side flange of the attaching member, and an operating shaft rotatably mounted in said bearing and having a gear meshing with the aforesaid pinion.

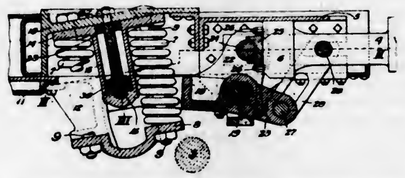
1,222,581. FOLDING BOX. SAMUEL P. SHUEY, Lakemp, Okla. Filed Apr. 8, 1916. Serial No. 89,812. (Cl. 220—17.)



1. A folding crate comprising a bottom wall having upturned flanges at opposite ends, a front wall having inturned flanges at opposite ends, pivot pins extending through the flanges and pivotally connecting the front and bottom walls, a rear wall having flanges at opposite ends, pivot pins extending through the flanges at the bottom and rear walls to pivotally connect the same, inclined edges on the flanges of the front wall for accommodating the pivot pins of the rear wall when the front wall is lowered, a cover hinged to the free edge of the rear wall, a central partition wall hinged to the bottom wall, end walls hinged to the bottom wall near the flanges, inturned latch members at the upper edges of the front and rear walls adjacent their flanges and adapted to engage and hold the end walls in raised position, an eye extending through the front wall, and right angle projections at the inner end of the eye adapted to engage and hold the partition wall in its raised position.

2. A folding crate comprising a bottom wall, angle members secured to the opposite ends of the bottom wall, flanges on the angle members extending upwardly from the bottom wall, a front wall, angle members secured to opposite ends of the front wall, flanges on the angle members extending inwardly from the front wall, pivot pins hingedly connecting the flanges of the front and bottom walls, the inner edges of said flanges being cut away, a rear wall, angle members on the ends of the rear wall, pivot pins extending through the angle members of the rear wall and the angle members of the bottom wall to hingedly connect the bottom and rear walls, the cut away portion of the angle members of the front wall accommodating the pivot pins to the rear wall when the front wall is folded, end walls hinged to opposite ends of the bottom, a central partition wall hinged to the bottom, inturned corners at opposite ends of the front and rear walls, said corners forming latches to engage the end walls and hold the same in a raised position and a cover for closing the whole.

1,222,582. DRAFT-GEARING. FRANK L. O. WADSWORTH, Sewickley, Pa., assignor of one-half to Henry F. Glig, Pittsburgh, Pa. Filed Apr. 15, 1909. Serial No. 490,123. (Cl. 213—64.)



1. Draft gearing comprising a frame, a resisting friction member carried thereby, a drawbar, a spring resistance arranged to oppose the movement of the drawbar in either direction, a movable friction member, and means connecting the movable friction member and the drawbar adapted to thrust said friction member against the resisting member and hold it in engagement therewith independently of said spring resistance thereby establishing and maintaining an independent frictional resistance to buffing movements.

2. Draft gearing comprising a frame, a friction producing member carried thereby, a drawbar, a spring resistance which opposes the movement of the drawbar in either direction, a movable friction member, and mechanism connecting the drawbar and the movable friction member adapted to separate the said members when pulling and adapted to establish and maintain a frictional engagement between them when the gear is closed by buffing movements.

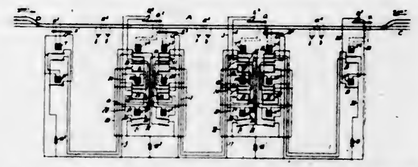
3. Draft gearing comprising a frame, a resisting friction member carried thereby, a drawbar, a movable friction member, and means connecting the movable friction member and the drawbar adapted to thrust said friction member against the resisting member and produce progressively increasing frictional resistance through said members against pressure of the drawbar in closing, and spring mechanism arranged to operate independently of the friction members and to resist movements of the drawbar in both directions.

4. Draft gearing comprising a frame, a drawbar, a spring a friction member carried by the frame, a movable friction member connected to the drawbar, and means independent of said spring for establishing and maintaining engagement between the friction members under buffing movements.

5. Draft gearing comprising a frame, a resisting friction member carried thereby, a drawbar, a movable friction member, a spring, and means connecting the movable friction member and the drawbar adapted to thrust said friction member against the resisting member and to compress the spring in buffing and to separate said friction members and compress the spring in pulling.

[Claims 6 to 13 not printed in the Gazette.]

1,222,583. RAILWAY SIGNALING. HENRY S. YOUNG, Brooklyn, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed July 22, 1913, Serial No. 780,464. Renewed Oct. 13, 1916. Serial No. 125,529. (Cl. 246—30.)



1. In combination, a stretch of railway track divided into a plurality of sections, a pair of opposing signals located adjacent each junction of adjacent sections for governing traffic in opposite directions through the stretch, a signal relay for the control of each signal, a circuit for each signal relay each of which circuits is controlled by the signal relay for the signal next in advance governing the traffic in the same direction, track circuits for the sections including track relays for the control of said signal relay circuits, a branch for each signal relay circuit around the signal relay contact which controls such circuit, an auxiliary relay for each signal relay for controlling the branch around the contact thereof, a pick-up or closing circuit for each auxiliary relay including a front contact of the corresponding signal relay and a back contact of a track relay for a section in advance of the section whose signal the auxiliary relay controls, and a holding circuit for each auxiliary relay including a back contact of the corresponding signal relay and a front contact of the auxiliary relay.

2. In combination, a stretch of railway track divided into a plurality of sections, a pair of opposing signals located adjacent each junction of adjacent sections for governing traffic in opposite directions through the stretch, a signal relay for the control of each signal, a circuit for each signal relay each of which circuits is controlled by the signal relay for the signal next in advance governing traffic in the same direction, track circuits for the sections including track relays for the control of said signal relay circuits, a branch for each signal relay circuit around the signal relay contact which controls such circuit, an auxiliary relay for each signal relay for controlling the branch around the contact thereof, a pick-up or closing circuit for each auxiliary relay including a front contact of the corresponding signal relay and a back contact of a track relay, and a holding circuit for each auxiliary relay including a back contact of the corresponding signal relay and a front contact of the said auxiliary relay.

3. In combination, a stretch of railway track, a plurality of signals governing traffic in one direction through the stretch, a plurality of other signals governing traffic in the other direction through the stretch, a signal relay for the control of each signal, a circuit for each signal relay each of which circuits is controlled by the signal relay for the signal next in advance governing traffic in the same direction, track circuits for the stretch including track relays for the control of said relay circuits, a branch for each signal relay circuit around the signal relay contact which controls such circuit, an auxiliary relay for each signal

relay for controlling the branch around said contact thereof, a pick-up or closing circuit for each auxiliary relay including a front contact of the corresponding signal relay and a back contact of a track relay, and a holding circuit for each auxiliary relay including a back contact of the corresponding signal relay and a front contact of said auxiliary relay.

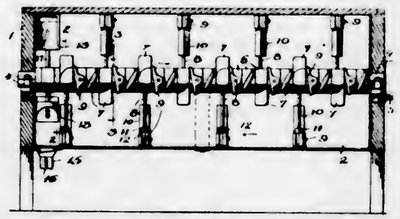
4. In combination, a stretch of railway track divided into a plurality of sections, two track relays for each section located adjacent the ends thereof, the track relay for each section first opened by a car or train passing through the section remaining open until after the other track relay for the same section has been opened, means for energizing the track relays, a pair of opposing signals located adjacent each junction of adjacent sections for governing traffic in opposite directions through the stretch, a signal relay for each signal, a circuit for each signal relay each of which circuits is controlled by a contact of the signal relay for the signal next in advance governing traffic in the same direction, the circuit for each signal relay being controlled also by both track relays for the section through which the corresponding signal governs traffic and by the first track relay for the section next in advance, a branch for each signal relay circuit around the signal relay contact which controls the circuit and around the contact of the track relay for the section in advance of the section through which the corresponding signal governs traffic, an auxiliary relay for each signal relay for controlling the branch around the said contact thereof, a pick-up or closing circuit for each auxiliary relay including a front contact of the corresponding signal relay and a back contact of the first track relay for the section next in advance of the section whose signal the auxiliary relay controls, and a holding circuit for each auxiliary relay including a back contact of the corresponding signal relay and a front contact of said auxiliary relay.

5. In combination, a stretch of railway track divided into a plurality of sections, two track relays for each section located adjacent the ends thereof, the track relay for each section first opened by a car or train passing through the section remaining open until after the other track relay for the same section has been opened, means for energizing the track relays, a pair of opposing signals located adjacent each junction of adjacent sections for governing traffic in opposite directions through the stretch, a signal relay for each signal, a circuit for each signal relay each of which circuits is controlled by the signal relay for the signal next in advance governing traffic in the same direction, each circuit being controlled also by both track relays of the section through which the corresponding signal governs traffic, a branch for each signal relay circuit around the contact of the first track relay of the section over which the corresponding signal governs traffic, said branch including a front contact of the signal relay itself, means for controlling each signal by the corresponding signal relay and by the first track relay of the section through which the signal governs traffic, and means for each signal relay for removing from said relay its control of the signal relay for the signal next in the rear governing traffic in the same direction.

[Claims 6 to 10 not printed in the Gazette.]

1,222,584. **SELF-RISING-FLOUR-MIXING MACHINE.** SAMUEL D. BARR, Beach City, Ohio, assignor of one-half to Howard Barr, Apple Creek, Ohio. Filed Oct. 4, 1916. Serial No. 123,670. (Cl. 259—109.)

1. In a mixing machine of the character specified, the combination with a mixing trough; of a horizontal shaft rotatably journaled therein; a series of collars mounted upon said shaft in abutting relation and provided with openings extending radially therethrough; radial arms seated in said openings; a set of agitating blades secured to the outer end of said arms; and a set of agitating blades connected at their bases directly to said collars, the first- and second-named sets of blades being pitched at different angles so that the said second-named blades will convey the central portion of the material acted upon toward one end of the trough during the rotation of said shaft, while the said first-named blades will convey the outer portion of the material toward the other end of the trough, and both sets will simultaneously subject it to a rotary agitating movement.



2. In a mixing machine of the character specified, the combination, with a mixing trough; of a horizontal shaft rotatably journaled therein; a series of collars mounted upon said shaft in abutting relation and provided with openings extending radially therethrough; radial arms seated in said openings; a set of agitating blades secured to the outer ends of said arms; a set of agitating blades connected at their bases directly to said collars, the first- and second-named sets of blades being pitched at different angles so that the said second-named blades will convey the central portion of the material acted upon toward one end of the trough during the rotation of said shaft, while the said first-named blades will convey the outer portion of the material toward the other end of the trough, and both sets will simultaneously subject it to a rotary agitating movement; and a set of spreading blades affixed to said arms between the first-named set of agitating blades and said collars.

3. In a mixing machine of the character specified, the combination, with a mixing trough; of a horizontal shaft rotatably journaled therein; a series of collars mounted upon said shaft in abutting relation and provided with openings extending radially therethrough; radial arms seated in said openings; a set of agitating blades secured to the outer ends of said arms; a set of agitating blades connected at their bases directly to said collars, the first- and second-named sets of blades being pitched at different angles so that the said second-named blades will convey the central portion of the material acted upon toward one end of the trough during the rotation of said shaft, while the said first-named blades will convey the outer portion of the material toward the other end of the trough, and both sets will simultaneously subject it to a rotary agitating movement; and a set of spreading blades of V-section affixed longitudinally to said arms between the first-named set of agitating blades and said collars.

1,222,585. **CIRCUIT-COUPLING FOR ELECTRICALLY-HEATED UTENSILS.** FREDERICK E. CARLSON, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 28, 1914. Serial No. 874,495. (Cl. 173—328.)



1. The combination with exposed circuit terminals, of a cap inclosing said terminals and secured in position, a plug supported by said cap, contacts carried by said plug and adapted for electrical engagement with said exposed terminals, sleeves of conducting material forming a part of said plug insulated from one another, electrical connection between one of said sleeves and one of said contacts, and between the other of said sleeves and the other contact, circumferential grooves formed exteriorly of each sleeve, a receptacle chambered to receive said plug, contact members located in the walls of said receptacle in alinement with and adapted to fit in said grooves, yielding means for holding said contact members in place, and electrical conductors connecting said contacts with a supply circuit.

2. The combination with exposed circuit terminals, of a cap inclosing said terminals, a plug supported by said cap, said plug comprising a pair of spring contact members located within said cap, electrically insulated from one another at one end and having their opposite ends adapted for electrical contact with said terminals, sleeves of electrical conducting material located outside of said cap insulated from one another, electrical connection between one of said sleeves and one of said contact members, and between the other sleeve and the other contact member, a circumferential groove in the exterior surface of each of said sleeves, and means for securing said cap and its supported parts in place.

3. The combination with exposed circuit terminals, of a plug connector comprising a cap inclosing said circuit terminals and secured in position, a sleeve of conducting material arranged outside of said cap and having an end shouldered and reduced to bear against the end of said cap and fit into an aperture therein, an insulating washer located against the end of said sleeve, a second sleeve of conducting material located next said washer, circumferential grooves in the exterior surface of both of said sleeves, a tubular bushing of insulating material extending through said sleeves and washer, a contact mounted upon said bushing within said cap and in electrical connection with the first mentioned sleeve, a screw extending through said tubular bushing and having electrical contact with the second mentioned sleeve, an insulating washer mounted on said screw next to said contact member, and a second spring contact member mounted on said screw against said washer, and a nut engaging said screw to unite the parts of said plug to said cap, said contact members being adapted to make electrical contact with said circuit terminals.

4. In a device of the character described, a receptacle chambered to receive a plug, apertures in the wall of said receptacle out of alinement with one another, ball contacts located in said apertures and normally projecting into said chamber, yielding means for holding said contacts in normal position, and electrical connections between said contacts and a supply circuit in combination with a plug fitting the chamber, said plug including contact members insulated from one another and circumferentially channeled to electrically and mechanically engage with said ball contact and permit relative rotation between said plug and receptacle.

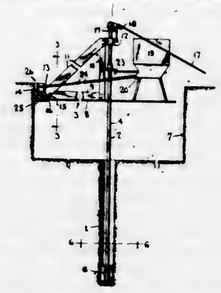
5. In a device of the character described, a chambered receptacle, a plug to fit said chamber, and a single means supported and movable in the wall of said receptacle for detachably uniting said parts both electrically and mechanically to permit relative rotation between them.

[Claims 6 to 8 not printed in the Gazette.]

1,222,586. **PIT-SILO-WALL CONSTRUCTOR.** RICHARD E. DILL, Belvidere, Nebr. Filed Aug. 19, 1914. Serial No. 857,472. Renewed Mar. 1, 1917. Serial No. 151,870. (Cl. 72—130.)

1. In a plastering machine, the combination with a vertical mast, of a horizontally rotatable frame mounted thereon, and provided with a spreading implement, a segmental table positioned upon said frame with its resultant convex edge arranged to conform to the surface to which the plaster is to be applied, said spreading implement approximately resting upon said table, and means for supplying plaster to said spreading implement.

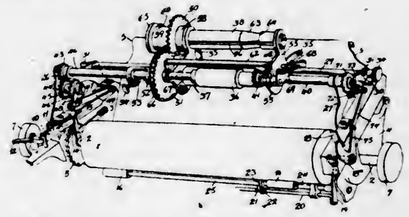
2. In a plastering machine, the combination of a horizontally rotatable frame, a tool hinged intermediate its ends to the outer end of said frame, and adjusting means arranged upon said table and positioned to engage said hinged tool upon opposite sides of its hinging point said adjusting means being longitudinally movable with respect to the frame and upon opposite sides of said hinging point.



3. In a machine of the character described, the combination of a horizontally rotatable frame, a tool hinged intermediate its ends to the outer end of said frame, adjusting members for engaging said tool, positioned upon said frame with respect to the hinge-point of said tool and longitudinally movable with respect to said frame and upon opposite sides of said hinge-point, for effecting the angular adjustment of said tool to the work to be operated upon, and a support whereon said frame is mounted.

REISSUES.

14,283. **TYPE-WRITING MACHINE.** FREDERICK A. HART, Newark, N. J., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Feb. 24, 1917. Serial No. 151,381. Original No. 1,212,940, dated Jan. 16, 1917, Serial No. 870,972, filed Nov. 9, 1914. (Cl. 197—132.)



1. The combination with a platen and a line-space mechanism for rotating the platen, said mechanism comprising adjusting means for varying the extent the platen is rotated by an operation of the line-space mechanism, of means for feeding a strip or web over the rotatable printing surface of the platen, and means to prevent the web from being fed by the platen, said web-feeding means operable by said line-space mechanism to feed the web forwardly the same distance at each operation of the line-space mechanism regardless of the distance the platen is rotated by said operation.

2. The combination with a platen and line-space mechanism for rotating the platen, said mechanism comprising adjusting means for regulating the distance the platen is rotated at each line-space operation, of means for feeding a web or strip over the platen, comprising feed rolls between which the web extends after passing over the platen, gearing between said feed rolls and the line-space mechanism operable to rotate the feed rolls to advance the web the same extent at each line-space operation independently of the extent of rotation of the platen, and means at the introductory side of the platen for placing tension on said web sufficient to prevent it from

being fed forwardly by the platen, so that the web is advanced at the peripheral speed of the said feed rolls.

3. In a typewriting machine, the combination with a roller platen and line-space mechanism for rotating the platen, of means for feeding a web or strip over the platen, said means comprising a web-feeding device to draw the web over the platen, a tension device for applying tension to the web at the introductory side of the platen sufficient to prevent the web from being drawn forwardly by the platen as the latter rotates, and means operated by the line-space mechanism to actuate said web-feeding device.

4. In a typewriting machine, the combination with a platen and a line-space mechanism for imparting step-by-step rotations to the platen, of a tally strip mechanism comprising a support for a supply roll, a feeding roll couple to which the web extends from the supply roll after passing around the platen, a winding spool or spindle on which the web is wound after passing between the rolls of said couple, a gear train between said couple and the line-space mechanism, for driving said couple at each line-space operation, gearing for rotating the winding spindle when said couple is driven, to wind the strip as it is advanced by said couple, said gearing comprising a slip connection, and a tension device applied to said supply roll to retard its rotation and place tension on the web sufficient to prevent it from being drawn forwardly with the platen at a greater speed than it is advanced by said couple.

5. The combination with a rotary platen, platen feed rolls for feeding a work-sheet over the platen, and means for rotating the platen, of means for feeding a web or strip which passes around the platen between the platen and work-sheet, said means comprising a winding spool to receive the web as it is fed over the platen, means to rotate said winding spool, and means at the introductory side of the platen to place tension on said web sufficient to prevent the web from being advanced by the platen.

6. The combination with a platen frame and a platen, of tally strip mechanism comprising a drive shaft extending parallel with the platen, means forming a support for a tally strip supply roll, a winding spindle, said support and winding spindle adjustable along said drive shaft to bring the tally strip to different positions longitudinally of the platen, means for feeding the tally strip over the platen and winding it on said winding spindle, and means for placing tension on the tally strip between the supply roll and the platen sufficient to prevent said strip from being carried forwardly by the rotation of the platen.

7. In a typewriting machine, the combination with a platen and a platen frame, of brackets secured to the platen frame ends, said brackets provided with recesses having restricted entrances, each recess forming a journal bearing, a rod forming a support for a tally strip roll, and having flattened portions movable through said entrances, to permit said rod to be placed in its bearings, said rod, when rotated in its bearings to present said flattened portions across said entrances, being held against removal, and a spring to bear against a flattened or reduced portion of the rod to hold it against accidental rotation into a position to be removed.

8. In a typewriting machine, the combination with a platen and a line-space mechanism for rotating the platen, of tally strip mechanism comprising means to support a tally strip extending around the platen over the rotary printing surface thereof, and feed said strip forwardly step by step as the line-space mechanism is operated, means for controlling the advance of the tally strip line by line independently of the distance through which the platen is rotated at each operation of its line-space mechanism, and means operated automatically to advance the tally strip each time the machine is manipulated to remove a work-sheet and replace it by a new work-sheet.

9. In a typewriting machine, the combination with a platen, line-space mechanism for imparting step-by-step rotations to the platen, platen feed rolls to feed work-sheets over the platen, and a key for throwing the feed rolls off the platen to permit the removal of a work-sheet, of means for feeding a tally strip around the platen between the latter and the work-sheets, connections between said means and said key for operating said means and advancing the tally strip when the key is operated, connections between the line-space mechanism and the tally strip feeding means for operating the latter when the line-space mechanism is operated, and means effective at the rotation of the platen for controlling the advance of the tally strip independently of the distance through which the platen is rotated, and independently of the work-sheet overlying the tally strip and being carried around by the platen; said feed rolls mounted to run only upon portions of the platen not occupied by the tally strip.

10. In a typewriting machine, the combination with a platen, line-space mechanism for imparting step-by-step rotations to the platen, platen feed rolls to feed work-sheets over the platen, and a key for throwing the feed rolls off the platen to permit the removal of a work-sheet, of means for feeding a taly strip, connections between said means and said key for operating said means and advancing the tally strip when the key is operated, connections between the line-space mechanism and the tally strip feeding means for operating the latter when the line-space mechanism is operated, said tally strip positioned to extend between the platen and the work-sheets thereon, and a tension device to place tension on the tally strip at the introductory side of the platen, said tension being sufficient to prevent the tally strip from being fed worwardly by the platen and work-sheets.

11. The combination with a roller platen and platen feed rolls for feeding a work-sheet over the platen, of a key connected to said feed rolls for throwing them off the platen, means to support a tally strip in position to extend around the platen between the latter and said work-sheet, to be fed over the platen, said tally strip-supporting means adjustable in a direction parallel with the platen axis to bring the tally strip to different positions along the platen and overlying work-sheet, tally strip feeding mechanism, means to prevent the tally strip from being drawn forward by the platen, and gearing between the said key and tally strip feeding mechanism for operating the latter when said key is operated.

12. The combination with a roller platen and platen feed rolls thereon for feeding work-pieces over the platen, of a line-space mechanism located at one end of the platen for rotating the platen, a key at the opposite end of the platen for throwing the said feed rolls off the platen, a drive shaft extending parallel with and substantially coextensive longitudinally with the platen, driving connections between the line-space mechanism and the adjacent end of the drive shaft for rotating the drive shaft by power applied at said end of the drive shaft when the line-space mechanism is operated, connections between said key and the adjacent end of the drive shaft for rotating the drive shaft by power applied at said last-mentioned end thereof when the key is operated, and means operated by the drive shaft for feeding a tally strip.

13. The combination with a roller platen and platen feed rolls thereon for feeding work-pieces over the platen, of a line-space mechanism located at one end of the platen for rotating the platen, a key at the opposite end of the platen for throwing the said feed rolls off the platen, a drive shaft extending parallel with the platen, from one end of the platen to the other, driving connections between the line-space mechanism and the adjacent end of the drive shaft for rotating the drive shaft by power applied thereto at said adjacent end thereof when the line-space mechanism is operated, connections between said shaft and said key for rotating the drive shaft by power applied thereto at the end thereof adjacent the key when the latter is operated, means to support a tally strip in position to be fed over the platen, said support adjustable along said drive shaft to bring the tally strip to any desired position longitudinally of the platen, and means operated by said drive shaft for feeding the tally strip forwardly over the platen.

14. In mechanism for winding a strip or web, the combination with a winding spindle or mandrel provided with a longitudinal slot or opening to receive and form a holding means for the end of the web or strip wound thereon, of a support in which said mandrel is journaled, said mandrel movable longitudinally in said support to withdraw it from the roll formed by winding said strip thereon, and thereby permitting the roll to be removed bodily from the mandrel.

15. In a tally strip mechanism, the combination with a feeding roll couple, of a winding spindle or mandrel on which the tally strip is wound after being fed forwardly by said couple, and a gear train connecting said couple and said mandrel for rotating the latter at a speed sufficient to prevent slack in the strip between the said couple and mandrel, said gear train comprising a slip connection permitting the speed of the winding spindle to accommodate itself to the speed at which the web is fed forwardly by said couple.

16. In a tally strip mechanism, the combination with feed rolls, of means to drive said feed rolls, a strip or web between said rolls, a winding spindle on which said web is wound as it is fed between said rolls, driving connections between said feed rolls and said spindle comprising a gear connected to one of said feed rolls, an intermeshing gear having a hub surrounding said spindle, friction bearing blocks mounted in said hub, and a spring holding said bearing blocks against the said spindle and thereby providing a slip driving connection between the spindle and said feed rolls.

17. The combination with a platen and line-space mechanism for rotating the platen, said mechanism comprising adjusting means for regulating the distance the platen is rotated at each line-space operation, of means for feeding a web or strip over the platen comprising feed rolls between which the web extends after passing over the platen, and gearing between said feed rolls and the line-space mechanism operable to rotate the feed rolls to advance the web the same extent at each line-space operation independently of the extent of rotation of the platen.

18. In a typewriting machine, the combination with a revoluble platen and platen feed rolls for feeding work-pieces over the platen, of means to support a supply roll in position to permit a strip or web to extend from said roll around the platen and past the printing line, a feeding roll couple beyond the writing line and between the rolls of which the web extends, a winding spindle or spool on which the web, after passing said feeding roll couple, is wound and forms a winding roll, mechanism to drive said couple and said winding spool and cause said couple to draw the web from the supply roll around the platen, said winding spindle being rotated at a speed sufficient to prevent slack in the web between the said spindle and the feeding roll couple, the means for driving the winding spindle comprising a slip connection to permit the speed of the winding roll to adjust itself to that of the feeding roll couple and prevent excessive strain on the web, and means for placing a holding tension on the supply roll sufficient to prevent the web from being drawn therefrom by the platen and its feed rolls, and piled between the platen and said feeding roll couple.

19. In a typewriting machine, the combination with a revoluble platen, platen feed rolls for feeding work-pieces over the platen, and line-space mechanism for imparting step-by-step rotations to the platen, of means to support a tally strip supply roll, a tally strip feeding roll couple for advancing a tally strip extending from the supply roll around the platen to said couple, an auxiliary line-space mechanism operated by the platen line-space mechanism and connected to said feeding roll couple for driving the latter and advancing the tally strip step by step as the line-space mechanisms are operated, a winding spindle on which the strip is wound after leaving the feeding roll couple, a gear train to drive said spindle when the said couple is driven, said gear train comprising a friction slip connection to regulate the tension of the strip as it is wound on said spindle and permitting automatic adjustment of the speed of the spindle relatively to that of the feeding roll couple, and retarding means for the strip at the introductory side of the platen for preventing the strip from being drawn from the supply roll except by a force greater than that exerted thereon by the platen and its feed rolls, whereby the platen and the platen feed rolls are prevented from advancing the strip and piling it between the platen and the feeding roll couple, the peripheral advance of the platen at each line-space operation being greater than that of the feeding roll couple.

20. In a typewriting machine, the combination with a platen frame and a revoluble platen journaled therein, of a drive shaft parallel with the platen and supported on the platen frame, tally strip mechanism comprising a supporting frame adjustable along said drive shaft for adjusting a tally strip to different positions along the platen, a tally strip supply roll adjustable with said frame and from which the tally strip extends around the platen, a winding spindle carried by said supporting frame and on which the tally strip is wound after passing around the platen, driving connections between said drive shaft and spindle for rotating the latter, line-space mechanism for rotating the platen, and gearing between the line-space mechanism and said drive shaft for driving the latter when the line-space mechanism is operated.

21. In a typewriting machine, the combination with a platen frame and a revoluble platen journaled therein, of a drive shaft parallel with the platen and supported on the platen frame, tally strip mechanism comprising a supporting frame adjustable along said drive shaft for adjusting a tally strip to different positions along the platen, a tally strip supply roll adjustable with said frame and from which the tally strip extends around the platen, a winding spindle carried by said supporting frame and on which the tally strip is wound after passing around the platen, driving connections between said drive shaft and spindle for rotating the latter, line-space mechanism for rotating the platen, gearing between the line-space mechanism and said drive shaft for driving the latter when the line-space mechanism is operated, platen feed rolls, a key for throwing said feed rolls off the platen, and connections between said key and said drive shaft for rotating the latter when said key is operated.

22. The combination with a platen frame and platen, of supporting brackets mounted on the platen frame ends, a drive shaft extending parallel with the platen and journaled in said brackets, a tally strip supporting frame, a supporting rod for a tally strip supply roll, said rod mounted in said brackets, a feeding roll couple mounted in said tally strip frame, and driving connections between said drive shaft and said couple for driving the latter and thereby feeding over the platen a tally strip extending from said supply roll around the platen to said couple, said tally strip frame adjustable longitudinally of the platen to adjust the tally strip to different positions along the platen.

23. The combination with a platen frame and platen, of supporting brackets mounted on the platen frame ends, a drive shaft extending parallel with the platen and journaled in said brackets, a tally strip supporting frame, a supporting rod for a tally strip supply roll, said rod mounted in said brackets, a feeding roll couple mounted in said tally strip frame, driving connections between said drive shaft and said couple for driving the latter and thereby feeding over the platen a tally strip extending from said supply roll around the platen to said couple, said tally strip frame adjustable longitudinally of the platen to adjust the tally strip to different positions along the platen, and leaf-springs carried by the tally strip frame and bearing against the ends of the supply roll to hold the latter against longitudinal displacement and cause it to be adjusted with the tally strip and frame, said springs forming a brake for the supply roll and holding the latter with sufficient power to prevent the tally strip from being fed forwardly by the platen faster than it is drawn forwardly by said couple.

24. The combination with a platen frame and a platen, of brackets mounted on the platen frame ends, a drive shaft extending parallel with the platen and journaled in said brackets, a supporting rod for a supply roll, said rod mounted in said brackets and extending parallel with the platen, a tally strip frame supported on and adjustable along said drive shaft and said rod to adjust a tally strip

to different positions along the platen, a feeding roll couple mounted in said tally strip frame, means for driving said drive shaft, gearing between said drive shaft and feeding roll couple for driving said couple when the drive shaft is rotated and thereby advancing over the platen the tally strip which extends from the supply roll around the platen to said coupic, a winding spindle, gearing between the drive shaft and said winding spindle for rotating the latter and winding the tally strip thereon as it is advanced by the feeding roll couple, and leaf-springs carried by the tally strip frame and bearing against ends of the supply roll to cause the latter to be carried with the tally strip frame when the latter is adjusted, said springs also retarding the rotation of the supply roll and placing tension on the tally strip sufficient to prevent it from being drawn forwardly by the platen and piling up between the platen and said feeding roll couple.

25. In a tally strip mechanism, the combination with a drive shaft, of a feeding roll couple comprising a roll connected to said shaft to rotate therewith and a second roll, an eccentrically mounted supporting shaft on which said second roll is journaled, a winding spindle to receive a strip fed between said rolls, a lever connected to rotate said eccentric shaft into and out of position to separate said rolls, said lever having a limited movement in both directions, a spring to hold said lever in either position, intermeshing pinions carried by said rolls and remaining in mesh while said rolls are separated, and gearing between the winding spindle and drive shaft for rotating said spindle from the drive shaft.

26. In a typewriting machine and tally-strip mechanism therefor, the combination with a platen, of a supply roll from which a tally strip or web may extend around the platen past the printing line, a winding spindle on which the web is wound in a roll as it is fed beyond the printing line, and a frame in which the supply roll and winding spindle are mounted, said frame being mounted for adjustment lengthwise of the platen to adjust the position of the tally strip along the platen.

27. In a typewriting machine, the combination with a rotatable platen, of line-spacing mechanism to rotate the platen and feed a work-sheet thereover, web-feeding mechanism, means operated by the line-spacing mechanism to drive said web-feeding mechanism, and thereby advance a web step by step, a winding spool or spindle on which the web is wound as it is advanced by said web-feeding mechanism, means forming a driving connection between said web-feeding mechanism and winding spool including a slip connection permitting the speed of the winding spool to accommodate itself to the speed at which the web is advanced by its feeding means, said web being supported and guided over the platen so that the web and the work-sheet on the platen may be held against the platen in superposed relation along the printing line, and means at the introductory side of the platen for placing tension on the web, and thereby taking it out of the direct control of the platen, permitting the work-sheet on the platen to be fed independently of or at a different speed from that of said web.

28. In a typewriting machine, the combination with a platen frame and a revoluble platen journaled therein, of a drive shaft parallel with the platen and supported on the platen frame, tally-strip mechanism comprising a supporting frame adjustable along said drive shaft for adjusting the tally strip to different positions along the platen, a tally-strip supply roll adjustable with said frame and from which the tally strip extends around the platen, a winding spindle carried by said supporting frame and on which the tally strip is wound after passing around the platen, driving connections between said drive shaft and spindle for rotating the latter, and means to rotate said drive shaft.

29. In a typewriting machine, the combination with a platen carriage and a platen thereon, of tally-strip mechanism comprising a frame, a tally-strip supply roll and a tally-strip winding spindle both mounted on said frame in position to support a tally strip extending from the supply roll around the platen past the printing line to the winding spindle, means for supporting said frame on the platen carriage, said frame adjustable lengthwise of the platen for adjusting the tally strip to different positions along the printing line, a drive shaft extending lengthwise of the platen, and means forming a driving connection from said shaft to the winding spindle and adjustable with said spindle lengthwise of the platen.

30. In a typewriting machine, the combination with a platen frame and a revoluble platen thereon, of a paper table at the introductory side of the platen for supporting and guiding work-sheets to the platen, tally-strip mechanism comprising a supporting frame, a tally-strip supply roll and tally-strip receiving means carried on said frame and so positioned that the tally strip may extend from the supply roll downward in front of the paper table around the platen and upward to said receiving means, the tally strip being spaced from said table to permit the work-sheets to be placed on said table and fed around the platen outside of the tally strip overlying the latter along the printing line, the tally-strip supporting frame being adjustable lengthwise of the platen to bring the tally strip to different positions along the printing line, and means to concomitantly advance the tally strip and overlying work-sheet through different line-space distances.

31. In a typewriting machine, the combination of a revoluble platen, means to control the line-spacing movements of the platen, means to engage the margin of a wide sheet to hold it against said platen to partake of the line-spacing movements thereof, and controlling means connected with said line-spacing means, for effecting, at the operations of said platen, relatively reduced line-space movements of a narrow sheet interposed between the wide sheet and said platen, whereby the interposed sheet advances more slowly than said platen.

32. In a typewriting machine, the combination of a revoluble platen, means to control the line-spacing movements of the platen, means to engage the margin of a wide sheet to hold it against the platen to partake of the line-spacing movements thereof, and controlling means connected with said line-spacing means, for effecting reduced line-space movements of a narrow sheet interposed between the wide sheet and the platen, the means for line-spacing the said narrow sheet including devices adjustable longitudinally of the platen, to permit location of the narrow sheet at a variety of points along the platen.

33. In a typewriting machine, the combination of a revoluble platen, means to control the line-spacing movements of the platen, means to engage the margin of a wide sheet to hold it against the platen to partake of the line-spacing movements thereof, and controlling means connected with said line-spacing means, for effecting reduced line-space movements of a narrow sheet interposed between the wide sheet and the platen, the means for controlling the interposed sheet comprising a device for holding back said interposed sheet against a tendency of the platen to advance the same.

34. In a typewriting machine, the combination of a revoluble platen, means to control the line-spacing movements of the platen, means to engage the margin of a wide sheet to hold it against the platen to partake of the line-spacing movements thereof, and controlling means connected with said line-spacing means, for effecting reduced line-space movements of a narrow sheet interposed between the wide sheet and the platen, the means for controlling the interposed sheet comprising a device for holding back said interposed sheet against a tendency of the platen to advance the same, and being adjustable longitudinally of the platen.

35. In a typewriting machine, the combination of a revoluble platen, means to control the line-spacing movements of said platen, means to engage the margin of a wide sheet to hold it against said platen to partake exactly of the line-spacing movements thereof, and controlling means connected with said line-spacing means, for effecting, at the rotative movements of said platen, relatively reduced line-space movements of a narrow sheet interposed between said wide sheet and the platen, the line-spacing movements of said interposed narrow sheet and of said platen being all controlled by a single manually-operable device.

36. In a typewriting machine, the combination of a revoluble platen, means to control the line-spacing movements of the platen, means to engage the margin of a wide sheet to hold it against the platen to partake of the line-spacing movements thereof, and controlling means connected with said line-spacing means, for effecting reduced line-space movements of a narrow sheet interposed between the wide sheet and the platen, and including a shaft extending along the platen for line-spacing the interposed sheet, and means for enabling said shaft to feed said interposed sheet at various adjustments thereof along the platen.

37. In a typewriting machine, the combination with a revoluble platen, of line-spacing mechanism having only one operating member or driver, said platen controlled by said line-spacing mechanism, means to press an outer or original sheet against said platen to cause said sheet to advance in line-space direction with said platen at the speed thereof, and automatic means connected with said line-spacing mechanism to advance to a less extent a carbon-copy sheet inserted between said outer sheet and the platen; said pressing means being lateral of the inserted sheet, to bear against only portions of the platen that are not occupied by said inserted sheet.

38. In a typewriting machine, the combination with a revoluble platen, of line-spacing mechanism having only one operating member or driver, said platen controlled by said line-spacing mechanism, means to cause an outer or original sheet to be driven by direct contact with said platen by means of rolls pressing the side margins thereof against said platen, and means connected to said line-spacing mechanism to advance to a less extent a sheet inserted between said outer sheet and said platen, and to control said interposed sheet so that said platen may advance independently thereof.

39. In a typewriting machine, the combination with a revoluble platen and a line-spacing mechanism whereby said platen is controlled, of means to hold an outer sheet against the platen, a revoluble device having a connection to said line-spacing mechanism to advance a narrow sheet interposed between the outer sheet and the platen at a less speed than the outer sheet, and means at the introductory side of the platen to hold back the inner sheet against the tendency of the platen to advance the same.

40. In a typewriting machine, the combination with a revoluble platen and a line-spacing mechanism whereby said platen is controlled, of means to hold an outer sheet against the platen, a revoluble device having a connection to said line-spacing mechanism to advance a narrow sheet interposed between the outer sheet and the platen at a less speed than the outer sheet, and means at the introductory side of the platen to hold back the inner sheet against the tendency of the platen to advance the same, said hold-back means including a revoluble member to co-act with the sheet and a friction member to retard its revolution.

41. In a typewriting machine, the combination with a revoluble platen and a line-spacing mechanism whereby said platen is controlled, of means to hold an outer sheet against the platen, a revoluble device having a connection to said line-spacing mechanism to advance a narrow sheet interposed between the outer sheet and the platen at a less speed than the outer sheet, and means at the introductory side of the platen to hold back the inner sheet against the tendency of the platen to advance the same, said hold-back means including a revoluble member to co-act with the sheet and a friction member to retard its revolution, said revoluble device and said hold-back means being adjustable together along the platen.

42. In a typewriting machine, the combination with a revoluble platen, of a line-spacing mechanism therefor, a revoluble device entrajacent to said platen and connected to said line-spacing mechanism to advance a sheet around said platen to a less extent than the movement of said platen, and a pressure device lateral to said sheet, whereby a wider sheet superposed upon said sheet may be line-spaced to the same extent as said platen, said pressure device being mounted to press only upon portions of said platen not occupied by the first-mentioned sheet.

43. In a typewriting machine, the combination with a revoluble platen, of a line-spacing mechanism therefor, a revoluble device extrajacent to the platen and connected to said line-spacing mechanism to advance a sheet around the platen to a less extent than the movement of the platen, and means whereby a sheet superposed upon said sheet may be line-spaced to the same extent as the platen, said revoluble device being adjustable along the platen.

44. In a typewriting machine, the combination of a revoluble platen, a winding spool and a delivery spool both arranged to control a tally strip running directly upon the platen, means for holding upon the platen to turn therewith a sheet superposed upon the tally strip and overlapping the same, a line-spacing mechanism to advance the platen to a greater extent than the tally strip, and means to counteract the tendency of the platen to advance the tally strip unduly.

45. In a typewriting machine, the combination of a revoluble platen, a winding spool and a delivery spool both arranged to control a tally strip running directly upon the platen, means for holding upon the platen to turn therewith a sheet superposed upon the tally strip and overlapping the same, a line-spacing mechanism to advance the platen to a greater extent than the tally strip, and means to counteract the tendency of the platen to advance the tally strip unduly, said tally strip spools being adjustable along the platen.

46. The combination with a revoluble platen, of means mounted extrajacent to said platen for advancing a narrow record sheet around the platen in line-spacing direction, means for giving said platen rotative movements each in excess of the movement of such narrow sheet, and means lateral to said narrow sheet to press a wide sheet against said platen, to be given thereby greater line-spacing movements than those of the narrow sheet, said pressing means mounted to press against only portions of said platen that are not occupied by said narrow sheet.

47. The combination with a revoluble platen, of means mounted extrajacent to the platen for advancing a narrow record sheet around the platen in line-spacing direction, means for giving the platen rotative movements each in excess of the movement of such narrow sheet, means to press a wide sheet against the platen, to be given thereby greater line-spacing movements than those of the narrow sheet, a single line-spacing mechanism being connected both to rotate said platen and advance said narrow sheet, and retarding means being provided for preventing the narrow sheet from advancing as far as the wide sheet at the line-spacing operation of the platen.

48. The combination with a revoluble platen, of means mounted extrajacent to the platen for advancing a narrow record sheet around the platen in line-spacing direction, means for giving the platen rotative movements each in excess of the movement of such narrow sheet, means to press a wide sheet against the platen, to be given thereby greater line-spacing movements than those of the narrow sheet, and means being provided for effecting relative adjustment of the narrow sheet and its feeding means longitudinally of the platen.

49. The combination with a revoluble platen, of means mounted extrajacent to the platen for advancing a narrow record sheet around the platen in line-spacing direction, means for giving the platen rotative movements each in excess of the movement of such narrow sheet, means to press a wide sheet against the platen to be given thereby greater line-spacing movements than those of the narrow sheet, a single line-spacing mechanism being connected both to rotate said platen and advance said narrow sheet, retarding means being provided for preventing the narrow sheet from advancing as far as the wide sheet at the line-spacing operation of the platen, and means being also provided for silencing the feed of the narrow sheet at the operation of the line-spacing mechanism.

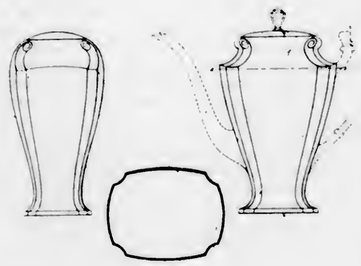
DESIGNS.

50,562. HANDLE FOR A SPOON, FORK, OR SIMILAR ARTICLE. GEORGE E. BALL, Stratford, Conn., assignor to Whiting Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Feb. 9, 1917. Serial No. 147,724. Term of patent 14 years.



The ornamental design for a handle for a spoon, fork, or similar article, as shown.

50,563. BODY OF A TEAPOT OR OTHER ARTICLE OF HOLLOW WARE. GEORGE E. BALL, Stratford, Conn., assignor to Whiting Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Feb. 10, 1917. Serial No. 147,960. Term of patent 14 years.



The ornamental design for the body of a teapot or other article of hollow ware, as shown.

50,564. LIGHT-GLOBE. FERD S. BARBIERS, Lancaster, Ohio, assignor to The Hocking Glass Company, Lancaster, Ohio, a Corporation of Ohio. Filed Feb. 14, 1917. Serial No. 148,637. Term of patent 7 years.



The ornamental design for a light globe, as shown.

50,565. STOVE. GEORGE B. CARTER and WILLIAM L. BERTRAM, Detroit, Mich., assignors to John C. Emrich, doing business under the name of C. Emrich, Columbus, Ohio. Filed Apr. 17, 1916. Serial No. 91,817. Term of patent 14 years.



The ornamental design for a stove, as shown.

50,566. PANEL FOR WOOD FURNITURE. PIETRO CERONE, Syracuse, N. Y. Filed Aug. 9, 1916. Serial No. 114,057. Term of patent 3½ years.



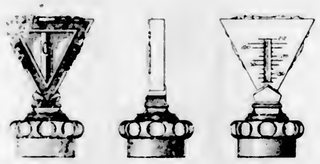
The ornamental design for a panel for wood furniture as shown.

50,567. NON-SKID TREAD. JERRY D. CLINE, Akron, Ohio, assignor of one-half to Christian A. Barnholth, Akron, Ohio. Filed Jan. 31, 1917. Serial No. 145,809. Term of patent 14 years.



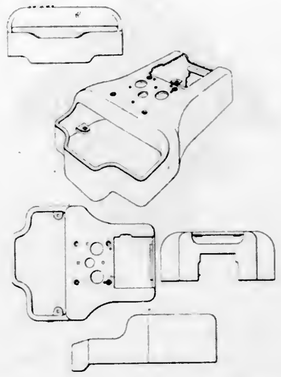
The ornamental design for a non-skid tread, as shown.

50,568. AUTOMOBILE-METER. FRANK V. COWAN, Chicago, Ill. Filed Nov. 27, 1916. Serial No. 133,791. Term of patent 7 years.



The ornamental design for an automobile meter, substantially as shown.

50,569. WRITING-MACHINE FRAME. WILLIAM H. EBELHARE and CLARENCE G. ARVIDSON, Indianapolis, Ind., assignors to The Stenotype Company, Indianapolis, Ind. Filed Nov. 7, 1916. Serial No. 130,076. Term of patent 7 years.

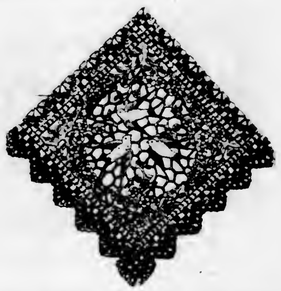


The ornamental design for a writing machine frame, as shown.

50,570. WALL-PAPER. ROBERT B. GRIFFIN, New York, N. Y. Filed Jan. 26, 1917. Serial No. 144,788. Term of patent 7 years.

The ornamental design for wall paper, substantially as shown.

50,571. LACE PAPER. CHARLES W. HAMILTON, Milwaukee, Wis. Filed Feb. 17, 1917. Serial No. 149,366. Term of patent 14 years.



The ornamental design for lace paper, as shown.

50,572. LACE PAPER. CHARLES W. HAMILTON, Milwaukee, Wis. Filed Feb. 17, 1917. Serial No. 149,367. Term of patent 14 years.



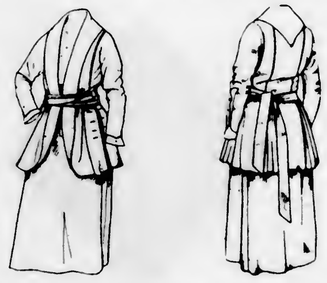
The ornamental design for lace paper, as shown.

50,573. REINFORCING-PLATE FOR SHOES. LEO HASEL, Lakeview, Oreg. Filed Oct. 9, 1916. Serial No. 124,733. Term of patent 14 years.



The ornamental design for reinforcing plate for shoes, as shown.

50,574. GARMENT FOR LADIES. RICHARD J. HICKSON, New York, N. Y. Filed Feb. 14, 1917. Serial No. 148,629. Term of patent 3½ years.



The new, original and ornamental design for a garment for ladies, as shown.

50,575. GARMENT FOR LADIES. RICHARD J. HICKSON, New York, N. Y. Filed Feb. 14, 1917. Serial No. 148,630. Term of patent 3½ years.



The new, original and ornamental design for a garment for ladies, as shown.

50,576. GARMENT FOR LADIES. RICHARD J. HICKSON, New York, N. Y. Filed Feb. 14, 1917. Serial No. 148,631. Term of patent 3½ years.



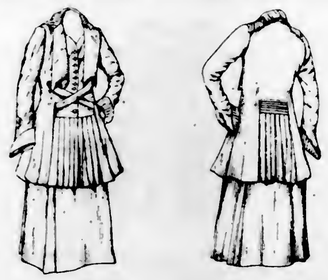
The new, original and ornamental design for a garment for ladies, as shown.

50,577. GARMENT FOR LADIES. RICHARD J. HICKSON, New York, N. Y. Filed Feb. 14, 1917. Serial No. 148,632. Term of patent 3½ years.



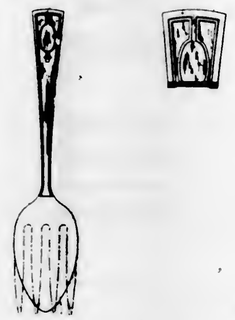
The new, original and ornamental design for a garment for ladies, as shown.

50,578. GARMENT FOR LADIES. RICHARD J. HICKSON, New York, N. Y. Filed Feb. 14, 1917. Serial No. 148,633. Term of patent 3½ years.



The new, original and ornamental design for a garment for ladies, as shown.

50,579. SPOON, FORK, OR SIMILAR ARTICLE. HENRIK HILLBOM, Wallingford, Conn., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn., a Corporation. Filed Feb. 23, 1917. Serial No. 150,587. Term of patent 3½ years.



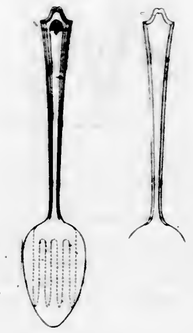
The ornamental design for a spoon, fork, or similar article, as shown.

50,580. FOOT-PLATE FOR SKATES. ERNEST HUNOLD, Providence, R. I. Filed Jan. 8, 1917. Serial No. 141,337. Term of patent 14 years.



The ornamental design for a foot plate for skates, as shown.

50,581. SPOON, FORK, OR SIMILAR ARTICLE. FRED W. KOONZ, Greenfield, Mass., assignor to Rogers, Lunt & Bowlen Company, Greenfield, Mass., a Corporation of Massachusetts. Filed Jan. 27, 1917. Serial No. 145,014. Term of patent 7 years.



The ornamental design for a spoon, fork, or similar article as shown.

50,582. BADGE OR INSIGNIA. WILLIAM LEHMBERG, Philadelphia, Pa. Filed Feb. 16, 1917. Serial No. 149,152. Term of patent 14 years.

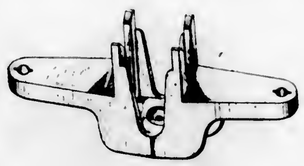
The ornamental design for a badge or insignia, as shown.

50,583. PILLOW-SLIP AND PILLOW. DORA G. MARCUS, New York, N. Y. Filed Jan. 2, 1917. Serial No. 140,317. Term of patent 3½ years.



The ornamental design for a pillow slip and pillow, as shown and described.

50,584. CROSS-BAR FOR ARCHITECTS' LEVELS. ROY W. MARTIN, Milwaukee, Wis. Filed May 19, 1916. Serial No. 98,700. Term of patent 14 years.



The ornamental design for a cross bar for architects' levels as shown.

50,585. NAME-PLATE. SAMUEL T. PAYNE and JOHN P. TARBOX, Buffalo, N. Y., assignors to Curtiss Aeroplane & Motor Corporation, a Corporation of New York. Filed Dec. 6, 1916. Serial No. 135,492. Term of patent 14 years.



The ornamental design for a name-plate, as shown.

50,586. SPOON, FORK, OR SIMILAR ARTICLE. FREDERICK E. PRÉTAT, Waterbury, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed Jan. 20, 1917. Serial No. 143,536. Term of patent 3½ years.



The ornamental design for a spoon, fork or similar article as shown.

50,587. CHILD'S COMBINATION NURSERY AND HIGH CHAIR. JAMES C. REAMER and MICHAEL POSEDEL, Seattle, Wash. Filed June 19, 1916. Serial No. 104,624. Term of patent 7 years.



The design for a child's combination nursery and high chair substantially as shown.

50,588. CASE FOR VACUUM-BOTTLES. ADOLPH C. RECKER, Oakville, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed Feb. 13, 1917. Serial No. 148,450. Term of patent 14 years.



The ornamental design for a case for vacuum bottles, as shown.

50,589. CASE FOR VACUUM-BOTTLES. ADOLPH C. RECKER, Oakville, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed Feb. 13, 1917. Serial No. 148,451. Term of patent 14 years.



The ornamental design for a case for vacuum bottles, as shown.

50,590. GLASS ARTICLE. MAURICE A. SMITH, Jeannette, Pa., assignor to McKee Glass Company, Jeannette, Pa., a Corporation of Pennsylvania. Filed Dec. 30, 1916. Serial No. 139,973. Term of patent 3½ years.



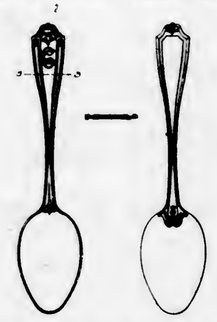
The ornamental design for a glass article of manufacture, as shown.

50,591. GLASS VESSEL. MAURICE A. SMITH, Jeannette, Pa., assignor to McKee Glass Company, Jeannette, Pa., a Corporation of Pennsylvania. Filed Dec. 30, 1916. Serial No. 139,974. Term of patent 3½ years.



The ornamental design for a glass vessel, as shown.

50,592. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. AXEL HERMAN STAF, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Jan. 9, 1917. Serial No. 141,492. Term of patent 14 years.



The ornamental design for a handle for spoons, forks or similar articles, as shown.

50,593. VEILING. ZEALIE VAN RAALTE, New York, N. Y. Filed Jan. 26, 1917. Serial No. 144,785. Term of patent 3½ years.



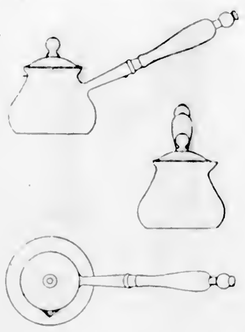
The ornamental design for veiling, as shown.

50,594. DISPLAY-CARD OR SIMILAR ARTICLE. PAUL VOGES, Chicago, Ill., assignor to Manz Engraving Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 3, 1915. Serial No. 64,920. Term of patent 3½ years.



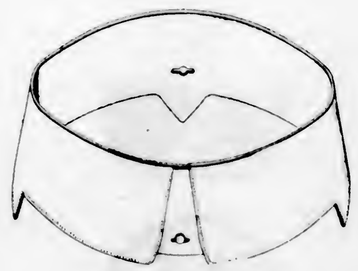
The ornamental design for a display card or similar article as shown.

50,595. SAUCEPAN. BERNARD P. WAGNER, Sidney, Ohio, assignor to The Wagner Manufacturing Company, Sidney, Ohio, a Corporation of Ohio. Filed Feb. 8, 1917. Serial No. 147,498. Term of patent 3½ years.



The ornamental design for sauce pan, as shown, consisting of a body with broadened lower portion and a pouring lip formed in the rim of the upper portion and a cover therefor, substantially as shown.

50,596. COLLAR. HERBERT O. WILKSON, Twin Falls, Idaho. Filed Nov. 7, 1916. Serial No. 130,077. Term of patent 14 years.



The ornamental design for a collar, as shown.

50,597. [WITHDRAWN.]

TRADE-MARKS

PUBLISHED APRIL 10, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 84,935. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GUST KROUSER, Parsons, Pa. Filed Mar. 4, 1915.



The pictures being of Anthony Allen and myself.

Particular description of goods.—A Preparation for the Treatment of Diarrhea and Dysentery.

Claims use since Jan. 22, 1915.

Ser. No. 93,832. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CALIFORNIA FRUIT GROWERS EXCHANGE, Los Angeles, Cal. Filed Mar. 24, 1916.

Sunkist

Particular description of goods.—Citrus Fruits.

Claims use since Oct. 10, 1907.

Ser. No. 94,129. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed Apr. 4, 1916.

PARAGON

Particular description of goods.—Clothes Wringers and Parts Thereof.

Claims use since Aug. 23, 1900.

Ser. No. 94,682. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. B. MATTHEWS & SONS, New Orleans, La. Filed Apr. 24, 1916.

MIRACLE

Particular description of goods.—Stock Feed.

Claims use since Apr. 4, 1916.

Ser. No. 95,397. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES S. KIRK & COMPANY, Chicago, Ill. Filed May 24, 1916.



Particular description of goods.—Talcum Powder, Perfume, Cold-Cream, Sachet-Powder, Toilet Water, and Face-Powder.

Claims use since on or about February, 1899.

Ser. No. 96,539. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DISC CHEMICAL COMPANY, Newark, N. J. Filed July 13, 1916.

SACLAC

Particular description of goods.—Sugar-of-Milk Tablets.

Claims use since January, 1915.

Ser No. 97,345. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CAPRONI BROTHERS COMPANY, Providence, R. I. Filed Aug. 15, 1916.

HEBE

The word "Hebe."

Particular description of goods.—Still-Water, Sparkling or Carbonated Water, Ginger-Ale, and Carbonated Water of Different Flavors.

Claims use since Apr. 1, 1913.

Ser. No. 97,856. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BLAIR MILLING CO., Atchison, Kans. Filed Sept. 8, 1916.



The word "Brand" being disclaimed.

Particular description of goods.—Self-Rising Buckwheat-Flour.

Claims use since Aug. 7, 1916.

Ser. No. 97,991. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KLEMENS S. RAMASHAUSKI, Chicago, Ill. Filed Sept. 14, 1916.

"OREMUS"

Particular description of goods.—Medicine as a Remedy for Diseases of the Lungs, Coughs, Catarrh, and Asthma.

Claims use since Jan. 1, 1915.

Ser. No. 98,079. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE CHARLES WILLIAM STORES, INC., Brooklyn, N. Y. Filed Sept. 19, 1916.

ETERNALITE

Particular description of goods.—Ready-Mixed Paints, Varnishes, Enamel, and Painters' Dry Colors.

Claims use since Feb. 1, 1916, on enamel, and since July 20, 1916, on paints, varnishes, and colors.

Ser. No. 98,202. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BYSTROM & HULL, Toledo, Ohio. Filed Sept. 25, 1916.



Particular description of goods.—Raised Breads and Pastries.

Claims use since in August, 1912.

Ser. No. 98,221. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OSCAR A. RATHER, Milwaukee, Wis. Filed Sept. 25, 1916.



No claim being made to the words "Tickle Stop."

Particular description of goods.—Cough-Drops.

Claims use since Sept. 18, 1916.

Ser. No. 98,379. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ATLAS FACTORIES COMPANY, Los Angeles, Cal. Filed Oct. 3, 1916.



Particular description of goods.—Dry Earth Paints, Unmixed, for Walls, Ceilings, and Woodwork, Which Is Manufactured by Said Atlas Factories Company and When Used Is to Be Mixed with Cold Water or Warm Water.

Claims use since the 10th day of April, 1916.

Ser. No. 98,629. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) FLANAGAN COMPANY, Tulsa, Okla. Filed Oct. 13, 1916.

GASO

Particular description of goods.—Gas-Burners and Oil-Burners.

Claims use since July 7, 1915.

Ser. No. 99,206. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) FRANK H. BOSSON, Boston, Mass. Filed Nov. 10, 1916.

VICTROLENE

Particular description of goods.—Cleaning and Polishing Preparations for Painted, Varnished, and Wooden Surfaces.

Claims use since Oct. 29, 1915.

Ser. No. 99,315. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THOMAS J. A. TODD, Watsonville, Cal. Filed Nov. 15, 1916.

"ANZAC ZONE"

Comprising the words "Anzac Zone."

Particular description of goods.—Ranch Products—viz., Fresh Fruits, Berries, and Root Crops, and Poultry and Eggs.

Claims use since July 1, 1916.

Ser. No. 99,328. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES. MOCO LABORATORIES, Oklahoma, Okla. Filed Nov. 16, 1916.



The lining shading on the letters of the word "Moco" does not designate red or any other particular color, but is used to give boldness to the letters.

Particular description of goods.—Patches for the Inner Tubes and Casings of Pneumatic Tires.

Claims use since the 15th day of May, 1916.

Ser. No. 99,461. (CLASS 37. PAPER AND STATIONERY.) H. W. CARTER PAPER COMPANY, Springfield, Mass. Filed Nov. 22, 1916.

CAPACO

Particular description of goods.—Writing and Printing Papers, Papeteries, Writing-Tablets, Toilet-Paper, Wrapping-Paper, Wax-Paper, Gummed Paper as Used by Printers to Print Thereon for Making Gummed Labels, Blotting-Paper, Cardboard, Envelops; Paper Case-Lining for Lining the Inside of Shipping Cases or Boxes to Protect the Contents from Injury—If Desired the Paper May be Treated to Render It Moisture-Proof; Tissue-Paper, Crape Paper, Paper Napkins, Corrugated Paper, Paper Towels, Paper Doilies.

Claims use since on or about Jan. 1, 1906.

Ser. No. 99,553. (CLASS 32. FURNITURE AND UPHOLSTERY.) J. & J. KOHN, INC., New York, N. Y., and Chicago, Ill. Filed Nov. 25, 1916.



Particular description of goods.—Dining-Room Chairs, Sitting-Room Chairs, Banquet-Chairs, Desk-Chairs, Bedroom-Chairs, Porch-Chairs, Arm-Chairs, Rockers, Settees, Foot-Stools, Bath-Room Stools, Bedroom-Stools, Porch-Stools, Porch-Swings, Dining-Room Tables, Sitting-Room Tables, Parlor-Tables, Bedroom-Tables, Porch-Tables, Costumer Hall-Stands, Fern-Stands, Couches.

Claims use since about Nov. 21, 1916.

Ser. No. 99,598. (CLASS 7. CORDAGE.) WATERBURY COMPANY, Jersey City, N. J., and New York, N. Y. Filed Nov. 27, 1916.



Particular description of goods.—Manila Rope.

Claims use since August 7 in the year 1916.

Ser. No. 99,719. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) SEARS, ROEBUCK AND COMPANY, Chicago, Ill. Filed Dec. 4, 1916.

PROTECTION

Particular description of goods.—Wringers and Parts Thereof.

Claims use since July, 1905.

Ser. No. 99,835. (CLASS 33. GLASSWARE.) GEORGE BORGFELDT & Co., New York, N. Y. Filed Dec. 11, 1916.



No claim being made to the word "Glass."

Particular description of goods.—Glassware as Follows: Jars, Bowls, Plates, Vases, Globes, Dishes, Jardinières, and Fern-Dishes.

Claims use since Dec. 1, 1916.

Ser. No. 99,955. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FISHER FLOURING MILLS COMPANY, Seattle, Wash. Filed Dec. 15, 1916.

LAYMOR

No claim being made to the exclusive use of the word "Fisher's" or the representation of the hen.
Particular description of goods.—Poultry Food.
Claims use since Oct. 16, 1916.

Ser. No. 100,179. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) NATIONAL FRUIT JUICE COMPANY, La Fayette, Ind. Filed Dec. 26, 1916.

APELLA
AN APPLE A DAY KEEPS THE DOCTOR AWAY

Particular description of goods.—Apple-Juice.
Claims use since June 5, 1915.

Ser. No. 100,207. (CLASS 2. RECEPTACLES.) THE REPUBLIC METALWARE CO., Buffalo, N. Y. Filed Dec. 27, 1916.

SAVORY

Particular description of goods.—Chambers, Garbage-Cans, Canisters, Flour-Cans, Spice-Boxes, Cuspidors, Pantry-Boxes, Buckets, Coffee-Flasks, Shakers, (Flour,) Soap-Dishes, Ash-Cans, Shakers, (Salt,) Lunch-Boxes, Chamber-Pails, Dinner-Pails, Water-Pails, Water-Pitchers, Coal-Hods, Shakers, (Pepper,) Shakers, (Sugar,) All of Metal.
Claims use since about Jan. 7, 1899.

Ser. No. 100,294. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FREDERICK W. LANGE, Ensley, Ala. Filed Jan. 2, 1917.

Puro

Particular description of goods.—Ice-Cream, Condensed Milk, Milk Powder, Butter, Cheese, Milk, Ice-Cream Cones, and Eggs.
Claims use since Jan. 1, 1914.

Ser. No. 100,333. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) HOME RUBBER CO., Trenton, N. J. Filed Jan. 3, 1917.

SOLID

Particular description of goods.—Asbestos-Fiber Sheet-Packing.
Claims use since Dec. 15, 1916.

Ser. No. 100,528. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCHLESINGER RADIUM CO., Denver, Colo. Filed Jan. 10, 1917.

MARVELITE

The words "Everlasting Cold Light" form no part of the trade-mark sought to be registered herein.
Particular description of goods.—Luminous Compounds.
Claims use since Dec. 5, 1916.

Ser. No. 100,539. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE STROH BREWERY CO., Detroit, Mich. Filed Jan. 11, 1917.

LUX-O

No claim being made in this application to the name "Stroh's."
Particular description of goods.—A Non-Intoxicating Malt-Brewed Beverage.
Claims use since Dec. 29, 1916.

Ser. No. 100,567. (CLASS 25. LOCKS AND SAFES. ART METAL CONSTRUCTION CO. INC., Jamestown, N. Y. Filed Jan. 13, 1917.

ArtMetal

No claim being made for the words "Jamestown, New York, U. S. A."
Particular description of goods.—Safes.
Claims use since Nov. 1, 1914.

Ser. No. 100,568. (CLASS 12. CONSTRUCTION MATERIALS.) ART METAL CONSTRUCTION CO. INC., Jamestown, N. Y. Filed Jan. 13, 1917.

ArtMetal

No claim being made for the expression "Jamestown, New York, U. S. A."
Particular description of goods.—Partitions, Doors, Metallic Gratings for Banks, Court Houses, Libraries, and Offices, Railings, and Stairs.
Claims use since Nov. 1, 1914.

Ser. No. 100,569. (CLASS 2. RECEPTACLES. ART METAL CONSTRUCTION CO. INC., Jamestown, N. Y. Filed Jan. 13, 1917.

ArtMetal

No claim being made for the expression "Jamestown, New York, U. S. A."
Particular description of goods.—Safety-Deposit Boxes.
Claims use since Nov. 1, 1914.

Ser. No. 100,574. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BURTON & DAVIS CO., New York, N. Y. Filed Jan. 13, 1917.

Particular description of goods.—Canned Fruits, Canned Vegetables, Canned Salmon, and Tomato Catsup.
Claims use since 1891.

Ser. No. 100,627. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MILTON BRADLEY CO., Springfield, Mass. Filed Jan. 15, 1917.

JITNEY

Particular description of goods.—Games.
Claims use since on or about Feb. 5, 1916.

Ser. No. 100,652. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) HUDSON MECHANICAL RUBBER CO., New York, N. Y. Filed Jan. 16, 1917.

HUDSON-UNIVERSAL

Particular description of goods.—Canvas Belting, Rubber Belting, Leather Belting, and Combination Canvas and Rubber Belting.
Claims use since Jan. 1, 1917.

Ser. No. 100,697. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALPHONSE P. FOOSE, Dayton, Ohio. Filed Jan. 18, 1917.

Globe Pine

Particular description of goods.—A Remedy for Coughs and Colds.
Claims use since about Apr. 1, 1908.

Ser. No. 100,744. (CLASS 38. PRINTS AND PUBLICATIONS.) BENJAMIN A. JAVITZ, New York, N. Y. Filed Jan. 19, 1917.

RESULTS

Particular description of goods.—Booklets and Circulars for Advertising a Collection-Service.
Claims use since July 3, 1914.

Ser. No. 100,769. (CLASS 39. CLOTHING.) JACOB BUCKMAN, New York, N. Y. Filed Jan. 20, 1917.

GUARDIAN

The word "Coat" being hereby disclaimed.
Particular description of goods.—Coats.
Claims use since Nov. 1, 1916.

Ser. No. 100,799. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRAZAR & COMPANY, New York, N. Y. Filed Jan. 22, 1917.

THISTLE

No claim being made to the word "Brand."
Particular description of goods.—Calcined Magnesia.
Claims use since on or about June 14, 1914.

Ser. No. 100,815. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL CARBON COMPANY, Cleveland, Ohio. Filed Jan. 22, 1917.



Particular description of goods.—Arc-Lamp Electrodes.
Claims use since Jan. 8, 1917.

Ser. No. 100,819. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) OLD DOMINION BEVERAGE CORPORATION, Richmond, Va. Filed Jan. 22, 1917.

Jaka

No claim being made to the word "Kola."
Particular description of goods.—Soft Drinks.
Claims use since June 1, 1916.

Ser. No. 100,853. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELLEN HICKEY, Los Angeles, Cal. Filed Jan. 23, 1917. Under ten-year proviso.



Particular description of goods.—A Remedy for Rheumatism.
Claims use since Oct. 5, 1886.

Ser. No. 100,857. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MARVEL ENGINEERING COMPANY, Chicago, Ill. Filed Jan. 23, 1917.



Particular description of goods.—Grease-Cups for Automobiles, Motors, and Other Vehicles and Machinery.
Claims use since on or about the 10th day of November, 1916.

Ser. No. 101,047. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Jan. 30, 1917.

"Three-in-One"

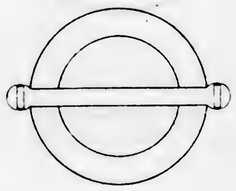
Particular description of goods.—Folding Shopping Bag.
Claims use since Oct. 9, 1916.

Ser. No. 101,057. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) COLGATE & CO., Jersey City, N. J., and New York, N. Y. Filed Jan. 31, 1917.

LES FLEURS
FAVORITES

Particular description of goods.—Perfumes, Toilet Powders, Toilet Waters, and Sachets.
Claims use since the 26th day of January, 1917.

Ser. No. 101,125. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) INTERSTATE CARTOON CO., New York, N. Y. Filed Feb. 2, 1917.



No claim being made to the words "Health," "Preparedness," and "Exercising Scepter" and to the letters "U. S. A."
Particular description of goods.—Exercising Apparatus in the Form of Dumb-Bells.
Claims use since Jan. 5, 1917.

Ser. No. 101,128. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) LANDERS, FRARY & CLARK, New Britain, Conn. Filed Feb. 2, 1917.

UNIVERSAL

Particular description of goods.—Electrically-Driven Apparatus for Store and Household Use Consisting of Bone-Grinders, Tool-Grinders, Knife-Cleaners, Meat-Choppers, Coffee-Mills, and Spice-Mills.
Claims use since May, 1913.

Ser. No. 101,166. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DUNDAS BROTHERS CO., Philadelphia, Pa. Filed Feb. 5, 1917.



Consisting of the word "Tarantella" and the ornamental design shown.
Particular description of goods.—Wheat-Flour.
Claims use since about Jan. 1, 1917.

Ser. No. 101,173. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Feb. 5, 1917.

HI-PUFF

Particular description of goods.—Oleomargarin.
Claims use since Feb. 1, 1917.

Ser. No. 101,203. (CLASS 39. CLOTHING.) CAROLYN T. WINDMULLER, New York, N. Y. Filed Feb. 6, 1917. Under ten-year proviso.

Thurn

The trade-mark consisting of the word "Thurn."
Particular description of goods.—Women's Gowns, Wraps, Suits Comprising Outer Gowns Consisting of Coat and Skirt; Dress-Waists, Negligée and Under Waists; Tea Gowns, Matinées, and All Manner of Lace Underwear; Fur Muffs, Fur Coats, Fur Scarfs, and Fur Neckpieces, and Ladies' Hats.
Claims use since a date prior to 1873.

Ser. No. 101,253. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA CODFISH COMPANY, San Francisco, Cal. Filed Feb. 9, 1917.



Particular description of goods.—Fresh, Dried, and Canned Cod-Fish.
Claims use since Aug. 10, 1909.

Ser. No. 101,269. (CLASS 38. PRINTS AND PUBLICATIONS.) THE HORN-SHAFER COMPANY, Baltimore, Md. Filed Feb. 9, 1917.

The MARYLAND MOTORIST

Particular description of goods.—Publications Issued Biannually.
Claims use since Nov. 1, 1916.

Ser. No. 101,351. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BUTR PLUS CO., Washington, D. C. Filed Feb. 14, 1917.

Butr-Plus

Particular description of goods.—Butter-Merging Compounds.
Claims use since November, 1916.

Ser. No. 101,398. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERICK S. HANF, New York, N. Y. Filed Feb. 15, 1917.

IS-BI-CAL

Particular description of goods.—Indigestion, Flatulency, Vertigo, Heartburn, Acid Stomach, and Acute Indigestion.
Claims use since about Dec. 15, 1916.

Ser. No. 101,438. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE AUTO AIDS MFG. CO., Chicago, Ill. Filed Feb. 17, 1917.

SILVER KING

Particular description of goods.—Spark-Plugs.
Claims use since Feb. 9, 1917.

Ser. No. 101,454. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NOVELTY MILL COMPANY, Seattle, Wash. Filed Feb. 17, 1917.

UWIN

Particular description of goods.—Wheat-Flour and Wheat Cereal.
Claims use since about March, 1914.

Ser. No. 101,459. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PORTLAND FLOURING MILLS COMPANY, Portland, Oreg. Filed Feb. 17, 1917.

HERO

Particular description of goods.—Wheat-Flour.
Claims use since about May, 1916.

Ser. No. 101,460. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PORTLAND FLOURING MILLS COMPANY, Portland, Oreg. Filed Feb. 17, 1917.

WILD ROSE

Particular description of goods.—Wheat-Flour, (Self-Rising.)
Claims use since about 1900.

Ser. No. 101,461. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PORTLAND FLOURING MILLS COMPANY, Portland, Oreg. Filed Feb. 17, 1917.

Mt. BAKER

Particular description of goods.—Wheat-Flour.
Claims use since about September, 1900.

Ser. No. 101,468. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMOUR GRAIN COMPANY, Jersey City, N. J., and Chicago, Ill. Filed Feb. 19, 1917.



Particular description of goods.—Rolle' White Oats.
Claims use since Jan. 8, 1917.

Ser. No. 101,478. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) COLONIAL STEEL COMPANY, Pittsburgh, Pa. Filed Feb. 19, 1917.

CO-CO

Particular description of goods.—Steel.
Claims use since January, 1915.

Ser. No. 101,486. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FEDERAL EXPORT CORPORATION, New York, N. Y. Filed Feb. 19, 1917.



Particular description of goods.—Steam-Engines, Turbine-Engines, Automobile Fire-Engines, Lathes for Wood-working, Lathes for Metal-Working; Drills, Punches, Chisels, Planers, Metal and Graphite Bearings and Bushings; Planters for Cotton, Corn, Grain, &c.; Tractors; Plows, Hoes, Rakes, Harrows, Cultivators, Mowing and Reaping Machines; Razors, Attachments for Internal-Combustion Engines—viz., Auxiliary Air-Admission Devices—Fire-Extinguishing Devices, Priming Devices and Cylinder Steaming Devices; Inflatable-Tire Pumps; Embroidering and Punching Machines.
Claims use since Jan. 1, 1916.

Ser. No. 101,487. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) FEDERAL EXPORT CORPORATION, New York, N. Y. Filed Feb. 19, 1917.



Particular description of goods.—Electric Generators, Electric Motors, Electric Switchboards, Electric Insulators, Electric Switches, Electric Fuses, Electric Cut-Outs, Insulated Wire, Electric Lamps, Electric-Lamp Receptacles, Electric-Light Carbons, Electric-Flash-Light Batteries, Dry Batteries, Electric Storage Batteries and Accumulators, Hard-Rubber Compound for Electrical Purposes, Electric Spark-Plugs, Friction-Tape for Electrical Purposes.
Claims use since Jan. 1, 1916.

Ser. No. 101,489. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GENERAL LEAD BATTERIES COMPANY, Newark, N. J. Filed Feb. 19, 1917.

TITAN

Particular description of goods.—Storage-Battery Plates.
Claims use since September 15, 1916.

Ser. No. 101,502. (CLASS 39. CLOTHING.) D. NUSBAUM & CO., New York, N. Y. Filed Feb. 19, 1917.

UKNIT

Particular description of goods.—Bathing-Suits and Sweaters.
Claims use since JAN. 22, 1917.

Ser. No. 101,503. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ONONDAGA STEEL COMPANY, INCORPORATED, Syracuse, N. Y. Filed Feb. 19, 1917.

ON

Particular description of goods.—Steel.
Claims use since about Dec. 1, 1916.

Ser. No. 101,516. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) STEWART-WARNER SPEEDOMETER CORPORATION, Chicago, Ill. Filed Feb. 19, 1917.

Stewart

The trade-mark is a facsimile of the signature of the first president and founder of this corporation.
Particular description of goods.—Electric Lamps.
Claims use since Jan. 30, 1917.

Ser. No. 101,517. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) STEWART-WARNER SPEEDOMETER CORPORATION, Chicago, Ill. Filed Feb. 19, 1917.

V-Ray

Particular description of goods.—Electric Lamps.
Claims use since Jan. 30, 1917.

Ser. No. 101,532. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHERMAN D. CLEGG, Wheeling, W. Va. Filed Feb. 20, 1917.

"US-PEP"

Particular description of goods.—An Ointment Intended to Assist in the Relief of Coughs, Chest-Colds, Croup, Pneumonia, Sore Throat, Tonsillitis, Bronchitis, Asthma, Eczema, Chilblains, Rheumatism, Neuralgia, Headache, Pleurisy, Sprains, Sore Joints, Sore Muscles, Stiff Neck, Bruises, Lame Back, and Lumbago.
Claims use since Feb. 5, 1917.

Ser. No. 101,534. (CLASS 17. TOBACCO PRODUCTS.) 44 CIGAR COMPANY, Philadelphia Pa. Filed Feb. 20, 1917.

44

Particular description of goods.—Cigars, Cigarros, Cheroots, and Cigar-Clippings.
Claims use since Feb. 16, 1897.

Ser. No. 101,535. (CLASS 17. TOBACCO PRODUCTS.) 44 CIGAR COMPANY, Philadelphia, Pa. Filed Feb. 20, 1917.

44

Particular description of goods.—Cigars, Cigarros, Cheroots, and Cigar-Clippings.
Claims use since Feb. 16, 1897.

Ser. No. 101,537. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JACOB L. GREENBAUM, Toledo, Ohio. Filed Feb. 20, 1917.

REWARD

Particular description of goods.—Catarrh Treatment, Remedy for Treatment of Diseases of the Throat, Chest, and Lungs, Laxative Cold-Tablets, Nerve and Liver Tonic, Stomach-Tablets, Cathartic Compound, Headache and Neuralgia Tablets, Kidney and Bladder Pills, Blood-Tonic, Cream for Face and Hands, Hair and Scalp Treatment.
Claims use since 1913.

Ser. No. 101,544. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARTIN L. HALL COMPANY, Boston, Mass. Filed Feb. 20, 1917.

Halco

Particular description of goods.—Coffee.
Claims use since November, 1910.

Ser. No. 101,549. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MUTUAL CREAMERY COMPANY, Salt Lake City, Utah. Filed Feb. 20, 1917.

Four-in-one

Particular description of goods.—Creamery-Butter.
Claims use since April, 1913.

Ser. No. 101,550. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MUTUAL CREAMERY COMPANY, Salt Lake City, Utah. Filed Feb. 20, 1917.

Maid o' Clover

Particular description of goods.—Creamery-Butter.
Claims use since Dec. 1, 1915.

Ser. No. 101,552. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NELSON-RHOADS CANDY CO., Denver, Colo. Filed Feb. 20, 1917.

Armorial

Particular description of goods.—Chocolates.
Claims use since Aug. 1, 1913.

Ser. No. 101,553. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OVERSEAS PRODUCTS CORPORATION, New York, N. Y. Filed Feb. 20, 1917.

WHITE SAIL

Particular description of goods.—Canned Goods—Namely, Fish Pudding, Herring in Tomato Sauce, Kippered Herrings, Sardines in Oil, Fresh Mackerel, Sauced Mackerel, Fresh Herring, Anchovies, Roll-Mops, (Herring and Sardines Spiced and Rolled,) Turtle Soup, Beef Stew, Krydd Sill, (Pickled and Spiced Herring, which is a Prepared Fish Ball,) Marmalade, Bismark Herring, Gaffelbitar, (Spiced Herring, Swedish Style,) Fruit Pudding.
Claims use since July 27, 1916.

Ser. No. 101,557. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCHAFER BAKERY, INC., Savannah, Ga. Filed Feb. 20, 1917.

NU-DO

Particular description of goods.—Bread.
Claims use since Mar. 31, 1910.

Ser. No. 101,563. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLUMBIA RIVER PACKERS ASSOCIATION, Astoria, Oreg. Filed Feb. 21, 1917. Under ten-year proviso.

DELMONICO

Particular description of goods.—Canned Salmon.
Claims use since 1891.

Ser. No. 101,586. (CLASS 17. TOBACCO PRODUCTS.) FRITCH, HIMES & COMPANY, Oskaloosa, Iowa. Filed Feb. 21, 1917.

Dandee

Particular description of goods.—Cigars.
Claims use since Feb. 1, 1917.

Ser. No. 101,626. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) STANDARD BOTTLING & EXTRACT CO., Boston, Mass. Filed Feb. 23, 1917.

MAPLETONE

Parti ular description of goods.—A Flavor for a Syrup Composed of Sugar and Hot Water, Used in Making Soft Drinks.
Claims use since Dec. 1, 1916.

Ser. No. 101,644. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TUSTIN LEMON ASSOCIATION, Tustin, Cal. Filed Feb. 24, 1917.

HILL CREST

Particular description of goods.—Lemons.
Claims use since Mar. 4, 1912.

Ser. No. 101,645. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TUSTIN LEMON ASSOCIATION, Tustin, Cal. Filed Feb. 24, 1917.

REDHILL

Particular description of goods.—Lemons.
Claims use since Jan. 1, 1911.

Ser. No. 101,662. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SMITH & KAUFMANN, New York, N. Y. Filed Feb. 24, 1917.

MADISON SQUARE S&K

Particular description of goods.—Silk Piece Goods and Ribbons.
Claims use since January, 1911.

Ser. No. 101,678. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLARENCE A. CRANE, Cleveland, Ohio. Filed Feb. 26, 1917.

CLEOPATRA

Particular description of goods.—Chocolate Candy.
Claims use since Nov. 1, 1916.

Ser. No. 101,684. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FIGVED IMPORTING CO., Portland, Me., and Chicago, Ill. Filed Feb. 26, 1917.

KRO KETTO

Particular description of goods.—Fish-Croquettes.
Claims use since Nov. 24, 1916.

Ser. No. 101,704. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MAUSER MILL COMPANY, Laurys Station, Pa. Filed Feb. 26, 1917.

COUNTERSIGN

Particular description of goods.—Wheat-Flour.
Claims use since Dec. 1, 1916.

Ser. No. 101,705. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MAUSER MILL COMPANY, Laurys Station, Pa. Filed Feb. 26, 1917.

KING PIN

Particular description of goods.—Wheat-Flour.
Claims use since Dec. 1, 1916.

Ser. No. 101,706. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MAUSER MILL COMPANY, Laurys Station, Pa. Filed Feb. 26, 1917.

FULL BLOOM

Particular description of goods.—Wheat-Flour.
Claims use since Dec. 1, 1916.

Ser. No. 101,721. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN FRUIT DISTRIBUTORS OF CALIFORNIA, Los Angeles, Cal. Filed Feb. 27, 1917.

JUPITER

Particular description of goods.—Oranges, Lemons, and Grape-Fruit.
Claims use since Mar. 1, 1911.

Ser. No. 101,723. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN FRUIT DISTRIBUTORS OF CALIFORNIA, Los Angeles, Cal. Filed Feb. 27, 1917.

MARS

Particular description of goods.—Lemons and Oranges.
Claims use since Jan. 25, 1910.

Ser. No. 101,724. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN FRUIT DISTRIBUTORS OF CALIFORNIA, Los Angeles, Cal. Filed Feb. 27, 1917.

AURORA

Particular description of goods.—Oranges, Grape-Fruit, and Cantaloups.
Claims use since Nov. 15, 1902.

Ser. No. 101,733. (CLASS 17. TOBACCO PRODUCTS.) 44 CIGAR COMPANY, Philadelphia, Pa. Filed Feb. 27, 1917.



Particular description of goods.—Cigars, Cigarros, Cheroots, and Cigar-Clippings.
Claims use since Feb. 16, 1897.

Ser. No. 101,734. (CLASS 17. TOBACCO PRODUCTS.) 44 CIGAR COMPANY, Philadelphia, Pa. Filed Feb. 27, 1917.

ADLON

Particular description of goods.—Cigars, Cigarros, Cheroots, and Cigar-Clippings.
Claims use since on or about Sept. 15, 1907.

Ser. No. 101,741. CLASS 46. FOODS AND INGREDIENTS OF FOODS.) P. E. HARRIS & Co., Seattle, Wash. Filed Feb. 27, 1917.

Spartan

Particular description of goods.—Canned Salmon.
Claims use since Dec. 26, 1916.

Ser. No. 101,742. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) IMPERIAL CANDY COMPANY, Milwaukee, Wis. Filed Feb. 27, 1917.

Campfire

Particular description of goods.—Marshmallows.
Claims use since Jan. 1, 1917.

Ser. No. 101,744. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) JENKINS BROS., Elizabeth, N. J., and New York, N. Y. Filed Mar. 23, 1917.

SELCLO

Particular description of goods.—Metallic Valves and Parts Thereof.
Claims use since on or about Jan. 18, 1917.

Ser. No. 101,746. (CLASS 12. CONSTRUCTION MATERIALS.) LOUISVILLE CEMENT COMPANY, Louisville, Ky. Filed Feb. 27, 1917.

Particular description of goods.—Building-Cement.
Claims use since July 16, 1916.

Ser. No. 101,755. (CLASS 39. CLOTHING.) ROBERT REIS & Co., New York, N. Y. Filed Feb. 27, 1917.



Particular description of goods.—Underwear, as Follows: Shirts, Drawers, and Union-Suits.
Claims use since Aug. 25, 1916.

Ser. No. 101,756. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RANDOLPH MARKETING CO., San Francisco, Cal. Filed Feb. 27, 1917.

BULLDOG

Particular description of goods.—Oranges and Lemons.
Claims use since September, 1911.

Ser. No. 101,758. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAN FERNANDO HEIGHTS LEMON CO., Los Angeles, Cal. Filed Mar. 26, 1917.

EVENING STAR

Particular description of goods.—Lemons, Oranges, and Grape-Fruit.
Claims use since Mar. 1, 1915.

Ser. No. 101,762. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNION FISH CO., San Francisco, Cal. Filed Feb. 27, 1917. Under ten-year proviso.

SILVER KING

Particular description of goods.—Dried Fish and Particularly Cod-Fish.
Claims use since September, 1893.

Ser. No. 101,764. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. VAN LANDINGHAM CO., Los Angeles, Cal. Filed Feb. 27, 1917.

BALBOA

Particular description of goods.—Canned Sardines, Canned Tuna Fish.
Claims use since Nov. 29, 1916.

Ser. No. 101,773. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CLEVELAND MACARONI COMPANY, Cleveland, Ohio. Filed Feb. 28, 1917.

GOLDEN AGE

Particular description of goods.—Paste Foods, Specifically Macaroni, Spaghetti, Ready-Cut and Noodle Cartons.
Claims use since Feb. 15, 1916.

Ser. No. 101,782. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HAGER, CLARK & Co., New York, N. Y. Filed Feb. 28, 1917.



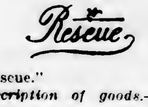
Particular description of goods.—Woolen Piece Goods.
Claims use since Feb. 17, 1917.

Ser. No. 101,808. (CLASS 39. CLOTHING.) MARSHALL W. TAYLOR, Philadelphia, Pa. Filed Feb. 28, 1917.



Particular description of goods.—Overalls for Men, Women, Boys, and Girls.
Claims use since on or about the 20th day of December, 1916.

Ser. No. 101,810. (CLASS 39. CLOTHING.) WOODBURY SHOE COMPANY, Beverly, Mass. Filed Feb. 28, 1917.



The word "Rescue."
Particular description of goods.—Canvas Boots and Shoes.
Claims use since Dec. 1, 1916.

Ser. No. 101,822. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAROLD G. PETERSON, Chicago, Ill. Filed Mar. 1, 1917.

DAISY

Particular description of goods.—Dressed Poultry.
Claims use since Aug. 1, 1912.

Ser. No. 101,858. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INTERSTATE COTTON OIL REFINING CO., Sherman, Tex. Filed Mar. 3, 1917.



Particular description of goods.—A Lard Substitute Composed of Cotton-Seed Oil and Oleo-Stearin.
Claims use since Aug. 15, 1913.

Ser. No. 101,859. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INTERSTATE COTTON OIL REFINING CO., Sherman, Tex. Filed Mar. 3, 1917.

LOG CABIN

Particular description of goods.—Shortening.
Claims use since Oct. 21, 1913.

Ser. No. 101,861. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INTERSTATE COTTON OIL REFINING CO., Sherman, Tex. Filed Mar. 3, 1917.

WHITE BEAUTY

Particular description of goods.—Shortening.
Claims use since June 5, 1916.

Ser. No. 101,862. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INTERSTATE COTTON OIL REFINING CO., Sherman, Tex. Filed Mar. 3, 1917.

JACK RABBIT

Particular description of goods.—A Lard Substitute Composed of Cotton-Seed Oil and Oleo-Stearin.
Claims use since Feb. 5, 1914.

Ser. No. 101,882. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUGE BRO'S. CANNING CO., Apalachicola, Fla. Filed Mar. 3, 1917.

BEAR-A-TARIA

Particular description of goods.—Canned Shrimp.
Claims use since Jan. 9, 1917.

Ser. No. 101,900. (CLASS 27. HOROLOGICAL INSTRUMENTS.) NELSON H. BROWN, Boston, Mass. Filed Mar. 6, 1917.

ICALLU

Particular description of goods.—Clocks.
Claims use since Aug. 13, 1914.

Ser. No. 101,939. (CLASS 15. OILS AND GREASES.) TRUE'S OIL COMPANY, Spokane, Wash. Filed Mar. 6, 1917.

FINANCE

Particular description of goods.—Lubricating-Oils.
Claims use since Jan. 1, 1917.

Ser. No. 101,940. (CLASS 15. OILS AND GREASES.) TRUE'S OIL COMPANY, Spokane, Wash. Filed Mar. 6, 1917.

PULOIL

Particular description of goods.—Lubricating-Oils.
Claims use since Jan. 1, 1917.

Ser. No. 101,943. (CLASS 15. OILS AND GREASES.) TRUE'S OIL COMPANY, Spokane, Wash. Filed Mar. 6, 1917.

CHARTER

Particular description of goods.—Lubricating-Oils.
Claims use since Jan. 1, 1917.

Ser. No. 101,963. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOOSE WILES COMPANY, Kansas City, Mo. Filed Mar. 7, 1917.

JERSEYMAID

Particular description of goods.—Chocolate Candy.
Claims use since Feb. 15, 1917.

Ser. No. 102,026. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Mar. 10, 1917.

EMPIRE

Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since January, 1901.

Ser. No. 102,029. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Mar. 10, 1917.

Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since January, 1917.

Ser. No. 102,053. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE STEINOLA COMPANY, Kansas City, Mo. Filed Mar. 10, 1917.

Steinola

Particular description of goods.—Phonographs or Talking-Machines.
Claims use since early in March, 1916.

Ser. No. 102,180. (CLASS 15. OILS AND GREASES.) CREW LEVICK COMPANY, Philadelphia, Pa. Filed Mar. 16, 1917.

Particular description of goods.—Illuminating, Lubricating, and Burning Oils and Greases.
Claims use since January, 1917.

Ser. No. 102,186. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MOSES HERZOG, New York, N. Y. Filed Mar. 16, 1917.

Favoritex

Particular description of goods.—Hair-Nets.
Claims use since about Mar. 12, 1917.

Ser. No. 102,190. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LESHER, WHITMAN & CO., INC., New York, N. Y. Filed Mar. 16, 1917.

Escuriel Tracings

Particular description of goods.—A Fabric with Cotton Warp and Filling of Wool or Mohair or Alpaca, Either Alone or Combined.
Claims use since Feb. 26, 1917.

TRADE-MARK REGISTRATIONS GRANTED

APRIL 10, 1917.

116,110. HUMIDIFIERS, ATOMIZERS, HUMIDITY-CONTROLLERS FOR USE IN VENTILATING BUILDINGS. AMERICAN MOISTENING COMPANY, Boston, Mass.
Filed April 21, 1916. Serial No. 94,602. PUBLISHED FEBRUARY 6, 1917.

116,111. BLOCKS AND SLABS FOR USE IN ROAD CONSTRUCTION. THE ANGLO-MEXICAN PETROLEUM PRODUCTS CO. LTD., London, England.
Filed August 23, 1916. Serial No. 97,571. PUBLISHED FEBRUARY 6, 1917.

116,112. ANTISEPTIC LOTION. THE BAPTISINE PHARMACAL CO., St. Louis, Mo.
Filed November 6, 1916. Serial No. 99,118. PUBLISHED FEBRUARY 6, 1917.

116,113. LADIES' DRESSES, CLOAKS, AND SUITS. CHARLES M. BERNSTEIN, New York, N. Y.
Filed December 13, 1916. Serial No. 99,885. PUBLISHED FEBRUARY 6, 1917.

116,114. SINGLE AND DUPLEX STEAM-PUMPS, JET AND BILGE PUMPS, AND AIR-COMPRESSORS. BLAKESLEE MANUFACTURING CO., Duquoin, Ill.
Filed November 10, 1916. Serial No. 99,204. PUBLISHED FEBRUARY 6, 1917.

116,115. MEDICINE FOR USE IN THE TREATMENT OF RHEUMATISM AND GOUT. CHARLES BRIZZOLARA, Richmond, Va.
Filed November 11, 1916. Serial No. 99,235. PUBLISHED FEBRUARY 6, 1917.

116,116. LIQUID PREPARATION FOR REMOVING DIRT AND GREASE, WHICH IS ALSO A POLISH. BURCH AND COLLINS, Washington, D. C.
Filed December 12, 1916. Serial No. 99,868. PUBLISHED JANUARY 30, 1917.

116,117. WEIGHING-SCALES. JOHN CHATILLON & SONS, New York, N. Y.
Filed December 19, 1916. Serial No. 100,039. PUBLISHED FEBRUARY 6, 1917.

116,118. CERTAIN NAMED METALS AND METAL CASTINGS AND FORGINGS. THE CINCINNATI IRON & STEEL COMPANY, Cincinnati, Ohio.
Filed November 25, 1916. Serial No. 99,536. PUBLISHED FEBRUARY 6, 1917.

116,119. PERIODICAL ISSUED THREE TIMES YEARLY. THE CLASS JOURNAL COMPANY, New York, N. Y.
Filed December 4, 1916. Serial No. 99,701. PUBLISHED FEBRUARY 6, 1917.

116,120. CERTAIN NAMED LADIES' CLOTHING. B. COHEN & CO. INC., New York, N. Y.
Filed December 18, 1915. Serial No. 91,589. PUBLISHED FEBRUARY 6, 1917.

116,121. NON-ALCOHOLIC CARBONATED BEVERAGES. COLUMBIA BREWING CO., Tacoma, Wash.
Filed November 6, 1915. Serial No. 90,453. PUBLISHED OCTOBER 3, 1916.

116,122. STOVES, RANGES, AND HOT-AIR FURNACES HEATED BY COAL, WOOD, AND GAS, AND PARTS THEREOF. CRIBBEN & SEXTON COMPANY, Chicago, Ill.
Filed October 28, 1916. Serial No. 98,939. PUBLISHED FEBRUARY 6, 1917.

116,123. MOUTH-WASH, ANTISEPTIC, AND ASTRINGENT. THE DENTAL AND TOILET PRODUCTS CORPORATION, New York, N. Y.
Filed November 29, 1916. Serial No. 99,621. PUBLISHED FEBRUARY 6, 1917.

116,124. MEN'S, BOYS', LADIES', MISSES', AND CHILDREN'S LEATHER SHOES. DEVINE & YUNGEL SHOE MFG. CO., Harrisburg, Pa.
Filed June 19, 1916. Serial No. 95,960. PUBLISHED FEBRUARY 6, 1917.

116,125. PHOTOGRAPHIC FILM. EASTMAN KODAK CO., Rochester, N. Y.
Filed December 14, 1916. Serial No. 99,927. PUBLISHED FEBRUARY 6, 1917.

116,126. PHOTOGRAPHIC FILM. EASTMAN KODAK CO., Rochester, N. Y.
Filed December 14, 1916. Serial No. 99,928. PUBLISHED FEBRUARY 6, 1917.

116,127. PHOTOGRAPHIC FILM. EASTMAN KODAK CO., Rochester, N. Y.
Filed December 14, 1916. Serial No. 99,929. PUBLISHED FEBRUARY 6, 1917.

116,128. PHOTOGRAPHIC FILM. EASTMAN KODAK CO., Rochester, N. Y.
Filed December 14, 1916. Serial No. 99,930. PUBLISHED FEBRUARY 6, 1917.

116,129. PHOTOGRAPHIC FILM. EASTMAN KODAK CO., Rochester, N. Y.
Filed December 14, 1916. Serial No. 99,931. PUBLISHED FEBRUARY 6, 1917.

116,130. CAMERAS. EASTMAN KODAK CO., Rochester, N. Y.
Filed December 15, 1916. Serial No. 99,954. PUBLISHED FEBRUARY 6, 1917.

116,131. CONTAINERS FOR TOILET ARTICLES. EISEMAN, KAISER & CO., Chicago, Ill.
Filed January 19, 1916. Serial No. 92,236. PUBLISHED FEBRUARY 6, 1917.

116,132. HAIR AND SCALP REMEDY. THE FLASH COMPANY, Greenville, S. C.
Filed November 24, 1916. Serial No. 99,519. PUBLISHED FEBRUARY 6, 1917.

116,133. REMEDY FOR INDIGESTION. LOUIS A. FOIX, Ysleta, Tex.
Filed November 11, 1916. Serial No. 99,242. PUBLISHED FEBRUARY 6, 1917.

116,134. CERTAIN NAMED VEHICLES, NOT INCLUDING ENGINES, AND PARTS THEREFOR. FORE RIVER SHIPBUILDING CORPORATION, Quincy, Mass.
Filed May 5, 1916. Serial No. 94,920. PUBLISHED FEBRUARY 6, 1917.

116,135. DOLLS. SAML. GABRIEL SONS & COMPANY, New York, N. Y.
Filed January 4, 1917. Serial No. 100,352. PUBLISHED FEBRUARY 6, 1917.

116,136. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS FOR TOILET PURPOSES. PHILO HAY SPECIALTIES CO., Newark, N. J.
Filed August 7, 1916. Serial No. 97,146. PUBLISHED JANUARY 23, 1917.

116,137. LIQUID FUEL FOR INTERNAL-COMBUSTION ENGINES. THE HYDRAGAS CORPORATION, New York, N. Y.
Filed December 14, 1916. Serial No. 99,038. PUBLISHED FEBRUARY 6, 1917.

116,138. PHOTOGRAPHIC DRY PLATES, PHOTOGRAPHIC FILMS, AND PREPARED PAPER FOR PHOTOGRAPHIC PURPOSES. ILFORD, LIMITED, Ilford, London, England.
Filed January 6, 1917. Serial No. 100,397. PUBLISHED FEBRUARY 6, 1917.

116,139. PHOTOGRAPHIC DRY PLATES, PHOTOGRAPHIC FILMS, AND PREPARED PAPER FOR PHOTOGRAPHIC PURPOSES. ILFORD, LIMITED, Ilford, London, England.
Filed January 6, 1917. Serial No. 100,398. PUBLISHED FEBRUARY 6, 1917.

116,140. CERTAIN NAMED STOPPERS AND CLOSURES MADE WHOLLY OR PARTLY OF CORK OR COMPOSITIONS RESEMBLING CORK. INTERNATIONAL CORK COMPANY, Brooklyn, N. Y.
Filed November 24, 1915. Serial No. 90,904. PUBLISHED FEBRUARY 6, 1917.

116,141. WATER-CLOSETS. J. D. JOHNSON CO., Brooklyn, N. Y., assignor to J. D. Johnson Co. Inc., a Corporation of Delaware.
Filed November 27, 1916. Serial No. 99,574. PUBLISHED FEBRUARY 6, 1917.

116,142. POWDER FOR CLEANING EYEGLASSES, GOGGLES, AND OTHER SIMILAR GLASS SURFACES. CHARLES H. KEHL & CO., Philadelphia, Pa.
Filed November 2, 1916. Serial No. 99,041. PUBLISHED JANUARY 2, 1917.

116,143. MOVING-PICTURE FILMS. KLEVER PICTURES, INC., New York, N. Y.
Filed December 18, 1916. Serial No. 100,012. PUBLISHED FEBRUARY 6, 1917.

116,144. APPAREL-CORSETS, CORSETS, CORSET-COVERS, AND CORSET-WAISTS. KOPS BROS., New York, N. Y.
Filed December 2, 1916. Serial No. 99,682. PUBLISHED FEBRUARY 6, 1917.

116,145. POLISHING-CLOTH FOR GOLD AND SILVER. FRANK A. LE COUNT, Springfield, Mass.
Filed October 6, 1916. Serial No. 98,470. PUBLISHED JANUARY 30, 1917.

116,146. COTTON PIECE GOODS. LONSDALE COMPANY, Providence, R. I.
Filed August 3, 1916. Serial No. 97,052. PUBLISHED FEBRUARY 6, 1917.

116,147. CAKES. LOOSE-WILES BISCUIT COMPANY, New York, N. Y., and Kansas City, Mo.
Filed October 26, 1916. Serial No. 98,901. PUBLISHED JANUARY 30, 1917.

116,148. RIBBONS. ULRIK R. T. LUND, North Catasauqua, Pa.
Filed December 16, 1916. Serial No. 99,986. PUBLISHED FEBRUARY 6, 1917.

116,149. SILK PIECE GOODS. H. R. MALLINSON & CO., New York, N. Y.
Filed December 1, 1916. Serial No. 99,665. PUBLISHED FEBRUARY 6, 1917.

116,150. RAZORS, KNIVES OF BASE METAL OTHER THAN SURGICAL KNIVES, AND SHEARS. MATTHEWS & LIVELY CO., Atlanta, Ga.
Filed July 21, 1916. Serial No. 96,717. PUBLISHED FEBRUARY 6, 1917.

116,151. DETERGENT PREPARATION FOR CLEANING, SCOURING, OR POLISHING. ENOCH MORGAN'S SONS COMPANY, New York, N. Y.
Filed August 16, 1913. Serial No. 72,379. PUBLISHED JANUARY 30, 1917.

116,152. SEMI-ANNUAL PUBLICATION. MOTION PICTURE NEWS, INC., New York, N. Y.
Filed November 2, 1916. Serial No. 99,042. PUBLISHED FEBRUARY 6, 1917.

116,153. CONFECTIONERY—VIZ., MANUFACTURED LICORICE. NATIONAL LICORICE CO., Brooklyn, N. Y.
Filed September 19, 1916. Serial No. 98,094. PUBLISHED JANUARY 30, 1917.

116,154. PREPARATION USED IN DRESSING AND GROWING HAIR. LULU O'DELL, St. Louis, Mo.
Filed November 6, 1916. Serial No. 99,141. PUBLISHED FEBRUARY 6, 1917.

116,155. CERTAIN NAMED CANNED FRUITS AND VEGETABLES. PRATT-LOW PRESERVING COMPANY, Santa Clara, Cal.
Filed November 18, 1916. Serial No. 99,383. PUBLISHED JANUARY 30, 1917.

116,156. HAIR-GROWER. MARY ELIZABETH PHILLIPS, Indianapolis, Ind.
Filed October 26, 1916. Serial No. 98,909. PUBLISHED FEBRUARY 6, 1917.

116,157. PHONOGRAPHS AND TALKING-MACHINES AND RECORDS FOR USE THEREWITH. PHILIP REINHERZ, New York, N. Y.
Filed August 12, 1916. Serial No. 97,311. PUBLISHED JANUARY 30, 1917.

116,158. CERTAIN NAMED ELECTRICAL SPECIALTIES AND CONDUIT-FITTINGS. CHAS. G. ROBIN, INC., New York, N. Y.
Filed September 30, 1916. Serial No. 98,343. PUBLISHED FEBRUARY 6, 1917.

116,159. MOTOR-LUBRICATING OILS AND GREASES. HARRY E. ROGERS, Bakersfield, Cal.
Filed November 27, 1916. Serial No. 99,587. PUBLISHED FEBRUARY 6, 1917.

116,160. NON-POISONOUS BALSAM FOR TREATING CERTAIN NAMED AFFECTIONS AND INFLAMMATIONS. GEORGE SCHMITT, Newark, N. J.
Filed September 26, 1916. Serial No. 98,248. PUBLISHED FEBRUARY 6, 1917.

116,161. CERTAIN NAMED CLOTHING FOR ADULTS AND BABIES. SCHUYLKILL SILK MILLS, Reading, Pa.
Filed October 9, 1916. Serial No. 98,530. PUBLISHED JANUARY 30, 1917.

116,162. SILK PIECE GOODS. R. & H. SIMON COMPANY, Union Hill, N. J., and New York, N. Y.
Filed October 1, 1915. Serial No. 89,589. PUBLISHED FEBRUARY 6, 1917.

116,163. GAMES AND APPARATUS FOR PLAYING THE SAME. JOHN T. SIMPSON, Newark, N. J.
Filed January 8, 1917. Serial No. 100,452. PUBLISHED FEBRUARY 6, 1917.

116,164. LEMON HOARHOUND ROCK AND RYE, SLOE-GIN, AND DRY GIN. STEIN BROTHERS, Chicago, Ill.
Filed December 26, 1916. Serial No. 100,181. PUBLISHED FEBRUARY 6, 1917.

116,165. AUTOMOBILE-POLISH. SUPERIOR MANUFACTURING CO., Knoxville, Tenn.
Filed September 12, 1916. Serial No. 97,960. PUBLISHED FEBRUARY 6, 1917.

116,166. HARDWOOD AND FINE TIMBER AND LUMBER. STEWART K. TAYLOR, Mobile, Ala.
Filed November 2, 1916. Serial No. 99,051. PUBLISHED FEBRUARY 6, 1917.

116,167. ILLUMINATING-OILS. TIDE WATER OIL CO., New York, N. Y.
Filed December 15, 1916. Serial No. 99,972. PUBLISHED FEBRUARY 6, 1917.

116,168. SOAP. FOREST TURNER, Kings Mountain, N. C.
Filed November 8, 1916. Serial No. 99,178. PUBLISHED JANUARY 30, 1917.

116,169. FERTILIZER CONSISTING OF COTTON-SEED MEAL. UNION SEED & FERTILIZER COMPANY, Guttenberg, N. J.
Filed May 31, 1916. Serial No. 95,567. PUBLISHED FEBRUARY 6, 1917.

116,170. OVERCOATS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed December 22, 1916. Serial No. 100,104. PUBLISHED FEBRUARY 6, 1917.

116,171. OVERCOATS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed December 22, 1916. Serial No. 100,106. PUBLISHED FEBRUARY 6, 1917.

116,172. OVERCOATS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed December 22, 1916. Serial No. 100,107. PUBLISHED FEBRUARY 6, 1917.

116,173. OVERCOATS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed December 22, 1916. Serial No. 100,111. PUBLISHED FEBRUARY 6, 1917.

116,174. OVERCOATS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed December 22, 1916. Serial No. 100,112. PUBLISHED FEBRUARY 6, 1917.

116,175. OVERCOATS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed December 22, 1916. Serial No. 100,113. PUBLISHED FEBRUARY 6, 1917.

116,176. OVERCOATS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed December 22, 1916. Serial No. 100,118. PUBLISHED FEBRUARY 6, 1917.

116,177. OVERCOATS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed December 22, 1916. Serial No. 100,119. PUBLISHED FEBRUARY 6, 1917.

116,178. OVERCOATS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed December 22, 1916. Serial No. 100,121. PUBLISHED FEBRUARY 6, 1917.

116,179. OVERCOATS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed December 22, 1916. Serial No. 100,122. PUBLISHED FEBRUARY 6, 1917.

116,180. OVERCOATS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed December 22, 1916. Serial No. 100,127. PUBLISHED FEBRUARY 6, 1917.

116,181. OVERCOATS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed December 22, 1916. Serial No. 100,131. PUBLISHED FEBRUARY 6, 1917.

116,182. OVERCOATS. UNITED STATES RUBBER COMPANY, New York, N. Y.
Filed December 22, 1916. Serial No. 100,134. PUBLISHED FEBRUARY 6, 1917.

116,183. UNDERWAISTS FOR BOYS AND GIRLS. JOHN WANAMAKER, NEW YORK, New York, N. Y.
Filed December 21, 1915. Serial No. 91,674. PUBLISHED FEBRUARY 6, 1917.

116,184. CANNED SAUER-KRAUT. THE J. WELLER CO., Oak Harbor, Ohio.
Filed November 18, 1915. Serial No. 90,752. PUBLISHED MAY 9, 1916.

116,185. LEADER USED IN ANGLING. JOSEPH WELSH, Pasadena, Cal.
Filed December 22, 1916. Serial No. 100,136. PUBLISHED FEBRUARY 6, 1917.

116,186. BOTTLE-WASHING MACHINES. THE S. S. WENZELL MACHINE COMPANY, Philadelphia, Pa.
Filed December 21, 1916. Serial No. 100,084. PUBLISHED FEBRUARY 6, 1917.

116,187. BOOK-PAPERS. WEST VIRGINIA PULP & PAPER COMPANY, New York, N. Y.
Filed February 25, 1914. Serial No. 76,156. PUBLISHED JANUARY 23, 1917.

116,188. LIVE POULTRY, PARTICULARLY A STRAIN OF RHODE ISLAND REDS. CLYDE C. WHITELEY, Wichita, Kans.
Filed January 14, 1915. Serial No. 83,865. PUBLISHED JANUARY 30, 1917.

116,189. OVERSHIRTS, OVERALLS, UNDERWEAR, AND WORKINGMEN'S GARMENTS. WISE BROTHERS, INC., Baltimore, Md., and New York, N. Y.
Filed December 2, 1915. Serial No. 91,113. PUBLISHED FEBRUARY 6, 1917.

116,190. SELF-RISING WHEAT-FLOUR. BOWLES BROS. CO., Los Angeles, Cal.
Filed September 29, 1916. Serial No. 98,309. PUBLISHED JANUARY 30, 1917.

116,191. CERTAIN NAMED EXTRACTS USED FOR FLAVORING FOOD. JOSEPH BURNETT CO., Boston, Mass.
Filed November 6, 1915. Serial No. 90,445. PUBLISHED JULY 25, 1916.

116,192. SELF-RISING FLOUR. CENTRAL GRO. CO., Tifton, Ga.
Filed November 18, 1916. Serial No. 99,371. PUBLISHED FEBRUARY 6, 1917.

116,193. COFFEE AND CHICORY. CHARLES GUSTAVE DUREL, New Orleans, La.
Filed November 9, 1915. Serial No. 90,539. PUBLISHED JANUARY 30, 1917.

116,194. COFFEE. GREENHUT COMPANY, INC., New York, N. Y.
Filed October 25, 1915. Serial No. 90,082. PUBLISHED JANUARY 30, 1917.

116,195. WHEAT-FLOUR. GULFPORT GROCERY COMPANY, Gulfport, Miss.
Filed November 13, 1916. Serial No. 99,272. PUBLISHED JANUARY 30, 1917.

116,196. PASTRY, CAKES, CONFECTIONS, ICES, AND ICE-CREAM. JOHN H. HALLORAN, New York, N. Y.
Filed November 7, 1916. Serial No. 99,149. PUBLISHED JANUARY 30, 1917.

LABELS

REGISTERED APRIL 10, 1917.

19,998.—*Title:* "AUTOTON TABLETS." (For Medicinal Preparation.) M. F. DEEHAN, Boston, Mass. Filed March 4, 1916.

19,999.—*Title:* "COLONIAL GIRL." (For Coffee.) DWINELL-WRIGHT COMPANY, Boston, Mass. Filed March 16, 1917.

20,000.—*Title:* "GRANDMA." (For Coffee.) DWINELL-WRIGHT COMPANY, Boston, Mass. Filed March 16, 1917.

20,001.—*Title:* "CREME DE MON REVE." (For a Cream for Purifying the Skin.) JOHN H. GLEASON, New York, N. Y. Filed March 8, 1917.

20,002.—*Title:* "CREME LA REINE." (For a Cream for Softening and Whitening the Skin.) JOHN H. GLEASON, New York, N. Y. Filed March 8, 1917.

20,003.—*Title:* "CREME MAUVEINE." (For Cold-Cream.) JOHN H. GLEASON, New York, N. Y. Filed March 8, 1917.

20,004.—*Title:* "CREME FLEUR DE NEIGES." (For a Cream for Purifying the Skin.) JOHN H. GLEASON, New York, N. Y. Filed March 8, 1917.

20,005.—*Title:* "MAUVEINE GLEASON." (For a Tonic for the Skin.) JOHN H. GLEASON, New York, N. Y. Filed March 8, 1917.

20,006.—*Title:* "COMBINATION STOGIES." (For Stogies.) DAVID GOLDEN, Chicago, Ill. Filed November 1, 1916.

20,007.—*Title:* "TAKE A NIP OF NIPPO." (For Mineral Water.) MACDONELL-CHOW CORP., New York, N. Y. Filed January 26, 1917.

20,008.—*Title:* "MIR-A-CO NATURE'S GIFT." (For Artificial Mineral Water.) THE MIR-A-CO COMPANY, Houston, Tex. Filed February 10, 1917.

20,009.—*Title:* "PYORRHEA REMEDY." (For Preparations for the Treatment of Pyorrhea.) J. J. NESOM, Los Angeles, Cal. Filed March 6, 1917.

20,010.—*Title:* "AUTO HEAD LIGHT AMPLIFIER." (For Auto Headlight-Amplifier.) NIGHT-GLOW NOVELTY COMPANY, Rockville, Conn. Filed December 27, 1916.

20,011.—*Title:* "LIPTONS TEA." (For Tea.) THOS. J. LIPTON, New York, N. Y., and Chicago, Ill. Filed August 14, 1916.

20,012.—*Title:* "PREST-O-NU." (For Automobile Polish.) B-NU MANUFACTURING COMPANY, Memphis, Tenn. Filed October 30, 1916.

20,013.—*Title:* "PRICE'S PURE PORK SAUSAGE & LARD." (For Pork, Sausage, and Lard.) STERLING S. PRICE, Fayette county, near Lexington, Ky. Filed May 10, 1916.

20,014.—*Title:* "SCHAFER'S THE BREAD THAT NOURISHES." (For Bread.) SCHAFER BAKERY, INC. Filed March 10, 1917.

20,015.—*Title:* "SMOKED SALMON PASTE." (For Canned Salmon Paste.) S. SCHMIDT & Co., New York, N. Y. Filed March 12, 1917.

20,016.—*Title:* "DE LUXE." (For Canned Caviar.) S. SCHMIDT & Co., New York, N. Y. Filed March 12, 1917.

20,017.—*Title:* "ONILLA POLISH." (For a Cleaning and Polishing Compound.) O. F. SMITH, Toledo, Ohio. Filed November 29, 1915.

20,018.—*Title:* "BEST VALUE." (For Cigars.) THE WEIDEMAN CO., Cleveland, Ohio. Filed February 12, 1917.

20,019.—*Title:* "WOOSLEY'S LINIMENT." (For Liniment.) WOOSLEY MEDICINE COMPANY, Commerce, Tex. Filed November 24, 1915.

20,020.—*Title:* "'EXTRA' DURO COLOURS." (For Colors.) WILLIAM PHILIP STEPHENS, Fort Worth, Tex. Filed February 23, 1916.

PRINTS

REGISTERED APRIL 10, 1917.

4,658.—*Title:* "CHAM-PAY." (For a Soft Drink.) CHAM-PAY PRODUCTS CO., Evansville, Ind. Filed February 10, 1917.

4,659.—*Title:* "MARBLEOID ASPHALT ROOFING." (For Roofing-Papers.) S. D. DUNLAP, Batavia, N. Y. Filed November 17, 1916.

4,660.—*Title:* "UNXLD BUTTER." (For Butter.) EMIL FLEISCHL & SON, New York, N. Y. Filed March 13, 1917.

4,661.—*Title:* "ASK THE AMERICAN BOY WHY HE PREFERS KELLOGG'S—THESE ARE THE FLAKES THAT ARE DELICATELY TOASTED AND THIN—THE ORIGINAL TOASTED CORN FLAKES, TENDER AND CRISP, WITH THAT APPETIZING 'COME TO BREAKFAST' FLAVOR YOU CAN'T MISTAKE OR FORGET." (For a Food, Specifically Toasted Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed March 8, 1917.

4,662.—*Title:* "LOOK FOR THE BAND." (For Cigars.) SEITER & KAPPES LITHOGRAPHING COMPANY, New York, N. Y. Filed February 3, 1917.

4,663.—*Title:* "FOR THE HOME-MAKER." (For Cereal Food, and Particularly for Shredded Wheat.) THE SHREDDED WHEAT COMPANY, Niagara Falls, N. Y. Filed February 10, 1917.

4,664.—*Title:* "FOR STURDY BOYS AND GIRLS." (For Cereal Food, and Particularly for Shredded Wheat.) THE SHREDDED WHEAT COMPANY, Niagara Falls, N. Y. Filed February 10, 1917.

4,665.—*Title:* "FOR THE WORKERS OF THE WORLD." (For Cereal Food, and Particularly for Shredded Wheat.) THE SHREDDED WHEAT COMPANY, Niagara Falls, N. Y. Filed February 10, 1917.

4,666.—*Title:* "FOR THE DESK-MAN." (For Cereal Food, and Particularly for Shredded Wheat.) THE SHREDDED WHEAT COMPANY, Niagara Falls, N. Y. Filed February 10, 1917.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Third Circuit.

AMERICAN CASTING MACH. CO. *v.* PITTSBURGH COAL WASHER CO.

Decided November 13, 1916; 237 Fed. Rep., 590.

1. PATENTS—VALIDITY—APPARATUS FOR CASTING METAL. The Scott patent, No. 788,334, for an apparatus for casting metal, *Held* void on the ground that the patentee had caused the invention to be patented in a foreign country more than seven months prior to his application for the United States patent.
2. SAME—RIGHT TO PATENT—PRIOR PATENTING IN FOREIGN COUNTRY—"CAUSED TO BE PATENTED." While an application for a patent in the name of three persons as joint inventors was pending one of such persons, representing also the other two, caused the invention to be patented in Great Britain. Afterward the joint application in this country was abandoned, and more than seven months after the British application was filed one of the joint applicants filed an application for a patent for the same invention in his name as sole inventor. *Held* that the foreign patent was caused to be issued by such sole applicant within the meaning of Revised Statutes, section 4887, as amended by act of March 3, 1897, (c. 391, sec. 3; 29 Stat., 692 Comp. St., 1913, sec. 9431, note,) which was then in force and was a bar to the granting of a United States patent on such application.
3. SAME—INVENTION—LINKS FOR CONVEYERS. The McKennan and Helander patent, No. 806,700, for links for conveyers, *Held* void for lack of invention.

APPEAL from the District Court of the United States for the Western District of Pennsylvania; Charles P. Orr, Judge.

STATEMENT OF THE CASE.

The following is the opinion of Orr, District Judge:

This patent suit originally involved three patents. Plaintiffs, prior to the trial, gave notice to the defendant that they would withdraw from consideration United States Patent No. 620,480, issued July 25, 1899, to E. A. Uehling and James W. Miller, for "casting and conveying apparatus." No objection was made by the defendant to the withdrawal of such a patent. While no amendment of the bill was made, the bill must be deemed to have been amended in accordance with the notice. It is also deemed to have been amended by striking out the name of the plaintiff Fannie S. Miller as administratrix. These amendments upon the eve of trial have scarcely tended to clarify the issues between the parties, because the pleadings are weighted by irrelevant averments. Moreover, the affidavits of the experts now contain many immaterial matters.

The suit as it now stands involves United States Patent No. 788,334, issued April 25, 1905, to James Scott, for "apparatus for casting metal," and United States Patent No. 806,700, issued December 5, 1905, to J. B. McKennan and A. H. Helander, for "links for conveyers." Both of said patents are owned by the plaintiffs.

The answer denies conjoint or other use by the defendant, denies notice by the plaintiffs to the public, and denies that the patentees either solely or jointly were the original inventors of the apparatus shown in the respective patents. It admits notice to the defendant by the plaintiffs of the latter's claim of title. It sets forth in detail as prior disclosures forty-three United States patents, seven British patents, and one German patent. By stipulation dated a month or more before the trial, but filed thereafter, it was agreed that the answer might be amended by the addition of five more prior patents and by adding averments that the Scott patent, No. 788,334, is void because the application therefor was not filed within seven months of the filing of the application for British Patent No. 3,880 of 1898, dated February 16, 1898, granted to James W. Miller, partly as communication through Edward A. Uehling and James Scott; that said Scott patent in suit, if valid when issued, expired with the limitation of said British patent, to wit, February 16, 1912; and that the acts charged in the bill occurred after said date, and after the alleged invention of the said patent in suit had become public property. By the stipulation it was further agreed that the application for British Patent No. 3,880 of 1898 was filed February 16, 1898, and was accepted May 20, 1898, and that the patent, in pursuance thereof, was sealed on August 2, 1898. It was further stipulated that said E. A. Uehling, James W. Miller, and James Scott, named in the several United States and British patents involved in this case, are the persons named in the patents here in suit, and further that the subject-matter of claims 2 and 5 of the Scott patent in suit is disclosed in the application for United States Letters Patent of said Uehling, Miller, and Scott filed December 7, 1897, Serial No. 626,022, which application never matured into a patent. The answer was never amended, but is deemed to have been, because the trial proceeded as if such amendment had been made.

The departures by the solicitors of both parties from the rule that the *allegata* and *probata* should agree in material matters has created a condition which may confuse a court in which the case was not originally brought. For that reason especially this court calls attention to them, and as well also that the members of the bar may be reminded of the rule mentioned. The stipulation contains a provision that proof of the facts referred to therein is waived. The stipulation was offered at the trial, but the facts were not, except inferentially, through the medium of the writing in which they are contained. The stipulation, and not the official notes of the stenographer, must be examined to find them.

Now, giving attention to the two patents in suit, it is to be first observed that they are by no means pioneer patents. They relate to improvements in apparatus for casting and conveying metals. But the apparatus described therein (for the improvements are capable of conjoint use) is chiefly used in the casting and handling of pig-iron.

It is sufficient to refer to an expired United States patent of the above-named E. A. Uehling, No. 548,146, under date of October 15, 1895, where the disadvantages of casting pigs in the open sand molds upon the floor in front of the blast-furnace is pointed out, and where the advantages of pouring the molten metal into molds of a uniform size, which are presented by mechanical operation, immediately under the metal as it flows from the furnace or ladle, and which carry the pigs formed therein to a proper dumping end, where they are automatically delivered into a suitable conveyance, are set forth. That patent of Uehling seems to be so broad in its scope that the subsequent patents referred to in this record, and relating to the same subject-matter, must be limited to the actual construction shown therein, if any invention be found.

The application for the Scott patent, No. 788,334, was filed August 31, 1899. More than seven months prior to that time, the application for the British patent, No. 3,880 of 1898, was filed. As appears from a copy of said English patent, James Willard Miller, as the applicant, states that the specifications are "partly as communication from Edward A. Uehling * * * and James Scott of Pittsburgh, * * * U. S. A." By section 3 of the act of Congress of 1897 (29 Stats. at L., p. 692, c. 391) section 4887 of the Revised Statutes was amended so as to read as follows:

"SEC. 4887. No person otherwise entitled thereto shall be debarred from receiving a patent from his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented by the inventor or his legal representatives or assigns in a foreign country, unless the application for said foreign patent was filed more than seven months prior to the filing of the application in this country, in which case no patent shall be granted in this country."

By section 8 of the said act it is provided that such section of the Revised Statutes as amended should not apply to any patent granted prior to January 1, 1898, nor to any application filed prior to said date, nor to any patent granted on such application. If, therefore, James Scott had made an invention in accordance with the application for the patent in suit, and had the same first patented or caused to be patented by himself or his legal representatives or assigns more than seven months prior to the date of such application, he had no right to receive the patent in suit for such invention. It is necessary, therefore, to determine whether James Scott authorized the application for the British patent. If he did, then the patent procured upon the application of Mr. Miller can fairly be considered to have been Mr. Scott's act within the meaning of the said act of Congress.

The subject-matter of the Scott patent in suit was disclosed in the English patent. Without giving much weight to the fact that Mr. Scott is named in the English patent, we must conclude from the evidence that Mr. Scott authorized and approved the application therefor. There is in evidence a certified copy of an application made by said Uehling, Miller, and Scott to the United States for a patent for "apparatus for casting metal." That application was filed December 7, 1897, and is No. 661,022. The seventeen drawings which accompanied that application appear to be, in all respects, like the seventeen drawings which became part of said British patent. On the 10th of November, 1897, said Scott, as well as each of the others, made an affidavit in support of that application that the three named were joint inventors. That the application for the United States patent never ripened into a patent and seems to have been abandoned is perhaps immaterial here.

Mr. Scott, who at that time was in the employ of the Carnegie Steel Company, testified in this case upon cross-examination as follows:

"Q. I understand from you that Mr. Uehling established an office in Pittsburgh, and had a draftsman, and made drawings in connection with these castings machines. Is that correct?

"A. Yes.

"Q. Who was the draftsman?

"A. If you will kindly ask Mr. White, he will give you the draftsman's name—Prochasky, I think.

"Q. Mr. Miller worked with Mr. Uehling?

"A. Oh, yes, yes. He was supposed to be the salesman. He was the fellow that went to Europe and tried to introduce it in Europe."

Again:

"Q. Will you please state what the circumstances were which led you to make that joint application with these three men?

"A. On account of the company saying they were to have access to all the improvements we were making on the machine, naturally; but I can't remember of going directly and swearing and giving them that, I can't remember.

"Q. Then you can't remember as to whether or not you did make the application for patents with them?

"A. I don't remember that.

"Q. Do you remember who was the attorney that drew up that application?

"A. I do not know, sir; I do not know.

"Q. Do you know why the application for patent was never granted?

"A. I really don't know anything about it. It never gave me any concern. My concern was to make the thing good, and to get it up the best that could be. The patent was a secondary consideration."

Again:

"Q. Well, now, did you ever talk with Mr. Uehling and Mr. Miller about Mr. Miller going to Europe to introduce the invention?

"A. I suppose that just came up. We would have to do something about it, naturally. I suppose they may have had a talk with me about going to Europe. I knew Miller did go to Europe to introduce the patents, but I don't remember that he was going to take out any patents. I am not sure about that. I don't know whether he did or not. I never spoke to Miller but once afterward, after he came back from Europe.

"Q. I am speaking about before he went to Europe. You and Miller and Uehling had talked together about his going to Europe, and about the introducing of the invention over there in Europe, had you?

"A. I may have. I wouldn't deny that, but I can't remember. We were friendly enough while the thing was being put through, and no doubt exchanged ideas."

It is a proper inference from all that testimony that Mr. Scott knew and approved of the introduction of the subject-matter of the patent in countries outside of the United States, of course, including England. It must be inferred that he authorized the protection of such rights as he might have in the invention in the best way, and it must be inferred that he knew that the best way to protect his rights in England was to procure a patent for the invention. The failure to procure Uehling and Miller as witnesses and to account for their absence is confirmatory of the conclusion reached.

It is impossible to conceive that the acts of Congress relating to patents would permit a joint inventor, who was a party to the procurement of a foreign patent, to obtain a patent for the same invention upon his sole application filed more than seven months after the application for the foreign patent. It is clear by the words of the statute that those who had applied for a patent in England, for a joint invention, could not, under the act, have procured a patent from the United States by an application for the same joint invention, filed more than seven months afterward.

It is expressly disclaimed by the solictors for the plaintiffs that the Scott patent in suit was a division of the United States application filed by Scott and his associates. This seems to be eminently proper, because it is hard to conceive it a division of the joint invention. Scott's early affidavit that it was a joint invention should have more weight than his testimony after the lapse of years to the effect that he was the sole inventor. The conclusion therefore reached is that the Scott patent in suit was granted to him contrary to law and is therefore invalid.

A consideration of the claims of the Scott patent leads to the conclusion that they are met in the prior art, except perhaps with respect to two elements in claim 2 and one element in claim 5, which claims are the only claims of that patent in litigation. These claims are as follows:

Claim 2: "In casting apparatus, the combination with one or more sets of molds, of mechanism for moving them, and a casting pot arranged to receive molten metal, said pot having a well and one or more integral lateral troughs, substantially as described."

Claim 5: "In casting apparatus, a mold having at its sides upwardly projecting splashers, substantially as described."

Taking up claim 2 first, we find in United States patent to Uehling, No. 548,146, and in United States patent to Uehling and Miller, No. 629,480, each for casting and conveying apparatus, a combination of the elements in claim 2 of the Scott patent in suit, except the well with which the intermediate casting-pot is provided and the troughs integral leading from it. We find in the prior patents the troughs leading from the casting-pot. We are not satisfied, however, that there is anything of invention in making parts integral with each other which before were separate. We find in those prior patents an intermediate casting-pot, and if there should be a depression in the bottom of such casting-pot there would be the well called for in the patent in suit. The intermediate casting-pot of the Scott patent in suit is not a deep pot, because it is not intended to retain much of the molten fluid, but enough thereof to permit an even flow through the troughs to the molds. The pot and the troughs leading therefrom are lined with fire-brick, but the fire-brick in the bottom of the casting-pot is so placed as to form a depression, which is called the well. This well is nothing more or less than an arrangement to protect the workmen from the splashing which would result from pouring the metal upon a flat surface. Mr. Scott, in his testimony, said that the pouring of molten metal was just like the pouring of water, and that if you let water run on the bottom of a bucket it will splatter all over it, but if there be water in the bucket it does not splatter so much. This well is but a depression of a few inches, and of course some of the molten metal remains therein and has to be removed therefrom by workmen. Mr. Scott stated that he has known men, in carelessness, rather than take the metal out of the well which had accumulated by the use of the apparatus to "put sand at each side of it, which the sand gave them the same thing—or a brick—because it would fall over either side, gave them the pool of iron." It is clear, therefore, that there could be no invention in having the well for the purpose for which it was intended, especially when the apparatus can be used without cleaning it out, and when the men prevent the splashing by raising an additional protection. This is not an instance of where difficulty had presented itself to the inventor and was not overcome until after experiment, but is rather the adoption of a practice apparent to any one desiring the result. There is nothing of invention in claim 2 of the Scott patent in suit. The same may be said of claim 5. The molds have at their sides what are called upward-projecting splashers. The upward-projecting splashers are merely extensions of the sides in order to retain the proper amount of molten metal in the molds and prevent it splashing out upon the machinery.

In the patent to Uehling, No. 548,146, and in the patent to Uehling and Miller, No. 629,480, the molds which are carried by the conveyer from the points where they are filled to the dumping end, and returned empty to be filled again, have an overlapping which prevents the molten metal from falling between the molds upon the links of the carriers. In the earlier patent the metal was poured transversely of the molds, and there was therefore no uneven flow of the metal toward the sides of the mold. In the later patent it was contemplated that the molten metal should be poured longitudinally of the molds. This necessarily made an uneven flow of metal as between the two sides of the mold. The side of the mold opposite the point of flow would resist a greater current than the opposite side, and yet the repulsion of that current toward the opposite side would tend to drive the liquid against it with a greater force than would be found if the arrangement of the Uehling patent had been followed. It is such a self-evident proposition that to prevent an overflow by a current of liquid you must raise the height of the obstruction against which it flows that no invention can be found therein. This is specially true where the difficulty overcome has not been of long duration, and therefore has not been the subject of consideration by many men. From Mr. Scott's own testimony it seems that the matter of procuring a patent was a secondary consideration, to say the least. It is therefore reasonable to assume that he did not believe that he had invented anything valuable, else he would have been anxious to have the protection which the law affords. The conclusion is therefore reached that, apart from the effect of the statute hereinbefore referred to, claims 2 and 5 of the Scott patent in suit are void for lack of invention.

Taking up the other patent, we find in the patent to

McKennan and Helander, No. 806,700, that the claims in issue read as follows:

"8. In a pig-casting machine, the combination of a series of molds, chains supporting said molds, each chain including a series of links having side members and a member rigidly connecting said side members, pins connecting successive links, and guide wheels on said pins between the side members of said links, each of the molds having its ends supported by the connecting members of a pair of links, substantially as described.

"9. In a pig-casting machine, the combination of a series of molds, chains for supporting said molds, each chain including a series of links, having side members, and a member rigidly connecting said side members, pins, connecting successive links, and guide wheels on said pins between the side members of said links, each of the molds having its ends supported by the connecting members of a pair of links, the connection between each mold and the links being arranged so that the weight of said mold is distributed equally between the two side members of the link, substantially as described.

"10. The combination in a pig-casting machine of a series of molds and chains for conveying the same, said chains including links each having two side members and a member rigidly connecting said side members, with a plate for each end of each mold, said plate being connected to the mold and to the connecting member of the link so that the weight of the mold is distributed equally between the side members of the link, substantially as described.

"11. The combination in a pig-casting machine of chains each having a series of links, pins connecting the links, and a series of pig molds having means for connecting them to the links so that their weight is distributed equally upon the two ends of each pin, substantially as described.

"12. The combination in a pig-casting machine of a series of molds each having projecting lugs at its ends, chains for the molds each including a series of links having two side plates and a substantially horizontal plate connecting the same, a wheel between the side plates of the adjacent ends of successive links, and pins connecting successive links and extending through their respective wheels, with a connecting piece fixed to the horizontal portion of each link and attached to the projecting lug at the end of the mold, substantially as described."

From the foregoing claims it would appear that the patent was perhaps limited in scope to the art of casting and conveying pigs. The patent, however, is not so limited, as appears from the specifications and the other claims which are not in suit. It relates to the art of conveying materials, regardless of their character. While relating to conveyers generally, it specially relates to the form of links in the chains to which the buckets or molds or other receptacles for the material to be conveyed are attached. In order that the material may be carried, the chain must be connected with wheels or rollers so placed that the axis of each wheel or roller is located at the point of connection between the successive links of the chain. If the periphery of the wheels or rollers be enlarged sufficiently, the receptacles for the material to be carried may be returned by a comparatively endless process, notwithstanding the nature of the receptacles, for there will be sufficient clearance for them upon the return-track if the diameter of the wheels or rollers be made sufficiently great. Such receptacles are necessarily attached to the links between the wheels or rollers.

That the foregoing is illustrative of the functions and operations of links for conveyers for years prior to the application of the McKennan and Helander patent is apparent from the evidence in this case. It is urged, however, by the plaintiffs, that the patent now under consideration is the first appearance in the art of rigid connection with the side members of the links, and indeed of means for equally distributing the weight upon the pins upon which the guide-wheels turn. The evidence in this case has failed to satisfy us that such contention on the part of the plaintiffs should be sustained. The patent, if valid at all, cannot be so broad as contended. Numerous examples of the prior art show such rigidity of connection and such equal distribution of load. It is unnecessary to refer to any but the Taplin patent, No. 413,635, of October 22, 1889. It is true the Taplin patent does not show the enlarged wheels by which clearance is given to the molds while they are being moved. It certainly is not invention to make the wheels as large as may be necessary to give clearance to that which the wheels may carry.

It is urged that invention should be found because there is shown to be economy in the operations of the apparatus of the patents in suit. Economy of operation is the effort of every successful manufacturer, and is the aim which induces the great majority of variations in mechanical operations and shop practices. The tendency to secure to one man a monopoly of an improvement which may reduce the wear and tear upon machinery should not be encouraged, where such improvement is one which any one skilled in the same art would have adopted to reach the same end.

The claims in suit of the McKennan and Helander patent are met in the prior art, and are void for want of invention.

The bill should be dismissed at plaintiffs' cost. Let a decree be drawn.

Mr. Clarence P. Byrnes and *Mr. G. H. Parmelee* for the appellant.

Mr. James J. Kay, Mr. A. Leo Weil, and *Mr. Charles M. Clarke* for the appellee.

Before BUFFINGTON, MCPHERSON, and WOOLLEY, Circuit Judges.

BUFFINGTON, *Cir. J.:*

In the court below the American Casting Machine Company, the owner of Patent No. 788,334, granted April 25, 1903, to James Scott for "apparatus for casting metal," and of Patent No. 806,700, granted December 5, 1905, to J. B. McKennan and A. H. Helander for "links for conveyers," filed a bill against the Pittsburgh Coal Washer Company, charging infringement of certain claims of said patents. On final hearing that court dismissed the bill, holding both patents lacked invention, and that the Scott patent was also invalid because, more than seven months before Scott applied for it, he had caused the same device to be patented in England. On entry of a decree dismissing the bill, the complainant appealed to this court.

(1) In the view we take of the Scott patent, it will not be necessary for us to decide whether the court below was right in holding it did not involve invention, for, apart from that question, we are of opinion that court rightly held the English patent avoided the Scott patent.

(2) By section 3 of the act of Congress of 1897 (29 Stats. at L., p. 692) and by the act of March 3, 1903, (32 Stats. at L., p. 1227,) section 4887 of the Revised Statutes was amended to read as follows:

No person otherwise entitled thereto shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented by the inventor or his legal representatives or assigns in a foreign country, unless the application for said foreign patent was filed more than seven months prior to the filing of the application in this country, in which case no patent shall be granted in this country.

Now, the patent here in suit, No. 788,334, for an apparatus for casting metal, was applied for by James Scott August 31, 1899, and granted April 25, 1905. More than seven months prior to Scott's application, to wit, on February 16, 1898, application was made for English Patent No. 3,880, which patent was granted to James Willard Miller, who in his specification described himself as a manufacturer's agent, and therein stated that the said improvement was—

partly a communication from Edward A. Uehling, a metallurgical chemist and engineer, of Newark, Essex, New Jersey, U. S. A., and James Scott, of Pittsburgh, Allegheny county, Pennsylvania, United States of America.

Without entering into details, it suffices to say that the subject-matter of the Scott American patent is embodied in the Miller English patent, and, as the American patent was not applied for until more than seven months thereafter, the statute above recited forbade the grant of such patent, if Scott's invention or discovery had been—

patented or caused to be patented by the inventor or his legal representatives or assigns—

in England. After hearing the proofs the court below held that Scott had caused his invention to be patented in England more than seven months before he had applied for his American patent, and that under the statute quoted above the latter patent was void. In view of all the proofs, the relations of the parties concerned, and the inferences fairly deducible therefrom, we are of opinion the court below committed no error in decreeing Scott's patent void on that ground.

From the proofs it appears that this case concerns the change in pig-metal casting from the old sand-bed method in universal use to the modern casting in conveyer metal molds. The old process and the underlying features of the new method are contrasted in Patent No. 548,146, applied for

November 28, 1892, and granted October 15, 1895, to Edward A. Uehling, of Birmingham, Ala., for an appuratus for and method of casting and conveying metals. In such patent it is said:

In the casting and handling of pig iron as now generally practised the iron is run into open sand molds called "pigs." In this operation the iron runs direct from the furnace into a long sand runner, from which side runners are led off, called "sows," which feed the "pigs." The sows are cut off from the main runner as the "pig beds" fill up, but the pigs must be detached from the sows and the latter broken into proper lengths for handling after the iron has set. This breaking off is done either while the iron is still red hot in the beds, making it an exceedingly hard task, or the iron is left to cool, in which case heavy bars and sledge hammers are required to break the pigs off the sows and then break the latter into proper lengths. After this breaking, water is sprayed over the iron, and when it has sufficiently cooled is gathered, loaded on trams, and taken to the yard, where it is piled. The scrap is then gathered from the beds, and the sand is wet down and molded up for another cast. These operations must be repeated from four to six times a day to take care of the product of a modern blast furnace, and they depend almost entirely upon the brute force and physical endurance of the operators. The product is rough and irregular, and the operation is very wasteful, producing large quantities of scrap, which must be remelted, and carries much sand with the iron, which reduces the value of the iron. Moreover, this method of running the iron from the furnace into the sand is under very poor control. It sometimes runs so slowly that the iron chills in the long runner before it reaches the lower pig beds. At other times the running of the iron is with such a rush that the cores, which form the partitions between the pig molds, are washed away and the beds sheeted. In either case the iron must be taken up from the sand beds and remelted to make it marketable, besides the expense of having to break it up and remove it from the beds. The method above stated has also the disadvantage that the iron, as it runs from the furnace, is frequently of varying quality, and it is of common occurrence that several grades of iron are run from the furnace at the same cast. In this it not infrequently happens that a portion of the pig is deficient in those elements which are necessary to constitute good cast iron—as, for example, silicon and graphite carbon—while another portion has an excess of these elements. In either the iron has less value than it would have if the elements were properly mixed. In addition to all this, much difficulty is often experienced in keeping the slag from running with and contaminating the iron, as well as preventing some of the iron from being wasted with the slag. To avoid the disadvantages and difficulties above stated, and to reduce the cost of the production and improve the quality of the product, is the object of my invention, and which embraces a novel construction of plant, in which the metal is run from the furnace into a large reservoir, so mounted that it can be brought in communication with a series of movable molds, and its contents can be poured into the latter in a continuous and perfectly controlled stream, forming pigs of uniform size, which solidify on their way to the dumping end, where they are automatically delivered into a car or other suitable conveyance.

From the testimony of Scott, who was superintendent of the Isabella furnaces of the Carnegie Steel Company, it appears that he began in 1895 experimenting on the same general lines, but without knowledge of Uehling's work. Before, however, he had evolved any method or practical device, Scott's attention was called to Uehling's patent, then just issued. His account of the matter is, viz:

I remember, before we were about to start the machine, I said to H. N. Curry, who has since deceased, "We ought to get Bakewell & Byrnes to furnish us with all the drawings or all the inventions that have ever been used for the handling of molten metal." H. N. Curry was sitting across the table from me. He was looking at the Patent Office Gazette, and I had looked at it, looked it over, and here was the Uehling machine showing the conveyer, a man sitting under it, with a hose, and a ladle at the other end. I said to Curry, "Lord, look at that. You better make some arrangements about seeing Uehling." And they did; they made arrangements with Uehling, and Uehling came up here and opened an office, and had a draftsman, and had Miller, "Shoebox" Miller, that is who he had with him, and after Uehling was given the half of the machine and the Carnegie Steel Company the other half, I was there to work it out for the money my company had put in and for my own reputation.

The half of the Uehling patent having been acquired by the complainant, a subsidiary company of Scott's employer, and the other half being held by Uehling and one Miller, it appears Scott was directed to improve on what Uehling had done, and to give Uehling and Miller full access to all he was doing in endeavoring to so improve. As we understand the proofs, Scott was to have no part in any patented improvements thus made in the line of his employment. In that regard, his testimony is:

I was thus to work it out for the money my company had put in and for my own reputation. The patents gave me no consideration. I was told that Uehling and Miller had access to anything that I did. There is the whole thing.

As a result of further experimentation, certain departures were made from Uehling's device and were embodied in the commercial machine made and sold in large quantities by the complainant. Briefly stated, these changes consisted in three things: First, a well or dam was provided, which received the stream of metal poured from the assembling vessel into the device, a change which stopped the dangerous splashing incident to Uehling's device; second, the molten metal was made to run into the molds longitudinally, instead of transversely, and barriers were placed at the far end of the mold, changes which prevented overflow and clogging of the conveyer mechanism. These changes are embodied in the claims here in issue, and the question whether they involved invention over Uehling we do not, as we said above, here discuss or describe. These changes were embodied in an American patent application made jointly by Uehling, Scott, and Miller in Serial No. 661,002, filed December 7, 1897. In this application Scott united with Uehling and Miller in alleging—

that they verily believe themselves to be the original, first, and joint inventors of the improvement in apparatus for casting metal described and claimed in the foregoing specification,

and that—

our invention is in the nature of an improvement upon the apparatus for casting metal described and claimed in Letters Patent No. 548,146, granted to Edward A. Uehling on October 15, 1895.

This joint application for a joint invention was prosecuted for nearly three years, and this by the same firm of attorneys who were originally named by the three applicants as their attorneys, without any repudiation of their action by Scott. The last entry in this application is dated November 6, 1900, and is:

Amendment filed October 20, 1900, has been entered. This puts the case for allowance, but it is withheld from issue on account of probable interference of another pending application.

While this joint application of the three patentees was pending, to wit, on February 16, 1898, Miller, one of the applicants, was sent to England to exploit the conveyer there. He is now dead, and Uehling was not called as a witness, so the only witness as to Miller's errand, and his authority, and the joint action and interest of the three, is Scott, who says:

Q. I understand from you that Mr. Uehling established an office in Pittsburgh and had a draftsman and made drawings in connection with these casting machines. Is that correct?

A. Yes. * * *

Q. Mr. Miller worked with Mr. Uehling?

A. Oh, yes. He was supposed to be the salesman. He was the fellow that went to Europe and tried to introduce it in Europe. * * *

Q. Well, now, did you ever talk with Mr. Uehling and Mr. Miller about Mr. Miller going to Europe to introduce the invention?

A. I suppose it just naturally came up. We would have to do something about it, naturally. I suppose they may have had a talk with me about going to Europe. I knew Miller did go to Europe to introduce the patents, but I don't remember that he was going to take out any patents. I am not sure about that. I don't know whether he did or not. I never spoke to Miller but once afterward, after he came back from Europe.

Q. I am speaking about before he went to Europe. You and Miller and Uehling had talked together about his going to Europe, and about the introducing of the invention over there in Europe, had you?

A. I may have. I wouldn't deny that, but I can't remember. We were friendly enough while the thing was being put through, and no doubt exchanged ideas. * * *

Q. When you knew that Mr. Miller was going to Europe, you knew that he was going there for the purpose of introducing this casting machine into the European market?

A. That is what I understood; yes.

It will also be noted that at the time of Miller's visit to Europe, early in 1898, the improvements on Uehling's device had been perfected and put into practical, successful, commercial use. The improvements then having proved successful, the three men having pending a joint application for an American patent, and Miller going abroad to exploit the invention, it is clear to us that sufficient facts and circumstances existed from which it could be fairly inferred that Miller's act in securing patent protection in England for the device came within the scope of their joint enterprise, and the patenting thereof by him was an act caused to be done by Uehling and Scott, and therefore such a prior patenting as the statute contemplated. In view of the lapse of years, of the fact that Miller is dead, that Uehling was not called to deny or disavow Miller's act, and of Scott really going no farther than saying he had, after these years, no recollection of having specifically authorized the patenting, we are warranted in regarding the patenting by Miller as one authorized by Scott. And such, indeed, would seem to have been the attitude of Scott himself until this present controversy arose, for in an *ex parte* patent controversy to which we will hereafter allude, in which there was no one but Scott's counsel to suggest the status, it was assumed the English patent was taken out by Miller in behalf of himself, Scott, and Uehling. Thus, in a Patent Office opinion delivered in that case in 1900, it was said:

The question here presented is one of law, arising from the fact that this sole applicant Scott jointly with one Uehling caused the invention of the appealed claims to be patented in Great Britain more than seven months prior to the date of his application in this country. The British patent thus jointly obtained is numbered 3,880 and the application therefor was dated February 16, 1898. The patent was sealed August 2, 1898. The pending application was not filed until October 27, 1900.

In view of all the foregoing facts and circumstances, we are of opinion the court below was justified in finding and holding that Scott caused the device of the patent in suit to be patented in England in 1898. Such being the case, and he not having applied for the American patent here in suit until 1900, the case falls within the literalism of the statute, from which there is no escape, unless by a construction which modifies its clear language. This construction the complainant urges by reason of the fact that, some three years after Scott joined in the joint application with Uehling and Miller above referred to, Scott, in 1900, applied for the patent here in suit, alleging he was the sole inventor. It is now contended by the complainant Scott's sole patent application should have the benefit of the prior joint application, and hence the seven-months' limit should not apply. The Patent Office, in granting the present patent, yielded to that contention, holding:

In order to make the foreign patent a bar against this application, it is necessary to hold that the causing of an invention to be patented in a foreign country by two joint applicants is a causing of that patent by one of the two joint applicants. That being held, and there having been filed in this country an application prior to the foreign patent by the same two persons, it ought to be held that either of these applicants, as respects a sole invention by him of what is disclosed in that prior domestic application, and for the purpose of deliverance from the bar of the statute, caused the prior domestic application to be filed in this country. The same ruling against him which brought him within the bar of the foreign patent should be made in favor of him to put him without that bar. That being so, this applicant is entitled, for this purpose, to the date of filing of the joint application as the date of filing an application in this country for the invention of the later foreign patent, and, the date of the joint application being prior to the date of the foreign patent, that patent is not a bar to the allowance of this application.

We cannot accede to this reasoning. Congress, in passing this statute, was dealing with the broad subject of the relative terms of foreign and domestic patents, and its purpose was to so synchronize the patent system of this and foreign countries that American patents should not monopolize in this country a device which had been freed from patent monopoly abroad. The statute was dealing with inventions and their monopoly, and not with the details of the forms by which individual applicants could secure their individual rights. In this case the device of the patent in suit secured patent monopoly in England in 1898. That patent expired in the year 1912, and after that date the invention was open to public use in Great Britain. More than seven months later Scott applied for the patent in suit, and it was granted in 1905. It will thus be seen that, under the ruling of the department, the whole purpose of the statute is defeated, for in this country the public is subjected to patent monopoly for years after the English public is free to use the invention. And on reflection it will appear that the fact that Scott had joined in an earlier joint application for a patent for the device should not alter the case. Had that application been pursued and granted, that patent would have duly protected the device. But *this joint application* was abandoned by Scott, and his subsequent sole application for a patent was not a division under the original application, but was a hostile and independent application, standing on its own ground. So far as time is concerned, the sole application had to stand on its own independent status, and its sole and only date of application was 1899. Such being the case, it was confronted by the fact that two years before the device in question had been caused by the applicant to be patented in England. Under such facts, we are clear the Patent Office was forbidden by the statute in question from issuing the patent in suit. The court below committed no error in dismissing the bill, so far as Mr. Scott was concerned.

(3) It remains to consider the patent to McKennan and Helander. Without entering into the details of this device, we may say that its substantial feature, so far as pig-casting device went, lay in dividing the load, so that, instead of being supported eccentrically on one end of an axle it rested on both ends. This, of course, reduced friction and wear, and was a more economical and efficient device than the eccentric carrying theretofore in use. But, conceding this, we do not see that the adoption of a well-understood method of supporting a load at two ends of an axle, where it was theretofore carried eccentrically, involved anything more than the engineering skill, effort, and progress incident to progressive efficiency in a great art, such as blast-furnace practice. Without further enlarging on the matter, we limit ourselves to stating our conclusion that we find no error in the court's conclusion that the claims in question in the McKennan and Helander patent did not involve invention.

The decree below is therefore reaffirmed.

Changes in Classification

(ORDER No. 2,311.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 19, 1917.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 73, Measuring Instruments, (Division XXXVI,) abolish subclasses—

8.	**Balances—**
101.	Electrical attachments,
99.	Equal arms,
102.	Pick-up weights,
100.	Recording.
15.	**Dynamometers.**
22.	**Hydrometers.**
	Scales—
39.	Beams,
8.	Cart,
23.	Hydrostatic,
41.	Pans,
29.	Pendulum,
121.	Platform,
101.	Price,
38.	Sack,
46.	Spring.

42. **Specific-gravity apparatus.**
103. **Steelyards.**
56. **Weights.**

The patents formerly contained in these subclasses have been placed in class 265, Force-Measuring, hereinafter established.

In class 234, Recorders, (Division XXIII,) abolish the following subclass, with its definition:

16. **Power.**

The patents formerly contained in this subclass have been placed in class 265, Force-Measuring, hereinafter established.

In same class abolish the last paragraph of the class definition and establish in lieu thereof the following:

Combinations of recording means with specific means for measuring force or weight or for testing the strength of material are excluded and are provided for in class 265, FORCE-MEASURING.

265.—FORCE-MEASURING.

1. **Miscellaneous.**
2. **Recording—**
   - Strength of material—
3. Beam-scale instruments,
4. Torque during transmission,
5. Scales—
6. Beam—
7. Automatically-slidable poise,
8. Spring—
9. Automatic.
10. **Friction.**
11. **Viscosity.**
12. **Strength of material—**
13. By impact or shock,
14. Fluid-transmission instruments,
15. Accumulative-weight instruments,
16. Beam-scale instruments,
17. Pendulum-scale instruments,
18. Spring-scale instruments—
19. Pivotal indicator.
20. **Muscular strength—**
21. Spring-scale instruments—
22. Pivotal indicator.
23. **Current-pressure.**
24. **Torque by absorption.**
25. **Torque during transmission—**
26. Total-registering.

265.—FORCE-MEASURING.

27. **Scales—**
28. Total-registering,
29. Computing—
30. Beam—
    - Slidable poise—
31. Pivotal indicator,
32. Changeable table,
33. Variable connection—
34. Shiftable beam,
35. Shiftable load-holder,
36. Pendulum—
    - Pivotal indicator—
37. Indirect connection,
38. Spring—
39. Pivotal indicator,
40. Vehicle—
    - Beam—
41. Relievable platform,
    - Spring—
42. Pivotal indicator,
43. **Buoyancy—**
44. **Specific gravity—**
45. Hydrometers—
46. With thermometer attachment,
47. Fluid transmission,
48. Automatic weight pick-up,
49. Beam—
50. Coin-testers,
51. Sack,
52. Hoisting load-holder,

265.—FORCE-MEASURING.

Scales—
- Beam—
53. Variable connection,
54. Equal arm,
55. With platform,
56. Automatically-slidable poise,
    - Slidable poise—
57. Pivotal indicator,
58. Auxiliary or substitute indicator—
    - Spring—
59. Pivotal indicator,
60. Non-slidable-poise feature,
61. Pendulum—
    - Pivotal indicator—
62. Indirect connection,
63. Spring—
64. Refrigerator—
65. Pivotal indicator,
66. Handling load-holder—
67. Pivotal indicator,
68. Pivotal indicator,
69. Thermal compensator,
70. Automatic poise,
71. Platforms—
72. With relieving-gear.

THOMAS EWING,
Commissioner.

Changes in Classification.

(ORDER No. 2,312.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 20, 1917.

The following change in the classification of inventions is hereby directed, to take effect immediately:

In class 11, Bookbinding, (Division V,) abolish subclass—

Binding-machines—
25. Signature-gatherers.

The patents formerly contained in this subclass have been placed in classes 270, Sheet-Material Associating or Folding, and 271, Sheet Feeding or Delivering.

THOMAS EWING,
Commissioner.

Changes in Classification.

(ORDER No. 2,313.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 23, 1917.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 137, Water Distribution, (Division XXXIX,) establish subclass—

Sprayers—
Spray-fluid actuated—
155. Motor.

The patents contained in this subclass have been taken for the most part from class 137, Water Distribution, subclass 59, Nozzle-holders.

In same class, subclass 87, Sprayers, Reaction, change the title to read:

Sprayers—
Spray-fluid actuated—
87. Reaction.

In same class, after the definition of subclass 7, Anemometer, insert the following note:

Search Class—
265—FORCE-MEASURING, subclass 23, Current-pressure, for means for recording the force of the wind directly.

In same class, after the definition of subclass 28, Specific gravity, insert the following note:

Search Class—
265—FORCE-MEASURING, subclasses 45, Scales, Buoyancy, Specific gravity, Hydrometers, and 46, Scales, Buoyancy, Specific gravity, Hydrometers, With thermometer attachment, for means for recording the specific gravity of a liquid which does not also include means for measuring the volume thereof.

Establish, in Division XXXVI, class 265, Force-Measuring, with the following subclasses and definitions, the patents contained in this class having been taken for the most part from the subclasses hereinbefore abolished in classes 73, Measuring Instruments, and 234, Recorders:

THOMAS EWING,
Commissioner.

Changes in Classification.

(ORDER No. 2,314.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 26, 1917.

It is hereby directed that class 267, Spring Devices, be transferred from Division X to Division XI, to take effect immediately.

THOMAS EWING,
Commissioner.

Changes in Classification.

(ORDER No. 2,315.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 27, 1917.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 70, Locks and Latches, (Division XX,) establish subclasses—

Locks—
126. For multiple controlling means—
127. With circuit-controller.

The patents contained in these subclasses have been taken for the most part from class 21, Carriages and Wagons, subclass 90, Motor-vehicles; class 70, Locks and Latches, subclass 90, Locks, Bicycle, and class 123, Internal-Combustion Engines, subclass 198, Accessories.

THOMAS EWING,
Commissioner.

THE OFFICIAL GAZETTE OF THE United States Patent Office.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Issue of April 17, 1917.

Patents	762	No. 1,222,587 to No.	1,223,349,	inclusive.
Designs	44	No. 50,598 to No.	50,641,	inclusive.
Trade-Marks	70	No. 116,197 to No.	116,266,	inclusive.
Labels	16	No. 20,021 to No.	20,036,	inclusive.
Prints	8	No. 4,667 to No.	4,674,	inclusive.
Reissues	6	No. 14,284 to No.	14,288,	inclusive.
Total	906			

Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.
Washington, D. C., April 14, 1917.

Attention is called to the following regulations of the Interior Department, contained in the circular issued May 22, 1915, which are applicable to attorneys practicing before this Office:

If any firm of attorneys or agents shall retain as a member thereof or receive into such membership any person who stands disbarred or suspended from the practice of this Department, its bureaus or offices, all of the members thereof who may have been admitted to practice shall be subject to disbarment.

If any attorney or agent in good standing before the Department shall knowingly employ as subagent or correspondent a person who has been prohibited from practice before the Department, it will be sufficient reason for the disbarment of the former from practice.

THOMAS EWING,
Commissioner.

Cancelation Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.
Washington, D. C., April 5, 1917.

Margaretha Schmitt, her assigns or legal representatives, take notice:

A cancelation proceeding has been instituted by this Office upon the application of August Underberg and Anna Underberg, of 6020 South Paulina street, Chicago, Ill., to effect the cancelation of the trade-mark registration of Margaretha Schmitt, No. 682 Hart street, New York, N. Y., registered December 26, 1899, No. 33,946, and the notice of such proceeding sent by registered mail to said Margaretha Schmitt at the said address, having been returned by the post-office undeliverable, notice is hereby given that unless said Margaretha Schmitt, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will proceed as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 6, 1917.

Anton Kufeke, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of L. G. Spindler, Produce Exchange, New York, N. Y., for registration of a trade-mark and trade-mark registered May 17, 1887, No. 14,400, to Anton Kufeke, Glasgow, Scotland, and a notice of such declaration sent by registered mail to said Anton Kufeke at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Anton Kufeke, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 31, 1917.

Albert Schnell, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Jacob Melicow, 144 West One hundred and thirteenth street, New York, N. Y., for registration of a trade-mark and trade-mark registered July 22, 1890, No. 18,191, to Albert Schnell, of St. Louis, Mo., and a notice of such declaration sent by registered mail to said Schnell at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Schnell, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 30, 1917.

James A. Harris, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Winter Haven Packing Co., of Winter Haven, Fla., for registration of a trade-mark and trade-mark registered October 20, 1885, No. 12,674, to James A. Harris, of Citra, Fla., and a notice of such declaration sent by registered mail to said Harris at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Harris, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 13, 1917.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Feb. 15	Jan. 27	270
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Nov. 20	Jan. 23	490
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Feb. 19	Mar. 15	114
234	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Feb. 12	Mar. 20	242
167	5. Bookbinding; Harvesters; Jewelry; Music	Nov. 27	Feb. 12	281
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Dec. 6	Jan. 25	380
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Nov. 29	Dec. 9	687
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Nov. 1	Feb. 19	1015
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Sept. 16	Mar. 28	521
235	10. Carriages and Wagons	Nov. 6	Mar. 17	885
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus.	Dec. 26	Mar. 20	172
324	12. Journal-Boxes, Pulleys, and Shafting; Machine Elements	Feb. 1	Mar. 12	619
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Dec. 14	Mar. 13	562
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Dec. 29	Jan. 11	280
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Mar. 12	Mar. 17	238
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Nov. 17	Jan. 11	605
303	17. Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting.	Jan. 3	Mar. 7	200
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Lubrication; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps, Steam-Engines; Steam-Engine Valves.	Feb. 28	Mar. 6	255
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Dec. 12	Jan. 8	805
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Mar. 14	Mar. 19	226
132	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Jan. 4	Feb. 14	289
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 13	Feb. 14	555
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Nov. 13	July 25	328
144	24. Apparel; Apparel Apparatus; Sewing-Machines; Garment Supporters	Dec. 21	Mar. 3	323
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Mar. 12	Mar. 19	140
105	26. Electricity, Generation; Motive Power	Sept. 13	Jan. 19	581
375	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Mar. 9	Mar. 12	246
63	28. Internal-Combustion Engines	Sept. 20	Feb. 24	526
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Dec. 5	Jan. 3	407
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Jan. 16	Mar. 24	440
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Dec. 26	Jan. 29	280
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Oct. 2	Mar. 10	960
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Dec. 5	Mar. 6	375
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Oct. 16	Mar. 2	327
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet	Oct. 23	Feb. 7	727
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring	Jan. 3	Mar. 21	608
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	Oct. 6	Mar. 3	772
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Mar. 10	Mar. 24	150
321	39. Water Distribution	Dec. 13	Mar. 2	396
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Jan. 16	Mar. 16	499
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Dec. 30	Feb. 7	391
244	42. Electricity, Conductors; Railway Signaling; Electricity-Transmission to Vehicles	Oct. 25	Mar. 3	346
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers, Sewerage; Surgery; Water Purification.	Jan. 24	Feb. 28	146
	Oldest new case, Sept. 13; oldest amended, July 25.			
	Total number of applications awaiting action			18,363
163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Feb. 5	Mar. 16	1130
	Designs	Feb. 28	Mar. 15	325
	Labels and Prints	Apr. 3	Apr. 2	96

PATENTS

GRANTED APRIL 17, 1917.

1,222,587. RAKER-GAGE. HOPE ALANSON, Abbotsford, British Columbia, Canada. Filed May 4, 1916. Serial No. 95,399. (Cl. 33—202.)



1. The combination with the straight edge of a raker gage, of a casing open at the bottom, and a strip supported wholly within the casing and unsecured thereto, said strip forming a bottom for the casing.

2. The combination with the straight edge of a raker gage, of a casing open at both ends and at the bottom, a strip removably mounted within the casing and inclosed thereby and forming a bottom for the same, and means within the casing for maintaining said strip in place.

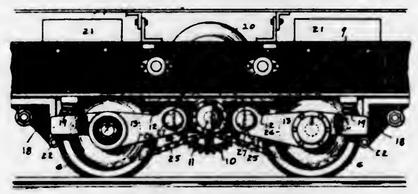
3. A device of the class described, comprising a casing open at the bottom, said casing having the lower edges of its sides turned inwardly to form flanges, a glass strip mounted in said casing and resting on said flanges, and a spring within said casing disposed to bear on the said strip.

4. A device of the class described, comprising a casing open at the ends and at the bottom, said casing having the lower edges of its sides turned inwardly to form flanges, a glass strip mounted in said casing and resting on said flanges, means for preventing inadvertent longitudinal movement of said strip, and means within said casing for maintaining the strip in detachable engagement with the said flanges.

5. A device of the class described, comprising a casing open at the ends and at the bottom, said casing having the lower edges of its sides turned inwardly to form flanges and the extremities of said flanges turned upwardly, a glass strip resting on the said flanges between the upturned ends thereof, and spring means within said casing for maintaining the said glass strip in place.

[Claim 6 not printed in the Gazette.]

1,222,588. CHAIN-DRIVE MOTOR. JAMES B. ALLFREE, Chicago, Ill. Filed Nov. 25, 1916. Serial No. 133,441. (Cl. 105—218.)



1. In a tractor, a driving sprocket wheel, a pair of traction wheels, a driven sprocket wheel, a link-belt connecting the two sprocket wheels, and means when the traction wheels rise and fall due to unevenness of track, to move them oscillatively about a center located between the axis of rotation of the traction wheels and the axis of rotation of the driving sprocket, and means to tighten the belt by increasing the distance between the driving and driven sprocket wheels.

2. In a tractor having wheels mounted on axles, a frame comprising arms having oscillatory supports at one end and axle bearings at the other, and means for varying the distance between the axes of oscillation and axle rotation.

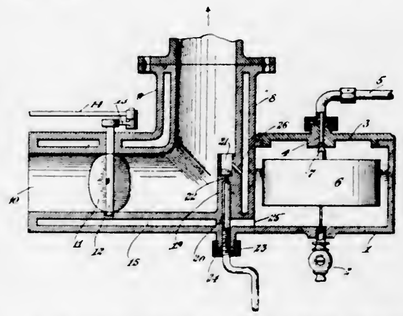
3. In a tractor, a pair of traction wheels and a driven sprocket wheel rotating about the same axis, a driving sprocket wheel, a link belt connecting the two sprocket wheels, and arm means swingingly supported adjacent to the axis of the driving sprocket wheel and supporting the traction wheels and driven sprocket wheel and means for varying the distance between the driving and driven sprocket wheels.

4. In a tractor, a driving sprocket, an axle, a driven sprocket mounted in a fixed manner on the axle, a pair of traction wheels also mounted in a fixed manner on the axle, a link-belt connecting the two sprocket wheels, and arms supporting the axle, said arms being pivoted between the axle and axis of rotation of the driving sprocket close to but sufficiently remote from the latter for easy disconnection and adjustment and means located at said pivots for varying the distance between the driving and driven sprocket wheels.

5. In a tractor, a driving sprocket, an axle, a driven sprocket mounted in a fixed manner on the axle, a pair of traction wheels also mounted in a fixed manner on the axle, a link-belt connecting the two sprocket wheels, arms supporting the axle, said arms being pivoted between the axle and axis of rotation of the driving sprocket, and pivot pins on which the arms are pivoted having cam-means for varying the effective lengths of the arms to tighten the belt by rotating the pins.

[Claims 6 to 16 not printed in the Gazette.]

1,222,589. CARBURETER. ALBERT ARNOLD, Bay City, Mich. Filed Aug. 12, 1916. Serial No. 114,492. (Cl. 123—132.)



1. A carbureter having the walls thereof chambered and adapted for communication with the exhaust manifold of an internal combustion engine, a float chamber forming part of said carbureter, and an enlargement in said carbureter provided with a well in communication with said float chamber and with the chambers in the wall of said carbureter so that the exhaust gases assist in providing an efficient explosive mixture.

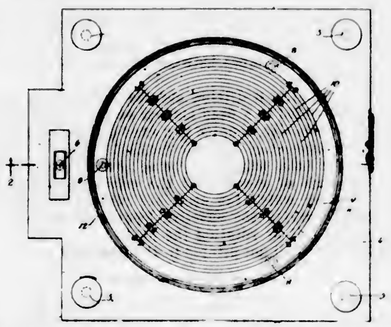
2. A carbureter having the walls thereof chambered and adapted to receive the exhaust gases from an internal

combustion engine, a float chamber, an enlargement in said carbureter provided with a well communicating with the chambers in the carbureter walls and also with said float chamber, and means controlling the communication between said float chamber and the well of said enlargement.

3. A carbureter having the walls thereof provided with chambers adapted to receive exhaust gases of an internal combustion engine, a float chamber, an enlargement in said carbureter having a well, said enlargement having ports establishing communication between said well and said float chamber, said enlargement having an angularly disposed and upwardly directed port to establish communication between the well of said enlargement and the chambers of the carbureter walls, and means controlling the communication between the well of said enlargement and said float chamber.

4. In a carbureter, a float chamber, an enlargement in said carbureter having a well communicating with said float chamber, and means adapted for conveying the exhaust gases of an internal combustion engine around said carbureter and into said carbureter above said wall.

1,222,590. DEVICE FOR TESTING THE SPREADING VALUE OF BAKING MATERIALS. JOSEPH P. BACHMAN, Newark, N. J. Filed Aug. 9, 1916. Serial No. 113,884. (Cl. 73—51.)



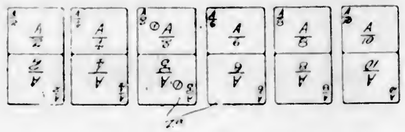
1. In a device of the character specified, in combination, at least one tray, said tray carrying markings indicating the proportionate amount of spread of a material placed thereon, adjustable means for supporting said tray in a horizontal position, and means whereby air may have free access to both the top and bottom of the tray.

2. In a device of the character specified, in combination, at least one non-corrugated tray, said tray carrying concentric markings, the markings having indicia indicating the proportion of spread of a material placed thereon, and means whereby air may have free access to both the top and bottom of the tray.

3. In a device of the character specified, in combination, at least one tray carrying concentric gage markings, a platform, a supporting member upon the platform removably carrying the tray, said tray and the platform being so situated as to allow an air space between them, and adjustable means for maintaining said tray in a horizontal position.

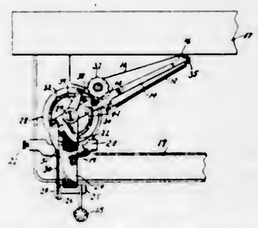
1,222,591. GAME. JOHN LUCIUS BAKER, Bonelta Springs, S. D. Filed Sept. 7, 1912. Serial No. 719,109. (Cl. 46—25.)

1. In combination; a pack of cards, divisible either into six groups of six cards each; or into seven groups, six of which comprising five cards each, while the seventh group consists of six cards; when the cards are arranged in six groups, the cards of each group are characterized conjunctively alphabetically and numerically, such as "A/2," "A/4," "A/5," ("Spanish five"), "A/6," "A/8," and "A/10;" and "B/2," "B/4," "B/5," ("Spanish five"), "B/6," "B/8," and "B/10," etc.; when the cards are arranged in seven groups, the seventh group consists of six cards used as a trump group and being consecutively alphabetically characterized, such as "A/5," "B/5," "C/5," "D/5," "E/5," and "F/5;" while the remaining groups consist of five cards each, in either case, however, there is always six groups characterized in alphabetical order, thereby constituting a game apparatus of thirty-six cards not only variable as to the number of groups, but variable as to the number of cards in each group, and also variable as to the alphabetical and numerical order.



2. A game apparatus, comprising a pack of cards variable as to the number of groups, variable as to the number of cards in each group, and also variable as to the alphabetical and numerical order, and divisible either into an even number of groups, each of an even number of cards characterized conjunctively alphabetically and numerically; or into a larger odd number of groups, one of which comprising an even number of cards used as a trump group and consecutively alphabetically characterized, and each of the remaining groups comprising a less odd number of cards.

1,222,592. METHOD FOR ERASING TYPE-WRITTEN MATTER. JOHN H. BALDWIN, Springfield, Mo. Original application filed Aug. 12, 1915, Serial No. 45,101. Divided and this application filed May 15, 1916. Serial No. 97,671. (Cl. 120—36.)



The improved method of erasing typewritten matter upon paper which consists in removing the surface fiber of the paper upon which the matter to be erased is shown without effecting other parts of the surface of the paper by forcibly projecting an adhesive body against the paper while the latter is held against a firm support, each contact of the said adhesive body with the paper, thus obtained, being substantially confined to that part of the surface of the paper which is covered by a single character of the type-written matter to be erased, and by then removing the said adhesive body from the paper with the said surface fiber adhering thereto, there being a separate projection of the adhesive body against the paper and a removal of the same therefrom for each type-written character to be erased.

1,222,593. ART OF PRODUCING ALUMINUM CARBID. MAURICE BARNETT and LOUIS BURGESS, New York, N. Y. Filed Jan. 26, 1917. Serial No. 144,614. (Cl. 204—62.)

1. The herein described process for producing aluminum carbid, consisting in acting upon a mixture or charge of alumina and carbon by continuously passing an electric current of suitable strength through a carbon or graphitic body or core within the said mixture or charge (the said

body or core acting as a resistance in the electric circuit) and utilizing the heat, thereby developed, to bring the mixture or charge to a temperature of approximately 2000° C.



2. The herein described process for producing aluminum carbid, consisting in acting upon a mixture or charge of alumina and carbon by continuously passing an electric current of suitable strength through a carbon or graphitic body or core within the said mixture or charge (the said body or core acting as a resistance in the electric circuit) and utilizing the heat, thereby developed, to bring the mixture or charge to a temperature of approximately 2000° C., or above, but in no event to the temperature of the electric arc.

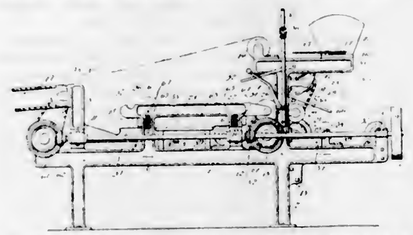
3. The herein described process for producing aluminum carbid, consisting in acting upon a mixture or charge of alumina and carbon by continuously passing an electric current of suitable strength through a carbon or graphitic body or core within the said mixture or charge (the said body or core acting as a resistance in the electric circuit) and utilizing the heat, thereby developed, to bring the mixture or charge to a temperature of approximately 2000° C., the amount of carbon in the said mixture or charge being in excess of that necessary to reduce the alumina to metal.

4. The herein described process for producing aluminum carbid, consisting in acting upon a mixture or charge of alumina and carbon by continuously passing an electric current of suitable strength through a carbon or graphitic body or core within the said mixture or charge (the said body or core acting as a resistance in the electric circuit) and utilizing the heat, thereby developed, to bring the mixture or charge to a temperature of approximately 2000° C. or above, but in no event to the temperature of the electric arc, the amount of carbon in the said mixture or charge being in excess of that necessary to reduce the alumina to metal.

5. The herein described process for producing aluminum carbid, consisting in acting upon a mixture or charge of alumina and carbon by continuously passing an electric current of suitable strength through a carbon or graphitic body or core within the said mixture or charge (said body or core acting as a resistance in the electric circuit) and utilizing the heat, thereby developed, to bring the mixture or charge to a temperature of approximately 2000° C., said mixture or charge consisting of approximately two parts of alumina to one part of carbon.

[Claims 6 to 8 not printed in the Gazette.]

1,222,594. MACHINE FOR PRINTING PREPARED ROOFING. MATHIAS B. BECKER, Chicago, Ill. Filed Nov. 26, 1913. Serial No. 803,131. (Cl. 164—39.)



1. A machine for printing predetermined designs on strips of grit coated roofing including a printing roll, a pressure roll associated therewith for forcing the grit coated face of the strip into contact with the surface of the printing roll, and means associated with said printing and pressure rolls for forcing the strip forward toward the printing roll at the surface speed of the latter.

2. In a machine of the kind specified, the combination with mechanism for effecting the passage of a strip through the machine, means for applying a relatively free flowing liquid to the strip in such quantity as to permit of the lateral spread of said liquid beyond the areas, lines or stripes upon which it is applied, mechanism associated with the said liquid applying means for applying to and while the applied liquid is still fluent, a substance adapted to effect an immediate thickening of said liquid to prevent spread of the same laterally of the areas, lines or stripes upon which it is applied, and means other than said thickening substance applying means for effecting a feeding of the thickening material from treated to untreated portions of the strip.

3. In a machine of the kind specified, the combination with a rotatable printing roll, a vat for a relatively free flowing liquid in which the roll is partially immersed and from which it is adapted to carry the liquid to the under surface of a strip to be printed, means for effecting forced passage of the strip through the machine, means for effecting an inversion of the strip after passing the printing roll and while carrying the still relatively free flowing liquid, means for dropping upon the printed face of the strip a material adapted to effect an immediate thickening of the liquid carried by the strip adapted to prevent spreading thereof beyond the areas, lines and stripes to which the same is applied by said printing roll, and means for effecting a thorough distribution of the thickening material.

4. In a machine of the kind specified, the combination with a rotatable printing roll, a vat for a relatively free flowing liquid in which the roll is partially immersed and from which it is adapted to carry the liquid to the under surface of a strip to be printed, means for effecting forced passage of the strip through the machine, means for effecting an inversion of the strip after passing the printing roll and while carrying the still relatively free flowing liquid, means for dropping upon the printed face of the strip a material adapted to effect an immediate thickening of the liquid carried by the strip whereby to prevent spreading thereof beyond the areas, lines and stripes to which the same is applied by said printing roll, the inverting means including means for effecting upward travel of the strip on an incline, and the means for feeding the thickening substance being at a high point whereby the unapplied portions are caused to travel by gravity in the direction opposite to direction of travel of the strip.

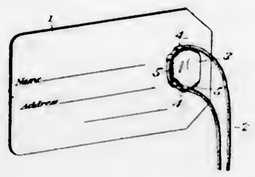
5. In a machine of the kind specified, the combination with a rotatable printing roll, a vat for a relatively free flowing liquid in which the roll is partially immersed and from which it is adapted to carry the liquid to the under surface of a strip to be printed, means for effecting forced passage of the strip through the machine, means for effecting an inversion of the strip after passing the printing roll and while carrying the still relatively free flowing liquid, means for dropping upon the printed face of the strip a material adapted to effect an immediate thickening of the liquid carried by the strip whereby to prevent spreading thereof beyond the areas, lines and stripes to which the same is applied by said printing roll, and mechanism for accelerating the movement of the material on the face of the strip being treated.

[Claims 6 to 23 not printed in the Gazette.]

1,222,595. SHIPPING-TAG. CHARLEY L. BEEMAN, Riverton, Wyo., assignor of one-half to R. P. Kile, Riverton, Wyo. Filed May 26, 1916. Serial No. 100,086. (Cl. 40—27.)

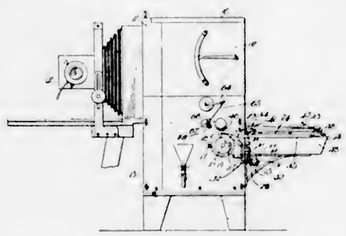
1. In combination with a tag, a fastening device thereon comprising a disk having prongs driven through and clenched on the bottom of the tag, said disk also having peripheral prongs and a doubled cord or the like arranged around the periphery of the disk, the peripheral prongs of the latter being bent around said cord and offset from the plane of the disk.

2. In combination with a tag, a fastening device thereon comprising a disk having prongs driven through and clenched on the bottom of the tag, said disk also having peripheral prongs and a doubled cord or the like arranged around the periphery of the disk, the peripheral



prongs of the latter being bent around said cord and offset from the plane of the disk, and a second disk on the reverse side of the tag and engaged and secured by the clenched prongs of the first named disk.

1,222,596. PHOTOGRAPHING AND DEVELOPING APPARATUS. GEORGE C. BEIDLER, Rochester, N. Y. Filed May 20, 1911. Serial No. 628,415. (Cl. 95—90.5.)



1. In an apparatus relating to photography, a container for film closed against actinic light, means for drawing film from the container, a receptacle to which the film is delivered after it has been exposed to light, means for effecting the said delivery of the film, and means movable vertically and longitudinally of the receptacle for submerging the film.

2. In an apparatus relating to photography, a container for film closed against actinic light, means for drawing film from the container, a receptacle to which the film is delivered after it has been exposed to light, means for effecting the said delivery of the film, an immersing member mounted in an inclined position to move in and out of the receptacle, and means for moving the immersing member.

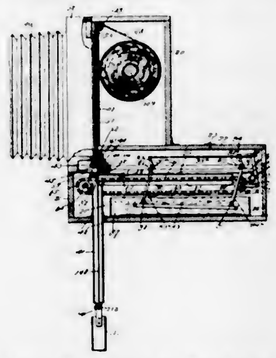
3. In an apparatus relating to photography, a container for film closed against actinic light, means for drawing film from the container, a receptacle to which the film is delivered after it has been exposed to light, means for effecting the said delivery of the film, an immersing member mounted to move into and out of the receptacle, means for driving the film delivery means and moving the immersing member.

4. In an apparatus relating to photography, a container for film closed against actinic light, means for drawing film from the container, a receptacle to which the film is delivered after it has been exposed to light, means for effecting the said delivery of the film, an immersing member mounted on an incline to move into and out of the receptacle, and means for moving the film delivering means and the immersing member.

5. In an apparatus relating to photography, a container for film closed against actinic light, means for drawing film from the container, a receptacle to which the film is delivered after it has been exposed to light, an immersing member, rotatable means for suspending the immersing member, and means for communicating rotary movement to the means for suspending the member.

[Claims 6 to 13 not printed in the Gazette.]

1,222,597. PHOTOGRAPHING AND DEVELOPING APPARATUS. GEORGE C. BEIDLER, Rochester, N. Y. Filed June 11, 1914. Serial No. 844,516. (Cl. 95—90.5.)



1. In an apparatus relating to photography, a receptacle for liquid to act on a film, means for delivering exposed film thereto, a member past which film travels to the receptacle, flexible means for moving the member to draw the film from the receptacle, and means actuated in conjunction with the said member moving means for cutting the film.

2. In an apparatus relating to photography, means for drawing a web of film and to deliver it to a receptacle and for supporting the film therein, a rod past which the film travels to the receptacle, flexible means on which the rod is supported, means for moving the flexible means to draw film from the receptacle, a knife past which the film travels in its delivery to the receptacle, a knife coacting therewith to cut the film, and means moved by the flexible means for actuating one of the knives.

3. In an apparatus relating to photography, a casing, a receptacle therein, means for delivering exposed film to the receptacle, a rod for moving film from the receptacle, guides in the casing, blocks slidable on the guides, said blocks having sockets for the ends of the rod, means for moving said blocks on the guide, and means for cutting the film after it is removed from the receptacle.

4. In an apparatus relating to photography, a casing, a receptacle therein for receiving film, means for delivering film to the receptacle, means for drawing film from the said receptacle, a second receptacle in the casing over which the film is drawn, means for cutting the film whereby it falls into the second mentioned receptacle, an immersing means operable with relation to the second mentioned receptacle, means for actuating the said immersing means, and flexible means connected to operate the film drawing means and the film immersing means.

5. In an apparatus relating to photography, a casing, a receptacle therein, guides in the casing, flexible means, means for drawing the flexible means longitudinally of the casing, a film drawing means connected to the flexible means, means for delivering film to the receptacle and for suspending it while the film drawing means operates to remove the film from the receptacle, a second receptacle in the casing over which film is suspended by the film drawing means, means for severing the said film to permit it to fall into the second mentioned receptacle, film immersing means suspended above the second mentioned receptacle and adapted to coact therewith, and means actuated by the flexible means for operating the immersing means.

[Claims 6 to 15 not printed in the Gazette.]

1,222,598. CONVEYING SYSTEM. MORRIS U. BERNHEIM, Louisville, Ky., assignor, by mesne assignments, to The Alvey-Ferguson Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 3, 1909. Serial No. 526,141. (Cl. 193—2.)

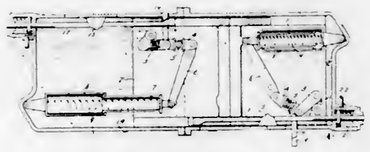


1. In a conveying system, an elevator adapted to automatically receive packages from conveyers disposed on different levels and to safely transfer the packages to a third level, combined with a plurality of conveyers for delivering packages to said elevator; the elevator having a package-supporting bed or way which is formed to provide an approximately horizontal receiving section at one end operatively related to one of said conveyers, an approximately horizontal delivering section at the other end, an approximately horizontal section intermediate of its length, and inclined sections between the intermediate section and the receiving and delivering sections at the ends of the elevator, respectively, said elevator also having traveling means which move relatively to the bed or way continuously from end to end of the elevator and conduct packages over the same, the intermediate approximately horizontal section of the elevator being operatively related to a conveyer-section and said conveyer-section when in operative position intersecting the path of a package at the junction of the intermediate section and an inclined section and being adjustable out of said path to permit packages to pass from one of said elevator-sections to the other.

2. In a conveying system, a series of gravity conveyers, each arranged on a different level, and an elevator common to said conveyers, said elevator having a package-supporting bed or way and traveling means for conducting packages thereover, the bed or way having inclined sections between said levels, respectively, approximately horizontal sections in operative relation with the lowermost and uppermost conveyers, respectively, and an intermediate approximately horizontal section in operative relation with the intermediate conveyer, said inclined sections merging into the approximately horizontal section and said traveling means being guided to traverse the elevator relatively to said bed or way, and in paths corresponding to said sections, the intermediate conveyer having a section which when in operative relation with the intermediate approximately-horizontal section of the elevator intersects the path of a package approaching on the adjacent inclined section and is adapted to be moved out of said path.

3. In a conveying system, a series of gravity conveyers, each arranged on a different level, and an elevator common to said conveyers, said elevator having a package-supporting bed or way and traveling means comprising package engaging elements which travel relatively to the package-supporting bed or way, continuously from one end of the same to the other, and conduct the packages thereover, the bed or way being provided with inclined sections arranged between said levels and approximately horizontal sections which are adjacent to said levels, respectively, the inclined sections merging into the approximately horizontal sections, the inclined sections of said bed or way being composed of rollers and said bed or way having slides arranged at the junctions of the inclined and approximately horizontal sections, each approximately horizontal section of the elevator being operatively related to a conveyer and the conveyer which coöperates with the intermediate approximately-horizontal section of the elevator having an end which when in operative position intersects the path of a package approaching on an inclined section and is movable out of said path.

1,222,599. ELECTRIC COUPLING DEVICE. THOMAS R. BROWN, Sparkill, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed May 14, 1914, Serial No. 838,417. Renewed Sept. 7, 1916. Serial No. 118,948. (Cl. 173—332.)



1. In an electric train line coupling, the combination with a casing containing a movable contact carrier adapted to be projected into a counterpart coupling for electrically connecting the train line circuits, of a spring acted upon by the coming together of counterpart couplings for storing energy and a system of levers operated by the spring for projecting the contact carrier.

2. In an electric train line coupling, the combination with a casing containing a movable contact carrier adapted to be projected into a counterpart coupling for electrically connecting the train line circuits, of a spring adapted to be compressed by the coming together of counterpart couplings and a lever mechanism operated by the expansion of the spring for projecting the contact carrier.

3. In an electric train line coupling, the combination with a casing containing a movable contact carrier adapted to be projected into a counterpart coupling for electrically connecting the train line circuits, of a spring adapted to be compressed by the retraction of the contact carrier upon the coming together of counterpart couplings and a lever mechanism operated by the expansion of the spring for projecting the contact carrier into counterpart coupling.

4. In an electric train line coupling, the combination with a casing containing a movable contact carrier adapted to be projected into a counterpart coupling for electrically connecting the train line circuits, of a toggle lever mechanism for projecting the contact carrier and including a spring, means actuated by the retraction of the contact carrier upon the coming together of counterpart couplings for rocking the toggle lever mechanism to compress the spring and operating to release the spring upon a predetermined movement, to thereby permit the projection of the contact carrier of the counterpart coupling by the expansion of the spring.

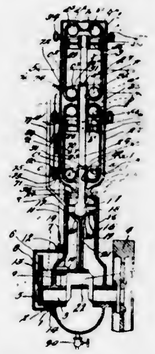
5. In an electric train line coupling, the combination with a casing containing a movable contact carrier adapted to be projected into a counterpart coupling for electrically connecting the train line circuits, of a toggle lever mechanism operatively connected to the contact carrier, a spring for actuating said toggle lever mechanism to project the contact carrier, a stop acting as an abutment for permitting the compression of the spring upon the coming together of counterpart couplings, and adapted to release the spring upon a predetermined movement of the contact carrier.

[Claims 6 to 11 not printed in the Gazette.]

1,222,600. INTERNAL-COMBUSTION ENGINE. DAVID J. BULLINGER, New Haven, Mo. Filed May 21, 1915. Serial No. 29,522. (Cl. 123—196.)

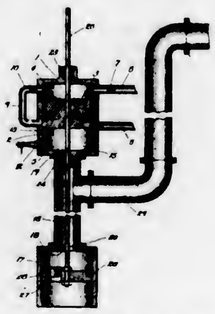
In an internal multiple cylinder double acting combustion engine, the combination of an engine cylinder having a bearing sleeve at one end and intake and exhaust ports adjacent said sleeve and a second engine cylinder having a bearing sleeve at one end to be arranged axially with the first bearing sleeve when the two cylinders are joined

axially together, of a piston rod reciprocating in said bearing sleeves and provided with pistons operating respectively in said cylinders, means for connecting the cylinders, the second cylinder having a cylinder head secured thereon, said cylinder head having adjacent intake and exhaust ports, the second sleeve being integral with the second cylinder, four ports, two being intake ports on one side of the second sleeve, the other two being exhaust ports on the other side of the second sleeve, the two cylinders having water jackets common to and in communication with each other, the cylinder head having a water jacket par-



tially surrounding its intake and exhaust ports and in communication with the water jacket of the second cylinder, thereby keeping said ports cool, the water jacket of the first cylinder extending partially about its intake and exhaust ports, the water jacket of the second cylinder partially curving about each of its four ports and entirely surrounding the central portion of said sleeve, to keep the ports, the sleeve and piston rod cooled, means for operating the rod, valves for said ports, and a mechanism connected to said valves and operated by said means for operating the valves.

1,222,601. APPARATUS FOR PUMPING FLUID. OSMON B. CAMPBELL, Jr., St. Joseph, Mo. Continuation of application Serial No. 25,420, filed May 3, 1915. This application filed Aug. 9, 1916. Serial No. 113,947. (Cl. 103—67.)



1. In a liquid pumping apparatus, a liquid conduit having a valved inlet near its lower end, a liquid pump, and an engine of the internal combustion, two-cycle type, in such operative relation that an explosion occurring in the combustion chamber of the engine will impart upward motion and impetus to liquid in the conduit, and that gases passed to the combustion chamber of the engine will be compressed therein by the descent of liquid through the liquid conduit into the liquid pump.

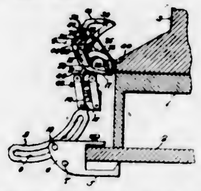
2. In a liquid pumping apparatus, a liquid conduit open at its upper end and having a valved inlet near its lower end and comprising a liquid cylinder member at its lower end, a piston in the liquid cylinder, an engine of the two-cycle, internal-combustion type, a piston in the engine cylinder, and a rod connecting said pistons, one end of the liquid cylinder being in communication with the lower portion of the liquid conduit and the other end being open, whereby gases expanding in the engine cylinder impart upward motion to liquid in the liquid conduit and gases passed to said engine cylinder are compressed therein by force of liquid passing down the liquid conduit and into the liquid cylinder against the piston in said liquid cylinder.

3. In a liquid pumping apparatus, an engine of the two-cycle, internal combustion type, comprising a cylinder and a piston, a liquid cylinder open at its lower end, a liquid conduit spacing and attached to said cylinders, the said conduit being in open communication with the liquid cylinder, a piston in the liquid cylinder, a rod extending through said conduit and connecting the engine and liquid pistons, and a check valve controlling flow to the conduit above the liquid piston, the liquid conduit having an opening therein for the discharge of liquid.

4. In a liquid pumping apparatus, a liquid conduit, an engine of the two-cycle, internal combustion type comprising a cylinder and piston, mounted on said conduit, an open bottom liquid cylinder suspended from said conduit, and having open communication with said conduit at its upper end, a piston, a rod extending through said conduit and connecting the piston in the liquid cylinder with the piston in the engine cylinder, a check valve for passing liquid to the liquid cylinder above the liquid piston, the said conduit having a discharge opening above the liquid piston.

5. In a liquid pumping apparatus, an engine of the two-cycle, internal combustion type, comprising a cylinder and a piston, a liquid conduit having its upper end attached to the cylinder head, a liquid cylinder attached to the lower end of said conduit, the lower end of said liquid cylinder being open and the upper end in open communication with the conduit, a piston in the liquid cylinder, a rod extending through the conduit and connecting said pistons, a check valve in the liquid piston for passing liquid to the conduit, the liquid conduit having a discharge opening between the engine and liquid cylinders.

1,222,602. STRETCHING DEVICE. GEORGE W. CHAMBERLAIN, Atlanta, Ga. Filed Feb. 11, 1916. Serial No. 77,759. (Cl. 223—33.)



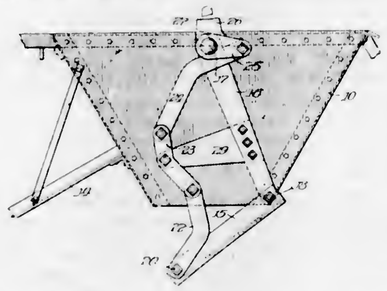
1. The combination with hat forming dies, of stretching devices spaced apart around said dies and including means to grip the material of the hat and stretch the same, and means disposed in the path of movement of the movable die and adapted to operate said first-named means.

2. The combination with hat forming dies, of stretching devices spaced apart around said dies and including means to grip the material of the hat and stretch the same, means disposed in the path of movement of the movable die and adapted to operate said first-named means, and means for restoring the first and second-named means to normal position succeeding the elevation of the movable die.

3. The combination with hat forming dies, of stretching devices disposed about said dies including means adapted to grip the material of the hat automatically in the downward movement of the movable die and stretch such material,

means for securing said devices to the base of the lower die, and means for adjusting said devices to proper positions relatively to the dies.

1,222,603. LOADING-HOPPER. LYLE CLAPPER, Two Harbors, Minn. Filed Sept. 25, 1916. Serial No. 122,078. (Cl. 193—46.)



1. In a loading device, the combination of a hopper, a closure for the bottom opening therein, a pair of links for supporting said closure, one of said links being articulated, and a lever for first breaking said articulated link and then acting to bodily move said closure transversely of the opening, substantially as described.

2. In a device of the class described, the combination of a container having a bottom opening, a closure for said opening, a pair of links for supporting said closure, one of said links being articulated and the other link being rigid, and means constructed to first engage said articulated link and break the same, then to engage said rigid link and to move said closure bodily transversely of the opening, substantially as described.

3. In a device of the class described, the combination of a container having a bottom opening, a closure for said opening, a pair of links for supporting said closure, one of said links being composed of a plurality of parts which are hinged together, a bracket fixed to one of said links and providing a fulcrum for one of the parts of the divided link, and means for first acting upon said divided link to permit of the dropping of one edge of the door or closure, then acting upon the other link to cause the bodily movement of the door, substantially as described.

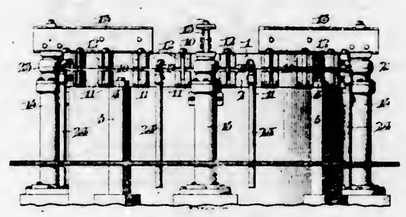
4. In a device of the class described, the combination of a hopper having a bottom opening, a horizontal door for said opening, a pair of links at each side of said hopper, each pair of links having a common pivotal point near the upper portion of the hopper, one of each of said pairs of links being articulated, and the other of each of said pairs of links being solid, and a lever acting to break both of said articulated links, then to engage said solid link and bodily move the door away from the opening, substantially as described.

5. In a loading device, the combination of a hopper, a door for the bottom opening therein, a rigid link for supporting one side of said door, a compound link for supporting the other side of the door, said compound link being composed of at least three supplementary links, and a bracket carried by said rigid link and providing a fulcrum for one of said supplementary links, substantially as described.

[Claim 6 not printed in the Gazette.]

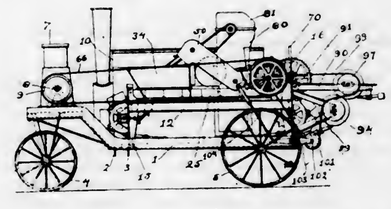
1,222,604. MECHANISM FOR CURING LONG-LENGTH RUBBER HOSE. CHARLES A. DANIEL, Philadelphia, Pa. Filed Aug. 5, 1912. Serial No. 713,247. (Cl. 18—17.)

A mechanism for curing long lengths of rubber hose, comprising in combination opposed horizontally disposed upper and lower plates, the opposed faces of said plates being formed with complementary spiral grooves for receiving the hose, heating means for each plate, means for introducing fluid pressure into said hose, and elevating means for the upper plate to permit the bodily placing or removal of the hose in the groove of the lower plate



said means comprising a plurality of arms secured to and extending beyond the periphery of the upper plate, and pressure actuated plungers cooperating with said outwardly extending ends of said arms.

1,222,605. PAVING-MIXING MACHINE. WILLIAM F. DAVIS, Kansas City, Mo. Filed June 15, 1914. Serial No. 845,116. (Cl. 94—6.)



1. In paving mixing machines the combination of a traveling conveyer, a hopper arranged to supply said conveyer with material, a roller arranged to roll material in said conveyer, a rotary scraper arranged above said conveyer, and means to deliver binder to said conveyer.

2. In paving mixing machines, the combination of a traveling conveyer arranged to receive material, and a scraper arranged to remove a portion of the material from said conveyer for the purpose of regulating the quantity of material remaining in said conveyer, a rotary scraper arranged to scrape material from said conveyer, and means to deliver binder to said material and rotary scraper.

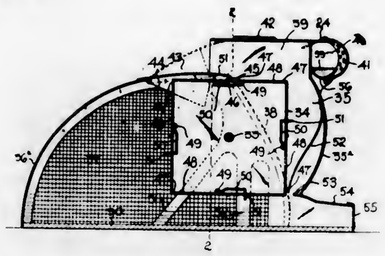
3. In paving mixing machines, the combination of a traveling conveyer, a hopper arranged adjacent to said conveyer, a roller arranged to compact material in said conveyer, a scraper arranged to scrape material in said conveyer to a certain depth, a conveyer arranged to convey the material removed by said scraper to said hopper, a rotary scraper arranged to scrape material from said conveyer, and means to supply binder to said scraper.

4. In paving mixing machines, the combination of a traveling conveyer, a rotary scraper arranged to scrape material from said conveyer, means to deliver binder to said scraper, said rotary scraper journaled in a swinging yoke so pivoted as to allow said rotary scraper to rise when the scraping edges of said scraper strike material they will not cut.

5. In paving mixing machines, the combination of a traveling conveyer, a rotary scraper arranged to scrape material from said conveyer, means to deliver binder to said scraper, and said rotary scraper journaled in journal boxes that will allow said scraper to move away from and toward said conveyer.

[Claims 6 to 9 not printed in the Gazette.]

1,222,606. RAT-TRAP. JOHN T. DANIEL, Columbia, Tenn. Filed July 1, 1916. Serial No. 107,100. (Cl. 43—24.)



1. A trap comprising a hollow body, a housing having side walls extending downward into the body and above the body and connected by an arched portion forming a passageway, the rear of the housing being closed by a wall, a pivoted supporting member disposed within said housing below the arched portion thereof, a latch holding the member in a set position, a treadle engaging the latch to release it and thereby release the supporting member to permit it to turn and discharge through the housing into the body of the trap, means for supporting bait at the rear end of the housing below the arched portion, and suitable baffles disposed on the rear wall of the housing for preventing the trapped animals from climbing up the walls of the housing.

2. A trap comprising a hollow body, a housing disposed in and projecting above the hollow body and comprising side walls, a top wall and a back wall, a bait receptacle mounted upon the rear wall adjacent the top wall, a pivoted supporting member mounted between the side walls of the housing and extending through the housing toward the rear end thereof and movable in a plane parallel to the side walls of the housing, a latch holding said member in a horizontal position, and a treadle engaging the latch to release it and thereby release the supporting member and permit the discharge of the animal through the housing into the body of the trap.

3. A trap of the character described including a chamber, a rotatable element having a plurality of treadles disposed in succession on the element, a hollow housing discharging into the chamber and having its mouth disposed above and arching over a treadle when the rotatable member is in a set position, said rotatable element rotating in a plane parallel to the side walls of the housing, means for latching the rotatable element in a set position, means actuated by the weight of an animal on the treadle releasing said latching means, and bait supporting means disposed in said housing inward of the mouth thereof and beyond said rotatable element.

4. A trap of the character described including a hollow body, a shaft extending through the hollow body, a rotatable element mounted upon said shaft and comprising a plurality of supporting members disposed in angular relation to each other, a hollow housing open at its upper end and at its lower end discharging into the body, said supporting members being adapted to be disposed successively in said open end to partly fill the same, trip levers mounted in connection with each supporting member and having tread plates connected thereto at one end, a plate hinged to the upper end of the body extending partly across the opening thereof and normally resting on and having latching engagement with the supporting member and adapted to be moved from its latching engagement by a depression of a corresponding tread plate and the corresponding actuation of the trip lever thereby permitting a rotation of the rotatable element, a guide-way or duct discharging into the lower portion of the body and having its mouth disposed to arch over the tread plate when the rotatable element is latched, and bait holding means disposed in said guide-way.

5. In a trap of the character described, a hollow body, a platform pivotally mounted upon the hollow body, and latching means preventing the rotation of the platform upon its pivot, said platform having an extension formed with an upwardly projecting member engaging said latching means, the depression of the forward end of the platform under the weight of an animal causing the upward movement of the rearward extension and the release of said latch.

1,222,607. STYLUS-HOLDER FOR TALKING-MACHINES. OMAR C. DE SELMS, Attica, Ind. Filed Aug. 7, 1916. Serial No. 113,679. (Cl. 274—28.)



1. The combination, with the stylus-holder of a talking-machine having a stylus receiving socket, of a removable arm extending laterally thereof, and means for securing the arm to said holder comprising a pin fixed in the arm and entering the stylus-socket in the stylus-holder, said arm having means remote from said pin for holding a stylus and means independent of the pin to keep the arm from swinging about the pin.

2. The combination, with the stylus-holder of a talking-machine having a stylus-receiving socket and a set screw, of a removable arm extending laterally of the stylus-holder, a fixed pin in the arm entering the stylus-socket where it is secured by said set-screw, the adjacent end of the arm being bent and bifurcated forming arms which straddle the set screw, said arm having means remote from the fixed pin for holding a stylus.

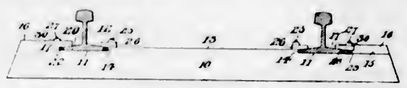
1,222,608. CATALYTIC DEVICE. JAMES DEWAR, London, and ADOLF LIEBMANN, Weybridge, England, assignors to The Procter and Gamble Company, Cincinnati, Ohio, a Corporation of Ohio. Filed June 16, 1915. Serial No. 34,506. (Cl. 87—12.)

1. For use in the hydrogenation of unsaturated fats or oils in presence of a catalyst, the combination of a support, and a fibrous material of organic origin attached thereto, said fibrous material impregnated with the catalyst.

2. For use in the hydrogenation of unsaturated fats or oils in presence of a catalyst, the combination of a support mounted for rotation, and a fibrous material attached to said revoluble support, said fibrous material impregnated with the catalyst.

3. For use in the hydrogenation of unsaturated fats or oils in presence of a catalyst, the combination of a support mounted for rotation, and a fibrous material of organic origin attached to said revoluble support, said fibrous material impregnated with the catalyst.

1,222,609. METALLIC TIE AND RAIL-FASTENER. FRANCISSEK DURIEL, ADAM JURKIEWICZ, and JAN SITKO, Fort Wayne, Ind. Filed Jan. 3, 1917. Serial No. 140,443. (Cl. 238—5.)

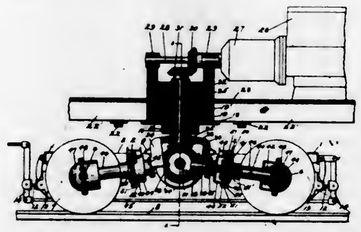


1. A railway tie of channel formation having transverse seating depressions formed therein and cut-away diagonally-opposite corner portions forming corner blocks adjacent the said seats with inner edges overlying the latter, the tie having curved serrated portions at the inner and outer sides of the said seats and being further provided with hold-fast receiving openings.

2. A metallic railway tie substantially U-shaped in cross-section having transverse rail receiving seats, the central portion of the upper face of the said tie having curved serrated end faces at the inner sides of said seats, blocks arranged at the diagonally opposite corners of the tie having sharpened inner edges overlying the said seats forming flange-receiving recesses therebeneath, the portions of said blocks at the inner ends of said recesses being serrated in arcuate arrangement.

3. A metallic railway tie substantially U-shaped in cross-section having transverse rail receiving seats, the central portion of the upper face of the said tie having curved serrated end faces at the inner sides of said seats, blocks arranged at the diagonally opposite corners of the tie having sharpened inner edges overlying the said seats forming flange-receiving recesses therebeneath, the portions of said blocks at the inner ends of said recesses being serrated in arcuate arrangement, the said tie having hold-fast receiving openings therethrough at opposite sides of the said seats furnished with a plurality of adjusting notches, bolts adjustably arranged through said openings, and flange engaging plates upon the said bolts.

1,222,610. DRIVING MEANS FOR MOTOR-DRIVEN RAILWAY-CARS. SAMUEL J. DUNKLEY, Kalamazoo, Mich. Filed Mar. 1, 1916. Serial No. 81,498. (Cl. 105—238.)



1. In a motor driven railway car, the combination with the car body, truck, bolsters and king bolt connections of an engine carried on the floor of the car, a driving shaft, suitable transmission connections from the engine to said driving shaft, a vertical connecting shaft disposed and journaled centrally in the king bolt of the car, beveled gears connecting the driving shaft with said vertical shaft, a gear housing disposed below the truck bolster, propeller shafts journaled in the said housing, a train of gears between the said vertical shaft and the said propeller shafts, universal joints with slip connections in said propeller shafts, and beveled gear connections between the propeller shafts and the car axles, coacting for the purpose specified.

2. In a motor driven railway car, the combination with the car body, truck, bolsters and king bolt connections, of a vertical shaft centrally disposed and journaled within the king bolt structure, driving means for the upper end of the shaft, and flexible driving connections from the lower end of the shaft to the car axles, as specified.

3. In a motor driven railway car, the combination with the car body, truck, bolsters and king bolt connections, of a vertical shaft centrally disposed and journaled within the king bolt structure, driving means for the upper end of the shaft, a gear housing disposed below the truck bolster, propeller shafts journaled in the said housing, a train of gears between the said vertical shaft and the said propeller shafts, universal joints with slip connections in said propeller shafts, and beveled gear connections between the propeller shafts and the car axles, coacting for the purpose specified.

4. In a motor driven railway car, the combination with the car body, truck, bolsters and king bolt connections of an engine carried on the floor of the car, a driving shaft, suitable transmission connections from the engine to said driving shaft, a vertical connecting shaft disposed and journaled centrally in the king bolt of the car, beveled gears connecting the driving shaft with said vertical shaft, and flexible driving connections from the lower end of the shaft to the car axles, as specified.

5. In a motor driven railway car, a vertical shaft with driving means at its upper end centrally disposed in the truck of said car, a gear housing surrounding the lower end thereof, propeller shafts with universal joints and slip connections, one end of each journaled in the said housing, a train of gears connecting the same to the vertical shaft, and beveled gearings connecting the said propeller shafts to the car axles, as specified.

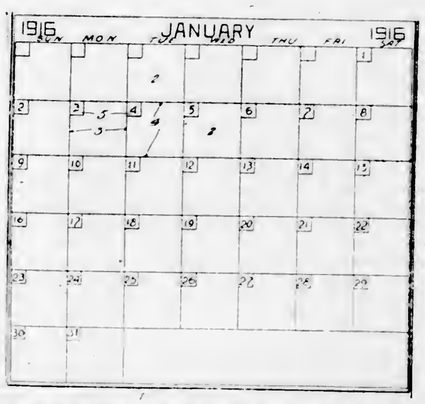
[Claims 6 and 7 not printed in the Gazette.]

1,222,611. FUNNEL. FRANCIS F. EMORY, Philadelphia, Pa. Filed Oct. 18, 1913. Serial No. 796,007. (Cl. 226—33.)



In a funnel, an annular supporting ledge fixedly secured to and within the funnel, a partition resting on said ledge, means penetrating the partition and engaging the ledge to removably fasten the partition in place, said partition being provided with an opening at one side of its center; a valve rod mounted to operate in a true vertical plane and concentric to said opening, bearings for said rod, a valve on said rod movable therewith to close said opening, a support rod mounted to operate in a true vertical plane and at one side of said valve rod, bearings for said support rod, a float on said support rod, a link pivoted to said support rod, and a bell crank lever pivotally fastened at one end to said link and engaging at its opposite end with said valve rod to operate said valve, the mentioned connection between said valve rod and said support rod precluding a binding tendency of the said two rods with their respective bearings.

1,222,612. MEMORANDUM-CALENDAR. PHILIP J. EVANS, Malad City, Idaho. Filed Aug. 4, 1916. Serial No. 113,151. (Cl. 40—121.)

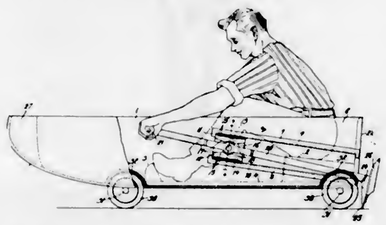


1. In a memorandum calendar, the combination of a sheet having vertical and horizontal parallel arranged

intersecting lines thereon forming memorandum spaces, means for indicating the days of the week arranged at the upper end of the sheet, and numbers indicating the days of the month arranged in certain of the corners of said memorandum spaces.

2. In a memorandum calendar, the combination of a sheet having vertical and horizontal parallel arranged intersecting lines thereon forming squares for memorandum spaces, means for indicating the days of the week arranged at the upper end of the sheet, smaller blocks formed in one of the upper corners of said blocks, portions of the sides of said larger blocks forming sides for the smaller blocks, the smaller blocks providing spaces for indicating the days of the month.

1,222,613. MANUALLY-PROPELLED VEHICLE. JOHN BAPTISTE FELICETTI, Philadelphia, Pa. Filed Feb. 27, 1917. Serial No. 151,186. (Cl. 208—38.)



1. A manually propelled vehicle, comprising a hollow body portion, means on said body portion forming guideways, blocks slidable within said guideways, levers pivotally connected to said blocks, handles on said levers, and impact members on said levers, substantially as described.

2. A manually propelled vehicle comprising a hollow body portion, rails secured to the outer surface of said body portion and spaced apart to provide guideways, blocks slidable between said rails, levers pivotally connected to said blocks, handles on said levers arranged at one side of their pivotal connection with said blocks, and pointed impact members on said levers and arranged at the opposite side of said pivotal connection, substantially as described.

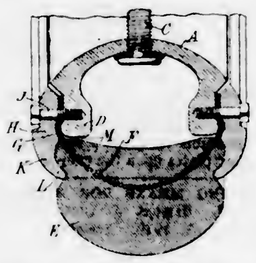
3. A manually propelled vehicle comprising a hollow body portion, rails secured to the outer surface of said body portion and spaced apart to provide guideways, said rails having longitudinally extending grooves formed in their oppositely disposed surfaces, blocks slidable between said rails and having recesses formed in their edges adjacent the grooves in said rails, anti-friction rollers mounted in said recesses and being designed to roll within said grooves in the rails, levers pivotally connected to said blocks, handles on said levers, and impact portions on said levers, substantially as described.

4. A manually propelled vehicle comprising a hollow body portion, rails secured to the outer surface of said body portion and spaced apart to provide guideways, said rails having longitudinally extending grooves formed in their oppositely disposed surfaces and arranged at an incline, blocks slidable between said rails and having recesses formed in their edges adjacent the grooves in said rails, anti-friction rollers mounted in said recesses and being designed to roll within said grooves in the rails, levers pivotally connected to said blocks, handles on said levers, and impact portions on said levers, substantially as described.

5. A manually propelled vehicle including a body portion, blocks slidable relatively to said body portion, said blocks having recesses formed therein, said recesses being shaped to provide converging edges, levers pivotally mounted on said blocks and having portions extending within said recesses, said levers having impact portions, handles on said levers, said converging edges on said block being operative to form stops for limiting the pivotal movement of the levers, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,222,614. VEHICLE WHEEL AND TIRE. FRANK H. FIELD, Passaic, N. J. Filed July 13, 1914. Serial No. 850,725. (Cl. 152—10.)



1. A vehicle wheel including in combination a concave rim, a rubber tire E of considerable thickness bridging the edges of said rim so as to convert the concavity thereof into an air chamber and having thin flexible flaps G, said flaps engaging and being fastened to the opposite sides of the rim with space to permit a slight radial movement between the opposed edges of the tire and of the rim respectively.

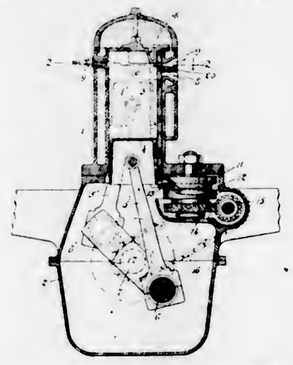
2. A vehicle wheel including in combination a concave rim, a rubber tire E of considerable thickness bridging the edges of said rim so as to convert the concavity thereof into an air chamber and extending well beyond the rim, an apron F of fabric embedded in said tire extending continuously from one side thereof to the other and beyond the sides to form thin flexible flaps G, the portion of said tire beyond said apron having side flanges L, and clamping rings H clamping said flaps against the rim with space to permit a slight radial movement between the opposed edges of the tire and of the rim respectively, said clamping rings having inwardly bent outer edges engaging said flanges L to limit such outward movement of the tire.

1,222,615. INTERNAL-COMBUSTION ENGINE. MARTIN FISCHER, Zurich, Switzerland, assignor to Fischer Motor Corporation, New York, N. Y., a Corporation of New York. Filed Mar. 19, 1915. Serial No. 15,676. (Cl. 123—59.)

1. In an internal combustion engine having two parallel cylinders and a pair of pistons connected 180° apart to a common crank shaft, a pair of axially adjacent ports for each cylinder, a longitudinally slidable valve for each cylinder between the cylinder and the piston and having a port to register with either cylinder port, a single cam having its axis parallel to the axes of the cylinders and arranged to actuate both valves, and means for driving said cam in correspondence with the crank shaft for similarly setting the two valves when their pistons are in corresponding positions.

2. In an internal combustion engine having two parallel cylinders and a pair of pistons connected 180° apart to a common crank shaft, a pair of axially adjacent ports for each cylinder, a longitudinally slidable valve for each cylinder between the cylinder and the piston and having a port to register with either cylinder port, a cam having its axis parallel to the axes of the cylinders and a peripheral groove common to and engaged with both valves, and means for driving said cam in correspondence with the crank shaft.

3. In an internal combustion engine having two parallel cylinders and a pair of pistons connected 180° apart to a common crank shaft, a pair of axially adjacent ports for each cylinder, a longitudinally slidable valve for each cylinder between the cylinder and the piston and having a port to register with either cylinder port, each valve also having a projecting pin, a cam having its axis parallel to the axes of the cylinders and provided with a groove with which both of said projecting pins are directly engaged so as to actuate the valves, and means for driving said cam in correspondence with the crank shaft.



4. In an internal combustion engine having two parallel cylinders and a pair of pistons connected 180° apart to a common crank shaft, a pair of axially adjacent ports for each cylinder, a longitudinally slidable valve for each cylinder between the cylinder and the piston and having a port to register with either cylinder port, each valve having a projecting pin, a cam provided with a groove with which both of said projecting pins are directly engaged for actuating the valves, and means for driving said cam in correspondence with the crank shaft.

1,222,616. CUTTING-BLOCK AND METHOD OF MAKING THE SAME. WILLIAM R. FORSYTH, Swampscott, Mass. Filed Aug. 21, 1916. Serial No. 116,186. (Cl. 144—309.)



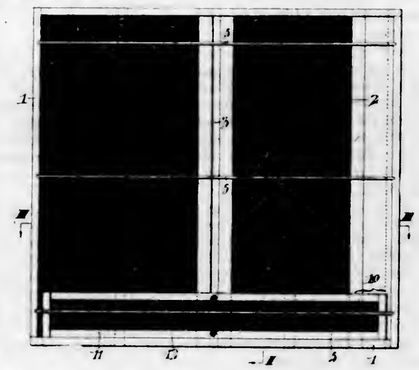
1. The hereindescribed method of making a cutting-block, comprising the following steps of paring a wooden billet circumferentially to produce thin flexible sheet-stock having the ends of the grain at opposite edges thereof, and gluing together, in face-to-face relation, a plurality of layers of such stock arranged with the grain of all such layers substantially parallel.

2. The hereindescribed method of making a cutting-block, comprising the following steps of reducing a wooden billet to thin flexible sheet-stock having the ends of the grain at opposite edges thereof, and gluing together, in face-to-face relation, a plurality of layers of such stock arranged with the grain of all such layers substantially parallel.

3. A cutting-block consisting of a plurality of layers of thin sheet-wood arranged to stand on edge, said layers being glued to each other, and the grain or fibers thereof extending from top to bottom, substantially as described.

1,222,617. EGG-TURNER. ISAIAH M. FRYE, Harrisonburg, Va. Filed Oct. 21, 1915. Serial No. 57,032. (Cl. 119—44.)

1. A tray for incubators comprising, an outer frame, a surface on which eggs are supported, and relatively narrow means adapted to slide across the top of said surface beneath the eggs, whereby the eggs are successively turned a few at a time.



2. A tray for incubators comprising, an outer frame, a surface on which eggs are supported having a slot extending lengthwise thereof, and a narrow strip extending across the width of said surface, engaging said slot and adapted to slide lengthwise of said surface.

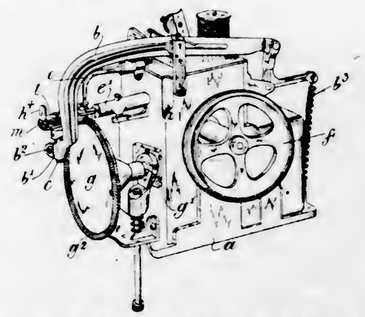
3. A tray for incubators comprising an outer frame; a surface on which eggs are supported having a lengthwise slot; a narrow strip extending across the width of said surface, adapted to slide lengthwise of said surface; and means attached to said strip engaging said slot, whereby said strip is always held at right angles to said slot.

4. A tray for incubators comprising, an outer frame, a surface on which eggs are supported having a lengthwise slot, a narrow strip extending across the width of said surface, and means attached to said strip engaging said slot, said means extending through said slot and below the tray, whereby the strip may be moved across the length of said surface.

5. A tray for incubators comprising an outer frame, a surface on which the eggs are supported having a lengthwise slot, a narrow strip extending across the width of said surface, a cross head attached to said strip adapted to engage said slot, and a handle attached to said cross head depending below said tray, whereby the strip may be moved lengthwise of said surface.

[Claims 6 to 9 not printed in the Gazette.]

1,222,618. SEWING-MACHINE. WILLIAM W. GAMMONS, Jersey City, N. J. Filed Sept. 21, 1915. Serial No. 51,745. (Cl. 112—31.)



1. In a sewing machine for sewing two pieces of fabric with an over-edge joint, a presser wheel, a needle and a single feed wheel serrated on opposite faces for engagement with both pieces of fabric and disposed therebetween.

2. In a sewing machine for sewing two pieces of fabric with an over-edge joint, a needle, a single feed wheel serrated on opposite faces for engagement with both pieces of fabric and disposed therebetween, and means for pressing the fabric into feeding engagement with opposite faces of the feed wheel, respectively.

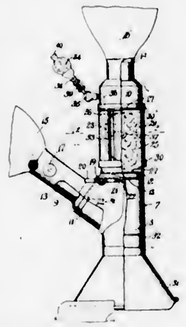
3. In a sewing machine for sewing two pieces of fabric with an over-edge joint, a needle, a single feed wheel for both pieces of fabric disposed therebetween and means for pressing the fabrics into feeding engagement with opposite faces of the feed wheel respectively, comprising a presser wheel, a presser plate mounted with the presser wheel and means to draw the plate toward the presser wheel, the wheel engaging one fabric and the presser plate engaging the other fabric.

4. In a sewing machine for sewing two pieces of fabric with an over-edge joint, a needle, a single feed wheel for both pieces of fabric disposed therebetween, means for pressing the fabrics into feeding engagement with opposite faces of the feed wheel respectively, comprising a presser wheel to engage one fabric, a presser plate mounted on the presser wheel to engage the other fabric and a spring to draw the plate yieldingly toward the presser wheel, and means to maintain the presser wheel in yielding engagement with the fabric.

5. In a sewing machine for sewing two pieces of fabric with an over-edge joint, a presser wheel, a needle, a single vertically disposed feed wheel for both pieces of fabric disposed therebetween, serrations on opposite faces of the feed wheel adjacent its periphery to engage the fabrics and means to adjust the wheel vertically with respect to the juxtaposed edges of the fabrics.

[Claims 6 to 11 not printed in the Gazette.]

1,222,619. ANESTHETIC-INHALER. GEORGE W. GAY, Corona, N. Y. Filed May 31, 1916. Serial No. 100,978. (Cl. 128—13.)



1. An anesthetic inhaler comprising a tubular body having an outlet passage in the lower portion thereof and a branch passage opening into said outlet passage, a face mask applied to the lower end of said outlet passage, an etherizing chamber in the tubular body above the point of entry of the branch passage provided with a free air inlet, a valve controlling entry of the air in said free air inlet, valve seats arranged in adjoining relation at the entrance of the branch passage into the outlet passage and below the etherizing chamber and a valve pivoted between said valve seats and arranged to coöperate with the respective valve seats when swung in opposite directions.

2. An anesthetic inhaler comprising a tubular body having an opening in one side thereof for insertion of an absorbent, screens in said tubular body above and below said opening for retaining said absorbent in position and defining an etherizing chamber within the tubular body, a valve sleeved on the tubular body and movable thereon to cover the opening therein more or less to thereby regulate admission of free air through said opening, a face mask applied to the end of the tubular body, a branch passage opening into the tubular body at a point above the face mask and below the etherizing chamber, valve seats at the end of said branch passage and at the end of the etherizing chamber and a single valve mounted for engagement with the respective valve seats.

3. An anesthetic inhaler comprising a tubular body having an opening in one side thereof for insertion of an absorbent, screens in said tubular body above and below said opening for retaining said absorbent in position and defining an etherizing chamber within the tubular body, a valve sleeved on the tubular body and movable thereon to cover the opening therein more or less to thereby regulate admission of free air through said opening, a face mask applied to the end of the tubular body, an anesthetic reservoir mounted on the tubular body above said sleeved valve and a supply passage extending from the reservoir downward into the etherizing chamber.

4. An anesthetic inhaler comprising a tubular body having an outlet passage and gas and ether passages discharging into said outlet passage, a valve pivoted at the junction of said gas and ether passages with said outlet passage and arranged when swung in opposite directions to control said gas and ether passages, and etherizing chamber in the ether passage having a free-air opening in one side thereof and a readily operable valve sleeved over the tubular body and controlling said free-air opening.

5. In combination, an anesthetic inhaler provided with an etherizing chamber, an ether container, a ball joint supporting said ether container on the inhaler and a supply passage leading from said ball joint to said etherizing chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,222,620. SIGHTING AND RANGE-FINDING DEVICE FOR FIREARMS. THOMAS FRANCIS GAYNOR, Brooklyn, N. Y., and FREDERICK GRIFFIN, London, England. Filed Feb. 23, 1916. Serial No. 79,963. (Cl. 33—47.)



1. A sighting and range finding device for a firearm, consisting of a diaphragm provided with a symmetrically shaped window of definite dimensions located centrally therein, and having a dark border around the window, substantially as described.

2. A sighting and range finding device for a firearm, consisting of a diaphragm provided with a symmetrically shaped window of definite dimensions located centrally therein and center indicators radiating therefrom, and having a dark border around the window.

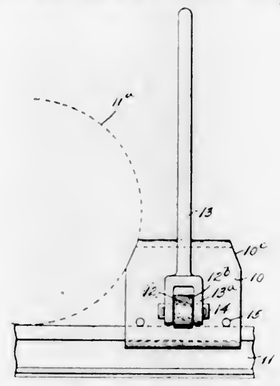
3. A sighting and range finding device for a firearm, consisting of a diaphragm provided with a symmetrically shaped open window of definite dimensions located centrally therein and center indicators consisting of slits in the diaphragm radiating from the window, which has a dark border.

4. A sighting and range finding device for a firearm, consisting of a diaphragm provided with a symmetrically shaped window of definite dimensions located centrally therein, and having a dark border around the window, and being provided with means by which the device can be separably and adjustably attached to the firearm at the foresight position thereon and in sighting alinement with the ordinary foresight device thereon, and so that it can be used as the foresight point of the firearm either with or without the ordinary foresight thereon, as desired, for range finding or aiming the firearm.

5. In combination with a firearm, a sighting and range finding device consisting of a diaphragm provided with a symmetrically shaped window of definite dimensions located centrally therein, and having center indicators radiating in horizontal and vertical positions from the window, by means of which when the device is properly secured to the firearm the sighting line can be indicated vertically over the axis of the barrel of the firearm, and being provided with means by which, the device can be properly and securely attached to the firearm at the foresight position thereon.

[Claims 6 to 16 not printed in the Gazette.]

1,222,621. RAIL-CLAMP. ROBERT P. GREENLEAF, Cleveland, Ohio, assignor to Frank Billings, Cleveland, Ohio. Filed Sept. 3, 1914. Serial No. 860,004. (Cl. 104—228.)



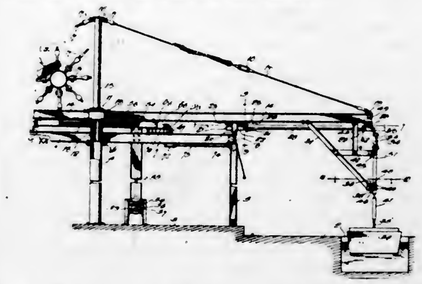
1. A rail clamp comprising a U-shaped member having clamping jaws and composed of two flat plates having at their upper edges inturned flanges which engage each other and which are spaced from the rail when the jaws are clamped thereto, a bolt passing loosely through the transverse center plane of said jaws, an adjustable nut on one end of said bolt, a clamping lever connected to the outer end of the bolt, said lever having a clamping cam for drawing the jaws toward each other to produce a clamping action on the rail when the lever is swung to a certain position.

2. A rail clamp comprising a U-shaped member composed of two parts constituting jaws adapted to clamp opposite sides of a rail, a clamping device extending through the same, a lever pivoted to the end of said device and adapted to be swung about its pivotal axis, said lever having means for drawing the two parts toward each other to produce clamping action on the rail, and devices extending between said parts and located on opposite sides of said clamping device so as to rest upon the rail being clamped.

3. A rail clamp comprising two jaws having a pair of pins extending from one member to the other and adapted to rest on the rail, a clamping bolt extending loosely through the sides of said jaws between said pins, an adjustable nut at one end of said bolt, a clamping lever pivoted to the opposite end of the bolt, said lever adapted to be swung to and from a position of parallelism with the jaws, and said lever having a cam shaped nose adapted to engage one of the jaws to draw said jaws together and produce a clamping action.

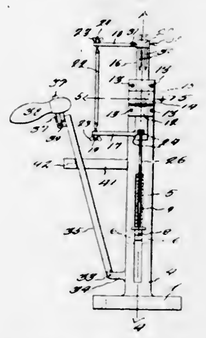
1,222,622. AMUSEMENT APPARATUS. JOSEPH GUILIANO, New Haven, Conn. Filed June 22, 1916. Serial No. 105,288. (Cl. 46—27.)

1. A device of the class described comprising a base, an annular track supported in a plane above said base, a rotary member having a plurality of radially extending arms, wheels mounted on said arms and traveling on said track for supporting said member, upright tubular guides fixed to the outer ends of said arms, rods slidable in said guides, means interposed between said wheels and said rods for imparting an up and down movement to the latter, passenger carrying devices connected to the lower ends of said rods, and means for rotating said member.



2. A device of the class described comprising a base, an annular track supported in a plane above said base, a rotary member having a plurality of radially extending arms, wheels mounted on said arms and traveling on said track for supporting said member, diagonal supporting bars secured at their upper ends to said arms at points spaced inwardly from the outer ends thereof, horizontal brace bars secured at one of their ends to the intermediate portions of said supporting bars, vertical brace bars disposed between said arms and the intermediate portions of said horizontal brace bars, upright tubular guides having means for attachment to the other ends of said supporting bars and said horizontal brace bars, rods slidable in said guides, means interposed between said wheels and said rods for imparting an up and down movement to the latter, passenger carrying devices connected to the lower ends of said rods, and means for rotating said member.

1,222,623. HEEL-TRIMMING MACHINE. FILOW DAWSON HARRIS, Griffin, Ga. Filed June 30, 1916. Serial No. 106,842. (Cl. 12—42.)



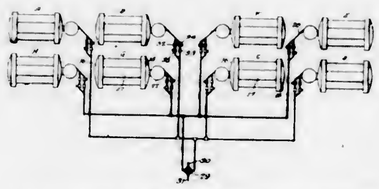
1. In a heel reducing or trimming machine, an upright having a bearing, a reciprocating member carrying a backsaw blade mounted in said bearing, a spring-tensioned pedal bar pivoted upon the upright and connected to the reciprocating member for imparting a reciprocating motion thereto, and a post pivoted to the upright and having clamping jaws to clamp a shoe, whereby the heel of the shoe may be moved toward the cutting teeth of said blade.

2. In a heel reducing or trimming machine, an upright having a bearing, a reciprocating member carrying a backsaw blade mounted in said bearing, a spring-tensioned pedal bar pivoted upon the upright and connected to the reciprocating member for imparting a reciprocating motion thereto, and a post pivoted to the upright and having

clamping jaws to clamp a shoe, whereby the heel of the shoe may be moved toward the cutting teeth of said blade, said upright having a laterally extending arm provided with a shoulder to support said pivoted post, to hold the heel of the shoe offset from the saw blade.

3. In a heel reducing or trimming machine, an upright having a vertical slot at its lower part and a lateral portion having a guide at its upper end, a reciprocating bar mounted in said guide and having laterally extending upper and lower arms, a hack-saw blade adjustably connected to the corresponding ends of said arms, said upright having a lateral arm provided with an abutment shoulder at its outer end, a post pivoted to the lower end of the upright and movable adjacent the last named arm in order to be limited in its outward movement by said abutment shoulder and having a clamp to clamp a shoe whereby the heel may be moved toward and in a line with the cutting teeth of the blade, a foot pedal pivotally mounted upon the upright and movable in the said slot and having a link connection with said bar to impart movement thereto, and spring means for elevating said pedal.

1,222,624. REVERSING-VALVE. ARTHUR G. HATCH, Duluth, Minn. Filed June 29, 1916. Serial No. 106,636. (Cl. 137—147.)



1. In a reversing system for regenerative furnaces, the combination of a plurality of valves, each including a trough adapted to contain water, a separate water container or tank connected to each trough, the trough and tank being permanently located at different elevations, means for changing the pressure in said tanks, and a valve adapted to alternately connect certain of said tanks to said pressure changing means and the remainder of said tanks to the atmosphere.

2. In a reversing valve, the combination of hollow end members, a hollow trough and a hollow diaphragm connecting said end members, means for supplying water to said trough, said means including a stationary tank located above said trough and means for alternately exhausting the pressure in said tank and connecting the same to the atmosphere, whereby the water in said tank is caused to occupy said trough and to be displaced therefrom, substantially as described.

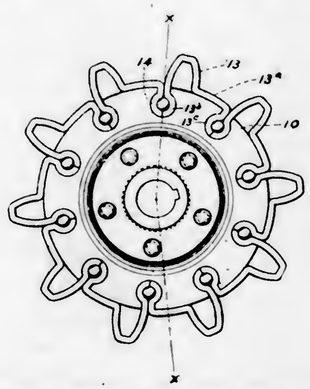
3. In a reversing system for regenerative furnaces, the combination of a plurality of valves, each including a trough adapted to contain water, a water container or tank connected to each trough, means for changing the pressure in said tanks, a valve for simultaneously connecting certain of said tanks to said pressure-changing means and the remainder of said tanks to the atmosphere, and means between each tank and said valve for controlling the size of the passage for each direction of flow of the fluid in said passage, substantially as described.

4. In a reversing valve, the combination of a trough adapted to contain water, a tank located at a different level from said trough, means for changing pressure conditions in said tank, whereby water is caused to flow from said tank into said trough and from said trough into said tank, said means including a pressure-changing device and means in the line between said tank and said pressure-changing device including a by-pass, check valves in said line and in said by-pass and needle valves also in said line and said by-pass, substantially as described.

5. In a reversing valve, the combination of a pair of hollow heads, a hollow diaphragm connecting said heads, a hollow trough connecting said heads, said diaphragm projecting into said trough, a stationary tank located above said trough and connected to the same, said tank being connected to a pressure-changing device whereby the water is alternately caused to occupy said tank and said trough, an overflow device for controlling the height of the water in said trough and means for maintaining the supply of water in said trough, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,222,625. SPROCKET-WHEEL. WALTER HAY, Seville, Ohio. Filed Aug. 11, 1913. Serial No. 784,160. (Cl. 74—31.)



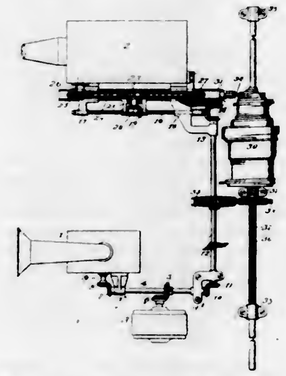
1. In a sprocket wheel, the combination of a body comprising disks, each of said disks having a hub opening, and each disk having a curved portion to provide an annular channel when the disks are in engagement with each other, a plurality of independent tooth sections, each tooth section having ends extending toward the hub opening, each end having a curved portion whereby when the adjacent ends of the tooth sections are brought together, the curved portions form circular portions, a pin extending through each of the annular channel between the disks and through circular portions for holding the teeth between the disks, and means for securing the disks together adjacent the hub openings.

2. In a sprocket wheel, the combination of a body, a plurality of independent tooth sections formed with chain-supporting extensions, each tooth section having its ends extended into the body, each end having a curved portion whereby when the adjacent ends of the tooth sections are brought together, the curved portions form circular or tubular portions, and a pin extending through each of the circular portions for securing the tooth sections to the body.

3. In a sprocket wheel, the combination of a body, a plurality of independent tooth sections, each tooth section having its ends extended into the body, each end having a bent portion whereby when the adjacent ends of the tooth sections are brought together, the bent portions form tubular portions, and means coöperating with the tubular portions for securing the tooth sections to the body.

1,222,626. APPARATUS FOR PRODUCING AUDIBLE MOVING PICTURES. HENRY HESS, Philadelphia, Pa. Filed June 20, 1913. Serial No. 774,795. (Cl. 88—16.2.)

1. In a device of the character described the combination of a phonographic apparatus, a moving picture apparatus, driving means for operating the same to reproduce their respective records simultaneously and non-synchronously, and a correcting member of predetermined functional action operated by the driving means and acting automatically to vary the speed of one of the records predeterminately in relation to that of the other record to effect the reproduction of said records in synchronism.



2. In a device of the character described the combination of a phonographic apparatus, a moving picture apparatus, driving means for operating the same to reproduce their respective records simultaneously and non-synchronously, and a correcting member of predetermined functional action operated by the driving means and acting to automatically vary the speed of the picture record predeterminately in relation to that of the phonographic record to effect the reproduction of said records in synchronism.

3. In a device of the character described the combination of a phonographic apparatus, a moving picture apparatus, driving means for operating the same to reproduce their respective records simultaneously and non-synchronously, and a rotary correcting member of predetermined functional action, operated by the driving means and acting in its rotation to automatically vary the speed of one of the records predeterminately in relation to that of the other record to effect the reproduction of said records in synchronism.

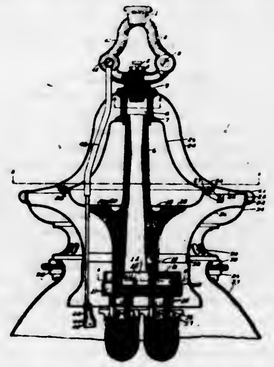
4. In a device of the character described the combination of a phonographic apparatus, a moving picture apparatus, driving means for operating the same to reproduce their records simultaneously, and a rotary cam member operated by the driving means and provided with a cam whose contour represents inaccuracies in synchronism, said cam acting in its rotation to automatically vary the speed of one of the records predeterminately in relation to that of the other record to effect the reproduction of said records in synchronism.

5. In a device of the character described the combination of a phonographic apparatus, a moving picture apparatus, driving means for operating the same to reproduce their records simultaneously, and a rotary cam member movable in the direction of its axis and operated by the driving means, said cam member provided with a cam whose contour represents inaccuracies in synchronism, said cam acting in its movements to automatically vary the speed of one of the records predeterminately in relation to that of the other record to effect the reproduction of said records in synchronism.

[Claims 6 to 10 not printed in the Gazette.]

1,222,627. GAS-LAMP. ALFRED H. HUMPHREY, New York, N. Y., assignor to General Gas Light Company, Kalamazoo, Mich. Filed Aug. 9, 1915. Serial No. 44,626. (Cl. 67—94.)

1. In a gas lamp, the combination of a supply pipe coupling member provided with a delivery nozzle, an air inlet member disposed on said coupling member to embrace said nozzle, a mixing tube disposed with its upper end in said inlet member, an inverted burner mounted on said mixing tube, a deflector plate through which said mixing tube is disposed having an upwardly facing annular shoulder, the portion of the plate beyond the shoulder being inclined downwardly and having a downturned rim at its outer edge, said plate having flue discharge openings therein on the outer side of its said shoulder, a downwardly flaring air supply casing arranged with its upper end engaging said coupling member, and its lower end disposed within said shoulder of said plate, said casing having an air inlet opening at its lower end, there being an unperforated portion of said plate below said inlet opening to guard the same from the products of combustion, a downwardly flaring partition arranged with its upper end engaging said air inlet member, its lower end being provided with an out-turned flange resting upon and secured to said plate, an upwardly flaring flue member embracing said burner, the upper end of said flue member being telescoped with the downwardly projecting rim on said plate, and an upwardly flaring casing member having a bead-like channel at its upper edge embracing the outer edges of said plate and flue member and having a globe supporting collar at its lower end and secondary air inlet openings above said collar.



2. In a gas lamp, the combination of a supply pipe coupling member provided with a delivery nozzle and having a shoulder concentric with said nozzle, an air inlet member disposed on said coupling member to embrace said nozzle and having side air inlet openings and a shoulder at its lower end, a mixing tube disposed with its upper end in said inlet member and having an annular flange thereon, an inverted burner mounted upon said mixing tube, a deflector plate mounted on said mixing tube flange, said plate having flue discharge openings therein, a downwardly flaring air supply casing disposed with its upper end between the shoulder of said coupling member and said air inlet member and its lower end on said plate within the flue discharge openings thereof, said casing having an air inlet opening at its lower end, there being an unperforated portion of said plate below said inlet opening to guard the same from the products of combustion, a downwardly flaring partition arranged with its upper end engaging said shoulder on said air inlet member and its lower end on said plate, and a flue member embracing said burner and secured to said plate on the outer side of its flue openings.

3. In a gas lamp, the combination of a gas supply pipe coupling member provided with a downwardly directed gas delivery nozzle, an air inlet member disposed on said coupling member to embrace said nozzle, a mixing tube disposed to coact with said inlet member, an inverted burner mounted upon said mixing tube, a deflector through which said mixing tube is disposed, a downwardly flaring air supply casing having an air inlet opening at its lower end disposed to inclose said air inlet member and with its lower end upon said deflector, said deflector having

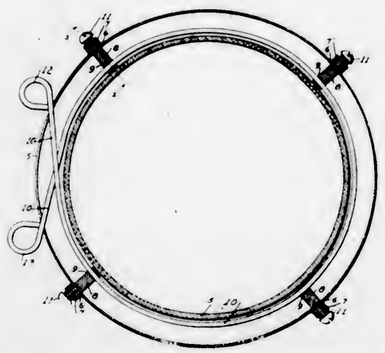
flue discharge openings therein at the outside of said casing, there being an imperforate portion of said deflector adjacent said inlet opening constituting a shield therefor, a downwardly flaring partition arranged with its upper end below the openings of said air inlet member and its lower end secured to said deflector, an upwardly flaring flue member embracing said burner and connected to said deflector at the outside of its said flue openings, and a casing member depending from said deflector and having a globe supporting collar at its lower end and secondary inlet openings above said collar.

4. In a gas lamp, the combination of a gas supply pipe coupling member provided with a downwardly directed gas delivery nozzle, an air inlet member disposed on said coupling member to embrace said nozzle, a mixing tube disposed to coact with said inlet member, an inverted burner mounted upon said mixing tube, a deflector mounted on said mixing tube, an air supply casing having an air inlet opening at its lower end disposed to inclose said air inlet member with its lower end upon said deflector, said deflector having flue discharge openings therein at the outside of said casing, there being an imperforate portion of said deflector adjacent said inlet opening constituting a shield therefor, a flue member embracing said burner and connected to said deflector at the outside of its said flue openings, and a casing member depending from said deflector and having a globe supporting collar at its lower end and secondary inlet openings above said collar.

5. In a gas lamp, the combination of a downwardly directed gas delivery nozzle, an inverted burner comprising a mixing tube disposed to receive gas from said nozzle and provided with a primary air inlet at its upper end, a downwardly flaring primary air supply casing embracing said mixing air inlet and having an air inlet opening adjacent its lower end, a deflector plate on said mixing tube disposed at the lower end of said casing to close and to project beyond the same and having flue discharge openings in its projecting portion, said plate having an imperforate portion below the said casing air inlet for deflecting the products of combustion therefrom, an upwardly flaring flue member disposed below said deflector plate to embrace the said discharge openings thereof, an outer casing disposed below said deflector plate to embrace said flue member, and a globe mounted on said outer casing to embrace said burner from below, said outer casing being provided with secondary air inlets above the globe.

[Claims 6 to 16 not printed in the Gazette.]

1,222,628. GLOBE-HOLDER. HUBERT R. HUMPHREY, Kalamazoo, Mich. Filed Aug. 9, 1915, Serial No. 44,487. Renewed Oct. 6, 1916. Serial No. 124,205. (Cl. 240—115.)



1. The combination of the collar of a light fixture having a slot therein and a plurality of spaced holes provided with outwardly projecting radially disposed bushings, radially disposed pin-like support members supported for longitudinal movement in said bushings and having transverse holes at their inner ends, screws tapped into the outer ends of said support members so that their heads constitute stops limiting the inward movement of the support members, and a contracting ring slidably arranged through said holes in said support members and having its ends crossed and disposed through said slot in said collar and terminating in finger pieces, the crossed ends of said ring being oppositely offset so that they may be retained in their crossed relation without lateral stress on the body of the ring.

2. The combination of the collar of a light fixture having a slot therein and a plurality of spaced holes provided with radially disposed bushings, radially disposed pin-like support members supported for longitudinal movement in said bushings and having transverse holes at their inner ends, and a contracting ring slidably arranged through said holes in said support members and having its ends crossed and disposed through said slot in said collar and terminating in finger pieces, the crossed ends of said ring being oppositely offset so that they may be retained in their crossed relation without lateral stress on the body of the ring.

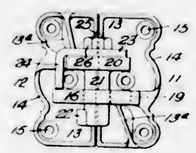
3. The combination of the collar of a light fixture having a plurality of spaced holes provided with outwardly projecting radially disposed bushings, radially disposed pin-like support members supported for longitudinal movement in said bushings and having transverse holes at their inner ends, screws tapped into the outer ends of said support members so that their heads constitute stops limiting the inward movement of the support members, and a contracting ring slidably arranged through said holes in said support members.

4. The combination with the collar of a light fixture having a horizontal slot therein, support members mounted for movement radially of said collar and having transverse holes therein, stops limiting the inward movement of said support members, and a contracting wire ring slidably arranged through said holes in said support members and having its ends crossed and disposed through said slot in said collar, the crossed ends of said ring being oppositely offset so that they may be retained in their crossed relation without lateral stress on the body of the ring.

5. The combination with the collar of a light fixture having a horizontal slot therein, support members mounted for movement radially of said collar and having transverse holes therein, and a wire ring slidably arranged through said holes in said support members and having its ends crossed and disposed through said slot in said collar, the crossed ends of said ring being oppositely offset so that they may be retained in their crossed relation without lateral stress on the body of the ring.

[Claims 6 to 11 not printed in the Gazette.]

1,222,629. SHUTTER-HINGE. JOSEPHS G. HUOT, Montreal, Quebec, Canada. Filed Aug. 31, 1915. Serial No. 48,211. (Cl. 16—110.)



1. In a hinge of the character described, a socket member having a notch therein, a pin member revolubly mounted in said socket member, a washer revoluble on the pin member, an arm on said washer engageable in the socket member notch, and means for locking the washer at any desired angle with respect to the pin member.

2. In a hinge of the character described, a socket member having a notch therein, a pin member revolubly mounted in said socket member, a washer revoluble on the pin member, an arm on said washer tapering toward its free end and engageable in the socket member notch, and means for locking the washer at any desired angle with respect to the pin member.

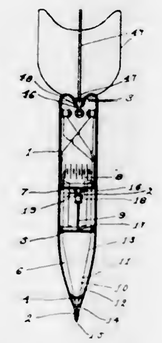
3. In a hinge of the character described, a pair of relatively revoluble members, an independent adjustable projection carried by one of said members, and a recess formed in the other member in the path of said projection.

4. In a hinge of the character described, a pin member, an arm member mounted on the pin member, a stud supporting said arm member, and a nut on the stud clamping the arm member against the pin member.

5. In a hinge of the character described, a pin member, an integral pivot pin therein, an arm member adjustably mounted with respect to the pin member, a stud carrying said arm extending longitudinally through the pin, and a nut on said stud adapted to clamp said arm member against the upper end of the pin.

[Claim 6 not printed in the Gazette.]

1,222,630. AERIAL-TORPEDO-STEERING MECHANISM. LEMUEL JOHN HUSTED, Kansas City, Mo. Filed Dec. 18, 1915. Serial No. 67,565. (Cl. 102—2.)



1. In an aerial missile, a magnetized depending controller, contact plates arranged around said controller, a guiding blade, electromagnets to control said guiding blade, and connections connecting from said contact plates to said electromagnets.

2. In an aerial missile, a magnetized depending controller, blades to control the direction of said missile, and means by which said controller will control said blade and turn said aerial missile from vertical direction when said controller is attracted by magnetic influence.

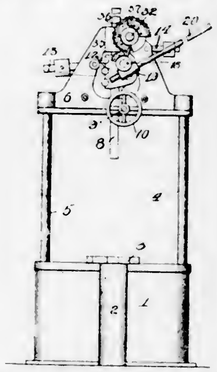
3. In an aerial missile, a magnetized depending controller, means to guide said missile, and connecting means whereby said controller will control said means to turn said missile from a vertical direction.

4. In an aerial missile, a depending controller, means to charge said controller with electromagnetic energy, a plurality of blades to guide said missile, and means connecting said controller and said blades whereby said missile is directed to an object that will attract said controller.

5. In an aerial missile, a suitable shell, a plurality of steering blades connected to said shell through suitable connections, the alinement of said blades changeable from the line of travel of said shell, said blades free to normally follow the direction of the travel of said shell, electromagnets arranged to change the angle of said blades, and a magnetized depending controller arranged to close in electric circuit with said magnets and compel said shell to follow the direction said controller may point.

[Claim 6 not printed in the Gazette.]

1,222,631. MANDREL-PRESS. WALTER J. O. JOHNSON, Chicago, Ill., assignor to Harry S. Folger, Chicago, Ill. Filed Sept. 17, 1914. Serial No. 862,191. (Cl. 29—85.)



1. In a mandrel press a supporting table, a ram adapted to be moved toward the same, a floating head adapted to be interlocked with said ram, counterweighted means for supporting said head, and interacting cams adapted to cause downward movement of said head and ram when said cams are rotated.

2. In a mandrel press of the class described, a ram, a head adapted to be interlocked therewith, cams journaled in said head, stationary bearings, cams journaled therein coacting with said first mentioned cams, and lever actuated gears for rotating said cams to force said head and ram downwardly.

3. In a device of the class described a frame, a ram movable therein, cam members journaled in said frame, a head in said frame adapted to be interlocked with said ram, counterweighted levers on said frame for movably supporting said head, and cams associated with said head and coacting with said first mentioned cams adapted when said respective cams are rotated to cause said head to move downwardly in the frame and said ram therewith.

4. In a device of the class described a frame, a ram movable therein, means movable in said frame adapted to interlock with said ram, counterweighted members movably supporting said means, interacting cams adapted when rotated to force said means and ram downwardly, and gear segments of varying radii adapted to intermesh with one another to cause rotation of said cams.

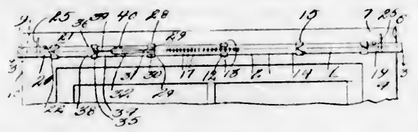
5. In a device of the class described a base, uprights secured thereon, a frame secured at the upper end of said uprights, a ram movable vertically therein, hand operated means for adjusting said ram, a pinion and rollers journaled in said frame for guiding said ram, a floating head mounted in said frame, means interlocking said head with said ram, and cams associated with said frame and with said movable head adapted when rotated to cause downward movement of said head and said ram therewith.

[Claims 6 to 18 not printed in the Gazette.]

1,222,632. WINDOW-SHADE HANGER. WILLIAM KEMBLE, Kingston, N. Y. Filed June 8, 1915. Serial No. 32,894. (Cl. 156—23.)

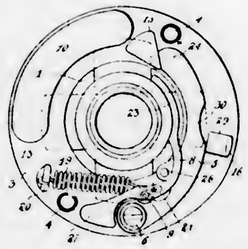
A window shade fixture comprising a hanger bar having jaws at its opposite ends to engage the opposite edges of a window frame, shade roller brackets mounted upon the bar, said bar consisting of three sections, means to adjustably and positively and rigidly connect the ends of

two of the sections, the inner end of one of the end sections having ears bent over the adjacent end of the intermediate section and terminating in an opposed lug, the end of said intermediate section adjacent said section having the ears being provided with ears overlying said end section, a lever pivoted between said lugs, and a wire link having a central resilient coil, one end of said link



being pivoted to said lever eccentric or offset from the pivot of the lever, the other end of said link being pivoted between the last named ears, whereby when the lever is thrown toward the link, said jaws will be drawn toward and in engagement with the opposite sides of the window frame.

1,222,633. CENTRIFUGAL SWITCH. CARLTON L. KENNEDY, South Braintree, Mass., assignor to The Holtzer-Cabot Electric Company, Brookline, Mass., a corporation of Massachusetts. Filed Aug. 1, 1914. Serial No. 854,523. (Cl. 175—310.)



1. A centrifugal switch having, in combination, a contact ring, a rotary support, a weight arm mounted on the support movable outwardly under centrifugal force, a brush arm mounted on the weight arm, and a spring connected with the support and with the brush arm for normally holding the weight and brush arms inwardly with the latter against the contact ring.

2. A centrifugal switch having, in combination, a contact ring, a rotary support, a weight arm pivoted on the support, a brush arm pivoted on the weight arm, the brush arm being adapted to contact with the contact ring while the weight arm is moved outward under centrifugal force until the rotary support has reached a predetermined speed of rotation, and a spring connected with the support and with the brush arm.

3. A centrifugal switch having, in combination, a contact ring, a rotary support, a weight arm pivoted on the support, a brush arm pivoted on the weight arm, and means directly connecting the brush arm with the rotary support for holding the brush arm in contact with the contact ring while the weight arm is moving outwardly to a predetermined point.

4. A centrifugal switch having, in combination, a contact ring, a rotary support, a weight arm pivoted on the support, and a brush arm pivoted on the weight arm and adapted to be held in contact with the contact ring by means of a spring, the brush arm being further adapted to be lifted out of contact with the ring by the weight arm when the support has attained a predetermined speed of rotation.

5. A centrifugal switch having, in combination, a contact ring, a rotary support, a weight arm pivoted on the support, a brush arm pivoted on the weight arm and normally in contact with the contact ring and adapted to remain in contact with the contact ring while the weight arm is traveling outward under centrifugal force, until the support has attained a predetermined speed of rotation, and then to be knocked out of contact with the ring by the weight arm.

[Claims 6 to 15 not printed in the Gazette.]

1,222,634. SIGNAL DEVICE FOR ELECTRIC-RAILWAY CARS. JESSE E. KEPPEL, St. Louis, Mo. Filed Nov. 21, 1914. Serial No. 873,267. (Cl. 246—28.)

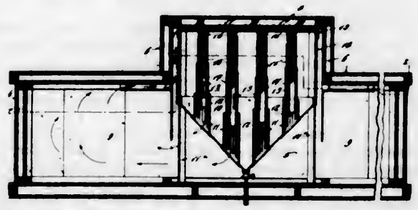


1. In an electric railway car, a signal device thereon for the attention of the motorman or the crew in charge, a signal device on said car for the attention of those on a car approaching, both of said signal devices being normally inactive, said first-mentioned signal device being continuously in operable condition, means for placing said second-mentioned signal device in operable condition at will, and means for rendering said signal devices active automatically upon the failure of the electrical current in the lead from the main source of electrical energy to the motive equipment of the car.

2. In an electric railway car having a trolley connection with a power line wire, a light projector arranged on the roof of the car in a position to project light in the region of the power line wire where the trolley is applied thereto, and electrical controlling means on the car in connection with the main electrical circuit from the trolley lead, said controlling means maintaining said light projector normally inactive, and whereby, upon failure of the electrical current in said main circuit, said illuminable device is rendered active automatically.

3. In an electric railway car having a trolley connection with a power line wire, an electrical illuminable device arranged on the roof of the car so as to project light in the region of the power line wire where the trolley is applied thereto, a local source of electrical energy on said car for said illuminable device, a normally open self-closing circuit closer for effecting a connection between said illuminable device and said local source of electrical energy, and an electrical controlling device for maintaining said circuit closer in normal open position, said controlling device being electrically connected to the main electrical circuit from the trolley lead whereby upon failure of the electrical current in said main circuit said illuminable device is rendered active automatically.

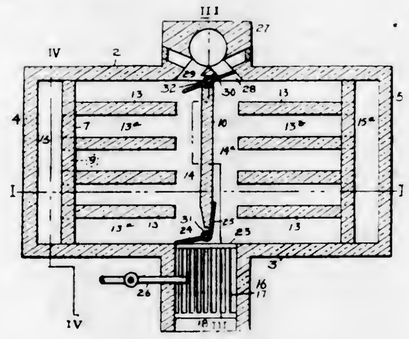
1,222,635. REFRIGERATOR. CHARLES A. KETTERER, East St. Louis, Ill. Filed Mar. 29, 1915. Serial No. 17,749. (Cl. 62—67.)



1. In combination with a salt and ice container, a plurality of open ended tubes extending through said container, each of said tubes being constructed of telescoping sections and certain of said sections being constructed of plain material and the remaining sections constructed of corrugated material, whereby to provide for the flow of brine from the salt and ice container over the interior faces of said tubes.

2. In combination with a salt and ice container, a plurality of open ended tubes extended through the said container, each tube being constructed of alternate plain and corrugated telescoping sections, the said sections varying in lengths in the several tubes to provide for the flow of brine from the container at different elevations into, and over the interior surfaces of said tubes.

1,222,636. SMELTING-FURNACE. JOHN KIRBY, Leechburg, Pa., assignor of one-fourth to Owen Kirby, Leechburg, Pa., one-fourth to James B. Sommerville, Wheeling, W. Va., and one-fourth to Samuel M. Boyd, Pittsburgh, Pa. Filed Dec. 13, 1916. Serial No. 136,597. (Cl. 263—15.)

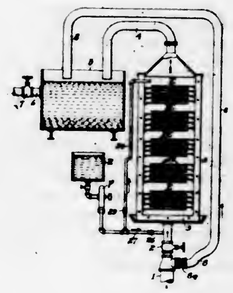


1. A furnace of the type set forth comprising a body portion, a pair of spaced transverse bridge walls therein, a base plate positioned between said walls and forming in connection therewith a smelting chamber, a pair of oppositely disposed flue chambers arranged below the smelting chamber and each having a set of longitudinal flues, a stack rearwardly of the smelting chamber, an imperforate transverse partition wall between, spaced from and separating said flue chambers, said partition wall extending from said plate to the bottom of said body portion and forming a pair of transverse flues leading from the flue chambers to the stack, said bridge walls in connection with said body portion forming transverse flues leading to the smelting chamber, said bridge walls having openings to establish communication between said longitudinal flues and the second mentioned transverse flues, and a combustion chamber arranged forwardly of the smelting chamber.

2. A furnace of the type set forth comprising a body portion, a pair of spaced transverse bridge walls therein, a base plate positioned between said walls and forming in connection therewith a smelting chamber, a pair of oppositely disposed flue chambers arranged below the smelting chamber and each having a set of longitudinal flues, a stack rearwardly of the smelting chamber, an imperforate transverse partition wall between, spaced from and separating said flue chambers, said partition wall extending from said plate to the bottom of said body portion and forming a pair of transverse flues leading from the flue chambers to the stack, said bridge walls in connection with said body portion forming transverse flues leading to the smelting chamber, said bridge walls having openings to establish communication between said longitudinal flues and the second mentioned transverse flues, and a combustion chamber arranged forwardly of the smelting chamber, means at the forward end of said partition wall for alternately opening one of said flue chambers to and closing the other of said chambers to the combustion chamber, and means for alternately closing the stack to said open flue chamber and opening the stack to said closed flue chamber.

3. A furnace of the type set forth comprising a body portion, a pair of spaced transverse bridge walls arranged therein, a base plate positioned between said walls and forming in connection therewith a smelting chamber, a pair of oppositely disposed flue chambers arranged below the smelting chamber and each having a set of longitudinal flues, an imperforate transverse partition wall interposed between, spaced from and separating said flue chambers, said wall extending from said plate to the bottom of the body portion and forming a pair of transverse flues into which open said flue chambers, said bridge walls in connection with said body portion forming transverse flues leading to the smelting chamber, said bridge walls having openings for establishing communication between the longitudinal flues and the last mentioned transverse flues, a stack adapted to communicate with the first mentioned transverse flues, and a combustion chamber adapted to communicate with the first mentioned transverse flues.

1,222,637. ELECTROCHEMICAL TREATMENT OF LIQUIDS. CLARENCE P. LANDRETH, Philadelphia, Pa. Filed Aug. 6, 1915. Serial No. 43,909. (Cl. 204—25.)



1. The method of removing from liquid or water soluble incrustating salts, which consists in introducing soluble hydroxid, and passing electric current therethrough, whereby the hydroxid reacts with said salts to produce insoluble material.

2. The method of treating liquid or water containing in solution material causing temporary hardness, which consists in introducing into the liquid or water a soluble hydroxid, adapted to react with said material to produce insoluble material, and passing electric current therethrough.

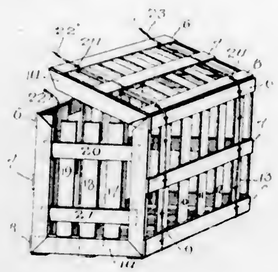
3. The method of treating liquid or water containing in solution material causing temporary hardness, which consists in passing electric current therethrough, and thereafter introducing a soluble hydroxid.

4. The method of treating liquid or water containing in solution material causing temporary hardness, which consists in passing electric current therethrough, and thereafter introducing a soluble hydroxid in quantity in excess of that necessary to react with said material in solution in said liquid or water whereby the effluent contains free alkali.

5. The method of treating liquid or water containing in solution therein material causing permanent hardness, which consists in introducing a soluble carbonate, and passing electric current therethrough.

[Claims 6 to 43 not printed in the Gazette.]

1,222,638. VENEER SHIPPING-CRATE. CHARLES Q. C. LEIGH, Chicago, Ill. Filed Sept. 8, 1916. Serial No. 119,020. (Cl. 217—43.)

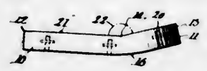


1. A folding crate comprising bottom top and side sections each end edge of each section provided with a lateral extension formed of three layers of veneer the intermediate layer whereof is formed of spaced strips whereby pockets and tenons are formed in said lateral extensions, means for flexibly securing said sections together, and end sections having projections thereon adapted to enter the pockets in said lateral extensions.

2. A folding crate comprising bottom top and side sections each end edge of each section provided with a lateral extension having mitered ends and formed of three layers of veneer the intermediate layer whereof is formed of spaced strips whereby pockets and tenons are formed in said lateral extensions, means for flexibly securing said sections together, and end sections having projections thereon adapted to enter the pockets in said lateral extensions.

3. A folding crate comprising bottom top and side sections each formed of longitudinal spaced strips and transversely spaced strips of veneer and each end edge of each section provided with a lateral extension formed of three layers of veneer the intermediate layer whereof is formed of spaced strips whereby pockets and tenons are formed in said lateral extensions, means for flexibly securing said sections together, and end sections having projections thereon adapted to enter the pockets in said lateral extensions.

1,222,639. RESILIENT SHOE-HEEL SECTION OR LIFT. GEORGE H. LEWIS, Elyria, Ohio. Filed May 15, 1916. Serial No. 97,575. (Cl. 36—35.)



1. A resilient shoe heel lift consisting of a plurality of portions, each portion having an upper plane surface, said portions and surfaces being normally at an angle to each other.

2. In a resilient heel lift, the combination of a plurality of portions normally forming a dihedral angle.

3. As an article of manufacture, a resilient heel lift normally having an obtuse dihedral angle in its upper surface.

4. In a resilient heel lift, the combination of a pair of portions each having an upper and a lower plane surface, the upper surfaces being normally at an angle to each other, said portions being substantially uniform in thickness and being of substantially the same thickness.

5. As an article of manufacture, a resilient heel lift with an upper plane and having an obtuse, dihedral angle the line of whose apex is in the upper surface of the lift and substantially perpendicular to the long axis of the lift.

[Claims 6 to 11 not printed in the Gazette.]

1,222,640. COMPOUND CONTAINING ACTIVE OXYGEN AND THE PROCESS OF MAKING THE SAME. OTTO LIEBKNECHT, Frankfort-on-the-Main, Germany, assignor to The Roessler & Hassiacher Chemical Co., New York, N. Y., a Corporation of New York. Original application filed Dec. 24, 1913, Serial No. 808,533. Divided and this application filed May 25, 1916. Serial No. 99,874. (Cl. 23—13.)

1. The process of manufacturing a stable compound comprising an alkali perborate consisting in combining the said alkali perborate with zinc carbonate.

2. The process of manufacturing a stable compound comprising sodium perborate consisting in combining sodium perborate with zinc carbonate.

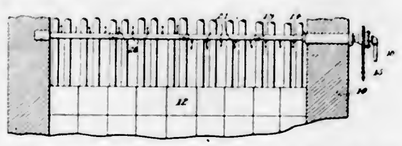
3. The process of manufacturing a stable compound comprising sodium perborate consisting in reacting on a mixture yielding sodium perborate with a soluble zinc compound in the presence of a sodium carbonate.

4. The process of manufacturing a stable compound comprising sodium perborate consisting in generating a sodium carbonate in a mixture yielding sodium perborate and reacting on the mixture with a soluble zinc compound.

5. The process of manufacturing sodium perborate consisting in generating a neutral sodium carbonate in a mixture yielding sodium perborate and reacting on the mixture with a suitable zinc compound.

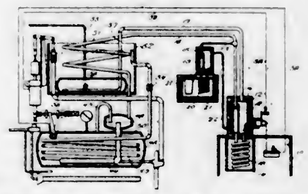
[Claims 6 and 7 not printed in the Gazette.]

1,222,641. SOOT-CLEANER FOR WATER-TUBE BOILERS. FREDERICK W. LINAKER, Dubois, Pa., assignor to The Vulcan Soot Cleaner Co., of Pittsburg, Pa., Dubois, Pa., a Corporation of New Jersey. Filed Nov. 13, 1915. Serial No. 61,359. (Cl. 122—392.)



A soot cleaner for boiler tubes, including a rotary distributing pipe associated with a bank of boiler tubes, the same being operable by hand-actuated means, a main supply pipe communicating with a feed pipe, a branch pipe, all of said pipes being valve-controlled, said distributing pipe having a swivel connection with said branch pipe, and jet nozzles positioned in two series or sets about said distributing pipe in different radial planes, one set of said nozzles being in longitudinal alinement on one side of said pipe and extending about midway thereof and the second set of said nozzles being positioned also in longitudinal alinement along the other half of the distributing pipe and upon the opposite side of said pipe.

1,222,642. MULTIPLE REFRIGERATING APPARATUS. EMIL C. LOETSCHER, Dubuque, Iowa. Filed Apr. 9, 1915. Serial No. 20,128. (Cl. 62—118.)



1. In refrigerating apparatus of the absorption type comprising a generator-absorber and a condenser, the combination therewith of a main refrigerating member, means for introducing a refrigerant into said main refrigerating member under generator pressure, an auxiliary refrigerating member, communicating means between said main and auxiliary refrigerating members, means for conveying the refrigerant to said auxiliary refrigerating member under reduced pressure and communicating means between said auxiliary communicating means and said reduced pressure communicating means.

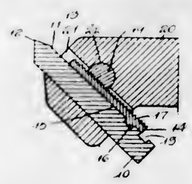
2. In refrigerating apparatus of the absorption type comprising a generator-absorber and a condenser, the combination therewith of refrigerant distributing members having different pressures, a plurality of refrigerant members one of which is directly connected to the high pressure communicating member and communicating means between said refrigerant member and the low pressure communicating member.

3. In refrigerating apparatus of the absorption type and provided with a generator-absorber and a condenser, the combination therewith of a main refrigerating member and an auxiliary refrigerating member, a high pressure refrigerating distributing member connected to said main refrigerating member and a connection between said main refrigerating member and said auxiliary refrigerating member, said auxiliary refrigerating member being in communication with the absorber of the apparatus.

4. In refrigerating apparatus of the absortion type and provided with a generator-absorber and a condenser, the combination therewith of a main refrigerating member and an auxiliary refrigerating member, a high pressure refrigerating distributing member connected to said main refrigerating member and a connection between said main refrigerating member and said auxiliary refrigerating member, said auxiliary refrigerating member being in communication with the generator-absorber of the apparatus and said communicating member between said auxiliary and main refrigerating members extending into said main refrigerating member and below the normal level of the liquid therein.

5. In refrigerating apparatus of the absorption type comprising a generator-absorber and a condenser, the combination therewith of a low pressure and a high pressure refrigerant distributing members, communicating means between said members for conveying a refrigerant material to the same, and thermostatic means connected to said communicating means between said distributing members, and operated by the temperature of the refrigerant in said communicating means.

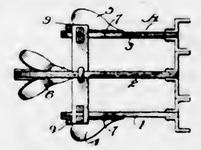
1,222,643. METAL-WORKING TOOL. FRED P. LOVEJOY, Springfield, Vt. Filed Dec. 13, 1916. Serial No. 136,647. (Cl. 29—99.)



1. A metal-working tool comprising a holder having a cutter-receiving socket, a cutter and a locking shoe therefor having, conjointly, a cross-sectional form that conforms substantially to that of said socket, said cutter and shoe having confronting bearing faces extending longitudinally thereof and having a transverse tongue and groove arranged to fit, one in the other, to afford interlocked relation, said holder having a cotter-receiving socket extending substantially at right angles to and intersecting said cutter-receiving socket, said sockets being eccentric as to each other, and a cotter conforming in cross section to said cotter-receiving socket and having a series of closely related locking ribs extending lengthwise thereof, said ribs being arranged to bear upon said shoe, said shoe having a series of ribs arranged to fit between said ribs of said cotter to lock said cutter rigidly to said holder, said ribs enabling said shoe to be interlocked with said cotter in a plurality of relative positions, to afford longitudinal adjustment of said cutter relatively to said holder.

2. A metal-working tool comprising a holder having a cutter-receiving socket, a cutter and a locking shoe therefor having, conjointly, a cross-sectional form that conforms substantially to that of said socket, said cutter and shoe having confronting bearing faces extending longitudinally thereof and having interlocking formations, said holder having a cotter-receiving socket extending substantially at right angles to and intersecting said cutter-receiving socket, said sockets being eccentric as to each other, and a cotter conforming in cross section to said cotter-receiving socket and having a series of closely related locking ribs extending lengthwise thereof, said ribs being arranged to bear upon said shoe, said shoe having a series of ribs arranged to fit between said ribs of said cotter to lock said cutter rigidly to said holder, said ribs enabling said shoe to be interlocked with said cotter in a plurality of relative positions, to afford longitudinal adjustment of said cutter relatively to said holder, said interlocking formation of said cutter and shoe comprising a transverse tongue and a plurality of transverse grooves each adapted to receive said tongue, whereby said cutter is adjusted relatively to said shoe.

1,222,644. GRAIN-DRILL ATTACHMENT. WILLIAM J. MCADAMS, Spurlock, Tex. Filed Oct. 29, 1915. Serial No. 58,530. (Cl. 111—18.)



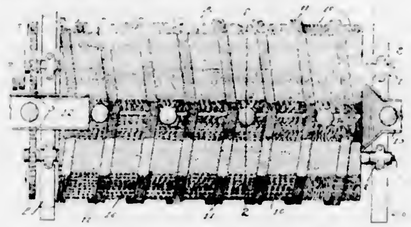
1. An agricultural implement having a plurality of mold boards with straight inner sides to produce furrows having a substantially vertical wall and a substantially inclined wall leading thereto, seed-distributing means mounted adjacent the mold boards and having the discharge ends disposed below the tops of the mold boards so that the seed may be deposited in the furrows without interference by the wind and will remain therein with the substantially straight wall of the furrow serving as abutments, and a shovel plow means disposed intermediate and coöperating with said mold boards.

2. An agricultural implement having rearwardly and downwardly extending beams, a third beam disposed intermediate said beams and extending rearwardly and downwardly, a bar disposed below the third beam and above the first mentioned beam, means to secure the beams to said bar to provide a rigid frame structure, mold boards carried adjacent the lower ends of the first mentioned beams and having substantially straight inner sides or walls to provide furrows having substantially straight walls and inclined walls leading thereto, said distributing members carried by first mentioned beams and having their outlet ends disposed below the tops of said mold boards so that the seeds may be lodged in the furrows without interference by the wind in delivery and after deposited, the vertical walls of the furrows acting as abutments for seeds, and the third beam extending rearwardly beyond the first mentioned beams and at its lower end having a shovel plow supported thereon to coöperate with the said mold boards.

1,222,645. BRUSH CONSTRUCTION. CHARLES C. MCINTOSH, Los Angeles, Cal., assignor to George D. Parker, Riverside, Cal. Filed Apr. 21, 1913. Serial No. 762,523. (Cl. 146—14.)

1. A cleaning machine comprising a supporting frame, a pair of cleaning brushes rotatably mounted thereon with their surfaces in parallel meeting relation and providing between them a fruit runway, the bristles of said brushes forming flat sided longitudinally extending circumferen-

tially disposed brush faces of uniform width throughout their length, the ends of certain of the bristles of each of said brushes projecting beyond the others and forming a helical conveying rib having flat faces to correspond with said brush faces, means for rotating said brushes to cause the fruit carried between the same to be tossed about to present all surfaces thereof to the brush faces during its travel longitudinally thereof.



2. A cleaning machine comprising a pair of rotatable cleaning brushes disposed in parallel meeting relation and providing between them a fruit runway, each brush comprising a core, a plurality of bristle backs detachably secured to the exterior thereof, bristles carried by said backs and forming with the bristles of the other brush backs flat sided circumferentially disposed brush faces of uniform width throughout their length, and the ends of certain of the bristles of each back projecting beyond the others, and arranged in rows at an angle transversely across the face of the brush backs, and when said backs are in position forming a helical conveying rib for each brush.

3. A cleaning machine comprising a frame, a pair of parallel spaced cleaning brushes rotatably mounted thereon, the bristles of said brushes forming flat sided circumferentially disposed brush faces of uniform width throughout their length, the ends of certain of the bristles of each of said brushes projecting beyond the others, and forming a helical conveying rib having flat faces, the meeting edges of the faces of one brush being disposed to contact with the faces of the opposite brush intermediate the edges thereof, means for uniformly rotating said brushes in opposite directions to cause the fruit carried between the same to be tossed about to present all surfaces thereof to the brush faces during its travel longitudinally thereof.

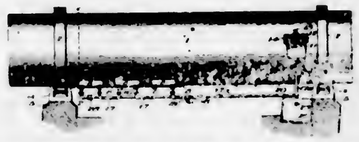
4. A cleaning machine comprising a frame, a pair of parallel spaced cleaning brushes rotatably mounted thereon, the bristles of said brushes forming flat sided circumferentially disposed brush faces of uniform width throughout their length, the ends of certain of the bristles of each of said brushes projecting beyond the others and forming a helical conveying rib having flat faces, the meeting edges of the faces of one brush being disposed to contact with the faces of the opposite brush intermediate the edges thereof, means for rotating said brushes at a uniform speed in opposite directions to cause the fruit carried between the same to be tossed first upwardly onto one brush and then onto the other to present all surfaces thereof to the brush faces during its travel longitudinally thereof.

5. A brush for the purpose described comprising a body of non-circular cross-section presenting bristles constituting projecting parts disposed at intervals relative to intermediate parts, in combination with other bristles extending outwardly beyond both said projecting and intermediate parts to constitute a feeding element.

[Claims 6 and 7 not printed in the Gazette.]

1,222,646. COOLING-PLATE FOR NODULIZING-KILNS. RICHARD V. MCKAY, Steelton, Pa. Filed Aug. 30, 1915. Serial No. 48,104. (Cl. 263—33.)

1. The combination with a rotating kiln and a body of water below the same, of a bucket secured to the kiln arranged to pass through said body of water and dip up a quantity thereof during a rotation of the kiln, a hollow cooling section or plate on the kiln, means to supply water from said bucket to said section and a steam exit in the section.



2. The combination with a rotating kiln and a body of water below the same; of a bucket secured to the kiln and arranged to pass through said body of water and dip up a quantity thereof during a rotation, a hollow cooling section on the kiln, means to supply water from said bucket to said section, a steam exit in said section and means to prevent steam from passing to the bucket.

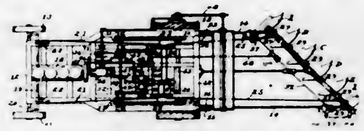
3. The combination with a rotating kiln and a body of water below the same; of a bucket secured to the kiln and arranged to pass through said body of water and dip up a quantity thereof during a rotation, a hollow cooling section on the kiln, means to supply water from said bucket to said section, a steam exit in said section, means to prevent steam from passing to the bucket and means to regulate the passage of steam from said section.

4. In a rotary kiln, the combination with the kiln shell having an opening therein; of a frame secured to said shell within the opening, and a removable cooling section mounted in the frame and having inlet and exhaust connections.

5. The combination with a rotary kiln, of a frame secured in the wall thereof and having two flanges, one of which is secured to the kiln, a removable cooling section mounted in the frame and having flanges coöperating with the other flange of said frame, means to detachably connect said other flange and the section flange, and inlet and outlet means for said section.

[Claims 6 to 10 not printed in the Gazette.]

1,222,647. POWER-DRIVEN AGRICULTURAL IMPLEMENT FOR PLOWING. JAMES M. MALACOVE, Tacoma, Wash. Filed Dec. 11, 1913. Serial No. 806,123. (Cl. 97—30.)



1. An agricultural implement comprising in combination with a truck and a motor, a rear frame adapted to be yieldingly connected to said truck, said frame provided with a rearwardly and laterally inclined transverse shaft rotatably attached thereto, said shaft provided with a plurality of gears, a plurality of vertical shafts adapted to mesh at their upper ends with the gears of said transverse shaft, plows detachably mounted on the lower ends of said vertical shafts, means connected to said frame for elevating said plows, a forward shaft on said rear frame adapted to engage said plow elevating means, means communicating with said forward shaft from said motor and means communicating with said rearwardly and laterally transverse shaft from said motor whereby said plows can be elevated by said first communicating means and laterally shifted by said last named communicating means.

2. An agricultural implement comprising in combination with a truck and a motor, a rear frame consisting of side rods and a transverse end beam attached thereto, said frame being yieldingly connected to said truck, a shaft rotatably mounted upon said transverse beam and provided with a plurality of gears, a plurality of vertical shafts provided with gears on their upper ends that mesh with the gears of said transverse shaft, plows mounted upon the lower ends of said vertical shafts, a forward transverse shaft, a wheel support for said plows having a rack and pinion engagement with said forward transverse shaft, a reversible bevel friction and a shaft therefor, forward truck wheels, forward and rearward cables wound upon the shaft of said reversible bevel friction approximately at their centers the ends of said forward cable extended forward and adapted to be connected respectively to said shaft of the forward truck wheels, the ends of said rearward cable extended rearward in the same manner and wound upon the rear transverse shaft, a transverse shaft in the plane of said reversible bevel friction and a counter shaft for said motor, an intermediate cable one end of which wound upon the said forward transverse shaft the other end wound upon said transverse shaft in the plane of said reversible bevel friction, said last named shaft having sprocket and chain engagement with the counter shaft of said motor, the said reversible bevel friction having sprocket and chain engagement with the counter shaft of said motor, whereby said plows can be elevated and lowered and whereby the points of said plows can be laterally shifted.

3. An agricultural implement comprising in combination with a truck frame and a motor, a rear frame attached to said truck frame, a transverse beam comprising the rear end of said rear frame, a transverse rear shaft mounted upon said beam, vertical shafts supported by said beam and engaging with said rear transverse shaft, plows attached to said vertical shafts, a forward transverse shaft, a wheel support for said plows having a rack and pinion engagement with said forward transverse shaft, means connecting said wheel support with the respective vertical shafts of said plows, a reversible bevel friction and a shaft therefor, forward and rearward cables wound upon said shaft of said reversible bevel friction approximately at their centers the ends of said forward cable connected to the shaft of the forward truck wheels and the ends of the rearward cable wound upon said transverse rear shaft, an intermediate cable, a transverse shaft in the plane of said reversible bevel friction, the ends of said intermediate cable wound upon said forward transverse shaft and said last named shaft, a counter shaft, means operatively connecting said counter shaft with said reversible bevel friction and means operatively connecting said counter shaft with the transverse shaft in the plane of said reversible bevel friction, shifter means for operating said reversible bevel friction and clutch operative means for actuating said plow lifting mechanism.

1,222,648. GROWING-TROUGH. JOHN C. MARKS, Chicago, Ill. Filed May 22, 1916. Serial No. 99,166. (Cl. 47—27.)



1. In a self watering growing trough, the combination of a container for water, means for automatically maintaining a predetermined level of water in said container, and a false bottom for said container consisting of a plurality of porous tiles provided with top faces forming a substantially continuous floor for supporting soil above the normal water level in said container, said tiles also having portions extending below the normal water level to feed water to the soil by capillary action through the pores of the tiles.

2. In a self watering growing trough, the combination of a container for water, and a false bottom for said container consisting of a plurality of porous tiles provided with top faces forming a continuous floor for supporting soil above the water level in said container, the bottom sides of said tiles being hollowed out to form air circulating spaces above the water level in the container and also to form integral parts extending below the water level to support the tiles in the container and to feed the water to the soil by capillary action through the pores of the tiles.

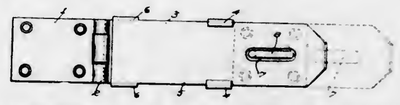
3. In a self watering growing trough, the combination of a container for water having an automatically controlled inlet and a plurality of outlets located at different levels from the bottom of the container, and a false bottom for said container consisting of a plurality of porous tiles provided with top faces forming a substantially continuous level floor for supporting soil above the water level in said container, the bottom side of said tiles being hollowed out to form air circulating spaces above the water level in the container and also to form feet integral with the tiles extending below the water level to support the tiles in the container and to feed the water to the soil by capillary action through the pores of the tiles.

4. In a self watering growing trough, the combination of a container for water, and a false bottom for said container consisting of a plurality of porous tiles having perforations extending therethrough from the top to the bottom, the top faces thereof being substantially flat and forming a continuous level floor for supporting soil above the water level in said container.

5. In a self watering growing trough, the combination of a container for water and a false bottom for said container formed by a plurality of porous tiles, the top faces of which provide a substantially continuous floor for supporting soil above the water level in said container, the bottom sides of said tiles resting on the bottom of said container, the tiles having air circulating spaces therein located above the water level in the container.

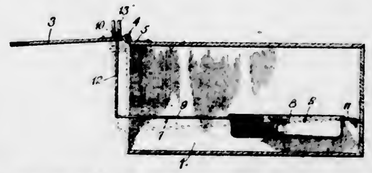
[Claims 6 to 12 not printed in the Gazette.]

1,222,649. EXPANSIBLE HASP. JANTHUS E. MARSHALL, Richmond, Cal. Filed May 17, 1915. Serial No. 28,643. (Cl. 70—83.)



An expansible hasp comprising an anchor plate; a primary plate having its inner end pivotally connected with said anchor plate, and having at its outer end integrally formed wings projecting laterally from its side edges, said wings being bent upwardly and inwardly to form guides; a secondary plate superposed upon said primary plate, said secondary plate having at its inner end integrally formed wings projecting from its side edges, said wings being bent downwardly and inwardly to embrace the edges of said primary plate and to form guides therefor to permit relative lineal sliding movement between said plates, said movement being limited in one direction by the abutment of the inner end of said secondary plate against the pivotal connection of said primary plate and said anchor plate, and in the other direction by the mutual abutment of the lugs upon the two plates; and means carried by the outer end of said secondary plate for temporary attachment to a suitable keeper.

1,222,650. POULTRY-NEST. JACOB EMANUEL MILLER, Coon Rapids, Iowa. Filed July 20, 1916. Serial No. 110,357. (Cl. 119—49.)

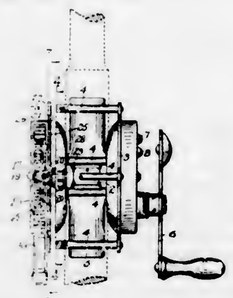


1. In a device of the class described, a coop having one end open, a closure pivoted at the top of the opening of

said coop to swing upwardly and outwardly, means for retaining said closure normally open, a nest therein having a U-shaped frame, and an egg receptacle secured between the arms of said frame adjacent the free ends thereof, the free ends of the arms of said frame being pivotally connected to the end of said coop, the connected ends of the arms of said frame being bent upwardly at right angles to the main portion of the arms, the cross bar of said U-shaped frame being disposed over the outer surface of said closure and in contact therewith, whereby when a fowl steps into the egg receptacle said closure will shut.

2. In a device of the class described, a coop, a normally open closure therefor, a nest therein comprising a U-shaped frame, and an egg receptacle secured between the arms of said frame adjacent the free ends thereof, hooked fingers formed on the free ends of the arms of said frame, the connected ends of the arms of said frame being bent upwardly at right angles to the main portion of the arms, said hooked fingers being pivotally engaged with the rear end of said coop, the cross bar of said U-shaped frame being disposed over the outer surface of said closure, a pair of notched ears secured to said closure to receive said crossbar, whereby when a fowl steps in the egg receptacle said closure will shut, and a pivoted catch for holding said closure in closed position.

1,222,651. FISHING-REEL. JOHN GEHRET MILLER, Reading, Pa. Filed Nov. 4, 1915. Serial No. 59,498. (Cl. 242—84.1.)



As a new article of improvement a combination device comprising a fishing-line reel, a tape-measure reel, and a connecting casing wall common to both reels; the main portion of the tape-measure casing being fixedly connected to said common casing wall in axial alinement with the fishing reel, substantially as set forth.

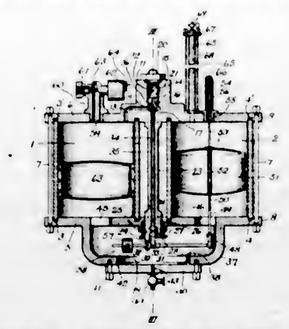
1,222,652. PRESSURE-REGULATOR. WILLIAM G. MILLER, Kansas City, Mo. Filed May 27, 1915. Serial No. 30,769. (Cl. 50—31.)

1. A regulator comprising an intake control valve, a pivotally mounted beam operatively connected with the valve, a rod on said beam, a float having threaded mounting on the rod, and a weight on said beam for counterbalancing the float.

2. A regulator comprising an intake control valve, lever mechanism for actuating the valve, a float adjustably mounted on the lever mechanism, a post on said float extending to the exterior of the regulator, and a pocket removably mounted on the regulator and normally inclosing the projected portion of said post.

3. A regulator comprising an intake control valve, lever mechanism for actuating the valve, a float adjustably mounted on the lever mechanism, a post on said float extending to the exterior of the regulator and having a guide ball at its free end, and a pocket removably mounted on the regulator and having interior guiding contact with the float post ball.

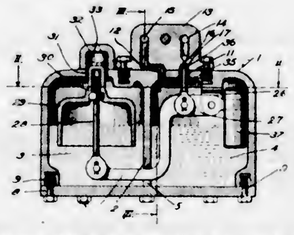
4. A regulator comprising separate intake and float chambers and a supply conduit leading to the top of the intake chamber, a conduit connecting the lower portions of said chambers, a valve seat in the supply conduit, a beam pivotally mounted in the connecting conduit, a valve rod connected with said beam and having a head cooperating with the valve seat to control supply to the intake chamber, a float rod on said beam projected into the float chamber, and a float adjustably mounted on said rod.



5. A regulator comprising separate intake and float chambers and a supply conduit leading to the top of the intake chamber, a conduit connecting the lower portions of said chambers, a valve seat in the supply conduit, a beam pivotally mounted in the connecting conduit, a valve rod connected with said beam and having a head cooperating with the valve seat to control supply to the intake chamber, a float rod on said beam projected into the float chamber, a float adjustably mounted on said rod, a post on said float extending to the exterior of the regulator, and a pocket removably mounted on the regulator and inclosing and guiding the float.

[Claims 6 to 12 not printed in the Gazette.]

1,222,653. PRESSURE-REGULATOR. WILLIAM G. MILLER, Kansas City, Mo. Filed Oct. 30, 1916. Serial No. 128,436. (Cl. 50—31.)



1. A pressure regulator comprising a housing containing separate valve and float chambers having a communicating channel, the valve chamber having intake and outlet channels, a beam pivotally mounted in one of said chambers and extended into the other, a valve connected with the beam and located in the valve chamber, and a float connected with the beam and located in the float chamber.

2. A pressure regulator comprising a housing having a partition dividing its interior into separate valve and float chambers, and having an opening therein at its lower edge and the housing having intake and outlet channels communicating with the valve chamber, a beam pivotally mounted in one of the chambers and extended into the other, a valve on the beam projected into said inlet channel, a float rod on the beam within the float chamber, and a float adjustably mounted on said rod.

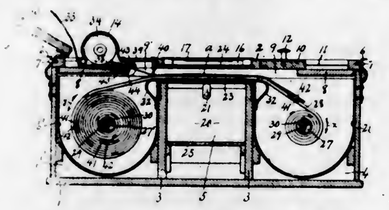
3. In a pressure regulator, a housing having a partition dividing its interior into separate valve and float chambers and having a channel for effecting communication between the chambers, the said housing having separate intake and outlet channels, a beam pivotally mounted in the upper portion of the valve chamber and extended downwardly to the bottom thereof and having an extension projected through the partition channel into the float chamber, a valve on the beam within the valve chamber, a float rod on the beam within the float chamber, and a float adjustably mounted on said rod.

4. In a pressure regulator, a housing having a partition dividing its interior into separate valve and float chambers the said partition having a channel therein providing communication between the chambers and the housing having separate intake and outlet channels communicating with the valve chamber, a hood on said housing, having separate intake and outlet channels communicating with corresponding channels in the housing, the inlet channel having a valve seat therein, a beam pivotally mounted in one of said chambers and extending into the other, a valve stem on said beam extending into the inlet channel and having a valve member adapted for coöperation with the seat in said head, a float rod on the beam, a float on said rod, and a cap on said housing removable to provide access to the float, for the purpose set forth.

5. A pressure regulator comprising a housing having a partition dividing its interior into separate valve and float chambers and having a channel for establishing communication between the said chambers, the said housing having separate intake and outlet channels in communication with the valve chamber and having a channel in communication with the float chamber, a head having intake and outlet channels in communication with corresponding channels in the housing, the intake channel in the head having a valve seat, a cap for covering the channel leading to the float chamber, a beam pivotally mounted within one of said chambers and extending to the other below the fluid level within said chambers, a valve steam on said beam extending through the inlet channel in the housing to the inlet channel in said head, a float adjustably mounted on said float rod and accessible through the opening in the float chamber portion of the housing upon the removal of said cap, and suitable intake and supply conduits in communication with corresponding channels in said head.

[Claim 6 not printed in the Gazette.]

1,222,654. PHOTOGRAPHIC DEVELOPING APPARATUS. STEPHEN A. MISCHANSKY, Syracuse, N. Y., assignor of one-half to Stanislaw Lniski, Syracuse, N. Y. Filed May 11, 1915. Serial No. 27,378. (Cl. 95—90.5.)



1. In a photographic developing apparatus, a case having a developing chamber in one end and a fixing chamber in the other end, and a "dark-chamber" intermediate the first-named chambers and communicating therewith to permit the passage of the film from one of said chambers to the other, said first-named chambers being provided with separate inlets for their respective liquids, and separate closures for said inlets.

2. In a photographic developing apparatus, a case having a developing chamber in one end and a fixing chamber in the other end, and a "dark-chamber" intermediate the first-named chambers and communicating therewith to permit the passage of the film from one of said chambers to the other, said first-named chambers being provided with separate inlets for their respective liquids, separate closures for said inlets, and separate reels located in said first-named chambers.

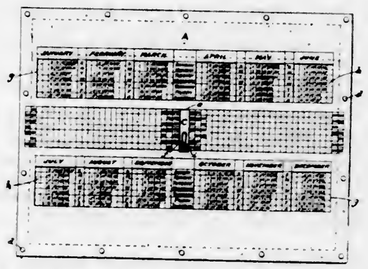
3. In a photographic developing apparatus, a case having a developing chamber in one end and a fixing chamber in the other end, and a "dark-chamber" intermediate the first-named chambers and communicating therewith to permit the passage of the film from one of said chambers to the other, said first-named chambers being provided with separate inlets for their respective liquids, separate closures for said inlets, separate reels located in said first-named chambers, and a conveyer apron having its opposite ends attached to said reels and its intermediate portion extended through the "dark-chamber."

4. In a photographic developing apparatus, a case having a developing chamber in one end and a fixing chamber in the other end, and a "dark-chamber" intermediate the first-named chambers and communicating therewith to permit the passage of the film from one of said chambers to the other, said first-named chambers being provided with separate inlets for their respective liquids, separate closures for said inlets, and a movable shutter at one end of the "dark-chamber" for excluding light from said chamber when the closure for the adjacent inlet is open.

5. In a photographic developing apparatus, the combination of a case having a chamber in one end for developing liquid and a separate chamber in the opposite end for a fixing liquid, said case having a "dark-chamber" between the first-named chambers, the "dark-chamber" having lower and upper screens in spaced relation to exclude actinic rays from the "dark-chamber" and to form a passage for the film from one of the first-named chambers to the other, and means for admitting and cutting off light from the under side of the lower screen.

[Claim 6 not printed in the Gazette.]

1,222,655. CALENDAR. FRANK X. MOERK, Oak Lane, Pa. Filed Jan. 18, 1916. Serial No. 72,669. (Cl. 40—109.

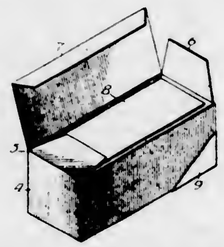


1. A calendar comprising two main sheets forming the front and rear faces of the calendar and each provided with cut-away portions corresponding to the twelve months of the year, seven rows of spaces on the front face corresponding to the seven days of the week and provided with consecutively arranged common year and leap year numerals, a slidable sheet arranged between the main sheets and provided on each side with a group of twelve sets of numerals corresponding to the twelve months of the year, each set of numerals having thirteen rows, the two groups of numerals being identical except for the provision of an additional numeral on the rear face in the set corresponding to the month of February, and a device on the front face of the intermediate sliding sheet adapted to be alined with any one of the seven rows of year numeral spaces on the front sheet, whereby the calendar may be adjusted from the front for either common years or leap years.

2. A calendar comprising two main sheets forming the front and rear faces of the calendar and each provided with cut-away portions corresponding to the twelve months of the year, seven rows of spaces on the front

face corresponding to the seven days of the week, said face provided with year numerals, a slidable sheet arranged between the main sheets and provided on each side with a group of twelve sets of numerals corresponding to the twelve months of the year, each set of numerals having thirteen rows, the two groups of numerals being identical except for the provision of an additional numeral on the rear face in the set corresponding to the month of February, seven rows of spaces on the rear face corresponding with the seven rows of spaces on the front face, said rear face provided with year numerals, and spaces on the rear face provided with month and day numerals arranged in line with transversely alining numerals of the seven rows and indicating dates for the determination of movable holidays in the years represented by such transversely alining numerals.

1,222,656. MEANS FOR PRESERVING PREPARED CEREAL, CEREAL PRODUCTS, AND THE LIKE. PAUL S. MOYER, Chicago, Ill., assignor to The Aridor Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 25, 1916. Serial No. 116,854. (Cl. 99—8.)



1. In combination, a complete box having closely fitting joints, a dry hygroscopic food product in said box, and a pad of fibrous material having a hygroscopic substance deposited in finely divided form upon the individual fibers thereof to form an extensive surface for the absorbance of moisture, said pad being disposed in said box out of contact with the food product and said substance having a greater affinity for moisture than said food product.

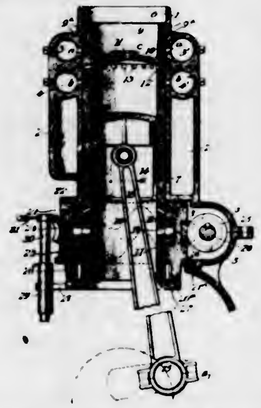
2. In combination a complete box having closely fitting joints and adapted to contain a prepared cereal and a flat pad made of a fibrous material having a hygroscopic substance deposited in finely divided form upon the individual fibers thereof to form an extensive surface for the absorbance of moisture, said pad being supported in said box out of contact with the prepared cereal.

1,222,657. INTERNAL-COMBUSTION ENGINE. JOHN FRANCIS MURPHY, Louisville, Ky. Filed Nov. 16, 1915. Serial No. 61,807. (Cl. 123—75.)

1. An internal combustion engine including a casing having inlet and exhaust ports, a sliding working cylinder having a common intake and exhaust port for alternately registering with said casing ports, a piston sliding in said working cylinder, cam means for moving said working cylinder, and means for advancing the action of the working cylinder with relation to the crank shaft while the engine is running.

2. An internal combustion engine including a casing having inlet and exhaust ports, a sliding working cylinder having a common intake and exhaust port for alternately registering with said casing ports, said working cylinder port being formed by a groove around the periphery of the cylinder, and a plurality of radially disposed openings establishing communication between the groove and the interior of the cylinder, a piston working in said cylinder, and means for reciprocating said cylinder in synchronism with the piston.

3. An internal combustion engine including a casing having inlet and exhaust ports, a working cylinder having a piston head provided with a common intake and exhaust port formed by an annular groove and a plurality of radially disposed openings, said common intake and exhaust port being adapted to alternately register with the casing ports, a piston working within said cylinder, and cam means for actuating said cylinder in synchronism with the piston.

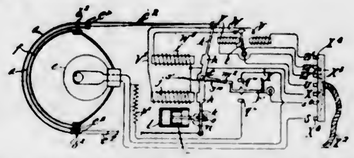


4. An internal combustion engine including a casing having inlet and exhaust ports arranged at different levels, a sliding working cylinder located within the casing and having a combined intake and exhaust port for alternately registering directly with said casing ports, said cylinder having offset flanges at one end, relatively fixed projections carried by said cylinder, and cam means for engaging said projections to operate the cylinder, said cam means having spaced depending lugs arranged to contact with said offset flanges on the cylinder during the compression and working strokes of the engine.

5. An internal combustion engine including a casing having inlet and exhaust ports, a sliding working cylinder located within the casing and having a common intake and exhaust port for alternately registering with said casing ports, relatively fixed projections carried by said cylinder, and cam means for engaging said projections to operate said cylinder in synchronism with the piston, said cam means comprising a sectional gear ring having a cam groove and also having a worm rack and rotatably supported on the cylinder, and a worm for operating said gear ring through the worm rack.

[Claims 6 to 8 not printed in the Gazette.]

1,222,658. ADVERTISING OR SIGNALING APPARATUS. JAMES PRIESTNALL NAYLOR, Dulwich, England. Filed Apr. 14, 1914. Serial No. 831,751. (Cl. 40—52.)



1. In a changeable electric display mechanism, an element comprising a shutter, separate primary electromagnetic devices adapted to move the shutter into positions of display and non-display, a relay including separate secondary electromagnetic devices adapted to determine which of said primary magnetic devices shall be energized, an alternative circuit connected to said primary electromagnetic devices, and means for operating said alternative

circuit to subsequently energize the primary device determined by said relay.

2. In a changeable electric display mechanism a visual element, means for artificially illuminating same, a shutter adapted to uncover and cover the visual element for display and non-display thereof, separate primary magnetic devices adapted to move the shutter into positions of display and non-display, a relay including separate secondary electromagnetic devices adapted to determine which of said primary magnetic devices shall be energized, an alternative circuit connected to said primary electromagnetic devices and means for operating said alternative circuit to subsequently energize the primary device determined by said relay.

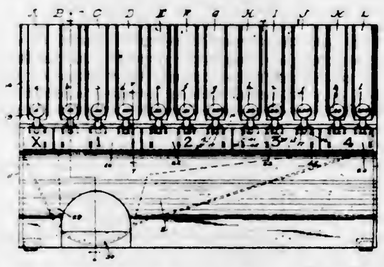
3. In a changeable electric display mechanism, an element comprising a lamp, a movable shutter for said lamp, electrical means to operate said shutter, cushioning means to prevent violent action of said shutter, said cushioning means comprising a dash-pot with a lost-motion joint to said shutter-operating means, an alternative circuit to said lamp including a resistance substantially equal to the resistance of the lamp, said shutter-operating means controlling the lamp-circuit and the alternative circuit, electrical connections arranged so that when the shutter is closed the lamp circuit is opened and the alternative circuit is closed, and when the shutter is open the lamp circuit is closed and the alternative circuit is opened.

4. In a changeable electric display mechanism, a plurality of independent elements each comprising a lamp, a movable shutter for said lamp, electrical circuits and connections for actuating said lamp, an alternative circuit to said lamp, including a resistance, electrical circuits and connections for actuating said shutter, means to electrically connect a plurality of said independent elements in a panel to be collectively operated, and means including a relay and electrical connections to connect the lamp or alternative circuit of one element in the panel with the lamp or alternative circuit of another element in the panel.

5. In a changeable electric display mechanism, a plurality of independent elements each comprising a lamp, a movable shutter for said lamp, shutter-operating means, electrical circuits and connections for actuating said lamp, an alternative circuit to said lamp including a resistance, electrical circuits and connections for actuating said shutter, means to collectively operate the shutter circuits of a plurality of elements in a panel, said shutter-operating means operating contacts and connecting the lamp in the circuit when the shutter is open, and operating other contacts and connecting up the alternative resistance circuit when the shutter is closed.

[Claims 6 to 21 not printed in the Gazette.]

1,222,659. CHANGE-MAKING MACHINE. FREDERICK A. NIEMANN, Chicago, Ill., assignor to Niemann and Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 9, 1914. Serial No. 871,138. (Cl. 133—4.)



1. In a change making machine, the combination with a plurality of receptacles for coins, of a plurality of channel-shaped slides provided with racks and adapted to be manipulated beneath said receptacles so as to eject coins therefrom, and means adapted to engage said racks to prevent the retraction of said slides until the forward movement of said slides has been completed.

2. In a change making machine, the combination with a base member formed with parallel slots terminating in coin recesses, of coin receptacles arranged above said recesses, a plurality of channel-shaped coin-ejecting slides provided with a rack on one of their flanges and operating in said slots so as to eject the coin retained in said recesses, springs to retract said slides to their normal position, and means for preventing the retraction of said slides until the forward movements of the same have been completed, comprising a pivoted pawl arranged in one of said slots adapted to engage said rack during said forward movement.

3. In a change making machine, the combination with a base formed with a pair of parallel slots, of a substantially upright coin receptacle arranged at one extremity of the slots, a coin ejecting slide having flanges projecting into said slots, the end of which slide engages and ejects a coin from the lower end of the coin stack in said receptacle.

4. In a change making machine, the combination with a base formed with a pair of parallel slots, of a substantially upright coin receptacle arranged at one extremity of the slots, a coin ejecting slide having flanges projecting into said slots, the end of which slide engages and ejects a coin from the lower end of the coin stack in said receptacle, one of said flanges being formed with a rack, a dog adapted to engage said rack on the forward stroke of the slide, and means on the slide which moves the dog out of operative engagement with the rack when the slide has completed its forward stroke.

5. In a change making machine, the combination with a base formed with a pair of parallel slots, of a substantially upright coin receptacle arranged at one extremity of the slots, a coin ejecting slide having flanges projecting into said slots, the end of which slide engages and ejects a coin from the lower end of the coin stack in said receptacle, one of said flanges being formed with a rack, a dog adapted to engage said rack on the forward stroke of the slide, and means on the slide which moves the dog out of operative engagement with the rack when the slide has completed its forward stroke and into engagement therewith on the complete retraction of the slide.

[Claims 6 to 10 not printed in the Gazette.]

1,222,660. PROCESS OF MAKING A CATALYZING AGENT FOR THE REDUCTION OF FATS AND UNSATURATED FATTY ACIDS. CARL PAAL, Erlangen, Germany, assignor, by mesne assignments, to The Hydrogenation Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Mar. 18, 1911. Serial No. 615,282. (Cl. 23—28.)

1. The process of making a catalyzing agent having a high degree of activity in the hydrogenation of unsaturated fatty compounds, which consists in suspending an insoluble material devoid of anticatalytic action in an aqueous liquid, and precipitating thereon a relatively small proportion of a substance containing a metal of the platinum group.

2. The process of making a catalyzing agent having a high degree of activity in the hydrogenation of unsaturated fatty compounds, which consists in suspending a finely-divided metal devoid of anticatalytic action in an aqueous liquid, and precipitating thereon a relatively small proportion of a substance containing a metal of the platinum group.

3. The process of making a catalyzing agent having a high degree of activity in the hydrogenation of unsaturated fatty compounds, which consists in suspending finely-divided nickel in an aqueous liquid, and precipitating thereon a relatively small proportion of a substance containing a metal of the platinum group.

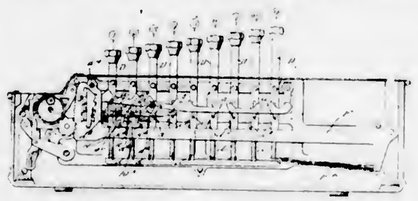
4. The process of making a catalyzing agent having a high degree of activity in the hydrogenation of unsaturated fatty compounds, which consists in suspending an insolu-

ble material devoid of anticatalytic action in an aqueous liquid, and precipitating thereon a relatively small proportion of a substance containing palladium.

5. The process of making a catalyzing agent having a high degree of activity in the hydrogenation of unsaturated fatty compounds, which consists in suspending a finely-divided metal devoid of anticatalytic action in an aqueous liquid, and precipitating thereon a relatively small proportion of a substance containing palladium.

[Claims 6 to 10 not printed in the Gazette.]

1,222,661. ADDING-MACHINE. WALTER J. PASINSKI, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 8, 1913, Serial No. 783,703. Renewed Sept. 13, 1916. Serial No. 119,979. (Cl. 235—82.)



1. In a machine of the class described, the combination of a registering lever; a series of keys constructed and arranged to act upon said lever at increasing distances from the latter's pivot; and means interposed between said lever and certain keys which act at the greater distances said means serving to impart movement to the lever though creating lost motion whereby displacement of the lever accompanying movement of said certain keys is reduced as related to the key-movement.

2. In a machine of the class described the combination of a registering lever; a series of keys constructed and arranged to act upon said lever at increasing distances from the latter's pivot; and means interposed between said lever and certain keys which act at the greater distances said means serving to impart movement to the lever though effecting conversion of motion whereby displacement of the lever accompanying movement of said certain keys is reduced as related to the key-movement.

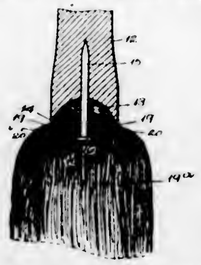
3. In a machine of the class described the combination of a spring-held registering lever; a series of depressible spring-upheld keys to act upon said lever at increasing distances from its pivot; and a lever through the medium of which a certain key acting at the greater distance displaces the registering lever.

4. In a machine of the class described the combination of a spring-held registering lever; a series of depressible spring-upheld keys to act upon said lever at increasing distances from its pivot; and a lever through the medium of which a certain key acting at the greater distance displaces the registering lever through shifting engagement therewith.

5. In a machine of the class described the combination of a spring-held registering lever; a series of depressible spring-upheld keys to act upon said lever at increasing distances from its pivot; and a lever pivoted at one end, in engagement at the opposite end with a certain key acting at the greater distance from the pivot of the registering lever, and having a shifting engagement intermediate its ends with said registering lever.

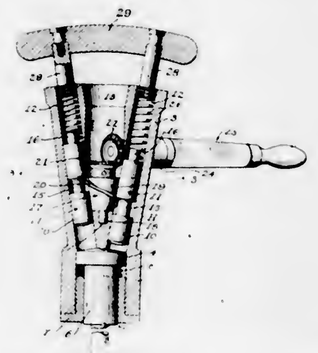
1,222,662. MOP. FREDERICK W. PENDERGAST, Cambridge, Mass. Filed Oct. 24, 1916. Serial No. 127,348. (Cl. 15—56.)

A mop comprising a handle having a clamping end face, mop filaments arranged in bunches the central portions of which extend across said face in various directions, a clamping spider formed to bridge said face and composed of an apertured central hub and arms radiating therefrom and provided at their outer ends with inwardly projecting fingers, which abut against the margin of said face, and a securing member composed of a shank passing through the hub aperture, driven into the longitudinal center of the handle, and extending lengthwise thereof,



and a head bearing on the outer side of the spider hub, said securing member being adapted when partially driven, to confine the spider spaced from said end face while the filaments are being assembled, and when completely driven to cause said fingers to abut against the margin of said face.

1,222,663. MULTIPLE-PLUNGER IMPACT-HAMMER. HAROLD D. PENNEY, Pelham, N. Y., assignor to Henry B. Newhall, Littleton, N. H. Filed Dec. 6, 1916. Serial No. 135,310. (Cl. 255—42.)



1. In a percussion instrument, the combination with a housing, of a tool holder having a conical impact top-face, slidably mounted in said housing, a plurality of reciprocating hammers (with their respective axes located at the outer ends upon a circle, and at their inner impacting ends located in like manner upon a circle of less diameter than the outer, both circles having the axis of the tool-holder as a common center) adapted to actuate said tool-holder, and means for actuating said hammers.

2. In a percussion instrument, the combination with a housing, of a tool-holder slidably mounted in said housing, a plurality of reciprocating hammers (with their respective axes located at the outer ends upon a circle, and at their inner impacting ends located in like manner upon a circle of less diameter than the outer, both circles having the axis of the tool-holder as a common center) adapted to actuate said tool-holder, means for normally maintaining said hammers under tension in a direction toward said tool holder, and means for successively releasing said hammers to strike said tool holder and again retracting such hammers.

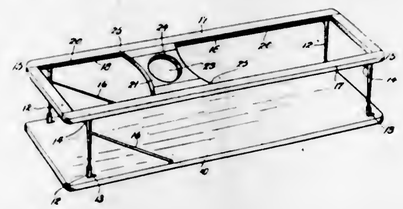
3. In a percussion instrument, the combination with a housing, of a tool holder slidably mounted in said housing, there being a plurality of bores in said housing converging as they approach the tool holder, hammers slidably mounted in said bores, means for successively retracting said hammers out of tool holder engaging position, and means for maintaining said hammers under tension against said retracting means.

4. In a percussion instrument, the combination with a housing, of a tool holder having a conical impact top-face slidably mounted in said housing, there being a plurality of bores in said housing converging as they approach the tool holder, a plurality of reciprocating hammers adapted to actuate said tool-holder, slidably mounted in said bores (with their respective axes located at the outer ends upon a circle, and at their inner impacting ends located in like manner upon a circle of less diameter than the outer, both circles having the axis of the tool-holder as a common center) means for successively retracting said hammers out of tool-holder engaging position, means for maintaining said hammers under tension against said retracting means, and means for maintaining the tool holder under tension and in the path of movement of the hammers.

5. In a percussion instrument, the combination with a housing, of a tool-holder having a conical impact top face, slidably mounted in said housing, a plurality of reciprocating hammers impacting with the conical impact top face of the tool-holder, having their respective axes located at the outer ends upon a circle, and their inner impacting ends located in like manner upon a circle of less diameter than the outer, both circles having the axis of the tool-holder as a common center; means for normally maintaining said hammers under tension in a direction toward said tool-holder, means for successively retracting and releasing said hammers to strike the conical impact face of said tool holder and again retracting such hammers, and means for maintaining the tool-holder under tension in the path of movement of the hammers when released.

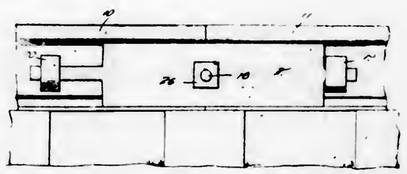
[Claims 6 to 10 not printed in the Gazette.]

1,222,664. DEVICE FOR USE IN INSTRUCTING INFANTS TO WALK. ALEXANDER PERNA, Philadelphia, Pa. Filed June 18, 1915. Serial No. 34,881. (Cl. 155—45.)



A knock-down device of the class noted embracing a solid base forming a treadway immediately adjacent the floor or ground, the underside of which is countersunk and is provided with rollers mounted therein, an upright hinged to said tread-way adjacent each corner thereof and in alinement with a countersunk portion, a rigid frame hinged to the tops of said uprights in a manner to permit said frame and tread-way to assume a paralleling position in the collapsed position of the device, which frame follows the marginal contour of and is of the same outer dimension as the tread-way, the side rails of said frame being grooved upon their inner faces, an apertured body support having tongues for tracking through said grooves, said support being provided upon opposite sides with inwardly curved portions and with buffers for abutting against the ends of the frame, and foldable braces disposed between said tread-way and a pair of uprights to permit collapsing of the device, the normal position of the device being that of having the uprights abutting upon the tread-way and the frame abutting upon the upright tops.

1,222,665. RAIL-JOINT. CHARLES B. PIPES, Akron, Ohio. Filed Dec. 28, 1916. Serial No. 139,301. (Cl. 239—9.)

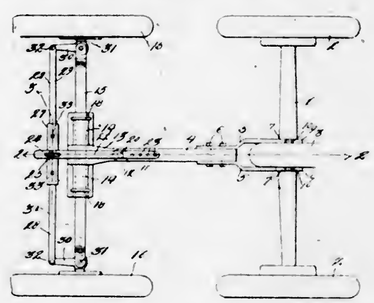


1. The combination with a pair of rails having rectangular openings therein adjacent the ends, of a fish plate, a pair of laterally extending ears therefrom adapted to engage in said openings, said ears having transverse openings therein, a locking plate, an arm extending from each end of said plate, and said arms adapted to engage in the transverse openings for a purpose specified.

2. The combination with a pair of rails having openings therein adjacent the ends, of a fish plate, a pair of ears extending laterally from the said plate adapted to engage the said openings, said ears having transverse openings therein, a locking plate, and means extending through the fish plate, the ends of the rail, and in engagement with the locking plate for a purpose specified.

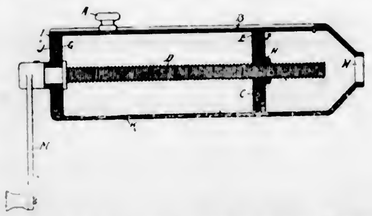
3. The combination with a pair of rails having transverse openings therein adjacent the ends thereof, of a fish plate, a pair of ears extending laterally from the said plate adapted to engage in the said openings, said ears having transverse openings therein, a locking plate, a short arm extending from one end of the locking plate, a long arm extending from the other end, said long arm being inserted in one of the transverse openings and the short arm in the other for a purpose specified.

1,222,666. STEERING-COUPLING FOR AUTOMOBILES. JOHN G. PORTER, Bridgeport, Nebr. Filed Aug. 25, 1916. Serial No. 116,857. (Cl. 21—137.)



A steering coupler between a towing automobile and a trailer automobile, comprising a bar having pivotal connections to the rear axle casing of the towing machine so as to pivot vertically, a plate having clamping connections to the front axle of the rear machine and provided with a forward extension ear or lug, the rear end of said bar having a bifurcation to receive said ear or lug, a pivot extending through the bifurcated end of the bar and the ear, a second bar connected to the rear portion of the first bar forward of said pivot and extending rearwardly beyond the front axle of the trailer machine, a false or substitute connecting bar connecting the rear arms of the knuckle joints of the front wheels of the trailer machine consisting of two sections, a sleeve connecting the two sections of the connecting bar, and a slot and pin connection between the sleeve and the rear end of the second bar.

1,222,667. GREASE-GUN. HERMAN H. PRETZEL, Stillwater, Minn. Filed May 19, 1915. Serial No. 29,237. (Cl. 221—79.)

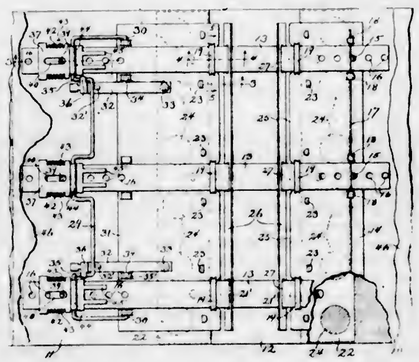


1. A grease gun comprising a casing having a discharge opening in an end wall and an entrance opening in a side wall through which the lubricant is inserted, a slidable closure for the side wall opening movable longitudinal of the casing, a plunger movable longitudinal in the casing for expelling the lubricant through the discharge opening thereof, and a stop arranged on the forward end of the closure in the path of the plunger to engage the latter when the closure is moved to opened position for preventing further opening movement of the closure independent of the plunger whereby to always keep the space in the rear of the plunger closed against ingress of the lubricant.

2. A grease gun comprising a casing having an end discharge opening and a side entrance opening, a closure for the side opening of the casing slidable from the rear in a longitudinal direction to operative position, a plunger operable longitudinally in the casing across the side opening, and means carried by the closure and engageable with the plunger on opening movement of said closure for holding the latter against uncovering the space in rear of said plunger.

3. A grease gun comprising a casing having a side entrance opening the surrounding edges of which are provided with grooves extending over the rear end wall of the casing, a closure slidable over the end wall and interlocking in the grooves about the casing opening, a plunger slidable in the casing, and spring pressed strips on the casing end wall and the plunger, said strips extending the width of the closure and exerting outward pressure on the closure at spaced points to firmly and evenly seat the closure on the walls of the grooves to provide a grease-tight joint.

1,222,668. LOOSE-LEAF BINDER. WILLIAM S. PROUDFIT, Grand Rapids, Mich. Filed June 15, 1911. Serial No. 633,434. (Cl. 129—41.)



1. In a device of the class described, covers having a stiff binding edge, a back connecting said covers and hinged thereto some distance from the extreme binding edge, leaf holding bands bridging the space between the binding edges of the covers, said parts being so arranged and constructed that the leaf holding bands with the leaves thereon will assume a position curved away from the back when the covers are opened and will assume a position curved in an opposite direction when the covers are closed, and both ends of each of said leaf holding bands being detachably secured to their respective covers for the purpose of threading the bands through the leaves.

2. In a loose leaf binder, covers, a member pivotally connected to one cover to swing toward and away from the binding edge thereof, and a leaf holding member having one end adjustably connected to said first named member and the other end adjustably connected to the other cover.

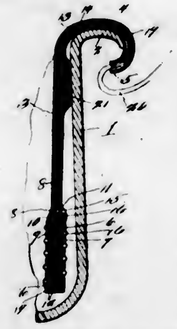
3. In a loose leaf binder, a cover, a leaf holding band, a nonstraight rod pivotally mounted on the cover to swing toward and away from the binding edge of the cover, means for detachably connecting one end of said leaf holding band to said rod and means whereby the pivotal point of said rod can be adjusted in a position nearer to or farther from the binding edge of the cover.

4. In a loose leaf binder, a cover, a leaf holding band secured to the cover and extending over the binding edge of the cover at right angles thereto, a guide lip and a guide strip near the binding edge of the cover between which the said band freely passes, the center portion of said lip and the center portion of said strip curved toward the band so as to contact with and bring the strain on the central portion of the band.

5. In a loose leaf binder, a cover, a toggle arm pivoted on the cover to swing toward and away from the binding edge of the cover, a leaf holding band pivotally connected to the free end of the toggle arm, and means for adjusting the pivotal point of the toggle arm toward and away from said binding edge.

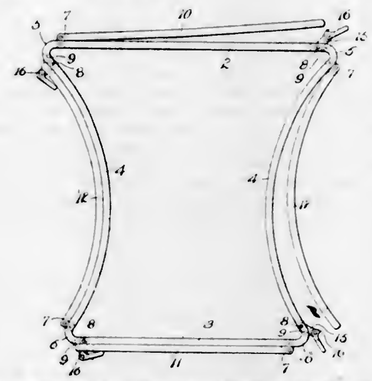
[Claims 6 to 8 not printed in the Gazette.]

1,222,669. ELECTRIC BATH-TUB HEATER. JOHN W. PURNELL, Morristown, Tenn. Filed May 3, 1916. Serial No. 95,202. (Cl. 219—41.)



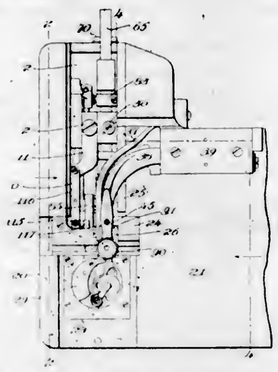
In an electric water heater, the combination with a tubular supporting member having a spiral groove at its lower end and provided with a hook at its upper end for attaching the member to the flanged upper edge of a tub, the end of the hook being extended transversely toward the body of the support to form means serving to prevent accidental upward displacement of the support from the flange of the bath tub, of an electric heating coil in said groove having wires for connection to a source of supply extending through the member, said tubular member having a lateral elongated ing to engage the inner face of the side of the bath tub to hold the heating coil at the lower end of said member out of contact with the inner face of the side of the tub.

1,222,670. HOSIERY-HOLDER FOR EMBROIDERING-MACHINES. IRVIN RADER, Reading, Pa., assignor to Nolde & Horst Company, Reading, Pa., a Corporation of Pennsylvania. Filed Sept. 28, 1915. Serial No. 52,977. (Cl. 112—7.)



A hosiery-holder for embroidering machines consisting of a rigid open frame formed of an endless bar of uniform cross-section bent to form parallel end portions and integral corner portions, outwardly extending pivot ears rigidly fixed to said bar adjacent the respective corner portions, separate clamping bars for each end and side portion of said frame connected to the respective pivot-ears, and separate locking means for the free ends of said bars each comprising a swinging-link connection to the frame and a cam lever.

1,222,671. BLINDSTITCH SEWING-MACHINE. FRED A. READ, Lynn, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Mar. 5, 1914. Serial No. 822,786. (Cl. 112—24.)

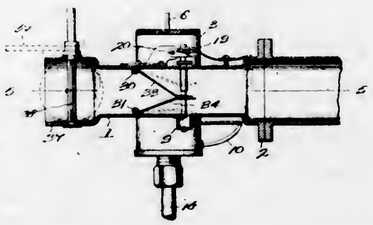


1. In a blind stitch sewing machine the combination of a needle carrying bar having an eccentric portion rigid therewith, means for reciprocating said bar, means for loosening said bar from and securing it to said reciprocating means to permit rotary adjustment of the bar, a needle holding block carried at the eccentric portion of the bar, means for loosening said block from said bar to permit relative rotation of the bar, whereby the needle may be adjusted to and from the axis of the bar in a given plane.

2. In a buttonhole finishing machine the following combination: means for bending and holding the work, means for holding and actuating a straight eye-pointed needle in a straight path slightly offset with respect to its correct path, and an idle wheel between the retracted needle point and the work bend and closely adjacent the convex side of the work bend and slightly within said needle path, whereby the needle in each advancing stroke rides up upon the idle wheel which minutely deflects the needle into its correct path immediately before the needle enters the work bend for making a blind stitch; said idle wheel being of a diameter a small multiple of the diameter of the needle, whereby it is sufficiently small to be accommodated in the restricted space and sufficiently large for practical mounting and to insure the needle properly finding itself upon the idle wheel periphery.

3. In a buttonhole finishing machine the following combination: means for bending and holding the work, means for actuating a straight eye-pointed needle to advance alternately in each of two straight paths, and an idle wheel between the retracted needle point and the work bend and adjacent the convex side of the work bend and slightly within said needle path, whereby the needle in each advancing stroke rides up upon the idle wheel which deflects the needle to cause it to accurately enter the work bend for making a blind stitch; said idle wheel constructed with three needle supporting flanges forming two separate needle receiving grooves adapted to be alternately engaged by the needle, the bottom of each groove serving to support the needle against the strain of its said deflection.

1,222,672. CARBURETER. HENRY M. REICHENBACH, Rochester, N. Y. Filed June 3, 1913. Serial No. 771,567. Renewed June 12, 1916. Serial No. 103,345. (Cl. 261—40.)



1. In a carbureter, the combination of a rectangular inlet conduit for an internal combustion engine, a fuel-supply device provided with rectangular feed openings within said conduit, a movable rectangular deflector within said conduit for directing the indrawn air in a jet across such fuel-feed openings, and means controlled by said deflector for regulating such fuel-feed openings.

2. In a carbureter, the combination of an inlet conduit for an internal combustion engine, a fuel-supply device provided with feed openings within and extending across said conduit, a suction-actuated movable deflector within said conduit for controlling the indrawn air and directing the latter in a jet across such fuel-feed openings, and means controlled by said deflector for regulating such fuel-feed openings.

3. In a carbureter, the combination of an inlet conduit for an internal combustion engine, a fuel-supply device provided with straight-edged feed openings, said device being so placed that the openings are made to extend across the conduit in such a position that the draft will be carried across the straight edges of said openings, a suction operated movable deflector within said conduit for directing the indrawn air in a jet across such fuel-feed openings, shiftable means for governing such fuel-feed openings, and connections between said deflector and shiftable means for actuating the latter.

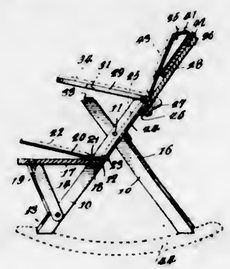
4. In a carbureter, the combination of an inlet conduit for an internal combustion engine, a fuel-supply device provided with feed openings within and extending across said conduit, substantially normally closed suction operated deflectors within said conduit for directing the in-

drawn air in a jet across such fuel-feed openings, shiftable means for governing such fuel-feed openings, connections between said deflector and shiftable means for actuating the fuel feed governing means, and means for normally maintaining said suction operated deflectors in closed position.

5. In a carbureter, the combination of an air inlet conduit for an internal combustion engine, suction operated means for permitting variable constriction of the effective opening in said conduit, a fuel-supply device provided with feed openings having straight edges, said device being so arranged that the openings are made to extend across said conduit in such a position that the draft will be across the straight edges of said openings, and means for effecting differential proportioning between said effective opening and said fuel feed openings in accordance with effective engine suction.

[Claims 6 to 31 not printed in the Gazette.]

1,222,673. CONVERTIBLE CHAIR. JOSEPH RIZZO, New York, N. Y. Filed July 23, 1915. Serial No. 41,538. (Cl. 155—6.)



1. A convertible chair of the character comprising pairs of supporting legs, a cross piece connecting the forward ones of said legs at a point intermediate their ends, a seat hingedly connected to said cross piece, means to support the outer end of said seat, a panel hingedly connected to said cross piece, means to support said panel, a movable panel carried by the forward ones of said supporting legs, and a pair of arm supports pivotally connected to said movable panel and adapted to engage the upper ends of said supporting legs, substantially as described.

2. In a convertible chair of the character described, pairs of supporting legs, a cross piece connecting certain of said supporting legs at a point intermediate the ends thereof, a seat hingedly connected to said cross piece, a supporting structure pivotally connected adjacent the lower ends of certain of said supporting legs for supporting the outer end of said seat, a panel hingedly connected to said cross piece, another cross piece connecting certain of said supporting legs adjacent their upper ends, and serving to support said panel, a second panel, a pair of adjustable blocks carried by said second mentioned cross piece, the lower end of said second mentioned panel being arranged between said blocks and the upper ends of said last mentioned supporting legs, and a pair of arm supports pivotally connected to said second mentioned panel and engaging the upper end of said legs, as and for the purpose set forth and described.

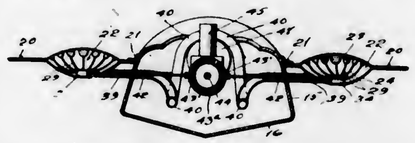
3. In a convertible chair of the character described, pairs of supporting legs, a cross piece connecting certain of said supporting legs at a point intermediate the ends thereof, a seat hingedly connected to said cross piece, means pivotally connected to certain of said supporting legs to support said seat in a substantially horizontal position, a panel hingedly connected to said cross piece, a second cross piece connecting certain of said supporting legs at a point adjacent their upper ends and serving to support said panel, a second panel removably connected adjacent the upper ends of certain of said supporting legs and adjacent the upper end of said first mentioned panel, a pair of arm supports pivotally connected to said second mentioned panel and engaging the upper ends of said supporting legs, and a housing formed on said second mentioned panel serving as a head rest, as and for the purpose set forth and described.

4. In a convertible chair of the character described, pairs of supporting legs, a cross piece connecting certain of said supporting legs, a seat hingedly connected to said cross piece, means to support said seat, a panel highly connected to said cross piece, a second panel removably supported adjacent the upper ends of certain of said supporting legs in a plane in parallelism with the plane of said first mentioned panel, a housing mounted on said second mentioned panel, a removable cover for said housing, a mirror mounted in said housing, and a pair of arm supports pivotally connected to said second mentioned panel and adapted to engage the upper ends of said supporting legs, as and for the purpose set forth and described.

5. In a convertible chair of the character described, pairs of supporting legs, a cross piece connecting certain of said supporting legs at a point intermediate the ends thereof, a seat hingedly connected to said cross piece, means to support said cross piece, a chair bottom hingedly connected to said cross piece and adapted to lie on said seat, a panel hingedly connected to said cross piece, a second cross piece connecting certain of said supporting legs and adapted to support the upper end of said panel, a second panel, means to clamp said second panel at the upper ends of certain of said supporting legs in engagement with the upper portion of said first mentioned panel, a pair of arm supports pivotally connected to said second mentioned panel and adapted to engage the upper ends of said supporting legs, a pair of side members mounted on said second mentioned panel, a cross piece hingedly connected to said first mentioned panel and adapted to lie on said side pieces, another cross piece hingedly connected to said last mentioned cross piece and also lying in engagement with the upper edges of said side pieces, a plurality of strips rigidly connected together, one of said strips being hingedly connected to the upper end of said second mentioned panel, said strips engaging the upper edges of said side pieces, and a mirror mounted on said second mentioned panel between said side pieces, as and for the purpose set forth and described.

[Claims 6 to 8 not printed in the Gazette.]

1,222,674. HYDROPLANE. CARLETON RUHE, Olean, N. Y. Filed Mar. 9, 1916. Serial No. 83,142. (Cl. 114—66.5.)



1. In a hydroplane of the character described, a hull, a structure connected with the hull and having an air chamber, apertured air suction cups arranged within the air chamber, and air suction means arranged within the cups.

2. In a hydroplane of the character described, a hull, a sustaining plane connected therewith and having an air chamber formed therein, and means for drawing air into the air chamber.

3. In a hydroplane of the character described, a hull, sustaining planes connected with the hull and disposed upon opposite sides thereof, means providing air chambers in the sustaining planes, and air suction means arranged within each air chamber.

4. In a hydroplane of the character described, a hull, a sustaining plane connected therewith, normally horizontally rotating propellers carried by the sustaining plane, means to drive the propellers, and propelling means for the hull.

5. In a hydroplane of the character described, a hull, sustaining planes connected with the hull and disposed upon opposite sides thereof, normally approximately horizontally rotating propellers carried by the sustaining planes, means to drive the propellers, and propelling means for the hull.

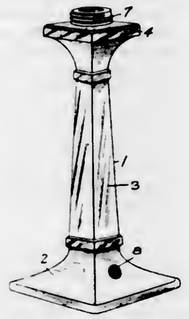
[Claims 6 to 13 not printed in the Gazette.]

1,222,675. HAT-HANGER. WILLIAM DANIEL RYAN, Millseet, New Brunswick, Canada. Filed Jan. 3, 1916. Serial No. 70,071. (Cl. 24—261.)



An improved article of manufacture, a hat holder, formed from a single length of steel wire and consisting of a spring tongue connected to a rectangular supporting frame; the lower portion of said frame is provided with a circular case inside said frame, adapted to receive a loop at the end of said tongue and having at the upper portion of said circular case the two ends of the steel wire bent inward and downward to form twin fasteners for attaching the lower portion of said frame in position; the upper portion of said frame is provided with two circular-shaped loops which are connected to the upper end of the tongue by twin spirals which coil inwardly toward each other, and end in parallel members forming the body of the tongue, the said parallel members extend outward and downward until they reach a point opposite the center of said circular case when said tongue is bent inward and upward to meet the top of said circular case and then spread to form, at the end of the tongue, a loop which fits into said circular case, all substantially as set forth.

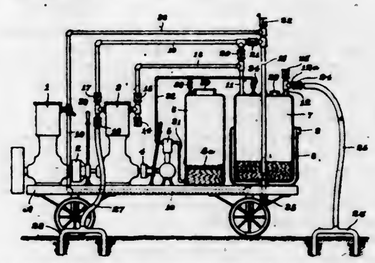
1,222,676. ELECTRIC CANDLESTICK. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Newark, Ohio, a Copartnership. Filed June 24, 1913. Serial No. 775,605. (Cl. 240—81.)



1. As an article of manufacture a molded candlestick having a conductor receiving passage blown longitudinally therethrough, the base of the candlestick having a lateral passage molded therethrough during the molding of the candlestick, said base having its under side hollowed out to open communication between said passages.

2. As an article of manufacture, a molded candlestick having a conductor receiving passage blown longitudinally therethrough and having a molded integral threaded boss at the upper end of said candlestick through which said passage is extended, the base of said candlestick having a lateral passage molded therethrough during the molding of the candlestick, said base having its under side hollowed out to open communication between said passages.

1,222,677. APPARATUS FOR FUMIGATING. RALPH NELSON SARGENT, Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Company, New York, N. Y., a Corporation of New York. Filed Mar. 2, 1915. Serial No. 11,593. (Cl. 167—3.)



1. In an apparatus for fumigating, the combination of a compressor, a tank and a gas generator, a connection between said compressor and said generator, a pump connected to said tank and said generator and means for driving said compressor and pump.

2. In an apparatus for fumigating, the combination of a compressor, a tank and a gas generator, a connection between said compressor and said generator, a pump connected to said tank and said generator, a jacket for said generator and means for driving said compressor and pump.

3. In an apparatus for fumigating, the combination of a compressor, a tank and a gas generator, a pipe passing through the cover of the generator and extending nearly to the bottom thereof, and a plurality of necks connecting with said generator, a connection between said pipe and said compressor and between one of said necks and said compressor, a pump connected to said tank and said generator, and means for driving said compressor and pump.

4. In an apparatus for fumigating, the combination of a compressor, a tank and a gas generator, a pipe passing through the cover of said generator and extending nearly to the bottom thereof, a connection from said pipe to the pressure side of said compressor, a connection from said generator to the suction side of the compressor, a connection between said two connections, a connection to said generator from the outside, a pump connected to said tank and said generator, and means for driving said compressor and pump.

5. In an apparatus for fumigating, the combination of a compressor, a tank and a gas generator, a connection between said compressor and said generator, a pump connected to said tank and said generator, a by-pass connection from said last-named connection to said tank, and means for driving said compressor and pump.

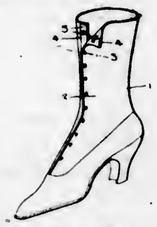
[Claims 6 to 8 not printed in the Gazette.]

1,222,678. SHOE. ADELIA P. SAVAGE, Sidney, Ohio. Filed Aug. 18, 1916. Serial No. 115,572. (Cl. 36—50.)

1. A shoe comprising an upper having overlapping edge portions, strips of material having a tendency toward mutual adherence on the adjacent faces of said edge portions, and fastening means adapted to hold said strips in engagement.

2. A shoe comprising an upper having overlapping edge portions, strips of material having a tendency toward mutual adherence on the adjacent faces of said edge portions,

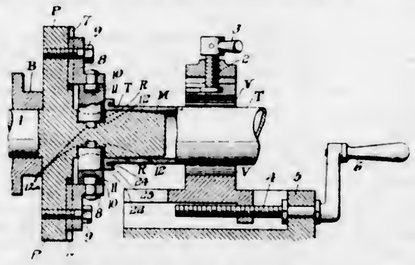
resilient material arranged between said strips and the respective edge portions, and fastening means adapted to hold said strips in engagement.



3. A shoe comprising an upper having overlapping edge portions, strips of material having a tendency toward mutual adherence on the adjacent faces of said edge portions, and snap fastenings secured through said strips and said edge portions, substantially as described.

4. A shoe comprising an upper having overlapping edge portions, strips of material having a tendency toward mutual adherence on the adjacent faces of said edge portions, strips of resilient material arranged between said strips and the adjacent edge portions, and snap fastenings secured through said strips and the adjacent portions of the upper, substantially as described.

1,222,679. METHOD OF MAKING FLANGED PIPE. LEOPOLD C. SCHNEIDER, Philadelphia, Pa. Filed Apr. 21, 1915. Serial No. 22,784. (Cl. 29—157.)



1. The method of flanging a pipe, which consists in working the end of the pipe outwardly to partially form the flange, working the partially formed flange backwardly, and simultaneously working metal of the pipe into the outwardly extending portion in replacement of the metal worked into the backwardly extending portion.

2. The method of flanging a pipe, which consists in working the end of the pipe outwardly to partially form the flange, working the partially formed flange backwardly and then inwardly, and simultaneously working metal of the pipe into the partially formed flange in replacement of the metal worked into the backwardly and inwardly extending portions.

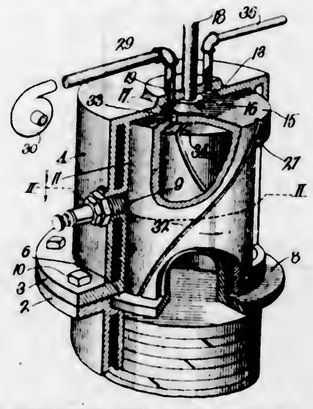
3. The method of flanging a pipe, which consists in working the end of the pipe outwardly to partially form a flange and simultaneously limiting the end of said partially formed flange to form a flange face substantially normal to the axis of the pipe, working the partially formed flange backwardly and simultaneously limiting the periphery of the partially formed flange and backwardly worked metal to form a peripheral surface, and while working the partially formed flange backwardly working metal of the pipe into the outwardly extending flange portion in replacement of the backwardly worked metal.

4. The method of flanging a pipe, which consists in working the end of the pipe outwardly to partially form the flange, working the partially formed flange backwardly and then inwardly, simultaneously working metal of the pipe into the partially formed flange in replacement of the metal worked into the backwardly and inwardly extending portions, and while working the metal outwardly, backwardly and inwardly limiting the same to form front, peripheral and back flange surfaces.

5. The method of flanging a pipe, which consists in working all portions of the material of the end of the pipe outwardly and then backwardly and then inwardly to the outer surface of the pipe.

[Claims 6 to 10 not printed in the Gazette.]

1,222,680. ROTARY VALVE FOR HYDROCARBON-ENGINES. GEORGE L. SCHOFIELD, Kansas City, Mo. Filed Jan. 10, 1916. Serial No. 71,208. (Cl. 123—80.)



1. The combination with a valve housing, of a cup located within and spaced from the housing to form annular and end chambers, a rotary valve located within said chambers and having a lubricant channel in its outer surface, and having an aperture for supplying lubricant to the valve cup, the said valve cup having a groove in its top and side, for the purpose set forth.

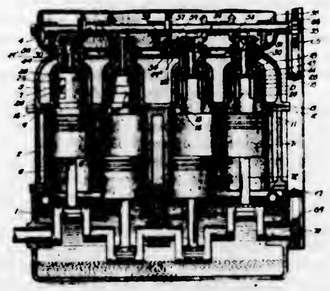
2. The combination with a valve housing, of a cup located within and spaced from the housing, and a rotary valve located between the cup and housing, the said cup having a groove in its top and side walls, inclined forwardly relative to the direction of travel of the rotary member.

3. The combination with a valve housing, of a cup located within the housing, and a rotary valve located between the cup and the housing and forming a lubricant chamber therebetween, and lubricant inlet and outlet conduits in communication with said chamber, the outlet conduit being of less capacity than the intake, for the purpose set forth.

4. The combination with a valve housing, having a raised portion, of a cup located within the housing, a rotary valve located between the cup and the housing and coöperating with the raised portion of the housing to form a lubricant chamber, the said cup having a groove in its end and side wall, and the valve having a groove in its side wall and having an aperture in its end wall for delivering oil from said chamber to the cup, substantially as and for the purpose set forth.

1,222,681. ROTARY VALVE FOR INTERNAL-COMBUSTION ENGINES. GEORGE L. SCHOFIELD, Kansas City, Mo. Filed Mar. 18, 1916. Serial No. 85,069. (Cl. 184—6.)

1. In an engine, a rotary valve, an inclosure for the valve, a valve operating shaft, an inclosure for said shaft also serving as a lubricant container, separate conduits connecting the valve inclosure with the shaft housing, one comprising an intake and the other an oulet, the outlet being of less capacity than the inlet, and means for forcing oil from the shaft housing to the valve inclosure, whereby pressure of the oil is maintained within the inclosure because of the lesser capacity of the outlet conduit.



2. In an engine, a plurality of individual valve housings, a valve rotatably mounted in each housing, a lubricant container, an intake conduit leading to each valve housing, a manifold in communication with the oil container and having connection with each of the said intake conduits, a pump for drawing oil from the container and forcing the same into the manifold, and an individual outlet conduit for each valve housing opening to the oil container whereby oil is circulated through the container and all of said valve housings.

3. In an engine, a plurality of individual valve housings, a valve rotatably mounted in each housing, a lubricant container, an intake conduit leading to each valve housing, a manifold in communication with the oil container and having connection with each of the said intake conduits, a pump for drawing oil from the container and forcing the same into the manifold, and an individual outlet conduit for each valve housing opening to the oil container whereby oil is circulated through the container and all of said valve housings, all of the outlet conduits being of lesser capacity than the respective intake conduits, whereby oil is maintained under pressure in the several valve housings.

4. In an engine, a plurality of cylinders, a valve for each cylinder, an inclosure for each valve, an oil reservoir, a manifold in communication with said reservoir, feeding conduits leading from the manifold to the respective inclosures, conduits leading from the respective inclosures to the reservoir, and a pump for forcing oil from the reservoir to the manifold.

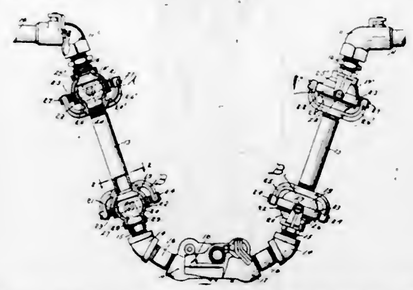
5. In an engine, a plurality of cylinders, a valve for each cylinder, an inclosure for each valve, an oil reservoir, a manifold in communication with said reservoir, feeding conduits leading from the manifold to the respective inclosures, conduits leading from the respective inclosures to the reservoir, a pump for forcing oil from the reservoir to the manifold, and a back check valve in each feeding conduit.

[Claims 6 and 7 not printed in the Gazette.]

1,222,682. FLEXIBLE PIPE CONNECTION. EDWARD A. SCHREIBER, Chicago, Ill., assignor to Egbert H. Gold, Chicago, Ill. Filed Jan. 27, 1916. Serial No. 74,622. (Cl. 137—89.)

1. The combination with a railway car and train-pipe section, of a flexible coupling element adapted to engage a corresponding element on another car to flexibly connect the train-pipe sections of said cars, comprising a ball and socket joint, a structure associated therewith to which the thrust of the fluid pressure on the ball and socket members is transmitted and which permits universal movement of said members within limits, and a swivel joint whereby one portion of said coupling element has axial movement with respect to the other.

2. The combination with a railway car and train-pipe section, of a flexible coupling element adapted to engage a corresponding element on another car to flexibly connect the train-pipe sections of said cars, comprising a coupler head of the gravity straight port type, a structure associated therewith to which the thrust of the fluid pressure on the ball and socket members is transmitted and which permits universal movement of said members within limits, and a swivel joint whereby one portion of said coupling element has axial movement with respect to the other.



3. The combination with a railway car and train-pipe section, of a flexible coupling element adapted to engage a corresponding element on another car to flexibly connect the train-pipe sections of said cars, comprising a ball and socket joint, a gimbal joint surrounding said ball and socket joint, and connected therewith to take the thrust of the fluid pressure on said ball and socket members and permit universal movement thereof within limits, and a swivel joint whereby one portion of said coupling element has axial movement with respect to the other.

4. The combination with a railway car and train-pipe section, of a flexible coupling element adapted to engage a corresponding element on another car to flexibly connect the train-pipe sections of said cars, comprising a pair of ball and socket joints, a rigid connecting pipe between the same, a structure associated with each of said joints to which the thrust of the fluid pressure on the ball and socket members is transmitted and which permits universal movement of said members within limits, and a swivel joint whereby one portion of said coupling element has axial movement with respect to the other.

5. The combination with a railway car and train-pipe section, of a flexible coupling element adapted to engage a corresponding element on another car to flexibly connect the train-pipe sections of said cars, comprising a coupler head of the gravity, straight port type, a pair of ball and socket joints, a rigid connecting pipe between the same, a structure associated with each of said joints to which the thrust of the fluid pressure on the ball and socket members is transmitted and which permits universal movement of said members within limits, and a swivel joint whereby one portion of said coupling element has axial movement with respect to the other.

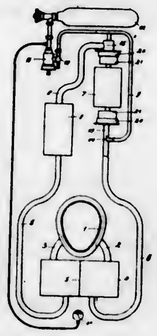
[Claims 6 to 12 not printed in the Gazette.]

1,222,683. RESPIRATOR. DETLEF KARL HEINRICH SCHÜMANN, Hamburg, Germany. Filed Dec. 8, 1913. Serial No. 805,347. (Cl. 128—13.)

1. A respirator of the character described, comprising in combination a regenerator having inlet and outlet mouths, conduits leading to and from said regenerator, cap nuts longitudinally movable on the ends of said conduits for connection with said inlet and outlet mouths, and spring pressed valve members associated with said cap nuts for closing said conduits when in one position and adapted to open said conduits when in another position.

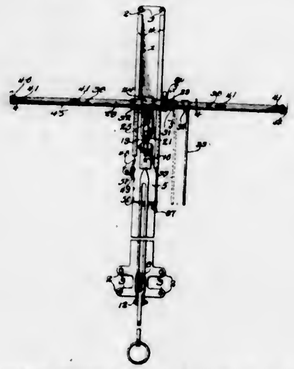
2. A respirator of the character described comprising in combination a regenerator having inlet and outlet mouths, conduits leading to and from said regenerator, cap nuts longitudinally movable on the ends of said conduits for connection with said inlet and outlet mouths, and valve

members associated with said cap nuts, said cap nuts being constructed as valve members and also as safety valve members and having operating springs for holding them seated against the ends of the said conduits against a limited interior pressure, and adapted to open said conduits when in another position.



3. A respirator of the character described, comprising in combination an air pipe, a removable purifying device, an oxygen supply tank, a pipe normally connecting said tank with said air pipe, a by-pass, and connecting means for said purifying device having means for properly connecting said oxygen tank through said by-pass and excluding outside air when the purifying device is removed.

1,222,684. COMBINED HARNESS-HOOK AND LINE-TIGHTENER. CHRIST SEIVERT, Seivert township, Cavalier county, N. D. Filed May 31, 1916. Serial No. 100,940. (Cl. 248—24.)



1. A detachable winding device comprising a sleeve, a tubular rod mounted in said sleeve, means for turning said rod in said sleeve, pins fitting in said rod, extension sleeves fitting on said pins, and means passing through said rod, pins and into said extension sleeves and pins to hold said rod, pins and extension sleeves together to move as a unit and to provide attaching eyes.

2. A detachable winding device comprising a sleeve, a tubular rod mounted in said sleeve, means for turning said rod in said sleeve, releasable means normally preventing the rod from turning in the reverse direction, pins fitting in said rod, extension sleeves fitting on said pins, and means passing through said rod and pins and into said extension sleeves and pins to hold said parts together to move as a unit and to provide attaching eyes.

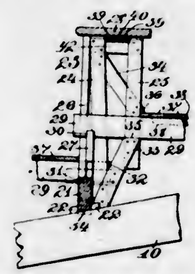
3. A detachable winding device comprising a sleeve, a tubular rod mounted in said sleeve, means for turning said rod in said sleeve and removable hook-bolts passing through said rod and having their tips penetrate through said rod into the interior thereof to serve as attaching eyes.

4. A detachable winding device comprising a rotary part, a sleeve in which said part rotates and a strap fixedly connected to said sleeve, depending therefrom, and provided with perforations, in combination with a reciprocally mounted block having a screw-tap, a pin mounted in said block, the said strap being adapted to receive said pin in one perforation, means passing through the other perforation of said strap into said screw-tap of said block, and means for reciprocating said block.

5. A detachable winding device comprising a rotary part, a sleeve in which said part rotates and a strap fixedly connected to said sleeve, depending therefrom, and provided with a perforation, in combination with a reciprocally mounted block, a pin mounted in said block, the said strap receiving said pin in its perforation, means for releasably holding said strap against turning around said pin and also against said block, and means for operating said block.

[Claims 6 and 7 not printed in the Gazette.]

1,222,685. STAND. ROBERT SELLICK, Newark, N. J. Filed Mar. 22, 1916. Serial No. 85,752. (Cl. 155—5.)



1. A stand comprising stringers, purlins supported by the stringers, stanchions on the purlins, seats on the stanchions, braces, and floor boards on the braces between the stanchions of one row and the next adjacent row, the purlins, the stanchions and the braces having co-acting means for detachably securing them in fixed position.

2. A stand comprising substantially parallel purlins, stanchions on the purlins, seats on the stanchions, braces connecting the rows of stanchions and the purlins, and floor boards on the braces and bearing against the rows to prevent movement of the rows toward each other.

3. In a stand, stringers, rows of seat-supporting elements at separated points on the stringers, braces detachably supported on the rows to hold the rows in alinement, and floor boards on the braces.

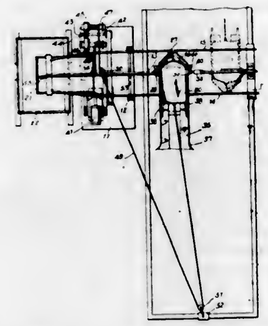
4. In a stand, stringers, rows of seat-supporting elements at separated points on the stringers, braces detachably supported on the rows to hold the rows in alinement, and floor boards on the braces, said boards bearing against the rows to prevent their movement toward each other.

5. In a stand, parallel rows of seat-supporting elements, said rows containing stanchions, seats on the stanchions, braces readily detachable and holding the rows in position, and floor boards on the braces, the floor boards resting against the rear edge of the stanchions of the row in front of its braces.

[Claims 6 to 10 not printed in the Gazette.]

1,222,686. UNLOADING APPARATUS. WILLIAM WILSON SHANOR, Bethlehem, Pa. Filed Aug. 2, 1915. Serial No. 43,308. (Cl. 214—10.)

1. In an unloading apparatus, the combination of a support, a track mounted thereon in an elevated position and extending therefrom so that its end may overlie a car to be unloaded, a truck adapted to move back and forth upon the track, a scoop, and means for moving the scoop into and out of the truck and for moving the truck upon the track; substantially as described.



2. In an unloading apparatus, the combination of a support, a track mounted thereon in an elevated position and extending therefrom so that its end may overlie a car to be unloaded, a truck movable on the track, a scoop adapted to be supported on the truck, and means for moving the truck upon the track, said rails being inclined relatively so that throughout a portion of the track they lie in different horizontal planes; substantially as described.

3. In an unloading apparatus, the combination of a portable support, a substantially horizontal rigid track mounted intermediate its ends upon the support in an elevated position so that the portion of the track projecting to one side of the support may overlie a car to be unloaded, a wheeled truck movable on the track, a scoop, and a single means for drawing the scoop upon the truck and moving the truck upon the track from a position at one end of the track overlying the car to be unloaded over the support to a dumping position at the side of the support opposite that of the car to be unloaded; substantially as described.

4. In an unloading apparatus, the combination of a portable support, a substantially horizontal rigid track mounted intermediate its ends upon the support in an elevated position so that the portion of the track projecting to one side of the support may overlie a car to be unloaded, a wheeled truck movable on the track, a scoop, a latch for the truck operated by the scoop when the latter moves upon the truck, and a single means for drawing the scoop upon the truck and moving the truck upon the track from a position at one end of the track overlying the car to be unloaded over the support to a dumping position at the side of the support opposite that of the car to be unloaded; substantially as described.

5. In an unloading apparatus, the combination of a wheeled vehicle constituting a support, a track extending crosswise of the support and beyond opposite sides thereof and pivotally mounted upon the support in an elevated position so that it may be turned about a horizontal axis to operative and inoperative positions, a truck on the track movable thereon to loading and dumping positions at opposite sides of the support, a latch for holding the truck against movement upon the track when the truck is in the loading position, a scoop, an operating device, a connection from the operating device to the scoop through which the scoop is drawn upon the truck and the truck moved upon the track, and means on the scoop for operating the latch when the scoop is moved upon the truck; substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

1,222,687. DISPLAY-COUNTER. WILLIAM G. SHERER and SAMUEL J. SHERER, Chicago, Ill. Filed Mar. 15, 1915. Serial No. 14,311. (Cl. 211—11.)

1. A display counter having a series of display pockets mounted on the front thereof one above the other and inclined to the vertical, each pocket being more inclined than and having its upper edge slightly behind the lower edge of the one above it.



2. A display counter having a series of display pockets mounted on the front thereof, inclined to the vertical in groups wherein each pocket is more inclined than, and has its upper edge slightly behind the lower edge of, the one above it.

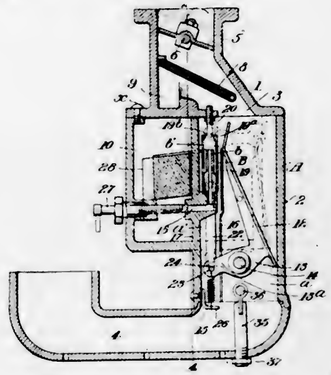
3. A display counter having a series of display pockets mounted on the front thereof in a series of horizontal rows, the pockets in each row being more sharply inclined than and having their upper edges arranged slightly behind the lower edges of those in the row above it.

4. The combination with a counter of a removable display front and top and end pieces hinged to said removable front and adapted to overlie the counter to form a cover therefor.

5. The combination with a counter of a removable display front, a bracket carried thereby, a counter top hinged thereon, end members arranged on the front adapted to fold under said bracket and to lie against the back of the display front, the top being adapted to lie against said end members in the folded position.

[Claims 6 and 7 not printed in the Gazette.]

1,222,688. CARBURETER. RALPH SHIPMAN, Sunbury, Pa. Filed July 22, 1911. Serial No. 640,032. (Cl. 261—47.)



1. In a carbureter for explosive engines, a casing having an air passageway therethrough, a fuel nozzle therein, a draft operated valve and means controlled thereby for first damping and then increasing the flow of air past the

end of the nozzle as the valve moves from its closed to its open position.

2. In a carbureter for explosive engines, a casing having an air passageway therethrough, fuel and air nozzles in said passageway, the air nozzle surrounding the fuel nozzle and having a vent, a pin of varying cross-sectional area in line with said vent, and a draft-controlled valve adapted to move said air nozzle and pin relatively to one another, said pin being formed so as to first decrease and then increase the size of the vent as the valve moves from its closed to its open position.

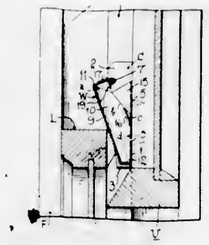
3. In a carbureter for explosive engines, a casing having an air passageway therethrough, fuel and air nozzles in said passageway, the air nozzles surrounding the fuel nozzle and having a vent, a pin in line with said vent, said pin having oppositely tapered portions, and a draft-controlled valve adapted to move said pin and air nozzle relatively to one another to cause the pin to enter the vent.

4. In a carbureter for explosive engines, a casing having an air passageway extending vertically therein, air and fuel nozzles arranged vertically in said passageway, said air nozzle surrounding the fuel nozzle and having an air inlet below the vent of the fuel nozzle and a vent above the top of the latter nozzle, a draft-actuated valve, and means co-acting therewith for first damping and then increasing the flow of fluid through the air nozzle as the valve moves from closed to open position.

5. In a carbureter for explosive engines, a casing having an air passageway therethrough, vertically arranged air and fuel nozzles in said passageway, said air nozzles surrounding the fuel nozzle and said air nozzle having a vent in its upper end, a stationary pin in line with said vent, and a draft-controlled valve connected to said air nozzle and adapted to move the same longitudinally of the pin, said pin being formed so as to first decrease and then increase the size of the vent as the valve moves from its closed to its open position.

[Claim 6 not printed in the Gazette.]

1,222,689. SASH-HOLDER. JAMES S. SMART, Chicago, Ill. Filed Dec. 11, 1916. Serial No. 136,284. (Cl. 16—124.)



1. A holder of the character described comprising a member adapted to be engaged with a sash, a wedge member pivotally engaged with the first named member and capable of being swung upwardly and in vertical alinement with the member, and means for constantly urging said wedge member in a position to overlie the first named member, said first named member being provided with a shoulder with which the wedge member contacts when at the limit of its movement toward the first named member.

2. In combination with an opening and relatively movable closure members for said opening, a casing secured to one of said members, a wedge member pivotally engaged directly with the casing and capable of being swung upwardly and in vertical alinement with the casing, and automatic means for imparting movement to the wedge member in one direction, said wedge member when at the limit of its movement under automatic influence coacting with the second closure member for holding the same against movement, said wedge member when at the limit of movement in an opposite direction permitting relative movement of said closure members.

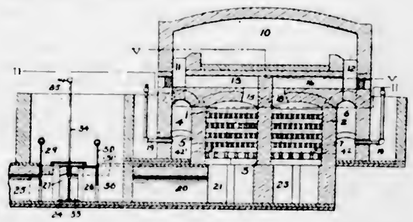
3. In combination with an opening and relatively movable closure members for said opening, a casing secured to one of said members, a wedge member pivotally engaged with the casing, and automatic means for imparting movement to the wedge member in one direction, said wedge member when at the limit of its movement under automatic influence coacting with the second closure member for holding the same against movement, said wedge member when at the limit of movement in an opposite direction permitting relative movement of said closure members, said wedge member being provided with inwardly directed bearing surfaces with which the second named closure member is adapted to engage when said wedge member is in inoperative position.

4. A holder of the class described comprising a casing including outstanding side walls, a pintle supported by said side walls in proximity to an end of the casing and adjacent the outer margins of said walls, a wedge member including an inwardly directed end plate pivotally engaged with the pintle and capable of being swung upwardly into vertical alinement with the casing, and automatic means coacting with said end wall of the wedge member for constantly urging the free end of the wedge member toward the casing.

5. A holder of the class described comprising a casing including outstanding side walls, a pintle supported by said side walls in proximity to an end of the casing and adjacent the outer margins of said walls, a wedge member including an inwardly directed end plate pivotally engaged with the pintle and capable of being swung upwardly into vertical alinement with the casing, automatic means coacting with said end wall of the wedge member for constantly urging the free end of the wedge member toward the casing, shoulders carried by the side walls of the casing inwardly of the pintle, and side walls carried by the wedge member to contact with said shoulders of the casing when the wedge member is in operative position.

[Claims 6 to 12 not printed in the Gazette.]

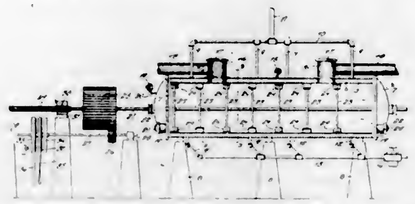
1,222,690. REGENERATIVE FURNACE. HORACE E. SMYTHE, Pittsburgh, Pa., assignor to The S. R. Smythe Company, Pittsburgh, Pa., a Corporation of West Virginia. Filed May 15, 1915. Serial No. 28,333. (Cl. 158—7.5.)



1. In a regenerative furnace, a furnace-chamber, a checker-chamber beneath the same, a preliminary combustion-chamber at the side of the checker-chamber, means for supplying gas to the preliminary combustion-chamber, means for supplying air to the bottom of the checker-chamber, means for supplying air from the lower portion of the checker-chamber to the preliminary combustion-chamber, means for conducting burning gases from the latter chamber to the furnace-chamber, and means for conducting air from the top of the checker-chamber to the furnace-chamber and into intimate contact with the said burning gases therein.

2. In a regenerative furnace, a furnace-chamber, a regenerator-chamber beneath the same, a preliminary combustion-chamber at the side of the latter chamber, means for conducting gases to the preliminary combustion-chamber, means for conducting partially-regenerated air into the latter chamber, passages for conducting the burning gases from the top of the preliminary combustion chamber to the furnace-chamber, and passages conducting fully-regenerated air from the regenerator-chamber to the furnace-chamber and into intimate contact with the said burning gases.

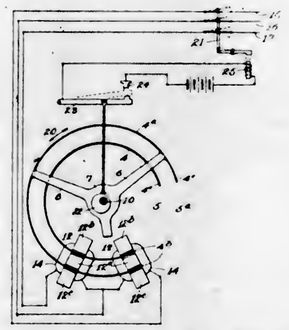
1,222,691. AGITATOR FOR DRIERS. JOHN SORENSEN, Brooklyn, N. Y. Filed Aug. 28, 1916. Serial No. 117,328. (Cl. 259—110.)



1. In apparatus of the character described, a substantially closed shell, sets of relatively short blades arranged within the shell in close proximity to the interior surface thereof to scrape hard material from the interior surface, the blades in one set being oppositely faced with respect to the blades in the other set, and means to alternately rotate all of the blades in opposite directions.

2. In apparatus of the character described; a substantially closed shell; sets of relatively short blades arranged within the shell in close proximity to the inner surface thereof to scrape hard material from such inner surface, such sets being longitudinally spaced with relation to the shell, the blades in one set being oppositely faced with relation to the blades in the other set; means to simultaneously reciprocate all of the blades longitudinally within the shell; and means to alternately simultaneously rotate all of the blades in opposite directions.

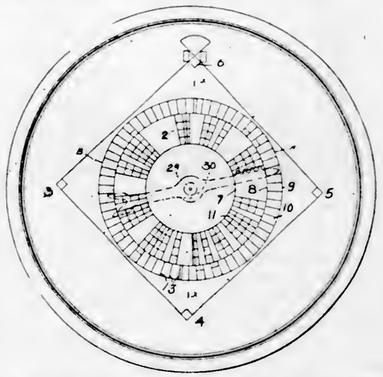
1,222,692. REVERSE-PHASE SAFETY-RELAY FOR MOTOR-CIRCUITS. CHARLES H. SPANGLER, Reading, Pa., assignor of one-half to C. Clarence Long, Reading, Pa. Filed Oct. 5, 1914. Serial No. 865,004. (Cl. 175—294.)



1. A reverse phase safety relay for a multiphase alternating current motor circuit, comprising E-shaped electromagnets, and a rotatable non-magnetic circuit-breaking wheel having parallel air-gapped rim portions; said air-gapped rim portions being arranged to swing between the poles of said magnets and their joint movement in either direction being limited by the boundary lines of the air-gaps.

2. A reverse phase safety relay for a multiphase alternating current motor circuit, comprising a pair of electromagnets and a non-magnetic circuit-breaker wheel having spaced-apart split rim portions forming a double annulus; said split rim portions being arranged to swing adjacent the poles of the respective magnets and forming air-gaps, and said rocking movement being imparted to said wheel by the combined action of said magnets upon the split rim portions as limited by the boundary lines of said air-gaps.

1,222,693. GAME APPARATUS. GEORGE STANTON and JOHN D. WALTER, Braddock, Pa. Filed Sept. 16, 1916. Serial No. 120,563. (Cl. 46—63.)



1. A game apparatus for playing base-ball comprising a field having thereon an outer circular row of radially disposed differently colored spaces each inscribed to set forth the outcome of a play with respect to a batsman, said field further having thereon, surrounded by said row of spaces, concentric rows of radially disposed single and sets of blocks of two colors each inscribed to set forth the outcome of a play with respect to a base-runner, and a pointer revolving over said field and having one edge provided with lateral protuberances each associating with a row of said concentric blocks to indicate a play with respect to a base runner, and said pointer further having an indicating end associated with said spaces of the outer row to indicate a play with respect to a batsman simultaneously with the indicating of a play with respect to a base-runner by a protuberance.

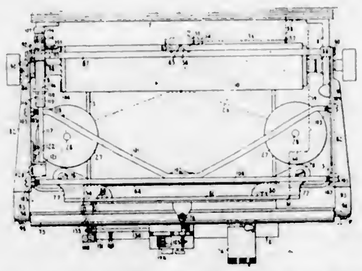
2. A game apparatus for playing base-ball comprising a circular row of blocks each inscribed to set forth the outcome of a play with respect to a batsman, radially disposed sets of blocks and radially disposed single blocks surrounded by said row of blocks, each of the radially disposed single blocks and the blocks of each set inscribed to set forth the outcome of a play with respect to a base runner, and an indicator associated with the rows of blocks to indicate a play.

1,222,694. COMBINED TYPE-WRITING AND COMPUTING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor, by mesne assignments, to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Mar. 8, 1913. Serial No. 752,900. (Cl. 235—59.)

1. In a combined typewriting and computing machine, the combination with a typewriter carriage and a computer carriage, of an intermediate frame connecting said carriages and including a transverse front bar, two side bars, each connected at its rear end to said typewriter carriage, and at its forward portion to one end of said front bar, and oblique braces connected to said front bar and also connected at their outer ends to the side bars of said intermediate frame.

2. In a combined typewriting and computing machine, the combination with a typewriter carriage and a computer carriage, of a truss connecting said carriages, said truss having means for affording a relative adjustment between its members and thereby a relative adjustment of the two carriages.

3. In a combined typewriting and computing machine, the combination with a typewriter carriage and a computer carriage, of a truss connecting said carriages and comprising end bars, a cross bar, and one or more oblique bars, and means for effecting relative adjustment between said cross and oblique bars and said end bars.

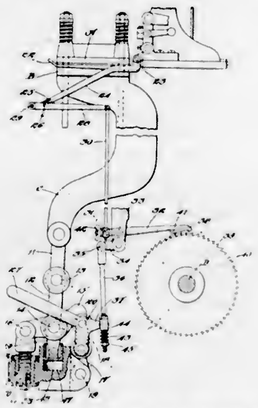


4. In a combined typewriting and computing machine, the combination with a typewriter carriage and a computer carriage, of end bars rigidly connected to said computer carriage, a cross bar rigidly connecting said end bars near said computer carriage, and one or more oblique bars, said bars having provision for relative adjustment to regulate the distance apart of the free ends of said end bars and the angles of said end bars with the line of carriage travel.

5. In a combined typewriting and computing machine, the combination with a typewriter carriage and a computer carriage, of end bars connected to the typewriter carriage so as to be rigid in an up and down direction, connections between said arms and said computer carriage such as to allow to said computer carriage at the points of connection a limited motion up and down, means for supporting said computer carriage between said arms, and adjustable truss connections between said arms to regulate the positions in a right and left-hand direction of the ends of said arms at said computer carriage.

[Claims 6 to 15 not printed in the Gazette.]

1,222,695. SAFETY DEVICE FOR BOX-ENDING MACHINES. EUGENE H. TAYLOR, Boston, Mass. Filed July 9, 1915. Serial No. 39,016. (Cl. 74—46.)



1. In a machine of the character described and in combination with a press, one member of which is movable toward and away from the other, of an actuating element, a support on which said element is pivotally mounted, means for moving said actuating element about its pivot on said support, and thereby operating said movable presser member, a feeler at the point where the pressing takes place, and means operated by the feeler to move the said support and thereby interrupt the operation of said movable presser member.

2. In a machine of the character described and in combination with a press operated by a toggle joint, a feeler at the point where the pressing takes place, a support for the fixed pivot of the toggle joint, and means operated by the feeler to lower the said support and interrupt the action of the toggle joint.

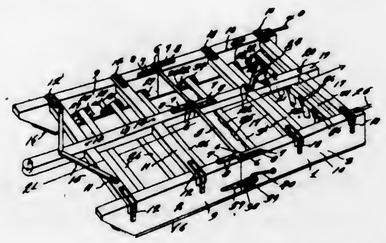
3. In a machine of the character described and in combination with a press one member of which is moved toward the other by an actuating element, a feeler at the point where the pressing takes place, a support for the said actuating element, a constantly moving toothed member, a hook to engage said toothed member, means operated by the hook to lower said support and interrupt the action of the actuating member, and connections between the feeler and the hook to cause the hook to engage the toothed member when the feeler is moved.

4. In a machine of the character described and in combination with a press operated by a toggle joint, a feeler at the point where the pressing takes place, a support for the fixed pivot of the toggle joint, a constantly moving toothed member, a hook to engage said toothed member, means operated by the hook to lower the said support and interrupt the action of the toggle joint, and connections between the feeler and the hook to cause the hook to engage the toothed member when the feeler is moved.

5. In a machine of the character described and in combination with a box form and platen, a hopper having movable sides, a feeler adjacent the pressing surface of the box form and platen, said feeler being mounted on a rod and slidable longitudinally thereof by the movement of the hopper sides, an actuating element for the box form, a support for said actuating element and means operated by the movement of the rod on which said feeler is mounted to lower the said support and interrupt the action of the box form.

[Claims 6 to 8 not printed in the Gazette.]

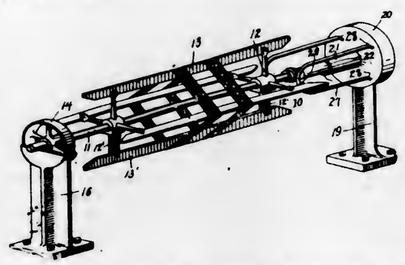
1,222,696. COMBINED CLOD-CRUSHER AND SCRUB-CUTTER. WILLIAM H. TRACY, Holland, Ky. Filed Aug. 31, 1916. Serial No. 117,898. (Cl. 55—23.)



1. In a clod crusher and scrub cutting machine, the combination of a frame consisting of two sections hingedly united, whereby the rear section may be folded upon the forward section and a spring support carried by the upper face of the rear section to engage the forward section, to support the rear section when folded, and of means for latching the two sections, whereby the rear section may drag rigidly in the rear of the forward section, a plurality of drag bars connecting the sides of each section.

2. In a clod crusher and scrub cutting machine, the combination of a frame consisting of two sections hingedly united, whereby the rear section may be folded upon the forward section and a spring support carried by the upper face of the rear section to engage the forward section, to support the rear section when folded, of means for latching the two sections, whereby the rear section may drag rigidly in the rear of the forward section, a plurality of scraper bars connecting the sides of each section, means for pivoting the scraper bars of the rear section, abutment means for the pivoted scraper bars, and knives carried by said pivoted scraper bars.

1,222,697. STRIPPING-STAND. HENRY J. TYNAN, Paterson, N. J. Filed Sept. 18, 1916. Serial No. 120,635. (Cl. 242—127.)



1. In a device of the class described, the combination of supports for the ends of a reel, said supports being spaced apart, and a stationary skein holder substantially in line with a reel held in said supports and at one end thereof.

2. In a device of the class described, the combination of supports for the ends of a reel, said supports being spaced apart, and a stationary skein holder substantially in line with a reel held in said supports, the skein holder being adapted to receive skeins from the reel and to hold the skeins from contact with the reel shaft.

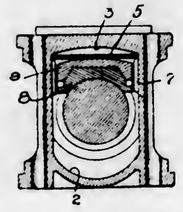
3. In a device of the class described, the combination of means for holding and pushing endwise on the shaft of a reel, means spaced away therefrom for rotatably supporting the opposite end of the reel and for holding it against endwise movement, and a stationary skein holder substantially in line with a reel held in place on the reel support.

4. In a device of the class described, the combination of a skein holder comprising a support, a plurality of arms projecting laterally therefrom, and means for detachably supporting a reel with its shaft between said arms.

5. In a device of the class described, the combination of a skein holder comprising a pair of U-shaped arms arranged side by side and in substantially vertical planes, and means for detachably supporting a reel midway between the arms.

[Claims 6 to 10 not printed in the Gazette.]

1,222,698. JOURNAL-SPRING. JAMES MILTON WAUGH, Chicago, Ill. Filed Feb. 15, 1913. Serial No. 748,630. (Cl. 64—10.)



1. In a device of the class described a journal box, a curved filler block therein, a journal, a journal bearing mounted thereon supporting said filler block, and resilient flexible shock absorbing means inserted between the filler block and the journal box acting to absorb shocks from the journal bearing.

2. A device of the class described embracing a journal box, a filler block having a convex outer surface, a bearing brass supporting said filler block upon an axle, and a group of separable resilient friction plates supported on said filler block and acting to support said journal box thereon.

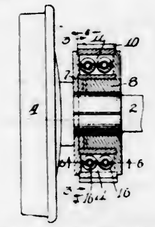
3. A device of the class described embracing a car journal box, and journal bearing members, said box and one of said members having adjacent surfaces complementally curved, spring friction plates inserted between said curved surfaces and held in position thereby, and means on the journal box to limit longitudinal movement of the journal bearing members therein.

4. A device of the class described embracing a journal box, a journal bearing brass therein, spring friction plates engaged within the journal box and acting to support the journal box on the journal bearing brass, said resilient and friction members engaging one of said elements at its ends and bearing against the other at its middle, said elements being complementally curved to afford equal cushion space on each side of the journal members.

5. A journal box of the class described transversely curved in its top at the under side thereof, a journal brass filler block therein, and spring friction plates permanently engaged in the top of the journal box and bearing on the journal brass filler block, said filler block being transversely curved on its upper face complementally with the curvature in the top of the journal box.

[Claims 6 and 7 not printed in the Gazette.]

1,222,699. SPRING DRIVING-GEAR. JAMES MILTON WAUGH, Chicago, Ill. Filed Jan. 2, 1915. Serial No. 65. (Cl. 74—29.)



1. In a device of the class described the combination of hub and cover plate members, and a gear journaled thereabout, springs disposed in recesses in said gear, abutments at each end of said springs adapted to rest against said gear, and abutments on said hub members adapted to receive stress through said springs and first mentioned abutments, from the gear to cause simultaneous rotation of said gear and hub members.

2. In a device of the class described interfitting hub members, a gear journaled on and disposed therebetween, springs disposed in recesses provided in said gear, follower blocks in the ends of said recesses and extending beyond the side walls of the gear and abutments formed on said hub members to contact said follower blocks to effect driving engagement between said gear and hub members through said springs.

3. In a device of the class described a gear having a plurality of recesses therein, springs disposed in said recesses, follower blocks disposed at each end of said recesses, means thereon to hold said springs engaged thereagainst in proper position, and mechanism on which said gear is journaled adapted to receive a drive therefrom through said springs, by contact with said follower blocks.

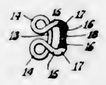
4. In a device of the class described interfitting hub members, abutments on the inner surfaces of each thereof, a gear journaled on said hub members and disposed therebetween, said gear having a plurality of recesses circumferentially thereabout, groups of spiral compression springs mounted within said recesses, and follower blocks within said recesses projecting beyond the side walls of the gear and contacting said abutment members to effect a drive from said gear through said springs to the hub members.

5. In a driving mechanism of the class described a gear having a plurality of recesses therein, coiled springs dis

posed within said recesses, follower blocks at each end of the recesses slidable therein, projections on said blocks adapted to engage said springs to hold the same properly spaced within the recesses, and mechanism adapted to contact said follower blocks to effect driving engagement between said mechanism and said gear.

[Claims 6 to 8 not printed in the Gazette.]

1,222,700. CORSET-LACING. OSCAR WEINGARTEN, New York, N. Y. Filed Oct. 5, 1916. Serial No. 123,832. (Cl. 24—149.)



1. In a corset lacing, an eyelet comprising a strand of flexible material formed into adjacent loops and having integral therewith oppositely projecting arms extending a substantial distance beyond the loops, and a revoluble member between, and held by said arms, the ends of said revoluble member being of substantially the same diameter as the adjacent ends of the arms which hold said member.

2. In a corset lacing, an eyelet comprising a strand of flexible material formed into adjacent loops and having integral therewith oppositely projecting arms extending a substantial distance beyond said loops and terminating in prongs the portions of said arms adjacent the prongs being thickened, and a double conical roller revoluble on said prongs, the ends of said roller being substantially of the same diameter as the adjacent thickened portions of said arms.

1,222,701. WEED-CUTTER. SOLOMON F. WEITMAN, Live Oak, Fla. Filed June 30, 1916. Serial No. 106,810. (Cl. 55—61.)

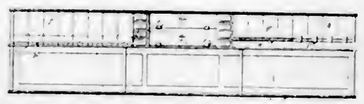


1. A cutting or chopping roller for a weed cutting machine comprising a cylindrical body, axially adjustable disk plates secured to the ends of the body and having projections, cutting blades arranged on the body inclined with relation to the length of the cylinder and extending radially and provided with slot and pin connection to said projections..

2. A cutting or chopping roller for a weed cutting machine comprising a cylindrical body, axially adjustable disk plates secured to the ends of the body and having projections, cutting blades arranged on the body inclined with relation to the length of the cylinder and extending radially and provided with slot and pin connection to said projections, and means carried by the central part of the body for holding the central portions of the blades at equal spaced intervals apart.

3. A cutting or chopping roller for a weed cutting machine comprising a cylindrical body, axially adjustable disk plates secured to the ends of the body and having projections, cutting blades arranged on the body inclined with relation to the length of the cylinder and extending radially and provided with slot and pin connections to said projections, adjustable means carried by the central part of the body for holding the central portion of the blades at equal spaced distances apart, said means comprising an annular recess in the body, an annular band adjustably secured in said annular recess and having projections between which said blades are frictionally held.

1,222,702. SHOW-CASE. WILLIAM L. WHEELESS, Parsons, Kans. Filed July 23, 1914. Serial No. 852,757. (Cl. 211—11.)



In a show case, the combination with a counter, of a superstructure mounted thereon having the rear side thereof open, a rod disposed longitudinally of said superstructure in spaced relation to the counter, a plurality of removable canisters mounted in the structure between said rod and the superstructure top, supporting lugs depending from the bottom of each canister and each formed with a notch adapted to receive said rod and support the canisters above the said counter, a valve controlled outlet opening in the bottom of each canister, and sight glasses mounted in the front wall of the superstructure whereby the contents of each canister may be viewed from the front of the show case.

1,222,703. SPOOL-PROTECTOR. JANE WHITE, Pasadena, Cal. Filed June 15, 1916. Serial No. 103,798. (Cl. 242—138.)



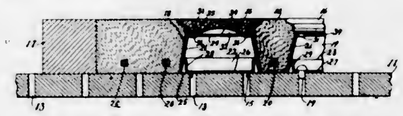
1. In combination with a spool of thread; an elastic covering over the same having an eye through which the thread passes.

2. In combination with a spool of thread; an elastic covering over the same having an eye through which the thread passes, said covering being designed to engage the spool with yielding pressure whereby the spool may be turned with relation to the covering when drawing out the thread.

3. In combination with a spool of thread; an elastic covering over the same having an eye through which the thread passes, said covering being of a width so that its opposite ends engage the beveled surfaces of the ends of the spool whereby to hold the covering from working endwise off the spool.

4. As a new article of manufacture, a contractile fabric covering for a spool of thread comprising an endless band of such width whereby it is adapted to rest with its opposite ends on the opposite beveled edges of a spool and having an eyelet for the passage of the thread therethrough.

1,222,704. FORM FOR CONCRETE SLABS. ROBIN L. WHITE, Chicago, Ill. Filed July 30, 1915. Serial No. 42,814. (Cl. 25—131.5.)



1. A glass supporting stool for concrete forms comprising, in combination, an inverted cup flaring downwardly and open at the bottom, the top of the cup being constructed to provide a seat for removably receiving the light of glass, a centering plate removably fitting within the open bottom of the cup and studs for positioning the centering plate upon an apertured bed plate.

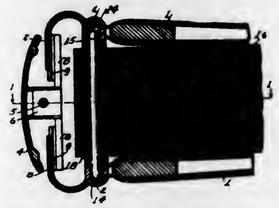
2. A concrete form supporting stool for embedded glasses having recessed bottoms comprising an inverted cup flaring downwardly and open at the bottom with a flat top wall constituting a seat for removably receiving the light of glass and with an opening in the said top wall in line with the recess in the bottom of the light of glass, for the insertion of an extracting tool.

3. A form for concrete slabs comprising, in combination, a sectional bed plate comprising a main body portion and a removable strip extending along one edge of the body, a frame forming a marginal mold for the slab resting on the said bed plate to cover parts of both of its said sections, a plurality of glass supporting stools each comprising an inverted cup flaring downwardly and open at the bottom, a centering plate fitting within the open end of the cup and means for locating the centering plates of the several stools upon the said body portion of the bed plate.

4. A form for concrete slabs with embedded glasses of less thickness than the slab, comprising, in combination, a bed plate, the upper surface of which constitutes a mold for the bottom of the slab, a plurality of two part glass supporting stools, the parts of each stool being separable by angular lifting movement and one of the parts of each stool being constructed to provide a seat for engagement with the underside of a light of glass above the level of the said upper surface of the bed plate and a mold for the margins of a flaring opening in the slab extending downwardly from the underside of the light of glass to the bottom of the slab and means for locating the other part of each stool upon the bed plate.

5. A form for concrete slabs with embedded glasses of less thickness than the slab, comprising, in combination, a sectional bed plate comprising a main body portion and a removable strip extending along one edge of the body, a frame forming a marginal mold for the slab resting on the said bed plate to cover parts of both of its said sections, a plurality of glass supporting stools removably resting upon the said body portion of the bed plate and each constructed to provide a seat for engagement with the under side of a light of glass at a distance from the bed plate and a mold for the margins of a flaring opening in the slab extending downwardly from the underside of the light of glass to the bottom of the slab and means for locating the several stools upon the said body portion of the bed plate.

1,222,705. TEMPORARY BINDER OR LOOSE-SHEET HOLDER. GEORGE P. WIGGINTON, Kalamazoo, Mich., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Continuation in part of application Serial No. 15,590, filed Mar. 10, 1915. This application filed Jan. 20, 1916. Serial No. 73,209. (Cl. 129—1.)



1. In a temporary binder, the combination of binder members provided with relatively fixed posts and opposed post sockets, means for adjusting said binder members, removable posts adapted to be engaged with said sockets and being freely removable therefrom when said binding members are separated, and sheets having notches open at ther binding edges and holes adjacent ther binding edges, said removable posts being adapted to be inserted through said holes in said sheets, said notches being adapted to be engaged with said relatively fixed posts.

2. In a temporary binder, the combination of adjustably associated binder members, an extensible relatively fixed post operatively associated with said binder members, removable posts of different lengths adapted to be removably associated with said binder members, and sheets having U-shaped notches open at their binding edges adapted to be engaged with said permanent post, and holes adjacent their binding edges adapted to receive a removable post when the notches are engaged with said permanent post.

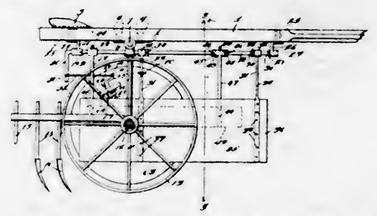
3. In a temporary binder, the combination of a pair of binder members provided with relatively fixed extensible posts and having opposed post sockets in their inner faces, means for adjusting said binder members, and removable posts of different lengths adapted to be removably engaged in said sockets and retained therein by the adjustment of the binder members thereto and being freely removable therefrom when the binder members are separated.

4. In a temporary binder, the combination of binder members provided with open post sockets, permanent posts extending between said binder members, and posts removably engaged in said sockets, said removable posts being retained in said sockets by the adjustment of the binder members thereto and being freely removable from said sockets when the binder members are separated.

5. The combination in a loose leaf binder of binder members and binding posts, at least one of said posts being removably associated with said binder members, and sheets provided with a plurality of open notches in their binding edges spaced so that the sheets may be arranged in an alined body or part in different lateral positions with alined notches engaging one of the posts, said sheets also having a plurality of holes adjacent their binding edges uniformly spaced relative to each other and relative to said notches so that there are registering holes adapted to receive a removable post when the sheets are arranged in an alined body or in different lateral positions with their notches registering.

[Claims 6 to 18 not printed in the Gazette.]

1,222,706. INSECT-DESTROYER. ROBERT L. WOOD, Fort Deposit, Ala. Filed Sept. 8, 1916. Serial No. 119,056. (Cl. 43—1.)

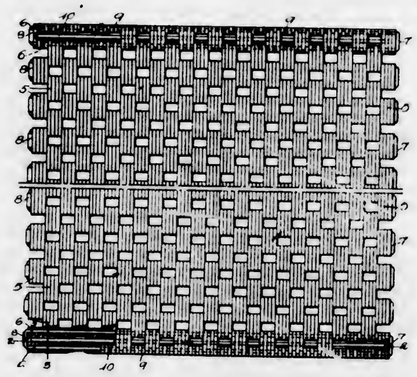


In an insect destroyer, a frame having an axle and supporting wheels thereon, a rocking shaft mounted in bearings of said frame, depending arms suspended from the forward and rear ends of said shaft, a pair of containers oppositely disposed and connected to the lower ends of said arms, said containers having broad outer sides and end flanges, said containers being spaced apart to form a passage, through which the plants pass, so that the insects will fall into a poisonous solution to be received in said containers, the rear arms having members to be engaged by the feet of the operator, so that the arms and their containers may be oscillated transversely of the machine, whereby the passage between the containers may accommodate itself to the irregularities of the plants, and an agitator rockable with the shaft to shake he plants, so that the insects will fall therefrom into the solution.

1,222,707. LINK MAT. WILLIAM WOODWARD, Brockton, Mass., assignor to Brockton Heel Company, Brockton, Mass., a Corporation of Massachusetts. Filed Dec. 4, 1916. Serial No. 134,830. (Cl. 15—62.)

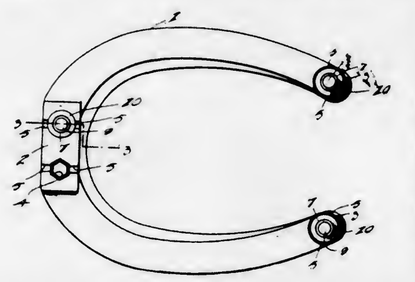
1. A link mat comprising pintle rods and links strung upon said rods, in combination with a reinforcing rod

passed through the endmost links of the mat between the endmost pintle rod and the next adjacent pintle.



2. A mat comprising interconnected longitudinally extending links and transversely extending pintle rods, and a stiffening member engaged with the endmost links of the mat and having strength to resist distortion in a direction transverse to the plane of the mat.

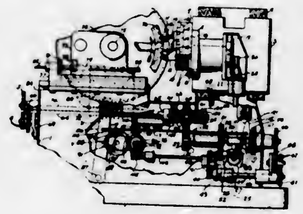
1,222,708. HORSESHOE. PAUL WUNDER, Glen Ullin, N. D. Filed May 12, 1916. Serial No. 97,084. (Cl. 168—31.)



In a horseshoe, a body, a toe plate secured to the under side of the body, bosses formed on the heel of the body on the under side thereof, said toe plate and bosses being provided with tapered hexagonal shaped apertures and also having grooves in the under side thereof bisecting said apertures to admit an instrument for the removal of the calk, the calks being adapted to be attached to the shoe, tapered hexagonal shaped extensions formed on the calks and adapted to be driven into the tapered hexagonal shaped apertures, flanges on the calks at the point where the extensions join the calks limiting the upward movement of said calks into the apertures of the body and also permitting of the ready insertion of the instrument for the removal of the calks, said calks also being provided with axial bores and cushioning elements in said bores, said hexagonal shaped extensions of the calks preventing rotation of the calks when inserted in the hexagonal shaped apertures of the body.

1,222,709. GEAR-GENERATING MACHINE. WILLIAM F. ZIMMERMANN, Newark, N. J., assignor to Gould & Eberhardt, Newark, N. J., a Corporation of New Jersey. Filed May 18, 1915. Serial No. 28,817. (Cl. 90—9.)

1. In combination with a work spindle, a cutter head, a tool slide, a second tool slide angularly disposed to said first slide, a driving member, a link connecting said driving member to said first tool slide, a second link connecting said driving member to said second tool slide, said links arranged to angularly reciprocate said tool slides, means to feed said tools at right angles to said work spindle, means to simultaneously rotate said spindle relative to said feeding motion, and means to periodically index said work spindle and tools in accordance with the number of teeth to be cut.



2. In combination with a work spindle, cutting tools arranged to reciprocate relatively to said spindle, means to feed said tools upwardly at right angles to said spindle, means to simultaneously rotate said spindle relatively to said feeding motion, means to periodically lock said spindle and to lower said cutting tools, and means to again unlock said spindle toward the end of the cutter lowering movement, thereby reversing the motion of the index wheel before again rotating same relative to the cutter feeding movement.

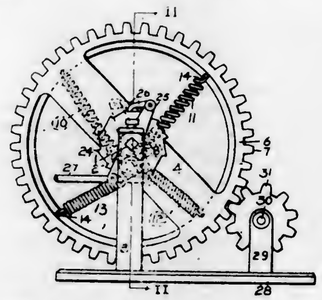
3. In combination with a work spindle, cutting tools arranged to reciprocate relatively to said spindle, feeding and reversing means for said cutting tools to move said tools at right angles to said spindle, an index shaft, connections between said index shaft and feeding means, other connections between said index shaft and work spindle whereby said work spindle is rotated relatively to said cutter feeding motion, means to periodically lock said index shaft and return said cutting tools, and means to again unlock said index shaft toward the end of the cutter lowering movement.

4. In combination with a work spindle, cutting tools arranged to reciprocate relatively to said spindle, feeding and reversing means for said cutting tools, an index shaft, connections between said index shaft and work spindle, a differential connection between said index shaft and said feeding and reversing means, means to periodically lock said index shaft and unlock said differential connection, means to connect said cutter reversing means to return said cutting tools relatively to said work spindle, and means to again unlock said index shaft and lock said differential, whereby said work spindle is again connected with said feeding means.

5. In combination with a work spindle, cutting tools arranged to reciprocate relatively to said spindle, feeding and reversing means to move said cutting tools at right angles to said spindle, an index shaft, connections between said index shaft and work spindle, a differential connection between said index shaft and said feeding and reversing means, comprising a gear wheel wherein differential gears are mounted, a second gear wheel meshing with and rotating said first mentioned gear wheel, a lock bolt for said index shaft, a second lock bolt for said differential, said locking bolts arranged to automatically lock and unlock said index shaft and differential alternately, two cams on said first mentioned gear wheel to actuate said locking bolts, one of said cams arranged to lock said index shaft at the end of the cutter feeding movement and to unlock said differential, the other cam arranged to unlock said index shaft and lock said differential at the end of the cutter return movement.

[Claims 6 to 9 not printed in the Gazette.]

1,222,710. MOTOR. ANDREW C. ZWARICH, Homestead, Pa. Filed Oct. 18, 1916. Serial No. 126,301. (Cl. 74—54.)



1. A motor comprising a stationary crank shaft, a disk carried by the crank of the shaft, a pair of opposed elongated rectangular plates revolving upon said shaft at each side of the crank thereof, a peripherally toothed circular band interposed between and having its edges connected to the inner faces of said plates, means for intermittently rotating one of said plates carrying said toothed band therewith, and a series of expansible and contractible pulling members arranged within said band and having their inner ends connected with said disk at equidistant points and their outer ends connected with the inner face of said band at equidistant points and providing means for changing the intermittent drive of the carrier into a continuous one.

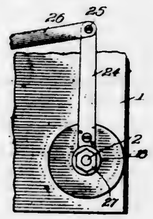
2. A motor comprising a stationary crank shaft, a disk carried by the crank of the shaft, a pair of opposed elongated rectangular plates revolving upon said shaft at each side of the crank thereof, a peripherally toothed circular band interposed between and having its edges connected to the inner faces of said plates, means for intermittently rotating one of said plates carrying said toothed band therewith, and a series of expansible and contractible pulling members arranged within said band and having their inner ends connected with said disk at equidistant points and their outer ends connected with the inner face of said band at equidistant points and providing means for changing the intermittent drive of the carrier into a continuous one, and a transmission mechanism including a gear meshing with the teeth of said member.

1,222,711. POST-HOLE DIGGER. JOHN JOSHUA ARMSTRONG, Sr., Weimar, Tex., assignor of one-sixth to Robert L. Williams and one-sixth to Thomas A. Hill. Filed Aug. 17, 1916. Serial No. 115,439. (Cl. 55—71.)



In a post hole digger: the combination with a pair of digging blades, being curved transversely, and having their upper portions bent toward each other and means for pivotally uniting said bent portions whereby said blades are held at spaced relations when entering the ground; of a pair of handle shanks secured to the inner faces of said blades, extending upwardly through said bent portions, and, converging toward each other and then engaging a short distance, and diverging forming handles, whereby said handle shanks may be separated for moving said blades toward each other to clamp the earth, when withdrawing the blades from the hole; and a U-shaped clamp carried by one handle shank having spring arms, between which the other shank is received, to hold the shanks together.

1,222,712. MECHANICAL MOVEMENT. MERTON C. ARMSTRONG, Rochester, N. Y., assignor to The Interstate Machine Products Company, Inc., Rochester, N. Y., a Corporation of New York. Filed Jan. 2, 1917. Serial No. 140,280. (Cl. 74—55.)



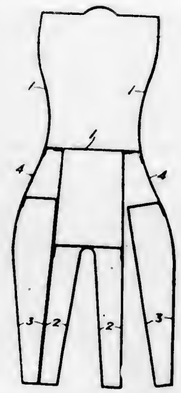
1. The combination with a support, a shaft carried thereby and a fixed brake shell surrounding the shaft, of a brake member fixed to the shaft within the brake shell, a clutch acting between the latter and the brake member to lock those two parts together when the shaft is turned in one direction and to permit their relative movement when the shaft is turned in the other direction, a driving member also fixed to the shaft and disposed against the brake member, a driving shell embracing the driving member and a clutch acting between the latter and the driving shell, to lock those two parts together when the shaft is turned in a direction releasing the brake and to permit their relative movement in the opposite direction.

2. The combination with a support, a shaft projecting therefrom and a fixed brake shell surrounding the shaft, of a brake member fixed to the shaft within the brake shell, a clutch acting between the latter and the brake member to lock those two parts together when the shaft is turned in one direction and to permit their relative movement when the shaft is turned in the other direction, a driving member also fixed to the shaft and disposed against the brake member, a driving shell embracing the driving member and coöperating with the brake shell to form a casing for both the driving and brake members and a clutch acting between the driving member and the driving shell to lock those two parts together when the shaft is turned in a direction releasing the brake and to permit their relative movement in the opposite direction.

1,222,713. DEVICE FOR USE IN FINISHING UNION-SUITS. EDWARD AXFORD, Germantown, Pa. Filed Feb. 20, 1914. Serial No. 819,892. (Cl. 223—19.)

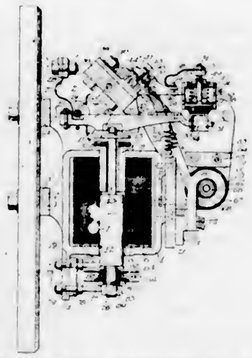
A device for use in finishing union suits which comprises the combination of a body frame the parts of which are relatively immovable, inner leg frame sections immovable in respect to the body frame and of which the parts are relatively immovable, and outer leg frame sections the parts of which are relatively immovable and which are disposed in the plane of the inner leg frame

sections and which are movably connected with the outer edges of the body frame and have their lower ends free



for lateral spreading movement in respect to the lower ends of the first mentioned leg frame sections.

1,222,714. ELECTRIC SWITCH. GEORGE BAEHR, McKeesport, Pa., assignor to Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 8, 1908, Serial No. 456,742. Renewed Oct. 29, 1913. Serial No. 798,136. (Cl. 175—281.)



1. In an electric switch, the combination with a frame having parallel upwardly extending portions, an insulating block supported between said upwardly extending portions of the frame and detachably secured thereto, a stationary contact carried by said insulating block, a switch arm arranged between said upwardly extending portions of the frame and adapted to engage said stationary contact, and an electromagnetic winding mounted in said frame beneath said switch and having a plunger for actuating said switch.

2. In an electric switch, the combination with a frame having a pair of parallel upwardly extending portions, of an insulating block fitting in grooves in said upright portions of said frame, means for securing said insulating block in place, contacts carried by said insulating block, a switch arm arranged between said upright portions of said frame and adapted to be moved into engagement with said stationary contact, and an electromagnetic winding mounted in said frame, beneath said arm, and having a movable plunger for actuating said arm.

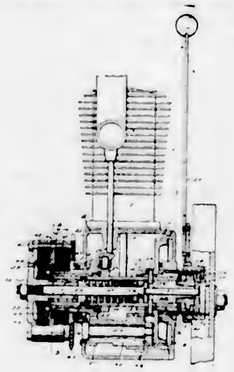
3. In an electric switch, the combination with a frame having a pair of parallel upwardly extending members, of an insulating block fitting in grooves in said members, detachable means securing said insulating block in position, a laminated main contact and a carbon contact carried by said insulating block, a switch arm arranged between the parallel members of said frame and carrying contacts adapted to engage the contacts carried by said insulating block, and an electromagnetic winding mounted in said frame for actuating said switch arm.

4. In an electric switch, the combination with a frame having a pair of upright members, of an insulating block fitting in grooves in said members, detachable means for securing said block in position, a contact holder carried by said block, a reversible laminated main contact adjustably mounted in said holder, a switch arm arranged between the upright members of said frame, and an electromagnetic winding mounted in said frame for actuating said switch arm.

5. In an electric switch the combination with a frame having two parallel upright members, of a switch arm arranged between said upright members, a pivot for said switch arm supported by said upright members, said switch arm having a notched portion for engaging said pivot, a solenoid mounted in said frame and having a movable core engaging said switch arm intermediate of its ends, the end of said core being rounded and fitting into a rounded recess in said switch arm, means for holding the notched portion of said switch arm in engagement with said pivot, contacts carried by said switch arm, an insulating block arranged above said switch arm and detachably secured to the upright members of said frame, and contacts carried by said insulating block and arranged to be engaged by the contacts carried by said switch arm.

[Claims 6 and 7 not printed in the Gazette.]

1,222,715. MOTOR-VEHICLE TRANSMISSION AND CLUTCH MECHANISM. RAYMOND A. BECKWITH, Hartford, Conn., assignor to Sutton, Aspinwall & Company, New York, N. Y., a Corporation of New York. Filed Nov. 23, 1916. Serial No. 132,939. (Cl. 74—59.)



1. In a motor vehicle the combination with the engine crank shaft, of a driving gear driven from the crank shaft, a high speed shaft driven directly by the driving gear, a low speed shaft driven indirectly from the driving gear, a driving sprocket, disk clutch members interposed between said high speed shaft and the driving sprocket, disk clutch members interposed between said low speed shaft and the driving sprocket, a spring for causing the engagement of the high speed clutch members, and means for causing the release of the high speed clutch members and for causing the engagement of the low speed clutch members.

2. In a motor vehicle the combination with the engine crank shaft, of a driving gear driven from the crank shaft, a high speed shaft driven directly by the driving gear, a low speed shaft driven indirectly from the driving gear, a

low speed shaft mounted concentric with the high speed shaft and driven indirectly from the driving gear, a driving sprocket, disk clutch members interposed between said high speed shaft and the driving sprocket, disk clutch members interposed between said low speed shaft and the driving sprocket, a spring for causing the engagement of the high speed clutch members, and means for causing the release of the high speed clutch members and for causing the engagement of the low speed clutch members.

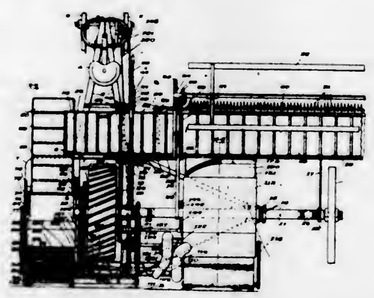
3. In a motor driven vehicle the combination with the engine crank shaft, of a driving gear driven from the crank shaft, a tubular high speed shaft driven directly by the driving gear, a tubular low speed shaft mounted concentric with the high speed shaft and driven indirectly from the driving gear, a driving sprocket, disk clutch members interposed between said high speed shaft and the driving sprocket, disk clutch members interposed between said low speed shaft and the driving sprocket, a spring arranged in the high speed shaft for causing the engagement of the high speed clutch members, and means for causing the release of the high speed clutch members and for causing the engagement of the low speed clutch members.

4. In a motor driven vehicle the combination with the engine crank shaft, of a driving gear driven from the crank shaft, a tubular high speed shaft driven directly by the driving gear, a tubular low speed shaft mounted concentric with the high speed shaft and driven indirectly from the driving gear, a driving sprocket concentric with said shafts, disk clutch members concentric with the high speed shaft and interposed between said shaft and the driving sprocket, disk clutch members concentric with the low speed shaft and interposed between said shaft and the driving sprocket, a spring for causing the engagement of the high speed clutch members, and means for causing the release of the high speed clutch members and for causing the engagement of the low speed clutch members.

5. In a motor driven vehicle the combination with the engine crank shaft, of a tubular shaft, means for driving said tubular shaft at high speed, a tubular shaft surrounding said high speed shaft, means for driving said surrounding shaft at low speed, a driving sprocket concentric with said shafts, disk clutch members concentric with the high speed shaft and interposed between said shaft and the driving sprocket, disk clutch members concentric with the low speed shaft and interposed between said shaft and the driving sprocket, and means for causing the engagement of and disengagement of said clutch members.

[Claims 6 to 21 not printed in the Gazette.]

1,222,716. COMBINED HARVESTER AND THRESHER. BERT R. BENJAMIN, Oak Park, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed May 1, 1913. Serial No. 764,808. (Cl. 56—29.)



1. In a harvester thresher, a frame, a main wheel journaled thereon, cutting, threshing and separating mechanism mounted thereon, and means for conveying the grain transversely in front of said wheel, rearwardly on the stubbleward side thereof through the thresher, transversely in the rear thereof to the separator, and forwardly on the grainward side through said separator.

2. In a combined harvester and thresher, a frame, a main wheel journaled thereon, a rotatable thresher and an oscillatory separator disposed on opposite sides of said main wheel, the axes of said thresher and said separator being disposed parallel to the axis of the main wheel, and transversely disposed conveying mechanism in front and in rear of said main wheel delivering grain respectively to said thresher and separator.

3. In a combined harvester and thresher, a frame, cutting and conveying apparatus disposed transversely thereof, a main wheel journaled thereon, a rotatable thresher and an oscillatory separator disposed on opposite sides of said main wheel, the axes of said thresher and said separator being parallel to the axis of the main wheel, conveyer mechanism between said cutting and conveying apparatus and said threshing and separating mechanism, and means for discharging the chaff laterally from the front end of said separator.

4. In a combined harvester and thresher, a frame, a main wheel journaled thereon, a thresher and a separator disposed on opposite sides of said main wheel, and transversely disposed conveying mechanism in front and in rear of said main wheel delivering grain respectively to said thresher and said separator, the path of movement of the grain through said thresher and said separator being parallel to the line of draft.

5. In a combined harvester and thresher, a frame, a main wheel journaled thereon, a thresher and a separator disposed on opposite sides of said main wheel, transversely disposed conveying mechanism in front and in rear of said wheel delivering grain respectively to said thresher and said separator, the path of movement of the grain through said thresher and said separator being parallel to the line of draft, and transversely disposed cutting mechanism disposed in front of certain of said conveying mechanism.

[Claims 6 to 24 not printed in the Gazette.]

1,222,717. SHOCKING-MACHINE. BERT R. BENJAMIN, Oak Park, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Nov. 20, 1913. Serial No. 802,131. (Cl. 56—121.)



1. A shocking machine sheaf delivery member having thereon intermediate its ends an upwardly extending tine, and means on said tine for spreading the inner stalks of a sheaf on said delivery member, thereby resisting bodily movement of the sheaf with respect to the delivery member.

2. A shocking machine sheaf delivery member having thereon an upwardly extending tine provided with a projecting edge disposed transversely with respect to the shank of said delivery member.

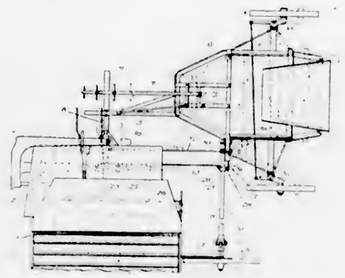
3. A shocking machine sheaf delivery member having thereon an upwardly extending tine provided with oppositely extending projecting edges disposed transversely with respect to the shank of said delivery member.

4. A shocking machine sheaf delivery member having an upstanding flattened tine tapered toward its ends and disposed substantially transversely with respect to the shank of said sheaf delivery member.

5. A shocking machine sheaf delivery member having an upstanding tine provided with laterally extending edges intermediate its ends resisting bodily movement of a sheaf along or away from said sheaf delivery member.

[Claims 6 to 8 not printed in the Gazette.]

1,222,718. GRAIN-SHOCKER. BERT R. BENJAMIN, Oak Park, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed July 17, 1915. Serial No. 40,407. (Cl. 56—121.)



1. In combination, a binder, binding mechanism thereon adjustable with respect thereto, a shocker operatively connected to the binder, and means for adjusting the shocker and binding mechanism relative to the binder and to each other in a single operation.

2. In combination, a binder, binding mechanism thereon adjustable with respect thereto, a shocker operatively connected to the binder, and single means operable from the binder whereby the shocker and binding mechanism may be adjusted relative to the binder and to each other.

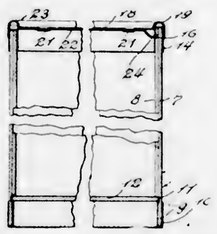
3. In combination, a binder, binding mechanism thereon adjustable with respect thereto, a shocker operatively connected to the binder, and means including a single operating member whereby the shocker and binding mechanism may be adjusted relative to the binder and to each other.

4. In combination, a binder, binding mechanism movable with respect thereto to adjust the bands on the sheaves, a shocker operatively connected to said binder, a sheaf delivery member on said shocker, and means for moving said binding mechanism to adjust a sheaf band and in the same operation adjusting said sheaf delivery member relative to the sheaf.

5. In combination, a binder, binding mechanism thereon adjustable with respect thereto, a shocker operatively connected to the binder, and single means operable from the binder whereby the shocker and binding mechanism may be adjusted relative to the binder and to each other, one of the same being moved through a longer path than the other.

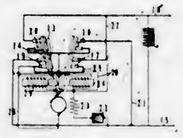
[Claims 6 to 13 not printed in the Gazette.]

1,222,719. CIGAR-CAN. EDGAR B. BICKER, St. Louis, Mo., assignor of one-third to Ernest Elekhoff, St. Louis, Mo. Filed Sept. 30, 1915. Serial No. 53,443. (Cl. 220—12.)



A can comprising a non-circular bottom, a can body made from a substantially rectangular blank and comprising inner and onter elements, the innermost element having a lesser dimension in one direction than the outer element, a metallic binding for reinforcing both of said elements along one margin, a second metallic binding for reinforcing the outermost element only, along its margin opposite the first mentioned metallic binding, said second metallic binding being channeled to receive the margins of the non-circular bottom and there being notches intersecting said channel whereby to permit the binding element to be bent about the non-circular bottom, and means for securing the can body around said bottom.

1,222,720. AUTOMATIC SWITCH. JOSEPH BIJUR, New York, N. Y., assignor to The Safety Car Heating and Lighting Co., New York, N. Y., a Corporation of New Jersey. Filed Nov. 17, 1911. Serial No. 660,761. (Cl. 171—313.)



1. In apparatus of the class described, in combination, a dynamo comprising field magnet, armature and armature shaft, a member mounted adjacent one end of said shaft to swing freely with respect thereto, switching means connected with said member whereby it is adapted to reverse the connections of said dynamo as it swings from one extreme position to another, and means mounted to turn with said armature shaft and adapted to coact inductively with said member to drag it in one or the other direction in accordance with the direction of rotation of said shaft.

2. In apparatus of the class described, in combination, a dynamo comprising field magnet, armature and armature shaft, a member mounted adjacent one end of said shaft to swing freely with respect thereto, switching means connected with said member whereby it is adapted to reverse the connections of said dynamo as it swings from one extreme position to another, means mounted to turn with said armature shaft and adapted to coact inductively with said member to drag it in one or the other direction in accordance with the direction of rotation of said shaft, and means tending to hold said member in a neutral position.

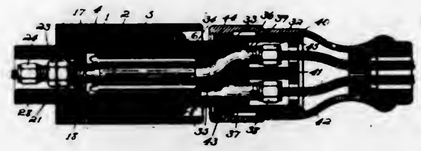
3. In apparatus of the class described, in combination, a dynamo comprising field magnet, armature and armature shaft, a member mounted adjacent one end of said shaft to swing freely with respect thereto, switching means connected with said member whereby it is adapted to reverse the connections of said dynamo as it swings from one extreme position to another, means mounted to turn with said armature shaft and adapted to coact inductively with said member to drag it in one or the other direction in accordance with the direction of rotation of said shaft, means tending to hold said member in a neutral position, and means adapted to hold said member in each contact-making position.

4. In apparatus of the class described, in combination, a contact, a movable member adapted to co-act therewith, means tending to urge said member away from said contact, an electro-magnet device tending, when energized, to hold said member against said contact to complete thereby an electrical connection, and means adapted to render effective said device as said member comes into operative relation with said contact.

5. In apparatus of the class described, in combination, two relatively movable members adapted to contact with each other, means tending to urge one member away from the other, an electro-magnetic device tending to hold said first member against the other and means adapted to increase the effectiveness of said device as said first member makes contact with the other.

[Claims 6 to 30 not printed in the Gazette.]

1,222,721. ELECTRICAL CONNECTION. CARL H. BISSELL and ELDA G. SMITH, Syracuse, N. Y., assignors to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Jan. 8, 1914. Serial No. 810,993. (Cl. 173—338.)



1. An electrical socket comprising a sleeve terminal having its inclosing wall provided with a circular series of lengthwise clamping contacts, the free ends of the contacts being flared outwardly, and an annular spring expansible and contractile in diameter, the spring encircling the contacts and being seated against the rear sides of said flared ends, substantially as and for the purpose described.

2. An electrical socket comprising a sleeve terminal slotted longitudinally from one end thereof, the slots terminating short of the other end forming a circular series of clamping contacts, the free ends of the contacts being flared outwardly, and an annular coiled spring encircling the contacts and being seated against the rear sides of the flared ends, substantially as and for the purpose specified.

3. An electrical socket comprising a body having an axial recess formed with an enlargement, a sleeve terminal arranged within the recess and provided with a circular series of lengthwise clamping contacts, and an annular spring expansible and contractile in diameter, the spring being arranged in the enlargement and encircling and coacting with the contacts, substantially as and for the purpose set forth.

4. An electrical socket comprising a body having an axial recess formed with an enlargement, a sleeve terminal arranged within the recess and provided with a circular series of lengthwise clamping contacts, portions of the contacts being extended outwardly in the enlargement, and an annular spring expansible and contractile in diameter, the spring being arranged in the enlargement and encircling the contacts and coacting with the outwardly extended portions of said contacts, substantially as and for the purpose specified.

5. An electrical socket comprising a body having a cylindrical recess formed with an enlargement at one end which opens through one end of the body, a circular series of contacts extending into the recess and having their ends projecting into the enlargement thereof and flared outwardly, and an annular coiled spring encircling the contacts within the enlargement, substantially as and for the purpose set forth.

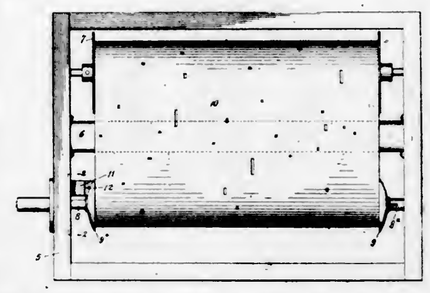
[Claims 6 to 23 not printed in the Gazette.]

1,222,722. AUTOMATIC MUSICAL INSTRUMENT. ERNST BÖCKER, New York, N. Y. Filed Sept. 29, 1913. Serial No. 792,299. (Cl. 84—166.)

1. In an automatic musical instrument, the combination of a support, a music roll rotatably carried thereby and means adapted to engage an end of said roll to exert a pressure thereon in an axial direction whereby said roll is retarded and held against axial vibration, said means being a separable unit detachably combined with said support so as to be removable from said instrument.

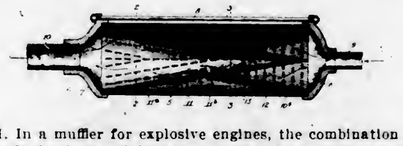
2. In an automatic musical instrument, the combination of a support, a music roll rotatably carried thereby and a resilient unit adapted to be detachably clamped by its own resiliency between said support and an end of said roll and to exert a pressure upon said end in an axial direction whereby said roll is retarded and held against axial vibration.

3. In an automatic musical instrument, the combination of a support, a music roll rotatably carried thereby, a pair of members connected together at one end and diverging from said end, prongs at the free end of one member whereby said members may be detachably secured between said support and an end of said roll and a cushion carried by the other member and adapted to bear against said end whereby said roll is retarded and held against axial vibration.



4. A device for retarding the rotation of music rolls and for preventing axial vibration thereof comprising a unit consisting of resilient members connected at one end, means carried by one of said members for detachably securing the unit in operative position and a cushion carried by the other member.

1,222,723. MUFFLER. ERVIN D. L. BOWMAN, Chicago, Ill. Filed Dec. 31, 1915. Serial No. 69,551. (Cl. 121—116.)



1. In a muffler for explosive engines, the combination of a body having an inlet at one end and an outlet at the other, hollow foraminous inwardly tapering inlet and outlet members in said body, one of the members having hollow deflecting means extending into the other.

2. In a muffler for explosive engines, the combination of a body having an inlet at one end and an outlet at the other, hollow foraminous inwardly tapering inlet and outlet members in said body, one of said members having a tapering portion disposed to outwardly deflect the products of combustion in the inlet member.

3. In a muffler for explosive engines, the combination of a body having an inlet and an outlet, perforated hollow inlet and outlet members in said body, the inlet member having a conoidal deflector therein, the deflector having its interior in communication with the chamber in the outlet member.

4. In a muffler for explosive engines, the combination of a body having an inlet and an outlet, a pair of foraminous hollow oppositely and inwardly tapered conoidal members in said body and deflecting means within one of said members.

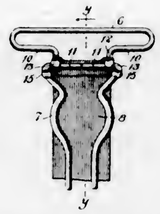
5. In a muffler for explosive engines, the combination of a body having an inlet and an outlet, hollow oppositely and inwardly tapered perforated conoidal inlet and outlet members, the inlet member having a conoidal deflector therein.

[Claims 6 to 9 not printed in the Gazette.]

1,222,724. BUTTON-CLASP. CHARLES E. BRADSHAW, Waterbury, Conn., assignor to Robert N. Bassett Company, Incorporated, Shelton, Conn., a Corporation of Connecticut. Filed Mar. 29, 1916. Serial No. 87,511. (Cl. 24—245.)

1. In a hose supporter or like article two loops and a bearing carried by one of said loops having its side pro-

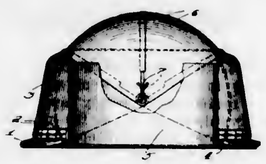
vided with an opening from end to end, the other loop having a pintle bar journaled in said bearing and a flattened portion to one side of and beyond one end of said pintle bar, whereby the pintle bar may slide into said bearing when the parts are being assembled.



2. A hose supporter clasp comprising a lower loop having a bearing which is open on its under side from end to end and an upper loop having a pintle bar journaled in said bearing, the said upper loop having alined flattened portions to one side of and beyond the ends of said pintle bar whereby the pintle bar may slide into said bearing when the parts are being assembled.

3. A metal mounting for running webbing comprising two articulated members one of which is provided with a sleeve having a lateral opening, and the other member having a pintle carried by said sleeve and a flattened portion to one side of said pintle, the said flattened portion being arranged to pass through said opening when the members are being assembled.

1,222,725. CUSPIDOR. MAURICE B. BRAND and FRANK TOTH, Chicago, Ill. Filed May 22, 1916. Serial No. 99,038. (Cl. 4—39.)



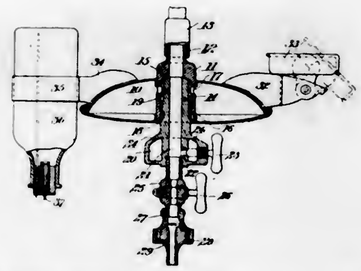
1. In a cuspidor or the like, a body member having an upper mouth, a pair of pivoted members arranged for normally closing said mouth, a bearing extending outwardly from the body member and having a base portion flush with that of the body member, a foot lever mounted on said bearing and presenting a cam-shaped end within the body member, and projections carried respectively by the said pivoted members and continuously engaging oppositely directed portions of the said cam-shaped end.

2. A cuspidor or the like including a casing having an upper mouth and a lateral opening, a bearing adjacent to said opening, a pair of closure members pivoted within the casing and adapted to close the said mouth and each having an arm extending beyond its pivotal mounting toward the said lateral opening, a lever pivoted in said bearing and coöperating means carried by said lever and said arms for causing a movement of the lever to move the said closure members.

1,222,726. SHOWER-BATH. HARRY S. BRICKELL, Pittsburgh, Pa. Filed Nov. 13, 1914. Serial No. 871,954. (Cl. 137—83.)

1. An improvement in shower baths comprising a shower head having means for discharging water in the form of a spray, and means for causing minute streams of water to impinge against the outer face of said shower head to form a mist or vapor.

2. An improvement in shower baths comprising a shower head having means for discharging water in the form of a spray, a valve member extending into said shower head and controlling the supply of water thereto, said valve member being provided with means for discharging minute streams of water against the outer face of said shower head to form a mist or vapor.



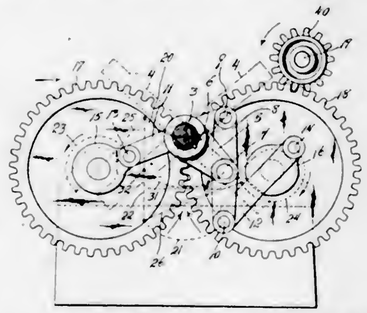
3. An improvement in shower baths comprising a shower head having means for discharging water in the form of a spray, and a valve member controlling the supply of water to said shower head and provided with means for causing minute streams of water to impinge against the under face of said shower head.

4. An improvement in shower baths comprising a shower head having means for discharging water in the form of a spray, a valve member extending into said shower head and controlling the supply of water thereto, said valve member being provided with a discharge passage therethrough, and means connected with said passage for discharging minute streams of water against the outer face of said shower head to form a mist or vapor.

5. An improvement in shower baths comprising a shower head having means for discharging water in the form of a spray, a valve member extending into said shower head and controlling the supply of water thereto, said valve member being provided with a discharge passage therethrough, said valve member having an enlarged annular chamber communicating with said passage and provided with means for discharging minute streams of water against the outer face of said shower head to form a mist or vapor.

[Claims 6 to 17 not printed in the Gazette.]

1,222,727. MEANS FOR IMPARTING OSCILLATORY MOVEMENT. ELMER H. BRIDENBAUGH, Denver, Colo., assignor to Henry O. Jackson, Denver, Colo. Filed May 18, 1916. Serial No. 98,318. (Cl. 74—14.)



1. In an apparatus of the class described, the combination with a pivoted member, of means for oscillating the same including a crank arm operably secured thereto, an equalizing bar to the center of which the outer end of the crank arm is pivoted, links having one extremity pivotally connected respectively with the opposite extremities of the equalizing bar, gears carrying cranks with which the opposite ends of the said links are respectively connected, and means for rotating the gears.

2. The combination with a pivoted member, of means for oscillating the same including a crank arm operably secured thereto, an equalizing bar to the center of which the outer end of the said crank arm is pivoted, two links of equal length having one extremity of each pivotally connected with the opposite ends of the equalizing bar, gears carrying cranks with which the opposite ends of the said links are respectively pivotally connected, and means for rotating the gears.

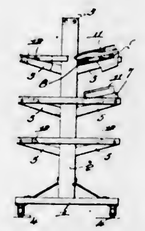
3. The combination with a movably mounted member, of means for oscillating the same including a crank arm operably secured thereto, an equalizing bar to the center of which the outer end of the crank arm is pivoted, two links of equal length having one extremity pivotally connected respectively with the opposite ends of the equalizing bar at equal distances from the center, meshing gears carrying cranks with which the opposite ends of the said links are respectively connected, and means for rotating the gears.

4. The combination with a movably mounted member, of means for oscillating the same including a crank arm operably connected therewith, an equalizing bar to the center of which the outer end of the crank arm is pivoted, two links of equal length having one extremity pivotally connected respectively with the opposite ends of the equalizing bar, meshing gears of equal size carrying cranks with which the opposite ends of the said links are respectively connected, and means for rotating the gears.

5. The combination with a movably mounted member, of means for oscillating the same including a crank arm operably connected therewith, an equalizing bar to the center of which the outer end of the crank arm is pivoted, two links of equal length having one extremity pivotally connected respectively with the opposite ends of the equalizing bar at equal distances from the center, meshing gears of equal size carrying cranks of equal length with which the opposite ends of the said links are respectively connected, and means for rotating the gears.

[Claims 6 to 8 not printed in the Gazette.]

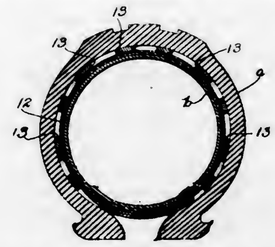
1,222,728. SHOE-RACK. GEORGE BROWN, Jr., Lynn, Mass. Filed Apr. 5, 1911. Serial No. 619,057. (Cl. 211—14.)



In a shoe rack, the combination with a frame having end uprights, of supporting arms extending from said uprights and arranged in pairs, shoe holders removably sustained by the uprights and each comprising two side arms to rest on the supporting arms, a member connecting the side arms and constituting a toe rest, and shoe-sustaining and separating members secured to and extending from the toe rest, each supporting arm having a positioning projection and each side arm of each shoe holder having a recess to receive said projection.

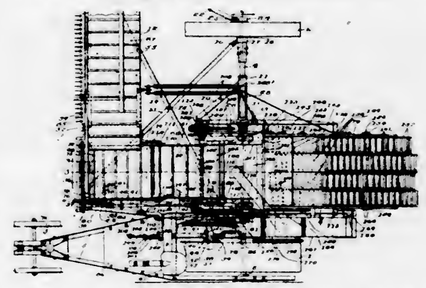
1,222,729. REINFORCEMENT FOR PNEUMATIC TIRES. FREDRICK S. BRYANT, Reading, Mass. Filed Mar. 18, 1916. Serial No. 85,186. (Cl. 152—18.)

A pneumatic tire reinforcement comprising a body approximately U-shaped in cross section, formed of frictional textile material, and having flexible overlapping edge portions, and a spacing grid of compressible elastic rubber, attached to the exterior of said body and provided with means for forming a plurality of uniform air spaces



of corresponding shape and depth having straight side walls, the margins of which constitute yieldable shoulders capable of frictional engagement with a tire shoe, said body forming substantially flat bottom walls for said spaces.

1,222,730. COMBINED HARVESTER AND THRESHER. NORMAN E. BUNTING, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed May 1, 1913. Serial No. 764,849. (Cl. 56—29.)



1. In a combined harvester and thresher, a frame, a thresher thereon, a vertically adjustable grain platform pivoted to said frame, a conveyer thereon, a coöperating thresher feeding conveyer on said frame disposed at the delivery end of said platform conveyer, and operative connections between said platform and feeding conveyers whereby the former may move bodily longitudinally of the latter.

2. In a combined harvester and thresher, a frame, a thresher thereon, a vertically adjustable grain platform pivoted to said frame, a conveyer thereon, a coöperating thresher feeding conveyer on said frame disposed in rear of said platform conveyer, and sliding operative connections between said platform and feeding conveyer whereby the former may move bodily longitudinally of said feeding conveyer.

3. In a combined harvester and thresher, a frame, a thresher thereon, a vertically adjustable grain platform pivotally connected to said frame, a conveyer thereon, a coöperating thresher feeding conveyer carried by said frame disposed in rear of said platform conveyer, and operative connections between said platform and feeding conveyer and said feeding conveyer and frame whereby said platform may move bodily longitudinally of said feeding conveyer and the latter may rise and fall.

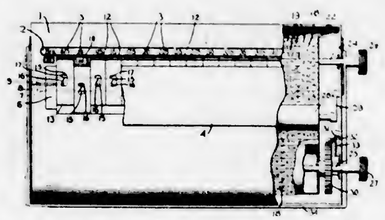
4. In a combined harvester and thresher, a frame, a thresher thereon, a vertically adjustable grain platform pivotally connected to said frame, a conveyer on said platform, a coöperating thresher feeding conveyer pivoted on said frame at its rear end and disposed in rear and beneath said platform conveyer, and operative connections

between said platform and feeding conveyer whereby the former may move bodily longitudinally of the latter.

5. In a combined harvester and thresher, a frame, a thresher thereon, a vertically adjustable grain platform pivotally connected to said frame, a conveyer on said platform, a coöperating thresher feeding conveyer pivoted on said frame at its rear end and disposed in rear and beneath said platform conveyer, and guide and roller connections between said platform and feeding conveyer whereby the former may move bodily longitudinally of the latter.

[Claims 6 to 31 not printed in the Gazette.]

1,222,731. ARITHMETICAL CALCULATOR. MICHAEL G. BURNETT, Watertown, Mass., assignor of fifty-one one-hundredths to Michael Burke, Marlboro, Mass. Filed Oct. 30, 1914. Serial No. 869,480. (Cl. 235—86.)



1. In an arithmetical calculator, a casing having an opening therein, a movable element in said casing having a scale and having arithmetical results delineated thereon, a scale on said casing adjacent said opening, said scales coöperating to indicate an arithmetical result, a plurality of shutters in said casing adapted to cover said arithmetical results, means for retaining each shutter normally in closed position and means actuated by the opening of one shutter to cause all other shutters to be closed.

2. In an arithmetical calculator, a casing having an opening therein, a movable element in said casing having a scale and having arithmetical results delineated thereon, a scale on said casing adjacent said opening, said scales coöperating to indicate an arithmetical result, a plurality of shutters in said casing for covering said arithmetical results, a plurality of springs in said casing adapted each normally to retain a shutter in closed position, and means actuated by the opening of one shutter to cause all other shutters to be closed.

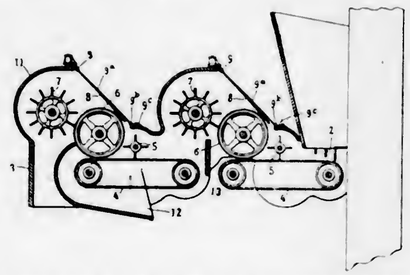
3. In an arithmetical calculator, a casing having an opening therein, a movable element in said casing having a scale and having arithmetical results delineated thereon, a scale on said casing adjacent said opening, said scales cooperating to indicate an arithmetical result, a plurality of shutters in said casing for covering said arithmetical results, means for retaining each shutter in normal closed position, a spring controlled cross-bar in said casing, a plurality of studs on said cross-bar, a cam surface in each shutter adapted each to engage one of said studs whereby when one shutter is opened all other shutters will be automatically closed.

4. An arithmetical calculator, including a casing having an opening therein, a plurality of vertically slidable shutters adapted normally to close said opening, means for normally retaining said shutters in closed position, a cam surface and a detent in each shutter, a bar in said casing adapted to traverse said casing, means tending to hold said bar to one side of said casing, a plurality of studs on said bar, said studs each being adapted to engage one of said shutter cam surfaces and detents whereby when one shutter is depressed said detent retains the same in depressed open position and said bar automatically effectuates the release of all shutters and the return of the same to normal closed position.

5. An arithmetical calculator, including a casing having an opening therein, a plurality of vertically slidable shutters adapted normally to close said opening, means for normally retaining said shutters in closed position, means for retaining a shutter in depressed open position and for effectuating the release and return to normal closed position of all other shutters, comprising a bar in said casing adapted to traverse said casing, a spring secured to said bar and to said casing whereby one end of said bar is normally held adjacent the casing side, a cam surface and a detent in each of said shutters formed by a slot and recess therein, a plurality of studs on said bar, one opposite each slot and adapted to engage said cam surface and detent whereby when a shutter is depressed its stud will engage the cam surface, transversely actuate the bar which functions to release any depressed shutter, and said stud will enter said recess and detain the depressed shutter in such position.

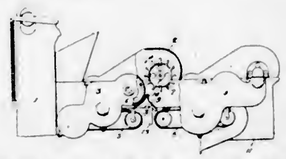
[Claims 6 and 7 not printed in the Gazette.]

1,222,732. SEPARATOR-SCREEN. BENJAMIN CRABTREE CALDERWOOD, Valley Falls, R. I., assignor to Price-Campbell Cotton Picker Corporation, New York, N. Y., a Corporation of Delaware. Filed Apr. 30, 1913. Serial No. 764,523. (Cl. 19—9.)



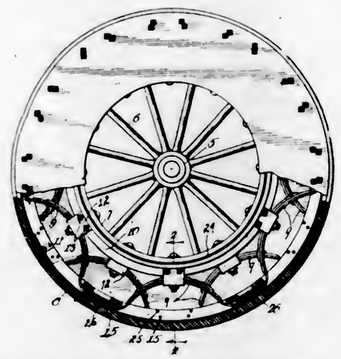
A separating screen for use in a cotton-cleaner attached to a cotton-picking machine, said screen comprising a series of vibrating tines secured to a transverse holder; an approximately U-shaped carrier the free ends of which are secured to the holder, and the transverse portion of which passes the ends of the tines at a distance therefrom; the transverse member of the carrier being adapted for attachment to a cotton-cleaner; a fan doffer; a card roller; and a breaker fan located below the tines, all combined and operating substantially as and for the purpose set forth.

1,222,733. BAFFLE-PLATE. BENJAMIN CRABTREE CALDERWOOD, Valley Falls, R. I., assignor to Price-Campbell Cotton Picker Corporation, New York, N. Y., a Corporation of Delaware. Filed Apr. 30, 1913. Serial No. 764,526. (Cl. 19—9.)



The combination of a card roller, a fan doffer, and an endless receiving belt, with a transverse baffle plate approximately triangular in cross-section, one side being arced and elastic and held adjacent the periphery of the card roller, and the other side being below the fan doffer and extending toward said belt, the free ends of the card teeth and the opposed surface of the baffle plate being slightly spaced apart, and the baffle plate serving to keep the cotton from falling from the card roller if any fails to be doffed from the card roller by the fan doffer; the fan doffer being above the baffle plate and the baffle plate being located in front of the card roller with its main portion below the axis thereof.

1,222,734. SPRING-WHEEL. FRANK CARTER, Chicago, Ill., assignor to Peerless Wheel Company, Chicago, Ill., a Corporation of Delaware. Filed May 20, 1916. Serial No. 98,945. (Cl. 152—37.)



1. A wheel comprising a felly; a rim movably associated with the felly and having a channel U-shaped in cross section in its inner periphery; leaf springs having their central portions secured to the felly and their end portions formed in loops and disposed in said channel with perforations in said spring ends; bolts passing through the channel and said loops connecting the springs with the rim; and coil springs disposed in the channel between said leaf springs with their ends disposed in the perforations of said leaf springs for resisting movements of the leaf spring ends both toward and away from each other, said channel being in engagement with the sides of the coil springs holding the latter against displacement.

2. A wheel comprising a felly; a rim substantially concentric with the felly; a series of leaf springs secured at their central portions to the felly, the end portions of each spring being bent back upon themselves forming loops and having parts of said bent back portions again bent into the same general directions of the central portions of the spring with perforations in their extreme ends; helical springs having their ends extending through the perforations of two adjacent leaf spring ends resisting the circumferential movements of the latter in the rim; and means on the rim engaging said loops for connecting the leaf springs to said rim.

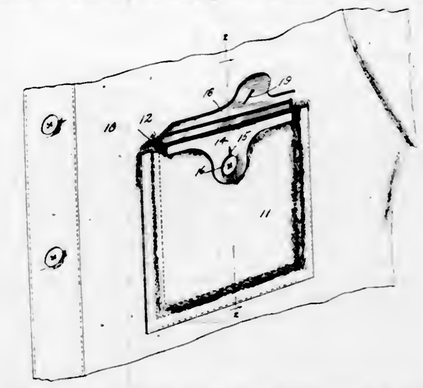
3. A wheel comprising a felly; a rim movably associated with the felly; leaf springs having portions rigidly secured to the felly and loops provided in their ends adjacent said rim; pins mounted in said rim and disposed in said loops adjustably connecting the leaf springs with said rims; and coil springs connected between adjacent ends of the leaf springs resisting movements of said leaf springs toward and away from each other.

1,222,735. WEARING-APPAREL. WILLIAM C. COLEMAN, Portland, Oreg. Filed Aug. 10, 1916. Serial No. 114,230. (Cl. 2—15.)

1. An inner pocket for a garment made of flexible water-proof material closed on the bottom and sides and having means on the open top adapted to be folded over the garment pocket and to be removably secured thereto on its outer side.

2. A protective pocket for garments comprising a bag-like article made of water-proof material open at the top only and having flaps on the front and rear of said open top for respectively securing said pocket within the pocket of a garment and for covering the opening of the pocket.

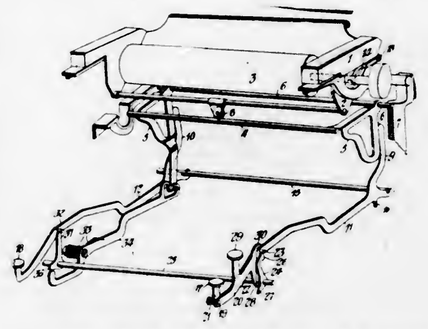
3. An inner pocket adapted to be placed within the pocket of a garment comprising a bag-like article formed of water proof material made impervious at its connected sides and bottom but open at the top, and a flap extending from each edge of said open top provided with means for securing said flaps to the pocket of a garment.



4. A protective pocket for garments comprising a bag-like structure made of water-proof materials sealed at its side and bottom edges against the entrance of moisture and open at the top, a securing flap projecting from the outer side of said protective pocket having means thereon for securing the same in the pockets of a garment, and a flap on the rear of the protective pocket to fold over the mouth thereof and be secured to the pocket of the garment by the same means that secures the first named flap.

5. A protective pocket for garments made of water-proof material with its side and bottom edges sealed and open at the top, flaps projecting upwardly from the front and rear sides of said pocket at the mouth thereof, and means on each of said flaps whereby the same may be attached to a garment.

1,222,736. TYPE-WRITING MACHINE. FRANK A. COOK, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed June 17, 1914. Serial No. 845,518. (Cl. 197—80.)



1. The combination of a shift key lever, a permanent key to operate said lever, a lock effective at the operation of the lever by said permanent key to hold the lever permanently in operated position, a temporary key to operate said lever, and a releasable trip carried by said permanent key normally effective at the operation of the lever by said temporary key to move and hold the lock in ineffective position, said trip movable by said permanent key from an operative to an inoperative position.

2. The combination of a shift key lever, a lock to hold the lever in operated position, a releasable trip normally effective at the operation of the lever to move and hold

the lock in ineffective position, and a lever-operating key connected to said trip for moving the trip relatively to the lever to a position in which it is ineffective to prevent operation of the lock, said lock effective at the operation of the lever by said key to lock the lever in its operated position.

3. The combination with a shift lever and a key to actuate the same, of a lock, a device operative when the lever is actuated by said key, to disable said lock, and an auxiliary key for operating said lever, said auxiliary key having a limited movement relatively to the lever, said disabling device being operable by said auxiliary key to a position to release the lock, said lock operable automatically at the operation of the lever by said auxiliary key, to lock the lever in operated position.

4. The combination with a shift lever and a key to actuate the same, of a lock, a device operative when the lever is actuated by said key, to disable said lock, an auxiliary key for operating said lever, said auxiliary key having a limited movement relatively to the lever, said disabling device being operable by said auxiliary key to a position to release the lock, said lock operable automatically at the operation of the lever by said auxiliary key, to lock the lever in operated position, a second shift lever operable independently of the first-mentioned lever, and means operated by said second lever to unlock the first lever.

5. In a typewriting machine, the combination of a key-actuated case-shift lever, a lock, a spring to throw the lock into locking engagement with the lever, a trip carried by the lever and normally operative to hold the lock out of use when the lever is operated, and an auxiliary key to operate said lever and to move the trip relatively to the lever to release the lock, whereby the lever is automatically locked when actuated by the auxiliary key.

[Claims 6 to 28 not printed in the Gazette.]

1,222,737. LEGGING. CARL T. DAHLIN, Stockholm, Wis. Original application filed June 3, 1916, Serial No. 101,494. Divided and this application filed Jan. 10, 1917. Serial No. 141,567. (Cl. 36—2.)

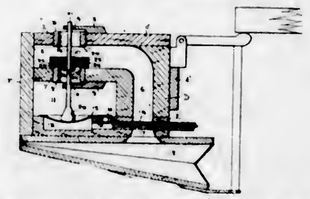


1. A legging having a flexible tubular body with a bottom extension extending over the top of the foot of the wearer, buckle-equipped straps secured to the bottom of the legging and extending, the one under the instep and the other under the ball of the foot, and a tie strap connecting said two buckle-equipped straps.

2. A legging having a flexible tubular body with a bottom extension extending over the top of the foot of the wearer, buckle-equipped straps secured to the bottom of the legging and extending, the one under the instep and the other under the ball of the foot, and a tie strap connecting said two buckle-equipped straps, and being located beneath the sole of the foot.

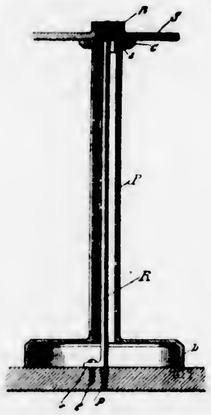
1,222,738. AUTOMATIC PIANO-PLAYER. GEORGE W. DAVENPORT and LOUIS J. BURKHIM, Gainesville, Fla. Filed Sept. 22, 1915. Serial No. 51,907. (Cl. 84—156.)

The combination in a pneumatic control valve of a piano player, of a skin diaphragm forming the base rest for the valve stem, a valve stem composed of wood, having an enlarged base portion and provided with a transverse pin and a circular washer of lead, two leather, and two felt disks surrounding the valve stem and adhesively connected thereto, a fiber disk between the two felt disks and adhesively connected thereto, provided with a central



orifice of slightly greater diameter than the diameter of the valve stem, two valve seats composed of non-corrosive material and situated above and below the two leather disks, and two guide fingers of wood for the valve stem, one above and one below the two valve seats.

1,222,739. SUPPORTING-PEDESTAL FOR CASH-REGISTERS. PAUL DE CHIME, Youngstown, Ohio. Filed Oct. 15, 1915. Serial No. 56,162. (Cl. 248—41.)

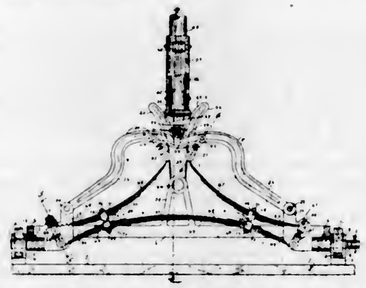


In a supporting pedestal the combination of a tubular standard and central anchoring rod, said rod being provided at its upper end with a threaded section to receive an inner threaded sleeve nut, the sleeve portion of which extends into the upper end of the standard, for the purpose of securing the object to be supported to the standard, and rod jointly, and means for securing said rod to the floor.

1,222,740. TROLLEY MECHANISM. EDWARD C. DIETRICH and CHARLES W. BLISS, South Bend, Ind. Filed Mar. 19, 1915. Serial No. 15,417. (Cl. 191—70.)

1. In a trolley mechanism, a trolley pole, a bifurcated trolley pole support, a rocker frame provided with fork brackets upon which said forked pole support is pivotally mounted, said rocker frame being provided also with a plurality of cam lever brackets, means for pivotally supporting said rocker frame to enable it to rock on a horizontal axis disposed in a different angle to the trolley pole axis, and resilient means including converging duplicate cam levers pivotally mounted upon said cam lever brackets and actuating said trolley pole for normally swinging the trolley pole to an upright position.

2. In a trolley mechanism, a trolley pole provided with a bifurcated support, a rocker frame provided with fork brackets upon which said bifurcated pole support is pivotally mounted on a horizontal axis, said rocker frame being provided also with cam lever brackets, means for pivotally supporting said rocker frame to enable it to rock on a horizontal axis relatively at right angles to the trolley pole axis, and resilient means including duplicate cam levers pivotally mounted upon said cam lever brackets and duplicate leaf springs adapted to actuate said trolley pole and support for normally swinging said trolley pole on its axis to a vertical position.



3. In a trolley mechanism, a laterally rocking frame provided with medially disposed fork brackets and cam lever brackets adjacent each end, a trolley pole, a bifurcated pole support pivotally mounted upon said fork brackets and adapted to swing either forward or backward from a normally upright position, rollers rotatively mounted upon the pole support, and duplicate converging spring pressed means engaging said rollers adapted to yieldably maintain said trolley pole and support in an upright position.

4. In a trolley mechanism, a trolley pole provided with a bifurcated support, a laterally rocking frame provided with medially disposed fork brackets and cam lever brackets on opposite sides thereof, said bifurcated pole support being pivotally mounted upon said fork brackets and yieldable either way on said pivots from a normally medial position, and resilient means actuating said pole and support for forcing the pole to an upright position, said means comprising duplicate cam levers and resilient members pivotally secured thereto to upwardly project the cam levers into engagement with the pole support.

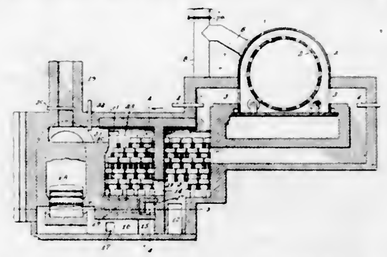
5. In a trolley mechanism, a trolley pole provided with a forked support, a laterally rocking frame provided with medially disposed fork brackets and cam lever supports on opposite sides thereof, said forked pole support being pivotally mounted upon said fork brackets and yieldable either way on its pivots from a normally upright position, and resilient means engaging the pole support for projecting the pole to an upright position, said means comprising duplicate cam levers and resilient members pivotally secured thereto and adapted to outwardly project the cam levers into engagement with the pole support.

[Claims 6 to 10 not printed in the Gazette.]

1,222,741. PROCESS OF HEATING AND APPARATUS THEREFOR. HENRY L. DOHERTY, New York, N. Y., assignor to The Improved Equipment Company, New York, N. Y., a Corporation of Colorado. Filed July 2, 1913. Serial No. 776,959. (Cl. 263—1.)

1. In heating, the process which comprises establishing and maintaining a flow of hot products of complete combustion in a closed circuit, such flow at one point passing through a container for the materials to be heated wherein it imparts heat to such materials and at another point passing through means for restoring the heat units disappearing in said circuit.

2. In heating, the process which comprises establishing and maintaining a flow of hot, chemically substantially inert products of combustion in a closed circuit, such flow at one point passing through a container for the materials to be heated wherein it imparts heat to such materials and at another point passing through means for restoring the heat units disappearing in said circuit.



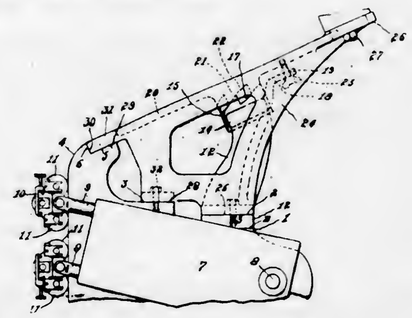
3. In heating, the process which comprises establishing and maintaining a flow of hot, chemically substantially inert gases in a closed circuit, such flow at one point passing through a container for the materials to be heated wherein it imparts heat to such materials and at another point passing through means for restoring the heat units disappearing in said circuit.

4. In heating, the process which comprises establishing and maintaining a flow of hot products of combustion in a closed circuit including a container for the materials to be heated, a minor fraction of the flow being vented off beyond the container and a compensating amount of new hotter products of combustion being added to the flow prior to entering the container.

5. In heating, the process which comprises establishing and maintaining a flow of hot products of combustion in a closed circuit including a container for the materials to be heated, a minor fraction of the flow being vented off at a point beyond the container, another minor fraction being admixed with air and diverted through a gas producer to furnish gas, such gas being burnt and the products of combustion being added to the flow to compensate for the vented amount and to restore heat.

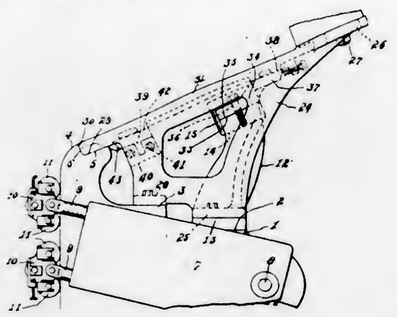
[Claims 6 to 16 not printed in the Gazette.]

1,222,742. PRINTING-PRESS APPLIANCE. JAMES E. DOYLE, Cleveland, Ohio, assignor of one-half to C. S. Britton, Cleveland, Ohio. Filed Oct. 29, 1913. Serial No. 797,941. (Cl. 101—79.)



A printing press appliance comprising in combination a frame formed above with tracks, a bracket structure supported thereon and having continuing track surfaces, a saddle having inking rolls adapted to be supported upon said continuing track surfaces, a support below said bracket structure, an inking disk adjustably mounted upon said support so as to permit of raising and lowering with respect thereto and means for fixing said disk in various positions of rest with respect to said track surfaces and wholly out of engagement with said rolls when the latter are positioned thereabove.

1,222,743. PRINTING-PRESS APPLIANCE. JAMES E. DOYLE, Cleveland, Ohio, assignor of one-half to Charles S. Britton, Cleveland, Ohio. Filed Nov. 5, 1913. Serial No. 799,301. (Cl. 101-79.)



1. A printing press appliance comprising in combination, a frame, a track, an inking disk carried between said tracks, a saddle, rollers upon said saddle and movable along said track, an inking roll mounted upon said saddle and adapted to travel over said disk, a plurality of inking plates superimposed upon said disk, means for fixing the said plates to said disk, and means for independently adjusting the elevation of said disk whereby to regulate the pressure between said inking roll and plates.

2. A printing press appliance comprising in combination, an inking roll, means for actuating the same, an inking disk beneath the path of travel thereof, a plurality of inking plates detachably supported by said disk and overlying the same, said plates being spaced with respect to each other, and means for adjusting said member in a direction perpendicular to the plane of said plates whereby to effect a contact of given pressure between said roll and plates.

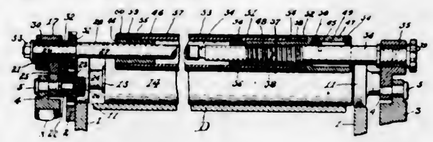
3. A printing press appliance comprising in combination, an inking device, a plurality of elongated inking plates of equal thickness arranged in a row thereacross, an inking roll yieldingly held against said plates, means for fixing said plates in various positions with respect to each other, and distinct means for adjusting said surfaces whereby to control the pressure of said roll upon said plates.

4. A printing press appliance comprising in combination, an inking disk, a plurality of inking plates detachably alined upon such disk, roller tracks therealong, a pair of inking rollers movable upon said tracks so as to frictionally engage said plates, a vibrator disposed therebetween and provided intermediately of its ends with an annular groove, said vibrator having frictional lineal contact on opposite sides of said groove with said inking rollers, means for actuating said rollers and vibrator together, means for sliding said vibrator in the direction of its own axis, and means for effecting a relative adjustment of said disk and rollers for the useful purpose specified.

1,222,744. SADDLE CONSTRUCTION. JAMES E. DOYLE, Cleveland, Ohio, assignor of one-half to Charles S. Britton, Cleveland, Ohio. Filed Nov. 10, 1913. Serial No. 800,058. (Cl. 101—348.)

1. In a saddle construction the combination of a saddle, a shaft upon said saddle, rollers fixed near opposite ends of said shaft, a sleeve loosely mounted intermediately of and spaced from said rollers, and a composition roll fixedly inclosing said sleeve and spaced from opposite ends thereof.

2. In a saddle construction the combination of a saddle, a bearing member thereon, said saddle being provided with a converging recess adjacent one side of said bearing, a latch hinged to said saddle on the other side of said bearing and extending across the same, and means for fixing said latch relative to such recess.



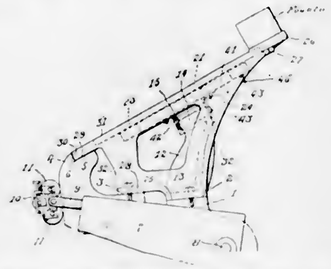
3. In a saddle construction the combination of a saddle provided above with a seat, a bearing block snugly resting in said seat, said saddle being formed laterally of said seat with a converging recess, a latch pivotally secured to said saddle and overlying said block, said latch having a depending extremity adapted to overhang said recess, and a thumb screw extending through said extremity and adapted to occupy said recess.

4. In a saddle construction the combination of a composition roll, a bracket formed above with a depressed seat, a bearing block detachably disposed in said seat and having a depending portion laterally beyond said composition roll, a spline shaft extending through said block, a gear keyed to said shaft, a vibrator slidably mounted upon the latter, means for adjusting said composition roll into frictional engagement with said vibrator, means for sliding said vibrator axially, and an idler mounted upon said depending portion and in mesh with said gear whereby both gear and idler may be removed irrespective of the adjustment of said composition roll.

5. In a saddle construction the combination of a bearing block, a spline shaft mounted therein, a gear fixed upon the latter, means for rotating said gear, a member keyed to said spline shaft and movable therewith, a vibrator slidable upon and detachable from said member and means for fixing said vibrator with respect to the latter.

[Claims 6 to 10 not printed in the Gazette.]

1,222,745. INKING-PLATE HEATER. JAMES E. DOYLE, Cleveland, Ohio, assignor of one-half to Charles S. Britton, Cleveland, Ohio. Filed Dec. 22, 1913. Serial No. 808,159. (Cl. 101—79.)



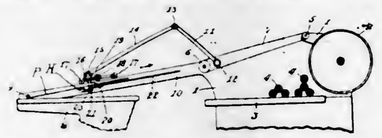
1. A heating appliance for printing presses comprising the combination of a bracket, an inking plate supported thereby, a heating member mounted and extending adjacent a major portion of the under surface of said plate, and an adjustable connection between for moving said member toward and away from said plate.

2. A heating appliance for printing presses comprising the combination of a bracket, an inking plate supported thereby, a heating element interposed between said bracket and plate and means for adjusting said element relatively to each and uniformly with respect to the plane of the latter.

3. A heating appliance for printing presses comprising the combination of a bracket provided with a bearing, an inking plate provided centrally with a stud rotatable in said bearing, and a heating element surrounding said bearing and out of contact therewith and with said plate.

4. A heating appliance for printing presses comprising an inking plate in combination with a looped heating member adjustably supported near the said plate whereby to control and variously distribute the heat zone created thereby.

1,222,746. MEANS FOR PREVENTING OFFSET IN PRINTING. JAMES E. DOYLE, Cleveland, Ohio, assignor of one-half to C. S. Britton, Cleveland, Ohio. Filed Dec. 29, 1913. Serial No. 809,160. (Cl. 34—18.)

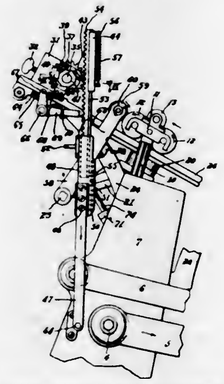


1. Means for preventing offset in printing comprising in combination, a carriage, a gripping device carried thereby and disposed on one side of a sheet, and a heater also attached to said carriage and disposed on the opposite side of the sheet.

2. Means for preventing offset in printing comprising in combination, a sheet conveyer, a bar adjacent thereto, a heating member, a pair of complementary clamping members enveloping said bar and secured to said member, means for drawing said members together, said heating member being disposed below and extending across said sheet.

3. Means for preventing offset in printing comprising in combination, mechanism for conveying a sheet, a bar attached for movement therewith, a heating member detachably carried by said bar, said heating member being disposed immediately below and extending across the line of travel of said sheet.

1,222,747. INK-SUPPLY CONTRIVANCE. JAMES E. DOYLE, Cleveland, Ohio, assignor of one-half to Charles S. Britton, Cleveland, Ohio. Filed Nov. 20, 1914. Serial No. 873,171. (Cl. 101—341.)



1. An ink-supply contrivance comprising a rotatable fountain roller, an inking surface adjacent the same, a saddle, means for actuating the same, a form roller mounted upon said saddle so as to roll against said surface, a duct roller adapted to roll against said surface and around with said fountain and form rollers, and means for controlling the extent of roll of said duct roller in its relation to one of the others.

2. An ink-supply contrivance for use with a type-form and an inking surface; comprising the combination of a form roller, means for reciprocating the same successively across said form and surface and movable means for supplying ink to said form roller during its movement in one direction, the arrangement being such that said form roller travels in both directions between the time it starts to receive ink from said supplying means and next deposits ink upon the type-form, and means for locking said supplying means against movement periodically.

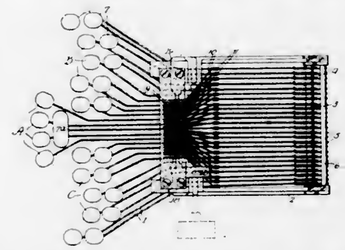
3. An ink-supply contrivance for use with a type-form and an inking surface; comprising the combination of a form roller, means for reciprocating the same successively across said form and surface, a second roller, means for supplying ink thereto, automatically operating means adapted alternately to hold said second roller at one end of the travel of said form roller and to release such second roller to the action of gravity whereby it falls into the path of movement so as to be rolled by said form roller, and throw-off means for adjusting the duration of such co-acting rolling movement.

4. An ink-supply contrivance for use with a type-form and an inking surface; comprising the combination of a saddle, means for reciprocating the same across the type-form and surface, a form roller thereon adapted to roll against said form and surface, a fountain roller at one limit of the reciprocal movement of said saddle, a duct roller between said form and fountain rollers adapted to contact both, said duct roller further adapted to intersect the path of said form roller and to be moved thereby, and throw-off means for varying the approach of said form roller and hence of said duct roller toward the fountain roller.

5. An ink-supply contrivance comprising the combination of a fountain roller, a form roller, means for reciprocating the same toward and away from said fountain roller, an ink transferring roller, normally disposed in the path of said form roller and adapted to be brought into engagement with said fountain roller, and adjustable means for varying the travel of said form roller whereby to prevent the engagement of said ink transferring roller with one of the other rollers.

[Claims 6 to 13 not printed in the Gazette.]

1,222,748. KEYBOARD FOR WRITING-MACHINES. ALRAH B. EDWARDS, Chicago, Ill., and FRANK K. RUSSELL, Dallas, Tex., assignors to Shortwriter Company, Wilmington, Del., a Corporation of Delaware. Filed Dec. 10, 1915. Serial No. 66,090. (Cl. 197—98.)



A keyboard for a writing machine comprising three groups of keys, two of which groups are arranged symmetrically at each side of the third group and rearwardly thereof, the side groups having their ends arranged in single pairs, the members of each pair being in alinement parallel to the side walls of the machine and the pairs being arranged in staggered relation transversely of the machine, the third group consisting of a single key elongated transversely of the machine and a plurality of keys disposed symmetrically in front of the single key.

1,222,749. SHADE-HOLDER. THEOPHILE EUPHRAT, South Norwalk, Conn. Filed Sept. 19, 1916. Serial No. 120,954. (Cl. 240—115.)

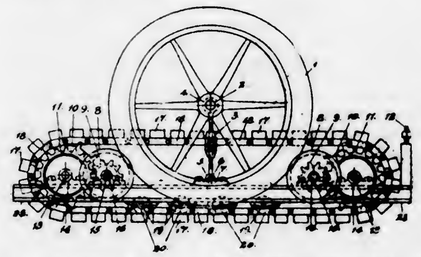
A shade holder comprising a ring having a downwardly extending angle flange, shade supporting lugs extending inward from said flange, said ring and flange

being provided with a notch, a bevel nosed catch pivoted in said notch and extending downward from the ring in position to engage a shade and hold it positively, and having a finger piece extending upward from the ring in



position to be conveniently engaged, and a spring acting to yieldingly retain the catch in the engaging position, the base of the notch serving as a stop to limit the inward movement of the catch.

1,222,750. AUTOMOBILE TRACTOR ATTACHMENT. EUGENE A. FAUT, Joliet, Ill. Filed Oct. 23, 1915, Serial No. 57,440. Renewed Mar. 10, 1917. Serial No. 154,008. (Cl. 21—114.)

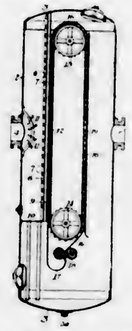


1. An automobile tractor attachment, comprising, a frame piece connected to the front axle of the automobile; concaved friction wheels on each side of said frame piece fastened to shafts passing through each side of said frame piece and journaling in boxes fastened to the sides of said frame piece, said friction wheels being engaged by and revolved by the motion of the rear automobile wheels; driving pinions fastened to said shaft, one on each side between the frame piece and one of said friction wheels; sprocket wheels fastened to shafts journaling in boxes in each side of said frame piece, each of said sprocket wheels engaging one of said driving pinions; link belts on each side of said frame piece having slats each end of which are fastened to one of said link belts, the said belts and connecting slats thus forming an oblong revolving apparatus underneath the axle of and nearly filling the space between, the rear wheels of an automobile, by means of which the combination is moved at about the speed of walking horses, all substantially as illustrated and described.

2. An automobile tractor attachment, comprising, an oblong revolving apparatus connected to the front axle of the automobile, the body of the apparatus to be placed under the rear part of the automobile; two spool-shaped wheels connected to said apparatus in such positions as to be engaged by the rear wheels of the automobile, the revolving motion of the automobile wheels imparting revolving motion to the said spool-shaped wheels, and the latter imparting motion to said apparatus; gearing means to reduce the revolving speed of said apparatus below that of said spool-shaped wheels, so as to adapt it to be connected to and to operate plows.

1,222,751. APPARATUS FOR SEPARATING VAPOR FROM GAS AND OTHER FLUIDS. LOUIS C. FROHRIEB, Pittsburgh, Pa. Filed July 19, 1916. Serial No. 110,087. (Cl. 183—4.)

1. In a separator of the class described, a closed tank or container having inlet and outlet connections, a perforated baffle plate within the container opposite the inlet connection, a mat or belt comprising fibrous material placed behind and adjacent to the baffle plate, and means for moving said mat or belt to bring different portions thereof into operative relation to the baffle plate, substantially as described.



2. In a separator of the character described, a closed tank or container having inlet and outlet connections, a baffle plate placed opposite the inlet connection, said baffle plate having a plurality of inclined troughs on its forward side, and a plurality of perforations between said troughs, a traveling belt of absorbent character placed behind the said baffle, and an imperforate baffle plate behind said mat or belt, substantially as described.

3. A separator of the character described, comprising a closed tank or container having an inlet connection and an outlet connection, a vertical baffle plate having a plurality of perforations, means for distributing the entering fluid throughout substantially the full height of said plate, and an endless absorbing belt placed behind and adjacent to said baffle plate, together with means for keeping said mat or belt in motion, substantially as described.

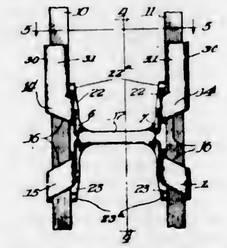
4. A separator of the character described, comprising a closed container having inlet and outlet connections, a baffle plate placed opposite the inlet connection and having a plurality of perforations therethrough, an endless chain placed behind said baffle plate, means for carrying and driving said chain, and an endless belt comprising fibrous material placed over and carried by the said chain, substantially as described.

5. A separator of the character described, comprising a closed container having inlet and outlet connections, a baffle plate placed opposite the inlet connection and having a plurality of perforations therethrough, an endless chain placed behind said baffle plate, means for carrying and driving said chain, an endless belt comprising fibrous material placed over and carried by the said chain, said belt being longer than the chain and having a slack portion, and means for squeezing the moisture from said slack portion, substantially as described.

1,222,752. CHAIR-SUPPORT STRUCTURE FOR MINING-MACHINE DRILLS. FRED FUNK, Chicago Heights, Ill., assignor to Funk Brothers Manufacturing Company, Chicago Heights, Ill., a Corporation of Illinois. Filed Apr. 19, 1915. Serial No. 22,385. (Cl. 255—53.)

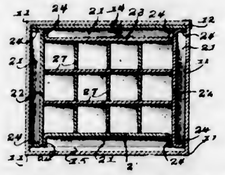
1. As an article of manufacture, a slide-chair comprising two body-portions connected together by a web and adapted to be received between a pair of spaced supporting post-bars channel shape in cross-section, each of such body-portions having a rib adapted to fit in the channel of its respective bar, such body-portions and ribs being recessed in alinement to afford bearings between the post-bars for the accommodation of the trunnions of an auger-boxing, and straps integral with said body-portions adapted to inclose said post-bars in substantial register with said bearings, substantially as described.

2. As an article of manufacture of the character described, a slide-chair comprising two body-portions connected together by a web and adapted to be received between a pair of spaced supporting post-bars channel-shape in cross-section, each of such body-portions having a rib adapted to fit in the channel of its respective bar, such body-portions and ribs being recessed in alinement to afford bearings between the post-bars for the accommodation of the trunnions of an auger-boxing, and straps integral with said body-portions and adapted to inclose said post-bars in substantial register with said bearings, each of said straps having an extension adapted to overlie the outer face and an edge of its respective bar, the edge-portions of said extensions having bearings for auger-box trunnions of greater length than those adapted to be accommodated in the bearings between the bars, substantially as described.



3. As an article of manufacture of the character described, a slide-chair comprising two body-portions connected together by a web and adapted to be received between a pair of spaced supporting post-bars channel shape in cross-section, each of such body-portions having a rib adapted to fit in the channel of its respective bar, such body-portions and ribs being recessed in alinement to afford two pairs of bearings between the post-bars for the accommodation of the trunnions of an auger-boxing, and a pair of straps integral with each of said body-portions and spaced apart and adapted to inclose said post-bars in substantial register with said bearings, one of the straps of each body-portion having an extension adapted to overlie the outer face and the opposite edges of its respective post-bar, the edge-portions of said extensions having bearings for auger-box trunnions of greater length than those adapted to be accommodated in the bearings between the bars, substantially as described.

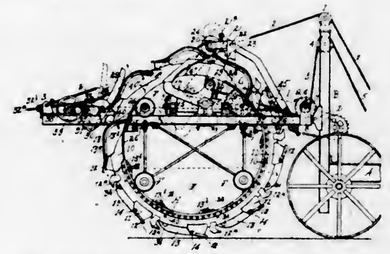
1,222,753. SHIPPING-CASE. PETER N. GAREAU, Pittsburgh, Pa. Filed June 17, 1915. Serial No. 34,665. (Cl. 229—14.)



1. A shipping case comprising a casing open at the top and bottom, a bottom member inclosed within said casing and having a cover member attached thereto, a false bottom resting upon said bottom member, a set of oppositely disposed false sides having their lower edges resting upon said false bottom, an additional set of oppositely disposed false sides also having their lower edges resting on said false bottom and arranged at right angles to the first set, ends of the false sides of the second set frictionally engaging the opposite inner faces of the false sides of the first set, whereby the first set retains the second set in position, and a false top resting upon said false sides.

2. A shipping case comprising a casing open at the top and bottom, a bottom member inclosed within said casing and having a cover member attached thereto, a false bottom having downturned flanges at its ends resting upon said bottom, a set of oppositely disposed sides having their lower edges resting upon said false bottom and having their ends turned outwardly against the end walls of said casing, an additional set of oppositely disposed false sides also having their lower edges resting on said false bottom and having outturned flanges at their ends arranged parallel with and frictionally engaging the inner face of the false sides of the first set, and a false cover resting upon said false sides.

1,222,754. DITCHING-MACHINE. FRANK H. GERDEMAN, Findlay, Ohio. Filed Dec. 23, 1914. Serial No. 878,649. (Cl. 37—29.)



1. In a ditching machine, a frame, a wheel mounted in the frame, a series of pivoted excavating shovels carried by the wheel, a scraper pivoted upon the frame and adapted to scrape in succession the interior of said shovels, and means controlled by the weight of the frame and wheel for yieldingly pressing the successive shovels and the scraper into operative relation.

2. In a ditching machine, a wheel, a series of excavating shovels carried by said wheel, a pivoted scraper adapted to scrape successively the interior of said shovels, a flexible support for said wheel, and connections between said support and the scraper, the arrangement being such that the weight of the wheel furnishes pressure for the scraper toward the shovels.

3. In a ditching machine, a wheel, a series of excavating shovels carried by said wheel, a pivoted scraper adapted to scrape successively the interiors of said shovels, a flexible support for said wheel, connections between said scraper and said support and a stop which limits the movement of the scraper toward the shovels.

4. In a ditching machine, a frame, a wheel revolubly mounted in said frame, a series of shovels carried by said wheel, a scraper adapted to scrape in succession said shovels, pivotal connections between said several shovels and the wheel, devices for pressing the shovels in succession toward the scraper, a flexible support for the frame, said flexible support being connected with said pressure devices whereby the weight of the frame and wheel is transmitted in part to said pressure devices.

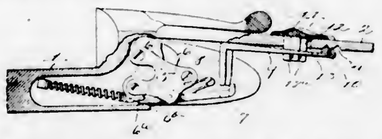
5. In a ditching machine, a frame, a wheel revolubly mounted in said frame, a series of shovels carried by the wheel, a pivoted scraper positioned to scrape in succession the interiors of said shovels, pivotal connections between said several shovels and the wheel, devices for pressing the shovels in succession toward the scraper, devices for pressing the scraper toward the shovel, a flexible support for the frame, said flexible support being operatively connected with said several pressure devices.

[Claims 6 to 16 not printed in the Gazette.]

1,222,755. SPLIT SAFETY-POST AND INDICATOR FOR DOUBLE-BARREL GUNS. GEORGE HENRY GIDDINGS, Ilion, N. Y. Filed Aug. 12, 1915. Serial No. 45,120. (Cl. 42—70.)

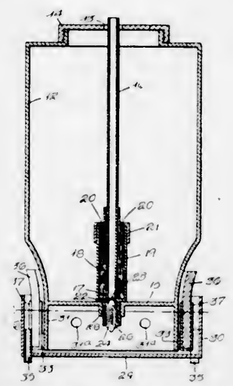
1. In a safety device of the kind described, a sectional safety button, a sectional safety post, each section of the

button coöperating with one of the post sections, pivoted sears having rearward end portions acting as stops to rearward movement of the post sections, and hammers having cam portions adapted to engage said sears and to hold the rear end portions of the sears in post stopping position, said cams becoming disengaged when said hammers reach their rearmost position, the said hammers, sears and post and button sections having independent movement, as and for the purpose set forth.



2. In a device of the kind described a safety button split longitudinally to form two sections, each section having a shank, and each shank having a reduced portion, a combined safety post and spring also split longitudinally to form two sections, the button shanks having their reduced portion passing respectively through the springs of the safety post sections, and hammers and sears, the sears coöperating with said post sections.

1,222,756. DISINFECTING APPARATUS. ARTHUR J. GRINER, Boston, Mass. Filed Dec. 14, 1916. Serial No. 136,955. (Cl. 137—154.)



1. An apparatus of the character stated, comprising a reservoir having an opening in its bottom, a gravity feed conduit communicating with said opening and extending above the bottom of the reservoir, said conduit constituting the outlet of the reservoir and having a liquid inlet communicating with the reservoir, and a mass of parallel, vertical filaments associated with said conduit in position to control a gravity flow of liquid, the voids between said filaments forming continuous vertical ducts of uniform conducting capacity from end to end, through which liquid flows by gravity.

2. An apparatus of the character stated comprising a reservoir having an opening in its bottom, a gravity feed conduit communicating with said opening and extending above the bottom of the reservoir, said conduit having a liquid inlet communicating with the reservoir near the reservoir bottom, the conduit constituting an outlet for the reservoir, a layer of filaments applied externally to the conduit within the reservoir and covering the said liquid inlet, said filaments constituting a capillary conductor, through which liquid flows by gravity, and a casing confining said filaments and communicating with the storage space of the reservoir to receive liquid therefrom.

3. An apparatus of the character stated comprising a reservoir having an internally-threaded nipple at its bottom, a conduit extending through said nipple and constituting the outlet of the reservoir, said conduit being provided with a liquid inlet above the reservoir bottom, a valve seat below the liquid inlet, and an internally-threaded socket below said valve seat adapted to adjustably support a valve coöperating with said seat, and a liquid-conducting casing surrounding the inlet-containing portion of the conduit and adapted to confine a layer of bristle against said inlet.

4. An apparatus of the character stated comprising a reservoir having a flange projecting downwardly from its lower end, a gravity feed conduit connected with the reservoir bottom and forming an outlet communicating with the space within said flange, said conduit having a liquid inlet communicating with the reservoir, means associated with said conduit for controlling a gravity feed of liquid therethrough, and a cup detachably engaged with said flange and adapted to accumulate liquid flowing from said outlet, and expose said liquid to the atmosphere, the rim of said cup surrounding said flange and being separated therefrom by an open space, and an elongated wick confined in said space with its lower longitudinal edge adjacent to the bottom of the cup and its upper longitudinal edge projecting above the rim of the cup.

5. An apparatus of the character stated comprising a reservoir having a flange projecting downwardly from its lower end, a gravity feed conduit connected with the reservoir bottom and forming an outlet communicating with the space within said flange, said conduit having a liquid inlet communicating with the reservoir, means associated with said conduit for controlling a gravity feed of liquid therethrough, and a cup formed to surround said flange and adapted to accumulate liquid flowing from said outlet and expose said liquid to the atmosphere, the said flange and cup being provided with separable inter-engaging coupling members, and the coupling members on the flange being provided with wick-engaging means.

1,222,757. PENDULUM-ESCAPEMENT. FERDINAND GUNDORPH, Portland, Oreg. Filed Nov. 8, 1915. Serial No. 60,346. (Cl. 58—129.)



1. A pendulum escapement comprising in combination a pendulum suspended to swing in a uniform continuous circular course, a spindle rotatably mounted upon said pendulum and having a laterally projecting weighted arm, stop members spaced apart and adapted to be engaged by said arm when in one position, the said arm being adapted to be successively moved out of engagement with said stop members, and means for moving the weighted arm having a positive driving connection therewith from one stop member to another.

2. A pendulum escapement comprising in combination a pendulum suspended to swing in a uniform continuous circular course, a spindle rotatably connected to said pendulum at a point to one side of its longitudinal axis and having a weighted arm projecting laterally therefrom, stop members equally spaced and adapted to be successively engaged by said weighted arm as it is revolved, and means for moving said weighted arm from one stop member to the other and having a positive driving connection therewith, substantially as described.

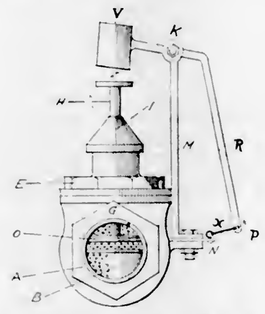
3. In a pendulum escapement of the character referred to, a pendulum adapted to be suspended to swing in a continuous circular course, a spindle rotatably connected with said pendulum in substantially parallel relationship therewith and to one side of its longitudinal axis, said spindle having a laterally projecting weighted arm, and means for intermittently revolving said weighted arm and spindle to different positions, whereby to intermittently impart a propelling impulse to said pendulum, and to maintain its continuous circular movement.

4. A pendulum escapement of the character referred to, comprising a pendulum provided at its upper end with means for suspending it to rotate in a continuous circular course, means comprising a pin engaging the upper end of the pendulum for preventing its turning about its own longitudinal axis during its circular rotation, positive driving means mounted upon said pendulum and adapted to be intermittently moved to different positions relative thereto, whereby to impart a propelling impulse to said pendulum, and means for intermittently moving the same to different positions, substantially as described.

5. A pendulum escapement of the character referred to, comprising a pendulum provided at its upper end with a suspending frame, means for supporting said pendulum by said frame to rotate about a circular course, means for preventing said pendulum from turning about its own axis as it rotates about its circular course, a spindle rotatably mounted in said pendulum frame to one side of the longitudinal axis of said pendulum, said spindle having a laterally projecting weighted arm, a series of stops equally spaced and adapted to be engaged by said weighted arm as it is revolved about said spindle, and means for successively moving said weighted arm from one stop to another, whereby it operates with each movement to impart a propelling impulse to said pendulum in the direction of its circular movement, substantially as described.

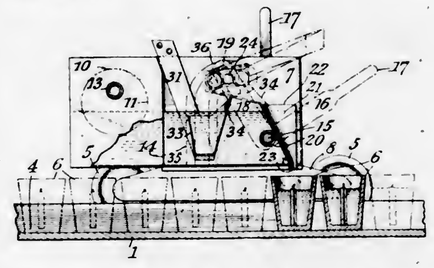
[Claim 6 not printed in the Gazette.]

1,222,758. VALVE FOR PIPES FOR THE CONDUCTION OF LIQUID AND GASEOUS FLUIDS. GEORGE C. HALL and ALFRED BRADSHAW, Calgary, Alberta, Canada. Filed Aug. 30, 1915. Serial No. 48,142. (Cl. 137—92.)



In valves for pipes conducting liquid or gaseous fluids the combination with a globe valve body of a vertical cylinder set in the top of the valve body, a piston and rod operating vertically in the said cylinder and having attached at the lower end of the rod a substantially flat valve cap for closing the opening between the inlet and outlet of the valve body,—a rod attached to the upper end of the piston and extending beyond the upper end of the cylinder; a vertical bracket attached to one side of the globe valve body and extending above the top of the said rod attached to the upper end of the piston; at the upper end of the said bracket an arm pivoted intermediate its length with a weight at one end immediately above the last named rod, a chain attached to the other end of the said arm, a piece of fuse wire attaching the last mentioned end of said arm to the globe valve body so that the said weight is suspended over the rod attached to the upper end of the piston.

1,222,759. FILLING DEVICE. CHARLES H. HAWKINS, Freeport, N. Y., assignor to The Standard Oil Company of New York, New York, N. Y., a Corporation of New York. Filed Apr. 27, 1916. Serial No. 93,845. (Cl. 226—17.)



1. In apparatus of the class stated, a reservoir, a filling tank separate from but connected with the reservoir near the bottom of the tank, means located in the filling tank to maintain a predetermined level of the liquid within it and the reservoir, a series of measures within the reservoir, a support for the measures having a bellcrank on its end which straddles the wall of the reservoir, a series of funnels practically entirely within the reservoir and practically entirely submerged in the material, and means on the exterior of the reservoir engaging with the outer part of the bellcrank whereby the measures may be first elevated vertically above the level of the liquid and then tipped forwardly for emptying them into the funnels.

2. In apparatus of the class stated, a reservoir, means to supply liquid thereto, means to maintain a predetermined level of the liquid within the reservoir, a series of measures within the reservoir, a movable support for the measures having a bellcrank on its end which straddles the wall of the reservoir, a cam plate on the exterior of the reservoir, means on the outer member of the bellcrank which engage with the cam plate, and means to move the said last named means relative to the cam plate.

3. In apparatus of the class stated, a reservoir, means to supply liquid thereto, means to maintain a predetermined level of the liquid within the reservoir, a series of measures within the reservoir, a movable support for the measures having a bellcrank on its end which straddles the wall of the reservoir, a cam plate on the exterior of the reservoir, means on the outer member of the bellcrank which engage with the cam plate, means to move the said last named means relative to the cam plate, and a series of funnels registering with the measures, the discharge ends whereof are located near one wall of the reservoir.

4. In apparatus of the class stated, a reservoir, means to supply liquid thereto, means to maintain a predetermined level of the liquid within the reservoir, a series of measures within the reservoir, a movable support for the measures having a bellcrank on its end which straddles the wall of the reservoir, a cam plate on the exterior of the reservoir, means on the outer member of the bellcrank which engage with the cam plate, means to move the said last named means relative to the cam plate, and a series of funnels registering with the measures.

5. In apparatus of the class stated, a reservoir, means to supply liquid thereto, means to maintain a predetermined level of the liquid within the reservoir, a series of measures within the reservoir, a movable support for the measures having a bellcrank on its end which straddles

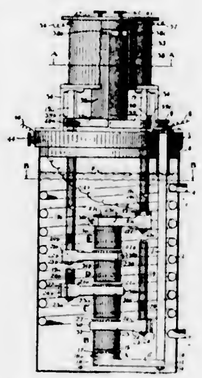
the wall of the reservoir, a cam plate on the exterior of the reservoir, means on the outer member of the bell-crank which engage with the cam plate, means to move the said last named means relative to the cam plate, and a series of funnels registering with the measures and located practically entirely within the reservoir, the discharge ends whereof are located near one wall of the reservoir.

1,222,760. BALL-CAGE FOR BEARINGS. LEWIS R. HEIM, Danbury, Conn., assignor to The Ball and Roller Bearing Company, Danbury, Conn., a Corporation of Connecticut. Filed July 3, 1916. Serial No. 107,245. (Cl. 64—59.)



A ball cage for bearings provided with pockets, each pocket having a hole leading into it from each side of the cage, of less diameter than the pocket, leaving a retaining flange at each end of the pocket, which yields when a ball is sprung in and then retains the ball.

1,222,761. OSCILLATOR. CHARLES D. HERROLD, San Jose, Cal. Filed Oct. 20, 1915. Serial No. 56,932. (Cl. 250—38.)



1. In an oscillator, an electrode removably positioned in an imperfectly conducting fluid and a plurality of electricity conducting members in axial alinement with said electrode and adapted to form a plurality of arc gaps, and means operatively connected to each of said conducting members for simultaneously and equally spacing the several members and holding the same in said spaced relation.

2. In an oscillator, a plurality of arc gaps formed by a plurality of axially alined, simultaneously adjustable, interspaced electricity conducting members operatively positioned in an electrical circuit, each of said members comprising a metallic disk and a tubular carbon removably attached to each other.

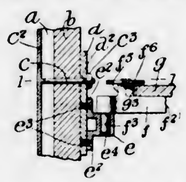
3. In an oscillator, an electrode removably positioned in an imperfectly conducting fluid and a plurality of adjustable electricity conducting members axially alined with said electrode and operatively positioned in an electrical circuit, and means for adjusting said members, said means comprising a solenoid having a divided core, each of the parts of said divided core being operatively connected to one of said members.

4. In an oscillator, a plurality of arc gaps formed by a plurality of axially alined, adjustable electricity conducting members operatively positioned in an electrical circuit, gravity actuated means for contiguously positioning said members when said circuit is broken and electrically actuated means for spacing said members when said circuit is closed.

5. In an oscillator, an electrode removably positioned in an imperfectly conducting fluid and a plurality of pairs of axially alined electrodes axially alined therewith and operatively positioned in an electrical circuit, and means operatively connected thereto for simultaneously and equally spacing the several pairs of electrodes.

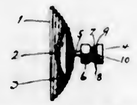
[Claims 6 to 12 not printed in the Gazette.]

1,222,762. CORNER SHELF FOR DISPLAY-WINDOWS. GUILDFORD G. HOUGHTON, New York, N. Y. Filed Apr. 6, 1915. Serial No. 19,465. (Cl. 248—19.)



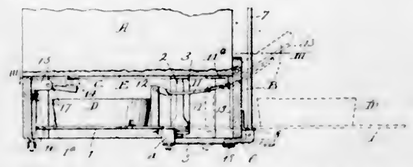
A combined corner fastening and shelf support comprising a bolt having a V-shaped head for engaging the outer surface of the meeting edges of two vertically disposed glass sheets, a vertical post provided with an angular face for engagement with the inner surface of said glass, said bolt passing through said post, a vertical plate mounted on said bolt and having outwardly extending wings engaging the lateral edges of said post for preventing said plate from turning on the post, a nut engaging the inner end of said bolt for securing the glass sheets, post and plate together, and a lug provided on said plate for supporting a shelf.

1,222,763. HERNIAL TRUSS. GEORGE R. HOUSE, Kansas City, Mo. Filed June 7, 1915. Serial No. 32,577. (Cl. 128—26.)



A hernial truss consisting of a spring wire coiled upwardly in inwardly receding convolutions to form a yielding and reversible frame and provided with a convex disk supportingly engaged by the inner side of one of the coils of said frame, in combination with attaching means mounted on the inner end portion of the wire of said frame.

1,222,764. DRIP-PAN CONTROLLER. FRED W. HOWDEN, Kansas City, Mo. Filed June 12, 1916. Serial No. 103,312. (Cl. 137—21.)



1. In combination with a structure having a drain pipe at its underside, a valve for closing said drain pipe, means for supporting a drip pan beneath said drain pipe and holding the valve open, and actuating means for the supporting means, whereby the same may be caused to hold the drip pan beneath the drain pipe or remove said drip pan from beneath the drain pipe and the structure.

2. In combination with a structure having a drain pipe at its underside, means for supporting a drip pan beneath said drain pipe, a hand controlled shaft mounted in front of the structure, and mechanism connecting said shaft and the drip pan supporting means whereby the same may be caused to hold the drip pan beneath the drain pipe, or remove said drip pan from beneath the drain pipe and the structure by proper manipulation of the shaft.

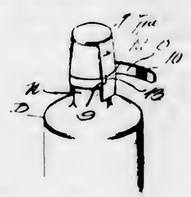
3. In combination with a structure having a drain pipe leading from its underside and a door mounted at its lower portion, means for supporting a drip pan beneath said drain pipe, means controlled by said supporting means for opening the door, and actuating means whereby the supporting means may be positioned to hold the drip pan beneath the drain pipe or remove said drip pan from beneath the drain pipe and the structure.

4. In combination with a structure having a drain pipe leading from its underside, a self-closing valve for closing the end of said drain pipe, a swingable shelf adapted to hold said valve open and support a drip pan beneath the drain pipe, and actuating means whereby said shelf may be positioned to hold the drip pan beneath the drain pipe or remove said drip pan from beneath the drain pipe and the structure.

5. In combination with a structure having a drain pipe leading from its underside and a door at its lower portion, a pivotally-mounted shelf for supporting a drip pan beneath said drain pipe, a door opener carried by said shelf for opening the door at the lower portion of the structure, and actuating means whereby the shelf may be adjusted to hold the drip pan beneath the drain pipe or remove said drip pan from beneath the drain pipe and the structure.

[Claims 6 and 7 not printed in the Gazette.]

1,222,765. COMBINED LABEL, SEAL, AND CORK-PULLER. EDWARD A. HUDSON, Artesia, N. Mex. Filed Apr. 13, 1916. Serial No. 90,914. (Cl. 215—53.)

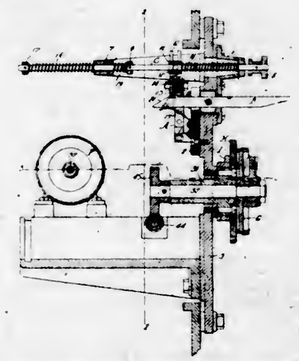


1. A device of the class described comprising a strip of flexible material having between its ends an opening whose edge is curled downwardly to form an annular flange increasing in diameter from its lower to its upper end, a cork inserted snugly in said flange and having its upper end spaced from the upper end of the latter, and a filling of plastic material in such space, the ends of the strip being adapted to be secured in contact with the neck of a bottle when the device is in use and to coöperate to form a finger loop when the cork is to be extracted.

2. A device of the class described comprising a strip of flexible material having between its ends an opening in which the upper end of a bottle cork is to be secured, and a sealing flap hinged to said strip and adapted to be secured over the cork, the ends of the strip being adapted to be secured in contact with the neck of a bottle when the device is in use and to coöperate to form a finger loop when the cork is to be extracted.

3. A device of the class described comprising a flat strip of flexible material having in its center an opening in which a bottle cork is to be secured, a sealing flap hinged to and formed integrally with one edge of said strip and designed to be secured over the cork and opening, the two ends of the strip being adapted to engage the opposite sides of the bottle neck when in use and to coöperate in forming a finger loop when the cork is to be extracted, said ends having interengaging fastening means for securing them together for the last named purpose, and a sealing band having one end attached temporarily to one of the aforesaid ends of the strip, said band being designed for passage around the bottle neck to secure said ends of the strip in position thereon when the bottle is sealed, said band being adapted to be broken, however, when said ends of the strip are to be used for forming the aforesaid finger loop.

1,222,766. LIGHT-CONTROLLING MECHANISM FOR PHOTOGRAPHIC APPARATUS. WILLIAM C. HUEBNER, Buffalo, N. Y., assignor to Huebner-Bleistein Patents Co., Buffalo, N. Y. Filed May 2, 1916. Serial No. 95,008. (Cl. 95—73.)



1. The combination of an electric lamp, an electric motor, a switch controlling the current to said lamp and said motor, a traveling controlling device which is driven by said motor and causes the operation of said switch to extinguish the light of the lamp when the controlling device is moved by the motor to a predetermined position, and means for connecting said controlling device operatively with the motor in different initial positions relative to said predetermined position for regulating the length of time that the lamp remains lighted.

2. The combination of an electric lamp, an electric motor whose speed varies with variations in the lamp current, a traveling controlling device which is driven by said motor and means which operate to shut off the light when said controlling device has been moved to a predetermined position by the motor.

3. The combination of an electric lamp, an electric motor whose speed varies with variations in the lamp current, a traveling controlling device which is driven by said motor, means which operate to shut off the light when said controlling device has been moved to a predetermined position by the motor, and means for placing said controlling device in driving connection with the motor in different initial positions relative to said predetermined position for regulating the length of time that the light is effective.

4. The combination of an electric lamp, an electric motor whose speed varies with variations in the lamp current, a traveling controlling device, means controlled by said controlling device for shutting off the light when said controlling device has been moved to a predetermined position, and drive gearing connecting said motor to said controlling device, said controlling device being connectible with said gearing at different distances from said predetermined position.

5. The combination of an electric lamp, an electric motor whose speed varies with variations in the lamp current, a traveling controlling device which is driven by said motor, a switch controlling the lamp, and means con-

trolled by said controlling device for operating said switch when the controlling device has been moved to a predetermined position by the motor.

[Claims 6 to 16 not printed in the Gazette.]

1,222,767. SKEE-SKATE. GEORGE LANDER JACQUES, Neillsville, Wis. Filed Feb. 19, 1915, Serial No. 9,337. Renewed Mar. 7, 1917. Serial No. 153,168. (Cl. 46—67.)

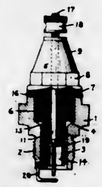


1. The combination in a skee or skate of two parallel runners carrying one or more tilting dogs between them provided with stops arranged to allow said dogs to tilt backward when the skee or skate moves forward and hold said dogs rigid substantially perpendicular to the runners tending to stop any backward motion of the skee or skate when the operator pushes backward thereon said runners also carrying means to secure the same to the foot.

2. The combination in a skee or skate of two parallel runners carrying one or more tilting dogs between them arranged to extend below said runners and assume a rigid position substantially perpendicular to the runners when the runners are moved backward and to tilt back and upward above the bottom of the runners when the runners are moved forward said runners also carrying a tilting foot plate pivoted thereto near its forward end said foot plate carrying means to secure the same to the foot.

3. The combination in a skee or skate of two parallel runners carrying dogs between them tending to stop any backward motion of said runners, a spring foot plate pivoted near its forward end to said runners having lips extending upward on its forward corners and carrying a toe strap near its forward end and carrying an instep strap at its rear end and carrying a heel strap extending to the rear on either side from near the forward end of said spring foot plate.

1,222,768. SPARK-PLUG-INSULATING MEANS. WARREN F. JOHNSTON, West Carrollton, Ohio. Filed Apr. 14, 1915. Serial No. 21,232. (Cl. 123—169.)



1. In a spark-plug, the combination with the shell thereof, of a bakelite insulating member threaded for insertion in the upper portion of said shell, and a silicate insulating member adapted to be secured to the bottom portion of said bakelite member, substantially as described.

2. In a spark-plug, the combination with the shell thereof, of a bakelite insulating member threaded for insertion in the upper portion of said shell, a porcelain insulating member adapted to be firmly secured to the bottom portion of said bakelite member, and an electrode passing through both members, substantially as described.

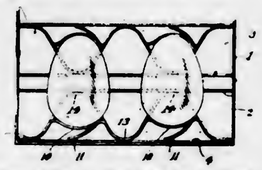
3. In a spark-plug, the combination with the shell thereof, of a bakelite insulating member threaded for insertion in the upper portion of said shell, said member provided with a tubular bore terminating at its lower end in an enlarged socket portion, a porcelain insulating member whose upper end is adapted to be inserted in said socket, and containing a tubular bore in a position to come flush with the tubular bore in said bakelite member, and an electrode adapted to be passed through both of said bores, substantially as described.

4. In a spark-plug, the combination with the shell thereof, of a bakelite insulating member threaded for insertion in the upper portion of said shell, a silicate insulating member adapted to be secured to the bottom portion of said bakelite member, an electrode passing through both of said members, and means attachable to said electrode for clamping said members firmly together, substantially as described.

5. In a spark-plug, the combination with the shell thereof, of a bakelite insulating member threaded for insertion in the upper portion of said shell, said member provided with a vertical tubular bore terminating at its lower end in an enlarged socket portion, a porcelain insulating member whose upper end is adapted to enter said socket, and containing a tubular bore in a position to come flush with the tubular bore in said bakelite member, an electrode with a threaded upper end, adapted to pass through both of said bores, a terminal nut for the threaded end of said electrode above said bakelite member, and a flange on the lower end of said electrode, adapted to engage and force the porcelain member firmly against the bakelite member when said terminal nut is tightened, substantially as described.

[Claim 6 is not printed in the Gazette.]

1,222,769. CUSHIONING DEVICE FOR PACKING. HENRY W. THAYER, New York, N. Y. Filed Apr. 22, 1915. Serial No. 23,264. (Cl. 217—27.)



1. A cushioning-device for packing-cartons, comprising top and bottom members with article-receiving openings in the top member, and a corrugated intermediate member secured to the top and bottom members aforesaid, two integral tongues slit from said intermediate member opposite each opening aforesaid, one of said tongues resting upon the floor of the bottom member and the other tongue resting upon the first-named tongue.

2. A cushioning-device comprising top and bottom and intermediate members, said intermediate member having a diagonally-disposed tongue resting upon said bottom member and also having a second diagonally disposed article-receiving tongue resting upon the first-named tongue, said top member having an article-receiving opening for each pair of tongues aforesaid.

3. A cushioning-member for packing fragile articles, consisting of a blank of suitable material having therein an article-receiving opening formed by slitting out a pair of oppositely-disposed tongues integral with said blank and extending toward one another, said tongues being adapted to rest one upon the other.

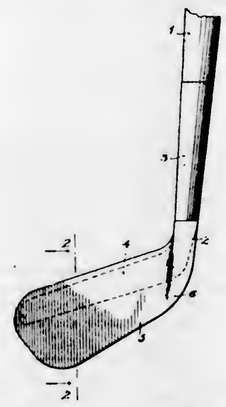
4. The herein-described blank for a packing-receptacle, containing an article-receiving opening produced by two oppositely-disposed pairs of slits, each pair of slits diverging toward the middle of said opening so as to produce two flaring tongues facing each other and wider at their mutually-adjacent ends.

5. A cushion-blank having an article-receiving opening formed by two pairs of oppositely-disposed slits to produce two tongues facing each other and adapted to rest one upon the other.

1,222,770. GOLF-CLUB. BENJAMIN M. KAYE, New York, N. Y. Filed Sept. 2, 1916. Serial No. 118,172. (Cl. 46—4.)

1. A golf club having a head of flexible and resilient material.

2. A golf club having a head composed partly of a solid material and partly of a flexible and resilient material.



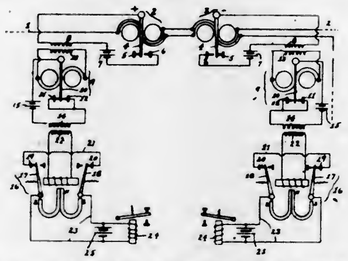
3. A golf club having a head with its lower half composed of a flexible and resilient material.

4. A golf club having a head with its upper portion composed of a solid material and the lower portion of said head composed of a flexible and resilient material.

5. A golf club having a head, the upper portion of said head being composed of a solid material, the lower portion of said head being composed of a flexible and resilient material, said upper solid portion being incased in said flexible and resilient material.

[Claims 6 to 8 not printed in the Gazette.]

1,222,771. TELEGRAPHIC RECEIVING ORGANISM. ISIDOR KITSEE, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y., a Corporation of New York. Filed July 25, 1914, Serial No. 853,080. Renewed Jan. 5, 1917. Serial No. 141,191. (Cl. 178—88.)

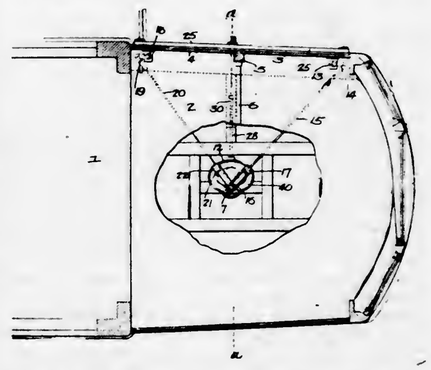


1. In combination with a telegraphic line, means to receive signals impressed upon said line in combination with means to translate said signals comprising vibratory line relay, an electric circuit therefor, a second relay, an inductorium, the primary inserted in the circuit of the first relay and the secondary inserted in the circuit of the second relay, a second localized relay operatively related to said first localized relay and translating means operatively related to said second localized relay.

2. In a system of telegraphy, in which a series of pulses are transmitted for each signal, a line relay, a vibratory tongue therefor, a local circuit comprising the primary of an inductorium and a source of current adapted to be made and broken through said vibratory tongue, a localized relay connected to the secondary of said intuctorium, a circuit comprising the primary of a second inductorium and a source of current therefor, a second localized relay connected to the secondary of said second inductorium, a source of current and a sounder, said source of current normally shunted through the armature of said second relay and adapted to operate said sounder when the shunt is broken.

3. In combination with a telegraphic line, two vibratory relays in said line, each of said vibratory relays provided with inductoriums and localized relays operatively related thereto and means to translate the vibrations of one or the other of the localized relays.

1,222,772. DOOR-OPERATING MECHANISM. GEORGE B. KOHLER, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 9, 1913. Serial No. 759,980. (Cl. 268—7.)



1. In a passenger car, the combination of two passageways arranged side by side; a door for each passageway; a single operating shaft; mechanism connecting the shaft with each of said doors so that when the shaft is moved in either direction one of the doors will be opened, while the other will remain closed, according to the direction of movement of the operating shaft.

2. The combination of two doors; a single operating shaft for both doors; and means connecting the shaft with the doors so that, when the shaft is given a partial movement in one direction, one door will be opened while the other will remain closed, and, on the complete movement of the shaft, both doors will be opened, one following the other in its movement.

3. The combination in a passenger car, of entrance and exit doors; a vertical shaft located within the car some distance from the doors; a connection between each door and the operating shaft so constructed that when the shaft is turned in one direction one door will be opened while the other remains closed and on the continued movement in either direction both doors will be opened.

4. The combination in a passenger car, of an entrance door and an exit door located side by side and at one side of the car; a vertical shaft centrally located with respect to the doors; a cam on the shaft; and means actuated by the cam and connected to each door so that when the shaft is turned in one direction one door will be opened in advance of the other and on the continued movement both doors will be opened.

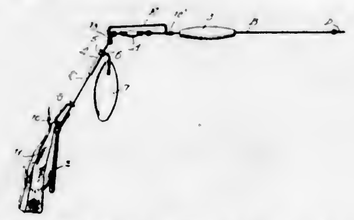
5. The combination in a passenger car, of independent entrance and exit doors arranged side by side and on one side of the car; a vertical shaft mounted within the car and centrally located with respect to the doors; connections between the shaft and each door so that when the shaft is partially turned in one direction one door will be opened while the other remains closed and when turned the full movement both doors will be opened.

[Claims 6 to 10 not printed in the Gazette.]

1,222,773. COMPOSITION FOR MAKING DENTAL IMPRESSIONS. HERBERT H. KREUTZMANN, Hillsboro, Wis. Filed June 19, 1916. Serial No. 104,403. (Cl. 106—6.)

The herein described composition of matter consisting of plaster of Paris 760 grains, sodium chlorid 35 grains, carmine ½ grain, orris root (powdered) 1 grain, and water 1½ ounces.

1,222,774. FISHING-TACKLE. CHARLES LEONARD, Lake Geneva, Wis. Filed Oct. 23, 1916. Serial No. 127,093. (Cl. 43—7.)



1. In a fishing tackle comprising a pair of pivotally connected and comparatively rigid members, one of which is adapted to be attached to a line, a weight or sinker carried by said last mentioned member at a point intermediate the line and the pivotal connection, a spoon and hook carried by the other one of said comparatively rigid members and means located at the point where said members are pivotally connected and adapted to prevent the hook and spoon carrying member from at any time assuming a position at an acute angle with the weight carrying member whereby the hooks are prevented from becoming caught upon the line during casting and trolling operations when the line is taut.

2. In a fishing tackle comprising a pair of pivotally connected members, one of which is adapted to be attached to a line, a weight or sinker upon said last mentioned member at a point intermediate the line and the point where said members are pivotally connected one to the other, hooks carried by the other one of said members, and means for preventing the hook carrying member from assuming such an angle with respect to the weight carrying member that the hooks may engage the line during casting and trolling when the line is taut.

3. In a fishing tackle the combination with a first comparatively rigid member arranged to be attached to a line, a weight or sinker carried by said member, a second comparatively rigid member, hooks and a spoon or spinner carried by said member and devices for pivotally connecting said members arranged to permit sufficient movement between said members to insure the proper operation of the spoon or spinner, but adapted to prevent the second member from assuming such an angle with respect to the weight carrying member that the hooks may engage the line during casting or trolling when the line is taut.

4. In a fishing tackle the combination with a pair of comparatively stiff members, one of which is adapted to be attached to a line, a weight or sinker carried by said last mentioned member, a spoon and hook carried by the other one of said members, together with a swivel connection between said members and means for preventing the said members from assuming such an angle one with the other that the hook may engage the line during casting or trolling when the line is taut.

1,222,775. EMBROIDERED SEAM. RUDOLF LOEB, Jenkintown, Pa. Filed June 12, 1913. Serial No. 773,274. (Cl. 112—34.)

1. As a new article of manufacture, an embroidered seam forming an eyelet and composed of stitches disposed upon a fabric and surrounding and constituting the border of an aperture; said stitches differing in length throughout their extent whereby an embroidered seam is produced having inner and outer margins of different size but substantially the same contour; certain of said stitches inclosing a portion of the fabric which serves to stuff said stitches and raise the same above the plane of the fabric.



2. As a new article of manufacture, an embroidered seam forming an eyelet and composed of stitches radially disposed upon a fabric and surrounding and constituting the border of an aperture; said stitches differing in length throughout their extent and forming a substantially circular exterior margin with a circular interior margin eccentric to the exterior margin whereby an embroidered seam is produced having two margins of substantially the same contour but of different size; certain of the stitches inclosing a portion of the fabric which serves to stuff said stitches and raise the same above the plane of the fabric.

1,222,776. METHOD OF AND APPARATUS FOR STRAIGHTENING WEFT-THREADS. JOHN LOWE and JOHN J. LYTH, Valleyfield, Quebec, Canada. Filed Mar. 21, 1916. Serial No. 85,660. (Cl. 26—8.)



1. A method of straightening the weft threads of cloth, which consists in accelerating the advance of one edge of the cloth with respect to an intermediate portion and retarding the advance of the opposite edge with respect to an intermediate portion, and in maintaining a variable sized surplus of cloth under uniform tension.

2. In a device of the character described, a plurality of rolls, and means for simultaneously drawing together adjacent ends of said rolls and separating the opposite adjacent ends of said rolls, the angular movement of all rolls being equal.

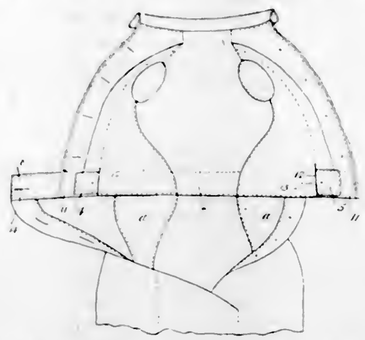
3. In a device of the character described, a plurality of rolls, toggle mechanisms connecting said rolls at their ends, and means for simultaneously operating said toggle mechanisms to draw the rolls together at one end, and force the rolls apart at the opposite end, the angular movement of all rolls being equal.

4. In a device of the character described, a plurality of rolls, and means for simultaneously adjusting the alternate rolls relatively in opposite directions at opposite ends.

5. In a device of the character described, a plurality of adjustable rolls, a plurality of non-adjustable rolls arranged alternately with the adjustable rolls, and means for simultaneously moving opposite ends of the adjustable rolls to different positions relatively to the non-adjustable rolls.

[Claims 6 to 14 not printed in the Gazette.]

1,222,777. GARMENT. ROBERT E. LOWE, Brooklyn, N. Y. Filed May 18, 1915. Serial No. 28,898. (Cl. 2—145.)



1. A garment having permanent belt sections secured at the front and rear of a garment, other belt sections attached to a permanent belt section and unattached over the hips, and means to engage the unattached ends of the belt.

2. A garment having permanent belt sections at the front and rear of the garment, adjustable belt sections unattached to the garment over the hips thereof, and means to engage and conceal the free ends of the adjustable belt sections, whereby the waist-band of the garment at the front and rear thereof may be retained in a substantially smooth condition.

3. A one piece garment provided with a belt to divide the garment into a waist portion and a skirt portion, said waist portion being provided with slitted plaits, the belt being constructed in sections, some of which are permanently connected to the garment and others unattached thereto over the hips, the unattached end portions of said belt being passed through the slits of said plaits to conceal the same.

4. A one piece garment provided with a belt which divides the garment into a waist portion and a skirt portion, the waist portion being open at the front and slitted plaits on each side of the opening, a belt portion permanently secured to the garment at the front thereof and terminating substantially at said plaits, another belt portion secured to the rear of the garment and having unattached ends which extend over the hips and are adapted to be passed through the slits of the plaits, and fastening means to engage said unattached ends.

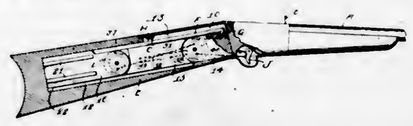
5. A one piece garment provided with a belt which divides the garment into a waist portion and a skirt portion, the waist portion being open at the front and having plaits adjacent the opening, the skirt being opened at the side substantially in alinement with a waist plait, and a belt secured to the garment at the back and unattached thereto over the hips, the unattached ends of said belt being provided with means to engage the garment at the waist line near said plaits.

[Claims 6 and 7 are not printed in the Gazette.]

1,222,778. FIREARM. JOSEPH FRANKLIN MCCLEARY, Findlay, Ohio. Filed June 24, 1916. Serial No. 105,578. (Cl. 42—73.)

1. In a firearm, the combination of a barrel, a hollow stock, a support coupling said barrel and stock, said support comprising a plurality of pivotally connected sections adapted to fit and slide into and out of the hollow of said stock when said sections are substantially alined, and means for retaining the said sections of said support in rigid angular relation one to another when exposed from said stock and with the said stock below its normal position relative to said barrel.

2. In a firearm, the combination of a barrel, a hollow stock, a support coupling said barrel and stock, said support comprising a plurality of pivotally connected sections adapted to fit and slide into and out of the hollow of said stock when said sections are substantially alined, means for retaining the said sections of said support in rigid angular relation one to another when exposed from said stock and with the said stock below its normal position relative to said barrel, and a periscope carried by said support with its sight opening in operative relation to said barrel and the eyepiece in close proximity to said stock when the latter is below its normal position with respect to said barrel



3. In a firearm, the combination of a barrel, a hollow stock, a support coupling said barrel and stock, said support comprising a plurality of pivotally connected sections adapted to fit in said stock when said sections are substantially alined, means for retaining the said sections of said support in rigid angular relation one to another when exposed from said stock and with the said stock below its normal position relative to said barrel, a periscope carried by said support with its sight opening in operative relation to said barrel and in close proximity to said stock when the latter is below its normal position with respect to said barrel, and means for retaining said support in a concealed or exposed position relative to said stock.

4. A firearm comprising in combination, a barrel, a receiver, a hollow stock, means for rigidly supporting said stock from said receiver as an abutment in close proximity to the said barrel or adjustable to lie a substantial distance below said barrel and serve as an abutment for said barrel through the intermediacy of said means, and a periscope carried by said means, adapted to fit wholly within said stock and to be concealed thereby when said stock is in close proximity to said barrel, or be positioned in operative relation to said barrel to facilitate aiming of the firearm when said stock is positioned at a substantial distance below said barrel.

5. In a firearm, the combination of a barrel, a hollow stock, a support coupling said barrel and stock, said support comprising a plurality of pivotally connected sections adapted to fit in said stock when said sections are substantially alined, means for retaining the said sections of said support in rigid angular relation one to another when exposed from said stock and with the said stock below its normal position relative to said barrel, a trigger in close proximity to said barrel, and mechanism for operating said trigger and including an auxiliary trigger in close proximity to said stock when the latter is below its normal position relative to said barrel.

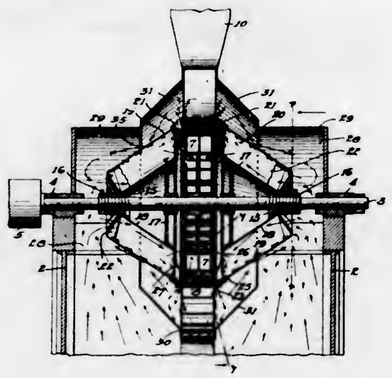
Claims 6 and 7 are not printed in the Gazette.]

1,222,779. DUST-SEPARATING FAN. JAMES MCDANIEL, Minneapolis, Minn. Filed June 5, 1915. Serial No. 32,316. (Cl. 233—4.)

1. A dust separator comprising a fan and casing therefor having an air inlet opening and concentric members spaced apart and arranged opposite said opening, said members having a dust passage formed between them and a dust inlet opening thereto at their outer ends, the inner member being opposite and adjacent said inlet opening, the outer member being spaced from said casing and cooperating therewith to form a narrow dust gap, said member and the wall of said casing converging toward said gap to form a peripheral pocket and into which pocket the particles of dust are directed by centrifugal force, and a dust chamber encircling said casing and receiving the dust from said gap.

2. A dust separator comprising a fan and casing therefor having air inlet openings in its opposite walls, con-

centric, substantially cone-shaped members arranged in pairs opposite said openings and having dust inlet openings and passages formed between them, walls provided at the inner end of said members and extending across the space between them, the outer members being spaced from said walls to form narrow dust exit gaps, said walls and said outer members converging toward said gaps to form peripheral pockets and direct the dust thrown outwardly through centrifugal force into said gaps, the inner members being spaced from the edges of said openings and adjacent thereto to provide air passages into said casing.



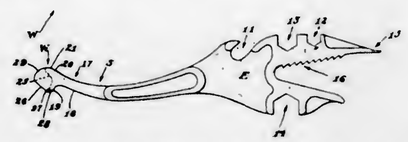
3. A dust separator comprising a fan, a casing therefor having a central air inlet opening, substantially cone-shaped members arranged opposite said opening, said members being spaced apart and having a dust inlet opening at their outer ends, the inner end of said inner member being opposite said inlet opening and spaced from the wall of said casing at the edge of said opening to form an air passage, the inner end of the outer member having a comparatively narrow exit gap formed between it and the outer portion of the wall of said casing, said wall extending across the space between said inner and outer members, a peripheral pocket with converging walls being formed by the wall of said casing and said outer member, whereby the dust thrown outwardly by centrifugal force will be directed to said exit gap and outside the zone of influence of the air entering the inlet opening of said casing.

4. A dust separator comprising a fan and casing therefor having an air inlet opening in its side wall, concentrically arranged cone-shaped members mounted opposite said opening, said members being spaced apart to form a dust passage between them and having a dust inlet opening at their outer ends, said inner member being adjacent the edge of said inlet opening to form an air passage between them, an exit dust gap being formed between said outer member and the wall of said casing through which the dust thrown outwardly by centrifugal force may escape, a peripheral pocket with converging walls being formed by the wall of said casing and said outer member, whereby the dust thrown outwardly by centrifugal force will be directed to said dust gap and out of the path of the air entering the inlet opening of said casing.

5. A dust separator comprising a fan, a casing therefor having inlet openings, cone-shaped members mounted to revolve on opposite sides of said casing and having passages therebetween, a dust chamber communicating with said passages at their outer ends, means to subject the dust held in suspension in the air passing through the passages to centrifugal force, means providing exit openings at the inner portions of said passages through which the dust is discharged and means providing communication between the inner portions of said passages and the interior of the fan casing, a dust gathering chamber encircling said casing and having a dust outlet opening and also having air escape openings adjacent to the walls of said cone-shaped members.

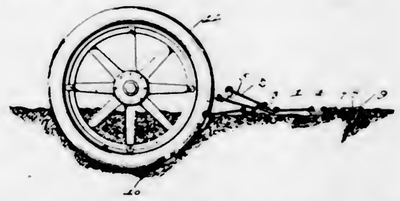
[Claims 6 to 10 not printed in the Gazette.]

1,222,780. WRENCH. ROBERT L. MCELROY, New York, N. Y. Filed Dec. 23, 1915. Serial No. 68,329. (Cl. 81—3.)



An implement for drawing a gromet over a rotatable button and for thereafter rotating the button comprising a shank, a head adapted to pass through the gromet secured to one end of said shank and extending beyond one side thereof, the head and shank being so shaped that their outer surfaces merge to form an unbroken curved surface, said head being recessed in the plane of the shank to form spaced walls for engaging the parallel sides of said button, and a third wall forming a lip which extends from and merges into the side of said shank.

1,222,781. PORTABLE TRACK DEVICE FOR MOTOR-VEHICLES. JAMES M. MAHER, Freemont, Nebr. Filed Aug. 14, 1916. Serial No. 114,746. (Cl. 104—45.)



1. A portable track device for motor vehicles comprising a flexible strap made up of parallel linked chains and cross bars fixed to certain of the links forming said parallel chains, a chain having its ends secured to one end of the strap and adapted to be fixed to the ground, and an initial traction chain at the other end of said strap.

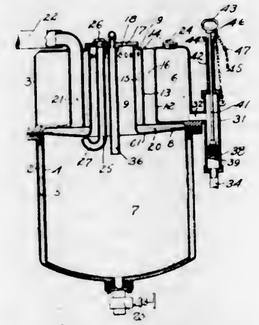
2. A portable track device for motor vehicles, comprising a flexible strap made up of side chains and cross bars fixed to said chains, an attaching chain at one end of the strap, and an initial traction chain at the other end thereof, said chain being composed of a series of long and short links.

1,222,782. GAS-GENERATING APPARATUS. CORNELIUS J. MARVIN, Los Angeles, Cal., assignor to The Braun Corporation, Los Angeles, Cal., a Corporation of California. Filed June 24, 1916. Serial No. 105,769. (Cl. 23—1.)

1. In a gas generating apparatus, a gas generating chamber having an upstanding neck, a collection chamber having a drain hole therein arranged at the base of said neck, passages connecting the upper portion of the neck with said collection chamber and a discharge pipe connected to said collection chamber.

2. A gas generating apparatus comprising a receptacle containing two separated storage chambers, each adapted to contain a different reagent, means for removing and measuring a definite quantity of reagent from one chamber and forcibly introducing it into the second chamber, a collection chamber for said gas arranged between said storage chambers, and a gas discharge pipe connected to said collection chamber.

3. A generating apparatus comprising a chamber adapted to contain a quantity of reagent, a second chamber adapted to contain a quantity of liquid reagent, a pump connected at its intake side to said liquid reagent containing chamber and at its discharge side to said first chamber and a chain adjustably arranged on said pump for limiting its stroke, whereby different predetermined amounts of the liquid reagent may be introduced into said first chamber.

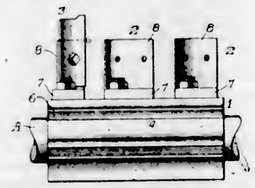


4. In a gas generating apparatus, a gas generating chamber having an upstanding neck provided with outlet apertures, an annular chamber adapted to contain a liquid reagent spaced from said neck and said gas generating chamber to form an annular space about the neck and above the gas generating chamber, said annular chamber being in communication with said neck through said outlet apertures, and a gas discharge pipe leading from said annular space.

5. In a gas generating apparatus, a heat insulated gas generating chamber adapted to contain a quantity of reagent and having an upstanding neck provided with outlet apertures, a plurality of annular chambers surrounding said neck, one of said chambers adapted to hold a liquid reagent and the other chambers being adapted to receive the gas from said outlet apertures, means for returning particles of liquid deposited on the walls of said gas receiving chambers to the gas generating chamber, and means for discharging the gas from said gas containing annular chambers.

[Claims 6 to 8 not printed in the Gazette.]

1,222,783. CUTTER-HEAD. MAGNUS W. MATTISON, Beloit, Wis., assignor to C. Mattison Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed Feb. 8, 1915. Serial No. 6,676. (Cl. 144—224.)

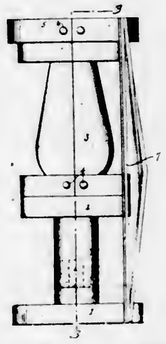


1. In a cutter-head, a body having a T-slot, a knife-carrier having a base adapted to overlie the slot, a bolt having an elongated head adapted for insertion through the narrow portion of the T-slot, said head being adapted to turn in the slot so as to extend cross-wise of the slot, the bolt extending through the base of the knife-carrier, and a nut on the bolt overlying the base, and complementary means on said knife-carrier and said bolt adapted to lie in said slot and prevent relative rotation between the bolt and the body.

2. In a cutter-head, a body having a T-slot, a knife-carrier having a base adapted to overlie the slot, a tongue on said base having a recess and adapted to lie in the narrow portion of said T-slot, a bolt having an elongated head adapted for insertion through the narrow portion of the T-slot, and a boss adapted to lie in the narrow portion of said T-slot, said head and said boss being adapted to turn in the slot so as to extend cross-wise of the slot, the bolt extending through the base of the knife-carrier, and a nut on the bolt overlying the base, said tongue and slot preventing relative rotation between the carrier and the body, and said boss and tongue preventing relative rotation between the carrier and the bolt.

3. In a cutter head, a body having a T-slot with a neck and a head; a knife-carrier having a base adapted to overlie the T-slot, a projecting tongue having a recess and adapted to fit into the neck of the T-slot, a bolt having an elongated head and adapted to lie within the head of the T-slot, the body of said bolt being adapted to extend through the neck of the T-slot and a hole in said knife-carrier, said body portion of the bolt having an interlocking boss adapted to engage the walls of said recess, said boss and said head portions of said bolt having the opposite corners thereof cut away or rounded whereby said bolt may be turned in said T-slot permitting said head to underlie the overhanging walls of said T-slot, and opposite sides of said boss engaging opposite walls of said recess whereby said bolt is prevented from rotating relative to said body and said carrier, and means on said bolt for rigidly and adjustably securing said knife carrier to said body.

1,222,784. SCREW-THREADED BULB-MOLD. FRANCIS J. MOLONEY, Corning, N. Y. Filed Nov. 26, 1915. Serial No. 63,451. (Cl. 49—55.)

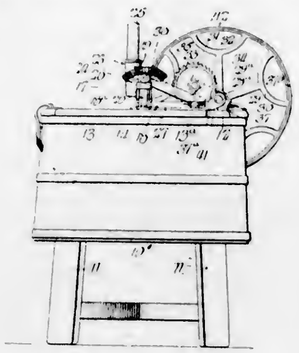


A screw threaded bulb mold, consisting of a base, a turn table rotatably mounted thereon, the upper surface thereof being enlarged to provide a bearing surface, a bulb mold member having its base enlarged to conform with the upper enlarged surface of the turn table, a screw threaded mold mounted on said bulb member and rigidly connected to the base by means of support bars.

1,222,785. OPERATING-GEARING FOR WASHING-MACHINES. GLENN MORE, Jamestown, N. Y., assignor to The Blackstone Manufacturing Company, Jamestown, N. Y., a Corporation of New York. Filed May 25, 1916. Serial No. 99,714. (Cl. 74—50.)

1. In combination a support, an auxiliary support, a bracket plate on said support, a second bracket plate on said auxiliary support, means operatively connecting said bracket plates providing a hinged connection between said supports, an alternating rotary operating shaft journaled in the bracket on said auxiliary support, a gear on said operating shaft, a fly-wheel shaft and a fly wheel mounted upon the bracket plate on said main support, said fly wheel shaft having its axis of rotation coincident with the axis of the hinged connection be-

tween said supports, a large gear mounted upon the bracket plate on said auxiliary support and operatively connected to said fly wheel shaft, a lever mounted on said bracket plate on the auxiliary support, said lever having a segmental rack meshing with the gear on said operating shaft, and means connecting said lever to said large gear adapted for imparting a continuous rotary movement thereto.



2. In combination a fixed support, a movable support, a bracket plate on said fixed support, a second bracket plate on said movable support, means operatively connecting said bracket plates providing a hinged connection between said supports, an alternating rotary operating shaft journaled in the bracket on said movable support, a fly wheel shaft carried by the bracket plate on said fixed support, a rocking prime mover lever journaled on the bracket plate on said movable support, closely adjacent the operating shaft, means connecting said prime mover lever with said operating shaft, and means operatively connecting said prime mover lever to said fly-wheel shaft, said means being adapted to impart a continuous rotary movement thereto, and includes a high speed gearing.

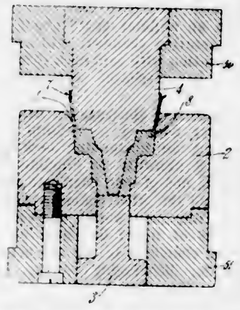
3. In combination a main or fixed support, an auxiliary or movable support, a bracket plate on each support, said bracket plates having interacting bearing members providing a hinged connection between said supports, an operating shaft journaled in said bracket on the movable support, a bevel pinion fixed to said shaft, a large gear mounted on the last mentioned bracket plate, a fly-wheel shaft and a fly-wheel thereon carried by the bracket plate on said fixed support, said fly wheel shaft having its axis of rotation coincident with the axis of the hinged connection between said supports and operatively connected to said large gear wheel, a lever mounted on the bracket plate on said movable support, said lever including a bevel gear segment which meshes with the bevel pinion on said operating shaft and means connecting said lever to said large gear, said lever through its connections, imparting an alternating rotary movement to said operating shaft and a continuous rotary movement to said large gear.

4. In combination, a main support, an auxiliary support associated therewith, a bracket plate having horizontally disposed bearing lugs, one of which is tubular fixed to said main support, a second bracket plate fixed to said auxiliary support, said second bracket plate having laterally extending arms adapted for pivotal engagement with the bearing lugs on the first named bracket plate and providing a hinged connection between said supports, a fly-wheel shaft, carried by the bracket plate on said main support, a gear pinion on said fly wheel shaft, an upright alternating rotary operating shaft journaled in the bracket plate on said auxiliary support, a large gear mounted on said last mentioned bracket plate and meshing with the gear pinion on the fly wheel shaft, a rocking lever mounted on one of said bracket plates, means operatively connecting said lever to said operating shaft, and means operatively connecting the large gear on the bracket plate on said auxiliary support with said operating lever, said means being constructed to translate the rocking movement of said lever into a continuous rotary motion of said large gear.

5. In combination a main support, an auxiliary support, a bracket plate fixed to said main support and having upright bearing standards provided with alined bearing studs, one of which is tubular, a second bracket plate fixed to said auxiliary support and having laterally extending arms adapted for pivotal engagement with the alined studs of the first mentioned bracket plate and providing a hinged connection between said supports, a fly wheel shaft mounted on the first mentioned bracket plate in axial alinement with the bearing studs thereon, a gear and a fly wheel on said shaft, an upright operating shaft journaled in the bracket plate on said auxiliary support, a bevel pinion on the top end of said operating shaft, a comparatively large gear also journaled on said bracket plate and meshing with the gear on said fly wheel shaft, a rocking lever having a bevel gear segment meshing with the gear on said operating shaft, and a link operatively connecting said lever with said large gear.

[Claim 6 not printed in the Gazette.]

1,222,786. FORGED CASTING AND METHOD OF MAKING THE SAME. ALBERT W. MORRIS, Springfield, Mass. Filed Oct. 9, 1916. Serial No. 124,526. (Cl. 22—200.)



1. The method of making a forged casting which consists in placing the liquid metal in partial confinement, rapidly cooling it until it is at or about its freezing temperature and then striking it a measured and unrelaxed forging blow with a suitable ram to increase its partial confinement and drive the impurities of the metal into a fin or flash, whereby the metallurgical structure of the metal is fixed under the blow.

2. The method of making a forged casting which consists in placing the liquid metal under partial confinement in a female die, rapidly cooling it until it is at or about its freezing temperature and then striking it a measured and unrelaxed forging blow with a suitable ram to confine the metal except for a restricted opening for an extrusion whereby the metallurgical structure of the metal is fixed throughout its mass by the unrelaxed blow.

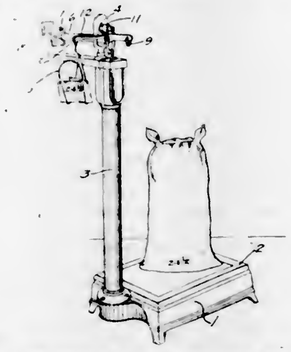
3. The method of making a machinable forged casting of cast iron and the like which consists in placing liquid metal in a female die part, permitting it to cool, and subjecting it to a measured and unrelaxed forging blow by a ram quickly applied at or about its freezing temperature, whereby the metal is confined except for a restricted opening for an extrusion, and then quickly withdrawn, then permitting the resultant piece to cool slowly at a heat substantially uniform throughout its mass.

4. The method of making a forged casting of cast iron and the like which consists in placing the liquid metal in a female die part, permitting it to cool rapidly to a point at or about its freezing temperature, then subjecting it to a measured and unrelaxed forging blow quickly applied by a male die part adapted to permit an extrusion of excess metal into a fin or flash and removing the resultant piece immediately after the blow is delivered.

5. The method of making a forged casting of a metal characterized by its normal resistance to forging as cast iron, aluminum alloys, and the like, which consists in placing the liquid metal in the female part of a die, permitting the temperature to fall toward the freezing point and forcing the rain or other part of the die against the metal by a quick blow at or about the temperature point when the metal will freeze before the force of the blow is relaxed.

[Claims 6 to 19 not printed in the Gazette.]

1,222,787. TARE-WEIGHT COMPENSATOR FOR BEAM-SCALES. CHARLES C. NEALE, Minneapolis, and RALPH W. SMITH, St. Paul, Minn. Filed Jan. 12, 1915. Serial No. 1,753. (Cl. 73—30.)



1. The combination with a weighing scale having a beam and a main load support connected thereto, of a tare weight compensator comprising an arm secured to and projecting laterally from said beam and provided with a container support hung therefrom at a point forward of the beam fulcrum, such distance as to establish a "one to one" relation between said compensator and main load support, whereby equal weights supported on the holder of said compensator and on the main load support of said scale will counterbalance each other.

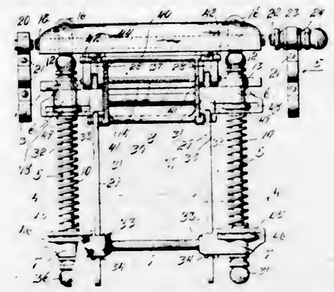
2. The combination with a weighing scale having a beam and a main load support connected thereto, of a tare weight compensator, comprising an arm rigidly secured to and projecting laterally from said beam and provided with a container support hung therefrom at a definite point forward of the beam fulcrum, the said arm having means permitting it to be adjusted longitudinally of said scale beam to effect the proper setting thereof.

1,222,788. LOCOMOTIVE-CAB SPRING-SEAT. JOSEPH P. NICHOLLS, Denver, Colo. Filed Nov. 16, 1914. Serial No. 872,298. (Cl. 155—25.)

1. A spring seat comprising a seat member, suspended uprights, springs surrounding the said uprights, and an operative connection between the seat member and the springs, whereby the latter form a cushion support for the seat member.

2. In combination, a seat member, uprights suspended from their upper extremities alone, springs surrounding said uprights, and an operative connection between the seat member and the springs, whereby the latter form a cushion support for the seat member.

3. The combination with a seat member, spaced uprights, springs surrounding the said uprights, keepers loose and vertically movable on the uprights and engaging the upper extremities of the springs, vertically disposed rods carried by the keepers and located between the spaced uprights and with which the seat member is hingedly connected above the keepers, lower keepers also loose on the uprights and forming guides for the said rods, the lower extremities of the springs engaging the lower keepers, while the seat member bears upon the upper keepers from above, whereby the springs provide a cushion support for the said member.



4. In combination, a seat member, two spaced uprights, upper and lower keepers loose on the uprights, spiral springs surrounding the uprights and located between the upper and lower keepers, nuts applied to the opposite extremities of the uprights and respectively above and below the keepers, the lower nuts adapted to regulate the tension of the springs, vertically disposed rods carried by the upper keepers and located between the spaced uprights and with which rods the seat member is hingedly connected, the lower keepers having guide openings through which the rods pass.

5. In combination, a seat member, two spaced uprights, upper and lower keepers loose on the uprights, spiral springs surrounding the uprights and located between the upper and lower keepers, nuts applied to the upper extremities of the uprights and respectively above and below the keepers, the lower nuts adapted to regulate the tension of the springs, vertically disposed rods carried by the upper keepers and located between the spaced uprights and with which rods the seat member is hingedly connected, the lower keepers having guide openings through which the rods pass, and means for supporting the seat member in position for use, the said means being hingedly connected with the said rods between the upper and lower keepers, and detachably connected with the said member, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,222,789. TREATMENT OF REFRACTORY AURIFEROUS ORES. JOHN HENRY NIEMANN, Adelaide, South Australia, Australia. Filed July 14, 1915. Serial No. 779,015. (Cl. 75—185.)

1. The method of treating refractory auriferous ore, which comprises comminuting the unroasted ore in the presence of selenium or a selenium compound and a weak cyanid solution while excluding air or oxygen.

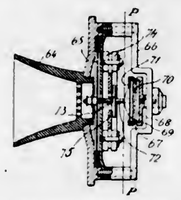
2. The method of treating refractory auriferous sulfid ores, which comprises forming a solution containing seleno-cyanid of gold from the native ore, maintaining said solution substantially free from oxidation, and causing the precipitation of the gold from said solution under substantially non-oxidizing conditions with relation to selenium.

3. The method of treating refractory auriferous ores, which comprises treating the raw ore with a weak cyanid solution in the presence of seleniferous material under non-oxidizing conditions, causing the precipitation of gold from said solution under like conditions in slimes, and retorting the slimes in a non-oxidizing atmosphere.

4. The method of treating refractory auriferous ores, which comprises treating the raw ore with a weak cyanid solution in the presence of seleniferous material and under non-oxidizing conditions, precipitating the gold from the

solution in slimes in a non-oxidizing atmosphere, distilling the slimes to recover values other than gold, and retorting the gold residues in a reducing atmosphere.

1,222,790. TELEPHONE-TRANSMITTER. JAMES G. NOLEN, New York, and ROBERT L. MCELROY, Whitestone, N. Y., assignors to Magnetic Phonograph Company, New York, N. Y., a Corporation of New York. Filed May 4, 1914. Serial No. 836,186. (Cl. 179—180.)



1. A transmitter for recording and reproducing sound waves comprising in combination a diaphragm, a variable resistance device arranged to be actuated by motion of that diaphragm, and magnetic means tending to pull said diaphragm away from the variable resistance device and disposed on the same side of the diaphragm as the resistance device.

2. A transmitter for recording and reproducing sound waves comprising in combination a diaphragm, a microphone arranged to be actuated by said diaphragm, and magnetic means tending to pull said diaphragm away from the microphone and disposed on the same side of the diaphragm as the microphone.

3. A transmitter for recording and reproducing sound waves comprising in combination a diaphragm support, a diaphragm carried thereby, a variable resistance device operatively connected to said diaphragm, and a magnet mounted upon said diaphragm support tending to pull the diaphragm away from the variable resistance device and disposed on the same side of the diaphragm as the resistance device.

4. A transmitter for recording and reproducing sound waves comprising in combination a diaphragm support, a diaphragm carried thereby, a variable resistance device operatively connected to said diaphragm, a magnet mounted upon said diaphragm support, and an armature operatively connected to said diaphragm, said magnet and armature arranged to pull the diaphragm away from said variable resistance device and disposed on the same side of the diaphragm as the resistance device.

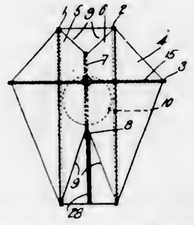
5. A transmitter for recording and reproducing sound waves comprising in combination a diaphragm support, a diaphragm carried thereby, a microphone, means connecting said diaphragm and microphone, an armature mounted upon said connecting means and a magnet operatively related to said armature, said armature being disposed on the same side of said diaphragm as said microphone.

[Claim 6 not printed in the Gazette.]

1,222,791. KITE. SAMUEL F. PERKINS, Boston, Mass. Filed Jan. 25, 1917. Serial No. 144,520. (Cl. 244—22.)

1. A kite having, in combination, two parallel sticks, a third stick disposed at right angles to said parallel sticks and forming a frame, a sheet adapted to cover one face of said frame and secured to opposite ends of said sticks, a pair of planes extending forwardly from said parallel sticks and uniting along a line substantially shorter than and disposed parallel with said parallel sticks and equidistant from said sticks, said planes gradually decreasing in length from that of said parallel sticks to that of said uniting line, and means for reinforcing the forward edges of said planes.

2. A kite having, in combination, two parallel sticks, a third stick disposed at right angles to said parallel sticks and forming a frame, a sheet adapted to cover one face of said frame and secured to opposite ends of said sticks, a pair of planes secured to said parallel sticks substantially coextensive therewith, said planes extending forwardly and uniting along a line disposed equidistant from said parallel sticks, and a fourth stick substantially shorter than said parallel sticks and secured along the uniting line of said planes, said planes gradually decreasing in length from that of said parallel sticks to that of said fourth stick.



3. A kite having, in combination, two parallel sticks, a third stick disposed at right angles to said parallel sticks and forming a frame, a sheet adapted to cover one face of said frame and secured to opposite ends of said sticks, a pair of planes secured to said parallel sticks substantially coextensive therewith, said planes extending forwardly and uniting along a line disposed equidistant from said parallel sticks, and a fourth stick substantially shorter than said parallel sticks and secured along the uniting line of said planes, said planes gradually decreasing in length from that of said parallel sticks to that of said fourth stick, said planes also having openings adapted to relieve a portion of the wind pressure thereagainst.

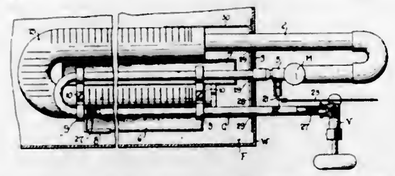
4. A kite having, in combination, two parallel sticks, a third stick disposed at right angles to said parallel sticks and forming a frame, a sheet adapted to cover one face of said frame and secured to opposite ends of said sticks, a pair of planes secured to said parallel sticks substantially coextensive therewith, said planes extending forwardly and uniting along a line disposed equidistant from said parallel sticks, and a fourth stick substantially shorter than said parallel sticks and secured along the uniting line of said planes, said planes gradually decreasing in length from that of said parallel sticks to that of said fourth stick, said planes also having openings adapted to relieve a portion of the wind pressure thereagainst, said sheet having an opening provided therein at the rear of said planes adapted to permit the escape of a portion of the wind passing beneath said planes.

5. A kite having, in combination, a pair of parallel sticks, a third stick disposed substantially at right angles to said parallel sticks, a reinforcing stick disposed parallel with said third stick upon the opposite sides of said parallel sticks, means for slidably securing the ends of said reinforcing stick to said third stick, means for binding said reinforcing stick and said third stick together upon opposite sides of each of said parallel sticks, a sheet adapted to cover the face of the frame formed by said sticks upon the same side thereof with said third stick, a pair of planes extending forwardly from each of said parallel sticks and uniting along a line disposed parallel with and equidistant from each of said parallel sticks, and means to reinforce the united edges of said planes.

[Claims 6 and 7 not printed in the Gazette.]

1,222,792. HYDROCARBON-BURNER. HENRY PETERS, Sioux Falls, S. D. Filed Aug. 7, 1916. Serial No. 113,569. (Cl. 158—65.)

1. A device of the character described comprising a burner, a substantially U-shape generator pipe coacting with the burner and leading from a suitable source of supply, a mixing chamber, an operative connection between the burner and the mixing chamber, said generator pipe discharging within the mixing chamber, an adjustable air vent in communication with the mixing chamber, and a supplemental tube snugly insertible within the entrance portion of the generator pipe, said tube being of a length substantially equal to the length of said entrance portion.



2. A device of the character described comprising a burner, a generator pipe coacting with the burner and leading from a suitable source of supply, a supply pipe in communication with the burner, a tubular mixing chamber supported by the outer end portion of the supply pipe, said generator pipe discharging within the mixing chamber at a point substantially diametrically opposed to the end of the supply pipe in communication with the mixing chamber, and nipples supported by the mixing chamber at opposite sides of the adjacent portions of the generator pipe and the supply pipe, said nipples being in communication with the atmosphere and capable of endwise adjustment.

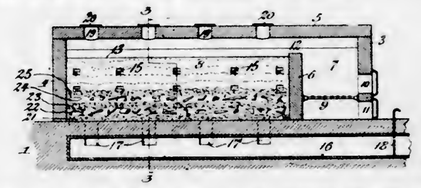
3. A device of the character described comprising a burner, a substantially U-shape supply pipe in communication with the burner, a tubular mixing chamber supported by the outer end of the supply pipe and having its opposite ends closed, said chamber being provided with an air vent in its wall opposite to the outer end of the supply pipe, a generator pipe coacting with the burner and leading from a suitable source of supply, said generator pipe discharging within the mixing chamber at a point substantially diametrically opposed to the outer end of the supply pipe, and a controlling valve interposed in the discharge end of the generator pipe exteriorly of the mixing chamber.

4. A device of the character described comprising a burner, a substantially U-shape supply pipe in communication with the burner, a tubular mixing chamber supported by the outer end of the supply pipe and having its opposite ends closed, said chamber being provided with an air vent in its wall opposite to the outer end of the supply pipe, a generator pipe coacting with the burner and leading from a suitable source of supply, said generator pipe discharging within the mixing chamber at a point substantially diametrically opposed to the outer end of the supply pipe, and a controlling valve interposed in the discharge end of the generator pipe exteriorly of the mixing chamber, said air vent consisting of a nipple in communication with the atmosphere and capable of endwise adjustment.

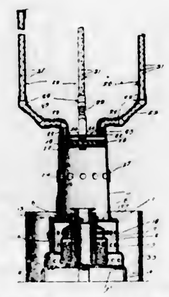
5. A device of the character described comprising a burner, a substantially U-shape supply pipe in communication with the burner, a tubular mixing chamber supported by the outer end of the supply pipe and having its opposite ends closed, said chamber being provided with an air vent in its wall opposite to the outer end of the supply pipe, a generator pipe coacting with the burner and leading from a suitable source of supply, said generator pipe discharging within the mixing chamber at a point substantially diametrically opposed to the outer end of the supply pipe, a controlling valve interposed in the discharge end of the generator pipe exteriorly of the mixing chamber, a nipple depending from the discharge end of the generator pipe rearwardly of and in close proximity to the valve, and a removable plug coacting with the nipple, said nipple affording a collecting chamber.

1,222,793. METHOD OF ANNEALING ARTICLES. ARTHUR L. POLLARD, Batavia, N. Y. Filed Dec. 1, 1916. Serial No. 134,290. (Cl. 148—8.)

The herein described method of annealing articles which comprises placing a layer of articles to be annealed in an oven and covering said layer of articles with a layer of protecting material in the presence of a heating medium and then suspending the further addition of articles and protecting material until said articles have been heated sufficiently to render them malleable, then successively adding another layer of articles to be annealed and another layer of protecting material in the presence of a heating medium and continuing the heating of the same until the last layer of articles has been heated sufficiently to render them malleable, and then in like manner successively adding further layers of articles to be annealed and layers of protecting material in the presence of a heating medium until the oven has been filled to the required extent and continuing the application of heat thereto until the last layer of articles has been heated sufficiently to render them malleable, and then permitting the whole mass of articles and protecting material to cool slowly.



1,222,794. ORCHARD-HEATER. JOHN L. QUINN, Los Angeles, Cal., assignor to Standard Oil Company of California, San Francisco, Cal., a Corporation of California. Filed Dec. 29, 1913. Serial No. 809,239. (Cl. 126—59.5.)



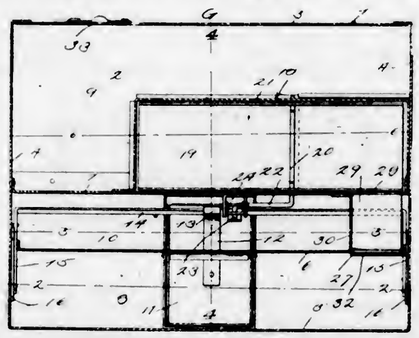
1. An orchard heater comprising a burner, a stack for the burner adapted to contain heated air and the products of combustion from the burner, and a plurality of angular perforated heat distributing pipes rotatably connected with the stack, each pipe comprising a plurality of relatively angularly adjustable perforated sections.

2. An orchard heater comprising a burner, a stack for the burner adapted to contain heated air and the products of combustion from the burner, and a plurality of angular perforated heat distributing pipes rotatably connected with the stack, each pipe comprising a plurality of relatively rotatably perforated sections, said pipes being closed at their outer ends.

1,222,795. RAT-TRAP. CHARLES D. RAMSEY, Sedalia, Tenn. Filed Sept. 14, 1916. Serial No. 120,136. (Cl. 43—26.)

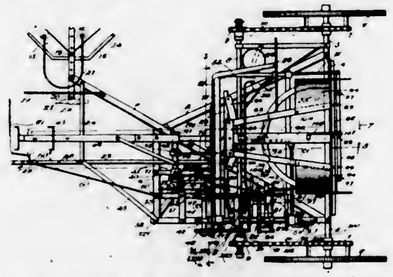
A trap comprising a housing, partitions extending longitudinally of the housing for dividing the same into an entrance chamber and a trapping chamber, a passage affording communication between said chambers, a tiltable table located within the entrance chamber, a latch mounted in the housing, a casing located within the trapping chamber, a platform mounted within the casing, a shaft fixed to the platform and having a crank arm carried thereby,

a bar pivotally mounted in the housing, said bar having arms carried by its ends, doors carried by the arms, the ends of the casing having openings formed therein, said doors being adapted to close the opening when the bar is



engaged by the latch, said latch being disengaged from the bar when the platform is tilted, and means carried by the table for engaging the bar to hold the doors in their open positions.

1,222,796. SHOCKING-MACHINE. CLEMMA R. RANEY, Centerville, Iowa, assignor of one-half to R. J. Raney, Centerville, Iowa. Filed July 21, 1910. Serial No. 573,106. (Cl. 56—122.)



1. In a shocking machine, a shock receptacle, a pivoted shock building member delivering sheaves thereto, and operating means therefor whereby said member may swing through arcs of gradually decreasing amplitude as it builds up a shock in said receptacle.

2. In a shocking machine, a prostrate shock receptacle, a shock building member delivering sheaves prostrate therein, and driving connections for said member whereby the same is moved through a path of gradually decreasing length as its builds up a shock in said receptacle.

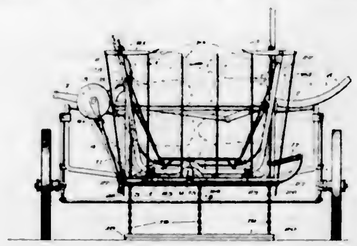
3. In a shocking machine, a frame, a normally prostrate tilting shock receptacle thereon, an upwardly and backwardly movable sheaf delivery member pivoted on said frame and delivering sheaves to said receptacle, and means whereby said member may move to different levels in said receptacle as it delivers the sheaves.

4. In a shocking machine, a frame, a sheaf delivery member pivoted thereon, driving mechanism for said delivery member, and means whereby said member may move independently of its driving mechanism during a portion of its movement.

5. In a shocking machine, a frame, a pivoted sheaf delivery member normally prostrate thereon, driving mechanism therefor whereby said member is moved to upright position, and means whereby said member may move independently of its driving mechanism after passing over its center.

[Claims 6 to 102 not printed in the Gazette.]

1,222,797. SHOCKING-MACHINE ATTACHMENT. CLEMMA R. RANEY, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Jan. 22, 1913. Serial No. 743,562. (Cl. 56—122.)



1. In a shocking machine, shock discharging mechanism, and means on the shocker for positively increasing the size of the rear side of a shock set thereby relative to the body thereof.

2. In a shocking machine, shock setting mechanism, and means on the shocker for positively projecting outward the butts of sheaves on the rear side of a shock set thereby.

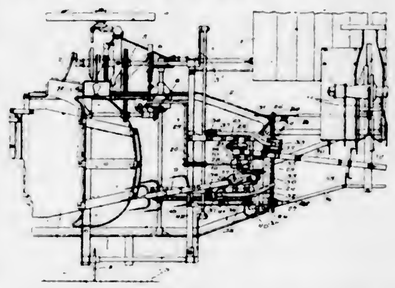
3. In a shocking machine, shock discharging mechanism, and means mounted on the machine for projecting laterally the butts of sheaves on the rear side of a shock set thereby.

4. In a shocking machine, shock discharging mechanism, and means engaging the shock for projecting laterally and rearwardly the butts of sheaves on the rear side of a shock set thereby.

5. In a shocking machine, a tilting normally prostrate shock receptacle, and means on the shocker for positively projecting outward the butts of sheaves on the rear corners of a shock set thereby.

[Claims 6 to 34 not printed in the Gazette.]

1,222,798. GRAIN-SHOCKER. CLEMMA R. RANEY, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed July 15, 1915. Serial No. 39,990. (Cl. 56—121.)



1. In combination, a binder, sheaf discharging mechanism thereon, a plurality of oscillatory sheaf delivery members receiving sheaves therefrom, and means for moving the same alternately in opposite directions.

2. In combination, sheaf discharging mechanism, a plurality of sheaf delivery members receiving sheaves therefrom, and means for moving the same in opposite directions through diverging paths.

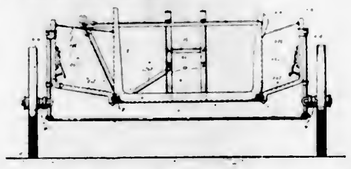
3. In combination, a plurality of normally prostrate upwardly movable oscillatory sheaf delivery members, and means for moving the same successively to and from the same initial position.

4. In combination, a plurality of oscillating sheaf delivery members, and means for moving the same successively through diverging paths from a common starting point which they successively occupy.

5. In combination, sheaf discharging mechanism, a shock receptacle, a plurality of oscillatory sheaf delivery members, and operating means therefor moving one of the same into sheaf receiving position adjacent said discharging mechanism while another delivers a sheaf to said receptacle.

[Claims 6 to 30 not printed in the Gazette.]

1,222,799. FRAME FOR SHOCKING-MACHINES. CLEMMA R. RANEY, Chicago, and ROBERT C. LIVESAY, Moline, Ill., assignors to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Jan. 6, 1913. Serial No. 740,481. Renewed Oct. 20, 1916. Serial No. 126,798. (Cl. 56—121.)



1. A shocking machine comprising a rigid horizontally disposed substantially U-shaped base member and a skeleton sheaf-receptacle housing frame having an open rear end, supported on said base member in rear of its front end and rigidly attached thereto.

2. In a shocking machine frame, a rigid horisontally disposed substantially U-shaped base member, a skeleton sheaf-receptacle housing frame disposed intermediate the ends thereof and rigidly attached thereto, and a plurality of laterally and upwardly projecting arms rigidly attached to the arms of said base member intermediate the ends of said frame.

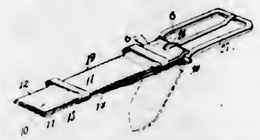
3. In a shocking machine frame, a rigid horizontally disposed substantially U-shaped base member, a skeleton sheaf-receptacle housing frame having an open rear end supported on said base and rigidly attached directly thereto intermediate the ends of the latter, and a tongue rigidly attached to the bowed end of said base member and disposed at an angle thereto.

4. A shocking machine frame comprising a rigid horizontally disposed substantially U-shaped base member and an upstanding substantially U-shaped sheaf-receptacle housing frame having an open rear end supported on said base intermediate the ends of the latter and rigidly attached directly thereto at its bowed portion.

5. A shocking machine frame comprising a rigid horizontally disposed base member, a plurality of transversely disposed substantially U-shaped members having their bowed portions rigidly attached directly to said base and their arms protruding upward at right angles therefrom, and a transverse member rigidly connecting the upper ends of the arms of one of said members.

[Claims 6 to 12 not printed in the Gazette.]

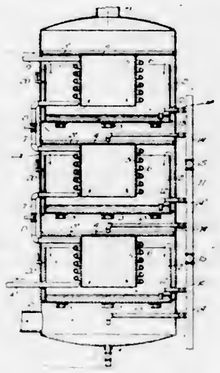
1,222,800. BELT. ANTON ŘEZNIČEK, Jersey City, N. J. Filed July 28, 1916. Serial No. 111,759. (Cl. 241—8.)



1. A belt comprising a strap provided with a longitudinal buckle tongue slot and with metal stiffening plates disposed on opposite sides of said slot at some distance from the edges thereof and a detachable fastening device composed of complementary members secured respectively to said strap on opposite sides of said slot, and a buckle having a cross bar and tongue, the tongue engaging said slot and the strap being folded over said cross bar and secured in folded position by said detachable fastener, the edges of said slot between said stiffening plates being free and flexible to facilitate the insertion and removal of the buckle.

2. In a belt the combination with a buckle having a crossbar, of a strap comprising an upper layer, an under layer terminating at a point removed from one end of said upper layer, an intermediate layer secured to said upper layer at the exposed portion thereof and extending in its rear part between said upper and under layers, retaining loops passed between said overlapping layers and secured by transverse stitching extending therethrough, stiffening means disposed between said upper and intermediate layers, said strap being adapted to be folded around said crossbar at a point reinforced by said stiffening means, and said stiffening means being adapted to be bent with said strap around said bar to retain said buckle in position, and disengageable fastening means adapted to retain said strap in holding position.

1,222,801. APPARATUS FOR DEPHLEGMATION. RUDOLPH R. ROSENBAUM, Chicago, Ill. Filed Aug. 22, 1916. Serial No. 116,254. (Cl. 196—5.)



1. In a dephlegmator, a drum having an inlet at the bottom and an outlet at the top, a pan mounted therein and surrounded by an annular space, a partition over said pan, said partition having a central opening, a tube surrounding said central opening and extending downwardly into said pan, and cooling pipes around said tube.

2. In a dephlegmator, a drum having an inlet at the bottom and an outlet at the top, a vertical series of pans mounted therein and each surrounded by an annular space, a partition over each pan, said partitions having central openings, a tube surrounding each opening and extending downwardly into the respective pan, and cooling pipes around each of said tubes.

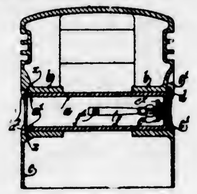
3. In a dephlegmator, a drum having an inlet at the bottom and an outlet at the top, a vertical series of pans mounted therein and each surrounded by an annular space, a partition over each pan, said partitions having central reticulated areas, a tube surrounding each said areas and extending downwardly into the respective pan, and cooling pipes around each of said tubes.

4. In a dephlegmator, a drum having an inlet at the bottom and an outlet at the top, a vertical series of pans mounted therein and each surrounded by an annular space, a partition over each pan, said partitions having central openings, tubes surrounding said openings and extending downwardly into the respective pans, cooling pipes around each said tubes, and a system of piping for conveying away condensates in said pans.

5. In a dephlegmator, a drum having an inlet at the bottom and an outlet at the top, a vertical series of pans mounted therein and each surrounded by an annular space, a partition over each pan, said partitions having central openings, tubes surrounding said openings and extending downwardly into the respective pans, cooling pipes around each said tubes, and a system of piping conveying away condensates in said pans, and for conveying the condensates of the upper pans to the partitions over the lower pans.

[Claims 6 and 7 are not printed in the Gazette.]

1,222,802. GUDGEON-PIN-LOCKING DEVICE. FREDERICK HENRY ROYCE, Derby, England, assignor to Rolls Royce Limited, Derby, England. Filed Sept. 19, 1916. Serial No. 121,069. (Cl. 74—85.)



1. The combination with a piston having exterior recesses, of a hollow gudgeon-pin extending through said piston and having recesses at one end, and a shoulder at the opposite end thereof, and a locking plate adapted to engage the recesses in the gudgeon-pin and the recesses in the piston.

2. In a piston, the combination of a hollow gudgeon-pin having recesses at one end, there being a recess in the piston coöperating therewith, of a locking member, tongues on the locking member adapted to engage said recesses, a screw adapted to secure the locking member to the gudgeon pin, and means within the pin for locking said screw against rotation.

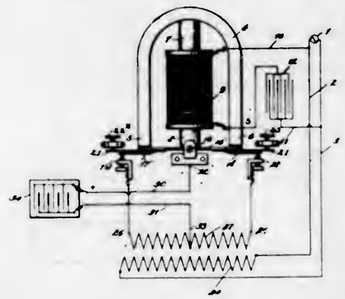
3. In a piston, the combination of a hollow gudgeon-pin having recesses at one end, there being a recess in the piston coöperating therewith, of a locking member, tongues on the locking member adapted to engage said recesses, a screw adapted to secure the locking member to the gudgeon-pin, said screw having a slotted portion and a resilient device secured within the gudgeon-pin adapted to engage said slotted portion for locking said screw against rotation.

4. The combination with a piston having exterior recesses in its wall, of a hollow gudgeon-pin extending transversely through said piston, having a shoulder at one end engaging certain of said piston recesses, a locking plate at the opposite end of said gudgeon pin engaging others of said piston recesses, means for attaching the locking plate to the gudgeon-pin and devices within the gudgeon-pin for locking said securing means.

5. The combination with a piston having exterior recesses in its wall, of a hollow gudgeon-pin extending transversely through said piston, having a shoulder at one end engaging certain of said piston recesses, a locking plate at the opposite end of said gudgeon pin engaging others of said piston recesses, means for preventing relative rotation between said locking plate and pin, a screw within the pin for attaching the locking plate to the pin, a slotted flange on the screw and a spring finger secured within the pin adapted to engage said slotted flange to secure the screw against rotation.

1,222,803. RECTIFYING DEVICE. CHARLES C. RUPRECHT, Midway, Fla. Filed Nov. 25, 1914. Serial No. 874,064. (Cl. 175—365.)

1. In a rectifier, in combination, a fixed magnet of constant polarity, a soft iron armature movably supported adjacent to the poles thereof so as to be acted upon by them equally, a solenoid connected to the alternating mains, a core for said solenoid, one pole of said core being maintained in operative magnetic relation to said magnet and armature whereby the polarity of said armature will tend to follow the polarity of said core, contact members carried by said armature, a direct current system including said contact members, and means connecting said alternating current mains to the said contact members in such wise that the current pulsations therein will flow through said contact members and into said direct current mains in the same direction.

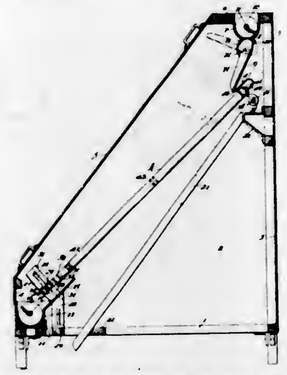


2. In a rectifier, in combination, a magnet having three fixed branches, two of said branches being of opposite but constant polarity and the third having a helix thereon connected to the alternating mains a movable armature having its middle portion adjacent to said third branch and its ends opposite said first branches respectively, whereby the polarity of said armature will tend to follow the polarity of said third branch, contact members movable with said armature, direct current mains operatively connected to said contact members, and means connecting said alternating current mains to the said contact members in such wise that the current pulsations therein will flow through said contact members and into said direct current mains in the same direction.

3. A rectifier comprising, in combination, a magnet of constant polarity, a magnet of alternating polarity having one of its poles connected to said first magnet intermediate the poles thereof, a soft iron armature movably mounted adjacent to said second magnet and having its ends projecting adjacent to the poles of said first magnet, contact members movable with said armature, fixed contact members adapted for engagement by said movable contact members, an alternating current main, connections between said main and said alternating magnet, a direct current main connected to said alternating current main through said contact members, said last named connection being arranged so as to cause a reversal of current flow to be effected upon shift in the position of said contact members, and means for maintaining a predetermined phase relation between the current associated with said alternating magnet and the current associated with said contact members.

4. In a rectifier, in combination, a U-shaped magnet of constant polarity, a solenoid arranged between the arms of said first magnet, a core for said solenoid having one end connected to said first magnet intermediate the poles and having its other end disposed between said poles, a movable soft iron armature passing closely by the last named pole of said solenoid core and extending adjacent to the poles of said first magnet, contact members movable with said armature, fixed contact members coöperating therewith, a divided current circuit having its terminal portions connected with said fixed contacts and its intermediate portions connected with the rectified mains, the other side of the rectified main being connected to said movable contacts, and means for supplying alternating current of the same frequency and phase relation to said solenoid and to said divided current circuit.

1,222,804. SEPARATING APPARATUS. CHARLES C. RUPRECHT, Midway, Fla. Filed Jan. 7, 1915. Serial No. 884. (Cl. 83—56.)



1. The combination of a vibratory screen, a striker member, a spring connection between said member and the screen, and means to cause impacts against said member.

2. In apparatus of the character set forth, the combination of a screen, means loosely supporting the screen, a cam engaging device having a spring supporting connection to the screen, a member having a cam portion for coöperation with said device, and means for moving said member.

3. In apparatus of the character set forth, the combination of a screen, a member supporting one end of the screen and with respect to which the screen is capable of angular and lateral movement, adjustment means for varying the extent of such movement, a movable member whereon the opposite end of the screen is arranged to bear, the movable member being at a different elevation than the supporting member whereby the screen is inclined, the movable member having a cam portion for coöperation with the end of the screen opposite the supporting member, and means for moving the movable member to cause its cam portion to move in a direction toward the elevated end of the screen.

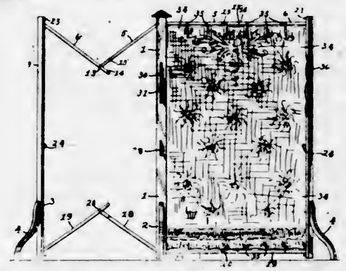
4. In apparatus of the character set forth, the combination of a screen, a member supporting one end of the screen and with respect to which the screen is capable of movement in a plane parallel to its own plane, adjustment means for varying the extent of such movement, a movable member whereon the opposite end of the screen is arranged to bear, the movable member being at a higher elevation than the supporting member whereby the screen is inclined downward toward the supporting member, the movable member having a cam portion for coöperation with the upper end of the screen, and means for moving the movable member to cause its cam portion to move in a direction toward the upper end of the screen.

5. In apparatus of the character set forth, the combination of a screen, a supporting member for one end of the screen and with respect to which the screen is capable of movement in its own plane, a cam engaging device yieldingly carried by the opposite end of the screen, a cam supported above the plane of the supporting member and in a position to be engaged by the cam engaging device, means for rotating said cam over in the direction of the upper end of the screen, and a bracket within which the supporting member is adjustable in an arc substantially concentric with a center defined by that end of the cam engaging device which traverses the cam.

[Claims 6 to 16 not printed in the Gazette.]

1,222,805. COMBINED SCREEN AND COSTUMER. WILLIAM HENRY SCHMID, Wabash, Ind. Filed Mar. 11, 1915. Serial No. 13,663. (Cl. 45—106.)

1. A combined screen and costumer having a central post, a plurality of screen sections, each section including a screen and a pair of pivotally joined arms at the upper border of the screen and a pair of pivotally joined arms at the lower border of the screen, a vertical rigid standard at the outer end of each screen, the inner arm of each pair being pivoted to the central post, and the outer arm thereof being pivoted to the end standard and means for adjusting said screens circumferentially of the post.

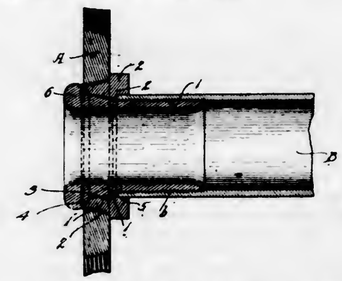


2. In an article of the class described, folding screen sections, a central post, said folding screen sections each including a pair of vertically swinging arms, one of said arms being pivoted to said post near the upper end of the latter, a vertical standard to which the outer end of the other arm is pivoted, means pivotally joining the inner ends of said arms, swiveling means permitting the turning of said arms, and pivotally connected arms joined to the lower ends of said post and standard.

3. In a device of the class described, a central post, circumferentially adjustable brackets mounted thereon at top and bottom, radial arms pivoted to said brackets, swiveling connections between the upper brackets and arm permitting the rotation of the latter, outer upper and lower arms pivoted to said first arms, a vertical standard to which said outer arms are pivoted, a swiveling connection between the outer upper arm and the upper end of said standard and a curtain hung on said arms.

4. In a device of the class described, a central post, folding screen sections each including a vertical end standard, folding arms pivotally connecting said post and standard, coöperating latching means mounted on said post and standard, a garment hanger mounted on one of said posts and operatively connected with said latch to release the same.

1,222,806. BOILER-FLUE-SETTING DEVICE. FREDERICK SCHMITT, Pocatello, Idaho. Filed Apr. 3, 1916. Serial No. 88,650. (Cl. 137—132.)



1. In combination, a flue sheet provided with a flue opening, a bushing disposed in said opening, a flue having an end thereof seated against said bushing, and a clamping and securing member connected with the flue and formed with one end portion engaging an end of the bushing and having wedging engagement with the bushing for some distance from the said abutting end portions to establish connection between the flue and flue sheet.

2. In combination, a flue sheet provided with a flue opening, a bushing disposed at said opening, a flue seated

against said bushing, said bushing having an internally contracted seat portion extending substantially the width of the flue sheet and a clamping and securing member connected with the flue and having wedging engagement throughout the said contracted portion of the bushing.

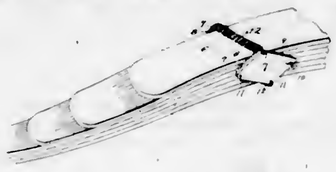
3. In combination, a flue sheet having a flue opening, a bushing screwed into said opening at the inner side of the flue sheet, a flue having its end seated against said bushing, the bushing being formed with an internal and inwardly contracted portion corresponding in extent substantially to the width of the flue sheet, and a clamping and securing member screwed into the flue and formed with a tapering external portion adapted to fit tightly in wedging contact throughout the surface of the contracted portion of the bushing.

4. In combination, a flue sheet having a flue opening, a bushing screwed into said opening at the inner side of the flue sheet, a flue having its end seated against said bushing, the bushing being formed with an internal and inwardly contracted portion, and a clamping and securing member screwed into the flue and formed with a tapering external portion adapted to fit tightly in wedging engagement with the contracted portion of the bushing, said clamping and securing member being formed with an enlargement at the outer side of the flue sheet having a bearing against the adjacent end of the bushing.

5. In combination, a flue sheet formed with a threaded flue opening, a bushing externally threaded and screwed into said opening and formed with a collar engaging the inner wall of the flue sheet, said bushing having an internal contracted portion intermediate its ends and seats at its opposite ends, a flue seated against the seat at the inner end of the bushing, and a clamping and securing member connected with the flue and formed with a tapering external portion adapted to wedge tightly into said contracted portion of the bushing and also formed with an enlargement at its outer end adapted to seat against the seat at the outer end of the bushing.

[Claims 6 and 7 not printed in the Gazette.]

1,222,807. LUBRICATOR FOR LEAF-SPRINGS. FRANK A. SCHOENL and HERMAN BIEDER, Cleveland, Ohio. Filed Nov. 22, 1916. Serial No. 132,832. (Cl. 184—1.)



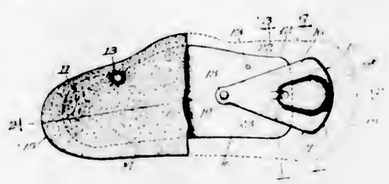
1. A lubricator for leaf springs, comprising a pair of holders provided with pads and adapted to be applied to opposite sides of the spring, said holders being longer in one direction than another, and connections between the holders engageable therewith at either longer or shorter axes, whereby the holders may be applied to springs of different thicknesses.

2. A lubricator for leaf springs, comprising a holder provided with a pad and adapted to be applied to the side of a spring, said holder having longer and shorter axes, and retaining devices engageable with the holder at either axis, to hold the same on the spring.

3. A lubricator for leaf springs, comprising a holder provided with a pad and adapted to be applied to the side of a spring, said holder having longer and shorter axes, and retaining devices engageable with the holder at either axis, to hold the same on the spring, said holder also having oil supply openings at points corresponding to the different axes.

4. A lubricator for leaf springs, comprising a pair of diamond-shaped holders provided with pads and adapted to be applied to opposite sides of the spring, and retaining springs connecting the opposite holders and engageable with various corners thereof.

1,222,808. ARCH-SUPPORT. WILLIAM M. SCHOLL, Chicago, Ill. Filed June 23, 1916. Serial No. 105,343. (Cl. 36—71.)



1. In a device of the character described, a main plate provided with front and rear bearing surfaces and adapted to span across the shank of a shoe from heel to ball thereof, and an extension plate arranged to bear at its rear end on the main plate between the ends of the latter and at its front end arranged to bear on the sole of the shoe and to underlie the anterior portion of the metatarsals, said extension plate being resiliently depressible with respect to the main plate.

2. In a device of the character described, a main plate provided with front and rear bearing surfaces and adapted to span across the shank of a shoe from heel to ball thereof, and an extension plate arranged to bear at its rear end on the main plate between the ends of the latter and at its front end arranged to bear on the sole of the shoe and to underlie the anterior portion of the metatarsals, said extension plate being pivotally mounted on the main plate.

3. In a device of the character described the combination of a main arch plate for spanning the shank of a shoe, and an extension plate having a rear portion bearing upon the main plate and having its front portion extending beyond said main plate, to rest upon the sole of the shoe, said extension plate being relatively resilient and said main plate relatively stiff, whereby said extension plate may yield toward the main plate and said extension plate having a hump near its front end curved in excess of any normal curvature of the foot.

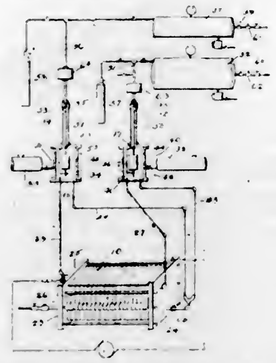
4. The combination with a main plate adapted to span the shank of a shoe with its rear end arranged to be positioned materially in rear of the heads of the metatarsals of the wearer, and a resilient extension plate bearing at its rear end on the main plate and at its forward end arranged to bear on the shoe and otherwise normally free from contact with subjacent parts, the forward end of said extension plate arranged for location near the heads of the metatarsals, said extension plate being resilient lengthwise between its bearing portions, and down-bent at its side edges for resiliency within its own area, whereby the said plate may first yield into contact the main plate and further by its spreading action.

1,222,809. GAS-GENERATOR. LÉO PAUL SÉNILLE, Providence, R. I. Filed June 16, 1916. Serial No. 104,092. (Cl. 204—5.)

1. In a gas generator, means for generating oxygen and hydrogen gases separately and simultaneously, separate pressure resisting storage containers connected to receive the gases under pressure as generated, and means for positively preventing the flow of gas from one container to the other regardless of the extent of difference in pressures said system being closed and without automatically controlled openings to the air.

2. In a gas generator, means for generating oxygen and hydrogen gases simultaneously, means for conducting each of said gases to a separate pressure storage receptacle, and an automatically actuated valve for controlling the gas pressures as generated.

3. In a gas generator, means for generating oxygen and hydrogen gases simultaneously, means for conducting said gases to separate pressure receptacles and positively actuated means controlled by the difference of pressures between the gases for controlling the flow of gases from the generator to said receptacles.

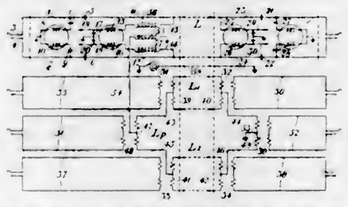


4. In a machine of the character described, means including an electric current for generating oxygen and hydrogen gases, two separate gas receiving chambers, means for conducting the different gases to said different chambers, and a valve controlled by the pressure in one of the chambers for automatically regulating the flow of gas to the other.

5. In a machine of the character described, means for generating oxygen and hydrogen gases, a separate chamber for receiving each of said gases under pressure and float actuated means for automatically shutting off the supply to one chamber when the pressure in the other exceeds that in the first a predetermined amount.

[Claims 6 to 12 not printed in the Gazette.]

1,222,810. PROTECTIVE SYSTEM FOR COMPOSITE CIRCUITS. THOMAS SHAW, Hackensack, N. J., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Oct. 12, 1916. Serial No. 125,190. (Cl. 179—15.)



1. In a protective system, a circuit to be protected and a primary circuit similarly related to a source of electrical disturbance, inductive means interconnecting said circuits, said inductive means being bridged across the protected circuit.

2. In a protective system, a circuit to be protected and a primary circuit similarly related to a source of electrical disturbance, ground taps leading from a conductor of the protected circuit, inductive means interconnecting said circuits, said inductive means being included in said ground taps.

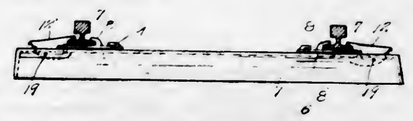
3. In a protective system, a composite circuit, comprising a series circuit and ground taps leading from the conductors thereof, a primary circuit, and a neutralized transformer interconnecting said circuits having its secondary winding located in said ground taps.

4. In a protective system, a composite circuit comprising a series circuit, and ground taps leading from the conductors thereof, a primary circuit, a source of electrical disturbances tending to produce electromotive forces in both circuits, and a neutralizing transformer having one winding in the primary circuit, and another winding in a ground tap of the composite circuit, whereby the electromotive force in the primary circuit induces a counter electromotive force in the composite circuit to neutralize the disturbing electromotive force therein.

5. In a protective system, a circuit to be protected, and a primary circuit similarly related to a source of electrical disturbances, said primary circuit comprising a series circuit and ground leads connected to the conductors of the series circuit so that the circuit of the ground leads shall continue over said conductors in parallel, said protected circuit and said primary circuit being interconnected by a transformer having a winding connected in a ground lead of the primary circuit.

[Claims 6 to 8 not printed in the Gazette.]

1,222,811. METALLIC RAILWAY-TIE. SAUL S. SNYDER, Columbus, Ohio. Filed June 26, 1916. Serial No. 105,966. (Cl. 238—5.)

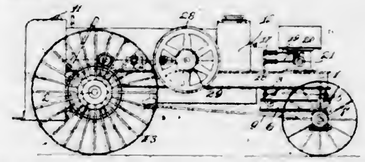


1. The combination of a hollow metallic tie having an opening and an adjacent overhanging tongue, a rail, and a rail chair projecting each side the rail provided with an overhanging flange to engage the rail flange, a locking member at the other side of the rail seated in said opening, and guide lugs at each end of the chair embracing the tongue and locking member respectively.

2. The combination with a hollow metallic tie having an opening therein, a rail, and a rail chair formed with end projecting lugs, of a rail locking member seated in the opening at one side of the rail and located between said lugs, upper and lower projecting lips on said member to engage said tie, chair and rail base, and means for securing the locking member in the tie.

3. The combination with a hollow metallic tie having an opening, a rail, and a rail chair, of a locking block in said opening having a pair of securing lips for the rail at one end, and at its opposite end formed with adjusting notches.

1,222,812. TRACTOR. CHARLES A. STICKNEY, Chicago, Ill. Filed Sept. 17, 1915. Serial No. 51,282. (Cl. 21—114.)

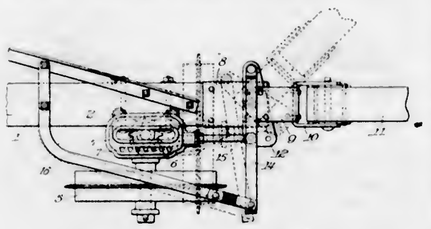


1. In a tractor the combination of an internal combustion engine having a crank shaft, a pair of driving wheels, having bull gears mounted thereon, a pair of bull pinions intermeshing with said bull gears, a friction clutch pulleys, one side of which is keyed to a power shaft, a set of gears intermeshing said crank shaft with the other side of said friction clutch pulley, means for engaging said friction clutch pulley so that said crank shaft and said power shaft will be interconnected, a pinion on said power shaft, a transmission shaft, having a differential gearing thereon and transmission gears thereon, a slidable gear on said power shaft adapted to be engaged with transmission gears on said transmission shaft, and a bull pinion mounted on said transmission shaft intermeshing with said bull gears.

2. In a tractor the combination of an internal combustion engine having a crank shaft, a pair of driving wheels

having bull gears mounted thereon, a transmission shaft, a pair of bull pinions mounted on said transmission shaft and intermeshing with said bull gears, a differential gear operating said transmission shaft and said bull pinions adapted to transmit a greater torque to one of said bull pinions than to other of said bull pinions, a power shaft having a friction clutch pulley coöperating therewith and slidable gears thereon, gears associated with said transmission shaft adapted to be meshed with said slidable gears, a set of spur gears adapted to interconnect one side of said friction clutch pulley with said crank shaft and means for engaging said friction clutch pulley so as to interconnect said power shaft with said crank shaft.

1,222,813. TONGUE-TRUCK. JOHN A. STONE, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Dec. 19, 1913. Serial No. 807,586. (Cl. 21—205.)



1. In a tongue truck, a support, a laterally swinging tongue carried thereon, and a wheel actuating rack member pivotally connected to said tongue and reciprocable thereby in a path substantially parallel with said support.

2. In a tongue truck, a support, a laterally swinging tongue pivoted thereon, a wheel carrying member journaled on said support, and means connected to said tongue and longitudinally reciprocable with respect to said support for turning the wheel carrying member in its bearings.

3. In a tongue truck, a support, a laterally swinging tongue pivoted thereon, a wheel support journaled on said support, and a reciprocatory slotted member pivotally connected to said tongue and movable thereby in a path substantially parallel with said support having its slotted portion operatively connected to said wheel support.

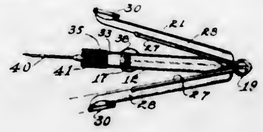
4. In a tongue truck, a support, a laterally swinging tongue pivoted thereon, a wheel support journaled on said support, and means including a longitudinally movable rack disposed parallel to said support and operatively connected directly to said tongue and wheel support for transforming an angular movement of the former into a rotary movement of the latter.

5. In a tongue truck, a support, a laterally swinging tongue pivoted thereon, a slotted wheel actuating member pivoted to said tongue and reciprocable thereby in a path substantially parallel to the line of draft, a wheel support journaled on said support, and means extending into the slot in said member for transforming a reciprocatory movement thereof into a rotary movement of said wheel support.

[Claims 6 to 11 not printed in the Gazette.]

1,222,814. SYRINGE. CARL STORZ, Tuttlingen, Germany. Filed Mar. 6, 1915. Serial No. 12,505. (Cl. 128—25.)

1. Means for giving a hypodermic injection comprising the combination of a replaceable sealed unit single-service dose container consisting of a tube having pliable walls and an integrally sealed and screw-threaded outlet nozzle, an elongated holder having means connected therewith for collapsing the tube, a puncturing point, a needle, and means for detachably securing the tube at its sealed nozzle end and connecting the same with the puncturing point and needle.



2. Means for giving a hypodermic injection comprising the combination of a replaceable sealed unit single-service dose container consisting of a tube having pliable walls and an integrally sealed outlet nozzle end, an elongated holder having means connected therewith for collapsing the tube, a puncturing point, a needle, a detachable coupling between the nozzle and needle, said coupling being movable from position on the holder for the purpose of insertion and removal of the container, and means for locking the coupling upon the forward part of the holder.

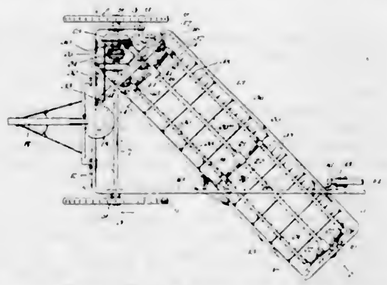
3. Means for giving a hypodermic injection comprising the combination of a replaceable sealed unit single-service dose container consisting of a tube having pliable walls and an integrally sealed screw nozzle, an elongated holder having means connected therewith for collapsing the tube, a needle, a puncturing point, and means for coupling the container with the needle and puncturing point comprising a screw socket for detachably receiving the sealed nozzle, and a screw for driving the puncturing point into the nozzle also engaging with the socket.

4. Means for giving a hypodermic injection comprising the combination of a replaceable sealed unit single-service dose container consisting of a tube having pliable walls and an integrally sealed and screw-threaded outlet nozzle, an elongated holder having means connected therewith for collapsing the tube, a puncturing point, a needle, and a screw coupling whereby the tube is detachably secured at its sealed nozzle end and connected with the puncturing point and needle, the puncturing point having a taper formation whereby it is tight seating in the puncture which it forms in the nozzle.

5. Means for giving a hypodermic injection comprising the combination of a replaceable sealed unit single-service dose container consisting of a tube having pliable walls and an integrally sealed outlet nozzle end, an elongated holder, lateral squeezing members connected with the holder, a puncturing point, a needle, and a coupling for detachably securing the tube at its nozzle end and connecting the same with the puncturing point and needle.

[Claims 6 to 29 not printed in the Gazette.]

1,222,815. COMBINED RAKE AND TEDDER. CHARLES R. STRAUGHN, Philadelphia, Pa. Filed Oct. 30, 1916. Serial No. 128,372. (Cl. 56—3.)



1. The combination of a supporting frame, carrying wheels therefor, a member rotatably mounted on the frame, means operative to rotate the member in either direction, a rake bar pivoted on the member and provided with two rollers, and cams on the frame guiding the rollers through paths which cross each other and constantly governing the movement of the rake during successive rotations of the member in either direction for use as either a rake or a tedder.

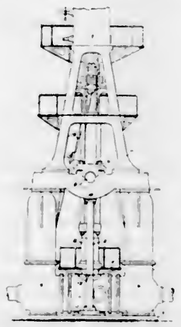
2. The combination of a supporting frame, carrying wheels therefor, a member rotatably mounted on the frame, means operative to rotate the member, a rake bar pivoted on the member and provided with two rollers each traversing a path in a plane different from the plane of the path of the other during the rotation of the member, and cams on the frame and located in said planes and coöperating with the rollers and constantly governing the movement of the rake during successive rotations of the member.

3. The combination of a supporting frame, carrying wheels therefor, a member rotatably mounted on the frame, means operative to rotate the member, a rake bar pivoted on the member and provided with two rollers each traversing a path in a plane different from the plane of the path of the other during the rotation of the member, a pair of spaced cams on the frame in the plane of the path of one of the rollers and coöperating therewith, a pair of spaced cams on the frame in the path of the other roller and coöperating therewith, said cams governing the movement of the rake during the rotation of the member, each roller passing through its cams and through the spaces between the ends thereof and one roller being engaged with one cam at all times.

4. The combination of a supporting frame, carrying wheels therefor, a member mounted on the frame to rotate either forward or backward, a rake bar pivoted on the member and provided with two rollers, cams on the frame guiding the rollers over paths which cross each other and constantly governing the movement of the rake during successive rotations of the member in either direction, and means operative to rotate the member in either direction.

5. The combination of a supporting frame, carrying wheels therefor, a member comprising a shaft rotatably mounted on the frame and spaced arms projecting from the shaft, a rake including a shaft extending between and mounted to turn in said arms, an arm projecting from the rake shaft and carrying a pair of rollers, cams on the frame guiding the rollers over paths which cross each other and constantly governing the movement of the rake during successive rotations of the member, and means operative to rotate the member in either direction for use as either a rake or a tedder.

1,222,816. PUMPING-ENGINE. LOUIS E. STROTHMAN, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Dec. 12, 1914. Serial No. 877,256. (Cl. 103—77.)



1. In an engine, the combination of a main foundation, an overhead vertical engine having a bed-plate, an engine shaft supported by said bed-plate, a support for said engine applied underneath said bed-plate at both sides of and remote from said shaft, and other supporting means for said engine applied underneath said bed-plate and located on opposite sides of said engine and in the vertical plane passing through the axis of said shaft said other supporting means extending directly from said bed-plate to said foundation.

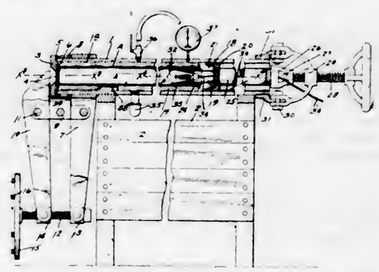
2. In an engine, the combination of a main foundation, an overhead vertical engine having a bed-plate, an engine shaft supported by said bed-plate, a support for said engine applied underneath said bed-plate at both sides of and remote from said shaft, a bearing for said shaft located at one side of said engine, and another supporting means for said engine applied underneath said bed-plate directly underneath said bearing said other supporting means extending directly from said bed-plate to said foundation.

3. In a pumping engine, a main pump foundation, a breathing plunger barrel having a projection unaffected by the breathing said projection resting on said foundation, an engine, means on said foundation for supporting a part of the weight of said engine, and a strut column resting on said projection and supporting the remainder of the weight of said engine.

4. In a pumping engine, a main pump foundation, a breathing plunger barrel having a projection unaffected by the breathing said projection resting on said foundation, an engine, pump elements on said foundation for supporting a part of the weight of said engine, a strut column resting on said projection and supporting the remainder of the weight of said engine, and a gallery, said strut column serving as a support for said gallery.

5. In a pumping engine having a breathing pump barrel, the combination of a main foundation, an overhead vertical engine having a bed-plate, an engine shaft supported by said bed-plate, a pumping element serving as a support for said engine applied underneath said bed-plate at both sides of said shaft, a bearing for said shaft located at one side of said engine, and another supporting means for said engine applied underneath said bed-plate directly underneath said bearing said other supporting means extending directly from said bed-plate to said foundation and unaffected by the breathing of said pump barrel.

1,222,817. TUBE-TESTING DEVICE. MARTIN J. SOBRASKE, Minneapolis, Minn. Filed June 5, 1915. Serial No. 32,340. (Cl. 73—51.)



1. A device for testing the crushing strength of tubes, comprising a testing tube having a conduit for delivering fluid thereto under pressure, and provided with a cap at one end and a head working within the other end portion thereof, coöperating to tightly clamp the ends of a tube being tested and hold the same within the said testing tube, subject to the surrounding fluid pressure.

2. In a device for testing the crushing strength of tubes, the combination with a testing tube, of a cap detachably secured to one end of said testing tube, and a head working adjustably within the other end portion of said testing tube, the said cap and head having gaskets adapted to engage the ends of the tube to be tested and hold the same within said testing tube subject to the surrounding fluid pressure.

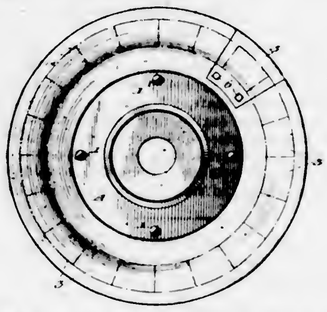
3. In a device for testing the crushing strength of tubes, the combination with a testing tube, of a cap detachably secured to one end of said testing tube, a piston-like head working within the other end portion of said testing tube, said cap and head having gaskets adapted to engage the ends of a tube to be tested, and a pressure device applied to said tube and operating on the said piston-like head to force the same toward said cap.

4. In a device for testing the crushing strength of tubes, the combination with a testing tube, of a cap detachably secured to one end of said testing tube, a piston-like head working within the other end portion of said testing tube, said cap and head having gaskets adapted to engage the ends of a tube to be tested, said piston-like head having a tube centering sleeve and an axial passage alined therewith.

5. In a device for testing the crushing strength of tubes, the combination with a testing tube, of a cap detachably secured to one end of said testing tube, a piston-like head working within the other end portion of said testing tube, said cap and head having gaskets adapted to engage the ends of a tube to be tested, the said cap having an axial passage permitting inspection of the interior of the tube to be tested.

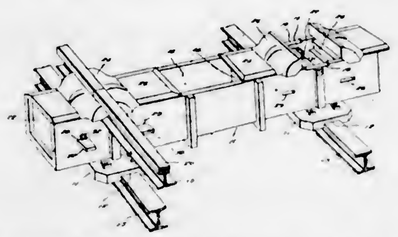
[Claims 6 to 10 not printed in the Gazette.]

1,222,818. SHEAVE OR PULLEY. FRANK D. UDALL, Ironwood, Mich. Filed Feb. 21, 1914. Serial No. 820,245. (Cl. 64—17.)



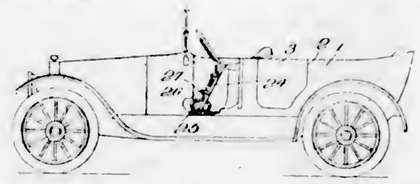
A sheave comprising two substantially similar sections, detachably connected together and forming therebetween a dovetailed peripheral groove, one section having an opening, a plate removably secured over said opening, a plurality of filler blocks laterally insertible through said opening in one of said sections, and means which secures the two sections together causing lateral clamping pressure upon the blocks.

1,222,819. RAILROAD-TIE. WILLIAM H. UMBEL, Uniontown, Pa. Filed May 23, 1916. Serial No. 99,358. (Cl. 238—5.)



A railroad tie, including a body open at its ends and top, two blocks removably mounted in each open end, co-operating means carried by both blocks and the tie for limiting the inner movement thereof and for holding the blocks from upward movement, cooperating wedging means carried by the blocks and tie body for holding the blocks from longitudinal movement, a rail chair provided by each block, and a cover for the tie body carried by each block.

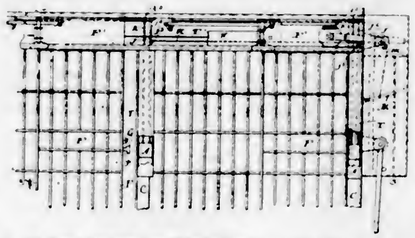
1,222,820. DOOR-OPERATING MECHANISM. HARRY C. UMPLEBY, Angelica, N. Y., assignor of one-third to Frank E. Bentley and one-third to Reynolds R. Maxsen, Angelica, N. Y. Filed Sept. 18, 1916. Serial No. 120,709. (Cl. 268—5.)



1. In combination with a body having a door opening, a door mounted for swinging movement at the opening, a latch bolt mounted for movement on the body and adapted to engage the door, a bar pivoted on the body and having a pin and slot connection with the bolt, a spring interposed between the bar and bolt, and a lever operated mechanism connected with the door and the bar.

2. In combination with a body having a door opening, a door mounted for swinging movement at the opening, a latch bolt mounted for movement on the body and adapted to engage the door, a bar pivoted on the body and having a pin-and-slot connection with the bolt, a collar adjustably mounted on the bar, a spring carried by the collar and engaging the bolt, and a lever operated mechanism connected with the door and the bar.

1,222,821. LOCK MECHANISM FOR CELL-DOORS. JAMES H. VAN DORN AND JOHN T. WHITEHOUSE, Cleveland, Ohio, assignors to The Van Dorn Iron Works Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 18, 1913. Serial No. 785,273. (Cl. 70—102.)



1. In door locking mechanism, the combination of a lock case having in one wall a hole for the passage of the bolt, a spring actuated pivoted latch within said lock case, a spring actuated pivoted bolt hole guard located within the lock case, means for moving the latch in the bolt releasing direction, and independent means for moving the bolt hole guard to the open position.

2. In door locking mechanism, the combination of a lock case having in one wall a hole for the passage of the bolt, a spring actuated pivoted latch within said lock case, a spring actuated pivoted bolt hole guard located within the lock case, means for moving the latch in the bolt releasing direction, and independent means for moving the bolt hole guard to the open position, two trains of mechanism extending out of the lock case to distant operating positions, one of said trains of mechanism having an operative connection with the means for moving the bolt-hole guard to the open position, and one of said trains of mechanism having an operative connection with the means for moving the latch in the bolt releasing direction.

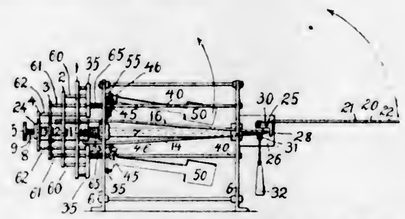
3. In door locking mechanism, the combination of a lock case having in one wall an opening for the passage of the bolt, with a spring actuated latch, and a bolt-hole guard, both pivoted within the latch case on the same pivot rod, the bolt-hole guard having an open center in which the latch is movable, means for moving the latch in the bolt releasing direction, means for moving the bolt-hole guard to the open position, a spring for moving said guard to the bolt-hole closing position, and means for locking said bolt hole guard in the bolt-hole closing positions.

4. In door locking mechanism, the combination of a lock case having in one wall an opening for the passage of the bolt, with a spring actuated latch pivoted within said case, a spring actuated bolt-hole guard also pivoted within said case, a vertical rock-shaft entering into the case and having therein an arm for engagement with the bolt-hole guard to move it to the open position, and interlocking hooks, one carried by the bolt-hole guard, and one by said rock-shaft, whereby the bolt-hole guard will be locked in the hole closing position.

5. In door locking mechanism, the combination of a lock case having in one wall an opening for the passage of the bolt, with a spring actuated latch and a spring actuated bolt-hole guard, both located within said case, two vertical rock shafts entering the case, one carrying an arm for engagement with the latch to open the same, and one carrying an arm for engagement with the bolt-hole guard to open it, an arm fixed to the rock-shaft which is associated with the latch, which arm is provided with a shoulder, a spring actuated trigger adapted to engage said shoulder to hold the latch in the bolt releasing position, an operating arm fixed to the upper end of the other rock shaft, a sliding door carrying a notched bolt adapted to enter the hole in the lock case, and carrying also a rod arranged to engage the arm attached to the shaft which operates the bolt-hole guard and to likewise engage said trigger.

[Claims 6 and 7 not printed in the Gazette.]

1,222,822. SELF-INDICATING TARGET. ANTON VANGEN, Vestfossen, Norway. Filed Aug. 23, 1916. Serial No. 116,567. (Cl. 124—15.)



1. A self indicating target comprising a plurality of target sections capable of axial and tilting movements, means actuated by the axial movement to indicate the section hit, and means actuated by the tilting movement to indicate the part of the section hit.

2. A self indicating target comprising a plurality of annular section adapted to be tilted and moved axially when hit, separate indicators for each section actuated by the axial movement of the latter and independent indicators actuated by the tilting movement of the sections.

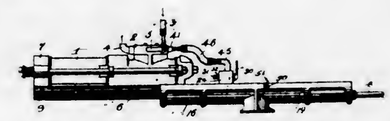
3. A self-indicating target comprising a plurality of annular sections adapted to be tilted and moved axially when hit, separate indicators for each section actuated by by the axial movement of the latter, and independent indicators common to all the sections actuated by the tilting movement of the sections for the purpose specified.

4. A self-indicating target comprising a plurality of annular sections adapted to be tilted and moved axially when hit, separate pivoted indicators for each section, rods for actuating the indicators operable by the axial movement of the different sections, independent indicators common to all the sections, and actuating rods for the independent indicators operable by the tilting movement of the sections.

5. A self-indicating target comprising a plurality of annular sections adapted to be tilted and moved axially when hit, a pivoted indicator for each section, rods operable by the axial movement of the different sections for actuating said indicators, one of the indicators being operable by the movement of one of the sections independently of the other sections and indicators, and means actuated by the tilting movement to indicate the part of the section hit.

[Claims 6 to 12 not printed in the Gazette.]

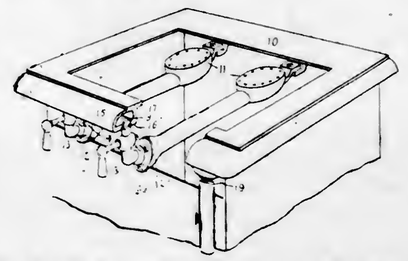
1,222,823. PNEUMATIC DRILL. JAMES C. H. VAUGHT, New York, N. Y. Filed Oct. 23, 1915. Serial No. 57,585. (Cl. 121—10.)



1. In a drilling machine of the pneumatic hammer type, and in combination with a shell or support, a double acting or reversible air feed mechanism including a cylinder, a piston in said cylinder, said cylinder being provided with a valve chest, a two throw valve for said valve chest, said valve chest being secured to said cylinder and located upon the upper or top side thereof, and a trough secured to the top of said feed cylinder to provide a passage to carry the air pressure to the front and rear ends of the feed cylinder, said feed cylinder also being provided with ports or openings at its extreme ends to admit the air pressure alternately to the opposite ends of the piston, said valve, air pasages and piston working separately and independently of the pneumatic hammer whether the hammer is operating or idle.

2. In a drilling machine of the pneumatic hammer type, a double acting or reversible air feed mechanism including a cylinder, a piston for said cylinder, said cylinder being provided with a valve chest, a two throw valve for said valve chest, said valve chest being secured to said feed cylinder, a trough secured to said feed cylinder, said trough being in communication with ducts or ports in said valve chest to convey the air pressure to the opposite ends of said cylinder, said trough and valve chest being located on the exterior of said feed cylinder, and means for controlling said valve, air passages and piston separately and independently of the pneumatic hammer whether the pneumatic hammer is operating or idle.

1,222,824. GAS-STOVE, (MANIFOLD.) ARTHUR W. WALKER, Malden, Mass., assignor to Walker and Pratt Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 26, 1914. Serial No. 814,314. (Cl. 126—39.)



In a stove, the combination of a supporting frame at the top of the stove comprising rails surrounding a burner

opening, one of the rails having a cored gas supply passage therein; and a burner under the burner opening having one end supported by the cored rail and connected with the passage therein.

1,222,825. TAMPON OR PESSARY. HARVEY W. WALTER, Peoria, Ill. Filed July 2, 1915. Serial No. 37,085. (Cl. 128—21.)



1. An article of the character described, including a core of absorbent material and a surrounding cup-like layer or shell of elastic fibrous and non-absorbent material, having its open end extending beyond the end of the core, so that an entrance opening is formed therein leading to said core.

2. An article of the character described, including a tampon or packing of absorbent material, and a surrounding shell or layer of elastic and non-absorbent material, and an additional shell or layer of absorbent material about said elastic or non-absorbent material.

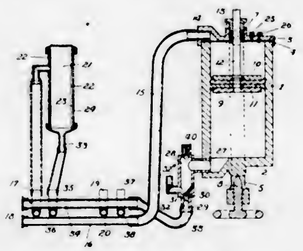
3. An article of the character described, including a pear-shaped tampon or packing of absorbent material, and a surrounding cup shaped shell of fibrous elastic and non-absorbent material with its edge normally extending above the outer end of said tampon or packing.

4. An article of the character described, including a tampon or packing of absorbent material, a surrounding shell or layer of fibrous elastic and non-absorbent material, an outer shell or layer of absorbent material, and soluble means for holding said shells in a compressed condition.

5. An article of the character described, including a solid tampon or packing of absorbent cotton, a shell or layer of lamb's wool surrounding said tampon, and an outer shell or layer of absorbent cotton.

[Claim 6 not printed in the Gazette.]

1,222,826. MILKING-MACHINE APPARATUS. JOHN WILFRED LLEWELLYN WARREN, Auckland, New Zealand. Filed Aug. 30, 1913. Serial No. 787,407. (Cl. 31—100.)

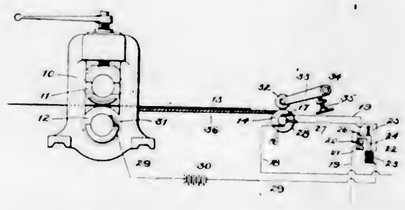


1. Milking apparatus comprising in combination a teat cup having an external casing and an internal flexible lining and pumping means communicating with the space between the said flexible lining and the said external casing said pumping means being adapted to transmit pulsations to said flexible lining and to draw milk into said pumping means and discharge the same therefrom.

2. Milking apparatus comprising in combination a set of teat cups each having an external casing and an internal flexible lining and pumping means, including a pump cylinder communicating at one end with the space between the said flexible lining and the said external casing, said pumping means being adapted to transmit pulsations to said flexible lining and to draw milk into and discharge the same from the other end of the cylinder of the pumping means.

3. Milking apparatus comprising in combination, a set of teat cups, a flexible lining arranged in each cup and so located as to form an annular space with the casing of said cup, suction nipples to said teat cups, a pump, connecting means extending from said suction nipples to one end of the pump cylinder, connecting means extending from said annular space of the teat cups to the other end of the pump cylinder, a valve chamber in said first-mentioned connecting means, and a milk delivery pipe, the movement of the pump piston in one direction producing a pressure against the lining in the teat cups and simultaneously creating a vacuum in the interior of the teat cups causing milk to flow through the valve chamber into the pump cylinder, the return movement of the piston causing a vacuum in the annular space of the teat cups simultaneously discharging the milk through the valve chamber into the delivery pipe.

1,222,827. COILING APPARATUS. WILLIAM R. WEBSTER, Bridgeport, Conn., assignor to Bridgeport Brass Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Jan. 9, 1913. Serial No. 741,074. (Cl. 242—78.)



1. In coiling apparatus, the combination of a magnetically controlled block, an energizing circuit therefor, and a controlling circuit for said energizing circuit including the metal strip being coiled, said controlling circuit being closed automatically by contact of the end of the strip with the body of the block; substantially as described.

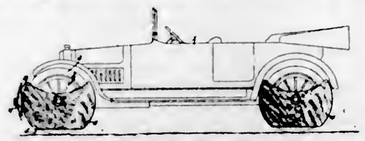
2. The combination with a rotary block, and means from which the stock may be fed thereto, of electromagnetic means controlled by direct contact of the stock with the body portion of the rotating block for effecting the attachment of the stock to the block; substantially as described.

3. In coiling apparatus, the combination of a rotary block on which the stock is adapted to be attached and wound, means for feeding the stock toward the block, and means comprising an electric circuit including the stock itself and closed by the stock when the forward end of the stock makes contact with the body portion of the block for causing the stock to be attached to the block; substantially as described.

4. In coiling apparatus, the combination of a rotary block, a strip guide in front of the same, means controlled by contact of the forward end of the strip with the body of the block for securing the strip on the block by magnetic attraction, and a presser roller for holding the forward end of the strip in contact with the block; substantially as described.

5. In coiling apparatus, the combination of a rotary block, a strip guide in front of the same, means controlled by contact of the forward end of the strip with the body of the block for securing the strip on the block by magnetic attraction, and a presser roller for holding the forward end of the strip in contact with the block, said presser roller constructed and arranged to bear on the coil as the same increases in diameter; substantially as described.

1,222,828. SAFETY DEVICE FOR AUTOMOBILES. HYMAN WEINBERG and CHARLES WEINBERG, Brooklyn, N. Y. Filed May 31, 1916. Serial No. 100,801. (Cl. 21—90.)



1. In a safety device for vehicles, a guard for each wheel, each of said guards being provided with a surrounding member for substantially covering the wheel while allowing the wheel to act in its usual capacity, a sliding member arranged on each of said guards, a wheel connected with the lower part of said sliding member and adapted to engage the ground and act as an anti-skidding device and an emergency wheel, a spring for resiliently holding the wheel against the ground when acting as an anti-skidding device, and means for raising and lowering the wheel and holding the same in place when acting as an emergency wheel.

2. In a safety device of the character described, a guard adapted to surround each wheel, each of said guards being provided with a slideway, a sliding bar arranged in said slideway, a wheel pivotally mounted at the lower end of said bar, a spring for resiliently holding said bar and wheel in a lowered position so as to cause the wheel to act as an anti-skidding device, a rack arranged on one side of said sliding bar, and means acting on said rack for raising and lowering the same and for holding the same together with said bar and wheel in any adjusted position.

3. In a safety device for vehicles, a guard substantially surrounding each of the front wheels, a brake shoe arranged interiorly of the front part of each of said guards, a sliding bar extending through the front of each of said guards for supporting said brake shoe, a buffer member connected with each of said sliding bars, a spring for resiliently holding said buffer member in a predetermined position and said brake shoes away from the wheels surrounded by said guards, and a transverse bar for connecting said buffer members, whereby when said buffer members or said transverse bars are pressed the same will cause said brake shoes to engage the front wheels and act as a brake therefor.

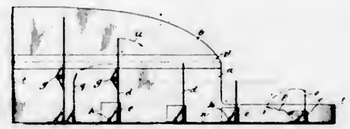
4. In a safety device for vehicles, a guard substantially surrounding each wheel individually, a plurality of emergency wheels, means for slidingly connecting one of said emergency wheels with each of said guards, a rack connected with each of said means, a gear wheel meshing with each of said racks, a ratchet wheel connected with each of said gear wheels, and a pair of oppositely acting pawls for controlling the rotation of said ratchet wheels, said ratchet wheels having squared tool receiving extensions.

5. In a safety device for vehicles, a guard substantially surrounding each of the front wheels of said vehicle, a brake shoe arranged interiorly of the front part of each of said guards, a sliding bar extending through the front of each of said guards for supporting said brake shoes, a buffer member connected with each of said sliding bars, and a spring for resiliently holding said buffer members in a predetermined position and said brake shoes away from the wheels surrounded by said guards, whereby when said buffer members are pressed the same will cause said brake shoes to engage said front wheels and act as a brake therefor.

1,222,829. MECHANICAL TOY OR GAME. SHELDON S. WELLS, New York, N. Y. Filed September 8, 1915. Serial No. 49,424. (Cl. 46—59.)

1. A game comprising a target element composed of relatively movable sections, said element being arranged to assume an upstanding position and be overturned by a projectile striking it, and means for causing the sections to relatively move when the target element is overturned.

2. A game comprising a target element composed of relatively movable sections having hinge mountings and connections to permit their swinging in opposite directions, said element being arranged to assume an upstanding position and being overturned by a projectile striking it, and means for causing the sections to relatively swing in opposite directions, when the target element is overturned.



3. A game comprising a support, a target element composed of sections, a hinge connection between the lower section and support that permits said section to swing in one direction, and a hinge connection between the sections that permits one of said sections to swing in an opposite direction.

4. A game comprising a support, a target element composed of sections, a hinge connection between the lower section and support that permits said section to swing in one direction, a hinge connection between the sections that permits one of said sections to swing in an opposite direction, and means for causing the last mentioned section to positively swing in said opposite direction when the lower section is swung.

5. A game comprising a support, a plurality of target elements mounted on the support and arranged to be overturned when struck by a target, the length of one target element being greater than the distance between it and the next target element, and means for preventing the first mentioned target element striking the other when overturned.

[Claims 6 to 9 not printed in the Gazette.]

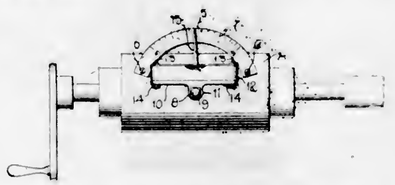
1,222,830. METHOD OF TREATING CEREALS AND CEREAL PRODUCTS. ERNEST E. WERNER, Indianapolis, Ind. Filed May 13, 1913. Serial No. 767,403. (Cl. 83—28.)

1. The process of treating cereals or cereal products by adding to them ammonium persulfate.

2. The process of treating cereals by steeping them prior to grinding in a liquid containing ammonium persulfate, $(NH_4)_2S_2O_8$.

3. The process of treating cereals by steeping them prior to grinding in a liquid containing ammonium persulfate and phosphoric acid, H_3PO_4, or P_2O_5.

1,222,831. INCLINOMETER. DANIEL MORGAN WILCOX, Krebs, Okla. Filed June 15, 1916. Serial No. 103,843. (Cl. 33—213.)



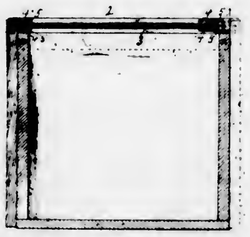
1. An inclinometer including a fixed degree scale, an oscillatably mounted supporting plate, a bubble case removably secured upon said supporting plate, and a pointer detachably fixed to the supporting plate and movable over the degree scale.

2. The combination with a boring tool having a fixed pivot stud projecting from its body, of a plate removably mounted intermediate of its ends upon said pivot stud, a bubble case fixed upon said plate, a graduated degree scale secured to the body of the tool, and an index element de-

tachably secured to said plate and movable therewith with respect to the scale.

3. The combination with a boring tool having a fixed pivot stud projecting from its body, of a plate provided with a boss intermediate of its ends loosely mounted to oscillate upon said stud, a bubble case secured upon said plate, a graduated degree scale fixed to the tool body, an index element provided with an opening in one end for engagement upon one end of said boss, and an attaching screw for said element having threaded engagement in the plate in spaced relation to said boss to detachably secure the index element thereto for oscillation with the plate.

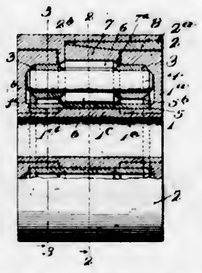
1,222,832. CLOSURE. JOHN F. WILHELM, Washington, D. C. Filed May 1, 1915. Serial No. 25,209. (Cl. 217—59.)



1. A closure adapted to the use of boxes comprising tracks on the ends of the box, and a double faced box lid with projections on the opposite corners of the said lid, the said projections engaging the tracks and rotatable therein the said tracks adapted to shift to extend beyond either the front or rear of the box as desired providing the means for the said projections to slide and carry the box lid to the opposite side of the box.

2. A closure adapted to the use of boxes comprising reciprocating sliding tracks movable beyond the front and rear of the box and a slidable double faced box lid, projections on the opposite corners of the said lid engaging the said sliding tracks and freely rotatable at any position in the said tracks providing the means for opening the box lid by a sliding or a rotatable action from either side of the box and reversing the box lid.

1,222,833. ROLLER-BEARING. ALBERT P. WILLS, New York, N. Y. Filed July 14, 1913. Serial No. 779,036. (Cl. 64—61.)



1. A roller-bearing device including a primary element, a secondary element, a plurality of interposed rolling elements, and a plurality of encompassing elements, one of which is deformable whereby when moved in relation to another of the encompassing elements some of the rolling elements are pressed outwardly away from the common axis of said encompassing elements and into contacting relationship with the secondary element in such manner that the contacting surfaces of said rolling and primary elements are in convex-concave relationship.

2. A roller-bearing device including a primary element, a secondary element, a plurality of interposed rolling elements, and a plurality of encompassing elements, one of which is deformable whereby, when moved in relation to another of the encompassing elements, pressure is exerted on some of the rolling elements which in turn effect a corresponding pressure on other of said rolling elements to press them outwardly with respect to the common axis of the primary and secondary elements.

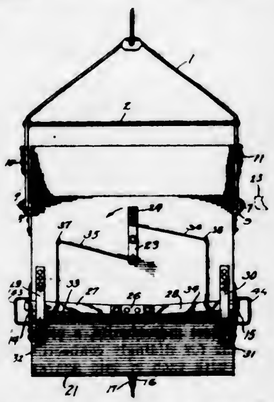
3. A roller-bearing device including a primary element, a secondary element, a plurality of interposed rolling elements, and a plurality of encompassing elements, movable relatively to exert pressure through the interposed elements upon one of the other elements outwardly with respect to the common axis of the primary and secondary elements.

4. A roller bearing structure including a primary element, a secondary element, track elements, and roller elements, some of which track only internally on some of said track elements and others track only internally on another of said track elements.

5. A roller-bearing structure including a primary element, a secondary element, and rolling elements tracking on internal surfaces of said elements and independent of the other surfaces of said elements.

[Claims 6 to 15 not printed in the Gazette.]

1,222,834. HOISTING-BUCKET. JOHN H. WILSON, San Mateo, Cal. Filed Feb. 14, 1916. Serial No. 78,100. (Cl. 37—54.)



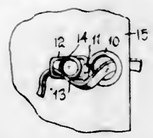
1. In a hoisting bucket a scraper, rigid latch arms connected therewith, a cover formed to fit the scraper, and pivoted thereto, pivoted latches on the cover to coöperate with the latch arms, springs to hold the latches in engagement with the latch arms, a pivoted plate on the cover, and cables connecting said plate and latches for releasing the latches.

2. In a hoisting bucket a scraper, rigid latch arms connected therewith, a cover formed to fit the scraper, and pivoted thereto, pivoted latches on the cover to coöperate with the latch arms, springs to hold the latches in engagement with the latch arms, a pivoted plate on the cover, connections between the pivoted plate and latches whereby the latches may be operated and guards adjacent each latch to prevent the latches from being accidentally disengaged.

1,222,835. LACE-FASTENER. DAVE WINBRAY, Hot Springs, Ark. Filed May 24, 1916. Serial No. 99,640. (Cl. 24—120.)

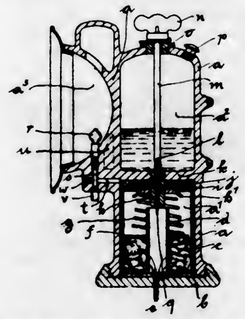
1. The combination with an eyelet, of a lace fastener coacting therewith comprising a member hingedly mounted on the eyelet and carrying a split ring on its under face adapted to be forced into the eyelet, said member having an opening for the passage of a lace.

2. The combination with an eyelet provided with a bead, of a loop having a portion thereof passing through the bead to thereby afford a hinged connection thereto, and a resilient member carried by said loop and adapted to be forced into the opening of the eyelet.



3. The combination with an eyelet provided with a bead, of a loop having a portion thereof passing through the bead to thereby afford a hinged connection thereto, and a resilient member carried by said loop and adapted to be forced into the opening of the eyelet, said member having the form of a split ring, the split in the ring being disposed at the side of the loop.

1,222,836. CYCLE-LAMP. FRIEDERICK WINDHAUSEN, Dusseldorf, Germany, assignor to the Firm of Laternen-Vertriebs-Gesellschaft mit beschränkter Haftung, Cologne, Germany. Filed Jan. 24, 1916. Serial No. 74,014. (Cl. 240—1.)

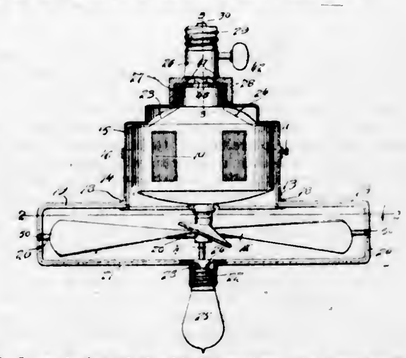


A casted acetylene lamp comprising a body portion including an upper water chamber, a reflector integral therewith, a lower carbid chamber integral with the water chamber and in communication therewith, the lower end of said carbid chamber having a threaded periphery, and a threaded closure adapted to coöperate with the threaded periphery of the carbid chamber for securing the same thereto.

1,222,837. PORTABLE ELECTRICAL DEVICE. ELBERT R. WINSLOW and CLYDE A. JONES, Kearney, Nebr. Filed Mar. 20, 1916. Serial No. 85,440. (Cl. 172—36.)

1. In a portable electrical device of the kind described, the combination with a motor driven fan and an electric light connected to the frame of said fan, of a socket projecting upwardly from said fan frame and adapted to be removably engaged with an incandescent light socket to support said device and to make electrical contact therewith, independent circuit wires extending from the electric light to a pair of contacts in the first named socket, a second pair of independent circuit wires running from the fan to a second pair of contacts also in the socket, and a circuit closing device adapted to optionally close the circuit through the electric light, the fan or through both.

2. In a portable electrical device of the kind described, the combination with a motor driven fan and an electric light, of a casing inclosing the motor of said fan and supporting said light, a socket projecting upwardly from said casing to sustain both fan and light from an incandescent light socket and to supply them with an electric current, circuit wires from the motor secured to terminals within the first-named socket, separate circuit wires from the electric light also entering said socket and secured to other terminals, and a circuit closing device adapted to engage said terminals for optionally energizing the fan or the electric light, or energizing both fan and light.



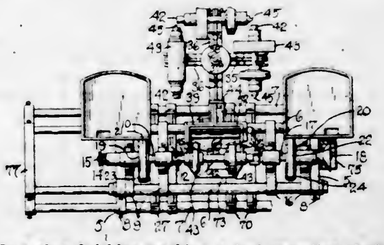
3. In a device of the kind described, the combination with an electric light and a motor driven fan, of a casing for the motor of said fan, and a socket projecting upwardly from said casing, a socket for the electric light, tubular supports connected to the motor casing and to the lamp socket looper around said fan, circuit wires from the motor connected to terminals within said socket, circuit wires from the lamp passing through said tubular supports into the motor casing and thence to terminals in the socket, and a sliding member adapted to make contact with one or both sets of terminals.

4. In a device of the kind described, the combination with an electric light and a motor driven fan, of a casing inclosing the motor of said fan and a socket projecting upwardly from said casing, a socket for said electric light, a tubular frame supporting said lamp socket attached to the motor casing, said frame being looped around the fan, independent circuits from the light and from the fan leading into said socket and there attached to insulated terminals, and means operated by a key adapted to be connected with an electric current for rendering either the light, the fan or both active.

5. The combination of an electric motor and a casing therefor adapted to be connected to an electric lamp socket, a fan driven by the motor, a tubular frame connected to the casing and inclosing the fan, an electric lighting device connected to the frame, an electric circuit extending from the lamp through the tubular frame into said casing, and an electric switch to control the motor.

[Claims 6 to 8 not printed in the Gazette.]

1,222,838. SHOE-FINISHING MACHINE. JOSEPH C. WISE, Quincy, Ill., assignor to Geo. J. Fischer, Quincy, Ill. Filed Oct. 25, 1915. Serial No. 57,773. (Cl. 12—1.)



1. In a shoe finishing machine, a tool operating shaft, a plurality of tools mounted for independent bodily move-

ment with respect to said shaft and means for supporting any one of said tools in position to be operatively connected to said shaft.

2. In a shoe finishing machine, a tool operating shaft, a plurality of tools mounted for independent bodily vertical swinging movement, and means for supporting any one of said tools in position to be operatively connected to said shaft.

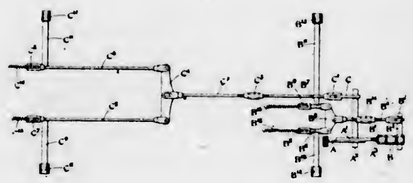
3. In a shoe finishing machine, an operating shaft, a rotatable support, a plurality of tools for independent swinging movement upon said support with respect to said shaft, and additional means for supporting any one of said tools in position to be operatively connected to said shaft.

4. In a shoe finishing machine, an operating shaft, a rotatable support, a plurality of tools mounted upon the said support for bodily movement with respect thereto, each of said tools including a shaft, additional means for supporting the tool shaft in alinement with the operating shaft, means to connect the contiguous ends of said shafts, and additional means permitting the adjustment of the rotatable tool support with respect to the operating shaft.

5. In a shoe finishing machine, an operating shaft, a support, a tool carrier adapted to be arranged upon said support, means for effecting a driving connection between the operating shaft and the tool, and means for locking the tool carrier upon said support against movement with respect thereto to maintain the tool in operative connection with said operating shaft.

[Claims 6 to 32 not printed in the Gazette.]

1,222,839. BRAKE-APPLYING MECHANISM. CHARLES COLEMAN WRIGHT, Parkfield, Princes Risborough, England. Filed July 7, 1913. Serial No. 777,080. (Cl. 21—8.)



1. Brake applying mechanism for vehicles, comprising an operating lever, brakes for the front and rear wheels of the vehicle, means operable from the said operating lever to apply the brakes and for varying the braking effect, substantially as described.

2. Brake applying mechanism for vehicles, comprising an operating lever, brakes for the front and rear wheels of the vehicle, means operable from the said operating lever to apply the brakes successively and for varying the braking effect successively, substantially as described.

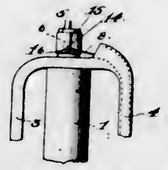
3. Brake applying mechanism for vehicles, comprising an operating lever, brakes for the front and rear wheels of the vehicle, means operable from the said operating lever to apply the brakes to a determined extent, and means for decreasing the braking effect at one or more of the brakes, substantially as described.

4. Brake applying mechanism for vehicles, comprising an operating lever, brakes for the front and rear wheels of the vehicle, means operable from the said operating lever to apply the brakes, and means for establishing a maximum effective power of the brakes in succession, substantially as described.

5. Brake-applying mechanism of the type described comprising a lever, a member operated thereby capable of actuating the brakes first to be applied, and connections between the said lever and the other brakes by which lost motion is permitted during a portion or the whole of the period in which the first applied brakes are being sensibly operated.

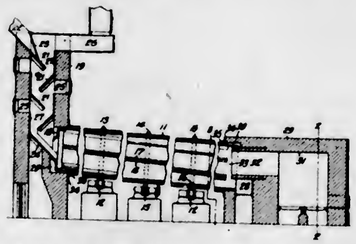
[Claims 6 to 12 not printed in the Gazette.]

1,222,840. SLIVER-CLEANER FOR FLIERS. EDWARD F. BENOIT, New Bedford, Mass. Filed May 31, 1916. Serial No. 100,918. (Cl. 118—57.)



The combination with a flier, said flier having a head provided with an outlet opening to accommodate a sliver, of a scraping member adapted for association with said head, said member being formed of a sheet of metal arcuate in cross section and provided with a slot terminating in an enlarged portion forming an opening for registration with the opening in the head.

1,222,841. DRYING APPARATUS FOR ASBESTOS OR OTHER MATERIAL. JOSEPH N. BOURQUE, Thetford Mines, Quebec, Canada. Filed Feb. 5, 1916. Serial No. 76,491. (Cl. 34—36.)



1. In a device of the character described, a furnace, a tower having a tortuous passage adapted for the movement of solid material by gravity extending downwardly from the top thereof, and a revoluble dry kiln mounted between the base of said tower and the furnace, said tower and kiln forming an outlet flue for the furnace.

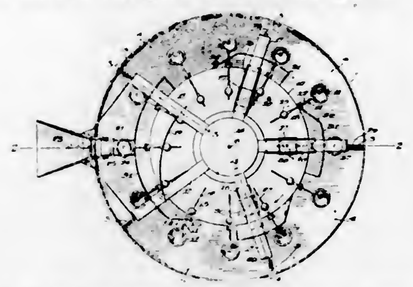
2. In a device of the character described, a tower, baffle plates therein forming a tortuous passage extending downwardly from the tower top, a furnace, a kiln forming connection between the furnace and tower passage, an inlet at the top of the tower, means for preventing the escape of furnace gas through said inlet, and a furnace gas outlet at the top of the tower.

3. In a device of the character described, a rotary kiln inclined slightly from the horizontal, transporting means in said kiln arranged to maintain material passing through the kiln as much as possible in the air, a furnace arranged to discharge hot gases into the lower end of said kiln, a tower arranged to convey furnace gases from the upper end of said kiln and to discharge material into the kiln, and means in said tower arranged to retard the passage of material and furnace gases sufficiently to effect a rough-drying and slight preheating of the material prior to entry into the kiln.

4. In a device of the character described, a revoluble shell inclined slightly from the horizontal, longitudinally disposed ribs projecting from the inner surface of said shell, and curved transporting plates carried by said ribs arranged in the form of a worm and adapted to uniformly distribute material passing through the kiln and maintain the progress thereof from the upper to the lower end of the kiln at low speed.

1,222,842. AUTOMATIC SCALE-WEIGHT FRUIT AND VEGETABLE SIZER. ORIN N. BOYER, Ontario, Oreg. Filed Mar. 13, 1916. Serial No. 83,995. (Cl. 130—32.)

1. A vegetable or fruit grading machine comprising a rotating table, a plurality of radially disposed levers fulcrumed on said table, fruit or vegetable receivers on said levers, balancing weights slidable on said levers, radially disposed tracks above the table, cams mounted slidably on said tracks for shifting the weights along the levers, and means for holding said cams in adjusted position.



2. A fruit or vegetable separator comprising a rotating table, a plurality of radially disposed levers fulcrumed thereon, fruit or vegetable receivers on said levers, balancing weights slidable along said levers, radiating arms spaced above the table, tracks carried by said arms and extending longitudinally thereof, carriages slidable on said tracks, cams carried by said carriages for shifting the weights along the levers, and means for holding said carriages in adjusted position.

3. A fruit or vegetable separator comprising a rotating table, a plurality of radially disposed levers fulcrumed on said table, fruit or vegetable receivers carried by said levers, means for overbalancing the receivers when the latter are loaded, and means for slowly decreasing the power of said balancing means to permit the loads of the receivers to tilt the levers to discharge their loads; in combination with cams spaced circumferentially around the edge of the table for returning the levers to normal position after they have tilted to discharge the loads of the receivers.

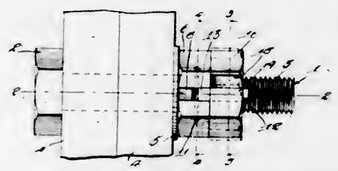
4. A fruit or vegetable separator comprising a rotating table, radially disposed levers fulcrumed on said table, fruit or vegetable receivers on said levers, balancing weights slidable on said levers, means for moving said weights along the levers as the table rotates to permit the load of the receivers to over-balance said weights, and means for returning said levers to normal position; in combination with a spirally arranged cam plate for returning the weights to the inner ends of the levers at the completion of each revolution of the table, a pivotal mounting for one end of said plate, and means for permitting radial adjustment of the other end of said plate.

5. A fruit and vegetable separator comprising a traveling support, a plurality of levers fulcrumed on said support and extending transversely of the direction of travel thereof, fruit or vegetable receivers carried by said levers, weights slidable on said levers for overbalancing the receivers when the latter are loaded, tracks spaced above the traveling support and extending transversely of the direction of travel thereof, carriages slidable on said tracks, cams carried by said carriages for shifting the weights along the levers to decrease the balancing power thereof, and means for holding said carriages in adjusted position.

[Claims 6 to 7 not printed in the Gazette.]

1,222,843. NUT-LOCK. FILLMORE W. BAICE, Mer Rouge, La., assignor of one-third to James M. Hollingsworth, Mer Rouge, La. Filed May 15, 1916. Serial No. 97,694. (Cl. 151—17.)

1. In a nut lock of the class described, the combination of a bolt having right and left hand intersecting threads, a primary nut threaded upon said bolt, an auxiliary nut threaded upon said bolt, said nuts being oppositely threaded, said primary nut being provided with a substantially L-shaped pocket formed adjacent its periphery, said pocket having an abutment bridge, said auxiliary nut having a notch extending inwardly from its periphery, said auxiliary nut having a lip overhanging the inner portions of said notch, thereby forming a substantially L-shaped notch, a key comprising an elongated body having beveled corners in diagonal relation, an offset extension formed upon the inner end of said key, whereby the inner end of said body will be provided with an abutment shoulder, said offset extension fitting within the outer portions of said L-shaped pocket of said primary nut, means for pivotally securing said key to said primary nut, said body of said key being adapted to be swung into the notch of said auxiliary nut and then moved under said lip, whereby said key will be held against accidental displacement and said nuts will be held from accidentally rotating, the beveled corners of said body being adapted to permit the movement of said key under said lip.

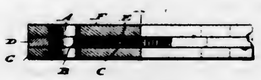


2. In a nut lock of the class described, the combination of a bolt having oppositely extending threads, a primary nut and an auxiliary nut carried by said bolt, said nuts being oppositely threaded, said auxiliary nut having a notch, said auxiliary nut having a lip overhanging the inner portions of said notch, a key pivotally mounted upon said primary nut, said key being adapted to be swung into said notch and then moved under said lip, whereby said key will be held within said notch, thereby holding said nuts against accidental rotation.

3. In a nut lock of the class described, the combination of a bolt having right and left threads, a primary nut and an auxiliary nut carried by said bolt, said auxiliary nut having a notch formed therein, said auxiliary nut also having a lip overhanging a part of said notch, an elongated key pivotally mounted upon said primary nut, said key having rounded corners, said key being adapted to be swung into said notch, said rounded corners permitting the key to be moved under said lip, whereby said key will be held from accidentally disengaging said auxiliary nut, and said nuts will be held against accidental rotation.

4. In a nut lock of the class described, the combination of a bolt having right and left threads, a primary nut and an auxiliary nut carried by said bolt, said auxiliary nut having a notch formed therein, said auxiliary nut also having a lip overhanging a part of said notch, said primary nut having a pocket formed therein, a key pivotally mounted within said socket, said key comprising a body having an offset extension, whereby said key may be swung so as to cause said extension to fit within said notch and move under said lip, whereby said key will be held in a set position, and said nuts will be held against accidental displacement.

1,222,844. DISPLAY-RACK. DANIEL H. CALDEMEYER, Evansville, Ind. Filed May 29, 1916. Serial No. 100,571. (Cl. 211—17.)

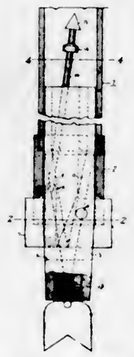


1. A display rack comprising three members arranged in superposed relation having a handle-receiving opening therethrough, the intermediate member being provided with a guiding or cut-out portion, a clamping block movable in, and whose edges are guided by, said cut-out portion, the outermost members serving as guides for the

faces of said block, a spring for projecting the block into the opening first-named, and means for limiting the projected movement of said block.

2. A display rack comprising three members arranged in superposed relation having a pair of handle-receiving openings therethrough, the intermediate member being provided with a pair of connected guiding or cut-out portions which intersect the openings aforesaid, clamping blocks movable in, and whose edges are guided by, said cut-out portions, the outermost members serving as guides for the faces of said blocks, and a spring interposed between said blocks and serving as a common means for projecting them.

1,222,845. DETACHABLE DRILL-BIT. DAVID A. CARDEN, Houston, Tex. Filed Mar. 23, 1916. Serial No. 86,147. (Cl. 255—76.)



1. A device of the character described including a supporting block, a bit secured thereto, a member pivoted to the block and whose ends project out laterally and seat in corresponding notches in the lower end of the drill stem.

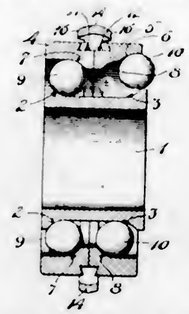
2. A device of the character described including a supporting block adapted to be inserted in a drill stem, a drill bit secured thereto, a member pivoted to the block whose ends project out laterally beyond said block and seat in alined notches in the lower end of the drill stem.

3. In a device of the character described the combination with a drill stem having oppositely arranged notches in its lower end, of a supporting block having a transverse slot therethrough, a member pivoted to said block and operating in said slot, the ends of said member normally projecting laterally beyond the block and resting in said notches, means whereby said member may be rotated on its pivotal support and thereby withdrawn within said slot.

4. In a device of the character described, the combination with a drill stem having oppositely arranged notches in its lower end, of a supporting block adapted to be inserted within said stem and having a slot therethrough, a drill bit carried by said supporting block, a member extending transversely through said slot and pivoted eccentrically therein, the ends of said member projecting beyond said block and being received by said notches and means attached to said member whereby it may be rotated on its pivotal support.

5. A device of the character described including a drill stem having oppositely arranged notches in its lower end, a supporting block having a transverse slot therethrough, a bit carried by said block, a member normally extending transversely through said slot and whose ends project laterally beyond the block when in said transverse position and are received by said notches, said member being pivoted eccentrically in said slot, means attached to said member whereby it may be rotated on its pivotal support and a fishing tool arranged to engage with said means to withdraw said device through said drill stem.

1,222,846. BALL-BEARING. CARL A. CARLSON, New Britain, Conn., assignor to the Fafnir Bearing Company, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 15, 1917. Serial No. 142,358. (Cl. 64—30.)



1. A ball bearing comprising a channeled member having annular shoulders to provide thrust receiving ball tracks, a pair of bearing members concentrically arranged with respect to said chaneled member and having annular ball tracks confronting the ball tracks of said channeled member, said bearing members being displaceable axially toward each other to permit balls to be introduced between confronting ball tracks, two sets of balls between said confronting sets of ball tracks and spreading means for said bearing members comprising a hard metal spreading member permanently secured between the axially displaceable bearing members to hold the same spaced apart to maintain the respective ball tracks thereon in proper operative relation with the confronting ball tracks on the other bearing member, said parts being constructed to enable the insertion and deformation of said spreading member between said axially displaceable bearing members in the act of assembling the bearing.

2. A ball bearing comprising a bearing member provided with two spaced ball races, a coöperating bearing member composed of a plurality of axially displaceable rings each conatructed to provide a ball race to coöperate with one of the ball races on the first mentioned bearing member, two rows of balls in the spaces between cooperating ball races, a non-removable hard metal spacing member between said two rings operating to hold the same at a fixed operative relation to cause the companion ball races to properly engage said two rows of balls and means permanently securing said hard metal spacing member in spacing position between the two rings of the two-part bearing member.

3. In a ball bearing of the double row type, two annular bearing members having two sets of ball races to receive two rows of balls, one of said bearing members comprising two rings axially displaceable to permit of the assembling of the bearing when said rings are brought together, a hard metal deformable spacing device, the two ring bearing member having a recess to receive said spacing member, the bottom of said recess forming a supporting platform for said deformable spacing member.

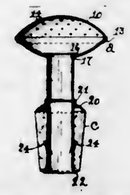
4. In a ball bearing of the double row type, two annular bearing members having two sets of ball races to receive two rows of balls, one of said bearing members comprising two rings axially displaceable to permit of the assembling of the bearing when said rings are brought together, a hard metal spacing device, the two ring bearing member having a recess to receive said spacing member, the bottom of said recess forming a supporting platform for said spacing member, the opposite edges of said recess being undercut, said spacing member projecting into said undercut portions.

5. In a ball bearing of the double row type, two annular bearing members having two sets of ball races to receive two rows of balls, one of said bearing members comprising two rings axially displaceable to permit of the assembling of the bearing when said rings are brought together,

a hard metal spacing device, the two ring bearing member having a recess to receive said spacing member, the bottom of said recess forming a supporting platform for said spacing member, the opposite edges of said recess being undercut, said spacing member projecting into said undercut portions and means for preventing the independent rotation of said rings.

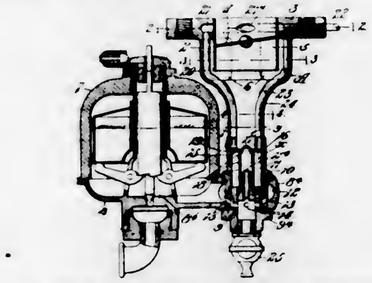
[Claims 6 to 11 are not printed in the Gazette.]

1,222,847. SPRINKLING DEVICE. LEWIS A. CARPENTER and RICHARD MIDDLETON, Revere, Mass. Filed May 7, 1913. Seral No. 766,040. (Cl. 137—83.)



In a device of the character described, a head composed of an upper member having a plurality of perforations, a lower member secured liquid-tight to said upper member, a tube extended from said lower member and provided at its lower end with an outwardly extended flange and between its ends with an outwardly extended bead and between said bead and flange with pointed cut portions which are bent outwardly, a collar on said tube engaging said bead on its underside, and a sleeve of resilient material on said tube and confined against longitudinal movement thereon by said flange and said collar and bead and against rotary movement by said outwardly extending cut portions which penetrate into said sleeve.

1,222,848. CARBURETER. WILLIAM C. CARTER, St. Louis, Mo., assignor to Carter Carburetor Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 8, 1913. Serial No. 788,632. (Cl. 261—41.)



1. A carbureter provided with an accelerating reservoir that holds the fuel which is supplied to the motor until comparatively high speed is attained, a vertically-disposed nozzle arranged inside of said reservoir and provided at its upper end with a discharge opening through which fuel is discharged into the air passageway of the carbureter, said nozzle having a plurality of ports located at different levels, a port for supplying liquid fuel to said nozzle, and an air supply duct having its upper end terminating in the air passageway of the carbureter and its lower end communicating with said accelerating reservoir above the level of the fuel therein so as to cause the suction on said supply port to vary as the level of the fuel in said accelerating reservoir varies.

2. A carbureter provided with an accelerating reservoir from which the supply of fuel is drawn until comparatively high speed is attained, a vertically-disposed nozzle arranged inside of said reservoir and provided at its upper end with a discharge opening and at its side with a plurality of ports located at different levels, a port for supplying liquid fuel to said nozzle, means for supplying air to said accelerating reservoir above the level of the fuel therein so as to cause the suction on said supply port to vary as the level of the fuel in said accelerating reservoir varies, and a starting reservoir from which fuel is drawn to start the engine and to maintain the engine in operation when it is running idle and at slow engine speeds.

3. A carbureter provided with a starting reservoir and an accelerating reservoir arranged in such a manner that the fuel will be drawn from said starting reservoir when the motor is cranked and from said accelerating reservoir when the motor is running at intermediate speeds, said accelerating reservoir communicating with the atmosphere, a nozzle in said accelerating reservoir which supplies liquid fuel to said starting reservoir under certain conditions, said nozzle being arranged so that the fuel will be drawn directly from same by the suction created in the carbureter at intermediate and high speeds of the motor, and being provided with a plurality of ports located at different levels, whereby varying quantities of fuel will enter said nozzle from the accelerating reservoir as the level of the fuel in said reservoir varies.

4. A carbureter provided with a starting reservoir and an accelerating reservoir arranged in such a manner that the fuel will be drawn from said starting reservoir when the motor is cranked and from said accelerating reservoir when the motor is running at intermediate speeds, a nozzle for supplying liquid fuel to both of said reservoirs under certain conditions, said nozzle being arranged so that the fuel will be drawn directly from same into the main air passageway of the carbureter by the suction created at intermediate and high speeds of the motor and said starting reservoir being so arranged with relation to said nozzle that fuel will flow from said nozzle into said starting reservoir by gravity when the motor ceases to operate, a port for supplying fuel to said nozzle, and means for progressively reducing the suction on said fuel-supply port as the speed of the motor increases.

5. A carbureter provided with a float tank, a starting reservoir and an accelerating reservoir arranged in such a manner that gravity causes liquid fuel to enter both of said reservoirs, means whereby cranking of the motor causes the fuel from said starting reservoir to be introduced into the intake pipe of the motor at a point above the throttle valve, and a combined fuel-supply inlet and outlet device for the accelerating reservoir, communicating with the float tank and provided with a number of ports located at different levels.

[Claims 6 to 15 not printed in the Gazette.]

1,222,849. SILO. OSCAR A. COONS, Houston, Tex. Filed Dec. 19, 1914. Serial No. 878,046. (Cl. 217—4.)



A structure of the character described including a foundation, stay bolts secured to and upstanding therefrom and spaced apart, a sectional wall supported by said foundation, annular angle irons surrounding the upper

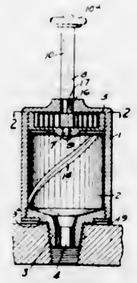
and lower ends, respectively, of the silo fitting over the outer angles thereof and secured thereto, radiating ties secured to the lower band and through which said stay bolts extend and nuts secured upon the upper ends of said bolts and securing said ties against detachment therefrom.

1,222,850. TOGGLE. JOSEPH D. COUGHLIN, Dorchester, Mass., assignor to Federal Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 11, 1915. Serial No. 55,345. Renewed Jan. 31, 1917. Serial No. 146,024. (Cl. 24—129.)



A toggle adapted to grip a rope, consisting of a rigid plate having a depression midway of its length and extending transversely thereof, a tongue struck up from the center of the plate and opposite from the depression, whereby when a rope is placed in the depression and the tongue forced down, the toggle will be held firmly upon the rope.

1,222,851. AUTOMATIC GREASE-CUP. JAMES F. CRAVEN, Pittsburgh, Pa. Filed May 17, 1916. Serial No. 98,026. (Cl. 184—45.)



1. An automatic grease cup, comprising a casing for attachment to the part to be lubricated, a cup-shaped follower rotatable therein, means contained within said follower for rotating the same, and means whereby the rotative movement of said follower produces longitudinal movement of the same in the casing.

2. An automatic grease cup, comprising a casing for attachment to the part to be lubricated, a cup-shaped follower rotatable therein, a coiled spring contained within said follower for rotating the same, and means whereby the rotative movement of said follower produces longitudinal movement of the same in the casing.

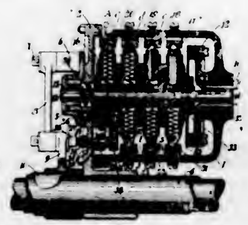
3. An automatic grease cup, comprising a casing for attachment to the part to be lubricated, a member rotatable and longitudinally movable in said casing, a member having longitudinal sliding movement in said casing, and a spring acting on both of said members for moving the same longitudinally in said casing.

4. An automatic grease cup, comprising a casing for attachment to the part to be lubricated, a member rotatable and longitudinally movable in said casing, a member having longitudinal sliding movement in said casing, and a spring connected to both of said members and intended to relatively rotate the same and arranged to simultaneously move the same in said casing.

5. An automatic grease cup, comprising a casing for attachment to the part to be lubricated, a follower rotatable therein, a member having longitudinal sliding movement in said casing, a spring connecting said member and follower for rotating the latter, and means whereby the rotation of said follower produces longitudinal movement of the same in the casing.

[Claim 6 not printed in the Gazette.]

1,222,852. CONTROLLER FOR AND METHOD OF REGULATING ELECTRIC MOTORS. HARRY EUGENE DEY, Jersey City, N. J. Filed Sept. 29, 1914. Serial No. 864,038. (Cl. 172—291.)



1. The method of regulating the speed of a series electric motor, which consists in varying the supply voltage while temporarily maintaining the motor field excited during the circuit change by a source of electromotive force shunted across the field.

2. The method of regulating the speed of a series electric motor, which consists in varying the supply voltage while temporarily maintaining the motor field excited during the circuit change by a storage battery shunted across the field.

3. The method of regulating the speed of a direct current series electric motor between series characteristic and shunt characteristic, which consists in temporarily connecting and disconnecting successively a source of electromotive force in shunt to the field of the motor.

4. The method of regulating the speed of a direct current series electric motor between series characteristic and shunt characteristic, which consists in temporarily connecting and disconnecting successively a storage battery in shunt to the field of the motor.

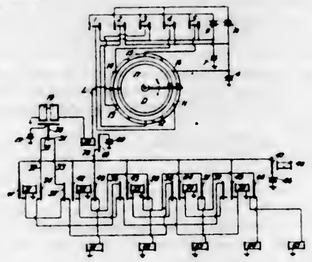
5. The combination with a reversible electric motor, of a permanent series connection of field and armature, separate sources of electromotive force connected to the field and to the armature, and means for reversing the connections of one of the sources of electromotive force, shunted across the field, to change the direction of rotation of the motor.

[Claims 6 to 29 not printed in the Gazette.]

1,222,853. SELECTING SYSTEM. AMOS F. DIXON, Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 11, 1915. Serial No. 50,176. (Cl. 177—253.)

1. A selecting system comprising a plurality of electromagnetically actuated devices, a plurality of selecting mechanisms, an electromagnet responsive to all current impulses received for effecting the successive operation of said devices in invariable order, and means responsive only to certain impulses and successively associated with said mechanisms by said devices for selectively affecting said mechanisms.

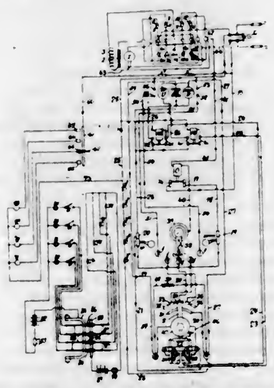
2. A selecting system comprising a plurality of relays, selecting mechanisms, an electromagnet characteristically responsive to signal current impulses of both polarities and coöperating with said relays to cause said relays to be successively operated, and a second electromagnet responsive only to current impulses with certain characteristics and adapted to be brought successively into operative relation with said mechanisms by said relays, whereby various combinations of current impulses variably affect said mechanisms.



3. A selecting system comprising a series of selecting mechanisms, means characteristically responsive to current impulses of certain characteristics, and a series of relays adapted to operate in predetermined sequence and to successively associate said means with said mechanisms, the last relay of the series bringing the last two of said series of mechanisms into operative relation with said means.

4. A selecting system comprising a plurality of selecting mechanisms, means characteristically responsive to current impulses of certain characteristics, a condenser, and a plurality of relays divided into groups, the relays of one group being energized by the charge of said condenser and those of another group being energized by the discharge thereof, said relays acting sequentially to bring said mechanisms successively under the control of said means.

1,222,854. OPERATING BOX-CONTROLLED DUMB-WAITER SYSTEM. EDWARD L. DUNN, Worcester, Mass., assignor, by mesne assignments, to Standard Plunger Elevator Company, of Worcester, Mass., a Corporation of Massachusetts. Filed Sept. 10, 1913. Serial No. 789,015. (Cl. 177—336.)



1. The combination with a hoisting mechanism and a dumbwaiter car, of a relatively stationary controller for starting and automatically stopping the car at any desired floor, and an instruction communication system between said controller station and the respective floors comprising a transmitting speaking device at each floor, a single receiving speaking device adjacent said controller, circuit controlling means adjacent each floor transmitting device, and a controlling switch adjacent said receiving device for selectively cutting out a plurality of said floor transmitting devices.

2. The combination with a hoisting mechanism and a dumbwaiter car, of a relatively stationary controller for starting and automatically stopping the car at any desired floor, and an instruction communication system between said controller station and the respective floors for directing the operation of a plurality of cars comprising a transmitting speaking device at each floor, a single receiving speaking device adjacent said controller, circuit controlling means adjacent each floor transmitting device, a single transmitting speaking device adjacent said controller, circuits therefrom to the respective floors, receiving speaking devices at said respective floors, and a controlling switch adjacent said receiving device for selectively cutting out a plurality of said floor transmitting devices.

3. The combination with a hoisting mechanism and a car, of a controller for starting and stopping the car at any desired floor, and an instruction communication system between said controller location and the respective floors comprising a transmitting speaking device at each floor, a single receiving speaking device adjacent said controller, circuit controlling means adjacent each floor transmitting device, a single transmitting speaking device adjacent said controller, circuits therefrom to the respective floors, a receiving speaking device at said respective floors, and a controlling switch adjacent said receiving device for selectively cutting out a plurality of said floor transmitting and receiving speaking devices.

4. The combination with a hoisting mechanism and a car, of an operating controller for starting the car and automatically stopping it at a predetermined floor, a receiving speaking device adjacent said controller, a plurality of circuits from said device to the respective floors at which the car is to stop, transmitting speaking devices in said circuits at the respective floors, a selective switch adjacent said operating box for cutting out all but one of said circuits independently of said receiving speaking device, and a switch at each floor controlling the circuit of its transmitting speaking device to said receiving speaking device adjacent said controller.

5. The combination with a hoisting mechanism and a car, of an operating controller for starting the car and automatically stopping it at a predetermined floor, a receiving speaking device adjacent said controller, a circuit from said device to each of the floors at which the car is to stop, transmitting speaking devices for said circuits at the respective floors, a transmitting speaking device adjacent said controlling means and having a separate circuit to each of the floors at which the car is to stop, a receiving speaking device in each of said circuits at said floors, and a selective switch adjacent said operating box for cutting out all but one of said transmitting circuits from said floors and a corresponding transmitting circuit from said operating station to said floor.

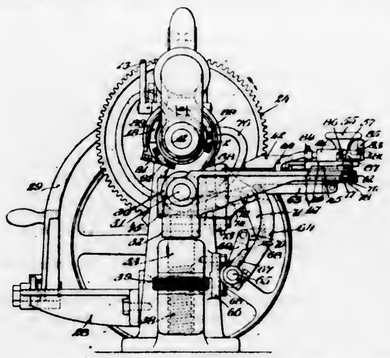
[Claims 6 to 15 not printed in the Gazette.]

1,222,855. MACHINE FOR OPERATING ON THE SOLES OF BOOTS AND SHOES. HARRISON H. EATON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 8, 1912. Serial No. 714,004. (Cl. 12—40.)

1. An insole slashing machine having, in combination, a tool for forming a slashed area in one face of an insole, a plurality of pushers arranged to engage the edge of the insole and feed the insole to the slashing tool, a gage for one end of the insole, and connected mechanism for adjusting the gage and pushers to properly locate the slashed area on different sizes of insoles, substantially as described.

2. A machine for operating on soles, having in combination, an operating tool, gages for determining the initial position of the sole with relation to the operating tool,

means for adjusting the gages both laterally and longitudinally, and connecting mechanism for causing a simultaneous lateral and longitudinal adjustment of the gages, substantially as described.



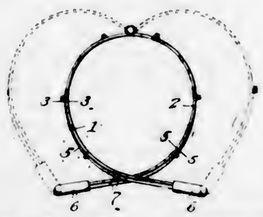
3. A machine for operating on soles, having in combination, an operating tool, gages contacting with the side of the sole at opposite ends to position the sole laterally, means for adjusting the gages laterally of the sole, and connecting mechanism acting to secure a differential adjustment of the gages, substantially as described.

4. A machine for operating on soles, having in combination, an operating tool, a gage for determining the longitudinal position of the sole, gages for determining the lateral position of the sole, adjusting means for the gages, and connecting mechanism for causing a simultaneous adjustment of all the gages to properly position varying sizes of soles, substantially as described.

5. A machine for operating on soles having, in combination, an operating tool, a gage arranged to engage one end of a sole, a pusher arranged to engage the forepart of the sole, a second pusher arranged to engage the shank of the sole, and a single means for simultaneously adjusting the gage and pushers to properly position different sizes of soles for the operation of the operating tool, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,222,856. SHOCK-BINDER. HOWARD C. ENGLAND, Lisbon, Md. Filed Sept. 10, 1915. Serial No. 50,049. (Cl. 100—31.)



1. A shock binder including two segmental members hinged together and adapted to encircle a shock, and ratchet teeth formed adjacent the free end of each member, said free ends being arranged to be drawn past each other to compress the shock and positively lock said ratchets to hold the shock in the compressed condition, substantially as described.

2. A shock binder including two segmental members hinged together and adapted to encircle a shock, ratchet teeth formed adjacent the free end of each member, said free ends being arranged to be drawn past each other to compress the shock and positively lock said ratchets to hold the shock in the compressed condition, and spring clips carried by said members to support a cord in tying relation to the shock, substantially as described.

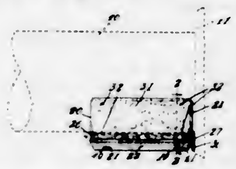
3. A shock binder including two segmental members hinged together and adapted to encircle a shock, means normally springing said members to an open position, and ratchet teeth carried by the free ends of each member, said free ends being arranged to be drawn past each other to compress the shock and lock said ratchets to hold the shock in a compressed condition, substantially as described.

4. A shock binder including two segmental members hinged together and each having a resilient portion adjacent the hinge, said members being adapted to encircle a shock, and ratchet teeth carried by the free end of each member, said free ends being arranged to be drawn past each other to compress the shock and lock said ratchets to hold the shock in the compressed condition, substantially as described.

5. A shock binder including two segmental members hinged together and each having a resilient portion adjacent the hinge and a reinforced rigid portion forming the free end, and ratchet teeth carried by the free end of each member, said free ends being arranged to be drawn past each other to compress the shock and lock said ratchets to hold the shock in the compressed condition, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,222,857. JOURNAL-LUBRICATOR. EDWARD H. ERNST, Waseca, Minn. Filed Sept. 25, 1916. Serial No. 122,097. (Cl. 64—35.)



1. A journal lubricator including a frame, an upper bearing block in said frame, an axle extending through the frame and engaged by the upper bearing block, a bearing cup positioned beneath the axle, said bearing cup constituting a lubricant receptacle having side walls and end walls, one of the end walls being provided with a cutout leading from its upper edge, applying wicks secured to the side walls and one of the end walls of said lubricant cup, the wick of the end wall extending through the cutout thereof and down the outer face of the end wall for applying lubricant to the hub of a wheel carried by said axle, and means for supporting the lower bearing cup beneath the axle and in operative relation thereto.

2. A journal lubricator including a frame, an upper bearing block positioned in said frame, an axle extending through the frame beneath the upper bearing block and in engagement therewith, a lubricant receptacle positioned beneath the axle, and including side walls and end walls, one of the end walls being provided with a cutout leading from its upper edge, applying wicks positioned within the lubricant receptacle for engaging the axle, one of the wicks extending through the cutout of the end wall, and along the outer face of the end wall, and means for holding said receptacle in position beneath the axle.

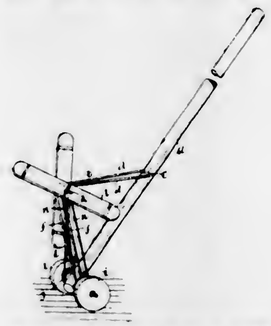
3. A journal lubricator comprising a frame, an upper bearing block in said frame, an axle extending through the frame beneath the bearing block, a lubricant receptacle positioned beneath the axle, applying wicks in said receptacle, one of the wicks extending out of the receptacle for engaging the hub of a wheel carried by said axle, and means for holding said receptacle in place beneath the axle.

4. A journal lubricator comprising a frame, an upper bearing block in said frame, an axle extending beneath said block, a lubricant receptacle beneath said axle including side walls and end walls, applying wicks positioned within the receptacle against the side walls and one of the end walls, the wick of the end wall extending over the same and down against the outer face of the end walls, and means for holding said lubricant receptacle in place beneath the axle.

5. A journal comprising a frame, an axle extending through said frame, a lubricant receptacle extending beneath said axle, lubricant applying means carried by said receptacle and extending out of the same for engaging the hub of a wheel carried by said axle, and means for holding the receptacle in operative relation to said axle.

[Claims 6 to 8 not printed in the Gazette.]

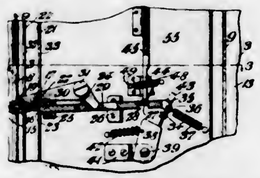
1,222,858. TOY. LOUIS E. ESTLER, Paterson, N. J. Filed Mar. 23, 1916. Serial No. 86,169. (Cl. 46—48.)



1. A toy including, in combination, a frame adapted to be held in the hand in an inclined position, vanes journaled in the frame side by side, and means, including traction means journaled in the lower end of and supporting the frame, for rotating the vanes in reverse directions.

2. A toy including, in combination, a frame, the frame including a rod adapted to be held in the hand at one end, an arched wire support attached at the extremities of its arch to the rod, a member to be rotated journaled in said support between its extremities, and means, including rotary traction means journaled in the frame at the other end of the rod, for moving said member, one extremity of said supporting affording a journal for the rotary traction means.

1,222,859. CHECK-CONTROLLED VENDING-MACHINE. JOHN FRITSCHE, Philadelphia, Pa. Filed June 10, 1916. Serial No. 102,847. (Cl. 194—63.)



1. A device of the character stated, comprising an article receiving casing, an article guide within the casing and extending exterior therefrom, a grasping member for each article to effect its removal, locking mechanism controlling the withdrawal of an article, and means in the path of a grasping member and acutated by it as an article is withdrawn from the casing to automatically effect the relocking of said locking mechanism.

2. A device of the character stated, comprising a casing having a plurality of compartments, an article guide fixed in said compartments and extending exterior of the casing, a grasping member for each article to effect its removal, locking mechanism controlling the withdrawal of an article, and means in the path of a grasping member and actuated by it as an article is withdrawn from the casing to automatically effect the relocking of said locking mechanism.

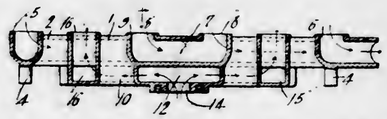
3. A device of the character stated, comprising a casing having a plurality of compartments, and openings therefinto, doors for said openings, an article guide fixed in said compartments and having a portion extending exterior of the casing in proximity to said doors, a grasping member for each article to effect its removal, locking mechanism controlling the withdrawal of an article, and means in the path of a grasping member and actuated by it as an article is withdrawn from the casing to automatically effect the relocking of said locking mechanism.

4. A device of the character stated, comprising a casing, an article guide connected with the casing and extending exterior thereof, a grasping member for each article to effect its removal from the casing and slidable on said article guide, locking mechanism for said grasping members, and means in the path of a grasping member and actuated by it as an article is withdrawn from the casing to unlock said locking mechanism.

5. A device of the character stated, comprising a casing, a retaining device within the casing and extending therefrom, means connected with said retaining device to effect the removal of an article from the casing, locking mechanism for said article removing means, means to lock said mechanism as an article is removed from the casing, and means to effect the unlocking of said mechanism.

[Claims 6 to 14 not printed in the Gazette.]

1,222,860. AUTO ATTACHMENT. LEROY C. GRIFFIN and PRIOR A. JONES, Cairo, Ga. Filed July 11, 1916. Serial No. 108,695. (Cl. 137—75.)

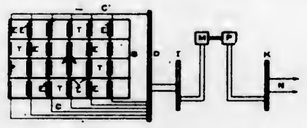


A device of the class described comprising in a one-piece structure, a tubular exhaust manifold and a fuel intake manifold formed integrally with the exhaust manifold and located on the outer side of the exhaust manifold, the intake manifold being shorter than the exhaust manifold and having its ends spaced from the ends of the exhaust manifold, the manifolds being separated by a common integral wall, the manifolds being of equal height and being depressed intermediate their ends to form chambers of the same size and located side by side, one end of the exhaust manifold being open to form an exhaust outlet, both ends of the exhaust manifold being provided with interal inlet ports, the intake manifold being provided at its ends with a pair of lateral outlet ports extended beneath the exhaust manifold and integral therewith to form a reinforcement, the chamber of the exhaust manifold being provided at its ends with a pair of lateral exhaust inlet ports, all of the above specified lateral ports opening at one side of the device, and the chamber of the intake manifold being provided intermediate its ends with a lateral fuel inlet port opening on the opposite side of of the device from the above specified lateral ports.

1,222,861. METHOD OF AND APPARATUS FOR ELECTROTANNING. LORENTZ ALBERT GROTH, London, England. Filed Oct. 5, 1914. Serial No. 865,210. (Cl. 204—27.)

1. In an apparatus for tanning hides or skins, means for suspending the hides or skins in a frame or frames in a tannic electroconductive bath of liquid; horizontally agitating the frame or frames; and automatically varying the density or amperage or pressure or voltage of the current transmitted through the bath according to the conditions obtaining within the bath at the moment, while maintaining the hides or skins immersed in the bath; the

electrolytic tannic bath being divided into a plurality of baths; means for moving the hides or skins in the electrolytic-bath in the plane of such skins or hides while immersed in the liquor; and means for automatically varying the amperage or density, or the pressure or voltage of the current passing through each individual bath of the battery of baths, according to the electrolytic condition obtaining at the moment in such individual bath.



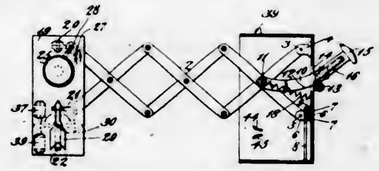
2. The hereinbefore described method of tanning hides and skins, comprising the following steps (1) immersing the same in an electrolytic-bath, for a suitable period during current action; (2) placing the hides or skins in a second electrolytic-bath, and inserting untreated hides or skins in the first-bath, and submitting the skins in the two baths to like treatment for a like synchronous period; (3) shifting the hides or skins again in like manner, and inserting a fresh lot in the first-bath, and repeating the treatment; (4) again shifting the hides or skins and inserting a fresh lot in the first bath, and repeating the treatment, and (5) removing the lot in the fourth bath, shifting, adding a fresh lot to the first bath, and again simultaneously treating, and so continuing.

3. The hereinbefore described method of tanning hides and skins, comprising the following steps (1) immersing the same in an electrolytic-bath, for a suitable period during current action; (2) placing the hides or skins in a second electrolytic-bath, and inserting untreated hides or skins in the first-bath, and submitting the skins in the two baths to like treatment for a like synchronous period; (3) shifting the hides or skins in a like manner, and inserting a fresh lot in the first-bath, and repeating the treatment; (4) again shifting the hides or skins and inserting a fresh lot in the first bath, and repeating the treatment, and (5) removing the lot in the fourth bath, shifting, adding a fresh lot to the first bath, and again simultaneously treating, and so continuing; treating liquor in each bath being of different composition.

4. The hereinbefore described method of tanning hides and skins, comprising the following steps (1) immersing the same in an electrolytic-bath, for a suitable period during current action; (2) placing the hides or skins in a second electrolytic-bath, and inserting untreated hides or skins in the first-bath, and submitting the skins in the two baths to like treatment for a like synchronous period; (3) shifting the hides or skins again in like manner, and inserting a fresh lot in the first bath, and repeating the treatment; (4) again shifting the hides or skins and inserting a fresh lot in the first bath, and repeating the treatment, and (5) removing the lot in the fourth bath, shifting, adding a fresh lot to the first bath, and again simultaneously treating, and so continuing; treating liquor in each bath being of different composition; and the character of the electric current passing through each bath being different.

5. The hereinbefore described method of tanning hides and skins, comprising the following steps (1) immersing the same in an electrolytic-bath, for a suitable period during current action; (2) placing the hides or skins in a second electrolytic-bath, and inserting untreated hides or skins in the first-bath, and submitting the skins in the two baths to like treatment for a like synchronous period; (3) shifting the hides or skins in a like manner, and inserting a fresh lot in the first-bath, and repeating the treatment; (4) again shifting the hides or skins and inserting a fresh lot in the first bath, and repeating the treatment, and (5) removing the lot in the fuorth bath, shifting, adding a fresh lot to the first bath, and again simultaneously treating, and so continuing; treating liquor in each bath being of different composition; the character of the electric current passing through each bath being different; and being automatically varied according to the conditions at the moment obtaining within such particular individual bath.

1,222,862. SIGNALING DEVICE FOR VEHICLES. CHARLES T. HARNED, Palmyra, N. J. Filed Oct. 29, 1915. Serial No. 58,531. (Cl. 116—31.)



1. In a signaling device, a sectional casing, one section of which forms a signal, means to effect relative movement of said sections, and devices common to the signal forming casing section and said means to cause the signal forming section to be partially rotated as it reaches the limit of its forward travel, said means forming the only connection between the sections of said casing.

2. In a signaling device, a casing, a lazy tongs normally concealed within said casing and connected therewith, a closure for said casing forming a signal and to which one front lever of the lazy tongs is connected, a shoe carried by the other front lever of the lazy tongs, and a rod carried by said closure and on which said shoe slides, said rod and shoe coöperating to partially rotate said closure during the movement of said lazy tongs.

3. In a signaling device, a casing, a lazy tongs concealed within the casing and having one rear lever pivotally connected with the casing, a shoe connected with the other rear level, a guide for said shoe, a closure for said casing forming a signal, one front lever of the lazy tongs being connected to said closure, and means common to the other front lever of the lazy tongs and to said closure to cause the closure to be partially rotated during the movement of said lazy tongs.

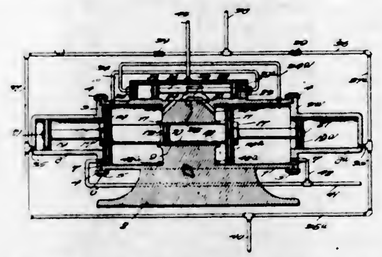
4. In a signaling device, a casing, a lazy tongs having one rear lever connected with the casing, a shoe connected with the other rear lever of the lazy tongs, a guide for said shoe, a signal forming closure for the casing connected with a front lever of the lazy tongs, a shoe carried by the other front lever of the lazy tongs, and a longitudinally distorted rod carried by said closure and engaging said last-named shoe.

5. In a signaling device, a casing, a lazy tongs concealed within the casing and having one rear lever pivotally connected with the casing, a shoe connected with the other rear lever, a guide for said shoe, a closure for said casing forming a signal, one front lever of the lazy tongs being connected to said closure, means common to the other front lever of the lazy tongs and to said closure to cause the closure to be partially rotated during the movement of said lazy tongs, and an actuating lever connected with said lazy tongs and extending exteriorly of the casing.

[Claim 6 not printed in the Gazette.]

1,222,863. ENGINE. JOSEPH LUTHER HART, Chickasha, Okla. Filed July 7, 1915. Serial No. 38,602. (Cl. 121—29.)

1. An engine comprising a cylinder having a transverse diaphragm provided with an axial opening, and dividing the interior of the cylinder into compartments, and having a valve chest at the diaphragm, and ports leading from the several compartments of the cylinder to the chest, the chest having an inlet port and an exhaust port between the first named ports, a piston in the cylinder comprising a rod passing through the opening in the diaphragm, and heads at the ends of the rod fitting the respective compartments, a valve in the valve chest, said valve being slidable in the chest in opposite directions to alternately connect the ports of the compartments with the inlet and exhaust, means for transmitting the pressure from each compartment to the opposite end of the valve chest to move the valve, and a pump connected with each end of the piston and operated thereby.



2. An engine comprising a cylinder having a transverse diaphragm provided with an axial opening, and dividing the interior of the cylinder into compartments, and having a valve chest at the diaphragm, and ports leading from the several compartments of the cylinder to the chest, the chest having an inlet port and an exhaust port between the first named ports, a piston in the cylinder comprising a rod passing through the opening in the diaphragm, and heads at the ends of the rod fitting the respective compartments, a valve in the valve chest, said valve being slidable in the chest in opposite directions to alternately connect the ports of the compartments with the inlet and exhaust, and means for transmitting the pressure from each compartment to the opposite end of the valve chest to move the valve.

3. In an engine, a cylinder having a diaphragm provided with an opening, and dividing the cylinder into compartments, a valve chest at the diaphragm having an inlet and an exhaust port, the compartments having ports leading to the chest, a piston in the cylinder, and comprising a rod passing through the opening of the diaphragm, and provided with heads fitting the compartments, a valve slidable in the chest, and adapted to alternately connect the ports of the compartments with the inlet and exhaust, and means for transmitting the pressure from each compartment to the opposite ends of the valve chest to move the valve.

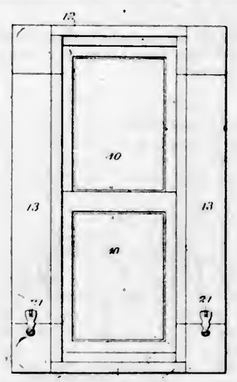
4. An engine comprising a cylinder having a diaphragm dividing the cylinder into compartments, a piston comprising a head in each compartment and rigidly connected with each other, the cylinder having a valve chest, and ports leading from the chest to the compartments at the diaphragm, said chest having an inlet and an exhaust port, a valve slidable in the chest for alternately connecting the ports of the compartments to the inlet and exhaust, and means for transmitting pressure from each compartment to the opposite ends of the valve chest to move the valve.

1,222,864. WINDOW. JOHN P. HASSELMEYER, New York, N. Y. Filed Aug. 28, 1914. Serial No. 859,031. (Cl. 20—45.)

1. In a window, a stationary frame, a pair of swinging frames pivotally mounted therein, sashes sliding therein, a pair of weights for each sash, endless cords secured respectively to the sash and to each weight, said cords passing through leads mounted in swinging frames and at a distance from the pivots.

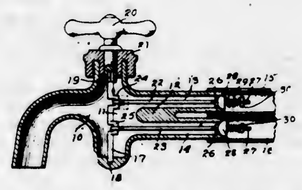
2. In a window, a stationary frame, a pair of swinging frames, pivotally mounted therein, window sashes, cords and weights, the cords and weights securing the sashes to the swinging frames.

3. In a window, a stationary frame, provided with fixed guides for the window sashes, a pair of swinging frames pivotally mounted in the stationary frame, said swinging frames forming guides for the window sashes in alinement with the aforementioned fixed guides, bearings in which the pivots of said frames are removably mounted, sashes mounted in said swinging frames, endless cords securing the sashes respectively to the swinging frames, uprights



hinged to the sides of the stationary frame to hold the swinging frames in upright position and their guides in line with the fixed guides, and means for holding the uprights in open and closed position.

1,222,865. FAUCET. NATHANIEL V. HAUGHTON, Alameda, Cal., assignor of one-half to M. T. Gardiner, San Francisco, Cal. Filed Oct. 29, 1915. Serial No. 58,656. (Cl. 137—26.)

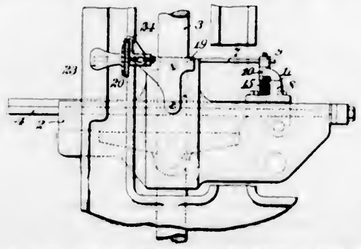


1. A faucet provided with a mixing chamber and having upper and lower inlet passageways communicating with the mixing chamber in superposed relation and provided with valve seats, a crank shaft rotatably mounted in the mixing chamber and having offsets extending at substantially right angles to each other, valve stems having their inner end portions rotatably mounted upon the offsets of the crank shaft and permitting complete rotation of the crank shaft, the valve stems extending through the passageways of the neck beyond the valve seat, valve heads slidably mounted upon the outer end portions of said valve stems, means for limiting the inward movement of said valve heads along said stems, and resilient means engaging said valve heads to yieldably hold the valve heads in engagement with the means for limiting their inward movement, a complete rotation of the crank shaft moving the valve stems first to open one inlet passageway and then the second and then move the valve stem to close the first passageway and then the second.

2. A faucet provided with a mixing chamber and having upper and lower inlets communicating therewith, valve stems extending through the inlets, valve heads slidably mounted upon the outer end portions of the valve stems, and limited in their inward movement along the valve stems, resilient means mounted upon the valve stems and engaging the valve heads to yieldably hold the heads in a set position, an actuating shaft rotatably mounted in the mixing chamber and provided with crank arms extending at substantially right angles to each other, the inner end portions of the valve stems being rotatably mounted upon the crank arms for permitting complete rotation of the

actuating shaft, a complete rotation of the actuating shaft moving the valve stems to move one to a position releasing the valve from a closed position with the second valve in a closed position and then moving the second stem to release its valve with the first valve open, the first valve being then brought to a closed position with the second open and the second then brought to a closed position with the first closed.

1,222,866. SOLE-PRESSING MACHINE. JOHN J. HEYS, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 24, 1915. Serial No. 41,680. (Cl. 12—21.)



1. A sole pressing machine, comprising a horizontally movable sole supporting form, a sole gage movable with the form, a stationary cam for controlling the position of the gage with relation to the form, and means for adjusting the position of the cam to control the position of the gage with relation to the form.

2. A sole pressing machine, comprising a sole supporting form, an arm pivoted at one end, a gage supported upon the free end of the arm in operative relation to the form, a cam for controlling the position of the gage, and means normally tending to maintain the gage in engagement with the cam.

3. A sole pressing machine, comprising a sole supporting form, a gage supported in operative relation to the form, a cam for determining the position of the gage, a sliding shaft supporting the cam, and a rotary adjusting member conveniently accessible to the operator for actuating the sliding shaft.

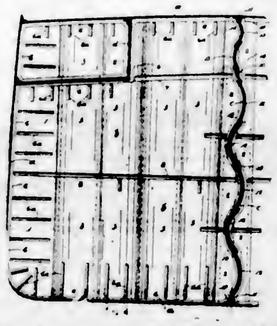
4. A sole pressing machine, comprising a horizontally movable sole supporting form, a gage member supported in operative relation to the form, a slide rod, a cam mounted upon the slide rod, a rotary adjusting member having a spiral slot formed therein, and a pin projecting from the slide rod and received in the spiral slot of the adjusting member.

5. A sole pressing machine, comprising a vertically movable crosshead, a form supported upon the crosshead, a gage, a bracket secured to the crosshead, a slide rod supported in the bracket, a cam for controlling the position of the gage mounted upon the end of the slide rod, and means for r oving the slide rod in a lengthwise direction.

[Claims 6 to 9 not printed in the Gazette.]

1,222,867. VESSEL-BULKHEAD. ARCHIBALD HOGG, Walker, Newcastle-upon-Tyne, England. Filed Dec. 21, 1915. Serial No. 67,967. (Cl. 114—78.)

1. A bulkhead construction for ships comprising a transverse bulkhead formed of flat plates and curved plates disposed so that the curves of adjacent plates are reversed, the flat plates lying at the edges of the bulkhead parallel with the crests and valleys of the curved plates, the arc of each plate curve being limited in extent to not more than one third of a circle and the width distance between adjacent curve crests exceeding four times the depth distance from crest to reversed crest, flanged joints between said flat plates and curved plates, and a continuous four-sided boundary frame comprising at least one angle bar, two sides of said frame being formed with broad shallow undulations which enter the undulations of the curved plates of the bulkhead, said frame being attached on all four sides both to the bulkhead and to the hull of the ship, all as set forth in the specification.



2. A bulkhead construction for ships comprising a transverse bulkhead formed of flat plates and curved plates disposed so that the curves of adjacent plates are reversed, the flat plates lying at the edges of the bulkhead parallel with the crests and valleys of the curved plates, the arc of each plate curve being limited in extent to not more than one third of a circle and the width distance between adjacent curve crests exceeding four times the depth distance from crest to reversed crest, flanged joints between said flat plates and curved plates, and a continuous four-sided boundary frame comprising at least one angle bar, two sides of said frame being formed with broad shallow undulations which enter the undulations of the curved plates of the bulkhead, said frame being attached on all four sides both to the bulkhead and to the hull of the ship, and not less than one support placed transversely of the crests and valleys of the curved plates, said support entering the undulations thereof and being connected to the plating of the transverse bulkhead and the hull of the ship, all as set forth in the specification.

3. A bulkhead construction for ships comprising a transverse bulkhead formed of flat plates and curved plates disposed so that the curves of adjacent plates are reversed, the flat plates lying intermediate of the curved plates and at the edges of the bulkhead parallel with the crests and valleys of the curved plates, the arc of each plate curve being limited in extent to not more than one third of a circuit and the width distance between adjacent curve crests exceeding four times the depth distance from crest to reversed crest, flanged joints between said flat plates and curved plates, and a continuous four-sided boundary frame comprising at least one angle bar, two sides of said frame being formed with broad shallow undulations which enter the undulations of the curved plates of the bulkhead, said frame being attached on all four sides both to the bulkhead and to the hull of the ship, and a longitudinal bulkhead abutting against the intermediate flat plates of said transverse bulkhead, said longitudinal bulkhead being formed of flat plates and curved plates of the same limited curvature as the curved plates of said transverse bulkhead, flanged joints between the flat plates and curved plates of the longitudinal bulkhead, and means for attaching the longitudinal bulkhead to the transverse bulkhead and to the hull of the ship, all as set forth in the specification.

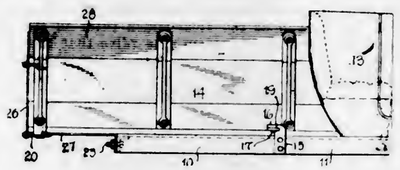
4. A bulkhead construction for ships comprising a transverse bulkhead formed of flat plates and curved plates disposed so that the curves of adjacent plates are reversed, the flat plates lying intermediate of the curved plates and at the edges of the bulkhead parallel with the crests and valleys of the curved plates, the arc of each plate curve being limited in extent to not more than one third of a circle and the width distance between adjacent curve crests exceeding four times the depth distance from crest to reversed crest, flanged joints between said flat

plates and curved plates, and a continuous four-sided boundary frame comprising at least one angle bar, two sides of said frame being formed with broad shallow undulations which enter the undulations of the curved plates of the bulkhead, said frame being attached on all four sides both to the bulkhead and to the hull of the ship, and a longitudinal bulkhead abutting against the intermediate flat plates of said transverse bulkhead, said longitudinal bulkhead being formed of flat plates and curved plates of the same limited curvature as the curved plates of said transverse bulkhead, flanged joints between the flat plates and curved plates of the longitudinal bulkhead, and means for attaching the longitudinal bulkhead to the transverse bulkhead and to the hull of the ship, and not less than one support placed transversely of the crests and valleys of the curved plates, said support entering the undulations thereof and being connected to the plating of the transverse bulkhead and the hull of the ship, all as set forth in the specification.

5. A bulkhead construction for ships comprising a transverse bulkhead formed of flat plates and curved plates disposed so that the curves of adjacent plates are reversed, the flat plates lying intermediate of the curved plates and at the edges of the bulkhead parallel with the crests and valleys of the curved plates, the arc of each plate curve being limited in extent to not more than one third of a circle and the width distance between adjacent curve crests exceeding four times the depth distance from crest to reversed crest, flanged joints between said flat plates and curved plates, and a continuous four-sided boundary frame comprising at least one angle bar, two sides of said frame being formed with broad shallow undulations which enter the undulations of the curved plates of the bulkhead, said frame being attached on all four sides both to the bulkhead and to the hull of the ship, and not less than one support placed transversely of the crests and valleys of the curved plates, said support entering the undulations thereof and being connected to the plating of the transverse bulkhead and the hull of the ship, and a longitudinal bulkhead abutting against the intermediate flat plates of said transverse bulkhead, said longitudinal bulkhead being formed of flat plates and curved plates of the same limited curvature as the curved plates of said transverse bulkhead, flanged joints between the flat plates and curved plates of the longitudinal bulkhead, and means for attaching the longitudinal bulkhead to the transverse bulkhead and to the hull of the ship, all as set forth in the specification.

[Claim 6 not printed in the Gazette.]

1,222,868. DETACHABLE VEHICLE-BODY. JOHN W. HOLLAND, Kelso, Tenn. Filed Apr. 26, 1916. Serial No. 93,738. (Cl. 21—7.)



1. Means for detachably connecting a wagon body to a vehicle bed comprising a pair of hooks adapted to be attached to the sides of the bed and having rearwardly projecting bills, and a T-shaped iron adapted to be attached to the bottom of a wagon body, the lateral ends of the T-shaped iron being engageable with said hooks, the rear end of the T-shaped iron being downwardly bent and perforated for engagement with an attaching bolt.

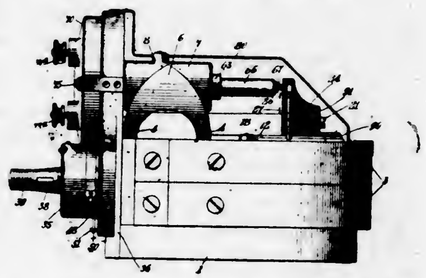
2. The combination with a vehicle frame or bed having upwardly extending laterally disposed hooks formed with rearwardly extending bills, of a wagon body having laterally projecting members engageable beneath the bills of the hooks, and means at the rear end of the wagon body for detachably connecting said rear end to the rear end of the frame and preventing rearward movement of the body relative to the frame.

3. The combination with a vehicle frame having laterally disposed hooks attached thereto and formed with rearwardly extending bills, of a wagon body having a transverse bar the ends of which project beyond the body and are adapted to engage beneath said bills, and a member attached to the rear end of the body extending downward from the bottom thereof and adapted to be disposed against the rear end of the frame, and a fastening device detachably connecting said member to the rear end of the frame.

4. The combination with a vehicle frame or bed having laterally disposed irons formed at their upper ends with rearwardly extending hook-shaped terminals, the bills of said terminals extending rearward, of a body having a transverse bar attached to the bottom thereof, the ends of which are adapted to extend beneath said bills, the rear end of the body having an iron attached thereto formed with a downwardly extending terminal end adapted to abut against the rear end of the bed or frame when the bar is in engagement with said first-named iron, and a bolt passing through the rear end of the frame and engaging said downwardly turned terminal end.

5. The combination with a vehicle frame or bed, and upwardly extending laterally disposed irons on said bed, each of said irons being bent to form a hook having a rearwardly extending bill, of a wagon body removably disposed upon said frame or bed having a transversely extending bar at its forward end projecting beyond the sides of the wagon body and engageable with said hook-shaped irons and beneath the bills thereof, the rear end of the body having an iron applied to the bottom thereof, having a downwardly extending terminal end adapted to abut against the rear end of the frame, and detachably bolted thereto.

1,222,869. MAGNETO. FRANCIS R. HOYT, East Orange, N. J., assignor to The Simms Magneto Company, East Orange, N. J., a Corporation of New York. Filed Feb. 15, 1916. Serial No. 78,345. (Cl. 123—149.)



1. In a magneto electric machine the combination with a field magnet having stationary pole shoes, of a core provided with parallel opposed pole portions interposed between the magnet pole shoes, a coil surrounding portions of said core, said pole shoes and pole portions being disposed concentrically around a common axial line and a rotary magnetic reversing device having its axis of rotation coincident with said axial line located between said pole shoes and pole portions and provided with separated portions of magnetic material for reversing the direction of magnetic flux through said separated portions of the rotary device and through said core, the pole portions of said core being movable laterally in curved paths concentric with said axial line.

2. In a magneto electric machine the combination with a permanent field magnet having parallel limbs provided with stationary pole shoes, said pole shoes having curved inner faces concentric with an axial line parallel with and between the limbs of the field magnet, of a rotary magnetic

reversing device arranged between said pole shoes and having its axis of rotation coincident with said axial line, a normally stationary core having parallel portions extending on opposite sides of said rotary device and parallel with the axis thereof, a coil surrounding portions of said core, said core and coil being pivotally mounted concentrically with said axial line whereby the pole portions of said core may be moved laterally in curved paths concentric with said axial line.

3. In a magneto electric machine the combination with a field magnet having parallel limbs provided with stationary pole shoes, of a rotary magnetic reversing device having its axis of rotation disposed centrally between said pole shoes and extending parallel with the limbs of the field magnets, a normally stationary core having parallel pole portions disposed parallel to and on opposite sides of the axis of said rotary reversing device, and a transversely disposed portion connecting said parallel pole portions and lying between the limbs of the field magnet and disposed transversely thereof and a coil surrounding portions of said core, pivotal supporting means for said core and coil, concentric with the axis of rotation of said rotary reversing device, and means for rocking said core and coil so as to move the pole portions of the core laterally in curved paths concentric with said axis, said rotary device being provided with separated portions of magnetic material.

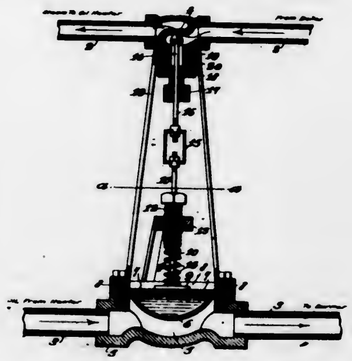
4. In a magneto electric machine the combination with field magnets provided with horizontally disposed parallel portions, stationary pole shoes secured to said parallel portions of the magnets and having their inner faces curved concentrically with an axial line parallel with and located between the parallel portions of the magnets, a rotary magnetic reversing device arranged between said pole shoes and having its axis of rotation coincident with said axial line, a normally stationary core structure having parallel portions on opposite sides of the rotary device and parallel with the axis thereof, a coil surrounding portions of said core and comprising a primary winding and a secondary winding, pivotal supporting means for said core structure and coil concentric with the axis of rotation of said rotary device, a periodic interrupter electrically connected with the primary winding, a distributer, a stationarily supported collecting brush connected with said distributer, and a segmental contact carried by said core structure and curved concentrically with the pivotal axis thereof, and engaging said brush and means for rocking said core structure and coil upon its pivotal supporting means.

5. In a magneto electric machine the combination with a main frame provided with separated supporting devices having opposed curved portions concentric with a common axis, a field magnet having parallel portions located on opposite sides of and parallel with said axis, stationary pole shoes secured to said parallel portions of the magnet adjacent to said supports, a core structure provided with parallel pole portions disposed on opposite sides of and parallel to said axis, supporting means for said core structure having exterior curved surfaces concentric with and engaging the curved surfaces of said supports, a coil surrounding portions of said core structure, and a rotary magnetic reversing device located within said supporting means provided with separated portions of magnetic material, said rotary device being located between the pole portions of said core and the pole shoes of said magnet.

[Claim 6 not printed in the Gazette.]

1,222,870. THERMOSTAT FOR OIL-HEATING MEANS. LESLIE A. IVANY, Vancouver, British Columbia, Canada. Filed Feb. 2, 1916. Serial No. 75,877. (Cl. 236—6.)

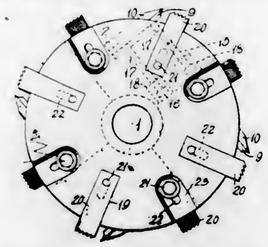
1. Means for controlling the temperature of oil for combustion, said means comprising the combination with a steam pipe delivering steam to an oil heater, and a pipe delivering oil from the heater to the burner, of a valve in the steam pipe controlling the passage of steam therethrough, a chamber through which the oil to the burner passes, a container exposed to the oil in the chamber one side of which container is flexible, said chamber charged with a fluid having a high ratio of expansion under heat, means for connecting the flexible side of the container to the valve of the steam pipe whereby outward movement of the flexible side of the container will operate to close the valve, said connecting means comprising a stem on said valve, an extension stem engaging the flexible side of said container, an adjustable turn-buckle connection between said stems, a spring for maintaining the engagement of said extension stem with said flexible side of said container, means for adjusting the tension of said spring, said tension adjusting means comprising a screw adapted to press against said spring, said screw being bored to permit passage of and having a passage for said extension stem, and means for supporting said valve and said container to maintain alinement of said stems.



2. A device of the class described, comprising the combination with a steam pipe delivering steam to an oil heater and a pipe delivering oil from the heater to the burner, of a valve in the steam pipe controlling the passage of steam therethrough to the heater, an open ended chamber through which the oil pipe to the burner delivers from the heater, a container having a substantially rigid side which closes the open end of the chamber, and a flexible side externally exposed to the air, said container charged with a fluid having a high ratio of expansion, a stem the end of which rests on the flexible side of the container, said stem endwise movable in a screw threaded into a support secured to the container, a spring between the end of this screw and a washer secured on the end of the stem, means for staying the valve of the steam pipe to the container, and means for adjustably connecting the end of the stem which rests on the container to the stem of the steam pipe valve that the valve may be opened when the flexible side of the container is at the inner limit of its movement and will close as it expands outward from that position.

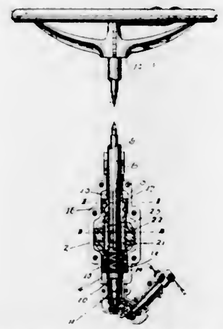
1,222,871. CUTTER-HEAD. EUGENE S. JESSEPH, Detroit, Mich. Filed Sept. 15, 1915. Serial No. 50,729. (Cl. 144—222.)

A cutter head comprising circular members A and B, opposed sector shaped enlargements on the member A providing similarly shaped recesses, each having the rear wall with the outer edge thereof forming part of the periphery of a member, opposed sector shaped enlargements on the member B adapted to fit in the recesses of the member A and provide recesses similar to the recesses of the member A to receive the enlargements of the member A, cutters set in the faces of the enlargements of both members and engaged by the rear walls of the recesses of said members with the cutters of one member positioned to balance the cutters of the other member, a split sleeve between the members A and B surrounded by the enlargements of said members, and means extending transversely of said members connecting said mem-



bers and retaining said members against the ends of said split sleeve.

1,222,872. STEERING-GEAR. JOSEPH P. LAVIGNE, Detroit, Mich. Filed Nov. 27, 1914. Serial No. 874,170. (Cl. 74—79.)



In a steering gear, a casing, a shaft extending longitudinally thereof and of one diameter throughout, sleeves spaced apart on said shaft within said casing and adapted for rotation with said shaft and provided with diamond threads, a sectional nut within said casing having the ends thereof journaled in the ends of said casing, the sections of said nut being in screw threaded engagement with the diamond threads of said sleeves and devoid of screw threads elsewhere whereby one part of said nut is moved in one direction and the other part in another direction by a rotative movement of said shaft, and a rock shaft supported by said casing and having connection with the parts of said nut whereby said shaft is rocked by a movement of the parts of said nut.

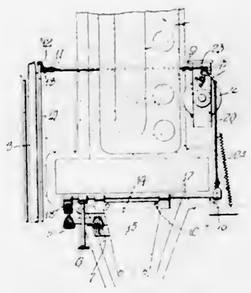
1,222,873. ATTACHMENT TO INVALID-BEDS. JOSEPH H. LEAL, San Francisco, Cal. Filed Mar. 28, 1916. Serial No. 87,173. (Cl. 5—43.)



1. In combination with a bedstead and a head support comprising side pieces pivoted on its side rails, plates removably secured to said side rails, a shaft extending through each plate, an arm carried on one end of each shaft, a roller carried by the outer end of each arm and engaging the corresponding side piece, a spring coiled around the shaft, its inner end being secured to the shaft, means for securing the outer end of the spring to the plate and means carried by said plate for limiting the upward swinging movement of said arm.

2. In combination with a bedstead and a head support comprising side pieces pivoted on its side rails, plates removably secured to said side rails, a shaft extending through each plate, an arm carried on one end of each shaft, a roller carried by the outer end of each arm and engaging the corresponding side piece, a spring coiled around the shaft, its inner end being secured to the shaft, means for securing the outer end of the spring to the plate, a sleeve removably secured around one of said side pieces, pins extending from said sleeve and spaced at proper intervals apart, and a finger pivoted on one of said arms and adapted to engage said pins to limit the movement of the side pieces.

1,222,874. AUTOMATIC ACCELERATOR. JOHN H. LEITCH, Detroit, Mich. Filed Sept. 1, 1916. Serial No. 117,971. (Cl. 74—81.)



1. An accelerator for vehicles, comprising—in combination with an engine, a carbureter, a throttle valve crank, steering post means for actuating the crank, and clutch and reverse pedals—a bearing member mounted in proximity to said pedals, a rock shaft journaled in said bearing member, adjustable curved levers on one end of said shaft normally engaging under said pedals, and a connection between the opposite end of said shaft and said throttle valve crank so that the throttle valve crank may be actuated independent of any steering post means.

2. An accelerator for vehicles, comprising—in combination with an engine, a carbureter, a throttle valve crank, steering post means adapted for actuating the crank, and clutch and reverse pedals,—a bearing member mounted in proximity to said pedals, a rock shaft journaled in said bearing members and having an end thereof extending under said pedals, adjustable levers on said rock shaft normally engaging said pedals, a crank carried by said rock shaft, an arm fixed on the throttle valve crank, a reach rod connecting said arm to the crank of said rock shaft, and means for holding said levers normally in engagement with said pedals.

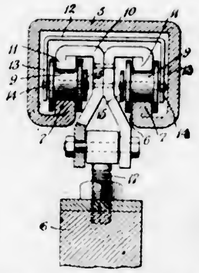
1,222,875. DESURFACER. WILLIAM H. LERCH, Chicago, Ill., assignor to Eugene Dietzgen Company, Chicago, Ill., a Corporation of Illinois. Filed June 9, 1916. Serial No. 102,672. (Cl. 51—6.)

A desurfacer for tracing linen, consisting of a receptacle having a top and bottom, said top being convex and provided with perforations, a cover rotatably mounted on the top end of the receptacle and provided with perforations adapted to be moved into and out of registration with the perforations in the top end of the receptacle, and an

abrading pad fixed on the cover with its rubbing surface conforming to the convexity of the top end of the receptacle and having a central opening therein the wall of which surrounds the perforations in the cover.



1,222,876. DOOR-HANGER. HARRY LEWSON, Brooklyn, N. Y. Filed Feb. 24, 1916. Serial No. 80,286. (Cl. 16—90.)

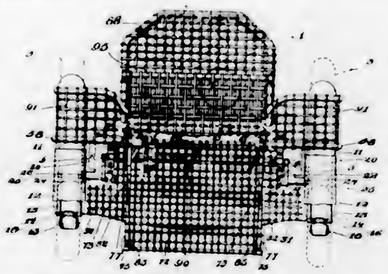


A door hanger comprising a track having a slot and upstanding rails at the opposite edges of said slot, a plurality of grooved rollers traveling on each of said rails, an arched spacing member having a top portion extending over and housing the tops of said rollers and having dependent side portions extending down over the outer sides of the rollers, a plurality of inwardly projecting horizontally disposed pivot pins carried by each of said dependent portions of the arched spacing member on which said grooved rollers are rotatably engaged and a supporting member having an elongated head portion disposed within the arched portion of the spacing member and provided with dependent rails at the opposite sides thereof bearing on top of the grooved rollers and having a dependent supporting portion extending below said head portion down between the two sets of rollers and through the slot between the supporting rails.

1,222,877. FENDER. FREDERICK LILLICH, Philadelphia, Pa. Original application filed Nov. 15, 1915, Serial No. 61,547. Patent No. 1,187,750, dated Aug. 8, 1916. Divided and this application filed Feb. 28, 1916. Serial No. 80,791. (Cl. 105—130.)

1. The combination with a wheeled vehicle, of wheel guards pivotally connected to the vehicle, a shaft connected to the wheel guards, an arm on the shaft, a catch on the arm engaging a fixed part and normally holding the wheel guards in elevated position, and means for adjusting the catch relative to the arm to vary the elevation of the wheel guards, substantially as described.

2. The combination with a wheeled vehicle, of wheel guards pivotally connected to the vehicle, a shaft connected to the wheel guards, an arm on the shaft, a catch on the arm engaging a fixed part and normally holding the wheel guards in elevated position, a bar supporting the catch and movably connected to the arm, said bar having a plurality of notches therein, and a spring bolt on the arm adapted to be positioned in any of the notches to vary the elevation of the wheel guards, substantially as described.



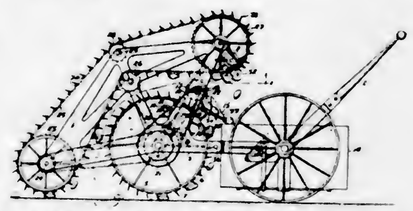
3. The combination with a wheeled vehicle, of wheel guards, pivotally connected to the vehicle, a shaft connected to the wheel guards, an arm on the shaft, a catch on the arm engaging a fixed part and normally holding the wheel guards in elevated position, a bar supporting the catch and movably connected to the arm, said bar having a plurality of notches therein, and a spring bolt on the arm adapted to be positioned in any of the notches to vary the elevation of the wheel guards, means located adjacent the vehicle seat for moving the arm to elevate the wheel guards, and other means located adjacent the vehicle seat for operating the spring bolt, whereby the elevation of the wheel guards may be adjusted from the seat of the vehicle, substantially as described.

4. The combination of a wheeled vehicle, of wheel guards pivotally connected to the vehicle, and having forwardly projecting frames at their lower ends, and flexible shoes secured to the guards and inclosing the frames, substantially as described.

5. The combination of a wheeled vehicle, of wheel guards pivotally connected to the vehicle, and having forwardly projecting frames at their lower ends, flexible shoes secured to the guards and inclosing the frames, and spring tongues secured to the frames and exerting forward pressure on the lower portions of the shoes, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,222,878. FRUIT-GATHERER. PETER H. LINT, Los Gatos, Cal. Filed July 21, 1915. Serial No. 41,087. (Cl. 56—99.)



1. In a machine for gathering fruit and the like from the ground, the combination of parallel bars having picker teeth, means for supporting said bars and for guiding them in succession into proximity with the ground, and an extruder rotatable about an axis eccentric to the path of the bars, and comprising pushers parallel with the bars and arranged to intervene respectively between successive pairs of bars.

2. In a machine for gathering fruit and the like from the ground, the combination of parallel bars having picker teeth, means for supporting said bars and for guiding them in succession into proximity with the ground, and a rotary extruder comprising pushers parallel with and of less length than the bars, and supports for the pushers rotatable about an axis within and eccentric to the path of the bars.

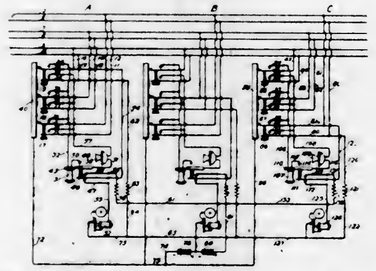
3. In a machine for gathering fruit and the like from the ground, a roller having at its circumference longitudinally extending bars formed with picker teeth, fixed supports within the roller, and an extruder wheel within the roller, rotatably supported by said supports and having pushers, parallel with, and arranged to intervene respectively between, said bars.

4. In a machine for gathering fruit and the like from the ground, a roller having at its circumference longitudinally extending bars formed with picker teeth, fixed supports within the roller, an extruder wheel rotatably mounted on said supports, and the ends of which have outwardly extending fingers, and longitudinal bars connecting the outer ends of said fingers.

5. In a machine for gathering fruit and the like from the ground, a shaft, a roller loosely mounted on said shaft and having at its circumference longitudinally extending bars formed with picker teeth, arms fixedly extending from said shaft within the roller, a shaft connecting the outer ends of said arms, an extruder wheel mounted on said shaft, the ends of which have outwardly extending fingers, and longitudinal bars connecting the outer ends of said fingers.

[Claims 6 to 9 not printed in the Gazette.]

1,222,879. TELEPHONE SYSTEM. ALBEN E. LUNDELL, New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Apr. 17, 1913. Serial No. 761,807. (Cl. 179—40.)



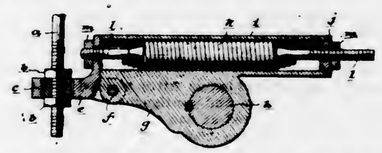
1. In a telephone system, in combination a plurality of line conductors, a plurality of stations interconnected thereby, a source of signaling current and a source of talking current common to said stations, a signal for each of said stations, a tone-producing circuit including the signal for each of said stations, a telephone set for each of said stations, a tone-detecting circuit including a receiver for each of said stations, and switching means at each of said stations for connecting said signal and said receiver in parallel circuits and in bridge on said source of ringing current.

2. In a telephone system, in combination a plurality of line conductors, a plurality of stations interconnected thereby, a source of signaling current and a source of talking current common to said stations, a tone-producing circuit including a signal for each of said stations, a telephone set for each of said stations, a tone-detecting circuit including a receiver for each of said stations, switching means at each of said stations for including said signal and said receiver in parallel circuits and in bridge on said source of ringing current, and means for disconnecting said tone-producing circuit independently of said tone-detecting circuit.

3. In a telephone system, in combination a plurality of line conductors, a plurality of stations interconnected thereby, a source of signaling current and a source of talking current common to said stations, a tone-producing circuit including a signal for each of said stations, a telephone set for each of said stations, a tone-detecting circuit including a receiver for each of said stations, switching means at each of said stations for including said signal and said receiver in parallel circuits and in bridge on said source of signaling current, and means for excluding said tone-detecting circuit from said source of signaling current without disconnecting said tone-producing circuit.

4. In a telephone system, in combination a plurality of line circuits each comprising a pair of wires, a plurality of stations interconnected thereby, a source of signaling current and a source of talking current common to said stations, a signal for each of said stations, a telephone set for each of said stations, switching means at each of said stations for including said telephone set in bridge on said line circuit pairs, switching means at each of said stations for applying said source of signaling current to the signal of another station, and switching means at a responding station constituting a sole means for including said source of talking current in bridge on a line circuit pair irrespective of the position of the circuits at the station calling.

1,222,880. CUSHIONING DEVICE FOR COMBING-NIPPERS. CULLEN L. LITTON, Withers, N. C. Filed Aug. 17, 1916. Serial No. 115,457. (Cl. 19—6.)



1. In a device of the class set forth, a rocking shaft, an arm carried thereby and provided with a tube, an angle lever pivoted to one end of the tube and having one of its arms adapted to close the adjacent end of the tube, a nipper rod connected to the other arm of this angle lever, a closure means at the opposite end of the tube, a coiled spring inclosed within the tube, and tensioning means for the spring connected to the arm of the angle lever which closes one end of the tube.

2. In a device of the class set forth, a tube carried by the rocking nipper shaft, a spring inclosed therein, means for closing the ends of the tube, a nipper rod, and means connecting the same to one end of said spring.

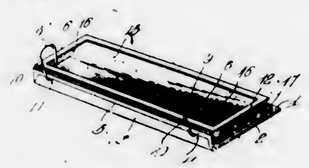
3. In a device of the class set forth, a nipper shaft, a nipper rod and means connecting the shaft to the rod for operating the same, said means embodying a coil spring and tension devices and a tube inclosing the spring and lying horizontally above the nipper shaft.

4. In a device of the class set forth, a rocking nipper shaft, a nipper rod and means connecting the shaft to the rod for operating the same, said means embodying a tube arranged above the shaft and fastened thereto so as to rock therewith, an angle lever pivotally connected to the tube and having an upstanding arm adapted to close the adjacent end of the tube, and another arm connected to the nipper rod, a closure for the opposite end of the tube, and a coil spring inclosed within said tube and connecting said closure to the upstanding end of the lever, for the purpose set forth.

1,222,881. FILING-INDEX. HUGH BOYD MCCULLOUGH, Brockwayville, Pa. Filed Apr. 3, 1916. Serial No. 88,579. (Cl. 129—1.)

1. A device of the class described comprising a base, an upright flange on one of the side edges, a pair of wires projecting upwardly from said base, said wires being bent laterally intermediate their ends, and extending back upon themselves in spaced relation, and the terminals of said wires being positioned adjacent the outer surface of said flange.

2. A device of the class described comprising a base, an upright flange on one of its side edges, a pair of wires projecting upwardly from said base, said wires being bent laterally intermediate their ends and extending back upon themselves in spaced relation, the bent portions of said wires projecting downwardly and inwardly, and the terminals of said portions being bent inwardly and disposed in a plane at right angles to the upright portions of said wires, with their extremities opposite the outer surface of said flange.



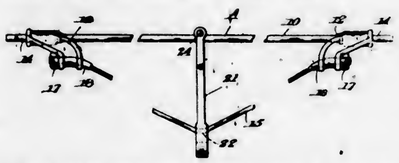
3. A device of the class described comprising a flat rectangular shaped base, an upwardly projecting flange on one of its side edges, a pair of spaced parallel wires secured at one end to said base adjacent either end of the same and contiguous to said flange, and said wires being bent loop-shaped over said flange with their terminals disposed adjacent the outer surface of the same.

4. A device of the class described comprising a rectangular shaped flat metal base, a padded covering for the lower surface of the same, inturned flanges on said base to secure the cover in position, an upwardly projecting flange on one of the side edges of the base, a pair of parallel loop-shaped guide wires secured one adjacent either end of the base and contiguous to the flange, and said wires being secured at one end to the upper surface of the base and having their opposite end terminating adjacent the outer surface of said projecting flange.

5. A removable filing leaf having apertures adjacent one side edge, and said side edge having diverging slits therein terminating at the inner edge of said apertures.

[Claim 6 not printed in the Gazette.]

1,222,882. BRAKE-BEAM. EDWARD CAMPBELL MCDOWELL, Hamilton, Ontario, Canada. Filed June 15, 1916. Serial No. 103,825. (Cl. 188—22.)



1. In a brake beam and in combination, a compression member having integral bearing trunnions, a shoulder on the inner end of the trunnions, a tensioning member and connecting member engaging the trunnions and the tensioning member and a strut extending between the compression and tensioning members.

2. In a brake beam and in combination, a compression member having integral bearing trunnions, a shoulder on the inner end of the trunnions, a tensioning member and a strut extending between the compression and tensioning members, the ends of the said tensioning member lying in a straight line, and means for spacing said ends from the compression member.

3. In a brake beam and in combination, a compression member, a tensioning member having curved ends of increased thickness and threaded and having an angular bracket member connecting the ends of the tensioning member with the compression member and a strut extending between the tensioning member and compression member.

4. In a brake beam and in combination, a compression member round in cross section having a notch therein, a tensioning member and a strut embracing both the tensioning and the compression members and having means to engage the notch adapted to prevent turning of the compression member.

5. A brake beam of the class described comprising a compression member provided with trunnions and having enlargements near the end thereof forming shoulders with the said trunnions, a V-shaped tensioning member having offset ends, means for spacing said ends from the compression member and holding said ends substantially parallel thereto and a strut operatively connecting the tensioning and compression members intermediate of the length thereof.

[Claims 6 to 9 not printed in the Gazette.]

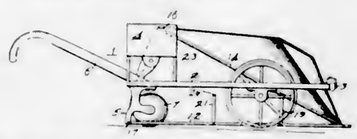
1,222,883. FUMIGATING-CANDLE AND PROCESS OF MAKING THE SAME. WALTER H. MEEK, Louisville, Ky. Filed June 10, 1915. Serial No. 33,326. (Cl. 167—12.)



1. A base for a fumigating candle composed of raw cotton having all essential oils and foreign substances removed therefrom, the fibers thereof being impregnated with resin gums capable of volatilization and with means for preventing the base from bursting when ignited into rapid combustion with the production of flame.

2. A process of producing a base for a fumigating candle which consists in subjecting raw cotton to alkaline baths and thorough rinsings thereby converting it into substantially pure cellulose free from oils and other foreign bodies, then drying the so treated cotton and subjecting it to a bath of potassium nitrate, then drying it again, then saturating it with a solution of benzoin, storax and balsam tolu, and finally drying the resulting product at a low temperature and compressing it into convenient shapes and sizes.

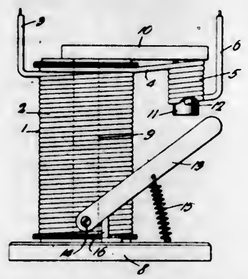
1,222,884. FENDER FOR SEEDERS AND PLANTERS. BARZILLAI C. MENDENHALL, Parker, Ind. Filed Jan. 20, 1916. Serial No. 73,198. (Cl. 111—32.)



1. The combination with a planter, of a V-shaped guard blade, supporting means therefor comprising a plurality of diverging rearwardly extending base bars, a plurality of rearwardly and upwardly extending relatively divergent top bars, the said top bars embracing the bottom bars at their front ends where they are jointly connected, the said base bars and top bars being provided with a bracing means intermediate the ends thereof, and supplemental brace members connected to the said base bars intermediate the bracing means and the free ends of the base bars to brace the guard blade intermediate the top and bottom edges thereof.

2. The combination with a planter, a shoe, running wheel, and draft pole, of a guarding device comprising a tapered supporting structure extending forwardly of the planter, a V-shaped deflecting blade, including a sheet of metal bent into a V-shaped configuration, the bottom and top edges thereof being substantially parallel, the sides thereof diverging to provide means for deflecting, the front end of said deflecting blade being provided with an aperture to accommodate the forward end of said draft pole.

1,222,885. INDUCTION-COIL CONTROLLER. MARY PIERSON MITCHELL, Eaton, Ohio. Filed Dec. 31, 1915. Serial No. 69,687. (Cl. 171—119.)



1. In a device of the character described, an induction coil embodying primary and secondary windings, an electromagnet connected to the primary winding and adapted to be energized operatively by an overcharge, and means controlled by said electromagnet for changing the induction between said windings.

2. In a device of the character described, an induction coil having primary and secondary windings, and means operated when one winding is subjected to an overcharge for shunting a portion of one winding.

3. In a device of the character described, an induction coil embodying primary and secondary windings, an electromagnet connected to one winding and means controlled by said electromagnet and operable when attracted whereby to shunt a portion of one winding.

4. In a device of the character described, an induction coil having primary and secondary windings and a core, a yoke connected to one end of said core, a secondary core carried by said yoke, a winding upon the secondary core and connected to one of said windings, and a pivoted armature switch having its free end adjacent to the secondary core to be attracted thereto, said armature switch being connected to one of the first mentioned windings and arranged to shunt a portion of said winding when attracted to the secondary core.

1,222,886. ELECTRIC SWITCH FOR LAMP-SOCKETS, &c. SHIRAS MORAIS and MONROE GUETT, Hartford, Conn., assignors to The Hart & Hegeman Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 14, 1915. Serial No. 21,212. (Cl. 173—354.)



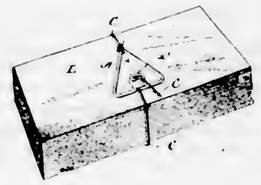
1. In an electric switch the combination of a fixed crown tooth member, and a rotary switch member springpressed in respect to the crown tooth member and provided with depending contacts coöperating with the teeth of said member, and a flat insulating ring loosely mounted in respect to said members and provided with internal teeth of which some underlie the contacts and serve to oppose or break arcs and of which others abut on the roots of the contacts to position the first mentioned teeth, substantially as described.

2. In an electric switch the combination of a fixed crown tooth member and a rotary switch member springpressed in respect to the crown tooth member and provided with depending contacts coöperating with the teeth of said members, and a flat insulating ring encircling the contacts of the crown tooth member and loosely mounted in respect to said members and provided with integral teeth of which some underlie the contacts and serve to oppose or break arcs and of which others abut on the roots of the contacts to position the first mentioned teeth, substantially as described.

3. In an electric switch the combination of a rotary element provided with depending contacts and with offsets, and a flat insulating ring loosely mounted in respect to said member and provided with internal teeth of which some underlie the contacts and serve to oppose or break arcs and of which others abut on the offsets to position the first mentioned teeth, substantially as described.

4. In an electric switch the combination of a rotary element comprising a hub having diametrically offset arms provided with depending contacts, an insulating disk notched for the passage of said arms and crimped to the hub, and an insulating ring loosely abutting on said disk and provided with internal teeth of which some underlie the contacts and of which some abut on said arms to position the first mentioned teeth when the disk is rotated.

1,222,887. PACKAGE AND BUNDLE TIE. JOHN L. PEARSON, Cedar Vale, Kans. Filed May 13, 1916. Serial No. 97,341. (Cl. 24—18.)



1. A fastening device for package and bundle ties made of a single piece of wire and comprising a base portion having two parallel adjacent posts, a coil having a plurality of convolutions surrounding the posts, one of said posts having a hooked portion extending over the top or outer coil and the outer end of the coiled wire being bent around the base of said posts.

2. A fastening device for package and bundle ties made of a single piece of wire and comprising a triangular base piece having two parallel adjacent posts, a coil extending from the outer end of one of said posts and having a plurality of convolutions surrounding the posts and the other post having a hooked portion extending over the top of the outer convolution of the coil.

1,222,888. WORK-HOLDER. HANS PETERSEN, Warrenton, Va. Filed Dec. 20, 1916. Serial No. 138,026. (Cl. 12—123.)

1. An expansible work-holder, comprising a body member having guiding means, a clamping member slidably mounted and movable endwise in said guiding means, means connected with said slidable member, at one side of the body member, for moving the clamping member and securing work between the same and the body member, and a spring for opening the clamping member, attached to said member at the opposite side of the body member.

2. An expansible work-holder, comprising a body member having a transverse opening, a clamping member loose

in said opening and movable endwise therethrough, a retractile spring connected to said clamping member at one side of the body member, and a pedal lever connected with the clamping member at the opposite side of the body member.



3. An expansible work-holder comprising a body member having a transverse opening, a filling-piece removably arranged in the lower portion of said opening, a clamping member loose in said opening above the filling piece and movable endwise through the opening, a retractile spring connected to said clamping member at one side of the body member, and a pedal lever connected with the clamping member at the opposite side of the body member.

4. In a work-holder of the expansible type, the combination of a body member having a facing of soft material and also having a transverse opening, a clamping member loose in and movable endwise through said opening, and means for moving said clamping member.

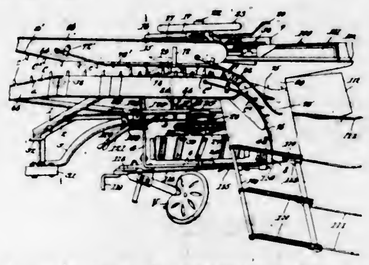
1,222,889. NON-REFILLABLE BOTTLE. EDWARD M. PINE, Philadelphia, Pa. Filed May 27, 1916. Serial No. 100,225. (Cl. 215—62.)



1. In a non-refillable bottle, a bottle, a gasket fixed in the neck thereof provided with a port therein forming a valve seat, and a valve formed of a body of non-corrodible material comprising a base, and a flange on the side thereof rising therefrom, and a block of buoyant material seated in said body and having its lower portion compressed in said side flange, the base of the body being imperforate.

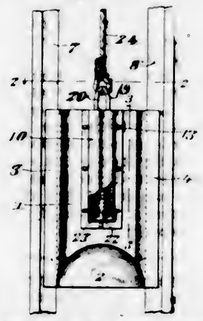
2. In a non-refillable bottle, a valve formed of a base, and a flange of non-corrodible material on the side thereof rising therefrom, and a block of buoyant material seated in said body and having its lower portion compressed in said side flange, said base being imperforate and having its underside unbroken in diametrical direction.

1,222,890. CORN-HARVESTER. WILLIAM H. ROE, Govans, Md. Filed July 1, 1914. Serial No. 848,449. (Cl. 56—105.)



In a corn harvester, the combination with cooperating cutting elements and an inclined shelf extending upwardly and rearwardly therefrom, and a structure fixed relative to the shelf and arranged adjacent thereto, of a plate movably mounted above the shelf and back of the cutting elements, said plate having substantially vertical faces, a reinforcing member extending longitudinally along one face of and secured to the plate and having a sleeve at one end, relatively broad wings or fingers extending laterally from the other face of the plate, said fingers being formed of separate parts secured to the plate, a link connection between one end portion of the reinforcing member and the adjacent fixed structure, and a revoluble crank engaging the sleeve at the other end of said reinforcing member, said crank and link cooperating to impart a combined reciprocating and oscillating movement to the plate and fingers.

1,222,891. PILE-DRIVER-HAMMER SUSPENSION. ERNEST B. ROGERS, Seattle, Wash. Filed July 27, 1916. Serial No. 111,707. (Cl. 61—13.)



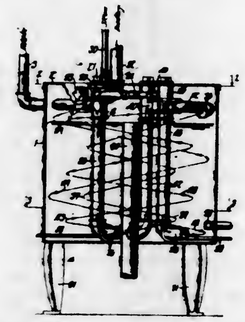
1. A suspension for pile-driver hammers comprising casing carried by the hammer, cushion means carried in said casings, and a suspension loop connected with said cushions to have the operation line attached thereto and thus cushion shocks incident to the operation of the hammer.

2. A suspension for pile-driver hammers comprising casings to be connected with the hammer, a suspension loop having rods connected therewith and extended into said casings, and cushion means carried by said rods to bear within the casings.

3. A suspension for pile-driver hammers comprising casings to be connected with the hammer, a suspension loop having rods connected therewith and extended into said casings, coiled springs mounted around said rod, and bearing washers mounted on the ends of the rods to confine the coil springs between the same and the heads of the casings to cushion the action of the hammer.

4. A suspension for pile-driver hammers comprising a pair of casings to be connected with the hammer on opposite sides of the web thereof, said casings provided with notched openings through the top thereof, a suspension loop to have a line or cable connected therewith, rods branched from said suspension loop in such arrangement that they are received through the notched openings of the casings, coiled springs mounted around said rod to bear at one end against the heads of the casings, and tension nuts connected on the free ends of the rods to bear against the remaining ends of the coil spring and to permit adjustment of the tension thereof.

1,222,892. CREAM-TREATING DEVICE AND PROCESS. JOHN F. RUFF, Port Huron, Mich. Filed Sept. 30, 1916. Serial No. 122,956. (Cl. 99—15.)



1. Means for comminuting cream comprising a closed conduit through which it is passed, means for supplying cream to the conduit, said conduit including a plurality of steam jets and means for cooling said conduit between said jets.

2. Means for comminuting cream comprising a casing, means for maintaining a predetermined level of cooling liquid therein, a conduit, means for supplying cream thereto, said conduit having portions located above the cooling liquid and other portions located below said level, said first mentioned portions each including a steam jet through which the cream is passed and by which it is delivered into the corresponding one of the last named portions.

3. Means for comminuting cream comprising a casing, means for maintaining a predetermined level of cooling liquid therein, a conduit, means for supplying cream thereto, said conduit having portions located above the cooling liquid and other portions located below said level, said first mentioned portions each including a steam jet through which the cream is passed and by which it is delivered into the corresponding one of the last named portions, the heating capacity of the first named portions being greater than the cooling capacity of the last named portions whereby the temperature of the cream is raised.

4. Means for comminuting and pasteurizing cream comprising a closed conduit through which it is passed, means for supplying cream to the conduit, said conduit including a plurality of steam jets and means for cooling said conduit between said jets, the heating capacity of the steam jets being sufficiently greater than the cooling capacity of the cooling means to insure the cream being thoroughly pasteurized.

5. Means for treating dairy products comprising a closed conduit through which said products are passed, means for supplying said product to the conduit, said conduit including a plurality of alternately arranged steam jets and cooling means.

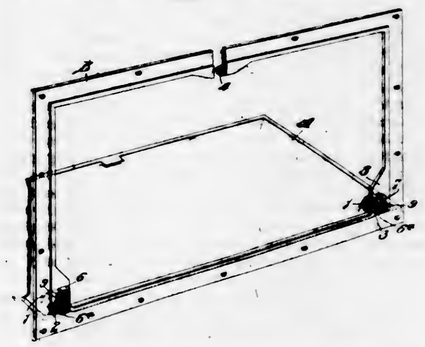
[Claims 6 to 18 not printed in the Gazette.]

1,222,893. AGGLOMERATION OF FINE ORES AND FLUE-DUST. WILHELM SCHUMACHER, Berlin, Germany, assignor to General Briquetting Company, New York, N. Y., a Corporation of Maine. Filed Jan. 26, 1916. Serial No. 74,518. (Cl. 75—73.)

1. That improvement in the art of agglomerating fine ores which consists in incorporating in the form of small, permanent, ball-like or egg-shaped briquets the finely divided particles of such fine ores whose sintering and melting points are relatively close together and then exposing such briquets to a temperature between the sintering and melting temperature of the ores.

2. That improvement in the art of agglomerating fine ores which consists in incorporating in the form of small, permanent, ball-like or egg-shaped briquets the finely divided particles of such fine ores whose sintering and melting points are relatively close together, then exposing such briquets to a temperature between the sintering and melting temperature of the ores and maintaining continual movement of the briquets while in the sintering or roasting zone.

1,222,894. STOVE-DOOR. LOYD SCRUGGS, St. Louis, Mo., assignor to The Copper Clad Malleable Range Company, St. Louis, Mo., a Corporation of Nebraska. Filed Oct. 27, 1913. Serial No. 797,549. (Cl. 126—194.)

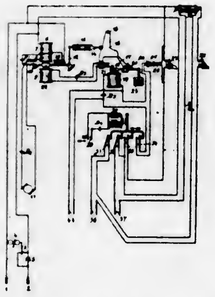


A stove, comprising a door frame provided with a door opening, a pair of horizontally-disposed, open-ended slots formed in the side edges of the opening in said frame diametrically opposite each other and adjacent the lower edge of said opening, a door provided at its lower edge with a pair of hinge members that project rearwardly from the door through the slots in said frame, the outer side face of each of said hinge members bearing against the inner end of the slot through which said member passes, thereby preventing the door from moving laterally in either direction with relation to the door frame, an integral stop on the inner end of one of said hinge members that bears against the inner side of the door frame when the door is open, and thus prevents said hinge member from moving forwardly out of its slot, and a removable stop on the other hinge member that performs a similar function, the hinge member with the integral stop being adapted to be inserted sidewise into its cooperative slot, and the other hinge member being adapted to have its end introduced in its slot and moved rearwardly through same prior to the operation of connecting the removable stop to said hinge member.

1,222,895. AUTOMATIC PHONOGRAPHIC RESPONDING AND RECEIVING DEVICE. FRANZ SEELAU, Berlin-Wilmersdorf, Germany, assignor of one-half to Alexander M. Newman, Berlin-Wannsee, Germany. Filed Dec. 29, 1914. Serial No. 879,427. (Cl. 179—6.)

1. In combination with an automatic responding and conversation recording instrument, a telephone exchange,

a source of calling current, an electromagnet, a switching member controlled by the said electromagnet, a circuit for energizing the said electromagnet by current from the said source and for operating the said switching member, means for locking the switching member in its operated position, and means actuated by the said electromagnet for controlling a supervisory signal located at the exchange.



2. In combination with an automatic responding and conversation recording instrument, a telephone exchange, a source of calling current, an electromagnet, a switching member controlled by the said electromagnet, a circuit for energizing the said electromagnet by current from the said source and for operating the said switching member, means for locking the switching member in its operated position, means actuated by the said switching member for controlling a supervisory signal located at the exchange, a talking current circuit, a telephonic switching device adapted to be energized by current in the talking circuit, means for maintaining the instrument in an off-normal condition, this means being controlled by the said telephonic switching device and being rendered operative during the flowing of talking current through the telephonic switching device, and means for restoring the said switching member to its normal position after the said telephonic switching device ceases to be energized.

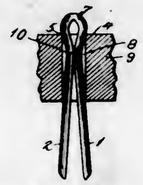
3. In combination with a telephone exchange, a source of calling current, and an automatic responding and conversation recording instrument comprising an electromagnet having an energizing and a locking winding, a switching member controlled by the said electromagnet, a circuit for energizing the said energizing winding by current from the said current source and for operating the said switching member, means for energizing the said locking winding, means actuated by the said electromagnet for controlling a supervisory signal located at the exchange, a responding microphone, a recording device, electrical connections joined to the responding microphone and to the recording device, and means for automatically altering the electrical connections of responding microphone, recording device and of the said energizing winding.

4. In combination with a telephone exchange, a source of calling current, an exchange line, and an automatic responding and conversation recording instrument comprising an electromagnet having an energizing and a locking winding, a switching member controlled by the said electromagnet, a circuit for energizing the said energizing winding by current from the said current source and for operating the said switching member, means for energizing the said locking winding, means actuated by the said electromagnet for controlling a supervisory signal located at the exchange, a responding microphone, a recording device, a telephonic switching device and means for automatically and separately connecting the said energizing winding, the responding microphone and the recording device together with the telephonic switching device to the said exchange line.

5. In combination with a telephone exchange, a source of calling current, an exchange line and an automatic recording and responding instrument comprising an electromagnet having an armature, means for locking said armature in its attracted position, a telephonic switching device, a restoring switch, means for moving the restoring switch, a retarding device for delaying the movement of the said restoring switch, said restoring switch being adapted to restore the said armature to its normal position and said restoring switch and retarding device being controlled only by the telephonic switching device.

[Claims 6 to 10 not printed in the Gazette.]

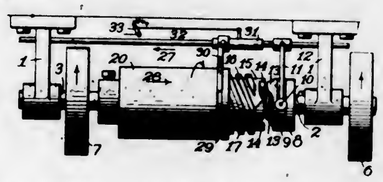
1,222,896. COTTER. HOWARD H. SHELTON, Akron, Ohio. Filed Oct. 15, 1914. Serial No. 866,786. (Cl. 74—8.)



1. A cotter having a pair of shanks the ends of which are initially in contact and the balance thereof in approximate parallelism and in contact with each other and formed integrally with a loop elongated in the line of the axis of the cotter, the portions of the loop extending from the shanks to the point of greatest diameter of the loop inclined and adapted to be engaged by the side walls of an opening into which the cotter is set, thereby to cause the shanks of the cotter to fulcrum on each other and to be bent apart at said point of junction to spread the ends thereof away from each other and impart thereto a permanent set for locking the cotter in position.

2. A cotter including a pair of shanks contacting throughout their lengths and having a looped head formed integral with the inner ends thereof, said cotter pin adapted for insertion in an opening of greater diameter than the combined cross-sectional areas of the shanks and of less diameter than the looped head whereby pressure upon the looped end to force the same into the opening will cause the shanks to spread and so be frictionally held.

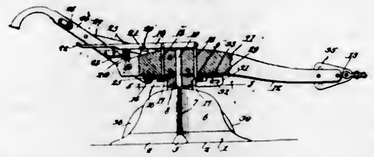
1,222,897. CLUTCH. GEORGE SIZURIN, Shrewsbury, Mass. Filed Mar. 19, 1912. Serial No. 684,707. (Cl. 192—1.)



In a clutching mechanism, a driving member and a driven member, a screwthreaded member rotatively connected with said driven member and capable of a longitudinal movement, a second screwthreaded member engaging said first named screwthreaded member, means for rotatively connecting said second screwthreaded member with said driving member at will, and compressible resilient means for resisting the longitudinal movement of said first named screwthreaded member, whereby the amount of power imparted from said driving member to said driven member will be determined by the compressibility of said resilient means.

1,222,898. PLOW. FRED SIMPSON, Lone Grove, Okla. Filed Dec. 9, 1916. Serial No. 136,027. (Cl. 97—27.)

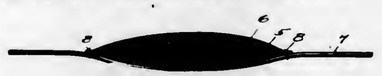
1. In a plow, the combination with a V-shaped plow share and a landside connecting the outer ends of the share, of a standard projecting from the landside, a head thereon, a beam mounted for horizontal turning movement upon the head, and separate means carried by the beam and coöperating with the head and standard respectively for holding the beam in line with the landside or at right angles thereto respectively.



2. A plow including a V-shaped share, a landside connecting the ends of the share, a standard, a head on the standard, a beam resting on the head, said standard having a recess therein, means carried by the beam for engaging the head at diametrically opposed points to hold the beam against tilting relative to the head, a locking lever, locking pins carried thereby and extending through the beam, there being recesses in the head for the reception of the pins when the beam is extended in the same direction as the landside, a latch slidably mounted on the beam, there being a recess in the standard for the reception of the latch when the beam is extended at right angles from the landside.

3. In a plow, the combination with a V-shaped plow share, moldboards extending therefrom and meeting to form a ridge, and a landside connecting the ends of the share, of a standard, a circular head thereon, a beam, a wear strip extending longitudinally under the beam and bearing on the head, means carried by the beam and engaging the head for holding the beam against tilting relative to the head, a bracket integral with said wear strip and engaging said head, separate means for locking the beam against rotation relative to the head and with the beam extending in the same direction as or at right angles to the landside, and handles extending from the beam.

1,222,899. CATAMENIAL SACK. GOODWIN B. SMITH, Philadelphia, Pa., assignor to The Junoform Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 18, 1915. Serial No. 62,184. (Cl. 128—5.)



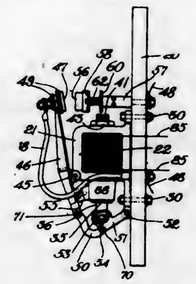
A catamenial bandage comprising a supporting strip formed of a single ply of flexible relatively nonextensible fabric, a single ply tube of open gauze extending longitudinally of the supporting strip with the supporting strip extending substantial distances beyond the ends of the tube, the ends of the tube being secured to the supporting strip by stitching, and a filling of compressible absorbent material arranged within the tube.

1,222,900. ALTERNATING-CURRENT MAGNET. WILLIAM S. SMITH, Cambridge, Mass. Filed Sept. 10, 1915. Serial No. 49,954. (Cl. 175—336.)

1. An alternating current magnet comprising a coil, a core, adjustable means forming part of the magnetic circuit for limiting the movement of the core when energized and means whereby the adjustment of said adjustable means regulates the amount of pull of the load upon said core.

2. An alternating current magnet comprising a coil, a core, adjustable means adapted when said core is energized to be in magnetic seal therewith and to limit its movement and means whereby the adjustment of said adjustable means regulates the amount of pull of the load upon said core.

3. An alternating current magnet comprising a coil, a core, adjustable means for limiting the movement of the core when energized and for regulating the length of the air gap when said core is not energized and means whereby the adjustment of said adjustable means regulates the amount of pull of the load upon said core.



4. An alternating current magnet comprising a coil, a core, adjustable means for regulating simultaneously the movement of the core when energized and the length of the air gap when the core is not energized and means whereby the adjustment of said adjustable means regulates the amount of pull of the load upon said core.

5. An alternating current magnet comprising a coil, a core, an adjustable screw forming part of the magnetic circuit for limiting the movement of the core when energized and means whereby the adjustment of said adjustable means regulates the amount of pull of the load upon said core.

[Claims 6 to 14 not printed in the Gazette.]

1,222,901. BROODER. MARY A. STEVENS, Stockton, Kans. Filed July 21, 1916. Serial No. 110,571. (Cl. 119—21.)



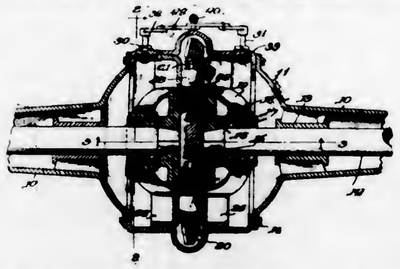
1. A brooder in the form of a closed container the sides of which are extended upwardly for one-half its length, a transverse partition connecting the sides at the central portion of the container to form with said sides a sleeping compartment, an opening provided in said partition, a cage-like structure superposed upon the unoccupied portion of the container to form a feeding compartment the same being in communication with the sleeping compartment, and a heating pipe extending through the interior of the container.

2. A brooder formed of sheet metal and including a flat container portion adapted to be filled with water and having the sides thereof for one-half its length extended upward, a transverse partition connecting the edges of the extended portions, said partition having an opening and a gate for controlling said opening, a partition extended across the opposite end of the brooder to form with the end wall thereof a trough, a cage structure superposed upon the brooder outside the first mentioned partition to form a feeding compartment, a covering of asbestos around the upwardly extended walls, and a heating pipe extended through the container whereby to heat the water therein and thereby heat the floor of the brooder.

1,222,902. LOCK FOR DIFFERENTIAL GEARS. CHARLES E. STORM, Trowbridge, Ill. Filed Dec. 14, 1915. Serial No. 66,777. (Cl. 21—90.)

1. The combination with a differential gearing including axle section receiving gears and pinions meshing with

the gears and having squared hub portions, of means movable into engagement with the squared hub portions of the pinions to lock them against turning movement.



2. The combination with a differential gearing including axle section receiving gears and pinions meshing with the gears and having squared hub portions, of means movable into engagement with the squared hub portions of the pinions to lock them against turning movement, said means including a locking member movable toward and away from the pinions, and a locking flange carried by the member for simultaneous engagement with the hub portions of the pinions.

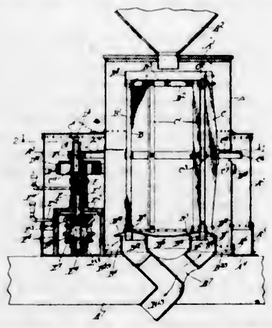
3. The combination with a differential gearing including axle section receiving gears and pinions meshing with the gears and having squared hub portions, of means movable into engagement with the squared hub portions of the pinions to lock them against turning movement, said means including a locking member movable toward and away from the pinions, a locking flange carried by the member for simultaneous engagement with the hub portions of the pinions, and means for controlling the movement of the locking member.

4. The combination with a differential gearing including axle section receiving gears and pinions meshing with the gears and having angularly faced hub portions, of locking members disposed at either side of the pinions and movable into and out of engagement with the hub portions thereof.

5. The combination with a differential gearing including axle section receiving gears and pinions meshing with the gears and having angularly faced hub portions, of locking members disposed at either side of the pinions and movable into and out of engagement with the hub portions thereof, and a spring constantly tending to hold the locking members in engagement with the hubs of the pinions.

[Claims 6 to 13 not printed in the Gazette.]

1,222,903. SCREEN. EDGAR B. SYMONS, Winnetka, Ill. Filed Aug. 20, 1915. Serial No. 46,546. (Cl. 83—56.)



1. The combination with a vertically disposed cylindrical screen, of means for feeding material along the surface thereof, and means for vibrating the screen against the moving material.

2. The combination with a vertically disposed cylindrical screen of means for feeding material vertically along the surface thereof, and means for vibrating the screen against the moving material.

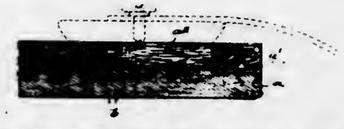
3. The combination with a vertically disposed cylindrical screen, of means for feeding material along the surface thereof, and means for intermittently bringing the screen surface into violent contact with the material.

4. The combination with a vertically disposed cylindrical screen, of means for feeding material vertically along the surface thereof, and means for intermittently bringing the screen surface into violent contact with the material.

5. The combination with a plurality of parallel screens arranged in juxtaposition, of means for feeding a thin film of material between them, and means for vibrating the screens against the material.

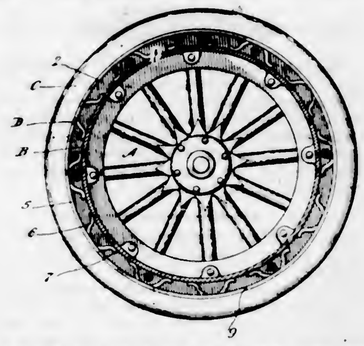
[Claims 6 to 24 not printed in the Gazette.]

1,222,904. ATTACHMENT FOR TRUSS-PADS. HARRY C. TINDALL, Macon, Ga., assignor to Frank Cushman Tindall, Macon, Ga. Filed Apr. 20, 1914. Serial No. 833,118. (Cl. 128—26.)



An attachment for truss pads comprising a base portion of soft material having a central raised part, a second superposed portion of soft material having a central opening within which said raised part of the base portion projects, and an interposed reinforcing web portion of leather or chamois overlying said base portion; said reinforcing web covering said base portion for its full length and width and lining the bottom of the opening formed in said superposed portion.

1,222,905. SPRING-TIRE. JAMES D. TIPPIE, West Nashville, Tenn. Filed Mar. 29, 1915. Serial No. 17,664. (Cl. 152—8.)



1. A spring tire for wheels including a tread member and a resilient element therefor, said resilient element comprising a plurality of substantially parallel outer rings and a plurality of depending arcuate leaf-spring members interposed between said rings and formed as an integral part of the plate.

2. In a spring tire for wheels, a tread member and a resilient element therefor, said resilient element comprising a plurality of substantially parallel ring-like members and a plurality of interposed depending resilient members, the ends of which are adapted to bear upon a portion of a wheel, the outer portions of the resilient depending members being integrally connected to the ring-like members and the portions of said resilient depending members adjacent to said outer portions being free to move between the ring-like members, said ring-like members and said depending members being formed from a single strip of metal in such manner that the entire strip is utilized in the formation thereof.

1,222,906. TIRE. ALFRED WILLIAM TORKINGTON, London, England. Filed June 20, 1913. Serial No. 774,869. (Cl. 152—14.)



A tread for a tire or tire cover comprising a body of flexible resilient material with metallic reinforcement therein, said metallic reinforcement comprising strips of interlaced wire helices, said helices being flexible laterally and compressible axially, said strips being arranged in two circumferential series, and the strips in each series being arranged edgewise and side by side in parallel relation, the strips in one series being inclined upwardly and inwardly toward the central plane of the tread and the strips in the other series also being inclined upwardly and inwardly toward the central plane of the tread but in the opposite direction from the strips of the first series.

1,222,907. AWNING. CHARLES J. TRUEMPER, Indianapolis, Ind. Filed Sept. 25, 1916. Serial No. 121,913. (Cl. 156—42.)



1. An awning, comprising a fabric sheet, a roller to which the upper edge of such sheet is attached so that the awning can be rolled up, a cross bar near the lower edge of said sheet, pivoted arms on which said cross bar is mounted, a second cross bar beneath the sheet and free therefrom, pivoted arms carrying said second cross bar so that when the awning is lowered the second cross bar engages the fabric strip at an intermediate point to give it a Mansard shape, and flexible tension members attached to the arms carrying said second cross bar for limiting its downward movement.

2. An awning, comprising a fabric sheet, a roller to which the upper edge of such sheet is attached so that the awning can be rolled up, a cross bar near the lower edge of said sheet, pivoted arms on which said cross bar is mounted, a second cross bar beneath the sheet and free therefrom, pivoted arms carrying said second cross bar so that when the awning is lowered the second cross bar engages the fabric strip at an intermediate point to give it a Mansard shape, and means for preventing said second cross bar from swinging downward beyond said intermediate point.

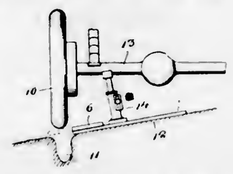
3. An awning, comprising a fabric sheet, a roller to which the upper edge of such sheet is attached so that the awning can be rolled up, a cross bar near the lower edge of said sheet, pivoted arms on which said cross bar is mounted, a second cross bar beneath the sheet and free therefrom, pivoted arms carrying said second cross bar so that when the awning is lowered the second cross bar engages the fabric strip at an intermediate point to give it a Mansard shape, and means for preventing said second cross bar from swinging downward beyond said intermediate point, the pivotal points of the arms carrying the second cross bar being higher than the pivotal points of the arms carrying the first cross bar.

4. An awning, comprising a fabric sheet, a roller to which the upper edge of such sheet is attached so that the awning can be rolled up, a cross bar near the lower edge of said sheet, pivoted arms on which said cross bar is mounted, a second cross bar beneath the sheet and free therefrom, pivoted arms carrying said second cross bar so that when the awning is lowered the second cross bar engages the fabric strip at an intermediate point to give it a Mansard shape, and means for preventing said second cross bar from swinging downward beyond said intermediate point, the arms carrying the second cross bar being shorter than and pivoted at higher points than are the arms carrying the first cross bar.

5. An awning, comprising a fabric sheet, a roller to which the upper edge of such sheet is attached so that the awning can be rolled up, a cross bar near the lower edge of said sheet, pivoted arms on which said cross bar is mounted, a second cross bar beneath the sheet and free therefrom, pivoted arms carrying said second cross bar so that when the awning is lowered the second cross bar engages the fabric strip at an intermediate point to give it a Mansard shape, and means for preventing said second cross bar from swinging downward beyond said intermediate point, the arms carrying the second cross bar being shorter than the arms carrying the first cross bar.

[Claims 6 to 9 not printed in the Gazette.]

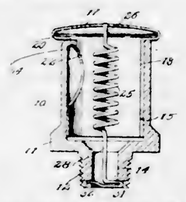
1,222,908. WHEEL-EXTRICATOR FOR AUTOMOBILES. WILLIAM W. TURNER, Philadelphia, Pa. Filed Sept. 6, 1916. Serial No. 118,772. (Cl. 104—45.)



1. A vehicle extricating device of the class described, comprising a base plate, a wheel engaging plate slidably connected to one extremity of said base plate, means for limiting the movement of said sliding plate with respect to said base plate, and pivoted sections secured to the extremity of said sliding plate.

2. A vehicle extricating device of the class described, comprising a base plate, a wheel engaging plate having a slot formed therein, said slot being operable to receive a fixed stud carried by said base plate and foldable sections pivotally secured to the extremities of said sliding plate.

1,222,909. SELF-CLOSING OIL-CUP. DANIEL H. TWAITS, Chicago, Ill. Filed Dec. 29, 1913. Serial No. 809,146. (Cl. 184—95.)



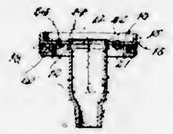
1. In an oil cup, the combination of a shell portion having a threaded lower end, a cap for the shell portion hav-

ing a sleeve slidably engaging the interior of the shell portion, said sleeve having a substantially circular opening slightly less in diameter than the diameter of the sleeve itself, an integral inwardly turned projection on the shell portion standing in said opening and adapted to engage the lower side thereof to limit the upward movement of the sleeve, and a spring attached to the cap and shell portion and adapted to draw the cap into the shell portion.

2. In an oil cup, the combination of a shell, a cap for the shell having a sleeve slidably engaging the interior of the shell, said sleeve having an opening through it extending vertically for a greater distance than half the height of the sleeve, an inwardly turned lug on the shell engaging said opening, and a spring attached to the cap and shell and tending to draw them together.

3. An oil cup made of three pieces of metal and comprising: first, a cylindrical body having an externally threaded lower extension and having an inwardly turned lug at the upper end of the body; second, a sheet metal cap having an intermediate head and a downwardly extending cylindrical wall integrally connected with the head by an annular intermediate portion, there being an opening through the sleeve extending for a considerable distance in a vertical direction, said sleeve being adapted to slidably occupy the interior of the shell with said annular intermediate portion overhanging the top of the shell and the lug on the body extending into said opening, and, third, a coiled tension spring occupying the interior of the cup and anchored at its upper end to the cap and at its lower end to the shell.

1,222,910. GREASE-CUP BODY. DANIEL H. TWAITS, Chicago, Ill. Filed Jan. 19, 1914. Serial No. 812,874. (Cl. 184—38.)



1. In a grease cup body, the combination of a tubular stem, a disk member immovably secured to one end of the stem, a resilient ring member on one side of said disk member, a separate ring contiguous to the other side of the resilient member and having inwardly projecting means located outside of the stem for securing the ring member in position.

2. In a grease cup body, the combination of a tubular stem, a disk secured to the upper end thereof, a resilient ring on one side of said disk, a ring member contiguous with the other side of the resilient ring having a flange turned toward the disk and a portion projecting inwardly from said flange and contiguous with said disk, and means for holding said portion in position.

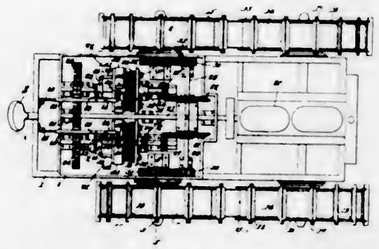
3. In a grease cup body, the combination of a tubular stem, a disk secured to the upper end thereof, a resilient ring on one side of said disk, a ring on the other side of said resilient ring having a flange turned toward the disk and having inwardly projecting lugs lying against said disk and secured thereto.

4. In a grease cup body, the combination of a tubular stem, a disk secured to the upper end thereof having a threaded periphery, a resilient ring on one side of said disk of substantially the same diameter as the disk, a ring on the other side of the resilient member of slightly smaller diameter than the resilient ring and disk and having a flange turned toward the disk contiguous with the inner periphery of the resilient member, and means for securing the same in place.

5. In a grease cup body, the combination of a tubular stem, a disk secured to the upper end thereof having external threads on its periphery, a resilient ring on one side of the disk, a circular member having a flange turned toward the disk and contiguous with the inner periphery of the resilient ring and having lugs projecting inwardly from said flange and lying against the surface of said disk, and means for securing said lugs to said disk.

[Claim 6 not printed in the Gazette.]

1,222,911. TRACTOR. WILLIAM D. WATKINS, San Jose, Cal., assignor of one-half to Harry W. Conkling, San Jose, Cal. Filed Feb. 10, 1916. Serial No. 77,482. (Cl. 21—114.)

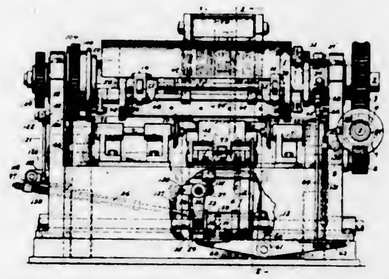


1. A tractor having a pair of wheels with channel-shaped rims whose flanges are notched, endless cables trained around said wheels, cross tractor members extending across said cables and having their terminals engageable in the notches, means carried by the tractor members embracing the cables to attach said members thereto, and means for actuating one of said wheels.

2. A tractor having a pair of wheels with channel-shaped rims whose flanges are provided with notches, endless cables trained around said wheels, cross tractor members upon said cables and having bent back portions embracing them, and means for driving one of said wheels, the ends of the tractor members being engageable in said notches.

3. A tractor having a pair of wheels provided with channel-shaped rims whose flanges have notches, endless cables trained around said wheels, cross T-irons upon said cables, the ends of the flanges of said irons being bent back into eyes embracing said cables, and the webs projecting outwardly from the cables to engage the ground, the ends of said irons being engageable in said notches.

1,222,912. STEREOTYPE-PLATE-FINISHING MACHINE. GEORGE F. WEBER, New York, N. Y., assignor, by mesne assignments, to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed Jan. 28, 1909. Serial No. 474,741. (Cl. 29—21.)



1. In a plate finishing machine, the combination with a rotary plate carrier, of a holder to which the carrier delivers the plate, end trimming means located alongside the path of movement of the carrier, and an interior shaving knife which operates on the plate while in the holder.

2. In a plate finishing machine, the combination with a rotary carrier having plate clamps, of a holder to which the carrier delivers, plate locking devices on the holder, and means for automatically operating the locking devices when the plate has been delivered to the holder and for releasing the plate clamps, and finishing devices.

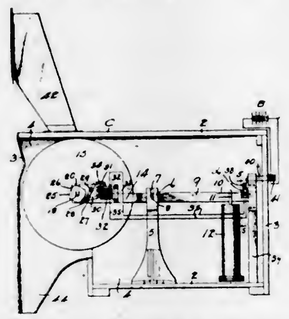
3. In a plate finishing machine, the combination with a rotary carrier having plate clamps, of a holder to which the carrier delivers the plate, locking devices coöperating with the holder, end trimming means operating on the plate while it is on the carrier, and an interior shaving knife operating on the plate when it is in the holder.

4. In a plate finishing machine, the combination with a rotary carrier, of a holder to which the carrier delivers the plate, end trimming means located alongside the path of movement of the carrier, a shaving knife, and means for giving the carrier two revolutions during one of which the plate is trimmed and during the other of which it is shaved.

5. In a plate finishing machine, the combination with a rotary carrier having plate clamps and plate forwarding means, of a holder to which the carrier delivers the plate, locking devices coöperating with the holder, end trimming means, an interior shaving device, means for operating the locking devices, means for releasing the plate clamps, and means for operating the forwarding means after the shaving is completed.

[Claims 6 to 26 not printed in the Gazette.]

1,222,913. AUTOMATIC WEIGHING APPARATUS. DICK B. WILLIAMS, New Orleans, La., assignor to Louisiana Nut and Produce Company, New Orleans, La., a Corporation of Louisiana. Filed Nov. 23, 1915. Serial No. 63,053. (Cl. 253—16.)



1. An automatic weighing apparatus comprising a casing, a balanced scale beam having a yoke at one end, a rotatable weighing and delivery drum having a plurality of weighing compartments mounted in said yoke and including an axle having at each end thereof reversely disposed ratchet disks, a magnetically controlled check pawl carried by said yoke and normally engaging one of said ratchet disks to prevent movement of the drum in a forward direction, and a spring tensioned pawl arranged reversely to the magnetically controlled pawl to engage with the other of said disks to prevent backward movement of the drum, and electrical means for controlling said magnetically controlled check pawl.

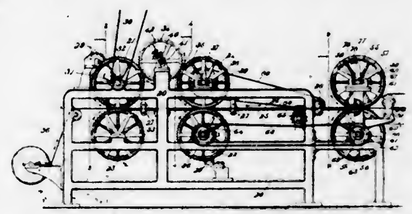
2. An automatic weighing apparatus comprising a casing, a balanced scale beam having a yoke at one end, a rotatable weighing and delivery drum, having a plurality of weighing compartments, mounted in said yoke and including an axle having reversely arranged ratchet disks at each end thereof, spring-tensioned pawls for engaging said ratchet disks, and electrical means for operating the pawl which checks the forward movement of the drum comprising a magnet device carried by said yoke and having a link connection with the pawl, circuit-closing contacts at the end of said beam opposite the drum, permanent battery contacts carried by the casing, and electrical connections between the beam contacts and said magnet device.

3. An automatic weighing apparatus comprising a casing having an inlet at its upper side and a downwardly directed delivery spout at its bottom side, a rotatable weighing and delivery drum arranged between said feed inlet and delivery spout, a scale beam for supporting said drum, pawl and ratchet means for controlling said rotatable drum, magnetic means carried by said beam for operating one of said pawls, circuit-closing contacts at the end of said beam opposite the drum, fixed contacts carried by the casing and connected with a source of electrical energy, and electric connection between said beam circuit closers and said magnetic means.

4. An automatic weighing apparatus comprising a casing, a support stationary within the casing, a balanced scale beam having a forked end portion and laterally disposed fulcrum lugs located at one side of the forked end and having a bearing in said stationary support, a weighing and delivery drum rotatably supported in said forked end, an axle for said drum having reversely disposed ratchet disks at each end thereof, spring-tensioned pawls for each disk, a magnet device for actuating one of said pawls to permit the drum to rotate forward under a predetermined weight, and electrical means for operating said magnet device to permit rotation of the delivery drum.

5. An automatic weighing apparatus including a balanced scale beam having a forked end portion, a weighing and delivery drum having an axle rotatably supported in said forked end, reversely disposed check disks carried by each end of said axle, spring-tensioned pawls disposed in reversed relation for said disks, a magnet device carried by said forked end portion and operatively connected with one of said spring-tensioned pawls, separate circuit-closing elements carried by each side of the scale beam at the weight end thereof, separate battery terminal contacts arranged in the path of movement of said circuit-closing elements on the beam, and electrical connections between said circuit-closing elements and said magnet device.

1,222,914. PRINTING AND CUTTING MACHINE. JOHN FLINN ANCONA, Rochester, N. Y. Filed July 21, 1913. Serial No. 780,244. (Cl. 101—224.)



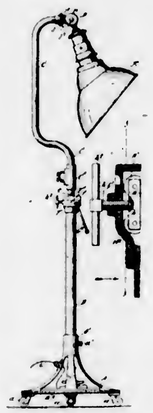
In a printing machine, a printing cylinder and a printing plate comprising a plurality of sections secured to said cylinder and having interengaging serrated edges, said sections having printing surfaces which collectively constitute a continuous printing surface wound about said cylinder in the form of a helix, said edges being perpendicular to said helix across the convolutions of said printing surface and substantially parallel to said helix between said convolutions.

1,222,915. ELECTRIC-LIGHT STAND. ROBERT D. H. ANDERSON, Boston, Mass., assignor to Frank Ridlon Company, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 13, 1915. Serial No. 45,343. (Cl. 240—67.)

1. In a device of the kind described, a standard comprising a sleeve, a hollow sliding member movable in said sleeve and carrying a lamp socket at its upper end, electric connection leading to said lamp sockets, and means to raise and lower said sliding member and to automatically

lock the same, said means comprising adjustable friction rollers adapted to engage said sliding member.

2. In a device of the kind described, a standard comprising a sleeve, a hollow sliding member movable in said sleeve and carrying a lamp socket at its upper end, electric connections leading to said lamp sockets, and means for raising and lowering said sliding member and comprising adjustable friction rollers mounted on opposite sides adapted to engage said sliding member, one of said friction rollers being mounted on a crank shaft, and means for operating said crank shaft.

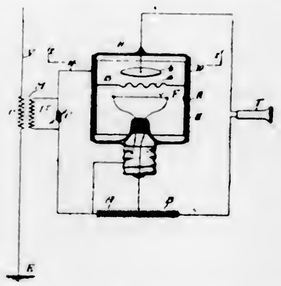


3. In a device of the kind described, a standard comprising a sleeve, a hollow sliding member movable in said sleeve and carrying a lamp socket at its upper end, electric connections leading to said lamp sockets, and means to raise and lower said sliding member comprising a housing, a shaft mounted therein, a roller supported upon said shaft to have frictional contact with said sliding member, adjustable coöperating means therein to retain said roller in contact with said sliding member, and means for rotating said roller to raise and lower said sliding member substantially as described.

4. In a device of the kind described, a standard comprising a sleeve, a hollow sliding member movable in said sleeve and carrying a lamp socket at its upper end, electric connections leading to said lamp sockets, and means for adjusting the height of said lamp sockets mounted on said sleeve and comprising a roller and means for supporting it in fixed position, and means adjustable with relation thereto adapted to engage said sliding member and force it into contact with said roller, said means comprising a carriage having rolls adapted to engage the sliding member on the side opposite said roller and means for adjusting said carriage radially to said sliding member, and means for rotating said roller.

5. In a device of the kind described, a hollow standard, a lamp holder and means for supporting said lamp holder on said standard comprising a member having a neck adapted for attachment to said standard, a hollow sleeve threaded into said member, said sleeve having a portion of its periphery smooth, a second member adapted to turn upon the smooth portion of said sleeve and means for confining it thereon, said members being in frictional contact whereby the second member may be turned about said sleeve as an axis, said second member carrying a bracket and a member having a circular bearing, a rotatable member having a complementary bearing adapted to engage with said circular bearing and having a hollow neck whereby a lamp socket may be attached thereto, said supporting means as a whole being hollow whereby a cable may be threaded through it from said standard to said lamp socket.

1,222,916. IONIZED-CHAMBER DEVICE. CLIFFORD DUDLEY BABCOCK, New York, N. Y., assignor of one-half to John Neilson, New York, N. Y. Filed Oct. 24, 1916. Serial No. 127,335. (Cl. 250—27.)



1. An ionized chamber device comprising a sealed vessel, an input electrode, an output electrode, an electrode adapted to be heated, a condenser having the spaced plates thereof upon opposite sides of and spaced by a wall of the vessel, and connections within said vessel between one of said electrodes and the inner plate.

2. An ionized chamber device including a sealed vessel, two electrodes inclosed within said vessel, means for heating one of said electrodes, and a condenser including spaced plates upon opposite sides of a wall of the vessel, the plate within the vessel being connected to the other electrode.

3. An ionized chamber device including a sealed chamber, spaced condenser plates upon opposite sides of a wall of the chamber, and a plurality of electrodes within the chamber, one of said electrodes being connected solely to the inner condenser plate.

4. An ionized chamber device including a tubular vessel, a conductor within said vessel closely adjacent to a wall thereof, a separate conductor outside of said vessel and closely adjacent to said wall opposite to said first mentioned conductor, an electrode within said vessel and connected to said first mentioned conductor, and a second electrode within said vessel and having a lead extending through the wall of the vessel.

5. An ionized chamber device including a tubular vessel, a condenser plate within said vessel closely adjacent to a wall thereof, a separate condenser plate outside of said vessel and closely adjacent to said wall opposite to said first mentioned condenser plate, an electrode within said vessel and connected to said first mentioned condenser plate, and a second electrode within said vessel and having a lead extending through the wall of the vessel.

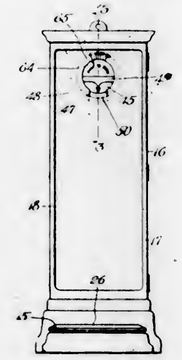
[Claims 6 to 18 not printed in the Gazette.]

1,222,917. AUTOMATIC WEIGHING-SCALE. ARTHUR W. BARNARD, Newton Center, Mass., assignor, by direct and mesne assignments, to Colonial Scale Company, Boston, Mass., a Corporation of Massachusetts. Original application filed July 15, 1915, Serial No. 40,121. Divided and this application filed Sept. 11, 1916. Serial No. 119,397. (Cl. 194—1.)

1. The combination with a coin-operated automatic weighing scale in which the weight indicated is normally concealed until a coin is deposited of means for giving a free reading of weight to a limited extent; said means comprising a limited scale and a pointer coöperating therewith; both being at all times visible and one being movable and actuated by the weighing mechanism and the other being fixed.

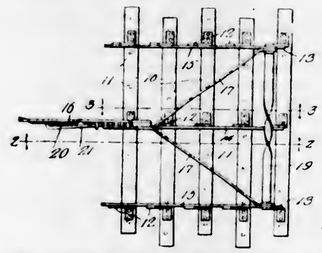
2. The combination with a coin-operated automatic weighing scale in which the weight indicated is normally concealed until a coin is deposited of means for giving at all times a free reading of weight to a limited extent.

3. The combination with a coin-operated automatic weighing scale having a rotary dial and in which the weight indicated is normally concealed until a coin is deposited of means for giving at all times a free reading of weight to a limited extent.



4. The combination with a coin-operated automatic weighing scale having a rotary dial and in which the weight indicated is normally concealed until a coin is deposited of means for giving at all times a free reading of weight to a limited extent; said means comprising a limited scale and a pointer coöperating therewith, both being at all times visible and one being on said rotary dial and the other being on a fixed part of the scale.

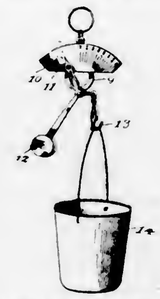
1,222,918. DRAG-HARROW. LEO BARTEL and JOHN HILDEBRAND, Fremont, Wis. Filed June 16, 1916. Serial No. 104,080. (Cl. 55—103.)



A harrow consisting of a series of spaced cross bars provided with teeth, arms fixed to the centers and adjacent the ends of said bars and extending upward therefrom, longitudinal side and center bars each having one set of said arms connected pivotally thereto, parallel bars pivotally connected to the arms above the side bars, a lever pivotally connected to the center bar adjacent one end thereof, reach bars pivoted to the lever and having their ends diverging and pivotally connected to the remote ends of the parallel bars, a quadrant fixed to the reach bars concentric to the pivot of the lever and reach bars and coöperating with the lever, and a latch carried by said lever and engaging said quadrant.

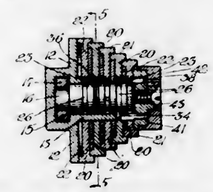
1,222,919. GRAIN-SAMPLING DEVICE. CONRAD R. BENNETT, Worcester, Mass. Filed Sept. 25, 1913. Serial No. 791,730. (Cl. 73—29.)

In a device of the character described, the combination of a main supporting frame having a fixed scale bar thereon, provided with graduations indicating pounds per bushel, a weighted pointer pivoted on said frame and movable over said scale bar, and a scale pan connected with said pointer and having a capacity for receiving a



definite volume of grain, whereby upon the filling of said scale pan with grain, the pointer will show on the scale the number of pounds to each bushel of such grain.

1,222,920. COMBINATION-LOCK. WILLIAM E. BLAIS, Boston, Mass. Filed Aug. 20, 1913. Serial No. 785,704. (Cl. 70—19.)



1. A combination lock comprising a sleeve having a series of transverse slots, a spindle mounted in said sleeve and longitudinally movable therein, said spindle having a longitudinal groove and a series of annular grooves, and a plurality of rotatable members mounted on said sleeve, each of said members being provided with means projecting through one of said slots in said sleeve into one of said annular grooves on said spindle and being provided with a stop projecting into the slot in said sleeve to limit the movement of said rotatable member on said sleeve, said stop being so arranged that when it is in engagement with the end of the slot in the sleeve the projecting means on said rotatable member projects into the longitudinal groove on said spindle permitting longitudinal movement thereof.

2. A combination lock comprising a sleeve having a plurality of transverse slots, a spindle mounted in said sleeve and longitudinally movable therein, said spindle having a longitudinal groove and a plurality of annular grooves corresponding to the transverse slots in said sleeve, and a series of rotatable members mounted on said sleeve, each of said members being provided with a pin which projects through one of said slots in said sleeve into one of said transverse grooves on said spindle and being provided with a stop engaging one of said slots in said sleeve to limit the movement of said rotatable member, said stop being so arranged that when it engages the end of the slot on said sleeve the said pin lies within said longitudinal groove on said spindle.

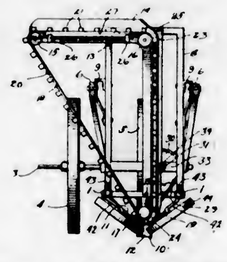
3. A combination lock comprising a body-portion provided with a recess to receive a member to be locked therein, a spindle for locking said member within said recess and a plurality of rings mounted on said body-portion, each of said rings being capable of a limited rotary movement, said rings serving to retain said spindle in the position of locking the said member within said recess except when all of said rings are rotated to the extreme ends of their movements in one direction or the reverse according to a prearranged code.

4. A combination lock comprising a body-portion provided with a recess to receive a member to be locked therein, a longitudinally movable spindle for locking said member within said recess and a plurality of rings mounted on said body-portion, each of said rings being capable of a limited rotary movement, said rings serving to retain said spindle in the position of locking the said member within said recess except when all of said rings are rotated to the extreme ends of their movements in one direction or the reverse according to a prearranged code.

5. A combination lock comprising a body-portion provided with a recess to receive a member to be locked therein, a longitudinally movable spindle for locking said member within said recess and means having a limited rotary movement for locking said spindle against longitudinal movement except when said means are rotated to the extreme ends of their movements in one direction or the reverse according to a prearranged code.

[Claim 6 not printed in the Gazette.]

1,222,921. PLANT-SETTER. HENRY A. BLEY, Eden, N. Y. Filed Mar. 28, 1916. Serial No. 87,329. (Cl. 55—72.)



1. In a planter, means for opening a furrow, means for depositing celery plants in the furrow with the roots extending downwardly and adjustably mounted means for closing the furrow and packing the earth about the roots before the plants leave the depositing means.

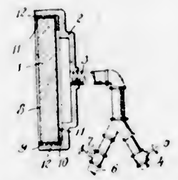
2. In a planter, the combination with a furrow opening shoe, of a vertically extending endless belt, means for rotating the belt, means for supporting celery plants in a horizontal position with the roots extending downwardly during their entire movement to the ground, means for releasing the plant from the first mentioned means, roots first and means for closing the furrow and packing the earth about the roots.

3. In a planter, the combination with furrow opening means, of a vertically movable endless belt, a plurality of elongated blocks extending transversely thereof, means for rotating the belt, the path of movement of the belt being vertically, horizontally and diagonally, the said blocks being adapted to support celery plants and having beveled portions in which the roots of the plants rest, a plate for preventing the displacement of the plants from the blocks in their vertical movement and permitting the displacement of the plants at the end of the vertical movement, the forward ends of the plants being released first whereby the forward movement of the planter will cause the plants to assume a vertical position and means for closing the furrow and packing the earth about the roots of the plants.

4. In a celery planter, the combination with a vertically movable endless belt having a plurality of blocks extending transversely thereof and arranged to support the stalks of the plants, which blocks are provided with beveled portions for receiving the roots of the plants, of means for actuating the belt.

5. In a celery planter, the combination with an endless vertically arranged belt, of blocks extending transversely thereof and arranged to support the stalks of the plants, the said blocks having cut-out portions arranged to support the roots of the plants in downwardly extending positions.

1,222,922. PROCESS OF BURNING GASES. WILLIAM ARTHUR BONE and JAMES WILLIAM WILSON, Leeds, and CYRIL DOUGLAS MCCOURT, London, England, assignors to Radiant Heating Limited, London, England, a British Corporation. Filed July 11, 1912. Serial No. 708,852. Renewed September 8, 1916. Serial No. 119,139. (Cl. 158—117.5.)



1. The process of burning explosive gaseous mixtures which consists in causing the mixture to flow with a velocity less than the normal speed of back-firing of the mixture through tortuous passages of a porous refractory diaphragm to a highly heated surface layer thereof, effecting combustion of the mixture within said highly heated surface layer of the diaphragm, and preventing backflashing by the cooling action of portions of the diaphragm through which the mixture flows on its way to the combustion zone, whereby the combustion is localized within the surface layer of the diaphragm and such surface layer is maintained in a state of incandescence.

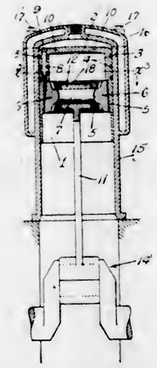
2. The process of burning explosive gaseous mixtures which consists in causing the mixture to flow with a velocity less than the normal speed of back-firing through tortuous passages of a porous refractory diaphragm to a highly heated surface layer thereof, effecting combustion of the mixture within said highly heated surface layer of the diaphragm, preventing backflashing by the cooling action of portions of the diaphragm through which the mixture flows on its way to the combustion zone, and permitting heat to radiate freely from said highly heated surface layer of the diaphragm, whereby the combustion is localized within the surface layer of the diaphragm and such surface layer is maintained in a state of incandescence.

3. The process of burning explosive gaseous mixtures which consists in causing the mixture to flow with a velocity less than the normal speed of back-firing of the mixture through tortuous irregular sectioned passages of a porous refractory diaphragm to a highly heated surface layer thereof, effecting combustion of the mixture within said highly heated surface layer of the diaphragm, and preventing backflashing by causing the mixture as it advances through the diaphragm to impinge on the walls of the tortuous passages of the diaphragm, whereby the combustion is localized within the surface layer of the diaphragm and such surface layer is maintained in a state of incandescence.

4. The process of burning gaseous fuel which consists in combining the gaseous fuel with a gaseous supporter of combustion in proportions to form an explosive gaseous mixture, causing the mixture to flow with a velocity less than the normal speed of back-firing of the mixture through a porous refractory diaphragm to a highly heated surface layer thereof, effecting combustion of the mixture within said highly heated surface layer of the diaphragm, and preventing backflashing by the cooling action of portions of the diaphragm through which the mixture flows on its way to the combustion zone, whereby the combustion is localized within the surface layer of the diaphragm and such surface layer is maintained in a state of incandescence.

5. The process of burning explosive gaseous mixtures which consists in causing the mixture to flow with a velocity less than the normal speed of back-firing through a porous refractory diaphragm to a highly heated surface layer thereof, effecting accelerated surface combustion of the mixture within said highly heated surface layer of the diaphragm, and preventing backflashing by the cooling action of portions of the diaphragm through which the mixture flows on its way to the combustion zone, whereby the combustion is localized within the surface layer of the diaphragm and such surface layer is maintained in a state of incandescence.

1,222,923. RECIPROCATING ENGINE. CHARLES M. BOOTH, Halleck, Cal. Filed July 3, 1916. Serial No. 107,475. (Cl. 74—85.)

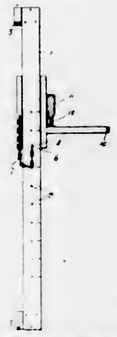


1. In an engine, a piston comprising a hollow circular shell closed at the upper end and internally screw-threaded from the lower end, and a wrist-pin screw-threaded to fit diametrically in the screw-threaded portion of the shell.

2. In an engine, a piston comprising a hollow circular shell closed at the upper end and internally screw-threaded from the lower end, and a wrist-pin having integral enlarged ends screw-threaded to fit the screw-threaded portion of the shell to mount the wrist-pin diametrically.

3. In an engine, a piston comprising a hollow circular shell closed at the upper end and internally screw-threaded from the lower end up to a shoulder, a wrist-pin having integral enlarged ends screw-threaded to fit the screw-threaded portion of the shell against the shoulder, and a locking pin removable from the top.

1,222,924. EXERCISING DEVICE. CHARLES ALVERSON BOYD, Margaretville, N. Y. Filed June 20, 1916. Serial No. 104,766. (Cl. 46—69.)



1. An exercising device of the class described comprising vertical standards spaced apart in parallelism, a block slidably mounted between said standards, means for holding said block at the desired elevation, and a horizontal tongue pivoted to said block and projecting outwardly therefrom and capable of swinging movement substantially as and for the purpose described.

2. An exercising device of the class described comprising vertical standards spaced apart in parallelism, a block slidably mounted between said standards, means for holding said block at the desired elevation, a horizontal tongue pivoted to said block and capable of swinging movement, and a spring acting upon said tongue to hold the latter in normal position and restore the same to such position.

1,222,925. FILM FOR COLOR CINEMATOGRAPHY. PERCY D. BREWSTER, East Orange, N. J. Filed June 24, 1914. Serial No. 846,966. (Cl. 95—2.)



1. As a new article of manufacture in the art of color photography, photographic film for the purpose described, comprising two color-sensitive films superposed one on the other and provided with means for holding the two in the same relative positions during exposure in a camera and during subsequent printing operations, and capable of opening along one edge for the insertion of another film between the two for printing purposes.

2. As a new article of manufacture in the art of color photography, photographic film for the purpose described, comprising two films, one sensitized for one or more colors and the second for one or more colors different from the first, the two films being superposed on each other and provided with means to hold the two in the same relative positions during exposure in a camera and during subsequent printing operations, and capable of opening along one edge to permit the insertion of another film between the two for printing purposes.

3. As a new article of manufacture in the art of color photography, photographic film for the purpose described, comprising two color-sensitive films superposed one on the other and spaced apart, and provided with means for holding the films in the same relative positions during exposure in a camera and during subsequent printing operations, but permitting the two films to open along one edge for the insertion of another film between the two for printing purposes.

4. As a new article of manufacture in the art of color photography, photographic film comprising two superposed color-sensitive films, a spacer between the two films, and means fastening the spacer and the two films together along one edge of the latter and permitting the films to open along the other edge for the insertion of a third film between the other two.

5. As a new article of manufacture in the art of color photography, photographic film comprising two superposed color-sensitive films, a permanent spacer between the two films along one edge thereof, the films and the spacer being fastened together, and a removable separator arranged between the two films and extending over the areas thereof that are to be exposed to light.

[Claims 6 to 10 not printed in the Gazette.]

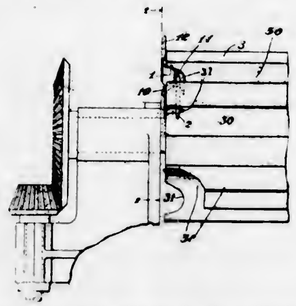
1,222,926. FISH-BEHEADING DEVICE. BENJAMIN R BRIERLY and EDWARD H. WAUGH, Seattle, Wash., assignors to Smith Cannery Machines Company, Seattle, Wash., a Corporation of Washington. Filed Jan. 26, 1916. Serial No. 74,488. (Cl. 17—10.)

1. In a fish dressing apparatus, in combination, a beheading knife, means for producing relative movement of the knife and the fish to behead the fish and a registering pin carried by one of said mechanisms and adapted to enter the fish gills in advance of the action of the knife to thereby correctly register the fish with the knife.

2. The combination with a fish dressing apparatus, of registering pins adapted to enter the fish gills in advance of the action of the knife to thereby register the fish with the knife.

3. In a fish dressing apparatus, the combination with a beheading knife having a cross-sectional outline conforming in the main to the outline of the fish gills, of a

fish-registering pin adapted to enter the fish gills and located at the concaved side of the knife.



4. In a fish dressing apparatus, the combination with a beheading knife of a fish-registering pin located at the side of the knife which lies toward the fish's head.

5. In a fish dresing apparatus, the combination with a beheading knife of a fish-registering pin positioned to enter the fish's gills.

[Claims 6 to 10 not printed in the Gazette.]

1,222,927. BALL-CONTAINER FOR BALL-BEARINGS. JOHN O. BUEKLUND, Worcester, Mass., assignor of one-third to Pehr G. Holmes, Worcester, Mass. Filed May 9, 1916. Serial No. 96,441. (Cl. 64—59.)



1. A ball container, formed from an integral blank and comprising an annular band having wing pieces connected at one end to the outer edge of said band, said annular band having a series of concave recesses, and each of said wings having a concave recess midway between its ends, with said wings bent against said band to bring said recesses in opposition to the recesses in said band to provide ball spaces.

2. A ball container formed from a single piece of sheet metal and comprising an annular band having wing pieces integral with its outer edge and provided at their free ends with laterally extended prongs, said wing pieces being folded against said band and having their prongs extended over the edge of said band, said band and said wing pieces having curved recesses to provide ball spaces.

3. A ball container, comprising an annular band having a series of spaced recesses, wing pieces integral at one end with said band, and means for uniting the opposite ends of said wings with said annular band.

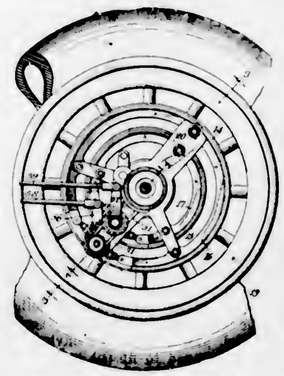
4. A ball container comprising an annular band, having wing pieces extending from its outer edge and connected at their free ends with said band, and concave recesses in said band and in said wing pieces forming spherically shaped receptacles for the reception of balls, said receptacles having openings to permit the contact of the balls with ball tracks.

1,222,928. PRODUCTION OF OXYGEN COMPOUNDS OF NITROGEN FROM AMMONIA. NILS BUSVOLD, Rjukan, Norway. Filed Dec. 16, 1915. Serial No. 67,279. (Cl. 23—1.)

1. In the oxidation of ammonia in the presence of a catalyst the process which consists in passing a gas mixture containing ammonia and oxygen through a layer of a catalytic agent, in such a manner that the pressure in the gas leaving the catalyst is lower than that of the atmosphere.

2. In the oxidation of ammonia in the presence of a catalyst the process which consists in passing a gas mixture containing ammonia and oxygen through a layer of a catalytic agent, in such a manner that the pressure in the gas leaving the catalyst is lower than that of the atmosphere the fall of pressure in the catalyst being at the same time less than 50 mm. mercurial column.

1,222,929. BRAKE MECHANISM FOR MOTOR-CARS. ALFRED L. CAMPBELL, Elmhurst, N. Y., assignor to Brewster & Co., a Corporation of New York. Filed Aug. 22, 1916. Serial No. 116,299. (Cl. 21—8.)



1. The combination, with the wheel, the brake drum, the slotted brake shoe sections, the axle and the axle housing, of a spider formed integrally with a sleeve fixed on the axle housing and with opposite arms formed respectively with a bearing for the pivot of the brake shoe sections, and bearing for the actuating lever of the brake shoe, and with a lateral arm and a guide pin carried by said lateral arm, on which plays the slot in the corresponding brake shoe section.

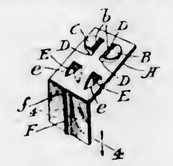
2. The combination, with the wheel, the brake drum, the brake shoe sections, the axle and the axle housing, of a spider arm fixed on said axle housing and formed with an undercut socket bearing, a brake shoe pivot having a head fixed in said socket bearing, an undercut cap fixed on said pivot, and brake shoe sections having their edges cut to enter the undercut socket bearing and cap.

3. The combination, with the brake actuating rock shaft, of a disk fixed thereon with a peripheral series of pin holes, a disk loose thereon formed with a peripheral series of pin holes, a loose collar interposed between the disks and pins fixed in said collar to enter corresponding holes in both disks.

4. The combination, with the brake actuating rock shaft, of a disk fixed thereon formed with a peripheral series of pin holes, a disk loose thereon formed with a series of peripheral holes of a different number from those of the tight disk, a collar interposed between the disks, and pins fixed in the collar, of a number of which the numbers of holes in both disks are different multiples.

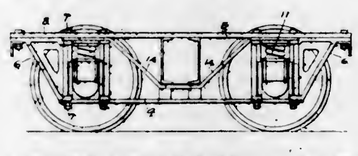
1,222,930. FASTENER FOR BUNDLE OR BALE TIES. SPENCER C. CARY, Brooklyn, N. Y., assignor to Cary Manufacturing Co., New York, N. Y., a Corporation of New York. Filed Dec. 26, 1913. Serial No. 808,709. (Cl. 24—28.)

A fastener for the tie wire of a bundle comprising a metal plate bendable intermediate its ends for producing a plurality of members which are positioned at an angle to each other, one of said members being provided with an aperture and with a groove, a plurality of bendable tongues extending upwardly from the other of said members, said tongues facing in opposite directions and said member being provided with notches positioned adjacent the union of the tongues with the member, and a plurality of prongs depending from the tongue-formed member and positioned intermediate said tongues and the bend in the



plate, whereby the fastener may be bent around the corner of a bundle and fastened thereto by the prongs preliminarily to the application of the tie wire the end portions of which are fastened to the apertured and grooved member and to the oppositely facing tongues in a manner to preclude severance of said tie wire by the metal comprising the plate.

1,222,931. CAR-TRUCK. ELBERT G. CHANDLER, Portland, Oreg. Filed Aug. 12, 1915. Serial No. 45,085. (Cl. 105—243.)



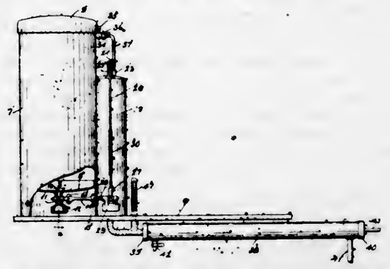
1. A combination integral heel-brace and journal-box column for car trucks, comprising a journal-box column with a bolt hole extending longitudinally therethrough, a horizontal top portion, a brace portion connecting the outer end of said top portion with the lower end of said journal box column, all cast in one piece, said combination heel-brace and journal-box being adapted to be secured in place in said car truck by means of a bolt extended longitudinally through said bolt hole in the journal-box column, substantially as described.

2. In combination with the top and lower bars and journal-box of a car truck, a combination integral heel-brace and journal-box column, cast in one piece, and comprising a journal-box column portion having a bolt hole formed therein longitudinally thereof, and a triangular frame-like portion formed at one side thereof, said combination heel-brace and journal-box column being secured between said top and lower bars by means of a bolt extended through said top bar, said journal-box column and said lower bar, substantially as shown and described.

3. A combination heel-brace and journal-box columns cast in one piece and comprising journal-box column portions having bolt holes formed therein longitudinally thereof, a connecting portion between the upper ends thereof forming a seat and a bracket-like portion, all substantially as shown and described.

1,222,932. STERILIZING APPARATUS. LEON CHEVALLE, Sardis, British Columbia, Canada. Filed Jan. 15, 1917. Serial No. 142,753. (Cl. 99—2.)

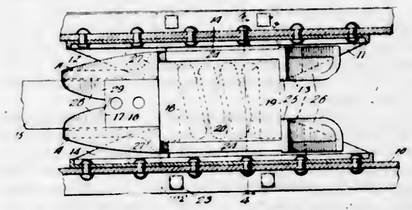
1. In a sterilizing apparatus of the class described, the combination with a container provided with an outlet faucet in its lower portion and an inlet passageway in its upper portion, of a tank containing compressed sterilized air; a valve-controlled pipe connecting the interior of said tank with said inlet passageway; and mechanism operatively disposed to connect the valve-cock of the valve of said valve-controlled pipe with the valve-cock of said faucet and adapted to be manually operated first to admit said sterilized air into said container and thereafter to open the passageway through said faucet.



2. In a sterilizing apparatus of the class described, the combination with a container provided with an outlet faucet in its lower portion and an inlet passageway in its upper portion, of a tank containing compressed sterilized air; a valve-controlled pipe connecting the interior of said tank with said inlet passageway; mechanism operatively disposed to connect the valve-cock of the valve of said valve-controlled pipe with the valve-cock of said faucet and adapted to be manually operated first to admit said sterilized air into said container and thereafter to open the passageway through said faucet; a valve-controlled pipe one terminal of which connects with the interior of said tank; a source of compressed air connected to the other terminal of said pipe; and heating means associated with said pipe whereby the compressed air within said pipe may be heated to sterilize it during its passage from said source of compressed air into said tank.

3. In a sterilizing apparatus of the class described, the combination with a container provided with an outlet faucet in its lower portion and an inlet passageway in its upper portion, of a tank containing compressed sterilized air; a valve-controlled pipe connecting the interior of said tank with said inlet passageway; mechanism operatively disposed to connect the valve-cock of the valve of said valve-controlled pipe with the valve-cock of said faucet and adapted to be manually operated first to admit said sterilized air into said container and thereafter to open the passageway through said faucet; a valve-controlled pipe having one of its terminals connected with the interior of said tank; a source of compressed air to which the other terminal of said valve-controlled pipe is connected; a receptacle for steam through which said valve-controlled pipe extends in an irregular course to subject it to the heat of steam that may be contained in said receptacle whereby compressed air may be sterilized during its passage through said valve-controlled pipe and means for maintaining steam under pressure within said receptacle.

1,222,933. KEYLESS YOKE. ALFRED COPONY, Chicago, Ill. Filed Nov. 30, 1914. Serial No. 874,679. (Cl. 213—42.)



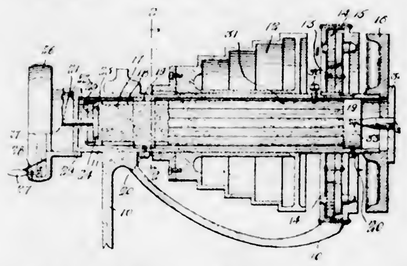
1. A yoke of the character described, comprising two horizontally arranged arms, each having at its front end, upper and lower inwardly extending flanges, said flanges having right angled shoulders arranged to engage the

usual upper and lower shoulders and side faces of the butt of a draw bar.

2. In a yoke for railway draft riggings, an arm having a longitudinally extending vertical web provided with an inwardly extending shoulder at the rear end thereof, said arm at the front end thereof having parallel, inwardly extending upper and lower flanges adapted to fit against the side faces and upper and lower shoulders of a draw bar butt.

3. In a draft rigging for railway cars, the combination with stop members having horizontally arranged guide ways, of a draw bar, a yoke, said yoke comprising two separate arms slidably mounted in said guide ways and supported by the latter, each of said arms being provided at its forward end with upper and lower flanges extending over the top and bottom faces of the draw bar, said flanges and draw bar having coöperating engaging shoulders for operatively connecting the draw bar with said members under draft.

1,222,934. SPINDLE FOR MILLING-MACHINES AND LATHES. LEO H. CORMIER, Brooklyn, N. Y. Filed Oct. 10, 1916. Serial No. 124,894. (Cl. 82—40.)



1. In a lathe, the combination of a hollow shaft provided with a face plate upon its inner end, a spindle slidably mounted in said hollow shaft and adapted to turn therewith, a tool or work-supporting plug detachably mounted in the inner end of the spindle and adapted to be projected beyond the shaft and to be withdrawn into the shaft, and means carried by the shaft for shifting said spindle therein

2. In a lathe, the combination of a hollow shaft, a face plate arranged at one end of the shaft, a spindle slidably mounted in said hollow shaft and adapted to turn therewith, a tool or work-supporting plug detachably mounted upon the inner end of the spindle and adapted to be projected beyond the shaft and through the face plate to receive the work and to be withdrawn into the shaft for binding the work against the face plate, and operating means connected to the spindle for shifting the same.

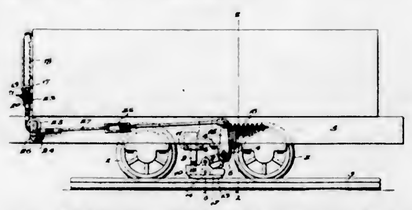
3. In a lathe, the combination of a hollow shaft, a face plate mounted upon the inner end of the shaft, a spindle to slide longitudinally in the shaft and to turn therewith, a detachable center mounted upon the inner end of the spindle and adapted to be projected thereby beyond the end of the shaft for supporting the work, a screw rod threaded through the outer end of said shaft and having swivel connection with the adjacent end of said spindle, and means on the outer end of said rod for turning the same to retract the spindle and bind the work against the face plate.

4. In a lathe, the combination of a hollow shaft having a face plate upon its inner end, a work supporting spindle mounted in the shaft adapted for longitudinal movement therein and adapted to turn therewith, means for shifting the spindle longitudinally in the shaft to bind the work against the face plate, and a set screw carried by the shaft for engagement with the spindle to lock the same in adjusted position.

5. In a lathe, the combination of a hollow shaft having a face plate thereon, a collar fitted in said shaft and secured thereto, said collar being provided with an internal transversely extending rib, a spindle fitting in said shaft provided with a longitudinally extending groove in its periphery for the reception of said rib whereby said spindle is permitted to move longitudinally in the shaft and is held for rotation therewith, and a tool or work support mounted on the projecting end of the spindle to bind the work against the face plate upon the retraction of the spindle.

[Claims 6 and 7 not printed in the Gazette.]

1,222,935. CAR-BRAKE. CHARLES CRON and RICHARD L. DINGLE, Wilkes-Barre, Pa. Filed Apr. 26, 1916. Serial No. 93,691. (Cl. 188—47.)



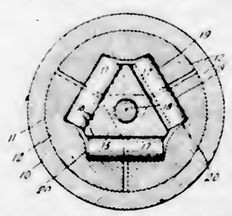
1. In a mechanism of the character described, a car body, spaced bearings thereon, a rock shaft journaled in the bearings, adjustable arms on the shaft, a brake shoe pivoted to each arm, a guide on the car body, a guide bar fixed to the shoe and slidably engaged with the guide, and means for rocking the shaft.

2. In a mechanism of the character described, a car body, spaced bearings thereon, a rock shaft journaled in the bearings, adjustable arms on the shaft, a brake shoe pivoted to each arm, a guide on the car body, a guide bar fixed to the shoe and slidably engaged with the guide, a lever arm extending upwardly from the shaft alongside of the car body, a spring connecting the lever arm to the body, and means for oscillating the lever arm against the action of the spring.

3. In a mechanism of the character described, a car body, spaced bearings thereon, a rock shaft journaled in the bearings, adjustable arms on the shaft, a brake shoe pivoted to each arm, a guide on the car body, a guide bar fixed to the shoe and slidably engaged with the guide, a lever arm extending upwardly from the shaft alongside of the car body, a spring connecting the lever arm to the body, an operating lever pivoted to the car body, and an adjustable connection between the lever arm and the operating lever.

4. In a car brake, a brake shoe carrier, a rock shaft having a fixed arm pivoted to the shoe carrier, the latter having a cut-out in its side, a bar fixed in the cut-out of the carrier and extending upwardly therefrom, a guide for the bar, a brake shoe fixed to the carrier and abutting the guide bar, and means for imparting rotary movement to the shaft.

1,222,936. FRICTION-GEAR. CHARLES E. DATH, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 18, 1915. Serial No. 56,415. (Cl. 213—64.)



1. In a friction draft gear, the combination with a friction shell, a wedge and a plurality of friction shoes coöperable therewith, of a plurality of anti-friction rollers interposed between said shoes and wedge, said rollers corresponding in number to the number of shoes, the axes of said rollers extending in a plane perpendicular to the axis of the gear, each of said rollers engaging two shoes.

2. In a friction draft gear, the combination with a friction shell, a plurality of friction shoes coöperable therewith, and a single piece wedge, of a plurality of anti-friction rollers interposed between said wedge and shoes, the number of said rollers corresponding to the number of shoes and each roller bearing upon adjacent portions of two shoes.

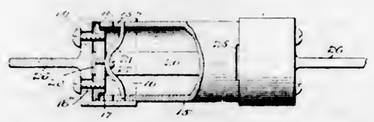
3. In a friction draft gear, the combination with a friction shell, friction shoes coöperating therewith, and a wedge, of anti-friction rollers interposed between said wedge and shoes, each of said shoes having a plurality of wedge faces and provided also with shoulders adjacent each wedge face, said shoulders being engaged by the ends of the rollers.

4. In a friction draft gear, the combination with a friction shell, a wedge and a plurality of friction shoes coöperable therewith, of a plurality of anti-friction rollers interposed between said shoes and wedge, the axes of said rollers extending in a plane perpendicular to the axes of the gear, each of said rollers engaging two shoes.

5. In a friction gear, the combination with a cylindrical friction shell, of a wedge having a regular polygon cross section at the wedge portion thereof, a plurality of friction shoes having cylindrical outer friction surfaces coöperating with said shell, the number of said shoes equaling the number of sides to said polygonal cross section, of the wedge, and anti-friction rollers interposed between the wedge and shoes, the arrangement of shoes, rollers and wedge being such that a radius extending from the axis of the cylinder to the center of a friction shoe will substantially bisect the angle between two adjacent sides of the polygonal section of the wedge and pass between the ends of adjacent rollers.

[Claims 6 and 7 not printed in the Gazette.]

1,222,937. FUSE. ALBERT F. DAUM, Pittsburgh, Pa. Filed May 10, 1913. Serial No. 766,816. (Cl. 175—273.)



1. In a fuse, a shell, having openings therein, a cap on the end of the shell, a clamping member within the cap, a fusible element clamped between the cap and the clamping member, and means coöperating with the said openings for permitting the cap to have a limited movement longitudinally of the shell.

2. In a fuse, a shell, a unit composed of a cap on the shell, a clamping member in the cap, and a fusible element clamped between the cap and said member independently of contact with the shell, and means projecting from the unit for permitting a limited movement of the unit longitudinally of the shell.

3. In a fuse, a shell, a fusible element, means for clamping said element in position within the shell, and means cooperating with the shell for permitting a limited movement of the clamping means as a unit longitudinally of the shell upon "blowing" of the element.

4. In a fuse, a shell, a fuse element, fuse-clamping means for positioning the fuse element within the shell, said means being movable longitudinally of the shell as a unit, and means coöperating with the shell for limiting the length of movement of the unit, the fuse element acting to normally restrain the movement of the unit in clamping position, said unit movement being permitted by the "blowing" of the fuse element.

5. In a fuse, a shell, a fuse element, a fuse-element clamping unit movable longitudinally of the shell, and means coöperating with the shell for placing the clamped fuse element under tension while protecting a circuit, said tension means aiding in disrupting the element when the safety limits are reached.

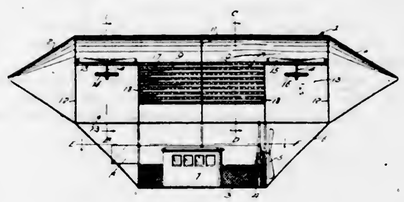
[Claims 6 to 27 not printed in the Gazette.]

1,222,938. DRILL. HERBERT P. DYSON, Knoxville, Tenn., assignor to Atlas Powder Company, Wilmington, Del., a Corporation of Delaware. Filed July 27, 1915. Serial No. 42,127. (Cl. 86—21.)



A drill comprising a driving tube, and a driving core to extend loosely and completely through and project both below and above said tube, said core having a driving point at its lower end and a collar above the tube to abut and serve as a hammer on the upper end of the tube, the core projecting substantially above said collar to serve as a hammer handle.

1,222,939. AIRSHIP. PERRY LORENZO EDDY, Cripple Creek, Colo. Filed Apr. 21, 1916. Serial No. 92,728. (Cl. 244—15.)



1. In an air ship, a body having an open bottom, vertical flues within the body, helicopters displacing air downwardly within the flues, there being compartments above the helicopters, each compartment having an air inlet space extending thereinto from the bottom of the body, and a cellular air resisting body within each of said inlets.

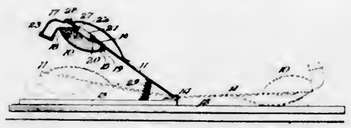
2. An air ship including a body open at the bottom and having a flue therein, a helicopter for displacing air downwardly within the flue, there being an air chamber above the helicopter, said air chamber having an air inlet extending from the bottom of the body, and a cellular air resisting body within the inlet.

3. An air ship including a body open at the bottom and having a flue therein, a helicopter for displacing air downwardly within the flue, there being an air chamber above the helicopter, said air chamber having an air inlet extending from the bottom of the body, and a cellular air resisting body within the inlet, said body including superposed series of inclined slats arranged in pairs, the pairs of slats being spaced apart.

4. An air ship including a body open at the bottom and having a flue therein, a helicopter for displacing air downwardly within the flue, there being an air chamber above the helicopter, said air chamber having an air inlet extending from the bottom of the body, and a cellular air resisting body within the inlet, said body including superposed series of inclined slats arranged in pairs, the

pairs of slats being spaced apart, the slats of each series being disposed at right angles to the slats of the adjoining series.

1,222,940. STAMP AND ENVELOP MOISTENER. BEULAH E. EDWARDS, Liscomb, Iowa. Filed Dec. 15, 1916. Serial No. 137,206. (Cl. 91—47.)



1. A device of the character described including a hinged supporting member, a container carried by the free end of the member and adapted in one position of the member to be disposed in an upright position and in another in an inverted position, and a nozzle controlling passage of fluid from the container when in inverted position, said nozzle including a perforate member positioned across the discharge opening of the container, and a retaining band engaging about the container and having a shoulder engaging the perforate member.

2. A device of the character described, a supporting base, an arm hinged to the intermediate portion of the base, a container fixed to the free end of the arm, a spring secured to the container and resting against the arm to cushion the arm from the base, and resilient means for holding the arm in position to space the container above the base when the arm is swung to invert the container.

3. A device of the character described including a supporting base, an arm hinged at one end near the center of the base, a semispherical container having a closed flat bottom secured to the free end of the arm, the container having a curved spout, and a discharge nozzle controlling passage of fluid through the spout.

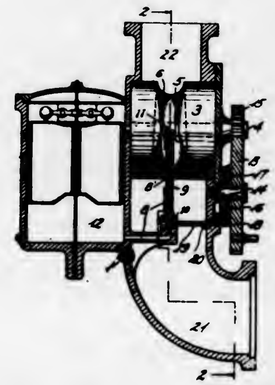
4. A device of the character described including a supporting base, an arm hinged at one end near the center of the base, a semispherical container having a closed flat bottom secured to the free end of the arm, the container having a curved spout, a discharge nozzle controlling passage of fluid through the spout, said nozzle including a band projecting beyond the spout, a perforate member engaging the end of the spout and encircled by the band, and a pad of absorbent material capable of seating within the band and against the perforate member.

1,222,941. CARBURETER. MICHAEL EGOROFF, Petrograd, Russia. Filed Aug. 10, 1915. Serial No. 44,671. (Cl. 261—44.)

1. An improved carbureter including, in combination, a pair of cylindrical rollers mounted for rotation in the same direction, grooves of variable cross-section on the rollers to form between the rollers a carbureting chamber and a diverging outlet for the charge, a spraying nozzle including a pipe and a sleeve therefor both substantially concentric, and a single gear train for rotating one of the pipes relatively to the other and simultaneously rotating both rollers in the same direction, to insure a proper regulation of the fuel supply.

2. An improved carbureter including, in combination, a pair of cylindrical rollers rotating on axially arranged spindles carried thereby, grooves of variable cross-section on the rollers adapted in any rotative adjustment of the rollers to form between the rollers a carbureting chamber and a diverging outlet for the charge, a spraying nozzle including two elements, a pipe and a sleeve therefor both substantially concentric, a pinion secured on each roller's spindle, a general pinion engaging the two pinions first mentioned, a conical wheel secured to the general pinion, and a segment engaging the conical wheel and moved when the general pinion is rotated and connected to one of the nozzle elements to adjust the nozzle to regulate the aperture thereof.

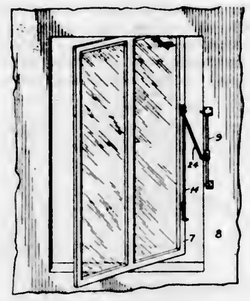
3. In an improved apparatus of the kind described, the combination with a carbureting chamber and a source of fuel-supply therefor, of a tube leading from said source and having an end directed toward the outlet of the carbureting chamber with an opening in said end of less area than the cross-sectional area of the tube's interior, a second tube arranged concentric with the first mentioned tube and having an opening closely adjacent to the first tube's opening and of less area than the cross-sectional area of the second tube's interior, a pair of cylindrical rollers arranged side by side to partially close the outlet end of the carbureting chamber and mounted for rotation on their axes, each roller having a groove in its side wall of varying cross-section so designed that the rollers may be adjusted on their axes to establish an outwardly diverging outlet for the carbureting chamber, and means for rotating the two rollers in the same direction and for simultaneously rotating one of the tubes relatively to the other, the parts being designed so that in any adjustment of the rollers on their axes the grooves form an outwardly diverging outlet from the carbureting chamber and so that said outlet and nozzle are correspondingly increased and decreased to insure a proper regulation and discharge of the fuel mixture.



4. In an improved apparatus of the kind described, the combination with a carbureting chamber and a source of fuel-supply therefor, of a tube leading from said source and having an end directed toward the outlet of the carbureting chamber with an opening in said end of less area than the cross-sectional area of the tube's interior, a rotatable tube arranged concentric with the first-mentioned tube and having an opening closely adjacent to the first tube's opening and of less area than the cross-sectional area of the second tube's interior, a pair of cylindrical rollers arranged side by side to partially close the outlet end of the carbureting chamber and mounted for rotation on their axes, each roller having a groove in its side wall of varying cross-section so designed that the rollers may be adjusted on their axes to establish an outwardly diverging outlet for the carbureting chamber, gears carried by each of the rollers, a gear meshing with the two gears carried by the rollers, a conical gear driven by the gear last mentioned, and a gear segment meshing with the conical gear and connected to the rotatable tube so that when the conical gear is rotated the rotatable tube will be rotated relatively to the other tube.

5. In an improved apparatus of the kind described, a pair of rollers arranged side by side having contacting cylindrical surfaces, each roller having a groove in its side wall between its ends varying in depth substantially from end to end, the two grooves being similar, opposite to each other and extending around their rollers in the same direction, so that the grooves in central section define an S-shaped figure in any operative position of the rollers.

1,222,942. WINDOW-FASTENER. WILLIAM C. FOX, Seattle, Wash., assignor of one-half to Charles H. Gaffner, Seattle, Wash. Filed Apr. 22, 1915. Serial No. 23,011. (Cl. 16—22.)



1. The combination with a window frame having a sash pivoted therein to swing on an axis parallel to one edge of the frame; of a rod fixed to the frame parallel to said edge, a sleeve slidably and rotatably mounted on the rod, a plate fixed to the sash, a stud swiveled in the plate, and a connecting rod having its ends pivoted to the sleeve and stud respectively.

2. A window fastener comprising a sleeve connected to a window frame for vertical movements, a clamping screw adapted for securing said sleeve in adjusted positions, a bracket secured to the window-sash, a link pivoted at one end to said sleeve, and a swivel pivoted to the other end of said link, said swivel and bracket being provided with coöperating means whereby the former is separable from the latter when the swivel is sufficiently rotated.

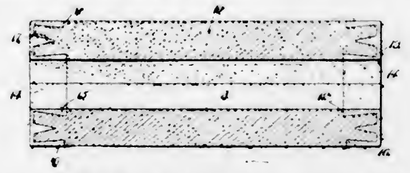
3. A window fastener comprising connections between a window-frame and a sash pivotally mounted therein, comprising a rod secured to the window frame, a sleeve slidably mounted on said rod, means for securing the sleeve in adjusted positions upon said rod, a bracket fixed to the sash, a link connected at one of its ends to said sleeve, a swivel on said link adapted to extend through an aperture provided in said bracket, and spaced means provided on said swivel to engage the bracket therebetween and arranged to permit the withdrawal of said swivel from the bracket when the swivel is moved into a predetermined rotary position.

4. A window fastener comprising a rod secured to a window frame, a bracket secured to the window-sash, a sleeve slidably and rotatably mounted on said rod, means to secure the sleeve in adjusted positions, and a two-part jointed link pivotally connected at one end to said sleeve and having a rotary connection at its other end with said bracket, said bracket and link being adapted to be disconnected when the latter is in a certain rotary position.

5. In a device of the class described, the combination with a window frame and a sash pivotally mounted therein, a sleeve, means secured to said window frame to serve as a support and guide for said sleeve, means to secure said sleeve in adjusted position on the aforesaid means, a bracket on said sash, said bracket being provided with an aperture having a circular central bearing portion and slots extending therefrom at diametrically opposite sides, and a link hingedly connected at one end to said sleeve and provided with a head at the other end formed with a cross-bar arranged to pass through said slots when the head is introduced into the aperture of said bracket.

1,222,943. METAL CAP FOR ROLLS. WILLIAM F. GAMMETER, Cadiz, Ohio. Filed Aug. 28, 1916. Serial No. 117,272. (Cl. 242—68.)

1. The combination with a tubular roll, of a cap for the end of the roll including a body adapted to engage against the roll end, inner and outer flanges adapted to seat in the bore of the roll and engage about the roll end, respectively, and means between the flanges for expanding that portion of the roll end engaged between them, the inner flange being thickened externally and the outer flange internally whereby the space between their free edges is more restricted than the space adjacent their juncture with the body of the cap.



2. The combination with a wooden roll formed with a square axial bore enlarged at its ends to provide internal stop shoulders, the roll being reduced at its ends externally to provide annular stop shoulders, of caps fitted to the ends of the roll, each cap including an outer annular flange engaging about the roll end and abutting against the external shoulder, a square internal flange seating in the enlarged end of the bore and abutting against the internal shoulder, the cap being formed with a square opening constituting a continuation of the bore of the roll and the flanges being thickened whereby the space between their free edges is more restricted than the space between their portions adjacent the body of the cap, and means between the flanges for expanding that portion of the roll end seating in such space.

3. The combination with a wooden roll formed with a square axial bore enlarged at its ends to provide internal stop shoulders, the roll being reduced at its ends externally to provide annular stop shoulders, of caps fitted to the ends of the roll, each cap including an outer annular flange engaging about the roll end and abutting against the external shoulder, a square internal flange seating in the enlarged end of the bore and abutting against the internal shoulder, the cap being formed with a square opening constituting a continuation of the bore of the roll and the flanges being thickened whereby the space between their free edges is more restricted than the space between their portions adjacent the body of the cap, and means between the flanges for expanding, that portion of the roll end seating in such space, said means comprising an annular wedging flange formed on the cap between the inner and outer flanges.

4. A metal cap for rolls including a circular body formed upon one face with an annular flange, the inner face of which is inclined inwardly toward its free edge, the cap being formed centrally with a square opening and with a flange surrounding the opening and projecting from the same face as the first flange, the second flange being squared and having its outer face inclined outwardly toward its free edge, and a wedging flange projecting from the face of the cap between the above mentioned flanges.

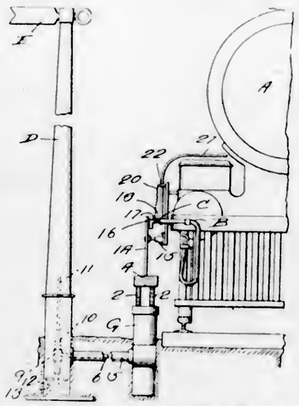
5. A metal cap for rolls including a circular body formed upon one face with an annular flange, the inner face of which is inclined inwardly toward its free edge, the cap being formed centrally with a square opening and with a flange surrounding the opening and projecting from the same face as the first flange, the second flange being squared and having its outer face inclined outwardly toward its free edge, and a wedging flange projecting from the face of the cap between the above mentioned flanges, the wedging flange being of less depth or length than the other flanges.

[Claims 6 and 7 not printed in the Gazette.]

1,222,944. TRAIN-STOPPING APPARATUS. ALBERT L. GUTHNER, Littleton, Colo. Filed Jan. 19, 1915. Serial No. 3,145. (Cl. 246—59.)

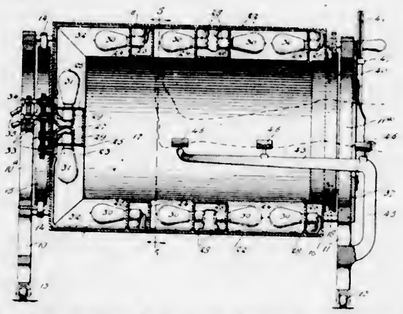
In a train stopping apparatus, the combination with a signal device having a vertically movable rod, a rack carried by said rod, a casing, a transverse shaft, pinions on

said shaft, one of said pinions operating upon said rack, and the other pinion operating in said casing, a piston head movable in said casing, a pair of rack bars carried by said head and meshing with the pinion in said casing,



said rack bars extending through the top of the casing, and a head mounted upon the projecting ends of said rack bars and adapted to be projected above the trackway when the signal is set to form a tripping device for a train stopping mechanism.

1,222,945. MEDICAL APPARATUS. OSCAR HAMMERSTEIN, New York, N. Y. Filed June 14, 1916. Serial No. 103,638. (Cl. 174—177.)



1. An apparatus of the kind described comprising a movable container adapted to receive and inclose the affected part and provided with internal recesses, heat generating means located within said recesses, the walls of the latter being constructed to concentrate the heat and deflect it inwardly toward the center of the container and means for moving said container about the affected part.

2. An apparatus of the kind described comprising a hollow member adapted to receive and inclose the affected part, heat generating means carried by said member and means for moving said member with said heat generating means about said affected part.

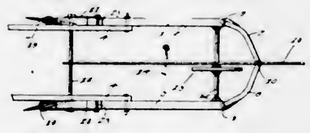
3. An apparatus of the kind described comprising a rotatable container adapted to receive the affected part and provided with an internal recess, and electrically energized means located within said recess, the walls of the latter being arranged to deflect the effects of said means inwardly toward the center of said container.

4. An apparatus of the kind described comprising a support, a hollow drum adapted to receive the affected part and rotatably carried by said support for producing light rays and for generating heat, means carried by said drum and located interiorly thereof and means for rotating said drum about the affected part.

5. An apparatus of the kind described comprising a support, a hollow drum adapted to receive the affected part and rotatably carried by said support, heat generating devices within said drum and rotatable therewith and means controlled by the patient for rotating said drum and heat generating devices about the affected part.

[Claims 6 to 10 not printed in the Gazette.]

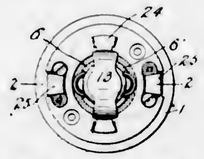
1,222,946. VINE-CUTTER. MATHEW J. HARRISON, Whigham, Ga. Filed July 19, 1916. Serial No. 110,257. (Cl. 55—64.)



1. In a vine cutter, a supporting frame, a supporting wheel rotatably supported a short distance rearwardly of the forward end of said supporting frame, said supporting frame including a pair of side bars, a pair of metallic bars held in binding engagement with portions of the sides of said side bars adjacent to their rear ends, and vine cutting disks rotatably carried by said metallic bars and positioned at slight angles with respect to the direction of travel of the vine cutter.

2. In a vine cutter, a supporting frame, a supporting wheel rotatably supported a short distance rearwardly of the forward end of said supporting frame, said supporting frame including a pair of side bars, a pair of metallic bars held in binding engagement with portions of the sides of said side bars adjacent to their rear ends, and vine cutting disks rotatably carried by said metallic bars and positioned at slight angles with respect to the direction of travel of the vine cutter, a pair of bars connected to the front ends of said rails and extending inwardly toward each other and forwardly from the ends of the side rails, a bracing rod carried by the rear end of said side rails, and a hitch bar connected to said bracing rod and extending forwardly therefrom, the front end of said hitch bar projecting beyond the front ends of said forwardly extending bars, and means for connecting said hitch bar to said forwardly extending bars.

1,222,947. ELECTRIC SWITCH. GEORGE H. HART, West Hartford, Conn. Filed June 17, 1916. Serial No. 104,180. (Cl. 175—290.)



1. In a snap switch capable of being actuated by an oscillating movement, the combination of a base, a spindle-carrying-member thereon having a plurality of radial recesses, stop pins located in said recesses and having inner cam surfaces, a spindle movably mounted in said spindle-carrying member, thrust members fixed on said spindle and adapted to engage said cam surfaces and a stop plate revolubly carried by said spindle and provided with alternate cutaway portions and projections forming substantially equally spaced shoulders adapted to engage said stop pins, a stop plate actuating spring, and means for holding said stop pins in shoulder-engaging position, the cam surfaces of two pins being separated by the axis

of one of said thrust members when their outer ends are in the same cutaway portion of said plate.

2. In a snap switch capable of being actuated by an oscillating movement, the combination of a base, a spindle-carrying-member thereon having two radial recesses, stop pins located in said recesses and having inner cam surfaces, a spindle movably mounted in said spindle-carrying member, a plurality of thrust members fixed on said spindle and adapted to engage said cam surfaces, a stop plate revolubly carried by said spindle and provided with alternate cutaway portions and projections forming substantially equally spaced shoulders adapted to engage said stop pins, a stop-plate actuating spring, means for holding said stop pins in shoulder-engaging position, the angles between said recesses being substantially one-half of the angle between said thrust members, the cam surfaces of two pins being separated by the axis of one of said thrust members when their outer ends are in the same cutaway portion of said plate.

3. In a snap switch capable of being actuated by an oscillating movement, the combination of a base, a spindle-carrying-member thereon having a plurality of radial recesses, stop pins located in said recesses and having inner cam surfaces, a spindle movably mounted in said spindle carrying member, two thrust members fixed on said spindle adapted to engage said cam surfaces successively and a stop plate revolubly carried by said spindle and provided with alternate cutaway portions and projections forming substantially equally spaced shoulders adapted to engage said stop pins, means for holding said stop pins in shoulder-engaging position, the cam surfaces of two pins being separated by the axis of one of said thrust members when their outer ends are in the same cutaway portion of said plate, said recesses being located at an angle of 90° from each other and said thrust members being located at an angle of substantially 180° from each other.

4. In an electric switch capable of being actuated by an oscillating movement, the combination of a spindle, a holding plate thereon, a handle, a bushing fixed in said handle, an internally threaded socket within said bushing movable longitudinally but not axially relatively thereto, a spring retracting said socket within said bushing, said plate having a radial slot engaging the sides of said spindle and being removable from said spindle by a movement parallel to said slot, said spindle and plate having plane surfaces engaging so as to prevent their relatively axial movement in either direction, said plate and bushing being provided with stop surfaces located at an angle to the walls of said slot preventing axial movement of said bushing relatively to said plate and spindle and preventing said plate moving relatively to said spindle in a direction parallel to its slot when said surfaces are in engagement said bushing locking said plate upon said spindle.

1,222,948. MARKING IMPLEMENT. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Filed Mar. 3, 1915. Serial No. 11,851. (Cl. 240—8.4.)



1. A marking implement comprising, in combination, marking means and illuminating means, one carried by the other and both being conjointly movable during the marking operation whereby movements of one are accompanied by like movements of the other and the rays of light are caused to illuminate the area being marked upon, a casing for said illuminating means, and holding means for said marking means, said holding means being movable along said casing in a direction lengthwise thereof whereby in one relative position said marking means extends beyond said illuminating means within the light shed by the latter and in another position is retracted, said holding means being held by said casing in grasping relation with said marking means.

2. A marking implement comprising, in combination, marking means and electric illuminating means, one carried by the other for conjoint movement, one of said means being movable relatively to the other and having one relative position in which said illuminating means directs its rays of light onto said marking means, said electric illuminating means including a lamp and a battery, said battery having a lateral terminal, and switch means operable by such movement to engage said lateral terminal to control said illuminating means.

3. A marking implement comprising, in combination, a metallic casing, a battery disposed within said casing and having two terminals, a lamp carried by said casing and having two terminals one of which is in constant electrical connection with said casing and the other with one of the battery terminals, a conducting member having constant electrical connection with said casing and having an operative movement to connect said casing electrically with the remaining battery terminal thereby to complete the lamp circuit, and marking means carried by said member and adapted to be carried by said movement into the rays of light from said lamp.

4. A marking implement comprising, in combination, a metallic casing, a battery disposed within said casing and having two terminals, a lamp carried by said casing and having two terminals one of which is in constant electrical connection with said casing and the other with one of the battery terminals, a conducting member having constant electrical connection with said casing and having an operative movement to connect said casing electrically with the remaining battery terminal thereby to complete the lamp circuit, said member being hollow and having elastic walls engaging said casing to hold said member against accidental movement, and marking means carried by said member and adapted to be carried by said movement into the rays of light from said lamp.

5. A marking implement comprising, in combination, a metallic casing, a battery disposed within said casing and having two terminals, a lamp carried by said casing and having two terminals one of which is in constant electrical connection with said casing and the other with one of the battery terminals, a conducting member having constant electrical connection with said casing and having an operative movement to connect said casing electrically with the remaining battery terminal thereby to complete the lamp circuit, said member being hollow and having yielding walls held under tension by said casing, and marking means grasped by said yielding walls and adapted to be carried by said movement into the rays of light from said lamp.

[Claims 6 to 8 not printed in the Gazette.]

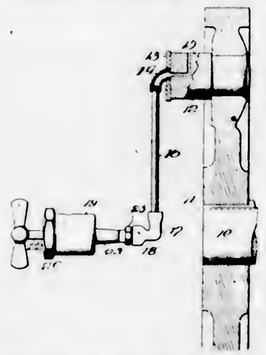
1,222,949. LUBRICATOR. JESSE C. HAYES, Rochelle, Ill. Filed May 6, 1916. Serial No. 95,942. (Cl. 184—8.)

1. The combination with a shaft having a crank pin associated therewith, of a lubricator carried by the pin and having communication with the periphery thereof, the said lubricator including a cup supported axially of the said shaft and provided with a stem, and a valve having a head, and a stem loosely received within the stem of said cup for guiding the valve head to active position closing the stem of the cup with the valve automatically operable by a back pressure from the pin toward the cup to abut off a back flow of lubricant from the said pin into the cup.

2. In a lubricator of the character described, a cup having a stem, a sleeve freely receiving the stem, means connecting the sleeve with the said stem, and a connection receiving the sleeve for rotatably supporting the cup upon the said connection.

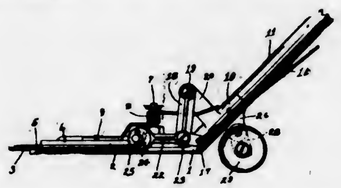
3. In a lubricator of the character described, a cup having a stem, a sleeve freely receiving the stem, a feed pipe operatively receiving the sleeve for rotatably supporting the cup upon the said pipe, and a valve slidable within the stem for automatically shutting off a back flow of lubricant from the pipe into the cup.

4. In a lubricator of the character described, a feed pipe, a cup provided with a stem having a cylindrical shank, a sleeve carried by the said shank and having operative screw threaded connection with the said pipe to rotatably support the cup upon the pipe, a nut screw threaded upon the inner extremity of the stem for connecting the sleeve with the shank, and a valve slidable within the inner extremity of the stem for shutting off a back-flow of lubricant from the feed pipe into the cup.



5. In a lubricator of the character described, a cup having a stem, a sleeve carried by the stem, means rotatably connecting the sleeve with the stem, and a feed pipe operatively receiving the sleeve for rotatably supporting the cup upon the said pipe.

1,222,950. LAWN-TRIMMER. KARL A. HEIDL, Columbus, Ohio. Filed Mar. 29, 1916. Serial No. 87,628. (Cl. 56—19.)



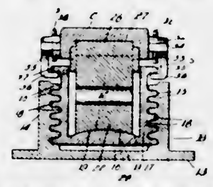
A lawn trimmer comprising a base unit, a handle rigidly attached to said unit, a shear blade rigidly carried by said unit, a second shear blade pivotally attached to said unit, a lateral extension on said second shear blade, an arm pivoted at one end to said base unit, a link pivoted to the opposite end of said arm and said lateral extension, and an actuating rod also operatively connected to the end of said arm to which said link is connected.

1,222,951. ADJUSTABLE SIDE BEARING. JOHN J. HENNESSEY, Milwaukee, Wis. Filed Apr. 17, 1916. Serial No. 91,592. (Cl. 64—65.)

1. In a rocker side bearing, the combination with a base member, of a top plate, rockers located between said top plate and base member, and means for adjusting said top plate and rockers as a unit and without disturbing the relation therebetween, vertically relatively to said base member.

2. In a side bearing, the combination with a base casting, of a horizontally reciprocating top plate, a plurality of members interposed between said top plate and base casting, and means for adjusting said top plate and members vertically, as a unit and without disturbing the relation therebetween, relatively to said base casting.

3. In a side bearing, the combination with a base casting, of a top plate, a bottom plate, rockers interposed between said top and bottom plates, and means permitting adjustment of said bottom plate, top plate, and rockers as a unit and without disturbing the relation therebetween, vertically relatively to the base casting.

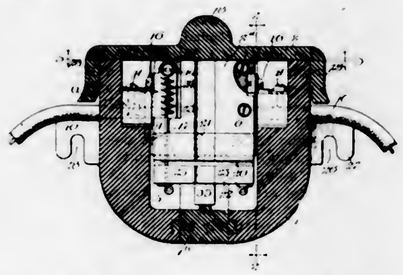


4. In a side bearing, the combination with a base casting having upstanding, spaced side walls, of a bottom plate slidably mounted between the side walls of the base casting, a reciprocating top plate, rockers interposed between said top and bottom plates, and detachable means at the ends of said base casting for retaining said bottom plates and the parts mounted thereon, in operative position.

5. In a side bearing, the combination with a base casting and a bottom plate relatively vertically adjustable, of a reciprocating top plate, rockers interposed between said top and bottom plates, and a spring connected to said top and bottom plates adapted to return the top plate to normal position after each actuation thereof.

[Claim 6 not printed in the Gazette.]

1,222,952. FUSE DEVICE. ALFRED HERZ, Chicago, Ill., assignor of one-half to Edmund O. Schweitzer, Chicago, Ill. Filed Jan. 26, 1911. Serial No. 604,836. (Cl. 175—277.)



1. A fuse device having a casing provided with interiorly arranged contact members, in combination with a fuse holding device provided with contact members to cooperate with said contact members in the casing, said casing having an aperture through which the fuse holding device may be inserted into and withdrawn from the casing, said fuse holding device having a member projecting out through said aperture when the fuse holding device is in position in the casing, and a closure for said aperture, said closure being adapted to engage said projecting member and thereby hold the same in position.

2. A fuse device having a casing provided with interiorly arranged contact members, in combination with a fuse holding device provided with contact members to cooperate with said contact members in the casing, said casing having an aperture through which the fuse holding device may be inserted into and withdrawn from the casing, said fuse holding device having a member projecting out through said aperture when the fuse holding device is in position in the casing, and a closure for said aperture, said closure being adapted to engage said projecting member and thereby hold the same in position, said projecting member being adapted to serve also as a handle for said fuse holding device.

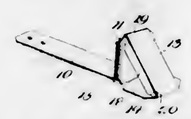
3. A device of the class specified comprising a casing having an aperture, contact members within the casing, a fuse holding device adapted for insertion into and withdrawal from the casing through the aperture therein, said fuse holding device being provided with contact members coöperating with those in the casing, said fuse holding device having a projecting member extending outwardly through said aperture and from the casing, and a closure for said aperture, said closure being mounted to permit of its being moved into position substantially parallel with the wall having said aperture, and into engagement with said projecting member, whereby said closure may merely by being brought into closed position, hold said projecting member in position.

4. A device of the class described, comprising a receptacle having top, bottom and side walls, a fuse carrying structure detachably mounted within the receptacle, a support for said fuse carrying structure secured to one of said side walls, another support for said structure on the side wall opposite to said first mentioned support, and a cover hingedly secured to said receptacle and engaging the fuse carrying structure between said cover and the wall which forms a support for the fuse carrying structure.

5. A device of the class specified having a casing and a fuse carrying device arranged within the casing, said fuse carrying device comprising a pair of compression members between which the fuse is arranged, spring means holding said compression members together, terminals secured to one of said members, the fuse being connected to said terminals, and coöperating terminals on the casing whereby said fuse carrying device may be removably mounted in the casing.

[Claims 6 to 11 not printed in the Gazette.]

1,222,953. SNOW-GUARD. EDWARD E. HISTAND, Doylestown, Pa. Filed Dec. 10, 1915. Serial No. 66,145. Cl. 108—27.)

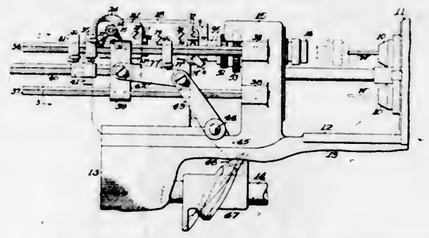


1. A device of the character described formed from a strip provided with an atttaching shank and having longitudinally spaced pairs of oppositely disposed notches formed in the margins thereof to define a foot upstanding from the shank, a bearing member extending longitudinally of the shank and provided with attaching lugs engaging the said shank, and a flanged supporting arm extending between the foot and bearing member with the flanges of the said arm engaging the confronting faces of the foot and bearing member to coöperate with the arm in supporting the foot in position.

2. A device of the character described including a body formed with an attaching shank and having portions of its length arranged to provide one a foot upstanding from the shank, another a bearing member extending longitudinally of the shank, and the other a supporting arm for the foot extending between the foot and bearing member and of less width than the foot, and reinforcing flanges carried by the said arm and having their ends formed to provide shoulders conforming to the adjacent faces of the foot and bearing member and engaging therewith in inward spaced relation to the side edges of the said foot and bearing member to coöperate with the said arm in supporting the foot relative to the bearing member.

1,222,954. THREADING MECHANISM FOR AUTOMATIC LATHES. JAMES J. HOGAN, JOHN F. JUDD, and LYMAN M. WAITE, Fitchburg, Mass., assignors to Fitchburg Machine Works, Fitchburg, Mass., a Corporation of Massachusetts. Filed May 19, 1916. Serial No. 98,659. (Cl. 29—37.)

1. In an automatic lathe, in combination, a threading die, driving means effective to rotate said die at each of two different speeds, controlling mechanism for said driving means, devices effective to advance and retract said die axially, actuators for said devices, and means to support said devices, mechanism, and actuators in alinement with either one of two successive operative positions of the work spindle.



2. In an automatic lathe, in combination, a threading die, means to rotate said die at each of two different speeds, a fixed frame member having guide-ways thereon, a removable support slidable on said ways, means to secure said support in fixed position on said ways during the continued operation of the machine, and mechanism mounted on said support through which the thread-cutting operation may be controlled.

3. In an automatic lathe, in combination, a threading die, means to rotate said die at each of two different speeds, a fixed frame member having two sets of guide-ways thereon, a support adapted to be mounted in fixed position on either one of said sets of ways, mechanism mounted on said support through which the thread-cutting operation may be controlled, and means to actuate said mechanism in either position thereof.

4. In an automatic lathe, in combination, a threading die, means to rotate said die at each of two different speeds, a fixed frame member having two sets of guide-ways thereon, a support adapted to be mounted in fixed position on either one of said sets of ways, mechanism mounted on said support through which the operation of the threading die may be controlled, a pair of sliding bars mounted for simultaneous movement on said fixed frame, and a plurality of devices effective when mounted on one of said bars to control the mechanism on said support when on one set of guide-ways, and effective when mounted on the other bar to control said mechanism when supported on the other set of guide-ways.

5. In an automatic lathe, in combination, a threading die, driving means for rotating said die at each of two different speeds, devices connected to move said die axially, and a single actuating member effective to advance and retract said die and to control the speed changes thereof.

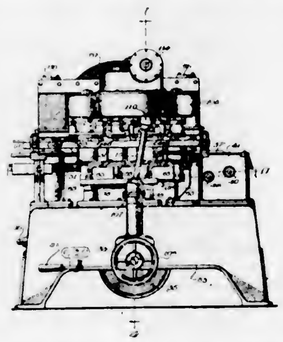
[Claims 6 to 16 not printed in the Gazette.]

1,222,955. CAN-SEAMING MACHINE. HARRY H. HOOD, Chicago, Ill., assignor to E. F. Herrmann. Filed Sept. 10, 1914. Serial No. 860,980. (Cl. 113—24.)

1. The combination of a continuously traveling conveyer adapted to engage and propel a series of objects to be operated upon, a reciprocatory carrier, devices carried by said carrier for operating upon said objects, means for advancing said carrier for a limited distance at the same speed and in the same direction as the said objects are traveling and for afterward retracting said carrier, means for engaging said objects with the operating devices while the carrier is traveling synchronously with said objects, means for driving said operating devices, power-transmitting means adapted to actuate said operating devices continuously, and controlling means for said operating devices synchronized with said reciprocating means.

2. In a can sealing machine, the combination of a continuously traveling conveyer adapted to engage and propel a succession of cans to be operated upon, a reciprocatory carrier, a seaming head on said carrier, seaming

devices mounted on said seaming head and adapted to travel around the axis of said head in an orbit corresponding with the seam to be formed, means for advancing said carrier for a limited distance at the same speed and in the same direction as the can bodies are caused to travel by said conveyer and for afterward retracting said carrier, means for engaging said can bodies with the seaming devices, and driving means for said seaming head.



3. In a can seaming machine, the combination of a continuously traveling conveyer adapted to engage and propel a succession of cans to be operated upon, a reciprocatory carrier, a seaming head on said carrier, seaming devices mounted on said seaming head and adapted to travel around the axis of said head in an orbit corresponding with the seam to be formed, means for advancing said carrier for a limited distance at the same speed and in the same direction as the can bodies are caused to travel by said conveyer and for afterward retracting said carrier, means for engaging said can bodies with the seaming devices, driving means for said seaming head, and controlling means for said engaging means operated synchronously with said conveyer and carrier.

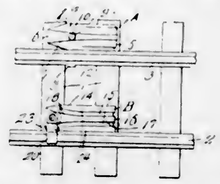
4. The combination of a traveling conveyer adapted to engage and propel a series of can bodies to be seamed, means for continuously actuating said conveyer in one direction only, a carrier, means for advancing said carrier for a limited distance at the same speed and in the same direction as the can bodies are traveling and for afterward retracting said carrier synchronized with said conveyer-actuating means, a seaming head mounted on said carrier, a seaming tool associated with said head, means for moving the can bodies into the field of the seaming tool while the carrier is traveling synchronously with said can bodies, means for engaging the seaming tool with the can bodies while in said field, and connections for continuously actuating said seaming tool.

5. The combination of a traveling conveyer adapted to engage and propel a succession of objects to be operated upon, a carrier, means mounted on said carrier for operating upon said objects, means for advancing said carrier for a limited distance at the same speed and in the same direction as the said objects and for afterward retracting said carrier, said means being synchronized with the conveyer, chucking mechanism synchronized with said carrier-actuating means and carried by said carrier, and means for actuating said operating devices carried by said carrier.

[Claims 6 to 29 not printed in the Gazette.]

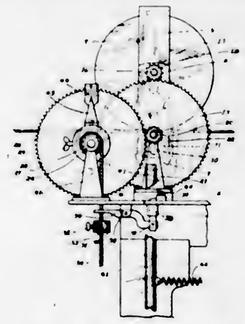
1,222,956. CAR-REPLACER. JOHN P. KOPP, Springfield, Mo., assignor of one-fourth to J. W. Sherman, one-eighth to J. W. Roberts, and one-eighth to G. F. Bigelow, Springfield, Mo. Filed May 27, 1916. Serial No. 100,244. (Cl. 104—163.)

In a car replacer, an element adapted to be secured to the inside of a rail, which element is provided with diverging wheel ways, an element adapted to be secured to the outside of a rail and provided with diverging wheel ways, a clamping member secured to the last mentioned



element and extending from beneath the same and a clamping member secured to the first mentioned element and extending above the same and having a groove therein for completing the wheel ways of said element.

1,222,957. WIRE-MEASURING DEVICE. LEONARD KRAMER, Ashland, Ky., assigner to Norton Iron Works, Ashland, Ky., a Corporation of Kentucky. Filed Oct. 28, 1915. Serial No. 58,350. (Cl. 33—132.)

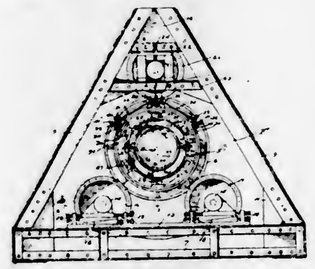


1. A wire measuring device comprising a supporting frame, a disk in connection with which the wire passes in being measured, a drum, a driving connection between said drum and said disk, a cable arranged to be wound on said drum, and stopping means carried by said cable, means for connecting said drum with a driving power, and disk connecting means coöperating with said stopping means whereby said disk connecting means is shifted and disconnected from said connecting means when a predetermined length of wire has been measured.

2. A wire measuring device comprising a supporting frame, a disk in connection with which the wire passes in being measured, a friction wheel coöperating with said disk, means for resiliently pressing said wheel toward said disk, a drum, a driving connection between said drum and said disk, a cable arranged to be wound on said drum, a collar adjustably mounted on said cable, means for connecting said drum with a driving power, and disconnecting means coöperating with said collar whereby said disk connecting means is shifted and disconnected from said connecting means when a predetermined length of wire has been measured.

3. A wire measuring device comprising a supporting frame, a rotatably mounted disk in connection with which said wire passes in being measured, a rotatably mounted friction wheel coöperating with said disk, means for resiliently pressing said wheel toward said disk, a drum, a train of gearing between said drum and said disk, said drum having a spiral groove in its periphery, a cable arranged to be wound on said drum, a collar adjustably mounted on said cable, a lever for connecting said drum with a driving power, and disconnecting means including a pivoted supplemental lever element having an opening through which said cable passes and coöperating with said cable and collar and said first named lever whereby said pivoted supplemental lever is shifted and disconnected from said first named lever when a predetermined length of wire has been measured.

1,222,958. CENTRIFUGAL CONCRETE-POLE MACHINE. WALTER H. LIENESCH, Chicago, Ill., assignor to Universal Concrete Products Company, Chicago, Ill., a corporation of Delaware. Filed Aug. 2, 1916. Serial No. 112,661. (Cl. 25—30.)



1. In a concrete pole machine, the combination with carrier mechanism and means for axially rotating the same, of a mold structure comprising a mold and a holder therefor, said holder being adapted to be removably inserted in said carrier mechanism to rotate therewith, and means for removably clamping said mold centrally in said holder.

2. In a concrete pole machine, the combination with carrier mechanism and means for rotating it axially, of mold mechanism comprising a holder and a mold, said holder being adapted for insertion in the carrier mechanism to rotate therewith and being longitudinally sectional whereby it may be opened to receive the mold, said mold being also longitudinally sectional whereby it may be opened to receive cement material, and opposed cross walls in the holder sections cut out at their inner ends to fit and receive the mold sections.

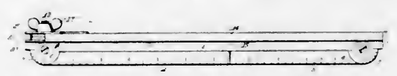
3. In a concrete pole machine, the combination with carrier mechanism adapted to be rotated axially and having clamping zones provided with clamping mechanism, of mold mechanism comprising a cylindrical holder and a mold, said holder being longitudinally divided into two sections hinged together at one edge whereby the holder may be opened to receive the mold, said mold being longitudinally divided into two parts, and cross walls in the holder parts shaped at their inner ends to receive and fit against the mold parts to hold these mold parts together when the holder parts are closed together, said holder being adapted to be inserted in the carrier mechanism to receive the pressure of the clamping mechanism against its parts and to transmit the pressure through the cross walls to the mold parts to securely lock the mold parts together during rotation of the holder with the carrier mechanism.

4. In a concrete pole machine, the combination with axially rotatable carrier mechanism having clamping zones provided with centering and clamping mechanism, of a cylindrical mold holder divided longitudinally into upper and lower halves, said halves being hinged together at one edge, a mold divided longitudinally into upper and lower halves, cross walls in said holder halves shaped at their inner ends to receive the upper and lower halves of the mold, said holder being adapted to be inserted in the carrier mechanism to receive the pressure of the clamps against its halves and to transmit such pressure to the mold halves, whereby said mold halves are rigidly locked together during rotation of the holder with the carrier mechanism.

5. In a concrete-pole machine, the combination with a cylindrical carrier, radial clamping mechanism in said carrier and means for rotating said carrier axially, of a mold holder divided longitudinally into upper and lower halves, said halves being hinged along one edge whereby they may be separated, a mold divided into upper and lower separable halves, sets of opposed cross walls in the holder halves cut out at their inner ends to receive the mold halves and to center the mold axially in said holder, said holder fitting into said carrier to be engaged by the radial clamping mechanism, the pressure of said clamping mechanism against the holder halves being transmitted by the holder cross walls to the mold halves whereby such mold halves are securely locked together during rotation of the holder with the carrier.

[Claims 6 to 11 not printed in the Gazette.]

1,222,959. ADJUSTABLE ANGLE-DEFINING GAGE. IRA G. LONGLEY, Kit Carson, Colo., assignor of one-half to N. E. Mills, Loveland, Colo. Filed Sept. 18, 1916. Serial No. 120,769. (Cl. 33—90.)



1. A gage of the character described, comprising a main member having blades hinged upon one end of the same and adapted to open out in opposite directions, blades hinged upon opposite ends of said main member, and adapted to open in opposite directions and in a plane at right angles to the plane of movement of the first mentioned blades, means for defining the angles of said blades, and means for clamping said blades in adjusted positions.

2. A gage of the character described, comprising a main member which is T-shaped in cross section, blades hinged upon a common pivot at one end of said main member and adapted when closed to lie against and flush with the edges of the flanged portion of said main member, blades hinged to the opposite ends of the main member and adapted when closed to lie against and flush with the lower edge of the main member, said blades having a swinging movement in a plane at right angles to the plane of movement of the former blades, means for defining the angles of said blades, and means for clamping said blades in adjusted positions.

3. A gage of the character described, comprising a main member, oppositely opening blades hinged to one end of said member, blades hinged to the opposite ends of the underside of said member, the plane of movement of the former and latter blades being at right angles, and means for defining the angles of said blades.

4. A gage of the character described, comprising a longitudinal main member T-shaped in cross section, a pair of depending parallel semicircular plates on each end of the main member, a blade pivoted at one end between each pair of plates, said plates being provided with degree marks, and shoulders on the hinged ends of said blades adapted to register with said marks when the blades are swung open, a circular plate on the upper side of the main member at one end thereof, blades having overlapping hinge members pivotally mounted upon said plate, a graduated circular plate secured to the main member above said overlapping hinge members, and means for clamping said plate against said overlapping members, the hinge ends of said blades having shoulders which register with the graduations on said clamping plate when the blades are opened, the swinging movement of the former and latter blades being in planes at right angles to each other.

5. In a gage of the character described, the combination with a longitudinal bar, T-shaped in cross section, and having a spirit level thereon, of oppositely opening blades hinged together upon one end of said bar, blades hinged to the opposite ends of the underside of said bar, the planes of movement of the former and latter blades being at right angles, the said blades in their closed position, forming in conjunction with the bar, a gage which is T-shaped in cross section.

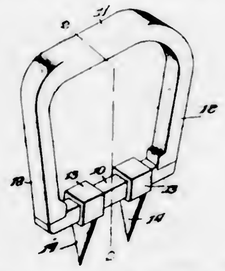
[Claims 6 and 7 not printed in the Gazette.]

1,222,960. METHOD OF OBTAINING ALUMINUM SALTS FROM SILICATES. RALPH H. MCKEE, Orono, Me. Filed Mar. 13, 1916. Serial No. 83,971. (Cl. 23—13.)

1. The herein described method of obtaining commercially pure aluminum salts from silicates of the sericite type, which consists in furnacing said silicates with lime or limestone and a chlorid, producing thereby a water-soluble potassium salt, extracting the soluble potassium salt, and decomposing the residual silicate by an acid reagent.

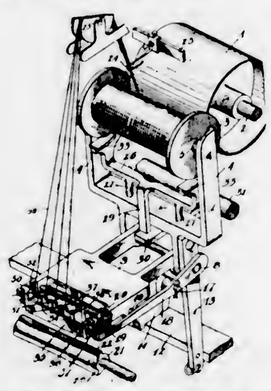
2. The herein described method of obtaining commercially pure aluminum salts from silicates of the sericite type, which consists in furnacing said silicates with lime or limestone, a chlorid and a reducing agent, producing thereby a water-soluble potassium salt, extracting the soluble potassium salt, and decomposing the residual silicate by an acid reagent.

1,222,961. PUNCH. ERNEST MAKER, Elsinore, Cal. Filed June 13, 1916. Serial No. 103,488. (Cl. 164—119.)



An implement of the class described comprising a holder including an upwardly arching portion having spaced sides connected at their upper ends by a hand grip portion and connected at their lower ends by a base portion, sleeves independently slidable on said base portion, and a puncturing device depending from each sleeve.

1,222,962. STOP-MOTION FOR DRUM SPOOLERS. HENRY J. MARX, Holyoke, Mass., assignor to The American Thread Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 14, 1916. Serial No. 72,003. (Cl. 242—38.)



1. In a drum spooler, the combination of a driving drum, a spool holding yoke, a brake shoe carried and normally supported by said yoke and movable relatively thereto, adapted to be engaged by the spool when the spool is withdrawn from said driving drum, means for causing said spool to be withdrawn from said drum upon the breaking of a thread being wound thereon, and a fixed anvil, said brake shoe having a depending portion adapted to engage said anvil when said spool is withdrawn from said driving drum, the movement of said spool causing it to engage said brake shoe when held from moving by said anvil.

2. In a winding machine the combination of a drum, a vertically and laterally movable spool-holder normally tending to move downward away from said drum and also laterally toward said drum, trip-mechanism normally holding said yoke in elevated position, means for holding the spool in said yoke away from said drum when said yoke is released by said trip-mechanism, a brake carried by said yoke and movably mounted upon the same, and means for stopping the downward movement of said brake before the limit of the downward movement of said yoke is reached, so as to cause braking engagement with said spool.

3. In a winding machine the combination of a drum, a vertically and laterally movable spool-holder normally tending to move downward away from said drum and also laterally toward said drum, trip-mechanism normally holding said yoke in elevated position, means for holding the spool in said yoke away from said drum when said yoke is released by said trip-mechanism, a brake carried by said yoke and movably mounted upon the same, and means for stopping the downward movement of said brake before the limit of the downward movement of said yoke is reached, so as to cause braking engagement with said spool, said yoke and said brake having substantially vertical guiding surfaces so that they move relatively to each other in a substantially vertical plane.

4. In a winding machine a trip-box having vertical trip-pin guiding openings, vertical trip-pins fitting within said openings and having transverse holes in their upper ends, pivotally mounted guide wires passing loosely through said holes and normally supporting said pins, said holes being substantially in line with the pivots and guide loops of said guide wires and between the same, a beater adapted to engage said trip-pins when said trip-pins and guide wires are in depressed position and a bar above said guide wires and removed from the guide loops thereof so as to be between said pivots and said trip-pins, and normally limiting the upward movements of said guide wires and holding them under tension against the pull of the threads passing therethrough.

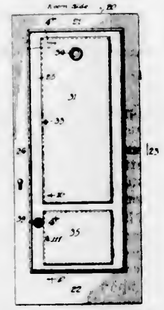
5. In a drum spooler, a trip-box having trip pin openings, trip pins fitting closely within said openings, said trip pins having openings in their upper ends, pivotally mounted guide wires extending through said openings, and a beater adapted to engage said trip pins when said pins and guide wires are in depressed position, said openings in said trip pins being cut away at one side so as to permit the easy removal of said guide wires therefrom and the subsequent withdrawal of said pins.

[Claim 6 not printed in the Gazette.]

1,222,963. SERVICE-DOOR. FRANK J. MATCHETTE, Milwaukee, Wis. Filed June 12, 1914. Serial No. 844,622. (Cl. 20—16.)

1. A main door having an opening therethrough, a secondary door arranged on each side of said main door to close said opening, a compartment being thereby completed by said secondary doors, and a lock for each of said secondary doors for electively locking it in closed position exclusively from its own side of the main door, said locks being normally operative one only at a time so that each of said secondary doors when locked closed forms part of the main door as a complete normally operative barrier structure while the other secondary door may be opened at any time to expose said compartment.

2. A main door having an opening therethrough, a secondary door arranged on each side of said main door to close said opening, a compartment being thereby completed by said secondary doors, a key lock for exteriorly locking and unlocking one of said secondary doors, and a lock exclusively accessible from its own side of the main door for locking in closed position and unlocking the other secondary door, said locks being normally operative one only at a time so that each of said secondary doors when locked closed forms a part of the main door as a complete normally operative barrier structure while the other secondary door may be opened at any time to expose said compartment.



3. In combination, a private inclosure having a doorway leading to a relatively public space, a main door mounted to close said doorway and to be opened, locking means for securing said door in said doorway, said main door having an opening therethrough, a secondary door arranged on each side of said main door to close said opening, a compartment being thereby completed by said secondary doors, a key lock for exteriorly locking and unlocking the secondary door on the public space side in closed position, and a lock exclusively accessible from the private inclosure for locking in closed position and unlocking the other secondary door, said locks being normally operative one only at a time so that each of said secondary doors when locked closed forms a part of the main door as a complete normally operative barrier structure against unauthorized entry into said private inclosure while the other secondary door may be opened at any time to expose said compartment.

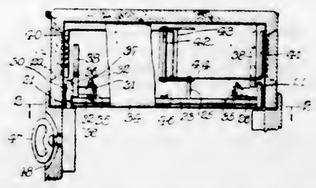
4. A main door having an opening therethrough, a secondary door arranged on each side of said main door to close said opening, a compartment being thereby completed by said secondary doors, means for locking each of said secondary doors in closed position, and means for preventing the simultaneous operation of said locks so that each of said secondary doors is automatically retained locked closed to form a part of the main door as a complete normally operative barrier structure while the other secondary door is open.

5. A main door having an opening therethrough, a secondary door arranged on each side of said main door to close said opening, a compartment being thereby completed by said secondary doors, a key lock for exteriorly locking and unlocking one of said secondary doors, and means exclusively accessible from its own side of the main door for locking in closed position and unlocking the other secondary door, and means for preventing the simultaneous operation of said locks so that each of said secondary doors is automatically retained locked closed to form a part of the main door as a complete normally operative barrier structure while the other secondary door is open.

[Claim 6 not printed in the Gazette.]

1,222,964. CABINET SERVICE-DOOR. FRANK J. MATCHETTE, Milwaukee, Wis. Filed July 23, 1914. Serial No. 852,533. (Cl. 232—1.)

1. In combination, a compartment having a plurality of apertures permitting access to the interior thereof, a plurality of normally-closed doors for said apertures, and interlocking mechanism determining the order of opening of each of said doors.



2. In combination, a compartment having a plurality of apertures permitting access to the interior thereof, movable means for closing said apertures, locking means for said closing means, detent means for engaging said locking means and means to determine the order of engagement of said detent means with said locking means.

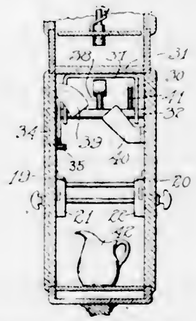
3. In combination, a casing, a plurality of openings therein, movable means for closing said openings, locking means for said movable means, detent means for engaging said locking means in a predetermined order only, and means for indicating the point in said order at which said detent means remains.

4. In combination, a casing, a plurality of openings therein, doors closing said openings, locking means for each of said doors, and detent means engaging each of said locking means only in turn.

5. In combination, a casing, a plurality of openings therein, doors normally closing said openings, and governing means for determining the only order in which said doors can be opened.

[Claims 6 to 74 not printed in the Gazette.]

1,222,965. SIGNALING MECHANISM. FRANK J. MATCHETTE, Milwaukee, Wis. Filed Feb. 26, 1915. Serial No. 10,819. (Cl. 232—1.)



1. In combination, a compartment, a plurality of apertures therein, movable closures for said apertures, said closures movable to expose only one of said apertures at a time, and signaling mechanism in said compartments, said signaling mechanism controlled by said movable closures.

2. In combination, a compartment having a plurality of apertures, movable means to close said apertures, and signaling mechanism giving a signal exterior to said compartment, said signaling mechanism being controlled by said movable means.

3. In combination a compartment, apertures in said compartment, movable closing means for closing said apertures, said closing means being provided with interconnecting means allowing said movable means to uncover only one of said apertures at a time, signaling means in said compartment, said means normally at non-indicating position, and actuating means to move said

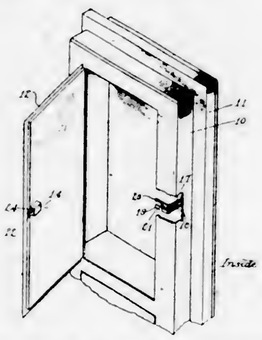
signaling means to the indicating position, said actuating means and the signaling means being disconnected when the movable closing means is moved to expose an aperture.

4. In combination, a compartment having a plurality of apertures, movable means for closing said apertures, and signaling mechanism in said compartment giving an indication exterior of said compartment, said signaling mechanism being controlled by said movable closing means.

5. In combination, a compartment having a plurality of apertures, movable closing means for said apertures, said closing means having means allowing only one of said apertures to be uncovered at a time, and signaling mechanism controlled by the movement of said movable closing means.

[Claims 6 to 23 not printed in the Gazette.]

1,222,966. COMPARTMENT-SEALING MECHANISM. FRANK J. MATCHETTE, Milwaukee, Wis. Filed Feb. 26, 1915. Serial No. 10,820. (Cl. 232—1.)



1. In combination, a wall, a compartment formed therein, a front door and a rear door for permitting access to said compartment, locking means for said doors, and interlocking means for holding one door locked so long as any other door is unlocked.

2. In combination, a wall, a compartment formed therein, a plurality of doors for said compartment, locks for said doors, and means constantly preventing the unlocking of all of said doors at the same time.

3. In combination, a wall, a compartment formed in said wall, a plurality of doors for allowing access to said compartment, locks for said doors, and means to interlock said locks so that one of said doors will be locked at all times.

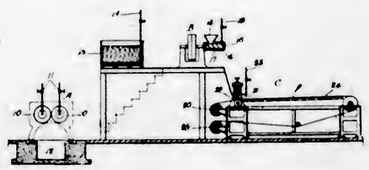
4. In combination, a wall, a compartment formed in said wall, a plurality of doors for allowing access to said compartment, locking means for said doors, and means interlocking said doors so that the remainder of said plurality of doors will always be held closed when one of said doors is unlocked.

5. In combination, a casing, a plurality of doors, a locking member for each door, and means interconnecting said locking members and operated by said locking members, said means allowing the unlocking of only one of said members at a time.

[Claims 6 to 32 not printed in the Gazette.]

1,222,967. METHOD OF PREPARING ADHESIVE COATINGS AND APPLYING THEM TO FABRICS WITHOUT THE USE OF SOLVENTS. JAMES MEADE, Stoughton, Mass. Filed Mar. 16, 1916. Serial No. 84,567. (Cl. 91—70.)

1. The method of applying adhesive coatings to fabrics which consists in mixing a gummy solid and a wax-like solid at a temperature at which the solids become plastic, and spreading the mixture upon the fabric under the influence of a higher temperature.



2. The method of applying adhesive coatings to fabrics which consists in grinding together and mixing a gum and a wax at a temperature at least that at which the mixture becomes plastic, tempering this mixture at a higher temperature, and spreading the mixture upon the fabric under the influence of a still higher temperature.

3. The method of applying adhesive coatings to fabrics which consists in grinding together and mixing a gum and a wax at a temperature of approximately 170° F., tempering this mixture at approximately 210° F., and spreading the mixture upon the fabric under the influence of a temperature of approximately from 212° to 215° F.

4. The method of preparing adhesive coatings which consists in grinding together and mixing a gum and a wax at a temperature at least that at which the mixture becomes plastic, immersing the mixture in a liquid heated to a higher temperature, and tempering the mixture.

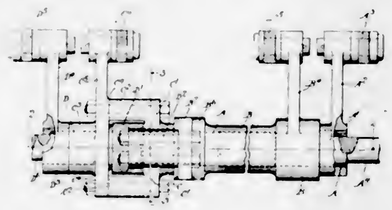
5. The method of preparing adhesive coatings which consists in grinding together and mixing a gum and a wax at a temperature at least that at which the mixture becomes plastic, immersing the mixture in a liquid heated to a higher temperature, and tempering the mixture at a still higher temperature.

[Claim 6 not printed in the Gazette.]

1,222,968. PROCESS OF MANUFACTURING TOW FROM FLAX AND SIMILAR PLANTS. JASON L. MERRILL, Washington, D. C. Filed Feb. 26, 1917. Serial No. 151,121. (Cl. 13—5.) (Dedicated to the public.)

A process for the manufacture of tow from flax and similar plants, consisting in breaking fibrous material in a multiplicity of places by subjecting the material to transverse bending, then subjecting the bended material to violent pulling and simultaneously therewith drawing the fibrous constituents of the material over each other for effecting the removal of the fragmentary woody substances adhering thereto, substantially as specified.

1,222,969. ROCK-SHAFT FOR VALVE-GEARS. CHARLES E. MILLER, Chicago, Ill., assignor to The Pyle-National Company, Chicago, Ill., a Corporation of New Jersey. Filed Aug. 4, 1916. Serial No. 113,036. (Cl. 74—5.)



1. A rock shaft device comprising a main shaft and a stub shaft arranged end to end, a hollow shaft rotatably mounted on the main shaft, a coupling interposed between the adjacent ends of the hollow and stub shafts, a hub rotatably mounted on the stub shaft and a coupling between it and the adjacent end of the main shaft.

2. A rock shaft device comprising a main shaft and a stub shaft arranged end to end, a hollow shaft rotatably mounted on the main shaft, a coupling interposed between the adjacent ends of the hollow and stub shafts, a hub rotatably mounted on the stub shaft and a coupling between it and the adjacent end of the main shaft, and rock arms mounted on the adjacent outside ends of the main and hollow shaft and rock arms mounted on the hub and on adjacent outside end of the stub shaft.

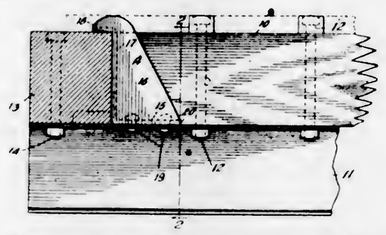
3. A rock shaft device comprising a main shaft and a stub shaft arranged end to end, a hollow shaft rotatably mounted on the main shaft, a coupling interposed between the adjacent ends of the hollow and stub shafts, a hub rotatably mounted on the stub shaft and a coupling between it and the adjacent end of the main shaft, said couplings being both identical but in reversed position to permit a relative angular movement of the two units containing them.

4. A rock shaft device comprising a main shaft and a stub shaft arranged end to end, a hollow shaft rotatably mounted on the main shaft, a coupling interposed between the adjacent ends of the hollow and stub shafts, a hub rotatably mounted on the stub shaft and a coupling between it and the adjacent end of the main shaft and rock arms mounted on the adjacent outside ends of the main and hollow shaft and rock arms mounted on the hub and on adjacent outside end of the stub shaft, said couplings being both identical but in reversed position to permit a relative angular movement of the two units containing them.

5. A rock shaft device comprising a main shaft and a stub shaft arranged end to end, a hollow shaft rotatably mounted on the main shaft, a coupling interposed between the adjacent ends of the hollow and stub shafts, a hub rotatably mounted on the stub shaft and a coupling between it and the adjacent end of the main shaft, the extreme outside ends of the stub and main shafts being provided with bearing portions extending beyond the rock arm.

[Claims 6 and 7 not printed in the Gazette.]

1,222,970. CAR-UNDERFRAMING. JOHN R. MITCHELL, Evanston, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 6, 1915. Serial No. 38,109. (Cl. 105—76.)



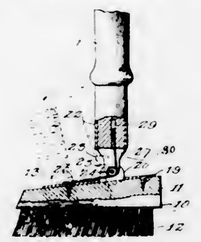
1. In car underframing, the combination with an end sill, a draft sill and a center sill, the end and center sills extending in the same plane and the draft sill being below the center sill, of unitary means for supporting said center sill and draft sill from the top of the end sill, said means being directly connected to the draft sill.

2. In car underframing, the combination with an end sill, a draft sill and a center sill, the draft sill extending under the end sill, of means for supporting said center sill and draft sill from the top of the end sill, said means comprising a member having a pocket within which the end of the center sill is disposed and provided also with a shoulder at the top extending over and resting upon the end sill, the draft sill being rigidly secured to said member.

3. In car under-frame, the combination with an end-sill, a center-sill, and a metal draft-sill located below the center-sill, of means for supporting said center-sill and draft-sill from the top of the end-sill, said means including a combined pocket and support having a recess within which is adapted to be seated the end of said center-sill, said combined pocket and support being riveted to the draft-sill and having an extension overhanging said end-sill.

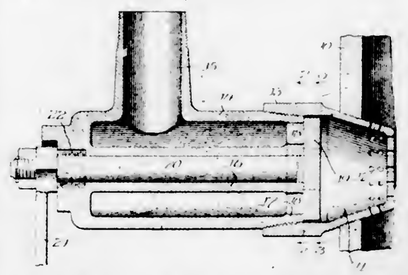
4. In car underframing, the combination with a transversely extending sill, a longitudinally extending sill located substantially in the same plane as the transversely extending sill, and a third sill located below and extended parallel with said longitudinally arranged sill, of means for supporting said longitudinally arranged sill and said third sill from the top of the transversely extending sill, said means including a combined pocket and support having a recess within which is adapted to be received the end of said longitudinally extending sill, said combined pocket and support being secured to said third sill and having an extension over-hanging said transversely extending sill.

1,222,971. BRUSH. GEORGE MOE, Duluth, Minn. Filed July 31, 1916. Serial No. 112,314. (Cl. 15—24.)



In a device of the class described, a brush body, a plate having forward and rear portions adapted to be secured to the brush and having lateral portions formed to engage snugly against the sides of the brush to prevent lateral movement thereof, central ears extending upwardly from the plate, a handle having a cylindrical ferrule engaged on the lower end, said ferrule having ears extended therefrom at opposite sides positioned to engage snugly between the said ears of the plate, a pintle engaged through the said ears of the plate and ferrule, a spring comprising a piece of wire bent to form a central narrow loop, one of the end portions being bent to form a helical spring portion, the ends of the spring being engaged slidably in the lower end of the handle, and said loop bearing upon said plate.

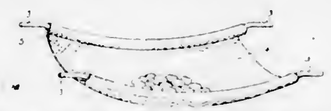
1,222,972. BLOW-OFF VALVE. ANDREW JACKSON MONFEE, Pratt City, Ala. Filed May 24, 1916. Serial No. 99,553. (Cl. 137—7.)



A blow-off valve comprising in combination, a nipple having an outside thread for direct attachment to a boiler

shell with a portion projecting within the boiler shell and provided with a relatively large number of small apertures, said nipple having also an interior thread on its outer end, a casing screwed into the outer end of said nipple, said casing comprising an outer shell 14 with an outlet 15 and having an integral, longitudinally extending, tubular portion 16, connected at one end by a perforated valve seat with the outer shell 14 and connected at the opposite end by an imperforate portion with the other shell 14, said tubular portion 16 being open from end to end and carrying a stem 20, on which is a valve 19 having a flat, smooth, exposed face and said nipple having its inner face also flat and smooth so as to prevent the lodgment of solid matter on or around the valve to interfere with its operation, and the valve and stem being integral so as to reduce the number of parts to a minimum.

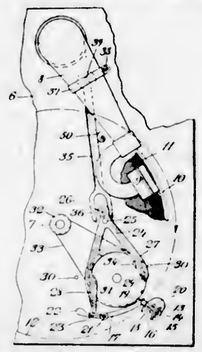
1,222,973. PORTABLE LOADER. LYCURGUS W. MORTER, Sedalia, Ohio, assignor of one-third to Nerxes Farrar and one-third to Harry S. Mitchell, London, Ohio. Filed Aug. 14, 1916. Serial No. 114,731. (Cl. 21—88.)



1. A portable loader of the character described comprising a pair of side supports carrying handles on each end and concaved intermediate said handle portions, and a flexible receiving member attached to said supports at the concaved portions.

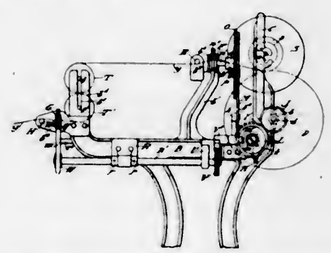
2. A portable loader of the character described comprising a pair of side supports each formed of a single bar or rod shaped to present handles on each end and a concaved portion between handles, and a flexible receiving member attached along opposite edges to said supports between their handles.

1,222,974. AUTOMATIC STOP MECHANISM FOR PHONOGRAPHS. AAGE NIELSEN, New York, N. Y., assignor to William A. Condon, Summit, N. J. Filed Nov. 21, 1913. Serial No. 802,199. (Cl. 74—46.)



The combination with a swinging member and a rotating member, a brake for the latter, a brake tripping lever for normally keeping said brake in inactive position, means for actuating said tripping lever to release the brake when said swinging member ceases to move, said means comprising a brake-controlling lever, an arm on the latter adapted to engage said tripping lever, an element frictionally mounted on said swinging member and in contact with said brake controlling lever for moving the same in one certain direction, a rotating cam driven by said rotating member for moving said brake controlling lever in the opposite direction and for moving the said arm into direct engagement with said tripping lever to release the said brake to brake the said rotating member when the swinging member ceases to move.

1,222,975. JACK-SPOOLER. THOMAS H. NUTE, East Providence, R. I. Filed July 8, 1915. Serial No. 38,799. (Cl. 28—14.)



1. In a transverse-mechanism for jack-spoolers, the combination with the driving-drum, drum-shaft and front and rear traverse-bars thereof, of a traverse-cam connected to be driven from the drum-shaft, a rockable traverse-lever adapted to be oscillated from the cam, adjustable means for connecting the lever to reciprocate the front traverse-bar with a quick traverse, a pawl on the traverse-lever, a ratchet-wheel adapted to be rotated from said pawl, an eccentric driven from the ratchet-wheel, and means attachable to the rear traverse-bar to engage the eccentric to traverse said bar with a relatively slow traverse.

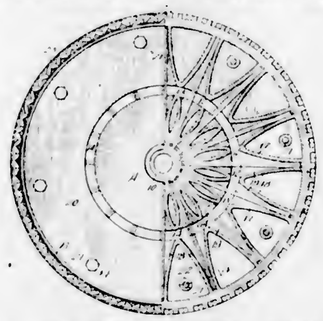
2. In a traverse-mechanism for jack-spoolers, the combination with the reciprocatable front and rear traverse-bars thereof, of a clamp-member adjustably attachable to the front traverse-bar, a traverse-arm mounted on said clamp, a bracket attachable to the frame of the spooler, a lever pivoted on said bracket, means connecting the lever with the traverse-arm, a cam rotatably mounted on the bracket to oscillate the traverse-lever to reciprocate the traverse-bar, a shaft journaled in bearings on the frame of the spooler, a ratchet-wheel on said shaft, a pawl on the traverse-lever adapted to rotate the ratchet-wheel to turn its shaft, a resiliently-operated check-pawl engaging the teeth of the ratchet-wheel to prevent backward rotation thereof, an eccentric on the ratchet-wheel shaft, and a member attachable to the rear traverse-bar to be engaged by the eccentric to impart a relatively slow traverse to said bar.

3. In a traverse-mechanism for jack-spoolers, the combination with the front and rear traverse-bars thereof, of a bracket for attachment to the frame of the spooler, a traverse-lever pivoted on said bracket, means for adjustably connecting one arm of said lever with the front traverse-bar, a cam rotatably mounted on the bracket to oscillate the traverse-lever, a shaft supported in bearings on the spooler-frame, a ratchet-wheel mounted on said shaft, a bracket adjacent said ratchet-wheel formed with a pocket, a plunger-pawl mounted in said pocket, a spring for maintaining the pawl in engagement with the teeth on the ratchet-wheel, a pawl on the traverse-lever for rotating the ratchet-wheel therefrom, an eccentric on the ratchet-wheel shaft, and means engaging said eccentric to impart reciprocation to the rear traverse-bar.

1,222,976. RESILIENT WHEEL. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 9, 1914. Serial No. 865,810. (Cl. 152—50.)

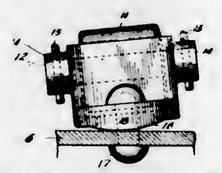
A resilient wheel of the character described comprising, a hub member having spaced circular flanges provided with a series of bearing members therebetween,

said bearing members being radially arranged and each having oppositely disposed curved bearing surfaces and forming pockets therebetween, a cast rim member having a series of integral inwardly extending bearing members, each of which is provided with a pair of oppositely



disposed curved bearing surfaces and forming pockets therebetween, and a series of spokes, each of which comprises a plurality of spring plates having the ends there of loosely and radially slidably mounted in said pockets of the hub and rim members.

1,222,977. SIDE BEARING FOR RAILWAY-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 1, 1916. Serial No. 81,325. (Cl. 64—64.)



1. In a side bearing for railway cars, the combination with a bolster, a cradle, and a roller carried by said cradle, of rivets, the cradle being provided on its lower face with a crown, and the rivets being adapted to secure the cradle in any fixed position to which the cradle may be oscillated on said crown.

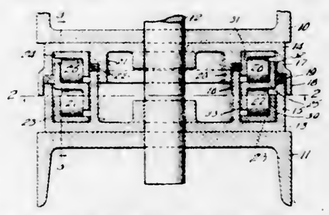
2. In a side bearing for railway cars, the combination with a bolster, a cradle, and a roller carried by said cradle, of means to secure the cradle to the bolster, the said cradle being provided on its lower face with a crown, and the said securing means being adapted to hold any portion of said crown in fixed engagement with the bolster.

3. In a side bearing for railway cars, rollers, a cradle therefor, a bolster and means securing the cradle to the bolster, the cradle being provided with a crown adjacent the bolster, the means securing the cradle to the bolster being adapted to hold any portion of the crown in a fixed position upon the bolster.

4. A side bearing for railway cars comprising a cradle provided with crowned faces on the bottom thereof, a roller rotatably mounted within said cradle, the axis of the roller being at right angles to the axis of the crowned faces, the cradle being provided with perforations at the bottom thereof and extending through said crowned faces, said perforations being adapted to receive securing means for attaching the cradle to a bolster, whereby the cradle may rock on said crowned faces directly on the bolster.

1,222,978. ANTIFRICTION CENTER-BEARING. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Apr. 14, 1916. Serial No. 91,205. (Cl. 64—64.)

1. In a device of the character described, the combination with opposed bearing plates, of two series of anti-friction members between said plates, one series being located directly above the other, and a floating plate interposed between said anti-friction members, said floating plate being of Z section, the web extending horizontally and the flanges vertically.



2. In a device of the character described, the combination with opposed bearing plates, of two series of anti-friction members between said plates, one series being located directly above the other, a floating plate interposed between said anti-friction members, said floating plate being of Z section with the web extending horizontally and the flanges vertically, and two series of chocks associated with said anti-friction members, one series of chocks being arranged to prevent movement of the anti-friction members in one direction and the other series of chocks to prevent movement of the anti-friction members in the opposite direction.

3. In a center bearing for cars, the combination with a lower bearing plate having an annular groove on its upper face and an upper bearing plate having an annular groove on its under face, said bearing plates being telescoped around their peripheries, of two sets of anti-friction rollers located within said grooves, one set above the other, and a Z plate inserted between said sets of rollers, the plate extending partly into each of said annular grooves.

4. In a center bearing for cars, the combination with upper and lower bearing plates having opposed annular grooves therein, of a wear plate of angular cross section disposed in each of said grooves, said wear plates being oppositely arranged, two sets of anti-friction members located in said grooves, and a floating plate interposed between said anti-friction members, said plate being of Z-section, whereby to resist vertical bending moments applied thereto from said anti-friction members.

5. In an anti-friction center bearing for railway cars, the combination with an upper bearing plate adapted to be secured to a body bolster, and a lower bearing plate adapted to be secured to a truck bolster, each of said plates being provided with an annular channel, of an annular wear plate of right angle cross section associated with the upper bearing plate, an annular wear plate of right angle cross section associated with the lower bearing plate, a series of anti-friction rollers mounted on said lower wear plate, a series of chocks associated with said rollers, a series of rollers in engagement with the upper wear plate, a series of chocks associated with said upper series of rollers, the two series of chocks being oppositely arranged, and a floating plate interposed between the two series of rollers.

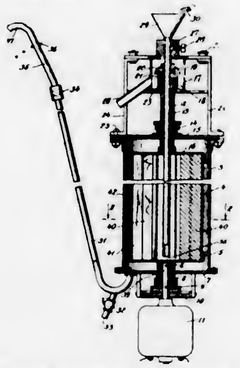
[Claim 6 not printed in the Gazette.]

1,222,979. PROCESS AND APPARATUS FOR REFINING CLAY, &c. STANLEY A. W. OKELL, East Orange, N. J., assignor to Industrial Chemical Company, New York, N. Y., a Corporation of New York. Filed July 6, 1916. Serial No. 107,750. (Cl. 233—21.)

1. The continuous process of centrifugally refining clay, which consists in suspending raw clay in water to the extent of about ten per cent. thereof, in subjecting a body of such raw clay solution to centrifugal action and in preventing undesirable eddies therein, in continuously removing separated heavier particles of grit, etc., from said body of raw clay solution and agitating them to keep them suspended in water during their discharge in sus-

pension, in continuously removing the solution of the remaining purified clay while in suspension in water and in continuously feeding raw clay solution to the body thereof undergoing centrifugal action at a point remote from the point of removal of the purified clay therefrom.

2. The continuous process of centrifugally refining clay, which consists in suspending raw clay in water, in subjecting a body of such raw clay solution to centrifugal action, in continuously removing separated heavier particles of grit, etc., from said body of raw clay solution and agitating them to keep them suspended in water during the solution of the remaining purified clay while in suspension in water and in continuously feeding raw clay solution to the body thereof undergoing centrifugal action at a point remote from the point of removal of the purified clay therefrom.



3. The continuous process of centrifugally refining clay, which consists in suspending raw clay in water, in subjecting a body of such raw clay solution to centrifugal action, in continuously removing separated heavier particles of grit, etc., from said body of raw clay solution, in continuously removing the solution of the remaining purified clay while in suspension in water and in continuously feeding raw clay solution to the body thereof undergoing centrifugal action.

4. The continuous process of centrifugally refining clay, etc., which consists in suspending the raw material in water to the extent of about ten per cent. thereof, in subjecting a body of such raw material solution to centrifugal action and in preventing undesirable eddies therein, in continuously removing separated heavier particles of waste material including grit, etc., from said body of raw material solution and agitating such waste material to keep it suspended in water during its discharge in suspension, in continuously removing the solution of the remaining purified clay while in suspension and in continuously feeding such solution of raw material to the body thereof undergoing centrifugal action.

5. The continuous process of centrifugally refining clay, etc., which consists in suspending the raw material in water, in subjecting a body of such raw material solution to centrifugal action, in continuously removing separated heavier particles of waste material including grit, etc., from said body of raw material solution and agitating such waste material to keep it suspended in water during its discharge in suspension, in continuously removing the solution of the remaining purified clay while in suspension and in continuously feeding such solution of raw material to the body thereof undergoing centrifugal action.

[Claims 6 to 13 not printed in the Gazette.]

1,222,980. PROCESS OF MAKING A PAINT OR ENAMEL MATERIAL. LEON ORNSTEIN, Brooklyn, N. Y. Filed May 1, 1916. Serial No. 94,589. (Cl. 134—39.)

1. The herein described process of manufacturing a paint and enameling material, which consists in forming a mixture of a phenol solution, an alkali, formaldehyde, and a solution of hydrochloric acid, and settling said mixture to obtain an oil-like precipitate therefrom, thereafter forming a mixture of a phenol solution with an alkali and formaldehyde, heating said mixture to the boiling point, adding a quantity of formaldehyde thereto, precipitating an oil-like body out of said second mixture, and finally combining the oil-like precipitates of the first and second mixtures, substantially as described.

2. The herein described process of manufacturing a paint and enameling material, which consists in forming a mixture of a phenol solution, an alkali, formaldehyde, and a solution of hydrochloric acid, settling said mixture to obtain an oil-like precipitate therefrom, thereafter forming a mixture of a phenol solution with an alkali and formaldehyde, heating said mixture to the boiling point, adding a quantity of formaldehyde thereto, precipitating an oil-like body out of said second mixture, combining the precipitates of the first and second mixtures, and finally adding a quantity of acid salt to the final product, substantially as described.

3. The herein described process of manufacturing a paint and enameling material, which consists in admixing an alkaline solution of cresol with formaldehyde and a solution of hydrochloric acid, settling said mixture to obtain an oil-like precipitate, thereafter forming a mixture of an alkaline solution of cresol with formaldehyde and heating such mixture to the boiling point, adding a quantity of formaldehyde to the second mixture and precipitating an oil-like body out of the same, and finally combining the oil-like precipitates of the two mixtures, substantially as described.

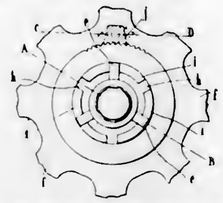
4. The herein described process of manufacturing a paint and enameling material, which consists in admixing an alkaline solution of cresol with formaldehyde and a solution of an acid, settling said mixture to obtain an oil-like precipitate, thereafter forming a mixture of an alkaline solution of cresol with formaldehyde and heating such mixture to the boiling point, adding a quantity of formaldehyde to the second mixture and precipitating an oil-like body out of the same, combining the precipitates of the first and second mixtures, and adding a quantity of acid salt to the final product, substantially as described.

5. The herein described process of manufacturing a paint and enameling material, which consists in admixing an alkaline solution of cresol with formaldehyde and a solution of hydrochloric acid, settling said mixture to obtain an oil-like precipitate, thereafter forming a mixture of an alkaline solution of cresol with formaldehyde and heating such mixture to the boiling point, adding a quantity of formaldehyde thereto, precipitating an oil-like body out of the same, combining the oil-like precipitates of the two mixtures and finally adding to the product a thinning medium whereby the same is reduced to brushing consistency.

1,222,981. VEHICLE-WHEEL. ARTHUR OWEN, Pendleton, England. Filed May 1, 1915. Serial No. 27,265. (Cl. 21—31.)

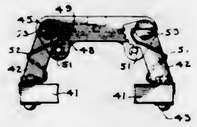
1. In a vehicle wheel, in combination, a fixed part, keys having radially projecting heads upon said fixed part, a detachable part slotted to pass over said keys and their projecting heads, a locking ring or annulus of sufficient internal diameter to pass over said keys but not their heads, slots in said locking ring to pass over the key heads, inclines upon said locking ring extending between said slots to engage the key heads upon a partial rotation of the ring, and securing means for said locking ring, as set forth.

2. In a vehicle wheel, the combination with a fixed part, and keys having radially projecting heads upon said fixed part, of a detachable part slotted to pass over said keys on to the fixed part, a locking ring of sufficient internal diameter to pass over said keys but not their heads, slots in said locking ring to pass over the key heads, inclines on said locking ring extending between the slots and engaging the key heads upon a partial rotation of the ring, and a catch piece engaging the locking ring, as set forth.



3. In a vehicle wheel, in combination the wheel axle, a boss like part fixed thereon, keys on said boss having radially projecting heads, a detachable part forming the wheel proper slotted to pass over said keys and their heads on to the boss, a disk limiting the movement of the detachable part over said boss, a locking ring of sufficient internal diameter to pass over said keys, slots in said ring to pass over said key heads, inclines between the slots on said locking ring, said inclines engaging the key heads upon a partial rotation of the ring, a catch piece engaging the locking ring and a cap inclosing the locking means, as set forth.

1,222,982. BRUSH AND HOLDER FOR GENERATORS AND MOTORS. JOHN B. PETERS, Toledo, Ohio, assignor to The Electric Auto-Lite Company, Toledo, Ohio, a Corporation of Ohio. Filed Nov. 14, 1913. Serial No. 801,002. (Cl. 200—24.)



1. In combination with a commutator, binding posts, a yoke of insulating material secured to the ends of the binding posts, pins extending into the yoke, arms having toothed segments, springs interposed between the toothed segments and the pins for pressing the arms toward each other, carbon block brushes secured to the ends of the arms, flexible connectors for connecting the binding posts with the carbon block brushes.

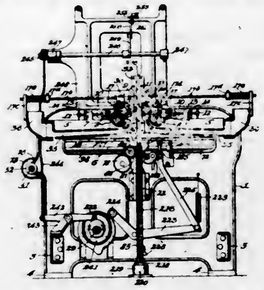
2. In combination with a commutator, binding posts, a yoke of insulating material secured to the ends of the binding posts, pins extending into the yoke, U-shaped arms pivotally connected to the binding posts and having an inwardly toothed segment, springs wound about the binding posts and located intermediate the pins and the segments for pressing the arms toward each other, carbon block brushes secured to the U-member, a lip extending over one end of the brushes for holding the carbon block brushes in position, flexible connectors for connecting the carbon block brushes with the binding posts.

1,222,983. MACHINE FOR GUMMING BLANKS FOR COVERING BOXES AND FOR OTHER PURPOSES. MELVILLE E. PETERS, Denver, Colo. Filed Feb. 23, 1915. Serial No. 10,049. (Cl. 91—51.)

1. In a blank-gumming machine, means for feeding and folding the blank, means for unfolding the blank, and means for completely gumming the surface of one side of the blank in three sections during one complete cycle movement of the machine.

2. In a blank-gumming machine, means for folding the blank, means for gumming said folded blank, means for unfolding the blank and means for transferring the gummed-blank from the machine in a flat condition.

3. In a blank gumming machine, means for feeding flat blanks into the machine, means for applying a narrow strip of gum across the center of their area as they feed into the machine, means for folding them after their centers have been gummed, and means for simultaneously coating both of the outside surfaces of each of said folded blanks from their gummed centers to their ends.

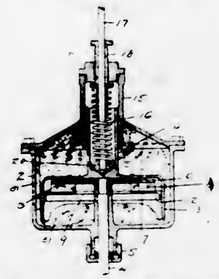


4. In a blank gumming machine, means for feeding flat blanks into the gumming machine and for applying gum to a narrow portion of the center of each blank as they are fed into the machine, means for then folding the blanks at their gummed centers, means for then gumming the opposite outside surfaces of said folded blanks, means for feeding said folded and gummed blanks from their gumming mechanism and for engaging them and spreading them out flat, means for engaging and moving said flat spread-out blanks from the spreading mechanism and feeding them from the gumming machine, all of said feeding and gumming actions being performed in each complete cycle movement of said gumming machine.

5. In a blank gumming machine, means for feeding blanks, means for gluing the central longitudinal portions thereof during the initial feeding movement, means for folding the blanks at their centers, and means for gumming the opposite outside surfaces of said folded blanks, said gumming operation being performed during one complete cycle movement of the gumming machine, and means for receiving said blanks from the folding means and for conveying them forward in their folded form and means for receiving them in folded form and spreading them out into a flat form.

[Claims 6 to 64 not printed in the Gazette.]

1,222,984. PRESSURE-OPERATED APPARATUS. GORDON C. PHARO, Marysville, Cal., assignor to Pharo & Chapman, a Copartnership composed of Gordon C. Pharo and Richard D. Chapman, San Francisco, Cal. Filed July 13, 1915. Serial No. 39,605. (Cl. 264—19.)



1. In combination, a rotatable centrifugally acting impeller having a radially extended side plate, a casing surrounding the impeller and movable axially with relation thereto, and forming a substantially fluid tight joint with the said side plate, and a body of liquid in said casing.

2. In combination, a rotatable centrifugally acting impeller having a side plate, a casing surrounding the im-

peller and movable axially relative thereto and forming a substantially fluid tight joint with the side plate, said plate dividing the casing into two chambers and a body of liquid in the casing adapted to be centrifugally forced into the impeller containing chamber by rotation of the impeller.

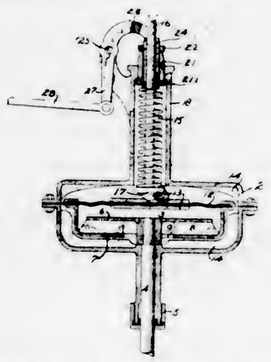
3. In combination, a casing containing a body of liquid and a rotatable centrifugally acting impeller arranged within the casing and forming on its suction side a substantially fluid tight joint with the casing, said casing and impeller being axially movable with respect to each other.

4. In combination, a casing containing a body of liquid, a plate forming a substantially fluid tight joint with the casing and dividing the casing into two chambers, one of which is closed, and means arranged in the closed chamber and axially movable with respect to the casing for forcing liquid into said closed chamber.

5. In combination, a casing containing a body of liquid, a rotatable centrifugally acting impeller arranged in said casing, a wall on the suction side of the impeller forming a substantially fluid tight joint with the casing and dividing it into two chambers, the chamber on the discharge side of the impeller being closed so that rotation of the impeller produces a difference in pressure in the two chambers, said casing and impeller being movable axially with respect to each other, and means opposing said relative movement.

[Claims 6 to 17 not printed in the Gazette.]

1,222,985. PRESSURE-OPERATED APPARATUS. GORDON C. PHARO, Marysville, Cal., assignor to Pharo & Chapman, a Copartnership composed of Gordon C. Pharo and Richard D. Chapman, San Francisco, Cal. Filed Dec. 6, 1915. Serial No. 65,259. (Cl. 264—19.)



1. In a device of the class described, an impeller having a wall on one side extending longitudinally beyond the opposite side and forming a cylinder, said wall being formed to direct the discharge from said impeller in a direction parallel to its axis of rotation, and a movable wall engaging said cylinder operated by the fluid pressure therein.

2. In a device of the class described, an impeller having an imperforate wall, a second wall spaced from said imperforate wall having a suction inlet therein and extending longitudinally beyond the periphery of said imperforate wall to form a cylinder, whereby the fluid is discharged from said impeller in a direction parallel to the axis, and a movable wall engaging said cylinder.

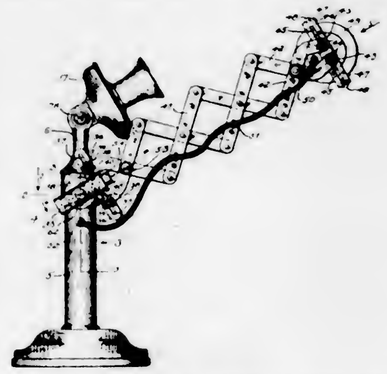
3. In a device of the class described, a housing, a centrifugally acting impeller in said housing, a casing attached to the suction side of the impeller and a movable wall engaging said casing.

4. In a device of the class described, a housing, a centrifugally acting impeller in said housing, a casing attached to the suction side of the impeller, a movable wall engaging said casing and a member adjacent the movable wall adapted to be moved thereby.

5. In a device of the class described, a housing, a centrifugally acting impeller in said housing, a casing attached to the suction side of the impeller and extending beyond the opposite side, a movable wall engaging said casing and a member in said housing adjacent the movable wall and adapted to be moved thereby.

[Claims 6 to 30 not printed in the Gazette.]

1,222,986. CIRCUIT-CONTROLLING TELEPHONE-RECEIVER SUPPORT. WILLIAM PICK, New York, N. Y. Filed July 31, 1916. Serial No. 112,310. (Cl. 179—150.)



1. The combination with a transmitter support and a plurality of contact springs normally insulated from each other inclosed therein, of a receiver, an extensible support for said receiver mounted on said transmitter support, means for bringing said springs into contact operated by said extensible support, and additional manually operated means for separating said springs.

2. The combination with a transmitter support, of a bearing secured to said support, a sleeve secured in said bearing and having a second sleeve at its outer end, a pair of wings provided with slots secured to said second sleeve, a lazy tongs slidably mounted at one end in said slots, a yoke provided with slots, the other end of said lazy tongs being slidably mounted in said slots in said yoke, and a receiver yieldingly attached to said yoke.

3. The combination with a transmitter support of a bearing provided with a projection and a threaded portion secured to said support, a sleeve secured in said bearing, a split washer secured to said sleeve, said split washer loosely straddling said projection, a second split washer revolubly mounted on said sleeve, the split washer tightly straddling said projection, and a nut revolubly mounted on said sleeve and screwed on said threaded portion, whereby said first named washer will be clamped between said second named washer and the face of said threaded portion.

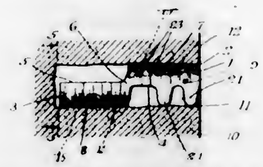
4. The combination with a telephone receiver support, of a plurality of contact springs mounted therein, a pin for moving said springs, a slide for moving said pin, a slot in said slide and a headed pin passing through said slot and secured in said first named pin for moving said springs.

1,222,987. BOLT-ANCHOR. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall. Filed Oct. 16, 1915. Serial No. 56,239. (Cl. 85—2.4.)

1. An article of manufacture comprising an expansible bolt anchor having a plurality of open sides.

2. An article of manufacture comprising an expansible bolt anchor having a plurality of open sides, said open sides being at an angle to each other.

3. An article of manufacture comprising an expansible bolt anchor having a plurality of open sides arranged staggered with relation to each other.

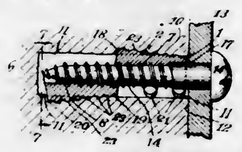


4. An article of manufacture comprising an expansible bolt anchor formed of a plurality of units, each unit having an open side and a connecting bendable member between the units.

5. An article of manufacture comprising an expansible bolt anchor formed of a plurality of units, each unit having an open side and a connecting bendable and breakable member between the units.

[Claims 6 to 11 not printed in the Gazette.]

1,222,988. BOLT-ANCHOR. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall. Original application filed Oct. 16, 1915, Serial No. 56,239. Divided and this application filed Mar. 17, 1916. Serial No. 84,896. (Cl. 85—2.4.)



1. An article of manufacture comprising an expansible ductile anchor having a plurality of open sides.

2. An article of manufacture comprising an expansible ductile anchor having a plurality of open sides arranged staggered with relation to each other.

3. An article of manufacture comprising an expansible ductile anchor having a plurality of open sides and a central axial bore.

4. An article of manufacture comprising an expansible ductile anchor having a plurality of open sides, said sides having inclined surfaces at an angle to each other.

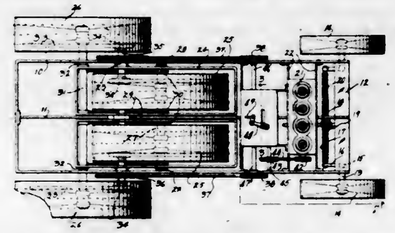
5. An article of manufacture comprising an expansible ductile anchor having a plurality of open sides arranged on different portions of the anchor.

[Claims 6 to 12 not printed in the Gazette.]

1,222,989. TRACTOR. JEFFERSON D. POWELL, Searcy, Ark. Filed Feb. 3, 1916. Serial No. 75,994. (Cl. 21—114.)

1. In a vehicle having a main framework, an auxiliary frame mounted to oscillate in a vertical plane in said main framework, a forward and a rearward traction wheel each provided with an individual shaft mounted to revolve in said auxiliary frame, a journal extending through said main framework and said auxiliary frame, the axis of revolution of which coincides with the axis of revolution of said auxiliary frame, means for revolving said journal, an internal gear in each of said traction wheels and pinions on said journal meshing with said gears for transmitting the rotation of said journal to the traction wheels.

2. In a tractor having a main framework, a pair of auxiliary frames mounted to oscillate in said main framework, the axes of oscillation of the two auxiliary frames being in alinement, a journal for each auxiliary frame extending through the same and through the main frame and placed in alinement with said axes of oscillation, a forward shaft carrying a traction wheel, a pair of bearings for said shaft in each of said auxiliary frames, a rearward shaft carrying a traction wheel, a pair of bearings therefor in each of said auxiliary frames, and means on the journals and on the traction wheels for transmitting the revolution of the journals to the respective traction wheels, the forward traction wheels being situated within their respective auxiliary frames and the rearward traction wheels outside thereof, whereby the two wheels in each frame will be oscillated, on going over uneven ground, independently of the two wheels mounted in the other auxiliary frame.



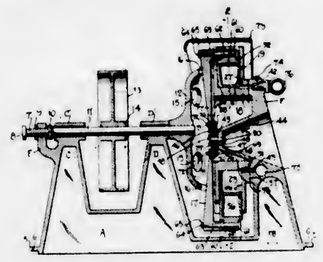
3. In a tractor having a main framework, a pair of auxiliary frames mounted to oscillate in said main framework, the axes of oscillation of the two auxiliary frames being in alinement, a journal for each auxiliary frame extending through the same and through the main frame and placed in alinement with said axes of oscillation, a forward shaft carrying a traction wheel, a pair of bearings for said shaft in each of said auxiliary frames, a rearward shaft carrying a traction wheel, a pair of bearings therefor in each of said auxiliary frames, and means on the journals and on the traction wheels for transmitting the revolution of the journals to the respective traction wheels, the forward traction wheels being situated within their respective auxiliary frames and the rearward traction wheels outside thereof, whereby the two wheels in each frame will be oscillated, on going over uneven ground, independently of the two wheels mounted in the other auxiliary frame, and means for revolving said journals.

4. In a tractor having a main framework, a pair of auxiliary frames mounted to oscillate in said main framework, the axes of oscillation of the two auxiliary frames being in alinement, a journal for each auxiliary frame extending through the same and through the main frame and placed in alinement with said axes of oscillation, a forward shaft carrying a traction wheel and a pair of bearings for said shaft in each of said auxiliary frames, a rearward shaft carrying a traction wheel, a pair of bearings therefor in each of said auxiliary frames, and means on the journals and on the traction wheels for transmitting the revolution of the journals to the respective traction wheels, the forward traction wheels being situated within their respective auxiliary frames and the rearward traction wheels outside thereof, whereby the two wheels in each frame will be oscillated, on going over uneven ground, independently of the two wheels mounted in the other auxiliary frame, a motor driven differential gear, a pair of compensatingly actuated driving shafts in said differential gear, a sprocket wheel on each of said driving shafts and corresponding sprocket wheels on said journals and chains connecting the journal sprocket wheels with the respective sprocket wheels on said driving shafts.

5. In a tractor having a main framework, a pair of auxiliary frames mounted to oscillate in said main framework, the axes of oscillation of the two auxiliary frames being in alinement, a journal for each auxiliary frame extending through the same and through the main frame and placed in alinement with said axes of oscillation, a forward shaft carrying a traction wheel, a pair of bearings for said shaft in each of said auxiliary frames, and a rearward shaft carrying a traction wheel, a pair of bearings therefor in each of said auxiliary frames, and means on the journals and on the traction wheels for transmit-

ting the revolution of the journals to the respective traction wheels, the forward traction wheels being situated within their respective auxiliary frames and the rearward traction wheels outside thereof, whereby the two wheels in each frame will be oscillated, on going over uneven ground, independently of the two wheels mounted in the other auxiliary frame, a motor driven differential gear, a pair of compensatingly actuated driving shafts in said differential gear, a sprocket wheel on each of said driving shafts and corresponding sprocket wheels on said journals and chains connecting the journal sprocket wheels with the respective sprocket wheels on said driving shafts, said differential gear including a hand operated starting and reversing device.

1,222,990. FLUID-ENGINE. JOHN BASIL RAMP, Lexington, Ky. Filed July 10, 1916. Serial No. 108,373. (Cl. 121—64.)

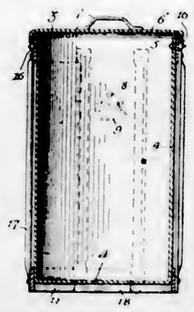


1. A rotary engine including a shaft, an annular rotor mounted on the shaft and having a plurality of radially disposed cylinders, each cylinder having a port extending outward to one side face of the rotor, a pedestal having a head disposed eccentric to the shaft and extending into the center of the rotor and eccentric thereto, connecting rods rotatably mounted upon the head, and pistons in the cylinders operatively connected to the rods, the face of the pedestal confronting the rotor having arcuate ports concentric to the axis of the rotor and with which the ports of the cylinders are adapted to register.

2. A rotary engine including a shaft, a dished supporting member mounted upon the shaft and having slots in its rim, a rotor formed integral with the supporting member and extending in a plane transverse to the axis thereof and formed with a plurality of cylinders in its periphery, each cylinder having a port extending outward in a direction away from said supporting member and to one side face of the rotor, a pedestal having a head disposed eccentric to the shaft and extending into the center of the rotor and eccentric thereto, connecting rods rotatably mounted upon the head and extending outward through the slots in the rim of the supporting member, and pistons in the cylinders operatively connected to the rods, the face of the pedestal confronting the rotor having arcuate ports eccentric to the axis of the rotor and with which the ports of the cylinders are adapted to register.

3. A rotary engine including a shaft, bearings within which the shaft is mounted, a rotor supporting member mounted upon the shaft and approximately dish-shaped, the rim of the member having slots, a rotor mounted upon the supporting member and extending in a plane transversely to the axis thereof, and formed upon its periphery with a plurality of cylinders, each cylinder having a port extending away from the supporting member and opening upon the lateral face of the rotor, a pedestal having a head extending into the rotor, the center of the head being eccentric to the shaft and to the rotor, a disk rotatably mounted upon the head, pistons in the several cylinders, and connecting rods pivotally connected to said disk and at their outer ends passing through the slots in the rim of the supporting member and pivotally connected to said pistons.

1,222,991. RECEPTACLE-FRAME. FRANK LEE RANDOLPH, Los Angeles, Cal. Filed Aug. 3, 1915. Serial No. 43,382. (Cl. 220—115.)



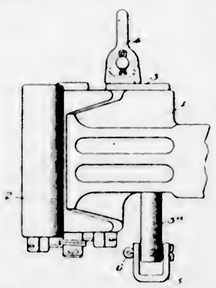
1. A frame for garbage cans comprising upper and lower members and side protecting stays of angular material, adjustable bolts for supporting and binding garbage cans or receptacles of different diameters within said frame.

2. A separable garbage can structure comprising a frame having an upper suspending band, a lower base frame, angular bars forming side stays connecting the said band and base frame, a can, and means for adjustably supporting and removably holding the said can within said frame.

3. A separable garbage can structure comprising a frame having an upper suspending band, a lower base frame, side bars connecting the said band and base frame, a can, a cover having a flange of sufficient diameter to inclose the upper edges of said frame and can, and means for adjustably supporting and removably holding the said can within said frame.

4. A receptacle frame having a circular suspending band, a many sided base, side bars supporting the said band on said base and means for holding a receptacle on said band.

1,222,992. CAR-COUPLING-LOCKING MECHANISM. WILLIAM J. REGAN, Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 12, 1916. Serial No. 136,494. (Cl. 213—14.)



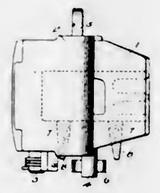
1. The combination with a coupler-head and a knuckle, of a lock member which projects outside the coupler-head, and a latch device pivotally mounted on the projecting end of the lock member, the arms of said pivoted latch member being each of a length substantially equal to the distance of its pivotal point from the proximate wall of the coupler-head.

2. The combination with a coupler-head and a knuckle, of a lock member which projects below the bottom wall of the coupler head, and a latch member pivotally mounted on the projecting end of the lock member and spaced with relation to the bottom wall of the coupler head when the lock member is in locked position.

3. The combination with a coupler-head, a knuckle, and a vertically movable lock member which projects below the bottom wall of the coupler head, of a flanged latch member having a pivotal connection with the lock-member, the arms of said pivoted latch member on opposite sides of the pivot being substantially equal in length and substantially equal to the distance the said pivotal point is below the bottom wall of the coupler head.

4. The combination with a coupler-head, a knuckle, and a lock member, of a latch device normally spaced from said head but adapted to engage the same to prevent said lock member from moving to unlocked position, said latch device being movably connected to and normally projecting beyond said lock member and being movable into engagement with the coupler-head by the rotation of said head.

1,222,993. CAR-COUPLING-LOCKING MECHANISM. WILLIAM J. REGAN, Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 12, 1916. Serial No. 136,495. (Cl. 213—14.)



1. The combination with a coupler-head, and knuckle pivoted thereon, of pendant dogs pivotally connected with the bottom wall of the coupler-head, and a lock which projects through the bottom wall of the coupler-head intermediate of the said dogs, said dogs being adapted upon rotation of said coupler-head to engage and prevent unlocking of said lock.

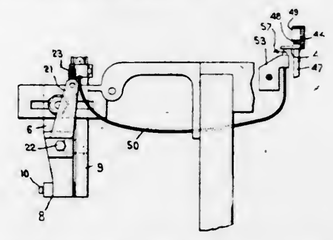
2. The combination with a coupler-head and knuckle, of a plurality of dogs movably connected to the bottom wall of the coupler-head, and a lock which projects below the bottom wall of the coupler-head between the said dogs and is provided with means for engaging said dogs to prevent an unlocking operation of said lock.

3. The combination with a coupler-head and knuckle, of a lock for retaining said knuckle in coupled position, and means for preventing said lock from moving to unlocked position, said means being mounted upon the coupler-head and being adapted to engage said lock through a lateral rotation of said head.

1,222,994. FEELER MECHANISM FOR LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Oct. 23, 1916. Serial No. 127,044. (Cl. 139—85.)

1. In an automatic filling replenishing loom the combination of a shuttle containing a filling carrier; a filling impinging member acting upon the beat up to enter the shuttle and contact with the filling on the filling carrier; a carrier movable relatively to, and normally retracted with respect to, said filling impinging member; a shuttle impinging member carried by said filling impinging member and connected to said carrier to move reversely therewith; and a penetrating member yieldingly projected from, and slidably mounted in, said carrier and adapted, when the carrier is projected by the engagement of the shuttle impinging member with the shuttle due to deplenishment of filling, to penetrate the remaining filling and, upon contact with the filling carrier, to be retracted thereby relatively to the carrier.

2. In an automatic filling replenishing loom the combination of a shuttle containing a filling carrier; a filling impinging member acting upon the beat up to enter the shuttle and contact with the filling on the filling carrier; a carrier movable relatively to, and normally retracted with respect to, said filling impinging member; a shuttle impinging member carried by said filling impinging member and connected to said carrier to move reversely therewith; a penetrating member yieldingly projected from, and slidably mounted in, said carrier and adapted, when the carrier is projected by the engagement of the shuttle impinging member with the shuttle due to deplenishment of filling, to penetrate the remaining filling and, upon contact with the filling carrier, to be retracted thereby relatively to the carrier; and means operated by said retraction of said penetrating member to initiate filling replenishment.



3. In an automatic filling replenishing loom, the combination of a shuttle containing a filling carrier; a filling impinging member acting upon the beat up to enter the shuttle and contact with the filling on the filling carrier; a carrier movable relatively to, and normally retracted with respect to, said filling impinging member; a shuttle impinging member carried by said filling impinging member and connected to said carrier to move reversely therewith; a penetrating member yieldingly projected from, and slidably mounted in, said carrier and adapted, when the carrier is projected by the engagement of the shuttle impinging member with the shuttle due to deplenishment of filling, to penetrate the remaining filling and, upon contact with the filling carrier, to be retracted thereby relatively to the carrier; means for initiating the operation of filling replenishing means; and a flexible connector extending between said penetrating member and said initiating means and comprising two relatively and longitudinally movable substantially conterminous juxtaposed parts one of which acts to support the other, the penetrating member when retracted acting to give relative longitudinal movement to said connector parts and therethrough and thereby to set in operation the said initiating means.

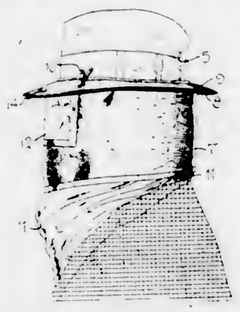
4. An automatic filling replenishing loom comprising means for initiating the operation of filling replenishing mechanism; a member moved upon the deplenishment of filling to a predetermined extent in the running shuttle; and a flexible connector extending between said initiating means and said member and comprising two relatively and longitudinally movable substantially conterminous juxtaposed parts one of which acts to support the other, the said member acting when moved to give relative longitudinal movement to said parts and therethrough and thereby to set in operation the said initiating means.

5. An automatic filling replenishing loom comprising means for initiating the operation of filling replenishing mechanism; a member moved upon the deplenishment of filling to a predetermined extent in the running shuttle; a flexible sheath having its ends secured against longitudinal movement, one adjacent the said member and the other adjacent the said initiating means; a flexible core located in and longitudinally movable with respect to said sheath; and means operated by the movement of the

said member to transmit longitudinal movement to said core and therefrom to said initiating means to initiate the operation of the filling replenishing mechanism.

[Claim 6 not printed in the Gazette.]

1,222,995. HEAD-PROTECTOR. FRED L. RHODES, Sault Ste. Marie, Mich. Filed July 5, 1916. Serial No. 107,625. (Cl. 2—116.)



1. A head protector including a relatively stiff foraminous sheet to extend around the head and face of the wearer, a fabric envelop secured to the entire upper edge of said foraminous sheet and of greater diameter than the same, said envelop being adapted to detachably receive a hat brim and provided with means for retaining the envelop thereon whereby said foraminous sheet is held closely adjacent to the under side of the hat brim in pendant relation thereto and inwardly spaced from the outer edge of the hat brim, and a flexible hood secured to the lower end of the foraminous sheet.

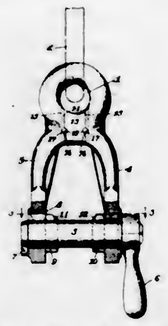
2. A head protector including a relatively stiff, foraminous sheet to extend aroound the head and face of the wearer and having an opening therein, a transparent piece of material secured in said opening, a fabric envelop secured to the entire upper edge portion of said foraminous sheet and of greater diameter than the same, said envelop being adapted to detachably receive a hat brim and provided with means for retaining the envelop thereon, whereby said foraminous sheet is held closely adjacent to the under side of the hat brim in pendant relation thereto and inwardly spaced from the outer edge of the hat brim, and a flexible hood secured to the lower edge of the foraminous sheet.

1,222,996. TOY. FRANK R. RHODES, Haymakertown, Va. Filed Nov. 17, 1916. Serial No. 131,907. (Cl. 244—2.)



A flying toy comprising a relatively wide annular band, a plurality of vanes integral with the lower edge of said band and projecting radially toward the axis thereof in a horizontal plane, said vanes being inclined in a transverse direction, a disk connecting the inner ends of said vanes and integral therewith, an integral tube projecting from the under side of said disk in the axis of the toy, and a drum having a concaved peripheral surface fixed on said tube and about which a string is adapted to be wound.

1,222,997. SHACKLE OR CONNECTING-LINK. HENRY E. ROTTMER, Washington, D. C. Filed July 13, 1916. Serial No. 109,153. (Cl. 57—127.)



1. A shackle or like connecting member having opposing arms with openings therein in axial alinement with each other and one of the openings having an extension or notch to permit the passage of a key member therethrough and a bolt having a handle at one end, said handle lying outside of the adjacent arm and extending laterally in respect to said bolt to serve as a weight for turning the same and a key on the other end of the bolt projecting laterally therefrom and adapted to pass through the notch, said bolt being slidable axially and limited in its outward axial movement to maintain its connection with one of the arms, the notch being so positioned that the key will be out of alinement therewith when the handle drops by gravity and thereby turns the bolt into locking position with said key on the outer side of the arm having the notch, and the key will be in line with said notch when the handle is a half turn from its position assumed by gravity, substantially as described.

2. In combination with a shackle, a bolt, extending between the arms thereof having a weighted member to turn said bolt into locking position, a key on said bolt, a notch in the arm of the shackle adjacent the said key but out of line therewith when the weight turns the bolt to locking position and flanges on the inner faces of the arms surrounding the bolt and projecting toward each other, said flanges being notched in line with each other for receiving the key on the bolt, when the same is turned into position for the longitudinal movement of the bolt, substantially as described.

3. In combination with a shackle having arms, with a bolt extending between said arms provided with a key and a weighted handle, a notch in one of the arms to permit the passage of said key and means for guiding the bolt after it leaves one of the arms and for holding the bolt in position against the action of its weight with the key in line with the said opening, substantially as described.

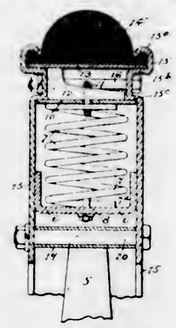
4. In combination in a shackle, having arms with a space between, a bolt having bearings in said arms in which it turns and slides, a key on one end of the bolt, a weighted handle on the opposite end of the bolt, one of the arms being notched to permit the passage of the key and flanges on the inner faces of the arms projecting toward each other and notched in line with the opening through one of the arms to receive the said key, the said notches having flaring mouths, substantially as described.

5. In combination in a shackle an eye portion, arms extending therefrom, a shifting bolt in said arms and an inserted throat-piece between the arms and the eye of the shackle, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,222,998. SPRING VEHICLE-WHEEL. WILLIAM RUTSON, Lorain, Ohio. Filed Sept. 30, 1916. Serial No. 123,074. (Cl. 152—38.)

1. The combination with a wheel felly and rim, of side plates clamped to the rim and working beside the felly, an intermediate band spaced from the rim and abutting against said side plates, springs between said band and felly, and fastening devices for said springs, located in the space between said rim and band and retained in engagement with the springs by the side plates.



2. The combination with a wheel felly and rim of side plates clamped to the rim and extending beside the felly, said plates having outer shoulders on which the rim seats and also having inner shoulders, an intermediate band resting against said inner shoulders, and springs between said band and felly.

3. The combination with a wheel felly and rim of side plates clamped to the rim and extending beside the felly, said plates having outer shoulders on which the rim seats and also having inner shoulders, an intermediate band resting against said inner shoulders, and springs between said band and the felly, said springs being connected at opposite ends to the band and felly respectively.

4. The combination with a wheel felly and rim, of side plates clamped to the rim and working beside the felly, an intermediate band abutting against said side plates, springs between said band and the felly, links connecting the outer ends of the springs and the band, and wedges engaging the links on the outer side of the band, said wedges being between the side plates and within the rim.

5. The combination with a wheel felly and rim, of side plates engaging the rim and extending beside the felly, said plates having outer shoulders on which the rim rests and inner shoulders spaced therefrom, a band abutting against said inner shoulders, bolts connecting the plates between the rim and the band, and springs between the felly and the band.

1,222,999. COMMUTATOR-BRUSH. HENRY K. SANDELL, Chicago, Ill., assignor to Herbert S. Mills, Chicago, Ill. Filed Mar. 20, 1916. Serial No. 85,322. (Cl. 200—25.)



1. A brush cast from an alloy comprising copper, antimony and nickel.

2. A brush cast from an alloy comprising more than fifty per cent. of copper, about thirty per cent. of antimony, and more than five per cent. of nickel.

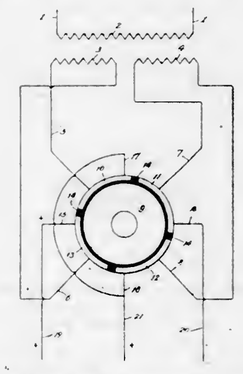
3. A brush cast from an alloy comprising copper, antimony, nickel and lead.

4. A brush cast from an alloy comprising more than fifty per cent. of copper, and about forty per cent. of antimony, nickel and lead taken together.

5. A brush cast from an alloy comprising about ½ copper, about ⅛ copper, about ⅛ antimony, and about ⅛ of nickel and lead taken together.

[Claims 6 to 10 not printed in the Gazette.]

1,223,000. MEANS FOR RECTIFYING ALTERNATING CURRENT FOR EDISON THREE-WIRE DISTRIBUTION SYSTEM. HENRY K. SANDELL, Chicago, Ill., assignor to Herbert S. Mills, Chicago, Ill. Filed Apr. 8, 1916. Serial No. 89,811. (Cl. 175—364.)



1. In combination, a transformer primary winding adapted to be connected with a source of alternating current, a pair of secondary windings operatively relating to said primary winding, an Edison three-wire direct current line, a rectifying commutator adapted to be driven in synchronism with the alternating current supplied to the said transformer, insulated commutator segments mounted on said commutator, brushes connected with the said transformer secondary windings and with said Edison three-wire lines, the said brushes and commutator segments being so arranged that connections are maintained between one end of each of said secondary transformer coils and the positive and negative wires respectively of the said Edison lines and between the other ends of said secondary transformer coils and the neutral wire of the said Edison line, during one-half of the alternating current wave, and connections are maintained between said last named ends of said secondary transformer winding, and the positive and negative wires respectively of the Edison line, and between the first named ends of said secondary transformer coil and the neutral wire of the Edison line, during the other half of the alternating current wave.

2. In combination, a primary transformer winding adapted to be connected to a source of alternating current, a pair of secondary windings operatively related to said primary winding, a rectifying commutator adapted to be driven in synchronism with the alternating current supplied to the said transformer, four 90° commutator segments mounted upon the said commutator, eight brushes spaced apart 45° and bearing upon the said commutator, means connecting two diametrically opposite brushes together, and to the neutral wire of an Edison three-wire system, means connecting the two brushes spaced 90° from said last named brushes to the positive and negative wires respectively of the said three-wire system, means connecting the two intermediate brushes on one side of the said neutral brushes to the ends of one of said secondary transformer coils, and means connecting the remaining two intermediate brushes on the other side of

said neutral brushes to the ends of the other secondary transformer coil, the arrangement being such that alternating current brushes of like polarity are spaced apart 90°, and brushes of unlike polarity are spaced apart 180°.

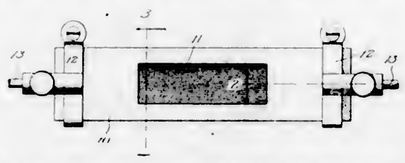
1,223,001. ALLOY BEARING. HENRY K. SANDELL, Chicago, Ill., assignor to Herbert S. Mills, Chicago, Ill. Filed June 19, 1916. Serial No. 104,453. (Cl. 75—1.)

1. A bearing comprising substantially fifty per cent. of copper, twenty-five per cent. of antimony and proportionate amounts of lead and nickel.

2. A bearing formed of an alloy comprising relatively large proportions of copper, antimony and an additional constituent which will increase the tensile strength.

3. A bearing formed of an allow consisting of four parts (by weight) of copper, two parts of antimony, one part of nickel, and one part of lead.

1,223,002. METAL COMPOSITION. HENRY K. SANDELL, Chicago, Ill., assignor to Herbert S. Mills, Chicago, Ill. Filed Sept. 12, 1916. Serial No. 119,656. (Cl. 75—1.)



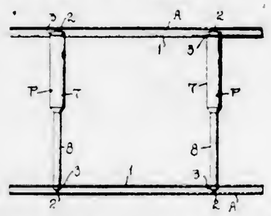
1. A contact point for making and breaking electrical circuits and comprising a metal composition including upward of 70 per cent. of nickel and upward of 3 per cent. of uncombined carbon.

2. A contact point for making and breaking electrical circuits and formed of a metal composition comprising substantially pure nickel, carrying upward of 3 per cent. of uncombined carbon.

3. A cast metal contact point for making and breaking electrical circuits and comprising upward of 70 per cent. of nickel and upward of 3 per cent. of graphitic carbon.

4. A cast metal contact point for making and breaking electrical circuits and comprising substantially pure nickel, carrying upward of 3 per cent. of graphitic carbon.

1,223,003. PAPER FILE AND BINDER. THEODORE P. SIEBENMANN, Greensboro, N. C. Filed Sept. 13, 1916. Serial No. 119,894. (Cl. 129—13.)



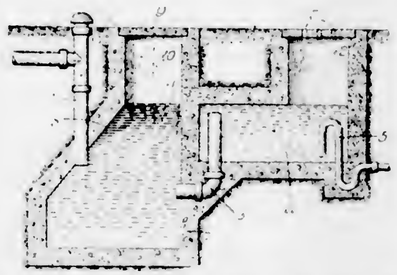
1. A binder comprising a tubular bar provided with an elongated slot, a post provided with an extension disposed through said slot, and a clamping member engageable with said extension for securing the post to the bar, the end portion of the post surrounding the extension being serrated and the coacting surface of the bar being also serrated.

2. A binder comprising a tubular bar provided with an elongated slot, a post provided with an extension disposed through said slot, and a clamping member engageable with said extension for securing the post to the bar, the contacting face of the nut being serrated and the coacting surface of the bar being also serrated.

3. A binder including a tubular bar provided with an elongated slot, a post disposed through said slot and extending through the bar, a locking plate within the bar and provided with an opening through which the post is adapted to pass, means for imparting endwise movement to the plate, and a plug arranged within the bar and provided with a slot through which the plate extends.

4. A binder including a tubular bar provided with an elongated slot, a post disposed through said slot and extending through the bar, a locking plate within the bar and provided with an opening through which the post is adapted to pass, a plug positioned within the bar adjacent an end thereof, a screw threaded through said plug and extending exteriorly of the bar, the inner portion of the screw being in swiveled engagement with the bar, and a second plug arranged within the bar and adjacent the opposite end thereof and provided with a slot through which the plate extends.

1,223,004. PROCESS FOR DISPOSAL OF SEWAGE BY MICRO-ORGANISMS. OLIVER F. STARR, Utica, N. Y., assignor of one-half to Edward A. Robinson, Mount Vernon, N. Y. Filed Apr. 10, 1914, Serial No. 830,874. Renewed Feb. 12, 1917. Serial No. 147,981. (Cl. 210—18.)



1. The process of sewage disposal which comprises excluding light and air from said sewage, disposing said sewage while out of contact with light and air in such manner as to provide a restricted anaerobic area, wherein the surface of the liquid is materially smaller than the cross sectional area at the bottom of the pool, substantially as specified.

2. The process of sewage disposal, which comprises excluding light and air from said sewage, disposing said sewage in a pool in such manner as to provide a restricted area to the upper surface of said sewage to concentrate micro-organisms within said restricted area, the surface of the liquid in said restricted area being materially smaller than the cross sectional area at the bottom of the pool and providing gaseous pressure greater than atmospheric pressure upon said restricted area beneath the scum surface, substantially as specified.

3. The process of sewage disposal which comprises disposing said sewage in a pool in such manner as to provide a restricted surface area, wherein the surface of the liquid is materiall smaller than the cross sectional area at the bottom of the pool, then subjecting said sewage to pressure under exclusion of light and air, then subjecting said sewage to a non-disturbing inflow and outflow.

4. The process of sewage disposal which comprises excluding a pool of sewage having a non-disturbing inflow and outflow from light, air and agitation until a mass of micro-organisms has been developed of a character and quantity sufficient to liquefy the solid mass of the flowing sewage, disposing said pool of sewage in such manner as to provide a restricted surface area that is materially smaller than the cross sectional area at the bottom of the pool to concentrate the micro-organic action in the upper portion of said pool, then providing for the accumulation of gases to produce gaseous pressure greater than atmospheric pressure under the surface of said pool

5. The process of disposing of sewage which comprises secluding a pool of sewage from light and air, disposing said pool of sewage in such a manner as to provide a concentrated micro-organic action in the upper portion of the pool adjacent the surface thereof by arranging said pool in such manner that the surface of the liquid is materially smaller than the cross sectional area at the bottom of the pool, conserving the heat produced by the action of said micro-organisms, and then providing a non-disturbing inflow and outflow beneath the surface of said pool.

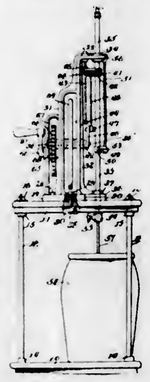
[Claims 6 to 14 not printed in the Gazette.]

1,223,005. CLASSIFIER FOR FLOUR-MILLS. JOHN P. STOFFEL, Los Angeles, Cal. Filed Jan. 11, 1916. Serial No. 71,433. (Cl. 83—38.)



In a classifier, a screen, a pair of spaced brackets affixed to said screen, a bar reciprocally mounted in said brackets, and shoulders on the outer ends of said bar adapted to alternately strike said brackets on reciprocal movement of the bar, said bar being adapted to be reciprocated on shaking of the screen.

1,223,006. CHURN-OPERATING MECHANISM. ABRAHAM H. STUTLER, West Union, W. Va. Filed Oct. 26, 1916. Serial No. 127,961. (Cl. 74—14.)



1. In an apparatus of the class described, a lower base member having a plurality of vertical standards and adapted to support a churn body, a supporting platform reversibly mounted upon said standards, a mechanism adapted to operate a churn dasher device and supported upon said platform, whereby the dasher operating mechanism may be disposed between the base and the platform when not in use.

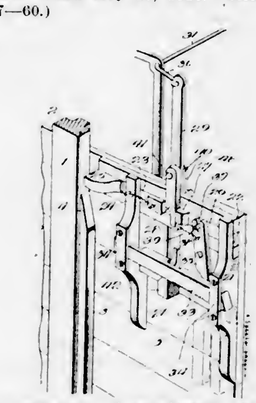
2. In an apparatus of the class described, a lower base member having a plurality of vertical standards and adapted to support a churn body, a supporting platform reversibly mounted upon said standards, a base plate carried by said platform and including horizontally directed bearing members, a base member engaging said horizontal bearings and having a lower vertical guide sleeve, a supporting frame rising from said base member and having an upper vertical guide sleeve, a dasher operating member slidable in said vertical guide sleeves and adapted to be engaged with a dasher device operated in said churn body, and means carried by said supporting frame for actuating said dasher operating members.

3. In an apparatus of the class described, a base plate adapted to be attached to a support including horizontally directed bearings, a base member engaging said horizontal bearings and having a lower vertical guide sleeve, a supporting frame rising from said base member and having an upper vertical guide sleeve, a dasher operting member slidable in said vertical guide sleeves and adapted to be engaged with a dasher device, and means carried by said slotted frame for actuating said dasher operating member.

4. In an apparatus of the class described, a base plate adapted to be attached to a support and including horizontally directed bearings arranged in pairs at right angles to each other, a base member engaging one pair of said horizontal bearings and having a lower vertical guide sleeve, a supporting frame rising from said base member and having an upper vertical guide sleeve, an operating member slidable in said vertical guides and adapted to be engaged with a dasher device, another plate member engaging the other pair of said horizontal bearings, another supporting frame rising from said last mentioned plate member, and means carried by said supporting frames for actuating said operating member.

5. In an apparatus of the class described, a lower base member having a plurality of vertical standards adapted to support a churn body, a supporting platform reversibly mounted upon said standards, a base plate carried by the supporting platform and including horizontally directed bearings, a plate member engaging said horizontal bearings and having a lower vertical guide, a supporting frame rising from said plate member and having an upper vertical guide, an operating member slidable in said vertical guide and adapted to be engaged with a dasher device, a spring operating to maintain said operating member yieldably at one end of its movement, and means carried by said supporting frame for actuating said operating member against the resistance of said spring.

1,223,007. ELEVATOR. BENJAMIN D. SUMNER, Tuscaloosa, Ala. Filed May 20, 1916. Serial No. 98,831. (Cl. 187—60.)



1. The combination of an elevator car, a gate past which the car may move provided with a recess in its end, the inner wall of the recess being cut away and the lower wall thereof presenting a stop shoulder, a dog pivoted between its ends within the recess and having its inner end normally projecting through the cut away portion of the inner wall of the recess and its outer end weighted and normally resting upon said stop shoulder, and means on the car to engage the dog and hold it against the stop shoulder on the upward movement of the car and to turn the dog about its pivot on downward movement of the car.

2. The combination of an elevator car, a gate, a slide upon the car adapted to move the gate to open position, a plunger mounted upon the car in alinement with said slide, a member interposed between the slide and the plunger to normally form an operative connection be-

tween them, and means for withdrawing said member from between the slide and the plunger.

3. The combination of an elevator car, a gate, a slide on the car adapted to move the gate to open position, a plunger slidably mounted on the car in alinement with the said slide, a movable member normally interposed between the plunger and the slide whereby movement of the plunger will be transmitted to the slide, means for withdrawing said member from between the plunger and the slide, and means for preventing contact of the plunger with the slide when said member is withdrawn.

4. The combination of an elevator car, a gate, a slide mounted on the car and adapted to move the gate to open position, a plunger slidably mounted on the car in alinement with said slide, means acting on the plunger to project the same, means for normally holding the plunger retracted, a finger pivotally mounted above the slide and depending between the plunger and the slide, and means for withdrawing the finger from between the plunger and the slide.

5. The combination of an elevator car, a gate, upper and lower slides mounted upon the car and adapted to move the gate to open position, a plunger mounted upon the car in alinement with the upper slide, means acting on said plunger to project and retract the same, a swinging member normally fitting between the plunger and the upper slide whereby to transmit the movement of the plunger to said slide, means for withdrawing said swinging member from between the plunger and the slide, and means movable with said withdrawing means for rendering both slides inoperative.

[Claims 6 to 9 not printed in the Gazette.]

1,223,008. HAT-FASTENER. CHRISTINA SWANSON, Portland, Oreg., assignor to John Kopf, Portland, Oreg. Filed Oct. 3, 1916. Serial No. 123,557. (Cl. 132—25.)



1. In a device of the character described, the combination of two semi-elliptical sections, each section being provided upon one end with a pin portion adapted to be disposed through the crown of the hat, head members engaged upon the outer ends of the pin portions, the other ends of said sections being provided with a hook member to engage over the pin portions and spaced hook members carried by the body of the sections and adapted to engage the hair of the wearer to securely retain the hat in position.

2. In a device of the character described, the combination of two semi-elliptical sections, hair engaging means carried by each of said sections, each section having a pin portion formed at one end and a hook member formed at the other end to engage over the pin portions to pivotally connect said sections.

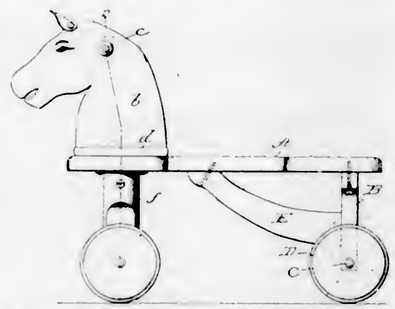
3. In a device of the character described, the combination of two semi-elliptical sections, pin portions formed upon one end of said sections, hook members formed upon the other ends of said sections and adapted to engage the pin portions to pivotally connect said sections, and spaced hook members carried by the body of the sections and adapted to engage the hair of the wearer.

4. A device of the character described consisting of two arcuate strands having their adjacent ends pivotally connected, the intermediate portions of the strands being bent upon themselves to form series of spaced hook members.

5. A device of the character described consisting of two arcuate strands having their adjacent ends pivotally connected, the intermediate portions of the strands being bent upon themselves to form series of spaced hook members, each of said strands having an end portion extended to afford a pin, the pin of one strand being remote from the pin of the second strand.

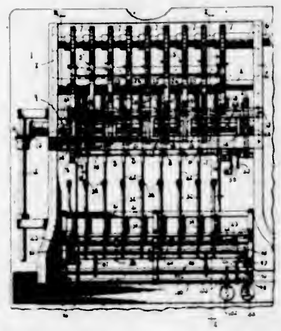
[Claim 6 not printed in the Gazette.]

1,223,009. CHILD'S VEHICLE. OSCAR A. SWINGLE and THOMAS J. MANGAN, Binghamton, N. Y., assignors to the Wilkinson Manufacturing Co., Binghamton, N. Y., a Corporation of New York. Filed Nov. 15, 1916. Serial No. 131,484. (Cl. 21—191.)



A child's vehicle comprising a body portion, wheels supporting the same, and a turning head having a disk secured to the bottom thereof and interposed between the head and the face of the body forming a support for the child's limbs in consting, substantially as described.

1,223,010. CALCULATING-MACHINE. FERDINAND J. TILLMAN, St. Louis, Mo., assignor to Typewriting Calculating Attachment Company, St. Louis, Mo., a Corporation of Missouri. Filed May 21, 1913. Serial No. 769,032. (Cl. 235—59.)



1. In a calculating machine, an integer wheel, means for operating said integer wheel, a transmission shaft operable by said integer wheel, a stop for said transmission shaft, key controlled devices including means for releasing said stop, and means providing for the return of said stop to its operative position at the completion of an operation of said integer wheel.

2. In a calculating machine, an integer wheel, means for operating said integer wheel, a transmission shaft operable by said integer wheel, a stop for said transmission shaft, key controlled devices including means for releasing said stop, and means controlled by said integer wheel providing for the return of said stop to its operative position at the completion of an operation of said integer wheel.

3. In a calculating machine, a series of integer wheels, means for operating said integer wheels, means for moving said integer wheels into coöperative relation with said operating means, a transmission shaft operable by said integer wheels, a locking device for stopping said transmission shaft, key controlled devices including means for releasing said locking device, and means controlled by said first mentioned integer wheel moving means providing for restoration of said locking device.

4. In a calculating machine, a series of integer wheels, means for operating said integer wheels, cam levers for moving said integer wheels into coöperative relation with said operating means, a transmission shaft operable by said integer wheels, a locking device for stopping said transmission shaft, key controlled devices including means for releasing said locking device, and means controlled by said cam levers providing for restoration of said locking device.

5. In a calculating machine, a series of integer wheels, means for operating said integer wheels, a transmission shaft operable by said integer wheels, a stop for said transmission shaft, key controlled devices including means for releasing said stop, a spring tending to restore said stop, a latch for holding said stop during the operation of said transmission shaft, and a latch releasing member operable by said integer wheels at the completion of the operation of said wheels.

[Claims 6 to 41 not printed in the Gazette.]

1,223,011. TAR-BURNER. CARL A. WENDELL, Joliet, Ill. Filed Oct. 21, 1916. Serial No. 127,005. (Cl. 158—74.)

1. The method of burning tar, which consists in mixing a readily combustible gas with air within a relatively confined space, causing said mixture to be ejected from said confined space with a whirling motion, conducting the tar through said mixing space, and ejecting said tar in a flat spray into said whirling body of burning gas at a point outside of said confined space, substantially as described.

2. The method of burning tar, which consists in combining combustible gas, steam and air in proper proportions within a chamber, causing said mixture to be ejected from said chamber with a whirling motion, conducting the tar to be burned through said chamber by the use of steam, atomizing the tar and discharging the same at a point outside of said chamber and into the zone of complete combustion of said gas, substantially as described.

3. In a tar burner, the combination of a nozzle, admission ports at one end of said nozzle for gas, steam and air, said steam admission ports being longitudinally and transversely inclined and located in spaced relation around said nozzle whereby the gaseous mixture is given a whirling motion, and an axial conduit within said nozzle, said conduit terminating in a flat spray nozzle at a point outside of said first-named nozzle, substantially as described.

4. In a tar burner, the combination of a cylindrical shell providing a plurality of spaced entrance ports for gas, steam and air, a plurality of said ports being disposed at an angle to longitudinal and transverse lines, whereby the mixture is caused to whirl, a tar inlet tube disposed axially of said cylinder, said tube terminating in a flat spray nozzle at a point exterior to said cylinder, and a steam injector located in said tar tube, substantially as described.

5. In a device of the class described, the combination with a cylinder having jackets at one end, of a pipe, one of said jackets being for gas and the other for steam, said cylinder being provided with openings connecting said gas jacket with the interior of said cylinder and also connecting the interior of said steam jacket with said cylinder, the latter openings being angularly disposed with respect to the longitudinal and transverse axes of said cylinder, a perforated end member positioned in the cylinder at the jacketed end thereof, said pipe extending through said cylinder and having a restricted wedge-shape mouth piece, whereby matter passing therethrough is caused to issue in fan-like manner, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,223,012. SCREW-THREAD-GAGING DEVICE. FREDERICK W. WHELPLEY and FRANK A. BICKNELL, Greenfield, Mass. Filed June 5, 1916. Serial No. 101,700. (Cl. 33—147.)



1. In a screw thread gaging instrument, in combination, a stock having a graduated scale and having a pointed stud fixed thereto and extended transversely therefrom, a pointer pivotally mounted to swing relatively to the stock and having one end registering on such scale, said pointer having a wide portion at its other end, and a member longitudinally slidable on the stock provided with a transversely extended pointed stud located at a suitable distance from the first named stud, and having at its end toward and in coöperative proximity to the pointer a projection located to one side of the pivot axis of the pointer and operable, under endwise movement of the stud-provided slidable member to cause a swinging deflection of the pivoted pointer.

2. In a screw thread gaging instrument, in combination, a tubular stock provided with a scale and having a pointed stud fixed thereto and extended transversely therefrom, and also having a slot through its wall, a pointer, longitudinally arranged within the tubular stock and pivotally mounted to swing relatively to said stock, and having one end registering on said scale, and having a wide portion at its other end, a plug fitting and longitudinally slidable within the stock and provided with a transversely extended pointed stud located at a suitable distance from the first named stud, and extended through said slot, said plug having, at its end toward and in coöperative proximity to the pointer a projection located to one side of the pivot axis of the pointer and operable, under endwise movement of the stud-provided plug to cause a swinging deflection of the pivoted pointer, and a spring against the reaction of which the pointer is swung in one direction.

3. In a screw thread gaging instrument, in combination, a stock, having a graduated scale and having a pointed stud fixed thereto and extended transversely therefrom, a pointer pivotally mounted to swing relatively to the stock and having one end registering on such scale, said pointer having a wide portion at its other end, means for adjustably positioning the axis pivot of the pointer relative to the length of the stock, and a member longitudinally slidable in the stock provided with a transversely extended pointed stud located at a suitable distance from the first named stud, and having at its end toward and in coöperative proximity to the pointer a projection located to one side of the pivot axis of the pointer.

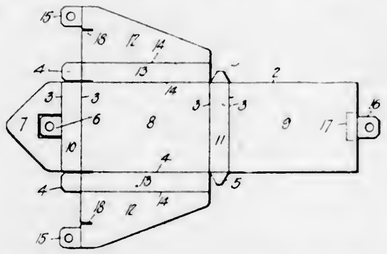
4. In a screw thread gaging instrument, in combination, a tubular stock provided with a scale and having longitudinal slots through the opposite walls thereof, and also provided with a pointed stud fixed thereto and extended transversely therefrom, said stock having a stud accommodating slot through its wall; and in a plane right angular to that at which said opposite slots are located, a pointer, longitudinally arranged within the tubular stock and having a pivot on which it swings relatively to the scale, which pivot is extended through said opposite slots and a collar which encircles the stock at its oppositely slotted portion, and with which the ends of the pivot have connection, said pointer having one end registering

with said scale and having a widened portion at its other end, a plug fitting and longitudinally slidable within the stock and provided with a transversely extended pointed stud located at a suitable distance from the first named stud, and extended through the slot in the stock therefor, said plug having, at its end toward and in coöperative proximity to the pointer, a projection located to one side of the pivot axis of the pointer and operable, under endwise movement of the stud-provided plug to cause a swinging deflection of the pivoted pointer, a spring against the reaction of which the pointer is swung in one direction, and means for confining said pivot carrying collar in endwise adjusted position on the tubular stock.

5. In a screw thread gaging instrument, in combination, a tubular stock provided with an indicating scale at one end and having external screw threads at an intermediate portion of its length, and having longitudinal slots through the opposite walls thereof, and intermediately of said threaded portion, and also provided with a pointed stud fixed thereto and extended transversely therefrom, said stock having a stud-accommodating slot through its wall at a distance from said stud, a pointer, longitudinally arranged within the tubular stock and having a pivot on which it swings relatively to the indicating scale, which pivot is extended through said opposite slots, a collar encircling the stock at its oppositely slotted portion and with which the ends of the pivot are connected, said pointer having one end registering with the scale and having a widened portion at its other end, a plug fitting and longitudinally slidable within the stock and provided with a transversely extended pointed stud located at a suitable distance from the first named stud, and extended through the accommodating slot in the stock therefor, and having, at its end toward and in coöperative proximity to the pointer, a projection located to one side of the pivot axis of the pointer and operable, under endwise movement of the stud-provided plug to cause a swinging deflection of the pivoted pointer, a spring against the reaction of which the pointer is swung in one direction, and annular nuts screw engaging on said externally threaded portion of the stock at opposite sides of the pivot carrying collar.

[Claim 6 not printed in the Gazette.]

1,223,013. CARD-CASE. ROLAND F. WILSON, Denver, Colo. Filed Dec. 15, 1915. Serial No. 66,988. (Cl. 229—38.)



1. A card-case comprising a body member having a tab and a weakened line along which to detach said tab, the said line being formed to provide a thumb-opening in the member when the tab is detached therefrom, a closing member having a tab registering with the first-mentioned tab, and a sealing device connecting said tabs for the connection of said members.

2. A card-case composed of a folded blank and including a side member and reinforcing members fastened together and having registering apertures, and a closing member having an aperture registering with the other apertures, for the passage of a sealing device.

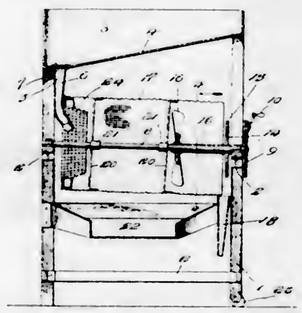
3. A card-case composed of a folded blank and including a side member and reinforcing members fastened together and having registering apertured tabs extending outwardly in alinement with said side member, and a closing member having an apertured tab registering with the first-mentioned tabs for the passage of a sealing device.

4. A card-case composed of a folded blank including a side member having a tab and a weakened line along which to detach the same, said line being formed to provide a thumb-opening in the member when the tab is detached therefrom, reinforcing members having tabs registering with the tab on said side-member, and a flap having a tab adapted to register with said registering tabs for their connection by a sealing-device.

5. A card case comprising a body member open at one end and having a tab in alinement with one of its sides, a lid connected at the other side of the body-member and having a folded flap adapted to be tucked between the contents of the case and the inner surface of the first-mentioned side, a tab extending from the folding line of the flap, to register with the first-mentioned tab, and a sealing device for the connection of the tabs.

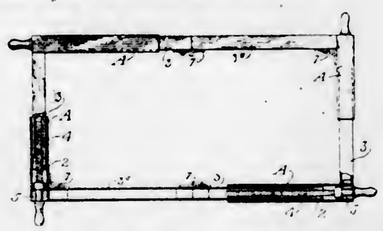
[Claims 6 to 8 not printed in the Gazette.]

1,223,014. SEED-CLEANER. GEORGE E. WOOD, Albany, Ohio. Filed Sept. 18, 1916. Serial No. 120,735. (Cl. 130—16.)



An apparatus for the purpose set forth comprising a foraminous separating cylinder, a conical screen disposed within the cylinder at the inlet end of the same, means for feeding material onto the conical screen, a fan arranged within the cylinder to direct a blast of air through the inlet end of the cylinder and against the inclined walls of the conical screen, and means for rotating the cylinder and the fan.

1,223,015. CURTAIN AND FABRIC STRETCHER. HENRY WOODLEY, West Berkeley, Cal. Filed Apr. 26, 1916. Serial No. 93,705. (Cl. 45—24.)



1. A device for stretching fabrics, consisting of four tubular supports having fixed collars, one diagonally located pair being longitudinally disposed, and the intermediate pairs at right angles thereto, threaded travelers slidable in said supports, connections having one end fixed to a traveler and the opposite end to the side of the opposed transverse support, and screws turnable in threads in the travelers and in the fixed collars in the supports.

2. In a device for stretching fabrics, internally threaded blocks, fabric supports slidable upon the blocks, screws, the threads of which fit the blocks, collars fixed in the supports in which the screw shanks are turnable to advance the supports longitudinally and transversely, connections between each block and the contiguous fabric support, and tubular extensions from the supports within which the ends of the screws are guided and movable.

3. In a device of the character described, internally threaded blocks, fabric supports slidable upon the blocks, collars fixed in the supports, screws, the shanks of which are turnable in the collars, and the threads turnable in the blocks, bars connecting the blocks with the adjacent supports, said bars being made in sections, and means to disconnect said sections and reduce the size of the frame.

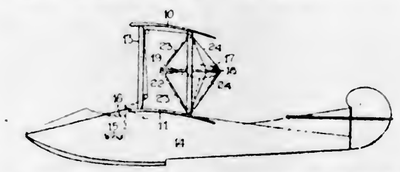
1,223,016. VERMIN-TRAP. LELAND G. YOUNG, Muscatine, Iowa. Filed Jan. 15, 1917. Serial No. 142,481. (Cl. 43—22.)



1. A vermin trap including a base strip of paper or like material, a corrugated strip resting thereon, and a top strip bearing upon the base strip and housing the corrugated strip, said corrugated strip and base strip being removable from the top strip.

2. The combination with a perch and fastening devices outstanding therefrom, of a strip having a longitudinal channel in the bottom thereof, means upon the ends of the strip for detachably engaging said fastening devices, a base strip extending under the channeled strip and resting on the perch, and a corrugated strip removably mounted in the channel and extending longitudinally thereof.

1,223,017. AILERON. ALBERT F. ZAHM, Buffalo, N. Y. Original application filed Mar. 26, 1914, Serial No. 827,485. Divided and this application filed Sept. 18, 1915. Serial No. 51,424. (Cl. 244—29.)



1. In a flying machine, the combination with the main planes of the machine, of an aileron normally neutral as to its placement with respect to said main planes, and means to distort said aileron from its neutral placement without altering the angle of incidence thereof.

2. In a flying machine, the combination with the main planes of the machine, of an aileron normally neutral as to its placement with respect to said main planes, and means to change the neutral placement of the aileron by mechanically controlled alteration of the camber without altering the angle of incidence thereof.

3. In a flying machine, the combination with the main planes of the machine, of an aileron normally neutral as to its placement with respect to said main planes, and means acting on the center of the aileron to cause the fore-and-aft edges thereof to approach in altering the neutral placement of the aileron without altering the angle of incidence thereof.

4. In a flying machine, the combination with the main planes of the machine, of an aileron normally neutral as to its placement with respect to said main planes, and means flexibly connecting with the aileron to cause vertical distortion thereof in either direction from its neutral placement without altering the angle of incidence thereof.

5. In a flying machine, the combination with the main planes of the machine, of an aileron normally neutral as to its placement with respect to said main planes, and means flexibly connecting with the aileron to alter the camber thereof in either vertical direction from its neutral placement without altering the angle of incidence thereof.

[Claims 6 to 30 not printed in the Gazette.]

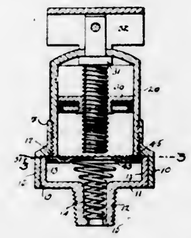
1,223,018. PROCESS FOR MANUFACTURING FANCY WEBS HAVING RAISED DESIGNS. EDUARD ZEIDLER, Guntramsdorf, Austria. Filed Mar. 8, 1915. Serial No. 12,937. (Cl. 26—2.)

1. Process of manufacturing fancy webs having raised designs, consisting in covering certain places of the web with a size, capable of destroying part of the vegetable or animal fiber by maceration, and napping the remaining places of said web for the purpose of retaining at the impressed portions of the web only the unnapped fiber of one kind and at the non-impressed portions of said web, both fibers and therewith a partially covered surface of thin fabric with little pile, substantially as described.

2. Process of manufacturing fancy webs of thin fabrics with little pile and having raised designs, consisting in covering certain places of said web with a size containing the dyestuff or coloring solution and being capable of destroying one kind of fiber, vegetable or animal by maceration, and napping the remaining places of the said web for the purpose of retaining at the covered portions of the web only the unnapped fiber of one kind and at the non-covered portions of said web, both fibers, substantially as described.

3. Process of manufacturing fancy webs of thin fabric with little pile having raised designs consisting in covering certain places of the web with a size, adding dye stuff, fixing said dye-stuff to the fiber destroying size in a bath, said size being capable of destroying part of the vegetable or animal fiber by maceration, and finally napping the remaining places of said web, for the purpose of retaining at the portions of said web covered by said size only the unnapped fiber of one kind and at the non-covered portions both fibers, substantially as described.

1,223,019. GREASE-CUP. OSCAR ZERK, Cleveland, Ohio, assignor, by mesne assignments, to George W. Bowen, Auburn, N. Y. Filed July 31, 1913. Serial No. 782,178. (Cl. 184—38.)



1. In a grease cup, a base including two members, one member comprising a circumferential wall and the other member entirely inclosing said circumferential wall and being contracted over the upper edge of the circumferential wall and a cap extending into and engaging the contracted portion of the latter member, substantially as and for the purpose set forth.

2. In a grease cup, a base including two members, one member comprising a circumferential wall and the other member entirely inclosing said circumferential wall and being contracted over the upper edge of the circumferential wall, and having its other edge contracted around

the lower edge of said circumferential wall, substantially as and for the purpose described.

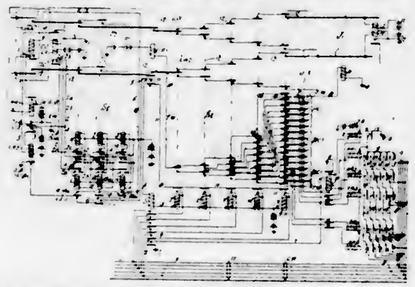
3. In a grease cup, a base consisting of a member having a bottom and an upstanding circumferential wall on the bottom, and a member having a wall encircling and fitting said circumferential wall and a portion extending above the upstanding wall and contracted inwardly over the edge of said wall and engaging said edge, and a cap coacting with the latter portion, substantially as and for the purpose specified.

4. In a grease cup, a base consisting of a member having a bottom and an upstanding circumferential wall on the bottom and a member having a wall encircling and fitting said circumferential wall and a portion extending above the upstanding wall and contracted inwardly over the edge of said wall and engaging said edge, the outer wall also having its lower edge contracted inwardly and lapping the lower face of the bottom, substantially as and for the purpose set forth.

5. As a new article of manufacture, a base for the grease cup consisting of a member having a bottom and an upstanding angular wall, and an upper member having a round threaded portion and a downward angular wall extending over the wall of the first mentioned member.

[Claims 6 to 13 not printed in the Gazette.]

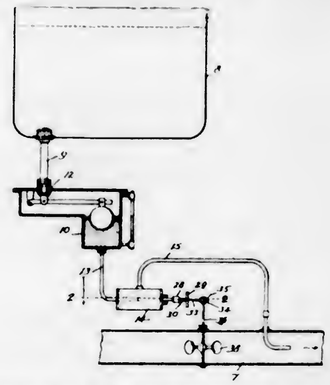
1,223,020. TELEPHONE SYSTEM. WILLIAM AITKEN, London, England, assignor to The Relay Automatic Telephone Company, Limited, London, England. Filed Feb. 25, 1916. Serial No. 80,455. (Cl. 179—18.)



1. In a telephone system, the combination of a number of groups of incoming lines, each group being divided into a number of sub-groups, a group of first choice outgoing lines associated with each sub-group of incoming lines, means for connecting an incoming line to a first choice line, a number of groups of second choice outgoing line, each of such groups being associated with a group of incoming lines, means adapted, when all the first choice lines available to an incoming line are busy, to connect an incoming line to a second choice line, a number of third choice outgoing lines available in common to a number of groups of incoming lines and means adapted, when all the first and second choice lines available to an incoming line are busy, to connect such incoming line to a third choice line.

2. In a telephone system, the combination of a number of groups of lines incoming to a switching unit, each group being divided into a number of sub-groups, a group of first choice lines connecting such unit to a second switching unit and associated with each sub-group of incoming lines, switches adapted to connect an incoming line to a first choice line, a number of groups of second choice lines connecting the first unit to the second switching unit, each of such groups being associated with a group of incoming lines, switches adapted, when all the first choice lines available to an incoming line are busy, to connect an incoming line to a second choice line, a number of third choice lines connecting the first unit to the second switching unit and available in common to a number of groups of incoming lines, switches adapted, when all the first and second choice lines available to an incoming line are busy, to connect such incoming line to a third choice line, such first, second and third choice lines being divided into a number of groups and each group being divided into a number of sub-groups, a group of first choice lines outgoing from the second switching unit, and associated with each sub-group of connecting lines, switches adapted to connect a connecting line to a first choice outgoing line, a number of groups of second choice outgoing lines, each of such groups being associated with a group of connecting lines, switches adapted, when all the first choice outgoing lines available to a connecting line are busy, to connect such connecting line to a second choice outgoing line, a number of third choice outgoing lines available in common to a number of groups of connecting lines and switches adapted, when all the first and second choice outgoing lines available to a connecting line are busy, to connect such connecting line to a third choice outgoing line.

1,223,021. PROPORTIONING FEEDING DEVICE. HENRY A. ALLEN, Chicago, Ill. Filed July 10, 1916. Serial No. 108,430. (Cl. 210—19.)



1. In apparatus of the character set forth, the combination of a conduit for fluid, a source of fluid under pressure for introduction into the fluid flowing in said conduit, a device driven by the fluid in said conduit, and means operated by the said fluid under pressure and controlled by said device, for effecting the introduction of said fluid under pressure into said conduit.

2. In apparatus of the character set forth, the combination of a conduit for fluid, a source of fluid under a constant pressure for introduction into the fluid flowing in said conduit, a device driven by the fluid in said conduit, and means operated by the said fluid under pressure and controlled by said device, for effecting the introduction of said fluid under pressure into said conduit.

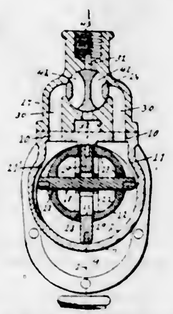
3. In apparatus of the character set forth, the combination of a conduit for fluid, a source of fluid under pressure for introduction into the fluid flowing in said conduit, a device driven by the fluid in said conduit, a pumping element actuated by the said fluid under pressure to discharge into said conduit, valve mechanism controlling the introduction of said fluid under pressure into said pumping element, and means actuated by said device for actuating said valve means.

4. In apparatus of the character set forth, the combination of a conduit for fluid, a source of fluid under pressure for introduction into the fluid flowing in said conduit, a device driven by the fluid in said conduit, a reciprocable pumping element actuated in both directions by the said fluid under pressure and discharging into said conduit, valve mechanism controlling the supply to the pumping element and the discharge therefrom of the said fluid under pressure, and means actuated by said device for actuating said valve mechanism.

5. In apparatus of the character set forth, the combination of a conduit for fluid, a source of fluid under pressure for introduction into the fluid flowing in said conduit, a device driven by the fluid in said conduit, a cylinder having an outlet passage, a piston reciprocable in said cylinder, valve means for controlling the introduction into the cylinder behind the piston and the discharge therefrom into said conduit, of the said fluid under pressure for actuating said piston to produce said discharge, and means actuated by said device for actuating said valve means.

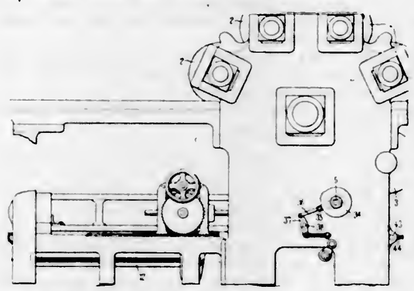
[Claims 6 to 9 not printed in the Gazette.]

1,223,022. PNEUMATIC DRILL. ARCHIE M. BAIRD, Topeka, Kans. Filed Nov. 27, 1916. Serial No. 133,542. (Cl. 121—78.)



The combination of a casing formed with a cylinder bore and with inlet and exhaust ports, a hollow rotary piston eccentrically mounted in the cylinder bore and bearing against one side thereof, a single one-piece pair of piston blades diametrically mounted in the piston, and a pair of separate piston blades radially mounted in said piston at right angles to the one-piece blade, said piston being formed with slots for the reception of said blades and with ribs for guiding the separate blades.

1,223,023. DELIVERY MECHANISM FOR SHEET-FEED ROTARY PRESSES. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed July 31, 1915. Serial No. 42,980. (Cl. 101—29.)



1. A sheet delivery mechanism for printing presses including a delivery cylinder, risers thereon for engaging the margins of the sheet whether continuous or staggered for passing the sheet around the cylinder without smutting the freshly printed face of the sheet and means coacting with the risers for controlling the movement of the sheet.

2. A sheet delivery mechanism for printing presses including a delivery cylinder, risers thereon for engaging the margins of the sheet whether continuous or staggered for passing the sheet around the cylinder without smutting the freshly printed face of the sheet, and rollers coacting with the risers for controlling the movement of the sheet.

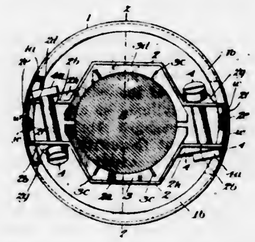
3. A sheet delivery mechanism for printing presses including a delivery cylinder, risers adjustable thereon to bring them into correspondence with the margins of the sheet whether continuous or staggered for passing the sheet around the cylinder without smutting the freshly printed face of the sheet and means coacting with the risers for controlling the movement of the sheet.

4. A sheet delivery mechanism for printing presses including a delivery cylinder, risers adjustable thereon to bring them into correspondence with the margins of the sheet whether continuous or staggered for passing the sheet around the cylinder without smutting the freshly printed face of the sheet, and rollers coacting with the risers for controlling the movement of the sheet.

5. A sheet delivery mechanism for printing presses including a sheet delivery cylinder having grippers for engaging the head of the sheet and risers on the cylinder for engaging the margins of the sheet whether continuous or staggered for passing the sheet around the cylinder without smutting the freshly printed face of the sheet.

[Claims 6 to 27 not printed in the Gazette.]

1,223,024. METAL SPLIT PULLEY. NICHOLAS BARRY, Muscatine, Iowa, assignor to Barry Manufacturing Company, Muscatine, Iowa, a Corporation of Iowa. Filed Feb. 18, 1914. Serial No. 819,554. (Cl. 64—18.)



1. The herein described split-pulley having two similar sections; each comprising a rim member having a circumferential bend and a spoke member having its ends fastened to the ends of the rim member and having a central portion bent to fit over a bushing and provided with inclined protuberances at opposite sides of said central portion, the ends of the spoke member projecting beyond the ends of the rim member and adapted to interlock with the ends of a similar spoke member on the opposed pulley section; together with bolts engaging said protuberances and arranged at an angle to each other and to the face of the pulley; and bushings adapted to be interposed between the bent portions of the spoke members and a shaft.

2. A split-pulley section comprising a rim member, a spoke-and-clamp member having its ends united to the ends of the rim member, one end of said spoke member projecting beyond that end of the rim member to which it is attached and the other end of the spoke member extending beyond that end of the rim member to which it is attached and its projecting end being bent into bayonet-shape; the bayonet end of such spoke member being adapted when assembled with a like pulley section to engage the projecting end of an opposed spoke member, while the ends of the opposed rim members abut, substantially as described.

3. In combination, opposite split-pulley sections having inclined bosses on their opposed faces, and straight fastening bolts engaging said inclined bosses said bolts lying at angles to the sides of the pulley sections so as

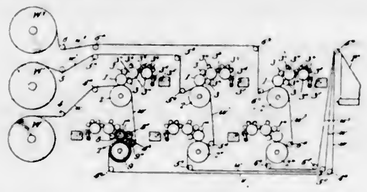
to be accessible from the sides thereof, substantially as described.

4. In combination, opposite split-pulley sections having inclined bosses on their opposed faces, and straight fastening bolts engaging said inclined bosses and uniting said sections, said bolts lying at angles to each other and to the sides of the pulley sections so as to be accessible from the sides thereof, substantially as described.

5. In a split-pulley the combination of opposite pulley sections; each comprising a rim member; a clamp-and-spoke member connecting the ends of the rim member and having a central portion adapted to engage a suitable bushing and also having inclined perforated bosses at opposite sides of the central portion; and inclined clamping bolts engaging said bosses, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,223,025. ROTARY PRINTING-PRESS. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed Aug. 15, 1912. Serial No. 715,186. (Cl. 270—5.)



1. In a printing press, the combination of a plate cylinder adapted to carry tubular plates, a journal bearing for each end of the cylinder whereby such plates may be slipped on or off either end of the cylinder; with two sets of means for driving the cylinder so arranged that when one driving means is disengaged from the cylinder the other will be in engagement therewith.

2. In a printing press, the combination of a plate cylinder adapted to carry tubular plates, a journal bearing for each end of said cylinder adapted to permit said tubular plates to be slipped endwise onto the cylinder at either end thereof; with duplicate sets of gearing for driving the cylinder so arranged that when one set of gearing is disengaged from the cylinder the other will be in engagement therewith.

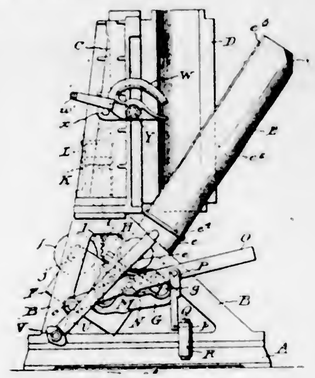
3. In a printing press, the combination of a plate cylinder adapted to carry tubular slotted plates, a journal bearing for each end of the cylinder having a narrow neck corresponding in width to the slots in the tubular plates whereby such plates may be slipped on or off either end of the cylinder; with means for driving the cylinder at each end so arranged that when one driving means is disengaged from the cylinder the other will be in engagement therewith.

4. In a printing press, the combination of a plate cylinder adapted to carry tubular slotted plates, a journal bearing for each end of said cylinder having a supporting neck substantially corresponding in width to the slots in the tubular plates whereby said tubular plates may be slipped endwise onto the cylinder at either end thereof past the bearing; with duplicate sets of gearing for driving the cylinder so arranged that when one set of gearing is disengaged from the cylinder the other will be in engagement therewith.

5. In a printing press, the combination of an impression cylinder, a plate cylinder adapted to carry tubular slotted plates and provided with margin bars adapted to engage the slots in the plates; bearings for the cylinder of less diameter than the cylinder and each supported by a neck substantially corresponding in width to the width of the margin bars on the cylinder to permit the slotted tubular plates to be slipped onto the cylinder over either end thereof; with duplicate sets of gearing for driving the cylinder at opposite ends thereof, so arranged that when one set of gearing disengages the cylinder the other will be in engagement therewith.

[Claims 6 to 22 not printed in the Gazette.]

1,223,026. STEREOTYPE-PLATE-CASTING BOX. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed Oct. 12, 1914. Serial No. 866,295. (Cl. 22—2.)



1. In a stereotype casting apparatus the combination of a cope and a drag adapted to surround a core, with a hollow core mounted on hollow trunnions, a water inlet connection with one hollow trunnion, and a water outlet connection with the other hollow trunnion.

2. In a stereotype casting apparatus the combination of a cope and a drag adapted to surround a core, with a hollow core mounted on hollow trunnions, an inlet and a drain pipe within the core, water inlet connections with one trunnion, and a water outlet connection with the other trunnion, substantially as described.

3. In a stereotype casting apparatus the combination of a cope and a drag adapted to surround a core, with a hollow core mounted on hollow trunnions, an inlet and a drain pipe within the core, a flexible water inlet connection with one hollow trunnion, and a flexible water outlet connection with the other hollow trunnion.

4. In a casting box the combination with a tiltable core; of a cam plate connected with the core, and a lever engaging the cam plate to hold the core in either raised or lowered position.

5. In a casting box, the combination of a tiltable core adapted to tilt by gravity, with means to hold the core in near but out of casting position.

[Claims 6 to 24 not printed in the Gazette.]

1,223,027. DUST-COLLECTOR FOR ROCK-DRILLS. GEORGE C. BRACKETT, Denver, Colo., assignor of one-half to George N. Robinson, Denver, Colo. Filed Aug. 9, 1915. Serial No. 44,481. (Cl. 255—50.)

1. The combination with a drill-steel mounted to move longitudinally and to rotate about its longitudinal axis, of a dust-collector comprising a cup-member adapted to engage the rock around a drill-hole during action of the steel upon the breast thereof, and having a bore in which said drill steel is loosely fitted, and a slot concentric with said bore, a clamping-member nonrotatably mounted upon the steel and adapted to slide longitudinally with relation thereto, and a pin on said clamping-member extending loosely through the slot of the cup-member.

2. The combination with a drill-steel mounted to move longitudinally and to rotate about its longitudinal axis, of a dust-collector comprising a cup-member adapted to engage the rock around a drill-hole during action of the steel upon the breast thereof, and having a bore in which said drill-steel is loosely fitted, a clamping member nonrotatably mounted upon the steel and adapted to slide



longitudinally with relation thereto, and a connection between said clamping member and said cup-member which permits of free rotary movement of the one with relation to the other.

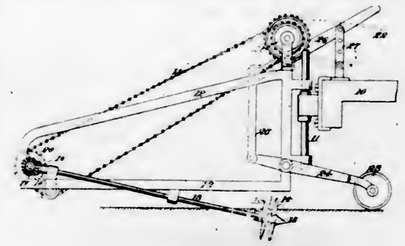
1,223,028. WATER-FILTER. JOSEPH W. BRENKERT, San Diego, Cal. Filed Oct. 31, 1916. Serial No. 128,675. (Cl. 210—6.)

1. In a filter of the class described, the combination of a casing provided with an inlet port and an outlet port at its lower end, a plunger in each end each provided with screens and a cloth placed between said screens, cotton placed between said plungers, a cap secured on the upper end of said casing, an outlet faucet communicating with the inner surface of said cap, and a resistance means between the upper plunger and said cap comprising two ring supports with small sized apertures therein and screens secured between said ring supports.

2. In a filter of the class described, the combination of a casing provided with an inlet and outlet port at its lower end, another outlet port at its upper end, a pair of plungers reciprocally mounted therein each carrying screens with a cloth placed between the same, a mass of cotton placed between said plungers in said casing, and a resistance member secured in the upper end of said casing comprising rings with small perforations therein, screens secured between said rings and a cloth secured between said screens.

1,223,029. ROTARY PLOW. ORESMUS G. BUTLER, San Francisco, Cal. Filed Mar. 27, 1916. Serial No. 86,908. (Cl. 97—52.)

1. In combination with a draft frame, an implement frame, means connecting the front end of the implement frame to the draft frame for supporting the former for vertical adjustment, and earth working means arranged on the rear of the implement frame to aid the first means in supporting said implement frame and thereby assume part of the strain imposed on said supporting means by the weight of the implement frame.



2. In combination with a draft vehicle, an implement frame, means connecting the frame to the vehicle for relative vertical movement, an arm pivoted to the frame and having a supporting wheel on its front end which latter extends in front of the frame, and means adjustable on the draft vehicle and connected with the arm for adjustably holding the wheel.

3. In combination with a draft vehicle, a plow frame having spaced uprights at its forward end each having a spindle bearing, vertical spindles connecting the vehicle and plow frame, an arm pivoted to each frame upright and extending forwardly thereof, a wheel carried by the forward end of each arm, an operating lever pivoted to the plow frame above the arms and having its rear end connected to the latter and its forward end overhanging the vehicle, and a detent device on the latter for engagement by the lever.

4. In combination with a draft vehicle, an implement frame, means connecting the frame to the vehicle for relative vertical and guided movement, a pivoted arm on the frame extending forwardly therefrom, a frame-supporting wheel on the forward end of the arm, an adjusting lever pivoted on the frame and connected with the arm for adjusting the latter, and means on the draft vehicle for adjustably engaging the lever to hold it in a predetermined adjustment.

5. In combination with a draft frame, an implement frame, horizontally spaced vertical spindles carried by one frame, a pair of vertically spaced eyes for each spindle carried by the other frame and slidably engaged with the respective vertical spindle, and supporting wheels carried by the implement frame and disposed forwardly thereof to aid the spindles and eyes in supporting the rear end of the implement frame.

1,223,030. MANUFACTURE OF STEEL. FRANK D. CARNEY and LEWIS B. LINDEMUTH, Bethlehem, Pa. Filed Nov. 20, 1916. Serial No. 132,399. (Cl. 75—46.)

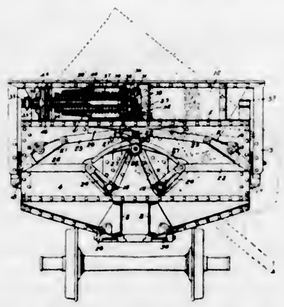
1. The method of making duplex steel, which comprises charging bessemerized metal into a basic open hearth furnace with sufficient manganese bearing material to produce a slag under basic conditions whose manganese content is sufficiently great to permit a reduction of a portion of said manganese content and cause its entrance into and its retention in the metal of the bath beneath it.

2. The method of making duplex steel, which comprises charging bessemerized metal into a basic open hearth furnace, then charging sufficient manganese bearing material to produce a slag under basic conditions whose manganese content is sufficiently great to cause a portion of its manganese to enter the metal beneath it, and causing the metal of the bath to contain at least 0.15% manganese during the entire refining operation.

3. The method of making duplex steel, which comprises charging bessemerized metal into a basic open hearth furnace with sufficient manganese material to produce a slag under basic conditions having a content of manganese oxid of ten per cent. or over.

4. The method of making duplex steel, which comprises charging bessemerized metal into a basic open hearth furnace with manganese ore sufficient to produce a slag containing about ten per cent. manganese oxid under basic conditions existing in the furnace.

1,223,031. TILTING SIDE-DUMP CAR. CHARLES H. CLARK, Crafton, Pa., assignor to Clark Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 15, 1915. Serial No. 55,974. (Cl. 105—191.)



1. In a dump car, the combination of an underframe, a body mounted to rock thereon, an outwardly and downwardly opening door hinged to the lowering side of the body, a shaft having a crank, a lever, a link connecting the lever and the crank of said shaft, body rocking means operatively connected to the lever, and links jointed together with one link secured to said crank shaft and the other link pivotally secured to the door whereby opening movement is imparted to the latter when the body tilts for dumping and whereby the door is closed as the body returns to upright position.

2. In a dump car, the combination of an underframe, an upright end frame, a body mounted to rock on the underframe, a downwardly and outwardly opening door for the lowering side of the body, a crank shaft paralleling the axis of rocking of the body, a lever fulcrumed in the end frame, a link connecting the lever and the crank of said shaft, a jointed link connection between the crank shaft and door whereby the latter is opened and closed, respectively, with the tilting and righting movements of the body, body tilting means, and means for oscillating the lever in reverse directions, the lever moving in one direction when the body tilts and in a reverse direction when it returns toward normal position.

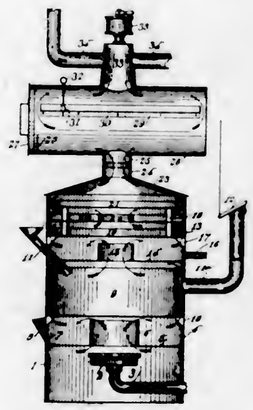
3. In a dump car, the combination of an underframe, a body mounted to rock thereon, body rocking means, a stub shaft movable with the body, a door for the lowering side of the body, an arm engaged and adapted to be moved longitudinally by the stub shaft when the body is in motion, and mechanism interposed between and operatively connecting said arm and the door whereby as the body tilts the door is automatically opened and as the body returns to upright position the door is automatically closed.

4. In a dump car, the combination of an underframe, an upright end frame, a body moutned to rock on the underframe, a door for the lowering side of the body, a crank shaft extending longitudinally of the axis of rocking, a lever fulcrumed between its ends in the end frame, a link connecting one end of the lever and a crank of said shaft, an arm pivotally connected to the opposite end of said lever, body tilting means operatively connected to said arm whereby as the body tilts the arm actuates said lever, and a jointed connection between the crank shaft and the door with said shaft operated by said lever in a direction to open the door as the body tilts and in a reverse direction for closing the door as the body is righted.

5. In a dump car, the combination of an underframe, a body mounted to rock thereon for dumping at either side, a downwardly and outwardly opening hinged door for each side of the body, a separate mechanism for opening and closing each door, means for tilting the body toward either side, and means actuated by the tilting mechanism for operatively engaging and actuating the appropriate door opening and closing means.

[Claims 6 to 19 not printed in the Gazette.]

1,223,032. MEDICINAL-VAPOR GENERATING AND FUMIGATING APPARATUS. JOHN F. CLASS, Dayton, Ohio. Filed Sept. 11, 1916. Serial No. 119,393. (Cl. 167—3.)

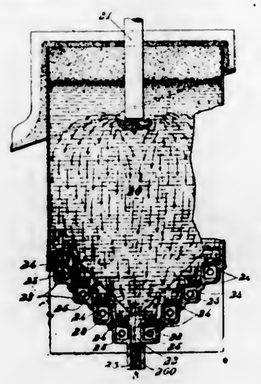


In an apparatus of the character specified, a main vapor generator comprising a base section having a heat medium within it, a section thereabove having two compartments adapted to contain fume generating material, one of which has a central communication with the base section, and the other of which has a marginal communication with the first-named compartment, an upper section surmounting the first-named section and having within it a plurality of shallow receptacles adapted to contain fume generating material and over and around which the fumes arising from the lower compartments circulate and commingle with the fumes arising from said shallow receptacles, a horizontal drum mounted above said upper section and having a communication therewith and having within it a shallow receptacle adapted to contain fume generating material and over and around which the circulating fumes from below pass in a strengthened state, an auxiliary generator receiving the fumes at a reduced temperature from said drum and in which the fumes are further strengthened, and a pipe connection through which the fumes are conducted from said auxiliary generator to the place of application, substantially as specified.

1,223,033. APPARATUS FOR SEPARATING OR CONCENTRATING ORES. DAVID COLE, Morenci, Ariz., assignor, by mesne assignments, to Metals Recovery Company, Augusta, Me., a Corporation of Maine. Filed Aug. 3, 1915. Serial No. 43,443. (Cl. 261—121.)

1. In a frothing classifier, a tank, and a porous medium through which air is admitted to said tank, said porous medium being arranged with different portions thereof at different levels and being of different thicknesses at the several levels respectively.

2. In a frothing classifier, a tank and means for admitting air to said tank, said means comprising a series of air chambers arranged at different levels and having tops composed of porous plates arranged with different portions thereof at different levels and of different thicknesses at the several levels respectively, and means for supplying air to the several chambers at different pressures, respectively.



3. In a frothing classifier, a tank and an inclined wedge-shaped porous plate through which air is admitted to said tank.

4. In a frothing classifier, a tank and means for admitting air to said tank, said means comprising a series of air chambers arranged at different levels and having tops composed of inclined wedge-shaped porous plates, and means for supplying air to the several chambers at different pressures, respectively.

5. In a frothing classifier, a tank having a bottom provided with an elongated slot extending thereacross and means for admitting air to said tank in the form of bubbles at different levels above the level of said slot, said means being constructed and arranged to cause the admission of air in constant volume at all levels.

[Claims 6 to 11 not printed in the Gazette.]

1,223,034. DEVICE FOR RECOVERING PIPES, SHAFTS, &c., FROM WELLS. SETH P. COLGAN and WALTER FREDERICK, Beaver City, Nebr. Filed July 25, 1916. Serial No. 111,137. (Cl. 57—9.)



1. A device of the character described comprising a supporting rod, a pair of arms connected to said rod, an apertured block mounted on said arms, and two pairs of gripping dogs of different sizes independently mounted on said block adapted to engage with pipes of different diameters for removing the same from a well, substantially as described.

2. A device of the character described comprising a supporting rod, a pair of arms connected to said rod, an apertured block mounted on said arms, two pairs of gripping dogs of different sizes independently mounted on said block adapted to engage with pipes of different diameters to remove the same from a well, and a conical spiral member having one end thereof secured to said block adapted to engage with and guide the pipe end to be engaged by said gripping dogs, substantially as described.

1,223,035. PRIMER-RETAINER FOR DYNAMITE CARTRIDGES. HARRY COMSTOCK, Mineville, N. Y. Filed Feb. 6, 1917. Serial No. 146,967. (Cl. 102—6.)



1. A primer retainer for dynamite cartridges comprising means adapted to be carried by the fuse at a point where said means will lie within an opened end of the shell when the cap or primer is in the dynamite, thereby permitting the opened end of the shell to be secured around said retainer.

2. A primer retainer for dynamite cartridges comprising a flared member adapted to be carried by the fuse at a point where said flared member will lie within an opened end of the shell when the cap or primer is in the dynamite, thereby permitting the opened end of the shell to be secured around said flared member.

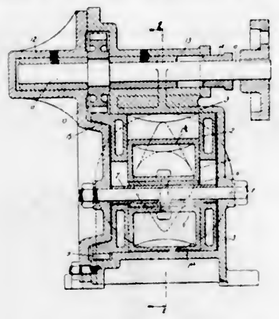
3. Means for priming a dynamite cartridge comprising a cap or primer, a fuse or the like, and a hollow flared retainer fastened on the fuse and located at a point where said retainer will lie within an opened end of the shell when the cap or primer is in the dynamite, thereby permitting the opened end of the shell to be secured around said retainer, and a cord or the like for tying the opened end of the shell around said flared retainer.

1,223,036. VALVELESS ROTARY PUMP. EDWIN LAWRENCE COPSEY, Old Heath, Colchester, England, assignor to F. W. Brackett & Company Limited, Colchester, England. Filed Apr. 4, 1916. Serial No. 88,842. (Cl. 103—44.)

1. In a valveless rotary pump, the combination of a casing, an eccentrically disposed non-rotating pin rigidly supported at both ends in said casing, a cylinder located in said casing and adapted to rotate around said pin, a driving shaft, a toothed element on said shaft, a long bearing for said shaft located on both sides of said toothed element, a toothed element formed on the periphery of the driven cylinder adapted to co-act with the toothed element on the driving shaft, a piston reciprocating in and rotating with said cylinder, and a slot provided in said piston midway between its ends in which said non-rotating pin is adapted to slide during the rotative movement of the piston.

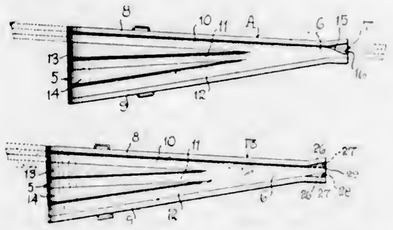
2. In a valveless rotary pump, the combination of a casing, an eccentrically disposed non-rotating pin rigidly

supported at both ends in said casing, a roller mounted on said pin, a cylinder located in said casing and adapted to rotate around said roller, a driving shaft, a toothed element on said shaft, a long bearing for said shaft located on both sides of said toothed element, a toothed element



formed on the periphery of the driven cylinder adapted to co-act with the toothed element on the driving shaft, a piston reciprocating in and rotating with said cylinder, a slot provided in said piston midway between its ends and plates secured within said slot between which said roller is adapted to slide during the rotative movement of the piston.

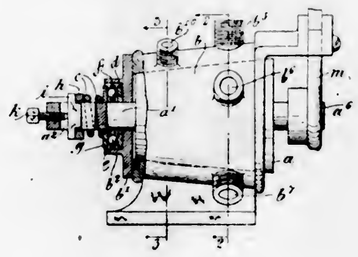
1,223,037. CAR-REPLACING FROG. JOHN H. CRITES, Oilton, Okla. Filed June 26, 1916. Serial No. 106,036. (Cl. 104—163.)



A car replacer comprising a base substantially triangular in plan having a relatively broad entrance end and a relatively narrow exit end, said base being formed with laterally disposed flanges extending up from and extending entirely along the side margins of the base, said flanges being relatively laterally diverged at their exit ends and said base being further formed with laterally disposed raial engaging flanges extending down from the under face of the body at the smaller end thereof, and said body being further formed upon its under face with a thickened portion triangular in plan and less in width than the body, the base of said triangular thickened portion being approximately coincident with the wider end of the body and the thickened portion having sides extending parallel to the sides of the body, the apex of said triangular thickened portion being spaced longitudinally from the inner ends of the rail engaging flanges, and the under face of the thickened portion being formed with a series of teeth.

1,223,038. LIQUID-VALVE. PAUL CROVO, Carlstadt, N. J., assignor to Beverage Machine and Bottle Co., Incorporated, New York, N. Y., a Corporation of New York. Filed Oct. 7, 1915. Serial No. 54,635. (Cl. 137—26.)

1. A liquid valve comprising a casing, a plug mounted rotatably therein, a series of five ports spaced along the circumference of the casing, two passages formed in the plug to register with pairs of the ports, respectively, an independent series of three ports formed at another part of the circumference of the casing, and a separate single passage formed in the plug to register with pairs of these last named ports, respectively, whereby upon rotation of the plug four of the first named ports and two of the last named ports are placed in communication, as required.



2. A liquid valve for use in a machine for filling bottles with liquid under pressure, comprising a casing, a plug mounted rotatably therein, a series of five ports spaced along the circumference of the casing and communicating respectively with a water supply, a water mensuring device, a syrup supply, a syrup measuring device and the bottle to be filled, two passages formed in the plug to register with pairs of the ports, respectively, an independent series of three ports formed at another part of the circumference of the casing and communicating, respectively, with the main gas supply, the gas connection to the water measuring device and the gas connection to the syrup measuring device, and a separate single passage formed in the plug to register with pairs of these last named ports, respectively, whereby the plug in two positions only controls all of the operations for filling.

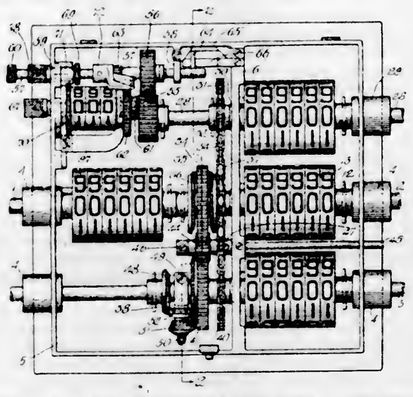
3. A liquid valve comprising a tapered casing, a conical plug mounted rotatably therein, a series of five ports spaced at equidistant points along the circumference of the casing 72° from one another, two curved passages formed in the plug, each of which subtends a worm of 72° and both of which are adapted to register with pairs of ports, respectively, an independent series of three ports formed at another part of the circumference of the casing at points 72° apart, measured in one direction, and a separate single curved passage formed in the plug and subtending a worm of 72° and adapted to register with pairs of the last named ports, respectively, whereby when the valve is in one position, four of the first named ports and two of the last named ports are placed in communication, and when the valve is rotated through an angle of 72°, four other of the first named ports and two other of the last named ports are placed in communication.

4. A liquid valve comprising a tapered casing, a conical plug, a valve stem extending through the end wall of the casing and slotted, a spring engaging the stem operatively to hold the plug snugly within the casing and an adjustable abutment for the spring disposed in the slot and guided thereby.

5. A liquid valve comprising a tapered casing having an end wall, a conical plug mounted rotatably within the casing, a valve stem extending through the end wall of the casing and slotted, a spring operatively interposed between the end wall of the casing and the valve stem to maintain the plug in snug engagement with the casing, an abutment for the spring disposed in the slot and guided thereby and a thumb screw in the end of the valve stem and extending into the slot to afford an adjustable seat for the spring abutment.

[Claim 6 not printed in the Gazette.]

1,223,039. REVOLUTION-COUNTER. HENRY H. CUMMINGS, Newton, Mass. Filed Aug. 28, 1912. Serial No. 717,453. (Cl. 235—91.)



1. In apparatus of the kind described, the combination with operative connections from three propelling engines of a ship, of separate counter mechanism for each engine to indicate the number of revolutions of the respective engines, and an average indicator adapted to be connected with each of the counter mechanisms for each shaft together with means to compensate, automatically, for proportionately different rotative movements of any of said propelling engines and to proportionately actuate said average indicator.

2. In apparatus of the kind described, the combination with operative connections from three propelling engines of a ship, of separate counter mechanism for each engine to indicate the number of revolutions of the respective engines, and an average indicator adapted to be connected with each of the counter mechanisms for each shaft together with differential gearing interposed between the propelling engines and the average indicator, said gearing being constructed and arranged to automatically compensate for varying speeds and dissimilar directions in the propelling engines and to transmit the resultant average only of all of said engines to the average indicator.

3. In apparatus of the kind described, the combination with operative connections from three propelling engines of a ship, of separate counter mechanism for each engine to indicate the number of revolutions per minute of the respective engines, and an average indicator adapted to be connected with each of the counter mechanisms for each shaft together with differential gearing arranged to compensate, automatically, for proportionately different rotative movements of any of said propelling engines and to proportionately actuate said average indicator.

4. In a device of the class described, a rotation counter adapted to indicate the average rotations of three or more individually moving shafts capable of varying rates of speed and in dissimilar directions, and a differential gearing connected to each one of said individually actuated shafts, said differential gearing comprising connections permitting the dissimilar rates of movements of any two of said shafts to be equated and the reverse direction of movement of a shaft to be deducted, and the resultant average rotative movement of all of said shafts to be transmitted to said average indicator.

5. In a device of the class described, a rotation counter adapted to indicate the average rotations of three or more individually moving shafts capable of varying rates of speed and in dissimilar directions, and a differential gearing connected to each one of said individually actuated shafts, said differential gearing including a rotatable sleeve carrying an idler meshing with two independently rotatable gears actuated by said shafts permitting the dissimilar rates of movements of any two of said shafts, while another shaft is stationary, to be equated, and the resultant average rotative movement of all of said shafts to be transmitted to said average indicator.

[Claim 6 not printed in the Gazette.]

1,223,040. FINISHING-MACHINE FOR SHOE-COUNTERS. THOMAS M. DEVANNEY, Cincinnati, Ohio, assignor to The Eagle Counter And Leather Company, Cincinnati, Ohio, a Corporation of Ohio. Filed June 4, 1913. Serial No. 771,575. (Cl. 51—17.)



1. A support plate for counter finishing machines, provided with an elevated counter-supporting portion, with an outline substantially similar to the outline of a counter adapted to be supported thereon, and having a curved forward edge, which is inclined at a relatively small angle to the surface of the counter-supporting portion.

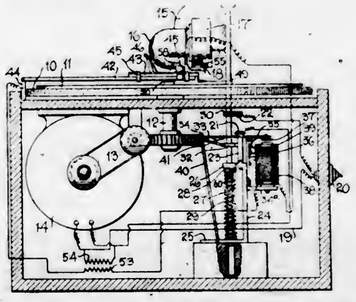
2. A support plate for counter finishing machines, having a curved and beveled forward edge and being provided with an elevated counter-supporting surface, which terminates in a portion of the beveled edge.

3. In a machine of the character described, a reciprocable table, a grinding roller normally below the level of a counter support plate located on the table and capable of yielding vertically, with relation to the table, and having a non-abrasive portion, a counter support plate mounted on the table and having a projection formed thereon for engaging the non-abrasive portion of the roll and for thereby raising the roll to engage a counter located on the plate.

4. In a machine of the character described, a reciprocable table, a grinding roll capable of yielding vertically, with relation to the table, and having non-abrasive ends, a plate mounted on the table above the normal level of the roll and having a curved forward edge for engaging the non-abrasive ends of the roll and for raising the roll to a counter-engaging position.

5. In a machine of the character described, a yielding grinding roll rotatably mounted on the machine, a reciprocable table movable under said roll, a plate mounted on the table and having an elevated counter-supporting portion formed thereon and located above the normal level of said roll so that the abrasive surface of the roll is capable of engaging only the elevated counter-supporting portion of the plate when the roll is raised by passing the plate under the roll, but is incapable of engaging the unraised portion of the plate.

1,223,041. AUTOMATIC STOP MECHANISM FOR SOUND-REPRODUCING MACHINES. RAYMOND BRADEN DE VERE, Seattle, Wash. Filed Aug. 7, 1916. Serial No. 113,579. (Cl. 74—46.)



1. The combination with a sound reproducing machine including a sound box and an electric motor for operating

the machine, of a spring actuated sound box lifting device and circuit breaker disposed in the motor circuit, a latch holding said lifting device and circuit breaker from operation, and means automatically operable after the motor has operated to a predetermined extent, releasing said latch to thereby cause the simultaneous lifting of the sound box and the breaking of the motor circuit.

2. The combination with a sound reproducing machine including a tone arm, a sound box and stylus, a motor disposed in circuit with a source of energy, a contact member adapted to be disposed in the path of movement of the stylus, a switch in the motor circuit, a switch operating and sound box lifting member normally urged in a direction to open the switch and lift the sound box, means holding said switch actuated and sound box lifting member from movement, said means being disposed in a normally interrupted circuit with the stylus and contact, the engagement of the stylus and contact closing said last named circuit and actuating said switch and sound box lifting member to break the circuit through the motor and simultaneously elevate the sound box.

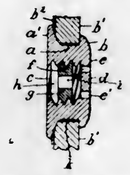
3. The combination with a sound reproducing machine including a tone arm, a sound box, a stylus thereon and an electric motor for driving the machine and disposed in circuit with a source of energy, of a contact member adapted to be disposed in the path of movement of the stylus and connected in an electric circuit therewith, said circuit being normally interrupted, a switch for breaking the motor circuit including contacts, said contacts being connected in the motor circuit, a sound box lifting member carrying one of said contacts, a spring normally urging the sound box lifting member in a direction to separate the contacts and lift the sound box, a latch holding said lifting member against the action of the spring, and electrical means disposed in the second named circuit operating on said latch to release it when the second named circuit is completed by the electrical engagement of the contact member with the stylus.

4. In a sound reproducing machine, a sound box supported for vertical movement, a rotatable record support over which the sound box is movable, means for raising the sound box from the record support comprising a vertically movable member having an arm operatively connected to the sound box, a spring urging the member to a raised position, a latch holding the member lowered, and means for automatically retracting the latch when the sound box is shifted over the record support to a predetermined position.

5. The combination with a sound reproducing machine including a vertically movable sound box and a motor, of spring actuated means for lifting the sound box, a latch holding the spring actuated means against its lifting movement, and means for releasing said latch after the motor has operated to a predetermined extent.

[Claims 6 to 11 not printed in the Gazette.]

1,223,042. VENTILATOR FOR BOOTS, SHOES, AND LIKE ARTICLES. EDWARD J. DEVLIN, Newark, N. J. Filed Jan. 24, 1917. Serial No. 144,140. (Cl. 36—3.)



1. In a shoe ventilator, a hub having an interior chamber with a plate at its outer end and having a passage extending from the central portion of the chamber to the interior of the shoe, and the outer plate having vent-holes extended into the chamber and arranged out of line with the said passage so as to obstruct the movement of any spray of water through the ventilator.

2. In a shoe ventilator, a hub having an interior chamber with a plate at its outer end and having a passage extending from the central portion of the chamber to the interior of the shoe, and the outer plate having vent-holes extended into the chamber at the upper and lower parts of the same respectively, whereby a tortuous channel for the air is provided and any spray entering the vent-hole is obstructed and water entering the chamber is drained from the lower part of the same.

3. In a shoe ventilator, the combination, with a hub having flanges upon its inner and outer ends and having a screw-threaded bore or chamber extending nearly through the hub, leaving a plate at one end of the bore with vent-holes in said plate arranged in a circle about the center of the chamber, of a screw-plug fitted to turn in the chamber and having a passage at the center, one end of the plug being adapted to close the vent-holes in the plate and the other end having means whereby the plug may be adjusted by a tool, the said construction providing a tortuous air-passage through the ventilator, as herein described.

4. In a shoe ventilator, the combination, with a hub, of a beveled integral flange upon its inner end and a smaller integral flange upon its outer end adapted to crowd through an aperture in the shoe-leather and retain the ventilator therein, the hub having a screw-threaded bore or chamber extending nearly through the hub, leaving an integral plate at the outer end of the chamber with vent-holes in said plate arranged in a circle about the center of the chamber, and a screw-plug fitted to turn in the chamber and having a passage at the center, one end of the plug being adapted to close the vent-holes in the plate and the other end having a notch for adjusting the plug by means of a screwdriver.

1,223,043. BROOM-RACK. HAROLD M. DRAPER, Richmond, Va. Filed May 16, 1914. Serial No. 839,113. (Cl. 211—17.)

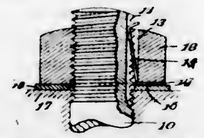


A broom rack comprising a support, a disk vertically adjustable thereon, the upper circumferential edge thereof being chamfered, a plurality of flexible loops consecutively formed from a continuous piece of cord by overlapping the cord at predetermined intervals, each of said loops projecting slightly beyond the circumferential edge of the disk, and means passing through said overlapping cord portions of said loops and into the disk to retain the loops in position, each of said flexible loops adapted to receive and suspend the broom handle frictionally against the said chamfered edge.

1,223,044. NUT-LOCK. DANIEL B. FABER, Uhrichsville, Ohio, assignor of one-half to Charles A. Greenlee, Uhrichsville, Ohio. Filed Sept. 6, 1916. Serial No. 118,761. (Cl. 151—11.)

1. A device of the class described comprising a bolt having an outwardly opening channel longitudinal of its threaded portion, a nut having an inwardly opening

recess directed transversely of its threads, and a resilient locking member including a body portion engaging in said nut recess and a projecting portion directed initially obliquely to the longitudinal axis of the body portion and adapted to extend between the nut and the member upon which it bears, whereby when the nut is rotated the body portion of the locking member will be forced into the bolt channel.



2. A device of the class described comprising a bolt having an outwardly opening channel longitudinally of its threaded portion, a nut having an inwardly opening recess directed transversely of its threads and a laterally directed recess in its inner face communicating with the transversely directed nut recess, and a resilient locking member including a body portion engaging in said transversely directed nut recess and a projecting portion directed initially obliquely to the longitudinal axis of the body portion, and adapted to extend between the nut and the member upon which it bears and partially within the lateral recess, whereby when the nut is rotated the body portion of the locking member will be forced into the bolt channel and the obliquely directed portion seated completely in the lateral nut recess.

3. A device of the class described comprising a bolt having an outwardly opening channel longitudinally of its threaded portion, one face of the channel extending radially of the face of the bolt and the bottom of the channel extending tangentially of the face of the bolt, a nut having an inwardly opening recess directed transversely of its threads, and a resilient locking member including a body portion engaging in said nut recess and a projecting portion directed initially obliquely to the longitudinal axis of the body portion and adapted to extend between the nut and the member upon which it bears, the body portion of the locking member being twisted so that when the nut is rotated pressure will be imparted to the projecting portion of the locking member to cause the body portion of the locking member to be forced into the bolt channel and engage flatly against the tangentially directed bottom of the bolt channel.

4. A nut locking device comprising a body of resilient material adapted to be seated in a nut with one portion directed initially obliquely to the longitudinal axis of the body and adapted to extend beneath the nut, whereby when the nut is moved toward the member upon which it bears the body of the locking device will be forced toward the interior of the nut.

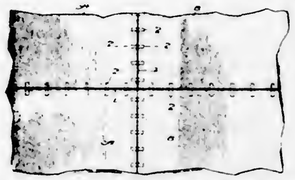
5. A nut locking device comprising a body of resilient material twisted longitudinally and adapted to be seated in a nut with one portion directed initially obliquely to the longitudinal axis of the body and adapted to extend beneath the nut, whereby when the nut is moved toward the member upon which it bears the body of the locking device will be forced toward the interior of the nut.

1,223,045. JOINT-FILLER FOR CONCRETE PAVING. LEWIS R. FERGUSON, Philadelphia, Pa. Filed July 29, 1916. Serial No. 112,093. (Cl. 94—1.)

1. In combination with paving sections, a pliable strip constituting an expansion joint filler intermediate the sections, and a plurality of dowels arranged at frequent intervals along the length of the joint and engaging the adjacent paving sections at the joint and embedded in the said sections during the forming thereof, substantially as described.

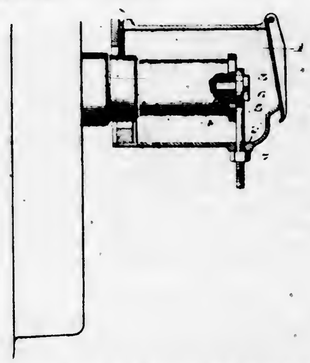
2. In combination with paving sections, a joint filler, and a series of dowels connected with the joint filler and projecting into both of the adjacent paving sections and embedded in the said sections during the forming thereof, substantially as described.

3. In combination with concrete paving sections, a joint filler interposed between the adjacent surfaces of said sections to compensate for the movements of said surfaces to or from each other, and means connected with said filler and projecting from opposite sides thereof and embedded in the adjacent sections to prevent said sections being projected out of alinement with each other.



4. In a pavement, the combination of concrete paving sections, a joint filler intermediate the sections and provided with a plurality of apertures therethrough substantially at the transverse center thereof, and a plurality of dowels projecting through said apertures and embedded within the contiguous portions of the adjacent sections, to maintain said sections, said joint filler, and said dowels in interlocked relation with each other.

1,223,046. MEANS FOR RAISING JOURNAL-BOXES. CHARLES B. HATHAWAY and CLAUD B. ELLIOTT, Hempstead, Tex. Filed June 8, 1916. Serial No. 102,460. (Cl. 29—84.)



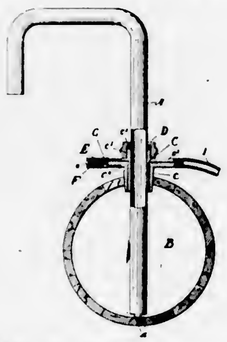
1. The combination of a journal box having an opening in its bottom wall, a journal disposed in said box, a hanger bolt suspended on the journal and depending through the opening in the bottom wall of the box and threaded, and a nut mounted on the threaded portion of the hanger bolt and disposed below the box; said nut being adapted to be turned through the medium of a wrench or the like.

2. The combination of a journal, a journal box containing the journal and having a vertical opening in its bottom wall, a hanger bolt disposed in front of the journal end and having a threaded portion depending through said opening, and a nut mounted on the threaded portion of the bolt, below the box; the said journal and the bolt being provided with coöperating appurtenances for suspending the bolt from the journal with the bolt in the relative position defined.

1,233,047. DEVICE FOR EMPTYING LIQUID-CONTAINERS. LOUIS ROBERT HEITZ and LOUIS THEO. HEITZ, Muscatine, Iowa. Filed Feb. 8, 1916. Serial No. 77,110. (Cl. 221—74.)

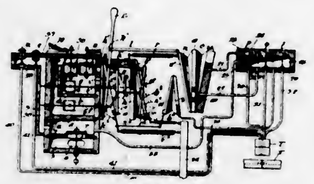
1. A device for emptying liquid containers comprising a tubular body adapted for insertion in a hole in the con-

tainer, said body having a smooth bore extending substantially its entire length and laterally projecting arms each having an air duct therethrough in communication with an air duct in said body extending to its lower end, one of said arms being adapted for the attachment thereto of a tube through which air may be forced into the container and the other arm provided with a safety valve controlling the escape of air through the air duct therein, together with a revoluble and longitudinally adjustable discharge pipe extending through said smooth bore and closely fitting therein whereby it is held in adjusted position and means on the upper end of said body for confining and compressing packing material around said pipe.



2. A device for emptying liquid containers comprising a tubular casting having integral lateral arms and a smooth bore extending substantially its entire length, a discharge pipe extending snugly through said bore into the container and revolubly and longitudinally adjustable therein, one arm being adapted for connection to a source of pressure, a tubular housing detachably connected to the other arm, and a spring-pressed valve inclosed in said housing, each arm having an air duct therethrough, the casting being also provided intermediate its inner and outer walls with a longitudinal duct opening at the end of the casting and arranged to connect with the air ducts in the arms, and means on the upper end of said body for confining and compressing packing material around said pipe.

1,223,048. PNEUMATICALLY-PLAYED MUSICAL INSTRUMENT. GUSTAV KARL HENNIG, Böhlitz-Ehrenberg, near Leipzig, Germany, assignor to the Firm of Ludwig Hupfeld Aktiengesellschaft, Böhlitz-Ehrenberg, near Leipzig, Germany. Filed Oct. 27, 1914. Serial No. 868,865. (Cl. 84—168.)



1. Tone control mechanism for pneumatically actuated musical instruments, comprising a main suction chamber, a plurality of tone controlling chambers in which exist different tensions and connected in parallel to said main suction chamber, a conduit arranged between the two chambers and means to admit the tension in one or the other tone control chambers to said conduit.

2. Tone control mechanism for pneumatically actuated musical instruments, comprising tone controlling chambers in which exist different tensions and connected to a conduit arranged between the chambers, means to connect the chambers singly and at will to said conduit to admit the tension in said chamber that has been connected to said conduit, and means for each chamber to temporarily increase the tension therein and thereby accentuate the tone being played under the tension existing in the chamber for the time being and connected to said conduit.

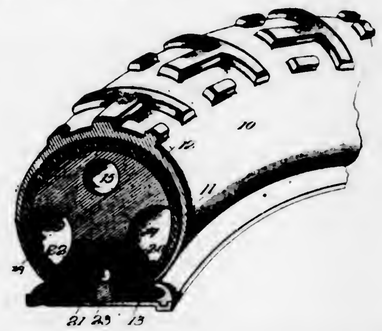
3. Tone controlling mechanism for pneumatically actuated musical instruments, comprising a main suction chamber, tone controlling chambers connected thereto in parallel and in which exist different tensions, a valve in each chamber controlling the connection with the main chamber, note sheet controlled mechanism for actuating said valves, bellows for said tone controlling chambers maintained under different tensions, note sheet controlled means to increase the tensions of said bellows, a conduit arranged between the parallel connected chambers and means to singly connect said chambers and conduit.

4. Tone control mechanism for pneumatically operated musical instruments, comprising a main tension chamber, tone controlling chambers connected thereto, a valve controlling the connection of each chamber with the main chamber, a spring expanded bellows communicating with each tone controlling chamber, mechanism to simultaneously actuate the valve and bellows pertaining to a tone controlling chamber, a conduit arranged between the tone controlling chambers and means to singly connect said conduit and a tone controlling chamber.

5. Tone control mechanism for pneumatically operated musical instruments, comprising a main tension chamber, tone controlling chambers connected thereto, a valve controlling the connection of each chamber with the main chamber, a spring expanded bellows communicating with each tone controlling chamber, mechanism to simultaneously oppositely actuate the valve and bellows pertaining to a tone controlling chamber, means to retard the collapsing of said bellows, a conduit arranged between the tone controlling chambers and means to singly connect said conduit and tone controlling chamber.

[Claims 6 to 11 not printed in the Gazette.]

1,223,049. AUTOMOBILE-TIRE. OLIE J. HICKS, Centerburg, Ohio. Filed Sept. 12, 1916. Serial No. 119,712. (Cl. 152—5.)



1. In a tire construction, the combination with an outer casing having rim engaging beads, of a resilient core adapted to seat within the casing, the core having a base portion adapted to seat between the beads and engage against a wheel rim, said base portion being of hard rubber with an intermediate annular strip of soft rubber.

2. In a tire construction, the combination with an outer casing having rim engaging beads, of a resilient core adapted to seat within the casing, the core having a base portion adapted to seat between the beads and engage against a wheel rim, said base portion being of hard rubber with an intermediate annular strip of soft rubber, the strip of soft rubber tapering in width from its inner to its outer edge and the core at the outer edge of the strip being formed with an annular chamber.

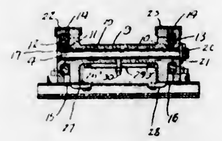
3. In a tire contruction, the combination with an outer casing having rim engaging beads, of a core shaped to fit within the casing and formed adjacent its outer peripheral portion with an annular chamber and at either side with annular grooves which, with the casing, provide additional annular chambers, that portion of the core lying outside of the intermediate portion of the latter chambers being of soft rubber, that between the inner portions of the latter chambers being of medium hard rubber, and that inside of the last named portion being of hard rubber.

4. In a tire construction, the combination with an outer casing having rim engaging beads, of a core shaped to fit within the casing and formed adjacent its outer peripheral portion with an annular chamber and it either side with annular grooves which, with the casing, provide additional annular chambers, that portion of the core lying outside of the intermediate portion of the latter chambers being of soft rubber, that between the inner portions of the latter chambers being of medium hard rubber, and that inside of the last named portion being of hard rubber, said latter hard rubber portion having wings extending upwardly along the sides of the medium hard rubber portion.

5. In a tire construction, the combination with an outer casing having rim engaging beads, of a resilient core adapted to fit within the casing and having the base portion seating between the beads and adapted to engage against a wheel rim, the core adjacent its outer portion being formed with an annular chamber and in its inner side portions with annular grooves which, with the casing, provide annular chambers, and the core further being provided between the side chambers and immediately above the base portion with an additional annular chamber.

[Claims 6 to 11 not printed in the Gazette.]

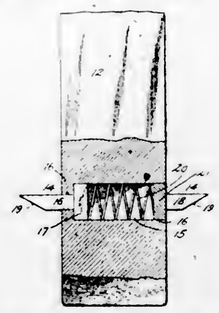
1,223,050. TREAD FOR TRACTORS. FRANK HOFFKNECHT, Merced, Cal. Filed Apr. 12, 1916. Serial No. 90,638. (Cl. 21—150.)



1. A tractor tread comprising a plurality of links each having two side members with an integral tubular connecting member at one end of the side members, one link being adapted to fit over another link, a pin pivotally connecting the two links, oppositely projecting collars at each side of two connected links, said links being formed with a groove around each collar, a packing in said groove, two wear plates, one let into the pin and the other into the tubular member, and bearing plates connected to the links.

2. A tractor tread comprising a plurality of links each having two side members with an integral tubular member connecting them at one end, one link being adapted to fit over another link, a pin pivotally connecting each pair of links, oppositely projecting collars on each side of the two connecting links, said links being formed with a groove around each collar, a packing in each groove, two wear plates one let into the pin and the other into the tubular member, an oil receptacle and means to deliver oil therefrom to said pin, lugs carried by the links for support of said oil receptacle, removable ground bearing plates connecting with the links and removable wear plates secured to the links on the opposite side therefrom to the ground plates.

1,223,051. SPIKE. WILLIAM H. HORTON, Ferndale, N. Y. Filed Sept. 7, 1916. Serial No. 118,867. (Cl. 85—23.)



1. A spike having a transverse cavity therein, a locking member slidable longitudinally in said cavity crosswise of the spike and adapted to be projected outwardly through an opening in one side of said spike, and resilient means for projecting the locking member.

2. A spike having a transverse cavity therein closed at one end, a locking member slidable in said cavity transversely of the spike and adapted to be projected outwardly through an opening in the closed end of the cavity, resilient means within the cavity for projecting the locking member, and a closure for the open end of the cavity.

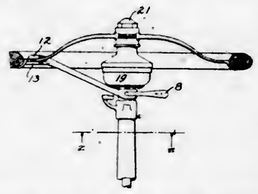
3. A spike having a chamber extending from one side laterally into the body of the spike near its point and a small opening from said chamber through the opposite side of the spike, and a locking means slidable within said chamber and adapted to be projected through said opening beyond said opposite side of the spike.

4. A spike having a chamber formed within the body thereof near its point and extending from one side transversely therein and having a small opening through the opposite side of the spike, a locking member comprising a head and a stem adapted to slide in said chamber and through said opening, and resilient means within said chamber forcing said locking member outwardly beyond said opposite side of the spike.

5. A spike having a transverse chamber formed within the body of the same near the point thereof and extending from one side nearly through the spike, a small opening from the bottom of said chamber through the opposite side of the spike, a locking member slidable in said chamber and adapted to be projected through said opening beyond the plane of the spike, said member comprising a stem and an enlarged head, and resilient means within said chamber to force said locking means outwardly, and a plug for closing the open end of the chamber and retaining the resilient means therein.

[Claims 6 and 7 not printed in the Gazette.]

1,223,052. AUTOMOBILE-LOCK. JOHN R. JACKSON, San Francisco, Cal., assignor to Albert G. Burns, Alameda, Cal. Filed Apr. 25, 1916. Serial No. 93,396. (Cl. 70—90.)



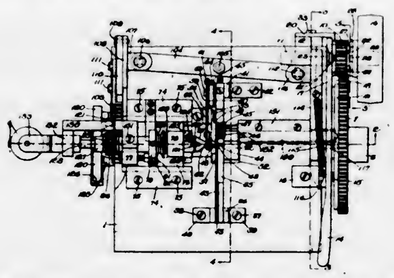
1. In combination with the steering wheel and control levers of an automobile, a bar having a forked end adapted to be mounted upon and to block the movement of the

control levers and a grooved end adapted to be locked upon the said steering wheel.

2. In combination with the steering post, steering wheel and control levers of an automobile, a forked bar adapted to span the steering post, the ends of said forks being grooved to engage and be supported by the said levers, said bar being adapted at its other end to be placed in locked engagement with the steering wheel.

3. In combination with the steering wheel, steering post and control levers of an automobile, a bar having a forked end adapted to block the movement of the control levers and a grooved end adapted to be locked upon said steering wheel, said bar being formed to contact with a portion of said steering post to prevent an upward movement of its outer end past the plane of said wheel.

1,223,053. MACHINE TO INSERT NEEDLE-LATCH RIVETS. JOHN J. JENKINS, Manchester, N. H. Filed Nov. 19, 1915. Serial No. 62,440. (Cl. 163—3.)



1. A machine of the class described, comprising automatic rivet threading mechanism, including means to hold an article with a perforation therein, adapted to receive a rivet, rivet holding means, mechanism to rotate said rivet holding means and automatic mechanism to feed forwardly said rivet holder during its rotation, at predetermined times, in combination with means to retract said holder while leaving the rivet so fed threaded in said recess.

2. A rivet threading machine of the class described, comprising means to hold an article having a plurality of perforations in alinement to receive a rivet, means to hold a rivet to be threaded into said perforations, automatic means to impart a relative feeding action of said rivet and article in combination with means to simultaneously impart rotation to said rivet relatively to the article during the feeding action, and mechanism to cut off said rivet after threading.

3. A rivet threading machine of the class described, comprising means to hold an article with a perforation to receive a rivet, means to hold a rivet to be threaded into said perforation, and automatic means to partially point the end of the rivet prior to threading the same into said recess.

4. A rivet threading machine of the class described, having means to hold a needle and latch to be riveted, means to hold a quantity of rivet material, automatic mechanism to feed forwardly, a predetermined length of said material to thread the latch and needle therewith, means to rotate the rivet material during such feeding action, a cutter operable at time intervals to separate a rivet length from the material during the rotation of the latter and a pair of clamping jaws adapted to remove a bur after a rivet has been cut from the rivet material and to partially point the said material preparatory to the succeeding threading action.

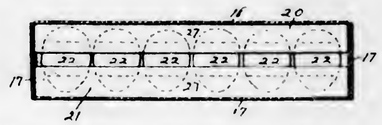
5. A rivet threading machine of the class described, having means to hold an article with a recess to receive a rivet, means to hold a coil of wire from which rivets are severed, means to predetermine the length of a rivet to be cut from said wire, means to feed said wire forwardly to thread the end thereof into said recess, means to cut the threaded portion from the wire, means to remove the bur from the end of the wire coil where cut, and means to point said wire where cut, in combination with mechanism to rotate said wire holder at a high rate of speed.

1,223,054. PIPE-COUPLING CLAMP. ALEX KERTÉSZ, Newark, N. J., assignor to R. Kertesz, Newark, N. J. Filed July 9, 1914. Serial No. 850,026. Renewed Feb. 12, 1917. Serial No. 148,257. (Cl. 137—28.)



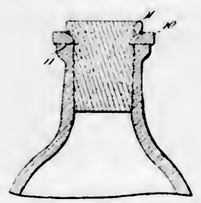
A clamp comprising hingedly connected jaws, ears extending from one of said jaws, a lip extending from the second jaw and rigid therewith and extending between the ears of the first mentioned jaw, a latch pin rotatably carried by said ears and provided with an offset positioned between the ears for pressing against the outside face of the lip to clamp an object between said jaws, one end portion of said latch pin being bent to provide a lever arm.

1,223,055. EGG-SHIPPING CASE. FRANK KOHT, Des Moines, Iowa. Filed June 27, 1914. Serial No. 847,616. Renewed Mar. 10, 1917. Serial No. 153,821. (Cl. 217—27.)



In combination with a box, horizontal members removably mounted therein and spaced vertically, said members having rows of alined openings formed therein, said openings having, radiating therefrom, slits to produce fingers for yieldingly engaging the ends of the eggs when engaged between the members, the adjacent slits of each opening being arranged in staggered relation, said members having oppositely extending side and end wings for engaging the top and bottom of the box.

1,223,056. BOTTLE-STOPPER EXTRACTOR. JESSE P. L'AMIE, Duluth, Minn. Filed Apr. 27, 1916. Serial No. 93,967. (Cl. 215—51.)



1. A device of the character described including a body provided with an opening and having a longitudinally tapered stopper engaging member formed on the inner face thereof to project within the periphery of said opening with the smaller end of said member presented toward the upper side of the body to gradually bite into a stopper inserted through the body for connecting the stopper thereto.

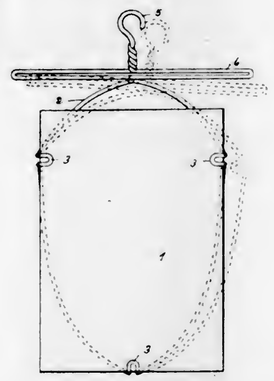
2. A device of the character described including a body provided with an opening and having a stopper engaging member formed on the inner face thereof to project within the periphery of said opening, the said member being provided with a cutting edge curving longitudinally and outwardly toward the upper side of the body to gradually bite into a stopper inserted through the body for connecting the stopper thereto.

3. A device of the character described including a body having a flared opening formed therethrough and provided with a stopper engaging member projecting inwardly from the wall of the said opening beyond the periphery thereof, the said member being longitudinally tapered with its smaller end presented toward the upper side of the body and being substantially V-shaped in cross-section with the apex thereof presented outwardly to provide a cutting edge curving from the thicker extremity of the member adjacent the smaller end of said opening outwardly over the flared wall of said opening toward the smaller end of the said member with the said cutting edge adapted to gradually bite into a stopper inserted through the said opening for connecting the body thereto.

4. A device of the character described including a body provided with a longitudinally tapered stopper receiving opening therethrough and having a longitudinally tapered stopper engaging member projecting inwardly from the wall of said opening beyond the periphery thereof with the larger end of said member arranged adjacent the smaller end of said opening with the said member gradually decreasing in thickness toward the larger end of the opening.

5. A device of the character described including a body having a stopper receiving opening formed therethrough with the opening provided with a smooth inner face and having a stopper engaging member projecting inwardly from the wall thereof beyond the periphery of said opening.

1,223,057. PLATE DEVELOPING HOLDER. LEONARD F. LIBBY, Portland, Me. Filed Mar. 21, 1916. Serial No. 85,714. (Cl. 95—100.)

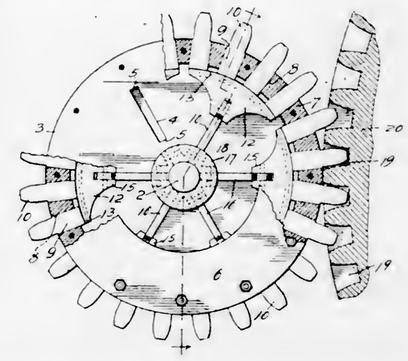


1. A developing plate holder comprising a spring body provided at the bottom and sides with hooks adapted to engage the bottom and side edges of the plate and means for suspending the holder in the bath.

2. A developing plate holder comprising a spring body provided at the bottom and sides with hooks formed integral therewith and adapted to engage the bottom and side edges of the plate and means for suspending the plate holder in the bath.

3. A developing plate holder comprising a spring body provided at the bottom and sides with hooks offset out of the plane of the body adapted to engage the bottom and side edges of the plate, whereby the hooks are spaced apart from the plate at all points when in position, and means for supporting the holder in the bath.

1,223,058. GEAR. HUBERT A. LONG, Berkeley, Cal. Filed Apr. 29, 1916. Serial No. 94,423. (Cl. 74—41.)



1. A disk having openings in the periphery thereof, blocks slidably mounted within the openings and having teeth at their outer ends, said blocks being arranged in groups, members slidable within the disk and engaging the blocks of the respective groups, and means for simultaneously moving said members toward or from each other to retract or project the teeth.

2. A disk having openings in the periphery thereof, blocks slidably mounted within the openings and having teeth at their outer ends, said blocks being arranged in groups, segments slidably mounted within the disk and interlocked with the blocks of the respective groups, the inner ends of the blocks being shiftable toward or from each other during their movement with the segments, and means for simultaneously moving the segments inwardly or outwardly to retract or project the teeth.

3. A gear including a disk, a ring secured to one face thereof and having a spacing flange formed with guide openings, there being guide grooves within the inner face of the disk and radially disposed, blocks slidably mounted within the openings and having teeth at their outer ends, segments slidably mounted between the ring and disk and having guide ribs mounted in the grooves, interfitting portions upon the segments and blocks, said blocks being arranged in groups and one segment being provided for each group of blocks, the inner ends of the blocks being shiftable toward or from each other during the sliding movement of the segments, a shifting sleeve, and link connections between said sleeve and the respective segments.

1,223,059. METHOD OF MANUFACTURING SEAT-POSTS. EDWARD JULIUS LONN, Laporte, Ind., assignor to Great Western Manufacturing Co., Laporte, Ind., a Corporation of Illinois. Original application filed July 26, 1916, Serial No. 111,440. Divided and this application filed Sept. 19, 1916. Serial No. 121,019. (Cl. 29—157.)

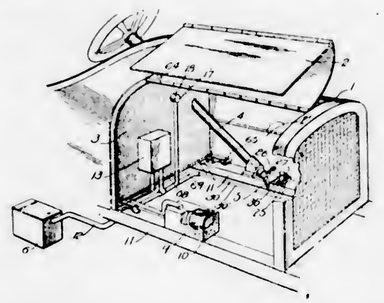
1. The method of producing a seat post which consists in bending a blank, having recesses in opposite edges, to tubular condition and bending the blank intermediate its ends at said recesses to a position in which one end-portion extends at an angle to the other end-portion thereof and uniting the opposed edges of the blank.

2. The method of producing a seat post which consists in bending a blank to partially tubular condition with one end thereof extending at an angle to the other end and with opposed edges thereof separated, inserting a reinforcing member through the space between said separated edges, into the interior of the partially formed tube to a position in which it lies within the angle formed by the

ends of the partially formed tube, and thereupon further bending the blank to cause the said opposed edges to substantially meet and confine said member in the tube and uniting said opposed edges.



1,223,060. SIGNALING DEVICE. CHARLIE O. LOUTHAN, Kansas City, Kans. Filed May 16, 1916. Serial No. 97,801. (Cl. 177—314.)

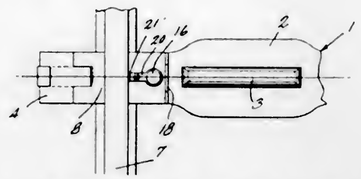


1. The combination with an automobile having a hood, hood doors, and a throttle mechanism, of a signaling system comprising a battery, a signaling mechanism having electrical connection with the said battery, means connected with said throttle mechanism and means on said hood doors for closing or breaking said electrical connection through the said system and a lock for breaking or closing a connection with said signaling mechanism.

2. The combination with an automobile having a hood, hood doors, and a throttle mechanism, of a signaling system comprising a battery, an electrically operated signaling mechanism having electrical connection with said battery, a pair of contact plates adjacent each of said hood doors interposed in said electrical connection, a post on each of said doors for holding said plates disengaged when said doors are closed, a pair of contact plates interposed in said electrical connection adjacent said throttle mechanism, means connected with said throttle mechanism for breaking or closing a circuit through the last named contact plates and a lock interposed in said connection between said signal and battery having contact members thereon and means in said lock for holding said contact members engaged for the purpose set forth.

3. The combination with an automobile having a hood, hood doors, and a throttle mechanism, of a signaling system comprising a battery, an electrically operated signaling mechanism having electrical connection with said battery, a pair of contact plates adjacent each of said hood doors interposed in said electrical connection, a post on each of said doors for holding said plates disengaged when said doors are closed, a pair of contact plates interposed in said electrical connection adjacent said throttle mechanism, means connected with said throttle mechanism for breaking or closing a circuit through the last named contact plate, and a relay operable by the battery for closing a circuit through said signaling mechanism and battery.

1,223,061. METAL TIE. WILLIAM J. MCGIBB, Pinsonfork, Ky., assignor of one-half to John J. Dunn, Pinsonfork, Ky. Filed Jan. 17, 1917. Serial No. 142,910. (Cl. 238—4.)

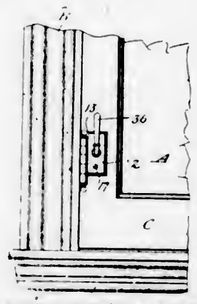


1. In a device of the class described, a tie; a rail thereon; a movable retainer engaging the rail and having an opening; means in the opening and engaging the tie for guiding the movement of the retainer toward and away from the rail; and a swinging latch carried by said means and engaging the retainer to hold the retainer against retraction with respect to the rail.

2. In a device of the class described, a tie; a rail thereon; a movable retainer engaging the rail and having an opening; means in the opening and engaging the tie for guiding the movement of the retainer toward and away from the rail; and a swinging latch carried by said means, the latch entering the opening and coacting with the retainer at one end of the opening to hold the retainer against retraction.

3. In a device of the class described, a tie; a rail thereon; a movable retainer engaging the rail and having an opening; means in the opening and engaging the tie for guiding the movement of the retainer toward and away from the rail; and a swinging latch mounted at one end on the retainer, the other end of the latch entering the opening and coacting with the retainer at said end of the opening, to prevent a retraction of the retainer with respect to the rail.

1,223,062. CASEMENT-LIFT AND HINGE. ULYSSES GRANT MCQUEEN, New York, N. Y. Filed Apr. 1, 1915. Serial No. 18,608. (Cl. 16—106.)



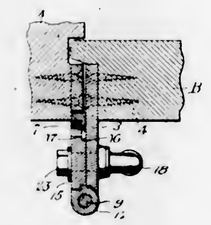
1. A casement lift comprising a housing mounted in a mortise in the inner side of the vertical stile of the casement and including inner and outer plates, the outer plate having a continuous vertical slot, a hinge having one leaf secured to the frame and a second leaf extended between said plates and free to slide in a vertical direction and provided with spaced arms, a lug extending between said arms and freely movable in said slot, and means coacting with the arms to slide the casement vertically.

2. A casement lift comprising a housing mortised in the casement, and having a vertical slot in one of its walls,

a hinge having one leaf secured to the frame and having its other leaf extending into the housing and adapted to permit the latter to slide thereon, a pair of arms carried by said other leaf, a continuous lug connecting the arms with each other and freely passing into the slot, the length of the slot exceeding the length of the lug, a pair of knuckles formed on said other leaf, the frame leaf having an unequal number of knuckles thereon, a pin passing through the first and second named knuckles and lifting mechanism moving the housing on said other leaf, said leaf having free contact with the housing and coöperating with said slot and lug to form a guide for the housing.

3. A casement lift and hinge including parallel leaves, one of said leaves being adapted for connection with the frame, two plates adapted to be secured to the casement, one of said plates being mounted in a mortise formed in the inner face of the vertical stile of the casement, the other plate being extended over the inner face of the casement to conceal the mortise and being coextensive in length with the next adjacent leaf of the hinge and having a continuous edge portion arranged in sliding contact therewith, to form a brace in the full length thereof, means on said next adjacent leaf interposed between said plates, and lifting mechanism permanently carried by said plates and co-acting with said means.

1,223,063. HINGE OR CASEMENT-LIFT. ULYSSES GRANT MCQUEEN, New York, N. Y. Filed May 22, 1915. Serial No. 29,892. (Cl. 16—106.)

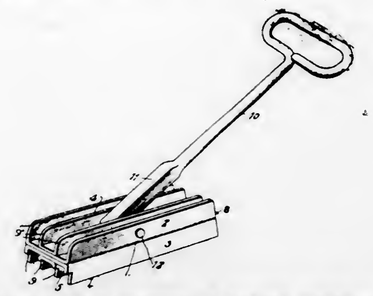


1. A combined hinge and casement lift, comprising, a leaf adapted to be fixed to the frame, a leaf having sliding connection with the first leaf and adapted to be secured to the casement, the first leaf having a recess therein, a member mounted in said recess and provided with a cam-slot, a pin passing through both leaves and through said member, said member coming flush with one surface of the recessed leaf when the hinge is closed and a cam journaled in the second leaf and having coöperative connection in the cam-slot of said member and provided with an actuating handle disposed at one side of said second leaf and journaled therein.

2. A combined hinge and casement lift, comprising, two relatively swinging leaves one of which being adapted to move vertically, a pin connecting the leaves, one of said leaves having a recess therein, a member movable with the other leaf and fitting in said recess when the hinge is closed, said member having a flange formed thereon at one side and provided with a horizontal elongated slot, a cam movable in said slot and disposed at one side of said flange and an operating handle connected with the cam and journaled in said other leaf.

3. A combined hinge and casement lift, comprising, two relatively swinging leaves, one of which is free to move in a vertical direction upon the other leaf, said other leaf having a recess, a member free to swing with the first leaf and always disposed directly at one side thereof and adapted to be extended into the recess of the said other leaf when the hinge is closed, and raising and lowering mechanism supported by the other leaf and co-acting with said member, the recess receiving the member therein when the hinge is closed.

1,223,064. CYLINDER-SCRAPER. RANDALL L. MEADER, Portland, Me. Filed Apr. 15, 1916. Serial No. 91,384. (Cl. 83—64.)



1. In a cleaning implement, a scraping member comprising a plurality of reversely arranged U-shaped members having alined cutting edges, the smaller channels being longitudinally arranged within the larger channels, one end edge of said channel members being inclined providing a cutting edge, a handle pivotally connected to the shorter side of the scraping member by means of a rod extending through the U-shaped channels, and the said handle being adapted to be seated in the smaller channel to facilitate the insertion of the cleaning implement.

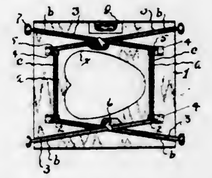
2. In a cleaning implement, a scraping member comprising a plurality of reversely arranged U-shaped members having alined cutting edges, the smaller channels being longitudinally arranged within the larger channels, the end edges of one end of the larger channel members being inclined, having the end edges of one larger channel supplemental to the adjacent and oppositely arranged larger channel member, and a handle pivotally connected to the said cleaning implement for the purpose described.

3. In a cleaning implement, a cutting element formed of a plurality of various sized reversely arranged channels having cutting edges, the smaller channels being longitudinally arranged within the larger channels, and a handle pivotally engaged therewith.

4. In a cleaning implement, a scraping element comprising a plurality of reversely arranged nested channels having alined cutting edges, the end portions thereof being beveled for cutting edges, and the opposite end portions thereof being recessed to form angular cutting edges.

5. In a cleaning implement, a scraping member, comprising a plurality of reversely arranged U-shaped members having alined cutting edges, the smaller channels being longitudinally arranged within the larger channels, the end edges of one end of the channel members being inclined having the end edge of the channel member of one side supplemental to the adjacent and oppositely arranged channel member providing a cutting edge, and the other end of the longer side being recessed to form a right-angular cutting section for the purpose described.

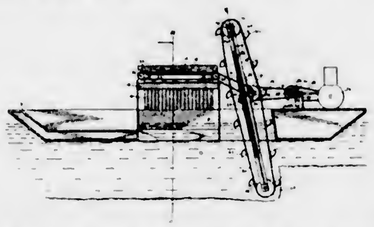
1,223,065. PORTABLE TOILET-SEAT. MARTIN MEYER, Omaha, Nebr. Filed Jan. 6, 1915. Serial No. 805. (Cl. 155—32.)



A portable toilet device, including an apertured seat having oppositely arranged approximately U-shaped grooves in its underside, correspondingly shaped support-

ing members having bearings in said approximately U-shaped grooves, said supporting members having divergent leg-forming portions, and holders secured to said seat and adapted to provide for pivotally connecting said supporting members to said seat, said holders having guards extending laterally therefrom to engage the divergent leg-forming portions of said supports and limit their movement as the latter are disposed in vertical position.

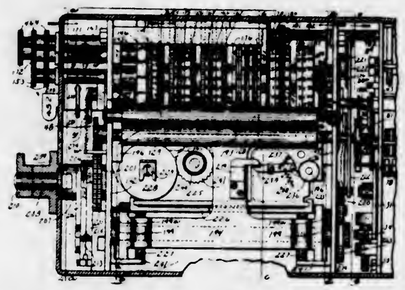
1,223,066. DREDGING APPARATUS. STRANGE E. NEILL and JAY B. HAMILTON, Kansas City, Kans. Filed Apr. 8, 1916. Serial No. 89,798. (Cl. 43—11.)



1. A dredging apparatus comprising a boat having a well or waste passage through the bottom thereof, an inclined screen mounted over said passage, a receiving platform mounted over said screen with one edge of the platform extending diagonally with reference to the screen, a distributing conveyer operating over said platform, and a continuously driven dredging elevator mounted on the boat with its upper end in position to deliver the dredged material on to said platform.

2. A dredging apparatus comprising a boat having a well or waste passage, an inclined screen mounted over said passage with the side portions of the screen inclined in opposite directions for delivering the screened material to the deck of the boat on both sides of said passage, a receiving platform mounted over said screen with the side edges of the platform converging and extending diagonally with reference to the screen, a distributing conveyer operating over said platform, and a continuously driven dredging elevator mounted on the boat with its upper end in position to deliver the dredged material on to said platform.

1,223,067. TAXIMETER. JOHN F. OHMER and ELMER HENRY BRIDENBAUGH, Dayton, Ohio, assignors to Ohmer Fare Register Company, Rochester, N. Y. Filed Nov. 11, 1908 Serial No. 462,100. (Cl. 235—30.)



1. A fare-printing device, means for actuating the same, impression mechanism coöperating with said fare-printing device, separately operated means for actuating said impression mechanism, and setting mechanism controlling the operative relation between said fare-printing device and its actuating mechanism, and also controlling said impression mechanism actuating devices.

2. A fare-printing device, means for actuating the same, impression mechanism coöperating with said fare-printing device, separately operated means for actuating said impression mechanism, setting mechanism controlling the operative relation between said fare-printing device and its actuating mechanism actuating devices, and also controlling said impression mechanism, and means controlling said setting mechanism.

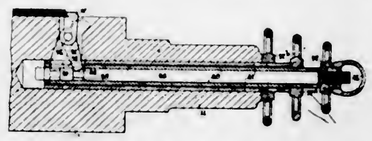
3. A fare-printing device, means for actuating the same, impression mechanism coöperating with said fare-printing device, separately operated means for actuating said impression mechanism, setting mechanism controlling the operative relation between said fare-printing device and its actuating mechanism and also controlling said impression mechanism actuating devices, and locking means controlling said setting mechanism.

4. A fare-printing device, means for actuating the same, impression mechanism coöperating with said fare-printing device, separately operated means for actuating said impression mechanism, setting mechanism controlling the operative relation between the fare-printing device and its actuating mechanism and also controlling said impression mechanism actuating devices, and a printing member controlling said setting mechanism and in operative relation with said impression mechanism.

5. A visible indicating and printing device, means for actuating the same, setting means controlling the operative relation between said visible indicating and printing device, and its actuating means, a printing member controlling said setting means, means for taking a print from said printing device and said printing member, said separately operated means being controlled by the setting means.

[Claims 6 to 67 not printed in the Gazette.]

1,223,068. PLATE-CLAMPING DEVICE FOR PRINTING-MACHINES. HERBERT PEARCE, THOMAS ROBERT GILLETT PARKER, and ROBERT HENRY CARVERHILL, Broadheath, England, assignors to The Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed Oct. 31, 1913. Serial No. 798,472. (Cl. 101—378.)



1. In combination with a cylinder having slots, and a longitudinal bore extending through the cylinder journal; of plate clamps in the slots, and a plurality of actuating members in said bore and respectively and independently operating different clamps.

2. In combination with a cylinder having slots and a longitudinal bore extending through the cylinder journal; of plate clamps in said slots, and a plurality of independently adjustable concentrically arranged actuating members in said bore whereby said clamps may be independently adjusted.

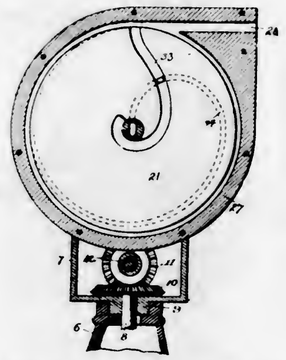
3. In combination with a cylinder having radial slots and a longitudinal bore extending axially through the cylinder journal; of plate clamping jaws pivoted in said slots, and a plurality of independently adjustable concentrically arranged actuating members extending within said bore whereby the said dogs may be independently adjusted.

4. In combination with a cylinder having radial slots and a longitudinal bore extending through the cylinder journal; of plate clamps in the slots, a plurality of independently adjustable clamp actuating members in said bore, and adjusting devices for said members at their outer ends.

5. In combination with a cylinder having radial slots, and a longitudinal bore extending through the cylinder journal; of plate clamps pivoted in the slots, a plurality of independently adjustable actuating members in said bore respectively engaging different clamps, and actuating devices for said members at the outer end of the journal.

[Claims 6 to 20 not printed in the Gazette.]

1,223,069. CENTRIFUGAL GUN. EDGAR E. PORTER, Columbia, S. C. Filed Aug. 30, 1916. Serial No. 117,708. (Cl. 89—10.)



1. In a machine gun of the centrifugal type the combination of a pair of juxtaposed coaxial disks provided with complementary bullet receiving grooves on their proximate faces, the groove on one disk being of approximately volute form and the groove on the other disk being so formed as to cross the groove on the first disk at a progressively changing point in its length as the disks are differentially rotated; and means for imparting differential rotation to the disks.

2. In a machine gun of the centrifugal type the combination of a pair of juxtaposed coaxial disks provided with complementary bullet receiving grooves on their proximate faces, the groove on one disk being of approximately volute form and the groove on the other disk being so formed as to cross the groove on the first disk at approximately a right angle at a progressively changing point in its length as the disks are differentially rotated; and means for imparting differential rotation to the disks.

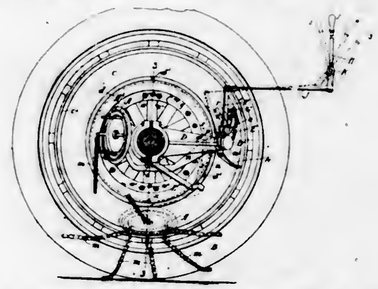
3. In a machine gun of the centrifugal type the combination of a pair of juxtaposed coaxial disks provided with complementary bullet receiving grooves on their proximate faces, the groove on one disk being of approximately volute form, and the groove of the other disk having a curvature which gradually decreases and then reverses from the center toward the periphery, whereby the two grooves always cross each other substantially at a right angle; and means for rotating said disks at differential speeds.

4. In a machine gun of the centrifugal type the combination of a pair of juxtaposed coaxial disks provided with complementary bullet receiving grooves on their proximate faces, the groove on one disk being of approximately volute form and the groove on the other disk being so formed as to cross the groove on the first disk at a progressively changing point in its length as the disks are differentially rotated; means for rotating said disks at differential speeds having a simple ratio; and an adjustable barrel for receiving and directing the bullets discharged from said grooves at the peripheries of said disks.

5. In a machine gun of the centrifugal type the combination of a pair of juxtaposed coaxial disks provided with complementary bullet receiving grooves on their proximate faces, the groove on one disk being of approximately volute form and the groove on the other disk being so formed as to cross the groove on the first disk at approximately a right angle at a progressively changing point in its length as the disks are differentially rotated; means for rotating said disks at differential speeds having a simple ratio; and an adjustable barrel for receiving and directing the bullets discharged from said grooves at the peripheries of said disks.

[Claims 6 to 9 not printed in the Gazette.]

1,223,070. ANTISKIDDING DEVICE FOR VEHICLES. WILLIAM H. PUTNAM, Brooklyn, N. Y. Filed Sept. 18, 1916. Serial No. 120,618. (Cl. 21—90.)



1. In a device of the character described, the combination with a vehicle wheel having a ring on the side thereof which is circumferentially movable relatively to the wheel, of a roller mounted to have the edge thereof in frictional bearing on said ring, and provided with a plurality of flexible members adapted under centrifugal force to be thrown more or less nearly radially and to engage under the tread of the wheel.

2. In a device of the character described, the combination with a vehicle wheel having a ring on the side thereof which is circumferentially movable relatively to the wheel, and means for imparting a frictional engagement between the wheel and ring, of a roller mounted to have the edge thereof in frictional bearing on said ring, and provided with a plurality of flexible members adapted under centrifugal force to be thrown more or less nearly radially and to engage under the tread of the wheel.

3. In a device of the character described, the combination with a vehicle wheel having a ring on the side thereof which is normally circumferentially movable relatively to the wheel, of a roller mounted to have the edge thereof in frictional bearing on said ring, and provided with a plurality of flexible members adapted under centrifugal force to be thrown more or less nearly radially and to engage under the tread of the wheel, and means for temporarily confining said ring non-revolubly relatively to the wheel.

4. In a device of the character described, in combination, a wheel having a ring section fixed on the side thereof and provided with a laterally protruding portion having a beveled or conical periphery, another ring section arranged on the side of the wheel and loose relatively to the wheel and the first named ring section and provided with a portion adapted for frictional engagement with the beveled portion of the said named ring section and means for retaining the second ring section relatively to the first ring section, and a roller mounted to have the edge thereof in frictional bearing on said second ring section and provided with a plurality of flexible members adapted to be centrifugally thrown and to engage under the tread of the wheel.

5. In a device of the character described, in combination, a wheel having a ring section fixed on the side thereof and provided with a laterally protruding portion having a beveled periphery, another ring section arranged on the side of the wheel and loose relatively to the wheel and the first named ring section and provided with an inclined flange adapted for frictional engagement with the beveled portion of the first named ring section, a retaining ring, secured to the edge of said flange, and overlapping the edge of said beveled portion of the first ring section, and a roller mounted to have the edge thereof in

frictional bearing on the said second ring section and provided with a plurality of flexible members adapted to be centrifugally thrown and to engage under the tread of the wheel.

[Claims 6 to 34 not printed in the Gazette.]

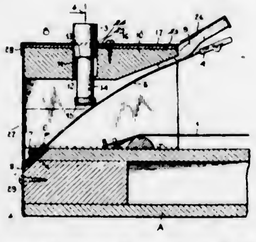
1,223,071. CRANK-SHAFT. JOSEPH E. HOLVECK, Pittsburgh, Pa., assignor to The Aldrich Pump Company, Allentown, Pa. Filed Feb. 16, 1915. Serial No. 8,489. (Cl. 74—38.)



1. A crank shaft, the successive crank bearings of which are at an angle of 216° measuring in the direction of rotation.

2. A multiple crank-shaft comprising a series of alined main bearings and successive crank bearings which are at an angle of 216 degrees measured in the direction of rotation, as shown and described, whereby when two cranks are on the working stroke, at least three main bearings carry the load.

1,223,072. KEY-ZITHER. LAWRENCE JOST, North Bergen, N. J., assignor to Oscar Schmidt, Inc., Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 9, 1916. Serial No. 113,875. (Cl. 84—116.)



1. The combination of a zither body, strings thereon, hammers for striking the strings, a bar in which the hammers are mounted and cast and which is fastened directly to the top of the body, and a keyboard mounted on top of the body and having keys engageable with the hammers, the front edge of the keyboard being substantially flush with the front of the body.

2. A zither comprising a body, a bar extending across the same at one end and having lugs bearing against the top surface of the body, fasteners passing through the bar and securing the same to the body, hammers anchored in the bar, and strings on the body in coöperative relation with the hammers.

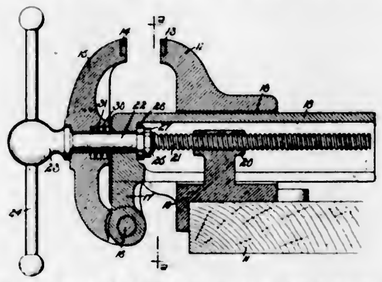
3. A zither of the class described comprising a body, strings mounted thereon, hammers for striking the strings, means fastening the hammers on the top surface of the body, a keyboard disposed over the hammers, end plates fastened to the top of the body and supporting the keyboard, and keys mounted in the keyboard and engageable with the hammers.

4. A zither of the class described comprising a body, a group of strings on the body, hammers fastened to the body and arranged to strike the strings, upright plates fastened to the top of the body at opposite sides of the group of strings, an apertured board fastened to the said plates, keys slidably mounted in the board and arranged to engage the hammers, a top plate overlying the board and through which the keys extend, the rear edge of the top plate being formed into a rest against which the hammers strike, and a cushion underlying the forward portion of the top plate.

5. A zither of the class described comprising a body, a group of melody strings thereon, a group of accompaniment strings on the body, a keyboard extending over the melody strings, a front plate fastened to the body and extending the full width thereof and having a portion coextensive with the keyboard and another portion bent into a hood disposed over the front ends of the accompaniment strings.

[Claims 6 to 11 not printed in the Gazette.]

1,223,073. VISE. CHARLES G. KAELIN, Buffalo, N. Y. Filed July 5, 1916. Serial No. 107,532. (Cl. 81—21.)



1. In a vise, a fixed jaw, a movable jaw adapted to coact with the said fixed jaw, a slide having a depending portion at its forward end and on which portion the said movable jaw is pivoted to swing toward or from the fixed jaw, and a common means for advancing and retracting the said slide and the movable jaw held thereon.

2. In a vise, a fixed jaw, a movable jaw adapted to coact with the said fixed jaw, a slide on which the said movable jaw is pivoted to swing toward and from the fixed jaw, a spring interposed between the said movable jaw and slide, a fixed nut, and a screw rod screwing in the said nut and engaging the said slide and the movable jaw for serving as a common actuating means for both.

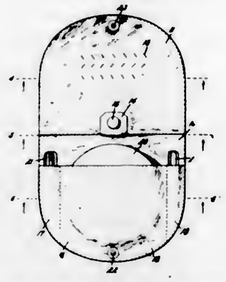
3. In a vise, a fixed jaw, a movable jaw adapted to coact with the said fixed jaw, a slide having a depending portion at its forward end and on which portion said movable jaw is pivoted to swing toward or from the fixed jaw, a spring interposed between the said movable jaw and the slide, a fixed nut, and a screw rod screwing in the said nut and having a non-threaded portion turnable in the said slide and in the said movable jaw, the said non-threaded portion having collars, of which one bears on the back of the depending portion of the slide and the other bears against the front of the said pivoted jaw.

4. In a vise, the combination of a fixed jaw, a slide, a movable jaw pivoted on the slide, a spring interposed between the said movable jaw and the slide, and a common manually controlled means engaging the said slide and the movable jaw to advance or retract both of them.

5. In a vise, the combination of a fixed jaw, a slide movable relatively thereto, a spring-pressed jaw pivotally mounted on the slide adapted to coact with the said fixed jaw, and a common manually controlled means for actuating both the slide and the said pivoted jaw relatively to the fixed jaw.

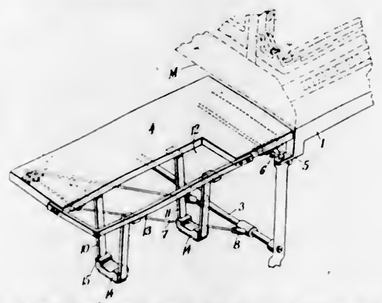
1,223,074. TOILET NOVELTY. BELLE R. KANTROWITZ, New York, N. Y. Filed Apr. 1, 1916. Serial No. 88,263. (Cl. 40—28.)

1. An article of the class described, comprising a foldable body adapted to be opened and closed, said body having a powder receptacle provided with a surface adapted for the application of powder to the skin and having a plurality of apertures adapted for the emission of powder, said surface being available for use as a powder puff when the article is open, said body having a pocket adapted to receive an object tending to distend said pocket and overlying said apertures when the article is closed, whereby said distended pocket forms a seal for said apertures, said pocket having a filling opening, and means for closing said opening, the article being provided with fastening means adapted to secure it in a folded and closed condition.



2. An article of the class described, comprising an elongated member adapted to be folded in the middle, an apertured facing member secured to the body near the margin thereof and across the piece substantially in the middle whereat said body folds, said facing member being suitable for the application of powder to the skin, and with the body forming a pocket, a flap at the transverse seam of the facing member for closing the pocket opening, and a second facing member secured to the body at the margin and also in seams running parallel to the longitudinal edges of the body, whereby a plurality of pockets is formed between the body and said second facing member, one of said pockets adapted to overlie the apertures in the first-mentioned facing member when the body is folded, the portion of the second facing forming said pocket being adapted to be distended when an object is inserted into said pocket and consequently forming a seal for the apertures in said first-mentioned facing member.

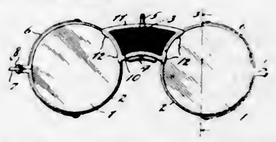
1,223,075. STAND OR SUPPORT FOR LOOSE-LEAF BOOKS, &c. WELLINGTON H. KIDDER, Roosevelt, N. Y., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Nov. 10, 1914. Serial No. 871,229. (Cl. 45—57.)



1. A table provided with means for holding a loose-leaf binder open at the point where a leaf has been withdrawn, and for retaining against accidental disarrangement the unlocked leaves of the binder, comprising an oblong pocket for supporting on edge the back part of the binder inserted in the pocket, said pocket having a saddle arranged to hold the back of the binder about centrally in the pocket, and the sides of the pocket being so disposed relatively to said saddle that the binder inserted in the pocket is retained thereby nearly in closed condition, said sides being slightly separated to permit the upstanding covers and leaves to tilt outwardly only sufficiently to retain the leaves against either cover where they may be set, and thereby hold the binder open at the point where the leaf is withdrawn.

2. A table provided with means for holding a loose-leaf binder open at the point where a leaf has been withdrawn, and for retaining against accidental disarrangement the unlocked leaves of the binder, comprising an oblong pocket for supporting on edge the back part of the binder inserted in the pocket, said pocket having a saddle arranged to hold the back of the binder about centrally in the pocket, and the sides of the pocket being so disposed relatively to said saddle that the binder inserted in the pocket is retained thereby nearly in closed condition, said sides being slightly separated to permit the upstanding covers and leaves to tilt outwardly only sufficiently to retain the leaves against either cover where they may be set, and thereby hold the binder open at the point where the leaf is withdrawn, the portion of said table which is provided with said pocket being hinged to swing down and bring said pocket beneath the remaining portion of the table.

1,223,076. GOGGLES. FREDERICK W. KING, New York, N. Y., assignor to Julius King Optical Co., a Corporation of New York. Filed Aug. 10, 1916. Serial No. 114,164. (Cl. 2—149.)

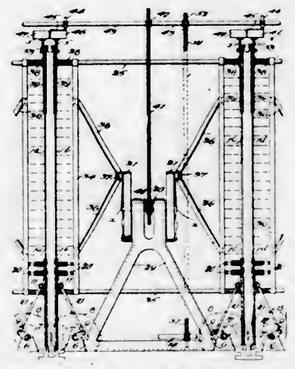


1. In a spectacle construction, in combination with a pair of lenses and eye-wires forming rims therefor, a shield member extending between the lenses and detachably connected at its ends to the eye-wires.

2. In a spectacle construction, in combination with a pair of lenses and eye-wires forming rims therefor, a shield member extending between the lenses and including an outstanding lug or finger at each end thereof, the lugs or fingers being clamped between the respective lenses and eye-wires.

3. In a spectacle construction, in combination with a pair of lenses and eye-wires forming rims therefor, a shield member extending between the lenses and composed of woven wire gauze and a sheet metal binding therefor, the binding including at each end one or more integral outstanding lugs or fingers clamped between the respective lenses and eye-wires.

1,223,077. DECORTICATING, CARDING, AND COMBING MACHINES. JEAN F. LAFONT, New Orleans, LA. Filed Jan. 14, 1914. Serial No. 812,043. (Cl. 13—6.)



1. In a decorticating device, a pair of opposed plates, means for reciprocating said opposed plates synchronously, slidable combs carried by each of said plates, the combs of one plate being opposed to the combs on the other plate.

and means for causing the simultaneous approach and recession of said opposed combs with respect to one another during the reciprocation of the plates.

2. In a decorticating device, a pair of opposed plates provided with a series of horizontal rows of openings, a series of combs, each of said combs having a shank arranged to enter one of the openings in said plates, means for reciprocating the opposed plates simultaneously, and means engaging the shanks of the combs simultaneously for forcing the combs toward one another during the reciprocation of the plates.

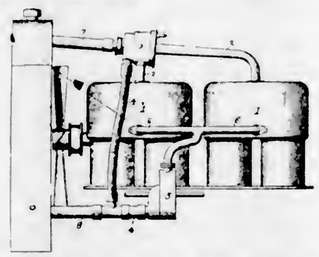
3. In a decorticating device, a vertically disposed slidable plate, said plate being provided with a series of openings, means for reciprocating the plate, a series of combs, each of said combs having a shank arranged to enter one of said openings, a slidable member arranged to simultaneously engage the shanks of the combs for moving them with respect to the plate, and means for moving said slidable member toward and away from the shanks of the combs.

4. In a decorticating device, a vertically disposed slidable plate, said plate being provided with a series of openings, means for reciprocating the plate, a series of combs, each of said combs having a shank arranged to enter one of said openings, a slidable member arranged to simultaneously engage the shanks of the combs for moving them with respect to the plate, means for moving said slidable member toward and away from the shanks of the combs, said last named means comprising arms carried by said slidable member on one side thereof, a cam roller carried by said arms, a cam wheel in engagement with said cam roller, means for operating said cam wheel, and springs disposed between said slidable member and said plate.

5. In a decorticating device, a vertically slidable plate provided with a plurality of openings, a plurality of combs each having a shank arranged to enter one of the openings in said plate, a roller carried by each of said shanks, an individual spring arranged to engage each shank for normally holding its comb near the plate, a slidable grid disposed parallel with said plate, guide members for said grid, the bars of said grid being arranged to register with the rollers on the shanks of the comb, a cam wheel, means for operating the latter, connections between said cam wheel and said grid for bringing the grid into engagement with the rollers on the shanks, thereby forcing the combs away from the plates, and spring means disposed on the opposite side of the grid from the cam and adapted to force the grid toward the cam, thereby retracting the combs.

[Claim 6 not printed in the Gazette.]

1,223,078. TEMPERATURE-REGULATOR FOR COMBUSTION-ENGINE CYLINDERS. FERDINAND ERNEST LAMMERT, Chicago, Ill. Filed Feb. 5, 1915. Serial No. 6,376. (Cl. 123—170.)



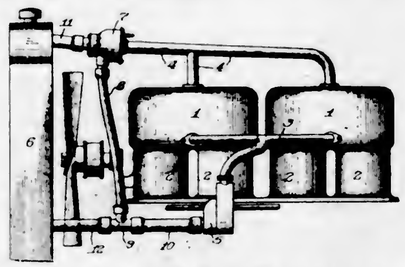
1. The combination with an engine cylinder and its cooling jacket, of a conduit leading outward from the jacket and returning thereto, means for forcing cooling liquid to circulate through said jacket and conduit, a thermostat located in the hot outgoing liquid, a radiator, a by-pass from said conduit through said radiator, and means operated by the thermostat to keep the by-pass closed when the temperature at the thermostat is below a predetermined point and to vary admission to the by-pass as the temperature varies above that point.

2. The combination with the cooling jacket of an engine cylinder, of a conduit leading outward from the upper, hotter portion of the jacket and returning to the cooler, lower portion thereof, means for compelling circulation in said jacket and conduit, a radiator, a by-pass from said conduit through said radiator, a thermostat located in that part of the conduit leading from the jacket to the by-pass, and a valve controlling the flow of liquid in said by-pass and actuated by the thermostat.

3. In apparatus of the class described, the combination with an engine having cooling fluid compartments around the cylinders, of circulating pipes from the upper to the lower portions of the compartments, a by-pass from the upper portion of the circulating pipes to the lower section of the same, a radiator interposed in the by-pass, a valve located in the upper portion of the pipes and adapted to regulate the circulation through the radiator, a thermostat located in the upper, hottest part of the circulation and connected to and adapted to control the said valve in accordance with variations of temperature in the said hottest part of the circulation, and means for adjusting the thermostat for different conditions.

4. A temperature regulator for the cooling system of a combustion engine comprising cooling fluid compartments around the cylinders, a casing, for holding a thermostat, pipes running directly from the upper, hotter portions of the compartments to the casing and a conduit running from the casing to the cooler, lower portion of the compartments, a radiator connected by a pipe to the casing and by another pipe to said conduit, a valve governing the flow in the pipe leading to the radiator, and a thermostat located in said casing and arranged to move said valve in accordance with variations of temperature in said casing.

1,223,079. TEMPERATURE-REGULATOR FOR INTERNAL-COMBUSTION ENGINES. FERDINAND ERNEST LAMMERT, Chicago, Ill. Filed May 1, 1915. Serial No. 25,208. (Cl. 123—178.)

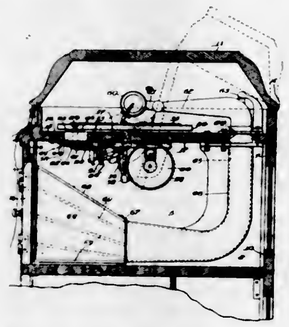


1. The combination with the cooling jacket of an engine, a radiator, a pipe connecting the hottest portion of the jacket with the radiator, a cooled-water tube leading from the radiator back to the jacket, and a conduit connecting said pipe and tube between the jacket and radiator, a valve between said conduit and the radiator controlling the passage to the latter, a valve controlling the flow in said conduit, a spring normally holding the first valve closed and the second valve open, and a thermostatic device arranged to act in opposition to the spring, opening the first valve and closing the second.

2. The combination with the cooling jacket of an engine of a regulating chamber, a pipe leading from the upper, hottest portion of the jacket to said chamber, a radiator, a normally closed tube leading from said chamber to the radiator, a return pipe from the radiator to the jacket, a normally open conduit leading from said chamber to the return pipe, and means within the chamber for automatically opening and closing said tube and conduit.

3. The combination with the cooling jacket of an engine, of a chamber, outside the jacket, having a receiving compartment, and discharge compartments, a conduit leading from the jacket to the receiving compartment, a radiator having an outlet to the jacket, a conduit leading from one discharge compartment to the radiator, a conduit leading from the other discharge compartment back to the radiator, valves controlling the passage of water from the receiving compartment to the discharge compartments, respectively, and automatic means for opening and closing said valves.

1,223,080. TALKING-MACHINE. WILLIAM D. LA RUE, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed May 15, 1914. Serial No. 838,638. (Cl. 274—2.)

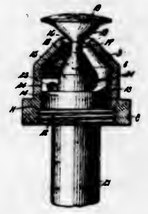


1. In a talking machine, the combination of a casing, a partition, a motor board, said partition and said motor board dividing said casing into an upper and a lower compartment, a motor mounted on said motor board, an amplifier in said casing below said motor, and a swinging arm arranged to swing over said motor board, said motor board being pivoted at intermediate points of its opposite edges to said partition on a transverse axis located to one side of the center of gravity of said motor board and the parts carried thereby to turn to a semi-inverted position facing a side of said cabinet, said motor and motor board in turning upon its pivots, swinging clear of said amplifier and swinging clear of said swinging arm when said arm is in one position.

2. The combination of a casing, a substantially horizontal partition, a motor board, said partition and said motor board dividing said casing into an upper and a lower compartment, said motor board being pivoted to turn with respect to said casing, said pivoting means comprising a pair of alined studs secured respectively adjacent opposite inner side edges of said partition at corresponding intermediate points thereof, a pair of supporting members secured respectively adjacent the opposite side edges of said motor board and each provided with a slot extending parallel to said motor board and open toward the rear edge of said motor board, said studs being respectively in pivotal engagement with the closed ends of said supports when said motor board is substantially horizontal and while said motor board is being swung on said studs as pivots, said slots providing means for permitting the removal or withdrawal of said motor board from said partition and of said studs from engagement with said members.

1,223,081. NOZZLE. ADOLPH W. LISSAUER, New York, N. Y. Filed Apr. 1, 1916. Serial No. 88,274. (Cl. 137—86.)

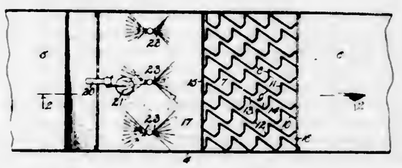
1. The herein described nozzle, consisting of a housing having an internally threaded base and a cylindrical portion above the base and terminating in a dome provided with a flaring opening, a distributer having an exteriorly threaded base and two cylindrical portions of different diameters, the smaller one of which has a tapering end provided with a threaded socket, the distributer having on the exterior of its cylindrical portions oppositely inclined surfaces and provided with a bore in two diameters opening at the base, and with openings leading from the smaller diameter of the bore out through the distributer below the high ends of the inclined surfaces thereof, the larger diameter of the bore being internally threaded, and a tapering deflector having a stem extending through the opening of the housing and provided with a threaded end screwing into the socket of the distributer.



2. The herein described nozzle, comprising a housing having a cylindrical portion terminating in a dome provided with a flaring opening, a distributer secured in the housing and having a tapering upper end provided with a threaded axial socket, the distributer having an axial bore in two diameters, and open at the base of the distributer, the distributer being provided with oppositely inclined surfaces on its exterior and with openings leading from the smaller portion of the bore out below the high end of the inclined surfaces, and a tapering deflector having a stem extending through the opening of the housing and provided with a threaded end engaging the socket of the distributer.

3. The nozzle herein described comprising a housing having a dome shaped top provided with an opening, a distributer secured in the housing and having an inclined upper end, an axial bore open at the base of the distributer, oppositely inclined surface on its exterior, and openings leading from the bore out through the distributer below the high end of the inclined surfaces, and a deflector having a stem extending through the opening of the housing and adjustably secured to the tapering end of the distributer.

1,223,082. COMPRESSIBLE-FLUID WASHER. ADOLPH W. LISSAUER, New York, N. Y. Filed Aug. 17, 1916. Serial No. 115,545. (Cl. 183—26.)



1. In a compressible-fluid washer, a separator having a plurality of continuous unobstructed vertical passages enlarged at intervals to form chambers for varying the speed of flow through the separator.

2. In a compressible-fluid washer, a separator having a plurality of unobstructed vertical continuous passages, each passage having a plurality of spaced enlargements forming chambers, each of which presents a wall to the facing portion of the passage.

3. In a compressible-fluid washer, a separator having a plurality of unobstructed continuous passages, each passage having a plurality of spaced enlargements forming

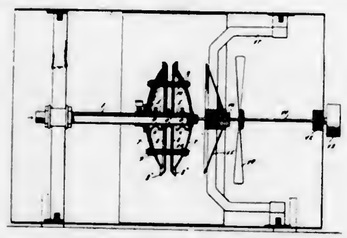
chambers, each of which chambers presents an angularly-shaped wall to the portion of the passage forming an inlet to the chamber.

4. In a compressible-fluid washer, a separator comprising a plurality of shaped plates disposed vertically which in cross section present an irregular zigzag, said plates being spaced in parallel relation to form passages each having a plurality of spaced enlargements, said enlargements being so formed that the portions of the passages therebetween are oblique to the direction of flow.

5. In a compressible-fluid washer, a separator comprising a plurality of shaped plates presenting in cross section an irregular zigzag, said plates being spaced in parallel relation so that sinuous unobstructed passages are formed therebetween through which the flow is broken up, each of said passages having a plurality of spaced enlargements forming chambers which present an angular wall to the facing portions of the passage.

[Claims 6 to 10 not printed in the Gazette.]

1,223,083. SPRAYING OR ATOMIZING DEVICE. JOHN LYNN, New York, N. Y. Filed Jan. 11, 1915. Serial No. 1,545. (Cl. 137—80.)



1. A liquid atomizer comprising two disks placed in juxtaposition so as to provide a marginal opening between them, said disks being of different diameters and the larger having an outwardly projecting flange, a stationary perforated liquid supply pipe extending into the space between the disks so as to deliver the liquid into the space between the disks, and means for rotating said disks.

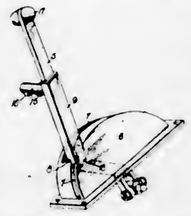
2. A liquid atomizer comprising a substantially flat disk having an outwardly projecting flange, a concave disk placed in juxtaposition to said flat disk with its edge within the plane of the edge of said flange, so as to provide a marginal opening between the disks, a stationary perforated liquid supply pipe extending into the space between the disks so as to deliver the liquid into the space between the disks, and means for rotating said disks.

3. A liquid atomizer comprising a hollow body consisting of two disks placed in juxtaposition so as to provide a marginal slot or opening between them, a stationary liquid supply pipe extending into the space between the disks, means for rotating said disks, and means supported by said supply pipe for deflecting the water from said pipe directly against each disk.

4. A liquid atomizer comprising a concave disk and a substantially flat disk, said disks being placed in juxtaposition so as to provide a marginal slot or opening between them, a perforated supply pipe about which said disks are supported, deflectors below the openings in said pipe to direct the liquid against the sides of the disks, and means for rotating said disks.

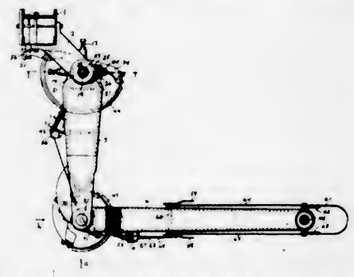
1,223,084. CONTROLLING-LEVER LOCK. EDWARD LOUIS MCMANUS, Jr., and CHARLES AUGUST SCHULTZ, Jr., New York, N. Y. Filed Dec. 13, 1916. Serial No. 136,708. (Cl. 74—39.)

1. In combination, a controlling lever, a housing therefor, said housing having slots wherein the lever is free to move longitudinally, said housing having also a notch joining the slots wherein the lever is free to move laterally, a slide on the lever adapted to engage the notch whereby the lever is prevented from moving longitudinally in the slots, a tooth on the slide for engaging the housing whereby the lever is prevented from moving laterally in the notch, a tubular projection on said slide, a spring-actuated plunger in said tubular projection, said lever having an opening which is adapted to register with the plunger when said slide engages the notch, and a socket connected to the plunger and housing of the projection whereby said plunger may be withdrawn from the opening in the lever, substantially as and for the purpose set forth.



2. In combination, a controlling lever, a housing therefor presenting slots wherein the lever is free to move longitudinally, said housing having a notch or cut-out joining the slots wherein the lever is adapted to move laterally and whereby it may be moved from one slot to the other, a slide on the lever adapted to engage the notch with its lower end under the action of gravity whereby the lever is prevented from moving longitudinally in the slots, a tooth depending from the lower end of the slide for engaging the housing so as to prevent a lateral movement of the lever in the notch or cut-out, a lateral, tubular projection on said slide, a spring-actuated plunger in said tubular projection, said lever having an opening with which the plunger is adapted to register when said slide engages the notch, a pin carried by the plunger, said tubular projection having slots for said pin, and a socket housing the projection and connected to the pin, substantially as and for the purpose set forth.

1,223,085. BOX-CAR-LOADING MACHINE. GEORGE MANIERRE, Milwaukee, Wis. Filed Oct. 21, 1914. Serial No. 867,793. (Cl. 248—1.)



1. In a box car loading machine the combination with a vertically disposed shaft of an arm extending therefrom and supported thereby and revoluble thereabout, a second arm hinged to said first mentioned arm and supported thereby, means for supporting said shaft, and means to adjust the shaft into a substantially vertical position.

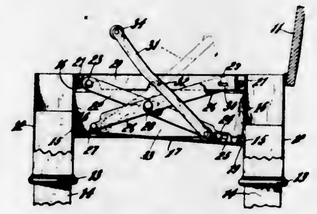
2. In a box car loading machine the combination with a vertically disposed shaft of an arm hinged thereto and supported thereby, a second arm hinged to said first mentioned arm and means for simultaneously locking said arms in different positions of adjustment with respect to each other and with respect to said shaft.

3. In a box car loading machine the combination with a vertically disposed shaft of an arm hinged thereto and supported thereby, a second arm hinged to said first mentioned arm and supported thereby, toothed segments and bolts for preventing movements of said arms with respect to each other and with respect to said shaft, and means for simultaneously releasing said bolts from said segments.

4. The combination with a vertically disposed shaft, an arm hinged thereto, a second arm hinged to the first mentioned arm, and a fixed, toothed segment, of a bolt secured to said first mentioned arm and adapted to engage said segment, a bell crank pivoted to said first mentioned arm and connected with said bolt and having an arm extending into the axis of the hinge connection between the first mentioned arm and the second mentioned arm, a bell crank pivoted to the second mentioned arm and having an arm engaging with the first mentioned bell crank in the axis of the hinge connection between the said two arms.

5. The combination with a vertically movable shaft and an arm hinged thereto, of a toothed segment secured to the shaft and provided with an outwardly extending bar provided with a ball member at its end, an elongated, vertical, fixed guide within which said ball member is received, and a bolt secured to said arm and adapted to engage with or to be disengaged from said toothed segment.

1,223,086. PIANO-BENCH. CHRISTIAN H. MARTIN, Akron, Ohio, assignor to John R. Gammeter, Akron, Ohio. Filed Mar. 27, 1914. Serial No. 827,557. (Cl. 155—22.)



1. A piano bench, comprising a body portion, sleeves at the corners thereof, leg members slidably mounted in the sleeves, a connecting member connecting the leg members at each end of the bench, and means for raising and lowering the body portion with respect to the connecting member and to a greater extent at one end of the connecting member than at the other end thereof.

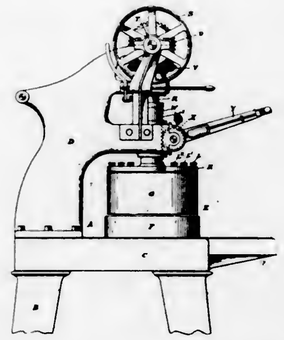
2. A piano bench, comprising a body portion, sleeves at the corners thereof, leg members slidably mounted in the sleeves, a connecting member pivotally connected with the leg members at each end of the bench, toggle links connecting the connecting member with the body portion, and means for spreading the toggle links.

3. A piano bench, comprising a body portion, sleeves at the corners thereof, leg members slidably mounted in the sleeves, a connecting member pivotally connected with the leg members at each end of the bench, toggle links connecting the connecting member with the body portion, and means for spreading the toggle links, said toggle links being crossed and pivoted together at the point of crossing nearer to one end of the toggle links than to the other end thereof whereby the angularity of the body portion with respect to the floor is varied with the change in height thereof.

1,223,087. BALL-FINISHING MACHINE. FRANK MAYHEW, Philadelphia, Pa., assignor to Atlas Ball Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 9, 1916. Serial No. 77,138. (Cl. 51—4.)

1. A machine of the class described comprising in combination opposed heads between which a relative rotation takes place, each head having a plurality of concentric ball-receiving grooves, one of said heads having concentric pressing rings or members which are free to float or move relative to each other while in operative engagement with balls that are between said heads and in the grooves thereof.

2. A machine of the class described comprising in combination opposing heads each having a plurality of concentric ball-receiving grooves or raceways, and means for imparting relative rotation between said opposing heads, one of said heads comprising a plurality of pressing rings which can move relative to each other when they are in engagement with the balls being operated upon.



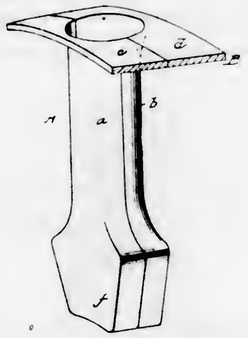
3. A machine of the class described comprising in combination a frame, a supporting head mounted upon said frame so that it can slide longitudinally thereupon, said head having upon its upper surface a plurality of concentric ball-receiving grooves or raceways, a vertically extending spindle carried in said frame, means for rotating said spindle, and a plurality of concentric upper rings or pressing members each of which has on its under surface a groove for receiving therein the balls which are in one of the grooves in said supporting ring, there being provided means between the upper rings or members and the shaft whereby said upper rings will be driven from said shaft, the construction being such that the upper rings are free to adjust themselves relative to each other and relative to the supporting head.

4. A machine of the class described comprising in combination a frame having a horizontally extending table, a supporting ring or member slidably mounted upon said table, said supporting ring or member having upon its upper surface a plurality of concentric circular grooves, a plurality of pressing rings located above said supporting ring, each pressing ring having on its underside a circular grooved portion which is opposed to one of the grooved portions in the supporting ring, a shaft mounted in said machine, and means whereby said shaft will rotate said pressing rings which are free to move relative to each other so as to accommodate themselves to do the work when they are in operating engagement therewith, the machine also being provided with means whereby said pressing rings can be lifted away from the supporting ring in order to permit the latter ring to be slid horizontally on the table from operative position.

5. A machine of the class described, comprising in combination a frame, a ball supporting member carried on said frame, said ball supporting member having on its upper surface concentric ball-receiving grooves, a plurality of pressing members arranged above the supporting member each pressing member having on its underside a ball-receiving groove that is opposed to a ball-receiving groove in the supporting member, a shaft carried in said frame, means for rotating said shaft, a yoke on the lower end of said shaft and means between said yoke and said pressing members whereby they will be rotated relative to the supporting member, the construction of said means being such that the pressing members are free to float or move relative to each other when they are in operative engagement with the balls being operated upon.

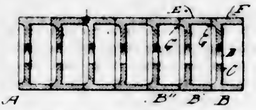
[Claims 6 to 15 not printed in the Gazette.]

1,223,088. METAL VEHICLE-WHEEL. THOMAS E. MURRAY, New York, N. Y. Filed June 28, 1916. Serial No. 106,315. (Cl. 21—69.)



A vehicle wheel of sheet metal, comprising tubular spokes, each spoke being formed in two longitudinally divided half sections, and the rim being formed in two circumferential half sections, each rim section having a uniformly smooth inner periphery with recesses in the opposing edges of said rim sections, the said spoke sections being electrically butt welded to said rim sections and registering with said recesses, and the said rim sections and the sections of each spoke being electrically welded together at their meeting edges.

1,223,089. SHEET-METAL ROD OR SHAFT. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 14, 1916. Serial No. 136,856. (Cl. 64—29.)

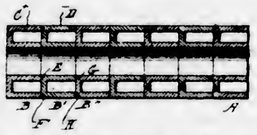


1. A rod or shaft of uniform diameter formed of a plurality of rings of struck up sheet metal and of like diameter placed successively edge to edge and united at said edges by electrically welded surfaces.

2. A rod or shaft formed of a plurality of rings of struck up sheet metal having transverse partitions, the said rings being placed successively edge to edge and united at said edges by electrically welded surfaces.

3. A rod or shaft as in claim 1, in combination with a ring at the end of said shaft having its outer edge of a diameter greater than that of its inner edge.

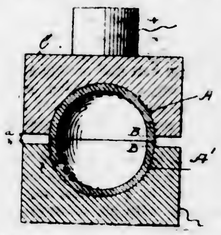
1,223,090. SHEET-METAL ROD OR SHAFT. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 14, 1916. Serial No. 136,857. (Cl. 64—29.)



1. A rod or shaft of uniform diameter formed of a plurality of channeled rings of struck up sheet metal and of like diameter placed successively and united by electrically welded surfaces.

2. A rod or shaft as in claim 1, in combination with a ring at the end of said shaft having its outer wall of a diameter greater than that of its inner wall.

1,223,091. METHOD OF MAKING HOLLOW METAL OBJECTS BY ELECTRICAL WELDING. THOMAS E. MURRAY and HARRY R. WOODROW, New York, N. Y.; said Woodrow assignor to said Murray. Filed Jan. 24, 1917. Serial No. 144,113. (Cl. 219—10.)



1. Electrically welding bodies seated in and free to tilt or nutate in matrix electrodes.

2. The method of shaping an object of sheet metal, which consists in, first, pressing, striking up or stamping said object into approximately a selected concavo, convex, dish or cup-shaped form; second, seating said object in an electrode having a matrix of the selected concavo, convex, dish or cup-shaped form, with the welding edge of said object protruding beyond said electrode; third, placing said edge in welding contact with a second object, and, fourth, pressing said objects together and establishing through said objects a welding current sufficient to heat said electrode, and thereby to soften the portion of said object seated in said matrix and to cause said softened portion to conform to the shape of said matrix.

3. The method of producing hollow metal objects substantially as herein set forth, which consists in, first, producing by stamping, striking up or pressing from sheet metal two half sections of the hollow object; second, placing said half sections in matrices formed in the faces of metal electrodes with the edges of said sections in registry; third, pressing said sections together, and at the same time establishing the welding current through said electrodes and sections, whereby said sections by the combined action of heat and pressure are made accurately to conform in shape to said matrices and are electrically welded at said edges.

4. The method of welding a concavo, convex body to a second body, which consists in seating said body in a matrix formed in the surface of a welding electrode, the said matrix corresponding in configuration to said body, in which matrix said body is free to tilt or nutate, applying pressure to force said bodies together, and thereby causing said body to adjust itself in said matrix to bring the welding edge of said body everywhere into contact with said second body, and establishing welding current through the joint between said bodies.

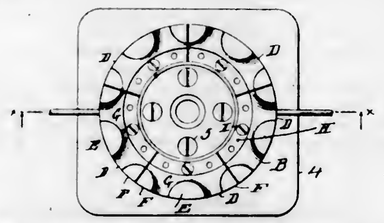
5. The method of welding two concavo, convex bodies, which consists in seating said bodies in matrices formed in the surfaces of the welding electrodes, the said matrices corresponding in configuration to said bodies, in which matrices said bodies are free to tilt or nutate, applying pressure to force said bodies together, and thereby causing said bodies to adjust themselves in said matrices to bring the welding joint at their contacting edges into a plane transverse to the direction of pressure, and establishing welding current to said contacting edges.

[Claim 6 not printed in the Gazette.]

1,223,092. ELECTRIC WELDING APPARATUS. THOMAS E. MURRAY, New York, N. Y. Filed Jan. 29, 1917. Serial No. 145,112. (Cl. 219—4.)

1. A welding electrode formed in sections secured together and having faces in the same plane, there being conjointly in said faces a matrix for receiving and positioning one of the objects to be welded.

2. A welding electrode formed in sections detachably secured together, there being conjointly in said sections a matrix for receiving and positioning one of the objects to be welded.



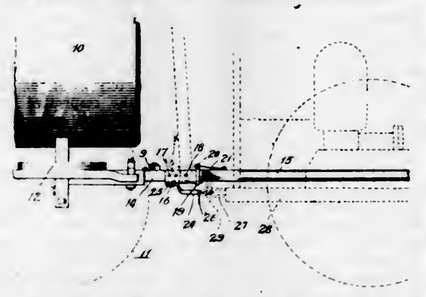
3. A welding electrode, comprising a support of conducting material, and secured thereon a plurality of separately removable plates; there being conjointly in said plates a matrix for receiving and positioning one of the objects to be welded.

4. A welding electrode, comprising a support of conducting material, having a recess in its face, and, seated in said recess, a plurality of separately removable plates; there being conjointly in said plates a matrix for receiving and positioning one of the objects to be welded.

5. A welding electrode, comprising a cylindrical support of conducting material, having an annular recess in its face, and, seated in said recess, a plurality of plates; there being conjointly in said plates a matrix for receiving and positioning one of the objects to be welded.

[Claims 6 to 8 not printed in the Gazette.]

1,223,093. DRAFT DEVICE. HERMAN NELSON, Chicago, Ill., assignor to John A. McGarry & Company, Chicago, Ill., a Copartnership consisting of John A. McGarry and Henry Fowler. Filed June 9, 1915. Serial No. 33,147. (Cl. 21—137.)

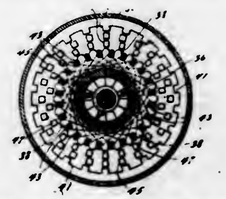


1. In a draft-appliance for a vehicle, the combination of a tongue comprising a plurality of members, one of which has its rear end fixed to the vehicle and the other of which has its rear end pivotally connected to the front of the fixed member to permit the front member to be swung into a substantially upright position, and a draft bar whereby the fixed member may be coupled to a tractor while the pivoted member is in upright position.

2. In a draft-device for a vehicle, the combination of a tongue comprising a plurality of members, one of which has its rear end fixed to a vehicle, a connection between the members comprising a bar secured to the fixed member and to which the other member is pivoted so it may be swung into a substantially upright position and a draft-bar secured under the tongue whereby the fixed member may be coupled to a tractor while the pivoted member is in an upright position.

1,223,094. DYNAMO-ELECTRIC MACHINE. ALFONS H. NEULAND, Bergenfield, N. J. Filed Feb. 20, 1914. Serial No. 819,920. (Cl. 171—123.)

1. A commutating machine comprising means including a rotatable element for producing a rapidly revolving magnetic field, an armature winding on the rotatable element arranged to be cut by the revolving field, a commutator on said rotatable element rotatable at a lower angular velocity than that of the magnetic field, a plurality of collector members, and a number of leads from the winding, at least one lead being connected to each collector member, the commutator being divided into a plurality of insulated segments arranged in consecutive groups, each group containing a number of segments corresponding to that of the collector members, and the corresponding segments of each group being connected in multiple to one of the collector members and forming a set.



2. A commutating machine comprising a rotatable armature winding, means for producing a magnetic field arranged to traverse the armature winding, a plurality of stationary flux conductors and a plurality of rotative flux conductors coöperative to cause the flux which traverses the winding to rapidly revolve, a plurality of collector members, and a commutator rotatable with the armature winding at a lower angular velocity than that of the magnetic field, the commutator being divided into a plurality of insulated segments arranged in consecutive groups, each group containing a number of segments corresponding in number to that of the collector members, the corresponding segments of each group being connected in multiple to one of the collector members.

3. A commutating machine comprising a rotatable armature winding, means for producing a magnetic field arranged to traverse the armature winding, a plurality of stationary flux conductors and a plurality of rotative flux conductors coöperative to cause the flux which traverses the winding to vary in intensity and to rapidly revolve, a plurality of collector members, and a commutator rotatable with the armature winding at a lower angular velocity than that of the magnetic field, the commutator being divided into a plurality of insulated segments arranged in consecutive groups, each group containing a number of segments corresponding in number to that of the collector members, the corresponding segments of each group being connected in multiple to one of the collector members.

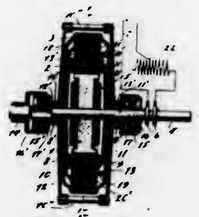
4. A commutating machine comprising a distributed induced winding having a plurality of leads, a field coil arranged to produce a magnetic flux traversing the winding, means including a rotor disposed within the field coil for causing the flux which traverses the winding to alternate and revolve at a higher angular velocity than that of the rotor as the rotor rotates, a plurality of collector members, at least one lead being connected to each collector member, and a commutator rotative at the angular velocity of the rotor, the commutator being divided into a plurality of insulated segments arranged in consecutive groups, each group containing a number of segments corresponding to that of the collector members, and the corresponding segments of each group being connected in multiple to one of the collector members and forming a set.

5. A commutating machine comprising a rotor, a field coil surrounding the rotor circumferentially thereof, a distributed induced winding arranged upon the rotor and having a plurality of leads, a plurality of collector members, at least one lead being connected to each collector member, the rotor including a plurality of magnetic conductors arranged to cause the flux which cuts the winding to rapidly reverse in direction and to revolve at a higher angular velocity than the rotor, and a commutator rotative at the angular velocity of the rotor, the commutator

being divided into a plurality of insulated segments arranged in consecutive groups, each group containing a number of segments corresponding to that of the collector members, and the corresponding segments of each group being connected in multiple to one of the collector members and forming a set.

[Claims 6 to 16 not printed in the Gazette.]

1,223,095. INDUCTION POWER-TRANSMITTING DEVICE. ALFONS H. NEULAND, Bergenfield, N. J. Filed Apr. 16, 1914. Serial No. 832,195. (Cl. 172—239.)



1. An induction power transmitting device comprising a stator, a rotor, a rotative magnetic field coupling the stator and rotor, said rotative field and said rotor when in electrical synchronism having different angular velocities, and an induction winding disposed within the magnetic field and arranged to be cut by the flux lines when the rotative field and rotor are out of synchronism.

2. An induction power transmitting device comprising a stator member, a rotor member, means for producing a revolving alternating magnetic flux adapted to couple the stator and rotor members, spaced flux conductors carried by the rotor and stator members coöperative to form a revolving path for the flux between the rotor and stator members as the rotor member rotates and one of the members including an annular magnetic path for the flux between the source of the flux and the revolving magnetic path, and an induction winding disposed around the annular path, whereby when the revolving magnetic path is out of synchronism with the rotor member the flux will flow a corresponding distance through the annular magnetic path and cut the winding and produce a torque.

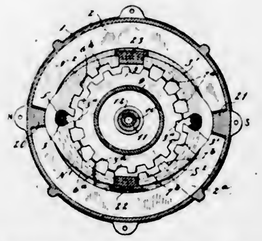
3. An induction power transmitting device comprising a stator member and rotor member, spaced flux conductors carried by the rotor and stator members coöperative to form a revolving path for the flux between the rotor and stator members as the rotor member rotates having greater angular velocity than that of the rotor member, means for producing a revolving magnetic flux traversing the two members, and an induction winding disposed within the magnetic field and arranged to be cut by the flux lines when the revolving magnetic flux and magnetic path are out of synchronism.

4. An induction power transmitting device comprising a co-axially arranged stator, rotor and rotative field member, spaced flux conductors carried by the rotor and stator members coöperative to form a revolving path for the flux between the rotor and stator members as the rotor member rotates having a greater angular velocity than that of the rotor and the field member having synchronous speed with the magnetic path, and an induction winding on one of the members arranged to be cut by the flux lines when the revolving magnetic flux and magnetic path are out of synchronism.

5. An induction power transmitting device comprising means for producing a revolving magnetic field, a stator arranged to be traversed by the magnetic field and having a plurality of circularly arranged spaced magnetic conductors extending substantially parallel to the axis of the magnetic field, a rotor having a plurality of spaced magnetic conductors adapted to successively radially aline with those of the stator and provide closed paths for the magnetic flux as the rotor rotates whereby the rotor and the magnetic field have a predetermined relative speed when in electrical synchronism, and an induction winding disposed within the magnetic field and arranged to be cut by the flux lines when the revolving magnetic field and the rotor are out of electrical synchronism.

[Claims 6 to 19 not printed in the Gazette.]

1,223,096. DYNAMO-ELECTRIC MACHINE. ALFONS H. NEULAND, New York, N. Y. Original application filed Jan. 19, 1914, Serial No. 812,908. Divided and this application filed Mar. 30, 1915. Serial No. 18,009. (Cl. 171—209.)



1. In a dynamo electric machine, means for producing a magnetic flux, a plurality of toothed two-part pole pieces, one for each pole of the field, a toothed rotative inductor coöperative with the teeth on the pole pieces to alternately shift the flux from one pole-part to the other of the respective pole pieces, and for each pole piece supporting members so arranged that the flux passing between the supporting members remains constant, whereby the flux is permitted to shift from one pole-part to the other without interference.

2. In a dynamo-electric machine, means for producing a magnetic flux, a plurality of toothed pole pieces, one for each pole of the field and each pole piece being provided with a coil-receiving slot dividing the pole piece into two pole-parts, a toothed rotative inductor coöperative with the teeth on the pole pieces to alternately shift the flux from one pole-part to the other of the respective pole pieces, and a supporting member for each pole piece engaging the pole piece at a point adjacent to the coil-receiving slot and on the side opposite the inductor.

3. In a dynamo-electric machine, means for producing a magnetic flux, a plurality of toothed pole pieces, one for each pole of the field and each pole piece being provided with a coil-receiving slot dividing the pole piece into two pole-parts, a toothed rotative inductor coöperative with the teeth on the pole pieces to alternately shift the flux from one pole-part to the other of the respective pole pieces, and supporting and spacing means for each of the pole pieces comprising two end supports and a middle support, the middle support engaging the pole piece at a point adjacent the coil-receiving slot and on the side opposite the inductor, whereby the supports permit the flux to shift from one pole-part to the other without interference.

4. In a dynamo electric machine, means for producing a magnetic flux, a plurality of toothed two-part pole pieces, one for each pole of the field, a toothed rotative inductor coöperative with the teeth on the pole pieces to alternately shift the flux from one pole-part to the other of the respective pole pieces, an induced winding axially surrounding the inductor, and supporting means for the pole pieces arranged to permit the flux to shift from one pole part to the other without interference.

5. In a dynamo-electric machine, in combination with the frame, a plurality of circumferentially arranged magnets, a plurality of toothed two-part pole pieces, one for each pole of the field, a toothed rotative inductor coöperative with the teeth on the pole pieces to alternately shift the flux from one pole-part to the other of the respective pole pieces, and a plurality of magnet spacing members carried by the frame and arranged between the adjacent ends of the respective magnets and each member engaging and supporting the respective pole piece.

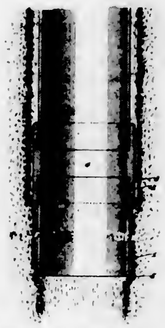
[Claims 6 and 7 not printed in the Gazette.]

1,223,097. SPECTACLES. GEORGE D. NUTTING, Cleveland, Ohio. Filed Jan. 11, 1915. Serial No. 1,506. (Cl. 88—41.)



As a new article of manufacture, a pair of eye glasses having rims and each rim provided with a downwardly projecting lug in the plane of the rim on its outer lower portion, in combination with separate supplemental lenses having rims and lugs thereon matching the lugs on the first named rims and finger grips at their middle outer portion relatively above and outward from said lugs, friction springs between said lugs and pivot screws engaged through said lugs and springs, whereby the outer lenses can be raised more or less and held at any desired elevation by said springs.

1,223,098. CASING-SHOE. GEORGE NYMANNING, Coalinga, Cal. Filed Aug. 17, 1916. Serial No. 115,404. (Cl. 166—9.)



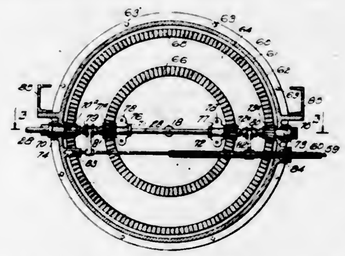
1. A casing shoe having interior threads at both ends, and a tubular extension engaging the lower threaded end thereof, the inner diameter of said extension being substantially that of the casing, said extension having a cutting edge at the lower end, substantially as and for the purpose set forth.

2. A casing shoe, a tubular extension of a diameter equal to the casing threaded with one end thereof into the lower end of the shoe, said extension presenting at its lower end a cutting edge of a shape similar to the cutting edge of the shoe.

1,223,099. DRIVING MECHANISM FOR TRACTORS. ALVIN ROSS OGBURN, Des Moines, Iowa. Filed Dec. 24, 1915. Serial No. 68,521. (Cl. 74—59.)

1. The combination of a single hand lever, a pair of dog levers mounted upon opposite sides of said hand lever and each provided with a lug, adapted to be engaged by said hand lever, the hand lever when in engagement with the lug of one of said dog levers being out of engagement with the lug of the other dog lever, change speed gearing connected with one of said dog levers and controllable thereby; and change speed gearing connected with the other of said dog levers and controllable thereby.

2. In a tractor controlling mechanism, the combination of a revoluble shaft, means for turning the same constantly in one direction, a pair of clutch members splined upon said revoluble shaft, a thrust rod connected with one of said clutch members, a movable sleeve connected with the other clutch member, a pair of levers, a shaft on which said levers are mounted to swing, members connecting said levers respectively with the thrust rod and the movable sleeve, and a single hand lever carried by said shaft for actuating either of said levers for shifting said clutch members one at a time from a predetermined normal position; other clutch members located to be engaged by said first-mentioned clutch members; and change-speed mechanism connected with said clutch members thus located and controllable by the same.



3. In a device of the character described, change-speed gearing for driving a tractor in one direction of travel, change-speed gearing for driving said tractor in the opposite direction of travel, a thrust rod movable in the direction of its own length for throwing said first-mentioned change-speed gearing into and out of action, a movable sleeve connected with said second-mentioned change-speed gearing for throwing the same into and out of action, a single hand lever, and mechanism connected with said single hand lever and said thrust rod and said movable sleeve for enabling both of said change-speed gearings to be controlled from said single hand lever.

4. The combination of change-speed gearing for driving a tractor in one direction of travel, change-speed gearing for driving said tractor in the opposite direction of travel, a single hand lever, dog levers having members for engagement by the single hand lever to actuate the dog levers, the said hand lever when in operative engagement with one of said dog levers being out of engagement with the other dog lever, pitmen connected with the dog levers, and members connected with the pitmen, one of said members being connected with said first-mentioned change-speed gearing, and the other member being connected with said second-mentioned change-speed gearing.

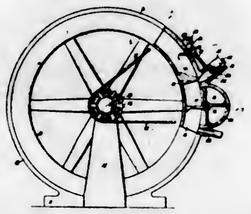
5. A device of the character described, comprising change-speed gearing for driving a tractor in one direction of its travel, change-speed gearing for driving the tractor in the opposite direction of its travel, a movable member for controlling one of said change-speed gearings, a second movable member for controlling the other of said change-speed gearings, a single hand lever for actuating either of said movable members, and mechanism connected with said single hand lever and controllable thereby for preventing said hand lever from affecting one of said change-speed gearings, while the said hand lever is controlling the other of said change-speed gearings.

[Claims 6 to 9 not printed in the Gazette.]

1,223,100. ROTARY ENGINE. EDWARD FRANCIS O'HAVER, Carlisle, Ind. Filed Mar. 15, 1916. Serial No. 84,310. (Cl. 123—13.)

1. A rotary engine, comprising a cylinder, a rotor mounted to turn therein and forming with the cylinder an annular working chamber, the rotor having a piston head, an abutment wheel having arms adapted to move successively into the said working chamber and adapted to be engaged by the said piston head, locking means for locking the said abutment wheel against turning, driving

means driven from the said rotor controlling the said locking means to unlock the said abutment wheel prior to the piston head reaching the abutment arm in position in the working chamber at the time, a pressure supply and ignition chamber opening into the said working chamber adjacent the abutment wheel, a gas chamber connected with a gas supply and having a port leading into the said pressure supply and ignition chamber, an air chamber having a port opening into the said pressure supply and ignition chamber, valves controlling the said ports and provided with spring-pressed stems, a cam shaft having arms controlling the said valve stems and valves, and driving means for driving the said cam shaft and controlled from the said rotor, the said driving means for the abutment wheel and the said driving means for the said cam shaft having a driving member common to both.



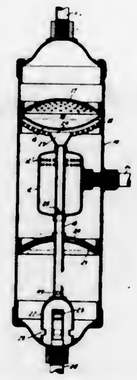
2. A rotary engine, comprising a cylinder, a rotor mounted to turn therein and forming with the cylinder an annular working chamber, the rotor having a piston head, an abutment wheel having arms adapted to move successively into the said working chamber and adapted to be engaged by the said piston head, locking means for locking the said abutment wheel against turning, driving means driven from the said rotor controlling the said locking means to unlock the said abutment wheel prior to the piston head reaching the abutment arm in position in the working chamber at the time, a pressure supply and ignition chamber opening into the said working chamber adjacent the abutment wheel, a gas chamber connected with a gas supply and having a port leading into the said pressure supply and ignition chamber, an air chamber having a port opening into the said pressure supply and ignition chamber, valves controlled from the rotor and controlling the said ports, and manually controlled setting means in the said gas chamber and the said air chamber for regulating the gas and air passing into the said gas and air chambers and into the said supply and ignition chamber.

1,223,101. STEAM-SEPARATOR. FRANK PACZIGA, New York, N. Y. Filed June 24, 1916. Serial No. 105,576. (Cl. 183—109.)

1. A steam separator, comprising a closed receptacle, two perforated partitions dividing said receptacle into three compartments, said receptacle having a steam outlet in direct communication with one of said compartments and a water outlet in a similar communication with another one of said compartments, a perforated vessel disposed in the third compartment, and a steam supply pipe leading to said perforated vessel.

2. A steam separator, comprising a closed receptacle, two perforated partitions dividing said receptacle into three compartments one disposed on top of another, said receptacle having a steam outlet in direct communication with the uppermost of said compartments and a water outlet in a similar communication with the lowermost of said compartments, a perforated vessel disposed in the intermediate compartment, and a steam supply pipe leading to said perforated vessel.

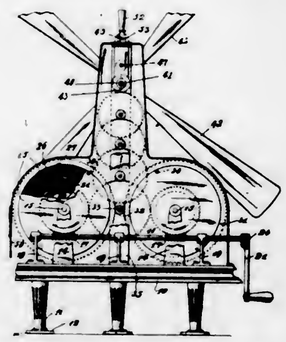
3. A steam separator, comprising a closed receptacle, two perforated partitions dividing said receptacle into three compartments one disposed on top of another, said receptacle having a steam outlet in direct communication with the uppermost of said compartments and a water outlet in a similar communication with the lowermost of said compartments, a perforated vessel disposed in the intermediate compartment, a steam supply pipe leading to said perforated vessel, a fine-meshed fabric arranged above the upper partition, and a fine-meshed fabric disposed below the lower partition.



4. A steam separator, comprising a closed receptacle, two perforated partitions dividing said receptacle into three compartments one disposed on top of another, said receptacle having a steam outlet in direct communication with the uppermost of said compartments and a water outlet in a similar communication with the lowermost of said compartments, a perforated vessel disposed in the intermediate compartment, a steam supply pipe leading to said perforated vessel, and a tube connecting the uppermost compartment with said water outlet, said tube having perforations within said vessel and also within the lowermost one of said compartments.

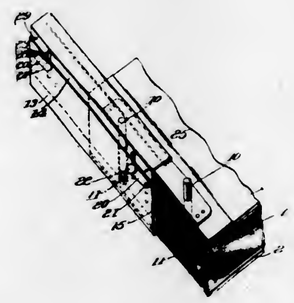
5. A steam separator, comprising a closed receptacle, two perforated partitions dividing said receptacle into three compartments one disposed on top of another, said receptacle having a steam outlet in direct communication with the uppermost of said compartments and a water outlet in a similar communication with the lowermost of said compartments, a perforated vessel disposed in the intermediate compartment, a steam supply pipe leading to said perforated vessel, and a tube connecting the uppermost compartment with said water outlet, said tube having perforations within said vessel and also within the lowermost one of said compartments.

1,223,102. SPRING-MOTOR. DIMITRIOS PANTAZI, New York, N. Y. Filed Nov. 26, 1915. Serial No. 63,473. (Cl. 185—37.)



In a spring motor, the combination with two or more pairs of spring drums, said drums being arranged in the same horizontal plane one in advance of the other, shafts upon which each pair of drums is rotatably mounted, worm wheels upon each of said shafts, coil springs engaged interiorly of said drums at one end thereof and with said shafts at the other, a shaft centrally between each group of spring drums, gears combined with said drums co-acting to drive the second mentioned shaft, a train of gears driven by said second shaft, a shaft rotatably mounted transversely of said drum and gear shafts, worms on the last named shaft meshing with said worm wheels, means for manually rotating the last named shaft, and means for positively holding or releasing said gear train.

1,223,103. BINDER. GEORGE W. PHELPS, New York, N. Y. Filed Aug. 21, 1916. Serial No. 115,987. (Cl. 129—13.)



1. A binder of the character described comprising means for securing the sheets in position consisting of securing strips attached to each side of the sheets by suitable securing means and a detachable strain resisting channel member provided with inturned flanges to underlie the securing strips to be locked in position thereby substantially as described.

2. A binder of the character described comprising means for securing the sheets in position consisting of securing strips secured to each side of the sheets to be bound, securing means adapted to secure the sheets and the strips in position and a channel member adapted to have interlocking engagement with the strips and said channel member being formed of relatively adjustable members and means for securing said members in position.

3. A binder of the character described comprising means for securing the sheets in position consisting of securing strips arranged on each side of the sheets to be bound, extensible securing posts adapted to secure the sheets and strips in position and a channel member adapted to have interlocking engagement with the strips, said channel member being adapted to inclose the securing strips and posts and comprising relatively adjustable members adapted to be slidably interlocked and means for securing the members in their adjusted positions.

4. A binder of the character described comprising means for securing the sheets in position consisting of flat securing strips arranged on each side of the sheets to be bound, two part extensible securing posts adapted to secure the sheets and strips, said posts being of tubular form in telescopic engagement, and compression springs contained within the posts, and a channel protective member provided with inturned flanges in underlying engagement with the strips, said channel member being adapted to inclose the securing means and comprising relatively adjustable members adapted to be slidably interlocked and means for securing the members together consisting of tightening bolts and securing arms connected therewith and provided with locking pins fitted to registering apertures in the channel members substantially as described.

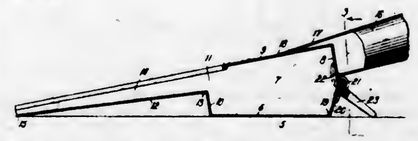
1,223,104. SHAFT FOR PAPER-ROLLS. GEORGE FRANKLIN PICKETT, Brooklyn, N. Y. Filed July 12, 1916. Serial No. 108,966. (Cl. 242—68.)



1. The combination with a shaft for paper rolls or the like, a head secured to one end of the shaft, a head having a conical inner end slidably fitted upon the other end of the shaft and adapted to be moved by hand directly into contact with the roll, the latter head being provided with an extension having a threaded exterior surface, a hand wheel having an internally threaded hub coöperating with said threaded surface, an abutment member slidable longitudinally of the shaft freely in one direction, means to control the sliding movement of the abutment member in the other direction from the shaft, means connecting the abutment member and wheel hub to prevent endwise separation, but permitting relative rotation of the hand wheel, and means to prevent rotation of the slidable head.

2. In a device of the character set forth, the combination with a shaft having a head secured at one end thereof, of a head slidable along the other end of the shaft, said head having at its outer end an extension having a threaded portion and a smooth reduced portion, a hub fitted upon said extension and having an internally threaded portion coöperating with the threaded portion of the extension and having means projecting inwardly from the other portion of the hub into contact with the reduced smooth portion of the extension, the hub serving to force the head in one direction until limited by said inwardly projecting means, an abutment slidably fitted upon the shaft, means to connect the hub with the abutment member for free rotation but preventing endwise displacement of the hub, and means extending between the head extension and the abutment member preventing relative rotation of these parts but permitting endwise movement of one with respect to the other.

1,223,105. DUST-PAN. WILLIAM PIGOTT, Santa Barbara, Cal. Filed Mar. 10, 1916. Serial No. 83,269. (Cl. 65—20.)

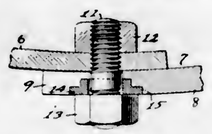


1. In a dust pan, a dust container having a scoop, a handle extending from the top of the back of the container, there being an outlet opening for the container in the back and below the handle, a door hinged to the container at the top of the outlet opening, resilient means for holding the door yieldingly closed, and an arm disposed below the handle and secured to the door which may be pressed against the floor to open the outlet, the movement of the arm being limited by engagement with the handle.

2. In a dust pan, a dust container having a bottom, sides, back and cover and a front wall which does not extend up to the cover, thereby leaving an opening through which dust may pass to the container, a scoop extending forwardly and downwardly from the top of the front wall, a handle extending from the top of the back of the container, there being an outlet opening for the container in the back and below the handle, a door hinged to the container at the top of the outlet opening, resilient means for

holding the door yieldingly closed, and an arm disposed below the handle and secured to the door which may be pressed against the floor to open the outlet, the movement of the arm being limited by engagement with the handle.

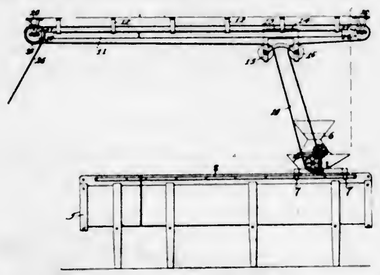
1,223,106. CLOSURE. JOHN A. POWER, Hampton, N. J. Filed May 13, 1916. Serial No. 97,286. (Cl. 220—124.)



1. The combination with a curved shell of a vessel provided with an opening in the side thereof, of a closure plate conforming to the curvature of said vessel, threaded studs held in said vessel and passed through said closure plate, nuts on the outer ends of said studs, and a washer interposed between each nut and said closure plate, the latter being recessed to provide a flat seat for each washer parallel with the face of the nut bearing against said washer.

2. The combination with a curved shell of a vessel provided with an opening in the side thereof, of a closure plate conforming to the curvature of said vessel, threaded studs held in said vessel and projected through said closure plate, a nut on the outer end of each stud, and a stepped washer interposed between each nut and said closure plate, the latter having a stepped recess therein to provide flat seats for the steps of each washer parallel with the face of the nut bearing against said washer.

1,223,107. BELT-DRIVE FOR CURD-MILLS. HENRY W. QUADE, Kewaskum, Wis. Filed Oct. 11, 1916. Serial No. 124,999. (Cl. 74—21.)



The combination, adapted for use in a curd mill, of a rotating shaft arranged on a horizontal axis and movable in a horizontal plane, means for guiding said shaft in its horizontal movement, and means for rotating said shaft in such horizontal movement, said means comprising a horizontal track, a carrier movable thereon, rollers on said carrier, pulleys at the ends of said track, a pulley on said shaft, an endless belt passed around all of said pulleys and guided by said carrier rollers, and means for driving one of said track pulleys.

1,223,108. BELLEVILLE-BOILER ELEMENTS WITH TUBES OF INCREASING DIAMETER. CHARLES RADIGUER, St.-Denis, France, assignor to Societe Anonyme des Etablissements Delaunay-Belleville, St.-Denis, France, a Corporation of France. Filed Apr. 16, 1914. Serial No. 832,372. (Cl. 122—235.)

1. In a boiler, the combination with an upper collector and a lower collector, of a boiler element comprising a plurality of boiler tubes through which the water is circulated from the lower collector to the upper collector by the rising steam in the tubes, the tubes in the vicinity of the upper collector being greater in diameter than those in the vicinity of the lower collector and the spaces between the tubes decreasing with the increase of the diameter of the tubes.

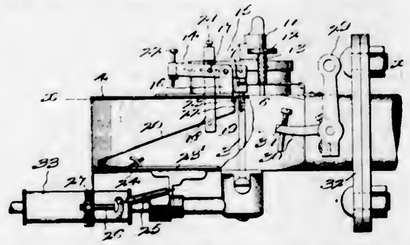


2. A boiler element comprising a coil adapted to permit water to be circulated upwardly therethrough by rising steam and comprising a plurality of tubes varying in size from relatively small tubes at the bottom of the coil to relatively large tubes at the top of the coil, the spaces between the tubes decreasing with the increase of the diameter of the tubes.

3. In a boiler, the combination with an upper collector and a lower collector, of a boiler element comprising a plurality of boiler tubes through which the water is circulated from the lower collector to the upper collector by the rising steam in the tubes, the tubes in the vicinity of the upper collector being greater in diameter than those in the vicinity of the lower collector, and junction boxes to which the ends of the tubes are connected, the boxes being of the same size and arranged in superposed relation.

4. In a boiler, the combination with an upper collector and a lower collector, of a boiler element comprising a plurality of boiler tubes through which the water is circulated from the lower collector to the upper collector by the rising steam in the tubes, the tubes in the vicinity of the upper collector being greater in diameter than those in the vicinity of the lower collector, and junction boxes to which the ends of the tubes are connected, the longitudinal axes of the tubes being equal distances apart whereby the spaces between the tubes decrease as the diameters of the tubes increase.

1,223,109. FUEL-SUPPLY DEVICE FOR INTERNAL-COMBUSTION ENGINES. HENRY M. REICHENBACH, Rochester, N. Y. Filed Jan. 27, 1915. Serial No. 4,722. Renewed July 10, 1916. Serial No. 108,448. (Cl. 261—40.)



1. In a fuel supply device for internal combustion engines, in combination, a fuel tank, upwardly directed pipes having fuel discharge openings connected with said tank, said openings discharging into the intake conduit, devices for controlling the areas of said openings, a deflecting plate in the intake conduit in front of said fuel openings, arranged to deflect incoming air toward said fuel openings in response to engine suction, and connections between said deflecting plate and said fuel discharge openings, whereby the area of said openings may be made to vary in direct proportion to the deflections of said plate.

2. A means for supplying fuel for an internal combustion engine, in direct proportion to engine suction, which consists of an intake conduit, a deflector plate hinged to the bottom thereof and extending obliquely forward, devices having fuel discharge openings, arranged in said conduit, in front of said deflector plate, means for changing the areas of said openings, and means connecting said devices with said deflector plate.

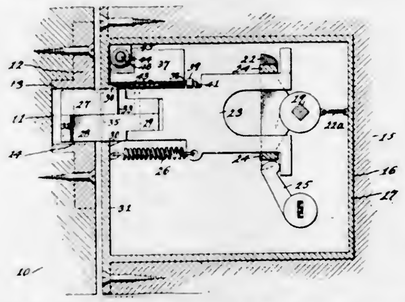
3. A means for supplying fuel for an internal combustion engine, in direct proportion to engine suction, which consists of an intake conduit rectangular in cross section, a deflector plate hinged to the bottom of said conduit and of a width corresponding to the width of the conduit and extending obliquely forward, devices having fuel discharge openings, arranged in said conduit, in front of said deflector plate, means for changing the areas of said openings, and means connecting said devices with said deflector plate.

4. A means for supplying fuel for an internal combustion engine, in direct proportion to engine suction, which consists of an intake conduit, a deflector plate hinged to the bottom thereof and extending obliquely forward, devices having fuel discharge openings, arranged in said conduit, in front of said deflector plate, means for changing the areas of said openings, and means connecting said devices with said deflector plate, said conduit being provided with an auxiliary valve at its bottom for admitting diluting air.

5. A means for supplying fuel for an internal combustion engine, which consists of a fuel tank, fuel distributers connected therewith, said distributers being provided with slots, an intake conduit, said distributers being arranged in said conduit, plugs arranged one in each of said distributers and adapted to be moved up and down therein to vary the area of opening of said slots, a head, a deflector plate in said conduit, and means connecting said head and said deflector plate whereby when the deflector plate is moved in response to engine suction, the head and the connected plugs are moved to vary the area of the openings in the distributers in direct proportion to the movement of the deflector plate.

[Claims 6 to 14 not printed in the Gazette.]

1,223,110. DOOR-LOCK. HERMAN REIN, New York, N. Y., and JAMES R. COMBS, Dinsmore, Fla.; said Combs assignor to said Rein. Filed May 18, 1916. Serial No. 98,397. (Cl. 70—64.)



1. A lock, comprising a casing, a bolt slidable therein formed of a plurality of members pivoted together, means for spreading said members apart at their outer ends when in outermost position consisting of inclined slots and a pin engaged therein, a sear carrying said pin, a spring tending to force said sear outwardly, and means for holding said sear in retracted position against the action of said spring.

2. A lock, comprising a casing, a bolt slidable therein formed of a plurality of members pivoted together, means for spreading said members apart at their outer ends when in outermost positions consisting of inclined slots and a pin engaged therein, a spring tending to hold said bolt in outermost position, a detent for holding said bolt in retracted position, means external of said lock for releasing said detent from said bolt to permit outward movement of the latter by said spring.

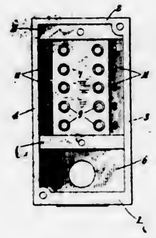
3. A lock, comprising a casing, a bolt slidable therein formed of a plurality of members pivoted together, means for spreading said members apart at their outer ends when in outermost positions, a spring for holding said bolt outwardly, and means for locking said bolt in innermost position against the action of said spring consisting of an externally released detent provided with a notch, said bolt having a tooth thereon engaged with said notch.

4. The combination with a door and a door jamb, of a lock comprising a casing, a bolt slidable therein formed of a plurality of members pivoted together, means for spreading said members apart at their outer ends when in outermost positions, a spring for moving said bolt outwardly, a detent for locking said bolt in innermost position, a button for releasing said detent from the exterior of said door and normally flush with the surface of said door, and a post on the inner edge of the door stop on said frame for forcing said button inwardly to release said detent to permit said bolt to shoot outwardly into engagement with said door frame.

5. The combination with a door and door jamb, of a lock comprising a bolt formed of a plurality of members in pivotal engagement, a spring for moving said bolt outwardly of said lock, means for normally holding said bolt entirely within said door when said door is open, and means for releasing said bolt holding means when said door is closed to permit said spring to shoot said bolt outwardly into engagement with said jamb.

[Claims 6 and 7 not printed in the Gazette.]

1,223,111. CONNECTION-BOX AND PLUGGING-JACK. HENRY FERGUSON RICHARDSON, New York, N. Y., assignor, by direct and mesne assignments, to said Henry Ferguson Richardson and Charles Auth, trustees, Brooklyn, N. Y. Filed Sept. 11, 1914. Serial No. 861,178. (Cl. 173—338.)



1. In a device of the character described, the combination of a block having a plurality of connection devices, a channel having slots through its side walls, and terminals for said connection devices to which said slots lead.

2. In a device of the character described, the combination of a block having a plurality of connection devices, a terminal for each of said connection devices, a common entrance for wires and a separate slot leading from the common entrance to said connection devices.

3. In a device of the character described, the combination of a block having a plurality of connection devices set in a face, a plurality of terminals set in a side and passing through and securing said connection devices in place, a common entrance for wires, and a separate slot leading from the common entrance to each of said terminals.

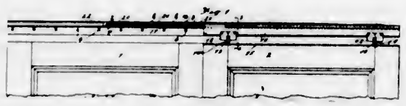
4. In a device of the character described, the combination of a block having a plurality of rows of connection devices on its face and corresponding terminals upon the opposite sides of the block, the block having a channel in the back thereof, and slots through the side walls of the channel adjacent said terminals.

5. In a device of the character described, the combination of a pair of blocks, one of said blocks having a plurality of plugs thereon, and the other of said blocks having corresponding sockets and a plurality of terminal posts

connected thereto, and having separate passages for the wires leading to the same, said terminal posts being located at an angle to the plugs and sockets.

[Claims 6 to 17 not printed in the Gazette.]

1,223,112. GUIDE FOR DOOR-HANGERS. OSCAR C. RIXSON, New Rochelle, N. Y. Filed Jan. 2, 1915. Serial No. 41. (Cl. 74—87.)



1. In a door hanger, a fixed track, a movable track carrying the door, anti-friction devices interposed between and in rolling contact with said tracks, a spacer for said anti-friction devices movable therewith, and lubricating pads carried by said spacer contacting with said tracks for cleaning and lubricating them and the anti-friction devices upon movement of said movable track.

2. In a door hanger, a fixed track, a movable track connected to the door, a hood extending over said fixed track the entire length thereof, anti-friction devices interposed between said tracks, a spacer and retainer for distributing said anti-friction devices over a length of said fixed track greater than the length of the movable track, lubricating pads carried by said spacer contacting with both tracks, said hood and fixed track having their free longitudinal edges adjacent to each other but spaced sufficient to provide a longitudinally disposed narrow opening in which the connection from the movable track to the door may slide, whereby said hood and fixed track form a substantially closed housing for said anti-friction devices and the surfaces of the tracks with which they contact.

3. In a door hanger, a fixed track, a movable track carrying the door, balls interposed between said tracks, a spacer for said balls comprising a relatively long narrow plate having spaced openings therein in which said balls rest, ears surrounding said openings embracing said balls and retaining them in position, said plate having other openings therein intermediate said first named openings, and brushes of absorbent material secured in said last openings, said brushes being of a size to contact with both of said tracks.

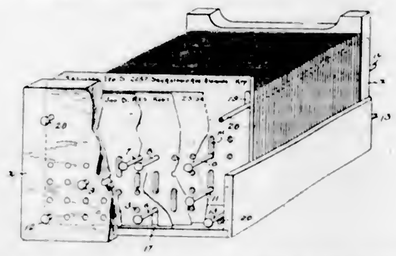
4. In a door hanger, a fixed track, a movable track connected to the door, a hood extending over said fixed track the entire length thereof, anti-friction devices interposed between said tracks, a spacer and retainer for distributing said anti-friction devices over a length of said fixed track greater than the length of the movable track, said hood and fixed track having their free longitudinal edges adjacent to each other but spaced sufficient to provide a longitudinally disposed narrow opening in which the connection from the movable track to the door may slide, whereby said hood and fixed track form a substantially closed housing for said anti-friction devices and the surfaces of the tracks with which they contact, and means carried by said spacer for cleaning and lubricating said tracks.

5. In a door hanger, a fixed track, a movable track carrying the door, anti-friction devices interposed between and in rolling contact with said tracks, a spacer for said anti-friction devices movable therewith, and pads carried by said spacer contacting with said tracks.

1,223,113. METHOD OF SEGREGATING UNITS. LEO S. ROBINSON, Alameda, Cal. Filed Jan. 30, 1913. Serial No. 745,194. (Cl. 129—16.1.)

1. The method of classifying units, consisting of providing said units with master apertures, and enlarging said master apertures in any unit without breaking the edge of said unit for sub-classification.

2. The method of segregating units consisting of providing said units with master apertures, enlarging said apertures in any unit without breaking the edge of said unit and associating said units with a key member; whereby said units may be identified and segregated according to their enlarged apertures.



3. The method of segregating a designated unit or units from a plurality of associated units, consisting in perforating all the units, altering one or more perforations of the designated units, and inserting a rod or rods through all of said units; whereby the undesignated units are held, and the designated units may be partially or wholly separated from said plurality of units.

4. The method of segregating cards from a plurality of cards, consisting of providing each of said cards with a series of master apertures, varying certain of said apertures, inserting a rod or rods through all of said cards, and subsequently effecting segregation by means of the variations of said apertures engaging said rod or rods.

5. The method of classifying and segregating units, consisting of providing said units with master apertures, enlarging one or more of said master apertures, to represent classification or subclassification, and passing segregation means through said apertures; whereby designated units may be selected from a plurality of units, according to all of the enlarged master apertures acted upon by the segregation means.

[Claims 6 to 16 not printed in the Gazette.]

1,223,114. ELECTROLYTIC RECTIFIER. CHARLES C. RUPRECHT, Midway, Fla. Filed Apr. 22, 1916. Serial No. 92,963. (Cl. 175—315.)

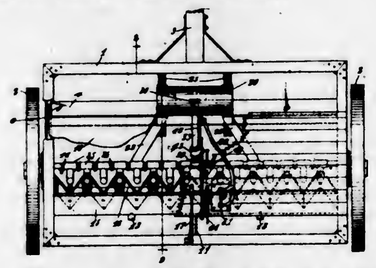


1. An electrolytic rectifier comprising a container for the electrolyte, a holder disposed in the container for holding chemicals submerged in the electrolyte, said holder having perforations in the portions above and below the chemicals for permitting the electrolyte to circulate downwardly through the chemicals from the top and laterally out of the chemicals at the bottom, and electrodes in the electrolyte at the side of the holder opposite from that holding the chemicals.

2. An electric rectifier or condenser comprising a receptacle, an electrolyte therein, there being a sediment collecting well in the bottom of the receptacle, means for drawing off the sediment from the bottom of the well, means in the receptacle for holding chemicals above the well and in the path of circulation of the electrolyte, and electrodes in the electrolyte at a point spaced from the chemicals.

1,223,115. GRASS-SCORCHER. BURR C. RUSSELL, Winfield, Kans. Filed June 7, 1916. Serial No. 102,197. (Cl. 126—271.2.)

1. A device of the character specified comprising a wheel supported main frame, an auxiliary frame hinged at the front of the main frame beneath the same and having shoes or runners at its rear end adapted to run upon the ground, a pair of plates at the rear of the auxiliary frame and connected therewith, said plates being parallel with the plane of the frame and with each other, and spaced apart and connected by inclined connecting plates dividing the space between the first named plates into a series of substantially triangular compartments open at their top and bottom, the alternate compartments having their apices forward and the intermediate compartments having their apices rearward, a carriage mounted to move on the auxiliary frame toward and from the compartments, and supporting a burner for each compartment, said burners being in alinement transversely of the frames, a source of supply for fuel under pressure on the carriage and delivering to the burners, windshields at the front and rear of the auxiliary frame and forming a closed compartment in which the burners are arranged, the rear shield being adjustable and the front shield having a draft opening and a damper for closing the opening, means for raising and lowering the rear end of the auxiliary frame, and means for moving the carriage.



2. A device of the character specified comprising a wheel supported main frame, an auxiliary frame hinged at the front of the main frame beneath the same and having shoes or runners at its rear end adapted to run upon the ground, a pair of plates at the rear of the auxiliary frame and connected therewith, said plates being parallel with the plane of the frame and with each other, and spaced apart and connected by inclined connecting plates dividing the space between the first named plates into a series of substantially triangular compartments open at their top and bottom, the alternate compartments having their apices forward and the intermediate compartments having their apices rearward, a carriage mounted to move on the auxiliary frame toward and from the compartments, and supporting a burner for each compartment, said burners being in alinement transversely of the frames, and a source of supply for fuel under pressure on the carriage and delivering to the burners.

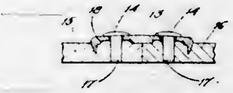
3. A device of the character specified comprising a wheel supported main frame, an auxiliary frame hinged at the front of the main frame beneath the same and having shoes or runners at its rear end adapted to run upon the ground, a pair of plates at the rear of the auxiliary frame and connected therewith, said plates being parallel with the plane of the frame and with each other, and spaced apart and connected by inclined connecting plates dividing the space between the first named plates into a series of substantially triangular compartments open at their top and bottom, the alternate compartments having their apices forward and the intermediate compartments having their apices rearward.

4. A device of the character specified comprising a wheel supported main frame, an auxiliary frame hinged at the front of the main frame beneath the same and having shoes or runners at its rear end adapted to run upon the ground, a pair of plates at the rear of the auxiliary frame and connected therewith, said plates being parallel with the plane of the frame and with each other, and spaced apart and connected by inclined connecting plates dividing the space between the first named plates into a series of substantially triangular compartments open at their top and bottom, the alternate compartments having their apices forward and the intermediate compartments having their apices rearward, and a burner for each compartment supported by the auxiliary frame.

5. A device of the character specified comprising a wheel supported frame, an auxiliary frame hinged thereto at the front of the main frame and having a series of burning compartments at the rear end thereof and adapted to run upon the ground and open at the top and bottom, a burner supported by the auxiliary frame at each compartment and delivering through the compartment, the compartments being substantially triangular in shape, and the alternate compartments having their apices in the opposite direction to the intermediate compartments and the lower edges of the compartments engaging the grass to separate and support the same.

[Claims 6 and 7 not printed in the Gazette.]

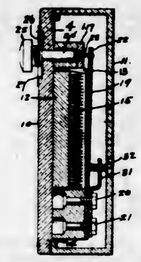
1,223,116. BELT-FASTENER. LOUIS S. SAWYER, Lynn, Mass. Filed May 19, 1916. Serial No. 98,644. (Cl. 24—31.)



1. A metallic plate for a belt fastener having at each of two opposite ends a downwardly extending prong to penetrate the two proximate members, said plate having two apertures intermediate said prongs for the passage of fastening studs through the respective belt members, each of said apertures merging abruptly into a recess of larger diameter than said aperture on the under side of the plate, said recess being embordered by a sharp edged shoulder which penetrates the belt member to a somewhat less depth than the pronga.

2. A metallic plate for a belt fastener having at each of two opposite ends a downwardly extending prong to penetrate the two proximate belt members, said plate having recesses in the under face thereof adjacent said two opposite prongs, but a short distance away therefrom, the plate being of greater thickness in the portions which surround said recesses than the recessed portion, the margin of each of said recesses on the under side being formed with a sharp corner, and said plate being also formed with an aperture opening into each of said recesses for the passage of a fastening stud.

1,223,117. ELECTROTHERMOSTATIC CONTROLLER. JOSEPH C. SCHAF, Jr., and WILLIAM E. MUNK, Indianapolis, Ind., assignors to Herbert E. Welchel, Indianapolis, Ind. Filed Sept. 16, 1916. Serial No. 120,506. (Cl. 177—347.)



1. An electric controller having an insulating block with a recess therein, a resistance coil in said recess, a terminal secured to one end of said block and connected with one end of said coil, a thermostatic bar secured at one end to the other end of said block, the free end portion of said bar normally making contact with the said terminal and

thereby connecting the bar and coil in the series, and means secured to said bar for limiting the movement thereof.

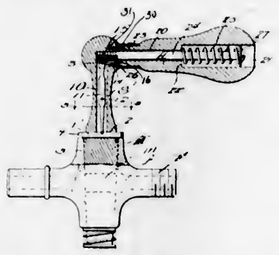
2. An electric controller having an insulating block with a recess therein, a resistance coil in said recess, a terminal secured to one end of said block and connected with one end of said coil, a thermostatic bar secured at one end to the other end of said block, the free end portion of said bar normally making contact with the said terminal and thereby connecting the bar and coil in the series, an arm rigidly secured on the fixed end of said bar and extending upwardly therefrom, and a screw extending through said arm for engaging said bar and limiting the separating movement of said bar and its contact point from said terminal.

3. An electric controller having a solid block of insulating material provided with a recess therein, a resistance coil in said recess, a metal plate secured to one end of said block and connected with one end of said coil, and a thermostatic bar rigidly secured to one end of said block, the free end portion of said bar being normally in contact with said plate, thereby connecting the bar and coil in series.

4. An electric controller having a solid block of insulating material provided with a recess therein, a resistance coil in said recess, a metal plate secured to one end of said block and connected with one end of said coil, a thermostatic bar rigidly secured to one end of said block, the free end portion of said bar being normally in contact with said plate, thereby connecting the bar and coil in series, and an adjusting screw passing through said block and adjustable through said plate having a contact point thereon whereby the distance between said last mentioned contact point and said bar may be regulated.

5. An electric controller having a solid insulating block with a recess therein, a resistance coil in said recess, a metal plate secured to one end of said block and connected with one end of said coil, a thermostatic bar rigidly secured at the other end to said block, the free end portion of said bar being normally in contact with said plate, thereby connecting the bar and coil in series, an arm secured to the fixed end of said bar extending thereover, a screw extending through said arm adapted to engage and adjust the position of said bar, and a controlling screw extending through the other end of said block adapted to screw through said plate and having a contact point thereon adapted to regulate the distance between said contact point and the free end of said bar for controlling the amount of heat generated by said coil for breaking said contact.

1,223,118. ROTARY-PLUG LOCK. LOUIS SCHNEIDER and EDWARD E. J. DUQUETTE, Atlanta, Ga. Filed May 26, 1916. Serial No. 100,137. (Cl. 137—7.)



1. The combination with a female member having a series of sockets, a male member movably mounted in the female member and having a guide in the line of said series, and a bolt slidably mounted in the guide and adapted to be projected into any of said sockets according to the relative position of the members; of a handle movably attached to the male member for adjusting its position in the female member, and connections between the handle and bolt whereby the movement of the handle with respect to the male member actuates the bolt.

2. The combination with a casing having an upstanding collar containing a series of sockets, and a plug movably mounted in said casing and having a guide in the plane of said sockets; of a bolt movably mounted in the guide, a rock lever pivoted to the stem of the plug and having one end engaging the bolt, a handle movably mounted on the head of said stem, and connections between the handle and the other end of the lever.

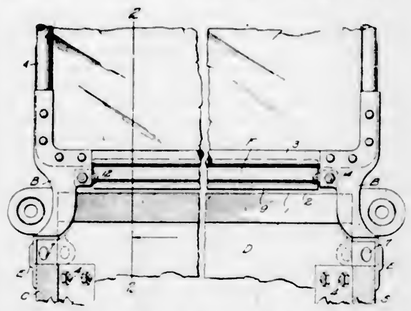
3. A turning plug and a casing, the former having a hollow stem provided with a guide intersecting its bore, and the casing having a plurality of sockets in the plane of said guide; combined with a bolt slidably mounted in said guide, a rock lever disposed within said bore and pivoted between its ends and its lower end engaging said bolt, the outer end of said stem having a lateral opening communicating with its bore, a pin projecting laterally from this end of the stem, a handle slidably mounted on said pin, and a link pivoted to the outer end of the rock lever, extending through said bore, and engaging the handle.

4. A casing, and a rotary hollow member therein provided with a guide intersecting its bore, the casing having a plurality of sockets in the plane of said guide; combined with a bolt slidably mounted in said guide, a rock lever disposed within said bore and pivoted between its ends with its lower end engaging said bolt, the outer end of said member having a lateral opening communicating with its bore, a pin projecting laterally from this end of the member, a handle slidably mounted on said pin, a ferrule surrounding the inner end of the handle and having an eye, and a link pivoted to the outer end of the rock lever, extending through said lateral opening, and having a hook engaging the eye in the ferrule.

5. A valve comprising a turning plug and a casing, the former having a hollow stem provided with a guide intersecting its bore, and the casing having a plurality of sockets in the plane of said guide; combined with a bolt slidably mounted in said guide, a rock lever in said bore with its lower end engaging said bolt, the outer end of said stem having a lateral opening communicating with its bore, a screw projecting laterally from this end and having an expansive spring beneath its head, a hollow handle slidably mounted on said screw and having a cavity inclosing the spring and against whose inner end said spring bears, and a link pivoted to the outer end of the rock lever, extending through the opening, and engaging the handle.

[Claims 6 to 8 not printed in the Gazette.]

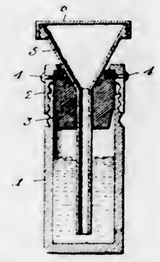
1,223,119. VENTILATOR ATTACHMENT FOR WINDSHIELDS. FRANK ASBURY SMITH, Orange, N. J. Filed Sept. 15, 1915. Serial No. 50,741. (Cl. 21—148.)



1. An attachment for a vehicle dash, comprising a wind shield, brackets rigidly fastened thereto, and a horizontally extending member pivoted at its ends on the brackets immediately adjacent the bottom of the wind shield to form a ventilator, the brackets extending downwardly below the member for attachment to the dash of the vehicle, said wind shield, bracket and member forming a unitary structure attachable to or detachable from the dash.

2. The combination of a vehicle dash, a wind shield, supporting brackets for the wind shield and holding the latter with its bottom spaced above the dash to provide a ventilating opening, a ventilator in the form of a vane disposed in the opening and having apertured lugs on its ends, apertured members on the brackets, and pivot bolts passing through the apertured lugs and members for frictionally holding the vane in different positions of adjustment, the front and rear edges of the vane being disposed respectively in front of and behind the plane of the wind shield, whereby the opening can be closed when the vane is in one position, the rear edge of the vane being bent into a downwardly inclined longitudinal lip for directing downwardly the air entering the opening.

1,223,120. LIQUID-MEASURING DEVICE. ARTHUR G. STOHN, Jersey City, and FRED LACROIX, Hasbrouck Heights, N. J. Filed June 24, 1915. Serial No. 36,094. (Cl. 215—15.)



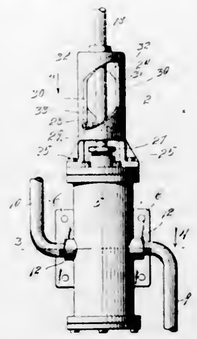
In a liquid measuring device, a receptacle having a cylindrical mouth with its exterior wall screw-threaded, a screw-threaded cap engaging the screw-threaded mouth of the receptacle, an elastic piston secured in the inner end of the cap and fitting into the mouth of the receptacle so that the downward movement of the cap will force the piston into the receptacle to displace the contents thereof, and a funnel removably mounted in the piston with its stem extending into the receptacle in close proximity to the bottom thereof so that the contents of the receptacle displaced by the inward movement of the piston will flow through the stem into the bowl of the funnel.

1,223,121. PROCESS FOR MAKING A NON-ALCOHOLIC BEVERAGE. ALEXANDER L. STRAUS, Baltimore, Md. Filed Feb. 23, 1917. Serial No. 150,329. (Cl. 99—11.)

A process for making a non-alcoholic beverage from fermented malt liquor, consisting in boiling the malt liquor to remove the alcohol and some of the water, adding heated water to the amount of that evaporated; adding salt, hops, gum arabic and sugar during the boiling operation; adding concentrated hops near the close of the boiling operation; rapidly reducing the temperature to approximately four degrees centigrade; adding one half to one ounce of liquid quassia per barrel; adding a suitable quantity of finings while the beverage is being cooled; adding chill proof preparation; adding four commercial size tablets of meta-sulfite of potassium per barrel while the beverage is in storage; permitting the beverage to remain in storage from two to five days; filtering and carbonating the beverage, and drawing it off in packages for the market.

1,223,122. PUMP. FRANK SUBRY, Denver, Colo. Filed May 29, 1916. Serial No. 100,451. (Cl. 103—76.)

1. In a pump, the combination of a cylinder provided with intake and discharge ports, a piston located in said cylinder and having two sets of grooves formed therein, one groove of each set extending from the bottom of the piston to a point near its upper extremity, while the other groove extends from the top of the piston to a point near its lower extremity, and the upper extremity of one groove and the lower extremity of the other groove of one of said sets being curved toward the adjacent groove, and means for rotating the piston during its reciprocation, for the purpose set forth.



2. In a pump, the combination of a cylinder, a piston located in the said cylinder and having grooves formed in its periphery, a member mounted upon top of the cylinder provided with open spaces in its opposite sides, the upper and lower walls of said openings being respectively inclined in reverse directions, and means carried by the stem of the piston adapted to engage said inclined walls during the reciprocation of the said piston for rotating the latter.

3. In a pump, the combination of a cylinder, a piston located in the said cylinder and having grooves formed in its periphery, a member mounted upon top of the cylinder provided with openings in its opposite sides, the upper and lower walls of said openings being inclined, a pin carried by the stem of the piston, and rollers mounted upon the opposite extremities of said pin adapted to engage the said inclined walls during the reciprocation of the piston, for the purpose set forth.

1,223,123. METHOD OF PACKING CATALYTICALLY-USEFUL SUBSTANCES. NATHAN SULZBERGER, New York, N. Y. Filed Sept. 5, 1916. Serial No. 118,409. (Cl. 23—28.)

1. Method for preserving the catalytic activity of a catalyst so as to allow its shipment without loss of its catalytic activity and its use in known amounts which comprises mixing the same with material of a fatty nature solid at ordinary temperatures and subdividing the mass into solid pieces each of which contains known amounts of the catalytic agent.

2. Method for preserving the catalytic efficiency of the reduction-product of the precipitate caused by treating a soluble nickel-compound with sodium-silicate, so that same may be shipped without loss of its use for catalytically hardening material of a fatty and oily nature, which comprises mixing same with material of a fatty and oily nature, which will not destroy its catalytic property and of such a melting point, that this material will be in solid form at ordinary temperature and subdividing the mass into solid pieces each of which contains known amounts of the catalytic agent.

3. Method for preserving the catalytic efficiency of the reduction-product of the precipitate caused by treating a compound of nickel with sodium-silicate, so that same can be shipped without loss of its value for a hydrogenating process, which comprises mixing the same in hardened cottonseed oil, which has such consistency, that it forms a solid at ordinary temperature and subdividing

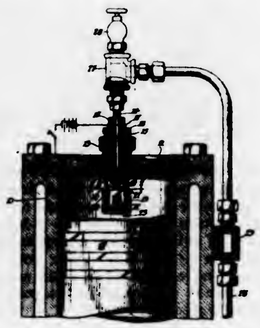
the mass into solid pieces each of which contains known amounts of the catalytic agent.

4. Method for preserving the catalytic efficiency of a catalyst for use in hydrogenating cottonseed oil, so as to allow its shipment without loss of its catalytic activity, which comprises mixing the same with hydrogenated cottonseed oil of such consistency that the same will be solid at ordinary temperature and subdividing the mass into solid pieces each of which contains known amounts of the catalytic agent.

5. Method for increasing the keeping quality of a nickel-catalyst, such as is obtained by precipitating a nickel-compound with sodium-silicate and rendering such precipitate catalytically active, so that such catalyst may be safely stored and shipped without substantial loss of its catalytic efficiency, which comprises mixing such catalyst with a material of a fatty and oily nature hydrogenated by some other amount of a catalytic agent to such degree of consistency, that the same will be in a solid condition at ordinary temperature and subdividing the mass into solid pieces each of which contains known amounts of the catalytic agent.

[Claims 6 to 10 not printed in the Gazette.]

1,223,124. VAPORIZER AND IGNITER FOR INTERNAL-COMBUSTION ENGINES. ARTHUR W. THOMPSON, Ottawa, Ontario, Canada. Filed May 12, 1916. Serial No. 96,973. (Cl. 123—145.)



1. A combined vaporizer and igniter for internal combustion engines including a delivery conduit extending into the combustion chamber and insulated from the wall of the latter, and an electrical resistance element adjacent the inner end of said conduit and having one end electrically connected to said conduit and the opposite end to said wall.

2. A combined vaporizer and igniter for internal combustion engines including a plug adapted to be screwed into the wall of the cylinder, a delivery conduit extending therethrough and insulated therefrom, and an electrical resistance element adapted to be heated by the passage of a current therethrough and having one end connected to said conduit and the opposite end to said plug.

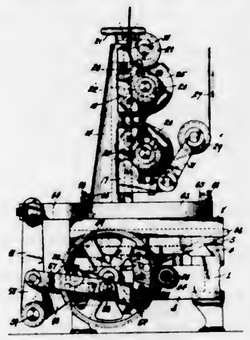
3. A combined vaporizer and igniter for internal combustion engines, including a plug adapted to be screwed into the wall of the engine cylinder, a liquid fuel conduit extending through said plug and insulated therefrom, a member within the cylinder and against which the liquid fuel may impinge from said conduit, and an electrical resistance element for heating said member, one end of said element being connected to said member and the opposite end being connected to said conduit.

4. A combined vaporizer and igniter for internal combustion engines including an annular member disposed within the cylinder, an electrical resistance coil encircled by said member, and means for delivering liquid fuel against the inner surface of the wall of said member.

5. A combined vaporizer and igniter for internal combustion engines, including a plug adapted to be inserted through the cylinder wall, an annular member within the cylinder and supported from said plug and open at the top and bottom, a liquid fuel delivery conduit extending through said plug and adapted to deliver against the inner surface of said member, and a heating coil within said member for vaporizing the liquid on said surface.

[Claims 6 to 8 not printed in the Gazette.]

1,223,125. TENONING-MACHINE. WILLIAM C. TROENDLE, Toledo, Ohio, assignor to The Toledo Wheelbarrow Company, Toledo, Ohio, a Corporation of Ohio. Filed Aug. 28, 1916. Serial No. 117,255. (Cl. 144—203.)



1. In a machine of the class described, a table mounted for angular adjustment, cutter means carried by said table for angular adjustment therewith and having tongue and groove connection with the table to adapt it to be reciprocated relative thereto, said cutter means having a circular base part, a yoke adjustably embracing said base part, and means operable to impart reciprocatory movements to said first means through said yoke.

2. In a machine of the class described, a frame, separate tables carried by said frame for angular adjustment relative thereto and to each other, a work guide mounted on each table, cutter means carried by each table for angular adjustment therewith and for reciprocatory movements transversely thereof, and mechanism operable to impart simultaneous reciprocatory movements to said cutter means.

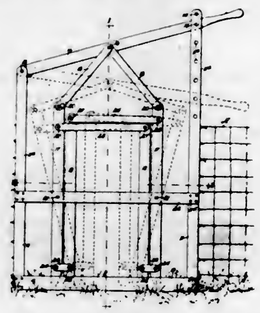
3. In a machine of the class described, a frame, separate tables carried by the frame for angular adjustment relative thereto and to each other, a frame head mounted on each table for angular adjustment therewith and guided thereby for reciprocatory movements transversely of the table, each frame head having a circular base portion, cutter means carried by each frame head, separate yokes rotatably embracing the circular base parts of said frame heads and having arms projecting therefrom, means for adjustably securing the yokes to the frame heads, and mechanism having a rocker member in connection with the arms of both yokes and operable through said yokes to impart reciprocatory movements to the frame heads in any direction for which they may be angularly adjusted.

4. In a machine of the class described, a frame, a base plate mounted for reciprocatory movements on said frame, a table mounted for rotary adjustment on said base plate, a frame head mounted on said table for angular adjustment therewith and for reciprocatory movements transversely thereof, cutter means carried by said frame head, a yoke adjustably connected to said frame head and having an arm projecting transversely therefrom, and means having a rocker member in sliding engagement with said yoke arm and operable to impart reciprocatory movements to said frame head on said table.

5. In a machine of the class described, a frame, a base plate adjustably carried by said frame, means operable to adjust said base plate relative to the frame, a table carried by said base plate for angular adjustment relative thereto, a frame head carried by said table for angular adjustment therewith and for reciprocatory movements transversely thereof, the direction of such reciprocatory movements being changed by an angular adjustment of the table, means adjustably connected to said frame and projecting therefrom transversely of the direction of permissible adjustment of said base plate, and means having a bar projecting loosely through said first means at one side of the frame head and operable when rocked to impart reciprocatory movements to the frame head on said table.

[Claim 6 not printed in the Gazette.]

1,223,126. HOLDING DEVICE FOR LIVE STOCK. JOHN W. TROXELL, Roby, Ill. Filed Dec. 4, 1916. Serial No. 134,904. (Cl. 119—99.)



1. A holding device for live stock, including a supporting structure, approximately upright holding bars movable in said structure toward or from each other to grip or release an animal, upright levers disposed outside of said holding bars and fulcrumed between their ends to rock on horizontal axes, connections between each of said levers at the upper end thereof and the upper end of the opposite holding bar, means at the base of the structure with which the lower ends of said levers are afforded guided movement, means forming a direct connection between each lever at the lower end and the holding bar adjacent thereto, and means to actuate said levers.

2. A holding device for live stock, including a supporting structure, approximately upright holding bars movable in said structure toward or from each other to grip or release an animal, approximately upright levers disposed in said structure outside of said holding bars and fulcrumed between their ends to rock on a horizontal axis, connections between each of said levers at the upper end thereof and the opposite holding bar, means forming a direct connection between each lever at the lower end and the holding bar adjacent thereto, the said levers and bars having guided movement at their lower ends in the said structure, a hand lever above the holding-bars and fulcrumed at one end on said structure at one side of the latter, means to adjustably hold the lever at the opposite side of said structure, and links connected with said hand lever between its ends and diverging therefrom, the lower ends of the links being pivotally secured to the upper ends of the first-mentioned levers.

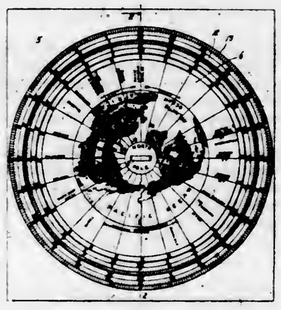
1,223,127. HOLDER FOR WHETSTONES. ARTHUR L. WALKER, Hoopeston, Ill. Filed Oct. 16, 1916. Serial No. 125,961. (Cl. 51—16.)

A holder of the character specified, comprising a plane body portion for receiving a stone and having means at its opposite ends for engaging the stone to hold the same on the body, said holder having at one end means for securing the holder to a fixed support with the opposite end from the said securing means inclining outwardly from the fixed support, said securing means comprising flanges extending rearwardly from the body and of greatest width at their inner end and having outwardly turned portions



at their free edges provided with openings for receiving screws or the like to secure the holder in place.

1,223,128. LONGITUDE AND TIME CHART. ROBERT J. WALLACE, Denver, Colo. Filed June 17, 1916. Serial No. 104,336. (Cl. 35—3.)



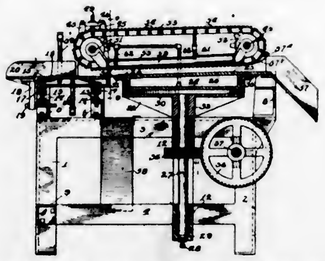
1. A chart including three connected plates, two of which are arranged in opposite sides of the third, the two outer plates being connected to rotate together and independently of the intermediate plate, the two outer plates representing respectively the Northern and Southern Hemispheres and containing appropriate data, while the inner plate represents on each side thereof the face of a clock.

2. A chart including three plates connected in cooperative relation, two of which are arranged on opposite sides of the third, the two outside plates being connected to rotate in unison independently of the third plate, the two outer plates representing respectively the Northern and Southern Hemispheres and containing appropriate data, while the inner plate contains data on each side representing the face of a 24-hour clock, each of the outer disks also containing the same data arranged adjacent the data of the intermediate plate.

1,223,129. SKINNING-MACHINE. ROBERT J. WATSON and ARTHUR E. OZOUF, Chicago, Ill., assignors to The Allbright-Nell Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 30, 1915. Serial No. 5,220. (Cl. 17—13.)

1. In a machine of the class described, an adjustable table to receive material thereon, heating elements therein to heat the material, feeding mechanisms for the material, a horizontally rotatable knife adapted to sever a

skin from the material fed forwardly on said table by said feeding mechanisms, and means adjusting said table vertically with respect to said knife.



2. In a device of the class described, a table, means for adjusting the same vertically, feeding means, cleaning members associated therewith, a horizontally rotatable knife adapted to sever skins from the material fed along said table into the machine by said feeding means, and means driving said knife and feeding means synchronously.

3. In a machine of the class described, a horizontally rotatable knife adjustable in various horizontal planes of rotation, automatically adjustable feeding means for feeding material into the field of operation of said knife, and heating elements associated with said knife and with said feeding means and movable therewith adapted to maintain the material at a relatively high temperature in the field of operation of said machine.

4. In a device of the class described a horizontally rotatable vertically adjustable knife, adjustable mechanism for feeding material into the field of operation thereof, and a plurality of heating elements associated with said knife and mechanism and movable therewith to maintain the material at a predetermined temperature.

5. In a device of the class described, a frame, a knife revolubly mounted thereon, adjustable mechanism feeding material into the field of operation of said knife, and means movable therewith for heating the material as it moves into and out of the field of said knife.

[Claims 6 to 11 not printed in the Gazette.]

1,223,130. DEVICE FOR SUSPENDING LIGHT-REFLECTING BOWLS. EDWIN L. WHITE, Brooklyn, N. Y., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Dec. 14, 1916. Serial No. 136,828. (Cl. 240—111.)



1. A device of the character described comprising a ring having a bottom flange, spaced arms secured to said flange and projecting therefrom, gripper fingers for connecting said device to a shade or dome, and means for connecting said arms with a bowl.

2. A device of the character described comprising a ring having an outwardly turned bottom flange, a plurality of spaced arms secured to said flange projecting therefrom and each provided on its free end with an eye, gripper fingers for connecting said device to a shade or dome, and means for connecting said arms with a bowl.

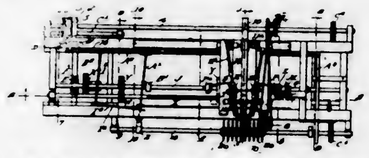
3. A device of the character described comprising a ring having an outwardly turned and downwardly inclined bottom flange, a plurality of spaced arms secured to said flange projecting therefrom and each provided at its free end with an eye, gripper fingers for connecting said device to a shade or dome, links engaging the eyes on said arms, and connecting the same with a bowl.

4. A device of the character described comprising a ring having a plurality of spaced vertical slots, and an outwardly turned bottom flange, a plurality of spaced arms secured to said flange and projecting therefrom, the upper ends of said arms passing through said slots in the ring and bent upwardly and outwardly forming gripper fingers for connecting the device to a shade or dome, and means for connecting said arms with a bowl.

5. A device of the character described comprising a ring of flat metal having a plurality of spaced vertical slots and an outwardly turned bottom flange, a plurality of spaced arms secured to said flange with one end projecting therefrom and provided with an eye, the other end of each arm passing through said slots in the ring and bent upwardly and outwardly forming gripper fingers for connecting the device to a shade or dome, and means for connecting said arms to a bowl.

[Claims 6 and 7 not printed in the Gazette.]

1,223,131. SAW-FILING MACHINE. FRENCH WILLIAMS, Little Rock, Ark., assignor of one-half to John Hogan, Little Rock, Ark. Filed July 27, 1915. Serial No. 42,133. (Cl. 76—32.)



1. A gin saw filing machine, comprising in combination a frame, a saw carrying shaft or mandrel supported by said frame, a plurality of saws carried by said shaft, means for continuously rotating said shaft, a file carriage and filing means thereon slidably mounted on the frame, an operating means for mutually driving the saw shaft, moving the carriage and the filing mechanism, means for raising and lowering the files, means for preventing the files from hanging on top of the saws while being lowered, and means for automatically moving the file carriage and filing mechanism from one saw to the next adjacent saw.

2. A gin saw filing machine, comprising in combination a frame, a gin saw carrying shaft or mandrel supported thereon, a plurality of gin saws mounted on said shaft or mandrel, a carriage slidable longitudinally on said frame, saw filing mechanism mounted on said carriage, means for mutually driving the saw mandrel and filing mechanism and revolving and reciprocating the same respectively, means for automatically moving the carriage longitudinally, clutch means to stop automatic movement of the carriage, and means operated by said carriage moving means to raise the filing mechanism out of engagement with the saws prior to sliding of the carriage.

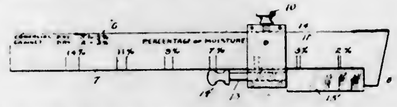
3. A gin saw filing machine, comprising in combination, a frame, a saw carrying mandrel having a series of saws thereon and supported by said frame, a carriage mounted to slide longitudinally on said frame, a saw filing mechanism operably mounted on said carriage, means for revolving the saw mandrel and reciprocating the file mechanism, and means for lifting the file carriage out of engagement with the saws to permit longitudinal movement of the carriage, means for lowering the files, and automatic means for preventing files from hanging on top of saws during such lowering movement.

4. A gin saw filing machine, comprising in combination a frame, a saw mandrel supported on said frame and carrying a series of circular saws, a carriage mounted on the frame and slidable longitudinally thereon, a filing mechanism on said carriage, a drive shaft common to the saw mandrel and filing mechanism and for revolving the saw mandrel and reciprocating the filing mechanism, means for sliding the carriage longitudinally, means for periodically lifting said carriage, and means carried by the carriage moving means for engaging and operating the carriage lifting means.

5. A gin saw filing machine, comprising in combination a frame, a saw mandrel supported thereon and carrying a series of spaced apart gin saws, a carriage mounted on said frame and movable longitudinally thereon, a filing mechanism carried by said carriage, a main drive shaft, means for sliding the carriage longitudinally of the frame operable from the main drive shaft and comprising a screw shaft adapted to engage the file carriage, a carriage lifting mechanism mounted on said carriage and operable from a counter-shaft, and adapted to throw the filing mechanism into and out of engagement with the saws.

[Claims 6 to 10 not printed in the Gazette.]

1,223,132. LUMBER-TESTER. CHARLES J. ZIGLER and WILLIAM P. HOLDEN, Chicago, Ill. Filed May 11, 1914. Serial No. 837,679. (Cl. 33—111.)



1. A new article of manufacture, comprising a lumber tester consisting of a plate having markings thereon in pairs, the marks of each pair being separated a distance corresponding to the amount that a test-piece having a standard dimension and which originally contained a given percentage of moisture, will shrink in drying, the different pairs being for different percentages which are indicated in each case by suitable markings adjacent the respective pairs, and means for measuring the shrinkage of a test piece and for comparing the measurement with such graduations, in order to determine the percentage of moisture in the piece tested.

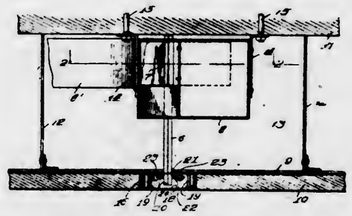
2. A lumber tester comprising a bar having a plurality of measurements marked thereon, each of such measurements having a numeral associated therewith, representing the percentage of moisture which a standard sized test piece originally contained if such test piece, upon drying, shrank an amount corresponding to the respective measurement, and means for measuring the shrinkage of a test piece and for comparing such shrinkage with the respective measurements of the bar.

3. A lumber tester comprising a square having a plurality of graduations marked in pairs adjacent a longitudinal edge on one arm thereof, the marks of each pair being separated a distance corresponding to the amount that a test-piece having a standard dimension and which originally contained a given percentage of moisture, will shrink in drying, the different pairs being for different percentages which are indicated in each case by suitable markings adjacent the respective pairs, a slide on said arm, means for locking said slide, an adjustable pin in said arm, arranged adjacent to the edge of the arm having the graduations thereon, and means for locking said pin, the arrangement being such that the shrinkage of a test piece may be indicated by the protruding portion of the pin, and this portion of the pin be moved along the arm to compare its length with the distance separating the pairs of graduations.

4. A scale for indicating percentages of moisture in wood, said scale comprising a body having a series of distances varying in length marked thereon, each distance being defined by two marks denoting the limits of that distance, and each distance being marked by a numeral representing percentage of moisture originally in a standard test piece which shrinks an amount corresponding to the distance so marked.

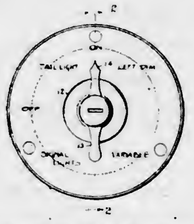
1,223,133. DAMPER-LOCK. JOSEPH ALSFASSER, Chicago, Ill. Filed May 11, 1916. Serial No. 96,744. (Cl. 126—295.)

1. In combination, a duct; a damper spindle disposed through and journaled in said duct; a rigidly mounted member having a perforation therein through which the damper spindle extends; a plate substantially parallel with the outer surface of said member and having a perforation therethrough in which the damper spindle extends; a disk on the damper spindle fixed to rotate therewith and disposed between said member and plate; and screws extending through said plate, threaded in said member and clamping the disk for holding the latter and damper spindle against rotation.



2. In combination, a duct; a cup mounted at one side of the duct with its open side directed away from said duct; a damper spindle extending through the duct and into the cup; a plate in the cup having an opening therein engaging the damper spindle; a disk between the bottom of the cup and plate fixed on the damper spindle to turn with the latter; means securing the plate to the cup and clamping the disk between the plate and cup; and a lid secured on the cup closing the latter.

1,223,134. ELECTRIC-LIGHTING SYSTEM. SAMUEL F. ARBUCKLE, Indianapolis, Ind. Filed Jan. 24, 1916. Serial No. 74,058. (Cl. 171—97.)



1. The combination with an automobile, electric headlights therefor, and an electric lighting system for lighting said lights, of means for controlling the current in said circuit which in one position can dim one of said headlights without dimming the other, and when further operated, will dim both of said headlights.

2. The combination with an automobile, electric headlights therefor, and an electric lighting system for lighting said lights, of means for controlling the current in said circuit which in one position can dim one of said headlights without dimming the other, and when further operated, will gradually dim both of said headlights.

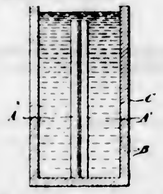
3. The combination with an electric lighting system, and an ignition system for an internal combustion engine, of a single switch construction for controlling the operation of said systems, means for locking said switch from operation when the ignition system is not in operation, and a key insertible in said switch construction for unlocking said switch construction and at the same time causing the operation of the ignition system.

4. The combination with an automobile, electric headlights therefor, and an electric circuit for said lights, of a switch for controlling the current, which switch includes a resistance unit arranged so that the current of both headlights will pass through said resistance unit and be gradually dimmed as the switch is operated and the portion of the resistance unit through which the current passes is gradually increased.

5. An electric lighting system including a plurality of lights, a resistance coil with one end thereof in electrical communication with one of said lights and the other end in electrical communication with the other of said lights, and means through which the current comes arranged to engage the resistance coil near one end thereof so that current from one light will pass through the major portion of said resistance coil and be dimmed while the other light will be relatively brilliant.

[Claims 6 to 15 not printed in the Gazette.]

1,223,135. MULTIPLE-PLATE REINFORCED GLASS AND PROCESS OF PRODUCING SAME. AREL BARDIN, Paris, France. Filed Apr. 25, 1914. Serial No. 834,371. (Cl. 49—81.)



1. The herein-described process of making multiple-plate reinforced glass, which consists in applying to a glass plate superimposed layers of gelatin, celluloid, gelatin and varnish; applying to another plate a layer of varnish; immersing the plates after the varnish hardens in a bath of solvent; pressing the varnished sides of the plates together while in the bath; and finally pressing the plates together out of the bath to force out solvent from between the plates.

2. A multiple-plate reinforced glass comprising a plate of glass having superimposed layers of gelatin, celluloid, gelatin and varnish; and a plate of glass having a layer of varnish united with the layer of varnish of the first-mentioned plate.

1,223,136. GEAR-SHIFTER. CHARLES B. BAUGHN, Oilfields, Cal. Filed Nov. 15, 1916. Serial No. 131,407. (Cl. 74—58.)



1. The combination with the intake manifold of an internal combustion engine, a drive shaft, and transmission gears; of means actuated by the suction in said manifold for shifting said gears.

2. The combination with the intake manifold of an internal combustion engine, a drive shaft, and transmission gears; of a plurality of reciprocating members in operable connection with said gears, and means in operable connection with said manifold for actuating said members by the suction in said manifold.

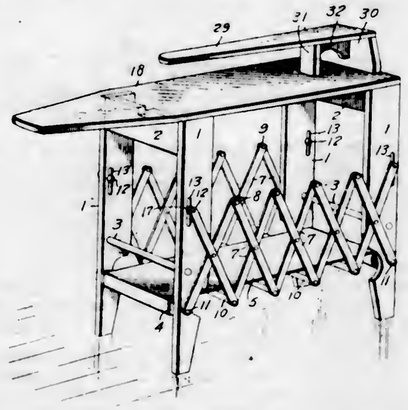
3. The combination with the intake manifold of an internal combustion engine, a drive shaft, and transmission gears; of a plurality of cylinders, pistons therein in operable connection with said gears, and means for exhausting air from either end of either cylinder through the medium of said manifold to correspondingly move either of said pistons to shift said gears.

4. The combination with the intake manifold of an internal combustion engine, a drive shaft, and transmission gears; of a plurality of cylinders, pistons therein in operable connection with said gears, means for exhausting air from either end of either cylinder through the medium of said manifold to correspondingly move either piston to shift said gears, and valve controlled means for admitting air through either piston to its cylinder at the end opposite to that from which the air is being exhausted.

5. The combination with the intake manifold of an internal combustion engine, a drive shaft, and transmission gears; of a plurality of cylinders, pistons therein in operable connection with said gears, means for exhausting air from either end of either cylinder through the medium of said manifold to correspondingly move the respective piston to shift said gears, and means for maintaining each of said cylinders neutral in the piston operation of the other cylinder.

[Claims 6 to 8 not printed in the Gazette.]

1,223,137. IRONING-BOARD. WILHELM B. BEHNKE, Ashland, Wis. Filed Aug. 24, 1915. Serial No. 47,065. Renewed Sept. 27, 1916. Serial No. 122,559. (Cl. 68—10.)



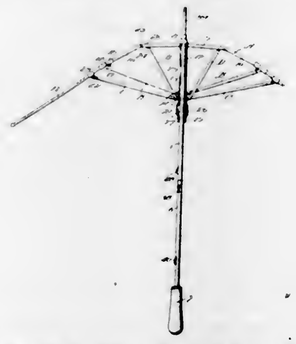
1. An ironing table, comprising a pair of open end frames, each of the said frames comprising a pair of laterally spaced legs and cross bars connecting the legs, a spring actuated roller journaled between the legs of one frame, a strip of flexible material winding on the roller and connected to a cross bar of the other frame, lazy tongs connecting the adjacent legs of the pairs for permitting the end frames to be moved toward and from each other, and an ironing board detachably hinged to one end frame and resting on the other.

2. An ironing table, comprising a pair of open end frames, each of the said frames comprising a pair of laterally spaced legs and cross bars connecting the legs, a spring actuated roller between the legs of one frame, a strip of flexible material winding on the roller and connected to a cross bar of the other frame, lazy tongs connecting the adjacent legs of the pairs for permitting the end frames to be moved toward and from each other, and an ironing board detachably hinged to one end frame and resting on the other.

3. In a device of the character specified, a supporting frame comprising end members movable toward and from each other, lazy tongs at opposite sides of the frame connecting the end members thereof, transverse rods connecting corresponding members of the lazy tongs upon opposite sides of the frame, a flexible strip supported upon the transverse rods and having connection at its ends with the respective end members of the frame, and means in the length of the flexible strip for tensioning the same and automatically taking up slack.

4. In a device of the character specified, a supporting frame comprising end members movable toward and from each other, each member embodying transversely spaced uprights, a cross bar connecting the uprights of one member and a spring roller disposed between the uprights of the other member, a flexible strip attached at one end to the cross bar and connected at its opposite end to the spring roller and adapted to wind thereon, lazy tongs at opposite sides of the flexible strip and frame and connecting uprights upon the same side of the frame, and transverse rods below the flexible strip and connecting corresponding members of the oppositely disposed lazy tongs.

1,223,138. FOLDING UMBRELLA. EUGENE STANLEY BLYTHE, Allen, Kans. Filed Mar. 18, 1915. Serial No. 15,215. (Cl. 135—25.)



1. An umbrella including a casing having a runner slidable thereon, a second runner slidable on the casing below the first runner and adapted to be maintained in raised or lowered position at will, a plurality of sectional ribs comprising each an inner section, an intermediate section, and an outer section, said inner rib sections being pivotally connected at their inner ends to the casing, a plurality of stretchers each pivotally connected at its inner end to said second runner and near its outer end to one of the inner rib sections near the outer end of the latter, a plurality of braces pivotally connected each at its inner end to the second runner, ears carried by the adjacent ends of the intermediate and end sections of each rib and being pivotally connected to the outer end of one of the braces, a plurality of struts each pivotally connected at its inner end to said second runner and at its outer end to one of the outer rib sections intermediate the ends thereof, said intermediate rib sections being pivotally connected each at its inner end to the outer end of one of the stretchers, and means for limiting the downward movement of said runner prior to the movement of second said runner into ultimate lowered position.

2. An umbrella including a casing having a tubular runner slidable thereon, a second runner slidable on the casing below the first runner and adapted to be maintained in raised and in lowered position at will, a plurality of sectional ribs comprising each an inner section, an intermediate section, and an outer section, said inner rib sections being pivotally supported at their inner ends on the casing, a plurality of stretchers each pivotally connected at its inner end to said second runner and near its outer end to one of the inner rib sections, the intermediate rib sections being each pivotally connected near its inner end to the outer end of one of the stretchers, a plurality of braces each pivotally connected at its inner end to the first runner and at its outer end to the adjacent ends of the outer and intermediate sections of one of the ribs, a plurality of struts, each pivotally connected at its inner end to said second runner and at its outer end to one of the outer rib sections intermediate the ends thereof, and means for limiting the downward movement of the first runner prior to the movement of said second runner into ultimate lowered position.

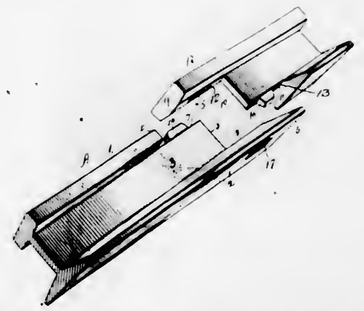
3. An umbrella including a support having a ring movable longitudinally thereof, a second ring movable longitudinally of the support below the first ring and adapted to be maintained in raised or lowered position at will, a plurality of sectional ribs including each an inner section, an intermediate section, and an outer section, said inner rib sections being pivotally supported by the support at their inner ends, a plurality of stretchers each pivotally connected at its inner end to the second ring and near its outer end to one of the inner rib sections, said stretchers being pivotally connected at their outer ends each to the inner end of one of the intermediate rib sections, a plurality of braces each pivotally connected at its inner end to the first said ring and being pivotally connected at its outer end to the adjacent ends of the intermediate and end sections of one of the ribs, a plurality of struts each pivotally connected at its inner end to said second ring and at its outer end to one of the outer rib sections, and means for limiting the downward movement of the first said ring prior to the movement of said second ring into ultimate lowered position.

4. An umbrella including a support, a plurality of sectional ribs including each an inner, an intermediate, and an outer section, said inner sections being pivotally connected to the support at a fixed point, stretchers to each of which near its outer end the adjacent end of the inner and intermediate sections of one of the ribs are pivotally connected, struts to the outer ends of each of which the outer section of one of the ribs is pivotally connected at a point intermediate its ends, braces to each of which near its outer ends the adjacent ends of the intermediate and outer sections of one of the ribs are pivotally connected, an element movable longitudinally of the support to which the braces are pivotally connected, a second element also movable longitudinally of the support and maintainable at will in extended or retracted position to which the stretchers and struts are pivotally connected, and means for limiting the movement of the first said element prior to the movement of said second element into ultimate retracted position.

5. An umbrella including a support, a plurality of sectional ribs including each an inner, an intermediate and an outer section, said inner sections being pivotally connected to the support at a fixed point, stretchers to each of which the inner and intermediate sections of one of the ribs are pivotally connected, struts to each of which the outer section of one of the ribs is pivotally connected, braces to each of which the intermediate and outer sections of one of the ribs are pivotally connected, means whereby the braces near their inner ends may be moved longitudinally with respect to the support, means movable longitudinally of the support into extended and retracted position and adapted to be maintained in each position at will, second said means adapted to move the stretchers and struts coincidentally therewith, and means for limiting the movement of the first said means prior to the movement of the second said means into ultimate retracted position.

[Claims 6 to 8 not printed in the Gazette.]

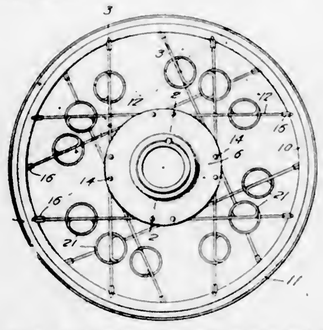
1,223,139. RAIL-JOINT. MILAN BOGDANOVIĆ, Cleveland, Ohio. Filed Feb. 18, 1915. Serial No. 9,111. (Cl. 239—8.)



A locking joint for the meeting ends of railway rails comprising three unbroken transverse abutments terminat-

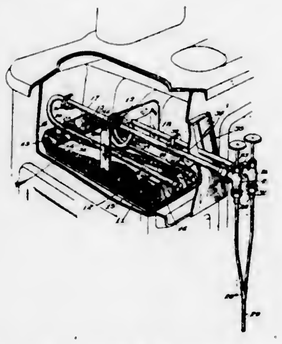
ing the head, foot and webs of the rails; longitudinal bearing surfaces extending between said abutments; a longitudinally tapered drainage slot in the foot and a tapered wedging boss upstanding from the web of one rail adjacent the end; and a longitudinal tapered recess in the head and tapered stud depending from the web of the adjacent rail-end; whereby the longitudinal wedging action will draw the abutments together and insure clearance for drainage through the slot in the rail-foot.

1,223,140. WHEEL. HAMILTON J. BOUDREAUX, Morgan City, La., assignor of one-half to Joseph H. Loeb, Morgan City, La. Filed June 16, 1915. Serial No. 34,410. (Cl. 152—50.)



In a wheel, the combination with a hub and a rim, of spokes connecting said hub to the rim, each spoke having intermediate its ends resilient cushioning mechanism for cushioning the hub against the rim, the spokes being tangential to the hub and being arranged in series, one series at each face of the wheel, and the members of each series being in pairs and the members of each pair extending in opposite directions, and the arrangement at the opposite faces of the wheel being similar and with the spokes at one face in advance of the corresponding spokes at the other face, said hub having at each end a flange adjustable angularly of the hub and to which the adjacent series of spokes is connected, and a tensioning device connecting each spoke to the rim, each of said devices comprising a sleeve into which the spoke is threaded, each sleeve having at its outer end a head whose inner surface is rounded, the rim having an opening for receiving the head and reduced at its inner end to provide a hold for the head.

1,223,141. OIL-BURNER. WILLIAM H. BOYD, Chicago, Ill. Filed Jan. 7, 1916. Serial No. 70,707. (Cl. 158—63.)



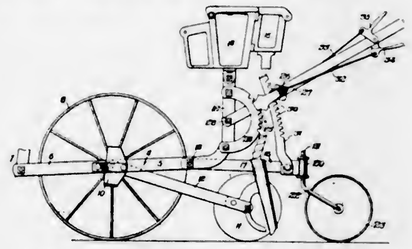
1. A burner of the class described, comprising a burner-unit, the upper portion or leg whereof constitutes a generator-portion while the lower leg constitutes a burner-portion and is provided with a jet-opening, an inclosed air-chamber provided with upwardly extending end walls having notches in which the burner-unit is mounted, the air-chamber being provided with an air-inlet in the bottom and with air-outlets in the top, the air-outlets in the top being arranged on opposite sides of the burner-portion and provided with upwardly presented deflecting walls adapted to direct the air-currents toward the jet-opening of the burner-portion, and a yoke member secured to the sides of the air-chamber and extending transversely thereof across the burner-unit so as to maintain the latter in position on the end walls of the air-chamber.

2. A burner of the class described, comprising an inclosed air-chamber, the bottom whereof is provided with an air-inlet at an intermediate point while the top is provided with a plurality of air-outlets arranged in pairs at opposite ends of said air-chamber, a pair of burner-units mounted on said air-chamber in spaced relation with the top wall thereof, said burner-units having their burner-portions arranged at opposite ends of the air-chamber and intermediate of the pair of air-outlets at the respective ends, upwardly presented deflectors adjacent the air-outlets whereby the outflowing air is deflected toward the burner-portions, and means secured to the sides of the air-chamber and extending transversely thereof in spaced relation with the top wall of said air-chamber, said means being provided with recesses for the reception of the generating-portions of the burner-units whereby the latter are removably held on the air-chamber.

3. A burner of the class described, comprising a plurality of adjacently arranged burner-units, an inclosed air-chamber on which the burner-units are mounted, the bottom of the air-chamber being provided with an air-inlet at an intermediate point while the top is provided with a plurality of air-outlets arranged on opposite sides of the burner-portions of said units, the top wall of the air-chamber being provided with an oil-receiving channel extending diagonally from end to end of the chamber beneath the parallelly arranged burner-units, and means secured to the air-chamber and extending across the burner-units whereby the latter is removably held in position.

4. A burner of the class described, comprising a base-portion formed to provide an air-chamber and provided with a bottom having an air-inlet at an intermediate point while the top is provided with air-outlets arranged in pairs at opposite ends of the base-portion, the end walls of said base-portion being extended above the top to constitute end walls for the air-outlets and provide burner-supports, a pair of burners arranged parallel with each other and supported by said end walls in spaced relation with the top of said base-portion, and means secured to said base-portion and extending across the burners whereby the latter are removably held in position on said end walls.

1,223,142. GRAIN-DRILL. THOMAS BRENNAN, Jr., Moline, Ill., assignor to Monitor Drill Company, Minneapolis, Minn., a Corporation of Minnesota. Filed May 6, 1915. Serial No. 26,313. (Cl. 111—36.)



1. A tillage implement provided with an articulated frame, tillage devices carried by one of the members of the frame, a hand lever pivoted to the member of the frame which carries the tillage devices, of locking means for holding the lever in a selected position of angular adjustment with respect to the frame to which it is pivoted to permit of a lifting of said frame section and tillage devices by a lifting movement of the lever, and locking means on the other section of the frame for holding the lever at different positions of vertical elevation, substantially as described.

2. A tillage implement provided with an articulated frame, tillage devices secured to one of the sections of the frame, supporting wheels for each of the sections of the frame, a hand lever pivoted to the section of the frame which carries the tillage devices, locking means for holding the hand lever in different positions of angular adjustment with respect to the frame section to which the lever is pivoted to permit of a lifting of said frame section and tillage devices by a lifting movement of the lever, and locking means on the other section of the frame for holding the lever in different positions of vertical elevation, substantially as described.

3. In an implement of the class described, an articulated frame consisting of front and rear sections pivoted together, furrow openers carried by the front section, a carrying wheel journaled to the front section, a lever pivoted to the front section, a rack segment secured to the front section, locking means on the lever for engaging with the rack to hold the lever in different positions of angular adjustment with respect to the front frame section, to permit of a lifting of said section and tillage devices by a lifting movement of the lever supporting wheels on the rear frame section, a rack secured to the rear frame section, and locking means on the lever for engaging with the rack to hold the lever in different positions of vertical elevation, substantially as described.

4. In an implement of the class described, the combination of a front frame section consisting of side rails terminating at the rear ends in supporting standards, seeding mechanism carried by the standards, a lever pivoted to each of the standards, locking means for each lever for holding the same in a selected position of angular adjustment with respect to its standard to permit of a lifting movement of the front frame and associated parts by a lifting movement of the lever, a rear frame pivoted to the front frame, supporting wheels for the rear frame, and means coöperating with each of the levers for holding the lever in selected positions of vertical elevation, substantially as described.

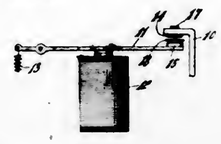
5. In an implement of the class described, the combination of a front frame section consisting of side rails terminating at the rear ends in supporting standards, seeding mechanism carried by the standards, a lever pivoted to each of the standards, locking means for each lever for holding the same in a selected position of angular adjustment with respect to its standard to permit of a lifting movement of the front frame and associated parts by a lifting movement of the lever, a rear frame pivoted to the front frame, supporting wheels for the rear frame, a rack for each lever, upstanding from the rear frame, and locking means on each of the levers for engaging with the corresponding rack for holding the levers in selected positions of vertical elevation, substantially as described.

[Claim 6 not printed in the Gazette.]

1,223,143. VIBRATOR-CONTACT. STEPHEN F. BRIGGS, Milwaukee, Wis., assignor to Briggs & Stratton Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 12, 1914. Serial No. 866,232. (Cl. 175—349.)

1. An electrical vibrating contact means, comprising a pair of contact members one of which is movable with relation to the other, and a loose third contact member therebetween capable of unrestrained turning movement to change the position of its contacting surface incident to the movements of the movable contact member.

2. An electrical vibrating contact device, comprising a pair of coöperating contact members one of which is movable with relation to the other and one of which is positioned above the other, and a third contact member loosely mounted on the lower contact member and capable of freely turning thereon and adapted to contact with the upper contact member.



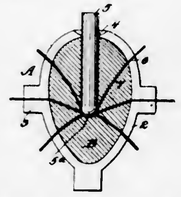
3. An electrical vibrating contact device comprising a pair of coöperating contact members one positioned above the other and one movable with relation to the other, and an intermediate contact member loosely seated on the lower contact member to turn and rock thereon for changing the position of its contact surface incident to the movements of the movable contact member.

4. An electrical contact device, comprising a pair of contact members, one of which is movable with relation to the other, an insulating pin on one contact member and a third contact member positioned between the pair of contact members and loosely mounted on the insulating pin.

5. An electrical contact device, comprising a pair of contact members one of which is movable with relation to the other, an insulating pin on one contact member, a third contact member positioned between the said contact members and loosely mounted on the insulating pin, one of the first mentioned contact members having a convex contact surface.

[Claims 6 to 11 not printed in the Gazette.]

1,223,144. PROCESS OF MAKING MEDICATED NEST-EGGS. JOHN GUIN BURNS, Pulaski, Tenn., assignor to Sol Cohn, Seymour A. Isaacs, Cecil Appleby, and Thomas B. Carter, Pulaski, Tenn. Filed Aug. 2, 1916. Serial No. 112,671. (Cl. 25—1.)



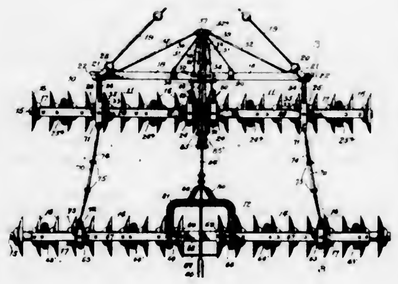
1. The process of making nest eggs, which consists in shaping two halves of the egg in separate mold sections, arranging flexible wires in crossing relation on one of the sections, bringing the sections together, inserting a chamber-molding plunger into the mold to a point beyond the crossing of the wires, whereby the latter are bent around the advancing plunger, removing the plunger, whereby a chamber is left in the body of the molded egg, and pulling the wires out of the egg to leave capillary passages.

2. The process of making a nest egg, which consists in molding in the body of the egg while plastic, a plurality of crossing wires, forcing a plunger into the body of the egg while plastic, to a point beyond the crossing of the wires, whereby the latter are deformed by the plunger, removing the plunger, whereby a chamber is left in the body of the egg, and longitudinally pulling the wires out of the body of the egg, whereby each wire leaves passages extending from opposite sides of the chamber to the surface of the egg.

1,223,145. DOUBLE DISK HARROW. WILLIAM W. CAMERON, La Crosse, Wis., assignor to La Crosse Plow Co., La Crosse, Wis., a Corporation of Wisconsin. Filed July 9, 1914. Serial No. 849,866. (Cl. 55—83.)

1. In tandem harrows, the combination of front and rear harrows, each comprising a pair of members capable

of being relatively angled, each member comprising a gang of disks, a draft-bar at the front of the front harrow draft-connections between the outer portions of said bar and the outer portions of the members of the front harrow, draft-connections at the sides of the harrow between the front and rear members, a lever for angling the members, and connections between said lever and all of the members for conjointly shifting the inner ends of the members of the front harrow into rearwardly converging relation and the members of the rear harrow into forwardly converging relation.



2. In tandem harrows, the combination of front and rear harrows, each comprising a pair of members capable of being relatively angled, each comprising a gang of disks, a draft-bar at the front of the front harrow, longitudinally extending draft-links between the sides of the front and rear members respectively, a lever for angling the members, and connections between said lever and the inner ends of all of the members for simultaneously angling the members of the front and rear harrows into convergent relation.

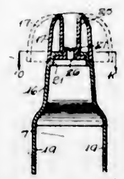
3. In tandem harrows, the combination of front and rear harrows, each comprising a pair of members capable of being relatively angled, each member comprising a gang of disks, a draft-bar at the front of the front harrow, draft-links between the outer ends of the draft-bar and the sides of the members of the front harrow, draft-links between the sides of the members of the front and rear harrows, a lever for angling the members, and link-connections between the lever and the inner ends of all the members for simultaneously shifting them into and out of angled positions.

4. In tandem harrows, the combination of front and rear harrows, each comprising a pair of members capable of being relatively angled, each member comprising a gang of disks, a draft-connection at the front of the front harrow, operatively connected to both of the harrows, a vertically swinging lever pivotally sustained in front of the front harrow members and extending rearwardly from its pivot to the rear of said front members, and connections between said lever and all of the members for shifting the members of the front harrow into a rearwardly converging position and the members of the rear harrow into forwardly converging position.

5. In tandem harrows, the combination of front and rear harrows, each comprising a pair of members capable of being relatively angled, each member comprising a gang of disks, a draft connection at the front of the front harrow, operatively connected to both of the harrows, a vertically swinging lever for angling the members pivotally sustained in front of the front harrow members and extending rearwardly from its pivot to the rear of said front members, link-connections pivoted to said lever and to the members of the front harrow, and oppositely working link-connections pivoted to said lever and to both of the members of the rear harrow, whereby all of the gangs will be simultaneously shifted by said lever.

[Claims 6 to 35 not printed in the Gazette.]

1,223,146. TURN-BUTTON FASTENER. FRED S. CARR, Brookline, Mass., assignor to Carr Fastener Company, Cambridge, Mass., a Corporation of Maine. Filed Oct. 23, 1916. Serial No. 127,056. (Cl. 24—221.)



1. A turn-button fastener comprising a shank formed to enter a buttonhole and having an attaching base at its inner end, and a fixed polygonal projection at its outer end, the sides of which face outwardly, and a button composed of an oblong flexible inverted cup pivoted to the shank, the mouth of said cup receiving said projection and having resilient inwardly facing side portions adapted to yieldingly engage and have elongated contact with opposite sides of said projection to yieldingly confine the button in different positions relatively to the shank.

2. A turn-button fastener comprising a shank formed to enter a buttonhole and having an attaching base at its inner end, and a fixed polygonal projection at its outer end, the sides of which face outwardly, and an oblong cupped sheet metal button pivoted to the shank and having slots subdividing its margin into resilient inwardly facing portions adapted to yieldingly engage and have elongated contact with opposite sides of said projection to yieldingly confine the button in different positions relatively to the shank.

3. A turn-button fastener comprising a shank formed to enter a buttonhole and having an attaching base at its inner end, and a fixed polygonal projection at its outer end, the sides of which face outwardly, an oblong button having resilient inwardly facing portions adapted to yieldingly engage and have elongated contact with opposite sides of said projection, and a pivotal connection between said shank and button.

4. A turn-button fastener comprising a hollow sheet metal shank formed to enter a buttonhole and having an attaching base at its inner end, and a hollow polygonal projection at its outer end, the sides of which face outwardly, and an oblong button pivoted to the shank and having resilient inwardly facing portions adapted to yieldingly engage and have elongated contact with two of said sides to yieldingly confine the button in different positions relatively to the shank.

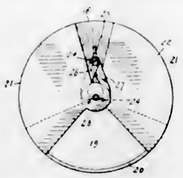
5. A turn-button fastener comprising a hollow sheet metal shank formed to enter a buttonhole and having an attaching base at its inner end, and a hollow polygonal projection at its outer end, the sides of which face outwardly, said projection being provided with a central bearing, an oblong cupped sheet metal button having resilient inwardly facing portions adapted to yieldingly engage and have elongated contact with said sides, and a stud engaged with said button and rotatable in said bearing to pivotally connect the button with the shank.

[Claims 6 to 8 not printed in the Gazette.]

1,223,147. SHUTTER FOR CINEMATOGRAPHIC APPARATUS. AUGUST CHRONIK and LOUIS CHRONIK, New York, N. Y. Filed June 7, 1916. Serial No. 102,247. (Cl. 88—19.3.)

1. A shutter for cinematographic cameras, comprising a rotary shaft, a disk fixedly attached thereto having an opening, two leaves oscillatably mounted upon said shaft for controlling said opening, a member shiftably disposed upon said shaft, and a connection between said member and said leaves for actuating the latter upon shifting said member.

2. The combination with a camera casing, of a shutter shaft rotatably mounted therein, a disk fixedly attached to said shaft having an opening, two leaves oscillatably mounted upon said shaft for controlling said opening, a member shiftably disposed upon said shaft, a connection between said member and said leaves for actuating the latter upon shifting said member, and operating means extending through said casing and in engagement with said member for manually operating said member.

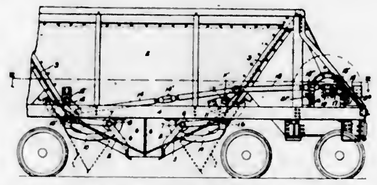


3. A shutter for cinematographic cameras, comprising a rotary shaft, a disk fixedly attached thereto having an opening, two leaves oscillatably mounted upon said shaft for controlling said opening, a member shiftably disposed upon said shaft, a slide movable in a radial direction on said disk, a link connecting said slide with each leaf, and a link connecting said slide with said shiftable member, whereby said leaves are actuated upon shifting said member.

4. A shutter for cinematographic cameras, comprising a rotary shaft, a disk fixedly attached thereto having an opening, two leaves oscillatably mounted upon said shaft for controlling said opening, and means upon said shaft in engagement with said leaves for actuating the latter.

5. A shutter for cinematographic cameras, comprising a rotary shaft, a disk fixedly attached thereto having an opening, two leaves oscillatably mounted upon said shaft for controlling said opening, and means shiftably disposed upon said shaft in engagement with said leaves for actuating the latter.

1,223,148. DUMP-CAR. CHARLES H. CLARK, Crafton, Pa., assignor to Clark Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Original application filed Nov. 14, 1912, Serial No. 731,304. Divided and this application filed Nov. 26, 1915. Serial No. 63,373. (Cl. 105—185.)



1. The combination of a dump car having a bottom discharge opening, a pair of doors for the opening adapted to close together with the doors movable bodily in opposite directions longitudinally of the car and with each door rotatable about a horizontal axis disposed transversely of the car, a single pair of supporting rollers for each door journaled, respectively, to the door ends and defining the axis of rotation of the door, tracks for the rollers secured to and extending longitudinally of the car, and door actuating means.

2. The combination of a dump car having a bottom discharge opening, a pair of doors for the opening adapted to close together with the doors movable bodily in opposite directions longitudinally of the car and with each door rotatable about a horizontal axis disposed transversely of the car, rollers mounted on the ends of each door and defining the axis of rotation thereof, tracks for the rollers secured to and extending longitudinally of the car, two sets of crank arms mounted on the car and adapted to rotate about axes disposed transversely of the car—one set of arms for each door with the arms pivotally connected thereto, and means for actuating the crank arms.

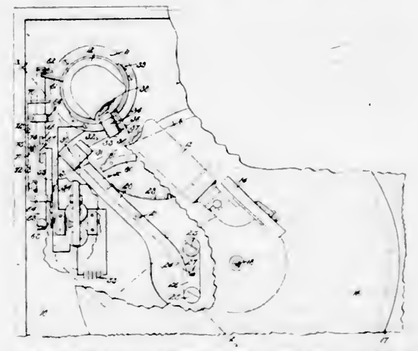
3. The combination of a dump car having a bottom discharge opening, the car having opposite side walls and downwardly converging end walls with all of said walls terminating at the discharge opening, a pair of doors adapted to close together with the doors movable longitudinally of the car and beneath said sloping end walls, the doors provided with upwardly extending end portions which form downward continuations of the opposite side walls when the doors are closed, each door rotatable about a horizontal axis disposed transversely of the car, supporting means for each door located thereon coincident with its axis of rotation, two sets of crank arms secured to the car and rotatable about horizontal axes located adjacent to the said sloping end walls—one set of arms for each door with the arms pivotally connected thereto, and means for actuating the crank arms.

4. The combination of a dump car having a bottom discharge opening, a door therefor, a horizontal shaft mounted on the car, mechanism operatively connecting the shaft and door, and a weighted operating arm secured to the shaft and adapted to be thrown to one side of the latter when rotating the shaft for opening the door and thrown to the opposite side of the shaft when rotating the same for closing the door.

5. The combination of a dump car provided with a bottom discharge opening, a pair of doors therefor adapted to open toward opposite ends of the car, a pair of cranks for each door operatively connected thereto with the cranks mounted on the car to rotate about axes disposed transversely of the car, links connecting the corresponding cranks of the respective pairs for operating the doors in unison, an operating shaft mounted on and disposed transversely of the car and provided with cranks, and connections between the respective cranks and said crank-arm-connecting links.

[Claims 6 to 8 not printed in the Gazette.]

1,223,149. REPEATING DEVICE FOR PHONOGRAPHS. WILLARD E. CLEVELAND, Fall River, Mass., assignor, by mesne assignments, to George Clay Cox, Rochester, N. Y. Filed Apr. 22, 1916. Serial No. 92,997. (Cl. 274—15.)



1. A repeating mechanism for phonographs, comprising a normally inactive cam lever mounted to swing up and down and sidewise, the cam end of the lever being adapted to engage the tone arm, means to impart an upward swinging movement to the cam end of the lever, and continually driven means adapted to engage the other end of the said lever at the time the cam end is raised to swing the cam lever sidewise.

2. A repeating mechanism for phonographs, comprising a normally inactive cam lever mounted to swing up and down and sidewise, the cam end of the said lever being adapted to engage the tone arm, actuating means controlled by the tone arm to swing the cam end and with it

the tone arm upward and the other end of the lever downward at the time the stylus reaches the end of the sound groove, and continually driven means adapted to engage the lowered other end of the cam lever to impart a swinging motion to the same to swing the raised tone arm outward.

3. A repeating mechanism for phonographs, comprising a normally inactive cam lever mounted to swing up and down and sidewise, a bell crank lever fulcrumed on the base of the tone arm, a projection on the tone arm base and adapted to be engaged by one arm of the said bell crank lever, the other arm of the bell crank lever being adapted to be engaged by the cam end of the said lever, actuating means controlled by the tone arm to swing the cam end of the cam lever upward and the other end downward at the time the stylus reaches the end of the sound groove, and continually driven means adapted to engage the lowered end of the cam lever to impart a swinging motion to the same to swing the raised tone arm outward.

4. A repeating mechanism for phonographs, comprising a normally inactive cam lever mounted to swing up and down and sidewise, a bell crank lever fulcrumed on the base of the tone arm, a projection on the tone arm base and adapted to be engaged by one arm of the said bell crank lever, the other arm of the bell crank lever being adapted to be engaged by the cam end of the said lever, actuating means controlled by the tone arm to swing the cam end of the cam lever upward and the other end downward at the time the stylus reaches the end of the sound groove, continually driven means adapted to engage the lowered end of the cam lever to impart a swinging motion to the same to swing the raised tone arm outward, and a spring pressing the said cam lever to return the latter to normal inactive position.

5. A repeating mechanism for phonographs, comprising a normally inactive cam lever mounted to swing up and down and sidewise, a bell crank lever fulcrumed on the base of the tone arm, a projection on the tone arm base and adapted to be engaged by one arm of the said bell crank lever, the other arm of the bell crank lever being adapted to be engaged by the cam end of the said lever, actuating means controlled by the tone arm to swing the cam end of the cam lever upward and the other end downward at the time the stylus reaches the end of the sound groove, continually driven means adapted to engage the lowered end of the cam lever to impart a swinging motion to the same to swing the raised tone arm outward, and a fixed plate having a beveled end for the cam lever to ride up on and support it with the cam end in raised position.

[Claims 6 to 9 not printed in the Gazette.]

1,223,150. OIL AND THE METHOD OF MAKING THE SAME. LEWIS A. COLEMAN, Norfolk, Va., assignor to American Chemical & Manufacturing Company, Inc., Norfolk, Va., a Corporation of Virginia. Filed Mar. 27, 1915. Serial No. 17,392. (Cl. 134—14.)

1. An oil comprising a mixture of evaporated linseed oil, oil of eucalyptus, spirits of turpentine, and resinous tar pitch, in substantially the proportions stated.

2. An oil comprising substantially evaporated linseed oil 80%, oil of eucalyptus 10%, spirts of turpentine or its described equivalent 5%, and resinous tar pitch 5%.

3. An oil comprising a mixture of linseed oil, oil of eucalyptus, spirits of turpentine, varnish makers' and paint makers' naphtha, and resinous tar pitch in substantially the proportions stated.

4. An oil comprising an admixture of evaporated linseed oil, oil of eucalyptus, spirits of turpentine or its described equivalent, resinous tar pitch, and tri-chlorethylene in substantially the proportions stated.

5. An oil comprising an admixture of evaporated linseed oil, oil of eucalyptus, spirits of turpentine, resinous tar pitch, and a diluent in substantially the proportions stated.

[Claim 6 not printed in the Gazette.]

1,223,151. RAILWAY-SWITCH. LLOYD COLLIS, New York, N. Y. Filed Sept. 1, 1914. Serial No. 859,599. (Cl. 104—12.)



1. In a railway system, branch tracks one above the other, a main track connectible with the lower branch track, and a removable track section the ends of which connect with the end of the upper branch track and with the end of the main track, substantially as described.

2. In a railway system, branch tracks one above the other, a main track, an upper removable track section for connecting the upper branch track with the main track, and a lower removable track section for connecting the lower branch track with the main track, substantially as described.

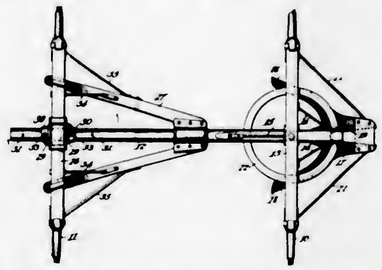
3. In a railway system, branch tracks one above the other, a main track connectible with the lower branch track, a removable track section the ends of which connect with the end of the upper branch track and with the end of the main track, and fixed supports for the removable section between its ends when in its connecting position, substantially as described.

4. In a railway system, branch tracks one above the other, a main track, upper and lower removable track sections for connecting respectively with the upper and lower branch tracks and having their ends vertically curved for tangential connection with the main track, substantially as described.

5. In a railway system, branch tracks one above the other, a main track, and upper and lower removable track sections hinged respectively at the ends of the upper and lower branch tracks for connection with the main track, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,223,152. WAGON RUNNING-GEAR. BENJAMIN W. COVE, Henderson, Ky., assignor to Henderson Wagon Works, Henderson, Ky., a Corporation of Kentucky. Filed Nov. 8, 1912. Serial No. 730,192. (Cl. 21—39.)



1. In a wagon-gear, the combination of front and rear bolsters, and a reach secured to the rear bolster by collars in front of and behind the rear bolster and passing through the front bolster and secured thereto.

2. In a wagon-gear, the combination of rear hounds, a hollow block or casting carried by the inner ends of the rear hounds, a reach passing through the hollow casting or block, the reach also passing through and secured to the front bolster, and a reach pin at the rear of the rear bolster.

3. In a wagon-gear, the combination of a rear bolster and axle-bed, a reach passing between them and having perforations at one end, collars surrounding the reach and having perforations corresponding to those in the reach and pins to pass through the perforations in the collars and reach on opposite sides of the rear bolster.

4. In a wagon-gear, the combination of a bolster, a reach passing through the bolster and secured thereto, an axle-bed, a fifth-wheel located between the axle-bed and the reach and an arm secured to one end of the reach and projecting beneath the surface of the fifth-wheel to serve as a lock for the fifth-wheel.

1,223,153. METHOD OR PROCESS OF TREATING LIQUIDS. FREDERICK D. CRANE, Montclair, N. J. Filed Jan. 8, 1917. Serial No. 141,068. (Cl. 44—7.)

1. The process of solidifying liquids which consists in dissolving a suitable fatty acid in the liquid to be solidified, and adding an alcoholate to the solution thus formed.

2. The process of solidifying liquids which consists in dissolving a suitable fatty acid in the liquid to be solidified, and adding sodium ethylate to the solution thus formed.

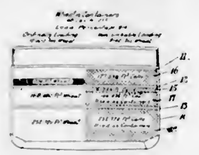
3. The process of solidifying liquids which consists in dissolving stearic acid in the liquid to be solidified, and adding sodium ethylate to the solution thus formed.

4. The process of solidifying liquids which consists in dissolving a suitable fatty acid in the liquid to be solidified, and adding a solution of an alcoholate in an excess of alcohol to said first mentioned solution.

5. The process of solidifying liquids which consists in dissolving a suitable fatty acid in the liquid to be solidified, and adding a solution of sodium ethylate in an excess of ethyl alcohol to said first mentioned solution.

[Claims 6 to 10 not printed in the Gazette.]

1,223,154. METHOD OF RENDERING SHIPS UNSINKABLE. WILLIAM T. DONNELLY, Brooklyn, N. Y. Filed Aug. 28, 1914. Serial No. 859,014. (Cl. 114—68.)



1. The method of loading ships, which consists in confining between decks watertight containers and loading a container with cargo to such an extent only that it will float in water and will afford its portion of the buoyancy required to maintain the ship afloat when water logged.

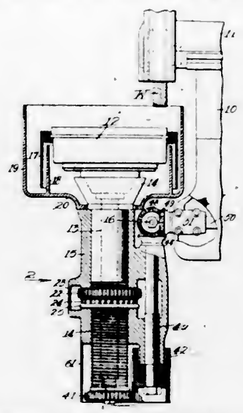
2. The method of loading ships, which consists in confining between decks water tight containers and distributing the entire cargo among the individual containers, each of which, however, is loaded to such an extent only that it will float in water and will afford its portion of the buoyancy required to maintain the vessel afloat when water logged.

1,223,155. TABLE DRIVING AND FEEDING MECHANISM FOR GRINDING-MACHINES. ALDEN M. DRAKE, Worcester, Mass., assignor to Heald Machine Company, Worcester, Mass., a Corporation of Massachusetts. Filed Sept. 26, 1916. Serial No. 122,306. (Cl. 51—12.)

1. In a grinding machine, in combination, a work table, a spindle on which said table is mounted, a sleeve forming a bearing for said spindle, a pivotally mounted support for said sleeve, means to adjust said support angularly and to secure said support in adjusted position, and means to adjust said sleeve axially in said support.

2. In a grinding machine, in combination, a work table, a substantially vertical spindle on which said table is mounted, a sleeve forming a bearing for said spindle, a hinged support for said sleeve angularly adjustable in a vertical plane, a horizontal shaft about the axis of which said support is angularly adjustable, means to drive said shaft, an intermediate shaft parallel to said spindle, bevel gear connections between said horizontal and said intermediate shafts and gear connections between said intermediate shaft and said spindle.

3. In a grinding machine, in combination, a work table, a substantially vertical spindle on which said table is mounted, a sleeve forming a bearing for said spindle and having a portion of its cylindrical outer surface threaded, a support for said sleeve, a nut rotatable in a bearing on said support but confined against axial movement, and means to turn said nut, said means comprising gear teeth on said nut, a pinion meshing therewith, and positively actuated means for rotating said pinion by power.

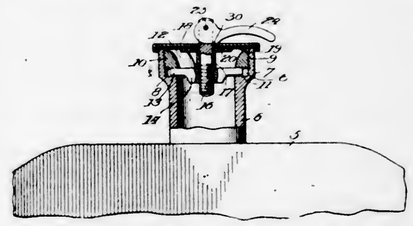


4. In a grinding machine, in combination, a work table, a substantially vertical spindle on which said table is mounted, a sleeve forming a bearing for said spindle and having a portion of its cylindrical outer surface threaded, a support for said sleeve, a nut for said sleeve rotatable in a bearing on said support but confined against axial movement, a gear secured to said nut, a pinion meshing with said gear, a short shaft for said pinion parallel to said spindle and a short horizontal shaft, both shafts being rotatable in bearings in said support, driving connections between said shafts, an automatic pawl and ratchet feed for said horizontal shaft, and additional means for turning said horizontal shaft manually.

5. In a grinding machine, in combination, a work table, a spindle on which said table is mounted, a pivotally mounted support for said spindle, means to adjust said spindle axially, a driving shaft mounted in fixed bearings, and a direct gear drive from said shaft to said spindle.

[Claims 6 and 7 not printed in the Gazette.]

1,223,156. RADIATOR-CAP. NELSON DU BOIS, Long Beach, Cal. Filed Mar. 12, 1915. Serial No. 14,036. (Cl. 220—124.)



1. A cap comprising a bushing adapted to be secured upon a radiator stem, and being provided with diametrically opposed recesses internally thereof, a shaft, a cross piece adjustably positioned upon the shaft and provided with reduced ends adapted to be passed through the recesses in the bushing whereby the cross piece may be

turned relatively to the bushing to engage beneath the same, a closure slidably positioned upon the shaft and being provided with a depending marginal flange, a gasket disposed against the closure within the flange, a washer disposed on the shaft beneath said gasket, said closure, gasket, and washer being movable longitudinally of the stem, a sleeve interposed on the stem between the cross piece and washer, said stem being provided with a recess in one end above the closure, a cam pivoted off center within the recess, a handle on which said cam is carried, said handle adapted to be manipulated whereby to engage said cam against the closure plate for compressing the gasket between the plate and upper end of the bushing, substantially as described.

2. A closure comprising a bushing adapted to be attached to a radiator stem, a cross piece adapted to be detachably engaged against and beneath the bushing, a shaft on which the cross piece is carried, a closure plate slidably disposed upon the shaft, a gasket carried by the closure plate, a sleeve disposed upon the shaft between the closure plate and the cross piece, and a cam carried by the shaft and movable into engagement with the closure plate for compressing the gasket against the bushing and against the sleeve.

3. In a cap, the combination of a bushing adapted to be connected with the stem of a radiator, a shaft having a threaded lower end, a cross piece threadedly connected with the threaded portion of the shaft, a set screw carried by the cross piece engaging the shaft, a closure plate slidably disposed upon the shaft, a sleeve disposed on said shaft between the closure plate and the cross piece, a cam carried by the shaft and movable whereby to force said closure plate toward the bushing, and compressible means adapted to be compressed between said closure plate and the bushing and the sleeve, respectively.

4. A radiator cap comprising a bushing adapted to be connected with the stem of a radiator, a cross piece detachably engaged beneath the bushing, a shaft on which the cross piece is carried, a closure plate, slidable on the shaft arranged above the bushing, compressible means carried by the closure plate, a sleeve mounted on the shaft between the closure plate and the cross piece, and means for forcing the closure plate toward the cross piece whereby to compress the compressible material against the bushing and against the sleeve.

5. A device of the character described, including a bushing adapted to be connected with the stem of a radiator, a closure plate arranged on one side of the bushing, a shaft slidably extending through the plate, a cross piece arranged to engage against the opposite side of the bushing, a gasket arranged between the closure plate and bushing, means whereby the closure plate may be drawn along the shaft to compress the gasket against the radiator stem, and means between the gasket and cross piece against which the gasket is pressed when the plate is drawn along the shaft.

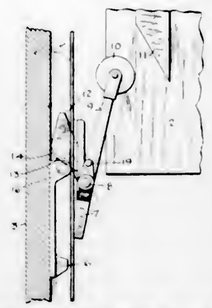
1,223,157. ELEVATOR-DOOR-LOCKING MECHANISM. EDWARD L. DUNN, Worcester, Mass., assignor, by mesne assignments, to Standard Plunger Elevator Company, Worcester, Mass., a Corporation of Massachusetts. Filed May 25, 1912. Serial No. 699,693. (Cl. 187—61.)

1. The combination with an elevator door, of normally unlocked locking means actuated to locking position by opening movement of the door, and means for holding said means unlocked when the elevator car is at said door.

2. The combination with an elevator car, of a door, normally inoperative means controlled by the door for locking the door against full opening while permitting a limited movement thereof, and means carried by the car for holding said locking means inoperative.

3. The combination with an elevator car, of a normally free door, means for locking the door upon opening movement thereof, and means carried by the car for holding said locking means inoperative when the door is opened.

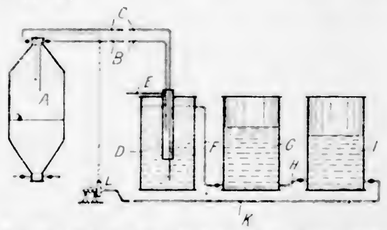
4. The combination with an elevator car, of a normally free door, a keeper carried by said door, a latch controlled by opening movement of said door to engage said keeper to lock the door, and means carried by the car for preventing engagement of said keeper and said latch.



5. The combination with an elevator car, of a normally free door, locking means operated by movement of said door to prevent full opening, and means carried by the car and coöperating with said locking means to prevent operation of said locking means.

[Claims 6 to 12 not printed in the Gazette.]

1,223,158. APPARATUS FOR THE EXTRACTION OF HYDROCARBONS, &c., ESPECIALLY CYMOL, WHICH ARISE IN THE MANUFACTURE OF SULFITE CELLULOSE. PEHR GULBRAND ENGER, Skotselven, Norway. Filed Mar. 9, 1916. Serial No. 83,034. (Cl. 92—2.)

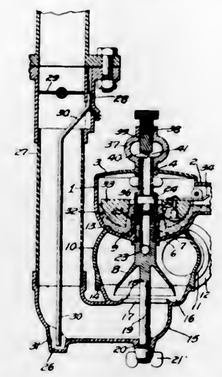


1. In an apparatus for separating oily and resinous extractives from pulp, the combination of a plurality of tanks, an inlet for one of the tanks adapted to be connected with the top outlet of a digester, an outlet provided adjacent to the top of the tank just mentioned, an inlet provided adjacent to the bottom of a second tank, a connection between the said outlet of the first tank and the inlet of the second tank, and an outlet for the second tank disposed adjacent to the bottom of the same and diametrically opposite to the inlet.

2. In an apparatus for separating oily and resinous extractives from pulp, the combination comprising a digester, a plurality of tanks, a connection from the top of the digester to one of the tanks, a connection from adjacent the top of the said tank to a point adjacent the bottom of the second tank, a connection from adjacent the bottom of the second tank to a slightly higher point in an adjacent tank, and means for returning liquid from the latter tank to the digester.

1,223,159. CARBURETER. ORVILLE HIRAM ENSIGN, Pasadena, Cal. Filed Nov. 21, 1912. Serial No. 732,746. (Cl. 261—41.)

1. In a carbureter having liquid supply means, a carbureting chamber below said liquid supply means, an air inlet into the carbureting chamber, an outlet passage opening from the mixing chamber below the level of the air inlet, a throttle valve for the outlet passage, a sump in the outlet passage, and a tube communicating with the sump and with the outlet passage beyond the throttle valve.



2. A carbureter comprising a liquid supply chamber; means to maintain liquid at a determined level in the supply chamber; a carbureting chamber located below said liquid supply chamber; an air inlet into the carbureting chamber; a nozzle chamber communicating with the liquid in the supply chamber and with the air in the carbureting chamber and normally sealed from the air in the supply chamber; an air passage leading from said nozzle chamber to the air; and a valve to control said air passage.

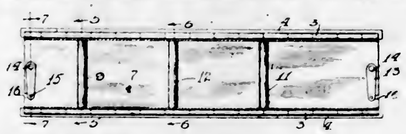
3. A carbureter comprising a liquid supply chamber; means to maintain liquid at a determined level in the liquid supply chamber; a carbureting chamber below the liquid supply chamber; an air inlet opening into the carbureting chamber; a nozzle chamber communicating with the liquid in the liquid supply chamber and with the air in the carbureting chamber and normally sealed from the air in the liquid supply chamber; an air passage leading from said nozzle chamber to the air; and a valve and valve seat to control said air passage; said valve seat being provided with a minute groove to prevent absolute closure of said air passage.

4. A carbureter comprising a carbureting chamber having annular top and bottom ends; a liquid supply chamber and an outlet passage fitting said ends respectively and rotatable thereon and a connecting bolt and nuts adjustably fastening the chambers and passage together.

5. A carbureter comprising a carbureting chamber having annular top and bottom ends; a liquid supply chamber and an outlet passage fitting said ends respectively and rotatable thereon and a sectional connecting bolt and nuts adjustably fastening the chambers and passage together, a section of said bolt being chambered and there being a passage through the bolt from the liquid supply chamber into the carbureting chamber.

[Claims 6 to 9 not printed in the Gazette.]

1,223,160. TRAY-LOOSE-LEAF BINDER. CHARLES R. FARGO, Chicago, Ill., assignor to Wilson-Jones Loose Leaf Company, Chicago, Ill., a Corporation of Illinois. Filed July 16, 1915. Serial No. 40,182. (Cl. 129—23.)



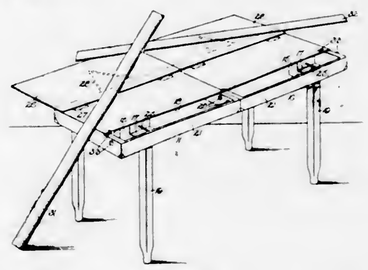
1. In a device of the class described, cover members, inner and outer angle plates hingedly connected thereto and adapted to be completely separated from one another, a binding post secured on each of said angle plates, means secured on said angle plates for co-action with said binding posts to properly aline the same when the covers are placed together, and means locking said angle plates one to another.

2. In a device of the class described, a binder comprising cover members, an angle plate hingedly connected to each thereof, said plates being adapted to be completely separated from one another, binding posts secured upon said respective angle plates adapted to be arranged in parallel relation when said cover members are attached to one another by means of said angle plates, and a removable binding post adapted to be held in position by engagement through apertures in said respective angle plates when said cover members are associated with one another.

3. In a device of the class described cover members, angle plates hingedly connected thereto adapted to lie flat against one another, and having registering slots therein, binding posts secured upon said respective angle plates, and pivoted means mounted on one of said angle plates adapted to engage the registering slots in each of said angle plates to hold the cover members associated with one another.

4. In a loose leaf binder adapted to retain apertured leaves therein without compression thereon, separable cover members, a slotted angle plate hingedly connected to each of said cover members and adapted to lie flat against one another, a binding post secured on each of said angled plates, a pin secured on each of said angled plates adapted to be engaged by the binding post of the other plate to hold the apertured leaves in position between said cover members, a detachable binding post engaging through said leaves and angle plates to retain the leaves within the binder when the cover members are associated with one another, and means on said angled plates for locking the same one to another.

1,223,161. PAPER-HANGER'S KIT. SANTE FAZZINI, New York, N. Y. Filed Dec. 8, 1916. Serial No. 135,760. (Cl. 190—11.)



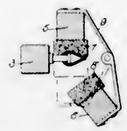
1. In a paper hanger's kit, the combination of a pair of similar sections hinged together end to end, reinforcing and stiffening means for said sections comprising a set of blocks secured within the same, each of the blocks having a threaded socket, a set of legs carried within the kit when collapsed, each leg having a threaded end adapted to coöperate with the socket in one of the blocks, one block of each section being cut away from one side to receive certain of the legs in carrying position, and a member passing through the cutaway block to lock the legs therein.

2. The herein described paper hanger's kit comprising a pair of box-like sections hinged together end to end, portions of the sections being cut away along one outer edge, supporting legs for the device when extended, said legs comprising two for each section adapted to be carried within the same in transportation and serving to fill the cutaway space aforesaid, and means to lock the legs in fixed position.

3. In a paper hanger's kit, the combination of a pair of similar box-like sections hinged together end to end and adapted to fold together providing an inner space for tools, said sections, however, being adapted to be extended to form a table top, means to lock the sections extended with

their outer faces upward in horizontal position, said outer faces being cut away along one edge, a set of supporting legs for the table top carried normally in transportation in said cutaways, and a cutting plate serving to fill said space when the device is used as a table.

1,223,162. CUP-REMOVER. ANTONIE FRITSCHE, New York, N. Y. Filed Sept. 18, 1916. Serial No. 120,702. (Cl. 41—1.)



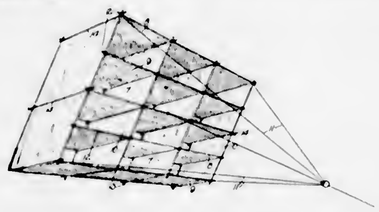
1. A cup remover comprising a fixed or stationary bar, a felt pad arranged on said bar, a pair of members pivotally connected to said fixed bar, a second bar slidingly mounted in said members, and a pad arranged on one face of said second bar adapted to be brought into contact with the pad on the fixed bar when said second bar has been moved to a closed position.

2. In a cup remover, a support, a cushioning pad arranged on said support, a member movable toward and from said cushioning member, a cushioning member arranged on said movable member, and means for supporting said movable member in such a manner as to allow a longitudinal movement thereof and a movement toward and from the first mentioned cushioning member.

3. As an article of manufacture for use with a plurality of artificial flower cup molds held in a predetermined relationship to each other, means for removing cups from said molds, comprising a pair of bars, hinges for connecting the bars together, said hinges being formed so that the pintle will be in line midway between the bars when the bars are moved to a closed position but spaced rearwardly therefrom for causing a greater radius of movement of said bars, and a felt cushioning member secured to each of said bars, said cushioning members being adapted to be brought toward each other and moved from each other as the bars are moved pivotally whereby the cups on said molds may be all grasped simultaneously and pulled from their support simultaneously.

4. As an article of manufacture for use with a plurality of artificial flower cup molds arranged in a straight line and against independent movement, means for simultaneously removing a cup from each of said molds comprising a pair of swinging members adapted to be swung from and toward each other, and a plurality of spaced cushioning blocks arranged on each of said swinging members, said blocks being adapted to grip the cups on said molds preparatory to removing the same.

1,223,163. KITE. ANDREW LANG GRAHAM, Santa Rosa, Cal. Filed Dec. 14, 1916. Serial No. 136,956. (Cl. 244—23.)



1. A kite comprising a cell having a rectangular-shaped opening in the front and rear thereof and presenting rectangular-shaped top and bottom planes and parallelogram-shaped side planes, said side planes being so related to the top planes that the free front edge of said top plane overhangs the free front edge of the bottom plane in the projection of said top plane on the bottom plane.

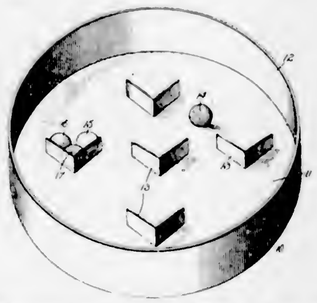
2. In a multicellular kite, a plurality of coplanar cells each presenting a substantially rectangular-shaped front and rear opening, each of said cells having substantially rectangular-shaped top and bottom planes and substantially parallelogram-shaped side planes.

3. In a kite, a plurality of cells, each cell presenting a front and rear opening, the top and bottom planes of each cell being in the shape of a rectangle, the side planes of the cell being in the shape of a parallelogram, the front and rear of said cells lying in respectively common planes.

4. In a kite, a plurality of coplanar cells open in the front and rear thereof, each cell presenting rectangularly-shaped top and bottom planes, and parallelogram-shaped side planes, said side planes being so related to the top and bottom planes that the front edge of the top plane overhangs the front edge of the bottom plane and the rear edge of the bottom plane extends beyond the rear edge of the top plane.

5. In a kite, a plurality of coplanar cells open in the front and rear thereof, each cell presenting a rectangularly-shaped top and bottom plane and parallelogram-shaped side planes, transverse and vertical bars reinforcing said cells at the front and rear, brace members connecting said bars, and bridle strings connected to said brace members at predetermined points of the kite, substantially as and for the purpose set forth.

1,223,164. PUZZLE GAME. LOUIS JOSEPH HABERKORN, Chatsworth, Ill. Filed July 12, 1916. Serial No. 108,819. (Cl. 46—41.)



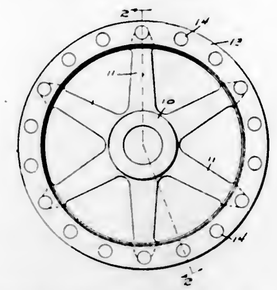
1. The combination with a tray having a smooth bottom and an upstanding rim surrounding the same, of a plurality of erect open sided traps loosely and movably supported upon the bottom within the tray, and a series of differently colored rolling members likewise contained within the tray and adapted to be caused to enter each of the traps in succession.

2. The combination with a tray having a smooth flat bottom and a circular rim surrounding the same and projecting upwardly above the bottom, of a series of self supporting traps slidably supported upon the smooth flat bottom and each having an open side, and a series of differently colored balls adapted to be caused to be rolled into each of the traps in succession in a certain predetermined order.

1,223,165. PAPER PULLEY. WILLIAM D. HAMERSTADT, Indianapolis, Ind. Filed Jan. 17, 1916. Serial No. 72,511. (Cl. 64—17.)

1. A pulley consisting of a hub portion with radial arms having transverse pins rigidly secured on the outer ends of said arms and extending radially beyond the end of said arms, and a paper rim portion secured on said pins.

2. A pulley including a hub portion with radial arms having pins rigidly secured on the outer ends of said arms, and a paper rim portion secured on said pins, and pins extending through said rim between said other pins, and not connected with the hub portion.

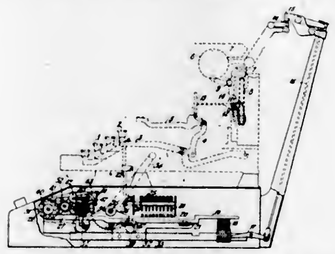


3. A pulley including a spider-like hub portion with pins secured to the outer ends of the arms thereof, and extending transversely of the pulley, a paper rim secured on said pins, and pins extending transversely through said rim independently of said spider-like hub portion and located at the same distance from the center of the pulley as the other pins.

4. A pulley including a hub, radial arms secured thereto, transverse pins secured to the ends of the arms, a paper rim secured on said pins and having a width greater than the length of the pins, and independent binding pins extending through said arm.

5. A pulley including a hub, radial arms secured thereto, transverse pins secured to the ends of the arms, a paper rim secured on said pins and having a width greater than the length of the pins, leaving holes in the rim at the ends of the pins, plugs filling the outer ends of the holes in the rim in which said pins are located, and binding pins extending entirely through said rim at the same distance from the center of the pulley as the other pins and independent of the arms thereof connected with the hub.

1,223,166. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Jersey City, N. J., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Oct. 20, 1911. Serial No. 655,680. (Cl. 235—60.)



1. The combination with computing wheels, means for turning them, and tens-carrying mechanism including a driving member common to all of said wheels, of means controlled by said driving member for engaging and locking all of the computing wheels against overthrow at every tens-carrying operation.

2. The combination with computing wheels, means for turning them, and a *seriatim* acting tens-carrying mechanism including a driving member, of individual yielding detents for said wheels, normally engaging the same, and means controlled by said driving member for successively rendering said detents unyielding to lock all of the computing wheels against overthrow at every tens-carrying operation.

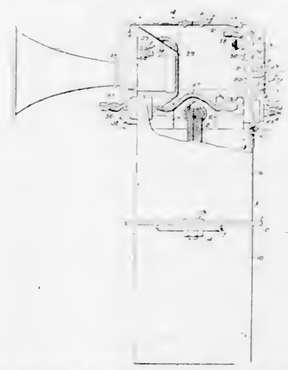
3. The combination with computing wheels, means for turning them, and a tens-carrying mechanism including an intermittent driving member, of individual devices to engage said wheels, and means controlled by said driver for acting upon said individual devices in succession, to cause them to lock the wheels against overthrow at the tens-carrying operation.

4. The combination with computing wheels, means for turning them, and a tens-carrying mechanism including an intermittent driving member, of spring detents for said wheels, and means to enable said driver to prevent yielding of said detents at the completion of the tens-carrying operation, thereby to prevent overthrow of the wheels.

5. The combination with computing wheels, means for turning them, and a tens-carrying mechanism including an intermittently operating drive shaft, of devices normally ineffective to lock said wheels against overthrow, and members upon said shaft to render said locking devices effective.

[Claims 6 to 36 not printed in the Gazette.]

1,223,167. BATTERY-RECEPTACLE. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Filed July 31, 1913. Serial No. 782,214. (Cl. 204—53.)



1. In an electrical apparatus, the combination with a battery, of a battery casing comprising upper and lower parts abutting intermediate the top and bottom of said battery, the upper part being provided with a shoulder to prevent upward movement of said battery, and means to secure said parts together.

2. A casing for a given battery comprising a body portion formed of separable parts adapted to fit about the battery and means for securing said parts together, said parts coöperatively forming a casing provided with an aperture too small to pass the battery and a closure for said aperture forming a chamber adjacent the battery.

3. In an electrical apparatus, the combination with a battery, of a battery casing having a chamber above said battery and an opening leading to the exterior of said casing, a door for said opening, a switch mounted within said chamber, connections between said switch and the battery terminals within said chamber, and means to lock said switch and said door.

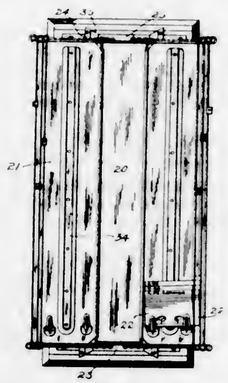
4. In an electrical apparatus, the combination with a battery, of a battery casing having a chamber above said battery and an opening leading to the exterior of said casing, a door for said opening, a switch mounted within said chamber, connections between said switch and the battery terminals within said chamber, and a hasp for fastening said switch and door.

5. In an electrical apparatus, the combination with a battery, of a battery casing having a chamber above said battery and an opening leading to the exterior of said casing, a door for said opening, a switch mounted within said chamber, connections between said switch and the battery

terminals within said chamber, said switch having a handle located exteriorly of said casing on said door, a hasp which receives said handle, and means to lock said hasp in place upon said handle.

[Claims 6 to 8 not printed in the Gazette.]

1,223,168. INDEX OR FILE. ROBERT D. HAYES, New Haven, Conn., assignor to Index Visible, Incorporated, New Haven, Conn., a Corporation of New York. Filed Aug. 18, 1914. Serial No. 857,334. (Cl. 129—16.)



1. In an index or file, a guide, a carrier, and means for slidably hinging the carrier to the guide such that it may be removed from the guide at an intermediate point; substantially as described.

2. In an index or file, the combination of a track or guide, a plurality of record carriers, and means for slidably hinging said record carriers to said track or guide such that each carrier is attachable and removable independently of the others; substantially as described.

3. In an index or file, the combination of a guide, a plurality of carriers, and means for slidably hinging said carriers to said guide such that each is attachable and removable independently of the others at any point in the guide; substantially as described.

4. In an index or file, the combination of a guide, a plurality of carriers, means for slidably hinging each carrier to said guide such that it is freely attachable and removable at any intermediate point in the guide independently of the other carriers, and a plurality of record members mounted on each carrier; substantially as described.

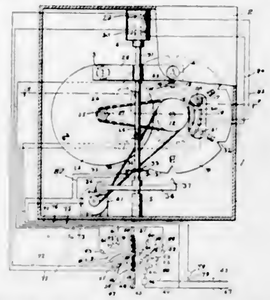
5. In an index or file, the combination of a main supporting means, and a plurality of slidably hinged leaves or carriers each freely removable from said supporting means without disturbing the others; substantially as described.

[Claims 6 to 44 not printed in the Gazette.]

1,223,169. REMOTE CONTROL SYSTEM. CHARLES J. HENSCHEL, Bloomfield, N. J. Filed Mar. 9, 1914. Serial No. 823,367. (Cl. 40—52.)

1. A remote control system comprising a movable and several stationary contact members, a motor to continuously move the movable contact member into successive contact with said stationary contact members, successive control circuits through the movable and stationary contact members and electromagnetic means to stop the movement at a predetermined position by energizing any one of said circuits.

2. A remote control signaling system comprising a signal member, a plurality of controlling circuits for said signal member, a normally continuously driven motor, contact mechanism driven by said motor for opening and closing said circuits successively in order to cause said signal to display successive indications, and mechanism remote from said motor for stopping the latter at any predetermined one of said indications.



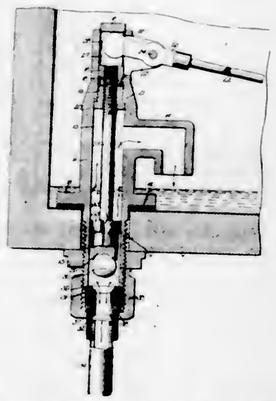
3. In a remote control signaling system, the combination of a signal member, a motor for normally actuating the same continuously, a plurality of electric circuits, contact mechanism connected with said circuits for opening and closing the same, said contact mechanism being normally actuated by said motor, and means controllable by said circuits and said contact mechanism for stopping said motor when said signal member indicates a predetermined signal.

4. A remote control signaling system comprising a signal member, non-reversing mechanism for actuating the same, a plurality of electric circuits each connected with said mechanism and selectively adapted to control the same, and a shutter to normally obscure said indicating member and means connected with said circuits and mechanism to open the shutter at predetermined intervals.

5. A remote control system comprising a movable indicating member, means for actuating the same continuously in one direction, mechanism controllable from the transmitting station for stopping said indicating member in a predetermined position, and a shutter also controllable from the transmitting station for preventing any indication except the proper one.

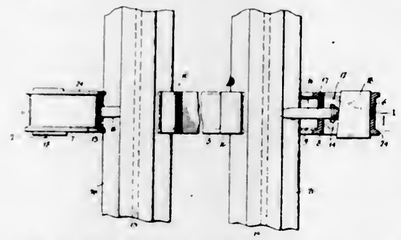
[Claims 6 to 9 not printed in the Gazette.]

1,223,170. FLUSHING-TANK VALVE. RAYMOND HODGSON, New York, N. Y. Filed Oct. 10, 1916. Serial No. 124,772. (Cl. 137—104.)



In combination with a liquid-holding tank having a perforation in the bottom thereof; a hollow-bodied faucet having a supporting flange and an extension, said extension being adapted to protrude beyond said tank when said flange is resting on the floor thereof; a supply pipe having rigidly connected therewith an upwardly-turned valve seat at the end thereof; means for operatively connecting the extension of said faucet and said supply pipe, said means embodying a screw-threaded member operatively engaging both said extension and said supply pipe; a ball valve loosely mounted on said valve seat for closing the entrance thereto; a plunger adapted to rest on said ball for holding the same on said seat, a float-operated lever pivoted intermediate its ends and having its inner end disposed above said plunger, a valve stem connected to said plunger, adjusting means connecting said lever and stem to vary the operative height of the outer end of the lever; and means for arresting the lift of said valve stem, said means embodying an abutment adjacent the upper end of said faucet, and an adjusting nut engaging said stem and provided with a flange for engaging said abutment.

1,223,171. CROSS-TIE FOR MINE RAILROADS OR TRACK CONSTRUCTIONS. ERNEST HUTTON, Wayland, Ky. Filed Nov. 16, 1916. Serial No. 131,721. (Cl. 238—5.)



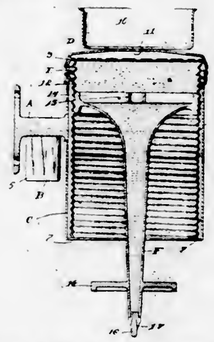
1. In a mine railroad or track construction, a tie having the opposite extremities bent upwardly and downwardly and formed with a flat seat member secured to the body of the tie and having an inner terminal upwardly and outwardly directed stop bend, a chamber being formed by bending the extremity of the tie as specified, said chamber having an opening in its inner wall, a rail disposed in the seat member, and a spike inserted through the said opening in the inner wall of the chamber and removably engaging the outer portion of the flange of the rail.

2. In a mine railroad or track construction, a tie having each extremity thereof bent upwardly and inwardly and then downwardly to form a chamber and continuing into a flat seat member secured to the body of the tie, the inner wall of the chamber having an opening therethrough, a loose clamping device inserted through said inner wall of the chamber and adapted to engage the outer portion of a rail flange, a rail having its flange engaging said seat member and held by said clamping device, and a wedge driven through the said chamber and engaging the outer end of the clamping device.

3. In a mine railroad or track construction, a tie having each extremity thereof bent upwardly and inwardly and then downwardly to form a chamber and continuing into a flat seat member which is secured to the body of the tie, the body of the tie forming the bottom of the chamber and having a slot therein and the inner wall of the chamber formed with an opening therethrough, a rail mounted in the seat member and having the base flange thereof engaging the latter, a clamping spike inserted through the opening in the inner wall of the chamber and having a portion of the head thereof engaging said slot, and a wedge block driven through the chamber and engaging the head of the spike to hold the latter in clamping position relatively to the outer portion of the flange of the rail.

4. In a mine railroad or track construction, a tie having each extremity thereof bent upwardly and inwardly and then downwardly to form a chamber and the outer wall of a seat which is provided with an overhanging projection, the seat continuing into a flat member which is secured to the body of the tie and terminating at its inner portion in an upwardly bent stop, the bent extremity of the tie forming a chamber whose inner wall is the downwardly bent portion of said extremity, the latter wall having an opening therein, a rail having its base flange engaging the flat portion of the seat with the inner edge of the flange fitting against the stop, a rail having its ball inverted and inserted between the first named rail and the said projection, the flange of the inverted rail resting on the ball of the first named rail, and a clamping means inserted through the opening in the inner wall of the chamber and engaging the flange of the first named rail, the head of the clamping device or means being held in the said chamber.

1,223,172. SOAP-DISPENSER. JACOB W. JACOBSON, Hancock, Mich. Filed July 25, 1916. Serial No. 111,207. (Cl. 221—94.)



The combination with a soap dispenser embodying a receptacle, and an ejector adjustably mounted in said receptacle, of a casing, adapted to receive said receptacle with the ejector projecting through an enlarged opening in the bottom thereof, said receptacle resting upon the flange constituting the bottom of the casing, the opposite end of the casing being slit at spaced intervals, and a cover for the casing, said cover being designed to bring the separated portions of the casing defined by said slits, into engagement with the receptacle to hold the latter fixed relatively to the casing.

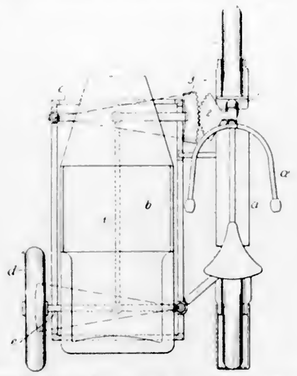
1,223,173. MEANS FOR STEERING A SIDE CAR ATTACHED TO A MOTOR-CYCLE. WILLIAM ARTHUR JAMES, Cowbridge, Wales. Filed June 30, 1915, Serial No. 37,275. Renewed Jan. 9, 1917. Serial No. 141,498. (Cl. 208—45.)

1. The combination with a motor-cycle and a side-car of a toothed sector movable angularly with the steering wheel of the motor cycle, a toothed member movably mounted upon the chassis of the side car and in mesh with said sector, a wheel pivotally mounted upon the said chassis so as to be capable of angular movement and means connecting said toothed member with said wheel on the chassis for transmitting the movements of the former member to the said wheel, substantially as set forth.

2. The combination with a motor-cycle and a side-car, of a toothed sector movable angularly with the steering wheel of the motor-cycle, a rack mounted upon the chassis of the side-car and actuated by said toothed sector, a side-car wheel, a member carrying the axle of the side-car wheel, said member being pivotally mounted upon the side-car chassis, and means connecting said member carrying said wheel with said rack, substantially as set forth.

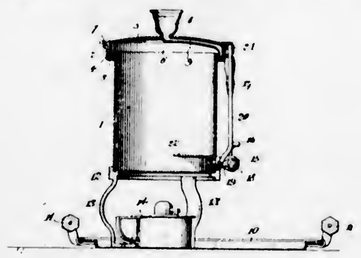
3. In a motor-cycle with side-car, the combination with a toothed segment mounted on the steering pillar of the motor-cycle, a toothed segment pivotally mounted upon the chassis of the side-car and meshing with the segment upon

the said steering pillar, a wheel axle pivoted at one end upon the said chassis and a rod connecting the said axle



to the toothed segment mounted upon the chassis, substantially as and for the purpose specified.

1,223,174. WATER-SEAL POT. MIGUEL JAUME, New York, N. Y. Filed Apr. 18, 1916. Serial No. 91,955. (Cl. 53—3.)



1. A coffee pot comprising a container, a closure for the container operative for venting or sealing the container, a draw-off valve for the discharge of the coffee from the container, and means operated by the movement of the valve for operating said closure for venting the container when the valve is opened and sealing the container when the valve is closed.

2. A coffee pot comprising a container provided with a sealing well, a cover movable vertically into and out of sealing engagement with the well, a draw-off valve for the discharge of the coffee from the container, and means operated by the movement of the valve for raising the cover so as to vent the container when the valve is opened and lowering the cover so as to seal the container when the valve is closed.

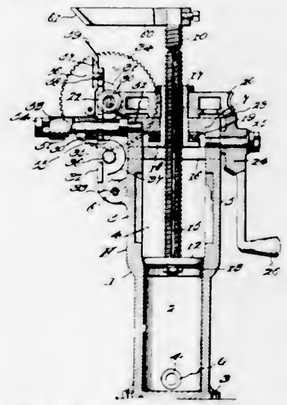
3. A coffee pot comprising a container provided with a sealing well, a cover movable vertically into and out of sealing engagement with the well, a combined filling and vent tube carried by the cover and having one end arranged for communication with the atmosphere and the other end arranged to be sealed by the well when the cover is in closed position, a draw-off valve for the discharge of the coffee from the container, and means operated by the opening and closing movements of the valve for respectively raising and lowering the cover and thereby moving the second-named end of the tube respectively out of and into sealing connection with the well.

4. A coffee pot comprising a container provided with a sealing well, a cover movable vertically into and out of sealing engagement with the well, a rotary draw-off valve, and a rod arranged to be raised and lowered by the opening and closing movements of the valve so as to raise and lower the cover and thereby vent or seal the container.

5. A coffee pot comprising a container provided at its lower portion with a discharge outlet and at its upper portion with a sealing well, a draw-off valve for the discharge of the coffee from the container through said outlet, a cover for closing the container, said cover being movable vertically into and out of sealing engagement with the well, means operated by the opening and closing movements of the valve for respectively raising and lowering the cover and thereby respectively venting or sealing the container, and an imperforate horizontal baffle plate disposed within the container and arranged to overhang and project inwardly beyond the line of said discharge outlet.

[Claim 6 not printed in the Gazette.]

1,223,175. SYSTEM OF FORCE-FEED LUBRICATION. SAMUEL M. JENKINS, Louisville, Ky., assignor to The Jenkins Graphite Lubricating Company, Louisville, Ky., a Corporation of Kentucky. Filed Apr. 18, 1916. Serial No. 91,954. (Cl. 184—37.)



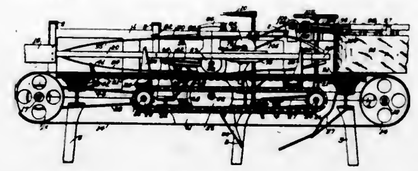
1. A force feed lubricator comprising a casting provided with a grease cylinder in the lowar part thereof, a cross head at the upper end thereof, and stanchions with openings between connecting said grease cylinder and said cross head, a piston adapted to project into said grease cylinder, a screw-threaded piston rod secured to said piston and projecting through said cross head, said piston rod being provided with longitudinal spline grooves on opposite sides thereof, spline bars spanning said stanchions and each having a spline projecting into said grooves in the piston rod, a sleeve nut journaled in said cross head and engaging the screw threads on said piston rod, a worm gear fast on said sleeve nut, a worm engaging said worm gear, and means for rotating said worm, and throw-out mechanism controlled by the movement of said piston rod for automatically disengaging said worm from said worm gear, said throw-out mechanism comprising a frame hinged to said casting and provided with journal bearings for said worm, a pin secured to said casting, a coil spring under compression mounted on said pin and normally pressing said hinged frame outward to disengage said worm, a fixed helix mounted on said pin, a movable helix revolubly mounted on said pin and adapted to engage the fixed helix, an arm hinged to said movable helix and adapted to turn same to the engaging position for holding said hinged frame against the action of said spring, means for locking said arm in the holding position, and an arm carried by the piston and adapted to engage said hinged arm and release same when said piston rod reaches a predetermined limit, substantially as described.

2. A force feed lubricator comprising a casting provided with a grease cylinder in the lower part thereof, a cross head at the upper end thereof, and stanchions with openings between connecting said grease cylinder and said cross head, a piston adapted to project into said grease cylinder, a screw-threaded piston rod secured to said piston and projecting through said cross head, said piston rod being provided with longitudinal spline grooves on opposite sides thereof, spline bars spanning said stanchions and each having a spline projecting into said grooves in the piston rod, a sleeve nut journaled in said cross head and engaging the screw threads on said piston rod, a worm gear fast on said sleeve nut, a worm engaging said worm gear, means for rotating said worm, and throw-out mechanism controlled by the movement of said piston rod for automatically disengaging said worm from said worm gear when the piston reaches a predetermined position in its travel, said throw-out mechanism comprising a hinged frame provided with journal bearings for said worm, a spring under compression tending to swing said hinged frame outward to disengage said worm, a pin, a fixed helix mounted on said pin, a movable helix also mounted on said pin, an arm hinged to said movable helix and adapted to turn same to the engaging position for holding said hinged frame against the action of said spring, means for locking said arm in the holding position, and an arm carried by the piston rod and adapted to engage said hinged arm and release same when said piston rod reaches a predetermined limit of its travel, substantially as described.

3. A force feed lubricator comprising a grease cylinder, a piston adapted to project into said grease cylinder, a screw-threaded piston rod secured to said piston, a sleeve nut engaging the screw threads on said piston rod, means for holding said piston rod against turning in said nut, a worm gear fast on said sleeve nut, a worm engaging said worm gear, means for rotating said worm, and throw-out mechanism controlled by the movement of said piston rod for automatically disengaging said worm from said worm gear when the piston reaches a predetermined position in its travel, said throw-out mechanism comprising a hinged frame provided with journal bearings for said worm, a spring under compression tending to swing said hinged frame outward to disengage said worm, a pin, a fixed helix mounted on said pin, a movable helix also mounted on said pin, an arm hinged to said movable helix and adapted to turn same to the engaging position for holding said hinged frame against the action of said spring, means for locking said arm in the holding position, and an arm carried by the piston rod and adapted to engage said hinged arm and release same when said piston rod reaches a predetermined limit of its travel, substantially as described.

4. A force feed lubricator comprising a grease cylinder, a piston adapted to project into said grease cylinder, a screw-threaded piston rod secured to said piston, a sleeve nut engaging the screw threads on said piston rod, means for holding said piston rod against turning in said nut, a worm gear fast on said sleeve nut, a worm engaging said worm gear, means for rotating said worm, and throw-out mechanism controlled by the movement of said piston rod for automatically disengaging said worm from said worm gear when the piston reaches a predetermined position in its travel, with means for rotating said worm gear by hand when said worm is out of engagement therewith, said throw-out mechanism comprising a hinged frame provided with journal bearings for said worm, a spring under compression tending to swing said hinged frame outward to disengage said worm, a pin, a fixed helix mounted on said pin, a movable helix also mounted on said pin, an arm hinged to said movable helix and adapted to turn same to the engaging position for holding said hinged frame against the action of said spring, means for locking said arm in the holding position, and an arm carried by the piston rod and adapted to engage said hinged arm and release same when said piston rod reaches a predetermined limit of its travel, substantially as described.

1,223,176. PACKING CASE OR CARTON SEALING MACHINE. HARRY L. JOHNSON, Battle Creek, Mich., assignor to Johnson Automatic Sealer Co., Ltd., Battle Creek, Mich. Filed Feb. 28, 1916. Serial No. 80,921. (Cl. 93—6.)



1. In a structure of the class described, the combination of a conveyer adapted to carry cartons on their sides and comprising side bars adapted to retain the front and rear flaps in their closed positions, a glue applying means comprising a glue feed roller shaft disposed transversely below said conveyer, a pair of feed rollers on said shaft, a pair of distributing rollers mounted at the sides of said conveyer to coact with said feed rollers, swinging supports for said distributing rollers comprising shafts therefor, shafts on which said supports are pivotally mounted, driving connections for such pivot shafts to said distributing roller shafts, cams on said feed roller shaft, and rollers on said distributing roller shafts coacting with said cams, whereby said distributing rollers are raised and lowered to bring them into engagement with said feed rollers and to move them to and from flap engaging position.

2. In a structure of the class described, the combination of a conveyer adapted to carry cartons on their sides and comprising side bars adapted to retain the front and rear flaps in their closed position, a glue applying means comprising a pair of glue feed rollers, a pair of distributing rollers adjustably mounted at the sides of said conveyer to coact with said feed rollers, and means for driving said rollers and for raising and lowering said distributing rollers to bring them into engagement with said feed rollers and to move them to and from flap engaging position.

3. In a structure of the class described, the combination of a conveyer, a glue applying means comprising a glue feed roller shaft disposed transversely of said conveyer, a pair of feed rollers on said shaft, a pair of distributing rollers mounted at the sides of said conveyer to coact with said feed rollers, swinging supports for said distributing rollers comprising shafts therefor, shafts on which said supports are pivotally mounted, driving connections for such pivot shafts to said distributing roller shafts, cams on said feed roller shaft, rollers on said distributing roller shafts coacting with said cams, whereby said distributing rollers are raised and lowered to bring them into engagement with said feed rollers and to move them to and from engaging position, and driving connections for said glue applying mechanism to said conveyer.

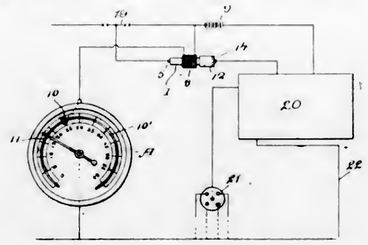
4. In a structure of the class described, the combination of a conveyer, a glue applying means comprising a glue feed roller shaft disposed transversely of said conveyer, a pair of feed rollers on said shaft, a pair of distributing rollers mounted at the sides of said conveyer to coact with said feed rollers, swinging supports for said distributing rollers comprising shafts therefor, shafts on which said supports are pivotally montued, driving connections for such pivot shafts to said distributing roller shafts, cams on said feed roller shaft, rollers on said distributing roller shafts coacting with said cams, whereby said distributing rollers are raised and lowered.

5. In a structure of the class described, the combination of a conveyer, a glue applying means comprising a glue feed roller shaft disposed transversely of said conveyer, a pair of feed rollers on said shaft, a pair of distributing rollers mounted at the sides of said conveyer to coact with said feed rollers, swinging supports for said distributing rollers, cams on said feed roller shaft, rollers on said distributing roller shafts coacting with said cams,

whereby said distributing rollers are raised and lowered to bring them into engagement with said feed rollers and to move them to and from flap engaging position, and driving connections for said glue applying mechanism to said conveyer.

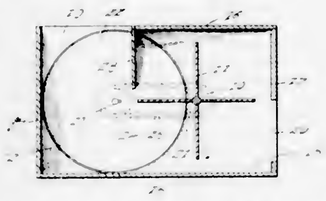
[Claims 6 to 16 not printed in the Gazette.]

1,223,177. SPEEDOMETER-CONTROLLED IGNITION-CIRCUIT BREAKER. JOEL W. JOHNSON, Pine Bluff, Ark. Filed Apr. 8, 1916. Serial No. 89,875. (Cl. 175—355.)



A speedometer-controlled ignition circuit breaker for the internal combustion engines of motor vehicles comprising in combination with a speedometer, a contact arranged in the path of the movable indicator of said speedometer, a tubular shell made in two separable sections, contact posts at the opposite ends of said shell having heads arranged interiorly of the shell, a solenoid coil surrounding said shell and having one terminal thereof in communication with the contact of the speedometer, a slidable core mounted within said shell, a spring arranged within said shell and serving to yieldingly hold the core in contact with one of said contact posts, said spring at its opposite end bearing against the head of the other contact post, and an electric circuit in which said solenoid coil is incorporated controlled by said movable indicator in conjunction with said contact.

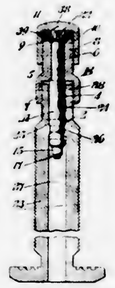
1,223,178. MILK AND BREAD BOX. HENRIETTE W. JONSON, Philadelphia, Pa., assignor of two-thirds to Alice E. Fox, Philadelphia, Pa. Filed Mar. 17, 1916. Serial No. 84,883. (Cl. 232—42.)



1. The combination with a door and a door frame and a floor having an opening therein, of a receptacle located at the lower end of the door frame and adapted to receive articles and having an entrance opening in one wall thereof and an outlet opening in another wall thereof normally closed by the door, means within the receptacle for preventing removal of the articles through the inlet opening after the articles have been placed within the receptacle, a strip carried by the lower wall of the receptacle and extending beneath the lower end of the door and having a plurality of openings therein and adapted to be interchangeably registered with the opening in the floor, and a pin located in spaced relation to the door detachably received by the registering openings in the strip and the floor and having the upper end thereof projecting above the strip, for the purpose specified.

2. A receptacle having an inlet opening and an outlet opening in the walls thereof, a rotatable shaft journaled within the receptacle and located adjacent the outlet opening, a platform carried by the shaft and operable across the outlet opening when the shaft is rotated, a second shaft journaled within the receptacle adjacent the inlet opening, means for preventing rotation of the second shaft in one direction, means carried by the second shaft for engaging an article inserted through the inlet opening and for moving the article onto the platform when the second shaft is rotated, and to prevent the withdrawal of the article through the inlet opening, a sprocket wheel carried by the first shaft, a sprocket wheel carried by the second shaft and operatively connected to the wheel on the first-mentioned shaft, whereby to effect rotation of the first shaft when the second shaft is rotated, for the purpose specified.

1,223,179. TIRE-VALVE. WILLIAM ASHLEY KELLY, New York, N. Y., assignor to Albert B. Norwalk, New York, N. Y. Filed Mar. 29, 1916. Serial No. 87,418. (Cl. 152—12.)



1. A tire valve construction including a tubular nut member having at its inner end internal screw-threads and having its outer end reduced and provided with external screw-threads which are the complement of said internal screw-threads, a tubular sealing member having at its outer end a long bearing sleeve passing through and substantially coterminous with the tubular nut member and forming an inseparable swivel connection with the outer reduced end portion of the tubular nut member and preventing longitudinal angular movement of said tubular members, whereby the internal screw-threads of the tubular nut member are adapted to engage the externally screw-threaded end of a tire tube and the tubular sealing member is adapted to form a seal with the tire tube without rotation relatively thereto, the external screw-threads of the tubular nut member being adapted to form a substitute screw-threaded end of the tire tube, the sealing member being provided with a valve seat, and a check valve carried by the sealing member and cooperative with the valve seat.

2. A tire valve construction including a tubular nut member having at its inner end internal screw-threads engageable with the external screw-threads of the end of a tire tube and having its outer end reduced and provided with external screw-threads similar to the end of the tire tube and complementary to said internal screw-threads, said external screw-threads of the nut member being adapted to take the place of the external screw-threads of the tire tube, a tubular sealing member adapted to form a seal within the bore of the tire tube and having at its outer end a long bearing sleeve passing through and substantially coterminous with the tubular reduced outer end portion of the nut member and forming an inseparable swivel connection with the tubular nut member, the sealing member being provided with a valve seat, and a check valve carried by the sealing member and cooperative with the valve seat.

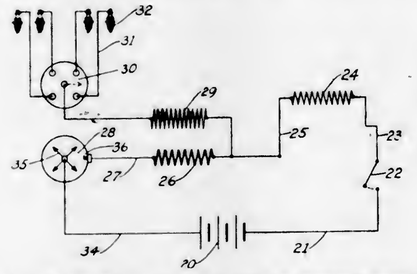
3. A tire valve construction comprising a tubular nut member having at its inner end internal screw-threads engageable with the external screw-threads of the end of a tire tube and having its outer end reduced and provided with external screw-threads complemental of said internal screw-threads and similar to and adapted to take the place of the external screw-threads of the end of the tire tube, a tubular sealing member having at its outer end a bearing sleeve of greater length than diameter passing through the tubular nut member and provided at its outer end with a flange for forming an inseparable swivel connection with the tubular nut member, the sealing member being provided with a valve seat, a check valve carried by the sealing member and coöperative with the valve seat, and a ring of packing material on the sealing member for forming a seal within the bore of the tire tube.

4. A tire valve construction comprising a tubular nut member having at its inner end internal screw-threads engageable with the external screw-threads of the end of a tire tube and having its outer end reduced and provided with external screw-threads complemental of said internal screw-threads and similar to and adapted to take the place of the external screw-threads of the end of the tire tube, a tubular sealing member having at its outer end a bearing sleeve of greater length than diameter passing through the tubular nut member and provided at its outer end with a flange for forming an inseparable swivel connection with the tubular nut member, the sealing member being provided with a valve seat, a check valve carried by the sealing member and coöperative with the valve seat, a valve-closing spring contained within the bearing sleeve of the tubular sealing member, and a ring of packing material on the sealing member for forming a seal within the bore of the tire tube.

5. A tire valve construction comprising, in combination with a tire tube attachable to the tire and having its outer end externally screw-threaded and having a sealing surface within its bore inward from the outer end, a tubular nut member internally screw-threaded at its inner end for screwing over the end of the tire tube and having a projecting outer reduced end portion provided with external screw-threads complemental to the internal screw-threads and adapted to take the place of the external screw-threads of the end of the tire tube, a tubular sealing member having at its outer end a bearing sleeve passing outward through and substantially coterminous with the tubular nut member and forming an inseparable swivel connection therewith, the sealing member being provided with a valve seat, a ring of packing material on the sealing member for forming a seal with the sealing surface of the tire tube, and a check valve coöperative with the valve seat.

[Claim 6 not printed in the Gazette.]

1,223,180. IGNITION SYSTEM. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Original application filed Apr. 17, 1911, Serial No. 621,512. Divided and this application filed Aug. 11, 1911. Serial No. 643,547. (Cl. 123—148.)



1. In an ignition system, a source of electrical energy; a main circuit including a current interrupter; circuit connections between the current source and said circuit; and means for diminishing the flow of current in said main circuit without opening said circuit, when there is a dwell of said current interrupter in its circuit closing position.

2. In an ignition system, a source of electrical energy; a main circuit including a current interrupter; circuit connections between the current source and the main circuit; and means for diminishing the flow of current in said main circuit without opening said circuit, when the main circuit remains closed throughout a substantial period of time.

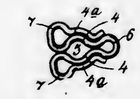
3. In an ignition system, a source of electrical energy; a main circuit including a current interrupter; circuit connections between the current source and the main circuit; and thermal resistance included in the main circuit, for diminishing the flow of current therein without opening said circuit, when there is a dwell of the current interrupter in its circuit closing position.

4. In an ignition system, a source of electrical energy; a main circuit having connection with said source; a current interrupter in the main circuit; and an iron wire control in series with the main circuit for diminishing the flow of current in the main circuit, without breaking said circuit when an abnormal flow of current occurs therein.

5. In an ignition system, a source of electrical energy; a main circuit having connection with said source; a current interrupter in said main circuit; and an iron wire connected in the main circuit, which iron wire becomes heated when there is an abnormal flow of current through the circuit, and by said heating thereby increases the resistance of said iron wire which increase of resistance is utilized to protect the circuit against the continued flow of the abnormal current.

[Claims 6 to 9 not printed in the Gazette.]

1,223,181. STUD-AND-SOCKET FASTENING FOR GARMENTS. OSCAR KJELDAAS, Christiania, Norway. Original application filed June 15, 1914, Serial No. 845,257. Divided and this application filed July 29, 1916. Serial No. 112,095. (Cl. 24—218.)



In a press-button, a socket member consisting of a single wire bent to form a loop or eye, the branches being curved to form a circular eye for engaging a stud, and the branches being continued and re-curved upon the outside of said circular eye and loop to approximately its entire length forming additions to the eye in close juxtaposition to the outside of the same broadening its surface for facilitating the buttoning operation.

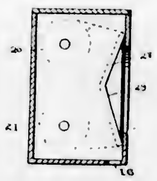
1,223,182. GAS-HEATER. JOSEPH LAMB, Jersey City, N. J. Filed Apr. 25, 1916. Serial No. 93,469. (Cl. 158—116.)



1. A burner comprising an elongated round ended endless tube, and a second tube extending longitudinally of the first tube and having the ends thereof integral with the rounded end portions of the first named tube, the upper portions of said tube being perforated.

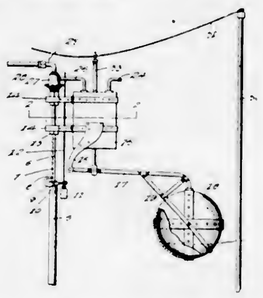
2. A spherical mixing chamber having inlet and outlet ports at diametrically opposite points and formed with air inlet slots around the inlet portion, and a reducer arranged in the inlet port and formed with a relatively small bore.

1,223,183. DIRECTION-INDICATOR. WILLIAM H. LARSEN, Racine, Wis. Filed Apr. 20, 1914. Serial No. 833,088. (Cl. 40—89.)



In a direction indicator, a casing having openings in the front wall thereof, a partition secured within said casing between said openings and dividing the casing into two compartments, said partition provided with a V-shaped opening, a V-shaped board secured in one of the compartments and having its upper and lower longitudinal edges rounded to provide guides, illuminating means in the other compartment, an indicating strip of semi-opaque material extending over the rounded edges of the said V-shaped board, and means arranged behind said board for actuating said strip, said V-shaped board being co-extensive with the V-shaped opening in the partition permitting the rays of light from said illuminating means to enter between said boards and behind said strip.

1,223,184. WAVE-MOTOR. AUGUST VICTOR LARSON, Bridgeport, Conn. Filed July 11, 1916. Serial No. 108,615. (Cl. 230—32.)



1. A wave motor including a standard, a post adjustably mounted therein, a compressor cylinder carried by said post, a float, an arm carried by said float pivotally supported by said cylinder, and means for locking said post in adjusted position.

2. A wave motor including a standard, a post adjustably supported therein, a compressor cylinder pivotally mounted upon said post, an arm pivotally secured to said cylinder, a float carried by said arm, and means for locking said post in adjusted position.

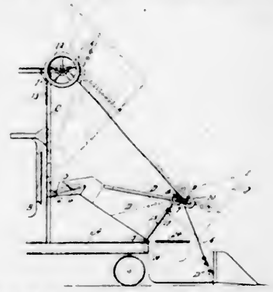
3. A wave motor including a standard, a post slidably mounted in said standard, means for locking said post in adjusted position with relation to said standard, a compressor including a cylinder and a float-actuated piston reciprocably mounted therein, means pivotally securing said compressor to said post, means for elevating said compressor, an arm pivotally secured to said compressor, and a float carried by said arm.

4. A wave motor comprising a post, a compressor including a cylinder and a float-operated piston reciprocably mounted therein, a float connected with said compressor, supporting plates carried by said compressor pivotally receiving said post, an outlet pipe for said compressor, a hollow casing connected with said outlet pipe disposed in axial alinement with said post, and an air supply pipe rotatably received within said casing.

5. A wave motor including a standard, a vertically adjustable post supported by said standard, means for locking said post in adjusted position, a compressor pivotally and adjustably supported by said post, said compressor including a cylinder and a piston reciprocably mounted therein, and a float operably connected with said piston of the compressor.

[Claims 6 and 7 not printed in the Gazette.]

1,223,185. CONCRETE-MIXER-LOADING BUCKET. ERICH H. LICHTENBERG, Milwaukee, Wis., assignor to Koehring Machine Company, Milwaukee, Wis. Filed Sept. 8, 1913. Serial No. 788,743. (Cl. 214—3.)



1. In charging mechanism for concrete mixers, the combination of a support, a bucket comprising a delivery section pivoted at one end to said support, a receiving section pivoted to the other end of the delivery section, an operating cable for raising the bucket connected with the receiving section, sheaves on the delivery section over which said cable passes, and means intermediate said sections whereby initial movement of said cable causes movement of the receiving section independently of the delivery section and subsequent movement of the cable moves the two sections simultaneously to a dumping position.

2. In charging mechanism for mixers, the combination of a bucket including inner and outer bucket sections normally inclining downward to receive a charge of material, a support, a pivotal connection between the support and the inner section, a pivotal connection between the sections, and means to raise the outer section initially to cause the same to coact with the inner section whereby to lift the sections simultaneously to an inclination opposite the normal one, for discharging the bucket.

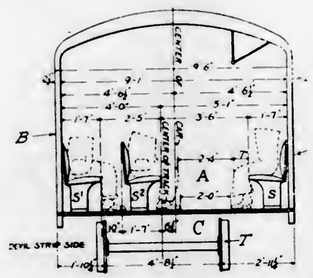
3. In charging mechanism for concrete mixers, the combination of a support, a bucket comprising a delivery section pivotally connected at one end with said support, a receiving section of angular form pivotally connected at a point intermediate its inner end with the other end of the delivery section, cable means connected with the receiving section of the bucket, and an abutment carried by said receiving section to engage the delivery section whereby to cause simultaneous movement of the two sections at a predetermined point in the movement of the receiving section.

4. In charging mechanism for concrete mixers, the combination of a support, a bucket comprising a delivery section pivotally connected at one end with said support, a receiving section of angular form pivotally connected at a point intermediate its inner end with the other end of the delivery section, cable means connected with the receiving section of the bucket, and an abutment carried by the inner end portion of the receiving section and adapted to engage the outer adjacent end of the delivery section at a predetermined point in the movement of the receiving section.

5. In charging mechanism for concrete mixers, the combination of a support, a bucket comprising a delivery section pivotally connected at one end with said support, a receiving section of angular form pivotally connected at a point intermediate its inner end with the other end of the delivery section, cable means connected with the receiving section of the bucket, an abutment carried by the inner end portion of the receiving section and adapted to engage the outer adjacent end of the delivery section at a predetermined point in the movement of the receiving section, sheaves on the delivery section over which said cable means passes, arms pivoted to the delivery section, and sheaves carried by said arms and also engaging said cable means from the side opposite that at which the first mentioned sheaves are arranged.

[Claims 6 to 9 not printed in the Gazette.]

1,223,186. STREET-CAR AND SIMILAR VEHICLE. LOUIS P. LIPPS, Cleveland, Ohio, assignor to himself as trustee. Filed Jan. 30, 1917. Serial No. 145,508. (Cl. 105—205.)



1. In a street-car, or similar vehicle, the combination of seats along the sides thereof, longitudinally arranged seats in front of the seats along one of the sides, an aisle between said seats in front and the seats along the other side, with spaces at intervals, between said seats in front, to permit egress and ingress therethrough from and to the seats beyond, substantially as shown and described.

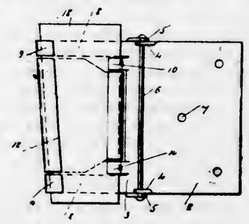
2. In a street-car, having the body thereof mounted upon the trucks with the center line thereof off the center line of the trucks, the combination of seats at the sides, seats intermediate thereof, an aisle between the intermediate seats and the seats at one side of the car, and suitable means of egress and ingress from and to said aisle and the seats beyond, substantially as shown and described.

3. A street-car, or similar vehicle, mounted eccentrically on its trucks, having longitudinally arranged seats at the sides, and also intermediately thereof, said intermediately arranged seats being interrupted at intervals, to afford passage therethrough, substantially as shown and described.

4. A street-car, or similar vehicle, mounted eccentrically on its trucks, having longitudinally arranged seats at the sides, longitudinally arranged seats intermediate of the seats at the sides, an aisle lengthwise of the car or vehicle between said intermediately arranged seats and the seats at one of the sides, and passageways through the intermediate seats, between the aisle and the seats on the other side, substantially as shown and described.

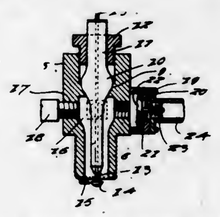
1,223,187. HINGE. ADOLPH C. LUTTER, Glenview, Ill. Filed Jan. 26, 1917. Serial No. 144,641. (Cl. 16—106.)

A hinge fastening, comprising a pivoted frame having at its top and bottom two arms of unequal length provided with hook-shaped guides at their free ends, said frame having also a pair of guide lugs struck up from its body portion and arranged adjacent to and between the other end portions of its said arms, a fastening plate provided at its edges with guides of unequal length the ends of which correspond with and fit between the said guides and guide lugs of the frame, and a connecting wedge



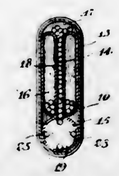
which engages with the guides and guide lugs of the fastening plate and frame.

1,223,188. SPARK-PLUG. JOSEPH E. MANLOVE, Plymouth, Ill. Filed July 21, 1916. Serial No. 110,558. (Cl. 123—169.)



A spark plug comprising a hollow rectangular body, a hollow externally screw-threaded extension formed on said body for threaded engagement with the head of an engine, a shoulder formed on the interior of the body and centrally thereof, an insulator having a circumferential enlargement extending through the body and into the extension and having the enlargement disposed against the shoulder, said body having oppositely disposed inlet ports communicating with the interior thereof at a point below the shoulder, a plate closing one of said inlet ports and having a transverse opening provided with its walls beveled to form a valve seat, plugs closing the other inlet ports, a spring pressed valve normally closing the transverse opening of the plate, a fuel supply pipe connected to the transverse opening, and electrodes carried by the insulator and extension.

1,223,189. MATCH-BOX. CHARLES F. MANN, Washougal, Wash. Filed Mar. 14, 1916. Serial No. 84,135. (Cl. 206—22.)

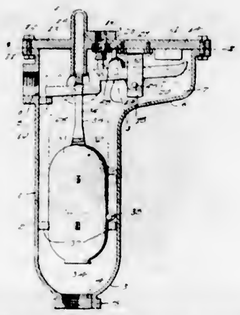


1. A match box comprising a receptacle, a casing arranged within said receptacle and defining therewith a main match receiving compartment, said casing having forwardly extending spaced walls terminating to provide compartments arranged beneath said main compartment, said walls defining auxiliary match compartments and a restricted passage establishing communication between the first mentioned compartments whereby the matches are fed singly from one to the other of said compartments, a grooved roller rotatably mounted in the second mentioned compartment, and means for operating

said roller to bring the matches in alinement with a discharge opening.

2. A device of the character described comprising a receptacle, defining a main match receiving compartment being formed with spaced parallel walls arranged within said casing centrally thereof, and spaced from the opposite sides of said casing to define auxiliary match receiving compartments, said walls terminating to provide a sleeve-like member disposed beneath the casing and communicating with the space between said walls, and a grooved roller journaled within the sleeve-like portion for the purpose specified.

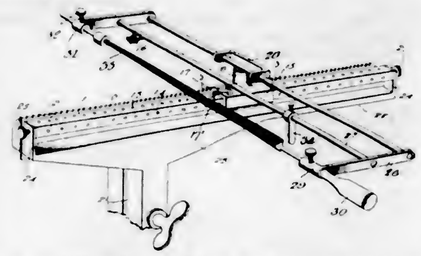
1,223,190. ATTACHMENT FOR VAPOR-HEATING SYSTEMS. WALTER M. MANNING and OSCAR B. GANSON, Omaha, Nebr. Filed July 11, 1916. Serial No. 108,628. (Cl. 137—122.)



In a device of the class described, a tubular body having an inlet opening at its lower end and an outlet opening adjacent its upper end, an offset chamber formed integrally with the body adjacent its upper end and at a point diametrically opposite the outlet opening, a cover fitted on the body and offset chamber to close the same, said cover having an air outlet port formed at a point substantially centrally thereof, a pair of depending brackets attached to the underside of the cover, a stem guide formed integrally with the cover adjacent the air outlet opening, a valve seat for said air outlet opening, guards formed on the under side and depending from the cover in spaced relation, said guards being positioned within the offset chamber, a trough shaped lever pivoted between the depending brackets, a ball weight positioned in said trough shaped lever, the guards preventing said weight from pulling out of said trough shaped lever, a valve pivoted to said lever at one end and adapted to coöperate with the valve seat in the air outlet valve to control the flow of air through the outlet, a downwardly offset arm formed on the end of the lever to which the valve is pivoted, a stop formed on the interior of the body to limit the downward movement of the end of the offset arm, a float within the body, and a slotted stem on the upper end of said float, the slot in the stem being adapted to accommodate the offset arm on the lever whereby the float may move vertically without moving the lever until such limits of movement of said float are reached, the lever acting to suspend the float within the body when the end of the offset portion engages the stop.

1,223,191. ADJUSTABLE SAW-FILING GUIDE. ADELBERT R. MERRITT, Brewerton, N. Y. Filed Mar. 15, 1916. Serial No. 84,355. (Cl. 76—36.)

1. An adjustable saw filing device comprising a support, a bar carried in the support and having a plurality of rows of spaced holes, a sleeve slidable over the bar and having a bearing rising therefrom, a U-shaped hanger mounted on the bearing for swinging movement, a set screw connecting the hanger to the bearing for locking it in adjusted position, a catch pivoted on the sleeve and engageable in any one of the holes for locking the sleeve adjusted, a guide having spaced parallel longitudinal rods, one rod being slidably and swingingly engaged in the hanger, means on the guide for clamping a file therein and permitting adjustment of the same, resilient means acting upon the catch to hold the same in positive locking position, and a stop adjustably mounted on the other rod.



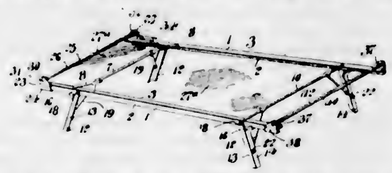
2. An adjustable saw filing device comprising a support, a bar carried in the support and having a plurality of rows of spaced holes, a sleeve slidable over the bar and having a bearing rising therefrom, a U-shaped hanger mounted on the bearing for swinging movement, a set screw connecting the hanger to the bearing for locking it in adjusted position, a catch pivoted on the sleeve and engageable in any one of the holes for locking the sleeve adjusted, a guide having spaced parallel longitudinal rods, one rod being slidably and swingingly engaged in the hanger, means on the guide for clamping a file therein and permitting adjustment of the same, resilient means acting upon the catch to hold the same in positive locking position, and a stop adjustably mounted on the other rod.

1,223,192. BRAKE APPARATUS. ARTHUR E. METZGER, Browning, Ill. Filed Dec. 28, 1916. Serial No. 139,331. (Cl. 21—9.)



A brake mechanism for trailers of traction engines, etc., comprising a truck with wheels thereon, a tongue secured to the truck, a spring-pressed brake shoe, a notched pull bar, a frame secured to the truck and carrying anti-friction rollers, a chain connecting said block, an anti-friction roller upon the forward axle of the truck over which said chain passes, and a pawl for engaging the notched pull bar.

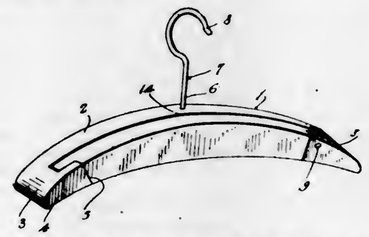
1,223,193. BED-SPRING AND TIGHTENER. CHARLES C. MITCHELL and WALTER J. BARHAM, Dallas, Oreg. Filed Mar. 15, 1916. Serial No. 84,402. (Cl. 5—5.)



1. In a collapsible bed frame of the class described, side rails, each having a downwardly extending web, legs, each having an outer web and an inwardly extending web, each leg having the upper end of its inwardly extending web bent away from the upper portion of the outer web and provided with a channel in its upper side, the outer web of each leg being pivotally connected to one of the side rails near the upper end of said leg, so that said legs are adapted to fold inwardly against the said rails, the channeled and angled arms of said legs being adapted, when the legs are in supporting position to engage the under edges of the vertical webs of said side rails.

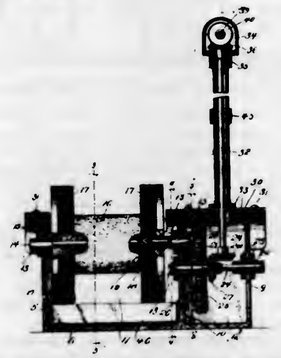
2. In a collapsible bed frame of the class described, a pair of side rails, cross brace rods detachably secured thereto, legs pivotally connected to said side rails and each having a brace member to engage under one of the side rails when said legs are in supporting position, and brace rods detachably connected each to one of said cross brace rods intermediate its ends and to one of said legs.

1,223,194. COMBINATION SUIT-HANGER. CHARLES T. MITCHELL, Spencerport, N. Y. Filed Mar. 25, 1916. Serial No. 86,644. (Cl. 211—13.)



A garment hanger comprising a curved body, a hook centrally of said body, a head extending outwardly from each end of the body and from one of the flat faces thereof, an inwardly extending lug on each head, a clamp member comprising a curved body, lugs on the ends of the curved body, said lugs being adapted to be positioned between the body of the hanger, and the lugs on the ends of the heads, and a pivot pin extending through one pair of lugs to hold the clamp member in pivotal relation to the body, the clamp member and lugs on the body being provided with coöperating inclined faces to limit the downward movement of the clamp member with relation to the body.

1,223,195. ROTARY SHOE-CLEANER. TONY MOLINARO, Silver Lake, N. J. Filed Oct. 5, 1915. Serial No. 54,214. (Cl. 15—2.)



1. In a device of the class described in combination a casing having a central partition, a pair of alining sleeves threaded into one wall of said casing and the partition respectively, a counter shaft mounted in said partition at one end and in another wall of said casing at its opposite end, the outer bearings of said last named counter shaft being removable, and an internal gear fixed upon said counter shaft, and a sleeve threaded into said partition in which one end of said counter shaft is received, said internal gear engaging said last named sleeve so as to be limited against movement in one direction, a stub shaft having a shoulder engaging one of said first named sleeves, a small gear fixed upon said stub shaft and engaging in said internal gear and held against displacement by the latter, a brush spool, and a shaft carried by said brush spool and having at one end a polysided bore, one end of said last named shaft being received in one of said first named sleeves, said stub shaft having a polysided portion fitting in said bore and adapted to rotate said brush spool.

2. In a device of the class described, in combination a casing, a partition in said casing, a brush spool having a polysided bore at one end and at its opposite end journaled in one wall of said casing, a stub shaft journaled in said partition and having a polysided portion fitting in said polysided bore and supporting said spool for rotation, said stub shaft being detachable from engagement with said spool to permit the opposite end of the spool shaft to be removed from the casing, a gear wheel carried by said stub shaft, a drive shaft adapted to have longitudinal movement, and an internal gear fixed upon said drive shaft, detachable from said first named gear by the longitudinal movement of said shaft and adapted to mesh with the latter to rotate the stub shaft.

1,223,196. SWAB-HOLDER. WALTER D. NARAMORE, Denver, Colo.; Beatrice Naramore administratrix of said Walter D. Naramore, deceased. Filed June 7, 1915. Serial No. 32,678. (Cl. 15—39.)

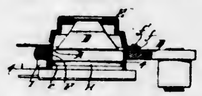


1. In a swab holder, the combination with a handle having a shank, of a head on said shank, and a swab carrying member carried by said head and provided with a tapered and slotted portion for connection with a swab.

2. In a swab holder, the combination with a handle having a shank, of a hollow cylindrical head on said shank having in its peripheral wall a longitudinally extending slot and a transversely extending slot intersecting said longitudinally extending slot between its ends, a swab carrying member having a stem received within said head, and a flattened and tapered portion below said stem for connection with a swab.

3. In a swab holder, the combination with a handle having a shank, of a head on said shank, a swab carrying member having a stem received in said head, and a flattened and tapered portion on said swab carrying member having slots therein inclining toward said stem to receive therein portions of a swab.

1,223,197. MICROSCOPE. HARVEY N. OTT, Buffalo, N. Y., assignor to Spencer Lens Company, Buffalo, N. Y. Filed Sept. 12, 1914. Serial No. 861,386. (Cl. 88—39.)



1. In a microscope, the combination of a substage provided with an opening for a substage appliance and with a retaining ring in said opening, a substage appliance adapted to be inserted upwardly into and removed from said retaining ring, and a spring catch on one of said parts and adapted to spring into engagement with a shoulder extending circumferentially around the other part for positively but releasably securing said appliance

in said retaining ring and permitting rotary adjustment of the appliance in the ring.

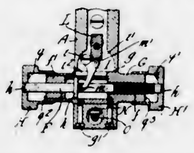
2. In a microscope, the combination of a substage provided with an opening for a substage appliance and with a retaining ring substantially concentric with said opening, a substage appliance adapted to be inserted upwardly into and removed from said retaining ring, and a spring catch on said retaining ring adapted to engage a circumferential shoulder on said appliance for releasably securing said appliance in said retaining ring.

3. In a microscope, the combination of a substage provided with an opening for a removable substage appliance and with a retaining ring, and a substage appliance adapted to be inserted upwardly into and removed from said retaining ring, said retaining ring having a spring tongue formed by an integral portion of the circumferential wall of said ring and extending circumferentially thereof and adapted to engage a circumferential shoulder on said appliance for releasably securing said appliance in said retaining ring.

4. In a microscope, the combination of a substage provided with an opening for a removable substage appliance and with a retaining ring in said opening, and a substage appliance adapted to be inserted upwardly into and removed from said retaining ring, said retaining ring having an integral spring tongue extending circumferentially thereof and adapted to engage a circumferential shoulder on said appliance for releasably securing said appliance in said retaining ring, said spring tongue being provided with an outwardly bent end portion for manipulating it.

5. In a microscope, the combination of a substage provided with an opening for a substage appliance and with an expansible retaining ring for said appliance, a substage appliance adapted to be inserted upwardly into said retaining ring, and a spring catch on said retaining ring adapted to engage a circumferential shoulder on said appliance for releasably retaining said appliance in said retaining ring, said catch permitting said appliance to be turned to different positions in said retaining ring, and said retaining ring acting by frictional engagement with said appliance to hold it in the position to which it is turned.

1,223,198. ADJUSTMENT MECHANISM FOR MICROSCOPES. HARVEY N. OTT, Buffalo, N. Y., assignor to Spencer Lens Company, Buffalo, N. Y. Filed July 12, 1915. Serial No. 39,226. (Cl. 88—39.)



1. In a microscope, the combination with an adjustable member carrying a lens, of adjustment mechanism therefor comprising a transverse screw shaft provided at opposite ends with means for turning it, a bearing having a screwthreaded engagement with said shaft for causing the shaft to move endwise when turned, and a lever for transmitting movement from said shaft to said adjustable member, said lever being in direct engagement with fixed parts on said shaft and said adjustable member.

2. In a microscope, the combination with an adjustable member carrying a lens, of adjustment mechanism therefor comprising a transverse screw shaft and a lever for transmitting movement from said shaft to said adjustable member, and spaced bearings for said shaft at opposite sides of said lever one of which bearings has a screwthreaded engagement with the shaft for causing the shaft to move endwise when turned, said lever being directly engaged and moved by a part fixed on said shaft.

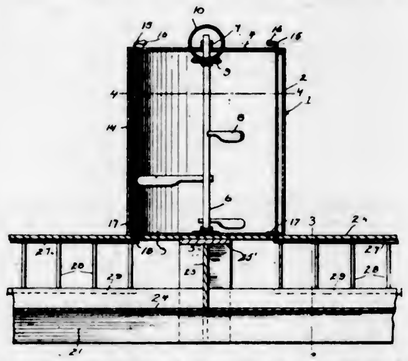
3. In a microscope, the combination with an adjustable member carrying a lens, of adjustment mechanism therefor comprising a transverse screw shaft provided with means for turning it, a device for transmitting motion from said shaft to said member, and a bearing sleeve through which said shaft extends, said sleeve having bearings for said shaft located at opposite sides of said motion transmitting device, one of which bearings has a screw-threaded engagement with the shaft for causing endwise movement of the shaft for actuating said device.

4. In a microscope, the combination with an adjustable member carrying a lens, of adjustment mechanism therefor comprising a transverse screw shaft provided with means for turning it, a lever actuated by endwise movement of said shaft for transmitting motion from said shaft to said member, a bearing sleeve through which said shaft extends and which has bearings located at opposite sides of said lever, one of said bearings having a screwthreaded engagement with said shaft for causing endwise movement of the latter, and a supporting part having a hole in which said bearing sleeve is secured.

5. In a microscope, the combination with an adjustable member carrying a lens, of adjustment mechanism therefor comprising a transverse screw shaft provided with means for turning it, a lever for transmitting motion from said shaft to said member, a bearing sleeve through which said shaft extends and which has bearings at opposite ends for the shaft, one of said bearings having a screwthreaded engagement with said shaft for causing endwise movement of the latter, and said bearing sleeve having an opening between said bearings through which said lever projects for engagement with said shaft, and a supporting part having a hole in which said bearing sleeve is secured.

[Claims 6 to 9 not printed in the Gazette.]

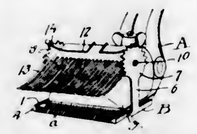
1,223,199. HOG-TROUGH. WILLIAM T. PATTERSON, Shelbina, Mo. Filed Oct. 29, 1914. Serial No. 869,267. Renewed Sept. 28, 1916. Serial No. 122,746. (Cl. 119—53.)



1. A hog feeding device including the combination with a container comprising a cylindrical body, a closure at the lower terminal of the cylindrical body, said closure being provided with a pair of outlet ports, troughs supported beneath the container, and means for supporting the container directly over the troughs, said troughs being provided with a pair of hinged panels, the panels being arranged to form division members and prevent the animals from placing anything but their heads in the troughs, and a strip disposed between the troughs and rigidly connected to the same for holding the troughs at a relatively spaced distance apart for preventing the animals from coming into contact with one another when feeding.

2. A hog feeding device including a container, said container comprising a cylindrical body, a closure at the lower terminal of the cylindrical body, said closure being provided with outlet ports, valves controlling the flow of the contents of the container through the outlet ports, of troughs, means positioned centrally over the troughs for supporting the container over the same, said troughs being provided with a central partition wall, and comprising a central ridge member, downward extensions formed laterally of the ridge member, said downward extensions being provided on their free edges with upturned portions, the upturned portions and downward extensions forming V-shaped troughs laterally of the ridge member, and hinged panels operatively mounted with relation to the troughs, said hinged panels being arranged to be swung upwardly to enable the person using the device to clean the same, and a connecting strip disposed between the two troughs and connected thereto for holding the same at relatively spaced distance apart preventing the faces of the animals from coming into contact with one another when feeding.

1,223,200. ADJUSTABLE COMB-HOLDER FOR HAIR-CLIPPERS. JARRIOTT T. PITTS, Mont Eagle, Tenn. Filed Sept. 4, 1914. Serial No. 860,287. Renewed Sept. 20, 1916. Serial No. 121,314. (Cl. 30—1.)

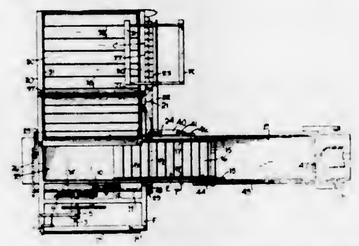


1. A comb holder for hair clippers, comprising a pair of jaws in spaced relation to each other adapted to clamp the clipper between them, arms extending from said jaws, a shaft having its extremities mounted to turn in said arms, comb holding means on said shaft, and means for holding said shaft from turning after being adjusted.

2. A comb holder for hair clippers, comprising a pair of jaws in spaced relation to each other adapted to clamp the clipper between them, flexible means connecting said jaws and permitting the same to yield toward and away from each other, arms extending from said jaws, a shaft having its extremities mounted to turn in said arms, comb holding means on said shaft, and means for holding said shaft from turning after being adjusted.

3. A comb holder for hair clippers, comprising a pair of jaws in spaced relation to each other adapted to clamp the clipper between them, arms extending from said jaws, a shaft having its extremities mounted to turn in said arm, and comb holding spring fingers on said shaft, said arms being formed with notches to be engaged by said fingers to hold the shaft from turning.

1,223,201. HEADER. WILLIAM V. PRITCHETT, Blooming Grove, Tex. Filed Oct. 30, 1916. Serial No. 128,535. (Cl. 56—100.)

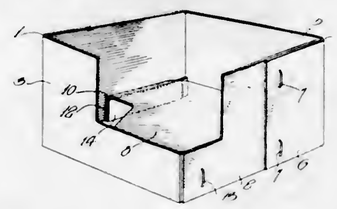


1. A device of the character described comprising a portable body, an elongated frame having its longitudinal axis disposed transversely of the body, said frame extending beyond one side of the body, a shaft carried by and disposed transversely of the body and with which an end portion of the frame is pivotally connected, a cutting mechanism carried by the forward marginal portion of the part of the frame extending to one side of the body, means for imparting rocking movement to the frame, a conveyer movable longitudinally of the frame and upon which the cutting mechanism discharges, the inner end portion of said conveyer being upwardly directed, a downwardly and forwardly inclined table carried by the frame and upon which the conveyer discharges, and a forwardly directed elevating mechanism carried by the frame and upon which the table discharges.

2. A device of the character described comprising a portable body, an elongated frame having its longitudinal axis disposed transversely of the body, said frame extending beyond one side of the body, the portion of the frame overlying the body being pivotally engaged with the body, a cutting mechanism carried by the forward marginal portion of the part of the frame extending to one side of the body, means for imparting rocking movement to the frame, a conveyer movable longitudinally of the frame and upon which the cutting mechanism discharges, the inner end portion of said conveyer being upwardly directed, a downwardly and forwardly inclined table carried by the frame and upon which the conveyer discharges, and a forwardly directed elevating mechanism carried by the frame and upon which the table discharges.

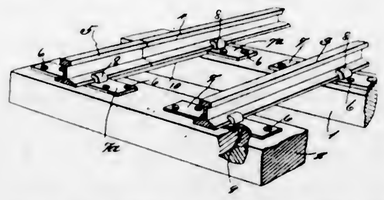
3. A device of the character described comprising a portable body, an elongated frame having its longitudinal axis disposed transversely of the body, said frame extending beyond one side of the body, the portion of the frame overlying the body being pivotally engaged with the body, a cutting mechanism carried by the forward marginal portion of the part of the frame extending to one side of the body, means for imparting rocking movement to the frame, a conveyer movable longitudinally of the frame and upon which the cutting mechanism discharges, the inner end portion of said conveyer being upwardly directed, a downwardly and forwardly inclined table carried by the frame and upon which the conveyer discharges, a forwardly directed elevating mechanism carried by the frame and upon which the table discharges, and a collecting receptacle carried by the body in advance of the frame and into which the elevating mechanism discharges.

1,223,202. FOLDING BERRY-BOX. CHARLES H. PROCTOR, Sheboygan, Wis. Filed July 13, 1916. Serial No. 109,114. (Cl. 229—23.)



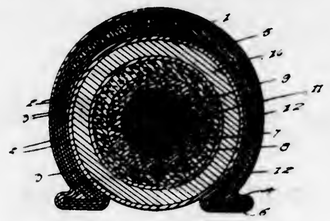
In a folding berry box, the combination with a thin wooden strip having four transverse V-shaped scores therein dividing it into five portions, four successive portions being of equal size and the remaining end portion being smaller, said strip being adapted to be folded with its smaller end portion overlapping the larger end and secured thereto adjacent one edge to form a substantially rectangular box adapted to be compressed to flat parallelogram shape, a substantially rectangular-shaped wooden bottom strip with transverse V-shaped scores adjacent two of its opposite edges, said edges being bent downwardly at right angles to the bottom strip, one of the edges being secured to the inner end wall of the box strip adjacent its bottom, a separate wooden locking strip secured at its ends across the lower inner side of the opposite wall of the box, and the free bent edge of the bottom strip having its corners cut away whereby said end is adapted to pass between the upper end of the locking strip and the adjacent wall of the box to hold the box securely in open position.

1,223,203. RAIL-FASTENER. OTTO JULIOUS RAJEWSKY, Blue Earth, Minn. Filed June 1, 1916. Serial No. 101,093. (Cl. 238—2.)



A combined rail fastener and rail brace plate, comprising an elongated plate corresponding in width to the width of the bases of a pair of adjacent rails and spanning from one tie to another and bridging or covering the adjacent ends of two adjoining rails, said plate at its opposite ends having transverse plates, thereby forming a rail fastener and rail plate I-shaped in plan view, said transverse plates having normally upstanding mild steel lugs substantially midway the ends of said transverse plates and arranged in pairs, the lugs of each pair being spaced correspondingly to the width of the base of the rail, and designed to be mauled to overlie opposite portions of the base of the rail, and means for securing the transverse plates to adjacent ties.

1,223,204. AIRLESS TIRE-CORE. CHARLES B. REYNOLDS, Sawtelle, Cal. Filed June 6, 1916. Serial No. 101,937. (Cl. 152—5.)



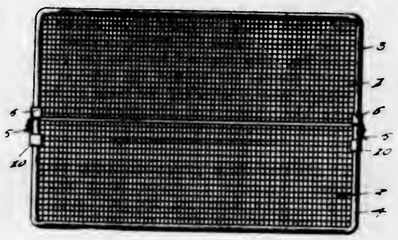
In a device of the character set forth comprising a filler consisting of layers of comminuted cork cemented together, a core within the layers of cork, tape spirally wound around the outer surface of the layers of cork, fabric belting spirally wound around the tape in an opposite direction, a metallic ribbon spirally wound around the fabric belting, and a shoe surrounding the filler.

1,223,205. GUARD FOR WIND-SHIELDS. VERNE M. ROLPH, Magnolia, Minn. Filed Feb. 3, 1917. Serial No. 146,426. (Cl. 21—148.)

1. A guard for wind shields comprising an upper section and a lower section, means hingedly connecting said sections, and means carried by said lower section for attaching said guard to an ordinary motor vehicle wind shield.

2. A guard for motor vehicle wind shields comprising an upper section and a lower section, said sections being constructed of mesh material, subtsantially U-shaped tubes binding the outer edges of said sections, means hingedly connecting said tubes, and means carried by the tube which extends about the lower section for detachably attaching the guard in front of an ordinary motor vehicle wind shield.

3. A guard for motor vehicle wind shields comprising an upper section and a lower section constructed of foraminous material, tubes extending about and binding the outer edges of said sections, means for hingedly connecting said sections, ears formed upon the side tube of said lower section, clamping plates hingedly connected to



said ears, and a rod extending through said clamping plates, a wing nut mounted upon one end of said rod for moving said clamping plates into clamping engagement with the side rods of an ordinary motor vehicle.

1,223,206. EXPANSIBLE SHOE-LAST. CARL SCHEVITZ, Jacksonville, Fla. Filed Aug. 16, 1916. Serial No. 115,249. (Cl. 12—130.)



1. An expansible shoe last comprising a frame, a yoke slidably mounted in the frame, extensible shafts journaled in the yoke, and stretching elements movable in the frame and having a cam engagement with said shaft.

2. An expansible shoe last comprising a frame, yokes movable in the frame, extensible shafts journaled in the yoke, stretching elements movable in and with the yoke and having a cam engagement with the said shafts, and means operable exteriorly of a shoe for independently moving each of the yokes and stretching elements.

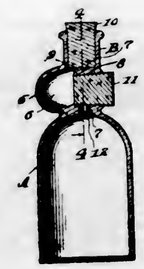
3. An expansible shoe last comprising a frame, a plurality of extensible shafts journaled in and moving longitudinally of the frame, stretching elements movable in the frame and with the shafts and having a cam engagement with the shafts, and means operable exteriorly of the shoe for extending the shafts to move the stretching elements and for moving the shafts longitudinally of the frame.

4. An expansible shoe last comprising a frame, L-shaped yokes slidable in the frame, shafts journaled in each arm of the yoke and engageable with each other, one of said shafts being formed of extensible sections threadedly engaging each other, one of the sections having a cam surface, and stretching elements movable in the yokes and having cam surfaces engageable with the cam surfaces of said sections for moving the elements laterally of the frame.

1,223,207. BOTTLE. JOHN F. SCYPINSKI, Detroit, Mich. Filed Feb. 7, 1916. Serial No. 76,756. (Cl. 221—98.)

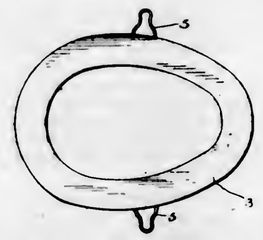
A bottle having a neck having an enlargement upon one side thereof providing a chamber within said neck at its intersection with the bottle body, a cylindrical wall extending inwardly from the opposite side of the neck and providing a transversely extending passage therein having an outer end opening out exteriorly of the neck and an inner end opening into said chamber, said wall having

ports at opposite points therein offset with relation to each other and establishing communication respectively



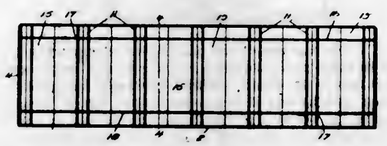
between the bottle body and chamber, and the chamber and neck.

1,223,208. SANITARY TOILET-SEAT PROTECTOR. JESSIE JANE SHARP, Circle, Mont. Filed Jan. 15, 1916. Serial No. 72,234. (Cl. 4—18.)



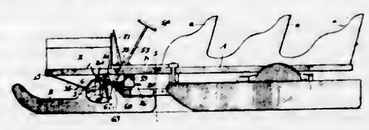
A fastener for an article comprising a pair of oppositely disposed flaps formed on the article, loops provided with enlarged ends for receiving the flaps, and laterally projecting arms secured to the free ends of the flaps and extending from each side of the flaps and provided with adhesive material thereon, said flaps extending through the loops and bent rearwardly upon the article and said arms being adhered to the article forming a hinge connection for the loops to the article and reinforcing the article at points of the hinges of the loops to the article.

1,223,209. SHIPPING-PACKAGE FOR EGGS. HENRY SPENCER SMITH, Ulster Park, N. Y. Filed May 25, 1915. Serial No. 30,390. (Cl. 217—34.)



A shipping package for eggs comprising a nest including longitudinal and transverse members dividing the same into a plurality of cells, said longitudinal and transverse members each comprising two similar members scored at the central of each of the cells and bent inwardly of the said cells, plates passing through alining openings adjacent to the top and bottom of the end walls of the cells and having their edges disposed adjacent to the central of the side walls of the cells, whereby to limit the inward movement of the said side walls with relation to the said cells.

1,223,210. STEERING-GEAR FOR MOTOR-SLEIGHS. PETER H. SMITH, Lougheed, Alberta, Canada. Original application filed Mar. 27, 1915, Serial No. 17,399. Divided and this application filed Jan. 4, 1916. Serial No. 70,312. (Cl. 21—48.)



1. In a motor sleigh, a front truck bolster to which the front runners are pivotally connected to turn on substantially vertical axes, means for turning said front runners, depressible fins carried by the latter, and manually controlled yieldable means for depressing said fins.

2. In a motor sleigh, a front truck bolster to which the front runners are pivotally connected to turn on substantially vertical axes, means for turning said front runners, depressible fins carried by the latter, and manually controlled means for depressing said fins.

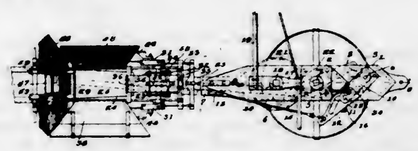
3. In a motor sleigh, a front truck bolster to which the front runners are pivotally connected to turn on substantially vertical axes, means for turning said front runners, depressible fins carried by the latter, standards rising from said fins, and a spring bar terminally engaging said standards to permit the latter to move upwardly and downwardly.

4. In a motor sleigh, a front truck bolster to which the front runners are pivotally connected to turn on substantially vertical axes, means for turning said front runners, depressible fins carried by the latter, standards rising from said fins, a spring bar terminally engaging said standards to permit the latter to move upwardly and downwardly, and manually controlled means for flexing said spring between the ends thereof.

5. In a motor sleigh, a front truck bolster to which the front runners are pivotally connected to turn on substantially vertical axes, means for turning said front runners, depressible fins carried by the latter, standards rising from said fins, a spring bar terminally engaging said standards to permit the latter to move upwardly and downwardly, and manually controlled means for flexing said spring between the ends thereof including a roller in relation to and against which said spring bar is slidable.

[Claim 6 not printed in the Gazette.]

1,223,211. BALING-PRESS. CHRISTIAN J. STARKS, Marco, La. Filed June 13, 1916. Serial No. 103,509. (Cl. 100—25.)



1. A baling press comprising a box, a plunger movably mounted therein, means for moving the plunger, panels hingedly mounted upon the box, arms attached to the panels and having angularly disposed end portions, shafts journaled upon the box and having cranks located opposite said arms, tamping members mounted upon the box, means operatively connecting said tamping members together and adapted to turn the said shafts and means for operating the said tamping members from the plunger moving means.

2. A baling press comprising a box, a plunger movably mounted therein, means for moving the plunger, panels hingedly mounted upon the box, arms carried by the panels, shafts journaled upon the box and having crank

located opposite said arms, tamping members movably mounted upon the box, bars operatively connecting said tamping members together, yokes and blocks carried by the said bars and adapted to turn the said shafts as the bars are moved and means operatively connecting the tamping members with the means for moving the plunger.

3. A baling press comprising a box, a plunger movably mounted therein, means for moving the plunger, shafts journaled upon the box and provided with cranks, panels hingedly mounted upon the box, arms attached to the panels and having end portions disposed transversely with relation to some of the cranks of the shafts, tamping members movably mounted upon the box, bars operatively connecting the said tamping members together, yokes carried by the bars and receiving other of the cranks of the said shafts and means for operating the tamping members from the means which moves the plunger.

4. A baling press comprising a box, a plunger movably mounted therein, means for moving the plunger, tamping members movably mounted upon the box, means for cushioning the movement of the tamping members, bars operatively connecting the tamping members together, means for moving the tamping members from the means which operates the plunger, yokes carried by the bars, panels hingedly mounted upon the box, arms attached to the panels, shafts journaled upon the box and having cranks, some of the cranks being located opposite the said arms and other of the cranks being located in the said yokes.

1,223,212. AEROMARINE TORPEDO. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed Mar. 7, 1916. Serial No. 82,666. (Cl. 114—21.)



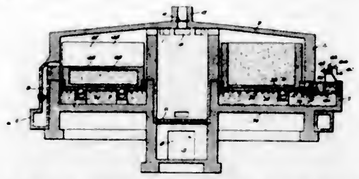
1. The combination with a small boat, of a torpedo suspended from the boat, a propeller supported by the boat, a distant flying machine, a cable connecting the boat to the flying machine to allow the latter to tow the boat and torpedo, and means whereby the cable may by tractive force of the flying machine actuate the propeller.

2. In apparatus of the class described, the combination with a flying machine provided with a depending cable, of a small boat, a propeller carried by the boat and driven by force exerted through the cable by the flying machine, means whereby the aviator may at will cause said force to drive the propeller or to advance the boat by simple towing action, and a contact torpedo suspended from the boat.

3. In apparatus of the class described, the combination with a small boat provided with a propeller, of a drum arranged to impart its own rotation to the propeller shaft, a cable wound upon the drum, and a contact torpedo suspended from the boat, whereby traction on the cable rotates the propeller and advances the boat and torpedo.

4. The combination with a hydro-aeroplane, of a small boat and a contact torpedo suspended therefrom, of a propeller for the boat, a drum arranged to impart its own rotation to the propeller shaft, a cable wound upon the drum and attached to the hydro-aeroplane, and means whereby variation in elevation of the hydro-aeroplane locks and releases the drum, thus causing the cable to act as a simple towline or to drive the propeller.

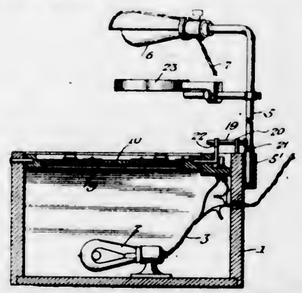
1,223,213. FURNACE. GEORGE W. STEVENSON, Canton, Ohio. Filed Aug. 22, 1916. Serial No. 116,347. (Cl. 263—35.)



1. A furnace comprising a side wall, a top wall and a bottom wall, a basin located at the side of the furnace and communicating with the interior thereof through an opening in the side wall, the upper end of the basin being at an elevation sufficiently high to hold water against the upper edge of the said opening, a wheel turnably mounted in the furnace, a fire box positioned centrally of the wheel, the lower portion of the furnace constituting a tank adapted to retain water from the basin, means for turning the wheel and immersed in the said water, a flue surrounding the base portion of the furnace, other flues communicating with the interior of the furnace and the first mentioned flue, and a stack communicating with the last mentioned flue.

2. A furnace comprising a body having a centrally positioned fire box and adapted to retain a liquid cooling agent, bearings located in the lower portion of the body and adapted to be immersed in said agent, antifriction members journaled in the bearings, a wheel having races which receive the antifriction members, partitions mounted upon the wheel, a flexible element connected with the wheel, a drum around which the said flexible element is wound and means immersed in said cooling agent and adapted to turn the drum.

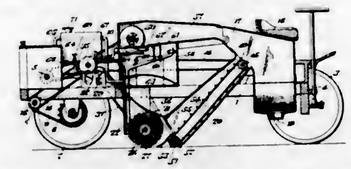
1,223,214. PHOTOPRINTING-MACHINE. FRANK L. STUBER, South Bethlehem, Pa. Filed Sept. 23, 1916. Serial No. 121,778. (Cl. 95—78.)



1. A photographic printing device comprising a casing, lighting means located one within the casing and another above the same, a frame pivotally mounted in the casing and having a sectional presser board, means for holding the opening of the frame toward one or the other of the lighting means and means carried by the frame and adapted to operate the lighting means whereby the lighting means toward which the opening of the frame is disposed is illuminated.

2. A photograph printer comprising a casing, lighting means located one within the casing and the other above the same, a frame pivotally mounted in the casing and having a sectional presser board, catch devices for holding the opening in the frame disposed toward one or the other of the lighting means, means carried by the frame and adapted to engage the lighting means whereby that lighting means to which the opening in the frame is disposed is illuminated, a catch mechanism for holding the frame at the position to which it is swung, a timing device located adjacent the casing and means mounted upon the casing and adapted to be operated by the timing device for releasing the catch device.

1,223,215. DUST-SEPARATOR FOR STREET-SWEEPERS. SAMUEL W. SUNDAY, Topeka, Kans. Filed Jan. 21, 1916. Serial No. 73,424. (Cl. 183—29.)



In a machine of the character described a receptacle, means for depositing material in the receptacle, a fan for drawing dust laden air from the receptacle, a second receptacle which receives the discharge outlet of the fan, a perforated plate located in the last mentioned receptacle opposite the discharge outlet of the fan, means for discharging water into the last mentioned receptacle at a point between the discharge out let of the fan and the perforated plate, a plate located in the lower portion of the last mentioned receptacle and means for discharging a heating agent into the last mentioned receptacle and under the last mentioned plate.

1,223,216. GEAR. RANDAL E. TALLEY, Irwin, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 9, 1916. Serial No. 136,025. (Cl. 74—28.)

1. A machine element having a molded working body portion comprising a non-abrasive fibrous material and a binder.

2. A gear having a molded working body portion comprising a non-abrasive fibrous material and a binder.

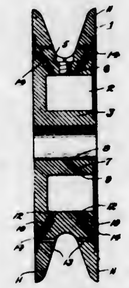
3. A gear having a self-sustaining molded working body portion comprising a non-abrasive fibrous material and a binder.

4. A molded gear composed of textile fibrous material and a binder and a film coating on its working faces.

5. A molded gear composed of cotton fibers and a binder.

[Claims 6 to 11 not printed in the Gazette.]

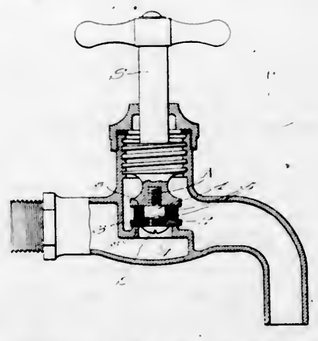
1,223,217. TROLLEY-WHEEL. CHARLES H. TAYLOR, Sawtelle, Cal. Filed Aug. 2, 1916. Serial No. 112,799. (Cl. 64—26.)



1. A trolley wheel having a centrally arranged circumferential oil chamber between the hub and the grooved periphery of the wheel, said wheel being bored angularly from its outer sides to the said chamber, and each of the said bores being of two dimensions, textile filling elements in the outer and larger portions of the bores, closing means for the bores upon the outer sides of the wheel, and transversely disposed outlet passages between the said enlarged portions of the bores and the groove in the wheel.

2. A trolley wheel having a centrally arranged circumferential oil chamber between the hub and the grooved periphery of the wheel and a port having a packing of textile material between the chamber and the interior of the hub of the wheel, said wheel having angular bores communicating with the outer wall of the chamber, said bores being of two dimensions, a textile packing within the outer and larger dimension of the bore, closing means for the bore, and said wheel having a passage between the said bore and the groove in the said wheel.

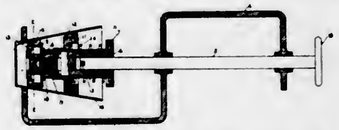
1,223,218. VALVE-RESEATER. FOREST R. TAYLOR, Lowell, Mich. Filed Aug. 3, 1916. Serial No. 112,968. (Cl. 90—12.5.)



1. The combination with a stem provided at one end with a stop and having a central threaded aperture, and a securing screw for insertion into said aperture; of a sleeve loosely mounted on said screw, a cutting disk carried by said sleeve and held against turning relatively thereto, and an elastic washer also carried by said sleeve between said disk and stop and held against turning thereon.

2. The combination with a stem provided at one end with an annular shoulder and having a central threaded aperture, and a securing screw for insertion into said aperture; of a sleeve loosely mounted on said screw and having an angular perimeter, a cutting disk having an aperture conforming in shape to the perimeter of said sleeve, and an elastic washer having the opening therein conforming in shape to the perimeter of said sleeve and disposed between said shoulder and disk.

1,223,219. CENTERING MECHANISM FOR GLASS ARTICLES. WILLIAM H. TICHBORNE, Wheeling, W. Va. Filed June 21, 1916. Serial No. 104,921. (Cl. 51—3.)



1. In a centering mechanism the combination of a spindle and a work holding member and means for rigidly locking said work holding member to said spindle in any position relative thereto, either in alinement therewith, or within a prescribed limit of eccentricity therefrom.

2. In a centering mechanism the combination of a spindle and a work holding member and means for rigidly locking said work holding member to said spindle in any position relative thereto, either in alinement therewith, or

within a prescribed limit of eccentricity therefrom, and means for simultaneously clamping the work to said work holding member.

3. In a centering mechanism the combination of a spindle, a gage in alinement therewith, a work holding member loosely carried by said spindle so as to have lateral play relative thereto, means for moving said spindle and said gage toward and away from each other while maintaining their relative alinement, and means for fastening said work holding member and said spindle together in any relative position that they are free to assume.

4. In a centering mechanism the combination of a spindle, a gage in alinement therewith, a work holding member loosely carried by said spindle so as to have lateral play relative thereto, means for moving said spindle and said gage toward and away from each other while maintaining their relative alinement, and means for fastening said work holding member and said spindle together in any relative position that they are free to assume, and means for simultaneously clamping the work to said work holding member.

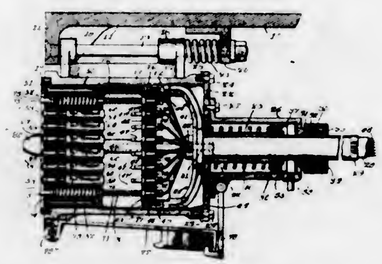
5. In a centering mechanism, an annular ring of elastic material mounted so as to be free to move radially through a distance in any direction, and means for locking said ring in any position against movement in a radial plane, and means for compressing said ring axially.

[Claims 6 to 8 not printed in the Gazette.]

1,223,220. [WITHDRAWN.]

1,223,221. [WITHDRAWN.]

1,223,222. ELECTRICAL MULTIPLE CONNECTOR. CHARLES H. TOMLINSON, Mansfield, Ohio, assignor to The Tomlinson Coupler Company, Mansfield, Ohio, a Corporation of South Dakota. Filed Jan. 30, 1914. Serial No. 815,339. (Cl. 173—332.)



1. The combination in an electric multiple connector, of a casing, a reciprocating plunger in said casing, an insulating member at the forward extremity of the casing, an electrical contactor movably supported in said insulating member and adapted to be projected from the forward face thereof, an insulating member carried by the said reciprocating plunger, a terminal connector plug supported by the insulating member on the reciprocating plunger, and a coöperating connector member connected to the contactor and being provided with a socket member to form a switch connection with the said connector plug when the plunger is operated to the forward end of the casing.

2. The combination in an electric multiple connector, of a casing, a reciprocating plunger in said casing, an insulating member at the forward extremity of the casing, a plurality of electrical contactors movably supported in said insulating member and adapted to be projected from the forward face thereof, an insulating member carried by said reciprocating plunger, a plurality of terminal connector plugs supported by the insulating member on the reciprocating plunger, and coöperating connector members electrically connected with the said contactors and being provided with socket members to form switch connections with the said connector plugs on the plunger when the plunger is operated to the forward end of the casing.

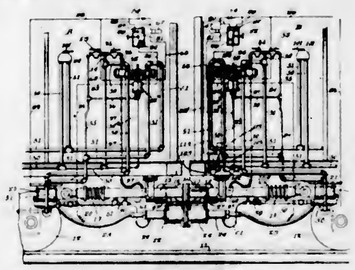
3. The combination in an electrical multiple connector of a casing, a reciprocating plunger in said casing, a plurality of electrical contactors movably supported and adapted to be projected from the forward face of the casing, a plurality of terminal connector plugs corresponding in number with the said contactors and being carried by the reciprocating plunger, and coöperating connector members in engagement with each of the contactors and being provided with socket members to form switch connections with the connector plugs when operated by the plunger.

4. The combination in an electrical multiple connector of a casing, a reciprocating plunger in said casing, a perforated insulating member at the forward extremity of the casing, electrical contactors movably supported in said perforated insulating member and adapted to be projected from the forward face thereof, a perforated insulating member carried by said reciprocating plunger, a plurality of terminal connector plugs in the perforations of said insulating member corresponding in number to the number of said contactors, coöperating connector members in engagement with the said contactors and being adapted to form switch connections with the said terminal connector plugs on the plunger, and elastic means interposed between the said contactors and their supporting insulating member, and between the said contactors and the connector members.

5. The combination in an electric multiple connector, of a casing, a reciprocating plunger in said casing, an insulating member at the forward extremity of the casing and closing the entrance thereof, said insulating member being provided with a plurality of perforations, electrical contactors movably mounted in the perforations of said insulating member and adapted to be projected from the forward face thereof, elastic means adapted to normally hold said contactors in retracted position, connectors corresponding in number with and connecting with said contactors, and coöperating terminal plugs mounted on said plunger and carried thereby and adapted to be brought into conjunction with said connectors for operating said contactors against the resistance of their elastic retaining means.

[Claims 6 to 24 not printed in the Gazette.]

1,223,223. AUTOMATIC CAR, AIR, AND ELECTRIC COUPLING MECHANISM. CHARLES H. TOMLINSON, Mansfield, Ohio. Filed Mar. 6, 1914. Serial No. 822,802. (Cl. 213—58.)



1. A system of train pipe coupling for two coöperating cars comprising a plurality of fluid-pressure connections through the coupling devices, means on each of the cars for controlling the fluid-pressure connections, and means whereby these connections on the two cars may be opened or closed by the operator from a station in either of the two coöperating cars.

2. The combination with a coupling device for cars comprising an interlocking device adapted to coöperate with a similar device on a companion car, a fluid pressure system and an electric system in each car, fluid and electric coupling devices associated with said car coupling device and adapted to coöperate with similar fluid and electric coupling devices on coöperating cars, controlling means for said car, fluid and electric coupling devices, comprising means for opening and closing the fluid-pressure system of the car in relation to the fluid-pressure coupling devices, and means for operating the car and electric coupling devices from the fluid pressure system.

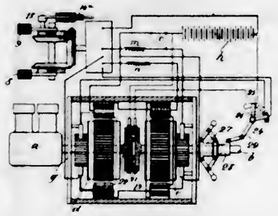
3. In a coupling system for cars, the combination with a brake line and a reservoir line, of car coupling devices, coupling terminals for said brake line and reservoir line adjacent the car coupling devices, means for controlling the pressure from said brake line and said reservoir line to the coupling connections comprising an electrically operated pilot valve, a main controlling valve in each of said brake line and reservoir line, and a fluid-pressure operated valve controlling said main valve and under the control of the said pilot valve.

4. In a system of car, fluid pipe and electric coupling devices on two coöperating cars, the fluid pipe coupling connections being on the faces of the car couplers, means whereby the fluid pipe connections may be controlled on both of two coöperating cars by an operator from one of the cars, and means controlled by the operator for moving the car coupling devices to their operative or inoperative position, said means being actuated from the fluid pipe connections.

5. In a system of train pipe coupling devices on a plurality of coöperating cars, the combination with car coupling devices, of means whereby a plurality of fluid-pressure connections terminating in the faces of the coupling devices are controlled by the operator from one of the cars comprising controlling valves in each of the fluid-pressure connections, and means for operating said controlling valves synchronously in each of the fluid-pressure connections in each individual car.

[Claims 6 to 11 not printed in the Gazette.]

1,223,224. APPARATUS FOR THE ELECTRICAL TRANSMISSION OF POWER. HERMAN BERNARD VAN DAALEN and HUGO PAUL SCHREIBER, London, England. Filed Oct. 23, 1912. Serial No. 727,397. (Cl. 171—315.)



1. Apparatus for the electric and direct transmission of power comprising a dynamo electric machine having two armatures capable of independent rotation and a single stationary field, the one armature working as a generator and the other as a motor, an engine coupled in any convenient manner to the generator for driving it, a shaft to be driven by the motor, a battery for the purpose specified and a controller in combination with a brake mechanism for effecting the regulation of the various speeds, the brake mechanism being so arranged that braking can not take place until the controller has resumed its neutral position, substantially as described.

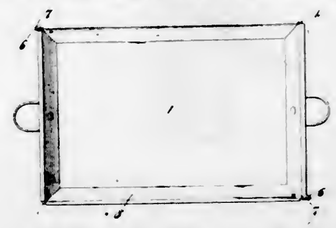
2. Apparatus for the electric and direct transmission of power comprising a dynamo electric machine having two armatures capable of independent rotation and a single stationary field, the one armature working as a generator and the other as a motor, an engine coupled in any convenient manner to the generator for driving it, a shaft to be driven by the motor, a battery for the purpose specified, and a controller in combination with a brake mechanism, the said brake mechanism being capable of acting successively as an electrical and as a mechanical brake, substantially as described.

1,223,225. VALVE-GRINDING TOOL. AUGUST WAGNER, Buffalo, Minn. Filed Oct. 24, 1916. Serial No. 127,407. (Cl. 51—4.)



A valve grinding tool comprising a pair of members one of which is provided with a body portion having a channel extending longitudinally thereof and a socket at one end, said member being farther provided with a transverse opening extending therethrough between the channel and socket, the other member having a body portion mounted for rocking movement in said channel and having one end provided with an offset upwardly turned portion, said upwardly turned portion having a reduced end provided with a longitudinally extending slot, a bolt passing through the opening in the first member and having a forked end embracing said reduced end, a pivot passing through the forked end and slot, a spring surrounding said bolt between said members, a thumb nut on said bolt on the side of the first member opposite the springs, and a valve recess engaging pin on the remaining end of each of said members.

1,223,226. BAKING-PAN. PERLEY D. WELLS, Milo, Me. Filed Mar. 29, 1916. Serial No. 87,530. (Cl. 53—6.)



1. A baking pan comprising a bottom panel, side and end walls provided at their lower portions with outstanding folds and return flanges, the said flanges being spaced from the folds and adapted to receive the edge portions of the bottom panel, the side and end walls being connected together in sets, one member of each set of the side and end walls having an outstanding fold with a return flange spaced from the same the spaces between the said fold and flanges being adapted to receive end portions of members of the other set of side and end walls and means for holding the side and end walls of one set in engagement with the folds and flanges of the other set of side and end walls.

2. A baking pan comprising a bottom panel, side and end walls having at their lower portions outstanding folds with return flanges spaced from the folds, the spaces between the said folds and flanges adapted to receive the edge portions of the bottom panel, the said side and

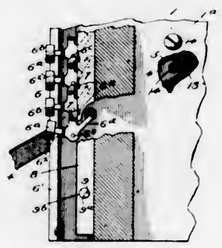
end walls being connected together in sets, one member of each set being provided with an outstanding fold and a return flange spaced from the fold, the space between the last mentioned fold and flange adapted to receive end portions of members of the other side and end walls, and hooks mounted upon the said walls and engageable with the said folds and flanges to hold the walls in close contact with each other.

1,223,227. RAIL-JOINT. CHARLES W. WHITCOMB, Potlatch, Idaho. Filed Sept. 6, 1916. Serial No. 118,689. (Cl. 239—8.)



The herein described means for connecting rails, including the meeting ends of two rails each having its end cut angularly from one of the sides of its head to the opposite side thereof, said cut extending through the web and base flange of the rails, said rails having their base flanges terminating in angular shoulders at the commencement and at the end of the angular cuts in the webs, the webs of the rails beyond the angular cuts therein being provided with a plurality of bolt openings and the said webs, inward of the bolt openings being enlarged to provide shoulders, angle bars within the fishing spaces of the rails between the shoulders, bolt members passing through the angle bars and the openings in the webs of the rails, and nuts for the bolts.

1,223,228. FILING APPLIANCE. HARRY B. WHITE, Canton, Ohio, assignor to Stewart S. Kurtz, Canton, Ohio. Filed June 21, 1909. Serial No. 503,413. (Cl. 45—2.)



1. In a filing appliance, the combination of a series of trays, means for slidably supporting each of the trays in inclined position whereby it is free to slide outwardly and downwardly under the influence of gravity, means for controlling the locking and releasing of each of the trays, and means common to all of the said controlling means for preventing the operation of the latter.

2. In a filing appliance, the combination of a series of trays, means for slidably supporting each of the trays in inclined position whereby it is free to slide outwardly and downwardly under the influence of gravity, means for controlling the locking and releasing of each of the trays, and slidable means common to all of the said controlling means for preventing the operation of the latter.

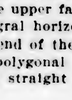
3. In a filing appliance, the combination of a series of sections or units each comprising a series of gravity operated slidable trays, means for controlling the locking and releasing of each tray in each section, and a device common to the locking and releasing means of each tray section or unit for preventing the operation of the said tray-controlling means, and a single mechanism for operating the said devices.

4. A freely slidable tray, a button exposed adjacent to the front of said tray, means for swingably supporting said button, and controlling means interposed between said button and the tray and arranged to engage the tray to hold it in closed position, the said means being operable by the button to release the tray and said button being actuated by gravity to normally maintain said controlling means in locking position.

5. In a filing appliance, the combination of a series of trays, means for freely and slidably supporting each tray in an inclined position whereby it is moved into exposed position under the action of gravity, a device for locking and releasing each tray, a dog connected with each locking and releasing device, and means common to all of said dogs and coöperating therewith to control the operation of the locking and releasing devices.

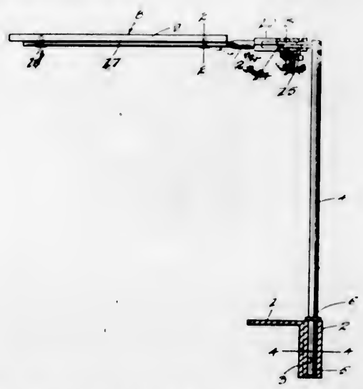
[Claims 6 to 11 not printed in the Gazette.]

1,223,229. NECKTIE-SUPPORTER. BENJAMIN FRANKLIN ALLEN, Chicago, Ill. Filed Mar. 27, 1914. Serial No. 827,705. (Cl. 24—60.)



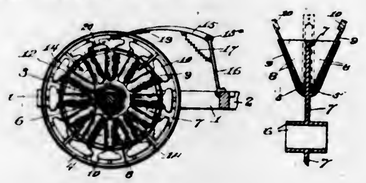
A necktie supporter comprising a continuous length of wire, bent upon itself to form keyhole slots adapted to receive a collar button, one end of the wire being of greater length and bent rearwardly and upwardly in spaced relation thereto for forming a prong to engage a necktie, said prong having a hump adjacent its free end, and the other end of the wire being bent forwardly and around the rearwardly extending portion of the other end of the wire to form a hump for coöperation with the first mentioned hump, providing a restricted portion to retain the necktie upon the prong.

1,223,230. BED ATTACHMENT. ALGOTH E. ANDERSON, Brooklyn, N. Y. Filed Jan. 28, 1914. Serial No. 814,862. (Cl. 45—82.)



The combination with a horizontal bed rail having vertical and horizontal flanges and provided at its horizontal flange with an exterior outwardly projecting lug extending from the lower edge to the upper face of the bed rail and having a vertical opening, a vertical standard journaled in the opening and provided with a stop collar arranged upon the upper face of the lug at the top of the bed rail, an integral horizontal arm extending inwardly from the upper end of the standard and provided with a relatively long polygonal portion, a table top located above the bed, a straight horizontal bar consisting of a flat inner attaching portion rigidly secured to the lower face of the table top and a relatively long outer tubular portion having a polygonal bore conforming to the configuration of the relatively long polygonal portion of the said arm and receiving the same, the polygonal portion of the arm and the tubular portion of the said bar permitting inward and outward adjustment of the table top and the standard permitting rotary movement of the table top and means for securing the bar in its adjustment on the arm.

1,223,231. MACHINE FOR PULLING COTTON-STALKS. JAMES D. ANDERSON, Jeddo, Ala. Filed July 11, 1916. Serial No. 108,591. (Cl. 55—66.)



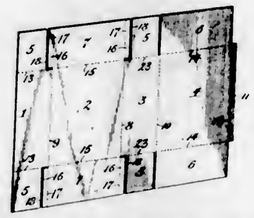
1. In a stalk pulling machine, the combination with a carriage, a revoluble pocketed wheel and stalk clamps carried by the pockets, of a pair of cam rings between which the clamps are revolved, brackets fixed to the carriage frame, and bars attached to the rings and adjustable in the brackets for adjustably holding the rings during the revolution of said wheel.

2. In a stalk pulling machine, a pair of non-revoluble rings having opposite cams, a wheel revoluble between the rings, pockets upon each side of the wheel and opening at the periphery of the wheel, a clamping member secured in each pocket and projecting therefrom between the rings, said members being closed by the cams during the revolution of the wheel.

3. In a stalk pulling machine, a revoluble wheel having peripheral pockets, a pair of cam rings overlapping the wheel, and stalk clamps projecting from the pockets and adapted to be closed by the cams, of a clamp spreader suspended over the wheel, and a clamp cleaner coöperating with the spreader during stalk pulling revolutions of the wheel.

4. In a stalk pulling machine, a revoluble stalk pulling wheel comprising a central web, pockets radiating from the central portion of the web on opposite sides thereof to the periphery of the web, clamps contained in the pockets and having stalk clamping jaws projecting beyond the periphery of the wheel, and a pair of non-revoluble cam rings surrounding the wheel with said jaws rotatable between the rings for closing the clamps in a stalk pulling operation.

1,223,232. CARTON. MARSELIUS T. ASH, Buffalo, N. Y. Filed Jan. 6, 1916. Serial No. 70,555. (Cl. 229—37.)



1. A carton having a plurality of longitudinal walls which together form a tubular body and a head for said body comprising a plurality of plies which are connected with said walls and bent inwardly relatively thereto so that the several plies overlap one another, the outermost ply having sealing flaps at opposite edges thereof which are secured to the outer side of the adjacent body walls and another of said plies being made of sections which are bent toward each other from opposite walls of the body and are reduced in width equal to the width of said sealing flaps the stock of which is removed from said ply sections.

2. A carton having four longitudinal side walls, and a transverse end wall, each side wall consisting of a single ply and the several side walls being constructed from a continuous sheet to form two intermediate side walls which have their opposing longitudinal edges connected with each other and two terminal side walls which meet at their outer longitudinal edges, one of said terminal side walls being provided on its outer longitudinal edge with a sealing flap which is secured to the corresponding longitudinal edge of the other terminal side wall, and said end wall comprising inner, intermediate and outer plies, said inner ply being composed of two sections which are connected at their outer edges, respectively, with adjacent transverse edges of diametrically opposite side walls while their inner edges are arranged opposite each other, said intermediate ply being connected at one of its longitudinal edges with the transverse edge of one of the other pair of diametrically opposite side walls, and said outer ply being connected at one of its longitudinal edges with the corresponding transverse edge of the other side wall of the last mentioned pair, and said outer ply being provided at its opposite transverse edges with transverse sealing flaps which are secured to the outer side of one of the intermediate and one of the terminal side walls.

1,223,233. CHIMNEY-HOLDER. ANNA K. ASHMON, Salem, Oreg. Filed Jan. 23, 1917. Serial No. 144,089. (Cl. 240—98.)



1. In combination with a burner having spring arms and a chimney engaged by the arms, of a band surrounding the burner and engaged by the spring arms whereby to frictionally engage between the said arms and the said chimney, and said band having an inner compressible facing.

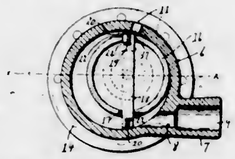
2. In combination with a burner having spring arms and a chimney engaged by the arms, of a band surrounding the chimney and contacted by the arms, a compressible strip upon the inner face of the band, and spring means upon the outer face of the band engaging with the arms of the burner, as and for the purpose set forth.

3. In combination with a lamp burner having spring arms and a chimney engaged by the arms, of a flexible metallic band disposed to be arranged to surround the chimney and to be contacted by the arms, said band having one of its ends formed with an eye and its other end formed with a bendable tongue adapted to be passed through the eye and to be bent over the said eye, a facing of compressible non-heat conducting material upon the inner face of the band, and means upon the outer face of the band for engaging with the spring arms of the burner.

4. In combination with a burner having spring arms and a chimney adapted to be engaged by the arms, of a

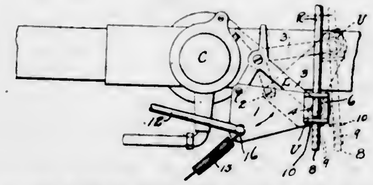
split band disposed to surround the chimney and to be contacted by the arms, means upon the edges of the bands for adjustably retaining the same upon the chimney, said band having its longitudinal edges inturned, a strip of compressible non-heat conducting material arranged between the said edges, and longitudinally arranged spring catch members upon the outer face of the band adapted to engage one with each of the spring arms of the burner.

1,223,234. PNEUMATIC TEST-HOLE DRILL. ARCHIE M. BAIRD, Topeka, Kans., assignor to Baird Pneumatic Tool Company, Topeka, Kans., a Corporation of Kansas. Filed Feb. 3, 1916. Serial No. 76,018. (Cl. 121—78.)



A pneumatic test hole drill comprising in combination, a cylindrical casing, a head secured to one end thereof, said head having three relatively concentric eccentric countersinks, a head secured to the other end of said casing and having an eccentric countersink therein and an opening therethrough concentric with said countersink, a hollow cylindrical rotor eccentrically arranged within said casing with one end portion seated within the largest countersink in said first-named head and the other end portion seated within the countersink of the second-named head, a stem formed on said first-named end of said rotor and projecting into the smallest countersink of said first-named head, said stem being surrounded by a thrust bearing arranged within the next-to the largest countersink in said first-named head, a shouldered stem formed on said second-named end of said rotor and projecting through the opening in said second-named head, a single sliding piston arranged transversely of said rotor, the outer edges of said piston being formed longitudinally with radial grooves and with ports leading into the bottom of said grooves from that side of the blade which receives the motive fluid, and radially reciprocating packing strips mounted in said grooves, said piston being formed with a groove in front of each of said ports.

1,223,235. ACCELERATOR DEVICE FOR AUTOMOBILES. MORTON S. BALDWIN, Adrian, Mich. Filed Dec. 13, 1916. Serial No. 136,685. (Cl. 74—81.)



1. A foot actuated accelerator device for automobiles including in combination with a carbureter having a throttle lever and a hand-controlled throttle stem, an actuator plate carried by said throttle lever, a foot actuated push rod connected with said plate, a spring for holding said plate in a normal position, a swivel bracket element carried by said plate, and a coupling rod pivotally connected at one end to said hand-controlled stem and having its free end engaging said swivel bracket element on the actuator plate.

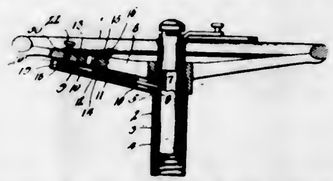
2. A foot actuated accelerator device for automobiles including in combination with a carbureter having a throttle lever and a hand-controlled throttle stem, an actuator plate carried by said throttle lever, a foot actuated push rod connected with said plate, a spring for holding said plate in a normal position, a swivel bracket element carried by said plate at its point of connection with the long arm of the throttle lever, and a coupling rod pivotally connected at one end to said hand-controlled stem and having its free end engaging said swivel bracket element on the actuator plate.

3. A foot accelerator device for automobiles including in combination with a carbureter having a throttle lever and a hand-controlled throttle stem, a substantially triangular actuator plate carried by the throttle lever, a foot actuated push rod connected with said plate, a spring for holding said plate in normal position, a swivel bracket element carried by said plate and connecting the same with the throttle lever, said swivel bracket including a bolt for pivotally clamping the long arm of the throttle lever to the underside of the plate and also pivotally clamping a substantially U-shaped bracket to the upper surface of said actuator plate, and a coupling rod having one end pivotally connected with the hand throttle stem and having its other end projecting through guide openings of the swivel bracket, and a pin carried by said coupling rod for engaging the bracket when moving in one direction.

4. A foot accelerator device for automobiles including in combination with a carbureter having a throttle lever and a hand-controlled throttle stem therefor, a spring-controlled actuator plate carried by said throttle lever, a foot actuated push rod connected with said actuator plate, a swivel bracket element carried by said plate and including a bolt for loosely clamping the long arm of the throttle leverto the underside of said plate and also loosely clamping the substantially U-shaped bracket portion to the upper side of said plate, said bracket portion having openings therein, a coupling rod connected with said hand-controlled stem at one end and having its opposite end working in the guide openings of said bracket, said rod having a portion thereof projecting beyond the bracket in its normal condition and provided with a plurality of adjustment openings, and a pin for entering in one of said adjustment openings, whereby the movement of the rod moves the actuator plate, but the movement of the plate causes the bracket to slide on the rod.

5. A foot actuated accelerator device for automobiles including in combination with a carbureter having a throttle lever and a hand-controlled stem therefor, an actuator plate carried by said throttle lever, a foot actuated connection for said plate, a spring for holding said plate in clamped position, a swivel bracket element carried by said plate, a coupling rod pivotally connected at one end to said hand-controlled stem, and having its free end engaging said swivel bracket element, and means for providing for relative adjustment between the free end of the coupling rod and the swivel bracket element.

1,223,236. AUTOMOBILE-CONTROL LOCK. SAMUEL W. BALDWIN and CHARLES A. PENEY, Hammond, La. Filed Jan. 31, 1917. Serial No. 145,736. (Cl. 70—90.)



1. Automobile control locking means comprising, in combination, a hand controlling wheel, a tubular shaft on which said wheel is fastened formed with a bolt hole in one side thereof, a non-rotatable casing surrounding said shaft and also having a bolt hole adapted to register with the first named bolt hole, a lock casing carried by said wheel, a locking bolt slidable therein and movable into

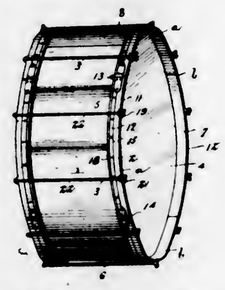
engagement with said bolt holes, a thrust spring for moving said bolt out of locking position, manually controlled means for shifting said bolt into locking position, and keyless locking mechanism for holding and releasing said bolt.

2. Automobile control locking means comprising, in combination, a hand controlling wheel, a tubular shaft on which said wheel is fastened formed with a bolt hole in one side thereof, a non-rotatable casing surrounding said shaft and also having a bolt hole adapted to register with the first named bolt hole, a rotatable throttle shaft housed within said steering shaft and also formed with a bolt hole, a lock casing carried by said wheel, a locking bolt slidable therein and movable into engagement with said bolt holes, a thrust spring for moving said bolt out of locking position, manually controlled means for shifting said bolt into locking position, and keyless locking mechanism for holding and releasing said bolt.

3. Automobile control locking means comprising, in combination, a hand controlling wheel, a tubular shaft on which said wheel is fastened formed with a bolt hole in one side thereof, a non-rotatable casing surrounding said shaft and formed with a series of bolt holes extending circumferentially thereof, a lock case carried by said hand controlling wheel, a locking bolt mounted in said lock case and adapted to enter the bolt holes in said tubular members, yieldable means for holding said bolt in unlocking position, manually controlled means for shifting said bolt into locking position, and keyless bolt holding and releasing means.

4. Automobile control locking means comprising, in combination, a hand controlling wheel, a tubular shaft on which said wheel is fastened formed with a bolt hole in one side thereof, a non-rotatable casing surrounding said shaft and formed with a series of bolt holes extending circumferentially thereof, a tubular throttle control shaft housed within said steering shaft and formed with a bolt hole, a lock case carried by said hand controlling wheel, a locking bolt mounted in said lock case and adapted to enter the bolt holes in said tubular members, yieldable means for holding said bolt in unlocking position, manually controlled means for shifting said bolt into locking position, and keyless bolt holding and releasing means.

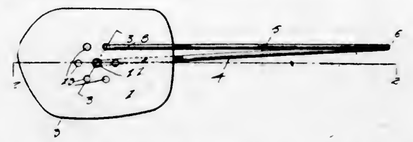
1,223,237. COLLAPSIBLE DRUM. WILLIAM A. BARRY, Kittanning, Pa. Filed June 7, 1915. Serial No. 32,723. (Cl. 84—10.)



1. In a drum, a foldable shell, head carrying bands for opposite ends of the shell, each of said bands comprising a pair of hingedly connected sections, each of said sections consisting of hinged parts pivoted on an axis at right angles to the axis of the sections, heads carried by the bands, slotted lugs carried by the bands and tension rods fitted into the slots of the lugs and having wing nuts threaded upon opposite ends thereof.

2. A collapsible drum comprising a segmental sectional shell, said sections being hinged together to provide a substantially oblong package when folded, pins projecting from the edge of one of the end sections and adapted to be received in recesses in the meeting edges of the adjacent section when the shell is in set up position, head carrying bands for the opposite ends of the shell, each of said bands comprising a pair of hingedly connected sections, each of said sections consisting of hinged members pivoted on an axis at right angles to the axis of the sections, heads carried by said bands, slotted lugs projected from the bands, tension rods fitted in the slots of said lugs, and nuts threaded upon the opposite ends thereof.

1,223,238. SCRAPER FOR PANS, KETTLES, &c. JOHN C. BATTIGE, Manistee, Mich. Filed May 5, 1916. Serial No. 95,587. (Cl. 65—12.)



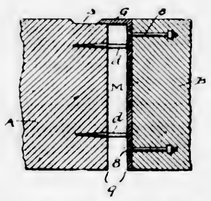
A scraper of the class described including a plate of irregular configuration provided with a pivot opening and having a plurality of perforations extending entirely through the plate and a handle composed of spaced sides and a connecting portion, the sides forming a grip and having inwardly offset terminal portions fitted against the plate, one of the terminal portions being bent at an angle to form a pivot, the latter being secured in the pivot opening and the other terminal portion being bent at an angle to form a lug, said lug extending entirely through and adapted to engage anyone of the perforations, the pressure of the hand on the handle maintaining the lug in engagement with the perforations.

1,223,239. MIXING MORTAR. EDMUND BECKER, Washington, D. C. Filed Feb. 24, 1912. Serial No. 679,730. (Cl. 106—25.)

1. In the process of forming mortars, the step which consists in adding, during the mixing operations, and to the three common basic ingredients of mortar, to wit: (1) lime or cement, (2) water (3) sand; as preservative, a fourth ingredient consisting of a soluble salt of lead, which is adapted to form insoluble salts of lead, with mortar destroying agents; such soluble salt being present in a proportion which exceeds, by weight, one part in two hundred of the lime or cement that is used as sole active agent in the mixture.

2. In the process of forming mortars, the step which consists in adding, during the mixing operation, and to the three common basic ingredients of mortar, to wit: (1) lime for cement (2) water (3) sand; as preservative, a fourth ingredient consisting of acetate of lead; such acetate of lead being present in a proportion which exceeds, by weight one part in two hundred of the lime or cement used as sole active agent of the mixture.

1,223,240. CONCRETE ROAD AND STRUCTURE. EDMUND BECKER, Washington, D. C. Filed Feb. 14, 1913. Serial No. 748,386. (Cl. 94—1.)



1. The method of forming an expansion joint which consists: first, in casting a block with holes opening into the

expansion space; secondly, in placing crushable spacers in such holes; thirdly, placing an angular plate to overlap the block that has been cast and bear against such crushable spacers, said plate being provided with anchors; fourthly, and finally, in casting the second block about such anchors.

2. The method of forming an expansion joint which consists: first, in casting a block with a depression at the outer face and with holes opening into the expansion space; secondly, in placing crushable spacers into such holes; thirdly, in placing an angular plate to rest in the depression at the outer face of the block first cast and bear against such crushable spacers; said plate being provided with anchors; fourthly and finally, in casting the second block about such anchors.

3. The method of forming an expansion joint which consists: first, in casting a block with a form provided with removable drills, to form holes in the block, directed into the expansion space; secondly, in allowing such cast block to set and removing such drills; thirdly, in placing crushable spacers in such holes; fourthly, in placing an angular plate to overlap the block first cast and to bear against such crushable spacers; said plate being provided with anchors; fifthly, and finally, in casting the second block about such anchors.

4. In the production of a concrete structure composed of blocks separated by vacant spaces to provide free expansion room for said blocks, and having each pair of adjacent blocks provided with a metallic cover plate for such expansion space with a leg extending from such cover plate down into such expansion space and firmly anchored to and against one of the said adjacent blocks: the method of casting such adjacent blocks which consists: first, in casting the block to which the cover plate is not attached and forming such first cast block with holes to admit comparatively thin wooden separators trimmed to the length desired; secondly, in resting and holding the said cover plate and leg, provided with suitable anchors, against said first cast block and separators as a form for casting the second block; thirdly, and finally, in casting the second block of which said cover plate and leg are to form a non-removable constituent part.

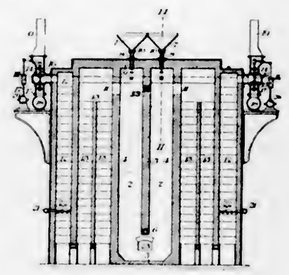
1,223,241. POISON-INDICATOR FOR BOTTLES. MARY BEERS, East Orange, N. J. Filed May 12, 1916. Serial No. 97,146. (Cl. 215—113.)



A poison indicator comprising a stopper having a vertically extending opening formed therein and having a recess formed in the bottom face thereof, said recess communicating with said opening, a shank extending through said opening and having an orifice formed adjacent its upper end, arms formed on the lower end of said shank and lying within said recess, and a cross bar extending through the orifice of said shank and detachably mounted therein, the upper end of the shank and the opposite ends of the cross bar being pointed.

1,223,242. MANUFACTURE OF PRODUCER-GAS. JOHN E. BELL, New York, N. Y. Continuation of application Serial No. 681,880, filed Mar. 6, 1912. This application filed July 17, 1915. Serial No. 40,461. (Cl. 48—74.)

1. The herein described method of manufacturing producer gas, which consists in burning powdered coal while the particles are held in suspension in a combustion chamber, supplying prehented air to the said chamber to support such combustion, and causing the gas produced in said chamber to change its direction of flow to thereby precipitate therefrom the ash and clinker formed by the combustion, then passing the gas through a heat storage device to lower its temperature, and subsequently using the heat stored in said device to preheat air for use in said combustion chamber, substantially as described.



2. The herein described method of manufacturing producer gas, which consists in causing powdered coal to fall through a combustion chamber, supplying preheated air to said chamber to support the combustion therein, and periodically interchanging the paths of the incoming air and outgoing gases, substantially as described.

3. The herein described method of manufacturing producer gas, which consists in causing powdered coal to fall through a combustion chamber, passing the outgoing gases from said chamber through a heat storage device, and subsequently utilizing the heat stored in said device to preheat air for the support of combustion and in said chamber, substantially as described.

4. The herein described method of operating a gas producer, which has a combustion chamber and a regenerator connected to opposite ends of said chamber, said method consisting in burning powdered fuel in suspension in said chamber, passing air into said chamber through one of the regenerators and simultaneously passing the gases from said chamber out through the other regenerator, and periodically changing the gas and air flow to cause each regenerator to be alternately used for cooling the outgoing gases and for heating the incoming air, substantially as described.

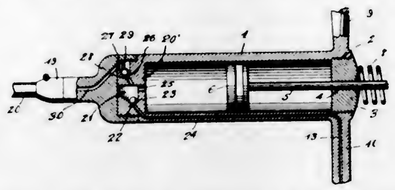
5. The herein described method of operating a gas producer having a vertically divided combustion chamber whose divisions are connected at their lower portions, and also having a regenerator connected to each division thereof, said method consisting in supplying powdered fuel alternately to the two divisions, passing air into the division being supplied with fuel through one of the regenerators and passing the gases from said division out through the other regenerator, and reversing the air and gas flow in the two regenerators with each change in the supply of fuel from one division to the other, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,223,243. SYRINGE. ALFRED N. BESSESEN, Minneapolis, Minn. Filed June 15, 1916. Serial No. 103,781. (Cl. 128—25.)

A device of the class described comprising a tubular barrel provided with an integrally formed head at one of its ends and having a handle and a stem extending from diametrically opposite points at the other end thereof, said head being provided with a recess in its outer side, a central opening disposed between the recess and the interior of said barrel, a notch in one edge of the outer side of said head, and a passage disposed between said notch and said recess, said stem and said barrel being

provided with communicating passages, the passage in said barrel extending longitudinally through the wall of the same and communicating with the recess in said head, valve seats formed in the recess and notch and registering with the above mentioned passages leading into the same, a cap threaded upon the first mentioned end of said barrel and coöperating with the recess and notch in said head to form inlet and outlet valve compartments re-



spectively, said cap being provided with a nozzle member and having a passage therein disposed between the latter and the notch in the head of said barrel, inwardly and outwardly opening ball valves disposed in the inlet and outlet valve compartments respectively, and a plunger slidable in said barrel and provided with an operating handle extending to the exterior of the same.

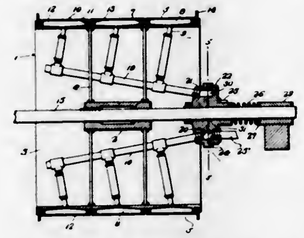
1,223,244. ABSORBENT FOR CARBON DIOXID IN BREATHING APPARATUS FOR USE IN MINE-RESCUE WORK OR LIKE PURPOSES. EDWARD JOHN BEVAN, London, England. Filed Nov. 17, 1915. Serial No. 61,993. (Cl. 167—3.)

1. A material for absorbing carbon dioxid in breathing apparatus for mine rescue work and similar purposes, which material consists of cellulose saturated with hydrated caustic alkali.

2. A material for absorbing carbon dioxid in breathing apparatus for mine rescue work and similar purposes, which material has the form of bread crumbs and consists of cellulose saturated with hydrated caustic alkali.

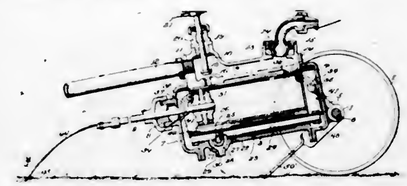
3. A material for absorbing carbon dioxid in breathing apparatus for mine rescue work and similar purposes, which material has the form of bread crumbs and consists of ground wood pulp saturated with 150 per cent. of its weight of caustic soda solution of 33 per cent. strength.

1,223,245. DEHYDRATOR. CHARLES BIESEL, El Paso, Tex. Filed Jan. 17, 1916. Serial No. 72,561. (Cl. 210—14.)



A dehydrator comprising a rotary drum having a channeled periphery partitioned to form rows of longitudinal and transverse separating chambers, a screen covering for said chambers, conductors connecting each transverse series of chambers, and a valve device comprising a rotary member connected with the series of conductors and a stationary member, and suction and fluid pressure supply pipes connected with the stationary member of the valve and adapted to be placed at different periods in communication with said conductors through the movement of said rotary valve member.

1,223,246. LAWN-SPRINKLER. GEORGE CHARLES BOHNENKEMPER, Denver, Colo. Filed Aug. 18, 1914. Serial No. 857,365. (Cl. 137—63.)



1. A sprinkler of the character described, comprising a support, a cylinder carried by the support, a hose connection for one end of the cylinder, a discharge for the other end of the cylinder, and means operated by the water pressure in the cylinder from the hose connection for intermittently moving said support.

2. A sprinkler of the character described comprising a support, a cylinder carried by the support, a supply and discharge carried by the opposite ends of the cylinder, a piston within the cylinder, a water supply for the inlet end of the cylinder for moving said piston, and means operated by the piston for engaging the ground and intermittently moving said support.

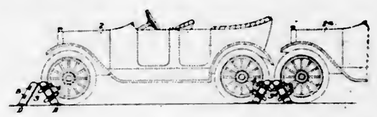
3. A sprinkler of the character described, comprising a support, a cylinder carried by the support, said cylinder having an inlet and outlet at opposite ends, a piston within the cylinder, a water supply for the inlet opening for moving the piston within the cylinder, a piston rod carried by the piston and a shoe carried by the piston rod for engaging the ground for intermittently moving the support, substantially as shown and described.

4. A sprinkler of the character described, comprising a support, a cylinder carried by the support, a hose connection for one end of the cylinder and a discharge at the opposite end, a piston within the cylinder and operated by the water-pressure from the hose connection, a piston rod carried by the piston and extending out through the rear end of the cylinder and adapted to engage the ground for moving the said support forward during the rearward movement of the piston.

5. A sprinkler of the character described, comprising a support, a cylinder carried by the support, a hose connection for one end of the cylinder and a discharge for the opposite end, a reciprocating piston within the cylinder and operated by the water pressure from the hose connection, a piston rod carried by the piston and extending through the rear end of the cylinder, and a foot carried by the piston-rod and adapted to engage the ground for moving the support forward on the rearward stroke of the piston.

[Claims 6 to 32 not printed in the Gazette.]

1,223,247. CHOCK. PEARL A. BOLOPUE, Pittsburgh, Pa. Filed June 27, 1916. Serial No. 106,145. (Cl. 21—8.)



1. A chock for blocking vehicles having two upwardly and inwardly inclined legs connected to each other at their upper ends, each of said legs having a web and a right angle flange at one edge thereof; substantially as described.

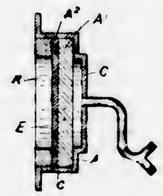
2. A chock for blocking vehicles having two upwardly and inwardly inclined legs connected to each other at their upper ends, each of said legs having a web and a right angle flange at one edge thereof, said webs and flanges also being provided with lashing openings near

their outer edges, and a securing foot at the lower end of each web; substantially as described.

3. A chock for blocking vehicles having two upwardly and inwardly inclined legs connected to each other at their upper ends, each of said legs having a web and a right angle flange at one edge thereof, said webs and flanges also being provided with lashing openings near their outer edges, and a securing foot at the lower end of each web and each flange; substantially as described.

4. A chock for blocking vehicles of inverted V-form, each of said members acting as a brace for the other member, each leg member having a web and a right angle flange, and a foot connected to the lower end of each of said members; substantially as described.

1,223,248. COMBUSTION OF MIXED GASES. WILLIAM ARTHUR BONE, Leeds, JAMES WILLIAM WILSON, Armley, Leeds, and CYRIL DOUGLAS MCCOURT, London, England, assignors to Radiant Heating Limited, London, England, a Corporation of Great Britain. Filed Oct. 8, 1910, Serial No. 586,058. Renewed Mar. 17, 1917. Serial No. 155,617. (Cl. 158—99.)



1. In apparatus for burning fuel, a porous composite diaphragm composed of porous non-metallic material and comprising a porous outer layer and a relatively denser inner portion, means to feed an explosive mixture of gaseous or vaporous fuel and of supporter of combustion therefor through said diaphragm, said diaphragm being adapted when heated to cause the accelerated combustion of said explosive mixture to occur substantially without visible flame, within the porous outer layer of said diaphragm and maintain incandescence thereof, the incandescent surface of said diaphragm being free to transmit by radiation heat supplied thereto from said combustion.

2. In apparatus for burning fuel, a thick porous composite refractory diaphragm comprising a porous outer layer and a relatively denser inner portion, means to feed an explosive mixture of gaseous fuel and of supporter of combustion therefor through said diaphragm, said diaphragm being adapted when heated to cause the accelerated combustion of said explosive mixture to occur substantially without visible flame within said diaphragm and maintain incandescence thereof.

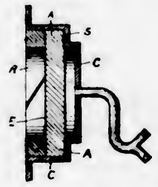
3. In apparatus for burning fuel, a porous composite refractory diaphragm consisting of non-metallic refractory material comprising a porous outer layer and a relatively denser inner portion, means to supply gaseous fuel and means to supply air and to form an explosive mixture thereof and feed the same through said diaphragm, said diaphragm being adapted when heated to cause the accelerated combustion of said mixture to occur substantially without visible flame within the outer layer of said diaphragm and maintain incandescence of the outer surface thereof.

4. In apparatus for burning fuel, a porous refractory diaphragm of non-metallic refractory material, a casing within which said diaphragm is mounted, means to render the edge portions of said diaphragm substantially impervious to gaseous material, and means to feed to said casing and through said diaphragm an explosive gaseous mixture containing substantially the combining proportions of air and of gas having high calorific value, said diaphragm being adapted when heated to cause the accelerated combustion of said explosive mixture to occur substantially without visible flame within the porous outer layer of said diaphragm and maintain incandescence thereof.

5. Apparatus for burning explosive gaseous mixtures, comprising a porous refractory diaphragm having a portion or layer adjacent its outer or outlet side which is more porous than the inner portion of the diaphragm, and means for maintaining a supply of the explosive mixture against the inlet side of the diaphragm to cause the mixture to enter and move through the passages of the diaphragm to burn within the outer more porous layer thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,223,249. PROCESS FOR PRODUCING HEAT. WILLIAM ARTHUR BONE, Leeds, JAMES WILLIAM WILSON, Armley, Leeds, and CYRIL DOUGLAS MCCOURT, London, England, assignors to Radiant Heating Limited, London, England, a Corporation of Great Britain. Original application filed Oct. 8, 1910, Serial No. 586,058. Divided and this application filed Nov. 18, 1911, Serial No. 661,103. Renewed Feb. 3, 1917. Serial No. 146,514. (Cl. 158—117.5.)



1. The process of producing heat which consists in combining a combustible gas and a combustion supporting gas in proportions to form an explosive gaseous mixture, maintaining a supply of the explosive mixture thus formed against one face of a porous refractory diaphragm under a pressure to cause the mixture to flow, at a speed sufficient to normally prevent back-firing, through the passages of the diaphragm to a highly heated surface layer thereof, and effecting combustion of the mixture within said highly heated surface layer of the diaphragm, whereby the combustion is localized within the surface layer of the diaphragm and such surface layer is maintained in a state of incandescence.

2. The process of producing heat which consists in combining a combustible gas and a combustion supporting gas in proportions to form an explosive gaseous mixture, maintaining a supply of the explosive mixture thus formed against one face of a porous refractory diaphragm to cause the mixture to flow through the passages of the diaphragm to a highly heated surface layer thereof, effecting combustion of the mixture within said highly heated surface layer of the diaphragm, and adjusting the pressure under which the mixture is supplied to maintain the combustion localized within the surface layer of the diaphragm, whereby such surface layer is maintained in a state of incandescence.

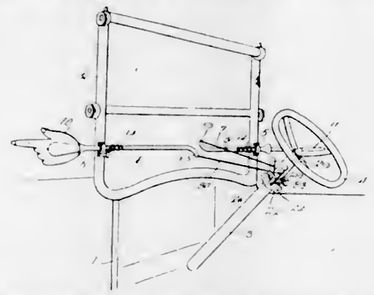
3. The process of burning explosive gaseous mixtures which consists in maintaining a supply of the explosive mixture against one face of a porous refractory diaphragm under a pressure to cause the mixture to flow, at a speed sufficient to prevent back-firing, through the passages of the diaphragm to a highly heated surface layer thereof, and effecting the combustion of the mixture within said highly heated surface layer of the diaphragm, whereby the combustion is localized within the surface layer of the diaphragm and such surface layer is maintained in a state of incandescence.

4. The process of burning explosive gaseous mixtures which consists in maintaining a supply of the explosive mixture against one face of a porous refractory diaphragm to cause the mixture to flow through the passages of the diaphragm to a highly heated surface layer thereof, effecting combustion of the mixture within said highly heated surface layer of the diaphragm, and adjusting the pressure under which the mixture is supplied to maintain the combustion localized within the surface layer of the diaphragm and such surface layer is maintained in a state of incandescence.

5. The process of producing heat which consists in combining a combustible gas and a combustion supporting gas in proportions to form an explosive gaseous mixture with the amount of combustion supporting gas somewhat in excess of the amount required for complete combustion of the combustible gas, maintaining a supply of the explosive mixture thus formed against one face of a porous refractory diaphragm to cause the mixture to flow through the passages of the diaphragm to a highly heated surface layer thereof, effecting combustion of the mixture within said highly heated surface layer of the diaphragm, and adjusting the pressure under which the mixture is supplied to maintain the combustion localized within the surface layer of the diaphragm, whereby such surface layer is maintained in a state of incandescence.

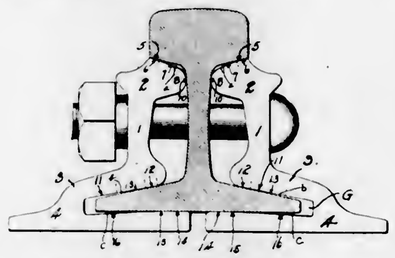
[Claim 6 not printed in the Gazette.]

1,223,250. DIRECTION-INDICATOR FOR AUTOMOBILES. FRANK M. BOWEN, Syracuse, N. Y. Filed June 10, 1916. Serial No. 102,910. (Cl. 116—31.)



A direction indicator comprising a signaling rod adapted to be journaled to a windshield, a link connected to the rod, a split collar adapted to be secured to a steering post, an upwardly extending lever pivoted to said collar and to the link for operating the signaling rod, a pin secured to the lever, a collar pivoted to the first mentioned collar and having a notch to receive the pin, for locking the lever against movement, and a handle formed on the second mentioned collar for swinging said collar upon its pivot to free the lever.

1,223,251. RAIL-JOINT. WILLIAM STEPHEN BOYCE, Pittsburgh, Pa., assignor to The Rail Joint Company, a Corporation of New York. Filed Aug. 15, 1916. Serial No. 115,056. (Cl. 239—9.)



1. A rail joint including the rail, and a joint bar having a primary and a secondary rail bearing face on each of its rail engaging surfaces.

2. A rail joint including the rail, and a joint bar having a head, foot and base member each of which is provided with a primary and secondary rail engaging face.

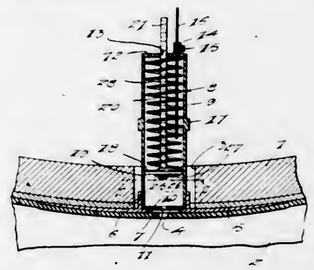
3. A rail joint including the rail, and a joint bar having a head, foot, and base member each having a primary bearing face engaging the rail in the initial application of the bar and a secondary rail-bearing face initially out of contact with the rail.

4. A rail joint including the rail and a joint bar having a primary and a secondary rail bearing face on each of its rail engaging surfaces, said primary bearing faces being disposed in the same plane as the faces of the rail with which they contact, and said secondary rail bearing faces being disposed at an angle thereto.

5. A rail joint including the rail and a joint bar having a plurality of rail engaging faces, said rail engaging faces having a limited contact with the rails in the initial application thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,223,252. PRESSURE-GAGE AND EXHAUST-VALVE. WALTER G. BRANZ, Long Point, Ill. Filed Feb. 25, 1916. Serial No. 80,453. (Cl. 137—53.)



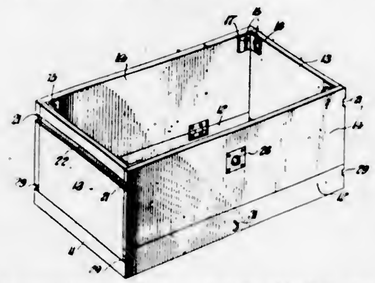
1. A pressure gage and exhaust valve comprising a cylinder, a head closing one end of said cylinder, threads formed on the opposite end of the cylinder, a plate adapted to fit between a tire and its rim, a collar formed centrally of the plate and being provided with internal threads, the cylinder being adapted to be threaded into the collar, the plate being provided with a central aperture formed within the collar, a gasket adapted to fit between the inner edge of the cylinder and the plate, the cylinder head having an opening near its side edge, a collar surrounding the last named opening, a rod adjustable within the collar, means to hold the rod in adjusted position, a piston slidable in the cylinder, the edge of the piston bearing against the cylinder to form a fluidtight joint, a spring bearing against the inner side of the head and on the outer side of the piston to normally urge the piston inwardly, the piston being provided with a port arranged in alinement with the rod and a valve for closing said port, said valve being adapted to be opened by the rod when the piston moves upwardly beyond a predetermined point.

2. A pressure gage and exhaust valve comprising a cylinder, a head closing one end of said cylinder, threads formed on the opposite end of the cylinder, a plate adapted to fit between a tire and its rim, a collar formed centrally of the plate and being provided with internal threads, the cylinder being adapted to be threaded into the collar, the plate being provided with a central aperture formed within the collar, a gasket adapted to fit between the inner edge of the cylinder and the plate, the cylinder head being provided with a central opening and having an opening near its side edge, a collar surrounding the last named opening, a rod adjustable within the collar, means to hold the rod in adjusted position, a piston slidable in the cylinder, the edge of the piston bearing against the cylinder to form a fluidtight joint, a spring bearing against the inner side of the head and on the outer side of the piston to normally urge the piston inwardly, the piston

being provided with a port arranged in alinement with the rod, a valve for closing said port, said valve being adapted to be opened by the rod when the piston moves upwardly beyond a predetermined point, and a piston rod connected to the piston and slidable through the central opening in the head, said rod being provided with graduations thereon in order to indicate the air pressure within the tire.

3. In a device of the class described, a cylinder communicating with the interior of a vehicle tire, a head at the outer end of the cylinder, said head being provided with a central aperture, a piston rod slidable through the aperture, a collar formed near the inner end of the piston rod, threads formed at the inner end of the piston rod, a disk seated on the piston rod adjacent the collar, a washer seated against the disk and adapted to contact with the wall of the cylinder to form a fluidtight joint, a plate seated against the washer on its underside, the disk and washer being provided with alined openings, a flap valve hinged to the plate and adapted to close the openings, a spring surrounding the threaded portion of the piston rod and adapted to bear against the flap valve to normally hold the same closed, a nut threaded on the threads of the piston rod to firmly clamp the whole in place and an adjustable push rod mounted within the head and extending into the cylinder, said push rod being adapted to aline with the opening in the piston whereby when the piston moves upwardly beyond a predetermined point the push rod will engage the valve and open the same.

1,223,253. COLLAPSIBLE BOX OR CRATE. LEWIS C. BRITTON, Egeland, N. D. Filed Apr. 26, 1916. Serial No. 93,698. (Cl. 217—15.)

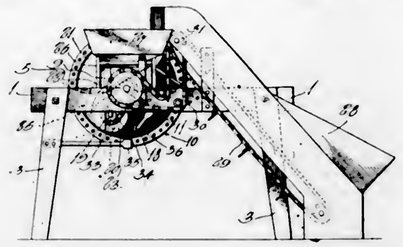


The combination with a receptacle having a bottom, side and end walls hingedly mounted thereon, of headed elements projecting from the adjacent corners of the respective walls and disposed within the receptacle when the walls are in set up position, corner clips, each having right angularly disposed branches, one branch having a straight slot opening at the lower edge of the branch for the reception of one of said headed elements, and the remaining branch having a substantially L-shaped slot opening at its free vertical edge for the reception of the remaining headed element, whereby said clip serves to hold the walls rigid in their set up position.

1,223,254. VEGETABLE-CUTTER. PHILLIP H. BERKS, Gordon, Nebr. Filed Dec. 1, 1916. Serial No. 134,369. (Cl. 146—11.)

1. A device of the class described comprising a revolving skeleton drum, a circular knife and a plurality of transverse knives arranged at the circumference of said drum and having their cutting edges disposed on the interior of the same, the transverse knives being arranged in radial planes with respect to the axis of said drum, and a roller revolubly mounted eccentrically within the interior of said drum for forcing the articles fed into the latter into contact with said knives.

2. A device of the class described comprising a revolving skeleton drum, a circular knife and a plurality of transverse knives carried by said drum and having their cutting edges disposed within the interior of the same, said knives forming the edge of said drum, means disposed within the interior of said drum for forcing the articles fed into the same into contact with said knives, means disposed within the interior of said drum for forcing said articles out through the edge of said drum, and a stationary knife disposed on the exterior of said drum for slicing said articles as they are forced out of said drum.



3. A device of the class described comprising a supporting frame, a hollow drum revolubly mounted upon said frame and having one of its sides open, a plurality of knives carried by said drum and having their cutting edges disposed within the interior of the same, said knives forming the edge of said drum, a roller revolubly mounted eccentrically within the interior of said drum, a chute supported exteriorly of said drum and having its discharge end disposed adjacent the open side of the same, and means supported within the interior of said drum for guiding the articles fed into the same by said chute into engagement with said roller, the latter forcing such articles into contact with said knives.

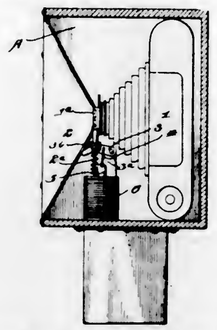
4. A device of the class described comprising a supporting frame, a hollow drum revolubly mounted upon said frame and having one of its sides open, a plurality of knives carried by said drum and having their cutting edges disposed within the interior of the same, said knives forming the edge of said drum, a roller revolubly mounted eccentrically within the interior of said drum, a chute supported exteriorly of said drum and having its discharge end disposed adjacent the open side of the same, a guide plate supported within the interior of said drum and having one of its ends disposed adjacent the discharge end of said chute, the other end of said plate being disposed adjacent said roller, and a pair of guide fingers supported within the interior of said drum and being disposed adjacent the side edges of said plate.

5. A device of the class described comprising a supporting frame, a hollow drum revolubly mounted upon said frame and having one of its sides open, a plurality of knives carried by said drum and having their cutting edges disposed within the interior of the same, said knives forming the edge of said drum, a roller revolubly mounted eccentrically within the interior of said drum, a chute supported exteriorly of said drum and having its discharge end disposed adjacent the open side of the same, a pair of plates mounted upon said frame, one of said plates being disposed within the interior of said drum, the other plate being disposed adjacent the open side of the latter, a guide plate supported within the interior of said drum between said pair of plates, one end of said guide plate being disposed adjacent the discharge end of said chute, the other end of said guide plate being disposed adjacent said roller, and a pair of guide fingers fixed to said pair of plates and disposed adjacent the side edges of said guide plate.

[Claim 6 not printed in the Gazette.]

1,223,255. ELECTRICAL PROTECTIVE SYSTEM. WILLIAM G. CHAPMAN, Huntington, W. Va. Filed Apr. 8, 1916. Serial No. 89,879. (Cl. 67—29.)

1. An apparatus of the character described including a shutter actuating circuit, a sparking circuit, a relay in said sparking circuit and controlling said shutter actuating circuit, a starting circuit, a switch for closing the sparking circuit, and means governed by the starting circuit for instantaneously closing said switch and a suitable time thereafter opening said switch independently of the condition of said starting circuit.

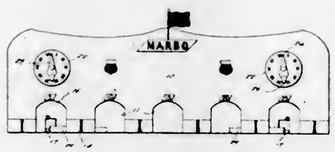


2. An apparatus of the character described including an actuating circuit, a sparking circuit, a relay in said sparking circuit controlling said actuating circuit, a switch in the sparking circuit, a starting circuit having a circuit closing device, and means controlled by said circuit for instantaneously closing said switch, said switch closing means having means independent of said starting circuit for producing a retarded opening movement of the switch.

3. An apparatus of the character described including an actuating circuit, a lighting circuit, means in said lighting circuit for opening and closing said actuating circuit, a starting circuit having opening and closing means therein, a switch for closing the sparking circuit, an automatically closing switch in the sparking circuit, a solenoid in the starting circuit for normally holding said switch open and permitting closing movement thereof when said solenoid is energized, said solenoid having a spring retracted core and a lost-motion connection with the switch, and a retarding device for controlling the retraction of the core.

4. An apparatus of the character described including an actuating circuit, a sparking circuit, a relay in the sparking circuit controlling the actuating circuit, an automatically closing switch in the sparking circuit, a starting circuit, a solenoid in said circuit having a core slidably connected with the switch and provided with means for normally holding the switch from action, said core having operative movement greater than the extent of closing movement of the switch, spring means tensioned by the operating movement of the core for returning said core and switch to normal position, and a retarding device controlling said core to reduce the speed of retraction thereof.

1,223,256. GAME. JACOB H. COFFMAN, Philadelphia, Pa. Filed Aug. 22, 1916. Serial No. 116,278. (Cl. 46—61.)

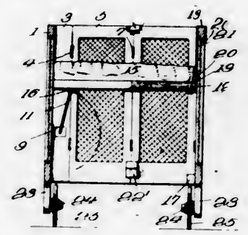


1. A game apparatus, including a relatively flat strip having a plurality of openings through the lower edge thereof, a deflecting member attached to the rear of such member and in the path of the openings, an audible alarm carried by the deflecting member, and means for actuating said alarm also carried by said member and disposed in the path to be engaged by a projectile.

2. A game apparatus, including a relatively flat strip having a plurality of openings through the lower edge thereof, a deflecting member attached to the rear of such member and in the path of the openings, and a plurality of guide forming members attached to the front face of said strip, two of said members coöperating to form a projectile guide for each opening.

3. A game apparatus, including a relatively flat strip having a plurality of openings through the lower edge thereof, a deflecting member attached to the rear of such member and in the path of the openings, an audible alarm carried by the deflecting member, means for actuating said alarm also carried by said member and disposed in the path to be engaged by a projectile, and a plurality of guide forming members attached to the front face of said strip, two of said members coöperating to form a projectile guide for each opening.

1,223,257. FOLDING COOP AND CRIB. PETER H. COLT, Warren, Pa. Filed May 17, 1916. Serial No. 98,125. (Cl. 5—58.)



1. A folding crib, comprising side pieces connected together by sectional end pieces, a double crank pivotally carried by one of said side pieces, a bottom frame pivotally mounted upon said crank, and means for supporting said bottom frame in different horizontal planes.

2. A crib having a double crank pivotally mounted within the walls thereof, a bottom pivotally mounted upon said crank, and means for supporting said bottom horizontally in different horizontal planes.

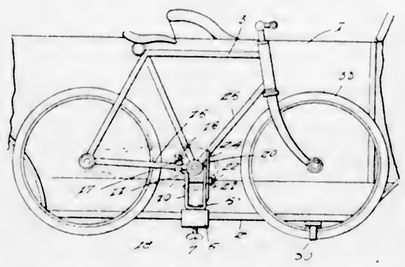
3. A folding crib, comprising side frames, one of said side frames being provided with lateral extensions, sectional end members connecting said extensions to the opposite side frame, said sectional end pieces being capable of being folded inwardly to draw the side frames together, bearings secured in said extensions, a double crank provided with trunnions mounted in said bearings, a bottom frame provided with eyes to receive said crank, said bottom frame being capable of being swung into vertical position within the extensions, and means for supporting said bottom frame horizontally in different horizontal planes.

4. A folding crib and coop comprising wheeled side frames, one of said side frames being provided with lateral extensions, sectional end members connecting said extensions to the opposite side frame, a double crank pivotally mounted within said extensions, a fabric covered frame pivotally mounted upon said double crank, a strip secured to one of the side fraimes for supporting said bottom in lowered horizontal position, buttons carried by one of the side frames, and tapes carried by the bottom frame adapted to engage said buttons for holding the opposite side of said bottom frame in raised horizontal position.

1,223,258. BICYCLE-CARRIER. CHARLES H. COOPER, Buena Vista, Fla. Filed May 9, 1916. Serial No. 96,440. (Cl. 224—29.)

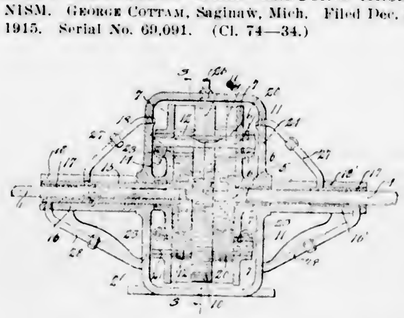
1. In a bicycle carrier, the combination, of an attaching clamp, a substantially U-shaped bar detachably connected to said attaching clamp, said bar having the upper

end of one of its legs bent outwardly, transversely positioned wings formed upon said outwardly bent end and having their upper surfaces concavely cut, a thumb screw adjustably carried by the outer bent end of said leg, and a clamping plate carried by said thumb screw and adapted for coaction with said wings for securely clamping the U-shaped member to a portion of a bicycle frame, the other leg of said member having its upper end forked.



2. In a bicycle carrier, the combination, of an attaching clamp, a substantially U-shaped bar detachably connected to said attaching clamp, said bar having the upper end of one of its legs bent outwardly, transversely positioned wings formed upon said outwardly bent end and having their upper surfaces concavely cut, a thumb screw adjustably carried by the outer bent end of said leg, a clamping plate carried by said thumb screw and adapted for coaction with said wings for securely clamping the U-shaped member to a portion of a bicycle frame, and a forked bar adjustably carried by the other leg of said U-shaped member.

1,223,259. PLANETARY SPEED-REDUCING MECHANISM. GEORGE COTTAM, Saginaw, Mich. Filed Dec. 28, 1915. Serial No. 69,091. (Cl. 74—34.)



1. A planetary speed changing mechanism consisting of a driving member, a driven member associated therewith, speed reducing means intermediate the driving and driven members, a relatively stationary element with which the speed reducing means coöperate to produce planetary movement consisting of a gear member having a lateral extension, a bearing supporting said extension, and means coacting with the bearing and clamping the extension to hold said gear member relatively fixed.

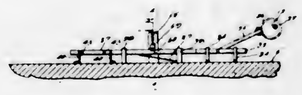
2. In combination, a casing, a driving member journaled at one side thereof, a driven member journaled at the opposite side thereof and arranged end to end with respect to the driving member and operably connected thereto, a frame journaled at one side on the driving member and at the other side on the driven member, a relatively stationary gear element operatively connected to the driving member, and clamping means coöperating with the bearing for the driving member and holding said gear element stationary.

3. Speed reducing mechanism of the class described comprising a driving shaft, a driven shaft, a gear member carried by said driven shaft, gearing intermediate the said gear member and the driving shaft, and a relatively stationary planetary gear of different diameter and interchangeable with the gear on the driven shaft whereby to provide for driving the latter in the same or reverse directions with respect to the driving shaft.

4. Speed reducing mechanism of the class described comprising a driving member, a driven gear, a relatively stationary gear, transmission gears intermediate the driving member and the aforesaid driven and stationary gears, all of said gear members being removably arranged for interchanging positions to obtain different directions of movement of the driven element.

5. Speed reducing mechanism of the class described comprising a driving shaft, a driving pinion carried thereby, relatively large gear members meshing with said driving pinion, supporting means for said gear members, a stationary gear member meshing with the last mentioned gear elements operatively connected to the supports therefor, a driven shaft, and a driven gear detachably connected thereto and of relatively smaller gear diameter than the stationary gear member aforesaid and operatively connected to the supports for the first mentioned gear elements, the stationary gear member being detachable for interchange with the driven gear member.

1,223,260. INTERNAL-COMBUSTION ENGINE. MADISON A. CRAWFORD, Clio, La. Filed Apr. 17, 1915. Serial No. 22,165. (Cl. 123—118.)

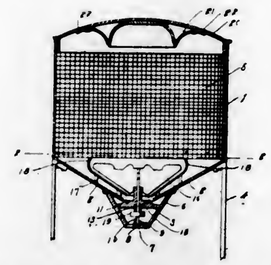


1. In an internal combustion engine, a pair of spring contacts, a base supporting said contacts, a slide rod, a pair of spaced contact pins carried by said rod adapted to alternately engage said spring contacts, a crank shaft, driving connections between said crank shaft and said rod, a centrifugal governor connected with said crank shaft, a pivoted latch member movable against the slide rod for locking the latter in inoperative position, and a vertically movable rod operable by said governor for automatically actuating the latch to lock the slide rod against operation.

2. In an internal combustion engine, a supporting base, a pair of spring contacts supported upon said base, a slide rod, a pair of spaced contact pins carried by said slide rod adapted to alternately engage the spring contacts, a second slide rod supported upon said base and engaged with the first-mentioned slide rod, a crank shaft supported upon the base, means connecting the crank shaft with the second-mentioned slide rod, brackets supporting the slide rods, a frame supported upon said base, a pivoted latch member supported by the frame and movable against the first-mentioned slide rod to lock the latter in inoperative position, means normally retaining the latch member in inoperative position, a centrifugal governor, means connecting said governor with said crank shaft, and a depressible rod associated with the governor and movable against the latch member to move the latter to operative position.

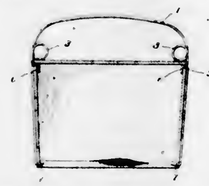
1,223,261. DISH-WASHER. BENJAMIN P. CRITCHLOW, Ogden, Utah. Filed July 19, 1916. Serial No. 110,195. (Cl. 141—9.)

A dish washer comprising a casing having a conically-shaped bottom, said bottom having an opening therein, hangers secured to the bottom, a vertical drive shaft journaled in the hangers and extending upwardly into the casing, a dish receptacle located in the casing, a funnel-shaped member secured to the conically-shaped bottom in spaced relation thereto and having its upper edge curved inwardly to form a deflector, and an agitator secured to the drive shaft and located in said funnel-shaped



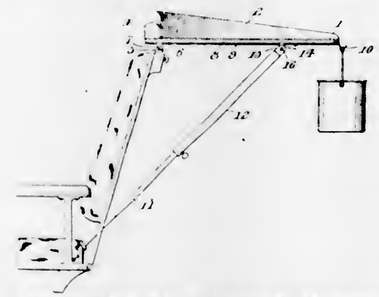
member to force water therefrom diagonally through the dish receptacle.

1,223,262. WIRE HANDLE FOR BASKETS, BOXES, AND THE LIKE. JACOB W. DAILEY, Forestville, N. Y. Filed Mar. 3, 1916. Serial No. 81,943. (Cl. 217—125.)



In combination with a basket having a cover, a resilient handle connected with the basket, said handle being U-shaped and having its side arms bent upon themselves to provide parallel loops projecting inwardly and in direct line with said handle, and having bills formed on said arms immediately below said loops and in line therewith, said bills being adapted to engage the top edge of the basket, and said bills and said loops being adapted to engage the cover and to be disengaged therefrom by a downward pressure on the handle.

1,223,263. SHAMPOO-BOARD. LEWIS D. DAY, Tulsa, Okla., assignor of one-half to Alvin E. Hutchison, Tulsa, Okla. Filed Nov. 6, 1916. Serial No. 129,883. (Cl. 4—2.)

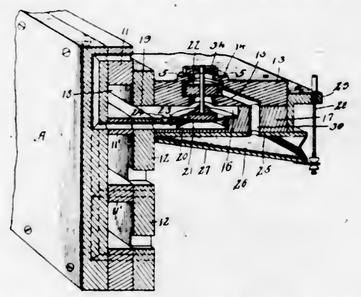


1. A shampoo board adapted for pivotal adjustment at one of its ends to a barber chair, said board including a pan or head-rest at one end thereof, a hollow longitudinal rib on the bottom of the pan, a reinforcing rod for said hollow rib, perforated lugs carried by said rod and projecting outwardly of the rib, one of said lugs forming part of the means whereby the board is pivotally attached to the chair and a brace rod pivotally connected to the other lug and adapted to engage a portion of the chair for holding the pan in operative position.

2. A shampoo board adapted for pivotal attachment to a barber chair said board including a pan, a head rest at one end thereof, the central longitudinal portion of the bottom of the pan being of increased cross-sectional area and having a longitudinal opening therein closed at one end, the rod positioned in said opening and having one end thereof engaging the closed end wall of the opening, extensible means carried by the rod adapted to engage a portion of the chair, whereby the pan is held in substantially horizontal position, a hook carried by the free sweeping end of the pan, and a drain bucket suspended from said hook.

1,223,264. [WITHDRAWN.]

1,223,265. PNEUMATIC ACTION FOR PLAYER-PIANOS. JUDSON ROGERS DE NOVELLES, Binghamton, N. Y. Filed Aug. 26, 1915. Serial No. 47,468. (Cl. 84—178.)



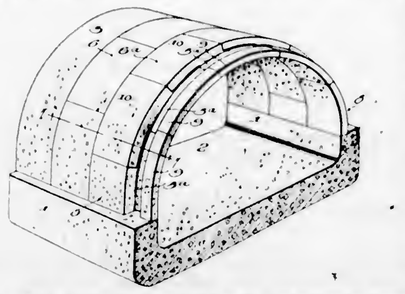
1. A pneumatic action comprising a chest board, a tube block fitted to the rear face thereof, a tracker tube rail arranged on the rear face of said board below the tube block, a back board mounted upon said block and rail, a tracker passage leading through said tube block, chest board and tube rail, valve blocks each fixed to the back board and having a valve chamber and valved air ports, an auxiliary block fixed to the valve blocks and having an air compartment and a diaphragm chamber for communication respectively with the tracker and bleed passages in the block and rail, a valve located in the valve chamber, a diaphragm closing the diaphragm chamber and for action upon the valve, and a bellows carried by the auxiliary block and having communication with the valve chamber.

2. A pneumatic action comprising a chest board, a tube block fitted to the rear face thereof, a tracker tube rail arranged on the rear face of said board below the tube block and rail, a tracker passage leading through said tube block, chest board and tube rail, a back board mounted upon said block, valve blocks each fixed to the back board and having a valve chamber and valved air ports, an auxiliary block fixed to the valve blocks and having an air compartment and a diaphragm chamber, for communication respectively with the tracker and bleed passages in the block and rail, a valve located in the valve chamber, a diaphragm closing the diaphragm chamber and for action upon the valve, and a bellows carried by the auxiliary block and having communication with the valve chamber, said auxiliary block being provided with a vent establishing communication between the air compartment and the bleed tube passage.

1,223,266. ARCH CONSTRUCTION. WALTER-DYER, Portland, Oreg. Filed Apr. 3, 1916. Serial No. 88,584. (Cl. 72—51.)

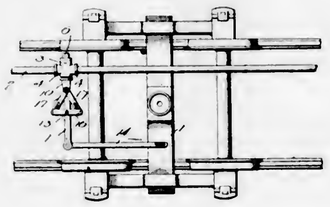
A self sustained block for building arches comprising an inner elongated rectangular half curved in longitudinal section and straight in transverse section, and an outer

elongated rectangular half also curved in longitudinal section and straight in transverse section, the two halves being overlapped and integrally joined at one corner and



being offset both longitudinally and transversely from each other with one side edge of each half disposed on the longitudinal center of the other half and with one end disposed on the transverse center thereof.

1,223,267. AIR-BRAKE ATTACHMENT. MALON INGRAM FLOWERS, Waelder, Tex., assignor of one-half to Archie Pierce Sale, Waelder, Tex. Filed Feb. 9, 1917. Serial No. 147,575. (Cl. 188—2.)



1. The combination with a railway car and a train pipe, of a valve casing interposed in the length of the said pipe, said casing having a tapering port transverse to the pipe, a valve in the casing having a port normally registering with the train pipe and having a second port communicating with the atmosphere and adapted to register with the train pipe when the valve is moved longitudinally, and a connection between the said valve and the truck for moving the valve when the truck is displaced with respect to the pipe beyond a predetermined distance, said connection comprising a lever pivoted to the car, said lever having a head engaging the valve when the parts are in normal position to hold the valve closed, the lever having a cross head intermediate its ends, a connection between the end of the lever remote from the valve and the truck, links connecting the valve with the ends of the cross head and having a lost motion connection with the same.

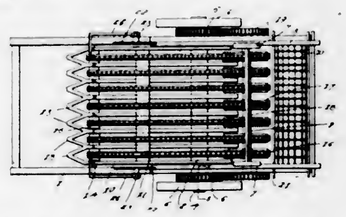
2. The combination with a railway car and a train pipe, of a valve casing interposed in the length of the said pipe, a valve in the casing having a port normally registering with the train pipe and having a second port communicating with the atmosphere and adapted to register with the train pipe when the valve is moved longitudinally, and a connection between the said valve and the truck for moving the valve when the truck is displaced with respect to the pipe beyond a predetermined distance, said connection comprising a lever pivoted to the car, said lever having a head engaging the valve when the parts are in normal position to hold the valve closed, the lever having a cross head intermediate its ends, a connection between the end of the lever remote from the valve and the truck, links connecting the valve with the end of the cross head and having a lost motion connection with the same.

3. The combination with a railway car and a train pipe, of a valve casing interposed in the length of the said pipe, said casing having a tapering port transverse to the pipe, a valve in the casing having a port normally registering with the train pipe and having a second port communicating with the atmosphere and adapted to register with the train pipe when the valve is moved longitudinally, and a connection between the said valve and the truck for moving the valve when the truck is displaced with respect to the pipe beyond a predetermined distance.

4. The combination with a railway car and a train pipe, of a valve casing interposed in the length of the said pipe, a valve in the casing having a port normally registering with the train pipe and having a second port communicating with the atmosphere and adapted to register with the train pipe when the valve is moved longitudinally, and a connection between the said valve and the truck for moving the valve when the truck is displaced with respect to the pipe beyond a predetermined distance.

5. The combination with a railway car and a train pipe, of a valve casing interposed in the length of the said pipe, a valve in the casing having a port normally registering with the train pipe and having a second port communicating with the atmosphere and adapted to register with the train pipe when the valve is moved longitudinally, a connection between the said valve and the truck for moving the valve when the truck is displaced with respect to the pipe beyond a predetermined distance, said connection comprising a pivoted lever connected at one end to the truck and engaging at the other the valve to normally hold the valve closed, and a cross head on the lever having a lost motion connection at its ends with the valve.

1,223,268. STONE-RAKE. FRED A. GARVIN, Washington, D. C. Filed Aug. 26, 1916. Serial No. 117,098. (Cl. 55—17.)



A stone rake comprising a frame, an axle secured to said frame, wheels carried by said axle, a conveyer rack pivoted to said axle and consisting of a plurality of parallel bars having their forward ends reduced and connected together in V-shaped formation to form plow points, a transverse strip connecting said bars together, and endless conveyer mounted on said rack for receiving stones from the plow points, and a stone collecting receptacle carried by the rear end of the frame to receive the stones from the conveyers.

1,223,269. SPIKE-PULLER. EDWARD FISHER GOBEN, Muskogee, Okla. Filed July 25, 1916. Serial No. 111,287. (Cl. 254—22.)

1. In a spike puller, a flat support having a lower curved edge forming a primal fulcrum edge and a rear extension providing an additional fulcrum means, the support at its forward extremity having a vertically extending shoulder at an angle thereto, a fixed jaw removably applied to the outer side of the support against the shoulder and having a lower extremity with a toe depending below the lower edge of the support, a pivoted jaw also

having an end depending below the lower edge of the support and continuing into an elongated handle forming a prying lever for operating the complete device, and a reversible bit with a toe at each end removably secured to the lower portion of the front edge of the pivoted jaw to coact with the fixed jaw, the said reversible bit when applied having its lower terminal coincident with the lower end of the pivoted jaw to brace the bit.



2. In a spike puller, a flat support having lower fulcrum means and a vertical shoulder at an angle to the front extremity thereof and projecting outwardly beyond the outer side of the support, a fixed jaw applied to the outer side of the support against said shoulder and terminating at its upper end flush with the upper edge of the support and having a lower depending end with a toe, a pivoted jaw on the support continuing into an elongated handle forming a prying lever, and a reversible bit secured to the front edge of the pivoted jaw adjacent to the fixed jaw and provided with a toe at each end to cooperate with the toe of the fixed jaw.

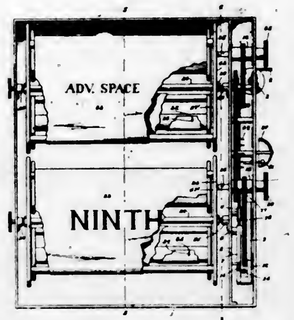
3. In a spike puller, a flat support having a lower fulcrum means, a fixed jaw applied to the outer side of the support and having a lower depending end with a toe, a pivoted jaw on the support continuing into an elongated handle forming a prying lever, a reversible bit secured to the pivoted jaw and provided with a toe at each end to coöperate with the toe of the fixed jaw, and a brace secured to the lower portion of the outer side of the support and extending over and engaging the pivoted jaw, the pivot of the latter jaw extending through one end of said brace to reinforce said pivot.

4. In a spike puller, a flat support having lower fulcrum means and an extension provided with a vertical bracing shoulder at an outward angle to the outer side of the support, a fixed jaw removably applied to the outer side of the support against said shoulder and having a lower depending toe, and a pivoted jaw on the outer side of the support continuing into an elongated handle forming a prying lever and provided with a depending toe to coöperate with the toe of the fixed jaw.

5. In a spike puller, a flat support having lower primal and additional fulcrum edges and an extension provided with a vertical bracing shoulder on the outer side of the support, a fixed jaw applied to the outer side of the support against said shoulder and having a lower depending toe, a pivoted jaw on the outer side of the support continuing into an elongated handle forming a prying lever and having a toe to coöperate with the toe of the fixed jaw, and a brace secured to the outer side of the support and extending over and having one end engaging the pivot of the pivoted jaw.

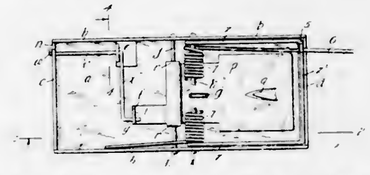
1,223,270. COMBINED STREET-INDICATOR AND ADVERTISING DEVICE. JOHN A. GREER, Hutchinson, Kans. Filed Jan. 17, 1916. Serial No. 72,560. (Cl. 40—87.)

A device of the character described, comprising a casing having a sight opening, a rack journaled in the casing, rollers journaled in the rack and provided at their ends with sockets, a scroll arranged to unwind from one of the rollers and wind upon the other roller, and means for turning the roller upon which the scroll is wound comprising a spring pressed stud engageable in the socket



of the roller upon which the scroll is wound the said rack adapted to be turned whereby either of the rollers may be engaged with the stud.

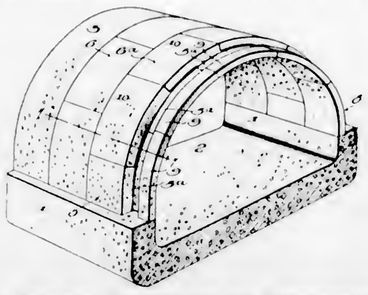
1,223,271. ANIMAL-TRAP. ALBERT M. GRUBBS, Portland, Oreg. Filed June 3, 1916. Serial No. 101,627. (Cl. 43—21.)



1. In an animal trap, the combination of a body, a spring-actuated jaw hinged on a transverse axis and having a projecting arm, a bait-holding trigger hinged on an axis parallel to that of the jaw and having a portion extending longitudinally rearward of its hinged axis, a bearing intermediate the hinged axis of the trigger and the rear end of the body, a bearing on such rear end of the body, a rocker shaft which is journaled longitudinally in said intermediate bearings and said rear end, the extremity of said rocker shaft having a laterally extending arm which is operatively connected with the rearwardly projecting portion of said trigger, said bearing on the rear end of the body being provided with a lateral notch adapted to have said projecting arm of the trigger inserted therein, and the outer extremity of the rocker shaft being bent-up to adapt the same to move said projecting arm out of said slot by the rocking of said shaft.

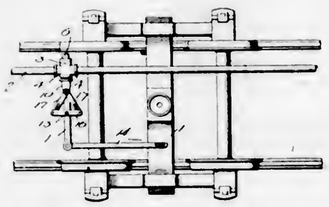
2. In an animal trap, the combination of a body, a spring-actuated jaw hinged on a transverse axis and having a projecting arm, a bait-holding trigger pivotally supported on an axis parallel to that of the jaw, and having a portion extending longitudinally rearward of its hinged axis, means for holding the trigger against lateral movement on its pivotal support, a bearing intermediate the hinged axis of the trigger and the rear end of the body, a bearing on such rear end of the body, a rocker shaft which is journaled longitudinally in said intermediate bearings and said rear end, the extremity of said rocker shaft having a laterally extending arm which is operatively connected with the rearwardly projecting portion of said trigger, said bearing on the rear end of the body being provided with a lateral notch adapted to have said projecting arm of the trigger inserted therein, and the outer end of the extremity of the rocker shaft being bent-up to adapt the same to move said projecting arm out of said slot by the rocking of said shaft.

elongated rectangular half also curved in longitudinal section and straight in transverse section, the two halves being overlapped and integrally joined at one corner and



being offset both longitudinally and transversely from each other with one side edge of each half disposed on the longitudinal center of the other half and with one end disposed on the transverse center thereof.

1,223,267. AIR-BRAKE ATTACHMENT. MALON INGRAM FLOWERS, Waelder, Tex., assignor of one-half to Archie Pierce Sale, Waelder, Tex. Filed Feb. 9, 1917. Serial No. 147,575. (Cl. 188—2.)



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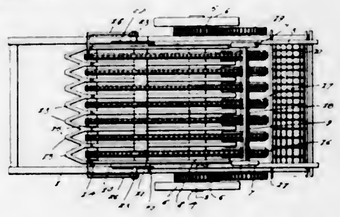
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3. The combination with a railway car and a train pipe, of a valve casing interposed in the length of the said pipe, said casing having a tapering port transverse to the pipe, a valve in the casing having a port normally registering with the train pipe and having a second port communicating with the atmosphere and adapted to register with the train pipe when the valve is moved longitudinally, and a connection between the said valve and the truck for moving the valve when the truck is displaced with respect to the pipe beyond a predetermined distance.

4. The combination with a railway car and a train pipe, of a valve casing interposed in the length of the said pipe, a valve in the casing having a port normally registering with the train pipe and having a second port communicating with the atmosphere and adapted to register with the train pipe when the valve is moved longitudinally, and a connection between the said valve and the truck for moving the valve when the truck is displaced with respect to the pipe beyond a predetermined distance.

5. The combination with a railway car and a train pipe, of a valve casing interposed in the length of the said pipe, a valve in the casing having a port normally registering with the train pipe and having a second port communicating with the atmosphere and adapted to register with the train pipe when the valve is moved longitudinally, a connection between the said valve, and the truck for moving the valve when the truck is displaced with respect to the pipe beyond a predetermined distance, said connection comprising a pivoted lever connected at one end to the truck and engaging at the other the valve to normally hold the valve closed, and a cross head on the lever having a lost motion connection at its ends with the valve.

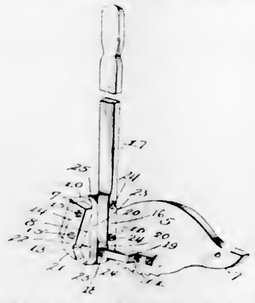
1,223,268. STONE-RAKE. FRED A. GARVIN, Washington, D. C. Filed Aug. 26, 1916. Serial No. 117,098. (Cl. 55—17.)



A stone rake comprising a frame, an axle secured to said frame, wheels carried by said axle, a conveyer rack pivoted to said axle and consisting of a plurality of parallel bars having their forward ends reduced and connected together in V-shaped formation to form plow points, a transverse strip connecting said bars together, and endless conveyer mounted on said rack for receiving stones from the plow points, and a stone collecting receptacle carried by the rear end of the frame to receive the stones from the conveyers.

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2. In a spike puller, a flat support having lower fulcrum means and a vertical shoulder at an angle to the front extremity thereof and projecting outwardly beyond the outer side of the support, a fixed jaw applied to the outer side of the support against said shoulder and terminating at its upper end flush with the upper edge of the support and having a lower depending end with a toe, a pivoted jaw on the support continuing into an elongated handle forming a prying lever, and a reversible bit secured to the front edge of the pivoted jaw adjacent to the fixed jaw and provided with a toe at each end to coöperate with the toe of the fixed jaw.

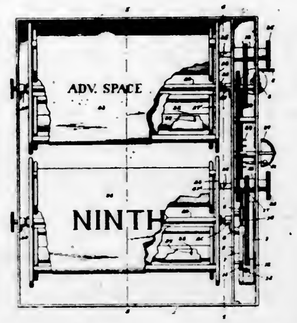
3. In a spike puller, a flat support having a lower fulcrum means, a fixed jaw applied to the outer side of the support and having a lower depending end with a toe, a pivoted jaw on the support continuing into an elongated handle forming a prying lever, a reversible bit secured to the pivoted jaw and provided with a toe at each end to coöperate with the toe of the fixed jaw, and a brace secured to the lower portion of the outer side of the support and extending over and engaging the pivoted jaw, the pivot of the latter jaw extending through one end of said brace to reinforce said pivot.

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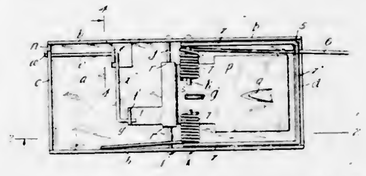
1,223,270. COMBINED STREET-INDICATOR AND ADVERTISING DEVICE. JOHN A. GREER, Hutchinson, Kans. Filed Jan. 17, 1916. Serial No. 72,560. (Cl. 40—87.)

A device of the character described, comprising a casing having a sight opening, a rack journaled in the casing, rollers journaled in the rack and provided at their ends with sockets, a scroll arranged to unwind from one of the rollers and wind upon the other roller, and means for turning the roller upon which the scroll is wound comprising a spring pressed stud engageable in the socket



of the roller upon which the scroll is wound the said rack adapted to be turned whereby either of the rollers may be engaged with the stud.

1,223,271. ANIMAL-TRAP. ALBERT M. GRUBBS, Portland, Oreg. Filed June 3, 1916. Serial No. 101,627. (Cl. 43—21.)

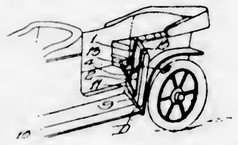


1. In an animal trap, the combination of a body, a spring-actuated jaw hinged on a transverse axis and having a projecting arm, a bait-holding trigger hinged on an axis parallel to that of the jaw and having a portion extending longitudinally rearward of its hinged axis, a bearing intermediate the hinged axis of the trigger and the rear end of the body, a bearing on such rear end of the body, a rocker shaft which is journaled longitudinally in said intermediate bearings and said rear end, the extremity of said rocker shaft having a laterally extending arm which is operatively connected with the rearwardly projecting portion of said trigger, said bearing on the rear end of the body being provided with a lateral notch adapted to have said projecting arm of the trigger inserted therein, and the outer extremity of the rocker shaft being bent-up to adapt the same to move said projecting arm out of said slot by the rocking of said shaft.

2. In an animal trap, the combination of a body, a spring-actuated jaw hinged on a transverse axis and having a projecting arm, a bait-holding trigger pivotally supported on an axis parallel to that of the jaw, and having a portion extending longitudinally rearward of its hinged axis, means for holding the trigger against lateral movement on its pivotal support, a bearing intermediate the hinged axis of the trigger and the rear end of the body, a bearing on such rear end of the body, a rocker shaft which is journaled longitudinally in said intermediate bearings and said rear end, the extremity of said rocker shaft having a laterally extending arm which is operatively connected with the rearwardly projecting portion of said trigger, said bearing on the rear end of the body being provided with a lateral notch adapted to have said projecting arm of the trigger inserted therein, and the outer end of the extremity of the rocker shaft being bent-up to adapt the same to move said projecting arm out of said slot by the rocking of said shaft.

3. An animal trap comprising a body made of a blank having sides, a front lip, and a rear flange, the body having also a transverse L-shape bearing and a longitudinal rib, a spring actuated jaw hinged on a transverse axis, a bait-holding trigger hinged on an axis parallel to that of the jaw and having a rearward extending portion, the trigger being made with a slot to receive said rib of the body, a rocker-shaft journaled longitudinally in said L-shaped bearing and the rear flange of the body, the extremity of said rocker-shaft having a bent portion which is connected with the inner end of the trigger, the jaw having a projecting arm, the rear flange of the body having a portion cut out and a lateral notch for receiving said arm, the outer end of said rocker shaft being bent so as to move across said notch of the rear flange of the body and thus release said arm of the jaw, when the trigger is actuated.

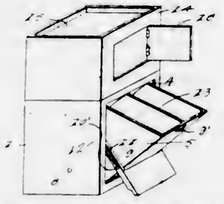
1,223,272. AUXILIARY SEAT FOR AUTOMOBILES. JAMES C. GURLEY, Norfolk, Va. Filed Jan. 25, 1916. Serial No. 74,202. (Cl. 155—26.)



1. The combination with a chair including a pair of side bars rising from its seat; of a pair of brackets extending laterally from said side bars above the seat, a pair of resilient back rods rising from said brackets and connected at their upper ends by a back rest, and a pair of clamps securing said resilient back rods to said side bars, said clamps being adjustable vertically to vary the amount which said rods are permitted to yield.

2. A collapsible chair comprising a pair of spaced vertical side bars each having a loop at its lower end and another loop spaced above said end, all of said loops projecting forwardly from the bars, a rear seat supporting bar extending between said side bars and having loops at its ends interengaging the upper loops thereof, a front seat supporting bar having its ends bent downwardly to form inclined braces whose lower ends are bent laterally inward and received slidably and rotatably in the lower loops of the side bars, and a flexible seat secured at its front and rear edges to said seat supporting bars, said front seat supporting bar being of a length to dispose its downwardly bent ends on the outer sides of the upper loops of the side bars when the chair is collapsed.

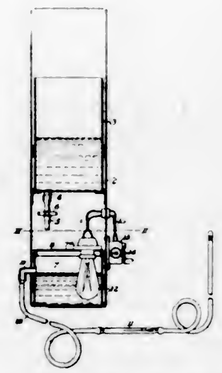
1,223,273. FUEL-BOX. THOMAS HACKERSON, Newark, Ill. Filed Nov. 1, 1916. Serial No. 128,916. (Cl. 126—283.)



1. A fuel bin comprising a casing having a doorway, a bin pivoted within said casing and adapted to be swung outwardly of the casing through the doorway, a pair of arms pivoted to the casing, means for connecting said arms together, said arms having elongated slots therein, and pins carried by the bin and extending in the slot to cause said arms to move outwardly of the casing with the bin to support the bin.

2. A fuel bin comprising a casing having a door way, a bin pivoted within said casing and having a rounded bottom, a handle secured to said bin for swinging said bin outwardly through the door way of the casing, and means pivoted within the casing and connected to the bin adapted to swing outwardly of the casing with the bin to support said bin in an open position.

1,223,274. APPARATUS FOR INJECTING SALINE AND OTHER SOLUTIONS. ROSCOE SCOTT HALLOCK, Niles, Ohio. Filed June 8, 1914. Serial No. 843,651. (Cl. 128—28.)



1. Apparatus of the character described, comprising an upper receptacle open to the atmosphere and having a visible bottom discharge, a valve for regulating said discharge, a lower receptacle open to the atmosphere below said discharge and having an overflow opening, said overflow being below the discharge from the upper receptable, so that the fluid passing from the one receptacle to the other is visible, a delivery tube connected to the overflow opening, and means within the lower receptacle for heating the liquid within the lower receptacle, and which heated liquid passes out through the delivery tube, substantially as described.

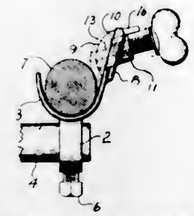
2. Apparatus of the character described, comprising a portable frame, an upper reservoir receptacle removably supported therein, a lower receptacle arranged to receive the discharge from the reservoir receptacle, means for regulating the rapidity of such discharge, said lower receptacle having an overflow opening above its bottom, a delivery tube connected to said opening, an electric lamp within said receptacle below the overflow opening, and means for controlling said lamp, substantially as described.

1,223,275. BOW-REST. HORACE G. HANCOCK, New Britain, Conn., assignor to The North & Judd Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Apr. 3, 1916. Serial No. 88,476. (Cl. 21—61.)

1. In a device of the class described a channeled rest member, a clamping member between the sides of the rest member, a screw threaded through one of said sides and having a swiveled connection with the clamping member, the screw serving to advance and retract the clamping member and the clamping member having means associated therewith to prevent the rotation thereof as it is operated by the screw.

2. In a device of the class described, a channeled rest member, a clamping member between the sides of the rest member, a screw threaded through one of said sides and having a swiveled connection with the clamping member, the screw serving to advance and retract said clamping member, and the latter having an extension and

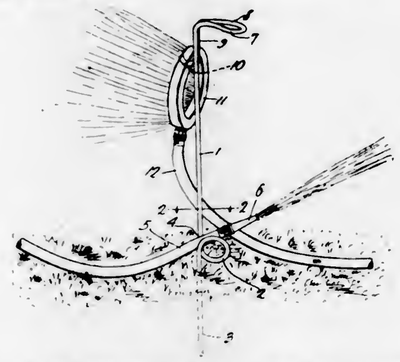
the side through which said screw extends having a notch to receive said extension, to thereby prevent rotation of the clamping member as the same is operated by the screw.



3. In a device of the class described a channeled rest member, a clamping member between the sides of the rest member and having a non-rotative connection with said rest member, and a screw threaded through one of said sides, having a swiveled connection with the clamping member and also having shoulders between which said clamping member is situated.

4. In a device of the class described, a channeled rest member, a clamping member between the sides of the rest member, one of the sides having a notch in its upper edge and the clamping member having an extension to fit within said notch, a screw threaded through the notched side of the rest member and having a swiveled connection with the clamping member, for advancing and retracting the latter.

1,223,276. LAWN-HOSE HOLDER. BURTON E. HANEY, Medford, Oreg. Filed May 24, 1916. Serial No. 99,584. (Cl. 248—29.)

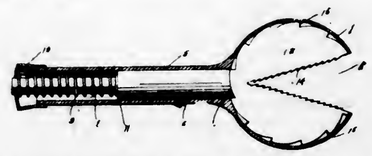


1. A hose holder comprising an upright rod having a single loop between its ends extending through a complete circle about a substantially horizontal axis, said rod having vertical portions projecting upwardly and downwardly from the ends of the loop, the downwardly projecting portion providing a ground entering prong below the loop and offset to one side of the upwardly projecting portion of the rod, the end portions of the loop being adapted to receive and clamp a hose.

2. A hose holder embodying an upright rod having a ground entering prong at its lower end and an angularly extending handle at its upper end, said handle having a bent back portion, said bent back portion having a depending portion extending along the body portion of the rod, and the depending portion having a hook at its lower end for holding a sprinkling head.

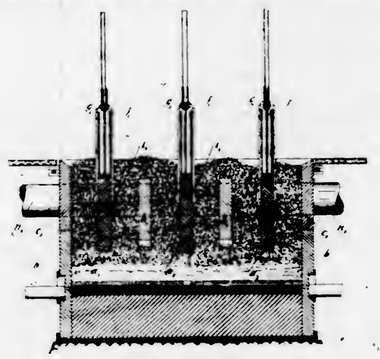
3. A hose holder comprising an upright rod having a loop between its ends providing a ground entering prong therebelow, the rod having an angularly extending handle at its upper end, said handle having a bent back portion, said bent back portion having a depending portion extending along the body portion of the rod, and the depending portion having a hook at its lower end.

1,223,277. WRENCH. WILLIAM M. HANSEN, Lewisville, Idaho. Filed Nov. 15, 1916. Serial No. 131,431. (Cl. 81—60.)



A wrench comprising a circular barrel, a hollow handle formed on said barrel, said barrel having oppositely disposed openings and one of said openings being in registration with the hollow handle, annular flanges formed on the edges of the barrel, a circular nut engaging member rotatably mounted in the barrel and having a V-shaped opening, said opening opening out through one edge of said member to receive a nut through the opening in the barrel, teeth formed on the periphery of said member, a dog slidable in said handle and having one end beveled to engage the teeth, an extension formed on the other end of the dog and extending exteriorly of the handle, a cap secured to the handle and having an opening to slidably receive the extension, and a coiled spring mounted on the extension and bearing against the dog and cap for normally urging the dog in engagement with the teeth of the member.

1,223,278. MULTIPLE-HEARTH ELECTRIC FURNACE. ALOIS HELFENSTEIN, Vienna, Austria, assignor to Union Carbide Company, a Corporation of Virginia. Filed June 5, 1914. Serial No. 843,244. (Cl. 204—64.)



1. In a multiple-hearth electric furnace provided with vertical electrodes of different polarity arranged one over each smelting hearth, the combination, with the reaction shaft of the furnace which is adapted to receive all electrodes of different polarity, of a charging shaft arranged over said reaction shaft, and gas outlet pipes extending into the material contained in said charging shaft down to a depth where the charging material above the pipe entrances is capable of serving as a packing to prevent the access of fresh air, said electrodes extending through the said charging shaft, for the purpose as described.

2. In a multiple-hearth electric furnace provided with vertical electrodes of different polarity arranged one over each smelting hearth, the combination, with the reaction shaft of the furnace which is adapted to receive all electrodes of different polarity, of a charging shaft arranged over said reaction shaft, and gas outlet pipes

reaching from above through the upper layer of the charging material into the charging shaft, said upper layer being adapted to exclude the outer air, and said electrodes extending vertically from above through said charging shaft into the reaction shaft, for the purpose as described.

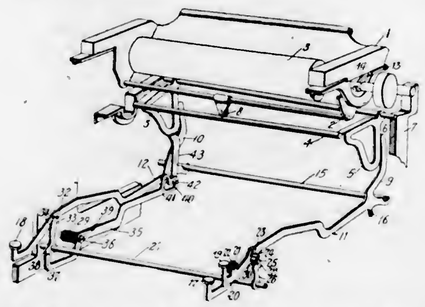
3. In a multiple-hearth electric furnace provided with vertical electrodes of different polarity arranged one over each smelting hearth, the combination, with the reaction shaft of the furnace which is adapted to receive all electrodes of different polarity, of a charging shaft arranged over said reaction shaft, and electrical insulators each inclosing an electrode bundle and its sockets, the length of each cover in upward direction being such as to prevent the charge from coming in contact with the sockets, even when the electrodes have been completely consumed.

4. In a multiple-hearth electric furnace provided with vertical electrodes of different polarity arranged one over each smelting hearth, the combination, with the reaction shaft of the furnace which is adapted to receive all electrodes of different polarity, of a charging shaft arranged over said reaction shaft, gas outlet conduits communicating with the interior of said charging shaft at a depth where the charging material above the entrance openings of said conduits will prevent the access of air, and electrical insulators inclosing each an electrode bundle and its sockets, the length of each cover in upward direction being such as to prevent the charge from coming in contact with the sockets, even when the electrodes have been completely consumed.

5. In a multiple-hearth electric furnace provided with vertical electrodes of different polarity arranged one over each smelting hearth, the combination, with the reaction shaft of the furnace which is adapted to receive all electrodes of different polarity, of a charging shaft arranged over said reaction shaft, partition walls arranged each between two electrodes of different polarity and above the working zone of said electrode, and electrical insulators each inclosing an electrode bundle and its sockets, the length of each cover in upward direction being such as to prevent the charge from coming in contact with the sockets, even when the electrodes have been completely consumed.

[Claims 6 to 14 not printed in the Gazette.]

1,223,279. TYPE-WRITING MACHINE. WILLIAM F. HELMOND, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 26, 1915. Serial No. 41,870. (Cl. 197—80.)



1. In a typewriting machine, the combination with a shiftable platen, of a shift lever, a lock therefor, means for automatically shifting said lock to a predetermined position at each actuation of the shift lever, a stop having a normal effective position on the shift lever such that actuation of the latter for a temporary shift of the platen causes the stop to be carried from a position out of the path of the lock to one in which it is in said path, so as to prevent operation of said lock after having been so shifted, means for moving the stop on the shift lever to an ineffective position from which it cannot, by operation of the shift lever, be brought to its position in the path of the lock, and means for throwing the lock, for sustained shift of the platen, when the shift lever is operated with the stop thereon in ineffective position.

2. In a typewriting machine, the combination with a shiftable platen, of a lever depressible to shift the platen, a lock therefor, means for automatically shifting said lock to a predetermined position at each actuation of the shift lever, a stop having a normal effective position on the shift lever such that actuation of the latter for a temporary shift of the platen causes the stop to be carried from a position out of the path of the lock to one in which it is in said path, so as to prevent operation of said lock after having been so shifted, means for lifting the stop on the shift lever from its normal position to an ineffective position from which it cannot, by operation of the shift lever, be brought to its position in the path of the lock, and means for throwing the lock, for sustained shift of the platen, when the shift lever is operated with the stop thereon in ineffective position.

3. In a typewriting machine, the combination with a shiftable platen, of a shift lever, a lock therefor, means for automatically shifting said lock to a predetermined position at each actuation of the shift lever, a stop-carrying arm pivoted to the shift lever and normally held in such angular position thereon that actuation of the shift lever, for a temporary shift of the platen, causes the stop on said arm to move from its normal position to a position in which it is interposed in the path of the lock, after said lock has been so shifted, means for moving said arm on its pivot in the opposite direction to cause the stop thereon to be held where movement of the shift lever cannot bring it to the path of the lock, and means for throwing the lock, for sustained shift of the platen, when the shift lever is operated with the stop thereon in ineffective position.

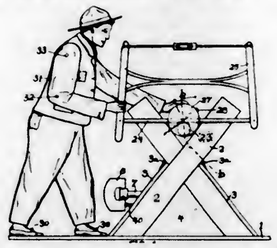
4. In a typewriting machine, the combination with a shiftable platen, of a shift lever, a lock therefor, means for automatically shifting said lock to a predetermined position at each actuation of the shift lever, a stop-carrying arm pivoted to the shift lever, a spring for normally holding said arm in such angular position on the shift lever, that actuation of the shift lever, for a temporary shift of the platen, causes the stop on said arm to move from its normal position to a position in which it is interposed in the path of the lock after said lock has been so shifted, means for moving said arm on its pivot in the opposite direction to cause the stop thereon to be held where movement of the shift lever cannot bring it to the path of the lock, and means for throwing the lock, for sustained shift of the platen, when the shift lever is operated with the stop thereon in ineffective position.

5. In a typewriting machine, the combination with a shiftable platen, of a shift lever, a detent on said lever, a spring latch adapted to engage said detent to lock the shift lever when the latter is shifted, said detent acting to cam back the latch during the shifting operation until the latch can snap into interlocking engagement with the detent, an arm, with a stop thereon, pivoted on the shift lever and normally held in an angular position to cause the stop to be interposed in the path of the latch after the latter has been cammed back, thereby preventing locking of the shift lever when the same is actuated for temporary shift of the platen, and means for rocking the stop-carrying arm reversely to the direction in which the shift lever is moved, to prevent the interposition of the stop in the path of the latch when the shift lever is operated for a sustained shift of the platen.

[Claims 6 to 26 not printed in the Gazette.]

1,223,280. FIGURE TOY. OLOF N. HILDETON, Stockholm, Wis. Filed Nov. 17, 1916. Serial No. 131,938. (Cl. 46—40.)

1. A toy comprising a base, a saw horse fixed on the base, a stick fixed on the saw horse in position to be sawed and having a saw kerf, a saw guided in the kerf and having teeth adapted to mesh with a gear pinion, a spring motor concealed within the saw horse and having an oscillated pinion meshing with the saw teeth, and a human figure fixed on the base and having one hand provided with joints and secured to the saw.

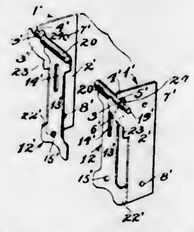


2. A toy comprising a base, a saw horse fixed on the base, a stick fixed on the saw horse in position to be sawed and having a saw kerf, a saw guided in the kerf and having teeth adapted to mesh with a gear pinion, a spring motor concealed within the saw horse and having an oscillated pinion meshing with the saw teeth, and a human figure fixed on the base and having one hand provided with joints and secured to the saw, and the other hand secured upon the stick.

3. A toy comprising a base, a saw horse fixed on the base, a stick fixed on the saw horse in position to be sawed and having a saw kerf, a saw guided in the kerf and having teeth adapted to mesh with a gear pinion, a spring motor concealed within the saw horse and having an oscillated pinion meshing with the saw teeth, and a human figure fixed on the base and having one hand provided with joints and secured to the saw, and the other hand secured upon the stick, said stick having the saw kerf beyond the end of the saw horse and being provided in its underside with a cavity, and said motor having an oscillated shaft extending along said cavity and carrying the pinion engaging the saw blade.

4. A toy comprising a saw horse, a spring motor concealed within the saw horse and having a train of gear wheels and shafts, one of the shafts having a crank, a rock shaft having a crank and a toothed sector, a rod connecting the two cranks, a shaft having two pinions one of which meshes with the sector, a saw having its teeth meshing with the other pinion, whereby the saw is reciprocated by the motor, and a figure having a member connected with the saw so as to be operated thereby, and a stick arranged on the saw horse and having a kerf for the saw to move in.

1,223,281. ADJUSTABLE SCREEN-HANGER. DAVID E. HIPOLITO, Los Angeles, Cal.; Hazel C. Hipolito, administratrix of said David E. Hipolito, deceased, assignor to herself, individually. Filed June 16, 1910. Serial No. 567,308. (Cl. 16—48.)



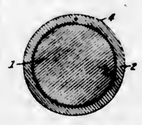
1. In a hinge, a bracket consisting of a flat plate having a main body, an upwardly and outwardly projecting supporting arm having a notch in its base at its upper edge and a retaining arm extending over the plate and having a notch in its under edge above the level of the notched base of the supporting arm, said supporting arm extending above the level of the under edge of the retaining arm substantially as and for the purpose set forth.

2. A window screen hanger comprising a bracket and a swinging member having a laterally projecting pivot to engage the bracket, and also having fingers to engage the edge of the screen stile.

3. A window screen hanger comprising a bracket having an arm; and a swinging member formed of a plate having a laterally projecting loop to encircle and pivotally engage the bracket arm and also having means to engage the edge of the screen stile.

4. In a hinge, a bracket consisting of a flat plate having a main body, an upwardly and outwardly projecting supporting arm extending in the plane of the plate and a horizontally retaining arm above the supporting arm; there being provided in the bases of said arms respectively oppositely-arranged notches one above the other, the upper notch being in the under edge of the retaining arm and the lower notch being in the upper edge of the supporting arm; said supporting arm extending above the level of the outlet from said notches and the lower edge of the retaining arm so that removal from the lower notch, of the engaging element of the swinging member of the hinge is made difficult.

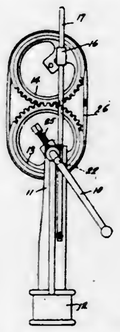
1,223,282. METHOD OF MAKING TUBES. WALLACE E. HUGHES, Philadelphia, Pa. Filed Sept. 14, 1915. Serial No. 50,637. (Cl. 80—62.)



1. The process of making a seamless tube, said process consisting in taking a hollow ingot, forcing the ingot over a mandrel of a uniform diameter throughout and reducing the ingot to form a tube, then acting on the metal of the tube in a longitudinal line so as to slightly enlarge the tube, and then carrying the enlargement around the tube and finally withdrawing the mandrel from the tube.

2. The process of making a seamless tube, said process consisting in first taking a hollow ingot, forcing the metal of the ingot over a mandrel of a uniform diameter throughout and reducing the ingot to form a tube on said mandrel, then hammering the tube on a longitudinal line so as to form a slight buckle or enlargement on the tube, then rolling the tube laterally to carry the buckle around the mandrel, freeing the tube therefrom, and finally withdrawing the mandrel from the finished tube.

1,223,283. PUMP-HEAD. CHRISTIAN S. KURTZ, Ephrata, Pa. Filed Sept. 12, 1916. Serial No. 119,683. (Cl. 74—14.)



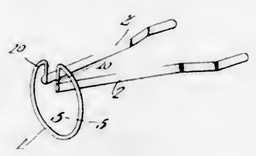
1. In a pump lift, the combination with a drive shaft of intermeshing eccentric gears, one of which is operated

by said drive shaft, a guide, a slide mounted upon said guide and having the other of said gears mounted therein, means carried by the gears for adjusting the eccentricity of said gears, and a lift rod connected with the slide.

2. In a pump lift, the combination with a drive shaft of intermeshing eccentric gears, one of which is operated by said shaft, a guide, a slide mounted upon the guide and having the other of said gears mounted thereon, a bridle encircling said gears and seated thereon, and a lift rod connected with said slide.

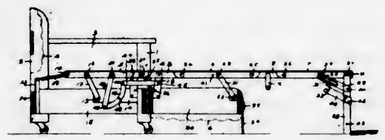
3. In a pump lift, the combination with a drive shaft of intermeshing eccentric gears, a guide, a slide mounted upon the guide, one of said gears being secured to the drive shaft and the other being mounted on said slide, said gears being provided with continuous peripheral seats, a bridle encircling said gears, and fitted in the seats thereof, and a lift rod connected with the slide.

1,223,284. INTRA-UTERINE DILATING-PESSARY. GEORGE D. MARSHALL, Kokomo, Ind. Filed Sept. 22, 1915. Serial No. 52,037. (Cl. 128—21.)



A device of the class described, comprising a divided resilient ring having its ends spaced circumferentially of the ring, the ends of the ring being provided with spaced fingers which project toward the center of the ring, the fingers being equipped adjacent their inner ends with expansible arms disposed approximately at right angles to the plane defined by the ring, the ring constituting means for aiding in spreading the arms apart.

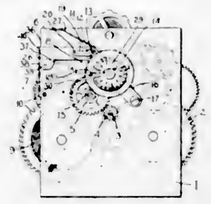
1,223,285. DAVENPORT. FRANCIS MARTIN, San Francisco, Cal. Filed Apr. 29, 1914. Serial No. 835,294. (Cl. 5—51.)



1. A folding bed comprising a main frame, a swinging seat hinged near the front edge of said main frame, a jointed mattress having head, intermediate, and foot sections, swing arms pivoted to said head section and said frame, swing arms pivoted to said intermediate section and swinging seat, supporting legs on said foot section, a bracket mounted on said seat between the head and the intermediate sections, a lever pivoted intermediate its ends on the main frame, a connecting link pivoted to said bracket and to one end of said lever, and a link pivoted to the head section and to the other end of the lever.

2. A folding bed comprising a main frame, a swinging seat hinged near the front edge of said main frame; a jointed mattress having head, intermediate, and foot sections; swing arms pivoted to said head section and to the main frame; a lever pivoted on the main frame; a link pivoted on said head section, and to one end of said lever; a link pivoted to the opposite end of said lever and to said swinging seat; and supporting legs on said foot section.

1,223,286. PERIODICAL-CALL APPARATUS. SALVATORE MASTROIANNI, Waterbury, Conn. Filed Nov. 13, 1914. Serial No. 872,002. (Cl. 116—1.)



1. In a device of the class described, the combination with a signal mechanism, of means normally locking said mechanism from operation, a driving member, a releasing member driven from the driving member and adapted in its movement to release the locking means for the signal mechanism, means to disengage the releasing member from the driving member when the signal is given, and means to return said releasing member to zero position when it is disengaged.

2. In a device of the class described, the combination with a signal mechanism, of means normally locking said mechanism from operation, a driving member, a releasing member driven from the driving member and adapted in its movement to release the locking means for the signal mechanism, means actuated by the signal mechanism to disengage the releasing member from the driving member when the signal is given, and means to return the releasing member to zero position when it is disengaged.

3. In a device of the class described, the combination with a signal mechanism, of means normally locking said mechanism from operation, a driving member, a releasing member driven from the driving member and adapted in its movement to release the locking means for the signal mechanism, means to disengage the releasing member from the driving member when the signal is given, and a return spring connected to the releasing member to return it to zero position when it is disengaged.

4. In a device of the class described, the combination with a signal mechanism, of means normally locking said mechanism from operation, a driving member, a releasing member driven from the driving member and adapted in its movement to release the locking means for the signal mechanism, means to disengage the releasing member from the driving member when the signal is given, a return spring connected to the releasing member to return it to zero position when it is disengaged, and an adjustable device to limit the return movement of said releasing member.

5. In a device of the class described, the combination with a signal mechanism, of means normally locking it from operation, a driving member, a releasing member driven from the driving member and adapted at a point in its movement to release the locking means for the signal mechanism, means actuated by the signal mechanism to disengage the releasing member from the driving member when the signal is given, a return spring to return the releasing member to zero position when it is disengaged, and an adjustable positioning member to limit the return movement of the releasing member.

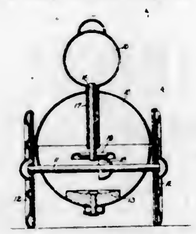
[Claims 6 to 17 not printed in the Gazette.]

1,223,287. WHEELED FIGURE TOY. LEO MORSE, New York, N. Y. Filed Feb. 7, 1917. Serial No. 147,061. (Cl. 46—45.)

1. In a figure toy, the combination of a non-rotary body, supporting means for said body adapted to rotate about a horizontal axis, a head for the body, and means to automatically rotate the head around its axis at an angle to the supporting axis while the toy is being transported.

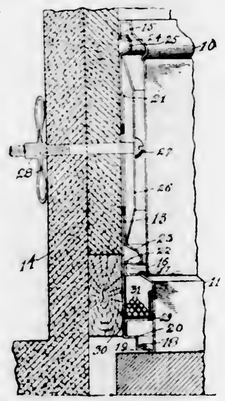
2. In a figure toy, the combination of a hollow body, a horizontal supporting axle for the body extending there-

through, a pair of supporting wheels secured to the ends of the axle on opposite sides of the body, a weight within the body below the axle serving to hold the body from rotation and erect, a head for the body, an axle secured to



the head and extending into the body, and devices carried respectively by the two axles serving to cause the rotation of the head around the axis of its axle while the toy is being transported along a supporting surface.

1,223,288. WIRE-CONDUIT METAL BASE. OTHO M. OTTE, Jamestown, N. Y. Filed Mar. 20, 1916. Serial No. 85,423. (Cl. 189—85.)



1. An attaching clip for a two-part molding comprising a plate terminating at each end in outwardly projecting return bends which have free edges which slidably bear against the wall, a truss plate to hold between said return bends, both of said plates having slotted openings therethrough for adjustable attachment to the wall, a third plate attached to said first plate and extending a spaced distance beyond the end thereof and its free edge bent in a curve, a two-part molding, one part of said molding having raised sides with inturned edges to accommodate said return bends and hold thereon when said inturned edges have been sprung over said return bends, one of said raised sides having a lengthwise groove therein, the other part of said molding having raised sides and the edge of one side received in said groove in said first molding part and the other raised side sprung over said curved end of said third plate.

2. In a molding, a clip, a head, means on the clip to engage the top and bottom parts of the head to secure the latter to the clip, a base, means on the clip to engage the bottom part of the base, and means whereby to secure the top of the base to the lower part of the head.

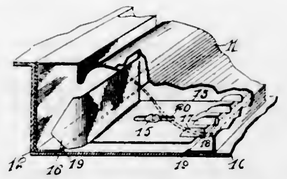
3. In a molding, a base, a head, and a clip having a plurality of means to engage and hold the top and bottom of the head and the bottom part of the base respectively, said head having a groove in its lower portion and the top part of the base having an extension received in said groove.

4. In a molding, a head, a clip, means on the clip to engage the top and bottom parts of the head to secure the latter to the clip, said clip projecting below the head, a base, means on said projecting part of the clip to engage and secure the lower part of the clip thereto, and means to secure the upper part of the base against movement.

5. In a molding, a base, a head superimposed on the base, and a clip common to the head and base and having means to engage the base and head to simultaneously secure both in position.

[Claims 6 to 8 not printed in the Gazette.]

1,223,289. RESILIENT HOLDING-CLIP. OTHO M. OTTE, Jamestown, N. Y. Filed Oct. 18, 1916. Serial No. 126,303. (Cl. 189—89.)



1. The combination of hollow sheet metal work having spaced inturned edges, a holding clip having a slot therein for adjustable attachment, and resilient projections on said clip having inclined notched ends to allow said inturned edges to move over said ends of said projections into locking engagement with said notched ends.

2. The combination of hollow sheet metal work having spaced inturned edges, a sheet metal holding clip having a plurality of spring teeth along each lateral edge portion, said spring teeth extending edgewise beyond said lateral edge portion of said clip and having inclined ends on the upper side and the underside cut away in a notch to press said spaced inturned edges down said inclined ends into holding engagement with said notches.

3. A connecting clip for sheet metal including a plate and a series of teeth thereon set on edge and having their outer ends curved and free and projecting beyond the body of the plate.

4. A connecting clip for sheet metal composed of a plate, and a member connected to said plate at substantially right angles thereto, said member having each of its ends extending outwardly away from the member and formed to provide grips on the inner side edges of its said ends.

5. A connecting clip for sheet metal having edge securing parts composed of a plate adapted to be secured so as to lie in the plane of the edge part of the sheet metal, a tooth connected to the plate, said tooth extending beyond the body of the plate so as to provide a longitudinal side gripping edge and being connected to the plate so that the plane of the tooth is at substantially right angles to the edge part of the sheet metal engaged by said gripping edge.

[Claim 6 not printed in the Gazette.]

1,223,290. TARGET. GEORGE RAVENSHEAR, West Ealing, England. Filed Aug. 24, 1915. Serial No. 47,106. (Cl. 124—15.)

1. A target for miniature and other ranges comprising the representation of an object reproduced upon a surface the size of said object being mathematically proportioned so that when viewed at a compartively short range said object will appear to the marksman as if seen by him in real life at a much greater range and a contrasting line on said object inclosing specific parts thereof for the purpose of allotting to them higher scoring values.

2. A target for miniature and other ranges comprising the representation of an object reproduced upon a surface the size of said object being mathematically propor-

tioned so that when viewed at a comparatively short range said object will appear to the marksman as if seen by him in real life at a much greater range and a con-



trasting line of wire embedded in said surface inclosing specific parts for the purpose of allotting to them higher scoring values.

1,223,291. TARGET. GEORGE RAVENSHEAR, London, England. Filed Aug. 24, 1915. Serial No. 47,909. (Cl. 124—15.)

1. A two color target for miniature and other ranges comprising a uniformly colored ground and the representation of an object reproduced on said ground in a single color, the colors being such as to excite color sensations similar to those produced when the actual figure is viewed at full range in its natural surroundings, and means for inclosing specific parts of said object.

2. A two color target for miniature and other ranges comprising a uniformly colored card, a realistic representation of an object in a single color on said card, the colors being such as to excite color sensations similar to those produced when the actual figure is viewed at full range in its natural surroundings, and a contrasting line inclosing specific parts of said object.

3. A two color target for miniature and other ranges comprising a uniformly colored background, a representation of a soldier reproduced on said background in a single color, the colors being such as to excite color sensations similar to those produced when a soldier is viewed at full range in his natural surroundings, and a contrasting line or wire embedded in said background to inclose vital parts.

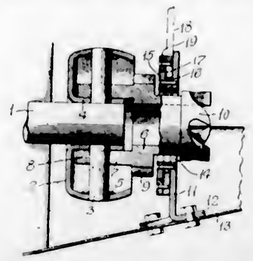
4. A two color target for miniature and other ranges comprising a background in a single tint or color and having a representation thereon of an object in a single tint or color and of a size to correspond with the actual size said object would appear if seen at full range, the colors being such as to excite color sensations similar to those produced when the actual figure is viewed at full range in its natural surroundings and contrasting means for inclosing specific parts of said object.

5. A target for miniature and other ranges comprising a uniformly colored ground and the representation of an object reproduced on said ground in a single color and of a size to correspond with the actual size said object would appear if seen at the full selected range, the colors of said background and object corresponding to the natural colors as they would appear to the eye of the marksman if viewed from a distance and means for inclosing specific parts of said object.

[Claim 6 not printed in the Gazette.]

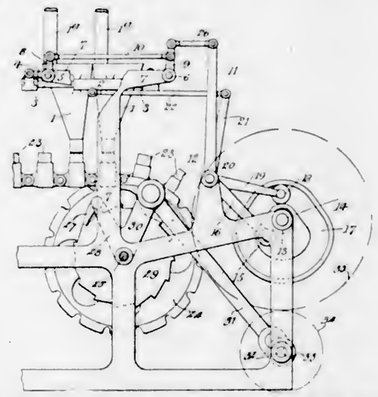
1,223,292. AUTOMOBILE-STARTER. THEODORE E. REYNOLDS, Detroit, Mich., assignor of one-half to Isabelle M. Farrington, Detroit, Mich. Filed May 16, 1916. Serial No. 97,938. (Cl. 74—54.)

In an automobile engine starting device, a pan, a hub adapted to extend into the pulley of an engine shaft and be fixed relative thereto, a ratchet wheel forming part of said hub, a laminated upright carried by said pan, an operating lever loosely held between laminations of said



upright, a gravity pawl connected to said operating lever adapted to engage said ratchet wheel and adapted to impinge against said pan to be kicked out of engagement with said ratchet wheel.

1,223,293. FILLING APPARATUS. WILLIAM ROSE, Gainsborough, England. Filed Feb. 3, 1914. Serial No. 816,232. (Cl. 226—9.)



1. In a machine of the character described, an endless conveyer adapted to carry receptacles to be filled and having at one point a rectilinear travel, means for imparting intermittent forward movement to said conveyor, a reciprocating filling chute arranged above the conveyor at said point of rectilinear travel and adapted to lead material to a receptacle carried by said conveyor, means for moving said chute forward with the conveyer during the filling operation and returning said chute to initial position during the ensuing advance of the conveyer.

2. In a machine of the character described, an endless conveyer adapted to carry receptacles to be filled and having at one point a rectilinear travel, means for imparting intermittent forward movement to said conveyer, a reciprocating filling chute arranged above the conveyer at said point of rectilinear travel and adapted to lead material to a receptacle carried by said conveyer, means for moving said chute forward with the conveyer during the filling operation and returning said chute to initial position during the ensuing advance of the conveyer, together with means for lowering said chute into the mouth of the container at the initiation of the filling operation and lifting it therefrom after the filling is completed.

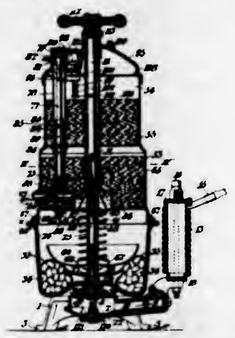
3. In a machine of the character described, an endless conveyer adapted to carry receptacles to be filled and having at one point a rectilinear travel, means for imparting intermittent forward movement to said conveyer, a plurality of simultaneously operated, reciprocating filling chutes arranged above the conveyer at said point of rectilinear travel and adapted to lead material to successive receptacles carried by said conveyer, means for moving said chutes forward with the conveyer during the filling operation and returning said chutes to initial position during the ensuing advance of the conveyer.

4. In a machine of the character described, an endless conveyer adapted to carry receptacles to be filled and having at one point a rectilinear travel, means for imparting intermittent forward movement to said conveyer, a plurality of simultaneously operated reciprocating filling chutes arranged above the conveyer at said point of rectilinear travel and adapted to lead material to successive receptacles carried by said conveyer, means for moving said chutes forward with the conveyer during the filling operation and returning said chutes to initial position during the ensuing advance of the conveyer, together with means for lowering said chutes into the mouths of the coöperating containers at the initiation of the filling operation and lifting said chutes therefrom after the filling is completed.

5. In a machine of the character described, an intermittently actuated traveling conveyer adapted to carry receptacles to be filled, a filling chute arranged above said conveyer and adapted to lead material to a receptacle carried by said conveyer, means for moving said chute forward with the conveyer during the filling operation and returning said chute to initial position after the filling operation is completed.

[Claims 6 to 10 not printed in the Gazette.]

1,223,294. ACETYLENE-GAS GENERATOR. EDWIN M. ROSENBLUTH, Philadelphia, Pa. Filed Sept. 18, 1913. Serial No. 790,396. (Cl. 48—4.)



1. In an acetylene gas generator, the combination with a carbid casing, having an imperforate central tubular column extending above said casing, with a gas outlet at the bottom thereof; of a water receptacle having a central tubular column and arranged to detachably fit upon said carbid casing, with said columns in loose telescopic relation; and means for detachably connecting said casing and receptacle; whereby the gas generated in said casing is directed in a film between said columns and subjected to the low temperature maintained by the water in said receptacle.

2. In an acetylene gas generator, the combination with a carbid casing; of a water receptacle arranged to detachably fit upon said carbid casing; means for detachably connecting said casing and receptacle; and means arranged to compress carbid downwardly and outwardly in said casing, including an annular bowl having a central outlet and a spring; the upper end of said spring being held by said water receptacle, and the latter having a water outlet overhanging said bowl.

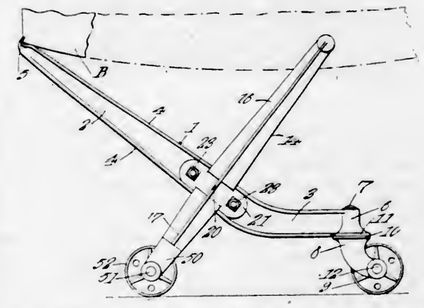
3. In an acetylene gas generator, the combination with a carbid casing, having a floor inclined downwardly from the center to the circumference thereof, whereby water in said chamber gravitates downwardly and outwardly on said floor; of means arranged to compress carbid downwardly and outwardly on said floor, including an annular bowl having a spring; and means arranged to introduce water between said bowl and floor; whereby the carbid in said chamber is continually pressed into coöperative relation with any water in said chamber.

4. In an acetylene gas generator, the combination with a carbid casing, having a floor which is lower at its outer portion than at its center; of means arranged to compress carbid downwardly and outwardly in said casing, including an annular bowl having a water outlet, and a spring pressing said bowl toward said floor; and means arranged to supply said bowl with water; whereby the carbid in said chamber is continually pressed into coöperative relation with any water in said chamber.

5. In an acetylene gas generator, the combination with a carbid casing, having a central tubular column with a gas outlet at the bottom thereof; of a water receptacle having a central tubular column and detachably fitted upon said carbid casing, with said columns in axial alinement; means for detachably connecting said casing and receptacle; a removable cartridge in said casing, extending annularly around said central tubular column, including a folded web of textile fabric having transversely extending parallel lines of stitches forming separate carbid compartments in a circumferential series in said casing; means compressing said cartridge in concentric relation with said column, including an annular bowl and a spring encircling said column; means at the lower end of said spring connecting it to said bowl so as to leave a space between them for the passage of water; and means controlling the supply of water from said receptacle to said bowl; whereby the carbid is maintained equally distributed in concentric relation with said column and continuously pressed into coöperative relation with any water in said casing.

[Claim 6 not printed in the Gazette.]

1,223,295. BARREL HOIST AND RACK. HENRY A. SCHAUB and FRED S. CRAWFORD, Huntington, W. Va. Filed Mar. 28, 1916. Serial No. 87,252. (Cl. 248—17.)



1. A barrel stand comprising an inclined intermediate bar having upper and lower lateral flanges; a pair of Y-shaped side members each including a shank, an upstanding arm and a depending arm, the ends of the shanks being provided with foot plates received between the flanges of the intermediate bar; and means for connecting the foot plates with the intermediate bar; the upstanding arms coacting with the upper end of the intermediate bar to form a three-point barrel support, and the depending arms coacting with the lower end of the intermediate bar to form a tripod.

2. A barrel stand comprising a pair of opposed Y-shaped members, each including a shank, an upstanding arm and a depending arm, the arms each comprising a body and an outstanding flange, the flanges merging to form the shank, and the bodies being prolonged onto the

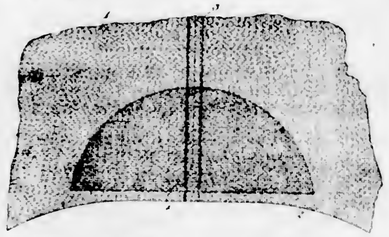
upper and lower edges of the shank, the shanks terminating in transverse foot plates; an inclined intermediate bar including flanges between which the foot plates are received, to dispose the Y-shaped members on opposite sides of the bar; and securing means uniting the foot plates with the bar; the upstanding arms coacting with the upper end of the intermediate bar to form a three-point barrel support, the depending arms coacting with the lower end of the intermediate bar to form a tripod.

1,223,296. METALLIC PISTON-RING. GEORGE C. SIEBERT, Chicago, Ill. Filed Oct. 12, 1916. Serial No. 125,200. (Cl. 29—156.)



The method of manufacturing metallic piston rings, consisting in first producing an endless ring of larger diameter than the required finished ring, then splitting this ring crosswise and reducing the thickness of one end of said ring for some distance from said end, at the same time rounding this end, then splitting the ring at one end in the middle to form a slot therein, then milling grooves at the other end of said ring and leaving the ends of said grooves rounded to afford a tongue adapted to enter said slot, then contracting the ring, and finally reducing said ring to operative external size by grinding.

1,223,297. SHOE-LINING. CHARLES A. STEWART, Andover, Mass. Filed Dec. 27, 1915. Serial No. 68,731. (Cl. 36—55.)



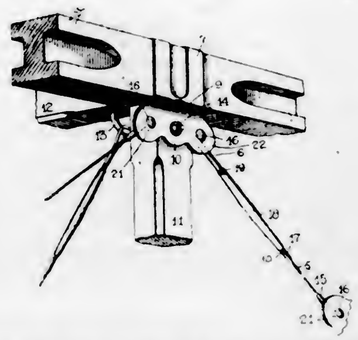
1. A shoe lining having applied to that portion thereof which comes at the rear portion of the shoe, and which covers the counter, a layer of a solidified, smooth-wearing, wear-resistant material, on the side forming the inside of the shoe, whereby the said portion of said lining is rendered more wear-resisting.

2. A shoe lining having applied to that portion only thereof which comes at the rear portion of the shoe, and which covers the counter, a layer of solidified, smooth-wearing, wear-resistant material, on the side forming the inside of the shoe, whereby the said portion of said lining is rendered more wear-resisting, and whereby a smooth inner surface is presented in that portion of the shoe above the heel.

3. A shoe lining having applied to that portion thereof which comes at the rear portion of the shoe, and which covers the counter, a layer of a solidified, smooth-wearing, wear-resistant material, on the side forming the inside of the shoe, said material being capable of reducing the moisture-absorbing property of said lining, whereby the said portion of said lining is rendered more wear-resisting.

4. A fabric shoe lining having applied to that portion thereof which comes at the rear portion of the shoe, and which covers the counter, a layer of a solidified, smooth-wearing, wear-resistant material, on the side forming the inside of the shoe, whereby the said portion of said lining is rendered more wear-resisting.

1,223,298. SPOKE-STAY. JOHN P. TARBOX, Buffalo, N. Y., assignor to Curtiss Aeroplane & Motor Corporation, a Corporation of New York. Filed Nov. 27, 1915. Serial No. 63,743. (Cl. 244—31.)



1. A spoke stay including separable portions, each of said portions being formed with an enlarged extremity and a head extending laterally therefrom.

2. A spoke stay including separable portions, each portion having one enlarged extremity angularly headed for anchorage and means adjustably connecting the portions to determine the tension of said stay.

3. A spoke stay including a wire portion and a shank portion formed with enlarged extremities, said enlarged extremities being provided with bent anchorage heads.

4. A spoke stay including a wire portion and a shank portion, each portion having an enlarged angularly extending headed extremity for separate anchorage and an enlarged exteriorly threaded extremity for mutual connection.

5. A spoke stay including a wire portion having enlarged extremities respectively angularly headed and threaded, a shank portion having its extremities similarly headed and threaded and a turnbuckle connecting the threaded extremities of said portions.

[Claims 6 to 9 not printed in the Gazette.]

1,223,299. PIPE-STRAINER. BURT E. TAYLOR, Mount Vernon, N. Y., assignor to Borden's Condensed Milk Company, New York, N. Y., a Corporation of New Jersey. Filed June 29, 1916. Serial No. 106,543. (Cl. 210—16.)



1. A pipe-strainer comprising in combination with a pipe provided with inlet and outlet ports, a plurality of tubular wire mesh straining devices concentrically disposed within one another in substantial parallelism with the longitudinal axis of the pipe, and respectively mounted each on one of a like plurality of separable annular apertured disks concentrically and successively held within one another, the outer disk being seated upon the inlet port of the pipe, and means for removably holding said outer disk in position on said inlet port.

2. A pipe-strainer comprising in combination with a pipe provided with inlet and outlet ports, a plurality of tubular wire mesh straining devices concentrically disposed within one another in substantial parallelism with the longitudinal axis of the pipe, and respectively mounted each on one of a like plurality of separable annular apertured disks concentrically and successively held within one another, the outer disk being seated upon the inlet port of the pipe, the wire mesh perforations of each being successively smaller from the inner to the outer of said straining devices, and means for removably holding said outer disk in position on said inlet port.

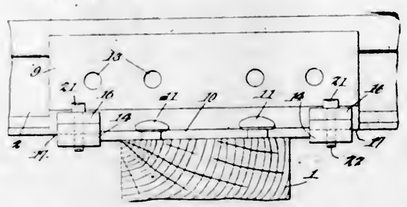
3. A pipe-strainer comprising in combination with a pipe provided with inlet and outlet ports, a plurality of tubular wire mesh straining devices concentrically disposed within one another in substantial parallelism with the longitudinal axis of the pipe, and respectively mounted each on one of a like plurality of separable annular apertured disks concentrically and successively held within one another, the outer disk being seated upon the inlet port of the pipe, and yielding means for removably holding said outer disk in position on said inlet port.

4. A pipe-strainer comprising in combination with a pipe provided with inlet and outlet ports, a plurality of tubular wire mesh straining devices concentrically disposed within one another in substantial parallelism with the longitudinal axis of the pipe, and respectively mounted each on one of a like plurality of separable annular apertured disks concentrically and successively held within one another, the outer disk being seated upon the inlet port of the pipe, the wire mesh perforations of each being successively smaller from the inner to the outer of said straining devices, and yielding means for removably holding said outer disk in position on said inlet port.

5. A pipe-strainer comprising in combination with a pipe provided with inlet and outlet ports, a plurality of tubular wire mesh straining devices concentrically disposed within one another in substantial parallelism with the longitudinal axis of the pipe, and respectively mounted each on one of a like plurality of separable annular apertured disks concentrically and successively held within one another, the outer disk being seated upon the inlet port of the pipe, and means, comprising a pivoted, spring-pressed, locking bar transversely disposed across said outer disk, for removably holding said outer disk in position on said inlet port.

[Claim 6 not printed in the Gazette.]

1,223,300. RAIL-BRACE. GEORGE P. TENNANT, Frostburg, Md. Filed Dec. 11, 1916. Serial No. 136,262. (Cl. 239—15.)



1. In a device of the character described, a brace to fit one side of a rail having a lower outstanding flange, and transverse clamping bars to extend under the rail and brace and having upper hooks at their ends to overlap said flange and the opposite portion of the base flange of the rail.

2. In a device of the character described, a brace to fit one side of a rail having a lower outstanding flange, transverse clamping bars to extend under the rail and brace and having upper hooks at their ends to overlap said flange and the opposite portion of the base flange of the rail, and retaining elements engageable through said bars, first mentioned flange and the corresponding hooks.

3. In a device of the character described, a brace to fit one side of a rail having a lower outstanding flange, and transverse clamping bars to extend under the rail and brace and having upper hooks at their ends to overlap said flange and the opposite portion of the base flange of the rail, said brace being provided intermediate its ends with a lower inwardly opening cavity for accommodating a tie plate and spikes.

4. In a device of the character described, a brace to fit one side of a rail and having a lower outstanding flange, and transverse clamping bars to extend under the rail and brace and having upper hooks at their ends to overlap said flange and the opposite portion of the base flange of the rail, said brace being provided intermediate its ends with a lower inwardly opening cavity for accommodating a tie plate and spikes, the ends of said base and its flange having lower cut away portions for receiving said bars when moved longitudinally relative to the brace.

5. In a device of the character described, a brace to fit one side of a rail and having a lower outstanding flange, transverse clamping bars to extend under the rail and brace and having upper hooks at their ends to overlap said flange and the opposite portion of the base flange of the rail, said brace being provided intermediate its ends with a lower inwardly opening cavity for accommodating a tie plate and spikes, the ends of said base and its flange having lower cut away portions for receiving said bars when moved longitudinally relative to the brace, said bars, first mentioned flange and corresponding hooks having apertures adapted to register, and retaining elements insertible in said apertures.

1,223,301. FUEL-OIL BURNER. EDWIN W. TUCKER, San Francisco, Cal. Filed Aug. 13, 1912. Serial No. 714,935. (Cl. 137—80.)



1. An oil burner comprising a distributing head, a tubular body fixed in the head, a nozzle fixed on said tubular body, a plug removably fixed in said distributing head, a fuel conduit slidable within said plug, a sleeve rotatably fixed in the plug and having threaded engagement with the fuel conduit, an atomizing head fixed on the fuel conduit and slidable within said nozzle, said atomizing head being of less diameter than the said plug: an atomizing tip fixed to the nozzle and a fuel chamber in the said distributing head communicating through the fuel conduit with the tubular body.

2. An oil burner comprising a tubular body having a nozzle at one end, a distributing head at the other end, said distributing head having a dividing wall, a plug extending through said wall, and provided with an internal chamber communicating with the distributing head, a fuel conduit extending through said plug and communicating with the chamber and the interior of said tubular body, means for imparting longitudinal movement to said fuel conduit, an atomizing head fixed upon the fuel conduit and slidable within said nozzle, said head having external means for breaking the oil into finely divided particles and an atomizing tip secured to said nozzle.

3. An oil burner comprising a distributing head, a tubular body fixed at one end in said head and provided with a nozzle at the other end, an atomizing tip secured to said nozzle and having an opening provided with a knife-like edge, a fuel conduit supported by said distributing head and longitudinally adjustable within said tubular body, an atomizing head secured to the outer end of said fuel conduit and provided with a grooved portion, a restricted portion and an enlarged portion, said enlarged portion being provided with spiral grooves terminating at graduated distances from the outer end thereof, and means for adjusting said fuel conduit.

4. An oil burner comprising an atomizing element consisting of a plug, a sleeve rotatably secured in said plug, a stuffing box surrounding the sleeve, a stem threaded into the sleeve, and having a squared portion engaging a square opening in the plug, a fuel conduit fixed on said

stem and slidable through said plug; an atomizing head fixed on the fuel conduit, in combination with a distributing head having a dividing wall, an opening in the dividing wall, engaged by the said plug; openings in said plug communicating with the distributing head; a tubular body fixed in the distributing head; a nozzle fixed on the tubular body and surrounding the atomizing head; an atomizing tip fixed to the nozzle and having an opening beveled to a cutting edge.

5. An oil burner comprising a tubular body provided with a nozzle, a fuel conduit within the body provided with means for supplying fuel to the interior of said body, an atomizer head secured to the fuel conduit and filling the bore of said nozzle, said head having peripheral grooves cut therein for nebulizing the fuel oil, said head being slidable within said nozzle, means for adjusting said fuel conduit to effect an adjustment of said head, an atomizing tip secured to said nozzle and having an opening with a beveled cutting edge, and flame molding means coöperating with said opening.

[Claims 6 to 12 not printed in the Gazette.]

1,223,302. METHOD OR PROCESS OF TREATING AUTOMOBILE-TIRES AND THE INNER TUBES THEREOF. FRANK S. WALTON, Philadelphia, Pa. Filed Oct. 24, 1916. Serial No. 127,461. (Cl. 91—68.)

1. The process of treating automobile tires and inner tubes employed therewith, which comprises the application of an oleaginous animal product to the inner wall of the tire shoe with which the inner tube contacts for the impregnation of the shoe therewith and the surface coating of said inner tube.

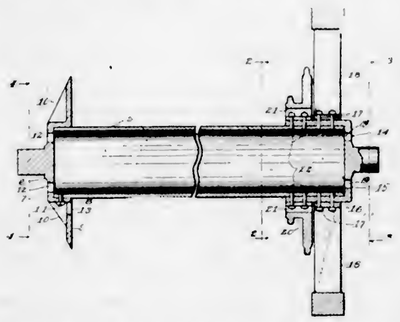
2. The process of treating automobile tires and inner tubes employed therewith, which comprises the application of thickened neat's-foot oil to the inner wall of the tire shoe with which the inner tube contacts for the impregnation of the shoe therewith and the surface coating of said inner tube.

3. The combination with the shoe of an automobile tire and an inner tube employed therewith, of an oleaginous animal product interposed between said shoe and the inner tube and impregnating the body of said shoe.

4. The combination with the shoe of an automobile tire and an inner tube employed therewith, of a body or layer of a non-drying animal oil interposed between said shoe and the inner tube and impregnating the body of said shoe.

5. The combination with the shoe of an automobile tire and an inner tube employed therewith, of a body or layer of thickened neat's-foot oil interposed between said shoe and the inner tube and impregnating the body of said shoe.

1,223,303. BULL AND CALF WHEEL. WILSON B. WIGLE, Fullerton, Cal. Filed Nov. 21, 1916. Serial No. 132,529. (Cl. 64—17.)

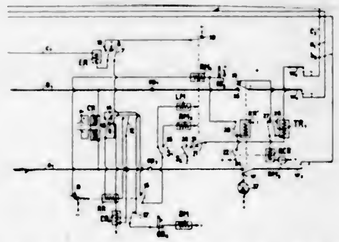


1. In a device of the class described, the combination of a drum, a gudgeon secured thereto comprising a brake wheel hub slipped over said drum and an end head, said drum and hub having registering bolt holes, said head having hand holes therein, said hub being of polygonal form, brake wheel arms mounted on the polygonal faces of said hub, and bolts extending through said holes and said arms securing the latter to said hub.

2. In a device of the class described, the combination of a hollow drum, a gudgeon secured thereto comprising a brake wheel hub slipped over said drum, and an end head, said drum and hub having registering bolt holes, said head having hand holes therein, said hub being of polygonal form, brake wheel arms mounted on the polygonal faces of said hub, bolts extending through the holes in said arms, and through holes in said hub securing the arms to said hub, a sprocket wheel having a hub slipped over said brake wheel hub, the hub of said sprocket having bolt holes therein registering with holes in said brake wheel hub and said drum, and bolts disposed in said last mentioned holes securing said sprocket wheel to said drum.

3. In a device of the class described, the combination of a hollow drum, a gudgeon secured thereto comprising a brake wheel hub slipped over said drum and an end head, said drum and hub having registering bolt holes, said head having hand holes therein, said hub being of polygonal form, brake wheel arms mounted on the polygonal faces of said hub, bolts extending through holes in said arms, and through holes in said hub securing the arms to said hub, a sprocket wheel having a hub slipped over said brake wheel hub, the hub of said sprocket having bolt holes therein registering with holes in said brake wheel and said drum, bolts disposed in said holes securing said sprocket wheel to said drum, said sprocket wheel hub having hand hole openings extending therethrough in which the ends of the securing bolts are disposed.

1,223,304. CONTROL-CIRCUITS FOR TELEPHONE SYSTEMS. FRITZ ALDENDORFF, Wilmersdorf, Berlin, Germany. Filed Mar. 16, 1914. Serial No. 825,103. (Cl. 179—18.)



1. In a switching system for interconnecting lines, a current source, a selector for selecting and testing said lines, a selecting relay for controlling the selecting function of said selector, an oscillatory armature on said selecting relay having back and front positions, and an electromagnet for initiating the testing function of said selector, said elemtromagnet being energized by said current source the moment the armature of the said selecting relay leaves its front position.

2. In a switching system for interconnecting lines, a current source, a selector for selecting and testing said lines, a selecting relay for controlling the selecting function of said selector, an oscillatory armature on said selecting relay having back and front positions an electromagnet that is energized the moment the armature of the said selecting relay leaves its front position and a circuit for initiating the testing function of said selector, which circuit is rendered operative by the deënergizing of said electromagnet when the said oscillatory armature remains in its front position.

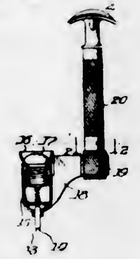
3. A switch with groups of contacts, selecting means for selecting a group of contacts, testing means for testing the contacts of said group, a switch control relay with an oscillating armature having two positions, and a change over relay which receives current during the travel of the armature of the control relay from its one position to its other position, the operation of the said testing means being initiated by the said change over relay.

4. In a switching system for interconnecting lines, a current source, a selector for selecting a line and for changing its electrical condition, a selecting relay for controlling the selecting operation of said selector, an oscillatory armature on said selecting relay having back and front positions and an electromagnet for controlling the operation of the said selector by which it changes the condition of a selected line, said electromagnet being energized by said current source in the period during which the armature of the said relay travels from its front position to its back position.

5. In a switching system for interconnecting lines, a current source, a switch for performing operations of different characters, a relay for causing the said switch to perform one operation, an electromagnet for causing the said switch to change from one operation to another operation, an oscillatory armature on said relay having back and front positions, said electromagnet being energized by said current source in the period during which the armature of the said relay travels from its front position to its back position.

[Claims 6 to 12 not printed in the Gazette.]

1,223,305. ILLUMINATING ATTACHMENT FOR RAZORS. KATHERINE E. ALLPORT, Chicago, Ill. Continuation in part of application filed June 7, 1913. Serial No. 772,258, Patent No. 1,180,686, dated Apr. 25, 1916. This application filed Mar. 16, 1916. Serial No. 84,533. (Cl. 240—2.)



1. The combination with a razor handle carrying a blade having a cutting edge disposed at one side of the handle axis, a battery, a lamp holder including an arm provided with means for removably attaching the holder to the razor handle at one side thereof in position to illuminate the cutting edge, a lamp within the holder, and conductor wires connecting the terminals of the lamp with those of the battery.

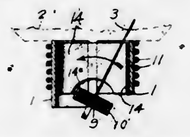
2. The combination with a razor handle carrying a blade having a cutting edge disposed at one side of the handle axis, a battery, a lamp holder including a laterally-extending arm for removably attaching the holder to the razor handle at one side thereof in position to illuminate the cutting edge, a lamp within the holder, and conductor wires connecting the terminals of the lamp with those of the battery.

3. The combination with a razor handle carrying a blade having a cutting edge disposed at one side of the handle axis, a battery, a lamp holder including a laterally-extending arm provided with a clip for removably and adjustably attaching the holder about the razor handle at one side thereof in position to illuminate the cutting edge, a lamp within the holder, and conductor wires connecting the terminals of the lamp with those of the battery.

4. The combination of a razor frame having a blade holder and a handle approximately perpendicular to the blade holder, an electric lamp socket extending parallel to said handle, means for securing the lamp socket to the handle at the side of the handle which lies beneath the blade edge when in use, an electric lamp in the front end of the socket adapted to throw its light rays below the blade holder, and a flexible electrical conductor extending from the rear of the lamp socket, said lamp socket and handle forming a hand hold; substantially as described.

5. The combination of a razor frame having a blade holder and a handle approximately perpendicular to the blade holder, an electric lamp socket extending parallel to the handle, a clip for adjustably securing the lamp socket to the handle at the side of the handle which lies beneath the blade edge when in use, and arranged to permit the socket to be adjusted longitudinally along the handle toward and from the blade holder, an electric lamp in the front end of the socket and adapted to throw its light rays below the blade holder, and a flexible electrical conductor extending from the rear of the lamp socket, said lamp socket and handle forming a hand hold; substantially as described.

1,223,306. ELECTRICAL MEASURING INSTRUMENT. WILLIAM ANTHONY, Clyde, Ohio. Filed Jan. 20, 1916. Serial No. 73,192. (Cl. 171—95.)



1. In an electrical measuring instrument, a spool, a coil of wire wound thereon and adapted to receive an electric current, a needle or pointer mounted for movement within the spool, a magnet secured to the needle in the field of force of the coil and adapted to be moved by variations of the current in the coil, and means coöperating with the current in the coil for regulating the amount of movement of the magnet, said last named means comprising an iron core bent to conform with the interior of the spool and being held in frictional contact with the inner walls of the spool, said core having a cut-away portion adjacent to said magnet.

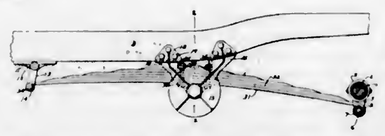
2. In an electrical measuring instrument, a spool, a coil of wire wound thereon and adapted to receive an electric current, a needle or pointer mounted for movement within the spool, a magnet secured to the needle in the field of force of the coil and adapted to be moved by variations of the current in the coil, means coöperating with the current in the coil for regulating the amount of movement of the magnet, said last named means comprising an iron core bent to conform with the interior of the spool and being held in frictional contact with the inner walls of the spool, said core having a pair of similar cut-away portions extending inwardly from one edge of the core in the walls of the core, said cut away portions being in close proximity to the end of the magnet.

3. In an electrical measuring instrument, an oblong spool, a coiled wire carried by said spool for conveying an electric current, a soft iron core comprising a sleeve formed from a single sheet of metal, said sleeve being inserted on the interior of the spool and being held in frictional contact therewith, a needle or pointer disposed within the interior of said core and having an axis disposed at right angles to the central axis of the core and having a pivot shaft, a magnet secured to said needle, the plane of the magnet being parallel with the central axis of the core and at right angles to said pivot shaft, said core having semicircular cut away portions extending inwardly from the edges of the core at one end thereof, the cut away portions being disposed adjacent to one end of said magnet and being symmetrically disposed with respect to the pivot of the needle.

1,223,307. SHOCK-ABSORBING DEVICE. WALTER C. BAKER, Cleveland, Ohio. Filed June 12, 1912. Serial No. 703,216. (Cl. 267—2.)

1. The combination, with a vehicle spring, of means located on the opposite sides of a portion of said spring

and opposing a frictional resistance to the transmission of motion or vibration from one section of the spring to another.



2. The combination of a spring, a pair of opposed plates secured to and located on opposite sides of the spring, means rotatably supporting said plates, and means frictionally engaging said plates to check the rotation thereof and of the spring.

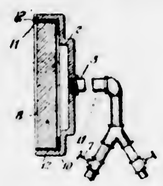
3. The combination of a spring, a pair of opposed plates, a spring connected to said plates and extending therebetween, means rotatably supporting said plates, means frictionally engaging said plates, and means for varying the friction exerted upon said plates.

4. The combination of a spring seat comprising a pair of opposed plates, a spring connected to said seat and extending between said plates, a rotary support for said seat, and means frictionally engaging said plates.

5. The combination, with a vehicle frame, of a pair of opposed plates carried by said frame, friction material on the inner surfaces of said plates, a spring seat rotatably mounted between said plates and comprising a pair of plates adapted to engage the friction material, and means for moving the first mentioned plates toward and from each other to vary the frictional engagement between the spring seat plates and the friction material.

[Claims 6 to 18 not printed in the Gazette.]

1,223,308. DIAPHRAGM APPARATUS FOR BURNING GASES. WILLIAM ARTHUR BONE, Leeds, JAMES WILLIAM WILSON, Armley, Leeds, and CYRIL DOUGLAS MCCOURT, London, England, assignors to Radiant Heating Limited, London, England, a Corporation of Great Britain. Original application filed Oct. 8, 1910, Serial No. 586,058. Divided and this application filed Feb. 20, 1912, Serial No. 678,912. Renewed Mar. 17, 1917. Serial No. 155,618. (Cl. 158—99.)



1. Apparatus for burning gaseous fuel comprising a porous and permeable refractory diaphragm composed of granules of refractory material bonded together to form a network of tortuous irregular gas passages, and means for maintaining a supply of an explosive gaseous mixture against one face of the diaphragm whereby the mixture will be caused to flow through the tortuous passages of the diaphragm to cause accelerated substantially flameless combustion to take place within the outer layer of the diaphragm when the latter becomes highly heated, the said tortuous passages of the diaphragm being of a size to prevent back-flashing of the explosive gaseous mixture therethrough.

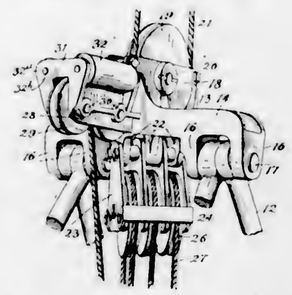
2. Apparatus for burning gaseous fuel comprising a porous and permeable refractory diaphragm composed of granules of refractory material bonded together to form a network of tortuous irregular gas passages, means for maintaining a supply of an explosive gaseous mixture against one face of the diaphragm whereby the mixture will be caused to flow through the tortuous passages of the diaphragm to cause accelerated substantially flameless combustion to take place within the outer layer of the diaphragm when the latter becomes highly heated, and means for preventing the entrance of the explosive gaseous mixture into the outer edge portions of the diaphragm to prevent said portions from becoming highly heated.

3. In an apparatus for burning gaseous fuel, a porous refractory diaphragm composed of fire clay granules united by a relatively fusible material to form a network of tortuous irregular gas passages, a casing within which the diaphragm is mounted, an impervious cement connecting the edge of said diaphragm with said casing, and means to feed an explosive gaseous mixture through said casing to said diaphragm, the burning of the explosive mixture causing the outer face of the diaphragm to be heated and thereby producing a flameless combustion within the outer layer of the diaphragm.

4. In an apparatus for burning gaseous fuel, a porous refractory diaphragm composed of granules of refractory material united by relatively fusible material to form a network of tortuous irregular gas passages, a casing within which the diaphragm is mounted, an impervious cement connecting the edge of said diaphragm with said casing, and means to feed an explosive gaseous mixture through said casing to said diaphragm, the burning of the explosive mixture causing the outer face of the diaphragm to be heated and thereby producing a substantially flameless combustion within the outer layer of the diaphragm.

5. Apparatus for burning gaseous fuel, comprising a porous and permeable refractory diaphragm composed of granules of refractory material of substantially uniform size bonded together to form a network of tortuous irregular gas passages, and means for maintaining a supply of an explosive gaseous mixture against one face of the diaphragm whereby the mixture will be caused to flow through the tortuous passages of the diaphragm to cause accelerated substantially flameless combustion to take place within the outer layer of the diaphragm when the latter becomes highly heated, the said tortuous passages of the diaphragm being of a size to prevent back-flashing of the explosive gaseous mixture therethrough, and the diaphragm having a rough outer surface.

1,223,309. GRAB-BUCKET. WILLIAM H. BOTTEN, Cleveland, Ohio, assignor to The Owen Bucket Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 22, 1914. Serial No. 878,630. (Cl. 37—30.)



1. A head-piece for a grab bucket comprising a central portion provided with laterally extending arms each having downwardly extending ears, and said central portion provided with a pair of upwardly extending ears, and with downwardly extending ears symmetrically arranged with respect to said upwardly extending ears.

2. A head-piece comprising an enlarged central portion provided with laterally extending arms each having downwardly extending ears, and said central portion provided also with upwardly extending ears adapted to support a holding sheave, with downwardly extending ears adapted to support a closing sheave; and with a third set of ears extending laterally from the middle portion said last set of ears being adapted to support guide-members for a closing line.

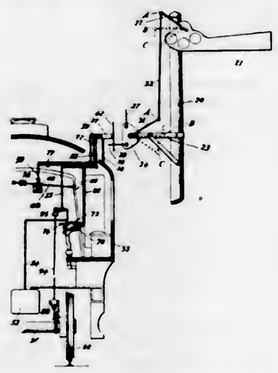
3. A head-piece for a grab bucket having laterally extending arms each of said arms being provided with a pair of downwardly extending ears, the said pairs of ears being arranged symmetrically with respect to the center of the head; a pair of upwardly extending ears arranged at substantially the center of the head and adapted to support a closing sheave; downwardly projecting ears arranged at substantially the center of the head and adapted to support a closing block; and a pair of laterally extending ears at right angles with respect to the arms for supporting guides for a closing line.

4. A head-piece for a grab bucket having laterally extending arms to which bucket supporting arms are adapted to be connected; a plurality of ears extending downwardly from the head at the central portion thereof, said ears being arranged at an angle with respect to the longest axis of the head; a pair of upwardly extending ears arranged at substantially the center of the head and adapted to support a holding sheave; and laterally extending ears which are substantially in line with the ears that support the holding sheave, said laterally extending ears adapted to receive a member which guides a closing line.

5. A head-piece for a grab bucket having an enlarged central portion from which extend lateral arms each of said arms being provided with a pair of downwardly extending ears adapted to support bucket arms; a plurality of ears extending downwardly from the enlarged portion of the head, said ears being adapted to support a closing block, the said downwardly extending ears being at an angle with respect to the longest axis of the head.

[Claims 6 to 8 not printed in the Gazette.]

1,223,310. AUTOMATIC TRAIN-STOP. EPHRAIM CHABOT, Providence, R. I. Filed Dec. 15, 1913. Serial No. 806,734. (Cl. 246—59.)



1. An automatic train stop comprising a source of fluid pressure, a fluid pressure motor controlling a source of power, a valve controlling the passage of the pressure fluid to the motor, the pressure of said fluid tending normally to move said valve to open position, a trip member having means for normally resisting opening movement of said valve, and means for temporarily preventing reduction of the fluid pressure against said valve when the same has been moved to open position under predetermined conditions.

2. An automatic train stop comprising a source of fluid pressure, a fluid pressure motor controlling a source of power, a valve controlling the passage of the pressure fluid to said motor, the pressure of said fluid tending normally to move the said valve to open position, a trip member having means for normally resisting opening movement of said valve, a manual valve controlling the flow of pressure fluid to the first mentioned valve, and automatic means for preventing operation of said manual valve under predetermined conditions.

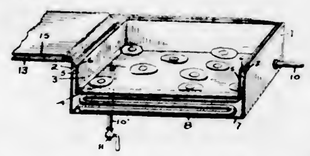
3. An automatic train stop comprising a source of fluid pressure, a fluid pressure motor controlling the source of power, a valve controlling the passage of the pressure fluid to the motor, the pressure of said fluid tending normally to move said valve to open position, a trip member provided with a rock shaft, having means for engaging said valve, a movable dog on said rock shaft, a spring engaging said dog to maintain said rock shaft in normal position, and means for temporarily preventing reduction of the fluid pressure against said valve when the same has been moved to open position under predetermined conditions.

4. An automatic train stop comprising a source of fluid pressure, a fluid pressure motor controlling the source of power, a valve controlling the passage of the pressure fluid to the motor, the pressure of said fluid tending normally to move said valve to open position, a trip member provided with a rock shaft, a cam on said rock shaft positioned to normally prevent opening movement of said valve, and means for temporarily preventing reduction of the fluid pressure against said valve when the same has been moved to open position under predetermined conditions.

5. In an automatic train stop, a source of fluid pressure, a motor controlling a source of power, fluid pressure mechanism for controlling said motor, a conduit leading from said source of pressure to said controlling mechanism, a valve controlling the flow through said conduit, means for effecting manual operation of said valve, and means for rendering said manual means ineffective under predetermined conditions.

[Claims 6 to 30 not printed in the Gazette.]

1,223,311. WARMING-RECEPTACLE. CHARLES A. COMPTON, San Francisco, Cal. Filed May 3, 1916. Serial No. 95,231. (Cl. 126—261.)



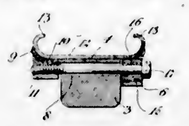
1. A warming receptacle comprising a casing, having an internal flange extending around the walls thereof, a pan adapted to fit within said casing in spaced relation to the walls, a flange formed on said pan to engage said first mentioned flange and support the pan below the top of said side walls, a heating element between the said casing and pan and means for covering the pan.

2. A heating receptacle comprising a casing, a flange extending around the interior of said casing near the upper edge thereof, a pan of smaller dimensions than the casing, a flange formed on said pan to rest upon said first mentioned flange and hold the pan suspended within the casing below the top of and in spaced relation to the walls thereof, a heating element between the pan and casing, and a cover for the pan hingedly secured to the casing.

1,223,312. DEMOUNTABLE RIM. LYMAN M. COOPER, Detroit, Mich., assignor of one-half to August T. Birk, Owosso, Mich. Filed May 1, 1916. Serial No. 94,555. (Cl. 152—21.)

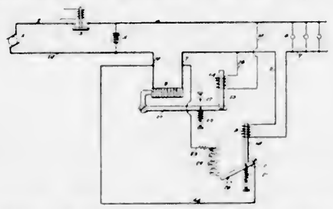
In a vehicle wheel, a wood felly having transverse peripheral grooves, a fixed rim on said felly having a curved inner edge and depressions at the outer edge thereof, said fixed rim closing said felly grooves with the exception of the ends thereof and having its depressions registering with the ends of said grooves, nuts riveted to the inner edge of said fixed rim and bracing the curved inner edge of said fixed rim by contacting therewith, a

demountable rim on said fixed rim having lugs secured thereto and extending into the depressions of said fixed



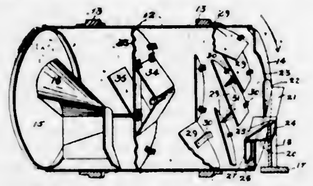
rim, and screw bolts extending through the lugs of said demountable rim and through the grooves of said wood felly into the nuts carried by said fixed rim.

1,223,313. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed June 23, 1910. Serial No. 568,426. (Cl. 171—229.)



An electric system comprising a work circuit, a generator for supplying the same, a resistance in series in the circuit, means for acting upon said resistance, means in shunt to the translation circuit for controlling the action of the last named means with a tendency to hold the voltage constant on the translation circuit, by increasing said resistance, a circuit in shunt to the said resistance including a variable resistance, means for closing the latter circuit and simultaneously inserting its resistance, and current controlled means for actuating said circuit closing means and operating to cause said shunt resistance to vary according to the load on the translation circuit.

1,223,314. MIXING-MACHINE. ANDREW J. CROPP, Chicago, Ill. Filed Nov. 29, 1911. Serial No. 663,061. (Cl. 83—73.)



1. In a mixer, in combination, a revoluble drum having an annular front end wall, means therein to mix and agitate the materials, and a low charging device consisting of blades of a greater width, than the front end wall of the drum from the opening therein to the periphery, said blades overlapping at their inner ends, forming a receiving means in front of a charging means and also upon revolution of the drum, a retaining means.

2. In a mixer, in combination, a revoluble drum, having at its front end, two inwardly extending annular flanges, and a continuous series of blades, having their front portions, of a greater height, than said flange, said blades being set at an angle from and running rearwardly for a short distance, said blades being spaced apart forming a channel, so as to charge and retain the material in the drum.

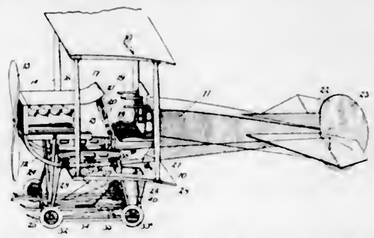
3. In a mixer, in combination, a revoluble drum, means therein to mix the material, a low charging device consisting of an inwardly extending annular flange and a series of blades extending from a short distance from said flange and set at an angle to the axis of the receptacle, and extending backwardly for a short distance for the purpose of directing the material into the receptacle, said blades running parallel with each other for a short distance, and a gate mounted between said blades, said gate having a free swinging movement in one direction only and restricted in the other direction for the purpose of stopping the return flow of loose concrete.

4. In a mixer, in combination, a revoluble drum, having on its front end, two inwardly extending annular flanges, the rear flange having openings adjacent to the drum for the return of overflow material.

5. In a mixer, in combination, a revoluble drum, having on its front end, two inwardly extending annular flanges, the rear flange having openings adjacent to the drum for the return of overflow material, and a blade extending from one side of the opening in the rear flange, at an angle to the axis and forwardly to the one side of the first flange for the purpose to guide overflow material.

[Claims 6 to 9 not printed in the Gazette.]

1,223,315. LANDING-GEAR FOR AIRCRAFT. GLENN HAMMOND CURTISS, Hammondsport, N. Y., assignor to The Curtiss Motor Company, Hammondsport, N. Y., a Corporation of New York. Filed Nov. 22, 1913. Serial No. 802,428. (Cl. 244—2.)



1. In combination an air craft, a landing chassis therefor comprising two laterally disposed pairs of wheels, and articulated longitudinal connections between the wheels of each pair, and further articulated connections extending transversely between the corresponding wheels of the pairs.

2. In combination, an air craft including a framework and a landing chassis, wheels for the chassis in laterally disposed pairs, articulated axles connecting corresponding wheels of opposite pairs, a single member depending from said framework for the support of each wheel and articulated at its extremities to connect the framework with the appropriate axle in the plane of the articulations of the latter.

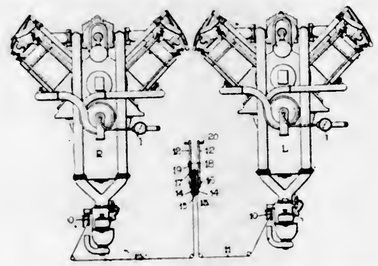
3. A landing chassis for aerial vehicles comprising a framework rigidly connected with the main body of the craft, a plurality of following wheels in fixed longitudinal and transverse relation having articulated connection with said framework, and an equalizing connection between said following wheels on the one hand and the main body of said craft on the other, whereby the rise and fall of said wheels in the vertical plane is correlated and the effect of such rise and fall on the main body of the craft minimized.

4. In combination an air craft, a rigidly connected frame work depending therefrom, a plurality of following wheels having articulated connection with said frame work for movement in the vertical plane with respect to the main body of said craft, but having interconnecting braces fixing their transverse and longitudinal positions, an equalizing member having a rocking connection with the main body of said craft, and a connecting member between each wheel and said equalizing member, said connecting member being pivotally joined both to the wheel and to the equalizing member.

5. In combination an air craft, a depending frame work fixedly connected therewith, a plurality of following wheels having articulated connection with said frame work and laterally removed therefrom, braces spacing said wheels longitudinally apart, an equalizing member having a yielding connection with the main body of said craft, and yielding connection between each of said wheels and said equalizing member connecting with the wheel in each case at a point removed from the point of its articulated connection aforesaid.

[Claims 6 to 22 not printed in the Gazette.]

1,223,316. MULTIPLE-CONTROL SYSTEM FOR PRIME MOVERS. GLENN H. CURTISS, Hammondsport, N. Y., assignor to The Curtiss Motor Company, Hammondsport, N. Y., a Corporation of New York. Filed Dec. 11, 1914. Serial No. 876,717. (Cl. 74—89.)



1. A multiple control system for motors comprising a speed regulating element for each motor, with control levers connected therewith and lying adjacent to each other upon a common base, and connection adjusting means between one of said control levers and the associated regulating device whereby the position of said control lever with respect to the regulating device may be changed.

2. A multiple control system for motors comprising a speed regulating device for each motor, control levers connected therewith, lying adjacent to each other upon a common base, and adapted to move through substantially the same angular range, together with connection adjusting means intermediate one of said control levers and the associated regulating device whereby said one lever may be adjusted into parallelism with the other lever without altering the regulated conditions of the motors.

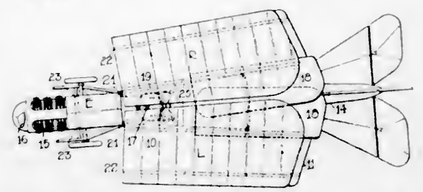
3. A multiple control system for motors comprising a speed regulating device for each motor, control levers connected therewith and lying so closely adjacent upon a common base that they may be conjunctively operated by one hand, and connection adjusting means between one of said levers and the associated regulating devices whereby the one lever may be adjusted to parallelism with the other.

4. A multiple control system for motors comprising a speed regulating device for each motor, control levers connected therewith, a clutch connection between the levers whereby they are clutched together in various angular relations, and a connection adjusting means intermediate one lever and the associated regulating device.

5. A multiple control system for motors comprising a speed regulating device for each motor, control levers therefor, a friction clutch connection between said levers arranged to permit independent adjustment thereof by force sufficient to overcome the friction of the clutch but requiring a force in excess of that necessary to operate all of the regulators, together with a connection adjusting means between one of the levers and the associated regulating device whereby the levers may be adjusted to parallelism independently of said friction connection.

[Claims 6 to 11 not printed in the Gazette.]

1,223,317. FOLDING-WING AEROPLANE. GLENN H. CURTISS, Hammondsport, N. Y., assignor to The Curtiss Motor Company, Hammondsport, N. Y., a Corporation of New York. Filed Dec. 11, 1914. Serial No. 876,718. (Cl. 244—12.)



1. An aeroplane including a fuselage, supporting surfaces divided into sections, hinge axes connecting the sections together, a stabilizing device carried by one section, and means extending through a hinge axis for control of said device from said fuselage.

2. An aeroplane including a fuselage, supporting surfaces divided into a fuselage section and wing sections, hinge means connecting the latter sections with said fuselage section on vertical axes, stabilizing devices carried by said wing sections, a common control for said devices supported on the fuselage, and flexible connections between each device and said control passing through the corresponding hinge axes.

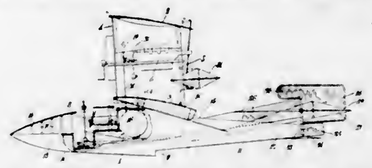
3. A biplane including a fuselage, superposed main surfaces longitudinally divided into a fuselage section and a pair of wing sections, hinge connections between adjacent sections, and posts connecting the superposed surfaces for each of the sections, said posts being of a streamline shape and certain posts of adjacent sections being formed sectionally stream-line to complement each other.

4. A biplane including a fuselage, superposed main supporting surfaces longitudinally divided into a fuselage section and a pair of wing sections, hinge connections between adjacent sections, posts connecting the superposed surfaces for each of the sections, the posts of adjacent sections being formed to complement each other, and means for hingedly or removably connecting said complementary posts.

5. A biplane including a fuselage, superposed main supporting surfaces longitudinally divided into a fuselage section and a pair of extreme wing sections, hinge connections between adjacent sections, posts connecting the superposed surfaces of each section, certain of the posts of adjacent sections being formed longitudinally complementary, other of such posts being formed transversely complementary, and clamp and hinge means variously connecting the complementary posts.

[Claim 6 not printed in the Gazette.]

1,223,318. BOAT-HULL. GLENN H. CURTISS, Hammondsport, N. Y., assignor to The Curtiss Motor Company, Hammondsport, N. Y., a Corporation of New York. Original application filed Sept. 6, 1912, Serial No. 718,840. Divided and application filed June 4, 1913, Serial No. 771,646. Divided and this application filed June 7, 1915. Serial No. 32,653. (Cl. 114—66.5.)



1. In a boat the combination of a relatively deep forward portion having an effective hydroplane bottom beneath the same and extending from the bow downwardly and rearwardly and thence rearwardly more horizontally

and of substantially the full width of the water-submerged sides of the boat, a rearwardly facing step formed in the bottom of the boat and terminating said hydroplane bottom, the bottom of the boat at the rear of said step inclining upwardly and rearwardly from the step, sides for the boat tapering rearwardly from a point well forward of the stern of the boat to provide a relatively long tapering tail portion, a cock-pit formed in the forward portion of the boat, and a deck inclined downwardly and rearwardly from the cock-pit toward the stern.

2. A boat having a wide comparatively shallow hydroplaning frontal portion, a main decking comprising a depressed portion and constituting the top wall of a pontoon, a rearwardly and upwardly projecting tail carrying a rudder, a seat for an operator located on the depressed portion of the decking of said wide frontal portion, and a false outer or bow decking covering said frontal portion and of a form to give a stream-line entry thereto.

3. In a boat hull having a wide decked over comparatively shallow hydroplaning frontal portion, a relatively deeper intermediate portion, a rearwardly and upwardly inclined tail portion, a transverse bottom edge formed at the juncture of said frontal portion and said tail portion, a cockpit located forwardly of said tail portion and above the deck of said frontal portion, a raised decking extending rearwardly from said cockpit to overlie said edge, and a means erected upon said frontal portion to continue the streamlines of said raised decking forwardly beyond said cockpit and with said frontal portion give to the hull a streamline entry at the bow.

1,223,319. FLYING-BOAT HULL. GLENN H. CURTISS, Buffalo, N. Y., assignor to Curtiss Aeroplane & Motor Corporation, a Corporation of New York. Filed Dec. 6, 1915. Serial No. 65,372. (Cl. 244—2.)



1. In a hull for flying boats, a hydroplaning bottom, and fin excrescences formed by extending the bottom planking laterally beyond the chines of the boat body proper.

2. In a hull for flying boats, a hydroplaning bottom, and fin excrescences formed on the boat body proper by extending the bottom planking continuously and uninterruptedly from the longitudinal center of said bottom laterally to the margins thereof.

3. In a hull for flying boats, a hydroplaning bottom, fin excrescences arranged to augment the hydroplaning area, and a base for the fin bottoms formed by extending portions of the interior framework of the boat body proper laterally beyond the chines.

4. In a hull for flying boats, planking arranged to provide a hydroplaning bottom terminating in a rearwardly facing step, fin surfaces provided by an extension of said planking in alinement with said bottom and terminating squarely in alinement with said step.

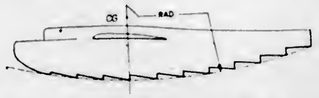
5. In a hull for flying boats, a cockpit provided in the hull, wing supports arranged intermediately across the hull to intersect the cockpit, and bulkheads disposed in the vertical plane of the respective supports to subdivide the cockpit into adjoining cockpit compartments.

[Claims 6 to 22 not printed in the Gazette.]

1,223,320. MULTIPLE-STEP FLYING-BOAT. GLENN H. CURTISS and JOHN P. TARSOX, Buffalo, N. Y., assignors to The Curtiss Motor Co., a Corporation of New York. Filed Jan. 13, 1916. Serial No. 71,944. (Cl. 244—2.)

1. A hydroplane boat, the bottom of which at the keel line is formed longitudinally on the arc of a curve having its center in an approximately vertical longitudinal plane and is provided with steps arranged respectively fore and aft of the vertical plane of said center.

2. A hydroplane boat, the hydroplaning bottom of which at the keel line is constituted by a series of steps arranged in a convex formation longitudinally of the boat, at least one of said steps being disposed in the vicinity of the point of maximum convexity.



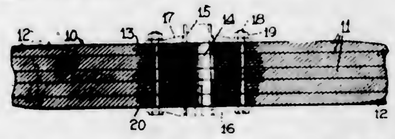
3. A hydroplane boat, the hydroplaning bottom of which is provided with a multiple number of steps arranged in convex formation longitudinally of the boat, and each step of which is longer than the preceding step.

4. A hydroplane boat, the hydroplaning bottom of which is provided with a multiple number of steps arranged in convex formation longitudinally of the boat, and each step of which is deeper at its rear end than the preceding step.

5. A hydroplane flying machine comprising a hydroplane structure, and aerial supporting surfaces connecting therewith, said hydroplane structure having its hydroplaning bottom provided with a multiple number of steps arranged at the keel line in convex formation longitudinally of the boat, the lowermost step being disposed in the vicinity of a line projected vertically through the center of gravity of the machine.

[Claims 6 and 7 not printed in the Gazette.]

1,223,321. PROPELLER. GLENN H. CURTISS, Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation, a Corporation of New York. Filed Mar. 31, 1916. Serial No. 88,089. (Cl. 170—159.)



1. A fibrous propeller having its hub portion of greater solidity than the blade portions thereof.

2. A propeller having its hub portion impregnated with an extraneous toughening substance.

3. An all-wood propeller having its permeable hub portion solidified by impregnation with an extraneous substance.

4. A propeller having its hub portion solidified by impregnation with a resinous substance.

5. A propeller having such portion or portions thereof as are designed to receive the greatest stresses incident to use solidified and toughened by impregnation with an extraneous substance.

[Claims 6 to 8 not printed in the Gazette.]

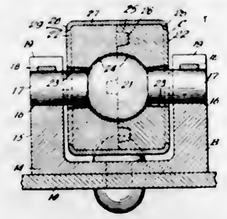
1,223,322. PROCESS OF PRODUCING METAL BODIES. CHARLES L. GEBAUER, Cleveland, Ohio. Filed Apr. 12, 1916. Serial No. 90,585. (Cl. 29—188.)

1. The process of producing formed metal articles which consists of molding finely disintegrated metallic constituents to the desired form under great pressure, and thereafter welding said constituents together by application of a degree of heat less than required to fuse the most refractory constituent.

2. The process of producing formed metal articles which consists of molding into the desired form under great pressure a mixture of finely divided metals of varying melting points and subsequently subjecting the mixture to a temperature intermediate the melting points of the constituent metals.

3. The process of producing metal bodies which consists of compressing into the desired form an intimate mixture of finely disintegrated metals, and subjecting said mixture to a temperature above the softening point of the least refractory metal and lower than the melting point of the remaining metals.

1,223,323. ROLLER SIDE BEARING FOR RAILWAY-CARS. WILLIAM A. GEIGER, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 22, 1914. Serial No. 867,990. (Cl. 64—64.)



1. A roller side bearing of the character described comprising, a bracket having a journal mounted thereon, and a roller rotatably mounted on said journal, the roller consisting of two circular members and a circumferentially extending shell inclosing and overlapping the side of said members to thereby unite the same.

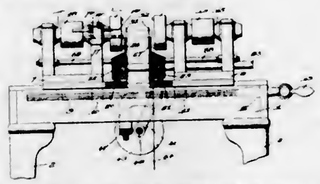
2. A roller side bearing of the character described comprising, a bracket having a journal mounted thereon, a roller rotatably mounted on said journal, the roller consisting of two circular members and a circumferentially extending shell inclosing and overlapping the sides of said members to thereby unite the same, and coöperating means on the interior of the roller and on the journal permitting the roller to oscillate in addition to its rotative movement.

3. In a roller side bearing for railway cars, the combination with a supporting bracket having a journal mounted thereon, of a roller mounted on said journal, said roller comprising two circular members having interfitting dowels and sockets on their meeting faces and a sleeve for holding said members in assembled position.

4. In a side bearing for railway cars, the combination with a base bracket, of a journal mounted in said bracket, said journal having a spherical enlargement near the center thereof, and a roller having a transverse opening therethrough, said opening being enlarged near the center thereof and curved to fit said spherical enlargement of the journal, said roller comprising two members and an inclosing sleeve to hold said members together.

5. In a side bearing of the character described, the combination with a supporting bracket having upstanding, spaced arms, each of which is provided with a journal bearing near the top thereof and open at its upper end, of a journal mounted in said bearings, said journal having a spherical enlargement near the center thereof, and a roller rotatably and rockably mounted on said journal, said roller comprising two circular members having interfitting projections and sockets on their meeting faces and a sleeve encircling said members and flanged at its edges to bind said members together.

1,223,324. SURFACE-TRIMMING MACHINE. HANS C. HANSEN, Newton, Mass.; H. Alfred Hansen executor of said Hans C. Hansen, deceased. Filed June 11, 1913. Serial No. 773,059. (Cl. 90—16.)



1. In a machine of the class described, a rotary cutter, a work rest mounted to move transversely thereof, work-clamping means carried by the work rest and adjustable to varying lengths of work, means for automatically feeding the work rest past the cutter, means for adjustably connecting the work rest to said feeding means whereby the extent of feed may be set to correspond with the length of work, means for disconnecting the work rest from the feeding means at the conclusion of the feeding movement, and means for automatically returning the work rest.

2. In a machine of the class described, a rotary cutter, a work rest mounted to reciprocate transversely thereof, work clamping means carried by the work rest and adjustable to varying lengths of work, means for automatically feeding the work rest past the cutter, means for adjustably connecting the work rest to said feeding means whereby the extent of feed may be set to correspond with the length of work, means for disconnecting the work rest from the feeding means at the conclusion of the feeding movement, and means for automatically returning the work rest.

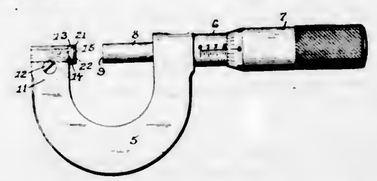
3. In a machine of the class described, a rotary cutter, a work rest mounted to move transversely thereof, work clamping means carried by the work rest and adjustable to varying lengths of work, a feed screw, means for continuously rotating the said feed screw, means for adjustably connecting the work rest to said feed screw whereby the extent of feeding movement may be set to correspond with the length of work, and whereby when the connection is effected the work rest will be fed by the screw past the cutter, means for automatically disconnecting the work rest from the feed screw at the conclusion of the feeding movement, and means for automatically returning the work rest.

4. In a machine of the class described, a rotary cutter, a work rest mounted to move transversely thereof, work clamping means carried by the work rest and adjustable to varying lengths of work, a feed screw, means for continuously rotating the said feed screw, means for adjustably connecting the work rest to said feed screw whereby the extent of feeding movement may be set to correspond with the length of work, and whereby when the connection is effected the work rest will be fed by the screw past the cutter, means for automatically disconnecting the work rest from the feed screw at the conclusion of the feeding movement, means for automatically returning the work rest at the conclusion of the feeding movement, and for thereupon automatically releasing the work clamping means.

5. In a machine of the class described, a rotary cutter, a work rest mounted to move transversely thereof, work-clamping means carried by the work rest and adjustable to varying lengths of work, means for automatically feeding the work rest past the cutter, means for adjustably connecting the work rest to said feeding means whereby the extent of feed may be set to correspond with the length of work, and means for automatically returning the work rest at the conclusion of the feeding movement, and for thereupon releasing the work clamping means.

[Claims 6 to 11 not printed in the Gazette.]

1,223,325. ANVIL FOR MICROMETER-GAGES AND SIMILAR GAGES. FERNANDO OSCAR JAQUES, Sr., Cranston, R. I. Filed Apr. 10, 1916. Serial No. 90,123. (Cl. 33—164.)



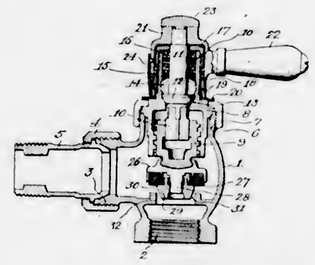
1. An anvil for micrometer gages and similar gages comprising a frame member having a saucer shaped cavity in one end, an anvil face member having a convex inverted saucer shaped back in the frame member cavity, and a fusible metal intermediate the frame member and the an-

vil face member, said fusible metal securing the anvil face member to the frame member.

2. An anvil for micrometer gages and similar gages comprising a frame member having a saucer shaped cavity in one end, an anvil face member having a flat face and an inverted saucer shaped back in the frame member cavity, and a fusible metal intermediate the frame member and the anvil face member, said fusible metal securing the anvil face member to the frame member.

3. An anvil for micrometer gages and similar gages comprising an externally screw-threaded frame member having a saucer shaped cavity in one end and a bore extending in from the cavity, an anvil face member having a flat anvil face, an inverted saucer shaped back in the frame member cavity and a stem in the bore of the frame member, and a fusible metal intermediate the frame member and the anvil face member, said fusible metal securing the anvil face member to the frame member.

1,223,326. VALVE. WILLIAM C. MARSH, Erie, Pa., assignor to Marsh Valve Company, Erie, Pa., a Corporation of New York. Filed Apr. 8, 1916. Serial No. 89,775. (Cl. 137—4.)



1. A valve, comprising a casing, a fixed valve seat therein, a valve for said seat embodying interchangeable closure members formed with cone surfaces of different pitch adapted to vary the extent of opening of said valve under a given movement of the latter, and means for operating said valve.

2. A valve, comprising a casing, a fixed valve seat therein, a valve for said seat embodying a valve piece, an annular packing ring therein adapted to contact with the valve seat, interchangeable closure members adapted to said valve piece having cone surfaces of different pitch and adapted, when screwed to position, to engage and retain said packing ring in position, and means for operating said valve.

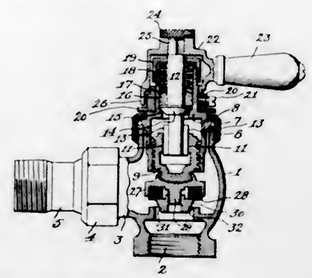
3. A valve, comprising a casing, a fixed valve seat therein, a valve for said seat embodying interchangeable closure members each formed with a straight throat adapted, when said valve is closed, to project within the valve seat, and with cone surfaces of different pitch below said seat, and means for operating said valve.

4. A valve, comprising a casing, a valve seat therein, a valve for said seat, a rotary valve stem, a cap piece engaging said stem to rotate the same, a handle for said cap piece, a spring pointer on said cap piece, a sleeve on the valve casing having a notched portion adapted to be engaged by said pointer, and an indicating ring below said sleeve and retained in place thereby.

1,223,327. VALVE. WILLIAM C. MARSH, Erie, Pa., assignor to Marsh Valve Company, Erie, Pa., a Corporation of New York. Continuation in part of application Serial No. 89,775, filed Apr. 8, 1916. This application filed Oct. 9, 1916. Serial No. 124,560. (Cl. 137—4.)

1. A valve, comprising a casing, a valve seat therein, a valve for said seat, a rotary valve stem for operating said valve, a packless seal in said casing for said valve stem, a packing in said casing reinforcing said packless seal, and resilient means for exerting pressure on said packing.

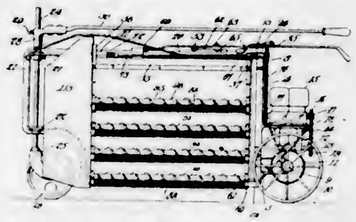
2. A valve, comprising a casing, a valve seat therein, a valve for said seat, a rotary valve stem for operating said valve, coöperating surfaces between said valve stem and casing forming a packless seal, a packing in said casing resting upon said packless seal, and resilient means for exerting pressure upon said packing.



3. A valve, comprising a casing, a valve seat therein, a valve for said seat, a rotary valve stem for operating said valve, complementary cones of unequal degrees in said casing and on said valve stem forming a packless seal, a packing in said casing resting upon an integral part of said valve stem and forming an auxiliary seal reinforcing said packless seal, and a spring for forcing said packing in sealing position and through said packing also maintaining said cones in sealing relation.

4. A valve, comprising a casing, a valve seat therein, a valve for said seat, a rotary valve stem for operating said valve, complementary cones of unequal degrees in said casing and on said valve stem forming a packless seal, a packing in said casing resting upon an integral part of said valve stem and forming an auxiliary seal reinforcing said packless seal, a spring exerting its tension on said packing, and a screw cap for retaining said spring in position.

1,223,328. COTTON-PICKER. JOSEPH B. NEIL, Filbert, S. C., assignor to South Carolina Cotton Picker Co., Yorkville, S. C. Filed July 20, 1914. Serial No. 852,045. (Cl. 56—6.)



1. In a cotton picking machine, oppositely disposed frames, means for adjusting the frames bodily toward or from each other, means for adjusting the frames angularly in a lateral direction, parallel superposed picking rolls carried by each frame and extending from front to rear thereof, means adjacent the respective rolls for removing cotton therefrom, and means close to and parallel with each picking roll for engaging cotton plants to maintain them in upstanding positions while the picking rolls are passing the plants and acting upon them.

2. A cotton picking machine including a picker frame, means for adjusting the frame bodily in a lateral direction, means for adjusting the frame angularly in a lateral direction, picking means carried by the frame, and a bur retarding and repelling spiral revolubly mounted close to said picking means and carried by the frame.

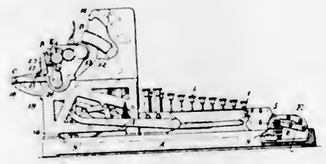
3. A cotton picking machine including a wheel supported frame adjustable angularly about a transverse axis, a picker frame carried by said wheel supported frame, means for adjusting the picker frame bodily in a lateral direction, means for adjusting said picker frame angularly in a lateral direction and about an axis extending through one end thereof, a picking roll carried by said frame and extending from front to rear thereof, doffing means coöperating with the roll and carried by the frame, and a revoluble bur retarding and repelling spiral carried by the picker frame and close to and parallel with the picking roll.

4. A cotton picking machine including a wheel supported frame adjustable angularly about a transverse axis to raise or lower one end relative to the ground, opposed picker frames supported by said adjustable frame and adjustable bodily and angularly in a lateral direction relative to each other, superposed revoluble picking rolls carried by the respective picker frames, the rolls of each frame being parallel and extending from the front end to the back end of the picker frame.

5. A cotton picking machine including a wheel supported frame adjustable angularly about a transverse axis to raise or lower one end relative to the ground, opposed picker frames supported by said adjustable frame and adjustable bodily and angularly in a lateral direction relative to each other, superposed revoluble picking rolls carried by the respective picker frames, the rolls of each frame being parallel and extending from the front end to the back end of the picker frame, and a revoluble bur repelling and retarding spiral above and close to each of the picking rolls.

[Claims 6 to 23 not printed in the Gazette.]

1,223,329. ADDING-MACHINE. WILLIAM H. PIKE, Jr., South Orange, N. J., assignor, by mesne assignments, to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 23, 1905. Serial No. 288,778. (Cl. 235—58.)



1. The combination of a movable carriage, adding devices, printing devices, actuating means therefor, and releasing means controlling the actuation of the printing devices, of means for retaining the carriage in different predetermined longitudinal positions, and means whereby the releasing means is rendered ineffective when the carriage is in certain positions.

2. In a machine of the character described, the combination with the printing appliances and actuating means therefor, of a stop device controlling the actuating means, a platen carriage movable to different positions opposite the printing appliances, means for holding said carriage in different predetermined positions, and devices intermediate the holding means and the stop device and controlled by the carriage to render said actuating means ineffective except when said carriage is in a predetermined position.

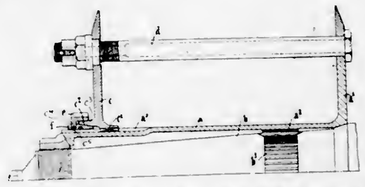
3. The combination in an adding machine and with the adding and printing appliances thereof, of actuating means, a stop device controlling the actuating means, means for shifting said stop device, a sliding platen carriage, an arm extending therefrom, and a movable bar having notches to receive said arm, and connected to render said stop shifting means inoperative when engaged by said arm that points between the notches.

4. The combination in an adding machine and with the adding and printing appliances thereof, of actuating means, a stop device controlling the actuating means, a sliding platen carriage, an arm extending therefrom, a movable bar having notches to receive said arm, and connected to render said stop shifting means inoperative when engaged by said arm that points between the notches, and means for moving said arm into and out of engagement with the bar, substantially as set forth.

5. The combination with the sliding platen carrier and actuating means of an adding machine, of a frame having a notched bar, intermediate connections whereby the rocking of the frame controls the actuating means, a finger carried by the carrier, and means whereby the finger may be shifted to a position above the notched bar and also in position to engage the notches thereof, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

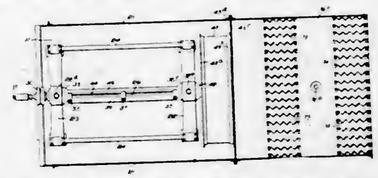
1,223,330. AIRCRAFT-PROPELLER. FREDERICK HENRY ROYCE, Derby, England, assignor to Rolls Royce Limited, Derby, England. Filed Sept. 19, 1916. Serial No. 121,072. (Cl. 244—25.)



1. An air-craft propeller hub comprising a sleeve having exterior longitudinal serrations, a flange integral with said sleeve, a second flange spaced therefrom and having a boss interiorly serrated to engage the serrations on the sleeve, an interior coned surface on said flange boss, an exteriorly coned ring loosely mounted on the sleeve and adapted to engage said interior coned surface and a nut screwed onto the boss and adapted to force and hold the coned ring in such engagement.

2. An air-craft propeller hub comprising a sleeve, a flange integral therewith a detachable flange mounted on the sleeve, splines or equivalents adapted to prevent rotary motion of the flange on the sleeve and means for locking said detachable flange on the sleeve and preventing it from rocking in a plane perpendicular to the axis thereof said means comprising a split externally coned ring mounted on the sleeve, an interiorly coned portion on the flange adapted to receive said ring and a nut screwed onto the flange and engaging said ring.

1,223,331. SYSTEM AND APPARATUS FOR TREATING AIR. FREDERICK WHITE, Brookline, Mass., assignor, by mesne assignments, to James T. Gray, Cambridge, Mass. Filed July 3, 1913. Serial No. 777,168. (Cl. 183—23.)



1. A system for treatment of air comprising in combination a room, an air-treating chamber having an entrance, and an exit in communication with said room, air current producing means for said chamber, and means to effect dehumidification of the air in said chamber by the discharge of a liquid agent thereinto in said chamber, including a pipe located in said chamber and having openings between its ends, and rotating means for said pipe to effect an even distribution of liquid substantially throughout said chamber.

2. A system for air treatment comprising in combination a room, an air treating chamber having an entrance, and an exit in communication with said room, air current producing means for said chamber, means to discharge a liquid agent into the air in said chamber, said means extending longitudinally of the chamber and rotatable to discharge liquid centrifugally thereto, rotating means for said means to discharge liquid agent, and means to extract moisture from or inject moisture into the air of said room by regulation of the temperature of the said agent.

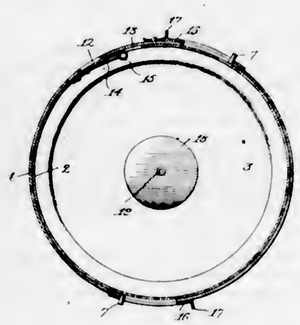
3. Apparatus for treating air comprising in combination an air treating chamber, means to move air therethrough, means to saturate the air in said chamber, means to exclude liquid, in excess of the liquid of saturation, from passage through the air moving means and means in advance of said air moving means to exclude liquid not of saturation from exit from said chamber.

4. Apparatus for treating air comprising in combination an air treating chamber, a fan to move air therethrough, means to saturate the air in said chamber, means to exclude liquid, in excess of the liquid of saturation, from passage through the fan and means in advance of said air moving means to exclude liquid not of saturation from exit from said chamber.

5. Apparatus for treating air comprising in combination an air treating chamber, a fan to move air therethrough, means to discharge streams of a liquid agent into said air, and means in proximity to said fan providing an air pocket to receive the unabsorbed agent and to exclude it from the fan.

[Claims 6 to 49 not printed in the Gazette.]

1,223,332. FILM-BOX FOR MOTION-PICTURE CAMERAS. CARL E. AKELEY, New York, N. Y., assignor to Akeley Camera, Inc., New York, N. Y., a Corporation of New York. Filed Apr. 27, 1916. Serial No. 93,928. (Cl. 242—70.)



1. A film box, comprising two sections having rims of substantially equal depth adapted to telescope one within the other, said rims being slotted transversely and said slots adapted to be brought into or out of register upon an adjustment of said sections with respect to each other while in their telescoped position, and means for locking said rims against separation but permitting relative rotation of said sections.

2. A film box, comprising two sections having rims of substantially equal depth adapted to telescope one within the other, said rims being slotted transversely and said slots adapted to be brought into or out of register upon an adjustment of said sections with respect to each other while in their telescoped position, means for locking said rims against separation but permitting relative rotation of said sections, and means for locking said rims against accidental relative rotation when the sections are adjusted to bring the transverse slots in the rims thereof out of register with each other.

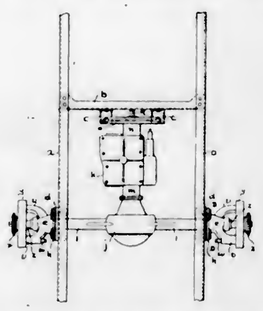
3. A film box, comprising two sections having rims of substantially equal depth adapted to telescope one within the other, said rims being slotted transversely and said slots adapted to be brought into or out of register upon an adjustment of said sections with respect to each other while in their telescoped position, a bayonet joint for connecting said rims comprising an angular slot in one rim and a pin in the other rim for engaging said slot, and a spring member on one rim adapted to engage a stud on the other rim when the sections are adjusted to bring the transverse slots in the rims thereof out of register with each other.

4. A film box, comprising two sections having rims of substantially equal depth adapted to telescope one within the other, said rims being slotted transversely and said slots adapted to be brought into or out of register upon an adjustment of said sections with respect to each other while in their telescoped position, and a spring plate carried by one of said rims and disposed so that its free end lies at one edge of the inner transverse slot, whereby it may act as a film guide when the box is adjusted to feeding position and as a light excluder when the box is adjusted to closed position.

5. A film box, comprising two sections having rims of substantially equal depth adapted to telescope one within the other, said rims being slotted transversely and said slots adapted to be brought into or out of register upon an adjustment of said sections with respect to each other while in their telescoped position, and a spring plate carried by one of said rims and disposed so that its free end lies at one edge of the inner transverse slot, said free end being rolled and acting as a film guide when the box is adjusted to feeding position and as a light excluder when the box is adjusted to closed position.

[Claims 6 and 7 not printed in the Gazette.]

1,223,333. TRANSMISSION MECHANISM FOR AUTOMOBILES. LOWELL C. FREEMAN, Detroit, Mich. Filed Mar. 19, 1913. Serial No. 755,379. (Cl. 21—90.)



1. In an automobile, the combination of a casing for the equalizing gear, laterally extending parts from said casing adapted to turn in bearings on said frame, a change-speed gear casing secured to said equalizing gear casing and extending at right angles thereto, an annulus surrounding said change-speed gear casing at a point remote from the equalizing gear casing so as to form a loose joint therewith, and means for detachably securing said annulus to the frame.

2. In an automobile, the combination of a casing for the equalizing gear, laterally extending parts from said casing adapted to turn in bearings on said frame, a change-speed gear casing secured to said equalizing gear casing and extending at right angles thereto, an annulus surrounding a portion of said change-speed gear casing remote from the equalizing gear casing, a cross piece forming part of said frame, lugs extending from said cross piece, lugs extending from said annulus and adapted to be removably secured upon the first mentioned lugs.

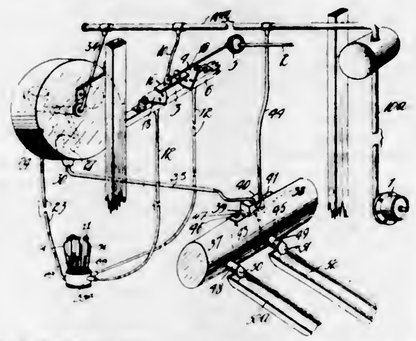
3. In an automobile, a frame, attaching pieces secured to said frame, said attaching pieces being countersunk in their outer surfaces, bearing brackets having projections adapted to fit into said countersunk portions of the attaching plates, bearings in said brackets, a counter shaft resting in said bearings, and means for securing said brackets to said attaching pieces.

4. In an automobile having a frame, attaching plates having forks opening downward from said frame, an equalizing gear casing having laterally extending portions adapted to fit in the openings of said forks, bearing brackets, said extensions of the equalizing gear casing bearing in said brackets, a counter shaft bearing in said equalizing gear casing, and means for detachably securing said brackets to the sides of said attaching plates.

5. In an automobile, the combination of a frame, a casing for the equalizing gear, laterally extending parts from said casing adapted to turn in bearings on said frame, a change-speed gear casing secured to said equalizing gear casing and extending at right angles thereto and means for detachably securing said gear casing to the frame so as to permit relative angular motion of said change gear casing, said bearings being removable in a direction approximately at right angles to said frame.

[Claim 6 not printed in the Gazette.]

1,223,334. MILKING-MACHINE. JOHAN WIELAERT, Remuera, Auckland, New Zealand, assignor, by mesne assignments, to Edward Marshall Cameron McAlpine, Brooklyn, N. Y. Filed Oct. 3, 1913. Serial No. 793,208. (Cl. 31—101.)



1. A milking machine consisting in the combination of a vacuum pump, teat cups, a claw carrying said teat cups, a pulsator communicating with said claw and said teat cups, a milk measuring device in connection with said vacuum pump arranged above the said claw and in communication therewith, a milk receiver divided into two compartments, and comprising a plate formed upon the top of same intermittent gear consisting of a partitioned dome or box connected with said measuring device and the vacuum supply and arranged to slide over the surface of said plate, said dome being adapted to alternately supply milk to said compartments, each compartment being held in vacuum during the flow of milk thereto, and delivery pipes fitted to the compartments having flap valves fitted to the outer ends thereof substantially as described.

2. In a milking machine, in combination with a source of milk supply and a source of vacuum, a milk receiver divided into two compartments by a partition, said compartments having delivery pipes carrying flap valves at their outer ends, a smooth surface or plate formed on said receiver at the center thereof, having slots through the same on either side of the partition and means operating on said plate for alternately placing said compartments into communication with said source of vacuum and said source of milk supply with the outside air, substantially as described.

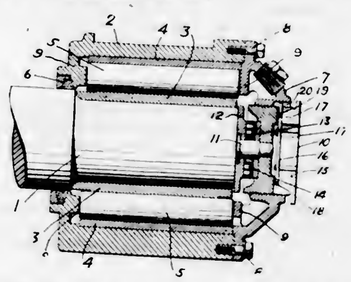
3. In a milking machine, vacuum and milk supply pipes, a receiver divided into two compartments by a partition and having a service plate, having slots therethrough into each compartment of intermittent gear consisting of a dome or box divided into two compartments connecting with said vacuum and milk supply pipes and means for sliding the said dome over the slotted surface or plate of the receiver in such a manner that milk is alternately fed into first one and then the other compartment of the receiver during the milking operation substantially as and for the purposes specified.

4. In a milking machine teat cups a milk measuring device consisting of a casing with a transparent face and provided with an outlet opening, a milk pipe fitted centrally of said casing and communicating with the said teat cups, a vacuum pump, a pipe connection between said casing and said vacuum pump, a sleeve loosely mounted around the milk pipe within the casing, radial tubes carrying buckets or receivers projecting from said sleeve, the ends of said tubes when in a horizontal position covering an orifice in the milk pipe, and means for weighing the milk delivered to the buckets, substantially as described.

5. In a milking machine a claw, teat cups, pipe connections, a pulsator consisting of a member formed with a compartment at each end, each communicating with said claw carrying said teat cups by the said pipe connections, a chamber formed between said outer chambers connected to a vacuum supply pipe, said chambers having orifices leading to the upper surface thereof, means for regulating the pressure to suit the various teats consisting of movable slotted segmental plates adapted to cover the orifices of the outer chambers of the pulsator and a hollow member arranged to slide over the face of the pulsator for interrupting the vacuum applied to the teat cups substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,223,335. CAR-JOURNAL ROLLER-BEARING. ROBERT S. WOODWARD, Jr., Philadelphia, Pa., assignor to The Standard Roller Bearing Company, Philadelphia, Pa., a Corporation of New Jersey. Filed June 27, 1912. Serial No. 706,171. (Cl. 64—50.)

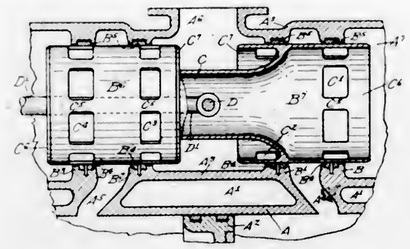


In a roller bearing the combination of an axle, a housing open at its end, an end cover for the housing having an opening therein opposite the end of the axle, a cap having screw-and-thread connection with the opening in the end cover, spring actuated locking means carried by the cap for locking the cap against turning movement in either direction and in respect to the housing, a post secured to the cap and extending toward the end of the axle, and an anti-friction end-thrust bearing carried by the post, substantially as described.

1,223,336. PISTON-VALVE. OTIS W. YOUNG, Chicago, Ill., assignor to Pyle-National Electric Headlight Company, Chicago, Ill., a Corporation of New Jersey. Filed Jan. 13, 1915. Serial No. 1,934. (Cl. 136—5.)

1. The combination with a cylindrical distribution valve for steam engines and the like of a valve chamber there-

for having a removable bearing block therein beneath the center line of the valve.



2. The combination with a cylindrical distribution valve for steam engines and the like of a valve chamber therefor having a removable bearing block therein beneath the center line of the valve, said valve being supported on said bearing out of contact with the remainder of the steam chamber.

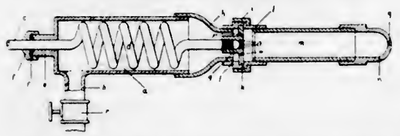
3. The combination with a cylindrical distribution valve for steam engines and the like of a valve chamber therefor having a removable bearing block therein beneath the center line of the valve, said valve being supported on said bearing out of contact with the remainder of the steam chamber, packing rings within said chamber interposed between it and the valve.

4. The combination with a cylindrical distribution valve for steam engines and the like of a valve chamber therefor having a removable bearing block therein beneath the center line of the valve, said valve being supported on said bearing out of contact with the remainder of the steam chamber, floating packing rings within said chamber interposed between it and the valve.

5. The combination with a cylindrical distribution valve for steam engines and the like of a valve chamber therefor having a removable bearing block therein beneath the center line of the valve, said valve being supported on said bearing out of contact with the remainder of the steam chamber, packing rings within said chamber interposed between it and the valve, and yieldingly gripping said cylinder.

[Claims 6 to 16 not printed in the Gazette.]

1,223,337. OIL-BURNER. HUGH EDWARD BROWN, Portland, Oreg., assignor of one-half to Edward Boyce, Portland, Oreg. Filed Aug. 4, 1916. Serial No. 113,183. (Cl. 158—75.)



1. In a burner of the type described, the combination of an elongate tubular body for the steam, a stuffing box at the inlet end of said body, an oil pipe having a part coiled within said body and its inlet end extending through said stuffing box, an atomizing nozzle secured at the discharge end of said body, said oil pipe having its outlet end secured to said atomizing nozzle, the latter being made with a peripheral flange, said nozzle having orifices comprising an axial orifice and a diverging orifice on either side thereof, said flange being made with converging orifices, a mixing chamber of substantial length affixed over said atomizing nozzle and its said flange, and a burner tip at the discharge end of said mixing chamber.

2. In a burner of the type described, the combination of an elongate tubular body for the steam, a stuffing box at the inlet end of said body, an oil pipe having a part coiled within said body and its inlet end extending through said stuffing box, an atomizing nozzle removably secured at the discharge end of said body, said oil pipe having its outlet end removably secured to said atomizing nozzle, the latter being made with a peripheral flange, said nozzle having orifices comprising an axial orifice and a diverging orifice on either side thereof, said flange being made with converging orifices, a mixing chamber of substantial length removably affixed over said atomizing nozzle and its said flange, and a burner tip at the discharge end of said mixing chamber.

3. In a burner of the type described, the combination of an elongate tubular body for the steam, a stuffing box at the inlet end of said body, an oil pipe having a part coiled within said body and its inlet end extending through said stuffing box, an atomizing nozzle secured at the discharge end of said body, said oil pipe having its outlet end secured to said atomizing nozzle, the latter being made with a peripheral flange, said nozzle having orifices arranged in a common plane and comprising an axial orifice and a diverging orifice on either side thereof, said flange being made with converging orifices, a mixing chamber of substantial length affixed over said atomizing nozzle and its said flange, and a burner tip at the discharge end of said mixing chamber.

4. In a burner of the type described, the combination of an elongate tubular body for the steam, a stuffing box at the inlet end of said body, an oil pipe having a part coiled within said body and its inlet end extending through said stuffing box, an atomizing nozzle secured at the discharge end of said body, said oil pipe having its outlet end secured to said atomizing nozzle, the latter being made with a peripheral flange, said nozzle having orifices arranged in a common plane and comprising an axial orifice and a diverging orifice on either side thereof, said flange being made with converging orifices in its lower half and being without perforations in its upper half, a mixing chamber of substantial length affixed over said atomizing nozzle and its said flange, and a burner tip at the discharge end of said mixing chamber.

5. In a burner of the character described the combination of an elongate tubular body for the steam, a stuffing box at the inlet end of said body, an oil pipe having a part coiled within said body, and its inlet end extending through said stuffing box, a reducer threaded on the outlet end of said body, a bushing threaded on the outlet end of said reducer, a flanged coupling ring threaded on said bushing, a nipple made with a companion flange engaging with said flange of the coupling ring, said bushing being made with a recess, an atomizer nozzle provided with a peripheral flange seated in said recess, said oil pipe having its outlet end secured to said atomizing nozzle, the latter having orifices comprising an axial orifice and a diverging orifice on either side thereof, said flange of said atomizing nozzle being provided with converging orifices, a tubular mixing chamber of substantial length threaded in said nipple, and a burner tip affixed on the outlet end of said mixing chamber.

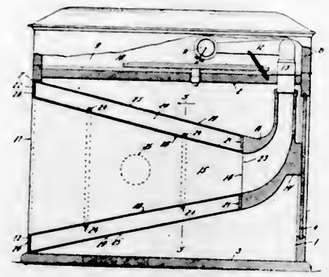
[Claims 6 and 7 not printed in the Gazette.]

1,223,338. SOUND-AMPLIFIER. BERNHARD FRITZSCH, Cincinnati, Ohio. Filed June 5, 1916. Serial No. 101,669. (Cl. 181—27.)

1. In a talking machine, in combination, a sound conduit, a double walled resonant sound amplifier formed with a central passage-way communicating at one end with said conduit, said double walled construction forming a resonant chamber as an unconfined air space surrounding the passage-way and non-communicative with said conduit.

2. In a talking machine, a sound conduit, and a hollow sound amplifying body comprising a resonant walled structure forming a sound passage communicating with said conduit, with a resonant chamber as an unconfined air space around said passage non-communicating with said conduit.

3. In a talking machine, a sound amplifier of hollow walled structure formed with a central sound passage-way and resonating amplifying chamber as an unconfined air space about said central passage-way non-communicative with said passage-way for emitting sound waves set off by the vibration of the walls.

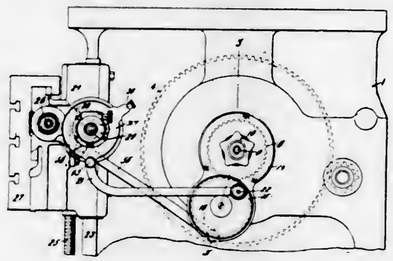


4. In a talking machine, a tapering sound conduit, a sound amplifying body having its sides each of double parallel walls spaced apart, forming a central amplifying sound passage communicating with said sound conduit, and the space between the walls, a resonator chamber open at its forward end and non-communicating with said sound conduit for amplifying sound waves set up by the vibration of said walls, or one of them.

5. In a talking machine, a sound conduit, a sound amplifying body having its sides each of double walls spaced apart and of resonant material, the outer wall provided with a sound hole, said double-walled sides forming a central sound amplifying passage communicating with said conduit and continuous therewith, and each side a resonating amplifying chamber non-communicating with said conduit.

[Claims 6 and 7 not printed in the Gazette.]

1,223,339. OPERATING MECHANISM FOR SHAPERS. FREDERICK W. A. HERRMANN and ALBERT E. ROBINSON, Cincinnati, Ohio, assignors to The American Tool Works Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 8, 1914. Serial No. 849,637. (Cl. 74—53.)



1. A device of the nature disclosed combining a support, a transversely translatable member mounted on said support and adjustable to various elevations thereon, oscillatory ratchet feeding devices for translating said member, crank devices connecting with said ratchet feeding devices susceptible to planetary motion to compensate for a definite intervening connecting length between said feeding and crank devices in the variance of elevation of said feeding devices, and connecting means for said devices.

2. A device of the nature disclosed combining planetary movable motion converting devices, motion imparting devices variable as to their relative location to said motion converting devices, and means connecting the two devices for planetarily moving the motion converting devices.

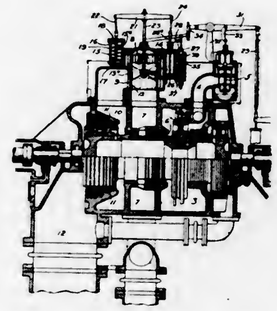
3. A device of the nature disclosed, combining planetary movable motion converting devices, intermittent reversible motion imparting devices variable as to the relative location to said motion converting devices, and means connecting the two devices for planetarily moving the motion converting devices.

4. A device of the nature disclosed combining a pair of motion converting devices unitarily rotatable, and each provided with an eccentric motion imparting axis, the eccentric axis of one of said devices transferable diametrically to opposite sides of its normal axis, whereby the forward and return semi-cycles of said eccentric axes may be relatively coincidentally or alternately disposed.

5. In a device of the nature described, a crank comprising two adjacent axially alined members, one thereof constituting a crank member independently rotatable upon the axis of the other, and means for unitarily combining said members, whereby the crank axis may be transferred upon opposite sides of the axes of said members.

[Claims 6 to 12 not printed in the Gazette.]

1,223,340. AUTOMATIC VALVE MECHANISM. JOSIAH FRANCIS JOHNSON, Edgewood, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Aug. 19, 1914. Serial No. 857,530. (Cl. 121—118.)



1. In combination with an engine having a fluid delivery port for bleeding steam from a low pressure working passage thereof, a valve for controlling the delivery of fluid through said port, means responsive to variations in the pressure of fluid delivered through said port for controlling the operation of the valve, and a governor mechanism for controlling the delivery of motive fluid to the engine and for controlling the operation of the valve independent of said means.

2. In combination with a multi-stage turbine having a fluid delivery port for bleeding steam from an intermediate pressure stage of the turbine, a valve mechanism for controlling the delivery of fluid through the port and for delivering fluid from the intermediate stage to a low pressure stage of the turbine, means responsive to the variations in pressure of the fluid delivered to said port for controlling the operation of the valve mechanism during normal loads on the turbine, and load responsive means for controlling the operation of the valve independently of the pressure responsive means during abnormal or overloads on the turbine.

3. In combination with a multi-stage turbine, having a port for bleeding steam from an intermediate pressure stage, a single valve for controlling the delivery of steam through the port and for delivering steam from the intermediate stage to a low pressure stage of the turbine, said valve being so arranged that the flow of steam to said port is increased as the flow to the low pressure stage is

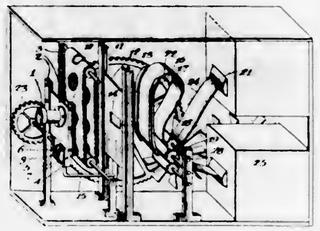
decreased, and the flow to the low pressure stage is increased as the flow to the port is decreased, means responsive to the pressure of fluid delivered to the port for controlling the operation of said valve, and a governor mechanism for controlling the delivery of steam to the turbine and for controlling the operation of said valve independently of said means.

4. In combination with a multi-stage turbine, having a port for bleeding steam from an intermediate pressure stage of the turbine, a single valve for controlling the delivery of fluid through the port and for delivering fluid from the intermediate stage to a low pressure stage of the turbine, means responsive to the pressure of fluid delivered by said valve to said port for controlling the operation of the valve, and load responsive means for controlling the operation of the valve independently of the pressure responsive means.

5. A turbine, having a port for delivering fluid from a working passage thereof of intermediate pressure, in combination with a low pressure turbine stage for receiving fluid from said passage of intermediate pressure, a single valve for controlling the delivery of fluid through said port and to said low pressure stage, means responsive to the pressure of the fluid delivered through said port for controlling the operation of said valve, and means responsive to the speed of the turbine for actuating said valve to close said port independently of the operation of said pressure actuated means.

[Claims 6 to 15 not printed in the Gazette.]

1,223,341. MOVING-PICTURE CAMERA. CHARLES KESSES, New York, N. Y. Filed Oct. 28, 1914. Serial No. 869,113. (Cl. 88—16.8.)

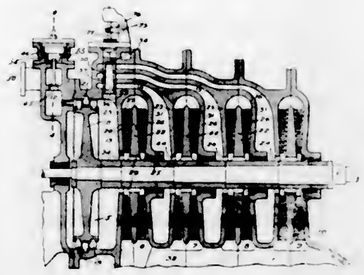


1. In a motion picture camera, the combination of a lens slide, a film guide way, means for feeding film continuously through said guide way, and exposing slide interposed between said lens slide and said film guide way, means for reciprocating said lens slide and said exposing slide in unison, means for adjusting the reciprocating means to cause the slides to move at the same speed as the film during exposure and a shutter to expose the film while the lens slide is moving in the same direction as the film.

2. In a motion picture camera, the combination of a lens slide, a film guide way, means for feeding film continuously through said guide way, an exposing slide interposed between said lens slide and said film guide way, means for reciprocating said lens slide and said exposing slide in unison, means for permitting the distance between said slides to be varied and a shutter to expose the film while the lens slide is moving in the same direction as the film.

3. In a motion picture camera, the combination of a lens slide, a film guide way, rollers adjacent said guide way to feed the film continuously therethrough, an exposing slide interposed between said lens slide and said film guide way, means for reciprocating said lens slide and said exposing slide in unison and a shutter to expose the film while the lens slide is moving in the same direction as the film.

1,223,342. ELASTIC-FLUID TURBINE. WILLIAM JAMES ALBERT LONDON, Hartford, Conn., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Original application filed Apr. 13, 1906, Serial No. 311,482. Renewed Oct. 30, 1912, Serial No. 728,733. Divided and this application filed Mar. 25, 1913. Serial No. 756,725. (Cl. 253—59.)



1. In combination in a turbine, an initial stage comprising at least one row of impulse blades, and a plurality of nozzles for delivering steam to said blades, less than the entire number of nozzles at times delivering steam to said blades, and a plurality of full annular admission low pressure sections adapted to operate in parallel on steam discharged from the initial stage and each comprising a plurality of working stages having a single row of moving blades per stage, said initial stage at times delivering steam to less than the whole number of low pressure sections.

2. A turbine having a high pressure section comprising a multiple drop impulse stage, expansion nozzles for delivering motive fluid to said stage, and at least three independent full annular admission low pressure turbine elements adapted to operate on the same terminal pressure and in parallel on fluid discharged from the impulse stage, said impulse stage at times delivering motive fluid to less than the whole number of said low pressure turbine elements.

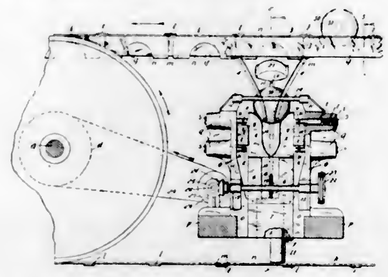
3. In combination a high pressure live steam turbine and an exhaust steam turbine divided into at least three separate parts, and each of said parts receiving steam direct from said first mentioned turbine, said high pressure turbine at times discharging into less than the whole number of parts of the exhaust steam turbine, and that part or those parts into which the high pressure turbine exhausts being designed to accommodate the steam entering from the high pressure turbine.

4. In combination a high pressure live steam turbine and an exhaust steam turbine divided into at least three parts operating separately and supplied with exhaust steam direct from said first mentioned turbine, said live steam turbine at times discharging into less than the whole number of parts of said exhaust steam turbine, and that part or parts into which the live steam turbine exhausts being designed to accommodate the steam from the live steam turbine.

5. In combination a high pressure live steam turbine, and an exhaust steam turbine divided into more than two parts, a single casing for both of said turbines, means controlling communication between all of the several parts of the exhaust steam turbine and the live steam turbine, said live steam turbine at times discharging into less than the whole number of parts of the exhaust steam turbine, and that part or those parts of the exhaust steam turbine into which the live steam turbine discharges being designed to accommodate the steam entering from said live steam turbine.

[Claims 6 to 12 not printed in the Gazette.]

1,223,343. FRUIT CUTTING AND PITTING MACHINE. KARL G. MOLTZNER, Portland, Oreg. Filed Mar. 1, 1916. Serial No. 81,546. (Cl. 146—6.)



1. In a device of the character described, the combination of fruit holding means, coöperating fruit cutting knives yieldingly mounted beneath the fruit holder and laterally separable, divergent separator members rigidly mounted beneath the knives and provided with a centrally located opening, and an endless carrier mounted adjacent the knives and provided with members adapted to carry fruit down between said knives.

2. In a device of the character described, the combination of fruit holding means, coöperating fruit cutting knives yieldingly mounted beneath the fruit holder and laterally separable, divergent separator members rigidly mounted beneath the knives and provided with a centrally located opening, an endless carrier mounted adjacent the knives and provided with a plurality of saddles adapted to carry fruit down between said knives, and driving means therefor.

3. In a device of the character described, the combination of a resilient expansible fruit holder, coöperating fruit-cutting knives yieldingly mounted beneath the fruit holder and laterally separable, divergent separator members rigidly mounted beneath the knives and provided with a centrally located opening, movable fruit engaging means adapted to carry fruit down between said knives, and fruit delivering means for delivering fruit to the holder.

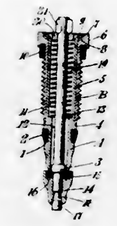
4. In a device of the character described, the combination of a resilient expansible fruit holder, coöperating fruit-cutting knives yieldingly mounted beneath the fruit holder and laterally separable, divergent separator members rigidly mounted beneath the knives and provided with a centrally located opening, movable fruit engaging means adapted to carry fruit down between said knives, fruit delivering means for delivering fruit to the holder at periodic intervals, and fruit delivering means adapted to work in unison with the means for carrying the fruit between the knives.

5. In a device of the character described, the combination of a resilient expansible fruit holder, coplanar fruit-cutting knives yieldingly mounted beneath the fruit holder and laterally separable, divergent separator members rigidly mounted beneath the knives and provided with a centrally located opening, movable fruit engaging means adapted to carry fruit down between said knives, fruit delivering means for delivering fruit to the holder at periodic intervals, driving means for said fruit delivering means, and connections between said fruit delivering means and the fruit engaging means so timed that these parts will operate in unison.

[Claims 6 and 7 not printed in the Gazette.]

1,223,344. TIRE-VALVE. ALBERT B. NORWALK, New York, N. Y. Filed Mar. 21, 1916. Serial No. 85,543. (Cl. 152—12.)

1. A tire-valve construction comprising a tubular swivel member having screw-threads engageable with a tire-tube and adapted to project at all times beyond the outer end of the tire tube and providing a long inner bearing, a sealing member having a long bearing sleeve inseparably swiveled in the long inner bearing of the screw-threaded tubular swivel member and substantially coterminous with the outer end thereof, packing material on the sealing member for forming a seal within the bore of the tire-tube by longitudinal thrusting against a coöperative part of the tire-tube and adapted to be pressed into such sealing relation by the screw-threaded tubular swivel member, the sealing member being provided with a valve seat; a check valve coöperative with the valve seat, and a valve-closing spring housed within the sealing member.



2. A tire-valve construction comprising a tubular plug member having screw-threads engageable with a tire-tube, such tubular plug member providing a long inner bearing, a sealing member having a long bearing sleeve inseparably swiveled in the long inner bearing of the tubular plug member and substantially coterminous with the outer end thereof, packing material on the sealing member for forming a seal within the bore of the tire-tube by longitudinal thrusting against a coöperative part of the tire-tube and adapted to be pressed into such sealing relation by the screw-threaded tubular plug member, the sealing member being provided with a valve seat; a check valve coöperative with the valve seat, and a valve-closing spring housed within the bearing sleeve of the sealing member.

3. A tire-valve construction comprising, in combination with a tire-tube attachable to the tire and having at its outer end an internally screw-threaded enlargement of its bore forming a screw-threaded socket and having an inwardly tapered sealing surface inward from such socket, a tubular screw-threaded plug member screwing into the socket, such tubular plug member providing a long inner bearing, a tubular sealing member having a long bearing sleeve inseparably swiveled in the long inner bearing of the tubular plug member and substantially coterminous with the outer end thereof, a tapered ring of packing material on the tubular sealing member adapted to be pressed into sealing relation with the inwardly tapered sealing surface of the tire-tube by the screw-threaded tubular plug member, the tubular sealing member being provided with a valve seat; a check valve coöperative with the valve seat and a valve-closing spring housed within the bearing sleeve of the tubular sealing member.

4. A tire-valve construction comprising a tubular plug member having screw-threads engageable with a tire-tube and having an enlarged head outwardly from its threaded part and adapted to project from the tire-tube, such tubular plug member providing a long inner bearing, a tubular sealing member having a long bearing sleeve inseparably swiveled in the long inner bearing of the tubular plug member and substantially coterminous with the outer end thereof, a ring of packing material on the tubular sealing member for forming a seal within the bore of the tire-tube by longitudinal thrusting against a coöperative part of the tire-tube and adapted to be pressed into such sealing relation by the screw-threaded tubular plug member, the tubular sealing member being provided with a valve seat; a check valve coöperative with the valve seat, and a valve-closing spring housed within the bearing sleeve of the tubular sealing member.

1,223,345. TIRE-VALVE. ALBERT B. NORWALK, New York, N. Y. Filed Nov. 14, 1916. Serial No. 131,212. (Cl. 152—12.)

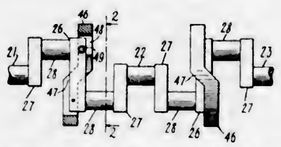


1. A tire valve construction comprising a tubular sealing member adapted to enter the outer end of a tire tube and provided at its inner end with a cylindrical extension forming a skirt having air inlet openings in the upper part thereof and having at the inside beyond said air inlet openings an annular seat groove provided with an annular projecting V-shaped bottom, a movable cup-shaped valve head within and guided by said cylindrical skirt and having an annular V-shaped sealing edge opposed to and substantially in alinement with the projecting V-shaped seat bottom, and a ring of packing material contained within said annular seat groove and adapted to be clamped between the V-shaped sealing edges of said seat and of said valve head.

2. A tire valve construction comprising a tubular sealing member adapted to enter the outer end of a tire tube and provided at its inner end with a cylindrical extension forming a skirt having air inlet openings in the upper part thereof and having at the inside beyond said air inlet openings an annular seat groove provided with an annular projecting V-shaped bottom, a movable cup-shaped valve head within and guided by said cylindrical skirt and having an annular V-shaped sealing edge opposed to and substantially in alinement with the projecting V-shaped seat bottom, a ring of packing material contained within said annular seat groove, a valve pin carrying the valve head at its inner end and extending outward into the tubular sealing member, and a valve-closing spring contained within the tubular sealing member and acting upon said valve pin to clamp the ring of packing material between the V-shaped sealing edges of the seat bottom and of the valve head.

3. A tire valve construction comprising a tubular sealing member adapted to enter the outer end of a tire tube and having at its inner end an annular seat groove provided with an annular projecting V-shaped bottom, a movable cup-shaped valve head having an annular V-shaped sealing edge opposed to and substantially in alinement with the projecting V-shaped seat bottom, and a ring of packing material contained within said annular seat groove and adapted to be clamped between the V-shaped sealing edges of said seat and of said valve head.

1,223,346. COUNTERBALANCE FOR MOTOR-SHAFTS. JOSEPH W. RIDGWAY, Long Island City, N. Y. Filed July 17, 1916. Serial No. 109,864. (Cl. 74—5.)



1. The combination with a crankshaft arm having crank pins projecting respectively from the ends thereof in opposite directions, of weights connected with said arm on the sides remote from said crank pins.

2. The combination with a crankshaft arm formed with crank pins projecting laterally therefrom at or near its ends, of weights opposed to said crank pins connected with one another transversely of said arm.

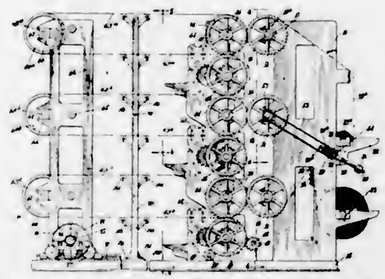
3. The combination with a crankshaft arm having pins projecting oppositely from the sides thereof one at each end, of weights attached to both ends of said arm so as to revolve therewith in a plane bisecting a line drawn through the mass centers of said pins.

4. The combination with a crankshaft arm having pins projecting from the ends thereof one at each side, of a ring disposed about said arm so as to throw its weight thereon oppositely to said pins in substantially equal parts on the remote sides.

5. The combination with a crankshaft, an arm thereacross, and pins projecting laterally one from each end of said arm, of a ring concentric with said crankshaft encircling the latter and the arm in an oblique direction.

[Claims 6 to 14 not printed in the Gazette.]

1,223,347. PRINTING PRESS. CHARLES F. STODDARD, Jr., Ridgefield Park, N. J. Filed Jan. 2, 1915. Serial No. 146. (Cl. 101—181.)



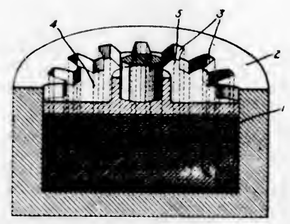
1. In a printing press, the combination with an impression cylinder, of a pair of cylinders, an endless, band-like printing form arranged thereon, means for securing the opposing edges of said band-like printing form together, and yielding means provided in one of said cylinders to accommodate the securing means for said band-like printing form as the same passes between said cylinder and said impression cylinder, substantially as specified.

2. In a printing press, the combination with an impression cylinder, of a pair of cylinders, an endless, band-like printing form arranged thereon, means for securing the opposing edges of said band-like printing form together, a longitudinal member yieldingly mounted in one of said cylinders for accommodating the means for securing the opposing ends of said band-like printing form in its passage between said last-mentioned cylinder and the impression cylinder, substantially as specified.

3. In a printing press, the combination with an impression cylinder, of a pair of cylinders, an endless, band-like printing form arranged thereon, means for securing the opposing edges of said band-like printing form together, one of said cylinders being provided with a longitudinal recess, a longitudinal member disposed within said recess, and spring means for maintaining said longitudinal member yieldingly in position within said longitudinal groove, said longitudinal member being adapted to accommodate the securing means for said band-like printing form as the same passes between said cylinder and said impression cylinder, substantially as specified.

1,223,348. PROCESS OF MAKING LAMINATED ARTICLES. ARTHUR J. BASTIAN, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 6, 1915. Serial No. 38,265. (Cl. 154—2.)

1. The process of making a shaped composite article that comprises forming blanks of sheet material corresponding in outline to the shape of the finished article, superposing a plurality of the said blanks associated with an adhesive material, and compacting the assembled materials in a mold conforming in shape to the finished article.



2. The process of making a shaped composite article that comprises forming blanks corresponding in outline to the shape of the finished article from fibrous sheet material associated with an adhesive material, superposing a plurality of the said blanks, and compacting the assembled materials in a mold conforming in shape to the finished article.

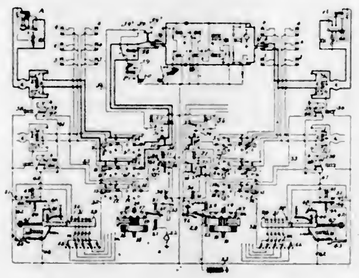
3. The process of making a composite article that comprises forming blanks of fibrous sheet material corresponding in outline to the shape of the finished article, superposing a plurality of the said blanks associated with an adhesive material, and applying heat and pressure to the assembled materials while confined in a mold conforming in shape to the finished article.

4. The process of making a composite article that comprises forming blanks of fibrous sheet material corresponding in outline to the shape of the finished article, superposing a plurality of the said blanks associated with a phenolic condensation product, and compacting the assembled materials in a mold conforming in shape to the finished article.

5. The process of making a composite article that comprises forming blanks corresponding in outline to the shape of the finished article from fibrous sheet material associated with a phenolic condensation product, superposing a plurality of the said blanks and applying heat and pressure to the superposed blanks while confined in a mold conforming in shape to the finished article.

[Claims 6 to 8 not printed in the Gazette.]

1,223,349. TELEPHONE SYSTEM. FRANCIS W. DUNBAR, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Dec. 30, 1904. Serial No. 238,957. (Cl. 179—27.)



1. A telephone exchange system including a plurality of telephone lines provided with line-jacks and divided into groups, a plurality of answering-jack circuits for each group of telephone lines also divided into groups and extending to answering-jacks at different sections of the switch-board, automatically operated selective switching mechanism in circuit relation with the lines and including traveling answering-terminals of the answering-jack circuits and multipled telephone line terminal contacts engaged by said answering-terminals, whereby the answering ends of the answering-jack circuits are connected with calling lines, apparatus for changing the electrical character of the answering-jack circuits to cause them when idle, to coöperate with the selective switching mechanism as if they were busy, to enable the said mechanism to pass the same into coöperation with an idle answering-jack circuit that may be used, and cord circuits in association with said answering-jacks provided with answering-plugs for engagement with said jacks, substantially as described.

2. A telephone exchange system including a plurality of telephone lines provided with line-jacks and divided into groups, a plurality of answering-jack circuits for each group of telephone lines also divided into groups and extending to answering-jacks at different sections of the switch-board, the answering-jacks of each group being distributed among the operators' positions at each section, automatically operated selective switching mechanism in circuit relation with the lines and including traveling answering terminals of the answering-jack circuits and multipled telephone line terminal contacts engaged by said answering-terminals, whereby the answering ends of the answering-jack circuits are connected with calling lines, apparatus for changing the electrical character of the answering-jack circuit to cause them, when idle, to coöperate with the selective switching mechanism as if they were busy, to enable the said mechanism to pass the same into coöperation with an idle answering-jack circuit that may be used, and cord circuits in association with said answering-jacks provided with answering-plugs for engagement with said jacks, substantially as described.

3. A telephone exchange system including a plurality of telephone lines provided with line-jacks and divided into groups, a plurality of answering-jack circuits for each group of telephone lines also divided into groups and extending to answering-jacks at different sections of the switch-board, automatically operated selective switching mechanism in circuit relation with the lines and including traveling answering terminals of the answering-jack circuits and multipled telephone line terminal contacts engaged by said answering-terminals, whereby the answering ends of the answering-jack circuits are connected with calling lines, apparatus for checking the operation of the selective switching mechanism, answering-jack circuit apparatus governing the aforesaid apparatus to enable the selective switching mechanism to avoid busy answering-jack circuits, apparatus for changing the electrical character of the answering-jack circuits to cause them, when idle, to coöperate with the selective switching mechanism as if they were busy, to enable the said mechanism to pass the same into coöperation with an idle answering-jack circuit that may be used, and cord circuits in association with said answering-jacks provided with answering-plugs for engagement with said jacks, substantially as described.

4. A telephone exchange system including a plurality of telephone lines provided with line-jacks and divided into groups, a plurality of answering-jack circuits for each group of telephone lines also divided into groups and extending to answering-jacks at different sections of the switch-board, the answering-jacks of each group being distributed among the operators' positions at each section, automatically operated selective switching mechanism in circuit relation with the lines and including traveling answering-terminals of the answering-jack circuits and multipled telephone line terminal contacts engaged by said answering-terminals, whereby the answering ends of the answering-jack circuits are connected with calling lines, apparatus for checking the operation of the selective switching mechanism and answering-jack circuit apparatus governing the aforesaid apparatus to enable the selective switching mechanism to avoid busy answering-jack circuits, apparatus for changing the electrical character of the answering-jack circuits to cause them, when idle, to coöperate with the selective switching mechanism as if they were busy, to enable the said mechanism to pass the same into coöperation with an idle answering-jack

1,223,345. TIRE-VALVE. ALBERT B. NORWALK, New York, N. Y. Filed Nov. 14, 1916. Serial No. 131,212. (Cl. 152—12.)

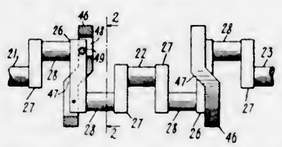


1. A tire valve construction comprising a tubular sealing member adapted to enter the outer end of a tire tube and provided at its inner end with a cylindrical extension forming a skirt having air inlet openings in the upper part thereof and having at the inside beyond said air inlet openings an annular seat groove provided with an annular projecting V-shaped bottom, a movable cup-shaped valve head within and guided by said cylindrical skirt and having an annular V-shaped sealing edge opposed to and substantially in alinement with the projecting V-shaped seat bottom, and a ring of packing material contained within said annular seat groove and adapted to be clamped between the V-shaped sealing edges of said seat and of said valve head.

2. A tire valve construction comprising a tubular sealing member adapted to enter the outer end of a tire tube and provided at its inner end with a cylindrical extension forming a skirt having air inlet openings in the upper part thereof and having at the inside beyond said air inlet openings an annular seat groove provided with an annular projecting V-shaped bottom, a movable cup-shaped valve head within and guided by said cylindrical skirt and having an annular V-shaped sealing edge opposed to and substantially in alinement with the projecting V-shaped seat bottom, a ring of packing material contained within said annular seat groove, a valve pin carrying the valve head at its inner end and extending outward into the tubular sealing member, and a valve-closing spring contained within the tubular sealing member and acting upon said valve pin to clamp the ring of packing material between the V-shaped sealing edges of the seat bottom and of the valve hend.

3. A tire valve construction comprising a tubular sealing member adapted to enter the outer end of a tire tube and having at its inner end an annular seat groove provided with an annular projecting V-shaped bottom, a movable cup-shaped valve head having an annular V-shaped sealing edge opposed to and substantially in alinement with the projecting V-shaped seat bottom, and a ring of packing material contained within said annular seat groove and adapted to be clamped between the V-shaped sealing edges of said seat and of said valve head.

1,223,346. COUNTERBALANCE FOR MOTOR-SHAFTS. JOSEPH W. RIDGWAY, Long Island City, N. Y. Filed July 17, 1916. Serial No. 109,864. (Cl. 74—5.)



1. The combination with a crankshaft arm having crank pins projecting respectively from the ends thereof in opposite directions, of weights connected with said arm on the sides remote from said crank pins.

2. The combination with a crankshaft arm formed with crank pins projecting laterally therefrom at or near its ends, of weights opposed to said crank pins connected with one another transversely of said arm.

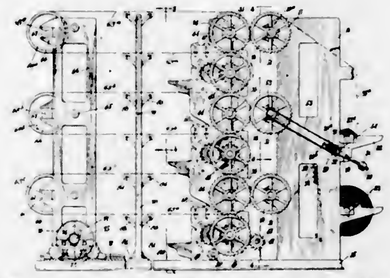
3. The combination with a crankshaft arm having pins projecting oppositely from the sides thereof one at each end, of weights attached to both ends of said arm so as to revolve therewith in a plane bisecting a line drawn through the mass centers of said pins.

4. The combination with a crankshaft arm having pins projecting from the ends thereof one at each side, of a ring disposed about said arm so as to throw its weight thereon oppositely to said pins in substantially equal parts on the remote sides.

5. The combination with a crankshaft, an arm thereacross, and pins projecting laterally one from each end of said arm, of a ring concentric with said crankshaft encircling the latter and the arm in an oblique direction.

[Claims 6 to 14 not printed in the Gazette.]

1,223,347. PRINTING PRESS. CHARLES F. STODDARD, Jr., Ridgefield Park, N. J. Filed Jan. 2, 1915. Serial No. 146. (Cl. 101—181.)



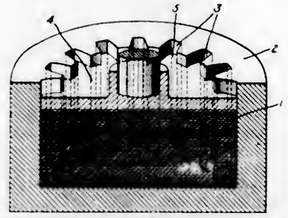
1. In a printing press, the combination with an impression cylinder, of a pair of cylinders, an endless, band-like printing form arranged thereon, means for securing the opposing edges of said band-like printing form together, and yielding means provided in one of said cylinders to accommodate the securing means for said band-like printing form as the same passes between said cylinder and said impression cylinder, substantially as specified.

2. In a printing press, the combination with an impression cylinder, of a pair of cylinders, an endless, band-like printing form arranged thereon, means for securing the opposing edges of said band-like printing form together, a longitudinal member yieldingly mounted in one of said cylinders for accommodating the means for securing the opposing ends of said band-like printing form in its passage between said last-mentioned cylinder and the impression cylinder, substantially as specified.

3. In a printing press, the combination with an impression cylinder, of a pair of cylinders, an endless, band-like printing form arranged thereon, means for securing the opposing edges of said band-like printing form together, one of said cylinders being provided with a longitudinal recess, a longitudinal member disposed within said recess, and spring means for maintaining said longitudinal member yieldingly in position within said longitudinal groove, said longitudinal member being adapted to accommodate the securing means for said band-like printing form as the same passes between said cylinder and said impression cylinder, substantially as specified.

1,223,348. PROCESS OF MAKING LAMINATED ARTICLES. ARTHUR J. BASTIAN, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 6, 1915. Serial No. 38,265. (Cl. 154—2.)

1. The process of making a shaped composite article that comprises forming blanks of sheet material corresponding in outline to the shape of the finished article, superposing a plurality of the said blanks associated with an adhesive material, and compacting the assembled materials in a mold conforming in shape to the finished article.



2. The process of making a shaped composite article that comprises forming blanks corresponding in outline to the shape of the finished article from fibrous sheet material associated with an adhesive material, superposing a plurality of the said blanks, and compacting the assembled materials in a mold conforming in shape to the finished article.

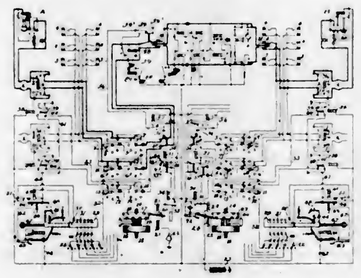
3. The process of making a composite article that comprises forming blanks of fibrous sheet material corresponding in outline to the shape of the finished article, superposing a plurality of the said blanks associated with an adhesive material, and applying heat and pressure to the assembled materials while confined in a mold conforming in shape to the finished article.

4. The process of making a composite article that comprises forming blanks of fibrous sheet material corresponding in outline to the shape of the finished article, superposing a plurality of the said blanks associated with a phenolic condensation product, and compacting the assembled materials in a mold conforming in shape to the finished article.

5. The process of making a composite article that comprises forming blanks corresponding in outline to the shape of the finished article from fibrous sheet material associated with a phenolic condensation product, superposing a plurality of the said blanks and applying heat and pressure to the superposed blanks while confined in a mold conforming in shape to the finished article.

[Claims 6 to 8 not printed in the Gazette.]

1,223,349. TELEPHONE SYSTEM. FRANCIS W. DUNBAR, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Dec. 30, 1904. Serial No. 238,957. (Cl. 179—27.)



1. A telephone exchange system including a plurality of telephone lines provided with line-jacks and divided into groups, a plurality of answering-jack circuits for each group of telephone lines also divided into groups and extending to answering-jacks at different sections of the switch-board, the answering-jacks of each group being distributed among the operators' positions at each section, automatically operated selective switching mechanism in circuit relation with the lines and including traveling answering-terminals of the answering-jack circuits and multipled telephone line terminal contacts engaged by said answering-terminals, whereby the answering-ends of the answering-jack circuits are connected with calling lines, apparatus for changing the electrical character of the answering-jack circuits to cause them when idle, to coöperate with the selective switching mechanism as if they were busy, to enable the said mechanism to pass the same into coöperation with an idle answering-jack circuit that may be used, and cord circuits in association with said answering-jacks provided with answering-plugs for engagement with said jacks, substantially as described.

2. A telephone exchange system including a plurality of telephone lines provided with line-jacks and divided into groups, a plurality of answering-jack circuits for each group of telephone lines also divided into groups and extending to answering-jacks at different sections of the switch-board, the answering-jacks of each group being distributed among the operators' positions at each section, automatically operated selective switching mechanism in circuit relation with the lines and including traveling answering terminals of the answering-jack circuits and multipled telephone line terminal contacts engaged by said answering-terminals, whereby the answering ends of the answering-jack circuits are connected with calling lines, apparatus for changing the electrical character of the answering-jack circuit to cause them, when idle, to coöperate with the selective switching mechanism as if they were busy, to enable the said mechanism to pass the same into coöperation with an idle answering-jack circuit that may be used, and cord circuits in association with said answering-jacks provided with answering-plugs for engagement with said jacks, substantially as described.

3. A telephone exchange system including a plurality of telephone lines provided with line-jacks and divided into groups, a plurality of answering-jack circuits for each group of telephone lines also divided into groups and extending to answering-jacks at different sections of the switch-board, automatically operated selective switching mechanism in circuit relation with the lines and including traveling answering terminals of the answering-jack circuits and multipled telephone line terminal contacts engaged by said answering-terminals, whereby the answering ends of the answering-jack circuits are connected with calling lines, apparatus for checking the operation of the selective switching mechanism, answering-jack circuit apparatus governing the aforesaid apparatus to enable the selective switching mechanism to avoid busy answering-jack circuits, apparatus for changing the electrical character of the answering-jack circuits to cause them, when idle, to coöperate with the selective switching mechanism as if they were busy, to enable the said mechanism to pass the same into coöperation with an idle answering-jack circuit that may be used, and cord circuits in association with said answering-jacks provided with answering-plugs for engagement with said jacks, substantially as described.

4. A telephone exchange system including a plurality of telephone lines provided with line-jacks and divided into groups, a plurality of answering-jack circuits for each group of telephone lines also divided into groups and extending to answering-jacks at different sections of the switch-board, the answering-jacks of each group being distributed among the operators' positions at each section, automatically operated selective switching mechanism in circuit relation with the lines and including traveling answering-terminals of the answering-jack circuits and multipled telephone line terminal contacts engaged by said answering-terminals, whereby the answering ends of the answering-jack circuits are connected with calling lines, apparatus for checking the operation of the selective switching mechanism and answering-jack circuit apparatus governing the aforesaid apparatus to enable the selective switching mechanism to avoid busy answering-jack circuits, apparatus for changing the electrical character of the answering-jack circuits to cause them, when idle, to coöperate with the selective switching mechanism as if they were busy, to enable the said mechanism to pass the same into coöperation with an idle answering-jack

circuit that may be used, and cord circuits in association with said answering-jacks provided with answering-plugs for engagement with said jacks, substantially as described.

5. A multiple switch-board telephone exchange system including a plurality of telephone lines divided into groups and multipled to different sections of the multiple switch-board, a plurality of answering-jack circuits for each group of telephone lines also divided into groups and extending to answering-jacks at different sections of the switch-board, automatically operated selective switching mechanism in circuit relation with the lines and including traveling answering-terminals of the answering-jack circuits and multipled telephone line terminal contacts engaged by said answering-terminals, whereby the answering ends of the answering-jack circuits are connected with calling lines, apparatus for changing the electrical character of the answering-jack circuits to cause them, when idle, to coöperate with the selective switching mechanism as if they were busy, to enable the said mechanism to pass the same into coöperation with an idle answering-jack circuit that may be used, and cord circuits in association with said answering-jacks provided with answering-plugs for engagement with said jacks, substantially as described.

[Claims 6 to 156 not printed in the Gazette.]

REISSUES.

14,284. SWITCH-BOX. JEROME Z. BAYLISS and CHARLES RAUS, Cleveland, Ohio, assignors to The Acme Metal Stamping Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 13, 1916. Serial No. 119,993. Original No. 1,167,879, dated Jan. 11, 1916, Serial No. 859,521, filed Aug. 31, 1914. (Cl. 247—5.)



1. An outlet or switch-box comprising a structure open on one side, lugs projecting inwardly from the ends of said box and along said opening, one of said lugs being provided with a hole, a headed securing device adapted to enter said hole; the other side of said structure or box being provided with a keyhole slot near one end adapted to receive the head of a headed device; the other end of said side being provided with an opening adapted to receive a lug like that projecting from the other end of said end along said open side.

2. An outlet or switch-box comprising a casing open on one side and lugs projecting inwardly along said opening from the ends of the casing, one of said lugs being provided with a hole and a headed fastening device adapted to enter same, and a removable side plate adapted to fit said opening, said side plate having an opening near one end into which opening may pass one of said lugs for engagement with said side plate, and a keyhole slot at the other end of said plate adapted to receive the head of said fastening device.

3. An outlet or switch-box comprising a casing open on one side and lugs projecting inwardly along said opening from the ends of the casing, one of said lugs being provided with a tap to receive a screw, and a removable side plate having an opening into which may pass the other of said inwardly projecting lugs for engaging and holding said side plate, and also having a keyhole slot adapted to receive the screw.

4. An outlet or switch-box comprising a casing having an open side and lugs projecting inwardly adjacent to said side from the ends of the casing, one of said lugs being tapped to receive a screw, and a removable side plate having an offset lug adapted to engage the other of said inwardly projecting lugs, and also having a keyhole slot adapted to receive the screw.

5. A gang outlet box comprising a unit box or casing one side of which has an offset lug with an opening thereunder, and a keyhole slot, and another unit or box fitting against the side of said box and having a lug engaging in the recess behind said lug and also having a screw engaging in said keyhole slot.

6. An outlet or switch-box comprising a casing having an open side and lugs projecting inwardly adjacent to said side from the ends of the casing, one of said lugs being tapped to receive a screw, and a removable side plate adapted to engage the other of said inwardly projecting lugs, and also having a keyhole slot adapted to receive the screw.

7. A gang outlet box comprising a unit box or casing one side of which has an opening and a keyhole slot, and another unit or box fitting against the side of said first named box and having a lug engaging in said opening and also having a screw engaging in said keyhole slot.

8. An outlet or switch box comprising a casing having an open side and lugs projecting inwardly adjacent to said side from the ends of the casing, one of said lugs being tapped to receive a screw, and a removable side plate arranged to be engaged by the other of said inwardly projecting lugs, and also having a keyhole slot adapted to receive the screw.

9. A gang outlet box comprising a unit box or casing one side of which has an opening and a keyhole slot, and another unit or box fitting against the side of said first named box and having a lug adapted to enter said opening to engage said side, and also having a screw engaging in said keyhole slot.

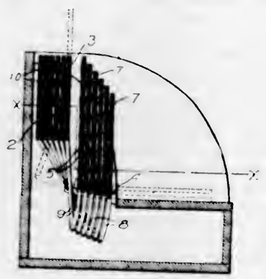
10. An outlet or switch box comprising a casing open on one side, lugs projecting inwardly from the ends of the box along said opening, one of said lugs being provided with an opening, a headed fastening device adapted to enter said opening, and a removable side plate adapted to cover said open side and to be engaged by the other of said lugs, said side plate provided also with a keyhole slot adapted to receive said headed fastening.

11. An outlet or switch box comprising a casing open on one side, lugs projecting inwardly from the ends of the box along said opening, one of said lugs being provided with an opening, a headed fastening device adapted to enter said opening, and a removable side plate adapted to cover said open side and to be slid into engagement with the other of said lugs, said side plate provided also with a keyhole slot, the wide part of said slot being adapted to receive the head of said fastening device, and the narrow part of said slot adapted to receive the stem of said slot when the side plate is slid into position.

14,285. ADVERTISING-CABINET. ALBERT S. MACHEN, Hicks Wharf, Va., assignor, by mesne assignments, to The National Cash Register Co., Dayton, Ohio, a Corporation of Ohio. Filed June 16, 1916. Serial No. 104,117. Original No. 1,137,072, dated Apr. 27, 1915, Serial No. 804,548, filed Dec. 3, 1913. (Cl. 40—65.)

1. In an appliance of the character specified, the combination of two groups of vertically arranged frames of like number, the said groups being adapted to removably support corresponding sets of cards, and connecting means between corresponding frames of the two groups, whereby movement of any one of the frames of one group, produces movement of the corresponding frame of the opposite group, so that the corresponding cards of the two sets are exposed.

2. In an appliance of the character specified, a support, front and rear groups of frames therein adapted to support corresponding sets of cards, the frames forming the front group, being pivotally located for rocking movement, and arranged in stepped relation so as to expose the upper marginal edges of the adjacent cards, connecting means between corresponding frames of front and rear groups, whereby movement of any one of the frames of the front group produces movement of the corresponding frame of the rear group.



3. In an appliance of the character specified, the combination of two groups of frames, the said frames being adapted removably to support corresponding data, and connecting links between corresponding frames of the two groups, whereby movement of any of the frames of one group, produces movement of the corresponding frames of the other group, so that a corresponding frame of each of the two groups is exposed.

4. In an appliance of the character specified, the combination of two groups of frames adapted removably to support data, and each frame of one group having a companion frame in the other group adapted to carry corresponding data, pivotal supports for one group to permit movement of the frames of that group to expose any data supported thereby, and link connections between the companion frames of the two groups whereby movement of frames of one group will effect simultaneous movement of the companion frames of the other group to expose the corresponding data.

5. In an appliance of the character specified, the combination of two groups of frames adapted removably to support data and each frame of one group having a companion frame in the other group adapted to carry corresponding data, pivotal supports for one group to permit movement of the frames of that group to expose any data supported thereby, said pivotal supports being arranged in a plane extending rearwardly and upwardly to cause a stepped relation of the upper edges of the frames so as to expose the upper portions of the frames, and link connections between the companion frames of the two groups whereby movement of the frames of one group will effect simultaneous movement of the companion frames of the other group to expose corresponding data.

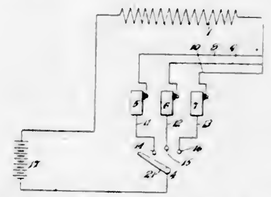
6. In an appliance of the character specified, the combination of two groups of frames, the said frames being adapted removably to support corresponding data, connecting means between corresponding frames of the two groups, whereby movement of any of the frames of one group produces movement of the corresponding frame of the other group so that a corresponding frame of each of the two groups is exposed, the frames of the latter group being heavier than the frames of the first group so as to restore all of said frames to normal position when released.

7. In an appliance of the character specified, the combination of two groups of frames adapted removably to support data, and each frame of one group having a companion frame in the other group adapted to carry corresponding data, pivotal supports for one group to permit movement of the frames of that group to expose any data supported thereby, link connections between the companion frames of the two groups whereby movement of frames of one group will effect simultaneous movement of the companion frames of the other group to expose the corresponding data, the frames of the latter group being heavier than the frames of the first group so as to restore all of the moved frames to normal position when released.

8. In an appliance of the character specified, the combination of two groups of frames adapted removably to support data, and each frame of one group having a companion frame in the other group adapted to carry corresponding data, the frames of one group being vertically slidable, projections for controlling the vertical movement of said slidable frames, pivotal supports for the frames of the other group and connections between the companion frames of the two groups whereby movement of frames of one group will effect movement of the corresponding frames of the other group.

9. In an appliance of the character specified, the combination of two groups of frames adapted removably to support data and each frame of one group having a companion frame in the other group adapted to carry corresponding data, grooved bars forming part of the frames of one group and adapted to removably receive in said grooves cards containing data, each frame of the other group comprising a channeled bar adapted to receive the lower edge of a card and a hook projection adapted to hold the upper edge of a card, pivotal supports for one group to permit movement of the frames of that group to expose the data on the cards inserted therein, said pivotal supports being arranged in a plane extending rearwardly and upwardly to cause a stepped relation of the upper portions of the frames to expose the upper margins of the inserted cards, and links connecting the companion frames of the two groups whereby movement of the frames of one group will effect simultaneous movement of the companion frames of the other group to expose corresponding data.

14,286. ELECTRIC HEATING-PAD. NELSON E. MANN, New Britain, Conn., assignor to Reliance Electric Heating Company, Columbia, Pa., a Corporation of New Jersey. Filed Feb. 23, 1917. Serial No. 150,593. Original No. 1,161,146, dated Nov. 23, 1915, Serial No. 35,741, filed June 23, 1915. (Cl. 219—20.)



1. Electrical heating means for warming pads, consisting of a single resistance coil, an electric circuit therefor, and a plurality of independently acting circuit controlling devices included in said circuit, each device being arranged to open the circuit at a different degree of heat, each of said devices having a different coefficient of expansion.

2. Electrical heating means for warming pads, consisting of a resistance coil, an electric circuit therefor, and a plurality of independently acting circuit controlling devices included in said circuit, each controlling device being arranged to open the circuit when the coil becomes heated to a predetermined extent, each controlling device being set to open the circuit at a different degree of heat.

3. Electrical heating means for warming pads, consisting of a single resistance coil, an electric circuit therefor, and a plurality of thermostats included in said circuit, each thermostat being set to open the circuit when the coil becomes heated to a predetermined extent.

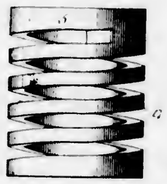
4. Electrical heating means for warming pads consisting of a single resistance coil, a circuit therefor, a plurality of thermostats, one pole of each thermostat being electrically connected to one end of said coil, a switch having a contact for each thermostat, each contact being

connected to the other pole of a corresponding thermostat, and a circuit-closing arm carried by the switch, said arm being in circuit with the source of electrical supply, each of said thermostats being set to open the circuit at a different degree of heat.

5. In a warming pad, electrical heating means therefor, a plurality of thermostatic circuit-controlling devices, and a manually operated switch to connect any desired one of said devices with said heating means.

6. In a warming pad, electrical heating means therefor, a plurality of independent thermostats set for operation at different degrees of heat, and a manually-operated switch for connecting any desired one of said thermostats into circuit with said heating means.

14,287. COIL-SPRING. JACOB B. KNUDSEN, Chicago, Ill., assignor of one-half to Francis H. Quail, Chicago, Ill. Filed Feb. 27, 1917. Serial No. 151,367. Original No. 843,827, dated Feb. 12, 1907, Serial No. 316,450, filed May 12, 1906. (Cl. 267—44.)



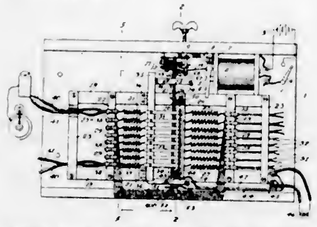
1. As a new article of manufacture a cast-iron coil-spring having its convolutions cast in spiral form.

2. As a new article of manufacture, a cast-metal coil-spring having its convolutions cast in spiral form.

3. As a new article of manufacture, a coil-spring composed of cast metal and having its respective ends integral with the next adjacent coil and having its convolutions cast in spiral form.

4. As a new article of manufacture, a coil-spring composed of cast metal having the annular flange formed integral with the end coil and having its convolutions cast in spiral form.

14,288. AUTOMATIC FIRE AND BURGLAR ALARM. LOUIS A. MEYERS, Sauk Center, Minn., assignor, by mesne assignments, of one-half to Volunteer Firemen's Signal Company, a Corporation of Minnesota. Filed Mar. 5, 1915. Serial No. 12,433. Original No. 1,084,100, dated Jan. 13, 1914, Serial No. 763,853, filed Apr. 26, 1913. (Cl. 179—5.)



1. An alarm attachment for telephone systems comprising a plurality of telephone circuit terminals, a plurality of ringing circuit terminals, an operating shaft, switch means for breaking the telephone circuits and closing the ringing circuits, means actuated by the operating shaft for operating said switch means, means for driving the operating shaft, and means for automatically terminating the driving of said shaft after the alarm has been sounded.

2. An alarm attachment for telephone systems comprising a plurality of telephone circuit terminals, a plurality of ringing circuit terminals, an operating shaft, switch means for breaking the telephone circuits and closing the ringing circuits, means actuated by the operating shaft for operating said switch means, a motor for driving the operating shaft, manually-controlled means for setting the motor in operation, and means thereafter operating automatically to stop the motor when the alarm has been sounded.

3. An alarm attachment for telephone circuits including a rocking bar, a pair of spaced contact fingers carried by the rocking bar, a contact adapted to be engaged by one of the said fingers when the bar is rocked in one direction, the said contact finger and contact being interposed in one of the wires of the telephone circuit, connections between the opposite contact finger and the opposite wire of the telephone circuit, a ringing circuit, contact bars connected to the terminals of the ringing circuit and arranged to be engaged by the respective contact fingers when the rocking bar is swung in the opposite direction, and means for causing the rocking bar to oscillate a predetermined number of times when set in motion.

4. An alarm attachment for telephone circuits including a ringing circuit, an operating shaft, a rocking bar, switch means actuated by the oscillations of the rocking bar for successively breaking the telephone circuit and introducing the telephone into the ringing circuit, means actuated by the operating shaft for oscillating the rocking bar, a motor for driving the operating shaft, and means for automatically stopping the motor after a predetermined number of oscillations have been imparted to the rocking bar.

5. An alarm attachment for telephone circuits including contact fingers, contact strips adapted to be engaged by the contact fingers when moved in one direction, a ringing circuit having the terminals thereof connected to the contact strips, a contact member adapted to be engaged by one of the contact fingers when the contact fingers are moved in the opposite direction, the said contact member and corresponding contact finger being introduced into one of the wires of the main telephone circuit, and means for reciprocating the contact fingers.

6. An alarm attachment for telephone circuits including a rocking bar, a pair of contact fingers carried by the rocking bar, a contact adapted to be engaged by one of the said fingers when the bar is rocked in one direction, the said contact finger and contact being interposed in one of the wires of the telephone circuit, and connections between the opposite contact finger and the opposite wire of the telephone circuit, a ringing circuit, and contact bars connected to the terminals of the ringing circuit and arranged to be engaged by the respective contact fingers when the rocking bar is swung in the opposite direction.

7. An alarm attachment for telephone circuits including a rocking bar, a pair of contact fingers carried by the rocking bar, a contact adapted to be engaged by one of the fingers when the bar is rocked in one direction, a pair of terminal bars, a pair of terminal members applied to each of the terminal bars, one set of terminal members having the telephone wires connected thereto, while the opposite set of terminal members have the telephone circuit wires connected thereto, a conductor connecting one of the terminal members to the before-mentioned contact member, conductors connecting each of the contact fingers with the respective terminal members of the other terminal bar, a cross wire connecting corresponding terminal members of the two terminal bars, a ringing circuit, and contact strips connected to the terminals of the ringing circuit and arranged to be engaged by the respective contact fingers when the rocking bar is swung in the opposite direction.

8. An alarm attachment for telephone circuits including a plurality of telephone circuits, a rocking bar, a pair of contact fingers upon the rocking bar for each of the telephone circuits, a contact member for each pair of contact fingers, said contact members being adapted to be engaged by one of the fingers of each pair when the rocking bar is swung in one direction and the said contact members and fingers being interposed in one of the wires of the telephone circuits, connections between the opposite contact finger of each pair and the opposite wire of the corresponding telephone circuit, a ringing circuit, and contact strips connected to the terminals of the ringing circuit and arranged to be engaged by the respective contact fingers of each pair when the rocking bar is swung in the opposite direction.

9. An alarm attachment for telephone circuits including a plurality of telephone circuits, a contact carrying bar, a contact thereon for each of the telephone circuits, a rocking bar, a pair of fingers upon the rocking bar for each of the contacts, one of the fingers of each pair being normally in engagement with the said contact, a pair of terminal bars, two sets of terminal members upon each terminal bar, the terminal members on one bar having the respective telephone wires of the different circuits connected thereto, while the terminal members of the opposite bar have the main wires of the telephone circuits connected thereto, cross wires between one set of corresponding terminal members upon the terminal bars, conductors between the opposite terminal members of one terminal bar and the contacts of the contact bar, conductors between the contact fingers and the terminal members of the opposite terminal bar, a ringing circuit, and contact strips connected to the terminals of the ringing circuit and adapted to be engaged by the respective contact fingers when the rocking bar is moved to disengage the contact fingers from the before-mentioned contacts.

10. An alarm attachment for telephone circuits including a rocking bar, a pair of contact fingers carried by the rocking bar, a contact adapted to be engaged by one of the fingers when the bar is rocked in one direction, the said contact finger and contact being interposed in one of the wires of the telephone circuit, a connection between the opposite contact finger and the opposite wire of the telephone circuit, a ringing circuit, contact strips connected to the terminals of the ringing circuit and arranged to be engaged by the respective contact fingers when the rocking bar is swung in the opposite direction, a main shaft, means actuated by the rotation of the main shaft for swinging the rocking bar back and forth, and means for driving the main shaft.

11. An alarm attachment for telephone circuits including a rocking bar, a pair of contact fingers carried by the rocking bar, a contact adapted to be engaged by one of the fingers when the bar is rocked in one direction, the said contact finger and contact being interposed in one of the wires of the telephone circuit, connection between the opposite contact finger and the opposite wire of the telephone circuit, a ringing circuit, contact strips connected to the terminals of the ringing circuit and arranged to be engaged by the respective contact fingers when the rocking bar is swung in one direction, an operating shaft, a toothed disk upon the operating shaft, a shoe riding upon the periphery of the toothed disk, means actuated by the shoe for operating the rocking bar, and means for driving the shaft.

12. An alarm attachment for telephone circuits including a rocking bar, a pair of contact fingers carried by the rocking bar, a contact adapted to be engaged by one of the fingers when the bar is rocked in one direction, the said contact finger and contact being interposed in one of the wires of the telephone circuit, connections between the opposite contact finger and the opposite wire of the telephone circuit, a ringing circuit, contact strips connected to the terminals of the ringing circuit and arranged to be engaged by the respective contact fingers when the rocking bar is swung in the opposite direction, an operating shaft, a disk rigid with the operating shaft and provided with a plurality of cam faces, a shoe adapted to ride upon the cam faces of the disk, means actuated by the shoe for operating the rocking bar, a motor for rotating the operating shaft, and means for releasing the motor.

13. An alarm attachment for telephone circuits including a ringing circuit, an operating shaft, a rocking bar, switch means actuated by the rocking bar for breaking the telephone circuit and introducing the telephone into the ringing circuit, means actuated by the operating shaft for actuating the rocking bar, a motor for driving the operating shaft, means for releasing the motor, and means for automatically stopping the motor after the alarm has been sounded.

14. An alarm attachment for telephone circuits including a ringing circuit, a rocking bar, switch means actuated by the rocking bar for breaking the telephone circuit and introducing the telephone into the ringing circuit, an operating shaft, means operated by the said shaft for actuating the rocking bar, a motor for driving the shaft, said motor including a toothed governor wheel, a detent adapted to engage the governor wheel, a notched disk upon the operating shaft, a spring arm engaging the notched disk and carrying the detent, the detent engaging the governor wheel when the end of the spring strip is seated within the notch of the disk, and means for withdrawing the spring arm from the notched disk to start the motor, the said spring arm then riding upon the periphery of the disk until the notch is again brought into position to be entered thereby.

15. In a telephone system comprising a central station and a plurality of subscribers' lines extending therefrom, the combination therewith at the central station of branch conductors for the respective lines, a source of signaling current for said branch conductors, said lines being normally continuous from the subscribers' stations to the points of junction with said branch conductors and beyond said points into the central station, and means to close circuits comprising said subscribers' lines practically simultaneously through said branch conductors and thereby to apply signaling current to operate the subscribers' signals.

16. In a telephone system comprising a central station and a plurality of subscribers' lines extending therefrom, the combination therewith at the central station of branch conductors for the respective lines, a source of signaling current for said branch conductors, switches by which said branch conductors may be connected to said lines, said lines being normally continuous from the subscribers' stations to said switches and beyond the same into the central station, and means to operate said switches practically simultaneously and thereby to apply signaling current to the subscribers' lines to operate the subscribers' signals.

17. In a telephone system comprising a central station and a plurality of subscribers' lines extending therefrom, the combination therewith of normally-closed switches in said lines, and means to open said switches practically simultaneously and at the same time to apply a source of signaling current to the subscribers' ends of said lines.

18. In a telephone system comprising a central station and a plurality of subscribers' lines extending therefrom, the combination therewith of a branch conductor, a source of signaling current therefor, and means to connect said branch conductor to all of said lines in a definitely fixed period of time of short duration at an intermediate point of each of said lines and thereby to send signaling current over all of said lines within said fixed period.

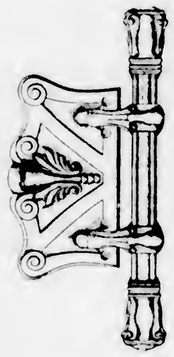
19. In a telephone system comprising a central station and a plurality of subscribers' lines extending therefrom, the combination therewith of a branch conductor, a source of signaling current therefor, means to connect said branch conductor to all of said lines in a definitely fixed period of time of short duration at an intermediate point of each of said lines and thereby to send signaling current over all of said lines within said fixed period, and means to terminate operation of said connecting means at the end of said fixed period.

20. In a telephone system comprising a central station and a plurality of subscribers' lines extending therefrom, the combination therewith of a branch conductor, a source of signaling current to be sent through said branch conductor, means to connect said branch conductor to all of said lines practically simultaneously at an intermediate point of each line, and means to operate said connecting means so as to send a predetermined sequence of impulses of signaling current through said branch conductor and into said lines in multiple and thereby to signal the subscribers accordingly.

21. In a telephone system comprising a central station and a plurality of subscribers' lines extending therefrom, the combination therewith of a branch conductor, a source of signaling current to be sent through said branch conductor, means to connect said branch conductor to all of said lines practically simultaneously at an intermediate point of each line, means to operate said connecting means so as to send a predetermined sequence of impulses of signaling current through said branch conductor and into said lines in multiple and thereby to signal the subscribers accordingly, and means terminating operation of said connecting means after a predetermined series of said impulses has been sent.

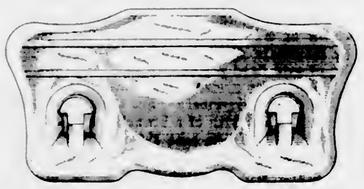
DESIGNS.

50,598. CASKET-HANDLE ARM AND LUG. GEORGE R. BAILEY, Brooklyn, N. Y., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 7, 1917. Serial No. 153,195. Term of patent 7 years.



The ornamental design for a casket handle arm and lug, as shown.

50,599. CASKET-HANDLE AND LUGS. GEORGE R. BAILEY, Brooklyn, N. Y., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 7, 1917. Serial No. 153,197. Term of patent 7 years.



The ornamental design for a casket handle and lugs, as shown.

50,600. ARM-PAN FOR LIGHTING-FIXTURES. ROBERT Y. BARROWS, Rutherford, and GEORGE V. STRAHAN, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1917. Serial No. 143,534. Term of patent 7 years.



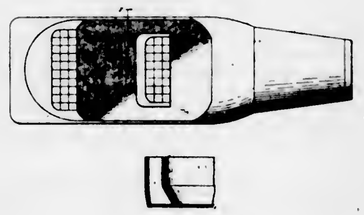
The ornamental design for an arm pan for lighting fixture, as shown.

50,601. TOBACCO-PIPE. JOHN A. BERCHTOLD, Sigel, Ill. Filed Jan. 4, 1917. Serial No. 140,642. Term of patent 3½ years.



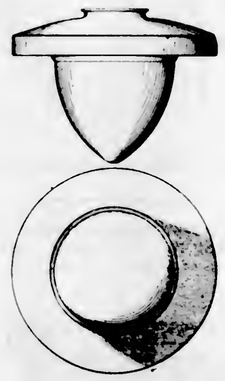
The ornamental design for a tobacco pipe, as shown.

50,602. AUTOMOBILE-BODY. LOYD F. BLASSINGHAM, Barron, Wis. Filed Feb. 2, 1917. Serial No. 146,289. Term of patent 14 years.



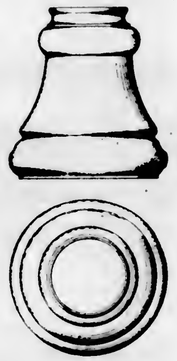
The ornamental design for an automobile body, as shown.

50,603. ILLUMINATING-GLOBE. KRAFT BOOTH, Philadelphia, Pa., assignor to Gillinder & Sons, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 2, 1917. Serial No. 140,319. Term of patent 7 years.



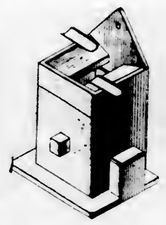
The ornamental design for an illuminating globe as shown.

50,604. ILLUMINATING-GLOBE. KRAFT BOOTH, Philadelphia, Pa., assignor to Gillinder & Sons, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 2, 1917. Serial No. 140,320. Term of patent 7 years.



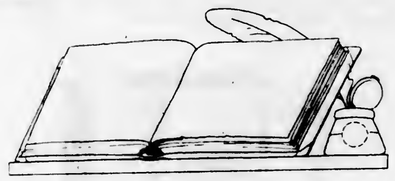
The ornamental design for an illuminating globe as shown.

50,605. COMBINED ASH-RECEIVER, CIGAR-REST, AND MATCH-BOX HOLDER. DANIEL BRODERICK, New York, N. Y. Filed Feb. 5, 1917. Serial No. 146,854. Term of patent 7 years.



The ornamental design for a combined ash receiver, cigar rest and match-box holder, as shown.

50,606. SIGN. IRVING BROMILEY, Cranston, R. I. Filed Feb. 2, 1917. Serial No. 146,288. Term of patent 3½ years.



The ornamental design for a sign as shown.

50,607. CATCH FOR SPECTACLE-CASES. WALTER M. CARTER, New Orleans, La. Filed June 18, 1915. Serial No. 34,933. Term of patent 14 years.



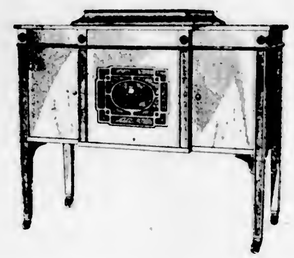
The ornamental design for a catch for spectacle cases, as shown.

50,608. TALKING-MACHINE CABINET. WILLIAM K. COWAN, Chicago, Ill. Filed Mar. 6, 1917. Serial No. 152,930. Term of patent 3½ years.



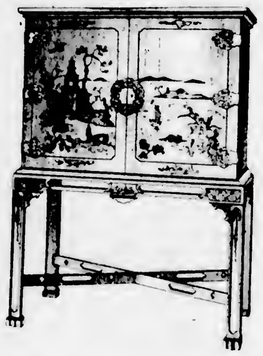
The ornamental design for a talking machine cabinet as shown.

50,609. TALKING-MACHINE CABINET. WILLIAM K. COWAN, Chicago, Ill. Filed Mar. 6, 1917. Serial No. 152,931. Term of patent 3½ years.



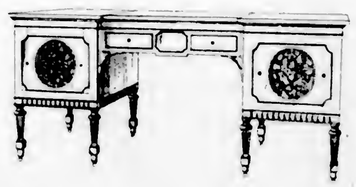
The ornamental design for a talking machine cabinet as shown.

50,610. TALKING-MACHINE CABINET. WILLIAM K. COWAN, Chicago, Ill. Filed Mar. 6, 1917. Serial No. 152,932. Term of patent 3½ years.



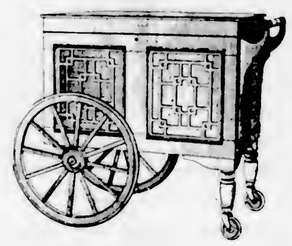
The ornamental design for a talking machine cabinet as shown.

50,611. TALKING-MACHINE CABINET. WILLIAM K. COWAN, Chicago, Ill. Filed Mar. 6, 1917. Serial No. 152,933. Term of patent 3½ years.



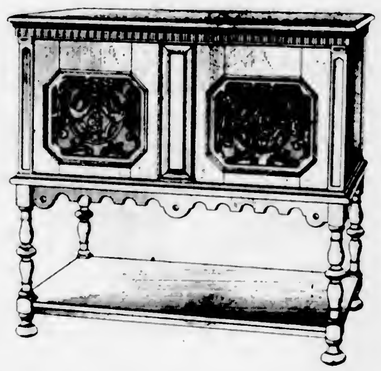
The ornamental design for a talking machine cabinet as shown.

50,612. TALKING-MACHINE CABINET. WILLIAM K. COWAN, Chicago, Ill. Filed Mar. 6, 1917. Serial No. 152,934. Term of patent 3½ years.



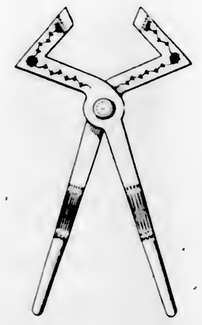
The ornamental design for a talking machine cabinet as shown.

50,613. TALKING-MACHINE CABINET. WILLIAM K. COWAN, Chicago, Ill. Filed Mar. 6, 1917. Serial No. 152,935. Term of patent 3½ years.



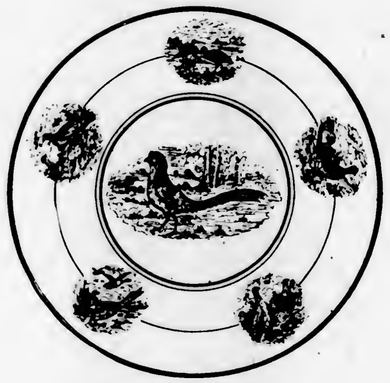
The ornamental design for a talking machine cabinet as shown.

50,614. HOG-HOLDER. THOMAS B. DWYER, Lewellen, Nebr. Filed Dec. 30, 1916. Serial No. 139,949. Term of patent 14 years.



The ornamental design for a hog holder, as shown.

50,615. PLATE OR SIMILAR ARTICLE. ROBERT ERLEBACH, Brooklyn, N. Y., assignor to The Palm Brothers Company, New York, N. Y. Filed Feb. 24, 1917. Serial No. 150,825. Term of patent 3½ years.



The ornamental design for a plate or similar article, as shown.

50,616. PLATE OR SIMILAR ARTICLE. ROBERT ERLEBACH, Brooklyn, N. Y., assignor to The Palm Brothers Company, New York, N. Y. Filed Feb. 23, 1917. Serial No. 150,591. Term of patent 3½ years.



The ornamental design for a plate or similar article, as shown.

50,617. PLATE OR SIMILAR ARTICLE. RUDOLF GAERTNER, New York, N. Y. Filed Feb. 21, 1917. Serial No. 150,276. Term of patent 3½ years.



The ornamental design for a plate or similar article, as shown.

50,618. PLATE OR SIMILAR ARTICLE. HANS GUENTHERMANN, Mount Vernon, N. Y. Filed Feb. 21, 1917. Serial No. 150,277. Term of patent 3½ years.



The ornamental design for a plate or similar article, as shown.

50,619. DISPLAY-STAND. JOHN A. GUSTUS and HENRY J. ERZINGER, Chicago, Ill. Filed Dec. 7, 1916. Serial No. 135,707. Term of patent 3½ years.



The ornamental design for a display stand as shown.

50,620. INSIGNIA, BUTTON, PIN, FOB, BOX-TOP, PAPER-WEIGHT, OR SIMILAR ARTICLES. JOHN FRANCIS HANBURY, New York, N. Y. Filed Feb. 15, 1916. Serial No. 78,544. Term of patent 3½ years.



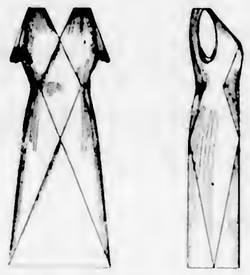
The ornamental design for an insignia, button, pin, fob, box-top, paper weight or similar articles as shown.

50,621. TEXTILE FABRIC. EUGENE IRVING HANSON, New Rochelle, N. Y., assignor to H. R. Mallinson & Co., New York, N. Y., a Firm composed of Hiram Royal Mallinson and Eugene Irving Hanson. Filed Mar. 20, 1917. Serial No. 156,211. Term of patent 3½ years.



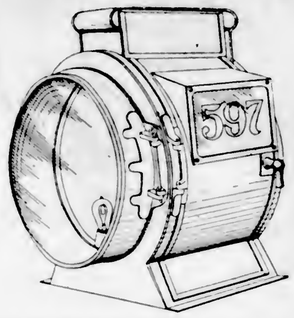
The design for a textile fabric substantially as shown and described.

50,622. GARMENT FOR WOMEN. BERTHA HERBERT HOLLEY, New York, N. Y. Filed Nov. 16, 1916. Serial No. 131,806. Term of patent 7 years.



The ornamental design for a garment for women, as shown.

50,623. HEADLIGHT-CASING. JOHN E. KILKER and CHARLES W. DAKE, Chicago, Ill., assignors to Pyle National Electric Headlight Company, Chicago, Ill., a Corporation of New Jersey. Filed Mar. 18, 1916. Serial No. 85,224. Term of patent 14 years.



The ornamental design for a headlight casing as shown.

50,624. VENTILATOR. LOUIE KLIMA, Owatonna, Minn. Filed Jan. 19, 1917. Serial No. 143,390. Term of patent 14 years.



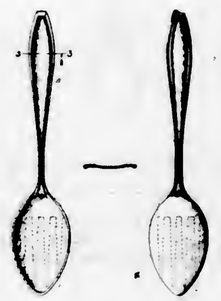
The ornamental design for a ventilator, as shown.

50,625. KETTLE-SPOUT. CARL LUND, Port Orchard, Wash. Filed Nov. 20, 1915. Serial No. 62,659. Term of patent 14 years.



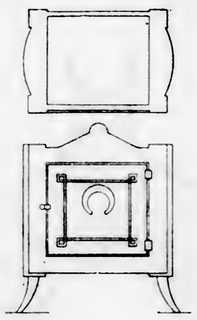
The ornamental design for kettle spout as shown.

50,626. SPOON, FORK, OR SIMILAR ARTICLE. WILLIAM MALMQUIST, Wallingford, Conn., assignor to Simeon L. and George H. Rogers Co., Wallingford, Conn., a Corporation of Maine. Filed Jan. 17, 1917. Serial No. 142,957. Term of patent 7 years.



The ornamental design for a spoon, a fork or a similar article, as shown.

50,627. WARMING-OVEN. HANNAH NORDMAN, Seattle, Wash., assignor of one-half to Edele M. Johnson, King county, Wash. Filed May 31, 1916. Serial No. 100,971. Term of patent 3½ years.



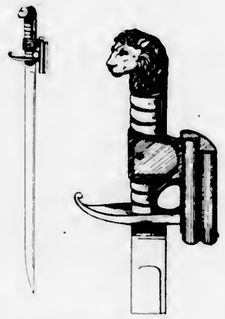
The ornamental design for a warming oven, as shown.

50,628. SPOON. GEORGE R. PLOETZ, New York, N. Y. Filed Feb. 9, 1917. Serial No. 147,715. Term of patent 3½ years.



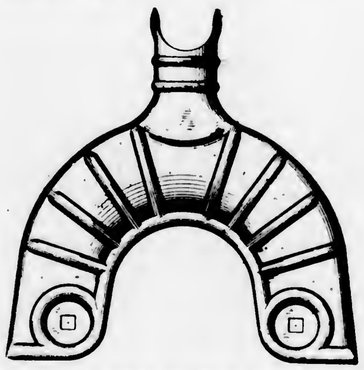
The ornamental design for spoon as shown.

50,629. COMBINED PISTOL AND SABER. STANISLAW PRZEPIORKA, Medina, N. Y. Filed Dec. 16, 1916. Serial No. 137,332. Term of patent 7 years.



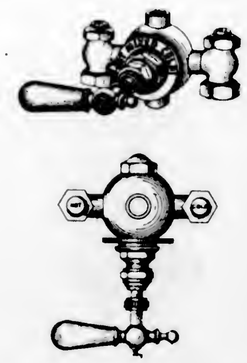
The ornamental design for a combined pistol and saber, as shown.

50,630. BROOM-CLAMP. MARTIN RASMUSSEN, Racine, Wis. Filed Feb. 19, 1917. Serial No. 149,689. Term of patent 3½ years.



The ornamental design for broom clamp substantially as shown.

50,631. VALVE-CASING. ROBERT W. REID, Jr., Brooklyn, N. Y. Filed Feb. 3, 1917. Serial No. 146,532. Term of patent 14 years.



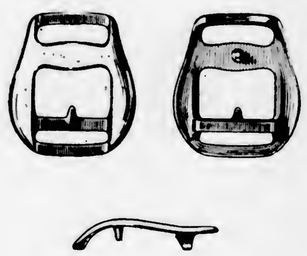
The ornamental design for a valve casing as shown.

50,632. CRETONNE OR OTHER TEXTILE FABRIC. MATTHEW W. RYAN, New York, N. Y. Filed Jan. 18, 1917. Serial No. 143,184. Term of patent 3½ years.



The ornamental design for a cretonne or other textile fabric, consisting of the design substantially as shown.

50,633. SHIELD-BUCKLE. RUDOLPH A. SCHWAHN, Eau Claire, Wis. Filed Jan. 5, 1917. Serial No. 140,837. Term of patent 14 years.



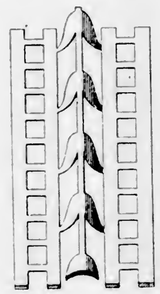
The ornamental design for a shield buckle, as shown.

50,634. CANOPY FOR GAS AND ELECTRIC FIXTURES. BENJAMIN SCHWARTZMAN, Brooklyn, N. Y., assignor to Samuel Shapiro, Joseph Shapiro, Solomon Shapiro, Dave Shapiro, and Morris Berman, New York, N. Y., Copartners doing business under the name of Reliance Metal Spinning Company, New York, N. Y. Filed Jan. 12, 1916. Serial No. 71,794. Term of patent 3½ years.



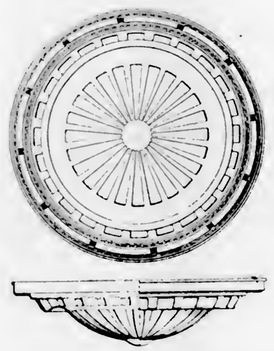
The ornamental design for a canopy for gas and electric fixtures, as shown.

50,635. CUT-OUT BORDER FOR PRECIOUS-METAL WARE. CHARLES F. SIMMS, Attleboro, Mass. Filed July 15, 1916. Serial No. 109,570. Term of patent 3½ years.



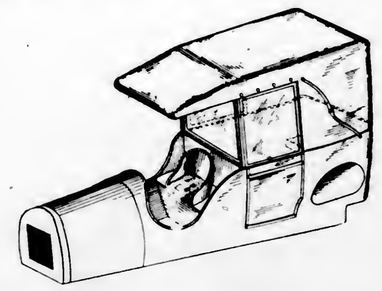
The ornamental design for a cut-out border for precious metal ware as shown.

50,636. LIGHT-FIXTURE. SIMON TEPFER, Brooklyn, N. Y., assignor to Universal Metal Spinning & Stamping Company, New York, N. Y., a Corporation. Filed Jan. 19, 1917. Serial No. 143,388. Term of patent 3½ years.



The ornamental design for a light fixture as shown.

50,637. COVERED VEHICLE-BODY. WILLARD IRVING TWOMBLY, New York, N. Y. Filed Oct. 26, 1914. Serial No. 868,772. Term of patent 3½ years.



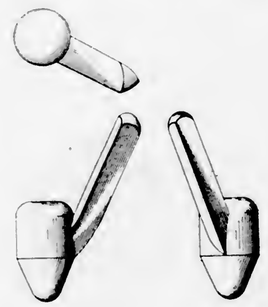
The ornamental design for a covered vehicle body, as shown.

50,638. RADIATOR FOR AUTOMOBILES AND OTHER VEHICLES. JOHN W. WATSON, Wayne, Pa. Filed Jan. 27, 1917. Serial No. 145,003. Term of patent 14 years.



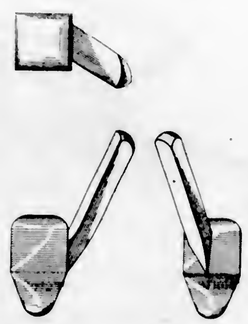
The ornamental design for radiator for automobiles and other vehicles substantially as shown and described.

50,639. STYLUS FOR PHONOGRAPHS. JOSEPH WOLFF, New York, N. Y., assignor to Sonora Phonograph Corporation, a Corporation of New York. Filed Nov. 27, 1914. Serial No. 874,342. Term of patent 7 years.



The ornamental design for a stylus for phonographs, as shown.

50,640. STYLUS FOR PHONOGRAPHS. JOSEPH WOLFF, New York, N. Y., assignor to Sonora Phonograph Corporation, a Corporation of New York. Filed Nov. 27, 1914. Serial No. 874,343. Term of patent 7 years.



The ornamental design for a stylus for phonographs, as shown.

50,641. CABINET FOR PHONOGRAPHS. WALTER J. BAKER, Chicago, Ill. Filed Mar. 6, 1917. Serial No. 152,941. Term of patent 3½ years.



The ornamental design for a cabinet for phonographs, as shown.

TRADE-MARKS

PUBLISHED APRIL 17, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 73,413. (CLASS 43. THREAD AND YARN.) DOLLFUS-MIEG & CIE. SOCIÉTÉ ANONYME, Mülhouse, Germany. Filed Oct. 16, 1913. Under ten-year proviso.

DMC

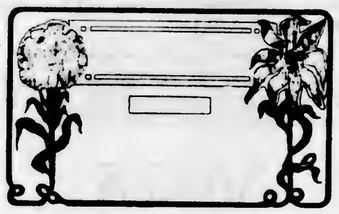
Particular description of goods.—Thread, Yarns, and Twists.
Claims use since 1841.

Ser. No. 83,583. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) F. A. HARDY & Co., Chicago, Ill. Filed Dec. 30, 1914.

OxylWeld

No claim being made to the word "Oxy" or the word "Weld" apart from the combination shown.
Particular description of goods.—Ophthalmic Lenses.
Claims use since Dec. 15, 1914.

Ser. No. 92,767. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed Feb. 11, 1916.



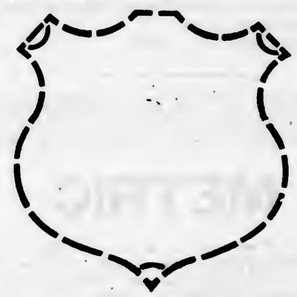
Particular description of goods.—Toilet-Paper.
Claims use since Mar. 20, 1913.

Ser. No. 93,305. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILLIAM J. KELLEY, Chicago, Ill., assignor to The N. K. Fairbank Company, Chicago, Ill., a Corporation of New Jersey. Filed Mar. 4, 1916.

FAIRY

Particular description of goods.—Shaving-Cream, Shaving-Powder, and Shaving-Stick.
Claims use since June 17, 1915.

Ser. No. 95,893. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) OTTO HIGEL COMPANY, INC., Buffalo, N. Y. Filed June 15, 1916.



Particular description of goods.—Player-Actions for Pianos.
Claims use since Feb. 21, 1914.

Ser. No. 96,805. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDGAR P. SHERMAN, Woodward, Ala. Filed July 24, 1916.



Particular description of goods.—A Liver-Tonic.
Claims use since Apr. 1, 1916.

Ser. No. 97,882. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCOTT & BOWNE, Bloomfield, N. J. Filed Sept. 9, 1916.

KERMAX

Particular description of goods.—Antiseptic Solution.
Claims use since Aug. 23, 1916.

Ser. No. 98,165. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GULF MFG. CO., LTD., New Orleans, La. Filed Sept. 22, 1916.

DIXIE

Particular description of goods.—Food-Flavoring Extracts.
Claims use since the year 1884.

Ser. No. 98,228. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SYRACUSE MILLING COMPANY, Syracuse, N. Y. Field Sept. 25, 1916.

SYRAGOLD

Particular description of goods.—Oats, Corn, Meal, Cracked Corn, Ground Oats, Crushed Oats, Ground Corn and Oats, Dairy Feed, Stock Feed, Scratch Grain, Little-Chick Feed, and Dry Mash.
Claims use since Nov. 2, 1910.

Ser. No. 98,369. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) METRIC PACKING COMPANY, Buffalo, N. Y. Filed Oct. 2, 1916.

METRIC

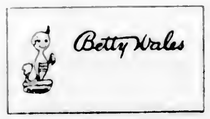
Particular description of goods.—Machinery Packing Made of Textile Fabric, Yarn, Rubber, Asbestos, Graphite, Metal, and Various Combinations of These Materials.
Claims use since about June 1, 1916.

Ser. No. 98,644. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARKANSAS GROCER CO., Blytheville, Ark. Filed Oct. 14, 1916.

EXCELLO

Comprising the word "Excello."
Particular description of goods.—Canned Goods—viz., Peaches, Pears, Strawberries, Gooseberries, Raspberries, Grated Pineapple, Apples, Plums, Cherries, Blackberries, Tomatoes, Lima Beans, Kidney-Beans, Sweet Potatoes, Hominy, Sauer-Kraut, Pumpkins, Strawberry-Beets, String-Beans, Rice, Mince-Meat, Prepared Mustard, Pork and Beans, Syrup and Sorghum, Extracts and Spices—viz., Strawberry Extract, Banana Extract, Lemon Extract, and Vanilla Extract, Leaf-Sage, Ginger, Cloves, Allspice, Coffee, Lard, and Soda.
Claims use since June, 1903.

Ser. No. 98,997. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GOLDMAN COSTUME CO., New York, N. Y. Filed Oct. 31, 1916.



No claim being made for the use of the words "Porous Plaster."
Particular description of goods.—Adhesive Plasters.
Claims use since Oct. 24, 1916.

Ser. No. 99,239. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EUVENOL COMPANY, Minneapolis, Minn. Filed Nov. 11, 1916.

EUVENOL

Particular description of goods.—Tooth-Paste, Talcum Powder, Face-Powder, Cold-Cream, Vanishing Cream, Toilet Cream, Shampoo Preparation, Perfume, and Toilet Water.
Claims use since about May 1, 1915, on tooth-paste, talcum powder, face-powder, cold-cream, vanishing cream, and toilet cream; since about Nov. 1, 1915, on shampoo preparation; since May 1, 1916, on perfume; since Nov. 1, 1916, on toilet water.

Ser. No. 99,339. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) CROUCH & FITZGERALD, New York, N. Y. Filed Nov. 17, 1916.



Particular description of goods.—Hat-Boxes, Valises, Hat-Trunks, Automobile-Trunks, Locker-Trunks, Wardrobe-Trunks, Sample-Cases, Toilet-Cases, Special Salesman's Cases, Special Traveling-Cases, and Traveling-Bags.
Claims use since about 1885.

Ser. No. 99,387. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) WILLIAM E. SPENCER, New York, N. Y. Filed Nov. 18, 1916.

VULPA

Particular description of goods.—Adhesive Vulcanizing Patches and Adhesive Vulcanizing Fabrics.
Claims use since about Sept. 12, 1916.

Ser. No. 99,445. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THOMAS LAMBE MCGEE, Drogheda, Ireland. Filed Nov. 21, 1916.

TONLODE

Particular description of goods.—Automobile-Chassis.
Claims use since February, 1916.

Ser. No. 99,602. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) H. W. JOHNS-MANVILLE COMPANY, New York, N. Y. Filed Nov. 28, 1916.



No claim being made to the words "Asbestos Sheet Packing Style No. 60, Covers the Continent, Trade Mark, Made in U. S. A."
Particular description of goods.—Asbestos Sheet-Packing.
Claims use since the 26th day of August, 1916.

Ser. No. 99,645. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) DANIEL ABERLE & SONS, St. Paul, Minn. Filed Dec. 1, 1916.



The picture is fanciful, no claim being made to the word "Hollister" and the words "By Cracky, It's Good Old Hollister."
Particular description of goods.—Whisky, Rum, Ethyl Alcohol, Brandy, Gin, and Cordials.
Claims use since on or about July 15, 1914.

Ser. No. 99,691. (CLASS 39. CLOTHING.) TOMAHAWK SHOE CO., Tomahawk, Wis. Filed Dec. 2, 1916.

TOMAHAWK

Particular description of goods.—Boots and Shoes Made of Leather Skins and Textile Materials.
Claims use since Jan. 1, 1915.

Ser. No. 99,697. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN LEAD COMPANY, New York, N. Y. Filed Dec. 4, 1916.



No claim being made to the word "Rinehart."
Particular description of goods.—Type-Metals, Solders, Composition Metals, Metal Alloys, Lead Bars, Pig-Lead, Babbitt Metals.
Claims use since Jan. 1, 1911.

Ser. No. 99,801. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ACME CLEANER MANUFACTURING COMPANY, Cleveland, Ohio. Filed Dec. 9, 1916.

ACME

Particular description of goods.—Wall-Paper Cleaner.
Claims use since about Oct. 1, 1898.

Ser. No. 99,962. (CLASS 5. ADHESIVES.) LIBERTY PAPER CO., New York, N. Y. Filed Dec. 15, 1916.

TIEDY

Particular description of goods.—Gummed Paper Tape.
Claims use since Sept. 16, 1915.

Ser. No. 100,089. (CLASS 17. TOBACCO PRODUCTS.) MINGA POPE DURYEA, New York, N. Y. Filed Dec. 22, 1916.



Particular description of goods.—Rolled Cigarettes.
Claims use since on or about Nov. 4, 1916.

Ser. No. 100,156. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JEAN WALLACE BUTLER, Chicago, Ill. Filed Dec. 26, 1916. Under ten-year proviso.

BUENA

Particular description of goods.—Almond Skin-Cerate, Dandruff-Lotion, Flesh-Rejuvenator, Marshmallow Skin-Paste, Emollient Skin-Tonic, Dandruff-Salve, Antiseptic

Steaming Fluid for Facial Steam-Bath, Orris and Lilac Milk, Skin-Cleanser, Petrol Depilatory, Face-Bleach, Eyebrow-Pencil, Cuticle-Cream, Nail-Paste, Freckle-Eradicator, Cinchona Hair-Tonic, Nail-Bleach, Acne-Lotion, Skin-Cleaning Lotion, Freckle-Cream, Eczema-Salve, Disappearing Massage-Cream, Persian Face-Pack, Dermatological Powder, Rouge, Acacia Lotion, Hand-Whitener, Skin Astringent Tonic, Massage-Cream, Brilliantine, Neptune Bath-Salts, Cake-Rouge, Talcum Powder, Perfumes, Lip-Salve, Face-Powder.

Claims use since the year 1893.

Ser. No. 100,222. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) JOHN OLSEN NYGAARD, Christiania, Norway. Filed Dec. 28, 1916.

Mandarin

Particular description of goods.—Press-Buttons or Separable Fasteners.

Claims use since June, 1916.

Ser. No. 100,226. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) STEWART-WARNER SPEEDOMETER CORPORATION, Chicago, Ill. Filed Dec. 28, 1916.

MOGUL

Particular description of goods.—Spark-Plugs.

Claims use since June 1, 1915.

Ser. No. 100,317. (CLASS 39. CLOTHING.) CARL SCHEVITZ, Jacksonville, Fla. Filed Jan. 2, 1917.



Particular description of goods.—Leather, Rubber, and Canvas Boots, Shoes, Slippers, and Sandals.

Claims use since Aug. 10, 1905.

Ser. No. 100,503. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SPRATT'S PATENT (AMERICA) LIMITED, London, England, and Newark, N. J. Filed Jan. 9, 1917.



Particular description of goods.—Dog-Biscuit and other Foods for Dogs, Cats, and other Animals and Substances and Preparations for Feeding Pheasants and other Game-Birds and Poultry.

Claims use since Jan. 1, 1871.

Ser. No. 100,544. (CLASS 5. ADHESIVES.) GUY K. COGSWELL, Hutchinson, Kans. Filed Jan. 12, 1917.



Particular description of goods.—Tire-Repairing Cement.

Claims use since September, 1916.

Ser. No. 100,629. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL IMPORTING CO., Boston, Mass. Filed Jan. 15, 1917.



Particular description of goods.—Bread, Toast, and Potato-Starch.

Claims use since July 1, 1915.

Ser. No. 100,724. (CLASS 17. TOBACCO PRODUCTS.) R. J. REYNOLDS TOBACCO COMPANY, Winston-Salem, N. C. Filed Jan. 18, 1917.

RJR

Particular description of goods.—Plug and Twist Tobacco.

Claims use since about June 1, 1885.

Ser. No. 100,789. (CLASS 12. CONSTRUCTION MATERIALS.) APCO ASPHALT ROOFING CO., New York, N. Y. Filed Jan. 22, 1917.



Particular description of goods.—Asphalt Roofing.

Claims use since on or about Nov. 9, 1914.

Ser. No. 100,822. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Jan. 22, 1917.

Honor Bu

Particular description of goods.—Knock-down Houses.

Claims use since Aug. 1, 1916.

Ser. No. 100,910. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE CINCINNATI BUTCHERS SUPPLY COMPANY, Cincinnati, Ohio. Filed Jan. 25, 1917.

BOSS

Particular description of goods.—Machinery, Packing-House Appliances and Supplies, and Store-Fixtures for Butchers' and Meat-Packers' Use, as Follows: Meat-Cutters, Enterprise Cutters, Fat-Cutters, Head-Splitters, Back-Fat Skinners, Meat-Mixers, Sausage-Stuffers, Casing-Cleaners, Hog-Scrapers, Lard-Presses, Lard-Strainers, Belly-Rollers, Hog-Hoists, Knocking-Pens, and Overhead Roller-Tracks and Manually-Operated Switches Therefor.

Claims use since March, 1903.

Ser. No. 101,011. (CLASS 12. CONSTRUCTION MATERIALS.) MISSISSIPPI LUMBER COMPANY, Chicago, Ill. Filed Jan. 29, 1917.



Particular description of goods.—Hardwood and Pine Lumber.

Claims use since 1900.

Ser. No. 101,020. (CLASS 6. (CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCHOLL MANUFACTURING COMPANY, INC., Chicago, Ill. Filed Jan. 29, 1917.

FIXO

Particular description of goods.—Corn-Plasters.

Claims use since 1906.

Ser. No. 101,022. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SCHOLL MANUFACTURING COMPANY, INC., Chicago, Ill. Filed Jan. 29, 1917.

Korrecto

Particular description of goods.—Instep-Arch Supports.

Claims use since 1906.

Ser. No. 101,049. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. SLAUSON CO., Stamford, Conn. Filed Jan. 30, 1917.

cesco

Particular description of goods.—Canned Fruits and Vegetables.

Claims use since October, 1916.

Ser. No. 101,095. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) IVY MILK PRODUCTS CO., Huron, S. D., and Minneapolis, Minn. Filed Feb. 1, 1917.



Particular description of goods.—Canned Unsweetened Sterilized Evaporated Milk.

Claims use since Dec. 16, 1916.

Ser. No. 101,147. (CLASS 37. PAPER AND STATIONERY.) GRAPHIC DUPLICATOR COMPANY, New York, N. Y. Filed Feb. 3, 1917.

Graphic

Particular description of goods.—Duplicators.

Claims use since about Nov. 1, 1916.

Ser. No. 101,182. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) SUBMARINE WIRELESS COMPANY, New York, N. Y. Filed Feb. 5, 1917.



Particular description of goods.—Sound-Operated Toys Such as are Known in the Trade as the Wireless Pup, Teletoy Dog, and the Like.

Claims use since Jan. 1, 1917.

Ser. No. 101,317. (CLASS 39. CLOTHING.) BLOOM & MILLMAN, New York, N. Y. Filed Feb. 12, 1917.

Everwash

Particular description of goods.—Shirt-Waists for Women.

Claims use since Oct. 1, 1906.

Ser. No. 101,342. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) STAYBESTOS MANUFACTURING COMPANY, Philadelphia, Pa. Filed Feb. 12, 1917.

S-M-C

Particular description of goods.—Brakelinings.

Claims use since about 1910.

Ser. No. 101,350. (CLASS 39. CLOTHING.) GEORGE BORGFELDT & Co., New York, N. Y. Filed Feb. 14, 1917.

MERITAS

Particular description of goods.—Headwear for Men, Women, and Children—Namely, Hats, Caps, and Bonnets.
Claims use since Jan. 29, 1917.

Ser. No. 101,381. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE CUSSINS & FEARN Co., Columbus, Ohio. Filed Feb. 15, 1917.

WHITE HOUSE

Particular description of goods.—Gas and Coal Stoves.
Claims use since about Jan. 1, 1903.

Ser. No. 101,448. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) A. KREAMER, INC., Brooklyn, N. Y. Filed Feb. 17, 1917. Under ten-year proviso.

KREAMERWARE

Particular description of goods.—Candle-Holders, Candlestick-Holders, Range-Boilers, and Carriage Foot-Warmers.
Claims use since Jan. 1, 1886.

Ser. No. 101,449. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) A. KREAMER, INC., Brooklyn, N. Y. Filed Feb. 17, 1917. Under ten-year proviso.

KREAMERWARE

Particular description of goods.—Stomach-Warmers and Douche-Pans.
Claims use since Jan. 1, 1886.

Ser. No. 101,473. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BLAKE MILLING COMPANY, Edwardsville, Ill. Filed Feb. 19, 1917.

SOLAX

Particular description of goods.—Wheat-Flour.
Claims use since July 22, 1914.

Ser. No. 101,501. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Feb. 19, 1917.

ROLLO

Particular description of goods.—Biscuit.
Claims use since as early as Feb. 27, 1908.

Ser. No. 101,523. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WELLS-ABBOTT-NIEMAN Co., Schuyler, Nebr. Filed Feb. 19, 1917.

STRONGARM



Particular description of goods.—Wheat-Flour.
Claims use since Nov. 1, 1916.

Ser. No. 101,540. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES F. WITT, Minneapolis, Minn. Filed Feb. 20, 1917.

CFW

Particular description of goods.—Print-Butter.
Claims use since Feb. 11, 1916.

Ser. No. 101,589. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) C. E. BYRNE PIANO Co., INC., New York, N. Y. Filed Feb. 23, 1917. Under ten-year proviso.

J. C. Wheeler & Co.

Particular description of goods.—Pianos.
Claims use since Jan. 1, 1895.

Ser. No. 101,603. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THOMAS B. HALLOCK, Brooklyn, N. Y. Filed Feb. 23, 1917.

BOREAL

Comprising the word "Boreal."
Particular description of goods.—Ventilators.
Claims use since Sept. 23, 1914.

Ser. No. 101,606. (CLASS 39. CLOTHING.) EDWIN ELKAN LION, New York, N. Y. Filed Feb. 23, 1917.

Blue Jacket

Particular description of goods.—Boys' Outer Suits, Jackets, Overcoats, Hats and Caps, Neckties, and Mufflers.
Claims use since December, 1913.

Ser. No. 101,609. (CLASS 39. CLOTHING.) MCKIBBIN, DRISCOLL & DORSEY, INC., St. Paul, Minn. Filed Feb. 23, 1917.



Particular description of goods.—Sheepskin-Lined Coats.
Claims use since January, 1906.

Ser. No. 101,629. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) VULCANITE MANUFACTURING Co., Lindenhurst, N. Y. Filed Feb. 23, 1917.



Particular description of goods.—Snap-Fasteners.
Claims use since October, 1915.

Ser. No. 101,672. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE BEAVER COMPANY, Buffalo, N. Y. Filed Feb. 26, 1917.



Particular description of goods.—Blackboards and Similar Boards for Writing Purposes.
Claims use since the 1st of February, 1917.

Ser. No. 101,673. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOSEPH C. BENDER, Denver, Colo. Filed Feb. 26, 1917.

OLD BLACK JOE

Particular description of goods.—Stove-Polish.
Claims use since Feb. 17, 1917.

Ser. No. 101,681. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) DURKEE-ATWOOD CO., Minneapolis, Minn. Filed Feb. 26, 1917.

RieNie

Particular description of goods.—Tire-Powder and Tire-Mica.
Claims use since the 11th day of December, 1911.

Ser. No. 101,763. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. VAN LANDINGHAM Co., Los Angeles, Cal. Filed Feb. 27, 1917.

RUBIDOUX

Particular description of goods.—Canned Sardines.
Claims use since May 15, 1916.

Ser. No. 101,787. (CLASS 17. TOBACCO PRODUCTS.) LIGGETT & MYERS TOBACCO COMPANY, New York, N. Y. Filed Feb. 28, 1917. Under ten-year proviso.

THE
Richmond
STRAIGHT CUT
No. 1 CIGARETTES.

Particular description of goods.—Cigarettes.
Claims use since about 1881.

Ser. No. 101,872. (CLASS 39. CLOTHING.) R. H. MACY & Co., New York, N. Y. Filed Mar. 3, 1917.

Alwyn

Particular description of goods.—Gloves.
Claims use since 1903.

Ser. No. 101,873. (CLASS 39. CLOTHING.) R. H. MACY & Co., New York, N. Y. Filed Mar. 3, 1917.

Marigold

Particular description of goods.—Gloves.
Claims use since 1903.

Ser. No. 101,874. (CLASS 39. CLOTHING.) R. H. MACY & CO., New York, N. Y. Filed Mar. 3, 1917.

Rosemary

Particular description of goods.—Gloves.
Claims use since 1903.

Ser. No. 101,875. (CLASS 39. CLOTHING.) R. H. MACY & CO., New York, N. Y. Filed Mar. 3, 1917.

Beryl

Particular description of goods.—**Gloves.**
***Claims use* since 1903.**

Ser. No. 101,876. (CLASS 39. CLOTHING.) R. H. MACY & CO., New York, N. Y. Filed Mar. 3, 1917.

Lady Washington

Particular description of goods.—Gloves.
Claims use since 1903.

Ser. No. 101,889. (CLASS 37. PAPER AND STATIONERY.) WORTENDYKE MANUFACTURING CO., Richmond, Va. Filed Mar. 3, 1917.

WURTHI

Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since Feb. 15, 1917.

Ser. No. 101,890. (CLASS 37. PAPER AND STATIONERY.) WORTENDYKE MANUFACTURING CO., Richmond, Va. Filed Mar. 3, 1917.

GRAEMAR

Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since Feb. 15, 1917.

Ser. No. 101,891. (CLASS 37. PAPER AND STATIONERY.) WORTENDYKE MANUFACTURING CO., Richmond, Va. Filed Mar. 3, 1917.

W·M·C

Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since Feb. 15, 1917.

Ser. No. 101,892. (CLASS 37. PAPER AND STATIONERY.) WORTENDYKE MANUFACTURING CO., Richmond, Va. Filed Mar. 3, 1917.

LUCEFF

Particular description of goods.—Toilet-Paper and Paper Towels.
Claims use since Feb. 15, 1917.

Ser. No. 101,893. (CLASS 37. PAPER AND STATIONERY.) WORTENDYKE MANUFACTURING CO., Richmond, Va. Filed Mar. 3, 1917.

AMITY

Particular description of goods.—**Toilet-Paper and Paper Towels.**
***Claims use* since Feb. 15, 1917.**

Ser. No. 101,970. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPPLIANCES.) TERRAPLASTICA MANUFACTURING CO. INC., Newark, N. J. Filed Mar. 7, 1917.

COMPLASTICA

Particular description of goods.—Dental Impression-Trays.
Claims use since Jan. 1, 1917.

Ser. No. 101,977. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ANZAC COMPANY, Boston, Mass. Filed Mar. 8, 1917.



Particular description of goods.—A Cereal Beverage Sold as Soft Drink.
Claims use since about Jan. 29, 1917.

Ser. No. 101,978. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ANZAC COMPANY, Boston, Mass. Filed Mar. 8, 1917.



Particular description of goods.—**A Cereal Beverage** Sold as Soft Drink.
***Claims use* since about July 1, 1916.**

Ser. No. 101,979. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ANZAC COMPANY, Boston, Mass. Filed Mar. 8, 1917.

ANZAC

Particular description of goods.—A Cereal Beverage Sold as Soft Drink.
Claims use since about July 1, 1916.

Ser. No. 102,133. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) P. BALLANTINE & SONS, Newark, N. J. Filed Mar. 14, 1917.

GOLDEN GLOW

Particular description of goods.—Ginger-Ale.
Claims use since Feb. 26, 1917.

Ser. No. 102,143. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) JOHNSON & JOHNSON, New Brunswick, N. J. Filed Mar. 14, 1917.

"COLLEGE"

Particular description of goods.—Suspensory Bandages or Jock-Straps.
Claims use since July, 1916.

Ser. No. 102,225. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) SHER-A-COCA BOTTLING COMPANY, INCORPORATED, Lexington, Ky. Filed Mar. 17, 1917.



Particular description of goods.—A Soft Drink.
***Claims use* since October, 1916.**

Ser. No. 102,249. (CLASS 39. CLOTHING.) LUCY DUFF GORDON, New York, N. Y. Filed Mar. 19, 1917.

Lady Duff Gordon

The words "Lady Duff Gordon" appearing in the facsimile handwriting of the applicant.
Particular description of goods.—Ladies' and Misses' Coats, Cloaks, Suits, Skirts, Gowns, Costumes, Dresses, Blouses, Capes, Hats, Bonnets, Caps, and Corsets.
Claims use since Oct. 1, 1916.

Ser. No. 102,304. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) G. ARTHUR BUHL, Chicago, Ill. Filed Mar. 21, 1917.

ASKUM

Particular description of goods.—A Soft Drink or Beverage.
Claims use since on or about Feb. 19, 1917.

Ser. No. 102,430. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES W. WILLIAMS, Paragould, Ark. Filed Mar. 24, 1917.



The trade-mark consisting of the portrait and facsimile signature of the applicant.
Particular description of goods.—A Pile Remedy.
Claims use since Feb. 23, 1917.

TRADE-MARK REGISTRATIONS GRANTED

APRIL 17, 1917.

116,197. NON-INTOXICATING CEREAL BEVERAGE. ANHEUSER-BUSCH BREWING ASSOCIATION, St. Louis, Mo.
Filed October 25, 1916. Serial No. 98,869. PUBLISHED FEBRUARY 13, 1917.

116,198. ELECTRIC SUCTION-CLEANERS. THE APEX ELECTRICAL MANUFACTURING COMPANY, Cleveland, Ohio.
Filed June 17, 1916. Serial No. 95,928. PUBLISHED FEBRUARY 13, 1917.

116,199. FOLDING AND COMBINATION SCREENS MADE OF WOOD, FIBER, AND SIMILAR MATERIALS. THE BEAVER COMPANY, Buffalo, N. Y.
Filed December 14, 1916. Serial No. 99,922. PUBLISHED FEBRUARY 13, 1917.

116,200. FLEXIBLE RUBBER AND COMPOSITION DISKS FOR USE AS A UNIVERSAL-JOINT MEMBER. F. R. BLAIR & CO., INC., New York, N. Y.
Filed September 7, 1916. Serial No. 97,834. PUBLISHED FEBRUARY 13, 1917.

116,201. ELECTRIC LAMPS. H. BOKER & CO. INC., New York, N. Y.
Filed December 18, 1916. Serial No. 99,997. PUBLISHED FEBRUARY 13, 1917.

116,202. PHOTOGRAPHIC NEGATIVE AND PAPER DEVELOPING COMPOUND. BURKE & JAMES, INC., Chicago, Ill.
Filed November 17, 1916. Serial No. 99,333. PUBLISHED FEBRUARY 13, 1917.

116,203. NECKTIES AND NECKSCARFS. CHURCH WEBB & CLOSE, New York, N. Y.
Filed July 14, 1916. Serial No. 96,557. PUBLISHED NOVEMBER 28, 1916.

116,204. BATH-ROBES, HOUSE-DRESSES, KIMONOS, NEGLIGÉES, AND BATHING-SUITS. MICHAEL COOPER, New York, N. Y.
Filed October 25, 1916. Serial No. 98,874. PUBLISHED FEBRUARY 13, 1917.

116,205. CANDY, AND PARTICULARLY CONFECTION-BARS MADE OF CHOCOLATE AND PEANUTS. WALTER W. DE BEVOISE, Brooklyn, N. Y.
Filed January 16, 1915. Serial No. 83,897. PUBLISHED SEPTEMBER 7, 1915.

116,206. CHEWING-TOBACCO IN PLUG AND OTHER FORMS AND SMOKING-TOBACCO. JOSEPH G. DILL, INC., Richmond, Va.
Filed December 2, 1916. Serial No. 99,675. PUBLISHED FEBRUARY 13, 1917.

116,207. SPARK-PLUGS. EFFICIENCY MOTOR-DEVICE CORPORATION, Omaha, Nebr.
Filed January 16, 1917. Serial No. 100,649. PUBLISHED FEBRUARY 13, 1917.

116,208. PRECIOUS-METAL ALLOY. THE ELECTRO METAL PRODUCTS CO., Cleveland, Ohio.
Filed September 19, 1916. Serial No. 98,081. PUBLISHED FEBRUARY 13, 1917.

116,209. MEDICINE-CABINETS. J. P. EUSTIS MANUFACTURING COMPANY, Boston, Mass.
Filed May 13, 1916. Serial No. 95,124. PUBLISHED JUNE 27, 1916.

116,210. LOGANBERRY BEVERAGE. FEATHERSTON PRODUCTS COMPANY, Portland, Oreg.
Filed January 15, 1917. Serial No. 100,619. PUBLISHED FEBRUARY 13, 1917.

116,211. MANGANESE SALTS. FRAZAR & COMPANY, New York, N. Y.
Filed June 28, 1916. Serial No. 96,201. PUBLISHED FEBRUARY 13, 1917.

116,212. INK-WELLS. THE GENERAL ECLIPSE COMPANY, Danielson, Conn.
Filed December 13, 1916. Serial No. 99,890. PUBLISHED FEBRUARY 13, 1917.

116,213. RUBBER TIRES. GRYPHON RUBBER AND TIRE CORPORATION, New York, N. Y.
Filed December 8, 1916. Serial No. 99,790. PUBLISHED FEBRUARY 13, 1917.

116,214. CIGARS, CIGARETTES, PIPE-TOBACCO, FLAKE CIGARETTE-TOBACCO, CHEWING-TOBACCO, TOBACCO CUTTINGS. WILLIAM F. HEILIGER, San Francisco, Cal.
Filed October 2, 1916. Serial No. 98,356. PUBLISHED FEBRUARY 13, 1917.

116,215. WHEAT-FLOUR. HEZEL MILLING COMPANY, East St. Louis, Ill.
Filed August 9, 1916. Serial No. 97,215. PUBLISHED JANUARY 30, 1917.

116,216. CONSTRUCTION MATERIALS. THE HIGH GRADE MANUFACTURING COMPANY, Cleveland, Ohio.
Filed November 2, 1916. Serial No. 99,037. PUBLISHED FEBRUARY 13, 1917.

116,217. TOILET-PAPER. THE JOHN HOBERG CO., Green Bay, Wis.
Filed October 25, 1916. Serial No. 98,880. PUBLISHED FEBRUARY 6, 1917.

116,218. DUPLICATORS—NAMELY, AN APPARATUS FOR PRODUCING FACSIMILES OF MANUSCRIPTS, TYPE-WRITING, AND THE LIKE. DAVID HYAMS, New York, N. Y.
Filed December 27, 1915. Serial No. 91,768. PUBLISHED FEBRUARY 13, 1917.

116,219. MUSIC-ROLLS FOR AUTOMATIC MUSICAL INSTRUMENTS. IMPERIAL PLAYER ROLL CO., Chicago, Ill.
Filed November 8, 1916. Serial No. 99,168. PUBLISHED FEBRUARY 6, 1917.

116,220. GOLF-BALLS. THE INDIA-RUBBER, GUTTA PERCHA & TELEGRAPH WORKS COMPANY LIMITED, London, England.
Filed May 24, 1916. Serial No. 95,395. PUBLISHED FEBRUARY 13, 1917.

116,221. FLUID-PRESSURE ENGINES AND PARTS THEREOF. INTERNATIONAL HARVESTER CORPORATION, Chicago, Ill.
Filed December 7, 1916. Serial No. 99,764. PUBLISHED FEBRUARY 13, 1917.

116,222. ELECTRIC-LIGHTING FIXTURES AND CERTAIN NAMED PARTS FOR SAME. BENJAMIN F. KLEIN, Cleveland, Ohio.
Filed February 28, 1916. Serial No. 93,143. PUBLISHED FEBRUARY 13, 1917.

116,223. CERTAIN NAMED MACHINERY FOR HANDLING AND TREATING PAPER AND FIBER BOARDS. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed December 9, 1916. Serial No. 99,818. PUBLISHED FEBRUARY 13, 1917.

116,224. OINTMENT FOR SKIN ERUPTIONS. H. S. LAMBDIN, Peru, Kans.
Filed December 13, 1916. Serial No. 99,895. PUBLISHED FEBRUARY 13, 1917.

116,225. LENSES FOR HEADLIGHTS. THE LEGALITE CORPORATION, Boston, Mass.
Filed April 15, 1916. Serial No. 94,449. PUBLISHED FEBRUARY 13, 1917.

116,226. PERFUMERY, TALCUM POWDER, AND SACHETS, SACHET-POWDERS. MCKESSON & ROBBINS, New York, N. Y.
Filed July 15, 1916. Serial No. 96,591. PUBLISHED FEBRUARY 13, 1917.

116,227. ATOMIZING-DISPENSERS FOR LIQUID OIL FOR POLISHING. MAGIC MIST, INCORPORATED, New York, N. Y.
Filed October 24, 1916. Serial No. 98,861. PUBLISHED FEBRUARY 13, 1917.

116,228. RUBBER PNEUMATIC AUTOMOBILE-TIRES FOR PLEASURE-CARS. PHILIP S. MALICKSON, Philadelphia, Pa.
Filed December 11, 1916. Serial No. 99,854. PUBLISHED FEBRUARY 13, 1917.

116,229. WEEKLY PUBLICATION. MARKETS PUBLISHING CORPORATION, New York, N. Y.
Filed December 19, 1916. Serial No. 100,043. PUBLISHED FEBRUARY 13, 1917.

116,230. ELECTRICAL TEST-CLIPS. R. S. MUELLER & Co., Cleveland, Ohio.
Filed January 8, 1917. Serial No. 100,445. PUBLISHED FEBRUARY 13, 1917.

116,231. WOVEN COTTON PIECE GOODS. NEUSS HESSLEIN & Co., New York, N. Y.
Filed January 15, 1917. Serial No. 100,628. PUBLISHED FEBRUARY 13, 1917.

116,232. SILK AND COTTON FABRIC IN THE PIECE. NEW HAMPTON MILLS, New York, N. Y.
Filed August 5, 1916. Serial No. 97,120. PUBLISHED OCTOBER 31, 1916.

116,233. NON-ALCOHOLIC CARBONATED BEVERAGE SOLD AS SOFT DRINK AND SYRUP FOR MAKING SAME. PACIFIC EXTRACT CO., Fresno, Cal.
Filed December 28, 1916. Serial No. 100,223. PUBLISHED FEBRUARY 13, 1917.

116,234. TOILET-PAPER, TISSUE-PAPER, PAPER TOWELS, WAX OR WAXED PAPER, PAPER NAPKINS, AND PAPER DOILIES. PAPER MILLS SPECIALTY CO., INC., Chicago, Ill.
Filed October 23, 1916. Serial No. 98,843. PUBLISHED FEBRUARY 13, 1917.

116,235. NON-ALCOHOLIC MALT BEVERAGE. POPEL-GILLER CO., Warsaw, Ill.
Filed November 22, 1916. Serial No. 99,471. PUBLISHED FEBRUARY 13, 1917.

116,236. MEDICINAL SALVE FOR THE TREATMENT OF BURNS, SCALDS, CUTS, BRUISES, LAMENESS, AND WOUNDS. READE MANUFACTURING CO., Hoboken, N. J.
Filed December 14, 1916. Serial No. 99,946. PUBLISHED FEBRUARY 13, 1917.

116,237. WIRE SCREEN-CLOTH. REYNOLDS WIRE CO., Dixon, Ill.
Filed December 19, 1916. Serial No. 100,047. PUBLISHED FEBRUARY 13, 1917.

116,238. WIRE SCREEN-CLOTH. REYNOLDS WIRE CO., Dixon, Ill.
Filed December 19, 1916. Serial No. 100,045. PUBLISHED FEBRUARY 13, 1917.

116,239. WIRE SCREEN-CLOTH. REYNOLDS WIRE CO., Dixon, Ill.
Filed December 19, 1916. Serial No. 100,046. PUBLISHED FEBRUARY 13, 1917.

116,240. WIRE SCREEN-CLOTH. REYNOLDS WIRE CO., Dixon, Ill.
Filed December 19, 1916. Serial No. 100,048. PUBLISHED FEBRUARY 13, 1917.

116,241. WEEKLY PERIODICAL. J. ROSENBAUM GRAIN COMPANY, Chicago, Ill.
Filed December 30, 1916. Serial No. 100,269. PUBLISHED FEBRUARY 13, 1917.

116,242. MAGAZINES ISSUED MONTHLY. THE RUDDER PUBLISHING CO., New York, N. Y.
Filed November 11, 1916. Serial No. 99,255. PUBLISHED FEBRUARY 13, 1917.

116,243. VELVETS AND PLUSHES IN THE PIECE. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed January 10, 1917. Serial No. 100,525. PUBLISHED FEBRUARY 13, 1917.

116,244. CERTAIN NAMED GAMES, TOYS, AND SPORTING GOODS. SCHMELZER ARMS CO., Kansas City, Mo.
Filed April 18, 1916. Serial No. 94,515. PUBLISHED FEBRUARY 13, 1917.

116,245. FOOT-SOAPS. SCHOLL MANUFACTURING COMPANY, INC., Chicago, Ill.
Filed January 2, 1917. Serial No. 100,315. PUBLISHED FEBRUARY 6, 1917.

116,246. LADIES' LEATHER SHOES. LOUIS SPITZ, Paterson, N. J.
Filed December 12, 1916. Serial No. 99,881. PUBLISHED FEBRUARY 13, 1917.

116,247. NEWSPAPER-SECTIONS. STAR COMPANY, New York, N. Y.
Filed January 8, 1917. Serial No. 100,454. PUBLISHED FEBRUARY 13, 1917.

116,248. NEWSPAPER-SECTIONS. STAR COMPANY, New York, N. Y.
Filed January 8, 1917. Serial No. 100,455. PUBLISHED FEBRUARY 13, 1917.

116,249. NEWSPAPER-SECTIONS. STAR COMPANY, New York, N. Y.
Filed January 8, 1917. Serial No. 100,456. PUBLISHED FEBRUARY 13, 1917.

116,250. DYES. SUNSET SOAP DYE COMPANY, New Rochelle, N. Y.
Filed December 26, 1916. Serial No. 100,187. PUBLISHED JANUARY 23, 1917.

116,251. CIGARS, CIGARETTES, AND SMOKING-TOBACCO. TESTA CIGAR CO., San Francisco, Cal.
Filed November 27, 1916. Serial No. 99,594. PUBLISHED FEBRUARY 13, 1917.

116,252. CORSETS, CORSET-GIRDLES, AND CORSET-COVERS OF BOTH KNITTED AND TEXTILE MATERIALS. LEON THOMAS, Paris, France.
Filed June 19, 1916. Serial No. 95,984. PUBLISHED FEBRUARY 13, 1917.

116,253. MOTION-PICTURE FILMS. TRIANGLE FILM CORPORATION, Richmond, Va., and New York, N. Y.
Filed February 16, 1916. Serial No. 92,903. PUBLISHED FEBRUARY 13, 1917.

116,254. SHOE-POLISH. TUBE BRUSH CO., Boston, Mass.
Filed December 2, 1916. Serial No. 99,693. PUBLISHED FEBRUARY 6, 1917.

116,255. UNDERWEAR AND SWEATERS. UNION SPECIAL MACHINE COMPANY, Chicago, Ill.
Filed October 23, 1914. Serial No. 82,107. PUBLISHED FEBRUARY 13, 1917.

116,256. LIQUID PREPARATION FOR REMOVING OILS AND GREASES FROM WOOLENS AND OTHER TEXTILE FABRICS. WILLIAM L. VOIGT, New York, N. Y.
Filed August 28, 1916. Serial No. 97,674. PUBLISHED FEBRUARY 6, 1917.

116,257. PREPARATION IN LIQUID FORM FOR REMOVING OILS AND GREASES FROM THE SKIN. WILLIAM L. VOIGT, New York, N. Y.
Filed August 28, 1916. Serial No. 97,675. PUBLISHED FEBRUARY 6, 1917.

116,258. CERTAIN NAMED PAINTS AND PAINTERS' MATERIALS. WADSWORTH, HOWLAND & CO., INCORPORATED, Boston, Mass.
Filed December 4, 1916. Serial No. 99,721. PUBLISHED FEBRUARY 13, 1917.

116,259. FLAT AND ENAMEL PAINTS AND COATINGS IN THE NATURE OF PAINTS. WADSWORTH, HOWLAND & CO., INCORPORATED, Boston, Mass.
Filed December 4, 1916. Serial No. 99,722. PUBLISHED FEBRUARY 13, 1917.

116,260. MEDICINAL SOAP HAVING IN SOLUTION A PURE SOLUBLE IODIN. LOUIS C. WEDGEFUTH, Yonkers, N. Y.
Filed November 11, 1914. Serial No. 82,530. PUBLISHED FEBRUARY 6, 1917.

116,261. DEVICES FOR TELEPHONES. THE WEILA-PHONE, INC., New York, N. Y.
Filed January 9, 1917. Serial No. 100,506. PUBLISHED FEBRUARY 13, 1917.

116,262. CARBONIZING-BOXES. WILBUR & CANNON, Syracuse, N. Y.
Filed December 11, 1916. Serial No. 99,865. PUBLISHED FEBRUARY 13, 1917.

116,263. CERTAIN NAMED VEHICLES, NOT INCLUDING ENGINES. WILCOX, CRITTENDEN & CO. INC., Middletown, Conn.
Filed May 31, 1916. Serial No. 95,569. PUBLISHED FEBRUARY 13, 1917.

116,264. GOLF-BALLS. THE WORTHINGTON BALL COMPANY, Elyria, Ohio.
Filed April 13, 1916. Serial No. 94,405. PUBLISHED JUNE 13, 1916.

116,265. WOOLEN GOODS IN THE PIECE. WORUMBO MANUFACTURING COMPANY, Lisbon Falls, Me.
Filed January 8, 1917. Serial No. 100,461. PUBLISHED FEBRUARY 13, 1917.

116,266. WOOLEN GOODS IN THE PIECE. WORUMBO MANUFACTURING COMPANY, Lisbon Falls, Me.
Filed January 8, 1917. Serial No. 100,462. PUBLISHED FEBRUARY 13, 1917.

TRADE-MARK REGISTRATIONS RENEWED.

14,325. COTTON THREADS AND YARNS OF ALL KINDS. ZWIRNEREI & NAEHFADENFABRICK GOEGGINGEN, Augsburg, Germany.
Registered April 26, 1887. Renewed April 26, 1917.

14,336. PANTALOONS. H. MORRIS & BRO., Memphis, Tenn.
Registered April 26, 1887. Renewed April 26, 1917.

14,369. COTTON THREADS AND YARNS OF ALL KINDS. ZWIRNEREI & NAEHFADENFABRICK GOEGGINGEN, Augsburg, Germany.
Registered May 10, 1887. Renewed May 10, 1917.

14,370. COTTON THREADS AND YARNS OF ALL SORTS. ZWIRNEREI & NAEHFADENFABRICK GOEGGINGEN, Augsburg, Germany.
Registered May 10, 1887. Renewed May 10, 1917.

LABELS

REGISTERED APRIL 17, 1917.

20,021.—*Title:* "KLEEN-A-PIPE." (For a Dissolving Cleaning Disinfecting Compound.) ROGER TAYLOR DAVIS, San Antonio, Tex. Filed March 24, 1917.

20,022.—*Title:* "KERR EX-O-DENT." (For Chewing-Gum.) DETROIT DENTAL MANUFACTURING CO., Detroit, Mich. Filed March 26, 1917.

20,023.—*Title:* "'JUST OUT' BABY BANTAM CANDY EGGS." (For Candies.) FARLEY CANDY COMPANY, Chicago, Ill. Filed February 23, 1917.

20,024.—*Title:* "LITTLE COOK ON EVERY BOX." (For Macaroni.) THE FOULDS-BRIGGS CO., Cincinnati, Ohio. Filed March 27, 1917.

20,025.—*Title:* "A 100% CIGAR PAR A 100% CIGAR." (For Cigars.) W. B. GLENN, New York, N. Y. Filed March 15, 1917.

20,026.—*Title:* "GLOVER'S MEDICATED SALT CAKE." (For a Medicated Salt Cake for Stock.) IRWIN N. GLOVER, Bailey, N. C. Filed March 7, 1917.

20,027.—*Title:* "THE RANGER." (For Cigars.) ISIDOR HAGLER, Denver, Colo. Filed March 26, 1917.

20,028.—*Title:* "(FILL EASY) BIN BALER." (For Balers.) K & B Co., Philadelphia, Pa. Filed January 23, 1917.

20,029.—*Title:* "BIG SIX." (For Cigars.) LA KUBRA CIGAR COMPANY, Chicago, Ill. Filed March 27, 1917.

20,030.—*Title:* "LILY MAYONNAISE." (For Mayonnaise Dressing.) SARAH H. LIEB, New York, N. Y. Filed January 27, 1917.

20,031.—*Title:* "APELLA NATURE'S BEST BEVERAGE." (For Non-Alcoholic Beverages.) NATIONAL FRUIT JUICE CO., La Fayette, Ind. Filed March 27, 1917.

20,032.—*Title:* "MEDICINAL." (For Peroxid.) NATIONAL PEROXIDE COMPANY, Brooklyn, N. Y. Filed March 21, 1917.

20,033.—*Title:* "NATIONAL." (For Peroxid.) NATIONAL PEROXIDE COMPANY, Brooklyn, N. Y. Filed March 21, 1917.

20,034.—*Title:* "AVALON." (For Sardines in Oil.) SOUTH COAST CANNING CO., Long Beach, Cal. Filed March 27, 1917.

20,035.—*Title:* "AMBER." (For Non-Intoxicating Cereal Beverage.) ST. LOUIS BEVERAGE COMPANY, St. Louis, Mo. Filed March 26, 1917.

20,036.—*Title:* "MT. FUJI." (For Beer.) TOM K. TANAKA, San Francisco, Cal. Filed March 23, 1917.

PRINTS

REGISTERED APRIL 17, 1917.

4,667.—*Title:* "CARTER INX." (For Carter's Inks and Paste.) THE CARTER'S INK COMPANY, Boston, Mass. Filed March 1, 1917.

4,668.—*Title:* "THE HEXAGON SEWING MACHINE." (For Sewing-Machines.) HEXAGON SEWING MACHINE COMPANY, New York, N. Y. Filed February 23, 1917.

4,669.—*Title:* "THE HEXAGON SEWING MACHINE." (For Sewing-Machines.) HEXAGON SEWING MACHINE COMPANY, New York, N. Y. Filed February 23, 1917.

4,670.—*Title:* "DONT SAY BEER,—SAY SCHLITZ." (For Beer.) JOS. SCHLITZ BREWING COMPANY, Chicago, Ill. Filed March 16, 1917.

4,671.—*Title:* "BE FAIR TO THE LITTLE FOLKS— —, THEY ARE WORTH IT. IN MOST HOMES 'NOTHING IS TOO GOOD FOR THE CHILDREN' AND THE LITTLE FOLKS ENJOY THE TENDER CRISPNESS AND DELICATE FLAVOR OF KELLOGG'S—THE ORIGINAL TOASTED CORN FLAKES.

IN OTHER HOMES THE MOTTO IS 'ANYTHING WILL DO FOR THE CHILDREN'—EVEN THE TOUGH, TASTELESS IMITATIONS OF KELLOGG'S." (For Toasted Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed January 16, 1917.

4,672.—*Title:* "EVERY HELPING OF KELLOGG'S PROVES HOW GOOD CORN FLAKES CAN BE.

OVER A THOUSAND-MILLION DISHES OF KELLOGG'S TOASTED CORN FLAKES WERE EATEN LAST YEAR. NO WONDER PEOPLE PREFER KELLOGG'S—THE ORIGINAL. THESE TENDER GOLDEN FLAKES ARE CRISP AND APPETIZING, THIN DELICATELY TOASTED, WITH A FLAVOR TEMPTING TO THE LAST SPOONFUL. THE RIGHT PACKAGE HAS THIS SIGNATURE: W. K. KELLOGG." (For Toasted Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed March 8, 1917.

4,673.—*Title:* "ALWAYS READY FOR KELLOGG'S TOASTED CORN FLAKES.

CHILDREN TIRE OF DRINKING MILK; BUT THE WISE MOTHER SMILES AND POURS THE MILK PLENTIFULLY INTO A BIG BOWLFUL OF KELLOGG'S. CHILDREN ARE ALWAYS READY FOR KELLOGG'S — THE ORIGINAL TOASTED CORN FLAKES,—THIN, CRISP AND APPETIZING." (For Toasted Corn Flakes.) KELLOGG TOASTED CORN FLAKE CO., Battle Creek, Mich. Filed March 22, 1917.

4,674.—*Title:* "ACORN BRAND, QUALITY FURNITURE." (For Furniture.) CLIFFORD S. REUTER, New York, N. Y. Filed March 30, 1917.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE LUTEN.

Decided January 11, 1916.

1. PATENTABILITY—BRIDGE-ARCHES.

Claims to an arrangement of arches of different lengths in which the difference in height of the springings of adjacent long and short arches necessarily produces a balance of the differing thrusts on the piers, permitting the use of a slender pier, *Held* patentable, although the size of the pier is not specified.

2. SAME—MECHANICAL SKILL—REINFORCEMENTS.

Claims relying for patentability chiefly on the location of reinforcing members in the body of the structure *Held* unpatentable. The location of reinforcing members in the proper places is a matter of design within the skill of the civil engineer.

[Note.—This application has resulted in Patent No. 1,186,109.]

APPEAL from Examiners-in-Chief.

BRIDGE.

Messrs. Hood & Schley for the applicant.

EWING, *Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the action of the Examiner in rejecting claims 3 to 14, inclusive, of which the following are illustrative:

3. The combination of a series of arches of span decreasing toward the end, each arch of shorter span having its two virtual springings at different heights and its higher virtual springing toward the adjacent arch of longer span.

4. The combination of a series of arches of span decreasing toward the end, each arch of shorter span having its two virtual springings at different heights and its higher virtual springing toward the adjacent arch of longer span and higher than the adjacent springing of said adjacent arch of longer span.

7. A bridge structure of hardened plastic comprising a pier, two oppositely extending load-sustaining members resting adjacent ends upon said pier, and reinforcing members embedded near each face of said pier and continuing into the load-sustaining members.

11. A bridge structure comprising two arches of unequal span, a pier support for the adjacent ends of said arches, and reinforcing members embedded in the pier near the springing of the shorter arch and extended along the extrados of the longer arch.

The references cited are: *Reinforced Concrete*, by Buell and Hill; 1904; page 236; Senate Document No. 96, Fifty-fifth Congress, second session, Plates 6, 7, 14, 26, and 27, (shows more completely the structure disclosed in Buell and Hill;) *Engineering News*, volume 39, January 27, 1898, page 54; *Engineering News*, volume 54, October 19, 1905, page 408; *Cement Arms*, 1904, by Berger and Guillerme, Pl. 19; Zogmann, No. 475,842, May 31, 1892; Luten, No. 1,009,676, November 21, 1911; Luten, No. 1,078,510, November 11, 1913.

Applicant has devised a combination of arches of unequal span in which the shorter arch springs from the common pier at a point higher than the longer arch and also at a point higher than its own opposite end, the result being that the greater thrust of the longer arch is balanced by the smaller thrust of the shorter arch, because the point of application is farther from the base of the pier and at the same time the crowns of the arches are in substantial alinement. This arrangement permits the use of slender piers and conduces to economy and beauty of construction.

Claims 1 and 2, which cover this arrangement, including the slender piers, were allowed by the Examiners-in-Chief. Claims 4, 6, and 13 cover the arrangement of arches above described, without specifying the size of the piers. The arrangement set forth in these claims, however, necessarily produces a balance of parts which permits the use of the slender pier and are believed to cover a patentable invention.

The remaining claims are found to be unpatentable for the reasons stated by the Examiners-in-Chief. They pertain chiefly to the location of reinforcing members in the body of the structure. The location of the reinforcing members in the proper places is a mere matter of design within the skill of the civil engineer.

In this connection it is pertinent to note that since this appeal was taken a number of patents to this applicant, dealing chiefly with the location of reinforcing members in concrete structures, have been held unpatentable by Judge Lewis, of the eighth circuit, in a decision rendered November 13, 1915. (See *Engineering News* of Dec. 2, 1915, p. 1094.)

The decision of the Examiners-in-Chief is reversed as to claims 4, 6, and 13 and affirmed as to the remaining claims.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

BAYER AND BROWN *v.* BRADLEY.

Decided January 9, 1917.

1. INTERFERENCE — PRIORITY — CONCEPTION — JOINT AND SOLE INVENTORS.

Where Bayer and Brown alleged conception in December, 1910, but the evidence shows that they never met until May, 1911, this is the earliest date that can be awarded them.

2. SAME—SAME—REDUCTION TO PRACTICE.

Priority awarded Bradley, who reduced the invention to practice by building and testing in February, 1911, an operative machine.

Mr. Emil Starck for the appellants.

Mr. F. C. Curtis for the appellee.

VAN ORSDEL, *J.:*

This appeal in interference is from the decision of the Commissioner of Patents affirming the decision of the Board of Examiners-in-Chief, which, in turn, affirmed the decision of the Examiner of Interferences. These appellants are here with the decisions of all the tribunals below against them.

The invention relates to steam-blowers for cleaning soot from the inclined tubes of water-tube boilers. The counts of the issue, twelve in number, are sufficiently illustrated by counts 1 and 12, as follows:

1. In a soot-blower for water-tube boilers having inclined tubes, a riser mounted opposite the sides of the tubes, a set of pivoted nozzles communicating with the riser, arranged one above the other in vertical series and oscillating about non-coincident axes in the general direction of the tubes, thereby following the dip of the tubes during the blowing operation.

12. In a soot-blower for water-tube boilers having inclined tubes, a fixed riser mounted opposite the sides of the tubes, a series of branches leading from the riser, hollow joints on said branches arranged one above the other in vertical series, and nozzles leading from the joints and oscillating about the axes of the several joints, said axes being non-coincident and substantially at right angles to the dip of the water tubes, whereby the nozzles follow the dip of the tubes during the blowing operation.

The earliest date of conception that can be awarded appellants is May 2, 1911. While they alleged conception in December, 1910, the evidence conclusively discloses that they never met each other until May, 1911. Bayer may have conceived prior to this date, as the testimony seems to indicate, but appellants are here claiming as joint inventors, and we are only concerned with the establishment of joint conception, which, it is not contended, occurred prior to May, 1911.

This date is too late to avail appellants. Appellee Bradley had a device built and tested in February, 1911. The device consisted of four rows of boiler-tubes, eighty-four in number, being twenty-one to the row, set at the angle used in a boiler construction. Soot was distributed on the tubes by hand and the nozzles were adjusted for sweeping the tubes. Steam was turned on, and it worked perfectly. As suggested in the opinions below, the fact that it cleaned the soot from the tubes is not of great importance, since this function is old in the art. The invention consists in the adjustment of the nozzle in relation to the tubes, so that the blast from the nozzle would be in the right direction, and, as suggested, this could be tested with four nozzles as well as with a greater number. The test made, we think, constituted a complete reduction of the invention to practice.

This was immediately followed by the building and installation of a blower in the plant of the Hall-Hartwell Company, at Troy, New York. It is unnecessary, however, to consider the evidence in relation to this construction,—although we think the evidence clearly establishes it,—as the reduction to practice had already been accomplished.

The case is not one where a doubt as to the sufficiency of the evidence is to be resolved in favor of the unanimous decisions of the tribunals below, but one where the evidence is overwhelmingly conclusive.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings as by law required.

Affirmed.

Court of Appeals of the District of Columbia.

GOODRICH DRUG COMPANY *v.* CASSADA MANUFACTURING COMPANY.

Decided February 5, 1917.

1. TRADE-MARKS—SIMILARITY—DOUBT.

If a doubt exists as to similarity of marks that would lead to confusion, it should be resolved for the protection of the public, in whose interest the prohibition of the statute as to registration of trade-marks likely to create confusion in trade was enacted.

2. SAME—SAME—DISSIMILARITY OF LABEL.

That registrant's label and package are dissimilar to those used by appellant is immaterial in determining the actual conflict between the marks. The label and the box are no part of the mark and can be changed at will.

3. SAME—SAME—"VELVELITE" AND "VELVETINA."

The mark "Velvelite," for face-powder, *Held* to be similar to the mark "Velvetina," for the same goods, and likely to lead to confusion.

Mr. C. A. Foster and *Mr. W. A. Johnston* for the appellant.

Mr. H. N. Paul, Jr., for the appellee.

VAN ORSDEL, *J.:*

This appeal is from the decision of the Commissioner of Patents denying the petition of appellant Goodrich Drug Company for cancelation of a trade-mark registered by appellee Cassada Manufacturing Company. The Commissioner reversed the decision of the Examiner of Interferences.

The registered trade-mark of appellee company is the word "Velvelite." The mark of appellant company, upon which the request for cancelation is based, is the word "Velvetina." Both marks are used on face-powder. That appellant company adopted and used its mark long prior to the date of the adoption of its mark by appellee company is conceded. We have, therefore, the single question of similarity of marks, no existence of actual confusion in trade having been proven.

In this sort of a case, little aid is to be secured from the decisions of the courts in similar cases. The decision, after all, must be based largely upon the impression conveyed to the mind of the court as to the probable result of the use of these marks upon the same kind of goods. That it would be likely to lead to confusion we have no doubt. But, if a doubt existed, it should be resolved for the protection of the public in whose interest the prohibition of the statute as to the registration of trade-marks likely to create confusion in trade was enacted.

We think the Assistant Commissioner fell into error in turning his decision upon the following ground:

There have been two points brought out by the record that are decisive of this case, first, the dissimilarity of

registrant's entire label as compared with that of the Goodrich Drug Company, the labels of the Cassada Manufacturing Co. being all gilt labels, and even the shape of the box in which the powder is put up is so unlike that of the Goodrich Company that there is evidently no intention of the Cassada Manufacturing Co. to mislead purchasers by the general appearance of its packages and labels.

These matters of dissimilarity should be of little concern in determining the actual conflict between the marks. The label and box are no part of the mark and can be changed at the will of the user. Hence, instead of being a distinction, they may become an inducement to deception and an aid in accomplishing the very thing which the statute aims to prevent.

The decision of the Commissioner of Patents is reversed, and the clerk is directed to certify these proceedings as by law required.

Reversed.

Court of Appeals of the District of Columbia.

NAIRN LINOLEUM COMPANY *v.* RINGWALT LINOLEUM WORKS.

Decided February 5, 1917.

1. TRADE-MARKS—OPPOSITION—INTEREST OF OPPOSER.

Opposer's allegation that for a number of years it has been extensively engaged in the manufacture and sale of linoleum, which it advertised and described as such—in other words, that it has used this mark as a trade-name—is a sufficient averment of interest. As between the attempted registration of a technical trade-mark and a descriptive name an opposer of the former must show actual trade-mark use. An opposer of the latter need show only use as a trade-name.

2. SAME—DESCRIPTIVE WORDS IN CONNECTION WITH A GEOMETRICAL FIGURE.

Descriptive words not being registrable, a trade-mark made up of the same with a geometrical figure cannot be made registrable by disclaiming the prohibited words. A figure meaningless in itself cannot be used as a vehicle by which to incorporate in a trade-mark prohibited descriptive matter.

3. SAME—SAME—SHOULD BE OMITTED.

"Having in mind therefore the intent and purpose of the Trade-Mark act, we repeat what we said in *Johnson v. Brandeau* (32 App. D. C., 348,) that the applicant should have been required to omit the objectionable matter from its mark."

Mr. E. S. Rogers and *Mr. F. M. Phelps* for the appellant.

Mr. Hans V. Briesen for the appellee.

ROBB, *J.:*

This is an appeal from a decision of the Patent Office dismissing appellant's (the opposer's) opposition to the registration by the appellee (the applicant) of the following mark:

RINGWALT'S LINOLEUM

In its application, as originally filed, appellant alleged use of the mark since the year 1912, in connection with the manufacture and sale of linoleum and oil-cloth. Thereupon the Examiner ruled that Linoleum, being the name of and hence descriptive of a well-known product, was not susceptible of registration. However, it was suggested that the word "should be removed from the drawing or disclaimed." Applicant thereupon amended its petition by disclaiming the words "Ringwalt's" and "Linoleum," "apart from the mark shown in the drawing."

Thereafter, the opposer filed its notice of opposition, alleging the following: (A) that it had been engaged in the manufacture and sale of linoleum for a number of years and had built up a large business; (B) that the word had been recognized for upward of forty years as descriptive, and that opposer's product always had been advertised and described as linoleum; (C) that applicant's product is not in fact linoleum but deceptively made to resemble it; (D) and finally, that "by reason of the foregoing opposer believes that it will be damaged" by the proposed registration. To this opposition the applicant filed a motion to dismiss.

The Examiner of Interferences attempted to distinguish this case from several cases decided in this court, on the ground that this applicant—

is not seeking to register the word "Linoleum," but has expressly alleged that it makes no claim to that word "apart from the mark shown in the drawing" which accompanies its application, and which includes the word "Ringwalt's" and a fanciful geometrical figure.

The Examiner was of opinion that the registration of this mark—

would not result in any personal injury to the opposer if the disclaimer of the word "Linoleum" is to be regarded as effective.

The Examiner then considered the question of alleged fraudulent use of the word by the applicant and made a recommendation to the Commissioner that the applicant be required to furnish a verified showing as to the character of the goods upon which it used the mark, but nevertheless dismissed the opposition. The Assistant Commissioner ruled that the opposer had not alleged a trade-mark use, and on the question of alleged fraudulent use of the mark by the applicant ruled that the word "Linoleum" had been too narrowly interpreted; in other words, that it properly applied to applicant's product. The Examiner's decision, therefore, was affirmed.

An application thereafter was made to amend the notice of opposition, but this was denied.

The Trade-Mark Act of February 20, 1905, (33 Stat., 724,) prohibits the registration of a mark consisting merely in the name of an individual, firm or corporation not written, printed, impressed or woven in some particular or distinctive manner or in association with the portrait of an individual—

or merely in words or devices which are descriptive of the goods with which they are used, or of the character or quality of such goods.

The intent of Congress is plain, and it is our duty to give it force and effect. In *Natural Food Co. v. Williams*, (30 App. D. C., 348) we sustained an opposition to the registration of the words "Shredded Whole Wheat" as a trade-mark for biscuits or crackers, although it was not claimed or shown that the opposer used the words as a trade-mark. We said:

That he (the opposer) did not use the words as a trade-mark, but merely in a descriptive sense, is of no moment. He, in common with all other manufacturers of shredded whole wheat, had the same right properly to designate their product as did the Natural Food Co.—

the applicant. In *Johnson* v. *Brandeau*, (32 App. D. C., 348,) where an attempt had been made to incorporate as a feature of the trade-mark the word "Asbestos," the opposition was sustained, although the opposer had used the words merely as a trade-name. The court, speaking, through the chief justice, said:

If registration be allowed, it becomes *prima facie* evidence of the applicant's ownership of it as a valid trade-mark * * * in any action which he may institute against the opposer or others who may use the word as a general trade name for similar articles. * * * Having used the word as such a trade name, although not entitled to ownership of it as a trademark, we think it is permissible for the opposer to make opposition to the registration by the applicant.

The court further said:

When an applicant describes and illustrates his trade-mark, and applies for its registration as so described, the Commissioner must likewise consider it in its entirety. We are of opinion that, in this case, he should have denied registration as claimed, giving the applicant at the same time an opportunity to amend by disclaiming and *omitting* the word objected to.

This rule was reaffirmed in *Electro Steel Co.* v. *Lindenberg Steel Co.*, (43 App. D. C., 270.) Again, in *Fishbeck Soap Co.* v. *Kleeno Mfg. Co.*, (44 App. D. C., 6,) where as here an attempt had been made to register prohibited matter by filing a so-called disclaimer in the Patent Office, we said:

The fact that the appellee has filed a disclaimer is of no consequence. * * * The disclaimer would slumber in the archives of the Patent Office while the mark would be used as registered. That is to say, the disclaimer would make no difference to the public. Such a subterfuge ought not to be permitted.

The facts alleged by the opposer clearly bring this case within the rule laid down in the first three cases above cited, for opposer alleges that for a number of years it has been extensively engaged in the manufacture and sale of linoleum, which it always has advertised and described as such; in other words, that it has used this mark as a trade-name, as it has a right to do. This is a sufficient averment of interest, since under the statute no one may abridge that right. The tribunals of the Patent Office evidently failed to distinguish between the attempted registration of a technical trade-mark and a descriptive name. In the former, the opposer must show actual trade-mark use; in the latter, a showing of use as a trade-name is sufficient.

Irrespective, therefore, of the question of alleged fraudulent use of the mark by the applicant, we are clearly of opinion that the opposition should have been sustained. The statute prohibits the registration of descriptive words, and yet the effect of the action of the Patent Office would be to give the applicant all the benefits of a registration, for the mark which would go out to the public would contain the prohibited words and, as stated in *Fishbeck Soap Co.* v. *Kleeno Mfg. Co.*, (44 App D. C., 6,) the disclaimer would slumber in the archives of the Patent Office. Indeed, but for the prohibited words there really would be no mark at all, since there would remain the entirely meaningless black figure. It is perfectly apparent that this meaningless black figure was employed as a vehicle by which there could be incorporated in the mark prohibited descriptive matter. Having in mind, therefore, the intent and purpose of the Trade-Mark Act, we repeat what we said in *Johnson* v. *Brandeau*, (32 App. D. C., 348,) that the applicant should have been required to omit the objectionable matter from its mark.

The decision is reversed.

Reversed.

FARR AND BAILEY MANUFACTURING COMPANY *v.* RINGWALT LINOLEUM WORKS. THOMAS POTTER, SONS & CO., INCORPORATED, *v.* RINGWALT LINOLEUM WORKS. COOK'S LINOLEUM COMPANY *v.* RINGWALT LINOLEUM WORKS. ARMSTRONG CORK COMPANY *v.* RINGWALT LINOLEUM WORKS. THE AMERICAN LINOLEUM MANUFACTURING COMPANY *v.* RINGWALT LINOLEUM WORKS. THE GEO. W. BLABON CO. *v.* RINGWALT LINOLEUM WORKS.

Decided February 5, 1917.

ROBB, *J.*:

These appeals involve substantially the same facts that were involved in the case just decided, and were to abide the decision therein. The decision in each case, therefore, will be reversed.

Reversed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Armstrong patent, No. 825,952, for metal-frame window-screens, construed and *Held* infringed by one of defendant's frames, but not by its latest device. *Atlas Floor Co.* v. *Robbins Mfg. Co.*, 239 Fed. Rep., 135.

(U. S. C. C. A.) The Cottom patent, No. 650,824, for a building material, construed and *Held* not infringed. *Johnson* v. *Stewart*, 239 Fed. Rep., 137.

(U. S. D. C.) The Harmatta patent, No. 1,046,066, for a process of electric welding and its product, *Held* valid and infringed. *Thomson Electric Welding Co.* v. *Barney & Berry*, 239 Fed. Rep., 147.

Disclaimer.

703,602.—*Edward Laas*, Elgin, and *Hiram H. Sponenburg*, Wadsworth, Ill. RAILWAY-RAIL STAY. Patent dated July 1, 1902. Disclaimer filed April 9, 1917, by the assignee, *Otto R. Barnett*.

Enters this disclaimer—

"To that form or modification of the invention illustrated in Fig. 5 of the drawing annexed to said specification and described in said specification, namely, at line 53 to 55 of page 1 thereof, in the following words, to-wit:

"'Fig. 5 is a side view of a portion of a track, illustrating a modification of our invention.'

"and at line 98, page 1, to line 9, page 2, in the following words, to-wit:

"'In the modification shown in Fig. 5 of the drawings the base-plate *h* of the rail-stay is secured to the cross-tie by spikes *g'* and terminates at the opposite ends with depending flanges *i*, bearing against opposite sides of the tie B, the attaching-bolt *c* being directly over the center of said tie, and from each flange projects a brace *j*, which braces bear against the bottom of the rail-base, as hereinbefore stated.

"'It will be seen that the track-rails will be effectually prevented from creeping longitudinally on the cross-ties and the ties held securely in their proper positions.'"

Adverse Decisions in Interference.

PATENT No. 1,170,840.

On March 16, 1917, a decision was rendered that Willis S. Morse was not the first inventor of the subject-matter covered by claims Nos. 1, 2, 3, 4, and 5 of his Patent No. 1,170,840, subject, "Tension-regulating mechanism for printing-presses and the like," and no appeal having been taken within the time allowed such decision has become final.

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 237—No. 4. TUESDAY, APRIL 24, 1917. Price—$5 per year.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Issue of April 24, 1917.

Patents	774	No. 1,223,350 to No. 1,224,123,	inclusive.
Designs	31	No. 50,642 to No. 50,672,	inclusive.
Trade-Marks	121	No. 116,267 to No. 116,387,	inclusive.
Labels	14	No. 20,037 to No. 20,050,	inclusive.
Prints	8	No. 4,675 to No. 4,682,	inclusive.
Reissues	4	No. 14,289 to No. 14,292,	inclusive.
Total	952		

Canadian Patent Office—Form of Claims—British Form Permitted—Memorandum for the Patent Examiners.

In a pending case the Examiner following the practice of the office reported against certain claims as being informal inasmuch as they contained references to other claims instead of describing the mechanism in question, and he stated that every claim must be an independent unit reciting the elements which comprise the device.

The applicant appealed to the Commissioner from the Examiner's action, contending that the British form in which his claims were drawn was not only allowable under the Canadian law but preferable to the one prescribed by the Canadian office.

As the determination of the question raised by the appeal involved a possible change in the long-established practice of the office I deemed it advisable to obtain the views of the Examiners before dealing with it.

These views were furnished me in memoranda. They are almost unanimously in favor of the established form of the office and I am inclined to agree with them; but while our present form may be preferable to the British I have not come to the conclusion that an applicant may not make use of the latter if he so prefer.

I can find no authority for the office practice other than the form contained in the published Rules and Forms. This form has the approval of the Governor in Council; but such approval has not the effect of making its use imperative; it simply establishes its sufficiency. Any other form which meets the requirements of the act, namely, "shall state clearly and distinctly the contrivances and things which he claims as new and for the use of which he claims an exclusive property and privilege," must be accepted.

If claims are presented in the British form the Examiner should point out to the applicant that, both for his own better protection and for the convenience of the office, it is desirable that the prescribed form be followed, but if he insists upon the use of the form which he has adopted his claims will be dealt with in that form at his own risk provided they meet the requirements of section 13 of the act.

Ottawa, 2nd May, 1910.

(Sgd.) GEO. F. O'HALLORAN,
Deputy Commissioner of Patents.

Changes in Classification.

(ORDER No. 2,318.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 12, 1917.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 99, Preserving, (Division VI,) establish subclass—

Food Compounds—
16. Confectionery.

The patents contained in this subclass have been taken from class 127, Sugar and Salt, subclass 4, Confectionery, hereinafter abolished.

In class 127, Sugar and Salt, (Division XXXI,) abolish subclass—

4. Confectionery.

The patents formerly contained in this subclass have been placed for the most part in class 99, Preserving, subclass 16, Food compounds, Confectionery, hereinbefore established; class 127, Sugar and Salt, subclasses 18, Vacuum-pans, and 19, Graining and draining, and various subclasses in class 257, Heat Exchange.

THOMAS EWING,
Commissioner.

Changes in Classification.

(ORDER No. 2,319.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 17, 1917.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 70, Locks and Latches, (Division XX,) establish subclasses—

Locks—
128. For levers—
130. Hand-cranks.
129. Hand-wheels.
131. H-slot.
132. Quadrant and lever-carried latch.

The patents contained in these subclasses have been taken from class 21, Carriages and Wagons, subclass 90, Motor-vehicles; class 70, Locks and Latches, subclass 90, Locks, Bicycle, and class 74, Machine Elements, subclass 39, Cranks and levers, Hand-levers.

THOMAS EWING,
Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 20, 1917.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Closure Operators; Fences; Gates; Harrows and Diggers; Plows; Railway Gates; Seeders and Planters; Trees, Plants, and Flowers.	Mar. 6	Feb. 3	274
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Dec. 1	Jan. 23	494
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Heating; Metal-Founding; Metallurgical Apparatus; Metallurgy; Plastic Metal Working.	Feb. 19	Mar. 15	105
234	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Pushing and Pulling Devices; Railway Mail Delivery; Store-Service; Traversing Hoists.	Mar. 1	Mar. 26	240
167	5. Bookbinding; Harvesters; Jewelry; Music	Dec. 21	Mar. 13	259
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Substance Preparation.	Dec. 6	Feb. 15	371
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes	Dec. 13	Dec. 20	660
131	8. Beds; Chairs; Flexible-Sheet Securing Devices; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Nov. 15	Feb. 19	1014
142	9. Air and Gas Pumps; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps	Nov. 2	Apr. 6	488
235	10. Carriages and Wagons	Nov. 14	Mar. 24	878
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Spring Devices; Whips and Whip Apparatus.	Dec. 26	Mar. 27	172
324	12. Journal-Boxes, Pulleys, and Shafting; Machine Elements	Feb. 15	Mar. 21	583
329	13. Ammunition and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Dec. 14	Mar. 20	562
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Jan. 11	Feb. 1	275
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	Mar. 21	Mar. 22	237
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony	Nov. 27	Jan. 12	617
303	17. Ornamentation; Paper Manufactures; Printing; Type Casting; Sheet Material Associating or Folding; Sheet Feeding or Delivering; Type Setting.	Jan. 19	Mar. 14	196
327	18. Fluid-Pressure Regulators; Injectors and Ejectors; Liquid Heaters and Vaporizers; Lubrication; Miscellaneous Heat-Engine Plants; Speed Responsive Devices; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Feb. 23	Mar. 24	276
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces; Domestic Cooking Vessels	Dec. 26	Jan. 20	501
179	20. Artificial Body Members; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Mar. 23	Mar. 26	240
182	21. Brakes and Gins; Carding; Cloth-Finishing; Continuous-Strip Feeding; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Jan. 6	Feb. 19	291
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 27	Feb. 19	563
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Sound Recording and Reproducing; Time-Controlling Mechanism.	Nov. 10	July 25	318
144	24. Apparel; Apparel Apparatus; Sewing-Machines; Garment Supporters	Jan. 2	Mar. 9	318
315	25. Agitating; Butchering; Centrifugal Bowl Separators; Mills; Threshing; Vegetable Cutters and Crushers; Gas Separation.	Mar. 12	Mar. 28	146
105	26. Electricity, Generation; Motive Power	Oct. 2	Jan. 19	582
375	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus	Mar. 12	Mar. 12	233
63	28. Internal-Combustion Engines	Oct. 2	Feb. 1	520
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking Tools.	Dec. 14	Jan. 3	407
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines	Jan. 16	Mar. 24	431
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Sugar and Salt.	Jan. 15	Mar. 2	273
278	32. Carbonating Beverages; Dispensing Beverages; Dispensing; Gas and Liquid Contact Apparatus; Heat Exchange; Packaging Liquids; Refrigeration.	Oct. 6	Mar. 23	923
70	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	Dec. 26	Mar. 10	378
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling Stock; Railway Ties and Fasteners.	Oct. 16	Mar. 7	306
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Signals; Toilet	Oct. 23	Mar. 28	696
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography; Force Measuring	Jan. 13	Apr. 2	605
107	37. Electric Lamps; Electricity, Circuit Makers and Breakers; Electricity, Conduits; Electricity, General Applications.	Oct. 23	Mar. 13	740
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells	Mar. 24	Apr. 5	155
321	39. Water Distribution	Jan. 15	Mar. 2	389
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 1	Mar. 30	489
125	41. Railway Draft Appliances; Resilient Tires and Wheels	Jan. 20	Feb. 14	365
244	42. Electricity, Conductors; Railway Signaling; Electricity-Transmission to Vehicles	Nov. 16	Mar. 12	331
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers, Sewerage; Surgery; Water Purification.	Jan. 24	Feb. 28	143

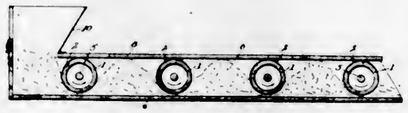
Oldest new case, Oct. 2; oldest amended, July 25.
Total number of applications awaiting action..... 18,044

163	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Feb. 15	Mar. 22	1174
	Designs	Mar. 12	Mar. 17	315
	Labels and Prints	Apr. 12	Apr. 7	61

PATENTS

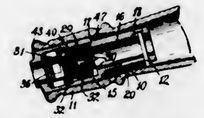
GRANTED APRIL 24, 1917.

1,223,350. METHOD OF DEFLOCCULATING SOLID MATERIALS. EDWARD GOODRICH ACHESON, New York, N. Y., assignor to Acheson Corporation, New York, N. Y., a Corporation of Delaware. Filed Jan. 17, 1917. Serial No. 142,861. (Cl. 252.)



A method of deflocculating solid materials, consisting in subjecting said materials, mixed with a deflocculating agent and in paste form, to alternate periods of attrition and relative rest, until the desired percentage of deflocculation is attained.

1,223,351. BOTTLE. BERTHA S. ALSOP, New York, N. Y. Filed Oct. 14, 1915. Serial No. 55,841. (Cl. 215—69.)



1. In a non-reusable bottle, a bottle neck having an outlet passage and a valve seat surrounding said outlet passage, a valve normally engaging said valve seat and displaceable by pressure into said outlet passage, a guard above the valve and means carried by said guard and cooperating with the valve upon displacement of the valve into the passage to prevent reëngagement of the valve with the valve seat.

2. In a non-reusable bottle, a bottle neck having an outlet passage and a valve seat surrounding said outlet passage, a valve normally resting upon said valve seat and displaceable into the outlet passage upon the application of pressure thereto, a weight above the valve for holding said valve engaged with the valve seat, and means carried by said weight and coöperating with the valve upon displacement of the same into the passage to prevent reëngagement of the valve with the valve seat.

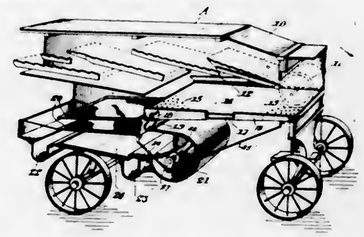
3. In a non-reusable bottle, a bottle neck having an outlet passage and a valve seat surrounding said passage, a loose hollow weight above the valve seat, a valve received in said hollow weight and normally engaging the valve seat but displaceable down into the outlet passage upon application of pressure thereto and coöperating means on the top of the valve and the inside of the hollow weight engaging upon displacement of the valve down into the outlet passage to prevent said valve being returned into engagement with the valve seat.

4. In a bottle construction, a bottle neck having an outlet passage and a valve seat surrounding said passage, and a valve for coöperation with said valve seat comprising a relatively hard glass-like valve body loosely fitting and guided in the outlet passage, a flat flexible valve on top of said valve body, a cork-like washer above said valve, a float above said cork-like washer, and means securing said valve parts together.

5. In a bottle construction, a bottle neck having an outlet passage and a valve seat surrounding said outlet passage, a valve normally engaging said valve seat and having a float on the upper portion thereof, and a tubular guard above said valve loosely surrounding and guiding the float portion of the valve, said guard having an opening in the side thereof to prevent the accumulation of liquid while pouring which would have a tendency to float the valve into engagement with its seat.

[Claims 6 to 9 not printed in the Gazette.]

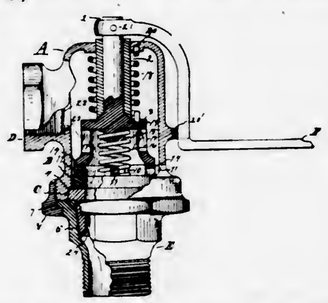
1,223,352. GRAIN-PAN SCREEN. DAVID AMBLER, Irma, Alberta, Canada. Filed Mar. 17, 1916. Serial No. 84,948. (Cl. 130—19.)



1. A grain pan screen comprising a shoe, an angularly disposed grain screen operatively mounted in the said shoe, a plate carried by the shoe located below the screen and forming therewith a substantially acute angle, means for closing the space between the said screen and plate and separating sieves adapted to receive the grain from said screen.

2. A grain pan comprising a grain screen, a shoe operatively supporting the said screen, a plate carried by the shoe located below the said screen and forming a substantially acute angle therewith, a sliding door at the rear end of the shoe inclosing the space between the screen and the said plate, and a transversely extending spout adjacent to the said door.

1,223,353. VALVE. FRED P. ANGELL, Battle Creek, Mich. Filed Mar. 13, 1916. Serial No. 83,860. (Cl. 137—7.)

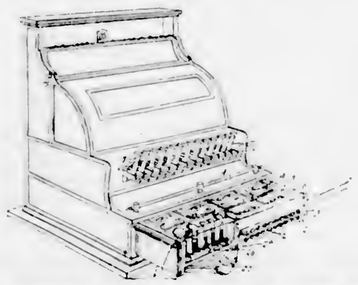


1. In a valve, a housing having an opening therethrough and an apertured valve seat fitted over one end of said housing, of a nipple fitted over and bearing against said valve seat, a nut fitted about said nipple and screw-

threaded to said housing to hold said valve seat and nipple intact with said housing, a valve rocker fitted within said housing end thereof engaging with said valve, its opposite end extending from said housing, a recoil spring fitted about said valve rocker, one end connecting with said valve rocker and at its opposite end with said housing, a coil spring fitted between said valve rocker and said valve to hold said valve in contact with said valve seat, an operating handle pivoted to the free end of said valve rocker, and a quadrant fitted to said housing whereby said operating handle may be locked in the operation of said valve.

2. In a valve, a housing having an opening therethrough, a valve seat having apertures therethrough fitted over one end of said housing, a pipe nipple fitted over said valve seat and connected with said housing, a valve fitted within said housing and bearing on said valve seat, said valve having coincident openings with the openings of said valve seat whereby by the moving of said valve said opening may be opened and closed, of a valve rocker adapted to engage with said valve at one end, its opposite end extending through an aperture in said housing, a recoil spring fitted about said rocker, one end of which engages with said valve rocker and the opposite end with said housing, said spring adapted to actuate said valve rocker to hold said valve in open contact with said valve seat until acted upon, an operating handle pivoted at the free end of said valve rocker adapted to be moved in an arc concentric with said valve to open and close the same and in a path transverse to said valve to hold said valve in an open or closed position, and a guard to hold said handle in operative connection with said valve rocker.

1,223,354. MONEY-PAYING ATTACHMENT FOR CASH-REGISTERS. STEPHEN J. BACHARDY and JAMES KISS, Newark, N. J. Filed Nov. 4, 1915. Serial No. 59,653. (Cl. 133—4.)



1. In combination, a cash register, manipulative controlling means therefor, a drawer controlled by said manipulative means, operating means for said drawer, a money handling mechanism the operation of which is governed by the action of the drawer and mounted in the drawer, and a money tray disposed in the drawer and housing the money handling mechanism aforesaid.

2. The combination with a cash register embodying the customary controlling keys, and a cash drawer releasable thereby, and money paying instrumentalities mounted in the drawer including a drawer opening device coacting to cause money ejection.

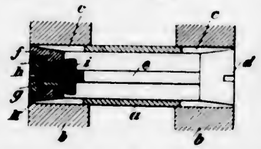
3. The combination with a cash register embodying the customary controlling keys, and a cash drawer releasable thereby, and money paying instrumentalities mounted in the drawer including a spring to open the drawer, a pusher operable by movement of the drawer to store up energy in said spring, and means acted on by the spring to control money ejection.

4. In combination, a cash register comprising manipulative register controlling means, and provided with the usual cash drawer space, and an attachment for said register consisting of money mechanism complete in itself and adapted to occupy said space after removal of the drawer and to be governed in operation by the register instrumentalities.

5. In combination with a cash register of the well known type including operating keys, and having a space for the usual cash drawer, a money paying mechanism adapted to be substituted for said drawer upon removal thereof and to be then controlled by said keys, and other control means governing action of the paying mechanism.

[Claims 6 to 43 not printed in the Gazette.]

1,223,355. GUDGEON-PIN FOR INTERNAL-COMBUSTION ENGINES. ADOLF BALTENSWEILER and KURT EGLOFF, Arbon, Switzerland, assignors to Firm Adolph Saurer, Arbon, Switzerland. Filed Apr. 22, 1916. Serial No. 92,973. (Cl. 74—85.)



1. The combination with a cylindrical gudgeon pin having internally conical, elastic ends, of a threaded pin having a conical head located in the one end of the gudgeon pin, an internally threaded member screwed on the threaded pin, and an externally conical ring movably carried by the latter member and located in the other end of the gudgeon pin.

2. The combination with a cylindrical gudgeon pin having internally conical, elastic ends, of a threaded pin having a conical head located in the one end of the gudgeon pin, an internally threaded member having a flange at one end and a collar at the other end screwed on the threaded pin, and an externally conical ring movably carried on the latter member between said flange and said collar and located in the other end of the gudgeon pin.

1,223,356. TITANIC-OXID PRODUCT AND METHOD OF OBTAINING THE SAME. LOUIS E. BARTON, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed July 27, 1915. Serial No. 42,171. (Cl. 23—13.)

1. The method of obtaining a product consisting essentially of titanic oxid (TiO_2) which comprises dissolving titanium tetrachlorid ($TiCl_4$) in a bath comprising water and sulfuric acid (H_2SO_4), distilling hydrochloric acid, and calcining the residue.

2. The method of obtaining a product consisting essentially of titanic oxid (TiO_2) which comprises commingling about 100 parts by volume of titanium tetrachlorid ($TiCl_4$), about 200 parts by volume of water (H_2O) and about 35 parts by volume of sulfuric acid, distilling hydrochloric acid from the resulting bath, and calcining the residue.

3. As a new article, a calcined, very friable, highly absorptive, substance of specific gravity 3.50 to 3.65, feeling to the touch like chalk, and also distinguished as containing at least traces of chlorin, as when admixed with oil to usual consistency of paint imparting to the surface on which it is spread a bluish white coloration, and as consisting essentially of minute particles of titanic oxid, which appear, by reflected light, white, and, by transmitted light, yellowish.

1,223,357. COMPOSITE TITANIC-OXID PIGMENT AND METHOD FOR PRODUCING THE SAME. LOUIS E. BARTON, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Aug. 29, 1916. Serial No. 117,398. (Cl. 204—61.)

1. The method of producing composite titanic oxid pigments which comprises supplying to a titanic sulfate solution particles of a therein suspendable base or extender, electrolyzing the charge and meanwhile heating it sufficiently to precipitate therein, and into contact with said particles, particles of basic titanic sulfate.

2. The method of producing composite titanic oxid pigments which comprises supplying to a titanic sulfate solution particles of a therein suspendable base or extender, electrolyzing the charge and meanwhile heating it sufficiently to precipitate therein, and into contact with said particles, particles of basic titanic sulfate, and filtering out the resulting composite precipitate and calcining it.

3. The method of producing composite titanic oxid pigments which comprises adding to a titanic solution a substance capable of therein precipitating sulfate particles by reaction with the sulfate in solution, electrolyzing the charge and meanwhile heating it sufficiently to precipitate therein, and into contact with said particles, particles of basic titanic sulfate.

4. The method of producing composite titanic oxid pigments which comprises adding to a titanic sulfate solution an extender pigment, electrolyzing the charge and meanwhile heating it sufficiently to precipitate therein, and into contact with said particles, particles of basic titanic sulfate.

5. In the production of composite titanic oxd pigments composed essentially of particles having thereto adherent and therewith coalesced particles of titanic oxid, the steps which consist in electrolyzing and heating a titanic sulfate solution containing said first mentioned particles.

[Claims 6 to 10 not printed in the Gazette.]

1,223,358. METHOD FOR PRODUCING BASIC TITANIC-SULFATE PRODUCTS AND PURE TITANIC OXID THEREFROM. LOUIS E. BARTON, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Aug. 29, 1916. Serial No. 117,399. (Cl. 204—9.)

1. The method of obtaining basic titanic sulfate which comprises electrolyzing a titanic sulfate solution, and meanwhile heating it.

2. The method of obtaining basic titanic sulfate which comprises electrolyzing a titanic sulfate solution, and meanwhile heating it to temperatures below boiling.

3. The method of obtaining basic titanic sulfate which comprises converting titanic sulfate solution into a titanic basic sulfate solution, electrolyzing such titanic basic sulfate solution, and meanwhile heating it sufficiently to precipitate therein basic titanic sulfate.

4. The method of obtaining basic titanic sulfate which comprises adding slaked lime to a titanic sulfate solution, filtering out resulting calcium sulfate, electrolyzing the resulting filtrate, and heating it to temperatures below boiling.

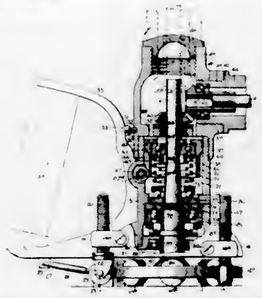
5. The method of treating a titanic sulfate solution which comprises passing an electrical current therethrough between a pair of thereby-contacted electrodes, and meanwhile heating the solution.

[Claims 6 and 7 not printed in the Gazette.]

1,223,359. TOOL FOR TREATING STONE, CONCRETE, AND OTHER MATERIALS. JOHN O. BERG, New York, N. Y., assignor to Rotary Power-Tool Company, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 13, 1915. Serial No. 14,101. Renewed June 3, 1916. Serial No. 101,645. (Cl. 125—6.)

1. In a tool of the class described, a rotary toothed cutter supported to be rotated by rolling engagement with the surface to be treated, said cutter having the cutting edge of each tooth leading in the direction of rotation of said cutter and having the leading face of each tooth receding, with respect to said direction of rotation, from the radius to the cutting edge, and means for rolling said cutter bodily over the surface to be treated.

2. In a tool of the class described, a rotary toothed cutter supported to be rotated by rolling engagement with the surface to be treated, said cutter having the cutting edge of each tooth leading in the direction of rotation of said cutter and having the leading face of each tooth receding, with respect to said direction of rotation, from the radius to the cutting edge, means for rolling said cutter bodily over the surface to be treated, and means for yieldingly holding said cutter in engagement with the surface to be treated.



3. In a tool of the class described, a rotary toothed cutter supported for rotation by rolling engagement with the surface to be treated, said cutter having the body of each tooth receding, with respect to the direction of rotation of the cutter, from the radius to the cutting edge, and a carrier automatically rolling said cutter bodily in a closed path while maintaining the axis of the cutter in one plane.

4. In a tool of the class described, a rotary toothed cutter supported for rotation by rolling engagement with the surface to be treated, said cutter having the body of each tooth receding, with respect to the direction of rotation of the cutter, from the radius to the cutting edge, a carrier automatically rolling said cutter bodily in a closed path while maintaining the axis of the cutter in one plane, and a resilient mount for said carrier pressing said carrier outward transversely to said plane.

5. In a tool of the class described, a rotary toothed cutter supported for rotation by rolling engagement with the surface to be treated, said cutter having the body of each tooth receding, with respect to the direction of rotation of the cutter, from the radius to the cutting edge, means for constantly pressing said cutter into engagement with the surface to be treated, and means for repeatedly rolling said cutter bodily over said surface in the direction to effect the aforementioned rotation of said cutter.

[Claims 6 to 20 not printed in the Gazette.]

1,223,360. GLUE AND MUCILAGE PENCIL. EDWARD C. BERNERS, Two Rivers, Wis. Filed Aug. 21, 1916. Serial No. 116,090. (Cl. 91—67.5.)



1. A mucilage pencil comprising an open end casing, an open end reservoir in the casing, a distributing means at one end of the reservoir, a filling closure at the other end

of the reservoir, closure caps for the ends of the casing and means for holding the reservoir in the casing.

2. A mucilage pencil comprising an open end casing, an open end reservoir in the casing, a distributing means at one end of the reservoir, a filling closure at the other end of the reservoir, closure caps for the ends of the casing, means for holding the reservoir in the casing, and the filling closure of the reservoir normally abutting the adjacent closure of the casing.

3. A mucilage pencil comprising a casing, an open end reservoir in the casing, a distributing means at one end of the reservoir, a filling closure at the other end of the reservoir and means for detachably holding the reservoir in the casing.

4. A mucilage pencil comprising an open end casing, an open end reservoir in the casing, a distributing means at one end of the reservoir, a filling closure at the other end of the reservoir and yielding means resisting movement of the reservoir in the casing.

5. A mucilage pencil comprising an open end casing, an open end reservoir in the casing, a distributing means at one end of the reservoir, a filling closure at the other end of the reservoir, a yielding means resisting movement of the reservoir in the casing, and means limiting movement of the distributing means end of the reservoir outwardly from the normally adjacent end of the casing.

[Claims 6 to 9 not printed in the Gazette.]

1,223,361. FEED-CONTROLLING DEVICE FOR SHUTTLES. DANIEL BLYDENBURGH, Pawtucket, R. I. Filed June 8, 1916. Serial No. 102,422. (Cl. 139—46.)



1. A shuttle and cop in combination with a strip secured to the inner face of the wall of the shuttle and a plurality of spring tongues fixed to said strip and engaging the yarn on the cop, substantially as described.

2. A shuttle and cop in combination with a strip secured to the inner face of the wall of the shuttle, a plurality of transversely disposed spring tongues and a resilient connection between said tongues and said strip whereby said tongues are caused to yieldingly engage the yarn on the cop, substantially as described.

3. A yarn feed regulating attachment for shuttles comprising a strip adapted to be secured to a shuttle and a plurality of spring tongues on said strip, as and for the purpose specified.

4. An attachment for shuttles comprising an angle bar adapted to be secured to the inner face of the wall of the shuttle, a plurality of spring tongues and a resilient connection between said tongues and said bar, substantially as described.

5. A shuttle and cop in combination with an angle bar secured to the inner face of the wall of a shuttle forming a longitudinally disposed pocket, a plurality of transversely disposed spring tongues, the ends of said tongues being bent and arranged in said pocket to form a resilient connection between the tongues and the bar, substantially as described.

[Claim 6 not printed in the Gazette.]

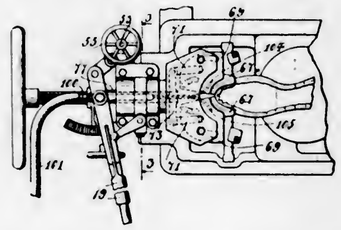
1,223,362. CIGAR AND METHOD OF BLENDING THE SAME. HENRY ANTON BOCK, Milford, Conn. Filed May 25, 1916. Serial No. 99,725. (Cl. 131—52.)



1. As a novel article of manufacture a blended cigar having a compound filler composed of a plurality of thin rolls, each of said rolls being made of one kind or quality of tobacco and at least one of which rolls is made of a different kind or quality of tobacco from at least one other of said rolls, said rolls being assembled within a wrapper and in the shape of a cigar.

2. A process of manufacturing blended cigars which comprises separately preparing thin rolls each composed of a single kind or quality of tobacco, selecting a number of such rolls, including a plurality of kinds or qualities of tobacco, said number of rolls being sufficient in amount to form the filler of a cigar, and assembling the same substantially parallel to one another to form the filler of a cigar, and thereafter completing the manufacture in the usual manner by the application of the wrapper structure.

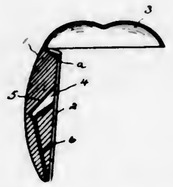
1,223,363. LASTING-MACHINE. PHILIP A. BOWEN, Lynn, Mass., assignor to Lillian E. Little, Lynn, Mass. Filed Oct. 23, 1914. Serial No. 869,115. (Cl. 12—14.)



1. The combination with a lasting machine having an adjustable head, of a pair of wipers mounted thereon; means mounted upon said head providing burners for heating said wipers; and means connecting said burners with a source of fuel supply.

2. The combination with a lasting machine having an adjustable head and a fixed base; of means to move said head in a plurality of directions relatively to said base; wipers carried by said head and movable therewith; means providing burners also carried by and movable with said head to maintain said burners in predetermined relation with said wipers when in retracted position to uniformly heat the same; and a flexible connection from said burners to a source of fuel supply therefor.

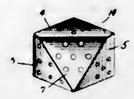
1,223,364. ARTIFICIAL TOOTH. RUTHERFORD H. BOWSHER, Adelphi, Ohio. Original application filed June 5, 1916, Serial No. 101,790. Divided and this application filed Feb. 13, 1917. Serial No. 148,337. (Cl. 32—9.)



A tooth provided with a facing having a bore extending thereinto at an acute angle toward its inner end, a second bore communicating with the first-mentioned bore at the inner end of each, said second bore extending into said facing from the inner end thereof and forming with the first-mentioned bore an obtuse angle, reinforcing means comprising a backing plate, a pin protruding from the outer face thereof, which pin is normally received by and held in the first-mentioned bore, a portion of said reinforcing means being bent inwardly at a suitable angle to the backing plate thereof to form the cusps of the tooth.

1,223,365. DIE. EDWARD N. BREITUNG, Marquette, Mich. Filed Jan. 27, 1916. Serial No. 74,525. (Cl. 46—65.)

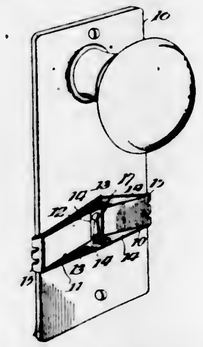
1. A playing die having seven flat sides, each having one or more spots thereon, the number of spots on each side being different, the die having a point opposite the side with the greatest number of spots.



2. A playing die having seven flat sides, each having one or more spots thereon, the number of spots on each side being different, the sides having one spot, two spots, and three spots being of substantially the same shape, the sides having four spots, five spots, and six spots being of another shape but substantially alike, and the side having seven spots being of a still different shape, the die having a point opposite said side with seven spots.

3. A playing die having seven flat sides, each having one or more spots thereon, the number of spots on each side being different, the sides having one spot, two spots, and three spots being of a non-equilateral quadrilateral shape and substantially alike, the sides having four spots, five spots and six spots having a substantially non-equilateral triangular shape with two of the corners thereof cut off by the intersection of adjacent sides, and the side having seven spots having a substantially equilateral triangular shape, the die having a point opposite said side with seven spots formed by the converging of lines on the edges of the one spot side, the two spot side and the three spot side.

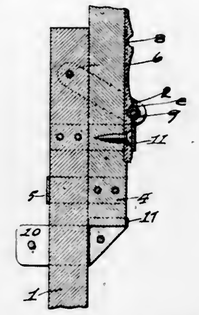
1,223,366. KEY-GUIDE FOR KEYHOLES. ERNEST E. BROWN, Chicago, Ill. Filed Sept. 28, 1916. Serial No. 122,714. (Cl. 70—16.)



1. A device of the character described formed from a single piece of material and including an elongated body provided intermediate its ends with a key opening with the inner face of the body forming guide walls sloping from the ends of the body inwardly toward the said opening, there being laterally and outwardly directed guide wings formed on the longitudinal edges of the body with the said wings sloping transversely toward the body and sloping longitudinally toward the said opening with the extremities of the body provided with laterally directed attaching members.

2. A key guide of the character described including an elongated body provided centrally with an opening and formed with guide walls sloping from the extremities of the body toward the said opening, guide wings carried by the body and flanking opposite sides of the opening, and laterally directed attaching members carried by the extremities of the body, the body being disposed to embrace an escutcheon plate with the attaching members abutting opposite edges of the plate and with the opening in the body registering with the keyhole opening in the plate.

1,223,367. ADJUSTABLE SHORE. GEORGE BROWN, Chicago, Ill. Filed Sept. 18, 1916. Serial No. 120,674. (Cl. 248—3.)

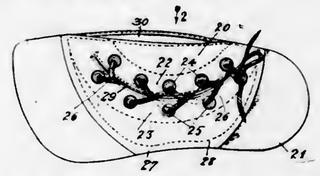


1. A device of the character described, the combination of a stationary upright, a slidable upright mounted adjacent thereto, a band mounted upon the stationary upright, and holding the slidable upright against the stationary upright, a loop preferably formed of metal pivotally secured to the upper end of the stationary upright, a metal strip recessed into the outer face of the slidable upright and securely attached thereto, said strip being provided with a plurality of notches and a curved surface intermediate the notches, means secured to the stationary upright to hold the slidable upright in a predetermined position in the event of the loop being displaced from engagement with one of the notches for the purpose set forth substantially as described.

2. A device of the character described, the combination of a stationary upright, a slidable upright mounted adjacent thereto, a band mounted upon the stationary upright, and holding the slidable upright against the stationary upright, a loop preferably formed of metal pivotally attached to the upper end of the stationary upright, a metal strip recessed into the outer face of the slidable upright and securely attached thereto, said strip being provided with a plurality of notches, and a curved surface intermediate the notches, a shelf mounted upon the lower part of the stationary upright, adapted to engage the lower end of the slidable upright, means to clamp said shelf firmly upon the stationary upright in the predetermined position.

3. An adjustable shore, a metal reinforcement recessed in the face of the slidable upright, said reinforcement being provided with a plurality of notches, a curved surface intermediate the notches for the purpose set forth substantially as described.

1,223,368. PNEUMATIC ARCH-SUPPORT. ROSE SCHUESSLER CARLING, Los Angeles, Cal. Filed Dec. 21, 1915. Serial No. 68,009. (Cl. 36—71.)



1. In an arch supporter, an insole, a sheet arranged across the insole and secured thereto having an opening to

form a pocket, a gore interposed between one edge of the sheet and the insole, and a removable pneumatic pad adapted to be disposed in the pocket formed by the sheet, insole and gore.

2. In an arch supporter, an insole, a sheet secured along its ends and one of its sides to the insole, forming a pocket, a removable pneumatic pad adapted to be disposed in the pocket, and flexible means connecting the other side of the sheet to the insole to permit expansion of the pocket.

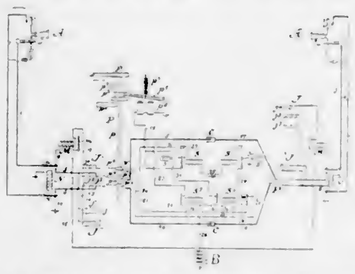
3. In an arch supporter, an insole, a sheet arranged across the under side of the insole stitched at its ends transversely of the insole and along the outer edge thereof, said sheet formed with a slit to provide contiguous flaps, a gore interposed between the inner edges of the sheet and insole, and a removable pneumatic pad disposed in the pocket formed by the sheet, insole, and gore.

4. In an arch supporter, an insole, a sheet arranged across the under side of the insole stitched at its ends transversely of the insole and along the outer edge thereof, said sheet formed with a slit to provide contiguous flaps, a gore interposed between the inner edges of the sheet and insole, a removable pneumatic pad disposed in the pocket formed by the sheet, insole, and gore, and means for fastening the contiguous flaps together.

5. In an arch support, a flexible insole, a flexible sheet of material secured upon said insole and having an opening therein to form a pocket, a removable resilient pad adapted to be inflated to a desired pressure and to fit within said pocket, and means formed by said sheet of material whereby pressure exerted by the outer edge of the foot upon said resilient pad will produce a counter-pressure adapted to expand the pad upwardly and outwardly toward the inner side of the foot arch, thereby adding support to the weakened portion of the foot and transferring the weight to the outer portion of the foot arch.

[Claim 6 not printed in the Gazette.]

1,223,369. TELEPHONE SYSTEM. EDWARD E. CLEMENT, Washington, D. C., assignor, by mesne assignments, to James R. Garfield, trustee, Cleveland, Ohio. Filed Aug. 18, 1905. Serial No. 274,765. (Cl. 179—27.)



1. In a telephone exchange system, the combination with a group of telephone lines extending from sub-stations to an exchange, of a plurality of cord connectors at the exchange, each including a manually operated terminal plug at one end of the cord circuit and having a traveling switch at the other end of the cord circuit with its wiper sweeping over fixed line contacts, means for driving said switches simultaneously with their wipers angularly displaced in sequence, whereby no two wipers will touch contacts of the same line simultaneously, and means serving to arrest the operation of a traveling switch and cause it to connect a cord circuit with the telephone line of a calling subscriber.

2. In a telephone exchange system, the combination with a group of telephone lines extending from sub-stations to an exchange, of a plurality of cord connectors at the exchange, each including a manually operated terminal plug at one end of the cord circuit and having a traveling switch at the other end of the cord circuit with its wiper sweeping over fixed line contacts, means for driving said switches simultaneously with their wipers angularly displaced in sequence, whereby no two wipers will touch contacts of the same line simultaneously, and means serving to arrest the operation of a traveling switch and cause it to connect a cord circuit with the telephone line of a calling subscriber, and a signal at the exchange controlled by said subscriber's apparatus to indicate the fact of his connection with a cord circuit.

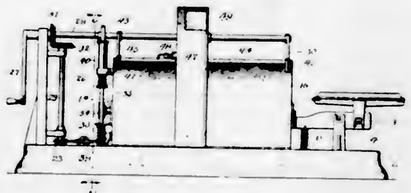
3. In a telephone exchange system, the combination with a group of telephone lines extending from sub-stations to an exchange, of a plurality of link connectors at the exchange, each including a manually operated terminal at one end of the link circuit and having a traveling switch at the other end of the link circuit, with its wiper sweeping over fixed line contacts, means for driving said switches simultaneously with their wipers angularly displaced in sequence, whereby no two wipers will touch contacts of the same line simultaneously, and means serving to arrest the operation of a traveling switch and cause it to connect a link circuit with the telephone line of a calling subscriber.

4. In a telephone exchange system, the combination with a group of telephone lines extending from sub-stations to an exchange, of a plurality of link connectors at the exchange, each including a manually operated terminal at one end of the link circuit and having a traveling switch at the other end of the link circuit with its wiper sweeping over fixed line contacts, means for driving said switches simultaneously with their wipers angularly displaced in sequence, whereby no two wipers will touch contacts of the same line simultaneously, means serving to arrest the operation of a traveling switch and cause it to connect a link circuit with the telephone line of a calling subscriber, and a signal at the exchange controlled by said subscriber's apparatus to indicate the fact of his connection with a link circuit.

5. A telephone exchange system whose telephone lines have connecting jacks and have cord circuits provided with connecting plugs for insertion within said jacks, selective switching mechanism in circuit relation with the lines for uniting calling telephone lines with idle cord circuits and including traveling answering terminals of the cord circuits and multiplied telephone line terminal contacts engaged by said answering terminals, means for driving a plurality of said answering terminals simultaneously but in sequence with respect to their path of travel, and calling subscribers' supervisory signaling apparatus connected with the cord circuits, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

1,223,370. COMPUTING-SCALE. ALLEN DE VILBISS, Jr., Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Company, Newark, N. J., a Corporation of New Jersey. Filed May 24, 1906. Serial No. 318,540. (Cl. 73—104.)



1. A computing recording scale comprising a differentially-movable type-carrying member, means for moving the same, a member operated by the weight on the scale for determining extent of movement of the type-carrying member and a platen member manually adjustable as to its point of coöperation with the type-carrying member.

2. A scale having a member whose position is controlled by the weight on the scale, a computation recording mechanism comprising a printing couple one member of which is a differentially movable type carrying member whose extent of movement is determined by the weight controlled member, and the other member of the printing couple manually adjustable as to its point of coöperation with the type carrying member according to the price per unit of weight, and means operated independently of the weight on the scale for moving the differentially movable member.

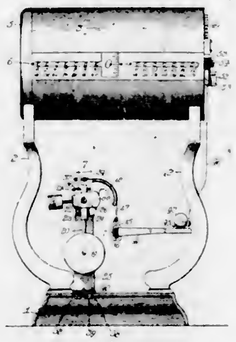
3. A scale having a member whose position is controlled by the weight on the scale, computation recording mechanism comprising a printing couple one member of which is a differentially movable type-carrying drum whose extent of rotation is determined by the weight controlled member, the other member of the printing couple being adjustable longitudinally of the drum according to price per unit of weight, and means for rotating the drum.

4. The combination with the scale beam of a computing weighing scale of computation recording mechanism comprising two coöperating members of which one is a differentially movable member whose ultimate position is determined by the position of the scale beam, and the other member is manually adjustable as to the point of coöperation with said differentially movable member, and means operated independently of the load on the scale for moving the differentially movable member.

5. The combination with the scale beam of a computing weight scale, of computation recording mechanism comprising a printing couple one member of which is a differentially movable type carrying member whose extent of movement is determined by the position of said scale beam, and the other member of the printing couple manually adjustable as to its position with reference to the type carrying member, and means operated independently of the load on the scale for moving the type carrying member.

[Claims 6 to 62 not printed in the Gazette.]

1,223,371. SCALE. ALLEN DE VILBISS, Jr., Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Company, Newark, N. J., a Corporation of New Jersey. Filed Sept. 1, 1906. Serial No. 332,932. (Cl. 73—104.)



1. In a pendulum scale, the combination of a scale beam, indicating mechanism operated thereby, a pendulum, a flexible connection arranged between such beam and pendulum, and a segment coöperating with such connection and adjustable with respect thereto; substantially as described.

2. In a pendulum scale, the combination of a scale beam, indicating mechanism operated thereby, a pendulum, a flexible connection arranged between such beam and pendulum, and a segment movable in unison with the pendulum and coöperating with such connection, said segment being adjustable with respect to said connection; substantially as described.

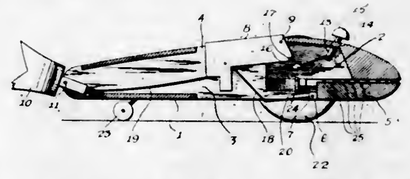
3. In a pendulum scale, the combination, with a supporting frame, of a pendulum pivotally mounted therein, a scale beam, a flexible connection between such beam and pendulum, and a segment coöperating with such connection and adjustable rotarily of the pivotal axis of the pendulum; substantially as described.

4. In a pendulum scale, the combination of a scale beam, indicating mechanism operated thereby, a pendulum, a flexible connection arranged between such beam and pendulum, means for adjusting the length thereof, and a segment coöperating with such connection; substantially as described.

5. In a pendulum scale, the combination of a scale beam, indicating mechanism operated thereby, a pendulum, a flexible connection arranged between such beam and pendulum, a clamp adjustably held by the pendulum and secured to the flexible connection, and a segment coöperating with such connection; substantially as described.

[Claims 6 to 45 not printed in the Gazette.]

1,223,372. FIGURE WHEELED TOY. JOHN VICTER DI ZEREGA, New York, N. Y. Filed Nov. 14, 1916. Serial No. 131,199. (Cl. 46—45.)



1. A toy comprising a horizontally elongated shark-like body having eye-holes in the forward part of its top, eye members comprising stems passing through said holes and enlargements respresenting eyes upon the upper ends of the stems, a pair of rolling supports and a crank connected therewith, and means whereby said eye members are actuated by said crank.

2. A toy comprising a horizontally elongated shark-like body having eye-holes in the forward part of its top, eye members slidable up and down in said holes, a pair of rolling supports and a crank connected therewith, and means whereby said eye members are actuated by said crank.

3. A toy comprising a shark-like body provided with rolling supports, an actuating crank, a movable lower jaw member and means whereby it is operated by the crank, a pivoted dorsal fin member tending to descend by its own weight, and a connection whereby the jaw member in its normal open position holds the fin member elevated.

4. A toy comprising a shark-like body provided with rolling supports, an actuating crank, a movable lower jaw member and means whereby it is operated by the crank, a pivoted dorsal fin member tending to descend by its own weight, a connection whereby the jaw member in its normal open position holds the fin member elevated, a pivoted tail member, and a connection between the same and the fin member whereby the tail member is raised by the dropping of the fin member.

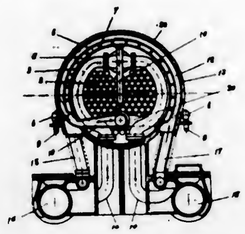
5. A toy comprising a shark-like figure body having eye holes, eye members slidable up and down in said eye holes, wires in the head of the figure whereon the eye members are mounted, rolling supports and a crank adapted to contact with said wires.

[Claim 6 not printed in the Gazette.]

1,223,373. FEED-WATER HEATER FOR LOCOMOTIVE-BOILERS. JUAN D'NARVARTE, N. C., Hacienda Laredo, Truxillo, Peru. Filed Aug. 26, 1916. Serial No. 117,113. (Cl. 122—425.)

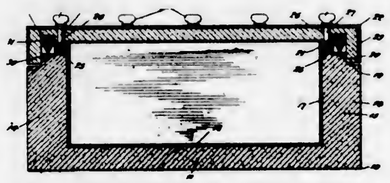
In a boiler of the locomotive type, the combination comprising cylinders, a smoke box having a stack, a water chamber formed on the exterior of and partly encircling said smoke box and disposed between the boiler and the stack, an exhaust steam passage leading from one cylinder

over part of said water chamber for the full length thereof and substantially encircling said smoke box, and a paral-



lel exhaust steam passage leading from the other cylinder over the remaining part of said chamber in the opposite direction.

1,223,374. PORTABLE VAULT. STEPHEN W. DYCKMAN, New York, N. Y. Filed Jan. 22, 1916. Serial No. 73,585. (Cl. 72—7.)



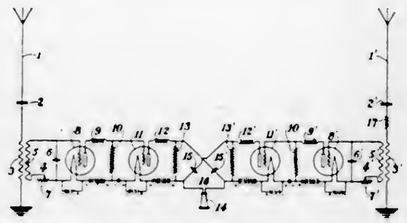
A portable vault, consisting of an open top box-like body formed of an intersticed metallic reinforcing shell having a covering of waterproof and airproof plastic material, and the upper edges of the walls of the body being formed to provide a number of rightangularly shaped superposed annular ledges disposed on horizontal planes as well as being disposed on an upward incline, a cover on the open top of the body also formed of an intersticed metallic reinforcing member with a covering of waterproof and airproof plastic material, an annular flange depending from the lid, and disposed so that its free edge rests on the lower ledge of the body, threaded bolts freely rotatable in spaced openings in the lid, and adapted to be screwed in threaded sockets provided in the walls of the body for releasably fastening the lid thereto, a puncturable metallic band on one of the ledges adjoining the flange of the lid, and an annular blade on the underside of the lid, adapted to be sunken in the band when the lid is locked to the body whereby moisture and air will be prevented from entering between the lid and the body when locked together.

1,223,375. ELECTRICAL TOY. GALE S. ELLIOTT, Needles, Cal. Filed Dec. 14, 1915. Serial No. 66,757. (Cl. 172—36.)



An electrical toy, comprising electromagnets, a rotating armature consisting of a metallic frame structure, a means for making and breaking the circuit between the electromagnets and the rotating armature consisting of tongues bent from the metallic frame and a fiber ring arranged within the tongues, and a brush operatively associated therewith.

1,223,376. WIRELESS RECEIVING SYSTEM. LLOYD ESPENSCHIED, Brooklyn, N. Y., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Sept. 23, 1915. Serial No. 52,260. (Cl. 250—20.)



1. A wireless receiving system comprising a receiving antenna and an auxiliary antenna, a vacuum tube detector associated with said receiving antenna, a second vacuum tube detector associated with said auxiliary antenna, a receiving device connected through said detectors with said antennæ, and means, including adjustable resistance elements for controlling the damping factors of waves set up in the two antennæ, whereby the natural characteristic oscillations in said antennæ, consequent upon a static disturbance, oppose and substantially neutralize each other as regards the said receiving device.

2. A wireless signaling system comprising a receiving antenna circuit proper, an auxiliary antenna circuit, a detecting device connected to said receiving antenna circuit, a second detecting device connected to said auxiliary antenna circuit, a receiving device differentially connected to both of said detecting devices and means for amplifying disturbing oscillations in said circuits to approximately equal amplitude.

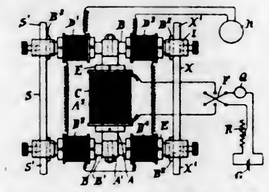
3. A wireless telegraph or telephone system comprising an antenna, a second auxiliary antenna, an oscillation circuit including inductance, capacity and resistance elements connected to first named antenna, a second oscillation circuit containing inductance, capacity and resistance elements connected to said auxiliary antenna, said oscillation circuits being adjusted to have the same damping factors, a detecting device connected to said first named oscillation circuit, a second detecting device connected to said second named oscillation circuit, an amplifying device whose input side is connected to said first named detecting device, a second amplifying device whose input side is connected to said second named detecting device and a receiving device differentially connected to the output side of both of said amplifying devices.

4. A wireless telegraph or telephone system comprising an antenna, a second auxiliary antenna, an oscillation circuit, including inductance, capacity and resistance elements, connected to said first named antenna; a second oscillation circuit containing inductance, capacity and resistance elements connected with said auxiliary antenna, a vacuum tube detector whose input side is connected to said first named oscillation circuit, a second vacuum tube detector whose input side is connected to said second named oscillation circuit, and a receiving device connected to the output side of both of said vacuum tube detectors in such a manner that the effects upon said receiving device of oscillations occurring in said oscillation circuits are opposed and substantially neutralized.

5. A wireless telegraph or telephone system comprising an antenna, a second auxiliary antenna, an oscillation circuit, including inductance, capacity and resistance elements, connected to said first named antenna, a second oscillation circuit containing inductance, capacity and resistance elements connected with said auxiliary antenna, a vacuum tube detector whose input side is operatively connected to said first named oscillation circuit, a second vacuum tube detector whose input side is connected to said second named oscillation circuit, a vacuum tube amplifier whose input side is connected to said first named detector, a second vacuum tube amplifier whose input side is connected to said second named detector; and a receiving device connected to the output sides of both said amplifiers, the constants of said oscillation circuits and the amplifying powers of said amplifiers being so adjusted that the receiving device is unresponsive to simultaneous natural oscillations occurring in said oscillation circuits.

[Claim 6 not printed in the Gazette.]

1,223,377. METHOD OF AND APPARATUS FOR TESTING MAGNETIC OBJECTS. FRANK P. FAHY, Washington, D. C. Filed Sept. 23, 1912. Serial No. 721,823. (Cl. 73—51.)

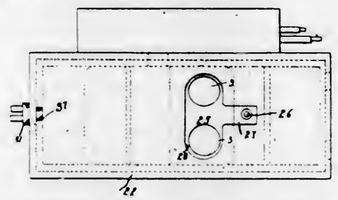


1. The method of determining the effect of heat treatment on a metallic magnetic material which consists in simultaneously subjecting two specimens of said material of practically the same shape but differing from one another in the heat treatments which they have received, to the effect of the same changing magneto-motive force and measuring the differential of the induction through the two specimens when the magneto-motive force is changed.

2. The method of determining the effect of a heat treatment on a metallic magnetic material which consists in electro-magnetically comparing one specimen of said material which has been subjected to said heat treatment with another specimen of said material of practically the same shape but which is in a thoroughly annealed condition by simultaneously subjecting the two specimens to the effects of the same changing magneto-motive force and measuring the differential of the induction through the two specimens when the magneto-motive force is changed.

3. The method of determining the magnetic properties of a magnetic object which consists in utilizing a changing magneto-motive force to creat a changing magnetic flux, passing one portion of said flux through said object and diverting another portion of said flux away from said object and measuring the differential inductive effects of said flux portions when said magneto-motive force is changed.

1,223,378. SWITCH-BLOCK AND CASING. ALBERT ISIDORE FROMAGER and JOSEPH FERDINAND SIX, Montreal, Quebec, Canada. Filed May 10, 1916. Serial No. 96,728. (Cl. 175—273.)



1. In a device of the character described, comprising a casing, an insulated block arranged within said casing, said block having a pair of spaced longitudinally extending bores formed therein, switch terminals arranged within each of said bores, a pair of rods slidably mounted within said bores for opening and closing said switch terminals, an insulated block for connecting one end of said rods, fuse plugs adapted to be connected in circuit with said switch terminals, said casing having an opening therein whereby access may be gained to said fuse plugs, a partition arranged within said casing to prevent access from being gained to the switch terminals arranged within one end of said bores, a plate slidably mounted within said casing, one end of said plate being connected to said block carried by said rods and means for sliding said plate whereby said rods will cause said switch terminals to be connected after said plate has completely closed the opening within the casing and disconnected said switch terminals before said plate can be permitted to open the opening within the casing.

2. In a device of the character described comprising an insulated block, a pair of parallel horizontally extending bores extending through said block, a pair of bushings arranged within each bore and held in spaced relation, a pair of rods slidably mounted within said bushings for electrically connecting the same, one end of said block having an enlarged portion formed therewith, fuse plugs adapted to be arranged within said enlarged portion, rings encircling the bushings arranged within one end of said block, means for connecting said rings with said fuse plugs, the last mentioned bushings having openings therein, leaf springs carried by said bushings having their free ends adapted to rest within said openings whereby they may contact with said rods, and means for connecting one end of said rods whereby they may be jointly operated.

3. In a device of the character described comprising a casing, an insulated block arranged within the medial portion of said casing, said block having a pair of spaced longitudinally extending bores therein, switch terminals arranged within each end of said bores, rods extending within said bores for connecting said switch terminals, a block for jointly connecting one end of said rods, said insulated block having an enlarged portion, fuse plugs adapted to be arranged within said enlarged portion and adapted to be connected to the switch terminals arranged within one end of said bores, electric connections connected to the switch terminals arranged within the opposite ends of the bores, a partition arranged within said casing for preventing access to be gained to the said electrical connections with the last mentioned switch terminals, a detachable cover for said casing having an opening therein, a slidable plate connected to said rods and adapted to close said opening, and means whereby when said plate is opened the switch terminals will be disconnected and access may be gained to said spark plugs and means whereby after said opening is closed said switch terminals will be connected, substantially as and for the purpose set forth.

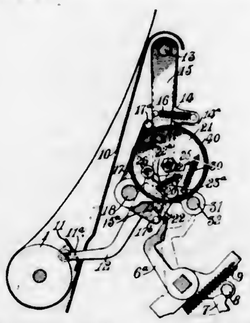
1,223,379. RECORDING-MACHINE. CLYDE GARDNER, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 15, 1916. Serial No. 115,114. (Cl. 197—189.)

1. The combination of paper-holding means, a feeler adapted to be obstructed by the paper, means normally holding said feeler back from the paper space, means for intermittently freeing the feeler, and signaling means set by the feeler when so freed and when also unobstructed by the paper.

2. The combination of paper-holding means, a vibratory feeler adapted to be obstructed by the paper, means tending to force the feeler into contact with the paper, a reciprocating paper-feed element normally holding the feeler back from the paper space, and signaling means set as an incident to the freeing of the feeler from such restraint and operated by said paper-feed element.

3. The combination of apertured paper-holding means, a vibratory feeler-finger alined with the aperture thereof, an operating arm for said finger, a spring-actuated lever engaging said arm and tending to project the finger through the aperture, a rocking member opposing the spring, a reciprocating paper-feed element normally back-

ing up said member, and signaling means operated by said element through the medium of said spring-actuated lever when the latter has projected the feeler-finger into space vacated by the paper.

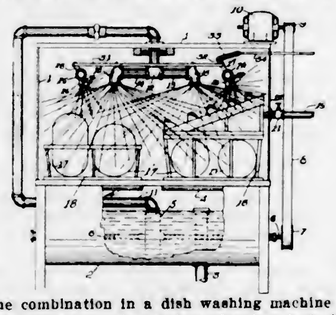


4. The combination of apertured paper-holding means, a vibratory feeler-finger alined with the aperture thereof, an operating arm for said finger, a spring-actuated lever engaging said arm and tending to project the finger through the aperture, a rocking member opposing the spring, a reciprocating paper-feed element normally backing up said member, and a spring-actuated signaling element engaged by said spring-actuated lever, the latter adapted to be flipped by the feed-element to retract and release said signaling element when the lever has projected the feeler-finger into space vacated by the paper.

5. The combination of apertured paper-holding means, a vibratory feeler-finger alined with the aperture thereof, an operating arm for said finger, a spring-actuated lever engaging said arm and tending to project the finger through the aperture, a rocking member opposing the spring, a reciprocating paper-feed element normally backing up said member, a bell, and a spring-actuated striker engaged by said spring-actuated lever, the latter adapted to be flipped by the feed-element to retract and release the said striker when the lever has projected the feeler-finger into space vacated by the paper.

[Claim 6 not printed in the Gazette.]

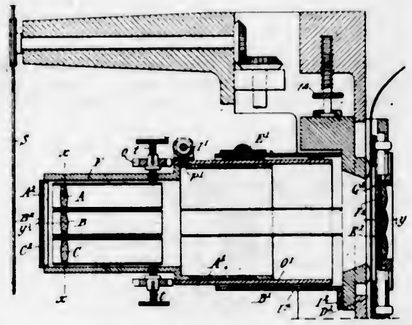
1,223,380. DISH-WASHING MACHINE. JOSEPHINE GARIS-COCHRANE, deceased, Chicago, Ill., by Annie F. Colt, executrix, Chicago, Ill., assignor to Garis-Cochrane Mfg. Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 29, 1914. Serial No. 835,299. (Cl. 141—9.)



1. The combination in a dish washing machine having racks and spray nozzles and a chamber inclosing the same, of means to supply soapy water to said spray nozzles, rinsing pipes inclosed within said machine, said pipes being provided with a plurality of rinsing nozzles, suitable pipe connections to connect said rinsing pipes to a source of supply of clean water, means operable from the exterior of the machine connected to said rinsing pipes for oscillating them at intervals.

2. The combination in a dishwashing machine having a chamber with racks and fluid spraying nozzles for washing therein, of rinsing nozzles rotatably supported in said chamber rotated by the force of water passing therethrough, and means of communication between said rinsing nozzles and a source of water supply.

1,223,381. CINEMATOGRAPH FOR NATURAL-COLOR PROJECTIONS BY THE THREE-COLOR PROCESS. LÉON GAUMONT, Paris, France, assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 5, 1912. Serial No. 675,627. (Cl. 88—16.4.)



1. A cinematographic apparatus for color projections by means of the three color method, comprising three objectives and a common support for the objectives, said support being rotatable about the axis of said support for bringing said objectives in vertical alinement.

2. A cinematographic apparatus for color projections by means of the three color method, comprising three objectives mounted upon a common objective support, two of said objectives being pivotally mounted on vertical and horizontal axes in said objectives' support, whereby the projections may be superposed.

3. A cinematographic apparatus for color projections by means of the three color method, comprising three objectives, two of which are pivoted and displaceable around the pivots with relation to the third, a stirrup having two members capable of being moved apart or together and having stops thereon limiting the pivotal movements of the displaceable objectives.

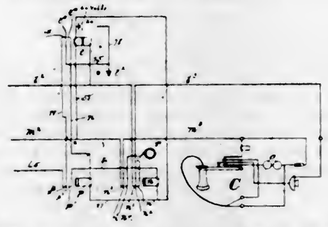
4. A cinematographic apparatus for color projections by means of the three color method, comprising a frame, three objectives, a support therefor capable of sliding vertically on the frame, an inner sleeve on the said support, means for rotating said sleeve in said support, a mounting, on said sleeve for said objectives, two of said objectives being mounted to be movable around vertical and horizontal axes.

5. In a cinematographic apparatus for color projections by means of the three color method, comprising three objectives, two of said objectives being mounted upon pairs of horizontal pivots, one of the pivots of each pair being longitudinally movable, and each pivoted objective being longitudinally movable on the second pivot of each pair so as to allow for the axial displacement of the pivoted objectives, screw stops adapted to limit the pivotal movement of said pivoted objectives around their horizontal axes, and springs tending to move said pivoted objectives against said stops.

[Claims 6 to 20 not printed in the Gazette.]

1,223,382. LOCKING MECHANISM FOR IMPULSE-TRANSMITTERS. CHARLES L. GOODRUM, Urbana, Ohio, assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed May 1, 1909. Serial No. 493,395. (Cl. 179—18.)

1. The combination with an impulse transmitter, a normally open subscriber's line into which said transmitter may be included, a locking device for the transmitter, an electromagnet adapted to be connected into the subscriber's line for operating the said locking device to unlock the transmitter, an impulse receiver, and means for establishing a connection with said impulse receiver upon closing the subscriber's line, a source of electric energy sufficient to operate the electromagnet to unlock said transmitter, and means for connecting said energy onto the subscriber's line when the impulse receiver is in circuit, substantially as specified.



2. In an automatic telephone system, a calling subscriber's station, an automatic mechanism for connecting said calling subscriber's station to a called subscriber's station, an impulse transmitter forming a part of said mechanism for effecting said connection, a locking device for said transmitter, means associated with the connecting mechanism for operating said locking device to unlock said transmitter when the same is in condition to receive impulses, a slow acting relay and a generator circuit normally disconnected from, but adapted to be connected with, said called subscriber's line by said slow acting relay influenced by the impulses from said transmitter, whereby ringing impulses may be sent from said transmitter after connections have been established between the calling and called subscriber's stations.

3. In an automatic telephone system, two subscriber's stations, an automatic mechanism for establishing connection between the same involving a calling station and an impulse transmitter, and means for establishing said connection by impulses from said transmitter, a generator circuit normally disconnected from connected stations, a line relay responsive to interruptions in the line circuit, a slow relay, and a ringing relay, said ringing relay being controlled jointly by said line and slow relays to connect said generator circuit into the connected line circuit.

4. In an automatic telephone system, two subscribers' stations connected for conversation, an impulse transmitter at one of said stations and a ringer at the other station, a generator circuit normally disconnected from said connected stations, a line relay responsive to interruptions in the line circuit, a slow relay, and a ringing relay, said ringing relay being controlled jointly by said line and slow relays to connect said generator circuit into the connected line circuit.

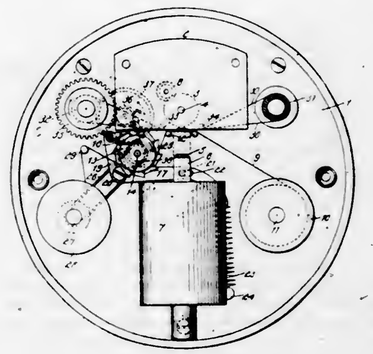
5. In an automatic telephone system, two subscribers' stations connected for conversation, a ringer at one of said stations and an impulse transmitter at the other, a normal relay bridged on the line and having back and front contacts respectively connected in circuits with two slow relays, one of which relays controls a ringing circuit and being in turn controlled by the other relay whereby the vibration of the armature caused by impulses through said normal relay will hold up the two slow relays and thus cause ringing current to be applied to the called station so long as impulses of current are passing through the normal relay.

[Claims 6 and 7 not printed in the Gazette.]

1,223,383. [WITHDRAWN.]

1,223,384. PRINTING MECHANISM FOR METERS. CHESTER I. HALL, Chicago, Ill., assignor to Chicago Electric Meter Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 22, 1912. Serial No. 732,854. (Cl. 234—35.)

1. In an apparatus of the class described, the combination of a supply roller for a paper tape adapted to receive a record, a receiving roller for the paper tape, a feed roller having projections thereon for engaging apertures in the paper tape, mechanism operated by the printing mechanism adapted when operated to rotate the feed roller an amount to advance the paper tape a distance of one record, and frictional driving connections between the feed roller and the receiving roller.



2. In a device of the class described, the combination of an electromagnetic operating device, a lever actuated by said operating device, a pawl carried by said lever, a feed roller for moving the record tape from a supply roller to a receiving roller, a ratchet wheel carried by said feed roller to be actuated by said pawl, and a friction drive actuated by the feed roller for winding the paper tape upon the receiving roller.

3. In an apparatus of the class described the combination with a supply roller for a paper tape adapted to receive a record, a receiving roller for the paper tape, a feed roller adapted to coöperate with the tape, printing means and mechanism operated by the printing means adapted when operated to rotate the feed roller an amount to advance the paper tape a distance of one record, and frictional driving connections between the feed roller and the receiving roller.

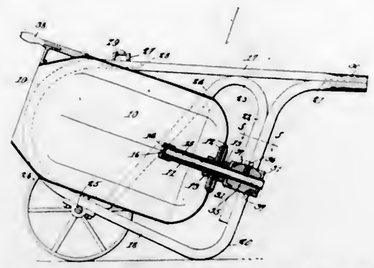
4. In an apparatus of the class described, the combination of printing wheels, electromagnetic mechanism arranged when actuated to advance the printing wheels, integrating mechanism controlling the operation of the electro-magnetic mechanism, and circuit breaking devices controlled by the electro-magnetic mechanism to break the energizing circuit by the operation of the electro-magnetic mechanism, said circuit breaking devices comprising a rotary cam actuated simultaneously with the printing wheels, three contact springs and a roller carried by one of said springs engaging said cam, rotation of said cam serving to make and break contact between said springs.

5. In an apparatus of the class described, the combination of printing wheels, electro-magnetic mechanism arranged when actuated to advance the printing wheels, integrating mechanism controlling the operation of the electro-magnetic mechanism, and circuit breaking devices controlled by the electro-magnetic mechanism to break the energizing circuit by the operation of the electro-magnetic mechanism, said circuit breaking devices comprising a rotary cam actuated by the electro-magnetic mechanism, said cam having alternate spaces and teeth of circular conformation relatively to the center of motion of the cam, three contact springs, and a roller carried by one of said springs in engagement with the surface of the cam, rotation of the cam serving to make contact between said first spring and a second one of said springs when said roller is upon a tooth at the same time to interrupt connection between said first spring and the third one of said springs and to make connection between said first spring and the third one of said springs when the roller

is in a space of the cam and at the same time interrupt connection between said first spring and the second one of said springs.

[Claims 6 to 8 not printed in the Gazette.]

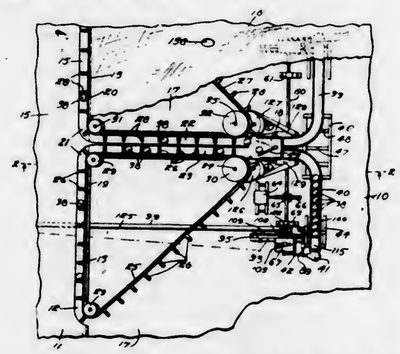
1,223,385. CONCRETE-MIXER. LOUIS C. HAMEL, Appleton, Wis. Filed July 19, 1916. Serial No. 110,100. (Cl. 83—73.)



1. A concrete mixer comprising a rotatable mixing drum, a wheeled support for the drum, said support being tiltable about its axle, and the drum extending in the direction of the length of the support, a shaft supporting the drum, a prop on the support behind the axle for limiting the downward tilt of the rear end of the support, and a support for the drum shaft carried by the prop.

2. A concrete mixer comprising a rotatable mixing drum, a wheeled support for the drum, said support being tiltable about its axle, and the drum extending in the direction of the length of the support, a shaft supporting the drum, a prop on the support behind the axle for limiting the downward tilt of the rear end of the support, said prop comprising laterally spaced side members, a cross-connection between said members and consisting of spaced channel bars having their channels facing, a block mounted between said bars and seating at its ends in the channels thereof, and a shaft supporting the drum and passing through the channel bars and the block therebetween.

1,223,386. AUTOMATIC BASE-BALL APPARATUS. DANIEL HANDELAN, Minneapolis, Minn. Filed Sept. 23, 1915. Serial No. 52,216. (Cl. 124—1.)



1. In combination with a platform sloping rearwardly having a ball-receiving trough at the bottom thereof and a back stop extending upwardly from said trough against which the balls are batted, a pitching machine located behind the back stop, a constantly-driven shaft, an endless conveyer continuously driven from said shaft, said conveyer traveling along said trough and rearwardly to an elevated point and operating to convey the balls thereto from said trough, means for delivering the balls one at a time to the pitching machine, said pitching machine thereafter automatically throwing the balls through apertures in the back stop.

2. In combination with a platform sloping rearwardly having a ball-receiving trough at the bottom thereof and a back stop extending upwardly from said trough against which the balls are batted, a trough extending rearwardly and upwardly from said first-named trough behind said back stop, a pitching machine located behind the back stop, a receptacle for receiving balls from said upwardly-sloping trough and holding the same for automatic delivery one at a time to the pitching machine, and means running continuously in said troughs for positively conveying the balls to the receptacle.

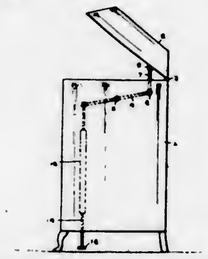
3. In combination with a platform sloping rearwardly having a ball-receiving trough at the bottom thereof and a back stop extending upwardly from said trough against which the balls are batted, a trough extending rearwardly and upwardly from said first-named trough behind said back stop, a pitching machine located behind the back stop, a receptacle for receiving balls from said upwardly-sloping trough and holding the same for automatic delivery one at a time to the pitching machine, means running continuously in said troughs for positively conveying the balls to the receptacle, means for delivering the balls one at a time to said receptacle, and automatic means for periodically actuating the pitching machine to cause the same to throw the delivered balls through apertures in the back stop.

4. In combination with a platform sloping rearwardly having a ball-receiving trough at the bottom thereof and a back stop extending upwardly from said trough against which the balls are batted, a trough extending rearwardly and upwardly from the central portion of said first-named trough behind said back stop, a pitching machine located behind the back stop, a receptacle for receiving balls from said upwardly-sloping trough and holding the same for automatic delivery one at a time to the pitching machine, and a pair of constantly-driven endless conveyers each running through the central trough and a portion of the first-named trough for positively conveying the balls to the receptacle.

5. In combination with a platform sloping rearwardly having a ball-receiving trough at the bottom thereof and a back stop extending upwardly from said trough against which the balls are batted, a trough extending rearwardly and upwardly from the central portion of said first-named trough behind said back stop, a pitching machine located behind the back stop in spaced relation, a separate receptacle for each pitching machine for receiving balls from said upwardly-sloping trough and holding the same for automatic delivery one at a time to the pitching machine, and a pair of constantly-driven endless conveyers each running through said central trough and a portion of the first-named trough, each of said conveyers operating positively to convey the balls to a corresponding receptacle.

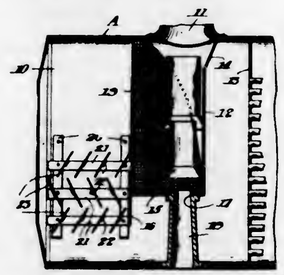
[Claims 6 to 10 not printed in the Gazette.]

1,223,387. LID-LIFTING DEVICE. EDWARD G. HAYNE, Ottawa, Ill. Filed Mar. 28, 1916. Serial No. 87,360. (Cl. 211—26.)



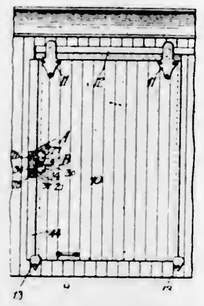
The combination with a cabinet having a hinged lid thereon, of a beam pivotally attached to the inner face of the cabinet, a strap pivoted at one end to one end of the beam and at its opposite end to the under face of the lid, a rod pivotally connected to the opposite end of the beam and projecting downwardly through the bottom of the cabinet, a counter balancing weight mounted upon said rod, and a head piece carried by the lower end of the rod whereby the lid may be opened or closed by the actuation of the head piece, said head piece adapted to engage with the surface upon which the cabinet is mounted to limit the opening movement of the lid.

1,223,388. SPARK-ARRESTER. ALBERT EDMUND HUDSON, Toronto, Ontario, Canada, assignor of one-third to Henry Bush Spencer and one-third to Robert Hudson, Ottawa, Ontario, Canada. Filed July 18, 1916. Serial No. 109,917. (Cl. 110—122.)



The combination with a boiler, of a spark arrester consisting of a baffle wall extending transversely across the upper portion of the smoke box of the boiler and provided with a lower offset portion of substantially V-shape, having a flange therearound, a curved perforated baffle wall located in front of the said baffle wall and coacting therewith, a pair of vertically disposed straps adjacent baffle wall, a plurality of pairs of longitudinal extending bars carried thereby, a plurality of transverse bars carried by pairs of said longitudinal bars angularly disposed thereon and perforated baffle plates carried by said transverse bars in front of the perforated baffle wall, the adjacent rows of said plates being angularly disposed in opposite directions and staggered relatively to each other.

1,223,389. SLIDING-DOOR FASTENER. LEE P. HYNES, Chicago, Ill., assignor to Railway Utility Company, Chicago, Ill., a Corporation of Illinois. Filed July 1, 1912. Serial No. 706,885. (Cl. 70—102.)



1. A lock for sliding doors comprising a latch member and a keeper, the former comprising a mounting adapted to be attached to the jamb of a door and an oscillatory member, the latter comprising a barrel journaled in the mounting on a horizontal axis parallel to the face of the jamb, a catch projecting laterally from said barrel and having a beveled front edge, the keeper being adapted to be secured to the door to one side of the said barrel and to engage the beveled edge of the catch to swing the same to one side and then to engage the rear edge of the catch to prevent opening the door.

2. A lock for sliding doors comprising a latch member and a keeper, the latch member comprising a mounting adapted to be attached to the jamb of a door and an oscillatory member, the latter comprising a barrel journaled in the mounting on a horizontal axis parallel to the face of the jamb, a catch projecting laterally from said barrel and having a beveled front edge, a heavy arm on said barrel normally pendant and maintaining said catch yieldingly in a substantially horizontal position, the keeper being adapted to be secured to the door to one side of the said barrel and to engage the beveled edge of the catch to swing the same to one side and then to engage the rear edge of the catch to prevent opening the door.

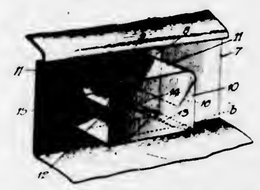
3. A lock for sliding doors comprising a latch member and a keeper, the latch member comprising a mounting adapted to be attached to the jamb of a door and an oscillatory member, the latter comprising a barrel journaled in the mounting on a horizontal axis parallel to the face of the jamb, a catch projecting laterally from said barrel and below the horizontal plane thereof, and having a beveled front edge, means for yieldingly mounting the oscillatory member with the catch in horizontal position, the keeper being adapted to be secured to the door to one side of the said barrel and to engage the beveled edge of the catch to swing the same to one side and then to engage the rear edge of the catch to prevent opening the door.

4. A lock for sliding doors comprising a latch member and a keeper, the latch member comprising a mounting adapted to be attached to the jamb of a door and an oscillatory member, the latter comprising a barrel journaled in the mounting on a horizontal axis parallel to the face of the jamb, a catch projecting laterally from said barrel and having a beveled front edge, a heavy arm on said barrel normally pendant and maintaining said catch yieldingly in a substantially horizontal position, the keeper being adapted to be secured to the door to one side of the said barrel and to engage the beveled edge of the catch to swing the same to one side and then to engage the rear edge of the catch to prevent opening the door, and a cam on said keeper adapted to engage said oscillatory member when the latter is oscillated to throw said arm above the barrel against the jamb and to tilt said arm outward to permit it to fall to pendant position.

5. A lock for sliding doors comprising a housing and a swinging latch mounted therein and comprising a barrel journaled in the housing, a laterally projecting beveled catch mounted upon the barrel, a depending strap also mounted upon the barrel and a pivoted dog engaging the strap.

[Claims 6 to 9 not printed in the Gazette.]

1,223,390. VENTILATOR. LEE P. HYNES, Chicago, Ill., assignor to Railway Utility Company, Chicago, Ill., a Corporation of Illinois. Filed May 31, 1913. Serial No. 770,886. (Cl. 98—22.)



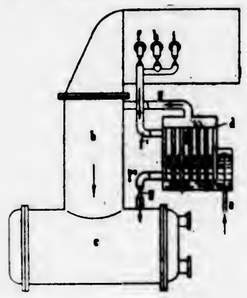
1. An intake ventilator having a longitudinal passage open at both ends, an outlet passage in one of the side walls thereof and a transverse deflecting abutment in the bottom of said passage.

2. An air intake or ventilator having a longitudinal passage open at both ends, a transverse horizontal deflecting abutment intermediate the ends of the passage and an outlet opening in one of the side walls thereof intermediate the ends of the passage and above the abutment.

3. An air inlet or ventilator having a longitudinal passage open at both ends and an intermediate outlet in one of the walls thereof, an abutment intermediate the ends of the passage and adapted to deflect the entering current of air, and end walls or abutments projecting from the wall of the passage opposite the first mentioned abutment and extending toward the same.

4. A ventilator or air inlet having a longitudinally extending passage open at both ends, and an intermediate outlet, a transverse ridge extending upward from the bottom of the passage and adapted to deflect an entering current of air, and end walls extending downward from the top of the passage substantially to the level of the top of the ridge.

1,223,391. CONDENSING APPARATUS. EMIL JOSSE, Berlin-Lankwitz, and WILHELM GENSECKE, Berlin-Wilmersdorf, Germany. Filed June 16, 1915. Serial No. 34,517. (Cl. 257—30.)



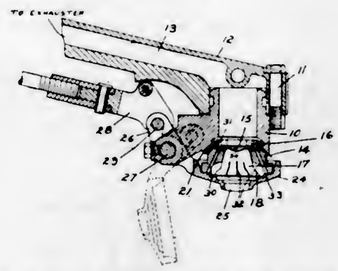
In an apparatus for producing distilled additional water in power engine plants the combination of a steam turbine, a conduit for the waste steam, a vaporizer, a pipe for supplying raw water to the said vaporizer, a series of steam outlet ports in the turbine, means for feeding the steam from the turbine through the said outlet ports to the vaporizer and from the vaporizer to the condenser, means for feeding the vapors formed in the vaporizer to the condenser and a regulating organ, for governing the supply of steam from the vaporizer to the condenser, substantially as described.

1,223,392. MOLD FOR GLASS-GATHERING MECHANISMS. AUGUST KADOW, Toledo, Ohio, assignor to The Westlake Machine Company, Toledo, Ohio, a Corporation of Ohio. Original application filed Sept. 7, 1912, Serial No. 719,178. Divided and this application filed Nov. 14, 1914. Serial No. 872,192. (Cl. 49—65.)

1. In a machine for manufacturing glass articles, the combination with a support, of an upper mold element rockingly suspended on said support and having a cavity open at the bottom, and a lower annular mold element hinged to said support in position to bear against the under side of said upper mold element to close said cavity.

2. In a machine for manufacturing glass articles, the combination with a support, of an upper mold element having a loose connection with said support and provided with a mold cavity open at the bottom, and an annular mold element hinged to said support in position to bear against the under side of said upper mold element.

3. In a machine for manufacturing glass articles, the combination with a support, of a mold element on said support having a cavity tapered inwardly first abruptly and then gradually, and an annular mold element adapted to fit over the open end of the first named element which coöperates with said first named element to form a blank having an outstanding flange, said upper mold element formed with exhaust ports and both elements formed with radial slits which put the interior of the mold in communication with said exhaust ports.

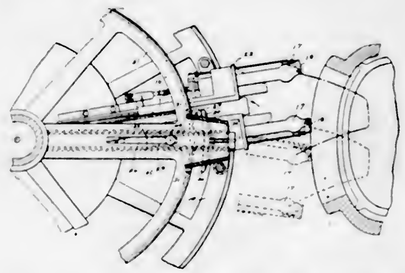


4. In a machine for manufacturing glass articles, the combination with a hollow supporting member, of an upper mold element which fits within said supporting member and is loosely connected therewith, and a lower mold element hinged to said support and adapted to bear against the under side of said upper mold element.

5. In a machine for manufacturing glass articles, the combination with a hollow supporting member, of a mold element which fits within said supporting member and is loosely connected therewith, and an annular lower mold element hinged to said support and adapted to bear against the under side of said upper mold element.

[Claims 6 to 19 not printed in the Gazette.]

1,223,393. GLASS-GATHERING MECHANISM. AUGUST KADOW, Toledo, Ohio, assignor to The Westlake Machine Company, Toledo, Ohio, a Corporation of Ohio. Filed Jan. 11, 1917. Serial No. 141,886. (Cl. 49—62.)



1. In apparatus for manufacturing glass articles, the combination with a glass furnace having a working opening, of a continuously rotating structure and a gathering mechanism having a fixed radial relation with said rotating structure so that it rotates therewith uninterruptedly; said mechanism comprising a gathering ram movable in the direction of its length radially of said machine, and means for producing reciprocating movements of said gathering ram timed to thrust the same into and withdraw it from the working opening of said furnace.

2. In apparatus for manufacturing glass articles, the combination with a glass furnace having a working opening of a rotary structure, and a gathering mechanism having a fixed relation with said rotary structure so that it rotates therewith uninterruptedly; said mechanism comprising a gathering ram movable in the direction of its length, a rotating cam and non-rotating means actuated by the cam to reciprocate the ram and having an engagement with the ram which allows the continuous rotation thereof during reciprocation.

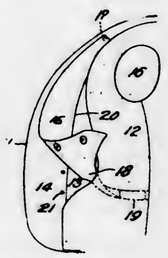
3. In apparatus for manufacturing glass articles, the combination with a glass furnace having a working opening, of a rotary structure, a glass gathering ram, a support having a fixed radial position on the rotary structure on which support the ram has movement only in the direction of its length, a slide on said rotary structure for imparting reciprocating movements to the ram, a stationary structure, a slide mounted thereon with capacity for longitudinal movement, means providing a connection between said slides whereby the slide on the stationary support imparts its movement to the other slide while permitting rotation of the latter, and means for imparting intermittent movements of reciprocation to the slide on the stationary support.

4. In apparatus for manufacturing glass articles, the combination with a glass furnace having a working opening of a rotary structure, a glass gathering ram, a support having a fixed radial position on the rotary structure on which the ram has movement only in the direction of its length, a slide on said rotary structure for imparting reciprocating movements to the ram, a stationary structure, a slide mounted thereon with capacity for longitudinal movement, means providing a connection between said slides whereby the slide on the stationary support imparts its movement to the other slide while permitting rotation of the latter, and a rotary cam for imparting movements of reciprocation to the slide on the stationary support.

5. In apparatus for manufacturing glass articles, the combination with a glass furnace having a working opening of a rotary structure, a glass gathering ram, a support fixed to the rotary structure on which the ram has movement only in the direction of its length, a slide on said rotary structure for imparting reciprocating movements to the ram, a stationary structure, a slide mounted thereon with capacity for longitudinal movement, one of said slides being formed with a slot and the other with an element projecting into said slot for communicating movement from one slide to the other and movable in said slot to permit the movement of rotation of the slide on the rotary structure while the slides are in engagement with each other, and means for imparting reciprocating movements to the other slide.

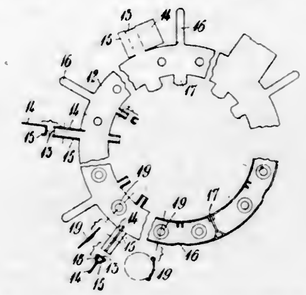
[Claims 6 to 10 not printed in the Gazette.]

1,223,394. GARMENT. JACOB J. KAHN, Montreal, Quebec, Canada, assignor of one-half to Samuel Hart & Company, Montreal, Canada. Filed Sept. 4, 1915. Serial No. 49,008. (Cl. 2—61.)



In a garment, a coat provided with facing and lining and having inside pockets opened from the front at the junction of the facing and lining, a flap permanently secured to each side of the coat immediately within the pocket opening and releasably securable at its upper end to the coat when withdrawn from the pocket, said flaps being unconnected with the coat in their lower portions, rearward extensions of the flaps in the portions thereof unattached to the coat, and elastic connections between said rearward extensions and the coat.

1,223,395. BALL-CAGE FOR BALL-BEARINGS. KALEB KARLSSON and FRANS EMANUEL JOHANSON, Gottenborg, Sweden, assignors to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Corporation of Sweden. Filed Aug. 11, 1915. Serial No. 44,906. (Cl. 64—59.)



1. A ball cage for ball bearings, comprising two rings of sheet-metal, having wings adapted to separate the balls, and brackets carrying said wings.

2. A ball cage for ball bearings, comprising two rings of sheet-metal, having wings adapted to separate the balls, and brackets carrying said wings, said brackets being bent at substantially right angles from the edges of the cage rings.

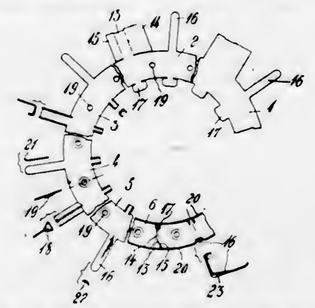
3. A ball cage for ball bearings, comprising two rings of sheet metal, having wings adapted to separate the balls, brackets carrying said wings, and projections engaging the free ends of the wings.

4. In a ball cage, comprising two rings and wings between them adapted to separate the balls, the combination of channel-pieces formed by ears of the rings to receive marginal portions of the wings.

5. A ball cage for ball bearings, comprising two rings of sheet metal, projections so folded as to provide recesses, and tongues engaging said recesses for assembling the cage rings.

[Claims 6 to 18 not printed in the Gazette.]

1,223,396. BALL-CAGE FOR BALL-BEARINGS. KALEB KARLSSON, Gottenborg, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Corporation of Sweden. Filed Oct. 30, 1915, Serial No. 58,885. Renewed Mar. 13, 1917. Serial No. 154,597. (Cl. 64—59.)



1. A ball-cage for ball bearings, comprising rings of sheet metal, projections on said rings so folded as to form recesses, and tongues projecting from the rings and engaging said recesses, said tongues being formed with any cross-section other than a flat one.

2. A ball-cage for ball bearings, comprising rings of sheet metal, projections on said rings so folded as to form recesses, and tongues projecting from the rings and en-

gaging said recesses, the outer extremities of the tongues being turned over for locking the rings together.

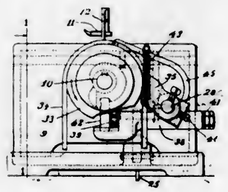
3. A ball-cage for ball bearings, comprising rings of sheet metal, projections on said rings so folded as to form recesses, and tongues projecting from the rings and engaging said recesses for the assembling of the ball-cage, said tongues being formed with any cross-section other than a flat one and the outer extremities of the tongues being turned over for locking the rings together.

4. A ball-cage for ball bearings, comprising rings of sheet metal, wings formed on the rings and adapted to separate the balls, brackets carrying said wings, the wings and the brackets being so folded as to form recesses, and tongues formed on the rings and engaging the recesses of the adjacent rings, said tongues being formed with any cross-section other than a flat one.

5. A ball-cage for ball bearings, comprising rings of sheet metal, wings formed on the rings and adapted to separate the balls, brackets carrying said wings, the wings and the brackets being so folded as to form recesses, and tongues formed on the rings and engaging the recesses of the adjacent rings, the outer extremities of the tongues being turned over between the rings for locking the rings together.

[Claims 6 to 12 not printed in the Gazette.]

1,223,397. STOP MECHANISM. JOHN KIEWICZ, Hyde Park, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Sept. 29, 1914. Serial No. 864,010. (Cl. 74—46.)

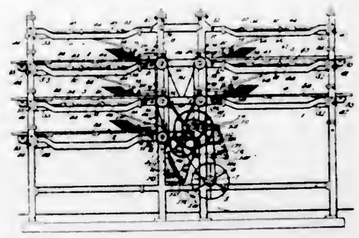


1. In a stop mechanism the combination with a shaft, a shaft retarder, and a positive stopping means for the shaft, a drum on said shaft with which the retarder contacts, said retarder consisting of an elongated metallic rod having its free end adjacent the drum and its other end supported for swinging movement; the supported end of the rod standing at an angle to its free end and adjustably engaged in a socket whereby the retarding force of the rod may be regulated.

2. In a stop mechanism the combination with a shaft, a retarder, a drum on said shaft with which the retarder contacts, said retarder consisting of an elongated stiff metallic rod having its free end bent substantially at right angles to its held end, the free end located to contact upon the drum, and its other end held by a movable holder, and means for moving said holder to cause the rod to bear forcibly against the drum for retarding the shaft.

1,223,398. NEWSPAPER SUPPLEMENTING OR INSERTING MACHINE. WILLIAM J. KIRKPATRICK and GEORGE W. FARLEY, Eureka, Cal., assignors of one-third to Ira Mullen, Eureka, Cal. Filed Nov. 2, 1915. Serial No. 59,283. (Cl. 271—57.)

1. In a machine for assembling a newspaper composed of a cover and an insert, a lower means for supporting covers; oppositely disposed upper means for supporting separate inserts; an opener; means for feeding a cover from the cover supporting means into the opener; means for operating the opener to spread the cover; means for positively accumulating a plurality of unopened inserts side by side directly above the opener; means for advancing an insert from each of the insert supporting means into the accumulating means; and mechanism for operating the accumulating means to permit the inserts to fall by gravity in an unopen condition into the cover which has been spread in the opener.



2. In a machine for assembling a newspaper composed of a cover and inserts, means for supporting a plurality of covers in folded condition; means for receiving and opening a cover; mechanism for advancing one cover at a time from the supporting means into the receiving and opening means; means for supporting the inserts in separate bundles; mechanism for advancing the inserts from the respective bundles to a position directly above the receiving means; mechanism for holding the inserts from the respective bundles until an insert has been delivered from each bundle; and means for releasing said mechanism to permit the inserts to fall by gravity into the cover after the same has been opened by the receiving means.

3. In a machine for assembling a newspaper composed of a cover and inserts, means for supporting a plurality of covers in folded condition; means for receiving and opening a cover; mechanism for advancing one cover at a time from the supporting means into the receiving and opening means; separate means for supporting the inserts; separate mechanisms for advancing the inserts into the cover after the cover has been opened by the receiving means; and means for operatively connecting the cover advancing means and both of the insert advancing means whereby the cover advancing means will be in advanced position while the insert advancing means is in retracted position, thereby to effect a feeding of the cover into the receiving means prior to the feeding of the inserts into the cover.

4. In a device of the class described, a support; a mutilated gear wheel journaled on the support; shafts journaled on the support and provided with cranks; interrupted pinions on the shafts and meshing into the gear wheel; a radius rod mounted to swing on the support; an opener comprising relatively movable parts; a stop movably mounted on one part of the opener and operable between the parts of the opener; a connection between the stop and one of the cranks; a connection between the radius rod and the other of the cranks; and a connection between the radius rod and the other part of the opener.

5. In a machine for assembling a newspaper composed of a cover and inserts, a cover receiving means; an insert retarding means located above the cover receiving means and comprising a movable member; insert feeding means discharging into the retarding means; mechanism for actuating the feeding means; and interengaging elements on said mechanism and the movable member of the retarding means coacting to effect an opening of the retarding means.

[Claims 6 and 7 not printed in the Gazette.]

1,223,399. METAL-COATED SHEET. WILLIAM G. KOCH, Milwaukee, Wis. Filed May 26, 1916. Serial No. 99,940. (Cl. 91—68.)

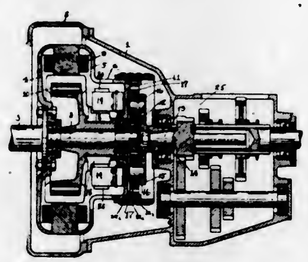
1. As an article of manufacture, a composite sheet comprising a layer of paper forming a base, a first coating impenetrable to an adhesive superposed on said layer, an adhesive coating of varnish superposed on said first coating, and a coating of pulverized metal superposed on said adhesive coating.

2. As an article of manufacture, a composite sheet comprising a layer of paper forming a base, a first coating impenetrable to an adhesive superposed on said layer, an adhesive coating superposed on said first coating, and a coating of pulverized metal superposed on said adhesive coating.

3. As an article of manufacture, a composite sheet comprising a layer of paper forming a base, a first coating of gum impenetrable to an adhesive superposed on said layer, an adhesive coating superposed on said first coating, and a coating of pulverized metal superposed on said adhesive coating.

4. As an article of manufacture, a composite sheet comprising a layer of paper forming a base, a first coating of gum impenetrable to an adhesive superposed on said layer, an adhesive coating of varnish superposed on said first coating, and a coating of pulverized metal superposed on said adhesive coating.

1,223,400. POWER-TRANSMISSION MECHANISM. CYRUS B. KURTZ, Lakewood, Ohio. Filed May 4, 1916. Serial No. 95,341. (Cl. 74—34.)



1. The combination with a main driving member and a driven member, of two coöperative dynamo electric elements, one of said electric elements being connected to said driving member, and differential mechanism connecting said two dynamo elements with said driven member.

2. The combination with a main driving member and a driven member, of two coöperative dynamo electric elements, one of said electric elements being connected to said driving members, the other of said electric elements being freely rotatable and planetary gearing connecting said two dynamo electric elements with said driven member.

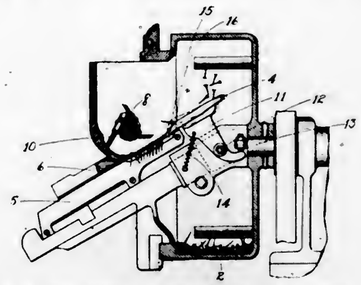
3. The combination with a main driving member and a driven member of two coöperative dynamo electric elements, one of said electric elements being connected to said driving member, the other of said electric elements being freely rotatable; said two electric elements being adapted to act as a clutch, and planetary gearing connecting said two elements with said driven member, the slip between said two dynamo electric elements determining the speed ratio between the driving members.

4. The combination with a main driving member and a driven member, of a dynamo field element carried by said driving member; a freely rotatable coöperative dynamo armature element, and differential mechanism operatively connecting said two electric elements with said driven member.

5. The combination with a main driving member and a driven member, of a dynamo field member carried by said driving member; a freely rotatable coöperative dynamo armature element and planetary gearing operatively connecting said two electric elements with said driven member, said mechanism consisting of an internal gear connected to said dynamo field element, gears carried by said driven member and in mesh with said internal gear, and a gear carried by said armature element and meshing with said gears carried by said driven member.

[Claim 6 not printed in the Gazette.]

1,223,401. TACK-SUPPLYING MECHANISM. ALBERT LATHAM, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 21, 1915. Serial No. 35,323. (Cl. 1—6.)



1. In a tack supplying mechanism, an inclined raceway, a plate overlapping the upper end of the raceway and adapted to deliver tacks to the raceway, and a tack clearer operating to move the line of tacks upwardly in the raceway and then allow them to slide down the raceway, said plate being movable away from the overlapped end of the raceway to allow the tacks in the upper portion of the line to pass between it and the top face of the raceway in response to the action of the clearer.

2. In a tack supplying mechanism, an inclined raceway, a plate adapted to deliver tacks to the raceway, said plate overlapping the upper end of the raceway and being pivotally mounted, and means for yieldingly holding the plate in adjusted relation of proximity to the overlapped portion of the raceway.

3. In a tack supplying mechanism, an inclined raceway, a plate adapted to deliver tacks to the raceway, and a tack clearer operating to move the line of tacks upwardly in the raceway and then allow them to slide down the raceway, said plate overlapping the upper end of the raceway and being cut away on its lower face where it overlaps the raceway to present a narrow edge which is located in proximity to the raceway and under which tacks in the line of tacks may be moved by the clearer.

4. In a tack supplying mechanism, the combination with a tack hopper and tack raceways, of a tack distributing plate overlapping the raceways and pivotally supported below the raceways, a spring arranged to tip the plate toward the raceways, and an adjustable stop to limit such movement.

5. In a tack supplying mechanism, a hopper, a raceway, and a plate to receive tacks from the hopper and deliver them to the raceway, said plate overlapping the upper end of the raceway and movable during the operation of the machine from and toward the top face of the raceway to prevent clogging of tacks in the raceway under the overlapping portion of said plate.

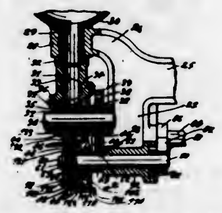
[Claims 6 to 8 not printed in the Gazette.]

1,223,402. CEMENT-APPLYING MACHINE. WILLIAM F. LAUTENSCHLAGER, Cincinnati, Ohio. Filed July 14, 1915. Serial No. 39,802. (Cl. 91—40.)

1. In a cement-applying machine of the character described, the combination of a rotary cement-applying brush comprising a flange having an outer face and bristles extending beyond the periphery of said flange, and a cement-wiping finger having a portion extending crosswise of the periphery of said brush, and a portion extending at an angle to said last-named portion in contact with said outer face of said flange, said cement-wiping finger provided with a throat in the inner face of said angle thereof, and constructed and arranged for wiping cement from said outer face of said flange through said throat on to said bristles.

2. In a cement-applying machine of the character described, the combination of a rotary cement-applying brush

arranged to apply cement to the margin of material and provided with a flange having an outer side face and with bristles extending beyond the periphery of said flange, cement-feeding means for said brush, and a cement-wiping finger having a portion extending crosswise of the periphery of said brush and a portion extending at an angle to said latter portion along said outer face of said flange between said cement-feeding means and the point of cement-application to the material, said finger provided with a cement-receiving throat in said angle thereof, and constructed and arranged for directing the cement on said flange toward said bristles through said throat.



3. In a cement-applying machine for applying cement to the margin of flexible material, the combination of a rotary cement-applying brush, margin-guiding means presented in a direction substantially parallel to the path of rotation of said rotary cement-applying brush and at the feeding-in side of said path for guiding said margin in a path crosswise of said path of rotation of said rotary cement-applying brush, a front portion of the periphery of said rotary cement-applying brush being exposed above the plane of said margin-guiding means, whereby portions of said margin may be manually applied to said rotary cement-applying brush in directions parallel to the path of rotation thereof.

4. In a cement-applying machine for applying cement to the margin of flexible material, the combination of a rotary cement-applying part, and guiding means for the margin of the material having a guiding surface for said margin for guiding said margin in a path crosswise of the path of rotation of said rotary cement-applying part and located at the feeding-in side of said rotary cement-applying part, said cement-applying part being free at its sides and front for manual movement of said margin along said guiding surface and across said rotary cement-applying part.

5. In a cement-applying machine for applying cement to the margin of flexible material, the combination of supporting and guiding means for the margin of the flexible material, and a rotary cement applying brush at the side of said supporting and guiding means, said supporting and guiding means located at the feeding-in side of the path of rotation of said rotary cement-applying brush, said rotary cement-applying brush being free at its sides and front for manual movement of said margin along said supporting and guiding means and across said rotary cement-applying brush, and for manual movement of said margin up and down at the feeding-out side of said rotary cement-applying brush.

[Claims 6 to 24 not printed in the Gazette.]

1,223,403. CEMENT-APPLYING MACHINE. WILLIAM F. LAUTENSCHLAGER, Cincinnati, Ohio. Filed Aug. 19, 1915. Serial No. 46,268. (Cl. 91—40.)



1. In a machine for applying cement to the margin of flexible material, the combination of a rotary cement-applier and a gage for the margin of the flexible material, arranged for feeding movement of the margin crosswise of said rotary cement-applier and lengthwise of the margin, and a cement-string control at the feeding-out side of said rotary cement-applier, said cement-string control located proximate to the path of the edge of the margin guided by said gage for contact by said edge with said cement-string control.

2. In a cement applying machine for applying cement to the margin of flexible material, the combination of a rotary cement-applier and a gage for the outer edge of the margin of the flexible material, arranged for feeding movement of the margin crosswise of said rotary cement-applier and lengthwise of the margin and flexing movement of the periphery of the cement-applier across said margin and past said outer edge thereof, and a cement-string control at the feeding-out side of said rotary cement-applier, said cement-string control located proximate to the path of said outer edge guided by said gage for contact by said outer edge with said cement-string control, said cement-string control extending beyond said path.

3. In a machine for applying cement to the margin of flexible material, the combination of a rotary cement-applier, a gage for the outer edge of the margin of the flexible material located at the feeding-in side of said rotary cement-applier, and a cement-string control at the feeding-out side of said rotary cement-applier, said gage and cement-string control being in substantial line with each other in crossline with said rotary cement-applier.

4. In a machine for applying cement to the margin of flexible material, the combination of a rotary cement-applier having a cement-applying periphery moving crosswise of the path of feeding movement, and a cement-string control proximate to the cement-applying portion of said periphery at the feeding-out side of said rotary cement-applier and extending laterally into the plane of the feeding-out side of said cement-applier extending perpendicular to its axis of rotation.

5. In a machine for applying cement to the margin of flexible material, the combination of a rotary cement-applying brush having a cement-applying periphery, and a cement-string control proximate to the cement-applying portion of said periphery at the feeding-out side of said rotary cement-applying brush and extending laterally into the plane of the feeding-out side of said rotary cement-applying brush extending perpendicular to its axis of rotation, and forming a cement-receiving pocket in which the bristles of said brush have flexure.

[Claims 6 to 12 not printed in the Gazette.]

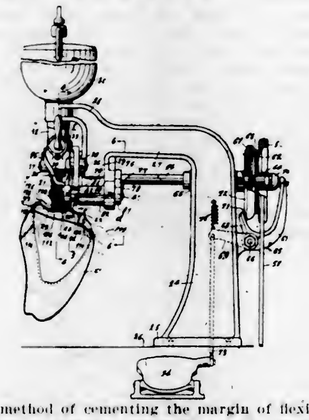
1,223,404. METHOD OF CEMENTING THE MARGINS OF FLEXIBLE MATERIAL. WILLIAM F. LAUTENSCHLAGER, Cincinnati, Ohio. Filed Aug. 19, 1915. Serial No. 46,269. (Cl. 12—146.)

1. The method of cementing the margin of flexible material which consists in moving the margin of the flexible material lengthwise of said margin across a cement-applying part which is moved across and toward the outer edge of the lengthwise moving margin for applying cement thereto throughout the application of cement to said margin.

2. The method of cementing the margin of flexible material which consists in moving the margin of flexible material lengthwise of said margin across a cement-applying part which is moved across and toward the outer edge of the lengthwise moving margin for applying cement thereto in paths oblique to the edge of said margin which are the resultants of said movements of said margin and said cement-applying part throughout the application of cement to said margin.

3. The method of cementing the margin of flexible material which consists in moving the margin of flexible material lengthwise of said margin across a cement-applying part which is moved crosswise of the lengthwise moving margin and applying cement thereto in oblique ridges which are the resultant of said movements of said margin and said cement-applying part.

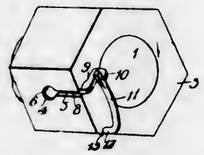
4. The method of cementing and folding the margin of flexible material which consists in moving the margin of flexible material lengthwise of said margin across a cement-applying part which is moved crosswise of said lengthwise moving margin and applying cement thereto in oblique ridges which are the resultant of said movements of said margin and said cement-applying part, and folding said margin with a crease intermediate of its width and crossingly arranging said ridges at the sides of said crease in contact with each other.



5. The method of cementing the margin of flexible material which consists in moving the margin of the flexible material lengthwise of said margin across a cement-applying part which is moved crosswise of the lengthwise moving margin and past the outer edge thereof for applying cement to said margin and causing cement to extend from said outer edge, and laying said extending cement lengthwise of said outer edge.

[Claims 6 to 21 not printed in the Gazette.]

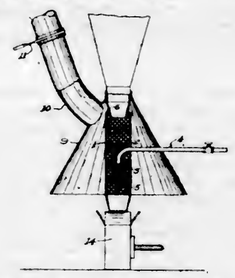
1,223,405. NUT-LOCK. MOSE LAVEQUE. Munising, Mich. Filed Aug. 21, 1916. Serial No. 116,048. (Cl. 151—25.)



The combination with a bolt and a nut thereon, said nut having a tangential recess communicating with the bore of the nut, a nut having formed in its outer face a slot communicating at one end with said recess and at the other with one end of the nut, a pawl slidably mounted in said recess having teeth on its inner end for engagement with the bolt, a laterally projecting shank on the end of said pawl positioned in said slot and projecting through the outer end of the same, an arm on the free end of said shank extending inwardly toward the bolt, a hook member formed on said arm, and a spring carried by said end of the nut and engageable with said hook to retain the pawl within the recess.

1,223,406. APPARATUS FOR FREEING LUMP-STARCH FROM ADHERING DUST OR POWDER. ADOLPH W. H. LENDERS, Cedar Rapids, Iowa. Original application filed Mar. 30, 1914. Serial No. 828,415. Divided and this application filed June 6, 1914. Serial No. 843,352. (Cl. 83—54.)

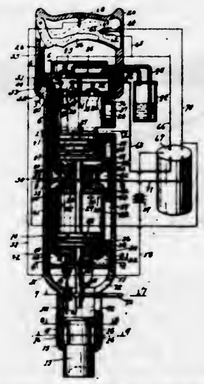
1. In a device of the character described a structure provided with a vertical relatively short and narrow and substantially unobstructed passage, the walls of said structure being foraminated, said passage being open for the unobstructed discharge of material, means for passing unidirectional uninterrupted currents of air across said passage and through the foraminated walls, means for delivering starch lumps to be cleaned to the top of said passage, and suction means open to the atmosphere surrounding said device and adapted to carry away the dust passing through the foraminated wall.



2. In a device of the character described a structure provided with a vertical relatively short and narrow and substantially unobstructed passage, the walls of said structure being foraminated, said passage being open for the unobstructed discharge of material, means for passing unidirectional uninterrupted currents of air across said passage, said means being centrally located within said foraminated walls, there being an annular space intermediate the two and means to deflect starch lumps into said space, means for passing unidirectional uninterrupted currents of air across said space and through the foraminated walls, means for delivering starch lumps to be cleaned to the top of said passage, and suction means open to the atmosphere surrounding said device and adapted to carry away the dust passing through the forminated wall.

3. In a device of the character described, a structure provided with a vertical relatively short and narrow and substantially unobstructed passage, the walls of said structure being foraminated, said passage being open for the unobstructed discharge of material, means for passing unidirectional uninterrupted currents of air across said passage and through its foraminated walls, means for delivering starch lumps to be cleaned to the said passage, and suction means for carrying away dust issuing from said structure.

1,223,407. RIVETING-TOOL. WALTER LEON LINDSAY, Chicago, Ill. Filed Feb. 12, 1913. Serial No. 747,869. (Cl. 123—7.)



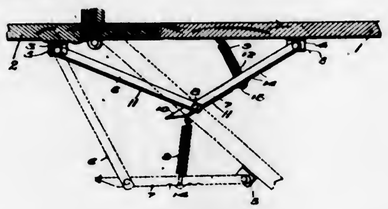
1. A riveting tool comprising a working cylinder and a compression cylinder in axial alinement; pistons in said cylinders operatively connected together; a hollow

head at the upper end of said working cylinder; a second hollow head between said cylinders; a third hollow head at the lower end of said compression cylinder; a partition in each of said hollow heads dividing the latter into two chambers, one of the chambers in each of said first and second mentioned hollow heads being in communication with said working cylinder, and both of the chambers in said second and third mentioned hollow heads being in communication with said compression cylinder; a communication between one of the chambers in each of said hollow heads; and a communication between the other chambers of said hollow heads, substantially as described.

2. A riveting tool comprising a working cylinder; a compression cylinder in axial alinement with said working cylinder; a piston in said working cylinder; a piston in said compression cylinder and connected with the piston in said working cylinder; a hollow cylinder head inclosing two semi-circular chambers at the lower end of said compression cylinder; a second hollow cylinder head inclosing two semicircular chambers between said working and compression cylinders; and a third hollow cylinder head inclosing two semi-circular chambers at the upper end of said working cylinder; a chamber around said compression cylinder and a second chamber around said working cylinder, said chambers with one of the semi-circular chambers in each of said hollow heads forming a communication from said compression cylinder to said working cylinder; and pipes connecting the other semi-circular chambers with each of said hollow cylinder heads affording a passage to said compression cylinder, substantially as described.

3. A riveting tool comprising a working cylinder; a compression cylinder in axial alinement with said working cylinder; a piston in said working cylinder; a piston in said compression cylinder and connected with the piston in said working cylinder; a hollow cylinder head inclosing two semi-circular chambers at the lower end of said compression cylinder; a second hollow cylinder head inclosing two semi-circular chambers between said working and compression cylinders; a third hollow cylinder head inclosing two semi-circular chambers at the upper end of said working cylinder; a chamber around said compression cylinder and a second chamber around said working cylinder, said chambers with one of the semi-circular chambers in each of said hollow heads forming a communication from said compression cylinder to said working cylinder; pipes connecting the other semi-circular chambers with each of said hollow cylinder heads affording a passage to said compression cylinder; and valves in said hollow heads controlling the communications to and from said compression cylinder and to said working cylinder, substantially as described.

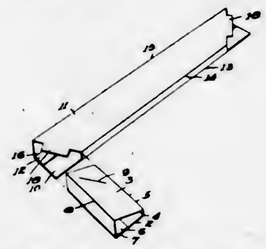
1,223,408. DOOR-CLOSER. ALBERT T. LOFTSGAARDEN, Powell, Wyo. Filed Jan. 11, 1916. Serial No. 71,492. (Cl. 16—96.)



1. A spring-actuated door-closing device, comprising brackets adapted for connection to a door casing and a door, respectively; said brackets having outwardly extending flanges, an arm formed of a strip of sheet-metal bent upon itself and having a bifurcated outer end portion receiving and pivoted to the door-casing bracket, an arm formed of a strip of sheet-metal bent upon itself and having a bifurcated outer end portion receiving and pivoted to the flange of the door bracket; the said arms being pivoted together adjacent to their inner ends, and one arm having an inner extended end portion movable in a bifurcation of the other and adapted to bring up against the back edge of such other, a retractile spring adapted at one end for connection to a door, and a connection between the other end of said spring and the arm complementary to the door-bracket; said connection being arranged in an aperture in the bight of the arm.

2. A spring-actuated door-closing device, comprising brackets adapted for connection to a door casing and a door, respectively, an arm formed of a strip of sheet-metal bent upon itself and pivoted at its outer end to one bracket, an arm formed of a strip of sheet-metal bent upon itself and pivoted to the other bracket; the said arms being pivoted together adjacent to their inner ends, and one arm having an inner extended end portion movable in a bifurcation of the other and adapted to bring up against the back edge of such other, a retractile spring adapted at one end for connection to a door, and a connection between the other end of the spring and one arm; said connection being arranged in an aperture in the bight of the arm.

1,223,409. PICTURE-FRAME. BERTHA L. MCMILLAN, Minneapolis, Minn. Filed Oct. 29, 1915. Serial No. 58,610. (Cl. 40—154.)

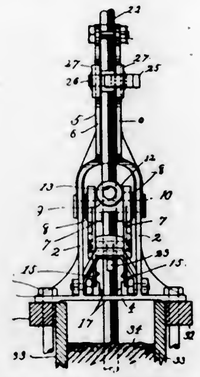


1. A picture frame comprising side and end rails, each composed of blanks of flexible material, rectangular, substantially, in form, and each having parallel score lines arranged in pairs thereon, the lines of one pair being nearer together than the lines of the other pair, said blanks being folded along said score lines to form front and rear panels and inner and outer panels, the inner panels being narrower than the outer ones through the difference in distance between the score lines of the two pairs, and the front panels being inclined inwardly and backwardly from the outer toward the inner panels, and the ends of one pair of rails having means for engaging with the abutting ends of the other pair of rails.

2. A picture frame comprising side and end rails, each composed of blanks of flexible material rectangular substantially in form and each having parallel score lines arranged in pairs thereon, one pair of score lines being near the longitudinal edge of the blank and the other pair near the middle portion thereof, the latter being nearer together than the former, said blanks being folded along said score lines to form front and rear panels and inner and outer panels, the inner panels being narrower than the outer ones through the difference in distance between the score lines of the two pairs, and the front panels being inclined inwardly and backwardly from the outer toward the inner panels, said rails being open at the ends and the ends of one pair of rails having means for engaging with the abutting ends of the other pair of rails.

3. A picture frame comprising side and end rails, each composed of blanks of flexible material, rectangular, substantially, in form, and each having parallel score lines arranged in pairs running lengthwise thereof, said blanks being folded along said score lines to form front and rear panels and inner and outer panels, the inner panels being narrower than the outer ones, whereby the front and rear panels of each rail converge inwardly toward one another, the rear panels having flat faces for securing the edges of a picture thereto, and the ends of some of the rails having tongues formed thereon and being open to receive the abutting ends of adjacent rails, and said abutting ends having slits therein to receive said tongues.

1,223,410. LIFTING DEVICE. JAMES MACDONALD, Chicago, Ill. Filed May 15, 1916. Serial No. 97,630. (Cl. 254—31.)



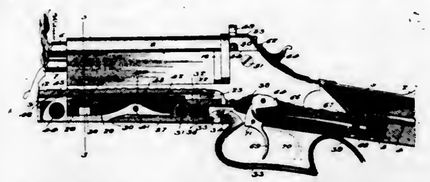
1. A device for moving a concrete form in a plane parallel to that of a stationary rod to which said device is adapted to be movably connected, comprising, in combination, primary and secondary frame members, the former of which is in direct operative connection with the form to be advanced, an oscillatory head having opposing trunnions thereon journaled respectively in said primary and secondary frames, the latter being in the plane of the axis of the rod to which said device is movably connected, a lever fulcrumed upon said second named trunnions, and gripping means upon each of said frames arranged to be in concentric operative relation to said rod for alternately gripping the same against movement in one direction while free to slide in the reverse direction.

2. A device for elevating a concrete form in a vertical plane by climbing an upright sustaining rod, comprising primary and secondary frame members, the former of which is in operative connection with the form, an oscillatory head having complementary trunnions thereon, one pair of trunnions being journaled in said primary frame in the plane of the axis of such sustaining rod and the other in said secondary frame, a lever fulcrumed upon said first named trunnions, and gripping means upon each of said frames in concentric relation to said rod for gripping the same against the gravitating action of the load while free to be alternately released and to slide upwardly thereon when said lever is vibrated.

3. A device for elevating a concrete form in a vertical plane by climbing an upright sustaining rod, comprising primary and secondary frame members, the former of which is in direct operative connection with the form to be lifted, an oscillatory head having complementary trunnions thereon journaled respectively in said primary and secondary frames, the former being in the plane of the axis of the sustaining rod, a lever fulcrumed upon said first named trunnions, complementary gripping members upon said secondary frame located upon opposite sides of said sustaining rod to normally sustain the load in concentric relation thereto, and gripping means upon said secondary frame in concentric relation to said rod for sustaining the load when said complementary gripping members are released.

1,223,411. SLIDE-ACTION FIREARM. WEBSTER L. MARBLE, Gladstone, Mich. Filed June 26, 1916. Serial No. 105,878. (Cl. 42—16.)

1. In a firearm, the combination with a slidable barrel, of a main combined locking and stop device therefor for holding the barrel in either closed or open position, and a supplemental or safety stop device for arresting the barrel if it passes the main locking and stop device when the barrel is in open position.



2. In a firearm, the combination with a slidable barrel, of a main stop device for locking the barrel when the latter is in open position, and a supplemental or safety stop device for arresting the barrel if it passes the main stop device when the barrel is in open position.

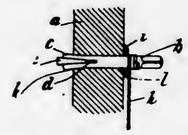
3. In a firearm, the combination with a barrel, of a spring-closed locking device therefor, and a movable trigger guard coöperating with said locking device, adapted for opening it.

4. In a firearm, the combination with a barrel, of a spring-closed locking device therefor, and a movable combined trigger guard and pistol grip movable in relation to the locking device and coöperating with said locking device adapted for releasing the locking device and for holding it in locked condition.

5. In a firearm, the combination with a frame, and a barrel receiver having an interlocking connection therewith, of a main combined locking and stop device therefor for holding the barrel receiver in either closed or open position, and a supplemental or safety stop device for arresting the barrel receiver if it passes the main locking and stop device when the receiver is in open position, and means for causing said main and supplemental locking devices to exert pressure to tighten the interlocking slidable connection aforesaid.

[Claims 6 to 20 not printed in the Gazette.]

1,223,412. WREST-PIN FOR PIANOS. JAMES ALFRED MURDOCH, London, and GEORGE TADGELL, Tottenham, London, England; said Tadgell assignor to said Murdoch. Filed Sept. 23, 1914. Serial No. 863,210. (Cl. 84—67.)



1. In combination with a wrest plank having a hole passing therethrough, said pin passing through the hole in said wrest plank, and means for expanding one end of the pin to frictionally hold the pin in the wrest plank.

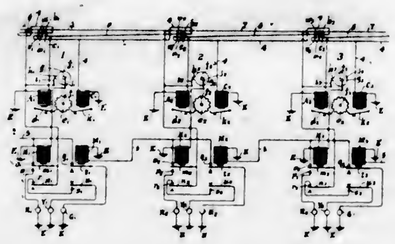
2. In combination with a wrest plank having a hole passing therethrough, a washer on one end of the said pin adjacent to the wrest plank, said pin passing through the hole in said wrest plank and means for frictionally holding the pin in the wrest plank after the wire has been pressed into engagement with the washer.

3. In combination with a wrest plank having a hole passing therethrough, said pin passing through the hole in the wrest plank, one end of the pin being slit and a wedge for expanding the slit end to frictionally hold the pin to the plank.

1,223,413. SIGNALING SYSTEM. CARL P. NACHOD, Philadelphia, Pa., assignor to Nachod Signal Company, Inc., a Corporation of New York. Filed Oct. 4, 1912. Serial No. 723,838. (Cl. 246—36.)

1. The combination with a vehicle controlled switch and a block or section of a railway, an electro-magnet

controlled by said switch, a step-by-step switch controlled by said magnet, a clear or proceed signal, second and third electro-magnets normally coöperating to display said clear or proceed signal, a second signal, said second electro-magnet being controlled by said step-by-step switch to discontinue display of said clear or proceed signal and to cause the display of said second signal.



2. The combination with a vehicle controlled switch and a block or section of a railway, an electro-magnet controlled by said switch, a step-by-step switch controlled by said magnet, a clear or proceed signal, second and third electro-magnets normally coöperating to display said clear or display signal, a second signal, said second electro-magnet being controlled by said step-by-step switch to discontinue display of said clear or proceed signal and to cause the display of said second signal, signaling apparatus at another station comprising an automatically controlled switch, said third electro-magnet controlled by said last named switch.

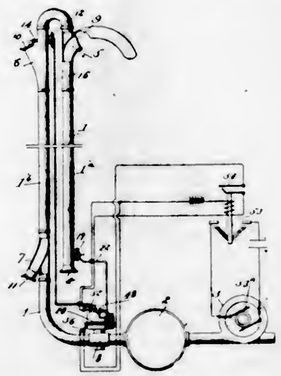
3. The combination with a vehicle controlled switch and a block or section of a railway, an electro-magnet controlled by said switch, a step-by-step switch controlled by said magnet, a clear or proceed signal, second and third electro-magnets normally coöperating to display said clear or display signal, a second signal, said second electro-magnet being controlled by said step-by-step switch to discontinue display of said clear or proceed signal and to cause the display of said second signal, signaling apparatus at another station comprising an automatically controlled switch, said third electro-magnet controlled by said last named switch, and a third signal displayed in response to normal condition of said second electro-magnet and abnormal condition of said third electro-magnet.

4. The combination with a vehicle controlled switch and a block or section of a railway, an electro-magnet controlled by said switch, a step-by-step switch controlled by said magnet, a clear or proceed signal, second and third electro-magnets normally coöperating to display said clear or display signal, a second signal, said second electro-magnet being controlled by said step-by-step switch to discontinue display of said clear or proceed signal and to cause the display of said second signal, signaling apparatus at another station comprising an automatically controlled switch, said second electro-magnet being normally energized through said step-by-step switch, and said third electro-magnet being normally energized through said automatically controlled switch at another station.

5. The combination with a vehicle controlled switch and a block or section of a railway, a signal, normally energized electro-magnets coöperating to cause the display of said signal, a second signal, means controlled by said vehicle controlled switch upon the entry of a car or train into said block or section for deënergizing one of said electro-magnets, means responsive to deënergization of said electro-magnet for causing display of said second signal and for discontinuing the display of said first signal, a third signal, and means responsive to entry of a car or train into the block or section in advance of said first named block or section causing reënergization of said electro-magnet and deënergization of another of said electro-magnets to cause the display of said third signal and discontinuation of the display of said second signal, and means responsive to the entry of a car or train into the block or section in advance of said second block or section to reëstablish display of said first signal and discontinue the display of said third signal.

[Claims 6 to 43 not printed in the Gazette.]

1,223,414. PNEUMATIC-DESPATCH-TUBE APPARATUS. JOHN T. NEEDHAM, New York, N. Y., assignor, by mesne assignments, to The Lamson Company, Newark, N. J., a Corporation of New Jersey. Filed Mar. 27, 1908. Serial No. 423,527. (Cl. 243—15.)



1. A transmission tube, means for exhausting air from said tube, a controlling valve to interrupt the passage of air through said tube, a vacuum chamber adjacent said valve and in communication with said tube, movable means in said vacuum chamber and connected to the valve to close said valve when there is a partial vacuum in the vacuum chamber and to open said valve when the partial vacuum is destroyed, a venting valve for said vacuum chamber, pneumatic means for operating said venting valve, a receiving terminal for the transmission tube, a door for said receiving terminal, a small air tube extending from the receiving terminal to the pneumatic means for operating the venting valve, and air chamber connected to said air tube near the receiving terminal, a diaphragm in said chamber, means operated by the terminal door for moving said diaphragm to force air through said air tube to open the venting valve.

2. A transmission tube, means for exhausting air from said tube, a controlling valve to interrupt the passage of air through said tube, a vacuum chamber adjacent said valve and in communication with said tube, movable means in said vacuum chamber and connected to the valve to close said valve when there is a partial vacuum in the vacuum chamber and to open said valve when the partial vacuum is destroyed, a venting valve for said vacuum chamber, pneumatic means for operating said venting valve, a receiving terminal for the transmission tube, and means to set in motion the air exhausting means when the venting valve is opened.

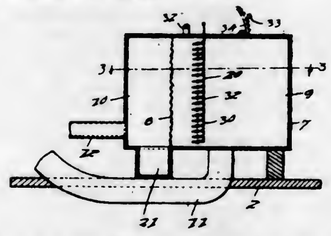
3. A transmission tube, means for exhausting air from said tube, a controlling valve to interrupt the passage of air through said tube, a vacuum chamber adjacent said valve and in communication with said tube, movable means in said vacuum chamber and connected to the valve to close said valve when there is a partial vacuum in the vacuum chamber and to open said valve when the partial vacuum is destroyed, a venting valve for said vacuum chamber, pneumatic means for operating said venting valve, a receiving terminal for the transmission tube, and electrical means operated by the venting valve when said valve is opened to start the air exhausting means.

4. A transmission tube, means for exhausting air from said tube, a controlling valve to interrupt the passage of air through said tube, a vacuum chamber adjacent said valve and in communication with the air exhausting means, movable means in said vacuum chamber and connected to the valve to close said valve when there is a partial vacuum in the vacuum chamber and to open said valve when the partial vacuum is destroyed, a venting valve for said vacuum chamber, pneumatic means for operating said venting valve, a receiving terminal for the transmission tube, electrical means operated by the venting valve when said valve is opened to start the air exhausting means, means for holding closed the circuit of the electrical air exhausting means, a pneumatic means for releasing said holding means, said pneumatic means being connected to the air exhausting means whereby said holding means will be released when the air exhausting means is in full operation, and means operated by the controlling valve moving means to close the circuit through the air exhausting means when said controlling valve is open, said means opening said circuit and thereby stopping the air exhausting means when the controlling valve is closed.

5. A controlling valve for a pneumatic despatch tube apparatus comprising a valve adapted to close the transmission tube, a pair of parallel differential diaphragms connected to said valve and spaced apart to form a chamber between them, said chamber being open to the atmosphere, a vacuum timing chamber, the larger diaphragm forming one wall of said chamber, means for forming a chamber between the smaller diaphragm and the valve, said smaller chamber being in communication with the exhaust side of the valve chamber, means for placing said chamber in communication with the timing chamber, a valve for the timing chamber, and means for opening said valve.

[Claims 6 to 28 not printed in the Gazette.]

1,223,415. BOLL-WEEVIL-DESTROYING MACHINE. JAMES H. NOLIS, New Brockton, Ala. Filed July 7, 1916. Serial No. 108,032. (Cl. 43—1.)

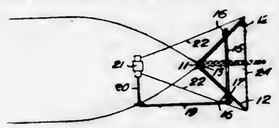


1. In a boll weevil destroying machine, the combination of a portable supporting structure, a receptacle carried by said supporting structure, a foraminous partition extending through said receptacle and dividing it into compartments, an ordinary air suction fan, the inlet of said fan communicating with one of said receptacle compartments, a pair of plant engaging nozzles communicating with the other of said compartments whereby the air will be drawn inwardly through sair nozzles, through said foraminous partition and into the fan, a shutter valve structure carried by said receptacle between said foraminous partition and said fan inlet whereby the air suction through said foraminous partition may be regulated as desired, and a trough positioned beneath said receptacle and adapted for receiving boll weevils from the compartment with which said nozzles communicate.

2. In a boll weevil destroying machine, the combination, of a portable supporting frame, an ordinary air suction fan carried by said supporting frame, means for propelling said fan, a plurality of suction nozzles connected to the air inlet of said fan, an air inlet pipe for said fan, a foraminous partition extending between said nozzles and said air suction pipe, a shutter valve structure positioned between said air suction pipe and said foraminous partition for cutting off the suction of air through said nozzles and said partition, and means positioned beneath said partition for receiving boll weevils therefrom upon the cutting off of air suction therethrough.

3. In a boll weevil destroying machine, the combination of a portable supporting structure, a receptacle carried by said supporting structure, a foraminous partition extending through said receptacle and dividing it into compartments, an ordinary air suction fan, the inlet of said fan communicating with one of said receptacle compartments, a pair of plant engaging nozzles communicating with the other of said compartments whereby the air will be drawn inwardly through said nozzles, through said foraminous partition and into said fan, a trough positioned beneath said receptacle and adapted for receiving boll weevils from the compartment with which said nozzles communicate, a box communicating with said trough, and a rake structure carried by said trough for drawing the boll weevils out of the trough into said box.

1,223,416. SHIP-BRAKE. THOMAS O'SULLIVAN, Montreal, Quebec, Canada. Filed June 22, 1916. Serial No. 105,219. (Cl. 114—145.)

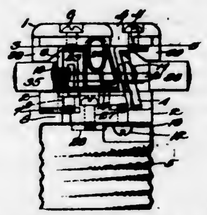


1. A ship brake, comprising a pair of plates hingeably secured to the stem of a ship, a right and left screw passing through the plates, and nuts operating on said screw pivotally mounted on the plates, and means for rotating the screw.

2. A ship brake, comprising a pair of plates hingeably secured to the stem of a ship, a right and left screw passing through the plates, nuts operating on said screw pivotally mounted on the plates, means for rotating the screw, means for steadying said plates in open and closed positions, and means for limiting the opening of the plates.

3. A ship brake, comprising a pair of plates hinged to the stem of a ship, a right and left screw arranged to open and close the plates, a power element on the ship, operative connection between said screw and the power element, steadying cables extending from the free edges of said plates to the power element, said power element being arranged to wind or unwind said steadying cables synchronously with the operation of the screw, whereby the cables will be kept taut at all times.

1,223,417. SOCKET. HERMAN G. PAPE, New York, N. Y., assignor to Ralph A. Schoenberg, New York, N. Y. Filed June 23, 1916. Serial No. 105,514. (Cl. 173—355.)



1. A socket comprising a screw shell; a movable contact; and a fixed contact coöperating with the movable contact, said fixed contact being directly connected to the shell.

2. A socket comprising a body of insulating material; a screw shell mounted on said body; a movable contact; and a fixed contact coöperating with the movable contact, said fixed contact being directly connected to the shell.

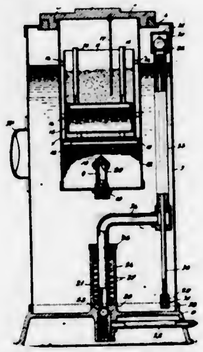
3. A socket comprising a body consisting of two separated sections of insulating material; two struts connecting said sections; means for connecting one of the lead wires to one of said struts and the other lead wire to the other of said struts; switch mechanism mounted between said sections, and comprising a stationary contact which also serves to fasten one of said struts to one of said sections.

4. A socket comprising a body consisting of two separated sections of insulating material; two struts connecting said sections; means for connecting one of the lead wires to one of said struts and the other lead wire to the other of said struts; switch mechanism mounted between said sections, and comprising a pair of stationary contacts, one of said contacts serving to fasten one of the struts to one of said sections and a screw shell fastened to one of said sections by the other of said stationary contacts.

5. A socket comprising a body consisting of two separated sections of insulating material; two struts connecting said sections; switch mechanism mounted between said sections and comprising a stationary contact; and a screw shell fastened to one of said sections by said contact.

[Claims 6 to 11 not printed in the Gazette.]

1,223,418. FIRE-EXTINGUISHER. GEORGE T. PEARSONS, New York, N. Y. Filed Mar. 10, 1916. Serial No. 83,237. (Cl. 169—12.)



1. In a fire extinguisher, the combination with a reservoir for a fire extinguishing liquid having an outlet, of means within the reservoir connected thereto to normally hold gas generating materials in a separated condition and free from the liquid in the reservoir and render the gas generated by said materials anhydrous, substantially as and for the purpose specified.

2. In a fire extinguisher, the combination with a reservoir for a fire extinguishing liquid having an outlet, of means within the reservoir and connected thereto to normally hold gas generating materials in a separated condition and adapted to be mixed to generate gas to expel the liquid from the reservoir, and means to render the gas generated by said materials anhydrous before it is utilized to expel the fire extinguishing liquid, substantially as and for the purpose specified.

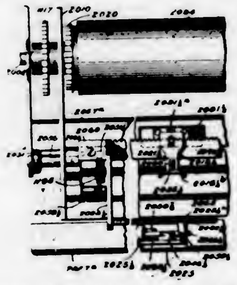
3. In a fire extinguisher, the combination with a reservoir for a fire extinguishing liquid having an outlet, of a gas generator in said reservoir connected to the reservoir in which to generate gas to expel the liquid from the reservoir, and means through which the gas generated in the generator is passed to render it anhydrous before it is utilized to expel the liquid from the reservoir, substantially as and for the purpose specified.

4. In a fire extinguisher, the combination with a reservoir for a fire extinguishing liquid having an outlet, of means within the reservoir and connected thereto to normally hold gas generating materials in a separated condition and adapted to be mixed to generate gas to expel the liquid from the reservoir, and a material through which the gas generated by the gas generating materials is passed to render it anhydrous before it is utilized to expel the liquid from the reservoir, substantially as and for the purpose specified.

5. In a fire extinguisher, the combination with a reservoir for a fire extinguishing liquid having an outlet, of a receptacle in said reservoir having an outlet leading into the reservoir; a gas generating material in said receptacle; means in said receptacle to hold another gas generating material free from the first gas generating material, and said materials when admixed adapted to generate gas to expel the liquid from the reservoir; and a third material in the receptacle to render the gas generated by the gas generating materials anhydrous before the gas is expelled into the reservoir, substantially as and for the purpose specified.

[Claims 6 to 14 not printed in the Gazette.]

1,223,419. CALCULATING-MACHINE. ARTHUR PENTECOST, East Orange, N. J., assignor to The Adder Machine Company, Wilkes-Barre, Pa., a Corporation of Pennsylvania. Filed Feb. 17, 1916. Serial No. 78,793. (Cl. 197—176.)



1. In a traveling carriage, the combination of a tabulating and minutely adjustable spacing mechanism, comprising a tabulating bar shiftably mounted on the carriage; a stop on the bar, the bar and stop being relatively adjustable; a stationary abutment with which the stop coacts; a minutely adjustable space bar connected with the tabulating bar and traveling with the carriage; and means to releasably engage the minute space bar, to disable the stop and lock the carriage where adjusted.

2. The combination with a traveling carriage; a stationary abutment; a tabulating mechanism shiftably mounted on the carriage; and adapted to coact with the abutment; of a minutely adjustable space bar connected with the tabulating mechanism; and a dog, the action of which against the minute space bar, shifts the tabulating mechanism to ineffective position, and locks the carriage where adjusted.

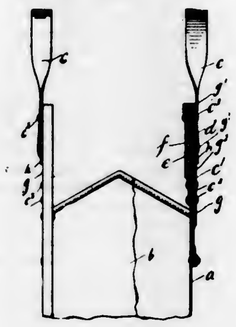
3. The combination with a traveling carriage; a stationary abutment; a tabulating mechanism shiftably mounted on the carriage; and adapted to coact with the abutment; of a minutely adjustable space bar connected with the tabulating mechanism; a dog, the action of which against the minute space bar, shifts the tabulating mechanism to ineffective position, and locks the carriage where adjusted; and means to control the dog.

4. The combination with a traveling carriage; a stationary abutment; and a tabulating mechanism shiftably mounted on the carriage; and adapted to coact with the abutment; of a serrated, minutely adjustable space bar; a serrated dog; and means to force the dog against the minute space bar to disable the tabulating mechanism and lock the carriage where adjusted.

5. The combination with a traveling carriage; a stationary abutment; and a tabulating mechanism shiftably mounted on the carriage; and adapted to coact with the abutment; of a minutely adjustable space bar connected with the tabulating mechanism; a dog, the action of which against the minute space bar, shifts the tabulating mechanism to ineffective position, and locks the carriage where adjusted; a stop, the action of which against the minute space bar, shifts the tabulating mechanism to ineffective position, and locks the carriage where adjusted; and means to releasably engage the dog, the dog having a seat entered by the operating means to hold the dog effective.

[Claims 6 to 28 not printed in the Gazette.]

1,223,420. SHOPPING-BAG. ISAK POMPER, New York, N. Y. Filed Dec. 26, 1916. Serial No. 138,892. (Cl. 224—47.)



1. A hand bag having flexible sides and an open top, stiffening strips of semi-rigid material along the upper parts of said sides, handles having their ends placed flat against and attached to said sides and shields of flexible material for the said ends, said shields having openings through which said ends project outwardly from beneath said shields and eyelets reinforcing the edges of said openings.

2. A hand bag having flexible sides and an open top, handles having their ends placed flat against and attached to the outer faces of said sides, stiffening strips of semi-rigid material for the upper parts of said sides and pieces of flexible material lying in planes parallel to said sides and on the outer faces thereof and serving to hold said stiffening strips in place and also to shield the ends of said handles.

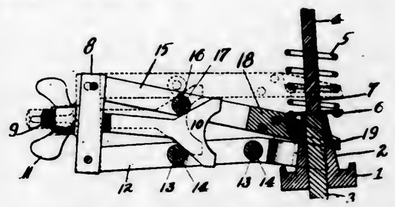
3. A hand bag having flexible sides and an open top, handles having their ends placed flat against and attached to the outer faces of said sides, pieces of flexible material lying on the outer faces of and in planes parallel to said sides and formed with pockets and stiffening strips of semi-rigid material in said pockets, said pieces serving also as shields for the ends of said handles.

4. A hand bag having flexible sides and an open top, handles having their ends placed flat against and attached to the outer faces of said sides, perforated pieces of flexible material lying on the outer faces of and in planes parallel to the said sides and formed with pockets, stiffening strips of semi-rigid material extending substantially the length of and over the upper parts of said sides and contained in said pockets, said ends of the handles projecting outwardly from beneath said pieces through the perforations thereof.

5. A flexible hand bag having an open top, handles having their ends placed flat against the outer faces of said bag, pieces of flexible material fixed and lying in planes parallel to the said outer faces and serving to shield the ends of said handles, said pieces having openings intermediate between their longitudinal edges, through which openings the ends of said handles freely project outwardly from beneath said pieces and rivets immediately below and above said openings for fixing the ends of said handles, said rivets being passed both through the said shielding pieces and material of the bag.

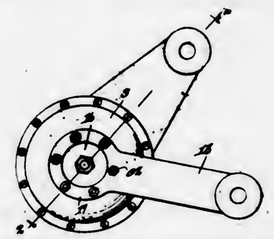
[Claim 6 not printed in the Gazette.]

1,223,421. VALVE-LIFTER. WALTER E. REYNOLDS, Kansas City, Mo. Filed Dec. 30, 1915. Serial No. 69,354. (Cl. 29—87.1.)



A valve lifter, comprising a block, an arm comprising a pair of bars pivoted at their ends to the lower end of said block, a plurality of cross pins connecting said bars between their ends, sleeves journaled on said pins between said bars, a second arm comprising a pair of bars pivotally connected at their rear ends to the upper end of said block and suitably spaced apart, a cross pin connecting said bars vertically above the rearmost pin connecting the first-named pair of bars, a spacing sleeve mounted on said cross pin of the second pair of bars, a bolt extending loosely through said block between said arms and provided with a rearwardly tapering head or wedge projecting between the bars of said pair of arms, a nut engaging the bolt and the rear side of said block and adapted when screwed upon the bolt to effect rearward movement of the latter and thereby cause the tapering head or wedge of the same to engage the sleeves of the pins lying in the same vertical plane, and a forked cup provided with a rearwardly projecting stem secured to and between the front ends of the bars of said second arm, the walls of said cup tapering downward and inward at their inner sides and converging at their front ends, the front ends of the bars of the first-named arm diverging forwardly to provide a forked end for said arm below the said cup.

1,223,422. SHOCK-ABSORBER. FRANK V. RISINGER, Youngstown, Ohio, assignor to The Block Gas Mantle Co., Youngstown, Ohio. Filed Oct. 14, 1916. Serial No. 125,667. (Cl. 21—105.)



1. A shock absorber including pivotally connected relatively movable members, friction plates revoluble with one of the members, laterally movable friction rings revoluble with said member, a friction disk interposed between each ring and one of the friction plates and revoluble with the other member, and wedging means interposed between the friction rings.

2. A shock absorber including pivotally connected relatively movable members, friction plates revoluble with one of the members, laterally movable friction rings revoluble with said member, a friction disk interposed between each ring and one of the friction plates and revoluble with the other member, wedging means interposed between the friction rings and movable with the friction disks.

3. A shock absorber including pivotally connected relatively movable members, friction plates revoluble with one

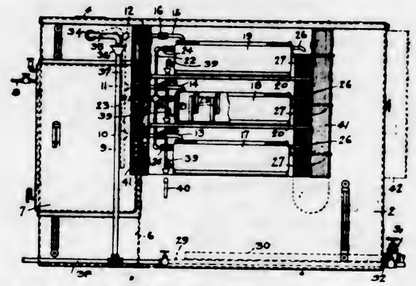
of the members, laterally movable friction rings revoluble with said member, a friction disk interposed between each ring and one of the friction plates and revoluble with the other member, wedging means interposed between the friction rings and movable with the friction disks, and means upon the friction rings normally out of engagement with but adapted, during excessive relative movement to engage the spreading means.

4. A shock absorber including pivotally connected members, opposed friction plates movable with one of the members, interposed laterally movable friction rings movable with said member, friction disks interposed between the rings and plates and movable with the other member, and adjustable spreading means interposed between the friction rings.

5. A shock absorber including pivotally connected members, opposed friction plates movable with one of the members, interposed laterally movable friction rings movable with said member, friction disks interposed between the rings and plates and movable with the other member, adjustable spreading means interposed between the friction rings, and means carried by the friction rings and normally disengaged from the spreading means for moving into engagement with said spreading means during excessive relative movement of the pivoted members to shift the rings laterally into frictional engagement with the friction disks.

[Claims 6 to 10 not printed in the Gazette.]

1,223,423. OIL-PURIFIER. JOHN F. ROBERTSON, Bellevue, Pa. Filed June 6, 1916. Serial No. 101,953. (Cl. 210—10.)



1. In an oil purifier, the combination with a suitable frame, of a reservoir for containing the impure oil, a plurality of settling-pans supported in said frame, means for delivering the oil from said reservoir to said pans, and means for removing said pans independently from said frame.

2. In an oil purifier, the combination with a suitable frame, of a reservoir for the impure oil, a plurality of settling-pans mounted in said frame one above the other, means for delivering the oil from said reservoir to said pans, and means for removing said pans independently from said frame.

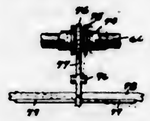
3. In an oil purifier, the combination with a suitable frame, of a reservoir for the impure oil, a plurality of settling-pans mounted one above the other in said frame, means for delivering the oil from said reservoir to said pans, and means for withdrawing said pans horizontally from said frame the one independently of the other.

4. In an oil purifier, the combination with a suitable frame, of a reservoir for the impure oil, a plurality of settling-pans mounted therein, independent means for delivering the oil from said reservoir, and means for removing said pans from said frame independently.

5. In an oil purifier, the combination with a suitable frame, of a reservoir for the impure oil, a steam-jacket surrounding said reservoir, a plurality of settling-pans mounted in said frame one above the other, means for delivering the oil from said reservoir to said pans, and means for removing said pans independently.

[Claims 6 to 9 not printed in the Gazette.]

1,223,424. COMBINED FLESHING AND UNHAIRING MACHINE. CARLETON RUHE, Olean, N. Y. Filed May 9, 1916. Serial No. 96,374. (Cl. 149—16.)



1. A machine of the character described, comprising a relatively stationary frame-section, a movable frame-section adapted to slide toward and away from the relatively stationary frame-section, gear teeth carried by the movable frame-section, hide-treating elements carried by the two frame-sections, a gear to engage the gear teeth of the movable frame-section, driving means for the gear, means to lock the movable frame-section against movement when in the inner position, means to lock the movable frame-section against movement when in the outer position, and means adapted to be operated by either locking means to render the driving means inactive.

2. A machine of the character described, comprising a relatively stationary frame-section, a movable frame-section adapted to be shifted toward and away from the relatively stationary frame-section, hide treating implements carried by both frame-sections, gear teeth carried by the movable frame-section, a gear to engage the gear teeth, driving means for the gear, spring pressed members to lock the movable frame-section in the inner and outer positions, and means to render the driving means inactive when either locking member is rendered active.

3. In a machine of the character described, a relatively stationary frame-section, a movable frame-section adapted to be shifted toward and away from the relatively stationary frame-section, a rotatable member adapted to effect the movement of the movable frame-section in either direction, automatically operating devices to lock the movable frame-section in the inner and outer positions, driving means for the rotatable member, and means to render the driving means inactive when either locking device functions to hold the movable frame section in the extreme position.

4. In a machine of the character described, a relatively stationary frame-section, a movable frame-section adapted to be shifted toward and away from the relatively stationary frame-section and having gear teeth, hide treating elements carried by the two frame-sections, a gear to engage the gear teeth, means to drive the gear in either direction embodying a clutch, self-acting dogs arranged to lock the movable frame-section against movement when it is shifted to the end of its travel in either direction, pivoted links connected with the dogs, and means connecting the pivoted links with the clutch and adapted to automatically render the clutch inactive when either dog is rendered active.

5. A machine of the character described, comprising a relatively stationary frame having an upstanding frame portion, a coacting sliding frame portion mounted upon the frame and movable toward and away from the upstanding frame portion, hide treating elements carried by the upstanding frame portion, coacting hide treating elements carried by the sliding frame portion, an arm pivotally connected with the upstanding frame portion, a second arm pivotally connected with the sliding frame portion and having pivotal connection with the first named arm, flexible gearing carried by the pivoted arms and connecting one element of the upstanding frame portion with an element of the sliding frame portion, and means to drive one of the elements which are geared together by the flexible gearing.

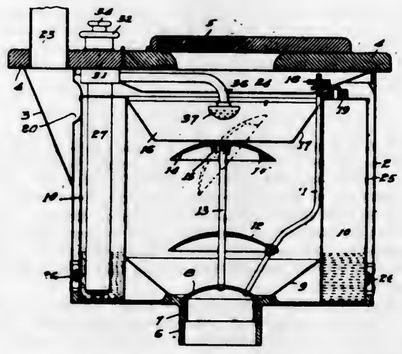
1,223,425. TIE-CLASP. CHARLES P. SAVAGE, South Tacoma, Wash. Filed May 29, 1916. Serial No. 100,539. (Cl. 24—85.)

1. A device of the class described comprising a U-shaped body member, a pronged member fixed to the free end of one of the arms of the latter and arranged adjacent and parallel to said arm, a compressible member disposed between the arms of said body member, a right angular lever pivotally mounted on the other arm of said body member and having an arm at the pivoted end thereof adapted to engage said compressible member for compressing the same, the free end of said lever being provided with a recess therein for receiving the free end of said pronged member when the former is disposed in abutting relation to the latter.



2. A shirt and tie clasp of the class described comprising a body member having a recess therein adapted to receive a portion of the shirt, a tie engaging pronged member rigidly attached to said body member, and a lever pivotally mounted upon said body member and having a cam member at the pivoted end thereof disposed within said recess and adapted to clamp the shirt therein, the free end of said lever being provided with a recess for receiving the free end of said pronged member when the former is in its operative position.

1,223,426. SANITARY CLOSET. HARRY Y. SCARBOROUGH, Minneapolis, Minn., and JAMES G. KING, Superior, Wis., assignors, by direct and mesne assignments, to Automatic Chemical Closet Company, Minneapolis, Minn., a Corporation of Minnesota. Filed Nov. 18, 1913. Serial No. 801,726. Renewed Sept. 27, 1916. Serial No. 122,545. (Cl. 4—30.)



1. A closet comprising a receptacle, having a seat opening, a tilting disk having a convex upper surface disposed beneath said opening and operating to partially conceal the contents of the receptacle, and means for delivering a chemical solution on the upper surface of said disk.

2. A closet comprising a receptacle having a seat opening, a disk disposed beneath said seat opening and normally concealing the contents of said receptacle, a second disk arranged beneath said first named disk and spaced therefrom, said disks operating to break up the swash of the contents of said receptacle, and means for delivering a chemical solution upon said first named disk.

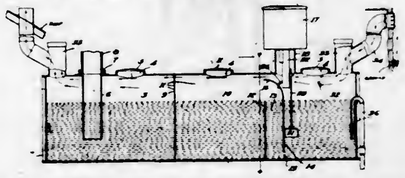
3. A closet comprising a receptacle having a seat opening, an inwardly inclined wall arranged beneath said seat opening, a disk having a convex upper surface disposed beneath said seat opening adjacent to the lower edge of said wall, and concentric, substantially, with respect thereto, said disk and wall operating to break up the swash of the contents of said receptacle, and means for delivering a chemical solution upon said disk.

4. A closet comprising a receptacle having a seat opening, a disk arranged beneath said opening and having a convex upper surface and operating to conceal the contents of the closet, and means for delivering a chemical solution upon the convex surface of said disk.

5. A closet comprising a receptacle having a seat opening, an upright rod arranged beneath said opening, a disk centrally mounted on said rod adjacent to said opening and operating to conceal the contents of the receptacle, and means for spraying the surface of said disk.

[Claims 6 to 17 not printed in the Gazette.]

1,223,427. TANK FOR THE TREATMENT OF SEWAGE. HARRY Y. SCARBOROUGH, Minneapolis, Minn. Filed Aug. 2, 1915. Serial No. 43,268. Renewed Sept. 27, 1916. Serial No. 122,546. (Cl. 210—1.)



1. An apparatus for the treatment of sewage comprising a tank having a chamber for disintegrating the solids, a chamber for the fertile liquid communicating with said disintegrating chamber, a sterile chamber having a discharge and receiving a supply of fertile liquid from said fertile chamber equal to the inflow to said disintegrating chamber with each flushing of the bowl, means for delivering a sterilizing chemical to said sterile chamber, and means retarding the mingling of the fertile liquid with the sterile liquid until subjected to the action of the sterilizing chemical.

2. An apparatus for the treatment of sewage comprising a tank having a chamber provided with means for communication with a closet bowl and in which chamber the solids are disintegrated by fermentation and bacterial action, a second chamber communicating with said fertile chamber to receive the waste in liquid form therefrom, a third chamber having a siphonic discharge and arranged to receive the fertile liquid from said second chamber with each overflow thereof, said third chamber having means for temporarily confining the fertile liquid and means for subjecting the fertile liquid while so confined to the action of a sterilizing chemical.

3. An apparatus for the treatment of sewage comprising a tank having an initial chamber provided with means for communication with a closet bowl and wherein the solids are disintegrated and liquefied, a second chamber having a perforated wall separating it from said first named chamber to receive the fertile liquid therefrom, a third or sterilizing chamber having a discharge and a partition separating it from said fertile chamber, means for delivering a sterilizing chemical to said sterile chamber and a wall mounted to retard the mingling of the overflow of the fertile liquid with the contents of said sterile chamber.

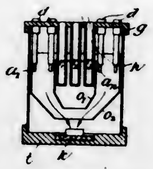
4. In a tank for treating sewage, a chamber adapted to contain liquid in fertile form, a sterilizing chamber, a partition separating said chambers, a wall spaced from said partition and from the floor of said tank and forming with said partition a narrow passage through which the fertile liquid flows to said sterilizing chamber, a receptacle for a sterilizing chemical having a spout for delivering the chemical to the space between said wall and said partition, and means controlled by the rise and fall of the sterile liquid in said sterilizing chamber for controlling the flow of said sterilizing chemical.

5. In a tank for treating sewage, a chamber adapted to contain liquid in fertile form, a sterilizing chamber, a partition separating said chambers, a wall spaced from said partition and from the floor of said tank and forming, with said partition, a narrow passage through which the

fertile liquid flows to said sterilizing chamber, and means for delivering a sterilizing chemical to said narrow passage.

[Claims 6 to 11 not printed in the Gazette.]

1,223,428. VAPOR ALTERNATING-CURRENT RECTIFIER AND SIMILAR APPARATUS. BÉLA SCHAEFER, Frankfort-on-the-Main-Bockenheim, Germany, assignor to the Firm of Hartmann & Braun A. G., Frankfort-on-the-Main, Germany. Filed Mar. 2, 1912, Serial No. 681,192. Renewed June 15, 1914. Serial No. 845,296. (Cl. 175—354.)



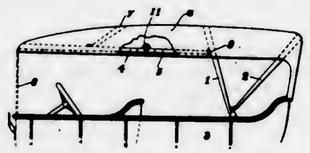
1. In a rectifier of the class described, a closed container of metal, a mercury cathode in the bottom of said container, a plurality of anodes arranged circularly in said container and adjacent its side walls, a screen interposed between said anodes and the side wall and embracing said anodes, the lower tapered end of said screen having a centrally disposed opening, said opening being directed toward the cathode.

2. In a rectifier of the class described, a closed container, a mercury cathode in the bottom thereof, a plurality of anodes arranged around said container adjacent the wall thereof, and an insulating screen surrounding said anodes and provided with a constricted neck dipping into said cathode.

3. In a rectifier of the class described, a closed container, a series of anodes positioned adjacent the side wall of said container, a cathode, a cooling member, and screen means between said anodes and the cathode and cooling member.

4. In a rectifier of the class described, a closed container, a series of anodes spaced around the side wall of said container, a screen surrounding said anodes and interposed between the wall and the anodes, said screen having a funnel-shaped bottom, a cathode immediately below the mouth of said funnel, a cooling member having an open end and depending from the top of said container, and a screen surrounding said cooling member and open at the bottom, said screen being interposed between the anodes and the cooling member and both of said screens being of insulating material.

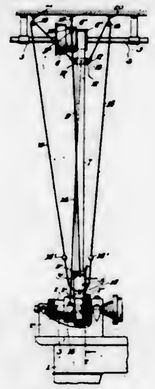
1,223,429. VEHICLE-TOP. GEORGE W. SCOTT, Troy, Ohio, assignor, by mesne assignments, to The Horton Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 8, 1915. Serial No. 1,142. (Cl. 21—62.)



1. In an automobile vehicle top, a front horizontal bow having connected front and rear parts foldable and extensible through a definite range of movement, and a joint between said parts comprising laterally separable companion members, one carried by each of said parts, said members having a rotatable bearing against one another and being provided with inter-matching projections and recesses formed and arranged to operatively inter-engage in either the fully extended or fully folded position of said parts but to be incapable of inter-engagement in any intermediate position of said parts.

2. In an automobile vehicle top, a front horizontal bow having connected front and rear parts foldable and extensible through a half circular range, and a joint between said parts comprising laterally separable companion members, one carried by each of said parts, said members having a rotatable bearing against one another and being provided with inter-matching projections and recesses and with shoulders which abut upon the completion of the folding or extension of said front and rear parts and thereby limit the folding or extensible movements of said parts, the projections and recesses of each member being arranged in diametrically opposite relation and having an area of one-fourth of a circle, the projections being plain or smooth-surfaced, as and for the purpose set forth.

1,223,430. BELT-SHIFTING MECHANISM. DAVID TOWNSEND SHARPLES, West Chester, Pa. Filed Nov. 17, 1916. Serial No. 131,816. (Cl. 64—4.)



1. A belt shifter comprising a device through which a belt is adapted to run freely and means for supporting said device so that it can float freely with the lateral movements of the belt section running therethrough.

2. A belt shifter comprising a device through which a belt is adapted to run freely and floating means for supporting said device so that it can move freely in transverse directions, transversely to the belt section passing therethrough.

3. A belt shifter comprising a collar adapted for substantially surrounding a belt adapted to run freely therethrough and a rod adapted to oscillate universally for supporting said collar.

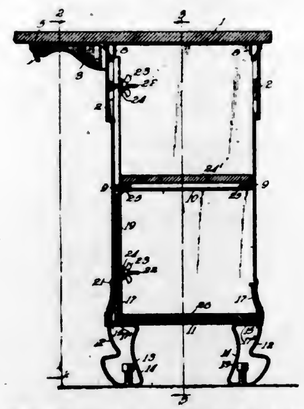
4. A belt shifter comprising a device adapted for substantially surrounding a belt adapted to run therethrough, floating means for supporting said device so that it can move universally, and flexible hand operated means connected with said device for shifting it.

5. A belt shifter comprising a device adapted for substantially surrounding a belt adapted to run freely therethrough, means adapted to oscillate universally for supporting said device, and means connected with said device so that it can be pulled in opposite directions.

[Claims 6 to 10 not printed in the Gazette.]

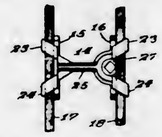
1,223,431. PANEL STRUCTURE. WILLIAM SIEBERT, Chicago, Ill. Filed Apr. 5, 1915. Serial No. 19,151. (Cl. 211—11.)

1. A panel structure including a number of spaced apart pilasters defining a plurality of adjacent panel spaces, said pilasters being provided near their bottom ends with lower and upper lugs; and a bottom rail resting upon the lower lugs and disposed beneath the upper lugs.



2. A panel structure including spaced apart pilasters defining adjacent panel spaces; inwardly extending threaded bolts carried by the pilasters; clamping plates upon the bolts; clamping nuts upon the bolts adapted to be moved against the clamping plates; and panels in adjacent panel spaces held in place between rear portions of the pilasters and the clamping plates by the clamping nuts, said clamping plates being loosely disposed upon the bolts to enable the clamping plates readily to be adapted to adjacent panels with which each clamping plate may be engaged.

1,223,432. SUPPORT FOR DRILLS. GEORGE B. SIMMONS, Ottumwa, Iowa, assignor to American Mining Tool Company, Ottumwa, Iowa, a Corporation of Iowa. Filed Jan. 20, 1915. Serial No. 3,379. (Cl. 255—53.)

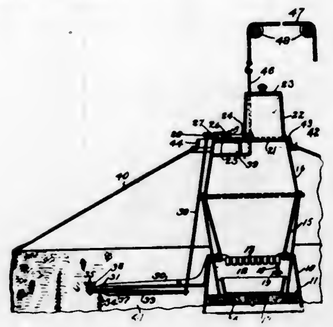


A drill support, comprising a supporting member composed of two parallel bars, a chair having sleeves embracing said bars, and a cross-bar connecting said sleeves, said cross-bar having a recess adjacent to one of said bars, a rocking cam mounted in said recess and adapted to be rocked in either direction into engagement with the surface of the adjacent bar before it reaches its point of maximum projection, and means carried by said chair for supporting a drill.

1,223,433. HOVER. SAMUEL B. SMITH, Cleveland, Ohio. Filed Nov. 27, 1916. Serial No. 133,702. (Cl. 237—3.)

1. In a hover, the combination of a base portion, a two-part combustion chamber having its greatest diameter near the center, each part thereof being frusto-conical in form, the top of the same being flat and formed with draft and fuel openings eccentrically arranged, a damper in the draft openings, a thermostatic device projecting from the base portion, a vertical damper rod connected thereto, means connecting said damper and said rod, and a canopy supported at the upper part of the combustion chamber and centrally apertured so that the draft and fuel openings are located outside of the canopy.

2. In a hover, the combination of a base portion, a two-part combustion chamber, each part being substantially frusto-conical in form, the two sections being superimposed so that the larger portions of the chamber are connected together, the flat top of the chamber being formed with draft and fuel openings, a damper in the draft opening, a thermostat arm secured to the base, a movable thermostat lever mounted below the arm, means connecting the thermostat lever with the damper, and a canopy supported at the upper part of the chamber and centrally apertured so that the draft and fuel openings are located outside of the canopy.



3. In a hover, the combination of a base portion, an upper stove section above the base having its widest part near the center of the stove and having its sides converging upwardly and downwardly from the center, the flat top of the upper stove section being formed with draft and fuel openings eccentrically arranged, a damper in the draft opening, a thermostatic device projecting from the base portion and a vertical damper rod connected thereto, means connecting said damper and said rod and a vertically-movable canopy supported on the upper part of the upper stove section and centrally apertured so that the draft and fuel openings are located outside of the canopy.

4. In a hover, the combination of a base portion, a two-part combustion chamber, each part being substantially frusto-conical in form and the chamber having its greatest diameter near the center thereof, the flat top of the same being formed with draft and fuel openings eccentrically arranged, a damper in the draft opening, a thermostatic device projecting from the base portion, a vertical damper rod connected thereto, means connecting said damper and said rod and a canopy supported at the upper part of the chamber and centrally apertured so that the draft and fuel openings are located outside of the canopy.

5. In a hover, the combination of a base portion, a combustion chamber having its greatest diameter near the center thereof, the sides of the same converging upwardly and downwardly from the center, the top of the chamber being formed with check draft and fuel openings eccentrically arranged, a damper in the draft opening, a canopy supported at the upper part of the combustion chamber and centrally apertured so that the draft and fuel openings are located outside of the canopy, a thermostatic device projecting from the base portion, a vertical damper rod extending upwardly therefrom and means connecting the damper and rod.

[Claim 6 not printed in the Gazette.]

1,223,434. MANUFACTURE OF ELECTRIC CABLES. WILLIAM FRANCIS SMITH, Brooklyn, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed May 23, 1914. Serial No. 840,582. (Cl. 173—264.)

1. The method of forming a twisted pair of insulated conductors which consists in covering each conductor with insulation, separately forming the insulated conductors into helices of the same pitch, and then bringing the helically formed insulated conductors together to make a twisted pair.

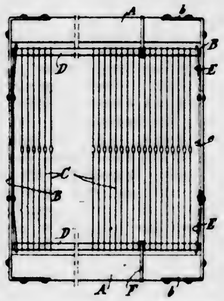
2. The method of forming a twisted pair of insulated conductors which consists in covering each conductor with

insulation, feeding the insulated conductors forward at the same speed, separately forming the insulated con-



ductors into helices of the same pitch, and then bringing the helically formed insulated conductors together to make a twisted pair.

1,223,435. HEDDLE-FRAME OF LOOMS. MAX SPALECK, Greiz, Germany, assignor to The Firm of Otto Spaleck, Greiz, Germany, said firm comprising Otto Spaleck, Max Spaleck, and Johannes Spaleck, Greiz, Germany. Filed June 17, 1913. Serial No. 774,085. (Cl. 139—73.)



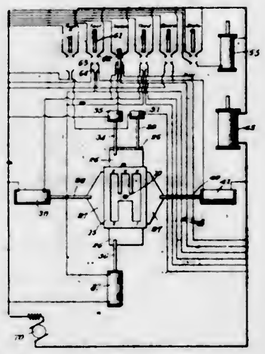
1. In heddle frames of looms, the combination of a heddle frame having end pieces, heddle rods of a length to fit between the end pieces of the frame, and spring-pressed means at the inner sides of said end pieces adapted to engage the ends of the heddle rods axially thereof, said spring-pressed means also being adapted to be retracted axially of the heddle rods to admit of fitting over the ends of the heddle rods to attach and detach the heddle rods to and from the frame.

2. In heddle frames of looms, the combination of a heddle frame having end pieces, heddle rods of a length to fit between the end pieces of the frame, and spring-pressed arms at the inner side of said end pieces adapted to be retracted to admit of fitting over the ends of the heddle rods to detachably connect said heddle rods to said frame.

3. In heddle frames of looms, the combination of a heddle frame having end pieces, heddle rods of a length to fit between the end pieces of the frame, and spring-arms at the inner side of said end pieces having openings therein into which the ends of said rods are adapted to fit and be thereby connected to said frame, said rods being detachable from said spring-arms by drawing back of said spring-arms.

4. In heddle frames of looms, the combination of a heddle frame having end pieces, heddle rods of a length to fit between the end pieces of the frame, and spring-arms at the inner side of said end pieces each having a plurality of openings therein into which the ends of a plurality of said rods are adapted to fit and be thereby connected to said frame, said rods being detachable from said spring-arms by drawing back of said spring-arms.

1,223,436. SPEED CHANGING AND CONTROLLING DEVICE. ARTHUR SPEAR, deceased, Brooklyn, N. Y., by Myrtle B. Spear, executrix, Brooklyn, N. Y. Filed Nov. 10, 1914. Serial No. 871,397. (Cl. 74—58.)



1. A speed changing and controlling device including in combination a plurality of selectively coöperating movable devices for effecting the various gear shifts, separate electrical operating means including a plurality of circuits for moving the various coöperating devices, and circuit controlling means for selectively controlling one or more of said circuits to effect a desired gear shift.

2. A speech changing and controlling device including in combination a plurality of selectively coöperating movable devices for effecting the various gear shifts, separate electro-magnetic means including a plurality of circuits for moving the various coöperating devices, and circuit controlling means for selectively controlling one or more of said circuits to effect a desired gear shift.

3. A speed changing and controlling device including in combination a plurality of selectively coöperating slidable members for effecting the various gear shifts, solenoids for operating the various slidable members, circuits for said solenoids, and circuit controlling means opening and closing one or more of said circuits for effecting a desired gear shift.

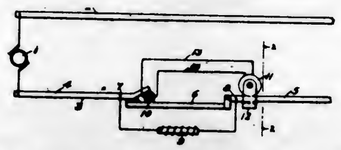
4. A speed changing and controlling device including in combination a plurality of selectively coöperating successively movable devices for effecting the various gear shifts, separate electrical operating means including a plurality of circuits for moving the various coöperating devices, and circuit controlling means for selectively controlling one or more of said circuits to sequentially effect a desired gear shift.

5. A speed changing and controlling device including in combination a plurality of selectively coöperating slidable members for effecting the various gear shifts, solenoids for operating the various slidable members, circuits for said solenoids, and circuit controlling means opening and closing successively a plurality of circuits to sequentially operate a plurality of solenoids to effect a desired gear shift.

[Claims 6 and 7 not printed in the Gazette.]

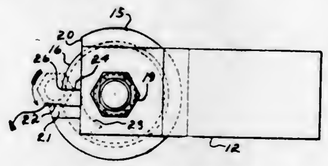
1,223,437. PROTECTIVE SYSTEM. JAMES BUCKNER SPEED, West New Brighton, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Sept. 3, 1915. Serial No. 48,778. (Cl. 175—294.)

1. A protective circuit comprising in combination with a power lead, an inductance in series with said lead, a switch normally short-circuiting said inductance, an inductance coil magnetically linked with said lead, and a detonating device in circuit with said inductance coil for opening said switch upon a sudden rush of current in said lead.



2. A protective circuit comprising in combination with a power lead, an inductance in series with said lead, a switch normally short-circuiting said inductance, a magnetic band surrounding said lead, an inductive winding on said band and a detonating device for opening said switch in series with said winding.

1,223,438. COMBINED FORMING AND CUT-OFF TOOL. CHRISTOPHER M. SPENCER, Hartford, Conn., assignor to The New Britain Machine Company, New Britain, Conn., a Corporation of Connecticut. Filed Sept. 13, 1916. Serial No. 119,865. (Cl. 29—97.)



1. A tool of the class described having forming and cut off portions to operate respectively tangentially and radially of the stock, the forming portion being adapted to conclude its action before the action of the cut off portion is concluded.

2. A tool of the class described having chamfering and cut off portions to act respectively tangentially and radially of the stock, the chamfering portion being adapted to conclude its action before the action of the cut off portion is concluded.

3. A tool of the class described having a sectional circular part the sections of which are respectively provided with forming and cut off portions, the forming portion extending a greater distance away from the axis of said circular portion than the cut off portion.

4. A tool of the class described having two disks fitted together, each disk having a cutting edge shaped for forming and cutting off operations, the cutting edge of the forming disk being adapted to finish its action before the action of the other portion is concluded.

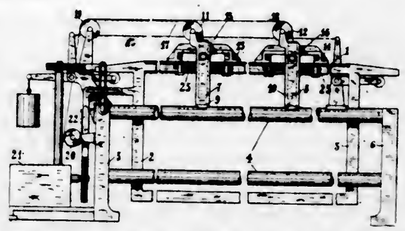
5. A tool of the class described having two disks fitted together, each disk having a cutting edge shaped respectively for forming and cutting off operations, the cutting edge of the forming disk being adapted to finish its action before the action of the other portion is concluded, the two disks being coaxial and rotatively adjustable.

[Claims 6 and 7 not printed in the Gazette.]

1,223,439. EMBROIDERING-MACHINE. WILHELM ALBERT STELLMACHER, Arbon, Switzerland. Filed Aug. 4, 1913. Serial No. 782,878. (Cl. 112—7.)

1. In an embroidery machine, the combination with a fabric frame, and mechanism for imparting vertical movement to the latter, of vertically movable supporting members connected with a longitudinal member of the frame, and independently adjustable tension members connecting said supporting members with said mechanism.

2. In an embroidery machine, the combination with a fabric frame, and mechanisms for imparting horizontal and vertical movements to the latter, of a plurality of vertically movable slides connected with the frame, and independently adjustable flexible bands connected with the slides and with the mechanisms for imparting vertical movement.



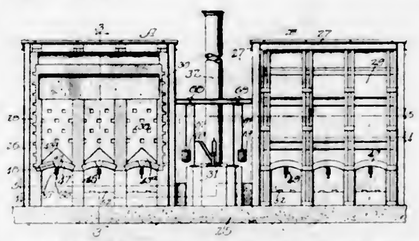
3. In an embroidery machine, the combination with a vertical and horizontally movable fabric frame, of a plurality of vertically movable slides, means connecting the slides to the frame adapted to permit horizontal movement of the frame relative to the slides, and independently adjustable flexible bands connected to the slides and adapted to be actuated by the vertical movement of the frame.

4. In an embroidery machine, the combination with a fabric frame, and mechanism for imparting vertical and horizontal movements to the latter, a plurality of vertically movable slides, rails mounted on and parallel to the top bar of the frame, rollers on the slides supporting the rails, and flexible bands adjustably connected to the slides and to the mechanism for moving the frame vertically.

5. In an embroidery machine, the combination with a fabric frame, and mechanism for imparting vertical and horizontal movements to the latter, a plurality of vertically movable slides, rails mounted on and parallel to the top bar of the frame, rollers on the slides supporting the rails, flexible bands adjustably connected to the slides and to the mechanism for moving the frame vertically, guide bars on the frame, and studs on the slides engaging the guide bars.

[Claims 6 and 7 not printed in the Gazette.]

1,223,440. CERAMIC KILN. ARTHUR L. STEVENS, Chicago, Ill. Filed Sept. 10, 1912. Serial No. 719,526. (Cl. 25—145.)



1. In a kiln for ceramic ware, or the like, the combination with means constituting a firing chamber having a continuous series of bag walls and flues extending the full length of each side thereof, of a regenerator communicating with each of said series of flues, and means whereby hot gases may be introduced into said chamber from said regenerators alternately through the flues on opposite sides of the chamber, and, in each case, discharged through the flues on the side opposite to that through which they entered into the regenerator communicating with said last named flues.

2. In a kiln for ceramic ware, or the like, the combination with means constituting a firing chamber having a bag wall and flue at each side thereof, of a regenerator communicating with each of said flues, said regenerators being located directly under said firing chamber, and means whereby hot gases may be introduced into said chamber from said regenerators alternately through the flues on

opposite sides of the chamber, and, in each case, discharged through the flue on the side opposite to that through which they entered into the regenerator communicating with said last named flue.

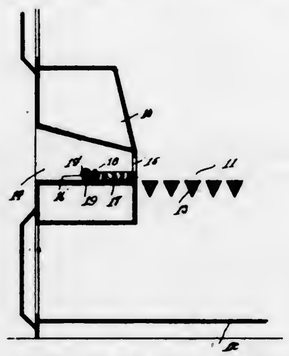
3. In a kiln for ceramic ware, or the like, the combination with means constituting a firing chamber having a contiguous series of bag walls and flues extending the full length of each side thereof, through which hot gases are introduced into said chamber alternately, of a regenerator communicating with each of said series of flues and provided with a fresh air intake and a discharge passageway, and means whereby said regenerators may be put into communication, one with the fresh air intake and the other with said discharge passageway.

4. In a kiln for ceramic ware, or the like, the combination with means constituting a firing chamber having a continuous series of bag walls and flues extending the full length of each side thereof, of a regenerator communicating with each of said series of flues and provided with a fresh air intake and a discharge passageway, means whereby said regenerators may be put into communication, one with the fresh air intake and the other with said discharge passageway, and means for varying the amount of air passing from said regenerators to the firing chamber.

5. In a kiln for ceramic ware, or the like, the combination with means constituting a firing chamber having a continuous series of bag walls and flues extending the full length of each side thereof, of a regenerator communicating with each of said series of flues and provided with a fresh air intake and a discharge passageway, means whereby said regenerators may be put into communication, one with the fresh air intake and the other with said discharge passageway, and burners located adjacent the lower ends of said flues.

[Claims 6 to 22 not printed in the Gazette.]

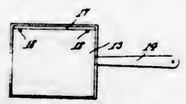
1,223,441. FIRE-BOX. HAMILTON C. STUART, St. Johnsbury, Vt. Filed Sept. 29, 1916. Serial No. 122,899. (Cl. 158—91.)



1. A stove including a jacket and a fire box, the jacket being provided with a housing having in its inner wall an opening permitting communication with the fire box, a cross strip in the housing forming a liquid fuel receptacle in the inner portion of the housing, a wick positioned in the liquid fuel receptacle against the cross strip, a securing plate engaging said wick, and clamping arms extending from the plate and engaging said cross strip to releasably hold the wick in place.

2. A stove including a jacket and a fire box, the jacket being provided with a housing having an opening in its inner walls to permit communication with the fire box, a strip extending across the housing to provide a liquid fuel receptacle in the inner portion thereof, a wick in said receptacle fitting against said strip, and means for releasably holding the wick in engagement with the cross strip.

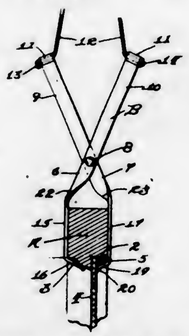
1,223,442. OIL-PAN. HAMILTON C. STUART, St. Johnsbury, Vt. Filed Sept. 29, 1916. Serial No. 122,900. (Cl. 158—10.)



1. A fuel carrier for the purpose described comprising a receptacle, pins extending from the bottom of the receptacle adjacent one of the walls thereof, a wick positioned between the pins and the wall of the receptacle and held in an upright position and in engagement with the side wall, and a handle extending from the receptacle.

2. A fuel carrier for the purpose described comprising a receptacle including a bottom and side walls, and wick engaging means extending from the bottom adjacent one of the side walls for holding a wick in an upright position in the receptacle and in engagement with the side walls.

1,223,443. STORM-WINDOW GRAPPLE. HAROLD H. SULLWOLD, St. Paul, Minn. Filed Sept. 5, 1916. Serial No. 118,567. (Cl. 57—9.)

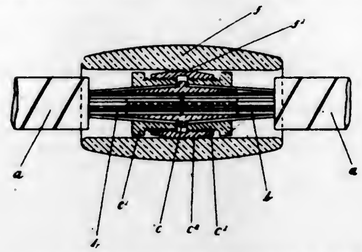


A window grapple, comprising, in combination, a pair of tongs hinged together by a pivot, the arms of said tongs above said pivot being formed with eyes, and the arms below said pivot being shaped to correspond with the sides of the cap of the window and formed on their outer extremities with inturned jaw members, one inclining inwardly closely over the putty surface of the cap and provided with a broad faced stop abutting the window surface, and the other inclining inwardly and conforming with the general trend of the mold surface of the cap, and a pair of cords secured to said tongs through said eyes, said arms immediately below said pivot being formed with downwardly and outwardly inclined inner edges serving to spread the tongs apart when the cords are released.

1,223,444. JOINT FOR ELECTRIC CABLES. ALBERT EDGAR TANNER, Stretford, and ERNEST ALEXANDER CLAREMONT, High Leigh, England. Filed July 22, 1916. Serial No. 110,646. (Cl. 173—303.)

1. A joint for electric cables comprising a sleeve having a smooth outer surface and adapted to be placed over the ends of the conductors to be joined, and a mechanical connector within said sleeve for connecting the ends of said conductors and comprising a plurality of concentric interthreaded members in threaded engagement with the interior of said sleeve, the aforesaid sleeve being in conductive connection with said conductors through said mechanical connector.

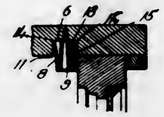
2. A joint for electric cables comprising a sleeve having a smooth outer surface and adapted to be placed over the ends of the conductors to be joined, a conductive mechanical connector within said sleeve for connecting the ends of said conductors, said connector comprising an outer collar in threaded engagement with the interior of the sleeve and bushings engaging the conductor ends and in threaded engagement with said collar whereby the sleeve is in conductive connection with the conductors.



3. A joint for electric cables comprising a sleeve having a smooth outer surface and adapted to be placed over the ends of the conductors to be joined, a collar having screw-threads about its outer periphery for the reception of said sleeve, a pair of bushings adapted to be screw-threaded into the opposite ends of said collar, and an inner tubular member receiving the ends of said conductors to be joined and mounted within said bushings.

4. A joint for electric cables comprising a tubular member tapering from its central portion toward its ends and adapted to receive the ends of the conductors to be joined, a bushing about either end of the tubular member, said bushings being tapered to correspond to the tapered ends of said tubular member, a collar adapted to engage about said bushings, and a sleeve adapted to be secured intermediate its ends to said collar and having a smooth outer surface.

1,223,445. WEATHER-STRIP. AIKEN C. TAYLOR, Richmond, Va., assignor to Emanuel P. Summerfield, Norfolk, Va. Filed June 27, 1916. Serial No. 106,184. (Cl. 20—39.)



1. The combination with a window frame having a bead groove therein and a sash, of a bead having a resilient freely movable side located in the bead groove of the frame and a strip secured to the sash and engaging the resilient side of the bead and being pressed into engagement with the adjacent side of the groove by said bead.

2. The combination with a window frame having a fixed face extending inwardly of the frame, of a bead having a resilient freely movable face opposed to said rigid face of the frame, a sash slidable in the frame and a strip carried by the sash and engaged frictionally between said rigid face of the frame and the resilient face of the bead.

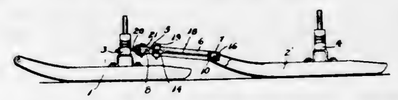
3. The combination with a window frame having a bead groove therein, of a parting bead mounted in said groove and having resilient diverging sides located within the groove in spaced relation to the sides thereof, a sash at each side of the parting bead, each sash having a strip thereon projecting into the groove in the frame between the corresponding sides of the bead and groove and engaging the said sides of the bead and the side of the groove.

4. The combination with a window frame having a bead groove therein, of a bead mounted in said groove and having resilient sides, the bead being of lesser width than the groove, a sash at each side of the bead having a strip thereon which extends into the groove between the bead and the corresponding side of the groove, the thickness of the strip being greater than each space between the corresponding side of the bead and the side of the groove.

5. A parting bead for window frames including a body portion U-shaped in cross section and having resilient sides, screws extending through the bead between the sides thereof and sleeves encircling the screws, which sleeves are of greater lengths than the widths of the sides.

[Claims 6 and 7 not printed in the Gazette.]

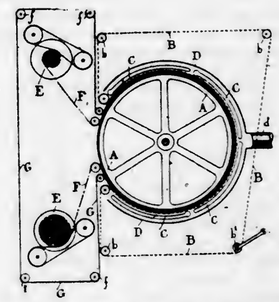
1,223,446. REACH STRUCTURE FOR VEHICLES. ANTON THOMPSON, Pelican Rapids, Minn. Filed July 15, 1916. Serial No. 109,544. (Cl. 21—48.)



1. The combination with a cross bar adapted to be pivotally secured to the runners of a rear sled, of a reach comprising a pair of telescopically connected members, the tubular member of the reach having a transverse opening through which the cross bar is inserted and rigidly secured to said member, and means for connecting the members of the reach in different longitudinal adjustments.

2. The combination with a cross bar adapted to be pivotally secured to the runners of a rear sled, of a reach comprising a pair of telescopically connected members, the tubular member of the reach having a transverse opening through which the cross bar is inserted and rigidly secured to said member, means for connecting the members of the reach in different longitudinal adjustments, and brace rods connecting the cross bar and tubular member of the reach.

1,223,447. APPARATUS FOR PRODUCING PHOTOGRAPHIC PICTURES. JOHN EDWARD THORNTON, Rochester, N. Y., assignor to John Owden O'Brien, Manchester, England. Filed Feb. 1, 1913. Serial No. 745,725. (Cl. 95—75.)



1. In an apparatus of the class described, the combination with a rotating member having a peripheral groove, a cushion within the groove for supporting a sensitized film, a negative film encircling the member, and transparent device encircling the negative film, of an elongated source of light partially encircling the device.

2. In an apparatus of the class described, the combination with a rotating member, an endless friction member encircling the rotating member, a guide for a sensitized film encircling the member, a negative film, a transparent device engaging the negative film, and means for preventing lateral movement of film, an elongated source of light

partially encircling the device, and means for removing the heat of the light.

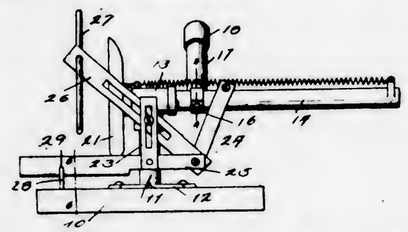
3. In an apparatus of the class described, the combination with a rotating member, an endless friction member encircling the member, a guide for a sensitized film encircling the member, a negative film, a transparent device engaging the negative film, and means carried by the drum for preventing lateral movement of film, an elongated source of light partially encircling the device, there being a flue for removing the heat of the light.

4. In an apparatus of the class described, the combination with a rotating member adapted to carry a sensitized strip, a developed photographic strip encircling the member, a pressure band partially encircling the member, and means for imparting tension to the band.

5. In an apparatus of the class described, the combination with a rotating member adapted to carry a sensitized strip, a developed photographic strip encircling the member, a transparent pressure band partially encircling the member, and means for imparting tension to the band.

[Claims 6 and 7 not printed in the Gazette.]

1,223,448. RAPID-FIRE TOY CANNON. JOHN R. TOBIN, Langford, S. D. Filed Oct. 18, 1916. Serial No. 126,349. (Cl. 124—13.)

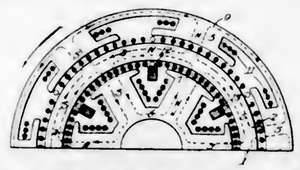


1. In a toy cannon, a stand, a barrel swiveled on said stand for swinging movement in a horizontal plane, a firing plunger reciprocable in said barrel, a spring connected to the plunger and barrel and urging said plunger forward, arms fixed to said barrel and extending downwardly therefrom, a guide carried by said arms and extending rearwardly therefrom, a cross arm carried by said plunger and having its lower end received in said guide and its upper end projecting above the barrel, other arms fixed to the barrel and extending rearwardly and upwardly therefrom, and a handled crank journaled in the last-mentioned arms and alternately engaging and releasing the upper end of said cross arm.

2. In a toy cannon, a stand, a barrel swiveled on said stand for swinging movement in a horizontal plane, a firing plunger reciprocable in said barrel, a spring connected to the plunger and barrel and urging said plunger forward, arms fixed to said barrel and extending downwardly therefrom, a guide carried by said arms and extending rearwardly therefrom, a cross arm carried by said plunger and having its lower end received in said guide and its upper end projecting above the barrel, other arms fixed to the barrel and extending rearwardly and upwardly therefrom, a handled crank journaled in the last-mentioned arms and alternately engaging and releasing the upper end of said cross arm, and means engaging said guide and limiting the swinging movement of the guide and barrel.

1,223,449. DYNAMO-ELECTRIC MACHINE. WILLIAM A. TURBAYNE, Niagara Falls, N. Y., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Mar. 17, 1913, Serial No. 754,920. Renewed Sept. 16, 1916. Serial No. 120,584. (Cl. 171—223.)

1. A dynamo electric machine provided with main field poles and regulating field poles, said regulating field poles acting to regulate the flux from said main field poles and being positioned to counteract the flux set up by the armature current.



2. A dynamo electric machine provided with a ring-wound armature, an external field structure and an internal field structure, said field structures being provided with pole pieces opposite each other, the polar faces of one set of field poles extending beyond the polar faces of the other set in the direction of rotation of the armature.

3. In a dynamo electric machine, a ring-wound armature, an external field yoke provided with poles, and an internal field yoke provided with poles, the poles of one yoke being slightly displaced angularly in the direction of rotation of the armature from the poles of the other yoke.

4. In a dynamo electric machine, a ring-wound armature, external field poles adjacent the outer periphery of said armature and internal field poles adjacent the inner periphery of said armature, each external pole being opposite an internal pole, and the polar faces of one set of poles extending beyond the polar faces of the other set of poles in the direction of rotation of the armature.

5. In a dynamo electric machine, a rotatable ring-wound armature, stationary field poles adjacent the outer periphery of said armature, and stationary field poles adjacent the inner periphery of said armature, one set of poles being angularly displaced in the direction of rotation of the armature from the poles of the other set.

[Claims 6 to 14 not printed in the Gazette.]

1,223,450. ARTIFICIAL DENTURE. GEORGE L. VAN ALLEN, Prince Bay, N. Y. Filed Dec. 22, 1916. Serial No. 138,300. (Cl. 32—9.)



1. A soft rubber denture comprising a base, a tooth mounted thereon, and a pair of soft rubber lips carried by the base and having concaved inner faces adapted to cover opposite sides of the gum ridge.

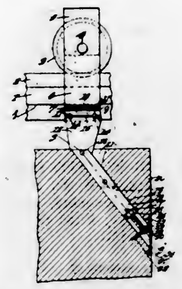
2. An artificial denture comprising a base, a tooth mounted thereon, and a pair of opposed soft rubber lips projecting from the back of the base, the roots of said lips extending over the sides of the base and tooth.

3. An artificial denture comprising a base, a tooth mounted thereon, a pair of opposed soft rubber lips projecting from the back of the base, and a soft rubber filament connecting the lips and extending over said back.

1,223,451. DOOR-HANGER. GEORGE F. VOIGHT, San Francisco, Cal. Filed July 14, 1916. Serial No. 109,332. (Cl. 16—7.)

1. A door hanger embodying a hanger section having an oblique tongue, a pair of complementing members secured to the opposite sides of said tongue to fit slidably in an oblique bore drilled in a door, said members projecting beyond the end of said tongue, the projecting portions of said members having means for receiving and holding a nut, a nut disposed between said members and held by said means, and an adjusting screw extending between said members and threaded through the nut.

2. A door hanger embodying a hanger section having an oblique downwardly projecting tongue, a pair of members of arcuate cross section resting against the opposite sides of said tongue, said tongue having a longitudinal corrugation struck to one side, securing means engaged through said members and corrugation to clamp the parts together, and adjusting means connected to and partially located between said members adjacent the lower ends thereof.



3. A door hanger embodying a hanger section having an oblique tongue, a pair of obliquely arranged members of arcuate cross section secured to the opposite sides of said tongue, a nut between the lower ends of said members, the lower ends of said members being pressed inwardly to engage the nut and prevent the rotation thereof, the lower ends of said members having inturned lips upon which the nut seats, said members having instruck portions above the nut to hold it seated on said lips, and an adjusting screw engaging the nut.

4. The combination with a door having an oblique bore drilled therethrough from one upright edge to its upper end and a slot in its upper end extending from the upper end of said bore, an oblique hanger section slidable in said bore and comprising a pair of parallel longitudinal members, a second hanger section comprising a plate disposed in a vertical plane and having a lower portion extending between and secured to said members, the plate being movable into said slot, and means within the lower portion of said bore connected to and extending between the lower ends of said members for adjusting said members in the bore.

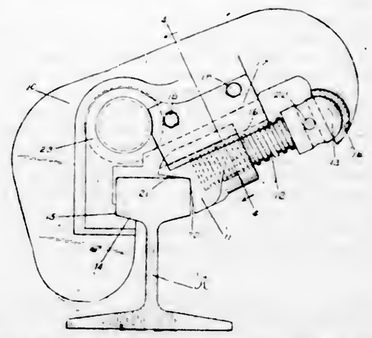
5. The combination with a door having an oblique bore drilled therethrough from one upright edge to its upper end, an oblique hanger section slidable in said bore and comprising a pair of spaced longitudinal members, a second hanger section comprising a plate disposed in a vertical plane and having a lower portion extending between and secured to the upper portions of said members, said door having a slot in its upper end extending from the upper end of said bore to receive said plate, a nut member between the lower ends of the aforesaid members, a washer member within the lower end of said bore, and a screw extending through the washer member and threaded into the nut member between the lower ends of the first mentioned members.

[Claim 6 not printed in the Gazette.]

1,223,452. DEVICE FOR MANIPULATING RAILROAD-RAILS. EUGENE W. VOGEL, Oak Park, Ill., assignor to Chicago Railway Signal and Supply Company, Carpentersville, Ill., a Corporation of Illinois. Filed Apr. 6, 1914. Serial No. 830,089. (Cl. 254—43.)

1. In a device of the character described, the combination with a rail engaging element comprising jaws one of which is slidable on the other with a loose engagement giving it capacity for self adjustment for rails of different size and contour, of a second rail engaging element, and means for causing one of said elements to be drawn toward or forced from the other.

2. In a device of the character described, the combination with a rail engaging element comprising a jaw formed with a guide slot, a jaw formed with a tongue slidable loosely in said slot, a spindle having a threaded engagement with the last named jaw, and a ball and socket joint between said spindle and the first named jaw; of a second rail engaging element, and means for causing one of said elements to be drawn toward or forced from the other.



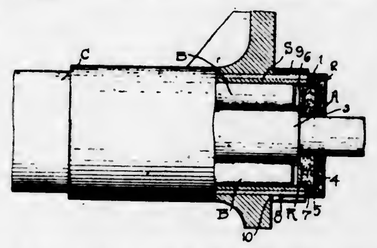
3. In a device of the character described, the combination with a rail engaging element comprising a jaw adapted to engage the under surface of the ball of a rail and formed with a guide slot, a jaw adapted to engage the diagonally opposite edge of the ball of said rail and slidable loosely in said guide slot, a spindle having a threaded engagement with said last named jaw, and a ball and socket joint interposed between the other end of the spindle and the first named jaw; of a second rail engaging element, and means for causing one of said elements to be drawn toward or forced from the other.

4. In a device of the character described, the combination with a pair of rail clamping elements comprising, in each case, a pair of jaws, one of which is slidably mounted on the other with capacity for rocking movement; of means for causing one of said elements to be drawn toward or forced from the other.

5. In a device of the character described, the combination with a pair of rail clamping elements comprising, in each case, a jaw adapted to engage the under surface of the ball of a rail, and a jaw slidable thereon with capacity for rocking movement which is adapted to engage the diagonally opposite edge of the ball of said rail; of means for causing one of said elements to be drawn toward or forced from the other.

[Claims 6 to 13 not printed in the Gazette.]

1,223,453. GREASE-RETAINER. JOHN WAHL, Alpena, S. D. Filed Oct. 21, 1916. Serial No. 127,030. (Cl. 137—115.)



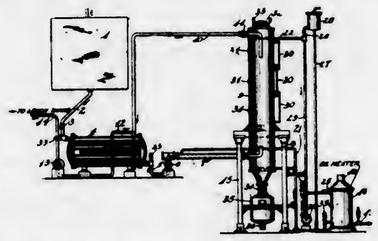
1. A grease retainer consisting of a flanged cap provided with a central opening, a washer of absorbent material positioned within said cap, a second washer of absorbent material arranged within said cap and of a diameter less than the diameter of the first named washer, a third washer of absorbent material positioned intermediate the periphery of the second named washer and the flange of the cap, and a washer of substantially rigid ma-

terial fitting within the cap and interposed between the first named washer and the last two named washers.

2. A grease retainer consisting of a flanged cap provided with a central opening, a washer of absorbent material positioned within said cap, a second washer of absorbent material arranged within said cap and of a diameter less than the diameter of the first named washer, a third washer of absorbent material positioned intermediate the periphery of the second named washer and the flange of the cap, and a washer of substantially rigid material fitting within the cap and interposed between the first named washer and the last two named washers, said substantially rigid washer fitting snugly within the cap.

3. A grease retainer comprising, in combination, a flanged cap, the outer marginal portion of the flange being outwardly flared, absorbent material within the cap, and an annular member adapted to surround the free marginal portion of the flange of the cap, said annular member being provided at its marginal portion remote from the cap with an inturned annular flange.

1,223,454. HYDROMETALLURGICAL APPARATUS FOR THE RECOVERY OF COPPER. EDWARD RAY WEIDLEIN, Thompson, Nev., assignor to Meinls Research Company, New York, N. Y., a Corporation of Maine. Filed Feb. 21, 1916. Serial No. 79,597. (Cl. 266—12.)



1. An apparatus for precipitating copper from copper sulfate solutions by means of sulfur dioxid, comprising a precipitating tank provided with means for heating the same to a suitable temperature, means for circulating therethrough under a suitable pressure the solution to be precipitated, and means for circulating the inflowing solution and the hot outflowing liquid into heat interchanging relation with each other; substantially as described.

2. An apparatus for extracting copper from copper bearing material with sulfuric acid and for precipitating the copper from the resulting copper sulfate solution, comprising a leaching tank for leaching the copper bearing material with sulfuric acid, a precipitating tank provided with means for heating the same to a suitable temperature, means for circulating through said precipitating tank in a continuous manner and under a suitable pressure the copper sulfate solution, together with sulfur dioxid, means for returning the outflowing liquid to the leaching tank, and means for circulating the returning hot liquid and the copper sulfate solution flowing from the leaching tank to the precipitating tank into heat interchanging relation with each other; substantially as described.

3. An apparatus for precipitating copper from copper sulfate solutions by means of sulfur dioxid, comprising a precipitating tank of considerable height provided with an inlet near its bottom and an outlet near its top, means for heating said tank to a suitable temperature, means for circulating therethrough under a suitable pressure the solution to be precipitated, and means for drawing off from the bottom of the tank the precipitated copper without interfering with the continuous operation of the apparatus; substantially as described.

4. An apparatus for precipitating copper from copper sulfate solutions by means of sulfur dioxid, comprising a precipitating tank, means for circulating therethrough under a suitable pressure the solution to be precipitated, an oil heater, and means for circulating the heated oil into heat interchanging relation with said precipitating tank to heat the same; substantially as described.

5. An apparatus for precipitating copper from copper sulfate solutions by means of sulfur dioxid, comprising a precipitating tank having a double wall for the circulation therethrough of heating oil, means for circulating through said tank under a suitable pressure the solution to be precipitated, an oil heater, and means for circulating the heated oil through said double wall of the precipitating tank; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,223,455. LATCH FOR FURNITURE-DRAWERS. ALBERT T. WEISS, Rochester, N. Y., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 18, 1913. Serial No. 807,494. (Cl. 70—42.)

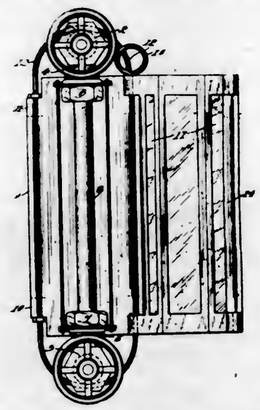


1. The combination with a drawer casing provided with a keeper on one wall thereof and a drawer in said chamber having a hollow front wall composed of a front plate provided with a slot and a lining plate spaced therefrom and provided with offset ears struck up from the material of the lining plate to constitute a guide, of a latch bolt housed within said wall and supported in the said guide on the lining plate to move vertically into and out of cooperation with the keeper on the casing as a locking means, an operating member for the latch bolt projecting forwardly therefrom through the slot in the front plate to the exterior of the drawer and a spring for returning the latch bolt having one end connected to the operating member and the other to one of the guiding ears on the lining plate.

2. The combination with a drawer casing provided with a keeper on one wall thereof and a drawer in said chamber having a hollow front wall composed of a front plate having an inwardly and thence downwardly turned flange and a lining plate arranged in spaced relation to the front plate and having an offset flange interlocked beneath that on the front plate and a slot adjacent to said flange, of a latch bolt housed within the front wall and mounted on the lining plate to extend through its slot in parallelism to but exteriorly of its offset flange, said bolt being movable as a locking means into and out of cooperation with the keeper on the casing.

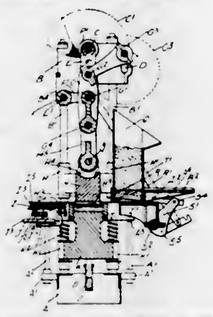
1,223,456. WATER-GAGE PROTECTOR FOR STEAM-BOILERS. WALTER G. WERRECK, Chicago, Ill. Filed Mar. 17, 1916. Serial No. 84,920. (Cl. 73—54.)

1. The combination with oppositely disposed nipples, of gage nuts, a gage glass connecting said gage nuts and readily releasable therefrom, a sectional member comprising a stationary element and a movable element inclosing said gage glass, said stationary element having applied thereto a striped coating of light-reflecting material, said movable element being formed with longitudinal apertures and having glass strips normally closing said apertures, means for adjustably supporting said stationary element, and means for locking said first named means in adjusted position with relation to said stationary element.



2. The combination with oppositely disposed nipples, of gage nuts, a gage glass connecting said gage nuts and readily releasable therefrom, a sectional member comprising a stationary element and a movable element inclosing said gage glass, said stationary element having applied thereto a striped coating of light-reflecting material, said movable element being formed with longitudinal apertures and having removable glass strips normally closing said apertures, threaded bails adjustably supporting said stationary element and nuts for the threaded portions of said bails for locking them in adjusted position with relation to said stationary element.

1,223,457. BRICK-PRESS. WILLIAM LICHTY WETTLAUFER, Toronto, Ontario, Canada. Filed Dec. 1, 1913. Serial No. 803,992. (Cl. 25—89.)



In a brick press, a main frame, a table supported by the main frame, a mold box having an open top and bottom supported by the table and having its upper edge flush with the surface thereof, upper and lower plungers adapted to enter said mold box, a feed hopper for feeding material to said mold box, a cut-off device for said hopper, a main operating lever for said upper plunger, a link connection between the upper plunger and main lever, means for operating the lower plunger to co-act with the upper plunger, a rocking shaft journaled in suitable bearings beneath the table, a bell crank mounted on said rock shaft, a link connection between said bell crank and cut-off device for operating the same, means for operating the bell crank from the main lever comprising a notched bar pivoted to the short arm of said bell crank, a link connecting said bar intermediately of its length with said main lever, a pin carried by the link adapted to engage the notch of the bar when such bar and link are alined, and a pin extending from said bell crank adapted to engage the joint between the link and bar and throw said link and bar out of engagement.

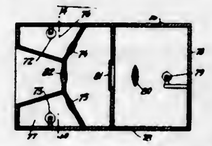
1,223,458. COMPOSITION FOR FILLING JOINTS IN METALLIC BODIES. JOHN D. WHITE, Toronto, Ontario, Canada. Filed Mar. 13, 1916. Serial No. 83,863. (Cl. 134—51.)

1. A material for closing joints or seams between metallic parts containing equal quantities of finely powdered whiting, finely powdered alum, and varnish.

2. A material for closing joints or seams between metallic parts containing equal quantities of finely powdered alum, and whiting, varnish, and finely powdered aluminum.

3. A material for closing joints or seams between metallic parts containing equal parts of finely powdered alum and finely powdered inert insoluble filling material, and varnish.

1,223,459. MEANS FOR PRODUCING COLORED-LIGHT EFFECTS. GILBERT C. WHITNEY, New York, N. Y. Filed Sept. 28, 1916. Serial No. 122,649. (Cl. 240—22.)



1. In a device of the class described, a plurality of sources of light differing in color from one another; means for controlling said sources so that light may emanate from one only of them at a time; a light intercepting member so located as to be illuminated by any one of said sources and to thereby become and serve as a secondary source of light the color of which will depend upon which one of said sources is in operation; and an uncolored lens spaced apart from said light intercepting member and through which light is projected from said member as a secondary source of light.

2. In a device of the class described, a plurality of primary sources of light; a plurality of members differing in color from one another and one of which members is associated with each of said sources; a screen so located as to be illuminated by light emanating from said primary sources and passing through the colored members associated therewith, whereby said screen becomes a secondary source of light; and an uncolored lens spaced apart from said screen and through which light is projected from said screen as a secondary source of light.

3. In a device of the class described, a plurality of primary sources of light; a plurality of members differing in color from one another and one of which members is associated with each of said sources; means for controlling said primary sources so that light may emanate from one only of them at a time; a screen so located as to be illuminated by light emanating from any one of said primary sources and passing through the colored member associated therewith, whereby said screen becomes a secondary source of light the color of which will depend upon which one of said primary sources is in operation; and an uncolored lens spaced apart from said screen a distance corresponding with its focal length and through which lens light is projected from said screen as a secondary source of light.

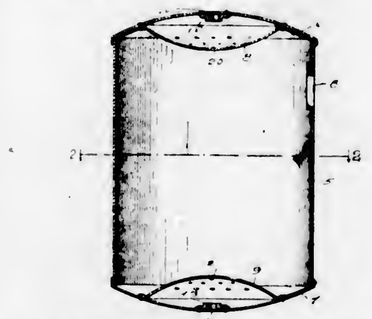
4. In a device of the class described, a plurality of primary sources of light; a screen adapted to form a secondary source of light; a plurality of lenses, one associated with each of said sources, said lenses differing in color from one another and their arrangement being such that light emanating from said several primary sources will pass through said lenses and be concentrated upon

said screen; means for controlling said primary sources so that light may emanate from one only of them at a time; and an uncolored lens spaced apart from said screen a distance corresponding with its focal length, and through which lens light is projected from said screen as a secondary source of light.

5. In a device of the class described, a screen adapted to form a secondary source of light; a plurality of primary sources of light located all upon one side of said screen; a plurality of lenses, one associated with each of said sources, said lenses differing in color from one another and a lens being located between each primary source of light and said screen so that light emanating from said several primary sources will pass through said lenses and be concentrated upon said screen; means for controlling said primary sources so that light may emanate from one only of them at a time; and an uncolored lens located upon the side of said screen opposite to that occupied by said primary sources of light, said lens being spaced apart from said screen a distance corresponding with its focal length and through which lens light is projected from said screen as a secondary source of light.

[Claims 6 to 12 not printed in the Gazette.]

1,223,460. CONTAINER FOR WATER SOFTENING OR FILTERING MATERIAL. GEORGE HENRY WIDNER, Des Moines, Iowa. Filed Jan. 2, 1917. Serial No. 140,230. (Cl. 210—8.)



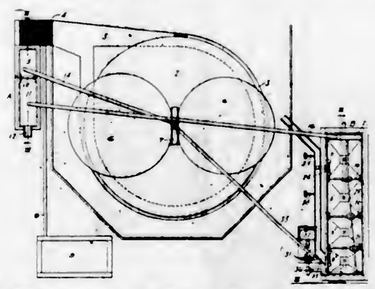
1. In combination, a container, an inlet thereto, and a plate disposed between said inlet and the main body of the container and having a plurality of openings formed therein, the area of which is proportional to the pressure existing at the point where they are located.

2. In combination, a container, an inlet thereto, and a plate disposed between said inlet and the main body of the container and having a plurality of openings formed therethrough which successively increase in area from the center toward the circumference of said plate and said inlet being disposed to discharge upon the central portion of said plate.

3. In combination, a container, an inlet thereto, an outlet therefrom and plates disposed between the inlet and the outlet respectively and the body of the container each of said plates having a plurality of openings formed therethrough which increase progressively in area from the center to the circumference of said plates, said inlet being disposed to discharge centrally upon one of said plates.

4. In combination a container, an inlet located centrally at one end thereof, a plate disposed between said inlet and the main body of the container, said plate having an imperforate central portion disposed in alinement with the inlet and a plurality of annular rows of openings formed therein, the openings of the several rows progressively increasing in area from the center to the circumference of the plate and an outlet at the opposite end of the container whereby when the container is filled with material water may be passed through the bed of the material continuously and under pressure and the flow therethrough will be equalized by the difference in area of the openings of the several rows.

1,223,461. SAND-GRADING APPARATUS FOR GLASS-GRINDING MACHINERY. JOHN WILLIS, Kane, Pa., assignor to American Plate Glass Company, Kane, Pa., a Corporation of New Jersey. Filed Oct. 18, 1915, Serial No. 56,348. Renewed Aug. 28, 1916. Serial No. 117,383. (Cl. 51—11.)



1. Apparatus for classifying abrasive material for a glass grinding machine comprising, in combination with a glass grinding table, means for collecting the abrasive and water, a partitioned primary tank adapted to receive the abrasive and water from the table and having a plurality of communicating closed bottom chambers, means for delivering coarse abrasive and water from one of said chambers to the table, a secondary grading tank having a series of settling chambers and intervening partitions, means for removing sand and water from the other chamber of the primary grader to the first settling chamber of the secondary grader, a manifold pipe having connections leading from each settling compartment of the secondary grader, a pump connected with said manifold pipe, and a delivery pipe leading from said pump to the table.

2. In combination with a glass grinding table, a primary grader adapted to receive the overflow therefrom, means for supplying fresh abrasive and water to said primary grader, means for removing coarse abrasive and water from the primary grader and delivering it to the table, a secondary grader having a series of compartments of gradually increasing width, separating partitions between said compartments adapted to provide for a flow thereover of the water and abrasive in suspension, means for removing finer abrasive and water from the primary grader to the first of said chambers, a pump, a conduit connected with said pump and with the bottom of each of the chambers of the secondary grader, and a delivery pipe leading from the pump to the table.

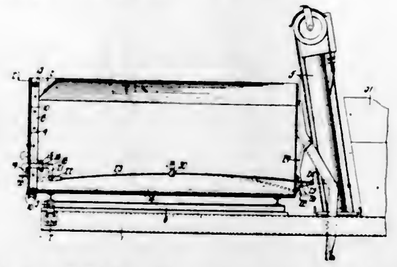
3. In combination with a glass grinding table, a secondary grader having a series of settling compartments and intervening partitions, the cross area of said compartments increasing from one to the other in the direction of the flow, means for removing abrasive and water from the lower portion of each compartment and delivering it to the table, and means for supplying abrasive and water to the first of said compartments and for preventing splashing therein.

4. In combination with a glass grinding table, a sand grading tank having a series of collecting compartments extending below the level of the table, positively acting means for downwardly withdrawing the contents of each compartment singly and for lifting said contents and delivering the same above the table, means for delivering abrasive and water to the first of said compartments, and overflow means for carrying off surplus water and material.

5. In combination with a glass grinding table, a settling tank having a series of communicating chambers separated by transverse partitions below the normal level of the water, said compartments having gradually diverging side walls whereby to increase the cross area of the several compartments successively and effect a gradual diminution in the progress of the current, means for delivering abrasive and water to the first of the said compartments, means for carrying off surplus water and abrasive, and positively acting means for withdrawing the contents of each compartment individually and for delivering it to the table.

[Claims 6 to 10 not printed in the Gazette.]

1,223,462. TRUCK-BODY-DOOR LATCH. GARFIELD A. WOOD, Detroit, Mich. Filed Sept. 25, 1916. Serial No. 121,911. (Cl. 21—20.)



1. In combination with a vehicle body arranged to be swung about a horizontal axis near the rear end of the vehicle and having at its rear end a door arranged to swing about a horizontal axis located near the upper edge of the body, means for latching the door located below the last mentioned axis, said means including a latch bar having a sliding movement longitudinally of said vehicle and also having a swinging movement, and means associated with said latch bar for sliding the latter rearwardly a predetermined distance from the position it occupies when the door is entirely closed and thereafter positively swinging said latch bar out of the path of the door, whereby the latch bar is caused to positively release the door after the latter has swung to partly open position.

2. In combination with a vehicle body arranged to be swung about a horizontal axis near the rear end of the vehicle and having at its rear end a door arranged to swing about a horizontal axis located near the upper edge of the body, means for latching the door located below the last mentioned axis, said means including a striker on the door, a guide on the body, a latch bar coöperating with the striker and having a sliding movement in said guide longitudinally of said vehicle and also having a swinging movement in said guide, and an operating rod pivotally connected to the latch bar whereby the latch bar, in latching the door, is first swung into engagement with the striker and afterward drawn forward by a sliding movement until the door is closed, and a hand lever also pivoted to the operating rod, said hand lever being movable to a position in which the door is closed, said body including means for limiting the movement of said hand lever in the direction stated, and said rod being arranged to automatically retain the lever in engagement with the movement limiting means.

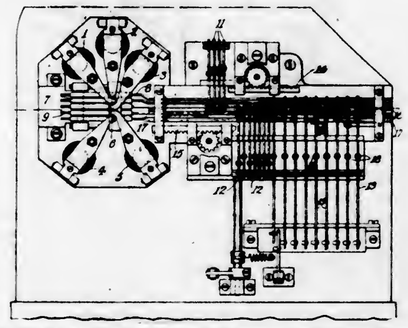
3. In combination with a vehicle body arranged to be swung about a horizontal axis and having a door arranged to be swung about an axis substantially parallel to the first mentioned axis, means for latching the door located below the last mentioned axis, said means including a striker on the door, a guide on the body, a latch bar coöperating with the striker and having a sliding movement and also having a swinging movement, an operating rod pivotally connected to the latch bar, and means associated with said latch bar and coöperating with said operating rod to positively swing the latch bar out of the path of the striker after the latch bar has been slid rearwardly a predetermined distance.

4. In combination with a vehicle body arranged to be swung about a horizontal axis and having a door arranged to be swung about an axis substantially parallel to the first mentioned axis, means for latching the door located below the last mentioned axis, said means including a striker on the door, a guide on the body, a latch bar coöperating with the striker and having a sliding movement in said guide and also having a swinging movement in said guide, an operating rod pivotally connected to the latch bar whereby the latch bar, in latching the door, is first swung into engagement with the striker and afterward drawn by a sliding movement until the door is closed, and a hand lever also pivoted to the operating rod, said hand lever being movable to a position in which the door is closed, said body including means for limiting the movement of said hand lever in the direction stated, and said rod being arranged to automatically retain the lever in engagement with the movement limiting means.

5. In combination with a vehicle body arranged to be swung about a horizontal axis and having a door arranged to be swung about an axis substantially parallel to the first mentioned axis, means for latching the door located below the last mentioned axis, said means including a striker on the door, a guide on the body, a latch bar coöperating with the striker and having a sliding movement in said guide and also having a swinging movement in said guide, an operating rod supported by the body and pivotally connected to the latch bar, a pivotally mounted hand lever supported by the body and pivoted to the operating rod, and a guide for an intermediate portion of the rod, said guide being out of alinement with the line joining the point at which the rod is connected to the latch bar to the point at which it is connected to the lever whereby the latch bar, in latching the door, is first swung into engagement with the striker and afterward drawn by a sliding movement until the door is closed.

[Claims 6 to 16 not printed in the Gazette.]

1,223,463. PRINTING-TELEGRAPH. JOHN E. WRIGHT, New York, N. Y. Filed Jan. 15, 1916, Serial No. 72,220. Renewed Mar. 8, 1917. Serial No. 153,240. (Cl. 178—27.)



1. In a printing or telegraph system, the combination with a series of permutation elements in a translator, of magnets for controlling the adjustment or position of certain of such elements, of means controlled in operation by the effect of line impulses and the adjustment of one or more of such elements to shift or adjust the position of another permutation element and devices or fingers divided into sets for controlling the lifting and turning of a type-wheel and the other operations of the machine adapted to respond to the adjustment of the permutation elements by the means described.

2. In a printing or similar telegraph system, the combination with a series of permutation elements of a translator, of magnets for directly shifting or adjusting all of such elements but one, means dependent upon line impulses and the direct adjustment of the permutation elements for its operation to set or adjust said one element, and fingers or like device coöperating with all of said

elements for controlling the rotary and longitudinal movements of the type-wheel and the other operations necessary in the machine.

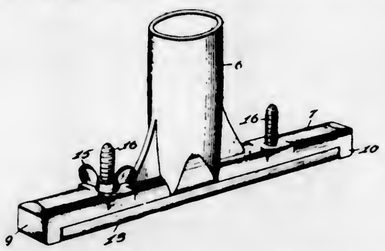
3. In a printing or similar telegraph receiving instrument, the combination with a group of permutation elements, of magnets for adjusting all but one of the same, of means dependent upon the adjustment of said elements for operation, and adapted when operated, to shift the said one element, means for locking that element in its shifted position, and means for restoring it to normal position, after utilization in its shifted position.

4. In a printing telegraph receiving instrument, the combination with a group of permutation elements, of a line controlled magnet adapted to shift or operate each element but one, a finger dependent for movement on the adjustment of the magnetically operated elements for shifting the said one element, means for locking the same when shifted, and means dependent upon the adjustment of all the elements for restoring the locked element to normal position.

5. In a printing telegraph receiving instrument, the combination with permutation bars and fingers dependent for movement upon the relative positions of said bars, line operated magnets for adjusting to position all of said bars but one, one of the fingers being adapted when moved to shift the said one bar, means for retaining the said bar in shifted position, and means for restoring it after utilization in its shifted position operated by the movement of another of said fingers.

[Claims 6 to 8 not printed in the Gazette.]

1,223,464. MOP-CLAMP. HENRY ANDERSCH and JOHN A. RAUSCH, St. Louis, Mo. Filed July 26, 1916. Serial No. 111,495. (Cl. 15—56.)

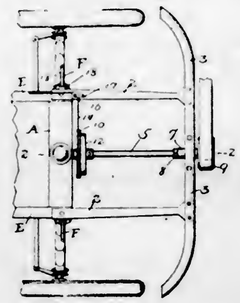


A device of the class described comprising an elongated horizontal body, a socket formed integral with the upper surface thereof, a projection formed integral with the under surface and at each end of the horizontal member and provided with a wedged shaped cavity, a V-shaped groove formed in the under side of the horizontal body and extending the entire distance between the projections, a detachable member having its upper surface shaped to fit within the V-shaped groove, wedge shape projections formed on each end and adapted to fit within the wedge shape cavities, a pair of locking bolts extending through both members and nuts for holding the members in locked position, substantially as specified.

1,223,465. POWER-DELIVERING ATTACHMENT FOR MOTOR-VEHICLES. EDWIN ROYCE ARMSTRONG, Evanston, Ill., assignor to Auto Power Company, Omaha, Nebr., a Corporation of Nebraska. Filed May 15, 1915. Serial No. 28,284. (Cl. 21—90.)

1. In combination with the engine shaft of a motor vehicle and the chassis, of an auxiliary shaft, a clutch connecting the same and the engine shaft with provision for relative lateral play, a frame attached to and extended from the chassis, and a bearing for the auxiliary shaft movable in the outer portion of said frame.

2. In combination with the chassis of a motor vehicle, and the engine shaft thereof extending lengthwise said chassis, of a frame attached to the latter and projecting forwardly therefrom, an auxiliary shaft in bearings on the chassis and the outer part of said frame and alined with the engine shaft and carrying at its forward end a power-delivering element such as a pulley, and a clutch connecting the said auxiliary shaft to the end of the engine shaft opposite that from which the vehicle is propelled.



3. In combination with the chassis of a motor vehicle and the engine shaft thereof extending lengthwise said chassis, of a frame attached to the latter and projecting forwardly therefrom and comprising substantially parallel side bars, and an outer transverse bar extending beyond said side bars constituting a bumper, and an auxiliary shaft in bearings on the chassis and said transverse bars of the frame and alined with and clutched to the engine shaft and carrying at its forward end a power-delivering element such as a pulley.

4. In combination with the chassis of a motor vehicle and the engine shaft thereof extending lengthwise said chassis, of a frame attached to the latter and projecting forwardly therefrom and comprising substantially parallel side bars, and an outer transverse bar extending beyond said side bars constituting a bumper, a shaft-bearing depending from the latter, and an auxiliary shaft in said bearing and alined with and clutched to the engine shaft and carrying at its forward end a power-delivering element such as a pulley.

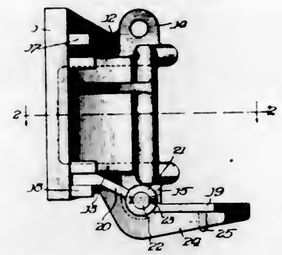
5. In combination with the chassis of a motor vehicle and the engine shaft thereof extending lengthwise said chassis, of a frame attached to the latter and projecting forwardly therefrom and having a transverse member constituting a bumper, a bracket depending from the latter and having a ball-socket, a shaft bearing with a ball engaging said socket, and an auxiliary shaft in bearings on the chassis and said frame and alined with and clutched to the engine shaft and carrying at its forward end a power-delivering element such as a pulley.

1,223,466. COUPLING-POCKET. FREDERICK H. BIRD, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed June 28, 1915. Serial No. 36,700. (Cl. 213—42.)

1. In a device of the class described, the combination of a pocket member having apertured lugs, stop lugs also secured to said pocket member, a shelf having a flat bearing portion, an arm engaging said stop lugs, and a pin passing horizontally through said apertured lugs and through said shelf member intermediate its ends, substantially as described.

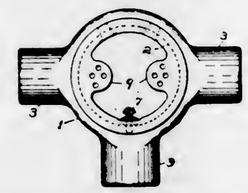
2. In a device of the class described, the combination of a coupler pocket, having rear wall and a floor, an apertured lug projecting downwardly from said floor, a shelf horizontally pivoted to said apertured lug, and a pair of lugs projecting forwardly from said rear wall and providing a space therebetween within which space the rear end of said shelf is adapted to be accommodated, substantially as described.

3. In a coupler pocket the combination of a pocket member including a rear wall and a floor, an apertured lug projecting from said floor, a pair of apertured lugs projecting from said rear wall, a shelf having apertures



intermediate its ends, and a horizontal pin passing through the apertures in said shelf and said lugs, the rear end of said shelf being accommodated in the space between the lugs projecting from said rear wall, substantially as described.

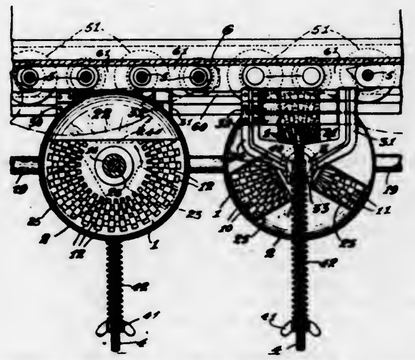
1,223,467. MEANS FOR ATTACHING ELECTRICAL APPLIANCES TO CONDUIT OUTLET-BOXES. CARL H. BISSELL, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed June 19, 1911. Serial No. 633,924. (Cl. 247—5.)



1. The combination with a metallic outlet box having means for connection to a conduit, and an opening through one side of relatively large area, and an electrical appliance located outside of the box, of means for securing the base of the appliance to the side of the box provided with said opening, and with the major portion of the under side of said appliance in uninterrupted communication with the chamber in the box through said opening, said means comprising a flat ring seated upon the face of the box surrounding the opening therein, said ring having a hook-shaped lug projecting from the inner edge thereof, and extending inwardly and outwardly for engaging the inner marginal wall of said opening in the box, a second lug extending from the inner edge of the ring at a point substantially opposite to the first lug, a screw adjustable transversely therein and designed to engage with the aforesaid marginal wall, and parts projecting from opposite sides of the inner edge of the ring, and located in a plane substantially intermediate between the lugs, and provided with openings for receiving means for securing said appliance to the ring, said ring and appliance constituting a closure for the opening in the box, substantially as and for the purpose described.

2. The combination with a metallic outlet box having means for connection to a conduit, and an opening through one side of relatively large area, and an electrical appliance located outside of the box, of means for securing the base of the appliance to the side of the box provided with said opening, and with the major portion of the under side of said appliance in uninterrupted communication with the chamber in the box through said opening, said means comprising a flat ring seated upon the face of the box surrounding the opening therein, said ring having a pair of spaced apart hook-shaped lugs projecting from the inner edge thereof, and extending inwardly and outwardly for engaging the inner marginal wall of said opening in the box, a third lug extending from the inner edge of the ring at a point substantially opposite to a point midway between the pair of lugs, said third lug being spaced apart from the pair of lugs a distance greater than that between the members of said pair, a screw adjustable transversely in the third lug and designed to engage with the aforesaid marginal wall, and parts projecting from diametrically opposite sides of the inner edge of the ring, and located in a plane substantially intermediate between the third lug and the members of the pair of lugs, and provided with openings for receiving means for securing said appliance to the ring, said ring and appliance constituting a closure for the opening in the box, substantially as and for the purpose described.

1,223,468. SCRAPER ATTACHMENT FOR FISH-CLEANING MACHINES. BENJAMIN R. BRIERLY and EDWARD H. WAUGH, Seattle, Wash., assignors to Smith Cannery Machines Company, Seattle, Wash., a Corporation of Washington. Filed Apr. 29, 1916. Serial No. 94,498. (Cl. 17—10.)



1. A scraping device for fish comprising a rotative member having an exterior scraping surface and a shield therefor permitting the free passage of the fish thereover, and having an opening exposing a portion of said scraping surface.

2. A scraping device for fish comprising a rotative member having an exterior scraping surface and a shield therefor having a plurality of openings of different size, and adjustable to thereby control the area of the scraping surface exposed.

3. A scraping device for fish comprising a rotative scraping member having a grooved exterior surface and a shield therefor having a plurality of openings therein, of different size and adjustable to thereby control the exposed area of said scraping surface.

4. A scraping device for fish comprising a rotative scraping member, having projecting ribs extending in a general radial direction and a series of holes located each in advance of a rib, and a shield for said scraping member having an opening exposing a limited area of the surface of the scraping member.

5. A scraping device for fish comprising a rotative scraping member, having a roughened exterior surface and a series of holes therethrough, a shield for the scraping member having a plurality of holes of different size and adjustable to thereby control the working area of the scraping surface.

[Claims 6 to 29 not printed in the Gazette.]

1,223,469. FRONT-AXLE CONSTRUCTION. ALANSON P. BRUSH, Detroit, Mich. Filed Nov. 30, 1914. Serial No. 874,606. (Cl. 21—141.)

1. In front axle construction, the combination of an axle having at each end a vertical sleeve and the follow-

ing mechanism associated therewith, viz. a steering knuckle having a supporting spindle which extends down through said sleeve and is rotatively mounted in the upper end thereof, a bearing sleeve which embraces said spindle and has a tongue and groove connection therewith and is rotatably mounted in the lower end of said axle sleeve and has an external flange below said axle sleeve for supporting the latter, and a nut which screws onto the lower end of said spindle.



2. In front axle construction, the combination of an axle having at each end a vertical sleeve and the following mechanism associated therewith, viz., a steering knuckle having a supporting spindle which extends down through said sleeve and is rotatively mounted in the upper end thereof, a bearing sleeve which embraces said spindle and has a tongue and groove sliding connection therewith and is rotatably mounted in the lower end of said axle sleeve and has an external flange below said axle sleeve for supporting the latter, a nut which screws onto the lower end of said spindle, and means for introducing oil into the axle sleeve around the spindle between the upper and lower bearings thereof.

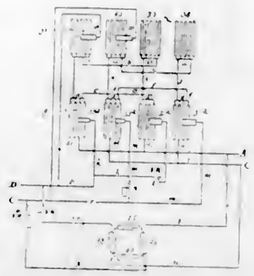
3. In front axle construction, the combination of an axle having at each end a vertical sleeve, and the following mechanism associated therewith, viz. a steering knuckle having a supporting spindle which extends down through said sleeve and is rotatively mounted in the upper end thereof, a bearing sleeve which embraces said spindle and has a tongue and groove sliding connection therewith and is rotatably mounted in the lower end of said axle sleeve and has an external flange below said axle sleeve for supporting the latter, a nut which screws onto the lower end of said spindle, means for introducing oil into the axle sleeve around the spindle between the upper and lower bearings thereof, and a cup nut removably secured to the lower end of the axle sleeve.

4. In front axle construction, the combination of an axle having at each end a vertical sleeve and the following mechanism associated with each of said axle sleeves, viz. a bushing fixed in the upper end of said sleeve and having an outwardly extended flange which engages with the upper end of said sleeve, a bushing fixed in the lower end of the sleeve having an outwardly extended flange which engages the lower end of said sleeve, a steering knuckle having a spindle, the upper portion of which is rotatably mounted in the upper bushing referred to, a bearing sleeve which embraces the spindle and has a tongue and groove connection therewith and is rotatably mounted in the lower bushing, said bearing sleeve having an outwardly extended flange whose upper surface engages the lower surface of the lower bushing, a nut which screws onto the lower end of this spindle, and means for introducing oil into the axle sleeve between the two bushings therein.

5. In front axle construction, the combination of an axle having at each end a vertical sleeve and the following mechanism associated with each of said axle sleeves, viz. a bushing fixed in the upper end of said sleeve and having an outwardly extended flange which engages with the upper end of said sleeve, a bushing fixed in the lower end of the sleeve having an outwardly extended flange which engages the lower end of said sleeve, a steering knuckle having a spindle, the upper portion of which is rotatably mounted in the upper bushing referred to, a bearing sleeve which embraces the spindle and has a tongue and groove connection therewith and is rotatably mounted in the lower bushing, said bearing sleeve having an outwardly extended flange whose upper surface engages the lower surface of the lower bushing, a nut which screws onto the lower end of this spindle, means for introducing oil into the axle sleeve between the two bushings therein and a cup nut which screws onto the flange of the lower bushing.

[Claim 6 not printed in the Gazette.]

1,223,470. CURRENT-TRANSFORMING DEVICE. ARTHUR R. BULLOCK, Cleveland, Ohio, assignor to Henry C. Lee, trustee, Los Angeles, Cal. Filed June 14, 1911, Serial No. 633,027. Renewed Sept. 20, 1916. Serial No. 121,309. (Cl. 175—364.)



1. In a current transforming device, the combination with two rotatable sets of segments adapted to rotate together, corresponding segments upon the two sets, being electrically connected, a contact making brush and a current carrying brush bearing upon one set of segments, the contact brush being set upon the segments a little in advance of the current carrying brush, said brushes being electrically connected, and a current breaking brush bearing upon the second set of segments, said brush being connected with the current carrying brush.

2. In a current transforming device, the combination with two rotatable sets of segments adapted to rotate together, corresponding segments upon the rotating bodies being electrically connected, a current carrying brush of low resistance and a contact making brush of relatively higher resistance bearing upon one of the sets of segments, the contact brush being set upon the segments a little in advance of the current carrying brush, said brushes being electrically connected, and a current breaking brush of higher resistance than the current carrying brush bearing upon the second set of segments and electrically connected with the current carrying brush.

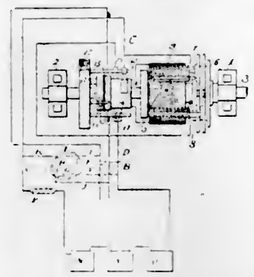
3. In a current transforming device the combination of a rotatable set of segments, a current carrying brush of low resistance and a contact making brush of high resistance bearing upon said set of segments, said contact brush being set upon the segments a little in advance of the current carrying brush, said brushes being electrically connected, a second set of segments, corresponding segments in both sets of segments being connected, the last mentioned segments being adapted to rotate with a higher peripheral speed, a current breaking brush bearing upon the second set of segments, said current breaking brush being of a higher relative resistance with respect to the current carrying brush, the last mentioned brush being electrically connected with the current carrying brush.

4. A current converting device comprising a plurality of sets of conducting means adapted to rotate together, conductors connecting corresponding means of said sets the said sets of conducting means being spaced from each other by an air gap, means adapted to connect said conducting means with an A C circuit, means adapted to connect said conducting means with a D C circuit, and means whereby said set of segments may be rotated.

5. A current converting device comprising a plurality of sets of conducting elements which sets are spaced apart by an air gap, conductors connecting elements in the said sets which electrically coöperate, means for electrically connecting said conducting elements with an A C circuit, means for electrically connecting said conducting elements with a D C circuit, and means for simultaneously moving said sets of conducting elements.

[Claims 6 to 26 not printed in the Gazette.]

1,223,471. APPARATUS FOR CHARGING STORAGE BATTERIES. ARTHUR R. BULLOCK, Cleveland, Ohio, assignor to Henry C. Lee, trustee, Los Angeles, Cal. Filed June 14, 1911, Serial No. 633,028. Renewed Sept. 20, 1916. Serial No. 121,310. (Cl. 171—314.)



1. In combination with a device for producing a pulsating direct current a circuit for supplying electric current thereto, of a storage battery to be charged by said device, an electrical connection between the battery and said device, a reactance coil in said connection and in series with the battery, and a circuit containing capacity connected between electrically connected sides of the current supply circuit for the first mentioned device and across the circuit of which the battery is a part.

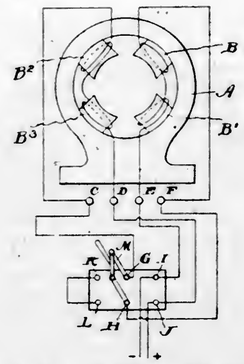
2. In combination with a device for producing a pulsating direct current a circuit for supplying electric current thereto, of a storage battery to be charged by said device, an electrical connection forming part of a circuit between the battery and said device, a reactance coil in said connection and in series with the battery, and a circuit containing a condenser connected between electrically connected sides of the current supply circuit for the first mentioned device and across the circuit of which the battery is a part.

3. The combination with an alternating current circuit, of a device connected thereto for rectifying said alternating current, a direct current circuit connected to said device, a storage battery connected in said circuit, a reactance coil in the circuit and in series with the battery, and a plurality of condensers electrically connected and arranged as a closed circuit, two points upon said condenser circuit being connected with the alternating current circuit, and two other points upon the condenser circuit upon opposite sides thereof and intermediate of the first two points being connected with the circuit of which the batteries are a part.

4. In combination with an alternating current circuit, of a device connected thereto for rectifying said alternating current, a direct current circuit connected to said device, a storage battery connected in said direct current circuit, a reactance coil in the direct current circuit and in series with the battery, and a circuit containing capacity connected between electrically connected sides of the alternating current circuit and across the direct current circuit.

5. In combination with an alternating current circuit, of a device connected thereto for rectifying said alternating current, a direct current circuit connected to said device, a storage battery connected in said direct current circuit, a reactance coil in the direct current circuit and in series with the battery, and a circuit containing a condenser connected between electrically connected sides of the alternating current circuit and across the direct current circuit.

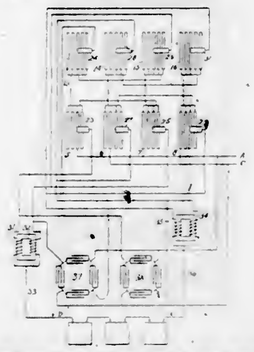
1,223,472. METHOD OF RUNNING A SYNCHRONOUS MOTOR. ARTHUR R. BULLOCK, Cleveland, Ohio, assignor to The Erie Coil Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 2, 1912, Serial No. 713,016. Renewed Sept. 20, 1916. Serial No. 121,311. (Cl. 172—120.)



1. The method of operating a synchronous motor when the motor is running in synchronism, which consists in supplying the field windings of the motor with an amount of current which is just sufficient to keep the motor from falling out of step, regardless of the power factor of the exciting circuit.

2. The method of operating a synchronous motor, which consists in starting the motor with the normal field excitation and when the motor is running at proper speed, and in synchronism, reducing the field excitation considerably below the normal field excitation and continuously running the motor with the fields under excited, regardless of the change of power factor of the exciting circuit.

1,223,473. CURRENT-CONVERTING DEVICE. ARTHUR R. BULLOCK, Cleveland, Ohio. Filed Dec. 22, 1913, Serial No. 808,116. Renewed Sept. 20, 1916. Serial No. 121,312. (Cl. 175—364.)



1. The combination with a device for producing a pulsating current, having a plurality of positive and negative terminals, and a reactance coil connected in series with each terminal, a common core upon which said coils are wound, the reactance coils for the positive terminals being connected in parallel with each other, and the reactance coils for the negative terminals being connected in parallel with each other.

2. The combination with an A C and D C circuit, of a device adapted to connect the sides of one of said circuits alternately with the sides of the other circuit, said de-

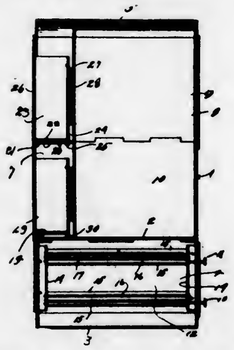
vice having a plurality of positive and negative terminals, a reactance coil connected in series with each of the terminals, a common core upon which said coils are wound, the reactance coils for the positive terminals being connected with each other in parallel, and the reactance coils for the negative terminals being connected with each other in parallel.

3. The combination with an A C and D C circuit, of a device adapted to connect the sides of one of said circuits alternately with the sides of the other circuit, said device being provided with a plurality of positive and negative terminals, a reactance coil connected in series with each of the terminals, a common core upon which said coils are wound, the reactance coils for positive terminals being connected with each other in parallel, and the reactance coils for negative terminals being connected with each other in parallel, and a circuit containing capacity adapted to be inserted between the sides of the A C circuit and each pair of positive and negative terminals of said device.

4. The combination with a device for converting alternating current to direct current, the said device being provided with a plurality of direct current positive terminals, and a plurality of direct current negative terminals, and a reactance coil connected in series with each of the positive and negative terminals, a common core upon which the coils are wound, the reactance coils for the positive terminals being connected in parallel with each other, and the reactance coils for the negative terminals being connected also in parallel with each other.

5. The combination with A C and D C circuits, of a device adapted to convert the alternating current to the direct current, said device being provided with a plurality of direct current positive terminals, and a plurality of direct current negative terminals, a reactance coil connected in series with each of the said terminals, a common core upon which the coils are wound, the reactance coils connected with the positive side of the D C circuit, and the reactance coils connected with the negative terminals, being connected in parallel with the negative side of the D C circuit.

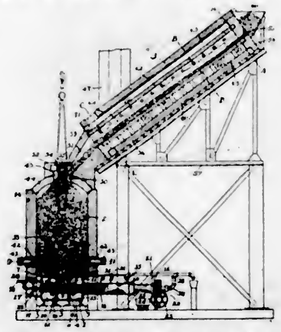
1,223,474. CASE FOR RURAL-MAIL CARRIERS. GUY CAMPBELL, Creedmoor, Tex. Filed May 25, 1916. Serial No. 99,829. (Cl. 206—38.)



1. A device of the class described comprising a casing, a vertical and a horizontal partition arranged within the casing and dividing the same into a pair of upper compartments and a lower compartment, hingedly mounted doors for the lower compartment, said doors having slots formed therein, frames carried by said doors and having rollers for winding strips of stamps thereon, second rollers carried by the frames for feeding the stamps through said slots, one of said upper compartments having containers mounted therein, the other of said compartments being for the purpose of receiving envelops and postal cards, and doors for the last named compartment.

2. A device of the class described, comprising a casing having a vertical and a horizontal partition for dividing the casing into a pair of compartments, hingedly connected doors for one of the compartments, containers mounted in the other compartment, means for yieldably connecting the containers to the vertical partition, said containers being adapted for sliding movement into and out of the associated compartments, and means for holding the containers in tilted positions.

1,223,475. CALCINING-FURNACE. WILLIAM R. CLYMER, Lakewood, Ohio, assignor to National Carbon Company, a Corporation of New Jersey. Filed Oct. 16, 1915. Serial No. 56,229. (Cl. 204—64.)



1. In an electric heating apparatus, a water cooled conveyer, an electric furnace for heating and feeding material into the conveyer, a passage inclined slightly greater than the angle of friction of the material thereon, said passage being adapted to permit material to slide slowly into the top of the electric furnace, and means for heating the charge as it slides therethrough.

2. In heating apparatus, a water cooled conveyer, an electric furnace to feed heated material into the conveyer, an inclined feeding passage secured to the top of the electric furnace, an air chamber above the feeding passage connected therewith, and a second chamber beneath said passage and connecting therewith at one end.

3. In heating apparatus, an electric furnace, an inclined preheating chamber connected to said furnace consisting of a passageway inclined slightly greater than the angle of friction of the material thereon, an air chamber above said passageway and parallel therewith, having one end opening to the atmosphere and the other end connected to the passageway, and a second chamber beneath said passageway having one end connected therewith and the other end with the atmosphere.

4. In an electric furnace, an inclined chamber for passing therethrough a charge containing combustible volatile matter, an air preheating chamber thereover having openings for admitting air to the charge, an outlet for the gaseous products, a shaft at the base of said first mentioned chamber, a passageway for the charge therebetween, and means for introducing electric heat into the material in the shaft, comprising an electrode in the base of the passage and an electrode in the base of the shaft.

5. In an electric furnace, inclosing walls having an opening for admitting air thereto, an inclined surface for sliding a combustible charge thereon, a partition above the surface having openings for admitting air to the charge, an outlet for gaseous products, a chamber at the base of said surface, means for passing the charge from the inclined surface into the chamber, and means for introducing electric heat into the material in said chamber.

[Claims 6 to 11 not printed in the Gazette.]

1,223,476. SIGHT. RUDOLPH COLLER, Gresham, Wis. Filed June 13, 1916. Serial No. 103,505. (Cl. 33—47.)

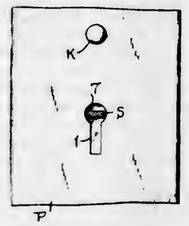
1. The combination with the barrel of a fire arm, of a sighting shield extending longitudinally of said barrel, said shield being semicylindrical in cross section, means to attach the shield to the barrel, a head sight at the forward end of said shield, a rear sight at the rear end of the shield, and means to adjust said rear sight to adapt the fire arm for long or short distance shooting.



2. The combination with the barrel of a fire arm, of a sighting shield extending longitudinally of said barrel, said shield being semicylindrical in cross section and having elongated slots in the lower portion thereof, means to attach the shield to the barrel and space the same a distance thereabove, a tongue at the free end of said shield, a rear sight connected to said tongue, and means to raise or lower said rear sight to adapt the fire arm for long or short distance shooting.

3. The combination with the barrel of a fire arm, of an elongated shield extending lengthwise of said barrel, means to attach the shield to the barrel and space the same above the barrel, said shield being semicylindrical in cross section and having slots therethrough to form drains, a tongue integral with said shield, a sight at the free end of the tongue and extending at right angles to the trend of the tongue, and a key coöperating with said sight to raise or lower the same to adapt the fire arm for long or short distance shooting.

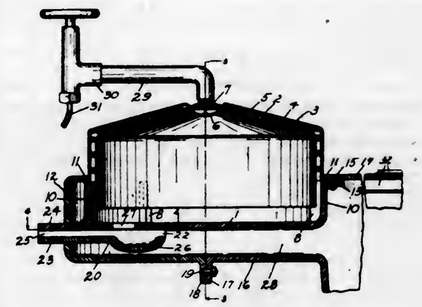
1,223,477. KEYHOLE-GUARD. ED ELIAS CURTISS, Spokane, Wash. Filed Jan. 25, 1917. Serial No. 144,482. (Cl. 70—7.)



1. In combination with a plate provided with a key hole, a plate slidably supported rearwardly of the first named plate and provided with a key hole adapted to register with the key hole of the first named plate, said second named plate being also provided with a slot in communication with the key hole opening at an end thereof, said slot being angularly related to the key hole and adapted to receive the shank of a key when said second named plate is moved in one direction, a lever plate mounted for rocking movement and having an end portion overlying the second named plate, means for rocking the lever plate, and a pin carried by the overlying portion of the lever plate, said second plate being provided with an opening loosely receiving said pin.

2. In combination with a plate provided with a key hole, a guide plate supported adjacent the first named plate and provided with a key hole in register with the key hole of the first named plate, a locking plate slidably engaged with the guide plate, said locking plate being provided with a key hole adapted to register with the key holes in the first two named plates, said locking plate being also provided with a slot in communication with an end portion of the key hole therein, said slot being also angularly related to the key hole and adapted to receive the shank of a key when said second named plate is moved in one direction, a lever plate mounted for rocking movement and having a portion overlying the locking plate, means for rocking the lever plate, and a pin carried by the overlying portion of the lever plate, said locking plate being provided with an opening to loosely receive the pin of the lever plate.

1,223,478. LIQUID-FUEL BURNER. HENRY A. DAVIS, Kalamazoo, Mich. Filed July 31, 1916. Serial No. 112,321. (Cl. 158—91.)



1. In a liquid fuel burner, the combination with a stove comprising a fire-pot provided with a discharge flue, of a cup-like body having an elongated discharge opening in its bottom, a foraminated top, a generator having a centrally disposed generating cup in its top disposed within said top in a spaced relation thereto and depending within said body in a spaced relation to its walls, means for feeding fuel to said generating cup, a priming member mounted below said body member and having a trough-like priming cup disposed below said discharge of said body, there being an auxiliary air inlet at the outer end of said priming cup member and a slot-like discharge at its inner end below said body, and a casing embracing said priming cup member and the front portion of said body and spaced from the bottom thereof and coacting therewith to provide a discharge passage delivering to said fire-pot, the said auxiliary air inlet opening being at the outside of the casing.

2. In a liquid fuel burner, the combination with a stove comprising a fire-pot provided with a discharge flue, of a body having a discharge opening in its bottom, a foraminated top, a generator disposed within said top in a spaced relation thereto and depending within said body in a spaced relation to its walls, means for feeding fuel to said generator, a priming member mounted below said body member and having a priming cup disposed below said discharge of said body, there being an auxiliary air inlet at the outer end of said priming cup member and a discharge at its inner end below said body, and a casing member embracing said priming cup and the front portion of said body and spaced from the bottom thereof and coacting therewith to provide a discharge passage delivering to said fire-pot, the said auxiliary air inlet opening being at the outside of the casing.

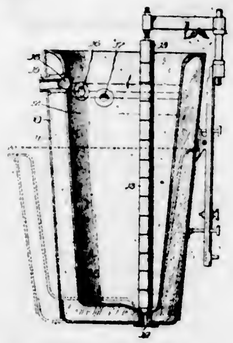
3. In a liquid fuel burner, the combination of a cup-like body having an elongated discharge opening in its bottom, a foraminated top, a generator having a centrally disposed generating cup in its top disposed within said top in a spaced relation thereto and depending within said body in a spaced relation to its walls, means for feeding fuel to said generating cup, and a priming cup member disposed below said body and having a trough-like priming cup disposed below said discharge of said body, there being an auxiliary air inlet at the outer end of said priming cup member, and a slot-like discharge at its inner end below said body.

4. In a liquid fuel burner, the combination of a body having a discharge opening in its bottom, a foraminated top, a generator disposed within said top member in a spaced relation thereto and depending within said body in a spaced relation to its walls, means for feeding fuel to said generator, and a priming cup member disposed below said body and having a priming cup disposed below said discharge of said body, there being an auxiliary air inlet at the outer end of said priming cup member and a discharge at its inner end below said body.

5. In a liquid fuel burner, the combination of a body having a discharge opening in its bottom, a foraminated top, a generator disposed within said top in a spaced relation thereto and depending within said body in a spaced relation to its walls, means for feeding fuel to said generator, and a priming cup disposed below said discharge of said body.

[Claim 6 not printed in the Gazette.]

1,223,479. APPARATUS FOR HANDLING MOLTEN STEEL. JAMES C. DAVIS, Hinsdale, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Sept. 27, 1915. Serial No. 52,840. (Cl. 22—84.)



1. A ladle provided with a plurality of openings in its side wall near its upper end, said openings being spaced apart vertically and means for plugging said openings substantially as described.

2. A ladle having a plurality of slag openings near its upper end, said openings being spaced apart vertically and horizontally and means for plugging said openings, substantially as described.

1,223,480. PAPER-SIZE AND PROCESS OF MAKING SAME. JUDSON A. DE CEW, Montreal, Quebec, Canada. Filed Feb. 25, 1914. Serial No. 820,957. (Cl. 134—21.)

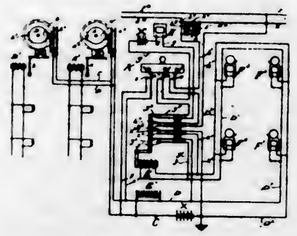
1. A product consisting of a cold size solution containing a non-decomposing resinate of ammonia, free ammonium hydrate and water without the presence of free rosin.

2. A process for making a size solution containing resinate of ammonia, free ammonium hydrate and water from a cold thick size, consisting of, forcing the cool size by means of pressure applied thereto, into a cold aqueous solution.

1,223,481. FACTORY FIRE-DRILL SYSTEM. DAVID G. DEE, Chicago, Ill., assignor, by mesne assignments, to Rochester H. Rogers, Rochester, N. Y. Original application filed Feb. 25, 1914, Serial No. 820,950. Divided and this application filed June 7, 1915. Serial No. 32,543. (Cl. 177—360.)

1. In an apparatus of the character described, the combination with a loop circuit provided with a plurality of alarm signal mechanisms arranged in series thereon, a relay coil in said circuit, a source of current supply connected to one end of the loop, and a resistance bridged across the loop and maintaining a closed circuit, of means for short-circuiting said resistance, sets of contacts normally retained in opened condition by current flowing in the relay, and current supply leads extending to said contacts and from the latter to the other end of the loop circuit.

2. In a fire alarm circuit the combination with two looped conductors, a source of current supply connected to one portion of said loop and alarm devices each connected to the two conductors in different portions of the loop, of a relay interposed in the loop, a resistance coil closing the circuit through the latter and normally rendering the alarm devices inoperative, leads from the source of current, attached to a different point of the loop and having contacts therein which are held open by current flowing in the relay coil, and means for rendering the resistance inoperative.



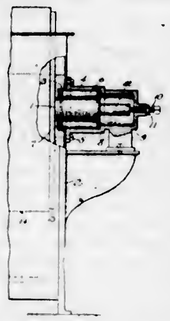
3. The combination with a loop circuit, of a resistance bridged across said circuit, a relay interposed in said loop, a source of current supply in said circuit whereby the relay is maintained energized through the resistance which maintains the circuit normally closed, and contacts under the control of said relay having leads tapped to said circuit whereby, upon the breaking of said circuit, current is fed to the same upon each side of the break.

4. The combination with an alarm circuit, of a source of current supply therein, a high resistance arranged to close said circuit and reduce the flow of current therethrough, a relay maintained energized by the reduced flow of current, through the circuit closed by the resistance aforesaid, and contacts under the control of the relay and connected to the circuit whereby when said relay is deënergized, current will be supplied to the alarm circuit.

5. The combination with a loop circuit, of alarm receiving devices therein, a source of current supply, normally opened contacts for despatching alarm signals arranged to be received on said alarm receiving devices, a relay in said alarm circuit, and means under the control of said relay for supplying current to either side of a break in said alarm circuit.

[Claims 6 and 7 not printed in the Gazette.]

1,223,482. JOURNAL-BEARING. ARTHUR C. DREW, New Bedford, Mass. Filed May 6, 1916. Serial No. 95,961. (Cl. 64—62.)



1. A journal bearing comprising a casing having an opening to receive the journal, said casing having an annular bearing surface inside thereof, a housing secured to the outside of said casing having an internal bearing surface, and bearing rollers engaging said bearing surfaces.

2. A journal bearing comprising a casing having an opening therein to receive a journal, a bearing having an annular bearing surface inside said casing, a housing secured to the outside of said casing having an internal bearing surface in alinement with the said annular bearing surface, said surfaces forming a bearing concentric with said journal.

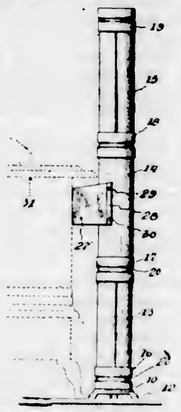
3. A journal bearing comprising a casing having an opening therein to receive a journal, an interior flange on said casing at least partially surrounding said opening, and a housing secured to said casing and surrounding the portion of said journal projecting through said casing, said flange and said casing having internal bearing surfaces.

4. A journal bearing comprising a casing having a circular opening to receive the journal, a member projecting inwardly from said casing, a housing projecting outwardly from said casing, said casing, member and housing having internal bearing surfaces in alinement, bearing rollers engaging said surfaces and the journal, and means on said member and said housing to limit endwise movement of said roller bearing.

5. A journal bearing comprising a supporting casing having an opening to receive a shaft, a housing tightly secured to one side of said casing and having an interior bearing surface, said casing having an annular bearing surface on the other side thereof, and bearing rollers between the shaft and said surfaces, whereby a portion of the load is carried by said annular bearing surface thus reducing the turning moment tending to loosen said housing from said casing.

[Claims 6 to 9 not printed in the Gazette.]

1,223,483. VENTILATING ATTACHMENT. FREEMAN A. DUNN, Keokuk, Iowa. Filed Mar. 25, 1916. Serial No. 86,721. (Cl. 237—47.)



1. A ventilating attachment including a tubular body member adapted to be positioned with its intermediate portion in juxtaposition to the heated portion of a stove, means for supporting the body member in substantially vertical position with its lower end spaced above the floor, and an outwardly projecting hood open at its bottom formed intermediate the length of the body member to engage a stove, the portion of the body member inclosed by the hood being formed with openings.

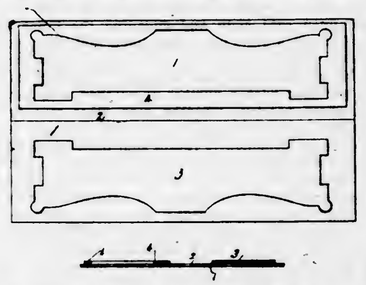
2. A ventilating attachment including an annular base having supporting feet and an upwardly directed annular flange, a plurality of tubular body members equal in external diameter to the external diameter of the flange, and a plurality of coupling rings equal in internal diameter to the external diameter of the body members and flange and each formed intermediate its length with an inwardly directed stop bead, whereby the coupling rings may connect the body members end to end and one of such body members to the flange, one of the body members being formed in its side with an opening, and a hood carried by such body member and partially inclosing the opening, said hood being open at its front and bottom.

3. A ventilating attachment including an annular base having supporting feet and an upwardly directed annular flange, a plurality of tubular body members equal in external diameter to the external diameter of the flange, and a plurality of coupling rings equal in internal diameter to the external diameter of the body members and flange and each formed intermediate its length with an inwardly directed stop bead, whereby the coupling rings may connect the body members end to end and one of such body members to the flange, one of the body members being formed in its side with an opening, and a hood carried by such body member and partially inclosing the opening, said hood being open at its front and bottom, and means for detachably connecting the hood to the body member.

4. A ventilating attachment including an annular base having supporting feet and an upwardly directed annular flange, a plurality of tubular body members equal in external diameter to the external diameter of the flange, and a plurality of coupling rings equal in internal diameter to the external diameter of the body members and flange and each formed intermediate its length with an inwardly directed stop bead, whereby the coupling rings may connect the body members end to end and one of such body members to the flange, one of the body members being formed in its side with an opening, and a hood carried by such body member and partially inclosing the opening, said hood being open at its front and bottom.

5. A ventilating attachment including an annular base having supporting feet and an upwardly directed annular flange, a plurality of tubular body members equal in external diameter to the external diameter of the flange, and a plurality of coupling rings equal in internal diameter to the external diameter of the body members and flange and each formed intermediate its length with an inwardly directed stop bead, whereby the coupling rings may connect the body members end to end and one of such body members to the flange, one of the body members being formed in its side with an opening, and a hood carried by such body member and partially inclosing the opening, said hood being open at its front and bottom, and means for detachably connecting the hood to the body member, said means including instruck tongues formed upon the hood and adapted to extend through slots formed in the body member.

1,223,484. PROCESS OF EMBOSSING. WALTER J. ELLIS, Vancouver, British Columbia, Canada. Filed Mar. 13, 1916. Serial No. 83,779. (Cl. 154—2.)

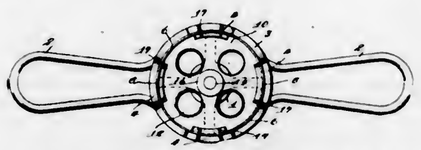


1. The process of making embossing dies by drawing the design outline of male and female dies upon a relatively hard but easily cut material, cutting the said male and female dies apart along the said outlines, placing the said male and female dies between adjacent faces of a hinged and relatively flexible backing member, securing one side of the male die to the backing member on one side of the hinge, securing the opposite side of the female die to the opposite side of the said backing mem-

ber respectively, securing the opposite sides of said backing member to type bases, and when said dies are in an interlocked position, severing the said hinge.

2. The process of making embossing dies by drawing the design outline of male and female dies upon a relatively hard but easily cut material, cutting the said male and female dies apart along the said outlines, placing the said male and female dies between adjacent faces of a hinged and relatively flexible backing member, said dies being in an interlocked relation to each other, securing one side of the male die to the backing member on one side of the hinge, securing the opposite side of the female die to the opposite side of the said backing member respectively, securing the opposite sides of said backing member to type bases, and when said dies are in an interlocked position, severing the said hinge.

1,223,485. CAN-OPENER. ROBERT H. EMERY, Brighton, Iowa. Filed Apr. 17, 1916. Serial No. 91,720. (Cl. 30—3.)



1. A can opener of the class described comprising a body having a flange formed upon its outer portions, blades carried upon said body having tapering edges merging in pointed portions, said blades being provided with inwardly bent ears, a plate positioned upon said body, said plate being provided with notches, said notches being adapted to receive said ears whereby said blades will be retained upon said body, said pointed portions being adapted to be forced through a can cover so as to allow the side edges to cut the can cover from the body thereof.

2. A can opener of the class described comprising a body having a flange formed upon its outer periphery, said body further being provided with depending lips formed upon said flange at spaced intervals apart, blades positioned upon said body and engaging the inner portions of said flange and lips, said blades provided with cutting edges and pointed ends, a plate positioned upon said body, said plate provided with a number of spaced depending lips, said lips of said plate being adapted to be positioned in alinement with the lips of said body, whereby said blades may be clamped in position upon said body.

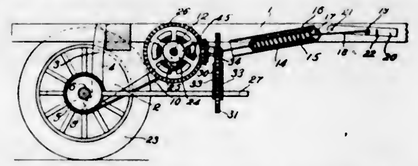
3. A can opener of the class described comprising a body having a flange upon its outer periphery, blades having tapering edges terminating in pointed ends positioned upon said body and engaging the inner portions of said flange, a plate positioned upon said body, said plate provided with a hollow neck extending through said body, said blades provided with inwardly extending ears, said plate provided with a number of notches, said ears fitting within said notches, whereby said plate will hold said blades upon said body, said neck being flared at its upper end so as to permanently retain said plate upon said body.

4. A can opener of the class described comprising a body having a flange upon its outer periphery, blades having tapering edges terminating in pointed ends positioned upon said body and engaging the inner portions of said flange, a plate positioned upon said body, said plate provided with a hollow neck extending through said body, said blades provided with inwardly extending ears, said plate being provided with a number of notches, said ears fitting within said notches, whereby said plate will hold said blades upon said body, said neck being flared at its upper end so as to permanently retain said plate upon said body, said pointed ends being adapted to be passed through the top of a can so as to allow said edges to cut the can top, whereby the can top may be removed from the can body, at which time the can top will be carried by said blades, and means for facilitating the removal of the can top from said blades.

5. A can opener of the class described, comprising a body having a flange upon its outer periphery, blades having tapering edges terminating in pointed ends positioned upon said body and engaging the inner portions of said flange, a plate positioned upon said body, said plate provided with a hollow neck extending through said body, said blades provided with inwardly extending ears, said plate being provided with a number of notches, said ears fitting within said notches, whereby said plate will hold said blades upon said body, said neck being flared at its upper end so as to permanently retain said plate upon said body, said pointed ends being adapted to be passed through the top of a can so as to allow said edges to cut the can top, whereby the can top may be removed from the can body, a headed plunger passing through said neck, and a washer carried upon the lower end of said plunger, said plunger being adapted to be pressed downwardly so as to cause the lower end thereof and said washer to engage the can top carried upon said blades for facilitating the removal of the can top from said blades.

[Claims 6 to 9 not printed in the Gazette.]

1,223,486. EQUALIZING MECHANISM. JOHN FORSTROM, Chicago, Ill. Filed Mar. 15, 1915. Serial No. 14,575. (Cl. 267—4.)



1. An equalizing mechanism of the class described, comprising a body and support, a plurality of oscillatory members pivotally mounted on said body, a plurality of oscillatory members pivotally mounted on said support, connections between said members compelling them to oscillate as a unit upon relative movements between said body and support, and means for resisting oscillations of said members.

2. A device of the class described, comprising a body and a support, connections between said body and support for yieldingly supporting the body thereon, means for communicating mechanical motion between said body and support, said means comprising a gear journaled on said body and a second gear connected with said support and movable therewith relative to said body, and an intermediate gear journaled on a pair of links each of which is respectively journaled concentric with said first mentioned gears on said body and support.

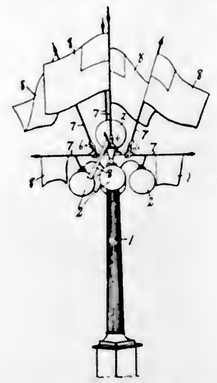
3. A device of the class described, comprising a body and a support, drums rotatably mounted on each side of said body and rigidly secured together, drums rotatably mounted on each side of said support and rigidly secured together, belts connecting said drums on the body and the support, and yielding means for resisting rotation of said drums.

4. An equalizing mechanism of the class described, comprising a body and support, a plurality of oscillatory members pivotally mounted on said body and on said support, connections between said plurality of members compelling them to oscillate as a unit upon relative movements between said body and support, and adjustable means for differentially resisting oscillations of said members.

5. A device of the class described, comprising a body and a support, connections between said body and support for yieldingly supporting the body thereon, and gearing connecting said body and support for the purpose of communicating mechanical motion therebetween, said gearing comprising a plurality of gears one of which is arranged to have a limited revolving motion around the other, whereby said body and support may move relatively to each other without disengaging said gears.

[Claim 6 not printed in the Gazette.]

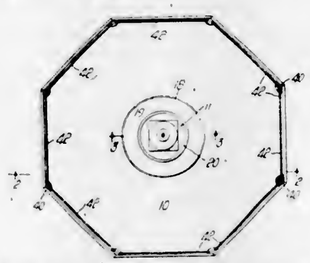
1,223,487. DECORATIVE LAMP-POST FOR STREET-LAMPS. EDWARD H. GOHL, Auburn, N. Y. Filed May 11, 1915. Serial No. 27,368. (Cl. 248—37.)



1. A flag-supporting bracket for decorative street lamp posts comprising a base having its opposite longitudinal edges provided with pendent flanges to receive between them a portion of the head of the post and the under side of its intermediate portion provided with a recess adjacent said head portion for receiving a flag staff, and a standard rising from the center of the base and inclining longitudinally thereof at an angle other than a right angle, said standard having a lengthwise opening for receiving a flag staff, and three bearings, two of which are located at one side of the passage at opposite ends thereof and the other bearing at the opposite side of the passage between the end bearings, the transverse distance between the inner faces of the end bearings and inner faces of the intermediate bearing being slightly less than the diameter of the flag staff which is to be inserted in said passage, whereby the portion of the flag staff adjacent the intermediate bearing will be deflected laterally between the end bearings.

2. In combination with the head of a street-lamp post, a flag-supporting bracket comprising a base secured to said head and a standard rising therefrom, the base having a recess opening from its under side adjacent the head for receiving one flag staff, the standard having a lengthwise socket for receiving another flag staff, said socket having an elongated opening in one side and a bearing for the flag staff at the diametrically opposite side.

1,223,488. STAGE-APPARATUS. ROBERT H. GOLDSTEIN, Los Angeles, Cal. Filed Oct. 16, 1916. Serial No. 125,811. (Cl. 46—70.)



1. Stage apparatus of the character described, embodying a plurality of inwardly facing mirrors arranged about a stage space, and a concealed camera station within said space.

2. Stage apparatus of the character described, embodying a plurality of inwardly facing mirrors arranged about a center and inclosing a stage space, a concealed camera station within said space, and means to cause relative rotation of the mirrors and camera station.

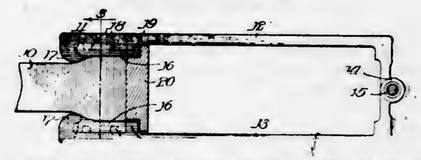
3. Stage apparatus of the character described, embodying a plurality of inwardly facing mirrors arranged about a center and inclosing a stage space, and a rotatable concealed camera station within said space.

4. Stage apparatus of the character described, embodying a central rotatable camera station, and a plurality of upright mirrors arranged around the camera station inclosing a stage space therearound.

5. Stage apparatus of the character described, embodying a central rotatable concealed camera station, and a plurality of upright mirrors arranged around the camera station inclosing a stage space therearound in which space an action may take place, the mirrors reflecting inwardly toward the camera station.

[Claim 6 not printed in the Gazette.]

1,223,489. DRAFT-YOKE. WILLIAM C. HEDGCOCK, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Oct. 25, 1915. Serial No. 57,667. (Cl. 213—42.)



1. In a draft yoke, the combination of two halves, an inturned hook provided at the forward end of each half, webs at the sides of the members, said webs joining the ends of the hooks to the sides of the arms, and a bolt for uniting the halves at their rearward ends, substantially as described.

2. In a draft device, the combination of a coupler shank having an enlarged butt end providing undercut shoulders, a yoke composed of two separate parts, the forward ends of said parts being bent in two directions to provide a hook adapted to engage beneath said undercut shoulders, and a bolt for uniting said two parts of the yoke, the arrangement being such that the parts of the yoke may not be disengaged from the draw bar shank when united to each other.

3. In a draft device the combination of a coupler shank providing undercut shoulders at its butt end, a two part yoke, each of the two parts of the yoke being provided at one end with a portion which is deflected downwardly and backwardly, a transverse abutment provided on each of said two parts and located between the ends thereof, and a bolt for uniting the two parts of the yoke, the arrangement being such that said parts of the yoke may be operatively attached to the butt end of the coupler only when the opposite ends of the parts are separated.

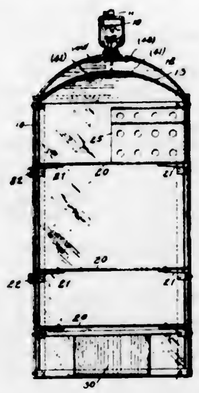
1,223,490. STERILIZING-CABINET. OTIS A. HOLLIS, Pittsburgh, Pa., assignor to Hollis Sterilizing Equipment Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Apr. 4, 1914. Serial No. 829,528. (Cl. 167—3.)

1. In a cabinet, the combination of a reservoir at the top, a plate beneath said reservoir having grooves therein to distribute a liquid delivered in single drops from said reservoir onto said plate, wicks adapted to take up the liquid from the grooves and to expose it to evaporation throughout the cabinet.

2. In a container cabinet, a glass reservoir at the top thereof, means to regulate the flow of a liquid therefrom to the interior of the cabinet, and vertical wicks whereby to expose the liquid to evaporation throughout the cabinet, substantially as described.

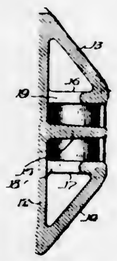
3. A disinfecting cabinet comprising a chamber, a vessel of liquid disinfectant carried on top of the chamber,

means for regulating the flow out of the containing chamber and for distributing it to the four corners of the



cabinet, and a series of downflow wicks to carry the disinfecting liquid down through the corners of the cabinet, substantially as described.

1,223,491. GUARD-ARM FOR COUPLINGS. ROBERT E. L. JANNEY, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Oct. 14, 1916. Serial No. 125,539. (Cl. 213—65.)



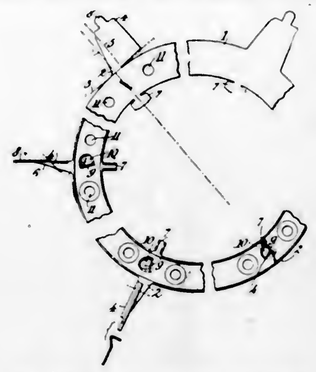
1. In a guard arm for car couplers, the combination of a vertical wall, converging outer webs, and webs joining the edges of said converging webs to said vertical wall, substantially as described.

2. A car coupler guard arm having a vertical wall, converging outer strengthening webs, an intermediate horizontal strengthening web, and webs joining the edges of said converging webs to said vertical wall, substantially as described.

3. A car coupler guard arm including a vertical wall, inclined outer stiffening webs and an intermediate horizontal web, and stiffening webs joining the edges of said inclined webs to said vertical wall, said stiffening webs being apertured to provide a passage between the cavity inclosed by said webs and the space adjoining said horizontal web, substantially as described.

1,223,492. BALL-CAGE FOR BALL-BEARINGS. FRANS EMANUEL JOHANSON, Gottenborg, Sweden. Filed Aug. 5, 1916. Serial No. 113,223. (Cl. 64—59.)

1. A ball cage for ball bearings, comprising two rings of sheet-metal, each of said rings carrying at its edge tapering brackets bent at substantially right angles to the plane of the ring, the oblique edges of the brackets of one cage ring facing the oblique edges of the brackets of the other cage ring, and a wing carried by each bracket and bent at substantially right angles to the plane thereof.



2. A ball cage for ball bearings, comprising two rings of sheet-metal, each of said rings carrying at its edge tapering brackets bent at substantially right angles to the plane of the ring, the oblique edges of the brackets of one cage ring facing the oblique edges of the brackets of the other cage ring, a wing carried by each bracket and bent at substantially right angles to the plane thereof, and means on said wings engaging the opposite ring for holding the cage rings in assembled condition.

3. A ball cage for ball bearings, comprising two rings of sheet-metal, each of said rings carrying at its edge tapering brackets bent at substantially right angles to the plane of the ring, the oblique edges of the brackets of one cage ring facing the oblique edges of the brackets of the other cage ring, a wing carried by each bracket and bent at substantially right angles to the plane thereof, and means on said wings engaging the opposite ring for holding the cage rings in assembled condition, the said engagement of the oblique edges of the brackets and the engagement of the fastening means serving to put the parts under tension and give rigidity to the structure.

4. A ball cage for ball bearings, comprising two rings of sheet metal, each of said rings carrying brackets bent at substantially right angles to the plane of the ring and a wing carried by each bracket at one side and bent at substantially right angles to the plane of the ring, the bracket being tapering and presenting an oblique surface opposite the wing carrying side, the oblique surfaces of the brackets of one ring abutting the oblique surfaces of the brackets of the other ring, the wings carried by each two abutting brackets being curved and in engagement at their sides opposite the brackets.

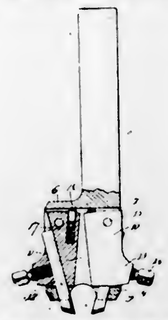
5. A ball cage for ball bearings, comprising two rings of sheet metal, each of said rings carrying at its outer edge brackets bent at substantially right angles to the plane of the ring and a wing carried by each bracket at one side and bent toward the inner edge of the ring at substantially right angles to the plane of the ring, the bracket being tapering and presenting an oblique surface opposite the wing carrying side, the oblique surfaces of the brackets of one ring abutting the oblique surfaces of the brackets of the other ring, the wings carried by each two abutting brackets being curved and in engagement adjacent the inner edge of the ring at their sides opposite the brackets.

[Claims 6 to 13 not printed in the Gazette.]

1,223,493. TOOL-HOLDER FOR PLANERS. CHARLES A. JOHNSON, Unionville, Conn. Filed Feb. 26, 1916. Serial No. 80,628. (Cl. 90—53.)

1. A tool holder for a planer, said holder including a head having its edges arranged to face in the direction of movement of the carriage, said head having an opening

extending through it from edge to edge, supports extending across said opening, carriers movably mounted to swing through said openings above said support, and a tool removably secured within each carrier and with its back edge adapted to rest against said support that resists the thrust caused by the cutting operation.



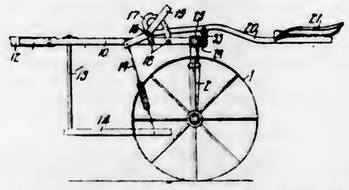
2. A tool holder for a planer, said holder including a head arranged to have its edges face in the direction of movement of the planer carriage, said head having an opening extending through it from edge to edge, supports underlying said opening, carriers pivotally mounted within said opening to have a swinging movement above said supports, said carriers having holes, and tools removably secured in the holes in the carriers in position to rest with their back edges against said supports that resists all thrusts caused by the cutting operation.

3. A tool holder for metal cutting machines, said holder including a head having an opening therein, tool carriers pivotally mounted in said opening, supports extending across said opening, and tools removably secured within the carriers and projecting to rest against said supports during the cutting operation, said supports receiving the entire thrust caused by the cutting operation.

4. A tool holder for metal cutting machines, said holder including a head having an opening therein and with tool supports located at the lower end of the head, tool carriers pivotally mounted in said opening, and tools removably secured to the carriers and adjustable lengthwise therein, said tools resting against said supports that resist the entire force of the cutting action.

5. A tool holder for metal cutting machines, said holder including a head having an opening therein, tool carriers pivotally mounted in said opening, supports extending across said opening, tools removably secured within the carriers and projecting to rest against said supports that resist the entire force caused by the cutting operation, and spring seated plungers exerting a thrust upon the carriers at their upper ends to press said tools against said supports.

1,223,494. SEAT-SPRING. WILLIAM P. JUDGE, Detroit, Mich. Filed Sept. 25, 1915. Serial No. 52,550. (Cl. 21—56.)



1. A vehicle comprising an axle, a frame extending forwardly of the axle, a seat bar pivotally supported on the frame at a point forward of the axle, said seat bar extending rearwardly of the axle and having a seat on its rear end, a detachable bracket secured to the axle, and a spring carried by said bracket and interposed between it and the seat bar, said bracket being reversible on the axle from a position in which the spring is forward of the axle to a position in which it is rearward of the axle, whereby the leverage of the seat bar on the spring may be varied.

2. A vehicle comprising an axle, a frame extending forwardly of the axle, a seat bar pivotally supported on the frame at a point forward of the axle, said seat bar extending above and rearwardly of the axle and having a seat on its rear end, a detachable bracket secured to the axle, and a spring carried by said bracket and interposed between it and the seat bar, said bracket being reversible on the axle from a position in which the spring is forward of the axle to a position in which it is rearward of the axle, whereby the leverage of the seat bar on the spring may be varied.

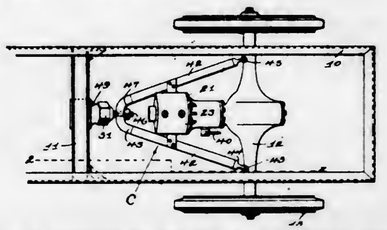
3. A vehicle comprising an axle, a frame extending forwardly of the axle, a seat bar pivotally supported on the frame at a point forward of the axle, said seat bar extending rearwardly of the axle and having a seat at its rear end, a detachable bracket secured to the axle, said bracket having a projecting portion, a spring attached at one end to the projecting portion and having its other end secured to the seat bar, said bracket being reversible on the axle from a position in which the projecting portion of the bracket is forward of the axle to a position in which it is rearward of the axle, whereby the leverage of the seat bar on the spring may be varied.

4. A vehicle comprising an axle, a frame extending forwardly of the axle, a seat bar pivotally supported on the frame at a point forward of the axle, said seat bar extending rearwardly of the axle and crossing the latter at an acute angle and having a seat on its rear end, a detachable bracket secured to the axle, and a spring carried by said bracket and interposed between it and the seat bar, said bracket being reversible on the axle from a position in which the spring is forward of the axle to a position in which it is rearward of the axle, whereby the leverage of the seat bar on the spring may be varied.

5. A vehicle comprising an axle, a frame extending forwardly of the axle, a seat bar pivotally supported on the frame at a point forward of the axle, said seat bar extending above and rearwardly of the axle and having a seat at its rear end, a detachable bracket extending over and embracing the axle, a spring carried by the bracket, divided means at the upper end of the spring for embracing the seat bar, and means for securing the divided means to the seat bar, said last mentioned means allowing the divided means to be adjusted longitudinally of the bar.

[Claims 6 and 7 not printed in the Gazette.]

1,223,495. SELF-PROPELLED VEHICLE. HARRY RICHMOND KELLEY, Minneapolis, Minn., assignor of one-half to Purity Baking Company, St. Paul, Minn., a Corporation of Minnesota. Filed Oct. 13, 1913. Serial No. 794,844. (Cl. 21—90.)



1. In a self-propelled vehicle, an axle having driving shafts therein and differential gearing connecting the same, traction wheels on said shafts, a frame supported on the axle, a floating support between said frame and axle, a worm in mesh with said differential gearing and a motor connected with said worm for turning the same,

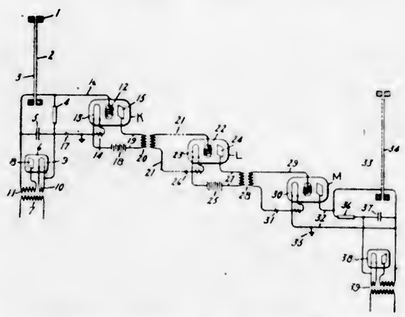
said motor being rigidly secured to the axle and attached to said floating support between its ends to hold the axle against rotation and distribute the rotative force thereof between the frame and axle.

2. In a self-propelled vehicle, a driving mechanism including a motor provided with a casing, a transmission housing rigidly secured to said casing, an axle rigidly secured to said housing and containing driving shafts and differential gearing therefor, a worm shaft revolubly mounted within said axle and furnished with a worm gear in mesh with said differential gearing, said shaft being in alinement with the motor shaft and protruding into the housing, a bearing within said housing in which said worm shaft is revoluble, and means also within said housing for connecting the shafts to turn the same at variable speeds and for disconnecting said shafts.

3. In a self-propelled vehicle, a driving mechanism including a motor provided with a casing, a transmission housing rigidly secured to said casing, an axle rigidly secured to said housing and containing driving shafts and differential gearing therefor, a worm shaft revolubly mounted within said axle and furnished with a worm gear in mesh with said differential gearing, said shaft being in alinement with the motor shaft and protruding into the housing, a driving gear on the motor shaft, a bearing for said worm shaft supported at the center of said driving gear, a driven gear slidable on the worm shaft and means for engaging and disengaging said driving and driven gears.

4. In a self-propelled vehicle, a frame, a driving mechanism including a motor provided with a casing, a transmission housing rigidly secured to said casing, an axle rigidly secured to said housing and containing driving shafts and differential gearing therefor, a worm shaft revolubly mounted within said axle and furnished with a worm gear in mesh with said differential gearing, said shaft being in alinement with the motor shaft and protruding into the housing, a bearing within said housing in which said worm shaft is revoluble, means also within said housing for connecting the shafts to turn the same at variable speeds and for disconnecting said shafts and a floating support between said axle and frame upon which said motor is mounted.

1,223,496. ELECTROSTATIC TELEPHONE SYSTEM. IRVING LANGMUIR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 15, 1914. Serial No. 851,094. Renewed Sept. 7, 1916. Serial No. 118,946. (Cl. 179—171.)



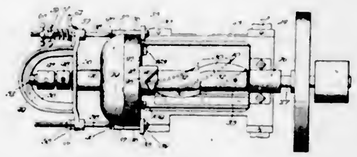
1. In a telephone system, the combination of a condenser the capacity of which is variable in response to sound vibrations, means for maintaining one of the electrodes of said condenser at a definite potential with respect to earth, a source of energy, and an electrical discharge apparatus having electrodes connected to said source of energy and also a charge-controlled member connected to said condenser for varying the conductivity between said electrodes, said member taking substantially no current.

2. In a telephone system, a transmitting device comprising the combination of a device varying in electrical capacity in response to sound waves, means for maintaining one of the electrodes of said device at a fixed potential, an energy transmitting apparatus operating by pure electron discharge in a vacuum too high to permit positive ionization, having main electrodes and a static charge responsive member for controlling an exchange of energy between said electrodes, electrical connections between said sound responsive device and said member and a source of energy connected to said electrodes.

3. In a telephone system, the combination of a condenser, at least one electrode of which is free to vibrate, means for maintaining one of the electrodes of said condenser at a definite potential, a current controlling device comprising main electrodes and a member controlling the conductivity of said device, being responsive to variations of static charge and having a capacity less than the capacity of said condenser, circuit connections between said condenser and the control member of said relay, a source of energy connected to the electrodes of said relay and sound producing means actuated by a variable current from said relay device.

4. In a signaling system, the combination of a condenser telephone transmitter, means for maintaining at least one electrode thereof at a definite potential, an electron discharge device having a grid circuit the capacity of which is less than the capacity of said transmitter, a local source of energy of substantially invariable voltage in the electrode circuit of said discharge device, and a telephone receiver in operative relation to said electrode circuit.

1,223,497. GRINDING-MACHINE. JOHN HOLLAND LETZ, Crown Point, Ind., assignor to The Letz Manufacturing Company, Crown Point, Ind., a Corporation of Indiana. Filed Apr. 17, 1915. Serial No. 21,941. (Cl. 83—8.)



1. In a grinding machine, the combination with a cylindrical concave provided with crushing ribs, of a hopper located above the concave and discharging thereinto, a bur casing at one end thereof, a shaft extending through said concave and casing and provided in the concave with a sleeve carrying crushing and feeding ribs coöperating with ribs on the concave, a bur secured to the shaft within the casing and having a flat annular grinding surface at its periphery and a conical central portion projecting from said grinding surface to the adjacent end of the concave and abutting the sleeve and provided with feeding ribs on its surface, a stationary bur secured to the bur-casing and having a corresponding flat annular grinding surface at its periphery and a hollow conical central portion provided with feeding ribs coöperating with the ribs of the rotating bur, the two sets of conical ribs converging as they approach the grinding surfaces, and means for controlling the rate at which the material to be ground is delivered from the concave to the burs.

2. In a grinding machine, the combination with a frame, of a bur-casing secured thereto having a bearing concavity therein, a stationary bur mounted in the casing, a shaft passing through the bur-casing, a rotating bur carried thereby, a bearing bracket having a convex bearing coöperating with the aforesaid concavity, a bolt passed through the bur-casing and the convex bearing to secure the bearing bracket to the casing, and means supported from the frame and casing and coöperating with the shaft to determine the relative position of the burs.

3. In a grinding machine, the combination with a concave having ears with apertures therein, of a bur-casing having apertures therein in alinement with the apertures in the concave and having a bearing concavity therein on the side opposite the concave, a stationary bur mounted in the bur-casing, a shaft passing through the bur-casing and having a rotating bur secured thereto, a bearing on the concave for the shaft, a bearing bracket having a convex bearing-surface coöperating with the aforesaid concavity in the bur-casing, a bolt passed through the bur-casing and convex bearing-surface to secure the bearing-bracket to the casing, a yoke coöperating with the bearing attached to the bur-casing to control the distance between the burs and having ears with apertures therein, a pair of threaded rods extending through the apertures of the concave, bur-casing and yoke, and securing means coöperating with the threaded rods to lock the bur-casing to the concave and to determine the position of the yoke relative to the bur-casing.

4. In a grinding machine, the combination with a concave having a pair of lugs extending upwardly from one end thereof, a bur-casing bolted to the end of the concave adjacent to the lugs, and a hopper resting on the concave and having one end adapted to pass between the lugs and the adjacent end of the bur-casing and to be held in position thereby, so that it can be lifted off when desired without otherwise disassembling the machine.

5. In a grinding machine, the combination with a concave having a pair of lugs extending upwardly from one end thereof, a bur-casing bolted to the end of the concave adjacent the lugs, a hopper resting on the concave and having one end adapted to pass between the lugs and the adjacent end of the bur-casing and to be held in position thereby, so that it can be lifted off when desired without otherwise disassembling the machine, a shaft journaled in the concave and passing through the bur-casing, a rotating bur secured to the shaft, a stationary bur mounted in the bur-casing, and a feed-controlling plate adjustably mounted between the hopper and the adjacent side of the bur-casing.

[Claims 6 to 9 not printed in the Gazette.]

1,223,498. PUMP. ARTHUR LEE LIGON, Fort Stockton, Tex. Filed June 5, 1916. Serial No. 101,722. (Cl. 103—58.)

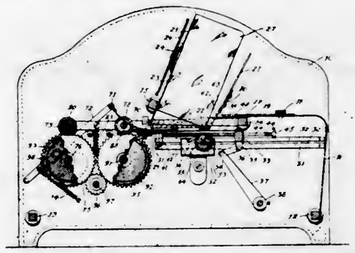


1. In a pump, a section of well casing, a pump barrel inclosed in said section, a tubular head in screw threaded engagement with the upper end of said barrel, a coupling connecting the section of casing with the next preceding section of casing, a means for detachably locking the head to the coupling, a piston traversing the barrel, and a take-up means traversing the head and entering the barrel, said takeup means arranged in the path of the piston to receive the upward thrust of said piston and thereby prevent accidental displacement of the head in said coupling.

2. In a pump, a section of well casing, a coupling connecting said section with the next preceding section, a tubular head arranged within said coupling, a packing interposed between the head and coupling, a lower coupling provided with a valve seat arranged on said section, and a pump barrel detachably connected to and supported by the head, said barrel provided with a lower valve entering and supported by the valve seat of the lower coupling in connection with a piston traversing the barrel, a tube extending through the head into the barrel, a means for locking the head to the upper coupling, said tube constituting a means for holding the locking means for the head in place, and a spring interposed between the lower end of the head and the lower end of the tube, said spring arranged to project the tube downward in the head in the path of the piston to prevent said piston from directly engaging said head.

3. In a pump, a section of well casing, a pump barrel inclosed by said section, a tubular head detachably engaged with the upper end of said barrel, a coupling connecting said section with a next preceding section of casing, a means for detachably locking the head to the coupling, a piston traversing the barrel, a piston rod traversing the head, a takeup means under spring tension traversing the head and extending into the barrel in the path of said piston to receive the upward thrust of said piston and prevent the piston striking said head, and a collar on the piston rod adapted to strike the takeup means to return said means to its normal position after being moved by said piston.

1,223,499. ENVELOP-SEALING MACHINE. SIDNEY L. LONG, Minneapolis, Minn., assignor to Pence Mailing Machine Company, Minneapolis, Minn., a Corporation. Filed Aug. 20, 1914. Serial No. 857,696. (Cl. 120—6.)



1. An envelop sealing machine comprising means for holding envelops in a stack with their flaps closed and turned down so that the flap of the lowermost envelop will be exposed, means engageable within the flap for successively and singly feeding the envelops from the stack and for moistening the gum upon the flap, and constantly-driven withdrawing and sealing means having a cycle of operative and inoperative phases timed to become operative upon the envelop subsequently to the termination of the feeding movement.

2. An envelop sealing machine comprising means for holding envelops in a stack with their flaps closed and turned down so that the flap of the lowermost envelop will be exposed, means engageable within the flap for successively and singly feeding the envelops from the stack and for moistening the gum upon the flap, a constantly-driven coacting pair of withdrawing and sealing members one of said members having an inoperative surface and being timed so as to be inoperative upon the envelop while it is fed and to engage the same subsequent to the termination of the movement of the feeding device.

3. An envelop sealing machine comprising means for holding envelops in a stack with their flaps closed and

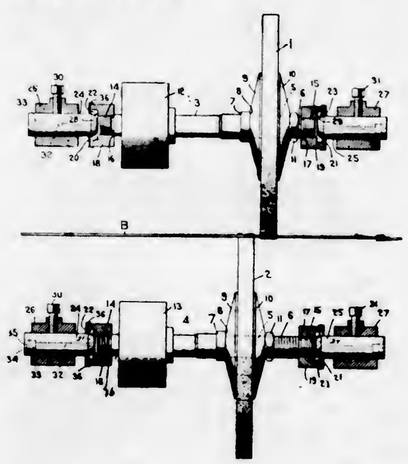
turned down so that the flap of the lowermost envelop will be exposed, means engageable beneath the flap for feeding the envelops successively and singly from the stack and for moistening the gum upon the flap, and means thereafter for withdrawing the envelop from said feeding means and sealing the flap, said withdrawing and sealing means being timed in action so as to become operative upon the envelop only at the termination of a definite extended period of time after the feeding means has terminated its movement of the envelop to permit the envelop to remain stationary after the same has been fed and before sealing.

4. An envelop sealing machine comprising means for holding envelops in a stack with their flaps closed and turned down so that the flap of the lowermost envelop will be exposed, means engageable beneath the flap for feeding the envelops successively and singly from the stack and for moistening the gum upon the flap, and means for separating the envelop being fed from the envelop above the same immediately after the beginning of the feeding movement.

5. An envelop sealing machine comprising means for holding envelops in a stack with their flaps closed and turned down so that the flap of the lowermost envelop will be exposed, means engageable beneath the flap for feeding the envelops successively and singly from the stack and for moistening the gum upon the flap, a reciprocating member, and means for causing the same to be inserted above the envelop being fed and below the next lowermost envelop of the stack to hold said envelops separated during a portion of the feeding movement.

[Claims 6 to 28 not printed in the Gazette.]

1,223,500. GRINDING-MACHINE. EDWARD S. LYONS, Woburn, Mass. Filed Sept. 23, 1916. Serial No. 121,872. (Cl. 51—7.)



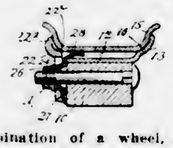
1. A grinding machine comprising a rotatable grinding member rigidly secured upon a shaft, cups containing raceways for rotatable antifriction elements secured upon the ends of said shaft, means for preventing movement of said cups longitudinally of said shaft, coöperating conoidal bearing members engaging said antifriction instrumentalities and means for adjusting said conoidal members in the direction of the axis of said shaft.

2. A grinding machine comprising a rotatable grinding member rigidly secured upon a shaft having reduced screw-threaded end portions and presenting shoulders, cups containing raceways for rotatable anti-friction elements screwed upon the ends of said shaft and against said shoulders, coöperating conoidal bearing members engaging said anti-friction instrumentalities, and means for adjusting said conoidal members in the direction of the axis of said shaft.

3. A grinding machine comprising a rotatable grinding member rigidly secured upon the shaft, means for supporting the said shaft including a cup containing a raceway for rotatable anti-friction elements secured to the end of said shaft, a coöperating conical bearing member engaging said anti-friction instrumentalities, said conical bearing member being provided with a lubricating chamber, and a duct leading therefrom to said bearing, and means for forcing lubricant from said chamber through said duct into the bearing.

4. A grinding machine comprising a rotatable grinding member rigidly secured upon the shaft, means for supporting the said shaft including a cup containing a raceway for rotatable anti-friction elements secured to the end of said shaft, a coöperating conical bearing member engaging said anti-friction instrumentalities, said conical bearing member being provided with a lubricating chamber having a screw-threaded wall, a duct leading from said chamber to said bearing, and a plug having a screw-threaded periphery engaging the screw-threads of the walls of said chamber and adapted to be advanced to force lubricant through said duct into said bearing.

1,223,501. MEANS FOR HOLDING DEMOUNTABLE RIMS ON WHEELS. STEWART R. MCKAY, Cleveland, Ohio, assignor to The McKay Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 13, 1916. Serial No. 103,407. (Cl. 152—21.)



1. The combination of a wheel, a demountable rim therefor, means carried by the wheel to engage said rim and limit its movement laterally in one direction, and a plurality of clamping devices for pressing said rim against said clamping means, each clamping device comprising a clamp having a jaw for engagement with the rim and a shank through which there is a hole, a bolt carried by said wheel projecting laterally therefrom through the hole in the clamp shank, a nut on said bolt, and a lug fixed to the wheel projecting laterally therefrom into the hole in said clamp shank and into engagement with the outer wall of said hole when the clamp is in operative position.

2. The combination of a wheel, a demountable rim therefor, means carried by the wheel to engage said rim and limit its movement laterally in one direction, and a plurality of clamping devices for pressing said rim against said clamping means,—each clamping device comprising a clamp having a jaw for engagement with the rim and a shank through which there is a hole, a bolt carried by said wheel projecting laterally therefrom through the hole in the clamp shank, a nut on said bolt, and a lug fixed to the wheel projecting laterally therefrom into the hole in said clamp shank and into engagement with the outer wall of said hole when the clamp is in operative position, the surface of said lug which engages the wall of said hole being inclined at an angle such that when the clamp is at the top of the wheel and the nut is loosened said clamp will slide down said inclined surface off of the lugs and toward the axis of the wheel.

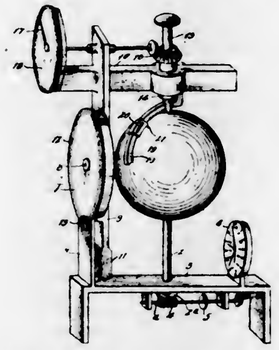
3. The combination of a wheel, a demountable rim therefor, means carried by the wheel to engage said rim and limit its movement laterally in one direction, and a plurality of clamping devices for pressing said rim against said limiting means each clamping device comprising a clamp having a jaw for engagement with the side of the rim and a shank through which there is a hole, a bolt carried by said wheel projecting laterally therefrom through the hole in the clamp shank, a nut on said bolt, a plate fixed to the outer face of the felly of the wheel and having an integral lug which projects outward into the hole in said clamp shank and into engagement with the wall of said hole to thereby hold the clamp in operative position and prevent it from moving radially inward therefrom.

4. The combination of a wheel, a demountable rim therefor, means carried by the wheel to engage said rim and limit its movement laterally in one direction, and a plurality of clamping devices for pressing said rim against said limiting means, each clamping device comprising a clamp having a jaw for engagement with the side of the rim and a shank through which there is a hole, a bolt carried by said wheel projecting laterally therefrom through the hole in the clamp shank, a nut on said bolt, a plate fixed to the outer face of the felly of the wheel and having an integral lug which projects outward into the hole in said clamp shank and into engagement with the wall of said hole to thereby hold the clamp in operative position and prevent it from moving radially inward therefrom, and said plate being formed with an integral finger which extends over and into engagement with the outer periphery of the wheel.

5. The combination of a wheel having adjacent its inner side an outwardly inclined conical flange, a demountable rim adapted to engage said flange and be thereby centered, a plurality of inclined spring arms fixed to the wheel and extended over the periphery thereof and between said periphery and demountable rim and into engagement with the latter, and clamping devices for forcing said rim toward and holding it in engagement with said conical flange.

[Claims 6 and 7 not printed in the Gazette.]

1,223,502. APPARATUS FOR SOLVING PROBLEMS OF SPHERICAL GEOMETRY. JULES MACÉ, Marseille, France. Filed May 7, 1913. Serial No. 766,210. (Cl. 33—1.)



1. Apparatus for solving problems in spherical geometry comprising a revoluble shaft, a sphere thereon, time indicating mechanism geared to said shaft so as to revolve therewith, a marking device adapted to be brought into contact with said sphere, a revoluble mounting therefor having its axis of revolution radially placed with respect to said sphere, an indicator connected with said mounting, a graduated sector, a second marking device movably mounted on said sector, and mounting means for said sector adapted to permit its revolution about the axis of said first-named marking device, substantially as described.

2. Apparatus for solving problems in spherical geometry comprising a revoluble shaft, a sphere thereon, time indicating mechanism geared to said shaft so as to revolve therewith, auxiliary time indicating means movable by hand and associated with said first named time indicating mechanism, a marking device adapted to be brought into contact with said sphere, a revoluble mounting therefor having its axis of revolution radially placed with respect to said sphere, an indicator connected with said mounting, a graduated sector, a second marking device movably mounted on said sector, and mounting means for said sector adapted to permit its revolution about the axis of said first-named marking device, substantially as described.

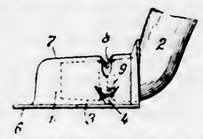
3. Apparatus for solving problems in spherical geometry comprising a revoluble shaft, a sphere thereon, time indicating mechanism geared to said shaft so as to revolve therewith, an upright parallel to said shaft, a revoluble shaft on said upright placed radially with respect to said sphere, an arm on said shaft at right angles thereto having a right angled extension, a marking point mounted upon said extension, a graduated sector placed in a diametrical plane, a mounting therefor adapted to permit revolution thereof around the axis of said marking point, and a second marking point, movably mounted upon said sector, substantially as described.

4. Apparatus for solving problems in spherical geometry comprising a shaft so mounted as to be revoluble on its own axis and inclinable at various angles at will, a sphere on said shaft, adjustable means for supporting said sphere and shaft, a graduated sector carried by and revoluble upon said shaft, a marking device movable on said sector and an indicating device suitably geared to said shaft for measuring the angles of revolution thereof, substantially as described.

5. Apparatus for solving problems in spherical geometry comprising a shaft so mounted as to be revoluble on its own axis and inclinable at various angles at will, a sphere on said shaft, a graduated sector carried by and revoluble upon said shaft, a marking device movable on said sector and an indicating device suitably geared to said shaft for measuring the angles of revolution thereof, substantially as described.

[Claim 6 not printed in the Gazette.]

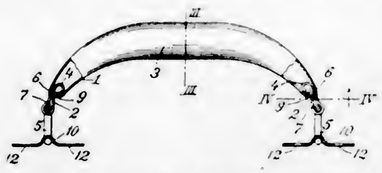
1,223,503. PIVOTED HANDLE FOR SUITCASES. BENJAMIN MARKOWITZ, Rockville Center, N. Y. Filed June 2, 1916. Serial No. 101,408. (Cl. 190—58.)



1. An attachable handle, comprising a U-shaped member having its two ends shaped round in cross section and bent outward so that their longitudinal axes are in line with each other, each of said outwardly bent ends being provided with an annular groove; attaching members provided with U-shaped recesses in which said outwardly bent ends may be placed; the two side walls of said U-shaped recesses being provided with struck-out, resilient tongues 9 which may be forced into said annular recesses of said outwardly bent ends, whereby movement of said attaching members transversely to or in line with the longitudinal axes of said ends is prevented, while permitting said ends to rotate in said recesses of said attaching members.

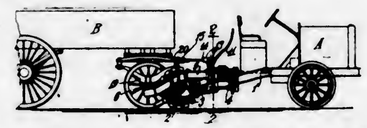
2. An attachable handle, comprising a U-shaped member having its two ends shaped round in cross section and bent outward so that their longitudinal axes are in line with each other, each of said outwardly bent ends being provided with an annular groove; attaching members provided with U-shaped recesses in which said outwardly bent ends may be placed; the two side walls of said U-shaped recesses being provided with struck-out resilient tongues 9 which may be forced into said annular recesses of said outwardly bent ends, whereby movement of said attaching members transversely to or in line with the longitudinal axes of said ends is prevented, while permitting said ends to rotate in said recesses of said attaching members; in combination with means whereby said members having said U-shaped recess may be attached to any desired article.

1,223,504. HANDLE FOR TRAVELING-BAGS OR SUIT-CASES. BENJAMIN MARKOWITZ, Rockville Center, N. Y. Filed June 9, 1916. Serial No. 102,682. (Cl. 190—57.)



A device of the character described, comprising a hollow handle formed of sheet metal; each end of said handle having an eye by means of which the handle may be connected to a receptacle; said eyes being formed by tongue extensions of said sheet metal handle; the end of each of said tongues extending beyond said eye being bent back against a wall on the interior of the handle, and reversely bent to form a circular loop or curl 4 having a diameter equal to the interior of the handle; shoulders 9 of the sheet metal handle being forced into engagement with said curl and against the portion of said extension located between said eye and said curl, whereby said curl is retained in said hollow handle.

1,223,505. TRACTOR. CHARLES H. MARTIN, Springfield, Mass. Filed Dec. 17, 1914. Serial No. 877,698. (Cl. 21—90.)



1. A tractor comprising in combination, a draw bar device adapted for connection with the steering mechanism of a trailer, said device having a flexible joint to permit relative vertical movement and another flexible joint to permit relative horizontal movement between tractor and trailer for hauling operations, and lifting mechanism to connect the tractor with the trailer through the steering means of the latter for the purpose described.

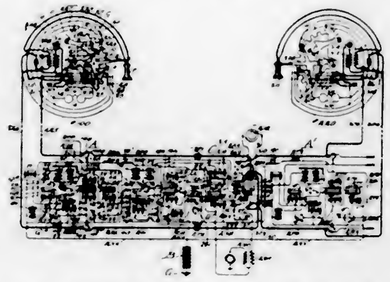
2. A tractor provided with means pivoted thereon and adapted to extend under the steering axle of a trailer, power actuated mechanism to rock and elevate said means at one end into operable engagement with said axle whereby the trailer may be steered in making short turns with the tractor and a hand operable controlling device for said mechanism whereby the trailer may be engaged and released from the said means as desired.

3. A separately operable and steerable tractor constructed for road and field use to turn in narrow spaces, a trailer also constructed for road and field use and provided with steering means to turn in narrow spaces, a draw bar constructed to connect the tractor with the steering means of the trailer, whereby the latter may be hauled and guided by the former, and mechanism on the tractor operable independently of the draw bar when the trailer is stationary or in motion to elevate the front end of the trailer, whereby the weight on the tractor with the traction wheels is increased or diminished as desired.

4. A tractor for road or field use having front steering and rear traction wheels, a lifting frame pivoted on the rear axle having supporting means extending rearwardly of said axle and adapted to pass under the axle of a trailer, mechanism operable to rock said frame on its pivot, whereby said means may engage to lift and release a trailer axle as desired, and a draw bar to connect the tractor with a trailer independently of the lifting frame.

5. A tractor provided with means adapted to be connected with the steering mechanism of a trailer to haul and guide the latter and independent devices operable by the driver of the tractor when the latter is moving or stationary to lift the front end of the connected trailer by operable engagement with the steering mechanism thereof, whereby the trailer may be guided either through said means or said devices and the steering mechanism of the trailer.

1,223,506. COMMON-BATTERY AUTOMATIC TELEPHONE SYSTEM. TALBOT G. MARTIN, Chicago, Ill., assignor, by mesne assignments, to Automatic Electric Company, a Corporation of Illinois. Filed Apr. 9, 1906. Serial No. 310,855. (Cl. 179—23.)



1. In a telephone system, the combination of a temporarily established talking circuit extending between calling and called subscribers' sub-stations, a condenser in each side of said circuit, a centralized source of talking and switching current, subscriber-controlled automatic switching machinery temporarily retained in position to maintain the circuit for talking purposes, said switching machinery provided with a pair of line-relays controllable only by the calling subscriber, the two winding of which constitute the only resistance for bridging the source of current across the talking circuit at the calling side of said condensers, auxiliary circuits controlled by said relays, another pair of relays controllable by the called subscriber, the windings of which constitute the only resistance for bridging the source of current across the talking circuit at the called side of said condensers, auxiliary circuits controlled by said last-mentioned pair of relays, and a fifth relay by which the calling subscriber controls the flow of current to that part of the talking circuit allotted to the called sub-station.

2. In a telephone system, the combination of a temporarily established talking circuit extending between calling and called subscribers' sub-stations, a condenser in each side of said circuit, a centralized source of talking and switching current, subscriber-controlled automatic switching machinery temporarily retained in position to maintain the circuit for talking purposes, said switching machinery provided with a pair of line-relays controllable only by the calling subscriber, the two windings of which constitute the only resistance for bridging the source of current across the talking circuit at the calling side of said condensers, auxiliary circuits controlled by said relays, another pair of relays controllable by the called subscriber, the windings of which constitute the only resistance for bridging the source of current across the talking circuit at the called side of said condensers, auxiliary circuits controlled by said last-mentioned pair of relays, and a differentially-wound relay by which the calling subscriber controls the flow of current to that part of the talking circuit allotted to the called sub-station.

3. In a telephone system, the combination of a temporarily established talking circuit extending between calling and called subscribers' sub-stations, a condenser in each side of said circuit, a centralized source of talking and switching current, subscriber-controlled automatic switching machinery temporarily retained in position to maintain the circuit for talking purposes, said switching machinery provided with a pair of line-relays controllable only by the calling subscriber, the two windings of which constitute the only resistance for bridging the source of current across the talking circuit at the calling side of said condensers, auxiliary circuits controlled by said relays, another pair of relays controllable by the called subscriber, the windings of which constitute the only resistance for bridging the source of current across the talking circuit at the called side of said condensers, auxiliary circuits controlled by said last-mentioned pair of relays, and a fifth relay by which the calling subscriber controls the flow of current to that part of the talking circuit allotted to the called sub-station, together with a trunk-release-circuit conjointly controlled by said line-relays and one of said second pair of relays.

5. In a telephone system, the combination of a temporarily established talking circuit extending between calling and called subscribers' sub-stations, a condenser in each side of said circuit, a centralized source of talking and switching current, subscriber-controlled automatic switching machinery temporarily retained in position to maintain the circuit for talking purposes, said switching machinery provided with a pair of line-relays controllable only by the calling subscriber, the two windings of which constitute the only resistance for bridging the source of current across the talking circuit at the calling side of said condensers, auxiliary circuits controlled by said relays, another pair of relays controllable by the called subscriber, the winding of which constitute the only resistance for bridging the source of current across the talking circuit at the called side of said condensers, auxiliary circuits controlled by said last-mentioned pair of relays, and a fifth relay by which the calling subscriber controls the flow of current to that part of the talking circuit allotted to the called sub-station, together with an energizing circuit for said fifth relay, said energizing circuit controlled by one of said line-relays.

[Claims 6 to 87 not printed in the Gazette.]

1,223,507. NURSERY RATTLE AND TOY. HERMAN E. MATHIAS, Brooklyn, N. Y. Filed Aug. 5, 1916. Serial No. 113,254. (Cl. 46—46.)

1. A combined rattle and toy comprising a hollow body having a portion of its wall transparent, a handle connected with the body, rattle elements in the body, and a toy element also in the body.

2. A combined rattle and toy comprising a hollow body having a transparent wall through which the interior of the body is seen, a figure freely mounted in the body to roll around therein, and a handle connected with the body.

3. A combined toy and rattle comprising a body having a transparent wall, a partition dividing the body into two compartments, one of which includes the transparent wall, a freely movable figure in the compartment having the transparent wall, rattle elements in the other compartment, and a handle connected with the body.

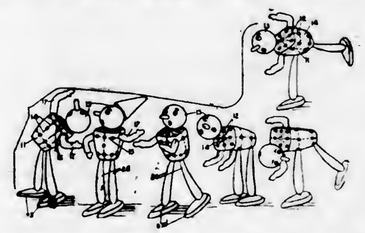
4. A rattle including a hollow body having a transparent wall, a handle connected with the body, and a roly-poly in the body.



5. A rattle including a hollow body having a transparent wall, a handle connected with the body, and a roly-poly in the body, there being a flat surface in the body on which the roly-poly is freely movable.

[Claim 6 not printed in the Gazette.]

1,223,508. TOY. WALTER MEYNER, New York, N. Y. Filed Oct. 27, 1916. Serial No. 128,008. (Cl. 46—40.)



1. A figure toy comprising a body having a line of sockets disposed to represent spinal movements and sockets disposed to represent limb movements, a head member engageable in different positions in said spinal sockets and limb members engageable in different positions in the limb sockets aforesaid.

2. A figure toy comprising a body, a head member engageable with said body along a line corresponding to spinal movements of the figure and limb members engageable with said body along lines corresponding to angular movements of such limbs on the body.

3. In figure toys, a plurality of differently shaped bodies having sockets of corresponding size and a plurality of detachable differently shaped limb members interchangeably engageable in the different sockets in the several bodies.

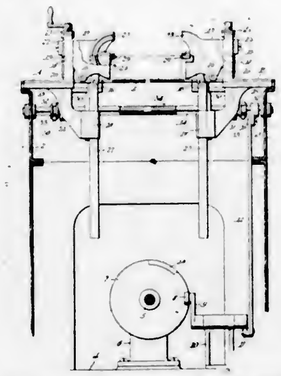
4. A figure toy comprising a body having a plurality of rows of sockets disposed to represent spinal movements and rows of sockets disposed to represent limb movements, a head member engageable in different sockets in said rows of spinal sockets and limb members engageable in different sockets in the rows of limb sockets.

5. A figure toy comprising a body having a row of spinal sockets and rows of limb sockets, limb members detachably engaged in the limb sockets, feet members detachably engageable with the limb members and a head member detachably engageable in the spinal sockets.

1,223,509. MECHANICAL-MOVEMENT MECHANISM. ALBERT F. MILLER, Denver, Colo. Filed Apr. 28, 1916. Serial No. 94,211. (Cl. 74—14.)

1. A mechanical movement comprising oppositely facing sliding members, means including a power actuated rod

for reciprocally moving said sliding members, and means including a threaded rod operatively connected to said power actuated rod and to said sliding members for moving said sliding members toward or away from each other without interfering with their regular cam actuated reciprocating movement.



2. In a mechanical movement, the combination of a supporting table, having oppositely arranged function performing heads, with a square rod connected to said heads, and means including a cam actuated mechanism for operating said square rod to reciprocate said heads simultaneously toward and away from each other.

3. In a mechanical movement, the combination of a table provided with oppositely arranged slideways, head members slidably mounted in said slideways, a manually operated threaded rod rotatably mounted in said table, means operated by the threaded rod for moving said head members, and means including cam actuated mechanism for reciprocating said heads in their slideways independent of their reciprocal movement by said threaded rod.

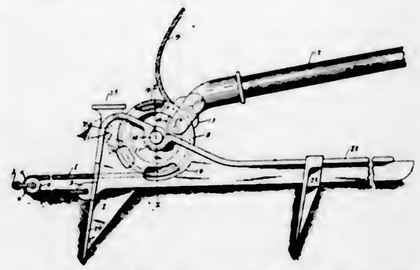
4. The combination in a mechanical movement of a table provided with oppositely arranged slideways, heads slidably mounted therein, with a square rod rotatably journaled at its ends to said table, and means including threaded plugs surrounding slidably the opposite end portions of said rod, a bushing secured to each head and threaded over each of said threaded plugs, a threaded shaft mounted in said table parallel with the square rod, and means including cross levers threaded to said rods having bifurcated ends which engage grooves in the ends of said threaded plugs.

5. In a mechanical movement the combination of a table provided with oppositely arranged slideways, heads slidably mounted therein, with a square rod rotatably journaled at its ends to said table, means including threaded plugs surrounding slidably the opposite end portions of said rod, a bushing secured to each head and threaded over each of said threaded plugs, means including cross levers supported by said table and in which said plugs are turnable for preventing said plugs from moving laterally on said square rod, and means including cam actuated mechanism for turning said square rod to impart a power actuated reciprocating movement to said heads of any predetermined stroke simultaneously toward and away from each other.

[Claims 6 to 10 not printed in the Gazette.]

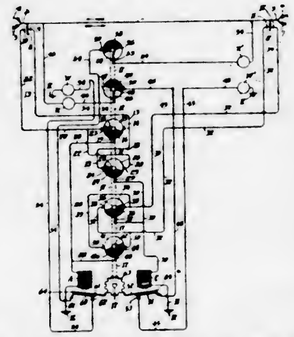
1,223,510. SELF-ANCHORING PULLER. GERHARD MOE, Ladysmith, Wis., and ALFRED J. KIRSTIN, Escanaba, Mich. Filed July 10, 1914. Serial No. 850,076. (Cl. 254—186.)

1. In a device of the described class, the combination of a cable, a cable supporting pulley, an anchor for supporting said pulley, a foot lever attached to said anchor, a hand lever connected at one end with said pulley, a pair of eccentrics attached to said hand lever, said eccentrics being adapted as said last named lever is moved in one direction to pass freely over the surface of said pulley, and as said lever is moved in the opposite direction to grip said cable, whereby the latter is caused to move a partial revolution with each alternate movement of said hand lever.



2. In a device of the described class, the combination of a cable, a cable supporting pulley, an anchor for supporting said pulley, a foot lever attached to said anchor, a hand lever connected at one end with said pulley, a cable connected with said pulley, the grip mechanism connected with said hand lever being adapted as the latter is moved in one direction to pass freely over the surface of said pulley, and as said lever is moved in the opposite direction to grip said cable, whereby the pulley is caused to revolve a partial revolution with each alternate movement of said hand lever, and a wedge shaped member adapted to move with said pulley as the latter is moved in one direction and to grip said pulley and prevent the same from turning in the opposite direction.

1,223,511. SIGNALING SYSTEM. CARL P. NACHOD, Philadelphia, Pa., assignor to Nachod Signal Company, Inc., a Corporation of New York. Filed Mar. 18, 1914. Serial No. 825,468. (Cl. 246—36.)



1. In a signaling system, a signal for each of separated stations, independent circuits for said signals energized from different of said stations, a control switch for each of said signal circuits, vehicle controlled contact mechanism at each of separated stations, a single electro-magnetic mechanism controlling said signal controlling switches in unison, and switching mechanism controlled by said electro-magnetic mechanism and through which said vehicle controlled contact mechanism controls said electro-magnetic mechanism.

2. In a signaling system, a signal at each of separated stations, independent circuits for said signals energized from different of said stations, a control switch for each of said signal circuits, vehicle controlled contact mechanism at each of separated stations, a single step by step mechanism for actuating said signal switches, electro-magnets for actuating said step by step mechanism controlled by said vehicle controlled contact mechanisms, and switching mechanism controlling said electro-magnets and actuated by said electro-magnets in unison with said signal switches.

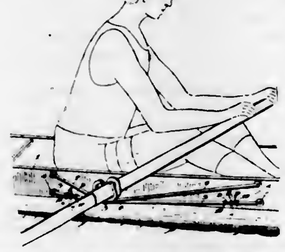
3. In a signaling system, a signal at each of separated stations, independent circuits for said signals energized from different of said stations, a control switch for each of said signal circuits, vehicle controlled contact mechanism at each of separated stations, a single step by step mechanism for actuating said signal switches, electro-magnets for actuating said step by step mechanism in opposite directions controlled by said vehicle controlled contact mechanisms, and switching mechanism controlling said electro-magnets and actuated by said electro-magnets in unison with said signal switches.

4. In a signaling system, a signal at each of separated stations, independent circuits for said signals, a switch controlling each of said circuits, vehicle controlled contact mechanism at each of separated stations, a pair of electro-magnets each of which is controlled by said vehicle controlled contact mechanisms, said signal controlling switches actuated in unison by said electro-magnets, and a single switching mechanism controlling the circuits of said electro-magnets actuated by said electro-magnets in unison with said signal controlling switches.

5. In a signaling system, a signal at each of separated stations, independent circuits for said signals, a switch controlling each of said circuits, vehicle controlled contact mechanism at each of separated stations, electro-magnets each of which is controlled by said vehicle controlled contact mechanisms for actuating said signal switches in unison, and a single switching mechanism controlling the circuits of said electro-magnets actuated by said electro-magnets in unison with said signal control switches.

[Claims 6 to 59 not printed in the Gazette.]

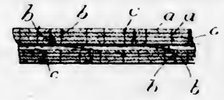
1,223,512. ADJUSTER FOR OUTRIGGERS. JOHN NEVILLE, Duluth, Minn. Filed May 18, 1916. Serial No. 98,364. (Cl. 9—26.)



In a device of the class described, the combination of an upper and a lower V-shaped frame, said frames attached to each other intermediate their ends, adjusting members carried by said lower frame, said adjusting members comprising a nut, oppositely threaded cylindrical portions integrally projecting from each side of said nut and adapted to screw into said lower V-shaped frame, auxiliary nuts carried by said cylindrical portions for strengthening said adjusting members and at the same time locking the same against rotary movement.

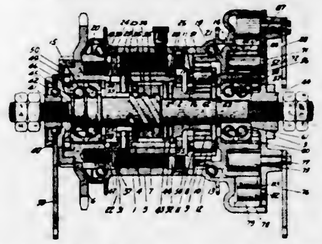
1,223,513. POWER-TRANSMISSION BELT. SUBBO NIKOLOFF, Putnam, Conn., assignor to Leland-Gifford Company, Worcester, Mass., a Firm consisting of William H. Leland, Albert J. Gifford, and Subbo Nikoloff. Filed Nov. 30, 1914. Serial No. 874,673. (Cl. 74—66.)

1. As an article of manufacture, a belt for transmission at high speeds, comprising a plurality of plies of narrow woven fabric of different widths, said belt being given a sufficient amount of twist to give the belt a round form and bring the edges at the surface substantially together so as to form a smooth outer surface but not sufficient to cause the edges in the interior to press hard against each other or overlap, whereby the edges of the inner plies do not wear on each other in use.



2. As an article of manufacture, a round belt consisting of a plurality of plies of narrow woven fabric twisted together, the two ends of each ply being secured together end to end at different places along the length of the belt so as to form seams, breaking joints, and the different plies being secured to each other by sewing through them.

1,223,514. VARIABLE-SPEED MECHANISM. VICTOR W. PAGE, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Jan. 16, 1913. Serial No. 742,322. (Cl. 74—34.)



1. In a cycle hub, a driving member, a driven hub shell member, a direct driving connection and an indirect driving connection therebetween, and common means carried by one of said members for supporting an element of said direct connection and for supporting an element of said indirect connection; substantially as described.

2. In a cycle hub, the combination with a driving member, a driven hub shell member, a friction disk direct drive for connecting said members comprising means subjecting said disks to thrust, and an indirect driving connection between said members, of a common means for supporting said disks under such thrust and for supporting an element of said indirect connection; substantially as described.

3. In a device of the character indicated, the combination with a driving member, a driven member, a direct driving connection therebetween and an indirect planetary drive for connecting said members, of common means for supporting an element of said direct connection and for supporting a planet gear of said indirect drive; substantially as described.

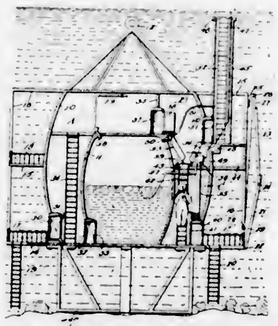
4. In a cycle hub, the combination with a driving member, a driven hub shell member, a friction disk drive for connecting said members and an indirect driving connection between said members; such friction disk drive comprising a series of disks slidably mounted with respect to each other and thrust means for forcing said disks to slide; of a common means for limiting the sliding of said disks under the action of said thrust means and for supporting an element of said indirect driving connection; substantially as described.

5. In a multi-speed cycle hub, an axle, a driving member and a driven spoke-carrying hub shell member rotatable about said axle, two optionally active driving connections, of different speed ratios, between said members, one of said connections including gearing and said connections when inactive permitting said driving member

to continuously rotate forwardly free of said hub shell, said hub shell receiving said driving member and said connections, and a radially extending member for supporting, at the one side wall thereof, an element of one of said connections and for supporting, at the other side wall thereof, a gear of the gear-including connection; substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

1,223,515. DIVING APPARATUS. ATHANASIOS PAPANASTASIOU, East Pittsburgh, Pa. Filed July 15, 1916. Serial No. 109,587. (Cl. 61—7.)



1. A diving apparatus comprising a housing including an outer and inner shell, said inner shell forming a water chamber, means to force air from said outer shell through the water in said inner shell and means to selectively dispense the air from said inner shell to said outer shell.

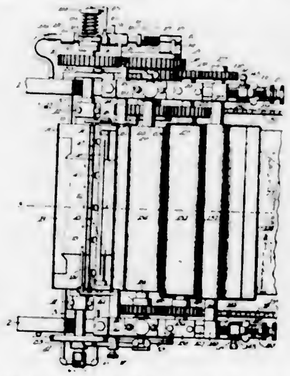
2. In an apparatus of the character described a housing including an outer and inner shell, said inner shell forming a water compartment, said outer shell being divided into a series of independent compartments, one of said last mentioned compartments being normally filled with water, and means to maintain a continual circulation of air through the other compartments and pass the air through the water in said inner shell whereby it will be purified.

3. In an apparatus of the character described a housing including an outer and an inner shell, said inner shell forming a water chamber, said outer shell comprising a series of independent compartments, means whereby communication may be had between said compartments, an upstanding tube carried by said outer shell, means whereby communication may be had between said tube and the interior of said outer shell, one of said compartments being normally filled with water, means to maintain a circulation of air through the other compartments and said tube and pass the air through the water in said inner shell and means to selectively dispense the air from said inner shell to said last mentioned compartment and said tube.

1,223,516. COÖPERATING BLANK FEEDING AND GUMMING MECHANISM FOR BLANK-GUMMING MACHINES. MELVILLE E. PETERS, GEORGE H. FATH, and ALBERT F. MILLER, Denver, Colo. Filed Dec. 22, 1915. Serial No. 68,270. (Cl. 91—62.)

1. A blank gumming mechanism comprising a blank gumming cylinder provided with an opening and closing segment portion, means for supplying said cylinder with a regulation supply of adhesive liquid gum, means for feeding blanks one at a time so that their advancing edge will rest on said segment portion, means for opening said segment portion to expose the advancing edge of said blank at a predetermined point in each revolution of said cylinder, and means for gripping and feeding each gummed blank off from and away from said blank gumming cylinder.

2. A blank gumming mechanism comprising a blank gumming cylinder provided with an opening and closing segment portion, means for supplying said cylinder with a regulation supply of adhesive liquid gum, means for feeding blanks one at a time so that their advancing edge will rest on said segment portion, means for opening said segment portion to expose the advancing edge of said blank at a predetermined point in each revolution of said cylinder, means for gripping and feeding each gummed blank off from and away from said blank gumming cylinder, means for intermittently rotating said roller, and means including blank gripping air suction inlet apertures for receiving and gripping and holding said blank to said blank's pad during its feeding movement on said feed roller.



3. A blank feeding and gumming mechanism comprising a blank feeding roller provided with a renewable blanket receiving blank supporting mechanism, means for stretching and holding said blanket pad on said roller in adjusted positions, a blank gumming cylinder arranged to receive the blanks from said feed roller, and means including a conveyer for transmitting the gummed blank.

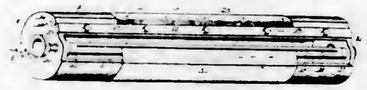
4. A blank feeding and gumming mechanism comprising a blank feeding roller provided with a renewable blanket receiving blank supporting mechanism, means for stretching and holding said blanket pad on said roller in adjusted positions, a blank gumming cylinder arranged to receive the blanks from said feed roller, means including a conveyer for transmitting the gummed blank, said blank gumming cylinder being provided with an alternately opening and closing gap arranged to receive the edge of said blank from said feed roller, means for opening said gap in said gumming cylinder to expose the edge of said blank, and for closing said gap before it passes under the gumming roller, and means including a conveyer provided with blank gripping fingers arranged to enter said gap for gripping the exposed edges of said blank in the gap of said cylinder.

5. In a blank feeding and gumming mechanism, the combination of the supporting frames and the gum supplying rolls and pan, means for adjusting the supply of gum to said rolls, a blank gumming cylinder rotatably mounted adjacent to said gum supplying rolls, a vertically adjustable gum distributing roll arranged above said gumming cylinder, and means for moving said gum supplying rolls to and from said gum distributing roll.

[Claims 6 to 20 not printed in the Gazette.]

1,223,517. BLANK AND LABEL FEEDING ROLLER FOR BLANK-GUMMING MACHINES. MELVILLE E. PETERS, GEORGE H. FATH, and ALBERT F. MILLER, Denver, Colo. Filed Dec. 22, 1915. Serial No. 68,271. (Cl. 91—62.)

1. A blank feeding roller having a surrounding blank supporting blanket of the same shape as the advancing end or feeding in end of said blank, means for removably and renewably securing said blanket to said roller, and means including air suction inlet apertures in said blanket and roller for gripping said blank to said roller by an air suction force.



2. A blank feeding roller having a blank supporting blanket removably secured thereto, and means including air suction inlet apertures through said blanket into said roller for gripping and holding a blank to said blanket.

3. A blank feeding roller arranged to receive blanks or labels, a blank receiving and supporting blanket or pad removably and renewably mounted on and secured on said roller, means including a plurality of air suction blank gripping air inlet apertures arranged through said blank into said roller, and means including an air passageway in said roller connecting with said air inlet apertures for producing a blank gripping air suction force at the entrance to said air suction inlet apertures.

4. A blank feeding roller arranged to receive blanks or labels, a blank receiving and supporting blanket or pad removably and renewably mounted on and secured on said roller, means including a plurality of air suction blank gripping air inlet apertures through said blank into said roller, and means including an air passageway in said roller connecting with said air inlet apertures for producing a blank gripping air suction force at the entrance to said air suction inlet apertures, said blanket being clamped at its advancing end portion adjacent to its air inlet apertures to register exactly with the sides of the advancing end portion of the blanks.

5. A blank feeding roller adapted to receive blanks or labels, a blank receiving and supporting blanket or pad removably and renewably mounted on and secured on said roller, means including a plurality of air suction blank gripping air inlet apertures arranged at said blank receiving station of said roller through said blank into said roller, and means including an air passageway in said roller connecting with said air inlet apertures for producing a blank gripping air suction force at the entrance to said air suction inlet apertures, said blanket being provided for said roller of the same width as the greatest width of said blanks and then cut to register exactly with the sides of the advancing feeding end of said blank when registering on said roller at its blank receiving station.

[Claims 6 to 11 not printed in the Gazette.]

1,223,518. PAINT-REMOVING COMPOUND AND PROCESS OF MAKING THE SAME. FAY EDWARD POSSON, Park Ridge, Ill., assignor to Safety First Manufacturing Co., Chicago, Ill., a Corporation of Illinois. Filed June 12, 1916. Serial No. 103,093. (Cl. 87—5.)

1. A compound for removing paint or similar coatings formed by mixing together a caustic alkali in sufficient quantity to constitute the active agent in the compound with water, silicate of soda and starch in proportions to form a pasty substance.

2. A compound for removing paint or similar coatings formed by mixing together a caustic alkali with water, silicate of soda and a mucilaginous substance in proportions which make the compound permanently pasty and adhesive in its consistency.

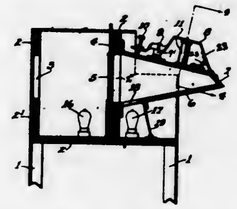
3. A compound for removing paint or similar coatings formed by mixing together the following ingredients in substantially the proportions as follows: four pounds of commercial lye or caustic soda with one gallon of water, two ounces of corn starch and one-half gallon of silicate of soda.

4. The method of manufacturing a composition of matter for removing paint and similar coatings which consists in boiling a caustic alkali in water, mixing therewith while boiling corn starch wet up so as to form a paste, adding silicate of soda, then allowing the compound to cool, and when cool stirring the same to form a smooth paste.

5. The method of manufacturing a composition of matter for removing paint or similar coatings which consists in boiling four pounds of commercial lye or caustic soda with approximately one-half gallon of water, mixing into the boiling water and alkali two ounces of corn starch reduced to a paste with a small amount of water taken from said half gallon, adding one-half gallon of silicate of soda, then allowing the composition to cool, and thereafter stirring the same to make a smooth paste.

[Claim 6 not printed in the Gazette.]

1,223,519. TARGET. FRANK C. REED, ERNEST A. PARKER, and EDWIN D. PARKER, Springfield, Ohio. Filed Aug. 25, 1915. Serial No. 47,352. (Cl. 124—15.)



1. In a device of the character described, a target member capable of being perforated, illuminating means in front of said target and illuminating means in the rear of said target, devices located in the path of the bullet back of said target and operated by the impact of said bullet to extinguish the forward illuminating means, and means for automatically restoring said forward illuminating means.

2. In a device of the character described, a target member capable of being perforated, illuminating means in front of said target and illuminating means in the rear of said target, devices located in the path of the bullet back of said target and operated by the impact thereof to extinguish the forward illuminating means, but at the same time leave the rear illuminating means in illuminating condition, and means for automatically restoring said forward illuminating means.

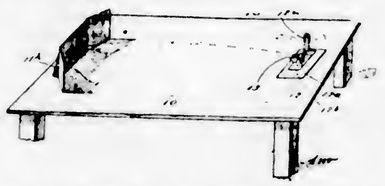
3. In a device of the character described, an immovable rearwardly converged deflector chamber having an open front, a target member capable of being perforated of substantially the same size as the open front of the said chamber and covering the same, illuminating means in front of said target and illuminating means in the rear of said target, and devices located at the rear end of said deflector chamber and operated by the impact of the bullet to extinguish the forward illuminating means.

4. In a device of the character described, an immovable rearwardly converged deflector chamber having an open front, a target member capable of being perforated of substantially the same size as said open front and covering the same, illuminating means in front of said target and illuminating means in the rear of said target, devices located at the rear end of said deflector chamber and operated by the impact of the bullet to extinguish the forward illuminating means, and means for restoring said forward illuminating means.

5. In a device of the character described, a target member capable of being perforated, illuminating means in front of said target and illuminating means in the rear of said target, a rearwardly converged deflector chamber in the rear of said target, a gravity restored device located at the end of said chamber and operated by the impact of the bullet to extinguish said forward illuminating means, and means for retarding the return to normal position of said restoring device.

[Claims 6 to 16 not printed in the Gazette.]

1,223,520. GAME. GEORGE L. REICHHELM, New Haven, Conn. Filed Jan. 5, 1915. Serial No. 656. (Cl. 124—1.)



1. In a device of the class described, a supporting frame provided with an upright arm, a track member located adjacent said arm, an impelling member pivotally attached to said arm, and a spring member extending between and attached to said impelling member and said frame to resist movement of said impelling member from its normal or rest position.

2. In a device of the class described, a frame provided with upwardly extending portions, a shaft journaled in said portions, a track member rigidly secured to said shaft, said shaft being adjustable to various positions to adjust the inclination of said track, and means to maintain such shaft in adjusted positions.

3. In a device of the class described, a frame provided with upwardly extending portions, a shaft journaled in said portions, a track member carried by said shaft, and an impelling member comprising a striking portion and an arm, the latter being pivotally attached to one of said upright portions of said frame.

4. In a device of the class described, a frame provided with upwardly extending spaced standards, a horizontal shaft journaled in said standards, a track member rigidly secured to said shaft, and an arm projecting radially from one end of said shaft and adjustably engaging the outer surface of the adjacent one of said standards for varying the inclination of said track.

5. In a device of the class described, a base, a supporting frame pivotally carried thereby, said supporting frame being provided with an upright arm, a track member located adjacent said arm, an impelling member pivotally attached to said arm, and a spring member extending between and attached to said impelling member and said frame to resist movement of said impelling member from normal or rest position.

[Claims 6 to 8 not printed in the Gazette.]

1,223,521. SOFT FOLD-COLLAR. RALPH C. RENIHAN, Troy, N. Y., assignor to Van Zandt, Jacobs & Co., Troy, N. Y., a Corporation of New York. Filed Dec. 1, 1916. Serial No. 134,445. (Cl. 2—91.)

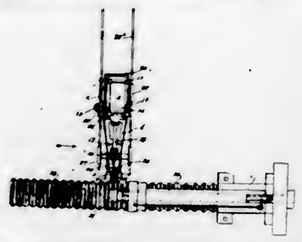


1. The combination with a fold-collar having a band and a folded-over top; of a bifurcated stiffener one branch of which engages the band and the other branch the folded-over top of the collar.

2. The combination with a collar comprising a band and a folded-over top each provided with a stiffener-receiving pocket opening toward the fold in the top, said pockets being disposed opposite each other; of a folded stiffener having its legs inserted in the respective pockets in the band and the top.

3. A fold-collar comprising a band and a folded-over top, said band being provided with a stiffener-receiving pocket opening toward the folded-over top, and said folded-over top being provided with a stiffener-receiving pocket opening toward the band opposite said pocket in the band, said pockets being adapted to receive the respective branches of a bifurcated stiffener.

1,223,522. PIPE-SQUEEZER. CECIL HENRY RICHARDSON, Saskatoon, Saskatchewan, Canada. Filed May 29, 1916. Serial No. 100,675. (Cl. 78—51.)



1. In a pipe squeezer the combination with a fixed riveting stake upon which the end of a riveted pipe and the end of an unriveted pipe lapped on the riveted pipe may be placed, of a continuous chain connection looped around the lapped ends of the pipes, a pair of adjoining guides located adjacent the lapped ends of the pipes and around which the chain is passed and means for pulling the chain passed between the pair of guides to effect the tightening of the looped end of the chain on the lapped ends of the pipes.

2. In a pipe squeezer the combination with a fixed riveting stake upon which the end of a riveted pipe and the end of an unriveted pipe lapped on the riveted pipe may be placed, of a continuous chain connection looped around the lapped ends of the pipes, a pulling connection attached to the chain and means for retaining the chain looper around the pipes in the pulling of the latter connection.

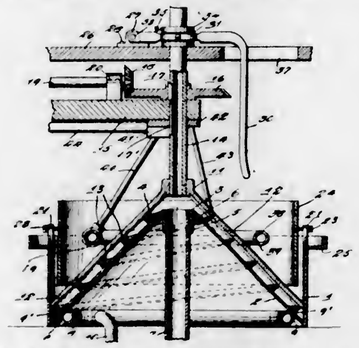
3. In a pipe squeezer the combination with a fixed riveting stake upon which the end of a riveted pipe and the end of an unriveted pipe lapped on the riveted pipe may be placed, of a continuous chain connection looped around the lapped ends of the pipes, a pair of opposing pulleys located adjacent the lapped ends of the pipes and receiving between them a portion of the chain, a steam cylinder supplied with a piston and means for reciprocating the piston, a piston rod extending from the piston and a pulley located at the end of the rod and receiving that portion of the chain passed between the former pulleys.

4. A pipe squeezing machine comprising, a bed casting having one end thereof provided with a pair of adjacent rotatably mounted pulleys, a steam cylinder mounted on the bed casting and provided with a reciprocating piston fitted with an extended piston rod which is directed toward the pulleys, a second pulley mounted on the extending end of the piston rod and a continuous chain having a portion thereof extending between the pair of pulleys and around the single pulley.

5. A pipe squeezing machine comprising, a bed casting having one end thereof provided with a pair of adjacent rotatably mounted pulleys, a steam cylinder mounted on the bed casting and provided with a reciprocating piston fitted with an extended piston rod which is directed toward the pulleys, a second pulley mounted on the extending end of the piston rod and a continuous chain having a portion thereof extending between the pair of pulleys and around the single pulley, said chain being provided in its length with an elongated arched link.

1,223,523. ORE-CLASSIFIER. EDISON C. ROBINSON, Telluride, Colo. Filed May 15, 1916. Serial No. 97,627. (Cl. 83—81.)

1. In an ore classifier of the class described, the combination of a tank having a conical bottom, said bottom extending evenly from its lower portion to its upper portion, thereby presenting an even bearing surface, said bottom having an outlet at its upper portion, means for supplying said tank with crushed ore and water, a rotating spider having arms extending into said tank, means for supporting and rotating said spider, spirals secured to said arms, each spiral formed from a ribbon-like strip of material coiled to form a plurality of convolutions, said convolutions diminishing in size toward the upper end of the spiral, said convolutions being spaced apart at greater distances than the width of said ribbon-like strips, thereby providing sufficient space for coarse ore, and said spirals resting evenly upon said conical bottom throughout their entire length, whereby ore will be dragged up said conical bottom as said spirals are moved by said arms.

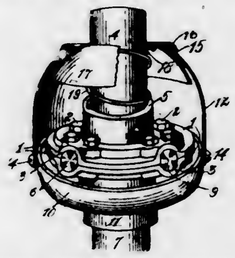


2. In an ore classifier of the class described, the combination of a tank having a conical bottom, said bottom extending evenly from its lower portion to its upper portion, thereby presenting an even bearing surface, said bottom having an outlet at its upper portion, means for supplying said tank with crushed ore and water, a rotating spider having arms extending into said tank, means for supporting and rotating said spider, spirals secured to said arms, each spiral formed from a ribbon-like strip of material coiled to form a plurality of convolutions, said convolutions diminishing in size toward the upper end of the spiral, said convolutions being spaced apart at greater distances than the width of said ribbon-like strips, said ribbon-like strips extending at right angles to the surface of said bottom, whereby as said spirals are moved around upon said bottom they will rest snugly thereon for dragging ore upon said bottom and furthermore said spirals will form gutter-like structures for causing water to run back therealong into said tank.

3. In an ore classifier of the class described, the combination of a tank having a conical bottom, said bottom extending evenly from its lower portion to its upper portion, thereby presenting an even bearing surface, said bottom having an outlet at its upper portion, means for supplying said tank with crushed ore and water, a rotating spider having arms extending into said tank, means for supporting and rotating said spider, spirals secured to said arms, each spiral formed from a ribbon-like strip of material coiled to form a plurality of convolutions, said convolutions diminishing in size toward the upper end of the spiral, said convolutions being spaced apart at greater distances than the width of said ribbon-like strips, thereby providing sufficient space for coarse ore, said spirals resting snugly upon said even conical bottom throughout their entire length, whereby ore will be dragged up said conical bottom as said spirals are moved by said arms, and means for lifting said spirals from engagement with said bottom whenever necessary.

4. In an ore classifier of the class described, the combination of a tank having a conical bottom, said bottom extending evenly from its lower portion to its upper portion, thereby presenting an even bearing surface, said bottom having an outlet at its upper portion, means for supplying said tank with crushed ore and water, a rotating spider having arms extending into said tank, means for supporting and rotating said spider, spirals secured to said arms, each spiral formed from a ribbon-like strip of material coiled to form a plurality of convolutions, said convolutions diminishing in size toward the upper end of the spiral, said convolutions being spaced apart at greater distances than the width of said ribbon-like strips, thereby providing sufficient space for coarse ore, said spirals resting snugly upon said even conical bottom throughout their entire length, whereby ore will be dragged up said conical bottom as said spirals are moved by said arms, and a lifting lever connected to said last-mentioned means, whereby said spirals may be lifted from engagement with said bottom when necessary.

1,223,524. UNIVERSAL JOINT. RALPH H. ROSENBERG, Bowling Green, Ohio, assignor to The Universal Machine Company, Bowling Green, Ohio, a Corporation. Filed Aug. 18, 1916. Serial No. 115,569. (Cl. 74—19.)



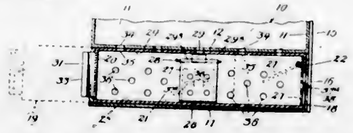
1. A universal joint structure comprising driving and driven shaft-members, connections between the adjoining ends of the shaft-members which permit their relative angular movement, a plate having a flanged margin and having therethrough a hole the margin of which tightly embraces one of said shaft-members, a cup-shaped shell having its rim secured to said flange, the opposite end of the shell being spherically curved and having therethrough a hole through which passes the other shaft-member, said shell having an internal annular groove surrounding said latter hole; packing in said groove, a spherically curved closure for said hole, said closure being centrally and slidably mounted upon said last mentioned shaft-member, and a spring engaged with said shaft-member for pressing said closure outwardly against said packing.

2. A universal joint structure comprising driving and driven shaft-members, connections between the adjoining ends of the shaft-members which permit their relative angular movement, one of said shaft-members being adapted to slide longitudinally upon and to revolve with a corresponding shaft-member, a plate having a flanged margin and having therethrough a hole the margin of which tightly embraces one of said shaft-members, a cup-shaped shell having its rim secured to said flange, the opposite end of the shell being spherically curved and having therethrough a hole through which passes the other shaft-member, said shell having an internal annular groove surrounding said latter hole, packing in said groove, a spherically curved closure for said hole, said closure being centrally and slidably mounted upon said last mentioned shaft-member, and a spring engaged with said shaft-member for pressing said closure outwardly against said packing.

1,223,525. COMBINED GARBAGE-CAN AND RAT-TRAP. HARRY SCHALLMAN, Chicago, Ill. Filed Nov. 5, 1915. Serial No. 59,710. (Cl. 43—24.)

1. A portable garbage or other refuse can having a bottom wall, legs secured to said can and extending below said bottom wall for supporting said can and its bottom wall above the ground, a rat trap located beneath said bottom wall and being slidably and removably mounted between said legs, said trap having a top wall, upright side walls, and a bottom wall, the latter being substantially flush with the surface of the ground when the trap

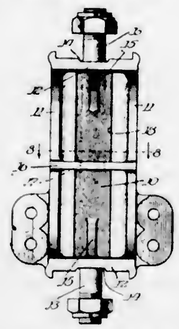
is located beneath said can; the top wall of said trap being adjacent the bottom wall of said can, and said walls being provided with registering holes whereby the odors of the matter deposited in said can may enter said trap and serve as bait therefor, said trap being provided in one of its upright side walls with a doorway, through which a rodent may enter said trap, an inwardly swinging door for normally closing said doorway, said trap being provided with an opening permitting the rodent caught by said trap to be removed therefrom, and a door for closing said opening.



2. A portable garbage or other refuse can having a bottom wall, legs secured to said can and extending below said bottom wall for supporting said can and its bottom wall above the ground, a base plate secured to said legs and adapted to contact with the ground, a rat trap having a bottom wall, a top wall, and upright side walls, said trap being removably inserted beneath the bottom wall of said can and having its bottom wall slidably mounted on said base plate, the top wall of said trap being adjacent the bottom wall of said can, and said walls being provided with registering holes whereby the odors of the matter deposited in said can may enter said trap and serve as bait therefor, said trap being provided in one of its upright side walls with a doorway, through which a rodent may enter said trap, an inwardly swinging door for normally closing said doorway, said trap being provided with an opening permitting the rodent caught by said trap to be removed therefrom, and a door for closing said opening.

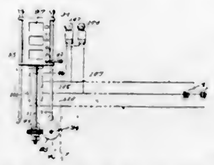
3. A rat or like trap made of sheet metal and having connected side, top, and bottom walls, one of the side walls of said trap being provided with an opening through which a rodent may enter said trap, an inwardly swinging door for normally closing said entrance opening, a locking member for locking said door in closed position, said trap being provided in one of the other of its side walls with an opening whereby the rodents may be removed from said trap, a sliding door for closing said last named opening; and the side and top walls of said trap being provided with a plurality of holes, for permitting air and light to enter said trap.

1,223,526. CAR-TRUCK COLUMN. GEORGE E. SCOTT, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Oct. 2, 1915. Serial No. 53,682. (Cl. 105—105.)



A car truck column, comprising a front wall, two side walls, two end walls and a web parallel with said end walls and joining said side walls, a fastening bolt integral with each end wall, said end walls adjacent to said bolt being grooved, said transverse web being apertured in a line parallel with said bolts, said front wall being vertically grooved to eliminate metal which would prevent the insertion of a bolt through the aperture in said transverse web, the arrangement being such that upon the breakage of one or both of said integral bolts an aperture may be drilled in said end walls for the accommodation of a separate fastening bolt, substantially as described.

1,223,527. SIGNAL DEVICE FOR ELEVATOR SYSTEMS. CHARLES D. SEEBERGER, New York, N. Y. Original application filed Aug. 1, 1907, Serial No. 386,665. Renewed Oct. 24, 1912, Serial No. 727,623. Divided and this application filed Mar. 13, 1914. Serial No. 824,356. (Cl. 177—336.)



1. In an elevator system, a pair of cars adapted to independently move in the same shaft; a distance device connecting the cars; and a signal device in one of the cars operated by the distance device when the cars approach within a predetermined distance.

2. In an elevator system, a pair of cars adapted to independently move in the same shaft; a distance device connecting the cars; and a signal device in each car operated by the distance device when the cars approach within a predetermined distance.

3. In an elevator system, a pair of cars adapted to independently move in the same shaft; a distance device connecting the cars; and signaling means in one of the cars having increasing warning indicia operated by the distance device when the distance between the cars decreases within a predetermined zone.

4. In an elevator system, a pair of cars adapted to independently move in the same shaft; a distance device connecting the cars; and signaling means in each car having increasing warning indicia operated by the distance device when the distance between the cars decreases within a predetermined zone.

5. In an elevator system, a pair of cars adapted to independently move in the same shaft; a distance device connecting the cars; a plurality of signals in one of the cars; and means in said car operated by the distance device to successively operate the signals when the distance between the cars decreases within a predetermined zone.

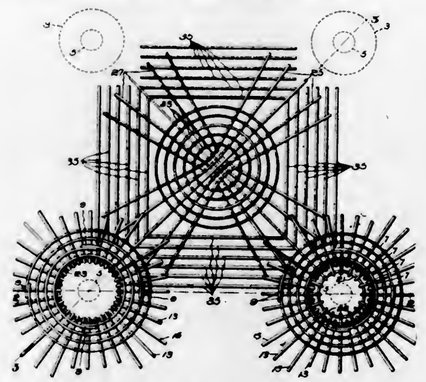
[Claims 6 to 24 not printed in the Gazette.]

1,223,528. SLIDING HAY-DOOR. THEODORE JOHN SIMONS, Haskins, Iowa. Filed Aug. 11, 1915. Serial No. 45,004. (Cl. 20—19.)



The combination of an inclined track, a door, a guide hanger comprising a frame and grooved rollers mounted diagonally upon said track and provided with a vertically disposed shank secured to the door, four pulleys, one located at each end of the track, the third pulley adjacent to the lower end of the track, the fourth pulley at some point below said last mentioned pulley, a cable secured at one end to the guide hanger and rove over the four pulleys, and a weight to which one end of the cable is secured and with which another portion of the cable is connected.

1,223,529. REINFORCED CONCRETE CONSTRUCTION. EDWARD SMULSKI, Brookline, Mass. Filed Apr. 12, 1915. Serial No. 20,599. (Cl. 72—15.)

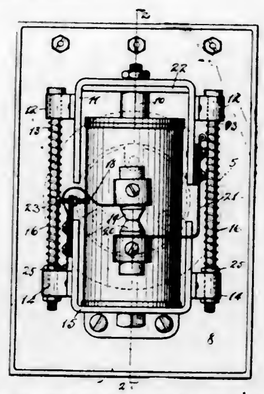


The combination with a concrete slab, of supporting columns therefor; reinforcing members in the upper surface portion of the slab diverging from the axes of the columns, circumferential reinforcing members extending transversely to said diverging members; groups of reinforcing members in the lower surface portion of the slab, crossing one another at the center of the slab, and extending diagonally across the slab with end portions intermingling with some of said diverging members, each of said groups having portions in compact relation at the center of the slab to provide ample reinforcement therefor and portions bent laterally outward from the center to provide less reinforcement for areas between the columns and the central area of the slab; central circumferential reinforcing members extending transversely to said groups of diagonal members; and groups of members for reinforcing areas of the slab between the columns surrounding said central circumferential members.

1,223,530. AUTOMATIC ELECTRIC CONTROLLER. BURTON W. SWEET, Cleveland, Ohio, assignor, by mesne assignments, to The Van Dorn Electric Tool Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 21, 1913. Serial No. 762,451. (Cl. 175—268.)

1. In an automatic electro-magnetic switch the combination of an electro-magnet; an armature actuated by said magnet; switch means operable by movement of said armature over a predetermined distance; said switch means including two resilient contact carrying arms; means for adjusting position of one of said resilient arms to vary the amount of armature movement required to operate said switch means; and other means adapted to vary the sensitiveness of said electro-magnet to current increase in said circuit.

2. In an automatic electro-magnetic switch, the combination of an electro-magnet; an armature actuated by said magnet; switch means operable by movement of said armature over a predetermined distance, said switch means including two resilient contact carrying arms; means for adjusting the position of one of said resilient arms to vary the amount of armature movement required to operate said switch means; and other means adapted to vary the sensitiveness of said electro-magnet to current increase in said circuit, said other means consisting of adjustable coil springs adapted to resist movement of said armature.

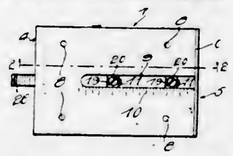


3. In an automatic electro-magnetic switch the combination of an electro-magnet; an armature actuated by the same; switch means operated by movement of said armature; guide bars slidably engaged by said armature; springs mounted about said bars in contact with said armature; and means adapted to adjust the tension of said springs to vary the resistance to movement of said armature.

4. In an automatic electro-magnetic switch the combination of an electro-magnet; an armature actuated by the same; switch means operated by movement of said armature; guide bars slidably engaged by said armature; springs mounted about said bars in contact with said armature; and adjusting nuts attached to said bars and adapted to compress said springs to increase the resistance to movement of said armature.

5. In an electro-magnetic switch the combination of an electro-magnet; an armature actuated by the same; a yoke attached to the outer end of said armature and movable therewith; switch means, comprising a spring contact, a contact held by and movable with said yoke, operated by movement of said armature; guide bars slidably engaged by said yoke; springs mounted about said bars in contact with said yoke; and adjustable nuts attached to said bars and adapted to compress said springs to increase the resistance to movement of said yoke and said armature.

1,223,531. GAGE. JUDSON SWITZER, Portland, Oreg. Filed July 18, 1916. Serial No. 109,110. (Cl. 33—197.)



1. A device of the class described comprising a casing having a slot in one side thereof, a screw swiveled in said casing adjacent one side of the slot, a nut member on said screw having one flat side thereof extending transversely across the slot, a spur detachably connected with the portion of the member adjacent the slot and projecting through said slot, one end of said screw being adapted for engagement with operating tools.

2. A device of the class described comprising a casing having a slot in one side thereof, a screw swiveled in said casing adjacent one side of the slot, a nut member on said screw having one flat side thereof extending

transversely across the slot, the portion of the member adjacent the slot having a recess therein, a spur extending through the slot and having a bent forked end adapted to be positioned in said recess, and fastening means carried by said member and positioned between the forked end of said spur to removably fasten the same thereto.

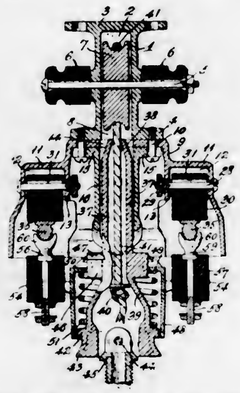
3. A device of the class described comprising a casing having alined slots in its top and bottom, a guide flange in one end of said casing, a pair of longitudinally extending spaced screws in the casing on the opposite sides of the slots, one screw having its opposite ends swiveled in the end walls of the casing and the remaining screw having one end swiveled in one end wall and the other in a bearing block adjacent one end of said casing, and members on the screws having portions positioned between the slots, spurs on the members projecting through the slots, and tool engaging means in the ends of the screws.

4. A device of the class described comprising a casing having alined slots in its top and bottom, a guide flange on one end of said casing, a pair of longitudinally extending spaced screws swiveled in said casing on opposite sides of the slots, nut members on the screws having portions positioned between the slots, spurs on said portions projecting through said slots, and tool engaging means in the ends of the screws.

5. A device of the class described comprising a casing, a guard flange at one end of the same, a screw swiveled in said casing, a nut member on the screw having a projecting portion bent parallel with said screw and extending through the adjacent end of the casing, a spur on said projecting end, and tool engaging means in one end of the screw.

[Claims 6 to 8 not printed in the Gazette.]

1,223,532. LAMP-HANGER. ALLISON J. THOMPSON, Cleveland, Ohio. Filed Jan. 3, 1916. Serial No. 69,955. (Cl. 240—66.)



1. In a lamp hanger, a main hanger member comprising a housing with an opening in the bottom thereof, a guiding sleeve supported in said housing, said sleeve being provided with a vertically disposed slot in one side, opposed upwardly inclined camming edges extending to the slot, ears extending radially from the sleeve one on each side and each adjacent to the slot, a latch stop supported by said ears, a latch pivoted in said ears and adapted to swing in a plane radial to the sleeve, said latch being pivoted to swing against the sleeve at the slot by normal tendency and to be limited in its opposite movement by said stop, an inwardly and downwardly extending tail portion carried by said latch, a lamp hanger member, an upwardly extending centering portion adapted to pass into the guiding sleeve to center the two hanger members, a pair of spaced lugs extending radially from one side of the centering member, said lugs being spaced vertically with the lower lug longer than the upper one, the upper lug being adapted to engage the cam edges of the guiding sleeve and swing the lamp hanger member into proper relationship with the main hanger member and to pass into the slot and engage the latch and move it upward and pass above it, and the lower lug being adapted to engage the tail portion of the latch and form a stop on the upward movement and at the same time forming a means for throwing the latch out of latching position on the release of the lamp hanger member, an elevating device secured in the guiding member of the lamp hanger member and passing up through the guiding sleeve, and suitable contact devices arranged between the hanger members.

2. In a lamp hanger, a main hanger member, a lamp hanger member, raising and lowering means between said members, means for centering the lamp hanger member with respect to the main hanger member and for insuring the proper relationship of such members, and suitable contact mechanism between the members comprising contact devices supported for movement in all directions to provide universal movement of the contacts with respect to each other, said contacts also having contacting surfaces permitting such movement.

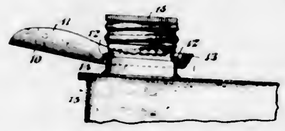
3. In a lamp hanger, a main hanger member, a lamp hanger member, raising and lowering means between said members, means for centering the lamp hanger member with respect to the main hanger member and for insuring the proper relationship of such members, and suitable contact mechanism between the members comprising contacts having coöperating saddle shaped nesting contacting surfaces adapted to permit of universal movement between contacts when in contact.

4. In a lamp hanger, a main hanger member, a lamp hanger member, raising and lowering means between said members, means for centering the lamp hanger member with respect to the main hanger member and for insuring the proper relationship of such members, and suitable contact mechanism between the members comprising contact devices supported for movement so as to permit them to center themselves universally when approaching engagement and when in engagement.

5. In a lamp hanger, a main hanger member, a lamp hanger member, raising and lowering means between said members, means for centering the lamp hanger member with respect to the main hanger member and for insuring the proper relationship of such members, and suitable contact mechanism between the members comprising cooperating contacts each having a concave arc shaped together with an intersecting convex arc shape whereby the two contact devices will nest and center themselves and will permit of a universal movement when in contact.

[Claim 6 not printed in the Gazette.]

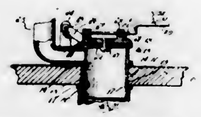
1,223,533. POURING-SPOUT. EDWARD R. THOMPSON, St. Louis, Mo., assignor to St. Louis Tin and Sheet Metal Co., St. Louis, Mo., a Corporation of Missouri. Filed July 10, 1916. Serial No. 108,408. (Cl. 221—23.)



1. A pouring spout for application to the nozzles of cans comprising a pouring member constructed with a pouring lip having side flanges and located at one end thereof, and an attaching collar at its opposite end adapted to entirely surround said nozzle and support the lip thereon, said collar comprising upwardly extending inner flange adapted to engage the nozzle and encircle the same, and an outer flange extending upwardly from the lower portion of the inner flange at the side thereof remote from said lip, merging with said side flanges and forming with said inner flange a substantially annular channel at its upper side communicating with said pouring lip and adapted to receive the return flow of liquid from the pouring lip and the overflow from the top of said nozzle when the can is set in upright position.

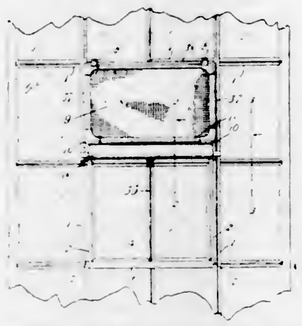
2. A pouring spout for application to the nozzles of cans, comprising a pouring lip and an attaching collar, said lip having side flanges converging toward the outer end, and said collar comprising an inner circular flange adapted to fit around the can nozzle and inclined downwardly away from said nozzle, an outer flange joining with the bottom of the inner flange and inclined upwardly away from the inner flange and forming therewith a V-shaped channel, the outer flange being made higher than the inner flange and extending partly around the same and merging into the side flanges of the lip, said side flanges being on a higher plane than the outer flange of the collar and the bottom of said lip being also above the plane of the bottom of the said channel.

1,223,534. CLOSET-TANK FLUSH-VALVE. GEORGE V. TOMAN, Boundbrook, N. J. Filed Feb. 2, 1916. Serial No. 75,740. (Cl. 4—5.)



In a flush tank, the combination with a flush pipe having a valve seat formed on its upper end, a valve head seated thereon, a pair of arms pivoted at one side of said flush pipe and above the valve seat, said arms being inclined downwardly to said valve head and carrying the latter in rigid relation, a float rod secured to and extending across said valve head from said arm and extending beyond the head, a float upon the forward end of said rod and means for actuating said rod to lift said valve head from its seat.

1,223,535. WINDOW-SCREEN. CLIFFORD TRAUT and HENRY HIGGIN, Newport, Ky., assignors to The Higgin Manufacturing Company, Newport, Ky., a Corporation of West Virginia. Filed July 6, 1914. Serial No. 849,274. (Cl. 156—14.)



1. In a revolving window having a sash pivoted to one side of the frame thereof, screens for said window one on each side of the window, the one having its edge on the line of the window pivot, and a curved contact member on the window having an arc adapted to maintain constant contact with the other screen.

2. In a revolving window having a sash mounted off the center of its frame, screens for said window rigidly and non-slidably mounted in vertical position, one above the center of the window on one side, and one below the center on the other, and rigid means on the window to maintain constant sliding contact with both screens in all positions without depressing or elevating either screen.

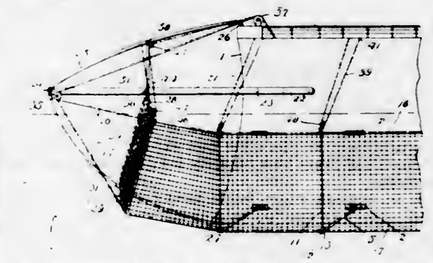
3. In a revolving window, with a frame therefor, a screen mounted in the frame and terminating near the pivotal center of the window and a curved contact plate on the window, to bear on the screen and means for adjusting the plate so that the surface thereof is substantially centered at the pivotal center of the window.

4. In a revolving window, with a frame therefor, a screen mounted in the frame and terminating near the pivotal center of the window, and a curved contact plate on the window to bear on the screen, and means for mounting the plate on the mullions of the window and adjusting the plate along said mullions so that the surface thereof is substantially centered at the pivotal center of the window.

5. In a revolving window, with a frame therefor, a screen mounted in the frame and terminating near the pivotal center of the window, a curved contact plate mounted on the window so as to fit over the mullions thereon and tight against the window, and so as to bear on the screen, and means for securing the plate to the said mullions at any desired position, for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

1,223,536. TORPEDO-SHIELD FOR VESSELS. JOHN O. TRAVELSTEAD, Pendleton, Oreg. Filed Oct. 14, 1916. Serial No. 125,675. (Cl. 114—240.)



1. The combination with a vessel, supporting means extending substantially longitudinally from the bow and stern ends of the vessel, shield members supported by said supporting means and laterally extending from opposite sides thereof for protecting the ends of the vessel, and other shields movably connected to the sides of the vessel and co-extensive therewith and having their ends connected to one of said laterally extending shields, said laterally extending shields being shiftable.

2. The combination with a vessel, of brackets connected to the sides of the vessel and arranged in rows at points about the water line and adjacent the bottom of the vessel, supporting booms, connecting elements arranged between the booms and the brackets whereby the booms may be swung horizontally and vertically of the sides of the vessel, protecting shields connected to the booms, means for shifting the shields and means for raising the shields.

3. The combination with a vessel, of rows of booms movably connected to the sides of the vessel, vertical rods arranged between the adjacent booms, cables connecting each of the booms and rods, protecting shields arranged between the booms and connected to the cables, means for shifting the shields laterally of the vessel, and means for raising the shields.

4. The combination with a vessel, of supports extending longitudinally from the respective ends of the vessel, means for bracing the supports, foldable shields movably connected to the supports and bracing means for protecting the ends of the vessel about the water line, rows of booms movably connected to the sides of the vessel, cables connecting the booms, main shields carried by the cable and coöperating with the foldable shields, the cables be-

ing extended to the vessel and operable to shift the shields, means for raising the foldable shields, and means for raising the side shields.

5. The combination with a vessel, of supports extending longitudinally from the respective ends of the vessel, means for bracing the supports on the vessel, means for bracing the bracing means on the supports, foldable shields connected to the supports and the portions of the bracing means beneath the water line, main protecting shields movably connected to the sides of the vessel about the water line and coöperating with the foldable shields, means for raising the main shields, means for raising the foldable shields, means for shifting all of the shields, and means for guiding the raising and shifting means during operation.

[Claim 6 not printed in the Gazette.]

1,223,537. FABRIC FOR MATS, RUGS, &c. FRANCIS W. TULLY, Brookline, Mass. Filed Nov. 26, 1915. Serial No. 63,355. (Cl. 139—71.)



1. A fabric adapted for a floor covering, including a textile or fibrous element having an adhesive surface and exposed at intervals on one face of the fabric.

2. A fabric for use as a covering for polished surfaces having incorporated therewith a yarn having a sticky covering adapted to adhere to said surface, the remainder of the fabric not being sticky.

3. A woven textile mat, rug or other covering having a yarn exposed at one surface at intervals, said yarn having an adhesive coating.

4. A textile mat, rug or other covering having on one face a pile and on the other face exposed runs of a yarn having a relatively high capacity for adhering to polished surfaces.

5. An inelastic woven fabric having a fibrous structural yarn exposed on one face only at intervals, said yarn having an adhesive surface whereby to prevent slippage of the fabric when said face is laid upon a polished surface.

[Claims 6 to 12 not printed in the Gazette.]

1,223,538. RUG, MAT, OR OTHER COVERING AND METHOD OF MAKING THE SAME. FRANCIS W. TULLY, Brookline, Mass. Filed Jan. 19, 1916. Serial No. 73,045. (Cl. 91—68.)



1. A rug or mat having on one face a sizing coating and a superposed adherent plastic coating of an adhesive substance.

2. A rug or mat having on one face an adherent coating incorporated by shallow penetration only with one face thereof, and an adhesive coating superposed upon and plastically adherent to said first-mentioned coating.

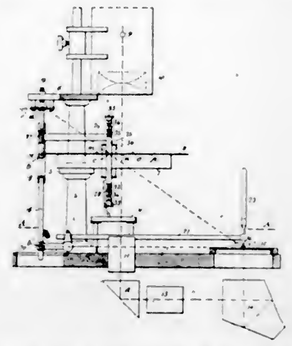
3. A rug or mat having on one face an applied pattern or figure comprising areas of a sizing coating and a plastically adherent superposed adhesive substance.

4. A rug or mat having on one face a coating comprised of an adherent substance insoluble in water, and an adhesive coating plastically applied to and superposed upon said adhering coating.

5. A rug or mat having an adherent sizing coating on one face thereof of a substance insoluble in water, and an adhesive coating of a rubber compound remaining sticky when dry.

[Claims 6 to 9 not printed in the Gazette.]

1,223,539. MACHINE FOR CUTTING CINEMATOGRAPHIC STENCILS. MARCEL VANDAL, Paris, France. Filed Aug. 21, 1913. Serial No. 785,878. (Cl. 33—24.)



1. A machine for cutting cinematographic stencils comprising an open-work table adapted to support a film, a translucent screen, cutting means adapted to cut out a part of the said film on the said table, projecting means whereby to project onto such screen a part of the same film at a short distance from the aforesaid part, and means connected with the cutting means and adapted to be led by hand onto such screen and to move proportionally the said cutting means.

2. A machine for cutting cinematographic stencils comprising a translucent screen, a source of light, projecting means adapted to project luminous rays of such light onto the screen, a pantograph, tracing means connected with a movable point of such pantograph and adapted to move onto the said screen, cutting means connected with another movable point of such pantograph, and an open-work table adapted to guide a film through the said luminous rays and through the field of action of the cutting means, the projecting means and the cutting means being so adapted that the two parts of the film exposed respectively to the action of such means will be different yet not far from one another.

3. A machine for cutting cinematographic stencils comprising the combination of a fixed support, a fixed guide having a horizontal groove, a rod having one end articulated to the said fixed support and its opposite end engaged in the said groove, such ends being so adapted that the said rod can turn around its own longitudinal axis and can oscillate in the plane which this axis forms with that of the groove, a fixed screen located perpendicularly to the last named plane, an open-work table parallel to such screen, tracing means, a connection between the tracing means and a part of said rod, the tracing means being adapted to be moved by hand on the said screen, cutting means and a connection between the cutting means and another part of the rod, the cutting means being adapted to move on the said table.

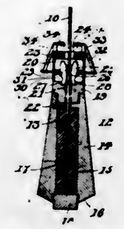
4. A machine for cutting cinematographic stencils comprising the combination of a fixed support, a fixed guide having a groove, a rod having one end articulated to the said fixed support and its opposite end engaged in the said groove, such ends being so adapted that the said rod can turn around its own longitudinal axis and can oscillate in the plane which this axis forms with that of the groove, two pairs of conical pivots fastened to the said rod on two lines perpendicular with respect to the axis of this rod and parallel with respect to one another, guiding means secured to one of said pairs of pivots and cutting means secured to the other of said pairs.

5. In a machine for cutting cinematographic stencils, a film-cutting means, a projecting means, a screen, a stylus mounted to be moved relatively to the screen to trace portions of a projected picture, a support on which a film may be positioned for its pictures to be projected by

the projecting means and for the film to be cut by the cutting means, and means controlled by the movements of the stylus to govern the said cutting means.

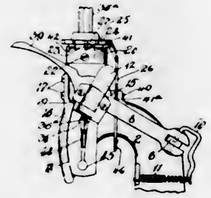
[Claims 6 and 7 not printed in the Gazette.]

1,223,540. HAT-PIN-POINT PROTECTOR. ZIGMOND VERES, Shelton, Conn. Filed Oct. 17, 1916. Serial No. 126,137. (Cl. 24—155.)



A hat-pin point protector, including a body-portion having embedded therein a cushion having an elongated tapering bore, a chambered member, with a tenon-like extended portion at one end threaded into a socket in said body portion and having a bore alining the bore of said cushion, said chambered member having a tapered centering passage through one end thereof and spaced from said tenon-like extended portion, opposed normally contracting jaws having their inner ends pivoted in notches in said tenon-like extended portion, said jaws being slidably carried upon spring-equipped rods, the springs of said rods exerting their pressure upon said jaws, said rods having pivotally connected thereto push-button-equipped levers fulcrumed in slotted extensions of said chambered member.

1,223,541. PENCIL-SHARPENING MACHINE. EDGAR P. WEBSTER, Bridgeport, Conn. Filed Feb. 21, 1914. Serial No. 820,107. (Cl. 120—94.)



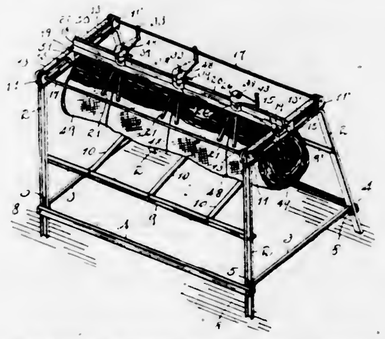
1. A pencil sharpening device having a head provided with oppositely located concave surfaces merging into straight surfaces toward the lower end of the head, the distance between said straight surface being equal to the proposed diameter of the lead of the pencil, an opening in the head to receive the pencil, an oscillating shaft, cutter carrying levers mounted on the shaft and oscillating therewith and also having a lateral movement thereon, and a stationary guide engaged by said levers for maintaining the cutters in the path of said concave and straight surfaces.

2. A pencil sharpening device having a head provided with oppositely located concave and straight surfaces, said head having an opening, a pencil holding chuck rotatably mounted therein, a transverse opening through the concave and straight surfaces and having a seat therein for supporting the end of a pencil, oscillatory cutter carrying levers, and a stationary guide engaged by said levers to positively maintain the cutters in the path of said concave and straight surfaces.

3. A pencil sharpening device having a head provided with oppositely located concave and straight surfaces, an opening in the head, a pencil holding chuck rotatably mounted therein, an oscillating shaft, cutter carrying levers mounted on the shaft and oscillating therewith and also having a lateral movement thereon, a stationary guide engaged by the levers to positively maintain the cutters in the path of said concave and straight surfaces, and means for rotating and elevating the pencil holding chuck on the upward movement of the levers.

4. A pencil sharpening device comprising a frame provided with concave surfaces and an opening to receive a pencil, oscillatory cutter carrying levers, a guide for maintaining the cutter carrying parts of the levers against said concave surfaces, a pencil holding chuck rotatably mounted in the pencil opening of the frame, a collar secured to the frame and having teeth in its upper surface, a toothed plate on the chuck having peripheral and depending teeth, the latter engaging the teeth of the collar under spring tension, pivotally supported pencil gripping fingers normally actuated toward a pencil under spring tension, and a pivotally supported chuck actuating lever engaging one of the cutter carrying levers to slightly rotate the chuck and cause the same to be temporarily lifted on the up stroke of the cutter carrying levers.

1,223,542. SACK-BALER. WILLIAM A. WEBSTER, Galesburg, Ill., assignor of one-half to John Hulse, Galesburg, Ill. Filed Aug. 20, 1915. Serial No. 46,510. (Cl. 100—31.)



1. In a baler, a supporting frame, frames pivotally connected therewith and adapted to swing toward and from each other, wire-tying means carried by one of said swinging frames, and wire-end-holding means carried by the other thereof.

2. In a baler, a supporting-frame, frames pivotally connected therewith, wire-end-securing elements, swinging one with each of the last recited frames and each thereof adapted to hold one end of a baling-wire, and means for tying the ends of the wires.

3. In a baler, swinging frames, a wire-end-holding device carried by one of them, and means carried by the other and adapted to free the wire from said holding-device.

4. In a baler, swinging frames, a wire-end-holding device carried by one of them, and wire-tying members carried by the other, one of said members adapted to free the wire from said device.

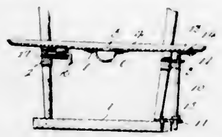
5. In a baler, swinging frames, a friction-clamp carried by one of them, and means carried by the other and adapted to free the wire from said clamp.

[Claims 6 to 15 not printed in the Gazette.]

1,223,543. TRAY. ALBERT G. WEDGE, Iron River, Mich. Filed Aug. 31, 1914. Serial No. 859,461. (Cl. 65—53.)

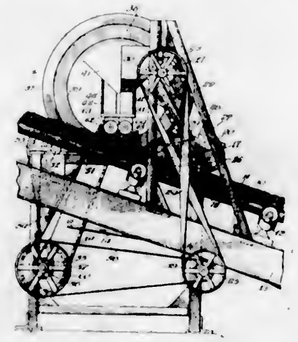
A substantially reniform tray for high-chairs formed of pressed metal having raised marginal flanges and its bottom sloped down from all portions to the center thereof, said bottom having a drainage opening at said center.

a semi-cylindrical drawer extending transversely of the tray and therebeneath from the forward edge of the tray to the center with the bottom of the drawer disposed



horizontally and its upper edges sloped to conform to the bottom of the tray, and means for suspending the drawer to permit sliding movement thereof in the direction of the sloping bottom of the tray.

1,223,544. AUTOMATIC SAMPLING DEVICE. CARL A. WENDELL, Joliet, Ill. Filed Dec. 23, 1914. Serial No. 878,712. (Cl. 73—21.)



1. In combination, means for moving a body of material, means for removing and transporting measured quantities of material being moved, a drum to which the removed material is transported, a distributing hopper, and means associated with said hopper and drum for automatically and progressively reducing the quantity of the material so selected.

2. In combination, means for continuously moving a body of material to be tested, means for selecting and transporting fractional portions of said material, a drum to which the selected material is transported, a distributing hopper, and means associated with said hopper and drum and adapted to progressively divide the samples so selected.

3. In combination, means for continuously moving a body of material to be tested, means for selecting and transporting fractional portions of said material, a drum to which the selected material is transported, a distributing hopper, means associated with said hopper and drum and adapted to progressively halve the samples so selected, and means for returning the unused portion of said sample to the body of material at a point removed from that at which the sample was selected.

4. In a sampling device, the combination of means for supplying thereto samples of the material to be tested, a rotary element having a plurality of series of buckets, to the first of which series said samples are supplied and by means of which said material is elevated, said series of buckets being in adjacent positions on said rotary member, a distributing hopper having at least two sections into each of which sections a portion of the material elevated by said buckets is received, the material received in one section being rejected, and that received in another section being delivered to an adjacent bucket, and means for causing the movement of said rotary member.

5. In a sampling device, the combination of means for supplying thereto samples of materials to be tested, and means for successively dividing said samples in geometrical progression, said last named means including a drum carrying adjacent series of buckets, a distributing hopper, said hopper being so arranged as to divide the sample into at least two parts, and means to return one part to an adjacent series of buckets in said drum.

[Claims 6 to 14 not printed in the Gazette.]

1,223,545. ACOUSTIC DEVICE. RANDOLPH WHITMAN, Mount Vernon, N. Y. Filed Dec. 23, 1914. Serial No. 878,688. (Cl. 179—182.)



1. In combination with a sound giving device, a very flexible perforated diaphragm, and flexible means adapted to connect the diaphragm with the device and adjacent to its sound giving part, and means for delivering sound waves directly to the ear of a user, when said diaphragm is acted upon by the sound waves from said device.

2. In combination with a sound giving device, very flexible perforated diaphragm means, means for flexibly connecting the diaphragm means to the device and adjacent to the sound giving part, and means provided for permitting sound waves to pass directly through the diaphragm means.

3. In combination with a sound device, an attachment comprising a holder adapted to embrace a portion of the sound device, a perforated diaphragm transversely disposed in the holder, and having a perforation therein for indicating the proper tension of the diaphragm and the position of the holder on the device.

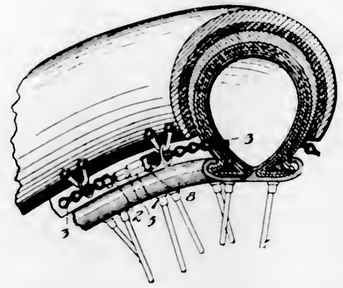
4. In combination with a telephone receiver, an attachment comprising a soft rubber holder adapted to embrace the receiver, an elastic diaphragm stretched across the holder, said diaphragm being provided with a relatively small central hole therein, said diaphragm being arranged to lower and soften the tone of sounds coming from the receiver without apparently reducing their force.

5. In combination with a telephone receiver, an attachment comprising an inclosed holder adapted to cup over the receiver, a centrally disposed elastic diaphragm means in the holder arranged between the receiver shell and the outer opening of the holder whereby a cushion of air will be provided on both sides of the diaphragm and the diaphragm will also act as a cushion so that the sounds from the receiver will be modified.

[Claims 6 and 7 not printed in the Gazette.]

1,223,546. COUPLING DEVICE FOR TIRE SIDE CHAINS. WILLIAM HENRY WILLIAMS, Erdington, Birmingham, England, assignor of one-half to Oscar Farkasch, Newcastle-upon-Tyne, England. Filed Oct. 10, 1914. Serial No. 866,115. (Cl. 85—36.5.)

1. As a tension adjusting device for the retaining members of auxiliary covers for pneumatic tires, an adjustable coupling comprising a screw threaded plunger, an interiorly threaded tubular socket portion, into which said plunger is adapted to be screwed, said socket portion being open at one end and blind at the other, the blind end of the socket portion having an integral projection for forming a swivel connection, and the said socket portion being also reduced in diameter toward the open end and being formed externally in the shape of a nut.



2. As a tension adjusting device for the retaining members of auxiliary covers for pneumatic tires, an adjustable coupling comprising a screw threaded plunger, an interiorly threaded tubular socket portion, into which said plunger is adapted to be screwed, said socket portion being open at one end and blind at the other, the blind end of the socket portion having an integral projection for forming a swivel connection, and the said socket portion being also reduced in diameter toward the open end and being formed externally in the shape of a nut, and provided with a small hole transversely therethrough near its open end for the purpose set forth.

3. As a tension adjusting device for the retaining members of auxiliary covers for pneumatic tires, an adjustable coupling comprising a screw threaded plunger, an interiorly threaded tubular socket portion into which said plunger is adapted to be screwed, said socket portion being open at one end and blind at the other, the blind end of the socket portion having an integral projection for forming a swivel connection, and the said socket portion being also reduced in diameter both externally and internally toward the open end and being formed externally in the shape of a nut along its entire length.

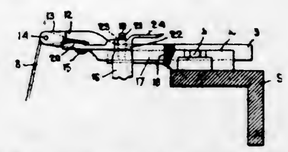
4. As a tension adjusting device for the retaining members of auxiliary covers for pneumatic tires, an adjustable coupling comprising a screw threaded plunger, an interiorly threaded tubular socket portion into which said plunger is adapted to be screwed, said socket portion being open at one end and blind at the other, the blind end of the socket portion having an integral projection for forming a swivel connection, a pressed metal ringlike swivel member through which said projection extends, said projection being riveted over to prevent the withdrawal of said member, a washer between said member and said projection, said pressed member having arms thereon, and said socket portion being also reduced in diameter toward the open end and being formed externally in the shape of a nut.

1,223,547. PROCESS OF REMOVING AND PREVENTING BOILER-SCALE. MENDAL W. WILLSON, Mount Carmel, Ill., assignor of one-third to Henry Littig and one-third to Zed Moore, Mount Carmel, Ill. Filed Aug. 25, 1916. Serial No. 116,836. (Cl. 210—22.)

1. The process of removing and preventing boiler scale, consisting in impregnating the boiler water with (1) catechu, soda-ash, blue vitriol, zinc, and Irish potatoes, and (2) subsequently impregnating the same at intervals with catechu and zinc.

2. The process of removing and preventing boiler scale, consisting in treating the water in the boiler with (1) a composition of catechu, soda-ash, blue vitriol, zinc, and Irish potatoes, and (2) subsequently treating the same at intervals of about seven days with a composition of catechu and zinc all prepared and proportioned in substantially the manner stated.

1,223,548. WEFT-FORK MECHANISM FOR LOOMS. HENRY W. YOUNGQUIST, Manchester, N. H., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass., a Corporation of Maine. Filed Sept. 8, 1916. Serial No. 119,124. (Cl. 139—54.)



1. In a loom comprising a recessed slide having a feeler member mounted thereon, a vibrating actuator reciprocating in said recess, a hook mounted upon said actuator and adapted upon detection of absence of filling to engage said feeling member and thereby to actuate the slide to effect a change in the operation of the loom; and a guard carried by said actuator covering said recess, whereby injury to the operator is prevented.

2. In a loom comprising a recessed slide having a feeling member mounted thereon, a vibrating actuator reciprocating in said recess, a hook mounted upon said actuator and adapted upon detection of absence of filling to engage said feeling member and thereby to actuate the slide to effect a change in the operation of the loom, said hook having an extension extending over and guarding said recess.

3. In a loom comprising a recessed slide having a feeling member mounted thereon, a vibrating actuator reciprocating in said recess, a hook mounted upon said actuator and adapted upon detection of absence of filling to engage said feeling member and thereby to actuate the slide to effect a change in the operation of the loom; said hook having a relatively thin integral tail piece extending over and guarding said recess.

4. In a loom comprising a recessed slide having a feeling member mounted thereon, a vibrating actuator reciprocable in said recess, an upwardly projecting stud on the end of said actuator, a hook loosely supported upon the end of said actuator and pivoted upon said stud, adapted to engage said feeling member upon detection of failure of filling and means for detachably retaining the hook upon said actuator.

5. In a loom comprising a recessed slide having a feeling member mounted thereon, a vibrating actuator reciprocable in said recess, a stud on the end of said actuator, a member loosely pivoted upon said stud having a hook at one end adapted to engage said feeling member upon detection of failure of filing and an extension overlying said recess and means for retaining the hook upon said stud.

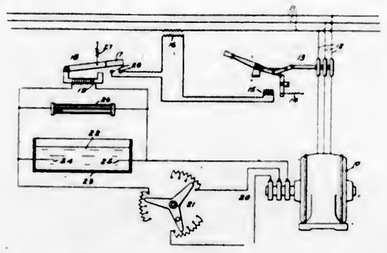
[Claim 6 not printed in the Gazette.]

1,223,549. CIRCUIT-PROTECTING APPARATUS. JAMES G. ZIMMERMAN, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed May 17, 1912. Serial No. 697,892. (Cl. 175—294.)

1. In combination, an electrical circuit, and controlling means for said circuit comprising an electro-magnetically actuated element and means comprising a liquid conductor in circuit with the actuating winding of said element for controlling the actuation of said element, said element being actuated on the passage of current of a certain value through said liquid conductor.

2. In combination, a circuit including a liquid the cross sectional area of which varies in response to abnormal circuit conditions, another circuit in which the current varies in response to changes in said liquid, and a circuit

controlling device in said last mentioned circuit responsive to said current variation.



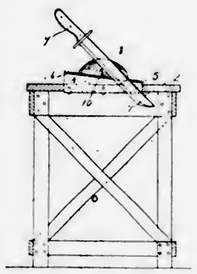
3. In combination, a circuit including a liquid the cross sectional area of which varies in response to abnormal circuit conditions, a branch circuit in which the current varies in response to changes in said liquid, and a circuit controlling device in said last mentioned circuit responsive to said current variation.

4. In combination, an electrical circuit, electro-magnetically actuated means for controlling said circuit, and means connected in parallel with the actuating winding of said controlling means for producing a "pinch effect" in response to a characteristic of the current in the circuit to be controlled to cause operation of said controlling means.

5. In combination, an electrically operated member, and a circuit including a liquid conductor connected in parallel with the operating circuit of said electrically operated member, means for supplying current to said circuits, said liquid conductor being adapted to be agitated by current variation therein to cause the actuation of said electrically operated member.

[Claims 6 and 7 not printed in the Gazette.]

1,223,550. DEVICE FOR SLICING FISH. JAMES LEONARD ALLEN, Houston, Tex. Filed Mar. 17, 1916. Serial No. 84,759. Renewed Mar. 17, 1917. Serial No. 155,612. (Cl. 146—7.)

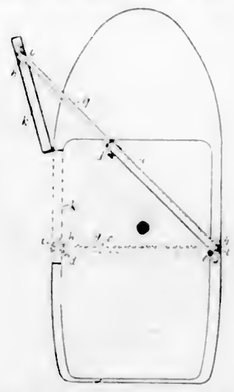


A device of the character described including a table, a suitable support therefor, said table having a slot therethrough, a blade secured to the table and projecting through the slot and being inclined forwardly, a transverse bar secured underneath the table at one end of the slot and a knife, one end of which is engaged under the bar and which coöperates with said blade.

1,223,551. WIND-SCREEN FOR SIDE CARS. ALBERT ATKINSON, London, England. Filed Mar. 7, 1916. Serial No. 82,607. (Cl. 21—148.)

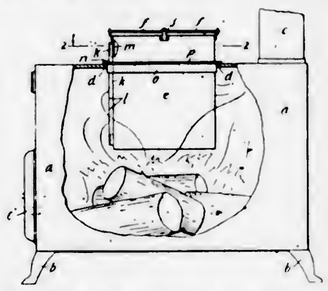
1. An automatically operated windscreen for sidecars comprising telescoping members pivotally mounted at each end on bearings fitted respectively to the body and the door of the sidecar, one of the members carrying the windscreen, as and for the purpose described.

2. An automatically operated windscreen for sidecars comprising telescoping members pivotally mounted at each end on bearings fitted respectively to the body and the



door of the sidecar, one of the members carrying the windscreen, and means for adjusting the screen laterally and angularly as and for the purpose described.

1,223,552. COOKING AND HEATING DEVICE. EDWARD M. ATKINSON, Portland, Oreg. Filed Mar. 9, 1916. Serial No. 83,060. (Cl. 53—1.)



1. A device of the character described comprising a cylindrical receptacle provided with an open upper end, a tube extending longitudinally of the receptacle, the lower end of said tube being open, and the upper end in communication with the interior of the receptacle, the exterior of the tube being made with a plurality of notches, a flanged sleeve slidably mounted on the receptacle, and a locking member pivoted on the flange of the sleeve and adapted to engage one of the notches of the tube so as to lock the sleeve and receptacle in any relative position to which they have been adjusted.

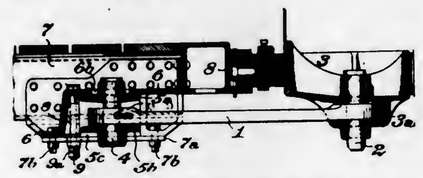
2. A device of the character described comprising a cylindrical receptacle provided with an open upper end, a tube extending longitudinally of the receptacle, the lower end of said tube being open, and the upper end in communication with the interior of the receptacle, the exterior of the tube being made with a plurality of notches, a flanged sleeve slidably mounted on the receptacle, and an eccentric locking member pivoted on the flange of the sleeve and adapted to engage one of the notches of the tube so as to lock the sleeve and receptacle in any relative position to which they have been adjusted.

3. A device of the character described comprising a cylindrical receptacle provided with an open upper end, a tube of triangular cross-section extending longitudinally of the receptacle, the lower end of said tube being open, and the upper end in communication with the interior of

the receptacle, the exterior of the tube being made with a plurality of notches, a flanged sleeve slidably mounted on the receptacle, and a locking member pivoted on the flange of the sleeve and adapted to engage one of the notches of the tube so as to lock the sleeve and receptacle in any relative position to which they have been adjusted.

4. A device of the character described comprising a cylindrical receptacle provided with an open upper end, a tube of triangular cross section extending longitudinally of the receptacle, the lower end of said tube being open, and the upper end in communication with the interior of the receptacle, the exterior of the tube being made with a plurality of notches, a flanged sleeve slidably mounted on the receptacle, and an eccentric locking member pivoted on the flange of the sleeve and adapted to engage one of the notches of the tube so as to lock the sleeve and receptacle in any relative position to which they have been adjusted.

1,223,553. DRAW-BAR-PIN CASTING. HERMAN F. BALL, Bronxville, N. Y. Filed Dec. 27, 1916. Serial No. 139,099. (Cl. 213—42.)



1. An end for end reversible draw bar pin casting for railroad vehicle draft gear, having upper and lower draw bar pin sockets which are in line axially and in a transverse plane at unequal distances from the ends of the casting.

2. A top and bottom reversible draw bar pin casting for railroad vehicle draft gear, having upper and lower draw bar pin sockets which are in line axially, and top and bottom bearing surfaces at unequal distances from its longitudinal central plane.

3. A draw bar pin casting for railroad vehicle draft gear, comprising, in an integral casting, vertical side walls; and upper and lower connecting plates, said plates having draw bar pin sockets which are in line axially and in a transverse plane at unequal distances from the ends of the casting.

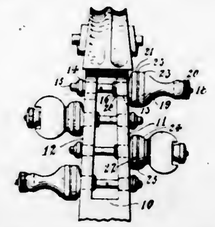
4. A draw bar pin casting for railroad vehicle draft gear, comprising, in an integral casting, vertical side walls; upper and lower connecting plates, said plates having draw bar pin sockets which are in line axially; and lateral bearing surface flanges projecting from the side walls at a greater distance from the longitudinal central plane of the casting than the upper plate.

5. In a railroad vehicle draft gear, the combination of a draw head adapted to be secured to a railroad vehicle; stops fixed on said draw head; a draw bar pin casting supported in said draw head and abutting on said stops; a draw bar pin fitted in sockets in said casting, located at unequal distances from its ends; means for maintaining said casting against said stops; and a draw bar coupled to said pin and adapted to be coupled, at its opposite end, to another vehicle.

[Claim 6 not printed in the Gazette.]

1,223,554. TUNING-PEG FOR STRINGED INSTRUMENTS. FREDERICK W. BECKER, New York, N. Y. Filed Nov. 20, 1913. Serial No. 802,019. (Cl. 84—78.)

1. A tuning peg for stringed instruments comprising a bushing adapted to be attached within an aperture in the wall of a peg box, a stem extending loosely through the bushing and adapted to have a string attached thereto, said stem being provided with a flattened shank and provided also with a collar engaging the inner end of the bushing, a finger piece for turning the stem mounted upon the shank and movable longitudinally thereon and adapted to engage the outer end of the bushing, and a thumb nut threaded upon the end of the shank to clamp the finger piece against the bushing, thereby holding the stem from rotation, the central portion of the adjacent ends of the finger piece and bushing being dished for the purpose set forth.



2. A tuning peg for stringed instruments comprising a bushing adapted to be attached within an aperture in the wall of a peg box, a stem extending loosely through the bushing and adapted to have a string attached thereto, said stem being provided with a flattened shank and provided also with a collar engaging the inner end of the bushing, a finger piece for turning the stem mounted upon the shank and movable longitudinally thereon and adapted to engage the outer end of the bushing, one of the engaging surfaces being annular in form to produce a uniform friction, and a thumb nut threaded upon the end of the shank to clamp the finger piece against the bushing, thereby holding the stem from rotation.

3. A tuning peg for stringed instruments comprising a bushing adapted to be attached within an aperture in the wall of a peg box, a stem extending loosely through the bushing and adapted to have a string attached thereto, said stem being provided with a flattened shank and provided also with a collar engaging the inner end of the bushing, a finger piece for turning the stem mounted upon the shank and movable longitudinally thereon and adapted to engage the outer end of the bushing, the engaging sides of the finger piece and bushing being enlarged to present a friction surface of considerable diameter, one of the friction surfaces being in the form of an annular ring, and a thumb nut threaded upon the end of the shank to bring the friction surfaces into engagement and thereby hold the stem from rotation.

4. A tuning peg for stringed instruments comprising a bushing adapted to be attached within an aperture in the wall of a peg box, a stem extending loosely through the bushing and adapted to have a string attached thereto, said stem being provided with a flattened shank and provided also with a collar engaging the inner end of the bushing, a finger piece loosely mounted upon the shank adapted to engage the outer end of the bushing, the engaging ends of the finger piece and bushing being enlarged to a considerable diameter, the central portion of the engaging ends being dished whereby annular frictional surfaces disposed in planes perpendicular to the axis of the stem are formed, and a thumb nut threaded upon the end of the shank to bring the frictional surfaces into engagement.

5. A tuning peg for stringed instruments comprising a bushing adapted to be attached within an aperture in the wall of a peg box, a stem extending loosely through the bushing and adapted to have a string attached thereto, said stem being provided with a flattened shank and provided also with a collar engaging the inner end of the bushing, a finger piece for turning the stem mounted upon the shank and movable longitudinally thereon and adapted to engage the outer end of the bushing, the engaging ends of the finger piece and bushing being enlarged to a considerable diameter, the central portion of the engaging ends being dished whereby annular frictional surfaces disposed in planes perpendicular to the axis of the stem are formed, a washer of different material separating the

friction surfaces, and a thumb nut threaded upon the end of the shank to bring the frictional surfaces into engagement.

[Claims 6 to 10 not printed in the Gazette.]

1,223,555. STEP FOR SHOVELS, SPADES, AND THE LIKE. GEORGE W. BENTON, Conneaut, Ohio. Filed Oct. 5, 1916. Serial No. 123,863. (Cl. 55—115.)



In combination with a spade blade or shovel blade, a pair of steps U-form in cross-section of malleable metal distinct from said blade and the rest of the implement fitting on the shoulders of said blade and extending for equal distances down the front and rear of the latter, each step consisting of a rounded top and a pair of downwardly projecting portions extending downward from the outer borders of said top, said portions being of equal length with said top and welded to said blade on both front and rear thereof so as to be practically integral therewith.

1,223,556. GRAPE-FRUIT PLIERS. CORNELIS LINDSAY BROUWER-ANCHER, Minneapolis, Minn. Filed May 17, 1916. Serial No. 98,067. (Cl. 146—6.)



1. A plier for the preparation of citrus fruit having flat blade-like jaws with sharp cutting edges extending in the planes of the opposing flat surfaces of said jaws.

2. A plier for the preparation of citrus fruit comprising intermediately pivoted levers formed with flat blade-like jaws with curved cutting edges extending in the planes of the opposing flat surfaces of said jaws.

3. A plier for the preparation of citrus fruit comprising intermediately pivoted levers formed with flat blade-like jaws with curved cutting edges, the opposing faces of said jaws being roughened to increase their grip, but the said roughened surfaces terminating inward of said cutting edges.

4. A plier for the preparation of citrus fruit having flat blade-like jaws with sharp cutting edges, the said jaws in their opposing faces having core receiving pockets.

5. A plier for the preparation of citrus fruit comprising intermediately pivoted levers formed with flat blade-like jaws with curved cutting edges, and the opposing faces of said jaws having longitudinally extended core receiving pockets that terminate short of the outer extremities thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,223,557. CAN-SOLDERING MACHINE. WILLIAM CAMERON, Chicago, Ill. Filed Dec. 10, 1913. Serial No. 805,686. (Cl. 113—61.)

1. In a can soldering machine, the combination of a frame, a can supporting and guiding horn comprising a plurality of parallel members adapted to engage the exteriors of the cans, mechanism for conveying the cans through said horn, and an arm rotatable about a fixed pivotal axis for positively discharging the cans from said mechanism at the delivery end of the horn.



2. In a can soldering machine, the combination of a horn conveyer mechanism for conveying cans along said horn, said mechanism including a series of can gripping devices, and an arm rotatable about a fixed pivotal axis at the discharge end of said horn for positively discharging the cans from said devices.

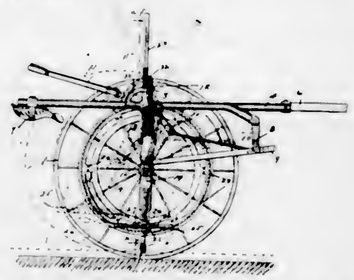
3. In a can soldering machine, the composition of a horn, an endless conveyer, means carried by said conveyer in position to engage a can and convey the same along the horn, and arms rotatable about fixed pivotal axes and intermittently projected into the path of travel of the cans for positively discharging the cans from opposite sides of said path from said conveyer.

4. In a can soldering machine, the combination of a guiding horn, conveyer mechanism for conveying cans longitudinally of said horn, and arms rotatable about fixed pivotal axes on opposite sides of said guiding horn for positively discharging the cans from said conveyer mechanism at the delivery end of the horn.

5. In a can soldering machine, the combination of a horn, a sprocket wheel mounted adjacent each end of said horn, a chain conveyer trained over said sprocket wheel to travel adjacent to said horn, can engaging means carried by said chain, and a device mounted concentrically with the sprocket wheel at the delivery end of the horn adapted to positively discharge the cans from said can engaging means.

[Claims 6 to 8 not printed in the Gazette.]

1,223,558. CULTIVATOR. CHARLES B. CARLEY, Rochester, Minn. Filed June 2, 1916. Serial No. 101,271. (Cl. 97—25.)



1. A wheel cultivator having a pivotally mounted crank axle, traction wheels on the crank portions of the axle, a hanger secured to the arch of said axle for concentric movement with the traction wheels, a ground-working tool carried by the hanger, and means for adjusting the crank axle circumferentially to vary the depth of the cut of said tool.

2. A wheel cultivator having a pivotally mounted crank axle, traction wheels on the crank portions of the axle, a longitudinally adjustable hanger secured to the arch of said axle for concentric movement with the traction wheels, a ground-working tool carried by the hanger, and means for adjusting the crank axle circumferentially to vary the depth of the cut of said tool.

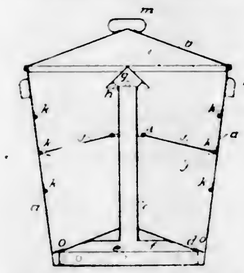
3. A wheel cultivator having a pivotally mounted crank axle, traction wheels on the crank portions of the axle, a longitudinally adjustable hanger secured to the arch of said axle for concentric movement with the traction wheels, a revoluble ground-working tool carried by the hanger, means for driving said tool from one of the traction wheels, and means for adjusting the crank axle circumferentially to vary the depth of the cut of said tool.

4. A wheel cultivator having two pairs of radially extensible hanger cranks, a horizontal shaft carried by each pair of hanger cranks, a plurality of axially and circumferentially spaced ground-working tools carried by each of said shafts, means for independently driving said shafts from the traction wheels, means for adjusting the hanger cranks circumferentially with the traction wheels to vary the cut of the ground-working tools, and means for radially adjusting the hanger cranks to independently carry the ground-working tools into and out of the ground.

5. In a wheel cultivator, the combination with a frame, of a crank axle having a radially offset intermediate portion on which said frame is pivotally mounted, a pair of traction wheels journaled on the crank axle, a pair of hanger cranks secured to the crank axle, a ground-working tool carried by the hanger cranks, and means for securing the crank axle to the frame in different angular adjustments to circumferentially adjust the hanger cranks together with the traction wheels and thereby vary the depth of the cut of the ground-working tool.

[Claim 6 not printed in the Gazette.]

1,223,559. WASHING-MACHINE. LOUIS WILLIAM CHARLEBOIS and EUGÈNE DEROUIN, Watertown, N. Y. Filed Dec. 30, 1916. Serial No. 139,756. (Cl. 68—30.)



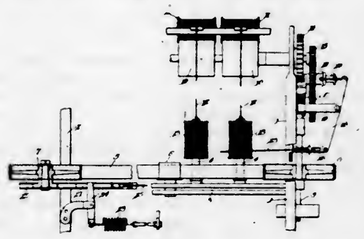
1. In a wash boiler of the class described, a plurality of vertically spaced rows of circumferentially extending cleats adapted to be secured to the inner wall of said boiler, clothes holding members hingedly engaging said cleats and extending radially inwardly therefrom, and the inner ends of said members being connected.

2. In a wash boiler of the class described, vertically swinging clothes holding members hingedly connected with the inner wall of the boiler and extending inwardly therefrom, and means for connecting the inner ends of said members.

1,223,560. ATTACHMENT FOR SILK-SPINNING MACHINES. ALVA ERNEST CHERSEMAN, Bradford, Pa., assignor to The Leon-Ferenbach Silk Company, Wilkes-Barre, Pa., a Corporation of Pennsylvania. Filed Nov. 20, 1916. Serial No. 132,428. (Cl. 118—8.)

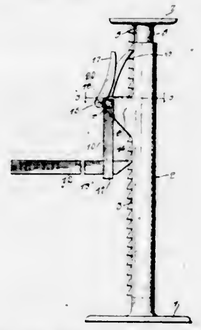
1. In a spinning frame, the combination of a series of bobbin spindles, an endless belt arranged to rotate the spindles, feed rolls adapted to draw thread from bobbins supported on the spindles, a train of gears for driving the feed rolls including a gear adapted to be bodily shifted toward and from operative position, and means controlled by the spindle driving belt for automatically shifting said gear to inoperative position when said belt breaks, for the purpose described.

2. In a spinning frame, the combination of a series of bobbin spindles, an endless belt arranged to rotate the spindles, a relatively stationary pulley or guide wheel for said belt arranged adjacent one end of the frame, a second pulley or guide wheel for the belt supported on a slide adjacent the other end of the frame, feed rolls adapted to draw thread from bobbins supported on the spindles, means for positively driving the feed rolls, a spring acting on said slide and guide wheel supported thereby to maintain the spindle driving belt taut and in operative relation to the spindles, and means adapted to be actuated by said spring to automatically render the feed roll driving devices inoperative if the spindle driving belt breaks.



3. In a spinning frame, the combination of a series of bobbin spindles, an endless belt arranged to rotate the spindles, a relatively stationary pulley or guide wheel for said belt arranged adjacent one end of the frame, a second pulley or guide wheel for the belt supported on a slide adjacent the other end of the frame, feed rolls adapted to draw thread from bobbins supported on the spindles, a train of gears for driving the feed rolls, including a gear adapted to be moved bodily to and from operative position, a lever having one arm engaging the slide supporting one of the guide wheels for the bobbin spindle driving belt, a spring acting on the other arm of said lever to maintain said belt in operative relation to the spindles, and a second lever having one arm connected with said bodily movable gear and its other arm connected with said slide, whereby if the spindle driving belt breaks said spring will automatically cause the bodily movable gear to be shifted to inoperative position so that the feed rolls will not draw thread from the bobbins when the latter are not rotating.

1,223,561. JACK. FRANK H. CHOATE, Greenville, Ohio. Filed Mar. 17, 1916. Serial No. 84,937. (Cl. 254—112.)



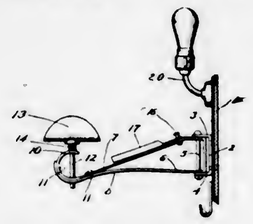
1. A jack comprising a hollow standard, a bracket extending laterally from the upper end thereof, a shank movable vertically in said standard, a vertically oscillating lever below the bracket for raising and lowering the shank, a substantially upright dog pivoted at its lower end to the aforesaid bracket and coöperating at its upper end with the shank to retain the latter in adjusted position, and a dog controlling finger pivoted to said dog

to one side of its pivot, said finger being adapted to be swung upwardly into contact with the back of the dog to force the latter into operative relation with the shank at the end of each raising stroke of the lever, said finger being also adapted to be swung downwardly and thereby serving to retract the dog upon each lowering stroke of the lever, said finger when in the last named position being disposed in the upward path of the lever, whereby it will be struck by the latter to again apply the dog at the end of each lowering stroke of said lever.

2. A jack comprising a shank, a vertically oscillating lever for raising and lowering the same, a pivoted dog above the lever for holding the shank in adjusted position, and an elongated weight pivoted at one end to said dog to one side of its pivot and capable of either resting on said dog or depending therefrom to either apply or release said dog, said weight when depending from the dog being in the upward path of the lever to again apply said dog after releasing it.

3. A jack comprising a vertically movable shank, a vertically oscillating lever for raising and lowering said shank, a dog above said lever for holding said shank in adjusted position, and a finger pivoted to said dog to one side of its pivot, said finger being capable of depending from the dog into the upward path of the lever and being also capable of resting on said dog.

1,223,562. TELEPHONE ARM-REST. MAGNIEN CLEMENCE, Kansas City, Mo. Filed June 2, 1916. Serial No. 101,254. (Cl. 248—20.)



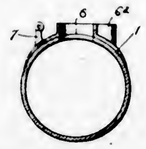
1. The combination with a base bracket, of a bracket pivotally mounted in the base bracket, having arms extending therefrom, one of said arms being backturned over its body portion and the backturned part and the body portion being provided with apertures, a post slidably mounted in said apertures, a seat on said post, a cushion interposed between the seat and the backturned portion of the body, and means for securing the free ends of said bracket together.

2. The combination with a wall board, of a bracket fixed on the wall board, and having forwardly projecting ears, a bracket pivotally mounted between said ears, and having extending arms, the said arms being curved at their forward ends and the upper arm being backturned over the body portion thereof, a post slidably mounted in the body and back-turned portions of said arm, a seat carried by said arm, a seat carried by said post, and a cushion interposed between the seat and back-turned portion of the arm.

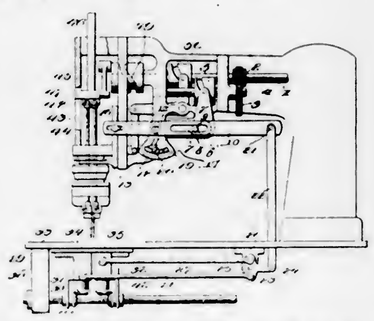
1,223,563. KEY-SEAT FOR WIND MUSICAL INSTRUMENTS. CHARLES G. CONN, Elkart, Ind. Filed June 8, 1915. Serial No. 32,922. (Cl. 84—7.)

1. In combination with a metallic wind musical instrument tube of substantially cylindrical form, having suitably located key-openings in the cylindrical wall; a metal plate conforming to the cylindrical surface of the instrument and intimately united therewith, and having key-openings registering with the key openings of the instrument: said plate having formed thereon, around its said key-openings, integral raised flanges providing key seats.

2. In combination with a metallic wind musical instrument tube of substantially cylindrical form having suitably located key-openings in the cylindrical wall; a metal plate conforming to the cylindrical surface of the instrument and intimately united therewith, and having key-openings registering with the key openings of the instrument; said plate having formed thereon, around its said key-openings, integral raised flanges providing key seats, the bases of said key seats being intimately united through their integral attaching plate to the defining margins of the key-openings in the instrument wall.



1,223,564. SEWING-MACHINE ROBERT CORNELY, Paris, France. Filed Aug. 13, 1914. Serial No. 856,608. (Cl. 112—7.)



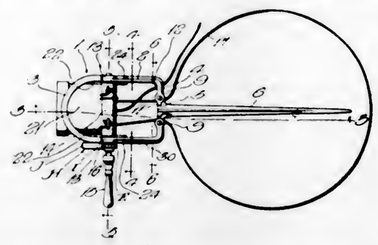
1. In a sewing machine, the combination of vertically reciprocating needle bars, needle separating and needle oscillating means including a lever having a crank pin support, the movement of which support effects simultaneous adjustment of the separating and oscillating means to produce seams of different widths.

2. In a sewing machine, the combination of vertically reciprocating needle bars, needle separating and needle oscillating means including a lever having a crank pin support, the movement of which support effects simultaneous adjustment of the separating and oscillating means to produce seams of different widths, and a graduated sector adapted to lock said crank pin support in a predetermined position.

3. In a sewing machine, the combination of vertically reciprocating needle bars, needle separating and needle oscillating means including a lever having a crank pin support, and shuttle mechanism having connection with said lever, the movement of said lever support effecting simultaneously the adjustment of the separating and oscillating means and of the shuttle mechanism.

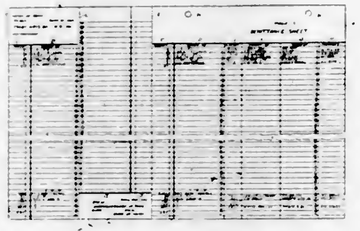
1,223,565. SHOCK-COMPRESSOR. DAVID C. CURREN, Prospect, Ohio. Filed Mar. 27, 1916. Serial No. 87,036. (Cl. 100—31.)

A shock compressor comprising a substantially rectangular-shaped frame, an integral thrust pin projecting from the front of said frame, said front of the frame having a notch in its upper edge with an inclined bottom face, the front of the frame having spaced openings therethrough spaced on opposite sides of the notch, one of said openings communicating with the notch and disposed adjacent the lower edge of the inclined face in its bottom, vertically disposed pulleys mounted in said openings, a transversely disposed rotatable drum mounted in said frame, and a compressing cord surrounding the shock with its



opposite ends secured to said drum and adapted to operatively engage the pulleys through the front of the frame.

1,223,566. BANK-REMITTANCE SHEET. IRA L. DARBY, Pawhuska, Okla. Filed Aug. 24, 1914. Serial No. 858,392. (Cl. 11—19.)



1. A bank remittance sheet comprising a main portion having its opposite faces ruled for check entries and forming opposite pages in relatively inverted relation, and detachable similarly ruled portions providing correspondingly inverted pages adapted to be folded upon said opposite faces, respectively, in manifolding relation.

2. A bank remittance sheet comprising a main portion having its opposite faces ruled for check entries and forming opposite pages in relatively inverted relation, and a detachable similarly ruled portion providing correspondingly inverted pages divided by a weakened line and adapted to be folded upon said opposite pages, respectively, of said main portion in manifolding relation.

3. A bank remittance sheet comprising a main portion provided with a binder margin at one end and having its opposite faces ruled for check entries and forming opposite pages in relatively inverted relation, and a detachable portion carried by one side of said main portion, said detachable portion being similarly ruled to provide correspondingly inverted pages and the latter being separated by a weakened line and adapted to be folded upon said opposite pages, respectively, of said main portion in manifolding relation.

1,223,567. METHOD OF TREATING VANADIUM-BEARING ORES. ROYAL S. DAVIS, Newmire, Colo., assignor to Primos Chemical Company, Primos, Pa., a Corporation of Pennsylvania. Filed July 28, 1914. Serial No. 853,725. (Cl. 75—17.)

1. The herein described process of treating vanadium ores, which consists in subjecting the ores to a chloridizing roast, and then in applying in the presence of moisture the solvent fumes given off to the roasted ore to produce a soluble vanadate.

2. The herein described process of treating vanadium ores, which consists in subjecting the ores to a chloridizing roast, in cooling the fumes given off in such roast, and then in applying the cooled fumes to the roasted ore in the presence of moisture to form a soluble vanadate.

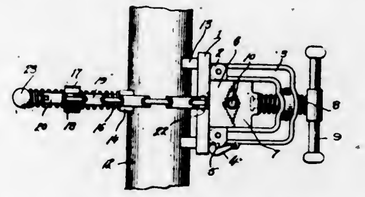
3. The herein described process of treating vanadium ores, which consists in subjecting the ores to a chloridizing roast, in cooling the fumes given off in such roast, in scrubbing the fumes, and then in applying the resultant solution to the roasted ore to form a soluble vanadate.

4. The herein described process of treating vanadium ores, which consists in subjecting the ores to a chloridizing roast, in leaching the roasted ore, and then in applying to the resultant residue the fumes given off in the roast to form a soluble vanadate.

5. The herein described process of treating vanadium ores, which consists in subjecting the ores to a chloridizing roast, in leaching the roasted ore, and then in applying to the resultant residue a solution obtained by scrubbing the fumes given off in the roast with water to form a soluble vanadate.

[Claims 6 and 7 not printed in the Gazette.]

1,223,568. PIPE-VISE. JOHN A. DE POINT and ERNEST C. VAN HEE, Sodus, N. Y. Filed Aug. 22, 1916. Serial No. 116,309. (Cl. 81—19.)



A device of the character described including a vise-carrying base, post-engaging jaws integral with the base, chains connected to the sides of the base, a chain-engaging member having the respective ends slotted for receiving the links of the chains, a screw-bar adjustably mounted in the chain-engaging member, a post-engaging jaw forming a bearing for the screw-bar, and a handle rigid with the screw-bar for consequently holding the base in position.

1,223,569. ENVELOP. ABRAHAM DEUTSCHMEISTER, New York, N. Y. Filed June 21, 1916. Serial No. 104,860. (Cl. 229—68.)



1. An envelop comprising a face portion and a back portion, a slot formed in one of said portions, and a normally concealed flap freely disposed at the interior of the envelop opposite said slot, whereby the matter may be inserted into the envelop and retained by the concealed flap.

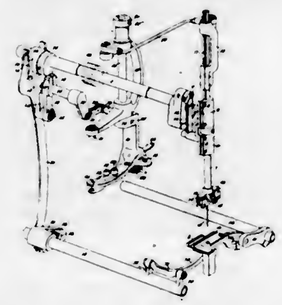
2. An envelop comprising a face portion and a back portion, a slot formed in one of said portions, and a normally concealed flap freely disposed at the interior of the envelop opposite said slot, said flap being of a proportion so as to pass from the interior of the envelop through the slot to the exterior so as to lock the contents within the envelop in place.

3. An envelop comprising a face portion, a back portion, a flap freely extending in the interior of the envelop from one of the lateral edges of one of said portions, there being a slot formed in one of said portions in juxtaposition with said flap, gummed flaps on the edges of said portions sealing the edges of the envelop about the entire perimeter of the same, said first mentioned flap being of a size to pass from the interior of the envelop through the slot so as to lock the contents of the envelop within the same.

4. An envelop comprising a face portion, a back portion, gummed flaps extending from the edges of the face portion, a flap extending freely from one of the edges of the back portion within the envelop and normally concealed therein, said back portion being formed with a slot adjacent said flap through which slot the flap may pass to the exterior of the envelop to lock the contents of the envelop within the same.

5. An envelop comprising a face portion, a back portion, gummed flaps extending from the edges of the face portion to seal the envelop about its perimeter, a flap extending from one of the edges of the back portion within the envelop and normally concealed therein, said back portion being formed with a slot adjacent said flap through which the flap can pass to the exterior of the envelop to lock the contents of the envelop within the same, the gummed flap which is attached to the edge of the back portion adjacent the slot being formed with portions passing across the ends of the slot to reinforce the material thereabout.

1,223,570. FEEDING MECHANISM FOR SEWING-MACHINES. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Original application filed May 16, 1913, Serial No. 767,963. Divided and this application filed Oct. 8, 1913. Serial No. 794,029. (Cl. 112—8.)



1. In a sewing machine, in combination, stitch-forming mechanism, feeding mechanism, and feed-controlling means distinct from said feeding mechanism and comprising a cam provided with a plurality of tracks, and a member connected with the feeding mechanism and carrying a plurality of relatively adjustable followers each adapted for engagement with one of said cam-tracks.

2. In a sewing machine, in combination, stitch-forming mechanism, feeding mechanism, and feed-controlling means distinct from said feeding mechanism and comprising a cam provided with a plurality of tracks, a primary lever connected with the feeding mechanism and carrying a follower in register with one of said cam-tracks, and an auxiliary lever mounted upon and adjustable relatively to the primary lever and carrying a follower in register with another of said cam-tracks.

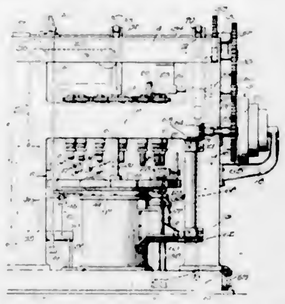
3. In a sewing machine, in combination, stitch-forming mechanism, feeding mechanism, and feed-controlling means comprising a cam provided with a plurality of tracks, actuating means for said cam, a member connected with the feeding mechanism and carrying a plurality of relatively adjustable followers each adapted for engagement with one of said cam-tracks, and means for disconnecting said cam from its actuating means.

4. In a sewing machine, in combination, stitch-forming mechanism, feeding mechanism comprising a feeding element and means whereby its normal length of operative movement may be adjusted, and feed-controlling means comprising a cam having a plurality of tracks, and a member connected with an element of the feeding mechanism and carrying a plurality of relatively adjustable followers each disposed in register with one of said cam-tracks.

5. In a sewing machine, in combination, stitch-forming mechanism, feeding mechanism comprising a feeding member and adjusting means whereby the normal length of operative movement may be determined, and controlling means connected with the feeding-mechanism independently of its adjusting means and acting on said feeding mechanism to temporarily interrupt the coöperation of its elements and thereby prevent motion of the feeding member in the direction of feed at predetermined intervals.

[Claims 6 and 7 not printed in the Gazette.]

1,223,571. TAPER-FINISHING MACHINE. WILLIAM W. DOOLITTLE, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 24, 1916. Serial No. 93,133. (Cl. 29—38.)



1. In a machine of the character described, and in combination, a drill frame and a work support located with reference to each other and relatively movable, a plurality of straight drills in said frame of different diameters constructed and arranged for taking successive cuts in the work in differing depths, whereby to leave steps of uncut stock in each of the cuts, and a taper finishing device for reaming the uncut stock to the desired finish diameter.

2. In a machine of the character described, and in combination, a drill frame and a work support operatively disposed for relative rotative and reciprocative movement, means for taper finishing tapered cylindrical portions of the work including a series of differently diametered drills rotatively carried in said frame and constructed and arranged with reference to said support for successively taking progressive cuts in relatively differing depths in said cylindrical portions, whereby to leave superposed annular steps of uncut stock projecting beyond the plane of the desired finish diameter, means for simultaneously rotating said drills, means for imparting relative movement to said table, and means for dressing down said steps to the desired finish diameter.

3. In a machine of the character described, the combination of a drill frame and a work support located with reference to each other and relatively movable in horizontal and vertical planes, and means for taper finishing tapered cylindrical portions of the work comprising a plurality of straight drills and one or more taper reamers rotatively carried in said drill frame and constructed and arranged respectively with relation to said table and the work for taking successive vertical cuts at different horizontal depths in said tapered cylindrical portions and for reaming the remaining uncut portions of stock to the finish taper diameter.

4. In a machine of the character described, the combination of a main frame, a drill frame thereon and a movable work support located with reference thereto, a group of drills rotatably carried in said drill frame, and to the cutting action of which the work is successively and simultaneously subjected when positioned on the table, said drills projecting from the drill frame toward the table and presenting cutting faces of gradually diminishing diameters at differing depths to the work, means on said main frame for holding said support during the cutting action of the drills, and means operatively associated with said work support for retracting the work table and the work from the drills as a cut is taken by the same in said work.

5. In a machine of the character described, and in combination, a drill frame, a group of spindles therein, a work table disposed with reference thereto, said table and frame being relatively movable, and means for successively taking cuts on cylindrical tapered portions of the work, comprising drills in said spindles presenting straight cutting faces of gradually diminishing diameters to the work and in echelon with reference to said table.

[Claims 6 to 15 not printed in the Gazette.]

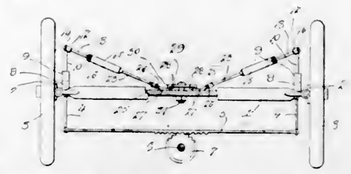
1,223,572. SPRING-FORK FOR CYCLES, MOTOR-CYCLES, AND THE LIKE. ARTHUR DREW, deceased, by Edith A. Osborne and Samuel Nield, executors, Wythall, England, assignors of one-half to William Holder Osborne and one-half to Edith Augusta Osborne, Wythall, England. Filed Aug. 31, 1914. Serial No. 859,498. (Cl. 208—97.)



1. A spring supporting device for the front wheels of cycles and the like comprising in combination a steering head, a fork, a link pivotally supported from the fork and connected to the lower extremity of the steering head, a second link pivotally connected to the fork and to the upper extremity of the steering head, said head, and fork links forming a parallelogrammic mechanism, a member having a pivotal connection with one of said links and which is itself pivotally movable about an axis which is near to the end of the parallelogrammic mechanism at which the connection of the link with the oscillatory member occurs, but which is not coincident with the axis of pivotal connection between the link and oscillatory member, and resilient means for resisting the upward movement of the fork.

2. A spring supporting device for the front wheel of cycles and the like comprising in combination a steering head, a fork, a link pivotally supported from the fork and connected to the lower extremity of the steering head, a second link pivotally connected to the fork and to the upper extremity of the steering head, said head, fork and links forming a parallelogrammic mechanism, a member having a pivotal connection with one of said links and which is itself pivotally movable about an axis which is near to the end of the parallelogrammic mechanism at which the connection of the link with the member occurs, but which is not coincident with the axis of pivotal connection between the link and oscillatory member, resilient means for resisting the upward movement of said fork, and resilient means for resisting the motion of said member which occurs at the time of the upward movement of said fork.

1,223,573. FRONT-WHEEL CONTROL FOR MOTOR-VEHICLES. HERVEY H. ELDRIDGE, Taylor, N. D., assignor of one-half to August Wegner, Taylor, N. D. Filed Sept. 30, 1916. Serial No. 123,169. (Cl. 21—200.)



1. The combination with a transversely shiftable steering rod and a vehicle axle connected therewith, of a plate secured to the axle and having right-angularly extending flanges thereon, plates having lugs thereon having interlocking engagement with the flanges, cylinders carried by the plates, pistons and piston rods movable in the cylinders, connections between the transverse shiftable steering rod and the piston rods, and resilient means mounted in the cylinders and normally urging the piston rods to a position to retain the steering rod in a neutral position.

2. The combination with a transversely shiftable steering rod and a vehicle axle connected therewith, relatively small tubes operatively connected with the axle, relatively large cylinders connected with the tubes, pistons and piston rods movable in the cylinders and tubes, connections between the steering rod and piston rods, and resilient means mounted in the cylinders and normally retaining the steering rod in a position to cause the vehicle to travel in a forward path.

3. The combination with a transversely shiftable steering rod, and a vehicle axle connected therewith, of cylinders operatively connected therewith and extending in divergent directions from the same, pistons and piston rods movable in the cylinders, rods connected with the ends of the axle and extending forwardly of the same and having pivotal connection with the outer extremities of the piston rods, and expansible means mounted in the cylinders and normally urging the piston rods to a position to retain the steering rod in its normal position.

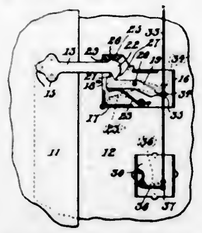
4. The combination with a transversely shiftable steering rod and a vehicle axle connected therewith, a plate mounted thereon and having inwardly extending flanges, plates lying against the axle and having lugs thereon having interlocking engagement with the flanges, tubes pivotally connected with the plates, cylinders carried by the tubes, pistons and piston rods movable in the cylinders, rods extending forwardly from the axle and having pivotal connection with the piston rods, and means in the cylinders for normally urging the piston rods to a position to retain the steering rod in its normal position.

5. The combination with a transversely shiftable steering rod and a vehicle axle connected therewith, of cylinders mounted in the axle and extending in a horizontal plane and in divergent relation, pistons and piston rods mounted in the cylinders, forwardly extending rods connected with the axle and pivotally connected in the outer extremities of the piston rods, and coil springs mounted in the cylinders and bearing against the pistons where upon shifting the steering rod in one direction, one of the springs will be compressed and return the steering rod to its initial position.

1,223,574. SHOE-FASTENING DEVICE. PETER W. FEDCZYSZYN, Medora, Manitoba, Canada. Filed July 11, 1916. Serial No. 108,740. (Cl. 24—205.)

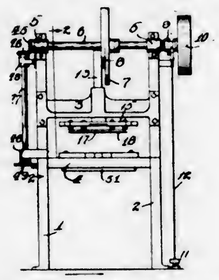
1. In a shoe fastener, a latch bar adapted to be attached at one end to a shoe upper and having a head on its free end provided on the lower face with a V-shaped projection and on its upper face with an inverted V-shaped projection, a receiving casing for the headed end of said latch bar having an entrance slot and provided in its top wall with a seat for the inverted V-shaped pro-

jection of said latch bar, a locking bolt pivoted within the casing provided with an inverted V-shaped lug to engage the V-shaped projection on the latch bar, and a spring within the casing bearing against the locking bolt.



2. In a shoe fastener, a latch bar, a receiving casing for the free end of said casing having a seat, a head on the latch bar having a projection to engage said seat, a locking bolt in the casing, a lug on said bolt and a projection on the latch bar to engage said lug, and a spring in the casing normally holding the bolt in engagement with the latch bar and the latch bar in engagement with the casing.

1,223,575. MARGINAL FOLDING DEVICE. MAX F. GARLIN, Chicago, Ill. Filed Dec. 18, 1915. Serial No. 67,530. (Cl. 223—15.)



1. In a machine of the class described, a movable presser plate, a table to receive the fabric to be folded and creased, bars movable inwardly to fold the margin of the fabric over said presser plate, and means operated by the presser plate moving mechanism for imparting pressure toward said table both to said presser plate and to said bars.

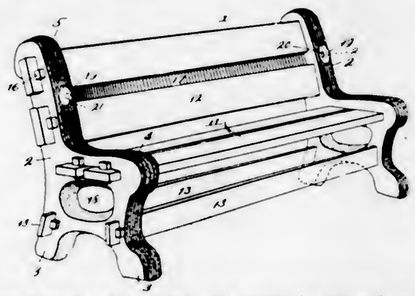
2. In a machine of the class described, a movable presser plate, bars adapted to be moved inwardly over said presser plate after a descent of the same, and means operated by the presser plate moving mechanism for imparting yielding pressure to said presser plate and to said bars to thrust the latter downwardly against the presser plate and crease the inwardly folded margin of the fabric therebetween.

3. In a machine of the class described, a table, bars yieldably and slidably mounted thereon, means for moving said bars inwardly toward one another, a presser plate adapted to be moved toward said table to press the fabric placed thereon, and a drive for said presser plate and said bars so timed as to move said bars inwardly over the presser plate to fold and crease the margin of the fabric thereover after the descent of the presser plate, to depress said bars and presser plate simultaneously and to move said bars outwardly and release the same prior to ascent of said presser plate.

4. In a machine of the class described, a table, a presser plate mounted thereabove adapted to move downwardly thereon, a yieldable support for said presser plate, bars yieldably mounted upon said table and slidable thereon, a drive to move said presser plate downwardly and thereafter move said bars inwardly and means to force said bars momentarily downwardly upon said presser plate, said drive acting thereafter to retract said bars after release from said presser plate and move said presser plate upwardly to initial position.

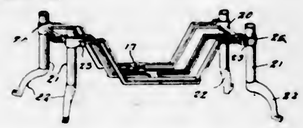
5. In a machine of the class described, a frame, a table mounted thereon, a drive shaft mounted at the upper end of the frame, a presser plate vertically movable in said frame and yieldably mounted, a cam mounted on said drive shaft and adapted to impart movement to said presser plate to lower and raise the same, and bars yieldably and slidably mounted upon said table and adapted to be moved inwardly over the margin of said presser plate after the descent of the latter to fold the margin of a fabric thereover, said bars being adapted to be thrust downwardly thereon and thereafter retracted to permit elevation of said presser plate to initial position.

1,223,576. COMPOSITE BENCH. STERNE H. GARTRELL, Kansas City, Mo. Filed Feb. 7, 1916. Serial No. 76,604. (Cl. 155—3.)



In a bench, end members, rails connecting the end members, seat forming planks and back planks also connecting the end members, and a metal sheet extending across the rear faces of the back planks and having its top and bottom edges bent outwardly and engaged over the top and bottom edges of the back planks and having its ends engaged with the inner faces of the end members to hold the metal sheet against movement.

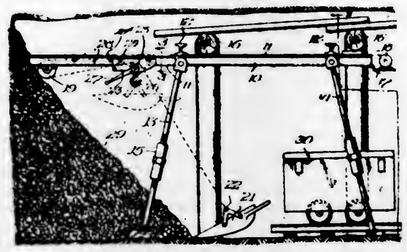
1,223,577. STAND FOR MOVING-PICTURE MACHINES. PETER R. GONSKY, Edmonton, Alberta, Canada, assignor to Endlessgraph Manufacturing Company, Detroit, Mich. Filed July 3, 1916. Serial No. 107,380. (Cl. 248—41.)



A stand of the character described comprising a base frame made in two parts connected together, each part comprising two legs and intermediate frame portions, one of the parts having a worm screw mounted therein; and a top section including two end frames and one side frame, the side frame having a bored and threaded part to receive said screw for adjustment of the top section upon the base, said top section having legs at each corner slidably engaged with the base section, and means to clamp said legs in adjusted positions.

1,223,578. LOADER. ALEXANDER M. GOW, Duluth, Minn., and FRANK E. KEESE, Ishpeming, Mich. Filed Mar. 13, 1916. Serial No. 83,963. (Cl. 214—13.)

1. In a mine loading device, the combination of a beam providing a runway, means for rigidly and readily removably mounting said beam relative to the walls of the space containing it, a car track on the floor of the space beneath said beam, a motor mounted above said track to permit free passage of a car on the track therebeneath, and car loading means operable by said motor and movable on said runway, substantially as described.



2. In a mine loader, the combination of a beam adapted to be rigidly located with its inner end in the extreme inner end of the drift, a tram car track beneath the outer end of said beam, a motor mounted above said track, a scoop, and cable connections between said motor and scoop, the parts being so arranged that ore located beneath the inner end of said beam is transported by the scoop to a point above a car on the track beneath the outer end of the beam and there dumped, substantially as described.

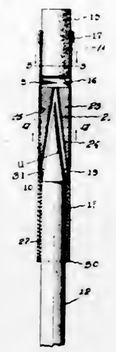
3. In an underground loading machine, a rearwardly inclined, vertically adjustable, trolley carrying, hollow track; transverse members secured to the track, hinged adjustable legs secured to the members, a sheave wheel secured to the front end of the track, a trolley adapted to travel on the track, a sheave carried by the trolley, a drum secured to the rear end of the track, means for driving the drum, a rope adapted to be wound on the drum, passing longitudinally through the hollow track and over each sheave, a scoop secured to the free end of the rope, and means on the trolley for securing the scoop in raised position.

4. In a device of the class described, the combination of a track member and adjustable legs attached to said track member, said track comprising two angular members in spaced relation, a sheave mounted on one end of said track, a drum mounted at the opposite end of said track, a trolley adapted to travel on said track, a sheave mounted on said trolley, a rope wound on said drum and extending between the track members and over the sheaves, a scoop to which the other end of said rope is attached, means on said trolley for supporting said scoop when in raised position and means connected to said drum for the operation thereon, substantially as described.

1,223,579. ATTACHMENT FOR PENCILS. MICHAEL A. GRYNIK, Ladywood, Manitoba, Canada. Filed May 6, 1916. Serial No. 95,901. (Cl. 120—93.)

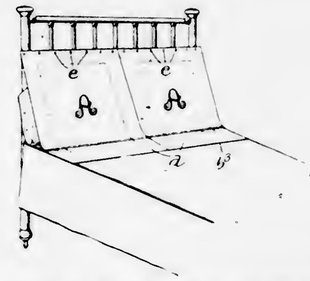
1. An attachment for pencils including a ferrule provided intermediate its length with a longitudinal slot, a pencil sharpening device mounted in the ferrule in position to discharge shavings through the slot when the attachment is utilized as a pencil sharpener, and means in the ferrule for normally holding the end of a pencil inserted therein in spaced relation to the pencil sharpening device, said means being removable from the ferrule and pencil to permit insertion of the pencil in the sharpening device.

2. An attachment for pencils including a ferrule provided intermediate its length with a longitudinal slot, a pencil sharpening device mounted in the ferrule in position to discharge shavings through the slot when the attachment is utilized as a pencil sharpener, and means in the ferrule for normally holding the end of a pencil inserted therein in spaced relation to the pencil sharpening device, said means including a second ferrule adapted to receive either the sharpened or unsharpened end of a pencil and seating within the end of the first ferrule, the second ferrule, at its outer end, having a stop flange engaging the end of the first ferrule and, at its inner end, an inward projection adapted to engage a pencil.



3. An attachment for pencils including a ferrule provided intermediate its length with a longitudinal slot, the ferrule about the slotted portion being formed with instruck projections, a frusto-conical pencil sharpening member having an inturned cutting edge and having outwardly punched projections seating within the intermediate portion of the ferrule in position to discharge shavings through the slot thereof, and an anchoring plug formed from molten metal poured between the sharpening member and intermediate portion of the ferrule and embedding the projections of both to anchor the sharpening member against turning movement independent of the ferrule.

1,223,580. PILLOW-SHAM HOLDER. ANNA GUTH, New York, N. Y. Filed Sept. 7, 1915. Serial No. 49,194. (Cl. 5—33.)



1. In a holder for fabric articles of the class described, a rectangular frame having a top cross head member which is composed of separate parts separated by a central portion of cork or other similar material, said frame being provided with a fabric covering the front and back portions of which are brought together at the bottom of the frame and extended to form an apron, and said fabric covering being open at the top and extending beyond the cross head member and adapted to be folded backwardly on said cross head member and secured thereto by pins or similar devices which pass into said cork or similar material.

2. In a holder for fabric articles of the class described, a rectangular frame having a top cross head member which is provided with a part of cork or similar material, said frame being provided with a fabric covering adapted to serve as a backing for articles attached to said frame, and one end of which is open to permit the insertion of

said frame thereinto, and means for securing said open end of the fabric covering to the top cross head member of the frame.

1,223,581. WATCHMAN'S CLOCK. FRANKLIN HARDINGE, Chicago, Ill., assignor to Hardinge Brothers, Chicago, Ill., a Corporation of Illinois. Filed Nov. 16, 1912. Serial No. 731,712. (Cl. 234—39.)

1. In a watchman's clock, the combination of record receiving means, a recording mechanism comprising a positively actuated member having a yielding pivotal support at one end, and means interposed between the actuating member and record receiving means to limit the movement of said positively actuated member.

2. In a watchman's clock, the combination of record receiving means, a recording mechanism comprising a positively actuated member for receiving a printing or embossing device, an actuating device positively engaging one end of such member, a spring support for the other end of such member, and means interposed between the actuating member and record receiving means to limit the movement of said positively actuated member.

3. In a watchman's clock, the combination of record receiving means, a recording mechanism comprising a positively actuated member having a yielding pivotal support at one end and being rounded at the other end, and means interposed between the actuating member and record receiving means to limit the movement of said positively actuated member, having rounded portions adapted to coact with said rounded end of said positively actuated member.

4. In a watchman's clock, the combination of a record receiving disk, a key for printing or embossing a character upon such disk, a member adapted to receive and supporting said key normally out of contact with the disk, a cam for positively engaging such member to force the key against the disk, and means interposed between the actuating member and disk to limit the movement of said positively actuated member.

5. In a device of the class described, the combination of a supporting platen, a clamping member adapted to slip over said supporting platen, and spring means carried by the platen adapted to engage the clamping member and retain the same in position.

[Claims 6 to 18 not printed in the Gazette.]

1,223,582. BRAKE. WILLIAM C. HEDGCOCK, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Mar. 2, 1916, Serial No. 81,598. Renewed Feb. 19, 1917. Serial No. 149,656. (Cl. 188—24.)



1. In a brake, the combination of levers and pull rods, one complete set of which is located at each side of a truck, a beam or bar connecting the two sets of riggings and a support for said rigging located intermediate the length of said bar.

2. In a brake, the combination of brake levers and connecting rods, one complete set of which is located at each side of a truck, whereby said levers are connected and apply their force at a point close to the brake shoes, beams or bars connecting the riggings on opposite sides on the truck, and supporting elements connected to said beams at a point intermediate their ends and located substantially at the longitudinal center line of the truck, substantially as described.

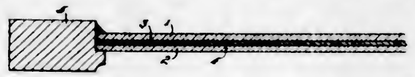
3. In a clasp brake for trucks, the combination of brake shoes applied to each side of each pair of wheels, a beam connecting each pair of shoes, brake levers, one at each end of each beam, connections between the brake levers of each side of the truck, a cylinder pull rod for each set of levers, and supporting links connected to said beams, said supporting links comprising the sole supporting means for said rigging.

4. In a brake, the combination of brake levers and connecting rods, the rods connecting certain of said levers providing a space therebetween, and a bracket connected to a rigid part of the truck and projecting into said space, whereby said rigging is guided against lateral movement, substantially as described.

5. In a brake arrangement, the combination of heads carrying shoes, a brake bar connecting adjacent heads, a brake rigging located at each side of the truck and connected to said brake bars at a point close to said head, and supporting means for said riggings and bars applied directly to said bars at a point substantially on the longitudinal center line of the truck, substantially as described.

[Claim 6 not printed in the Gazette.]

1,223,583. ALARM-GLASS. HALBERT K. HITCHCOCK, Pittsburgh, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 30, 1915. Serial No. 18,127. (Cl. 177—314.)



1. In combination a compound alarm plate comprising two sheets of glass with an interposed transparent layer of tough resistant material in which is embedded a signal wire extending back and forth through the layer.

2. In combination a compound alarm plate comprising two sheets of glass with an interposed transparent layer of material attached to the sheets, and in which is embedded a signal wire extending back and forth through the layer.

3. In combination a compound alarm plate comprising two sheets of glass with an interposed transparent layer of celluloid attached to the sheets and in which is embedded a signal wire extending back and forth through the layer.

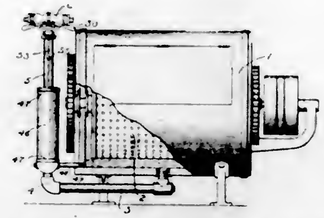
4. In combination a compound alarm plate comprising a sheet of glass to one side of which is attached a transparent sheet of tough resistant material other than glass in which is embedded a signal wire extending back and forth through the sheet.

5. In combination a compound alarm plate comprising a sheet of glass to one side of which is attached a transparent layer of insulating material other than glass having embedded therein a signal wire extending back and forth through the layer.

1,223,584. AUTOMATIC VALVE FOR WASHING-MACHINES. JOSEPH HUEBSCH and RICHARD ROOST, Milwaukee, Wis., assignors to Huebsch Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 24, 1913. Serial No. 802,644. (Cl. 137—68.)

1. In a device of the class described a casing, a plurality of main valves mounted end to end therein and communicating with a common outlet, auxiliary valves axially alined therein, piston valves connected with said main valves and operatable therewith, passages in said casing controlled by said piston valves, means for regulating the area of opening of said passages, mechanism for setting one or more of said valves independently in an adjusted

open position, and means for automatically releasing all of said open valves to closed position after a predetermined flow therethrough.



2. In a device of the class described a casing, valve seats therein, a plurality of automatically closing valves alined therein and adapted to move toward one another to closed positions in said valve seats and communicating with a common outlet, means on said casing adjustable from the exterior thereof to govern the closing movement of said valves, auxiliary valves connected in said main valves to open prior to the opening of said main valves and to close prior to the closing thereof, and means determined by the quantity of the discharge for automatically releasing all of said valves simultaneously when in open position to permit closure thereof.

3. In a device of the class described valve casings mounted end to end, a plurality of valves therein communicating with a common outlet, auxiliary valves mounted within said valves to open prior to the opening of said valves, and to close prior to the closure thereof, a piston and dash pot connected with said first mentioned valves, a release passage for said dash pot communicating around said first mentioned valves, and permitting easy opening of said first mentioned valves when said auxiliary valves are first opened and retarding the closure of said first mentioned valves after said auxiliary valves are closed.

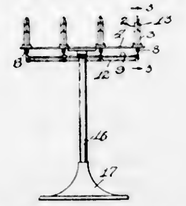
4. In a device of the class described a casing, valve seats alined therein, a plurality of independently operable valves axially alined in said casing with the valve seat ends of said valves adapted to move toward one another to engage in said valve seats and communicating with a common outlet thereof, manually operated actuating means operated independently for each of said valves, locking means therefor, acting to hold said valves in adjusted open positions, auxiliary valve passages formed in the walls of said casing acting to equalize the pressure on each side of said valves, and a float acting to release said locking means therefrom to permit automatic closing of the valves at a predetermined flow therethrough, and graduated adjusting means for the float.

5. A device of the class described embracing independent sources of fluid supply, an independent valve for each acting to control the flow therefrom, a piston forming a part of each of said valves, passages for equalizing the pressure on each side of said valves the opening and closing of which are controlled by said piston, a yoke formed on each of said valves, mechanism engaged in said yokes for locking said valves in adjusted open position, said valves alined with the yoked ends adjacent one another, a receptacle to receive the flow, an independent float tank supplied from said valves independently of the receptacle and communicating to discharge freely thereto, a float adjustably supported in said tank and mechanism operated by the float to release the valves to closed position when the level of the liquid in the receptacle reaches a predetermined height.

[Claims 6 to 18 not printed in the Gazette.]

1,223,585. HEATED HOSIERY-FORM. JOSEPH HUEBSCH. Milwaukee, Wis. Filed June 8, 1914. Serial No. 843,659. (Cl. 223—17.)

1. A device of the class described comprising a hollow form curved to form foot and leg portions, a steam pipe extending axially through said hollow form and open at its end to admit steam thereinto to heat the same, a slot in the wall of said form out of communication with the hollow interior thereof, a heel piece slidable on said form and heated thereby, and means engaging said heel piece to the form through the slot in the wall thereof.



2. In a device of the class described, a hollow internally heated hose form having a slot in the wall thereof out of communication with the hollow interior of the form, a heel member mounted slidably upon the outer surface of said form, and a pin secured in said head member and engaging in said slot to hold the heel member in position and permitting adjustment thereof.

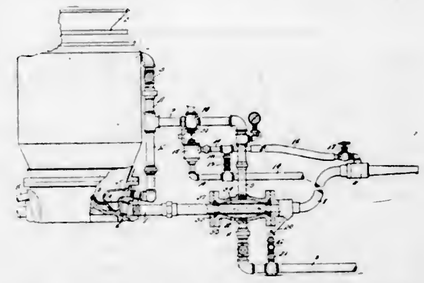
3. In a device of the class described, a hollow internally heated hosiery form comprising a curved leg and foot portion, a steam admission pipe disposed axially within the form and open at its end to admit steam thereinto and conforming to the curvature of said form, said hosiery form relatively thin in cross section and terminating in relatively sharp edges, and a heel piece having an acutely angled groove therein to fit closely over one edge of said form to receive heat therefrom and slidably mounted for adjustment thereon.

4. A device of the class described comprising a hollow form, means extending axially therethrough to admit steam thereinto to heat the same, said form relatively thin in cross section and terminating in sharpened edges, a heel member acutely grooved to fit over one of said sharpened edges capable of sliding on the form into different positions of adjustment and adapted to receive heat from the form, and a pin and slot affording the connection between said form and heel piece.

5. In a device of the class described a heated hose form terminating in sharpened edges, and a tapered slidable heel piece thereon heated by the heat from said form.

[Claims 6 and 7 not printed in the Gazette.]

1,223,586. CEMENT-GUN APPARATUS. JOHN F. JOHNSON, Pittsburgh, Pa., assignor to Pittsburgh Plate Glass Company, a Corporation of Pennsylvania. Filed Aug. 22, 1916. Serial No. 116,248. (Cl. 91—45.)



1. The combination with a cement gun having a hydrating nozzle supplied with ingredients through separate passages, of means controlled by the flow of material through one passage for regulating the flow of material through the other passages.

2. The combination with a cement gun having a hydrating nozzle supplied with fluids through separate passages, of means controlled by the flow of fluid through one passage for regulating the flow of fluid through the other passage.

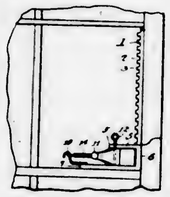
3. The combination with a cement gun having a hydrating nozzle supplied with water and air through separate passages, of means controlled by the flow of water through one passage for regulating the flow of air through the other passage.

4. The combination with a cement gun having a hydrating nozzle supplied with water through one passage and with a mixture of powdered cement and air through another passage, of means controlled by the flow of water through one passage for regulating the flow of the cement and air through the other passage.

5. The combination with a cement gun having a hydrating nozzle supplied with water through one passage and with a mixture of powdered cement and air through another passage, of means controlled by the flow of water through one passage for proportioning the flow of cement and air through the other passage with respect to the flow of water.

[Claims 6 to 17 not printed in the Gazette.]

1,223,587. VENTILATION WINDOW-LOCK. GEORGE WILLIAM JORDAN, Cincinnati, Ohio. Filed Apr. 10, 1916. Serial No. 90,159. (Cl. 16—30.)

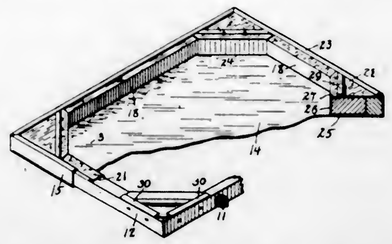


A window lock comprising, in combination with two relatively movable sashes, a rack fastened vertically along one sash, a lock body having a spaced-apart top and base, secured to the top of the other sash near said rack, a lever pivoted between said top and base to swing laterally and make locking engagement with said rack to hold said sashes relatively immovable in different relative positions, a spring engaging with said lever and with said lock body to cause said lever to engage with said rack, but yieldable to allow said lever to be disengaged from said rack, said lever extending across the crack between the two sashes, a pin inserted down through said top and said lever, and preventing disengagement of said lever from said rack, and flexible means securing said pin to said lock body but allowing it to be readily inserted into or withdrawn from said top and lever.

1,223,588. WASHTUB-COVER. JACOB KANSTER, Newark, N. J., assignor of one-third to Thomas J. Walsh and one-third to Frank Walsh, Newark, N. J. Filed July 5, 1916. Serial No. 107,503. (Cl. 220—9.)

1. In a washtub cover, a substantially rectangular wooden frame and a covering therefor of sheet metal extending over the top of the frame and having a marginal extension downward over the sides of the frame, said margin being turned inwardly and provided with a hook, and a plurality of substantially U-shaped sheet metal members having one leg longer than the other, the shorter leg being tucked under the wooden frame and between it and the top cover and the longer leg being provided with a hook which together with the first named hook are secured together in a double interlocked seam.

2. In a washtub cover, a wooden frame, a sheet metal covering therefor extending over the top and the outer sides, and sheet metal members covering the under sides of the frame and extending upwardly close to and covering the inner sides thereof and being interlocked with the covering for the top and outer sides in a double seam extending about and reinforcing the cover at the bottom thereof.

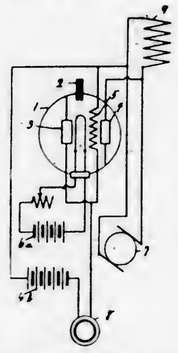


3. In a washtub cover, a wooden frame, a sheet metal covering therefor extending over the top and the outer sides, and sheet metal members tucked between said covering and the top of the frame and covering the inner and under sides of the frame and double seamed to the top and outer sides in a double seam extending about the under side of the cover at substantially the peripbery thereof.

4. In a washtub cover, a wooden frame comprising corner blocks, a sheet metal covering therefor extending over the top and outer sides, and sheet metal members covering the inside and the bottom of the frame and corner blocks and being interlocked with the covering for the top and outer sides in a double seam on the bottom side of the cover.

5. In a washtub cover, a substantially rectangular frame including corner blocks, a covering therefor of sheet metal extending over the top and outer sides of the frame, sheet metal coverings for the inner and under sides of the frame tucked between the top covering and the frame and interlocked in the frame bottom with the covering for the outer sides and sheet metal coverings for the corner blocks tucked between the top covering and the frame and covering the inner sides of the blocks, and sheet metal members double seamed therewith on the bottom of the corner blocks and also double seamed with the covering for the outer sides, said top covering having a groove formed therein about the inner margin of the frame.

1,223,589. SIGNALING DEVICE. AUGUST J. KLONECK, New York, N. Y. Filed Jan. 28, 1914. Serial No. 814,989. (Cl. 250—36.)



1. A signaling device, consisting of a receptacle having inclosed therein two arcing electrodes, incandescent means and a blow out coil.

2. A signaling device, consisting of a receptacle having inclosed therein a plurality of arcing electrodes and incandescent means, one of said electrodes being a blow out coil, said coil being adapted to produce a magnetic field within said receptacle.

3. A signaling device, consisting of a receptacle having inclosed therein a plurality of arcing electrodes and incandescent means, one of said electrodes being a blow out coil, said coil being arranged between the incandescent means and another electrode and adapted to produce a magnetic field between the latter.

4. A signaling device, consisting of a receptacle having inclosed therein a plurality of arcing electrodes and incandescent means, one of said electrodes being a blow out coil, said coil being supported at both ends by said receptacle and adapted to produce a magnetic field between said electrodes.

5. A signaling device, consisting of a receptacle having inclosed therein a plurality of arcing electrodes and incandescent means, and a blow out coil, one end of said coil being in connection with another electrode.

[Claims 6 to 8 not printed in the Gazette.]

1,223,590. [WITHDRAWN.]

1,223,591. WELL-BORING STEM. MAHLON E. LAYNE, Houston, Tex. Filed Dec. 1, 1913. Serial No. 803,889. (Cl. 225—31.)



1. In combination in a well boring stem, a pair of tubes, reinforcing tubular coupling means at the ends of the tubes having a tapering screw connection, the interior diameter of the reinforcing coupling means at their meeting ends being less than the interior diameter of the tubes, with a gradually increasing diameter from the portions of reduced diameter to the other ends of the reinforcing means.

2. In combination in a well boring stem, a pair of tubes, reinforcing coupling means at the ends of the tubes having a tapering screw connection, the said coupling means being tapered internally at their outer ends and having their interior diameter at their inner ends materially reduced from that of the interior diameter of the tubes.

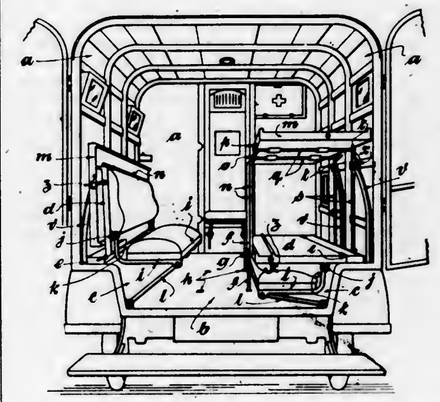
3. In combination in a well boring stem, a pair of tubes, reinforcing coupling means at the ends of the tubes having a tapering screw connection, the said coupling means being tapered internally at their outer ends and having their interior diameter at their inner ends materially reduced from that of the interior diameter of the tubes, and the exterior diameter of the coupling means being substantially the same as that of the said tubes.

4. In combination in a well boring stem, a pair of tubes, a reinforcing coupling means at the end of one tube having a tapering externally threaded portion and a cylindrical guide portion in advance of the threaded portion, and a second reinforcing coupling means at the end of the other tube having a tapering internally threaded portion and a portion to the rear thereof formed to receive and fit the said guide portion on the first coupling means.

5. In combination in a well boring stem, a pair of tubes, a reinforcing coupling means at the end of one tube, having a tapering externally threaded portion and an external stop portion, a second reinforcing coupling means at the end of the other tube having an internally tapering threaded portion and a stop portion opposing the stop portion on the other coupling means, and a plurality of washers between the said stop means, clearance being provided in the second coupling means opposite the end of the first mentioned coupling means whereby the coupling means may be screwed farther together on the removal of one of the washers.

[Claims 6 and 7 not printed in the Gazette.]

1,223,592. AMBULANCE-VEHICLE. ROBERT WALTER DICKSON LESLIE, London, and GERALD ALFRED CHILD, Southampton, England. Filed Dec. 28, 1916. Serial No. 139,430. (Cl. 21—80.)



1. In ambulance vehicles, a vehicle body, a stretcher tray hingedly connected to the vehicle body and on one side adapted to serve as a tray and on the other side adapted to form a seat back, a seat adapted to lie below said tray when lowered, links connecting said seat to said tray, further links connecting said seat to the vehicle body, the said links when the tray is raised imparting a vertical movement to the seat while holding it horizontal, a further stretcher tray above the first named tray and means for supporting said tray, said upper tray-supporting means allowing of the tray being raised and lowered bodily in the arc of a circle, and also allowing of the tray when in the raised position being folded against the vehicle body, substantially as herein set forth.

2. In ambulance vehicles, a vehicle body, a stretcher tray hinged thereto, a seat hingedly connected to said tray, links connecting said seat to a fixed part of the vehicle body, a superimposed stretcher tray, cross bars revolubly mounted below said second tray, swinging stanchions to which said cross bars are attached, means to support the tray in the raised position, and hinged means to permit said tray to be folded against the wall of the vehicle, substantially as described.

3. In ambulance vehicles, a vehicle body, a stretcher tray hinged thereto, a seat hingedly connected to said tray, links connecting said seat to a fixed part of the vehicle body, a superimposed stretcher tray, cross bars revolubly mounted below said second tray, swinging stanchions to which said cross bars are attached, the front stanchions being longer than the rear stanchions, quadrants fixed to the wall of the vehicle, projections on the outer stanchions engaging the quadrants, and means

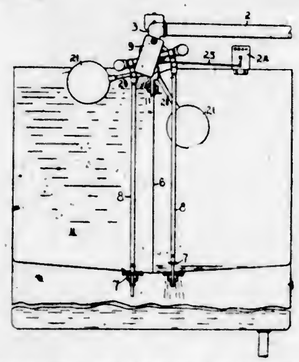
to retain the tray in the raised position, substantially as described.

4. In ambulance vehicles, a vehicle body, a stretcher tray hingedly connected to said body, one face of which is adapted to form a seat back, a seat which lies below said tray when the tray is lowered, links connecting the seat to said tray, further links connecting the front of the said seat to the vehicle body at points below the rear of the seat, a further stretcher tray above the first named tray, swinging stanchions pivotally connected to the vehicle body near the rear edge of the lower tray, means for hingedly connecting the outer side of the tray to the upper end of the said sanchions, horizontal cross-bars extending below the tray and hingedly connected to the upper end of the said stanchions, means below the tray for hingedly connecting the tray to the cross rods, further stanchions supporting the cross rods and tray on the inner side of the tray, said stanchions being pivotally connected to the lower tray, and said cross rods being detachably connected to said stanchions, quadrant guiding means adjacent to the stanchions and means on the stanchions adapted to automatically engage the said quadrant guiding means and support the tray in the required position, substantially as herein set forth.

5. In ambulance vehicles, a vehicle body, a stretcher tray hingedly connected to said body, one face of which is adapted to form a seat back, a seat which lies below said tray when the tray is lowered, links connecting the seat to said tray, further links connecting the front of the said seat to the vehicle body at points below the rear of the seat substantially as herein set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,223,593. LIQUID-WEIGHER. GEORGE D. LIVINGSTON, Minneapolis, Minn., assignor to Robert B. Whitacre, St. Paul, Minn. Filed Oct. 19, 1914. Serial No. 867,434. (Cl. 73—28.)



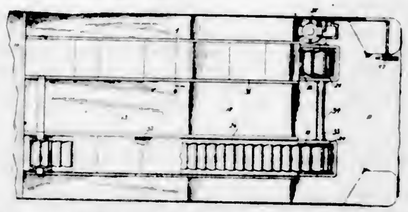
1. In an automatic liquid weigher, the combination with a source of liquid supply, of a pair of tanks having outlet valves, an oscillatory spout adapted to direct the flow of liquid into one or other of said tanks according to the direction in which it is swung, an oscillatory valve lever operatively connected at its opposite ends with the valves in said respective tanks, a top weighted element having a transversely extending opening at the top and a pivotal support at its lower end, a lateral pin carried by said valve lever and extending into the opening in the top weighted element, an operative connection between said lever and said spout, and floats actuated by the rise of the liquid in the tank which is being filled and operative to turn the top weighted element until the center of gravity thereof is shifted to the other side of its pivotal support, whereby the top weighted element will drop over and strike the pin upon the valve lever, thereby throwing said lever and swinging the spout.

2. In an automatic liquid weigher, the combination with a source of liquid supply, of a pair of tanks having outlet valves, an oscillatory spout adapted to direct the flow of liquid into one or the other of said tanks, according to the direction in which it is swung, an oscillatory valve lever operative to open and close the valves in said respective tanks, a top weighted lever having a pivotal support at its lower end, a pair of floats loosely mounted upon said pivotal support on opposite sides of said top weighted lever, one of said floats working within one tank and the other float within the other tank, coöperating means upon the floats and weighted lever, whereby said lever will be lifted and turned by one or other of the floats as the float rises in its tank, an operative connection between said valve lever and the spout, and means carried by the valve lever in position to be engaged by the weighted lever when the same is turned so far that its center of gravity is shifted to the other side of its pivotal support, whereby the valve lever is turned and the mouth of the spout is shifted from one tank to the other.

3. In an automatic liquid weigher, the combination with a source of liquid supply, of a pair of tanks having outlet valves, an oscillatory spout adapted to direct the flow of liquid into one or other of said tanks according to the direction in which it is swung, an oscillatory valve lever operative to open and close the valves in said respective tanks and having an upstanding arm, a top weighted lever having a pivotal support at its lower end, and formed with a transversely extending opening, a lateral pin carried by said arm and engaging the spout at one end and extending into the opening in the top weighted lever at the other end, a pair of floats mounted on said pivotal support and working within said tanks respectively, and coöperating clutch lugs upon the floats and top weighted lever whereby each float as it rises in the tank will engage and turn said lever, thereby causing said lever to drop over and strike said pin when it has been turned so far as to shift its center of gravity to the other side of its pivotal support, whereby to turn the valve lever and swing the spout.

4. In an automatic liquid weigher, the combination with a source of liquid supply, of a pair of tanks having outlet valves, an oscillatory spout adapted to direct the flow of liquid into one or the other of said tanks according to the direction in which it is swung, an oscillatory valve lever operatively connected at its opposite ends with the valves in said respective tanks and having an upstanding arm, a top-weighted skeleton yoke having a pivotal support at its lower end, a lateral pin carried by said arm and engaging the spout at one end and extending through the yoke at the other end, and means actuated by the rise of the liquid in the tank which is being filled for turning the yoke until its center of gravity is shifted to the other side of its pivotal support, whereby the yoke will drop over and engage said pin, thereby turning the valve lever and swinging the spout.

1,223,594. LOCOMOTIVE-TENDER. NATHAN M. LOWER, Schenectady, N. Y. Filed Mar. 21, 1916. Serial No. 85,351. (Cl. 105—260.)



1. In a locomotive tender, in combination, a fuel bin having a sloping back wall and a fuel carrying deck extending backwardly therefrom, an endless conveyer located on such wall and deck, and means for driving the conveyer.

2. In a locomotive tender having a fuel bin, in combination, a trough located on the fuel-supporting wall of the bin, an endless conveyer running in the trough, and a partition in the trough between the two turns of the conveyer, and means for driving the conveyer.

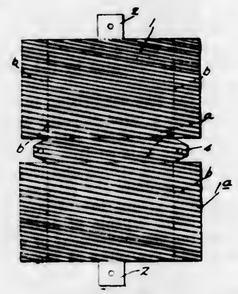
3. In a locomotive tender having a fuel bin, in combination, a trough located on the fuel-supporting wall of the bin, an endless conveyer running in the trough and a partition in the trough between the two turns of the conveyer, a plurality of removable cover plates for the trough, and means for driving the conveyer.

4. In a locomotive tender, in combination, a fuel bin having a sloping back wall, an endless conveyer located on such wall, means for driving the conveyer, and ratchet and pawl connection between the driving means and the conveyer.

5. In a locomotive tender, in combination, a fuel bin having a sloping back wall, an endless conveyer located on such wall, means for driving the conveyer, ratchet and pawl connection between the driving means and the conveyer, and means for reversing the driving direction of such connection.

[Claims 6 and 7 not printed in the Gazette.]

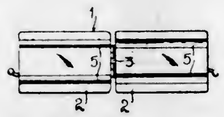
1,223,595. METALLIC INSERT. FRANK G. MCMILLAN and HOWARD O. MCMILLAN, Minneapolis, Minn. Filed May 22, 1916. Serial No. 99,148. (Cl. 72—105.)



1. A wall insert constructed from a single piece of obliquely corrugated sheet metal bent to form the four walls and closed inner end of a box-like structure, with said corrugations on opposite walls reversely oblique and exposed at the inner surface of the box for engagement with the threads of a lag screw inserted into the box structure, and with the corrugated surfaces at the exterior thereof, serving to anchor the same in the concrete.

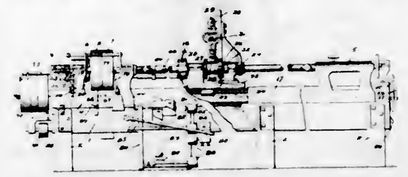
2. A wall insert constructed from a single piece of obliquely corrugated sheet metal bent to form the four walls and closed inner end of a box-like structure, with said corrugations on opposite walls reversely oblique and exposed at the inner surface of the box for engagement with the threads of a lag screw inserted into the box structure, with the corrugated surfaces at the exterior thereof, serving to anchor the same in the concrete, and the said box having integral laterally projecting ears at its outer edge adapting it to be temporarily secured to a mold form.

1,223,596. PACKAGE-TIE. EUGENE A. MCSWINEY, Normandy, Mo. Filed Sept. 27, 1916. Serial No. 122,476. (Cl. 24—18.)



A package tie including a cord holder embodying sections having adjacent ends pivotally connected by transversely spaced hinges affording an opening therebetween, said sections being provided with longitudinally disposed corrugations extending entirely therealong, the corrugations of one section being adapted to seat within the corrugations of a second section when said sections are in overlying relation, and means carried by the free end portions of the sections for locking said sections in overlying relation.

1,223,597. TURNING AND FLUTING MACHINE. FRANK B. MERRY and JESSE D. WARE, Savannah, Ga. Filed Sept. 7, 1916. Serial No. 118,847. (Cl. 142—1.)



1. The combination with a lathe bed, of a supporting shelf, a cutter carriage, a carrier for said carriage on said shelf, a structurally independent templet mounted directly on said shelf adjacent the carrier, means for adjusting said carrier and said templet laterally toward and from the lathe bed, and means for locking said carrier and templet in adjusted positions on the supporting shelf to prevent accidental movement thereof by said adjusting means.

2. The combination with a lathe bed, of a supporting shelf, a cutter carriage, a carrier for said carriage on said shelf, a structurally independent templet mounted directly on said shelf adjacent the carrier, means for simultaneously adjusting said carrier and said templet laterally toward and from the lathe bed, and means for locking said carrier and templet in adjusted positions, on the supporting shelf to prevent accidental movement thereof by said adjusting means.

3. The combination with a lathe bed, of a cutter carriage, a carrier for said carriage, a pivot for said carrier, a structurally independent templet, means for adjusting said pivoted carrier and said templet laterally toward and from the lathe bed, and means for locking said pivot and said templet in adjusted positions, said locking means permitting swinging movement of the carrier independently of said templet.

4. The combination with a lathe bed, of a cutter carriage, a carrier for said carriage, a pivot for said carrier, a structurally independent templet, means for simultaneously adjusting said pivoted carrier and said templet laterally toward and from the lathe bed, and means for locking said pivot and said templet in adjusted positions, said locking means permitting swinging movement of the carrier independently of said templet.

5. The combination with a lathe bed, of a cutter carriage, a carrier for said carriage, a pivot for said carrier, a structurally independent templet, means for adjusting said pivoted carrier and said templet laterally toward and from the lathe bed, means for locking said pivot and said templet in adjusted positions, said locking means permitting swinging movement of the carrier in the plane of adjustment independently of said templet, and means for preventing said swinging movement of the carrier.

[Claims 6 to 9 not printed in the Gazette.]

1,223,598. GRENADE AND THE LIKE. WILLIAM MILLS, Birmingham, England. Filed June 15, 1915. Serial No. 34,232. (Cl. 102—29.)

1. A grenade or the like, said grenade comprising in combination means for firing or exploding the grenade, an externally disposed lever adapted to control the firing means, and retaining means for said lever arranged in connection with the part or half of the lever in the vicinity of the said firing means which it controls.

2. A grenade or the like, said grenade comprising in combination means for firing or exploding the grenade, an externally disposed lever adapted to control the firing

means, and manually removable retaining means for said lever arranged in connection with the part or half of the lever in the vicinity of the said firing means which it controls, the half of said lever remote from said firing means being exposed to the grasp of the hand when said retaining means is being removed.



3. A grenade or the like, said grenade comprising in combination means for firing or exploding the grenade, an externally disposed pivoted lever adapted to control the firing means, and manually removable retaining means for said lever arranged in connection with the part or half of the lever in the vicinity of the said firing means which it controls, the half of said lever remote from said firing means being exposed to the grasp of the hand when said retaining means is being removed.

1,223,599. GRENADE AND THE LIKE. WILLIAM MILLS, Birmingham, England. Original application filed June 15, 1915, Serial No. 34,232. Divided and this application filed Feb. 2, 1916. Serial No. 75,654. (Cl. 102—29.)



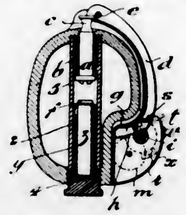
1. A grenade or the like comprising in combination, a body, means carried by said body for firing or exploding the grenade, an externally disposed lever adapted to control said firing means, a pivot for said lever, and means providing a bearing for said pivot, said means permitting the arm of the lever to move so as to release said firing means without the short arm of the lever contacting with the part in relation to which the lever is pivoted.

2. A grenade or the like comprising in combination, a body, means carried by said body for firing or exploding the grenade, a lever disposed externally of said body and adapted to control said firing means, a pivot for said lever, and means providing a bearing for said pivot in connection with the body of the grenade, said last mentioned means permitting said lever to move into a position substantially radial to the body of the grenade without contacting with the body.

1,223,600. GRENADE AND THE LIKE. WILLIAM MILLS, Birmingham, England. Filed May 8, 1916. Serial No. 96,137. (Cl. 102—29.)

1. A grenade or the like comprising in combination a spring impelled striker, a lever disposed externally of the grenade for controlling said striker, said lever being arranged to be retained in position to hold said striker by the means for propelling the grenade, and to be automatically released when the grenade is thrown, and timing means for retarding the movement of said lever for a material period of time following immediately after the release of the lever from the propelling means.

2. A grenade or the like comprising in combination, a spring impelled striker, a lever disposed externally of the grenade and directly controlling said striker, said lever being arranged to be held by the means for propelling the grenade in position to hold said striker, and timing mechanism coöperating with said striker and lever for providing a period of time intermediate the release of said lever by said propelling means before the striker operates.



3. A grenade or the like comprising in combination, a spring impelled striker, a lever disposed externally of the grenade and directly controlling said striker, said lever being arranged to hold said striker, and timing mechanism coöperating with said striker and lever for providing a period of time intermediate the release of said lever by said propelling means before the striker operates, said timing mechanism being operated by the spring employed to impel said striker.

4. A grenade or the like comprising in combination, a spring impelled striker, a lever disposed externally of the grenade and directly controlling said striker, said lever being arranged to hold said striker and timing mechanism coöperating with said striker and lever for providing a period of time intermediate the release of the lever by said propelling means before the striker operates, said timing mechanism being capable of adjustment whereby the period between the commencement of operation of the timing mechanism and exploding of the grenade may be varied.

5. A grenade or the like comprising in combination a spring impelled striker, a lever disposed externally of the grenade and directly controlling said striker, said lever being arranged to be held by the means for propelling the grenade in position to hold said striker, and timing mechanism arranged to provide a period of time intermediate the release of said lever by said propelling means before the striker operates.

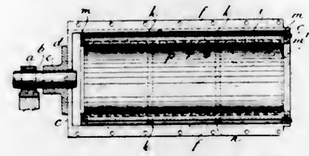
[Claims 6 to 8 not printed in the Gazette.]

1,223,601. FRUIT-PICKER. GEORGE MITCHELL, Camas, Wash. Filed Feb. 8, 1913. Serial No. 746,981. (Cl. 56—99.)



A fruit picker, including a supporting handle, a conveyer tube secured to the upper end of the handle, a closure flap upon the lower extremity of said tube, means for connecting the free end of the closure flap with the tube, means carried by the lower part of the tube to adjust the same vertically upon the handle to control the discharge of the fruit therefrom, and a rod extending upwardly into proximity of the upper end of the supporting handle, said rod connected with the said flap connecting means for disengaging the free end of the closure flap from the tube.

1,223,602. MANUFACTURE, CENTRIFUGALLY, OF HOLLOW ARTICLES. DONALD MOIR and HUGH BUCHANAN, Rosario de Santa Fé, Argentina. Filed Feb. 12, 1916. Serial No. 77,972. (Cl. 25—30.)



1. In a process of the kind described for producing hollow articles the step of centrifugally smoothing the internal surface by removing and collecting superfluous material therefrom along its whole length simultaneously.

2. The process of manufacturing hollow articles centrifugally which consists in assembling parts of a configuring member within rotary inclosing means adapted to resist centrifugal bursting stresses, introducing material to be centrifugally acted upon into the configuring member, consolidating the same centrifugally, removing and collecting superfluous material from the internal surface of the article along its whole length simultaneously, removing the configuring member with its contents as soon as sufficiently set to permit thereof, and allowing the contents to set completely while remaining in the configuring member.

3. The process of manufacturing hollow articles of reinforced agglomerate which consists in centrifugally consolidating a layer of agglomerate until partially set, introducing the reinforcement, following the introduction of the reinforcement by further agglomerate and centrifugally consolidating the added agglomerate upon and around the reinforcement.

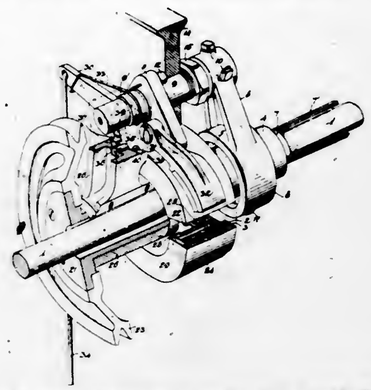
4. The process of manufacturing hollow articles of reinforced agglomerate which consists in introducing agglomerate into a rotary configuring member, dressing such agglomerate interiorly to produce a layer of predetermined thickness, introducing the reinforcement, following the introduction of the reinforcement by further agglomerate and centrifugally consolidating the added agglomerate upon and around the reinforcement.

5. The process of manufacturing hollow articles of reinforced agglomerate which consists in introducing agglomerate into a rotary configuring member, dressing such agglomerate interiorly to produce a layer of predetermined thickness, introducing the reinforcement, following the introduction of the reinforcement by further agglomerate and dressing such added agglomerate interiorly to produce a second layer of predetermined thickness.

1,223,603. POWER-TRANSMITTER. GEORGE E. MOLYNEUX, Bayonne, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Jan. 30, 1913. Serial No. 745,079. (Cl. 74—26.)

1. In a power transmitter in combination, driving and driven members having coöperative curved surfaces maintained one within the other, a main driving shaft rotating about a fixed axis and passing through said driving and driven members, and means for moving the driven member transversely of the axis of said shaft to bring the same into engagement with the driving member while maintaining the parallelism of the axes of said members.

2. In a power transmitter in combination, a main driving shaft, a driving member on said shaft and held against bodily movement, a driven member surrounding and adapted to be passed through by said shaft, said members having complemental faces adapted to be brought into frictional engagement with each other, said faces being normally concentric with each other and with said shaft, and means to effect a relative movement between said members to move one of them to a position eccentric with the other and into frictional engagement therewith.



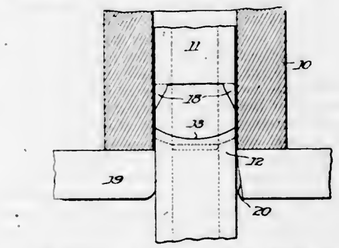
3. In a power transmitter in combination, a main driving shaft sustained in fixed position, a driving member fast on said shaft, a driven member normally concentric with and penetrated by the driving member, and means for moving said driven member to a position eccentric with the driving member and into frictional engagement therewith and for maintaining the parallelism of the members during such movement.

4. In a power transmitter, in combination, a main driving shaft, a driving member fast on said shaft and provided with a peripheral flange surrounding the same, a pivoted hanger surrounding the driving shaft, a driven member rotatably supported in said hanger and having its hub extending between the flange of the driving member and the driving shaft and encircling the latter, and means for moving the driven member laterally to bring the same into engagement with the driving member.

5. In a power transmitter, in combination, a main driving shaft, a driving member fast on said shaft fixed against lateral movement and provided with an annular friction face, a pivoted hanger surrounding the driving shaft, a driven member rotatably supported in said hanger, said driven member being normally concentric with the driving member and formed with an annular recess to receive the friction face of the driving member, and means for effecting a relative lateral movement between said members to bring the same into frictional engagement with each other.

[Claims 6 to 14 not printed in the Gazette.]

1,223,604. METHOD OF MAKING NUTS FOR BOLTS. JOHN W. MURRAY, Joliet, Ill. Filed June 21, 1916. Serial No. 104,911. (Cl. 10—86.)

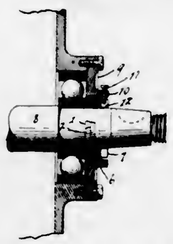


1. The method of forming nuts for bolts, which consists in severing a block of metal from a bar, punching said block to form a bolt opening, then compressing said block

into a die in such manner as to form a flat face bounded by chamfered corners, the compressive force being so applied in order to produce such result as to form a convex surface on the opposite face of the block, substantially as described.

2. The method of forming nuts for bolts, which consists in severing a block of metal from a bar, punching said block to form a bolt opening, then compressing said block into a die in such manner as to form a flat face bounded by chamfered corners, the compressive force being unequally applied whereby a greater deflection of metal is caused at the sides of the nut, the resultant product having a convex surface opposite said flat face.

1,223,605. METALLIC PACKING. VICTOR E. NELSON, Detroit, Mich., assignor of forty-nine one-hundredths to Alfred T. Harrow, Detroit, Mich. Filed Feb. 24, 1913. Serial No. 750,118. (Cl. 137—115.)



1. In a metallic packing for rods, shafts and the like, a split spring metal ring having a tapered outer surface, and an adjustable seat for said ring having a like tapered surface less in diameter than the normal diameter of the tapered surface of the ring, the depth of the seat being less than the length of the ring to allow for adjustment.

2. A metallic packing for rods, shafts and the like comprising a boxing or housing for the shaft, a pair of split, concentric, spring metal rings, the outer surface of each ring being tapered to jointly provide a single uniform cone surface, a retainer encircling the shaft and threaded in the housing, the retainer being provided with a seat for the rings having a tapered surface less in diameter and length than the tapered surface of the rings.

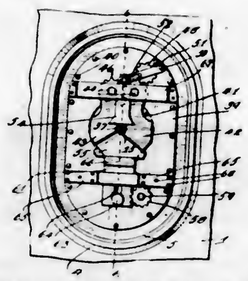
3. A metallic packing for rods, shafts and the like comprising in combination with a housing for the shaft, an apertured plate for the housing through which the shaft extends, a retainer encircling the shaft and threaded in the housing having a tapered or cone shaped seat on the inner end thereof, a split spring metal ring having a tapered outer surface the normal diameter of which is greater than the diameter of the seat, and means on the shaft against which the ring may engage, the length of the cone surface of the ring being greater than the length of the cone surface of the seat.

4. A metallic packing for rods, shafts and the like comprising in combination a boxing or housing for the shaft, an apertured plate forming a closure for the housing and through which the shaft may project, a retainer threaded in the aperture and having a tapered seat on the inner end, a pair of split concentric spring metal rings, the outer surface of both rings being tapered to provide a uniform cone surface the normal diameter of which is greater than the diameter of the tapered seat, and means on the shaft to prevent the rings from riding out of the seat, the length of the tapered surface of the seat being less than the length of the cone surface of the two rings.

5. In a metallic packing for rods, shafts and the like, a split spring metal ring having a tapered outer surface, and an adjustable seat for the ring having a like tapered surface less in diameter and less in length than the tapered surface of the ring, the inner diameter of the ring when seated being greater than that of the rod about which it is positioned.

[Claims 6 to 9 not printed in the Gazette.]

1,223,606. VESSEL INDICATING AND RAISING APPARATUS. BENJAMIN FRANKLIN NIXON, Winnipeg, Manitoba, Canada. Filed May 2, 1916. Serial No. 94,981. (Cl. 114—16.5.)



1. In a device of the class described, the combination of a plate, said plate being adapted to be carried upon the deck of a vessel, a float normally extending through said plate into the interior of said vessel, a cable connected to said float and extending into the interior of the vessel, whereby when the vessel sinks the float may rise to the surface so as to pay out said cable, said cable being adapted to direct a ball having a finger downwardly into the vessel, locking jaws pivotally mounted upon said plate, means for swinging said locking jaws to a closed position, and a locking slide mounted upon said plate, said locking slide being adapted to engage the forward ends of said jaws when the jaws are in a closed position, thereby positively holding said jaws in a gripping engagement with the finger of said ball, whereby as said finger and ball are raised the sunken vessel may also be raised.

2. In a device of the class described, the combination of a plate, said plate being adapted to be secured to the deck of a vessel, said plate having a central opening, a float carried upon said plate and extending through said opening into the interior of the vessel, a cable carried by said float and extending into the vessel whereby when the vessel sinks the float may rise to the surface so as to allow the cable to be paid out, whereby a lifting ball and finger may be directed downwardly along said cable through the opening formed in said plate, rotating shafts carried by said plate, locking jaws mounted upon said shafts, said jaws having intermeshing racks at their rear ends, whereby as the shafts are rotated the jaws may be swung to a closed position, said jaws having sockets adapted to receive said finger, one jaw having an upwardly offset end for fitting over the remaining jaw when the jaws are in a closed position, whereby the finger may be positively gripped so as to cause the sunken boat or vessel to be lifted as the finger and ball are raised.

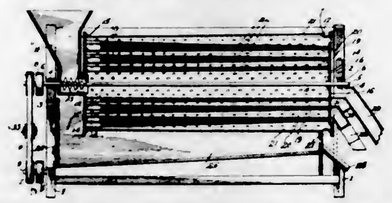
3. In a device of the class described, the combination of a plate, said plate being adapted to be secured to the deck of a vessel, said plate having a central opening, a float carried upon said plate and extending through said opening into the interior of a vessel, a cable carried by said float and extending into the vessel, whereby when the vessel sinks the float may rise to the surface so as to allow the cable to be paid out, whereby a lifting ball and finger may be directed downwardly along said cable through the opening formed in said plate, rotating shafts carried by said plate, locking jaws mounted upon said shafts, said jaws having intermeshing racks at their rear ends, whereby as the shafts are rotated the jaws may be swung to a closed position, said jaws having sockets adapted to receive said finger, one jaw having an upwardly offset end for fitting over the remaining jaw when the jaws are in a closed position, a locking plate slidably mounted upon the rear end of said jaws, means for simultaneously moving said locking plate over the rear ends of said jaws as the jaws are swung to a closed position, whereby when the jaws are closed said plate may bear upon the finger for positively reinforcing said jaws and also stably retaining the finger.

4. In a device of the class described, the combination of a plate, said plate being adapted to be secured to the deck of a vessel, said plate having a central opening, a float carried upon said plate and extending through said opening into the interior of the vessel, a cable carried by said float and extending into the vessel, whereby when the vessel sinks the float may rise to the surface so as to allow the cable to be paid out, whereby a lifting ball and finger may be directed downwardly along said cable through the opening formed in said plate, rotating shafts carried by said plate, locking jaws mounted upon said shafts, said jaws having intermeshing racks at their rear ends, whereby as the shafts are rotated the jaws may be swung to a closed position, said jaws having sockets adapted to receive said finger, one jaw having an upwardly offset end fitting over the remaining jaw when the jaws are in a closed position, a locking plate slidably mounted upon the rear ends of said jaws, means for simultaneously moving said locking plate over the rear ends of said jaws as the jaws are swung to a closed position, whereby when the jaws are closed said plate may bear upon the finger for positively reinforcing said jaws for positively retaining the finger, and a locking slide carried upon said plate and being adapted to engage the forward ends of said jaws for resisting any tendency of said jaws to swing to an open position when the boat or vessel is being raised by the upward movement of said ball and finger.

5. In a device of the class described, the combination of a plate having an opening, said plate being adapted to be carried upon the deck of a ship, a float normally carried by said plate and extending through said opening into the interior of the ship, a cable carried by said float and extending into the interior of the ship whereby when the float rises to the surface the cable will be paid out, said cable being adapted to direct a ball and finger downwardly through the opening in said plate, shafts rotatably mounted upon said plate, jaws keyed upon said shafts, intermeshing racks formed upon the rear ends of said jaws, whereby as one shaft is rotated the jaws may be swung to a closed position, a pinion rotatably mounted upon said plate and meshing with one of said racks, a pin carried by said pinion, a slotted link pivotally mounted upon said plate, said pin of said pinion extending into the slot of said link, a reinforcing plate slidably mounted upon the rear ends of said jaws, a pin carried by said reinforcing plate extending through said slot of said link, whereby as the jaws are swung to a closed position said pinion will be rotated so as to swing the free end of the reinforcing plate forwardly, whereby as the jaws engage the finger of said ball the reinforcing plate will also engage the finger so as to reinforce said jaws, whereby as the finger and ball are moved upwardly the sunken ship may also be raised.

[Claims 6 to 21 not printed in the Gazette.]

1,223,607. COTTON-SEED CULLING MACHINE. CHARLES D. PANTAZE, Birmingham, Ala. Filed Feb. 3, 1917. Serial No. 146,534. (Cl. 130—16.)



1. A cotton-seed culling machine comprising a plurality of concentrically arranged perforated sheet metal drums which increase in diameter toward their discharge ends, and return wire mesh screen drums adapted to delint the cotton-seed and disposed one between each pair of perforated drums and coextensive in length therewith but increasing in diameter in the opposite direction therefrom, there being discharge openings at the larger ends of the screen drums, means to rotate the drums, and separate chutes to carry off the different grades of seed from the perforated drums.

2. A cotton-seed culling machine comprising a plurality of concentric perforated metallic drums which increase in diameter toward their discharge ends, means to rotate the drums, and delinting wire mesh return screens adapted to catch the seed passing through each drum, except the last, and to return same to the smaller end of the next larger drum, substantially as described.

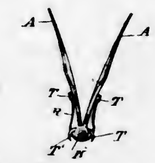
3. A cotton-seed culling machine comprising a plurality of concentric perforated sheet metal drums which increase in diameter toward their discharge ends, means to rotate and oscillate the drums, and delinting wire mesh return screens rotatable with the drums and adapted to catch the seed passing through each drum, except the last, and to return same to the smaller end of the next larger drum, substantially as described.

4. A cotton-seed culling machine comprising a main driving shaft, means to rotate and oscillate the shaft, a feed hopper mounted on the shaft, and a culling apparatus also mounted on the shaft and comprising alternate and reversely flaring sheet metal and wire mesh screen drums, the metal drums having perforations and the screen drums being of a character to delint the cotton-seed.

5. In a cotton-seed culling machine, a plurality of concentric cylinders formed of perforated sheet metal and disposed concentrically with increasing diameters toward their discharge ends, a circular head plate to which the drums are connected at one end, a ring plate connected to an outer drum at the other end, a spider connecting said plate and the intermediate drums, a rotatable shaft on which said spider and circular head plate are mounted, screen return drums surrounding each inner perforated drum and extending from end to end thereof, said delinting screen drums having their diameter increasing toward the intake end of the perforated drums and having discharge openings at its larger end, and separate chutes to receive the seed discharged from each perforated drum.

[Claims 6 to 8 not printed in the Gazette.]

1,223,608. VEIL-CLASP. SARAH A. PEARSALL, Rockville Center, N. Y. Filed May 24, 1916. Serial No. 99,626. (Cl. 24—250.)



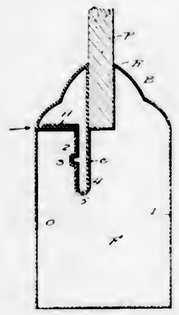
1. A veil clasp comprising two wings having portions turned into rolls which are provided with angled slots, a sleeve upon which the wings are journaled, said sleeve being slotted, a spring-pressed push rod movable within the sleeve and having pins projecting from the slots in the wall of the sleeve and angled slots in said rolls, and spurs upon the wings for gripping the veil.

2. A veil clasp comprising two wings, the inner marginal edges of which are turned into cylindrical rolls which are provided with reversely-arranged angled slots, a sleeve upon which said rolls are journaled, shoulders upon the sleeve preventing longitudinal movements to the wings, a spring-pressed push rod mounted in the sleeve, pins projecting from said rod and movable within the slots of the sleeve and rolls of the wings, oppositely disposed spurs projecting from said rolls and designed to grip a veil, and springs bearing against the wings.

3. A veil clasp comprising two wings, the inner marginal edges of which are turned into cylindrical rolls which are provided with reversely-arranged angled slots, a sleeve upon which said rolls are journaled, shoulders upon the sleeve preventing longitudinal movements to the wings, a

spring-pressed push rod mounted in the sleeve, plus projecting from said rod and movable within the slots of the sleeve and rolls of the wings, oppositely disposed spurs projecting from said rolls adapted to grip a veil, slotted bars, one upon each wing, a flat spring having slitted ends passing through the slots of said bars, said springs curved in opposite directions upon their inner ends, said springs serving to normally throw the wings to their limits in one direction.

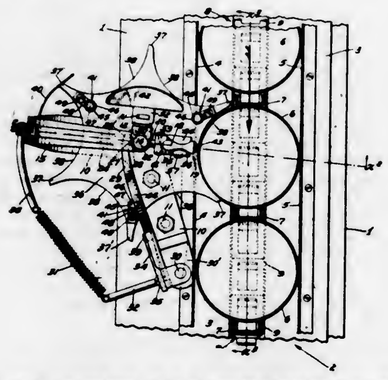
1,223,609. PANE-FASTENING. ARNOLD G. PETERS, Minneapolis, Minn. Filed Feb. 29, 1916. Serial No. 81,187. (Cl. 20—56.4.)



1. The herein described pane fastening composed of a strip of spring metal formed near one edge into a molding, extending thence into a wall, the remote edge of said wall being united with a second wall spaced from the first, and a rib on said second wall projecting away from the first wall, the whole for use substantially as described.

2. The herein described pane fastening composed of a strip of spring metal formed at one edge with a lip, extending thence into a molding, the remote edge of the molding extending into a wall, the remote edge of said wall united with a second wall spaced from the first and having a rib and the edge of the ribbed wall formed into a second lip overlying the lip first named, the whole for use substantially as described.

1,223,610. CAN-STAMPER. STEFANO PITTALUGA, Los Angeles, Cal., assignor of one-fourth to C. P. Gorini, one-fourth to E. J. Kitterman, and one-fourth to F. W. Schultz, Los Angeles, Cal. Filed Aug. 8, 1914. Serial No. 855,925. (Cl. 101—44.)



1. The combination with a conveyer adapted to carry cans in an upright position, of an upright standard mounted at one side of the conveyer, a spring retracted stamp mounted for horizontal reciprocation in position to hit the sides of the cans, a spring actuated hammer for advancing the stamp, and means for raising and releasing the hammer by the movement of the cans.

2. The combination with a conveyer adapted to carry cans in an upright position, of an upright standard mounted at the side of the conveyer, a spring retracted stamp mounted for horizontal reciprocation upon the standard in position to hit the sides of the cans, a spring actuated hammer for advancing the stamp, a sprocket rotatably mounted upon the standard and having teeth to be engaged by the passing cans and having means for raising and releasing the hammer, so that said hammer is operated by the passing cans.

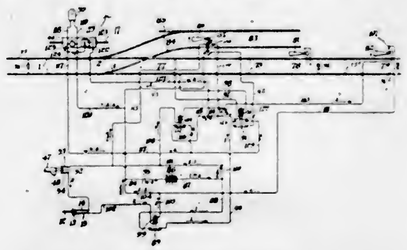
3. The combination with a conveyer to carry containers, of a standard mounted adjacent said conveyer, a shiftable stamp mounted on said standard and adapted to impress successive containers, and a lever to strike the stamp, said standard serving as a stop to arrest the striking blow of the lever just previous to the impression-contact of the stamp to thus permit of the instantaneous rebound of the stamp.

4. The combination with a conveyer to carry containers, of a standard mounted adjacent said conveyer, a shiftable stamp mounted on said standard and adapted to impress successive containers, a striking pin on the stamp and extending through the standard, and a lever to strike the striking pin to impress the stamp, the distance from the outer end of said striking pin to the impression face of the stamp being less than the distance between the lever striking face and the impression receiving plane of the cans when said lever is normally bearing against the standard, thus to permit of the instantaneous rebound of the stamp after impression-contact.

5. The combination with a conveyer to carry containers, of a laterally shiftable stamp to impress successive containers, a spring actuated lever to strike the stamp, a rotatably mounted sprocket having teeth adapted to successively receive the containers as the same are moved along by the conveyer, and a retracting finger on the lever and extending into the path of said sprocket teeth, said teeth being adapted to wipe by the retracting finger and thus retract the lever to deliver the stamping blow.

[Claims 6 to 12 not printed in the Gazette.]

1,223,611. RELEASE-LOCK FOR SWITCHES. ERNEST K. POST and JOHN S. GENSHEIMER, Altoona, Pa. Filed May 27, 1915. Serial No. 30,822. (Cl. 246—34.)



1. In a device of the character stated, a hand-thrown switch, a switch-throwing mechanism therefor, a mechanical lock for the switch-throwing mechanism, hand-thrown means for unlocking the lock, an electric indication lock engaging the unlocking means when the lock is deënergized, a time element started by the unlocking means and making electric contact and an electric circuit including the contact of the time element and the winding of the indication lock for energizing the indication lock when the time has elapsed after the setting of the time element.

2. In a device of the character stated, a switch, a hand-operated switch-throwing mechanism therefor, a mechanical lock for the switch-throwing mechanism, hand-operated unlocking mechanism for the lock, an electric indication lock engaging the unlocking mechanism when the electric lock is deënergized, a time element started by partial movement of the unlocking mechanism and making electric contact, electric circuits for energizing the indication lock separately and in series with the contact of the time element and track-circuit-operated connections for energizing the two circuits according to the presence or absence of traffic upon the track.

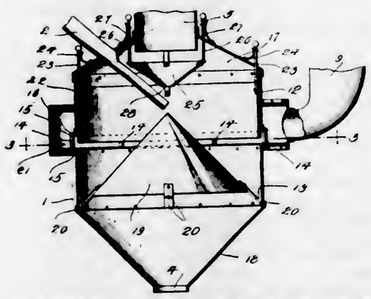
3. In a device of the character stated, a switch, hand-throwing mechanism therefor, a mechanical lock for the throwing mechanism, hand-operated unlocking mechanism for the lock, a lever, a rod moved by the lever, a time element started by movement of the rod and making electric contact, a second rod moved part of its throw by movement of the first rod and connected with the lock release, an electric indication lock when deënergized preventing full movement of the second rod, electric circuits including the indication lock and the indication lock through the contact of the time element respectively and electric means for energizing the two circuits selectively, according to the presence or absence of traffic upon the track.

4. In a device of the character stated, a hand-thrown switch, a mechanical lock therefor, hand-thrown unlocking mechanism for said lock capable of resting at an intermediate part of its stroke, means for moving the unlocking mechanism an appreciable part of its stroke to a resting point, an electric indication lock preventing full movement of the unlocking mechanism when the indication lock is deënergized and electric means for energizing the indication lock and permitting completion of the movement of the unlocking mechanism.

5. In a device of the character stated, a hand-thrown switch, a mechanical lock therefor, hand-thrown unlocking mechanism for said lock having relatively movable parts, means for moving the unlocking mechanism a part of its stroke, an electric indication lock preventing full movement of the unlocking mechanism when the indication lock is deënergized, electric means for energizing the indication lock and permitting completion of the movement of the unlocking mechanism and separate hand-operated means for completing the movement of one of the parts of the unlocking mechanism.

[Claims 6 to 37 not printed in the Gazette.]

1,223,612. SEPARATOR FOR GRINDING-MILLS. WILLIAM J. PRICE, Dixon, Ill. Filed May 11, 1916. Serial No. 96,887. (Cl. 83—54.)



1. In a separator for grinding mills, the combination of a separating chamber having in its lower end a coarse material outlet and in its upper end a fine material outlet through which suction is to be created, means for depositing ground material in the chamber, means for retarding the downward travel of such material in said chamber, means for directing a horizontal film of air against said retarding means, and means for preventing the discharge of coarse particles with the fine material and for returning them to the retarding means.

2. In a separator for grinding mills, the combination of a separating chamber having in its lower end a coarse material outlet and in its upper end a fine material outlet through which suction is to be created, means for depositing ground material in the chamber, means for retarding the downward travel of such material in said chamber, means for directing a current of air against said retarding means, and means for retarding the passage of material from the separating chamber into the fine material outlet, and for collecting coarse particles of such material and returning them to the first mentioned retarding means.

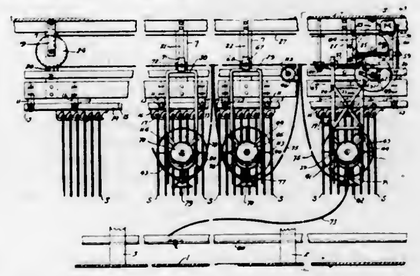
3. In a separator for grinding mills, the combination of a separating chamber having in its lower end a coarse material outlet and in its upper end a fine material outlet through which suction is to be created, means for depositing ground material in the chamber, means for retarding the downward travel of such material in said chamber, means for directing a current of air onto said retarding means, and a funnel-shaped deflector plate disposed beneath the fine material outlet and having a central discharge opening, said deflector plate serving to collect comparatively heavy particles of material and to return them through said discharge opening to said retarding means.

4. In a separator for grinding mills, the combination of a separating chamber having in its lower end a coarse material outlet and in its upper end a fine material outlet through which suction is to be created, means for depositing ground material in the chamber, means for retarding the downward passage of such material in said chamber, means for directing a current of air against said retarding means, a funnel-shaped deflector plate disposed beneath the fine material outlet, said plate having a central discharge opening through which heavier particles of material collected on said plate may be discharged, and means permitting vertical adjustment of said deflector plate.

5. A separator for use in connection with grinding mills, said separator comprising a casing having pneumatic separating means therein, the lower end of said casing having a coarse material outlet while a fine material discharge pipe extends from the upper end of said casing, a funnel-shaped deflector plate disposed beneath and of greater diameter than said pipe, said plate having a central opening to discharge comparatively large particles of material collected therein, and means permitting vertical adjustment of said deflector plate.

[Claim 6 not printed in the Gazette.]

1,223,613. PAPER-CURING MACHINE. CARL RAHSKOPFF, Mill Valley, Cal. Filed Apr. 24, 1916. Serial No. 93,215. (Cl. 34—26.)



1. A paper curing machine comprising a rack adapted to support a series of paper bundles from the upper edges thereof, a fan adapted to blow air into the edges of the paper bundles, and means to cause said fan to travel back and forth across the edges of the paper bundles.

2. A paper curing machine comprising a rack adapted to support a plurality of paper bundles by the upper edges of the paper sheets, a fan adapted to blow air into the

edges of the paper bundles, means whereby the position of the fans may be adjusted with respect to the paper bundles, and means to slowly move the fan back and forth across the edges of the paper bundles.

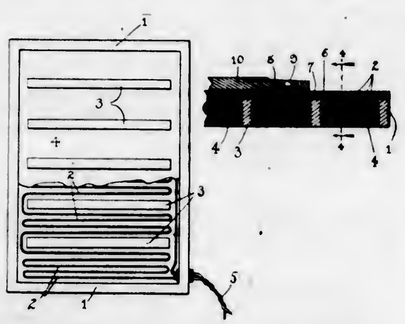
3. A paper curing machine comprising a frame adapted to support a plurality of bundles of paper sheets by the upper edges thereof, a plurality of fans adapted to blow air into the edges of the paper bundles, a suitable connection between the several fans, and means to move the fans back and forth across the edges of the paper bundles.

4. A paper curing machine comprising a rack adapted to suspend a plurality of bundles of paper sheets from the upper edges of the sheets, a fan adapted to blow air into the edges of the paper bundles, a wheeled frame in which said fan is supported, a track on which said frame rides, a sprocket chain extending along the track, a link connecting the wheeled frame and sprocket chain, and means to drive the sprocket chain whereby the fan is moved back and forth across the edges of the paper bundles.

5. A paper curing machine comprising a frame adapted to support a plurality of bundles of paper sheets by the upper edges of said sheets, a plurality of wheeled frames, a track on which they ride, a fan supported in each frame, a sprocket chain extending along the track, a link connected with one of said frames and with the sprocket chain, means to drive said sprocket chain to cause the wheeled frame to travel back and forth across the ends of the paper sheets, a pair of pulleys, a cable over which said pulleys pass, and connections between said cable and the other fan frames whereby all of the fans will be caused to travel back and forth across the ends of the paper sheets.

[Claim 6 not printed in the Gazette.]

1,223,614. EMBOSSING ATTACHMENT FOR PRINTING-PRESSES. FRED W. REED, South Bend, Ind. Filed Nov. 24, 1913. Serial No. 802,709. (Cl. 219—19.)



In an embossing attachment for printing presses, a supporting block consisting of a shell, a plurality of transversely extending webs formed integral with said shell and providing a plurality of recesses, non-conducting cement in said recesses, a coiled resistance wire embedded in said cement whereby said supporting block may be electrically heated and means on the face of the supporting block for securing an embossing die.

1,223,615. POCKET SURVEYING INSTRUMENT. RALPH W. RICHARDS, Waterville, Me. Filed Feb. 5, 1916. Serial No. 76,383. (Cl. 88—2.4.)

1. A pocket surveying instrument comprising in combination, a casing having a straight ruling edge; a magnetic compass inclosed by said casing; a lid having a straight ruling edge, a reflecting inner surface, and a sight line on said surface; a hinge connecting said casing and lid for causing their ruling edges to be in alinement to produce a continuous ruling edge when the lid is swung back; and folding sights one carried by the lid and another by the casing.



2. A pocket surveying instrument comprising in combination a casing having opposed parallel ruling edges; a magnetic compass inclosed by said casing; a lid having opposed parallel ruling edges, a sight slot and a reflecting inner surface; a hinge connecting said casing and lid for causing their ruling edges to be in alinement to produce continuous parallel ruling edges when the lid is swung back; and folding sights one carried by the lid and another by the casing.

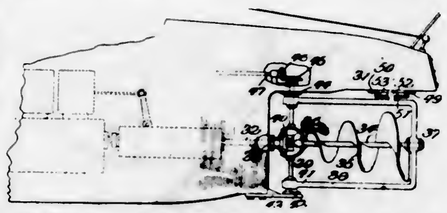
3. A pocket surveying instrument comprising in combination, a casing having a straight ruling edge; a magnetic compass inclosed thereby; a lid provided with a sight slot and a reflecting inner surface; a hinge connecting said casing and lid; and a folding sight carried by said casing.

4. A pocket surveying instrument comprising in combination, a substantially rectangular casing having a side grooved to present a sharp ruling edge; a substantially rectangular lid having a side grooved to present a sharp ruling edge; a hinge connecting said lid and casing and for causing the ruling edges thereof to be in alinement when the lid is opened out; and folding sights one carried by the lid and the other by the casing.

5. In a combined transit and level of the reflecting pocket type, the combination of a casing; a magnetic compass and a leveling device mounted in said casing; a folding sight carried by said casing; a lid for said casing, provided with a reflecting inner surface, a window and a sight line; and a hinge connecting said casing and lid said hinge being offset, for causing the window to be in the line of sight when the lid is adjusted for use of the device as a level, and out of the line of sight when the lid is adjusted for use of the device as a reflecting transit.

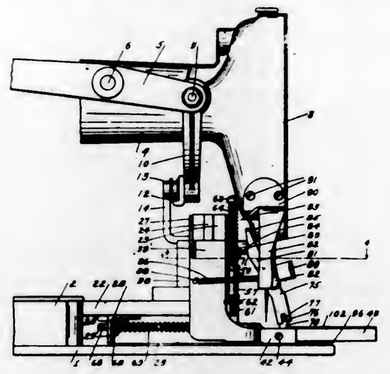
[Claims 6 to 9 not printed in the Gazette.]

1,223,616. BOAT AND ITS PROPELLER. OTTO A. W. RIECKS, Everett, Mass. Filed Nov. 8, 1915. Serial No. 60,321. (Cl. 115—35.)



In ship construction, a hull, the stern of which is formed with an overhang, a vertical shaft extending through the overhanging portion of the stern, arcuate guides secured to the under face of the overhang and concentric with respect to the shaft, the guides being substantially L-shaped in section with one arm of each spaced from the overhang and with such arms directed toward each other, a frame carried by and mounted to turn with the shaft, an arm projecting upwardly from the frame between the arms of the guides, laterally projecting rollers carried by the arm of the frame and engaging the upper faces of the arms of the guides to support the adjacent end of the frame for turning movement about the axis of the shaft, a shaft journaled in the frame at right angles to the first shaft, and a propeller blade carried by the second shaft.

1,223,617. SPECIAL-WORK SEWING-MACHINE. ARTHUR ROSENTHAL, Grand Rapids, Mich., assignor to Rose Label Machine Company, Grand Rapids, Mich. Filed Mar. 13, 1915. Serial No. 14,236. (Cl. 112—33.)



1. In a machine of the class described, the combination with the base, arm and head of a sewing machine, of a work carrying arm, means for moving said work carrying arm in a predetermined path, a work holder presser foot and a label holder presser foot carried by said arm, means for lifting said label holder presser foot relative to said work holder presser foot and said label holder presser foot relative to the base of the machine, an automatic thread cutting means, a label slide comprising side members carried by said work holder presser foot, a bottom plate secured to said side members and provided with slots, a slidable bar mounted on said slide, a label follower secured at one end to said slide bar, fingers carried by said follower and disposed in the slots of said bottom plate, a spring lever carried by the work holder presser foot and connected at its lower end to the rear end of said slidable bar, a notched latch pivoted on said lever, a locking pin to engage said latch, a trip means for said latch secured to the head of the machine adapted to engage the upper end of said latch and trip the same when the work holder presser foot is lifted, and a downwardly projecting arm on the head of the machine disposed and adapted during the movement of the work carrying arm to engage said laterally projecting arm on said lever to rock the same on its pivot and thereby automatically latch said follower in its outer position, all coacting substantially as described and for the purpose specified.

2. In a machine of the class described, the combination with the base, arm and head of a sewing machine, of a work carrying arm, means for moving said work carrying arm in a predetermined path, a work holder presser foot and a label holder presser foot carried by said arm, means for lifting said label holder presser foot relative to said work holder presser foot and said label holder presser foot relative to the base of the machine, a label slide comprising side members carried by said work holder presser foot, a bottom plate secured to said side members and provided with slots, a slidable bar mounted on said slide, a label follower secured at one end to said slidable bar, fingers carried by said follower and disposed in the slots of said bottom plate, a spring lever carried by the work holder presser foot and connected at its lower end to the rear end of said slidable bar, a notched latch pivoted on said lever, a locking pin to engage said latch, trip means for said latch secured to the head of the machine adapted to engage the upper end of said latch and trip the same when the work holder presser foot is lifted, and a downwardly projecting arm on the head of the machine disposed and adapted during the movement of the work carrying arm to engage said laterally projecting arm on said lever to rock the same on its pivot and thereby automatically latch said follower in its outer position, all coacting substantially as described and for the purpose specified.

3. In a machine of the class described, the combination with the base, arm and head of a sewing machine, of a work carrying arm, means for moving said work carrying arm in a predetermined path, a work holder presser foot and a label holder presser foot carried by said arm, means for lifting said label holder presser foot relative to said work holder presser foot and said label holder presser foot relative to the base of the machine, a label slide comprising a bottom plate provided with slots, a slidable bar mounted on said slide, a label follower secured at one end to said slidable bar, fingers carried by said follower and disposed in the slots of said bottom plate, a spring lever carried by the work holder presser foot and connected at its lower end to the rear end of said slidable bar, a notched latch pivoted on said lever, a locking pin to engage said latch, and a trip means for said latch secured to the head of the machine and adapted to engage the upper end of said latch and trip the same when the work holder presser foot is lifted, coacting substantially as described and for the purpose specified.

4. In a machine of the class described, the combination with the base, arm and head of a sewing machine, of a work carrying arm, means for moving said work carrying arm in a predetermined path, a work holder presser foot and a label holder presser foot carried by said arm, means for lifting said label holder presser foot relative to said work holder presser foot and said label holder presser foot relative to the base of the machine, a label slide comprising a bottom plate provided with slots, a slidable bar mounted on said slide, a label follower secured at one end to said slidable bar, fingers carried by said follower and disposed in the slots of said bottom plate, a spring lever carried by the work holder presser foot and connected at its lower end to the rear end of said slidable bar, a notched latch pivoted on said lever, a locking pin to engage said latch, and a trip means for said latch secured to the head of the machine adapted to engage the upper end of said latch and trip the same when the work holder presser foot is lifted, coacting substantially as described and for the purpose specified.

5. In a machine of the class described, the combination with the base, arm and head of a sewing machine, of a work carrying arm, means for moving said work carrying arm in a predetermined path, a work holder presser foot and a label holder presser foot carried by said arm, means for lifting said label holder presser foot relative to said work holder presser foot and said label holder presser foot relative to the base of the machine, a label slide comprising a bottom plate provided with slots, a slidable bar mounted on said slide, a lable follower secured at one end to said slidable bar, fingers carried by said follower and disposed in the slots of said bottom plate, a spring lever carried by the work holder presser foot and connected at its lower end to the rear end of said slidable bar, a notched latch pivoted on said lever, a locking pin to engage said latch, and a trip means for said latch, coacting substantially as described and for the purpose specified.

[Claims 6 to 22 not printed in the Gazette.]

1,223,618. VEHICLE-JACK. PARLEE H. RUSSELL, Van Buren, Ohio. Filed Apr. 21, 1915. Serial No. 22,904. (Cl. 254—88.)

1. In a device of the character described, a track structure, guide means, lifting blocks arranged in proximity to said guide means, a jack carriage movably mounted on said guide means, said carriage including complemental chair structures, and means connecting said chair structures, substantially as described.

2. In a device of the character described, a track structure, guide means, lifting blocks arranged in proximity to said guide means, a jack carriage movable on said guide

means, said carriage including complemental chair structures, a stirrup formed in each of said chair structures, a body structure seated in said stirrups for connecting said chair structures, and axle engaging blocks carried by said body structure, substantially as described.

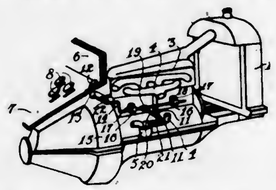


3. In a device of the character described, the combination with track structure, guide means, and lifting blocks arranged in proximity thereto, of a jack carriage including chair structures, supporting wheels carried by each of said chair structures and engaging said guide means, means connecting said chair structures, axle engaging members carried by said means and detachable plates carried by said means and said axle engaging members, substantially as described.

4. In a device of the character described, the combination with a track structure, guide means, and lifting blocks arranged in proximity thereto, of a jack carriage including spaced chair structures arranged to extend longitudinally with respect to said track structure, stirrups formed intermediate the ends of said chair structures, a block seated in said stirrups connecting said chair structures, supporting wheels carried by said chair structures and operable on said track structure, spaced axle supporting blocks arranged on said connecting block, and detachable plates fixed to said connecting block and the said supporting block to limit movement of an axle on said supporting blocks, as and for the purpose specified.

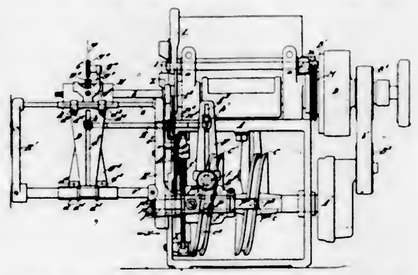
5. In a device of the character described, the combination with a track structure, and lifting blocks arranged in proximity thereto, of a jack carriage including spaced chair structures arranged longitudinally with respect to said track structure, oppositely projecting bearings on said chair structures, supporting wheels connected with said bearings to operate on said track structure, stirrups formed intermediate the ends of said chair structures, a block seated in said stirrups to connect said chair structures, said block projecting above said chair structures, L-shaped axle supporting blocks detachably affixed to said connecting blocks, one portion of said supporting blocks overlying the upper edge of said connecting blocks and the other portion thereof engaging with one longitudinal face thereof, and detachable plates affixed to said connecting blocks and said supporting blocks to project above the latter and limit movement of the axle on said supporting blocks, as and for the purpose specified.

1,223,619. FOOT-ACCELERATOR FOR AUTOMOBILES. WILBUR E. RYAN, Memphis, Tenn., assignor of one-half to Charles H. Robertson, Memphis, Tenn. Filed Nov. 16, 1916. Serial No. 131,612. (Cl. 74—81.)



In an accelerating mechanism for automobiles, the combination with a carbureter and its operating arm, of a bracket on the said operating arm, guides in longitudinal alinement with the axis of the automobile, a rod slidably mounted in said guides to permit motion parallel to the axis of the automobile, said rod being bent upward near its rear end to clear the flywheel case of the engine, thence extended backward in a horizontal plane over said case, thence bent at right angles in a horizontal plane toward the center line of the automobile, an arm pivoted to said rod and to the bracket on the carbureter operating arm, a spring normally holding said rod retracted and a foot pedal near the axial center of the automobile, extending downward through the foot board, pivoted thereto, and engaging said rod so that said rod will be moved forward when said pedal is depressed, substantially as and for the purposes set forth.

1,223,620. STOPPING MECHANISM FOR WINDING-MACHINES. CLAES RYDEN, Cranston, R. I., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 19, 1914. Serial No. 872,985. (Cl. 242—10.)



1. In a winding machine, the combination with the rotating winding-spindle and reciprocating traverse-guide, of means for rotating the spindle, an oscillating rocker-arm for reciprocating the guide, stopping-mechanism for arresting the operation of the spindle and guide, and means engaged by and actuated from the rocker-arm to cause the action of the stopping-mechanism when the guide reaches either extreme of its throw.

2. In a winding machine, the combination with a winding-spindle, of means to rotate said spindle, a plurality of traverse-guides adapted to be traversed longitudinally of the spindle, means for reciprocating the guides at different speeds, and means for automatically arresting the operation of the spindle and guides when one of the latter reaches its extreme of traverse in either direction.

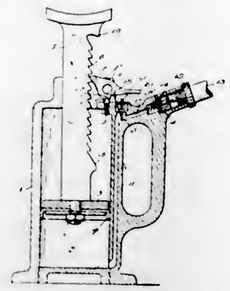
3. In a winding machine, the combination with a rotating winding-spindle, of a traverse-guide adapted to be reciprocated with respect to the spindle, an oscillating arm for reciprocating the guide, stopping-mechanism for arresting the operation of the spindle and guide, a sliding-member engaged by and operated from the movement of the guide-reciprocating arm at each extreme of its throw, and means actuated by the sliding-member to operate the stopping-mechanism when the guide reaches the end of its traverse.

4. In a winding machine, the combination with a rotating winding-spindle, of means to rotate the spindle, a plurality of traverse-guides adapted to be traversed longitudinally of the spindle, means for reciprocating the guides at different rates of speed, stopping mechanism for arresting the operation of the spindle and guides, and means adapted to actuate the stopping-mechanism at certain intervals of the winding, said means actuated from the reciprocating-means of one of the guides but independently of the reciprocation of the other guide.

5. In a coil-winding machine, the combination with a winding-spindle, of means to rotate said spindle, a wire-guide adapted to be traversed longitudinally of the spindle, a guide for insulating-material also adapted to be traversed along the spindle, means for reciprocating the guides at different rates of speed with the insulating-material-guide having several traverses to one traverse of the wire-guide, and means to arrest the operation of the winding-spindle and both guides when the wire-guide reaches either end of its traverse without respect to the position of the other guide.

[Claims 6 to 16 not printed in the Gazette.]

1,223,621. LIFTING-JACK. CHARLES F. SCHERENZEL, San Francisco, Cal. Filed July 24, 1916. Serial No. 110,819. (Cl. 254—93.)



1. In a lifting-jack, the combination with a standard having a cylindrical bore, a piston therefor, and a lifting-bar operable with said piston, of means to supply air under pressure into said bore below the piston for effecting the elevation of the lifting-bar, a relief valve, and means engageable with and influenced by the bar near the end of its upward travel whereby said valve is caused to open for the escape of the compressed air and enable the lifting-bar to descend to the lower end of its stroke.

2. In a lifting-jack of the class described, a standard, a lifting-bar having a series of teeth, a pawl provided on said standard and adapted to engage the teeth of said bar for releasably supporting the same at various elevations, a relief valve for regulating the pressure of the power medium, and means provided on said bar and engageable with the pawl when the bar approaches the upper end of its stroke whereby the pawl is caused to effect the relief valve for the escape of said power medium and enable the bar to descend.

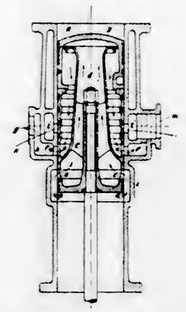
3. In a lifting-jack of the class described, a standard, a lifting-bar having a series of teeth, a pawl provided on said standard and adapted to engage the teeth of said bar for releasably supporting the same at various elevations, a spring-closing relief valve for regulating the pressure of the power medium, means provided on said bar and engageable with the pawl when the bar approaches the upper end of its stroke whereby the pawl is caused to effect the relief valve for the escape of said power medium and enable the bar to descend, and a second means provided on said bar and operable when the latter reaches the lower end of its stroke to render said relief valve closed and thereby enable the power medium capable of elevating the lifting-bar.

4. In a lifting-jack of the class described, a standard having a cylindrical bore, a piston operable within said bore, a lifting-bar secured to said piston and provided with a series of teeth, a pawl supported on said standard and engageable with the successive teeth as the lifting rod is elevated, means for effecting said pawl to engage the same with the teeth at the termination of a downward stroke of the bar and means to disengage the pawl from the teeth at the termination of an upward stroke of the bar.

5. In a lifting jack of the class described, a standard having a cylindrical bore, a piston therefor, a lifting-bar operable with said piston, of means to supply fluid under pressure into said bore below the piston to effect the elevation of the lifting-bar, a relief valve for the escape of compressed fluid from said bore, and means influencing said valve and actuated by the alternate strokes of the lifting-bar whereby reciprocatory motion is afforded to the latter through the differences in fluid pressures obtaining under said piston.

1,223,622. DEVICE FOR COOLING THE PISTON OF AN INTERNAL-COMBUSTION ENGINE. WILHELM SCHMIDT, Cassel-Wilhelmshöhe, Germany. Filed Jan. 18, 1916. Serial No. 72,742. (Cl. 123—171.)

1. A combined steam and internal combustion engine comprising a steam cylinder and piston, a combustion cylinder and piston, an exhaust steam connection from the steam cylinder and a passage through the body of the combustion piston both ends of said passage terminating in the peripheral wall of the combustion piston, one of said ends being adapted to be connected with the exhaust steam connection and the other end being adapted to be connected with the outside of the cylinder.



2. A combined steam and internal combustion engine comprising a combustion piston and a steam piston joined end to end, a cylinder common to both pistons having a combustion space at one end and a steam space at the other end, and means for flowing exhaust steam through the body of the combustion piston to its peripheral wall and thence to the outside of the cylinder when the steam piston has made its expansion stroke.

3. A combined steam and internal combustion engine comprising a combustion piston and a steam piston joined end to end, a cylinder common to both pistons having a combustion space at one end and a steam space at the other end, an inner partition wall adapted to conduct the exhaust steam from the steam end of the cylinder to and against the inner end surface of the piston at the combustion side, the free end of said partition wall being turned into a flange adapted to cause the exhaust steam to wash the whole area of said inner surface.

4. A combined steam and internal combustion engine comprising a hollow piston having closed ends, and a cylinder for said piston having a combustion space at one end and a steam space at the other end, the cylinder having an annular recess and the piston having annular slots which register with said recess when the piston has made its steam expansion stroke thereby admitting steam to the piston, and means for connecting the inside of the piston with the outside of the cylinder simultaneously with the admission of the exhaust steam thereto.

5. A combined steam and internal combustion engine comprising a hollow piston having opposite pressure receiving ends, a cylinder for said piston having a combustion space at one end and a steam space at the other, two sets of annular openings in said piston near the steam end thereof, a tubular partition wall separating said sets of openings and terminating near the combustion end of the piston, and means for connecting one set of openings with the outside of the cylinder when the steam piston has made its expansion stroke.

[Claims 6 and 7 not printed in the Gazette.]

1,223,623. FUSE DEVICE. EDMUND O. SCHWEITZER and NICHOLAS J. CONRAD, Chicago, Ill., assignors to Schweitzer & Conrad, a Corporation of Illinois. Filed Dec. 20, 1913. Serial No. 807,811. (Cl. 175—273.)

1. A device of the class specified comprising in combination, a tube of insulating material, metal terminals at the opposite ends of said tube, a fuse and a reinforcing wire of high melting temperature between said terminals, a spring acting upon said fuse and wire, and a cork envelop confining said fuse and wire and holding the same in contact with each other.

2. In a fuse device, the combination with fuse terminals, one of which is movable, of a fuse extending between

said terminals, a spring acting upon the movable terminal to separate it from the other and thereby lengthen the fuse gap upon the operation of the fuse, and a reinforcing metallic conductor of higher tensile strength and higher melting point acting to relieve the tension of said spring upon said fuse.



3. In a fuse device the combination with terminals for the fuse, one of which is movable relatively to the other, of a fuse extending between said terminals, a spring pulling directly upon the movable terminal to separate it from the other and thereby lengthen the fuse gap, and a reinforcing conductor also extending between said terminals and acted upon by said spring, said reinforcing conductor consisting of a wire of relatively strong material having a relatively high resistance and higher melting point.

4. In a fuse device, the combination of a tubular casing made of insulating material, a metallic cap at one end of said casing said cap forming a terminal of the fuse device, a metallic terminal member extended through said cap into the interior of the casing, the inner end of said member forming a fuse terminal, a fuse and reinforcing conductor connected and secured to said metallic member and extended from the end of the same into the casing, a movable terminal connected to the other end of said fuse and metallic reinforcing conductor, a spring connected with said movable terminal, and arc extinguishing liquid within said tubular member.

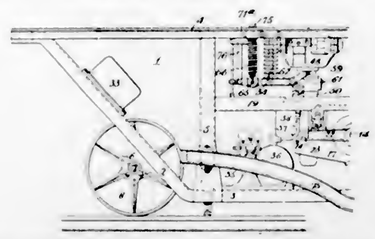
5. The combination with a fuse casing of a metal disk 3, a link 9 passing through said disk into the interior of said casing, a pin 12 passing through an aperture in said link, and soldered to the outer surface of said disk 3, said link 9 being provided with a plurality of transverse apertures in its portion within said casing, a fuse wire wound around said link and passing through the apertures therein, and a terminal for the other end of the fuse wire.

[Claims 6 to 8 not printed in the Gazette.]

1,223,624. MEANS FOR DISTRIBUTING PARCELS AND THE LIKE. ARTHUR GEORGE SEAMAN, Bowden, SAMUEL OSBORNE, Manchester, HENRY ASHLEY COX, Ealing, and ALFRED WARWICK GATTIE, London, England. Filed Dec. 7, 1911. Serial No. 664,468. (Cl. 214—1.)

1. Automatic goods distributing apparatus comprising two bodies moving in relation to one another for transporting the goods, means on one body for transferring said goods, means upon a second body for receiving said goods, means upon said second body for operating the transfer mechanism, and means upon the first body for operating the receiving mechanism of the second body.

2. Automatic goods distributing apparatus comprising two relatively moving bodies, means for propelling one of said bodies, means upon said body for effecting the transfer of trays containing the goods to the second body, means upon said second body for receiving said trays, a movable member operatively associated with said transfer mechanism, a track upon the second body for engaging and operating said movable member, a movable member operatively associated with said receiving mechanism, and a track upon the first body for engaging and operating said movable member of the receiving mechanism.



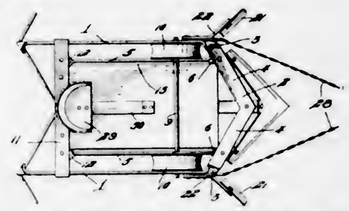
3. Automatic goods distributing apparatus comprising two relatively moving bodies, means for propelling one of said bodies, means upon said body for effecting the transfer of trays containing the goods to the second body, means upon said second body for receiving said trays, an arm moving in a circular path operatively associated with said transfer mechanism, a track upon the second body for engaging and operating said arm, an arm movable in a circular path operatively associated with said receiving mechanism, and a track upon the first body for engaging and operating said arm of the receiving mechanism.

4. Automatic goods distributing apparatus comprising two relatively moving bodies for transporting the goods, rollers for effecting the transfer of trays containing said goods upon one body, rollers upon one of said bodies to receive said trays, an arm movable in a circular path operatively associated with said transfer rollers, a track upon the second body engaging and operating said arm, an arm movable in a circular path operatively associated with said receiving rollers, and a track upon the first body engaging and operating said arm of the receiving mechanism.

5. Automatic goods distributing apparatus comprising two relatively moving bodies for transporting the goods, rollers for effecting the transfer of trays containing said goods upon one body, rollers upon the second body to receive said trays, an arm movable in a circular path operatively associated with said transfer rollers, a track upon the second body whereby said arm of the transferring rollers is constrained to follow a predetermined path at a predetermined acceleration and retardation of angular movement, an arm movable in a circular path operatively associated with said receiving rollers, and a track upon the first body whereby said arm of the receiving rollers is constrained to follow a predetermined path at a predetermined acceleration and retardation of angular movement.

[Claims 6 to 12 not printed in the Gazette.]

1,223,625. ROAD-DRAG. FRANCIS M. SETTLE, Wynnewood, Okla. Filed Apr. 24, 1916. Serial No. 93,285. (Cl. 37—5.)



1. A road drag having a road scraper at its forward end and a horizontally undulating leveling scraper at its rear end, the terminals of the road scraper being disposed in longitudinal alinement with rearwardly extending undulations of the rear leveling scraper.

2. A road drag having a road scraper at its forward end, side scrapers disposed with their adjacent ends in spaced proxmity to the ends of the scraper, and a horizontally undulating leveling scraper at its rear end disposed with rearwardly extending undulations in longitudinal alinement with the aforesaid spaces between the scrapers.

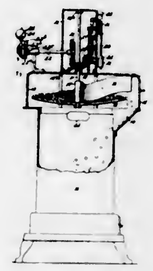
3. A road drag having a pointed road scraper at its forward end formed with rearwardly diverging arms, cutting edges extending from the point along the arms, side scrapers forwardly diverging with their adjacent ends in spaced proximity to the rear ends of the road scraper, and a rear horizontally undulating leveling scraper disposed with rearwardly extending undulations in longitudinal alinement with the aforesaid spaces between the scrapers.

4. A road drag including longitudinal frame members having a forwardly extending transverse connecting portion, inner longitudinal frame members having downwardly extending forward portions and secured adjacent said portions to the transverse frame portion, said inner and outer frame members being disposed in transverse spaced relation, a transverse shaft journaled in the frame members, supporting wheels mounted on the shaft and disposed in the aforesaid spaces, a road scraper mounted on the downwardly extended portions of the inner frame members, a central longitudinal bar having a down-turned forward terminal for connection to the road scraper and the transverse frame portion, forwardly diverging side scrapers mounted on the outer frame members, and a leveling scraper mounted upon the rear terminals of the outer frame members and the central longitudinal bar.

5. A road drag including a frame, a road scraper at its forward end, side scrapers forwardly diverging and mounted in spaced proximity to the ends of the road scraper, arms for supporting the side scrapers adjustably pivoted to the frame, and means for securing the arms against movement subsequent to said adjustment.

[Claim 6 not printed in the Gazette.]

1,223,626. AUTOMATIC COAL-FEEDER. FREDERICK SANFORD SEYMOUR, Manchester, Iowa. Filed May 20, 1916. Serial No. 98,711. (Cl. 110—118.)



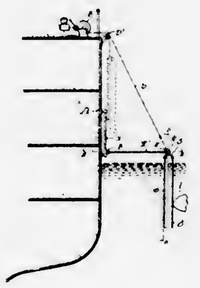
1. An automatic feeder for stoves, including a tray, a vertical shaft carrying said tray at its lower end and connected therewith at the approximate center of the tray, means above the tray to revolubly mount said shaft in a stove at the top so that the tray will be suspended on the shaft below the shaft-supporting means, a relatively fixed blade loosely sleeved on the shaft above the tray, means to prevent turning of the blade with the shaft, and an inclined deflector relatively fixed at the outer end of the blade and below the tray and inwardly disposed to deflect the material inwardly beneath the tray.

2. An automatic feeder for stoves, including a dished tray, a vertical shaft to the lower end of which said tray is fixed at the approximate center of said tray, means above the tray to revolubly mount said shaft in the stove at the top with the tray suspended below the shaft-supporting means, a relatively fixed blade sleeved on the shaft above the tray, the said blade being longitudinally concaved and having its concave surface disposed reversely to the direction of rotation of the tray, means to prevent turning of the blade with the shaft, and an inclined deflector adjacent to the outer end of the blade below the tray and inwardly disposed to deflect the material inwardly beneath the tray.

3. The combination with a stove open at the top for the reception of fuel, a tray disposed transversely at the open top of the stove and extending approximately across the area of the said open top, a vertical shaft to the lower end of which the tray is secured at the approximate center of the tray, means above the open top of the stove and above the said tray revolubly supporting the shaft and suspending the tray above the said open top of the stove, an inclined deflector on the stove at a side thereof, and beneath the tray, and so disposed as to deflect the material inwardly beneath the tray, a blade loose on the shaft and extending laterally, the outer end of the blade being disposed adjacent to the said deflector to direct material from the tray to the deflector, and means to prevent the turning of the blade with the shaft and tray.

4. An automatic feeder for stoves, including a fuel-carrying tray, a shaft on which said tray is carried, means to mount the shaft in a stove at the top, and optionally variable means to revolve said shaft to cause the tray to feed fuel over a desired period of time, said means comprising a drive shaft in driving engagement with the first shaft, an arm loose on the drive shaft and weighed to gravitationally move through different predetermined angles, and means to actuate the drive shaft by the gravitational movement of the said arm.

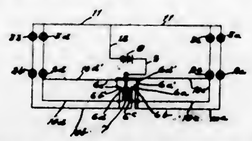
1,223,627. SHIP-PROTECTING SHIELD. WILLIAM A. SHEPHARD, Waukesha, Wis. Filed May 29, 1916. Serial No. 100,513. (Cl. 114—240.)



1. A submersible shield for protecting ships comprising a frame, vertically disposed sheathing plates carried by the frame having their edges overlapped and spaced apart, arms having ends in hinged connection with the upper portion of the frame means for hingedly connecting the opposite ends of the arms to the sides of the vessel, and means for raising and lowering the shields.

2. A submersible shield for protecting ships comprising a frame, vertically disposed sheating plates carried thereby having their edges overlapped and spaced apart, arms in pivotal union with the upper portion of the frame, guide rods adapted to be secured to the vessel sides, slidable heads mounted upon the guide rods in pivotal union with the other ends of the arms, a power controlled winch mechanism and cables connecting the winch mechanisms and upper portion of the shield frame.

1,223,628. VEHICLE-SIGNAL DEVICE. CONRAD SHERMUND, San Francisco, Cal., assignor of one-fourth to George W. Cofield, one-fourth to Benjamin B. Sugarman, and one-fourth to Abraham J. Sugarman, San Francisco, Cal. Filed June 21, 1916. Serial No. 104,881. (Cl. 177—337.)

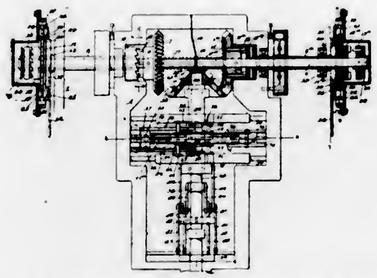


1. A signal device for vehicles comprising two similar pairs of differently colored lights positioned at the rear of the vehicle, one pair at each side thereof, and visible from the rear, and two similar pairs of differently colored lights similarly positioned at the front of the vehicle and visible from the front thereof, one light of each pair being colored to indicate danger and the other to indicate safety; means for illuminating said lights; and means under the control of the driver of the vehicle for exhibiting the danger lights upon either side and the safety lights upon the other, or the danger or safety lights upon both sides, to indicate the movements of the vehicle.

2. A signal device for vehicles comprising two similar pairs of lights positioned at the rear of the vehicle and visible from the rear, one pair being positioned at each side of the vehicle, and two similar pairs of lights similarly disposed at the front of the vehicle and visible from the front, one light of each pair being colored green and the other red; means for illuminating said lights; and means under the control of the driver of the vehicle for exhibiting the red lights upon either side of the vehicle, and the green lights upon the other side, or the red or green lights upon both sides simultaneously, to indicate the movements of the vehicle.

3. A signal device for vehicles, comprising two similar pairs of differently colored electric lamps positioned at the rear of the vehicle, one pair at each side thereof, and visible from the rear, and two similar pairs of differently colored electric lamps similarly positioned at the front of the vehicle and visible from the front, one lamp of each pair being colored to indicate danger and the other to indicate safety; a plurality of electric circuits, each including one rear lamp and the correspondingly positioned and similar colored front lamp; a source of electric energy for illuminating said lamps; and a switch for controlling said circuits to illuminate the danger lamps upon either side and the safety lamps upon the other side, or the danger or safety lamps upon both sides, to indicate the movements of the vehicle.

1,223,629. MOTOR-VEHICLE. DANIEL C. SLAGHT, Easton, Pa. Filed May 29, 1915. Serial No. 31,148. (Cl. 21—90.)



1. In a motor vehicle the combination with a motor, a driving axle and means for driving the axle, of wheels carried on the axle, means for driving a wheel independently of the axle and means for driving a wheel from the axle.

2. In a motor vehicle the combination with a motor, a driving axle shaft, a sleeve on the shaft, wheels supported on the shaft, connections between the motor and the shaft for driving the shaft, means for driving the sleeve, and connections whereby one wheel is driven by the shaft and connections whereby one wheel is driven by the sleeve.

3. In a motor vehicle the combination with a motor, a driving axle shaft; sleeves on the shaft, wheels carried on the sleeves, and connections between the motor and shaft for driving the latter, of means for driving a wheel, means carried by the sleeve for driving a wheel, and means carried by the shaft for driving a wheel.

4. In a motor vehicle the combination with a motor, a driving axle shaft, sleeves on the shaft, wheels loosely carried on the sleeves, and connections between the motor and shaft for driving the latter, of means for driving a sleeve, means carried by the sleeve for driving a wheel and means carried by the shaft for driving a wheel.

5. In a motor vehicle the combination with a motor, a driving axle shaft, sleeves on the shaft, wheels loosely carried on the sleeves, and connections between the motor and shaft for driving the latter, of means carried by the shaft for driving a sleeve, means carried by the sleeve for driving a wheel and means carried by the shaft for driving a wheel.

[Claims 6 to 23 not printed in the Gazette.]

1,223,630. PAPER-CLIP. RICHARD J. SMETON, Newark, N. J., assignor to The Whitehead & Hoag Company, Newark, N. J., a Corporation of New Jersey. Filed Dec. 30, 1915. Serial No. 69,348. (Cl. 24—259.)



1. A paper clip comprising a disk, a tongue integral with the disk along one edge only, said tongue provided with a semi-cylindrical portion adjacent its connection to the disk and a laterally and longitudinally curved bead formed upon the circumference of the semi-cylindrical portion and merging into the disk and into the tongue adjacent the termination of the semi-cylindrical portion.

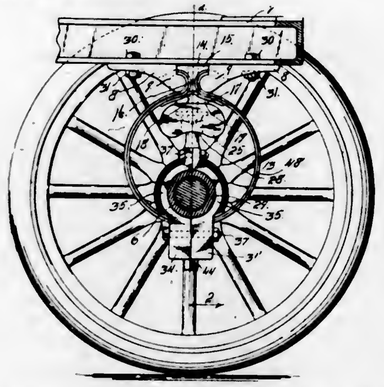
2. A clip comprising a disk, a tongue extending across the disk and integral with the disk along one edge only, said tongue provided with a raised portion adjacent its connection to the disk, and a bead extending laterally of the raised portion and longitudinally of the tongue and merging into the disk and tongue respectively.

1,223,631. VEHICLE-SPRING. CICERO G. SMITH, Palisades, Colo. Filed June 15, 1914. Serial No. 845,046. (Cl. 267—21.)

1. The combination with the body and axle of a vehicle, of a spring composed of two approximately semi-circular members brought into coöperative proximity to form a circular device, the extremities of the spring members being outwardly curved and the body and axle of the vehicle being equipped with parts which the curved extremities of the spring members movably engage.

2. The combination with the body and axle of a vehicle, of a spring composed of two approximately semi-circular members brought into coöperative proximity to form a circular device, the extremities of the spring members being outwardly curved, the body and axle of the vehicle being equipped with parts which the curved extremities of the spring members movably engage, and means applied to the spring extremities for supporting and guiding them in coöperative relation with their engaging parts.

3. The combination with the body and axle of a vehicle, of a spring composed of two approximately semi-circular members brought into coöperative proximity to form a circular device, the extremities of the spring members being outwardly curved, the body and axle of the vehicle being equipped with parts which the curved extremities of the spring members movably engage, means applied to the spring extremities for supporting and guiding them in coöperative relation with their engaging parts, the said means including upper and lower plates, and bolts passing therethrough and extending between the extremities of the spring members.



4. The combination with the body and axle of a vehicle, of a spring composed of two approximately semi-circular members brought into coöperative proximity to form a circular device, the extremities of the spring members being outwardly curved, the body and axle of the vehicle being equipped with parts which the curved extremities of the spring members movably engage, means applied to the spring extremities for supporting and guiding them in coöperative relation with their engaging parts, the said means including upper and lower plates, and bolts passing therethrough and extending between the extremities of the spring members, the latter having openings to receive the shanks of the interposed bolts.

5. The combination with the body and axle of a vehicle, of a spring composed of two approximately semi-circular members brought into coöperative proximity to form a circular device, the extremities of the spring members being outwardly curved, and the body and axle being respectively equipped with parts which the curved extremities of the spring members engage, and means applied to the spring extremities for supporting and guiding them in coöperative relation with their engaging parts, said means comprising plates engaging the spring extremities interiorly, blocks engaging said extremities exteriorly, and bolts passing through said plates and blocks.

[Claims 6 to 13 not printed in the Gazette.]

1,223,632. SEWING-MACHINE RUFFLER. CHARLES STAFFORD, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed July 31, 1913. Serial No. 782,201. (Cl. 112—16.)



1. In a ruffling attachment, a ruffling blade, an operating lever adapted to be reciprocated, and operative connections between said blade and said operating lever for imparting ruffling movements to the blade, said operative connections including a carrier making a complete cycle of movement during a plurality of reciprocations of the operating lever and being provided with a plurality of controlling elements in spaced relation and adjustable without removal from the carrier to vary the frequency of movement of the ruffling blade.

2. In a sewing machine ruffler, the combination with a ruffling blade, an operating lever, a pawl pivotally mounted thereon, and a member connected with said ruffling blade and adapted for operative engagement by said pawl, of a carrier, controlling elements mounted upon and independently adjustable on said carrier and adapted to control the relation of the pawl with said member whereby they may be prevented from engagement in certain operative movements of the pawl.

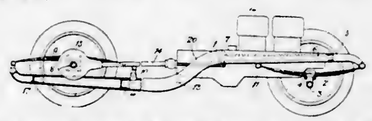
3. In a sewing machine ruffler, the combination with a ruffling blade, a member connected therewith and provided with a shoulder, an operating lever, and a pawl connected with and deriving operative movements from said lever and having a path of normal movement embracing said shoulder, of a plurality of independently adjustable controlling elements movable in unison in a path intersecting that normally traversed by said pawl and adapted to periodically deflect said pawl out of its said path.

4. In a sewing machine ruffler, the combination with a ruffling blade, a member connected therewith and provided with a shoulder, an operating lever, and a pawl connected with and deriving operative movements from said lever and having a path of normal movement embracing said shoulder, of a plurality of relatively adjustable controlling elements movable in unison in a path intersecting that normally traversed by said pawl and adapted to periodically deflect said pawl out of its said path, a ratchet-wheel in permanent operative relation with said pawl, and a plurality of controlling elements moving with said ratchet-wheel and adapted to assume operative relation with said pawl to deflect it from its normal path of movement, provision being made for shifting certain of said controlling elements into and out of operative relation with said pawl.

5. In a sewing machine ruffler, the combination with a ruffling blade, an operating lever, a pawl pivotally mounted thereon, and a member connected with said ruffling blade and adapted for operative engagement by said pawl, of a rotary carrier, a series of endwise adjustable transverse pins mounted in said carrier and each adapted for movement in a path within and out of supporting relation with said pawl, and means for imparting a partial rotary movement to said carrier for each operative movement of said lever.

[Claims 6 to 10 not printed in the Gazette.]

1,223,633. MOTOR-VEHICLE. HOWARD STARK, Pawling, N. Y. Filed Aug. 24, 1912. Serial No. 716,815. (Cl. 21—90.)



In a motor vehicle the combination comprising a front axle provided with driven wheels and a rear axle provided with driving wheels, a frame comprising side members having their front portions extending above, and supported by, the front axle, and their rear portions extending beneath and suspended from the rear axle, springs interposed between the rear axle and the frame and cross members connecting such side members adjacent their respective ends.

1,223,634. PROJECTILE. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed Dec. 4, 1916. Serial No. 134,936. (Cl. 102—28.)

1. A projectile having a cylindrical pointed body of any hard tenacious metal, a conical nose member of relatively soft metal fitting over the pointed end of the body and practically extending the cylindrical part of the latter, and a thin jacket of softer metal covering the exposed portion of said body and the rear portion of said nose member.

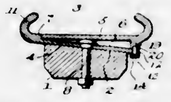
2. The combination with a cylindrical pointed projectile body of metal suitable for piercing armor, of a nose member of softer metal fitting over the conical part of the body and terminating substantially at the forward end of the cylindrical portion, and a thin jacket of metal softer than the body fitting over the latter and the rear portion only of the nose member and crimped into engagement with the latter.



3. The combination with a cylindrical pointed projectile body of metal suitable for piercing armor provided with longitudinal ribs, of a softer pointed nose member fitting over the conical forward portion of the body and having its rear portion of substantially the same diameter as said body, and a thin relatively soft jacket in sliding engagement with said ribs and having its forward margin bent inward to engage said nose member.

4. The combination with a cylindrical pointed projectile body having longitudinal ribs, of a softer conical nose piece fitting over the point portion of said body, and a thin jacket in sliding non-revoluble engagement with the ribbed body, extending forward over the nose piece and engaged with the same along a line in the rear of the body's point.

1,223,635. TIRE-RIM. HENRY STINEMETTS, The Dalles, Oreg. Filed June 7, 1916. Serial No. 102,265. (Cl. 152—21.)



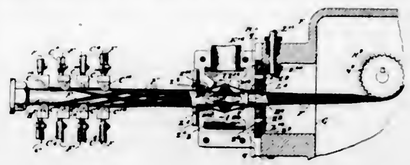
1. In combination, a felly having a beveled outer face, a rim having an inner section connected with said face, tapered ribs on the inner rim section, an outer rim section for connection with the inner rim section, and tapered ribs on the outer rim section arranged in pairs to provide grooves to receive the ribs on the inner rim section.

2. In combination, a felly having a beveled outer face, a rim having an inner section provided with a reduced and inclined portion connected with said face, tapered ribs on the outer face of said inclined portion extending transversely and diagonally thereof, an outer rim section for connection with the inner rim section, and diagonally arranged and transversely extending tapered ribs arranged in pairs on the inner face of the outer rim section to receive therebetween the ribs on the inner rim section.

3. In combination, a felly having a beveled outer face, a rim having an inner section connected with said face, diagonally disposed and transversely extending tapered ribs on the outer face of the inner section, an outer rim section for connection with the inner rim section, diagonally disposed and transversely extending tapered ribs arranged in pairs on the inner face of the outer rim section to receive therebetween the ribs on the outer face of the inner rim section, a flange on the outer rim section having openings therein, and spring pressed pins carried by the inner rim section and having portions thereof adapted to be received in said openings.

1,223,636. AUTOMATICALLY-ACTING DEVICE FOR COATING THE YARN ELEMENTS FROM WHICH A LAMINATED COHESIVE INTERWOUND FABRIC BAND IS CONSTRUCTED. LAWRENCE A. SUBERS, East Cleveland, Ohio. Original application filed Feb. 19, 1912, Serial No. 678,696. Continuation of renewed application filed Feb. 5, 1913, Serial No. 746,420. This application filed Aug. 17, 1914. Serial No. 857,074. (Cl. 28—21.)

1. In a device for forming a laminated-cohesive-interwound tubular fabric from yarn elements, and for coating the same, a mandrel upon which the yarn elements are wound and cross each other at an angle, a receptacle for coating material through which the mandrel passes, and an expanding device concentric with said mandrel over which said yarn elements pass, and means for pulling said yarn elements over said mandrel and expanding device, and a tension device for each yarn element.



2. In a device for the purpose described, a mandrel upon which bands of flexible material are interwound, a chamber for coating material through which said mandrel passes, and expanding means concentric with said mandrel over which said bands pass to expose the same separately to the said coating material in said chamber.

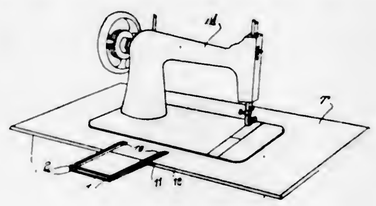
3. In a device for constructing a laminated-cohesive-interwound tubular fabric, and for coating the yarn elements composing the same, a mandrel, a chamber for coating material through which the mandrel passes, stationary annular expanding means concentric with the mandrel over which said yarn elements are drawn, and means for placing said yarn elements under tension.

4. In a device for constructing a laminated-cohesive-interwound fabric, said fabric composed of yarn elements, a mandrel, means for rotating the yarn elements about said mandrel, means for pulling the yarn elements over the mandrel and for supplying tension thereto, a chamber for coating material through which the mandrel and fabric extend, and means for temporarily separating the yarn elements and constituent yarns while passing through said chamber to expose the yarn elements and constituent yarns separately to contact with the coating material therein.

5. In combination, a mandrel upon which a laminated-cohesive-interwound fabric composed of yarn elements is constructed, a chamber for fluid coating material through which said mandrel passes, an annular expanding device upon said mandrel within said chamber, said mandrel being provided with grooves in its outer surface passing underneath said annular expanding member and on both sides thereof, said mandrel being provided with passages communicating with said grooves, a valve controlling the said passages, and means for introducing fluid coating material under pressure to said chamber and to said valve.

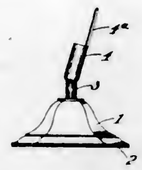
[Claims 6 to 14 not printed in the Gazette.]

1,223,637. LAMP-SUPPORT. ALICE C. SWAIN, La Jolla, Cal. Filed Mar. 23, 1916. Serial No. 86,215. (Cl. 45—75.)



A lamp bracket comprising a platform, a flange around the outer and side edges of said platform, the side flanges thereof being extended beyond the inner edge to form arms adapted to overlie a table, a clamping jaw secured to the bottom of said platform adjacent the inner edge and extending beyond the same, and a clamping screw carried by said jaw, whereby the table will be clamped between said arms and the jaw.

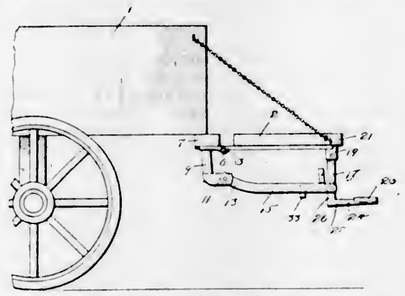
1,223,638. WATCH-STAND. WILBUR C. SWANSON, San Diego, Cal. Filed Nov. 17, 1915. Serial No. 61,907. (Cl. 224—4.)



1. In a device of the class described, the combination of an upwardly tapering base piece, a pad upon which said base piece rests, a stem secured centrally on the top of said base piece and extending upwardly therefrom some distance and a watch holder secured on the upper end of said stem at an acute angle from the vertical comprising a semi-circular recessed portion in which the edge of the watch rests and a circular back portion against which the back of said watch rests and a pad in said watch holder, whereby a cushion is formed for said watch.

2. In a device of the class described, the combination of a base piece, a stem secured thereto and a watch holder comprising a semi-circular recessed portion adapted for the edge of the watch to rest in and a circular back portion adapted for the back of said watch to rest against.

1,223,639. GATE. DURBIN A. SWARTSEL, Cincinnati, Ohio. Filed Feb. 16, 1915. Serial No. 8,472. (Cl. 21—21.)



1. In combination a vehicle, an end gate therefor, a step carried thereby adapted to fold and unfold with the movement of said gate, said step suspended from the free edge of said gate, hangers by means of which said step is suspended, links connecting said hangers with said vehicle body, brackets to which said links are pivoted, the ends of said links connected to said brackets being curved, supporting members for said step, said members being pivotally connected to said hangers.

2. In combination a vehicle, an end gate therefor, a step carried thereby adapted to fold and unfold with the movement of said gate, said step suspended from the free edge of said gate, hangers by means of which said step is suspended, links connecting said hangers with said vehicle body, brackets to which said links are pivoted, the ends of said links connected to said brackets being curved, supporting members for said step, said members being pivotally connected to said hangers, said members having means for engagement with said links whereby the members will be held against pivotal movement in one direction.

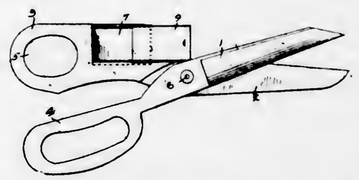
3. In combination a vehicle, an end gate therefor, a step carried thereby adapted to fold and unfold with the movement of said gate, said step suspended from the free edge of said gate, hangers by means of which said step is suspended, links connecting said hangers with said vehicle body, brackets to which said links are pivoted, the end of said links connected to said brackets being curved, supporting members for said step, said members being pivotally connected to said hangers, said members having means for engagement with said links whereby the members will be held against pivotal movement in one direction, means on said members for engagement with said hangers whereby said members will be held against pivotal movement in one direction.

4. In combination a vehicle body, brackets depending from the extreme end thereof, an end gate, hangers pivoted to the free edge thereof, a step carried thereby, and a link connecting said brackets and hangers.

5. In combination a vehicle body, brackets depending from the extreme end thereof, an end gate, hangers pivoted to the free edge thereof, a step carried thereby, and a link connecting said brackets and hangers, means for holding said step rigid.

[Claims 6 to 19 not printed in the Gazette.]

1,223,640. SHEARS ATTACHMENT. ARCHER DUANE SWEET, Scranton, Pa. Filed Aug. 17, 1915. Serial No. 45,966. (Cl. 30—13.)



1. The combination with a pair of cutting blades having handles and pivoted face to face, of a receptacle means positioned on one of the handles and in proximity to the pivot point of the blades, a cover means provided for said receptacle and slidable in the direction of the blade of the opposed handle, said blade adapted when opened to traverse the path of said cover and to limit the outward movement thereof.

2. The combination with a pair of cutting blades pivoted face to face and having handles, one of which is provided with a cut-out portion of right-angular configurations of a receptacle seated in said cut-out portion and having a bulging side adapted to fit into a corresponding groove formed in the cut-out portion, and a cover slidably associated with said receptacle and movable in the direction of the cutting blades, one of said blades adapted when open to traverse the path of said cover and to limit the outward movement thereof, whereby said receptacle is prevented from becoming uncovered during the operation or use of the device.

3. A pair of shears having one of the handles of the cutting blades provided with a cut-out portion, a receptacle accommodated in said cut-out portion and open laterally of the said handle, cover means arranged over said lateral opening and slidable in the direction of said cutting blades, said cover adapted in its various extended positions to abut against one of the cutting blades to limit the extent of separation of said cutting blades.

4. The combination with a pair of cutting blades pivoted face to face and having handles, of a receptacle, one of said handles being provided with a cut-out portion of right angular configuration to accommodate said receptacle, the lower edge of the cut-out portion having a longitudinal groove provided therein to receive a correspondingly bulged side of the receptacle, said receptacle opening laterally of the inner face of its supporting handle and having its marginal edge rolled to provide beads, the inner one of which is spaced from the adjacent edge of the supporting handle and a cover having turned-under edges for engagement with the beads of the receptacle,

said cover being slidably disposed in the direction of the cutting blades and adapted, when extended, to limit the extent of separation of said blades.

1,223,641. DEVICE FOR FASTENING SHEET MATERIAL TOGETHER. CARRIE E. TAYLOR, Los Angeles, Cal. Filed Oct. 19, 1915. Serial No. 56,794. (Cl. 24—203.)



1. A device for fastening the overlapping edges of sheets of material together to form an invisible seam, comprising a member made of a longitudinal resilient strip of metal having its marginal portions bent to form a flat base, a series of apertures spaced at regular intervals along the median line of said base, a second member made of a longitudinal resilient strip of metal having its marginal portions bent to form a flat face, a series of bottom members along the median line of said face and adapted to engage the apertures in the said first named member, the face of said second member being provided with a series of spaced perforations, and a strip of metal interposed between said members and provided with pin points adapted to engage said perforations.

2. A device for fastening the overlapping edges of sheets of material together to form an invisible seam, comprising a member made of a longitudinal strip of metal having a flat base, a series of apertures spaced at regular intervals along a straight line in said base, a second member made of a longitudinal strip of metal having a flat face, a series of button members therein adapted to engage said apertures, one of said members being provided with a series of spaced perforations, and a strip of metal interposed between said members and provided with a series of pin points adapted to engage said perforations.

3. A device for fastening the overlapping edges of sheets of material together to form an invisible seam, comprising a member made of a longitudinal strip of metal having a base portion provided with a series of apertures therein, a second member made of a longitudinal strip of metal having a face provided with a series of button members adapted to engage said apertures, one of said members being provided with a series of perforations, and means interposed between said members and adapted to pierce the overlapping edges of the sheets of material and to engage said perforations.

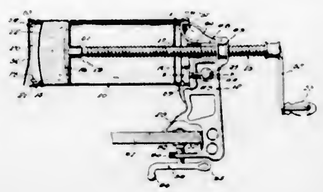
4. A device for fastening the overlapping edges of sheets of material together to form an invisible seam, comprising a longitudinal member having a series of apertures in longitudinal alinement, a longitudinal second member having a series of button members adapted to engage said apertures, one of said members being provided with a longitudinal series of perforations, and means interposed between said members adapted to pierce the sheets of material between said members and to engage said perforations.

5. A device for fastening the overlapping edges of sheets of material together to form an invisible seam, comprising a longitudinal member having a flat face provided with a series of apertures, and a second member provided with a series of resilient button members adapted to engage said apertures, each of said members being formed of one plate of metal having its longitudinal edges bent upon the central portion thereof adjacent to each other, said apertures and said button members being formed along said adjacent edges.

[Claims 6 and 7 not printed in the Gazette.]

1,223,642. DOMESTIC PRESS. LAWRENCE H. TAYLOR, Wichita, Kans. Filed May 23, 1916. Serial No. 99,389. (Cl. 100—44.)

1. In a culinary device, a bracket having a plurality of vertically extending trunnions, a food holding receptacle adapted to be mounted upon the bracket through engagement with the trunnions, clamps adjustable upon the bracket and movable into and out of engagement with one end of the receptacle to prevent movement of the receptacle with respect to the bracket, a follower movable within the receptacle, and a press screw threaded through the bracket and engaging the follower to actuate it.



2. In a culinary device, a food holding receptacle open at one end, such end being pressed to provide an external screw thread and a resultant internal screw thread, a strainer carrying ring threaded within such end of the receptacle, a deflector carrying ring threaded about such end of the receptacle, a follower mounted in the receptacle, a bracket for supporting the receptacle, and a press screw threaded through the bracket and operatively engaging the follower.

3. In a culinary device, a food holding receptacle having a closure in spaced relation to one end, the end exterior of the closure being formed with diametrically disposed openings, a bracket having alined trunnions to seat in the openings, a follower in the receptacle, a press screw threaded in the bracket and co-acting with the follower, and clamps carried by the bracket and engageable with the trunnion receiving end of the receptacle at opposite sides to hold the receptacle against swinging movement.

4. In a culinary device, a bracket having a plurality of vertically extending trunnions, a food holding receptacle adapted to be mounted upon the bracket through engagement with the trunnions, clamps swingingly mounted upon opposite sides of the bracket and movable into engagement with the receptacle to hold it against swinging movement, and means for securing the clamps in adjusted position.

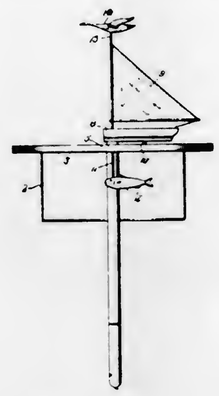
5. In a culinary device, a bracket having a plurality of vertically extending trunnions, a food holding receptacle adapted to be mounted upon the bracket through engagement with the trunnions, clamps swingingly mounted upon opposite sides of the bracket and movable into engagement with the receptacle to hold it against swinging movement, and means for securing the clamps in adjusted position, said means including a clamping bolt passed through the clamps and bracket to support the clamps upon the bracket, and a clamping nut threaded upon the bolt.

1,223,643. REVOLVING TOY. ABRAM B. TILTON, Bayhead, N. J. Filed May 10, 1916. Serial No. 96,671. (Cl. 46—14.)

1. A toy comprising a handle, a track supported by the handle, an arm having one end rotatably connected to said handle and its other end slidably mounted on the track, a ball bearing arranged to reduce friction between the mentioned end of the arm and the track, and an amusement device supported by the arm.

2. A toy comprising a handle, a flanged track supported by the handle, an arm having one end rotatably connected to said handle and its other end slidably mounted on said track, and a sail boat having its forward end secured to said arm and formed with a projection slidable on the track and in abutting relation with the flange of the track.

3. A toy comprising a handle, a flange track supported by the handle, an arm having one end rotatably connected to said handle, a ball bearing rotatably mounted in the other end of the arm and running on said track, a sail



boat secured to the arm, and an auxiliary amusing device supported from said arm above and below said sail boat.

1,223,644. RULE. JACOB W. TRIPP, New York, N. Y. Filed Sept. 2, 1916. Serial No. 118,203. (Cl. 33—107.)

1. The combination with a measuring device, of a slotted slide and means consisting of pins in the measuring device which pass through slots in the slide for movably connecting said slide to the measuring device, said slide having an angular notch, an edge of which accurately alines with the end of the measuring device when the slide is extended.

2. The combination with a measuring device, of a slotted slide, pins in the measuring device which pass through the slots in said slide, so that the slide may be limited in its movements by the pins and may bring one of its edges into projecting alinement with the end of the measuring device.

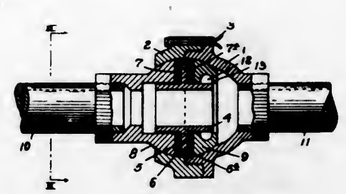
3. A rule in combination with a slotted slide, pins in the rule passing through the slots in the slide and located so that the slide may be extended beyond the end of the rule and may be caused to project laterally so as to bring an edge in alinement with the end of the rule.

4. The combination with a graduated rule, of a slotted slide having an angular notch in one edge, one of the slots having a right-angled offset slot at one end, pins in the rule and passing through the slots for controlling the movement and position of the slide when extended, in order that one of the edges of the notch may be brought into alinement with the end of the rule and thus provide a hook to engage an object.

5. The combination with a rule, of a slotted slide having an end provided with an angular notch, one of whose edges is designed to be alined with the end of the rule, guiding means on the rule passing through the slots in the slide in order that the position of the latter may be accurately determined, and means for temporarily holding the slide in its idle position.

[Claim 6 not printed in the Gazette.]

1,223,645. SELF-TIGHTENING BALL-AND-SOCKET PIPE-JOINT. THEODORE C. VAN EPPS, Los Angeles, Cal. Filed Sept. 21, 1916. Serial No. 121,415. (Cl. 137—88.)



1. In a self-tightening universal ball-and-socket pipe joint the combination with a two-part socket member one part of which is provided with means for attaching it to a pipe; of a ball member within said socket and comprising a central sleeve provided medially with a laterally extending disk, a pair of compressible packing rings surrounding said sleeve and disposed one on each side of said disk, and a pair of centrally bored packing-compressing rings each telescoping with one end of said sleeve and freely slidable longitudinally thereon to tighten said packing rings, one of said packing-compressing rings being provided with means for attaching it to a pipe and the other being provided with a face exposed to fluid pressure.

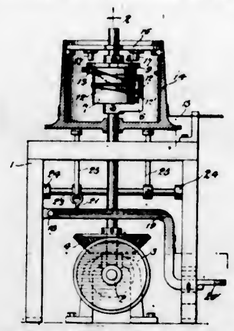
2. In a self-tightening universal ball-and-socket pipe joint, the combination with a two-part socket member one part of which is provided with means for attaching it to a pipe; of a ball member within said socket and comprising a central sleeve provided medially with a laterally extending disk beveled on each side at its periphery, a pair of compressible packing rings surrounding said sleeve and disposed one on each side of said disk, said rings being beveled outwardly at their peripheries to conform to the bevel of said disk, and a pair of centrally bored packing-compressing rings each telescoping with one end of said sleeve and freely slidable longitudinally thereon to tighten said packing rings, one of said packing-compressing rings being provided with means for attaching it to a pipe and the other being provided with a face exposed to fluid pressure.

3. In a self-tightening universal ball-and-socket pipe joint, the combination of a two-part socket member having a spherical inner face, one part of the socket being provided with means for attaching it to a pipe; of a ball member within said socket and comprising a central cylindrical sleeve provided medially with a laterally projecting disk extending to the inner face of the socket member, the sides of said disk at the periphery thereof being beveled toward each other, a pair of compressible packing rings surrounding said sleeve and disposed one on each side of the disk, said rings being beveled outwardly at their peripheries to conform to the bevel of said disk, and a pair of centrally bored packing-compressing rings each telescoping with the outer face of one end of said sleeve and freely slidable longitudinally thereon to tighten said packing rings, the outer faces of said packing-compressing rings being sections of spheres, one of said rings being provided with means for attaching it to a pipe and the other being provided with a face exposed to fluid pressure.

1,223,646. CLUTCH DEVICE. WILHELM VORDERWINKLER, Brooklyn, N. Y. Filed July 6, 1915. Serial No. 38,200. (Cl. 192—9.)

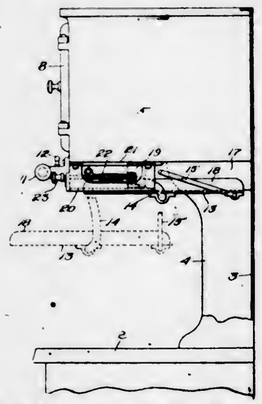
1. The combination with a shaft and a bracket secured thereto, of a flat spiral spring attached at one end to said bracket, a cylinder loosely mounted on said shaft frictionally driven by contact with said spring, and means for increasing the tension of said spring said means being fixed at one end to said bracket and at the other end to said cylinder.

2. The combination with a shaft, and a bracket secured thereto, of a flat spiral spring secured at one end to said bracket, surrounding said shaft, a cylinder within said spring in frictional contact therewith, said cylinder being



loosely mounted on said shaft, and a band coiled around said spring, one end of said band being secured to said bracket and the other to said cylinder, whereby the tension of said spring upon said cylinder may be varied in accordance with the power transmitted.

1,223,647. COOKING-STOVE. ARTHUR W. WALKER, Malden, Mass., assignor to Walker & Pratt Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 8, 1914, Serial No. 860,507. Renewed June 3, 1916. Serial No. 101,644. (Cl. 126—41.)



1. In a cooking stove, the combination with one or more broiling burners of parallel-motion hangers suspended adjacent to the burners, and a broiler support beneath the burners carried by the hangers at their lower ends and movable upward and downward therewith while maintained in substantially horizontal position.

2. In a cooking stove, the combination with one or more broiling burners of parallel-motion hangers suspended adjacent to the burners, a broiler support beneath the burners carried by the hangers at their lower ends and movable upward and downward therewith while maintained in substantially horizontal position, and means for raising and lowering the combined hangers and broiler support and holding them in various positions of elevation.

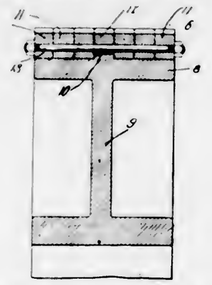
3. In a cooking stove, the combination with a casing having an open bottom, of one or more broiling burners located in said casing, a substantially horizontal plate movable upward and downward beneath the burners and adapted to serve as a closure for the open bottom of the casing when elevated and as a broiler support when lowered, said plate when in its lowered position being accessible from below the burners, and means for supporting the plate and maintaining it in substantially horizontal position while moved upward and downward.

4. In a cooking stove, the combination with a casing having an open bottom, of one or more broiling burners located in said casing, a substantially horizontal plate movable upward and downward in an uninclosed space beneath the burners and adapted to serve as a closure for the open bottom of the casing when elevated and as a broiler support when lowered, and means comprising parallel-motion hangers for supporting the plate and providing for its upward and downward movements.

5. In a cooking stove, the combination with one or more broiling burners, of a substantially horizontal broiler support movable upward and downward in an uninclosed space beneath the burners and having upwardly-extending side portions forming wind shields, and means for moving the support upward and downward while maintaining it in substantially horizontal position.

[Claims 6 to 18 not printed in the Gazette.]

1,223,648. GEARING. ROBERT WARRINER, Quincy, Mass., assignor to Fore River Shipbuilding Corporation, Quincy, Mass., a Corporation of Massachusetts. Filed Sept. 28, 1916. Serial No. 122,747. (Cl. 74—28.)



A gear having, in combination, a cylindrical body portion, a rib on the periphery of said body portion located between and at a substantial distance from the opposite sides of said body portion, a peripheral portion, said peripheral portion comprising a plurality of rings keyed to said body portion on opposite sides of said rib, a gear ring encircling said rib and bolts extending through said first mentioned gear rings and clamping them to said rib.

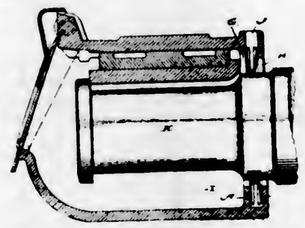
1,223,649. DUST-GUARD. LACEY Y. WILLIAMS, Toledo, Ohio. Filed June 26, 1915, Serial No. 36,418. Renewed Oct. 24, 1916. Serial No. 127,499. (Cl. 64—22.)



1. A dust guard comprised of three sheets or layers of wood arranged with the grain of one at an angle to the grain of another, adhesive material between the sheets, and rivets passed through the sheets to form a single composite structure, said guard having a circular opening therethrough for the passage of a journal; in substance as set forth.

2. A dust guard provided with a plurality of openings, casings within the openings, shanks with projecting heads within the casings, a spring on each shank, and means for limiting the outward movements of the heads from the casings, the said springs pressing the heads outwardly when the guard is within the box chamber and forcing the guard against the surface of the front wall which bounds the said chamber.

1,223,650. DUST-GUARD. LACEY Y. WILLIAMS, Toledo, Ohio. Filed May 17, 1916. Serial No. 98,089. (Cl. 64—22.)



1. A metallic dust guard having a circular flange to engage a journal and two flanges, each with a turned edge, extending outwardly from said circular flange at substantially right angles, said latter flanges being adapted to engage the vertical surfaces of the metal bounding the dust guard chamber.

2. A metallic dust guard having a circular flange to engage a journal and two flanges, each with a turned edge, extending outwardly around said circular flange, one of said two flanges being slightly dished, for the purpose set forth.

3. A metallic dust guard comprised of two parts each having a circular flange and a flange extending outwardly from said circular flange, and the circular flange of one part disposed outside the circular flange of the other part and the edge turned to fasten the two together.

4. A metallic dust guard comprised of two parts each having a circular flange and a flange extending outwardly from said circular flange, the circular flange of one part being disposed outside the circular flange of the other part and the edge turned to fasten the two together; one of said outwardly extended flanges being dished relative to the circular flanges.

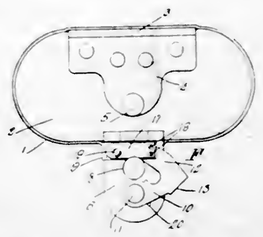
5. A metallic dust guard comprised of two parts each having a circular flange and a flange extending outwardly from said circular flange, the circular flange of one part being disposed outside the circular flange of the other part and the edge turned to fasten the two together; both of said outwardly extended flanges having their outer edges turned inwardly toward each other.

[Claims 6 and 7 not printed in the Gazette.]

1,223,651. LATCH FOR PNEUMATIC CARRIERS. OSCAR WINTER, New York, N. Y. Filed May 2, 1916. Serial No. 94,922. (Cl. 70—3.)

1. A carrier having a hinged cover, a member hinged to the carrier to swing against the cover when in closed position, the cover and said member being provided with interengageable means including a stud carried by one of them and a latch carried by the other engageable with said stud, and a detent for holding the latch in engagement with said stud.

2. A carrier for use in pneumatic tubes, having an open end, a cover and a member hinged to the carrier at opposite sides of said open end and swingable away from one another in opposite directions, said member being swingable against the cover in overlapped relation when the cover is closed, an outstanding stud carried by the cover, said member having an aperture for receiving said stud when said member is swung against the cover in closed position, and a latch carried by said member and engageable with said stud.

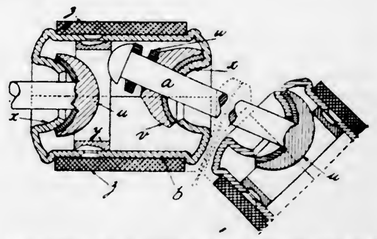


3. A carrier having a hinged cover, said cover having a headed stud, a plate hinged to the carrier to swing against the outer side of the cover and having an aperture to receive said stud, and a hook-shaped latch pivoted to said plate and swingable into engagement with said stud.

4. A carrier having a cover, said cover being provided with a headed stud, a plate hinged to the carrier to swing against the cover, said plate having a tongue, a latch pivoted to said plate and having a bill movable between said plate and tongue, said bill providing a hook engageable with the stud under the head thereof, and a detent carried by said tongue and engageable with said bill to hold the latch in operative position.

5. A carrier having a hinged cover provided with a headed stud, a plate hinged to the carrier to swing against the cover and having an aperture for receiving said stud, said plate having a tongue extending from one edge thereof adjacent the hinged end, said tongue being disposed transversely upon the inner side of said plate, a latch pivoted to the inner side of said plate adjacent the free end thereof and having a bill working between said plate and tongue to provide a hook engageable with said stud under the head thereof, said tongue having an aperture, said bill having an aperture to register therewith, a detent ball within the first mentioned aperture, and a leaf spring secured to said tongue to press said ball against said plate, the ball being engageable in the aperture of said bill to hold the latch in operative position.

1,223,652. CHAIN. LUIS WIRTZ, Edgbaston, Birmingham, England. Filed Nov. 13, 1915. Serial No. 61,367. (Cl. 74—32.)



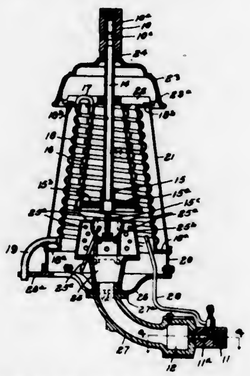
1. An improved chain comprising in combination hollow links of cylindrical form and shank links with enlarged bearing parts, said hollow links being formed in separable parts and having internally convex bearing portions and said shank links having complemental surfaces for engaging said bearing portions whereby engagement between the surfaces and portions under strain tends to maintain the separable parts of the hollow links together, and securing means for said separable parts of the hollow links.

2. An improved chain comprising in combination hollow links and shank links, the hollow links being formed of two semi-cylindrical portions having end portions or flanges and each being formed with an aperture through which one of the shank links projects, said end portions

being internally convex around said apertures to form bearing surfaces engaged by concave bearing parts on the shank links.

3. An improved chain comprising in combination hollow links of cylindrical form, and shank links with enlarged bearing parts, the hollow links each being formed in separable parts meeting each other parallel with the longitudinal axis of the completed link, and the bearing surfaces between the hollow links and shank links being shaped so that engagement between them under strain tends to maintain the separable parts of the hollow links together, and securing means for said separable parts of said hollow links.

1,223,653. INSTANTANEOUS WATER-HEATER. FRANK YOKEL, Pittsburgh, Pa., assignor to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Sept. 16, 1915. Serial No. 50,991. (Cl. 122—183.)



1. In a device of the character described, a water-circulating system having a controllable inlet and an outlet, said system including an annular spiral passageway leading to the outlet, and a controllable burner extending above the bottom plane of and positioned in direct opposition to more than a single convolution of the outlet portion of said spiral passageway, whereby the water will be subjected to its maximum heating action immediately in advance of its discharge from the system, said burner and the water supply for the passageway being connected together, whereby the burner acts as a positioning member for the supply connections.

2. In a device of the character described, a water-circulating system having a controllable inlet and a permanently-open outlet, said system including an annular spiral passageway leading to the outlet, and a controllable burner extending above the bottom plane of and positioned in direct opposition to more than a single convolution of the outlet portion of said spiral passageway, whereby the water will be subjected to its maximum heating action immediately in advance of its discharge from the system, said burner and the water supply for the passageway being connected together, whereby the burner acts as a positioning member for the supply connections.

3. In a device of the character described, a water-circulating system having a controllable inlet and an outlet, said system including an outer and inner member each having a spiral water passageway, said members being connected to join the passageways, a water supply leading to said inner member, the outer member extending below the inner member and carrying the outlet, and a controllable burner extending above the bottom plane of and positioned in direct opposition to more than a single convolution of the passageway leading immediately to the outlet, and also in juxtaposition to the inlet end of the spiral passageway of the inner member.

4. In a device of the character described, a water-circulating system having a controllable inlet and an outlet, said system including an annular spiral passageway leading to the outlet, and a controllable burner positioned in direct opposition to more than a single convolution of the outlet portion of said spiral passageway, and means within the system for independently controlling the flow of water therethrough, said means remaining unaffected by the results of controllable inlet manipulation.

5. In a device of the character described, a water-circulating system having a controllable inlet and an outlet, said system including an annular spiral passageway leading to the outlet, and a controllable burner positioned in direct opposition to more than a single convolution of the outlet portion of said spiral passageway, and means within the system for independently controlling the flow of water therethrough, said means being positioned in juxtaposition to the controllable inlet, said means remaining unaffected by the results of controllable inlet manipulation.

[Claims 6 to 19 not printed in the Gazette.]

1,223,654. CUTTING-TOOL. HENRY W. ALLINGHAM, Northenden, England, assignor to Peter A. Frasse & Co., Inc., New York, N. Y., a Corporation of New York. Filed Mar. 3, 1916. Serial No. 81,776. (Cl. 29—100.)



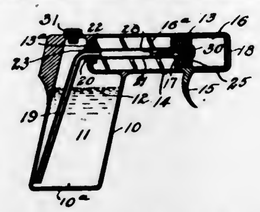
1. A cutting tool comprising a relatively massive body portion of inexpensive metal, provided with a recess near one of its ends, the axis of said hole being inclined in two directions to the axis of said body portion, and a bit of high speed steel fitted intimately into said recess, seated in and permanently affixed to said body portion, projecting beyond the end and one side of said body portion and being largely surrounded by said body portion.

2. A cutting tool comprising a relatively massive body portion of inexpensive metal, provided with a recess of circular cross-section, near one of its ends, the axis of said hole being inclined in two directions to the axis of said body portion, and a bit of high speed steel of circular cross-section seated in and fitted intimately into said recess and permanently affixed to said body portion, projecting beyond the end and one side of said body portion and largely surrounded by said body portion, the inner end of said bit abutting against the bottom of said recess.

3. A cutting tool comprising a body portion of inexpensive metal, provided with a recess of circular cross-section, near one of its ends, the axis of said hole being inclined in two directions to the axis of said body portion, and a bit of high speed steel of circular cross-section fitted intimately into said recess and permanently affixed to said body portion and projecting beyond the end and one side of said body portion, the inner end of said bit abutting against the bottom of said recess, the end of said body portion being beveled and the side thereof being cut away in the directions of incline of said bit.

1,223,655. LIQUID-PROJECTING APPARATUS. THOMAS RAYMOND ARDEN, Brooklyn, N. Y., assignor to David Heyman, Brooklyn, N. Y., and Louis Yankauer, New York, N. Y. Filed Apr. 29, 1916. Serial No. 94,323. (Cl. 42—56.)

1. In a device of the character described, the combination of a liquid reservoir, a barrel, a piston in said barrel, a cell movable in said barrel, there being a passage providing communication between said reservoir and the interior of said cell, and a valve at one end of said passage for controlling the emission of liquid therefrom.



2. In a device of the character described, the combination of a stock having a liquid reservoir therein, a barrel carried by said stock, a movable cell in said barrel, and a valve-controlled piston adapted to place said cell in communication with the reservoir.

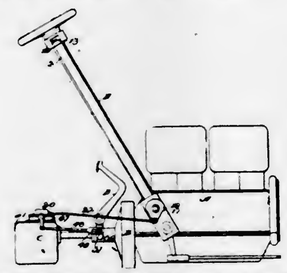
3. In a device of the character described, the combination of a stock having a liquid reservoir therein, a barrel carried by said stock, a movable cell in said barrel, a valve-controlled piston adapted to place said cell in communication with the reservoir, and a trigger for moving the cell in the barrel.

4. In a device of the character described, the combination of a stock having a liquid reservoir therein, a barrel carried by said stock, a hollow piston stationarily supported in said barrel, a tube extending through said reservoir into communication with said piston, a valve at the outlet end of said piston, and a cell reciprocable in said barrel and into which the valved end of said piston projects.

5. In a device of the character described, the combination of a stock having a liquid reservoir therein, a barrel carried by said stock, a hollow piston stationarily supported in said barrel, a tube extending through said reservoir into communication with said piston, a valve at the outlet end of said piston, a cell reciprocable in said barrel and into which the valved end of said piston projects, and washers on said piston making a frictional fit with the inner face of said cell.

[Claims 6 and 7 not printed in the Gazette.]

1,223,656. SELECTIVE GEAR-SHIFTING MECHANISM. JOHN CLAYTON BACKUS, Smethport, Pa. Filed Oct. 1, 1914. Serial No. 864,454. (Cl. 74—58.)



1. In a gear shifting mechanism, a movable actuating element, a plurality of gear shifting devices including members movable into or out of the path of movement of the actuating element, and selecting mechanism operatively connected to said members to shift them into or out of said path of movement.

2. In a gear shifting mechanism, a movable actuating element, a pair of connected gear shifting members disposed one on each side of the actuating element, selecting mechanism operatively connected to shift either one of the gear shifting members into or out of the path of movement of the actuating element, and means acting to move the projected gear shifting member from its engagement with the actuating element after the actuating element has shifted the gear shifting member.

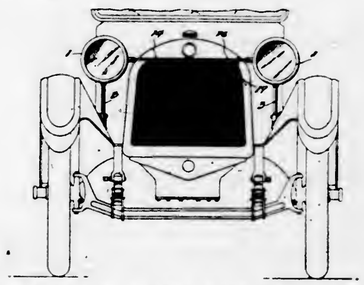
3. In a gear shifting mechanism, a movable actuating element, a pair of gear shifting members disposed for reciprocation on each side thereof and operatively connected to the gears to be shifted, and gear selecting means, said means in a neutral position causing the retraction of all of said gear shifting members out of operative relation to the actuating element and when shifted from neutral position causing the projection of any one of said members into operative relation to the actuating element according to the position to which it is shifted.

4. In a gear shifting mechanism, a pair of connected gear shifting members mounted for reciprocation, an actuating element disposed between the gear shifting members, selecting means operatively connected to the gear shifting members, said means in neutral position causing the retraction of both of said gear shifting members from operative relation to the actuating element, but when shifted in one direction from neutral, causing the projection of one of said members into operative relation to the actuating member and when shifted in the other direction causing the projection of the other member into such operative relation, a movement of said connected gear shifting members under the action of the actuating member causing the retraction of the gear shifting member engaged by the actuating member.

5. A gear shifting mechanism, a pair of connected gear shifting members, an actuating member disposed between the gear shifting members, and selecting means operatively connected to the gear shifting members to cause a projection of one or the other of said members when shifted in one or the other direction from neutral, a movement of said connected gear shifting members because of engagement of the projected member by the actuating member causing the retraction of the gear shifting member so engaged, the selecting means upon being brought back to neutral position projecting the other gear shifting member so that upon a second movement of the actuating member in the same direction a reverse movement of the connected gear shifting members will be attained, both of said gear shifting members being retracted out of operative relation to the actuating member when the gear shifting members arrive at neutral position.

[Claims 6 to 38 not printed in the Gazette.]

1,223,657. AUTOMOBILE-HEADLIGHT. JOHN CLAYTON BACKUS, Smethport, Pa. Filed June 22, 1916. Serial No. 105,255. (Cl. 240—41.)



1. In a headlight, a casing, a reflector mounted within the casing for turning movement, means operable to turn the reflector in one direction, means tending to turn the reflector in the opposite direction, and adjustable means disposed between and carried by the reflector and the casing for limiting the turning movement of the reflector in the last-mentioned direction.

2. In a headlight, a casing, a reflector mounted within the casing for turning movement, means tending to turn the reflector in one direction, an abutment upon the said reflector, an adjustable abutment screw carried by the

casing for coaction with the abutment, and means operable to turn the reflector in the opposite direction.

3. In a headlight, a casing, a reflector section mounted fixedly in the front end of the casing, a movable reflector section disposed in the rear portion of the casing and having its front end disposed within and pivoted to the rear end of the first-mentioned reflector section, means connected to the two reflector sections tending to normally hold the movable section in a set position, means between the casing and the movable section for varying said set position and means for turning the movable section.

4. In a headlight, a support, a reflector mounted thereon for tilting movement, means tending to tilt the reflector in one direction, means for tilting the reflector in the opposite direction, and coacting abutment elements upon the reflector and support for limiting the tilting movement of the reflector in the first-mentioned direction, one of said elements being adjustable.

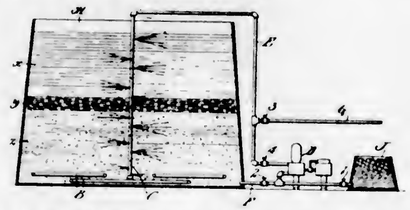
1,223,658. SCRUBBING DEVICE. MALCOLM BACON, Eagle Rock, Cal. Filed Dec. 13, 1916. Serial No. 136,631. (Cl. 15—53.)



1. A scrubbing device comprising a water tube having a relatively long straight portion and having portions bent at right angles to said straight portion at both ends thereof, a container having a nozzle inserted in the water tube at the juncture of the straight portion and one of the bent portions with the axes thereof coinciding, means in the container to express the contents thereof, and a brush having a hollow body provided with ports, said body being fastened to the other bent portion.

2. A scrubbing device comprising a water tube having a relatively long straight portion and having an intermediate offset portion and having a short relatively straight portion in axial alinement with the relatively long straight portion, there being a hole having its axis coinciding with the axis of the relatively long straight portion of the tube, a nozzle inserted in said hole, means adjacent the offset portion of the water tube to force a cleansing agent through said nozzle into the water tube, and a brush having a hollow body provided with ports and connected with said relatively long straight portion of the water tube.

1,223,659. TREATMENT OF CRUDE OIL. WILLIAM S. BARNICKEL, St. Louis, Mo. Filed Nov. 19, 1914. Serial No. 873,061. (Cl. 196—29.)



1. A process for treating natural emulsions of petroleum containing petroleum, brine and other organic matter, which consists in intimately mixing with a mass of same a suitable soluble water-softening agent capable of precipitating the alkaline earths present in the emulsion, in an amount relatively small as compared with the brine and other organic matter in the mass, whereby the brine and other organic matter are caused to settle to the bottom and the petroleum to rise to the top of the mass.

2. A process for treating natural oils containing petroleum, water, mineral salts and foreign organic matter, which consists in intimately mixing with a large mass of same, in the presence of heat, in relatively small quantities a suitable water-softening agent capable of precipitating the alkaline earths present in the emulsion, such, for example, as a soluble carbonate, a soluble sulfate, a soluble silicate, a soluble soap, oleic acid, rosin or any of the fatty substances from which soaps are made, or a combination of two or more of the aforesaid chemicals, or a combination of one or more of same with a soluble hydrate, whereby the water, mineral salts, and foreign organic matter in the mass are caused to separate from the petroleum and settle, the petroleum rising to the top of the mass, and thereafter drawing off the petroleum.

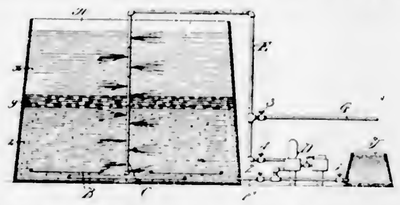
3. A process for treating natural oils of the kind described, which consists in introducing into a mass of same a suitable soluble water-softening agent capable of precipitating the alkaline earths present in the emulsion, thoroughly mixing the same with said mass and finally drawing off the separated petroleum from the top of the mass.

4. A process for treating natural mixtures of oil and water, known in the oil fields as "roily oil" and "bottom settlings," which consists in adding to and intimately mixing with a large mass of same a relatively small quantity of a suitable water-softening agent capable of precipitating the alkaline earths present in the emulsion, such, for example, as a soluble carbonate, a soluble sulfate, a soluble silicate, a soluble soap, oleic acid, rosin or any of the fatty substances from which soaps are made, or a combination of two or more of the aforesaid chemicals, or a combination of one or more of same with a soluble hydrate in such proportions as to soften, or partially soften, the brine in the mass, thereby causing the brine to separate from the oil and settle to the bottom, and thereafter drawing off the oil.

5. A process for treating bottom settlings, roily oil and mixtures of similar characteristics, which consists in bringing in contact therewith a suitable water-softening agent or chemical capable of precipitating the alkaline earths present in the emulsion and allowing it to stand until the petroleum separates and rises to the top.

[Claims 6 to 11 not printed in the Gazette.]

1,223,660. APPARATUS FOR TREATING NATURAL OILS AND RESIDUES OF SAME. WILLIAM S. BARNICKEL, St. Louis, Mo. Original application filed Nov. 19, 1914, Serial No. 873,061. Divided and this application filed Mar. 6, 1916. Serial No. 82,462. (Cl. 196—1.)



1. An apparatus for treating natural oils and residues from same, comprising a tank or receptacle having an unobstructed interior, said tank being adapted to hold the material to be treated, means for introducing a solution containing a water-softening agent into the material in said tank in the form of fine jets or sprays that are discharged approximately horizontally through the material at innumerable points between the top surface of the material and the bottom of the tank, thereby causing every portion of the mass in said tank to be brought in contact with the water-softening agent in said solution, and means whereby the solution that settles to the bottom of the tank may be again introduced into the material in said tank in the same manner previously specified.

2. An apparatus for treating natural oils and residues from same, comprising a tank or receptacle that has an unobstructed interior, said tank being adapted to hold the material to be treated, means for heating the material in said tank, and means for introducing a solution containing a water-softening agent into the material in said tank in the form of fine jets or sprays that squirt horizontally through said material from a point at the center of the tank toward the side walls thereof, thereby causing the water-softening agent in said solution to come in contact with all portions of the mass in the tank.

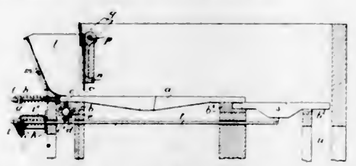
3. An apparatus for the purpose described, consisting of a tank for holding the material to be treated, a small container for holding a chemical-treating solution, a perforated injecting device immersed in the material in said tank, a pump for drawing the treating solution from said container and forcing it into said injecting device, and means for causing the pump to draw the chemical-treating solution out of the bottom of said tank and force it into said injecting device after the contents of said chemical solution container has been exhausted.

4. An apparatus of the character described, comprising a tank for holding material that is to be treated, an injecting device arranged in an upright position in the material in said tank and provided with side orifices at innumerable points intermediate the ends of same, means for supplying a water-softening agent to said device under pressure, a steam supply pipe, and means whereby communication between said steam supply pipe and said injecting device can be established and cut off at the will of the operator in charge of the apparatus.

5. An apparatus of the character described, comprising a tank for holding material that is to be treated, an injecting device immersed in the material in said tank, a pump having its discharge side connected with said device, a container for holding a liquid which it is desired to distribute thoroughly through said material, and means for establishing communication between the suction side of said pump and said tank or container at the will of the operator in charge of the apparatus.

[Claim 6 not printed in the Gazette.]

1,223,661. MECHANICALLY-OPERATED GRATE. HUGO BAUER, Vienna, Austria, assignor of one-half to C. Schember & Söhne, Vienna, Austria. Filed Nov. 6, 1915. Serial No. 59,912. (Cl. 110—38.)



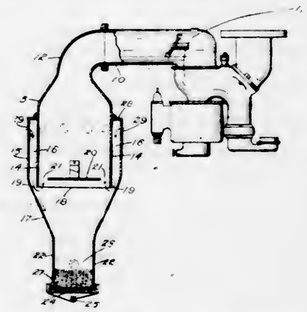
1. A mechanically operated grate comprising longitudinally movable, substantially horizontally arranged grate-bars, supports therefor, springs for holding said grate-bars in their normal positions, a continuously rotated actuating means for periodically moving said grate-bars singly and at different times against the action of their springs, the springs rapidly returning the grate-bars to their normal positions, a supplementary grate arranged at the rear of said grate bars for receiving the clinkers, said supplementary grate comprising longitudinally movable horizontal plates, and means for periodically moving said plates back and forth opposite to the movement of said grate-bars.

2. A mechanically movable grate comprising longitudinally movable, substantially horizontally arranged grate-bars, supports therefor, means, such as springs, for holding the grate-bars in their normal positions, an actuating means for moving said grate-bars against the action of their springs, the springs rapidly returning the grate-bars to their normal positions, a supplementary grate arranged at the rear of the said grate-bars for receiving the clinkers, said supplementary grate comprising substantially horizontally arranged, longitudinally movable plates, rods pivoted to said movable plates, springs on said rods holding the plates in their normal positions, projections on said rods, and an actuating means adapted to periodically engage said projections to move the said rods and thereby the said plates against the actions of their springs, the latter rapidly returning the said plates to their normal positions.

3. A mechanically operated grate comprising longitudinally movable, substantially horizontally arranged grate-bars, supports therefor, means, such as springs, holding the said grate-bars in their normal positions, projections on said grate-bars, a supplementary grate arranged at the rear of said grate-bars for receiving the clinkers, said supplementary grate comprising longitudinally movable, substantially horizontally arranged plates, rods pivoted to said plates, springs on said rods, holding the rods and the said plates in their normal positions, projections on said rods, a rotatable shaft, projections thereon, adapted to engage the projections on said rods and on said grate-bars, so as to periodically move the said plates and the said grate-bars in opposite directions, the springs rapidly returning the said plates and the said grate-bars to their normal positions, and a source of power for rotating said shaft.

4. A mechanically operated grate comprising longitudinally movable, substantially horizontally arranged grate-bars, supports therefor, means, such as springs, holding the said grate-bars in their normal positions, projections on said grate-bars, a supplementary grate arranged at the rear of said grate-bars for receiving the clinkers, said supplementary grate comprising longitudinally movable, substantially horizontally arranged plates, rods pivoted to said plates, springs on said rods, holding the rods and the said plates in their normal positions, projections on said rods, a rotatable shaft, projections thereon, adapted to engage the projections on said rods and on said grate-bars, so as to periodically move the said plates and the said grate-bars in opposite directions, the springs rapidly returning the said plates and the said grate-bars to their normal positions, the arrangement being such that the grate-bars are moved twice to each movement of the said plates and a source of power for rotating said shaft.

1,223,662. CARBURETER. ASHLEY C. BENNETT, Minneapolis, Minn. Filed July 9, 1915. Serial No. 38,892. (Cl. 183—75.)



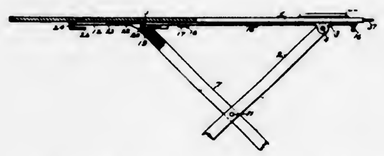
1. The combination with a carbureter having an inlet pipe adapted to be connected to an internal combustion engine so that air will be caused to pulsate through said pipe in response to the suction of the engine, of means associated with said inlet pipe and operative upon the pulsating currents of air as it passes to the inlet pipe for causing continuous gravity separation of solid impurities from the air entering the carbureter while continuously permitting unrestricted maximum flow of air through the inlet pipe to the carbureter.

2. In combination with a carbureter having an inlet pipe adapted to be connected to an internal combustion

engine so that air will be caused to pulsate through said pipe in response to the operations of the engine, an expanded casing connected with said inlet pipe and embodying a depending closed chamber providing a dead-air space for the reception of solid impurities from the air and embodying means for directing the pulsating currents of air toward and then away from said dead-air chamber whereby said solid impurities are thrown into the dead-air space and will gravitate therein to the closed end of the chamber.

3. In combination with a carbureter having an inlet pipe adapted to be connected to an internal combustion engine so that air will be caused to pulsate through said pipe in response to the operations of the engine, a casing applied to the open end of said pipe and forming an expanded intake passageway, a casing extending below said intake passageway forming a normally-closed chamber providing a dead-air space for the reception of solid impurities from the air passing into said first-named casing, and means for admitting air into said first-named casing and directing the same so that it will be caused by the pulsations of the engine to circulate above and about said dead-air space as it passes into said expanded intake passageway whereby said solid impurities are thrown into the dead-air space and will gravitate therein to the closed end of the chamber.

1,223,663. FOLDING IRONING-BOARD. WILLIAM F. BLAKE, Battle Creek, Mich., assignor to J. B. Foglesong, Battle Creek, Mich. Filed Oct. 20, 1914. Serial No. 867,560. (Cl. 68—10.)



1. In an ironing board, the combination of a board with pivoted folding standards, a rod connecting the legs of one of the standards, sleepers inside the standards and connected to the board each having recesses to engage the said rod, and a keeper between the sleepers provided with a lip to engage the said rod.

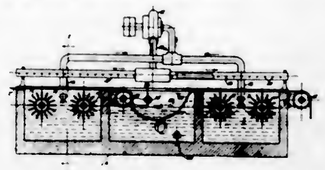
2. In an ironing board, the combination of a board with folding standards, provided with two sleepers each having recesses, and provided with a spring-controlled plunger supported for movement in an endwise direction.

3. In an ironing board, the combination of a board with adjustable folding standards, having sleepers with recesses, and a spring-controlled plunger provided with a keeper at one end to engage the end rod of one pair of standards and hold it in any of said recesses and in close proximity to the top.

4. In an ironing board with folding standards, the combination of a spring-controlled plunger, supported for limited movement in an endwise direction, and with a keeper operating in connection with two sleepers, each having recesses, to lock the standards in any one of several positions when said standards are open, and to keep them from sidewise or downward movement.

1,223,664. APPARATUS FOR TREATING CINEMATOGRAPHIC FILMS. PERCY D. BREWSTER, East Orange, N. J. Filed Apr. 22, 1915. Serial No. 23,024. (Cl. 95—94.)

1. In a film-treating machine, in combination, a tank adapted to contain a reagent and having an opening through which the contents of the tank can reach the film, means for passing a film over said opening and in contact with the edges thereof whereby only one side of the film is exposed to the interior of the tank, means for bringing the reagent into contact with the side of the film exposed thereto through said opening, and means for creating a partial vacuum in the tank.



2. In a film-treating apparatus, in combination, a tank adapted to contain a reagent and having a film-treating opening in its upper portion but being otherwise closed, means for passing a film over said opening and in contact with the edges thereof, means for bringing the reagent into contact with the side of the film exposed thereto through said opening, and an exhauster connected with the tank to produce a partial vacuum therein.

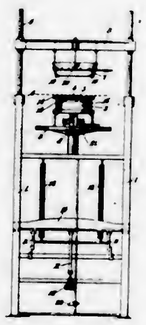
3. In a film-treating apparatus, in combination, a tank adapted to contain a reagent and having a film-treating opening in its upper portion, means for passing a film over said opening and in contact with the edges thereof, and means in the tank for bringing the reagent into contact with the side of the film which is exposed through said opening.

4. In a film-treating apparatus, in combination, a tank having a film-treating opening in its upper portion but being otherwise closed, means for passing a film over said opening and in contact with the edges thereof, means for projecting a reagent through said opening and against the exposed side of the film, and air-exhausting means connected with the tank to produce a partial vacuum therein.

5. In a film-treating apparatus, in combination, a tank having a film-treating opening in its upper portion, means for passing a film over said opening and in contact with the edges thereof, means for projecting a reagent through said opening and against the inner side of the film, and means for discharging jets of air against the outer surface of the film.

[Claims 6 to 15 not printed in the Gazette.]

1,223,665. HAT-FORMING DIE. JOHN S. BUCKMAN, Elmhurst, N. Y., assignor to Berg Brothers, New York, N. Y., a Copartnership composed of Henry Berg and Julius Berg. Filed July 19, 1916. Serial No. 110,048. (Cl. 223—31.)



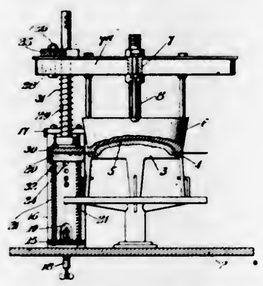
1. A hat-forming die comprising a blocking die, a stretcher plate having an aperture adapted to receive the blocking die, means for normally holding said plate above the shaping portion of the blocking die, a presser ring supported above the blocking die and stretcher plate, and means for moving said presser ring into clamping engagement with the stretcher plate at a point above the shaping portion of the die and moving said ring and plate in clamped relation downwardly over the blocking die.

2. A hat-forming die comprising a rigidly mounted shaping or blocking die, a stretcher plate formed with an aperture adapted to receive the blocking die, means for yieldably mounting the stretcher plate on the base of the blocking die whereby said plate will be normally held at the top of the blocking die, a presser ring above the stretcher plate, means for vertically reciprocating the presser ring, radially extending lugs formed in the bottom of the presser ring and adapted to engage correspondingly placed and radially extending grooves in the upper surface of the stretcher plate.

3. A hat forming die comprising a rigidly mounted blocking die, a vertically reciprocable presser ring, a yieldable stretcher plate supported between the blocking die and the presser ring, means for reciprocating the presser ring, and radially extending ribs formed on the presser ring adapted to engage in radially extending recesses in the stretcher plate.

4. A hat-forming die comprising a rigidly mounted blocking die, a stretcher plate formed with an aperture adapted to receive the blocking die, means for yeildably mounting the stretcher plate on the base of the blocking die to normally hold said plate at the top of the blocking die, a vertically reciprocable presser ring supported above the stretcher plate, and means for reciprocating said presser ring to bring it into engagement with the blocking die and force the stretcher plate downwardly over the blocking die.

1,223,666. HAT-FORMING MACHINE. JOHN S. BUCKMAN, Elmhurst, N. Y., assignor to Berg Brothers, New York, N. Y., a Copartnership composed of Henry Berg and Julius Berg. Filed Oct. 11, 1916. Serial No. 124,952. (Cl. 223—31.)



1. In a hat-forming machine, the combination of an upper die, a lower die, means for moving the upper die into operative engagement with the lower die, and means for gripping one edge of the material to be shaped and carrying it downwardly past the shaping portion of the lower die at one side thereof in advance of the engagement of the dies.

2. In a hat-forming machine, the combination of a stationary die, a movable die, means for bringing the movable die into operative engagement with the stationary die, and a pair of gripping jaws actuated by said die moving means to grip one edge of the material to be shaped and carry the edge of the material past the forming portion of the stationary die in advance of the engagement of the dies.

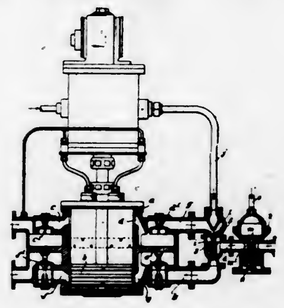
3. In a hat-forming machine, the combination of a stationary die, a movable die, means for bringing the movable die into operative engagement with the stationary die, and a pair of gripping jaws actuated by said die-moving means to grip the material to be shaped in advance of the engagement of the dies and carry the material into pressing position over the stationary die.

4. In a hat-forming machine, the combination of a frame, a table supported therein, a stationary die mounted on the table, a movable die supported above the stationary die, means for moving the dies into operative engagement, a gripping jaw yieldably supported on the table above the plane of the shaping portion of the stationary die, and a gripping jaw carried by the movable die support and adapted to contact with said yieldable jaw to clamp the material to be shaped in advance of the engagement of the dies and force said yieldable jaw below the plane of the shaping portion of the stationary die with the jaws in clamped relation.

5. In a hat-forming machine, the combination of a frame, a table supported therein, a stationary die mounted on the table, a movable die supported above the stationary die, means for bringing the dies into operative engagement, a gripping jaw normally supported on the table above the plane of the shaping portion of the stationary die, a gripping jaw carried by said die-moving means and adapted to engage the jaw on the table to clamp one edge of the cloth to be shaped and carry it downward past the shaping portion of the stationary die when the dies are brought into engagement.

[Claims 6 to 15 not printed in the Gazette.]

1,223,667. HOT-WATER-FEED PUMP FOR LOCOMOTIVE AND OTHER BOILERS. CHARLES CAILLE, Leperreux, France. Filed Oct. 13, 1914. Serial No. 866,558. (Cl. 261—76.)



1. Water heating means comprising a main nozzle, means of admitting water behind said nozzle, a steam priming nozzle located behind and opening into the main nozzle, and a chamber beyond said main nozzle having a steam inlet leading thereinto through which steam is induced to flow by the action of water emerging from said main nozzle.

2. Water heating means comprising a main nozzle, means of admitting water behind said nozzle, a steam priming nozzle located behind and opening into said main nozzle, a chamber beyond said main nozzle having a steam inlet, and a perforated tube at the outlet of said chamber arranged to permit of steam being induced to flow through the perforations into said tube by the stream of water flowing therein.

3. In combination with a steam pump, water heating means comprising a main nozzle, means of admitting water behind said nozzle, a steam priming nozzle supplied from the pump exhaust and located behind and opening into the main nozzle, a chamber beyond said main nozzle, and an outlet to said chamber through which steam is induced, by the action of water emerging from said main nozzle, to enter for heating the water.

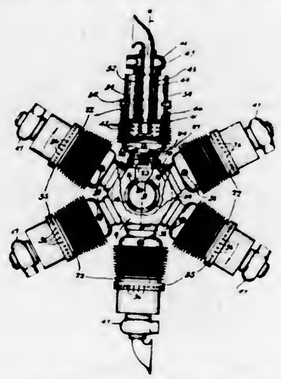
4. The combination comprising a high pressure steam line, a low pressure steam line, an injector, means for supplying water to said injector, a connection between said low pressure steam line and said injector, and means for closing said connection when the pressure in said high pressure steam line is reduced.

5. The combination comprising a high pressure steam line, a low pressure steam line, an injector, means for supplying water to said injector, a connection between said low pressure steam line and said injector, a valve in said connection, and a spring arranged to close said

valve, said high pressure line being in communication with said valve, whereby said valve is maintained open by the steam under pressure.

[Claims 6 and 7 not printed in the Gazette.]

1,223,668. COOLING SYSTEM FOR THE PISTONS OF INTERNAL-COMBUSTION ENGINES. FRANKLIN L. CHAMBERLIN, Cleveland, Ohio; E. W. Moore administrator of said Franklin L. Chamberlin, deceased. Filed May 1, 1914. Serial No. 835,609. (Cl. 123—171.)



1. In a cooling system for the pistons of internal combustion engines, the combination of a cylinder mounted so as to be free to rotate, a piston arranged in said cylinder, a piston rod connecting said piston, said piston and piston rod having a continuous passageway therein which extends from the outer end of the piston rod into the piston and up again to the outer end of the piston rod, one end of said passageway being arranged to face in the direction of rotation of said cylinder and the other end of said passageway being arranged to face in a different direction and means for producing a reciprocating motion between the cylinder and the piston.

2. In a cooling system for the pistons of internal combustion engines of the character indicated, the combination of a stationary crank-shaft, an engine cylinder mounted on and adapted to rotate around said shaft at one side of the crank pin, a hollow piston arranged in said cylinder, a tubular piston rod connected with said piston, an operative connection between the piston rod and the crank pin and a pipe extending down through the piston rod, the outer end of said pipe extending beyond the outer end of the piston rod and having the mouth thereof facing in the direction of rotation of said cylinder.

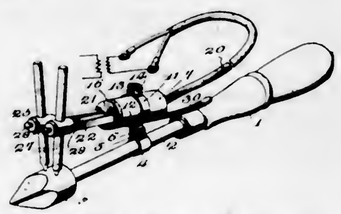
3. In a cooling system for the pistons of internal combustion engines, the combination of a stationary crank shaft, an engine cylinder mounted on and adapted to rotate around said crank shaft at one side of the crank pin, a hollow piston arranged in said cylinder, a tubular piston rod connected with the piston, a link operatively connecting said piston rod with the crank pin of the crank shaft, a pipe extending down through the tubular piston rod and projecting beyond the outer end of the piston rod and provided with a flaring mouth which faces in the direction of rotation of the cylinder.

4. In a cooling system for the pistons of internal combustion engines, the combination of a stationary crank shaft, an engine cylinder mounted on and adapted to rotate around said crank shaft at one side of the crank pin, a piston arranged in said cylinder, a piston rod connected with said piston, the said piston and piston rod having a continuous passageway therein which extends from the outer end of the piston rod into the piston and up again to the outer end of the piston rod, one end of said passageway being arranged to face in the direction of rotation of said cylinder, the other end of the passageway being arranged to face in the direction opposite to the direction of rotation of said cylinder.

5. In a cooling system for the pistons of internal combustion engines, the combination of a stationary crank shaft, an engine cylinder mounted on and adapted to rotate around said crank shaft at one side of the crank pin, a hollow piston arranged in said cylinder, a piston rod connected with said piston, said piston rod having a passageway extending therethrough and communicating with the chamber in said piston, a chambered head mounted on the upper end of said piston rod, a pipe extending down through said chambered head and into the chamber in the piston, said pipe extending beyond the said head and having a mouth arranged to face in the direction of rotation of the cylinder and said head being provided with an outlet opening facing in the direction opposite to the direction of rotation of said cylinder and an operative connection between the piston rod and the crank shaft.

[Claims 6 to 12 not printed in the Gazette.]

1,223,669. ELECTRICAL HEATING ATTACHMENT FOR SOLDERING-IRONS. JOHN G. CLEMENS, Buffalo, N. Y. Filed Feb. 27, 1917. Serial No. 151,344. (Cl. 219—22.)



1. In a heating attachment for soldering irons, a member, means for mounting the member for rocking movent upon a soldering iron, electrical conductor members extending from the first-mentioned member, and means upon the second-mentioned members for supporting carbons.

2. In a heating attachment for soldering irons, a member, means for mounting the member for rocking movement upon the shank of a soldering iron, electrical conductor members extending from the first-mentioned member, means upon the second-mentioned members for adjustably supporting carbons, and means normally yieldably holding the first-mentioned member rocked in position to cause contact of the carbons with the head of the iron.

3. In a heating attachment for soldering irons, a member for application to the shank of an iron, a member mounted for rocking movement thereon, a member mounted for free rotation with relation to the rocking member, and carbon supports carried by the rotatable member.

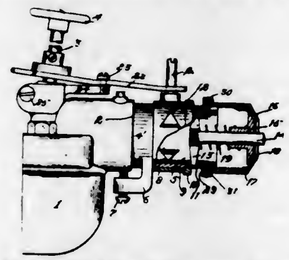
4. In a heating attachment for soldering irons, a member for application to the shank of an iron, a member mounted for rocking movement thereon, a member mounted for free rotation with relation to the rocking member, carbon supports carried by the rotatable member, and means normally yieldably holding the rocking member in position to cause engagement of the carbons with the head of the iron.

5. In a heating attachment for soldering irons, a member for attachment to the shank of the iron, a socket mounted for rocking movement upon the said member, a bushing freely rotatably fitted within the socket, conductor posts extending from the bushing toward the head of the iron, and means at the forward end of each post for supporting a carbon.

[Claims 6 to 10 not printed in the Gazette.]

1,223,670. MANUALLY-CONTROLLED AUXILIARY AIR-INLET FOR CARBURETERS. JOHN J. COLLINS, Oakland, Cal. Filed Dec. 7, 1915. Serial No. 65,504. (Cl. 137—26.)

1. An attachment for detachably securing over the uncontrolled air inlet of a carbureter whereby independent manual and automatic air controls are provided, the same comprising an open ended tubular member provided intermediate of its ends with a plurality of openings, a valve supporting stem carried by said tubular member, a bonnet provided with an opening and adjustably connected to the outer open end of said tubular member, a pressure actuated valve carried by said stem for controlling the opening in said bonnet, a manually controlled sleeve valve rotatably mounted in said tubular member for controlling the openings in the side wall thereof, spring tension means for seating said valve, the tension of said means being capable of variation by the adjustment of said bonnet, and means adjacent the inner open end of said tubular member for attaching the same to a carbureter.



2. An attachment for securing over the uncontrolled air inlet of a carbureter whereby independent manual and automatic air controls are provided, the same comprising an open ended tubular member, provided intermediate of its ends with a plurality of openings, a valve supporting stem carried by said tubular member, a bonnet provided with an opening and adjustably connected to the outer end of said tubular member and through which said stem extends, a pressure actuated valve slidable on said stem for controlling the opening of said bonnet, a sleeve valve rotatably mounted on said tubular member, for controlling the openings in the side wall thereof, and an adjustable spring tension means for seating said pressure actuated valve.

1,223,671. BUCKLE FOR WRISTBANDS AND SIMILAR USES. HENRY JAMES COLLIS, Taunton, Mass. Filed May 7, 1915. Serial No. 26,476. (Cl. 24—191.)



1. An improved buckle for wrist bands and similar uses, comprising a main body portion consisting of a flat base plate carrying upwardly-projecting side flanges or arms, a clamp member carried at the front of the body by said arms, and a pulley member consisting of a revoluble cylindrical roller mounted above the base plate at a point in rear of said clamp member and operable independently thereof as a revoluble bearing for the strap before it is clamped by the clamp member, substantially as and for the purpose set forth.

2. An improved buckle for wrist bands and similar uses, comprising a main body portion consisting of a flat base plate carrying upwardly-projecting side flanges or arms, a clamp member carried at the front of the body by said arms, and a pulley member consisting of a revoluble cylindrical roller constituted by a solid bar of cylindrical cross-section and reduced or circumferentially shouldered at its ends to form gudgeons operating in cylindrical bearings in said side arms, said revoluble roller being mounted above the base plate at a point in rear of said clamp member and operable independently thereof as a revoluble bearing for the strap before it is clamped by the clamp member, substantially as and for the purpose set forth.

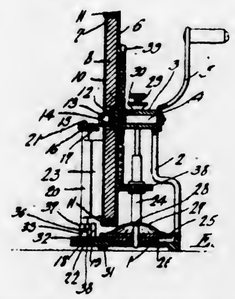
3. An improved buckle for wrist bands and similar uses, comprising a main body portion consisting of a flat base plate carrying upwardly-projecting side flanges or arms, a clamp member carried at the front of the body by said arms, and a pulley member consisting of a revoluble cylindrical roller mounted above the base plate at a point in rear of said clamp member and operable independently thereof as a revoluble bearing for the strap before it is clamped by the clamp member, said clamp member having a body portion constituted by a finger plate projecting rearwardly from its fulcrum and extended to overlie and cover the separate independent revoluble pulley member when the buckle is in "closed" position.

4. An improved buckle for wrist bands and similar uses, comprising a main body portion consisting of a flat base plate carrying upwardly-projecting side flanges or arms, a clamp member carried at the front of the body by said arms, and a pulley member consisting of a revoluble cylindrical roller mounted above the base plate at a point in rear of said clamp member and operable independently thereof as a revoluble bearing for the strap before it is clamped by the clamp member, said clamp member having a body portion constituted by a finger plate projecting rearwardly from its fulcrum and extended to overlie and cover the separate independent pulley member and bowed transversely in concavo-convex form to fit over and conform to the segment of the circumference of the cylindrical roller when the buckle is in "closed" position.

5. An improved buckle for wrist bands and similar uses, comprising a main body portion consisting of a flat base plate carrying upwardly-projecting side flanges or arms, a clamp member carried at the front of the body by said arms, and a pulley member consisting of a revoluble cylindrical roller having bearings in said side arms and mounted above the base plate at a point in rear of said clamp member and operable independently thereof as a revoluble bearing for the strap before it is clamped by the clamp member, said clamp member having a body portion constituted by a finger plate projecting rearwardly from its fulcrum and extended to overlie and cover the separate independent pulley member and bowed transversely in concavo-convex form to fit over and conform to the segment of the circumference of the cylindrical roller and being cut away or recessed at the ends of said bowed portion to permit the passage of the plate downwardly between the projecting arms which carry the roller, substantially as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,223,672. RAZOR-SHARPENING MACHINE. ELISHA A. CONWAY, Williamsport, Pa., assignor of one-half to John E. Waltz, Williamsport, Pa. Filed Dec. 13, 1916. Serial No. 136,693. (Cl. 51—16.)



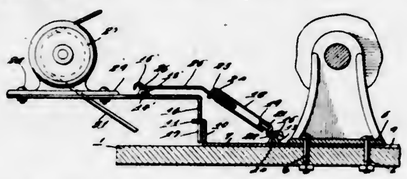
1. A sharpening machine embodying a frame having a base and a standard, a horizontal shaft journaled in the standard, a vertical member carried by said shaft, a disk-shaped sharpening member carried by said member, a vertical shaft journaled to the standard and to the base and operatively connected with the first mentioned mem-

ber, a vertical oscillatory blade holder having its lower end journaled to the base, the base and blade holder having coöperating means for resisting the movement of a blade held by the holder against the sharpening member, the resisting means being yieldable, a pinion carried by the lower portion of the blade holder, a spur gear rotatable upon the vertical shaft on the base and connected with said opinion, a pressure spring carried by the vertical shaft and bearing upon said spur gear, and means for regulating the pressure of said spring against the spur gear.

2. A sharpening machine embodying a frame, a shaft journaled in the frame, a disk-shaped sharpening member carried by said shaft, an oscillatory blade holder for presenting a blade in reversed positions against the face of said sharpening member, a leaf spring carried by said holder, stops carried by the frame for the engagement of said spring before the blade is brought against the sharpening member, a pinion carried by the blade holder, a shaft journaled in the frame and geared to the sharpening member to rotate therewith, a spur gear rotatable upon said shaft and connected to said pinion, a spider-shaped pressure spring keyed upon said shaft and having its arms pressing against said gear spur, the shaft having a shoulder bearing against the pressure spring, and means for shifting said shaft to regulate the tension of the pressure spring.

3. A sharpening machine embodying a rotatable sharpening member, an adjustably mounted oscillatory blade holder, a pinion keyed upon said holder and reversible to change its position, a rotatable shaft connected to the sharpening member to rotate therewith, a pair of spur gears rotatable together loosely upon said shaft, a pressure spring rotatable with said shaft and bearing against one of the spur gears, and a pinion meshing with one of said spur gears, the first mentioned pinion being adapted to mesh with the last mentioned pinion when in one position and to mesh with the other spur gear when in its other position.

1,223,673. ADJUSTABLE MOTOR-BRACKET FOR ELECTRIC WASHERS. OSCAR R. COREY, Fairfield, Iowa. Filed May 10, 1916. Serial No. 96,635. (Cl. 248—30.)



1. In a device of the class described, the combination of a base, said base having a slot extending thereinto from one end, said slot being tapered toward its end portion, said base being adapted to be positioned upon the top of a washing machine, whereby said base may receive securing bolts for holding the base in a set position, and a table adjustably mounted upon said base, said table being adapted to carry a motor for operating a washing machine, said table being adapted to be adjusted for slightly moving the motor as desired.

2. In a device of the class described, the combination of a base, means for firmly carrying said base upon the top of a washing machine, said base having an upstanding wall at one end, a flange extending in a horizontal plane from said wall, said flange provided with longitudinal slots, a table having a depending wall formed upon one end portion, tongues extending from said depending wall, said tongues passing through said slots, whereby said table will be demountably carried upon said base, and means for holding said table in an adjusted set position upon said base, said table being adapted to carry a motor, whereby said table may be adjusted when necessary for moving said motor.

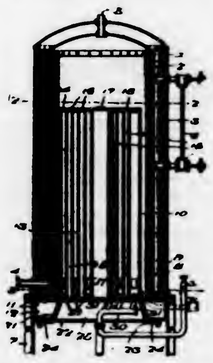
3. In a device of the class described, the combination of a base, a table movably mounted upon said base, a frame connected to said base and a frame connected to said table, means for adjustably connecting said frames, whereby said frames may be drawn toward each other or moved from each other as desired, thereby permitting said table to be adjusted with respect to said base, said table being adapted to carry a motor, whereby upon the movement of said table the slack in a belt connecting the motor to a washing machine may be taken up.

4. In a device of the class described, the combination of a base, said base being adapted to be carried upon a washing machine, a table movably mounted upon said base, a frame connected to said base and a frame connected to said table, a turn-buckle, a threaded bolt connected to said turn-buckle, said last-mentioned frame being connected to said bolt, said first-mentioned frame being connected to said turn-buckle, whereby as said turn-buckle is rotated said bolt may be moved thereinto or moved outwardly therefrom so as to decrease or increase the distance between said frames, thus causing said table to be adjusted, said table being adapted to carry a motor, whereby the motor may be moved when necessary for obtaining the right tension of a belt connecting the same to the washing machine.

5. In a device of the class described, the combination of a base, said base being adapted to be carried upon a washing machine, a table movably mounted upon said base, said base and said table being provided with pairs of upstanding spaced lugs, pintles carried by said lugs, hooks carried by said pintles, frames having coiled ends connected to said hooks, said frames also having central eyes, a turn-buckle having a headed pin at one end and a movably mounted bolt at the opposite end thereof, said eyes fitting upon said pin and said bolt, whereby as the turn-buckle is rotated the distance between said frames may be increased or decreased as desired, whereby said table may be moved upwardly or downwardly at its outer end, said table being adapted to carry a motor so that upon the movement of the table the tension of a belt between the motor and the washing machine may be accurately obtained.

[Claims 6 to 9 not printed in the Gazette.]

1,223,674. WATER-HEATER AND STEAM-BOILER. MAJOR E. DEARING, Salt Lake City, Utah. Filed Oct. 11, 1916. Serial No. 125,118. (Cl. 219—38.)



1. In a water heater and steam boiler, the combination with inner and outer shells having an intervening heat insulating space or chamber, of a hollow convolute heating device contained within the inner shell and having the opposite surfaces of its coils exposed to the water adapted to be contained in said inner shell.

2. In a water heater and steam boiler, the combination with inner and outer shells having an intervening heat insulating space or chamber, of a hollow convolute heating device contained within the inner shell and having the opposite surfaces of its coils exposed to the water adapted to be contained in said inner shell and means for introducing heat into the lower parts of the coils of said heating device.

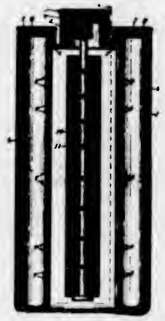
3. In a water heater and steam boiler, the combination with inner and outer shells having an intervening heat insulating space or chamber, of a hollow convolute heating device contained within the inner shell and having the opposite surfaces of its coils exposed to the water adapted to be contained in said inner shell, a removable bottom section, and heating means self-contained therewith adapted to introduce heat into the lower portions of the coils of said heating device.

4. In a water heater and steam boiler, the combination with a shell adapted to contain water, of a hollow convolute heating device whose coils are separated and which is contained within the shell, and means for introducing heat directly into the interior of said convolute heating device.

5. In a water heater and steam boiler, the combination with a shell adapted to contain water, of a hollow convolute heating device whose coils are separated and which is contained within the shell and has an open end portion, and means bodily detachable from the shell, adapted for introducing heat into one end portion of said hollow convolute heating device.

[Claims 6 to 8 not printed in the Gazette.]

1,223,675. COMBINED POCKET-CASE AND STERILIZER FOR SURGICAL INSTRUMENTS. AUGUSTO H. DE GOENAGA, Gobleville, Mich. Filed Sept. 7, 1915. Serial No. 49,381. (Cl. 167—3.)

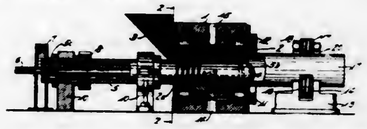


1. A pocket case and sterilizer for surgical instruments, comprising a casing having a central threaded neck at the top and openings through the top at the sides of the neck, tubular instrument containers arranged in said openings to project from the top, the projecting ends of said containers being threaded, the inner walls of said containers being perforated, caps for said containers, a closure cap for said casing threaded on said neck, a rod depending from said casing cap, and absorbent material carried by said rod, said absorbent material being adapted to be inserted and removed through said casing opening.

2. A device of the class described, comprising a casing, a removable closure therefor, a rod depending from said casing closure, absorbent material carried by said rod, said material being removable from said casing with said closure, instrument containers arranged in said casing and open to the interior thereof to permit circulation from the casing therethrough, and closures for said containers independent of said casing closure.

3. A device of the class described, comprising a casing, a removable closure therefor supported by a single wall of said casing, absorbent material removable from said casing with said closure, an instrument container arranged in said casing and open to the interior thereof to permit circulation from the casing therethrough, and a closure for said container independent of said casing closure.

1,223,676. MACHINE FOR THE MANUFACTURE OF PIPES, CYLINDERS, &c. DIMITRI SENSAUD DE LAVAUD, São Paulo, Brazil. Filed July 21, 1916. Serial No. 110,485. (Cl. 22—65.)



1. In a casting machine, the combination comprising a rotary mold, and a roller disposed within said mold.

2. In a machine for casting hollow bodies, the combination comprising a rotary mold, a roller disposed within said mold, and means for continuously ejecting a casting as formed.

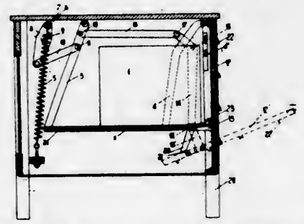
3. In a casting machine, the combination comprising a rotary mold, a roller disposed within said mold, and ejecting means formed on the outer surface of said roller.

4. In a casting machine, the combination comprising a rotary mold, and a roller disposed within said mold, said roller having a helical channel cut in its outer surface.

5. In a casting machine, the combination comprising a rotary mold, a roller disposed within said mold, and means for cooling said mold and roller.

[Claims 6 to 11 not printed in the Gazette.]

1,223,677. DESK OR CABINET FOR DISAPPEARING TYPE-WRITING MACHINES. CAMILLE DE VLEESCHOUWER and JOHANNES TACOMA, Amsterdam, Netherlands. Original application filed July 23, 1914, Serial No. 852,628. Divided and this application filed Mar. 9, 1916. Serial No. 83,028. (Cl. 45—52.)



1. An article of furniture having a housing provided with an opening, a movable closure for said opening, a supporting member mounted for movement through the said opening during passage between its exteriorly disposed operative position and its inoperative position within the housing wherein it is disposed so that it can be reached only when the said closure is partially open, and means for transmitting motion from the supporting member to the said movable closure to cause the latter to be automatically withdrawn into the housing during outward movement of the supporting member, the closure being free for limited independent movement relative to the said motion transmitting means.

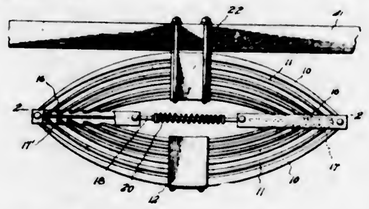
2. An article of furniture having a housing provided with an opening, a movable closure for said opening, a supporting member mounted for movement through the said opening during passage between its exteriorly disposed operative position and its inoperative position within the housing wherein it is disposed so that it can be reached only when the said closure is partially open, and means for transmitting motion from the supporting member to the said movable closure to cause the latter to be automatically withdrawn into the housing during outward movement of the supporting member, said means including a lever pivoted to the housing and connected operatively with the supporting member, an arm of the lever being pivotally connected with the said closure to support the same and having a limiting extension adapted to engage the closure to permit only limited independent movement of the latter relative thereto.

3. An article of furniture having a housing provided with an opening, a movable closure for said opening, a supporting member mounted for movement through the said opening during passage between its exteriorly disposed operative position and its inoperative position within the housing wherein it is disposed so that it can be reached only when the said closure is partially open, and means for transmitting motion from the supporting member to the said movable closure to cause the latter to be automatically withdrawn into the housing during outward movement of the supporting member, said means including a lever pivoted to the housing and connected operatively with the supporting member, an arm of the lever being pivotally connected with the said closure to support the same and having a limiting extension adapted to engage the inner face of the closure at a point situated below the point of pivotal connection with the lever when the closure has been displaced slightly from its normal angular relation to the lever.

4. An article of furniture having a housing provided with an opening, a movable closure for said opening, a supporting member mounted for movement through the said opening during passage between its exteriorly disposed operative position and its inoperative position within the housing wherein it is disposed so that it can be reached only when the said closure is partially open, means for transmitting motion from the supporting member to the said movable closure to cause the latter to be automatically withdrawn into the housing during outward movement of the supporting member, the closure being free for limited independent movement relative to the said motion transmitting means and means adapted to lock the supporting member automatically upon being moved into its operative position.

5. An article of furniture having a housing provided with an opening, a movable closure for said opening, a supporting member mounted for movement through the said opening during passage between its exteriorly disposed operative position and its inoperative position within the housing, wherein it is disposed so that it can be reached only when the said closure is partially open, and means for transmitting motion from the supporting member to the said movable member to cause the latter to be automatically withdrawn into the housing during outward movement of the supporting member, the said motion transmitting means being adapted to support the closure rigidly with respect thereto during movement of the supporting member to prevent the closure from swinging into contact with the housing, the closure being free for limited independent movement relative to the said motion transmitting means.

1,223,678. VEHICLE-SPRING. WILLIAM F. DOHERTY, Jr., Bisbee, Ariz. Filed Mar. 3, 1916. Serial No. 81,893. (Cl. 267—32.)



1. A vehicle spring including a body bar, a master leaf connected thereto, and a plurality of supplemental leaves supported upon the master leaf in spaced relation to each other and in spaced relation to the body bar to coöperate therewith with the space between the free ends of said supplemental leaves and the body bar gradually increasing from the outermost supplemental leaf to the innermost supplemental leaf.

2. A vehicle spring including a body bar provided with flanges, a master leaf connected to the body bar, and a supplemental leaf connected with the master leaf and supported to coöperate with the body bar with the free extremities of said supplemental leaf received between said flanges to be held against lateral displacement thereby.

3. A vehicle spring including a body bar, a master leaf connected thereto, and a plurality of supplemental leaves connected with the master leaf and arranged to confront the body bar, all of the said leaves being decreased in length and thickness from the master leaf to the innermost supplemental leaf with the supplemental leaves arranged to successively coöperate with the body bar.

4. A vehicle spring including a body bar, a master leaf connected thereto, and a plurality of supplemental leaves associated with the master leaf, the supplemental leaves being supported in spaced relation to each other and to the master leaf with the spacing between the said leaves decreased from the master leaf.

5. A vehicle spring including a body bar, a master leaf connected thereto, and a plurality of supplemental leaves associated with the master leaf, the supplemental leaves being supported in spaced relation to each other and to the master leaf, and means for supporting the said leaves in spaced relation with the said means graduated in thickness from the innermost supplemental leaf to the master leaf.

[Claim 6 not printed in the Gazette.]

1,223,679. OPTICIAN'S PUPILLARY PLIERS. ARTHUR KENNETH DOWNS, Portland, Oreg. Filed Aug. 14, 1916. Serial No. 114,939. (Cl. 81—15.)

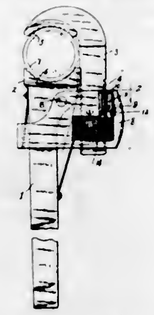


1. In a device of the character described comprising a pair of pivoted arms, a jaw formed integral with each arm and each being rounded throughout their entire lengths, a platform formed integral with one of said jaws and having its upper face terminating above the upper face of the jaw to which it is formed and means for limiting the closing movement of said jaws whereby the upper face of the platform will be held in spaced relation with the adjacent jaw.

2. An optician's pliers comprising a pair of pivoted arms, a jaw formed integral with the outer end of each arm and tapering toward a point, said jaws each being substantially semicircular in cross section, means for limiting the closing of said jaws whereby when the jaws are closed they will lie parallel with each other and in spaced relation, a platform formed integral with one of said jaws having substantially a semicircular configuration in cross section and being of greater width than the jaws, the upper face of said platform being slightly higher than the upper face of the jaw to which it is connected and the upper face of the platform adapted to be retained in spaced relation with the adjacent jaw when the jaws are in closed position.

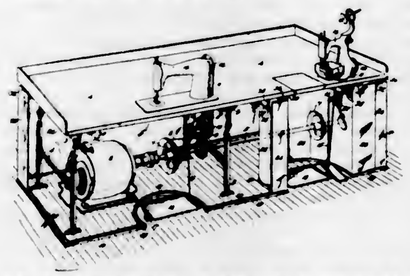
1,223,680. PIPE-WRENCH. MICHAEL F. DRISCOLL, West Springfield, Mass. Filed Dec. 20, 1916. Serial No. 137,995. (Cl. 81—105.)

In a pipe wrench the combination, of fixed and movable jaws, the jaws having teeth arranged in the form of a circle to place uniform pressure on the article to be gripped and to prevent the wrench from becoming detached from the pipe when it hangs in a vertical plane, the movable jaw being mounted in a yoke which is pivotally secured to the fixed handle part of the wrench, threads on the movable jaw, a nut having an opening therethrough and engaging the threads for adjusting the same, and means for locking the nut, said means comprising grooves in the end of the nut and arranged tangentially to the opening in the nut, a slide, a U-shaped guide-way secured to the yoke to receive the slide and located adjacent the grooves in the nut, said slide engaging the grooves, and



means for adjusting and clamping the slide in the guide-way, whereby the movable jaw is held in a fixed position during the operation of turning the pipe.

1,223,681. CASING OR SHIELD FOR POWER-TABLES. HERMANN EICHHORN and RUDOLPH BECKER, Elizabeth, N. J., assignors to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Apr. 6, 1914. Serial No. 829,764. (Cl. 74—56.)



1. A casing or shield for a power-table, comprising a floor-rail, a shield-plate fitted at the lower edge to said rail, and means for detachably securing said shield-plate in position upon said rail.

2. A casing or shield for a power-table, comprising a floor-rail, a series of shield-plates fitted at their lower edges to said rail each with an edge contiguous to that of an adjacent shield-plate, and means for detachably securing said shield-plates in position upon said rail.

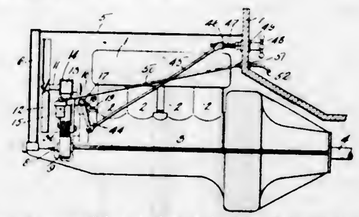
3. A casing or shield for a power-table, comprising a rail to be disposed beneath the table-top, a shield plate having its lower edge fitted upon and supported by said rail, and a spring-holder engaging the upper edge of said shield-plate and adapted to press the same yieldingly and detachably upon said rail.

4. A casing or shield for a power-table, comprising a floor-rail to be disposed beneath the table and provided with a seat, a series of shield-plates resting upon and having their lower edges confined in position by said seat of the floor-rail, and spring-holders sustained by the table in yielding engagement with the upper edges of said plates and acting to press the latter upon said seat of the floor-rail.

5. In a power-table for supporting one or more sewing machines and having suspended beneath it one or more power-transmitters with suitable treadle connections, a casing or shield arranged below the table comprising a floor-rail formed with a backwardly deflected portion adapted to embrace a treadle, and a plurality of detachable shield sections resting upon said rail, said shield sections conforming to the shape of the rail with its backwardly deflected portion, embracing the treadle, and forming a partition between the same and the transmitter.

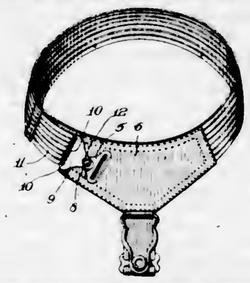
[Claim 6 not printed in the Gazette.]

1,223,682. PUMP OR COMPRESSOR FOR MOTOR-VEHICLES AND THE LIKE. ALFRED H. FEPELLE, Buffalo, N. Y., assignor of two-thirds to William La Hodny, Buffalo, N. Y. Filed Apr. 19, 1913. Serial No. 762,202. (Cl. 230—27.)



A pump comprising a frame having a bearing recess therein, a cylinder having a trunnion mounted in said bearing recess, means for securing said trunnion in said recess, a piston reciprocating in said cylinder but capable of disconnection therefrom, a bearing pin carried by said frame, a friction disk removably mounted upon said bearing pin and having a crank pin projecting from the side thereof, said piston having an extended portion with a bearing therein removably engaging said crank pin, said piston being normally retained in said cylinder by its engagement with said crank pin and said friction disk being normally held upon said bearing pin by said piston, whereby when said means for retaining said cylinder trunnion in said bearing recess are released, said cylinder, piston and friction disk may be separated from said frame and from each other.

1,223,683. GARTER ATTACHMENT. WILLIAM FERGUSON, Philadelphia, Pa., assignor to Pioneer Suspender Company, a Corporation of Pennsylvania. Filed May 6, 1916. Serial No. 95,759. (Cl. 24—221.)



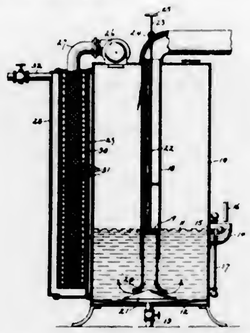
1. A garter attachment for disengageably connecting the leg band comprising a stud carrying element provided with a spheroidal knob mounted thereon, and a coöperating element having an oval aperture for receiving the knob, the longitudinal axes of aperture and knob being at an angle when the garter is in operative position.

2. A garter attachment for disengageably connecting the leg band comprising a stud carrying element provided with a spheroidal knob mounted thereon and a coöperating element having an oval aperture for receiving the knob, the longitudinal axes of aperture and knob being inclined to each other at an angle of approximately forty-five degrees.

1,223,684. VENTILATION AND CLEANING DEVICE. JOHN C. FLEMING, Boston, Mass. Filed Dec. 20, 1916. Serial No. 138,063. (Cl. 98—33.)

1. An improved method of ventilation and cleaning air comprising guiding a stream of atmospheric air at

atmospheric pressure through a body of purifying liquid and releasing the same into said liquid contiguous to the bottom thereof, maintaining a rarefaction of air above the surface of said liquid, thereby causing said air at atmospheric pressure to first pass downwardly and then to be discharged upwardly therefrom through the liquid by its natural force, whereby the air pervades the liquid and is rarefied and cooled, varying the rarefaction of air in the space above said liquid by controlling the volume of discharge therefrom, and finally delivering said air to the space to be ventilated.



2. An improved method of ventilation and cleaning air comprising guiding a stream of atmospheric air at atmospheric pressure to the bottom of a purifying liquid, maintaining a rarefaction of air above the surface of said liquid, thereby causing said air at atmospheric pressure to pass downwardly into the liquid and then to be discharged upwardly therefrom by its natural force, whereby the air is rarefied and cooled, neutralizing any impure gases intermingled with the air, and finally delivering the purified air to the space to be ventilated.

3. A ventilation and cleaning device comprising a liquid holding receptacle, an atmospheric air supply pipe having its discharge end located below the liquid in the receptacle, means for creating a partial vacuum within the receptacle above the surface of the liquid therein, to cause air to pass through the liquid in the receptacle by atmospheric pressure, and means for causing the air to pass over animal charcoal after passing through said liquid.

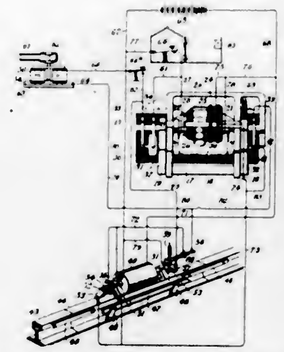
4. A ventilation and cleaning device comprising a liquid holding receptacle, an atmospheric air supply pipe having its discharge end located below the liquid in the receptacle, means for creating a partial vacuum within the receptacle above the surface of the liquid therein to cause air to pass through the liquid in the receptacle by atmospheric pressure, a chamber containing animal charcoal, and a conduit leading from said receptacle above the surface of the liquid to said chamber.

5. A ventilation and cleaning device comprising a liquid holding receptacle, an atmospheric air supply pipe having its discharge end located below the liquid in the receptacle, means for creating a partial vacuum within the receptacle above the surface of the liquid therein to cause air to pass through the liquid in the receptacle by atmospheric pressure, a chamber through which the purified air passes upon leaving said receptacle, and a cage within said chamber containing animal charcoal.

[Claims 6 and 7 not printed in the Gazette.]

1,223,685. PERMISSIVE AUTOMATIC TRAIN-STOP. AUSTEN H. FOX, New York, and ARNOLD W. LENDEROTH, Stapleton, N. Y. Filed Apr. 21, 1913. Serial No. 762,462. (Cl. 246—59.)

1. Train-control apparatus comprising a vehicle having a detector responsive to the condition of the roadway, a stopping device controlled by said detector, a speed-responsive member, means controllable by a person and also controlled by said member for avoiding the normal effect of the detector on said stopping device below a predetermined speed at control points in the roadway, and a device actuated concurrently with the last-said means on assuming its operative condition for retaining it in that condition.



2. Train-control apparatus comprising a vehicle having a detector responsive to the condition of the roadway, a stopping device controlled by said detector, a speed-responsive member, means controllable by a person and also controlled by said member for avoiding the normal effect of the detector on said stopping device below a predetermined speed at control points on the roadway, an automatic self-retainer for holding said means in its operative condition, and a device on the vehicle responsive to the condition of the roadway for restoring said means to inoperative condition.

3. Train-control apparatus comprising a vehicle having a detector responsive to the condition of the roadway, a stopping magnet having a detector-controlled switch in its circuit, a speed-controlled switch in series with said magnet and detector switch, and a shunt circuit and means for closing the same around said detector switch.

4. Train-control apparatus comprising a vehicle having a detector responsive to the condition of the roadway, a stopping magnet having a detector-controlled switch in its circuit, a shunt circuit adapted to be closed around said detector switch, a magnet controlling the closure of said shunt circuit, and a speed-controlled switch located in the return from said detector switch and said shunt.

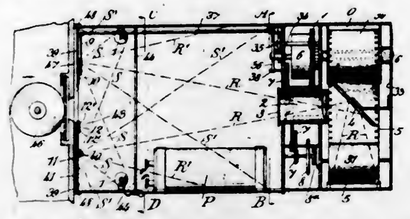
5. Train-control apparatus comprising a vehicle having a detector responsive to the condition of the roadway, a stopping device controlled by said detector, a speed-responsive member operative above a predetermined maximum speed of the vehicle, means for avoiding the normal stopping effect of the detector, and mechanism conjointly operative with said means for subjecting the connection between said detector and stopping device to the action of said speed-responsive member.

[Claims 6 to 13 not printed in the Gazette.]

1,223,686. DEVICE FOR RECORDING THE READINGS OF METERS. AUGUST FRISCH, Zurich, Switzerland, assignor to the Firm of A. Frisch & Co., Zurich, Switzerland. Filed May 14, 1915. Serial No. 28,065. (Cl. 95—31.)

1. A device for recording the readings of meters, comprising a casing, a camera located within the latter, illuminating means in the casing out of the field of the camera lens adapted to illumine the indicators of a meter, time indicating means in the casing extending into the field of the camera lens and the light rays of the illuminating means, and clock mechanism for operating the time indicator located out of the field of the lens.

2. A device for recording the readings of meters, comprising a casing, a camera located within the latter, illuminating means in the casing out of the field of the camera lens adapted to illumine the indicators of a meter, hour, day, and month indicating means in the casing extending into the field of the camera lens and light rays of the illuminating means, and clock mechanism for operating the hour indicating means located out of the field of the lens.

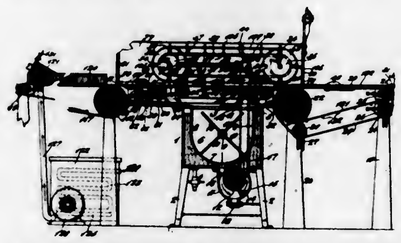


3. A device for recording the readings of meters, comprising a casing, a camera located within the latter, illuminating means in the casing out of the field of the camera lens adapted to illumine the indicators of a meter, an hour indicating sector mounted on the front of the casing and extending into the field of the camera lens and the light rays of the illuminating means, a hand extending over the sector, and timing means located in the casing out of the field of the lens to oscillate the hand.

4. A device for recording the readings of meters, comprising a casing, a camera located within the latter, illuminating means in the casing out of the field of the camera lens adapted to illumine the indicators of a meter, an hour indicating sector mounted on the front of the casing and extending into the field of the camera lens and the light rays of the illuminating means, a hand extending over the sector, a clock mechanism located in the camera above the lens, and a rod carrying the hand extending from the clock mechanism out of the field of the lens.

5. A device for recording the readings of meters comprising, a casing, a camera located therein, an illuminating means in the casing adapted to illumine the indicators of a meter, an hour indicating sector located in the casing within the field of the lens and the light rays of the illuminating device, a clock mechanism located in the camera, a shaft extending from the camera to the front of the casing, an indicating hand connected to the shaft in front of the sector, a toothed sector on the shaft, a pivoted toothed sector in mesh with the sector on the shaft, and a cam rotated by the clock mechanism adapted to oscillate the pivoted sector.

1,223,687. CANDY-COATING MACHINE. WILLIAM FRITZ, Philadelphia, Pa. Filed Apr. 3, 1915. Serial No. 18,875. (Cl. 91—3.)



1. In a coating machine, a pair of transverse rollers, an endless feeding apron fitted around said rollers and having transverse strips upon them, elastic bands fitting around said apron at predetermined distances, means for imparting longitudinal movement to the apron and bands, a pair of transverse rollers, an endless open work apron upon said rollers, means for rotating said rollers, transverse rotary supports above the ends of said apron, elastic endless bands fitting around such supports and slightly above the open work apron and registering with the feeding bands, means for coating blanks during their movement, and means for exploding the coated blanks from the open work apron to cooling air.

2. In a coating machine, a pair of transverse rollers, an endless feeding apron fitted around said rollers and having transverse strips upon them, elastic bands fitting around said apron at predetermined distances, means for imparting longitudinal movement to the apron and bands, a pair of transverse rollers, an endless open work apron upon said rollers, means for rotating said rollers, transverse rotary supports above the ends of said apron, elastic endless bands fitting around such supports and slightly above the open work apron, and registering with the feeding bands, flexible carriers around said rotary supports, strips transversely supported at given distances upon said carriers and having pins projecting outward, means for coating blanks during their movement, and means for exposing the coated blanks from the open work apron to cooling air.

3. In a coating machine, a pair of transverse rollers, an endless feeding apron fitted around said rollers and having transverse strips upon them, elastic bands fitting around said apron at predetermined distances, means for imparting longitudinal movement to the apron and bands, a pair of transverse rollers, an endless open work apron upon said rollers, means for rotating said rollers, transverse rotary supports above the ends of said apron, elastic endless bands fitting around such supports and slightly above the open work apron, and registering with the feeding bands, means for coating blanks during their movement, vibrating means acting against the upper portion of the open work apron to vibrate the latter, and means for exposing the coated blanks from the open work apron to cooling air.

4. In a coating machine, a pair of transverse rollers, an endless feeding apron passed around said rollers, bands fitting around said apron at predetermined distances, means for imparting longitudinal movement to the apron and bands, transverse rollers, an endless open-work apron on said rollers, means for rotating the rollers, transverse rotary supports above the ends of said apron, endless bands fitting around said supports and slightly above the open-work apron and registering with said feeding bands, means for coating blanks during their movement, and means for exposing the coated blanks from the open-work apron to cooling air.

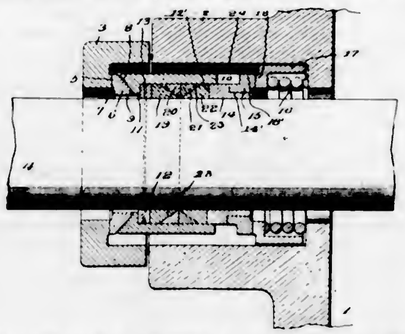
5. In a coating machine, a pair of transverse rollers, an endless feeding apron passed around said rollers, bands fitting around said apron at predetermined distances, means for imparting longitudinal movement to the apron and bands, transverse rollers, an endless open-work apron on said rollers, a rotary support above the ends of said apron, flexible carriers around said rotary support, endless bands fitting around said supports and slightly above the open-work apron and registering with said feeding bands, means for coating blanks during their movement, and means for exposing the coated blanks from the open-work apron to cooling air.

[Claims 6 to 8 not printed in the Gazette.]

1,223,688. ROD-PACKING. SHIRLEY L. GARY, South Richmond, Va. Filed Aug. 10, 1915. Serial No. 44,797. (Cl. 137—116.)

1. A floating rod packing comprising a cup having an inwardly extending flange at its outer end, the inner face of which is straight, an abutting ring placed within the cup and having oppositely disposed straight faces one of which contacts with the straight face of the flange, a second abutting ring at the inner end of the cup having a straight face, two packing rings placed within the cup with their outer faces straight and in contact with the adjacent straight faces of the abutting rings and having their inner faces converging in the direction of the rod.

two other packing rings mounted upon the converging faces of the first-mentioned packing rings and having their abutting faces straight, and means exerting a yieldable pressure against all of said rings.



2. A rod packing comprising a cup having an inwardly extending flange, the outer face of which is concave and the inner face of which is straight, an abutting ring placed within the cup and having a straight face bearing against the straight face of the flange, a second abutting ring having a straight face, a head ring having a convex face engaging the concave face of the flange, a plurality of metallic packing rings interposed between the abutting rings and provided with inclined edges intersecting at the surface of the rod, certain of said packing rings having straight faces for contact with the straight faces of the adjacent abutting rings, and means for exerting a yieldable pressure against all of the rings.

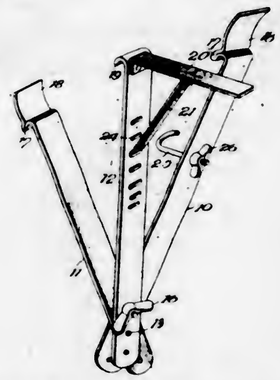
3. A rod packing of the floating type comprising a cup having an inwardly extending flange, the inner face of which is straight, an abutting ring having straight side faces, one of which bears against the straight face of the flange, a second abutting ring having its outer end straight and its inner end reduced to form a seat, a plurality of metallic packing rings seated within the cup and interposed between the abutting rings, said rings having inclined faces intersecting at the surface of the rod, a follower ring fitted to the seat in the second-mentioned abutting ring, and a spring bearing against the follower ring for exerting a yieldable pressure against all of the packing rings.

4. A rod packing comprising a cup having parallel inner and outer walls and provided at one end with an inwardly extending flange, the outer face of which is concave and the inner face of which is straight, a head ring having a convex face bearing against the concave face of the flange, an abutting ring having a straight face bearing against the straight face of the flange, a second abutting ring having a straight face, a plurality of packing rings interposed between the abutting rings, certain of said packing rings having straight faces for engagement with the straight faces of the adjacent abutting rings and inclined faces converging in the direction of the rod for contact with correspondingly inclined faces on the other of said packing rings, a follower ring, a barrel bearing against the follower ring, and a spring housed within the barrel for exerting a yieldable pressure on the follower ring.

5. A rod packing comprising a cup having its outer end provided with an inwarly extending flange, the outer face of which is concave and the inner face of which is straight, a head ring coacting with the flange, an abutting ring having straight side faces, one of which bears against the straight face of the flange, a second abutting ring having its front end straight and its rear end reduced to form a circumferential seat, a plurality of metallic packing rings interposed between the abutting rings, the outer faces of some of the packing rings being straight for engagement with the adjacent abutting rings and their inner faces converging in the direction of the rod for contact with correspondingly converging faces of the other of said packing rings, a follower ring fitted to the seat in the last-mentioned abutting ring and provided with a thickened portion having a flat face, a barrel having a flat face bearing against the flat face of the follower ring, and a spring arranged within the barrel for forcing the barrel and follower ring in the direction of the packing rings.

[Claims 6 to 9 not printed in the Gazette.]

1,223,689. TIRE-REPLACER. JOHN WM. GETZENDANER, Polo, Ill. Filed June 6, 1916. Serial No. 102,083. (Cl. 157—6.)



1. A device of the character described including coacting arms, attaching elements carried thereby, a tire engaging bracket carried by one of said arms, and stop guards carried by the other of said arms and disposed for engagement with a tire resting upon said bracket with one of said last mentioned arms fixed and the other of said last mentioned arms movable toward the said first mentioned arm for shifting a tire longitudinally upon the said bracket.

2. A tire replacer for vehicle wheels including coacting arms, means pivotally connecting the said arms at their inner extremities with the arms extending radially therefrom and supported to swing about the wheel hub, attaching elements carried by the outer extremities of said arms for engagement with the wheel tire to move around the tire, a tire receiving bracket mounted upon one of the arms and disposed to project laterally therefrom, and a stop guard carried by the free extremity of the other of said arms for engagement with a tire upon the movement of said last mentioned arm toward said first mentioned arm to shift the tire inwardly upon the bracket.

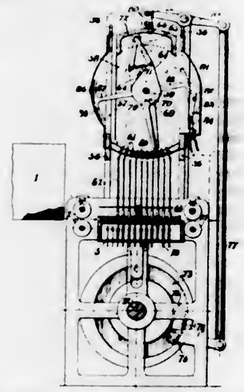
3. A tire replacer for vehicle wheels including coacting radial arms pivotally connected at their inner extremities, attaching elements carried by the outer extremities of said arms for engagement with a wheel tire to move around the tire, a cupped socket member arranged at the inner extremities of the arms and formed to fit over the wheel hub for supporting the said arms to swing about the hub, a tire receiving bracket mounted upon the free extremity of one of said arms and disposed to project laterally therefrom, and a stop guard carried by the free extremity of the other of said arms and adapted for engagement with a tire upon the movement of said last mentioned arm toward the said first mentioned arm for shifting the tire inwardly upon the bracket.

4. A device of the character described including coacting arms, means adjustably and pivotally connecting the inner extremities of said arms with the arms extending radially therefrom, attaching elements carried by the outer extremities of the arms, a tire receiving bracket adjustable upon one of said arms to project laterally from the free extremity thereof, and a stop guard carried by the free extremity of the other of said arms and disposed for engagement with a tire with said last mentioned arm movable toward said first mentioned arm for shifting the tire inwardly upon said bracket.

5. A device of the character described including coacting radial arms pivotally connected at their inner extremities and bent at their outer extremities to provide attaching hooks with the adjacent terminal of one of said arms extended to provide an upstanding stop guard, and a tire receiving bracket mounted upon the other of said arms and disposed to project laterally therefrom with the said first mentioned arm movable toward said first mentioned arm to engage the said stop guard with a tire to shift the said tire inwardly upon the bracket.

[Claims 6 and 7 not printed in the Gazette.]

1,223,690. ADDING AND SORTING MACHINE. HANS GOERLITZ, Berlin, Germany, assignor to Powers Accounting Machine Company, New York, N. Y., a Corporation of Delaware. Filed July 19, 1915. Serial No. 40,700. (Cl. 74—46.)



1. In combination with the drive of an adding or sorting machine, of a stop action coöperating with perforated cards comprising means for coöperating with the perforations in a card, a drive controlling member adapted to be actuated into a certain position by said means when said means coöperate with a certain perforation, said controlling member assuming another position when said means coöperate with another perforation, and connecting means for operatively connecting said controlling member with said drive, said change in position in said controlling member disconnecting said drive with the result that the machine stops whenever a new group or series of cards commences, or when the supply of cards is exhausted.

2. In combination with the drive of an adding or sorting machine, of a stop action coöperating with perforated cards comprising pins for coöperating with the perforations in a card, a drive controlling member adapted to be set in a certain position by any one of said pins when one of said pins coöperates with a certain perforation, said controlling member assuming another position when another of said pins coöperates with another perforation, and connecting means for operatively connecting said controlling member with said drive, said change in position in said controlling member disconnecting said drive with the result that the machine stops whenever a group or series of cards commences.

3. In combination with the drive of an adding or sorting machine, of a stop action coöperating with perforating cards comprising a predetermined series of pins for coöperating with certain of the perforations in a card, a drive controlling member adapted to be set in a certain position by any one of said pins when such pin coöperates with a certain perforation, said controlling member assuming another position when another of said pins coöperates with another perforation, and connecting means for operatively controlling said connecting member with said drive, said change in position in said controlling member disconnecting said drive with the result that the machine stops whenever a new group or series of cards commences.

4. In combination with the drive of an adding or sorting machine, of a stop action coöperating with perforating cards comprising a predetermined series of pins for coöperating with certain of the perforations in a card, a drive controlling member to be differently actuated by successively operative different pins when such pins coöperate with certain perforations, said change in actuation disconnecting said drive.

5. In combination with the drive of an adding or sorting machine, of a stop action coöperating with perforated cards comprising means for coöperating with the perforations in a card, a drive controlling member to be differently actuated by said coöperating means when such coöperating means successively coöperate with different perforations, said change in actuation disconnecting said drive.

[Claims 6 to 14 not printed in the Gazette.]

1,223,691. LENS. ROBERT L. GORDON, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association of Massachusetts. Filed Dec. 1, 1916. Serial No. 134,385. (Cl. 88—57.)

1. A cylindrical lens, having an axis forming line invisibly marked on the surface thereof.



2. The combination with a lens having a cylindrical power, of an axis designation extending across the lens and permanently applied thereto but invisible as respects ordinary vision.

3. The combination with a cylinder lens, of a faint indentation formed thereon and extending along the axis of the cylinder.

1,223,692. COMPOSITION OF MATTER FOR USE AS A RUBBER SUBSTITUTE. FRANCIS A. HALSEY, Philadelphia, Pa., assignor of one-fourth to Charles Hamilton, Philadelphia, Pa. Filed Dec. 7, 1915. Serial No. 65,553. (Cl. 106—23.)

1. A composition of matter for use in the manufacture of vehicle tires and for like purposes, including Pará rubber, aluminum wool, and cotton waste.

2. A composition of matter for use in the manufacture of vehicle tires and for like purposes, including Pará rubber, kieselguhr, and aluminum wool.

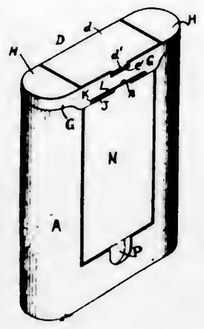
3. A composition of matter for use in the manufacture of vehicle tires and for like purposes, including Pará rubber, kieselguhr, fullers' earth, oxid of lead, aluminum wool, cotton waste, and wood pulp.

4. The herein described composition of matter for use in the manufacture of vehicle tires and for like purposes, including Pará rubber, kieselguhr, fullers' earth, asbestos, oxid of lead, powdered sulfur, aluminum wool, cotton waste, and wood pulp, substantially in the proportions stated.

5. A composition of matter for use in the manufacture of vehicle tires and for like purposes, including Pará rubber and aluminum wool.

[Claim 6 not printed in the Gazette.]

1,223,693. COMBINED TOBACCO, MATCH, AND PAPER RECEPTACLE. ALLISON A. HAVEN, Chicago, Ill., assignor of fifty one-hundredths to Thomas F. Yore, Chicago, Ill. Filed Feb. 19, 1916. Serial No. 79,364. (Cl. 206—38.)

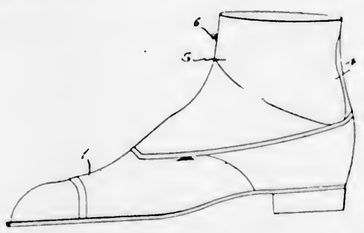


1. A receptacle, in combination with a cover hinged thereto, said cover comprising an additional receptacle, the ends and bottom whereof consist of a portion of the top of said cover forced out therefrom and the sides whereof consist of the sides of said cover, with an additional cover hinged to register with the opening in the first named cover which results from the forcing of said ends and bottom of the additional receptacle out therefrom.

2. A receptacle, comprising side and end walls, in combination with a cover, provided with an additional receptacle and a hinge joining said receptacle and cover, said cover provided with an aperture adapted to form the open side of said additional receptacle, and a cover to said aperture, one of said side walls provided with a recess forming an additional receptacle, a cover to said additional receptacle and means on said last named cover to retain paper thereon.

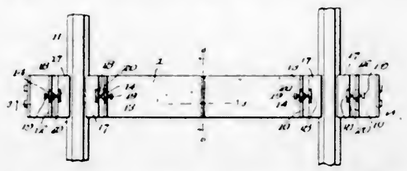
3. A receptacle comprising side and end walls, one of said side walls provided with a recess forming an additional receptacle, in combination with covers, said covers hinged to one end of said recessed side, the pintle of said hinge being common to said first named receptacle, and to said covers, and the cover to said first named receptacle provided with an additional receptacle and with a hinged cover to said additional receptacle.

1,223,694. SHOE. CHARLES G. HEEREN, Long Island City, N. Y. Filed July 1, 1916. Serial No. 107,192. (Cl. 36—50.)



A shoe having an upper comprising a lower portion extending from the sole of the shoe up over the instep at the front of the shoe and having its upper edges inclining downwardly from the front of the upper toward the heel of the shoe, and an upper portion secured to the lower portion at the back of the shoe only, the ends of said upper portion being arranged to be secured together at the front of the shoe, and the lower edge portions of said upper portions being arranged to over-lap the upper edge portions of said lower portions.

1,223,695. RAILWAY CONSTRUCTION. GEORGE B. HOFFMAN, Raven Rock, N. J. Filed July 11, 1916. Serial No. 108,632. (Cl. 238—3.)



1. A reinforced plastic tie comprising two sections having abutting ends, spring means for connecting the sections, and means for adjusting such connecting means.

2. A reinforced plastic tie comprising two sections, a saddle member arranged at the confronting ends of the sections, and spring pressed means engaging with the saddle member to connect the sections.

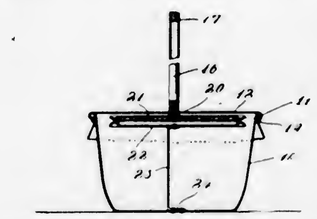
3. A tie comprising two alining sections, a member arranged at the confronting ends of the sections, spring pressed means for connecting the member with the respective tie sections, said means including adjustable elements operative from the ends of the tie.

4. A tie comprising two alining sections having their confronting ends formed each with a pocket, a flanged saddle member in the pockets, and adjustable means passing through the tie sections and engaging with the flanges of the saddle for connecting the sections with the saddle.

5. A plastic tie comprising two alining sections, reinforcing plates upon the confronting ends of the sections, an element bridging the sections, and adjustable spring pressed means upon each of the sections connected with the said element for joining the sections.

[Claims 6 to 9 not printed in the Gazette.]

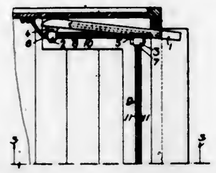
1,223,696. TOY. HEINRICH JABLONOWSKY, Riverside, N. J. Filed July 6, 1916. Serial No. 107,729. (Cl. 46—46.)



1. In a toy, the combination with an open hollow metallic receptacle of circular cross section, a flexible diaphragm engaged at the edges of said receptacle, a hollow post vertically positioned centrally of said diaphragm, and a whistle combined with said post, said post having a periphery adapted to be engaged in frictional contact with a moistened element whereby the diaphragm is caused to emit sound.

2. In a toy, the combination with a cylindrical vessel having beveled walls, a beaded upper edge, a diaphragm engaged with said edge over the open top of said receptacle, a hollow post rigidly secured vertically upon said diaphragm, a cymbal element at the bottom of said post below said diaphragm, a second cymbal element supported within said receptacle in register with the first element, and a whistle formed with said post.

1,223,697. SLIDING DOOR. LEENDERT JANSE, The Hague, Netherlands. Filed Mar. 23, 1915. Serial No. 16,403. (Cl. 119—14.)



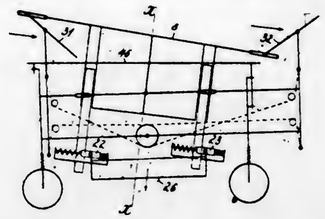
1. In a railway wagon the combination of a vertical door member, a side horizontal supporting track arranged substantially parallel to the side wall of the wagon, an end horizontal supporting track arranged substantially parallel to the end wall of the wagon, a pair of spaced brackets attached to said door member, means for engaging said side track only and pivotally mounted on a vertical axis on one of said brackets, means for engaging said end track only and pivotally mounted on a vertical axis on the other bracket, a pair of guide tracks and a pair of guide members attached to said door member and each engaging in one of said guide tracks, said end-supporting track being at a smaller distance from the end wall of the wagon than it is from the adjacent vertical edge of the door member when the latter is in its open position whereby the door member protrudes from the end of the wagon when in said position.

2. In a railway wagon the combination of a vertical door member, a side horizontal supporting rail arranged substantially parallel to the side wall of the wagon, an end horizontal supporting rail arranged substantially parallel to the end wall of the wagon, a pair of spaced brackets attached to said door member, a roller for engaging said side rail only and pivotally connected to one of said brackets on a vertical axis, a roller for engaging the end rail only and pivotally connected to the other bracket on a vertical axis, a pair of guide tracks arranged in vertical alinement with said supporting rails, and a pair of guide members attached to said door member and each engaging in one of said guide tracks, said end supporting rail being at a smaller distance from the end wall of the wagon than it is from the adjacent vertical edge of the door member when the latter is in its open position whereby the door member protrudes from the end of the wagon when in said position.

3. In a railway wagon the combination of a vertical door member, a side horizontal supporting track arranged substantially parallel to the side wall of the wagon, an end horizontal supporting track arranged substantially parallel to the end wall of the wagon, a pair of spaced brackets, attached to said door member, means for engaging said side track only and pivotally mounted on a vertical axis on one of said brackets, means for engaging said end track only and pivotally mounted on a vertical axis on the other bracket at a lesser distance from the door member than the aforesaid axis, a pair of guide tracks, and a pair of guide members attached to said door member and each engaging in one of said guide tracks, said end supporting track being at a smaller distance from the end wall of the wagon than it is from the adjacent vertical edge of the door member when the latter is in its open position whereby the door member protrudes from the end of the wagon when in said position.

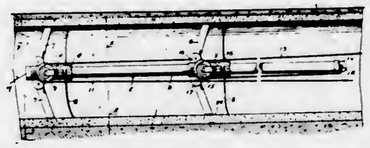
1,223,698. STABILIZATION OF AIRCRAFT. CARL ALFRED JOHANSSON, Christiania, Norway. Filed Jan. 18, 1916. Serial No. 72,759. (Cl. 244—29.)

1. In a flying machine, the combination of a machine frame with a stability frame, means for connecting both frames, horizontal rods in said stability frame, slides on said rods, means for keeping said slides in their central position, a carriage, horizontal rudders on the stability frame connected to said machine frame, means for operating said rudders by hand, a bearing plane, a means at the front of the machine frame connecting said plane with said frame, said rudders being actuated by the tilting of the machine to cause the machine to move back into its normal position, substantially as described.



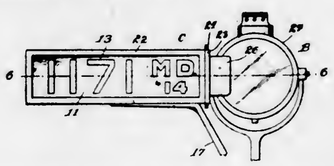
2. In a flying machine, the combination of a main frame with a stability frame, a central shaft connecting both frames, horizontal rods in said stability frame, slides on said rods, springs for keeping said slides in their central position, a carriage supported by said rods and horizontal rudders on the stability frame connected to the machine frame, and means for operating said rudders by hand, a bearing plane, a universal joint connecting said plane at the front with said main frame, and a slotted cross-guide connecting said plane at the rear to said main frame, and studs on the main frame guided in the slots of the cross-guide, substantially as described and for the purpose set forth.

1,223,699. CONDUIT-THREADER. STEPHEN KAMOWSKI, Nanticoke, Pa. Filed May 6, 1915. Serial No. 26,375. (Cl. 247—24.)



In a conduit threader having a guide rod and fixed and movable crawler sleeves mounted thereon radial gripping arms pivoted at their inner ends to the crawler sleeves, resilient means urging the gripping arms outward which comprises spring wire members having U-shaped portions for engaging gripping arms, looped portions on said spring members for encircling the pivotal points of the gripping arms and free ends on said spring members for abutting against the crawler sleeves substantially as and for the purpose set forth.

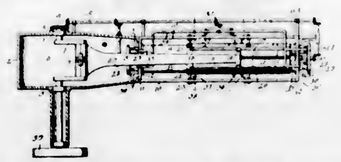
1,223,700. LICENSE-HOLDER. WALTER F. KOENIG, Wilton Junction, Iowa. Filed Sept. 25, 1914. Serial No. 863,544. (Cl. 40—131.)



1. A license device for lamps comprising a hollow body open at one end and side, a lamp arranged adjacent the open end of the body, a transparent panel mounted in said body and closing the open side thereof, and a light deflector detachably mounted in said body at the open end thereof and contacting with said panel whereby the panel will be locked within said body.

2. A license device for lamps comprising a hollow body open at one end and side, a lamp arranged adjacent the open end of said body, guides formed in said body at the open end thereof, a transparent panel in said body and having one end thereof disposed adjacent one of said guides and a light deflector mounted in said guides and contacting with said panel whereby the latter may be locked within said body.

1,223,701. INTERNAL-COMBUSTION ENGINE. FRANK HENRY KRIENITZ, McFarland, Kans. Filed Dec. 18, 1915. Serial No. 67,620. (Cl. 123—50.)

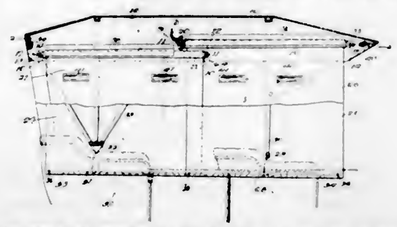


1. In an internal combustion engine, the combination of a crank shaft having a single crank, a crank case, a frame extending away from said crank case and comprising longitudinal and transverse members, horizontally opposed pistons having closed heads at their inner ends arranged in spaced relation to each other, the outer ends of said pistons being fixedly secured to said frame, a block of cylinders corresponding in number with the number of pistons and arranged to reciprocate back and forth relatively to and upon said pistons, a wrist pin on the block of cylinders, a connecting rod extending from said wrist pin to said crank shaft, intake and exhaust valves in said piston heads, stems extending from said valves in opposite directions through the outer ends thereof, rotary cam disks coöperating with said valve stems, said disks being operatively connected with and driven by the crank shaft, a post extending from the block of cylinders and supporting said wrist pin, and truss rods connecting said wrist pin with the block of cylinders.

2. In an internal combustion engine, the combination of a crank shaft having a single crank, a crank case, a frame extending away from said crank case and comprising longitudinal and transverse members, horizontally opposed pistons having closed heads at their inner ends arranged in spaced relation to each other, the outer ends of said pistons being fixedly secured to said frame, a block of cylinders corresponding in number with the number of pistons and arranged to reciprocate back and forth relatively to and upon said pistons, a wrist pin on the block of cylinders, a connecting rod extending from said wrist pin to said crank shaft, an intake and an exhaust valve in each piston head, stems extending from said valves in opposite directions through the outer ends thereof, rotary cam disks coöperating with said valve stems, said disks being operatively connected with and driven by the crank shaft, each cam disk being provided with a raised cam face coöperating with a plurality of intake valve stems, and another raised cam face coöperating with a plurality of exhaust valve stems.

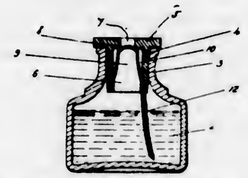
1,223,702. STORM-CURTAIN. LIPPE KRUSE, Scotland, S. D. Filed May 6, 1916. Serial No. 95,840. (Cl. 21—62.)

In a device of the class described, forward and rear curtain rollers carrying curtain material, said rollers adapted to be swingingly connected respectively at their outer ends to a vehicle top with the forward roller and the curtain material thereof overlapping the rear roller and the curtain material thereof, a bracket device including side portions in spaced relation and connected at their rear ends, one of said side portions adapted to be connected to the vehicle top and the other side portion provided with a socket to detachably support the forward end of the rear roller, and another bracket device adapted to be connected to the vehicle top rearwardly of the first mentioned bracket device and having means for detachably supporting the rear end of the forward roller, whereby when the curtain material is unrolled the rear portion



of the forward curtain material will overlap the forward portion of the rear curtain material and prevent the entrance of the elements when the vehicle is moved forwardly.

1,223,703. INKSTAND. FRANK LA CHAPELLE, Erie, Pa. Filed Oct. 2, 1916. Serial No. 123,316. (Cl. 120—64.)



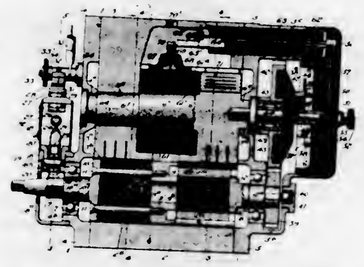
1. An ink holder provided with a neck, a stopper inserted in the neck and having a pen hole at its top and a chamber below the pen hole, a collapsible air bag closed at its top and having its lower end secured to the lower part of the stopper and forming an annular ink space in the said chamber, and a tube communicating with the said ink space and extending downwardly in the ink holder.

2. An ink holder provided with a neck, a stopper inserted in the neck and having a pen hole at its top and a chamber below the pen hole, a shoulder being formed at the top of the said chamber around the pen hole, a collapsible air bag closed at its top and having its lower end secured to the lower part of the stopper and forming an annular ink space in the said chamber, the upper part of the said air bag being normally pressed against the said shoulder, and a tube communicating with the said ink space and extending downwardly in the ink holder.

1,223,704. ELECTRIC GENERATOR. LEON J. LE PONTOIS, Cleveland, Ohio, assignor, by mesne assignments, to The Teagle Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 18, 1911. Serial No. 627,927. (Cl. 171—209.)

1. In an ignition current generator, the combination of a pair of pole pieces one of which carries a plurality of polar projections, each having a polar surface opposed to the polar surface of the other pole piece, a pair of end plates of non-magnetic material forming with said pole pieces a rigid field structure, magnets on opposite sides of said field structure and having their like poles disposed in consequent pole relationship to said pole pieces, a generating winding in inductive relation to one of said polar projections, and an unwound inductor rotor rotatably mounted at either end in the adjacent said end plate and shaped and correlated to said polar surfaces of said pole pieces alternately to establish for the flux from all said magnets a uni-directional flux path through said winding, and then a path outside of said winding, whereby the flux always traverses the said winding in the same direction.

2. In an ignition current generator, the combination of a pair of pole pieces one of which carries a plurality of polar projections, each having a polar surface opposed to the polar surface of the other pole piece, a pair of end plates of non-magnetic material forming with said pole pieces a rigid field structure, magnets on opposite sides of said field structure and having their like poles disposed in consequent pole relationship to said pole pieces, a generating winding in inductive relation to one of said polar projections, an unwound inductor rotor rotatably mounted at either end in the adjacent said end plate and shaped and correlated to said polar surfaces of said pole pieces alternately to establish first a path for the flux of all of the magnets between the polar face of the unwound polar projection and the polar surface of the opposing pole piece and outside of said generating winding, and then a path for the flux of all of the magnets through said generating winding and between the polar surface of said wound polar projection and the polar surface of the opposing pole piece.



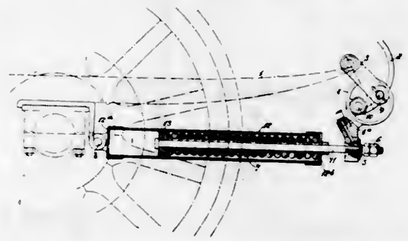
3. In an ignition current generator, the combination of a pair of iron pole pieces, one of which carries a plurality of polar projections, each having a polar surface opposite to the polar surface of the other pole piece, a pair of end plates of non-magnetic material forming with said pole pieces a rigid field structure, a generating winding in inductive relation to one of said polar projections, magnets on opposite sides of said field structure and having their like poles connected to the same pole piece, and an unwound inductor rotor mounted near either end in the adjacent one of said end plates and having polar surfaces shaped and correlated to the polar surfaces of said pole pieces to establish alternately an iron path for the flux of all of said magnets outside said generating winding ad then an iron path through said generating winding for the flux of all of said magnets, whereby the flux always traverses the said winding in the same direction.

4. In an ignition current generator, the combination of a generating winding, a pair of iron pole pieces, one of which has a plurality of polar projections, one of said polar projections being detachably connected to said pole piece and carrying said generating winding, a pair of end plates of non-magnetic material forming with said pole pieces a rigid field structure, magnets on opposite sides of said field structure and having their like poles connected to the same pole piece, and an unwound inductor rotor mounted at either end in the adjacent one of said end plates and having polar surfaces shaped and correlated to the polar surfaces of said pole pieces to establish alternately an iron path for the flux of all of said magnets outside of said generating winding and then an iron path through said generating winding for the flux of all of said magnets, whereby the flux always traverses the said winding in the same direction, each of said magnets being removable from said rectangular frame structure without disassembling any other parts of the generator.

5. In an electric generator of the class described, a pair of pole pieces, one of said pole pieces having a pair of polar projections, a generating coil on one of said polar projections, an inductor rotor mounted to rotate between the polar faces of said polar projections and the opposite pole piece, said inductor rotor having a pair of flux distributing sections each of which has a long and a short axis with the long axis of one section arranged at an angle to the long axis of the other section, and permanent magnets on opposite sides of said pole pieces, each having one end connected to one of said pole pieces and its other end connected to the other of said pole pieces, the flux distributing sections of said inductor rotor being disposed to coöperate with the polar faces of said polar projections, respectively, to alternately establish paths of least magnetic reluctance through and then outside of said coil as the inductor rotor is rotated.

[Claims 6 to 12 not printed in the Gazette.]

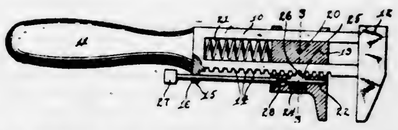
1,223,705. SHOCK-ABSORBER FOR VEHICLES. ANTOINE EDMOND LEYMARIE, Paris, France. Filed Jan. 23, 1913. Serial No. 743,850. (Cl. 267—19.)



1. In a shock absorbing device for vehicles, the combination with a main axle-carried leaf spring and a frame-carried leaf spring having one of its ends extended downward to a point directly beneath the corresponding end of the main spring, of a bell-crank lever fulcrumed upon the end of the said frame-carried spring and disposed normally so as to provide a depending arm and an arm projecting outward from the said spring ends in a horizontal direction, a link connecting the last-named lever arm with the end of the main spring, and shock-absorbing means connecting the depending arm of the lever with the axle which carries the said main spring to resist movement of the said lever arm.

2. In a shock absorbing device for vehicles, the combination with a main axle-carried leaf spring and a frame-carried leaf spring having one of its ends extended downward to a point directly beneath the corresponding end of the main spring, of a bell-crank lever fulcrumed upon the end of the said frame-carried spring and disposed normally so as to provide a depending arm and an arm projecting outward from the said spring ends in a horizontal direction, a link connecting the last-named lever arm with the end of the main spring, and a shock-absorber comprising telescopic members, one of which is pivoted at its outer end on the axle which carries the said main spring, the other telescopic member being connected to the depending arm of the said lever, and resilient means associated with the said members to resist relative movement of the same.

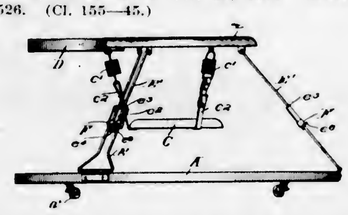
1,223,706. WRENCH. RICHARD S. LINDSTROM, Detroit, Mich. Filed Oct. 11, 1915. Serial No. 55,289. (Cl. 81—134.)



In a wrench of the character described, a shank having a handle formed at one end thereof, a jaw fixed at the other end of said shank, said shank being slotted longi-

tudinally, another jaw having an opening to receive said shank, said second mentioned jaw carrying a portion operable in said slot, a spring mounted in said slot to retain said movable jaw normally in engagement with said fixed jaw, a plurality of teeth formed on one edge of said shank, a locking member having one end journaled in said movable jaw, said locking member being provided with an offset adjacent one end, a projection formed on said offset, said movable jaw being cut out to receive said offset and said projection at certain times, a handle to turn said locking member to position said projection between certain of said teeth to lock said movable jaw with respect to said fixed jaw, and means to prevent accidental turning movement of said locking member when said projection engages with said teeth, substantially as described.

1,223,707. BABY-WALKER. JOHN S. LYON, Rochester, N. Y., assignor of one-half to Traugott C. Uhlen, Rochester, N. Y. Filed Oct. 24, 1914. Serial No. 868,526. (Cl. 155—45.)

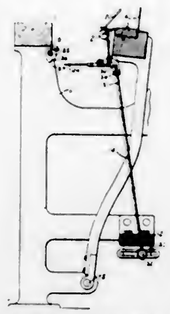


1. A device for holding babies comprising in combination a base frame, and a supporting frame of less area than the base frame and mounted thereon by means of a plurality of extensible connections permitting the supporting frame to be arranged in spaced relation above the base frame or folded upon the latter, said extensible connections each comprising a pair of members pivoted to the base frame and supporting frame respectively, a guide connected to one of said members, the other of said members being slidable through openings of the guide, the guide having a recess to receive one end of the relatively slidable member when the members are extended, and a keeper movable on the guide and coöperating, when in one position, with said relatively slidable member to hold the end referred to in said recess, and in its other position to release said relatively slidable member and permit the connection to be collapsed.

2. A device for holding babies comprising in combination a base frame, and a supporting frame of less area than the base frame and mounted thereon by means of a plurality of extensible connections permitting the supporting frame to be arranged in spaced relation above the base frame or folded upon the latter, said extensible connections each comprising a pair of members pivoted to the base frame and supporting frame respectively, a guide attached to one of said members and having a flange thereon, the other member embodying a pair of bars movable through openings in said flange, said guide having a recess within which the end of the last mentioned member may be located to hold the connection extended, and a keeper slidable on the guide and coöperating with said member to hold said end within the recess.

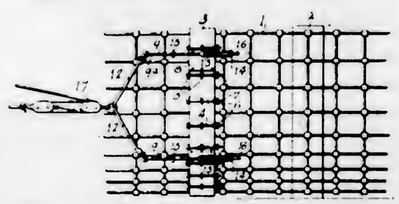
1,223,708. WEFT-DETECTING MECHANISM FOR LOOMS. BENJAMIN F. MCGUINESS, Saundersville, Mass., assignor to Crompton & Knowles Loom Works, Worcester, Mass., a Corporation of Massachusetts. Filed Mar. 24, 1916. Serial No. 86,507. (Cl. 139—54.)

In a loom, in combination, a lay, a detecting member pivotally mounted on said lay, a transmitting shaft, a notched collar fixed on said shaft, and a dagger movable with the lay and positioned by said detecting member, said collar having a cam surface thereon positioned to engage said dagger whenever it clears the notch in the collar and to thereby temporarily remove the detecting member from the newly inserted weft, said dagger being thereafter released by the relative angular movements of



said shaft and lay, and permitting said member to pass below the warp during the continued forward movement of the lay.

1,223,709. WIRE-FENCE STRETCHER. JESSE P. MATTOX, Stilwell, Okla. Filed Aug. 15, 1916. Serial No. 115,075. (Cl. 254—83.)

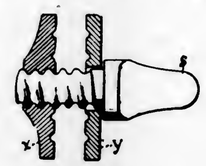


1. A device for stretching woven wire fencing, including a pair of complemental gripping bars adapted to be applied to the fencing from opposite sides thereof, a pull rod extending along one side of the gripping bars and provided with a guide eye, a coöperating clamping rod arranged on the opposite side of the gripping bars, one end of the clamping rod slidably engaging the pull rod while the opposite end thereof is provided with an inclined finger which is slidable within the guide eye of the pull rod and coöperates therewith to forcibly move the rods into engagement with the gripping bars when a pull is exerted upon the pull rod, and means for exerting a pull upon the pull rod.

2. A device for stretching woven wire fencing, including a pair of complemental gripping bars adapted to be applied to the fencing from opposite sides thereof, a pull rod extending along one side of the gripping bars and provided at the forward end thereof with a longitudinally extending loop and a laterally projecting guide eye, a clamping rod arranged upon the opposite side of the gripping bars, the rear end of the clamping rod slidably engaging the pull rod, while the forward end thereof is extended laterally and terminates in a forwardly inclined finger insertible laterally through the loop of the pull rod and adapted to engage the guide eye of the pull rod for coöperation therewith to forcibly move the rods into engagement with the gripping bars when a pull is exerted upon the pull rod, and means for exerting a pull upon the pull rod.

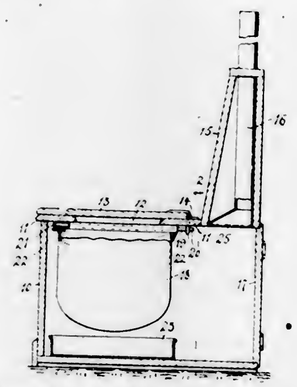
1,223,710. CLOTHES-PIN. JACOB MATTSON and JOHN O'BRIEN, Virginia, Minn. Filed Sept. 23, 1915. Serial No. 52,149. (Cl. 24—137.)

A clothes pin of the character described, comprising a thumb screw, an inner and outer clamping member, the outer clamping member having a threaded opening through which the threaded portion of the thumb screw passes as a means of locking the two portions together, the inner clamping member having a smooth opening through which



the said thumb screw passes loosely and such inner member being locked between the said outer member and the shoulder of the said thumb screw when said screw is adjusted.

1,223,711. DRY CLOSET. JOHN H. MERSHON, Van Alstyne, Tex. Filed Sept. 12, 1916. Serial No. 119,708. (Cl. 4—82.)



A device of the class described comprising a receptacle of porous material open at the upper side and having a hem encompassing the open side, rods having terminal eyes and embedded in said hem, one eye of each rod being disposed within the hem, pointed hooks adapted to be attached to a closet seat and with which the embedded eyes of the rods are engageable, and hooks adapted to be engaged with a closet seat and with which the projecting portions of the rods are engageable.

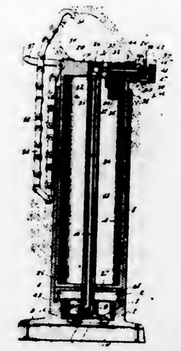
1,223,712. FLUID-PRESSURE LIFTING-JACK. JOHN MAX MEYERS, West Chester, Pa. Filed Apr. 23, 1913. Serial No. 763,132. (Cl. 138—9.)

1. A fluid pressure jack, comprising a casing, and a plunger working within said casing, said plunger having an air tight chamber for the storage of compressed air or other fluid, and having controlled communication between said chamber and the plunger space of the casing.

2. A fluid pressure jack, comprising a casing, and a tank for the storage of compressed air or other fluid, telescoping within said casing, adapted to provide a bearing at its outer end, and having controlled communication with the space between said tank and the closed end of the casing.

3. A fluid pressure jack, comprising a casing, a tank for the storage of compressed air or other fluid, extending within said casing, said tank having controlled communication with the space between it and the closed end of the casing, and a packing carried by said tank for sealing the space between the walls of the tank and casing.

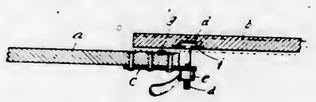
4. A fluid pressure jack, comprising a casing, a tank for the storage of compressed air or other fluid, extending within said casing, said tank having controlled communication with the space between said tank and the closed end of the casing and a packing carried by said tank, said tank being provided beneath said packing with a series of circumferential grooves having cross connecting grooves in open relation with the compressed air space of the casing.



5. A fluid pressure jack, comprising a casing, a plunger working within said casing, one of said elements having a chamber for the storage of compressed air or other fluid and having controlled communication between said storage chamber and the plunger space of the casing, and a release valve in said casing controlled by the relative movement of the plunger and casing upon reaching a predetermined point of movement.

[Claims 6 to 18 not printed in the Gazette.]

1,223,713. LOCKING DEVICE FOR SLIDING DOORS. ALBERT E. MILES, Haverhill, Mass. Filed Jan. 24, 1917. Serial No. 144,277. (Cl. 70—102.)

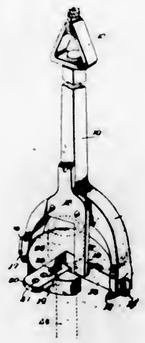


In combination with a pair of relatively sliding doors having overlapping end portions, a bracket mounted on one of said doors and arranged to project beyond its end, a bolt having a transversely projecting head and a shank extending loosely through the projecting end of said bracket, to permit sliding and universal swinging movement of said shank therein, the other door having a recess in its side opposite the end of said bracket, when the doors are in closed position, and a plate thereover having an opening therein adapted to permit said bolt head to be passed therethrough and a slot leading from said opening adapted to receive said shank, when swung laterally in the bracket, to permit the bolt-head to be engaged with the inner side of said plate, and a nut threaded on the end of said shank beyond the bracket, to draw the bolt-head toward the bracket, and clamp the doors together.

1,223,714. ROD-LIFTING TOOL. JOHN M. MILLER, Eagle Pass, Tex., assignor of one-half to Osie S. Harper, Eagle Pass, Tex. Filed Nov. 2, 1916. Serial No. 129,192. (Cl. 57—9.)

1. A device of the character described including a stock, a work engaging member carried thereby and provided with spaced jaws, a dog carried by one of said jaws to confront the other jaw, and means arranged for engage-

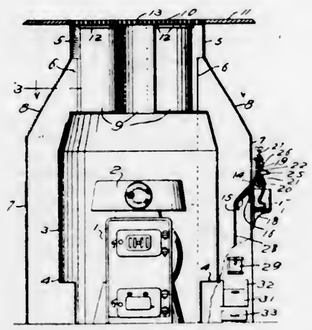
ment with the dog at longitudinally spaced points selectively for holding the dog fixed.



2. A device of the character described including a stock, a work engaging member carried thereby and providing spaced jaws, a dog mounted upon one of said jaws and provided with spaced openings, and means arranged for selective engagement in said openings for adjusting the dog to project between the jaws.

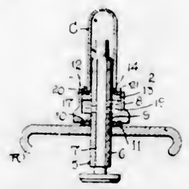
3. A device of the character described including a stock bifurcated to form spaced arms, a work engaging member having the form of a hook swingingly mounted between the said arms with the shank of the hook providing an inner jaw and the bill of the hook providing an outer jaw, the outer jaw having a recess formed therein opening through the upper face of the said jaw, and a dog received within said recess to confront the inner jaw with the dog removable at the upper side of the outer jaw.

1,223,715. FURNACE. JOHN Z. MILLER, Hagerstown, Md., assignor of one-half to Glenn G. Golling, Hagerstown, Md. Filed Mar. 20, 1916. Serial No. 85,437. (Cl. 126—99.)



A furnace embodying a jacket having opposite lower inlet openings, a register box above the upper end of the jacket and having openings in its opposite sides extending to the lower edges thereof, opposite vertical channels having their upper ends attached to said sides of said box around the openings thereof and having their flanges projecting inwardly, said channels and box providing an arch-like structure straddling the jacket with the lower edge of the box seating upon the upper end of the jacket and the edges of the channel flanges secured to opposite sides of said jacket whereby air flowing through said channels comes in contact with the jacket, the lower ends of the channels communicating with said inlet openings of the jacket, a hot air pipe rising from the upper end of the jacket within said box and a register fitted upon said box and the upper end of said pipe.

1,223,716. TIRE-VALVE CAP. WILBUR MILLER, Los Angeles, Cal. Filed Sept. 7, 1916. Serial No. 118,889. (Cl. 152—12.)



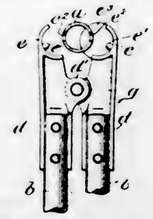
1. The combination with a valve stem having a threaded bore, of a nut threaded upon said stem and having a chamber to surround the valve stem, a washer plate longitudinally movable within said chamber, the bore of the washer plate and said valve stem having co-acting means to prevent rotation of the washer plate, a dust cap, means for effecting a detachable locking connection between one end of the dust cap and said nut, a packing gland carried by the washer plate, and an expansible element arranged in the chamber of the nut and urging said washer plate and packing gland in one direction to hold the packing gland in tight frictional engagement against the end of the dust cap.

2. The combination with a threaded valve stem, of a nut threaded upon the stem and having a chamber surrounding the valve stem, a washer plate longitudinally movable within the chamber, the bore of the washer plate and the valve stem being provided with co-acting means to prevent rotation of the washer plate, an annular packing gland engaged upon the washer plate and movable therewith, said gland and the washer plate having co-acting means to prevent rotation of the gland relative to the washer plate, a dust cap, means for effecting a detachable interlocking connection between the dust cap and one end of said nut, and expansible means within the chamber of the nut constantly urging the washer plate and the packing gland in one direction to hold the gland in tight frictional engagement against the end of the dust cap.

3. The combination with a threaded valve stem, of a nut threaded upon said stem having a chamber surrounding the valve stem, a washer plate longitudinally movable in said chamber provided upon one face with an annular boss, the bore of the washer plate and the valve stem having co-acting means to prevent rotation of the washer plate, a packing gland seated against the face of the washer plate around said boss, said gland and the boss being also provided with co-acting means to prevent rotation of the gland with respect to the washer plate, a dust cap, means for effecting a detachable interlocking connection between the dust cap and one end of the nut, and a spring arranged within the chamber of the nut and constantly urging the washer plate and the packing gland in one direction to hold the gland in tight frictional engagement against the end of the dust cap.

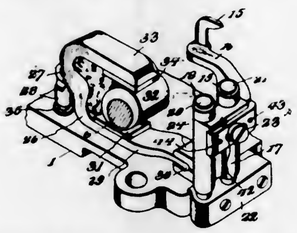
1,223,717. FOLDING HAMMOCK-SUPPORT. HARRY MINTZ, Boston, Mass. Filed June 17, 1914. Serial No. 845,730. Renewed Mar. 8, 1917. Serial No. 153,459. (Cl. 5—32.)

A folding frame comprising a top bar, a pair of supporting legs pivoted together near the top and sleeve sections at the top of each pair of legs actuated by the relative movements of said legs and coöperating to embrace the ends of the top bar to unite the legs and top bar when the frame is set up, each of said sleeve sections having a pin on its inner face and each end of the top bar being provided with holes to engage said pin when the sleeve sections are in closed position, one at least of



the sleeve sections of each pair being provided with an end wall adapted to overlie the end of the top bar.

1,223,718. TRIMMING MECHANISM FOR SEWING-MACHINES. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 14, 1913. Serial No. 767,610. (Cl. 112—6.)



1. A trimming mechanism, including in combination a work support, a fixed trimming member, a support therefor, a movable trimming member coöperating with said fixed member, said movable member being located beneath the work support, extending above and overhanging said work support, and means for supporting said movable trimming member, whereby it is moved up and down, said supporting means including devices for preventing the trimming member from moving laterally relative to the fixed member.

2. A trimming mechanism, including in combination a work support, a fixed trimming member, a support therefor, a movable trimming member coöperating with said fixed member, said movable member being located beneath the work support, extending above and overhanging said work support, and means for supporting said movable trimming member, whereby it is moved up and down, said supporting means including spaced posts and spaced sleeves engaging said posts and having movement relative thereto in a direction at right angles to the work support.

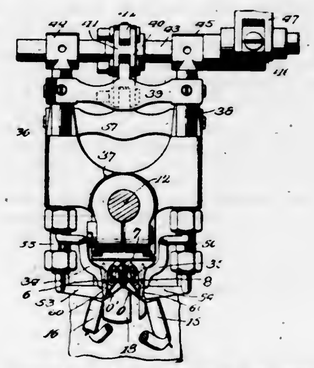
3. A trimming mechanism including in combination, a work support, a fixed trimming member, a support therefor, a movable trimming member coöperating with said fixed member, said movable member being located beneath the work support, extending above and overhanging said work support, means for supporting said movable trimming member whereby it is moved up and down, said supporting means including spaced posts and spaced sleeves engaging said posts and having movement relative thereto in a direction at right angles to the work support, a lever connected to said sleeves, a shaft, an eccentric on the shaft coöperating with said lever, and means for pivotally supporting said lever.

4. A trimming mechanism including in combination, a work support, a fixed trimming member, a support therefor, a movable trimming member coöperating with said fixed member, said movable member being located beneath the work support, extending above and overhanging said work support, means for supporting said movable trimming member whereby it is moved up and down, said supporting means including spaced posts and spaced sleeves engaging said posts and having movement relative thereto in a direction at right angles to the work support, a lever connected to said sleeves, a shaft, an eccentric on the shaft coöperating with said lever, and means for pivotally supporting said lever, said pivotal support for said lever being adjustable for shifting the vibrating position of said sleeve.

5. A trimming mechanism including a movable trimming blade, a support for said movable blade, means for guiding the support, whereby it is moved up and down in the same path, a lever connected to said support, a shaft, an eccentric on said shaft, said lever having means cooperating with said eccentric and a fulcrum support for said lever, said fulcrum support being located at the rear end of the lever and including means whereby it may be adjusted for turning the lever about the eccentric to vary the working position of the movable trimming member.

[Claims 6 to 13 not printed in the Gazette.]

1,223,719. ORNAMENTAL-STITCH SEWING-MACHINE. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation. Filed June 4, 1915. Serial No. 32,129. (Cl. 112—7.)



1. The combination with a plurality of needles arranged in a line extending transversely of the line of feed, of means for guiding two ornamental threads, means for simultaneously forming half twisted loops in the respective ornamental threads and presenting said half twisted loops for the entrance respectively of the outer needles.

2. The combination with a plurality of needles arranged in a line extending transversely of the line of feed, of means for guiding independently two ornamental threads, a set of devices at each side of the line of feed and cooperating in succession with the thread guiding means for forming half twisted loops in the ornamental threads.

3. The combination with a plurality of needles arranged in a line extending transversely of the line of feed, of means for guiding independently two ornamental threads, a set of devices at each side of the line of feed and cooperating in succession and simultaneously with the thread guiding means for forming half twisted loops in the ornamental threads.

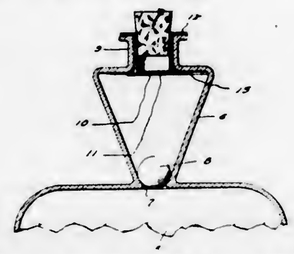
4. The combination with a plurality of needles arranged in a line extending transversely of the line of feed, an ornamental thread guiding member, a thread hook and thread finger at each side of the line of feed with which said thread guiding member coöperates in succession for forming half twisted loops first for one outside needle and then for the other outside needle.

5. The combination with a plurality of needles arranged in a line extending transversely of the line of feed, an ornamental thread guiding member, a thread hook and thread finger at each side of the line of feed with which said thread guiding member coöperates in succession for

forming half twisted loops first for one outside needle and then for the other outside needle, and a thread deflector at each side of the line of feed for deflecting the ornamental thread into engagement with its respective thread hook.

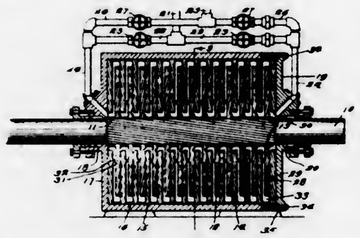
[Claims 6 to 11 not printed in the Gazette.]

1,223,720. NON-REFILLABLE BOTTLE. EDWARD C. MURRAY, Oklahoma, Okla. Filed Feb. 16, 1916. Serial No. 78,611. (Cl. 215—69.)



A non-refillable bottle including a body having a neck issuing therefrom, an annular rib formed exteriorly at the mouth of the neck and having a flat outer face, the neck being enlarged adjacent the bottle body to provide an inverted conical chamber the apex of which serves as a valve seat while the base forms a relatively wide annular stop, a ball valve insertible in the chamber and normally resting on the seat and adapted to engage the stop when the bottle is inverted, an imperforate tube snugly fitted in the outer portion of the neck and terminating at the inner end of the outer portion of the neck, an annular flange formed exteriorly on the outer end of the tube and connected to the outer face of the rib so as to be supported by the rib, and a perforated disk mounted at the inner end of the tube to prevent the bottle valve from completely closing the tube so as to consequently permit of liquid passing through the tube.

1,223,721. ROTARY ENGINE. THOMAS F. I. O'BRIEN, New York, N. Y. Filed Sept. 13, 1915. Serial No. 50,480. (Cl. 253—81.)

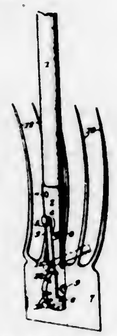


1. In an engine of the class described, a stationary frame and a rotor journaled therein, a plurality of contacting faces carried by said frame and rotor, some of said faces in the stationary and rotating faces having grooves formed therein which in the contiguous faces are obliquely inclined to each other, others of said faces having ribs formed thereon which in the contiguous faces are obliquely inclined, and said ribs forming passages between some of said faces connecting the grooves of one pair of contiguous faces to those of the succeeding pair of contiguous faces.

2. In an engine of the class described, a plurality of stationary partitions and a plurality of movable partitions disposed between said stationary partitions, the faces of said partitions having channels formed thereon by grooves in one face of each partition and ribs formed on the opposite face and said channels in the contiguous faces of the stationary and movable partitions crossing each other.

3. In an engine of the class described, a plurality of stationary partitions, and a corresponding number of rotatable partitions between the stationary ones, contact faces formed on said partitions, said faces having channels formed therein, which oppose each other in the contiguous faces, said channels being formed on one face of each partition by having said face ribbed and on the opposite face of each partition by having said face grooved, and the channels of each contiguous pair of faces communicating with those on the next adjacent pair of faces to direct a motive fluid through the channels formed in said faces in opposite directions in the consecutive faces.

1,223,722. COMBINATION-TOOL. JOHN B. OFFERMANN, Beaver Dam, Wis. Filed Dec. 30, 1916. Serial No. 139,739. (Cl. 55—25.)



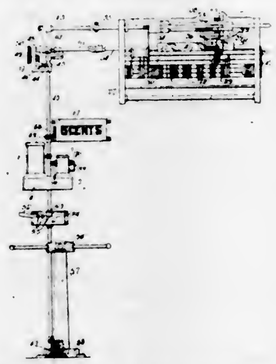
1. In a device of the described class, the combination of a sleeve, a locking lever pivotally connected near one of its ends with said sleeve, a retaining member formed in connection with said sleeve for the reception of one end of said locking lever, a blade, a semi-circular plate rigidly affixed to said blade, said semi-circular plate being provided with a plurality of recesses for the reception of one end of said locking lever, and means for pivotally connecting said semi-circular plate to said sleeve.

2. In a device of the described class, the combination of a locking lever pivotally connected near one of its ends with said sleeve, a pair of annular lugs, forming a recess between said lugs for the reception of one end of said locking lever, a blade, a semi-circular plate rigidly affixed to said blade, said semi-circular plate being provided with a plurality of recesses for the reception of one end of said locking lever, and means for pivotally connecting said semi-circular plate to said sleeve.

1,223,723. FARE-BOX. WILFRED I. OHMER, Dayton, Ohio, assignor to The Recording and Computing Machine Company, Dayton, Ohio, a Corporation of Ohio. Filed Dec. 30, 1911. Serial No. 668,612. (Cl. 235—44.)

1. The combination, with a fare recorder having setting means to set the same to record any one of a plurality of fares of different kinds, and a fare box having operable mechanism, of an operating device connected with said setting means, said fare recorder and said fare box mechanism, means arranged within the reach of the conductor to move said operating device in one direction to set said fare recorder to record the selected fare, and means connected to said operating device for moving the same in another direction to simultaneously cause said recorder to be actuated to record a selected fare and to operate the mechanism of said fare box.

2. The combination, with a fare recorder having means to set the same to record any one of a plurality of fares of different kinds, and a fare box separate from said recorder and having operable mechanism, of an operating device connected with said fare recorder and said fare box mechanism to cause said recorder to be actuated to record a selected fare upon each operation of the mechanism of said box, means arranged within reach of the conductor to operate said setting means to allow the said recorder to register a selected fare, and means connected with said operating device and arranged to insure the operation of the mechanism of said fare box as each fare is deposited therein and a passenger enters.



3. The combination, with a fare recorder having means to set the same to record any one of a plurality of fares of different kinds, and a fare box separate from said recorder and having operable mechanism, of an operating device connected with said fare recorder and said fare box mechanism to cause said recorder to be actuated to record a selected fare upon each operation of the mechanism of said fare box, means arranged within reach of the conductor to operate said setting means to allow the recorder to register the selected fare, and means connected with said operating device and arranged to be operated by a passenger entering.

4. The combination, with a fare recorder having means to set the same to record any one of a plurality of fares of different kinds, and a fare box separate from said recorder and having operable mechanism, of means operated by the collector to operate said setting means to allow said recorder to register a selected fare, and means to insure the operation of said recorder and fare box mechanism each time a fare is deposited in said fare box and a passenger enters, said last-mentioned means being arranged to be operated by the passenger.

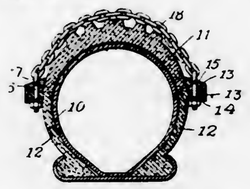
5. The combination, with a fare recorder having means to set the same to record any one of a plurality of fares of different kinds, and a fare box having operable mechanism, of an operating device common to said setting means, fare recorder and fare box mechanism, means attached to said operating device and within reach of the collector to set said recorder to record a particular fare, and separate means connected to said operating device to insure the operation of said fare box mechanism and fare recorder as each fare is deposited in the fare box as the passenger enters.

[Claim 6 not printed in the Gazette.]

1,223,724. PNEUMATIC TIRE. FRED C. OTTO, Worcester, Mass. Filed May 15, 1916. Serial No. 97,517. (Cl. 152—19.)

1. As an article of manufacture, a tire made up of a plurality of members having outwardly extending flanges at their meeting edges, separated metal rings located on the outer surfaces of said flanges, one of said rings having a flange extending beyond the edge of the other ring, and means for holding the rings and flanges together.

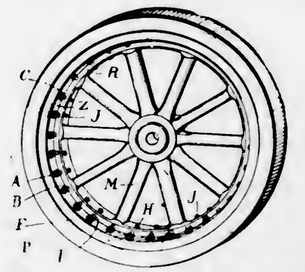
2. As an article of manufacture, a tire comprising side members and a tread member, each of said side members having an outwardly extending flange, and the tread member having two oppositely extending flanges contacting with the flanges of the side members, metallic rings on opposite sides of the flanges for helping to hold the parts together, one of said rings having a circular extension extending beyond the edge of the other ring for holding the same in position and means for holding the rings and flanges together.



3. As an article of manufacture, a tire comprising side members and a tread member, each of said side members having an outwardly extending cylindrical flange, and the tread member having two oppositely extending cylindrical flanges, bolts extending through said flanges, and two independent rings on opposite sides of the flanges for engaging the bolts and helping to hold the parts together.

4. As an article of manufacture, a tire comprising side members and a tread member, each of said side members having an outwardly extending circular flange, and the tread member having two oppositely extending circular flanges contacting with the flanges of the side members, bolts extending through said flanges, and metallic rings on opposite sides of the flanges for engaging the bolts and helping to hold the parts together, one of said rings having a circular extension against which the ends of the flanges abut and extending beyond the edge of the other ring for holding the same in position.

1,223,725. VEHICLE-WHEEL. MAX CYRUS OVERMAN, New York, N. Y. Filed Feb. 1, 1910, Serial No. 541,243. Renewed Mar. 19, 1917. Serial No. 155,943. (Cl. 152—7.)



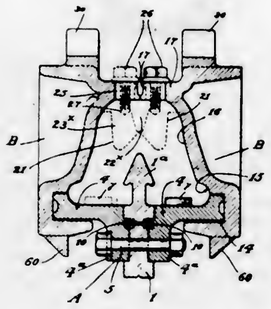
1. In combination, a wheel rim, a ring telescoping over the free edge of said rim having an inwardly directed flange and an outwardly directed flange, the latter located at the side of the tire, bolt means extending radially relative to the wheel through the aforesaid rim and ring, the latter being slotted together with its inwardly directed flange to permit the stems of the bolts to pass when the ring is adjusted to the rim, and washers for said bolts which are non-passable through the slots and which engage the inwardly directed flange on the ring to hold it against lateral displacement.

2. In combination, a wheel rim, a ring telescoping over the free edge of said rim having an outwardly directed flange located at the side of the tire, bolt means extending radially relative to the wheel through the aforesaid rim and ring, the latter being slotted to permit the stems of

the bolts to pass in adjusting the ring to the rim, washers for said bolts, and projections on said ring engaging said washers to prevent lateral displacement of the ring.

3. In combination, a wheel rim, a ring telescoping over the free edge of said rim having an outwardly directed flange located at the side of the tire, bolt means extending radially relative to the wheel through the aforesaid rim and ring, the latter being slotted to permit the stems of the bolts to pass in adjusting the ring to the rim, washers for said bolts, and means on the ring preventing its lateral displacement by engaging the periphery as distinguished from the face of the washers.

1,223,726. MOLD FOR TIRES. MAX CYRUS OVERMAN, New York, N. Y. Filed May 11, 1912. Serial No. 696,638. (Cl. 18—42.)

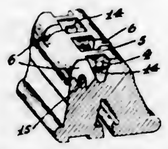


1. A tire mold comprising a base-ring having an outer periphery corresponding with the base of the tire and having a core corresponding with the longitudinal opening through the tire; side-rings which are laterally removable and replaceable relative to the base-ring, said side-rings each having an inner face corresponding with one side of the tire and further having an inwardly directed annular flange, whose inner periphery corresponds with half the tread of the tire, said side-rings having a sliding fit with the base-ring so that the excess material squeezes out between the aforesaid thread flanges, said flanges being inwardly slotted from their free edges; insert-cores having flat-sided heads receivable into said slots, and bolts having heads which overlie the sides of said slots and being screw-connected with the heads of the inserts, which latter also overlie the sides of said slots on the opposite face of the flanges.

2. A mold in separable parts for forming tires having depressed surface openings, said parts having coacting flanges which abut when the mold parts are together to form the tread of the tire, inserts for forming said depressed openings carried by the tread-forming flanges within the mold space so that they are forced laterally through the tire-forming material as the flanges are brought together, and means operable from the outside of the mold for detaching the inserts from the flanges to leave them in the tire as the flanged mold parts are separated.

3. A mold in separable parts for forming tires having depressed surface openings, said parts having coacting flanges which abut when the mold parts are together to form the tread of the tire, inserts for forming said depressed openings carried by the tread-forming flanges within the mold space so that they are forced laterally through the tire-forming material as the flanges are brought together, and means operable from the outside of the mold for detaching the inserts from the flanges to leave them in the tire as the flanged mold parts are separated, said means comprising screw connections to the inserts located in transverse slots formed in the edge of the given tread-forming flange.

1,223,727. TIRE. MAX CYRUS OVERMAN, New York, N. Y. Filed Aug. 5, 1912. Serial No. 713,295. (Cl. 152—1.)



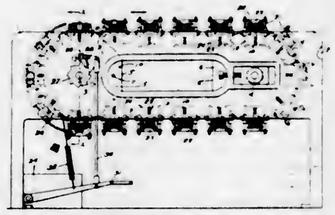
1. A rubber vehicle tire having a tread made flexible by open cavities, and small projections in the cavities, each attached to the bottom and a side wall of the given cavity.

2. A rubber vehicle tire having a tread made flexible by open cavities, and small projections in the cavities, each attached to the bottom and a side wall of the given cavity, the projections on the opposite side walls of the same cavity being staggered so as not to abut against each other when the tire is in action.

3. A rubber vehicle tire having a tread made flexible by open cavities, and small projections in the cavities, each attached to the bottom and a side wall of the given cavity, the projections on the opposite side walls of the same cavity being staggered so as not to abut against each other when the tire is in action, and the projections from the one side wall extending across the given cavity substantially as far as the projections from the opposite wall.

4. A rubber vehicle tire having a tread made flexible by open cavities and small projections in the cavities, each attached to only one side wall of the given cavity, the projections on opposite side walls of the same cavity extending to the middle portion thereof, but being staggered so as not to abut against each other when the tire is in action.

1,223,728. HEEL-LIFT-ASSEMBLING MACHINE. EVAN L. PAGE, Georgetown, Mass., assignor, by direct and mesne assignments, to Page Machine Company, Inc., Haverhill, Mass., a Corporation of Massachusetts. Filed May 4, 1912. Serial No. 695,018. Renewed Sept. 22, 1916. Serial No. 121,687. (Cl. 12—50.)



1. In a heel-lift assembling machine, supporting-means, an endless flexible carrier extending about said supporting-means and comprising a series of heel-lift forms opening outwardly, means to move said carrier about said supporting-means, a clamping-device for each form, and means to move each clamping-device to compress the lifts while in its form.

2. In a heel-lift assembling machine, a support, a series of heel-holders, flexibly connected to form an endless carrier, and each having a lift-receiving seat, means to drive said carrier to bring each holder successively to a lift-receiving position in which its seat faces upwardly, forming means to guide the lifts into heel form when assembled on the seat of each holder while in said receiving position, a clamping device for each holder and means to move each clamping device to clamp the lifts on the seat of its corresponding holder while held in position by said forming means.

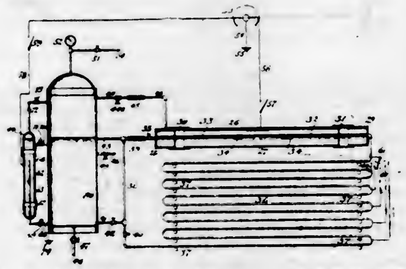
3. In a heel-lift assembling machine, a series of heel forms flexibly connected to form an endless carrier, means to drive said carrier, and a support for said carrier arranged to conduct the same in a semi-circular path about a horizontally disposed axis, said forms being arranged to open outwardly with relation to said axis, and each having a clamping device and means to move the same inwardly, with relation to said axis, to press the lifts against the bottom of its form.

4. In a heel-lift assembling machine, a series of heel forms flexibly connected to form an endless carrier, means to drive said carrier, and a support for said carrier arranged to conduct the same in oppositely disposed, semi-circular paths, about separated, horizontally disposed axes, and horizontally therebetween, said forms being arranged to open outwardly with relation to said axes and each having a clamping device and means to move the same inwardly with relation to said axes to press the lifts against the bottom of its form.

5. In a heel-lift assembling machine, a series of heel forms flexibly connected to form an endless carrier, means to drive said carrier, and a support for said carrier arranged to conduct the same in oppositely disposed, semi-circular paths, of approximately equal radii, and about parallel, horizontally disposed axes, separated to provide elongated horizontal path-portions therebetween, said forms being arranged to open outwardly with relation to said axes and each having a clamping device and means to move the same inwardly with relation to said axes to press the lifts against the bottom of its form.

[Claims 6 to 43 not printed in the Gazette.]

1,223,729. ELECTRIC WATER-HEATER. FRANK C. PERKINS, Buffalo, N. Y., assignor of one-eighth to George J. Meyer, one-eighth to George H. Meyer, one-eighth to Leo P. Meyer, and one-eighth to Eugene Meyer, Buffalo, N. Y. Filed Dec. 1, 1916. Serial No. 134,291. (Cl. 219—40.)



1. A water heating apparatus comprising a metal steam and water tank, a water pipe coil having its opposite ends connected respectively with the upper and lower parts of said tank and having a metal section which is insulated from those parts of the coil which are connected with said tank, and a source of electric energy having its terminals connected respectively with said insulated metal conduit section and said metal tank.

2. A water heating apparatus comprising a metal water tank, a water pipe coil having two metal end sections which are electrically connected with the upper and lower parts, respectively, of said water tank, and an intermediate metal section communicating with said metal end sections but electrically insulated therefrom, and a source of electric energy having its terminals connected, respectively, with said intermediate section and said tank.

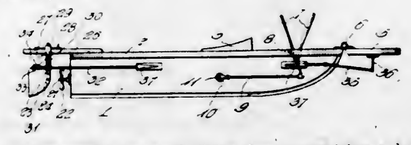
3. A water heating apparatus comprising a metal water tank, a heating chamber comprising two metal heads communicating, respectively, with the upper and lower parts of said tank and a tubular body connected at opposite ends with said heads but electrically insulated therefrom, and a source of electric energy having its poles connected respectively, with said tubular body and said water tank.

4. A water heating apparatus comprising a metal water tank, a heating chamber comprising two metal heads and a tubular metal body connected at opposite ends with said heads but electrically insulated therefrom, a metal inlet pipe connecting the lower part of said tank with the lower head of said chamber, a metal outlet pipe connecting the upper part of said metal tank with the upper head of said chamber, and a source of electric energy having its terminals connected, respectively, with said metal tank and said body.

5. A water heating apparatus comprising a metal water tank, a heating chamber comprising two metal heads and a tubular metal body connected at opposite ends with said heads but electrically insulated therefrom, a metal inlet pipe connecting the lower part of said tank with the lower head of said chamber, a metal outlet pipe connecting the upper part of said metal tank with the upper head of said chamber, one of said pipes projecting into said heating chamber, and a source of electric energy having its terminals connected, respectively, with said metal tank and said body.

[Claims 6 and 7 not printed in the Gazette.]

1,223,730. DIVING-BOAT. LINCOLN PIERCE, Tucson, Ariz. Filed Mar. 23, 1916. Serial No. 86,190. (Cl. 9—18.)



1. A manually operated diving boat comprising a hull having a horizontal deck upon which the operator lies, said deck being adapted to normally travel on the surface of the water, means for propelling the boat, a rudder for guiding the same laterally, an additional rudder for submerging the craft, and a single operating member for both rudders designed to be actuated by the feet of the user.

2. A manually operated diving boat comprising a hull having a deck upon which the operator lies, said deck being adapted to normally travel on the surface of the water, propelling means for the boat, a submerging rudder, an operating member therefor movable forwardly and rearwardly and capable of turning in a horizontal plane, said member being adapted to be operated by the feet of the user, and an additional rudder operated by the aforesaid operating member for guiding the boat when said member is turned as specified.

3. A manually operated diving boat comprising a hull having a deck upon which the operator lies, said deck being adapted to travel on the surface of the water, means for propelling the boat, a vertically swinging submerging rudder at the front end of the boat, a pair of rods extending rearwardly from said rudder, a pair of rods extending rearwardly from said arms, a rearwardly movable cross bar having yeilding connections at its ends with the rear ends of said rods, said bar being capable of turning in a horizontal plane, and a steering rudder operated by said operating bar for guiding the boat when turned as specified.

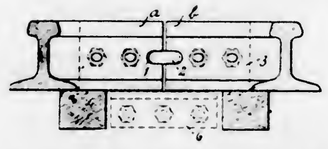
4. A manually operated diving boat comprising a hull having a deck upon which the operator lies, said deck being adapted to travel on the surface of the water, means for propelling the boat, a vertically swinging submerging rudder at the front end of the boat, a pair of crank arms depending from said rudder, a pair of rods extending rearwardly from said arms, a rearwardly movable cross bar having yielding connections at its ends with the rear ends of said rods, said bar being capable of turning in a horizontal plane, a fixed guide carried by the rear end of the boat, a slide movable forwardly and rearwardly on said guide and having a pivotal connection with the operating bar, and a second rudder secured to said bar for guiding the boat when said bar is turned as specified.

5. A manually operated diving boat comprising a hull having a deck upon which the operator lies, means for pro-

pelling the boat, a vertically swinging submerging rudder at the front end of the boat, a pair of crank arms depending from said rudder, a pair of rods leading rearwardly from said crank arms, stops on the rear ends of said rods, springs on said rods bearing against the stops, a transverse operating bar adapted to be engaged by the feet of the operator and having sliding connections at its ends with the aforesaid rods, being in contact with the front ends of the springs thereon, said bar being capable of turning in a horizontal plane, and a rudder secured to and depending from the center of said bar for guiding the boat when said bar is turned as stated.

[Claims 6 and 7 not printed in the Gazette.]

1,223,731. RAIL-JOINT FOR RAILWAYS. ERIK HANSEN CLAUSEN RAVN, Marslev, Denmark. Filed Aug. 5, 1913. Serial No. 783,140. (Cl. 239—3.)



In a rail-joint for railways, the combination of rails having their ends provided with incisions forming together openings 1 and 5, two fish-plates, a projection 2 belonging to one of the fish-plates and resting in said opening 1, an upward going extension of the said fish-plate forming an even upper surface *x*, resting in said opening 5, and a plate 6 connected with the said fish-plate and being yoked to another plate 6, with which it meets in the middle under the foot of the rail, the two plates 6 holding the foot of the rail loosely, there being a space between them and the rail base, substantially as set forth, for the purpose specified.

1,223,732. KILN. JOSEPH A. REAMS, Richmond, Va., assignor to William J. Parrish, Richmond, Va. Filed Sept. 20, 1916. Serial No. 121,236. (Cl. 25—142.)

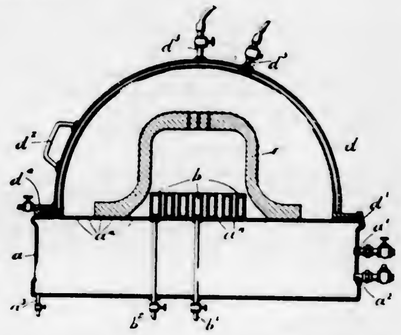


1. In a kiln, the combination of an open-ended tunnel through which carriers containing objects to be burned may be continuously passed, and means whereby air is caused to pass laterally across the tunnel in a zone at the exit end thereof, thence back across the tunnel in the form of products of combustion, thence again across the tunnel in another zone, and thence finally across the tunnel in still another zone at the inlet end of the tunnel, said means embodying an exhaustion apparatus at the inlet end of the tunnel, groups of openings in the opposite walls of the tunnel in each zone, outside flues connecting the openings in one group with the openings in the next group, and a combustion apparatus in the second zone from the exit end of the kiln.

2. In a kiln, the combination of a single open-ended tunnel through which carriers containing objects to be burned may continuously pass, and means whereby air is caused to pass laterally across the tunnel in a zone at the exit end thereof, thence back across the tunnel in the form of products of combustion, and finally across the tunnel in still another zone at the inlet end thereof, said means embodying an exhaustion apparatus at the inlet end of the tunnel, openings in the opposite walls of the tunnel in each zone, flues connecting the openings in each zone with the openings in the next zone, and a combustion apparatus in the second zone from the exit end of the kiln.

3. In a kiln, the combination of a single continuous open-ended tunnel, through which cars containing objects to be burned may continuously pass, the walls of this tunnel being provided with separated groups of openings, flues connecting the openings of one set with the openings of an adjacent set, means whereby products of combustion are caused to pass back and forth across said tunnel through said openings to the flues from the exit end toward the inlet end of the tunnel, cars adapted to pass through said tunnel, each car being provided with a baffle wall forming a movable partition in the tunnel, for the purpose set forth.

1,223,733. APPARATUS FOR TREATING AND FINISHING SIZED HATS. WILLIAM W. RIDAY, Philadelphia, Pa. Filed Feb. 5, 1916. Serial No. 76,262. (Cl. 223—31.)



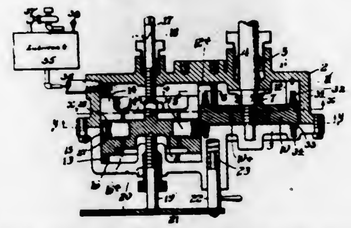
In an apparatus of the character described, a hollow base arranged with pipe-fittings and with a perforated roof, a steam or elastic fluid heater mounted on said roof, arranged with pipe-fittings extending through said base, a perforated hat former surrounding said heater and a jacketed hood connected with the roof of said base and arranged with pipe-fittings for heating the same and a pipe-fitting extending therethrough for forcing air or other elastic fluid into the chamber formed by said hood, the arrangement being such that the hat in a heated condition is held by said former after the steam through said fittings is cut-off, which has softened or mulled the hat, air or other elastic fluid is admitted through certain of said fittings to cause the hat to be quickly dried and finished so that by removal of the same then from the said former it is in a condition for immediate use, substantially as described.

1,223,734. ROTARY PUMP. BENTLEY L. RINEHART, Philadelphia, Pa. Filed Mar. 1, 1915. Serial No. 11,199. (Cl. 103—44.)

1. In a pump, the combination of a casing having an inlet and outlet, two gears fitting the casing and meshing with each other at a point between the inlet and outlet one of which gears is driven and the other loose, a shaft to rotate one of the gears, means for maintaining the two gears in different relative transverse positions of alinement whereby a greater or less portion of the teeth are caused to mesh for producing a corresponding change in fluid displacement, and means for maintaining a fluid under pressure within the casing and outside of the space occupied by the two gears, whereby the pressure of the fluid being pumped is substantially balanced and leakage prevented.

2. In a pump, the combination of a casing having an inlet and outlet, two gears fitting the casing and meshing with each other at a point between the inlet and outlet one of which gears is driven and the other loose, a shaft to rotate one of the gears, means for adjusting the other of the gears in different positions of transverse adjustment relatively to the driven gear to change the extent of meshing contact of the two gears for providing a corresponding change in fluid displacement, and means for maintaining a fluid under pressure within the casing and outside of the space occupied by the two gears whereby the pressure of the fluid being pumped is substantially balanced and leakage prevented.

with each other at a point between the inlet and outlet one of which gears is driven and the other loose, a shaft to rotate one of the gears, means for maintaining the two gears in different relative transverse positions of alinement whereby a greater or less portion of the teeth are caused to mesh for producing a corresponding change in fluid displacement, means for maintaining the teeth spaces at and adjacent to the place of meshing inclosed to prevent lateral flow of the fluid, and means for maintaining a fluid under pressure within the casing and outside of the space occupied by the two gears whereby the pressure of the fluid being pumped is substantially balanced and leakage prevented.



3. In a pump, the combination of a casing having an inlet and outlet, two gears fitting the casing and meshing with each other at a point between the inlet and outlet one of which gears is driven and the other loose, a shaft to rotate one of the gears, means for adjusting the other of the gears in different positions of transverse adjustment relatively to the driven gear to change the extent of meshing contact of the two gears for providing a corresponding change in fluid displacement, and means for maintaining a fluid under pressure within the casing and outside of the space occupied by the two gears whereby the pressure of the fluid being pumped is substantially balanced and leakage prevented.

4. In a pump, the combination of a casing having an inlet and outlet, two gears fitting the casing and meshing with each other at a point between the inlet and outlet one of which gears is driven and the other loose, a shaft to rotate one of the gears, means for adjusting the other of the gears in different positions of transverse adjustment relatively to the driven gear to change the extent of meshing contact of the two gears for providing a corresponding change in fluid displacement, circular followers on opposite sides of the adjustable gear and movable with it for maintaining the teeth spaces at and adjacent to the place of meshing of the gears inclosed to prevent lateral flow of fluid, and means for maintaining a fluid under pressure within the casing and outside of the space occupied by the two gears whereby the pressure of the fluid being pumped is substantially balanced and leakage prevented.

5. In a pump, the combination of a casing having an inlet and an outlet, two gears fitting the casing and meshing with each other at a point between the inlet and outlet, one of which gears is driven and the other loose said loose gear having annular packing grooves on its opposite faces near the teeth and a plurality of transverse apertures through the body of the gear communicating with said annular grooves, a shaft to rotate the driven gear, circular followers on opposite sides of the loose gear and by means of which said gear is adjusted transversely to the driven gear, annular packing rings on each side of the loose gear arranged in the annular grooves and respectively sliding in contact with the surface of the circular followers, springs in the transverse holes of the loose gear and common to both of the packing rings for simultaneously forcing them apart with equal pressures to insure the same tightness of the packing on each side of the loose gear, and means for adjusting the followers and the loose gear to change the extent of meshing between the two gears.

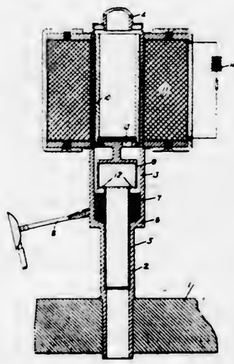
[Claims 6 to 14 not printed in the Gazette.]

1,223,735. TILING CURB. BENJAMIN M. ROLPH, Dixon, Ill. Filed Oct. 27, 1915. Serial No. 58,110. (Cl. 72—79.)



In a device of the class described, a pair of spaced-apart parallel plates; a pair of arch frames pivotally connected with said plates near the ends thereof, the contiguous frames at the ends of two adjoining plates forming braces for the ends of such plates when they are turned downwardly together in either direction, to hold said plates in alinement.

1,223,736. VALVE. EDWARD E. ROSE, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 12, 1915. Serial No. 61,085. (Cl. 137—4.)



1. The combination with a tube, of means for providing a mechanical closure therein, and a mass of readily fusible solid material arranged to seal said closure when in the closed position, said sealing material being non-vaporizable under high vacuum at ordinary temperatures.

2. The combination with a tube, of means for providing a mechanical closure therein, and a mass of readily fusible alloy arranged to seal said closure when in the closed position.

3. Sealing means for a valve comprising a mass of readily fusible solid material which is non-vaporizable at ordinary temperatures under high vacuum.

4. Sealing means for a valve comprising a mass of readily fusible alloy.

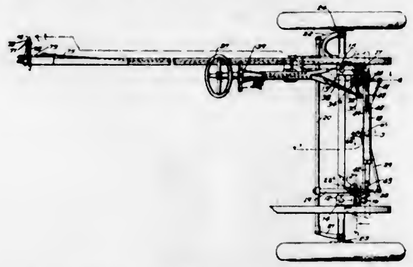
5. Sealing means for a valve comprising a mass of solder.

[Claims 6 to 17 not printed in the Gazette.]

1,223,737. DIRIGIBLE LAMP AND DIRECTION-INDICATOR. FREDERICK M. ROSS and HARRY L. COOK, Cincinnati, Ohio. Filed Apr. 5, 1916. Serial No. 89,188. (Cl. 240—62.)

1. A combined dirigible lamp and direction indicating device for automobiles, comprising a lamp bracket rotatively mounted on the vehicle chassis, means for rotating the bracket, a yielding device and a direction indicator operatively connected with the yielding device and adapted to be moved from its normal position to a position corresponding with that of the movement of the bracket, said yielding device being adapted to return the bracket and the indicator to their normal straight ahead positions when the bracket rotating means is released.

2. In a combined dirigible lamp and direction indicating device for vehicles, the combination of two lamp brackets adapted to move from their normal straight ahead positions to positions in which the lamp rays are projected to one side or the other side of the vehicle, each bracket having stops for limiting its inward movement, a yielding device operatively connected with the brackets, adapted to return both brackets to their normal straight ahead positions and to permit outward movement of one bracket independently of the other bracket, a direction indicator operatively connected with the yielding device and adapted to operate in one direction when one of the brackets is operated and in the opposite direction when the opposite bracket is operated, and means for simultaneously operating the direction indicator and either one of the brackets to indicate the direction of travel of the vehicle.



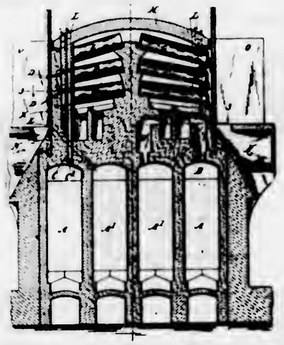
3. In combination in a combined dirigible lamp and direction indicating device for automobiles, a lamp bracket rotatively mounted on the vehicle chassis, manually controlled means for rotating the bracket and adapted to be operated either from the steering gear of the automobile or independently thereof to rotate the bracket in one direction, a yielding device located between the means and the bracket, adapted to rotate the bracket in the opposite direction when the means is released, a direction indicator operatively connected with the yielding device, and stops for limiting the movement of the bracket from its normal straight ahead position to its abnormal side direction indicating position.

4. A combined dirigible lamp and direction indicating device for automobiles, comprising a lamp bracket rotatively mounted on the vehicle chassis, a manually controlled means for rotating the bracket, a yielding device located between the means and the bracket, adapted to rotate the bracket in the opposite direction when the means is released, and a direction indicator operatively connected with the yielding device, said yielding device consisting of a spring, a rod operatively connected with one end of the spring and with the bracket, an abutment for the opposite end of the spring, and a link operatively connecting the means and the spring-engaging end of the rod, whereby the spring will be compressed upon movement of the bracket to its abnormal position.

5. In a combined dirigible lamp and direction indicating device for vehicles, the combination of two lamp brackets adapted to be moved from their normal straight ahead positions to positions in which the lamp rays are projected to one side or the other side of the vehicle, each bracket having stops for limiting its movement in but one direction, a yielding device operatively connected with the bracket and adapted to return both brackets to their normal straight ahead positions and to permit movement of one bracket independently of the other bracket, and manually controlled means for operating either of the brackets against the tension exerted by the yielding device, said yielding device consisting of a spring, a rod operatively connected with one end of the spring and with one of the brackets, a rod operatively connected with the other end of the spring and with the other bracket, and a block located adjacent to the spring and adapted to be operatively connected with one rod when moved in one direction and with the other rod when moved in the opposite direction, each rod when inoperative forming an abutment for its end of the spring, whereby the spring will be compressed upon movement of the bracket from its normal to its abnormal position by said means.

[Claims 6 to 9 not printed in the Gazette.]

1,223,738. SMELTING-FURNACE. EDWIN RUCK, Swansea, Wales. Filed May 6, 1916. Serial No. 95,866. (Cl. 263—18.)

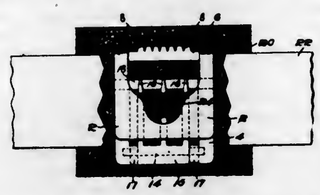


1. A smelting furnace having a combustion chamber, a plurality of retorts at different levels in said combustion chamber, there being a port extending through the bottom of the combustion chamber, means for supplying heated air to said port, there being a second port extending through the bottom of the combustion chamber adjacent to the other port, means for supplying heated gas to said port, said combustion chamber having a front wall, a plurality of auxiliary air ports in said wall, means for supplying heated air to said ports, openings extending through the front wall at different levels communicating with said auxiliary air ports and the combustion chamber, there being an auxiliary gas port adjacent to each air port within the front wall, means for supplying heated gas to said auxiliary ports, and an opening extending from said auxiliary gas port into the combustion chamber adjacent to each of the openings extending from the auxiliary air ports to the combustion chamber, substantially as described.

2. A smelting furnace having a combustion chamber on each side thereof, a plurality of retorts at different levels in each combustion chamber, there being an air chamber and a gas chamber on each side of the structure having checkerwork therein, the air and gas passing through said chambers to be heated when moving in one direction and the products of combustion passing out through the other gas and air chamber to heat up the checkerwork, a gas inlet port on each side of the structure communicating with its gas chamber and the lower end of the combustion chamber, said ports extending through the bottom of the combustion chamber, an air port on each side of the structure extending through the bottom of the combustion chamber each communicating with its combustion chamber and its air chamber below the combustion chamber, said gas and air ports on each side of the structure being adjacent to each other, a plurality of auxiliary gas ports on each side of the structure extending through the side walls adjacent to the front ends of the retorts, said auxiliary gas ports communicating with their respective gas chambers below the combustion chambers, laterally extending openings through said walls at different levels communicating with the auxiliary gas ports and the combustion chambers, there being an auxiliary air port adjacent to each auxiliary gas port communicating with its air chamber below the combustion chamber, each of said auxiliary air ports having a plurality of laterally extending openings adjacent to the

laterally extending openings communicating with the gas ports for feeding air to the combustion chamber at different levels to commingle with the gas fed through the auxiliary gas ports, substantially as described.

1,223,739. BELT OR GARMENT SUPPORTER OR HOLDER. ANDREAS SCHRAMA, Hamburg, Germany. Filed Mar. 14, 1916. Serial No. 84,010. (Cl. 241—11.)



1. A device to enable a garment to be supported or held in place by a belt or band, comprising, in combination, a belt embracing member; teeth projecting outwardly from one marginal portion of said member; teeth pivotally connected to said member adjacent the opposite marginal portion thereof and projecting inwardly therefrom; and a locking member, mounted for sliding movement relatively to said belt embracing member for locking said last named teeth in operative position.

2. A device to enable a garment to be supported or held in place by a belt or band, comprising, in combination, a belt receiving body portion; a toothed member carried by said body portion for securing said device to the garment by passing said toothed member through a part of the material to which the device is to be secured with the free end of said toothed member projecting from said material; and means movably mounted on said body portion to enable said means to be inserted between the material and the end portion of said toothed member, that projects from said material, and prevent disengagement of said toothed member.

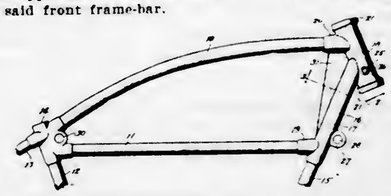
3. A device to enable a garment to be supported or held in place by a belt or band, comprising, in combination, a relatively flat belt embracing member; and means to secure said device to a garment, including toothed means projecting from one marginal portion of said belt embracing member inwardly toward the opposite marginal portion of said member, and further toothed means projecting outwardly from said opposite marginal portion, both of said toothed means being located in substantially the same plane when the device is secured to the garment.

4. A device to enable a garment to be supported or held in place by a belt or band, comprising, in combination, a belt embracing member 2, 4; toothed means 16 pivotally secured to and projecting inwardly from one marginal portion of said belt embracing member toward the opposite marginal portion of said member for securing said device to the garment; a locking member 18 slidingly connected to said belt embracing member for locking said toothed means in operative position, said belt embracing member being recessed to render said toothed means and said locking means readily accessible for manipulation.

1,223,740. MOTOR-CYCLE-FRAME CONSTRUCTION. IGNAZ SCHWINN, Chicago, Ill. Filed Mar. 24, 1915. Serial No. 16,713. (Cl. 208—93.)

1. In cycle-frame construction, upper and lower frame-bars, a front frame-bar extending at an angle to said bars and terminating short of said lower frame-bar, and a unitary head-section forming an extension of said front frame-bar, as well as a joint member for securing the upper end of said front frame-bar to the front ends of said upper and lower frame-bars and a fork-supporting head-member.

2. In cycle-frame construction, upper and lower frame-bars, a front frame-bar extending at an angle to the said bars and terminating short of said lower frame-bar, and a unitary head-section forming an extension of said front frame-bar, as well as a joint member for securing the upper end of said front frame-bar and the front ends of the said upper and lower frame-bars, and a fork-supporting head-member, said head-section having a web lying within the said frame and joining the securing means for said upper frame-bar, the head-member and the extension of said front frame-bar.

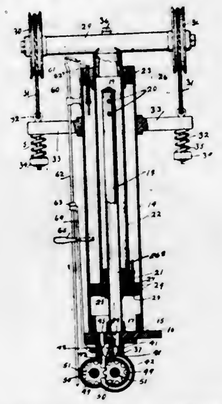


3. In cycle-frame construction a unitary frame element comprising a fork-supporting head-member, a bosa for securing an upper frame-bar and a member for securing a lower frame-bar and a front frame-bar.

4. In cycle-frame construction, a unitary frame element comprising a fork-supporting head member having integral counter bored bosses adapted to receive fork-supporting bearings, a boss for securing an upper frame-bar, a member extending at an angle to said head-member, and a cluster carried by the outer end of said member for securing a lower frame-bar and a front frame-bar.

5. In cycle-frame construction, a unitary frame element comprising a fork-supporting head-member, a boss for securing an upper frame member, an extension in the plane of said boss and divergently inclined with relation thereto, a cluster for securing a lower frame-bar and a front frame-bar on the outer end of said last-named extension, and a web-section lying within the angle of and joining the said boss, head-member and extension.

1,223,741. HYDRAULIC HOIST FOR DUMPING-VEHICLES. JOHN SCHWISTER, St. Paul, Minn., assignor of one-half to Albert S. Anderson, St. Paul, Minn. Filed Dec. 29, 1916. Serial No. 139,655. (Cl. 138—9.)



1. In a hydraulic hoist, the combination with a cylinder and piston working therein, of a pump with connections for delivering oil from one side to the other of said piston, a driving shaft, a clutch for connecting said shaft to said pump, and connections for automatically throwing said clutch out of action, to stop said pump, when the piston approaches the one limit of its movement in said cylinder.

2. In a hydraulic hoist, the combination with a cylinder and piston working therein, of a pump with connections

for delivering oil from one side to the other of said piston, a driving shaft, a clutch for connecting said shaft to said pump, connections for automatically throwing said clutch out of action, to stop said pump, when the piston approaches the one limit of its movement in said cylinder, and a normally closed check valve in said piston arranged to be opened at the above noted extreme position of said piston.

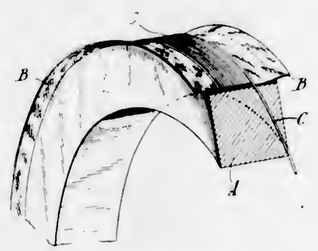
3. In a hydraulic hoist, the combination with a cylinder and return tube therein, of a piston working within said cylinder and around said return tube and having a tubular stem surrounding said return tube and working through the upper head of the cylinder, said cylinder, return tube, and tubular stem having circulating ports, a pump having a supply conduit leading from said return tube and a delivery conduit leading to the lower end of said cylinder, and a controller valve arranged to open and close said supply and delivery conduits to control the movements of said piston.

4. In a hydraulic hoist, the combination with a cylinder and return tube therein, of a piston working within said cylinder and around said return tube and having a tubular stem surrounding said return tube and working through the upper head of the cylinder, said cylinder, return tube, and tubular stem having circulating ports, a rotary pump having a supply conduit leading from said return tube and a delivery conduit leading to the lower end of said cylinder, a controller valve arranged to open and close said supply and delivery conduits to control the movements of said piston, and a normally closed check valve in said piston arranged to be opened at the limit of the upward movement of said piston.

5. In a hydraulic hoist, the combination with a cylinder and return tube therein, of a piston working within said cylinder and around said return tube and having a tubular stem surrounding said return tube and working through the upper head of the cylinder, said cylinder, return tube, and tubular stem having circulating ports, a rotary pump having a supply conduit leading from said return tube and a delivery conduit leading to the lower end of said cylinder, a controller valve arranged to open and close said supply and delivery conduits to control the movements of said piston, a driving shaft, a clutch for connecting said driving shaft to said pump, and a clutch releasing connection arranged to be automatically actuated at the limit of its upward movement of said piston and to thereby open the clutch and stop the pump.

[Claims 6 to 8 not printed in the Gazette.]

1,223,742. ENDLESS BAND AND METHOD OF MANUFACTURING THE SAME. THOMAS SLOPER, Devizes, England. Filed Nov. 18, 1915. Serial No. 62,198. (Cl. 154—4.)



1. The method of making endless bands of particularly smooth exterior and great flexibility suitable for folding the cigarette papers in cigarette machines consisting in wrapping a strip of canvas whose thickness does not exceed .01 of an inch around the periphery of a circular "former," winding a layer of threads whose thickness does not exceed .04 of an inch in a spiral on the canvas, and applying a layer of fine canvas on the outer face of this layer of threads, a thin coating of an adhesive being incorporated between the threads and those faces of the canvas which are toward the same, the thickness of all the materials used being such that the total thickness of the band when finished is not more than .06 of an inch.

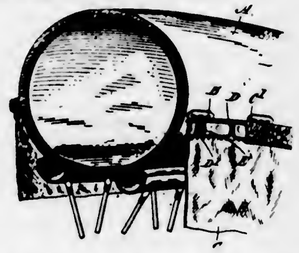
2. The method of making endless bands consisting in wrapping a strip of fine canvas around the periphery of a circular "former," winding a layer of threads in a spiral on the canvas, and applying a layer of fine canvas on the outer face of this layer of threads by folding the free edges of the canvas strip, which may be made wide enough for this purpose, over the layer of threads, a thin coating of an adhesive being incorporated between the threads and those faces of the canvas which are toward the same.

3. The method of making endless bands consisting in wrapping a strip of fine canvas around the periphery of a circular "former," winding a layer of threads in a spiral on the canvas but reducing the thickness of the layer laid over predetermined longitudinally disposed zones along which it is desired the band shall be more flexible, and applying a layer of fine canvas on the outer face of this layer of threads, a thin coating of an adhesive being incorporated between the threads and those faces of the canvas which are toward the same, substantially as set forth.

4. The method of making endless bands consisting in wrapping a strip of fine canvas around the periphery of a circular "former," winding a layer of threads in a spiral on the canvas but reducing the thickness of the layer by omitting the threads at predetermined longitudinally disposed zones along which it is desired the band shall crease, and applying a layer of fine canvas on the outer face of this layer of threads, a thin coating of an adhesive being incorporated between the threads and those faces of the canvas which are toward the same, substantially as set forth.

5. An endless band of particularly smooth exterior and great flexibility suitable for folding the cigarette papers in cigarette machines, consisting in a strip of canvas whose thickness does not exceed .01 of an inch and whose ends are joined to make it into an endless band, a layer of threads thereon whose thickness does not exceed .04 of an inch such threads being laid in a spiral circumferentially around the endless canvas strip, and a layer of fine canvas on the threads, the whole being connected together by an adhesive incorporated between the threads and those faces of the canvas which are toward the same the thickness of all the materials used being such that the total thickness of the band when finished is not more than .06 of an inch.

1,223,743. WIND-SHIELD FOR WHEELS. THOMAS SLOPER, Wiltshire, England. Filed Sept. 29, 1916. Serial No. 122,831. (Cl. 21—69.)



1. In a wind-shield for a wheel the combination of a shield of flexible material shaped to cover the side of the wheel and of a diameter less than the combined diameter of the wheel and tire, links secured to the shield around the periphery in such manner than they can swing in the circumferential direction of the shield, and fasteners on the side of the tire to receive those ends of the links which project beyond the shield, the connection between the links and fasteners being such that the links can swing relatively to them in the circumferential direction of the shield, substantially as and for the purpose set forth.

2. In a wind-shield for a wheel the combination of a shield of flexible material shaped to cover the side of the wheel and of a diameter less than the combined diameter of the wheel and tire, a series of rigid links disposed around the periphery of the shield and each connected thereto by one end in such manner that it can swing in the circumferential direction of the shield, and fasteners on the side of the tire which engage the other ends of the links in such manner that they can swing on the fasteners in the circumferential direction of the shield, substantially as and for the purpose set forth.

3. In a wind-shield for a wheel the combination of a shield of flexible material shaped to cover the side of the wheel and of a diameter less than the combined diameter of the wheel and tire, a series of resilient fastenings secured to the periphery of the shield, a link connected to each fastening in such manner that the link projects beyond the periphery of the shield and can swing in the circumferential direction of the same, and fastenings on the side of the tire to receive the projected ends of the links, the connection being such that the links can swing on the fastenings in the circumferential direction of the shield, substantially as and for the purpose set forth.

4. In a wind-shield for a wheel the combination of a shield of flexible material shaped to cover the side of the wheel and of a diameter less than the combined diameter of the wheel and tire, a series of fastenings disposed in a peripheral pocket in the shield, each fastening being of wire bent to provide a broad thrusting face against the peripheral edge of the pocket, the two ends of the wire being bent inward toward the center of the shield and then toward each other to provide a resilient portion, links connected each by one end to the resilient portion provided by the fastenings in the shield, the connection between these fastenings and the links being such that the latter can swing in the circumferential direction of the shield and fastenings on the side of the tire to receive the ends of the links which project from the shield, the connection between those fastenings and the links also being such that the links can swing in the circumferential direction of the shield, substantially as and for the purpose set forth.

1,223,744. ATTACHMENT FOR GUITARS. WILLIAM J. SMITH, New York, N. Y. Filed Jan. 8, 1916. Serial No. 70,960. (Cl. 84—133.)



1. A removable attachment for changing the tone of an ordinary guitar to simulate that of a Hawaiian guitar, comprising a metallic support to rest upon the neck of the instrument for holding the strings off of the nut.

2. A removable attachment for changing the tone of an ordinary guitar to simulate that of a Hawaiian guitar, comprising an inverted U-shaped metallic support to straddle the nut and rest upon the neck of the instrument for holding the strings off of the nut.

3. A clip for stringed instrument nuts adapted to fit detachably over the ordinary nut of a stringed instrument, and having side members adapted to contact with and rest upon the portions of the instrument on opposite sides of said ordinary nut, said side members being higher than the sides of said nut whereby the instrument strings will be elevated.

1,223,745. RESILIENT COMPOSITION FOR PRINTERS' ROLLERS. CHARLES EMILE SOANE, London, England, assignor of one-half to Usher-Walker, Limited, London, England. Filed Feb. 2, 1916. Serial No. 75,787. (Cl. 106—5.5.)

1. The herein described method of producing an infusible resilient composition for printers' rollers which consists in treating a gelatinous water-containing mass with compounds produced by the condensation of an aldehyde with an amino compound.

2. The herein described method of producing an infusible resilient composition for printers' rollers which consists in treating a mixture of glue soaked in water and glycerin with compounds produced by the condensation of an aldehyde with an amino compound.

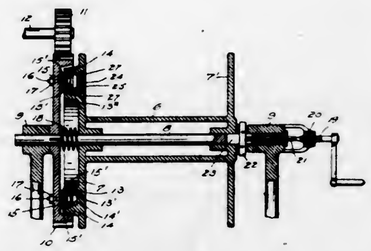
3. The herein described method of producing an infusible resilient composition for printers' rollers which consists in treating a gelatinous water-containing mass with the product produced by condensing together formaldehyde and amin.

4. The herein described method of producing an infusible resilient composition for printers' rollers which consists in treating a gelatinous water-containing mass with the product produced by condensing together formaldehyde and anilin.

5. The herein described method of producing an infusible resilient composition for printers' rollers which consists in treating a mixture of glue soaked in water and glycerin with the product produced by condensing together formaldehyde and an amin.

[Claims 6 to 9 not printed in the Gazette.]

1,223,746. FRICTION-CLUTCH. SAMUEL A. THOMAS, Seattle, Wash. Filed June 22, 1915. Serial No. 35,649. (Cl. 192—8.)



1. In apparatus of the class described, the combination with a power driven member and a series of segmental friction blocks detachably secured thereto, of a driven member provided with an annular groove adapted to coöperate with said friction blocks, said member being provided with an opening therein of sufficient size for the withdrawal therethrough of one of said friction blocks, a closure for said opening, and means for detachably securing said closure within said opening.

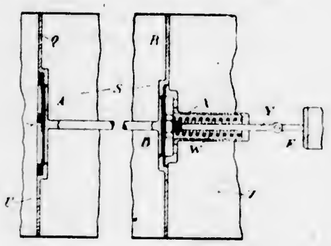
2. In apparatus of the class described, the combination with a shaft, a power driven wheel mounted on the shaft,

a series of friction blocks detachably secured to said wheel, a drum rotatable on said shaft and provided with a flange at its end adjacent to said wheel, and two concentric ribs provided on the drum flange and serving with the aforesaid friction blocks as clutch elements, said drum flange being provided with an opening which is coextensive with a recess provided in one of said ribs, of means for closing said opening and also the rib recess, and devices for detachably securing said means to the drum flange.

3. In apparatus of the class described, the combination of a driving member having detachable friction blocks thereon, a driven member provided with friction elements complementary to said blocks for coupling the two members, said driven member being provided with a detachable portion to furnish an opening whereby the friction blocks may be successively removed through said driven member.

4. In a device of the class described, the combination of a flanged drum having an annular friction groove in said flange, annular friction blocks secured to a revolving member and adapted to frictionally engage said friction groove, and a removable gate in the flange of said drum whereby the friction blocks may be changed when the gate is removed with the drum and revolving member in their assembled positions.

1,223,747. SUBMARINE VESSEL. ABRAHAM JOHANNES VAN STOCKUM, Rijswijk, Netherlands. Filed Aug. 5, 1913. Serial No. 783,094. (Cl. 114—25.)



1. In a submarine vessel the combination of a device for controlling the vertical course of said vessel, a pair of abutments located within said vessel and having different effective areas, means for conducting opposing pressures upon said abutments proportionally to the pressure of the water at two longitudinally separated points on the vessel, means for exerting an independent predetermined pressure upon said abutments, and means for adjusting the position of said device in accordance with the position of said abutments.

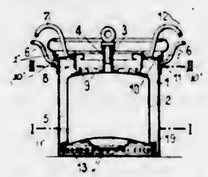
2. In a submarine vessel the combination of a pair of abutments having unequal exposed areas located within said vessel, means for conducting opposing pressures to said abutments when the axis of said vessel is horizontal, a device for controlling the vertical course of said vessel, and means independent upon the depth of submersion of the vessel for counterbalancing the difference of pressure upon said abutments.

3. In a submarine vessel the combination of a device for controlling the vertical course of a vessel, a pair of abutments having unequal effective areas, means for subjecting said abutments to the opposing pressures of the water at longitudinally separated points in the vessel when submerged, means for exerting an independent predetermined pressure upon said abutments, and means controlled by the resulting pressure upon said abutments for adjusting the position of said device.

4. In a submarine vessel the combination of a device for controlling the vertical course of said vessel, a pair of abutments located within the vessel having different effective areas, means for subjecting the abutment having the larger effective area to the pressure of the water at the front portion of the vessel when submerged, means for subjecting the abutment having the smaller effective area to the pressure of the water at the rear portion of the vessel, means for connecting the two abutments mechanically together, a spring for exerting an independent predetermined pressure upon said abutments, and means dependent upon the position of said abutments relative to said vessel for controlling said device.

5. In a submarine vessel, the combination of a device for controlling the vertical course of the vessel; a pair of operatively connected abutments subject to opposing pressures of water from longitudinally separated points of the vessel when submerged, and having unequal effective areas; means for exerting an independent predetermined pressure on the abutments; and means controlled by the resulting pressure upon said abutments for adjusting the position of said device.

1,223,748. COOKING AND FOOD-STERILIZING APPARATUS. ABRAHAM JOHANNES VAN STOCKUM, Amsterdam, Netherlands. Filed Oct. 18, 1913. Serial No. 795,904. (Cl. 53—1.)



1. A steam-cooker and sterilizing appliance comprising in combination an outer vessel, an inner inverted vessel, a tubular neck rising from the top of said inner vessel, means for closing said tubular neck, and means for fixing said inner vessel in said outer vessel whereby the bottom edge of said inner vessel is held clear of the floor of said outer vessel, the wall of the latter rising above the top of the inner vessel.

2. A steam-cooker and sterilizing appliance comprising in combination an outer vessel, an inner inverted vessel, a tubular neck rising from the top of said inner vessel, means for closing said tubular neck, means for supporting food in said inverted vessel, and means for fixing said inner vessel in said outer vessel whereby the bottom edge of said inner vessel is held clear of the floor of said outer vessel, the wall of the latter rising above the top of the inner vessel.

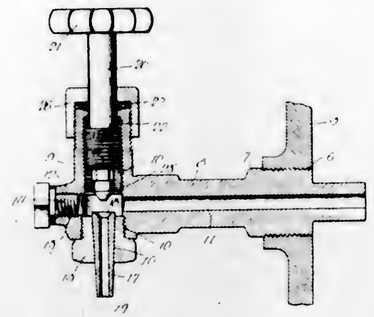
3. A steam-cooker and sterilizing appliance comprising in combination an outer vessel, an inner inverted vessel, a tubular neck rising from the top of said inner vessel, means for closing said tubular neck, a detachable perforated cover at the lower part of said inverted vessel, and means for fixing said inner vessel in said outer vessel whereby the bottom edge of said inner vessel is held clear of the floor of said outer vessel, the wall of the latter rising above the top of the inner vessel.

4. A steam-cooker and sterilizing appliance comprising in combination an outer vessel, an inner inverted vessel, a tubular neck arising from the top of said inner vessel, means for closing said tubular neck, a detachable perforated cover at the lower part of said inverted vessel, a pendent handle fixed to said cover, and means for fixing said inner vessel in said outer vessel whereby the bottom edge of said inner vessel is held clear of the floor of said outer vessel, the wall of the latter rising above the top of the inner vessel.

5. A steam-cooker and sterilizing appliance comprising in combination a single outer vessel, a single inner inverted vessel, a tubular neck rising from the top of said inner vessel, means for closing said tubular neck, a detachable perforated cover at the lower part of said inverted vessel, and means for fixing said inner vessel in said outer vessel whereby the bottom edge of said inner vessel is held clear of the floor of said outer vessel, the wall of the latter rising above the top of the inner vessel.

[Claims 6 to 10 not printed in the Gazette.]

1,223,749. GAGE OR TRY-COCK. WILLIAM H. WAFER and JOHN MURRIN, Chicago, Ill. Filed Apr. 27, 1916. Serial No. 93,856. (Cl. 137—138.)



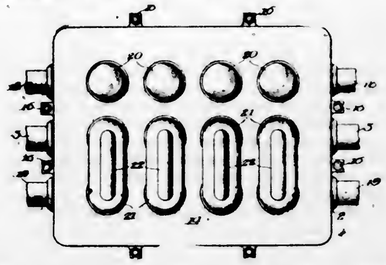
1. A gage or try-cock consisting of a casing having a channel adapted to be placed in communication with a boiler and provided with an opening located vertically and transversely with respect to said channel and intersecting the same and also provided with an opening in alinement with the outer end of said channel, of removable means to close the last named opening, an apertured plug removably located in the transverse opening on one side of said channel, a tube located in the opening of said plug and having a valve seat in its inner end, a valve stem adjustably mounted in the opposite portion of said transverse opening and a valve removably connected to the inner end of said stem and adapted to open and close said valve seat.

2. A gage or try-cock consisting of a casing having a channel adapted to be placed in communication with a boiler and provided with a screw-threaded opening located vertically and transversely with respect to said channel and intersecting the same and also provided with a screw-threaded opening in alinement with the outer end of said channel, of a screw-threaded plug located in the last named opening, an apertured and externally screw-threaded plug located in the lower portion of the transverse opening, a tube located in the opening of said plug and having a valve seat in its inner end, a valve stem screw-threaded in the opposite portion of said transverse opening and a valve removably connected to the inner end of said stem and adapted to open and close said valve seat.

3. A gage or try-cock consisting of a substantially L-shaped casing having its longer and shorter members channeled, the longer member of said casing being externally screw-threaded near its free end to engage an opening in the vertical wall of a boiler and the shorter member of said casing having its channel internally screw-threaded, the said shorter member also having a screw-threaded opening in alinement with the outer end of the channel in the longer member of the casing, a screw-threaded plug located in the last named opening, an apertured and externally screw-threaded plug located in one end of the opening in the shorter member of the casing, a tube removably located in the opening of the last named plug and having a valve seat in its inner end, a valve stem screw-threaded in the opposite portion of the shorter member of the casing and a valve removably connected to the inner end of said stem and adapted to open and close said valve seat.

1,223,750. CABLE-BOX. ALBERT A. WAKEFIELD, Chicago, Ill., assignor, by mesne assignments, to G & W Electric Specialty Co., Chicago, Ill., a Corporation of Illinois. Filed May 14, 1910. Serial No. 561,360. (Cl. 247—13.)

1. A device of the class specified comprising a box or casing, a plurality of parallel cables each being composed of a plurality of strands which enter and leave the casing, said casing being apertured to permit the introduction of conductors which connect with the several strands of each of the cables, said apertures extending in lines which are perpendicular to each other, means for connecting conductors which extend in a line over the cable, said means forming a means for connecting a conductor of one line with the conductor which extends in a line which is perpendicular to the first mentioned line.



2. A cable box having suitable apertures to permit the inlet and outlet of the cable, and also having members by which connection can be made with the cable, said members being inclosed in insulating bushings and provided with means for adjustment of the member toward and away from the cable, and also with means for temporarily securing said members in adjusted position.

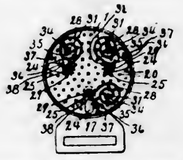
3. A cable box having suitable apertures to permit the inlet and outlet of the cable, and also having members by which connection can be made with the cable, said members being inclosed in insulating bushings and provided with means for adjustment of the members toward and away from the cable, and also with means for temporarily securing said members in adjusted position, said means comprising screws extending transversely through the upper ends of the insulating bushings and engaging the members.

4. A cable box having a plurality of conductors entering therein, individual insulated conducting members for said conductors, having their respective ends provided with a hook and a socket, said hooked ends connecting a member with its allotted conductor, and means for electrically interconnecting said socketed conductor, outlets.

5. A cable box having a plurality of conductors entering therein, individual insulated conducting members for said conductors, said conductors having their opposite ends provided with a hooked portion and a rotatable socketed portion, said hooked portion connecting said member with its allotted conductor, and insulating hoods having members which enter the socketed portion of said members for electrically interconnecting said conducting members.

[Claims 6 to 15 not printed in the Gazette.]

1,223,751. TRUSS. WALLACE WENZEL, Holyoke, Mass. Filed June 28, 1916. Serial No. 106,377. (Cl. 128—26.)



1. The combination, in a truss, with a belt and a perineal strap provided with fasteners, of a hollow slotted pad, helical springs in said pad, means to secure the inner ends of said springs to said pad and prevent such ends from turning on their axes, posts for said fasteners, and means to attach said posts at their inner terminals to the free ends of said springs, said posts extending through and operating in the slots in said pad.

2. The combination, in a truss, of a belt and a perineal strap provided with fasteners, a hollow slotted pad, helical springs in said pad and having their inner ends secured thereto, and fastener-engaging members attached at their inner terminals to the free ends of said springs, and extending through and operating in the slots in said pad, the fastener connected with said perineal strap being permanently attached to one of said fastener-engaging members, and the fasteners connected with said belt being attachable to and detachable from the others of said members.

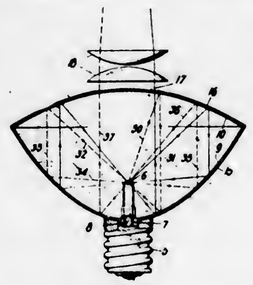
3. The combination, with a hollow slotted truss pad, of helical springs in said pad, the inner ends of said springs being enlarged and seated in the slots provided for them in a wall of said pad, bolts passing through said wall and the enlarged parts of said springs, nuts on said bolts to bind said enlarged parts to said wall, the latter and said enlarged parts being clamped between the heads of said bolts and said nuts, and posts carried at the outer ends of said springs.

4. The combination, with a hollow slotted truss pad, of helical springs in said pad and having their inner ends secured thereto, shouldered posts carried at the free terminals of said springs, and nuts on said posts to confine the parts of said springs, that engage said posts, between the shoulders on the posts and said nuts, to secure said posts to said springs, said posts being guided and having their movement limited by the edges of the slots in said pad.

5. The combination, with a hollow slotted truss pad, of helical springs in said pad, the inner ends of said springs being enlarged and seated in the slots provided for them in said pad, bolts and nuts arranged to bind the enlarged parts to said pad, shouldered posts carried at the outer ends of said springs, and nuts on said posts to secure the latter to said springs, said posts operating in other slots provided for them in said pad.

[Claims 6 and 7 not printed in the Gazette.]

1,223,752. APPARATUS FOR REFLECTING LIGHT-RAYS. ARTHUR H. ADAMS, Sparkill, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Jan. 14, 1915. Serial No. 2,181. (Cl. 240—41.)



1. In a light projecting device, a source of light and means for projecting substantially all the rays from said source upon a limited area, said means comprising a pair of reflecting paraboloids of different focal length arranged in opposing relation on a common axis and having said source of light as a common focus, one of said paraboloids being provided with an axial opening for the passage of light rays.

2. In a light projecting device, a source of light and means for projecting substantially all the rays from said source upon a limited area, said means comprising a pair of reflecting parabolоids of different focal length arranged in opposing relation on a common axis and having said source of light as a common focus, the paraboloid of greater focal length being provided with an axial opening for the passage of light rays.

3. In a light projecting device, a source of light, a parabolic reflector partly surrounding said source of light and having its focus substantially coincident with the effective center of said source, a second parabolic reflector of greater focal length than the first arranged on the other side of said source of light in opposing relation to said first-mentioned parabolic reflector, and having a common axis and focus therewith; said reflectors being arranged in abutting relation, and one of said reflectors having an axial opening therein for the passage of light rays.

4. In a light projecting device, a source of light, a parabolic reflector partly surrounding said source of light and having its focus substantially coincident with the effective center of said source, a second parabolic reflector of greater focal length than the first arranged on the other side of said source of light in opposing relation to said first-mentioned parabolic reflector, and having a common axis and focus therewith; said reflectors being arranged in abutting relation, the reflector of greater focal length having an axial opening for the passage of light rays.

5. An electric lamp comprising a front and rear wall joined together, both walls being of paraboloidal contour arranged on a common axis in opposing relation, said wall contours being of different focal length and having the focus of one coincident with the focus of the other, a filament mounted at said coincident focus, a paraboloidal reflecting surface on one of said walls, and an annular reflecting surface on the other of said walls.

[Claim 6 not printed in the Gazette.]

1,223,753. KNIFE-SHARPENER. ELIAS B. ANDERSON, Forreston, Ill. Filed Aug. 2, 1916. Serial No. 112,656. (Cl. 51—7.)



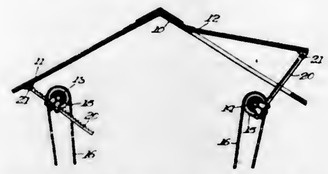
1. A device of the class described, comprising a base-plate adapted to be secured to a table at the edge thereof; an abrading stone supported on said base-plate; clamp-plates engaging said stone and having operative connection with said base-plate; and a pair of guide-plates on opposite sides of said stone, adapted to be adjusted with relation thereto.

2. A device of the class described, comprising a base-plate, adapted to be attached to a table near the edge thereof; an abrading stone supported on said base-plate; clamp-plates engaging said stone and projected laterally into guide-plates; plates slidable on said base-plate and projected upwardly into guide-plates coöperating with said first-named guide-plates; means for adjustment of said guide-plates; and means of adjustment for said clamp-plates.

3. A device of the class described, comprising a base-plate adapted to be attached to the edge of a table and provided with a pair of recesses at its outer edge; an abrading member supported on said stone with its outer end projecting between said recesses; means for holding said stone rigidly against said plate; a pair of guide-plates on opposite sides of said abrading member; and means for adjusting said guide-plates with relation thereto.

1,223,754. GEARING. EDWARD BERLES, Chicago, Ill., assignor to John C. Moninger Company, Chicago, Ill., a Corporation of Illinois. Filed July 21, 1916. Serial No. 110,538. (Cl. 74—27.)

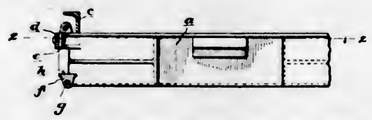
1. The combination with a rotatable shaft of an annulus member thereon having a set-screw receiving hub and at one end a pinion, both ends of said member having undercut grooves forming with the shaft a pair of oppositely opening annular channels with concentric inner and outer walls, a rack for engagement with the pinion, a rack guide comprising a carriage straddling the rack and having an abutment for the back of the rack to hold it in engagement with the pinion, and fingers projecting from the carriage into each of the aforesaid channels at the side of the shaft adjacent the rack.



2. The combination with a rotatable shaft of a pinion thereon, means for securing the pinion to the shaft, both ends of said pinion having undercut grooves forming with the shaft a pair of oppositely opening annular channels with concentric inner and outer walls, a rack for engagement with the pinion, a carriage straddling the rack and providing an abutment for the outer face thereof to hold the same in engagement with the pinion, and arcuate fingers projecting from each side of the carriage for engagement with the aforesaid channels at the side of the shaft adjacent the rack.

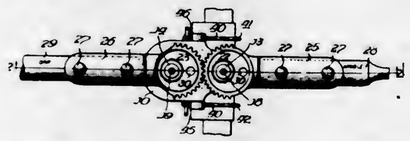
3. The combination with a rotatable shaft of a pinion thereon, means for securing the pinion to the shaft, each end of said pinion having oppositely opening annular channels, a rack for engagement with the pinion, a carriage straddling the rack and providing an abutment for the outer face thereof to hold the rack in engagement with the pinion, and fingers projecting from each side of the carriage for engagement with the aforesaid channels at the side of the shaft adjacent the rack.

1,223,755. DRAFT-RIGGING. WILLIAM P. BETTENDORF, deceased, Davenport, Iowa, by Joseph W. Bettendorf, administrator, Davenport, Iowa. Original application filed Mar. 13, 1907, Serial No. 362,176. Divided and this application filed July 22, 1915, Serial No. 41,262. Renewed Mar. 19, 1917. Serial No. 155,948. (Cl. 213—42.)



In a draft rigging for railway cars, a pair of separated draft sills adapted to receive the draft rigging between them and provided with downwardly-facing shoulders on their inner faces near their lower front corners, a striking plate extending across the front ends of the draft sills, a coupler-shank supporting-bar having its ends rigidly abutting the inner faces of the sills and in engagement with the aforesaid downwardly-facing shoulders, and a horizontal bolt extending through the sills and longitudinally through said supporting-bar.

1,223,756. BOW-FACING-OAR MECHANISM. EUGENE BIDDISON, Fox Lake, Ill., assignor of one-half to Edgar E. Skillin, River Grove, Ill. Filed Oct. 21, 1916. Serial No. 126,815. (Cl. 9—25.)



1. Bow-facing oar mechanism including in combination a support adapted to be secured to a boat so as to rock thereon, a pair of intermeshing gears pivoted eccentrically on said support, means for securing a handle to one of said gears and means for securing a blade to the other of said gears.

2. Bow-facing oar mechanism including in combination a gear support, a pair of intermeshing gears pivoted eccentrically on said support, means for securing a handle to one of said gears, means for securing an oar blade to the other of said gears, holding means adapted to be secured to the side portion of a boat, said gear support being pivotally mounted to rock on said holding means.

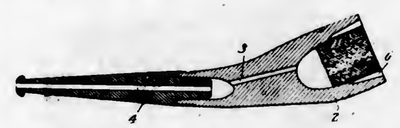
3. Bow-facing oar mechanism including in combination a support adapted to be secured to a boat, an oar blade and a handle mounted to rock on said support, said blade and said handle being operatively connected in motion communicating relation to each other by means providing a varying rate of travel of the blade with respect to that of the handle when rowing motion is applied to the handle.

4. Bow-facing oar mechanism including in combination a support for an oar blade and a handle, an oar blade and a handle mounted to rock on said support, and means including intermeshing gears operatively connecting said handle and said blade in motion communicating relation to each other providing a decreasing rate of travel of the blade from the initial portion of the stroke to substantially the central portion of the stroke and an increasing rate of travel from such substantially central portion of the stroke to the end portion of the stroke when the device is normally in use and the rate of travel of the handle is constant from the beginning to the end of the stroke.

5. Bow-facing oar mechanism including in combination a support adapted to be secured to a boat, a pair of intermeshing segmental gears pivotally mounted on said support, a handle carried by one of said gears and an oar blade carried by the other of said gears, one of said gears having a pitch line substantially circular and being pivoted off center.

[Claim 6 not printed in the Gazette.]

1,223,757. SMOKING-PIPE AND METHOD OF SUPPORTING COMBUSTION IN SAME. JOHN WILLARD BOLTE, Oak Park, Ill. Filed Aug. 12, 1916. Serial No. 114,549. (Cl. 131—12.)



1. A pipe having a bowl adapted to hold a prepared cartridge of tobacco of a diameter approximately equal to its length and having a combustible wrapper, the said bowl being so shaped as to grip the inner end of the cartridge whereby the body of the cartridge beyond its inner end is held out of contact with the wall of the bowl and is surrounded by an annular air space between it and the bowl, for the purpose set forth.

2. A pipe having a tapering bore forming a bowl gradually enlarging toward its outer end, and an inner or contracted end, and adapted to hold a prepared cartridge of tobacco of a diameter approximately equal to its length, and in quantity substantially equivalent to a single pipe charge, and provided with a combustible wrapper, the said bowl being adapted to grip one end of the cartridge at the inner or contracted end of the bowl, whereby the body of the cartridge beyond its inner end is held out of contact with the wall of the bowl and is surrounded by an annular air space between it and the bowl, for the purpose set forth.

1,223,758. PNEUMATIC MOTOR. GEORGE P. BRAND, New York, N. Y. Filed Apr. 13, 1915. Serial No. 21,167. (Cl. 230—2.)

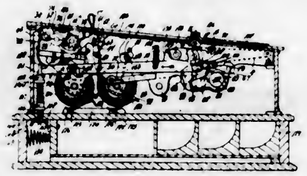
1. In a pneumatic motor, the combination of a member having a longitudinally disposed tension chamber and

transverse ports, valves controlling said chamber and ports, a plurality of pneumatics in pairs, a plate connecting the pneumatics of each pair, said plates having lugs and being removably secured to the pneumatics, and a rod extending longitudinally of said member and supported in lugs thereon and in the lugs of said plates.



2. In a pneumatic motor, the combination of a member having a longitudinally extending tension chamber and transverse ports, valves on said member one for each pair of ports, pneumatics in pairs disposed upon the other side of said member and communicating with said ports, said member having spaced lugs intermediate the pneumatics of each pair, plates removably secured to and connecting the pneumatics of each pair, and said plates provided with lugs disposed upon opposite sides of the lugs of said member, and a longitudinally disposed rod passed through the lugs of the said plates and member and constituting a common pivot upon which all of said pneumatics are rockably mounted.

1,223,759. AUTOGRAPHIC REGISTER. CHARLES BRISTOW, Fendalton, Christchurch, New Zealand, assignor to The Imperial Cash Register Company, Limited, Wellington, New Zealand, a Corporation of New Zealand. Filed Dec. 16, 1911. Serial No. 666,311. (Cl. 11—36.)



1. In an autographic register, in combination, means for supporting a paper ribbon upon which items are to be recorded, a pair of rollers for feeding said ribbon, the upper roller being freely movable in its end bearings, and a brake for applying pressure to the upper roller, said brake consisting of a shoe, friction rollers carried thereby and engaging said roller at circumferentially spaced points and a screw threaded member engaging said shoe for adjusting the pressure thereof on said roller.

2. In an autographic register, in combination, means for supporting a paper ribbon upon which items are to be recorded, means for intermittently feeding said ribbon, and a stationary plate over which said ribbon passes, said plate being formed with a lengthwise groove on its upper surface for the purpose described.

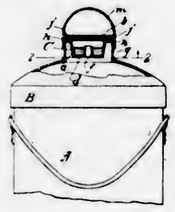
3. In an autographic register, in combination, spools upon which a paper ribbon is mounted, two side frames each having slots the lower ends of which form bearings in which said spools are journaled, retaining members pivotally mounted on the outer faces of said side frames and overlapping the upper portions thereof, said members normally holding said spools in said open bearings, but movable to allow removal of said spools.

4. In an autographic register, in combination, spools upon which a paper ribbon is mounted, and two side frames for supporting said spools, each of said frames consisting of two pivotally connected parts having recesses formed in their adjacent faces, said recesses when the parts are closed together forming bearings in which said spools are journaled, and means carried by one of said frame parts for holding the parts normally in closed relation.

5. In an autographic register, in combination, spools upon which a paper ribbon is mounted, two side frames for supporting said spools, each of said frames consisting of two pivotally connected parts having recesses formed in their adjacent faces, said recesses when the parts are closed together forming bearings in which said spools are journaled, and means for yieldingly holding said parts together.

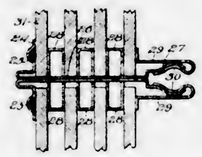
[Claims 6 to 17 not printed in the Gazette.]

1,223,760. GARBAGE-CAN. JOHN H. BROWN, Springfield, Mass. Filed May 6, 1916. Serial No. 95,932. (Cl. 220—56.)



A garbage can, and a cover therefor provided with a centralized upstanding cylindrical incasing portion and having partially circular plates secured thereto and in separation from the inner surface thereof and having the ends thereof separated one from another, a receptacle for disinfectant comprising inclosing bottom, side and top walls, the bottom wall having a central upstanding tubular member open at both its ends and terminating below the top wall of the receptacle, and said receptacle having laterally extending lips for engagement with and detachment from the said partially circular plates.

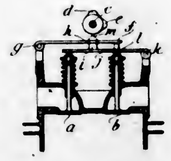
1,223,761. WINDOW CONSTRUCTION. M. LEWIS BROWN, Niles, Mich., assignor to Kawneer Manufacturing Company, Niles, Mich. Filed Apr. 27, 1912. Serial No. 693,588. (Cl. 189—78.)



1. In a sectional pane support, a metal frame member having a flat bottom, an integrally formed high-yielding flange at one end thereof, an outwardly and inwardly curved portion at the other edge thereof and a readily detachable yielding member having a clamping engagement with and carried by said outwardly and inwardly curved portion and adapted to clamp one or more panes of glass against said high-yielding member, substantially as described.

2. In apparatus of the class described, a rectangular metallic member provided with a flange at one side thereof and with a deflected portion at the other side thereof, a clamping member curved to conform with said deflected portion and engageable directly thereupon so as to be entirely supported thereby, said clamping member when applied to said deflected member being adapted to clamp a plurality of panes of glass against said flange.

1,223,762. INTERNAL-COMBUSTION ENGINE. ETTORE BUGATTI, Paris, France. Filed Apr. 6, 1916. Serial No. 89,292. (Cl. 123—90.)

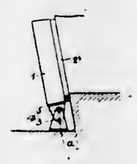


1. An internal combustion engine having twin exhaust and admission valves located directly opposite one another in a plane perpendicular to the cam shaft, and having tapped levers controlling said valves respectively, the lever for one pair of valves located above the lever for the other valves, said levers having projections, and a cam shaft having cams acting on said projections respectively, such projection on the lower tappet lever passing up through the plane of the upper lever.

2. An internal combustion engine having exhaust and admission valves located directly opposite one another in a plane perpendicular to the cam shaft, and having superposed tappet levers controlling said valves respectively, the upper lever having an opening through which a cam projection on the lower lever passes, and the lower lever having an opening through which passes a connection from the upper lever to the spindle of the valve controlled thereby, and a cam shaft having cams acting on said levers respectively.

3. An internal combustion engine having twin exhaust and admission valves for each cylinder placed opposite one another in planes perpendicular to the cam shaft, combined with tappet levers one operating the twin exhaust valves and the other the twin admission valves, said levers arranged in planes one above the other, the upper lever having an opening through which passes a cam projection on the lower lever, and the lower lever having openings through which pass connections from the upper lever to the spindles of the valves controlled thereby, and a cam shaft having cams acting on said levers respectively.

1,223,763. LOCK-GATE. MAX BUCHHOLZ, Gross-Plehnendorf, near Danzig, Germany. Filed Mar. 24, 1913. Serial No. 756,550. (Cl. 61—21.)



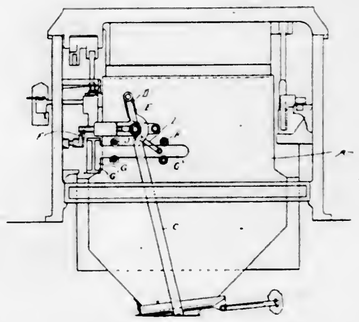
1. In a lock gate, a bearing therefor consisting of an inclined thrust member, its angle of inclination in the vertical plane being such that the vertical component of the pressure on such member tends to cause the latter to turn away from the pivoting axis, while the horizontal component produces a moment tending to turn the said member into vertical position.

2. In a lock gate, the combination with a packing, of a bearing for said gate consisting of an inclined thrust member, the inclination of which in horizontal plane extends at an angle between the lines running from the center of the upper end of said member to the center of gravity of the gate and to the resultant of the horizontal component of the weight of the gate and the component due to the pressure when the lock is filled with water.

3. In a lock gate, an abutment on the back edge of the gate and a corresponding abutment on the masonry of the gateway, a stop plate, an inclined thrust member the inclination of which in the vertical plane is such that so long as the horizontal component arises only from the weight of the gate the said member rests against said stop plate and the abutments clear each other, and when the water pressure rises the horizontal component increases and said member tips inwardly bringing said abutments into contact with one another.

4. In a lock gate the combination with the sill and the masonry wall, of a collar hinge at the top corner of the gate, a thrust member at the lower corner thereof having rounded ends, sockets in the gate and in the masonry wall in which the rounded ends of said member rest, the angle of inclination of said member in vertical plane being such that the moment due to the vertical component of the pressure on said member against the moment due to the horizontal component tends to turn the said member away from the wall.

1,223,764. LOCKING DEVICE FOR AUTOMATIC WEIGHING-SCALES. ERNEST E. BURROWS, St. Johnsbury, Vt., assignor to E. and T. Fairbanks and Company, St. Johnsbury, Vt., a Corporation of Vermont. Filed Apr. 28, 1916. Serial No. 94,113. (Cl. 73—175.)



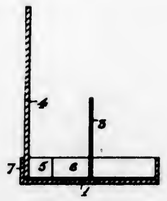
1. In a scale, the combination with a toggle locking mechanism for the discharge gate and a coöperating lever for controlling the upper gate, of a reciprocating locking member for holding said lever from tripping, and a positive mechanical connection between said locking mechanism and said toggle mechanism in both directions.

2. In a scale, the combination with a toggle locking mechanism for the discharge gate and a coöperating lever for the upper gate adapted to mutually trip each other, of a reciprocating locking bar for holding the lever for the upper gate from tripping while said toggle locking mechanism is in tripped position, and a pivotal positive actuating connection between said toggle locking mechanism and said locking bar in both directions of movement.

3. In a scale, the combination with a toggle locking mechanism for the lower gate, provided with a striker arm, and a coöperating lever for controlling the upper gate, said lever and striker arm being adapted to mutually trip each other, of a laterally-slidable bar for holding said lever from being tripped while said toggle mechanism is in tripped position, and a pivotal link connecting said bar with said toggle mechanism to positively project and withdraw the bar.

4. In a scale, the combination with a toggle locking mechanism for the discharge gate having a bell-crank striker arm, and a lever controlling the upper gate cooperating with said striker arm to mutually trip each other, of a locking bar for holding said lever from tripping, and a link connecting said locking bar with said toggle mechanism adapted to positively project said arm when the toggle mechanism is tripped and to positively retract said arm upon the re-locking of the toggle and in advance of the tripping of said lever.

1,223,765. CHILD'S TOY. EDWIN TEARLE CALDICOTT, Fulham, England. Filed Oct. 12, 1916. Serial No. 125,214. (Cl. 46—37.)



1. A toy of the character in which representations of objects are grouped to form a scene, comprising a base, plastic material of an approximately-maintained tacky nature on said base, and representations adapted to be pressed against and held in approximately-upright position by said plastic material.

2. A toy of the character substantially as described, comprising a base member provided with a coating of plastic material, characterized by the capability to hold relatively right objects in position approximately perpendicular to the base by the contact of edges of said objects with said material, and objects adapted to be pressed onto the plastic material and held to said base member thereby.

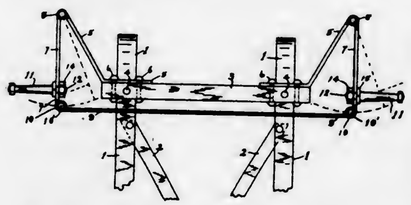
3. A toy of the character substantially as described, comprising a base member in the form of a shallow receptacle, soft plastic material of a tacky nature contained therein, and objects removably maintained on said base member by said plastic material.

4. In toys and the like, a support having an exposed layer of material of an approximately-maintained tacky-like nature capable of holding toys or other representations in display positions by the engagement of their edges with said material.

5. In toys and the like, a support having a layer of material of a tacky-like nature capable of holding objects of sheet material in display position by their engagement with said material, and objects of sheet material adapted to have edge portions thereof pressed to said material and to be thereby held in display positions.

[Claims 6 and 7 not printed in the Gazette.]

1,223,766. STEERING-GEAR FOR VEHICLES. GEORGE C. CAMPBELL, Elkhart, Ind. Filed Oct. 18, 1915. Serial No. 56,626. (Cl. 21—12.)



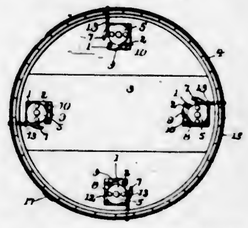
1. The combination with a vehicle frame provided with a pair of axle carrier brackets and an axle carrier pivotally mounted upon each of the latter and linked to each other adjacent the end opposite the pivotal mount thereof, each of said axle carriers being apertured substantially in a horizontal plane, of a wheel axle rigidly mounted within said axle carrier aperture and adapted to swing therewith.

2. The combination with a vehicle frame provided with a pair of axle carrier brackets and an axle carrier pivotally mounted upon each of the latter and linked to each other adjacent the end opposite the pivotal mount thereof, each of said axle carriers being apertured substantially in a horizontal plane intermediate its extremities, of a wheel axle having one end thereof arranged within said axle carrier aperture; and means for detachably fastening said axle within said aperture.

3. The combination with a vehicle frame provided with a pair of axle carrier brackets, each of said axle carrier brackets having an axle carrier pivotally mounted thereon, the latter being provided with a wheel axle, of a link pivotally connecting said axle carriers and adapted solely to space said carriers when lateral pressure is exerted upon the vehicle frame for vehicle steering purposes.

4. In a vehicle of the class described, the combination with the vehicle frame, of a pair of carrier brackets rigidly supported by said frame and extending forward and outward therefrom; a substantially straight axle carrier bar hinged to each of said brackets at the outer end of the latter and adapted to swing therefrom in a horizontal plane, said carrier bar extending rearwardly from its hinged mount and being provided with an aperture intermediate its extremities; a wheel axle rigidly mounted in said axle carrier aperture and projecting laterally therefrom; and a link pivotally connected with each of said carrier bars at a point rearwardly of said axle mount and adapted solely to space said carrier bars when lateral pressure is exerted upon the vehicle frame for vehicle steering purposes.

1,223,767. KNOCKDOWN BARREL OR HOGSHEAD. WILLIAM SHIRLEY CARTER, Lovingston, Va. Filed Sept. 30, 1915. Serial No. 53,311. (Cl. 217—44.)



1. A container comprising staves having adjustable hoops for sustaining the same against outward movement, heads arranged within the opposite ends of the staves to sustain the same against inward movement, means including adjustable hooks connected to the end hoops, and means for holding the said hooks in adjusted position.

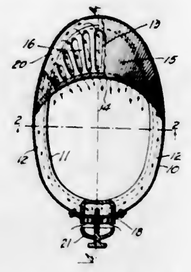
2. A container comprising staves having adjustable hoops for sustaining the same against outward movement, heads arranged within the opposite ends of the staves to sustain the same against inward movement, links upon the end hoops and arranged upon the outer faces of the heads, and means including adjustable hooks upon the heads for engaging the said links.

3. A container comprising staves having adjustable hoops for sustaining the same against outward movement, heads arranged within the opposite ends of the staves to sustain the same against inward movement, links upon the end hoops, means including rotatable hooks upon the heads for engaging the inner ends of the said links, and means for engaging the said hooks and securing them in adjusted position.

4. A container comprising staves having adjustable hoops for sustaining the same against outward movement, heads arranged within opposite ends of the staves to sustain the same against inward movement, links upon the end hoops passing through openings in certain of the staves and arranged upon the outer faces of the heads, and means including rotatable hooks and locking pawls for securing them in adjusted positions.

1,223,768. COMBINATION COAL AND WOOD HEATING-STOVE. ROBERT F. CLARK, Salt Lake City, Utah. Filed Nov. 23, 1915. Serial No. 63,073. (Cl. 126—77.)

1. In a stove having a fire pot, a surrounding shell spaced apart therefrom, and a suitably located draft inlet, the combination therewith, of a chambered portion having the general shape of the carpel of an orange lying crosswise the top of the fire pot in a position opposite the said draft inlet, the said chambered portion formed by an apertured bottom wall intersected by a solid top wall and making an acute angle therewith, the space included between the said intersecting walls opening directly into the space included between the said fire pot and the said surrounding shell, for the purpose specified.



2. In a stove having a fire pot, a surrounding shell spaced apart therefrom and a suitably located draft inlet, the combination therewith, of an apertured hood surmounting a portion of the said fire pot, and located diametrically opposed to the said draft inlet, the said hood sloping upwardly toward the center of the stove and at a suitable distance from the said center intersecting a superposed solid wall inclined away from the center of the stove, the space included between the said hood and the said wall opening directly into the space included between the said fire pot and the said surrounding shell, for the purpose specified.

3. In a stove comprising a fire pot a surrounding shell spaced apart therefrom and a draft inlet located in the front of the said surrounding shell, the combination with the said fire pot of an apertured, suitably curved hood extending over the rear upper portion thereof, and an upwardly sloping solid wall intersecting the said hood and having a curved edge for bearing against the interior of the said surrounding shell in such a manner that a space having the general shape of the carpel of an orange will be formed between the said hood and the said sloping wall, this space being in direct communication with the space included between the said fire pot and the said shell, for the purpose specified.

4. In a stove, the combination with a fire pot having tapering corrugations, of a surrounding shell having corrugations corresponding to, and registering with, the tapering corrugations of the said fire pot, the fire pot and the shell being suitably spaced apart for the purpose specified.

5. In a stove, the combination with a fire pot having tapering corrugations, of a surrounding shell having corrugations corresponding to, and registering with, the tapering corrugations of the said fire pot, the fire pot and the shell being suitably spaced apart from each other; a draft inlet leading into the space included between the fire pot and the shell; a suitably shaped expansion chamber communicating with the said included space and with the interior of the said fire pot; and an inclined apertured wall, all suitably located, for deflecting a current of air from the said expansion chamber downwardly into the said fire pot for the purpose specified.

1,223,769. DRIVING-BELT. GEORGE DAVISON, Stonington, Conn. Filed Sept. 22, 1915. Serial No. 52,111. (Cl. 74—62.)

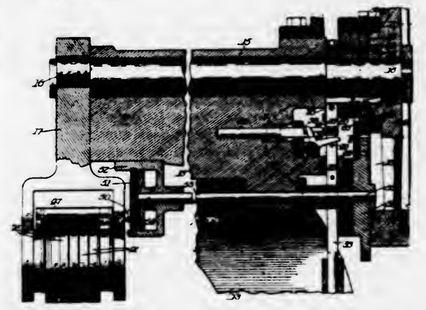
1. A driving belt formed of felt comprising a body of fulled wool fibers having incorporated therein during the fulling process an adequate quantity of fibers of greater tensile strength than that possessed by the wool fibers, thereby to impart to the belt the requisite tensile strength for belt purposes, and the fibers of which felt have an oil and a wax coating rendering, substantially, the felt waterproof and the oil non-oxidizable.

2. A driving belt formed of felt comprising a body of fulled wool fibers having incorporated therein during the fulling process an adequate quantity of fibers of greater tensile strength than that possessed by the wool fibers, thereby to impart to the belt the requisite tensile strength for belt purposes, and the fibers of said body having an oil coating and a coating exterior thereto formed of wax and resin.

3. A driving belt formed of felt having incorporated therein an oil coating on the fibers and exterior to said coating a coating of wax and resin.

4. A driving belt formed of felt having incorporated therein a filler of oil and pigment and a further filler of wax and resin.

1,223,770. STOP MECHANISM FOR PUNCH-PRESSES. ALFRED L. DAY, Chicago, Ill., assignor to American Perforator Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 23, 1912. Serial No. 685,826. (Cl. 74—46.)



1. In a punch press, a rotatable operating shaft, a driving wheel therefor, a clutch mechanism for connecting and disconnecting said shaft with respect to said wheel, comprising a member carried by said shaft and movable relative to said shaft which connects and disconnects the said shaft from the wheel; means tending to move said member to connecting position; an abutment movable into and out of the path of said member, said abutment, when in the path of said member, stopping it in disconnecting position, and a safety device for preventing the shaft from making more than one revolution, when the abutment is moved out of the path of said member, said device comprising a stop movable into and out of the path of said member, said stop when in the path of said member, stopping said member, in the same position in which said abutment stops it.

2. In a punch press, in combination, an operating shaft; a driving wheel therefor; a clutch mechanism for intermittently connecting said driving wheel with said shaft, said clutch mechanism including a clutch-tripping member movably mounted on said shaft, means tending to hold said clutch-tripping member in the position in which clutch connection is made between said driving wheel and said shaft, and a vertically movable abutment movable into and out of the path of said member so as to cause the clutch to be thrown out and in respectively, whereby, when said abutment is moved out of the path of said member, said member will rotate with said shaft; and a safety device for preventing said shaft from making more than one revolution, said safety device comprising a horizontally movable stop adapted to enter behind said member after said abutment has been moved out of the path of the same and the same has consequently started to revolve, and remain in the path of said member until said abutment is moved back into the path of the same; and means for connecting said stop with said abutment

so that the movements of said abutment into and out of the path of said member will effect the said movements of said stop.

3. In a punch press, in combination, an operating shaft; a driving wheel therefor; a clutch mechanism for intermittently connecting said driving wheel with said shaft, said clutch mechanism including a clutch-tripping member movably mounted on said shaft, means tending to hold said clutch-tripping member in the position in which clutch connection is made between said driving wheel and said shaft, and a vertically disposed abutment movable into and out of the path of said member so as to cause the clutch to be thrown out and in respectively, whereby, when said abutment is moved out of the path of said member, said member will rotate with said shaft; and a safety device for preventing said shaft from making more than one revolution, said safety device comprising a movable stop, disposed at an angle to said abutment, and adapted to enter behind said member after said abutment has been moved out of the path of the same and the same has consequently started to revolve, and remain in the path of said member until said abutment is moved back into the path of the same; and a bell crank lever engaging said abutment and said stop so as to impart the said movements to said stops.

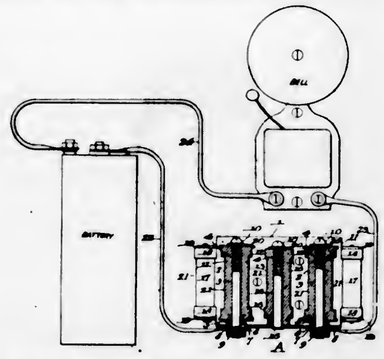
4. In a punch press, in combination, an operating shaft; a driving wheel therefor; a clutch mechanism for intermittently connecting said driving wheel with said shaft, said clutch mechanism including a clutch-tripping member movably mounted on said shaft, means tending to hold said clutch-tripping member to the position in which clutch connection is made between said driving wheel and said shaft, and an abutment movable into and out of the path of said member so as to cause the clutch to be thrown out and in respectively, whereby, when said abutment is moved out of the path of said member, said member will rotate with said shaft; and a safety device for preventing said shaft from making more than one revolution, said safety device comprising a stop movably connected with said movable abutment, and adapted to enter behind said member after said abutment has been moved out of the path of the same, and remain in the path of said member until said abutment is moved back into the path of the same; and means for preventing said stop from entering in front of said member before the same has started to revolve.

5. In a punch press, in combination, an operating shaft; a driving wheel therefor; a clutch mechanism for intermittently connecting said driving wheel with said shaft, said clutch mechanism including a clutch-tripping member movably mounted on said shaft, means tending to hold said clutch-tripping member in the position in which clutch connection is made between said driving wheel and said shaft, and an abutment movable into and out of the path of said member so as to cause the clutch to be thrown out and in respectively, whereby, when said abutment is moved out of the path of said member, said member will rotate with said shaft; and a safety device for preventing said shaft from making more than one revolution, said safety device comprising a stop movably connected with said movable abutment, and adapted to enter behind said member after said abutment has been moved out of the path of the same, and remain in the path of said member until said abutment is moved back into the path of the same; and a guard plate movably mounted upon the face of said member adjacent to said stop, so as to prevent said stop from entering in front of said member before the latter has started to revolve.

[Claim 6 not printed in the Gazette.]

1,223,771. MOVING-PICTURE-OPERATOR'S AUTOMATIC SIGNALING DEVICE. OSCAR B. DAY, Greencastle, Ind. Filed Oct. 18, 1916. Serial No. 126,378. (Cl. 177—311.)

1. A moving picture operator's automatic signaling device including a frame to which contact rollers having shoulders and flanges at each end thereof are attached; spindles by which the contact rollers are attached to the frame and on which the contact rollers rotate, the spindles passing through nonconducting washers placed between the ends of the rollers and frame, through nonconducting collars placed in holes in the frame, through nonconducting washers outside of the frame and through the eyes to which the cords are attached, the spindles being provided with nuts at one end, and washers and screws at the other, as specified and shown.



2. A moving picture operator's automatic signaling device including a frame to which contact rollers, having shoulders and flanges at each end thereof are attached; spindles by which the contact rollers are attached to the frame and on which the contact rollers rotate, the spindles passing through nonconducting washers placed between the ends of the rollers and frame; through nonconducting collars placed in holes in the frame, and through nonconducting washers outside the frame, and through the eyes to which the cords are attached, the spindles being provided with nuts at one end and washers and screws at the other; a tension roller having a shoulder at each end; a spindle by which the tension roller is attached to the frame, between the contact rollers and on which the tension roller rotates, the spindle having a head at one end and being provided with a washer and screw at the other, as shown and described.

3. A moving picture operator's automatic signaling device including a frame to which contact rollers are attached; spindles by which the contact rollers are attached to the frame and on which the contact rollers rotate; means for insulating the spindles and contact rollers from the frame; means for attaching the eyes to which the cords are secured to the spindles; means for retaining the contact rollers and spindles in their required positions; a tension roller having a shoulder at each end; a spindle by which the tension roller is attached to the frame, and on which the tension roller rotates and means for retaining the tension roller and spindle in their required positions; a pair of guide rollers having shoulders and pivots at each end thereof, one of which is attached at each end of the frame by means of lugs, the various rollers being in parallel spaced relation with each other as specified and shown.

4. A moving picture operator's automatic signaling device including a frame to which contact rollers are attached; spindles by which the contact rollers are attached to the frame and on which the rollers rotate, the contact rollers being provided with shoulders and flanges at each end, the spindles and rollers being insulated from the frame by nonconducting washers and collars; means for securing the eyes to which the cords are attached to the spindles; means for retaining the contact rollers and spindles in their required positions; a tension roller having a shoulder at each end; a spindle by which the tension roller is attached to the frame and on which the tension roller rotates, and means for retaining the tension roller and spindle in their required positions; a pair of guide rollers having shoulders and pivots at each end, one of which is attached at each end of the frame by means of lugs; grooves in the various rollers formed by the shoulders thereon; the several rollers in parallel spaced relation with each other; a film to which strips of tinfoil, or other suitable conducting material, are attached, near an edge of the film, one of the strips of tinfoil being attached at the end and the other at a distance from the end of the film; a battery and bell, and means for connecting the device with the battery and bell, and means for connecting the battery and bell, substantially as shown and described and for the purpose specified.

1,223,772. APRON-CANVAS. AMMIEL F. DECKER, Brooklyn, N. Y., assignor to Tingue, Brown & Company, New York, N. Y., a Corporation of New York. Filed Dec. 6, 1916. Serial No. 135,347. (Cl. 74—62.)



1. An apron-section, comprising a strip of flexible material provided upon its surface with a plurality of visible indicating lines disposed longitudinally and at predetermined distances from one another and from the marginal edges of the section, so that when the ends of the section are brought together, or when a number of identical sections are placed end to end, to form the apron, the said lines will exactly register with, and will constitute absolutely accurate continuations of, one another, the continuous lines forming guides to insure correct positioning and joinder of the section ends and correct running of the apron.

2. An apron-section, comprising a strip of flexible material provided upon its surface with a plurality of visible indicating lines of a color which presents a marked contrast to the color of the material itself, said lines being disposed longitudinally and at predetermined distances from one another and from the marginal edges of the section, so that when the ends of the section are brought together, or when a number of identical sections are placed end to end, to form the apron, the said lines will exactly register with, and will constitute absolutely accurate continuations of, one another, the continuous lines forming guides to insure correct positioning and joinder of the section ends and correct running of the apron.

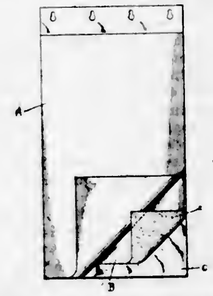
3. An apron-section, comprising a strip of textile material provided upon its surface with a plurality of visible indicating lines of a color which presents a marked contrast to the color of the material itself, said lines being disposed longitudinally and at predetermined distances from one another and from the marginal edges of the section, so that when the ends of the section are brought together, or when a number of identical sections are placed end to end, to form the apron, the said lines will exactly register with, and will constitute absolutely accurate continuations of, one another, the continuous lines forming guides to insure correct positioning and joinder of the section ends and correct running of the apron.

4. An apron-section, comprising a strip of textile material having a plurality of strands, of a color presenting a marked contrast to the color of the material itself, said strands being interwoven thereinto to form visible indicating lines disposed longitudinally and at predetermined distances from one another and from the marginal edges of the section, so that when the ends of the section are brought together, or when a number of identical sections are placed end to end, to form the apron, the said lines will exactly register with, and will constitute absolutely accurate continuations of, one another, the continuous lines forming guides to insure correct positioning and joinder of the section ends and correct running of the apron.

5. An apron-section, comprising a strip of flexible material provided upon its surface with a pair of visible, longitudinal indicating lines located in predetermined proximity to its marginal edges, and with a pair of additional, spaced indicating lines located intermediate of, and parallel with the first-named lines, the spaces between adjacent lines being substantially equal, so that when the ends of the section are brought together, or when a number of identical sections are placed end to end, to form the apron, the said lines will exactly register with, and will constitute absolutely accurate continuations of, one another, the continuous lines forming guides to insure correct positioning and joinder of the section ends and correct running of the apron.

[Claims 6 to 8 not printed in the Gazette.]

1,223,773. STENCILING MATERIAL. ALBERT B. DICK, Lake Forest, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 15, 1916. Serial No. 137,129. (Cl. 41—3.5.)



1. In stenciling material, the combination with a stencil-sheet, of a firm but flexible carrier-sheet and a backing-sheet between said stencil-sheet and carrier-sheet, said backing-sheet having a thin coating of wax-like material, impervious to moisture, on the side thereof adjacent to the coacting surface of said carrier-sheet, substantially as set forth.

2. In stenciling material, the combination with a stencil-sheet, of a firm but flexible carrier-sheet and an absorbent backing-sheet between said stencil-sheet and carrier-sheet, said backing-sheet having a thin coating of waxlike material, impervious to moisture, on the side thereof adjacent to the coacting surface of said carrier-sheet, substantially as set forth.

3. In stenciling material, the combination with a stencil-sheet, of a firm but flexible carrier-sheet, and an absorbent backing-sheet between said stencil-sheet and carrier-sheet, said backing-sheet having a thin coating of hard waxlike material, impervious to moisture, on the side thereof adjacent the coacting surface of said carrier-sheet, substantially as set forth.

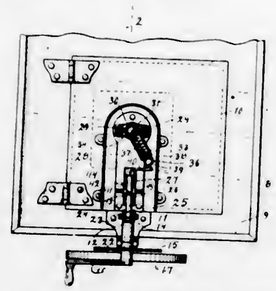
4. In stenciling material, the combination with a stencil-sheet, of a firm but flexible varnished carrier-sheet and an absorbent backing-sheet between said stencil-sheet and carrier-sheet, said backing-sheet having a thin coating of waxlike material, impervious to moisture, on the side thereof adjacent the coacting varnished surface of said carrier-sheet, substantially as set forth.

5. In stenciling material, a backing for a stencil-sheet comprising a firm but flexible varnished carrier sheet and an absorbent backing-sheet thereon with a thin layer of hard waxy material between the varnished surface of said carrier-sheet and the body of said absorbent backing-sheet, said backing-sheet, waxy material and carrier-sheet being secured together throughout substantially the entire expanse of said backing-sheet, and said waxy material

and the varnish coating on said carrier-sheet being together impervious to moisture contained in said absorbent backing-sheet, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,223,774. WASHING-MACHINE MECHANISM. HERMAN C. DOMAN, Oshkosh, Wis. Filed Apr. 13, 1916. Serial No. 90,813. (Cl. 74—14.)



1. A washing machine mechanism, comprising a work shaft having an arm projecting therefrom, a two part driving shaft extending at an angle with relation to the work shaft, a crank arm mounted on the driving shaft, means operatively and detachably connecting the two parts of the drive shaft together, and a slidable resilient connection between the crank arm and the work shaft arm for operatively connecting said parts together and for separably maintaining the shaft parts in engagement with each other.

2. A washing machine mechanism, comprising a work shaft having an arm projecting therefrom, a two part driving shaft extending at an angle with relation to the work shaft, clutch members carried by the adjacent ends of the respective parts of the two part shaft, a crank arm mounted on the driving shaft and a slidable resilient connection between the crank arm and the work shaft arm for operatively connecting said parts together and for separably maintaining the clutch in engagement with each other.

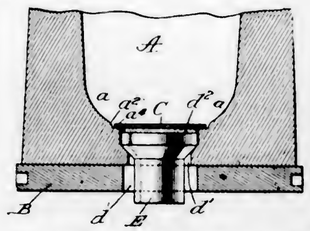
3. A washing machine mechanism, comprising a work shaft having a tubular arm projecting therefrom, a two part driving shaft extending at an angle with relation to the work shaft, clutch members carried by the adjacent ends of the two part shaft, a crank arm mounted on the end of the driving shaft adjacent the work shaft arm, a plunger slidably mounted in the tubular arm and having a connection with the crank arm, and a resilient means carried by the tubular arm and engaging the plunger for maintaining the plunger in engagement with the crank arm and the clutch members separably engaging each other.

4. A washing machine mechanism, comprising a work shaft having a tubular arm projecting therefrom, a two part driving shaft extending at an angle with relation to the work shaft, clutch members carried by the adjacent ends of the two part shaft, a crank arm mounted on the end of the driving shaft adjacent the work shaft arm, a plunger slidably mounted in the tubular arm and having a ball and socket connection with the crank arm, and a coiled spring positioned in the bore of the tubular member and engaging the plunger for maintaining the ball and socket parts together and for maintaining the clutch members separably engaging each other.

5. A washing machine mechanism, comprising a work shaft having a tubular arm projecting therefrom, a two part driving shaft extending at an angle with relation to the work shaft, clutch members carried by the adjacent ends of the two part shaft, a crank arm mounted on the end of the driving shaft adjacent the work shaft arm, a plunger slidably mounted in the tubular arm and having a ball and socket connection with the crank arm, a coiled spring positioned in the bore of the tubular member and engaging the plunger for maintaining the ball and socket parts together and for maintaining the clutch members separably engaging each other, and means for disengaging one clutch member from the other.

[Claim 6 not printed in the Gazette.]

1,223,775. INGOT-MOLD. GEORGE A. DORNIN, Baltimore, Md. Filed Aug. 3, 1916. Serial No. 113,002. (Cl. 22—139.)



1. An ingot mold having a bottom opening, a sealing plate of larger area than the bottom opening of the mold covering the same and supported by the walls of the lower portion of the mold cavity above the bottom opening, and refractory sealing material interposed between the plate and those portions of the mold walls which support it.

2. An ingot mold having a bottom opening, a stool on which the mold is supported, a sealing plate of larger area than the bottom opening of the mold covering the same and supported by the walls of the lower portion of the mold cavity above the bottom opening, and refractory sealing material interposed between the stool and the plate.

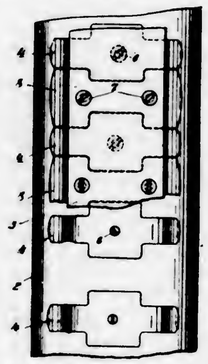
3. An ingot mold having a bottom opening and a sealing plate of larger area than the bottom opening of the mold covering the same and supported by the walls of the lower portion of the mold, and sealing material applied beneath the plate on the mold walls near the edges of said plate.

4. An ingot mold having a bottom opening surrounded by a flattened ledge and a sealing plate onto which the molten metal is poured of larger area than the bottom opening covering the same and supported by said ledge.

5. An ingot mold having a circular bottom opening surrounded by a ledge of rectangular shape and a rectangular sealing plate of larger area than the bottom opening covering the same and supported by said ledge.

[Claims 6 to 11 not printed in the Gazette.]

1,223,776. ARMORED PNEUMATIC TIRE. TOSSANUS DUYSENS, Maastricht, Netherlands, assignor of one-half to René Hustinx, Maastricht, Netherlands. Filed July 15, 1916. Serial No. 109,543. (Cl. 152—16.)



1. A pneumatic tire comprising a cover provided with a series of plates fastened at intervals on the periphery thereof, and an annular tread band provided with a series of plates fastened at intervals to said tread band, the plates of said tread band being adapted to fit in the spaces between the plates of said cover.

2. A pneumatic tire comprising a cover provided with a series of plates fastened at intervals on the periphery thereof, and an annular tread band provided with a series of plates fastened at intervals to said tread band, the plates of said tread band being adapted to fit in the spaces between the plates of said cover and the plates of the respective series being provided with interlocking recesses and projections.

1,223,777. VACUUM-TIGHT SEAL. EARL E. EBY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 6, 1915. Serial No. 38,119. (Cl. 91—70.1.)



1. The process for producing a vacuum-tight seal between two members which comprises bringing said members into close mechanical union and then spraying a layer of metal over the line of contact.

2. The process for producing a vacuum-tight seal between two members which comprises bringing said members into close mechanical union and then depositing a layer of metal over the line of contact by a fusing spray.

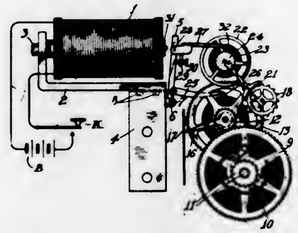
3. The process for producing a vacuum-tight seal between two members which comprises bringing said members into close mechanical union, spraying a layer of metal over the line of contact, and then covering said layer with a coating of sealing material.

4. The process for producing a vacuum-tight seal between two members which comprises bringing said members into close mechanical union, depositing a layer of metal over the line of contact by means of a fusing spray, and then covering said layer with a coating of sealing material.

5. A vacuum-tight container comprising a plurality of closely fitting members, and a layer of spray deposited metal over the lines of union thereof.

[Claim 6 not printed in the Gazette.]

1,223,778. CONTROLLING MECHANISM FOR CLOCK-MOVEMENTS. LAWRENCE ERICSON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed July 7, 1910. Serial No. 570,730. (Cl. 161—15.)



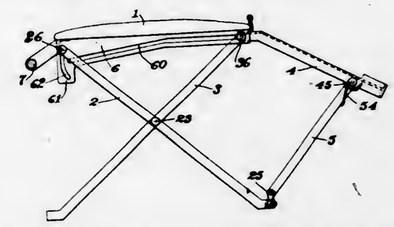
1. In a controlling mechanism, the combination with a motor driven clock movement provided with a balance wheel normally at rest, of a serrated stop movable with said balance wheel, an electromagnet and armature, a member controlled by said armature for effectively connecting and disconnecting the motor and mechanism of said clock movement, a pawl pivotally secured to said armature for engaging said serrated stop to positively move the balance wheel when the armature is attracted, said pawl and member being so arranged that the motor is effectively connected to said clock movement before said pawl starts the movement of said balance wheel, and adjusting means whereby the period of engagement between said pawl and said stop after said armature has started to move in its attraction may be varied.

2. In a controlling mechanism, the combination with a motor driven clock train provided with a balance wheel normally at rest, of a serrated disk movable with said balance wheel, an electromagnet and armature, a lever controlled by said armature for effectively connecting and disconnecting mechanism of said clock train and the motor, a pawl pivotally secured to said armature for engagement with said serrated disk whereby when said armature is moved said pawl moves said balance wheel after said lever has effectively caused the motor mechanism to be connected to said balance wheel, adjustable cooperating means between said pawl and armature to cause said pawl to disengage from said disk and whereby the period of engagement between said pawl and disk after said armature has started to move may be varied.

3. A controlling device of the class described including a motor driven clock movement provided with a balance wheel, the motor normally tending to operate said clock movement, an electromagnet provided with an armature carrying an operating member associated with said clock movement for controlling the application of the motive power to mechanism of said clock movement, and a pawl member carried by said armature for positively moving the balance wheel of said clock movement when the said armature is attracted to insure the positive operation of the balance wheel and clock movement by the motor.

4. A device of the character described including a motor driven clock train having a balance wheel, a ratchet wheel movable with said balance wheel, a magnet and armature associated with said clock train, a restraining member carried by said armature to prevent the motor from normally operating said balance wheel, and a lever also carried by said armature for engaging said ratchet wheel to positively move the balance wheel, said restraining member and said lever operating in such a manner that when the armature of the magnet is attracted, the restraining member permits the motor mechanism to be effectively connected to the balance wheel before the lever positively operates the said balance wheel.

1,223,779. FOLDING SHOE-FITTING STOOL. ALFRED WILLIAM FAIRHURST, Seattle, Wash. Filed Sept. 18, 1916. Serial No. 120,623. (Cl. 155—22.)



1. The combination with a folding stool of a foot rest pivoted to an upper part of the stool and a supporting bar pivoted to the outer end of said foot rest and to a lower part of the stool.

2. A shoe fitting stool comprising a seat, crossed legs pivoted to each other, one pair of legs being secured to one side of the seat and the other having a sliding connection with the seat, a foot support connected with the latter pair of legs, and a bar connected with the outer end of said foot support and with the lower end of the first mentioned pair of legs.

3. A shoe fitting stool comprising a seat having a downwardly extending flange at each of two opposite sides,

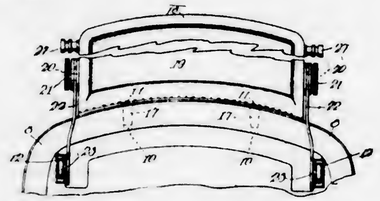
one end of these flanges having a slot extending in a vertical direction, said flanges also each having a slot extending substantially from end to end, two pairs of legs centrally pivoted together, one pair having pivots engaging one of said slots and the other pair having pivots engaging the other slots, a foot support secured to the upper end of one pair of legs and a supporting bar pivoted to said foot support and to the lower end of the other pair of legs.

4. A shoe fitting stool comprising a seat, two pairs of legs pivoted centrally to each other, one pair of legs having a vertically movable pivotal engagement with the rear end of the seat, the other pair of legs having a sliding engagement from front to rear with the seat, a foot support having pivotal engagement with the upper end of the latter pair of legs, and a supporting bar having a pivot connection with the outer end of the foot support and with the lower ends of the other pair of legs.

5. A shoe fitting stool comprising a seat, two pairs of legs pivoted centrally to each other, one pair of legs having pivotal connection with the rear end of the seat, the other pair of legs having pivotal engagement with the seat slidable from front to rear, a foot rest pivotally connected with the upper ends of the latter pair of legs, and a supporting bar pivoted to said foot rest and to the other pair of legs, the seat having fingers which engage and support the inner end of the foot rest when the stool is opened for use.

[Claim 6 not printed in the Gazette.]

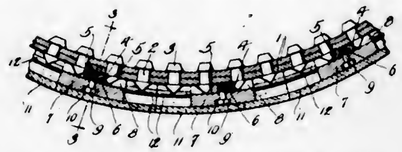
1,223,780. WIND-SHIELD. MICHAEL G. FOX, Chicago, Ill. Filed May 12, 1916. Serial No. 97,030. (Cl. 21—148.)



1. In a wind shield for vehicles, the combination with the vehicle-body, of a housing located above the floor of said body, and having sockets in its upper rear portion, a member located longitudinally with respect to said housing and within the same near each side thereof, each of said members having a hollow enlargement at its rear portion and provided with a longitudinal guide-way on its inner surface, each of said enlargements having a vertical guide-way terminating at its lower end in a forward extension, a frame having a transparent sheet and transversely mounted on the rear portion of the housing, pins on the lower part of said frame, a link adjustably mounted at its upper end on each side of said frame and a projection on the lower portion of each of said links to operate in the guide-ways of said members.

2. In a wind shield for vehicles, the combination with the vehicle body, of a housing located above the floor of said body and having on its rear upper portion a transversely disposed rib provided with a plurality of sockets, a member located longitudinally with respect to said housing and within the same near each side thereof, each of said members having a hollow enlargement at its rear portion and provided with a longitudinal guide-way on its inner surface, each of said enlargements having a vertical guide-way terminating at its lower end in a forward extension, a frame having a transparent sheet and transversely mounted on the rear portion of the housing, the said frame having in its lower surface a groove to receive said rib, pins on the lower part of said frame to fit in said sockets, a link adjustably mounted at its upper end on each side of said frame and a projection on the lower portion of each of said links to operate in the guide-ways of said members.

1,223,781. BOILER-SEAM PROTECTOR. JOSEPH J. GAGE, Dayton, Ohio, assignor of one-fourth to Henry MacKey and one-fourth to Isaiah Harnish, Dayton, Ohio. Filed May 25, 1916. Serial No. 99,814. (Cl. 110—97.)



1. A boiler seam protector comprising a plurality of anchor members adapted to be supported by the projecting rivet heads at the seam or seams of the boiler, a refractory seam covering, and means for securing said covering to said anchor members.

2. A boiler seam protector comprising a plurality of anchor members adapted to be supported by the projecting rivet heads at the seam or seams of a boiler, said members having ribs for interlocking engagement with grooves formed in said heads, a refractory seam covering, and means for securing said covering to said anchor members.

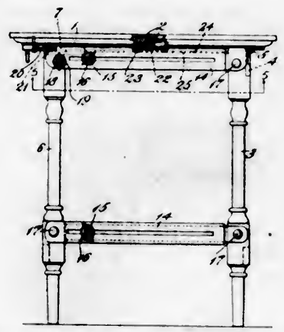
3. A boiler seam protector comprising a plurality of anchor members adapted to be forced between the projecting rivet heads at the seam or seams of a boiler, said members having outstanding ribs on opposed sides for reception in grooves formed in said heads, a refractory seam covering, and means for securing said covering to said anchor members.

4. A boiler seam protector comprising a plurality of anchor members adapted to be supported at intervals by the projecting rivet heads at the seam or seams of the boiler, supporting members adapted to be secured to said anchor members and provided with anchoring means, and a refractory seam covering consisting of a number of sections disposed end to end and having anchoring means for interlocking detachable engagement with said anchoring means on said supporting members.

5. The combination with the projecting rivet heads at the seam of a boiler, of a plurality of anchor members supported by said heads, and a refractory seam covering supported by said anchor members.

[Claims 6 to 10 not printed in the Gazette.]

1,223,782. FOLDING AND EXTENSION TABLE. ADRIAN ST. C. GARMAN, Philadelphia, Pa. Filed Mar. 15, 1916. Serial No. 84,301. (Cl. 45—116.)

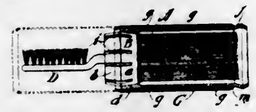


1. A table provided with legs and having its top formed in sections, cross bars hinged to the opposite sections, slides formed of telescopic members connected with the opposite cross bars, and braces formed of sectional members connecting the legs of the opposite sections, and means for tightly connecting the latter-named members.

2. A table provided with legs and having its top formed in sections, a cross bar hinged to one section and connecting the legs of said section, a cross bar hinged to the other section and connecting its legs, means connecting the opposite top sections whereby the table is convertible into an extension table, means permitting the legs of both sections to fold substantially parallel with each other and with the top, and braces pivotally connecting the legs of the opposite sections of the table, said braces being formed of extensible slotted sections, and means for tightly connecting the latter.

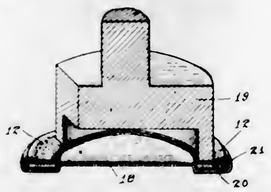
3. A table provided with legs and having its top formed in sections, a cross bar hinged to one section and connecting the legs of said section, a cross bar hinged to the other section and connecting its legs, means connecting the opposite top sections whereby the table is convertible into an extension table, means permitting the legs of both sections to fold substantially parallel with each other and with the top, and slotted sectional braces pivotally connected with the legs of opposite sections and foldable substantially parallel with the legs and top, said braces forming means for tightly connecting the legs.

1,223,783. DEVICE FOR TOILET USE. FRANK GRANT, Westfield, Mass. Filed Jan. 14, 1916. Serial No. 72,161. (Cl. 132—11.)



A brush carrying member, including a shank portion of circular cross section correspondingly forwardly and rearwardly tapered, a cylindrical casing open at each end having the inside wall at one end formed outwardly flaring, having its external wall surrounding such flaring wall outwardly beveled or expanded and having its external surface at its other end oppositely outwardly beveled or expanded, and a sheath or shell telescopically combined with the casing having one end thereof contracted so that when the sheath is properly slid in either direction the contracted end portion thereof will have a pinching or binding engagement with either of the expanded external end portions of the casing.

1,223,784. METHOD OF PREPARING CAN ENDS FOR HERMETIC SEALING TO CAN-BODIES. JAMES A. GRAY, San Francisco, Cal., assignor to American Can Company, San Francisco, Cal., a Corporation of New Jersey. Filed Jan. 29, 1916. Serial No. 75,034. (Cl. 113—80.)



1. The method of preparing curled flanges of can ends to be subsequently attached to can bodies by means of an interfolded joint or seam to form a hermetic seal, consisting in successively positioning can ends having curled flanges, and cut can end liners of greater external diameter than the diametrical opening of the curled flanges of the can end in axial alinement, and uniting the said curled can ends and said can end liners by forcing the liners past the said curled flanges into the recess formed thereby.

2. The method of preparing curled flanges of can ends to be subsequently attached to can bodies by means of an interfolded joint or seam to form a hermetic seal, consisting in successively positioning can ends having curled flanges, and cut can end liners of greater external diameter than the diametrical opening of the curled flanges of the can end in axial alinement, temporarily reducing the external diameter of the liners, and uniting the said curled can ends and said can end liners.

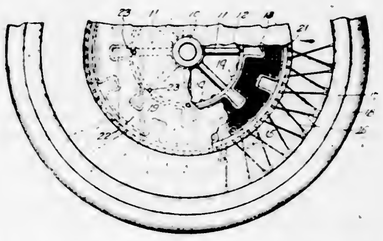
3. The method of preparing curled flanges of can ends to be subsequently attached to can bodies by means of an interfolded joint or seam to form a hermetic seal, consisting in successively positioning can ends having curled flanges, and cut can end liners of greater external diameter than the diametrical opening of the curled flanges of the can end in axial alinement, temporarily reducing the diameter of the liners, applying the liners to the can end flanges, and permitting the radial expansion of the liners.

4. The method of preparing curled flanges of can ends to be subsequently attached to can bodies by means of an interfolded joint or seam to form a hermetic seal, consisting in successively positioning in spaced relation can ends having curled flanges, successively positioning in spaced relation cut can end liners of greater external diameter than the diametrical opening of the curled flanges of the can ends, axially alining said can ends and liners successively with each other, and uniting the said curled can ends and said can end liners by forcing the liners past the said curled flanges and causing them to expand radially into the recess formed thereby.

5. The method of preparing the flanges of can ends to be subsequently attached to can bodies, by means of an interfolded joint or seam, to form a hermetic seal, consisting in positioning a can end having an upwardly and inwardly curled flange forming a recess, placing in axial alinement therewith a can end liner of greater external diameter than the diametrical opening of the curled edge of the can end, and uniting the said curled can end and said can end liner by forcing said liner past said curled edge into the recess formed thereby.

[Claims 6 to 11 not printed in the Gazette.]

1,223,785. VEHICLE-WHEEL. OSCAR J. HACKBARTH, Elmhurst, Ill. Filed Feb. 28, 1917. Serial No. 151,461. (Cl. 152—43.)



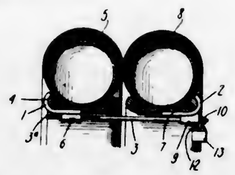
1. A resilient wheel comprising inner and outer concentric spaced apart annular members, projections on each member extending into the area lying therebetween, and a plurality of short resilient tubes of diameter materially less than the radial distance between the members packed tightly into the space between the members and projections.

2. A resilient wheel comprising inner and outer concentric spaced apart annular members, projections on each member extending into the area lying therebetween, a plurality of short resilient open ended rubber tubes of diameter materially less than the radial distance between the members packed tightly into the space between the members and projections, and annular plates overlying the ends of the tubes and secured to one of the members.

1,223,786. SPARE-TIRE HOLDER. WILLIAM P. HAMMOND, Passaic, N. J. Filed Nov. 26, 1915. Serial No. 63,364. (Cl. 224—29.)

1. A device for supporting a second spare tire from the rim of a first spare tire, including clamping means for

engaging the rims only of the tires and fastening them together, and locking means for holding the clamping means in position.



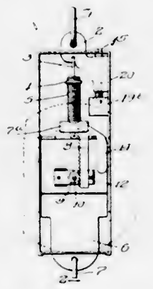
2. A device for supporting a second spare tire from the rim of a first spare tire, including complemental clamping claws adapted to engage the rims of the two tires, a member adjustably connecting the clamping claws, and locking means coöperating with the member to prevent theft of the tire.

3. A device for supporting a second spare tire from the rim of a first spare tire, including complemental clamping claws adapted to engage the rims of the two tires, and formed with sleeves one of which is internally threaded, and a member extending through the sleeves and threaded for coöperation with the internally threaded sleeve to draw the two tires tightly together.

4. A device for supporting a second spare tire from the rim of a first spare tire, including coöperating clamping claws adapted to engage the rims of the two tires and provided with sleeves, a bolt member extending through the sleeves, said bolt member having a threaded engagement with one of the sleeves and terminating in a head which bears against the opposite sleeve, and locking means to prevent the bolt member from working loose.

5. A device for supporting a second spare tire from the rim of a first spare tire, including coöperating clamping claws constructed to engage the rims of the two tires and formed with shanks fitting against the inner surfaces of the rims, each of the shanks being provided with an outstanding sleeve one of which is internally threaded while the opposite sleeve is provided at the outer end thereof with a perforated ear, a bolt member passing through the sleeves and having one end thereof in engagement with the interiorly threaded sleeve while the opposite end thereof terminates in a head which bears against the end of the other sleeve, said head being formed with an eye adapted to be rotated into registry with the perforated ear of the sleeve, and a padlock adapted to engage the eye and perforated ear to lock the bolt against working loose.

1,223,787. WEIGHING-SCALE. MARIUS H. HANSEN, Chicago, Ill. Filed Nov. 4, 1915. Serial No. 59,596. (Cl. 265—68.)



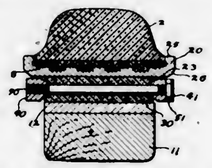
1. In a scale the combination of a casing having through its top an elongated opening, or slot, load mechanism independent of the casing, said load mechanism having a plate metal load head occupying and adapted to move freely through said opening of the casing, a draw bar and a load spring, the upper and lower ends of the load spring being connected to said load-head and draw bar, respectively, a rack bar carried by the load mechanism, a pinion supported by the casing and engaged by said rack bar, a pointer, means for operatively connecting said pinion and pointer and adjustable setting mechanism engaging the casing and load mechanism for moving the load mechanism bodily relatively to the casing.

2. In a scale the combination of a casing having through its top an elongated opening, a load head, made of plate metal, extending through said opening, free of the casing, and freely movable therein, adjustable means connecting the load-head and casing, a load spring, a draw bar, the upper end of which is connected to the lower end of the load spring, a rack bar carried by the draw bar, a pinion carried by the casing, and a pointer operatively connected with said pinion.

3. In a scale the combination of a casing having an opening through the top thereof, a load-head extending through said opening, a hanger engaging said load-head, a set screw having threaded engagement with the load-head, a swivel connection between said screw and the casing, a load spring, the upper end of which is connected with the load-head, a draw bar, the upper end of which is connected to the lower end of the load spring, a rack bar carried by said draw bar and a pinion engaged by said rack bar and supported by the casing.

4. In a scale the combination of a casing having an opening through the top thereof, a load-head extending through said opening, a suspension-device engaging said load-head above the top of the casing, a load spring, a rod connecting the upper portion of the load spring with the load-head in the line of strain, a draw bar, the upper end of which is connected with the lower end of the load spring, the bottom of the casing having a second opening through which said draw bar extends, a rack bar carried by the draw bar, a pinion with which said rack bar engages, a shaft carrying said pinion and supported by the casing, a pointer carried by said shaft, a setting screw having threaded engagement with the load-head and means providing a swivel connection between said setting screw and the casing.

1,223,788. COMBINED CUSHIONING AND FASTENING DEVICE FOR TIRES. ADELBERT HAUSCHILD, Akron, Ohio. Filed Apr. 4, 1916. Serial No. 88,852. (Cl. 152—36.)



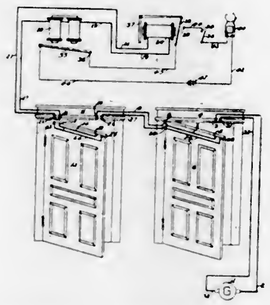
1. As a new article of manufacture, a self-contained cushioning and fastening device independent of but adapted for use between a wheel center and tire-carrying rim, comprising an intermediate rubber cushion, pressure distributing rings engaging the opposite sides thereof, the rubber cushion extending continuously from one of said rings to the other, means extending through said cushion and engaging said pressure distributing rings adapted to draw said pressure distributing rings toward each other and thereby compress the intermediate cushion to exert a radial expansive action simultaneously inwardly and outwardly between the wheel center and the tire-carrying rim while the pressure distributing rings are out of contact with the wheel center and tire-carrying rim, thereby obviating any rigid connection between the wheel and tire and maintaining an unobstructed cushion effect.

2. The combination with a wheel center having a cylindrical exterior and a tire carrying rim having a cylindrical interior, the diameter of said interior being materially greater than the exterior diameter of the wheel center, and a self-contained cushioning and fastening device adapted to be slid laterally into place between the wheel center and rim and comprising a laterally continuous rubber cushion, pressure distributing rings on opposite sides of said cushion, at least one of such rings having a less radial dimension than the radial distance across the annular space between the wheel center and rim, and means adapted to force said pressure distributing rings toward each other to compress the cushion laterally and cause it to expand radially inwardly and outwardly while the pressure distributing rings remain out of contact with both the wheel center and the rim and therefore do not interfere with the free movement of the cushion.

3. A self-contained cushioning and fastening device for securing a tire to a wheel center and allowing its ready removal therefrom comprising an elastic cushion in the form of a ring of rubber having a cylindrical inner and outer periphery and adapted to stand between the wheel center and tire, pressure distributing rings engaging the opposite sides of the elastic ring, at least one of said pressure distributing rings being not materially larger in radial dimension than the elastic ring, whereby such pressure distributing ring and the elastic ring may be shoved laterally into place between the wheel center and tire, bolts passing through the elastic ring in a position parallel to the axis of the wheel, means for securing said bolts to one of the pressure distributing rings, and nuts screwing onto the other ends of said bolts and bearing against the outer face of the other pressure distributing ring.

4. The combination of a wheel center, a tire surrounding the same, a laterally continuous cushioning member adapted to stand between the wheel center and tire, a pair of pressure distributing rings engaging the opposite sides of the cushioning member, each of said rings being independent of the tire and wheel center and having the edges of the cushion-engaging face beveled or reduced, and means for forcing said rings together to expand the cushioning member inwardly and outwardly.

1,223,789. BURGLAR-ALARM SYSTEM. SIMON B. HESS, New York, N. Y. Filed May 17, 1915. Serial No. 28,611. (Cl. 177—314.)



1. In a system of the class described, a protective circuit, and an auxiliary circuit controlled thereby, said protective circuit including a source of energy, a first electromagnet and a second electromagnet, said second electromagnet being adapted, when energized, to condition said auxiliary circuit to be energized upon a subsequent deenergization of the electromagnet first mentioned.

2. In a system of the class described, a protective circuit and an auxiliary circuit, the protective circuit including a source of energy and an electromagnet, a second electromagnet in said protective circuit having a shutter adapted to be released by actuation of its armature upon the closure of the protective circuit, thereby closing one break in said auxiliary circuit, and an alarm adapted to be operated upon the closure of a second break in series in said auxiliary circuit by said first named electromagnet.

3. In a system of the class described, a protective circuit including a source of energy and two electromagnets, arranged to control an alarm circuit comprising a second circuit serially including an armature and coöperant contact member associated with one of said electromagnets, a shutter and coöperant contact member associated with the second electromagnet, said second electromagnet being adapted to be actuated to release said shutter upon the closure of said protective circuit.

4. In a system of the class described, a protective circuit including a source of energy and two electromagnets, arranged to control an alarm circuit comprising a second circuit serially including an armature and coöperant contact member associated with one of said electromagnets, a shutter and coöperant contact member associated with the second electromagnet, said second electromagnet being adapted to be actuated to release said shutter upon the closure of said protective circuit, to close one break in said second circuit, thereby to prepare the said second circuit for the operation of a signal, upon the occurrence of a decrease of current flow in said protective circuit.

5. In an alarm system, a protective circuit, and an alarm circuit serially including a source of energy, a manually operable switch, an alarm signal, an armature controlled switch adapted to be closed upon retraction of its armature, and a drop shutter controlled switch adapted to be closed upon attraction of its armature, said last two mentioned switches being controlled by said protective circuit.

[Claims 6 and 7 not printed in the Gazette.]

1,223,790. METHOD OF MAKING THE MEAT OF SEA MAMMALS FIT FOR FOOD. GUSTAV ADOLF HOLZAPFEL, Leipzig, Germany. Filed Jan. 31, 1916, Serial No. 75,302. Renewed Mar. 15, 1917. Serial No. 155,088. (Cl. 99—1.)

1. The art of producing a meat food for human consumption which consists in subjecting sea mammal meat to the action of cold water and warm water in alternation, then subjecting the so treated sea mammal meat to the action of a pickling solution containing common salt, sugar and a flavoring ingredient, then subjecting the so pickled mammal meat to pressure operative to eliminate more or less of said pickling liquor together with extractive matters offensive to the taste.

2. The art of producing a meat food for human consumption which consists in subjecting for a period of at least one day sea mammal meat to the action of cold and warm water in alternation, then subjecting the so treated sea mammal meat to the action of a pickling solution containing common salt, sugar and a flavoring ingredient, then subjecting the so pickled sea mammal meat to pressure operative to eliminate more or less of said pickling liquor together with extractive matters offensive to the taste.

3. The art of producing a meat food for human consumption which consists in subjecting sea mammal meat to the action of cold water and warm water in alternation, then subjecting the so treated sea mammal meat to the action of an aqueous pickling solution containing common salt, sugar and a pungent alcoholic liquor, and then subjecting the so pickled sea mammal meat to pressure operative to eliminate more or less of said pickling liquor together with extractive matters offensive to the taste.

4. The art of producing a meat food for human consumption which consists in subjecting sea mammal meat to the action of cold water and warm water in alternation, then subjecting the so treated sea mammal meat to the action of an aqueous pickling solution containing common salt, sugar and a pungent alcoholic liquor, and a savory vegetable, then subjecting the so pickled sea mammal meat to pressure operative to eliminate more or less of said pickling liquor together with extractive matters offensive to the taste.

1,223,791. LINEMAN'S DEVICE. VAN BUREN JACKSON, Pedro Miguel, Canal Zone, assignor to San Diego Consolidated Gas and Electric Co., San Diego, Cal., a Corporation of California. Filed Apr. 24, 1916. Serial No. 93,101. (Cl. 173—273.)



1. A lineman's device for making a connection to a high potential live line wire consisting of a clamp having means for securing a tap wire thereto, said clamp further having a pair of elongated oppositely disposed jaws disposed one above the other with a channel extending longitudinally between said jaws constructed to receive the line wire in a position extending longitudinally in said channel between said jaws when the clamp is moved laterally onto the wire, the outer sides of said jaws being substantially flat and parallel with each other to enable the clamp to be held yieldingly in a holding device engaging the said outer sides of said jaws, the lower one of the said jaws having screw means attached thereto for securing the line wire in said channel, said screw means having a form to detachably interlock a screw-rotating device.

2. In a lineman's device, the combination of a clamp having means for securing a tap wire thereto, and having a pair of oppositely disposed jaws to receive the line wire therebetween, a holder for the clamp having a head, said head and said clamp being of correlated form to coöperate in enabling said head to temporarily hold said clamp in applying the same to the line wire, said clamp having securing means, and said holder having insulated actuating means for interlocking said securing means to actuate the same from a point remote from said head to secure the clamp to the line wire.

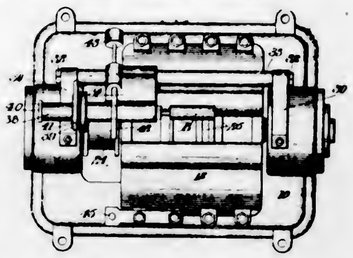
3. A lineman's device for making connection to a high potential live line wire, consisting of a clamp having a bore to receive a tap wire, and having means for securing the tap wire in said bore, said clamp being open on its side to enable it to be applied by a lateral movement to the line wire, and having a fixed jaw to engage the line wire on one side, said clamp further having a clamping jaw guided on said clamp, and a clamping screw mounted in the under side of said clamp having a wing-head below to interlock with a slot in an actuating part and engaging at its upper end with said movable jaw to clamp the same against the line wire.

4. A holding device for permanently connecting a tap wire to a high potential live line wire, consisting of an insulating handle, a head carried thereby having means for detachably holding a clamp which is to be attached to the wire, and means mounted on said handle for securing the clamp to the live wire before disengaging the holding device from said clamp.

5. A holding device for permanently connecting a tap wire to a high potential live line wire, consisting of an insulating bar, a head carried thereby having means for yieldingly and detachably holding a clamp which is to be attached to the line wire, and means movably carried by said bar for securing the clamp to the live wire, said holding device being disengageable from said clamp so as to leave the clamp on the line wire.

[Claims 6 to 8 not printed in the Gazette.]

1,223,792. APPARATUS FOR USE IN MANUFACTURING ARTICLES OF CERAMIC MATERIAL. JOSEPH A. JEFFERY and BENJAMIN A. JEFFERY, Detroit, Mich. Filed May 14, 1914. Serial No. 838,593. (Cl. 51—3.)



1. An improved apparatus for shaping blanks of ceramic material, comprising a rotatably supported pattern wheel contoured to shape the longitudinal surface of a blank, a blank-supporting chuck rotatably supported upon an axis parallel with the axis of rotation of said pattern wheel, means by which the chuck may be moved laterally and substantially radially with respect to the pattern wheel to bring the longitudinal surface of the blank into contact with the pattern wheel, and means for simultaneously rotating the pattern wheel and the chuck while the blank is in contact with the pattern wheel.

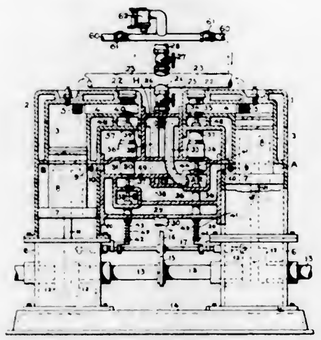
2. An apparatus for shaping blanks of ceramic material comprising a rotatably supported pattern wheel contoured to shape the longitudinal surface of a blank, a rod supported parallel with the axis of rotation of said pattern wheel, a sleeve mounted to oscillate upon said rod, a carrier attached to said sleeve, a blank supporting chuck rotatably supported by said carrier and rotatable upon an axis parallel with the axis of rotation of said pattern wheel, means by which the carrier may be moved to bring the longitudinal surface of the blank into contact with the pattern wheel, and means for simultaneously rotating the pattern wheel and the chuck while the blank is in contact with the pattern wheel.

3. An improved apparatus for shaping blanks of ceramic material comprising a rotatably supported pattern wheel contoured to shape the longitudinal surface of a blank, an oscillating member mounted adjacent said pattern wheel, a carrier attached to said oscillating member and offset with respect to said pattern wheel, a blank supporting chuck rotatably supported by said carrier and rotatable upon an axis parallel with the axis of rotation of said pattern wheel, means by which the carrier may be moved to bring the longitudinal surface of the blank into contact with the pattern wheel, and means for simultaneously rotating the pattern wheel and the chuck while the blank is in contact with the pattern wheel.

4. An improved apparatus for shaping blanks of ceramic material comprising a casing, a pattern wheel inclosed by said casing and contoured to shape the longitudinal surface of a blank, arms attached to said casing, a carrier pivotally supported by said arms, a blank supporting chuck rotatably supported by said carrier and rotatable upon an axis parallel with the axis of rotation of said pattern wheel, means by which the carrier may be moved to bring the longitudinal surface of the blank into contact with the pattern wheel, and means for simultaneously rotating the pattern wheel and the chuck while the blank is in contact with the pattern wheel.

5. An improved apparatus for shaping blanks of ceramic material comprising a case, a pattern wheel rotatably mounted within said casing and contoured to shape the longitudinal surface of the blank, arms attached to said casing, a rod supported by said arms, a sleeve mounted to oscillate upon said rod, a carrier attached to said sleeve, a blank supporting chuck rotatably supported by said carrier and rotatable upon an axis parallel with the axis of rotation of said pattern wheel, means by which the carrier may be moved to bring the longitudinal surface of the blank into contact with the pattern wheel, and means for simultaneously rotating the pattern wheel and the chuck while the blank is in contact with the pattern wheel.

1,223,793. CRUDE OR HEAVY OIL ENGINE. BERNHARD JOHNSON, Valparaiso, Ind. Filed Dec. 26, 1913. Serial No. 808,800. (Cl. 123—59.)



1. A pair of cylinders, separate pistons slidable therein, enlargements to said pistons, compression chambers for the enlargements, fuel inlets to said chambers, check valves in the inlets, an independent heating chamber, fuel passages therein, means for directing exhaust gases around said passages, separate connections from the respective compression chambers to the fuel passages in the heater, separate connections from fuel passages within the heating chamber to opposite cylinders, means for independently subjecting the fuel in such passages to additional heat, and independent valves controlling the entrance and exit of said passages, whereby the fuel charge is subjected to two heatings first when the enlargement forces the charge into the heating chamber and secondly when such charge is withdrawn and again returned to the chamber after comingling with a second charge preparatory to being admitted to the working end of the cylinder.

2. A pair of cylinders, separate double ended pistons operable therein, one end serving for compression and power purposes and the other for suction and compression only, passage ways leading from in front of the compression end of one piston to in front of the power end of the other piston, means for heating the passageways by the exhaust gases of the cylinders, suitable independent valves placed at the exits of the passage ways, and other valves interposed therein between the first named valves and the compression chambers.

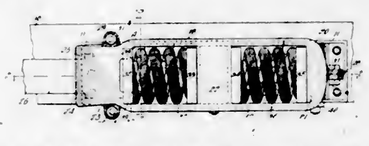
3. A power chamber, a piston slidable therein, a compression chamber, a piston slidable in said compression chamber, means for preventing back flow in the inlet to the compression chamber, an inlet to said chamber; a heater; means adapted to deliver a fuel charge thereto, subsequently withdraw the same to co-mingle with another charge and finally deliver both charges to said heater; means for conducting the fuel from the heater to the power chamber; means for releasing the same therefrom to the power chamber, and means for further compressing the fuel by the power piston.

4. A pair of cylinders, pistons operative therein, power and compression chambers to each cylinder, interconnections from the compression chamber of one cylinder to the power chamber of the other cylinder adapted to conduct fuel charges, means for heating said charges located between the compression chambers and the power chambers of the cylinders, and suitable pairs of independent valves adapted to control the passage of the charges through the heater to the power chamber of the respective cylinders the two valves of each pair being opened at the same time and which may be closed independently of each other.

5. A compression chamber, a power cylinder and a piston therein forming a unit, another unit coöperating therewith the compression chamber of one unit being connected to the power cylinder of the other unit, a heater placed between the compression chambers and the cylinders, two pairs of independent valves constituting separate sets adapted to control the passage of fuel through the heater, means for opening one valve of each set through the movement of the other valve of the same set, and means for closing the valves of each set independently of each other and of the valves constituting the other pair.

[Claims 6 to 10 not printed in the Gazette.]

1,223,794. RAILWAY-CAR DRAFT-RIGGING. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 25, 1914. Serial No. 853,014. (Cl. 213—42.)



1. In a railway draft rigging, the combination with a yoke formed of two parts and divided centrally longitudinally, each of said parts being in the form of a loop and having inwardly extending, opposed projections, of a follower extending transversely through said yoke, said follower being cut away on its upper and lower edges, the narrow portion of said follower formed by said cut away portions being adapted to be seated between said inwardly extended projections formed on the yoke parts.

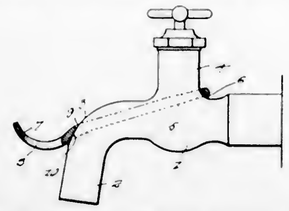
2. In a railway draft rigging, the combination with a yoke consisting of two parts, each part being in the form of a loop and having opposed, inwardly extending projections near the forward end thereof, of a front follower extending through said yoke, said follower being cut away on the top and bottom edges thereof and adapted to be received between said inwardly extending projections on the yoke members.

3. In a draft rigging for railway cars, the combination with a two-part yoke, the parts being separable and having a division line extending longitudinally and centrally thereof, said yoke parts when assembled having a hood at the forward end thereof within which is adapted to be received a butt of a standard draw bar, said yoke being provided with downwardly and upwardly projecting flanges at the rear of said hood and against which the rear face of the draw bar butt is adapted to bear, of an H-shaped follower extending transversely through the yoke and adapted to fit between said flanges.

1,233,795. SUPPORT. HARRY S. R. JOHNSON, Sanford, Mich. Filed Oct. 27, 1916. Serial No. 128,086. (Cl. 248—22.)

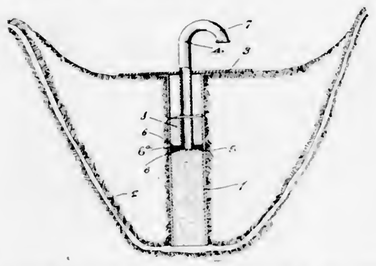
A support comprising a substantially U-shaped attaching member having its web portion disposed about the valve stem housing of a valve and having its arm portions converging inwardly in the direction of each other and disposed over the curved spout of the valve, a supporting member having one end formed on the ends of the arm portions and having an inclined groove upon its

under surface to receive the curved spout of the valve to prevent lateral movement thereof, and said supporting



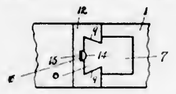
member being apertured and curved upwardly to form a hook for supporting articles.

1,223,796. CURBING FOR ARTESIAN WELLS. JAMES B. JOHNSON, Jester, Okla. Filed Nov. 6, 1915. Serial No. 60,008. (Cl. 166—2.)



A curbing for Artesian wells comprising a well casing, a pipe of smaller diameter than the well casing positioned within the casing, a horizontally positioned flange formed upon the lower end of said pipe and having its outer edge engaging the inner surface of the well casing, a washer mounted upon the upper surface of said flange, and a second flange resting upon the upper surface of said washer, said washer and said last named flange having their outer edges engaging the inner surface of the well casing, said pipe being driven into said casing for positioning said flanges below the ordinary water level and a cement filler positioned within said casing above said flanges.

1,223,797. RIM. JAMES S. JOHNSTON, Utica, N. Y. Filed June 6, 1916. Serial No. 102,082. (Cl. 152—21.)

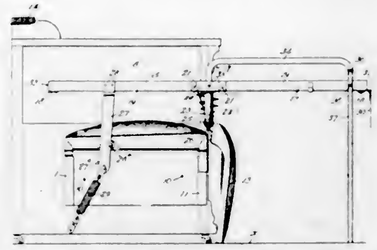


1. In a rim split transversely, an end having a tongue, another end having a plate with a matrix adapted to receive said tongue, and a bolt having a head mounted in said plate adjacent one of said ends, whereby to lock the tongue in said matrix, and said bolt having its head partially cut away, whereby to release said ends.

2. In a rim split transversely, an end having a tongue with converging sides, another end having a plate with a matrix adapted to receive said tongue, whereby to prevent the lateral or endwise displacement of said ends, and a bolt screw mounted in said plate, whereby to prevent the vertical displacement of said ends, said bolt having its head partially cut away, whereby to release said ends, when said bolt is turned in given position.

3. In a rim split transversely, an end having attached thereto a tongue with converging sides, a plate having a matrix adapted to receive said tongue, said plate being attached to the opposite end of said rim, a bolt screw mounted in said plate, whereby to lock the tongue in said matrix, and said bolt having its head partially cut away, whereby to release said ends.

1,223,798. SOFA-BED. WILLIAM J. KELLY, Clinton, Iowa. Filed Oct. 5, 1914. Serial No. 865,058. (Cl. 5—47.)



1. In a sofa-bed, the combination of a mattress formed of sections pivotally connected together and adapted to fold into the back-portion of the sofa-bed, means pivotally supporting said mattress at its inner section non-coincident with the pivotal connections between said sections, a truss-bar connected with said mattress adjacent the pivotal connections between the sections thereof and bodily movable with the mattress, and means for supporting the truss-bar to support the mattress when the latter is extended.

2. In a sofa-bed, the combination of a pivotally supported mattress formed of end-sections and an intermediate section pivotally connected together and adapted to fold into the back-portion of the sofa-bed, a truss-bar connected with said intermediate section, means engaging said truss-bar for supporting the latter when the mattress is extended, and means interposed between said truss-bar and the fabric of said mattress for preventing the latter from sagging when the mattress is extended.

3. In a sofa-bed, the combination of a pivotally-supported mattress formed of sections pivotally connected together and foldable into the back portion of the sofa-bed, and a sofa-back connected with said mattress and serving to support the mattress adjacent to the pivotal connections between the mattress-sections when the mattress is extended to form a bed.

4. In a sofa-bed, the combination of a pivotally-supported mattress formed of sections pivotally connected together and foldable into the back portion of the sofa-bed, and a sofa-back pivotally connected to said mattress adjacent to the pivotal connections between its sections, and serving to support the mattress adjacent to said pivotal connections when the mattress is extended to form a bed.

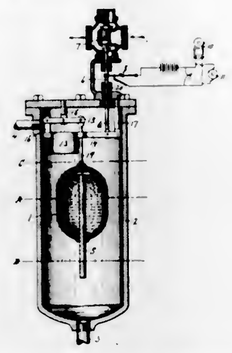
5. In a sofa-bed, the combination of a pivotally-supported mattress formed of sections pivotally connected together and foldable into the back portion of the sofa-bed, a truss-bar connected with said mattress adjacent to the pivotal connections between the sections thereof, and a sofa-back pivotally connected with said truss-bar and serving to support the mattress at said truss-bar when the mattress is extended to form a bed.

[Claims 6 to 11 not printed in the Gazette.]

1,223,799. LIQUID-LEVEL INDICATOR FOR STEAM-BOILERS. WILLARD A. KITTS, Sr., Oswego, N. Y., assignor to Kitts Steam Specialty Co., Inc., Oswego, N. Y., a Corporation of New York. Filed Mar. 2, 1915. Serial No. 11,478. (Cl. 137—102.)

1. In a water-level indicator for steam boilers, the combination with a water and steam-containing chamber, of a shell movable in said chamber and closed at the top, a tube secured to the bottom of the shell and extended some distance above and below said bottom, the upper

end of the tube terminating within the shell, and counterbalancing means normally maintaining the shell in such position that the lower end of the tube will be below the water level in said chamber, and means for indicating a variation in the normal relation of the shell and its counterbalancing means.



2. In a water-level indicator for steam boilers, the combination with a water and steam-containing chamber, of a shell movable within said chamber and open at the bottom only, the remaining portions of the shell being closed against the passage of water therein or therethrough, means within the shell for retaining a body of water therein nearly equal to its capacity, counterbalancing means normally maintaining the shell in such position that the mouth of its opening is below the liquid level in the chamber, and means for indicating a change from the relative positions of the shell and its counterbalancing means.

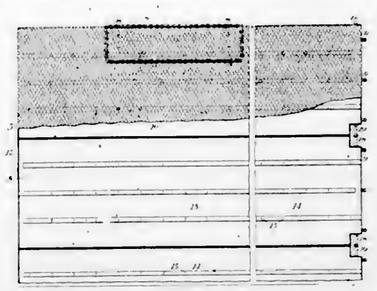
3. In a water-level indicator for steam boilers, the combination with a water-containing chamber, of a shell movable in said chamber by the rise or fall of water, means for admitting water into the shell from the bottom only, the remaining portions of the shell being closed against the entrance of water therein or therethrough, said means being arranged to maintain a quantity of water in the shell nearly equal to its capacity and means actuated by the movement of the shell from a certain position for indicating such movement.

4. In a water-level indicator for steam boilers, the combination with a water-containing chamber, of a shell movable in said chamber by the rise or fall of water, and provided with a reduced tubular extension projecting downwardly from the bottom thereof, counterbalancing means for normally maintaining the shell in such position that the lower end of the extension will be immersed in the water in the chamber, and means for indicating a change in the relation of said shell to its counterbalancing means from normal.

5. In a water-level indicator for steam boilers, the combination with a water-containing chamber, of a shell movable in said chamber by the rise or fall of water, means for admitting water into the shell from the bottom only and for retaining a definite quantity of the water so admitted to give the water-containing shell a certain displacement in the water of the receptacle, means for approximately counterbalancing such displacement and means for indicating a change of position of the shell due to a variation of the water level in the chamber.

1,223,800. WATER-COOLED FLOOR. LUTHER L. KNOX, Avalon, Pa. Filed Oct. 24, 1914. Serial No. 868,544. (Cl. 257—256.)

1. A water cooled floor, comprising a plurality of hollow metal units arranged side by side, each of said units having a recessed portion at one end thereof and at the edge adjacent to another member, and water circulating connections within said recess connecting adjacent units to each other; substantially as described.



2. A water cooled floor, comprising a plurality of hollow metal units arranged side by side and having water circulating connections between them, and a water bosh secured to the top of one of said units and forming a part thereof, said water bosh having water circulating connections with the unit to which it is secured, substantially as described.

3. A water cooled floor, comprising a plurality of hollow units placed side by side, water circulating connections between said units, each of said units having an upwardly extending relief pipe connected thereto, substantially as described.

4. A water cooled floor, comprising a plurality of hollow metal units arranged side by side and having water circulating connections between them, and a water bosh resting on said floor and having circulating connections with the interior thereof, said floor forming the bottom of the bosh; substantially as described.

5. The combination of a heating furnace and a cooling device comprising a floor having a water chamber therein, means for circulating water through said floor chamber, an upwardly extending water cooled device adjacent to the furnace, and means for circulating water through said device, substantially as described.

1,223,801. WATER-COOLED FLOOR STRUCTURE. LUTHER L. KNOX, Avalon, Pa., assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Original application filed Oct. 24, 1914, Serial No. 868,544. Divided and this application filed Mar. 4, 1916. Serial No. 82,192. (Cl. 257—256.)



1. A water-cooled floor structure, comprising substantially parallel flanged beam members, a floor plate secured to the upper flange of said beam members, and flanged bottom plate members between the beams and forming with said floor plate a series of hollow water-containing spaces, substantially as described.

2. A water-cooled floor structure, comprising substantially parallel flanged beam members, a floor plate secured to the upper flange of said beam members, and flanged bottom plate members between the beams and forming with said floor plate a series of hollow water-containing spaces, there being water-circulating connections between the spaces, substantially as described.

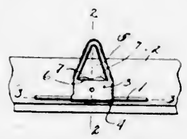
3. A water-cooled floor comprising a floor plate, a plurality of flanged bottom members secured to said plate and forming with the plate a plurality of water-containing chambers, and supporting beams secured to the floor plate, some of said beams being between adjacent chambers, substantially as described.

4. A water-cooled floor comprising a floor plate, a plurality of flanged bottom members secured to said plate and forming with the plate a plurality of water-containing chambers, and supporting beams secured to the floor plate, some of said beams being between adjacent chambers, said beams forming a structural part of the structure, substantially as described.

5. A water-cooled floor comprising a floor plate, a plurality of bottom plate members having flanged edges, and a plurality of beams having a web portion and upper flanges to which the floor plates are secured, the flanged edges of the bottom plate members being secured to the web portions of said beams, substantially as described.

[Claim 6 not printed in the Gazette.]

1,223,802. PICTURE-HANGER. HARRY H. KUHN, Marshall, Ill. Filed June 19, 1916. Serial No. 104,586. (Cl. 40—145.1.)



A picture hanger comprising a staple adapted to be engaged with the picture frame, a plate pivotally and slidably connected to the staple, said plate having an opening formed therein for detachably engaging a supporting device, one wall of said opening terminating in a right angle flange, said flange having spurs carried thereby for engaging the adjacent rail of the picture frame as and for the purpose set forth.

1,223,803. SIGN-BOARD. JOHN C. LAKE, Big Prairie, Ohio. Filed Oct. 24, 1916. Serial No. 127,363. (Cl. 40—135.)

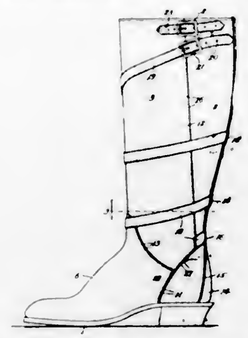


1. In a sign of the character described, the combination of sign sections adapted to be placed back to back, one of the longitudinal edges of each section provided with a flange, a cap provided with oppositely disposed open folds, said open folds adapted to receive the longitudinal flanges of the sections and the opposite ends of each section provided with open folds.

2. In a sign of the character described, the combination of a sign consisting of members adapted to be placed face to face, said sections provided upon one of their longitudinal edges with flanges, a connecting cap adapted to embrace the flanges, each of said sections provided with oppositely disposed folds upon one of their ends and the plain ends of the sections adapted to be located under the folds.

3. In a sign of the character described, the combination of a sign consisting of members adapted to be placed face to face, said sections provided upon one of their longitudinal edges with flanges, a connecting cap adapted to embrace the flanges, each of said sections provided with oppositely disposed folds upon one of their ends and the plain ends of the sections adapted to be located under the folds, said folds formed of a length less than the width of the sections.

1,223,804. BOOT. MARTIN LARSON, Chicago, Ill. Filed Dec. 7, 1916. Serial No. 135,653. (Cl. 36—50.)



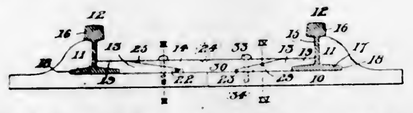
1. A boot of the character described with its upper portion presenting relatively movable overlapping sections, the overlapping edge-portions of which are substantially vertically disposed, said sections being secured to the bottom-portion of the boot throughout the marginal edges of the latter and overlapping and being relatively movable from the sole of the boot to the top thereof, but only at the side of the boot, one of said side-sections extending across the front of the boot and being permanently secured in position at its lower edge at the front of the boot, and means for drawing said sections about the leg of the wearer to produce a snug fit.

2. A boot of the character described with its upper portion presenting relatively movable overlapping sections, the overlapping edge-portions of which are substantially vertically disposed, said sections being secured to the bottom-portion of the boot throughout the marginal edges of the latter and overlapping and being relatively movable from the sole of the boot to the top thereof, but only at the side of the boot, one of said side-sections extending across the front of the boot and being permanently secured in position at its lower edge at the front of the boot, and a strap secured to the one of said sections which overlaps the other thereof, at the side of the boot and adapted to be spirally wound about the boot for drawing said sections together to cause the upper part of the boot to snugly fit the leg of the wearer.

3. A boot of the character described with its upper portion presenting relatively movable overlapping sections, the overlapping edge-portions of which are substantially vertically disposed, said sections being secured to the bottom-portion of the boot throughout the marginal edges of the latter and overlapping and being relatively movable from the sole of the boot to the top thereof, but only at the side of the boot, one of said side-sections extending across the front of the boot and being permanently secured in position at its lower edge at the front of the boot and terminating closely adjacent the front edge of the heel at the side thereof where it overlaps the other of said sections, with its lower rear portion cut away to present a diagonally disposed edge extending from the sole to the extreme rear edge of this section, the lower extremity of said rear edge extending in spaced relation to the sole and extending closely adjacent the extreme rear portion of the boot.

4. A boot of the character described having a bottom portion and an upper portion formed of a vamp and a separate portion permanently secured thereto at the front and sides of the boot, said upper portion presenting along one side the boot overlapping relatively movable sections, said sections being secured to the bottom portion of the boot throughout the marginal edges of the latter and relatively movable from the sole of the boot to the top thereof, but only at the side of the boot, the rear edge of the said section extending across the front of the boot, terminating at the bottom portion of the boot closely adjacent the front edge of the heel at that side of the boot where it overlaps the other of said sections, and having its lower rear portion cut away to present a diagonally disposed edge extending from the bottom of the boot to the extreme rear edge of said section, the lower extremity of said rear edge extending in spaced relation to the bottom of the boot and extending closely adjacent the extreme rear portion of the boot.

1,223,805. METALLIC TIE AND RAIL-FASTENER. STANLEY LASIEWICZ and PAUL LASIEWICZ, Three Lakes, Wis. Filed Jan. 31, 1917. Serial No. 145,679. (Cl. 238—5.)



1. A device of the class described comprising a tie adapted for mounting rails thereon, integral abutments arranged adjacent the opposite ends of the tie, flanged plates arranged inwardly of said abutments spaced therefrom, a cam locking member centrally swiveled upon the tie intermediate the said plates and cam connections between the said member and plates.

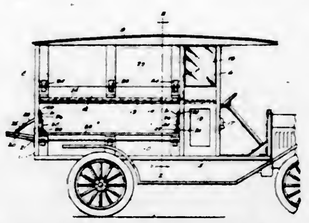
2. A device of the class described comprising a tie, rails mounted thereon, integral abutments carried by the tie adjacent the outer sides of the rails, plates arranged inwardly of the rails upon the tie overlying the base flanges of the rails, and a turn member centrally pivoted upon the tie intermediate the said plates having a hub portion provided with cam edges arranged in operative engagement with the inner edges of the plates during the operation of the device.

3. A device of the class described comprising a tie, rails mounted thereon, integral abutments carried by the tie adjacent the outer sides of the rails, plates arranged inwardly of the rails upon the tie overlying the base flanges of the rails, a turn member centrally pivoted upon the tie intermediate the said plates having a hub portion provided with cam edges arranged in operative engagement with the inner edges of the plates during the operation of the device, the said plates having curved grooves therein and lugs carried adjacent the opposite ends of the turn member adapted for operative engagement with the said grooves during the wedging operation.

4. A device of the class described comprising a tie, integral abutments arranged adjacent the opposite ends of the tie, rails positioned upon the tie against the said abutments, plates carried by the tie overlying the base flanges of the rails and provided with inwardly inclined upper face portions slanting toward opposite inner corners of the plates when operatively arranged, a turn locking member centrally swiveled between the said plates having beveled end portions with inclined lower faces adapted for overlying the inclined faces of the said plates when in its securing position arranged longitudinally of the tie.

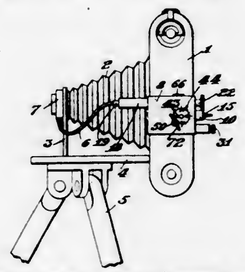
5. A device of the class described comprising a tie, integral abutments arranged adjacent the opposite ends of the tie, rails positioned upon the tie against the said abutments, plates carried by the tie overlying the base flanges of the rails and provided with inwardly inclined upper face portions slanting toward opposite inner corners of the plates when operatively arranged, a turn locking member centrally swiveled between the said plates having beveled end portions with inclined lower faces adapted for overlying the inclined faces of the said plates when in its securing position arranged longitudinally of the tie, the locking member being provided with a hub having cam edges adjacent the inner edges of said plates, the said plates having eccentrically positioned curved slots in the inclined faces thereof, and lugs carried by the inclined faces of the end portions of the locking member adapted for operative positions within the said slots when the device is assembled.

1,223,806. AUTO DELIVERY-TRUCK. JAMES F. LAYTHAM, Monroe, and DOUGLAS A. ARNOLD, North Yakima, Wash. Filed Apr. 27, 1916. Serial No. 93,906. (Cl. 21—7.)



In a vehicle-body, the combination with framework consisting of a bed member, posts, a roof supported thereby, a base-board and a transom-board secured to the posts at opposite sides of the body, and two superposed floors, the upper of said floors being removably supported between said transom boards and the lower floor being fixedly secured between said base boards, of a tail-gate hingedly connected from its lower edge to the rear of the body, side gates hingedly connected from their lower edges to the respective base and transom-boards, and link-devices connecting the gates with the adjacent posts to support the outer ends of the gates when in their open positions.

1,223,807. SHUTTER-OPERATOR FOR CAMERAS. ROSCOE B. LEAVITT, Houston, Mo. Filed June 25, 1915. Serial No. 36,401. (Cl. 161—26.)



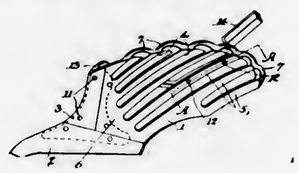
1. In a device of the class described, a spring pressed shutter operating member, a releasable catch for holding said member retracted, releasing mechanism for said catch comprising a lever member having a cam portion arranged and adapted to engage said catch, a rotatory member having a portion arranged and adapted to engage said lever member at a point during its rotation, a gear member in coöperative relation to said rotatory member, said gear member and said rotatory member being relatively constructed and arranged so that normally the former prevents rotation of the latter, said gear member and said rotatory member being also constructed and arranged for engagement once during each complete rotation of the gear member whereby said rotatory member is rotated partially during each rotation of said gear member, a clock-work mechanism for actuating said gear member, means for energizing said clock-work mechanism and simultaneously rotating said gear member to set said rotatory member so as to actuate said lever member at different predetermined instants, and a releasable brake for said clock-work mechanism.

2. A pneumatic shutter operator for cameras comprising a casing, a cylinder on said casing having provision for a tube connection with the shutter mechanism of the camera, a piston in said cylinder, a rod connected to said piston, a lever in coöperative engagement with said rod, a spring connected to said lever and acting to move the piston in one direction, a stop on said rod, a spring

catch on said casing arranged and adapted for the engagement of said stop, a knob on said rod for withdrawing said piston against the action of its spring and for effecting the engagement of said stop with said spring catch, a releasing device for said spring catch comprising a lever member, a rotating tappet arranged in cooperative relation to said lever member so as to engage the same at a point during its rotation, a clock-work mechanism for actuating said tappet, a releasable brake for said clock-work mechanism, and means for energizing said clock-work mechanism and setting said tappet to actuate said lever member at different predetermined instants.

3. In a pneumatic shutter operator for cameras, a cylinder having a spring-actuated piston therein, means for releasably holding said piston against the action of its spring, and means for releasing said holding means, comprising a lever member, a rotating tappet arranged in coöperative relation to said lever member, a gear disk arranged in coöperative relation to said tappet so as to normally prevent rotation of the latter, said gear disk and said tappet being relatively arranged for engagement once during each complete revolution of the gear disk whereby said tappet is rotated partially during each rotation of the gear disk, a shaft on which said gear disk is mounted, a clock-spring connected to said shaft so as to be wound proportionately thereby when the shaft is rotated to set said tappet, a clock-train having a ratchet and pawl connection with said shaft, a speed controlling escapement for said clock-train, and a releasable brake coöperating with said escapement.

1,223,808. SLAT-MOLDBOARD. WILLIAM H. LEE, Syracuse, N. Y., assignor to Syracuse Chilled Plow Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 28, 1914. Serial No. 869,048. (Cl. 97—18.)



1. A mold board provided at its front part with an earth-turning portion and at the rear of said portion with a plurality of rearwardly extending slats formed integral with said earth-turning portion and with a plurality of lengthwise slots alternating with the slats and extending through the inner and outer surfaces of the mold board, the outer faces of the slats forming rearward continuations of spaced apart portions of the outer surface of said earth-turning portion, substantially as and for the purpose set forth.

2. A mold board provided at its front part with an earth-turning portion and at the rear of said portion with integral top and bottom rearward extensions of said portion having opposing edges substantially equidistant from each other and with a plurality of substantially equidistant rearwardly extending slats arranged between the top and bottom extensions and formed integral with said earth turning portion and with a plurality of lengthwise slots alternating with the slats and extending through the inner and outer surfaces of the mold board, the outer faces of the top and bottom extensions and the slats forming rearward continuations of spaced apart portions of the outer surface of said earth-turning portion, substantially as and for the purpose set forth.

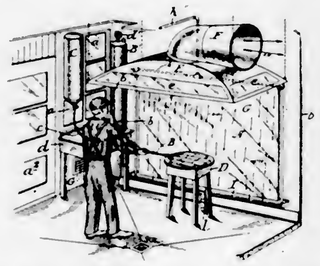
3. A mold board provided at its front part with an earth-turning portion and at the rear of said portion with a plurality of rearwardly extending slats formed integral with said earth-turning portion and with a plurality of lengthwise slots alternating with the slats and extending through the inner and outer surfaces of the mold board and through the top edge of the outer surface of the mold board, the outer faces of the slats forming rearward continuations of spaced apart portions of the outer surface of said earth-turning portion, substantially as and for the purpose described.

4. A mold board provided at its front part with an earth-turning portion and at the rear of said portion with a plurality of rearwardly extending slats formed integral with said earth-turning portion and with a plurality of lengthwise slots alternating with the slats and extending through the inner and outer surfaces of the mold board, the outer faces of the slats forming rearward continuations of spaced apart portions of the outer surface of said earth-turning portion, the mold board being also provided on its inner face with braces spaced apart from the front ends of the slats and joining said slats, substantially as and for the purpose set forth.

5. A single piece mold board formed with a plurality of slots opening through its inner and outer faces and its top edge, the portions of the mold board between the slots constituting slats integral with the body of the mold board, and the mold board being provided with braces located on its inner face and joined to the portions of the mold board on opposite sides of the slots, substantially as and for the purpose set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,223,809. METHOD OF AFFORDING PROTECTION TO WORKMEN DURING THE OPERATION OF SPRAYING CERAMIC AND OTHER ARTICLES. HARRY D. LILLIBRIDGE, Zanesville, Ohio, assignor to American Encaustic Tiling Company, Ltd., New York, N. Y., a Corporation of New York. Filed July 28, 1913. Serial No. 781,500. (Cl. 91—68.)



1. The method of eliminating waste sprayed matter during the application of a spray to objects under treatment which consists in intercepting the spray by a spray-absorbing medium toward which the spray is directed.

2. The method of eliminating waste sprayed matter during the application of a spray to objects under treatment which consists in conducting the spraying operation within a substantially closed chamber, and intercepting the waste spray by an absorbing medium toward which the spray is directed.

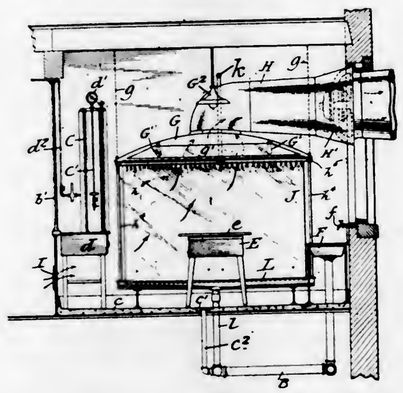
3. The method of eliminating waste sprayed matter during the application of a spray to objects under treatment which consists in intercepting the spray by a curtain or film composed of an absorbing liquid toward which the spray is projected.

4. The method of eliminating waste sprayed matter during the application of a spray to objects under treatment which consists in conducting the spraying operation within a substantially closed chamber, establishing a flow of a liquid to produce a curtain or film within such chamber, and intercepting the waste spray by such liquid curtain or film, whereby the waste spray is absorbed by the liquid curtain or film.

5. The method of eliminating waste sprayed matter during the application of a spray to objects under treatment which consists in directing the spray toward the objects and toward a panel in the path of the waste spray, and flushing the surface of the panel with a continuously flowing liquid which produces a curtain or film of spray absorbing liquid operating to preclude the rebound of the sprayed matter from the surface of the panel.

[Claims 6 to 8 not printed in the Gazette.]

1,223,810. SANITARY TILE-SPRAYING CHAMBER. HARRY D. LILLIBRIDGE, Zanesville, Ohio, assignor to American Encaustic Tiling Company, Ltd., New York, N. Y., a Corporation of New York. Filed July 28, 1913. Serial No. 781,501. (Cl. 91—45.)



1. An apparatus of the class described embodying a chamber, spraying means positioned within said chamber whereby the work of spraying objects is to be performed, means for circulating air through the chamber, an absorbing medium positioned within said chamber to collect or take up deleterious sprayed matter projected by the spraying means beyond the work, and means for withdrawing air from the chamber and adjacent said absorbing medium.

2. An apparatus of the class described embodying a chamber, spraying means positioned within the chamber whereby the work of spraying objects is performed, means for circulating air through the chamber, and means for establishing within such chamber a liquid curtain adapted to absorb deleterious sprayed matter projected beyond the objects under treatment, said air circulating means being effective in withdrawing air from the chamber adjacent the liquid curtain.

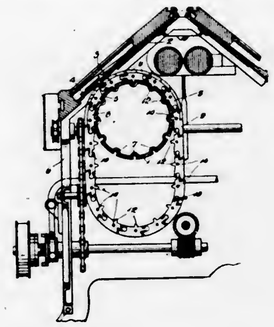
3. An apparatus of the class described embodying a chamber, spraying means within the chamber, means for admitting air to the lower part of the chamber, a spray absorbing medium positioned to intercept a spray which passes beyond the work under treatment, and means for exhausting air from the upper part of the chamber adjacent the spray absorbing medium.

4. An apparatus of the class described embodying a chamber, spraying means within said chamber whereby the operation of spraying objects with coloring matter is conducted, means for producing a continuously moving film or sheet of liquid in such relation to the work as to intercept the sprayed matter which passes said objects, and means for circulating air through the chamber and withdrawing air therefrom at a point adjacent the moving film or sheet of liquid for carrying off the sprayed coloring matter rebounding from the work under treatment.

5. An apparatus of the class described embodying a chamber within which is to be conducted the operation of spraying objects, means for producing a continuously moving film or sheet of liquid in a position to intercept the spray passing such objects, and means for circulating air through said chamber and withdrawing it adjacent the film or sheet so as to envelop the field within which is conducted the operation of spraying the objects under treatment whereby the operator within the chamber is enabled to perform the work without danger of inhaling a poisonous sprayed coloring matter.

[Claims 6 to 18 not printed in the Gazette.]

1,223,811. PATTERN DRUM AND CHAIN FOR KNITTING-MACHINES. ELIHU LIPPITT, Grand Rapids, Mich., assignor to Grand Rapids Underwear Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Jan. 18, 1915. Serial No. 2,926. (Cl. 66—30.)



1. A pattern chain for knitting machines comprised of a plurality of flat links having their ends detachably connected together to form an endless series, a plurality of said endless series of links located side by side, with the sides of the links in contact throughout the entire length thereof and means connecting the corresponding contacting links of the different series together, substantially as described.

2. A pattern chain for knitting machines comprised of a plurality of flat links having ends detachably connected together to form an endless series of links, a plurality of said endless series of links located side by side, and rods passing through the corresponding contacting links of the different series serving to connect said links together, substantially as described.

3. A pattern chain for knitting machines comprised of a plurality of links, each formed with a rounded head at one end and with a socket at the other end, said head and socket being in alinement, said links being detachably connected end to end to form an endless series, the socket of one link receiving the head of an adjacent link, a plurality of said endless series of links located side by side, and means connecting the contacting links of the different series of links together, substantially as described.

4. A link for pattern chains formed from a flat piece of metal having a rounded head at one end and a socket at the opposite end, said head and socket being in alinement, and a tooth projecting at one edge of the link between the ends thereof.

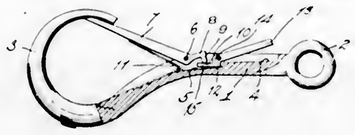
5. A link for pattern chains formed from a flat piece of metal having a rounded head at one end and a socket at the opposite end, said head and socket being in alinement, a tooth at one edge between the ends of the link and an integral projection at the opposite edge of the link, substantially as described.

[Claim 6 not printed in the Gazette.]

1,223,812. SNAP-HOOK. JOHN LISTIAK, Youngstown, Ohio. Filed June 21, 1916. Serial No. 104,974. (Cl. 24—233.)

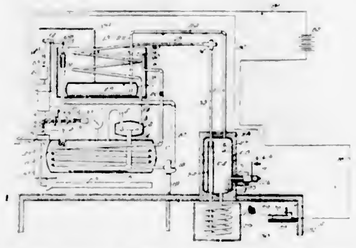
A snap hook comprising a body, a hook at one end of the body, a spring pressed tongue pivoted at one end to the body, an arm extending angularly from the pivoted end of the tongue, a lug extending from the free end of the

arm, a lever pivoted at one end to the body, and an offset finger located at the pivoted end of and angularly



related to the lever, and having its side engaged by said lug and being freely movable with relation to said lug.

1,223,813. REFRIGERATING APPARATUS. EMIL C. LOETSCHER, Dubuque, Iowa. Filed Mar. 24, 1915. Serial No. 16,551. (Cl. 62—5.)



1. In refrigerating apparatus of the absorption type, the combination therewith of heat controlling means for applying and shutting off the heating agent and thermostatic means separately operable from the heat controlling means but connected therewith whereby the heat controlling means is rendered operative or inoperative by said thermostatic means.

2. In refrigerating apparatus of the absorption type comprising a generator, an absorber, a condenser and a refrigerating member, the combination therewith of means for heating said generator, thermostatic means for controlling the heating agent operated by the temperature of said generator and thermostatic means for controlling the operation of the heating agent thermostatic means and operated by the temperature of said refrigerating member.

3. In refrigerating apparatus of the absorption type comprising a generator, an absorber, a condenser and a refrigerating member, the combination therewith of means for heating said generator, thermostatic means for controlling the heating agent operated by the temperature of said generator and thermostatic means for controlling the operation of the heating agent thermostatic means and operated by the temperature of the apparatus at a point near the refrigerating member.

4. In refrigerating apparatus of the absorption type comprising a generator, an absorber, a condenser, a refrigerating member and a refrigerator, the combination therewith of means for heating said generator, thermostatic means for controlling the heating agent operated by the temperature of said generator, thermostatic means for controlling the operation of the heating agent thermostatic means and operated by the temperature of said refrigerating member and thermostatic means in said refrigerator operated by the temperature therein and controlling the operation of said heat controlling and refrigerating thermostatic means.

5. In refrigerating apparatus of the absorption type comprising a generator, an absorber, a condenser, a refrigerating member and a refrigerator, the combination therewith of thermostatic means in said generator, thermostatic means in said refrigerating member and thermostatic means in said refrigerator and means whereby the operation of the heat controlling thermostat in said generator is controlled by the conjoint operation of the thermostats in said refrigerating member and said refrigerator.

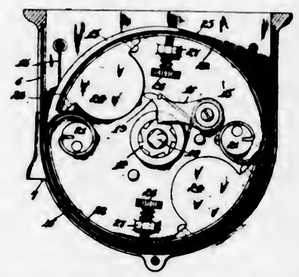
[Claims 6 and 7 not printed in the Gazette.]

1,223,814. AUTOMOBILE-JACK. AMBROSE F. LUTZ, Keota, Iowa. Filed June 3, 1916. Serial No. 101,558. (Cl. 254—131.)



A jack comprising a pair of vertically extending and relatively spaced members, bolts extending through said members, spacing blocks carried by said bolts and disposed between the members, said members having their lower ends bent at right angles to form attaching feet, a base plate secured to the attaching feet, said members having their upper ends bent at right angles and disposed in opposite directions, a lever consisting of a pair of members secured together and pivoted between the members adjacent their upper ends, the members of the levers having one of their ends bent to form a substantially U-shaped handle, the ends of which are adapted to engage the ground when the lever is in a substantially vertical position to support the vertical standard, the other ends of the members of said lever being bent to form a substantially U-shaped member, the web portion of which is adapted to frictionally engage the right angled upper ends of the first named members when the lever is in a substantially vertical position to prevent the lever from accidentally moving upon its pivot with relation to the vertical members, and a substantially U-shaped member pivoted to the arm portions of the last named U-shaped end of the lever and adapted to engage the hub of a wheel.

1,223,815. CENTRIFUGAL BRAKE FOR HARNESS-HANGERS. LOUIS MARCEL LYMBURNER, Montreal, Quebec, Canada. Filed Jan. 14, 1915, Serial No. 2,199. Renewed Mar. 21, 1917. Serial No. 156,300. (Cl. 74—45.)

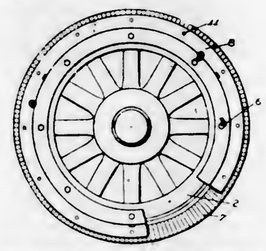


1. A centrifugal brake of the character described, comprising a rotatable member, spring brake arms, means for fixing one end of each brake arm to said rotatable member, a weight secured to the free end of each brake arm, ears carried by said rotatable member at points near the weighted ends of said brake arms, and screws threaded through said arms and adapted to engage the inner faces of said brake arms and adjust them radially.

2. A centrifugal brake of the character described comprising, a rotatable member, pins carried by said member, spring brake arms each having one end coiled about and fixed to one of said pins, a weight secured to the free end of each brake arm, ears carried by said rotatable member at points near the weighted ends of said brake arms, and screws threaded through said ears and adapted to engage the inner faces of said brake arms to adjust the same radially

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1,223,816. VEHICLE-TIRE. CHARLES M. MANLY, Freeport, N. Y. Filed June 29, 1914. Serial No. 847,970. (Cl. 21—207.)



1. A vehicle tire having its tread formed of a plurality of corrugated rings of sheet material clamped together with projections on the face of each ring set in the recesses on the face of the adjacent rings, the edges of said rings forming the load supporting and wearing surface of the tire.

2. A vehicle tire having its tread formed of a plurality of alternate rings of corrugated sheet metal and softer material clamped together with the edges of the sheet metal forming the load-supporting and wearing surface of the tire, the softer material being of a thickness less than the depth of the corrugations.

3. A vehicle tire having its tread composed of a plurality of rings of sheet material with the edges of the rings forming the wearing surface of the tire, and means for clamping said rings together and decreasing the diameter of the rings to draw them into close contact with the periphery of the wheel.

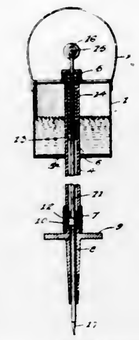
4. A vehicle tire having its tread composed of a plurality of corrugated rings of sheet material having the corrugations angular and extending diagonally of the circumference of the wheel, and means for clamping said rings together to form a compact body with the edges of the rings forming the driving surface of the tire comprising clamping plates on each side of the rings, said clamping plates engaging only the depressions of the corrugations whereby when they are drawn together the diameter of the rings will be reduced.

5. In a vehicle tire the combination of a rim, a plurality of rings of sheet material surrounding said rim with their edges forming the wearing surface of the tire, clamping rings engaging the opposite side faces of said sheet metal rings, and means for drawing said clamping rings together to clamp said sheet metal rings and simultaneously radially clamping said supporting rim.

[Claim 6 not printed in the Gazette.]

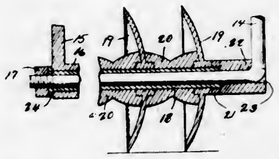
1,223,817. WEED-EXTERMINATOR. DANIEL W. MANNHARDT, FREDRICK L. MANNHARDT, and HERMAN A. MANNHARDT, Washington, Iowa. Filed Oct. 29, 1914. Serial No. 869,279. (Cl. 47—37.)

A weed exterminator comprising a reservoir having alined openings in its top and bottom walls, a tube extending through said alined openings, said tube having its ends externally screw-threaded, a circular flange formed on said tube and engaging the bottom of said reservoir to support the same, a screw cap fitted on the outer end of said tube to close the same and to hold said reservoir in engagement with said flange, said tube having an opening therein communicating with the reservoir, a discharge nozzle having a tapered end fitted on the lower screw threaded end of said tube, a circular flange formed in-



tegral with said nozzle, a valve stem extending through said nozzle and said tube and having its ends extending above the reservoir and beyond the lower end of the nozzle, an operating handle formed on the upper portion of said valve stem, a valve carried by said stem and arranged to seal the inner end of said nozzle, a piston carried by said stem and disposed above said aperture, and a coil spring on said valve stem and having its ends bearing against said cap and piston respectively.

1,223,818. AGRICULTURAL MACHINE. LESTER P. MATHES, ULYSSES L. MATHES, and CHARLES H. RUSSELL, Grand Valley, Okla. Filed Oct. 13, 1915. Serial No. 55,679. Renewed Mar. 12, 1917. Serial No. 154,339. (Cl. 97—78.)

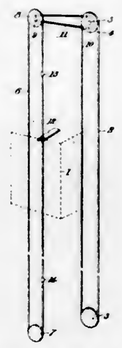


In a disk harrow, a shaft, a sleeve extending the length thereof and rotatably mounted thereon, a plurality of disks provided with hubs mounted on and rotatable with the sleeve, and approximately cylindrical blocks also mounted on the sleeve between the disks and having recesses formed in their ends for the reception of the said hubs.

1,223,819. CONTROLLING MEANS FOR ELEVATORS. GUY K. MITCHELL, Baltimore, Md. Original application filed Mar. 13, 1912. Serial No. 683,576. Divided and this application filed Sept. 4, 1914. Serial No. 860,229. (Cl. 187—36.)

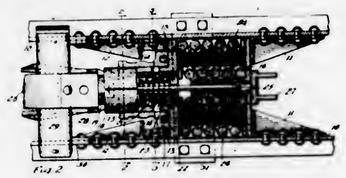
1. In a power-operated hoist, a car, manually actuated means for controlling the supply of motive power to said car, and car actuated means for automatically operating such controlling means as the car approaches the limits of its movement, and speed reducing gearing permanently connecting said car actuated means with said manually actuated means, so that they always move together, but at different rates.

2. In a power-operated hoist, the combination with a car, of the usual hand rope for controlling the movement thereof, a wheel over which such rope passes, a cable, a second wheel over which such cable passes, knocker balls



secured to said cable in the path of a projection movable with said car, and reduction gearing permanently connecting said wheels so that they always move together, but at different speeds.

1,223,820. FRICTION DRAFT-GEAR. JOHN R. MITCHELL, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 18, 1915. Serial No. 56,478. (Cl. 213—64.)



1. In a draft rigging, the combination with stop members, of a longitudinally movable combined friction shell and spring casing, friction elements coöperable with said shell, springs within said casing, and a follower interposed between the friction elements and said springs, said follower being movable with the friction elements when pressure is applied to the latter to operate the gear in one direction, said follower remaining stationary and said shell and casing moving when the gear is operated in the opposite direction.

2. In a draft rigging, the combination with a longitudinally movable friction shell, spring casing, friction elements coöperating with said shell, and spring within said casing, of a follower interposed betwen said friction elements and said spring, front and rear stops, said follower engaging one set of stops when the friction shell and spring casing is moved in one direction, the spring casing engaging the other sets of stops when the gear is operated in the opposite direction.

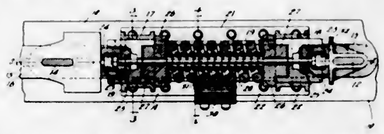
3. As an article of manufacture, a combined friction shell and spring casing, the latter being wider than the shell and thereby forming transversely extending shoulders where the shell and casing coalesce, said shoulders being provided with openings through which are adapted to extend projections from a follower within the spring casing.

4. As an article of manufacture, a friction shell having a spring casing formed integrally therewith at the inner end of the shell, said shell having also formed integrally therewith at its opposite end arms each of which is provided with an elongated slot adapted to receive a coupler key.

5. In a device of the character described, the combination with a longitudinally movable friction shell, spring casing, friction elements coöperating with said shell, and twin arranged springs within said casing, of a follower within the casing and located between said springs and the inner ends of said friction elements, and means for holding said follower stationary while the shell moves when the gear is actuated in one direction, whereby the combined capacity of the twin springs and friction elements is obtained when the gear is actuated in one direction, and only the capacity of the twin springs is obtained when the gear is operated in the opposite direction.

[Claim 6 not printed in the Gazette.]

1,223,821. FRICTION-GEAR. JOHN R. MITCHELL, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 18, 1915. Serial No. 56,479. (Cl. 213—64.)



1. A member for draft riggings which comprises a casting having open ended shells at each end thereof, said shells being connected by integral, longitudinally extending flange portions, the latter being adapted to be directly secured to the draft sills of the car.

2. A member for draft riggings which comprises a casting having open ended shells at each end thereof, said shells being connected by integral, longitudinally extending flange portions, the latter being adapted to be directly secured to the draft sills of the car, both of said shells having interior friction faces adapted to coöperate with friction shoes.

3. A member for draft gears having open ended shells at each end thereof, said shells being connected by upper and lower flanges extending longitudinally on each side of the shells, said upper and lower flanges being spaced and thereby adapted to form guideways for yoke acting members.

4. A member for draft gears having open ended shells at each end thereof, said shells being connected by upper and lower flanges extending longitudinally on each side of the shells, said upper and lower flanges being spaced and thereby adapted to form guide-ways for yoke acting members, each of said shells having an interior friction surface adapted to coöperate with friction shoes.

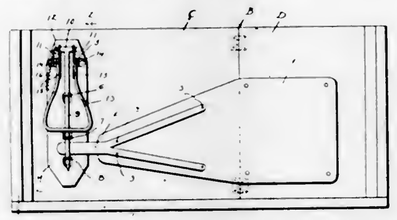
5. In a draft rigging, the combination with front and rear friction shells rigidly secured to draft members, friction elements coöperable with each of said shells, and a single spring interposed between said friction mechanisms and coöperable with each, one of said friction mechanisms being operable under buff only, and the other under draft only, said friction shells being connected by integral, longitudinally extending flanges.

[Claim 6 not printed in the Gazette.]

1,223,822. END-GATE-LOCKING MECHANISM. ALBERT M. NELSON, Doland, S. D. Filed Aug. 16, 1916. Serial No. 115,227. (Cl. 21—21.)

1. The combination with an end gate formed of a pair of foldable sections, and an element having one end connected to one of the sections and having its other end adapted to engage the other section when the sections are in unfolded position, of a plate mounted on the other section of the gate, a Y-shaped element carried by the other end of the element and having the stem portion thereof extending beyond the free end of the element and adapted to engage the plate when the sections are in unfolded position, a bolt slidably associated with the plate for engaging the stem of the Y-shaped element when the sections are in unfolded position, and a manipulating element carried by the plate and having connection with the bolt.

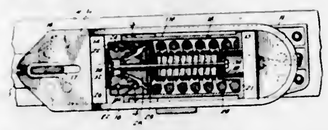
2. The combination with an end gate formed of a pair of foldable sections, and an element having one end connected to one of the sections, and having its other end extending across the meeting edges of the sections, of a plate carried by the other section, a vertical series of apertured lugs struck therefrom, means carried by the element and adapted to be received by the space between certain adjacent lugs when the sections are in unfolded position, a bolt slidably extending through the opening in the lugs adapted to engage over the mentioned means when the latter is positioned between the lugs, a manipulating element carried by the plate, and means for connecting the manipulating element to the bolt.



3. The combination with an end gate formed of a pair of foldable sections, and an element carried by one of the sections and adapted to extend across the meeting edges of the sections when the sections are in unfolded position, of a plate carried by the other section of the gate, means carried by the element for engaging the plate when the sections are in unfolded position, a bolt slidably associated with the plate for engaging over the mentioned means, when the gate sections are in unfolded position, a sleeve carried by the upper end of the bolt, a manipulating element pivoted to the plate, links operatively connected to the sleeve and the manipulating element so as to effect sliding of the bolt when the manipulating element is moved in one direction, and means for effecting the return of the manipulating element, links and bolts to normal position after the manipulating element is released.

4. In locking mechanism for folding gate sections, the combination with a plate carried by one of the sections, lugs formed on the plate, a bolt slidably associated with the plate and operable between the lugs, means carried by the other gate section for engaging in rear of the bolt when the sections are in unfolded position so as to prevent folding of the sections, a U-shaped manipulating element having the sides thereof pivoted between the lugs, and means for connecting the manipulating element to the bolt, whereby to effect sliding of the bolt when the manipulating element is operated.

1,223,823. RAILWAY DRAFT-RIGGING. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Mar. 18, 1915. Serial No. 15,345. (Cl. 213—64.)



1. A friction gear for draft riggings comprising a friction shell, friction shoes, a spring, a main wedge acting directly against said spring, auxiliary wedges between the main wedge and shoes, and anti-friction rollers between the auxiliary wedges and shoes, said shoes remaining stationary during initial portions of the actuation of the gear.

2. A friction gear for draft riggings comprising a friction shell, friction shoes coöperable therewith, a spring, a main wedge, auxiliary wedges between the main wedge and shoes, and a plurality of anti-friction rollers between each shoe and its corresponding auxiliary wedge, said shoes remaining stationary during initial portions of the actuation of the gear.

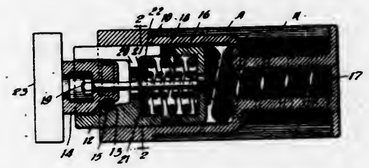
3. A friction gear for draft riggings comprising a friction shell, friction shoes coöperable therewith, a spring, wedging means interposed between said spring and shoes and including a main and auxiliary wedges, and anti-friction rollers between the main and auxiliary wedges and also between the auxiliary wedges and the friction shoes.

4. A friction gear for draft riggings comprising a friction shell, friction shoes coöperable therewith, a spring, wedging means interposed between said spring and shoes and including a main and auxiliary wedges, and anti-friction rollers between the main and auxiliary wedges and also between the auxiliary wedges and the friction shoes, there being a plurality of anti-friction rollers between each auxiliary wedge and adjacent friction shoe.

5. A friction gear for draft riggings comprising a friction shell, friction shoes coöperable therewith, a spring, a main wedge, auxiliary wedges interposed between the main wedge and the friction shoes, and anti-friction rollers interposed between the friction shoes and auxiliary wedges, said friction shoes and auxiliary wedges having roller bearing faces inclined inwardly toward the center of the gear to thereby cause the auxiliary wedges to move inwardly toward the axis of the gear during initial portions of buff and draft actions, said shoes remaining stationary during said initial portions of buff or draft actions.

[Claims 6 and 7 not printed in the Gazette.]

1,223,824. FRICTION-GEAR. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 18, 1915. Serial No. 56,430. (Cl. 213—64.)



1. In a friction gear, the combination with a plurality of friction shoes circularly arranged, of a washer, said shoes having flanges provided with radially extending ribs thereon against which said washer is adapted to bear.

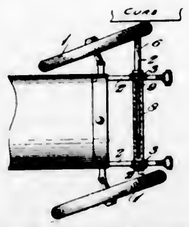
2. In a friction gear, the combination with a friction shell, a plurality of friction shoes circularly arranged and coöperating with said shell, a wedge coöperating with said shoes, and spring means resisting movement of said shoes relatively to the shell, of means for insuring a uniform application of the spring resistance to movement of all of said shoes, said means including a washer interposed between said spring means and said shoes and uniformly spaced circumferentially arranged projections on said shoes and against which said washer bears.

3. In a friction gear, the combination with a plurality of friction shoes, and spring means for resisting movement thereof, of a washer interposed between said spring means and said shoes, each of said shoes being provided with a radially extending rib tapered toward the center of the gear.

4. As an article of manufacture, a friction shoe for friction gears, said shoe having an outer cylindrical friction face, an inner wedge face, and a flange on its inner face perpendicular to the friction face, said flange being provided on the side remote from the wedge face, with a radially extending rib on which spring pressure is adapted to be applied.

5. A friction shoe for friction gears, said shoe having an outer friction face, an inner wedge face and a flange on its inner face, said flange being provided with a rib on the side away from said wedge face, said rib being tapered toward the free edge of said flange.

1,223,825. LOCKING DEVICE FOR AUTOMOBILES AND OTHER VEHICLES. CHARLES A. PABST, Philadelphia, Pa. Filed Dec. 29, 1916. Serial No. 139,465. (Cl. 70—90.)



1. In a locking mechanism for automobiles, the combination with the running wheels and the chassis frame, of a casing carried by said chassis frame, a locking member adjustably carried by said casing and adapted to abut against either running wheel to prevent the steering of said wheels, and means to secure said locking member in its adjusted position.

2. In a locking mechanism for automobiles, the combination with the running wheels and the chassis frame, of a casing secured to said chassis frame and provided with a slot, a locking bar longitudinally slidable in said casing, and adapted to abut against either of said wheels to prevent their steering, an actuating handle extending through said slot and connected with said locking bar to effect its adjustment, and means to secure said locking bar in its adjusted position.

3. The combination with the chassis frame and the running wheels of an automobile, of a casing secured to said chassis frame and provided with a polygonal shaped aperture extending through its ends, a polygonal shaped bar slidable in said aperture to bring an end in contact with a juxtaposed running wheel, said bar, when moved in an opposite direction, being adapted to engage the other running wheel and means to secure said bar in its operative and inoperative positions.

4. In a locking mechanism for automobiles, the combination with the running wheels and the chassis frame, of a casing extending transversely of the chassis frame and connected therewith, a bar slidable in said casing and provided with a plurality of recesses, said bar being adapted to engage either running wheel to prevent the steering thereof, and a lock carried by said casing and provided with a plunger adapted to engage one of said recesses to secure said bar in its adjusted position.

5. In a locking mechanism for automobiles, the combination with the running wheels and the channel bars of the chassis frame, of a casing extending laterally of and connected to said channel bars and provided with a slot in one of its walls, a locking bar longitudinally slidable in said casing and adapted to extend through either end, to contact with the juxtaposed running wheel, an actuating handle extending through said slot and engaging said locking bar, and a lock carried by said casing to interlock with said locking bar.

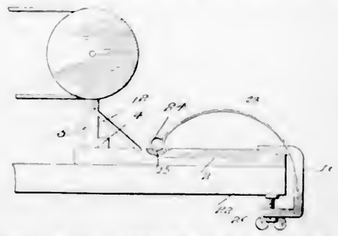
[Claims 6 to 10 not printed in the Gazette.]

1,223,826. SHARPENING-MACHINE. WILLIAM M. PALMER, Madison, Ind. Filed June 7, 1916. Serial No. 102,210. (Cl. 51—7.)

1. The combination with a grinding machine including a base frame, of a clamping member therefor including a frame, one end of said frame engaging said base frame, and a pair of spring arms extending from said clamp for engagement with said base frame.

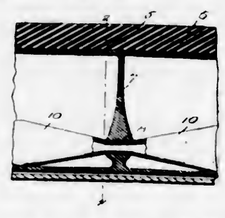
2. The combination with a grinding machine including a base frame composed of longitudinal stringers, of means for clamping said frame including a clamping member having a jaw for engagement with one end of said base frame, and a plurality of spring arms extending from said clamp for engagement with the longitudinal stringers of said base frame.

3. The combination with a grinding and polishing machine including a base frame composed of longitudinal stringers and end stringers, of means for supporting said frame including a clamp having a stationary jaw, spring



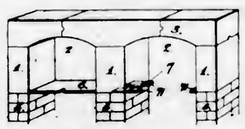
arms carried by said clamp for engagement with said longitudinal stringers, said base frame being provided with a recess to accommodate said jaw, and means for clamping said jaw to an object.

1,223,827. INNER TUBE TO BE USED ON AUTOMOBILES AND OTHER CONVEYANCES. EFFIE MAY PEARSON, Chicago, Ill. Filed Sept. 11, 1916. Serial No. 119,504. (Cl. 152—22.)



An inner tube for pneumatic tires having a series of transverse partitions dividing the interior of said tube into separate compartments, with apertures in said partitions for establishing communication between the compartments, a continuous expansible auxiliary tube inclosed in the aforesaid tube and passing through the compartments thereof and through the apertures in the partitions, said auxiliary tube being inflatable to close the apertures, and having a taper in the direction of the apertures, and inflating valves connected to both tubes.

1,223,828. FURNACE DEAD-PLATE. ADELBERT W. PETTIS, Jr., Boston, Mass., assignor of one-half to Charles N. Morgan, Troy, N. Y. Filed Jan. 17, 1916. Serial No. 72,531. (Cl. 110—86.)



1. In a furnace front, the combination with the side piers, the fire-brick jambs and the arched fire-brick top; of a dead plate independent of the said jambs shaped to snugly fit within the opening between the said jambs and supports projected inwardly from the jambs on which the plate is adapted to be reversibly mounted.

2. In a furnace front, the combination with the metal casing or front plate having a door closed inlet, a fire-brick front that abuts the casing and includes opposite side jambs and an arched top; of a dead plate having the plan shape of the opening in the fire-brick front, supports projected inwardly from the jambs on which the said plate is adapted to loosely rest, the front edge

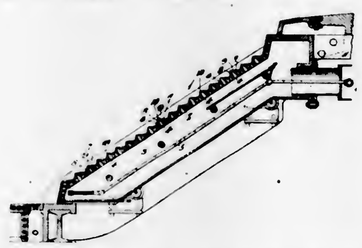
of the plate abutting the front casing at a point below the door opening, said front edge having a vertical notch and grooves in the upper and lower faces that merge with the notch, said notch grooves being adapted to receive a hooked implement for lifting the plate up from its seat to be removed from between its side jambs.

1,223,829. WHEEL. GEORGE PICKERING, Dover, Del. Filed Feb. 23, 1912. Serial No. 679,412. (Cl. 152—37.)



A wheel comprising a hub, spokes radiating from said hub, a felly at the outer ends of said spokes, blocks supported on the felly, arcuate plates attached to the side edges of the felly and extending outwardly therefrom, inturned flanges at the outer edges of the plates, springs supported on the blocks, a rim supported on the outer ends of the springs, arcuate plates attached to the rim and extending inwardly therefrom, inturned flanges on the extreme inner ends of the plates forming shoulders engaging the inner side of the rim, right angularly extending flanges formed at the extreme inner ends of the last mentioned flanges and projecting inwardly to a point intermediate the flanges on the first mentioned plates and the felly, the said flanges on the first mentioned plates frictionally engaging the right angularly extending portion to form dust tight joints between the plates on the felly and rim, and outturned flanges on the right angularly extending portion for engaging the inner sides of the inturned flanges on the felly to limit the outward movement of the rim with relation to the felly.

1,223,830. GRATE FOR AUTOMATIC STOKERS. JAMES REAGAN, Philadelphia, Pa. Filed Sept. 19, 1916. Serial No. 120,914. (Cl. 110—38.)

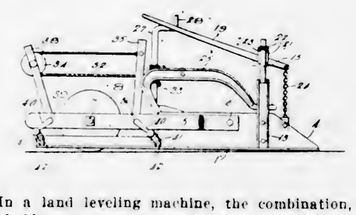


1. A grate for automatic stokers of the character described, having substantially horizontal and upright faces, ash retaining pockets or recesses formed in said faces, said recesses arranged in such a manner so as to substantially embrace the entire area of said faces, perforations in said grate between alternate pockets or recesses in the horizontal and upright faces, to allow for the discharge of air from an air chamber, below the grate and forming a part thereof, through the perforations in said grate to the fire.

2. A grate for automatic stokers of the character described, having substantially horizontal and upright faces, ash retaining pockets or recesses formed in said faces, said recesses arranged in such a manner so as to substantially embrace the entire area of said faces, perforations in said grate between alternate pockets or recesses in the horizontal and upright faces, the discharge openings of said perforations in the surface of said grate and intermediate said ash retaining recesses allowing for the discharge of air therefrom to the fire without disturbing the ash in the said recesses.

3. In a device of the character stated, a grate having its surface inclined and its fuel receiving face composed of detachable stepped sections, having substantially horizontal and upright faces, a series of ash retaining pockets arranged in staggered order in said horizontal face, so as to substantially embrace the entire area of said face, said face having a series of perforations therein, whose discharge openings are located between said ash pockets, so as to permit the discharge of air to the fire without disturbing the ash in said ash pockets.

1,223,831. GROUND-LEVELING MACHINE. HENRY J. REED, Townsend, Mont. Filed Nov. 23, 1916. Serial No. 133,005. (Cl. 37—5.)



1. In a land leveling machine, the combination, of a pair of side runners, a scraper blade carried by said runners, a pair of arms connected to said runners, an axle carried by said arms, a roller rotatably mounted upon said axle and positioned rearwardly of said scraper blade, a pair of substantially U-shaped channel irons attached to said runners adjacent their forward ends, a pair of standards slidably and rotatably carried by said channel irons, supporting wheels carried by said standards, pins extending diametrically through said standards adjacent their upper ends, saddles slidably mounted upon said standards and resting upon said pins, levers, pivotally connected to said saddles, flexible members connected to the forward ends of said levers and to the front ends of said runners for raising the front ends of the runners upon downward pivotal movement of the handle ends of said levers.

2. In a land leveling machine structure, the combination, of a pair of runners, a scraper blade carried by said runners, a pair of substantially horizontally positioned arms attached to said runners, a shaft carried by said arms, a roller rotatably mounted upon said shaft, a pair of crank shafts rockably carried by said arms, upstanding portions formed upon said crank shafts intermediate of their ends, a pulley carried by the upstanding portion of one of said crank shafts, a vertical rotatable rod supported by said scraper blade, a cable connected to said rod extending about said pulley and connected to the upstanding portion of the crank shaft other than the upstanding portion which carries said pulley, whereby when said vertical rotatable rod is rotated for winding said cable upon or unwinding it from the rod, said crank shaft will be rocked, and means connecting the cranks of said crank shaft to said runners for raising or lowering the rear ends of the runners upon rocking movement of the crank shaft.

3. In a land levelling machine structure, the combination, of a pair of runners, a scraper blade carried by said runners, a pair of substantially horizontally positioned arms attached to said runners, a shaft carried by said arms, a roller rotatably mounted upon said shaft, a pair of crank shafts rockably carried by said arms, upstanding portions formed upon said crank shafts intermediate of their ends, a pulley carried by the upstanding portion of one of said crank shafts, a vertical rotatable rod supported by said scraper blade, a cable connected to said rod extending about said pulley and connected to the upstanding portion of the crank shaft other than the upstanding portion which carries said pulley, whereby when said vertical rotatable rod is rotated for winding said cable upon or unwinding it from the rod, said crank shaft will be rocked, means connecting the cranks of said crank shaft to said runners for raising or lowering the rear ends of the runners upon rocking movement of the crank shaft, means for preventing accidental unwinding rotation of said rod, and means for raising the front ends of said runners independent of raising the rear ends of the runners.

1,223,832. ICE-CREEPER FOR HORSESHOES. HARRY L. RILEY, Atlantic City, N. J. Filed Nov. 6, 1916. Serial No. 129,648. (Cl. 168—30.)

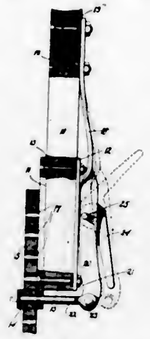


1. The combination with a horse-shoe, of an ice-creeper, consisting of a channeled plate, one wall formed into an overlapping beveled flange adapted to be slipped onto the shoe-surface from the inner side, a calking-device having a hollow threaded shank flanged intermediate of both ends, a movable pin fitting the body of said device, the shank of said device adapted to enter said creeper-plate and the said pin to bite into the said shoe-surface to prevent loosening, slipping or disarrangement of said creeper-plate in position and forming with said creeper-plate flange and set-screw the securing means for said plate with said shoe-surface, substantially as described.

2. The combination with a horse-shoe, of an ice-creeper, consisting of an angular channeled hinged two-part plate, one wall formed into an overlapping beveled flange adapted to be slipped onto the shoe-surface from the inner side and calking-devices having hollow threaded shanks flanged intermediate of both ends and with pins fitting the bodies of said devices, the shanks of said devices adapted to enter said creeper-plate and said pins to bite into the shoe-surface to prevent loosening, slipping or disarrangement of the creeper-plates in position and forming in conjunction with the creeper-plate flange and set-screws the securing means for the creeper-plates with said shoe-surface, substantially as and for the purposes described.

1,223,833. ATTACHMENT FOR COUPLING A PUMP TO A WINDMILL. ERNEST W. ROBBINS, Township One, Franklin county, Nebr. Filed Feb. 26, 1915. Serial No. 10,808. (Cl. 74—17.)

In a coupling device of the character described, the combination with a pump rod having a series of spaced openings and a member coupled therewith, a guide carried by said member to slidably receive said pump rod and having an opening to register with a selected one of said openings, and a wear plate opposite said guide, of a spring affixed at one end to said member and turned ninety degrees adjacent its other end to provide a bearing portion, a cam lever having its pivot member journaled through said bearing portion, and a retaining stud carried at a fixed point on said spring to operate in the way of said guide and enter a selected one of said orifices to retain said pump rod and said member in rigid relation, said cam lever engaging on said wear plate, whereby upon manipula-



tion of said cam lever, said retaining stud may be moved to release said pump rod, substantially as described.

1,223,834. ARTIFICIAL STONE SLAB, SHINGLE, AND PLATE AND COMPOSITION FOR MAKING SAME. WILLIAM SÄNGER, Passaic, N. J., assignor, by mesne assignments, to Asbestos Slate Roofing Manufacturing Company, Incorporated. Filed Aug. 30, 1915. Serial No. 48,072. (Cl. 106—24.)

1. A composition of matter for producing artificial stone slabs, shingles, plates and the like consisting of cement, asbestos fiber, chemically active precipitated anhydrous silica, and water, the said silica being adapted to effect the silification of the bases contained in the cement.

2. A composition of matter for producing artificial stone, slabs, shingles, plates and the like consisting of cement, finely divided asbestos fiber, chemically active precipitated anhydrous silica, and water, the said silica being adapted to effect the silification of the bases contained in the cement and to increase the strength and hardness of the composition in the course of time by forming insoluble silicate under the influence of atmospheric moisture and carbonic acid gas.

3. A composition of matter for producing artificial stone slabs, shingles, plates and the like consisting of cement, fine asbestos fiber, chemically active precipitated anhydrous silica and about twice the weight of the dry mass of water, the said silica being adapted to effect the silification of the bases of the cement.

4. A composition of matter for producing artificial stone slabs, shingles, plates and the like consisting of cement, fine asbestos fiber, chemically active precipitated anhydrous silica and about twice the weight of the dry mass of water, the said silica being adapted to effect the silification of the bases of the cement throughout the composition and of its surface portion by steam.

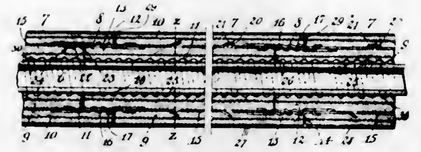
5. A composition of matter for producing artificial stone slabs, shingles, plates and the like consisting of hydraulic binding cement, fine asbestos fiber, chemically active precipitated anhydrous silica, and water, the said silica and free earthy basic oxids occurring in the surface portion of the composition being adapted to be hydrated by steam and to form insoluble earthy silicates from the hydrated substances.

[Claims 6 to 8 not printed in the Gazette.]

1,223,835. PIPE-COVER. SIMON SCHMAUS, Buffalo, N. Y., assignor of one-half to Charles J. Dudley, North Tonawanda, N. Y. Filed Sept. 15, 1913. Serial No. 789,804. (Cl. 154—44.)

1. A cover for steam pipes or the like formed in sections of a moldable substance and having threaded mortise and tenon connections embedded therein.

2. A cover for steam pipes or the like formed in sections of a molded substance, each section having a threaded tenon connection member embedded therein at one end and a threaded mortise connection member embedded therein at its other, the tenons of each section being threaded into the mortise of an adjoining section.



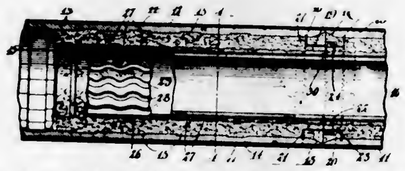
3. A cover for steam pipes or the like formed in sections of molded material, adjoining sections having their adjacent ends abutting and being provided with invisible co-acting threaded portions of different material than said molded material embedded in the latter and fitting one within the other.

4. A cover for steam pipes or the like formed in sections of molded material having mortise and tenon connections, each tenon having a metallic facing and each mortise having a metallic lining, said metallic lining being embedded within the molded material and the inner ends only of the metallic facings being embedded in said material.

5. A cover for steam pipes or the like formed in sections of a molded substance having tenon and mortise connections, a foundation tube for each section embedded in said substance and having a threaded portion facing the tenon and a thread portion lining the mortise, the tenons of each section entering the mortise of an adjoining section.

[Claims 6 to 18 not printed in the Gazette.]

1,223,836. PIPE-COVER. SIMON SCHMAUS, Buffalo, N. Y., assignor of one-half to Charles J. Dudley, North Tonawanda, N. Y. Filed May 14, 1914. Serial No. 838,611. (Cl. 154—44.)



1. A covering for steam pipes or the like, comprising an exterior wooden member and a body portion formed of pulp or other plastic material molded into said exterior wooden member, the latter serving as both a mold for said pulp or other plastic material and as the outer member of the completed cover said body portion being concealed by said exterior wooden member.

2. A covering for steam pipes or the like, comprising a cylindrical exterior member formed of thin wooden staves having their longitudinal edges in contact and a body portion formed of pulp or other plastic material molded into said exterior member, the latter serving both as a mold for said body portion and as a cover for the same to conceal said body portion.

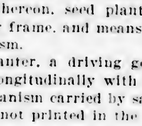
3. A covering for steam pipes or the like, comprising an exterior wooden member and a body portion bonded to the interior surface of said exterior wooden member said body portion being wholly concealed by said exterior wooden member.

4. A covering for steam pipes or the like, comprising an exterior wooden member formed of thin staves constructed into cylindrical form, an inner asbestos member, and an intermediate member molded of pulp or other plastic material.

5. A covering for steam pipes or the like, comprising an exterior wooden member formed of thin staves constructed into cylindrical form, an inner asbestos member, and an intermediate member molded of pulp or other plastic material and bonded to said exterior and inner members.

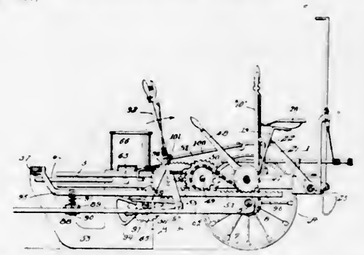
[Claims 6 to 18 not printed in the Gazette.]

1,223,837. SHADE-ROLLER SUPPORT. JOHN A. SHARPS, Bablin, W. Va. Filed Jan. 18, 1916. Serial No. 72,807. (Cl. 156—34.)



A shade roller support comprising a bracket having an intermediate portion and side portions, means for drawing the side portions toward each other, a wheel having an axle journaled in the side portions and provided with bosses which are frictionally engaged by the side portions, the wheel having means for engaging a shade roller, teeth provided upon the wheel and a chain trained about the wheel and having links which mesh with the teeth.

1,223,838. CORN-PLANTER. JOSEPH T. STEELE, Windsor, Ill., Filed May 2, 1916. Serial No. 94,925. (Cl. 111—6.)



1. In a corn planter, a driving gear frame, a runner frame adjustable relative thereto, seed planting mechanism carried by said runner frame, and means for advancing said runner frame relative to said driving gear frame.

2. In a corn planter, a driving gear frame, a runner frame adjustable relative thereto, seed planting mechanism carried by said runner frame, means for advancing said runner frame relative to said driving gear frame, and means for actuating said seed planting mechanism selectively when said runner frame is in the advanced position.

3. In a corn planter, a driving gear frame, a runner frame adjustable longitudinally thereof, and means for exerting upward pressure on said runner frame.

4. In a corn planter, a driving gear frame, a runner frame adjustably and flexibly connected thereto, means for adjusting said runner frame, means for exerting an upward pressure thereon, seed planting mechanism carried by said runner frame, and means for selectively actuating said mechanism.

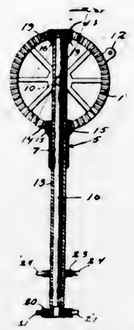
5. In a corn planter, a driving gear frame, a runner frame adjustable longitudinally with respect thereto, and seed planting mechanism carried by said runner frame.

[Claims 6 to 11 not printed in the Gazette.]

1,223,839. EGG-BEATER. WILLIAM DAVID TURNER, Tucson, Ariz. Filed Aug. 21, 1914. Serial No. 857,871. (Cl. 259—132.)

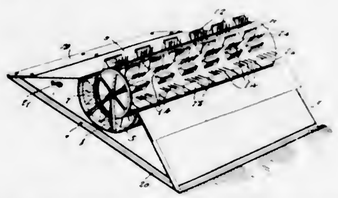
1. An egg beater comprising a sleeve, a shaft mounted thereon, a head secured to the lower end of the shaft and provided with radiating arms carrying the beaters, a second head threaded on the lower end of the said sleeve, radiating arms threaded into the second head also carrying

beaters and adapted to impinge the surface of the sleeve to prevent accidental rotation of the head in relation to the sleeve and means for rotating the shaft and sleeve in opposite directions.



2. In an egg beater, a beater head, a shaft threaded through said beater head, and beater arms threaded into the head and adapted to bear against the shaft to lock the head from rotating on said shaft.

1,223,840. PULVERIZER. GEORGE A. WAGATHA, New Orleans, La. Filed Dec. 20, 1916. Serial No. 137,979. (Cl. 55—1.)



1. In a device as set forth, a body, the front and rear sides of said body angling upwardly and toward each other, said body provided with a substantially semi-cylindrical recess formed between the upper facing edges of said front and rear inclined sides, a drum rotatably mounted within said recess, a plate attached to the forward lower edge of said forward inclined sides for loosening dirt and guiding it onto said forward inclined sides.

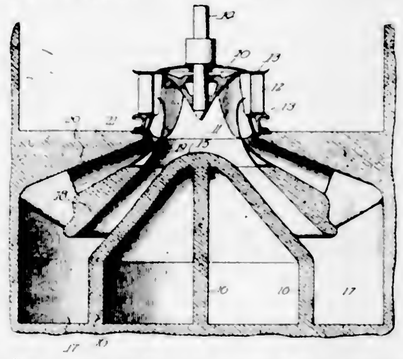
2. In a device as set forth, a body, the front and rear sides of said body angling upwardly and toward each other, said body provided with a substantially semi-cylindrical recess formed between the upper facing edges of said front and rear inclined sides, a drum rotatably mounted within said recess, a plate attached to the forward lower edge of said forward inclined sides for loosening dirt and guiding it onto said forward inclined sides, a plurality of crushing spurs attached to the outer surface of said drum in rows longitudinally and circumferentially of the drum, and crushing spurs arranged in rows longitudinally and circumferentially of the inner surface of said substantially semi-cylindrical recess, the spurs carried by the walls of said recess being disposed staggeredly with respect to the drum carried spurs.

3. In a device as set forth, a body, the front and rear sides of said body angling upwardly and toward each other, said body provided with a substantially semi-cylindrical recess formed between the upper facing edges of said front and rear inclined sides, a drum rotatably mounted within said recess, a plate attached to the forward lower edge of said forward inclined sides for loosening dirt and guiding it onto said forward inclined sides, a plurality of crushing spurs attached to the outer surface of said drum in rows longitudinally and circumferentially of the drum, and crushing spurs arranged in rows longitudinally and circumferentially of the inner surface of said substantially semi-cylindrical recess, the spurs carried by the walls of said recess being disposed staggeredly with respect to the drum carried spurs, and a plurality of tines carried by said drum and arranged in sets, said sets of tines being disposed in alinement with the circumferential rows of said drum carried spurs and intermediate of the rows.

4. In a device as set forth, a body, said body provided with a substantially semi-cylindrical recess, means for guiding dirt upwardly into said recess, a drum rotatably mounted within the recess, a plurality of crushing spurs carried by the periphery of said drum and arranged in rows longitudinally and circumferentially of the drum, and a plurality of crushing spurs projecting into said recess and disposed staggeredly with respect to the drum carried spurs.

5. In a device as set forth, a body, said body provided with a substantially semi-cylindrical recess, means for guiding dirt upwardly into said recess, a drum rotatably mounted within the recess, a plurality of crushing spurs carried by the periphery of said drum and arranged in rows longitudinally and circumferentially of the drum, and a plurality of crushing spurs projecting into said recess and disposed staggeredly with respect to the drum carried spurs, and a plurality of tines carried by said drum and disposed in sets alining with the circumferential rows of said drum carried crushing spurs.

1,223,841. REGAINER FOR WATER-POWER PLANTS. WILLIAM M. WHITE, Milwaukee, Wis. Filed May 26, 1913. Serial No. 769,790. Renewed Jan. 25, 1917. Serial No. 144,547. (Cl. 253—122.)



1. In a device of the class described, the combination of a water-wheel mounted in a water passage, the space beneath said passage being divided into a plurality of unobstructed conduits within which the water may whirl, the conduits receiving water from the water-wheel at different velocities and causing said water to be expanded into a progressively increasing space, whereby pressure is regained from velocity, substantially as described.

2. In a device of the class described, the combination of a water-wheel mounted in a water passage, a flared tube registering with said passage, said tube being adapted to receive water passing through a portion of said water wheel, and an annular radial passage arranged around said tube, the walls of said passage being formed to deflect the water from axial to substantially radial in a relatively sharp bend near the runner, said last named passage being adapted to receive and permit the radial expansion of water discharged through a portion of said water wheel runner, substantially as described.

3. In a device of the class described, the combination of a water wheel and a plurality of annular concentric passages communicating with the discharge of the wheel and receiving water from different portions thereof, each

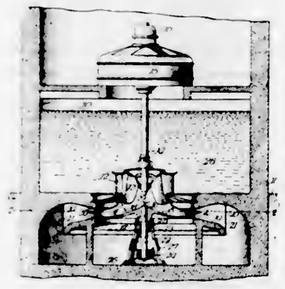
passage being unobstructed to permit the whirling of the water therein and having a component radial to the axis of the rotation of the wheel.

4. In a device of the class described, the combination of a water-wheel mounted in a water-passage, the space beneath said water-wheel being divided into a plurality of separated passages, one of said passages being disposed to cause substantially radial flow of water, each of said separated passages being centrally arranged with reference to said water-wheel whereby water discharged from one portion of said water-wheel is permitted substantially radial expansion in all directions from said water-wheel, substantially as described.

5. In a device of the class described, the combination of a water-wheel mounted in a water passage, said wheel having runner vanes, webs between adjacent vanes, the space at the discharge end of said water-wheel being divided into a plurality of separated passages, the openings into said passages registering with those divisions of the water-wheel which are formed by said webs, the outer of said passages having an extreme flare whereby water received into said passages from the water wheel is permitted substantially radial flow in all directions, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,223,842. WATER-WHEEL-SPEED INCREASER. WILLIAM M. WHITE, Milwaukee, Wis. Filed Aug. 20, 1913. Serial No. 785,657. Renewed Jan. 25, 1917. Serial No. 144,548. (Cl. 253—122.)



1. The combination of a water wheel and a revoluble impeller mounted for rotation in the same direction as said water wheel fitted with vanes forming passages to receive the water from the water wheel runner, the impeller being driven by such water, the vanes of said impeller extending outwardly from the center and maintaining a rotary motion in the water in the impeller creating centrifugal force to increase the effective head acting on the water wheel, substantially as described.

2. The combination of a water wheel and a revoluble impeller receiving the discharge water from the water wheel runner, the impeller being driven by such water in the same direction as said water wheel runner, the rotary motion of the impeller discharging the water by means of centrifugal force against a greater pressure than exists at the discharge of the water wheel runner, substantially as described.

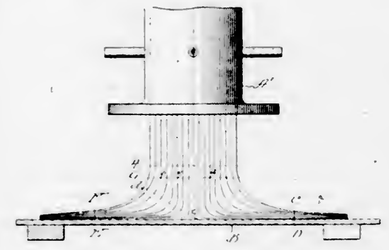
3. The combination with a water wheel of a revoluble impeller fitted with vanes forming passages through which the water from the water wheel is adapted to be discharged, and stationary vanes located at the discharge of said impeller forming passages of increasing capacity whereby the energy of the water delivered from said impeller is transformed from velocity into pressure, substantially as described.

4. The combination of a water wheel, a revoluble impeller disposed at the discharge of said water wheel, said impeller being fitted with vanes forming passages to receive the water from the water wheel runner, such vanes being disposed so as to give rotary motion to the water flowing through the impeller, means providing an annular passage about said impeller, such annular passage increasing in volume from the impeller wheel outwardly, whereby the energy of the water discharged from the impeller is transformed from velocity into pressure, the pressure maintained at the discharge of the annular passage being greater than that existing at the discharge of the water wheel, substantially as described.

5. In water wheel construction, the combination of a water wheel and a revoluble impeller receiving and driven by discharge water from the water wheel, said impeller being mounted for rotation in the same direction as that of said water wheel and provided with regaining passages disposed about the eye of the impeller.

[Claims 6 to 16 not printed in the Gazette.]

1,223,843. APPARATUS FOR UTILIZING THE HYDRAUCONE ACTION OF WATER. WILLIAM M. WHITE, Milwaukee, Wis. Filed July 6, 1915. Serial No. 38,373. Renewed Jan. 25, 1917. Serial No. 144,549. (Cl. 253—17.)



1. A hydraucone chamber for the purpose described, formed by a casing having conoidal walls of increasingly greater cross-sectional area in the direction of flow than that required to inclose a free hydraucone, substantially as described.

2. In a conduit, the combination of a casing having side walls shaped to form a frusto-conoidal chamber, a deflecting plate forming the bottom of said chamber, said walls being spaced from said plate to form a discharge outlet for the water in said chamber whereby the direction of flow of the water passing from the open end to the bottom of the chamber is changed from axial to radial without unnecessary losses, and issues from said discharge in stream lines of substantially equal velocity, substantially as described.

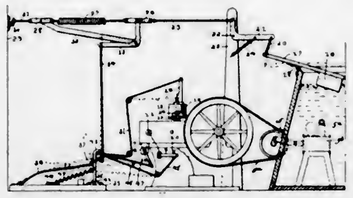
3. As a device, conoidal walls inclosing a chamber having a circular inlet and an annular outlet and a substantially flat base, the radius of curvature of the conoidal walls being such as to maintain within the chamber reactions of a free hydraucone, substantially as described.

4. A hydraucone regainer comprising a casing having an axial entrance and side walls shaped to form frusto-conoidal chamber, a deflecting plate forming the bottom of said chamber, said walls being of slightly increasingly greater capacity than that required to inclose a hydraucone and being spaced away from said plate to form a discharge outlet of greater capacity than that at entrance, whereby the direction of flow of the water is changed from axial to radial without unnecessary losses and for the regain of pressure from velocity, substantially as described.

5. The combination, with a frusto-conoidal chamber and a plate disposed adjacent thereto against which the water passing through said chamber impinges and is directed radially therefrom in all directions, of a collecting chamber surrounding said plate and communicating with said conoidal chamber, substantially as described.

[Claims 6 to 27 not printed in the Gazette.]

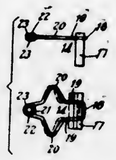
1,223,844. EXPLOSIVE-ENGINE-CONTROLLING MECHANISM. CLARENCE E. ANDERSON, Pecatonica, Ill. Filed Mar. 24, 1916. Serial No. 86,409. (Cl. 103—86.)



1. In combination, an explosive engine, a pump connected therewith, a tank connected with the pump, and a float arranged in the tank, a base plate, an inverted U-shaped member pivotally secured to said base plate, arms carried by the U-shaped member, engine-controlling means, flexible operating members carried by the arms and connected with the engine controlling means, spring means normally tending to move said U-shaped member in one direction, a pivoted latch plate having an offset adapted to lock said pivoted member in adjusted position, and means operable by the float to release said latch plate.

2. In combination, an explosive engine, a pump connected therewith, and a tank connected with the pump, a pivoted lever, a float carried by one end of said lever and extending into the tank and operable by the liquid therein, a support, a spring connected with said support, a link connected with said spring, a connection between said link and said lever including a pivoted bell crank, a relatively long link connected with the end of said spring opposite the first-mentioned link, a bell crank pivotally connected at its bight portion to the relatively long link and having one end connected with the first-mentioned link, a base plate, a member pivotally secured to said base plate, engine controlling means operable by the pivoted member, spring means normally tending to move said pivoted member, a latch plate for locking said pivoted member in adjusted position, and means connecting the other arm of said second-mentioned bell crank with said latch plate.

1,223,845. BUFFER. WILLIAM H. ASPEGREN, Quincy, Mass. Filed Apr. 21, 1916. Serial No. 92,754. (Cl. 16—77.)



1. A buffer comprising a resilient member, means for attaching said resilient member to a door or door frame, said means extending substantially at right angles to said resilient member, and a positioning member engaging said attaching means and extending at right angles thereto, said positioning member adapted to be fastened to said door or door frame.

2. A buffer comprising an angle member, one side of said angle member consisting of a flat piece of resilient material, the other side of said angle member consisting of a U-shaped wire, the legs of said U-shaped wire passing through said piece of resilient material and forming V-shaped wings whereby said piece of resilient material may be fastened either to a door or door frame, two sides of said angle member being adapted to simultaneously contact with the two sides of a right angled recess and also to contact simultaneously with the edge and one face of a door to which it may be attached.

3. A buffer comprising a resilient shock and sound absorbing member, a U-shaped wire, the legs of said U-shaped wire passing through said member, oppositely disposed V-shaped wings formed by said legs, an eyelet at the extremities of said legs, means passing through said eyelet adapted to fasten said buffer to a door frame or door, and a positioning member adapted to engage said buffer and coöperate with said fastening device to attach said buffer to said door frame or door.

1,223,846. COMPOSITION OF MATTER FOR CLEANING OR POLISHING BLACKBOARDS OR THE LIKE. JOHN N. BACHMAN, Slatington, and MORRIS L. BACHMAN, Walnutport, Pa. Filed Feb. 15, 1915. Serial No. 8,322. (Cl. 51—1.)

1. A composition of matter, comprising rosin, shellac, a wax, and finely divided mineral material.

2. A composition of matter, comprising sulfur, shellac, pitch asphaltum, rosin, crystolon, (carborundum, and slate dust.

3. A composition of matter, comprising rosin, pitch asphaltum, shellac, and carborundum.

4. A composition of matter, comprising shellac, pitch asphaltum, powdered carborundum, and crystolon.

5. A composition of matter of the character described, comprising sulfur, wax, rosin, pitch, asphaltum, shellac, powdered carborundum, and powdered slate.

[Claim 6 not printed in the Gazette.]

1,223,847. RAIL-JOINT. JAMES B. BAUM, Grand Junction, Colo., assignor of one forty-fifth to Pat Geiston and one forty-fifth to John P. Moore, Grand Junction, Colo. Filed May 2, 1916. Serial No. 94,916. (Cl. 239—13.)

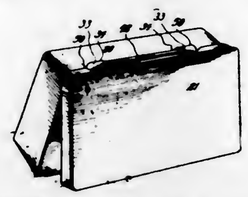


A rail joint comprising a pair of abutting rail sections, plates mounted on opposite sides of the rail sections, ribs formed on the plates, a base plate underlying the rail and having its opposite ends extending beyond the side of the rail and provided with raised portions, the inner edges of the raised portions being beveled, plates located at the opposite ends of the base plate and having cutout portions therein for receiving the raised portions on the base plate and to provide shoulders for engaging the beveled edges on the raised portion, clamping members carried by the last-mentioned plates and operatively engaging the first-mentioned plates and fastening elements extending through the last-mentioned plates and the base plate and located on the opposite sides of the clamping members.

1,223,848. CONSTRUCTING LID-HINGES FOR SHEET-METAL RECEPTACLES. GEORGE WILLIAM BERRY, Rose Bay, near Sydney, New South Wales, Australia, assignor to The Wireless Hinge Manufacturing Company Limited, Sydney, Australia. Filed Apr. 22, 1916. Serial No. 93,013. (Cl. 113—116.)

1. A process for hingedly connecting a sheet metal receptacle body and rimmed lid, which consists in producing bulbed tongues on said body portion, bending a depending marginal portion of the lid rim stock to a tubulous or fluted section, slotting out rim stock rearward of the tubularly bent margin thereof thereby leaving portions of said tubulous or fluted margin to form pintles, positioning said pintles under said tongues, and inclosing said tongues thereover.

2. The herein described improvement in the manufacture of sheet metal receptacles with rimmed lids hingedly attached thereto by pintles which are formed of the lid rim stock and are embraced by bulbed tongues on the body member, which consists of the following named operations in successive order:—firstly bending a depending margin of said rim stock to form a tubulous or fluted edge thereon, and secondly slotting back said stock rearward of said tubulous edge, thereby forming pintles engageable by said body tongues.



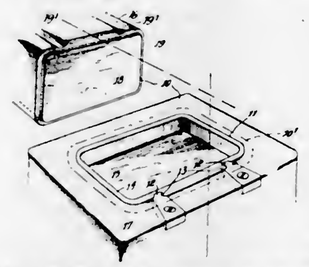
3. An improved process of hingedly connecting a rim lid to a receptacle body constructed in sheet metal, which consists in forming the lid with a centrally disposed depending portion on one of the rims thereof, bending the marginal portion of said depending stock to a tubulous or fluted edge and thereafter forming pintles from the ends of said tubulous or fluted lid edges by cutting away portion of the lid stock above and around the ends of the same: forming two open end bulbs on the back of the receptacle body, slitting the body stock over the top and outer ends of each of said bulbs and then bending the stock bounded by said incisions outwardly to form bulbed tongues, introducing said pintles beneath said bulbs, and inclosing said tongues over said pintles.

4. An improved process of hingedly connecting a receptacle body and a rimmed lid therefor constructed of sheet metal, consisting in forming the lid with a depending portion on the back rim thereof, then forming a bent edge on the margin of said depending portion, subsequently producing pintles at the ends of said bent edge by slotting out portions of the rim above the ends of the same, forming bulbed tongues on the back of the receptacle body, and finally inclosing said tongues over said pintles.

5. A process for hingedly connecting a sheet metal receptacle body and rimmed lid, which consists in producing bulbed tongues on said body portion, forming one rim of the lid with a depending portion terminated by curved notches extending into the rim stock above said depending portion thereof, bending the depending portion of the rim stock to a tubulous or fluted section, slotting out rim stock rearward of the tubularly bent margin thereof inward from the beforementioned notches at the ends thereof, thereby leaving the end portions of said tubulous fluted margin projecting to form pintles, introducing said pintles into said bulbed tongues, and inclosing said bulbed tongues thereon.

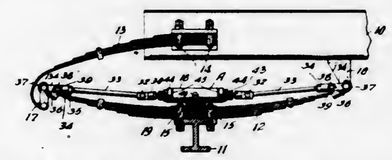
[Claims 6 and 7 not printed in the Gazette.]

1,223,849. MANUFACTURE OF LIDS FOR PRESSED SHEET-METAL RECEPTACLES. GEORGE WILLIAM BERRY, Rose Bay, near Sydney, New South Wales, Australia, assignor to The Wireless Hinge Manufacturing Company Limited, Sydney, Australia. Original application filed Apr. 22, 1916, Serial No. 93,013. Divided and this application filed Aug. 11, 1916. Serial No. 114,371. (Cl. 113—42.)



An apparatus for forming a rimmed lid with a depending portion on one rim and from the margin of which hinge pintles are formed comprising a forming punch and a die-block, a deep groove formed vertically in said die-block, notch cutters projecting inwardly from one side of said groove, recesses in the inner sides of said cutters, a drawing ring having its outer periphery shaped to fit snugly in said groove and around said cutters, a forming block located within said drawing ring and below the level of said cutters, said punch having its periphery shaped to fit neatly in said groove, and an ejector block fitting slidably within the lower part of said punch.

1,223,850. SHOCK-ABSORBER FOR VEHICLES. HANS BRATLIE, Chicago, Ill. Filed July 26, 1916. Serial No. 111,376. (Cl. 267—19.)



1. In a shock absorber of the character described, the combination with a spring container, of a spring within said container, a plunger within the container for compressing said spring, a connecting rod operatively attached to the plunger, and means for attaching the free end of said rod to the main spring or other part of a vehicle, said means including a clip bent into hook shape at one end and forked at its other end, the forked end being pivotally connected to the end of said rod and the hook shaped end of the clip fitting over the spring or other portion of the vehicle.

2. A shock absorber of the character described comprising a spring controlled plunger, a rod for actuating said plunger and means for connecting the outer end of said rod to the main spring or other suitable portion of a vehicle, said means including an adjustably threaded nut mounted on the end of said rod, and a clip pivotally attached to said nut, said clip having a hook shaped end adapted to fit over a main spring end or other suitable portion of the vehicle.

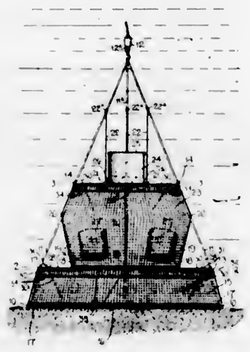
3. The combination with the chassis, axle, and main spring of an automobile, of a shock absorber, the latter comprising a spring chamber rigidly attached to the axle, springs within said chamber, plungers for compressing said springs, oppositely extended rods for actuating said plungers, and means for connecting the ends of said rods to portions of the main spring whereby, upon relative approach of the chassis and axle, the rods will be pulled apart, and upon relative separation from normal position of the chassis and axle, the rods will be forced toward each other.

4. The combination with a shock absorber, including a spring and a plunger for compressing the spring, of a connecting rod attached to the plunger, and means for attaching the free end of said rod to the spring or other portion of a vehicle, said means including a hook-shaped member adapted to fit over the end of said spring or other portion of the vehicle, said hook-shaped member being pivotally connected to said free end of the rod.

1,223,851. CRAB AND TERRAPIN TRAP. ROBERT E. CARTER, Middletown, N. C. Filed Dec. 20, 1916. Serial No. 138,061. (Cl. 43—20.)

1. In a trap, an annular body formed of a lower portion and an upper portion less in diameter than the lower portion whereby to provide an annular entrance opening disposed in a horizontal plane and extending entirely around the upper portion of the body, a ring supported in said entrance opening in concentric relation to the annular body, and a plurality of fingers pivotally mounted upon the ring, having their outer ends counterweighted and their inner ends normally engaging beneath the lower end of the upper portion of the body.

2. In a trap, an annular body formed of a lower portion and an upper portion less in diameter than the lower portion whereby to provide an annular entrance opening disposed in a horizontal plane and extending entirely around the upper portion of the body, a ring supported in said entrance opening in concentric relation to the annular body, and a plurality of pairs of fingers pivotally mounted upon the ring having their outer ends counterweighted and their inner ends normally engaging beneath the lower end of the upper portion of the body, said pairs of fingers being formed with eyes embracing the ring.

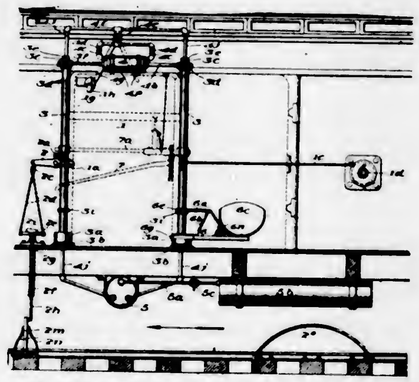


3. In a trap, an annular body formed of a lower portion and an upper portion less in diameter than the lower portion whereby to provide an annular entrance opening disposed in a horizontal plane and extending entirely around the upper portion of the body, a ring supported in said entrance opening in concentric relation to the annular body, a plurality of pairs of fingers pivotally mounted upon the ring having their outer ends counterweighted and their inner ends normally engaging beneath the lower end of the upper portion of the body, said pairs of fingers being formed with eyes embracing the ring, and an annular screen disposed below the outer ends of the fingers and preventing access thereto.

4. A trap comprising a plurality of upwardly converging braces arranged in spaced relation, a lower annular body formed of perforate material attached to said braces, an upper annular body supported by said braces and having its lower edge concentric to the upper edge of the first named portion of the body and spaced therefrom, a bait box supported at the upper end of the upper body portion and concentric thereto, there being an annular entrance opening between the bait box and the members and between the lower end of the edge of the second named body portion and the upper edge of the first named body portion, both of said annular openings being disposed in horizontal planes and a plurality of pivoted fingers operatively supported across said entrance openings and having counterweighted outer ends, the fingers being disposed side by side and being independently movable.

5. A trap of the character described comprising a base ring, upwardly and inwardly extending braces attached to the base ring, a second ring disposed above the base ring and attached to said brace, a third ring disposed above the second ring and attached to the bases, a wall of perforate material attached to the base and second rings and to said braces, a wall of perforate material attached at its upper edge to the third ring, extending downward along said braces and attached thereto, and then extending downward and inward, an operatively supported ring to which the lower edge of this last named wall is attached, a ring supported from the braces and disposed on a level with the upper edge of the second named wall, a ring operatively supported between the second named ring and the lower edge of the second named wall, a plurality of pairs of fingers independently pivoted upon said last named ring, the fingers being counterweighted at their outer ends whereby they are yieldingly held in a horizontal position, a ring disposed between the third named ring, a bait box concentric thereto and operatively supported upon the braces, a plurality of pairs of counterweighted fingers swingingly mounted upon the last named ring and normally supported in a horizontal position, and a bottom operatively engaged with the base ring.

1,223,852. MAIL CATCHING AND DELIVERING APPARATUS. JAMES B. CARY, Mason City, Iowa, assignor of one-third to Claxton W. Lacy, Des Moines, Iowa, and one-third to Charles J. Raffensperger, Victor, Iowa. Filed Mar. 3, 1916. Serial No. 81,863. (Cl. 258—6.)



1. In combination with a car having a door a mail discharger, and means for operating said discharger including a cylinder, means for supplying air to said cylinder, a valve for controlling the admission of air to said cylinder and means on the car door for automatically opening said valve when the door opens.

2. In combination a mail discharger, and means for operating said discharger including an air cylinder means for supplying air to said cylinder, a valve for controlling the admission of air to said cylinder and devices for operating said valve upon the opening of the car door, with a catch for holding said door normally in closed position, and tripping mechanism for releasing said catch.

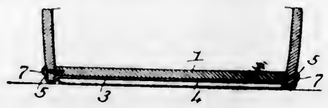
3. In mail discharging apparatus, the combination of a rotatable shaft, a discharger, an air cylinder, a piston therein, means connected with said piston for turning said shaft, and a valve for controlling the admission of air to and from said cylinder, with a catch on the car door, a valve lever adapted to be engaged by said catch to open the valve when the door opens; means for normally holding the door in closed position, and means for opening the door when disengaged by the catch.

4. In mail discharging apparatus, the combination of a rotatable shaft, a discharger, an air cylinder, a piston therein, means connected with said piston for turning said shaft and a valve for controlling the admission of air to and from said cylinder, with a catch on the car door, a valve lever adapted to be engaged by said catch to open the valve when the door opens; means for normally holding the door in closed position, and means for opening the door when disengaged by the catch, trip devices for disengaging the catch, and a relatively fixed device on the track adapted to actuate the trip devices.

5. In mail discharging apparatus, the combination of a rotatable shaft, a discharger, an air cylinder, a piston therein, means connected with said piston for turning said shaft, means for supplying compressed air to said cylinder, a valve for controlling the admission of air to and from said cylinder, a lever for operating said valve, a catch on the car door adapted to engage said lever and open the valve when the door opens, means for normally holding the door in closed position, means for opening the door, trip devices for disengaging the catch, and a relatively fixed device on the track adapted to actuate the trip devices.

[Claims 6 to 10 not printed in the Gazette.]

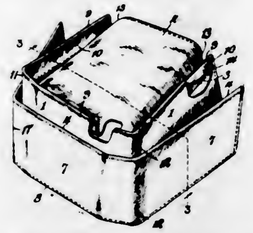
1,223,853. BARREL-CLEAT. LESTER I. COPE and ANDREW F. ZINSMASTER, Pittsburgh, Pa. Filed Sept. 14, 1915. Serial No. 50,652. (Cl. 217—72.)



1. A barrel cleat consisting of a metallic strap for snug engagement with a head of the barrel, said strap being stamped along its longitudinal center to provide a rib, the terminals of which fall short of the strap ends, said rib adapted to lie substantially flush with the terminals of the barrel staves for contact with the supporting medium, to relieve the barrel head of pressure when the barrel is in an upright position.

2. A barrel cleat consisting of a metallic strap for engagement with the head of the barrel, the opposite ends of said strap being inherently flexible to permit engagement of the same over the barrel staves for securement to the latter, and a rib formed on said strap, adapted to lie substantially flush with the portions of the strap, which engage over the barrel staves for contact with the supporting medium, whereby the barrel head is relieved of pressure.

1,223,854. NURSE'S CAP. HARRIET CUTLER, Los Angeles, Cal. Filed June 27, 1916. Serial No. 106,188. (Cl. 2—106.)



1. A cap comprising a body portion having integral front and side walls, an integral band rising from the bottom of the front and side walls and having its upper edge spaced from the upper edges of the said walls, an integral top member extending rearwardly from the upper edge of the front wall and lying between the side walls, and means for connecting the top member to the side walls.

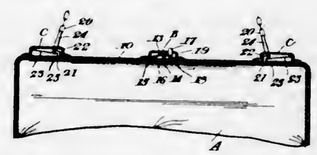
2. A cap comprising a body portion, having integral front and side walls, an integral upstanding band surrounding the front and sides and in spaced relation thereto, downwardly extending flaps carried by the upper edges of the side walls on the inner sides thereof, and a centrally located integral top portion having its side edges downturned so as to lie against said flaps and be secured thereto.

3. A cap comprising a continuous member forming the front and side walls, an integral hemmed band rising from the bottom edges of the front and side walls and surrounding the same and having its upper edge free and spaced therefrom and terminating below the upper edges of the front and side walls, flaps depending from the upper edges of the side walls, and an integral top member extending rearwardly from the upper edge of the front wall and lying between the side walls and having its side edges fastened to the said flaps.

4. A blank for a cap formed of a single piece of fabric comprising an elongated substantially rectangular body member having a deep hem along one long side thereof and folded back at the hem line onto the body member, so as to form the outer band of the cap, and an outwardly directed centrally located extension at the other long side of the body member to form the top of the cap, said extension being secured to the body member.

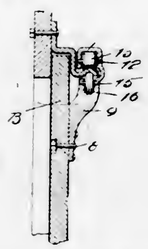
5. A blank for a cap comprising an elongated substantially rectangular body member having a rectangular extension projecting from one side edge, and longitudinal crease lines extending from end to end, one of the crease lines being spaced from one side edge a sufficient distance to provide a band for the cap, while the other crease line is spaced a less distance from the other side edge to leave flaps on each side of the said extension.

1,223,855. AUTOMATICALLY-LOCKING HAND-BAG. JOSEPH LOUIS CYRILLE NOËL and JOSEPH EMILE NOËL, Ottawa, Ontario, Canada. Filed Oct. 18, 1915. Serial No. 56,562. (Cl. 190—55.)



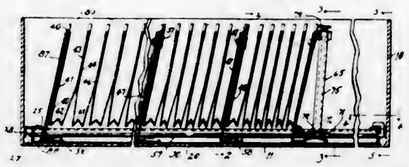
In a bag and in combination, superimposed reinforcing members for the bag lips having registering slots therein, pivoted catch members movable into said slots to lock the bag lips together adapted to be automatically actuated when the bag is suspended from the hand grip, and resilient means for unlocking the catch members when the tension on the hand grip has been released.

1,223,856. DOOR-HANGER. WILLIAM A. DAVIS, Hammond, Ind., assignor of one-half to Doll L. Newman, Hammond, Ind. Filed Oct. 26, 1915. Serial No. 58,036. (Cl. 16—90.)



In combination, a plate formed of metal and being supported at one edge, the said plate being bent adjacent the supporting portion outwardly and at right angles and then downwardly to provide a pocket, the outer edge of said plate being bent outwardly and at right angles to the downwardly extending portion, the metal adjacent the said outer edge being bent to provide an upwardly extending rib on its upper face and a groove on its under face coextensive with said plate and parallel with the free edge thereof, a door having its upper edge inclosed by said pocket, a bracket on said door inclosing the free edge of said plate, rollers rotatably mounted on said bracket above and below the free edge of said plate, the upper roller having a grooved periphery for engagement with said rib, and the under roller being engaged in the groove on the under side of said plate.

1,223,857. FILING DEVICE. WILLIAM L. DEMING. Salem, Ohio. Filed Sept. 16, 1915. Serial No. 51,042. (Cl. 129—16.)



1. In a filing device, the combination with a channel-shaped support, comparatively stiff upright plates, substantially vertical strips on said plates extending downwardly into the channel of the support, and a set of pockets between the plates and secured to them.

2. The combination of a suitable support, a series of upwardly extending comparatively stiff plates slidably mounted adjacent their lower edges in the support, a set of compartively flexible pockets between adjacent plates, each set comprising a series of loops connected together, the endmost loops of the set being connected to the plates adjacent thereto.

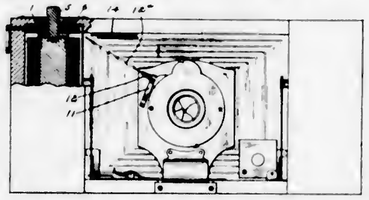
3. An expansible index file comprising sets of flexible pockets one behind the other, stiff individual supports for the different sets slidably mounted, the set of pockets between the supports being suspended therefrom.

4. The combination of a set of pockets connected together one behind the other, said pockets being open above and closed at the bottom, a reinforcing plate for the pockets, a metallic plate secured to the reinforcing plate and extending above it, the edges of said metallic plate being bent upon itself to provide a receptacle for an indexing device.

5. The combination of a set of filing pockets one behind the other, a substantially upright front plate for the set, spring means resisting the forward swinging of the front plate, and means for limiting the rearward swinging thereof.

[Claims 6 to 23 not printed in the Gazette.]

1,223,858. CAMERA. JOSEPH ANATOLE DESJARDINS and CHARLES TANCRÈDE DESJARDINS, Sorel, Quebec, Canada. Filed Sept. 7, 1915, Serial No. 49,370. Renewed Mar. 23, 1917. Serial No. 156,868. (Cl. 95—31.)



1. In a photographic apparatus, the combination with a casing provided with a shutter, of a film receiving roller mounted in said casing, a shutter operating lever, a spring arm on said casing having a fork to engage said lever, a cord for operating said spring arm, means for rotating the film receiving roller to the full extent of an exposure for each exposure, and means carried thereby and adapted to engage and actuate the aforesaid cord.

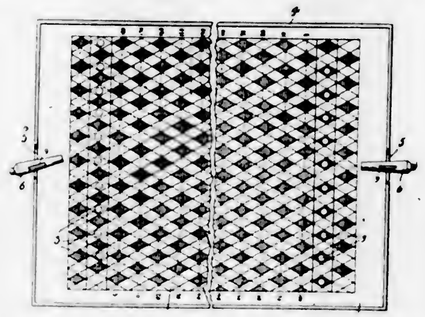
2. In a photographic apparatus, the combination with a casing provided with a shutter, of a film receiving roller mounted in said casing, a shutter operating lever, a spring arm on said casing having a fork to engage said lever, pawl and ratchet mechanism connected to said casing to rotate said roller, means for actuating said pawl and ratchet mechanism, a cord for operating said spring arm, a slide plate on said casing for operating said cord, and means connected to said pawl and ratchet mechanism for actuating said slide plate.

3. In a photographic apparatus, the combination with a casing provided with a shutter, of a film receiving roller mounted in said casing, a shutter operating lever, a spring arm on said casing having a yoke adapted to engage said shutter lever, a cord for operating said arm, pawl and ratchet mechanism connected to said casing for rotating said receiving roller, a pulley connected to said casing for driving the pawl and ratchet mechanism, means for operating said pulley to a pre-determined extent, means for returning said pulley after each operation, a slide plate on said casing for actuating said cord, and connections between said plate and said pulley for operating said plate.

4. In a photographic apparatus, the combination with a casing provided with a shutter, of a film receiving roller mounted in said casing, a shutter operating lever, a spring arm on said casing provided with a yoke adapted to engage said shutter lever, a cord for operating said spring arm, pawl and ratchet mechanism connected to said casing for rotating the receiving roller, a pulley connected to said casing for driving said pawl and ratchet mechanism, means for operating said pulley to a pre-determined extent, means for returning said pulley after each operation, a slide plate on said casing for operating said cord, a dog carried by said plate and a pin carried by said pulley adapted to engage said dog.

5. In a photographic apparatus, the combination with a casing provided with a shutter, a film receiving roller mounted in said casing, a shutter operating lever, a spring arm on said casing provided with a yoke adapted to engage said shutter lever, a cord for operating said spring arm, pawl and ratchet mechanism connected to said casing to rotate the receiving roller, a pulley mounted in said casing for driving said pawl and ratchet mechanism, means for operating said pulley to a pre-determined extent, means for returning said pulley after each operation, a slide plate on said casing for actuating said cord, a guide pulley mounted on said slide plate, a dog carried by said slide plate, a spring carried by said dog and adapted to engage said cord and bind it against said guide pulley, and a pin carried by the aforesaid pulley adapted to engage said dog.

1,223,859. GAME. RUDOLPH W. DOAN, Endicott, Wash. Filed Aug. 2, 1916. Serial No. 112,772. (Cl. 46—59.)



1. A game including a game board having transverse rows of alternating diamond shaped blocks upon one face, said board being also provided with means for indicating the value of the several rows of blocks, game pieces adapted to be arranged across the ends of said board and moved over said blocks in a zig-zag manner, projectiles for striking and knocking over said game pieces, and means mounted at either end of said board for aiming and firing said projectiles.

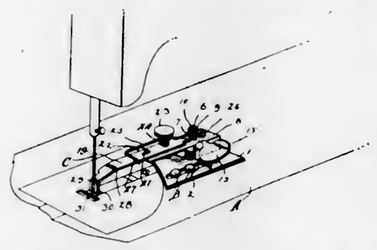
2. A game comprising a board having a plane surface including transverse rows of diamond shaped blocks alternating in color, said rows increasing in value for each player toward the opposite end of the board, said rows being separated by blank rows of blocks, one of the transverse rows at either end of the board serving as a starting row, game pieces adapted to be positioned upon said starting rows and moved toward the opposite end of the board, a protecting upstanding flange for said board, projectiles for striking and knocking over said game pieces, and means pivotally mounted in said flange at the opposite ends of said board for firing said projectiles.

3. In a game, a game board having a plurality of blocks upon its upper face, sets of game pieces adapted to be moved one block at a time toward each other, and projectile shooting devices arranged at opposite sides of the board and behind each set of pieces, each of the projectile shooting devices being adapted to be aimed to knock down a piece after it has been moved to a new position.

4. In a game, a game board, sets of game pieces arranged upon the board and movable toward each other, the game pieces of each set being adapted to alternately move toward each other, and means for projecting projectiles at each set of game pieces after each movement of the same to knock them over.

5. In a game, a board having a checkered surface, sets of game pieces arranged on the checkered surface and adapted to be moved toward each other in a zig zag path alternately from each set, the pieces of each set being arranged in alinement at the start of the game, a projectile shooting device arranged behind each set of pieces, each of the projectile shooting devices being adapted to shoot projectiles to knock down the pieces after each has been moved to a new position.

1,223,860. EDGE-GUIDE ATTACHMENT FOR SEWING-MACHINES. ARTHUR W. DUDLEY, Marlboro, Mass. Filed Apr. 27, 1916. Serial No. 93,947. (Cl. 112—9.)



1. In an edge guide for sewing machines, a plate adjustably connected to the table of a sewing machine, a block rotatably carried by said plate, a plate attached to the upper surface of said block, a guide arm pivotally connected to said plate and extending outwardly therefrom, said guide arm having its outer free end bent to form a vertical edge guide and provided with a vertically extended needle guiding recess in its outer face.

2. In an edge guide for sewing machines, an attaching plate adjustably connected to the table of a sewing machine, a block rotatably carried by said attaching plate, a plate attached to the upper surface of said block, a guide arm pivotally connected to said plate and extending outwardly therefrom, said guide arm having its outer free end bent to form a vertical edge guide and provided with a vertically extending needle guiding recess in its outer face, a thumb screw connected to said guide arm for pivotally moving it with respect to said plate, said thumb screw holding said guide arm in adjusted pivotal position.

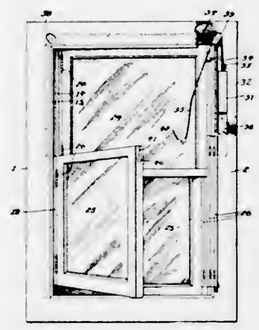
3. In an edge guide for sewing machines, an attaching plate adjustably connected to the table of a sewing machine, a block rotatably carried by said attaching plate, a plate attached to the upper surface of said block, a guide arm pivotally connected to said plate and extending outwardly therefrom, said guide arm having its outer free end bent to form a vertical edge guide and provided with a vertically extending needle guiding recess in its outer face, a thumb screw connected to said guide arm for pivotally moving it with respect to said plate, said thumb screw holding said guide arm in adjusted pivotal positions, and a spring connected to said plate and to said guide arm for holding said guide arm against accidental upward pivotal movement.

4. In an edge guide for sewing machines, an attaching plate provided with a groove extending inwardly in the upper surface of the same, a pin carried by said attaching plate, a block pivotally mounted upon said pin for permitting of a limited vertical movement of the block with respect to the plate, a boss projecting downwardly from the under surface of said block and adapted for seating in said recess for preventing accidental pivotal movement of said block with respect to said plate, a cam pivotally carried by said block and engaging the upper surface of said plate, a thumb rest connected to said cam for pivotally moving the cam for moving the under surface of said block out of facial engagement with the upper surface of said plate to permit of pivotal movement of the block, and means for automatically moving said block downwardly into engagement with said plate upon release of pressure from said cam.

5. In an edge guide for sewing machines, an attaching plate provided with a groove extending inwardly in the upper surface of the same, a pin carried by said attaching plate, a block pivotally mounted upon said pin for permitting of a limited vertical movement of the block with respect to the plate, a boss projecting downwardly from the under surface of said block and adapted for seating in said recess for preventing accidental pivotal movement of said block with respect to said plate, a cam pivotally carried by said block and engaging the upper surface of said plate, a thumb rest connected to said cam for pivotally moving the cam for moving the under surface of said block out of facial engagement with the upper surface of said plate to permit of pivotal movement of the block, and means for automatically moving said block downwardly into engagement with said plate upon release of pressure from said cam, a second upstanding pin carried by said plate and adapted for limiting the pivotal movement of said block, said plate being provided with a slot formed therein.

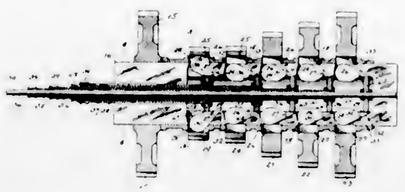
[Claims 6 to 14 not printed in the Gazette.]

1,223,861. SASH-BALANCE. FRANCOIS DUFRESNE, St. Laurent, Quebec, Canada. Filed June 11, 1915, Serial No. 33,613. Renewed Mar. 21, 1917. Serial No. 156,299. (Cl. 16—116.)



In combination with a sash adapted to slide up and down and pulleys suitably supported at the top of the window casing, a pair of sash cords being connected to each side of said sash, a weight compartment arranged at one side only of the casing, a pair of separate weights both arranged to slide in said compartment one above the other, the lowermost one of said weights being connected to one of the sash cords, the uppermost weight being slidably arranged on this cord and connected to the other sash cord for the purpose herein set forth.

1,223,862. VARIABLE-SPEED GEARING. GEORGE EATON, Baltimore, Md. Filed Oct. 23, 1915. Serial No. 57,408. (Cl. 74—59.)



1. In a variable-speed gearing the combination with a driving shaft of a driven shaft disconnected with respect to the driving shaft; a plurality of gears fixed on the driven shaft; a gear shaft having a plurality of gears normally loose thereon and each of said latter gears having continuous engagement with a gear on the driven shaft; a separate and independently movable engaging means on the interior of the gear shaft for each gear carried thereby; a separate reciprocating means in said gear shaft for each engaging means therein and means for rotating said gear shaft continuously from the driving shaft.

2. In a variable-speed gearing the combination with a driving shaft, of a driven shaft disconnected from the driving shaft; a plurality of gears fixed on the driven shaft; a gear shaft having a longitudinal chamber therein and a series of alined but disconnected openings on the circumference thereof; engaging devices mounted in the gear shaft at each of said openings; a gear loosely carried on the gear shaft around each of said openings; a separate and independently movable actuating means in the gear shaft for each gear-engaging means and means for rotating said gear shaft continuously from the driving shaft.

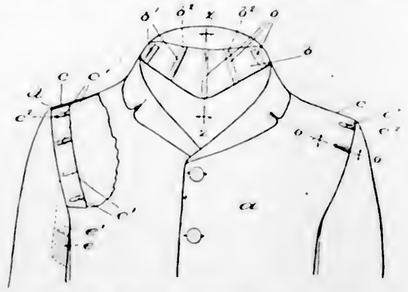
3. In a variable-speed gearing the combination with a driving shaft, of a driven shaft; a plurality of gears fixed on said driven shaft; a gear shaft having a longitudinal chamber and a series of alined but separated openings from the chamber to the circumference thereof; independently movable dogs pivotally mounted at each of said openings; a separate and independent reciprocating bar movable longitudinally in the chamber for each set of dogs; a separate gear on the gear shaft for and around each set of openings and means for rotating the gear shaft continuously from the driving shaft.

4. In a variable-speed gearing the combination with a driving shaft, of a driven shaft; a plurality of gears fixed on said driven shaft; a gear shaft having a longitudinal chamber and a series of openings from the chamber to the circumference thereof, said openings being arranged in sets; a series of separate and independently movable reciprocating bars in the gear shaft,—said bars telescoping each other and being of different lengths and each bar terminating adjacent to a set of openings in the gear shaft; independently movable dogs mounted in the openings of the gear shaft; means on each bar for operating one set of dogs only; a gear around the gear shaft continuously from the driving shaft.

5. In a variable-speed gearing the combination with a driving shaft, of a driven shaft; a plurality of gears fixed on the driven shaft; a gear shaft having a plurality of gears that are normally loose thereon and each of said latter gears having constant engagement with a gear on the driven shaft; a separate and independently movable engaging means carried by the gear shaft for each gear thereon; a separate and independent operating means for each engaging means; an actuating means for all the independent operating means and means to prevent the actuating means moving an operating means while another operating means is in the operated position.

[Claim 6 not printed in the Gazette.]

1,223,863. VENTILATED RAIN-COAT. SAM FREEDMAN and FRED FREEDMAN, Chelsea, Mass. Filed Apr. 12, 1916. Serial No. 90,602. (Cl. 2—65.)



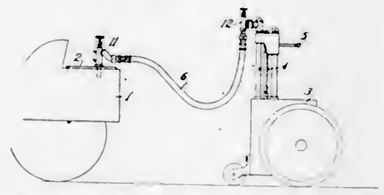
1. A ventilated raincoat embracing in its construction a coat of moistureproof material, a supplemental patch secured across the back portion of the neck inside the coat to extend transversely thereof, and formed with a series of short approximately vertical hollow plaits or passages, elastic tubular members for distending said plaits to allow the upward escape of air from the interior of the garment when worn, a series of inlet tubes arranged adjacent to the arm holes to allow the inflow of fresh air around the shoulder portions of the garment below the level of said hollow plaits, to coöperate therewith in maintaining circulation of the air into and out of the upper portion of the garment, substantially as described.

2. A rain coat of the class described embracing a series of short approximately vertical tubular ventilating passages arranged inside the neck portion of the garment to allow the escape of air from the interior of the coat, and a supplemental series of inlet passages formed in the sleeve portion of the garment adjacent to the armhole thereof, substantially as described.

3. A raincoat embracing in its construction the usual body and sleeves, the sleeves being cut out on their under sides adjacent to the arm holes to leave an aperture of substantial area, a patch secured to the sleeve to cover said aperture and overlap somewhat beyond the lower edge thereof, and a series of elastic ventilating tubes inserted between the overlapped portions of the patch and the sleeve, and having their lower ends in communication with the outside of the coat and their upper ends communicating with the interior of the sleeve portion, substantially as described.

4. A raincoat embracing in its construction the usual sleeves and body portion, and having the body portion at the armhole seams overlapping exteriorly the upper ends of the sleeves, yielding and elastic rubber tubes inserted between said overlapped portions of the body and sleeves above the shoulder, substantially as described.

1,223,864. TUBULAR CONDUIT. CHARLES L. FRENCH, Cambridge, Mass. Filed May 2, 1914. Serial No. 835,859. (Cl. 173—326.)

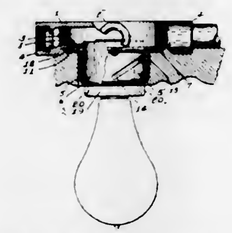


1. A conduit formed of material possessing high electrical resistance, metal fittings, one at each end of said conduit and detachably secured thereto, and external, annular grooves, one on each fitting and so positioned as to

be concealed by the conduit when assembled for use; in combination with a strip or wire composed of material possessing low electrical resistance and embedded within the wall of said conduit throughout its length, the ends of said strip or wire being adapted to occupy said grooves, and means whereby electrical contact between said ends and said fittings may be insured, said means being so positioned as to permit the the full assembling of said conduit upon said fittings, after said means have been employed, without disturbing said contact.

2. A filling tube comprising a flexible conduit formed of insulating material; a metallic fitting at one end of said conduit and adapted for connection to a suitable pumping device; and a metallic faucet at the opposite end of said conduit; in combination with a flexible metallic strip, or wire, adapted to form a path of low electrical resistance between said fitting and said faucet.

1,223,865. ELECTRIC-CONDUIT FITTING. DANIEL C. GIBLEY, Winthrop, Mass., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Original application filed Oct. 6, 1910, Serial No. 585,599. Patent No. 1,180,838. Divided and this application filed Apr. 10, 1916. Serial No. 90,147. (Cl. 247—6.)

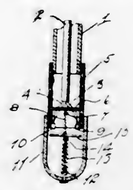


1. The combination of an electric conduit fitting comprising a hollow body having means for connection with a conduit and an opening in one wall thereof, a cap for the opening, the cap comprising inner and outer telescoping sleeve members, one of said members being fixed to the body and the other being adjustable axially of the fixed member, a socket extending into the cap and supported by the adjustable sleeve member, the outer sleeve member being formed with a spiral slot, and clamping means extending through the slot and into the inner sleeve member for holding the movable sleeve member in its adjusted position, substantially as and for the purpose described.

2. The combination of an electric conduit fitting comprising a hollow body having means for connection with a conduit and an opening in one wall thereof, a cap for the opening including inner and outer telescoping sleeve members, the outer member being fixed to the body and formed with a spiral slot and the inner member being adjustable axially and formed with an inturned flange at its outer end, a screw extending through said slot and turning into the inner sleeve member for holding the inner sleeve member in its adjusted position, and a socket for an electrical appliance extending into the inner sleeve member and adapted to be connected to the wires in the body, the socket having a flange lapping the inturned flange of the inner sleeve member and engaging the outer face thereof and being secured thereto, substantially as and for the purpose specified.

1,223,866. CIRCUIT-CLOSER FOR AUTOMATIC TRAIN-STOPS. CLARENCE J. GRAHAM and JOSEPH A. FARRIS, Chicago, Ill. Original application filed Feb. 15, 1916, Serial No. 78,502, now Patent No. 1,200,339. Divided and this application filed July 26, 1916. Serial No. 111,453. (Cl. 200—27.)

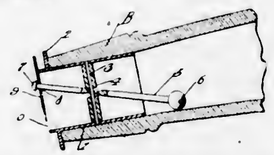
1. In a circuit closer, a body, contacts supported by said body, a frangible member secured to the body, a hook carried by the frangible member, a bridging contact, a relatively weak spring connected to one side of the bridging contact and to the hook connected to the body, said spring normally tending to move the bridging contact into engagement with the contacts carried by the body, and a spring of greater strength secured to the opposite side of the bridging contact and to the frangible element so that said frangible element will hold the bridging contact away from the contacts under normal conditions and when broken will allow the weak spring to move the bridging contact against the contacts carried by the body to complete an electric circuit.



2. In an automatic train stop, a circuit closer comprising a hollow cylindrical body, contacts at diametrically opposed points within said body, a disk for bridging said contacts, a glass bulb on the lower end of said body, a relatively heavy spring for holding the disk away from the contacts, said spring being connected to the lower end of the bulb whereby upon the breaking of the bulb the disk will be free to move upwardly and a relatively weak spring attached to the upper side of the disk for moving the same upwardly.

3. A circuit closer for an automatic train stop including a sleeve of insulated material having a web extending transversely thereof intermediate its ends, means to rigidly support the sleeve in vertical position, contacts at the lower end of the sleeve arranged at diametrically opposite points, an inverted dome-shaped cap secured to the lower terminal of the sleeve, a bridging contact within the cap, a relatively strong spring to hold the bridging contact away from the contacts and a relatively weak spring attached to the bridging contact and to the web to move the bridging contact into engagement with the contacts upon breakage of the cap,

1,223,867. BOTTLE-CLOSURE. HARRY M. GRAY, Millvale, Pa., assignor of one-half to Crescenzia Allors, Pittsburgh, Pa. Filed Sept. 24, 1915. Serial No. 52,430. (Cl. 215—55.)



1. A bottle closure including a tubular body insertible into the neck of a bottle, a centrally disposed stem mounted to swing freely in any direction within the body, a weight at the lower end of the stem, and a disk loosely mounted upon the upper end portion of the stem and bearing against the end of the body.

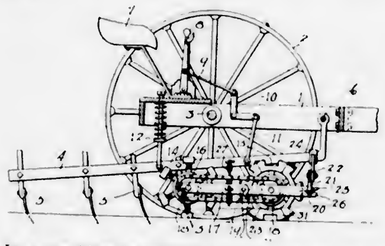
2. A closure for bottles, including a tubular body, a weighted stem mounted to swing freely in any direction within the body, said stem being normally extended along the longitudinal center of the body, and a disk normally bearing on one end of the body and loosely engaging one end portion of the stem, said disk being slidable upon the end of the body under the action of the stem to open or close the body.

3. A bottle closure including a tubular body insertible into the neck of a bottle, a diametrically disposed pivot in the body, a stem mounted on the pivot at the center

of the body and normally extending along the longitudinal center of the body, spacing means for holding the stem centered in the body, a weight for holding said stem normally vertical, a closure slidably mounted on one end of the body and loosely engaging the stem, said stem constituting means for holding the closure in centered position when the stem is vertical.

4. A bottle closure including a tubular body insertible into the neck of a bottle, a diametrically disposed pivot in the body, a stem mounted on the pivot at the center of the body and normally extending along the longitudinal center of the body, spacing means for holding the stem centered in the body, a weight for holding said stem normally vertical, a closure slidably mounted on one end of the body and loosely engaging the stem, said stem constituting means for holding the closure in centered position when the stem is vertical, and means on the stem for holding the closure against removal therefrom.

1,223,868. COTTON-CHOPPER. JC. CHRISTON GUNN, Walnut Springs, Tex. Filed Dec. 7, 1916. Serial No. 135,637. (Cl. 97—49.)



1. In a machine for thinning young plants, the combination with a cultivator, of a plant crushing drum provided with peripheral plant receiving pockets for preserving stands of young plants, and a wheel trailing the drum and provided with cups arranged to fit over the stands of young plants and prevent them from being covered by the cultivator.

2. In a machine for thinning young plants, the combination with a cultivator, of a plant crushing drum provided with peripheral plant receiving pockets adapted to preserve stands of young plants, a wheel trailing behind the drum and provided with cups positioned according to the pockets of the drum, and means for causing the drum and wheel to rotate in synchronism, the cups of the wheel being successively positioned over the stands of young plants to prevent them from being covered by the cultivator.

3. In a machine for thinning young plants, the combination with a cultivator, of a plant crushing drum provided with peripheral plant receiving pockets adapted to preserve stands of young plants, a wheel trailing behind the drum and provided with cups adapted to fit over the stands of young plants to prevent them from being covered by the cultivator, mud hooks upon the drum, and gearing between the drum and wheel for causing them to rotate in synchronism.

4. In a machine for thinning young plants, the combination with a cultivator, of an expansible plant crushing drum provided with peripheral plant receiving pockets for preserving stands of young plants, the peripheral distance between the pockets being varied by expanding and contracting the drum, and an expansible wheel trailing behind the drum and carrying cups positioned according to the pockets of the drum, the wheel being adapted to be adjusted in a manner corresponding to that of the drum and the cups thereof being arranged to fit over the stands of young plants and prevent them from being covered with soil from the cultivator.

5. In a machine for thinning young plants, the combination with a cultivator, of a plant crushing drum having the periphery thereof formed of a series of segmental blocks, said blocks being movable in and out to vary the effective size of the drum and being provided with plant receiving pockets adapted to preserve stands of young plants, and means trailing the crushing drum for preventing the stands of young plants from being covered with soil from the cultivator.

[Claims 6 and 7 not printed in the Gazette.]

1,223,869. HAND-LAMP. CARL HAMBUECHEN, Belleville, Ill., assignor to American Carbon & Battery Co., East St. Louis, Ill., a Corporation of Illinois. Filed Sept. 30, 1916. Serial No. 122,981. (Cl. 240—8.5.)



1. In a battery hand lamp, the combination of a tubular casing, a battery therein comprising a plurality of dry cells arranged end to end, a lamp having one terminal connected with said battery, connections between the other terminal of said lamp and said battery, said connections including two switch mechanisms arranged in series, either of which may be operated to interrupt the flow of current from said battery to said lamp one of said switch mechanisms having an actuating thumb-piece on the side of said tubular casing and the other having a lock to hold it in open position.

2. In a battery hand lamp, the combination of a casing, a battery therein, a lamp to be supplied with current from said battery, a thumb-piece on said casing, switch mechanism between said battery and said lamp and comprising a finger within said casing and extending longitudinally thereof, said finger being movable by said thumb-piece to open the circuit to the lamp, and means for opening the battery circuit at another point when desired to prevent accidental lighting of the lamp by inadvertent movement of said thumb-piece.

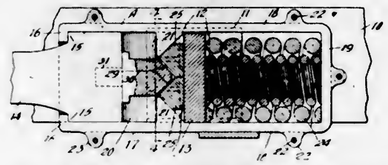
3. In a battery hand lamp, the combination of a tubular casing, a battery therein comprising a plurality of dry cells arranged end to end, a lamp having one terminal contacting with a battery terminal, and switch mechanism for connecting the other lamp terminal to the remaining battery terminal, said mechanism comprising a contact finger and two contact members, said contact finger being normally connected with a lamp terminal and extending and moving longitudinally of said casing, said finger and one of said members being movable into engagement with the other contact member to complete the circuit from the battery to the lamp.

4. In a battery hand lamp, the combination of a tubular casing, a cap secured to one end of said casing, a collar secured to the other end thereof, a lens and a reflector clamped between said collar and the adjacent casing end, a lamp threaded into said reflector, a battery within said casing and having one terminal connected with the inner terminal of said lamp, and switch mechanism between the other terminal of said battery and said reflector, said mechanism comprising a thumb-piece movable on said casing, a contact finger electrically connected with said reflector and movable with said thumb-piece and extending longitudinally of said casing, an insulated contact member in the form of a ring with which said finger may engage to complete the circuit to the lamp, a second contact member in the form of a yielding plate housed within said cap and movable to make or break contact with said contact ring member, and a spring connecting said contacting plate with the bottom of the battery.

5. In a battery hand lamp, the combination of a tubular casing, a cap secured to one end of said casing, a collar secured to the other end thereof, a lens and a reflector clamped between said collar and the adjacent casing end, a lamp threaded into said reflector, a battery within said casing and having one terminal connected with the inner terminal of said lamp, and switch mechanism between the other terminal of said battery and said reflector, said mechanism comprising a thumb-piece movable on said casing, a contact finger electrically connected with said reflector and movable with said thumb-piece and extending longitudinally of said casing, an insulated contact member in the form of a ring with which said finger may engage to complete the circuit to the lamp, a second contact member in the form of a yielding plate housed within said cap and movable to make or break contact with said contact ring member, and a spring connecting said contacting plate with the bottom of the battery, and a lock to hold said cap against accidental turning when said contact members have been separated.

[Claims 6 to 10 not printed in the Gazette.]

1,223,870. DRAFT-RIGGING FOR RAILWAY-CARS. JOSEPH HARRIS, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Sept. 2, 1915. Serial No. 48,598. (Cl. 213—64.)



1. In a draft rigging, the combination with a draw-bar, a cushioning medium, and a yoke movable with the draw-bar in draft, of means co-acting with the yoke for moving the same forwardly upon rearward movement of the draw-bar.

2. In a draft rigging, the combination with a draw-bar, a yoke, a fixed abutment and a cushioning medium between the abutment and yoke, said yoke being movable in the same direction to actuate the cushioning medium upon both inward and outward movement of the draw-bar.

3. In a draft rigging, the combination with draft sills, a member stationary relative thereto and a cushioning medium, of a draw-bar, a yoke, means for pulling the yoke in unison with a draw-bar upon forward movement of the latter, and means for moving the yoke forwardly upon rearward movement of the draw-bar.

4. In a draft rigging, the combination with a yoke, draw-bar, fixed abutment, and a cushioning medium, of devices interposed between said draw-bar, abutment, and yoke for translating inward pressure from the draw-bar to an outwardly directed force on the yoke.

5. In a draft rigging, the combination with a draw-bar, friction elements, a spring, and means for actuating the friction elements upon rearward movement only of the drawbar, said spring being compressed in the same direction upon either inward or outward movement of the draw-bar.

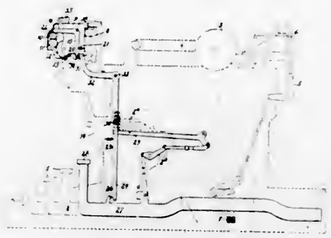
[Claims 6 to 12 not printed in the Gazette.]

1,223,871. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FREDERICK A. HART, Jersey City, N. J., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Nov. 28, 1911. Serial No. 662,873. (Cl. 235—59.)

1. The combination with a computing head and a master wheel, of a carriage to which said computing head is connected for step-by-step movements, a clearance type-key on the framework of the machine, and means controlled by said computing head in various positions thereof for locking and releasing said clearance type-key.

2. The combination with a master wheel and a set of computing wheels, of a carriage to which said computing wheels are connected, a bar extending along the run of said carriage, a clearance type-key upon the framework of the machine and controlled by said bar, and means for causing said wheels to operate through said bar to render said key effective or ineffective.

3. The combination with a master wheel and a set of computing wheels, of a carriage to which said computing wheels are connected, a bar extending along the run of the carriage, a type-operating clearance key upon the frame of the machine, a latch for locking said key, and means operating through said bar to enable said wheels to cause the latch to lock and release the key.

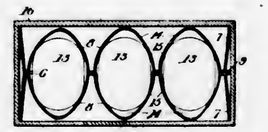


4. The combination with a master wheel and a set of computing wheels, of a carriage to which said computing wheels are connected, a bar extending along the run of the carriage, a type-operating clearance key upon the frame of the machine, a latch controlled by said bar for locking said key, a tumbler, said computing wheels being provided with notches into which said tumbler may fall when all the wheels stand at zero, and means to cause said tumbler to operate said bar at different positions of said carriage.

5. The combination with a letter-feeding typewriter carriage and a rack thereon, of a computing head adjustable along said rack and comprising a set of computing wheels, each of said wheels having a notch, a tumbler mounted upon said computing head and extending along said wheels, a spring to cause said tumbler to fall into the notches when the wheels all stand at zero, a bar extending parallel to the run of the carriage, said tumbler hinged upon said computing head and having a part to engage and operate said bar, an arm rigid with said bar and having a latch thereon, a type-operating clearance key having a hook, and a spring to move said latch to engage said hook.

[Claims 6 to 27 not printed in the Gazette.]

1,223,872. EGG-CARRIER. GEORGE W. HARTLEY and ARTHUR W. SEELEY, Saginaw, Mich. Filed Dec. 23, 1915. Serial No. 68,355. (Cl. 217—27.)

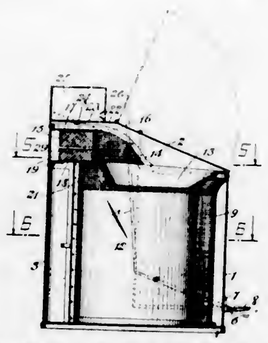


A cell case comprising an outer casing, and a filler therein comprising two plates faced together in contact, said plates each having half cells which are registered to form complete cells, and also having outwardly flared marginal flanges of greater width than the depth of the cells, said flanges projecting on the same sides of the plates as the cells and fitting at their edges into the corners of the casing.

1,223,873. GARBAGE-RECEPTACLE AND TRAP. CICERO W. HARTT, Pierson, Mich. Filed June 29, 1914. Serial No. 847,866. Renewed Feb. 21, 1917. Serial No. 150,250. (Cl. 43—22.)

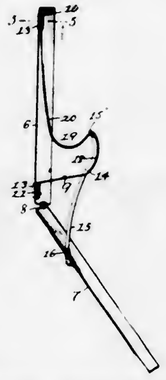
1. In a garbage receptacle of the class described, a casing, a foraminous wall arranged in the casing and spaced therefrom, said casing being provided with a plurality of

openings adjacent the bottom, said foraminous wall being connected with the casing near the upper edge of the casing, a trap arranged adjacent the upper part of said foraminous wall and in line of travel with animals passing upwardly over said foraminous wall whereby said animals may easily enter said trap, a garbage can arranged within said foraminous wall, and a lid for the top of the said casing.



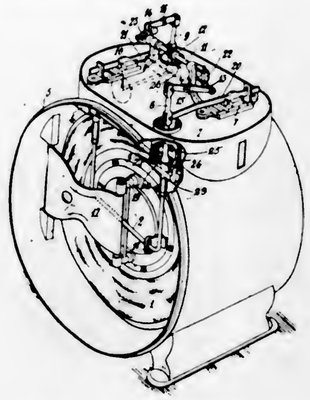
2. In a garbage receptacle of the character described, a casing provided with a lid and designed to receive a can, said casing being formed with a plurality of openings near the bottom, an inner foraminous wall arranged in said casing, said inner wall being spaced from the outer wall except at the top, said foraminous wall merging into a passageway near the top, a foraminous box arranged in said passageway, and doors arranged in said box, said doors yielding inwardly whereby rats, mice and the like passing up the foraminous wall seeking access to said can may freely enter said box.

1,223,874. CIGARETTE-MAKING MACHINE. PETER HAYN, Brooklyn, N. Y. Filed July 17, 1915. Serial No. 40,429. (Cl. 131—5.)



A cigarette machine, comprising a shallow box having a hinged cover, a looped flexible band having its ends secured to the bottom of the box at the front and rear edges thereof, arms hinged to the cover of the box at the sides thereof and having their end portions curved downwardly, and a concavo-convex plate arranged under the band and secured to the curved ends of the arms with its convex side outward and the ends of the arms projecting a short distance beyond the front edge of the plate, the projecting ends of said arms being adapted to engage the bottom of the box to serve as guides and hold the said plate spaced from the bottom of the box.

1,223,875. MECHANISM OF DRY METERS AND LIKE APPARATUS. GEORGE HEELEY, Paris, France, assignor to Cie pour la Fabrication des Compteurs et Materiel d'Usines a Gaz, Paris, France. Filed Nov. 26, 1913. Serial No. 803,156. (Cl. 73—1.)

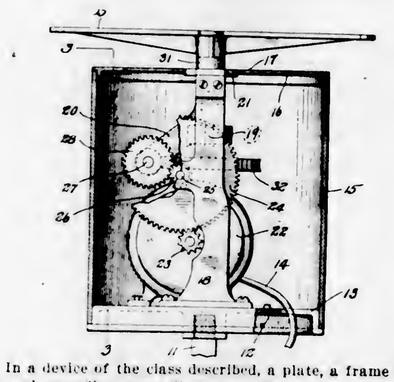


1. In a dry meter the combination of a measuring member and distributing devices including slide valves with a motion transmitting device for connecting said measuring member with said distributing devices, comprising rocking yoke members transmitting the movement of the measuring member to the slide valves, a partition separating the measuring member from the distributing devices, said partition being provided with openings, a rod extending each yoke above its axis of oscillation, each rod passing through one of the said openings, sleeves provided on said openings for the passage of the said rods, a flexible sealing membrane disposed within each sleeve and traversed by the corresponding rod, fluid tight connections between said membranes and the respective rods extending therethrough and to the inner wall of said sleeves, a shaft connected at right angles to said rods to enable the latter to oscillate, a cross member having bent arms formed with said shaft to enable the axis of oscillation of same to pass diametrically through the plane of said sealing membranes, bushes provided on the inner wall of the meter for supporting the ends of said shaft, and means for connecting the ends of the yoke members with the measuring member and with the distributing devices.

2. In a dry meter the combination with bellows and distributing devices including slide valves of a motion transmitting device for connecting said bellows with said distributing devices, comprising rocking yoke members pivotally connected to said bellows, a partition separating the bellows from the said slide valves, said partition being provided with openings, a rod extending each yoke member above its axis of oscillation and passing through one of the said openings, sleeves provided in said openings, a flexible membrane provided in each sleeve and closing each opening, the said membranes being centrally traversed by the aforesaid rods, fluid tight means for securing the membranes to the respective rods, a flanged ring secured within each sleeve for receiving the peripheral edge of the flexible membrane, a screw-threaded ring screwing into the former ring for tightening the said membrane at its periphery, a shaft connected at right angles to each rocking rod and supported on either side thereof so that the axis of this shaft passes diametrically through the plane of the flexible membrane, a cross-member having bent arms formed on the shaft so as to connect the latter with the rocking rod underneath the flexible membrane, trunnions formed at the ends of said shaft enabling the same to rock, bushes arranged on the inner wall of the meter for supporting said trunnions and means for connecting the ends of each of said rods with the bellows and with the corresponding distributing slide-valves.

3. In a dry meter the combination with bellows and distributing devices including slide valves of a motion transmitting device for connecting said bellows with said distributing devices, comprising rocking yoke members pivotally connected to the bellows, a partition separating the bellows from and adapted to support the said slide valves, said partition being provided with openings, a rod extending each yoke member above its axis of oscillation and passing through one of said openings, sleeves provided in said openings, a flexible sealing membrane provided in each sleeve for the closure of each opening, the said membrane being centrally traversed by the rocking rod, fluid-tight means for securing the membranes to the respective rods, a flanged ring fixed within each sleeve for receiving the peripheral edge of the flexible membrane, a screw-threaded ring screwing into the aforesaid ring for tightening said membrane at its periphery, a shaft connected at right angles to each rocking rod and supported on either side thereof so that the axis of this shaft passes diametrically through the central plane of the flexible membrane, a cross-member having bent arms formed on said shaft for connecting same with the rocking rod underneath the flexible membrane, trunnions formed at the ends of the said shaft enabling the same to rock, bushes provided on the inner wall of the meter for supporting said trunnions, small bars arranged at the opposite ends of each rod for controlling the distributing slide valves, and a common shaft connected to each rod and adapted to be driven thereby to operate the registering mechanism of the meter.

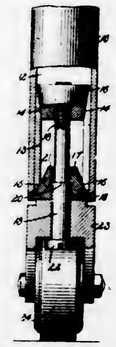
1,223,876. MOTOR AND SUPPORT FOR DISPLAY-FORMS AND THE LIKE. MORRIS A. HEIMANN, St. Louis, Mo. Filed Jan. 5, 1916. Serial No. 70,436. (Cl. 211—20.)



In a device of the class described, a plate, a frame fixed to and extending upwardly from said plate, a motor fixed on the plate adjacent to the frame, a vertically disposed shaft journaled for operation in bearings in the upper portion of the frame, a worm wheel on the lower end of said shaft, a horizontally disposed shaft journaled in suitable bearings in the frame, a worm on said last mentioned shaft, which worm meshes with the teeth of the worm wheel, driving gear connections between the motor shaft and the horizontally disposed shaft, a housing removably positioned on the base and inclosing the frame, the gearing supported thereby, and the motor and a display support removably positioned on the upper end of the vertically disposed shaft.

1,223,877. EXPANSION-FASTENING FOR CASTERS. JOHN W. HILFRANK, White Plains, N. Y., assignor of one-third to Leland Hotaling, White Plains, N. Y. Filed May 26, 1916. Serial No. 99,997. (Cl. 16—4.)

1. An expansion fastening, comprising a split sleeve adapted to be inserted into a recess in the part on which the expansion fastening is to be used, the said sleeve being provided at its ends with interior conical seats, conical inner and outer heads seated on the said seats, the outer head having a flange adapted to abut against the face of the part on which the fastening is applied, and a screw rod extending loosely through the said outer head and screwing in the said inner head, the said screw rod having a shoulder abutting against the said outer head, the screw rod projecting outward beyond the said flange and terminating in a head to form a journal.



2. An expansion fastening for casters and other articles, comprising a split sleeve adapted to be inserted into a recess in the part to which the article is to be attached, the said sleeve having at its ends conical interior seats, of which the angle of the seat at the inner end of the sleeve is smaller than that of the seat at the outer end of the sleeve, conical inner and outer heads seated on the said seats, the outer head having a flange abutting against the face of the part on which the fastening is applied, and a screw rod extending loosely through the said outer head and screwing in the said inner head.

3. An extension fastening for casters and other articles, comprising a split sleeve adapted to be inserted into a recess in the part to which the article is to be attached, the said sleeve having at its ends conical interior seats, of which the angle of the seat at the inner end of the sleeve is smaller than that of the seat at the outer end of the sleeve, conical inner and outer heads seated on the said seats, the outer head having a bore enlarged at its outer portion forming a shoulder, and a screw rod extending loosely through the said outer head and screwing in the said inner head, the said screw rod having an enlarged portion extending in the enlarged portion of the bore of the outer head and forming a shoulder abutting against the said shoulder of the outer head.

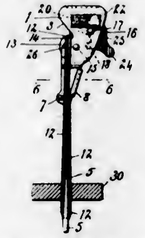
4. An expansion fastening for casters and other articles, comprising a split sleeve adapted to be inserted into a recess in the part to which the caster is to be attached, the said sleeve having at its ends conical interior seats, of which the angle of the seat at the inner end of the sleeve is smaller than that of the seat at the outer end of the sleeve, conical inner and outer heads seated on the said seats, the outer head having a flange abutting against the face of the part on which the fastening is applied, and a screw rod extending loosely through the said outer head and screwing in the said inner head, the said screw rod having a shoulder abutting against the said outer head and the said screw rod having a head at its outer end spaced from the face of the said outer conical head.

5. An expansion fastening, comprising a split sleeve adapted to engage a recess in a part on which the fastening is to be used, the said sleeve having a conical seat at one end, a conical head engaging the said seat, a head held on the other end of the said sleeve and having a flange adapted to abut against the face of the said part,

and a screw rod screwing in the said conical head and extending loosely through the said flanged head, the said screw rod having an enlarged portion forming a shoulder bearing against a shoulder formed in the said flanged head, the said enlarged portion of the screw rod projecting outward beyond the said flange and terminating in a head.

[Claim 6 not printed in the Gazette.]

1,223,878. DEVICE FOR INSERTING PLUGS IN TIRES. HARRY R. HIRAT, Trenton, N. J., assignor of one-half to William F. Lemon and Walter D. Lemon, trading as William F. Lemon & Bro., Trenton, N. J. Filed Dec. 9, 1916. Serial No. 135,975. (Cl. 152—27.)



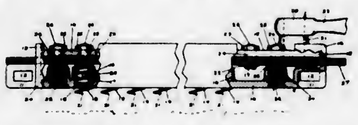
1. In a device of the character described, the combination of a handle consisting of two side plates secured together, a needle secured between the side plates, a retaining member pivotally mounted between the side plates and means for locking the retaining member in a fixed position.

2. In a device of the character described the combination of a handle, a needle secured in the handle, engaging means formed upon the free end of the needle, a wheel having notches formed therein mounted in the handle and means for locking said wheel in a fixed position.

3. In a device of the character described, the combination of a handle having two side plates secured together, a needle secured in the side plates, a wheel having notches formed therein rotatably mounted between the side plates, a pawl adapted to lock the said wheel and means for disengaging the pawl from the wheel.

4. In a device of the character described, the combination of a handle formed from a single piece bent upon itself to form side plates, a needle secured between the adjacent end portions of the side plates, a fastening device for securing the side plates together, an engaging means formed upon the free end of the needle, a shoulder formed in the side plate to prevent any inward movement of the needle, a wheel having notches formed therein rotatably mounted between the side plates, a pawl loosely mounted between the side plates, a projection upon the pawl to engage the said wheel, a spring to hold the pawl in engagement with the wheel and a finger grip upon the pawl.

1,223,879. LAST-SLICE HOLDER. JOSEPH HOPKINSON, Dayton, Ohio, assignor to The Computing Scale Company, Dayton, Ohio, a Corporation of Ohio. Filed Aug. 6, 1915. Serial No. 43,914. (Cl. 17—14.)



1. In a device of the class described, in combination, a plurality of carrying studs each of the said studs carrying a centrally open spiral tang, means for rotating the studs and the tangs, and means independent of said tangs for advancing the said studs and tangs, the said advancing and turning movement of the tangs being adapted to engage the tangs in a piece of meat.

2. A last slice holder, including, in combination, a plurality of carrying studs, each of said studs carrying a spiral tang, means for rotating the studs and the tangs thereon, an apertured plate adjacent the points of said tangs and means for advancing said tangs and retracting them to a position in which the points of the tangs are below the surface of the apertured plate whereby accidental contact with the points of the tangs is prevented.

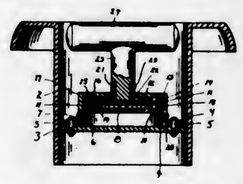
3. A last slice holder, including, in combination, a plurality of carrying studs, supporting plates therefor, a plurality of spiral tangs, secured to said studs, and means for rotating the studs and tangs, said means being adapted to cause relative movement of the tangs and studs with respect to one supporting plate and unison movement of the tangs and studs with the other supporting plate, whereby the tangs are advanced outwardly and engage the meat.

4. A last slice holder, comprising, in combination, a meat plate, a plurality of studs carrying tangs, supported thereon, and normally positioned with the points of the tangs below the surface of the meat plate; and means for concurrently rotating and advancing the studs, whereby the tangs are rotated and advanced beyond the meat plate to engage meat and hold said meat securely to the face of the meat plate.

5. A last slice holder, comprising, in combination, a meat plate, a plurality of studs, journaled at one end in the meat plate, said studs each having a spiral slot in its periphery, spiral tangs engaged in the said slots in the studs, and turning means to turn and axially advance the studs in their journals in the meat plate and to concurrently turn and advance the spiral tangs carried thereby.

[Claims 6 to 25 not printed in the Gazette.]

1,223,880. BALL-BEARING HANDLE FOR MILK-CANS AND SIMILAR CONTAINERS. SAMUEL HOUGH, Atco, N. J., assignor of one-third to Joseph Layer, Berlin, N. J., and one-third to Charles John Glaser, Camden, N. J. Filed Sept. 18, 1916. Serial No. 120,722. (Cl. 31—77.)



1. A new article of manufacture comprising a can top having a chamber with a handle swiveled thereto and entirely contained within said chamber.

2. In a device of the character stated a supporting wall, a base member carried by said supporting wall, a cover member detachably secured to said base member, a rotary disk mounted between said members, and a handle carried by said disk.

3. In a device of the character stated a supporting wall, a base member detachably secured thereto, a cover member detachably secured to the base member, said cover member having a hole therein, a disk rotatably mounted between said members, said disk having a socket projecting through the opening in the cover member, ball bearings arranged between the rotary disk and said members, and a handle mounted in said socket.

4. A can top having a supporting wall or partition below its upper edge, thereby forming a handle chamber, a base member detachably secured to said supporting wall or partition, said base member having a ball race or groove formed therein, a cover member detachably secured to the base member, said cover member having a hole therein and provided with a ball race or groove, a rotary disk arranged between said members, said disk having ball races or grooves therein, ball bearings mounted in said ball races, a socket carried by the rotary disk and projecting through the hole in the cover member, and a handle detachably mounted in said socket and lying entirely within the chamber.

5. A can top provided with a supporting wall or partition situated below the upper edge of the can top to form a handle chamber, a base member comprising a body having a ball race or groove in its top wall and threaded exteriorly, and a flange projecting from said body, fastening means for detachably securing the base member to the supporting wall, a cover member comprising a top wall having a central opening therein, and a ball race or groove formed in its inner face and a flange threaded interiorly adapted to be mounted on the base member, a nut adapted to be threaded on the base member and jam against the edge of the cover member for locking the same in its adjusted position, a disk rotatably mounted between said members, said disk having a ball race or groove in each face, ball bearings mounted between the disk and members adapted to run in the ball races, a socket formed with the disk and projecting through the opening in the cover member, said socket being threaded interiorly, a handle, the shank of which is adapted to be threaded into the socket, and a set screw mounted in said socket and adapted to engage the shank of the handle for holding the same in place.

1,223,881. ELECTRICAL INSULATION. WILLIS ALDEN ISHLER, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 11, 1916. Serial No. 119,449. (Cl. 173—28.)



1. An insulation barrier comprising a relatively thin totally inclosed casing of an insulating material impervious to oil and a film of oil contained therein.

2. An insulating barrier comprising a relatively thin impervious totally inclosed casing and oil therein.

3. An insulating barrier comprising an oil soaked absorbent sheet and an impervious wrapping totally inclosing the same.

4. An insulating barrier comprising an oil soaked absorbent sheet, a sheet of fire resistant material at each side thereof and an impervious wrapping totally inclosing the same.

5. An insulating barrier comprising an oil soaked absorbent sheet, a sheet of insulating material at one side thereof and an impervious wrapping totally inclosing the same.

1,223,882. SKEE-SKATE. GEORGE LANDER JACQUES, Neillsville, Wis. Filed Feb. 4, 1915. Serial No. 6,136. (Cl. 46—67.)



1. The combination in a skee or skate of two parallel runners, a tilting foot platform pivoted thereto, a tilting dog attached to the forward end of said foot platform.

2. The combination in a skee or skate of two parallel runners, a tilting foot platform pivoted thereto, a tilting dog pivoted at its middle portion to the forward end of said foot platform, a spiral spring connecting the upper end of the tilting dog to the forward part of the foot platform for normally maintaining the tilting dog in a position substantially perpendicular to the runners.

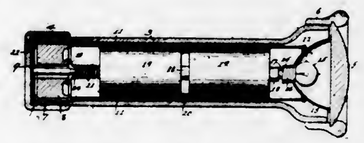
3. The combination in a skee or skate of two parallel runners connected by braces, two of which are adapted to afford a support for the front and rear end respectively of the tilting foot platform next herein mentioned, a tilting foot platform pivoted intermediate its ends to said runners the front and rear ends of which platform are adapted each respectively to rest at times on one of said braces, said platform carrying means to secure the same to the foot, a tilting dog secured to the forward end of said foot platform having its lower end entered through the opening between said runners, a spring secured to the upper end of the tilting dog and to the foot platform tending to move the upper end of said tilting dog rearwardly, and a stop on the foot platform to limit the rearward motion of the upper end of said dog.

4. The combination in a skee or skate of two parallel runners, a tilting foot platform pivoted thereto carrying a tilting foot plate pivoted near its forward end to said platform near the forward end thereof said tilting foot plate carrying means to secure the same to the foot, a tilting dog attached to the forward end of said foot platform.

5. The combination in a skee or skate of two parallel runners connected by braces two of which are adapted one to support either end of the foot platform next herein mentioned, a tilting foot platform pivoted to said runners carrying at its forward end a tilting dog held in a position substantially perpendicular to the runners by a spring, a spring foot plate pivoted near its forward end to said foot platform near the forward end thereof carrying means to secure the skee to the foot.

[Claim 6 not printed in the Gazette.]

1,223,883. PORTABLE ELECTRIC LAMP. LAWRENCE F. JAMES and RICHARD F. JAMES, New York, N. Y. Filed Nov. 2, 1916. Serial No. 129,079. (Cl. 240—8.5.)



1. The combination with an electric lamp and battery; of a casing therefor, a bushing adjustably held therein and in electrical connection with said lamp, a movable cap on said casing, and means carried by said cap for closing a circuit through said lamp, bushing, and battery.

2. The combination with an electric lamp and battery; of a casing therefor, a bushing in said casing in electrical connection with said lamp, an insulating block carried by said bushing, a movable cap on said casing, and coacting means carried by said block and cap for closing a circuit through said lamp, bushing, and battery.

3. The combination with an electric lamp and battery; of a casing therefor, a bushing in said casing in electrical connection with said lamp, an insulating block carried by said bushing, a conductive cone in electrical connection with said battery carried by said block, a movable cap for said casing, and means carried by said cap for closing an electrical circuit through said lamp, bushing, cone, and battery.

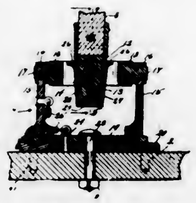
4. The combination with an electric lamp and battery; of a casing therefor, a bushing in said casing, a ring carried by said bushing and in electrical connection therewith and with said lamp, a movable cap on said casing, and means carried by said cap for closing a circuit through said lamp, ring, bushing, and battery.

5. The combination with an electric lamp and battery; of a casing therefor, a bushing in said casing in electrical connection with said lamp, an insulating block carried by said bushing, a conductive cone carried by said block,

a conductive spring interposed between said cone and battery, a movable cap on said casing, and means carried by said cap for closing a circuit through said lamp, bushing, cone, spring, and battery.

[Claim 6 not printed in the Gazette.]

1,223,884. BUTT-REST FOR A FISHING-ROD. HUGO R. JOHNSTONE, Pasadena, Cal. Filed Oct. 10, 1916. Serial No. 124,914. (Cl. 248—37.)



1. A butt-rest for a fishing rod, comprising a pivot, a base connected to the pivot, a gimbal ring pivotally mounted on the base, and a socket pivotally mounted on the gimbal ring as set forth.

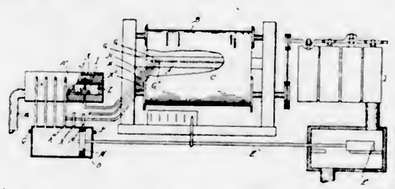
2. A butt-rest for a fishing rod, comprising a bearing plate, a base pivotally mounted on the bearing plate, a gimbal ring pivotally mounted on the base, and a socket pivotally mounted on the gimbal ring as set forth.

3. The combination of a pivot, a base connected to the pivot, a gimbal ring pivotally mounted on the base, and a socket pivotally mounted on the gimbal ring and provided with a flaring mouth, said part being tapered and having flattened sides substantially as and for the purpose set forth.

4. The combination with a seat, of a bearing plate on the seat, a base pivotally and removably mounted on the bearing plate, a gimbal ring pivotally mounted on the base, and a socket pivotally mounted on the gimbal ring and provided with a flaring mouth.

5. The combination with a seat, of a bearing plate on the seat, a base pivotally mounted on the bearing plate, a gimbal ring pivotally mounted on the base, a socket pivotally mounted on the gimbal ring and provided with a flaring mouth, said part being tapered and having flattened sides as set forth, and means to lock the base against rotating on the bearing plate at will.

1,223,885. AUTOMATIC REGULATOR FOR PNEUMATIC PIANOS. VERN L. JONES, Detroit, Mich., assignor to The Farrand Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 10, 1913. Serial No. 760,253. (Cl. 84—168.)

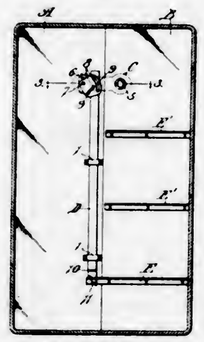


1. In a pneumatically operated musical instrument, the combination with a valve member for controlling the motor, a valve chest provided with a vacuum chamber and a tracker board, of means for controlling said valve member and valve chest, including a plurality of connections between the chest and the tracker board, a cylinder, a plurality of separate conduits between the valve chest and the cylinder, means for connecting said last mentioned connections to said vacuum chamber, a piston in the cylinder, and an operative connection intermediate the valve and piston.

2. In a pneumatically operated musical instrument, the combination of a member to be operated and a tracker board, of a piston member and a cylinder member, means for moving said member to be operated upon the movement of said piston member, a plurality of ducts opening into said cylinder member, a vacuum chamber, connections between said vacuum chamber and tracker board and means actuated through said connections for operatively connecting said ducts with said vacuum chamber, for adjusting said member to be operated upon the uncovering of the port in the tracker board, said member remaining in its adjusted position upon the closing of said port.

3. In a pneumatically operated musical instrument, the combination with the member to be adjusted, means for controlling said member comprising a piston member and a cylinder member, said cylinder member having bleeds arranged in its ends, an operating connection between one of said members and the member to be adjusted, a valve chamber, an adjacent vacuum chamber, connections between the valve chamber and said cylinder, pneumatics, means operated by said pneumatics for connecting said valve chamber and vacuum chamber, ducts leading to the pneumatics, and means for controlling said ducts.

1,223,886. WARDROBE-TRUNK. GUSTAV H. JUERGENS, St. Louis, Mo., assignor to P. C. Murphy Trunk Co., St. Louis, Mo., a Corporation of Missouri. Filed Dec. 14, 1916. Serial No. 136,883. (Cl. 190—13.)



1. A wardrobe trunk, comprising a garment section and a drawer section, a hasp lock arranged on the outside of the trunk adjacent one end of same and provided with a base portion that is oscillatingly mounted on said garment section, a locking bar arranged on the inside of the trunk and connected to the base portion of said hasp lock in such a manner that said bar will be reciprocated when said base portion is turned, and a drawer slide arranged on the inside of the drawer section adjacent the opposite end of the trunk and provided with a hole into which said locking bar projects when the trunk is locked.

2. A wardrobe trunk, comprising a garment section and a drawer section, a hasp lock arranged on the outside of the trunk adjacent one end of same and provided with a base portion that is oscillatingly mounted on said garment section, a locking bar arranged on the inside of the trunk and connected to the base portion of said hasp lock in such a manner that said bar will be reciprocated when said base portion is turned, a drawer slide arranged on the inside of the drawer section adjacent the opposite end of the trunk and provided with a flange in which a hole is formed, and an offset portion at the lower end of said locking bar that enters said hole when the hasp lock is manipulated to lock the trunk.

3. A wardrobe trunk, comprising a garment section and a drawer section, a hasp lock arranged on the outside of the trunk adjacent one end of same and provided with an oscillatingly mounted base portion, a spindle on said base portion that projects through a hole in the garment section, a plate secured to the inner end of said spindle and provided with a pair of elongated slots, a reciprocating locking bar arranged in guides on the inside of the garment section and provided with studs that enter said elongated slots, and an angle-shaped drawer slide arranged on the inside of the drawer section adjacent the opposite end of the trunk and provided with a hole that is adapted to receive a reduced portion on one end of said locking bar when the trunk is locked.

1,223,887. ADVERTISING APPARATUS. EUGENE KLUCHANSKY, New York, N. Y. Filed June 5, 1916. Serial No. 101,710. (Cl. 40—32.)



1. An advertising device embodying an endless track, a plurality of carriages mounted for movement along the track, exhibiting signs mounted on said carriages, an endless driving member mounted for movement adjacent the track and provided with projections, means for actuating said driving member, and projections on the carriages extending into the path of the projections of the driving member whereby the projections of the driving member engage with the projections on the carriages and cause said carriages to move along the track.

2. An advertising device embodying an endless track, a plurality of carriages mounted for movement along the track, exhibiting signs mounted on said carriages, an endless driving member movable adjacent the track and provided with projections, projections on the carriages extending into the path of the projections of the driving member whereby they are engaged by said projections on the driving member and the carriage is caused to move along the track, a loop in the driving member extending out of the path of travel of the projections on the carriage, and means coöperating with the loop for actuating the driving member.

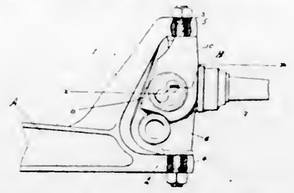
3. An advertising device embodying an endless track, a plurality of carriages mounted for movement along a track, exhibiting signs mounted upon the carriages, an endless drive chain provided with projections adapted to engage with the carriages for moving them along the track, said drive chain being provided with a loop extending out of the path of travel of the carriages, directional means for guiding the drive chain in parallel relation with the track, a driving sprocket in said loop, and means for rotating the sprocket to impart movement to the drive chain.

4. An advertising device embodying an endless track, a plurality of carriages mounted for movement along the track, exhibiting signs on said carriages, an endless drive chain provided with projections adapted to coöperate with the carriages for moving them along the track, a pair of directional sprockets around which the drive chain extends and is formed in a loop between the sprockets which loop extends laterally out of the path of said carriages, means coöperating with the loop of the drive chain for imparting movement thereto, and means coöperating with one of said directional sprockets for taking up the slack of the chain.

5. An advertising device embodying an endless track, a plurality of carriages mounted for movement along the track, an endless driving member provided with projections, a pair of directional rollers around which the driving member extends and is formed into a loop between said rollers, means coöperating with the loop of the driving member for imparting movement to said driving member, projections on the carriages adapted to be engaged by the projections on the driving member to move the carriages along the track from one directional roller around the track to the other directional roller, and connections between the successive carriages for moving them across the space between the two rollers.

[Claims 6 to 14 not printed in the Gazette.]

1,223,888. LOCK FOR AUTOMOBILES. FRANK H. KNIGHT, Lancaster, Pa., assignor of one-half to Henry G. Rush, Lancaster, Pa. Filed Feb. 5, 1917. Serial No. 146,697. (Cl. 70—90.)



1. In combination a spindle body to support an automobile wheel said spindle body hinged to swing laterally upon an axle, a barrier movably mounted upon said spindle body to be moved into engagement with the axle to hold said spindle body at a like angle with either desired face of said axle, and a device to move said barrier into such engagement with the axle.

2. In combination a spindle body to support an automobile wheel said spindle body hinged to swing laterally upon an axle, a barrier movably mounted upon said spindle body to be moved into engagement with the axle to positively hold said spindle body at a like angle with either desired face of said axle, a device to move said barrier into engagement with the axle, and means to hold said device in operative engagement with said barrier.

3. In combination a spindle body to swing laterally upon an axle and to support an automobile wheel, a spindle casing forming a part of said spindle body and having an axial aperture to receive a bolt whereby it is hinged to the axle, said bolt, a barrier movably mounted upon the spindle casing to be moved into engagement with the axle to prevent the lateral swinging of the spindle body upon said axle, and a device to be moved to move the barrier outwardly from the spindle casing and into position to engage the axle and to maintain it in such position.

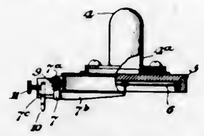
4. A spindle body to support an automobile wheel said spindle body hinged to an axle to swing in opposite directions thereon, a barrier upon said spindle body to be moved to engage an axle, a device to be freely moved by pressure from the hand in one direction to move the barrier outwardly from the spindle body and into engagement with the axle, and means to maintain said device in engagement with the barrier and said barrier in engagement with the axle until said device has by a key been released from restraint.

5. In combination a spindle body to support an automobile wheel and hinged to swing laterally upon an axle, a barrier movably mounted upon said spindle body to be moved into engagement with the axle to hold said spindle body from lateral movement thereon, a device to be freely moved in one direction by pressure from the hand to engage and move the barrier toward and into engagement with the axle, and a key controlled lock to hold said device in engagement with the barrier and said barrier in engagement with the axle until such lock has been acted upon by a key to release said device from restraint and thereby permit the return of said device and its actuated barrier to normal position.

1,223,889. TALKING-MACHINE. THOMAS KRAEMER, Philadelphia, Pa. Filed Mar. 3, 1915. Serial No. 11,662. (Cl. 274—28.)

1. In a talking machine, a sound box having a diaphragm, a lever fulcrumed intermediate its length on said sound box, and a stylus connected to the outer arm of

said lever, offset from the axis thereof and disposed transversely to said axis, in combination with a tone arm to which said sound box is immovably connected, so that lateral or vertical undulations of records revolving in engagement with said stylus will rock said lever.



2. In a talking machine, a sound box having a diaphragm, a lever having a fulcrum on said sound box, said lever having one arm fixed to said diaphragm and a transverse socket carried by the other, a stylus disposed in said socket transversely to said lever, and a tone arm to which said sound box is connected so that laterally and vertically undulated records will act on said stylus and vibrate said diaphragm normally, said lever extending transversely to said tone arm.

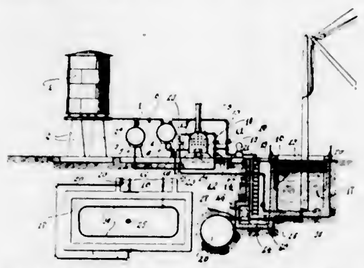
3. In a talking machine, a sound box having a diaphragm, a lever fulcrumed intermediate its length on a side of said sound box, said lever having an arm connected with said diaphragm and an oppositely extending arm provided with a stylus offset from and disposed transversely to the axis of said lever and adapted to coact with a record, and a tone arm to which said sound box is immovably connected so that lateral or vertical undulations of a record coacting with said stylus will rock said lever.

4. In a talking machine, an oscillatory tone arm, a sound box connected to said tone arm, a lever having an axis of oscillation on a side of said sound box, said axis extending transversely to the length of said lever, said lever having one arm connected with said diaphragm and another arm exending beyond said sound box, and a stylus connected with the arm of said lever beyond said sound box, said sound box being movable in a circular arc by the oscillation of said tone arm, and the axis of said lever being movable through positions substantially parallel to radii of said arc.

5. In a talking machine, an oscillatory tone arm, a sound box fixed to said tone arm with the face of its diaphragm disposed substantially parallel to the face of a record adapted for use therewith, a lever fulcrumed intermediate its length on said sound box with an arm thereof connected with said diaphragm, said lever having an axis of oscillation extending in approximately the same direction as the tangent to the record groove at the point thereof engaged by the stylus, and said stylus connected with an arm of said lever disposed oppositely to said arm first named.

[Claims 6 to 10 not printed in the Gazette.]

1,223,890. APPARATUS FOR TREATING POLES OR OTHER WOODEN ARTICLES. EDWARD A. LUNDSLEY, Spokane, Wash. Filed June 26, 1916. Serial No. 105,993. (Cl. 99—12.)



1. In an apparatus for impregnating timbers, a treating tank, a supply pipe communicating therewith, a delivery pipe connected to the latter and disposed within the tank, means for raising and lowering the outlet of the delivery pipe, and a delivery nozzle adjustably mounted upon the delivery pipe.

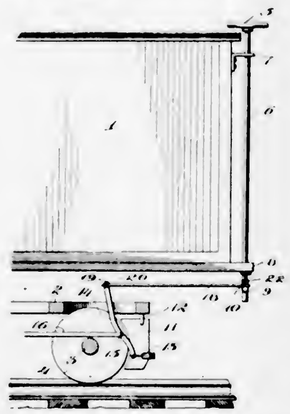
2. In an apparatus for impregnating timbers, the combination of a treating tank adapted to contain a treating fluid or liquid supported upon a liquid of greater specific gravity, supply pipes communicating with said treating tank, connecting pipes establishing connection between said supply pipes, means for forcing and circulating said supported liquid through said pipes and said tank, and a plurality of vertically adjustable liquid conveying devices connected to said supply pipes and disposed within said tank.

3. In an apparatus for impregnating timber, a treating tank, a supply pipe communicating therewith, a pivotally mounted liquid flowing device connected to the latter and disposed within the tank, and means for raising and lowering the outlet or mouth of said device said means consisting of an adjustable lever fixedly secured to said device and means for retaining said lever in adjusted position.

4. In an apparatus for impregnating timber, a treating tank, a supply pipe communicating therewith, and vertically adjustable means for delivering liquid from the pipe to the tank said means consisting of a pipe connected to the supply pipe and pivotally mounted in the wall of the tank and extending into the tank, a delivery nozzle adjustably mounted upon the end of the pipe, and a rod having one end pivotally secured to said nozzle and the opposite end pivotally secured to the wall of the tank.

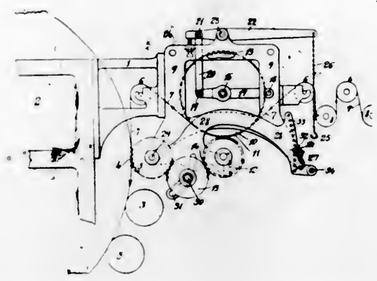
5. In an apparatus for impregnating timbers, the combination of a treating tank adapted to contain a treating fluid or liquid supported upon a liquid of greater specific gravity, supply and discharge pipes communicating with the upper part of said treating tank, connecting pipes adapted to establish connection between said pipes, and means for forcing and circulating said supported liquid through said pipes and said tank.

1,223,891. HAND-BRAKE FOR RAILROAD-CARS. CHESTER R. LORD, Mineral City, Ohio. Filed Sept. 23, 1916. Serial No. 121,740. (Cl. 188—52.)



In combination with a car truck, a car brake comprising brake shoes pivotally mounted upon said truck, a brake beam fixedly attached to said brake shoes, a lever pivotally connected to said brake beam, a connecting link pivotally connected to said lever intermediate the extremities thereof, a brake car pivotally connected to the upper extremity of said lever, said brake bar having a slot near its other extremity, a brake wheel shaft, a radial arm provided upon said shaft, and a pin carried on said arm and located through the slot in said brake bar.

1,223,892. MACHINE FOR MAKING CUT-OUT WALL-PAPER. WILLIAM F. MARRESFORD, Brooklyn, N. Y. Filed Aug. 10, 1912. Serial No. 714,432. (Cl. 101—178.)



1. In a machine for decorating a web of paper or similar material, the combination with a rotary cylinder printing machine having at least one design printing cylinder, of a web cutting means arranged to approximately simultaneously cut a design in predetermined relation to the design printing cylinder, a platen also driven synchronously with said cutting means and said printing cylinder to feed the web to said printing machine, said cutting means being mounted to be moved toward and from said platen and said platen being mounted to move toward and from said cutting means.

2. The combination with a decorative design web printing roller, of a cutting roller driven in synchronism with said printing roller and having on its periphery a succession of separate cutting knife edges to form a separable line of slits in the web corresponding to the design approximately simultaneously printed by said printing roller.

3. The combination with a decorative design web printing roller, of a cutting roller driven in synchronism with said printing roller and having on its periphery a succession of separate individually adjustable knife edges to form a seperable line of slits in the web corresponding to the design approximately simultaneously printed by said printing roller.

4. In wall paper manufacture, and in combination with means for continuously applying a design to a web, means immediately adjacent and synchronized with said design applying means for approximately simultaneously and continuously effecting in the web a close linear succession of slits outlining said design in fixed relation thereto, whereby said web is capable of further handling as an entirety and the design bearing portion rendered separable by tearing the portions between successive slits.

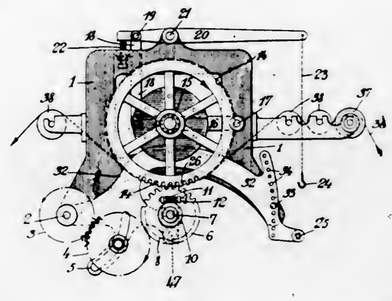
5. The combination with a decorative design printing roller, of a cutting roller driven in synchronism with said printing roller and having on its periphery a succession of separate cutting knife edges to approximately simultaneously form a line of cuts in the web corresponding to the design printed by said printing roller, and a platen driven synchronously with said cutting roller to support and feed the web as said knife edges successively cut the design.

[Claims 6 to 8 not printed in the Gazette.]

1,223,893. MACHINE FOR MAKING WALL-PAPER CUT-OUTS. WILLIAM F. MARRESFORD, Brooklyn, N. Y. Filed Apr. 6, 1914. Serial No. 829,755. (Cl. 164—28.)

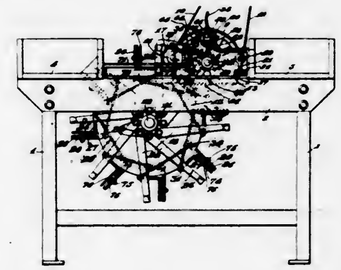
1. The combination with rotary design cutting means, and a cooperating rotary platen, of meshing driving gears therefor, and frictional driving means between the platen and its driving gear rendering the peripheral speed of the platen and the cutter independent of the speed of said driving gears.

2. The combination of a driven platen, a pattern cutting roll geared to be driven therewith, means for angularly adjusting the cutting roll relatively to the platen, and means permitting the platen to slip relatively to its driving means.



3. The combination with a positively driven bodily swinging platen, of a swinging pattern cutting roll geared to be driven with said platen, said cutting roll and platen bodily swinging toward and from each other, means for angularly adjusting the cutting roll relatively to the platen, and means permitting the platen to slip relatively to its driving means.

1,223,894. MACHINE FOR MAKING LAMINATED SOLES. JOHN E. MITCHELL and DENNIS PARKS, St. Louis, Mo. Filed June 26, 1916. Serial No. 105,806. (Cl. 154—1.)



1. A machine for making laminated soles comprising a movably mounted series of clamps, and means for separating the clamping members of one clamp and thereby arresting the movement of all the clamps.

2. A machine for making laminated soles comprising a movably mounted series of clamps, and means tending to move toward its operative position for separating the members of one clamp and thereby arresting the movement of all the clamps.

3. A machine for making laminated soles comprising a clamp carrier, a series of movable clamps carried thereby, and means for separating the members of one clamp and thereby offering a yielding resistance to further movement of all the clamps.

4. A machine for making laminated soles comprising a clamp carrier, a series of movable clamps carried thereby, and means for separating the members of one clamp and thereby yieldably limiting the extent of further movement of all the clamps.

5. A machine for making laminated soles comprising a clamp carrier, a series of movable clamps carried thereby, and means operating first to separate the members of one

clamp and thereby arrest the movement of the clamp carrier in one direction, and then to lock the clamp carrier and clamps from movement in the opposite direction.

[Claims 6 to 22 not printed in the Gazette.]

1,223,895. METALLIC RAILROAD-TIE. AARON NEISWENDER, Orwigsburg, Pa., assignor of one-half to Howard W. Weston, Pottsville, Pa. Filed Nov. 26, 1915. Serial No. 63,643. Renewed Sept. 27, 1916. Serial No. 122,549. (Cl. 238—5.)



1. A metallic cross tie including a pair of I beams arranged side by side and having their upper flanges fitted together, the upper flanges being cut away between the webs to form intermediate and end openings, end plates secured to the webs of the I beams, spaced plates located at the intermediate opening and inner and outer rods piercing the intermediate and end plates and extending through the end opening of the said top flanges and provided thereat with means for engaging a rail at the inner and outer sides thereof.

2. A metallic cross tie including a pair of I beams arranged side by side and having their upper flanges cut away at the ends and at the center to form openings, top plates secured to the upper flanges and provided at the end openings with slots and terminating at the central opening, vertical plates arranged in the central opening and provided at their upper and lower edges with oppositely extending flanges, the upper flanges engaging the top plates and the lower flanges being secured to the bottom flanges of the I beams, end plates connecting the webs at the ends of the I beams, inclined rods piercing the end plates and the vertical plates and provided with means for engaging the same and having terminal hooks located at the end openings of the I beams and the slots of the top plates and arranged to engage the rails at the side edges thereof.

3. A metallic cross tie including spaced beams having vertical webs and upper and lower horizontal flanges fitted together, the upper horizontal flanges being cut away at the ends and at an intermediate point to form end slots and an intermediate opening, upright plates or members mounted in the intermediate opening, and rods piercing the upright plates and adjustably connected with the same and extending therefrom to the end slots and provided thereat with means for engaging the base of a rail.

4. A metallic cross tie including beams having vertical webs and upper and lower horizontal flanges and arranged side by side, the upper horizontal flanges being cut away at the ends and at an intermediate point to form end slots and an intermediate opening, upper plates secured to the upper flanges and extending from the end slots to the intermediate opening and adapted to receive the rails, upright plates or members mounted in the intermediate opening at the ends thereof and fastening devices extending from the upright plates to the end slots and provided with means for engaging the rails at the base thereof.

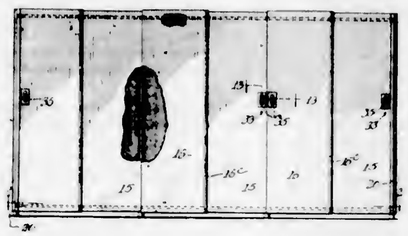
1,223,896. SPEED-INDICATOR. MARTIN NYSTROM, Chicago, Ill., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed Nov. 16, 1916. Serial No. 131,622. (Cl. 264—15.)

A speed indicator for talking machine record tables comprising a base having an axial opening to receive the spindle of a talking machine, a hollow standard supported on said base having a slot in one face and a scale contiguous to said slot, an indicator pivotally mounted within said standard with its end projecting through said slot, and a pair of weighted arms pivotally mounted on



said standard, one of said arms having an extension engaging said indicator.

1,223,897. DOOR FOR SHELVING. JOHN B. O'CONNOR, Aurora, Ill., assignor to Lyon Metallic Manufacturing Company, Aurora, Ill., a Corporation of Illinois. Filed Aug. 25, 1915. Serial No. 47,268. (Cl. 189—46.)



1. A cabinet having a track extending across the front, and a pair of doors slidable upon said track, one door of the pair having flanges fitting over the top and bottom edges of the other door to be guided thereby.

2. A cabinet having a track extending across the front, and a pair of doors slidable upon said track, one door having anti-friction rollers near each end traveling upon said track and the other door having anti-friction rollers near one end traveling upon said track, the other end of the last mentioned door being flanged to fit over the upper and lower edges of the other door to be guided thereby.

3. A cabinet having a plurality of compartments arranged side by side, a track extending across the front of said compartments, and a set of doors for each compartment, the doors sliding upon said track, the doors of a set telescoping with each other whereby they may be brought approximately into register, the track being continuous across the front of the cabinet whereby the telescoped doors may be slid far enough to completely uncover a compartment.

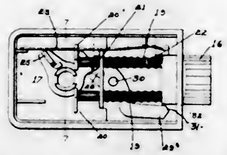
4. A cabinet having a plurality of compartments arranged side by side, a pair of doors for each compartment, the doors of a pair telescoping with each other and the aggregate length of the pair of doors being approximately equal to the length of the cabinet, and a track upon which said doors are slidable to cover and uncover said compartments, said track being continuous across a plurality of compartments to thereby permit the doors of one compartment to slide over to a point in front of another compartment to thereby completely expose the first compartment.

5. A cabinet having a track at the front, and a pair of telescoping doors traveling upon said track, the external door having a channel at the end remote from the internal door whereby, when the doors are brought into register, the channeled end of the external door will fit over

the inclosed end of the internal door to thereby prevent the external door from swinging away from the plane of the internal door.

[Claims 6 to 16 not printed in the Gazette.]

1,223,898. NIGHT-LATCH. ALBERT A. PAGE, East Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Mar. 24, 1913. Serial No. 756,553. (Cl. 70—42.)



1. In a rim night latch, the combination of a case, a latch bolt therein having a shank, a guide piece for said shank, a spring tending to throw the latch bolt outward beyond the normal latching position, a hub for retracting said bolt, a pivoted lever in the case controlled by said hub and automatically movable into the path of the latch bolt when the latter is projected beyond the latching position, to prevent said bolt from being forced back into the case, and releasable means for holding said latch bolt in the normal latching position in opposition to said spring; substantially as described.

2. In a rim night latch, the combination of a case, a latch bolt therein, a spring tending to project the latch bolt beyond the normal latching position, a hub having a wing engaging said bolt and adapted to retract the same, a pivoted lever in the case, a knob connected with said hub releasable means controlled by said knob for holding said latch bolt in the normal latching position in opposition to said spring, and means for moving said lever into and out of the path of the bolt as the latter is projected beyond the latching position and retracted respectively; substantially as described.

3. In a lock, the combination of a case, a latch bolt therein, a retracting hub for said latch bolt, means for projecting said bolt outward beyond the latching position as said hub is rotated, and a member in the case separate from said hub but actuated thereby to prevent the projected bolt from being forced back into the case; substantially as described.

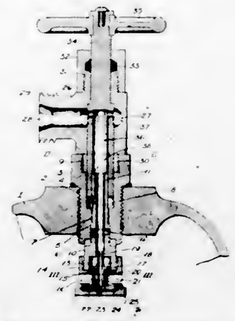
4. In a lock, a case, a latch bolt therein, a retracting hub for said latch bolt, a spring for projecting said bolt outward beyond the latching position as said hub is rotated in one direction, and a pivoted lever in the case actuated by said hub as the latter is so rotated, to block the incursion of the bolt; substantially as described.

5. In a lock, a case, a latch bolt therein, a deadlocking lever for said latch bolt, means yieldingly urging the bolt outward beyond the latching position, and a retracting hub for said latch bolt permitting the outward projection of the bolt as the hub is rotated in one direction, said hub actuating said deadlocking lever as the hub is so rotated but being free of the lever as the hub moves the latch bolt from the latching position to a fully retracted position; substantially as described.

[Claims 6 to 29 not printed in the Gazette.]

1,223,899. HIGH-PRESSURE-GAS-TANK VALVE. GEORGE M. PARKS, Kansas City, Mo., assignor of one-half to Anders Larsen, Kansas City, Mo. Filed Nov. 6, 1915. Serial No. 60,160. (Cl. 220—110.)

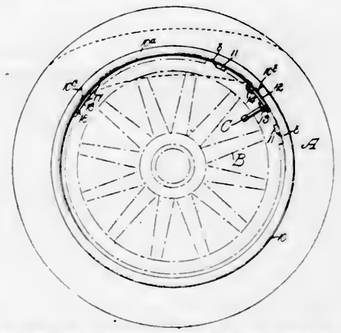
1. A gas tank, provided with a tubular plug having a valve seat; a valve provided with a stem having an adjustable relation with the plug, a bore or passage and an opening above the valve seat, communicating with said bore or passage; a coupling removably secured to the outer end of the plug; a handle stem journaled in the coupling and detachably interlocked with the valve stem for turning the same to effect valve unseating or valve seating adjustment of said stem; and a yieldingly seated valve carried by the first-named valve and adapted to be unseated when the pressure in the tank rises a predetermined distance to guard against overcharging of the tank.



2. A gas tank, provided with a tubular plug having a valve seat; a valve provided with a stem having an adjustable relation with the plug, a bore or passage and an opening above the valve seat, communicating with said bore or passage; a coupling removably secured to the outer end of the plug; a handle stem journaled in the coupling and detachably interlocked with the valve stem for turning the same to effect valve unseating or valve seating adjustment of said stem; a yieldingly seated relief valve carried by the first-named valve and adapted to be unseated when the pressure in the tank rises a predetermined distance to guard against overcharging of the tank; and a disk carried by said relief valve and adapted in the event of failure of the latter to open under excess pressure in the tank to rupture under such pressure and permit the gas to escape from the tank.

3. The combination with a tank of a tube, a perforated cap upon the inner end of the tube within the tank, a yieldingly seated relief valve closing the perforation in said cap and provided with a tubular stem, a head screwed upon the inner end of said stem, a centrally perforated cap secured on said head, and a disk clamped between said head and cap and closing communication between the bore of said valve stem and the perforation of the last-named cap; said disk being adapted to rupture and establish communication between the interior of the tank and the bore of the valve stem in the event the said valve fails to open under a predetermined pressure in the tank.

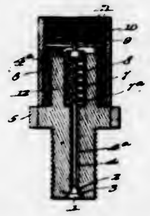
1,223,900. DETACHABLE WHEEL-RIM. CALVIN DAVID PAXSON, Cleveland, Ohio. Filed Oct. 3, 1916. Serial No. 123,468. (Cl. 152—21.)



A detachable rim composed of a main body section constituting the major portion of the rim, a section con-

stituting the remaining portion of the rim and bodily removable from the main section, and means to detachably fasten both ends of the removable section, the fastening means at one end consisting of a stud projecting radially inward on the removable section, a tubular rivet on the adjacent end of the body section of the rim, and a latch pivotally secured at one end by the said tubular rivet, the said tubular rivet forming a passage for the air valve, the opposite end of the latch having a hooked formation to engage the said pin on the removable section.

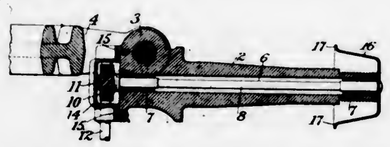
1,223,901. VALVE. MARSHALL J. PAYNE, Staunton, Va. Filed July 26, 1916. Serial No. 111,448. (Cl. 137—32.)



1. A valve comprising a casing having an internal valve seat, a valve to coöperate with the seat having a valve stem extending through a channel longitudinal in the casing, said channel having a recessed space opposite the valve seat, a spring in the recessed space bearing on the valve casing and the valve stem and acting to hold the valve to the seat, an externally threaded sleeve on the casing adapted for axial and not rotary movement, a threaded member engaging the said sleeve with means for moving and holding the valve to its seat.

2. A valve comprising a casing having an internal valve seat, a valve to coöperate with the seat having a valve stem extending through a channel longitudinal to the valve casing, a recessed space in the channel opposite the valve seat, a spring in the recessed space bearing on the valve casing and the valve stem, an externally threaded sleeve on the casing positioned for axial and not rotary movement, said sleeve operatively connected to the valve stem, with means for moving and holding the valve to its seat, said means embracing the spring in the recessed space, a threaded member adapted to bear on the valve casing and acting to move the sleeve in an axial direction.

1,223,902. MECHANISM FOR DRIVING SPEEDOMETERS. JOHN G. PERRIN, Detroit, Mich., assignor to Motor Patents Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 1, 1911. Serial No. 641,875. (Cl. 235—96.)



1. In a motor vehicle, the combination with a stationary axle, a steering spindle pivoted at the end of said axle with its axis in off set relation to its pivot, and a wheel rotatably mounted on said spindle, of an indicator driving mechanism comprising a shaft arranged in said spindle, gears at the inner end of said shaft, and a driving connection between said shaft and said wheel at the outer end of said spindle.

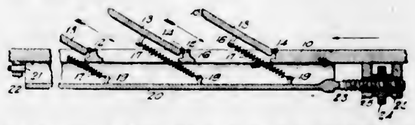
2. In a motor vehicle, the combination of a stationary axle, a steering wheel spindle pivotally connected with said axle, and having its axis off set rearwardly thereof, a wheel rotatably mounted on said spindle, a shaft extending longitudinally through said spindle, and a driving connection between the wheel and said shaft.

3. In a motor vehicle, the combination of an axle, a steering wheel spindle pivotally connected with said axle and having its axis off set relative thereto longitudinally of the vehicle, a wheel rotatably mounted on said spindle, an axially arranged shaft supported in bearings in said spindle, and a driving connection between the wheel and said shaft at the onter end of the spindle.

4. In a vehicle, the combination with the axle, the steering spindle, and the wheel mounted on the spindle, of an indicator driving mechanism comprising an axially arranged shaft extending through said spindle, a vertical pivot connecting said spindle to said axle and arranged wholly at one side of the axis of the spindle, and a driving connection between the wheel and said shaft.

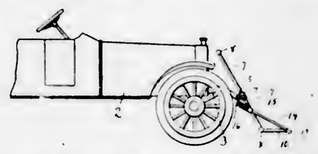
5. In a vehicle, the combination with the axle and the steering spindle, of an indicator driving mechanism including a shaft extending axially through the spindle and a pivotal connection for said spindle to said axle having its axis offset from the axis of said shaft.

1,223,903. AUTOMOBILE-DOOR. SALE A. PICKENS, New York, N. Y. Filed Nov. 9, 1915. Serial No. 60,517. (Cl. 98—22.)



An automobile door having a series of elongated vertical openings; a series of solid louvers therefor each being pivotally connected at the rear edge of one of said openings; a master bar reciprocatively mounted transverse said openings; a series of springs operatively connecting said master bar and each of said louvers; and means for manually adjusting said master bar, said means embodying a screw-threaded extension of said master bar, and a rotary nut operatively connected therewith.

1,223,904. AUTOMOBILE-FENDER. WILLIAM C. REUTTER, Mannayunk, Pa. Filed Mar. 3, 1917. Serial No. 152,166. (Cl. 105—253.)

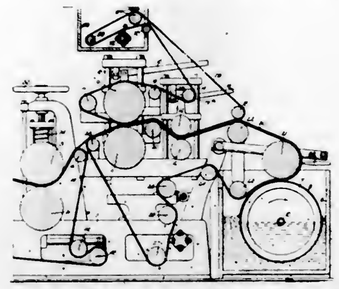


1. In combination with a vehicle a fender embracing a guard, rigidly secured to said vehicle, a scoop hinged to the lower and forward end of said guard, sockets carried by the guard and supporting rods pivoted to the scoop and slidably mounted in said sockets.

2. In combination with a vehicle a fender embracing a guard rigidly secured to said vehicle, a scoop hinged to the lower and forward end of said guard, sockets carried by the guard, supporting rods pivoted at the front ends of the sides of the scoop and slidably mounted in said sockets, and means acting upon said rods for supporting the scoop in a normal horizontal position.

3. In combination with a vehicle a fender embracing a guard rigidly secured to said vehicle, a scoop hinged to the lower and forward end of said guard, sockets carried by the guard, supporting rods pivoted at the front ends of the sides of the scoop and slidably mounted in said sockets, spring engaging means carried by the inner ends of the supporting rods and springs coiled about said rods and situated between said spring engaging means and the sockets, whereby said springs will normally hold the scoop in a horizontal position.

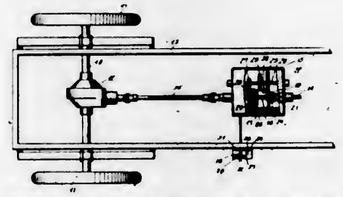
1,223,905. MACHINE FOR CONVERTING PULP INTO SHEETS. HENRY GEER ROGERS, Au Sable Forks, N. Y. Filed Jan. 13, 1917. Serial No. 142,209. (Cl. 92—43.)



1. In a machine for forming pulp into sheets, squeezing means including a roller having a longitudinal groove presenting a non-squeezing line to produce a relatively weakened line with excess moisture transversely of the sheet, and tension-breaking rollers beyond the said first roller to exert breaking action on the web at the weakened line.

2. In a machine for forming pulp into sheets, squeezing means including a roller having a longitudinal groove presenting a non squeezing line to produce a relatively weakened line with excess moisture transversely of the sheet, in combination with tension breaking rollers driven at a relatively higher speed than the said grooved roller.

1,223,906. AUTOMOBILE-LOCKING DEVICE. LOUIS C. SCHERMERHORN, Paterson, N. J. Filed Oct. 31, 1916. Serial No. 128,669. (Cl. 74—58.)



1. Transmission gearing comprising an axially adjustable gear, a relatively fixed gear adapted to coöperate therewith in one position, and a rigid segment adapted to engage the adjustable gear in a second position thereof to thereby lock said gearing against rotation.

2. Transmission gearing comprising a direct transmission shaft, a countershaft, coöperating gears on the respective shafts, comprising an axially adjustable gear, stationary means for engaging said adjustable gear, means for axially adjusting said adjustable gear to throw it into and out of mesh with its coöperating gear, and into engagement with said stationary means to lock the adjustable gear against rotation.

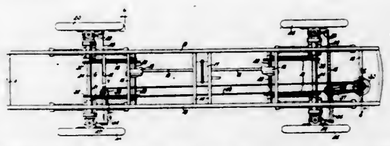
3. Transmission gearing comprising a direct transmission shaft, a countershaft, coöperating gears on the respective shafts, means for axially adjusting one of the gears to throw it into and out of mesh with its coöperating gear, and means adjacent to the coöperating fixed gear for locking the adjustable gear against rotation.

4. Transmission gearing comprising a direct transmission shaft, a countershaft, coöperating gears on the respective shafts, means for axially adjusting one of the gears to throw it into and out of mesh with its coöperating gear, and a stationary gear segment adjacent to the fixed gear and adapted to be engaged by the adjustable gear for locking same.

5. Transmission gearing comprising a direct transmission shaft, a countershaft, coöperating gears on the respective shafts, means for axially adjusting one of the gears to throw it into and out of mesh with its coöperating gear, and a stationary segment adjacent to the gear, and means for moving the adjustable gear into mesh with the fixed gear and the stationary segment to lock the shafts.

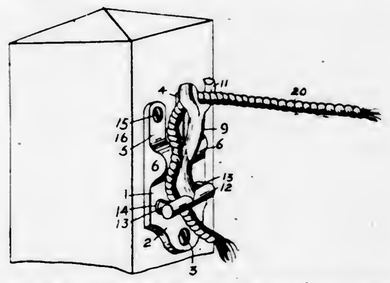
[Claims 6 and 7 not printed in the Gazette.]

1,223,907. STEERING-GEAR. JOSEPH RYAN STILL SMITH, Placerville, Colo. Original application filed Apr. 21, 1915, Serial No. 22,811. Divided and this application filed Apr. 22, 1916. Serial No. 93,017. (Cl. 21—193.)



The herein described steering devices for automobiles, the same comprising a fixed tubular post, a pair of independently rotatable shafts journaled coaxially of the post, a pair of hand wheels connected to the respective rotary shafts and each held from rotation with relation to its shaft, the holding means for one of the hand wheels including a hub slidable along its shaft, and means to control the sliding movement of the hub whereby the hand wheel connected thereto is adapted to be locked either to the post for non-rotation, to the other hand wheel for rotation therewith, or in a mid position independent of both the other hand wheel and the post.

1,223,908. LINE-HOLDER. MATHIAS SMOLIK, Pittsburgh, Pa., assignor, by direct and mesne assignments, to Economy Specialties Company, a Corporation of Delaware. Filed Aug. 19, 1916. Serial No. 115,793. (Cl. 24—133.)

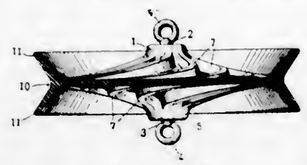


A line clamp comprising a holder provided intermediate its ends with a pair of outwardly extending enlargements each formed with a pocket, said enlargements spaced from each other, a clamping lever provided at each side and intermediate its ends with a laterally projecting lug seated in one of the pockets whereby the lever is pivotally connected with the holder, said holder having formed therein between its lower end and said enlargements a pair of transverse alining openings spaced from the sides of the holder, and said clamping lever including a transversely extending base having formed integral with its inner face near each end an inwardly extending lug, said lugs seating in said openings to prevent slipping of a line from under the base.

1,223,909. DISK STRAIN-INSULATOR. LOUIS STEINBERGER, Brooklyn, N. Y. Filed Jan. 3, 1913. Serial No. 739,988. (Cl. 173—318.)

1. In an insulator, a disk formed with a plurality of ridges thereon radiating from a common point and ex-

tending in curved directions so that one ridge overlaps a portion of another ridge radially from said common point.



2. In an insulator, a disk formed with a central body portion, and a series of ridges formed on said disk extending from said body portion in curved directions toward the margin of the disk, and a portion of one of said ridges overlapping a portion of another of said ridges radially from said body portion.

3. In an insulator, a disk, and means thereon defining a plurality of creepage paths extending in curved directions from the central portion of the disk toward the periphery thereof, said paths having portions overlapping radially from said central portion of the disk.

4. In an insulator, a disk having relatively upper and lower surfaces, a plurality of spaced and separate ridges extending along said two surfaces in a spiral direction, and the ridges on one surface extending in a spiral direction opposite to the direction of the ridges on the other surface.

5. In an insulator, a disk having a plurality of ridges upon each of its opposite surfaces defining creepage paths between them, there being a creepage path upon one surface to form a pair with each creepage path upon the opposite surface, the two creepage paths of each of said pairs extending from the central portion of the disk in substantially diametrically opposite directions but being curved so as to terminate adjacent a common point in the vicinity of the periphery of the disk.

[Claims 6 to 9 not printed in the Gazette.]

1,223,910. EVENER-BAR OR THE LIKE. JOHN R. TAYLOR, Brackenridge, Pa., assignor to Allegheny Steel Company, a Corporation of Pennsylvania. Filed Nov. 9, 1916. Serial No. 130,452. (Cl. 21—78.)



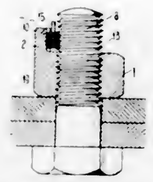
1. An evener bar or the like comprising one piece of sheet metal bent to U-shape and having opposite flanged openings, the ends of the opposing flanges forming butt joints.

2. An evener bar or the like comprising one piece of sheet metal bent to a U-shape and having depressed perforated cups arranged in pairs back to back, and rivets in the perforations of each pair.

1,223,911. LOCK-NUT. CHRISTIAAN CORNELIS VAN DER VALK, The Hague, and FRANCOIS MARINUS VAN PANTHALEON BARON VAN ECK, Rotterdam, Netherlands, assignors to Carel Otto Heuvelink, The Hague, Netherlands. Filed May 24, 1916. Serial No. 99,530. (Cl. 151—25.)

1. A lock nut provided with a marginal lug projecting from one of the end faces thereof the inner surface of said lug being curved so as to form a space between said surface and a bolt protruding through the nut, which space gradually diminishes in width, and a locking key adapted to be inserted and wedged tightly in said space.

2. A lock nut provided with a marginal lug projecting from one of the end faces thereof the inner surface of said lug being curved to cylindrical form so as to form a space between said surface and a bolt protruding through the nut, which space gradually diminishes in width, and a locking key adapted to be inserted and wedged tightly in said space.



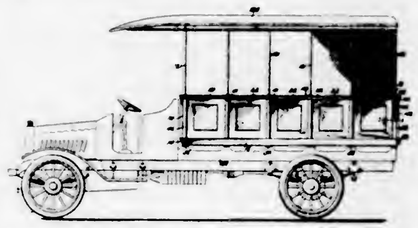
3. A lock nut having a polygonal periphery and provided with a marginal lug projecting from one of the end faces thereof the inner surface of said lug being curved so as to form a space between said surface and a bolt protruding through the nut, which space gradually diminishes in width, the space being narrowest opposite one of the corners of the nut, and a locking key adapted to be inserted and wedged tightly in said space.

4. A lock nut provided with a marginal lug projecting from one of the end faces thereof the inner surface of said lug being curved so as to form a space between said surface and a bolt protruding through the nut, which space gradually diminishes in width, and a locking key adapted to be inserted and wedged tightly in said space, said key consisting of a cylindrical member having a plurality of peripheral grooves forming between them a plurality of peripheral threads corresponding in distance from each other with the pitch of the bolt screw thread.

5. A lock nut provided with a marginal lug projecting from one of the end faces thereof, the inner surface of said lug being curved so as to form a space between said surface and a bolt protruding through the nut which space gradually diminishes in width and a locking key adapted to be inserted and wedged tightly in said space, said key consisting of a cylindrical member having a plurality of peripheral grooves forming between them a plurality of peripheral threads corresponding in distance from each other with the pitch of the bolt screw thread, said peripheral threads being serrated.

[Claims 6 to 9 not printed in the Gazette.]

1,223,912. BODY FOR AUTO-TRUCKS. WILLIAM K. WATERMAN, New York, N. Y. Filed June 16, 1916. Serial No. 103,982. (Cl. 21—7.)



1. A knockdown body for auto-trucks, comprising a bottom frame formed of side beams and cross beams of channel iron, side panels having overlapping joints at the sides and resting on the said side beams, hollow side posts resting on the said side beams at the joints of the panels, fastening means connecting the said side posts with the overlapping sides of the side panels to fasten the latter together and to the side posts, and bolts within the said side posts and engaging the said side beams to fasten the side posts to the side beams.

2. A knockdown body for auto-trucks, comprising a bottom frame formed of side beams and cross beams of channel iron, side panels having overlapping joints at the sides and resting on the said side beams, hollow side posts resting on the said side beams, fastening means connecting

the said side posts with the overlapping sides of the side panels to fasten the latter together and to the side posts, bolts within the said side posts and engaging the said side beams to fasten the side posts to the side beams, an angle iron secured to the front cross beam of the frame, front end panels having overlapping joints at their sides, hollow front posts resting on the said angle iron, fastening means connecting the said front posts with the overlapping sides of the front panels, and bolts within the said front posts and engaging the said front angle iron to fasten the said front posts to the said angle iron.

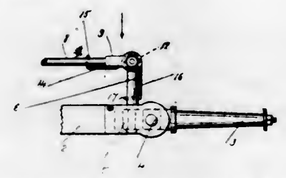
3. A knockdown body for auto-trucks, comprising a bottom frame formed of side beams and cross beams of channel iron, side panels having overlapping joints at the sides and resting on the said side beams, hollow side posts resting on the said side beams, fastening means connecting the said side posts with the overlapping sides of the side panels to fasten the latter together and to the side posts, bolts within the said side posts and engaging the said side beams to fasten the side posts to the side beams, an angle iron secured to the front cross beam of the frame, front end panels having overlapping joints at their sides, hollow front posts resting on the said angle iron, the forward side panels having at their forward sides outwardly extending flanges extending between the corner side and front posts, fastening means connecting the said front posts with the overlapping sides of the front panels, and bolts within the said front posts and engaging the said front angle iron to fasten the side front posts to the said angle iron

4. A knockdown body for auto-trucks, comprising a bottom frame formed of side beams and cross beams of channel iron, side panels having overlapping joints at the sides and resting on the said side beams, hollow side posts resting on the said side beams, the foremost and rearmost side panels having outwardly extending flanges engaging the side posts located at the front and rear ends of the side beams, fastening means connecting the said side posts with the overlapping sides of the side panels to fasten the latter together and to the side posts, and bolts within the said side posts and engaging the said side beams to fasten the side posts to the side beams.

5. A knockdown body for auto-trucks, comprising a bottom frame formed of side beams and cross beams of channel iron, side panels having overlapping joints at the sides and resting on the said side beams, hollow side posts resting on the said side beams, fastening means connecting the said side posts with the overlapping sides of the side panels to fasten the latter together and to the side posts, bolts within the said side posts and engaging the said side beams to fasten the side posts to the side beams, an angle iron secured to the front cross beam of the frame, front end panels having overlapping joints at their sides, hollow front posts resting on the said angle iron, fastening means connecting the said front posts with the overlapping sides of the front panels, bolts within the said front posts and engaging the said front angle to fasten the said front posts to the said angle iron, and interlocking means connecting the adjacent side panels and front panels with each other.

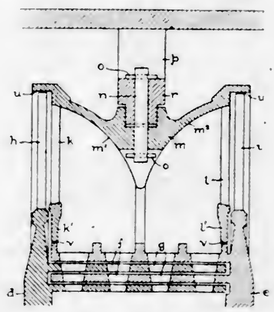
[Claims 6 to 15 not printed in the Gazette.]

1,223,913. STEERING MECHANISM. SCOTT S. WEAVER, Tampa, Fla. Filed Mar. 20, 1916. Serial No. 85,319. (Cl. 21—200.)



The combination, with a pivoted axle spindle having an operating arm provided with an eye having a projecting portion, and a connecting-rod having a forked end portion which is pivoted to the said eye; of a spring formed of a single piece of spring metal having a coil at its middle part which encircles the projecting portion of the said eye and which is arranged in the forked portion of the connecting-rod and to one side of the said arm, said coil terminating in arms having hooks which are bent around in the same direction and which project laterally from the said arms in the same general plane as the said coil but in opposite directions and which are sprung into engagement with the connecting-rod and operating arm respectively.

1,223,914. RADIAL STEAM-TURBINE. OSCAR ANTON WIBERG, Flisspong, Sweden. Filed Jan. 15, 1917. Serial No. 142,525. (Cl. 253—83.)



1. An elastic fluid turbine comprising a radial flow blade system, an axial flow blade system, stationary directing means which receive the fluid exhausting from the first system and deliver it to the axial flow system, and an inclosing casing, in combination with means for supporting the stationary directing means from said casing which permit the casing and means to expand and contract independently.

2. An elastic fluid turbine comprising a radial flow blade system, an axial flow blade system, stationary directing means which receive the fluid exhausting from the first system and deliver it to the axial flow system, and an inclosing casing, in combination with means supported by the casing and attached to said stationary fluid directing means which permit the casing and directing means to expand and contract independently and prevent relative axial movement of the casing and said directing means.

3. An elastic fluid turbine comprising a radial flow blade system, an axial flow blade system, stationary directing means which receive the fluid exhausting from the first system and deliver it to the axial flow system, and an inclosing casing, in combination with an annular member which supports the fluid directing means, and means that connect the casing and member and permit them to expand and contract independently without changing the central position of said member.

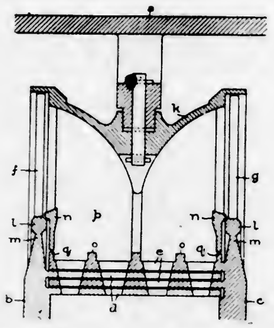
4. An elastic fluid turbine comprising a radial flow blade system, an axial flow blade system, stationary directing means which receive the fluid exhausting from the first system and deliver it to the axial flow system, and an inclosing casing, in combination with an annular member which carries rows of fluid directing means on opposite sides and has a deflector between, and means which are attached to the member and also to the casing which permit one of said parts to expand and contract independently of the other.

5. An elastic fluid turbine comprising a radial flow blade system, an axial flow blade system, stationary directing means which receive the fluid exhausting from the first system and deliver it to the axial flow system, and

an inclosing casing, in combination with a ring to which the directing means are rigidly attached, means for supporting the ring from the casing which permits the ring and casing to expand and contract independently, and means for holding the ring concentric with the turbine axis when said expansions and contractions take place.

[Claims 6 to 8 not printed in the Gazette.]

1,223,915. ELASTIC-FLUID TURBINE. OSCAR ANTON WIBERG, Finspong, Sweden. Filed Jan. 15, 1917. Serial No. 142,526. (Cl. 253—83.)



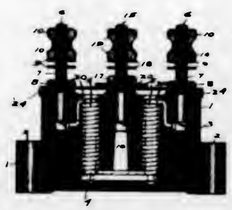
1. In an elastic fluid turbine, the combination of members which rotate in opposite direction and have concentric rows of blades through which the motive fluid flows radially outward, an axial flow system of larger diameter than the radial flow system which comprises stationary blades and blades that rotate with said members, and an annular diffuser chamber which surrounds the radial flow system, has a smaller inlet than outlet and is located between said systems, the said chamber acting to reduce the residual velocity of the exhaust as it flows from one system to the other.

2. In an elastic fluid turbine, the combination of a radial flow blade system, a pair of members which carry the blades of said system and rotate in opposite directions, each of said members having an enlarged rim, an axial flow system comprising stationary fluid directing means and rotating blades carried by said rims, and an annular diffuser chamber which is situated between said enlarged rims receives the motive fluid exhausting from the radial blade system and after decreasing its residual velocity delivers it to said stationary directing means and to the rotating blades on said rims.

3. In an elastic fluid turbine, the combination of a radial flow blade system, a pair of members which carry the blades of said system and rotate in opposite directions, each of said members having an enlarged rim, an axial flow blade system comprising rows of stationary and rotating blades which surround the radial flow system, rings to which the inner ends of the stationary blades are attached, said rings being located between said members, and an annular diffuser chamber located between the rings which enlarges from its inlet to its outlet by an amount sufficient to reduce the residual velocity of the motive fluid received from the radial system, said chamber delivering fluid in multiple to said rows of stationary blades.

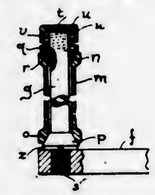
4. In an elastic fluid turbine, the combination of axially extending blades arranged in concentric rows and through which the motive fluid flows from the axis outwardly, radially extending stationary and rotating blades which surround the axial blades and through which the motive fluid flows axially, the inner ends of the stationary radial blades being separated from the axial blades by a distance equal to at least three times the width of the outer row of axial blades to form a chamber, and means for directing the motive fluid into said stationary blades.

1,223,916. LIGHTNING-ARRESTER. FREDERICK B. WIEGAND, Cleveland, Ohio, assignor to The National Electric Specialty Company, Toledo, Ohio, a Corporation of Ohio. Filed Apr. 29, 1915. Serial No. 24,665. (Cl. 175—214.)



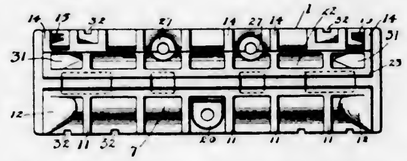
In a lightning arrester, the combination of a carbon disk, terminal plates located in juxtaposition to the carbon disk, a porcelain container having bosses for insulating and supporting the disk and plates above the container, binding posts extending through the terminal plates and the carbon disk and connected therewith and secured in the container, an electromagnet having coils connected to the binding posts extending through the terminal plates and located between the binding posts, the poles of the electromagnet located below the opposing edges of the carbon disk and the terminal plates, and a hardened plastic insulating material filling the porcelain container around the magnet.

1,223,917. BEARING FOR SIGNALS FOR AUTOMOBILES. GEORGE R. WILLIAMS, Highland Park, Mich. Filed June 12, 1913. Serial No. 773,165. (Cl. 64—7.)



The combination with an automobile having a chassis, a cylindrical rod *g* extending vertically from said chassis, a sleeve *m* having its ends formed into hollow conical bearings, conical annuli adapted to slide over said rod and engage in said bearings, a nut upon the upper end of said rod, said nut having a concavity on its lower side, and a spring interposed between said nut and the upper annulus and passing within said concavity, said upper annulus being adapted to be pressed against its bearings in said sleeve by said spring.

1,223,918. RAIL-JOINT. WILLIS D. WILLIAMS, East St. Louis, Ill., assignor to Williams Boltless Rail Joint Manufacturing Company, Prescott, Ariz., a Corporation of Arizona. Filed June 14, 1916. Serial No. 103,621. (Cl. 239—6.)



1. A rail joint comprising a base-plate, a brace on one side thereof, and a removable clamp adapted to be slidable longitudinally to and from clamping position on the other side of said base-plate, said brace and said clamp having

flanged upper edges adapted for supporting the rail-head, said clamp having transverse ribs on its under side.

2. A rail joint comprising a base-plate, a brace on one side thereof, and a removable clamp adapted to be slidable longitudinally to and from clamping position on the other side of said base-plate, said brace and said clamp having flanged upper edges adapted for supporting the rail-head, said clamp having a webbed under side adjacent to the base flange of the rail.

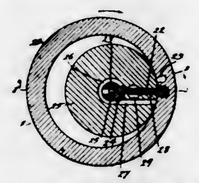
3. A rail joint comprising a base-plate, a brace on one side thereof, and a removable clamp adapted to be slidable longitudinally to and from clamping position on the other side of said base-plate, said brace and said clamp having flanged upper edges adapted for supporting the rail-head, said clamp having transverse ribs on its under side and transverse ribs on its outer side, there being buttress fillings on said outer side adjacent to ribs at each end of said clamp for strengthening the same against breaking when said clamp is rammed to and from clamping position.

4. A rail joint comprising a base-plate, a brace on one side thereof, a retaining abutment on the opposite side having an opposing face provided with a bolt-receiving notch surrounded in part by a reinforcing boss, a removable clamp slidable to position longitudinally of the base-plate and provided with a face contacting with the face of the retaining abutment, the face of said clamp being likewise formed with a bolt-receiving notch complemental to the notch of the abutment and a surrounding reinforcing boss also complemental to the boss of said abutment, said base-plate being formed with a bolt-receiving opening registering with the notch of said abutment, reinforcing ribs provided on the bottom of the base-plate and about the opening thereof, and a bolt passed through the opening of the base-plate and the notches of the abutment and clamp having one end portion seated on the bosses and the other end portion engaged within the space between the reinforcing ribs.

5. A rail joint comprising a base-plate, a brace on one side thereof, and a removable clamp adapted to be slidable longitudinally to and from clamping position on the other side of said base-plate, said brace and said clamp having flanged upper edges adapted for supporting the rail-head, said base-plate having ribs transversely thereof and ribs longitudinally thereof on its under side, said transverse ribs being adapted to bear against the edges of the supporting ties to prevent longitudinal movement of said base-plate and said longitudinal ribs being adapted to engage the adjacent surface of the supporting ties to prevent lateral movement of said base-plate, said transverse ribs being of relatively greater height than said longitudinal ribs.

[Claims 6 to 15 not printed in the Gazette.]

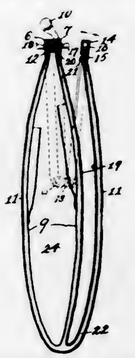
1,223,919. ROTARY PUMP. WALTER J. WILSON, Petersburg, Ind. Filed Aug. 5, 1914. Serial No. 855,153. (Cl. 230—30.)



1. The combination with an electric motor, of a fixed crank shaft, having an air passage therein, a cylinder carried by the rotor of said motor, a concentric drum carried by said shaft within and eccentric to said cylinder, and an abutment in rocking connection with said cylinder and in sliding engagement with said drum, said cylinder being provided with an air inlet and said drum with a passage in intermittent communication with the passage in said shaft.

2. The combination with an electric motor, of a fixed crank shaft having an air passage therein, a cylinder carried by the rotor of said motor and provided with a longitudinal cylindrical recess in the inner wall thereof, a concentric drum carried by said shaft within and eccentric to said cylinder and provided with a radial slot extending to the periphery thereof, and an abutment provided with a cylindrical head filling said cylindrical recess and comprising a plate filling said radial slot, said cylinder being provided with an air inlet and said drum with a passage in intermittent communication with the passage in said shaft.

1,223,920. HAND-BAG. LOUIS WOLF, New York, N. Y. Filed Aug. 4, 1916. Serial No. 113,086. (Cl. 150—29.)



1. A hand bag, consisting of a frame, a lining forming a pocket, a cover, a supplemental cover, and means for bringing either of said covers into covering position.

2. A hand bag, consisting of a frame, a lining formed into a pocket, a cover, a supplemental cover, and means for bringing either of said covers into covering position without disturbing the contents of said pocket.

3. A hand bag, consisting of a frame, a lining formed into a pocket, a cover, a supplemental cover, a handle, and means for bringing either of said covers into covering position without disturbing the contents of said pocket or said handle.

4. A hand bag, comprising two frame members in pivotal connection, a lining carried by said members and forming a pocket, a supplemental frame member in pivotal connection with said first named frame members, a cover secured at one side to said supplemental frame member and at its other side to one of said first named frame members, a cover secured at one side to said supplemental frame member and at its other side to the other of said first named frame members, and means for locking said supplemental frame member to either of said first named frame members.

5. A hand bag, comprising two frame members in pivotal connection at each end of said bag, a lining secured to said frame members and forming a pocket, means for holding said pocket closed, a link pivoted to each pivotal connection of said frame members, a supplemental frame member pivoted to said links, a cover secured at one side to said supplemental frame member and at its other side to one of said first named frame members, a cover secured at one side to said supplemental frame member and at its other side to the other of said first named frame members, one of said covers being folded between said lining and the other of said covers and adapted to be opened to inclose said last named cover and said lining by swinging said supplemental frame member on its pivots, and means for securing said supplemental frame member to either of said first named frame members.

1,223,921. LAMP-CHANGING DEVICE. ADOLPH ZEISEL, Bel Air, Md., assignor to Zeisel Electric Co., Bel Air, Md., a Corporation of Maryland. Filed June 19, 1916. Serial No. 104,499. (Cl. 240—101.)

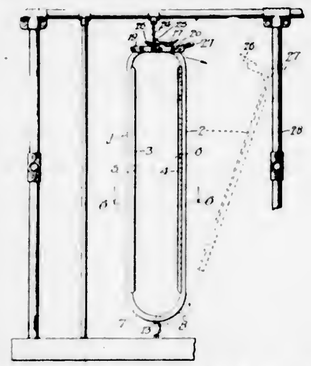
The combination with a rod, of a pair of fulcrum members carried thereby, a gripping arm pivotally mounted on each fulcrum member, each of said gripping arms

being provided with a slot, a portion of the slot being parallel with the portion of the corresponding slot for locking the gripping arms in their gripping position, and the remaining portion of the slot being angularly dis-



posed, a slidable collar carried by the rod, a pin carried on each side of said slidable collar and arranged to enter one of the slots of the gripping arm, means for moving the collar with respect to the rod, and a spring for normally retaining the collar in an upper position.

1,223,922. STANCHION. ELMER T. ABENDROTH, De Pere, Wis., assignor to Western Steel & Iron Works, De Pere, Wis., a Corporation of Wisconsin. Filed Feb. 9, 1914. Serial No. 817,471. (Cl. 119—149.)



1. A stanchion comprising side bars the upper and lower ends of which extend inwardly to space said bars apart, hinge members adjustably secured to the lower inward extensions of said side bars, and catch members adjustably secured to the upper inward extensions of said side bars, substantially as described.

2. A stanchion comprising channel side bars, the upper and lower ends of which extend inwardly to space said bars apart, separate hinge members adjustably secured in the channels of the inwardly extending lower ends of said side bars and separate catch members adjustably secured to the inwardly extending upper ends of said side bars, said catch members comprising depending flanges which embrace the sides of said side bars, whereby said side bars are adjustable toward and from each other and said hinge and catch members are supported against lateral displacement relative to said side bars, substantially as described.

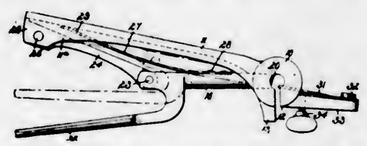
3. A stanchion comprising side bars hinged together at their lower ends, a catch on the upper end of one of said side bars which is adapted to engage a shoulder on the other of said side bars for connecting the upper ends of said side bars, and suspension means for said stanchion applied to said catch and adapted to maintain the same yieldingly in locking position, substantially as described.

4. A stanchion comprising side bars hinged together at their lower ends, a catch pivoted to one of said side bars which is adapted to engage a shoulder on the other of said side bars, suspension means for said stanchion which coöperates with a rigid part of said catch in use to maintain said catch yieldingly in locking position, substantially as described.

5. A stanchion comprising side bars hinged together at their lower ends, a catch pivoted to one of said side bars which is adapted to engage a shoulder on the other of said side bars, flexible suspension means for said stanchion connected to the side bar to which said catch is pivoted and which engages a rigid part of said catch, the relation being such that in use the weight of said stanchion will maintain said catch yieldingly in locking position, substantially as described.

[Claim 6 not printed in the Gazette.]

1,223,923. SAW-SET. EDGAR ABER, St. Joseph, Mich. Filed May 31, 1916. Serial No. 100,789. (Cl. 76—69.)



1. In a saw set, a frame having a guideway for a saw blade, there being two openings extending through the frame one at each side of the guideway and both leading thereto, a member carrying a die disposed through one opening, means to operate the member, and a fulcrumed member disposed through the other opening and movable transversely relatively thereto while substantially maintaining its distance from the die when the first member is at rest.

2. In a saw set a frame having a transverse guideway for a saw blade there being two openings in the frame one at each side of the transverse guideway and both leading thereto, a spring fulcrum member secured at one end to the frame and with its other end disposed through one of the openings and extending into the transverse guideway there being a threaded orifice leading to the spring fulcrum member at a distance from its first mentioned end, a screw meshing in the threaded orifice and engaging the spring fulcrum member for adjusting the latter, a member carrying a die disposed through the other opening and means to operate the last mentioned member.

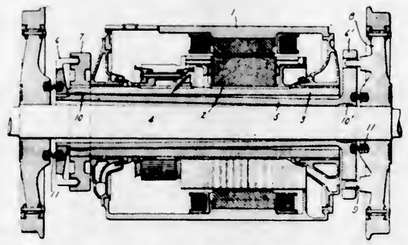
3. In a saw set, a frame having a transverse guideway for a saw blade, there being two openings in the frame one at each side of the transverse guideway and both leading thereto, a member carrying a die disposed at one of the openings, a second member mounted to move on an axis parallel with the longitudinal path of the guideway and having an end disposed in substantially the same longitudinal plane as the first member and extending through the other opening, the second member being adapted to be adjusted in the said opening, and means to operate the first mentioned member.

4. In a saw set a frame having a transverse guideway for a saw blade there being an opening in the frame at one side of the transverse guideway and leading thereto, a fulcrum member on the frame at the other side of the transverse guideway, a toggle joint having a member carrying a die and extending through the opening, a handle for the frame extending in the same general direction as the toggle joint the outer end of the other member of the toggle joint being pivoted to the haindle and an outwardly extending handle on a member of the toggle joint which may be grasped with the handle of the frame for the purpose specified.

5. In a sew set a frame having a transverse guideway for a saw blade there being an opening in the frame at one side of the transverse guideway and leading thereto, a fulcrum member on the frame at the other side of the transverse guideway, a toggle joint having a member carrying a die and extending through the opening, a handle for the frame extending in the same general direction as the toggle joint, the outer end of the other member of the toggle joint being pivoted to the handle, an outwardly extending handle on a member of the toggle joint which may be grasped with the handle of the frame for the purpose specified, and resilient means for holding the central portion of the toggle joint yieldingly extended from the handle of the frame.

[Claim 6 not printed in the Gazette.]

1,223,924. POWER-TRANSMITTING MECHANISM. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 7, 1916. Serial No. 113,482. (Cl. 64—13.)



1. In combination, a driving shaft and a driven shaft, one of which is hollow, the other being of relatively smaller diameter and extending through said hollow shaft, and a power transmitting member extending between said shafts and normally concentric therewith but capable of eccentric movement relative to either of said shafts, said power transmitting member having driving connection with each of said shafts at opposite ends thereof.

2. In combination, a driving shaft and a driven shaft, one of which is hollow, the other being of relatively smaller diameter and extending through said hollow shaft, a clutch member on each of said shafts at opposite ends thereof, and a power transmitting member extending between said shafts and provided with a clutch member at each end which clutch members engage the clutch members on the two shafts, said power transmitting member being normally concentric with both of said shafts but capable of eccentric movement relative to either of the shafts.

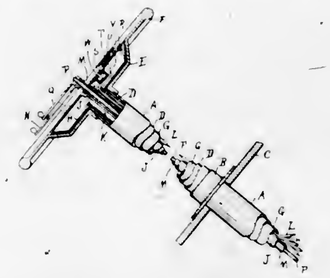
3. In combination, a driving shaft and a driven shaft, one of which is hollow, the second shaft being of relatively smaller diameter and extending through said hollow shaft, a clutch member on each of said shafts at opposite ends thereof, a power transmitting member extending between said shafts and provided with a clutch member at each end which clutch members engage the clutch members on the two shafts, and means for maintaining the engaging clutch members in concentric relation while permitting of relative eccentric movement between the said shafts.

4. In combination, a driving shaft and a driven shaft, one of which is hollow, the second shaft being of relatively smaller diameter and extending through said hollow shaft, a clutch member on each of said shafts and at opposite ends thereof, a power transmitting sleeve intermediate said shafts, a clutch member on each end of said sleeve which clutch members freely engage the clutch members on the two shafts, the power transmitting sleeve having ball and socket connection with each of said shafts adjacent the respective clutch members, the arrangement being such as to permit of relative eccentric movement between said shafts while maintaining the clutch members on the sleeve in concentric relation with the clutch members on the two shafts.

5. In combination, in a motor drive, a motor comprising a stationary member and a rotating member provided with a hollow shaft, a driven shaft of relatively smaller diameter extending through said hollow shaft, and a power transmitting member located between said shafts and having driving connections with each of said shafts at opposite ends thereof, the parts being so proportioned and arranged as to permit of relative eccentric movement between the shafts.

[Claims 6 to 8 not printed in the Gazette.]

1,223,925. ELECTRIC CONTROL FOR AUTOMOBILES. CARL S. ALTSCHUL, Fort Wayne, Ind. Filed Mar. 17, 1916. Serial No. 84,917. (Cl. 21—90.)



1. In apparatus of the class described, a steering-tube, a steering-wheel fixed upon the tube at the top thereof and having a central concavity, a stationary supporting tube extending through the steering-tube, a secondary stationary tube extending through the former supporting tube, a housing supported upon said stationary tubes and extending within the concavity, a series of switches contained within the housing, their stems extending through the top thereof, and a series of conductors extending within the stationary supporting tube and connected respectively with said switches.

2. In apparatus of the class described, in combination with a steering-tube having a steering-wheel fixed thereupon, a stationary supporting tube extending through the steering-tube, a secondary stationary tube extending through the latter, a housing the top of which is fixed upon the innermost stationary tube and the bottom of which is fixed upon the other supporting tube, a series of switches contained within the housing their stems extending through the top thereof, and a series of conductors extending between the stationary tubes and connected respectively with the switches.

3. In apparatus of the class described, in combination with a steering-tube having a steering-wheel fixed thereupon, a stationary supporting tube extending through the steering-tube, a housing fixed upon the top of the stationary-tube, a series of switches contained within the housing, and a series of conductors extending through the stationary tube and having respective connections with said switches.

4. In apparatus of the class described, in combination with a steering-tube having a steering-wheel fixed thereon, a stationary supporting tube extending through the steering-tube, a housing fixed upon the supporting tube at the top thereof, a series of contact points on the housing, a spring supported plate adapted to be pressed into contact with any of the points, a series of switches supported by the housing, and a series of conductors extending through the supporting tube and having connections respectively with said switches and contact points.

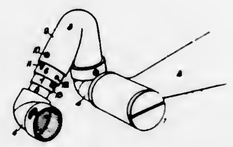
5. In combination with a steering-wheel having a central concavity, a stationary housing beneath the plane of the rim of the wheel, a series of switches within the housing, their stems extending through the top thereof, and a series of conductors having connections respectively with the switches.

1,223,926. CONCRETE-ARCH FORM. THOMAS R. ANDERSON, Oklahoma, Okla. Filed Sept. 19, 1916. Serial No. 120,960. (Cl. 25—131.5.)



As an article of manufacture, for use in a concrete arch form, a span unit consisting of two similar angle bar members of arcuate form arranged back to back and having the overlapping ends of the vertical web members provided with a plurality of holes, and a lever arranged between said members having oppositely disposed studs at opposite ends adapted to enter the respective holes to move said members longitudinally with respect to each other.

1,223,927. UNIVERSAL TONE-ARM. PETER BECKER, New York, N. Y. Filed Jan. 23, 1917. Serial No. 143,939. (Cl. 274—24.)



1. A universal tone arm comprising a gooseneck, a reproducer-carrying elbow, and a telescoping joint between the elbow and gooseneck, said joint comprising three longitudinally slidable sections fitting one within another, the outermost section being slidable in the gooseneck and the innermost section being rigidly connected with the elbow, means for limiting the outer and intermediate section to a longitudinal movement, and means for limiting the inner section to a longitudinal and rotary movement.

2. A universal tone arm comprising a gooseneck, a reproducer-carrying elbow, and a telescoping joint between the elbow and gooseneck, said joint comprising three longitudinally slidable sections fitting one within another, the outermost section being slidable in the gooseneck and the innermost section being rigidly connected with the elbow, means for limiting the outer and intermediate section to a longitudinal movement, and means for limiting the inner section to a longitudinal and rotary movement, the inner ends of the said sections being provided with recesses adapted to register when the said joint is contracted.

3. A universal tone arm including a gooseneck, a reproducer-carrying elbow, and an extensible joint between the elbow and gooseneck, said joint consisting of a plurality of tubular sections fitting one within another, the outermost section being slidable in the gooseneck, and the innermost being rigidly connected with the elbow, means for limiting all of the sections except the innermost one to a longitudinal movement and for limiting the extent of the longitudinal movement, and means between the innermost section and the next for permitting the innermost section to move longitudinally and rotatably and again longitudinally.

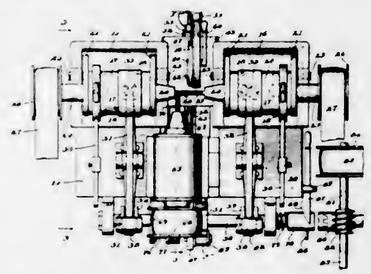
1,223,928. LOCK. MIRZA H. BENSON, Des Moines, Iowa, assignor of one-half to E. Channing Evans, Des Moines, Iowa. Filed July 13, 1914. Serial No. 850,811. (Cl. 70—108.)

A lock of the class described comprising a casing having locking bolts arranged therein in staggered relation with each other, a yoke having opposite arms slidably extended through said casing, said arms being provided in their adjacent faces with pluralities of notches to receive said locking bolts, said locking bolts having beveled ends



adapted to permit said arms to slide freely in said casing in one direction, the parts of said device being so arranged that the free ends of the locking bolts enter the notches in the respective arms at points at different distances from the closed end of the yoke.

1,223,929. PISTON-RING-MILLING MACHINE. GEORGE H. BLETTNER, Chicago, Ill. Filed Nov. 3, 1915. Serial No. 59,390. (Cl. 90—15.)



1. A machine of the class described comprising a frame; a rotatable cutter on said frame; a chuck on said frame; means for moving said chuck to pass said cutter partially through said work; and means for oscillating said cutter after said movement about an axis distanced from its axis of rotation, substantially as described.

2. A machine of the class described comprising a frame; a rotatable cutter on said frame; a work carrying chuck on said frame; means for applying work in said chuck to said cutter; means for oscillating said cutter during its operation about an axis distanced from its axis of rotation to cut a surface curved with the axis of oscillation as a center; and means for adjusting the axis of oscillation, substantially as described.

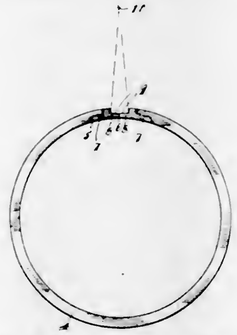
3. A machine of the class described comprising a frame; a rotatable cutter on said frame; a chuch on said frame; means for moving said chuck to pass said cutter partially through said work; means for oscillating said cutter after said movement about an axis distanced from its axis of rotation; and means for adjusting the axis of oscillation, substantially as described.

4. A machine of the class described comprising a frame; a piston ring chuck on said frame; a rotatable cutter on said frame mounted to oscillate about an axis located at substantially the center of a piston ring in said chuck; means for subjecting a piston ring in said chuck to the cutting operation of said cutter; and means for oscillating said cutter during its cutting operation to cut a notch in said ring substantially to the curvature thereof, substantially as described.

5. A machine of the class described comprising a frame; a piston ring chuck on said frame; a rotatable cutter on said frame mounted to oscillate about an axis located at substantially the center of a piston ring in said chuck; means for subjecting a piston ring in said chuck to the cutting operation of said cutter to pass said cutter partially therethrough; and means for oscillating said cutter during its cutting operation to cut a notch in said ring substantially to the curvature thereof, substantially as described.

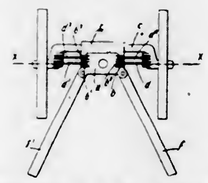
[Claims 6 to 13 not printed in the Gazette.]

1,223,930. METHOD OF MAKING PISTON-RINGS. GEORGE H. BLETTNER, Chicago, Ill. Filed July 17, 1916. Serial No. 109,681. (Cl. 29—148.)



The method of dressing tongues of split piston rings which consists in arranging an end milling tool at an inclination thereto and subjecting the outer surfaces of said tongues to the action thereof, substantially as described.

1,223,931. GUN-CARRIAGE OF A WIDE FIRING-ANGLE. EMILE ALEXANDRE LOUIS BOURDELLES, St.-Denis, France, assignor to The Societe Anonyme Des Etablissements Delaunay-Belleville, St.-Denis, France, a Corporation of France. Filed Apr. 14, 1915. Serial No. 21,419. (Cl. 89—40.)



1. The combination of a gun carriage having an axle, a gun carriage head, and a link at each side of said head for pivotally supporting the same from the axle for movement substantially parallel to the axle.

2. The combination of a gun carriage having an axle, a gun carriage head, and a link at each side of said head pivoted to the head and to the carriage on pivots extending substantially at right angles to the axle for pivotally supporting the same from the carriage.

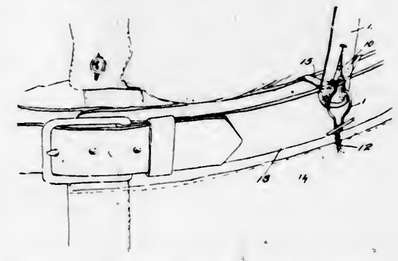
3. The combination of a gun carriage, a gun carriage head, means associated with each side of said head to pivotally support the same from the carriage for movement substantially parallel to the axle of the carriage, and means to prevent relative movement between the carriage and said head longitudinally of the carriage.

4. The combination with a gun carriage, a gun carriage head, trails pivoted thereto, and a link at each side of said head to pivotally support the same from the carriage for movement substantially parallel to the axle of the carriage.

5. The combination with a gun carriage, a gun carriage head, trails pivoted thereto, a link at each side of said head to pivotally support the same from the carriage for movement substantially parallel to the axle of the carriage, and means to prevent relative movement between said head and the carriage longitudinally of the latter.

[Claim 6 not printed in the Gazette.]

1,223,932. COMBINATION SUSPENDER-BUTTON AND BELT HOOK. ARTHUR C. CAMP, New York, N. Y. Filed Aug. 21, 1912. Serial No. 716,154. (Cl. 24—73.)



A device of the type described, including a wire member bent upon itself at a point in its midlength to form a loop, the lower end of said loop being substantially V-shaped, the resultant legs thereof bulging or curving outwardly and then extending toward each other and spaced apart at their ends, whereby may be received therebetween a suspender button, said legs terminating in substantially parallel spaced portions, whereby a suspender-end may be passed thereover and seated upon said bulged or curved portion, around said parallel spaced portions, said parallel spaced portions being bent at their ends rearwardly and downwardly, the terminals of the downwardly extended portions being formed into eyes, which lie in a plane parallel to that of said looped portions, said eyes being positioned adjacent the upper ends of said bulged or curved portions and said upwardly and downwardly extending portions of said device being spaced apart.

1,223,933. ARTIFICIAL IMBIBING-STRAW. PAUL H. CARR, Washington, D. C. Filed May 3, 1916. Serial No. 95,094. (Cl. 93—94.)



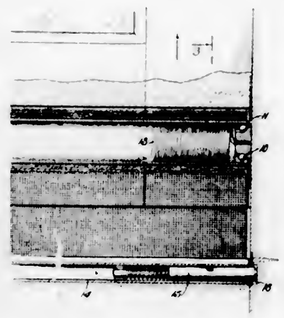
1. As a new article of manufacture, an artificial straw substantially oval in cross-section and having a single passage therethrough.

2. As a new article of manufacture an artificial straw comprising a tube, the cross section of which is provided with a short diameter and a long diameter forming two longitudinal parallel substantially flat walls connected by longitudinally extending end walls, whereby a single opening of substantially elliptical form is provided.

1,223,934. WINDOW-SCREEN. MINARD WESLEY CHARLTON, Evart, Mich. Filed July 5, 1916. Serial No. 107,548. (Cl. 156—39.)

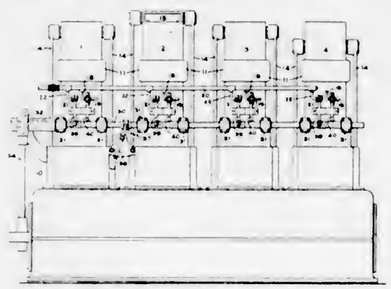
In combination with a window-sash rail having a longitudinally-extending recess, a curtain roller in said re-

cess, end plates for closing the ends of the recess constituting the bearings for the roller, a screen curtain on the roller, a tubular rod secured to the free end of the curtain, spring-actuated plungers associated with each end of the tubular rod, and seats in the window frame for the plungers whereby the end of the curtain is secured to the



frame so that the opening formed by the displacement of the sash is barred by the curtain, said end plates having notches for accommodating the tubular rod when the plungers are disengaged from the seats in the frame, substantially as and for the purpose set forth.

1,223,935. METHOD OF AND APPARATUS FOR CONTROLLING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. HENRI G. CHATAIN, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Aug. 30, 1912. Serial No. 717,895. (Cl. 123—181.)



1. The method of starting an internal combustion engine under load which consists in admitting high pressure elastic starting fluid alone to the cylinder thereof to start the piston, injecting an amount of fuel larger than that normally required to operate the engine into the cylinder together with said elastic starting fluid until the engine is brought up to the desired running speed, and subsequently cutting off the supply of elastic starting fluid and cutting down the fuel to the amount normally required for the load at that speed.

2. The combination in an internal combustion engine having a fuel admission valve and an air starting valve, of a mechanism for operating said valves to start the engine under load, comprising means for operating the starting valve to admit air to start the piston, means for simultaneously operating both the air starting valve and the fuel valve to admit starting air and more than the amount of fuel normally required for the load, and means for shutting off the air starting valve and admitting only the amount of fuel normally required for the load.

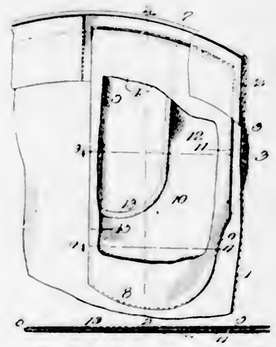
3. The method of starting a multi-cylinder internal combustion engine which consists in admitting an elastic starting fluid alone thereto under relatively high pressure to start the pistons, injecting fuel into one or more of the cylinders together with elastic fluid, injecting fuel into the remaining cylinder or cylinders, and finally cutting off the supply of elastic starting fluid, and admitting fuel in the normal manner.

4. The method of starting a multi-cylinder internal combustion engine which consists in admitting high pressure fluid to all of the cylinders, introducing fuel into some of the cylinders together with the said fluid, introducing fuel into all of the cylinders together with the said fluid, and cutting off the supply of said fluid and admitting fuel.

5. The method of starting a multi-cylinder internal combustion engine which consists in admitting air to the cylinders under a sufficiently high pressure to start the pistons and their load into motion, injecting fuel to certain of the cylinders in addition to the charges of air and under a pressure at least equal to said air pressure, injecting fuel into all of the cylinders together with the charges of high pressure air, and cutting off the supply of high pressure air, and admitting fuel to the cylinders in the normal manner.

[Claims 6 to 16 not printed in the Gazette.]

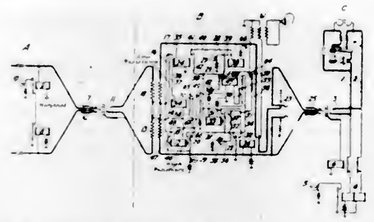
1,223,936. GARMENT-POCKET. SIMEON D. CHELF, Kensington, Kans. Filed June 22, 1916. Serial No. 105,227. (Cl. 2—15.)



1. A garment pocket having side walls and a partition wall arranged therebetween, the side walls at their rear edges being disconnected from each other to form the mouth of the pocket and the rear edge of the partition wall being united to the rear edge of one of the said side walls, the partition wall having its forward edge spaced rearwardly from the forward edges of the side walls throughout its upper portion and at its lower portion extending substantially to the said forward edges of the side walls.

2. A garment pocket having inner and outer side walls united along their edges except for the upper portion of their rear edges throughout which they are relatively disconnected to form the mouth of the pocket, and a partition wall arranged between the side walls and having its upper edge united to the upper edges of the side walls and its rear edge united to the rear edge of the inner one of the side walls, the bottom edge and lower portion of the rear edge of the said partition wall being united to the corresponding edge portions of the said side walls and the forward edge of the said partition wall constituting a substantially perpendicular portion spaced rearwardly from the forward edges of the side walls, the partition wall including a portion extending from the lower end of the first mentioned portion forwardly to the said forward edges of the side walls, and extending downwardly and united to the forward edges of the said side walls.

1,223,937. TELEPHONE SYSTEM. HENRY P. CLAUSEN, Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, a Corporation of New York. Filed Aug. 17, 1915. Serial No. 45,906. (Cl. 179—50.)



1. In a telephone system, a main exchange, a sub-exchange, telephone lines terminating at each exchange, a trunk line extending from the main exchange to the sub-exchange, a connecting circuit at the main exchange for connecting a calling line with a trunk line, a signal associated with said connecting circuit, means for actuating said signal when said connecting circuit is connected through said trunk to a called line, means for retiring said signal when the called subscriber responds, and a second means for actuating said signal when the trunk is disconnected from a called line, said second means conditioned to operate while the trunk and connecting means are united.

2. In a telephone system, a main exchange, a sub-exchange, telephone lines terminating at each exchange, a trunk line extending from the main exchange to the sub-exchange, a connecting circuit at the main exchange for connecting a calling line with a trunk line, a supervisory lamp associated with said connecting circuit, means for lighting said lamp when said connecting circuit is connected to said trunk line, means for extinguishing said lamp when a called subscriber united by said connecting circuit and trunk line responds, and a second means for actuating said lamp when the trunk is disconnected from the called line, said second means conditioned to operate while the trunk and connecting circuits are united.

3. In a telephone system, a main exchange, a sub-exchange, telephone lines terminating at each exchange, a trunk line extending from the main exchange to the sub-exchange, a connecting circuit at the main exchange for connecting a calling line with a trunk line, a tone producing device associated with said trunk circuit, said device being actuated by the disconnection of the trunk line from a called line, while the trunk and connecting circuits are united.

4. In a telephone system, a main exchange, a sub-exchange, telephone lines terminating at each exchange, a trunk line extending from the main exchange to the sub-exchange, a connecting circuit at the main exchange for connecting a calling line with a trunk line, a supervisory lamp associated with said connecting circuit, circuits for controlling said lamp when said connecting circuit is united with said trunk line, said lamp being lighted when one of said circuits is closed, said lamp being retired when another of said circuits is closed, means for controlling said control circuits, said means being inactive when said connecting circuit is united with said trunk line permitting the closure of said lighting circuit for said lamp, said means being active when a called subscriber connected by said connecting circuit and trunk line responds thereby effecting the closure of said retiring circuit for said lamp, and a second means for controlling said control circuits conditioned to operate when the trunk is disconnected from the called line and said trunk and connecting circuits are united, said second means being adapted to effect the activity and inactivity of said control means thereby causing said lamp to be flashed.

5. In a telephone system, a main exchange, a sub-exchange, telephone lines terminating at each exchange, a trunk line extending from the main exchange to the sub-exchange, a connecting circuit at the main exchange for connecting a calling line with a trunk line, a supervisory lamp associated with said connecting circuit, circuits for controlling said lamp when said connecting circuit is united with said trunk line, one of said circuits comprising a high resistance path for lighting said lamp when completed, another of said circuits including a low resistance path for retiring said lamp when completed, means for controlling said circuits, said means being inactive when said connecting circuit is united with said trunk line permitting the closure of said high resistance circuit, said means being active when a called subscriber connected by said connecting circuit and trunk line responds thereby effecting the retiring of said lamp by the closure of said low resistance circuit, and a second means for controlling said control-means conditioned to operate when the trunk is disconnected from the called line and said trunk and connecting circuits are united, said second means being adapted to effect the activity and inactivity of said control-means thereby causing said lamp to be flashed.

1,223,938. DEVICE FOR BORING AXIALLY-CURVED HOLES. FRED A. CLOSE, Uniontown, Pa., assignor of one-half to George W. Dunham, Detroit, Mich. Original application filed Sept. 13, 1915, Serial No. 50,331. Divided and this application filed Jan. 15, 1916. Serial No. 72,202. (Cl. 77—72.)

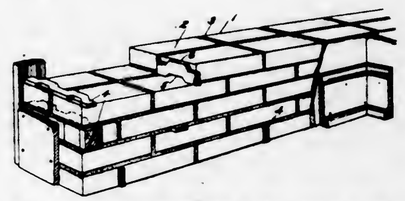


1. A curve-boring tool, comprising a short length reamer having a smooth tapering nose, and a flexible shaft directly forming the shank of said reamer and adapted to impart a driving torque and longitudinal thrust thereto.

2. A curve-boring tool, comprising a short length reamer having a tapering nose, a straight rigid shank and a connection between said reamer and shank allowing universal motion of the former, relative to the latter.

3. A curve-boring tool, comprising a short length reamer having a tapering nose, a shank constituting a drive-shaft for said reamer and a plurality of links forming the driving connection between the reamer and said shank, said connection allowing the axis of the reamer to assume various angular relations with that of the shank.

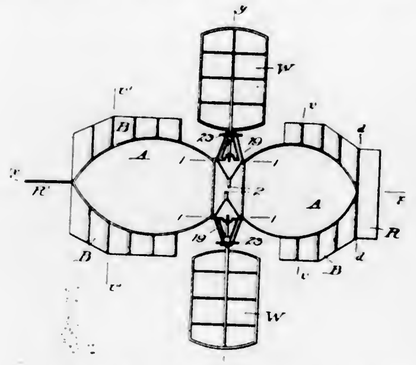
1,223,939. NAILING-BLOCK. EDWIN B. COSBY, Kansas City, Mo. Filed July 17, 1916. Serial No. 109,772. (Cl. 72—105.)



1. A nailing strip comprising a flat body having a notch in one edge forming a mortar key recess and nailing surfaces at opposite ends of the recess, and having a projection from its other edge opposite the notch, forming key recesses at opposite ends of the projection.

2. A nailing strip comprising a flat body, having a plurality of spaced notches in each edge forming alternating recesses and projections throughout the length of the strip, the notches in one edge alternating with those in the opposite edge to stagger the flat faces of the strips, for the purpose set forth.

1,223,940. FLYING-MACHINE OR FLIER. WILLIAM S. CRANMER, Fresno, Cal. Filed Aug. 29, 1908. Serial No. 450,890. (Cl. 244—17.)



1. In a flying machine, an air-chamber in the superstructure thereof, made of a light framework covered by some fabric, convex on the upper and concave on the under side, circular in general plan, resembling an inverted saucer having a permanent shape and fixed position relative to adjoining parts, and forming on its under side in connection with the adjacent parts to which it is attached, a parachute having its concave under side open and unobstructed for the free entrance of air, and held in downward position by the heavier weight of the lower parts of the flying machine.

2. The combination of an air-chamber in the superstructure of a flying machine forming on its under side in connection with the adjacent parts to which it is attached, a parachute having a permanent shape and fixed position relative to adjoining parts, and having its concave under side open and unobstructed for the free entrance of air, and a tube extending through the body of the air-chamber which affords a limited outlet for the air under the parachute while descending, which is adapted in size to permit the escape of compressed air while falling in such quantity as to cause the maximum pressure under the parachute without an over accumulation of compressed air and consequent tipping or oscillation of the parachute, and which is used solely for this purpose.

3. In a flying machine, the combination of an air-chamber in the superstructure thereof made of a light framework covered by some fabric, convex on the upper and concave on the under side, circular in general plan, and resembling an inverted saucer, having a permanent shape and fixed position relative to adjoining parts, and forming on its under side, in connection with the adjacent parts to which it is attached, a parachute having its concave under side open and unobstructed for the free entrance of air, and held in downward position by the heavier weight of the lower parts of the flying machine, and aeroplanes extending interally from the framework which supports the air-chamber.

[Claims 4 to 34 not printed in the Gazette.]

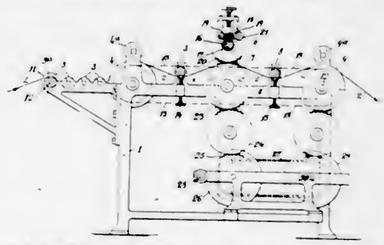
1,223,941. ONION-SET TOPPER AND CLEANER. GEORGE C. CURTIS, Hutchinson, Kans. Filed Jan. 18, 1916. Serial No. 72,739. (Cl. 130—32.)

In an apparatus of the character described, a rotary topping and cleaning cylinder having a longitudinally extending series of openings in diametrically opposite sides thereof and in the same plane, the openings in the series being substantially opposite each other, and a continuous series of diametrically disposed scraping and cleaning



tines, said tines being formed by a continuous strand of wire extending back and forth along the length of the cylinder and passing through said openings to divide the cylinder transversely into compartments of equal area.

1,223,942. MACHINE FOR MAKING CUT-OUT WALL-PAPER. ROBERT DIEHL, Philadelphia, Pa., assignor to William F. Marresford, Brooklyn, N. Y. Filed Apr. 7, 1914. Serial No. 830,103. (Cl. 164—28.)



1. In a machine for making cut-out decorative webs, rotary means for feeding a design bearing web, rotary means for cutting a design in said web, and variable speed means for driving said feeding means and said perforating means.

2. In a machine for making cut-out decorative webs, rotary means for feeding a design bearing web, rotary means for cutting said web, variable speed means for driving said feeding means and said cutting means, and means for relatively displacing the cutting means and the web to maintain registry of the cut pattern with the web pattern.

3. In a machine for cutting a design bearing web to permit separation thereof, means for positively feeding the web, a rotary cutting means for longitudinally cutting the web in predetermined relation to the design thereon, transversely adjustable guiding means to register the web longitudinally with said cutting means, and means for relatively longitudinally adjusting the cutting means and the web while the machine is running.

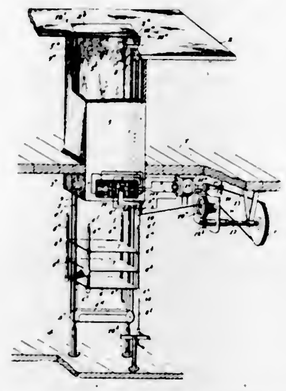
4. In a machine for cutting a design bearing web in correspondence with the design, rotary cutting and feeding means, means for driving said means separately at variable speeds, and independent means for varying the relative angular position of said feeding and cutting means.

5. The combination with rotary cutting means, and a movable cooperating platen, of positive feeding means independent thereof, means for driving the feeding means independently of the cutting means and platen, and means for varying the relative speeds of said feeding means and said cutting device.

[Claim 6 not printed in the Gazette.]

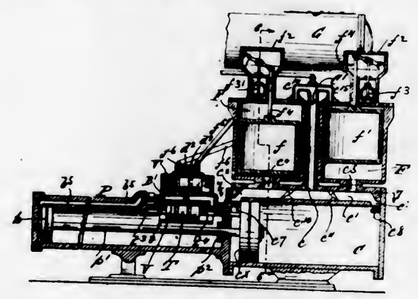
1,223,943. AUTOMATIC TABLE-SERVICE APPARATUS. JOHN F. DASCHNER, Cleveland, Ohio. Filed Jan. 9, 1915. Serial No. 1,400. (Cl. 187—3.)

In an apparatus of the character described, the combination of a table having an opening therein, an elevator shaft extending downwardly therefrom, an elevator movable in said shaft, a motor and driving connections for moving the elevator in either direction, a motor controller, a connection with the controller extending to the table and to the base of the shaft, means on the elevator adapted automatically to operate said controller connection to stop the elevator at the table and at the base of the shaft, means at the table for manually operating said



controller connection to lower the elevator, and means at the base of the shaft for manually operating the said controller connection to raise or lower the elevator.

1,223,944. APPARATUS FOR RETURNING WATER OF CONDENSATION TO BOILERS, &c. GUYON L. C. EARLE, Forest Hills, N. Y. Filed May 19, 1916. Serial No. 98,509. (Cl. 103—106.)



1. In hydraulic apparatus of the character designated the combination of a low pressure liquid collection cylinder, a high pressure liquid cylinder in alinement therewith, pistons in said cylinders united by a common piston rod, inlets for admitting liquid to both sides of the piston in said collection cylinder, outlets therefor on both sides of said piston, an actuating liquid supply independent of both the inlets and outlets of the actuated liquid, inlet valves controlling the said pressure cylinder, outlet valves controlling the discharge of liquid pressure from said pressure cylinder, means for reversing said inlet and outlet valves, float valves controlling the supply of fluid pressure to said inlet valves and actuated by the liquid collected in said collection cylinder, said parts being positive in their action and operable under varying conditions, for the purpose set forth.

2. In hydraulic apparatus of the character designated, the combination of a liquid high pressure actuating cylinder and a low pressure liquid collection cylinder in axial alinement therewith, pistons in said cylinders connected to act in unison, float chambers communicating with the said low pressure collection cylinder, floats therein and liquid high pressure valves controlled by said floats whereby the liquid power is shifted alternately to opposite ends of the actuating cylinder for the purpose set forth.

3. In hydraulic apparatus of the character designated, the combination of a liquid high pressure actuating cylinder and a low pressure liquid collection cylinder in axial alinement therewith, pistons in said cylinders connected to act in unison, float chambers communicating with said low pressure liquid collection cylinder, a drip pipe communicating with said low pressure liquid collection cylinder and with said float chambers, floats in the latter and liquid high pressure valves controlled by said floats; whereby the liquid power pressure is shifted alternately to opposite ends of the actuating cylinder, for the purpose described.

4. In hydraulic apparatus of the character designated, the combination of a liquid high pressure actuating cylinder and a low pressure liquid collection cylinder in axial alinement therewith, pistons in said cylinders connected to act in unison, a liquid inlet passage with ports opening into the collection cylinder at opposite ends thereof, discharge ports at opposite ends of said liquid collection cylinder, float chambers communicating with said inlet passage to the collection cylinder, floats therein and liquid high pressure valves controlled by said floats whereby the high pressure liquid power is shifted alternately to opposite ends of the actuating cylinder, for the purpose described.

5. In hydraulic apparatus of the character designated, the combination of a liquid high pressure actuating cylinder and a low pressure liquid collection cylinder in axial alinement therewith, pistons in said cylinders connected to act in unison, a liquid inlet passage with ports opening into the liquid collection cylinder at opposite ends thereof, discharge ports at opposite ends of said liquid collection cylinder, a drip stand pipe communicating with said inlet passage, float chambers communicating with said inlet passage and with said drip stand pipe, floats therein, and liquid high pressure valves controlled by said floats whereby high pressure liquid power is applied alternately to opposite ends of the actuating cylinder, for the purpose described.

[Claims 6 to 17 not printed in the Gazette.]

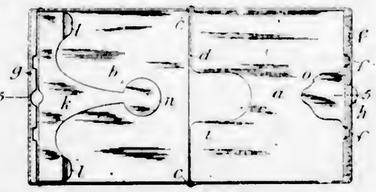
1,223,945. RAILWAY-SWITCH. FRANK EVANS and DAVID DUTT, Riverdale, Mich., assignors of one-third to Burtis O. Markham, Riverdale, Mich. Filed Sept. 23, 1915. Serial No. 52,174. (Cl. 104—23.)



1. In an apparatus of the class described a transverse switch bar, mounted to turn and to slide axially and provided with a rocker arm thereon, a longitudinally disposed link, there being a connection between said link and said rocker arm to rock the arm by a longitudinal movement of the link and arranged to permit a transverse movement of the rocker arm with the switch bar relatively to the link, means connected with said link and adapted to be engaged by a train trip to move the link longitudinally, and means to connect the switch bar with switch points to throw the latter by a longitudinal movement of the switch bar.

2. An apparatus of the class described, including a transverse switch bar mounted to turn and to slide axially and provided with a rocker arm thereon, a longitudinally ranging link, having between the ends thereof, an opening receiving the said arm on the switch bar, said opening being of a width to permit a movement of the said rocker arm transversely of the opening in response to a sliding movement of the switch bar, levers pivotally connected with the opposite ends of the said link and adapted to be engaged by a train trip, and means to connect the switch bar with switch points.

1,223,946. CASE FOR CURRENCY AND OTHER NOTES. JACOB FENIGSTEIN, Finsbury, London, England. Filed Jan. 15, 1917. Serial No. 142,496. (Cl. 150—38.)



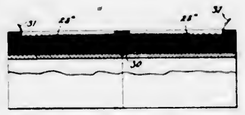
1. A case for currency and other notes comprising two hinged leaves between which the notes are placed in a folded condition the said leaves being so connected that a slit is formed at the hinged side through which the notes can be removed while one leaf of the case is provided with an opening for allowing the finger to be placed upon the note partly exposed in the said opening, for the purpose of withdrawing it, substantially as described.

2. A case for currency and other notes comprising two hinged leaves, a slit formed between the adjacent hinged edges, an opening for allowing the finger to be placed upon a note partly exposed in the said opening, and a clip arranged within the case for holding the notes at one end, substantially as described.

3. A case for currency and other notes comprising the following elements:—two leaves hinged together and made deeper at one end than at the other so that when the leaves are closed together the case will be of wedge shape, a fastening for retaining the leaves in their closed position, a slit formed at the hinged edge of the case through which the notes can be removed, an opening formed in one leaf for allowing the finger to be placed upon a note partly exposed in the said opening, and a clip pivoted in the deep end of one leaf, claws upon the said clip for gripping the notes, and an extension also formed upon the said clip and projecting beneath the opening formed in the other leaf, substantially as described.

4. In a case for currency and other notes, the combination of two leaves or case parts made deeper at one end than at the other, an intermediate frame to which the said leaves are hinged at their shallow ends, a catch or fastening upon each leaf for securing it to the intermediate frame, a slit at the shallow end to each leaf between its outer wall and the intermediate frame, and an opening formed in each leaf for allowing the finger to be placed upon a note partly exposed in the said opening, substantially as described.

1,223,947. INDUCTION COIL. CHARLES A. FERRELL, Cleveland, Ohio, assignor of one-half to Harry E. Page, Cleveland, Ohio. Filed Oct. 7, 1915. Serial No. 54,648. (Cl. 175—359.)

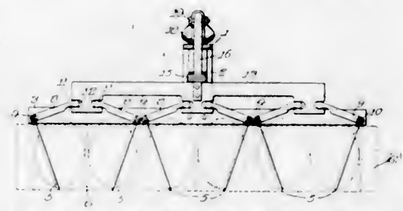


1. An induction coil secondary having the different layers of wire within its body separated by insulating material of low specific inductive capacity and having the turns adjacent each free terminal separated from the remainder of the coil by insulating material of higher specific inductive capacity.

2. An induction coil secondary having adjacent layers of wire in its body portion separated by non-impregnated paper and having a portion adjacent to the free terminals insulated by a layer of substantially the same thickness as the said paper layer and of a material of higher specific inductive capacity than that of paper whereby the outer turns are more effectively insulated than the inner turns but are compacted together to the same extent.

3. A coil for electrical use comprising a plurality of layers of helically wound wire, the layers in the body of the coil being separated by thin sheets of dry paper and the terminal layers being insulated by sheets of impregnated material whereby the outer turns are more effectively insulated than the inner turns but are compacted together to the same extent.

1,223,948. EGG-CANDLER. JAMES J. FINNEY, Chicago, Ill., assignor to International Egg Candler Corporation, Beatrice, Nebr., a Corporation of Nebraska. Filed July 13, 1916. Serial No. 108,986. (Cl. 99—6.)



1. In an egg candling device, the combination of a frame, rock shafts pivotally mounted in said frame, egg engaging loops fastened to said shafts, levers for operating said shafts, said levers having rounded heads at the free end, a slotted bar having slots for receiving the heads of said levers, and means mounted on the frame for operating said slotted bar.

2. In an egg candling device, the combination of a frame, rock shafts pivotally mounted in said frame, egg engaging loops fastened to said shafts, levers for operating said shafts, a slotted bar interfitting with the ends of said levers for operating them, a plunger connected to said slotted bar for operating it, said plunger being guided by said frame, and a lever for operating said plunger, said lever having a fulcrum which is shiftable upon said frame.

3. An egg candling device having a pair of side bars, a cross bar connecting them, rock shafts mounted in said side bars, egg engaging loops fastened to said shaft, levers for operating said shafts, a vertically movable bar for operating said levers, a plunger for operating said vertically movable bar, a lever connected to said plunger for operating it, said lever having a fulcrum arm between its ends, and said fulcrum arm being supported by and traveling upon said cross bar.

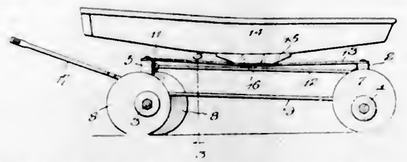
4. An egg lifter having a frame, rock shafts journaled therein, egg engaging loops fastened to said shafts, levers for operating said shafts and a manually operated bar for operating said levers, the bar and the levers having interfitting connections in which the parts are arranged in the same plane, one part having an open ended slot and the cooperating part having a portion projecting endwise into said open ended slot and said parts being consequently readily assemblable by either relative sidewise movement or by relative endwise movement when the structure is in course of manufacture and dispensing with fastening devices of any kind.

5. An egg lifter having a frame, rock shafts journaled therein, egg engaging loops fastened to said shafts, levers for operating said shafts and a manually operated bar having open ended slots for receiving the free ends of said levers, said levers lying in the same plane as the bar and the free ends of the levers projecting into the open ends of said slots.

[Claims 6 and 7 not printed in the Gazette.]

1,223,949. WAGON. HERMAN W. FLAGG, Providence, R. I., assignor of one-third to William H. Francis, Sr., and one-third to Pardon H. Cranston, Providence, R. I. Filed Jan. 9, 1917. Serial No. 141,468. (Cl. 21—183.)

1. In a wagon, front and rear axles, bolsters surmounting the axles, a third bolster pivoted to the front bolster for turning, a pair of wheels on the rear axle eccentrically mounted but axially allined, a pair of front wheels set eccentrically on the front axle and at opposite eccentricity, a pair of rods connecting the third bolster universally with the rear bolster, another rod similarly joining the first two bolsters, side flexible straps connecting the third and rear bolsters, a wagon body, and rocking blocks supporting the body from the central portions of the straps.



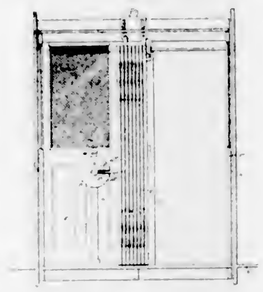
2. In a wagon, a pair of axles, eccentrically mounted wheels on the axles, those on one axle being axially related and those on the other axle eccentrically related, a universally jointed frame work supported on the axles, a body, and flexible means supporting the body on the frame work.

3. In a wagon, front and rear wheels, axles eccentrically journaled thereto, universally connected bolsters on the axles, flexible connections between the bolsters, and a body supported on said flexible connections.

4. In a wagon, a frame including front and rear bolsters, flexible straps connecting the bolsters, a body supported on the flexible straps, and eccentrically mounted wheels supporting the frame.

5. In a wagon, front and rear bolsters, a socket member carried by each, a connecting rod having ball terminals engaging in the sockets, wheels eccentrically mounted on the bolsters, and a body supported from the bolsters.

1,223,950. ELEVATOR. THOMAS P. FORD, Brooklyn, N. Y. Filed Nov. 25, 1916. Serial No. 133,323. (Cl. 187—47.)



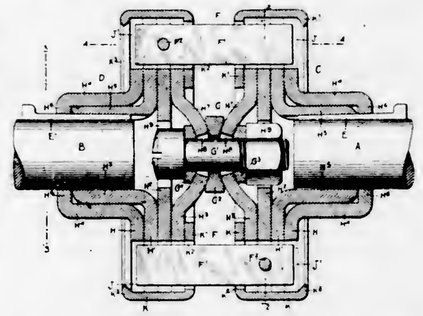
1. In an elevator, the combination of a car, a car-controlling mechanism therefor, a shaft door, a car door, and a locking device for the said controlling mechanism, the said locking device having means to lock the controlling mechanism at the time the car is at a standstill at a landing, and the car door and the shaft door are open, the said locking device being attached to the said car door to move bodily sidewise with the car door on opening and closing the latter, the said locking device and the said shaft door having coacting means to hold the locking device in locking position while the shaft door is open and to allow the locking device to move transversely into a partly unlocking position relative to the said controlling mechanism on being released by the shaft door on closing the latter, the said locking device being completely disengaged from the controlling mechanism on closing the car door.

2. In an elevator, the combination of a car having a car door, a shaft door, a car-controlling mechanism, and a bolt engaging the said car-controlling mechanism at the time the car is at a landing and the said car door and the said shaft door are open, the said bolt being carried by the said car door to move bodily with the car door on opening and closing the latter, the said bolt and the said shaft door having coacting means to move the bolt transversely in one direction and the said bolt having means to move it transversely in the opposite direction on being released by the shaft door on closing the latter.

3. In an elevator, the combination of a car, a car-controlling mechanism for the same, a shaft door, a car door, and a bolt adapted to engage and lock the said controlling mechanism, the bolt having a spring arm attached to the said car door to move the said bolt sidewise on opening and closing the car door, the said bolt being capable to move transversely in one direction by the resiliency of its spring arm and the said spring arm of the bolt and the said shaft door having coacting means to move the bolt transversely in the opposite direction on closing the said shaft door, the said bolt being held in locking position by the coaction of both the car door and the shaft door at the time the doors are in open position and the said bolt moving into open position and out of engagement with the said controlling mechanism on the closing of both doors.

4. In an elevator, a car-controlling mechanism for the car and having a disk provided with a slot, a bolt having a shoulder and adapted to engage the said slot, and a spring arm carrying the said bolt and attached to the car door to move sidewise with the latter, the said spring arm having a hump adapted to be engaged by the shaft door.

1,223,951. FLEXIBLE COUPLING. WILLIAM J. FRANCKE, Highland Park, N. J. Filed Feb. 9, 1915, Serial No. 7,008. Renewed Sept. 21, 1916. Serial No. 121,507. (Cl. 64—13.)



1. In a flexible coupling, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, and flexible connecting members connecting the said coupling members with each other, one end of the connecting members being held against longitudinal movement in one coupling member and the other end being free to slide in a longitudinal direction in the other coupling member, the connecting members being held against longitudinal movement in alternate relation in the coupling members.

2. In a flexible coupling, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, and flexible connecting members each comprising a plurality of superimposed flat springs, and a pin extending through the springs at one end thereof and projecting beyond the faces of the outermost springs, the projecting ends of a pin of one connecting member engaging a coupling member to hold the connecting member against longitudinal movement, the other end of each connecting member being free to slide in the other coupling member.

3. In a flexible coupling, the combination of coupling members adapted to be secured to the adjacent ends of

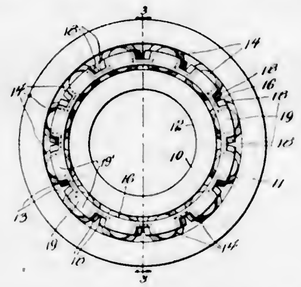
two shafts, and flexible connecting members each comprising a plurality of superimposed flat springs, and a pin extending through the springs at one end thereof and projecting beyond the faces of the outermost springs, the projecting ends of a pin of one connecting member engaging a coupling member to hold the connecting member against longitudinal movement, the other end of each connecting member being free to slide in the other coupling member, the pin of one connecting member engaging one coupling member, and the pin of the next following member engaging the other coupling member.

4. In a flexible coupling, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, each coupling member being provided with peripheral recesses, the recesses in the coupling members being located opposite each other, and connecting members each fitting with its ends into a pair of registering recesses, each connecting member comprising a plurality of superimposed flat springs, and a transverse pin extending through one end of each connecting member, the ends of the pin engaging a coupling member and the pins engaging the coupling members in alternate relation.

5. In a flexible coupling member, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, each coupling member being provided with peripheral recesses, the recesses in the coupling members being located opposite each other, the side walls of alternate recesses in each coupling member having radial guideways, the guideways of one coupling member alternating with the guideways of the other coupling member and connecting members fitting with their ends in the registering recesses of the said coupling members to connect the latter with each other, each connecting member comprising a plurality of superimposed flat springs and a transverse pin extending through one end of each connecting member, the ends of the pins engaging the said guideways.

[Claims 6 to 15 not printed in the Gazette.]

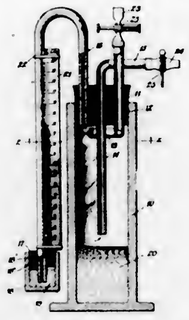
1,223,952. BEARING. DAVID H. FRIEND, Canton, Ohio. Filed Aug. 23, 1912. Serial No. 716,650. (Cl. 64—62.)



In a device of the class described, rings, a series of rollers interposed between said rings and having convexed bearing faces, a band interposed between said rings and having spaced openings therein receiving said rollers, arcuate flanges formed integral with the transverse side walls of said openings for contact with the bearing faces of said rollers, said flanges being of less length than said openings, and continuous flanges on the marginal edges of said band having spaced notches therein forming ears at the ends of said openings spaced from the ends of the arcuate flanges for contact with the ends of said rollers.

1,223,953. CARBONIC-ACID INDICATOR. ARVID FRISAK, Woodbury, N. J. Filed Jan. 6, 1917. Serial No. 141,000. (Cl. 23—3.)

1. An apparatus for determining the percentage of carbonic acid in flue gases including a cylinder, a stopper closing one end of the cylinder, gas inlet and outlet tubes projecting through the stopper, a caustic soda solution in the cylinder, the outlet tube terminating at one end slightly above the level of the solution and the inlet tube terminating at one end adjacent the upper end of the cylinder, means for independently cutting off passage of gas through the tubes, and means for determining the amount of any vacuum created in the cylinder.



2. An apparatus for determining the percentage of carbonic acid in flue gases including a cylinder, a stopper closing one end of the cylinder, gas inlet and outlet tubes projecting through the stopper, a caustic soda solution in the cylinder, the outlet tube terminating at one end slightly above the level of the solution and the inlet tube terminating at one end adjacent the upper end of the cylinder, means for independently cutting off passage of gas through the tubes, a U-tube having one end projecting through the stopper of the cylinder, a mercury holding container into which the opposite end of the tube projects, and a scale supported in juxtaposition to that arm of the U-tube extending into the mercury whereby the height of a mercury column in such arm may be read.

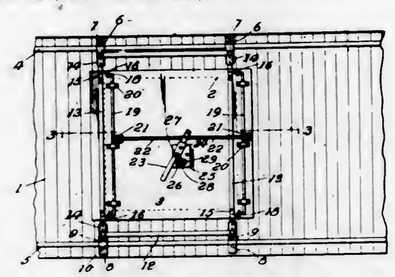
3. An apparatus for determining the percentage of carbonic acid in flue gases including a cylinder, a stopper closing one end of the cylinder, a tube extending through the stopper with its inner end bent to provide an arcuate terminal lying in a plane at right angles to the axis of the cylinder and adjacent the stopper, an outlet tube projecting through the stopper with its inner end spaced from the bottom of the cylinder, a caustic soda solution in the cylinder, the level of which is slightly below the inner end of the outlet tube, cocks independently controlling passage of gas through the tubes, and means for determining the percentage of any vacuum created in the cylinder.

4. An apparatus for determining the percentage of carbonic acid in flue gases including a cylinder, a stopper closing one end of the cylinder, a tube extending through the stopper with its inner end bent to provide an arcuate terminal lying in a plane at right angles to the axis of the cylinder and adjacent the stopper, an outlet tube projecting through the stopper with its inner end spaced from the bottom of the cylinder, a caustic soda solution in the cylinder, the level of which is slightly below the inner end of the outlet tube, cocks independently controlling passage of gas through the tubes, and means for determining the percentage of any vacuum created in the cylinder, said means including a mercury holding container closed by a stopper having an air vent, a U-tube having one end projecting through the stopper of the cylinder and the other through the stopper of the container and into the mercury, and a scale carried by that arm of the U-tube projecting into the mercury whereby the height of a mercury column in such arm may be read.

5. An apparatus for determining the percentage of carbonic acid in flue gases including a container, a stopper closing one end of the container, gas inlet and outlet tubes projecting through the stopper, a carbonic acid absorber in the container, the outlet tube terminating at one end in spaced relation to the bottom of the container and the inlet tube having its inner end bent to provide an arcuate terminal disposed slightly below the stopper in substantially a horizontal plane, means for independently cutting off passage of gas through the tubes, and means for determining the amount of any vacuum created in the container.

[Claim 6 not printed in the Gazette.]

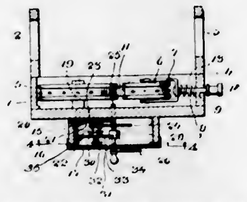
1,223,954. MOUNTING FOR SLIDING DOORS. PRIM GAGNON, Papineau, Ill. Filed June 12, 1916. Serial No. 103,231. (Cl. 20—23.)



1. In combination, a wall having therethrough a door opening, and a door for closing said opening, a sliding frame on which said door is mounted, means carried by said frame for forcing said door toward and away from the wall, a horizontally swinging hand lever fulcrumed between its ends to the door for operating the aforesaid means, a locking plate pivoted to said lever and having a T-shaped slot, and a stud projecting outwardly from the door into said slot, said stud being adapted for reception in either of the laterally extending portions of said slot to lock the lever in reversed positions.

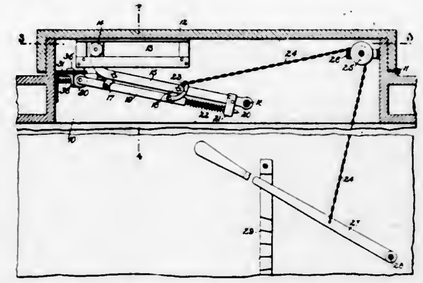
2. The combination with a wall having therein a door opening and tracks above and below said opening; of a pair of upper carriages mounted on the upper track, a pair of lower carriages on the lower track, a pair of vertical bars spaced outwardly from the wall a greater distance than the thickness of a door for the aforesaid opening, said bars having their ends extended rearwardly and secured to the upper and lower carriages and being spaced apart a distance less than the width of the door opening, upper and lower horizontal bars secured at their ends to said carriages, a door disposed between the vertical bars and the wall and of less height than the distance between the rearwardly bent ends of said vertical bars to allow said door to move forwardly, and means supporting said door from certain of the aforesaid bars for permitting it to move forwardly and rearwardly.

1,223,955. ROPE-METER. EUGENE M. GANT, Ethridge, Tenn. Filed Sept. 10, 1915. Serial No. 50,025. (Cl. 33—134.)



In a rope meter, a supporting frame, a pair of rope engaging wheels between which the rope passes, said wheels being driven by the rope, one of said wheels constituting a pressure element for holding the rope in frictional engagement with the other wheel, and registering mechanism actuated by one of said wheels and comprising a driving arbor, a driven arbor, a pointer carried by the driven arbor, a dial faced gear frictionally held on the driving arbor, a mutilated gear on the driven arbor, and means for shifting the driven arbor out of engagement with the driving arbor without shifting the mutilated gear out of engagement with the dial faced gear to reset the registering mechanism.

1,223,956. SCUTTLE-HOLE PROTECTOR. ADOLF GANZENMÜLLER, Mount Vernon, N. Y. Filed Jan. 30, 1917. Serial No. 145,570. (Cl. 108—31.)



1. In a scuttle hole protector of the type described, a locking device comprising a fixed plate, a spring actuated lever fulcrumed on the under side of the said plate and adapted to engage the protector, and a locking and unlocking member having movement in the direction of its length and having its forward end abutting the said lever and extending under the said plate.

2. In a scuttle hole protector of the type described, a locking device comprising a plate of angle iron and fixed with its vertical member to the frame of the protector, a lever fulcrumed on the under side of the horizontal member of the said plate and adapted to engage the protector, a spring pressing one end of the said lever, and a manually controlled locking and unlocking member provided on its free end with a friction roller adapted to engage the spring-pressed end of the said lever and to extend under the horizontal member of the said fixed plate.

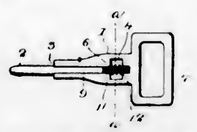
3. In a scuttle hole protector of the type described, a locking device comprising a plate of angle iron and fixed with its vertical member to the frame of the protector, a lever fulcrumed on the under side of the horizontal member of the said plate and adapted to engage the protector, a spring pressing one end of said lever, a manually controlled locking and unlocking member provided on its free end with a friction roller adapted to engage the spring-pressed end of the said lever and to extend under the horizontal member of the said fixed plate, and a bracket fixed on the protector and engaged by the other end of the said lever.

4. The combination of a frame provided with a plate of angle iron, a spring-actuated lever fulcrumed on the under side of the said plate, a protector for closing or opening the said frame and provided on the under side with a track and with a keeper adapted to be engaged by the said lever, an arm mounted to swing on the said frame and engaging the said track to swing the protector into open or closed position, and a spring-pressed bar slidable on the said arm and provided with a friction roller and adapted to pass under the said plate and engage the said lever.

5. The combination of a frame provided with a plate of angle iron, a spring-actuated lever fulcrumed on the under side of the said plate, a protector for closing or opening the said frame and provided on the under side with a track and with a keeper adapted to be engaged by the said lever, an arm mounted to swing on the said frame and engaging the said track to swing the protector into open or closed position, and a spring-pressed bar slidable on the said arm and provided with a friction roller adapt-

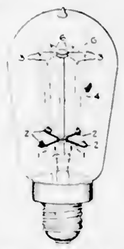
ed to pass under the said plate and engage the said lever, parallel links connecting the said bar with the arm, and manually controlled means connected with the said bar to retract the latter from locking position and to subsequently cause the arm to swing upward and raise the protector.

1,223,957. SNAP-HOOK. CHARLES PHILIP GARDNER, Fort Recovery, Ohio. Filed Aug. 31, 1915. Serial No. 48,234. (Cl. 24—239.)



A snap hook comprising a body having a longitudinal bore extending to one end and also having an arm on one side of the said end, and the body being further provided with a transversely arranged chamber intersecting said bore near its inner end, a recess at one side of the bore and at the inner side of the chamber, and camming shoulders in rear of said recess and leading from opposite sides of the chamber to the rear end of said recess at opposite sides thereof, in combination with a hook having a shank mounted in the bore for longitudinal movement and also for partial rotation and a bill at the outer end of the shank to close against and overlap the outer side of the arm of the body, said hook also having a cam stud at one side and near the inner end of the shank to enter either side of the chamber behind one of the camming shoulders on rearward movement of the hook, and to also enter said recess when the hook is moved outwardly, and a spring to normally move the hook outwardly and thereby cause one of the camming shoulders to direct the cam stud into the recess between the camming shoulders and thereby cause the hook to be moved to and locked in closed position.

1,223,958. METALLIC-FILAMENT INCANDESCENT ELECTRIC LAMP. EMIL GEISEL, Barnes, London, England, assignor to General Electric Company, a Corporation of New York. Filed Oct. 3, 1912. Serial No. 723,674. (Cl. 176—39.)



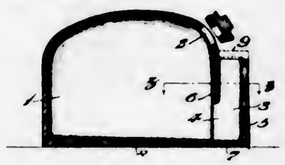
1. In an incandescent lamp, the combination of a central supporting stem, a plurality of sets of supports mounted thereon, the members of one set being flexible and having hooks on the ends thereof, the members of another set being comparatively rigid and having an open coil in the outer end thereof, a continuous refractory filament strung back and forth between the members of the sets of supports so that the axial movement of the filament in the direction of the rigid supports is limited by the coiled portion in the rigid support.

2. In an incandescent lamp, a central supporting stem, a plurality of hooked flexible supports mounted thereon, a plurality of rigid supports mounted thereon, said rigid supports having a helical coil on the end thereof, and a continuous filament strung back and forth between said supports and capable of longitudinal movement with respect to the rigid supports, the filament being arranged to engage the rigid support at one point under normal conditions and at a plurality of points under abnormal conditions.

3. In an incandescent lamp, a central supporting stem, a hooked flexible support mounted thereon, a rigid support mounted thereon, said rigid support having a helical coil on the end thereof, said coil consisting of more than one turn, a continuous filament strung back and forth between said flexible and rigid support, said filament normally engaging one spire of said coiled portion of the rigid support and engaging two adjacent spires of said coil on movement caused by abnormal conditions.

4. The combination in an incandescent lamp of a filament support having a helical coil on the end thereof, said coil consisting of more than one turn and a filament normally engaging one spire of said coiled portion and engaging two adjacent spires under abnormal conditions.

1,223,959. GLASS-MELTING POT. EDGAR A. GILLINDER, Philadelphia, Pa. Filed Sept. 17, 1915. Serial No. 51,134. (Cl. 49—60.)



1. A glass melting pot composed of a body closed at the top and having a discharge passage in its side in the lower portion thereof, and a well on side set-out from the same and having its top open exterior of the adjacent wall of said body and of said top and having a closed bottom and being in communication with the interior of said body at said passage, and a feed inlet in the wall of said body above the open top of said well.

2. A glass melting pot composed of a body closed at the top, a well set-out from a wall of the same and beyond said top, said wall having in its lower portion a passage forming a communicating passage for said well and body, the bottoms of said body and well being integrally continuous of each other, the upper face of said bottoms being inclined from the rear of said body to the front of said set out well.

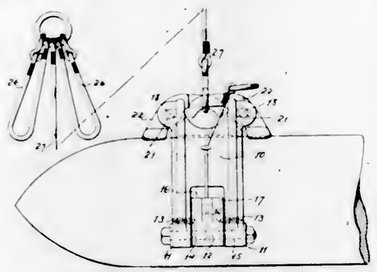
3. In a glass melting pot, a body having an integral top, a well set out from a wall of the same, said wall having in its lower portion a passage forming a communicating passage for said well and body, the top of said well being directly open from above outside of the adjacent wall of said body having an integral top.

4. A glass melting pot comprising a body closed at the top and said top provided with a feed opening, a well set out from a wall of said body beyond the top, said wall having in its lower portion a passage forming a communication between the body and well, the top of said well being directly open from above outside of the adjacent wall of said body, the bottoms of said body and well being continuous of each other and inclined unbroken throughout from the rear wall of the pot to the outer wall of the well.

1,223,960. GRAPPLE. MICHAEL W. GILMARTIN, Dover, N. J., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed July 7, 1916. Serial No. 108,024. (Cl. 57—9.)

1. In a grapple, the combination of a yoke comprising an inverted U-shaped structure, a latch mounted in the lower end of an arm of said yoke so as to form a rest and support for said body below its greatest diameter, and a pivoted clamping jaw carried by the yoke and adapted to engage the body suspended within the yoke intermediate the latch and free end of the other arm, the said clamping jaw being connected with the hoist cable so as to be positively actuated thereby.

2. In a grapple, the combination of a yoke comprising an inverted U-shaped structure of a size and shape to conform to the body to be lifted, a latch mounted in the lower end of an arm of said yoke so as to form a rest and support for said body and two pivoted clamping jaws carried by the yoke approximately midway between the ends of the free ends of the arms of the yoke and adapted to be actuated by the hoist cable to engage the body within the yoke.



3. In a grapple, the combination of a yoke comprising a rigid structure adapted to straddle the object to be lifted and conforming in shape to the part of the object embraced by the yoke, a latch mounted in the lower end of an arm of said yoke and adapted to engage the object below the greatest diameter of the latter, and two clamping jaws pivoted to the yoke adjacent to and at opposite sides of the suspension point of the yoke the said jaws adapted to engage the object and lock it against endwise movement in the yoke.

4. In a grapple, the combination of a yoke comprising a rigid structure adapted to straddle the object to be lifted and conforming in shape to the part of the object embraced by the yoke, a latch mounted in the lower end of an arm of said yoke and adapted to engage the object below the greatest diameter of the latter and two clamping jaws pivoted to the yoke adjacent the suspension point of the latter and adapted to be actuated by the hoist cable to engage the body within the yoke at both sides of the latter.

5. In a grapple, the combination of an inverted U-shaped yoke adapted to straddle the object to be lifted, a latch mounted in the lower end of an arm of said yoke and adapted to engage the object below the greatest diameter of the latter and two clamping jaws pivoted to the yoke and adapted to engage the object at both sides of the yoke, one of said clamping jaws terminating in a looped end for the attachment of the hoist cable and the other clamping jaw having its inner end constructed to be engaged and actuated by said loop shaped end.

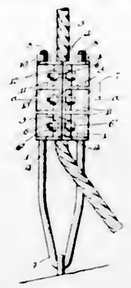
[Claims 6 to 8 not printed in the Gazette.]

1,223,961. CABLE-CLAMP. JOHN H. GUEDHILL, Philadelphia, Pa. Filed June 7, 1916. Serial No. 102,123. (Cl. 24—135.)

1. A cable clamp comprising a pair of similar jaws having complementary longitudinal channels providing a seat, means for clamping said jaws together, and a clevis having bifurcations extending through said jaws and disposed symmetrically with reference to the plane of juncture thereof.

2. A cable clamp comprising jaws having respective longitudinal openings, complementary longitudinal channels providing a seat between said openings and bearings containing apertures, bolts passing through said apertures transverse to said aperture first named and engaging said bearings to hold said jaws together, said jaws having intersecting ribs forming recesses in which the extremities of said bolts are disposed.

3. A cable clamp comprising jaws having complementary channels forming an axial seat extending longitudinally thereof, a clevis having bifurcations extending through the respective jaws on opposite sides of a plane between them, and means for clamping said jaws together.

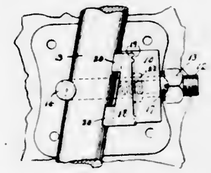


4. A cable clamp comprising a plurality of jaws having complementary channels forming a seat and ribs forming recesses, said ribs providing a substantially regular bearing, bolts connecting with said jaws and having their terminals within the recesses formed by said ribs, a clevis having furcations connected with the respective jaws, and insulating means wrapped around and supported by said ribs.

5. A cable clamp comprising means for seating and gripping a cable, said means comprising a pair of similar parts symmetrical with respect to a plane of juncture, in combination with anchoring means having a bearing in line with the cable seated in said means first named and furcations passing through the respective parts aforesaid.

[Claim 6 not printed in the Gazette.]

1,223,962. LAMP MOUNTING. CHARLES E. GODLEY, Detroit, Mich., assignor to Edmunds and Jones Corporation, Detroit, Mich., a Corporation of New York. Filed Nov. 6, 1916. Serial No. 129,718. (Cl. 248—3.)



1. A lamp mounting comprising an arm secured to the lamp and having a circular row of teeth, a jaw mounted thereon and having a row of teeth to engage the teeth on the arm and also provided with teeth to engage a post, and an adjustable member to engage the side of the post opposite said jaw.

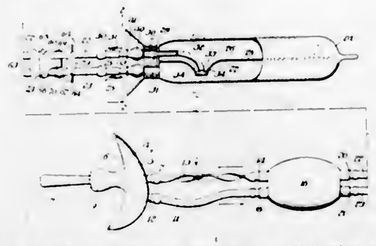
2. A lamp mounting comprising an arm secured to the lamp and having a circular row of teeth, a jaw mounted thereon and having a row of teeth to engage the teeth on the arm and also provided with teeth to engage a post, a screw concentric with said rows of teeth to secure the jaw to the arm, and a hook slidably mounted in the arm and adapted to engage the side of the post opposite said jaw.

3. A lamp mounting comprising an arm secured to the lamp and having a circular row of teeth, a jaw mounted thereon and having a row of teeth to engage the teeth on the arm and also provided with teeth to engage a post, a screw concentric with said rows of teeth to secure the jaw to the arm, and a hook slidably mounted in the arm and adapted to engage the side of the post opposite said jaw, said arm being formed with a shoulder to support said hook.

4. A lamp mounting comprising an arm secured to the lamp and having teeth, a jaw mounted thereon and having teeth to engage the teeth in the arm and also formed to engage a post, the planes of the set of teeth and of the

post engaging surface being at an oblique angle to each other, and adjustable means to force the jaw against the post.

1,223,963. VAGINAL DOUCHE. HERMAN GOLLOMB, New York, N. Y. Filed June 3, 1915. Serial No. 31,819. (Cl. 128—25.)



1. In a vaginal douche, a member provided with a part adapted to enter the vagina and having an inlet passageway therein adapted to discharge liquid into the vagina and an outlet passageway therein adapted to receive liquid from the vagina, a bag having top and bottom and side and end walls, the top and bottom walls being of greater area than the side and end walls, said bag having two separate compartments therein adapted to contain liquid, said compartments being located one above the other and separated by a horizontal partition, means to connect one of said compartments and said outlet passageway, and means to connect the other of said compartments and said inlet passageway and to cause liquid to flow to said inlet passageway.

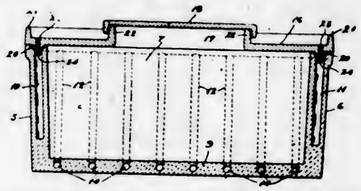
2. In a vaginal douche, a member provided with a part adapted to enter the vagina and having an inlet passageway therein adapted to discharge liquid into the vagina and an outlet passageway therein adapted to receive liquid from the vagina, a bag having a horizontal partition dividing it into upper and lower compartments adapted to contain liquid, said partition having a depression therein, a discharge pipe having its inlet end opening into said depression and thereby communicating with said upper compartment, means to connect said lower compartment and said outlet passageway, and means to connect said pipe and said inlet passageway and to cause liquid to flow to said inlet passageway.

3. In a vaginal douche, a member provided with a part adapted to enter the vagina and having an inlet passageway therein adapted to discharge liquid into the vagina and an outlet passageway therein adapted to receive liquid from the vagina, a bag having a horizontal partition dividing it into upper and lower compartments adapted to contain liquid, a discharge pipe having its inlet end opening into the upper compartment, a web connecting said pipe and said partition, means to connect said lower compartment and said outlet passageway, and means to connect said pipe and said inlet passageway and to cause liquid to flow to said inlet passageway.

4. In a vaginal douche, a part adapted to enter the vagina and having a passageway therein adapted to discharge liquid into the vagina, a flattened expansible and contractible tube connected to said part and having right and left twisted portions, and means operative to force liquid into said tube intermittently.

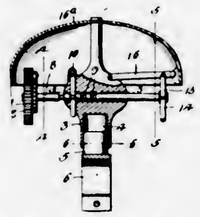
1,223,964. REFRIGERATOR. ORIEL M. GRAVES, Ephrata, Wash. Filed Aug. 15, 1916. Serial No. 115,085. (Cl. 45—134.)

1. A refrigerator of the class described, which embodies a box-like receptacle formed of molded porous earthy material and having a gutter-like groove in the top surface of its vertical walls; a plurality of holes disposed to extend downwardly from said gutter-like groove into said vertical walls to form cells for water; a cover removably disposed to cover said receptacle, said cover being provided with a ridge extending along the edge portions of its bottom side to adapt said ridge to project into said gutter-like groove; an opening formed in the central portion of said cover to give access to the interior of said receptacle; flanges projecting upwardly from the top of said cover and disposed one to extend around the outer edges thereof and the other to extend around the edges of said opening, whereby there is formed a shallow reservoir for water on the top of said cover; and a plurality of holes extending downwardly through said cover and through said ridge and disposed to register with respective ones of said cells, said holes being provided with a filling of material through which water may percolate whereby water from said shallow reservoir may find its way into said cells to saturate the porous walls of the receptacle.



2. A refrigerator of the class described, which embodies a box-like receptacle formed of molded porous earthy material whereby its end walls, side walls and bottom wall are integral and porous, the inner side surfaces of all of said walls being covered with material that is impervious to water; a gutter-like groove formed in the top surfaces of said end walls and side walls to extend throughout the lengths thereof; a plurality of holes disposed to extend downwardly from said gutter-like groove into said end walls to form cells for water; a plurality of holes disposed to extend from the outer surface of the lower portion of one of said side walls transversely through said bottom wall and into the opposite side wall, the entrance of each of said holes being closed by a removable stopper; a plurality of other holes disposed to extend downwardly from said gutter-like groove in each of said side walls to communicate with respective ones of the holes that extend transversely through said bottom wall; a cover removably disposed to cover said receptacle, said cover being provided with a ridge extending along the edge portions of its bottom side to adapt said ridge to project into said gutter-like groove; a container for water intergrally associated with the top side of said cover; and conduit means extending between said container and the holes which extend downwardly from said gutter-like groove into said end walls and side walls, said conduit means containing material which permits water slowly to percolate therethrough.

1,223,965. AUTOMATIC SIGNALING DEVICE. GEORGE S. GUMAER, Coronado, Cal. Filed May 9, 1916. Serial No. 96,458. (Cl. 116—56.)

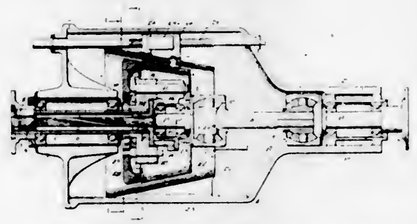


1. In a signal device for vehicles, a bracket, a gong mounted on said bracket, a shaft journaled in said bracket, a series of annular grooves in said shaft, a transverse hole in said bracket communicating with the journal of said shaft, a pin adapted to be inserted into said hole and to engage any one of said annular grooves to secure said shaft in its longitudinal adjustments, a clapper pivoted upon said bracket, an element mounted on said shaft adapted to actuate said clapper when said shaft is rotated, and means for rotating said shaft.

2. In a signal device for vehicles, a clamp, a bracket mounted on said clamp for rotational adjustment, means for securing said bracket in any adjustment respecting said clamp, a shaft journaled in said bracket at right angles to the axis of said bracket, means for adjusting said shaft longitudinally in said bracket, a clapper pivoted on said bracket, an element mounted on said shaft adapted to actuate said clapper when said shaft is rotated, a gong mounted on said bracket and adapted to be contacted by said clapper, and a means for driving said shaft.

3. In a signal device for vehicles, a clamp, a bracket mounted on said clamp for rotational adjustment, means for securing said bracket in any adjustment respecting said clamp, a shaft journaled in said bracket at right angles to the axis of said bracket, a series of annular grooves in said shaft, a transverse hole in said bracket communicating with the journal of said shaft, a pin adapted to be inserted into said hole and to engage any one of the said annular grooves to secure said shaft in its longitudinal adjustments, a clapper pivoted on said bracket, an element mounted on said shaft adapted to actuate said clapper when said shaft is rotated, a gong mounted on said bracket and adapted to be contacted by said clapper, and means for driving said shaft.

1,223,966. CHANGE-SPEED DEVICE. JOHANN W. T. GUTT, New Brunswick, N. J., assignor of one-half to Gustave R. Henke, New York, N. Y. Filed May 6, 1916. Serial No. 95,790. (Cl. 74—26.)



1. A speed changing device comprising a driving shaft, a driven shaft having an angularly movable section, a crank pin connected with the said section, a roller connected with the said section in concentric relation to the crank pin for rotating the driven shaft, an axially adjustable conical race with the internal surface of which the roller has an engagement, means for operatively connecting the crank pin with the driving shaft, means for yieldingly maintaining the roller in contact with the race, and means for axially adjusting the race.

2. A speed changing device comprising a driving shaft, a driven shaft having an angularly movable section, a crank pin connected with the said section, a roller connected with the said section in concentric relation to the crank pin for rotating the driven shaft, an axially adjustable conical race with the internal surface of which the roller has an engagement, means for operatively connecting the crank pin with the driving shaft, and a spring extending axially of the driving shaft and operatively connected with the roller for yieldingly maintaining the same engaged with the race.

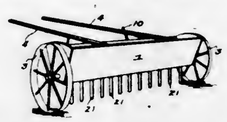
3. The combination of a driving shaft, an arm carried thereby, a member pivotally connected with the arm at a point eccentric to the shaft and adapted to swing on an axis parallel with the shaft, a crank pin operatively connected with the member, spring-actuated means acting on the member to throw the crank pin from a position concentric to the driving shaft, a driven shaft connected with the crank pin to receive rotation therefrom, and an adjustable device for moving the crank pin toward the axis of the driving shaft.

4. A change speed device comprising a driving shaft, a driven shaft in axial alinement therewith and having an angularly movable section, a crank pin on the movable section of the driven shaft, means operatively connecting the crank pin with the driving shaft, means arranged to yieldingly urge the crank pin outwardly from the axis of the driving shaft, and an adjustable device for throwing the crank pin inwardly toward the axis of the driving shaft.

5. A change speed device comprising a driving-shaft, a driven shaft in axial alinement therewith and having an angularly movable section, a crank pin on the movable section of the driven shaft, means operatively connecting the crank pin with the driving shaft, a spring means for moving the crank pin eccentrically to the driving shaft, a roller rigidly connected with the crank pin, and a frusto-conical race with the internal surface of which the roller is permanently engaged.

[Claims 6 to 8 not printed in the Gazette.]

1,223,967. SEED AND FERTILIZER DISTRIBUTER. WILLIAM D. HAINES, Haddonfield, N. J. Filed Dec. 3, 1913. Serial No. 804,522. (Cl. 111—34.)

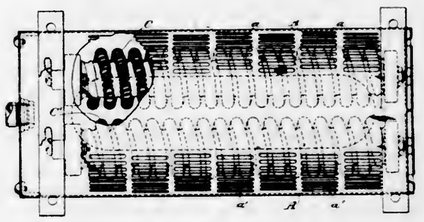


1. The combination in a distributer of a container having a series of outlets; a slide valve having two unequally spaced series of openings all in the same straight line; means for adjusting said slide valve to open different numbers of the outlets in the container including an operating lever mounted on the container; and means for connecting said lever to the slide valve.

2. The combination in a distributer of a container having a series of outlets; a slide having a number of series of openings all in the same straight line, the openings in one of said series being less in number than the outlets of the container; and means for moving said slide into any of several positions to bring the openings of any series into line with the outlets of the container.

3. The combination in a distributer of a container having a series of outlets; a slide valve having different numbers of openings; and means for adjusting said slide valve to open different numbers of the outlets in the container.

1,223,968. ELECTRIC CAR-HEATER. WILLIAM S. HAMMOND, Jr., Chicago, Ill., assignor to Consolidated Car-Heating Company, Albany, N. Y., a Corporation of West Virginia. Filed Aug. 12, 1914. Serial No. 856,477. (Cl. 219—20.)

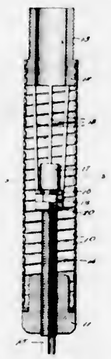


1. An electric heater for cars comprising a casing having a centrally located base opening that extends longitudinally of the casing, a duct for delivering air to said base opening, the top of the casing having a series of

outlet openings disposed adjacent its longitudinal edges to cause the air to be discharged from the casing in different directions and in two separate streams, and a pair of heaters within the casing arranged in spaced parallel relation to cause the air from the inlet to circulate between and around the heaters.

2. As an improvement in electric heaters for cars and the like, the combination with a closed chamber to be heated, the casing having a centrally located base opening extending longitudinally thereof, a duct delivering air through said opening, said duct having its inlet end communicating with the outside atmosphere, the top of the casing having a series of outlet openings spaced from each other and disposed adjacent the longitudinal edges of the casing to cause air to be discharged from the casing in two separate streams, and a pair of heaters within the casing arranged in spaced parallel relation on opposite sides of the base opening and contiguous to the outlet openings, to cause air from the said duct to circulate between and around the heaters.

1,223,969. WELL-SCREEN. HENRY E. HANSON, Bowdon, N. D. Filed Dec. 9, 1916. Serial No. 136,021. (Cl. 166—8.)



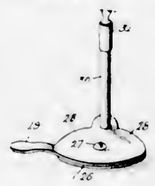
1. A well screen comprising a body formed of a spiral spring having its convolutions provided with flat outer faces and curved inner faces, a base engaging the lower end of the spring body and provided with a threaded passage, a threaded stem extending through the threaded passage into the spring body, a hollow head fitting into the upper end of the spring body, arms extending from the head into the spring body, a head formed at the inner end of said stem, a collar carried by said arms and positioned about the stem beneath the head thereof, an abutment positioned upon the stem beneath the collar, and a jam nut positioned upon the stem and engaging the abutment to hold the same in place.

2. A well screen comprising a body formed of a spiral spring, a base engaging the lower end of the spring body and provided with a threaded passage, a stem extending through the threaded passage into the spring body and provided with a head at its inner end, a hollow head at the upper end of the spring body, a bearing bracket including a collar positioned about the inner end of the stem beneath the head thereof, arms leading from the collar to the head at the upper end of the spring body, and an abutment mounted upon the stem beneath the collar.

3. A well screen comprising a body formed of a spiral spring, a base engaging the lower portion of the spring body and provided with a threaded passage, a hollow head having its lower portion provided with external threads for engagement by the convolutions of the spring body, an adjusting stem threaded through the passage of the base and provided with an abutment head at its inner end, an abutment carried by the stem in spaced relation to the abutment head, and a collar loosely mounted upon the stem between the abutment and the abutment head and provided with carrier arms extending from the hollow head.

4. A well screen comprising an expansible body having inlets adjusted through longitudinal expansion and contraction of the body, a base engaging the lower portion of the body and provided with a threaded passage, a hollow head engaging the upper portion of the body, an adjusting stem threaded through the passage of the base and having its inner end portion provided with a stationary abutment, a movable abutment carried by the stem in spaced relation to the stationary abutment, and a collar loosely mounted upon the stem between the stationary and movable abutments and rigidly supported from the hollow head.

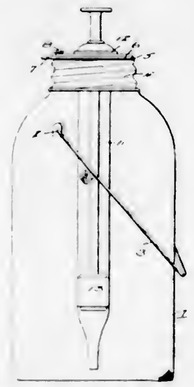
1,223,970. GRAPHOPHONE-TONE-ARM STOP. JOHN R. HARE, New Windsor, Md. Filed Nov. 13, 1916. Serial No. 131,107. (Cl. 274—9.)



1. A tone-arm stop, comprising a stationary base-plate, a supporting-plate rotatably secured to said base-plate, a vertically disposed stop standard mounted at one side of said supporting-plate to be carried therewith, and a limit-stop formed in said base plate which is adapted to be engaged by the lower end of said stop-standard.

2. A tone-arm stop, comprising a stationary base-plate having a recess in its edge to provide a pair of abutting shoulders, a supporting-plate rotatably mounted on said base-plate, and a vertically disposed stop-standard mounted at the edge of said supporting-plate, the lower end of said stop-standard being extended below said supporting plate and adapted to travel in the recess of the base-plate and alternately engage said abutting shoulders to positively limit the movement of the stop-standard in both directions.

1,223,971. DISTILLED-WATER BOTTLE AND STORAGE-BATTERY FILLER. RUSSELL WINSTON HARVEY, Lynchburg, Va. Filed May 31, 1916. Serial No. 100,985. (Cl. 215—72.)



1. The combination with a container carrying a plurality of series of indications, a ring movably mounted

thereon adjacent one of them, and an index on the ring adapted to coact therewith; of a member removably mounted in the mouth of the container and in selective positions therein, and an index on said member adapted to coact with the other series of indications.

2. The combination with a jar, a closure therefor having through it a hole and around the hole two rings of indications; of an indicator movably mounted around the cap and having an index overlying the outer ring, and a member selectively and removably mounted in said hole and having an index overlying the inner ring, for the purpose set forth.

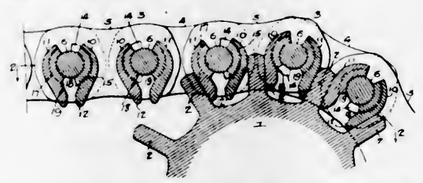
3. In a battery filler, the combination with a receptacle, and a closure therefor having a hole and inscribed with a ring of numbers around such hole; of a syringe removably mounted in and closing said hole and an index carried by the syringe, the latter adapted to be set selectively in the hole so that the index will coact with any of said numbers.

4. In a battery filler, the combination with a container carrying a plurality of rings of indications, a ring movably mounted thereon adjacent one of them, and an index on the ring adapted to coact therewith; of a syringe removably mounted in the mouth of the container and in selective positions therein, and an index on the syringe adapted to coact with the other ring of indications.

5. In a battery filler, the combination with a receptacle, a closure therefor having a polygonal hole, and a ring of indications around said hole, each opposite one side thereof; of a member removably mounted in said hole, and an index thereon adapted to coact with said indications, said member being polygonal on its exterior so as to be capable of insertion in said hole in selective positions, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,223,972. DRIVE-CHAIN. HENRY E. HAYWARD, Indianapolis, Ind., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed June 13, 1916. Serial No. 103,421. (Cl. 74—32.)



1. The combination in a drive chain, of two bushings; links connected to the bushings, each bushing having a central bearing face and having lateral segmental extensions engaging the links, the center portion being recessed to allow the edge of the segmental extensions to be machined.

2. A bushing for a drive chain consisting of a central portion forming a bearing face and having lateral segmental extensions to engage the links of a drive chain and shaped to rotate on a pivot pin, the central portion being recessed so as to allow the edge of the segmental extensions to be machined.

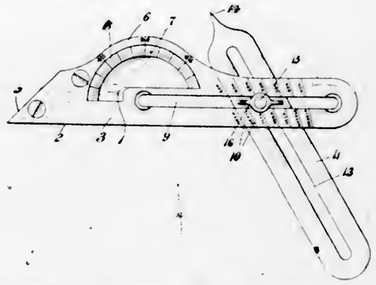
1,223,973. CLASP-BRAKE. WILLIAM C. HEDGCOCK, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Oct. 2, 1916. Serial No. 123,258. (Cl. 188—24.)



2. In a clasp brake, the combination of riggings, located one at each side of the truck, a hanger lever, the upper end of which is pivoted to the truck, a brake head secured to said hanger lever intermediate the ends thereof, a brake bar pivoted to the lower end of said hanger lever and serving to connect the riggings on the two sides of the truck, and a support, in the form of a bracket and link, connected to said brake bar near the middle thereof, substantially as described.

[Claims 1 and 3 not printed in the Gazette.]

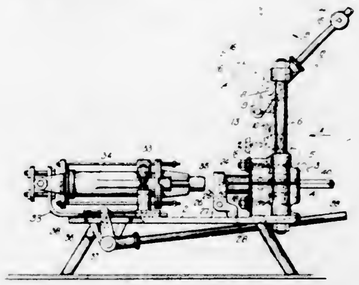
1,223,974. COMBINED PROTRACTOR AND BEVEL. ALFRED H. HELDEN, Kansas City, Mo. Filed June 28, 1916. Serial No. 106,470. (Cl. 33—102.)



1. A combined protractor and bevel comprising a bar having a straight edge and also having a protractor scale and bevel graduations, and a straight edge arm pivotally and slidably connected to said bar, adapted to be arranged parallel with the bar or in line with any of the bevel graduations, the said arm having a pointer at one end adapted to coact with the protractor scale.

2. A combined protractor bevel comprising a bar providing a straight edge and also having a protractor cale and bevel graduations, and a longitudinal slot, a straight edge arm also having a longitudinal slot, and a pivoting element for the said arm and shiftable in the said slots of the bar and arm, the said arm having a pointer adapted to coact with the protractor scale when the pivoting element is concentric with the protractor scale.

1,223,975. MACHINE FOR FORMING SHANKS AND COLLARS ON DRILL-STEELS. ALFRED A. HENTZELL, Littleton, Colo. Filed Nov. 3, 1915. Serial No. 59,348. (Cl. 76—5.)



1. In a machine of the character described, the combination with a movable plunger-die for forming a drill-steel or the like, of a vise for holding the drill-steel in place during the forming operation, including coöperative jaws, complementary bushing-parts on said jaws, locking-keys occupying registering grooves in opposite faces of the jaws and the respective bushing-parts, and means for securing the bushing-parts against longitudinal displacement.

2. In a machine of the character described, the combination with a movable plunger-die for forming a drill-steel

or the like, of a vise for holding the drill-steel in place during the forming operation, including coöperative jaws, complementary bushing-parts on said jaws, and means for securing the said parts against displacement, including curved keys in registering circular grooves in opposite faces of the jaws and the respective bushing-parts, the said keys having lateral studs occupying recesses in the said grooves.

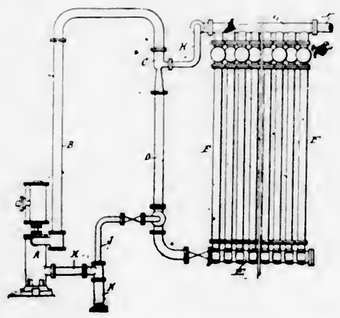
3. In a machine of the character described, the combination with a vise for holding a drill-steel or the like in place during a forming operation, of a stock, a plunger-die for forming the drill-steel, supported for movement in said stock and in a socket of the vise, and a pin on said stock in a slot of the die for limiting the movement of the die in one direction.

4. In a machine of the character described, the combination with a vise for holding a drill-steel or the like in place during a forming operation, of a pivoted stock, and a plunger-die for forming the drill-steel, movably supported thereon, the said stock having a foot to support it in a position in which the plunger die is axially in line with the steel-receiving hollow of the vise.

5. In a machine of the character described, the combination with a movable plunger-die for forming a drill-steel or the like, and a vise for holding the drill-steel in place during the forming operation, of a carrier for the support of an engine in actuative relation to the plunger-die, and a hand-lever fulcrumed at a suitable point in operative connection with said carrier.

[Claims 6 to 15 not printed in the Gazette.]

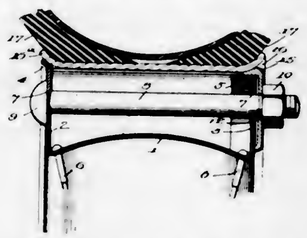
1,223,976. FEED-WATER-CIRCULATING ARRANGEMENT FOR ECONOMIZERS. EDWARD GEORGE HILLER, Manchester, England. Filed June 10, 1916. Serial No. 102,985. (Cl. 122—415.)



The combination, of a multiple-pipe, a feed water heater or economizer, an injector having its suction inlet connected to the outlet end of the economizer and its outlet to the inlet end of the economizer, a feed water pump having its delivery pipe connected to the injector so as to discharge the feed water through the injector, a suction or water supply pipe for the pump, and a free or uncontrolled branch pipe leading from the delivery pipe of the injector to the said suction pipe of the pump, substantially as described.

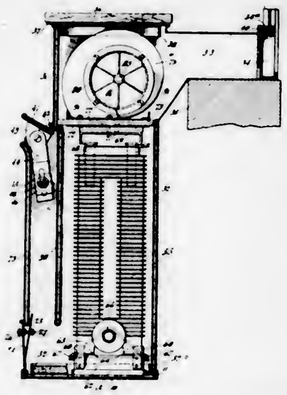
1,223,977. WIRE WHEEL CONSTRUCTION. HENRY L. HUBBARD, Cleveland, Ohio. Filed Oct. 3, 1916. Serial No. 123,460. (Cl. 152—21.)

1. In a wheel construction, a fixed rim consisting of a single piece of pressed steel, said fixed rim being preferably U-shaped in cross section and having a supporting flange at the extremity of each of the side portions, a circular demountable rim having one edge arranged to engage one of said flanges, means for wedging the other side of the demountable rim, said means comprising bolts arranged to extend through the sides of the fixed rim, and clamping lugs each having an edge arranged to enter between the demountable rim and one of said flanged portions of the fixed rim, and means for preventing a rotary movement of the clamping lugs about their bolts, said last named means comprising pins or studs secured to each lug on opposite sides of the bolts and arranged to enter corresponding openings in the fixed rim.



2. In a wheel construction, a fixed rim consisting of a single piece of pressed steel of substantially U-shaped cross section, one of the sides of the fixed rim having an outwardly flaring flange, the other side having an annular flange, bolts arranged to pass through both sides of said fixed rim, clamping lugs each having an opening arranged to receive the bolts, said lugs being provided with a shoulder at one end arranged to engage the side of the fixed rim and being provided at the opposite end with an elongated wedge-shaped flange, said clamping lugs having a retaining pin on each side of said bolt openings arranged to enter corresponding openings in one of the sides of said fixed rim, and nuts for forcing said clamping lugs into clamping position.

1,223,978. VENTILATOR UNIT. MOSES G. HUBBARD, Summit, N. J., assignor to Monarch Ventilator Company, New York, N. Y., a Corporation of New York. Filed Aug. 6, 1913. Serial No. 783,346. (Cl. 257—137.)



1. A ventilator comprising in combination an independent base having side and end flanges, suitable blower and heater devices, and a housing having an air intake and an air outlet for said blower and heater devices removably seated on said independent base and held in position thereon by said side and end flanges.

2. A ventilator comprising in combination an independent base having side and end flanges, a cushion or pad disposed thereon, suitable heater and blower devices, and a housing having an air intake and an air outlet for said heater and blower devices removably seated on said cushion or pad and held in position thereon by said side and end flanges.

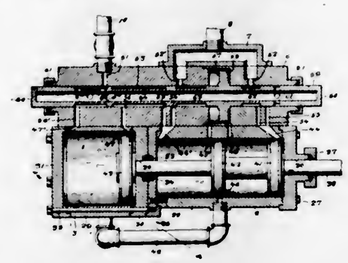
3. In a ventilator, the combination with a housing having an air intake and an air outlet a heater compartment; of a heater in said compartment a support therefor, and an independent housing base with flanges for positioning said housing and said heater support.

4. A ventilator including a housing having an air intake and an air outlet and comprising an upper blower compartment, a heating compartment below and communicating therewith, and a discharge compartment in front of said heater compartment communicating therewith at the bottom.

5. A ventilator including a housing having an air intake and an air discharge and comprising an upper blower compartment, a heater compartment below and communicating therewith, a discharge compartment in front of said heater compartment communicating therewith at the bottom, and an adjustable deflector controlling the discharge opening of said discharge compartment.

[Claims 6 to 20 not printed in the Gazette.]

1,223,979. ADMISSION-VALVE FOR STEAM-ENGINES. WILLIAM R. HUPP, Bryson City, N. C. Filed June 24, 1916. Serial No. 105,610. (Cl. 121—39.)

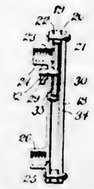


1. In a fluid pressure engine, the combination of high and low pressure cylinders having inlet and exhaust ports, a single piston operating in the low pressure cylinder, a pair of pistons operating in the high pressure cylinder, said pistons being connected for movement in unison, a valve movable to control communication between the sources of steam supply and the high pressure cylinder, the exhaust of steam from the high pressure cylinder to the low pressure cylinder and the final exhaust of steam from said low pressure cylinder, and fluid pressure means controlled by one of the pistons in the high pressure cylinder for actuating said valve.

2. In a fluid pressure engine, the combination of high and low pressure cylinders having inlet and exhaust ports, a piston operating in the low pressure cylinder, a pair of pistons operating in the high pressure cylinder, said pistons being connected for movement in unison, a sliding hollow valve having a longitudinal passage, ports communicating with said passage and external annular passages, for controlling communication between the source of steam supply and said cylinders and the flow of steam from one cylinder to the other for a compound action, and fluid pressure piston controlled means for actuating said valves in the movements of said pistons.

3. In a fluid pressure engine, the combination of high and low pressure cylinders having inlet and exhaust ports, pistons operating in said cylinders, a sliding valve comprising a hollow body forming a longitudinal passage and having ports communicating with said passage and external annular passages for controlling communication between the source of steam supply and the high pressure cylinder, the exhaust of steam from said cylinder to the low pressure cylinder and the final exhaust of steam from the low pressure cylinder for a compound action, and piston controlled fluid pressure means for actuating said valve.

1,223,980. MOISTURE-SUPPLYING DEVICE FOR GAS-ENGINES. LOWBER D. JACKSON, Philadelphia, Pa. Filed Sept. 18, 1916. Serial No. 120,785. (Cl. 137—26.)



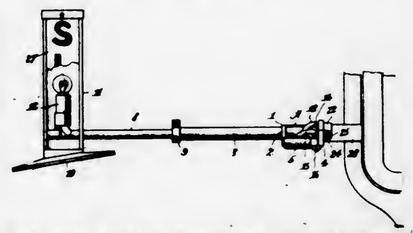
1. A combined valve and mixer for supplying air and water to internal combustion engines, including a substantially cylindrical shallow casing adapted to be positioned upon edge and formed adjacent its lower edge with a water inlet port and adjacent its upper edge with an outlet port and at either side of the outlet port with air inlet ports, and a valve controlling passage of air and water from the outlet port.

2. A combined valve and mixer for supplying air and water to internal combustion engines, including a substantially cylindrical shallow casing adapted to be positioned upon edge and formed adjacent its lower edge with a water inlet port and adjacent its upper edge with an outlet port and at either side of the outlet port with air inlet ports, and a valve controlling passage of air and water from the outlet port, the air inlet ports being formed one in each end wall of the casing.

3. A combined valve and mixer for supplying air and water to internal combustion engines, including a substantially cylindrical shallow casing adapted to be positioned upon edge and formed adjacent its lower edge with a water inlet port and adjacent its upper edge with an outlet port and at either side of the outlet port with air inlet ports, and a valve controlling passage of air and water from the outlet port, the air inlet ports being formed one in each end wall of the casing with the walls of one directed inwardly and downwardly and the walls of the other directed inwardly and upwardly.

4. A combined valve and mixer for supplying air and water to internal combustion engines, including a substantially cylindrical and relatively shallow casing adapted to be positioned on edge and provided adjacent its lower edge with a water inlet port and adjacent its upper edge with an outlet port and at either side of the outlet port with air inlet ports, a disk valve mounted in the casing and controlling the outlet port, said disk valve being formed with an opening adapted to register with the outlet port and in its periphery with a notch, a pin carried by the casing and seating in the notch to limit turning of the valve, and means exterior of the casing for operating the valve.

1,223,981. AUTOMOBILE SIGNALING DEVICE. AXEL W. JOHNSON, Portland, Oreg. Filed Feb. 8, 1916. Serial No. 76,978. (Cl. 116—31.)



In a traffic signal for automobiles, the combination of a supporting member, means for securing said supporting member to a wind-shield, a substantially horizontal rock shaft journaled on said supporting member, a signal arm fixedly related to said rock shaft and extending at a right

angle thereto, a signal arm shield fixedly attached to said arm and adapted to support a reflector, and a manually controlled arm on said rock shaft for turning the latter, said signal arm and shield being so related to the rock shaft that when the signal is in its non-useful position it is concealed by said shield.

1,223,982. SPRING-BARREL FOR WATCHES. WILLIAM W. JORDAN, Mena, Ark. Filed May 13, 1916. Serial No. 97,436. (Cl. 58—86.)



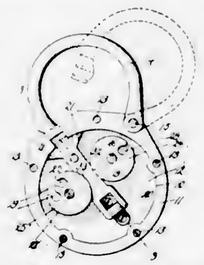
1. In a spring barrel, a bottom portion having an annular wall around its edges, means for fastening the end of a spring to said bottom, said means being so arranged that the spring must be raised upward from said bottom to be disengaged therefrom, the annular wall having a lug projecting inward over the end of the spring.

6. In a spring barrel, a bottom portion having an annular wall around its edges, the bottom portion having an elongated opening adapted to receive the fastening member of a spring, the side wall having a lug projecting inward over one end of said opening.

9. In a spring barrel, a bottom portion having a side wall, said side wall being rabbeted, a cover-plate resting in the rabbet of the wall, the side wall having an undercut lug projecting into the edge of the cover-plate, and means co-acting with the lug to hold the cover-plate down in the rabbet of the wall.

[Claims 2 to 5, 7, and 8 not printed in the Gazette.]

1,223,983. KEYLESS PADLOCK. JOHN KARIN, Koppel, Pa. Filed May 18, 1916. Serial No. 98,378. (Cl. 70—112.)

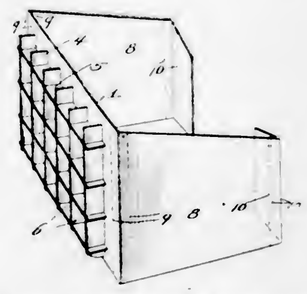


1. A padlock comprising a hollow body portion, a latching arm movably mounted in said body portion for movement transversely of the body portion, a shackle carried by the body portion and having its free end engaged by the latching arm, fingers extending from the latching arm, and locking disks movably mounted in the body portion and extending in overlapping relation to said fingers when in an operative position, and provided with cut-outs through which the fingers may pass to permit the latching arm to move to an inoperative position when the locking disks are in an inoperative position.

2. A lock comprising a hollow body portion, pins rotatably carried by said body portion and extending through the same, disks carried by said pins in said body portion, a latching arm pivotally mounted in said body portion for transverse movement therein, and a shackle pivotally connected with said body portion and having its free end portion extending into said body portion and engaged by said latching arm, said disks when moved to an operative position extending in overlapping relation to the latching arm to prevent movement of said latching arm.

3. A padlock comprising a hollow body portion, a shackle connected with said body portion and having its free end extending into the same, a latching arm pivotally mounted in said body portion for transverse movement therein and engaging the free end of said shackle said latching arm being provided with side arms for engaging the wall of the body portion to prevent longitudinal movement of the latching arm in one direction, fingers extending from said latching arm, pins extending through said body portion, and disks carried by said pins and provided with cutouts through which said fingers may pass to permit said latching arm to move to an inoperative position, said disks when in an operative position extending in overlapping relation to the fingers to prevent pivotal movement of the latching arm.

1,223,984. DISPLAY-RACK. FERDINAND KAUFMAN, New Orleans, La. Filed June 2, 1915. Serial No. 31,734. (Cl. 211—9.)



As an article of manufacture, a display rack for disposition within boxes having transparent front portions, comprising a plurality of article-supporting cellular sections adapted for arrangement flush against the front wall of the box directly behind the transparent portion thereof, and a flexible support for said sections embodying a front member arranged at the back of the sections and to which they are directly secured, and a pair of rearwardly-extending side members constituting continuations of said front member and adapted for arrangement flush against the side walls of the box, said side members having their rear ends bent laterally inward to form flaps adapted for arrangement against the rear wall of the box; the flexible support having a plurality of score lines at its corners, to enable the effective lengths of the front member and the side members of said support to be varied to conform to the width and length of the particular box in which the rack is to be used.

1,223,985. COMPRESSED-POWDER HOLDER. WILLIAM G. KENDALL, Newark, N. J. Filed July 31, 1916. Serial No. 112,348. (Cl. 132—34.)



1. The combination with a box having a peripheral wall and a compressed powder holder having an upwardly and inwardly inclined peripheral wall, of an anchoring device adapted to seat in the bottom of the box and having upwardly and inwardly directed resilient fingers adapted to lockingly yet detachably receive the holder.

2. The combination with a box having a peripheral wall and a compressed powder holder having an upwardly and inwardly inclined peripheral wall, of an anchoring device adapted to seat in the bottom of the box and having upwardly and inwardly directed resilient fingers adapted to lockingly yet detachably receive the holder, the anchoring device being proportioned for wedging engagement within the peripheral wall of the box.

3. The combination with a box having a slightly flared peripheral wall and a powder holder adapted to seat in the box and having an upwardly and inwardly inclined peripheral wall, of a substantially disk shaped body of sheet material adapted to be wedged within the flared wall of the box and slotted radially at peripherally spaced intervals to provide resilient tongues which are bent upwardly and inwardly to detachably engage the inwardly directed wall of the holder.

4. The combination with a container and a compressed powder pad, of a resilient plate sprung into the container to seat flatly against the bottom thereof and be frictionally held therein, and locking fingers projecting from the plate and engaging the pad.

5. A holder for powder pads comprising a resilient plate having radially extending ears, the plate at either side of each ear being radially slotted whereby the ears, together with the portions comprehended between the slots, provide resilient tongues, the tongues being upwardly and inwardly bent to extend at an acute angle to the plate and the terminals of the tongues being out bent.

1,223,986. ELECTRODE AND COATING THEREFOR. JESSE CRITZ KING, Montreal, Quebec, Canada. Filed July 31, 1916. Serial No. 112,443. (Cl. 204—65.)



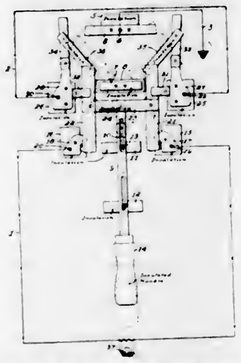
1. An electrode for electric furnaces having a surface coating of fire-clay and graphite.

2. An electrode for electric furnaces having a coating of mixed fire-clay and graphite, the mixture having approximately the same expansion and contraction as the material of the electrode.

3. A coating for electrodes for electric furnaces comprising a mixture of fire-clay and graphite.

4. A coating for electrodes for electric furnaces comprising a mixture of twenty-five to seventy-five parts of graphite and seventy-five to twenty-five parts of fire-clay, by weight.

1,223,987. CUT-OUT SWITCH FOR SERIES LOOPS. WILLIAM ARCHIBALD KIRKLAND, Cedar Falls, Iowa. Filed Feb. 14, 1916. Serial No. 78,122. (Cl. 175—285.)



1. A device of the character described, comprising a make-and-break mechanism inserted in a main circuit having a series loop, said mechanism having coacting conduction bodies of which some are movable out of or into contact with others to thereby dissociate the loop from said main circuit and close the main circuit and a ground connection leading from these conducting bodies in the loop circuit only when said loop circuit is disconnected from said main circuit.

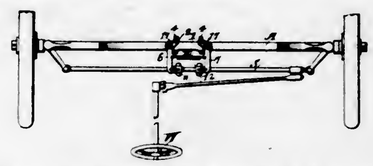
2. A device of the character described, comprising a make-and-break mechanism inserted in a main circuit having a series loop, said mechanism having movable parts coacting to dissociate the loop from the main circuit while leaving the latter closed, and a ground connection adapted to become connected to the loop when the loop is dissociated from the main circuit.

3. A device of the character described, comprising a make-and-break mechanism inserted in a circuit having a series loop, said mechanism having movable parts adapted to coact to dissociate the loop from the main circuit while closing the main circuit, a ground-connection leading from the series loop only when the latter is cut off from the main circuit, and means for moving said parts.

4. A device of the character described, comprising a make-and-break mechanism connecting a main circuit with a series loop thereof, said mechanism being composed of insulated base-plates, terminals thereon in a main circuit with a generator, other base-plates, terminals thereon in circuit with a loop circuit, movable insulated switch-blades movable into contact with said base-plates to establish a series circuit through said main circuit and loop, an insulated conducting clip, said switch-blades being movable out of contact with certain of said base-plates and into contact with said clip to dissociate the loop from the main circuit while closing the main circuit, another insulated conducting clip, movable blades on the last-mentioned base-plates movable into contact with the last-mentioned clip when the first-mentioned switch-blades are moved into contact with the first-mentioned clip, a ground-wire connected to the last-mentioned clip, and means for shifting said movable parts to and fro.

5. A device of the character described, comprising a make-and-break mechanism connecting a main circuit with a series loop thereof, said mechanism being composed of insulated base-plates, terminals thereon in a main circuit with a generator, other base-plates, terminals thereon in circuit with a loop circuit, movable insulated switch-blades movable into contact with said base-plates to establish a series circuit through said main circuit and loop, an insulated conducting clip, said switch-blades being movable out of contact with certain of said base-plates and into contact with said clip to dissociate the loop from the main circuit while closing the main circuit, another insulated conducting clip, movable blades on the last-mentioned base-plates movable into contact with the last-mentioned clip when the first mentioned switch blades are moved into contact with the first-mentioned clip, and means for shifting said movable parts to and fro.

1,223,988. AUTOMOBILE STEERING DEVICE. WILLIAM J. LAUGHLIN, Beloit, Wis. Filed June 3, 1915. Serial No. 31,872. (Cl. 21—200.)



1. In combination with the front axle and steering rod of an automobile, a bearing plate secured to the front axle, an arm pivoted at each end of the plate and extending toward the steering rod, an abutment arranged on the said plate adjacent the pivot of each arm, stops on the steering rod, each stop being frictionally engaged by the end of the lever which it adjoins each of the stops being capable of independent adjustment for wear, and a retractile spring interposed between the arms and secured to each arm midway of the arm pivots and the arm stops.

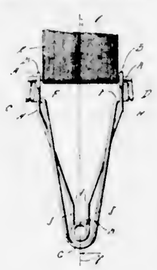
2. In combination with the front axle and steering rod of an automobile, a bearing plate having suitable means whereby it may be fixedly clamped to the front axle, bear-

ing lugs and abutment lugs arranged at both ends of the bearing plate, a pair of arms pivoted on the bearing lugs and extending rearwardly toward the steering rod, heels provided on the arms adjacent their pivoted connection with the bearing plate to engage the aforesaid abutment lugs, a coil spring interposed and connected between the rearwardly extending arms to maintain contact of the before mentioned heels with the abutment lugs under normal conditions, friction rollers pivoted at the rear extremity of the arms and adjoining the steering rod, and lugs fastened on said steering rod and adjusted to engage the aforesaid friction rollers whereby the steering rod will constantly be urged to a predetermined central and normal position under influence of the coil spring so that the vehicle may maintain a straight course without effort by the driver.

3. In combination with the front axle and steering rod of an automobile, a transverse bridge plate having downwardly turned lugs on its front edge and downwardly turned lugs on its rear edge the said lugs being tapped to admit clamp-screws whereby the bridge plate may be fixedly clamped onto the front axle, bearing lugs and abutment lugs provided at the longitudinal extremities of the bridge plate, an arm pivoted on each of the bearing lugs and extending rearwardly to a place adjacent the steering rod, friction rollers pivoted on the underside of the rear ends of the aforesaid arms, and heels provided on the opposite ends of the arms extending laterally to a point of engagement with the aforementioned abutment lugs, hooks provided on each of the rearwardly extending arms at a point midway of their length, stops adjustably clamped onto the steering rod, and a coiled tension spring fastened onto the aforementioned hooks and spanning the space between the rearwardly extending arms whereby to normally maintain the aforementioned heels and abutment lugs in contact and to urge the steering rod to its central and pre-determined normal position to insure the straight-away travel of the vehicle.

4. In a device of the character described, a bridge plate adapted to be clamped onto the front axle of an automobile, abutment lugs and pivot lugs cast integrally with the bridge plate at its longitudinal extremities, rearwardly extending arms mounted on the pivot lugs and having integral heels adjacent the pivotal connection of the arms with the bridge plate whereby to limit the movement of the arms, in one direction, friction rollers pivoted to the rear ends of the aforesaid rearwardly extending arms adapted to frictionally engage suitable stops on the adjoining steering rod of the automobile and a spring device arranged between the aforesaid arms to maintain a predetermined angular position of the rearwardly extending arms under normal conditions and to return the steering rod to its central and normal position should it be shifted to turn the vehicle out of a straight-away course.

1,223,989. GARMENT-SUPPORTER. FREDRICK J. LINDGREN, New Haven, Conn. Filed June 7, 1915. Serial No. 32,609. (Cl. 24—246.)



A garment-supporter, including two members, one member having depending therefrom at its ends and in continuation thereof opposed spring-coils, said coils themselves having in continuation inwardly extending portions, the latter terminating in a tapering loop, the legs of which loop are at right-angles to said inwardly extending portions, the other member also forming a tapering loop the legs of which loop terminate at their upper ends in eyes receiving said member having end coil-springs, said legs extending along parallel lines a short distance vertically, said parallel portions themselves being extended into convergent portions, the latter terminating along parallel lines in a resilient coil, the legs thereof crossing the legs of the first referred to loop.

1,223,990. WHEEL-RIM. EDWARD J. LOBDELL, Onaway, Mich. Filed May 3, 1916. Serial No. 95,025. (Cl. 21—179.)



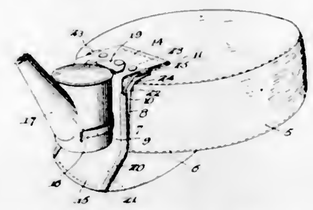
1. A substantially circular wheel-rim comprising an inner member formed of abutting sections, the inner surfaces of said sections being convex and the outer surfaces being concave, the outer surfaces of the sections being grooved near the ends eccentrically to the curvature of the rim, and connecting members conforming to said eccentric grooves, said connecting members and the ends of the sections being united to each other by cementitious material, the surfaces in which the inner member meets the connecting members being curved longitudinally about points located on the same side of the rim as is the center of the latter at the connecting points, whereby a large cementing surface is afforded.

2. An endless wooden wheel rim comprising an inner member having its ends abutting, each of the ends having a plurality of tongues, the tongues on one end interengaging with the tongues of the adjacent end to form joints, some of the tongues terminating at different points circumferentially of the wheel than others, the outer surface of said inner member being curved transversely and being grooved longitudinally, and a connecting piece received in said groove, said abutting ends being joined to each other and to said connecting piece by glue.

3. A substantially circular wheel-rim comprising an inner member the ends of which abut and have interengaging tongues arranged in the plane of the wheel and glued together to form a joint, the outer surface of said inner member being grooved at the joint eccentrically to the line of curvature of the wheel-rim, and a connecting member conforming to said eccentric groove and glued to the ends of the inner member, the surface in which the inner member meets the connecting member being curved longitudinally about a point located on the same side of the rim as is the center of the latter at the joint, whereby a large gluing surface is afforded.

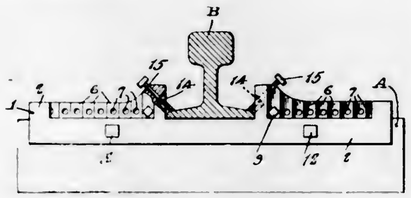
1,223,991. MINER'S CAP. LAWSON MCCLASKY, Butte, Mont. Filed Dec. 5, 1916. Serial No. 135,246. (Cl. 240—60.)

A bracket for supporting miners' lamps upon caps comprising a backing plate and a supporting plate, said plates being terminally bent to provide the same with an upper tongue and a lower tongue, the said supporting plate having its intermediate portion in spaced relation with respect to the backing plate, lamp supporting means upon said supporting plate at the point of formation of the upper tongue portion with said supporting plate, and reinforcing rods attached to the opposite longitudinal edges of the supporting plate, said reinforcing rods being extended beyond the plane of the upper tongue portion, the extending extremities of said rods being bent to provide braces, said braces lying on opposite sides of the point of formation of the upper tongue portion with the supporting plate, sleeves formed on the opposite longitudinal edges of the upper tongue of the supporting plate, shanks formed



on the braces adapted to engage the said sleeves for preventing any accidental sagging or breaking of the supporting plate, substantially as and for the purpose specified.

1,223,992. RAIL-CLAMP. JOHN THOMAS MCCONNELL, Wichita, Kans., assignor of one-half to James H. Newell, Wichita, Kans. Filed Dec. 27, 1916. Serial No. 139,091. (Cl. 238—4.)



1. A rail clamp formed of a pair of clamping sections, each section consisting of a bar adapted to engage one side of a rail tie and to extend beneath the base flange of a rail, and a pair of L-shaped flanges carried by the bar and adapted to overlie the upper side of the tie and to lie, respectively, on opposite sides of the base flange of the rail, the said L-shaped flanges each having the long arms thereof provided with a plurality of openings, the flanges on one bar opposing the flanges on the other bar, rail-engaging means carried by the flanges, and rods connecting the opposed flanges to each other and adapted to be received by the openings in the long arms of the opposed flanges, for the purpose specified.

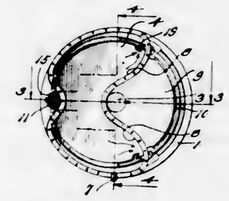
2. A rail clamp formed of a pair of sections, each section consisting of a bar adapted to engage one side of a rail tie, flanges carried by the bar and adapted to overlie the upper side of the tie and to lie, respectively, on opposite sides of the base flange of a rail, the flanges on one bar opposing the flanges on the other bar, means for connecting the opposed flanges to each other, and rail-engaging means adjustably associated with the flanges.

3. A rail clamp formed of a pair of sections, each section including L-shaped flanges adapted to overlie the upper side of the rail tie, the flanges on one section opposing the flanges on the other section, and each flange having the outer side of the long arm thereof provided with a plurality of shoulders arranged in echelon, the said long arms having openings therein extending transversely through the arms and the shoulders, rods connecting the opposed flanges and adapted to be received by the openings in the long arms of the opposing flanges, and rail-engaging means carried by the long arms of the flanges.

4. A rail clamp formed of a pair of clamping sections, each section consisting of a bar adapted to engage one side of a rail tie and to extend beneath the base flange of a rail, means for connecting the bar to the tie, flanges carried by the bars and adapted to overlie the upper side of the rail tie, and rail-engaging means adjustably associated with the flanges.

5. A rail clamp formed of a pair of clamping sections, each section consisting of a bar adapted to engage one side of a rail tie and having rail tie-engaging prongs formed integral with the inner side thereof, means carried by the bars for engaging over the rail tie, rail-engaging means carried by the first-mentioned means, and lateral extensions formed on the outer sides of the bars and located at points opposite the prongs, for the purpose specified.

1,223,993. LUBRICATING DEVICE. ROBERT H. MCNEE, Nyssa, Oreg. Filed June 8, 1916. Serial No. 102,530. (Cl. 74—38.)



1. The combination with a revoluble member and actuating means therefor, of an element arranged in spaced relation to the actuating means aforesaid and constituting the operative connection between the revoluble member and a part to be operated thereby, a lubricant reservoir embodied in said revoluble member, and a passage leading from the lubricant reservoir to said connection element to supply lubricant thereto incident to centrifugal action during rotation of the revoluble member.

2. A lubricating device comprising a revoluble member, a spindle element carried thereby, a chamber formed in said revoluble member having a recurved end wall extending substantially radially of the revoluble member, and a duct having its entrance arranged adjacent to the end wall to receive the lubricant directed thereinto by said wall under centrifugal action when the revoluble member is rotated, said duct leading to the spindle aforesaid.

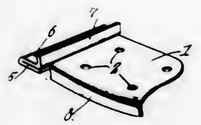
3. A lubricating device comprising a revoluble member having an opening to receive a member to be lubricated, a chamber in said revoluble member for holding a supply of lubricant, and a duct arranged circumferentially of the revoluble member and communicating at each end with the opening aforesaid, said duct having an entrance thereinto from the lubricant chamber whereby to provide a circulation of lubricant through the opening during rotation of the revoluble member.

4. A lubricating device of the class described comprising a revoluble member, a spindle element carried thereby and having a lubricant passage therethrough, a chamber in said revoluble member for holding a supply of lubricant, an annular groove formed in the revoluble member, and a duct seated in said groove and communicating at its ends with the lubricant passage in the spindle aforesaid, said duct having an entrance thereinto arranged in the lubricant chamber whereby to provide a circulation of lubricant through the duct during rotation of the revoluble member.

5. A lubricating device comprising a revoluble member, a spindle element carried thereby and having a lubricant passage therethrough, a chamber in said revoluble member for holding a supply of lubricant, and a duct extending circumferentially about the revoluble member and communicating at each end with the lubricant passage in the spindle aforesaid, said duct having spaced entrances thereinto at substantially diametrically opposite points of the revoluble member whereby to permit a flow of lubricant under centrifugal action in either direction of rotation of the revoluble member through said duct.

[Claims 6 to 9 not printed in the Gazette.]

1,223,994. SHOE ATTACHMENT. BOYD C. MALICK, Lima, Ohio. Filed Sept. 25, 1916. Serial No. 122,104. (Cl. 36—73.)



1. An article of foot wear for use by pole climbers having a lateral extension at its outer side projecting outwardly a sufficient distance to engage the outer portion of a climbing implement to prevent it contacting with the article of foot wear and without a part pressing against the upper of the article of foot wear.

2. An article of foot wear adapted to be worn by pole climbers, the shank of which is provided with a lateral extension at the outer side projecting outwardly to such an extent as to engage the outer portion of a climbing implement to prevent it contacting with the article of foot wear.

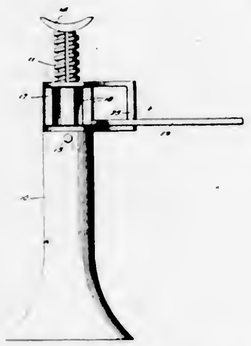
3. An attachment applicable to an article of foot wear used by pole climbers, having an extension to project from the outer side of the article of foot wear and so arranged as to engage the outer portion of a climbing implement to prevent it from contacting with the article of foot wear.

4. An attachment for an article of foot wear used by pole climbers, applicable to the shank and having a portion to rest against the outer edge of the shank and an extension projecting beyond said portion to such an extent as to engage the outer portion of a climbing implement and prevent it from contacting with the article of foot wear.

5. An attachment for an article of foot wear used by pole climbers, embodying a plate adapted to be secured to the shank of the article of foot wear and having a portion to rest against the outer edge of the shank and an outwardly projecting portion so arranged as to engage the outer portion of a climbing implement and prevent it from contacting with the article of foot wear.

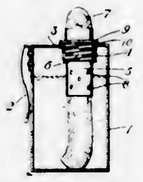
[Claims 6 and 7 not printed in the Gazette.]

1,223,995. LIFTING-JACK. ERNEST H. MARSHALL, Montezuma, Iowa. Filed Dec. 28, 1915. Serial No. 68,982. (Cl. 254—98.)



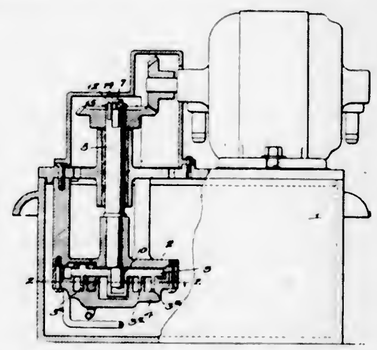
In a lifting jack, the combination with a hollow base, a jack screw mounted in the base for vertical movement therein, and a nut threaded upon the jack screw and provided in its periphery with a plurality of rests, of a yoke embracing the nut and being mounted at its sides for free rotation upon the jack screw, said yoke having a rounded fulcrum portion joining the sides and being spaced from the nut, and a lever having a longitudinal slot therein near one end to receive the fulcrum portion of the yoke and having a laterally opening recess communicating with the slot to permit the easy engagement and disengagement of the lever with respect to said fulcrum, said lever having a laterally directed claw on said end adapted for engagement in said recesses of the nut, said longitudinal fulcrum-receiving slot being adapted to permit the retraction of the lever when reciprocated to obtain a new grip of the claw upon the nut.

1,223,996. FINGER-MOISTENER. FRANK S. MATHER, New York, N. Y. Filed Sept. 23, 1916. Serial No. 121,785. (Cl. 91—54.4.)



A finger moistener comprising a container having a threaded opening in its top, a hook carried by said container a threaded sleeve for said opening, a wick for said sleeve, a flange on said sleeve, a packing between said threaded opening and flange and roughened points projecting inwardly from said sleeve into said wick.

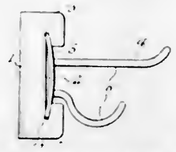
1,223,997. AUTOMATIC ADJUSTER FOR ECCENTRIC SHAFTS. GERALD DE COURCY MAY, Washington, D. C. Filed Dec. 13, 1915. Serial No. 66,485. (Cl. 103—44.)



1. The combination with a pump of the kind described comprising a shaft having an eccentric portion on its inner end, a bushing thereon, and an impeller actuated by said bushing, said shaft and eccentric portion having a longitudinal bore therethrough, of a rod in said bore and extending therefrom at each end, an arm carried by the outer end of the rod and at an angle thereto, and a spring supported from said shaft and bearing on said arm.

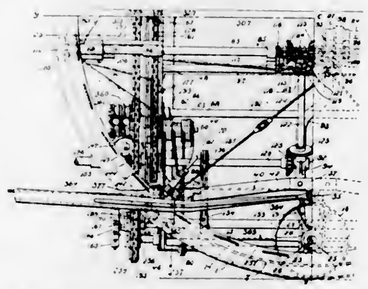
2. The combination with a pump of the type described comprising a shaft having an eccentric portion at its inner end and a longitudinal bore passing through said shaft and eccentric portion, a bushing on said eccentric portion, and an impeller engaging said bushing, of a rod passing loosely through the said bore and projecting therefrom, the outer end of the shaft being recessed, a plate fitting in said recess and having a projecting arm, an arm secured to said rod, and a spring arranged between and bearing on said arms.

1,223,998. CLOTHES-HANGER. WILLIAM H. MAYNARD, Burlington, Vt. Filed Feb. 7, 1916. Serial No. 76,729. (Cl. 248—27.)



The combination of a support having a main groove and a pair of auxiliary grooves arranged at an angle to said main groove with a hook having a resilient body portion and a pair of oppositely arranged spaced hooks, said body portion being bowed and inserted in said main and auxiliary grooves by pressure being applied to said hooks.

1,223,999. HARVESTER. ADAM B. MEINHARDT, Paxico, Kans. Filed Dec. 30, 1915. Serial No. 69,469. (Cl. 56—100.)



1. In a harvester, a spokeless wheel having an internal runway, a body frame on which the harvesting machinery is located, a supporting wheel for said frame running in said runway, a caster wheel for supporting the grain side of said frame, a trailing truck and an articulated connection between said truck and said frame, and mechanism coöperative with said frame, said supports and said truck connection for raising, lowering and leveling the frame with respect to the ground.

2. In a harvester, a spokeless tractor wheel having an internal runway, a body frame on which the harvesting machinery is located, a supporting wheel for said frame running in said runway, a caster wheel for supporting the grain side of said frame, a third ground support for said frame, mechanism coöperative with said frame and said supports for raising and lowering the frame with respect to the ground, said spokeless wheel having a gear flange, driving mechanism mounted on the frame and including driving gears engaging said flange, and means for operating said gears.

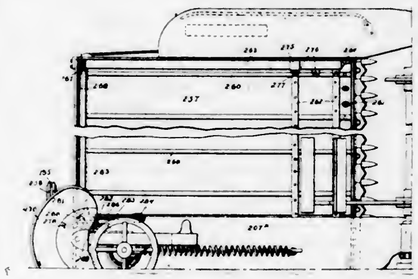
3. In a harvester, a spokeless tractor wheel having an internal runway, a body frame on which the harvesting machinery is located, a supporting wheel for said frame running in said runway, a caster wheel for supporting the grain side of said frame, a third ground support for said frame, mechanism coöperative with said frame and said supports for raising and lowering the frame with respect to the ground, said spokeless wheel having a gear flange, driving mechanism mounted on the frame and including driving gears engaging said flange and means for operating said gears, said gear operating means including reversing mechanism.

4. In a harvester, a spokeless tractor wheel having an internal runway, a body frame on which the harvesting machinery is located, a supporting wheel for said frame running in said runway, a caster wheel for supporting the grain side of said frame, a third ground support for said frame, mechanism coöperative with said frame and said supports for raising and lowering the frame with respect to the ground, said spokeless wheel having a gear flange, driving mechanism mounted on the frame and including driving gears engaging said flange, means for operating said gears, means for mounting said gears to yield as to position with relation to the center of said spokeless wheel for purpose of self-adjustment as said frame is raised or lowered.

5. In a harvester, a spokeless tractor wheel having an internal runway, a body frame on which the harvesting machinery is located, a supporting wheel for said frame running in said runway, a caster wheel for supporting the grain side of said frame, a third ground wheel support for said frame, mechanism coöperative with said frame and said supports for raising and lowering the frame with respect to the ground, said spokeless wheel having a gear flange, driving mechanism mounted on the frame and including driving gears engaging said flange, means for operating said gears, said gear operating means including reversing mechanism, means for mounting said gears to yield as to position with relation to the center of said spokeless wheel for purpose of self-adjustment as said frame is raised or lowered.

[Claims 6 to 48 not printed in the Gazette.]

1,224,000. HARVESTER. ADAM B. MEINHARDT, Paxico, Kans. Original application filed Dec. 30, 1915, Serial No. 69,469. Divided and this application filed June 10, 1916. Serial No. 102,856. (Cl. 56—36.)



1. In a harvester having a grain receiving platform and a conveyer thereon and an operator's platform; the combination with the conveyer, of grain head straps, mechanism on the grain platform for shifting said grain head straps, and means on the operator's platform for controlling said shifting mechanism.

2. In a harvester having a grain receiving platform and a conveyer thereon and an operator's platform, the combination with the conveyer, of a grain head strap and mechanism on the grain platform and operatively controlled from the operator's platform for shifting said grain head strap, said mechanism comprising a slideway along the side of the grain platform, a slide bar on said slideway, said bar having a member to which the grain head strap is attached, means continuously tending to move said slide bar in one direction, and a device on the operator's platform and connected with said slide bar for moving it in the opposite direction.

3. In a harvester having a grain receiving platform and a conveyer thereon and an operator's platform, the combination with the conveyer, of a grain head strap and mechanism on the grain platform and operatively controlled from the operator's platform for shifting said grain head strap, said mechanism comprising a slideway, a slide bar on said slideway, said bar having a member to which the grain head strap is attached, means continuously tending to move said slide bar in one direction, a device on the operator's platform and connected with said slide bar for mounting it in the opposite direction, said

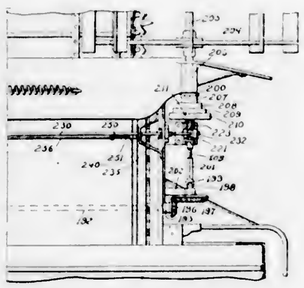
device including means for holding the slide bar in its adjusted position.

4. In a harvester having a grain receiving platform and a conveyer thereon and an operator's platform, the combination with the conveyer, of a grain head strap and mechanism on the grain platform and operatively controlled from the operator's platform for shifting said grain head strap, said mechanism comprising a slideway along the side of the grain platform, a slide bar on said slideway, said bar having a member to which the grain head strap is attached, a spring for moving said slide bar in one direction, and a device on the operator's platform and connected with said slide bar for moving it in the opposite direction.

5. In a harvester having a grain receiving platform and a conveyer thereon and an operator's platform, the combination with the conveyer, of a grain head strap and mechanism on the grain platform for shifting said grain head strap, said mechanism comprising a slideway along the side of the grain platform, a slide bar on said slideway, said bar having a member to which the grain head strap is attached, means continuously tending to move said slide bar in one direction, and a cable connected to the slide bar and extending to the operator's platform, a wheel on the operator's platform on which said cable is wound to move said slide bar in the opposite direction.

[Claims 6 to 9 not printed in the Gazette.]

1,224,001. HARVESTER-REEL-OPERATING MECHANISM. ADAM B. MEINHARDT, Paxico, Kans. Original application filed Dec. 30, 1915, Serial No. 69,469. Divided and this application filed June 10, 1916. Serial No. 102,857. (Cl. 74—58.)



1. In a mechanism of the character stated, a driving shaft having a pinion, a driven shaft provided with a set of gear sections of progressively increasing diameter with any one of which said pinion is adapted to mesh, of a lever operated device for raising and lowering said pinion to aline with a predetermined gear section, and means operated by the said lever for advancing or withdrawing said pinion to cause said pinion to mesh or unmesh with the particular gear section desired.

2. In a harvester, a driving shaft having a pinion, a reel rotating shaft provided with a set of gear sections of progressively increasing diameter with any one of which said pinion is adapted to mesh, of a support, guide standards on said support, a vertically shiftable frame mounted between said standards, a lever for raising and lowering said frame, a horizontally shiftable bearing box for said pinion shaft, said box having a gear rack, a gear sector pivoted in said shaftable frame and engaged with said rack to advance or withdraw said pinion into or out of position with relation to the selected gear section, and an operative connection between said sector and said lever.

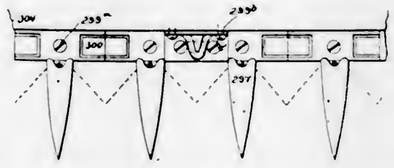
3. In a harvester, a driving shaft having a pinion, a reel rotating shaft provided with a set of gear sections of progressively increasing diameter with any one of which said pinion is adapted to mesh, of a support, guide standards on said support, a vertically shiftable frame mounted between said standards, a lever for raising and lowering said frame, a horizontally shiftable bearing box for said pinion shaft, said box having a gear rack, a gear sector pivoted in said shiftable frame and engaged with said rack to advance or withdraw said pinion into or out of position with relation to the selected gear section, said lever being connected with said sector and a rotatable fulcrum for said lever whereby the lever may be turned on its axis to operate said sector as well as be moved to raise and lower said frame.

4. In a harvester, a driving shaft having a pinion, a reel rotating shaft provided with a set of gear sections of progressively increasing diameter with any one of which said pinion is adapted to mesh, of a support having guide standards, a vertically shiftable frame mounted between said standards, a lever for raising and lowering said frame, a sling mounted in said vertically shiftable support, a horizontally slidable bearing box for said driving shaft mounted in said sling, said box having a gear rack, a gear sector having a stub shaft journaled in a bearing in said vertically shiftable frame and engaging said gear rack to shift the same, said lever being connected to said sector adjacent to its stub shaft axis, a rotatable fulcrum for said lever whereby said lever may be raised and lowered to shift said vertically shiftable frame and may also be turned to oscillate said sector.

5. In an apparatus of the class described, a driving shaft having a pinion, a driven shaft provided with a set of gear sections of different diameters with any one of which said pinion is adapted to mesh, a device for raising and lowering said pinion to aline with a predetermined gear section, a device coöperative with the aforesaid device whereby said pinion may be advanced or withdrawn to mesh or unmesh with the particular gear section desired, and a single operating lever common to both of said devices for actuating the same.

[Claims 6 to 8 not printed in the Gazette.]

1,224,002. CUTTING MECHANISM FOR HARVESTERS. ADAM B. MEINHARDT, Paxico, Kans. Original application filed Dec. 30, 1915, Serial No. 69,469. Divided and this application filed June 10, 1916. Serial No. 102,858. (Cl. 56—43.)



1. In a cutting mechanism for harvesters, the combination with the supporting frame body over which the conveyer canvas slides, a bottom bar, means for holding said bar to project forwardly from said body, a cutting mechanism supported on said body and bar in close juxtaposition to said body and comprising a set of fingers, each including laterally projecting base portions secured on the top of said bar and held against said body, a knife bar slidable on said base portions, knives on said knife bar, knife guards secured to said projecting bar and projected over said knives, and means to reciprocate said knife bar.

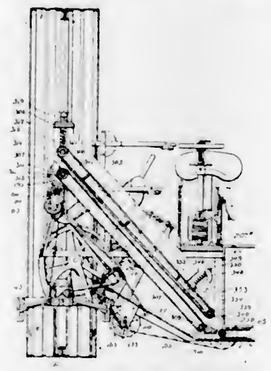
2. In a cutting mechanism for harvesters, the combination with the supporting frame body over which the conveyer canvas is sliding, a bottom bar, means for holding said bottom bar to project forwardly from said body, a cutting mechanism supported on said body and bar in close juxtaposition to said body and comprising a set of fingers, each including laterally projecting base portions secured on the top of said bar and held against said body and having recessed upper faces, a knife bar slidable on said base portions, knives on said knife bar, knife guards secured to said projecting bar and projecting over said knives, and means to reciprocate said knife bar.

3. In a cutting mechanism for harvesters, the combination with the supporting body including a bar, means for holding said bar to extend forwardly from the body proper, a cutting mechanism supported on said body and its bar in close juxtaposition thereto and comprising a set of fingers, each including laterally projecting base portions supported on said body and its bar, a knife bar slidable on said base portions, knives on said knife bar, knife guards secured to said body and its bar and projecting over said knives, and means for reciprocating said knife bar, said base portions of said finger being recessed to reduce the area in engagement with said knife bar and thereby reduce friction.

4. In a cutting mechanism for harvesters, a supporting bar, a set of fingers each including a base portion having a lateral projection, means for securing said base portion to said supporting bar, each of said fingers having knife slot passages, ledger plates secured in said passages, knife guards each including a base portion arranged between a pair of fingers, said knife guard base portion and said finger base portion lying in the same plane, a knife carrying bar slidable on said base portions, knives carried by said bar to coöperate with said fingers, said knife guards including portions projecting over said knives to hold said knife bar down on said bases.

5. In a cutting mechanism for harvesters, a supporting bar, a set of fingers each including a base portion having a lateral projection, means for securing said base portion to said supporting bar, each of said fingers having knife slot passages, ledger plates secured in said passages, knife guards each including a base portion arranged between a pair of fingers, said knife guard base portion and said finger base portion lying in the same plane, a knife carrying bar slidable on said base portions, knives carried by said bar to coöperate with said fingers, said knife guard including portions projecting over said knives to hold said knife bar down on said bases, said knife guard projecting portions having transverse grooves on their under faces, said knives being secured to said knife bar by members having heads to pass through said grooves.

1,224,003. HARVESTER. ADAM B. MEINHARDT, Paxico, Kans. Original application filed Dec. 30, 1915, Serial No. 69,469. Divided and this application filed June 10, 1916. Serial No. 102,859. (Cl. 56—89.)



1. In a harvester, an elevator for conveying the grain from the platform and delivering it from the machine, said elevator comprising a lower endless conveyer and an upper endless conveyer between which conveyers the grain is carried, yieldable supports for said upper conveyer whereby the space between said upper and lower conveyers may be self-adjusted by the grain, said supports comprising vertically slotted guides adjacent to the upper end of the upper conveyer, bearings mounted in said slotted guides in which bearings the upper conveyer shaft is journaled and spring pressed pivoted suspension members for sustaining the lower end of the upper conveyer for longitudinal and rise and fall movement-adjustment, means for applying direct driving power to one of said conveyers, power transmitting gear connections between the upper and lower conveyers, said connections including shiftable elements, and means for maintaining said elements in operative engagement to permit the rise and fall of the upper conveyer in performing its self-adjusting functions.

2. In a harvester, the combination with the body frame including a platform and wheel support therefor, means for moving the body from over the ground, a grain platform conveyer, a cutting mechanism in advance of said conveyer, an elevator for raising the grain from the conveyer and delivering it from the machine, said elevator comprising a lower endless conveyer, and an upper endless conveyer between which conveyers the grain is carried, yieldable supports for said upper conveyer whereby the space between said upper and lower conveyers may be self-adjusted by the grain, said supports comprising a fixed member having vertical slots, vertical slide bearings for the upper end of the upper conveyer, said bearings being movable in said slots and yieldably suspended pivotally mounted members for sustaining the lower end of the upper conveyer, a butt end elevating conveyer adjacent to and coöperative with said lower elevator conveyer, said butt conveyer including fingers to engage the grain, adjacent drive shafts having conveyer rolls for the upper and lower conveyers, gears on said drive shafts, intermeshing pinions themselves respectively meshing with said gears, means for supporting said pinions to maintain them in mesh with one another, and with their respective gears as said elevator conveyers adjust themselves for the grain, and means for applying direct power to one of the elevator conveying shafts.

3. In a harvester, an elevator for conveying the grain from the platform and delivering it from the machine, said elevator comprising a lower relatively fixedly located endless conveyer, and an upper endless conveyer, between which conveyers the grain is carried, a driving shaft at the upper extremity of the lower conveyer, a driving gear on said driving shaft, a driving shaft at the upper extremity of said upper conveyer, a driving gear on said upper conveyer driving shaft, a plurality of intermeshing pinions connecting said driving gears, a yieldable support for said upper conveyer driving shaft, devices coöperative with said gears and pinions for maintaining said gears and pinions constantly in mesh during the yielding movements of said upper conveyer driving shaft, and supports for yieldably pivoting the lower extremity of said upper conveyer.

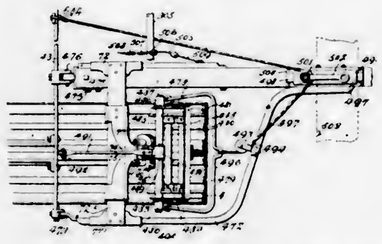
4. In a harvester, an elevator for conveying the grain from the platform and delivering it from the machine, said elevator comprising a lower relatively fixedly located endless conveyer, and an upper endless conveyer, between which conveyers the grain is carried, a driving shaft at the upper extremity of the lower conveyer, a driving gear on said driving shaft, a driving shaft at the upper extremity of said upper conveyer, a driving gear on said upper conveyer driving shaft, intermeshing pinions connecting said driving gears, a yieldable support for said upper conveyer driving shaft, devices coöperative with said gears and pinions for maintaining said gears and pinions constantly in mesh during the yielding movements of said upper conveyer driving shaft, one of said driving gears including a yielding clutch device.

5. In a harvester, an elevator for conveying the grain from the platform and delivering it from the machine, said elevator comprising a lower relatively fixedly located endless conveyer, and an upper endless conveyer, between which conveyers the grain is carried, a driving shaft at the upper extremity of the lower conveyer, a driving gear on said driving shaft, a driving shaft at the upper extremity of said upper conveyer, a driving gear on said upper conveyer driving shaft, intermeshing pinions connecting said driving gears, a yieldable support for said upper conveyer driving shaft, devices coöperative with said gears and pinions for maintaining said gears

and pinions constantly in mesh during the yielding movements of said upper conveyer driving shaft, and supports for "floating" the lower extremity of said upper conveyer, and one of said driving gears including a yielding clutch device, substantially as shown and described.

[Claims 6 to 9 not printed in the Gazette.]

1,224,004. HARVESTER. ADAM B. MEINHARDT, Paxico, Kans. Original application filed Dec. 30, 1915, Serial No. 69,469. Divided and this application filed June 10, 1916. Serial No. 102,860. (Cl. 56—33.)



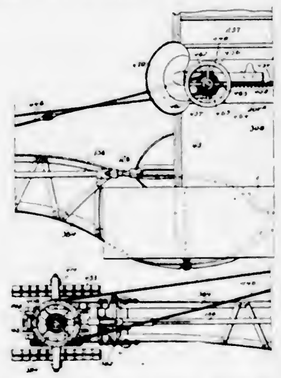
1. In a harvester, a spokeless traction wheel having a runway, a body frame on which the harvesting machinery is located, a wheeled support for the grain side of said frame, a draft appliance coupled to said frame to extend in front of said spokeless wheel, said draft appliance including a tongue, a yoke secured to said tongue and embracing said spokeless wheel, and a wheeled truck running in said spokeless wheel runway, a brace connecting said truck with said frame, a draft yoke embracing said spokeless wheel and connected to said wheeled truck, a slide shiftably mounted on said tongue and having a sheave, a draft cable passed through said sheave and having one end connected to said draft yoke, and its other end connected to said body frame.

2. In a harvester, a spokeless traction wheel having a runway, a body frame on which the harvesting machinery is located, a supporting wheel for said frame running in said runway, a wheeled support for the grain side of said frame, a draft appliance coupled to said frame to extend in front of said spokeless wheel, said draft appliance including a tongue, a yoke secured to said tongue and embracing said spokeless wheel, means for hinging said yoke to said frame, devices for raising and lowering said tongue and holding said tongue in its different positions, and a wheeled truck running in said spokeless wheel runway, a brace connecting said truck with said frame, a draft yoke embracing said spokeless wheel and connected to said wheeled truck, a slide shiftably mounted on said tongue and having a sheave, a draft cable passed through said sheave and having one end connected to said draft yoke, and its other end connected to said body frame.

3. In a harvester, a spokeless traction wheel having a runway, a body frame on which the harvesting machinery is located, a supporting wheel for said frame running in said runway, a wheeled support for the grain side of said frame, a draft appliance coupled to said frame to extend in front of said wheel and including a yoke hingedly secured to said frame and embracing said traction wheel, a draft tongue secured to said yoke and hingedly secured to said frame, a slidable cross bar on said tongue and yoke, guide wheels supported on said cross bar to operate in said runway of said wheel, a wheeled truck running in said runway, guide rods connecting said truck with said frame, pulleys on said tongue, a cable having one end connected to said truck and passing over said pulleys and having its other end connected to said frame, substantially as shown and described.

4. In a harvester, a spokeless traction wheel having a runway, a body frame on which the harvesting machinery is located, a supporting wheel for said frame running in said runway, a wheeled support for the grain side of said frame, a draft appliance coupled to said frame to extend in front of said wheel and including a yoke hingedly secured to said frame and embracing said traction wheel, a draft tongue secured to said yoke and hingedly secured to said frame, a slidable cross bar on said yoke and draft tongue, guide wheels supported on said cross bar to operate in said runway of said wheel, a wheeled truck running in said runway, guide rods connecting said truck with said frame, pulleys on said tongue, a cable having one end connected to said truck and passing over said pulleys and having its other end connected to said frame, a slideway on said tongue, a slide on said last mentioned slideway, one of said tongue pulleys being located on said last mentioned slide, and a cross tree mounted on said last named slide, substantially as shown and described.

1,224,005. STEERING MECHANISM FOR HARVESTERS. ADAM B. MEINHARDT, Paxico, Kans. Original application filed Dec. 30, 1915, Serial No. 69,469. Divided and this application filed Sept. 5, 1916. Serial No. 118,568. (Cl. 21—201.)



1. In a harvester, a body frame, a trailer truck, an auxiliary or sub-frame between said truck and said body frame, said trailer truck including traction wheels, a supporting yoke therefor pivoted to turn on a vertical axis, a steering mechanism controlled from the body frame and connected with said yoke for turning the same, said steering mechanism comprising a steering post on the body frame having a steering wheel, and drum and cable connection between said post and said truck yoke.

2. In a harvester, a body frame, a trailer truck, an auxiliary or sub-frame between said truck and said body frame, said trailer truck including traction wheels, a supporting yoke therefor pivoted to turn on a vertical axis, a steering mechanism controlled from the body frame and connected with said yoke for turning the same, said steering mechanism comprising a steering post on the body frame having a steering wheel, and drum and cable connections between said post and said truck yoke, and means for yieldably supporting said post.

3. In a harvester, a body frame, a trailer truck, an auxiliary or sub-frame between said truck and said body frame, said trailer truck including traction wheels, a supporting yoke therefor pivoted to turn on a vertical axis, a steering mechanism controlled from the body frame and connected with said yoke for turning the same, said steering mechanism comprising a steering post on the body frame having a steering wheel, and drum and cable connections between said post and said truck yoke, and a locking device for holding said steering post against turning.

4. In a harvester, a body frame, a trailer truck, an auxiliary or sub-frame between said truck and said body frame, said trailer truck including traction wheels, a supporting yoke therefor pivoted to turn on a vertical axis, a steering mechanism controlled from the body frame and connected with said yoke for turning the same, said steering mechanism comprising a steering post on the body frame having a steering wheel, and drum and cable connections between said post and said truck yoke, and means for yieldably supporting said post, and a locking device for holding said steering post against turning.

5. In a harvester, a body frame, a trailer truck, an auxiliary or sub-frame between said truck and said body frame, said trailer truck including traction wheels, a supporting yoke therefor pivoted to turn on a vertical axis, a steering mechanism controlled from the body frame and connected with said yoke for turning the same, said steering mechanism comprising a steering post on the body frame having a steering wheel, and drum and cable connection between said post and said truck yoke, and a locking device for holding said steering post against turning, said locking device comprising a fixed plate, a plunger mounted on said steering post and wheel, a cam device to force said plunger against said plate and means for retracting said plunger when released.

[Claims 6 and 7 not printed in the Gazette.]

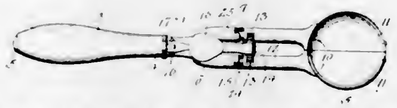
1,224,006. PORCELAIN THREAD-GUIDE. JOHN R. MITCHELL, New York, N. Y. Filed Nov. 27, 1915. Serial No. 63,836. (Cl. 242—157.)



1. A hook for guiding thread in textile machinery consisting of a body having an elongated eye at its upper end, an upwardly inclined slot leading into said eye above the bottom thereof, and a finger projecting inwardly and upwardly into said eye from the side containing said slot and forming an extension to the upper wall of the slot, whereby a thread escaping from the finger will be thrown against the back wall of the eye.

2. A hook for guiding thread in textile machinery consisting of a body having an elongated eye at its upper end, the eye having rounded ends and one substantially straight side, an upwardly inclined slot leading into said eye above the bottom thereof and opposite said substantially straight side, and a finger projecting inwardly and upwardly into said eye from the side containing said slot and above the slot to form a pocket to normally carry the thread.

1,224,007. ICE-CREAM SPOON. AUGUST E. MOOS, Nokomis, Ill. Filed Dec. 13, 1916. Serial No. 136,779. (Cl. 107—48.)



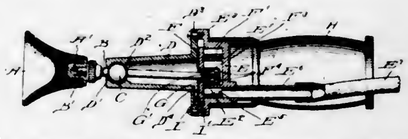
1. In an ice cream spoon, the combination of a handle having journals extending therefrom and arranged in substantially parallel and spaced relation to each other, sphero-quadrantal bowl sections having extended shafts normally in spaced and substantially parallel relation to each other and mounted to oscillate on said journals, sector gear faces on said shafts, a thumb lever having a pivotal mounting on the frame and carrying a rack member having oppositely disposed toothed faces which simultaneously engage the sector faces on said shafts for oscillating the sections of the bowl, and a pin extending transversely between said journals, said shafts being formed with bayonet slots to engage said pin and enable said shafts to be connected to and disconnected from said pin by turning said shafts beyond their normal limit of turning movement.

2. In an ice cream spoon, the combination of a handle having journals extending therefrom and arranged in substantially parallel and spaced relation to each other, sphero-quadrantal bowl sections having extended shafts normally in spaced and substantially parallel relation to each other and mounted to oscillate on said journals, sector gear faces on said shafts, a thumb lever having a pivotal mounting on the frame and carrying a rack member having oppositely disposed toothed faces which simultaneously engage the sector faces on said shafts for oscillating the sections of the bowl, and a pin extending transversely between said journals, said shafts being formed with bayonet slots to engage said pin and enable said shafts to be connected to and disconnected from said pin by turning said shafts beyond their normal limit of turning movement, the pivot of said thumb lever being removable and thereby enabling said rack member to be moved entirely out of engagement with said sector gear faces.

3. In an ice cream spoon, the combination of a handle having journals extending therefrom and arranged in substantially parallel and spaced relation to each other, sphero-quadrantal bowl sections having extended shafts normally in spaced and substantially parallel relation to each other and mounted to oscillate on said journals, sector gear faces on said shafts, a thumb lever having a pivotal mounting on the frame and carrying a rack member having oppositely disposed toothed faces which simultaneously engage the sector faces on said shafts for oscillating the sections of the bowl, and a pin extending transversely between said journals, said shafts being formed with bayonet slots to engage said pin and enable said shafts to be connected to and disconnected from said pin by turning said shafts beyond their normal limit of turning movement, and substantially semi-circular scrapers bearing against the inner surfaces of the bowl sections and having a fixed relation to the frame.

4. In an ice cream spoon, the combination of a handle having journals extending therefrom and arranged in substantially parallel and spaced relation to each other, sphero-quadrantal bowl sections having extended shafts normally in spaced and substantially parallel relation to each other and mounted to oscillate on said journals, sector gear faces on said shafts, a thumb lever having a pivotal mounting on the frame and carrying a rack member having oppositely disposed toothed faces which simultaneously engage the sector faces on said shafts for oscillating the sections of the bowl, and a pin extending transversely between said journals, said shafts being formed with bayonet slots to engage said pin and enable said shafts to be connected to and disconnected from said pin by turning said shafts beyond their normal limit of turning movement, the pivot of said thumb lever being removable and thereby enabling said rack member to be moved entirely out of engagement with said sector gear faces, each of said scrapers having a jointed connection with the respective bowl section and being detachable therefrom and from said frame.

1,224,008. MOTOR FOR MASSAGE APPARATUS. GEORGE F. NELSON, Washington, D. C. Filed Mar. 13, 1912. Serial No. 683,452. Renewed Dec. 7, 1916. Serial No. 135,702. (Cl. 128—19.)



1. A motor of the kind described comprising a holding portion having a casing connected thereto, said casing hav-

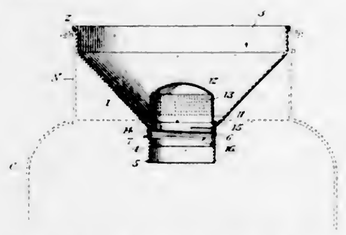
ing a concentric passage with inlet and outlet ports connected therewith, inlet and outlet pipes extending through the holding portion and communicating with the inlet and outlet ports of the casing, an impeller having a concentric ring of less diameter than the passage adapted to rest in said passage, said ring being divided at one point, a hood connected to the casing, and a shaft universally mounted in said hood and operatively connected to said impeller.

2. A motor of the kind described comprising a handle, a casing connected thereto, said casing having a circular passage separated by a dividing wall with inlet and outlet ports upon opposite sides of said wall, inlet and outlet pipes communicating with said ports and extending through the handle, an impeller having a divided ring of less diameter than the passage adapted to rest in the circular passage of the casing, a hood attached to the forward end of said casing, a shaft universally mounted in the forward end of said hood, the rear end of said shaft being operatively connected with the impeller, together with yieldable means carried by said impeller for receiving the end thrust of said shaft.

3. A motor of the kind described comprising a holding member, a casing connected to the forward end thereof, inlet and outlet pipes arranged in said holding member and communicating with inlet and outlet ports of said casing, the casing having a circular passage, a wall separating said ports, an impeller having a central socket and a ring of less diameter than the passage, said ring being divided and adapted to work in said passage, said impeller having openings produced therein, a hood attached to the casing, a shaft universally mounted at the forward end of said hood, the inner end of the shaft being operatively connected with the central portion of the impeller, and the forward end of the shaft projecting from said hood, the said hood forming a continuation of said casing.

4. In a motor of the kind described a suitable handle, a cylindrical casing carried within an end of the handle, said casing opening forwardly, a flanged hood carried by the open end of the casing, said hood having a ball arranged therein, an impeller arranged within said casing and confined therein by the hood flange, a shaft adapted to extend through said ball and to project from said hood, said shaft being operatively connected to said impeller, and means for admitting and discharging a fluid under pressure through said handle to and from said impeller, as and for the purpose set forth.

1,224,009. MILK-STRAINER. CHARLES A. NIEMANN, Marcus, Iowa. Filed Dec. 20, 1916. Serial No. 138,024. (Cl. 210—16.)



1. In a device of the character described, the combination with a funnel including a spout, a flat annular seat around its upper end, and a body connected with the periphery of the seat and increasing in size thence upward; of a strainer having a cylindrical body of a size to closely fit said spout, its top closed, its upper portion having a perforated zone and an imperforate zone just beneath it, an annular flange projecting radially from said body just beneath said imperforate zone and adapted to contact with said seat, and coacting means within the spout and on the body for locking them together when the flange engages said seat, for the purpose set forth.

2. In a device of the character described, the combination with a funnel including a spout, a flat annular seat around its upper end, and a body connected with the periphery of the seat and increasing in size thence upward, said spout having screw threads pressed into it; of a strainer having a cylindrical body of a size to fit said spout, its top closed, its upper portion having a perforated zone and an imperforate zone just beneath it, a flange projecting radially outward just beneath said imperforate zone and adapted to contact with said seat, and threads pressed into the strainer beneath the flange and adapted to engage those within the spout, for the purpose set forth.

1,224,010. AUTOMATIC MINE-GATE. THOMAS J. OSBORNE, Premier, W. Va., assignor of one-half to Leander D. Riffe, Premier, W. Va. Filed Nov. 10, 1916. Serial No. 130,629. (Cl. 269—7.)



1. A swingingly supported gate having a hinge rod provided with an arm having a tappet member, a movably supported bar having an arm engaging the tappet member, rock shafts having cranks with which the bar is pivotally connected, an auxiliary rock shaft having a trip arm and a crank, a crank extending from one of the first mentioned rock shafts, a link connecting said crank with the crank of the auxiliary rock shaft, a rod pivotally connected with the movably supported bar, a bracket through which said rod is guided, and a retracting spring on said rod.

2. In a device of the class described, a gate comprising two leaves each having a hinge rod, said hinge rods being provided with divergent arms having tappet members, and said hinge rods being also provided each with a radial arm intermediate the divergent arms, a spring connecting the radial arms and operating to maintain the gate leaves in closed position, and means for engaging the tappet members to swing the gate leaves against the tension of the closing spring.

3. In a device of the class described, a gate comprising two leaves each having a hinge rod, said hinge rods being provided with divergent arms having tappet members, and said hinge rods being also provided each with a radial arm intermediate the divergent arms, a spring connecting the radial arms and operating to maintain the gate leaves in closed position, and means for engaging the tappet members to swing the gate leaves against the tension of the closing spring, said means including bars supported for longitudinal movement on each side of the gate, said bars having tappet engaging arms, and operating means for said bars.

4. In a device of the class described, a gate comprising two leaves each having a hinge rod, said hinge rods being provided with divergent arms having tappet members, and said hinge rods being also provided each with a radial arm intermediate the divergent arms, a spring connecting the radial arms and operating to maintain the gate leaves in closed position, and means for engaging the tappet members to swing the gate leaves against the tension of the closing spring, said means including bars supported for longitudinal movement at each side of the gate, said bars having tappet engaging arms, rock shafts having arms with which the bars are pivotally connected, and means for actuating the rock shafts to start the bars in the direction of the gate from either side, said actuating means including a rock shaft having a trip arm lying in the path of an approaching vehicle, and said longitudinally movable bar being disposed in the path of a wheel of the approaching vehicle by the weight of which the movement of the bar in the direction of the gate will be completed.

5. A gate comprising swingingly supported leaves, each having a hinge rod provided with divergent tappet carrying arms, arms extending radially from the hinge rods intermediate the tappet carrying arms, a spring connecting the radial arms and operating to maintain the gate in a closed position, rock shafts extending across the two approaches to the gate, said rock shafts having arms, longitudinally movable bars pivotally connected with said arms, said bars having beveled tappet engaging arms and one of said bars at each approach to the gate having a flange, and means for actuating the rock shafts at one side of the gate by the impact and weight of an approaching vehicle.

[Claims 6 and 7 not printed in the Gazette.]

1,224,011. SOLDER-HEATING TOOL. JAMES O. PARKER, Lakin, Kans. Filed Oct. 14, 1916. Serial No. 125,645. (Cl. 126—270.)



1. A tool of the character set forth comprising a shank, a handle thereon, a container on said shank, and a focusing lens on the shank at a point above the container for concentrating the rays of sun on the contents of said container.

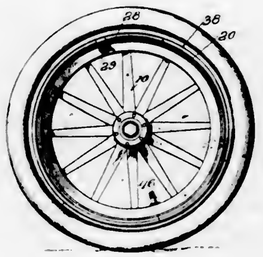
2. A tool of the character set forth comprising a shank, a handle mounted upon one end of said shank, a collar on said shank, a container pivotally mounted to said collar, and a focusing lens adjustably mounted on the shank with respect to the said container, substantially as and for the purpose specified.

3. A tool of the character set forth comprising a shank, a handle at one end of said shank, a collar adjustably mounted on the shank and provided with a lug, a container provided with spaced ears, means passing through the ears of the container and through the lug of the collar for pivotally connecting the container to said collar, and a focusing lens adjustably and rotatably supported on said shank and capable of adjustment toward or away from said container, substantially as and for the purpose specified.

1,224,012. DEMOUNTABLE RIM. GEORGE H. PARKS, Lomax, Ill. Filed Nov. 10, 1914. Serial No. 871,297. (Cl. 152—21.)

1. In a device of the character described, an inner rim including a body portion having an annular flange formed thereon and recessed to define a plurality of oppositely arranged and circumferentially extending shoulders, a sectional locking ring detachably mounted upon the body portion and having lugs formed thereon extending within said recesses and provided with oppositely disposed shoulders engaging said first mentioned shoulders, a wedge detachably engaging between adjacent extremities of said ring, said locking ring being provided with an annular flange confronting said first mentioned flange, and an outer rim carried by said inner rim and disposed to detachably receive a tire, said outer rim upon its inner face being provided with spaced annular shoulders engaging between said flanges.

2. In a device of the character described, an inner rim including a body portion having a flange formed on one side margin thereof and having its opposite margin cut away to provide a locking ring seat, there being recesses formed in the body portion and opening into said seat, the recesses defining oppositely disposed shoulders upon the body portion, a flanged locking ring having lugs formed on one margin thereof extending into said recesses and provided with oppositely disposed shoulders engaging said first mentioned shoulders, a locking member for the ring, and an outer rim carried by the inner rim and provided with shoulders engaging between the flange of the ring and the flange of the body portion, the outer rim being adapted to receive a tire.



3. A wheel rim including an annular body portion provided with reversely arranged shoulders, a sectional locking ring coacting with the body portion and provided with reversely arranged shoulders engaging said first mentioned shoulders, and locking means for said ring, the said rim being disposed to receive an outer rim with a portion of the outer rim contacting with the ring adjacent the shoulders of the ring in active position.

1,224,013. PROCESS FOR PREPARING OXIDS OF URANIUM. CHARLES L. PARSONS, Durham, N. H. Filed May 19, 1915. Serial No. 29,210. (Cl. 75—18.) (Dedicated to the public.)

1. The process of preparing uranium dioxid, consisting in reducing a uranium compound in a fused bath with carbonaceous matter.

2. The process of preparing uranium dioxid, consisting in fusing a mixture of a uranium compound and a flux in the presence of carbonaceous material.

6. The process of preparing uranium dioxid, consisting in fusing a mixture of finely divided alkali metal uranate, flux and carbonaceous matter, cooling, dissolving out soluble matter and washing the residue.

7. The process of preparing uranium dioxid consisting in fusing a mixture of a uranate and a flux in the presence of a reducing agent, dissolving out soluble matter, washing successively with an alkali solution, water and an acid.

[Claims 3 to 5 and 8 not printed in the Gazette.]

1,224,014. PROCESS FOR THE PURIFYING OF URANIUM COMPOUNDS. CHARLES L. PARSONS, Durham, N. H. Filed May 19, 1915. Serial No. 29,211. (Cl. 75—17.) (Dedicated to the public.)

1. The process of purifying uranium compounds, which consists in fusing the same with a flux incapable of forming a soluble compound with the uranium and then dissolving out the soluble matter from the uranium compound.

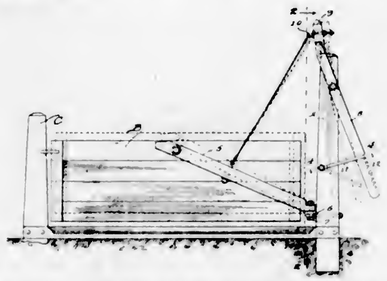
2. The process of purifying uranates from vanadium and the like, consisting in fusing the uranate with a flux incapable of forming a soluble compound with the uranium, dissolving out the soluble matter and washing the residue.

4. The process of purifying an alkali metal uranate, consisting in fusing the same with an alkali metal chlorid, and washing the resulting mass.

6. In the process of purifying a uranate the step of fusing the same with an alkali metal chlorid.

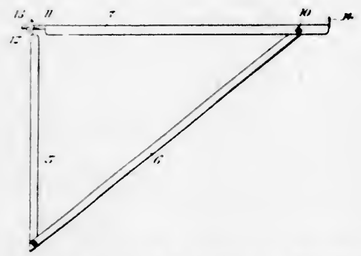
[Claims 3, 5, and 7 not printed in the Gazette.]

1,224,015. GATE ADJUSTMENT. THEODORE L. PATRICK, Pawpaw, Ill. Filed May 20, 1916. Serial No. 98,834. (Cl. 39—11.)



The combination with a post, of a gate therefor, a support fixed to said gate and pivotally mounted on the post, a vertically movable member on said post, a connection between said post and movable member for adjusting said gate, said member having a toothed surface, and a locking element carried by the post and engaging said surface to hold said member in adjusted position.

1,224,016. WALL-BRACKET. PETER H. PETERSEN, Westbrook, Me. Filed Apr. 17, 1916. Serial No. 91,681. (Cl. 248—18.)

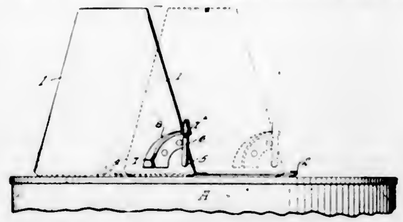


1. A bracket comprising a plurality of sections made from channeled material, a pair of said sections being pivoted to the ends of the remaining section, a threaded bolt fixed to the free end of one of the pivoted sections, and a perforated eye formed on the free end of the other pivoted section and receiving said threaded bolt.

2. A bracket comprising a plurality of sections made from channeled material, a pair of sections being pivoted to the ends of the remaining section, a threaded bolt fixed to the free end of one of the pivoted sections, a perforated eye formed on the free end of the other pivoted section and receiving said threaded bolt, and a nut adjustably and detachably engaged on the threaded bolt.

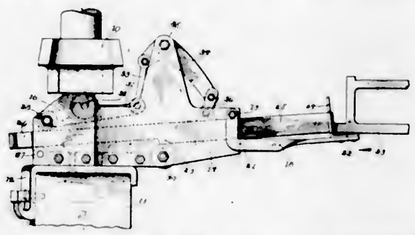
1,224,017. SAFETY APPLIANCE FOR POWDER-KEGS AND OTHER CONTAINERS. BARDOLPH PETERSON, Sherrard, Ill. Filed Apr. 9, 1915. Serial No. 20,197. (Cl. 221—23.)

A cartridge-filler attachment for powder kegs and other containers, including an approximately cone-shaped spout, said spout having inwardly bent flange-forming edges and an outwardly extended plane-edge, said keg having a seat-plate provided with an opening, a valve forming a closure for said opening, said seat-plate having an upturned edge and an extended narrow edge, said upturned edge being



adapted to receive the extended plane-edge of said spout and said narrow edge extension of the seat-plate being adapted to be bent upwardly to lock the spout to the container.

1,224,018. STOVING-HAMMER. HENRY E. RARICK, Altoona, Pa. Filed Oct. 25, 1916. Serial No. 127,595. (Cl. 78—17.)



1. In a stoving or similar machine, the combination with a steam-hammer, a frame, means for securing the frame to the anvil of the steam-hammer, a ram or hammer operating within the frame and means connected to the ram or hammer and adapted to be operated by the steam-hammer for driving forward the ram or hammer.

2. In a stoving or similar machine, the combination of a frame, a ram or hammer operating within the frame, and connecting levers comprising a pressure bar to operate the ram or hammer when the pressure bar is struck.

3. In a stoving or similar machine, the combination with a frame, a ram or hammer disposed approximately horizontally in the frame, a pressure bar, and connecting links and levers for operating the ram or hammer the pressure bar being arranged to receive a blow from a steam-hammer or similar power device.

4. In a stoving or similar machine, the combination with a frame, of a ram or hammer traveling upon rollers in the frame and slightly inclined so as to return to inoperative position by gravity, and levers and connections for operating the ram or hammer and adapted to receive and transmit power to the ram or hammer.

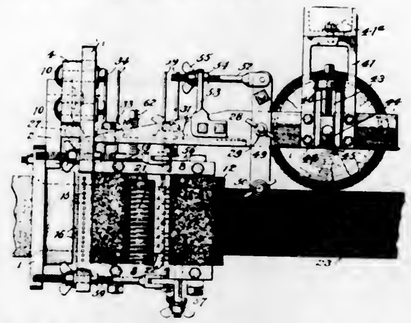
5. In a stoving or similar machine, the combination with a frame bearing a series of guides, a ram or hammer traveling upon the guides in the frame, a pair of work supporting arms carried by the frame, and a guide plate on the arms for determining the blow of the ram or hammer.

[Claims 6 to 8 not printed in the Gazette.]

1,224,019. ATTACHMENT FOR BRICK-MACHINES. DANIEL E. REAGAN, Columbus, Ohio. Filed Sept. 6, 1916. Serial No. 118,748. (Cl. 25—1.)

1. In a brick machine, the combination of the mouth piece of a die for shaping the clay ribbon, a pivoted frame located at the outlet side of said mouth piece and means carried by said pivoted frame for plowing the face of the clay ribbon and for applying pressure to the furrowed face.

2. In a brick machine, the combination of the mouth piece of a die for shaping a clay ribbon, plates secured to said mouth piece, a frame adjustably and pivotally secured to said plates and means carried by said pivoted frame for plowing the face of the clay ribbon and for applying pressure to the furrowed face.



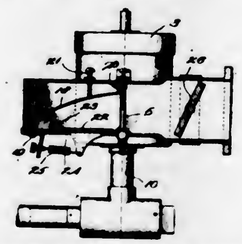
3. In a brick machine, the combination of the mouth piece of a die for shaping the clay ribbon, a pivoted frame located at the outlet side of said mouth piece, a pressing roller adapted to travel on the clay ribbon and support the outer end of the pivoted frame, and means located intermediate the said mouth piece and roller for plowing the face of the clay ribbon.

4. In a brick machine, the combination of a mouth piece of a die for shaping the clay ribbon, a pivoted frame located at the outlet side of said mouth piece, a pressing roller adjustably secured to said frame at the outer end, the said roller adapted to travel on the clay ribbon and support the outer forward end of the pivoted frame, and means located between the said mouth piece and roller for plowing the face of the clay ribbon.

5. In a brick machine, the combination of a mouth piece of a die for shaping the clay ribbon, a pivotal frame located at the outlet side of said mouth piece, a pressing roller journaled in said pivoted frame at the outer free end of the latter, a weight carrying box for weighting the roller and means carried by the frame intermediate the rollers and mouth piece for plowing the face of the clay ribbon.

[Claims 6 to 15 not printed in the Gazette.]

1,224,020. ATOMIZING AND NEBULIZING DEVICE. HENRY M. REICHENBACH, Rochester, N. Y. Filed Mar. 11, 1913. Serial No. 753,602. Renewed June 28, 1916. Serial No. 106,520. (Cl. 261—40.)



1. In an atomizer and nebulizer, the combination of an inlet conduit for internal combustion engines, a fuel feed device consisting of a series of tubes opening within said conduit, means for supplying fuel at constant level to said device, and a spring metal valve in said conduit, said valve crossing the conduit from the bottom toward the fuel discharge level, and terminating in fingers swinging to shield or cover openings between tubes of the feed device and to guide air past the tube openings.

2. In an atomizer and nebulizer, the combination of an inlet conduit for internal combustion engines, a fuel feed device consisting of a series of tubes opening within said conduit, means for supplying fuel at constant level to said device, and a spring metal valve in said conduit, said valve crossing the conduit from the bottom toward the fuel discharge level, and terminating in fingers swinging between the tubes of said feed device.

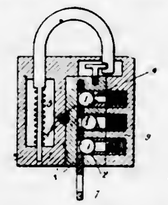
3. In an atomizer and nebulizer, the combination of an inlet conduit, rectangular in cross section, for air for internal combustion engines, a fuel feed device consisting of a series of tubes opening within said conduit, means for supplying fuel at constant level to said device, and a spring metal valve in said conduit, said valve crossing the conduit from the bottom toward the fuel discharge level, and terminating in fingers swinging between the tubes of said feed device, said fingers being bent at their ends upon a curve concentric with the fixed center of swing.

4. In an atomizer and nebulizer, the combination of an inlet conduit for internal combustion engines, provided with a deflecting plate, a fuel feed device opening within said conduit, said fuel feed consisting of a series of feed tubes provided with slots and means for regulating the size of slots, a spring-seated valve actuated by the engine suction for admitting a jet of air and directing such jet across the fuel feed openings and against said deflecting surface, and a throttle valve in said conduit between said fuel feed device and deflecting surface.

5. In an atomizer and nebulizer, the combination of an inlet conduit for internal combustion engines, a series of feed tubes provided with vertical slots arranged crosswise within said conduit, means for supplying fuel at a constant level to said tubes, a spring-seated plate or valve actuated by the engine suction for directing air across such slots, and a throttle valve in said conduit between said feed tubes and engine.

[Claims 6 to 27 not printed in the Gazette.]

1,224,021. LOCK. CHARLES RENAUX, Paris, France. Filed Nov. 12, 1913. Serial No. 800,563. (Cl. 70—46.)

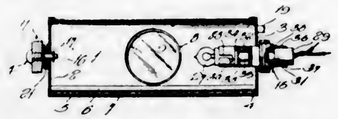


1. A lock comprising a casing and a rotary plug in combination with a plurality of locking members each consisting of a plurality of parts, the parts of each member within the plug comprising a hollow cylinder and a ball, the several cylinders being of different internal diameters and interchangeable, the balls being seated in the ends of respective hollow cylinders and being arranged for seating in the recesses of a suitable key.

2. A lock comprising a casing and a rotary plug in combination with a plurality of locking members of the tumbler pin type each consisting of a plurality of parts, the parts of each member within the plug comprising a hollow cylinder and a ball, the several cylinders being of equal lengths and interchangeable, the balls being seated in the ends of respective cylinders and being arranged for engagement by a suitable key.

3. A lock comprising a casing and a rotary plug in combination with a plurality of locking members of the tumbler pin type each consisting of a plurality of parts, the parts of each member within the plug comprising a hollow cylinder and a ball, the several cylinders being of equal lengths and of different internal diameters and interchangeable, the balls being seated in the ends of respective cylinders and being arranged for engagement by a suitable key.

1,224,022. AUTOMOBILE-SIGNAL. ANTON P. ROTHERMICH, St. Louis, Mo. Filed May 11, 1916. Serial No. 96,886. (Cl. 40—77.)



1. In a signal of the class described, a bracket having spaced arms, a casing mounted to rotate between said arms, a journal carried by one of said arms and extending into the casing through one end thereof, said journal having an aperture in its inner end, and a coiled spring having one end extending through the aperture in said journal and its other end anchored to the casing, whereby said spring operates to turn the casing and to secure said journal thereto.

2. In a signal of the class described, a U-shaped bracket having bearings in the free ends of its arms, a light casing disposed between said arms and having journal openings in its ends, a pinion fixed to the outer face of one end of said casing concentric with the opening therein, a removable journal having threaded engagement with the bearing in one of said bracket arms and extending loosely through said pinion and the registering journal opening in said casing end, a hollow journal removably mounted in the bearing of the other bracket arm and extending loosely through the opening in the other end of the casing, lighting means mounted in said hollow journal and disposed within said casing, a sector-shaped gear pivoted to the inner face of the bracket arm at the end of the casing carrying the pinion, said gear meshing with said pinion, laterally spaced lugs extending outwardly from said gear at opposite sides of said arm for engaging said arm and limiting the turning movement of the gear and casing in opposite directions, an actuating member connected with said gear to rotate said casing, and a spring connected to return the casing after actuation.

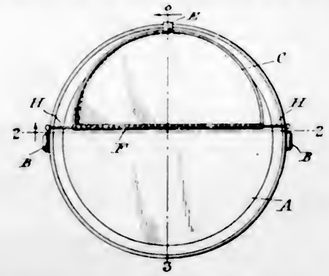
1,224,023. TRACE-FASTENER. OLIVER A. RUSSELL, Windsor, Vt. Filed June 3, 1915. Serial No. 31,949. (Cl. 21—79.)



A trace fastener comprising a ferrule having a portion thereof adapted to be mounted on a whiffletree, and its other portion internally threaded, an externally threaded plug mounted in the threaded portion of said ferrule and having its outer end flush with the outer end of said ferrule whereby said plug is mounted entirely within the same, said plug having a longitudinal bore and a transverse opening intersecting said bore intermediate its ends, and extending across the entire width of said plug, one of the end walls of said opening having diametrically disposed grooves therein, a shank slidable longitudinally in said bore and having a head, a pin carried by said shank adjacent the end wall of said opening having the grooves therein adapted to engage in said grooves whereby to prevent turning of said shank, and a spring surrounding said shank and mounted between said pin and opposite end wall of said opening for yieldably holding said pin in engagement with one of the said grooves.

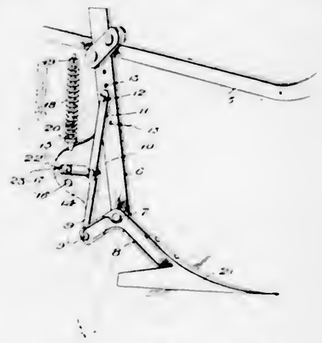
1,224,024. ADJUSTABLE PAN FOR WASHTUBS. ELIZABETH MAY SALISBURY, Parkers Prairie, Minn. Filed Sept. 12, 1916. Serial No. 119,781. (Cl. 68—31.)

An adjustable pan for wash tubs having a circumferential flange, the inner edge of said pan being provided with a longitudinal roll, an extensible rod telescoping within said roll and having heads at their outer ends, a hook integral with the inner edge of the pan and adapted



to engage over the edge of the tub, the upper edge of the flange of the pan being flush with the upper edge of the receptacle supporting the pan.

1,224,025. SULKY-PLOW. JOHN T. SANDERS, Rosser, Tex. Filed Sept. 5, 1916. Serial No. 118,520. (Cl. 97—11.)

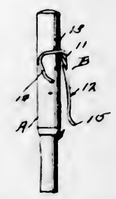


1. The combination with a supporting standard, of a plow supporting and trip device, including a plow carrying member pivotally connected in the lower end thereof, two links pivotally connected together and having their respective free terminals engaging the plow supporting member and said standard, two cam lugs, one of which is carried by each of said links, a rod connected to each of the cam lugs and permitting of relative movement of the lugs, a spring mounted upon said rod, and means acted upon by the spring engaging one of the cam lugs to normally hold the lugs in yielding abutting relation with each other and the links extended.

2. The combination with a supporting standard, of a plow supporting and trip device, including a plow carrying member pivotally connected in the lower end thereof, two links pivotally connected together and having their respective free terminals engaging the plow supporting member and said standard, two cam lugs one of which is carried by each of said links, a rod pivotally connected to the lower of the cam lugs and slidably mounted through the upper cam lug, a spring mounted upon said rod, means acted upon by the spring and engaging the upper cam lug to normally hold the links extended, and coöperative means carried by the cam lugs for limiting the movement of the lugs toward each other.

3. The combination with a supporting standard of a trip attachment for plows, including a substantially L-shaped plow carrying member pivotally connected to one end of the standard, two links pivotally connected together, one of said links being pivotally connected to one terminal of the L-shaped member and the other link being adjustably connected to the standard, two cam shaped lugs, one lug being carried by each link, a rod pivotally connected to the lower lug and slidably mounted in the upper lug, a coil spring adjustably mounted upon said rod, and means mounted upon the rod to be acted upon by the spring to engage the upper cam lug to normally hold the lugs in yielding engagement with each other and the links straightened.

1,224,026. PEN AND PENCIL CLIP. JOHN L. SAXE, Waterbury, Conn. Filed July 31, 1916. Serial No. 112,404. (Cl. 24—11.)

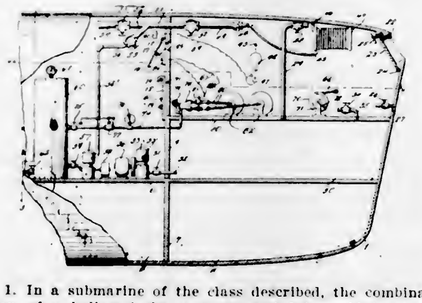


1. A pen or pencil clip comprising a tongue and gripping elements carried by the tongue adapted in one position to hold the same pressed against the pen or pencil and in their other position to hold the tongue pressed outwardly from the pen or pencil.

2. A pen or pencil clip comprising a tongue, laterally directed gripping elements at one end of the tongue arranged to hold the tongue pressed against the pen or pencil, the free end portions of said elements being directed at an angle thereto to provide supplemental gripping elements which when in active position will serve to hold the tongue pressed outwardly from the pen or pencil.

3. A pen or pencil clip comprising a tongue, laterally directed and oppositely curved gripping elements at one end of the tongue, the free end portions of said elements being directed at an angle thereto in direction substantially parallel with the tongue and oppositely curved to provide supplemental gripping elements.

1,224,027. SUBMARINE. FREDERICK W. SCHOENEN, Great Falls, Mont. Filed Jan. 8, 1916. Serial No. 71,010. (Cl. 114—16.)



1. In a submarine of the class described, the combination of a hollow body, a hose carried by said body, a hose reel, said hose reel comprising a hollow axle, pneumatic tubes carried by the end portion of said axle, whereby said hose reel may easily float when in the water, said axle provided with a pair of alined openings in its side portions, bars carried upon said axle, a hose being adapted to be reeled upon said bars, said hose communicating with the interior of said axle through one of said openings, whereby when said hose reel is positioned within the water it will float so as to allow said hose to be unreeled, whereby said axle will be carried above the surface of the water, and means positioned within said submarine for sucking air through said openings into said axle and downwardly through said hose into the interior of the submarine.

2. In a submarine of the class described, the combination of a hollow body, a hose communicating with the interior of said body, a hose reel, said reel comprising a hollow axle, floats secured to said axle for supporting the axle above the water when the reel is floating, said axle having a plurality of openings, bars carried by said axle, a hose connected to said axle and communicating with the interior thereof through one of said openings, said hose being removably mounted upon said bars, whereby when said reel is positioned in the water it will float, thereby causing said hose to be unreeled, whereby air may pass through said axle and hose into said submarine.

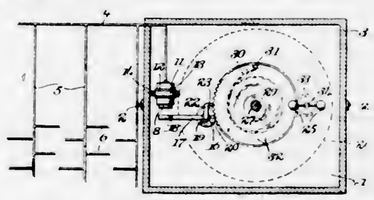
3. In a submarine of the class described, the combination of a hollow body, a hose communicating with the interior of said body, a hose reel, said reel comprising a hollow axle, floats secured to said axle for supporting the axle above the water when the reel is floating, said axle having a plurality of openings, bars carried by said axle, a hose connected to said axle and communicating with the interior thereof through one of said openings, said hose being removably mounted upon said bars, whereby when said reel is positioned in the water it will float, thereby causing said hose to be unreeled, and means positioned within said submarine for sucking air through said axle and base into said submarine.

4. In a submarine of the class described, the combination of a hollow body, a hose communicating with the interior of said body, a hose reel, said hose reel comprising a hollow axle, floats secured to said axle, said axle having a plurality of openings, a hose connected to said axle and communicating with the interior thereof through one of said openings,—means for removably supporting said hose upon said axle, said floats adapted to support said axle above the water when the reel is floating, whereby air may pass through said axle and hose into the interior of said submarine.

5. In a submarine of the class described, the combination of a hollow body, a hose communicating with the interior of said body, a hose reel, said hose reel comprising a hollow axle, floats secured to said axle, said axle having a plurality of openings, a hose connected to said axle and communicating with the interior thereof through one of said openings, means for removably supporting said hose upon said axle, said floats being adapted to support said axle above the water when the reel is floating, and means carried within said submarine for drawing air through said axle and hose into the interior of said submarine.

[Claims 6 to 12 not printed in the Gazette.]

1,224,028. FIRE-SIGNAL APPARATUS. JOHN McINTOSH SMITH, St. John, New Brunswick, Canada. Filed Oct. 31, 1913. Serial No. 798,511. (Cl. 116—11.)



1. In fire signal apparatus, a bell, a clapper for said bell, a gear wheel operating said clapper through movement thereof, a second gear wheel in mesh with said gear wheel, a spindle for said bell on which said second gear wheel is mounted, a detent device, a bearing for said detent device, said detent device being normally in engagement with one of said gear wheels, said bearing being

provided with an enlarged opening to permit sliding movement of the detent, a projectile, means to support said projectile, explosive means for said projectile, a fuse extending into said projectile to coöperate with said explosive means, said detent device arranged for shifting through engagement of said projectile therewith upon its discharge, and a cam carried by said bearing on and past which said device operates upon shifting movement.

2. In fire signal apparatus, a bell, a clapper for said bell, a gear wheel operating said clapper through movement thereof, a second gear wheel in mesh with said gear wheel, a spindle for said bell on which said second gear wheel is mounted, a detent device, a bearing for said detent device, said detent device having a portion turnably and slidably mounted in said bearing, said bearing also having an enlarged opening to permit sliding movement of the detent device, an angle arm extending from said portion terminating in an enlargement, a second angle arm extending from said portion, a finger extending from said second angle arm and at an angle thereto to normally engage said second gear wheel, a projectile opposite said enlarged portion of the first angle arm, a support for said projectile snugly receiving the projectile and having an open end through which the projectile is discharged and having a closed end serving as an abutment, and a cam carried by said bearing on and past which said detent device slides upon shifting movement.

1,224,029. CALK-PLATE. JOSEPH F. SMITH, Heybrook, Wash. Filed Feb. 5, 1917. Serial No. 146,611. (Cl. 36—59.)



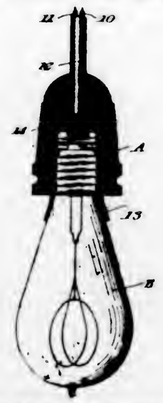
1. In a device of the class described, the combination of a calk plate formed of spring material, and formed in substantially the shape of the shoe sole, slots formed around the periphery of the calk plate, a backing strip properly secured to the upper side of the calk plate, and flat headed calks which are retained in the said slots by means of the inherent spring of the calk plate.

2. In a removably attachable calk plate, the combination of a spring steel plate, having notches cut around its edges, a backing strip permanently secured to the upper side of said plate, and flat headed calks mounted in the said slits with the head between the backing strip and plate, whereby the inherent spring of the plate retains the calk within the slot.

1,224,030. WATER-TIGHT LAMP-SOCKET. STANLEY BAXTER SMITH, St. John, New Brunswick, Canada, assignor of one-half to Louis S. Benjamin, St. John, Canada. Filed Apr. 23, 1915. Serial No. 23,437. (Cl. 173—362.)

1. A lamp socket having a resilient water tight sleeve attached to and forming a part of the socket adapted to closely fit the base end of a lamp.

2. A device of the class described comprising a socket including a threaded terminal, a lamp including a base making threaded engagement with the terminal, a pair of insulated wires one of which is connected to the threaded terminal and the other to the center terminal of the socket, a resilient sleeve attached to and forming a part of the socket surrounding the joint of the terminal and the lamp base and engaging the exterior of the terminal and the body of the lamp, sealing the joint and



rendering the same water-tight, a rubber casing surrounding the wires and an ebonite capping surrounding the sleeve, the socket and the lower ends of the said wires, as and for the purpose specified.

1,224,031. MILK-TICKET HOLDER AND PROTECTOR. FRANK L. SPEELMAN, Crestline, Ohio. Filed Nov. 21, 1916. Serial No. 132,656. (Cl. 40—11.)



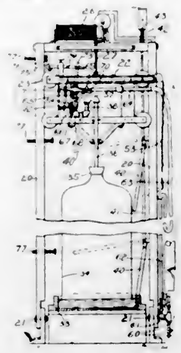
A milk ticket holder comprising wires twisted together at a point intermediate with their ends to form a standard, the lower ends of the wires being arranged radially to span around a milk bottle mouth and being provided with downwardly turned portions to engage around the bead of the mouth, the upper portions of two of the wires being bent reversely to form ticket gripping jaws.

1,224,032. GLASS-DRAWING APPARATUS. ARTHUR E. SPINASSE, Mount Vernon, Ohio. Filed May 24, 1911, Serial No. 629,121. Renewed Mar. 8, 1917. Serial No. 153,533. (Cl. 49—17.)

1. A glass drawing machine bodily tiltable between vertical and horizontal positions.

2. Glass drawing apparatus comprising a drawing element, a frame work upon which said element moves, said frame-work being bodily tiltable out of operative position to a position removed from the heat and gas updrafts from the source of drawing.

3. Glass drawing apparatus comprising a normally vertical framework, ways thereon upon which a drawing element may move in drawing, and a pivot at the bottom of said framework upon which said framework may be lowered to a horizontal position.

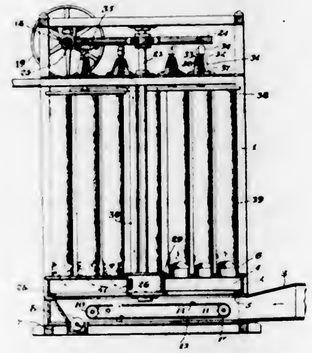


4. Glass drawing apparatus comprising a reciprocable glass drawing element, a frame-work upon which said glass drawing element is slidable in drawing and pivotally supported at its base and means for causing the retention of said frame-work at different positions of adjustment about such pivot.

5. Apparatus for drawing glass cylinders comprising a drawing element, a swing-down drawing frame and means for retaining the cylinder against jar in swinging down.

[Claims 6 to 55 not printed in the Gazette.]

1,224,033. DUST-COLLECTOR. CHARLES STAHN, New Haven, Mo. Filed Feb. 7, 1917. Serial No. 147,197. (Cl. 183—54.)

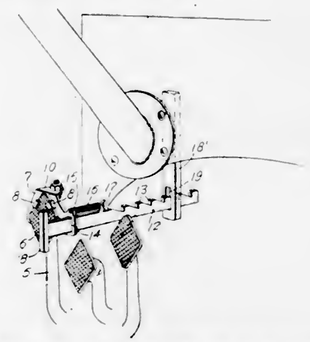


1. A dust collector comprising a frame, a casing carried by the frame, means for introducing dust laden air into the casing, radially disposed partitions arranged in the upper portion of the casing, a drum journaled for rotation in the casing between the said partitions and provided at its sides with an opening, a blade carried by the drum and located below the said opening, tubes of woven material connected with the casing at points between the partitions and means for agitating the tubes.

2. A dust collector comprising a frame, a casing carried by the frame, means for introducing dust laden air into the casing, radially disposed partitions disposed within the casing, a drum journaled for rotation between the inner ends of the said partitions and provided at its sides with an opening, a blade carried by the drum and located below the said opening, tubes of woven material connected with the said casing at points between the partitions, spring supported sectors connected with the upper ends of the said tubes and means for vibrating the said sectors vertically.

3. A dust collector comprising a frame, a casing mounted upon the frame, means for introducing dust laden air into the casing, partitions arranged radially within the casing, a drum journaled for rotation between the inner ends of the said partitions and provided at its side with an opening, a blade carried by the drum and located below the said opening, a shaft attached to the drum, tubes of woven material connected with the top of the casing, sectors connected with the upper ends of the said tubes, a wheel mounted upon the shaft and having a set of ratchet teeth, means for rotating said wheel, and spring supported bolts attached to the sectors and having portions located in the path of movement of the said ratchet teeth.

1,224,034. LOCKING MEANS FOR CLUTCH-LEVERS. PERL LEE STARR, Weed, Cal. Filed Aug. 16, 1916. Serial No. 115,171. (Cl. 74—81.)



1. In a motor vehicle, the combination of a clutch lever having a foot pedal, a base plate secured to the foot pedal, an adjustable locking member movable relatively to said plate and projecting at its forward end beyond the same, a stationary locking member associated with said adjustable locking member, and a foot engaging element carried by the forward end of said adjustable locking member whereby the same is actuated to cause the latter member to have locking engagement with the stationary locking member.

2. In a motor vehicle, the combiantion of a clutch lever having a foot pedal, a base plate secured to the underside of the foot pedal, an adjustable locking member movable relatively to said plate and normally projecting at its forward end beyond the same, a stationary locking member associated with said adjustable locking member, a foot engaging element carried by the forward end of said adjustable locking member whereby the same is actuated to cause the latter member to have locking engagement with the stationary locking member, and means for releasably retaining said adjustable locking member in engagement with the stationary locking member.

3. In a motor vehicle, the combination of a depressible clutch lever, a fixed locking member, and an adjustable locking member adjustable independently of and simultaneously with the adjustment of the clutch lever, the adjustable locking member when moved to locking position holding the clutch lever in a depressed position, and resilient means placed under tension when the adjustable locking member is moved to locked position and tending to releasably retain the said member in locked position, the said means serving to return the adjustable locking member to normal position when the said member is released.

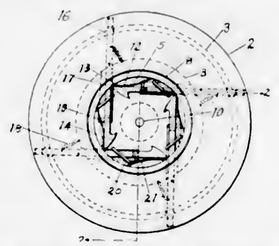
4. In a motor vehicle, the combination of a depressible clutch lever, a fixed locking member, and a locking member extending substantially at right angles to the fixed locking member and adjustable relative thereto, means for releasably holding the adjustable locking member in locking engagement with the fixed locking member, the said

means, when the adjustable locking member is released, serving to move said member out of engagement with the fixed locking member, the said adjustable locking member having an element adapted, when the locking member is adjusted to locking position, to exert pressure against the clutch lever to hold the same in an adjusted position.

5. In a motor vehicle, the combination of a clutch lever, a foot pedal for actuating the clutch lever, a fixed locking member, an adjustable locking member extending substantially at right angles to the fixed locking member, the adjustable locking member being adjusted to locking position relative to the fixed locking member when the clutch lever is operated, the adjustable locking member having a foot engaging element at its forward end normally projecting beyond the foot pedal and adapted, when the said adjustable locking member is moved to locking position, to exert pressure on the clutch lever to lock the same in a depressed or adjusted position, and means for releasably holding the adjustable locking member in the locked position, the said means tending to return the said member when released to normal position.

[Claims 6 to 11 not printed in the Gazette.]

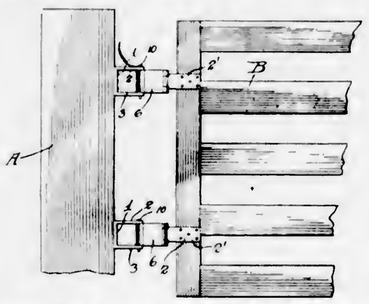
1,224,035. SELF-SERVING DINING-TABLE. HARRY STRANDBERG, Newfolden, Minn. Filed Dec. 10, 1915. Serial No. 66,187. (Cl. 45—26.)



2. In a device of the character described, a stationary annular top, provided with a revoluble center portion, supported on suitable bearings, and provided with a plurality of operating lugs, and in combination therewith a plurality of operating bars to co-act with said lugs, and means for automatically returning these bars to their normal position after operation.

[Claim 1 not printed in the Gazette.]

1,224,036. HINGE. GEORGE V. SUTTON, Keota, Colo. Filed Feb. 24, 1916. Serial No. 80,249. (Cl. 16—49.)



In combination with a gate and a gate post, of a strip of material bent to form a U-shaped bracket having its central portion fastened to the said gate post and its ends extended into the space between the gate post and the gate, a leaf having one end reduced and provided with a knuckle, the said leaf being fastened to the said gate and in longitudinal alinement with the said U-shaped bracket, an intermediate leaf having a pair of knuckles formed at its end for registration with the knuckle on the end of the said first leaf and having its opposite end provided with an elongated knuckle pivotally connected to the terminals of the said bracket, the width of the said first mentioned leaf being less than the distance between the said terminals of the bracket whereby the said leaf may be swung into the space between the sides of the bracket, whereby the said intermediate leaf may extend toward the gate post and be disposed between the sides of the said bracket for permitting the said first mentioned leaf to extend outwardly from the sides thereof.

1,224,037. ELECTRIC SIGN. SPENCER E. SWANCUTT, Stevens Point, Wis. Filed June 27, 1916. Serial No. 106,212. (Cl. 40—133.)



1. A sign comprising a casing having openings therein, reflectors arranged at an angle in said openings, a bracket mounted within said casing and formed with guides, a lamp socket slidably mounted in said guides, a reflector rigidly secured to said socket, and an electric bulb mounted in said socket.

2. A sign comprising a casing having openings therein, reflectors arranged at an angle in said openings, a bracket mounted within said casing and formed with guides, a lamp socket slidably mounted in said guides, a reflector rigidly secured to said socket, an electric bulb mounted in said socket, and a resilient clip formed upon said bracket for preventing rectilinear movement of the socket but allowing rotary movement thereof.

1,224,038. IDENTIFICATION DEVICE. RICHARD SYLVESTER, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a Corporation of Delaware. Filed Feb. 16, 1917. Serial No. 148,929. (Cl. 40—2.)



1. As a means for rapidly identifying individuals by a casual inspection and adapted for identifying employees, an identification device comprising a body portion adapted to constitute a supporting frame for a photograph of the person to be identified, said photograph carrying indicia associating the original of the photograph with the particular employment, said frame having a configuration adapted to position the photograph and indicia distinctively to permit of rapid identification.

2. As a means for rapidly identifying individuals by a casual inspection and adapted for identifying employees, an identification device comprising a body portion having one face thereof marked with data identifying to retain a photograph of the individual to be identified, and an identifying number for the individual associated with said photograph, said frame having a configuration to position the photograph and number distinctively to permit of rapid identification.

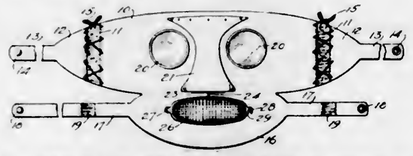
3. As a means for rapidly identifying individuals by a casual inspection and adapted for identifying employees, an identification device comprising a badge or the like having a back plate marked with data identifying the concern using the device, a frame adapted to hold a photograph of the individual to be identified, said photograph carrying indicia associating the original of the photograph with the particular employment, said frame having a configuration adapted to position the photograph and indicia distinctively to permit of rapid identification, a transparent plate adapted to overlie the photograph and the indicia, and a retaining rim for securing the above mentioned parts in assembled position.

4. As a means for rapidly identifying individuals by a casual inspection and adapted for identifying employees, an identification device comprising a back plate marked with data identifying the concern using the device, a skeleton spider-like frame adapted to be placed against the inner face of the back plate and designed to constitute a support for a photograph of the individual to be identified, said photograph having an identification number associated therewith, said spider having a configuration adapted to position the photograph and number distinctively to permit of rapid identification, a transparent plate overlying said photograph and number, and a rim for retaining the back plate, the transparent plate and the skeleton frame in assembled position.

5. As a means for rapidly identifying individuals by a casual inspection and adapted for identifying employees, an identification device comprising a back plate having the outer face thereof marked with data to identify the concern using the device, a spider frame lying adjacent the inner face of the back plate and provided with means for supporting a photograph with the latter distinctively displayed to permit of rapid identification, a transparent plate overlying said spider frame, and means for retaining the back plate, the transparent plate and the spider frame in assembled position.

[Claims 6 to 10 not printed in the Gazette.]

1,224,039. PROTECTIVE MASK. SEMEN SYNOHUBYK, Myrnam, Alberta, Canada. Filed Nov. 27, 1916. Serial No. 133,765. (Cl. 128—42.)



1. A mask of the class described having a front or face portion and lateral portions, elastic strips connecting the face and lateral portions, means to limit the expansion of the elastic strips and means to releasably secure said lateral portions together behind the wearer's head.

2. A mask of the class described having a front or face portion and lateral portions, elastic strips connecting the face and lateral portions, lacings crossing said elastic strips and limiting the expansion thereof, and means to releasably secure said lateral portions together behind the wearer's head.

1,224,040. WELL-BUCKET. EWING H. TAYLOR, Fayetteville, Tenn., assignor of one-half to J. A. Ausbrooks, three-eighths to L. W. Alexander, and one-eighth to John M. Cullum, Fayetteville, Tenn. Filed Apr. 10, 1916. Serial No. 90,221. (Cl. 103—35.)

1. A well bucket having an opening provided near the bottom thereof, a valve adapted to assume a position permitting water to enter the bucket through the opening when the bucket is being sunk, and constituting a closure for said opening when the bucket is being raised, said bucket embodying in its construction a shielding surface underlying the valve when in open position, and adapted to prevent the water from exerting a closing movement on the valve when the bucket is sinking.



2. A well bucket having an opening provided near the bottom thereof, a valve adapted to assume a position permitting water to enter the bucket through the opening when the bucket is being sunk, and constituting a closure for said opening when the bucket is being raised, said bucket embodying in its construction a shielding surface underlying the valve when in open position, and adapted to prevent the water from exerting a closing movement on the valve when the bucket is sinking, said shielding surface having a diameter greater than that of the valve.

3. A well bucket having a bottom provided with an opening, a valve adapted to assume a position permitting water to enter the bucket through the opening when the bucket is being sunk, and constituting a closure for said opening when the bucket is being raised, said bucket embodying in its construction a shielding surface underlying the valve when in open position and adapted to prevent the water from exerting a closing movement on the valve when the bucket is sinking, said valve comprising a disk having a rod slidably mounted in the bucket and adapted to receive a cable for lowering and raising the bucket in the well, and said shielding surface comprising a disk suspended from the bottom of the bucket and having a diameter greater than that of the valve.

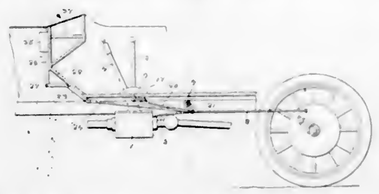
4. A well bucket having a bottom provided with an opening, a valve adapted to assume a position permitting water to enter the bucket through the opening when the bucket is being sunk, and constituting a closure for said opening when the bucket is being raised, said bucket embodying in its construction a shielding surface underlying the valve when in open position, and adapted to prevent the water from exerting a closing movement on the valve when the bucket is sinking, said valve comprising a disk and having a swivel connection to a rod, said rod being slidably mounted in the bucket and adapted to receive a cable for lowering and raising the bucket in the well, and said shielding surface comprising a disk suspended from the bottom of the bucket, and having a diameter greater than that of the valve.

1,224,041. LOCKING MECHANISM FOR MOTOR-VEHICLES. MERL LAVERNE TAYLOR, Pontiac, Mich. Filed Mar. 17, 1916. Serial No. 84,875. (Cl. 21—90.)

1. In locking mechanism for motor vehicles, the combination with the gear shifting lever having an opening formed therein, the emergency brake rod and the lever for actuating said rod, of a rod operable from said brake rod to enter the opening in said gear shifting lever to lock the latter in neutral position.

2. In locking mechanism for motor vehicles, the combination with the gear shifting lever having an opening formed therein, the emergency brake rod and the lever for

actuating said rod, of a rod operable from said brake rod to enter the opening in said gear shifting lever to lock the latter in neutral position, said rod comprising two axially alining sections, means holding said sections against accidental disconnection, and means between the confronting ends of said sections permitting movement of one of the sections relatively to the other.



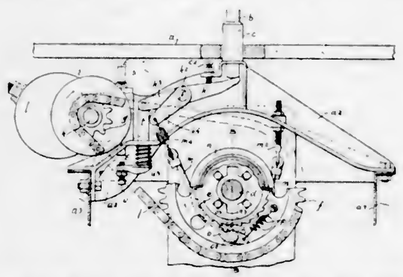
3. In locking mechanism for motor vehicles, the combination with the gear shifting lever, the emergency brake rod and the lever for actuating said rod, of means operable from said rod to lock the gear shifting lever in neutral position, and means for locking said last means in actuated position.

4. In locking mechanism for motor vehicles, the combination with the gear shifting lever, the emergency brake rod and the lever for actuating said rod, of means operable from said rod to lock the gear shifting lever in neutral position, and key controlled means for locking said last means in actuated position.

5. In locking mechanism for motor vehicles, the combination with the gear shifting lever, the emergency brake rod and the lever for actuating said rod, of means operable from said rod to lock the gear shifting lever in neutral position, and a circuit breaker connected in the ignition circuit of the engine of the vehicle and operable from said rod to break such circuit.

[Claim 6 not printed in the Gazette.]

1,224,042. STARTER FOR INTERNAL-COMBUSTION ENGINES. HORACE T. THOMAS, Lansing, Mich. Filed Dec. 9, 1915. Serial No. 65,997. (Cl. 74—7.)



1. In a starter, the combination of a motor and engine shafts normally disconnected, transmission means between the motor and engine shafts including normally disconnected parts, frictional means coöperative with one of the parts to connect the parts and means under the direct control of the operator for rendering the frictional means operative.

2. In a starter, the combination of a motor and engine shafts normally disconnected, transmission means between the motor and engine shafts including normally disconnected parts, frictional means coöperative with one of the parts to connect the parts, and means under the direct control of the operator for setting said motor in operation adapted to cause the action of said frictional means for the purpose described.

3. In an apparatus of the kind described, an engine shaft, a ratchet wheel upon said shaft, a wheel adapted to be actuated by the starting motor and to rotate free of said shaft, a pawl upon said wheel adapted to move into engagement with the teeth of said ratchet wheel, a friction operated part engaging said pawl eccentrically, and means for frictionally actuating the said part.

4. In an apparatus of the kind described, an engine shaft, a ratchet wheel upon said shaft, a wheel adapted to be actuated by the starting motor and to rotate free of said shaft, a ring concentric and adjacent to said wheel, a pawl upon said wheel adapted to move into engagement with the teeth of said ratchet wheel, said ring engaging said pawl eccentrically, and means for applying frictional resistance to said ring.

5. In an apparatus of the kind described, an engine shaft, a ratchet wheel upon said shaft, a wheel adapted to be actuated by the starting motor and to rotate free of said shaft, a ring concentric and adjacent to said wheel, a pawl upon said wheel adapted to move into engagement with the teeth of said ratchet wheel, said ring engaging said pawl eccentrically, a yielding means for applying frictional resistance to said ring.

1,224,043. POULTRY-FOUNTAIN. VAN THOMPSON, Salt Lick, Ky. Filed Oct. 10, 1916. Serial No. 124,837. (Cl. 119—72.)



A poultry fountain comprising a hollow substantially rectangular member having transverse partitions adjacent the ends thereof providing a central reservoir and end compartments, said end compartments having open tops, the central compartment having a flanged opening and a closure for the opening, the partitions, adjacent the lower ends thereof having openings, and gravity influenced valves located in the reservoir and pivotally secured one to each of the partitions above the openings in the partitions whereby one of said valves will contact with one of the partitions to close the opening in the said partition when the fountain is tilted from one of its ends, so as to cut off communication between one of the end compartments and the reservoir.

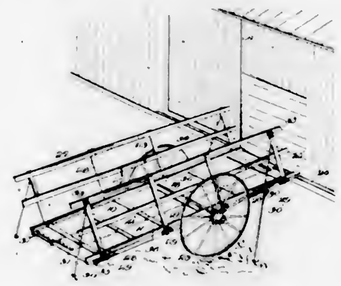
1,224,044. FIGUREHEAD. ISAAC B. THURMAN, Atlanta, Ga., assignor to John R. Smith, McDonough, Ga. Filed Feb. 11, 1916. Serial No. 77,746. (Cl. 46—40.)



1. A figure-head comprising a stationary hollow body, laterally disposed members projecting from said body at opposite sides thereof and pivoted thereto for vertical self-initiated vibration, said members having angular arms projecting laterally beyond their pivots into said body and a transverse retractile spring connecting said arms, said members having such length that they will normally be balanced in positions intermediate the upper and lower limits of their movement, and being disposed in planes warped or inclined to air currents passing under said members from front to rear of the figure-head.

2. A figure-head comprising a stationary body, a member projecting laterally therefrom and pivoted thereto, said member being of such length that it will normally be balanced in a position intermediate the upper and lower limits of its movement and being disposed in a plane warped or inclined to air currents passing under said member from front to rear of said figure-head and spring means tending to move said member toward and hold it in normal intermediate position.

1,224,045. GANGWAY. RICHARD TITSWORTH, Fort Bliss, Tex., assignor of one-third to Thomas J. Walsh, Fort Bliss, Tex. Filed Dec. 31, 1915. Serial No. 69,636. (Cl. 119—82.)



1. A gangway including a sectional floor, means connecting the said sections, and runners carried by certain of the sections with the said last mentioned sections detachable to be reversed for providing ramps independent with respect to each other and having the said runners projecting upwardly to form guides for the wheels of vehicles passing over the said ramps.

2. A gangway including a sectional floor, a plurality of members respectively secured to and connecting the sections of the floor, and supporting wheels carried by certain of the said members.

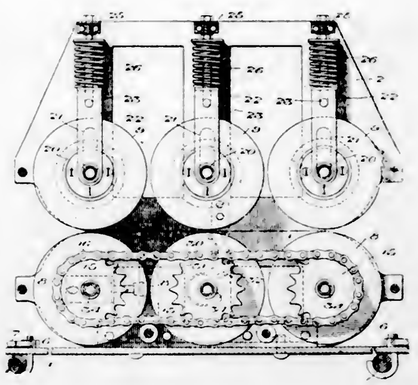
3. A gangway including a floor, supporting wheels for the gangway, side members associated with the floor, and ground engaging stakes engaged with the side members for bracing the said members and provided with brackets adapted for engagement beneath one end of the floor with the opposite end of the floor engaging with the ground and with the said stakes supporting the floor whereby the said wheels may be detached.

4. A gangway including a sectional floor, and a plurality of straps connected to corresponding sides of the floor sections one to each of the said sections with coacting ends of the said straps secured together for connecting the sections of the floor, certain of the floor sections being removable and formed upon the opposite sides thereof with unobstructed faces to provide complemental ramps independent with respect to each other.

5. A gangway including a sectional floor, means connecting the said sections, and double ended hooks carried by certain of the said floor sections with corresponding ends of said hooks adapted to support the floor at one extremity thereof, the said last mentioned sections being removable to be reversed for providing ramps adapted to be supported at the adjacent extremities thereof by opposite corresponding ends of said hooks.

[Claims 6 to 8 not printed in the Gazette.]

1,224,046. APPARATUS FOR FEEDING FIRE-HOSE. THOMAS B. TURLEY, Washington, D. C. Filed Aug. 5, 1916. Serial No. 113,393. (Cl. 254—177.)



1. A fire-hose feeding apparatus, comprising a frame, a series of rolls mounted in the frame, a series of rolls also mounted in the frame with their peripheries in opposed relation to the peripheries of the rolls in the first-named series; the rolls of the two series being concave in the direction of their lengths and being provided in said concave with means calculated to engage and feed a fire hose in the direction of the length thereof, and means for positively rotating one series of rolls in concert and in a common direction.

2. A fire-hose feeding apparatus, comprising a frame, a series of rolls mounted in the frame, a series of rolls also mounted in the frame with their peripheries in opposed relation to the peripheries of the rolls in the first-named series; the rolls of the two series being concave in the direction of their lengths and being provided in said concaves with means calculated to engage and feed a fire hose in the direction of the length thereof, yielding means backing the rolls of one series and adapted to yieldingly hold said rolls to their work and also adapted to enable the rolls to move away from the rolls of the other series when a coupling is encountered, and means for positively rotating one series of rolls in concert and in a common direction.

3. A fire-hose feeding apparatus, comprising a frame, a series of rolls mounted in the frame, a series of rolls also mounted in the frame with their peripheries in opposed relation to the peripheries of the rolls in the first-named series; the rolls of the two series being concave in the direction of their lengths and being provided in said concave with means calculated to engage and feed a fire hose in the direction of the length thereof, yielding means backing the rolls of one series and adapted to yieldingly hold said rolls to their work and also adapted to enable the rolls to move away from the rolls of the other series when a coupling is encountered, means for positively rotating one series of rolls in concert and in a common direction, and means for holding said rolls against retrograde rotation.

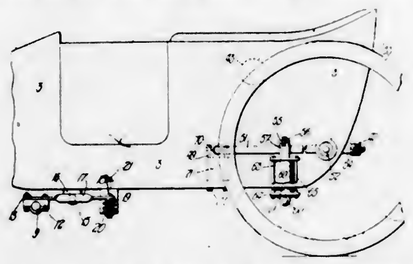
4. An apparatus for feeding fire-hose, comprising frame sections hinged together, means for detachably securing said sections in closed position, opposed rolls, one in each frame section, constructed and arranged to receive a hose between them and to feed the hose lengthwise on rotation of one roll, and means for rotating said roll.

5. An apparatus for feeding fire-hose, comprising frame sections hinged together, means for detachably securing said sections in closed position, opposed rolls, one in each frame section, constructed and arranged to receive a hose between them and to feed the hose lengthwise on rotation

of one roll, means for rotating said roll, and means for holding the other roll under yielding pressure against a hose.

[Claim 6 not printed in the Gazette.]

1,224,047. SUPPORT OF MOTOR-CYCLE SIDE CARS. JOHN W. UNDERWOOD, Melbourne, Victoria, Australia. Filed Oct. 31, 1916. Serial No. 128,748. (Cl. 208—45.)



1. In combination, a side car, means for supporting one end of the side car, inner and outer crank arms pivotally mounted thereon to support the opposite end of the side car, a supporting wheel carried by the outer crank arm, and shock absorbers connected to said crank arms and to the side car.

2. In combination a side car, means for supporting one end of the side car, a crank pin extending across and pivotally mounted on said side car, inner and outer crank arms extending from said crank pin, a supporting wheel carried by the outer crank arm, a flexible connection between the inner crank arm and the cycle frame and shock absorbers between each of the crank arms and the side car.

3. In combination a side car, means for supporting one end of the side car, a crank pin extending across and pivotally mounted on the said side car, inner and outer crank arms extending rearwardly from said crank pin, a supporting wheel carried by the outer crank arm, a clamp flexibly connected to the inner crank arm, a cross pin carried by the side car, and a shock absorber connected to each of the crank arms and the cross pin.

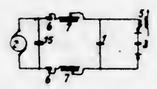
4. In combination a side car, means for supporting one end of the side car, bearings carried thereby, a crank pin capable of turning in said bearings, inner and outer crank arms extending from said crank pin, a supporting wheel carried by the outer crank arm, a bearing carried by the inner crank arm, a stud pin in said bearing, a clamp pivoted to said stud pin, a bearing carried by each of said crank arms, a pin accommodated by each bearing, a fork connected to each of said pins, a plunger rod carried by said fork, a plate carried hy the plunger rod, a cross pin carried by the side car, lower shock absorber plates connected to said cross pin, upper shock absorber plates bolted to said lower plates, a spring between each upper plate and the plate of the plunger rod and a recoil spring between each last mentioned plate and the lower shock absorber plate.

5. In the support of motor cycle side cars, a telescoping-rod, a universal joint connecting the inner end of said rod to the side car, a universal joint at the outer end of said telescoping rod, means connected to said last mentioned universal joint for attachment to the cycle frame, and means for disconnecting said attaching means from the telescoping rod.

[Claims 6 to 16 not printed in the Gazette.]

1,224,048. METHOD FOR PRODUCING ELECTRICAL OSCILLATIONS OF HIGH FREQUENCY FROM DIRECT CURRENT. EGBERT VON LEPEL, Berlin-Wilmersdorf, Germany. Filed Apr. 7, 1914. Serial No. 830,268. (Cl. 250—38.)

1. In a system of the class described comprising a source of current with tuning means connected to an oscillation circuit containing a spark gap, reservoir condenser and blocking condenser, the condensers having capacities of an equal order, the herein described method of producing electrical oscillations of high frequency which consists in charging the reservoir condenser, closing the circuit through the spark gap and blocking condenser to produce a train of sparks, and so tuning the feeding current with respect to the rhythm of the train of sparks that, at the moment of ignition, the condensers will produce a resulting spark potential which is substantially equal to double the value of the feeding potential.



2. In a system comprising a source of direct current with tuning means connected to an oscillation circuit containing a spark gap, a reservoir condenser and blocking condenser, the condensers having capacities of an equal order, the herein described method of producing electrical oscillations of high frequency which consists in charging the reservoir condenser, closing the oscillation circuit periodically through the spark gap and blocking condenser to produce a train of sparks, and so tuning the feeding current with respect to the rhythm of the train of sparks that, at the moment of ignition, the condensers will produce a resulting spark potential equal to double the value of the feeding potential.

3. In a system comprising a source of direct current with tuning means connected to an oscillation circuit containing one or more spark gaps having a constant gap length, one or more spark gaps having a periodically variable gap length, a reservoir condenser charged by said source of current, and a blocking condenser, said condensers having capacities of an equal order, the herein described method of producing electrical oscillations of high frequency which consists in charging the reservoir condenser, closing the oscillation circuit periodically through the spark gaps and blocking condenser to produce a train of sparks, and so tuning the feeding current with respect to the rhythm of the train of sparks that, at the moment of ignition, the condensers will produce a resulting spark potential equal to double the value of the feeding potential.

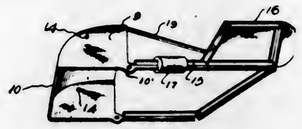
4. In a system for producing high frequency electrical oscillations, the combination of a source of direct current, an oscillation circuit including a reservoir condenser charged by said source of current, a spark gap, a blocking condenser, and means for closing the oscillation circuit to produce a train of sparks, said condensers having capacities of the same order, and means for tuning the direct current supply with respect to the rhythm of the train of sparks to produce a resulting spark potential which is equal to double the value of the feeding potential.

5. In a system for producing high frequency electrical oscillations, the combination of a source of current, a reservoir condenser charged by said source of current, a blocking condenser, said condensers having capacities of an equal order, means for closing a circuit through said condensers to discharge the reservoir condenser and produce a train of oscillations, and means for tuning the feeding current with respect to the rhythm of the train of oscillations.

[Claims 6 to 8 not printed in the Gazette.]

1,224,049. WINDMILL. THOMAS H. WILLIAMSON, Carne, N. Mex. Filed Oct. 12, 1915. Serial No. 55,478. (Cl. 170—15.)

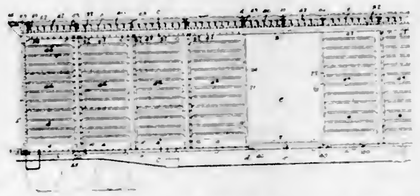
1. In a windmill, the combination with a platform and a shaft vertically journaled therein, a wind-wheel rotative with said shaft above the platform, bearings mounted on the shaft above and below said wind-wheel, and rotative relative to the shaft, a shield mounted on said bearings and consisting of upper and lower segmental plates and an arcuate web therebetween, a frame extending from the shield in diametrical alinement with the radial edges at one end of the shield, a vane mounted upon the outer extremity of said frame, and a counterweight slidable on one of the horizontal arms of said frame between the shield and the vane to adjust the balance of the shield.



2. In a windmill, the combination with a platform and a shaft vertically journaled therein, a wind-wheel rotative with said shaft above the platform, bearings mounted on the shaft above and below said wind-wheel, and rotative relative to the shaft, a shield mounted on said bearings and consisting of upper and lower segmental plates and an arcuate web therebetween, supporting rollers interposed between the shield and the platform, a frame extending from the shield in diametrical alinement with the radial edges at one end of the shield, a vane mounted upon the outer extremity of said frame, and a counterweight slidable on one of the horizontal arms of said frame between the shield and the vane to adjust the balance of the shield.

3. In a windmill, the combination with a platform and a shaft projecting vertically through the latter, a wind-wheel carried by the shaft to rotate therewith, a shield carried by the shaft and rotative thereon, said shield consisting of upper and lower segmental plates having bearings on the shaft at their centers, and a web joining their peripheral edges, a frame extending in diametrical alinement with the edges at one end of the shield, a vane carried by the extremity of the frame and a counterweight on one of the arms of the frame and horizontally slidable between the shield and the vane.

1,224,050. RAILWAY-CAR. JOHN S. WORTH and CHARLES BRECHT, Coatesville, Pa., assignors to said John S. Worth and William P. Worth, Coatesville, Pa. Filed Dec. 7, 1914. Serial No. 875,917. (Cl. 105—192.)



1. The combination of a freight car having sides and ends and a roof, the sides being made of a series of plates corrugated lengthwise, one plate being arranged above another and secured thereto; a series of posts spaced apart and made of bent sheet metal, the posts having flanges at each side and the plates at the posts being free of corrugations so that the flat flanges of the posts can be secured to the flat portions of the plates; and cap plates located on the outside of the car in line with the posts and secured thereto and to the side plates.

2. The combination in a freight car, of a series of side plates placed one above another, the edges of one plate being secured to the edges of another plate, the upper plates overlapping the lower plates; a cornice plate extending throughout the length of the car and overlapping the top plate; a series of inside posts; an outside cap plate in line with the posts; and a roof structure secured to the cornice plate.

3. The combination in a car, of metallic side plates having short longitudinal corrugations spaced apart forming flat sections; a side post made of flanged and shaped plates and secured to the flat portions of the side plates; an outside cap plate slightly bent to form a longitudinal vent space, the cap plate being secured to the flat portions of the side plates in line with the posts; a cornice plate extending longitudinally of the car at the roof and overlapping the upper side plate, said upper side plate and post stopping short of the cornice plate and forming a vent opening communicating with the vent passage in the cap plate, said cap plate being open to the atmosphere at the bottom.

4. A freight car having an end consisting of plates corrugated horizontally, the corrugations being spaced apart by flat sections; and inner and outer vertical posts secured to the plates at the flat portions.

5. The combination in a freight car, of an end made of a series of plates, one located above another, and secured together, each plate having a series of short horizontal corrugations spaced apart by flat sections; and vertical posts extending the full height of the car, the post on the inside being of the same depth throughout and flanged, the post on the outside having a tapered rib extending a greater distance at the bottom than at a point near the top, the two posts being secured at their flanges to the flat portions of the plates.

[Claims 6 to 20 not printed in the Gazette.]

1,224,051. CAR END. JOHN S. WORTH and CHARLES BRECHT, Coatesville, Pa., assignors to said John S. Worth and William P. Worth, Coatesville, Pa. Filed Dec. 26, 1914. Serial No. 879,104. (Cl. 105—192.)



1. The combination in a car end, of two corrugated plates, the upper plate having a downwardly projecting flange and the lower plate having an upwardly projecting flange, the flange of the lower plate being out of line with the flange of the upper plate and extending some distance beyond the surface of said plate; and a Z-beam, the upper flange of the Z-beam being connected to the flange of the upper plate and the lower flange of the Z-beam being connected to the flange of the lower plate, both plates having side flanges arranged to be secured to the sides of the car and the Z-beam being tapered and having its ends bent to extend over the sides of the car.

2. The combination in the end plate of a railway car, of upper and lower corrugated plates, the lower plate having two sets of corrugations spaced apart, the upper plate having a single set of corrugations; a Z-beam forming a strengthening member and also forming the means of attaching one plate to the other; and a reinforcing Z-beam secured to the lower plate and between the two sets of corrugations.

3. The combination in the end plate of a railway car, of a corrugated plate; a reinforcing beam secured to the outer side of the plate, said plate being pressed out at the point where the beam is secured; and rivets securing the beam to the plate, the inner heads of the rivets being

within the depression of the plate so as to be back of the inner line of the plate.

4. The combination in the metal end of a railway car, of two plates, one mounted above the other, the lower plate having two series of short vertical corrugations spaced apart, the upper plate having a series of long corrugations arranged radially; a Z-beam connecting the two plates and extending to the sides of the car, the upper plate overlapping the upper flange of the Z-beam, the lower flange of the Z-beam overlapping the vertical flanged portion of the lower plate; a single row of rivets securing the plate to the beam and a single row of rivets securing the lower plate to the beam; and a Z-beam secured to the lower plate on the line between the two sets of corrugations and secured to the plate by a single row of rivets, the plate being pressed out so that the rivets will be within the inner line of the plate.

1,224,052. CAR CONSTRUCTION. JOHN S. WORTH, Coatesville, Pa., assignor to himself and William P. Worth, Coatesville, Pa. Filed Dec. 30, 1915. Serial No. 69,421. (Cl. 105—192.)



1. The combination in a freight car, of the box type, of a base frame and a roof frame; plates extending from the base frame to the roof frame and secured to said frames, the vertical edges of the plates being offset; and a series of pressed sheet metal posts at the junction of the said plates, said posts having flanges, webs and head, the flanges of the posts overlapping the offset portions of the plates and secured thereto.

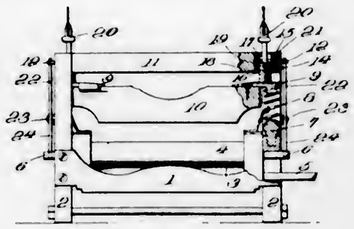
2. The combination in a freight car, of the box type, of a base frame and a roof frame; plates extending from the base frame to the roof frame and secured to said frame, the vertical edges of the plates being offset; a series of pressed sheet metal posts at the junction of the said plates, said posts having flanges, webs and head, the flanges of the posts overlapping the offset portions of the plates; tie plates extending across the joints between the plates at the posts; and means for securing the flanges of the plates, the offset portions of the plates, and the tie plates together.

3. The combination in a freight car of the box type, of a base frame and a roof frame; plates extending from the base frame to the roof frame and secured to said frame, the vertical edges of the plates being offset, a series of pressed sheet metal posts at the junction of the said plates, said posts having flanges, webs and head, the flanges of the posts overlapping the offset portions of the plates; T-shaped tie plates extending across the joints at the back of the plates and having a portion extending forward between the side plates and between the webs of the posts, the tie plates being secured by rivets to the side plates and the posts.

1,224,053. AUTOMATIC PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS. REA P. WRIGHT, Washington, D. C., assignor to John Francis Hemenway, New York, N. Y. Filed Oct. 26, 1916. Serial No. 127,902. (Cl. 68—32.)

1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar fixed in said frame having slidably mounted non-rotatable boxes at the ends thereof, said top bar having cut-away portions, pivoted latches mounted in the cut-away portions for holding said boxes in predetermined position within said top bar, levers mounted on the side bars of said frame having portions arranged in the path of travel of one of said pressure roll shafts on the separation of said rolls, said latches having portions arranged in the path of travel of said levers for moving said latches out of engagement with said boxes for releasing said pressure means.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar fixed in said frame having vertically disposed bores at each end and cut-away portions communicating with said bores, bearing sleeves fixed in said bores having slots registering with the cut-away portions of said top bar, non-rotatable boxes slidably mounted in said bearing sleeves having notches, pivoted latches mounted in the cut-away portions of the top bar adapted to extend into the notches in said boxes for holding said boxes in predetermined position within said frame, and levers pivotally mounted on the side bars engaging said latches for moving said latches out of the notches of said boxes for releasing said boxes on the separation of said pressure rolls.



3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar fixed in said frame, non-rotatable slidably mounted pressure carrying boxes carried by said top bar, pressure screws mounted in said boxes for adjusting said pressure means, said top bar having cut-away portions at its ends, pivotal latches mounted in said cut-away portions, said boxes having notches adapted to receive said latches for holding said boxes in predetermined position within said frame, pivoted levers mounted on the side bars of said frame adapted to move said latches out of said notches for releasing said boxes, said levers having portions arranged in the path of travel of one of the pressure roll shafts on the separation of said rolls.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, slidably mounted non-rotatable boxes arranged in said frame, pivoted latches mounted in said frame for holding said boxes in predetermined position therein, and means actuated by the abnormal separation of said pressure rolls for moving said latches in position to release said boxes.

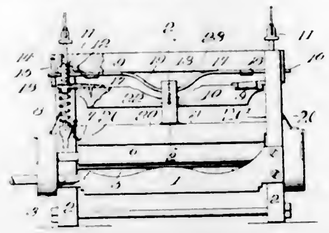
5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, slidably mounted non-rotatable boxes carried by said frame, pivoted latches mounted in said frame for holding said boxes in predetermined position, and levers engaging said latches on the abnormal separation of said pressure rolls for allowing said boxes to move within said frame to release said pressure means.

[Claim 6 not printed in the Gazette.]

1,224,054. COMBINED STRIPPER AND PRESSURE-RELEASE. REA P. WRIGHT, Washington, D. C., assignor to John Francis Hemenway, New York, N. Y. Filed Dec. 2, 1916. Serial No. 134,639. (Cl. 68—32.)

1. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted pressure screw carrying member mounted in said frame, means for holding said movably mounted pressure screw carrying member in predetermined position, a stripper member mounted in said frame contacting with said retaining means on the separation of said rolls for releasing said means.

2. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a movably mounted pressure screw carrying member mounted in said frame, a pressure screw carried by said member for adjusting said pressure means, a resilient member for holding said pressure screw carrying member in predetermined position within said frame, a stripper mounted in said frame adjacent one of said pressure rolls, and means carried by said stripper member coacting with said resilient member for expanding said resilient member on the separation of said pressure rolls for releasing said pressure screw carrying member.



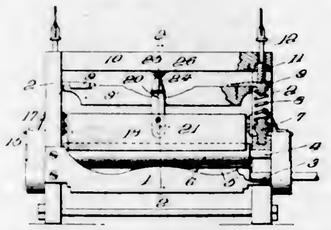
3. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame, a resilient member carried by said top bar for normally holding said top bar in predetermined position within said frame, and a stripper member mounted in said frame above one of said pressure rolls for expanding said resilient member on the separation of said rolls for releasing said top bar.

4. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, keepers carried by the side bars of the said frame, a top bar movably mounted within said frame, a resilient member carried by said top bar coöperating with said keepers for normally holding said top bar in predetermined position within said frame, a stripper board mounted in said frame adjacent the upper pressure roll and means carried by said stripper board for expanding said resilient member on the separation of said rolls for releasing said top bar.

5. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, keepers carried by the side bars of said frame, a resilient member carried by said top bar coöperating with said keepers for normally holding said top bar in predetermined position within said frame, a stripper member movably mounted within said frame adjacent the upper pressure roll, and a member adjustably mounted in said stripper member contacting with said resilient member on the separation of the said rolls for expanding said resilient member to release said top bar.

[Claims 6 to 16 not printed in the Gazette.]

1,224,055. COMBINED STRIPPER AND PRESSURE-RELEASE. REA P. WRIGHT, Washington, D. C., assignor to John Francis Hemenway, New York, N. Y. Filed Dec. 2, 1916. Serial No. 134,640. (Cl. 68—32.)



1. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame, a stripper member pivotally mounted in said frame above the upper pressure roll, and a retaining member carried by said stripper member for holding said top bar in predetermined position within said frame, said retaining member being moved out of engagement with said top bar on the separation of said rolls for releasing said pressure means.

2. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having means for adjusting said pressure means, a stripper member pivotally mounted in said frame above the upper pressure roll, an eye carried by said top bar, and a retaining member adjustably mounted upon said stripper member having a hook engaging said eye.

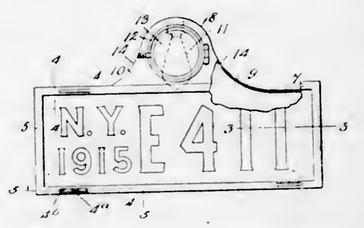
3. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having pressure screws for adjusting said pressure means, a pivotally mounted stripper member adjustably mounted in said frame above the upper pressure roll, and a retaining member adjustably mounted on said stripper member coacting with said top bar for normally holding said top bar in predetermined position within said frame.

4. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having pressure screws for adjusting said pressure means, bearings adjustably mounted on said frame, a stripper member having trunnions pivotally mounted in said bearings, said stripper member arranged adjacent the upper pressure roll, an eye carried by said top bar, and a retaining member carried by said stripper member, having a hook extending into said eye for normally holding said top bar in predetermined position within said frame.

5. A clothes wringer comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a top bar movably mounted in said frame having pressure screws for adjusting said pressure means, an eye carried by said top bar, a pivotally mounted stripper member mounted in said frame above the upper pressure roll, and a retaining member adjustably carried by said stripper member having a hook portion extending into said eye for holding said top bar in predetermined position within said frame.

[Claims 6 to 8 not printed in the Gazette.]

1,224,056. LICENSE-NUMBER PLATE. VICTOR ALTMAN, Buffalo, and MICHAEL ALTMAN, Rochester, N. Y. Filed Nov. 2, 1915. Serial No. 59,321. (Cl. 40—133.)



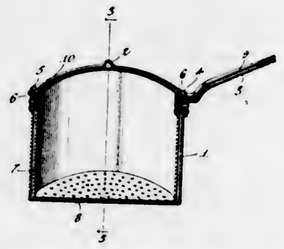
A device of the character described comprising a casing open at one side and provided with a compartment, the compartment having spaced longitudinal channels, a vertical channel, cushioning means within said casing, a transparent plate movable in said channels, a plate of the same size as that of the transparent plate and provided with a cut-out indicia, the said plates being extended beyond one end of the casing, and adjustable clamping means removably fitting on the casing and provided with rough surfaces adapted to embrace the adjacent surfaces of said plates at a point where they extend beyond the end of the casing, the said adjustable means serving to operatively confine the edges of said plates in said casing, and spring portions struck up from the walls of the longitudinal channels substantially as and for the purposes specified.

1,224,057. METHOD OF RECOVERING ZINC AND IRON FROM SOLUTIONS THEREOF. CHARLES E. BAKER, Chicago, Ill. Filed Jan. 26, 1917. Serial No. 144,625. (Cl. 204—18.)

1. A method of recovering zinc and iron from solutions containing the same, consisting in simultaneously depositing the said metals, and then effecting a separation thereof by vaporizing the zinc, and recovering the zinc.

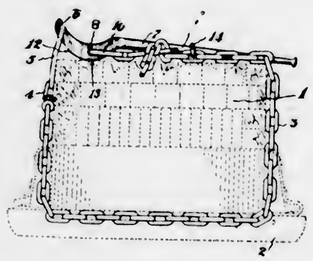
2. A method of recovering zinc and iron from solutions containing the same, consisting in simultaneously precipitating the said metals in the form of a non-compact deposit, then effecting a separation of the metals by vaporizing the zinc, and recovering the zinc.

1,224,058. COMBINED KETTLE AND STRAINER. GEORGE H. BAUMANN, Milwaukee, Wis. Filed Apr. 18, 1916. Serial No. 91,931. (Cl. 53—8.)



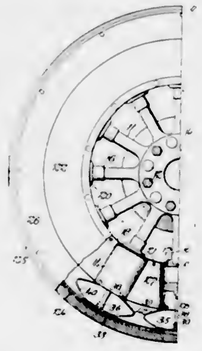
The herein described combined kettle and strainer comprising an outer vessel, a lug on the outer side of the outer vessel, projecting upwardly therefrom and provided in one side with an open slot, a handle for the outer vessel having a downturned portion at its inner end bearing against the outer side of the lower portion of said lug, common fastening devices for said lug and the downturned end of said handle and securing said lug and handle to said outer vessel, in combination with an inner vessel detachably fitted in the outer vessel and also having a handle to enter slot of said lug to lock the vessels together when their handles are in line with each other.

1,224,059. LOAD-BINDER. GEORGE H. BEHREND, Athens, Wis. Filed July 25, 1916. Serial No. 111,308. (Cl. 214—5.)



A load binder including a lever which comprises a straight handle portion and a cam portion at one terminal curved laterally beyond the axis of the handle and back again intersecting said axis and defining an outside curve relatively abrupt at the point of lateral curvature, and flattened along the recurvate portion, a notch provided at the extremity of the cam portion, said lever being adapted to extend transversely of the load with its cam portion resting thereon and with the notched terminal thereof adjacent the edge of the load, a chain adapted to encircle the load with one end connected to the lever at the point of lateral curvature thereof and extending in contiguous and spaced relation to the lever handle and around the load, and a link at the other chain terminal adapted for engagement in the notch for operation substantially as described.

1,224,060. RESILIENT VEHICLE-WHEEL. ADOLPH A. BENDER, Pinebluff, Wyo., assignor to Bender Resilient Wheel Mfg. Company, Pinebluff, Wyo., a Corporation of Wyoming. Filed Jan. 10, 1917. Serial No. 141,618. (Cl. 152—37.)



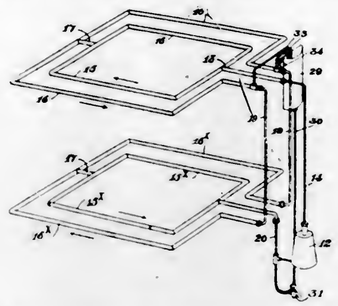
1. In a wheel of the class described, an inner rim, an outer rim, a plurality of cylinders spaced radially about the inner rim, a piston working in each of said cylinders, an internal peripheral guide member secured to the inner face of the outer rim, plates having interengagement with said peripheral guide member and pivotally secured to said piston, and C springs having their ends secured within the cylinders, and adapted to engage the plates at a point intermediate the ends of the said spring.

2. In a wheel of the class described, an inner rim, an outer rim spaced from the inner rim, cylinders spaced radially about the inner rim, a guide member fixed on the inner surface of the outer rim and extending peripherally thereof, plates slidably mounted on said guide and provided with inwardly projecting central portions, rods pivotally connected to said plates and pistons, and C springs having central openings fitting the inwardly projecting portions of the plates and having their ends pivotally connected to said cylinders.

3. In a wheel of the class described, an inner rim, an outer rim spaced from the inner rim, cylinders spaced radially about the inner rim, guides fixed on the inner surface of the outer rim and extending peripherally thereof, plates slidably mounted on said guides, and provided with inwardly projecting central portions, rods pivotally connected to said plates and pistons, and C springs having central openings fitting the inwardly projecting portions of the plates and having their ends pivotally connected within the outer ends of said cylinders, the portions of the springs adjacent their ends bearing against opposite edge portions of said cylinders.

4. In a wheel of the class described, an inner rim, an outer rim, a plurality of cylinders carried by the inner rim, pistons operating in said cylinders, a peripheral guide secured to the inner face of the outer rim, plates engaging said peripheral guide and having their outer face in contact with the inner face of the outer rim, links connecting said plates with said piston, and C springs having their ends secured within the piston and provided with an opening intermediate their ends to receive the guide engaging portions of said plates.

1,224,061. HEATING APPARATUS. LEONARD BOND, Glossop, England. Original application filed May 23, 1914, Serial No. 840,491. Divided and this application filed Jan. 11, 1916. Serial No. 71,547. (Cl. 237—15.)



1. A thermo-siphon heating apparatus comprising in combination a plurality of concentrically arranged hot water circuit pipes following the internal shape of each chamber or compartment to which the apparatus is applied, and placed one within the boundary of the other; a short connecting pipe at one end of the apparatus for establishing communication between the circuit pipes; a boiler; a supply pipe from the boiler communicating with the inner circuit pipe at the other end of the apparatus; return pipes communicating with the outer of the said circuit pipes; a reserve tank, a pipe connecting the said tank with the boiler; and exhaust pipes connecting the top of the reserve tank with the highest point of the circuit pipes.

2. In a thermo-siphon heating apparatus, the combination with the chambers or compartments; of a plurality of concentrically arranged hot water circuit pipes arranged one within the boundary of the other and placed in horizontal tiers one above the other in the respective chambers; short connecting pipes for short-circuiting the pipes in each tier; a boiler; a supply pipe from the boiler communicating with the inner circuit pipe of the upper tier; return pipes joining the outer circuit pipe of the top tier to the outer circuit pipe of the lower tier; a return pipe for connecting the inner circuit pipe of the lower tier to the boiler; a reserve tank; a pipe connecting the said tank with the boiler; and exhaust pipes connecting the top of the reserve tank with the highest point of the circuit pipes.

3. In a thermo-siphon heating apparatus, the combination with the chambers or compartments; of a plurality of concentrically arranged hot water circuit pipes 15, 16, and 15× and 16×, arranged one within the boundary of the other, and placed in horizontal tiers one above the other in the respective chambers, short circuiting pipes 17 joining the inner circuit pipe to the outer circuit pipe in each tier; a supply pipe 14 from the boiler communicating with the inner circuit pipe of the upper tier; return pipes 19 joining the outer circuit pipe of the upper tier to the outer circuit pipe of the lower tier; a pipe 20 joining the inner circuit pipe of the lower tier to the boiler, said pipes 17, 19 and 20 being smaller than the others so as to act as throttles; a reserve tank 29; a pipe 14 connecting the said tank with the boiler; and exhaust pipes 33 connecting the top of the reserve tank with the highest point of the circuit pipes.

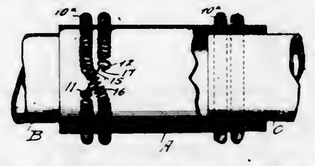
4. In a thermo-siphon heating apparatus for warming chambers and compartments, the combination with the respective chambers of a plurality of concentrically arranged hot water circuit pipes arranged one within the boundary of the other and placed in horizontal tiers one above the other in the said chambers, the pipes of the upper tier being of rather larger size than the corresponding pipes of the lower tier so that the former will have a proportionally larger heat radiating surface than the latter; a flow pipe from the boiler communicating with the inner circuit pipe of the upper tier; return pipes communicating with the outer of the said circuit pipes in each tier; a return pipe connecting the inner circuit pipe of the lower tier to the boiler; and connecting pipes for short circuiting the pipes in each tier.

1,224,062. HOSE-CLAMP. THEODORE A. BOOR, Ashville, Ohio. Filed Dec. 15, 1914, Serial No. 877,336. Renewed Mar. 16, 1917. Serial No. 155,360. (Cl. 137—28.)



A hose clamp comprising a helical band presenting a crossing portion of a convolution between the terminal ends of the band, and a fastening means detachably uniting the ends of the band, said means ranging obliquely across said portion of the convolution and having a bend presenting arms at an angle to each other.

1,224,063. HOSE-CLAMP. THEODORE A. BOOR, Ashville, Ohio. Original application filed Dec. 15, 1914, Serial No. 877,336. Divided and this application filed Sept. 26, 1916. Serial No. 122,291. (Cl. 137—28.)



1. A hose clamp presenting a helical spring forming a convolute elastic compression band presenting terminal ends at opposite sides of an intermediate convolution and fastening means detachably connected to said ends and having a member ranging obliquely across the said convolution.

2. A hose clamp presenting a helical spring forming a convolute elastic compression band presenting terminal ends at opposite sides of an intermediate convolution, and fastening means detachably uniting said ends, said means consisting of an eye at one end engaging a coil of one convolution, a straight portion and ranging obliquely across the intermediate convolution and a hook at the other end engaging the end of another convolution.

3. A hose clamp comprising a helical band presenting a crossing portion of a convolution between the terminal ends of the band, and fastening means detachably connected to said terminals and ranging obliquely across said crossing portion of the convolution.

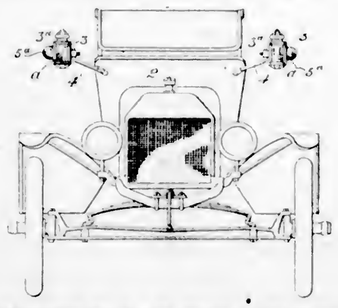
4. A hose clamp comprising a helical band presenting a crossing portion of a convolution between the terminal ends of the band and fastening means detachably uniting said terminals, said means consisting of a bar having an eye at one end engaging a coil of one terminal and a hook at the opposite end engaging the opposite terminal, said bar ranging obliquely across the crossing portion of the convolution.

1,224,064. LAMP FOR MOTOR-VEHICLES. ROBERT E. BOORAEM, Denver, Colo. Filed May 11, 1916. Serial No. 96,797. (Cl. 240—22.)

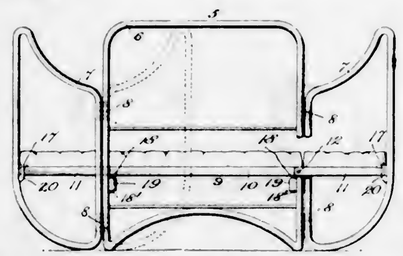
1. As an improved article of manufacture, a light of the character described comprising a casing with an illuminating lamp therein and a signaling flash-light fixedly disposed outside of said casing and arranged to flash a light to both the front and rear.

2. An illuminating lamp and a casing therefor, a signaling flash-light supported from the casing of the illuminat-

ing lamp and extended beyond the same to flash a light in all directions including front and rear, and a transluscent globe supported on the casing of the illuminating lamp and inclosing the flash-light.



1,224,065. BED. NICHOLAS R. BRADY, Dutchess Junction, N. Y. Filed July 7, 1914. Serial No. 849,597. (Cl. 5—9.)



In combination a board for a bed frame comprising an intermediate member with side members hingedly connected with the intermediate member at the edges thereof and foldable against the intermediate member, sockets mounted upon the intermediate member, brackets mounted at the free edges of the side members and spring sections pivotally connected together, the outer spring sections being cut away at their inner edges thereby forming shoulders adapted to abut against the side edges of the intermediate spring section when the said side sections are extended, the said sockets adapted to support the intermediate spring section, the outer spring section being provided with longitudinally disposed rails the ends of which project beyond the ends of the said sections and the said projecting portions adapted to be received in the brackets mounted upon the said side members.

1,224,066. ORE CONCENTRATOR. JAMES H. BRITTAIN, Salt Lake City, Utah. Filed Apr. 6, 1916. Serial No. 89,493. (Cl. 83—85.)

1. An ore concentrator of the class described including a pair of receptacles each having an inlet into its lower end and a waste outlet from its upper end, a conduit for supplying ore in suspension to the inlet of one receptacle, agitators in the lower ends of both receptacles, a second conduit leading from the waste outlet of said one receptacle to the inlet of the other, said second conduit having an open upper end to allow free circulation of air, a launder spaced laterally from the receptacles beyond said second conduit, and an eave board extending from one edge of the receptacles over the open end of said second conduit to the launder.

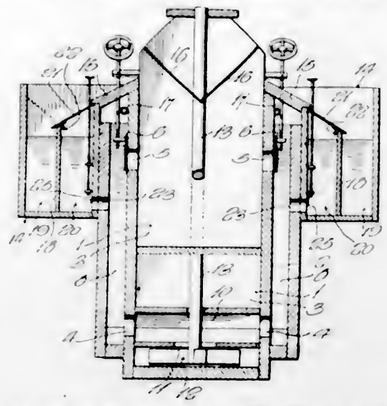
2. An ore concentrator of the class described comprising an agitating receptacle, said receptacle being provided with a side wall over which ore laden froth may overflow, a launder to receive such froth, said launder having a vertical partition dividing it into two chambers, means for closing the upper end of either chamber to direct the froth into the other and return means connecting one chamber of the launder with the agitating receptacle.

3. An ore concentrator of the class described comprising an agitating receptacle, said receptacle being provided with a side wall over which ore laden froth may overflow, a launder to receive such froth, said launder having a vertical partition dividing it into two chambers, a shiftable inclined cover plate for closing the upper end of either chamber to direct the froth into the other and return means connecting one chamber of the launder with the agitating receptacle.

4. An ore concentrator of the class described comprising an agitating receptacle, said receptacle being provided with a side wall over which ore laden froth may overflow, a launder to receive such froth, said launder having a vertical partition lying parallel to the aforesaid side of the receptacles and dividing said launder into two chambers, said partition being of less height than the sides of the launder, an inclined cover plate having near its lower edge a stop shoulder, said plate being adapted to incline upwardly from the upper edge of the partition to either side of the launder, the stop shoulder serving to abut said partition to hold the plate in either position and return means connecting one chamber of the launder with the agitating receptacle.

5. An ore concentrator of the class described comprising a pair of receptacles each having into its lower end an inlet and near its upper end an outlet, a conduit for supplying ore in suspension to the inlet of one receptacle, agitators in both receptacles, a second conduit leading from the outlet of said one receptacle to the inlet of the other, one side of both receptacles being comparatively low, a launder adjacent this side of the receptacles in which ore laden froth overflowing therefrom may collect, said launder having a partition dividing it into an inner and an outer chamber, a valved passage leading from one of said chambers into the first named conduit, and means for directing the froth into either of said chambers.

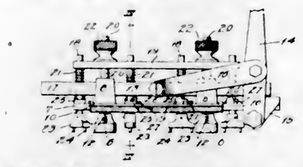
[Claims 6 to 8 not printed in the Gazette.]



1,224,067. VALVE-GRINDING MECHANISM. EARL CASNER, Carthage, Mo. Filed Sept. 28, 1915. Serial No. 52,998. (Cl. 51—4.)

1. In a valve grinding machine, the combination of a supporting frame, a set of rotatable spindles adapted to be connected with the valves to be ground, means for oscillating the spindles, springs acting respectively upon the spindles for holding them in engagement with the valves with yielding force, and means for varying the tension of all the said springs substantially simultaneously and equally at will.

2. In a valve grinding machine, the combination of a movable frame having a stationary plate, a movable plate supported parallel with and spaced from the said stationary plate, a set of spindles carrying tools adapted to engage with the valves being ground, supported in the said plates so as to be rotatable therein and also longitudinally movable therein, springs acting upon the said spindles and bearing against the said movable plate adapted to hold the valve-engaging tools to their work with yielding force, and means for adjusting the said movable plate to vary the tension of the said springs.



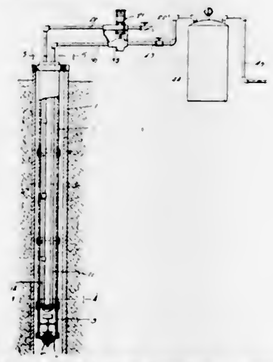
3. In a valve grinding machine, the combination of a rotatable and longitudinally movable spindle adapted to be connected with a valve for grinding it while seated, means for oscillating the spindle, means for holding the spindle against the valve to be ground with yielding force, and means disposed concentric with the axis of rotation of the spindle for positively moving the spindle longitudinally as it is being oscillated.

4. In a valve grinding machine, the combination of a rotatable and longitudinally movable spindle adapted to be connected with a valve for grinding it while seated, means for oscillating the spindle, means for holding the spindle against the valve to be ground with yielding force, and means disposed concentric with the axis of rotation of the spindle and arranged to cause the spindle, while being oscillated, to be turned without longitudinal movement thereof, during a portion of its period of oscillation, and to positively cause it to be moved longitudinally during another portion of its oscillation.

5. In a valve grinding machine, the combination of a rotatable spindle carrying a valve-engaging tool, means acting on the spindle for holding the tool in engagement with the valve with yielding force, means for oscillating the spindle, and a cam device and a projection engaging therewith, one of these being carried directly by the spindle for periodically moving the spindle longitudinally as it is being oscillated.

[Claims 6 to 8 not printed in the Gazette.]

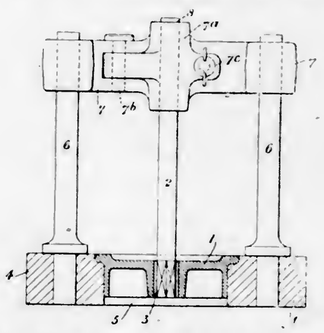
1,224,068. PNEUMATIC WATER-LIFT. JOHN G. CHASON, Colquitt, Ga. Filed June 23, 1916. Serial No. 105,430. (Cl. 103—84.)



1. In a device of the class described, a cylinder, a piston operable in said cylinder, a cross head connected with the piston, a weight supported by the cross head, an automatic valve beneath the weight, and a stem positioned above said valve and beneath the weight whereby when the pressure in the cylinder becomes reduced the weight will descend against the stem and open the valve.

2. In a device of the class described, a water outlet pipe, an air inlet pipe, a cylinder connected to the outlet pipe, a piston operable in said cylinder, a piston rod extending upwardly from said piston, a cross head carried by the piston rod, arms extending downwardly from said rod, a weight supported by the lower ends of the arms, a normally closed valve in the inlet pipe, and a stem positioned above said valve and beneath the weight for engagement with said valve when the weight descends, the said piston lowering under the influence of the weight when the pressure in the cylinder becomes reduced.

1,224,069. DEVICE FOR EFFECTING THE CONNECTION OF CIRCULAR ROTATABLE BODIES TO THEIR SHAFTS. JAMES CLAYTON, Coventry, England, assignor to Courtaulds, Limited, London, England. Filed Apr. 18, 1916. Serial No. 91,987. (Cl. 29—89.)



A device for use in connecting circular rotatable bodies to shafts, the said device consisting of a base-piece or plate, with an opening to receive the body and a cross-head supported from the said base-piece, or plate, and having in it one portion of an opening for receiving the shaft, a strap-piece connected with the cross-head having in it the other portion of the opening for receiving the shaft and means for securing the said strap-piece to the cross-head, the axes of the opening for the shaft and the opening for the body being in line with each other; substantially as hereinbefore explained.

1,224,070. THREAD-GUIDE FOR ARTIFICIAL-SILK MACHINES. JAMES CLAYTON, Coventry, England, assignor to Courtaulds, Limited, London, England. Filed Apr. 18, 1916. Serial No. 91,988. (Cl. 18—8.)



1. A thread guide for use in machines for the manufacture of artificial silk, said guide comprising a tubular

member and a supporting ferrule mounted thereon at a predetermined distance from its lower end.

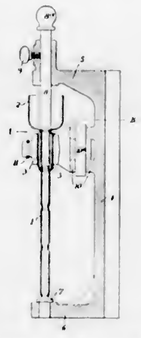
2. In a machine for the manufacture of artificial silk, a plurality of thread guides comprising tubular members, and a supporting ferrule mounted on each at a predetermined, uniform distance from the lower ends of said guides.

3. A thread guide for use in machines for the manufacture of artificial silk, said guide comprising a tubular member and a supporting ferrule mounted thereon at a predetermined distance from its lower end and having its axis precisely alined with that of the tubular guide.

4. A thread guide for use in machines for the manufacture of artificial silk, said guide comprising a tubular member and a supporting ferrule mounted thereon at a predetermined distance from its lower end and having an outstanding supporting flange.

5. A thread guide for use in machines for the manufacture of artificial silk, said guide comprising a tubular member and a supporting ferrule mounted thereon at a predetermined distance from its lower end and having an outstanding supporting flange at its upper end.

1,224,071. DEVICE TO BE EMPLOYED IN MAKING FUNNELS, OR THREAD-GUIDES, FOR USE IN MACHINES FOR THE MANUFACTURE OF ARTIFICIAL SILK. JAMES CLAYTON, Coventry, England, assignor to Courtaulds, Limited, London, England. Original application filed Apr. 18, 1916, Serial No. 91,988. Divided and this application filed Aug. 17, 1916. Serial No. 115,528. (Cl. 29—89.)



1. A device for affixing a ferrule to a tubular thread guide, comprising means engaging the upper and lower ends of the tubular guide to hold the latter in predetermined axial position and clamping means for holding a ferrule surrounding the guide but spaced therefrom to receive an interposed cement.

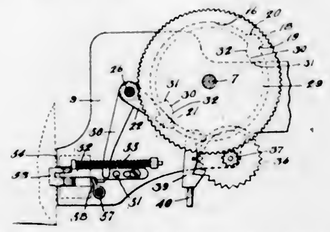
2. A device for affixing a ferrule to a tubular thread guide, comprising members relatively displaceable to permit the insertion therebetween of the upper and lower ends of the tubular guide and to hold the latter in predetermined axial position in combination with means for holding a ferrule surrounding the guide but spaced therefrom to receive an interposed cement.

3. A device for affixing a ferrule to a tubular thread guide, comprising means engaging the upper and lower ends of the tubular guide to hold the latter in predetermined axial position, a fixed support for holding a ferrule in coaxial position on said guide but spaced therefrom to receive an interposed cement, together with a coöperating movable member serving to clamp said ferrule between the same and the fixed support.

4. A device for affixing a ferrule to a tubular thread guide, comprising means engaging the upper and lower ends of the tubular guide to hold the latter in predetermined axial position, a fixed support having a ferrule-receiving groove coaxial with the tubular guide.

5. A device for affixing a ferrule to a tubular thread guide, comprising centering devices for engaging the opposite ends of the guide and holding the same in predetermined axial position, in combination with a fixed ferrule support having a ferrule-receiving groove coaxial with said centering devices.

1,224,072. SIGNAL-BOX HAVING LOCAL ALARM. FREDERICK W. COLE, Newton Highlands, Mass., assignor to Gamewell Fire Alarm Telegraph Company, New York, N. Y., a Corporation of New York. Filed Apr. 21, 1915. Serial No. 22,939. (Cl. 177—373.)



1. A signal-box having a bolt-mechanism, a local-alarm mechanism, means for placing said local-alarm mechanism under tension with a tendency to operate, locking-means for the local-alarm mechanism which is adapted to serve as the actuating-means for the bolt-mechanism, to bring about the operation of both concurrently, when actuated, and means for actuating said locking-means by the means that places the local-alarm mechanism under tension.

2. A signal-box having a bolt-mechanism, a local-alarm mechanism, manually operable means for placing an element of said local-alarm mechanism under tension with a tendency to operate the same, locking-means for the local-alarm mechanism which is adapted to serve as the actuating-means for the bolt-mechanism, whereby as the local-alarm mechanism is released the bolt-mechanism is operated simultaneously, and means for moving said locking-means having provision to be actuated by said manually operable means.

3. A signal-box door having a bolt-mechanism, a local-alarm-mechanism having an operating-handle, and operating-means for the bolt-mechanism which is the locking-means for the local-alarm mechanism, and means connected for actuation by said handle to simultaneously release the local-alarm mechanism and to operate the bolt-mechanism to unlock the door.

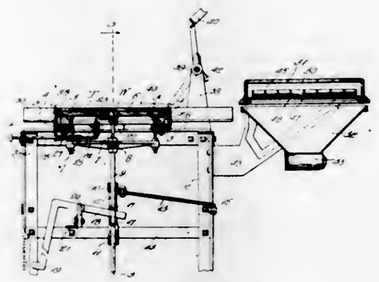
4. A signal-box having a bolt-mechanism, a spring-mechanism, local-alarm mechanism, a winding-device for the spring, and a common controlling-member normally arranged for locking the local-alarm mechanism, and adapted to be moved to release the local-alarm mechanism upon operation of the winding-device and also adapted to be moved by the winding-device to operate the bolt-mechanism at the end of a winding movement.

5. A signal-box having a bolt-mechanism, a spring-mechanism, local-alarm mechanism, a winding-device for the spring, and a common controlling-member normally arranged for locking the local-alarm mechanism, and adapted to be moved to release the local-alarm mechanism upon operation of the winding-device and also adapted to be moved by the winding-device to operate the bolt-mechanism at the end of a winding movement, said controlling-means being also adapted for operation by a co-operative part of the local-alarm mechanism when the winding-device has ben moved a predetermined distance.

[Claims 6 to 22 not printed in the Gazette.]

1,224,073. TILE-FORMING MACHINE. ROBERT T. COTTAM, Norfolk, Va. Filed Dec. 28, 1916. Serial No. 139,366. (Cl. 25—43.)

1. In a tile forming machine, the combination of a horizontal molding frame, inwardly extending ledges at the lower edge of opposite sides of said frame, a partition bar to rest on said ledges and extend between said sides, arms depending from the ends of said partition bar, and clamping screws carried by said arms for engagement with the lower faces of said ledges to clamp said partition bar in operative position.



2. In a tile forming machine, the combination of a horizontal molding frame, means for supporting a pallet therein in any one of a number of vertically spaced planes, a prong for piercing a depending web of the tile, said prong having a vertical stem, a socket in which said stem is mounted for vertical adjustment, and operating means for the prong connected with said socket

3. In a tile forming machine, the combination of a horizontal molding frame, horizontal tracks extending along two of the opposite sides of said frame, a shaper bar extending over said frame and having depending lugs on its end portions, the lower faces of said portions having dovetail grooves, flat horizontal wear plates having dovetail ribs on their upper faces received slidably in said grooves, wear flanges depending from said plates and abutting the outer faces of the aforesaid lugs, and means for securing said plates in place, said plates and flanges being adapted to travel on the aforesaid tracks.

4. In a tile forming machine, the combination of a molding frame, a pair of rigidly fixed horizontal tracks spaced to one side of said frame, a second pair of horizontal tracks supported slidably on the first named tracks to be withdrawn toward the molding frame, and a tile sanding screen mounted slidably on said second pair of tracks to be disposed over the completed tile for sanding the same when said screen is rapidly reciprocated along the second pair of tracks.

5. In a tile forming machine, the combination of a molding frame, a projectable and retractible sanding screen for sanding the tiles formed in said frame when said screen is reciprocated, and a plurality of crossed slats standing on edge on said screen to prevent the sand from gravitating to restricted areas thereof.

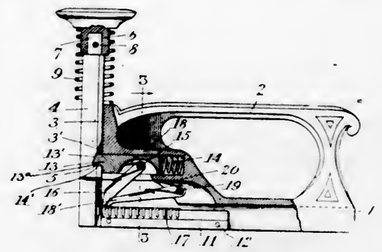
[Claims 6 and 7 not printed in the Gazette.]

1,224,074. TROLLING-SPOON. WILLIAM COUPER, Blacktail, Idaho, assignor of one-half to John C. Glahe, Burke, Idaho. Filed Mar. 15, 1916. Serial No. 84,446. (Cl. 43—30.)



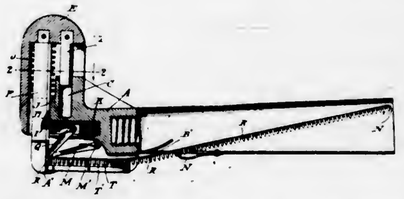
A trolling spoon consisting of a single piece of metal having a body portion, one longitudinal edge thereof having an angular flange and the opposite edge being concaved, reversely dish shaped ends projecting a distance beyond the main body portion, tackle attaching means at their extreme outer edges, all as and for the purpose described.

1,224,075. STAPLING-MACHINE. JOHN B. CROFOOT, Chicago, Ill. Filed Oct. 28, 1915. Serial No. 58,469. (Cl. 1—48.)



In a stapling machine, a body, a reciprocating staple setting plunger, a spring for moving the plunger upwardly, a bar operating at right angles to the reciprocating plunger, means carried by the bar for feeding the staples forward, and means carried by the plunger and coöperating with the bar for restricting the vertical movement of the plunger against the tension of the spring.

1,224,076. MAGAZINE-HAMMER. JOHN B. CROFOOT, Chicago, Ill. Filed June 13, 1916. Serial No. 103,537. (Cl. 1—48.)



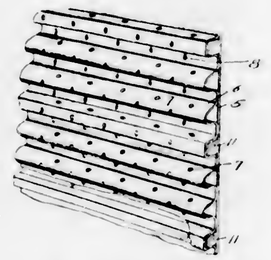
1. In a magazine stapling hammer, a body having a shouldered portion, a chambered momentum head slidably mounted on said body, a reciprocating staple setting plunger connected to said head and provided with a notch in one edge thereof, a bar operating at right angles to said plunger and having a shouldered end co-operating with the notch in the plunger to restrict the movement of the plunger in one direction, a spring upon the plunger bearing against the end of the chambered portion of the momentum head and the shouldered portion of said body, and means for guiding the momentum head and plunger.

2. In a magazine head and plunger body having a shouldered portion and a guideway, a chambered momentum head slidably mounted on said body, a reciprocating staple setting plunger connected to said head and provided with a notch in one edge thereof, a bar operating at right angles to said plunger and having a shouldered end coöperating with the notch in the plunger to restrict the movement of the plunger in one direction, a spring upon the plunger bearing against the end of the chambered portion of the momentum head and the shouldered portion of said body, and a guide member fixed in the wall of the chamber of said momentum head and movable in the said guideway in the body of the device.

1,224,077. PLASTER-BOARD WITH KEY-OPENINGS. GEORGE P. CRUMBAUGH, St. Louis, Mo., assignor of one-half to Edwin W. Grove, St. Louis, Mo. Filed Mar. 31, 1914. Serial No. 828,590. (Cl. 72—124.)

1. A plaster board embodying a non-corrosive light structure comprising a flat backing sheet and a corrugated

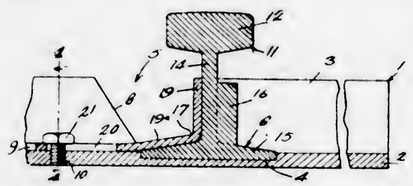
sheet fixed to one side thereof and provided with a plurality of hollow corrugations closed at their rear portions by said backing sheet, the corrugations projecting solely from one side of the backing sheet so that the latter may be applied against a support without interference of projections thereon, the corrugated sheet having openings formed through the side portions and apexes of the corrugations thereof, the openings in the apexes being in alternate relation to the openings in the side portions of the corrugations to avoid weakening the corrugations and to provide a greater plurality of key forming means, openings also being formed in the bottoms of the valleys between the corrugations.



2. A plaster board comprising a flat backing sheet having a corrugated sheet secured against one side thereof and formed with hollow corrugations projecting solely from one side of the backing sheet, the corrugations having key openings formed in the opposite side portions thereof and in the apexes of the same, the openings in the apexes of the corrugations being in alternate relation to the openings in the side portions of the corrugations to avoid weakening the latter and to form a greater number of key openings in each corrugation, and solid ribs loosely and removably inserted in portions of the corrugations to reinforce the latter.

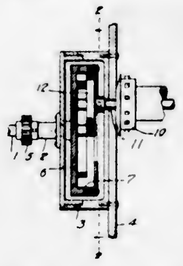
3. A plaster board mainly embodying a noncorrosive light structure comprising a flat backing sheet of paper and a facing corrugated sheet also of paper secured to one side of the backing sheet, both sheets being flexible, the corrugated sheet having hollow corrugations projecting solely from one side of the backing sheet and closed at their rear portions by the latter sheet, the corrugations having openings in the sides thereof and also in the valleys between the corrugations to form keys extending in different directions relatively to a plaster covering adapted to be applied over the corrugated sheet, and solid ribs loosely and removably inserted in portions of the corrugations to reinforce the latter and the plaster board at the points where the said ribs are applied.

1,224,078. RAIL-FASTENER. J CORWIN CRUM, Scott City, Kans. Filed Jan. 29, 1917. Serial No. 145,235. (Cl. 238—5.)



In a device of the class described, a trough-shaped tie including a base and sides, the sides having notches including extensions prolonged longitudinally of the tie into the sides; a rail located in the notches and resting on the base, the rail including a web and a flange, one portion of the flange being received in the extensions, and the web having a projection engaged between the sides of the tie; and a removable retainer carried by the base and overhanging the opposite portion of the flange of the rail.

1,224,079. INTERMITTENT-MOVEMENT MECHANISM. JAMES F. DAVIDSON, Marlow, Okla. Original application filed Oct. 14, 1914, Serial No. 866,651. Divided and this application filed Feb. 10, 1917. Serial No. 147,795. (Cl. 74—41.)



1. An intermittent and fractional rotation mechanism for film advancing mechanism for motion picture cameras, comprising a cam wheel with a single inwardly projecting tooth and having a discontinuous upstanding flange carried thereby with the opening symmetrical with respect to said tooth, and an eccentrically mounted wheel with a plurality of pins arranged in the path of motion of said tooth and adapted to engage the outer periphery of said upstanding flange.

2. A device of the class described, comprising a cam wheel including a peripheral rim with an inwardly projecting tooth, a discontinuous flange spaced therefrom with the opening therein symmetrical with respect to said tooth, and an eccentrically mounted wheel with a plurality of laterally projecting pins adapted to ride in the slot defined by the peripheral rim and outstanding flange of the cam wheel, said single tooth adapted to contact with and frictionally revolve a pin for the fractional rotation of the second mentioned wheel and the positioning of the adjacent pin within said slot.

3. An intermittent movement comprising a driving shaft, a cam wheel secured at the end of said driving shaft and having a laterally extending circular flange, an inwardly projecting tooth carried by said flange, the sides of the tooth being curved on the arc of a circle, a discontinuous arc shaped flange carried by said cam wheel, the ends of said arc shaped flange being disposed symmetrically with respect to the tooth, and the space between said discontinuous flange and said circular flange constituting a groove, a drive shaft, a wheel carried by said drive shaft at the end thereof and provided with four laterally extending cylindrical pins, each pin having a diameter substantially equal to the groove, said pin bearing wheel being disposed eccentrically with respect to the cam wheel shaft.

4. An intermittent movement comprising a driving shaft, a cam wheel secured at the end of said driving shaft and having a laterally extending circular flange, an inwardly projecting tooth carried by said flange, a discontinuous arc-shaped flange carried by said cam wheel, the ends of said arc-shaped flange being disposed symmetrically with respect to the tooth, and the space between said discontinuous flange and said circular flange constituting a groove, a drive shaft, a wheel carried by said drive shaft at the end thereof and provided with four laterally extending cylindrical pins, each pin having a diameter substantially equal to the groove, said pin bearing wheel being disposed eccentrically with respect to the cam wheel shaft, the sides of the tooth being curved.

5. An intermittent movement comprising a driving shaft, a cam wheel secured at the end of said driving shaft and having a laterally extending circular flange, an inwardly projecting tooth carried by said flange, the sides of the tooth being curved on the arc of a circle, a discontinuous arc-shaped flange carried by said cam wheel, the ends of said arc-shaped flange being disposed symmetrically with respect to the tooth, and the space between said discontinuous flange and said circular flange constituting a groove, a drive shaft, a wheel carried by said drive shaft at the end thereof and provided with four laterally extending cylindrical pins, each pin having a diameter substantially equal to the groove, said pin bearing wheel being disposed eccentrically with respect to the cam wheel shaft, the curved sides of said inwardly extending tooth being equal to one-fourth of the circumference of said pin bearing wheel.

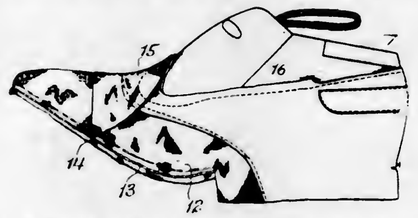
[Claim 6 not printed in the Gazette.]

1,224,080. GAME APPARATUS. MILLIE M. DEIBEL, Youngstown, Ohio. Filed Sept. 20, 1916. Serial No. 121,255. (Cl. 46—59.)



A game apparatus comprising a board, a frame mounted thereon and having an intermediate bar portion with upstanding loops formed at the ends thereof, links having eyes which receive the said bar portion and which are movable upon the loops and a figure connected with the links, the parts being so arranged that the figure normally hangs pendent from the bar at a point between the loops but when the links move upon the loops the figure is held in elevated position.

1,224,081. TURN-SHOE AND METHOD OF MAKING THE SAME. MILTON L. DODGE, Newburyport, Mass. Filed July 24, 1916. Serial No. 110,855. (Cl. 12—142.)



1. A method of making turn shoes, comprising stitching the upper and lining to the sole, but leaving the toe end of the lining unattached, turning the shoe, inserting a molded toe box in the shoe when the said free end of the lining is withdrawn rearwardly, and then tucking the lining into the interior of the inserted box.

2. A method of making turn shoes, comprising stitching the upper and lining to the sole, but leaving the toe end of the lining unattached, turning the shoe, and inserting a molded toe box between the toe end of the upper and the loose end of the lining.

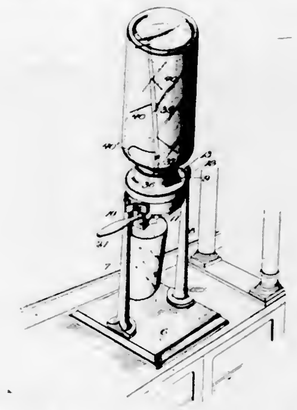
3. A method of making turn shoes, comprising stitching the upper and lining to the sole, but leaving the toe end of the lining unattached, turning the shoe, inserting a molded toe box between the toe end of the upper and the loose end of the lining, and then securing the loose end of the lining.

4. A method of making turn shoes, comprising stitching the upper and lining to the sole, but leaving the toe end of the lining loose, turning the shoe, drawing the loose end of the lining heelward, rendering the surfaces of a molded toe box adhesive, inserting said box into the toe cavity of the shoe, returning the loose end of the lining to its normal position to adhere to the inner surface of the box, and inserting a filler in the shoe to overlap the edges of the lining and the bottom portion of the box.

5. A method of making turn shoes which comprises securing the upper to the sole, without a toe box, turning the shoe, and then securing a molded toe box in the shoe.

[Claims 6 to 10 not printed in the Gazette.]

1,224,082. DISPENSING DEVICE. RICHARD DRAKE, Racine, Wis., assignor to J. Fred Sugden, Racine, Wis. Filed June 16, 1916. Serial No. 104,043. (Cl. 221—66.)



1. A dispensing device comprising a stand, a dispensing head removably mounted thereon, means carried by said head for removably supporting a container, a spout from said head, a dispensing member in said head, said dispensing member comprising a body portion provided with a plurality of radial extensions, and a depending extension, a shaft passing through said dispensing member, a ratchet on said shaft, a plurality of agitating members on said shaft adapted to stir the granular material in the container, means for rotating the shaft and means for permitting an angular movement of said shaft in addition to said rotation.

2. A dispensing device comprising a stand, a dispensing head removably mounted thereon, removable means carried by said head for removably supporting a container, a dispensing member in said head, means carried by the dispensing member adapted to agitate the material within the container, and means for permitting an angular movement of said agitating means.

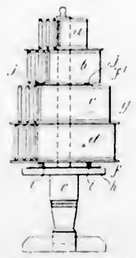
3. A dispensing device comprising a stand, a dispensing head thereon, a dispensing member in said head, said member consisting of a body portion having a plurality of radial extensions and a depending extension, a shaft passing through said body portion and adapted to turn therewith, a ratchet on said shaft, a handle rotatably journaled on said extension, a pawl on said handle in engagement with the ratchet, whereby movement of the handle will rotate said shaft and the dispensing member.

4. A dispensing device comprising a head adapted to support a container, a dispensing means carried by the head, means for operating said dispensing means, and agitating means capable of rotary and angular movement adapted to operate in conjunction with the dispensing means.

5. A dispensing device comprising a head adapted to support a container, dispensing means in said head, a shaft extending from said dispensing means into the container, a plurality of knuckle joints on the shaft, and means for rotating the shaft.

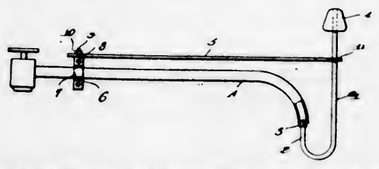
[Claim 6 not printed in the Gazette.]

1,224,083. REVOLVING BOOKCASE. THOMAS CHALMERS DRURY, Dublin, Ireland. Filed Mar. 3, 1916. Serial No. 81,839. (Cl. 45—79.)



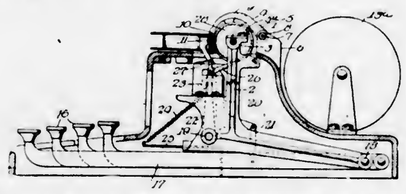
A revolving book case comprising a pedestal, a platform carried by said pedestal, a central rod of uniform diameter extending from said platform, a metal plate on said platform, a set of book shelves carried by said rod, the shelves having an alined opening to fit over the rod, casters on said shelves engaging said plate, a second plate carried by said shelves, a second set of shelves carried by said rod, and provided with an alined opening to fit over the rod, casters on said second set of shelves engaging said second plate, said sets of shelves being rotatable about said rod, and a cap on said rod to normally hold said shelves in position.

1,224,084. DRINKING-FOUNTAIN. THEODORE DUNCAN, San Francisco, Cal. Filed Nov. 7, 1916. Serial No. 130,037. (Cl. 137—109.)



A drinking fountain and supporting means therefor, said supporting means including a faucet engaging clamp having an upwardly extending pivot, a spring arm pivotally mounted at its inner end on said pivot and bearing on said clamp, a nut screwed on said pivot and bearing on the inner end of the spring arm and thereby enabling the latter to be arranged either in line with or at an angle to the faucet, the fountain being attached to the outer end of the spring arm and being held thereby with the intake end of the fountain engaged in the discharge end of the faucet.

1,224,085. WRITING-MACHINE. ALRAH B. EDWARDS, Chicago, Ill., and FRANK K. RUSSELL, Dallas, Tex., assignors to Shortwriter Company, Wilmington, Del., a Corporation of Delaware. Filed Dec. 10, 1915. Serial No. 66,091. (Cl. 197—9.)



1. In a writing machine, the combination of a frame, a platen rotatably mounted thereon, ribbon spools rotatably mounted on said frame in normally fixed relation thereto, and means engaging the ribbon between said spools and actuated by the rotation of said platen to automatically impart lateral movement to the portion of the ribbon between said engaging means.

2. In a writing machine, the combination of a frame, a platen rotatably mounted thereon, ribbon spools rotatably mounted on said frame in normally fixed relation thereto, pivoted arms having means thereon to engage the ribbon between said spools, and means operable when said platen is rotated to automatically actuate said arms to import a lateral movement to the portion of the ribbon between said arms.

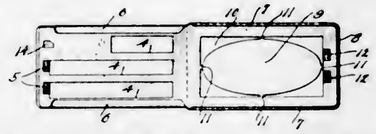
3. In a writing machine, the combination of a frame, a platen rotatably mounted thereon, ribbon spools rotatably mounted on said frame in normally fixed relation thereto, means engaging the ribbon between said spools and actuated by the rotation of said platen to automatically impart a lateral movement to the portion of the ribbon between said engaging means, and key-actuated means to rotate said platen.

4. In a writing machine, the combination of a frame, a platen rotatably mounted thereon, ribbon spools rotatably mounted on said frame in normally fixed relation thereto, pivoted arms having means thereon to engage the ribbon between said spools, means operable when said platen is rotated to automatically actuate said arms to impart a lateral movement to the portion of the ribbon between said arms, type bars mounted adjacent the platen, keys connected to said type bars, and an operative connection between said keys and platen, whereby when one of the former is actuated the latter is caused to rotate.

5. In a writing machine, the combination of a frame, a platen rotatably mounted thereon, ribbon spools rotatably mounted on said frame in normally fixed relation thereto, pivoted arms having means thereon to engage the ribbon between said spools, a cam operable when said platen is rotated to automatically actuate said arms to impart a lateral movement to the portion of said ribbon between said arms, a plurality of type bars pivoted adjacent said platen, a member arranged to swing, a connection between each type bar and said member, and cooperating means on said platen and member whereby the former is rotated when either of said type bars is actuated.

[Claims 6 to 9 not printed in the Gazette.]

1,224,086. SAFETY-CARRIER. CHARLES W. FISCHER and RUDOLF SCHAMBER, Gregory, S. D. Filed Jan. 8, 1916. Serial No. 71,016. (Cl. 229—6.)



1. A container of the class described comprising openable sections, one of said sections having an opening therein, a locking pin inserted through said opening to lock the sections together, the free terminal of said pin lying in said opening below the surface of its section and constituting a fingerpiece, and a frangible seal attached concealing said opening and coöperating with the fingerpiece aforesaid to hold the pin against displacement and inaccessible without fracture of the seal.

2. A container of the class described comprising cooperative sections, locking elements on said sections lying between the sections when the latter are close together, one of said sections having an opening therein, a locking member insertible through the opening into said locking elements for holding the sections together, said locking member having a manipulating projection arranged when the member is in locking position to lie contiguous to the face of one of said sections, and sealing means adapted for attachment to the face of the last mentioned section over the opening and projection whereby to hold the locking member from displacement and completely concealing said opening and projection.

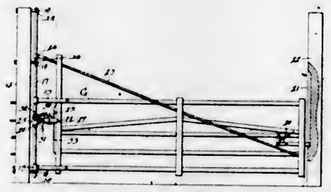
3. A container of the class described comprising openable sections adapted to receive therebetween indicia bearing contents, one of said sections having its material cut out to form sight openings for disclosing the indicia aforesaid, said cut out material being arranged to form locking elements, and means coöperating with said locking elements to hold the sections closed.

4. A container of the class described comprising openable sections adapted to receive therebetween indicia bearing contents, each of said sections having its material cut out to form openings, said cut out material being rolled back to form coating locking eyes, and a locking member insertible into said eyes when in registering position for holding the sections in closed position.

5. A container of the class described comprising openable sections adapted to receive cards and similar articles therein, one of said sections having its material about the central portion thereof partly cut out so as to leave narrow severable connecting tongues for said central portion whereby the latter may be detached, said container constituting a frame for the contents upon detachment of the central portion aforesaid.

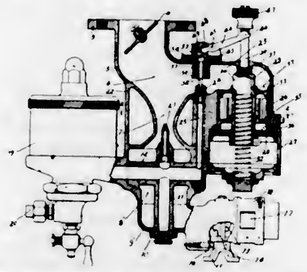
[Claim 6 not printed in the Gazette.]

1,224,087. GATE. ALLEN GLENN FLORY, Winchester, Idaho. Filed Dec. 22, 1916. Serial No. 138,426. (Cl. 39—14.)



A gate post, a hinge rod supported thereby, a gate having hinge members engaging the hinge rod, a jack member including a sleeve fitted for rotation on the hinge rod and having laterally extending arms, shafts supported by said arms, one of said shafts having a crank and a pinion, and the other shaft carrying a spur wheel in mesh with said pinion, and a spring actuated dog engaging the spur wheel; in combination with hoisting means actuated by the crank.

1,224,088. CARBURETER. JOHN S. GOLDBERG, Chicago, Ill., assignor to Stromberg Motor Devices Company, Chicago, Ill., a Corporation of Illinois. Filed May 27, 1912. Serial No. 699,838. (Cl. 261—41.)



1. In a carbureter, a carbureting chamber, primary fuel and air inlet means, a separate fuel nozzle leading to the carbureting chamber, a valve for said fuel nozzle, an air inlet thereto, a valve for said air inlet mechanically connected with the fuel valve, and a vertically reciprocating piston mechanically connected with said air and fuel valves and exposed to the pressure in the carbureting chamber.

2. In a carbureter, a carbureting chamber, primary fuel and air inlet means, an additional fuel nozzle leading to the carbureting chamber, a valve for said fuel nozzle, and air inlet thereto, a valve for said air inlet mechanically connected with the fuel valve, a piston mechanically connected with said air and fuel valves and exposed to the pressure in the carbureting chamber, and a manually operated valve also controlling said air inlet.

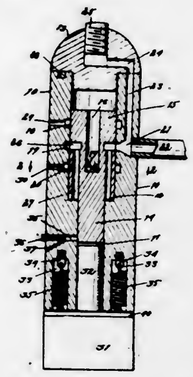
3. In a carbureter, a carbureting chamber, primary fuel and air inlet means, a separate fuel nozzle leading to the carbureting chamber, a valve for said fuel nozzle, an air inlet thereto, a valve for said air inlet mechanically connected with the fuel valve, and a piston mechanically connected with said air and fuel valves and exposed to the pressure in the carbureting chamber.

4. In a carbureter, a carbureting chamber, primary fuel and air inlet means, a fuel nozzle leading to the carbureting chamber, a tapered needle valve for said fuel nozzle, an air inlet thereto, a valve for said air inlet mechanically connected with the fuel valve, and a piston mechanically connected with said air and fuel valves and exposed to the pressure in the carbureting chamber.

5. In a carbureter, a carbureting chamber, primary air and fuel inlet means, a throttle valve controlling the outlet, a secondary fuel nozzle, a float chamber connected with both nozzles, a vertical cylindrical valve chamber with side outlets, a tubular valve within said valve chamber operated manually to vary the effective size of said side outlets, a piston valve in said tubular valve, a piston chamber below said valve chamber, a piston in said piston chamber, a hollow shaft connecting said pistons, said hollow shaft passing through the carbureter chamber and having its bore exposed thereto, the underside of the piston being thus exposed to the pressure in the carbureting chamber and the other side of the piston being exposed to the atmosphere, said hollow shaft extending beyond the casing, a loosely mounted needle valve for the secondary fuel inlet, a carrier for said valve, and a lever engaging said carrier and adapted to be engaged by a part on said shaft.

[Claim 6 not printed in the Gazette.]

1,224,089. PNEUMATIC SCALING-TOOL. ELMER A. HAWLEY, Des Moines, Iowa, assignor of one-half to Charles T. Smith, Des Moines, Iowa. Filed Aug. 24, 1915, Serial No. 47,171. Renewed Mar. 14, 1917. Serial No. 154,895. (Cl. 83—64.)

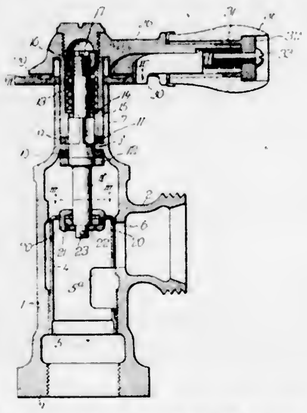


1. In a pneumatic tool, a supporting body having a bore and recesses in one end thereof, springs received in said recesses, a plate secured adjacent to the end of said body having recesses to support said springs, said plate having a slot with a restricted inner end, a reciprocating member in said bore, and a striking tool having a shank provided with a groove, said shank being received in the

lower end of said bore, the portion of said plate around the restricted inner end of said slot being received in said groove, said recess being of such shape as to permit lateral movement of said plate and said springs.

2. In a device of the class described, a pneumatic scaling tool including a supporting member, a reciprocating member mounted therein, means for operating said reciprocating member more rapidly in one direction than in the other, an operating tool slidably mounted in said supporting member and slightly spaced from the reciprocating member when said reciprocating member and said operating tool are close together, yielding means for holding said operating tool at its upper limit of movement toward the reciprocating member, and means for regulating the air cushion between the reciprocating member and the operating tool.

1,224,090. VALVE. JOSEPH P. LAVIGNE, Detroit, Mich. Filed Nov. 19, 1913. Serial No. 801,764. (Cl. 137—4.)



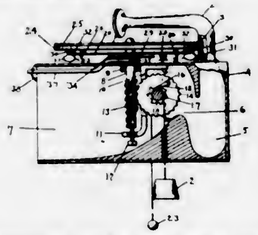
1. A valve comprising a casing having an inlet opening, a sleeve rotatable in the casing provided with a port adapted to be brought into register with the opening, a stem journaled in the casing extending through an opening in the head of the sleeve, a member laterally movable on the stem in one direction, and laterally movable in the head of the sleeve at right angles to the member's movement on the stem and non-rotatably secured to the sleeve, and means for turning the stem.

2. A valve comprising a casing having a lateral inlet opening, a sleeve longitudinally adjustable and rotatable in the casing provided with a port adapted to register with the opening and with a cross slot in its head, a spindle for turning the sleeve journaled in the casing, a plate member non-rotatably secured to the spindle and adapted to move laterally in one direction thereon and in the cross slot of the sleeve, and a plate movable in synchronism with said plate member and coöperating therewith in holding said sleeve relative to said spindle.

3. In a valve having a casing with an inlet opening and a sleeve rotatable and longitudinally adjustable in the casing that controls the opening, a stem journaled in the casing substantially in axial alinement with the sleeve, means operatively connecting the sleeve and stem comprising a plate non-rotatable on the stem, and a plate interlocked with the first plate, the sleeve having a head with cross slot in which the first plate is movable in one direction, and the plates coacting to couple the sleeve to turn with the stem.

1,224,091. CENTRIFUGAL BRAKE FOR REPRODUCING MECHANISMS. HUBERT A. MYERS, Toledo, Ohio. Filed Mar. 11, 1915. Serial No. 13,611. (Cl. 74—45.)

1. A centrifugal speed regulator for sound reproducers embodying a shaft, a rotatable record platform carrier mounted on the shaft, flyweights carried by and radially spaced from the shaft by the carrier, a brake ring sustained by the flyweights, and an opposing brake member with which the ring may coact.



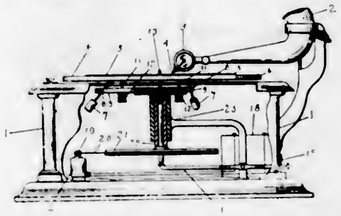
2. A centrifugal speed regulator for sound reproducers embodying a shaft, a rotatable record platform carrier mounted on the shaft, a friction brake for the carrier including a brake ring having radial extensions, flyweights carried by and radially spaced from the shaft by the carrier, for operating the brake ring by coacting with the radial extensions thereof, and an opposing non-rotatable brake ring.

3. A centrifugal speed regulator for sound reproducers embodying a shaft, a rotatable record platform carrier mounted on the shaft, a friction brake for the carrier including a brake ring disposed adjacent the carrier, flyweights mounted on and within the platform radius of the carrier and provided with extensions for moving the brake ring, said flyweights being spaced from the shaft by the carrier, an opposing non-rotatable brake ring, and means for adjusting the non-rotatable brake ring.

4. A centrifugal speed regulator for sound reproducers embodying a shaft, a rotatable platform carrier mounted on the shaft, a friction disk movable with the carrier, an opposing non-rotatable disk, and flyweight means mounted on and within the platform radius of the carrier, said flyweight means being spaced from the shaft by the carrier, said friction disk and flyweight means having coacting radially disposed extensions to move the disks relatively into braking position.

5. A centrifugal speed regulator for sound reproducers embodying a shaft, a rotatable record platform carrier mounted on the shaft, an opposing non-rotatable brake element, means for adjusting the carrier relatively to the brake element, and centrifugal speed regulator means mounted on and within the platform radius of the carrier including flyweights spaced by the carrier from the shaft and having extensions, and an annular member having radial extensions engageable by the flyweight extensions in shifting the annular member into coacting position with the brake element.

1,224,092. RECORD-CONTROLLING MECHANISM. HUBERT A. MYERS, Toledo, Ohio. Filed July 30, 1915. Serial No. 42,699. (Cl. 74—45.)



1. A rotatable record carrier, a vertical coaxial relatively independently rotatable driver therefor embodying a clutch member, a second clutch member rotatable with the carrier, and fly weights directly mounted on the carrier and having coaction with one of the clutch members

to move it out of and into engagement with the other clutch member.

2. A rotatable record carrier, a shaft therefor, fly weights directly mounted upon the carrier within the radial extent thereof independently of the shaft and spaced therefrom, a vertically coaxial friction disk carried by the carrier and provided with extensions engageable by the fly weights whereby the friction disk is shiftable by the fly weights, and an opposing driving friction disk for actuating the fly weight shifted disk.

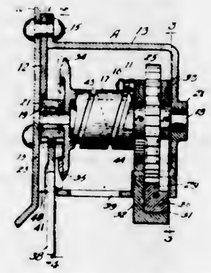
3. A rotatable record carrier, a shaft therefor, fly weights directly mounted on the under side of the carrier independently of the shaft and spaced therefrom, a driver embodying a clutch member, a second clutch member normally yieldably sustained by the carrier, and fly weights for shifting the yieldably sustained clutch member from and toward the driving clutch member.

4. A rotatable record carrier, a shaft therefor, fly weights directly mounted on the under side of the carrier independently of the shaft and spaced therefrom, a driver embodying a friction member, a second friction member normally yieldably sustained by the carrier, and fly weights for shifting the yieldably sustained friction member from and toward the driving clutch member.

5. A rotatable record carrier, fly weights directly mounted on the under side of the carrier, a driver embodying a friction member, a second friction member normally yieldably sustained by the carrier, fly weights for shifting the yieldably sustained friction member from and toward the driving clutch member, and an adjustable support for the carrier including means for varying the action of the friction member.

[Claim 6 not printed in the Gazette.]

1,224,093. HAND-BRAKE. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Jan. 13, 1916. Serial No. 71,820. (Cl. 188—57.)



1. In a brake of the character described, the combination with a chain winding member, of an operating lever for winding a chain upon said member, said lever being normally disengaged from said member, a friction clutch associated with said member and adapted to automatically lock the same, and means for releasing the clutch.

2. In a brake of the character described, the combination with a chain winding member, and means for operating said member, of a friction clutch coöperable with said member to hold it in locked position, and means, separate from the first named means, for releasing said clutch.

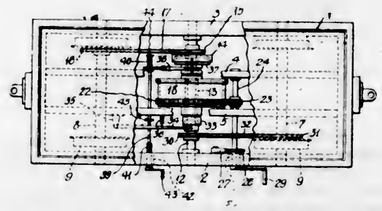
3. In a brake of the character described, the combination with a chain winding member, and means for operating said member, of a friction clutch coöperable with said member to hold it in locked position, and a release lever for disengaging the clutch elements.

4. In a brake of the character described, the combination with a chain winding member, and means for operating said member to tighten the chain, of a friction element movable in unison with said member, a stationary friction element coöperable therewith, said elements being actuated to frictional locking engagement by tension on the chain when the same is tightened, and means, separate from the first named means for disengaging said friction elements to release the chain.

5. In a brake of the character described, the combination with a chain winding member, an automatically operating friction means associated therewith for locking the same when the chain is tightened, and separate and individually operated levers, one for rotating said member to tighten the chain and the other for releasing the friction means.

[Claims 6 to 19 not printed in the Gazette.]

1,224,094. COAL-CAR. ANDY PAPP and JAMES CHRISTOF, Detroit, Mich. Filed Jan. 29, 1917. Serial No. 145,207. (Cl. 105—101.)



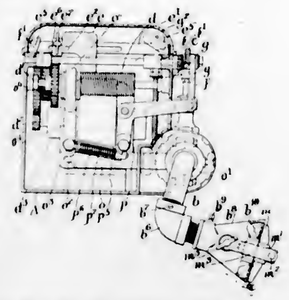
1. The combination with a car body and revoluble axles and wheels, of sets of hangers carried by said car body, a motor shaft journaled in one set of hangers, a sleeve loose on said shaft, a drum loose on said sleeve, a spiral spring in said drum having one end thereof attached to said sleeve and the other end thereof attached to said drum, a clutch member on said shaft, a shiftable clutch member on said sleeve and held to rotate therewith, sprocket chains adapted to impart movement from said motor shaft and sleeve to said axles, a ratchet head carried by said sleeve, a lever adapted to move said shiftable clutch, a pawl normally engaging said ratchet head to prevent operation of said sleeve by said spring, means carried by another set of hangers adapted to successively move said lever and pawl so that said shiftable sleeve clutch is moved to engage the shaft clutch to establish a driving connection therebetween, and said sleeve released for operation by said spring, and means carried by another set of hangers adapted for rotating said drum to place the spring therein under tension.

2. The combination with a car body having revoluble axles and wheels, of a motor shaft supported beneath said car body, a sleeve loose on said shaft, a spring actuated motor for imparting movement to said sleeve, driving connections between said shaft and said axles, a clutch on said shaft, a shiftable clutch slidably keyed on said sleeve and adapted to engage said shaft clutch, a lever adapted to shift said sleeve clutch to establish a driving connection between said sleeve and shaft, a ratchet head carried by said sleeve, a pawl normally engaging said ratchet head to prevent operation of said sleeve by said spring actuated motor, means carried by said car body adapted to successively move said lever and said pawl to establish a driving connection between said sleeve and said shaft and release said sleeve for operation by said spring actuated motor, and means including a rack and pinion adapted for placing said spring actuated motor in an operable condition for imparting movement to said sleeve.

1,224,095. APPARATUS FOR WASHING SUGAR. EUGENE ROBERTS and ANGUS H. GIBSON, Lehi, Utah, assignors to Sugar Centrifugal Discharger Company, Salt Lake City, Utah, a Corporation of Utah. Filed May 20, 1913. Serial No. 768,767. (Cl. 137—66.)

1. An apparatus for washing sugar in centrifugal baskets, embracing in its construction a spray nozzle arranged to direct a liquid spray against the sugar collected on the inside wall of the basket, a spray pipe for conducting the washing liquid to said nozzle, a cut-off valve, a hand lever for opening said valve, an actuating shaft op-

erating independently of the flow of the liquid, a valve closing device arranged to be operatively connected with said shaft by the valve opening movement of said lever, substantially as described.



2. An apparatus for washing sugar in centrifugal baskets, embracing in combination an oscillatory spraying nozzle, a liquid supply pipe leading thereto, a cut-off valve, a constantly rotating shaft, a valve controlling mechanism operatively connected with said shaft by the operation of opening the valve and oscillating mechanism for oscillating the spray nozzle, said oscillating mechanism being operatively connected with, and driven by said shaft, substantially as described.

3. In an apparatus for washing sugar in centrifugal baskets, the combination of an oscillatory spray nozzle arranged to direct a fan-shaped spray of liquid against the vertically walled sugar in the basket, a liquid supply pipe in communication therewith, a cut-off valve for said pipe, a controlling lever for operating said valve, a continuously rotating actuating shaft, a timing device for said valve, and an oscillating mechanism for oscillating said spray nozzle, said timing device and said oscillating mechanism being driven by said shaft when said valve is opened and being disconnected therewith when said valve is closed, substantially as described.

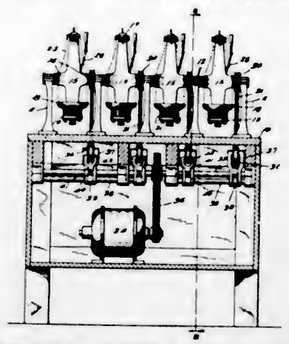
4. In an apparatus for washing sugar in centrifugal baskets, the combination of an oscillatory spray nozzle mounted to oscillate in a fixed substantially vertical plane, a supply pipe therefor, a cut-off valve for said supply pipe, a timing mechanism for controlling the closing of said valve, oscillating mechanism for oscillating said spray nozzle, a constantly running actuating member for operating said timing mechanism and said cut-off valve when said valve is open, both mechanisms being operatively engaged with said common actuating member by the valve opening means, substantially as described.

5. In an apparatus for washing sugar in centrifugal baskets, the combination of a liquid supply pipe, an oscillatory nozzle pivotally mounted upon said pipe in position to direct a substantially vertical fan-shaped spray against the sugar wall on the inside of the basket, means for automatically oscillating said spray nozzle in a substantially vertical plane, said spray nozzle being angularly adjustable to either side of said vertical plane in order to vary the vertical extent of said spray where it impinges against said wall of sugar, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,224,096. DEFIBRINATER. GEORGE H. ROBERTS, Indianapolis, Ind., assignor to Pitman-Moore Company, Indianapolis, Ind., a Corporation of Indiana. Filed July 29, 1916. Serial No. 112,149. (Cl. 259—81.)

1. A defibrinater, comprising a jar-supporting element mounted for rotation, said jar-supporting element having two opposed parts for receiving and clamping a jar between them, one of such parts being spring-mounted, a clamping member for moving said opposed parts relatively to produce a clamping and unclamping of said jar, the axis of rotation of said jar-supporting element passing through a jar when it is clamped between such opposed parts, and means for rotating said jar-supporting element.



2. A defibrinater, comprising a jar-supporting element mounted for rotation, said jar-supporting element having two opposed parts for receiving and clamping a jar between them, one of such parts being spring-mounted, the axis of rotation of said jar-supporting element passing through a jar when it is clamped between such opposed parts, and means for rotating said jar-supporting element.

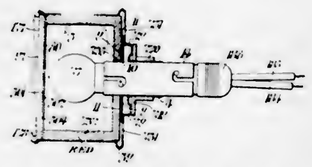
3. A defibrinater, comprising a jar-supporting element mounted for rotation, said jar-supporting element having two opposed parts for receiving and clamping a jar between them, one of such parts being spring-mounted, a clamping member for moving said opposed parts relatively to produce a clamping and unclamping of said jar, and means for rotating said jar-supporting element.

4. A defibrinater, comprising a jar-supporting element mounted for rotation, said jar-supporting element having two opposed parts for receiving and clamping a jar between them, one of such parts being spring-mounted, and means for rotating said jar-supporting element, the axis of such rotation being transverse to the axis of the jar.

5. A defibrinater, comprising a jar-supporting element mounted for rotation about an axis transverse to the jar axis, said jar-supporting element having two opposed parts for receiving and clamping a jar between them, one of such parts being spring-mounted, a driving motor, and means for drivingly connecting and disconnecting said motor and said jar-supporting element.

[Claims 6 to 10 not printed in the Gazette.]

1,224,097. LAMP-SUPPORT. EDWIN M. ROSENBLUTH, Philadelphia, Pa. Filed Nov. 4, 1913. Serial No. 799,106. (Cl. 240—11.)



1. The combination with a lamp casing including a shell of sheet metal having a circumferential opening, and an axial opening surrounded by a tubular shank; of a translucent element fitted in said shell in coaxial relation therewith and covering said circumferential opening; a translucent element, at one end of said shell, retaining said other translucent element; means arranged to engage the edge of said second translucent element and the end of said shell; an electric incandescent lamp holder fitted in the axial opening in said shell; and means detachably securing said lamp holder in said shell, in coöperative relation with both of said translucent elements.

2. The combination with a lamp casing including a cylindrical shell of sheet metal having a circumferential opening, a rear axial opening, and a rear eccentric opening; of a single translucent circular body fitted in said shell in coaxial relation therewith, covering said circumferential and eccentric openings; an electric incandescent lamp holder fitted in the axial opening in said shell; and means detachably securing said lamp holder in said shell in coöperative coaxial relation with said body.

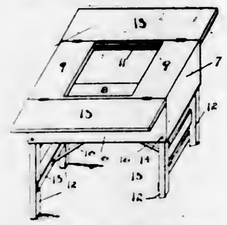
3. The combination with a lamp casing including a shell of sheet metal having a circumferential opening, a rear axial opening, and a rear eccentric opening; of a single translucent circular body fitted in said shell in coaxial relation therewith, covering said circumferential and eccentric openings; an electric incandescent lamp holder fitted in the axial opening in said shell; and means detachably securing said lamp holder in said shell in coöperative coaxial relation with said body.

4. The combination with a lamp casing including a shell of sheet metal having an axial opening and a rear eccentric opening; of a translucent body fitted in said shell in coaxial relation therewith, having a red portion covering said eccentric opening; an electric incandescent lamp holder fitted in the axial opening in said shell; an incandescent lamp in said holder; and means detachably securing said lamp holder in said shell in coöperative coaxial relation with said body; whereby said lamp is adapted to project light from said casing to appear red at said eccentric opening but clear elsewhere.

5. The combination with a lamp casing including a shell of sheet metal having an axial opening and a rear eccentric opening; of a translucent body fitted in said shell in coaxial relation therewith, having a portion covering said eccentric opening; an electric incandescent lamp holder fitted in the axial opening in said shell; and means detachably securing said lamp holder in said shell in such coöperative coaxial relation with said body as to cause light to be projected radially through said body from said lamp holder.

[Claims 6 to 17 not printed in the Gazette.]

1,224,098. CAMPING OUTFIT. GEORGE SHETOKIN, Portland, Oreg. Filed Sept. 14, 1916. Serial No. 120,077. (Cl. 190—12.)

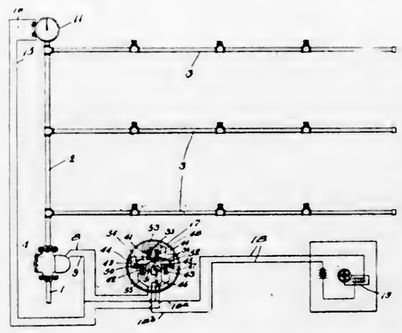


1. In a camp outfit, a box like structure; a cover for said box; members hinged upon said box adapted to fold over upon said cover or to unfold substantially flush with said cover to form a table top therewith; legs pivotally attached to said box and adapted to fold into a recess in the bottom of said box; in combination with benches comprising a seat member; an angle member hinged to each end of said seat member adapted to fold up and nest with said box, one leg of each of said angle members projecting over the end of said box when nested therewith.

2. In a camp outfit, a holding table and supply receptacle in combination with benches comprising, seats; legs pivotally attached to the ends of said seats; and edge members attached to the ends of said seats and adapted to encompass said folding table when said legs are folded against said seats and the benches and table are nested together.

3. In a camp outfit, a folding table and supply receptacle in combination with seats; angle members hinged to the ends of said seats, one leg of each of said angle members forming extensions to said seats, and the other legs of said angle members forming supports for said seats, said seats and angle members nesting compactly with said table when folded.

1,224,099. SIGNALING SYSTEM FOR SPRINKLER SYSTEMS. NATHAN H. SUREN, Needham, Mass., assignor to Gamewell Fire Alarm Telegraph Company, New York, N. Y., a Corporation of New York. Filed Apr. 24, 1915. Serial No. 23,777. (Cl. 177—382.)



1. The combination with a water distribution system having a supply-pipe and a service-pipe, a check-valve interposed there-between, and a pressure-gage connected to said service-pipe, of signal-mechanism having governing circuits connected to be controlled, one by said check-valve and another by said pressure-gage, to cause selective code-signals to be transmitted.

2. The combination with a sprinkler-system having a supply-pipe and a service-pipe, a check-valve interposed between said pipes, and a pressure-gage associated with the service-pipe, of a signal-mechanism having governing circuits controlled by said check-valve and said pressure-gage, respectively, electro-magnetic devices energized by said circuits, and means controlled thereby for transmitting selective code-signals according to the condition of said sprinkler-system.

3. The combination with a sprinkler-system having a supply-pipe and a service-pipe with a check-valve interposed therebetween, and a pressure-gage associated with the service-pipe, of signal-mechanism having governing circuits arranged to be controlled by said check-valve and said pressure-gage, respectively, said signal-mechanism having electro-magnets responsive to each of said circuits, and means controlled by said electro-magnets for transmitting selective code-signals.

4. The combination with a sprinkler-system having a supply-pipe and a service-pipe, with a check-valve interposed therebetween, and a pressure-gage associated with the service-pipe, of signal-mechanism having governing-circuits arranged to be controlled by said check-valve and said pressure-gage, respectively, said signal-mechanism having electro-magnets responsive to each of said circuits, and having connections to exert a governing action on the other of said circuits, and means controlled by said electro-magnets for transmitting selective code-signals.

5. The combination with a sprinkler-system having a supply-pipe and a service-pipe, with a check-valve interposed therebetween, and a pressure-gage associated with the service-pipe, of signal-mechanism having governing-circuits arranged to be controlled by said check-valve and said pressure-gage, respectively, said signal-mechanism having a signal-train equipped with a plurality of signal-wheels, and means responsive to said circuits for causing any one of said signal-wheels to become operative.

[Claims 6 to 17 not printed in the Gazette.]

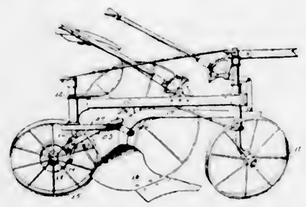
1,224,100. WAIST. MYRA JULIET TAYLOR, Sydney, New South Wales, Australia. Filed May 7, 1915. Serial No. 26,578. (Cl. 2—73.)



1. In an improved stayette for body wear, a body part consisting of a back part formed of two pieces of fabric united in the center with a stiffening seam adapted to overlie the spinal column, a V shaped cut out marginal seamed opening extending downwardly and outwardly from said stiffening seam; elastic in the said opening, united to the margins thereof, two front parts of the said garment each united to one half of the said back portions by an under arm seam extending from the arm hole downwardly to the bottom edge of the garment, a marginal seamed V shaped opening formed in the bottom part of each of the said front parts, elastic in each of the said V shaped parts, darts extending upwardly from each of the said V parts, a spiral seam arranged to unite the said darts with the said underarm seams, as described and shown and for the purposes set forth.

2. In an improved stayette for body wear comprising a two-part back united together by a centrally stiffened seam terminating short of the lower ends of the parts, an elastic gusset connecting the lower ends of said parts, a two-part front each provided with a dart and having overlapping front edges, said two-part front being connected with the two-part back by under arm seams, an elastic gusset secured in the overlapping edges of the front part, a pair of cross bands connected to one end of the two-part back and adapted to extend through loops disposed on the sides and front portions of the stayette and means for uniting the free ends of the cross bands together.

1,224,101. BRAKE FOR PLOWS. FORREST L. WAGNER, Buchanan, Iowa. Filed July 31, 1916. Serial No. 112,434. (Cl. 97—36.)

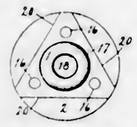


1. In a device of the class described, the combination of a frame, a caster wheel for supporting a portion of said frame a plow mounted on said frame and capable of being raised and lowered with relation thereto, a brake device for said caster wheel operated by said plow in all positions of the caster wheel for setting said brake device when said plow is raised.

2. In a device of the class described, the combination of a frame, a plow mounted thereon capable of being raised and lowered, an upright shaft rotatably mounted on said frame, having at its lower end a rearward extension, a spindle on said extension, a caster wheel mounted on said spindle, a brake device operatively connected with said caster wheel, a supporting member mounted on said upright shaft a lever pivotally mounted on said supporting member having one end operatively connected with said brake device, and a curved member suitably mounted on the movable plow and adapted when said plow is raised to operate said lever for setting said brake in any of the positions with the caster wheel.

3. In a device of the class described, the combination of a frame, a plow supported thereon and capable of being raised and lowered with relation thereto, an upright shaft having at its lower end a lateral extension, a spindle on said extension, a caster wheel rotatably mounted on said spindle, a brake device mounted on said caster wheel, a clamp mounted on said upright shaft, a lever pivotally supported on said clamp having one end operatively connected with said brake device, a curved member mounted on said movable plow and so located as to engage the other end of said lever when the movable plow is raised regardless of the position of said caster wheel for setting said brake.

1,224,102. ACOUSTIC DIAPHRAGM. WILLIAM W. YOUNG, Agawam, Mass., assignor to L. A. Young, Agawam, Mass. Filed June 1, 1916. Serial No. 101,182. (Cl. 181—32.)



1. An acoustic diaphragm comprising a vibratory member consisting of a central portion with extensions therefrom to form points of suspension, and a perforated reproducing member attached to said first-mentioned member, said vibratory member covering the perforation in said reproducing member.

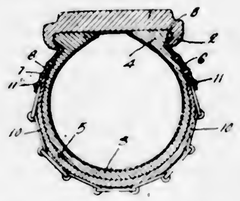
2. An acoustic diaphragm comprising a vibratory member consisting of a central portion with extensions therefrom to form points of suspension, and a perforated reproducing member attached to said vibratory member, said first-mentioned member covering the perforation and in part being upset into said reproducing member.

3. An acoustic diaphragm comprising a vibratory member consisting of a central portion having extensions to form a plurality of points of suspension, and a reproducing member attached to said vibratory member, the latter being of less area than and countersunk in said reproducing member.

4. An acoustic diaphragm comprising a vibratory member consisting of a central portion with extensions therefrom to form points of suspension, and a perforated reproducing member attached to said vibratory member, said vibratory member covering the perforation and being countersunk in said reproducing member.

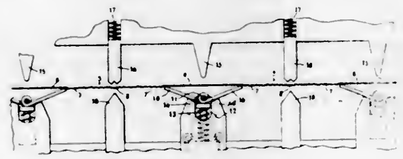
5. An acoustic diaphragm comprising a vibratory member consisting of a central portion with extensions therefrom to form points of suspension, and a perforated reproducing member attached to said vibratory member, said vibratory member covering the perforation and being countersunk and in part upset in said reproducing member.

1,224,103. BLOW-OUT PROTECTOR FOR TIRES. THEODORE W. CARTER, Silver City, N. Mex., assignor of one-half to Moses R. Buchanan, Silver City, N. Mex. Filed Oct. 30, 1916. Serial No. 128,527. (Cl. 152—24.)



In a device of the class described, a pair of side plates and a flexible tire-inclosing body connecting the side plates, each side plate being provided at its ends with first tongues which extend outwardly for engagement beneath the clencher flanges of a rim, each plate being provided intermediate its ends with a second tongue which extends inwardly for engagement between the base of a tire and the base of a rim, the second tongue projecting beyond the first tongues, whereby the bead of a tire may engage the side edges of the second tongue, thereby to aid in holding the side plate against longitudinal movement.

1,224,104. EXPANDED METAL MANUFACTURE. NORRIS ELMORE CLARK, Plainville, Conn. Filed Feb. 15, 1915. Serial No. 8,354. (Cl. 164—6.5.)



1. The improvement in the art of making expanded metal which includes first slitting portions of a sheet in staggered arrangement to form inclined bendable strands and leaving broad unslitted portions, said strands being inclined in opposite directions on opposite sides of the center of the section between the unslitted portions, then forming relatively deep parallel trough-shaped ribs by engaging the centers and outer edges of the unslitted portions and folding the sides of said portions out of their original plane, thereby turning the strands at one side of the center of the intervening slitted section in opposite angular relation to the strands of the other side of said slitted section simultaneously with the opening of the meshwork.

2. The improvement in the art of making expanded metal which includes slitting sections of a sheet in staggered arrangement to form bendable strands and leaving broad unslitted portions, folding the edges of the unslitted portions out of the plane of the centers of the slitted sections, thereby opening meshwork with the strands of halves thereof arranged in opposed angularity between the folded members.

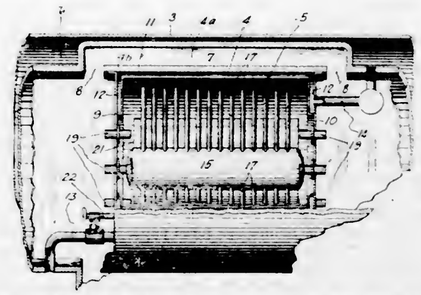
3. The improvement in the art of making expanded metal which includes slitting sections of a sheet in staggered arrangement and leaving unslitted portions, holding portions of the slitted sections on opposite sides of an unslitted portion and folding the edges of the unslitted portion to form a groved beam member and thereby carrying the attached edges of the slitted sections out of their original plane to form meshwork.

4. The improvement in the art of forming expanded metal which includes forming a plurality of rows of relatively short slits leaving strands connected in staggered arrangement in a section of a sheet and leaving relatively broad unslitted portions at opposite edges of the slitted section folding the broad unslitted portions to form beams and moving their edges out of their original plane in advance of the center of the slitted section and then moving the center of the slitted section into the plane of the edges of the beams.

5. The improvement in the art of making expanded metal which includes first slitting sections of a sheet in staggered arrangement so as to produce bendable strands and leaving broad marginal and intermediate narrow unslitted portions, then folding said unslitted portions into alternate deep and shallow channels facing in opposite directions and moving adjacent edges of adjacent unslitted portions into different planes thereby producing open meshwork and then bringing the edges of all of said channels into a common plane.

[Claims 6 to 13 not printed in the Gazette.]

1,224,105. WATER-TUBE BOILER FOR SUBMARINES. GREGORY C. DAVISON, New London, Conn., assignor to The Electric Boat Company, a Corporation of New Jersey. Filed Mar. 25, 1916. Serial No. 86,652. (Cl. 114—16.)



1. In a submarine boat, in combination, an inner hull, an outer hull, a closed compartment within the inner hull, a water-tube boiler located in said compartment and a fore-and-aft arranged thoroughfare compartment alongside the boiler compartment, the thoroughfare compartment extending forward and aft beyond the forward and aft ends of the boiler compartment, and openings in the inner hull forward and aft of the boiler compartment for affording direct communication to the thoroughfare compartment.

2. In a submarine boat, in combination, a closed boiler compartment within the hull, and a thoroughfare compartment alongside the boiler compartment and exterior to the hull and communicating with the interior of the hull forward and aft of the boiler compartment.

3. In a submarine boat, in combination, a closed compartment within the hull, a water-tube boiler located in said compartment, and a connection whereby the compartment may be flooded to cool the boiler when the vessel is submerged.

4. In a submarine boat, in combination, an inner hull, an outer hull, a closed compartment within the inner hull, a water-tube boiler located in said compartment and occupying the entire interior thereof, a thoroughfare compartment arranged exterior to the inner hull and alongside the boiler compartment and communicating with the interior of the inner hull forward and aft of the boiler compartment, and a connection whereby the closed compartment may be flooded to cool the boiler when the vessel is submerged.

5. In a submarine boat, in combination, an outer hull, an inner hull which in horizontal section defines a cruciform figure, and a closed boiler compartment located intermediate and spaced from the arms of the cross.

[Claims 6 to 14 not printed in the Gazette.]

1,224,106. TOILET-PAPER-ROLL HOLDER. JOHN GOOD, Brooklyn, N. Y., assignor to Servet Specialty Company, New York, N. Y., a Corporation of New York. Filed Feb. 11, 1909. Serial No. 477,392. (Cl. 211—31.)



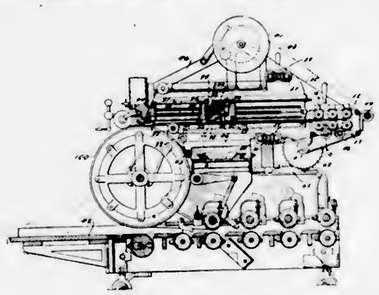
1. A dispensing holder for toilet-paper rolls, comprising a fixed friction table of a diameter approximately that of the toilet paper roll and unobstructed at its front and

side margins, means for supporting the same in projecting relation from a wall, and an upright freely-projecting pivot post secured at its lower end to the central part of said table for supporting the paper roll in endwise frictional contact thereon, whereby the roll must always be rotated relatively to the fixed underlying friction surface and the paper can be drawn off and downwardly from either side or the front of said immovable table and torn against the side of the roll itself.

2. A dispensing holder for toilet-paper rolls, consisting of a bent plate forming a vertical wall-attaching part and a horizontal fixed flat friction table of a diameter approximately that of the roll to be supported, the said table having a central aperture and a substantially circular margin at the front and sides, and a tubular sheet metal post secured at its lower end in the aperture in the table and projecting freely upward and formed with an integral closed and unobstructed top.

3. A dispensing holder for toilet-paper rolls comprising a sheet-metal table bent at one side to form a vertical wall-attaching flange, said flange being again bent outward and turned upward to form an article holder projecting away from the wall, and a vertical post rising freely from the plate and adapted to hold a toilet-paper roll endwise thereon.

1,224,107. STRIP FEEDING AND SEVERING MECHANISM. EDGAR M. HAWKINS and CHARLES R. SEYMOUR, Rochester, N. Y., assignors to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Original application filed Jan. 7, 1913, Serial No. 740,601. Divided and this application filed Nov. 6, 1915. Serial No. 60,020. (Cl. 164—48.)



1. In a machine of the character described and in combination, a pair of coöperating feed belts for engaging with and feeding a continuous strip, and a severing device positioned and operative to transversely sever the strip at a point between the ends of the strip-engaging runs of said belts.

2. In a machine of the character described and in combination, a pair of coöperating feed belts for engaging with and feeding a continuous strip, and a severing device positioned and operative to transversely sever the strip at a point between the ends of the strip-engaging runs of said belts and being adjustable in position lengthwise of said runs.

3. In a machine of the character described and in combination, a pair of coöperating feed belts for engaging with and feeding a continuous strip and having an intermittent feeding movement, means for adjusting the feeding movement of said belts, and a severing device positioned and operative to transversely sever the strip at a point between the ends of the strip-engaging runs of said belts.

4. In a machine of the character described and in combination, a pair of coöperating feed belts for engaging with and feeding a continuous strip, and having an intermittent feeding movement, means for adjusting the feeding movement of said belts, and a severing device positioned and operative to transversely sever the strip at a point between the ends of the strip-engaging runs of said belts and being adjustable in position lengthwise of said runs.

5. In a machine of the character described and in combination, strip feeding means comprising a pair of coöperating feed belts having an intermittent feeding movement, means for adjusting the feeding movement of said belts, strip severing means operative on the strip at a point between the adjacent runs of said belts, a work support, and a conveyer for conveying the severed pieces of strip to the work on said work support; said severing means being adjustable between the adjacent belt runs in a direction toward and from the conveyer to sever the strip into pieces of a length substantially corresponding to the feeding movement of the feed belts.

[Claims 6 to 14 not printed in the Gazette.]

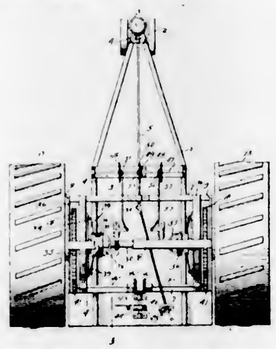
1,224,108. INTERCHANGEABLE HAND-COVERING. ARCHIBALD MCMARTIN, Johnstown, N. Y.; Josephine K. McMartin administratrix of said Archibald McMartin, deceased. Filed Oct. 1, 1914. Serial No. 864,443. (Cl. 2—9.)



1. An interchangeable hand covering comprising a palm member and a thumb member, the palm member being formed with a straight slit substantially cutting the lower edge of the said member and extending vertically medially of one side thereof to the thumb crotch of the covering, the thumb member being formed from a blank complete in itself and having its portions at opposite sides of its longitudinal median line of counterpart form, the said thumb blank having a relatively wide upper portion the edges of which are united to form the complete thumb stall proper, the said thumb blank being provided with a relatively narrow and downwardly tapering lower portion the lateral edges of which are fitted within the said slit and united to the palm member at the opposite sides of the said slit, the said lower portion of the thumb member extending throughout the length of the said slit.

2. An interchangeable hand covering including a palm member and a thumb member, the palm member being formed from a blank, the portions at the opposite sides of the vertical median line of which are of counterpart form and constitute associated palm portions, the said palm portions being divided along the vertical longitudinal median line of the blank by a slit extending to the lower end edge of the blank, each of the palm portions being formed with a slit extending inwardly from the upper end of the first mentioned slit; the thumb portion of the hand covering being formed from a blank formed in each lateral edge with a notch, the said lateral edges of the blank converging toward each end of the blank from the said notches, the outer end edge of the blank having arcuate edge portions meeting at the longitudinal median line of the blank, the said blank being folded along its said longitudinal median line to form the thumb portion or sheath and the said thumb portion or sheath having its outer side devoid of connecting seams from the outer end of the said portion entirely to the inner end thereof, the lateral edge portions of the said thumb blank and the arcuate end portion thereof being united by a continuous seam from the said notches to the meeting point of the said arcuate outer end edge portions, the lateral edge portions of the blank between the said notches and the inner end of the blank being disposed within and united to the edge portions of the palm blank at opposite sides of the slit which extends at the vertical median line thereof, the portion of the palm blank between the slits which diverge from the upper end of the said slit at the vertical longitudinal median line being disposed to overlap the first mentioned united lateral edge portions of the thumb blank at their ends next adjacent the notches and being secured thereto, the inner end of the thumb blank at its longitudinal median line terminating at the extreme lower ends of the walls of the slit at the vertical longitudinal median line of the said thumb blank.

1,224,109. DRIVE-GEARING FOR TRACTORS. MARTIN SAND, Grygla, Minn. Filed Aug. 3, 1915. Serial No. 43,430. (Cl. 21—114.)



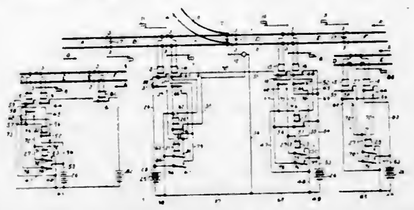
1. In a drive gearing for wheeled vehicles; a frame, drive wheels mounted thereon and carrying internal gears, internal gears concentric with the first-mentioned gears and supported for rotary movement, double pinions meshing with the gears on each wheel, a drive shaft, a pinion on said shaft meshing with one of the pinions of each double pinion, and means for preventing movement of the last-mentioned internal gears.

2. In a drive gearing for tractors, the combination with a frame, of drive wheels mounted thereon, castings secured to the drive wheels and having internal gears, sleeves extending through the said wheels, internal gears secured to said sleeves and located within the castings, shafts extending through the sleeves and having pinions on their ends, double pinions mounted within the castings and meshing with the gears thereon, with the pinions on the aforementioned shafts and with the internal gears on the sleeves, means for maintaining the last mentioned internal gears stationary and means for imparting movement to the said shafts.

3. In a drive gearing for tractors, the combination with a frame having wheels mounted thereon, of means for driving said wheels including shafts, internal gears secured to the inner ends of said shafts, a drive shaft, pinions secured to said drive shaft, plates slidably mounted on the drive shaft, pinions mounted on the said plates and meshing with the internal gears and the pinions on the drive shaft, rings encircling the internal gears and secured to the frame and clutch blocks mounted on the plates and adapted to engage either the rings or the internal gears.

1,224,110. [WITHDRAWN.]

1,224,111. SWITCH-INDICATOR. SEDGWICK N. WIGHT, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Dec. 16, 1911. Serial No. 666,210. (Cl. 246—30.)



1. In a railway signal system: a signal: a trackway; means for dividing the trackway into a rear track circuit section, a plurality of intermediate track circuit sections and a forward track circuit section; means for creating a difference of potential between the rails of the trackway in each track circuit section; translating devices connected across the rails of the trackway in each section and energized by a flow of current produced by the said difference of potential and deënergized in succession by the passage of a train over the trackway; a relay governed by the translating devices of each of the track circuit sections except the rear track circuit section; a circuit including said signal governed by said relay and by the translating device of the rear track circuit section and by the translating device of the adjacent intermediate track circuit section; a holding circuit for said another relay governed by the relay itself and by the translating device of the rear track circuit section; another circuit including said signal governed by said another relay.

2. In a railway signal system: a signal; a trackway; means for dividing the trackway into a rear track circuit section, a plurality of intermediate track circuit sections and a forward track circuit section; means for creating a difference of potential between the rails of the trackway in each track circuit section; translating devices connected across the rails of the trackway in each section and energized by a flow of current produced by the said difference of potential and deënergized in succession by the passage of a train over the trackway; a relay governed by the translating devices of each of the track circuit sections except the rear track circuit section; a circuit including said signal governed by said relay and by the translating device of the rear track circuit section; another relay; an energizing circuit for said relay governed by the translating device of the rear track circuit section and the translating device of the adjacent intermediate track circuit section; a holding circuit for said another relay governed by the relay itself and by the translating device of the rear track circuit section; another circuit including said signal governed by said another relay and by said first mentioned relay.

3. In a railway signal system: a signal: a trackway divided into a series of track circuit sections: means for creating a difference of potential between the rails of the trackway in each section; translating devices connected to the rails of the trackway in each section; and energized by the flow of current produced by the said difference of potential, and deënergized in succession by the passage of a train over the trackway, at least two of the translating devices being connected at the right of the signal and at least two being connected to the left of the signal; a circuit for the signal closed when no train is present on any part of the said trackway, said circuit being controlled by each of the translating devices; another circuit for the signal normally open, means for closing said normally open circuit by the deënergization of the extreme left hand translating device by a train moving toward the left away from the signal.

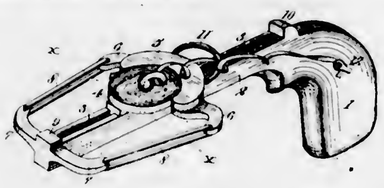
4. In a railway signal system: a signal: a trackway divided into a series of track circuit sections; means for

creating a difference of potential between the rails of the trackway in each section; translating devices connected to the rails of the trackway in each section and energized by the flow of current produced by the said difference of potential, and deënergized in succession by the passage of a train over the trackway, at least two of the translating devices being connected at the right of the signal and at least two being connected to the left of the signal; a circuit for the signal closed when no train is present on any part of the said trackway, said circuit being controlled by each of the translating devices; another circuit for controlling the signal normally open, means for closing said normally open circuit by the deënergization of the extreme right hand translating device by a train moving toward the right away from the signal.

5. In a railway signal system: a signal; a trackway divided into a series of track circuit sections; means for creating a difference of potential between the rails of the trackway in each section; translating devices connected to the rails of the trackway in each section and energized by the flow of current produced by the said difference of potential, and deënergized in succession by the passage of a train over the trackway, at least two of the translating devices being connected at the right of the signal and at least two being connected to the left of the signal; a circuit for the signal closed when no train is present on any part of the said trackway, said circuit being controlled by each of the translating devices; another circuit for the signal normally open, means for closing said normally open circuit by the deënergization of the extreme left hand translating device by a train moving toward the left away from the signal, another circuit for controlling the signal normally open, means for closing said normally open circuit by the deënergization of the extreme right hand translating device by a train moving toward the right away from the the signal.

[Claims 6 to 18 not printed in the Gazette.]

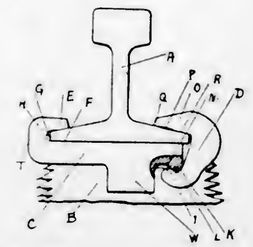
1,224,112. SERPENTINE-SHOOTER. JOSE LOUIS CASTILLO, San Francisco, Cal. Filed Sept. 11, 1916. Serial No. 119,445. (Cl. 124—14.)



1. A gun including a stock having a barrel, said barrel having a longitudinal dovetail groove in its upper face, a slide having a dovetail projection engaged in said groove, a holder secured to the upper face and rear end of the slide and having a curved front face extending on opposite sides of the slide whereby to allow a seprentine reel to seat on a side thereof on the upper face of the slide and have its periphery engaged with said curved front face of the holder, a ring connected to the rear end of the holder, a rigid stop on the barrel at the inner end of the groove, means to project the slide outwardly, and a clamping clip secured to a side of the stock, said holder having a flat upper face so as to allow an end of the serpentine to be arranged thereover and connected to said clip.

2. A gun including a stock and a barrel, a holder slidably connected to the barrel, said holder having a horizontal bottom to receive one flat side face of a serpentine reel and having a vertical curved wall to engage the periphery of the reel, whereby to hold the reel in horizontal position with its side faces parallel to the barrel, and a clamping clip secured to the stock, said vertical curved wall of the holder being formed so as to allow one end of the serpentine to be passed therebeyond and clamped by the clip, against the stock.

1,224,113. RAIL-ANCHOR. HORATIO G. GILLMOR, Washington, D. C. Filed Sept. 17, 1915. Serial No. 51,203. (Cl. 238—4.)



1. A rail gripping part constructed with a stop which may be deformed to permit said part to be driven transversely upon a rail.

2. A rail base flange engaging and gripping part for rail anchors constructed with rail base edge engaging portions adapted to be changed in form to permit said part to be driven transversely upon a rail.

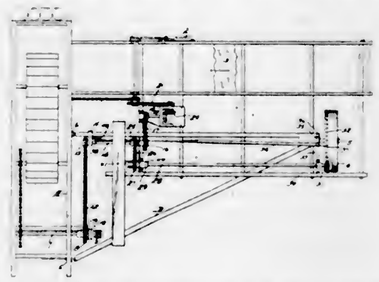
3. A rail engaging and clamping element for anticreepers constructed with a jaw at one end adapted to engage one edge of the rail base and on the under side of the other end a plurality of seats each adapted to engage a rotatable pressure producing part.

4. A rail engaging and gripping element constructed with a seat adapted to engage a vertical pressure producing part and arranged to deform to adapt said part to variation in the size of the rail.

5. A rail embracing and gripping part constructed with deformable rail edge engaging portions and a deformable seat adapted to engage with a pressure producing part.

[Claims 6 to 28 not printed in the Gazette.]

1,224,114. COMBINED HARVESTER. BENJAMIN HOLT, Stockton, Cal., assignor to The Holt Manufacturing Company, Stockton, Cal., a Corporation of California. Filed July 8, 1913. Serial No. 777,848. (Cl. 56—33.)

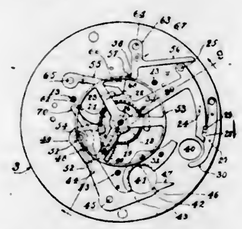


1. In a harvester, the combination of a main frame having a driving support, a header frame also having a driving support, driving connections for the header frame driving support adapted to drive the latter at a speed in excess of the main frame driving support, and means interposed in power transmitting relation in said driving connections for permitting the traction of the header frame driving support to equalize the speed of the latter with respect to the main frame driving support, whereby under normal traction conditions the two driving supports travel at substantially equalized speeds.

2. In a harvester, the combination of a main frame, a driving support for the main frame, a power shaft in driving relation with said driving support, a header frame, a driving support for the header frame, driving connections between said power shaft and the header frame driving support adapted to drive the latter at a speed in excess of the main frame driving support, and means interposed in power transmitting relation in said driving connections for permitting the traction of the header frame driving support to equalize the speed of the latter with respect to the main frame driving support, whereby under normal traction conditions, the two driving supports travel at substantially equalized speeds.

3. In a harvester, the combination of a main frame, a traction member forming the ground support for the main frame, a header frame, a bearing wheel journaled on the header frame, a power shaft driving said traction member, drive connections between said power shaft and the bearing wheel for driving the same at a speed in excess of the speed of the traction member, said drive connections including a slip sprocket operative to permit of a normal uniform speed of the bearing wheel relative to the traction member.

1,224,115. COIN-CONTROLLED MACHINE. GEORGE KERN, Peru, Ill. Filed Mar. 17, 1916. Serial No. 84,790. (Cl. 194—61.)



1. In a machine of the class described, a receptacle, a supporting plate in said receptacle, indicating mechanism mounted above said plate, and including a dial, a shaft, an indicating hand on said shaft, a pinion, and coin controlled actuating means for said indicating mechanism having a segmental gear meshing with the pinion.

2. In a machine of the class described, a receptacle, a supporting plate in said receptacle, indicating mechanism mounted above said plate, and including a dial, a shaft, an indicating hand on said shaft, a pinion, coin controlled actuating means for said indicating mechanism having a segmental gear meshing with the pinion, and a coin controlled released spring returned lever for rocking said segmental gear.

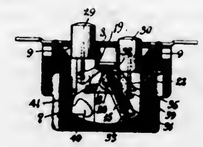
3. In a machine of the class described, a receptacle, a supporting plate in said receptacle, an outer top cover over said supporting plate, said plate and cover being separated sufficiently to leave a narrow space in which a coin might be moved flat-wise, a rotatable element constructed to move said coin, a bell crank lever actuated by said moving coin, indicating mechanism, said indicating mechanism being actuated by said bell crank lever, and mechanism constructed to lock said coin moving element against rotation when an improper coin is placed into the machine.

4. In a machine of the class described, a receptacle, a supporting plate in said receptacle, an outer top cover over said supporting plate, said plate and cover being separated sufficiently to leave a narrow space in which a coin might be slipped edgewise, coin controlled actuating elements movably mounted in said space, a central dome on the cover, and indicating mechanism arranged in said dome, said coin controlled elements including a coin moving lever, a bell crank, said bell crank being actuated by a coin when moved by said bell crank lever, and mechanism actuated by said bell crank lever constructed to rotate said indicating mechanism.

5. In a machine of the class described, a receptacle, a supporting plate in said receptacle, an outer top cover over said supporting plate, said plate and cover being separated sufficiently to leave a narrow space in which a coin might be slipped edgewise, coin controlled actuating elements movably mounted in said space, a central dome on the cover, a dial in said dome, a rotatable shaft vertically mounted in the cover and dome and operatively connected to the actuating elements, and an indicating hand carried by said shaft.

[Claims 6 to 29 not printed in the Gazette.]

1,224,116. ELECTRIC SWITCH. RAGNAR O. W. LUNDIN, New Britain, Conn., assignor to The Trumbull Manufacturing Company, Plainville, Conn., a Corporation of Connecticut. Filed Dec. 16, 1915. Serial No. 67,121. (Cl. 175—293.)

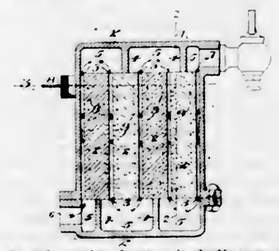


1. In a switch of the character described, a swinging contact making lever, a relatively stationary contact arranged to be engaged thereby, a rocking switch operating lever pivotally supported below the point of pivotal support of the contact making lever and provided with a spring seat substantially in the plane of the pivotal support of the contact making lever, a tension spring stretched between the contact making lever and the switch operating lever connected to said spring seat at one end and connected with the contact making lever at its opposite end and means for rocking said switch operating lever to thereby carry that end of the spring which is engaged with the spring seat to one side of the pivotal center of the contact making lever.

2. In a switch of the character described, a swinging contact making lever, a relatively stationary contact arranged to be engaged thereby, a rocking switch operating lever pivotally supported below the point of pivotal support of the contact making lever and provided with a spring supporting portion arched upwardly toward the pivotal support of the contact making lever, a spring engaged with said arched portion at one end and with the contact making lever at its opposite end, and means for rocking the switch operating lever.

3. In a switch of the character described, a supporting bracket having a slot therein, said slot being open at one side intermediate the ends of the same to admit pivots for engagement in the opposite ends of the slot, a contact making lever having a pivotal engagement in one end of said slot, a switch operating lever having a pivotal engagement in the opposite end of said slot and arched toward the contact making lever pivot and a throwing spring connected between the contact making lever and the arched portion of the switch operating lever and exerting tension to hold the pivots of said levers at the opposite ends of said open pivot slot.

1,224,117. ELECTRIC WATER-HEATER. SAMUEL D. NESMITH, La Jolla, Cal. Filed Nov. 8, 1916. Serial No. 130,156. (Cl. 219—39.)



1. An electric water heater including a casing having a top and a bottom one of which is removable, said top

and bottom each having integral inwardly extending partitions, a body of insulating material having a series of flat water passages molded therein, and electrical wires embedded in said body adjacent the sides of said water passages, said body being insertible as a unit in said casing and engaged at its top and bottom with the free ends of the partitions so as to be supported by the partitions of the bottom.

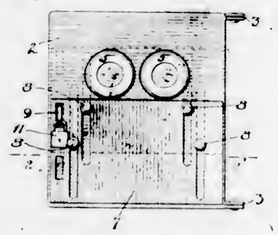
2. An electric water heater including a casing having an inlet and an outlet, a body of insulating material having flat water channels molded therein and extending therethrough to cause the water to directly contact with said material, means to direct the water successively through the channels, and electrical wires embedded in said body.

3. An electric water heater including a casing, a body of insulating material in the casing, said body being molded with a series of narrow spaced flat water passages which latter extend through the top and bottom of the body, means to successively direct the water through said passages, and electrical wires embedded in said body and arranged in layers so as to present two sides disposed adjacent and between a pair of the passages.

4. An electric water heater including a casing having an inlet and an outlet, a body of insulating material having flat water channels molded therein and extending therethrough to cause the water to directly contact with said material, the top and bottom of the casing having inwardly extending partitions the inner ends of which abut the top and bottom sides respectively of said body at points between the channels of the latter, said partitions being arranged to direct the water successively through said channels, and electrical wires embedded in said body.

5. An electric water heater including a casing having an inlet and an outlet, a body of insulating material having flat water channels molded therein and extending therethrough to cause the water to directly contact with said material, said body having its ends spaced from the adjacent walls of the casing so as to form water channels in conjunction therewith, said inlet and outlet registering with the last named channels respectively, said casing having inwardly extending partitions the inner ends of which abut the top and bottom sides respectively of said body at points between the channels of the latter, said partitions being arranged to direct the water successively through said channels, and electrical wires molded in said body.

1,224,118. FUSE-BOX. ROSCOE RATCLIFFE, New Britain, Conn., assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn., a Corporation of Connecticut. Filed Aug. 14, 1916. Serial No. 114,700. (Cl. 175—273.)



1. A fuse box comprising a box portion for containing a base block designed to removably receive a fuse, a cover portion hinged to the box portion and having an opening arranged in line with a fuse when in place, a slide carried by said cover and arranged when in one position to project over said opening, and when in another position to uncover said opening, and means to lock said slide in either position by the act of closing said cover.

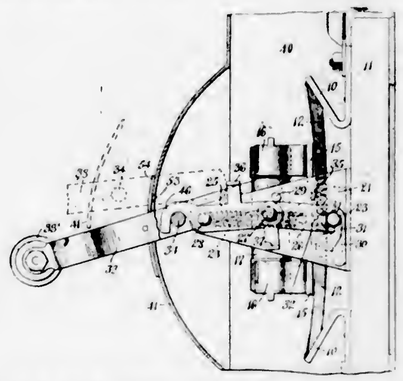
2. A fuse box comprising a box portion for containing a base block designed to removably receive a fuse, a cover portion hinged to the box portion and having an opening arranged in line with a fuse when in place, a slide carried by said cover and arranged when in one position to project over said opening, and when in another position to uncover said opening, and means to lock said slide in either position by the act of closing said cover, said means comprising a projection on the box arranged to engage the slide and block its movement when the cover is closed.

3. A fuse box comprising a box portion for containing a base block designed to removably receive a fuse, a cover portion hinged to the box portion and having an opening arranged in line with a fuse when in place, a slide carried by said cover and arranged when in one position to project over said opening, and when in another position to uncover said opening, and means to lock said slide in either position by the act of closing said cover, said means comprising a projection on the box arranged to engage the slide and block its movement when the cover is closed, with means to coöperate with said projection to lock the cover closed.

4. In a device of the character described, a box portion arranged to receive a fuse support within the same designed to removably hold a fuse plug, a cover hinged to said box and having an opening in line with said fuse support, a slide mounted on said box cover and arranged to project over said opening when in one position and uncover said opening in another position, with means carried by the box to lock said slide against movement when the cover is closed, and to leave said slide free to be moved when said cover is opened.

5. In a device of the character described, a box portion arranged to receive a fuse support within the same designed to removably hold a fuse plug, a cover hinged to said box and having an opening in line with said fuse support, a slide mounted on said box cover and arranged to project over said opening when in one position and uncover said opening in another position, with means carried by the box to lock said slide against movement when the cover is closed, and to leave said slide free to be moved when said cover is opened, the opening in the box cover corresponding substantially in size and shape to the end of a fuse plug.

1,224,119. SAFETY-SWITCH. ALEXANDER K. SUTHERLAND, New Britain, Conn., assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn., a Corporation of Connecticut. Filed May 4, 1916. Serial No. 95,299. (Cl. 175—284.)



1. In a switch construction, stationary and movable contacts, an inclosure therefor including a movable cover, a hinge member connected to said movable contact and having two shoulders spaced apart from each other and an operating handle pivotally carried by the cover and having an arm adapted to swing between said shoulders when the cover is closed whereby the circuit may be controlled.

2. In a switch construction, stationary and movable contacts, an inclosure therefor including a movable cover, a hinge member connected to said movable contact and having two shoulders spaced apart from each other, an operating handle pivotally carried by the cover and having an arm adapted to swing between said shoulders when the cover is closed whereby the circuit may be controlled and interlocking parts carried by said hinge member and by said cover for preventing the cover from being opened when the contacts are in closed circuit position.

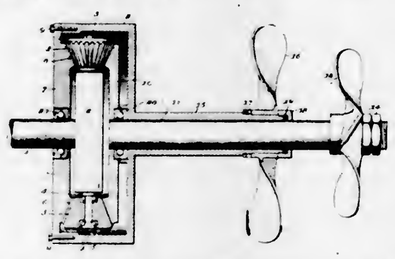
3. In a switch construction, stationary and movable contacts, an inclosure therefor including a movable cover, a hinge member connected to said movable contact and having two shoulders spaced apart from each other, an operating handle pivotally carried by the cover and having an arm adapted to swing between said shoulders when the cover is closed whereby the circuit may be controlled and a stop for normally preventing the closing of the circuit, said stop being adapted to be released by said operating arm.

4. In a switch construction, stationary contacts, slotted standards, an insulating carrier, studs projecting from the ends thereof into said slotted standards, members hinged to said standards and having means of connection with one of the studs in each slot, a stop movable with one of said hinge members and an operating handle for moving said hinge members to close and open the circuit.

5. In a switch construction, a stationary contact, a stationary slotted standard, a carrier having means projecting into the slot of said standard, a contact carried by said carrier, an arm hinged to said standard, a second arm hinged to said first mentioned arm and also hinged to said carrier, one of said arms having two laterally projecting shoulders and a hinged operating member adapted to oscillate between said shoulders, a spring normally tending to pull said carrier so as to separate the contacts and a stop for one of said arms to limit its swinging movement and permit the spring to hold the parts in the closed circuit position.

[Claims 6 to 10 not printed in the Gazette.]

1,224,120. PROPULSION MECHANISM. HORACE M. CAKE, Philadelphia, Pa. Filed Oct. 12, 1909, Serial No. 522,250. Renewed Mar. 21, 1917. Serial No. 156,456. (Cl. 115—37.)



1. In a propulsion mechanism in combination, a driving shaft, a cylindrical driven shaft, a tubular shaft surrounding said cylindrical shaft, compensating means operatively connecting said driving shaft with both the cylindrical shaft and the tubular shaft to drive the cylindrical shaft and the tubular shaft in the same direction, and propellers on both driven shafts.

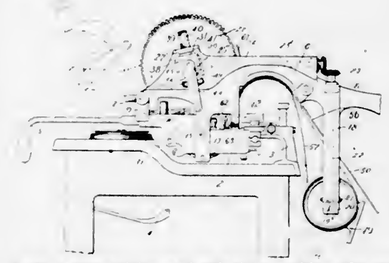
6. A propulsion mechanism including a driving shaft, two screw propellers mounted in axial alinement and means intermediate said driving shaft and said propellers to drive both propellers in the same direction in such manner that the speed of either of said propellers is dependent upon the resistance offered to the other propeller, both of said screw propellers rotating about the axis of the driving shaft.

13. In a propulsion mechanism in combination, a driving shaft, a transmission head carried on said driving shaft, compensating gears upon said transmission head, a face plate carrying thereon a beveled gear in engagement with the compensating gears, a tubular shaft, a propeller on said tubular shaft, a casing attached to said tubular shaft, said face plate being secured to and comprising a closure for said casing, a cylindrical shaft mounted within said tubular shaft, a propeller carried upon said cylindrical shaft, and a beveled gear on the cylindrical shaft and in engagement with the compensating gears, the driving shaft, the tubular shaft and the cylindrical shaft all being in axial alinement.

24. A propulsion mechanism including a driving shaft, a transmission head, compensating gears carried by said transmission head, a cylindrical driven shaft, a propeller on said cylindrical shaft, a tubular shaft, a propeller on said tubular shaft, said tubular shaft and said cylindrical shaft both being on one side of said transmission head, a beveled gear operatively connected with said cylindrical shaft, said beveled gear being on the same side of the transmission head as are the propellers, and a second beveled gear on the opposite side of the said transmission head and operatively connected with the said tubular shaft.

[Claims 2 to 5, 7 to 12, 14 to 23, and 25 to 30 not printed in the Gazette.]

1,224,121. COMBINED TYPE-WRITING AND PRINTING MACHINE. TRUMBLE DE ROODE, New York, N. Y. Filed Sept. 23, 1911. Serial No. 650,955. (Cl. 101—181.)



1. In a typewriting and printing machine, the combination of a typewriting mechanism including a platen with which the type of the mechanism coact, a printing surface mounted in position to coöperate with said platen and capable of supporting type characters at any point thereon in position to coact with the platen, said typewriting mechanism being operable at an intermediate point in the operation of printing from said printing surface, and means for securing alinement of the typewritten and printed matter.

2. In a typewriting and printing machine, the combination of a typewriting mechanism including a platen with which the type of the mechanism coact, a printing surface mounted in position to coöperate with said platen, said typewriting mechanism being operable at an intermediate point in the operation of printing from said printing surface and irrespective of the arrangement of the printing characters upon the printing surface, and means for securing alinement of the typewritten and printed matter.

3. In a typewriting and printing machine, the combination of a typewriting mechanism including a rotatable platen with which the type of the mechanism coact, a printing surface mounted in position to coöperate with said platen and capable of supporting type characters at any point thereon in position to coöperate with the platen, a ribbon mounted adjacent to the platen to supply ink for printing both from said type and from said printing surface, said typewriting mechanism being operable during and while temporarily suspending the operation of printing from said printing surface, and means for securing alinement of the typewritten and printed matter.

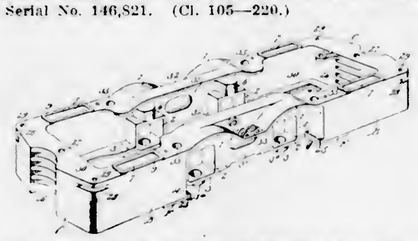
4. In a typewriting and printing machine, the combination of a typewriting mechanism including a rotatable platen with which the type of the mechanism coact, a printing surface mounted in position to coöperate with the platen, a ribbon mounted in position to supply ink for

printing from said type and from said printing surface, said typewriting mechanism being operable at an intermediate point in the operation of printing from the printing surface and irrespective of the arrangement of the printing characters upon the printing surface, and means for securing alinement of the typewritten and printed matter.

5. In a typewriting and printing machine, the combination of a typewriting mechanism including a platen with which the type of the mechanism coact, a printing surface mounted in position to cooperate with the platen, said typewriting mechanism being operable during and while temporarily suspending the operation of printing from the printing surface, and shiftable indicating means for indicating the insertion of typewritten matter in the body of the matter printed from said printing surface.

[Claims 6 to 46 not printed in the Gazette.]

1,224,122. STORAGE-BATTERY LOCOMOTIVE. RAYMOND MANCHA, St. Louis, Mo. Filed Feb. 5, 1917. Serial No. 146,821. (Cl. 105—220.)



1. A storage battery locomotive equipped with a truck whose frame is composed of a single casting having integral sand boxes.

2. A storage battery locomotive provided with a truck whose frame is equipped with hollow portions cast integral with the end sills and the side members of the frame so as to serve as sand boxes.

3. A truck frame for storage battery locomotives composed of side members and end sills integrally connected together, said side members being provided with integral sand boxes and with integral journal box guides.

4. A truck frame for storage battery locomotives, comprising cast metal end sills and side members integrally connected together, said side members having integral sand boxes and wheel pockets arranged intermediate said sand boxes.

5. A truck frame for storage battery locomotives composed of end sills and side members integrally connected together, said side members having integral sand boxes and integral wheel guards.

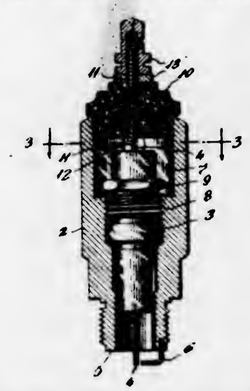
[Claims 6 to 19 not printed in the Gazette.]

1,224,123. SPARK-PLUG. WILLIAM E. SHERBONDY, Cleveland, Ohio. Filed Aug. 19, 1916. Serial No. 115,761. (Cl. 123—169.)

1. A spark plug comprising a one-piece long hex shell having an exteriorly threaded lower end and an interiorly threaded chamber at its upper end, an insulating core carried by said shell and projecting into and terminating within said chamber and carrying a central electrode, an insulating plug threaded into said chamber and carrying means for connecting a conduit wire with said electrode.

2. A spark plug comprising a one-piece long hex shell having an exteriorly threaded lower end and an interiorly threaded chamber at its upper end, an insulating core carried by said shell and projecting into and terminating within said chamber and carrying a central electrode, an insulating plug threaded into said chamber and carrying means for connecting a conduit wire with said electrode, said means spaced from the central electrode to form a spark gap, said shell having adjacent to said spark gap one or more openings therein.

3. A spark plug comprising a one-piece long hex shell having an exteriorly threaded lower end and an interiorly threaded chamber at its upper end, an insulating core carried by said shell and projecting into and terminating within said chamber and carrying a central electrode, an insulating plug threaded into said chamber and carrying means for connecting a conduit wire with said electrode, said means spaced from the central electrode to form a spark gap, said shell having adjacent to said spark gap one or more openings therein, and transparent material located in said chamber and covering said opening or openings.



4. A spark plug comprising an integral shell having a relatively long hex on its exterior and an exteriorly threaded chamber at its lower end and an interiorly threaded chamber at its upper end, said chambers having a communicating bore having an annular shoulder, an insulating core having a shoulder in juxtaposition to the shoulder of the bore and having its ends projecting into and terminating within said chambers, the bore adjacent to the upper chamber being interiorly threaded, a bushing within said upper chamber and fitting said bore threads for holding the insulating core in position and an insulating plug closing the upper chamber and carrying a rod for conducting the current to the central electrode.

5. A spark plug comprising an integral shell having a relatively long hex on its exterior and an exteriorly threaded chamber at its lower end and an interiorly threaded chamber at its upper end of greater diameter than said lower chamber, said chambers having a communicating bore having an annular shoulder, an insulating core having a shoulder in juxtaposition to the shoulder of the bore and having its ends projecting into and terminating within said chambers, the bore adjacent to the upper chamber being interiorly threaded, a bushing within said upper chamber and fitting said bore threads for holding the insulating core in position, an insulating plug closing the upper chamber and carrying a rod for conducting the current to the central electrode.

[Claims 6 to 8 not printed in the Gazette.]

REISSUES.

14,289. COMPOSITE TITANIC-OXID PIGMENT AND METHOD OF PRODUCING THE SAME. LOUIS E. BARTON, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Aug. 3, 1916. Serial No. 113,023. Original No. 1,155,462, dated Oct. 5, 1915, Serial No. 850,876, filed July 14, 1914. (Cl. 134—58.)

1. The method of treating a titanic sulfate solution which comprises adding thereto a compound capable of forming by reaction with said solution an insoluble sulfate and digesting the mass so as to produce a composite precipitate comprising such insoluble sulfate and titanic acid.

2. The method of treating a titanic sulfate solution which comprises adding thereto a soluble salt capable of forming by reaction with said solution an insoluble sulfate and digesting the mass so as to produce a composite precipitate comprising such insoluble sulfate and titanic acid.

3. The method of treating a titanic sulfate solution which comprises adding thereto a chlorid of an alkali earth metal and digesting the mass so as to produce a composite precipitate comprising an insoluble sulfate and titanic acid.

4. The method of treating a titanic sulfate solution which comprises adding thereto chlorid of calcium and digesting the mass so as to produce a composite precipitate comprising an insoluble sulfate and titanic acid.

5. The method of making pigments containing titanic oxid which comprises digesting a titanic compound in sulfuric acid until titanic sulfate is formed, adding a compound capable of forming an insoluble sulfate, treating the mixture to promote precipitation of titanic acid, separating the resulting precipitates, and calcining them.

6. The method of making pigments containing titanic oxid which comprises digesting a titanic compound in sulfuric acid until titanic sulfate is formed, adding chlorid of calcium, treating the mixture to promote precipitation of titanic acid, separating the resulting precipitates from the solution, and calcining them.

7. In the production of pigments containing titanic material the steps which consist in adding to a titanic sulfate solution a saturated solution of a compound capable of forming by reaction with said solution an insoluble sulfate and digesting the mass so as to produce a composite precipitate.

8. In the production of pigments containing titanic material the steps which consist in adding to a titanic sulfate solution a saturated solution of chlorid of calcium and digesting the mass so as to produce a composite precipitate.

9. In the production of pigments containing titanic oxid the steps which consist in adding to a titanic sulfate solution a solution of a soluble salt capable of forming by reaction with said solution an insoluble sulfate and digesting the mixture at about 100° C. until an insoluble sulfate and titanic acid have been precipitated.

10. In the production of pigments containing titanic oxid the steps which consist in adding to a titanic sulfate solution a solution of chlorid of calcium, and digesting the mixture at about 100° C. until insoluble sulfate of calcium and titanic acid have been precipitated.

11. In the production of pigments containing titanic oxid the steps which consist in adding to a titanic sulfate solution a saturated solution of a soluble salt capable of forming by reaction with said solution an insoluble sulfate, distilling or evaporating the resulting mixture at about 100° C., digesting the residue in hot water, separating the resulting precipitates from the solution and calcining them.

12. In the production of pigments containing titanic oxid the steps which consist in adding to a titanic sulfate solution a solution of chlorid of calcium, distilling or evaporating the resulting mixture at about 100° C., digesting the residue in hot water, separating the resulting precipitates from the solution and calcining them.

13. In the production of pigments containing titanic oxid the steps which consist in adding to a titanic sulfate solution a precipitant-compound capable of forming by reaction with said solution an insoluble sulfate, filtering the resulting solution to separate therefrom then-precipitated particles of said insoluble sulfate, adding more of said precipitant-compound to the filtrate, and separating therefrom precipitated particles of said insoluble sulfate and of titanic acid.

14. In the production of pigments containing titanic oxid the steps which consist in adding to a titanic sulfate solution chlorid of calcium, filtering the resulting solution to separate therefrom then-precipitated particles of calcium sulfate, adding more chlorid of calcium to the filtrate and separating therefrom precipitated particles of calcium sulfate and of titanic acid.

15. As a new article a composite pigment comprising titanic oxid and a sulfate extender.

16. As a new article a composite pigment comprising titanic oxid and more of a sulfate extender.

17. As a new article a composite pigment comprising a sulfate extender and, thereto adhering, titanic oxid.

18. As a new article a composite pigment comprising particles of a sulfate extender and thereto adhering smaller particles of titanic oxid.

19. As a new article a composite pigment comprising titanic oxid, a sulfate extender, and iron oxid.

20. As a new article a composite pigment comprising particles of a sulfate extender, thereto adhering smaller particles of titanic oxid, and comprising also iron oxid in quantity less than said titanic oxid.

21. As a new article a composite pigment comprising titanic oxid and calcium sulfate.

22. As a new article a composite pigment comprising titanic oxid and more calcium sulfate.

23. As a new article a composite pigment comprising calcium sulfate and thereto adhering titanic oxid.

24. As a new article a composite pigment comprising particles of calcium sulfate and thereto adhering smaller particles of titanic oxid.

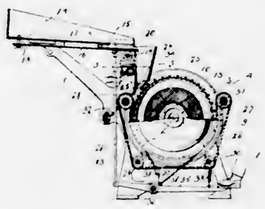
25. As a new article a composite pigment comprising titanic oxid, calcium sulfate in quantity greater, and iron oxid in quantity less, than said titanic oxid.

26. As a new article a composite pigment of specific gravity 2.95 to 3.10 in the form of a soft, fine powder, in color white faintly tinged with cream, and consisting principally of particles of calcium sulfate having thereto adherent smaller particles of titanic oxid.

27. As a new article a composite pigment of specific gravity 2.95 to 3.10 in the form of a soft, fine powder, in color white faintly tinged with cream, consisting principally of particles of calcium sulfate, having thereto adherent smaller particles of titanic oxid, and containing also iron oxid.

28. In the production of composite titanic products from a titanic solution, the step which consists in precipitating compounds of titanium upon particles of matter suspended in said solution.

14,290. MACHINE FOR FACILITATING THE PACKING OF MAGNETIC OBJECTS OF OBLONG SHAPE. OTTO GAMPER, Münchwilen, Switzerland. Filed Jan. 10, 1917. Serial No. 141,682. (Original No. 1,014,869, dated Jan. 16, 1912, Serial No. 604,870. Reissue No. 13,731, dated May 19, 1914, Serial No. 812,609, filed Jan. 16, 1914. (Cl. 10—162.)



1. A machine for packing oblong magnetic objects, comprising two magnetic poles forming between themselves a magnetic field to receive said objects and means movable within the said field to bring the objects into compact form.

2. A machine for packing oblong magnetic objects, comprising two magnetic poles forming between themselves a magnetic field to receive the said objects and means for retaining said objects in parallelism in said field upon the deënergizing of the said magnetic poles.

3. A machine for packing oblong magnetic objects, comprising two magnetic poles spaced apart to form between themselves an annular groove adapted to receive the said objects and means following the periphery of said an-

nular groove and serving to retain the said objects in said groove upon the deënergizing of the said poles.

4. In a machine for facilitating the packing of magnetic objects of oblong shape, north and south magnetic poles spaced apart to form a groove therebetween, said groove being open along one side, and means for delivering objects to said groove along the length thereof, and through said open side.

5. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles having a groove formed between them, the width of said groove being substantially equal to the length of said objects, and the north and south magnetic poles being on opposite sides of said groove, and said groove being open along one side.

6. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles having a groove formed between them, the width of said groove being substantially equal to the length of said objects, the north and south magnetic poles being on opposite sides of said groove, and said groove being open along one side, and means for delivering magnetic objects to said groove through said open side.

7. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles having a groove formed between them, the width of said groove being substantially equal to the length of said objects, the north and south magnetic poles being on opposite sides of said groove and said groove being open along one side, and means movable within said groove to bring said objects into compact form.

8. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles having a groove formed between them, the north and south magnetic poles being on opposite sides of said groove, and the width of said groove being substantially equal to the length of said objects, and a feeding receptacle for said objects having a movable part delivering said objects to the open side of said groove.

9. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles having a groove formed between them, the width of said groove being substantially equal to the length of said objects, the north and south magnetic poles being on opposite sides of said groove and means following the periphery of said groove and serving to retain the objects within said groove upon the deënergizing of the said magnetic poles.

10. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles having a groove formed between them, the north and south magnetic poles being on opposite sides of said groove, and the width of said groove being substantially equal to the length of said objects, and a feeding receptacle for said objects having a movable part delivering said objects to the open side of said groove and along substantially the entire length thereof.

11. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles having a groove formed between them, the north and south magnetic poles being on opposite sides of said groove, and said groove being open throughout its length along one side, and a feeding receptacle delivering through said open side, said receptacle and said groove being relatively movable.

12. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles forming between them a magnetic field to receive the said objects, automatic means for delivering objects to said field and means for bringing the said objects into compact form within said field.

13. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles having a groove formed between them, the north and south magnetic poles being on opposite sides of said groove, and said groove being open throughout its length along one side, a feeding receptacle delivering through said open side, and means for effecting a relative movement of said receptacle and said groove in the direction of the length of the groove.

14. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles spaced apart to form a groove therebetween, said groove being open along one side, means for delivering objects to said groove along the length thereof and through said open side and means for retaining said objects within said groove upon the deënergizing of said magnetic poles.

15. In a machine for facilitating the packing of magnetic objects of oblong shape, north and south magnetic poles spaced apart to form a groove therebetween to receive the said objects, vibratory means for delivering said objects into said groove and automatic means for bringing said objects into compact form within said groove.

16. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles forming between them a magnetic field to receive said objects and flexible means to retain said objects within said field upon the deënergizing of the said magnetic poles.

17. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles forming between them a magnetic field to receive the said objects, means for retaining said objects within said field upon the deënergizing of the said magnetic poles and means acting upon said first named means and serving to bring the said objects into compact form within said field.

18. In a machine for facilitating the packing of magnetic objects of oblong shape, a magnet having two magnetic poles forming a groove between them to receive the said objects and flexible means following the periphery of a portion of said magnet for retaining said objects in engagement therewith upon the deënergizing of the said magnet.

19. In a machine for facilitating the packing of magnetic objects of oblong shape, parallel north and south magnetic poles spaced apart to form a field between them of a width substantially equal to the length of said objects, means for automatically delivering the magnetic objects into said field and means for bringing said objects into compact form within said field.

20. In a machine for facilitating the packing of magnetic objects of oblong shape, parallel north and south magnetic poles spaced apart to form a field between them of a width substantially equal to the length of said objects, means for automatically delivering the magnetic objects into said field and spring actuated means for bringing said objects into compact form within said field.

21. In a machine for packing magnetic objects, two magnetic poles forming a magnetic field between them and serving to receive the said objects and means movable transversely through said field to bring the said objects into compact form within said field.

22. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles having a groove formed between them, the north and south magnetic poles being on opposite sides of said groove, a feeding receptacle for the objects having a movable part, a rotatable cam normally engaging said part, and means for disengaging said part from the cam.

23. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles having a groove formed between them, the north and south magnetic poles being on opposite sides of said groove, a feeding receptacle for the objects having a movable part, a cam engaging said part, a lever, means operated by the lever to break the circuit of the magnetic poles, and means also operated by said lever to disengage said movable part from the cam.

24. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles having a groove formed between them, the north and south magnetic poles being on opposite sides of said groove, a feeding receptacle for the objects having a movable delivering part, means for agitating said part and means for simultaneously stopping said agitation and breaking the circuit of said magnetic poles.

25. In a machine for facilitating the packing of magnetic objects of oblong shape, north and south magnetic poles spaced apart to form a groove therebetween, said groove being open along one side throughout its length,

means for delivering magnetic objects to said groove through said open side, and means for varying the width of said groove.

26. In a machine for facilitating the packing of magnetic objects of oblong shape, north and south magnetic poles spaced apart to form a groove between them of a width substantially equal to the length of said objects and means for adjusting one magnetic pole toward and from the other to vary the width of the groove.

27. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles, a groove formed between them, the north and south magnetic poles being on opposite sides of said groove, a feeding receptacle for the objects having a movable part, a driving shaft, a cam on the latter engaging said part, a lever, and means operated by the lever to break the circuit of the magnetic poles, and a bar carried by the lever adapted to effect disengagement of the part and the cam.

28. In a machine for facilitating the packing of magnetic objects of oblong shape, a cylindrical rotary magnet having two magnetic poles forming a groove circumferentially of said magnet, the north and south magnetic poles being on opposite sides of the groove and means for delivering the magnetic objects to said groove.

29. In a machine for facilitating the packing of magnetic objects of oblong shape, a cylindrical rotary magnet having two magnetic poles forming a groove circumferentially of said magnet, the north and south magnetic poles being on opposite sides of the groove, and means for delivering the magnetic objects to said groove through the open side of the latter.

30. In a machine for facilitating the packing of magnetic objects of oblong shape, a magnet having two magnetic poles forming a groove, the north and south magnetic poles being on opposite sides of the groove, and the groove being open along the length of the latter, a feeding receptacle, and means for moving the groove in the direction of its length and in respect to said receptacle.

31. In a machine for facilitating the packing of magnetic objects of oblong shape, a cylindrical rotary magnet having two magnetic poles forming a groove, the north and south magnetic poles being on opposite sides of the groove, said groove being formed circumferentially on said magnet, rollers journaled in the machine frame, a pair of cords passing over said rollers and over part of the periphery of the magnetic poles.

32. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet, two magnetic poles spaced to leave a groove therebetween, the north and south magnetic poles being on opposite sides of the groove and said groove being formed circumferentially on said magnet, and flexible means following the periphery of a portion of said magnet for retaining objects in engagement therewith upon the deënergizing of the magnet.

33. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet having two magnetic poles forming a circular groove between them, the north and south magnetic poles being on opposite sides of the groove, said groove being formed circumferentially on said rotary magnet, a feeding receptacle and means for simultaneously arresting the rotation of the magnet and stopping the feeding action.

34. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet having two magnetic poles forming a circular groove between them, the north and south magnetic poles being on opposite sides of the groove, a movable feeding device and means for simultaneously arresting the rotation of the magnet and stopping said feeding device.

35. In a machine for facilitating the packing of magnetic objects of oblong shape, a movable magnet having north and south magnetic poles, spaced apart and forming a groove between them, a movable delivery part and means for stopping the movement of said magnet and the movement of said part simultaneously.

36. In a machine for facilitating the packing of magnetic objects of oblong shape, a movable magnet having two magnetic poles, forming a groove between them, the north and south magnetic poles being on opposite sides of the groove, and means for stopping said magnet and simultaneously deënergizing it.

37. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet having two magnetic poles forming a circular groove, the north and south magnetic poles being on opposite sides of the groove, means for arresting the rotation of the magnet, and means for automatically breaking the circuit of the magnet at the same time.

38. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet having two magnetic poles forming a circular groove, the north and south magnetic poles being on opposite sides of the groove, a lever fulcrumed on the machine frame, a brake adapted to be operated by said lever and to act on the rotary magnet to arrest its rotation, and a contact in the circuit of the rotary magnet adapted to be broken when the lever is actuated.

39. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet having two magnetic poles forming a circular groove, the north and south magnetic poles being on opposite sides of the groove, a feeding receptacle for the objects having a movable delivery part, and means for automatically rocking said part.

40. In a machine for facilitating the packing of magnetic objects of oblong shape, a movable magnet having two magnetic poles normally rigid in respect to each other and spaced to leave a groove, the north and south magnetic poles being on opposite sides of the groove, a feeding receptacle for the objects having a movable dispensing part, and means for automatically rocking said part.

41. In a machine for facilitating the packing of magnetic objects of oblong shape, a magnet having two magnetic poles normally rigid in respect to each other and spaced to leave a groove, the north and south magnetic poles being on opposite sides of the groove, a feeding receptacle for the objects having a movable dispensing part, and means for automatically rocking said part.

42. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet having two magnetic poles forming a circular groove, the north and south magnetic poles being on opposite sides of the groove, a feeding receptacle for the objects having a movable delivery part, means for automatically rocking said part, and means for automatically stopping the feeding upon stopping the magnet.

43. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet having two magnetic poles forming a circular groove, the north and south magnetic poles being on opposite sides of the groove, a feeding receptacle for the objects having a movable delivery part, means for automatically rocking said part, and means for automatically stopping the rotation of the magnet and deënergizing the magnet.

44. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet having two magnet poles forming a circular groove, the north and south magnetic poles being on opposite sides of the groove, a feeding receptacle for the objects having a movable delivery part, means for automatically rocking said part, and means for automatically stopping the feeding action upon stopping the rotation of the magnet.

45. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet having two magnetic poles forming a circular groove, the north and south magnetic poles being on opposite sides of the groove, a feeding receptacle for the objects having a movable delivery part, a driving shaft, a cam on the latter engaging said part, a belt brake, a lever fulcrumed on the machine frame adapted to lock the belt brake, a circuit breaker for the rotary magnet operable by the lever, and means carried by the lever to disengage said movable part from said cam.

46. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet having two magnetic poles forming a circular groove, the north

and south magnetic poles being on opposite sides of the groove, means for delivering the magnetic objects to said groove and means for varying the width of said groove.

47. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet having two magnetic poles forming a circular groove, the north and south magnetic poles being on opposite sides of the groove, means for delivering magnetic objects to said groove through the open side thereof.

48. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet having two magnetic poles forming a circular groove, the north and south magnetic poles being on opposite sides of the groove, and the width of said groove being substantially equal to the length of said objects, and means for varying the width of said groove.

49. In a machine for facilitating the packing of magnetic objects of oblong shape, a cylindrical rotary magnet having two magnetic poles forming a groove, the north and south magnetic poles being on opposite sides of the groove, said groove being formed circumferentially on the rotary magnet, means for displacing one of the poles with relation to the other to vary the width of the groove, a driving shaft, a feeding receptacle for the objects having a movable part, a cam on the shaft engaging said part, a lever fulcrumed on the machine frame, a brake operated by the lever to arrest rotation of said magnet, a circuit breaker for the rotary magnet, a push bar carried by said lever adapted to disengage said movable part from said cam.

50. In a machine for facilitating the packing of magnetic objects of oblong shape, a cylindrical rotary magnet having two magnetic poles forming a groove, the north and south magnetic poles being on opposite sides of the groove, said groove being formed circumferentially of the rotary magnet, means for displacing one of the poles with relation to the other, to vary the width of the groove, a feeding receptacle for the objects having a movable part, a driving shaft, a cam on the latter engaging said part, a lever fulcrumed on the machine frame, a belt brake adapted to be locked by said lever and to act on the rotary magnet to arrest rotation thereof, and a contact in the circuit of the rotary magnet adapted to be broken when the lever is so actuated, and means carried by said lever adapted to disengage said movable part from said cam.

51. In a machine for facilitating the packing of magnetic objects of oblong shape, a rotary magnet having two parallel magnetic poles forming a circular groove, the north and south magnetic poles being on opposite sides of the groove, means for arresting the rotation of the magnet, a feeding receptacle for the objects having a movable delivery part, a lever fulcrumed on the machine frame, a contact in the circuit of the rotary magnet, and connections for operating said arresting means, breaking said contact, and stopping action of said delivery part upon operating said lever.

52. In a machine for facilitating the packing of magnetic objects of oblong shape, a movable magnet having two parallel magnetic poles forming a groove, the north and south magnetic poles being on opposite sides of the groove, a feeding receptacle for the objects having a movable delivery part, a lever fulcrumed on the machine frame, a contact in the circuit of the magnet, means for arresting the movement of the magnet, and connections for operating said arresting means, breaking said contact, and stopping the action of said delivery part upon operating said lever.

53. In a machine for facilitating the packing of magnetic objects of oblong shape, two parallel magnetic poles, forming a groove, the north and south magnetic poles being on opposite sides of the groove and spaced apart to a distance substantially equal to the length of said objects, a feeding receptacle, said receptacle and said magnet being relatively movable in the direction of the length of the groove, and means for arresting said movement, means for deënergizing said magnet, and manually operable means for simultaneously controlling said arresting means and said deënergizing means.

54. In a machine for facilitating the packing of magnetic objects of oblong shape, having two magnetic poles spaced apart to leave a groove therebetween of a width substantially equal to the length of said objects, a hopper for delivering to said groove, means for varying the width of said groove, and means for varying the width of said hopper in accordance with the width of the groove.

55. In a machine for facilitating the packing of magnetic objects of oblong shape, two magnetic poles spaced apart to form a groove therebetween, the width of said groove being substantially equal to the length of said objects, a hopper delivering to said groove, and magnetic poles upon opposite sides of said hopper tending to straighten said objects to parallel positions before they are delivered to said groove.

56. In a machine for packing magnetic objects, magnetic poles forming a field between themselves to receive the said objects and movable means for bringing said objects into compact form within said field.

57. In a machine for packing magnetic objects, magnetic poles forming an annular field between themselves to receive the said objects and means movable within said annular field for bringing said objects into compact form within said field.

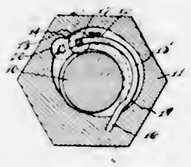
58. In a machine for packing magnetic objects, magnetic poles forming a field between themselves for receiving the said objects and spring actuated means for compressing said objects in said field.

59. In a machine for packing magnetic objects, magnetic poles forming a magnetic field between themselves, means for compressing said objects in said field and means for delivering said objects into said field.

60. In a machine for packing magnetic objects, magnetic poles forming between themselves a magnetic field and having non-magnetic means for guiding said objects into said field, and means for compressing said objects in said field.

61. In a machine for packing magnetic objects, magnetic poles forming between themselves a magnetic field and having non-magnetic means for guiding said objects into said field, means for compressing said objects in said field and means for delivering said objects into said field.

14,291. NUT-LOCK. ARNOLD HEINRICH WEGENER, Hoboken, N. J., assignor to Roller Lock Nut Company, Inc., a Corporation of New York. Filed June 17, 1916. Serial No. 104,287. Original No. 1,093,666, dated Apr. 21, 1914, Serial No. 773,944, filed June 16, 1913. (Cl. 151—25.)



1. The combination with a threaded bolt, of a nut having a recess extending along the thread thereof, said recess having between deeper portions a portion of reduced depth, a locking roller in said recess coöperating with said reduced portion thereof to lock said nut to said bolt but movable past said reduced portion when said nut is forcibly turned, and a spring carried by said nut and tending constantly to hold said roller in locking position, said spring being connected to said roller and so mounted in said nut that it may be moved with said roller into the unlocking position of the latter.

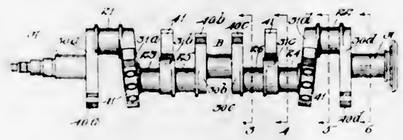
2. The combination with a threaded bolt, of a nut having a recess extending along the thread thereof, said recess having between deeper portions a portion of reduced depth, a locking roller in said recess adapted to coöperate with said reduced portion from either side thereof to lock said nut to said bolt but movable past said reduced portion when said nut is turned with force, and means causing such locking action, said means comprising a spring carried by the nut and constantly connected with the roller.

3. The combination with a threaded bolt, of a nut having a recess adjacent to and extending along the thread of the bolt, said recess having an intermediate reduced portion, a locking roller located in said recess and adapted to engage between said reduced portion thereof and said bolt to lock said nut against unscrewing but movable past said reduced portion when said nut is forcibly unscrewed, and a spring connected to said roller and so located in the nut that it is tensioned by movement of said roller to either side of said reduced portion.

4. A nut having the usual threaded bolt receiving opening and having a recess extending along the thread thereof, said recess having between deeper portions a portion of reduced depth, a locking roller of a diameter greater than the depth of the reduced portion of said recess, and a spring connected to said roller and so connected to the nut that it operates at all times to maintain said roller in, or to press it toward, the reduced portion of said recess, said spring being so located in said nut that it may yield in either direction, when the nut is on a bolt, to an extent that will permit its movement with said roller along said recess to either side of said reduced portion.

5. A nut having the usual threaded bolt receiving opening and having a recess extending along the thread thereof, said recess having between deeper portions a portion of reduced depth, a locking roller of a diameter greater than the depth of the reduced portion of said recess, and a spring comprising a strip of resilient metal having one end fixed in the nut and its free end connected to the roller and operating to maintain said roller normally in the reduced portion of the recess, said spring extending along said recess and being curved about said opening and so spaced both from the bottom of the recess and from said opening, that it may yield in either direction, when the nut is on a bolt, to an extent to permit its movement with said roller along said recess to either side of said reduced portion.

14,292. BALANCED CRANK-SHAFT. STEPHEN I. FEKETE Detroit, Mich., assignor to Hudson Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Jan 8, 1917. Serial No. 141,299. Original No. 1,165,861, dated Dec. 28, 1915, Serial No. 36,602, filed June 28, 1915. (Cl. 74—5.)



3. A crank shaft having six crank pins symmetrically disposed in pairs about the shaft some of which pins are each connected with the shaft by a short crank arm and some of which are connected together in pairs by long crank arms, a counterbalancing weight fixed to each short arm and extending on the opposite sides of the axis of the crank shaft, and a counterbalancing weight which is connected with each long arm and extends therefrom to a point such that its center of weight is across the center from and is 120° removed from the axis of the two crank pins which said long arm connects, each of said counterbalancing weights producing a tendency to deflection which is equal and opposite to that produced by the offcenter masses which it counterbalances.

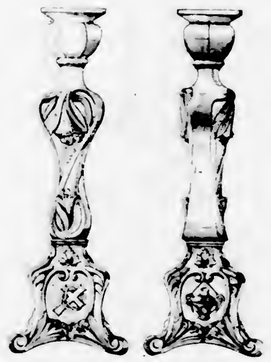
4. A six throw crank shaft for internal combustion engines which consists of a plurality of balanced longitudinal sections each of which sections consists of a crank arm, a part only of one or more associated crank pins, and a weight which produces a tendency to deflection which is equal and opposite to the tendency to deflection produced by the said crank arm and said part of said crank pin or pins.

7. A crank shaft having rotating working parts constituting offcenter masses, which by centrifugal force tend to deflect the crank shaft between its bearings, combined with counterbalancing weights the amount and location of which are such as to produce an equal and opposite tendency to deflect said crank shaft between the bearings.

[Claims 1, 2, 5, and 6 not printed in the Gazette.]

DESIGNS.

50,642. CANDLESTICK FOR ALTARS. GEORGE R. BAILEY, Brooklyn, N. Y., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 7, 1917. Serial No. 153,193. Term of patent 7 years.

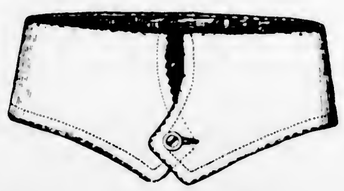






The ornamental design for candle stick for altars, as shown

50,643. COLLAR. MAURICE BALLIN, San Francisco, Cal., assignor to Neustadter Bros., San Francisco, Cal., a Corporation of California. Filed Aug. 9, 1916. Serial No. 114,061. Term of patent 7 years.



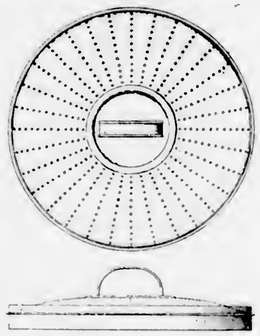
The ornamental design for a collar, as shown.

50,644. TREAD FOR AN AUTOMOBILE-TIRE. HERBERT S. BLYNT, Binghamton, N. Y. Filed Feb. 5, 1917. Serial No. 146,853. Term of patent 14 years.



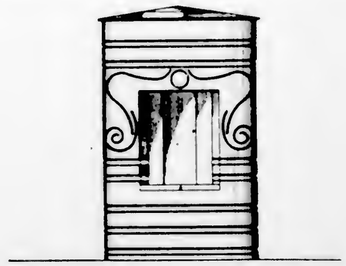
The ornamental design for a tread for an automobile tire, as shown.

50,645. COVER FOR COOKING-RECEPTACLES. SUSAN E. BROCK, Cooper, Tex. Filed Nov. 29, 1916. Serial No. 134,215. Term of patent 3½ years.



The ornamental design for a cover for cooking receptacles, as shown.

50,646. HOG-WATERER. HARLEY S. BUSBY, Washington, Iowa. Filed Jan. 25, 1917. Serial No. 144,539. Term of patent 3½ years.



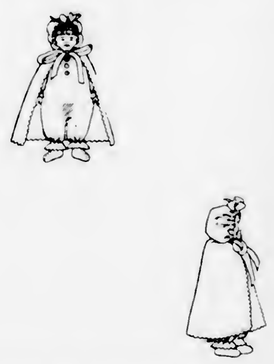
The ornamental design for a hog waterer, as shown.

50,647. PLACARD. JOHN BUSHKOVSKI, Columbus, Ohio. Filed Jan. 12, 1917. Serial No. 142,116. Term of patent 14 years.



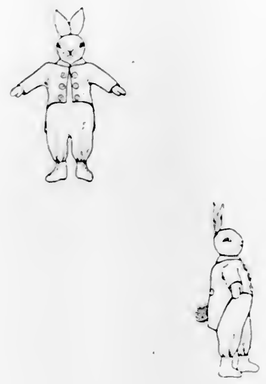
The ornamental design for a placard, as shown.

50,648. DOLL. NELLIE S. DAY, Springfield, Mass. Filed Feb. 9, 1917. Serial No. 147,717. Term of patent 7 years.



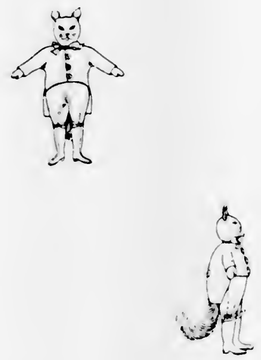
The ornamental design for a doll as shown.

50,649. EFFIGY. NELLIE S. DAY, Springfield, Mass. Filed Feb. 9, 1917. Serial No. 147,718. Term of patent 7 years.



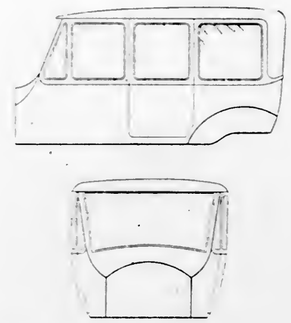
The ornamental design for an effigy as shown.

50,650. EFFIGY. NELLIE S. DAY, Springfield, Mass. Filed Feb. 9, 1917. Serial No. 147,719. Term of patent 7 years.



The ornamental design for an effigy as shown.

50,651. AUTOMOBILE-BODY. CHARLES DUMELIN, New York, N. Y. Filed Jan. 24, 1917. Serial No. 144,303. Term of patent 3½ years.



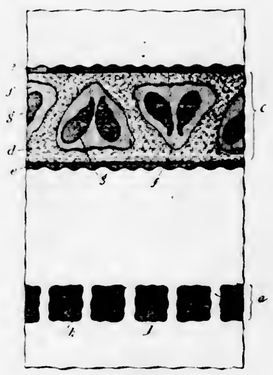
The ornamental design for an automobile body as shown.

50,652. RUBBER BALL. ROBERT C. EDDY, Milwaukee, Wis. Filed Sept. 20, 1913. Serial No. 790,951. Term of patent 14 years.



The ornamental design for a rubber ball, as shown.

50,653. TEXTILE FABRIC. EUGENE IRVING HANSON, New Rochelle, N. Y., assignor to H. R. Mallinson & Co., New York, N. Y., a Firm composed of Hiram Royal Mallinson and Eugene Irving Hanson. Filed Mar. 6, 1917. Serial No. 152,944. Term of patent 3½ years.



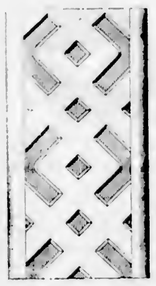
The design for a textile fabric substantially as shown and described.

50,654. TEXTILE FABRIC. EUGENE IRVING HANSON, New Rochelle, N. Y., assignor to H. R. Mallinson & Co., New York, N. Y., a Firm composed of Hiram Royal Mallinson and Eugene Irving Hanson. Filed Mar. 6, 1917. Serial No. 152,946. Term of patent 3½ years.



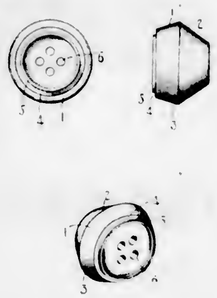
The design for a textile fabric substantially as shown and described.

50,655. TREAD FOR RUBBER TIRES. GERARDUS POST HERRICK, New York, N. Y. Filed Jan. 31, 1917. Serial No. 145,802. Term of patent 3½ years.



The ornamental design for a tread for rubber tire, as shown.

50,656. BUTTON. WILLIAM W. HOBÉ, New York, N. Y. Filed Nov. 9, 1916. Serial No. 130,483. Term of patent 3½ years.



The ornamental design for a button as shown and described.

50,657. DOLL. EDWARD I. HORSMAN, Jr., New York, N. Y. Filed Feb. 23, 1917. Serial No. 150,589. Term of patent 3½ years.



The ornamental design for a doll as shown.

50,658. DOLL. EDWARD I. HORSMAN, Jr., New York, N. Y. Filed Feb. 23, 1917. Serial No. 150,590. Term of patent 3½ years.



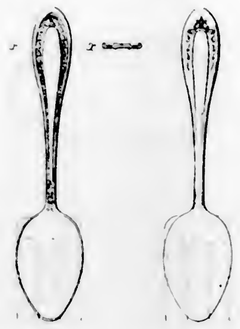
The ornamental design for a doll as shown.

50,659. PIN OR SIMILAR ARTICLE. ALFRED T. HOWARTH, Worcester, Mass. Filed June 7, 1916. Serial No. 102,342. Term of patent 7 years.



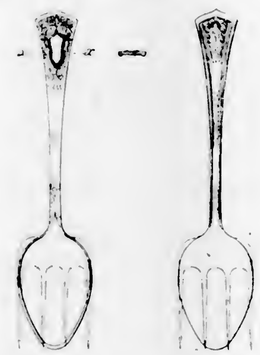
The ornamental design for a pin, or similar article, as shown.

50,660. HANDLE FOR A SPOON, FORK, OR SIMILAR ARTICLE. WILLIAM A. JAMESON, Niagara Falls, N. Y. Filed Feb. 7, 1917. Serial No. 147,247. Term of patent 7 years.



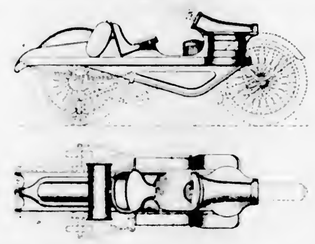
The ornamental design for a handle for a spoon, fork, or similar article, as shown.

50,661. HANDLE FOR A SPOON, FORK, OR SIMILAR ARTICLE. WILLIAM A. JAMESON, Niagara Falls, N. Y. Filed Feb. 7, 1917. Serial No. 147,248. Term of patent 7 years.



The ornamental design for a handle for a spoon, fork, or similar article, as shown.

50,662. FRAME FOR A TWO-WHEELED AUTOVEHICLE. WILLIAM G. MOORE, Miami, Fla. Filed Dec. 9, 1916. Serial No. 136,112. Term of patent 7 years.



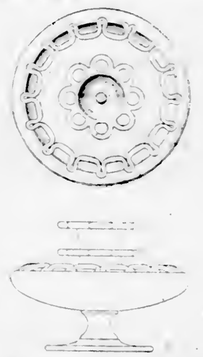
The ornamental design for a frame for a two wheeled auto vehicle as shown.

50,663. ARTICLE OF MANUFACTURE. LOUIS M. MUSLINER, New York, N. Y. Filed Feb. 6, 1917. Serial No. 147,007. Term of patent 7 years.



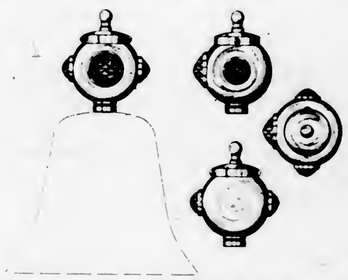
The ornamental design for an article of manufacture, as shown and described.

50,664. FLOWER-HOLDER. ARTHUR JOHN NASH, New York, N. Y. Filed Feb. 3, 1917. Serial No. 146,528. Term of patent 7 years.



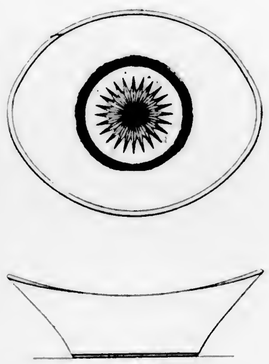
The ornamental design for a flower holder, as shown.

50,665. KNOB FOR SIGNAL-BELLS. ANDREW TRUST POEHLMANN, Catonsville, Md. Filed Jan. 15, 1917. Serial No. 142,571. Term of patent 14 years.



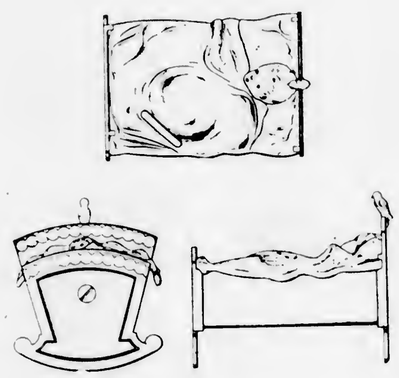
The ornamental design for a knob for signal bells, as shown.

50,666. NAPPY. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Hersey & Co., Newark, Ohio. Filed Feb. 16, 1917. Serial No. 149,151. Term of patent 14 years.



The design for a nappy, as shown.

50,667. TOY CRADLE-BANK. ALFRED H. SANDER, Newark, N. J., assignor to Grey Iron Casting Company, Mount Joy, Pa., a Corporation of Pennsylvania. Filed Feb. 29, 1916. Serial No. 81,273. Term of patent 7 years.



The ornamental design for toy cradle bank, as shown.

50,668. CIRCLET. ANTON F. STEINER and EMMA W. STEINER, Crane, Mo. Filed Mar. 4, 1916. Serial No. 82,249. Term of patent 14 years.



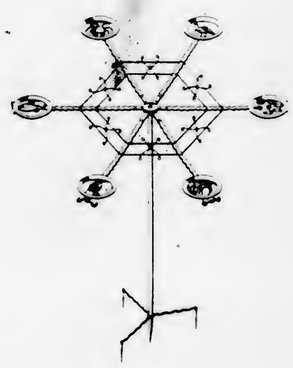
The ornamental design for a circlet, as shown.

50,669. STATUETTE OR SIMILAR ARTICLE. JOHN FRANK TILLER, Washington, D. C. Filed Feb. 8, 1917. Serial No. 147,500. Term of patent 3½ years.



The ornamental design for a statuette or similar article as shown and described.

50,670. CAMP-TABLE. ALEX VAJDA, North Chicago, Ill. Filed Dec. 27, 1916. Serial No. 139,218. Term of patent 7 years.



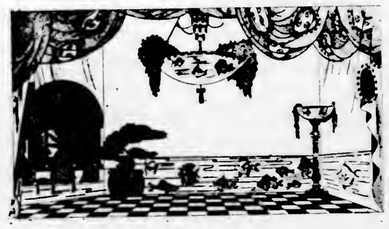
The ornamental design for a camp table, as shown.

50,671. CANDLE. HAROLD H. WILL, Syracuse, N. Y., assignor to The Will & Baumer Co., Syracuse, N. Y., a Corporation of New York. Filed Aug. 29, 1916. Serial No. 117,546. Term of patent 14 years.



The ornamental design for a candle, substantially as shown and described.

50,672. DROP-CURTAIN. IRENE A. WRIGHT, Kearney, N. J. Filed Dec. 18, 1916. Serial No. 137,734. Term of patent 7 years.



The ornamental design for a drop curtain as shown.

TRADE-MARKS

PUBLISHED APRIL 24, 1917.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 84,830. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE UZIT MANUFACTURING COMPANY, Brooklyn, N. Y. Filed Feb. 27, 1915.



The words "Trade Mark for the Skin" are disclaimed.
Particular description of goods.—Salves, Ointments, Glycerids, and Lotions for the Skin.
Claims use since Feb. 17, 1915.

Ser. No. 88,321. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. P. BRAUN COMPANY, Chicago, Ill. Filed July 31, 1915.

CREAM-FLAKE

Particular description of goods.—Lard Substitute.
Claims use since Dec. 1, 1904.

Ser. No. 90,255. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WALLACE B. COATES, Jr., Lynn, Mass. Filed Nov. 1, 1915.

VENUSA



Particular description of goods.—Toilet Preparations—viz., Hair-Tonic, Liquid Powder, Creams for the Skin, Powders for the Skin, and Tooth-Powder.
Claims use since November, 1907.

Ser. No. 90,815. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE ROY CORL, Buda, Ill. Filed Nov. 22, 1915.



No claim is made for the term "Perfection."
Particular description of goods.—A Hog Tonic.
Claims use since Apr. 1, 1915, and for three or four years prior thereto by the Perfection Live Stock Remedy Company, my predecessor.

Ser. No. 91,372. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE HOLBROOK MFG. CO., Jersey City, N. J. Filed Dec. 10, 1915. Under ten-year proviso.

"LIMPIA-SOLO"

Particular description of goods.—Scouring-Soap.
Claims use since Jan. 1, 1895.

Ser. No. 92,580. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEL ORO GROVES, Safety Harbor, Fla. Filed Feb. 2, 1916.



Particular description of goods.—Oranges and Grape-Fruit.
Claims use since Nov. 1, 1908.

Ser. No. 94,413. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. P. BRAUN COMPANY, Chicago, Ill. Filed Apr. 14, 1916.

STAR

Particular description of goods.—Oleomargarin.
Claims use since Nov. 9, 1914.

Ser. No. 96,785. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STANLEY HAYDOCK, Montreal, Canada. Filed July 24, 1916.

BETTER DAYS

Particular description of goods.—Medicinal Preparations for External Use, Such as Liniments and Plasters for the Treatment of Rheumatism and Cramps and Aches and Pains Generally Due to Colds, Strains, and Indigestion.
Claims use since May 5, 1916.

Ser. No. 97,034. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) FUEL CITY MANUFACTURING CO., Clarksburg, W. Va. Filed Aug. 2, 1916.

"WILPET"

Particular description of goods.—Turpentine Cups and Aprons.
Claims use since Feb. 1, 1915.

Ser. No. 97,268. (CLASS 39. CLOTHING.) CASS & DALEY SHOE COMPANY, Salem, Mass. Filed Aug. 11, 1916.

Cadaco

The word "Cadaco."
Particular description of goods.—Leather Boots and Shoes.
Claims use since June, 1915.

Ser. No. 97,347. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THOS. E. GREANEY, Boston, Mass. Filed Aug. 15, 1916.

Tycraft

The "Tycraft."
Particular description of goods.—Necktles and Mufflers.
Claims use since February, 1904.

Ser. No. 97,881. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SCOTT & BOWNE, Bloomfield, N. J. Filed Sept. 9, 1916.

JERMAX

Particular description of goods.—Antiseptic Solution.
Claims use since Aug. 23, 1916.

Ser. No. 98,209. (CLASS 32. FURNITURE AND UPHOLSTERY.) GASAU-THOMPSON COMPANY, Brooklyn, N. Y. Filed Sept. 25, 1916.

DIAMOND

Particular description of goods.—Wire Fabric Used Particularly as Spring-Bottoms for Beds, Davenettes, Couches, Folding Chairs, Cots, and Cribs.
Claims use since Sept. 16, 1916.

Ser. No. 98,294. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KALO-KAIN CHEMICAL CO., Detroit, Mich. Filed Sept. 28, 1916.

KALO-KAIN

Particular description of goods.—Medicinal Preparation for Painless Dentistry Operations, Dispensed in Ampuls.
Claims use since Sept. 13, 1916.

Ser. No. 98,719. (CLASS 17. TOBACCO PRODUCTS.) THE UNITED KINGDOM TOBACCO COMPANY, LIMITED, London, England. Filed Oct. 17, 1916.



The background against which the representation of the thistle is displayed is printed in red. For the purposes of this registration, but without waiving its common-law rights thereto, no claim is made by the applicant to the descriptive words, geographical term, or proper names "Major Drapkin & Co., London, Branch of the United Kingdom Tobacco Co. Ltd.," which were removed from the drawing.
Particular description of goods.—Cigarettes.
Claims use since 1903.

Ser. No. 99,341. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DUNDAS BROTHERS CO., Philadelphia, Pa. Filed Nov. 17, 1916.



The words "Farina, Marca, Qualità, Sublime, Dundas Bro's. Co., Philadelphia, Pa." and the representation of the coat-of-arms of the United States and Italy not being claimed, the portrait being fanciful.
Particular description of goods.—Wheat-Flour.
Claims use since about 1916.

Ser. No. 99,531. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GAIL G. BOWMAN, Cleveland, Ohio. Filed Nov. 25, 1916.



Particular description of goods.—Castor-Oil.
Claims use since Feb. 1, 1916.

Ser. No. 99,669. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TITANIUM PIGMENT COMPANY, INC., Niagara Falls, N. Y. Filed Dec. 1, 1916.

TITANOX

Particular description of goods.—Pigments.
Claims use since Nov. 23, 1916.

Ser. No. 99,812. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) M. GOUDARD & MENNESSON, Neuilly-sur-Seine, France. Filed Dec. 1, 1916.

SOLEX

Particular description of goods.—Motor-Cycles and Frames, Forks, Axles, Wheels, and Change-Speed Gear for Motor-Cycles.
Claims use since July 1, 1916.

Ser. No. 99,901. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) QUEEN CITY FLOUR & FEED CO., Cincinnati, Ohio. Filed Dec. 13, 1916.

PAULA

No claim is made to the exclusive right to the words "Perfect Patent" and "Flour."
Particular description of goods.—Wheat-Flour.
Claims use since about July 1, 1916.

Ser. No. 100,148. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE ACIERAL COMPANY OF AMERICA, New York, N. Y. Filed Dec. 26, 1916.

ACIERAL

Particular description of goods.—Metal or Aluminum Compounds in the Form of Ingots, Castings, Rods, Plates.
Claims use since June 7, 1916.

Ser. No. 100,149. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE ACIERAL COMPANY OF AMERICA, New York, N. Y. Filed Dec. 26, 1916.

A.C.A.

Particular description of goods.—Metal or Aluminum Compounds in the Form of Ingots, Castings, Rods, Plates.
Claims use since June 7, 1916.

Ser. No. 100,423. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE CONTINENTAL FIBRE COMPANY, Newark, Del. Filed Jan. 8, 1917.

CONITE

Particular description of goods.—Electrical Insulating Material.
Claims use since Aug. 1, 1916.

Ser. No. 100,446. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FRANK LIST MCMECHEN, San Diego, Cal. Filed Jan. 8, 1917.

STEEMO

Particular description of goods.—Automatic Vapor-Injector for Gas-Engines and other Devices in Which Exists a Vacuum or Partial Vacuum.
Claims use since Dec. 1, 1916.

Ser. No. 100,491. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WM. C. DOAN, Zanesville, Ohio. Filed Jan. 9, 1917.

NERV-WORTH

No claim being made for the words "Tonic Laxative Tablets."

Particular description of goods.—A Tonic Laxative Tablet.

Claims use since Nov. 1, 1915.

Ser. No. 100,527. (CLASS 39. CLOTHING.) H. M. SAWYER & SON, East Cambridge, Mass. Filed Jan. 10, 1917.



The words "Sawyer's Slickers" being disclaimed.

Particular description of goods.—Waterproof Coats, Slickers, Jackets, Pants, Hats, Aprons, and Ponchos.

Claims use since the 1st day of July, 1916.

Ser. No. 100,630. (CLASS 2. RECEPTACLES.) PAPER MILLS SPECIALTY CO. INC., Chicago, Ill. Filed Jan. 15, 1917.

Pamisco

Particular description of goods.—Paper Drinking-Cups, Paper Lunch Rolls or Wrappers, and Paper Egg-Carriers.

Claims use since April, 1916.

Ser. No. 100,651. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GLOUE CANNING CO., Eastport, Me. Filed Jan. 16, 1917.

CLID

Particular description of goods.—Canned Sardines.

Claims use since Sept. 21, 1916.

Ser. No. 100,671. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HIRSH & SCHOFIELD, INC., New York, N. Y. Filed Jan. 17, 1917.

Par-o-lac

Particular description of goods.—Material for Coating the Interior of Wooden Beer Receptacles.

Claims use since Dec. 28, 1916.

Ser. No. 100,733. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PERRY AARONS, New York, N. Y. Filed Jan. 19, 1917.



The portrait shown being fanciful.

Particular description of goods.—Cheese.

Claims use since Oct. 12, 1916.

Ser. No. 100,773. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) GUSTAV AUGUSTUS HENRY MULLER, New York, N. Y. Filed Jan. 20, 1917.

"LUMINAL"

Particular description of goods.—Ready-Mixed Paints.

Claims use since the 31st day of May, 1916.

Ser. No. 100,787. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN METAL PRODUCTS COMPANY, Milwaukee, Wis. Filed Jan. 22, 1917.

AMPCO

Particular description of goods.—Metals Resembling Bronze and Castings Made from Said Metal.

Claims use since June 2, 1914.

Ser. No. 100,894. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KEHLOE FLOUR MILLS CO., St. Louis, Mo. Filed Jan. 24, 1917.



The applicant disclaims exclusive use of any of the words except the word "Diana." The lines on the drawing are not intended to indicate color, but are used merely as shading for the drawing.

Particular description of goods.—Wheat-Flour and Self-Rising Flour.

Claims use since about January, 1885.

Ser. No. 100,911. (CLASS 39. CLOTHING.) HARRY COLLINS, New York, N. Y. Filed Jan. 25, 1917.



No claim being made to the name "Harry Collins" and to the words "Art in Dress."

Particular description of goods.—Ladies' Outer Wearing-Apparel Consisting of Gowns, Dress, Shirt, and Under Waists, Cloaks, Outer and Under Suits, and Hats.

Claims use since about Jan. 1, 1914.

Ser. No. 100,935. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) RUBBER AND CELLULOID HARNESS TRIMMING CO., Newark, N. J. Filed Jan. 25, 1917.

KOCHUK

Particular description of goods.—Paint, Varnish, Nail, Hair, Shaving, and Clothes Brushes.

Claims use since about Dec. 1, 1916.

Ser. No. 101,044. (CLASS 10. FERTILIZERS.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Jan. 30, 1917.

Raphoro

Particular description of goods.—Fertilizer.

Claims use since Oct. 1, 1916.

Ser. No. 101,116. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) L. C. CHASE & COMPANY, Boston, Mass. Filed Feb. 2, 1917. Under ten-year proviso.

CHASE

Particular description of goods.—Artificial Leather, Woven Textile Fabrics Made Wholly or in Part of Cotton, and Coated with Rubber or Waterproof Surface Coating; Woven Textile Fabrics Made Wholly or in Part of Mohairs or other Animal Hair and Coated with Rubber or Waterproof Surface Coating; a Leather Substitute for Use in the Manufacture of Shoes and Similar Purposes Made Partly of Woven Textile Material; Woven Textile Fabrics Coated with Rubber or Waterproof Surface Coating for Automobile Tops, Curtain Sides, and Upholstery.

Claims use since at least as early as 1867.

Ser. No. 101,146. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHARLES H. GOLDSMITH, Philadelphia, Pa. Filed Feb. 3, 1917.

Komfort

The word "Kloth" is disclaimed.

Particular description of goods.—Crash Cloth, Panama Cloth, and Imitation Panama Fabric.

Claims use since on or about Mar. 15, 1916.

Ser. No. 101,175. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PHILIP MUNTER CO., INC., New York, N. Y. Filed Feb. 5, 1917.

Chérubins

Particular description of goods.—Face-Powder, Rouge and Powder Compacts, Creams, Toilet Water, and Perfume.

Claims use since July 7, 1916.

Ser. No. 101,183. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) TOWNE AND FILIPPINI, Crows Landing, Cal. Filed Feb. 5, 1917.

4 IN 1

Particular description of goods.—Automobile-Polish.

Claims use since Jan. 10, 1917.

Ser. No. 101,252. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMERICAN BLEACHED GOODS COMPANY, New York, N. Y. Filed Feb. 9, 1917.

HOLIDAY

No claim is made to the exclusive use of the word "Suiting."

Particular description of goods.—Cotton Piece Goods.

Claims use since Jan. 24, 1917.

Ser. No. 101,284. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ELWOOD RENDER, Fairmont, Nebr. Filed Feb. 10, 1917.

HI-LO

Particular description of goods.—A Game of Cards.

Claims use since Jan. 15, 1917.

Ser. No. 101,287. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CUNARDI PHARMACAL COMPANY, Burlington, Iowa. Filed Feb. 10, 1917.

CUNARDI

Particular description of goods.—Healing-Powders for Application to Wounds.
Claims use since Apr. 10, 1915.

Ser. No. 101,299. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PARK CHEMICAL COMPANY, Detroit, Mich. Filed Feb. 10, 1917.

KLEAN HEAT

Particular description of goods.—Substances or Materials Used in the Hardening of Steel and in the Heat Treatment of Steel.
Claims use since Nov. 7, 1912.

Ser. No. 101,337. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) NATIONAL SMELTING & REFINING CORPORATION, New York, N. Y. Filed Feb. 12, 1917.



Particular description of goods.—Platinum-Solder, Gold-Solder, and Silver-Solder.
Claims use since its organization on or about the 15th day of October, 1913.

Ser. No. 101,364. (CLASS 12. CONSTRUCTION MATERIALS.) GREAT SOUTHERN LUMBER COMPANY, Bogalusa, La. Filed Feb. 14, 1917.

BOGALUSA

The word "Bogalusa."
Particular description of goods.—Shingles, Laths, Sawed Lumber, Planed Lumber, Sawed Timbers, and Planed Timbers.
Claims use since on or about July 1, 1914.

Ser. No. 101,428. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVID J. LITTLE, Binghamton, N. Y. Filed Feb. 16, 1917.

Cazolene

The trade-mark consists of the word "Cazolene."
Particular description of goods.—A Toilet Preparation—Namely, Tooth-Wash, an Antiseptic Compound.
Claims use since Apr. 2, 1916.

Ser. No. 101,500. (CLASS 39. CLOTHING.) MAY HOSIERY MILLS, Burlington, N. C. Filed Feb. 19, 1917.

B.V. May

The mark being the facsimile signature of B. V. May, a member of the firm.
Particular description of goods.—Hosiery.
Claims use since June 26, 1916.

Ser. No. 101,591. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WILLIAM JORDAN BROUSE, Madrid, N. Y. Filed Feb. 23, 1917.

Brouse's
Marvo-Lusto

The word "Brouse's" being applicant's facsimile signature.
Particular description of goods.—A Cleaning and Polishing Material for Automobiles, Pianos, Woodwork, and Furniture.
Claims use since Oct. 1, 1916.

Ser. No. 101,624. (CLASS 39. CLOTHING.) THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y. Filed Feb. 23, 1917.

KAKARA

Particular description of goods.—Women's, Children's, and Infants' Coats, Cloaks, Wraps, Capes, Dresses, Dress-Waists, and Outer Skirts.
Claims use since about Dec. 1, 1916.

Ser. No. 101,655. (CLASS 17. TOBACCO PRODUCTS.) MACLIN-ZIMMER-MCGILL TOBACCO CO. INCORPORATED, Petersburg, Va. Filed Feb. 24, 1917.



Particular description of goods.—Smoking-Tobacco, Chewing-Tobacco, Snuff, and Leaf-Tobacco.
Claims use since 1887.

Ser. No. 101,656. (CLASS 17. TOBACCO PRODUCTS.) MACLIN-ZIMMER-MCGILL TOBACCO CO. INCORPORATED, Petersburg, Va. Filed Feb. 24, 1917.



Particular description of goods.—Smoking-Tobacco, Chewing-Tobacco, Snuff, and Leaf-Tobacco.
Claims use since 1904.

Ser. No. 101,675. (CLASS 10. FERTILIZERS.) THE COE-MORTIMER COMPANY, New York, N. Y. Filed Feb. 26, 1917. Under ten-year proviso.

E. FRANK COE'S

Particular description of goods.—Fertilizer.
Claims use since 1857.

Ser. No. 101,702. (CLASS 39. CLOTHING.) CLARENCE M. FLORA, Oklahoma, Okla. Filed Feb. 26, 1917.

E.E.E.R.
W.V.A.R.

Particular description of goods.—Dress, Negligée, and Work Shirts.
Claims use since Oct. 1, 1916.

Ser. No. 101,728. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) RALPH S. BYRAM, Germantown, Pa. Filed Feb. 27, 1917.



Particular description of goods.—Laces, Knitted Insertion, and Knitted Edgings for Underwear.
Claims use since Jan. 2, 1917.

Ser. No. 101,729. (CLASS 39. CLOTHING.) GEORGE BORGFELDT & CO., New York, N. Y. Filed Feb. 27, 1917.

Gibico

Particular description of goods.—Hats and Caps for Men, Women, and Children.
Claims use since Feb. 23, 1917.

Ser. No. 101,771. (CLASS 39. CLOTHING.) BRADLEY & METCALF CO., Milwaukee, Wis. Filed Feb. 28, 1917.

The COUNTRY GENTLEMAN

The words "The Country Gentleman."
Particular description of goods.—Men's, Boys', and Youths' Shoes Made from Leather.
Claims use since January, 1916.

Ser. No. 102,048. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE QUENCHO COMPANY, Baltimore, Md. Filed Mar. 10, 1917.

QUENCHO

Particular description of goods.—Non-Alcoholic Beverages to be Sold as a Soft Drink.
Claims use since Mar. 9, 1917.

Ser. No. 102,064. (CLASS 38. PRINTS AND PUBLICATIONS.) AUTOMOTIVE ENGINEERING PUBLISHING CO. INC., Bridgeport, CONN. Filed Mar. 12, 1917.

AUTOMOTIVE ENGINEERING

Particular description of goods.—A Monthly Magazine.
Claims use since September, 1916.

Ser. No. 102,328. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NATIONAL CARBON COMPANY, Long Island City, N. Y. Filed Mar. 22, 1917.

DAYLO

Particular description of goods.—Portable Electric Lights and Dry Batteries.
Claims use since about Mar. 20, 1917.

TRADE-MARK REGISTRATIONS GRANTED

APRIL 24, 1917.

116,267. FLUXES FOR AUTOGENOUSLY WELDING ALUMINIUM AND ALUMINIUM ALLOYS. Aktien-Gesellschaft für Autogene Aluminium-Schweissung, Zurich, Switzerland.
Filed September 6, 1916. Serial No. 97,815. PUBLISHED FEBRUARY 20, 1917.

116,268. MEDICINAL REMEDIES FOR CERTAIN DISEASES, SUCH AS INDIGESTION, DYSPEPSIA, AND CONSTIPATION. Charles Allen, St. Louis, Mo.
Filed January 8, 1917. Serial No. 100,415. PUBLISHED FEBRUARY 20, 1917.

116,269. ELASTIC VEHICLE-TIRES. The American Rubber and Tire Company, Akron, Ohio.
Filed December 26, 1916. Serial No. 100,150. PUBLISHED FEBRUARY 20, 1917.

116,270. POSITIVE AND NEGATIVE PICTURE-FILMS. Artfilm Studios, Cleveland, Ohio.
Filed January 8, 1917. Serial No. 100,417. PUBLISHED FEBRUARY 13, 1917.

116,271. CORNMEAL. Aunt Jemima Mills Company, St. Joseph, Mo.
Filed October 16, 1916. Serial No. 98,678. PUBLISHED DECEMBER 26, 1916.

116,272. PEANUTS. The Bain Peanut Co., Inc., Wakefield, Va.
Filed March 18, 1916. Serial No. 93,624. PUBLISHED FEBRUARY 13, 1917.

116,273. YARNS OF WOOL, WORSTED, OR HAIR. J. and J. Baldwin and Partners, Limited, Halifax, England.
Filed December 13, 1916. Serial No. 99,887. PUBLISHED FEBRUARY 20, 1917.

116,274. SPECIALLY-PREPARED BARLEY. Barley Foods Co., Morgantown, W. Va.
Filed December 9, 1916. Serial No. 99,802. PUBLISHED FEBRUARY 13, 1917.

116,275. BUCKWHEAT-FLOUR. Barley Foods Co., Morgantown, W. Va.
Filed December 9, 1916. Serial No. 99,804. PUBLISHED FEBRUARY 13, 1917.

116,276. FOLDING AND COMBINATION SCREENS AND RACKS MADE OF WOOD, FIBER, AND SIMILAR MATERIALS. The Beaver Company, Buffalo, N. Y.
Filed December 14, 1916. Serial No. 99,920. PUBLISHED FEBRUARY 20, 1917.

116,277. FOLDING AND COMBINATION SCREENS AND RACKS MADE OF WOOD, FIBER, AND SIMILAR MATERIALS. The Beaver Company, Buffalo, N. Y.
Filed December 14, 1916. Serial No. 99,921. PUBLISHED FEBRUARY 20, 1917.

116,278. FOLDING AND COMBINATION SCREENS AND RACKS MADE OF WOOD, FIBER, AND SIMILAR MATERIALS. The Beaver Company, Buffalo, N. Y.
Filed December 14, 1916. Serial No. 99,924. PUBLISHED FEBRUARY 20, 1917.

116,279. CHEWING-GUM. The Bee Bee Confection Company, Dayton, Ohio.
Filed August 25, 1916. Serial No. 97,614. PUBLISHED FEBRUARY 20, 1917.

116,280. CANDY. Blanke-Wenneker Candy Company, St. Louis, Mo.
Filed September 7, 1916. Serial No. 97,833. PUBLISHED FEBRUARY 20, 1917.

116,281. HANDKERCHIEFS. George Borgfeldt & Co., New York, N. Y.
Filed December 28, 1916. Serial No. 100,214. PUBLISHED FEBRUARY 20, 1917.

116,282. SOAP. A. Bourjois & Co., Inc., New York, N. Y.
Filed January 22, 1916. Serial No. 92,323. PUBLISHED JANUARY 2, 1917.

116,283. TOILET POWDER. A. Bourjois & Co., Inc., New York, N. Y.
Filed January 10, 1917. Serial No. 100,509. PUBLISHED FEBRUARY 20, 1917.

116,284. DOMESTIC ONIONS IN THEIR NATURAL STATE, WITHOUT TOPS. Bridge & Souter Co. Inc., Canastota, N. Y.
Filed September 22, 1916. Serial No. 98,159. PUBLISHED FEBRUARY 13, 1917.

116,285. BEVERAGES, NON-ALCOHOLIC, SOLD AS A SOFT COLA DRINK. J. Wise Brown, Tulsa, Okla.
Filed October 9, 1916. Serial No. 98,511. PUBLISHED NOVEMBER 28, 1916.

116,286. DAIRY, STOCK, CATTLE, AND FARM-ANIMAL FOOD. The Buckeye Cotton Oil Company, Cincinnati, Ohio.
Filed December 21, 1916. Serial No. 100,076. PUBLISHED FEBRUARY 13, 1917.

116,287. EMBROIDERY-TINSEL, EMBROIDERY-FLOSS, EMBROIDERY-SILK, EMBROIDERY-CORD, AND EMBROIDERY-ROPE. Campbell, Metzger & Jacobson, New York, N. Y.
Filed December 1, 1916. Serial No. 99,650. PUBLISHED FEBRUARY 20, 1917.

116,288. MOTOR-CARS. The Clyde Cars Company, Clyde, Ohio, and New York, N. Y.
Filed October 17, 1916. Serial No. 98,720. PUBLISHED JANUARY 9, 1917.

116,289. REMEDY FOR DISEASES AND DISORDERS OF THE UTERUS. Barzillai L. Cole, St. Louis, Mo.
Filed December 29, 1916. Serial No. 100,233. PUBLISHED FEBRUARY 20, 1917.

116,290. ETCHED AND ENGRAVED PLATES. The Colorplate Engraving Company, New York, N. Y.
Filed March 28, 1916. Serial No. 93,931. PUBLISHED JANUARY 2, 1917.

116,291. BAKING-POWDER. Commercial Importing Co., Seattle, Wash.
Filed January 2, 1917. Serial No. 100,281. PUBLISHED FEBRUARY 20, 1917.

116,292. MINERS' ELECTRIC LAMPS. The Concordia Safety Lamp Co., Inc., Pittsburgh, Pa.
Filed October 26, 1914. Serial No. 82,166. PUBLISHED JANUARY 5, 1915.

116,293. RUBBER PNEUMATIC TIRES. Continental Rubber Works, Erie, Pa.
Filed December 11, 1916. Serial No. 99,839. PUBLISHED FEBRUARY 20, 1917.

116,294. PREPARATION TO INCREASE THE VAPORIZATION AND INTENSIFY HYDROCARBON FUELS. THE CULMER CHEMICAL COMPANY, Independence, Kans.
Filed October 23, 1916. Serial No. 98,827. PUBLISHED FEBRUARY 20, 1917.

116,295. FRUIT—NAMELY, DRIED FRUITS, SUCH AS PRUNES. HAROLD P. CURTIS, San Jose, Cal.
Filed December 10, 1915. Serial No. 91,366. PUBLISHED FEBRUARY 13, 1917.

116,296. CANNED FRUITS AND CANNED VEGETABLES. DAILEY-UDELL COMPANY INCORPORATED, Brockport, N. Y.
Filed December 6, 1915. Serial No. 91,216. PUBLISHED FEBRUARY 20, 1917.

116,297. CAKE, POTATO CHIPS, DOUGHNUTS, AND SALTED NUTS. MARGARET DYER, Collinsville, Conn.
Filed November 25, 1916. Serial No. 99,537. PUBLISHED FEBRUARY 13, 1917.

116,298. CEREAL BEVERAGE. EAST ST. LOUIS-NEW ATHENS BREWING CO., New Athens, Ill.
Filed January 22, 1917. Serial No. 100,798. PUBLISHED FEBRUARY 20, 1917.

116,299. NOODLES. RUDOLF ELSINGER, Cincinnati, Ohio, assignor to Mothers Macaroni Company, Minneapolis, Minn., a Corporation.
Filed June 12, 1916. Serial No. 95,815. PUBLISHED FEBRUARY 13, 1917.

116,300. WHEAT-FLOUR. ENID MILLING COMPANY, Enid, Okla.
Filed December 4, 1916. Serial No. 99,704. PUBLISHED FEBRUARY 13, 1917.

116,301. WHEAT-FLOUR. ENID MILLING COMPANY, Enid, Okla.
Filed December 4, 1916. Serial No. 99,705. PUBLISHED FEBRUARY 13, 1917.

116,302. LIVER-TONIC FOR THE TREATMENT OF BILIOUSNESS, CONSTIPATION, INDIGESTION, AND SOUR STOMACH. ROBERT J. ESTES, Coalgate, Okla.
Filed January 9, 1917. Serial No. 100,492. PUBLISHED FEBRUARY 20, 1917.

116,303. LIQUID MEDICINE FOR INDIGESTION, &c. FOSTER & MUTTON, Lynchburg, Va.
Filed December 22, 1916. Serial No. 100,090. PUBLISHED FEBRUARY 20, 1917.

116,304. CLEANER, DEODORANT, GERMICIDE, AND INSECTICIDE. FRANTZ, BUCHANAN & CO., INC., Camden, N. J.
Filed January 12, 1917. Serial No. 100,553. PUBLISHED FEBRUARY 20, 1917.

116,305. LIP-REDUCING LOTION. LYDIA GARDNER, Joplin, Mo.
Filed January 5, 1917. Serial No. 100,368. PUBLISHED FEBRUARY 20, 1917.

116,306. CERTAIN NAMED HEATING APPARATUS. GAS APPLIANCE COMPANY, INC., Philadelphia, Pa.
Filed November 20, 1915. Serial No. 90,791. PUBLISHED FEBRUARY 13, 1917.

116,307. COTTON PIECE GOODS. J. W. GODDARD & SONS, INCORPORATED, New York, N. Y.
Filed December 22, 1916. Serial No. 100,092. PUBLISHED FEBRUARY 6, 1917.

116,308. POULTRY FEED KNOWN AS EGG MASH, SCRATCH FEED, LITTLE-CHICK FEED, PIGEON FEED, AND POULTRY FEED. SAMUEL GOLDBERG, Detroit, Mich.
Filed November 9, 1916. Serial No. 99,188. PUBLISHED FEBRUARY 20, 1917.

116,309. RUBBER TIRES. THE GORDON TIRE & RUBBER CO., Canton, Ohio.
Filed December 18, 1916. Serial No. 100,007. PUBLISHED FEBRUARY 20, 1917.

116,310. COFFEE, TEA, FLAVORING EXTRACTS FOR FOODS, SPICES, AND ROLLED OATS. GOWAN-LENNING-BROWN CO., Duluth, Minn.
Filed January 5, 1917. Serial No. 100,369. PUBLISHED FEBRUARY 13, 1917.

116,311. DRESSED POULTRY. GRANT BROTHERS CO., Marion, Ind.
Filed January 2, 1917. Serial No. 100,291. PUBLISHED FEBRUARY 13, 1917.

116,312. WOOLEN PIECE GOODS. HAGER, CLARK & CO., New York, N. Y.
Filed December 28, 1916. Serial No. 100,216. PUBLISHED FEBRUARY 20, 1917.

116,313. CANNED CRABS. THE HALE COMPANY, San Francisco, Cal.
Filed December 26, 1916. Serial No. 100,166. PUBLISHED FEBRUARY 13, 1917.

116,314. CANNED CRABS. THE HALE COMPANY, San Francisco, Cal.
Filed December 26, 1916. Serial No. 110,167. PUBLISHED FEBRUARY 13, 1917.

116,315. WHEAT-FLOUR. PETER HAUPT, New Athens, Ill.
Filed December 18, 1916. Serial No. 100,008. PUBLISHED FEBRUARY 13, 1917.

116,316. HAIR-DRESSING. THE HEROLIN MEDICINE COMPANY, Atlanta, Ga.
Filed December 5, 1916. Serial No. 99,727. PUBLISHED JANUARY 30, 1917.

116,317. WHEAT-FLOUR. HEZEL MILLING COMPANY, East St. Louis, Ill.
Filed December 15, 1916. Serial No. 99,960. PUBLISHED FEBRUARY 13, 1917.

116,318. CHEESE. J. S. HOFFMAN COMPANY, Chicago, Ill.
Filed December 20, 1916. Serial No. 100,057. PUBLISHED FEBRUARY 13, 1917.

116,319. CHEESE. J. S. HOFFMAN COMPANY, Chicago, Ill.
Filed December 20, 1916. Serial No. 100,058. PUBLISHED FEBRUARY 13, 1917.

116,320. CHEESE. J. S. HOFFMAN COMPANY, Chicago, Ill.
Filed December 20, 1916. Serial No. 100,059. PUBLISHED FEBRUARY 13, 1917.

116,321. BEVERAGE-FORMING FOOD PRODUCT IN THE FORM OF READILY-SOLUBLE POWDER OR TABLETS. ALEXANDER HORLICK, Milwaukee, Wis.
Filed November 17, 1915. Serial No. 90,702. PUBLISHED FEBRUARY 20, 1917.

116,322. CHEMICAL COMPOUND FOR USE IN GASOLENE FOR INTERNAL-COMBUSTION ENGINES. THE HOWARD-VAUGHAN CO., Niagara Falls, N. Y.
Filed November 4, 1916. Serial No. 99,086. PUBLISHED FEBRUARY 20, 1917.

116,323. MEDICINAL COMPOUND FOR CERTAIN NAMED DISEASES. THE A. J. HULL MEDICINE CO., Findlay, Ohio.
Filed December 4, 1916. Serial No. 99,710. PUBLISHED FEBRUARY 20, 1917.

116,324. TOY CYCLES. THE KADOOLIATOR PEOPLE, INC., Terre Haute, Ind.
Filed January 8, 1917. Serial No. 100,431. PUBLISHED FEBRUARY 20, 1917.

116,325. STOCK FEED COMPOSED WHOLLY OR MAINLY OF GRAINS AND SEEDS OR MIXTURES THEREOF. CHAS. A. KRAUSE MILLING CO., Greenfield, Wis.
Filed January 2, 1917. Serial No. 100,293. PUBLISHED FEBRUARY 13, 1917.

116,326. CERTAIN NAMED STANDARDS, POLES, PILING, BRICK, BLOCKS, AND TILES. H. A. LANDWEHR, Los Angeles, Cal.
Filed October 12, 1916. Serial No. 98,599. PUBLISHED FEBRUARY 20, 1917.

116,327. CANNED VEGETABLES AND SAUER-KRAUT. LANGE CANNING CO., Eau Claire, Wis.
Filed June 8, 1916. Serial No. 95,707. PUBLISHED FEBRUARY 13, 1917.

116,328. WHEAT-FLOUR. THE LARABEE FLOUR MILLS CORPORATION, Hutchinson, Kans.
Filed January 2, 1917. Serial No. 100,295. PUBLISHED FEBRUARY 13, 1917.

116,329. LEATHER. A. C. LAWRENCE LEATHER CO., Boston, Mass.
Filed December 22, 1916. Serial No. 100,099. PUBLISHED FEBRUARY 20, 1917.

116,330. MEDICINE FOR THE TREATMENT OF ASTHMA AND BRONCHIAL TROUBLE. AVILA J. LE FAIVRE, Clayton, N. Y.
Filed January 10, 1917. Serial No. 100,521. PUBLISHED FEBRUARY 20, 1917.

116,331. SHOE-DRESSING. JEAN I. LEIST, Brooklyn N. Y.
Filed August 6, 1915. Serial No. 88,464. PUBLISHED FEBRUARY 13, 1917.

116,332. FINISHED AND UNFINISHED LUMBER. THE LONG-BELL LUMBER COMPANY, Kansas City, Mo.
Filed January 9, 1917. Serial No. 100,497. PUBLISHED FEBRUARY 20, 1917.

116,333. CAKES. LOOSE-WILES BISCUIT COMPANY, Kansas City, Mo.
Filed December 18, 1916. Serial No. 100,014. PUBLISHED FEBRUARY 13, 1917.

116,334. CERTAIN NAMED TOILET PREPARATIONS. LUNDBORG COMPANY, New York, N. Y.
Filed December 21, 1915. Serial No. 91,645. PUBLISHED FEBRUARY 20, 1917.

116,335. CERTAIN NAMED FOODS. MCCLELLAND WARD CO., Decatur, Ill.
Filed September 12, 1914. Serial No. 81,229. PUBLISHED FEBRUARY 13, 1917.

116,336. PARASOLS. H. R. MALLINSON & CO., New York, N. Y.
Filed January 24, 1917. Serial No. 100,896. PUBLISHED FEBRUARY 20, 1917.

116,337. SHAVING-LOTION FOR USE AFTER SHAVING. MANUFACTURING CHEMISTS' AGENCY, Philadelphia, Pa.
Filed August 1, 1916. Serial No. 97,028. PUBLISHED FEBRUARY 20, 1917.

116,338. SALTED NUTS. MARPLE BROS., Philadelphia, Pa.
Filed December 22, 1916. Serial No. 100,101. PUBLISHED FEBRUARY 13, 1917.

116,339. CERTAIN NAMED TOYS. MARY M. MASON, Chicago, Ill.
Filed November 13, 1916. Serial No. 99,279. PUBLISHED FEBRUARY 20, 1917.

116,340. MATRICES. MERGENTHALER LINOTYPE COMPANY, New York, N. Y.
Filed January 6, 1917. Serial No. 100,399. PUBLISHED FEBRUARY 20, 1917.

116,341. CERTAIN NAMED NON-ALCOHOLIC BEVERAGES. THE MIHALOVITCH BROTHERS COMPANY, Cincinnati, Ohio.
Filed December 26, 1916. Serial No. 100,174. PUBLISHED FEBRUARY 20, 1917.

116,342. LIQUID CHEMICAL TO BE ADDED TO GASOLENE TO INCREASE COMBUSTION AND ELIMINATE CARBON. MILLER CHEMICALS, INC., Bloomfield, N. J., and New York, N. Y.
Filed December 4, 1916. Serial No. 99,717. PUBLISHED FEBRUARY 20, 1917.

116,343. COFFEE. WILLIAM R. MOORHOUSE, Pittsburgh, Pa.
Filed January 2, 1917. Serial No. 100,298. PUBLISHED FEBRUARY 13, 1917.

116,344. ORANGES, LEMONS, AND GRAPE-FRUIT. MURPHY OIL COMPANY, East Whittier, Cal.
Filed December 1, 1916. Serial No. 99,660. PUBLISHED FEBRUARY 13, 1917.

116,345. PERIODICALS ISSUED MONTHLY. JOHN F. MURRAY, New York, N. Y.
Filed December 13, 1916. Serial No. 99,898. PUBLISHED FEBRUARY 20, 1917.

116,346. SNAP-FASTENERS FOR FEMININE APPAREL ONLY. MAX NATHAN, New York, N. Y.
Filed July 20, 1916. Serial No. 96,696. PUBLISHED OCTOBER 31, 1916.

116,347. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed December 15, 1916. Serial No. 99,966. PUBLISHED FEBRUARY 13, 1917.

116,348. DISINFECTANT. NATIONAL PAPER PRODUCTS COMPANY, San Francisco, Cal.
Filed January 2, 1917. Serial No. 100,300. PUBLISHED FEBRUARY 20, 1917.

116,349. INSECTICIDE. NATIONAL PAPER PRODUCTS COMPANY, San Francisco, Cal.
Filed January 2, 1917. Serial No. 100,302. PUBLISHED FEBRUARY 20, 1917.

116,350. STOCK-DIP, INSECTICIDES, GERMICIDES, AND DISINFECTANTS. NATIONAL PAPER PRODUCTS COMPANY, San Francisco, Cal.
Filed January 2, 1917. Serial No. 100,304. PUBLISHED FEBRUARY 20, 1917.

116,351. PORTABLE HOUSES. NICOLAI DOOR MANUFACTURING CO., Portland, Oreg.
Filed January 3, 1917. Serial No. 100,335. PUBLISHED FEBRUARY 20, 1917.

116,352. RICE. NEW ORLEANS COFFEE CO. LTD., New Orleans, La.
Filed December 18, 1916. Serial No. 100,017. PUBLISHED FEBRUARY 20, 1917.

116,353. FRESH APPLES IN BOXES. OKANOGAN GROWERS UNION, Okanogan, Wash.
Filed November 23, 1916. Serial No. 99,508. PUBLISHED FEBRUARY 13, 1917.

116,354. DRY GROCERIES AND CANNED GOODS. H. H. PALMER & CO., New York, N. Y.
Filed May 27, 1916. Serial No. 95,480. PUBLISHED SEPTEMBER 19, 1916.

116,355. ANTIFREEZING LIQUID FOR AUTOMOBILE-RADIATORS AND PLUMBING-FIXTURES. JAMES F. PATERSON, St. Paul, Minn.
Filed January 5, 1917. Serial No. 100,379. PUBLISHED FEBRUARY 20, 1917.

116,356. INJECTION AND CAPSULES FOR THE TREATMENT OF GONORRHEA. PATTERSON DRUG CO., Lynchburg, Va.
Filed December 2, 1916. Serial No. 99,685. PUBLISHED FEBRUARY 20, 1917.

116,357. MEDICINE FOR THE TREATMENT OF CERTAIN NAMED DISEASES. PITINO BROTHERS & COMPANY, Los Angeles, Cal.
Filed January 8, 1917. Serial No. 100,448. PUBLISHED FEBRUARY 20, 1917.

116,358. WHEAT-FLOUR. PRANGE MILLING COMPANY, New Douglas, Ill.
Filed December 22, 1916. Serial No. 100,102. PUBLISHED FEBRUARY 13, 1917.

116,359. STOCK AND POULTRY FOOD. E. RAUH & SONS FERTILIZING COMPANY, Indianapolis, Ind.
Filed January 2, 1917. Serial No. 100,311. PUBLISHED FEBRUARY 13, 1917.

116,360. FACE-CREAMS. FLORENCE REDMOND, New York, N. Y.
Filed December 22, 1916. Serial No. 100,103. PUBLISHED FEBRUARY 20, 1917.

116,361. SWEEPING COMPOUNDS. RICHMOND WATERPROOF PRODUCTS CO., Port Richmond, N. Y.
Filed November 10, 1916. Serial No. 99,218. PUBLISHED FEBRUARY 13, 1917.

116,362. MEDICINAL TONICS. RIGO-TONE CHEMICAL CO., Petersburg, Va.
Filed December 27, 1916. Serial No. 100,209. PUBLISHED FEBRUARY 20, 1917.

116,363. WHEAT FEED. RUSSELL-MILLER MILLING CO., Minneapolis, Minn.
Filed December 30, 1916. Serial No. 100,271. PUBLISHED FEBRUARY 13, 1917.

116,364. WHEAT-FLOUR. RUSSELL-MILLER MILLING CO., Minneapolis, Minn.
Filed December 30, 1916. Serial No. 100,272. PUBLISHED FEBRUARY 13, 1917.

116,365. WHEAT-FLOUR. RUSSELL-MILLER MILLING CO., Minneapolis, Minn.
Filed January 2, 1917. Serial No. 100,314. PUBLISHED FEBRUARY 13, 1917.

116,366. WOMEN'S, CHILDREN'S, AND INFANTS' COATS, CLOAKS, WRAPS, CAPES, DRESSES, WAISTS, AND SKIRTS. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed January 10, 1917. Serial No. 100,526. PUBLISHED FEBRUARY 20, 1917.

116,367. REMEDY FOR THE TREATMENT OF INGROWING NAILS. ARTHUR M. SAMSON, New Orleans, La.
Filed January 5, 1917. Serial No. 100,381. PUBLISHED FEBRUARY 20, 1917.

116,368. LETTER-CASES, WALLETS, AND POCKET-BOOKS. HERMAN SCHEUER & SONS, New York, N. Y.
Filed January 8, 1916. Serial No. 92,026. PUBLISHED FEBRUARY 20, 1917.

116,369. ARCH-SUPPORTS. SCHOLL MANUFACTURING COMPANY, INC., Chicago, Ill.
Filed January 20, 1917. Serial No. 100,782. PUBLISHED FEBRUARY 20, 1917.

116,370. ARCH-SUPPORTS. SCHOLL MANUFACTURING COMPANY, INC., Chicago, Ill.
Filed January 20, 1917. Serial No. 100,783. PUBLISHED FEBRUARY 20, 1917.

116,371. NEWSPAPER ARTICLES, MAGAZINE ARTICLES, A MAGAZINE-SECTION PUBLISHED PERIODICALLY. ELEANOR SCHORER, New York, N. Y.
Filed January 11, 1917. Serial No. 100,538. PUBLISHED FEBRUARY 20, 1917.

116,372. SMOKING-TOBACCO. SHIELDS & SON, Albany, N. Y.
Filed April 14, 1916. Serial No. 94,434. PUBLISHED JULY 25, 1916.

116,373. RUBBER TIRES. SOUTHERN HARDWARE & BICYCLE COMPANY, Jacksonville, Fla.
Filed January 2, 1917. Serial No. 100,323. PUBLISHED FEBRUARY 20, 1917.

116,374. WHISKY. STEIN BROTHERS, Chicago, Ill.
Filed December 26, 1916. Serial No. 100,182. PUBLISHED FEBRUARY 20, 1917.

116,375. HAIR-TONIC. STHOHMEYER & ARPE COMPANY, New York, N. Y.
Filed December 23, 1916. Serial No. 100,144. PUBLISHED FEBRUARY 20, 1917.

116,376. BACTERIAL VACCINS. SWAN-MYERS CO., Indianapolis, Ind.
Filed September 2, 1916. Serial No. 97,774. PUBLISHED FEBRUARY 20, 1917.

116,377. CANNED SALMON AND CANNED SARDINES. SYME EAGLE & CO., Chicago, Ill.
Filed November 20, 1916. Serial No. 99,417. PUBLISHED FEBRUARY 20, 1917.

116,378. BRANDY, BLENDED WHISKY AND STRAIGHT WHISKY, COCKTAILS, CORDIALS, RUM, GIN, AND VERMUTH. THE TERRETTS & GARLAND STORE, Chicago, Ill.
Filed January 17, 1917. Serial No. 100,689. PUBLISHED FEBRUARY 20, 1917.

116,379. MEDICATED WADDING. THE THERMOGÈNE CO., LIMITED, Haywards Heath, England.
Filed January 6, 1917. Serial No. 100,407. PUBLISHED FEBRUARY 20, 1917.

116,380. INSECT-DESTROYING POWDER. HENRY THOMAS TOMPSITT, St. Kilda, near Melbourne, Victoria, Australia.
Filed December 12, 1916. Serial No. 99,883. PUBLISHED FEBRUARY 13, 1917.

116,381. DOLLS AND THE HEADS, BODIES, AND LIMBS THEREOF. TRION TOY COMPANY, INC., Brooklyn, N. Y.
Filed December 9, 1916. Serial No. 99,826. PUBLISHED FEBRUARY 20, 1917.

116,382. PREPARATION FOR THE TREATMENT OF LUMBAGO, RHEUMATISM, AND SWOLLEN JOINTS. MAE TYNION, New York, N. Y.
Filed November 6, 1915. Serial No. 90,491. PUBLISHED JANUARY 30, 1917.

116,383. STOCK FOODS. JOHN WADE & SONS, Memphis, Tenn.
Filed December 15, 1916. Serial No. 99,976. PUBLISHED FEBRUARY 13, 1917.

116,384. KNITTED FABRICS IN THE PIECE. L. F. WANNER CO., INC., New York, N. Y.
Filed December 22, 1916. Serial No. 100,137. PUBLISHED FEBRUARY 20, 1917.

116,385. INSOLES. BRITTON WEST AND CHARLES R. COOPER, A FIRM, Chicago, Ill.
Filed November 8, 1916. Serial No. 99,180. PUBLISHED FEBRUARY 20, 1917.

116,386. PREPARATION FOR STIMULATING THE GROWTH OF EYEBROWS AND EYELASHES. THOS. L. WILLIAMS, Chicago, Ill.
Filed November 15, 1916. Serial No. 99,317. PUBLISHED FEBRUARY 20, 1917.

116,387. PREPARATIONS FOR TREATMENT OF CERTAIN NAMED DISEASES AND AFFECTIONS. NICKOLAOS ZARPAS, Monessen, Pa.
Filed December 6, 1916. Serial No. 99,753. PUBLISHED FEBRUARY 20, 1917.

TRADE-MARK REGISTRATIONS RENEWED.

14,457. YARNS, THREADS, AND EMBROIDERING MATERIALS. VAN BLANKENSTEYN & HENNINGS, New York, N. Y.: Otto Siegfried Ettlinger, assignee.
Registered May 31, 1887. Renewed May 31, 1917.

TRADE-MARK REGISTRATIONS CANCELED.

32,865. SUSPENDERS. HUGH G. MACWILLIAM, St. Paul, Minn.
Registered May 16, 1899. Canceled March 27, 1917.

103,193. TALCUM POWDER. CASSADA MANUFACTURING CO., Chester, Pa.
Registered March 16, 1915. Canceled March 19, 1917.

105,945. COFFEE, TEA, OLIVE-OILS, AND COCOA. A. J. SHELDON CO., New York, N. Y.
Registered August 31, 1915. Canceled April 6, 1917.

114,786. CIGARS, CHEROOTS, AND LITTLE CIGARS. JOSE LOVERA COMPANY, New York, N. Y.
Registered January 2, 1917. Canceled March 19, 1917.

LABELS

PUBLISHED APRIL 24, 1917.

20,037.—*Title:* "REX FLOOR VARNISH." (For Floor-Varnish.) HENRY BONN CO., Milwaukee, Wis. Filed February 16, 1917.

20,038.—*Title:* "BURGESS BATTERY." (For Electric Batteries.) C. F. BURGESS LABORATORIES, Madison, Wis. Filed April 10, 1917.

20,039.—*Title:* "BURGESS BATTERY." (For Electric Batteries.) C. F. BURGESS LABORATORIES, Madison, Wis. Filed April 10, 1917.

20,040.—*Title:* "ROUGH & TUMBLE PLAY SUITS." (For Boys' Cotton Fabric Play-Suits.) CLAWSON & WILSON COMPANY, Buffalo, N. Y. Filed April 6, 1917.

20,041.—*Title:* "STERLING." (For a Non-Intoxicating Beverage.) EVANSVILLE BREWING ASSN., Evansville, Ind. Filed April 7, 1917.

20,042.—*Title:* "BALD-E-NO." (For a Hair-Restorative.) L. S. GRAY, Fort Worth, Tex. Filed April 9, 1917.

20,043.—*Title:* "YARGODINE." (For a Dandruff Cure.) L. S. GRAY, Fort Worth, Tex. Filed April 9, 1917.

20,044.—*Title:* "ADEN." (For Succotash.) E. W. GATES & SON CO., Richmond, Va. Filed March 10, 1917.

20,045.—*Title:* "OLD ENGLISH." (For Furniture-Polish.) FREDERICK DARVILL, South Berwick, Me. Filed April 5, 1917.

20,046.—*Title:* "DERRYVALE." (For Irish Linen.) DERRYVALE LINEN COMPANY, New York, N. Y. Filed March 20, 1917.

20,047.—*Title:* "REVIVIENT LIQUID MASSAGE AND BLEACH." (For Toilet Preparations.) MARY E. MONTGOMERY, Denver, Colo. Filed September 18, 1916.

20,048.—*Title:* "THERMOLENE." (For An Antifreezing Solution.) JOHN ROCHE, Albany, N. Y. Filed January 8, 1917.

20,049.—*Title:* "JONTEEL." (For Cold-Cream.) UNITED DRUG COMPANY, Boston, Mass. Filed February 7, 1917.

20,050.—*Title:* "WATERMAN'S IDEAL INK." (For Ink.) L. E. WATERMAN COMPANY, New York, N. Y. Filed April 7, 1917.

PRINTS

PUBLISHED APRIL 24, 1917.

4,675.—*Title:* "THE O-CEDAR RESULT." (For O-Cedar Polish.) CHANNELL CHEMICAL COMPANY, Chicago, Ill. Filed November 3, 1916.

4,676.—*Title:* "YOUR DINING ROOM FURNITURE." (For O-Cedar Polish.) CHANNELL CHEMICAL COMPANY, Chicago, Ill. Filed November 3, 1916.

4,677.—*Title:* "GOSMAN'S GINGER ALE." (For Ginger-Ale.) THE GOSMAN GINGER ALE CO., Baltimore, Md. Filed April 9, 1917.

4,678.—*Title:* "STERNO CANNED-HEAT." (For Canned-Heat and Sterno Kitchenette.) S. STERNAU & COMPANY, INC., Brooklyn, N. Y. Filed February 8, 1917.

4,679.—*Title:* "SAMOSET CHOCOLATES." (For Chocolates.) THE SAMOSET CHOCOLATES COMPANY, Boston, Mass. Filed January 9, 1917.

4,680.—*Title:* "SAMOSET CHOCOLATES." (For Chocolates.) THE SAMOSET CHOCOLATES COMPANY, Boston, Mass. Filed January 9, 1917.

4,681.—*Title:* "SAMOSET CHOCOLATES." (For Chocolates.) THE SAMOSET CHOCOLATES COMPANY, Boston, Mass. Filed January 9, 1917.

4,682.—*Title:* "SAMOSET CHOCOLATES." (For Chocolates.) THE SAMOSET CHOCOLATES COMPANY, Boston, Mass. Filed January 9, 1917.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Eighth Circuit.

COCA-COLA CO. *v.* BENNETT *et al.*

Decided December 8, 1916.

238 FED. REP., 513.

1. TRADE-MARKS AND TRADE-NAMES—RIGHT OF OWNER OF TRADE-MARK—UNAUTHORIZED BOTTLING OF GOODS.

A manufacturer of a syrup used with carbonated water to produce a beverage which was sold either at soda-fountains or in bottles, whose registered trade-mark covered both the syrup and the beverage, but who bottled none of the beverage, having contracted with others therefor under contracts requiring the purchase of syrup from the manufacturer and its preparation under regulations to protect the quality, can prevent one who has not the manufacturer's consent from bottling the syrup with carbonated water, even in accordance with the regulations, and selling it under the trade-mark, since otherwise the manufacturer would have no means for protecting the quality of the goods sold under his trade-mark.

2. SAME—RIGHTS OF OWNER—SALES IN BULK.

When a manufacturer of an article of food or drink sells it in bulk and also puts it up in bottles bearing a distinctive trade-mark, the purchaser of the article in bulk cannot legally bottle it and affix the manufacturer's label to the bottle.

3. MONOPOLIES—VIOLATION OF ANTITRUST ACT—RIGHTS OF OWNER OF TRADE-MARK.

The invalidity, under Sherman Antitrust Act, July 2, 1890, (c. 647, 26 Stat., 209; Comp. St., 1913, secs. 8820–8830,) of contracts by which the owner of a trade-mark covering both a syrup and the beverage made therefrom granted the exclusive right to bottle the beverage, does not affect the owner's right to prevent the sale of the beverage under the trade-mark by one who bottled it without consent.

APPEAL from the District Court of the United States for the District of Kansas; John C. Pollock, judge.

Mr. Frank F. Reed and *Mr. Edward Rogers* (*Messrs. Candler, Thompson & Hirsch, Messrs. Holmes, Yankey & Holmes, Mr. Harold Hirsch*, and *Mr. Charles G. Yankey* on the brief) for the appellant.

Mr. C. M. Williams for the appellees.

Before SANBORN, ADAMS, and CARLAND, Circuit Judges.

CARLAND, *Cir. J.*:

Appellant brought this action against appellees to restrain an alleged trade-mark infringement and unfair competition. The trial court, upon consideration of the pleadings and certain stipulated facts, dismissed the complaint for want of equity. The facts upon which appellant relies for relief are substantially as follows:

Appellant is a corporation of the State of Georgia, with its principal place of business at Atlanta, in said State. Appellees are copartners doing business under the firm-name of Bennett Mineral & Distilled Water Company at Hutchinson, Kans. Appellant is the owner of the trade-mark "Coca-Cola" and the business of the manufacture and sale of two kinds of syrup in connection therewith. The trade-mark covers both the syrups and beverages made therefrom. It was registered in the Patent Office of the United States January 31, 1893, and again October 31, 1905. The name "Coca-Cola" has been exclusively used by appellant and its predecessors, since on or about the year 1886, for the purpose of identifying the syrups manufactured by it and its predecessors as their own product, and to distinguish it from all other articles marketed and sold by others. The name "Coca-Cola" has been used by said appellant exclusively in connection with its product, by attaching and applying said name to all barrels, kegs, jugs, bottles, and other receptacles containing said product, and also by placing said name on labels in connection therewith.

Great care, skill, and judgment have at all times been used by appellant and its predecessors in the manufacture of said product, Coca-Cola, in order to protect it from contamination and impurities, and in the barreling and putting up of said product, so that the product should reach the consumer in a clean and wholesome condition, and great pains have also been taken by appellant that the bottles and other receptacles in which the product has been placed are free from dirt or objectionable matter, and great amounts of time and labor have been expended by appellant in marketing and selling its product under the name "Coca-Cola" throughout the United States and in foreign countries. Coca-Cola is universally known, and large sums have been expended in advertising said product. The product Coca-Cola is received by the consuming public in two ways—over the soda-fountain, and in bottles. The syrup as such is not consumed by the public. At the soda-fountain it is mixed with carbonated water, and in bottles it is similarly mixed.

Appellant does not bottle its bottling product itself, but its entire bottling product is sold under contract to two Tennessee corporations, viz. Coca-Cola Bottling Company and The Coca-Cola Bottling Company, which in turn have given the privilege under contract to certain other corporations and individuals to bottle the syrup made for bottling purposes and to use in connection therewith the trade-mark "Coca-Cola." Among the corporations having the privilege of bottling is the Western Coca-Cola Bottling Company. Any person or corporation receiving authority by contract to bottle and sell bottled Coca-Cola in a prescribed territory agrees to bottle the same in the following manner:

To prepare and put in bottles using a crown-stopper thereon, a mixture of Coca-Cola syrup and of water charged with carbonic-acid gas under pressure of not less than one atmosphere, said Coca-Cola syrup and said water in said mixture to be used in proportions of not less than one ounce of Coca-Cola syrup to each seven or eight ounce bottle of carbonated water, making thereof a carbonated drink of the strength stated. Said person or corporations also agree not to add any compound, syrup, color, flavoring matter, acid, headings, sugar, or other sweetener, or any other preservative of any name or nature, or any other substance or ingredient whatsoever, or any water, other than pure carbonated water, commonly called soda-water, to the syrup furnished by the plaintiff or to the water used for carbonating, and also agree not to use for said Coca-Cola syrup any substitute whatever, or to make any other drink and sell same under the name Coca-Cola.

Coca-Cola Bottling Company and The Coca-Cola Bottling Company of Tennessee take the entire output of the product of the appellant manufactured for bottling purposes. No other person, firm, or corporation buys or can buy the same from the appellant. The appellant is in no way directly or indirectly interested in the two Coca-Cola bottling companies, above described, or interested in any of their profits; but the contract between them provides that appellant shall retain control over its trade-mark and have the right of inspection and supervision, for the purpose of securing the bottling of its product according to contract as hereinbefore stated. The two bottling companies, with the consent of appellant, have divided the territory described in the contract between them, and said companies have entered into contracts with other companies, by which contracts local bottling companies are given the exclusive right within certain restricted territory to bottle and sell the bottled product, Coca-Cola.

The Western Coca-Cola Company, organized under the laws of the State of Illinois, is one of these companies. Its territory embraces several States, including Kansas. The bottling companies do not enter into a contract with more than one person, firm, or corporation in the territory allotted to any local bottler. The contracts between the two Coca-Cola bottling companies, sometimes referred to as the parent companies, and the various local bottling companies, are always approved and consented to by the appellant. The appellant has no financial interest in the local bottling plants. The appellant sells its bottling product to the parent bottling companies above described, and will not accept any order for said product, except from these two bottling companies, and no other person, firm, or corporation can buy Coca-Cola syrup from appellant for bottling purposes than the companies above described. The local bottling companies are supplied direct from the factories of the parent bottling companies, but the order comes to the appellant through the parent bottling companies, and these bottling companies pay appellant for the bottled product so distributed to the local bottling plants. The shipments of bottling-syrup are made both in interstate and intrastate commerce, aggregating a large volume of business.

The defendants are using the trade-mark "Coca-Cola" on a bottled product without the authority or permission of appellant. The product so bottled by defendants is the Coca-Cola syrup as manufactured by appellant for bottling purposes, bought by the defendants partly from the Western Coca-Cola Bottling Company and partly from vendees of appellant and in the open market. The said Coca-Cola syrup is mixed by defendants with carbonated water and sold as a beverage under the trade-mark Coca-Cola, and defendants have no contract with or authority from the Coca-Cola bottling companies or appellant for bottling the same, and no restriction as to the use of said syrup is agreed upon by defendants with the jobbers or wholesalers from whom they purchase said syrup. All of the Coca-Cola which defendants have manufactured and sold has been made from the Coca-Cola syrup manufactured and sold by appellant in the usual and ordinary way which appellant authorizes and permits consumers and patrons to manufacture and sell Coca-Cola as a beverage. Paragraph 16 of the complaint, which is admitted by the answer, is as follows:

That by reason of the premises your orator is rightfully and equitably entitled to the sole and exclusive use of the trade-mark "Coca-Cola," and to protection in the use thereof as applied to its products, and in equity and good conscience to protection against all manner and form of fraudulent use and imitation of said trade-mark, and that the public generally has at all times acknowledged and acquiesced in the aforesaid rights of your orator and of your orator's predecessors aforesaid in and to said trade-mark.

(1) The question arising on the facts as above stated is: Have the defendants, without the authority or permission of the appellant, the right to manufacture Coca-Cola as a beverage by mixing the bottling-syrup of appellant with carbonated water and sell the same to the public under the trade-mark Coca-Cola? The trade-mark "Coca-Cola," covering as it does both the bottling-syrup and the beverage made therefrom by adding carbonated water, entitles the appellant to the exclusive right to manufacture and sell its syrup, and also to make and sell the beverage known as "Coca-Cola." Certainly, if the appellant has the exclusive right to make and sell under its trade-mark the beverage called "Coca-Cola," it can grant the right and privilege to others

to do that which it might do itself; and it necessarily results from this state of the case that no person or corporation can manufacture the bottled beverage called "Coca-Cola" and sell the same under appellant's trade-mark without its consent or authority.

It is true that the appellant has no money directly invested in the business of the bottling companies; but it is very plain that, as the syrup manufactured by the appellant is not itself consumed by the public as such there could be no sale of the syrup unless there was a sale of the beverage made therefrom, and so it is apparent that the appellant is directly and greatly interested in having its bottled product delivered to the consuming public under such circumstances and in such manner as will promote the sale thereof. It is also apparent that the only way the appellant can secure the right to supervise the manner of the bottling of its product is to refuse to grant the privilege of bottling, except upon condition that certain prescribed regulations are complied with. It would, therefore, seem to be too plain for argument that both under the law of trade-mark and upon sound reason defendants in the case at bar may not, without the consent and authority of the appellant, manufacture the bottled beverage and sell the same under the appellant's trade-mark, "Coca-Cola."

Counsel for the defendants argue that, as it appears that defendants use the bottling-syrup of the appellant and mix the same with carbonated water in the same way that appellant authorizes other persons and corporations to do, they have the right to manufacture and sell under the appellant's trade-mark. But suppose that other persons and corporations without number should be of the same opinion; it would result that appellant would have no control over the integrity of its trade-mark, which is its guaranty that the beverage is as represented, and its business might be ruined. It is true the defendants might sell the bottling-syrup which they buy under the appellant's trade-mark; but, since they change the syrup into a beverage without the permission and authority of appellant, they have no right to sell the same under appellant's trade-mark. The argument advanced is also faulty, as it would permit persons other than the owner of the trade-mark to control its use.

(2) The law seems to be settled that when a manufacturer of an article of food or drink sells it in bulk, and also puts it up in bottles, the latter bearing a distinctive trade-mark, a purchaser of the article in bulk will be guilty of unfair competition and be enjoined from bottling and affixing the manufacturer's distinctive label upon the goods bottled by him. (*Coca-Cola Co.* v. *J. G. Butler & Sons*, D. C., 229 Fed., 224; *Krauss* v. *Peebles Co.*, C. C., 58 Fed., 585, 592; *People* v. *Luhre*, 195 N. Y., 377; 89 N. E., 171; 25 L. R. A., N. S., 473; *Hennessy* v. *White*, Cox, Man. of T. M. Cas., 377; Brown on T. M., secs. 910, 759, and authorities there cited.) One of the reasons given for this rule is that—

Unless the manufacturer can control the bottling, he cannot guarantee that it is the genuine article prepared by him.

And as said by Judge Trieber in *Coca-Cola Co.* v. *J. G. Butler & Sons, supra:*

To this may be added that he cannot tell whether it is bottled in so careful a manner as is essential to the preservation of the article and the maintenance of its good reputation.

It would seem that to uphold the contention of counsel for the defendants would be to destroy all the value that the appellant's trade-mark has. It would open the door to any person or corporation to adulterate the beverage sold as Coca-Cola without any right in the appellant to prevent it.

The greatest value of a trade-mark is the reputation established by the excellence of the article, and the knowledge and appreciation of that fact by the consuming public. An article without any merit can derive no benefit from a trade-mark, and only a temporary benefit from the most extensive advertisement. It is like the value of a "good will" in an established going concern. It depends upon the successful operation of the business. Without that there is no value to it. Who would pay for the good will of a business conducted at a loss? (*Coca-Cola Co.* v. *Butler & Sons, supra.*

The cases of *Russia Cement Co.* v. *Frauenhar* (133 Fed., 518; 66 C. C. A., 500) and *Appollinaris Co.* v. *Scherer*, (C. C., 27 Fed., 18) are cited as sustaining the position of counsel for defendants; but an examination of these cases shows that in the *Cement Case* the same cement without any addition or subtraction was resold under the trade-mark name. If the defendants in this case had simply resold the syrup, it would be within the reasoning of the case cited; but they did not do that. They changed the syrup into a beverage, and they say that they changed it in the same manner that the appellant authorized other persons to do. But the trouble with this argument is that it destroys appellant's exclusive right to its trade-mark, and the resulting right to say who may use it. In the *Appollinaris Case* the same water, without subtraction or addition, was sold under its true name. Without prolonging the discussion further, we do not think the defendants have the right to manufacture and sell Coca-Cola under the trade-mark name of appellant without its consent.

(3) Counsel for defendants further urge that the contracts which appellant has made with the Tennessee corporations, and which the Tennessee corporations have made with appellant's consent with local persons and corporations, are in violation of the Sherman law. The trial court seems to have based its ruling in dismissing the complaint partly upon this proposition, it appearing to that court that this suit was one to enforce these contracts. We do not think the validity of the contracts are in any wise brought into question on this record. The appellant simply claims that the defendants have no right to manufacture and sell Coca-Cola under appellant's trade-mark without its consent, and our decision in this case goes no further than to hold that the claim of appellant is well founded. We do not decide that the whole or any part of the contracts made by appellant with the bottling companies are valid. The granting of the consent of appellant to the defendants to manufacture and sell the product Coca-Cola under its trade-mark could be manifested without the contracts mentioned in the evidence. It will be time enough to decide as to the validity of the contracts when a suit arises

in which their validity is involved, and when some person is sued who has a contract. Manifestly, if the consent and authority of appellant is necessary in order to manufacture and sell Coca-Cola under its trade-mark, then appellant has the right to impose any such reasonable condition to the granting of such consent as will protect the integrity of the trade-mark.

It results from what we have said that the judgment dismissing the complaint should be reversed, and the case remanded, with instructions to the trial court to grant the injunction prayed for. The question of damages was not considered in the lower court, and that question will be left open to be dealt with as law and justice may require.

ADAMS, Circuit Judge, concurred in the decision of this case, but deceased before the opinion was prepared.

ADJUDICATED PATENTS.

(U. S. D. C.) The Clarke patent, No. 1,035,819, for a union-suit, *Held* not to disclose invention with respect to the alleged invention of a closed crotch. *Globe Knitting Works* v. *Segal*, 239 Fed. Rep., 322.

(U. S. C. C. A.) The Hall patents, No. 665,212 and No. 665,326, relating to slugs in a linotype-machine and casting-mold for the same, *Held* valid and infringed. *Mergenthaler Linotype Co.* v. *International Typesetting Mach. Co.*, 239 Fed. Rep., 316.

(U. S. C. C. A.) The Kempshall patent, No. 670,080, for a device for using engine-exhaust for heating purposes, *Held* not infringed. *Pelton* v. *American Auto Heater Co.*, 239 Fed. Rep., 320.

(U. S. C. C. A.) The Kennedy patent, No. 1,104,512, for a typographical machine, conceding its validity, *Held* not infringed. *Mergenthaler Linotype Co.* v. *International Typesetting Mach. Co.*, 239 Fed. Rep., 316.

(U. S. D. C.) The Lodge patent, No. 609,154, for improvements in wireless telegraphy, *Held* valid and infringed. *Marconi Wireless Telegraph Co.* v. *Kilbourne & Clark Mfg. Co.*, 239 Fed. Rep., 328.

(U. S. D. C.) The Marconi patent, No. 763,772, for a system of wireless telegraphy, *Held* not infringed. *Marconi Wireless Telegraph Co.* v. *Kilbourne & Clark Mfg. Co.*, 239 Fed. Rep., 328.

(U. S. C. C. A.) The Neill patent, No. 933,386, for an oil-well derrick, *Held* valid and infringed. *Neill* v. *Kinney*, 239 Fed. Rep., 309.

(U. S. D. C.) The Smith design patent, No. 38,855, for a design for a font of type, *Held* valid and infringed. *Keystone Type Foundry* v. *Wynkoop*, 239 Fed. Rep., 355.

Adverse Decisions in Interference.

PATENT NO. 1,130,004.

On March 24, 1917, a decision was rendered that Frederick H. Miller was not the first inventor of the subject-matter covered by claims 1, 2, 5, 6, and 8 of his Patent No. 1,130,004, subject, "Starting-motors," and no appeal having been taken within the time allowed such decision has become final.

PATENT NO. 1,130,573.

On March 24, 1917, a decision was rendered that Frank Conrad was not the first inventor of the subject-matter covered by claims 1, 2, and 17 of his Patent No. 1,130,573, subject, "Safety device for starting-motors," and no appeal having been taken within the time allowed such decision has become final.

Cancelation Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 5, 1917.

Margaretha Schmitt, her assigns or legal representatives, take notice:

A cancelation proceeding has been instituted by this Office upon the application of August Underberg and Anna Underberg, of 6020 South Paulina street, Chicago, Ill., to effect the cancelation of the trade-mark registration of Margaretha Schmitt, No. 682 Hart street, New York, N. Y., registered December 26, 1899, No. 33,946, and the notice of such proceeding sent by registered mail to said Margaretha Schmitt at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Margaretha Schmitt, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will proceed as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 6, 1917.

Anton Kufeke, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of L. G. Spindler, Produce Exchange, New York, N. Y., for registration of a trade-mark and trade-mark registered May 17, 1887, No. 14,409, to Anton Kufeke, Glasgow, Scotland, and a notice of such declaration sent by registered mail to said Anton Kufeke at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Anton Kufeke, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 31, 1917.

Albert Schnell, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Jacob Mellcow, 144 West One hundred and thirteenth street, New York, N. Y., for registration of a trade-mark and trade-mark registered July 22, 1890, No. 18,191, to Albert Schnell, of St. Louis, Mo., and a notice of such declaration sent by registered mail to said Schnell at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Schnell, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 30, 1917.

James A. Harris, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Winter Haven Packing Co., of Winter Haven, Fla., for registration of a trade-mark and trade-mark registered October 20, 1885, No. 12,674, to James A. Harris, of Citra, Fla., and a notice of such declaration sent by registered mail to said Harris at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Harris, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

R. F. WHITEHEAD,
First Assistant Commissioner.

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APRIL, 1917.

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DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

APRIL, 1917.

[Decisions of the Court of Appeals of the District of Columbia are indicated by a star (*) and of the Circuit Court of Appeals by the letter [d.]

ABANDONED APPLICATIONS.

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BAR TO PATENT.

See Right to Patent.

COMBINATION.

See Construction of Claims, 1.

CONCEPTION OF INVENTION.

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CONFUSION OF THE PUBLIC.

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CONSTRUCTION OF CLAIMS.

1. PATENTABILITY—UNPATENTABLE COMBINATION.
Where the art showed, substantially, applicant's mechanism for holding open and effecting the closure of swinging doors and it was also common to have the operation of doors thermally controlled, *Held* that claims covering the thermal control of that particular mechanism were unpatentable.
[*Ex parte* Anderson, 309.

2. SAME—BRIDGE-ARCHES.
Claims to an arrangement of arches of different lengths in which the difference in height of the springings of adjacent long and short arches necessarily produces a balance of the differing thrusts on the piers, permitting the use of a slender pier, *Held* patentable, although the size of the pier is not specified.
[*Ex parte* Luten, 917.

3. SAME—MECHANICAL SKILL—REINFORCEMENTS.
Claims relying for patentability chiefly on the location of reinforcing members in the body of the structure, *Held* unpatentable. The location of reinforcing members in the proper places is a matter of design within the skill of the civil engineer. [Id.

CONSTRUCTION OF STATUTES.

See Particular Patents, 1; Right to Patent.

1. PATENTS—SUIT TO OBTAIN PATENT—EFFECT OF PATENT OFFICE DECISION.
While the decision of the Court of Appeals of the District of Columbia in an interference proceeding is not conclusive in a subsequent suit by the defeated applicant to obtain the issuance of a patent under Revised Statutes, section 4915, (Comp. St., 1913, sec. 9460,) even though the evidence is the same, the district court must be convinced that it furnishes no substantial support for the decree before it will be justified in overturning the same.
[d Gold *et al.* v. Gold, 309.

2. SAME—PATENT OFFICE DECISION.
This rule is applicable whether the controversy bears on the credibility of witnesses and the weight of evidence or on questions peculiar to patent laws, such as the construction and scope of the patent application. [d Id.

3. SAME—SUIT TO OBTAIN PATENT—ISSUES AND PROOF.
In a suit under Revised Statutes, section 4915, to obtain the issuance of a patent the issue is not limited to the question of priority of invention between the parties; but to entitle complainant to a decree he must fully establish his right to the patent.
[d Id.

CONSTRUCTION OF TRADE-MARK STATUTES.

See Registration of Trade-Marks, 2; Similarity of Trade-Marks, 1.

MONOPOLIES—VIOLATION OF ANTITRUST ACT—RIGHTS OF OWNER OF TRADE-MARK.
The invalidity, under Sherman Antitrust Act, July 2, 1890, (c. 647, 26 Stat., 209; Comp. St., 1913, secs. 8820–8830,) of contracts by which the owner of a trade-mark covering both a syrup and the beverage made therefrom granted the exclusive right to bottle the beverage, does not affect the owner's right to prevent the sale of the beverage under the trade-mark by one who bottled it without consent. [d Coca-Cola Co. v. Bennett *et al.*, 1219.

CONTRACTS.

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See Registration of Trade-Marks, 2.

INTERFERENCE.

See Construction of Claims; Construction of Statutes; Priority of Invention.

PRIORITY—CONCEPTION—JOINT AND SOLE INVENTORS.
Where Bayer and Brown alleged conception in December, 1910, but the evidence shows that they never met until May, 1911, this is the earliest date that can be awarded them.
[*Bayer and Brown *v.* Bradley, 917.

INVENTION.

See Particular Patents, 2.

JOINT AND SOLE INVENTORS.

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MONOPOLIES.

See Construction of Trade-Mark Statutes.

OPERATIVE DEVICE.

See Priority of Invention.

OPPOSITION TO REGISTRATION OF TRADE-MARKS.

INTEREST OF OPPOSER.
Opposer's allegation that for a number of years it has been extensively engaged in the manufacture and sale of linoleum, which it advertised and described as such—in other words, that it has used this mark as a trade-name—is a sufficient averment of interest. As between the attempted registration of a technical trade-mark and a descriptive name an opposer of the former must show actual trade-mark use. An opposer of the latter need show only use as a trade-name.
[*Nairn Linoleum Company *v.* Ringwalt Linoleum Works, 919.

PARTICULAR PATENTS.

1. GOLD—NO. 948,667—HOSE-COUPLER—SUIT TO OBTAIN PATENT.
Complainant in a suit under Revised Statutes, section 4915, *Held* not to have established his right to a patent to the invention covered by the Gold patent, No. 948,667, for a coupler for hose for connecting the steam-heating pipes of railway-cars.
[‡ Gold *et al. v.* Gold, 309.

2. MCKENNAN AND HELANDER—NO. 806,700—LINKS FOR CONVEYERS—INVENTION.
The McKennan and Helander patent, No. 806,700, for links for conveyers, *Held* void for lack of invention.
[‡ American Casting Mach. Co. *v.* Pittsburgh Coal Washer Co., 621.

3. SCOTT—NO. 788,334—APPARATUS FOR CASTING METAL—VALIDITY.
The Scott patent, No. 788,334, for an apparatus for casting metal, *Held* void on the ground that the patentee had caused the invention to be patented in a foreign country more than seven months prior to his application for the United States patent. [‡ Id.

PATENTABILITY.

See Construction of Claims.

PRIORITY OF ADOPTION AND USE.

See Opposition to Registration of Trade-Marks.

PRIORITY OF INVENTION.

See Construction of Statutes, 3; Interference.

REDUCTION TO PRACTICE.
Priority awarded Bradley, who reduced the invention to practice by building and testing in February, 1911, an operative machine. [* Bayer and Brown *v.* Bradley, 917.

REDUCTION TO PRACTICE.

See Interference; Priority of Invention.

REGISTRATION OF TRADE-MARKS.

1. DESCRIPTIVE WORDS IN CONNECTION WITH A GEOMETRICAL FIGURE.
Descriptive words not being registrable, a trade-mark made up of the same with a geometrical figure cannot be made registrable by disclaiming the prohibited words. A figure meaningless in itself cannot be used as a vehicle by which to incorporate in a trade-mark prohibited descriptive matter.
[* Nairn Linoleum Company *v.* Ringwalt Linoleum Works, 919.

2. SAME—SHOULD BE OMITTED.
"Having in mind therefore the intent and purpose of the Trade-Mark Act, we repeat what we said in *Johnson v. Brandeau* (32 App. D. C., 348,) that the applicant should have been required to omit the objectionable matter from its mark." [* Id.

RIGHT TO PATENT.

See Construction of Statutes, 1, 3; Particular Patents, 1.

PRIOR PATENTING IN FOREIGN COUNTRY—"CAUSED TO BE PATENTED."
While an application for a patent in the name of three persons as joint inventors was pending one of such persons, representing also the other two, caused the invention to be patented in Great Britain. Afterward the joint application in this country was abandoned, and more than seven months after the British application was filed one of the joint applicants filed an application for a patent for the same invention in his name as sole inventor. *Held* that the foreign patent was caused to be issued by such sole applicant within the meaning of Revised Statutes, section 4887, as amended by act of March 3, 1897, (c. 391, sec. 3, 29 Stat., 692, Comp. St., 1913, sec. 9431, note,) which was then in force and was a bar to the granting of a United States patent on such application.
[‡ American Casting Mach. Co. *v.* Pittsburgh Coal Washer Co., 621.

RIGHTS OF OWNER OF TRADE-MARK.

See Construction of Trade-Mark Statutes.

1. TRADE-MARKS AND TRADE-NAMES—UNAUTHORIZED BOTTLING OF GOODS.
A manufacturer of a syrup used with carbonated water to produce a beverage which was sold either at soda-fountains or in bottles, whose registered trade-mark covered both the syrup and the beverage, but who bottled none of the beverage, having contracted with others therefor under contracts requiring the purchase of syrup from the manufacturer and its preparation under regulations to protect the quality, can prevent one who has not the manufacturer's consent from bottling the syrup with carbonated water, even in accordance with the regulations, and selling it under the trade-mark, since otherwise the manufacturer would have no means for protecting the quality of the goods sold under his trade-mark. [‡ Coca-Cola Co. *v.* Bennett *et al.*, 1219.

2. SAME—SALES IN BULK.
When a manufacturer of an article of food or drink sells it in bulk and also puts it up in bottles bearing a distinctive trade-mark, the purchaser of the article in bulk cannot legally bottle it and affix the manufacturer's label to the bottle. [‡ Id.

SIMILARITY OF TRADE-MARKS.

1. CONFUSION OF THE PUBLIC—DOUBT.
If a doubt exists as to similarity of marks that would lead to confusion, it should be resolved for the protection of the public, in whose interest the prohibition of the statute as to registration of trade-marks likely to create confusion in trade was enacted.
[* Goodrich Drug Company *v.* Cassada Manufacturing Co., 918.

2. SAME—DISSIMILARITY OF LABEL.
That registrant's label and package are dissimilar to those used by appellant is immaterial in determining the actual conflict between the marks. The label and the box are no part of the mark and can be changed at will. [* Id.

3. SAME—"VELVELITE" AND "VELVETINA."
The mark "Velvelite," for face-powder, *Held* to be similar to the mark "Velvetina," for the same goods, and likely to lead to confusion. [* Id.

STATE OF THE ART.

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TECHNICAL TRADE-MARKS.

See Opposition to Registration of Trade-Marks.

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TRADE-MARKS.

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF APRIL, 1917.

[Abbreviations: "Gaz."=Official Gazette.]

A. B. Dick Company. (See Dick, Albert B., assignor.)
Aalborg, Christian, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Driving connection for motor-driven fans. No. 1,222,512; Apr. 10; v. 237; p. 560.
Aaron, Solomon E., Boston, Mass. Combination stripping and splitting pliers. No. 1,222,513; Apr. 10; v. 237; p. 561.
Abel, Walter T., assignor to The Patent Button Company, Waterbury, Conn. Button. No. 1,221,009; Apr. 3; v. 237; p. 3.
Abendroth, Elmer T., assignor to Western Steel & Iron Works, De Pere, Wis. Stanchion. No. 1,223,922; Apr. 24; v. 237; p. 1124.
Aber, Edgar, St. Joseph, Mich. Saw-set. No. 1,223,923; Apr. 24; v. 237; p. 1124.
Abrams, Harvey and H. C., Long Pine, Nebr. Curtain and shade hanger. No. 1,221,264; Apr. 3; v. 237; p. 93.
Abrams, Hicks C. (See Abrams, Harvey and H. C.)
Abrams, Sarah. (See Riley, Jnil, assignor.)
Abramson, Herbert, Benson, Minn. Miter-box. No. 1,222,514; Apr. 10; v. 237; p. 561.
Acheson Corporation. (See Acheson, Edward G., assignor.)
Acheson, Edward G., assignor to Acheson Corporation, New York, N. Y. Deflocculating solid materials. No. 1,223,350; Apr. 24; v. 237; p. 923.
Acme Metal Stamping Company, The. (See Bayliss and Raus, assignors.) (Reissue.)
Accocella, Philip F., New York, N. Y. Attachment for notched collars. No. 1,221,010; Apr. 3; v. 237; p. 3.
Adams, Albert H., *et al.* (See Graham, Leslie B., assignor.)
Adams, Albert L., Cedar Rapids, Iowa. Handle. No. 1,221,403; Apr. 3; v. 237; p. 141.
Adams, Arthur H., Sparkill, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Apparatus for reflecting light-rays. No. 1,223,752; Apr. 24; v. 237; p. 1066.
Adams, George A., San Jose, Cal. Coin-controlled chair. No. 1,221,265; Apr. 3; v. 237; p. 93.
Adams, Henry, Stamford, Conn. Centrifugal table. No. 1,221,951; Apr. 10; v. 237; p. 364.
Adams, Henry, Stamford, Conn. Centrifugal pulverizer. No. 1,221,952; Apr. 10; v. 237; p. 365.
Adams, Lucious G. (See Herzog and Medlock, assignors.)
Adams-Randall, Charles, Boston, Mass. Electric-telegraph system. No. 1,221,814; Apr. 10; v. 237; p. 315.
Adams, Reed, Lapeer, Mich. Printing apparatus. No. 1,221,815; Apr. 10; v. 237; p. 315.
Adams, Sherwood H., assignor to J. Rothschild, San Francisco, Cal. Receptacle for cigarette-wrappers and tobacco. No. 1,222,254; Apr. 10; v. 237; p. 470.
Adams, William C., Upland, Cal. Oil-burning heater. No. 1,222,346; Apr. 10; v. 237; p. 503.
Adapto Mfg. Co., The. (See Patterson, Horace L., assignor.)
Adder Machine Company, The. (See Pentecost, Arthur, assignor.)
Aeschbach, Friedrich, Aarau, Switzerland. Molding-machine. No. 1,221,266; Apr. 3; v. 237; p. 94.
Aichele, Albert, assignor to Aktiengesellschaft Brown Boveri & Cie., Baden, Switzerland. Electrode of metallic vapor-rectifiers or other apparatus. No. 1,221,647; Apr. 3; v. 237; p. 223.
Ainsley, David L., Mammoth, Pa. Brake. No. 1,222,347; Apr. 10; v. 237; p. 503.
Aitken, William, London, England. Telephone system. No. 1,221,404; Apr. 3; v. 237; p. 142.
Aitken, William, assignor to The Relay Automatic Telephone Company, Limited, London, England. Telephone system. No. 1,223,020; Apr. 17; v. 237; p. 778.
Akeley Camera. (See Akeley, Carl E., assignor.)
Akeley, Carl E., assignor to Akeley Camera, Inc., New York, N. Y. Film-box for motion-picture cameras. No. 1,223,332; Apr. 17; v. 237; p. 882.
Aktiebolaget Svenska Kullagerfabriken. (See Karlsson and Johanson, assignors.)
Aktiebolaget Svenska Kullagerfabriken. (See Karlsson, Kaleb, assignor.)
Aktiengesellschaft Brown Boveri & Cie. (See Aichele, Albert, assignor.)
Alanson, Hope, Abbotsford, British Columbia, Canada. Raker-gage. No. 1,222,587; Apr. 17; v. 237; p. 629.
Albrecht, Christian A. (See Muehlelsen and Albrecht.)
Aldendorff, Fritz, Wilmersdorf, Berlin, Germany. Control-circuits for telephone systems. No. 1,223,304; Apr. 17; v. 237; p. 872.
Aldrich, Luke F., Greenup, Ill. Broom-case. No. 1,221,648; Apr. 3; v. 237; p. 224.
Aldrich Pump Company, The. (See Holveck, Joseph E., assignor.)
Alexander, Jesse. (See Mott and Alexander.)
Alexander, L. W., *et al.* (See Taylor, Ewing H., assignor.)
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Power-transmitting mechanism. No. 1,223,924; Apr. 24; v. 237; p. 1125.
Alinder, Henry, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Locking device. No. 1,221,405; Apr. 3; v. 237; p. 142.
Allbright-Nell Company, The. (See Jordan, Robert E., assignor.)
Allbright-Nell Company, The. (See Watson and Ozouf, assignors.)
Allbright, William B., Chicago, Ill. Hog scraping, dehairing, polishing, and cleaning machine. No. 1,221,406; Apr. 3; v. 237; p. 143.
Allegheny Steel Company. (See Taylor, John R., assignor.)
Allen, Benjamin F., Chicago, Ill. Necktie-supporter. No. 1,223,229; Apr. 17; v. 237; p. 848.
Allen, Henry A., Chicago, Ill. Proportioning feeding device. No. 1,223,021; Apr. 17; v. 237; p. 778.
Allen, James L., Houston, Tex. Device for slicing fish. No. 1,223,550; Apr. 24; v. 237; p. 994.
Allfree, James B., Chicago, Ill. Chain-drive motor. No. 1,222,588; Apr. 17; v. 237; p. 629.
Allingham, Henry W., Northenden, England, assignor to Peter A. Frasse & Co., Inc., New York, N. Y. Cutting-tool. No. 1,223,654; Apr. 24; v. 237; p. 1030.
Allis-Chalmers Manufacturing Company. (See Alinder, Henry, assignor.)
Allis-Chalmers Manufacturing Company. (See Demon, George B., assignor.)
Allis-Chalmers Manufacturing Company. (See Strothman, Louis E., assignor.)
Allis-Chalmers Manufacturing Company. (See Zimmerman, James G., assignor.)
Allors, Crescenzia. (See Gray, Harry M., assignor.)
Allport, Katherine E., Chicago, Ill. Illuminating attachment for razors. No. 1,223,305; Apr. 17; v. 237; p. 873.
Alsfasser, Joseph, Chicago, Ill. Damper-lock. No. 1,223,133; Apr. 17; v. 237; p. 817.
Alsop, Bertha S., New York, N. Y. Bottle. No. 1,223,351; Apr. 24; v. 237; p. 923.
Alteneder, Ferdinand A., Glenside, Pa. Drawing implement. No. 1,221,786; Apr. 3; v. 237; p. 271.
Altman, Michael. (See Altman, Victor and M.)
Altman, Victor, Buffalo, and M. Altman, Rochester, N. Y. License-number plate. No. 1,224,056; Apr. 24; v. 237; p. 1169.
Altschul, Carl S., Fort Wayne, Ind. Electric control for automobiles. No. 1,223,925; Apr. 24; v. 237; p. 1125.
Alverson, Lewis, Omaha, Nebr. Standard fence-stay anchor-rod and lightning-rod. No. 1,222,255; Apr. 10; v. 237; p. 470.
Alvey-Ferguson Company, The. (See Bernheim, Morris U., assignor.)
Ambler, David, Irma, Alberta, Canada. Grain-pan screen. No. 1,223,352; Apr. 24; v. 237; p. 923.
American Can Company. (See Gray, James A., assignor.)
American Carbon & Battery Co. (See Hambuechen, Carl, assignor.)
American Chemical & Manufacturing Company. (See Coleman, Lewis A., assignor.)
American Encaustic Tiling Company. (See Lillibridge, Henry D., assignor.)

American Graphophone Company. (See Buelna and Burson, assignors.)
American Graphophone Company. (See Woods, Clinton E., assignor.)
American Hoist & Derrick Company. (See Crosby, Oliver, assignor.)
American Loose Leaf Manufacturing Company. (See Wessel, Louis, Jr., assignor.)
American Mining Tool Company. (See Simmons, George B., assignor.)
American Optical Company. (See Bugbee, Lucian W., assignor.)
American Optical Company. (See Day, George H., assignor.)
American Optical Company. (See Gordon, Robert L., assignor.)
American Optical Company. (See Moffitt, Jeremiah, assignor.)
American Optical Company. (See Tillyer, Edgar D., assignor.)
American Perforator Company. (See Day, Alfred L., assignor.)
American Plate Glass Company. (See Willis, John, assignor.)
American Steam Gauge & Valve Manufacturing Company. (See Manning, Coleman J., assignor.)
American Steel Foundries. (See Bird, Frederick H., assignor.)
American Steel Foundries. (See Davis, James C., assignor.)
American Steel Foundries. (See Hedgcock, William C., assignor.)
American Steel Foundries. (See Janney, Robert E. L., assignor.)
American Steel Foundries. (See Scott, George E., assignor.)
American Telephone and Telegraph Company. (See Cornelius, Volney D., assignor.)
American Telephone and Telegraph Company. (See Espenschied, Lloyd, assignor.)
American Telephone and Telegraph Company. (See Kitsee, Isidor, assignor.)
American Telephone and Telegraph Company. (See Shaw, Thomas assignor.)
American Thread Company. (See Curry, Malcolm, assignor.)
American Thread Company, The. (See Marx, Henry J., assignor.)
American Tool Works Company, The. (See Herrmann and Robinson, assignors.)
American Well Works, The. (See Bodinson, Lars W., assignor.)
American Wringer Company, The. (See Wright, Rea P., assignor.)
Amet, Edward H., Redondo Beach, Cal. Apparatus for producing companion auditory and visual records for simultaneous reproduction. No. 1,221,407; Apr. 3; v. 237; p. 143.
Amet, Edward H., Redondo Beach, Cal. Means for reproducing vibrations. No. 1,221,408; Apr. 3; v. 237; p. 144.
Amet, Edward H., Redondo Beach, Cal. Electric telephone talking machine. No. 1,222,348; Apr. 10; v. 237; p. 502.
Ancona, John F., Rochester, N. Y. Printing and cutting machine. No. 1,222,914; Apr. 17; v. 237; p. 741.
Andersch, Henry, and J. A. Rausch, St. Louis, Mo. Mop-clamp. No. 1,223,464; Apr. 24; v. 237; p. 962.
Anderson, Albert S. (See Schwister, John, assignor.)
Anderson, Algoth E., Brooklyn, N. Y. Bed attachment. No. 1,223,230; Apr. 17; v. 237; p. 848.
Anderson, Ever A. (See Ostman and Anderson.)
Anderson, Chris. Pickert, N. D. Flour-sifter. No. 1,221,816; Apr. 10; v. 237; p. 315.
Anderson, Clarence E., Pecatonica, Ill. Explosive-engine-controlling mechanism. No. 1,223,844; Apr. 24; v. 237; p. 1098.
Anderson, Elias B., Forreston, Ill. Knife-sharpener. No. 1,223,753; Apr. 24; v. 237; p. 1066.
Anderson, Emil, New York, N. Y., assignor to The Universal Turbine Company, Jersey City, N. J. Turbine-engine. No. 1,221,500; Apr. 3; v. 237; p. 176.
Anderson, Frank J., Box Elder, Mont. Clasp-fastener. No. 1,221,011; Apr. 3; v. 237; p. 3.
Anderson, James A., New York, N. Y. Vessel mooring and positioning apparatus. No. 1,221,012; Apr. 3; v. 237; p. 3.
Anderson, James D., Jeddo, Ala. Machine for pulling cotton-stalks. No. 1,223,231; Apr. 17; v. 237; p. 849.
Anderson, John A., assignor of one-half to O. Morton, Bridgeport, Conn. Cotter-pin extractor. No. 1,222,173; Apr. 10; v. 237; p. 441.
Anderson, Lycurgus, Lake Creek, Tex. Grading apparatus. No. 1,221,501; Apr. 3; v. 237; p. 176.
Anderson, Robert D. H., assignor to Frank Ridlon Company, Boston, Mass. Electric-light stand. No. 1,222,915; Apr. 17; v. 237; p. 741.
Anderson, Samuel A., Jr., Louisville, Ky. Electric saw. No. 1,221,267; Apr. 3; v. 237; p. 94.
Anderson, Thomas R., Oklahoma, Okla. Concrete-arch form. No. 1,223,926; Apr. 24; v. 237; p. 1126.
Anderson, William F. (See Scott, Granville E., assignor.)
Andreatte, Joseph, Oakdale, Cal. Pay-as-you-enter gate or turnstile. No. 1,221,268; Apr. 3; v. 237; p. 95.
Andrews, Al. Moorcroft, assignor of one-third to F. C. Hunter, one-third to M. R. Camplin, and one-third to O. Nelson, Sheridan, Wyo. Water-elevator. No. 1,221,269; Apr. 3; v. 237; p. 95.
Andrews, George R. (See Paterson, William S. and M. H., assignors.)
Andrus, James R., Woodland, Wash. Undercutter. No. 1,221,128; Apr. 3; v. 237; p. 44.
Angell, Fred P., Battle Creek, Mich. Valve. No. 1,223,353; Apr. 24; v. 237; p. 923.
Anglo-American Cotton Products Corporation. (See Laudell, Herbert S., assignor.)
Anthony, William, Clyde, Ohio. Electrical measuring instrument. No. 1,223,306; Apr. 17; v. 237; p. 873.
Appleby, Cecil, *et al.* (See Burns, John G., assignor.)
Arbib, Alexander. (See Kaufman, Charles L., assignor.)
Arbuckle, Samuel F., Indianapolis, Ind. Electric-lighting system. No. 1,223,134; Apr. 17; v. 237; p. 817.
Arden, Thomas R., assignor to D. Heyman, Brooklyn, and L. Yankauer, New York, N. Y. Liquid-projecting apparatus. No. 1,223,655; Apr. 24; v. 237; p. 1030.
Ardin, Lucien, New York, N. Y. Entry-sheet for articles of merchandise. No. 1,222,060; Apr. 10; v. 237; p. 400.
Arendt, Morton, assignor to H. Malmin Company, Inc., New York, N. Y. Construction of electrically-driven cloth-cutting machines. No. 1,221,409; Apr. 3; v. 237; p. 144.
Arfstrom, Oscar G. (See Runquist, Carl, assignor.)
Aridor Company, The. (See Moyer, Paul S., assignor.)
Armstrong, Edwin R., Evanston, Ill., assignor to Auto Power Company, Omaha, Nebr. Power-delivering attachment for motor-vehicles. No. 1,223,465; Apr. 24; v. 237; p. 962.
Armstrong, John J., Sr., Weimar, Tex., assignor of one-sixth to R. L. Williams and one-sixth to T. A. Hill. Post-hole digger. No. 1,222,711; Apr. 17; v. 237; p. 673.
Armstrong, Merton C., assignor to The Interstate Machine Products Company, Inc., Rochester, N. Y. Mechanical movement. No. 1,222,712; Apr. 17; v. 237; p. 673.
Armstrong, William, Wadena, Minn. Gutter for stables. No. 1,221,817; Apr. 10; v. 237; p. 316.
Arnold, Albert, Bay City, Mich. Carbureter. No. 1,222,589; Apr. 17; v. 237; p. 629.
Arnold, Douglas A. (See Laytham and Arnold.)
Arnold, Egmont B., Milwaukee, Wis. Temporary binder. No. 1,221,953; Apr. 10; v. 237; p. 365.
Arnold, Willard E., Portland, N. D. Gate-latch. No. 1,221,954; Apr. 10; v. 237; p. 365.
Arnott, Robert F., Upper Montclair, N. J., assignor to I. L. Myers, New York, N. Y. Manufacture of paper cartons. No. 1,221,649; Apr. 3; v. 237; p. 224.
Arseneault, John H., Shediac, New Brunswick, Canada. Grease-cup. No. 1,222,256; Apr. 10; v. 237; p. 470.
Asbestos Protected Metal Company. (See Davis, Meyer, assignor.)
Asbestos Slate Roofing Manufacturing Company. (See Sanger, William, assignor.)
Ash, Marsellus T., Buffalo, N. Y. Carton. No. 1,223,232; Apr. 17; v. 237; p. 849.
Ashe, Lauren H. (See Kohman, Godfrey, and Ashe.)
Ashmun, Anna K., Salem, Oreg. Chimney-holder. No. 1,223,233; Apr. 17; v. 237; p. 849.
Aspegren, William H., Quincy, Mass. Buffer. No. 1,223,845; Apr. 24; v. 237; p. 1098.
Asquith, Stead A., Waterloo, Iowa. Safety-catch. No. 1,222,515; Apr. 10; v. 237; p. 562.
Atkins, Henry A., and T. Frandsen, Moline, Ill. Garden and lawn tool. No. 1,221,650; Apr. 3; v. 237; p. 224.
Atkinson, Albert, London, England. Wind-screen for side cars. No. 1,223,551; Apr. 24; v. 237; p. 994.
Atkinson, Edward M., Portland, Oreg. Cooking and heating device. No. 1,223,552; Apr. 24; v. 237; p. 994.
Atlas Ball Company. (See Mayhew, Frank, assignor.)
Atlas Powder Company. (See Dyson, Herbert P., assignor.)
Atlas Tank Manufacturing Company. (See Wahlberg, Eric J., assignor.)
Auel, Carl B., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Ventilating plate and spacer for electrical apparatus. No. 1,221,013; Apr. 3; v. 237; p. 4.
Ausbrooks, J. A., *et al.* (See Taylor, Ewing H., assignor.)
Auth, Charles, assignor to E. L. Auth, Brooklyn, N. Y. Storage-battery charger. No. 1,222,257; Apr. 10; v. 237; p. 471.
Auth, Charles, *et al.*, trustees. (See Richardson, Henry F., assignor.)
Auth, Emma L. (See Auth, Charles, assignor.)
Authier, Joseph M. (See Cordeau, Adolphe, assignor.)
Auto Power Company. (See Armstrong, Edwin R., assignor.)
Automatic Chemical Closet Company. (See Scarborough and King, assignors.)
Automatic Electric Company. (See Campbell, Wilson L., assignor.)
Automatic Electric Company. (See Erickson, Charles J., assignor.)
Automatic Electric Company. (See Hulit, John A., assignor.)
Automatic Electric Company. (See Martin, Talbot G., assignor.)
Automatic Electric Company. (See Smith, Arthur B., assignor.)

Automatic Electric Washer Company. (See Ogg, Harry L., assignor.)
Automatic Packing & Labeling Company. (See Gwinn, George W., assignor.)
Axelsson, Charli, assignor of thirty-five one-hundredths to W. F. Prehall, Lakeville, Minn. Releasing device. No. 1,221,651; Apr. 3; v. 237; p. 224.
Axford, Edward, Germantown, Pa. Device for use in finishing union-suits. No. 1,222,713; Apr. 17; v. 237; p. 673.
Babcock, Clifford D., assignor of one-half to J. Neilson, New York, N. Y. Ionized-chamber device. No. 1,222,916; Apr. 17; v. 237; p. 742.
Bachardy, Stephen J., and J. Kiss, Newark, N. J. Money-paying attachment for cash-registers. No. 1,223,354; Apr. 24; v. 237; p. 924.
Bachman, John N., Shallington, and M. L. Bachman, Walnutport, Pa. Composition of matter for cleaning or polishing blackboards or the like. No. 1,223,846; Apr. 24; v. 237; p. 1098.
Bachman, Joseph P., Newark, N. J. Device for testing the spreading value of baking materials. No. 1,222,590; Apr. 17; v. 237; p. 630.
Bachman, Morris L. (See Bachman, John N. and M. L.)
Back, Arthur D., Juneau, Alaska. Bag-holder. (Reissue.) No. 14,279; Apr. 3; v. 237; p. 283.
Backus, John C., Smethport, Pa. Selective gear-shifting mechanism. No. 1,223,656; Apr. 24; v. 237; p. 1031.
Backus, John C., Smethport, Pa. Automobile-headlight. No. 1,223,657; Apr. 24; v. 237; p. 1031.
Bacon, Malcolm, Eagle Rock, Cal. Scrubbing device. No. 1,223,658; Apr. 24; v. 237; p. 1032.
Badeau, Harry U., assignor to The Bryant Electric Company, Bridgeport, Conn. Face-plate for flush receptacles. No. 1,221,652; Apr. 3; v. 237; p. 225.
Badger Brass Mfg. Co., The. (See Welles, Richard H., assignor.)
Badische Anilin & Soda Fabrik. (See Schmidt, Hochschwender, and Eichler, assignors.)
Baehr, George, McKeesport, Pa., assignor to Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,222,714; Apr. 17; v. 237; p. 674.
Baird, Archie M., Topeka, Kans. Pneumatic drill. No. 1,223,022; Apr. 17; v. 237; p. 779.
Baird, Archie M., assignor to Baird Pneumatic Tool Company, Topeka, Kans. Pneumatic test-hole drill. No. 1,223,234; Apr. 17; v. 237; p. 850.
Baird Pneumatic Tool Company. (See Baird, Archie M., assignor.)
Baker, Charles E., Chicago, Ill. Recovering zinc and iron from solutions thereof. No. 1,224,057; Apr. 24; v. 237; p. 1170.
Baker, Hugh J., assignor to The Concrete Forms Company, Indianapolis, Ind. Form for concrete construction. No. 1,222,349; Apr. 10; v. 237; p. 504.
Baker, James W., Jr. (See Sutton and Baker.)
Baker, John L., Bonelta Springs, S. D. Game. No. 1,222,591; Apr. 17; v. 237; p. 630.
Baker, Walter C., Cleveland, Ohio. Shock-absorbing device. No. 1,223,307; Apr. 17; v. 237; p. 873.
Baldwin, John H., Springfield, Mo. Erasing type-written matter. No. 1,222,592; Apr. 17; v. 237; p. 630.
Baldwin Locomotive Works, The. (See Linton, Morris, assignor.)
Baldwin Locomotive Works, The. (See Rushton, Kenneth, assignor.)
Baldwin, Morton S., Adrian, Mich. Accelerator device for automobiles. No. 1,223,235; Apr. 17; v. 237; p. 850.
Baldwin, Samuel W., and C. A. Peney Hammond, La. Automobile-control lock. No. 1,223,236; Apr. 17; v. 237; p. 850.
Balint, Michael. (See Kurunczi and Balint.)
Ball, Henry P., assignor to S. Sternau & Co., Brooklyn, N. Y. Container. No. 1,222,571; Apr. 10; v. 237; p. 583.
Ball, Herman F., Bronxville, N. Y. Draw-bar-pin casting. No. 1,223,553; Apr. 24; v. 237; p. 995.
Ball and Roller Bearing Company, The. (See Heim, Lewis R., assignor.)
Baillin, Cyrll G. (See Paul, Christine F., Jr., assignor.)
Ballner, Charles R., Jamaica, N. Y. Building construction. No. 1,222,174; Apr. 10; v. 237; p. 442.
Baltensweiler, Adolf, and K. Egloff, assignors to Firm A. Saurer, Arbon, Switzerland. Gudgeon-pin for internal-combustion engines. No. 1,223,355; Apr. 24; v. 237; p. 924.
Baltisser, Jacob, Basel, Switzerland. Calculating-machine especially devised for geodetic measurements. No. 1,221,653; Apr. 3; v. 237; p. 225.
Bandfield, Harold G., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Protector. No. 1,222,350; Apr. 10; v. 237; p. 504.
Bangs, Chester T., Ottawa, Ill. Packing for sleeve-valves of engines. No. 1,222,351; Apr. 10; v. 237; p. 504.
Banner, Otto, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Regulating mechanism for centrifugal compressors and pumps. No. 1,222,352; Apr. 10; v. 237; p. 504.
Barber, Howard M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Delivery mechanism for sheet-feed rotary presses. No. 1,223,023; Apr. 17; v. 237; p. 779.
Barbour, John P. (See Simpson and Barbour.)
Barnickel, William S., St. Louis, Mo. Treatment of crude oil. No. 1,223,659; Apr. 24; v. 237; p. 1032.
Barnickel, William S., St. Louis, Mo. Apparatus for treating natural oils and residues of same. No. 1,223,660; Apr. 24; v. 237; p. 1032.
Bard, Jacob W., assignor to Sangamo Electric Company, Springfield, Ill. Thermo-couple. No. 1,221,270; Apr. 3; v. 237; p. 96.
Bardin, Abel, Paris, France. Multiple-plate reinforced glass and producing same. No. 1,223,135; Apr. 17; v. 237; p. 818.
Barham, Walter J. (See Mitchell and Barham.)
Barleau, Jerome E., Colfax, Cal. Constant-flow module. No. 1,222,258; Apr. 10; v. 237; p. 471.
Barker, Philip. (See Christian and Barker.)
Barnard, Arthur W., Newton Center, assignor to Colonial Scale Company, Boston, Mass. Automatic weighing-scale. No. 1,222,917; Apr. 17; v. 237; p. 742.
Barnett, Charles J., Neodesha, Kans. Machine for roughening clay ribbons. No. 1,221,014; Apr. 3; v. 237; p. 4.
Barnett, Maurice, and L. Burgess, New York, N. Y. Producing aluminum carbid. No. 1,222,593; Apr. 17; v. 237; p. 630.
Barr, Howard. (See Barr, Samuel D., assignor.)
Barr, Samuel D., Beach City, assignor of one-half to H. Barr, Apple Creek, Ohio. Self-rising-flour-mixing machine. No. 1,222,584; Apr. 10; v. 237; p. 588.
Barrell, William L., Lawrence, Mass. Weft-replenishing loom. No. 1,221,410; Apr. 3; v. 237; p. 144.
Barry Manufacturing Company. (See Barry, Nicholas, assignor.)
Barry, Nicholas, assignor to Barry Manufacturing Company, Muscatine, Iowa. Metal split pulley. No. 1,223,024; Apr. 17; v. 237; p. 779.
Barry, William A., Kittanning, Pa. Collapsible drum. No. 1,223,237; Apr. 17; v. 237; p. 851.
Bartel, Leo, and J. Hildebrand, Fremont, Wis. Drag-harrow. No. 1,222,918; Apr. 17; v. 237; p. 743.
Bartells, Edwin J., assignor to Pacific Creosoting Company, Seattle, Wash. Paving-block. No. 1,222,061; Apr. 10; v. 237; p. 401.
Barton, Louis E., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Titanic-oxid product and obtaining the same. No. 1,223,356; Apr. 24; v. 237; p. 924.
Barton, Louis E., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Composite titanic-oxid pigment and producing the same. No. 1,223,357; Apr. 24; v. 237; p. 924.
Barton, Louis E., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Method for producing basic titanic-sulfate products and pure titanic oxid therefrom. No. 1,223,358; Apr. 24; v. 237; p. 925.
Barton, Louis E., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Composite titanic-oxid pigment and producing the same. (Reissue.) No. 14,289; Apr. 24; v. 237; p. 1192.
Bartram, Haworth W., Melbourne, and A. Gillies, Heidelberg, Victoria, Australia. Milking-machine. No. 1,221,654; Apr. 3; v. 237; p. 226.
Bastian, Arthur J., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Making laminated articles. No. 1,223,348; Apr. 17; v. 237; p. 888.
Bates Valve Bag Company. (See Miller, Reginald R., assignor.)
Battige, John C., Manistee, Mich. Scraper for pans, kettles, &c. No. 1,223,238; Apr. 17; v. 237; p. 851.
Bauer & Black. (See Schulz, Otto C., assignor.)
Bauer & Black. (See Sharp, William H., assignor.)
Bauer, Hugo, assignor of one-half to C. Schember & Söhne, Vienna, Austria. Mechanically-operated grate. No. 1,223,661; Apr. 24; v. 237; p. 1033.
Baughn, Charles B., Oilfields, Cal. Gear-shifter. No. 1,223,136; Apr. 17; v. 237; p. 818.
Baum, James B., assignor of one forty-fifth to P. Geiston and one forty-fifth to J. P. Moore, Grand Junction, Colo. Rail-joint. No. 1,223,847; Apr. 24; v. 237; p. 1098.
Bauman, Edward L., Detroit, Mich. Resilient wheel. No. 1,221,411; Apr. 3; v. 237; p. 145.
Baumann, George H., Milwaukee, Wis. Combined kettle and strainer. No. 1,224,058; Apr. 24; v. 237; p. 1170.
Baumgarn, Hans H., Lemmon, S. D. Steam-chest. No. 1,221,271; Apr. 3; v. 237; p. 96.
Bayles, Lewis C., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Valve for percussive tools. No. 1,222,353; Apr. 10; v. 237; p. 505.
Bayliss, Jerome Z., and C. Raus, assignors to The Acme Metal Stamping Company, Cleveland, Ohio. Switch-box. (Reissue.) No. 14,284; Apr. 17; v. 237; p. 890.
Beach Manufacturing Co., The. (See Beach, William J., assignor.)
Beach, William J., assignor to The Beach Manufacturing Co., New Haven, Conn. Velocipede. No. 1,222,354; Apr. 10; v. 237; p. 505.
Beacon Miniature Electric Co. (See Kaplan, Morduch L., assignor.)
Beattie, John E. (See Rossiter and Beattie.)
Bechman, Henry F., assignor to Duplex Printing Press Company, Battle Creek, Mich. Rotary printing-press. No. 1,223,025; Apr. 17; v. 237; p. 780.

Bechman, Henry F., assignor to Duplex Printing Press Company, Battle Creek, Mich. Stereotype-plate-casting box. No. 1,223,026; Apr. 17; v. 237; p. 780.

Beck, Charles W., Rockville Center, N. Y., assignor, by mesne assignments, to The Beck-Frost Corporation, Detroit, Mich. Protector and lubricant-retainer for the joints of the steering mechanism and other parts of an automobile. No. 1,221,015; Apr. 3; v. 237; p. 4.

Beck Duplicator Company. (See Fecher, Frederick F., assignor.)

Beck-Frost Corporation, The. (See Beck, Charles W., assignor.)

Beck, William P., and A. C. Burns, Birmingham, Ala. Shingle-making machine. No. 1,221,272; Apr. 3; v. 237; p. 96.

Becker, Edmund, Washington, D. C. Mixing mortar. No. 1,223,239; Apr. 17; v. 237; p. 851.

Becker, Edmund, Washington, D. C. Concrete road and structure. No. 1,223,240; Apr. 17; v. 237; p. 851.

Becker, Frederick W., New York, N. Y. Tuning-peg for a stringed instrument. No. 1,223,554; Apr. 24; v. 237; p. 995.

Becker, Mathias B., Chicago, Ill. Machine for printing prepared roofing. No. 1,222,594; Apr. 17; v. 237; p. 631.

Becker, Nicholas A., South San Francisco, Cal. Curb-bar. No. 1,221,955; Apr. 10; v. 237; p. 365.

Becker, Oliver E., Chicago, Ill. Electric-current brush structure. No. 1,221,818; Apr. 10; v. 237; p. 316.

Becker, Peter, New York, N. Y. Universal lone-arm. No. 1,223,927; Apr. 24; v. 237; p. 1126.

Becker, Rudolph. (See Elchhorn and Becker.)

Beckwith, Raymond A., Hartford, Conn., assignor to Sutton, Aspinwall & Company, New York, N. Y. Motor-vehicle transmission and clutch mechanism. No. 1,222,715; Apr. 17; v. 237; p. 674.

Becton, Dickinson & Co. (See Laurent, Henry, assignor.)

Bedell, Richard M., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, Typographical machine. No. 1,221,819; Apr. 10; v. 237; p. 316.

Beegle, Daniel F., Waitsburg, Wash. Grain-bin. No. 1,222,516; Apr. 10; v. 237; p. 562.

Beemnan, Charley L., assignor of one-half to R. P. Kile, Riverton, Wyo. Shipping-tag. No. 1,222,595; Apr. 17; v. 237; p. 631.

Beers, Burton B. (See Labadie and Beers.)

Beers, Mary, East Orange, N. J. Poison-indicator for bottles. No. 1,223,241; Apr. 17; v. 237; p. 852.

Behnke, Wilhelm B., Ashland, Wis. Ironing-board. No. 1,223,137; Apr. 17; v. 237; p. 818.

Behrend, George H., Athens, Wis. Load-binder. No. 1,224,059; Apr. 24; v. 237; p. 1170.

Beidler, George C., Rochester, N. Y. Photographing and developing apparatus. No. 1,222,596; Apr. 17; v. 237; p. 632.

Heidler, George C., Rochester, N. Y. Photographing and developing apparatus. No. 1,222,597; Apr. 17; v. 237; p. 632.

Bell, John E., New York, N. Y. Manufacture of producer-gas. No. 1,223,242; Apr. 17; v. 237; p. 852.

Bellini, Ettore, Enghien-les-Bains, France. Apparatus for directed wireless telegraphy and telephony. No. 1,221,787; Apr. 3; v. 237; p. 272.

Bement, Theron R. (See Hopkins, Arthur C., assignor.)

Bender, Adolph A., assignor to Bender Resilient Wheel Mfg. Company, Pinebluff, Wyo. Resilient vehicle-wheel. No. 1,224,060; Apr. 24; v. 237; p. 1170.

Bender Resilient Wheel Mfg. Company. (See Bender, Adolph A., assignor.)

Benedict, Charles H., Chicago, Ill. Drying apparatus. No. 1,221,129; Apr. 3; v. 237; p. 44.

Benison, Thomas S., East Flat Rock, N. C. Tool-handle. No. 1,221,655; Apr. 3; v. 237; p. 226.

Benjamin, Bert R., Oak Park, Ill., assignor to International Harvester Company of New Jersey. Combined harvester and thresher. No. 1,222,716; Apr. 17; v. 237; p. 675.

Benjamin, Bert R., Oak Park, Ill., assignor to International Harvester Company of New Jersey. Shocking-machine. No. 1,222,717; Apr. 17; v. 237; p. 675.

Benjamin, Bert R., Oak Park, Ill., assignor to International Harvester Company of New Jersey. Grain-shocker. No. 1,222,718; Apr. 17; v. 237; p. 676.

Benjamin Electric Mfg. Company. (See Benjamin, Reuben R., assignor.)

Benjamin, Louis S. (See Smith, Stanley B., assignor.)

Benjamin, Reuben R., assignor to Benjamin Electric Mfg. Company, Chicago, Ill. Carbureter. No. 1,221,956; Apr. 10; v. 237; p. 316.

Benn, Alonzo N., Chicago, Ill. Pickling, curing, treating, and handling meat food products. No. 1,221,957; Apr. 10; v. 237; p. 366.

Bennett, Ashley C., Minneapolis, Minn. Carbureter. No. 1,223,662; Apr. 24; v. 237; p. 1033.

Bennett, Conrad R., Worcester, Mass. Grain-sampling device. No. 1,222,919; Apr. 17; v. 237; p. 743.

Benoit, Edward F., New Bedford, Mass. Slicer-cleaner for filers. No. 1,222,840; Apr. 17; v. 237; p. 716.

Benson, Edward, Miami, Ariz. Shoe-lace clasp. No. 1,221,656; Apr. 3; v. 237; p. 226.

Benson, Mirza H., assignor of one-half to E. C. Evans, Des Moines, Iowa. Lock. No. 1,223,928; Apr. 24; v. 237; p. 1126.

Bent, Roy H. and W. C., Antwerp, N. Y. Food product and making the same. No. 1,222,062; Apr. 10; v. 237; p. 401.

Bent, Wynn C. (See Bent, Roy H. and W. C.)

Bentley, Frank E., *et al.* (See Umpleby, Harry C., assignor.)

Benton, George W., Conneaut, Ohio. Step for shovels, spades, and the like. No. 1,223,555; Apr. 24; v. 237; p. 996.

Bentz, Joseph J., assignor to Keystone Film Company, Los Angeles, Cal. Manufacture of articles from plaster of Paris. No. 1,221,130; Apr. 3; v. 237; p. 45.

Berg Brothers. (See Buckman, John S., assignor.)

Berg, John O., assignor to Rotary Power-Tool Company, Inc., New York, N. Y. Tool for treating stone, concrete, and other materials. No. 1,223,359; Apr. 24; v. 237; p. 925.

Berger, Herman, Keene, N. D. Automatic vehicle-brake. No. 1,221,273; Apr. 3; v. 237; p. 97.

Bergman, Sven R., Lynn, Mass., assignor to General Electric Company, Dynamo-electric machine. No. 1,221,657; Apr. 3; v. 237; p. 227.

Berles, Edward, assignor to John C. Moninger Company, Chicago, Ill. Gearing. No. 1,223,754; Apr. 24; v. 237; p. 1066.

Berlin Mills Company. (See Hanson, Hugo H., assignor.)

Bernard, Harry O., Birmingham, Ala. Water-cooled welding-electrode. No. 1,221,958; Apr. 10; v. 237; p. 366.

Berners, Edward C., Two Rivers, Wis. Glue and mucilage pencil. No. 1,223,360; Apr. 24; v. 237; p. 925.

Bernhard, Richard, Milwaukee, Wis., assignor, by mesne assignments, to Worthington Pump and Machinery Corporation, Drier. No. 1,221,412; Apr. 3; v. 237; p. 145.

Bernheim, Morris U., Louisville, Ky., assignor, by mesne assignments, to The Alvey-Ferguson Company, Cincinnati, Ohio. Conveying system. No. 1,222,598; Apr. 17; v. 237; p. 633.

Berry, Arthur, Springfield, Mo. Automatic farm-gate. No. 1,221,274; Apr. 3; v. 237; p. 97.

Berry, George W., Rose Bay, near Sydney, New South Wales, assignor to The Wireless Hinge Manufacturing Company Limited, Sydney, Australia. Constructing lid-hinges for sheet-metal receptacles. No. 1,223,848; Apr. 24; v. 237; p. 1098.

Berry, George W., Rose Bay, near Sydney, New South Wales, assignor to The Wireless Hinge Manufacturing Company Limited, Sydney, Australia. Manufacture of lids for pressed sheet-metal receptacles. No. 1,223,849; Apr. 24; v. 237; p. 1099.

Berry, Robert C., Indianapolis, Ind. Carbon-removing means for internal-combustion engines. No. 1,221,959; Apr. 10; v. 237; p. 367.

Berry, William O., Caro, Mich. Article-support for ladders. No. 1,221,658; Apr. 3; v. 237; p. 227.

Berryhill, John H., F. E. Hand, and L. A. Thomas, assignors to The Vulcan Plow Company, Evansville, Ind. Lifting mechanism for plows. No. 1,222,517; Apr. 10; v. 237; v. 562.

Bersbach, Emil, Chicago, assignor to R. J. Jacker, Oak Park, Ill. Luggage-carrier for roadsters. No. 1,222,572; Apr. 10; v. 237; p. 583.

Bessesen, Alfred N., Minneapolis, Minn. Syringe. No. 1,223,243; Apr. 17; v. 237; p. 852.

Bessmer, Herman. (See Fiebl, Charles F., assignor.)

Bessom, Earl A., assignor to The Wheeler-Schebler Carbureter Co., Indianapolis, Ind. Carbureter. No. 1,221,502; Apr. 3; v. 237; p. 176.

Best, William N., Brooklyn, N. Y. Truss. No. 1,221,016; Apr. 3; v. 237; p. 5.

Bethune, Harry F., and R. J. O'Neill, Denver, Colo. Upper framing for insulated steel railway-cars. No. 1,221,960; Apr. 10; v. 237; p. 367.

Bettendorf, Joseph W., administrator. (See Bettendorf, William P.)

Bettendorf, William P., deceased; J. W. Bettendorf, administrator, Davenport, Iowa. Draft-rigging. No. 1,223,753; Apr. 24; v. 237; p. 1067.

Bevan, Edward J., London, England. Absorbent for carbon dioxid in breathing apparatus for use in mine-rescue work or like purposes. No. 1,223,244; Apr. 17; v. 237; p. 853.

Beverage Machine and Bottle Co. (See Crovo, Paul, assignor.)

Beyer, Charles E., Mazatlan, Mexico. Concentrator. No. 1,221,659; Apr. 3; v. 237; p. 227.

Bezer, Henry, Newark, N. J. Railway signaling system. No. 1,221,017; Apr. 3; v. 237; p. 5.

Bice, Arthur W., Windsor, Ontario, Canada. Gas-regulating valve. No. 1,221,660; Apr. 3; v. 237; p. 228.

Bicker, Edgar B., assignor of one-third to E. Eickhoff, St. Louis, Mo. Cigar-can. No. 1,222,719; Apr. 17; v. 237; p. 676.

Bickhart, Grabill J., Hilbert, Wis. Elevator-head. No. 1,221,961; Apr. 10; v. 237; p. 367.

Bicknell, Frank A. (See Whelpley and Bicknell.)

Biddlson, Eugene, Fox Lake, assignor of one-half to E. E. Skillin, River Grove, Ill. Bow-facing-oar mechanism. No. 1,223,756; Apr. 24; v. 237; p. 1067.

Bieder, Herman. (See Schoenl and Bieder.)

Biesel, Charles, El Paso, Tex. Dehydrator. No. 1,223,245; Apr. 17; v. 237; p. 853.

Bigelow, G. F., *et al.* (See Kopp, John P., assignor.)

Bijur, Joseph, assignor to The Safety Car Heating and Lighting Co., New York, N. Y. Automatic switch. No. 1,222,720; Apr. 17; v. 237; p. 676.

Billings, Frank. (See Greenleaf, Robert P., assignor.)

Bilton, George E., assignor of one-half to N. C. Maynard, Toronto, Ontario, Canada. Tray. No. 1,221,788; Apr. 3; v. 237; p. 272.

Bird, Frederick H., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Coupling-pocket. No. 1,223,466; Apr. 24; v. 237; p. 962.

Birk, August T. (See Cooper, Lyman M., assignor.)

Bishop, Alfred R. (See Carns and Bishop.)

Bissell, Carl H., assignor to Crouse-Hinds Company, Syracuse, N. Y. Means for attaching electrical appliances to conduit outlet-boxes. No. 1,223,467; Apr. 24; v. 237; p. 963.

Bissell, Carl H., and E. G. Smith, assignors to Crouse-Hinds Company, Syracuse, N. Y. Electrical connection. No. 1,222,721; Apr. 17; v. 237; p. 677.

Bissell Carpet Sweeper Company. (See Mason, Francis C., assignor.)

Bissell Carpet Sweeper Company. (See Shanahan and Mason, assignors.)

Bittle, Clarence E., assignor to O. P. Wyland, Harlan, Iowa. Animal-trap. No. 1,222,063; Apr. 10; v. 237; p. 401.

Bittmann, Heinrich, Frankfort-on-the-Main, Germany, assignor to Dwight & Lloyd Sintering Company, Inc., New York, N. Y. Sintering fine oxid ore and metallurgical products. No. 1,221,962; Apr. 10; v. 237; p. 368.

Blackstone Manufacturing Company, The. (See More, Glenn, assignor.)

Blair, Walter D., and H. C. Raasch, Red Lake Falls, Minn. Wheat-shocking attachment for harvesters. No. 1,221,820; Apr. 10; v. 237; p. 317.

Blais, William E., Boston, Mass. Combination-lock. No. 1,222,920; Apr. 17; v. 237; p. 743.

Blaisdell Paper Pencil Company. (See Smith, Charles A., assignor.)

Blake, William F., assignor to J. B. Foglesong, Battle Creek, Mich. Folding ironing-board. No. 1,223,663; Apr. 24; v. 237; p. 1034.

Blanchet, William F., Tampa, Fla. Air-compressor. No. 1,221,131; Apr. 3; v. 237; p. 45.

Blankavag, Frank, Princeton, Wis. Lock. No. 1,221,132; Apr. 3; v. 237; p. 45.

Blathy, Otto T., Budapest, Hungary. Calibrating electric meters. No. 1,221,821; Apr. 10; v. 237; p. 317.

Bleach Process Company. (See Wheeler, Frank G., assignor.)

Bleecker, Warren F., Washington, Pa. Cartridge-fuse. No. 1,221,275; Apr. 3; v. 237; p. 98.

Blettner, George H., Chicago, Ill. Piston-ring-milling machine. No. 1,223,929; Apr. 24; v. 237; p. 1126.

Blettner, George H., Chicago, Ill. Making piston-rings. No. 1,223,930; Apr. 24; v. 237; p. 1127.

Bley, Henry A., Eden, N. Y. Plant-setter. No. 1,222,921; Apr. 17; v. 237; p. 744.

Bliss, Charles W. (See Dietrich and Bliss.)

Bliss, William L., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Lubricating device. No. 1,221,018; Apr. 3; v. 237; p. 5.

Bloch, Marie, New York, N. Y. Hygienic toilet-seat cover. No. 1,221,661; Apr. 3; v. 237; p. 228.

Block Gas Mantle Co., The. (See Risinger, Frank V., assignor.)

Blundell, Mary R. (See Blundell, William C., assignor.)

Blundell, William C., assignor of one-half to M. R. Blundell, Los Angeles, Cal. Water-indicating means for steam-boilers. No. 1,221,963; Apr. 10; v. 237; p. 368.

Blydenburgh, Daniel, Pawtucket, R. I. Feed-controlling device for shuttles. No. 1,223,361; Apr. 24; v. 237; p. 926.

Blythe, Eugene S., Allen, Kans. Folding umbrella. No. 1,223,138; Apr. 17; v. 237; p. 819.

Bobo, Lee O., Fresno, Cal. Plow. No. 1,222,064; Apr. 10; v. 237; p. 401.

Bobrick, Mayo A., Cleveland, Ohio. Auxiliary seat-back. No. 1,222,175; Apr. 10; v. 237; p. 442.

Bock, Henry A., Milford, Conn. Cigar and blending the same. No. 1,223,362; Apr. 24; v. 237; p. 926.

Böcker, Ernst, New York, N. Y. Automatic musical instrument. No. 1,222,722; Apr. 17; v. 237; p. 677.

Bockstahler, Louis A., Lakewood, Ohio. Automatically-controlled floating mine. No. 1,221,964; Apr. 10; v. 237; p. 369.

Bodinson, Lars W., assignor to The American Well Works, Aurora, Ill. Centrifugal pump. No. 1,221,822; Apr. 10; v. 237; p. 317.

Bogdanović, Milan, Cleveland, Ohio. Rail-joint. No. 1,223,139; Apr. 17; v. 237; p. 819.

Borgs, Thaddeus M., Monongahela, Pa. Sliding-horn kick-back dump. No. 1,221,662; Apr. 3; v. 237; p. 228.

Bohnenkemper, George C., Denver, Colo. Lawn-sprinkler. No. 1,223,246; Apr. 17; v. 237; p. 853.

Boker, Vitus A., Minneapolis, Minn. Tractor-truck. No. 1,221,133; Apr. 3; v. 237; p. 45.

Bolander, George R., Alameda, Cal. Sprinkler. No. 1,221,276; Apr. 3; v. 237; p. 98.

Bolopue, Pearl A., Pittsburgh, Pa. Chock. No. 1,223,247; Apr. 17; v. 237; p. 853.

Bolte, John W., Oak Park, Ill. Smoking-pipe and supporting combustion in same. No. 1,223,757; Apr. 24; v. 237; p. 1067.

Bond, Leonard, Glossop, England. Heating apparatus. No. 1,224,061; Apr. 24; v. 237; p. 1171.

Bone, William A., J. W. Wilson, Leeds, and C. D. McCourt, assignors to Radiant Heating Limited, London, England. Burning gases. No. 1,222,922; Apr. 17; v. 237; p. 744.

Bone, William A., Leeds, J. W. Wilson, Armley, Leeds, and C. D. McCourt, assignors to Radiant Heating Limited, London, England. Combustion of mixed gases. No. 1,223,248; Apr. 17; v. 237; p. 854.

Bone, William A., Leeds, J. W. Wilson, Armley, Leeds, and C. D. McCourt, assignors to Radiant Heating Limited, London, England. Producing heat. No. 1,223,249; Apr. 17; v. 237; p. 854.

Bone, William A., Leeds, J. W. Wilson, Armley, Leeds, and C. D. McCourt, assignors to Radiant Heating Limited, London, England. Diaphragm apparatus for burning gases. No. 1,223,308; Apr. 17; v. 237; p. 874.

Bonfield, William W. (See Wilhelm and Bonfield.)

Boor, Theodore A., Ashville, Ohio. Hose-clamp. No. 1,224,062; Apr. 24; v. 237; p. 1171.

Boor, Theodore A., Ashville, Ohio. Hose-clamp. No. 1,224,063; Apr. 24; v. 237; p. 1171.

Booraem, Robert E., Denver, Colo. Lamp for motor-vehicles. No. 1,224,064; Apr. 24; v. 237; p. 1171.

Boos, Elmer J., Cincinnati, Ohio. Combined head and signal lamp. No. 1,221,965; Apr. 10; v. 237; p. 369.

Booth, Charles M., Halleck, Cal. Reciprocating engine. No. 1,222,923; Apr. 17; v. 237; p. 745.

Bopp, Clinton L., Hawkeye, Iowa. Track instrument. No. 1,221,663; Apr. 3; v. 237; p. 229.

Bopp, Clinton L., Waterloo, Iowa. Electric signal for railways. No. 1,222,518; Apr. 10; v. 237; p. 563.

Borden's Condensed Milk Company. (See Campbell, Charles H., assignor.)

Borden's Condensed Milk Company. (See Taylor, Burt E., assignor.)

Bosch, Firm of Robert. (See Honold, Gottlob, assignor.)

Bosch, Firm of Robert. (See Kratz, Franz, assignor.)

Bosch, Firm of Robert. (See Rall, Max, assignor.)

Bostock, Edgar H., Nutley, N. J., assignor of one-half to Mansfield & Co., New York, N. Y. Precautionary sign. No. 1,221,277; Apr. 3; v. 237; p. 98.

Boston Last Company. (See Leighton, Arthur M., assignor.)

Botten, William H., assignor to The Owen Bucket Company, Cleveland, Ohio. Grab-bucket. No. 1,223,309; Apr. 17; v. 237; p. 874.

Boudreaux, Hamilton J., assignor of one-half to J. H. Loeb, Morgan City, La. Wheel. No. 1,223,140; Apr. 17; v. 237; p. 820.

Boudwin, Walker J., assignor of one-half to The General Engineering Company, Salt Lake City, Utah. Feeding-drum. No. 1,221,136; Apr. 3; v. 237; p. 47.

Bourdelles, Emile A. L., assignor to Societe Anonyme Des Etablissements Delaunay-Belleville, St.-Denis, France. Gun-carriage of a wide firing-angle. No. 1,223,931; Apr. 24; v. 237; p. 1127.

Bourque, Joseph N., Thetford Mines, Quebec, Canada. Drying apparatus for asbestos or other material. No. 1,222,841; Apr. 17; v. 237; p. 716.

Bouzo, Manuel, Habana, Cuba. Colter. No. 1,221,503; Apr. 3; v. 237; p. 177.

Bouzo, Manuel, Habana, Cuba. Loading apparatus. No. 1,221,504; Apr. 3; v. 237; p. 177.

Bowdish, Beecher S., Demarest, N. J. Food-holding device for birds. No. 1,221,019; Apr. 3; v. 237; p. 6.

Bowen, Frank M., Syracuse, N. Y. Direction-indicator for automobiles. No. 1,223,250; Apr. 17; v. 237; p. 855.

Bowen, George W. (See Zerk, Oscar, assignor.)

Bowen, Philip A., assignor to L. E. Little, Lynn, Mass. Lasting-machine. No. 1,223,363; Apr. 24; v. 237; p. 926.

Bowker, Thomas F., Fitchburg, Mass., assignor to M. E. Johnson, trustee. Truss for bicycle or motor-cycle frames. No. 1,221,823; Apr. 10; v. 237; p. 318.

Bowkus, John A., Grand Rapids, Mich. Gas saver and purifier. No. 1,221,278; Apr. 3; v. 237; p. 99.

Bowman, Ervin D. L., Chicago, Ill. Muffler. No. 1,222,723; Apr. 17; v. 237; p. 677.

Bowsher, Rutherford H., Adelphi, Ohio. Artificial tooth. No. 1,223,364; Apr. 24; v. 237; p. 926.

Boyce, Edward. (See Brown, Hugh E., assignor.)

Boyce, William S., Pittsburgh, Pa., assignor to The Rail Joint Company. Rail-joint. No. 1,223,251; Apr. 17; v. 237; p. 855.

Boyd, Charles A., Margaretville, N. Y. Exercising device. No. 1,222,924; Apr. 17; v. 237; p. 745.

Boyd, Samuel M., *et al.* (See Kirby, John, assignor.)

Boyd, William H., Chicago, Ill. Oil-burner. No. 1,223,141; Apr. 17; v. 237; p. 820.

Boye, James H., assignor to James H. Boye Manufacturing Company, Chicago, Ill. Sash-lock. No. 1,221,824; Apr. 10; v. 237; p. 318.

Boye, James H., assignor to The Boye Needle Company, Chicago, Ill. Tatting-shuttle. No. 1,221,176; Apr. 10; v. 237; p. 443.

Boye Needle Company, The. (See Boye, James H., assignor.)

Boyer, Edmund S., Exeter, N. H. Light-holder. No. 1,221,664; Apr. 3; v. 237; p. 230.

Boyer, Orin N., Ontario, Oreg. Automatic scale-weight fruit and vegetable sizer. No. 1,222,842; Apr. 17; v. 237; p. 716.

Boynton, George W., Boston, Mass. Device for repairing pneumatic tires. No. 1,222,259; Apr. 10; v. 237; p. 472.

Brackett, George C., assignor of one-half to G. N. Robinson, Denver, Colo. Dust-collector for rock-drills. No. 1,223,027; Apr. 17; v. 237; p. 780.

Bradbury, Clifford C., Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Secrecy system for extension and party-line telephones. No. 1,221,134; Apr. 3; v. 237; p. 46.

Bradley, Linn, East Orange, N. J., and W. A. Schmidt, Los Angeles, Cal., assignors to Research Corporation, New York, N. Y. Separating certain constituents from a gas or mixture of gases. No. 1,221,505; Apr. 3; v. 237; p. 178.

Bradley, William H., Pittsburgh, Pa. Air-control system for furnaces. No. 1,222,519; Apr. 10; v. 237; p. 563.

Bradley, William J., assignor to Monarch Steam Blower Company, Troy, N. Y. Soot-ejector for steam-boilers. No. 1,222,177; Apr. 10; v. 237; p. 443.

Bradshaw, Alfred. (See Hall and Bradshaw.)

Bradshaw, Charles E., Waterbury, assignor to Robert N. Bassett Company, Incorporated, Shelton, Conn. Button-clasp. No. 1,222,724; Apr. 17; v. 237; p. 677.

Brady, Nicholas R., Dutchess Junction, N. Y. Bed. No. 1,224,065; Apr. 24; v. 237; p. 1172.

Braine, Bancroft G. (See Wolhaupter and Braine.)

Brand, George P., New York, N. Y. Pneumatic motor. No. 1,223,758; Apr. 24; v. 237; p. 1067.

Brand, Maurice B., and F. Toth, Chicago, Ill. Cuspidor. No. 1,222,725; Apr. 17; v. 237; p. 678.

Brandenberger, Jacques E., assignor to La Societe dite "La Cellophane," Paris, France. Sensitive photographic film. No. 1,221,825; Apr. 10; v. 237; p. 318.

Branz, Walter G., Long Point, Ill. Pressure-gage and exhaust-valve. No. 1,223,252; Apr. 17; v. 237; p. 855.

Brasington, John J. (See Watson and Brasington.)

Bratlie, Hans, Chicago, Ill. Shock-absorber for vehicles. No. 1,223,850; Apr. 24; v. 237; p. 1099.

Braun Corporation, The. (See Marvin, Cornelius J., assignor.)

Brecht, Charles. (See Worth and Brecht.)

Breitung, Edward N., Marquette, Mich. Die. No. 1,223,365; Apr. 24; v. 237; p. 927.

Brenkert, Joseph W., San Diego, Cal. Water-filter. No. 1,223,028; Apr. 17; v. 237; p. 781.

Brennan, Thomas, Jr., Moline, Ill., assignor to Monitor Drill Company, Minneapolis, Minn. Grain-drill. No. 1,223,142; Apr. 17; v. 237; p. 820.

Brewster & Co. (See Campbell, Alfred L., assignor.)

Brewster, Percy D., East Orange, N. J. Film for color cinematography. No. 1,222,925; Apr. 17; v. 237; p. 745.

Brewster, Percy D., East Orange, N. J. Apparatus for treating cinematographic films. No. 1,223,664; Apr. 24; v. 237; p. 1034.

Brice, Fillmore W., assignor of one-third to J. M. Hollingsworth, Mer Rouge, La. Nut-lock. No. 1,222,843; Apr. 17; v. 237; p. 717.

Brickell, Harry S., Pittsburgh, Pa. Shower-bath. No. 1,222,726; Apr. 17; v. 237; p. 678.

Bridenbaugh, Elmer H. (See Ohmer and Bridenbaugh.)

Bridenbaugh, Elmer H., assignor to H. O. Jackson, Denver, Colo. Means for imparting oscillatory movement. No. 1,222,727; Apr. 17; v. 237; p. 678.

Bridgeport Brass Company. (See Webster, William R., assignor.)

Brierly, Benjamin R., and E. H. Waugh, assignors to Smith Cannery Machines Company, Seattle, Wash. Fish-beheading device. No. 1,222,926; Apr. 17; v. 237; p. 745.

Brierly, Benjamin R., and E. H. Waugh, assignors to Smith Cannery Machines Company, Seattle, Wash. Scraper attachment for fish-cleaning machines. No. 1,223,468; Apr. 24; v. 237; p. 963.

Briggs, Stephen F., assignor to Briggs & Stratton Company, Milwaukee, Wis. Vibrator-contact. No. 1,223,143; Apr. 17; v. 237; p. 821.

Briggs & Stratton Company. (See Briggs, Stephen F., assignor.)

Bright, C. A. (See Miller, Bendix, assignor.)

Bright, Fred E., Philadelphia, Pa., assignor to The Hess-Bright Manufacturing Company. Cage for antifriction-bearings. No. 1,221,020; Apr. 3; v. 237; p. 6.

Brisbois, Odilom, assignor to J. H. Ware, Chicago, Ill. Telephone system. No. 1,221,135; Apr. 3; v. 237; p. 46.

Brisley, Frederick N., Frederick, Okla. Towel-holder. No. 1,221,279; Apr. 3; v. 237; p. 99.

Bristol Company, The. (See Bristol, William H., assignor.) (Reissue.)

Bristol, William H., Middlebury, assignor to The Bristol Company, Waterbury, Conn. Temperature-compensating device for thermo-electric measuring instruments. (Reissue.) No. 14,280; Apr. 3; v. 237; p. 283.

Bristow, Charles, Fendalton, Christchurch, assignor to The Imperial Cash Register Company, Limited, Wellington, New Zealand. Autographic register. No. 1,223,759; Apr. 24; v. 237; p. 1068.

Brittain, James H., Salt Lake City, Utah. Ore-concentrator. No. 1,224,066; Apr. 24; v. 237; p. 1172.

Brittain, Robert, Downsville, N. Y. Front-axle brace. No. 1,221,665; Apr. 3; v. 237; p. 230.

Britton, Charles S. (See Doyle, James E., assignor.)

Britton, Lewis C., Egeland, N. D. Collapsible box or crate. No. 1,223,253; Apr. 17; v. 237; p. 856.

Brock, Arthur, Jr. (See Pedersen, Niels, assignor.)

Brockbank, John, Sydney, New South Wales, Australia. Apparatus for grinding lenses. No. 1,221,280; Apr. 3; v. 237; p. 99.

Brockton Heel Company. (See Woodward, William, assignor.)

Bronner, Joseph W., Baltimore, Md. Can attachment. No. 1,221,666; Apr. 3; v. 237; p. 230.

Brooks, Benjamin T., and H. Essex, assignors to Gulf Refining Company, Pittsburgh, Pa. Manufacture of alcohols. No. 1,221,667; Apr. 3; v. 237; p. 230.

Brooks, Clayton A., Girard, Pa. Safety device for railways. No. 1,221,826; Apr. 10; v. 237; p. 318.

Brooks, Clayton A., Girard, Pa. Safety apparatus for railways. No. 1,221,827; Apr. 10; v. 237; p. 319.

Brouwer-Ancher, Cornelis L., Minneapolis, Minn. Grapefruit pliers. No. 1,223,550; Apr. 24; v. 237; p. 996.

Browand, Benjamin T., Cleveland, Ohio. Tool-holder for automatic machines. No. 1,222,178; Apr. 10; v. 237; p. 443.

Brown, Albert T. (See Eustis and Brown.)

Brown, Alvin, Plainfield, Ill. Tractor. No. 1,222,260; Apr. 10; v. 237; p. 472.

Brown, Charles P. (See Smith, Charles D., assignor.)

Brown, Ernest E., Chicago, Ill. Key-guide for keyholes. No. 1,223,366; Apr. 24; v. 237; p. 927.

Brown, George, Chicago, Ill. Adjustable shore. No. 1,223,367; Apr. 24; v. 237; p. 927.

Brown, George, Jr., Lynn, Mass. Shoe-rack. No. 1,222,728; Apr. 17; v. 237; p. 679.

Brown, Horace P., and C. L. Johnston, Oakland, Cal. Mechanism for interleaving paper. No. 1,222,261; Apr. 10; v. 237; p. 472.

Brown, Hugh E., assignor of one-half to E. Boyce, Portland, Oreg. Oil-burner. No. 1,223,337; Apr. 17; v. 237; p. 884.

Brown, James E., Bristol, England. Dredge-cutter. No. 1,221,021; Apr. 3; v. 237; p. 6.

Brown, James M., Johnson City, Tenn. Smokeless powder and making same. No. 1,222,065; Apr. 10; v. 237; p. 402.

Brown, J. Grove, Groton, N. Y. Chute-wagon. No. 1,221,281; Apr. 3; v. 237; p. 99.

Brown, J. Grove, Groton, N. Y. Dumping-wagon. No. 1,221,828; Apr. 10; v. 237; p. 319.

Brown, John F., and A. Humphreys, Casa Grande, Ariz. Vehicle-spring. No. 1,222,066; Apr. 10; v. 237; p. 402.

Brown, John H., Springfield, Mass. Garbage-can. No. 1,223,760; Apr. 24; v. 237; p. 1068.

Brown, Lewis W., Norfolk, Va. Drawers-supporter. No. 1,221,966; Apr. 10; v. 237; p. 369.

Brown, M. Lewis, assignor to Kawneer Manufacturing Company, Niles, Mich. Window construction. No. 1,223,761; Apr. 24; v. 237; p. 1068.

Brown, Reinhardt H., Laporte, Ind. Child's collapsible sulky. No. 1,222,179; Apr. 10; v. 237; p. 444.

Brown, Robert S., assignor to The New Britain Machine Company, New Britain, Conn. Tote-box. No. 1,221,789; Apr. 3; v. 237; p. 272.

Brown, Thomas R., Sparkill, N. Y., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Electric coupling device. No. 1,222,599; Apr. 17; v. 237; p. 633.

Brown, Walter F., New London, Conn. Internal-combustion engine. No. 1,222,067; Apr. 10; v. 237; p. 402.

Brown, William, Newark, N. J. Life-boat for submarines. No. 1,221,282; Apr. 3; v. 237; p. 100.

Brownell Company, The. (See Little, Clarence R., assignor.)

Bruna, Albert. (See Pariotti, Giovanni B., assignor.)

Brundage, Fred A., Belmont, N. Y. Utensil-lifter. No. 1,222,262; Apr. 10; v. 237; p. 473.

Brunswick-Balke-Collender Company, The. (See Judd, Earldley C. B., assignor.)

Brunswick-Balke-Collender Company, The. (See Nystrom, Martin, assignor.)

Brunton, Earl, St. Louis, Mo. Measuring instrument. No. 1,221,668; Apr. 3; v. 237; p. 231.

Brush, Alanson P. (See Nacker, Owen M., assignor.)

Brush, Alanson P., Detroit, Mich. Front-axle construction. No. 1,223,469; Apr. 24; v. 237; p. 963.

Bryant Electric Company, The. (See Badeau, Harry U., assignor.)

Bryant Electric Company, The. (See Thomas, George B., assignor.)

Bryant, Fredrick S., Reading, Mass. Reinforcement for pneumatic tires. No. 1,222,729; Apr. 17; v. 237; p. 679.

Brygider, Simon R., Oakland, Cal. Mold-box. No. 1,221,283; Apr. 3; v. 237; p. 100.

Brygider, Simon R., Oakland, Cal. Machine for pressing concrete blocks. No. 1,221,284; Apr. 3; v. 237; p. 101.

Buch, Max, Detroit, assignor to H. E. Edwards, Jackson, Mich. Top for motor-vehicles and the like. No. 1,221,669; Apr. 3; v. 237; p. 231.

Buchanan, Henry, Sheffield, England. Register for cash-receipts and the like. No. 1,221,670; Apr. 3; v. 237; p. 231.

Buchanan, Hugh. (See Moir and Buchanan.)

Buchanan, Moses R. (See Carter, Theodore W., assignor.)

Bucher, John E., Coventry, assignor to Nitrogen Products Company, Providence, R. I. Producing the bicarbonate of an alkali or alkaline-earth metal. No. 1,221,506; Apr. 3; v. 237; p. 178.

Buchholz, Max, Gross-Plehnendorf, near Danzig, Germany. Lock-gate. No. 1,223,763; Apr. 24; v. 237; p. 1069.

Buchsbaum, Samuel, Chicago, Ill. Switch. No. 1,222,355; Apr. 10; v. 237; p. 506.

Buckeye Drier Company. (See Prindle, William E., assignor.)

Buckman, John S., Elmhurst, assignor to Berg Brothers, New York, N. Y. Hat-forming die. No. 1,223,665; Apr. 24; v. 237; p. 1034.

Buckman, John S., Elmhurst, assignor to Berg Brothers, New York, N. Y. Hat-forming machine. No. 1,223,666; Apr. 24; v. 237; p. 1035.

Bucyrus Company. (See Butcher, Pierpont E., assignor.)

Buda Company. (See Dyer, Walter C., assignor.)

Budy, Charles. (See Sajtos, George, assignor.)

Buelna, Guadalupe, and A. E. Barson, Santa Barbara, Cal., assignors to American Graphophone Company, Bridgeport, Conn. Brake for talking-machines. No. 1,221,285; Apr. 3; v. 237; p. 101.

Buesse, Leo J., Webster Groves, Mo. Base for supporting vises and the like on columns. No. 1,221,507; Apr. 3; v. 237; p. 178.

Bugatti, Ettore, Paris, France. Internal-combustion engine. No. 1,223,762; Apr. 24; v. 237; p. 1069.

Bugbee, Lucian W., assignor to American Optical Company, Southbridge, Mass. Bifocal. No. 1,221,967; Apr. 10; v. 237; p. 369.

Bullinger, David J., New Haven, Mo. Internal-combustion engine. No. 1,222,600; Apr. 17; v. 237; p. 633.

Bullock, Arthur R., Cleveland, Ohio. Current-converting device. No. 1,223,473; Apr. 24; v. 237; p. 965.

Bullock, Arthur R., Cleveland, Ohio, assignor to H. C. Lee, trustee, Los Angeles, Cal. Current-transforming device. No. 1,223,470; Apr. 24; v. 237; p. 964.

Bullock, Arthur R., Cleveland, Ohio, assignor to H. C. Lee, trustee, Los Angeles, Cal. Apparatus for charging storage batteries. No. 1,223,471; Apr. 24; v. 237; p. 965.

Bullock, Arthur R., assignor to The Eric Coil Company, Cleveland, Ohio. Running a synchronous motor. No. 1,223,472; Apr. 24; v. 237; p. 965.

Bump, James A., Malta, Ohio. Cock. No. 1,222,068; Apr. 10; v. 237; p. 403.

Bunger, Tjelko K., Wellsburg, Iowa. Lawn-mower. No. 1,222,263; Apr. 10; v. 237; p. 473.

Bunker, Raymond D., Yonkers, N. Y. Evaporating aqueous solutions. No. 1,221,022; Apr. 3; v. 237; p. 7.

Bunting, Norman E., Chicago, Ill., assignor to International Harvester Company of New Jersey. Combined harvester and thresher. No. 1,222,730; Apr. 17; v. 237; p. 679.

Burchard, Samuel W., St. Louis, Mo. Cattle-guard. No. 1,221,286; Apr. 3; v. 237; p. 101.

Burd, Roy L., Chicago, Ill., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 1,221,829; Apr. 10; v. 237; p. 320.

Burdick & Son. (See Krug, Louis R., assignor.)

Burgess, Louis. (See Barnett and Burgess.)

Burke, Michael. (See Burnett, Michael G., assignor.)

Burkhim, Louis J. (See Davenport and Burkhim.)

Burklund, John O., assignor of one-third to P. G. Holmes, Worcester, Mass. Ball-container for ball-bearings. No. 1,222,927; Apr. 17; v. 237; p. 746.

Burks, Phillip H., Gordon, Nebr. Vegetable-cutter. No. 1,223,254; Apr. 17; v. 237; p. 856.

Burnett, Michael G., Watertown, assignor of fifty-one one-hundredths to M. Burke, Marlboro, Mass. Arithmetical calculator. No. 1,222,731; Apr. 17; v. 237; p. 680.

Burns, Albert G. (See Jackson, John R., assignor.)

Burns, Alvin C. (See Beck and Burns.)

Burns, John G., assignor to S. Cohn, S. A. Isaacs, C. Appleby, and T. B. Carter, Pulaski, Tenn. Making medicated nest-eggs. No. 1,223,144; Apr. 17; v. 237; p. 821.

Burrell, Joseph E., Winnipeg, Manitoba, Canada. Safety jewel-box. No. 1,221,830; Apr. 10; v. 237; p. 320.

Burroughs Adding Machine Company. (See Burd, Roy L., assignor.)

Burroughs Adding Machine Company. (See Gardner, Clyde, assignor.)

Burroughs Adding Machine Company. (See Pasinski, Walter J., assignor.)

Burroughs Adding Machine Company. (See Pike, William H., Jr., assignor.)

Burroughs Adding Machine Company. (See Vincent and White, assignors.)

Burrows, Ernest E., assignor to E. and T. Fairbanks and Company, St. Johnsbury, Vt. Locking device for automatic weighing-scales. No. 1,223,764; Apr. 24; v. 237; p. 1069.

Burson, Arthur E. (See Buelna and Burson.)

Burt, Robinson, assignor to F. N. Burt Company, Limited, Buffalo, N. Y. Labeling-machine. No. 1,221,831; Apr. 10; v. 237; p. 320.

Burtch, Lewis D., assignor of one-half to C. H. Hackett, Barahoo, Wis. Bag-holder. No. 1,221,671; Apr. 3; v. 237; p. 232.

Burton, William S., Ames, Iowa. Pneumatic stacker mechanism. No. 1,222,180; Apr. 10; v. 237; p. 444.

Busse, Edwin G., assignor to Chicago Railway Equipment Company, Chicago, Ill. Rail-supporting device. No. 1,221,832; Apr. 10; v. 237; p. 321.

Busse, William J., Chicago, Ill. Vehicle-wheel. No. 1,222,356; Apr. 10; v. 237; p. 506.

Busvold, Nils, Rjukan, Norway. Production of oxygen compounds of nitrogen from ammonia. No. 1,222,928; Apr. 17; v. 237; p. 746.

Butler, Oresmus G., San Francisco, Cal. Rotary plow. No. 1,223,029; Apr. 17; v. 237; p. 781.

Buzzard, James E. (See Thomas, William S., assignor.)

Buzzard, Matt, Fenton, Mich. Pneumatic-tire inflator. No. 1,222,520; Apr. 10; v. 237; p. 563.

Bybire, Oscar J., Canton, Wis. Nut-lock. No. 1,221,413; Apr. 3; v. 237; p. 145.

C. Mattison Machine Works. (See Mattison, Magnus W., assignor.)

C. Schember & Söhne. (See Bauer, Hugo, assignor.)

C. B. Cottrell & Sons Company. (See Barber, Howard M., assignor.)

Cabanne, Charles G., assignor of twenty-four one-hundredths to T. Lonergan and twenty-four one-hundredths to J. E. Rutledge, St. Louis, Mo. Holder for firearms. No. 1,222,264; Apr. 10; v. 237; p. 473.

Cahill, Edward, New York, N. Y. Thermal-controlled shutter. No. 1,221,414; Apr. 3; v. 237; p. 145.

Cahill, Edward, New York, N. Y. Thermal-controlled shutter. No. 1,221,415; Apr. 3; v. 237; p. 146.

Caille, Charles, Leperreux, France. Hot-water-feed pump for locomotive and other boilers. No. 1,223,667; Apr. 24; v. 237; p. 1035.

Cake, Horace M., Philadelphia, Pa. Propulsion mechanism. No. 1,224,120; Apr. 24; v. 237; p. 1191.

Caldemeyer, Daniel H., Evansville, Ind. Display-rack. No. 1,222,844; Apr. 17; v. 237; p. 717.

Calderwood, Benjamin C., Valley Falls, R. I., assignor to Price-Campbell Cotton Picker Corporation, New York, N. Y. Separator-screen. No. 1,222,732; Apr. 17; v. 237; p. 680.

Calderwood, Benjamin C., Valley Falls, R. I., assignor to Price-Campbell Cotton Picker Corporation, New York, N. Y. Baffle-plate. No. 1,222,733; Apr. 17; v. 237; p. 680.

Caldicott, Edwin T., Fulham, England. Child's toy. No. 1,223,765; Apr. 24; v. 237; p. 1070.

California Cotton Mills Company. (See Millar, John R., assignor.)

Callahan, James M., Washington, D. C. Arch-support. No. 1,221,833; Apr. 10; v. 237; p. 321.

Callahan, Thomas J., Dayton, Ohio. Sectional greenhouse. No. 1,221,672; Apr. 3; v. 237; p. 232.

Callahan, William P. (See Mackintosh and Callahan.)

Cameron, Frederick F., Ridgeclough, Alberta, Canada. Washer. No. 1,221,623; Apr. 3; v. 237; p. 7.

Cameron, William, Chicago, Ill. Can-soldering machine. No. 1,223,557; Apr. 24; v. 237; p. 996.

Cameron, William W., assignor to La Crosse Plow Co., La Crosse, Wis. Double disk harrow. No. 1,223,145; Apr. 17; v. 237; p. 821.

Camp, Arthur C., New York, N. Y. Combination suspender-button and belt hook. No. 1,223,932; Apr. 24; v. 237; p. 1127.

Campbell, Alfred L., Elmhurst, N. Y., assignor to Brewster & Co. Brake mechanism for motor-cars. No. 1,222,929; Apr. 17; v. 237; p. 746.

Campbell, Charles H., assignor, by mesne assignments, to Borden's Condensed Milk Company, New York, N. Y. Treating milk. No. 1,221,024; Apr. 3; v. 237; p. 7.

Campbell, George C., Elkhart, Ind. Steering-gear for vehicles. No. 1,223,766; Apr. 24; v. 237; p. 1070.

Campbell, Guy, Creedmoor, Tex. Case for rural-mail carriers. No. 1,223,474; Apr. 24; v. 237; p. 966.

Campbell, Harry E., New York, N. Y. Metal window-frame. No. 1,222,357; Apr. 10; v. 237; p. 506.

Campbell, Harry E., New York, N. Y. Metal window frame and sash. No. 1,222,358; Apr. 10; v. 237; p. 507.

Campbell, James B., *et al.* (See Newkirk, William P., assignor.)

Campbell, Leon W., Boston, Mass. Cotton-comber. No. 1,221,025; Apr. 3; v. 237; p. 8.

Campbell, Osmon B., Jr., St. Joseph, Mo. Apparatus for pumping fluid. No. 1,222,601; Apr. 17; v. 237; p. 634.

Campbell, Wilson L., La Grange, Ill., assignor, by mesne assignments, to Automatic Electric Company. Automatic telephone trunking-switch and system therefor. No. 1,221,287; Apr. 3; v. 237; p. 101.

Camplin, M. B., *et al.* (See Andrews, Al, assignor.)

Canaday, Orpha P., Fort Wayne, Ind. Liquid-dispensing device. No. 1,221,288; Apr. 3; v. 237; p. 102.

Cannon, Jeronimo, assignor of one-half to R. Levitan, Nashville, Tenn. Automatic train-stop system. No. 1,221,968; Apr. 10; v. 237; p. 370.

Canty, Ernest L., Augusta, Me. Milk-pail. No. 1,221,673; Apr. 3; v. 237; p. 232.

Canitan, Arquimedes, David, Canal Zone. Train-signal. No. 1,221,674; Apr. 3; v. 237; p. 233.

Carbonari, Raffaele, Chicago, Ill. Accordion. No. 1,221,026; Apr. 3; v. 237; p. 8.

Carden, David A., Houston, Tex. Detachable drill-bit. No. 1,222,845; Apr. 17; v. 237; p. 718.

Carl, Chester C., Fairfield, Iowa. Floor-clamp. No. 1,222,521; Apr. 10; v. 237; p. 564.

Carleton, Gideon W. (See Duffy, Joseph J., assignor.)

Carley, Charles B., Rochester, Minn. Cultivator. No. 1,223,558; Apr. 24; v. 237; p. 996.

Carling, Rose S., Los Angeles, Cal. Pneumatic arch-support. No. 1,223,368; Apr. 24; v. 237; p. 927.

Carlson, Carl A., assignor to The Fafnir Bearing Company, New Britain, Conn. Ball-bearing. No. 1,222,846; Apr. 17; v. 237; p. 718.

Carlson, Frederick E., assignor to Landers, Frary & Clark, New Britain, Conn. Circuit-coupling for electrically-heated utensils. No. 1,222,585; Apr. 10; v. 237; p. 588.

Carlson, Herman E. (See Rasmussen and Carlson.)

Carman, Carlyle B., Salineville, Ohio. Electrically-heated fireless cooker. No. 1,222,181; Apr. 10; v. 237; p. 444.

Carman, Charles W. (See Newell and Carman.)

Carnegie, Alfred Q. (See Parsons, Carnegie, and Cook.)

Carney, Frank D., and L. B. Lindemuth, Bethlehem, Pa. Manufacture of steel. No. 1,223,030; Apr. 17; v. 237; p. 781.

Carney, Thomas W., Clifton, N. J. Splash-board for sinks. No. 1,221,137; Apr. 3; v. 237; p. 47.

Carns, Emmett T., and A. R. Bishop, Murray, Iowa. Planter-marker. No. 1,222,522; Apr. 10; v. 237; p. 564.

Carpenter, Fleming, *et al.* (See Jones, William W., assignor.)

Carpenter, Lewis A., and R. Middleton, Revere, Mass. Sprinkling device. No. 1,222,847; Apr. 17; v. 237; p. 719.

Carr Fastener Company. (See Carr, Fred S., assignor.)

Carr, Fred S., Brookline, assignor to Carr Fastener Company, Cambridge, Mass. Turn-button fastener. No. 1,223,146; Apr. 17; v. 237; p. 822.

Carr, Paul H., Washington, D. C. Artificial imbibing-straw. No. 1,223,933; Apr. 24; v. 237; p. 1127.

Carrie, Franklin G., executor. (See Rossiter and Beattie, assignors.)

Carson, Robert W., Rossville, Ind. Hog-oiling device. No. 1,221,675; Apr. 3; v. 237; p. 233.

Carter Carburetor Company. (See Carter, William C., assignor.)

Carter, Frank, assignor to Peerless Wheel Company, Chicago, Ill. Spring-wheel. No. 1,222,734; Apr. 17; v. 237; p. 681.

Carter, Robert E., Middletown, N. C. Crab and terrapin trap. No. 1,223,851; Apr. 24; v. 237; p. 1099.

Carter, Theodore W., assignor of one-half to M. R. Buchanan, Silver City, N. Mex. Blow-out protector for tires. No. 1,224,103; Apr. 24; v. 237; p. 1184.

Carter, Thomas B., *et al.* (See Burns, John G., assignor.)

Carter, William C., assignor to Carter Carburetor Company, St. Louis, Mo. Carburetor. No. 1,222,848; Apr. 17; v. 237; p. 719.

Carter, William S., Lovingston, Va. Knockdown barrel or hogshead. No. 1,223,767; Apr. 24; v. 237; p. 1070.

Carverhill, Robert H. (See Pearce, Parker, and Carverhill.)

Cary, Clarence G. (See Gorham and Cary.)

Cary, James B., Mason City, assignor of one-third to C. W. Lacy, Des Moines, and one-third to C. J. Raffensperger, Victor, Iowa. Mail catching and delivering apparatus. No. 1,223,852; Apr. 24; v. 237; p. 1100.

Cary, James H., Memphis, Tenn. Cotton-gin feeder. No. 1,222,523; Apr. 10; v. 237; p. 565.

Cary Manufacturing Co. (See Cary, Spencer C., assignor.)

Cary, Spencer C., Brooklyn, assignor to Cary Manufacturing Co., New York, N. Y. Fastener for bundle or bale ties. No. 1,222,930; Apr. 17; v. 237; p. 746.

Case, Frank E., Schenectady, N. Y., assignor to General Electric Company. Pneumatically-operated cam-controller. No. 1,221,676; Apr. 3; v. 237; p. 234.

Casner, Earl, Carthage, Mo. Valve-grinding mechanism. No. 1,224,067; Apr. 24; v. 237; p. 1172.

Castillo, Jose L., San Francisco, Cal. Serpentine-shooter. No. 1,224,112; Apr. 24; v. 237; p. 1188.

Cathcart, William A. P., Honolulu, Hawaii. Motion-picture-camera support. No. 1,221,677; Apr. 3; v. 237; p. 234.

Cavanagh, John F. (See Stahl and Cavanagh.)

Cement Products Company. (See Harris, John F., assignor.)

Ch. Hamann Mathematische Mechanisches Institut G. m. b. H., The. (See Hamann, Christel, assignor.)

Chabot, Ephraim, Providence, R. I. Automatic train-stop. No. 1,223,310; Apr. 17; v. 237; p. 875.

Chadwick, John M., Dayton, Ohio. Sewing-machine mechanism. No. 1,221,138; Apr. 3; v. 237; p. 48.

Chalman, John E., assignor to Union Special Machine Company, Chicago, Ill. Folding device for sewing-machines. No. 1,222,069; Apr. 10; v. 237; p. 403.

Chamberlain, George W., Atlanta, Ga. Stretching device. No. 1,222,602; Apr. 17; v. 237; p. 634.

Chamberlain, Horace P., Buffalo, assignor to Standard Oil Company of New York, New York, N. Y. Obtaining products from petroleum by decomposition of component hydrocarbons thereof. No. 1,221,790; Apr. 3; v. 237; p. 279.

Chamberlin, Clarence P., Detroit, Mich. Wind-shield. No. 1,221,805; Apr. 3; v. 237; p. 279.

Chamberlin, Franklin L., deceased, Cleveland, Ohio; E. W. Moore, administrator. Cooling system for the pistons of internal-combustion engines. No. 1,223,668; Apr. 24; v. 237; p. 1036.

Chance, Henry M., Philadelphia, Pa. Apparatus and method for producing metals of improved quality. No. 1,221,139; Apr. 3; v. 237; p. 48.

Chandler, Elbert G., Portland, Oreg. Car-truck. No. 1,222,931; Apr. 17; v. 237; p. 747.

Chandler, Harry D., Seattle, Wash. Extension seat-back for automobiles. No. 1,221,969; Apr. 10; v. 237; p. 370.

Chapin, Earl B., St. Louis, Mo., assignor of one-third to E. Stark, East St. Louis, Ill., and one-third to F. G. Chapin, St. Louis, Mo. Elevator-shaft-door latch. No. 1,221,508; Apr. 3; v. 237; p. 179.

Chapin, Fenton G., *et al.* (See Chapin, Earl B., assignor.)

Chapman, Charles E., Springfield, Ill. Counting and listing machine. No. 1,222,359; Apr. 10; v. 237; p. 507.

Chapman, James. (See Young and Chapman.)

Chapman, William G., Huntington, W. Va. Electrical protective system. No. 1,223,255; Apr. 17; v. 237; p. 856.

Chappell, George H., Englewood, N. J. Screw-engine. No. 1,221,834; Apr. 10; v. 237; p. 322.

Charlebois, Louis W., and E. Derouin, Watertown, N. Y. Washing-machine. No. 1,223,539; Apr. 24; v. 237; p. 997.

Charles B. Foster and Company. (See Higinbotham, Arthur O., assignor.)

Charlton, Minard W., Evart, Mich. Window-screen. No. 1,223,934; Apr. 24; v. 237; p. 1127.

Chason, John G., Colquitt, Ga. Pneumatic water-lift. No. 1,224,068; Apr. 24; v. 237; p. 1173.

Chatain, Henri G., Erie, Pa., assignor to General Electric Company. Method of and apparatus for controlling mechanism for internal-combustion engines. No. 1,223,935; Apr. 24; v. 237; p. 1128.

Chatfield, Charles B., Grand Rapids, Mich. Automobile-seating. No. 1,222,360; Apr. 10; v. 237; p. 508.

Check, Carl R., Enterprise, Iowa. Coal-dump. No. 1,221,416; Apr. 3; v. 237; p. 146.

Check, Carl R., Enterprise, Iowa. Life-saving suit. No. 1,221,417; Apr. 3; v. 237; p. 146.

Cheeseman, Alva E., Bradford, assignor to The Leon-Ferenbach Silk Company, Wilkes-Barre, Pa. Attachment for silk-spinning machines. No. 1,223,560; Apr. 24; v. 237; p. 997.

Chelf, Simeon D., Kensington, Kans. Garment-pocket. No. 1,223,936; Apr. 24; v. 237; p. 1128.

Chernack, Abel E., Providence, R. I. Loom. No. 1,222,524; Apr. 10; v. 237; p. 565.

Chesley, Edward, Swetnam, Va. Sap spile or spout. No. 1,221,509; Apr. 3; v. 237; p. 179.

Chevalle, Leon, Sardis, British Columbia, Canada. Sterilizing apparatus. No. 1,222,932; Apr. 17; v. 237; p. 747.

Chicago Electric Meter Company. (See Hall, Chester L., assignor.)

Chicago Railway Equipment Company. (See Busse, Edwin G., assignor.)

Chicago Railway Equipment Company. (See Williams, Charles H., assignor.)

Chicago Railway Signal and Supply Company. (See Vogel, Eugene W., assignor.)

Child, Gerald A. (See Leslie and Child.)

Chisholm, Charles L., Marysville, New Brunswick, Canada, assignor to Chisholm Transmittter & Telephone Instruments Company. Telephone desk set. No. 1,221,678; Apr. 3; v. 237; p. 234.

Chisholm Transmitter & Telephone Instruments Company. (See Chisholm, Charles L., assignor.)

Choate, Frank H., Greenville, Ohio. Jack. No. 1,223,561; Apr. 24; v. 237; p. 997.

Cholakovski, Adolf, Philadelphia, Pa. Burglar-trap. No. 1,221,679; Apr. 3; v. 237; p. 235.

Christensen, Florence, New York, N. Y. Artist's sketching kit. No. 1,221,510; Apr. 3; v. 237; p. 179.

Christenson, George, Jamaica, N. Y., assignor to H. W. Johns-Manville Company. Piston-packing expander. No. 1,222,361; Apr. 10; v. 237; p. 508.

Christenson, George, Jamaica, N. Y., assignor to H. W. Johns-Manville Company. Piston-packing expander. No. 1,222,362; Apr. 10; v. 237; p. 508.

Christenson, George, Jamaica, N. Y., assignor to H. W. Johns-Manville Company. Piston-packing expander. No. 1,222,363; Apr. 10; v. 237; p. 509.

Christian, William L., and J. P. Barker, Los Angeles, Cal. Shoe for tires. No. 1,222,070; Apr. 10; v. 237; p. 404.

Christof, James. (See Papp and Christof.)

Chronik, August and L., New York, N. Y. Shutter for cinematographic apparatus. No. 1,223,147; Apr. 17; v. 237; p. 822.

Chronik, Louis. (See Chronik, August and L.)

Ciaffone, Lorenzo, New York, N. Y. Non-skidable tire-guard. No. 1,221,511; Apr. 3; v. 237; p. 180.

Cie pour la Fabrication des Compteurs et Materiel d'Usines a Gaz. (See Heeley, George, assignor.)

Clapper, Lyle, Two Harbors, Minn. Loading-hopper. No. 1,222,603; Apr. 17; v. 237; p. 635.

Claremont, Ernest A. (See Tanner and Claremont.)

Clark Car Company. (See Clark, Charles H., assignor.)

Clark, Charles H., Crafton, Pa., assignor to Clark Car Company, Pittsburgh, Pa. Tilting side-dump car. No. 1,223,031; Apr. 17; v. 237; p. 782.

Clark, Charles H., Crafton, assignor to Clark Car Company, Pittsburgh, Pa. Dump-car. No. 1,223,148; Apr. 17; v. 237; p. 823.

Clark, Edward W., assignor of one-half to A. Wells, Los Angeles, Cal. Composite piston. No. 1,221,419; Apr. 3; v. 237; p. 147.

Clark, Emerson L., Lakewood, assignor to National Carbon Company, Cleveland, Ohio. Incandescent light for projection apparatus. No. 1,221,418; Apr. 3; v. 237; p. 146.

Clark, Emerson L., Lakewood, Ohio, assignor to National Carbon Company. Compression-theostat. No. 1,222,182; Apr. 10; v. 237; p. 445.

Clark, George H. Cambridge, assignor to Crosby Steam Gage & Valve Company, Boston, Mass. Safety-valve. No. 1,222,071; Apr. 10; v. 237; p. 404.

Clark, John L., Putney, S. D. Threshing-machine. No. 1,221,145; Apr. 3; v. 237; p. 50.

Clark, Norris E., Plainville, Conn. Expanded-metal manufacture. No. 1,224,104; Apr. 24; v. 237; p. 1185.

Clark, Robert F., Salt Lake City, Utah. Combination coal and wood heating-stove. No. 1,223,768; Apr. 24; v. 237; p. 1070.

Clarke, James A., Devon, Pa. Instrument. No. 1,222,525; Apr. 10; v. 237; p. 565.

Class, John F., Dayton, Ohio. Medicinal-vapor generating and fumigating apparatus. No. 1,223,032; Apr. 17; v. 237; p. 782.

Clausen, Henry P., Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone signaling system. No. 1,221,140; Apr. 3; v. 237; p. 48.

Clausen, Henry P., Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Connecting-circuit for telephone switching systems. No. 1,222,364; Apr. 10; v. 237; p. 509.

Clausen, Henry P., Mount Vernon, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone system. No. 1,223,937; Apr. 24; v. 237; p. 1129.

Claussen, Martin, and W. A. McKay, San Francisco, Cal. Portable incandescent lamp. No. 1,222,573; Apr. 10; v. 237; p. 584.

Clayton, Archie R., North Fork, Nev. Revolving rake. No. 1,222,526; Apr. 10; v. 237; p. 566.

Clayton, James, Coventry, assignor to Courtaulds, Limited, London, England. Device for effecting the connection of circular rotatable bodies to their shafts. No. 1,224,069; Apr. 24; v. 237; p. 1173.

Clayton, James, Coventry, assignor to Courtaulds, Limited, London, England. Thread-guide for artificial-silk machines. No. 1,224,070; Apr. 24; v. 237; p. 1173.

Clayton, James, Coventry, assignor to Courtaulds, Limited, London, England. Device to be employed in making funnels, or thread-guides, for use in machines for the manufacture of artificial silk. No. 1,224,071; Apr. 24; v. 237; p. 1174.

Clemence, Magnien, Kansas City, Mo. Telephone arm-rest. No. 1,223,562; Apr. 24; v. 237; p. 998.

Clemens, John G., Buffalo, N. Y. Electrical heating attachment for soldering-irons. No. 1,223,669; Apr. 24; v. 237; p. 1036.

Clement, Edward E., Washington, D. C., assignor, by mesne assignments, to J. R. Garfield, trustee, Cleveland, Ohio. Telephone system. No. 1,223,369; Apr. 24; v. 237; p. 928.

Cleveland Car Specialty Company. (See Costello, Joseph A., assignor.) (Reissue.)

Cleveland Macaroni Company, The. (See Gammel, Karl, assignor.)

Cleveland, Willard E., Fall River, assignor, by mesne assignments, to G. C. Cox, Rochester, N. Y. Repeating device for phonographs. No. 1,223,149; Apr. 17; v. 237; p. 823.

Cleveland, William K., Tampa, assignor of one-half to C. W. Kennon, Hillsborough county, Fla. Drive-gearing. No. 1,221,680; Apr. 3; v. 237; p. 235.

Cline, Allan J., assignor to Cline Electric Manufacturing Company, Chicago, Ill. Driving mechanism for linotype-machines. No. 1,222,265; Apr. 10; v. 237; p. 474.

Cline Electric Manufacturing Company. (See Cline, Allan J., assignor.)

Close, Fred A., Uniontown, Pa., assignor of one-half to G. W. Dunham, Detroit, Mich. Device for boring axially-curved holes. No. 1,223,938; Apr. 24; v. 237; p. 1129.

Clough, Alonzo E., Madison, S. D. Splint. No. 1,221,289; Apr. 3; v. 237; p. 102.

Clough, Bert E., Battle Creek, Mich. Electrical horse-power-computing machine. No. 1,221,681; Apr. 3; v. 237; p. 235.

Cluley, John P., Green Bay, Wis. Electric welding apparatus. No. 1,221,512; Apr. 3; v. 237; p. 180.

Cluley, John P., St. Louis, Mo., assignor to Cluley Multiplier Company, Green Bay, Wis. Multiplying-machine. No. 1,221,027; Apr. 3; v. 237; p. 8.

Cluley Multiplier Company. (See Cluley, John P., assignor.)

Clymer, William R., Lakewood, Ohio, assignor to National Carbon Company. Calcining-furnace. No. 1,223,475; Apr. 24; v. 237; p. 966.

Coan, William C., assignor to The Universal Valve and Valve Gear Co., Cleveland, Ohio. Steam-engine valve and valve-gear. No. 1,222,266; Apr. 10; v. 237; p. 474.

Cochrane-Bly Company. (See Dow, Roy B., assignor.)

Coffield, James G., assignor of one-third to W. C. Coffield, Norfolk, Va., and W. H. Coffield, Edenton, N. C. Air-coupling. No. 1,221,682; Apr. 3; v. 237; p. 236.

Coffield, William C., *et al.* (See Coffield, James G., assignor.)

Coffield, William H., *et al.* (See Coffield, James G., assignor.)

Coffman, Jacob H., Philadelphia, Pa. Game. No. 1,223,256; Apr. 17; v. 237; p. 857.

Cofield, George W., *et al.* (See Shermund, Conrad, assignor.)

Cohen, Ada, Chelsea, Mass. Alarm device for liquid-levels. No. 1,222,183; Apr. 10; v. 237; p. 445.

Cohen, Leon, St. Louis, Mo. Hat-lining. No. 1,222,527; Apr. 10; v. 237; p. 566.

Cohen, Leon, St. Louis, Mo. Hat-protector. No. 1,222,528; Apr. 10; v. 237; p. 566.

Cohn, Albert, and L. H. Debs, Chicago, Ill. Strainer. No. 1,221,683; Apr. 3; v. 237; p. 236.

Cohn, Sol, *et al.* (See Burns, John G., assignor.)

Colby, Mark R., Portland, Oreg. Steam-boiler. No. 1,221,028; Apr. 3; v. 237; p. 9.

Cole, Frederick W., Newton Highlands, Mass., assignor to Gamewell Fire Alarm Telegraph Company, New York, N. Y. Signal-box having local alarms. No. 1,224,072; Apr. 24; v. 237; p. 1174.

Cole, David, Tucson, Ariz. Grinding-mill. No. 1,222,184; Apr. 10; v. 237; p. 445.

Cole, David, Morenci, Ariz., assignor, by mesne assignments, to Metals Recovery Company, Augusta, Me. Apparatus for separating or concentrating ores. No. 1,223,033; Apr. 17; v. 237; p. 782.

Coleman, Harry H., New York, N. Y. Walking doll. No. 1,221,970; Apr. 10; v. 237; p. 371.

Coleman, Lewis A., assignor to American Chemical & Manufacturing Company, Inc., Norfolk, Va. Oil and making the same. No. 1,223,150; Apr. 17; v. 237; p. 824.

Coleman, William C., Portland, Oreg. Wearing-apparel. No. 1,222,735; Apr. 17; v. 237; p. 681.

Colgan, Seth P., and W. Frederick, Beaver City, Nebr. Device for recovering pipes, shafts, &c., from wells. No. 1,223,034; Apr. 17; v. 237; p. 783.

Coller, Rudolph, Gresham, Wis. Sight. No. 1,223,476; Apr. 24; v. 237; p. 966.

Collier, William H., Nashville, Tenn. Concealed-hinge construction for doors, &c. No. 1,221,684; Apr. 3; v. 237, p. 237.

Collier, William H., Brentwood, Tenn. Door-latch. No. 1,221,685; Apr. 3; v. 237; p. 237.

Collins, John J., Oakland, Cal. Manually-controlled auxiliary air-inlet for carbureters. No. 1,223,670; Apr. 24; v. 237; p. 1036.

Collins, Oliver P., McKeesport, assignor of one-third to T. Y. Cross and one-third to R. R. Fee, Pittsburgh, Pa. Machine for folding and shearing sheet metal. No. 1,221,686; Apr. 3; v. 237; p. 237.

Collis Company, The. (See Collis, George, assignor.)

Collis, Florence M., executrix. (See Collis, George.)

Collis, George, deceased; F. M. Collis, executrix, assignor to The Collis Company, Clinton, Iowa. Poultry-rack. No. 1,222,072; Apr. 10; v. 237; p. 404.

Collis, Henry J., Taunton, Mass. Buckle for wristbands and similar uses. No. 1,223,671; Apr. 24; v. 237; p. 1037.

Collis, Lloyd, New York, N. Y. Railway-switch. No. 1,223,151; Apr. 17; v. 237; p. 824.

Colonial Scale Company. (See Barnard, Arthur W., assignor.)

Colsten, Herbert B., Great Bend, Pa. Train-stop. No. 1,222,529; Apr. 10; v. 237; p. 566.

Colt, Annie F., executrix. (See Garis-Cochrane, Josephine.)

Colt, Peter H., Warren, Pa. Folding coop and crib. No. 1,223,257; Apr. 17; v. 237; p. 857.

Columbro, Nicola, Cleveland, Ohio. Combined cooking and heating stove. No. 1,221,146; Apr. 3; v. 237; p. 50.

Combs, James R. (See Rein and Combs.)

Comeau, Hilaire J., Hartford, Conn. Collar-fastener. No. 1,221,290; Apr. 3; v. 237; p. 103.

Comings, William R., Wharncliffe, Wimbledon Park, and E. J. Hall, Catford, England. Apparatus for making and securing box lids and bottoms. No. 1,221,835; Apr 10; v. 237; p. 322.

Commonwealth Steel Company. (See Shallenberger, Charles S., assignor.)

Compton, Charles A., San Francisco, Cal. Warming-receptacle. No. 1,223,311; Apr. 17; v. 237; p. 875.

Computing Scale Company, The. (See Hopkinson, Joseph, assignor.)

Comstock, Harry, Mineville, N. Y. Primer-retainer for dynamite-cartridges. No. 1,223,035; Apr. 17; v. 237; p. 783.

Concrete Forms Company, The. (See Baker, Hugh J., assignor.)

Concrete Stave Silo Company, The. (See Wahl, Eugene J., assignor.)

Condon, William A. (See Nielsen, Aage, assignor.)

Conkling, Harry W. (See Watkins, William D., assignor.)

Conn, Byron O. (See Root, Charles F., assignor.)

Conn, Charles G., Elkhart, Ind. Key-seat for wind musical instruments. No. 1,223,563; Apr. 24; v. 237; p. 998.

Connecticut Telephone & Electric Company. (See Stahl and Cavanagh, assignors.)

Conrad, Nicholas J. (See Schweitzer and Conrad.)

Consolidated Car-Heating Company. (See Hammond William S., Jr., assignor.)

Consolidated Car-Heating Company. (See McElroy, James, F., assignor.)
Converse, Atherton D., Winchendon, Mass. Making heads for drums and other musical instruments. No. 1,221,141; Apr. 3; v. 237; p. 49.
Converse, Atherton D., Winchendon, Mass. Drum. No. 1,221,142; Apr. 3; v. 237; p. 49.
Conway, Elisha A., assignor of one-half to J. E. Waltz, Williamsport, Pa. Razor-sharpening machine. No. 1,223,672; Apr. 24; v. 237; p. 1037.
Cook, Frank A., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,222,736; Apr. 17; v. 237; p. 681.
Cook, Harry, Newark, N. J. Dial for games and the like. No. 1,221,791; Apr. 3; v. 237; p. 273.
Cook, Harry L. (See Ross and Cook.)
Cook, John J., Monroe, La. Picture and mirror hanger. No. 1,222,530; Apr. 10; v. 237; p. 567.
Cook, Stanley S. (See Parsons, Carnegie, and Cook.)
Cook, Wallace L., Chicago, Ill. Protector. No. 1,222,365; Apr. 10; v. 237; p. 509.
Cooke, William A., Jr., Brooklyn, N. Y. File, binder, or the like. No. 1,222,073; Apr. 10; v. 237; p. 405.
Cooke, William A., Jr., Brooklyn, N. Y. File, binder, or the like. No. 1,222,074; Apr. 10; v. 237; p. 405.
Cooke, William A., Jr., Brooklyn, N. Y. File, binder, or the like. No. 1,222,075; Apr. 10; v. 237; p. 405.
Cooke, William A., Jr., Brooklyn, N. Y. Letter-file or the like. No. 1,222,076; Apr. 10; v. 237; p. 406.
Coons, Oscar A., Houston, Tex. Silo. No. 1,222,849; Apr. 17; v. 237; p. 719.
Cooper, Charles H., Buena Vista, Fla. Bicycle-carrier. No. 1,223,258; Apr. 17; v. 237; p. 857.
Cooper, Charles R. (See Copony, Alfred, assignor.)
Cooper Company, The. (See Cooper, Hugh S., assignor.)
Cooper, Harry, Gwinner, N. D. Automatic bond-lamp control. No. 1,221,687; Apr. 3; v. 237; p. 238.
Cooper, Hugh S., assignor to The Cooper Company, Cleveland, Ohio. Alloy. No. 1,221,769; Apr. 3; v. 237; p. 266.
Cooper, Samuel C., Nanda, N. Y. Autographic attachment for cameras. No. 1,222,531; Apr. 10; v. 237; p. 567.
Cooper, Lyman M., Detroit, assignor of one-half to A. T. Birk, Owosso, Mich. Demountable rim. No. 1,223,312; Apr. 17; v. 237; p. 875.
Cope, Lester I., and A. F. Zinsmaster, Pittsburgh, Pa. Barrel-cleat. No. 1,223,853; Apr. 24; v. 237; p. 1101.
Copeman, Lloyd G., Flint, Mich. Grease-cup. No. 1,222,185; Apr. 10; v. 237; p. 446.
Copony, Alfred, Chicago, Ill. Keyless yoke. No. 1,222,933; Apr. 17; v. 237; p. 747.
Copony, Alfred, assignor of one-half to C. R. Cooper, Chicago, Ill. Car-door. No. 1,221,971; Apr. 10; v. 237; p. 371.
Copper Clad Malleable Range Company, The. (See Scruggs, Loyd, assignor.)
Copsey, Edwin L., Old Heath, Colchester, assignor to F. W. Brackett & Company Limited, Colchester, England. Valveless rotary pump. No. 1,223,036; Apr. 17; v. 237; p. 783.
Cordeau, Adolphe, Ste. Madeleine, assignor of one-half to J. M. Authier, St. Hilaire, Quebec, Canada. Ditching-plow. No. 1,221,972; Apr. 10; v. 237; p. 371.
Core, George W., *et al.* (See McIntyre, William H., assignor.)
Corey, Oscar R., Fairfield, Iowa. Adjustable motor-bracket for electric washers. No. 1,223,673; Apr. 24; v. 237; p. 1038.
Corlett, Robert S., Evanston, assignor to J. Rousso, Chicago, Ill. Apparatus for controlling use of towels. No. 1,222,532; Apr. 10; v. 237; p. 568.
Corlett, Robert S., Evanston, assignor to J. Rousso, Chicago, Ill. Coin-controlled towel-service apparatus. No. 1,222,533; Apr. 10; v. 237; p. 568.
Cormier, Leo H., Brooklyn, N. Y. Roller-bearing. No. 1,222,534; Apr. 10; v. 237; p. 569.
Cormier, Leo H., Brooklyn, N. Y. Spindle for milling-machines and lathes. No. 1,222,934; Apr. 17; v. 237; p. 748.
Cornely, Robert, Paris, France. Embroidering presser-foot. No. 1,221,291; Apr. 3; v. 237; p. 103.
Cornely, Robert, Paris, France. Sewing-machine. No. 1,223,564; Apr. 24; v. 237; p. 998.
Corona Typewriter Company. (See Latta, Emmit G., assignor.)
Corona Typewriter Company. (See Mosher, Charles P., assignor.)
Corona Typewriter Company. (See Tucker, Benjamin W., assignor.)
Coryell, William C., Youngstown, Ohio. Rolling-mill. No. 1,221,029; Apr. 3; v. 237; p. 9.
Cosad, Albert R., Piedmont, Cal. Saliva-ejector. No. 1,222,267; Apr. 10; v. 237; p. 475.
Cosby, Edwin B., Kansas City, Mo. Nailing-block. No. 1,223,939; Apr. 24; v. 237; p. 1120.
Cosby, Walter W., Birmingham, Mo. Lagging-fastener for pulleys. No. 1,221,792; Apr. 3; v. 237; p. 274.
Costello, Joseph A., assignor to Cleveland Car Specialty Company, Cleveland, Ohio. Carline for car-roof frames. (Reissue.) No. 14,281; Apr. 3; v. 237; p. 283.
Costmeter Company. (See Quigley, John T., assignor.)
Cottam, George, Saginaw, Mich. Planetary speed-reducing mechanism. No. 1,223,259; Apr. 17; v. 237; p. 858.
Cottam, Robert T., Norfolk, Va. Tile-forming machine. No. 1,224,073; Apr. 24; v. 237; p. 1174.
Couden, Earl R., Chicago, Ill. Folding stereoscope. No. 1,221,836; Apr. 10; v. 237; p. 322.
Coughlin, Joseph D., Dorchester, assignor to Federal Manufacturing Company, Boston, Mass. Toggle. No. 1,222,850; Apr. 17; v. 237; p. 720.
Couper, William, Blacktail, assignor of one-half to J. C. Glahe, Burke, Idaho. Trolling-spoon. No. 1,224,074; Apr. 24; v. 237; p. 1175.
Courtaulds, Limited. (See Clayton, James, assignor.)
Cousins, Volney D., Oakland, Cal., assignor to American Telephone and Telegraph Company, Boston, Mass. Fraud-detecting telephone toll system. No. 1,222,077; Apr. 10; v. 237; p. 406.
Couve, Charles F., Aurora, Ill. Water-lift. No. 1,221,837; Apr. 10; v. 237; p. 323.
Cove, Benjamin W., assignor to Henderson Wagon Works, Henderson, Ky. Wagon running-gear. No. 1,223,152; Apr. 17; v. 237; p. 824.
Cowart, Stephen A., Midlothian, Tex. Self-locking mechanism for steering-wheel shafts of automobiles. No. 1,221,688; Apr. 3; v. 237; p. 238.
Cox, Ernest C., Newport News, Va. Signaling device for automobiles. No. 1,222,078; Apr. 10; v. 237; p. 406.
Cox, George C. (See Cleveland, Willard E., assignor.)
Cox, Henry A. (See Seaman, Osborne, Cox, and Gattle.)
Coyne, Anthony E., Marion, Ill. Shield or protector. No. 1,221,513; Apr. 3; v. 237; p. 180.
Coyne, Patrick S., Kansas City, Mo. Paving-machine. No. 1,221,689; Apr. 3; v. 234; p. 238.
Craig, Robert M., Wilkinsburg, Pa. Denture. No. 1,221,420; Apr. 3; v. 237; p. 147.
Crain, William L., Los Angeles, Cal. Foldable camp-stove. No. 1,221,514; Apr. 3; v. 237; p. 181.
Crane Company. (See Doolittle, William W., assignor.)
Crane, Frederick D., Montclair, N. J. Treating liquids. No. 1,223,153; Apr. 17; v. 237; p. 825.
Crane, Raymond E. (See Lawrence and Crane.)
Crane, Samuel G., Toledo, Ohio, assignor to Toledo Computing Scale Company, Newark, N. J. Automatic weighing-scale. No. 1,221,143; Apr. 3; v. 237; p. 49.
Cranmer, William S., Fresno, Cal. Flying-machine or flier. No. 1,223,940; Apr. 24; v. 237; p. 1130.
Cranston, Pardon H., *et al.* (See Flagg, Herman W., assignor.)
Craven, James F., Pittsburgh, Pa. Automatic grease-cup. No. 1,222,851; Apr. 17; v. 237; p. 720.
Crawford, Fred S. (See Schaub and Crawford.)
Crawford, John S., New London, Conn. Safety device for railways. No. 1,221,690; Apr. 3; v. 234; p. 239.
Crawford, Maderson A., Clio, La. Internal-combustion engine. No. 1,223,260; Apr. 17; v. 237; p. 858.
Creighton, James R., Cambridge, Ill. Heater for automobiles. No. 1,221,691; Apr. 3; v. 237; p. 239.
Cresap, Andrew R., Manila, Philippine Islands. Manufacture of agglutinated rice-kernels. No. 1,221,973; Apr. 10; v. 237; p. 372.
Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,223,313; Apr. 17; v. 237; p. 876.
Cribbs, Luther H., Dade City, Fla. Animal-shears. No. 1,221,292; Apr. 3; v. 237; p. 103.
Crisler, Horace, assignor of one-half to J. W. Sutherlin, Doyleville, Ark. Mail-catching device. No. 1,221,147; Apr. 3; v. 237; p. 51.
Crist, Firman R., Clayton, N. J. Dispensing-container. No. 1,221,838; Apr. 10; v. 237; p. 324.
Critchlow, Benjamin P., Ogden, Utah. Dish-washer. No. 1,223,261; Apr. 17; v. 237; p. 858.
Crites, John H., Clifton, Okla. Car-replacing frog. No. 1,223,037; Apr. 17; v. 237; p. 784.
Crites, Joe, assignor to Raymond Brothers Impact Pulverizer Company, Chicago, Ill. Pulverizing apparatus. No. 1,221,144; Apr. 3; v. 237; p. 50.
Crivelli, Guiseppe. (See Duro, Crivelli, and Pampuro.)
Crockett, Frank L., North Uxbridge, assignor to Whitin Machine Works, Whitinsville, Mass. Top-comb motion. No. 1,221,839; Apr. 10; v. 237; p. 324.
Crofoot, John B., Chicago, Ill. Stapling-machine. No. 1,224,075; Apr. 24; v. 237; p. 1175.
Crofoot, John B., Chicago, Ill. Magazine-hammer. No. 1,224,076; Apr. 24; v. 237; p. 1175.
Crompton & Knowles Loom Works. (See Hutchins and Ryon, assignors.)
Crompton & Knowles Loom Works. (See McGuiness, Benjamin F., assignor.)
Crompton & Knowles Loom Works. (See Ryon, Eppa H., assignor.)
Cron, Charles, and R. L. Dingle, Wilkes-Barre, Pa. Car-brake. No. 1,222,935; Apr. 17; v. 237; p. 748.
Cronenberg, William, Brooklyn, assignor to Morris Bernhard Co., New York, N. Y. Feed device for sewing-machines. No. 1,221,692; Apr. 3; v. 237; p. 239.
Crooks, C. L., *et al.* (See Newkirk, William P., assignor.)
Cropp, Andrew J., Chicago, Ill. Mixing-machine. No. 1,223,314; Apr. 17; v. 237; p. 876.
Crosby, Oliver, assignor to American Hoist & Derrick Company, St. Paul, Minn. Unloading-sling for derricks. No. 1,221,693; Apr. 3; v. 237; p. 240.
Crosby Steam Gage & Valve Company. (See Clark, George H., assignor.)
Croslar, Glenn F., Joliet, Ill. Power-hammer. No. 1,221,421; Apr. 3; v. 237; p. 147.

Cross, Thomas Y., *et al.* (See Collins, Oliver P., assignor.)
Crouse-Hinds Company. (See Bissell, Carl H., assignor.)
Crouse-Hinds Company. (See Bissell and Smith, assignors.)
Crouse-Hinds Company. (See Gidley, Daniel C., assignor.)
Crovo, Paul, Carlstadt, N. J., assignor to Beverage Machine and Bottle Co., Incorporated, New York, N. Y. Liquid-valve. No. 1,223,038; Apr. 17; v. 237; p. 784.
Crowson, Jonas H., Texarkana, Tex. Separator. No. 1,221,974; Apr. 10; v. 237; p. 372.
Cruise, E. D. (See Musgrove, Roy M., assignor.)
Crum, Hollis R., assignor to R. C. Penfield, Chicago, Ill. Brick-setter with self-acting gripping-fingers. No. 1,221,793; Apr. 3; v. 237; p. 274.
Crum, Hollis R., assignor to R. C. Penfield, Chicago, Ill. Apparatus for handling brick. No. 1,222,535; Apr. 10; v. 237; p. 569.
Crum, J. Corwin, Scott City, Kans. Rail-fastener. No. 1,224,078; Apr. 24; v. 237; p. 1176.
Crumbaugh, George P., assignor of one-half to E. W. Grove, St. Louis, Mo. Plaster-board with key-openings. No. 1,224,077; Apr. 24; v. 237; p. 1175.
Cuff, George, Poyette, Wis. Traction-engine. No. 1,221,975; Apr. 10; v. 237; p. 372.
Culbert, Charles L., Baltimore, Md. Power mechanism. No. 1,222,186; Apr. 10; v. 237; p. 446.
Cullum, John M., *et al.* (See Taylor, Ewing H., assignor.)
Cummings, Henry H., Newton, Mass. Revolution-counter. No. 1,223,039; Apr. 17; v. 237; p. 785.
Curl, Myrtle E., Port Orford, Oreg. Apparatus for drawing liquids. No. 1,221,293; Apr. 3; v. 237; p. 103.
Curren, David C., Prospect, Ohio. Shock-compressor. No. 1,223,565; Apr. 24; v. 237; p. 998.
Currier, Hiram D., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Telephone system. No. 1,221,026; Apr. 3; v. 237; p. 10.
Curry, Malcolm, Holyoke, Mass., assignor to The American Thread Company, New York, N. Y. Hand-controlled safety-knife. No. 1,222,366; Apr. 10; v. 237; p. 510.
Curtain Supply Company, The. (See Whitmore, Edward E., assignor.)
Curtis, George C., Hutchinson, Kans. Onion-set topper and cleaner. No. 1,223,941; Apr. 24; v. 237; p. 1130.
Curtiss Aeroplane & Motor Corporation. (See Curtiss, Glenn H., assignor.)
Curtiss Aeroplane & Motor Corporation. (See Tarbox, John P., assignor.)
Curtiss, Ed E., Spokane, Wash. Keyhole-guard. No. 1,223,477; Apr. 24; v. 237; p. 967.
Curtiss, Glenn H., assignor to The Curtiss Motor Company, Hammondsport, N. Y. Landing-gear for aircraft. No. 1,223,315; Apr. 17; v. 237; p. 876.
Curtiss, Glenn H., assignor to The Curtiss Motor Company, Hammondsport, N. Y. Multiple-control system for prime movers. No. 1,223,316; Apr. 17; v. 237; p. 877.
Curtiss, Glenn H., assignor to The Curtiss Motor Company, Hammondsport, N. Y. Folding-wing aeroplane. No. 1,223,317; Apr. 17; v. 237; p. 877.
Curtiss, Glenn H., assignor to The Curtiss Motor Company, Hammondsport, N. Y. Boat-hull. No. 1,223,318; Apr. 17; v. 237; p. 877.
Curtiss, Glenn H., Buffalo, N. Y., assignor to Curtiss Aeroplane & Motor Corporation. Flying-boat hull. No. 1,223,319; Apr. 17; v. 237; p. 878.
Curtiss, Glenn H., Buffalo, N. Y., assignor to Curtiss Aeroplane and Motor Corporation. Propeller. No. 1,223,321; Apr. 17; v. 237; p. 878.
Curtiss, Glenn H., and J. P. Tarbox, Buffalo, N. Y., assignors to The Curtiss Motor Co. Multiple-step flying-boat. No. 1,223,320; Apr. 17; v. 237; p. 878.
Curtiss Motor Company, The. (See Curtiss, Glenn H., assignor.)
Curtiss Motor Co., The. (See Curtiss and Tarbox, assignors.)
Cutler-Hammer Mfg. Co. (See Baehr, George, assignor.)
Cutler-Hammer Mfg. Co., The. (See Davis, William R., assignor.)
Cutler-Hammer Mfg. Co., The. (See Henderson, Clark T., assignor.)
Cutler-Hammer Mfg. Co., The. (See Klein, Charles J., assignor.)
Cutler-Hammer Mfg. Co., The. (See Zimmer, Paul H., assignor.)
Cutler, Harriet, Los Angeles, Cal. Nurse's cap. No. 1,223,854; Apr. 24; v. 237; p. 1101.
D'Arcy, Frank P., Kalamazoo, Mich. Cushion structure. No. 1,221,976; Apr. 10; v. 237; p. 372.
D'Autremont, Louis P., Duluth, Minn. Puzzle. No. 1,221,149; Apr. 3; v. 237; p. 51.
D'Narvarte, N. C., Juan, Hacienda Laredo, Truxillo, Peru. Feed-water heater for locomotive-boilers. No. 1,223,373; Apr. 24; v. 237; p. 929.
Dahlin, Carl T., Stockholm, Wis. Legging. No. 1,222,737; Apr. 17; v. 237; p. 682.
Dalley, Jacob W., Forestville, N. Y. Wire handle for baskets, boxes, and the like. No. 1,223,262; Apr. 17; v. 237; p. 859.
Dain, Joseph, assignor to Deere and Company, Moline, Ill. Riding attachment for harrows. No. 1,221,148; Apr. 3; v. 237; p. 51.
Dalton, Walter J., *et al.* (See Hoffmann, Michael, assignor.)
Dam, Chris, and J. E. Markley, Gordon, Nebr. Steel auto-tire. No. 1,221,694; Apr. 3; v. 237; p. 240.
Damon, George B., Belvidere, N. J., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Method of and apparatus for drying materials. No. 1,222,079; Apr. 10; v. 237; p. 407.
Damplerre, Fernando R. de, Madrid, and J. Gonzalo, Valencia, Spain. Vehicle-wheel. No. 1,222,538; Apr. 10; v. 237; p. 571.
Daniel, Charles A., Philadelphia, Pa. Mechanism for curing long-length rubber hose. No. 1,222,604; Apr. 17; v. 237; p. 635.
Daniel, John T., Columbia, Tenn. Rat-trap. No. 1,222,606; Apr. 17; v. 237; p. 636.
Daniel, Paul, Jamaica, assignor to M. Ely, New York, and C. Fuller, Port Washington, N. Y. Rotary gas-engine. No. 1,221,840; Apr. 10; v. 237; p. 324.
Dann, Ernest G., Chicago, Ill. Leaf-spring. No. 1,221,695; Apr. 3; v. 237; p. 241.
Darby, Ira L., Pawhuska, Okla. Bank-remittance sheet. No. 1,223,566; Apr. 24; v. 237; p. 999.
Daschner, John F., Cleveland, Ohio. Automatic table-service apparatus. No. 1,223,943; Apr. 24; v. 237; p. 1130.
Dath, Charles E., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging for railway-cars. No. 1,222,080; Apr. 10; v. 237; p. 407.
Dath, Charles E., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction-gear. No. 1,222,936; Apr. 17; v. 237; p. 748.
Daum, Albert F., Pittsburgh, Pa. Fuse. No. 1,222,937; Apr. 17; v. 237; p. 749.
Davenport, George W., and L. J. Burkhim, Gainesville, Fla. Automatic piano-player. No. 1,222,738; Apr. 17; v. 237; p. 682.
Davidson, James F., Marlow, Okla. Motion-picture apparatus. No. 1,221,515; Apr. 3; v. 237; p. 181.
Davidson, James F., Marlow, Okla. Intermittent-movement mechanism. No. 1,224,079; Apr. 24; v. 237; p. 1176.
Davidson, Lyman C., Chicago, Ill. Fastener for box-closures. No. 1,222,367; Apr. 10; v. 237; p. 510.
Davis, Archibald H., Schenectady, N. Y., assignor to General Electric Company. Protective device for systems of distribution. No. 1,222,536; Apr. 10; v. 237; p. 570.
Davis, David C., Swissvale, Pa., assignor to Westinhouse Electric and Manufacturing Company. Keep-alive anode. No. 1,222,537; Apr. 10; v. 237; p. 570.
Davis, Henry A., Kalamazoo, Mich. Liquid-fuel burner. No. 1,223,478; Apr. 24; v. 237; p. 967.
Davis, James C., Hinsdale, Ill., assignor to American Steel Foundries, New York, N. Y. Apparatus for handling molten steel. No. 1,223,479; Apr. 24; v. 237; p. 968.
Davis, Meyer, assignor to Asbestos Protected Metal Company, Pittsburgh, Pa. Building construction. No. 1,221,150; Apr. 3; v. 237; p. 52.
Davis, Meyer, assignor to Asbestos-Protected Metal Company, Pittsburgh, Pa. Building construction. No. 1,221,151; Apr. 3; v. 237; p. 52.
Davis, Michael J., Brooklyn, N. Y. Egg-candling device. No. 1,221,294; Apr. 3; v. 237; p. 104.
Davis, Royal S., Newmire, Colo., assignor to Primos Chemical Company, Primos, Pa. Treating vanadium-bearing ores. No. 1,223,567; Apr. 24; v. 237; p. 999.
Davis, William A., assignor of one-half to D. L. Newman, Hammond, Ind. Door-hanger. No. 1,223,856; Apr. 24; v. 237; p. 1101.
Davis, William F., Kansas City, Mo. Paving-mixing machine. No. 1,222,605; Apr. 17; v. 237; p. 635.
Davis, William H. (See Phinous, James M., assignor.)
Davis, William R., Springfield, Ill., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Controller. No. 1,222,187; Apr. 10; v. 237; p. 446.
Davis, William W., and W. W. MacDonald, San Francisco, Cal. Grease-cup. No. 1,221,031; Apr. 3; v. 237; p. 10.
Davison, George, Stonington, Conn. Driving-belt. No. 1,223,769; Apr. 24; v. 237; p. 1071.
Davison, Gregory C., New London, Conn., assignor to The Electric Boat Company. Water-tube boiler for submarines. No. 1,224,105; Apr. 24; v. 237; p. 1185.
Day, Alfred L., assignor to American Perforator Company, Chicago, Ill. Stop mechanism for punch-presses. No. 1,223,770; Apr. 24; v. 237; p. 1071.
Day, Charles, G. E. Windeler, and P. Grant, Hazel Grove, near Stockport, England, assignors to General Electric Company. Internal-combustion engine. No. 1,221,696; Apr. 3; v. 237; p. 241.
Day, Charles, G. E. Windeler, and P. Grant, Hazel Grove, near Stockport, England, assignors to General Electric Company. Internal-combustion engine. No. 1,221,697; Apr. 3; v. 237; p. 241.
Day, David T., Washington, D. C. Treating mineral oils for increasing the yield of light-gravity oils. No. 1,221,698; Apr. 3; v. 237; p. 242.
Day, George H., Southbridge, Mass. Lens-frame. No. 1,221,794; Apr. 3; v. 237; p. 274.
Day, George H., assignor to American Optical Company, Southbridge, Mass. Eye-protector. No. 1,221,977; Apr. 10; v. 237; p. 373.
Day, Leonard, New York, N. Y., assignor to Federal Signal Company. Detector-bar. No. 1,222,308; Apr. 10; v. 237; p. 511.

Day, Lewis D., assignor of one-half to A. E. Hutchison, Tulsa, Okla. Shampoo-board. No. 1,223,263; Apr. 17; v. 237; p. 859.

Day, Oscar B., Greencastle, Ind. Moving-picture operator's automatic signaling device. No. 1,223,771; Apr. 24; v. 237; p. 1072.

Dayton Engineering Laboratories Co., The. (See Kettering, Charles F., assignor.)

De Avila, Christiano C., and A. M. Remington, assignors to Simonds Manufacturing Company, Fitchburg, Mass. Crosscut-saw-tooth gage. No. 1,222,188; Apr. 10; v. 237; p. 440.

De Cew, Judson A., Montreal, Quebec, Canada. Paper-size and making same. No. 1,223,480; Apr. 24; v. 237; p. 968.

De Chiune, Paul, Youngstown, Ohio. Supporting-pedestal for cash-registers. No. 1,222,739; Apr. 17; v. 237; p. 682.

De Forest, Lee, San Francisco, Cal., assignor to Radio Telephone & Telegraph Company, New York, N. Y. Wireless-telegraph signaling system. No. 1,221,033; Apr. 3; v. 237; p. 11.

De Forest, Lee, assignor to De Forest Radio Telephone and Telegraph Company, New York, N. Y. Oscillating-current generator. No. 1,221,034; Apr. 3; v. 237; p. 11.

De Forest, Lee, assignor to De Forest Radio Telephone and Telegraph Company, New York, N. Y. Apparatus for use in wire or radio communications. No. 1,221,035; Apr. 3; v. 237; p. 11.

De Forest Radio Telephone and Telegraph Company. (See De Forest, Lee, assignor.)

De Goenaga, Augusto H., Gobleville, Mich. Combined pocket-case and sterilizer for surgical instruments. No. 1,223,675; Apr. 24; v. 237; p. 1039.

De Long Hook and Eye Company, The. (See Galt, William J., Jr., assignor.)

De Noyelles, Judson R., Binghamton, N. Y. Pneumatic action for player-pianos. No. 1,223,265; Apr. 17; v. 237; p. 859.

De Point, John A., and E. C. Van Hee, Sodus, N. Y. Pipe-vise. No. 1,223,508; Apr. 24; v. 237; p. 999.

De Roode, Trimble, New York, N. Y. Combined type-writing and printing machine. No. 1,224,121; Apr. 24; v. 237; p. 1191.

De Selms, Omar C., Attica, Ind. Stylus-holder for talking-machines. No. 1,222,607; Apr. 17; v. 237; p. 636.

De Vere, Raymond B., Seattle, Wash. Automatic stop mechanism for sound-reproducing machines. No. 1,223,041; Apr. 17; v. 237; p. 785.

De Vilbiss, Allen, Jr., Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Company, Newark, N. J. Computing-scale. No. 1,223,370; Apr. 24; v. 237; p. 928.

De Vilbiss, Allen, Jr., Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Company, Newark, N. J. Scale. No. 1,223,371; Apr. 24; v. 237; p. 929.

De Vilbiss Manufacturing Co., The. (See De Vilbiss, Thomas A., assignor.)

De Vilbiss, Thomas A., assignor to The De Vilbiss Manufacturing Co., Toledo, Ohio. Medicinal vaporizer. No. 1,221,516; Apr. 3; v. 237; p. 181.

De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Feeding mechanism for sewing-machines. No. 1,223,570; Apr. 24; v. 237; p. 1000.

De Whalley, John J. A., Lee, assignor to The Molassine Company Limited, East Greenwich, England. Making fertilizer from peat. No. 1,221,979; Apr. 10; v. 237; p. 373.

De Witt, Murl, Mount Ayr, Iowa. Riding-harrow. No. 1,221,152; Apr. 3; v. 237; p. 53.

De La Mare, William J., Des Moines, Iowa. Airship. No. 1,221,841; Apr. 10; v. 237; p. 325.

De La Poëze, Yves, St. Fulgent, France. Radiator. No. 1,221,422; Apr. 3; v. 237; p. 147.

Dearing, Major E., Salt Lake City, Utah. Water-heater and steam-boiler. No. 1,223,674; Apr. 24; v. 237; p. 1038.

Debs, Louis H. (See Cohn and Debs.)

Decker, Ammiel F., Brooklyn, assignor to Tingue, Brown & Company, New York, N. Y. Apron-canvas. No. 1,223,772; Apr. 24; v. 237; p. 1073.

Decker, Harry R., Houston, Tex. Tire-protector. No. 1,221,978; Apr. 10; v. 237; p. 373.

Dee, David G., Chicago, Ill., assignor, by mesne assignments, to R. H. Rogers, Rochester, N. Y., Local fire-alarm system. No. 1,221,032; Apr. 3; v. 237; p. 10.

Dee, David G., Chicago, Ill., assignor, by mesne assignments, to R. H. Rogers, Rochester, N. Y. Factory fire-drill system. No. 1,223,481; Apr. 24; v. 237; p. 968.

Deere and Company. (See Dain, Joseph, assignor.)

Deere and Company. (See Howard, Otis W., assignor.)

Deibel, Millie M., Youngstown, Ohio. Mechanical toy. No. 1,221,699; Apr. 3; v. 237; p. 242.

Deibel, Millie M., Youngstown, Ohio. Game apparatus. No. 1,224,080; Apr. 24; v. 237; p. 1177.

Deicke, Charles M., Baltimore, Md. Screen-door attachment. No. 1,221,700; Apr. 3; v. 237; p. 243.

Deigman, Richard C. (See Jackson, Earnest L., assignor.)

Deliglanes, Thomas, Rock Island, Ill. Weapon. No. 1,222,540; Apr. 10; v. 237; p. 571.

Demlit, Wallingford C., Brooklyn, N. Y. Replaceable valve-seat for flush-tanks. No. 1,222,081; Apr. 10; v. 237; p. 407.

Deming, William L., Salem, Ohio. Filing device. No. 1,223,857; Apr. 24; v. 237; p. 1102.

Dempsey, Arthur E., and O. Steinbaugh, Council Bluffs, Iowa. Stick-candy making and apparatus for same. No. 1,221,423; Apr. 3; v. 237; p. 148.

Denne, Mark T., Rushden, England. Sewing-machine. No. 1,221,842; Apr. 10; v. 237; p. 325.

Derouin, Eugène. (See Charlebois and Derouin.)

Descalles, Eugène M. C., Paris, France. Permutation-padlock. No. 1,222,082; Apr. 10; v. 237; p. 408.

Desjardins, Charles T. (See Desjardins, Joseph A. and C. T.)

Desjardins, Joseph A. and C. T., Sorel, Quebec, Canada. Camera. No. 1,223,858; Apr. 24; v. 237; p. 1102.

Deutsch-Koloniale Gerb- & Farbstoff-Gesellschaft m. b. H. (See Römer, Adolf, assignor.)

Deutsch, Simon, Detroit, Mich. Float-controlled electric indicator. No. 1,222,189; Apr. 10; v. 237; p. 447.

Deutsche Maschinenfabrik Aktiengesellschaft. (See Tadey, Carl, assignor.)

Deutschmeister, Abraham, New York, N. Y. Envelop. No. 1,223,569; Apr. 24; v. 237; p. 999.

Devanney, Thomas M., assignor to The Eagle Counter and Leather Company, Cincinnati, Ohio. Finishing-machine for shoe-counters. No. 1,223,040; Apr. 17; v. 237; p. 785.

Devlin, Edward J., Newark, N. J. Ventilator for boots, shoes, and like articles. No. 1,223,042; Apr. 17; v. 237; p. 786.

Dew, Henry J., Chorlton-cum-Hardy, Manchester, England. Lamp for motor-vehicles and like services. No. 1,221,036; Apr. 3; v. 237; p. 12.

Dew, Henry J., Chorlton-cum-Hardy, Manchester, England. Lamp for motor-vehicles and like services. No. 1,221,037; Apr. 3; v. 237; p. 12.

Dewar, James, London, and A. Liebmann, Weybridge, England, assignors to The Procter and Gamble Company, Cincinnati, Ohio. Catalytic device. No. 1,222,608; Apr. 17; v. 237; p. 636.

Dey, Harry E., Jersey City, N. J. Controller for and method of regulating electric motors. No. 1,222,852; Apr. 17; v. 237; p. 720.

Di Zerega, John V., New York, N. Y. Figure wheeled toy. No. 1,223,372; Apr. 24; v. 237; p. 929.

Dick, Albert B., Lake Forest, assignor to A. B. Dick Company, Chicago, Ill. Stenciling material. No. 1,223,773; Apr. 24; v. 237; p. 1073.

Dick, Maurice S. (See Witte, Adolf F., assignor.)

Dickerson, Fred G. (See Fricke, William A., assignor.)

Dickerson, Fred G., Chicago, Ill. Display apparatus. No. 1,222,083; Apr. 10; v. 237; p. 408.

Dickinson, William H., *et al.* (See McKeever, Charles, assignor.)

Diehl, Robert, Philadelphia, Pa., assignor to W. F. Marresford, Brooklyn, N. Y. Machine for making cut-out wall-paper. No. 1,223,942; Apr. 24; v. 237; p. 1130.

Dierks, Edward F., San Diego, Cal. Pump-valve. No. 1,221,843; Apr. 10; v. 237; p. 325.

Dietrich, Edward C., and C. W. Bliss, South Bend, Ind. Trolley mechanism. No. 1,222,740; Apr. 17; v. 237; p. 682.

Dietz, William, Brooklyn, N. Y. Cigarette-case. No. 1,221,701; Apr. 3; v. 237; p. 243.

Dill, Richard E., Belvidere, Nebr. Pit-silo-wall construction. No. 1,222,586; Apr. 10; v. 237; p. 589.

Dimelow, William F., New York, N. Y. Recoil-pad for firearms. No. 1,222,190; Apr. 10; v. 237; p. 447.

Dingle, Richard L. (See Cron and Dingle.)

Dixon, Amos F., Newark, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selecting system. No. 1,222,853; Apr. 17; v. 237; p. 720.

Doan, Rudolph W., Endicott, Wash. Game. No. 1,223,859; Apr. 24; v. 237; p. 1102.

Dodge, Milton L., Newburyport, Mass. Turned shoe and making the same. No. 1,221,153; Apr. 3; v. 237; p. 53.

Dodge, Milton L., Newburyport, Mass. Shoe and making the same. No. 1,221,154; Apr. 3; v. 237; p. 53.

Dodge, Milton L., Newburyport, Mass. Turn-shoe and making the same. No. 1,224,081; Apr. 24; v. 237; p. 1177.

Dodson, Emery H., Eleanor, Ill. Train-order signal. No. 1,221,155; Apr. 3; v. 237; p. 54.

Dodson, Joseph H., Chicago, Ill. Trap. No. 1,222,191; Apr. 10; v. 237; p. 447.

Doeblin, Wm. M., *et al.* (See Good and Tandy, assignors.)

Doherty, Henry L., assignor to The Improved Equipment Company, New York, N. Y. Process of heating and apparatus therefor. No. 1,222,741; Apr. 17; v. 237; p. 683.

Doherty, William F., Jr., Bisbee, Ariz. Vehicle-spring No. 1,223,678; Apr. 24; v. 237; p. 1040.

Doman, Herman C., Oshkosh, Wis. Washing-machine mechanism. No. 1,223,774; Apr. 24; v. 237; p. 1074.

Donaldson, Charles, Brookville, Pa. Burner. No. 1,222,084; Apr. 10; v. 237; p. 408.

Donham, Benjamin C., Glen Ridge, N. J., assignor to Spray Engineering Company, Boston, Mass. Compressed-air washer. No. 1,222,541; Apr. 10; v. 237; p. 572.

Donnald, E. B. (See Myers, Bascomb J., assignor.)

Donnelly, William T., Brooklyn, N. Y. Rendering ships unsinkable. No. 1,223,154; Apr. 17; v. 237; p. 825.

Donovan, Joseph T., and J. A. Tighe, Boston, Mass. Lever-locking means for motor-vehicles. No. 1,222,085; Apr. 10; v. 237; p. 409.

Doolittle, Orson W., Glenside, Pa. Lubricator. No. 1,221,795; Apr. 3; v. 237; p. 275.

Doolittle, William W., assignor to Crane Company, Chicago, Ill. Taper-finishing machine. No. 1,223,571; Apr. 24; v. 237; p. 1000.

Dopkins, George W., Morris, Minn. Automatic air-pump. No. 1,221,295; Apr. 3; v. 237; p. 104.

Dorouin, George A., Baltimore, Md. Ingot-mold. No. 1,223,775; Apr. 24; v. 237; p. 1074.

Dorsey, Adolphus A., Newport, Nebr. Dividing-board for mowing-machines. No. 1,221,980; Apr. 10; v. 237; p. 374.

Dotson, Viola E., Lenox, Iowa. Loading and unloading chute. No. 1,221,156; Apr. 3; v. 237; p. 54.

Douglas, Theodore, Scarboro, N. Y. Valve construction. No. 1,221,702; Apr. 3; v. 237; p. 243.

Douglas, Z. A. (See Kelly, John B., assignor.)

Douglass, Samuel, assignor to W. Kromdyk, Jr., Kalamazoo, Mich. Universal joint. No. 1,222,268; Apr. 10; v. 237; p. 475.

Dow, Roy B., assignor to Cochrane-Bly Company, Rochester, N. Y. Combined shaping and milling machinery. No. 1,221,844; Apr. 10; v. 237; p. 326.

Downey, Clark H., West Point, Ga. Doll. No. 1,221,157; Apr. 3; v. 237; p. 54.

Downey, Richard F., assignor of six-tenths to I. M. Lederer, Milwaukee, Wis. Cigar-banding machine. No. 1,221,424; Apr. 3; v. 237; p. 148.

Downey, Thomas F., Paterson, N. J. File and rasp cutting tool. No. 1,221,845; Apr. 10; v. 237; p. 326.

Downs, Arthur K., Portland, Oreg. Optician's pupillary pliers. No. 1,223,679; Apr. 24; v. 237; p. 1040.

Doyle, James E., assignor of one-half to C. S. Britton, Cleveland, Ohio. Printing-press appliance. No. 1,222,742; Apr. 17; v. 237; p. 683.

Doyle, James E., assignor of one-half to C. S. Britton, Cleveland, Ohio. Printing-press appliance. No. 1,222,743; Apr. 17; v. 237; p. 684.

Doyle, James E., assignor of one-half to C. S. Britton, Cleveland, Ohio. Saddle construction. No. 1,222,744; Apr. 17; v. 237; p. 684.

Doyle, James E., assignor of one-half to C. S. Britton, Cleveland, Ohio. Inking-plate heater. No. 1,222,745; Apr. 17; v. 237; p. 684.

Doyle, James E., assignor of one-half to C. S. Britton, Cleveland, Ohio. Means for preventing offset in printing. No. 1,222,746; Apr. 17; v. 237; p. 685.

Doyle, James E., assignor of one-half to C. S. Britton, Cleveland, Ohio. Ink-supply contrivance. No. 1,222,747; Apr. 17; v. 237; p. 685.

Drake, Alden M., assignor to Heald Machine Company, Worcester, Mass. Table driving and feeding mechanism for grinding-machines. No. 1,223,155; Apr. 17; v. 237; p. 825.

Drake, Richard, assignor to J. F. Sugden, Racine, Wis. Dispensing device. No. 1,224,082; Apr. 24; v. 237; p. 1177.

Draper Corporation. (See Rhoades, Alonzo E., assignor.)

Draper Corporation. (See Stafford, Alfred E., assignor.)

Draper Corporation. (See Youngquist, Henry W., assignor.)

Draper, Harold M., Richmond, Va. Broom-rack. No. 1,223,043; Apr. 17; v. 237; p. 786.

Dremel, Albert J., Racine, Wis. Hose-clamp. No. 1,221,425; Apr. 3; v. 237; p. 148.

Dresel, Charles, Brooklyn, N. Y. Table attachment for beds. No. 1,221,296; Apr. 3; v. 237; p. 104.

Dreux, Alexander H., assignor to F. N. Burt Company, Limited, Buffalo, N. Y. Shaping paper. No. 1,221,846; Apr. 10; v. 237; p. 326.

Drew, Arthur, deceased; E. A. Osborne and S. Nield, executors, assignors of one-half to W. H. Osborne and one-half to E. A. Osborne, Wythall, England. Spring-fork for cycles, motor-cycles, and the like. No. 1,223,572; Apr. 24; v. 237; p. 1001.

Drew, Arthur C., New Bedford, Mass. Journal-bearing. No. 1,223,482; Apr. 24; v. 237; p. 968.

Driscoll, Michael F., West Springfield, Mass. Pipe-wrench. No. 1,223,680; Apr. 24; v. 237; p. 1040.

Drummond, Joseph W., Chillicothe, Ohio. Demountable rim. No. 1,222,542; Apr. 10; v. 237; p. 572.

Drury, Thomas C., Dublin, Ireland. Revolving bookcase. No. 1,224,083; Apr. 24; v. 237; p. 1178.

Dryden, Eli E., *et al.* (See White, Tilman, assignor.)

Du Bois, Nelson, Long Beach, Cal. Radiator-cap. No. 1,223,156; Apr. 17; v. 237; p. 825.

Dubé, George R., New Bedford, Mass. Door-lock. No. 1,221,703; Apr. 3; v. 237; p. 243.

Dubiel, Francissek, A. Jurkiewicz, and J. Sitko, Fort Wayne, Ind. Metallic tie and rail-fastener. No. 1,222,609; Apr. 17; v. 237; p. 636.

Ducher, Edwin, Jersey City, N. J. Moving-picture-film winder. No. 1,221,704; Apr. 3; v. 237; p. 244.

Dudley, Arthur W., Marlboro, Mass. Edge-guide attachment for sewing-machines. No. 1,223,860; Apr. 24; v. 237; p. 1103.

Dudley, Charles J. (See Schmaus, Simon, assignor.)

Duffy, Joseph J., assignor of one-half to G. W. Carleton, Brooklyn, N. Y. Aerial torpedo. No. 1,221,426; Apr. 3; v. 237; p. 149.

Dufresne, Francois, St. Laurent, Quebec, Canada. Sash-balance. No. 1,223,861; Apr. 24; v. 237; p. 1103.

Duke, Wilbey C., South Richmond, Va. Adjustable pipe-hanger. No. 1,221,705; Apr. 3; v. 237; p. 244.

Dultmeier, Frank J., Manning, Iowa. Adjustable tongue-holder. No. 1,222,192; Apr. 10; v. 237; p. 447.

Dunagan, James A., Taylors, S. C. Compound tool. No. 1,221,297; Apr. 3; v. 237; p. 104.

Dunbar, Francis W., Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, Telephone system. No. 1,223,349; Apr. 17; v. 237; p. 889.

Dunbar, Orls K., Centerville, Ind., assignor to The Toledo Rack & Level Company, Toledo, Ohio. Display-stand. No. 1,221,517; Apr. 3; v. 237; p. 182.

Duncan, Harrie E., assignor to Waltham Watch Company, Waltham, Mass. Watch readable by touch. No. 1,222,369; Apr. 10; v. 237; p. 511.

Duncan, Theodore, San Francisco, Cal. Drinking-fountain. No. 1,224,084; Apr. 24; v. 237; p. 1178.

Dunford, William T., assignor to Shurloc Elevator Safety Company, Inc., New York, N. Y. Safety-lock for elevator systems. No. 1,221,809; Apr. 3; v. 237; p. 280.

Dunford, William T., assignor to Shurloc Elevator Safety Company, Inc., New York, N. Y. Elevator safety system. No. 1,221,810; Apr. 3; v. 237; p. 281.

Dunham, Bert G. (See Goodrum and Dunham.)

Dunham, Bert G., Hawthorne, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Automatic telephone system. No. 1,221,158; Apr. 3; v. 237; p. 54.

Dunham, George W. (See Close, Fred A., assignor.)

Dunkley, Samuel J., Kalamazoo, Mich. Driving means for motor-driven railway-cars. No. 1,222,610; Apr. 17; v. 237; p. 637.

Dunlap, Orle T., *et al.* (See Good and Tandy, assignors.)

Dunn, Edward L., assignor, by mesne assignments, to Standard Plunger Elevator Company, Worcester, Mass. Operating box-controlled dumb-waiter system. No. 1,222,854; Apr. 17; v. 237; p. 721.

Dunn, Edward L., assignor, by mesne assignments, to Standard Plunger Elevator Company, Worcester, Mass. Elevator-door-locking mechanism. No. 1,223,157; Apr. 17; v. 237; p. 826.

Dunn, Freeman A., Keokuk, Iowa. Ventilating attachment. No. 1,223,483; Apr. 24; v. 237; p. 969.

Dunn, John J. (See McGirr, William J., assignor.)

Dunn, Lewis C., San Antonio, Tex. Container. No. 1,222,543; Apr. 10; v. 237; p. 572.

Dunn, Sola B., Chicago, Ill. Securing device. No. 1,221,706; Apr. 3; v. 237; p. 244.

Duplex Printing Press Company. (See Bechman, Henry F., assignor.)

Duplex Printing Press Company, The. (See Pearce, Parker, and Carverhill, assignors.)

Duquette, Edward E. J. (See Schneider and Duquette.)

Durbin, Votaw S., St. Louis, Mo. Pipe-coupling. No. 1,221,707; Apr. 3; v. 237; p. 245.

Duro, Francesco, G. Crivelli, and F. Pamparo, Milan, Italy. Machine for trimming the brims of hats. No. 1,221,427; Apr. 3; v. 237; p. 149.

Duscher, Ernest, La Crosse, Wis., assignor, by mesne assignments, to Printograph Manufacturing Co., St. Paul, Minn. Filling-in attachment for printing-machines. No. 1,221,159; Apr. 3; v. 237; p. 55.

Duscher, Ernest, La Crosse, Wis., assignor, by mesne assignments, to Printograph Manufacturing Co., St. Paul, Minn. Printing-machine. No. 1,221,160; Apr. 3; v. 237; p. 55.

Dutcher, Pierpont E., Milwaukee, assignor to Bucyrus Company, South Milwaukee, Wis. Rail-clamp. No. 1,222,193; Apr. 10; v. 237; p. 448.

Dutt, David. (See Evans and Dutt.)

Duysens, Tossanus, assignor of one-half to R. Hustinx, Maastricht, Netherlands. Armored pneumatic tire. No. 1,223,776; Apr. 24; v. 237; p. 1074.

Dwight & Lloyd Sintering Company. (See Bittmann, Heinrich, assignor.)

Dyckman, Stephen W., New York, N. Y. Portable vault. No. 1,223,374; Apr. 24; v. 237; p. 930.

Dyer, Walter, Portland, Oreg. Arch construction. No. 1,223,266; Apr. 17; v. 237; p. 859.

Dyer, Walter C., assignor to Buda Company, Chicago, Ill. Rail-drilling machine. No. 1,221,708; Apr. 3; v. 237; p. 245.

Dyett, Frank J., Ilion, N. Y. Key. No. 1,221,709; Apr. 3; v. 237; p. 246.

Dygert, Charles B., assignor to Remington Arms and Ammunition Company, Ilion, N. Y. Sight for firearms. No. 1,221,298; Apr. 3; v. 237; p. 105.

Dygert, Henry A., Philadelphia, Pa. Surgical appliance. No. 1,221,518; Apr. 3; v. 237; p. 182.

Dyson, Herbert P., Knoxville, Tenn., assignor to Atlas Powder Company, Wilmington, Del. Drill. No 1,222,938; Apr. 17; v. 237; p. 749.

E. and T. Fairbanks and Company. (See Burrows, Ernest E., assignor.)

E. I. du Pont de Nemours and Company. (See Sylvester, Richard, assignor.)

E. L. Watrous Galvanizing Company. (See Watrous, Edward L., assignor.)

E. R. Wagner Manufacturing Company. (See Wagner, Edward R., assignor.)

Eacret, Godfrey, San Francisco, Cal. Indicator. No. 1,222,269; Apr. 10; v. 237; p. 475.

Eagle Counter and Leather Company, The. (See Devanney, Thomas M., assignor.)

Earle, George W., Hempstead, N. Y. Preventing or extinguishing fires in oil-tanks. No. 1,221,038; Apr. 3; v. 237; p. 12.
Earle, Guyon L. C., Forest Hills, N. Y. Apparatus for returning water of condensation to boilers, &c. No. 1,223,944; Apr. 24; v. 237; p. 1131.
Earnshaw, George F., assignor to Earnshaw Knitting Co., Chicago, Ill. Child's sleeping-garment. No. 1,221,710; Apr. 3; v. 237; p. 246.
Earnshaw Knitting Co. (See Earnshaw, George F., assignor.)
Eastham, James M., Shreveport, La. Deep-well pump. No. 1,221,519; Apr. 3; v. 237; p. 182.
Eastman Kodak Co. (See Folmer, William F., assignor.)
Eastman Kodak Company. (See Gaumont, Léon, assignor.)
Eaton, George, Baltimore, Md. Variable-speed gearing. No. 1,223,862; Apr. 24; v. 237; p. 1104.
Eaton, Harrison H., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating on the soles of boots and shoes. No. 1,222,855; Apr. 17; v. 237; p. 721.
Eby, Earl E., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Vacuum-tight seal. No. 1,223,777; Apr. 24; v. 237; p. 1075.
Eby, Fred E. (See Witty, Eby, and Meader.)
Economy Devices Corporation. (See Stafford, Hal R., assignor.)
Economy Specialties Company. (See Smolik, Mathias, assignor.)
Edahl, Knute, Chicago, Ill. Shock-resisting mechanism. No. 1,221,428; Apr. 3; v. 237; p. 150.
Eddy, Perry L., Cripple Creek, Colo. Airship. No. 1,222,939; Apr. 17; v. 237; p. 749.
Edholm, Fredric, Eskilstuna, Sweden. Fuel-pump of internal-combustion engines. No. 1,222,270; Apr. 10; v. 237; p. 476.
Edison, Thomas A., Llewellyn Park, assignor to New Jersey Patent Company, West Orange, N. J. Alternating-current rectifier. No. 1,221,981; Apr. 10; v. 237; p. 374.
Edmonds, Walter D. (See Ladoff, Isador, assignor.)
Edmunds and Jones Corporation. (See Godley, Charles E., assignor.)
Edwards, Alrah B., Chicago, Ill., and F. K. Russell, Dallas, Tex., assignors to Shortwriter Company, Wilmington, Del. Keyboard for writing-machines. No. 1,222,748; Apr. 17; v. 237; p. 685.
Edwards, Alrah B., Chicago, Ill., and F. K. Russell, Dallas, Tex., assignors to Shortwriter Company, Wilmington, Del. Writing-machine. No. 1,224,085; Apr. 24; v. 237; p. 1178.
Edwards, Beulah E., Liscomb, Iowa. Stamp and envelop moistener. No. 1,222,940; Apr. 17; v. 237; p. 750.
Edwards, Charles C., Phoenix, Ariz. Mess and ice box. No. 1,221,711; Apr. 3; v. 237; p. 246.
Edwards, Henry E. (See Buch, Max, assignor.)
Egbert, William E., Cleveland, Okla. Kitchen-cabinet. No. 1,221,796; Apr. 3; v. 237; p. 276.
Egloff, Kurt. (See Baltensweiler and Egloff.)
Egly, Georg, assignor to Gebrueder Siemens & Co., Berlin-Treptow, Germany. Flame-arc lamp and electrode therefor. No. 1,221,039; Apr. 3; v. 237; p. 13.
Egoroff, Michael, Petrograd, Russia. Carbureter. No. 1,222,941; Apr. 17; v. 237; p. 750.
Eichhorn, Hermann, and R. Becker, Elizabeth, N. J., assignors to The Singer Manufacturing Company. Casing or shield for power-tables. No. 1,223,681; Apr. 24; v. 237; p. 1041.
Eichler, Theodor. (See Schmidt, Hochschwender, and Eichler.)
Eickhoff, Ernest. (See Bicker, Edgar B., assignor.)
Eklund, Walfrid S., and W. E. Payne, Donner, La. Compression-starter for combustion-engines. No. 1,222,544; Apr. 10; v. 237; p. 573.
Eldredge, Hervey H., assignor of one-half to A. Wegner, Taylor, N. D. Front-wheel control for motor-vehicles. No. 1,223,573; Apr. 24; v. 237; p. 1001.
Electric Auto-Lite Company, The. (See Peters, John B., assignor.)
Electric Boat Company, The. (See Davison, Gregory C., assignor.)
Electric Compositor Company. (See Petri-Palmedo, David, assignor.)
Electric Weighing Company. (See Messiter, Edwin H., assignor.)
Ell-Kay Mfg. Co., The. (See Moore and Morton, assignors.)
Elliott, Claud B. (See Hathaway and Elliott.)
Elliott, Gale S., Needles, Cal. Electrical toy. No. 1,223,375; Apr. 24; v. 237; p. 930.
Ellis, Walter J., Vancouver, British Columbia, Canada. Embossing. No. 1,223,484; Apr. 24; v. 237; p. 969.
Elmblad, Hjalmar, assignor to The Printasign Company, Chicago, Ill. Printing-machine. No. 1,221,429; Apr. 3; v. 237; p. 150.
Elmstrom, Anshelm B., Swampscott, and J. A. McDonald, Auburndale, Mass. Camera. No. 1,221,847; Apr. 10; v. 237; p. 327.
Ely, Moses, *et al.* (See Daniel, Paul, assignor.)
Elzy, John C., and F. Messenger, St. Paul, Minn. Jack. No. 1,221,712; Apr. 3; v. 237; p. 247.
Emanuelson, Gustaf, New Haven, Conn. Greasing device for bakers' use. No. 1,222,370; Apr. 10; v. 237; p. 511.
Emery, Albert H., Stamford, Conn. Railway track-scale. No. 1,222,271; Apr. 10; v. 237; p. 476.
Emery, Albert H., Stamford, Conn. Scale-platform check and support. No. 1,222,272; Apr. 10; v. 237; p. 476.
Emery, Plato G., Chicago, Ill. Vestibule-curtain for railway-cars. No. 1,221,982; Apr. 10; v. 237; p. 374.
Emery, Robert H., Brighton, Iowa. Can-opener. No. 1,223,485; Apr. 24; v. 237; p. 970.
Emory, Francis F., Philadelphia, Pa. Funnel. No. 1,222,611; Apr. 17; v. 237; p. 637.
Empire Paper Bottle Company. (See Regan, William F., assignor.)
Endlessgraph Manufacturing Company. (See Gonsky, Peter R., assignor.)
Enell, Otto E., Jersey City, N. J., assignor to Unique Specialty Co., Inc., New York, N. Y. Extension curtain-roller. No. 1,221,161; Apr. 3; v. 237; p. 56.
Engelbrecht, Julius, Boone, Colo. Excavating machine. No. 1,221,848; Apr. 10; v. 237; p. 327.
Enger, Pehr G., Skotselven, Norway. Apparatus for the extraction of hydrocarbons, &c., especially cymol, which arise in the manufacture of sulfite cellulose. No. 1,223,158; Apr. 17; v. 237; p. 826.
Engl, Gadient, F. Straub, and A. Grob, assignors to Society of Chemical Industry in Basle, Basel, Switzerland. Chromium compounds of azo dyestuffs containing groups able to be chromated, and a process of making the same. No. 1,221,849; Apr. 10; v. 237; p. 327.
England, Howard C., Lisbon, Md. Shock-binder. No. 1,222,856; Apr. 17; v. 237; p. 722.
English, John C., Camden, N. J., assignor to Victor Talking Machine Company, Talking-machine. No. 1,222,371; Apr. 10; v. 237; p. 511.
English, John C., Camden, N. J., assignor to Victor Talking Machine Company, Talking-machine. No. 1,222,372; Apr. 10; v. 237; p. 512.
Ensign, Orville H., Pasadena, Cal. Carbureter. No. 1,223,159; Apr. 17; v. 237; p. 826.
Epstein, Harry M., New York, N. Y., assignor to C. F. Glauz, Philadelphia, Pa. Closure. No. 1,222,373; Apr. 10; v. 237; p. 512.
Erdödi, Johan, New York, N. Y. Combined boiler and water-heater. No. 1,221,520; Apr. 3; v. 237; p. 183.
Erickson, Arthur F., Seattle, Wash. Bottle-holding device. No. 1,222,086; Apr. 10; v. 237; p. 409.
Erickson, Charles J., assignor to Automatic Electric Company, Chicago, Ill. Semi-automatic telephone system. No. 1,221,296; Apr. 3; v. 237; p. 105.
Ericson, Lawrence, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Controlling mechanism for clock-movements. No. 1,223,778; Apr. 24; v. 237; p. 1075.
Erie Coil Company, The. (See Bullock, Arthur R., assignor.)
Ernst, Edward H., Waseca, Minn. Journal-lubricator. No. 1,222,857; Apr. 17; v. 237; p. 722.
Ersnes, Nils, Antelope, Mont. Bread-cutter. No. 1,221,300; Apr. 3; v. 237; p. 105.
Erwin, Jessie M., Billings, Mont. Baby-jumper. No. 1,221,850; Apr. 10; v. 237; p. 327.
Espenschied, Lloyd, Brooklyn, N. Y., assignor to American Telephone and Telegraph Company. Wireless receiving system. No. 1,223,376; Apr. 24; v. 237; p. 930.
Essex, Harry. (See Brooks and Essex.)
Estes, Elizabeth. (See Tighe, William P., assignor.)
Estler, Louis E., Paterson, N. J. Toy. No. 1,222,858; Apr. 17; v. 237; p. 723.
Etienne, John W., Clarion, Iowa. Boiler-compound feeder. No. 1,221,851; Apr. 10; v. 237; p. 328.
Euchenhofer, Adolph F., assignor to The Standard Register Company, Dayton, Ohio. Autographic register. No. 1,221,521; Apr. 3; v. 237; p. 183.
Eugene Dietzgen Company. (See Lerch, William H., assignor.)
Euphrat, Theophile, South Norwalk, Conn. Shade-holder. No. 1,222,749; Apr. 17; v. 237; p. 685.
Eureka Smokeless Furnace Company, The. (See Nilson, Andrew, assignor.)
Eustis, John P., Newton, and A. T. Brown, Arlington, assignors to J. P. Eustis Manufacturing Company, Boston, Mass. Pneumatically-operated musical instrument. No. 1,221,162; Apr. 3; v. 237; p. 56.
Evangelist, Dominick. (See Puccini and Evangelist.)
Evans, E. Channing. (See Benson, Mirza H., assignor.)
Evans, Edward S., Richmond, Va. Chock-block. No. 1,222,374; Apr. 10; v. 237; p. 513.
Evans, Frank, and D. Dutt, assignors of one-third to R. O. Markham, Riverdale, Mich. Railway-switch. No. 1,223,945; Apr. 24; v. 237; p. 1131.
Evans, Harry, Bryn Mawr, Pa. Spring-attaching means for automobiles. No. 1,222,087; Apr. 10; v. 237; p. 410.
Evans, Harry N., Sr., assignor of two-thirds to A. M. Joyce and B. H. Green, Philadelphia, Pa. Hose-coupling. No. 1,222,088; Apr. 10; v. 237; p. 410.
Evans, Philip J., Malad City, Idaho. Memorandum-calendar. No. 1,222,612; Apr. 17; v. 237; p. 637.
Everts, George W., Minneapolis, Minn. Christmas-tree stand. No. 1,222,273; Apr. 10; v. 237; p. 476.
Exline, Marcus P., Dallas, Tex. Check-book-stub holder. No. 1,222,375; Apr. 10; v. 237; p. 513.

Extrand, Alfred, Aberdeen, Wash. Airship. No. 1,221,430; Apr. 3; v. 237; p. 151.
F. N. Burt Company. (See Burt, Robinson, assignor.)
F. N. Burt Company. (See Dreux, Alexander H., assignor.)
F. N. Burt Company. (See Palmer, Lyndon C., assignor.)
F. W. Brackett & Company Limited. (See Copsey, Edwin L., assignor.)
Faber, Daniel B., assignor of one-half to C. A. Greenlee, Uhrichsville, Ohio. Nut-lock. No. 1,223,044; Apr. 17; v. 237; p. 786.
Fafnir Bearing Company, The. (See Carlson, Carl A., assignor.)
Fahy, Frank P., Washington, D. C. Method of and apparatus for testing magnetic objects. No. 1,223,377; Apr. 24; v. 237; p. 931.
Fahnestock, Ernest B., Brooklyn, N. Y. Spring fastening device. No. 1,221,713; Apr. 3; v. 237; p. 247.
Fairhurst, Alfred W., Seattle, Wash. Folding shoe-fitting stool. No. 1,223,779; Apr. 24; v. 237; p. 1075.
Falck, Fritz W. (See McCarty and Falck.)
Fargo, Charles R., assignor to Wilson-Jones Loose Leaf Company, Chicago, Ill. Tray loose-leaf binder. No. 1,223,160; Apr. 17; v. 237; p. 827.
Faries, Robert, Decatur, Ill. Steam-boiler. No. 1,221,431; Apr. 3; v. 237; p. 151.
Farkasch, Oscar. (See Williams, William H., assignor.)
Farley, George W. (See Kirkpatrick and Farley.)
Farquharson, Charles W., assignor to Model Form Company, Chicago, Ill. Adjustable dress-form. No. 1,221,522; Apr. 3; v. 237; p. 183.
Farrand Company, The. (See Jones, Vern L., assignor.)
Farrar, Nerxes, *et al.* (See Morter, Lycurgus W., assignor.)
Farrer, Charles S., Dunmore, Pa. Steam-blower. No. 1,222,274; Apr. 10; v. 237; p. 477.
Farrington, Isabelle M. (See Reynolds, Theodore E., assignor.)
Farris, Joseph A. (See Graham and Farris.)
Fath, George H. (See Peters, Fath, and Miller.)
Faulkner, Albert S., Ogden, Utah. Automatic engine-starter. No. 1,221,301; Apr. 3; v. 237; p. 105.
Faut, Eugene A., Joliet, Ill. Automobile tractor attachment. No. 1,222,750; Apr. 17; v. 237; p. 686.
Fazzini, Sante, New York, N. Y. Paper-hanger's kit. No. 1,223,161; Apr. 17; v. 237; p. 827.
Fecher, Frederick F., Brooklyn, N. Y., assignor to Beck Duplicator Company. Duplicating-machine. No. 1,222,275; Apr. 10; v. 237; p. 477.
Fedczyszyn, Peter W., Medora, Manitoba, Canada. Shoe-fastening device. No. 1,223,574; Apr. 24; v. 237; p. 1001.
Federal Manufacturing Company. (See Coughlin, Joseph D., assignor.)
Federal Signal Company. (See Day, Leonard, assignor.)
Fee, Byrd R., *et al.* (See Collins, Oliver P., assignor.)
Feffelle, Alfred H., assignor of two-thirds to W. La Hodny, Buffalo, N. Y. Pump or compressor for motor-vehicles and the like. No. 1,222,682; Apr. 24; v. 237; p. 1041.
Fekete, Stephen L., assignor to Hudson Motor Car Company, Detroit, Mich. Balanced crank-shaft. (Reissue.) No. 14,292; Apr. 24; v. 237; p. 1197.
Felicetti, John B., Philadelphia, Pa. Manually-propelled vehicle. No. 1,222,613; Apr. 17; v. 237; p. 638.
Felker, Lewis H., Huron, S. D. Fence-post. No. 1,221,983; Apr. 10; v. 237; p. 375.
Fellencer, Allen C. (See Kuhn, James F., assignor.)
Fellows, Edwin R., assignor to The Fellows Gear Shaper Company, Springfield, Vt. Means for generating the teeth of irregular gears. No. 1,221,432; Apr. 3; v. 237; p. 151.
Fellows Gear Shaper Company, The. (See Fellows, Edwin R., assignor.)
Fenigstein, Jacob, Finsbury, London, England. Case for currency and other notes. No. 1,223,946; Apr. 24; v. 237; p. 1132.
Ferguson, Charles M., Victorville, Cal. Shade-roller. No. 1,222,276; Apr. 10; v. 237; p. 478.
Ferguson, Charles W., Bower, W. Va. Attachment for telephones. No. 1,222,376; Apr. 10; v. 237; p. 513.
Ferguson, James A., Plummer, Idaho. Saw-set. No. 1,221,040; Apr. 3; v. 237; p. 13.
Ferguson, Lewis B., Philadelphia, Pa. Joint-filler for concrete paving. No. 1,223,045; Apr. 17; v. 237; p. 787.
Ferguson, William, Philadelphia, Pa., assignor to Pioneer Suspender Company. Garter attachment. No. 1,223,683; Apr. 24; v. 237; p. 1041.
Ferrell, Charles A., assignor of one-half to H. E. Page, Cleveland, Ohio. Induction-coil. No. 1,223,947; Apr. 24; v. 237; p. 1132.
Ferry, John J., Englewood, N. J. Advertising-card holder for car and other seats. No. 1,222,089; Apr. 10; v. 237; p. 410.
Field, Frank H., Passaic, N. J. Vehicle wheel and tire. No. 1,222,614; Apr. 17; v. 237; p. 638.
Fifield, Charles F., assignor of one-half to H. Bessmer, Hastings, Mich. Loading-machine. No. 1,222,277; Apr. 10; v. 237; p. 478.
Fillion, George, Sr., deceased, Lake Linden, Mich.; S. Fillion, administratrix. Worm-gear-disengaging mechanism. No. 1,222,278; Apr. 10; v. 237; p. 478.
Fillion, Salome, administratrix. (See Fillion, George, Sr.)
Findley, Thomas W., Minneapolis, Minn. Electrically-operated trolley-door. No. 1,222,090; Apr. 10; v. 237; p. 411.
Finney, James J., Chicago, Ill., assignor to International Egg Candler Corporation, Beatrice, Nebr. Egg-candler. No. 1,223,948; Apr. 24; v. 237; p. 1132.
Fischer, Charles W., and R. Schamber, Gregory, S. D. Safety-carrier. No. 1,224,086; Apr. 24; v. 237; p. 1178.
Fischer, Geo. J. (See Wise, Joseph C., assignor.)
Fischer, Joseph W., Philadelphia, Pa. Tailor's measuring or fitting coat. No. 1,221,302; Apr. 3; v. 237; p. 106.
Fischer, Martin, Zurich, Switzerland, assignor to Fischer Motor Corporation, New York, N. Y. Internal-combustion engine. No. 1,222,615; Apr. 17; v. 237; p. 638.
Fischer Motor Corporation. (See Fischer, Martin, assignor.)
Fisher, Ira S., Molino, Mo. Rail-tie. No. 1,221,714; Apr. 3; v. 237; p. 247.
Fisk, Frederick C. (See Swanberg, Arthur W., assignor.)
Fitchburg Machine Works. (See Hogan, Judd, and Waite, assignors.)
Fitts, James L., Pensauken township, Camden county, N. J., assignor to Warren Webster & Company. Steam-heating. No. 1,221,433; Apr. 3; v. 237; p. 152.
Flagg, Herman W., assignor of one-third to W. H. Francis, Sr., and one-third to P. H. Granston, Providence, R. I. Wagon. No. 1,223,949; Apr. 24; v. 237; p. 1132.
Flannery Bolt Company. (See Hyland, Charles, assignor.)
Fleming, John C., Boston, Mass. Ventilation and cleaning device. No. 1,223,684; Apr. 24; v. 237; p. 1041.
Flint, Bradford B., Saranac Lake, N. Y. Identification device for tooth-brushes and the like. No. 1,222,377; Apr. 10; v. 237; p. 513.
Flintkote Manufacturing Company. (See Overbury and Platts, assignors.)
Flood, Patrick, assignor of one-half to E. J. B. Murray, Albany, N. Y. Sand-box. No. 1,221,523; Apr. 3; v. 237; p. 184.
Flory, Allen G., Winchester, Idaho. Gate. No. 1,224,087; Apr. 24; v. 237; p. 1179.
Flowers, Malon I., assignor of one-half to A. P. Sale, Waelder, Tex. Air-brake attachment. No. 1,223,267; Apr. 17; v. 237; p. 860.
Floyd, Zebulum S., West Marion, S. C. Pen and pencil clip holder. No. 1,221,715; Apr. 3; v. 237; p. 248.
Flynn, James, Brooklyn, N. Y. Excavating-bucket. No. 1,221,041; Apr. 3; v. 237; p. 13.
Fogle, William M., Dansville, N. Y. Resharpening saw-blades. No. 1,222,195; Apr. 10; v. 237; p. 449.
Foglesong, J. B. (See Blake, William F., assignor.)
Folger, Harry S. (See Johnson, Walter J. O., assignor.)
Folmer, William F., assignor to Eastman Kodak Co., Rochester, N. Y. Gear-cutting machine. No. 1,221,303; Apr. 3; v. 237; p. 106.
Folmer, William F., assignor to Eastman Kodak Co., Rochester, N. Y. Reflecting-camera. No. 1,221,304; Apr. 3; v. 237; p. 106.
Fontaine, Philiza H., Petersburg, N. D. Reversing-gear for steam-engines. No. 1,221,716; Apr. 3; v. 237; p. 248.
Ford, Thomas P., Brooklyn, N. Y. Elevator. No. 1,223,950; Apr. 24; v. 237; p. 1133.
Fore River Shipbuilding Corporation. (See Warriner, Robert, assignor.)
Forester, William H., Portage la Prairie, assignor of one-half to T. A. Watson, Grand View, Manitoba, Canada. Combined window-lock and draft-stop. No. 1,222,378; Apr. 10; v. 237; p. 513.
Forster, William A., Port Huron, Mich. Supporting device. No. 1,221,717; Apr. 3; v. 237; p. 248.
Forstrom, John, Chicago, Ill. Equalizing mechanism. No. 1,223,486; Apr. 24; v. 237; p. 970.
Forsyth, William R., Swampscott, Mass. Cutting-block and making the same. No. 1,222,616; Apr. 17; v. 237; p. 639.
Fowler, Herbert E., administrator. (See Fowler, John W.)
Fowler, John W., deceased, Henniker, N. H.; H. E. Fowler, administrator. Milk-can. No. 1,222,279; Apr. 10; v. 237; p. 479.
Fox, Alice E. (See Jonson, Henriette W., assignor.)
Fox, Austin H., New York, and A. W. Lenderoth, Stapleton, N. Y. Permissive automatic train-stop. No. 1,223,685; Apr. 24; v. 237; p. 1042.
Fox, Michael G., Chicago, Ill. Wind-shield. No. 1,223,780; Apr. 24; v. 237; p. 1076.
Fox, Ray S., Blue Earth, Minn. Stake-puller. No. 1,221,718; Apr. 3; v. 237; p. 248.
Fox, William C., assignor of one-half to C. H. Gaffner, Seattle, Wash. Window-fastener. No. 1,222,942; Apr. 17; v. 237; p. 751.
France, Ervine H., Detroit, Mich. Direction-indicating apparatus for motor-vehicles. No. 1,222,379; Apr. 10; v. 237; p. 514.
Francis, William H., Sr., *et al.* (See Flagg, Herman W., assignor.)
Francke, William J., Highland Park, N. J. Flexible coupling. No. 1,223,951; Apr. 24; v. 237; p. 1133.
Frank Ridlon Company. (See Anderson, Robert D. H., assignor.)
Frankeberger, Albert J., Bloomington, Ill. Moistener-tank for heaters. No. 1,222,380; Apr. 10; v. 237; p. 514.
Frankel Connector Company. (See Frankel, Harry, assignor.)
Frankel, Edward T., New York, N. Y. Talking-machine record. No. 1,222,381; Apr. 10; v. 237; p. 514.

Frankel, Harry, assignor to Frankel Connector Company, Inc., New York, N. Y. Extension attachment for testing-clips. No. 1,221,524; Apr. 3; v. 237; p. 184.

Frankell, August J., New York, N. Y. Gripping-tool. No. 1,221,042; Apr. 3; v. 237; p. 13.

Fraser, George H., Brooklyn, N. Y. Machine for crushing or grinding. No. 1,222,382; Apr. 10; v. 237; p. 515.

Fraser, George H., Brooklyn, N. Y. Machine for crushing or grinding. No. 1,222,383; Apr. 10; v. 237; p. 515.

Fraser, George H., Brooklyn, N. Y. Machine for crushing or grinding. No. 1,222,384; Apr. 10; v. 237; p. 515.

Fraser, George H., Brooklyn, N. Y. Machine for crushing or grinding. No. 1,222,385; Apr. 10; v. 237; p. 515.

Fraudsen, Theodor. (See Atkins and Fraudsen.)

Frazier, Luther, Anthony, Kans. Harness-ring. No. 1,221,525; Apr. 3; v. 237; p. 184.

Frederick, Carl K., Detroit, Mich. Coal-car guard. No. 1,221,434; Apr. 3; v. 237; p. 152.

Frederick, Walter. (See Colgan and Frederick.)

Free, Henry T. (See Thompson and Free.)

Freedman, Fred. (See Freedman, Sam and F.)

Freedman, Sam and F., Chelsea, Mass. Ventilated raincoat. No. 1,223,863; Apr. 24; v. 237; p. 1104.

Freeman, Lowell C., Detroit, Mich. Transmission mechanism for automobiles. No. 1,223,333; Apr. 17; v. 237; p. 882.

French, Charles L., Cambridge, Mass. Tubular conduit. No. 1,223,864; Apr. 24; v. 237; p. 1104.

French, William E., Clintwood, Va. Station-indicator. No. 1,222,280; Apr. 10; v. 237; p. 479.

Fricke, William A., Chicago, Ill. Display apparatus. No. 1,222,093; Apr. 10; v. 237; p. 413.

Fricke, William A., Oak Park, assignor of one-half to F. G. Dickerson, Chicago, Ill. Display apparatus. No. 1,222,091; Apr. 10; v. 237; p. 411.

Fricke, William A., assignor of one-half to F. G. Dickerson, Chicago, Ill. Display apparatus. No. 1,222,092; Apr. 10; v. 237; p. 412.

Friend, David H., Canton, Ohio. Bearing. No. 1,223,952; Apr. 24; v. 237; p. 1134.

Frink, Charles S., Minneapolis, Minn. Bathing apparatus. No. 1,221,163; Apr. 3; v. 237; p. 57.

Frisak, Arvid, Woodbury, N. J. Carbonic-acid indicator. No. 1,223,953; Apr. 24; v. 237; p. 1134.

Frisch, August, assignor to A. Frisch & Co., Zurich, Switzerland. Device for recording the readings of meters. No. 1,222,686; Apr. 24; v. 237; p. 1042.

Frisch & Co., A. (See Frisch, August, assignor.)

Fritch, Charles F., Detroit, Mich. Relief-valve. No. 1,221,719; Apr. 3; v. 237; p. 248.

Fritsche, Antonie, New York, N. Y. Cup-remover. No. 1,223,162. Apr. 17; v. 237; p. 828.

Fritsche, John, Philadelphia, Pa. Check-controlled vending-machine. No. 1,222,859; Apr. 17; v. 237; p. 723.

Fritz, William, Philadelphia, Pa. Candy-coating machine. No. 1,223,687; Apr. 24; v. 237; p. 1043.

Fritzsch, Bernhard, Cincinnati, Ohio. Sound-amplifier. No. 1,223,338; Apr. 17; v. 237; p. 884.

Frohrieb, Louis C., Pittsburgh, Pa. Apparatus for separating vapor from gas and other fluids. No. 1,222,751; Apr. 17; v. 237; p. 686.

Fromager, Albert L., and J. F. Six, Montreal, Quebec, Canada. Switchblock and casing. No. 1,223,378; Apr. 24; v. 237; p. 931.

Frommann, Franklin A., assignor to O. Frommann, Chicago, Ill. Metallic-spoked wheel. No. 1,222,094; Apr. 10; v. 237; p. 413.

Frommann, Olive. (See Frommann, Franklin A., assignor.)

Froussard, Albert F., St. Louis, Mo. Tube-cleaner. No. 1,221,984; Apr. 10; v. 237; p. 375.

Frye, Isaiah M., Harrisonburg, Va. Egg-turner. No. 1,222,617; Apr. 17; v. 237; p. 639.

Frykberg, Jacob, Bridgeport, Conn. Theft-preventing mechanism for automobiles. No. 1,223,435; Apr. 3; v. 237; p. 153.

Fuel Saving Company. (See Wood, Walter D., assignor.)

Fulcerl, Delia G., North Weymouth, Mass. Hat-fastener. No. 1,222,281; Apr. 10; v. 237; p. 479.

Fuller, Charles, *et al.* (See Daniel, Paul, assignor.)

Funk Brothers Manufacturing Company. (See Funk, Fred, assignor.)

Funk, Fred, assignor to Funk Brothers Manufacturing Company, Chicago Heights, Ill. Chair-support structure for mining-machine drills. No. 1,222,752; Apr. 17; v. 237; p. 686.

Funk, James B., assignor to The Wheeler-Schebler Carburetor Co., Indianapolis, Ind. Carbureter. No. 1,221,526; Apr. 3; v. 237; p. 185.

Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Electrical heating resistance. No. 1,222,196; Apr. 10; v. 237; p. 449.

Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Electric unit. No. 1,222,197; Apr. 10; v. 237; p. 450.

G & W Electric Specialty Co. (See Wakefield, Albert A., assignor.)

Gabel, Edward, Utica, N. Y. Shade for headlights. No. 1,221,305; Apr. 3; v. 237; p. 107.

Gabrielson, Carl, assignor to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,221,720; Apr. 3; v. 237; p. 249.

Gaede, John W., Cleveland, Ohio. Plane. No. 1,221,436; Apr. 3; v. 237; p. 153.

Gaffner, Charles H. (See Fox, William C., assignor.)

Gage, Joseph S., assignor of one-fourth to H. Mackey and one-fourth to I. Harnish, Dayton, Ohio. Boiler-seam protector. No. 1,223,781; Apr. 24; v. 237; p. 1076.

Gagnon, Prim, Papineau, Ill. Mounting for sliding doors. No. 1,223,954; Apr. 24; v. 237; p. 1135.

Gall, Marvin L., Phillippi, W. Va. Adjustable school desk and seat. No. 1,221,306; Apr. 3; v. 237; p. 107.

Gallagher, Edward G., assignor to The Lake Torpedo Boat Company of Maine, Bridgeport, Conn. Torpedo-firing control and signal apparatus for torpedo-boats. No. 1,222,198; Apr. 10; v. 237; p. 450.

Galt, William J., Jr., assignor to The De Long Hook and Eye Company, Philadelphia, Pa. Garment-hook. No. 1,222,095; Apr. 10; v. 237; p. 413.

Galt, William J., Jr., assignor to The De Long Hook and Eye Company, Philadelphia, Pa. Snap-fastener. No. 1,222,096; Apr. 10; v. 237; p. 414.

Gamewell Fire Alarm Telegraph Company. (See Cole, Frederick W., assignor.)

Gamewell Fire Alarm Telegraph Company. (See Suren, Nathan H., assignor.)

Gammel, Karl, assignor to The Cleveland Macaroni Company, Cleveland, Ohio. Package-filling machine. No. 1,222,199; Apr. 10; v. 237; p. 450.

Gammeter, John R. (See Martin, Christian H., assignor.)

Gammeter, William F., Cadiz, Ohio. Metal cap for rolls. No. 1,222,943; Apr. 17; v. 237; p. 751.

Gammons, William W., Jersey City, N. J. Sewing-machine. No. 1,222,618; Apr. 17; v. 237; p. 639.

Gamper, Otto, Münchwilen, Switzerland. Machine for facilitating the packing of magnetic objects of oblong shape. (Reissue.) No. 14,290; Apr. 24; v. 237; p. 1193.

Ganson, Oscar B. (See Manning and Ganson.)

Gant, Eugene M., Ethridge, Tenn. Rope-meter. No. 1,223,955; Apr. 24; v. 237; p. 1135.

Ganzenmüller, Adolph, Mount Vernon, N. Y. Scuttle-hole protector. No. 1,223,956; Apr. 24; v. 237; p. 1135.

Gardiner, M. T. (See Haughton, Nathaniel V., assignor.)

Gardiner, Charles P., Fort Recovery, Ohio. Snap-hook. No. 1,223,957; Apr. 24; v. 237; p. 1136.

Gardner, Clyde, assignor to Burroughs Adding Machine Company, Detroit, Mich. Recording-machine. No. 1,223,379; Apr. 24; v. 237; p. 931.

Gardner, John A., Grifton, N. C. Universal seed-planter. No. 1,222,386; Apr. 10; v. 237; p. 517.

Gardner, Levi S., Cedar Grove, La. Carbureter. No. 1,221,164; Apr. 3; v. 237; p. 57.

Garean, Peter N., Pittsburgh, Pa. Shipping-case. No. 1,222,753; Apr. 17; v. 237; p. 687.

Garfield, James R., trustee. (See Clement, Edward E., assignor.)

Garis-Cochrane, Josephine, deceased; A. F. Colt, executrix, assignor to Garis-Cochrane Mfg. Co., Chicago, Ill. Dish-washing machine. No. 1,223,380; Apr. 24; v. 237; p. 932.

Garis-Cochrane Mfg. Co. (See Garis-Cochrane, Josephine, assignor.)

Garlin, Max F., Chicago, Ill. Marginal folding device. No. 1,223,575; Apr. 24; v. 237; p. 1002.

Garman, Adrian S., Philadelphia, Pa. Folding and extension table. No. 1,223,782; Apr. 24; v. 237; p. 1076.

Garrity, Carlotta M., Boston, Mass. Hair-waver. No. 1,221,437; Apr. 3; v. 237; p. 154.

Gartrell, Sterne H., Kansas City, Mo. Composite bench. No. 1,223,576; Apr. 24; v. 237; p. 1002.

Garvin, Fred A., Washington, D. C. Stone-rake. No. 1,223,268; Apr. 17; v. 237; p. 860.

Garwood Company. (See Paull, Carl, assignor.)

Gary, Shirley L., South Richmond, Va. Rod-packing. No. 1,223,688; Apr. 24; v. 237; p. 1043.

Gasparaitis, Stanley, Chicago, Ill. Pressure-fountain paint-brush. No. 1,221,170; Apr. 3; v. 237; p. 60.

Gasper, Emil, Grass Valley, Cal. Vehicle-wheel. No. 1,221,721; Apr. 3; v. 237; p. 249.

Gattie, Alfred W. (See Seaman, Osborne, Cox, and Gattie.)

Gaumont, Léon, Paris, France, assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y. Cinematograph for natural-color projections by the three-color process. No. 1,223,381; Apr. 24; v. 237; p. 932.

Gay, George W., Corona, N. Y. Anesthetic-inhaler. No. 1,222,619; Apr. 17; v. 237; p. 640.

Gay, Lloyd T., Taft, Cal. Rod-rotating tee. No. 1,221,438; Apr. 3; v. 237; p. 154.

Gaylord, Robert H., Pasadena, assignor to R. H. Gaylord Company, Los Angeles, Cal. Elevator-signal. No. 1,221,527; Apr. 3; v. 237; p. 185.

Gaynor, Thomas F., Brooklyn, N. Y., and F. Griffin, London, England. Sighting and range-finding device for firearms. No. 1,222,620; Apr. 17; v. 237; p. 640.

Gearhart, Roy E., *et al.* (See Jones, William W., assignor.)

Gebauer, Charles L., Cleveland, Ohio. Producing metal bodies. No. 1,223,322; Apr. 17; v. 237; p. 878.

Geiger, William A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Roller side bearing for railway-cars. No. 1,223,323; Apr. 17; v. 237; p. 879.

Geisel, Emil, Barnes, London, England, assignor to General Electric Company. Metallic-filament incandescent electric lamp. No. 1,223,958; Apr. 24; v. 237; p. 1136.

Geiston, Pat, *et al.* (See Baum, James B., assignor.)

General Briquetting Company. (See Schumacher, Wilhelm, assignor.)

General Electric Company. (See Alexanderson, Ernst F. W., assignor.)

General Electric Company. (See Bergman, Sven R., assignor.)

General Electric Company. (See Case, Frank E., assignor.)

General Electric Company. (See Chatain, Henri G., assignor.)

General Electric Company. (See Davis, Archibald H., assignor.)

General Electric Company. (See Day, Windeler, and Grant, assignors.)

General Electric Company. (See Geisel, Emil, assignor.)

General Electric Company. (See Ishler, Willis A., assignor.)

General Electric Company. (See Langmuir, Irving, assignor.)

General Electric Company. (See Larson, Carl W., assignor.)

General Electric Company. (See Merriam, Ezra B., assignor.)

General Electric Company. (See Priest, Edward D., assignor.)

General Electric Company. (See Schwarz, Elmer H., assignor.)

General Engineering Company, The. (See Boudwin, Walker J., assignor.)

General Gas Light Company. (See Humphrey, Alfred H., assignor.)

General Railway Signal Company. (See Wight, Sedgwick N., assignor.)

General Welded Products Co. (See Lachman, Maurice, assignor.)

Gensecke, Wilhelm. (See Josse and Gensecke.)

Gensheimer, Johns S. (See Post and Gensheimer.)

George, Jerome R., assignor to Morgan Construction Company, Worcester, Mass. Housing for rolling-mills. No. 1,221,043; Apr. 3; v. 237; p. 14.

George S. Johnston Co. (See Morgan, Harold H., assignor.)

Gerdeman, Frank H., Findlay, Ohio. Ditching-machine. No. 1,222,754; Apr. 17; v. 237; p. 687.

Gerley, Alberto, Buenos Aires, Argentina. Convertible life-belt. No. 1,221,852; Apr. 10; v. 237; p. 328.

Getzendaner, John W., Polo, Ill. Tire-replacer. No. 1,223,689; Apr. 24; v. 237; p. 1044.

Gibson, Angus H. (See Roberts and Gibson.)

Giddings, George H., Ilion, N. Y. Split safety-post and indicator for double-barrel guns. No. 1,222,755; Apr. 17; v. 237; p. 687.

Gidley, Daniel C., Winthrop, Mass., assignor to Crouse-Hinds Company, Syracuse, N. Y. Electric-conduit fitting. No. 1,223,865; Apr. 24; v. 237; p. 1105.

Gilg, Henry F. (See Wadsworth, Frank L. O., assignor.)

Gillam, Manly M., Flushing, N. Y. Glove holding, stretching, and shaping device. No. 1,221,165; Apr. 3; v. 237; p. 57.

Gilliam Manufacturing Company, The. (See White, Harry B., assignor.)

Gillies, Alexander. (See Bartram and Gillies.)

Gillinder, Edgar A., Philadelphia, Pa. Glass-melting pot. No. 1,223,959; Apr. 24; v. 237; p. 1136.

Gilmor, Horatio G., Washington, D. C. Rail-anchor. No. 1,224,113; Apr. 24; v. 237; p. 1188.

Gilmartin, Michael W., Dover, N. J., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Grapple. No. 1,223,960; Apr. 24; v. 237; p. 1136.

Glaenzer, Jules, New York, N. Y. Check-book. No. 1,222,201; Apr. 10; v. 237; p. 451.

Glahe, John C. (See Couper, William, assignor.)

Glaser, Charles J., *et al.* (See Hough, Samuel, assignor.)

Glauz, Charles F. (See Epstein, Harry M., assignor.)

Gledhill, John H., Philadelphia, Pa. Cable-clamp. No. 1,223,961; Apr. 24; v. 237; p. 1137.

Gleiche, Carl, assignor to Stock Motorpflug Gesellschaft Mit Beschränkter Haftung, Berlin, Germany. Motor-plow. No. 1,222,387; Apr. 10; v. 237; p. 517.

Glenn, William L., Lebanon, Colo. Stalk-chopper. No. 1,222,388; Apr. 10; v. 237; p. 517.

Goben, Edward F., Muskogee, Okla. Spike-puller. No. 1,223,269; Apr. 17; v. 237; p. 860.

Godefroy, Marcel, New York, N. Y. Resilient wheel. No. 1,221,307; Apr. 3; v. 237; p. 107.

Godfree, Ernest G., Sandringham, near Melbourne, Victoria, Australia. Telephone system. No. 1,221,439; Apr. 3; v. 237; p. 154.

Godfrey, Truman M. (See Kohman, Godfrey, and Ashe.)

Godley, Charles E., assignor to Edmunds and Jones Corporation, Detroit, Mich. Lamp-mounting. No. 1,223,962; Apr. 24; v. 237; p. 1137.

Goelzer, Walter J., assignor of one-half to J. H. Wood, Bloomington, Ill. Stock-feeder and water-fountain. No. 1,222,389; Apr. 10; v. 237; p. 518.

Goerlitz, Hans, Berlin, Germany, assignor to Powers Accounting Machine Company, New York, N. Y. Adding and sorting machine. No. 1,223,690; Apr. 24; v. 237; p. 1045.

Gohl, Edward H., Auburn, N. Y. Decorative lamp-post for street-lamps. No. 1,223,487; Apr. 24; v. 237; p. 971.

Gold, Egbert H. (See Schreiber, Edward A., assignor.)

Goldberg, John S., assignor to Stromberg Motor Devices Company, Chicago, Ill. Carbureter. No. 1,224,088; Apr. 24; v. 237; p. 1179.

Golden, Daniel J., assignor to Golden Sporting Shoe Company, Brockton, Mass. Foot-ball shoe. No. 1,221,985; Apr. 10; v. 237; p. 376.

Golden Sporting Shoe Company. (See Golden, Daniel J., assignor.)

Golding, John F., Washington, D. C. Door-holder. No. 1,221,528; Apr. 3; v. 237; p. 185.

Goldstein, Robert H., Los Angeles, Cal. Stage apparatus. No. 1,223,488; Apr. 24; v. 237; p. 971.

Golling, Glenn G. (See Miller, John Z., assignor.)

Gollomb, Herman, New York, N. Y. Vaginal douche. No. 1,223,963; Apr. 24; v. 237; p. 1138.

Golz, Maximillian R., Chicago, Ill. Automobile-lock. No. 1,221,044; Apr. 3; v. 237; p. 14.

Gonsky, Peter R., Edmonton, Alberta, Canada, assignor to Endlessgraph Manufacturing Company, Detroit, Mich. Stand for moving-picture machines. No. 1,223,577; Apr. 24; v. 237; p. 1002.

Gonzalo, Justo. (See Dampierre and Gonzalo.)

Good, John, Brooklyn, assignor to Servet Specialty Company, New York, N. Y. Toilet-paper-roll holder. No. 1,224,106; Apr. 24; v. 237; p. 1185.

Good, Thomas L., and T. L. Tandy, assignors of one-sixth to H. P. Hotz, one-sixth to O. T. Dunlap, one-sixth to W. M. Doeblin, and one-sixth to C. W. Terry, Edwardsville, Ill. Automobile-wheel. No. 1,221,529; Apr. 3; v. 237; p. 186.

Goodrum, Charles L., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,221,166; Apr. 3; v. 237; p. 58.

Goodrum, Charles L., Brooklyn, assignor to Western Electric Company, Incorporated, New York, N. Y. Automatic telephone-exchange system. No. 1,221,167; Apr. 3; v. 237; p. 58.

Goodrum, Charles L., Brooklyn, assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,221,168; Apr. 3; v. 237; p. 59.

Goodrum, Charles L., Brooklyn, assignor to Western Electric Company, Incorporated, New York, N. Y. Machine-switching telephone-exchange system. No. 1,221,169; Apr. 3; v. 237; p. 59.

Goodrum, Charles L., Urbana, Ohio, assignor, by mesne assignments, to Western Electric Company, Incorporated. Locking mechanism for impulse-transmitters. No. 1,223,382; Apr. 24; v. 237; p. 932.

Goodrum, Charles L., and R. G. Dunham, Rochester, N. Y., assignors, by mesne assignments, to Western Electric Company, Incorporated. Apparatus for transmitting impulses of current in electric circuits. No. 1,221,308; Apr. 3; v. 237; p. 108.

Gooley, August B. (See Wires, Pearle J., assignor.)

Gordon, Robert L., assignor to American Optical Company, Southbridge, Mass. Lens. No. 1,223,691; Apr. 24; v. 237; p. 1045.

Gorham, Ralph, Winfield, and C. G. Cary, Zearing, Iowa. Meat-support. No. 1,222,390; Apr. 10; v. 237; p. 518.

Gorini, C. P., *et al.* (See Pittaluga, Stefano, assignor.)

Gorsuch, Edwin W., Baltimore, Md. Automatic train-control system. No. 1,221,309; Apr. 3; v. 237; p. 108.

Gorsuch, Edwin W., Baltimore, Md. Shoe structure for train-control systems. No. 1,221,310; Apr. 3; v. 237; p. 109.

Gottschalk, Julius, New York, N. Y. Filler-form for embroidery. No. 1,221,440; Apr. 3; v. 237; p. 154.

Gould & Eberhardt. (See Zimmerman, William F., assignor.)

Gould, Edwin J., San Diego, Cal. Differential or compensating gearing. No. 1,222,097; Apr. 10; v. 237; p. 414.

Gould, Sylvester O., Marion, Ind. Engine. No. 1,221,530; Apr. 3; v. 237; p. 186.

Gow, Alexander M., Duluth, Minn., and F. E. Keese, Ishpeming, Mich. Loader. No. 1,223,578; Apr. 24; v. 237; p. 1002.

Graebing, Edward E., Chicago, Ill. Safety device for elevators. No. 1,221,531; Apr. 3; v. 237; p. 187.

Graf, John C., Hollister, Cal. Priming device. No. 1,221,532; Apr. 3; v. 237; p. 187.

Graham, Andrew L., Santa Rosa, Cal. Kite. No. 1,223,163; Apr. 17; v. 237; p. 828.

Graham, Clarence J., and J. A. Farris, Chicago, Ill. Circuit-closer for automatic train-stops. No. 1,223,866; Apr. 24; v. 237; p. 1105.

Graham, Leslie B., East Chicago, Ind., assignor of one-third to himself, one-third to A. H. Adams, Oak Park, and one-third to J. L. Jackson, River Forest, Ill. Apparatus for obtaining direct currents from alternating currents. No. 1,221,311; Apr. 3; v. 237; p. 109.

Graham, Linwood L., Cades, S. C. Animal-trap. No. 1,221,312; Apr. 3; v. 237; p. 110.

Granberg, John G., Beckemeyer, Ill. Condenser for redistilling spelter. No. 1,221,045; Apr. 3; v. 237; p. 15.

Grand Rapids Show Case Company. (See Young, Samuel D., assignor.)

Grand Rapids Underwear Company. (See Lippitt, Ellihu, assignor.)

Grandinetti, Joseph V., Patchogue, N. Y. Extension-tower. No. 1,222,200; Apr. 10; v. 237; p. 451.

Grant, Edward C., Ottawa, Ontario, Canada. Watch strap. No. 1,222,391; Apr. 10; v. 237; p. 518.

Grant, Frank, Westfield, Mass. Device for toilet use. No. 1,223,783; Apr. 24; v. 237; p. 1077.

Grant, Peter. (See Day, Windeler, and Grant.)
Gravell, James H., Philadelphia, Pa. Chemical primer for zinc. No. 1,221,046; Apr. 3; v. 237; p. 15.
Gravell, James H., Philadelphia, Pa. Cleaning metals and preventing them from corroding. No. 1,221,441; Apr. 3; v. 237; p. 155.
Gravell, James H., Philadelphia, Pa. Cleaning metals and preventing them from corroding. No. 1,221,442; Apr. 3; v. 237; p. 155.
Graves, Orlel M., Ephrata, Wash. Refrigerator. No. 1,223,964; Apr. 24; v. 237; p. 1138.
Gray, Erlo H. and L. C., Rochester, N. Y. Copy-holder. No. 1,222,282; Apr. 10; v. 237; p. 480.
Gray, Harry M., Millvale, assignor of one-half to C. Allors, Pittsburgh, Pa. Bottle-closure. No. 1,223,867; Apr. 24; v. 237; p. 1105.
Gray, James A., assignor to American Can Company, San Francisco, Cal. Preparing can ends for hermetic sealing to can-bodies. No. 1,223,784; Apr. 24; v. 237; p. 1077.
Gray, James T. (See White, Frederick, assignor.)
Gray, Leon C. (See Gray, Erlo H. and L. C.)
Gray, Max and R. Harris, New York, N. Y. Vehicle-tire. No. 1,222,283; Apr. 10; v. 237; p. 480.
Great Lakes Dredge and Dock Company, The. (See Wilhelm and Bonfield, assignors.)
Great Western Manufacturing Co. (See Lonn, Edward J., assignor.)
Green, Benjamin H., *et al.* (See Evans, Harry N., Sr., assignor.)
Green, George S., and A. W. Oswald, Muskegon, Mich. Gear-testing machine. No. 1,222,392; Apr. 10; v. 237; p. 518.
Green, John C., Hackettstown, N. J. Dynamometer transmission device. No. 1,222,393; Apr. 10; v. 237; p. 519.
Greenamyer, Clarence V. (See McMillan and Greenamyer.)
Greenamyer, Clarence V., Los Angeles, assignor of one-half to J. McMillan, Glendale, Cal. Tool-grinding attachment for lathes. No. 1,221,797; Apr. 3; v. 237; p. 276.
Greenamyer, Clarence V., Los Angeles, assignor of one-half to J. McMillan, Glendale, Cal. Grinding attachment for lathes. No. 1,221,798; Apr. 3; v. 237; p. 276.
Greenleaf, Robert P., assignor to F. Billings, Cleveland, Ohio. Rail-clamp. No. 1,222,621; Apr. 17; v. 237; p. 641.
Greenlee, Charles A. (See Faber, Daniel B., assignor.)
Gregg, Hermit E., Portland, Oreg. Suspenders. No. 1,221,722; Apr. 3; v. 237; p. 250.
Gregory, Harrison R., St. Louis, Mo. Air-deflector. No. 1,221,533; Apr. 3; v. 237; p. 187.
Grier, John A., Hutchinson, Kans. Combined street-indicator and advertising device. No. 1,223,270; Apr. 17; v. 237; p. 861.
Griffin, Frederick. (See Gaynor and Griffin.)
Griffin, Leroy C., and P. A. Jones, Cairo, Ga. Auto attachment. No. 1,222,860; Apr. 17; v. 237; p. 723.
Griffin, Stanton D., and E. R. Kirk, Memphis, Tenn. Rotary internal-combustion engine. No. 1,221,171; Apr. 3; v. 237; p. 60.
Grimes, Thaddeus S., assignor to Lummus Cotton Gin Company, Columbus, Ga. Cowl. No. 1,222,394; Apr. 10; v. 237; p. 519.
Griner, Arthur J., Boston, Mass. Disinfecting apparatus. No. 1,222,756; Apr. 17; v. 237; p. 688.
Grob, Armin. (See Engl, Straub, and Grob.)
Grode, Frank P., Kansas City, Mo. Pool-ball collector. No. 1,222,284; Apr. 10; v. 237; p. 480.
Grooms, Denver, Marshall, Mich. Transmission-gearing. No. 1,222,395; Apr. 10; v. 237; p. 520.
Gross, William, assignor to Safety Lock Company, Minneapolis, Minn. Lock. No. 1,222,545; Apr. 10; v. 237; p. 573.
Groth, Lorentz A., London, England. Method of and apparatus for electrotanning. No. 1,222,861; Apr. 17; v. 237; p. 723.
Grove, Edwin W. (See Crumbaugh, George P., assignor.)
Groves, Albert, Acton, London, England. Variable-speed gearing. No. 1,221,047; Apr. 3; v. 237; p. 15.
Grubbs, Albert M., Portland, Oreg. Animal-trap. No. 1,223,271; Apr. 17; v. 237; p. 861.
Grundman, Rudolf, Chicago, Ill. Hopper-scale. No. 1,222,202; Apr. 10; v. 237; p. 451.
Grynik, Michael A., Ladywood, Manitoba, Canada. Attachment for pencils. No. 1,223,579; Apr. 24; v. 237; p. 1003.
Guett, Monroe. (See Morris and Guett.)
Guichard, Marcel, assignor to Société d'Electricité Mors, Paris, France. Telescopic mast. No. 1,221,723; Apr. 3; v. 237; p. 250.
Guide Motor Lamp Manufacturing Company, The. (See Persons, William F., assignor.)
Guillano, Joseph, New Haven, Conn. Amusement apparatus. No. 1,222,622; Apr. 17; v. 237; p. 641.
Gulf Refining Company. (See Brooks and Essex, assignors.)
Gunaer, George S., Coronado, Cal. Automatic signaling device. No. 1,223,965; Apr. 24; v. 237; p. 1138.
Gundorph, Ferdinand, Portland, Oreg. Equalizer for mainspring-drives. No. 1,221,986; Apr. 10; v. 237; p. 376.
Gundorph, Ferdinand, Portland, Oreg. Pendulum-escapement. No. 1,222,757; Apr. 17; v. 237; p. 688.
Gunn, Jr., Christon, Walnut Springs, Tex. Cotton-chopper. No. 1,223,868; Apr. 24; v. 237; p. 1106.
Gurley, James C., Norfolk, Va. Auxiliary seat for automobiles. No. 1,223,272; Apr. 17; v. 237; p. 862.
Guth, Anna, New York, N. Y. Pillow-sham holder. No. 1,223,580; Apr. 24; v. 237; p. 1003.
Guthner, Albert L., Littleton, Colo. Train-stopping apparatus. No. 1,222,944; Apr. 17; v. 237; p. 751.
Gutt, Johann W. T., New Brunswick, N. J., assignor of one-half to G. R. Henke, New York, N. Y. Change-speed device. No. 1,223,966; Apr. 24; v. 237; p. 1139.
Gwinn, George W., New York, N. Y., assignor to Automatic Packing & Labeling Company, Durham, N. C. Machine for packaging materials. No. 1,221,313; Apr. 3; v. 237; p. 110.
H. & D. Company, The. (See Hawn, Andrew P., assignor.)
H. Koppers Company. (See Sperr and Montgomery, assignors.)
H. Malmin Company. (See Arendt, Morton, assignor.)
H. J. Smith Tractor Company. (See Smith, Henry J., assignor.)
H. W. Johns-Manville Company. (See Christenson, George, assignor.)
H. W. Johns-Manville Company. (See Rowell, Frank F., assignor.)
Haack, John H., and E. Mletoff, Los Angeles, Cal. Can opener and holder. No. 1,221,724; Apr. 3; v. 237; p. 250.
Haberkorn, Louis J., Chatsworth, Ill. Puzzle game. No. 1,223,164; Apr. 17; v. 237; p. 828.
Hacklarth, Oscar J., Elmhurst, Ill. Vehicle-wheel. No. 1,223,785; Apr. 24; v. 237; p. 1077.
Hackerson, Thomas, Newark, Ill. Fuel-box. No. 1,223,273; Apr. 17; v. 237; p. 862.
Hackett, Charles H. (See Burtch, Lewis D., assignor.)
Hadlock, Walter I., Portland, Oreg. Figure toy. No. 1,221,314; Apr. 3; v. 237; p. 110.
Hagadone, Clinton A., Western Springs, Ill., assignor to International Harvester Company of New Jersey. Journal-bearing. No. 1,221,315; Apr. 3; v. 237; p. 111.
Hagadone, Clinton A., Western Springs, Ill., assignor to International Harvester Company of New Jersey. Corn harvester and husker. No. 1,221,316; Apr. 3; v. 237; p. 111.
Hagstrom, Anna E. (See Hagstrom, Carl J., assignor.)
Hagstrom, Carl J., assignor to A. E. Hagstrom, Glen Cove, N. Y. Antirattler door-lock. No. 1,222,396; Apr. 10; v. 237; p. 520.
Haigh, Harry J., New York, N. Y. Multiple pan. No. 1,221,725; Apr. 3; v. 237; p. 250.
Haines, William D., Haddonfield, N. J. Seed and fertilizer distributer. No. 1,223,967; Apr. 24; v. 237; p. 1139.
Hakes, Hudson W., Millbury, Mass. Self-threading shuttle. No. 1,221,048; Apr. 3; v. 237; p. 15.
Hall, Chester L., Fort Wayne, Ind., assignor to Chicago Electric Meter Company, Chicago, Ill. System for recording meter operations. No. 1,221,443; Apr. 3; v. 237; p. 155.
Hall, Chester L., assignor to Chicago Electric Meter Company, Chicago, Ill. Printing mechanism for meters. No. 1,223,384; Apr. 24; v. 237; p. 933.
Hall, Edward J. (See Comings and Hall.)
Hall, George C., and A. Bradshaw, Calgary, Alberta, Canada. Valve for pipes for the conduction of liquid and gaseous fluids. No. 1,222,758; Apr. 17; v. 237; p. 689.
Hall, Rupert E., Houston, Tex. Dental occluding-frame. No. 1,222,203; Apr. 10; v. 237; p. 452.
Hall, Stephen C. W., *et al.* (See Hand, Levi, assignor.)
Haller, John H., Bucklin, Kans. Lath-holder. No. 1,221,317; Apr. 3; v. 237; p. 112.
Hallock, Roscoe S., Niles, Ohio. Apparatus for injecting saline and other solutions. No. 1,223,274; Apr. 17; v. 237; p. 862.
Halsey, Francis A., assignor of one-fourth to C. Hamilton, Philadelphia, Pa. Composition of matter for use as a rubber substitute. No. 1,223,692; Apr. 24; v. 237; p. 1045.
Talvorson, Mathias, Hubbard, Oreg. Lock. No. 1,221,534; Apr. 3; v. 237; p. 187.
Hamann, Christel, Friedenau, near Berlin, assignor to The Ch. Hamann Mathematische Mechanisches, Institut G. m. b. H. Berlin, Germany. Calculating-machine. No. 1,221,318; Apr. 3; v. 237; p. 112.
Hamblen, David, Jr., Newton, Mass. Wind instrument. No. 1,222,285; Apr. 10; v. 237; p. 481.
Hambuechen, Carl, Belleville, assignor to American Carbon & Battery Co., East St. Louis, Ill. Hand-lamp. No. 1,223,869; Apr. 24; v. 237; p. 1106.
Hamel, Louis C., Appleton, Wis. Concrete-mixer. No. 1,223,385; Apr. 24; v. 237; p. 934.
Hamerstadt, William D., Indianapolis, Ind. Paper pulley. No. 1,223,165; Apr. 17; v. 237; p. 828.
Hamill, William W., Glasgow, Scotland. Liquid-meter. No. 1,221,726; Apr. 3; v. 237; p. 251.
Hamilton, Ashton, Brockton, Mass. Flexible molding. No. 1,221,444; Apr. 3; v. 237; p. 156.
Hamilton, Charles. (See Halsey, Francis A., assignor.)
Hamilton, Edward E., Northboro, Mass. Ribbon-holder. No. 1,221,172; Apr. 3; v. 237; p. 60.
Hamilton, Jay B. (See Neill and Hamilton.)
Hamilton, John R., Yonkers, assignor to Sypho-Chemical Sprinkler Corporation, Croton-on-Hudson, N. Y. Automatically-locking shut-off valve. No. 1,222,397; Apr. 10; v. 237; p. 520.

Hamilton, William E., Columbus, Ohio. Coal-handling machine. No. 1,222,286; Apr. 10; v. 237; p. 481.
Hamilton, William F., Ventura, Cal. Belt-tractor. No. 1,222,546; Apr. 10; v. 237; p. 573.
Hammerstein, Oscar, New York, N. Y. Medical apparatus. No. 1,222,945; Apr. 17; v. 237; p. 752.
Hammett, John F. (See Robinson, Joseph A., assignor.)
Hammond, William P., Passaic, N. J. Spare-tire holder. No. 1,223,786; Apr. 24; v. 237; p. 1077.
Hammond, William S., Jr., Chicago, Ill., assignor to Consolidated Car-Heating Company, Albany, N. Y. Electric car heater. No. 1,223,968; Apr. 24; v. 237; p. 1139.
Hancock, Horace G., assignor to The North & Judd Manufacturing Company, New Britain, Conn. Bow-rest. No. 1,223,275; Apr. 17; v. 237; p. 862.
Hancock, James E., Cedaredge, Colo. Beet-lifting machine. No. 1,222,098; Apr. 10; v. 237; p. 414.
Hancock, James E., Cedaredge, Colo. Beet-topping machine. No. 1,222,099; Apr. 10; v. 237; p. 415.
Hand, Frederick E. (See Berryhill, Hand, and Thomas.)
Hand, Levi, Minneapolis, Minn., assignor of one-half to S. C. W. Hall, Sioux Falls, S. D., and one-half to A. N. Munson, Minneapolis, Minn. Check-marker. No. 1,221,049; Apr. 3; v. 237; p. 16.
Handelan, Daniel, Minneapolis, Minn. Automatic baseball apparatus. No. 1,223,386; Apr. 24; v. 237; p. 934.
Haney, Burton E., Medford, Oreg. Lawn-hose holder. No. 1,223,276; Apr. 17; v. 237; p. 863.
Hanna, Charles G., assignor of one-half to A. Slocum, Syracuse, N. Y. Power gear-shifting mechanism. No. 1,221,319; Apr. 3; v. 237; p. 112.
Hansen, Hans C., deceased, Newton, Mass.: H. A. Hansen, executor. Surface-trimming machine. No. 1,223,324; Apr. 17; v. 237; p. 879.
Hansen, H. Alfred, executor. (See Hansen, Hans C.)
Hansen, Marius H., Chicago, Ill. Weighing-scale. No. 1,223,787; Apr. 24; v. 237; p. 1078.
Hansen, Martin, Salt Lake City, Utah. Tractor. No. 1,221,320; Apr. 3; v. 237; p. 113.
Hansen, Neils C., assignor to William A. Berkey Furniture Company, Grand Rapids, Mich. Clamp. No. 1,222,204; Apr. 10; v. 237; p. 452.
Hansen, William M., Lewisville, Idaho. Wrench. No. 1,223,277; Apr. 17; v. 237; p. 863.
Hanson, Henry E., Bowdon, N. D. Well-screen. No. 1,223,969; Apr. 24; v. 237; p. 1140.
Hanson, Hugo H., Boston, Mass., assignor to Berlin Mills Company, Berlin, N. H. Cloth for filter-presses. No. 1,222,100; Apr. 10; v. 237; p. 415.
Hardinge Brothers. (See Hardinge, Franklin, assignor.)
Hardinge, Franklin, assignor to Hardinge Brothers, Chicago, Ill. Watchman's clock. No. 1,223,581; Apr. 24; v. 237; p. 1004.
Hardnett, Merrellon F., Atlanta, Ga. Bicycle-frame. No. 1,222,398; Apr. 10; v. 237; p. 521.
Hare, John R., New Windsor, Md. Graphophone-tone-arm stop. No. 1,223,970; Apr. 24; v. 237; p. 1140.
Harford, George, Kansas City, Mo. Cooking utensil. No. 1,221,853; Apr. 10; v. 237; p. 328.
Harned, Charles T., Palmyra, N. J. Signaling device for vehicles. No. 1,222,862; Apr. 17; v. 237; p. 724.
Harnish, Isaiah, *et al.* (See Gage, Joseph J., assignor.)
Harp, William L., assignor of one-half to C. P. Waugh, Galax, Va. Tire-chain tightener. No. 1,221,173; Apr. 3; v. 237; p. 61.
Harper, Osie S. (See Miller, John M., assignor.)
Harris, Benjamin. (See Gray and Harris.)
Harris, Fillow D., Griffin, Ga. Heel-trimming machine. No. 1,222,623; Apr. 17; v. 237; p. 641.
Harris, Glenna E., Springfield, Ohio. Window-tent. No. 1,221,727; Apr. 3; v. 237; p. 251.
Harris, John F., assignor to Cement Products Company, Wilmington, N. C. Concrete tank. No. 1,221,728; Apr. 3; v. 237; p. 252.
Harris, Joseph, Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Draft-rigging for railway-cars. No. 1,223,870; Apr. 24; v. 237; p. 1107.
Harris, Julia L., Englewood, Tenn. Hinge. No. 1,221,987; Apr. 10; v. 237; p. 376.
Harrison, Mathew J., Whigham, Ga. Vine-cutter. No. 1,222,946; Apr. 17; v. 237; p. 752.
Harrison, Noble C. (See Harrison, William M., assignor.)
Harrison, William M., New Rochelle, N. Y., assignor to N. C. Harrison, Trenton, N. J. Concrete-waterproofing powder. No. 1,221,445; Apr. 3; v. 237; p. 156.
Harriss, James B., Newark, N. J., assignor to P. Lorillard Company, New York, N. Y. Wrapped box. No. 1,222,287; Apr. 10; v. 237; p. 481.
Harrow, Alfred T. (See Nelson, Victor E., assignor.)
Hart, Frederick A., Newark, N. J., assignor to Underwood Computing Machine Company, New York, N. Y. Typewriting machine. (Reissue.) No. 14,283; Apr. 10; v. 237; p. 589.
Hart, Frederick A., Jersey City, N. J., assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,223,166; Apr. 17; v. 237; p. 829.
Hart, Frederick A., Jersey City, N. J., assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,223,871; Apr. 24; v. 237; p. 1107.
Hart, George H., West Hartford, Conn. Electric switch. No. 1,222,947; Apr. 17; v. 237; p. 752.
Hart & Hegeman Manufacturing Company, The. (See Morris and Guett, assignors.)
Hart, Joseph L., Chickasha, Okla. Engine. No. 1,222,863; Apr. 17; v. 237; p. 724.
Hartford-Fairmont Company. (See Peller, Karl E., assignor.)
Hartley, George W., and A. W. Seeley, Saginaw, Mich. Egg-carrier. No. 1,223,872; Apr. 24; v. 237; p. 1107.
Hartmann & Braun, A. G. (See Schäfer, Bela, assignor.)
Hartt, Cicero W., Pierson, Mich. Garbage-receptacle and trap. No. 1,223,873; Apr. 24; v. 237; p. 1107.
Harvey, Albert L., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Circuit-interrupting system. No. 1,221,050; Apr. 3; v. 237; p. 16.
Harvey, Russell W., Lynchburg, Va. Distilled-water bottle and storage-battery filler. No. 1,223,971; Apr. 24; v. 237; p. 1140.
Hase, Takebe, San Francisco, Cal. Projectile. No. 1,222,288; Apr. 10; v. 237; p. 481.
Hasselmeyer, John P., New York, N. Y. Window. No. 1,222,864; Apr. 17; v. 237; p. 725.
Hastings, Herbert. (See Stump, Ira E., assignor.)
Hatch, Arthur G., Duluth, Minn. Reversing-valve. No. 1,222,624; Apr. 17; v. 237; p. 642.
Hatfield, Guy M., Fort Smith, Ark. Potato-harvester. No. 1,221,729; Apr. 3; v. 237; p. 252.
Hatfield, Mattie R., Wichita, Kans. Egg-inspecting machine. No. 1,221,730; Apr. 3; v. 237; p. 252.
Hathaway, Charles B., and C. B. Elliott, Hempstead, Tex. Means for raising journal-boxes. No. 1,223,046; Apr. 17; v. 237; p. 787.
Hauf, George F. (See Robertson and Hauf.)
Haughton, Nathaniel V., Alameda, assignor of one-half to M. T. Gardiner, San Francisco, Cal. Faucet. No. 1,222,865; Apr. 17; v. 237; p. 725.
Hauschild, Adelbert, Akron, Ohio. Combined cushioning and fastening device for tires. No. 1,223,788; Apr. 24; v. 237; p. 1078.
Haven, Allison A., assignor of fifty one-hundredths to T. F. Yore, Chicago, Ill. Combined tobacco, match, and paper receptacle. No. 1,223,693; Apr. 24; v. 237; p. 1046.
Hawk, Emery A. (See Hawk, Geary E. and E. A.)
Hawk, Geary E. and E. A., Camden, N. J. Washing-machine. No. 1,221,174; Apr. 3; v. 236; p. 61.
Hawkins, Charles H., Freeport, assignor to The Standard Oil Company of New York, New York, N. Y. Filling device. No. 1,222,759; Apr. 17; v. 237; p. 689.
Hawkins, Edgar M., and C. R. Seymour, assignors to M. D. Knowlton Company, Rochester, N. Y. Strip feeding and severing mechanism. No. 1,224,107; Apr. 24; v. 237; p. 1186.
Hawkins, Elwood, Atlantic City, N. J. Operating mechanism for steam-shovels. No. 1,222,205; Apr. 10; v. 237; p. 452.
Hawley, Elmer A., assignor of one-half to C. T. Smith, Des Moines, Iowa. Pneumatic scaling-tool. No. 1,224,089; Apr. 24; v. 237; p. 1179.
Hawley, Frank M. (See Nedoma, Charles L., assignor.)
Hawn, Andrew P., assignor to The H. & D. Company, Goodland, Ind. Automatic spark-adjusting attachment. No. 1,222,399; Apr. 10; v. 237; p. 521.
Hawthorne, Ellsworth A., Bridgeport, Conn. Marking implement. No. 1,222,948; Apr. 17; v. 237; p. 753.
Hawthorne, Ellsworth A., Bridgeport, Conn. Battery-receptacle. No. 1,223,167; Apr. 17; v. 237; p. 829.
Hayn, Peter, Brooklyn, N. Y. Cigarette-making machine. No. 1,223,874; Apr. 24; v. 237; p. 1108.
Hay, Walter, Seville, Ohio. Sprocket-wheel. No. 1,222,625; Apr. 17; v. 237; p. 642.
Hayes, Jesse C., Rochelle, Ill. Lubricator. No. 1,222,949; Apr. 17; v. 237; p. 753.
Hayes, Robert D., assignor to Index Visible, Incorporated, New Haven, Conn. Index or file. No. 1,223,168; Apr. 17; v. 237; p. 830.
Hayne, Edward G., Ottawa, Ill. Lid-lifting device. No. 1,223,387; Apr. 24; v. 237; p. 934.
Hays, Louis, assignor to The Kaynee Company, Cleveland, Ohio. Combination-garment. No. 1,221,051; Apr. 3; v. 237; p. 16.
Hayton, Charles B., Ceres, Va. Rail-joint. No. 1,221,731; Apr. 3; v. 237; p. 253.
Hayward, Henry E., Indianapolis, Ind., assignor to Link-Belt Company, Chicago, Ill. Drive-chain. No. 1,223,972; Apr. 24; v. 237; p. 1141.
Heald Machine Company. (See Drake, Alden M., assignor.)
Heatherbell, George A., Deep Bay, Port Cygnet, Tasmania, Australia. Automatic trap-nest. No. 1,221,175. Apr. 3; v. 237; p. 61.
Hecht, Herbert A., Paterson, N. J. Physician's mask. No. 1,221,446; Apr. 3; v. 237; p. 156.
Hedgcock, William C., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Draft-yoke. No. 1,223,489; Apr. 24; v. 237; p. 971.
Hedgcock, William C., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Brake. No. 1,223,582; Apr. 24; v. 237; p. 1004.
Hedgcock, William C., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Clasp-brake. No. 1,223,973; Apr. 24; v. 237; p. 1141.
Heeley, George, assignor to Cie pour la Fabrication des Compteurs et Materiel d'Usines a Gaz, Paris, France. Mechanism of dry meters and like apparatus. No. 1,223,875; Apr. 24; v. 237; p. 1108.

Heeren, Charles G., Long Island City, N. Y. Shoe. No. 1,223,694; Apr. 24; v. 237; p. 1046.

Heesh, Frank, Lake Como, Pa. Match-box. No. 1,221,732; Apr. 3; v. 237; p. 253.

Heftler, Victor R., Detroit, Mich., assignor to Société anonyme du Carburateur Zenith, Lyon, France. Carbureter. No. 1,222,400; Apr. 10; v. 237; p. 522.

Heidl, Karl A., Columbus, Ohio. Lawn-trimmer. No. 1,222,950; Apr. 17; v. 237; p. 754.

Helm, Lewis R., assignor to The Ball and Roller Bearing Company, Danbury, Conn. Ball-cage for bearings. No. 1,222,760; Apr. 17; v. 237; p. 690.

Helmann, Morris A., St. Louis, Mo. Motor and support for display-forms and the like. No. 1,223,876; Apr. 24; v. 237; p. 1109.

Helsey & Co., A. H. (See Sanford, Andrew J., assignor.)

Heltz, Louis R. and L. T., Muscatine, Iowa. Device for emptying liquid-containers. No. 1,223,047; Apr. 17; v. 237; p. 787.

Heltz, Louis T. (See Heltz, Louis R. and L. T.)

Helden, Alfred H., Kansas City, Mo. Combined protractor and bevel. No. 1,223,974; Apr. 24; v. 237; p. 1141.

Helfenstein, Alois, Vienna, Austria, assignor to Union Carbide Company. Multiple-hearth electric furnace. No. 1,223,278; Apr. 17; v. 237; p. 863.

Helmond, William F., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,223,279; Apr. 17; v. 237; p. 864.

Helwig, Oscar F., assignor to Standard Die & Specialty Company, Chicago, Ill. Cream-cup. No. 1,222,206; Apr. 10; v. 237; p. 453.

ttemenway, John F. (See Wright, Rea P., assignor.)

Henderson, Clark T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,222,207; Apr. 10; v. 237; p. 453.

Henderson, Mabel A. C., Chicago, Ill. Hair-waver. No. 1,221,447; Apr. 3; v. 237; p. 157.

Henderson Wagon Works. (See Cove, Benjamin W., assignor.)

Henderson, Watt A., Birmingham, Mich. Test-plug. No. 1,221,733; Apr. 3; v. 237; p. 253.

Hendler, Lionel M., Baltimore, Md. Means for blowing ice-cream from molds. No. 1,221,321; Apr. 3; v. 237; p. 113.

Hendricks, Clark. (See Prewitt and Hendricks.)

Henke, Gustave R. (See Gutt, Johann W. T., assignor.)

Hennessey, John J., Milwaukee, Wis. Adjustable side bearing. No. 1,222,951; Apr. 17; v. 237; p. 754.

Hennig, Gustav K., assignor to Ludwig Hupfeld Aktiengesellschaft, Böhlitz-Ehrenberg, near Leipzig, Germany. Pneumatically-played musical instrument. No. 1,223,048; Apr. 17; v. 237; p. 788.

Henry, George J., Jr., San Francisco, Cal. Valve mechanism for gate-valves. No. 1,221,052; Apr. 3; v. 237; p. 17.

Henry, William L., Louisville, Ky. Manifold receipt, waybill, and delivery record book for express companies. No. 1,221,988; Apr. 10; v. 237; p. 377.

Henschel, Charles J., Bloomfield, N. J. Remote-control system. No. 1,223,169; Apr. 17; v. 237; p. 830.

Hentzell, Alfred A., Littleton, Colo. Machine for forming shanks and collars on drill-steels. No. 1,223,975; Apr. 24; v. 237; p. 1141.

Herrmann, E. F. (See Hood, Harry H., assignor.)

Herrmann, Frederick W. A., and A. E. Robinson, assignors to The American Tool Works Company, Cincinnati, Ohio. Operating mechanism for shapers. No. 1,223,339; Apr. 17; v. 237; p. 885.

Herrold, Charles D., San Jose, Cal. Oscillator. No. 1,222,761; Apr. 17; v. 237; p. 690.

Herz, Alfred, assignor of one-half to E. O. Schweitzer, Chicago, Ill. Fuse device. No. 1,222,952; Apr. 17; v. 237; p. 754.

Herzog, Joseph J., and W. M. Medlock, assignors of one-third to L. G. Adams, Mobile, Ala. Automatic spark-timer for internal-combustion engines. No. 1,221,176; Apr. 3; v. 237; p. 61.

Hess-Bright Manufacturing Company, The. (See Bright, Fred E., assignor.)

Hess, Edward B., Brooklyn, assignor to Royal Typewriter Company, Inc., New York, N. Y. Gage for setting paper in type-writers. No. 1,221,854; Apr. 10; v. 237; p. 328.

Hess, Henry, Philadelphia, Pa. Apparatus for producing audible moving pictures. No. 1,222,626; Apr. 17; v. 237; p. 642.

Hess, Herbert, Huntington, N. Y. Stabilizer for vehicles. No. 1,222,401; Apr. 10; v. 237; p. 522.

Hess, Simon B., New York, N. Y. Electric lock. No. 1,221,322; Apr. 3; v. 237; p. 114.

Hess, Simon B., New York, N. Y. Burglar-alarm system. No. 1,223,789; Apr. 24; v. 237; p. 1079.

Heuvelink, Carel O. (See Van der Valk and Van Eck, assignors.)

Hewitt, Bert, San Rafael, Cal. Valve tester and grinder. No. 1,222,289; Apr. 10; v. 237; p. 482.

Heyman, David, *et al.* (See Arden, Thomas R., assignor.)

Heys, John J., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-pressing machine. No. 1,222,866; Apr. 17; v. 237; p. 726.

Hicks, Levi, Holland, Mich., assignor to Invincible Grain Cleaner Company, Silver Creek, N. Y. Grain-scouring appliance. No. 1,221,855; Apr. 10; v. 237; p. 329.

Hicks, Ollie J., Centerburg, Ohio. Automobile-tire. No. 1,223,049; Apr. 17; v. 237; p. 788.

Hickson, Edwin J., Butler, Pa. Bed. No. 1,221,856; Apr. 10; v. 237; p. 329.

Higgin, Henry. (See Traut and Higgin.)

Higgin Manufacturing Company. (See Traut and Higgin, assignors.)

Higinbotham, Arthur O., assignor to Charles H. Foster and Company, Worcester, Mass. Steering-gear for vehicles. No. 1,222,290; Apr. 10; v. 237; p. 482.

Hildebrand, John. (See Bartel and Hildebrand.)

Hildeton, Olof N., Stockholm, Wis. Figure toy. No. 1,223,280; Apr. 17; v. 237; p. 864.

Hildt, August, Jersey City, N. J., assignor to New Jersey Quilting Co. Quilting-machine. No. 1,221,857; Apr. 10; v. 237; p. 330.

Hilfrank, John W., assignor of one-third to L. Hotaling, White Plains, N. Y. Expansion-fastening for casters. No. 1,223,877; Apr. 24; v. 237; p. 1109.

Hill, Edward A., Norwalk, Ohio. Heating attachment for feed-water injectors. No. 1,221,989; Apr. 10; v. 237; p. 377.

Hill, Enoch, Dallas, S. D. Extractor for pulling headless nails, spikes, and the like. No. 1,221,323; Apr. 3; v. 237; p. 114.

Hill, Ralph N., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Selectively-operated system. No. 1,221,177; Apr. 3; v. 237; p. 62.

Hill, Thomas A., *et al.* (See Armstrong, John J., Sr., assignor.)

Hiller, Edward G., Manchester, England. Feed-water-circulating arrangement for economizers. No. 1,223,976; Apr. 24; v. 237; p. 1142.

Himes, John H., Milwaukee, Wis. Valve. No. 1,221,178; Apr. 3; v. 237; p. 62.

Hinchley, John W., London, England. Apparatus for expressing liquid from materials. No. 1,222,209; Apr. 10; v. 237; p. 454.

Hinchley, John W., London, England. Expressing liquid from peat. No. 1,222,210; Apr. 10; v. 237; p. 454.

Hinman, Charles W. and W. H., Winchester, Mass. Gasmeter. No. 1,221,179; Apr. 3; v. 237; p. 63.

Hinman, Walter H. (See Hinman, Charles W. and W. H.)

Hinz, Julius C., Detroit, Mich. Burner. No. 1,221,448; Apr. 3; v. 237; p. 157.

Hipolito, David E., deceased, Los Angeles, Cal.; H. C. Hipolito, administratrix, assignor to herself individually. Adjustable screen-hanger. No. 1,223,281; Apr. 17; v. 237; p. 865.

Hipolito, Hazel C., administratrix. (See Hipolito, David E.)

Hirst, Harry R., assignor of one-half to W. F. Lemon & Bro., Trenton, N. J. Device for inserting plugs in tires. No. 1,223,878; Apr. 24; v. 237; p. 1110.

Hirt, Leon E., Charleston, W. Va. Method and apparatus for fractionating hydrocarbons. No. 1,222,402; Apr. 10; v. 237; p. 522.

Histand, Edward E., Doylestown, Pa. Snow-guard. No. 1,222,953; Apr. 17; v. 237; p. 755.

Hitchcock, Charles D., Chicago, Ill. Receptacle for cultivating and preserving flowers. No. 1,221,449; Apr. 3; v. 237; p. 157.

Hitchcock, Halbert K., Tarentum, Pa. Making clay pots or crucibles. No. 1,221,450; Apr. 3; v. 237; p. 158.

Hitchcock, Halbert K., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Alarm-glass. No. 1,223,583; Apr. 24; v. 237; p. 1004.

Hochberg, Anthony, Wilkes-Barre, Pa. Drain-pipe reamer. No. 1,221,734; Apr. 3; v. 237; p. 254.

Hochschwender, Karl. (See Schmidt, Hochschwender, and Eichler.)

Hodde, William C. (See Rial and Hodde.)

Hodgson, Raymond, New York, N. Y. Flushing-tank valve. No. 1,223,170; Apr. 17; v. 237; p. 830.

Hodschar, Frederick, Brooklyn, N. Y. Wet-cleaning attachment for carpet-sweepers. No. 1,221,324; Apr. 3; v. 237; p. 114.

Hoffknecht, Frank, Merced, Cal. Tread for tractors. No. 1,223,050; Apr. 17; v. 237; p. 789.

Hoffman, Addison F., and W. M. Parkin, Pittsburgh, Pa. Pickling metal articles. No. 1,221,735; Apr. 3; v. 237; p. 254.

Hoffman, Frederick H., assignor to Williams, Brown & Earle, Philadelphia, Pa. Controller device for electric lighting and heating purposes. No. 1,221,451; Apr. 3; v. 237; p. 158.

Hoffman, George B., Raven Rock, N. J. Railway construction. No. 1,223,695; Apr. 24; v. 237; p. 1046.

Hoffmann, Michael, assignor of one-half to W. J. Dalton and one-sixth to F. R. Klueczny, Ivanhoe, Minn. Electric switch. No. 1,221,325; Apr. 3; v. 237; p. 114.

Hogan, James J., J. F. Judd, and L. M. Waite, assignors to Fitchburg Machine Works, Fitchburg, Mass. Threading mechanism for automatic lathes. No. 1,222,554; Apr. 17; v. 237; p. 755.

Hogan, John. (See Williams, French, assignor.)

Hogg, Archibald, Walker, Newcastle-upon-Tyne, England. Vessel-bulkhead. No. 1,222,867; Apr. 17; v. 237; p. 726.

Hold Fast Caster Cup Company, The. (See Schauermann, Edward, assignor.)

Holden, Hiram C., Pittsburgh, Pa., assignor to Washburn Crosby Company, Minneapolis, Minn. Obtaining starch. No. 1,221,990; Apr. 10; v. 237; p. 377.

Holden, William P. (See Zigler and Holden.)

Holland Automatic Lock Co. (See Holland, Luther W., assignor.)

Holland, John W., Kelso, Tenn. Detachable vehicle-body. No. 1,222,868; Apr. 17; v. 237; p. 727.

Holland, Luther W., assignor to Holland Automatic Lock Co., Pleasant Hill, Mo. Latch. No. 1,221,180; Apr. 3; v. 237; p. 63.

Holland, Robert B., North Yakima, Wash. Portable nail-distributer. No. 1,221,736; Apr. 3; v. 237; p. 254.

Hollands, Walter, London, England. Apparatus for producing toric lenses. No. 1,221,858; Apr. 10; v. 237; p. 330.

Hollingsworth, James M. (See Brice, Fillmore W., assignor.)

Hollis, Otis A., assignor to Hollis Sterilizing Equipment Company, Pittsburgh, Pa. Sterilizing-cabinet. No. 1,223,490; Apr. 24; v. 237; p. 971.

Hollis Sterilizing Equipment Company. (See Hollis, Otis A., assignor.)

Holmberg, Theodore A., Cleveland, Ohio. Gas-burner. No. 1,221,535; Apr. 3; v. 237; p. 187.

Holmes, Chris W., assignor of one-half to J. A. Larson, Staples, Minn. Egg-tester. No. 1,222,403; Apr. 10; v. 237; p. 523.

Holmes, Pehr G. (See Burklund, John O., assignor.)

Holmes, Major E., Lakewood, assignor to National Carbon Company, Cleveland, Ohio. Making battery-depolarizers. No. 1,221,991; Apr. 10; v. 237; p. 378.

Holmgren, Per F., Brooklyn, N. Y. Tool-holder. No. 1,222,102; Apr. 10; v. 237; p. 415.

Holt, Benjamin, assignor to The Holt Manufacturing Company, Stockton, Cal. Combined harvester. No. 1,224,114; Apr. 24; v. 237; p. 1188.

Holt Manufacturing Company, The. (See Holt, Benjamin, assignor.)

Holzapfel, Gustav A., Leipzig, Germany. Making the meat of sea mammals fit for food. No. 1,223,790; Apr. 24; v. 237; p. 1079.

Holtzer-Cabot Electric Company. (See Kennedy, Carlton L., assignor.)

Holtzman, John, assignor of one-half to B. Roman, New York, N. Y. Sash-lock. No. 1,221,799; Apr. 3; v. 237; p. 276.

Holveck, Joseph E., Pittsburgh, assignor to The Aldrich Pump Company, Allentown, Pa. Crank-shaft. No. 1,222,071; Apr. 17; v. 237; p. 796.

Homer, Frank P. (See Lewellen and Homer.)

Honold, Gottlob, assignor to Firm of R. Bosch, Stuttgart, Germany. Apparatus for adjusting the period of electrical ignition. No. 1,221,326; Apr. 3; v. 237; p. 115.

Honold, Gottlob, assignor to Firm of R. Bosch, Stuttgart, Germany. Electrical regulating device. No. 1,221,327; Apr. 3; v. 237; p. 115.

Honold, Gottlob, assignor to Firm of R. Bosch, Stuttgart, Germany. Signal-horn. No. 1,221,859; Apr. 10; v. 237; p. 330.

Honolulu Iron Works Company. (See Leonard, Albert P., assignor.)

Hood, Harry H., Chicago, Ill., assignor to E. F. Herrmann, Can-seaming machine. No. 1,222,955; Apr. 17; v. 237; p. 755.

Hooper, Richard G., Delaware, Ohio. Game-table. No. 1,221,181; Apr. 3; v. 237; p. 63.

Hoover, George W. (See Mergen and Hoover.)

Hoover, Thomas A., Fresno, Cal. Automobile-bumper. No. 1,221,800; Apr. 3; v. 237; p. 277.

Hopkins, Arthur C., assignor of one-half to T. R. Bement, Sioux Falls, S. D. Attachment for internal-combustion engines. No. 1,221,536; Apr. 3; v. 237; p. 188.

Hopkins, Charles E., New York, N. Y. Stereotype-casting box. No. 1,221,537; Apr. 3; v. 237; p. 188.

Hopkinson, Joseph, assignor to The Computing Scale Company, Dayton, Ohio. Last-slice holder. No. 1,223,879; Apr. 24; v. 237; p. 1110.

Hopson, William R., Bridgeport, Conn. Resilient vehicle-wheel. No. 1,221,053; Apr. 3; v. 237; p. 17.

Horton Company, The. (See Scott, George W., assignor.)

Horton, William H., Ferndale, N. Y. Spike. No. 1,223,051; Apr. 17; v. 237; p. 789.

Hotaling, Leland. (See Hilfrank, John W., assignor.)

Hotchkiss, William R., St. Paul, Minn. Removable book-cover. No. 1,221,737; Apr. 3; v. 237; p. 254.

Hotz, Henry P., *et al.* (See Good and Tandy, assignors.)

Hough, Samuel, Atco, assignor of one-third to J. Layer, Berlin, and one-third to C. J. Glaser, Camden, N. J. Ball-bearing handle for milk-cans and similar containers. No. 1,223,880; Apr. 24; v. 237; p. 1110.

Houghton, Guildford G., New York, N. Y. Corner-shelf for display-windows. No. 1,222,762; Apr. 17; v. 237; p. 690.

House, George R., Kansas City, Mo. Hernial truss. No. 1,222,763; Apr. 17; v. 237; p. 690.

Howard, Otis W., assignor to Deere and Company, Moline, Ill. Sulky-plow. No. 1,221,992; Apr. 10; v. 237; p. 378.

Howd, Charles B., Chicago, Ill. Lacing-fly for corsets. No. 1,222,103; Apr. 10; v. 237; p. 416.

Howden, Fred W., Kansas City, Mo. Drip-pan controller. No. 1,222,764; Apr. 17; v. 237; p. 690.

Hoyt, Francis R., assignor to The Simms Magneto Company, East Orange, N. J. Magneto. No. 1,222,869; Apr. 17; v. 237; p. 727.

Hubbard, Henry L., Cleveland, Ohio. Wire wheel construction. No. 1,223,977; Apr. 24; v. 237; p. 1142.

Hubbard, Moses G., Summit, N. J., assignor to Monarch Ventilator Company, New York, N. Y. Ventilator-unit. No. 1,223,978; Apr. 24; v. 237; p. 1142.

Hudepohl, Henry E., Mount Healthy, Ohio. Air heater and drier. No. 1,221,328; Apr. 3; v. 237; p. 115.

Hudson, Albert E., Toronto, assignor of one-third to H. B. Spencer and one-third to R. Hudson, Ottawa, Ontario, Canada. Spark-arrester. No. 1,223,388; Apr. 24; v. 237; p. 935.

Hudson, Edward A., Artesia, N. Mex. Combined label, seal, and cork-puller. No. 1,222,765; Apr. 17; v. 237; p. 691.

Hudson Motor Car Company. (See Fekete, Stephen I., assignor.)

Hudson, Robert, *et al.* (See Hudson, Albert E., assignor.)

Huebner-Bleisteln Patents Co. (See Huebner, William C., assignor.)

Huebner, William C., assignor to Huebner-Bleistein Patents Co., Buffalo, N. Y. Light-controlling mechanism for photographic apparatus. No. 1,222,766; Apr. 17; v. 237; p. 691.

Huebsch, Joseph, Milwaukee, Wis. Heated hosiery-form. No. 1,223,585; Apr. 24; v. 237; p. 1005.

Huebsch, Joseph, and R. Roost, assignors to Huebsch Manufacturing Company, Milwaukee, Wis. Automatic valve for washing-machines. No. 1,223,584; Apr. 24; v. 237; p. 1004.

Huebsch Manufacturing Company. (See Huebsch and Roost, assignors.)

Huff, Russell, assignor to Packard Motor Car Company, Detroit, Mich. Carbureter. No. 1,221,329; Apr. 3; v. 237; p. 116.

Hughes, George G., and J. F. McDuffie, Bessemer, Ala. Mining system. No. 1,221,860; Apr. 10; v. 237; p. 331.

Hughes, Wallace E., Philadelphia, Pa. Making tubes. No. 1,223,282; Apr. 17; v. 237; p. 865.

Hulit, John A., assignor to Automatic Electric Company, Chicago, Ill. Selective signaling system. No. 1,221,801; Apr. 3; v. 237; p. 277.

Hull, John C., Gasport, N. Y. Spray-gun. No. 1,221,861; Apr. 10; v. 237; p. 331.

Hulse, John. (See Webster, William A., assignor.)

Hultquist, Charles A., Los Angeles, Cal. Drilling-machine. No. 1,221,862; Apr. 10; v. 237; p. 331.

Hume, James H., assignor to James Howden & Company, Limited, Glasgow, Scotland. Furnace-front. No. 1,222,101; Apr. 10; v. 237; p. 415.

Humphrey, Alfred H., New York, N. Y., assignor to General Gas Light Company, Kalamazoo, Mich. Gas-lamp. No. 1,222,627; Apr. 17; v. 237; p. 643.

Humphrey, Hubert R., Kalamazoo, Mich. Globe-holder. No. 1,222,628; Apr. 17; v. 237; p. 644.

Humphreys, Alphonso. (See Brown and Humphreys.)

Hunt, George G., assignor to The Independent Harvester Company, Plano, Ill. Wide-spreading device for fertilizer-distributers. No. 1,221,863; Apr. 10; v. 237; p. 332.

Hunt, John H., Flat River, Mo. Crank-holding attachment for motor-vehicles. No. 1,222,104; Apr. 10; v. 237; p. 416.

Hunter, F. C., *et al.* (See Andrews, Al, assignor.)

Huntley Manufacturing Company, The. (See Huntley, Stephen A., assignor.)

Huntley, Stephen A., assignor to The Huntley Manufacturing Company, Omaha, Nebr. Recoil-pad for fire-arms. No. 1,222,291; Apr. 10; v. 237; p. 483.

Huot, Josephs G., Montreal, Quebec, Canada. Shutter-hinge. No. 1,222,629; Apr. 17; v. 237; p. 644.

Hupp, William R., Bryson City, N. C. Admission-valve for steam-engines. No. 1,223,979; Apr. 24; v. 237; p. 1143.

Husted, Lemuel J., Kansas City, Mo. Aerial-torpedo-steering mechanism. No. 1,222,630; Apr. 17; v. 237; p. 645.

Hustinx, René. (See Duysens, Tossanus, assignor.)

Hutchins, George F., Worcester, and E. H. Ryon, Waltham, Mass., assignors to Crompton & Knowles Loom Works. Weft-replenishing loom. No. 1,221,802; Apr. 3; v. 237; p. 277.

Hutchison, Alvin E. (See Day, Lewis D., assignor.)

Hutton, Ernest, Wayland, Ky. Cross-tie for mine railways or track constructions. No. 1,223,171; Apr. 17; v. 237; p. 831.

Hyatt, John W., Pleasantdale, N. J. Apparatus for continuously pressing ice fragments into an endless bar. No. 1,221,054; Apr. 3; v. 237; p. 18.

Hydrogenation Company, The. (See Paal, Carl, assignor.)

Hyland, Charles, assignor to Flannery Bolt Company, Pittsburgh, Pa. Stay-bolt structure for boilers. No. 1,222,292; Apr. 10; v. 237; p. 483.

Hynes, Lee P., assignor to Railway Utility Company, Chicago, Ill. Sliding-door fastener. No. 1,223,389; Apr. 24; v. 237; p. 935.

Hynes, Lee P., assignor to Railway Utility Company, Chicago, Ill. Ventilator. No. 1,223,390; Apr. 24; v. 237; p. 935.

Illinois Malleable Iron Co. (See Johnson, John L., assignor.)

Iman, Orla H., assignor to Voigtmann & Co., Chicago, Ill. Metal window-frame. No. 1,222,293; Apr. 10; v. 237; p. 483.

Imperial Cash Register Company, The. (See Bristow, Charles, assignor.)

Improved Equipment Company, The. (See Doherty, Henry L., assignor.)

Independent Harvester Company, The. (See Hunt, George G., assignor.)
Independent Ice Company of Baltimore City. (See Kirkpatrick, Willis B., assignor.)
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Industrial Chemical Company. (See Okell, Stanley A. W., assignor.)
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Ingersoll-Rand Company. (See Bayles, Lewis C., assignor.)
Ingersoll-Rand Company. (See Peters, Arthur E., assignor.)
International Egg Candler Corporation. (See Finney, James J., assignor.)
International Harvester Company of New Jersey. (See Benjamin, Bert R., assignor.)
International Harvester Company of New Jersey. (See Bunting, Norman E., assignor.)
International Harvester Company of New Jersey. (See Hagndone, Clinton A., assignor.)
International Harvester Company of New Jersey. (See Morris, Thomas A., assignor.)
International Harvester Company of New Jersey. (See Raney, Clemma R., assignor.)
International Harvester Company of New Jersey. (See Raney and Livesay, assignors.)
International Harvester Company of New Jersey. (See Sharp, Charles S., assignor.)
International Harvester Company of New Jersey. (See Stone, John A., assignor.)
International Harvester Corporation. (See Johnston, Edward A., assignor.)
International Harvester Corporation. (See McClenathen, Robert, assignor.)
Interstate Machine Products Company, The. (See Armstrong, Merton C., assignor.)
Invincible Grain Cleaner Company. (See Hicks, Levi, assignor.)
Irving, James A., New York, N. Y. Smoking-pipe. No. 1,221,864; Apr. 10; v. 237; p. 332.
Irwin, William D., Livingston, Mont. Adjustable axle-pattern gage. No. 1,222,404; Apr. 10; v. 237; p. 523.
Isaacs, Seymour A., *et al.* (See Burns, John G., assignor.)
Isgreg, W. D., *et al.* (See Newkirk, William P., assignor.)
Ishler, Willis A., Pittsfield, Mass., assignor to General Electric Company. Electrical insulation. No. 1,223,881; Apr. 24; v. 237; p. 1111.
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Isley, George H., assignor to Morgan Construction Company, Worcester, Mass. Gas-producer. No. 1,221,055; Apr. 3; v. 237; p. 18.
Isom, Joseph F., Augusta, Ga. Level device. No. 1,221,738; Apr. 3; v. 237; p. 255.
Ivany, Leslie A., Vancouver, British Columbia, Canada. Thermostat for oil-heating means. No. 1,222,870; Apr. 17; v. 237; p. 728.
J. G. Brill Company, The. (See Kohler, George B., assignor.)
J. H. White Manufacturing Company. (See White, Edwin L., assignor.)
J. P. Eustis Manufacturing Company. (See Eustis and Brown, assignors.)
Jablonowsky, Heinrich, Riverside, N. J. Toy. No. 1,223,696; Apr. 24; v. 237; p. 1046.
Jacker, Richard J. (See Bersbach, Emil, assignor.)
Jackson, Dugald C. (See Jackson, William B., assignor.)
Jackson, Earnest L., assignor of six-tenths to R. C. Dolgman, Columbus, Ga. Attachment for speeder stop-motions. No. 1,222,465; Apr. 10; v. 237; p. 523.
Jackson, George, Jr., Hohokus, N. J. Signal apparatus. No. 1,221,538; Apr. 3; v. 237; p. 189.
Jackson, Henry O. (See Bridenbaugh, Elmer H., assignor.)
Jackson, John L., *et al.* (See Graham, Leslie B., assignor.)
Jackson, John R., San Francisco, assignor to A. G. Burns, Alameda, Cal. Automobile-lock. No. 1,223,052; Apr. 17; v. 237; p. 789.
Jackson, Joseph M., *et al.* (See Turner, Frank A., assignor.)
Jackson, Lowber D., Philadelphia, Pa. Moisture-supplying device for gas-engines. No. 1,223,980; Apr. 24; v. 237; p. 1143.
Jackson, Van Buren, Pedro Miguel, Canal Zone, assignor to San Diego Consolidated Gas and Electric Co., San Diego, Cal. Lineman's device. No. 1,223,791; Apr. 24; v. 237; p. 1080.
Jackson, William B., assignor of one-half to D. C. Jackson, Chicago, Ill. Synchronizing device. No. 1,222,547; Apr. 10; v. 237; p. 574.
Jacobs, Albert W., Yutan, Nebr. Tractor. No. 1,221,739; Apr. 3; v. 237; p. 255.
Jacobs, Henry W., Topeka, Kans., and E. D. Levy, Springfield, Mo. Car. No. 1,221,740; Apr. 3; v. 237; p. 255.
Jacobson, Hans M., Waterford, Wis. Horse-releaser. No. 1,221,056; Apr. 3; v. 237; p. 18.
Jacobson, Jacob W., Hancock, Mich. Soap-dispenser. No. 1,223,172; Apr. 17; v. 237; p. 831.
Jacques, George L., Neillsville, Wis. Skee-skate. No. 1,222,767; Apr. 17; v. 237; p. 692.
Jacques, George L., Neillsville, Wis. Skee-skate. No. 1,223,882; Apr. 24; v. 237; p. 1111.
Jakab, Mike, Woodland, Me. Animal-trap. No. 1,222,406; Apr. 10; v. 237; p. 524.
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James, Lawrence F. and R. F., New York, N. Y. Portable electric lamp. No. 1,223,883; Apr. 24; v. 237; p. 1111.
James, Perry C., Sciota, Ill. Hinge. No. 1,222,294; Apr. 10; v. 237; p. 483.
James, Richard F. (See James, Lawrence F. and R. F.)
James, William A., Cowbridge, Wales. Means for steering a side car attached to a motor-cycle. No. 1,223,173; Apr. 17; v. 237; p. 831.
Janney, Robert E. L., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Guard-arm for couplings. No. 1,223,491; Apr. 24; v. 237; p. 972.
Janse, Leendert, The Hague, Netherlands. Sliding door. No. 1,223,697; Apr. 24; v. 237; p. 1047.
Jaques, Fernando O., Sr., Cranston, R. I. Anvil for micrometer-gages and similar gages. No. 1,223,325; Apr. 17; v. 237; p. 879.
Jaume, Miguel, New York, N. Y. Water-seal pot. No. 1,223,174; Apr. 17; v. 237; p. 832.
Jeffery, Benjamin A. (See Jeffery, Joseph A. and B. A.)
Jeffery, Joseph A. and B. A., Detroit, Mich. Apparatus for use in manufacturing articles of ceramic material. No. 1,223,792; Apr. 24; v. 237; p. 1080.
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Jenkins, John J., Manchester, N. H. Machine to insert needle-latch rivets. No. 1,223,053; Apr. 17; v. 237; p. 790.
Jenkins, Samuel M., assignor to The Jenkins Graphite Lubricating Company, Louisville, Ky. System of force-feed lubrication. No. 1,223,175; Apr. 17; v. 237; p. 832.
Jensen, Alfred A., Merrill, Wis. Railway-tie and fastener. No. 1,221,330; Apr. 3; v. 237; p. 116.
Jensen, George C., Oakland, Cal. Lock mechanism for automobiles. No. 1,221,993; Apr. 10; v. 237; p. 378.
Jensen, George C., Oakland, Cal. Automobile lock mechanism. No. 1,221,994; Apr. 10; v. 237; p. 379.
Jenson, Samuel N., Estancia, N. Mex. Chalk-cup. No. 1,221,057; Apr. 3; v. 237; p. 19.
Jernberg, Axel V., Tidaholm, Sweden. Fermentation of sulfite waste liquor. No. 1,221,058; Apr. 3; v. 237; p. 19.
Jesseph, Eugene S., Detroit, Mich. Cutter-head. No. 1,222,871; Apr. 17; v. 237; p. 728.
Jessup, Henry W., trustee. (See Twombly, Willard I., assignor.)
Jett, George C., Gary, Ind. Tractor chain tread. No. 1,222,295; Apr. 10; v. 237; p. 484.
Johanson, Frans E. (See Karlsson and Johanson.)
Johanson, Frans E., Gottenborg, Sweden. Ball-cage for ball-bearings. No. 1,223,492; Apr. 24; v. 237; p. 972.
Johansson, Carl A., Christiania, Norway. Stabilization of aircraft. No. 1,223,698; Apr. 24; v. 237; p. 1047.
John A. Roebling's Sons Company. (See Sunderland, Charles C., assignor.)
John C. Moninger Company. (See Berles, Edward, assignor.)
Johnson Automatic Sealer Co. (See Johnson, Harry L., assignor.)
Johnson, Axel W., Portland, Oreg. Automobile signaling device. No. 1,223,981; Apr. 24; v. 237; p. 1143.
Johnson, Ben B., Evansville, Ind. Sewer-trap. No. 1,222,296; Apr. 10; v. 237; p. 484.
Johnson, Bernhard, Valparaiso, Ind. Crude or heavy oil engine. No. 1,223,793; Apr. 24; v. 237; p. 1081.
Johnson, Charles A., Unionville, Conn. Tool-holder for planers. No. 1,223,493; Apr. 24; v. 237; p. 972.
Johnson, Claude R., Neodesha, Kans. Gas-stove. No. 1,221,539; Apr. 3; v. 237; p. 189.
Johnson, Frank P., Danville, Pa. Tire-fastening device. No. 1,222,211; Apr. 10; v. 237; p. 454.
Johnson, George A., assignor to W. H. Miner, Chicago, Ill. Draft-yoke. No. 1,221,331; Apr. 3; v. 237; p. 116.
Johnson, George A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Railway-car draft-rigging. No. 1,223,794; Apr. 24; v. 237; p. 1081.
Johnson, Harry L., assignor to Johnson Automatic Sealer Co., Ltd., Battle Creek, Mich. Packing case or carton sealing machine. No. 1,223,176; Apr. 17; v. 237; p. 833.
Johnson, Harry S. R., Sanford, Mich. Support. No. 1,223,795; Apr. 24; v. 237; p. 1081.
Johnson, James B., Jester, Okla. Curbing for Artesian wells. No. 1,223,796; Apr. 24; v. 237; p. 1082.
Johnson, John D., Aurora, Nebr. Package-tie. No. 1,221,741; Apr. 3; v. 237; p. 256.
Johnson, John E., Pittsburgh, Pa., assignor to Pittsburgh Plate Glass Company. Cement-gun apparatus. No. 1,223,586 Apr. 24; v. 237; p. 1005.
Johnson, John L., assignor to Illinois Malleable Iron Co., Chicago, Ill. Molding-machine. No. 1,221,452; Apr. 3; v. 237; p. 158.
Johnson, Joel W., Pine Bluff, Ark. Speedometer-controlled ignition-circuit breaker. No. 1,223,177; Apr. 17; v. 237; p. 834.
Johnson, Josiah F., Edgewood, Pa., assignor to The Westinghouse Machine Company. Automatic valve mechanism. No. 1,223,340; Apr. 17; v. 237; p. 885.

Johnson, Lewis H., Bloomfield, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated, Telephone-exchange system. No. 1,221,182; Apr. 3; v. 237; p. 64.
Johnson, Lewis H., Bloomfield, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,221,865; Apr. 10; v. 237; p. 332.
Johnson, Lewis H., Bloomfield, N. J., assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,221,866; Apr. 10; v. 237; p. 333.
Johnson, Mary E., trustee. (See Bowker, Thomas F., assignor.)
Johnson, Walter J. O., assignor to H. S. Folger, Chicago, Ill. Mandrel-press. No. 1,222,631; Apr. 17; v. 237; p. 645.
Johnston, Clarence L. (See Brown and Johnston.)
Johnston, Edward A., Chicago, Ill., assignor, by mesne assignments, to International Harvester Corporation. Carbureter. No. 1,221,183; Apr. 3; v. 237; p. 64.
Johnston, Hugh, Toronto, Ontario, Canada. Game apparatus. No. 1,221,803; Apr. 3; v. 237; p. 278.
Johnston, James G., Evanston, Ill., assignor to Warren Featherbone Company, Three Oaks, Mich. Stockmount. No. 1,221,184; Apr. 3; v. 237; p. 65.
Johnston, James S., Utica, N. Y. Rim. No. 1,223,797; Apr. 24; v. 237; p. 1082.
Johnston, Warren F., West Carrollton, Ohio. Spark-plug-insulating means. No. 1,222,768; Apr. 17; v. 237; p. 692.
Johnstone, Hugo R., Pasadena, Cal. Butt-rest for a fishing-rod. No. 1,223,884; Apr. 24; v. 237; p. 1112.
Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Hanger for light-reflecting bowls. No. 1,221,059; Apr. 3; v. 237; p. 19.
Jones, Clyde A. (See Winslow and Jones.)
Jones, John A., Farmington, Me. Trap-nest for hens. No. 1,221,540; Apr. 3; v. 237; p. 189.
Jones, Prior A. (See Griffin and Jones.)
Jones, Vern L., assignor to The Farrand Company, Detroit, Mich. Automatic regulator for pneumatic pianos. No. 1,223,885; Apr. 24; v. 237; p. 1112.
Jones, William W., assignor of one-fifth to R. E. Gearhart and one-fifth to F. Carpenter, Maryville, Mo. Resilient wheel. No. 1,221,995; Apr. 10; v. 237; p. 379.
Jonson, Henriette W., assignor of two-thirds to A. E. Fox, Philadelphia, Pa. Milk and bread box. No. 1,223,178; Apr. 17; v. 237; p. 834.
Jordan, George W., Cincinnati, Ohio. Ventilation window-lock. No. 1,223,587; Apr. 24; v. 237; p. 1006.
Jordan, Robert E., assignor to The Albright-Nell Company, Chicago, Ill. Hair and refuse remover for dehairing-machines. No. 1,221,185; Apr. 3; v. 237; p. 65.
Jordan, Thomas H., Milton, W. Va. Cover for cooking utensils. No. 1,222,212; Apr. 10; v. 237; p. 455.
Jordan, William W., Mena, Ark. Spring-barrel for watches. No. 1,223,982; Apr. 24; v. 237; p. 1144.
Josse, Emil, Berlin-Lankwitz, and W. Gensecke, Berlin-Wilmersdorf, Germany. Condensing apparatus. No. 1,223,391; Apr. 24; v. 237; p. 936.
Jost, Lawrence, North Bergen, assignor to Oscar Schmidt, Inc., Jersey City, N. J. Key-zither. No. 1,223,072; Apr. 17; v. 237; p. 796.
Joy, Robert, San Francisco, Cal. Mechanical mattress-tightener. No. 1,222,297; Apr. 10; v. 237; p. 484.
Joyce, Adam M., *et al.* (See Evans, Harry N., Sr., assignor.)
Joyce, Thomas G., Scranton, Pa. Rail-joint. No. 1,222,407; Apr. 10; v. 237; p. 524.
Judd, Earlsley C. B., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Closet-seat hinge. No. 1,221,060; Apr. 3; v. 236; p. 19.
Judd, John F. (See Hogan, Judd, and Waite.)
Judge, William P., Detroit, Mich. Seat-spring. No. 1,223,494; Apr. 24; v. 237; p. 973.
Juergens, Gustav H., assignor to P. C. Murphy Trunk Co., St. Louis, Mo. Wardrobe-trunk. No. 1,223,886; Apr. 24; v. 237; p. 1112.
Julius King Optical Co. (See King, Frederick W., assignor.)
Junoform Company, The. (See Smith, Goodwin B., assignor.)
Jurkiewicz, Adam. (See Dubiel, Jurkiewicz, and Sitko.)
Kadow, August, assignor to The Westlake Machine Company, Toledo, Ohio. Manufacture of hollow glass articles. No. 1,221,332; Apr. 3; v. 237; p. 117.
Kadow, August, assignor to The Westlake Machine Company, Toledo, Ohio. Mold for glass-gathering mechanisms. No. 1,223,392; Apr. 24; v. 237; p. 936.
Kadow, August, assignor to The Westlake Machine Company, Toledo, Ohio. Glass-gathering mechanism. No. 1,223,393; Apr. 24; v. 237; p. 936.
Kaelin, Charles G., Buffalo, N. Y. Vise. No. 1,223,073; Apr. 17; v. 237; p. 796.
Kahl, John W., Otisco, Ind. Hay-rake. No. 1,221,541; Apr. 3; v. 237; p. 190.
Kahlenberg Bros. Co. (See Kahlenberg, William R., assignor.)
Kahlenberg, William R., assignor to Kahlenberg Bros. Co., Two Rivers, Wis. Governor for fuel-injection pumps of engines of the semi-Diesel or like types. No. 1,221,542; Apr. 3; v. 237; p. 190.
Kahn, Jacob J., assignor of one-half to Samuel Hart & Company, Montreal, Quebec, Canada. Garment. No. 1,223,394; Apr. 24; v. 237; p. 937.
Kahn, Julius, Jersey City, N. J., assignor to Pacific Novelty Company, New York, N. Y. Clasp. No. 1,221,996; Apr. 10; v. 237; p. 380.
Kahrer, Robert J., Newark, N. J. Water-heater. No. 1,222,105; Apr. 10; v. 237; p. 417.
Kalamazoo Loose Leaf Binder Co. (See Wigginton, George P., assignor.)
Kalamazoo Tank and Silo Co. (See Youmans, George P., assignor.)
Kaminsky, Bennett, Indianapolis, Ind. Drinking-fountain. No. 1,222,298; Apr. 10; v. 237; p. 484.
Kamawski, Stephen, Nanticoke, Pa. Conduit-threader. No. 1,223,699; Apr. 24; v. 237; p. 1047.
Kandó, Coloman de, Budapest, Hungary, assignor, by mesne assignments, to Westinghouse Machine Company. Electric motor system. No. 1,222,539; Apr. 10; v. 237; p. 571.
Kanster, Jacob, assignor of one-third to T. J. Walsh and one-third to F. Walsh, Newark, N. J. Washtub-cover. No. 1,223,588; Apr. 24; v. 237; p. 1006.
Kantrowitz, Belle R., New York, N. Y. Toilet novelty. No. 1,223,074; Apr. 17; v. 237; p. 796.
Kaplan, Morduch L., Brooklyn, assignor to Beacon Miniature Electric Co., Inc., New York, N. Y. Galvanic cell. No. 1,221,061; Apr. 3; v. 237; p. 20.
Kaplan, Morduch L., Brooklyn, assignor to Beacon Miniature Electric Co., Inc., New York, N. Y. Galvanic cell. No. 1,221,062; Apr. 3; v. 237; p. 20.
Karch, Oscar H., Rochester, N. Y. Automatic stop for sound-reproducing machines. No. 1,222,408; Apr. 10; v. 237; p. 525.
Kardell, Henry W., St. Louis, Mo. Traction-plow. No. 1,222,299; Apr. 10; v. 237; p. 485.
Karin, John, Koppel, Pa. Keyless padlock. No. 1,223,983; Apr. 24; v. 237; p. 1144.
Karlsson, Kaleb, assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Ball-cage for ball-bearings. No. 1,223,396; Apr. 24; v. 237; p. 937.
Karlsson, Kaleb, and F. E. Johanson, assignors to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Ball-cage for ball-bearings. No. 1,223,395; Apr. 24; v. 237; p. 937.
Kaufman, Charles L., Englewood, N. J., assignor to A. Arblb, New York, N. Y. Apparatus for making feather boas and the like. No. 1,222,300; Apr. 10; v. 237; p. 485.
Kaufman, Ferdinand, New Orleans, La. Display-rack. No. 1,223,984; Apr. 24; v. 237; p. 1144.
Kawneer Manufacturing Company. (See Brown, M. Lewis, assignor.)
Kaye, Benjamin M., New York, N. Y. Golf-club. No. 1,222,770; Apr. 17; v. 237; p. 692.
Kaynee Company, The. (See Hays, Louis, assignor.)
Keating, William, New York, N. Y. Elevator protective apparatus. No. 1,221,543; Apr. 3; v. 237; p. 190.
Keeler, Max N., Urbana, Ill. Window structure. No. 1,221,186; Apr. 3; v. 237; p. 65.
Keener, George I. (See McLaughlin, Charles W., assignor.)
Keese, Frank E. (See Gow and Keese.)
Kelper, Henry B., Lancaster, Pa. Knockdown forge. No. 1,221,187; Apr. 3; v. 237; p. 66.
Keller, Carrie M., Fort Worth, Tex. Hat for dolls and other purposes. No. 1,221,867; Apr. 10; v. 237; p. 333.
Keller, Julius, Fond du Lac, Wis. Detonator for ordnance-shells. No. 1,221,453; Apr. 3; v. 237; p. 159.
Keller, Julius, Fond du Lac, Wis. Detonator. No. 1,221,454; Apr. 3; v. 237; p. 159.
Kelley, Harry H., Atlanta, Ga. Vacuum shuttle-operating mechanism for looms. No. 1,222,409; Apr. 10; v. 237; p. 525.
Kelley, Harry H., Atlanta, Ga. Compressed-air shuttle-operating mechanism for looms. No. 1,222,410; Apr. 10; v. 237; p. 526.
Kelley, Harry R., Minneapolis, assignor of one-half to Purity Baking Company, St. Paul, Minn. Self-propelled vehicle. No. 1,223,495; Apr. 24; v. 237; p. 973.
Kellogg Switchboard and Supply Company. (See Currier, Hiram D., assignor.)
Kellogg Switchboard & Supply Company. (See Dunbar, Francis W., assignor.)
Kellogg Switchboard and Supply Company. (See Ericson, Lawrence, assignor.)
Kelly, Charles R., Cambridge Springs, Pa. Fertilizer-distributer. No. 1,221,742; Apr. 3; v. 237; p. 256.
Kelly, Edward, and E. Reynolds, Bradley Beach, assignors of one-fifth to F. Newman, Manasquan, N. J. Vaporizer for gas-engines. No. 1,222,166; Apr. 10; v. 237; p. 417.
Kelly, John B., assignor of one-half to Z. A. Douglas, Birmingham, Ala. Railway-track sand-remover. No. 1,222,213; Apr. 10; v. 237; p. 455.
Kelly, John L. M., Trenton, N. J. Automobile and vehicle signaling device. No. 1,222,301; Apr. 10; v. 237; p. 486.
Kelly, William A., assignor to A. B. Norwalk, New York, N. Y. Tire-valve. No. 1,223,179; Apr. 17; v. 237; p. 834.
Kelly, William J., Clinton, Iowa. Sofa-bed. No. 1,223,798; Apr. 24; v. 237; p. 1082.

Kemble, William, Kingston, N. Y. Window-shade hanger. No. 1,222,632; Apr. 17; v. 237; p. 645.

Kendall, Ira H., Potsdam, N. Y. Milk-testing bottle. No. 1,221,455; Apr. 3; v. 237; p. 159.

Kendall, William G., Newark, N. J. Compressed-powder holder. No. 1,223,985; Apr. 24; v. 237; p. 1144.

Kennedy, Carlton L., South Braintree, assignor to The Holtzer-Cabot Electric Company, Brookline, Mass. Centrifugal switch. No. 1,222,633; Apr. 17; v. 237; p. 646.

Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Type or matrix. No. 1,221,868; Apr. 10; v. 237; p. 334.

Kennon, C. W. (See Cleveland, William K., assignor.)

Kent, Arthur A., Philadelphia, Pa. Horn. No. 1,222,107; Apr. 10; v. 237; p. 417.

Keppel, Jesse E., St. Louis, Mo. Signal device for electric-railway cars. No. 1,222,634; Apr. 17; v. 237; p. 646.

Kerfoot, Thomas J., Bluffton, Ind. Meter-box. No. 1,222,411; Apr. 10; v. 237; p. 526.

Kern, George, Peru, Ill. Coin-controlled machine. No. 1,224,115; Apr. 24; v. 237; p. 1189.

Kerst, John G., Springfield, Ill. Shocking accessory for harvesting-machines. No. 1,221,743; Apr. 3; v. 237; p. 256.

Kersten, Jacob, Grand Rapids, Mich. Integral nut-lock, spring, and washer. No. 1,221,456; Apr. 3; v. 237; p. 160.

Kersto Corporation. (See Kohout, George A., assignor.)

Kertész, Alex, assignor to R. Kertesz, Newark, N. J. Pipe-coupling clamp. No. 1,223,054; Apr. 17; v. 237; p. 790.

Kertesz, R. (See Kertész, Alex, assignor.)

Kesses, Charles, New York, N. Y. Moving-picture camera. No. 1,223,341; Apr. 17; v. 237; p. 886.

Kessler, Martin C., assignor to The Kessler Motor Company, Denver, Colo. Explosive-engine. No. 1,221,544; Apr. 3; v. 237; p. 191.

Kessler, Martin C., assignor to Kessler Motor Company, Denver, Colo. Explosive-engine. No. 1,221,545; Apr. 3; v. 237; p. 191.

Kessler Motor Company, The. (See Kessler, Martin C., assignor.)

Ketterer, Charles A., East St. Louis, Ill. Refrigerator. No. 1,222,635; Apr. 17; v. 237; p. 646.

Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Ignition system. No. 1,223,180; Apr. 17; v. 237; p. 835.

Keystone Film Company. (See Bentz, Joseph J., assignor.)

Kicklighter, Charles H., Pasadena, Cal., assignor to Westinghouse Electric & Manufacturing Company. Voltage-regulator. No. 1,222,412; Apr. 10; v. 237; p. 527.

Kidder, Wellington H., Roosevelt, assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Stand or support for loose-leaf books, &c. No. 1,223,075; Apr. 17; v. 237; p. 797.

Klenzle, Herbert, New York, N. Y. Shade-holder. No. 1,221,744; Apr. 3; v. 237; p. 257.

Kiewicz, John, Hyde Park, assignor to The Reece Button Hole Machine Company, Boston, Mass. Stop mechanism. No. 1,223,397; Apr. 24; v. 237; p. 938.

Kightlinger, Adelbert D., Washington, Pa. Derrick. No. 1,221,747; Apr. 3; v. 237; p. 258.

Kile, R. P. (See Beeman, Charley L., assignor.)

Kilham, Arthur E., *et al.* (See Turner, Frank A., assignor.)

Kiliman Hydraulic Power Transmission Company. (See Kiliman, Thomas A., assignor.)

Kiliman, Thomas A., Nashville, assignor to Kiliman Hydraulic Power Transmission Company, Tullahoma, Tenn. Motor or pump. No. 1,221,333; Apr. 3; v. 237; p. 117.

King, Clifford G., Providence, R. I. Brooch. No. 1,221,869; Apr. 10; v. 237; p. 334.

King, Eugenia W., Birmingham, Ala. Thread-cutting thimble. No. 1,221,546; Apr. 3; v. 237; p. 192.

King, Frederick W., New York, N. Y., assignor to Julius King Optical Co. Goggles. No. 1,223,076; Apr. 17; v. 237; p. 797.

King, George A., Maple Falls, Wash. Driving mechanism. No. 1,221,334; Apr. 3; v. 237; p. 117.

King, Gilbert, Pittsburgh, Pa. Belt. No. 1,222,302; Apr. 10; v. 237; p. 486.

King, James D., assignor to The Queen City Safety Appliance Company, Meridian, Miss. Safety device for railway-cars. No. 1,222,108; Apr. 10; v. 237; p. 418.

King, James G. (See Scarborough and King.)

King, James T., Highland Park, Mich. Piston. No. 1,222,413; Apr. 10; v. 237; p. 527.

King, Jesse C., Montreal, Quebec, Canada. Electrode and coating therefor. No. 1,223,986; Apr. 24; v. 237; p. 1145.

Kiral, Lake, New York, N. Y. Can-opener. No. 1,221,745; Apr. 3; v. 237; p. 257.

Kirby, John, assignor of one-fourth to O. Kirby, Leechburg, Pa., one-fourth to J. B. Sommerville, Wheeling, W. Va., and one-fourth to S. M. Boyd, Pittsburgh, Pa. Smelting-furnace. No. 1,222,636; Apr. 17; v. 237; p. 647.

Kirby, Owen, *et al.* (See Kirby, John, assignor.)

Kirk, Edward R. (See Griffin and Kirk.)

Kirkland, William A., Cedar Falls, Iowa. Cut-out switch for series loops. No. 1,223,987; Apr. 24; v. 237; p. 1145.

Kirkpatrick, William J., and G. W. Farley, assignors of one-third to I. Mullen, Eureka, Cal. Newspaper supplementing or inserting machine. No. 1,223,398; Apr. 24; v. 237; p. 938.

Kirkpatrick, Willis R., assignor to Independent Ice Company of Baltimore City, Baltimore, Md. Apparatus for manufacturing ice. No. 1,221,746; Apr. 3; v. 237; p. 258.

Kirstin, Alfred J. (See Moe and Kirstin.)

Kiss, James. (See Bachardy and Kiss.)

Kitsee, Isidor, Philadelphia, Pa. Color-carrier for color photography. No. 1,221,457; Apr. 3; v. 237; p. 160.

Kitsee, Isidor, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y. Quadruplex telegraphy. No. 1,221,188; Apr. 3; v. 237; p. 66.

Kitsee, Isidor, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y. Telegraphy. No. 1,221,547; Apr. 3; v. 237; p. 192.

Kitsee, Isidor, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y. Telegraphy. No. 1,221,870; Apr. 10; v. 237; p. 334.

Kitsee, Isidor, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y. Quadruplex telegraphy. No. 1,222,303; Apr. 10; v. 237; p. 486.

Kitsee, Isidor, Philadelphia, Pa., assignor, by mesne assignments, to American Telephone and Telegraph Company, New York, N. Y. Telegraphic receiving organism. No. 1,222,771; Apr. 17; v. 237; p. 693.

Kitt, William C., Cincinnati, Ohio. Egg-carrying package. No. 1,221,804; Apr. 3; v. 237; p. 278.

Kitterman, E. J., *et al.* (See Pittaluga, Stefano, assignor.)

Kittle, Caroline, North Bergen, N. J. Registry-return-receipt envelop. No. 1,221,189; Apr. 3; v. 237; p. 67.

Kitts Steam Specialty Co. (See Kitts, Willard A., Sr., assignor.)

Kitts, Willard A., Sr., assignor to Kitts Steam Specialty Co. Inc., Oswego, N. Y. Liquid-level indicator for steam-boilers. No. 1,223,799; Apr. 24; v. 237; p. 1082.

Kjeldaas, Oscar, Christiania, Norway. Stud-and-socket fastening for garments. No. 1,223,181; Apr. 17; v. 237; p. 835.

Klein, Charles J., Milwaukee, Wis. Circuit-controller. No. 1,222,215; Apr. 10; v. 237; p. 456.

Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,222,214; Apr. 10; v. 237; p. 455.

Kline, James N., Washington, D. C. Vacuum nursing-bottle and nipple therefor. No. 1,221,335; Apr. 3; v. 237; p. 118.

Klinsmann, Otto A., Fargo, N. D. Caster. No. 1,222,414; Apr. 10; v. 237; p. 527.

Kloneck, August J., New York, N. Y. Signaling device. No. 1,223,589; Apr. 24; v. 237; p. 1066.

Kluchansky, Eugene, New York, N. Y. Advertising apparatus. No. 1,223,887; Apr. 24; v. 237; p. 1113.

Kluczny, Frank R., *et al.* (See Hoffmann, Michael, assignor.)

Knight, Amos L., assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Casting-machine for elements of printing-forms. No. 1,222,415; Apr. 10; v. 237; p. 527.

Knight, Frank H., assignor of one-half to H. G. Rush, Lancaster, Pa. Lock for automobiles. No. 1,223,888; Apr. 24; v. 237; p. 1113.

Knox, Luther L., Avalon, Pa. Water-cooled floor. No. 1,223,800; Apr. 24; v. 237; p. 1083.

Knox, Luther L., Avalon, assignor to Knox Pressed & Welded Steel Company, Pittsburgh, Pa. Water-cooled floor structure. No. 1,223,801; Apr. 24; v. 237; p. 1083.

Knox Pressed & Welded Steel Company. (See Knox, Luther L., assignor.)

Knudsen, Becker C., Clinton, Iowa. Radius-rod for automobiles. No. 1,221,190; Apr. 3; v. 237; p. 67.

Knudsen, Jacob B., assignor of one-half to F. H. Quail, Chicago, Ill. Coil-spring. (Reissue.) No. 14,287; Apr. 17; v. 237; p. 892.

Koch, William G., Milwaukee, Wis. Metal-coated sheet. No. 1,223,399; Apr. 24; v. 237; p. 938.

Koehler, Frank G., St. Louis, Mo. Truck. No. 1,221,997; Apr. 10; v. 237; p. 380.

Koehring Machine Company. (See Lichtenberg, Erich H., assignor.)

Koenig, Walter F., Wilton Junction, Iowa. License-holder. No. 1,223,700; Apr. 24; v. 237; p. 1047.

Kohler, George B., assignor to The J. G. Brill Company, Philadelphia, Pa. Car-seat. No. 1,221,748; Apr. 3; v. 237; p. 258.

Kohler, George B., assignor to The J. G. Brill Company, Philadelphia, Pa. Door-operating mechanism. No. 1,222,772; Apr. 17; v. 237; p. 603.

Kohlhaas, George P., Greene, Iowa. Seed-corn tipper. No. 1,221,336; Apr. 3; v. 237; p. 118.

Kohman, Henry A., T. M. Godfrey, and L. H. Ashe, Pittsburgh, Pa., assignors to Ward Baking Company, New York, N. Y. Manufacture of bread. No. 1,222,304; Apr. 10; v. 237; p. 487.

Köhn, Claus H., Leipzig, assignor to M. Brockmann Chemische Fabrik m. b. H., Leipzig-Eutritzsch, Germany. Motor-plow. No. 1,221,458; Apr. 3; v. 237; p. 160.

Kohout, George A., assignor to Kersto Corporation, Chicago, Ill. Automatic furnace-stoker. No. 1,222,109; Apr. 10; v. 237; p. 418.

Kohr, Frank, Des Moines, Iowa. Egg-shipping case. No. 1,223,055; Apr. 17; v. 237; p. 790.

Kolossvary, Endre, Budapest, Hungary, assignor, by mesne assignments, to Western Electric Company, Incorporated. Apparatus for checking a number of telephone-calls. No. 1,221,191; Apr. 3; v. 237; p. 67.

Kopf, John. (See Swanson, Christina, assignor.)

Kopp, John P., assignor of one-fourth to J. W. Sherman, one-eighth to J. W. Roberts, and one-eighth to G. F. Bigelow, Springfield, Mo. Car-replacer. No. 1,222,956; Apr. 17; v. 237; p. 756.

Kraemer, Thomas, Philadelphia, Pa. Talking-machine. No. 1,223,889; Apr. 24; v. 237; p. 1113.

Kraft, Henry P., Ridgewood, and M. C. Schweinert, West Hoboken, N. J. Pressure-gage. No. 1,221,548; Apr. 3; v. 237; p. 192.

Kramer, Leonard, assignor to Norton Iron Works, Ashland, Ky. Wire-measuring device. No. 1,222,957; Apr. 17; v. 237; p. 756.

Kratz, Franz, assignor to Firm of R. Bosch, Stuttgart, Germany. Electrical condenser for ignition-current generators. No. 1,221,998; Apr. 10; v. 237; p. 380.

Kraus, Jakob, Brunswick, Germany. Electrostatic separator for inflammable materials. No. 1,222,305; Apr. 10; v. 237; p. 487.

Krauth, Albert, assignor to Krauth & Benninghofen, Hamilton, Ohio. Numbering mechanism. No. 1,222,306; Apr. 10; v. 237; p. 487.

Krauth & Benninghofen. (See Krauth, Albert, assignor.)

Krbavac, Gabriel, Avery, Iowa. Knockdown box. No. 1,222,416; Apr. 10; v. 237; p. 528.

Kreber, Ernest, Tampa, Fla. Sign. No. 1,222,417; Apr. 10; v. 237; p. 528.

Kreber, Ernest, Tampa, Fla. Sign-applying tool. No. 1,222,418; Apr. 10; v. 237; p. 529.

Kreiter, Richard F., Houston, Tex. Insect-guard. No. 1,221,999; Apr. 10; v. 237; p. 381.

Kresse, Ernest R., Brooklyn, N. Y. Belt-shifting device. No. 1,222,216; Apr. 10; v. 237; p. 456.

Kreutzmann, Herbert H., Hillsboro, Wis. Composition for making dental impressions. No. 1,222,773; Apr. 17; v. 237; p. 694.

Krienitz, Frank H., McFarland, Kans. Internal-combustion engine. No. 1,223,701; Apr. 24; v. 237; p. 1048.

Krill, Edward F., St. Louis, Mo. Internal-combustion engine. No. 1,221,337; Apr. 3; v. 237; p. 118.

Kromdyk, William, Jr. (See Douglass, Samuel, assignor.)

Krone, Carl R., Oakland, Cal. Indicator for vehicles. No. 1,222,000; Apr. 10; v. 237; p. 381.

Krug, Louis R., assignor to Burdick & Son, Albany, N. Y. Molding device. No. 1,221,459; Apr. 3; v. 237; p. 161.

Kruse, Lippe, Scotland, S. D. Storm-curtain. No. 1,223,702; Apr. 24; v. 237; p. 1048.

Krystek, John B., Bow Island, Alberta, Canada. Safety-envelop. No. 1,222,419; Apr. 10; v. 237; p. 529.

Kuhn, Frank. (See Kuhn and Oakes, assignors.)

Kuhn, Harry H., Marshall, Ill. Picture-hanger. No. 1,223,802; Apr. 24; v. 237; p. 1084.

Kuhn, James F., Easton, assignor of one-half to A. C. Feliencer, Allentown, Pa. Coupling for chains, &c. No. 1,222,217; Apr. 10; v. 237; p. 457.

Kuhn, Robert, and A. Oakes, assignors to F. Kuhn, Detroit, Mich. Electrical heating unit. No. 1,222,001; Apr. 10; v. 237; p. 381.

Kukla, Jozef, Buffalo, N. Y. Mold-feeder. No. 1,221,460; Apr. 3; v. 237; p. 161.

Kunz-Wheeler-Moffat Company. (See Moffat, Albert S., assignor.)

Kunzelman, Albert H., Chillicothe, Ohio. Doctor-vibrating device for paper-machines. No. 1,221,338; Apr. 3; v. 237; p. 119.

Kurtz, Christian S., Ephrata, Pa. Pump-head. No. 1,223,283; Apr. 17; v. 237; p. 865.

Kurtz, Cyrus B., Lakewood, Ohio. Power-transmission mechanism. No. 1,223,400; Apr. 24; v. 237; p. 939.

Kurtz, Stewart S. (See White, Harry R., assignor.)

Kurunczi, Andrew, and M. Ballut, Detroit, Mich. Self-leveling table. No. 1,222,420; Apr. 10; v. 237; p. 529.

Kutter, Herman L., Hamilton, Ohio. Pulping apparatus. No. 1,222,218; Apr. 10; v. 237; p. 457.

L. C. Smith & Bros. Typewriter Company. (See Gabrielson, Carl, assignor.)

L'Amie, Jesse P., Duluth, Minn. Bottle-stopper extractor. No. 1,223,056; Apr. 17; v. 237; p. 790.

La Chapelle, Duval, Nyack, N. Y. Gliding boat. No. 1,221,871; Apr. 10; v. 237; p. 335.

La Chapelle, Frank, Erie, Pa. Inkstand. No. 1,223,703; Apr. 24; v. 237; p. 1048.

La Crosse Plow Co. (See Cameron, William W., assignor.)

La Hodny, William. (See Fefelle, Alfred H., assignor.)

La Rue, William D., Camden, N. J., assignor to Victor Talking Machine Company. Talking-machine. No. 1,223,080; Apr. 17; v. 237; p. 799.

La Societe dite "La Cellophane." (See Brandenberger, Jacques E., assignor.)

Labadie, Harry H., and B. B. Beers; said Beers assignor, by mesne assignments, to W. Schweitzer Estate, Chicago, Ill. Extension-drawer and the like. No. 1,221,339; Apr. 3; v. 237; p. 119.

Labs, Carl, Amherst, Nebr. Lister. No. 1,221,192; Apr. 3; v. 237; p. 68.

Lachman, Maurice, assignor to General Welded Products Co., New York, N. Y. Bedstead. No. 1,221,872; Apr. 10; v. 237; p. 335.

Lacroix, Fred. (See Stohm and Lacroix.)

Lacy, Claxton W., *et al.* (See Cary, James B., assignor.)

Ladoff, Isador, Wilkinsburg, Pa., assignor of thirty one-hundredths to W. D. Edmonds, Boonville, N. Y. Producing alloys. No. 1,221,873; Apr. 10; v. 237; p. 335.

Ladoff, Isador, Wilkinsburg, Pa., assignor of thirty one-hundredths to W. D. Edmonds, Boonville, N. Y. Making alloys. No. 1,221,874; Apr. 10; v. 237; p. 335.

Lafont, Jean F., New Orleans, La. Decorticating, carding, and combing machine. No. 1,223,077; Apr. 17; v. 237; p. 797.

Lafont, William A., St. Louis, Mo. Apparatus for unloading and distributing materials. No. 1,222,219; Apr. 10; v. 237; p. 458.

Labanssois, René E., Paris, France. Carbureter. No. 1,221,749; Apr. 3; v. 237; p. 259.

Lahti, Elias, McMurray, Wash. Feed-cutter. No. 1,222,110; Apr. 10; v. 237; p. 418.

Laird, Abraham L., Coal City, Ind. Furniture-caster. No. 1,221,750; Apr. 3; v. 237; p. 259.

Lajcak, Joseph, Erie, Colo. Base-ball mask. No. 1,222,002; Apr. 10; v. 237; p. 381.

Lake Erie Manufacturing Co. (See Pratt, James R., assignor.)

Lake, John C., Big Prairie, Ohio. Sign-board. No. 1,223,803; Apr. 24; v. 237; p. 1084.

Lake Torpedo Boat Company of Maine, The. (See Gallagher, Edward G., assignor.)

Lamar, Alexis L., Pittsburg, Kans. Kerosene-vaporizer. No. 1,222,548; Apr. 10; v. 237; p. 574.

Landi, Joseph, Jersey City, N. J. Gas-heater. No. 1,223,182; Apr. 17; v. 237; p. 835.

Lambert, David, New York, N. Y. Apparatus for administering anesthetics. No. 1,222,421; Apr. 10; v. 237; p. 530.

Lammert, Ferdinand E., Chicago, Ill. Temperature-regulator for combustion-engine cylinders. No. 1,223,078; Apr. 17; v. 237; p. 798.

Lammert, Ferdinand E., Chicago, Ill. Temperature-regulator for internal-combustion engines. No. 1,223,079; Apr. 17; v. 237; p. 798.

Lanson Company, The. (See Needham, John T., assignor.)

Landell, Herbert S., Philadelphia, Pa., assignor to Anglo-American Cotton Products Corporation, New York, N. Y. Treating cotton-waste, &c. No. 1,222,422; Apr. 10; v. 237; p. 530.

Landers, Frary & Clark. (See Carlson, Frederick E., assignor.)

Landis, Abraham B., Enfield, Pa. Cutter-head. No. 1,221,193; Apr. 3; v. 237; p. 68.

Landreth, Clarence P., Philadelphia, Pa. Electrochemical treatment of liquids. No. 1,222,637; Apr. 17; v. 237; p. 647.

Lane, Alfred M., assignor to Monarch Metal Weather Strip Company, St. Louis, Mo. Window-adjusting rod. No. 1,221,751; Apr. 3; v. 237; p. 260.

Lane, Alfred M., assignor to Monarch Metal Weather Strip Company, St. Louis, Mo. Casement-window stay. No. 1,221,752; Apr. 3; v. 237; p. 260.

Lane, Charles C., Los Angeles, Cal. Amalgamating apparatus. No. 1,221,461; Apr. 3; v. 237; p. 161.

Lang, George H., Auburn, Victoria, Australia. Locking attachment for bolts and nuts, wheel-caps, and the like. No. 1,221,194; Apr. 3; v. 237; p. 68.

Langmuir, Irving, Schenectady, N. Y., assignor to General Electric Company. Electrostatic telephone system. No. 1,223,496; Apr. 24; v. 237; p. 974.

Lannin, Charles E., Old Mission, Mich. Device for stripping the leaves from fruit. No. 1,222,003; Apr. 10; v. 237; p. 382.

Lanston Monotype Machine Company. (See Knight, Amos L., assignor.)

Lapp, Leslie W. (See Wells and Lapp.)

Lare, Charles A., Eugene, Oreg. Flash-light-ignition system for cameras. No. 1,221,063; Apr. 3; v. 237; p. 20.

Lark, Everard T., New Hanover, Ill. Fastener for automobile-hoods. No. 1,222,549; Apr. 10; v. 237; p. 575.

Larsen, Anders. (See Parks, George M., assignor.)

Larsen, William H., Racine, Wis. Direction-indicator. No. 1,223,183; Apr. 17; v. 237; p. 836.

Larson, August V., Bridgeport, Conn. Wave-motor. No. 1,223,184; Apr. 17; v. 237; p. 836.

Larson, Carl W., Erie, Pa., assignor to General Electric Company. Electric locomotive. No. 1,221,753; Apr. 3; v. 237; p. 260.

Larson, John A. (See Holmes, Chris W., assignor.)

Larson, Martin, Chicago, Ill. Boot. No. 1,223,804; Apr. 24; v. 237; p. 1084.

Lasiewicz, Paul. (See Lasiewicz, Stanley and P.)

Lasiewicz, Stanley and P., Three Lakes, Wis. Metallic tie and rail-fastener. No. 1,223,805; Apr. 24; v. 237; p. 1085.

Laternen-Vertriebs-Gesellschaft mit beschränkter Haftung. (See Windhausen, Friederick, assignor.)

Latham, Albert, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Method of making tubular knives. No. 1,221,195; Apr. 3; v. 237; p. 68.

Latham, Albert, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Tack-supplying mechanism. No. 1,223,401; Apr. 24; v. 237; p. 939.

Latta, Emmit G., Syracuse, N. Y. Type-writing machine. No. 1,221,875; Apr. 10; v. 237; p. 335.

Latta, Emmit G., Syracuse, N. Y., assignor to Corona Typewriter Company, Inc. Type-writing machine. No. 1,222,423; Apr. 10; v. 237; p. 530.

Latta, Emmit G., Syracuse, N. Y., assignor to Corona Typewriter Company, Inc. Type-writing machine. No. 1,222,550; Apr. 10; v. 237; p. 575.

Latta, Emmit G., Syracuse, N. Y., assignor to Corona Typewriter Company, Inc. Type-writing machine. No. 1,222,551; Apr. 10; v. 237; p. 576.

Laughlin, Elmyr A., Chicago, Ill. Truck-bolster. No. 1,222,552; Apr. 10; v. 237; p. 576.

Laughlin, William J., Beloit, Wis. Automobile steering device. No. 1,223,988; Apr. 24; v. 237; p. 1145.

Laurent, Henry, East Rutherford, assignor to Becton, Dickinson & Co., Rutherford, N. J. Syringe. No. 1,222,424; Apr. 10; v. 237; p. 531.

Lautenschlager, William F., Cincinnati, Ohio. Cement-applying machine. No. 1,223,402; Apr. 24; v. 237; p. 939.

Lautenschlager, William F., Cincinnati, Ohio. Cement-applying machine. No. 1,223,403; Apr. 24; v. 237; p. 940.

Lautenschlager, William F., Cincinnati, Ohio. Cementing the margins of flexible material. No. 1,223,404; Apr. 24; v. 237; p. 940.

Lavaud, Dimitri S. de, São Paulo, Brazil. Machine for the manufacture of pipes, cylinders, &c. No. 1,223,676; Apr. 24; v. 237; p. 1039.

Laveck, Louis, and A. M. Roy, Fulton, N. Y. Machine for removing corset-steels and the like. No. 1,222,307; Apr. 10; v. 237; p. 488.

Laveque, Mose, Munising, Mich. Nut-lock. No. 1,223,405; Apr. 24; v. 237; p. 941.

Lavigne, Joseph P., Detroit, Mich. Steering-gear. No. 1,222,872; Apr. 17; v. 237; p. 729.

Lavigne, Joseph P., Detroit, Mich. Valve. No. 1,224,090; Apr. 24; v. 237; p. 1180.

Lawrence, Edward H., Cameron, W. Va., and R. E. Crane, Chicago, Ill. Sanitary connection. No. 1,221,064; Apr. 3; v. 237; p. 21.

Layer, Joseph, *et al.* (See Hough, Samuel, assignor.)

Layman, Florence P., New York, N. Y., assignor to Sanitary Refrigerator & Heater Company, Portage, Pa. Shelving for refrigerators. No. 1,222,308; Apr. 10; v. 237; p. 488.

Layne, Mahlon E., Houston, Tex. Well-boring stem. No. 1,223,591; Apr. 24; v. 237; p. 1007.

Laytham, James F., Monroe, and D. A. Arnold, North Yakima, Wash. Auto delivery-truck. No. 1,223,806; Apr. 24; v. 237; p. 1085.

Le Clair, Archill J., Haverhill, Mass. Welt-innersole. No. 1,222,309; Apr. 10; v. 237; p. 489.

Le Pontois, Leon J., assignor, by mesne assignments, to The Tengie Company, Cleveland, Ohio. Electric generator. No. 1,223,704; Apr. 24; v. 237; p. 1048.

Le Vasseur-Belisle, Joseph N., Worcester, Mass. Guide-eye for shuttles. No. 1,222,004; Apr. 10; v. 237; p. 382.

Leach, Grover C., Bangs, Tex. Seed-grader. No. 1,222,111; Apr. 10; v. 237; p. 419.

Leal, Joseph H., San Francisco, Cal. Attachment to invalid-beds. No. 1,222,873; Apr. 17; v. 237; p. 729.

Leavitt, Roscoe B., Houston, Mo. Shutter-operator for cameras. No. 1,223,807; Apr. 24; v. 237; p. 1085.

Lebel, Joseph N., Salem, Mass. Spike. No. 1,221,462; Apr. 3; v. 237; p. 162.

Lederer, Isidore M. (See Downey, Richard F., assignor.)

Lee, Henry C., trustee. (See Bullock, Arthur R., assignor.)

Lee, Oscar G., and F. M. Osborne, Washington, Pa. Mine-elevator cage. No. 1,221,754; Apr. 3; v. 237; p. 261.

Lee, William H., assignor to Syracuse Chilled Plow Company, Syracuse, N. Y. Slat-moldboard. No. 1,223,808; Apr. 24; v. 237; p. 1086.

Lehman, Christian S., Lawn, Pa. Folding box. No. 1,221,755; Apr. 3; v. 237; p. 261.

Leigh, Charles Q. C., Chicago, Ill. Veneer shipping-crate. No. 1,222,638; Apr. 17; v. 237; p. 648.

Leighton, Arthur M., Melbourne, Quebec, Canada, assignor to Boston Last Company, Boston, Mass. Last. No. 1,222,553; Apr. 10; v. 237; p. 576.

Leitch, John H., Detroit, Mich. Automatic accelerator. No. 1,222,874; Apr. 17; v. 237; p. 729.

Leland-Gifford Company. (See Nikoloff, Subbo, assignor.)

Lemon & Bro., William F. (See Hirst, Harry R., assignor.)

Lenderoth, Arnold W. (See Fox and Lenderoth.)

Lenders, Adolph W. H., Cedar Rapids, Iowa. Apparatus for freeing lump-starch from adhering dust or powder. No. 1,223,406; Apr. 24; v. 237; p. 941.

Leon-Ferenbach Silk Company, The. (See Cheeseman, Alva E., assignor.)

Leonard, Albert P., New York, N. Y., assignor to Honolulu Iron Works Company. Aspirator. No. 1,221,463; Apr. 3; v. 237; p. 162.

Leonard, Charles, Lake Geneva, Wis. Fishing tackle. No. 1,222,774; Apr. 17; v. 237; p. 694.

Lepel, Egbert von, Berlin-Wilmersdorf, Germany. Producing electrical oscillations of high frequency from direct current. No. 1,224,048; Apr. 24; v. 237; p. 1166.

Lepper, John H., Mason City, Iowa. Electrical vaporizer. No. 1,222,425; Apr. 10; v. 237; p. 531.

Lepper, John H., Mason City, Iowa. Heating means for carbureters. No. 1,222,426; Apr. 10; v. 237; p. 531.

Lerch, William H., assignor to Eugene Dietzgen Company, Chicago, Ill. Desurfacer. No. 1,222,875; Apr. 17; v. 237; p. 729.

Leslie, Robert W. D., London, and G. A. Child, Southampton, England. Ambulance-vehicle. No. 1,223,592; Apr. 24; v. 237; p. 1007.

Letz, John H., assignor to The Letz Manufacturing Company, Crown Point, Ind. Grinding-machine. No. 1,223,497; Apr. 24; v. 237; p. 974.

Letz Manufacturing Company, The. (See Letz, John H., assignor.)

Levinstein Limited. (See Morgan, Gilbert T., assignor.)

Levis, Thomas S. (See Luery, Levis, and Nelson.)

Levitan, Barney. (See Cannon, Jeronimo, assignor.)

Levy, Edward D. (See Jacobs and Levy.)

Lewellen, John W., Ridal, and F. P. Homer, Aldan, Pa. Headlight. No. 1,222,427; Apr. 10; v. 237; p. 532.

Lewers, Robert J., Newport News, Va. Toilet-disinfector. No. 1,221,340; Apr. 3; v. 237; p. 119.

Lewis, George H., Elyria, Ohio. Resilient shoe-heel section or lift. No. 1,222,639; Apr. 17; v. 237; p. 648.

Lewis, Russell W., Waukegan, Ill., assignor to United States Envelope Company, Springfield, Mass. Assembling and banding machine. No. 1,221,196; Apr. 3; v. 237; p. 69.

Lewis, Samuel H., Richmond, Va. Fluid-pressure-operated valve-gear-shifting mechanism. No. 1,221,876; Apr. 10; v. 237; p. 336.

Lewson, Harry, Brooklyn, N. Y. Door-hanger. No. 1,222,876; Apr. 17; v. 237; p. 730.

Leymarie, Antoine E., Paris, France. Shock-absorber for vehicles. No. 1,223,705; Apr. 24; v. 237; p. 1049.

Libby, Leonard F., Portland, Me. Plate developing holder. No. 1,223,057; Apr. 17; v. 237; p. 791.

Lichtenberg, Erich H., assignor to Koehring Machine Company, Milwaukee, Wis. Hand-operated chute. No. 1,221,756; Apr. 3; v. 237; p. 261.

Lichtenberg, Erich H., assignor to Koehring Machine Company, Milwaukee, Wis. Concrete-mixer-loading bucket. No. 1,223,185; Apr. 17; v. 237; p. 856.

Lichtman, Michael, New York, N. Y. Photographic camera. No. 1,222,310; Apr. 10; v. 237; p. 489.

Liddell, Moses V., Brooklyn, N. Y. Wheeled scraper. No. 1,222,428; Apr. 10; v. 237; p. 532.

Liebknecht, Otto, Frankfort-on-the-Main, Germany, assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y. Compound containing active oxygen and making the same. No. 1,222,640; Apr. 17; v. 237; p. 648.

Liebmann, Adolf. (See Dewar and Liebmann.)

Lienesch, Walter H., assignor to Universal Concrete Products Company, Chicago, Ill. Centrifugal concrete-pole machine. No. 1,222,958; Apr. 17; v. 237; p. 757.

Ligon, Arthur L., Fort Stockton, Tex. Pump. No. 1,223,498; Apr. 24; v. 237; p. 974.

Lile, Clarence, assignor to Superior Products Company, Granite City, Ill. Box-liner. No. 1,222,221; Apr. 10; v. 237; p. 458.

Lillibridge, Harry D., Zanesville, Ohio, assignor to American Encaustic Tiling Company, New York, N. Y. Affording protection to workmen during the operation of spraying ceramic and other articles. No. 1,223,809; Apr. 24; v. 237; p. 1086.

Lillibridge, Harry D., Zanesville, Ohio, assignor to American Encaustic Tiling Company, New York, N. Y. Sanitary tile-spraying chamber. No. 1,223,810; Apr. 24; v. 237; p. 1087.

Lillich, Frederick, Philadelphia, Pa. Fender. No. 1,222,877; Apr. 17; v. 237; p. 730.

Linaker, Frederick W., Dubois, assignor to The Vulcan Soot Cleaner Co., of Pittsburg, Pa., Dubois, Pa. Soot-cleaner for water-tube boilers. No. 1,222,641; Apr. 17; v. 237; p. 648.

Lincoln, Paul M., Pittsburgh, Pa. Automobile-starter. No. 1,222,222; Apr. 10; v. 237; p. 459.

Lind, Herman H., Lakewood, assignor to The Ohio Blower Company, Cleveland, Ohio. Ventilator. No. 1,222,554; Apr. 10; v. 237; p. 576.

Lindemuth, Lewis B. (See Carney and Lindemuth.)

Lindgren, Fredrick J., New Haven, Conn. Garment-supporter. No. 1,223,989; Apr. 24; v. 237; p. 1146.

Lindsay, Walter L., Chicago, Ill. Riveting-tool. No. 1,223,407; Apr. 24; v. 237; p. 941.

Lindsley, Edward A., Spokane, Wash. Apparatus for treating poles or other wooden articles. No. 1,223,890; Apr. 24; v. 237; p. 1114.

Lindstrom, Richard S., Detroit, Mich. Wrench. No. 1,223,706; Apr. 24; v. 237; p. 1049.

Link Belt Company. (See Hayward, Henry E., assignor.)

Lint, Peter H., Los Gatos, Cal. Fruit-gatherer. No. 1,222,878; Apr. 17; v. 237; p. 730.

Linton, Morris, Moorestown, N. J., assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Lever mechanism for operating throttle-valves. No. 1,222,429; Apr. 10; v. 237; p. 532.

Lipman, Jacob G., New Brunswick, N. J. Producing citrate soluble phosphates. No. 1,222,112; Apr. 10; v. 237; p. 419.

Lippitt, Elihu, assignor to Grand Rapids Underwear Company, Grand Rapids, Mich. Pattern drum and chain for knitting-machines. No. 1,223,811; Apr. 24; v. 237; p. 1087.

Lipps, Louis P., Cleveland, Ohio, assignor to himself as trustee. Street-car and similar vehicle. No. 1,223,186; Apr. 17; v. 237; p. 837.

Lissauer, Adolph W., New York, N. Y. Nozzle. No. 1,223,081; Apr. 17; v. 237; p. 790.

Lissauer, Adolph W., New York, N. Y. Compressible-fluid washer. No. 1,223,082; Apr. 17; v. 237; p. 790.

Listak, John, Youngstown, Ohio. Snap-hook. No. 1,223,812; Apr. 24; v. 237; p. 1087.

Littauer, Lucius N. (See Weis, John P., assignor.)

Little, Henry, *et al.* (See Willson, Mendal W., assignor.)

Little, Clarence B., assignor to The Brownell Company, Dayton, Ohio. Automatic safety-stop for engines. No. 1,221,757; Apr. 3; v. 237; p. 262.

Little, Lillian E. (See Bowen, Philip A., assignor.)

Little, Thomas D., Dothan, Tex. Peanut-planter. No. 1,222,113; Apr. 10; v. 237; p. 419.

Livesay, Robert C. (See Raney and Livesay.)

Livingston, George D., Minneapolis, assignor to R. B. Whitacre, St. Paul, Minn. Liquid-weigher. No. 1,223,593; Apr. 24; v. 237; p. 1008.

Lilski, Stanislaw. (See Mischansky, Stephen A., assignor.)

Lobdell, Edward J., Onaway, Mich. Wheel-rim. No. 1,223,990; Apr. 24; v. 237; p. 1146.

Locke, John, White Plains, N. Y. Changeable display-board. No. 1,221,758; Apr. 3; v. 237; p. 262.

Locomotive Stoker Company. (See Lower, Nathan M., assignor.)

Loeb, Joseph H. (See Boudreaux, Hamilton J., assignor.)

Loeb, Rudolf, Jonkiatown, Pa. Embroidered seam. No. 1,222,775; Apr. 17; v. 237; p. 694.

Loertscher, David, St. Gallen, Switzerland. Device for handling loaves of cheese. No. 1,221,341; Apr. 3; v. 237; p. 119.

Loescher, George A. (See Wegner, Loescher, and Plowright.)

Loetscher, Emil C., Dubuque, Iowa. Multiple refrigerating apparatus. No. 1,222,642; Apr. 17; v. 237; p. 648.

Loetscher, Emil C., Dubuque, Iowa. Refrigerating apparatus. No. 1,223,813; Apr. 24; v. 237; p. 1088.

Loftsgaarden, Albert T., Powell, Wyo. Door-closer. No. 1,223,408; Apr. 24; v. 237; p. 942.

London, William J. A., Hartford, Conn., assignor to The Westinghouse Machine Company. Elastic-fluid turbine. No. 1,223,342; Apr. 17; v. 237; p. 886.

Lonergan, Thomas, *et al.* (See Cabanne, Charles G., assignor.)

Long, C. Clarence. (See Spangler, Charles H., assignor.)

Long, Hubert A., Berkeley, Cal. Gear. No. 1,223,058; Apr. 17; v. 237; p. 791.

Long, Sidney L., assignor to Pence Mailing Machine Company, Minneapolis, Minn. Envelop-sealing machine. No. 1,223,499; Apr. 24; v. 237; p. 975.

Longley, Ira G., Kit Carson, assignor of one-half to N. E. Mills, Loveland, Colo. Adjustable angle-defining gage. No. 1,222,959; Apr. 17; v. 237; p. 757.

Lonn, Edward J., assignor to Great Western Manufacturing Co., Laporte, Ind. Manufacturing seat-posts. No. 1,223,059; Apr. 17; v. 237; p. 791.

Loomis, Alfred L., Tuxedo Park, N. Y. Toy. No. 1,222,005; Apr. 10; v. 237; p. 382.

Loomis, Allen, assignor to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,222,006; Apr. 10; v. 237; p. 382.

Loomis, Cecil F. (See McFarland and Loomis.)

López, Jesus M., C. Piedras Negras Coah, Mexico. Shock-absorber. No. 1,221,877; Apr. 10; v. 237; p. 337.

Lord, Chester R., Mineral City, Ohio. Hand-brake for railway-cars. No. 1,223,891; Apr. 24; v. 237; p. 1114.

Louisiana Nut and Produce Company. (See Williams, Dick B., assignor.)

Louthan, Charlie O., Kansas City, Kans. Signaling device. No. 1,223,060; Apr. 17; v. 237; p. 792.

Lovejoy, Fred P., Springfield, Vt. Metal-working tool. No. 1,222,643; Apr. 17; v. 237; p. 649.

Lovejoy, John F., New Rochelle, assignor of one-half to A. Stein, New York, N. Y. Briqueting-machine. No. 1,221,878; Apr. 10; v. 237; p. 337.

Lovekin, Luther D., Philadelphia, Pa. Thermostatic gas-valve mechanism. No. 1,221,197; Apr. 3; v. 237; p. 69.

Lowe, John, and J. J. Lyth, Valleyfield, Quebec, Canada. Method of and apparatus for straightening weft-threads. No. 1,222,776; Apr. 17; v. 237; p. 694.

Lowe, Robert E., Brooklyn, N. Y. Garment. No. 1,222,777; Apr. 17; v. 237; p. 695.

Lower, Nathan M., Schenectady, N. Y. Locomotive-tender. No. 1,223,594; Apr. 24; v. 237; p. 1008.

Lower, Nathan M., Jarrettown, Pa., assignor to Locomotive Stoker Company, Schenectady, N. Y. Locomotive-stoker. No. 1,222,430; Apr. 10; v. 237; p. 533.

Ludwig Hupfeld Aktiengesellschaft. (See Hennig, Gustav K., assignor.)

Luery, Michael, assignor to Model Form Company, Chicago, Ill. Adjustable model dress-form. No. 1,221,550; Apr. 3; v. 237; p. 193.

Luery, Michael, T. S. Levis, and B. S. Nelson, assignors to Model Form Company, Chicago, Ill. Adjustable-connecting device for dress-forms. No. 1,221,549; Apr. 3; v. 237; p. 193.

Lummus Cotton Gin Company. (See Grimes, Thaddeus S., assignor.)

Lundell, Alben E., assignor to Western Electric Company, Incorporated, New York, N. Y. Semi-automatic telephone system. No. 1,221,879; Apr. 10; v. 237; p. 338.

Lundell, Alben E., assignor to Western Electric Company, Incorporated, New York, N. Y. Message-register circuits. No. 1,222,311; Apr. 10; v. 237; p. 489.

Lundell, Alben E., New York, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated, Telephone system. No. 1,222,879; Apr. 17; v. 237; p. 731.

Lundin, Ragnar O. W., New Britain, assignor to The Trumbull Manufacturing Company, Plainville, Conn. Electric switch. No. 1,224,116; Apr. 24; v. 237; p. 1189.

Lutter, Adolph C., Glenview, Ill. Hinge. No. 1,223,187; Apr. 17; v. 237; p. 837.

Lutz, Ambrose F., Keota, Iowa. Automobile-jack. No. 1,223,814; Apr. 24; v. 237; p. 1088.

Lutz, Carl, St. Gallen, Switzerland, assignor to Reichenbach & Co., New York, N. Y. Flounced skirt. No. 1,221,198; Apr. 3; v. 237; p. 70.

Lutz, Harry G., Geneva, N. Y. Safety-razor. No. 1,221,065; Apr. 3; v. 237; p. 21.

Lutz, William D., Allendale, assignor to Otis Elevator Company, Jersey City, N. J. Alternating-current magnet-brake. No. 1,221,880; Apr. 10; v. 237; p. 338.

Lymburner, Louis M., Montreal, Quebec, Canada. Centrifugal brake for harness-hangers. No. 1,223,815; Apr. 24; v. 237; p. 1088.

Lynch, James B., Syracuse, N. Y. Tire for automobiles. No. 1,221,759; Apr. 3; v. 237; p. 262.

Lynch, Walter D., St. Paul, Minn. Device for containing and applying shoe-polish. No. 1,221,066; Apr. 3; v. 237; p. 21.

Lynn, John, New York, N. Y. Spraying or atomizing device. No. 1,223,083; Apr. 17; v. 237; p. 800.

Lyon, John S., assignor of one-half to T. C. Uhlen, Rochester, N. Y. Baby-walker. No. 1,223,707; Apr. 24; v. 237; p. 1050.

Lyon Metallic Manufacturing Company. (See O'Connor, John B., assignor.)

Lyons, Edward S., Woburn, Mass. Grinding-machine. No. 1,223,500; Apr. 24; v. 237; p. 976.

Lysholm, Henry, Woodbury, N. J. Mechanism for feeding sheet metal to punching-machines. No. 1,221,881; Apr. 10; v. 237; p. 339.

Lyth, John J. (See Lowe and Lyth.)

Lytton, Cullen L., Withers, N. C. Cushioning device for combing-nippers. No. 1,222,880; Apr. 17; v. 237; p. 731.

M. Brockmann, Chemische Fabrik m. b. H. (See Köhn, Claus H., assignor.)

M. D. Knowlton Company. (See Hawkins and Seymour, assignors.)

MacDonald, William W. (See Davis and MacDonald.)

MacKay, Vasil, Boston, Mass. Furnace. No. 1,221,073; Apr. 3; v. 237; p. 24.

MacLane, Stanley R., Boston, Mass. Driving and speed-regulating mechanism for phonographs. No. 1,221,074; Apr. 3; v. 237; p. 25.

MacLane, Stanley R., Boston, Mass. Driving and speed-regulating mechanism for phonographs. No. 1,221,075; Apr. 3; v. 237; p. 25.

Macdonald, Edith O., St. Regis Falls, N. Y. Dye composition. No. 1,222,433; Apr. 10; v. 237; p. 534.

Macdonald, James, Chicago, Ill. Lifting device. No. 1,223,410; Apr. 24; v. 237; p. 943.

Macé, Jules, Marseille, France. Apparatus for solving problems of spherical geometry. No. 1,223,502; Apr. 24; v. 237; p. 977.

Macer, Lionel W., Pilgrims Rest, Transvaal, South Africa. Rail-joint. No. 1,222,313; Apr. 10; v. 237; p. 490.

Macey, Sarah A., Las Animas, Colo. Curtain-bracket. No. 1,222,434; Apr. 10; v. 237; p. 534.

Machen, Albert S., Hicks Wharf, Va., assignor, by mesne assignments, to The National Cash Register Co., Dayton, Ohio. Advertising-cabinet. (Reissue.) No. 14,285; Apr. 17; v. 237; p. 890.

Mack, James E., Ray Brook, N. Y. Printed instrument. No. 1,222,010; Apr. 10; v. 237; p. 384.

Mackey, Henry, *et al.* (See Gage, Joseph J., assignor.)

Mackintosh, John, Melrose, and W. P. Callahan, Oakland, Cal. Saw-filing machine. No. 1,221,343; Apr. 3; v. 237; p. 120.

Madden, Thomas J., Cairo, Ill. Foot-gage. No. 1,221,557; Apr. 3; v. 237; p. 196.

Madigan, Cornelius F., and T. Webster, Brooklyn, N. Y. Container. No. 1,222,227; Apr. 10; v. 237; p. 461.

Madsen, Soren, New York, N. Y. Vending-machine for articles of food and the like. No. 1,222,314; Apr. 10; v. 237; p. 490.

Maegly, Frederick C., Chicago, Ill. Display device for car-weights. No. 1,221,464; Apr. 3; v. 237; p. 162.

Maegly, Frederick C., Chicago, Ill. Tare-weight indicator for freight-cars. No. 1,221,465; Apr. 3; v. 237; p. 163.

Magnetic Phonograph Company. (See Nolen and McElroy, assignors.)

Maher, James M., Freemont, Nebr. Portable track device for motor-vehicles. No. 1,222,781; Apr. 17; v. 237; p. 696.

Mainwaring, Albert E. (See Thomas and Mainwaring.)

Maitland, John, Swampscott, Mass. Thread-stand. No. 1,221,883; Apr. 10; v. 237; p. 340.

Maker, Ernest, Elsinore, Cal. Punch. No. 1,222,961; Apr. 17; v. 237; p. 758.

Malacove, James M., Tacoma, Wash. Power-driven agricultural implement for plowing. No. 1,222,647; Apr. 17; v. 237; p. 650.

Malick, Boyd C., Lima, Ohio. Shoe attachment. No. 1,223,994; Apr. 24; v. 237; p. 1148.

Mancha, Raymond, St. Louis, Mo. Storage-battery locomotive. No. 1,224,122; Apr. 24; v. 237; v. 1192.

Mangan, Thomas J. (See Swingle and Mangan.)

Maulerre, George, Milwaukee, Wis. Box-car-loading machine. No. 1,223,085; Apr. 17; v. 237; p. 800.

Manley, McCaslan V., Newnan, Ga. Cotton-seed planter. No. 1,222,228; Apr. 10; v. 237; p. 461.

Manlove, Joseph E., Plymouth, Ill. Spark-plug. No. 1,223,188; Apr. 17; v. 237; p. 837.

Manly, Charles M., Freeport, N. Y. Vehicle-tire. No. 1,223,816; Apr. 24; v. 237; p. 1089.

Mann, Charles F., Washougal, Wash. Match-box. No. 1,223,189; Apr. 17; v. 237; p. 837.

Mann, Nelson E., New Britain, Conn., assignor to Reliance Electric Heating Company, Columbia, Pa. Electric heating-pad. (Reissue.) No. 14,286; Apr. 17; v. 237; p. 891.

Mannhardt, Daniel W., F. L., and H. A., Washington, Iowa. Weed-exterminator. No. 1,223,817; Apr. 24; v. 237; p. 1089.

Mannhardt, Frederick L. (See Mannhardt, Daniel W., F. L., and H. A.)

Mannhardt, Herman A. (See Mannhardt, Daniel W., F. L., and H. A.)

Manning, Coleman J., Medford, assignor to American Steam Gauge & Valve Manufacturing Co., Boston, Mass. Pressure-gage. No. 1,222,315; Apr. 10; v. 237; p. 491.

Manning, Walter M., and O. B. Ganson, Omaha, Nebr. Attachment for vapor-heating systems. No. 1,223,190; Apr. 17; v. 237; p. 838.

Mansfield & Co. (See Bostock, Edgar H., assignor.)

Mansfield, James G. B., Gorda, Cal. Sidehill gang-plow. No. 1,221,764; Apr. 3; v. 237; p. 264.

Manteufel, Otto C., Milwaukee, Wis. Loose-leaf binder. No. 1,221,466; Apr. 3; v. 237; p. 163.

Manz Engraving Company. (See Voges, Paul, assignor.)

Mapson, Robert L., San Diego, assignor of one-half to L. Sperbeck, La Mesa, Cal. Valve-releasing device. No. 1,222,229; Apr. 10; v. 237; p. 461.

Marble, Webster L., Gladstone, Mich. Slide-action firearm. No. 1,223,411; Apr. 24; v. 237; p. 943.

Marcotte, Joseph A., Babylon, N. Y. Mallet attachment for hammers. No. 1,221,344; Apr. 3; v. 237; p. 120.

Marleich, Lazo, Chicago, Ill. Swimming appliance. No. 1,221,167; Apr. 3; v. 237; p. 164.

Markham, Burtis O. (See Evans and Dutt, assignors.)

Markley, John E. (See Dam and Markley.)

Markowitz, Benjamin, Rockville Center, N. Y. Pivoted handle for suitcases. No. 1,223,503; Apr. 24; v. 237; p. 977.

Markowitz, Benjamin, Rockville Center, N. Y. Handle for traveling-bags or suitcases. No. 1,223,504; Apr. 24; v. 237; p. 978.

Marks, John C., Chicago, Ill. Growing-trough. No. 1,222,648; Apr. 17; v. 237; p. 651.

Marresford, William F. (See Diehl, Robert, assignor.)

Marresford, William F., Brooklyn, N. Y. Machine for making cut-out wall-paper. No. 1,223,892; Apr. 24; v. 237; p. 1115.

Marresford, William F., Brooklyn, N. Y. Machine for making wall-paper cut-outs. No. 1,223,893; Apr. 24; v. 237; p. 1115.

Marschke, Fredrich W. (See Marschke, William A. and F. W.)

Marschke, William A. and F. W., Indianapolis, Ind. Controller. No. 1,221,315; Apr. 3; v. 237; p. 121.

Marsh-Capron Manufacturing Company. (See Mosby, Alfred D., assignor.)

Marsh Valve Company. (See Marsh, William C., assignor.)

Marsh, William C., assignor to Marsh Valve Company, Erie, Pa. Valve. No. 1,223,326; Apr. 17; v. 237; p. 880.

Marsh, William C., assignor to Marsh Valve Company, Erie, Pa. Valve. No. 1,223,327; Apr. 17; v. 237; p. 880.

Marshall, Ernest H., Montezuma, Iowa. Lifting-jack. No. 1,223,995; Apr. 24; v. 237; p. 1148.

Marshall, George D., Kokomo, Ind. Intra-uterine dilating-pessary. No. 1,223,284; Apr. 17; v. 237; p. 866.

Marshall, Ianthus E., Richmond, Cal. Expansible hasp. No. 1,222,649; Apr. 17; v. 237; p. 651.

Martin, Charles H., Springfield, Mass. Tractor. No. 1,223,505; Apr. 24; v. 237; p. 978.

Martin, Christian H., assignor to J. R. Gammeter, Akron, Ohio. Piano-bench. No. 1,223,086; Apr. 17; v. 237; p. 801.

Martin, Francis, San Francisco, Cal. Davenport. No. 1,223,285; Apr. 17; v. 237; p. 866.

Martin, Homer V., Lincoln, Nebr. Guide-file. No. 1,221,884; Apr. 10; v. 237; p. 340.

Martin, John A., assignor of one-half to J. H. Woodard, Spokane, Wash. Safety elevator mechanism. No. 1,221,885; Apr. 10; v. 237; p. 341.

Martin, Leonard D., Marinette, Wis. Cigar-case. No. 1,222,435; Apr. 10; v. 237; p. 534.

Martin, Talbot G., assignor to Automatic Electric Company, Chicago, Ill. Automatic telephone switching apparatus. No. 1,221,346; Apr. 3; v. 237; p. 121.

Martin, Talbot G., Chicago, Ill., assignor, by mesne assignments, to Automatic Electric Company. Common-battery automatic telephone system. No. 1,223,506; Apr. 24; v. 237; p. 978.

Marui, Hyokichi. (See Marui, Marie H. and H.)

Marui, Marie H. and H., New York, N. Y. Fountain attachment for pens. No. 1,221,468; Apr. 3; v. 237; p. 164.

Marvin, Cornelius J., assignor to The Braun Corporation, Los Angeles, Cal. Gas-generating apparatus. No. 1,222,782; Apr. 17; v. 237; p. 696.

Marx, Henry J., Holyoke, Mass., assignor to The American Thread Company, Jersey City, N. J. Stop-motion for drum-spoolers. No. 1,222,962; Apr. 17; v. 237; p. 758.

Mason, Francis C., assignor to Bissell Carpet Sweeper Company, Grand Rapids, Mich. Vacuum-cleaner. No. 1,222,436; Apr. 10; v. 237; p. 535.

Mason, Francis C. (See Shanahan and Mason.)

Mason, Fred, Springfield, Mo. Force-feeder for grease cups. No. 1,221,551; Apr. 3; v. 237; p. 194.

Mastrolanni, Salvatore, Waterbury, Conn. Periodical-call apparatus. No. 1,223,286; Apr. 17; v. 237; p. 866.

Matchette, Frank J., Milwaukee, Wis. Service-door. No. 1,222,963; Apr. 17; v. 237; p. 758.

Matchette, Frank J., Milwaukee, Wis. Cabinet service-door. No. 1,222,964; Apr. 17; v. 237; p. 759.

Matchette, Frank J., Milwaukee, Wis. Signaling mechanism. No. 1,222,965; Apr. 17; v. 237; p. 759.

Matchette, Frank J., Milwaukee, Wis. Compartment-sealing mechanism. No. 1,222,966; Apr. 17; v. 237; p. 760.

Mather, Frank S., New York, N. Y. Finger-moistener. No. 1,223,996; Apr. 24; v. 237; p. 1148.

Mathes, Charles. (See Williams, Robert, assignor.)

Mathes, Lester P. and U. L., and C. H. Russell, Grand Valley, Okla. Agricultural machine. No. 1,223,818; Apr. 24; v. 237; p. 1089.

Mathes, Ulysses L. (See Mathes and Russell.)

Mathias, Herman E., Brooklyn, N. Y. Nursery rattle and toy. No. 1,223,507; Apr. 24; v. 237; p. 979.

Mattes Plumbing Company, The. (See Zodeck, Perlin, assignor.)

Matthewman, Winfred, Ingleton, England. Valve and the like. No. 1,222,316; Apr. 10; v. 237; p. 491.

Matthews, Aubrey, Fitzgerald, Ga. Tie-press. No. 1,221,886; Apr. 10; v. 237; p. 341.

Mattison, Magnus W., assignor to C. Mattison Machine Works, Beloit, Wis. Cutter-head. No. 1,222,783; Apr. 17; v. 237; p. 697.

Mattox, Jesse P., Stillwell, Okla. Wire-fence stretcher. No. 1,223,709; Apr. 24; v. 237; p. 1050.

Mattson, Jacob, and J. O'Brien, Virginia, Minn. Clothes-pin. No. 1,223,710; Apr. 24; v. 237; p. 1050.

Matzene, R. Gordon. (See McCarty and Falck, assignors.)

Mauger, John B. (See McMahan and Mauger.)

Maxsen, Reynolds R., *et al.* (See Umpleby, Harry C., assignor.)

Maxwell, George W., assignor, by mesne assignments, to Security Manufacturing Company, San Francisco, Cal. Check-protector. No. 1,222,317; Apr. 10; v. 237; p. 492.

Maxwell, Thomas S., Cleveland, Ohio. Detachable lining for vehicle mud-guards. No. 1,222,011; Apr. 10; v. 237; p. 384.

May, Gerald D., Washington, D. C. Automatic adjuster for eccentric shafts. No. 1,223,997; Apr. 24; v. 237; p. 1148.

Mayhew, Earl P., San Diego, Cal. Gold-saving amalgamator. No. 1,221,347; Apr. 3; v. 237; p. 122.

Mayhew, Frank, assignor to Atlas Ball Company, Philadelphia, Pa. Ball-finishing machine. No. 1,223,087; Apr. 17; v. 237; p. 801.

Maynard, Norman C. (See Bilton, George E., assignor.)

Maynard, William H., Burlington, Vt. Clothes-hanger. No. 1,223,998; Apr. 24; v. 237; p. 1149.

McAdams, William J., Spurlock, Tex. Grain-drill attachment. No. 1,222,644; Apr. 17; v. 237; p. 649.

McAlpine, Edward M. C. (See Wielaert, Johan, assignor.)

McArthur, Alexander P., Chicago, Ill. Fountain-pen. No. 1,222,555; Apr. 10; v. 237; p. 577.

McBean, Duncan D., New York, N. Y. Tunnel and building same. No. 1,221,067; Apr. 3; v. 237; p. 22.

McBean, Duncan D., New York, N. Y. Building and placing piers. No. 1,221,068; Apr. 3; v. 237; p. 22.

McCann, John J., Burlington, N. J. Lathe for turning irregular forms. No. 1,221,552; Apr. 3; v. 237; p. 194.

McCarthy, Daniel J., Wilkinsburg, assignor to The Union Switch & Signal Company, Swissvale, Pa. Electromagnetic apparatus. No. 1,222,431; Apr. 10; v. 237; p. 533.

McCarty, John P., and F. W. Falck; said Falck assignor to R. G. Matzene, Los Angeles, Cal. Surf diving and skimming device. No. 1,222,114; Apr. 10; v. 237; p. 419.

McCaskell, Jasper A., Salt Lake City, Utah. Refining sugar liquor. No. 1,221,553; Apr. 3; v. 237; p. 194.

McCaskell, Jasper A., Salt Lake City, Utah. Refining sugar liquor. No. 1,221,554; Apr. 3; v. 237; p. 195.

McClasky, Lawson, Butte, Mont. Miner's cap. No. 1,223,991; Apr. 24; v. 237; p. 1146.

McCleary, Joseph F., Findlay, Ohio. Firearm. No. 1,222,778; Apr. 17; v. 237; p. 695.

McClelland, David H., Pittsburgh, Pa. Nail-making machine. No. 1,221,555; Apr. 3; v. 237; p. 195.

McClenathen, Robert, Akron, Ohio, assignor, by mesne assignments, to International Harvester Corporation. Ignition system. No. 1,221,199; Apr. 3; v. 237; p. 70.

McClenathen, Robert, Akron, Ohio, assignor, by mesne assignments, to International Harvester Corporation. Ignition system. No. 1,221,200; Apr. 3; v. 237; p. 70.

McClenathen, Robert, Akron, Ohio, assignor, by mesne assignments, to International Harvester Corporation. Electric ignition system. No. 1,221,201; Apr. 3; v. 237; p. 71.

McConnell, John T., assignor of one-half to J. H. Newell, Wichita, Kans. Rail-clamp. No. 1,223,992; Apr. 24; v. 237; p. 1147.

McConway & Torley Company, The. (See Regan, William J., assignor.)

McCool, Edward F., assignor to The McCool Mfg. & Trading Co., Victor, Colo. Driving mechanism for grinding-mills. No. 1,221,760; Apr. 3; v. 237; p. 263.

McCool Mfg. & Trading Co., The. (See McCool, Edward F., assignor.)

McCormick, Hugh M., Chicago, Ill., assignor to Uplift Corset Company, Phoenix, Ariz. Designing corset-stays. No. 1,221,811; Apr. 3; v. 237; p. 282.

McCormick, Joseph K., Union, Ind. Stock-feeder. No. 1,222,556; Apr. 10; v. 237; p. 577.

McCourt, Cyril D. (See Bone, Wilson, and McCourt.)

McCullough, Hugh B., Brockwayville, Pa. Filing-index. No. 1,222,881; Apr. 17; v. 237; p. 731.

McDaniel, James, Minneapolis, Minn. Dust-separating fan. No. 1,222,779; Apr. 17; v. 237; p. 695.

McDonal, Lee (See Nelson and McDonal.)

McDonald, Joseph A. (See Elmstrom and McDonald.)

McDowell, Edward C., Hamilton, Ontario, Canada. Brake-beam. No. 1,222,882; Apr. 17; v. 237; p. 732.

McDuffie, John F. (See Hughes and McDuffie.)

McEachron, Lynn P., Hoosick Falls, N. Y. Tool-holder. No. 1,221,556; Apr. 3; v. 237; p. 195.

McElroy, James F., Albany, N. Y., assignor to Consolidated Car-Heating Company. Operating mechanism for car-doors. No. 1,221,202; Apr. 3; v. 237; p. 71.

McElroy, Robert L. (See Nolen and McElroy.)

McElroy, Robert L., New York, N. Y. Wrench. No. 1,222,780; Apr. 17; v. 237; p. 696.

McFadden, Patrick H., Spokane, Wash. Rail-anticreeper. No. 1,221,203; Apr. 3; v. 237; p. 71.

McFall, Earl D. (See Ratcklin, Emery J., assignor.)

McFarland, George, and C. F. Loomis, Peoria, Ill. Tractor. No. 1,222,557; Apr. 10; v. 237; p. 578.

McGarry & Co., John A. (See Nelson, Herman, assignor.)

McGirr, William J., assignor of one-half to J. J. Dunn, Pinsonfork, Ky. Metal tie. No. 1,223,061; Apr. 17; v. 237; p. 792.

McGrath, Thomas W., Silverton, Oreg. Gate. No. 1,222,223; Apr. 10; v. 237; p. 459.

McGrew, Charles L., Kansas City, Mo. Automatic safety steering device. No. 1,221,761; Apr. 3; v. 237; p. 263.

McGuane, Felix J., Chicago, Ill. Liquid-elevating apparatus. No. 1,221,069; Apr. 3; v. 237; p. 23.

McGuane, Felix J., Chicago, Ill. Liquid-elevator. No. 1,221,070; Apr. 3; v. 237; p. 23.

McGuiness, Benjamin F., Saundersville, assignor to Crompton & Knowles Loom Works, Worcester, Mass. Weft-detecting mechanism for looms. No. 1,223,708; Apr. 24; v. 237; p. 1050.

McGuire, Charles, Seattle, Wash. Cableway. No. 1,222,007; Apr. 10; v. 237; p. 383.

McIntosh, Charles C., Los Angeles, assignor to G. D. Parker, Riverside, Cal. Brush construction. No. 1,222,645; Apr. 17; v. 237; p. 649.

McIntyre, John C., Hoopeston, assignor to Sprague Canning Machinery Company, Chicago, Ill. Cleaner and scalder. No. 1,222,008; Apr. 10; v. 237; p. 383.

McIntyre, William H., assignor of one-fourth to F. M. Sala and four-twentieths to G. W. Core, Toledo, Ohio. Piston-valve. No. 1,222,115; Apr. 10; v. 237; p. 420.

McKay Company, The. (See McKay, Stewart R., assignor.)

McKay, Richard V., Steelton, Pa. Cooling-plate for nodulizing-kilns. No. 1,222,646; Apr. 17; v. 237; p. 650.

McKay, Stewart R., assignor to The McKay Company, Cleveland, Ohio. Means for holding demountable rims on wheels. No. 1,223,501; Apr. 24; v. 237; p. 976.

McKay, William A., *et al.* (See Claussen, Martin, assignor.)

McKee, Charles H., Pittsburgh, Pa. Plowing-machine. No. 1,222,116; Apr. 10; v. 237; p. 420.

McKee, Charles H., Pittsburgh, Pa. Tilling-machine. No. 1,222,117; Apr. 10; v. 237; p. 420.

McKee, Ralph H., Orono, Me. Obtaining aluminum salts from silicates. No. 1,222,960; Apr. 17; v. 237; p. 758.

McKeever, Charles, Jersey City, N. J., assignor of one-third to W. H. Dickinson and one-third to C. B. Mears, New York, N. Y. Vehicle-lamp. No. 1,222,312; Apr. 10; v. 237; p. 490.

McLaughlin, Charles W., Buckhannon, assignor of one-half to G. L. Keener, Weston, W. Va. Pressure-regulator. No. 1,221,342; Apr. 3; v. 237; p. 120.

McMahan, Robert M., and J. B. Mauger, Potts Grove, Pa. Lock for automobiles. No. 1,221,882; Apr. 10; v. 237; p. 340.

McManus, Albert E., Duluth, Minn. Laminated spring. No. 1,221,071; Apr. 3; v. 237; p. 24.

McManus, Edward L., Jr., and C. A. Schultz, Jr., New York, N. Y. Controlling-lever lock. No. 1,223,084; Apr. 17; v. 237; p. 800.

McMartin, Archibald, deceased, Johnstown, N. Y.; J. K. McMartin, administratrix. Interchangeable hand-covering. No. 1,224,108; Apr. 24; v. 237; p. 1186.

McMartin, Josephine K., administratrix. (See McMartin, Archibald.)

McMillan, Bertha L., Minneapolis, Minn. Picture-frame. No. 1,223,409; Apr. 24; v. 237; p. 942.

McMillan, Frank G. and H. O., Minneapolis, Minn. Metallic insert. No. 1,223,595; Apr. 24; v. 237; p. 1009.

McMillan, Howard O. (See McMillan, Frank G. and H. O.)

McMillan, Joseph. (See Greenamyer, Clarence V., assignor.)

McMillan, Joseph, Glendale, and C. V. Greenamyer, Los Angeles, Cal. Current-collector for electric cars. No. 1,221,762; Apr. 3; v. 237; p. 263.

McMillan, Joseph, Glendale, and C. V. Greenamyer, Los Angeles, Cal. Trolley. No. 1,221,763; Apr. 3; v. 237; p. 264.

McMurray, John C., East Boston, Mass. Safety oil-gage for internal-combustion engines. No. 1,221,812; Apr. 3; v. 237; p. 282.

McNee, Robert H., Nyssa, Oreg. Lubricating device. No. 1,223,993; Apr. 24; v. 237; p. 1147.

McNeil, John F., Phoenix, Ariz. Perfume-vending machine. No. 1,222,224; Apr. 10; v. 237; p. 459.

McNeill, Thomas C., Chicago, Ill. Telephone-directory. No. 1,222,009; Apr. 10; v. 237; p. 384.

McNulty, Harry B., assignor to Wonder Talking Machine Company, Inc., New York, N. Y. Spring-motor. No. 1,221,072; Apr. 3; v. 237; p. 24.

McNulty, Michael P., Whitney, N. C. Railway construction. No. 1,222,432; Apr. 10; v. 237; p. 534.

McQueen, Ulysses G., New York, N. Y. Casement-lift and hinge. No. 1,223,062; Apr. 17; v. 237; p. 792.

McQueen, Ulysses G., New York, N. Y. Hinge or casement-lift. No. 1,223,063; Apr. 17; v. 237; p. 793.

McSwiney, Eugene A., Normandy, Mo. Package-tie. No. 1,223,596; Apr. 24; v. 237; p. 1009.

McWilliams, Arthur C., Chicago, Ill. Lamp-socket. No. 1,222,225; Apr. 10; v. 237; p. 460.

Meade, James, Stoughton, Mass. Method of preparing adhesive coatings and applying them to fabrics without the use of solvents. No. 1,222,967; Apr. 17; v. 237; p. 760.

Meader, Randall L., Portland, Me. Cylinder-scraper. No. 1,223,064; Apr. 17; v. 237; p. 793.

Meader, Warren S. (See Witty, Eby, and Meader.)

Mears, Charles W., Cleveland, Ohio. Paper-bending machine. No. 1,222,437; Apr. 10; v. 237; p. 535.

Mears, Clem B., *et al.* (See McKeever, Charles, assignor.)

Meas, Augustus, Niagara Falls, N. Y. Garment-balancing device. No. 1,222,012; Apr. 10; v. 237; p. 384.

Medlock, Walter M. (See Herzog and Medlock.)

Meek, Walter H., Louisville, Ky. Fumigating-candle and making the same. No. 1,222,883; Apr. 17; v. 237; p. 732.

Meinhardt, Adam B., Paxico, Kans. Harvester. No. 1,223,999; Apr. 24; v. 237; p. 1149.

Meinhardt, Adam B., Paxico, Kans. Harvester. No. 1,224,000; Apr. 24; v. 237; p. 1149.

Meinhardt, Adam B., Paxico, Kans. Harvester-reel-operating mechanism. No. 1,224,001; Apr. 24; v. 237; p. 1150.

Meinhardt, Adam B., Paxico, Kans. Cutting mechanism for harvesters. No. 1,224,002; Apr. 24; v. 237; p. 1150.

Meinhardt, Adam B., Paxico, Kans. Harvester. No. 1,224,003; Apr. 24; v. 237; p. 1151.

Meinhardt, Adam B., Paxico, Kans. Harvester. No. 1,224,004; Apr. 24; v. 237; p. 1152.

Meinhardt, Adam B., Paxico, Kans. Steering mechanism for harvesters. No. 1,224,005; Apr. 24; v. 237; p. 1152.

Menasha Cooperage Company. (See Wegner, Loescher, and Plowright, assignors.)

Mendenhall, Barzillai C., Parker, Ind. Fender for seeders and planters. No. 1,222,884; Apr. 17; v. 237; p. 732.

Méray, Frank, New York, N. Y. Self-lubricating plane. No. 1,222,438; Apr. 10; v. 237; p. 535.

Mercer, Henry H., Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Stoneworking-machine. No. 1,222,558; Apr. 10; v. 237; p. 578.

Mercer, John C., Pittsburgh, Pa. Sound-reproducing stylus. No. 1,221,348; Apr. 3; v. 237; p. 122.

Meredith, Herbert E., McAlester, Okla. Automatic film-winding mechanism for cameras. No. 1,221,558; Apr. 3; v. 237; p. 196.

Mergen, Joseph F., Tipton, and G. W. Hoover, Osborne, Kans. Luggage-carrier. No. 1,221,559; Apr. 3; v. 237; p. 197.

Mergenthaler Linotype Company. (See Bedell, Richard M., assignor.)

Mergenthaler Linotype Company. (See Kennedy, David S., assignor.)

Mergenthaler Linotype Company. (See Muehleisen and Albrecht, assignors.)

Mergenthaler Linotype Company. (See Muehleisen, Carl, assignor.)

Merriam, Ezra B., Schenectady, N. Y., assignor to General Electric Company. Electric switch. No. 1,222,439; Apr. 10; v. 237; p. 536.

Merrill, Jason L., Washington, D. C. Manufacturing tow from flax and similar plants. No. 1,222,968; Apr. 17; v. 237; p. 769.
Merriman, Robert M., Akron, Ohio. Collapsible core. No. 1,221,349; Apr. 3; v. 237; p. 122.
Merriman, Robert M., Akron, Ohio. Making four-ply lock-cord tires. No. 1,221,887; Apr. 10; v. 237; p. 341.
Merriman, Robert M., Akron, Ohio. Four-ply lock-cord tire. No. 1,221,888; Apr. 10; v. 237; p. 342.
Merritt, Adelbert R., Brewerton, N. Y. Adjustable sawmilling guide. No. 1,223,191; Apr. 17; v. 237; p. 838.
Merry, Frank B., and J. D. Ware, Savannah, Ga. Turning and fluting machine. No. 1,223,597; Apr. 24; v. 237; p. 1009.
Mershon, John H., Van Alstyne, Tex. Dry closet. No. 1,223,711; Apr. 24; v. 237; p. 1051.
Messenger, Frederick. (See Elzy and Messenger.)
Messiter, Edwin H., Brooklyn, assignor to Electric Weighing Company, New York, N. Y. Electric meter. No. 1,221,560; Apr. 3; v. 237; p. 197.
Metal Arts & Crafts Co. (See Jones, Charles E., assignor.)
Metals Recovery Company. (See Cole, David, assignor.)
Metals Research Company. (See Weidlein, Edward R., assignor.)
Metzger, Arthur E., Browning, Ill. Brake apparatus. No. 1,223,192; Apr. 17; v. 237; p. 838.
Meyer, Alexandre, Paris, France. Metal covering for car or vehicle bodies and preparing the same. No. 1,221,561; Apr. 3; v. 237; p. 197.
Meyer, Alexandre, Paris, France. Manufacture of panels made of enameled or vitrified sheet metal designed to be used as covering means for railways, carriages, tramways, automobiles, and the like. No. 1,221,562; Apr. 3; v. 237; p. 198.
Meyer, Alfred F. (See Reinhold and Meyer.)
Meyer, Eugene, *et al.* (See Perkins, Frank C., assignor.)
Meyer, Friedrich W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Frequency-changing system. No. 1,222,440; Apr. 10; v. 237; p. 536.
Meyer, George H., *et al.* (See Perkins, Frank C., assignor.)
Meyer, George J., *et al.* (See Perkins, Frank C., assignor.)
Meyer, George J., Milwaukee, Wis. Automatic safety-stop. No. 1,221,889; Apr. 10; v. 237; p. 342.
Meyer, Gustave. (See Wullyamoz and Meyer.)
Meyer, Leo P., *et al.* (See Perkins, Frank C., assignor.)
Meyer, Martin, Omaha, Nebr. Portable toilet-seat. No. 1,223,065; Apr. 17; v. 237; p. 793.
Meyer, Robert, Millheim-on-the-Ruhr, Germany. Rock machine-drill for operating with flushing water. No. 1,221,469; Apr. 3; v. 237; p. 164.
Meyers, George W., U. S. Army. Robber-proof railway-car. No. 1,221,563; Apr. 3; v. 237; p. 198.
Meyers, John M., West Chester, Pa. Fluid-pressure lifting-jack. No. 1,223,712; Apr. 24; v. 237; p. 1051.
Meyers, Louis A., Sauk Center, Minn., assignor, by mesne assignments, of one-half to Volunteer Firemen's Signal Company. Automatic fire and burglar alarm. (Reissue.) No. 14,288; Apr. 17; v. 237; p. 892.
Meyner, Walter, New York, N. Y. Toy. No. 1,223,508; Apr. 24; v. 237; p. 979.
Michelson, Frederick H., Denver, Colo. Automobile-headlight dimmer. No. 1,222,013; Apr. 10; v. 237; p. 385.
Middleton, Richard. (See Carpenter and Middleton.)
Mietoff, Erick. (See Haack and Mietoff.)
Milburn, Luther P., Boulder, Colo. Furniture-polish. No. 1,222,441; Apr. 10; v. 237; p. 537.
Miles, Albert E., Haverhill, Mass. Locking device for sliding doors. No. 1,223,713; Apr. 24; v. 237; p. 1051.
Millar, John R., Oakland, assignor to California Cotton Mills Company, San Francisco, Cal. Quilt and mattress. No. 1,221,890; Apr. 10; v. 237; p. 343.
Miller, Albert F. (See Peters, Fath, and Miller.)
Miller, Albert F., Denver, Colo. Mechanical-movement mechanism. No. 1,223,509; Apr. 24; v. 237; p. 979.
Miller, Albert F., assignor to Individual Specialties, Inc., New York, N. Y. Peg-board. No. 1,221,470; Apr. 3; v. 237; p. 164.
Miller, Bendix, assignor of one-half to C. A. Bright, Oakland, Cal. Casing-feeder. No. 1,222,318; Apr. 10; v. 237; p. 492.
Miller, Charles E., assignor to The Pyle-National Company, Chicago, Ill. Rock-shaft for valve-gears. No. 1,222,969; Apr. 17; v. 237; p. 760.
Miller, Emil C., Nutley, assignor to Sanitary Spout Company, West Nutley, N. J. Closure for bottles, jars, and other vessels. No. 1,221,350; Apr. 3; v. 237; p. 123.
Miller, Henry E., Moro, Ark. Permutation hasp-lock. No. 1,222,230; Apr. 10; v. 237; p. 462.
Miller, Jacob E., Coon Rapids, Iowa. Poultry-nest. No. 1,222,650; Apr. 17; v. 237; p. 651.
Miller, John G., Reading, Pa. Fishing-reel. No. 1,222,651; Apr. 17; v. 237; p. 652.
Miller, John M., assignor of one-half to O. S. Harper, Eagle Pass, Tex. Rod-lifting tool. No. 1,223,714; Apr. 24; v. 237; p. 1051.
Miller, John Z., assignor of one-half to G. G. Golling, Hagerstown, Md. Furnace. No. 1,223,715; Apr. 24; v. 237; p. 1052.
Miller, Marion R., Canyon, Tex. Farming implement. No. 1,221,351; Apr. 3; v. 237; p. 123.
Miller, Reginald R., assignor to Bates Valve Bag Company, Chicago, Ill. Machine for wire-tying bags. No. 1,222,014; Apr. 10; v. 237; p. 385.
Miller, Wilbur, Los Angeles, Cal. Tire-valve cap. No. 1,223,716; Apr. 24; v. 237; p. 1052.
Miller, William B., Pittsburgh, Pa. Machine for forming heels and toes of horseshoes. No. 1,222,574; Apr. 10; v. 237; p. 584.
Miller, William G., Kansas City, Mo. Pressure-regulator. No. 1,222,652; Apr. 17; v. 237; p. 652.
Miller, William G., Kansas City, Mo. Pressure-regulator. No. 1,222,653; Apr. 17; v. 237; p. 652.
Miller, William S., Washington, D. C. Mechanical movement. No. 1,221,471; Apr. 3; v. 237; p. 165.
Mills, Edward L., Los Angeles, Cal. Underreamer. No. 1,221,352; Apr. 3; v. 237; p. 123.
Mills, Edward L., Los Angeles, Cal. Underreamer. No. 1,221,353; Apr. 3; v. 237; p. 123.
Mills, Henry D., Inwood, N. Y. Window-screen. No. 1,221,564; Apr. 3; v. 237; p. 198.
Mills, Herbert S. (See Sandell, Henry K., assignor.)
Mills, N. E. (See Longley, Ira G., assignor.)
Mills, William, Birmingham, England. Grenade and the like. No. 1,223,598; Apr. 24; v. 237; p. 1009.
Mills, William, Birmingham, England. Grenade and the like. No. 1,223,599; Apr. 24; v. 237; p. 1010.
Mills, William, Birmingham, England. Grenade and the like. No. 1,223,600; Apr. 24; v. 237; p. 1010.
Miner, William H. (See Dath, Charles E., assignor.)
Miner, William H. (See Geiger, William A., assignor.)
Miner, William H. (See Harris, Joseph, assignor.)
Miner, William H. (See Johnson, George A., assignor.)
Miner, William H. (See Mitchell, John R., assignor.)
Miner, William H. (See O'Connor, John F., assignor.)
Miner, William H., Chazy, N. Y. Draft-rigging for railway-cars. No. 1,222,118; Apr. 10; v. 237; p. 421.
Mintern, Richard A., Horsham, Victoria, Australia. Cultivating implement. No. 1,221,565; Apr. 3; v. 237; p. 198.
Mintz, Harry, Boston, Mass. Folding hammock-support. No. 1,223,717; Apr. 24; v. 237; p. 1052.
Mischansky, Stephen A., assignor of one-half to S. Lilski, Syracuse, N. Y. Photographic developing apparatus. No. 1,222,654; Apr. 17; v. 237; p. 653.
Mitchell, Augusta V., Washington, D. C. Wheel-hub. No. 1,222,231; Apr. 10; v. 237; p. 462.
Mitchell, Augusta V., Washington, D. C. Wheel for artillery-carriages. No. 1,222,232; Apr. 10; v. 237; p. 462.
Mitchell, Augusta V., Washington, D. C. Spring-spoke wheel. No. 1,222,233; Apr. 10; v. 237; p. 463.
Mitchell, Charles C., and W. J. Barham, Dallas, Oreg. Bed-spring and tightener. No. 1,223,193; Apr. 17; v. 237; p. 838.
Mitchell, Charles T., Spencerport, N. Y. Combination suit-hanger. No. 1,223,194; Apr. 17; v. 237; p. 839.
Mitchell, George, Camas, Wash. Fruit-picker. No. 1,223,601; Apr. 24; v. 237; p. 1010.
Mitchell, Guy K., Baltimore, Md. Controlling means for elevators. No. 1,223,819; Apr. 24; v. 237; p. 1089.
Mitchell, Harry S., *et al.* (See Morter, Lycurgus W., assignor.)
Mitchell, John E., and D. Parks, St. Louis, Mo. Machine for making laminated soles. No. 1,223,894; Apr. 24; v. 237; p. 1115.
Mitchell, John R., New York, N. Y. Porcelain thread-guide. No. 1,224,006; Apr. 24; v. 237; p. 1153.
Mitchell, John R., Evanston, Ill., assignor to W. H. Miner, Chazy, N. Y. Car-underframing. No. 1,222,970; Apr. 17; v. 237; p. 761.
Mitchell, John R., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction draft-gear. No. 1,223,820; Apr. 24; v. 237; p. 1090.
Mitchell, John R., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction-gear. No. 1,223,821; Apr. 24; v. 237; p. 1090.
Mitchell, Mary P., Eaton, Ohio. Induction-coil controller. No. 1,222,885; Apr. 17; v. 237; p. 733.
Mitchell, William L., Brooklyn, N. Y. Closure and lock device for containers. No. 1,221,354; Apr. 3; v. 237; p. 124.
Model Form Company. (See Farquharson, Charles W., assignor.)
Model Form Company. (See Luery, Levis, and Nelson, assignors.)
Model Form Company. (See Luery, Michael, assignor.)
Modern Compressed Air Cleaning Company. (See Overholt, Edwin E., assignor.)
Moe, Aaron B., Chicago, Ill., assignor to Otis & Moe Manufacturing Company. Feed-hopper. No. 1,221,355; Apr. 3; v. 237; p. 124.
Moe, George, Duluth, Minn. Brush. No. 1,222,971; Apr. 17; v. 237; p. 761.
Moe, Gerhard, Ladysmith, Wis., and A. J. Kirstin, Escanaba, Mich. Self-anchoring puller. No. 1,223,510; Apr. 24; v. 237; p. 980.
Moench, Frederick, Rushville, Ill. Soldering-iron. No. 1,221,566; Apr. 3; v. 237; p. 199.
Moerk, Frank X., Oak Lane, Pa. Calendar. No. 1,222,655; Apr. 17; v. 237; p. 653.
Moffat, Albert S., Belmont, Mass., assignor to Kunz-Wheeler-Moffat Company. Filament for incandescent bulbs. No. 1,222,119; Apr. 10; v. 237; p. 421.
Moffat, Walter A., Erie, Pa. Apparatus for eliminating condensation in steam-engine cylinders. No. 1,221,356; Apr. 3; v. 237; p. 125.

Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Trimming mechanism for sewing-machines. No. 1,223,718; Apr. 24; v. 237; p. 1053.
Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Ornamental-stitch sewing-machine. No. 1,223,719; Apr. 24; v. 237; p. 1053.
Moffitt, Jeremiah, assignor to American Optical Company, Southbridge, Mass. Drill. No. 1,222,559; Apr. 10; v. 237; p. 579.
Moir, Donald, and H. Buchanan, Rosario de Santa Fé, Argentina. Manufacture, centrifugally, of hollow articles. No. 1,223,602; Apr. 24; v. 237; p. 1011.
Mojonnier Bros. Co. (See Mojonnier, Julius J., assignor.)
Mojonnier, Julius J., Oak Park, Ill., assignor to Mojonnier Bros. Co., Portland, Me. Estimating the solid content of liquid food products. No. 1,221,357; Apr. 3; v. 237; p. 125.
Molassine Company Limited, The. (See De Whalley, John J. A., assignor.)
Molinaro, Tony, Silver Lake, N. J. Rotary shoe-cleaner. No. 1,223,195; Apr. 17; v. 237; p. 839.
Moloney, Francis J., Corning, N. Y. Screw-threaded bulb-mold. No. 1,222,784; Apr. 17; v. 237; p. 697.
Moloney, Thomas O. (See Neeley, George S., assignor.)
Moltzner, Karl G., Portland, Oreg. Fruit cutting and pitting machine. No. 1,223,343; Apr. 17; v. 237; p. 887.
Molyneux, George E., Bayonne, N. J., assignor to The Singer Manufacturing Company. Power-transmitter. No. 1,223,603; Apr. 24; v. 237; p. 1011.
Monarch Metal Weather Strip Company. (See Lane, Alfred M., assignor.)
Monarch Steam Blower Company. (See Bradley, William J., assignor.)
Monarch Ventilator Company. (See Hubbard, Moses G., assignor.)
Monce, Samuel G., Unionville, Conn. Mounting for glass-cutters. No. 1,221,076; Apr. 3; v. 237; p. 26.
Moncure, William A. P., Batesville, Va. Mold for concrete structures. No. 1,221,567; Apr. 3; v. 237; p. 199.
Monfee, Andrew J., Pratt City, Ala. Blow-off valve. No. 1,222,972; Apr. 17; v. 237; p. 761.
Monitor Drill Company. (See Brennan, Thomas, Jr., assignor.)
Montague, Hubert H., Traverse City, Mich. Lawn-mower. No. 1,221,204; Apr. 3; v. 237; p. 72.
Montgomery, Forest H., East Orange, N. J. Attachment for adding-machines and type-writers. No. 1,221,568; Apr. 3; v. 237; p. 199.
Montgomery, Robert J. (See Sperr and Montgomery.)
Moore, Adelbert H., and E. F. Morton, assignors to The Ell-Kay Mfg. Co., Kansas City, Mo. Partition-support. No. 1,221,205; Apr. 3; v. 237; p. 72.
Moore, Charles W., South Bend, Ind. Street or station indicator. No. 1,222,015; Apr. 10; v. 237; p. 386.
Moore, E. C. (See Rogers, Leo L., assignor.)
Moore, E. W., administrator. (See Chamberlin, Franklin L.)
Moore, Essie H., Pittsburg, Tex. Envelop. No. 1,221,569; Apr. 3; v. 237; p. 200.
Moore, John P., *et al.* (See Baum, James B., assignor.)
Moore and White Company, The. (See White, Joseph A., assignor.)
Moore, Zed, *et al.* (See Willson, Mendal W., assignor.)
Moos, August E., Nokomis, Ill. Ice-cream spoon. No. 1,224,007; Apr. 24; v. 237; p. 1153.
More, Glenn, assignor to The Blackstone Manufacturing Company, Jamestown, N. Y. Operating-gearing for washing-machines. No. 1,222,785; Apr. 17; v. 237; p. 697.
Morford, Albert W., New Monmouth, N. J. Tail-light. No. 1,222,442; Apr. 10; v. 237; p. 537.
Morgan, Abraham, Independence, Mo. Resilient wheel. No. 1,221,570; Apr. 3; v. 237; p. 200.
Morgan, Charles N. (See Pettle, Adelbert W., Jr., assignor.)
Morgan Construction Company. (See George, Jerome R., assignor.)
Morgan Construction Company. (See Isley, George H., assignor.)
Morgan, Gilbert T., London, assignor to Levinstein Limited, Manchester, England. Alkylarylamin production. No. 1,221,077; Apr. 3; v. 237; p. 26.
Morgan, Harold H., assignor to George S. Johnston Co., Chicago, Ill. Cement. No. 1,221,571; Apr. 3; v. 237; p. 200.
Morgan, Thomas W., Jr., *et al.* (See White, Tilman, assignor.)
Morris, Albert W., Springfield, Mass. Forged casting and making the same. No. 1,222,786; Apr. 17; v. 237; p. 698.
Morris Bernhard Co. (See Cronenberg, William, assignor.)
Morris, George W., Racine, Wis. Oil-pump indicator. No. 1,221,078; Apr. 3; v. 237; p. 26.
Morris, Shiras, and M. Guett, assignors to The Hart & Hegeman Manufacturing Company, Hartford, Conn. Electric switch for lamp-sockets, &c. No. 1,222,886; Apr. 17; v. 237; p. 733.
Morris, Thomas A., St. Paul, Minn., assignor, by mesne assignments, to International Harvester Company of New Jersey. Fiber-treating machine. No. 1,221,358; Apr. 3; v. 237; p. 126.
Morrison, William, assignor to Vesta Accumulator Company, Chicago, Ill. Power-transmission system. (Reissue.) No. 14,282; Apr. 3; v. 237; p. 284.
Morse, Leo, New York, N. Y. Wheeled figure toy. No. 1,223,287; Apr. 17; v. 237; p. 866.
Morter, Lycurgus W., Sedalia, assignor of one-third to X. Farrar and one-third to H. S. Mitchell, London, Ohio. Portable loader. No. 1,222,973; Apr. 17; v. 237; p. 762.
Morton, Edward F. (See Moore and Morton.)
Morton, Harold D., Mitchell, Nebr. Poison-label. No. 1,221,572; Apr. 3; v. 237; p. 201.
Morton, Orville. (See Anderson, John A., assignor.)
Mosby, Alfred D., assignor to Marsh-Capron Manufacturing Company, Chicago, Ill. Apparatus for distributing concrete. No. 1,222,016; Apr. 10; v. 237; p. 386.
Moseley, Arnold, London, England. Trial-frame. No. 1,222,017; Apr. 10; v. 237; p. 387.
Mosher, Charles P., Brooklyn, N. Y., assignor to Corona Typewriter Company, Inc. Type-writing machine. No. 1,222,443; Apr. 10; v. 237; p. 537.
Motor Patents Company. (See Perrin, John G., assignor.)
Mott, Raymond C., and J. Alexander, Clinton, Ind. Hay-press. No. 1,221,573; Apr. 3; v. 237; p. 201.
Moyer, Paul S., assignor to The Aridor Company, Chicago, Ill. Means for preserving prepared cereal, cereal products, and the like. No. 1,222,656; Apr. 17; v. 237; p. 654.
Muckenhirn, Charles H., Detroit, Mich., assignor, by mesne assignments, to The Standard Sanitary Manufacturing Company, Pittsburgh, Pa. Water-closet bowl. No. 1,221,359; Apr. 3; v. 237; p. 126.
Muckle, John S., and T. H. Straley, assignors to Standard Elevator Interlock Company, Philadelphia, Pa. Interlocking mechanism for elevators. No. 1,222,444; Apr. 10; v. 237; p. 537.
Muehleisen, Carl, Berlin, Germany, assignor to Mergenthaler Linotype Company. Typographical composing and distributing machine. No. 1,221,360; Apr. 3; v. 237; p. 126.
Muehleisen, Carl, Berlin, Germany, assignor to Mergenthaler Linotype Company. Typographical composing and distributing machine. No. 1,221,361; Apr. 3; v. 237; p. 127.
Muehleisen, Carl, Berlin, Germany, assignor to Mergenthaler Linotype Company. Distributing mechanism of typographical composing-machines. No. 1,222,018; Apr. 10; v. 237; p. 387.
Muehleisen, Carl, Berlin, Germany, assignor to Mergenthaler Linotype Company. Multiple-magazine typographical composing-machine. No. 1,222,120; Apr. 10; v. 237; p. 421.
Muehleisen, Carl, and C. A. Albrecht, Berlin, Germany, assignors to Mergenthaler Linotype Company. Distributing mechanism of typographical composing-machines. No. 1,222,019; Apr. 10; v. 237; p. 387.
Mueller, Rudolph J. J., assignor to Universal Oxygen Company, Sheboygan, Wis. Electrolyzing apparatus. No. 1,221,206; Apr. 3; v. 237; p. 73.
Mueller, Rudolph J. J., assignor to Universal Oxygen Company, Sheboygan, Wis. Gas-torch. No. 1,222,319; Apr. 10; v. 237; p. 492.
Mühlbach, Ferdinand, New York, N. Y. Sputum-receiver. No. 1,221,207; Apr. 3; v. 237; p. 73.
Mullick, Joseph, Stoyestown, Pa. Heating-stove. No. 1,222,121; Apr. 10; v. 237; p. 421.
Mullen, Ira. (See Kirkpatrick and Farley, assignors.)
Milller, Frank X., Buffalo, N. Y. Vertically-adjustable post. No. 1,222,234; Apr. 10; v. 237; p. 463.
Mullin, Benjamin, Jersey City, N. J. Air-brake for locomotive-cranes. No. 1,221,079; Apr. 3; v. 237; p. 27.
Municipal Machine Manufacturing Company, The. (See Schroeder, Jacob A., assignor.)
Munk, William E. (See Schaf and Munk.)
Munson, Alfred N., *et al.* (See Hand, Levi, assignor.)
Munson, Robert L., Detroit, Mich. Collapsible wheel-flange. No. 1,221,574; Apr. 3; v. 237; p. 201.
Murdoch, James A., London, and G. Tadgell, Tottenham, London, England; said Tadgell assignor to said Murdoch. Wrest-pin for pianos. No. 1,223,412; Apr. 24; v. 237; p. 943.
Murphy, Clinton C., Chicago, Ill., assignor to P. H. Murphy Company, Parnassus, Pa. Car-roof. No. 1,221,891; Apr. 10; v. 237; p. 343.
Murphy, Clinton C., Chicago, Ill., assignor to P. H. Murphy Company, Parnassus, Pa. Car-roof. No. 1,221,892; Apr. 10; v. 237; p. 343.
Murphy, Jesse W. (See Rodefer, Bert A., assignor.)
Murphy, John F., Louisville, Ky. Internal-combustion engine. No. 1,222,657; Apr. 17; v. 237; p. 654.
Murray, Edward G., Oklahoma, Okla. Non-refillable bottle. No. 1,223,720; Apr. 24; v. 237; p. 1054.
Murray, Edward J. B. (See Flood, Patrick, assignor.)
Murray, John D., assignor of one-half to T. Scoble, San Francisco, Cal. Pneumatic conveyer. No. 1,221,080; Apr. 3; v. 237; p. 27.
Murray, John W., Joliet, Ill. Making nuts for bolts. No. 1,223,604; Apr. 24; v. 237; p. 1011.
Murray, Thomas E., New York, N. Y. Metal vehicle-wheel. No. 1,223,088; Apr. 17; v. 237; p. 802.
Murray, Thomas E., New York, N. Y. Sheet-metal rod or shaft. No. 1,223,089; Apr. 17; v. 237; p. 802.
Murray, Thomas E., New York, N. Y. Sheet-metal rod or shaft. No. 1,223,090; Apr. 17; v. 237; p. 802.

Murray, Thomas E., New York, N. Y. Electric welding apparatus. No. 1,223,092; Apr. 17; v. 237; p. 802.

Murray, Thomas E., and H. R. Woodrow, New York, N. Y.; said Woodrow assignor to said Murray. Method of making hollow metal objects by electrical welding. No. 1,223,091; Apr. 17; v. 237; p. 802.

Murrin, John. (See Wafer and Murrin.)

Musgrove, Roy M., Spanish Fork, Utah, assignor of one-half to E. D. Cruise, Kansas City, Kans. Shock-absorbing body-brace for automobiles. No. 1,222,445; Apr. 10; v. 237; p. 538.

Muzzy, William H., Detroit, Mich. Fuel-feeding device for automobiles. No. 1,222,235; Apr. 10; v. 237; p. 463.

Myers, Bascomb J., Lancaster, assignor to E. B. Donnald, Goldville, S. C. Dispensing-bin. No. 1,221,575; Apr. 3; v. 237; p. 202.

Myers, Frank W., Owosso, Mich. Street-barricade. No. 1,222,020; Apr. 10; v. 237; p. 388.

Myers, Hubert A., Toledo, Ohio. Centrifugal brake for reproducing mechanisms. No. 1,224,091; Apr. 24; v. 237; p. 1180.

Myers, Hubert A., Toledo, Ohio. Record-controlling mechanism. No. 1,224,092; Apr. 24; v. 237; p. 1180.

Myers, I. L. (See Arnott, Robert F., assignor.)

Nachod, Carl P., Philadelphia, Pa., assignor to Nachod Signal Company, Inc. Signaling system. No. 1,223,413; Apr. 24; v. 237; p. 943.

Nachod, Carl P., Philadelphia, Pa., assignor to Nachod Signal Company, Inc. Signaling system. No. 1,223,511; Apr. 24; v. 237; p. 980.

Nachod Signal Company. (See Nachod, Carl P., assignor.)

Nacker, Owen M., assignor of one-half to A. P. Brush, Detroit, Mich. Valve-actuating mechanism. No. 1,222,194; Apr. 10; v. 237; p. 448.

Nadeau, Bernard C., Fall River, Mass. Resilient wheel. No. 1,221,362; Apr. 3; v. 237; p. 127.

Napier, Charles H. (See Napier, James W. and C. H.)

Napier, Charles, assignor to Napier Saw Works, Inc., Springfield, Mass. Manufacture of tempered saw-blades. No. 1,221,576; Apr. 3; v. 237; p. 202.

Napier, James W. and C. H., Duquesne, Pa. Target throwing device. No. 1,222,446; Apr. 10; v. 237, p. 538.

Napier Saw Works. (See Napier, Charles, assignor.)

Naramore, Beatrice, administratrix. (See Naramore, Walter D.)

Naramore, Walter D., deceased, Denver, Colo.; B. Naramore, administratrix. Swab-holder. No. 1,223,196; Apr. 17; v. 237; p. 839.

National Brass Manufacturing Co. (See Wray, Charles F., assignor.)

National Carbon Company. (See Clark, Emerson L., assignor.)

National Carbon Company. (See Clymer, William R., assignor.)

National Carbon Company. (See Holmes, Major E., assignor.)

National Cash Register Co., The. (See Machen, Albert S., assignor.) (Reissue.)

National Electric Specialty Company, The. (See Wiegand, Frederick B., assignor.)

Naylor, James P., Dulwich, England. Advertising or signaling apparatus. No. 1,222,658; Apr. 17; v. 237; p. 654.

Neale, Charles C., Minneapolis, and R. W. Smith, St. Paul, Minn. Tare-weight compensator for beam-scales. No. 1,223,787; Apr. 17; v. 237; p. 699.

Nedoma, Charles L., assignor of one-half to F. M. Hawley, Detroit, Mich. Carbureter. No. 1,222,236; Apr. 10; v. 237; p. 464.

Needham, John T., New York, N. Y., assignor, by mesne assignments, to The Lamson Company, Newark, N. J. Pneumatic-despatch-tube apparatus. No. 1,223,414; Apr. 24; v. 237; p. 944.

Neeley, George S., Overland Park, assignor of one-half to T. O. Moloney, St. Louis, Mo. Safety repair device for high-voltage transmission-lines. No. 1,221,893; Apr. 10; v. 237; p. 344.

Neeley, George S., Overland Park, assignor of one-half to T. O. Moloney, St. Louis, Mo. Safety repair device for high-voltage transmission-lines. No. 1,221,894; Apr. 10; v. 237; p. 344.

Neighbour, William W., Spartanburg, S. C. Ball-retainer. No. 1,222,447; Apr. 10; v. 237; p. 538.

Nell, Joseph B., Filbert, assignor to South Carolina Cotton Picker Co., Yorkville, S. C. Cotton-picker. No. 1,223,328; Apr. 17; v. 237; p. 880.

Neill, Strange E., and J. B. Hamilton, Kansas City, Kans. Dredging apparatus. No. 1,223,066; Apr. 17; v. 237; p. 794.

Nellson, John. (See Babcock, Clifford D., assignor.)

Nelson, Theophilus F., Palisade, N. J. Explosion-engine. No. 1,221,081; Apr. 3; v. 237; p. 27.

Nelswender, Aaron, Orwigsburg, assignor of one-half to H. W. Weston, Pottsville, Pa. Metallic railway-tie. No. 1,223,895; Apr. 24; v. 237; p. 1116.

Nelson, Albert M., Doland, S. D. End-gate-locking mechanism. No. 1,223,822; Apr. 24; v. 237; p. 1090.

Nelson, Ben S. (See Luery, Levis, and Nelson.)

Nelson, George F., Washington, D. C. Motor for massage apparatus. No. 1,224,008; Apr. 24; v. 237; p. 1153.

Nelson Herman, assignor to John A. McGarry & Company, Chicago, Ill. Draft device. No. 1,223,093; Apr. 17; v. 237; p. 803.

Nelson, Oscar, *et al.* (See Andrews, Al, assignor.)

Nelson, Robert, Minneapolis, Minn. Tool-holder. No. 1,222,448; Apr. 10; v. 237; p. 539.

Nelson, Victor E., assignor of forty-nine one-hundredths to A. T. Harrow, Detroit, Mich. Metallic packing. No. 1,223,605; Apr. 24; v. 237; p. 1012.

Nelson, Willie W., and L. McDonal, Monticello; said McDonal assignor of his entire right to W. W. Weathersby, Brookhaven, Miss. Front-wheel drive. No. 1,222,449; Apr. 10; v. 237; p. 539.

Nesler, Lewis A., Niles, Cal. Shoe-shining stand. No. 1,221,363; Apr. 3; v. 237; p. 127.

Nesmith, Samuel D., La Jolla, Cal. Electric water-heater. No. 1,224,117; Apr. 24; v. 237; p. 1189.

Ness, William, Spring Grove, Pa. Wrench. No. 1,221,577; Apr. 3; v. 237; p. 203.

Neu, Clarence W., Georgetown, Ohio. Corn snapper and shredder. No. 1,221,364; Apr. 3; v. 237; p. 127.

Neuland, Alfons H., assignor to Neuland Magneto Company, San Francisco, Cal. Magneto. No. 1,221,208; Apr. 3; v. 237; p. 74.

Neuland, Alfons H., Bergenfield, N. J. Dynamo-electric machine. No. 1,223,094; Apr. 17; v. 237; p. 803.

Neuland, Alfons H., Bergenfield, N. J. Induction power transmitting device. No. 1,223,095; Apr. 17; v. 237, p. 804.

Neuland, Alfons H., New York, N. Y. Dynamo-electric machine. No. 1,223,096; Apr. 17; v. 237; p. 804.

Neuland Magneto Company. (See Neuland, Alfons H., assignor.)

Neville, John, Duluth, Minn. Adjuster for outriggers. No. 1,223,512; Apr. 24; v. 237; p. 981.

New Britain Machine Company, The. (See Brown, Robert S., assignor.)

New Britain Machine Company, The. (See Spencer, Christopher M., assignor.)

New Departure Manufacturing Company, The. (See Page, Victor W., assignor.)

New Jersey Patent Company. (See Edison, Thomas A., assignor.)

New Jersey Patent Company. (See Schiff, Charles, assignor.)

New Jersey Quilting Co. (See Hildt, August, assignor.)

Newell, James H. (See McConnell, John T., assignor.)

Newell, Warren P. and C. W. Carman, Hamburg, Iowa. Broom. No. 1,222,227; Apr. 10; v. 237; p. 464.

Newhall, Henry B. (See Penney, Harold D., assignor.)

Newhall, Henry B. (See Pleister, Henry W., assignor.)

Newkirk, William P., Portsmouth, Ohio, assignor of one-fourth to C. L. Crooks, one-eighth to W. D. Isgreg, and one-eighth to J. B. Campbell, Pueblo, Colo. Railway-stake. No. 1,222,575; Apr. 10; v. 237; p. 585.

Newman, Alexander M. (See Seelan, Franz, assignor.)

Newman, Doll L. (See Davis, William A., assignor.)

Newman, Frederick. (See Kelly and Reynolds, assignors.)

Nicholls, Joseph P., Denver, Colo. Locomotive-cab spring-seat. No. 1,222,788; Apr. 17; v. 237; p. 699.

Nield, Samuel, *et al.*, executors. (See Drew, Arthur.)

Nielsen, Aage, New York, N. Y., assignor to W. A. Condon, Summit, N. J. Automatic stop mechanism for phonographs. No. 1,222,974; Apr. 17; v. 237; p. 762.

Nielsen, Florian, Jamestown, N. Y. Combination table-desk. No. 1,221,209; Apr. 3; v. 237; p. 74.

Nielsen, Zern, Omaha, Nebr. Steering device for automobiles. No. 1,222,238; Apr. 10; v. 237; p. 465.

Niemann and Company. (See Niemann, Frederick A., assignor.)

Niemann, Charles A., Marcus, Iowa. Milk-strainer. No. 1,224,009; Apr. 24; v. 237; p. 1154.

Niemann, Frederick A., assignor to Neuland Magneto Company, Chicago, Ill. Change-making machine. No. 1,222,653; Apr. 17; v. 237; p. 655.

Niemann, John H., Adelaide, South Australia, Australia. Treatment of refractory auriferous ores. No. 1,222,789; Apr. 17; v. 237; p. 699.

Nikoloff, Subbo, Putnam, Conn., assignor to Leland-Gifford Company, Worcester, Mass. Power-transmission belt. No. 1,223,513; Apr. 24; v. 237; p. 981.

Nilson, Andrew, assignor to The Eureka Smokeless Furnace Company, Chicago, Ill. Furnace. No. 1,221,082; Apr. 3; v. 237; p. 28.

Nitrogen Products Company. (See Bucher, John E., assignor.)

Nixon, Arthur, Rusholme, Manchester, England. Solid elastic tire. No. 1,221,083; Apr. 3; v. 237; p. 28.

Nixon, Benjamin F., Winnipeg, Manitoba, Canada. Vessel indicating and raising apparatus. No. 1,223,606; Apr. 24; v. 237; p. 1012.

Noël, Joseph E. (See Noël, Joseph L. C. and J. E.)

Noël, Joseph L. C. and J. E., Ottawa, Ontario, Canada. Automatically-locking hand-bag. No. 1,223,855; Apr. 24; v. 237; p. 1101.

Nolde & Horst Company. (See Rader, Irvin, assignor.)

Nolen, James G., New York, and R. L. McElroy, Whitestone, assignors to Magnetic Phonograph Company, New York, N. Y. Telephone-transmitter. No. 1,222,790; Apr. 17; v. 237; p. 700.

Nolin, James H., New Brockton, Ala. Boll-weevil-destroying machine. No. 1,223,415; Apr. 24; v. 237; p. 945.

Norcross, Camillo S., Bushnell, Ill. Wheel-plow. No. 1,222,122; Apr. 10; v. 237; p. 422.

Nordstrom, Charles, Milwaukee, Wis. Lathe taper attachment. No. 1,222,021; Apr. 10; v. 237; p. 388.

Norman, William F., Nevada, Mo. Traveling ceiling-fan for tunnel-driers. No. 1,221,365; Apr. 3; v. 237; p. 128.

Norris, Warren J., McLoud, Okla. Syringe. No. 1,221,084; Apr. 3; v. 237; p. 28.

North & Judd Manufacturing Company, The. (See Hancock, Horace G., assignor.)

Norton Iron Works. (See Kramer, Leonard, assignor.)

Norwalk, Albert B. (See Kelly, William A., assignor.)

Norwalk, Albert B., New York, N. Y. Tire-valve. No. 1,223,344; Apr. 17; v. 237; p. 887.

Norwalk, Albert B., New York, N. Y. Tire-valve. No. 1,223,345; Apr. 17; v. 237; p. 888.

Nuckolls, Samuel H., Atlanta, Ga. Drinking-cup and container. No. 1,222,450; Apr. 10; v. 237; p. 539.

Nusbaum, Harry W., Mount Airy, Md. Time-indicator for railway-trains. No. 1,221,366; Apr. 3; v. 237; p. 128.

Nute, Thomas H., East Providence, R. I. Jack-spooler. No. 1,222,975; Apr. 17; v. 237; p. 762.

Nutting, George D., Cleveland, Ohio. Spectacles. No. 1,223,097; Apr. 17; v. 237; p. 805.

Nymanning, George, Coalinga, Cal. Casing-shoe. No. 1,223,098; Apr. 17; v. 237; p. 805.

Nysewander, David J., Toledo, Ohio. Tank. No. 1,222,123; Apr. 10; v. 237; p. 422.

Nystrom, Martin, assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Speed-indicator. No. 1,223,806; Apr. 24; v. 237; p. 1116.

O. S. Walker Co. (See Walker, Oakley S., assignor.)

O'Brien, John. (See Mattson and O'Brien.)

O'Brien, John O. (See Thornton, John E., assignor.)

O'Brien, Thomas F. I., New York, N. Y. Rotary engine. No. 1,223,721; Apr. 24; v. 237; p. 1054.

O'Connell, Edward, Detroit, Mich. Fountain-comb. No. 1,221,578; Apr. 3; v. 237; p. 203.

O'Connor, John B., assignor to Lyon Metallic Manufacturing Company, Aurora, Ill. Door for shelving. No. 1,223,897; Apr. 24; v. 237; p. 1116.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Resilient wheel. No. 1,222,976; Apr. 17; v. 237; p. 762.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Side bearing for railway-cars. No. 1,222,977; Apr. 17; v. 237; p. 763.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Antifriction center-bearing. No. 1,222,978; Apr. 17; v. 237; p. 763.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Railway draft-rigging. No. 1,223,823; Apr. 24; v. 237; p. 1091.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Friction-gear. No. 1,223,824; Apr. 24; v. 237; p. 1091.

O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Hand-brake. No. 1,224,093; Apr. 24; v. 237; p. 1181.

O'Gara, James, Dayton, Ohio. Water-driven engine. No. 1,221,085; Apr. 3; v. 237; p. 29.

O'Haver, Edward F., Carlisle, Ind. Rotary engine. No. 1,223,100; Apr. 17; v. 237; p. 805.

O'Malley, John F., New York, N. Y. Match-holder. No. 1,221,581; Apr. 3; v. 237; p. 204.

O'Neill, James A., New York, N. Y., assignor to The Westinghouse Machine Company. Twyer-block. No. 1,222,452; Apr. 10; v. 237; p. 540.

O'Neill, Richard J. (See Bethune and O'Neill.)

O'Sullivan, Thomas, Montreal, Quebec, Canada. Ship-brake. No. 1,223,416; Apr. 24; v. 237; p. 945.

Oakes, Archie. (See Kuhn and Oakes.)

Oberle, Joseph H., Marshalltown, Iowa. Concrete-block machine. No. 1,221,367; Apr. 3; v. 237; p. 128.

Ochs, Karl, Charlottenburg, assignor to Siemens & Halske, A. G., Berlin, Germany. Electrolysis of alkaline haloids. No. 1,222,239; Apr. 10; v. 237; p. 465.

Odell, George W., Westmount, Quebec, Canada. Adjusting and record card and the like. No. 1,221,895; Apr. 10; v. 237; p. 344.

Offermann, John B., Beaver Dam, Wis. Combination-tool. No. 1,223,722; Apr. 24; v. 237; p. 1054.

Ogburn, Alvin R., Des Moines, Iowa. Driving mechanism for tractors. No. 1,223,099; Apr. 17; v. 237; p. 805.

Ogg, Harry L., assignor to Automatic Electric Washer Company, Newton, Iowa. Combined washing and wringing machine. No. 1,222,240; Apr. 10; v. 237; p. 465.

Ohio Blower Company, The. (See Lind, Herman H., assignor.)

Ohio Blower Company, The. (See Swartwout, Denton K., assignor.)

Ohio Gas Generator & Manufacturing Company, The. (See Weber, Theodore T., assignor.)

Ohmer Fare Register Company. (See Ohmer and Bridenbaugh, assignors.)

Ohmer, John F., and E. H. Bridenbaugh, Dayton, Ohio, assignors to Ohmer Fare Register Company, Rochester, N. Y. Taximeter. No. 1,223,067; Apr. 17; v. 237; p. 794.

Ohmer, Wilfred L., assignor to The Recording and Computing Machine Company, Dayton, Ohio. Fare-box. No. 1,223,723; Apr. 24; v. 237; p. 1054.

Olinstrand, Enoch, assignor to U. S. Steel Furniture Company, Syracuse, N. Y. Furniture-drawer. No. 1,222,451; Apr. 10; v. 237; p. 539.

Okell, Stanley A. W., East Orange, N. J., assignor to Industrial Chemical Company, New York, N. Y. Process and apparatus for refining clay, &c. No. 1,222,979; Apr. 17; v. 237; p. 763.

Olds, Ira P., Santa Rosa, Fla. Wheelbarrow step-ladder. No. 1,221,579; Apr. 3; v. 237; p. 203.

Oliver, Doctor F., Oakland, Cal. Door-buffer. No. 1,221,580; Apr. 3; v. 237; p. 203.

Olsen, Alfred G., Elkhorn, Wis. Concrete-mixer. No. 1,221,368; Apr. 3; v. 237; p. 129.

Olson, Lones T., Detroit, Mich. Draft apparatus. No. 1,221,086; Apr. 3; v. 237; p. 29.

Olson, Walter E., Chicago, Ill. Drying-chamber for rugs. No. 1,222,560; Apr. 10; v. 237; p. 579.

Ornstein, Leon, Brooklyn, N. Y. Making a paint or enameling material. No. 1,222,980; Apr. 17; v. 237; p. 764.

Osborn, William H., Louisville, Ky. Copy-holder. No. 1,221,369; Apr. 3; v. 237; p. 129.

Osborne, Edith A., *et al.*, executors. (See Drew, Arthur.)

Osborne, Francis M. (See Lee and Osborne.)

Osborne, Samuel. (See Seaman, Osborne, Cox, and Gattle.)

Osborne, Thomas J., assignor of one-half to L. D. Riffe, Premier, W. Va. Automatic mine-gate. No. 1,224,010; Apr. 24; v. 237; p. 1154.

Osborne, William H. (See Drew, Arthur, assignor.)

Oscar Schmidt, Inc. (See Jost, Lawrence, assignor.)

Ostman, John A., and B. A. Anderson, Chicago, Ill. Towel, napkin, and drapery hanger. No. 1,221,582; Apr. 3; v. 237; p. 204.

Oswald, Adolph W. (See Green and Oswald.)

Otis Elevator Company. (See Lutz, William D., assignor.)

Otis Elevator Company. (See Sundh, August, assignor.)

Otis & Moe Manufacturing Company. (See Moe, Aaron B., assignor.)

Ott, Harvey N., assignor to Spencer Lens Company, Buffalo, N. Y. Microscope. No. 1,223,197; Apr. 17; v. 237; p. 839.

Ott, Harvey N., assignor to Spencer Lens Company, Buffalo, N. Y. Adjustment mechanism for microscopes. No. 1,223,198; Apr. 17; v. 237; p. 840.

Otte, Otho M., Jamestown, N. Y. Resilient holding-clip. No. 1,222,453; Apr. 10; v. 237; p. 540.

Otte, Otho M., Jamestown, N. Y. Wire-conduit metal base. No. 1,223,288; Apr. 17; v. 237; p. 867.

Otte, Otho M., Jamestown, N. Y. Resilient holding-clip. No. 1,223,289; Apr. 17; v. 237; p. 867.

Otto, Fred C., Worcester, Mass. Pneumatic tire. No. 1,223,724; Apr. 24; v. 237; p. 1055.

Overbury, Frederick C., New York, N. Y., and H. C. Platts, assignors to Flintkote Manufacturing Company, Rutherford, N. J. Tile roofing. No. 1,221,370; Apr. 3; v. 237; p. 130.

Overholt, Edwin E., Washington, D. C., assignor to Modern Compressed Air Cleaning Company. Pneumatic carpet-cleaner. No. 1,222,454; Apr. 10; v. 237; p. 540.

Overman, Max C., New York, N. Y. Vehicle-wheel. No. 1,223,725; Apr. 24; v. 237; p. 1055.

Overman, Max C., New York, N. Y. Mold for tires. No. 1,223,726; Apr. 24; v. 237; p. 1056.

Overman, Max C., New York, N. Y. Tire. No. 1,223,727; Apr. 24; v. 237; p. 1056.

Owen, Arthur, Pendleton, England. Vehicle-wheel. No. 1,222,981; Apr. 17; v. 237; p. 764.

Owen Bucket Company, The. (See Botten, William H., assignor.)

Ozouf, Arthur E. (See Watson and Ozouf.)

P. Lorillard Company. (See Harriss, James B., assignor.)

P. C. Murphy Trunk Co. (See Juergens, Gustav H., assignor.)

P. H. Murphy Company. (See Murphy, Clinton C., assignor.)

Paal, Carl, Erlangen, Germany, assignor, by mesne assignments, to The Hydrogenation Company, Cincinnati, Ohio. Making a catalyzing agent for the reduction of fats and unsaturated fatty acids. No. 1,222,660; Apr. 17; v. 237; p. 655.

Pabst, Charles A., Philadelphia, Pa. Locking device for automobiles and other vehicles. No. 1,223,825; Apr. 24; v. 237; p. 1092.

Pacific Creosoting Company. (See Bartells, Edwin J., assignor.)

Pacific Novelty Company. (See Kahn, Julius, assignor.)

Packard Motor Car Company. (See Huff, Russell, assignor.)

Packard Motor Car Company. (See Loomis, Allen, assignor.)

Packwood, George H., Sr., Tampa, Fla. Table. No. 1,222,455; Apr. 10; v. 237; p. 541.

Paczga, Frank, New York, N. Y. Steam-separator. No. 1,223,101; Apr. 17; v. 237; p. 806.

Page, Albert A., East Haven, assignor to Sargent & Company, New Haven, Conn. Night-latch. No. 1,223,898; Apr. 24; v. 237; p. 1117.

Page, Ervin L., Georgetown, assignor to Page Machine Company, Inc., Haverhill, Mass. Heel-lift-assembling machine. No. 1,223,728; Apr. 24; v. 237; p. 1056.

Page, Harry E. (See Ferrell, Charles A., assignor.)

Page Machine Company. (See Page, Ervin L., assignor.)

Page, Marshall H., San Francisco, Cal. Tobacco-receptacle. No. 1,221,896; Apr. 10; v. 237; p. 345.

Page, Victor W., assignor to The New Departure Manufacturing Company, Bristol, Conn. Variable-speed mechanism. No. 1,223,514; Apr. 24; v. 237; p. 981.

Pall, James C., Bridgeport, Conn. Device for holding, centering, and steadying taps. No. 1,221,897; Apr. 10; v. 237; p. 345.

Palm, Per W., Bandette, Minn. Sled. No. 1,221,898; Apr. 10; v. 237; p. 345.

Palmer, Alphonso T., Cicero, Ill. Rail-joint. No. 1,221,899; Apr. 10; v. 237; p. 346.

Palmer, Lyndon C., assignor to F. N. Burt Company, Limited, Buffalo, N. Y. Box. No. 1,221,900; Apr. 10; v. 237; p. 346.

Palmer, William M., Madison, Ind. Sharpening-machine. No. 1,223,826; Apr. 24; v. 237; p. 1092.

Pampuro, Francesco. (See Duro, Crivelli, and Pampuro.)

Pantaze, Charles D., Birmingham, Ala. Cotton-seed-culling machine. No. 1,223,607; Apr. 24; v. 237; p. 1013.

Pantazi, Dimitrios, New York, N. Y. Spring-motor. No. 1,223,102; Apr. 17; v. 237; p. 806.

Papanastasiou, Athanasios, East Pittsburgh, Pa. Diving apparatus. No. 1,223,515; Apr. 24; v. 237; p. 982.

Pape, Herman G., assignor to R. A. Schoenberg, New York, N. Y. Socket. No. 1,223,417; Apr. 24; v. 237; p. 944.

Papp, Andy, and J. Christof, Detroit, Mich. Coal-car. No. 1,224,094; Apr. 24; v. 237; p. 1181.

Parichan, Martin H., Manchester, N. H. Curtain-fixture. No. 1,221,210; Apr. 3; v. 237; p. 75.

Parietti, Giovanni B., Richmond, assignor of one-half to A. Bruna, Westminster, England. Propulsion of boats. No. 1,222,124; Apr. 10; v. 237; p. 422.

Parker, Edwin D. (See Reed and Parker.)

Parker, Ernest A. (See Reed and Parker.)

Parker, George D. (See McIntosh, Charles C., assignor.)

Parker, James O., Lakin, Kans. Solder-heating tool. No. 1,224,011; Apr. 24; v. 237; p. 1155.

Parker, Thomas R. G. (See Pearce, Perker, and Carverhill.)

Parkin, William M. (See Hoffman and Parkin.)

Parks, Dennis. (See Mitchell and Parks.)

Parks, George H., Lomax, Ill. Demountable rim. No. 1,224,012; Apr. 24; v. 237; p. 1155.

Parks, George M., assignor of one-half to A. Larsen, Kansas City, Mo. High-pressure-gas-tank valve. No. 1,223,899; Apr. 24; v. 237; p. 1117.

Parmele, William G., Chetopa, Kans. Milk-pail. No. 1,221,583; Apr. 3; v. 237; p. 204.

Parr, Daniel R., St. Louis, Mo. Gravity railway system. No. 1,221,371; Apr. 3; v. 237; p. 130.

Parrish, William J. (See Reams, Joseph A., assignor.)

Parsons, Charles A., A. Q. Carnegie, Newcastle-upon-Tyne, and S. S. Cook, Wallsend, England; said Carnegie and Cook assignors to said Parsons. Construction of turbine and like rotors. No. 1,221,087; Apr. 3; v. 237; p. 29.

Parsons, Charles L., Durham, N. H. Preparing oxids of uranium. No. 1,224,013; Apr. 24; v. 237; p. 1155.

Parsons, Charles L., Durham, N. H. Purifying of uranium compounds. No. 1,224,014; Apr. 24; v. 237; p. 1155.

Pasinski, Walter J., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 1,222,661; Apr. 17; v. 237; p. 656.

Patent Button Company, The. (See Abel, Walter T., assignor.)

Paterson, Alexander P., *et al.* (See Secord, Frederick A., assignor.)

Paterson, May H. (See Paterson, William S. and M. H.)

Paterson, William S. and M. H., Oakland, assignors of one-half to G. R. Andrews, Fresno, Cal. Lawn-mower and lawn-trimmer. No. 1,222,241; Apr. 10; v. 237; p. 466.

Patrick, Shelby, Durango, Colo. Article-holding rack. No. 1,221,584; Apr. 3; v. 237; p. 204.

Patrick, Theodore L., Pawpaw, Ill. Gate adjustment. No. 1,224,015; Apr. 24; v. 237; p. 1156.

Patterson, Horace L., assignor to The Adapto Mfg. Co., Inc., Otisville, N. Y. Motor-hydrocarbon-supply device. No. 1,222,576; Apr. 10; v. 237; p. 585.

Patterson, William T., Shelbina, Mo. Hog-trough. No. 1,223,199; Apr. 17; v. 237; p. 840.

Paul, Christian F., Jr., Peekskill, assignor of one-half to C. G. Bailin, New York, N. Y. Connector for electrical terminals. No. 1,222,022; Apr. 10; v. 237; p. 388.

Paull, Carl, Sound Beach, Conn., assignor to Garwood Company, Garwood, N. J. Chuck. No. 1,222,320; Apr. 10; v. 237; p. 493.

Paxson, Calvin D., Cleveland, Ohio. Detachable wheel-rim. No. 1,223,900; Apr. 24; v. 237; p. 1117.

Payne, Daniel H., and E. C. Woodworth, Boyes Springs, Cal. Clothes-drier. No. 1,222,242; Apr. 10; v. 237; p. 466.

Payne, Marshall J., Staunton, Va. Valve. No. 1,223,901; Apr. 24; v. 237; p. 1118.

Payne, William E. (See Eklund and Payne.)

Peake, George H., Creede, Colo. Automobile-lock. No. 1,222,458; Apr. 10; v. 237; p. 541.

Pearce, Herbert, T. R. G. Parker, and R. H. Carverhill, Broadheath, England, assignors to The Duplex Printing Press Company, Battle Creek, Mich. Plate-clamping device for printing-machines. No. 1,223,068; Apr. 17; v. 237; p. 794.

Pearch, Robert H., Elmira, N. Y. Drain-pipe and basin-trap flusher attaching device. No. 1,221,901; Apr. 10; v. 237; p. 346.

Pearsall, Sarah A., Rockville Center, N. Y. Veil-clasp. No. 1,223,608; Apr. 24; v. 237; p. 1013.

Pearson, Effie M., Chicago, Ill. Inner tube to be used on automobiles and other conveyances. No. 1,223,827; Apr. 24; v. 237; p. 1092.

Pearson, John L., Cedar Vale, Kans. Package and bundle tie. No. 1,222,887; Apr. 17; v. 237; p. 733.

Pearsons, George T., New York, N. Y. Fire-extinguisher. No. 1,223,418; Apr. 24; v. 237; p. 946.

Peden, Joseph W., Grand Rapids, Mich. Tobacco-bag attachment. No. 1,221,372; Apr. 3; v. 237; p. 130.

Pedersen, Niels, assignor to A. Brock, Jr., Philadelphia, Pa. Camera-mounting. No. 1,221,902; Apr. 10; v. 237; p. 347.

Peer, Perry A., Comstock, Mich. Folding table-standard. No. 1,222,457; Apr. 10; v. 237; p. 541.

Peerless Wheel Company. (See Carter, Frank, assignor.)

Peiler, Karl E., Hartford, Conn., assignor to Hartford-Fairmont Company, Canajoharie, N. Y. Manufacture of glassware. No. 1,222,243; Apr. 10; v. 237; p. 467.

Pemberton, John W., Wheeling, W. Va. Tread-resurfacing device for wheels. No. 1,221,211; Apr. 3; v. 237; p. 75.

Pence Mailing Machine Company. (See Long, Sidney L., assignor.)

Pendergast, Frederick W., Cambridge, Mass. Mop. No. 1,222,662; Apr. 17; v. 237; p. 656.

Peney, Charles A. (See Baldwin and Peney.)

Penfield, Raymond C. (See Crum, Hollis B., assignor.)

Penfield, Raymond C., New York, N. Y. Lifting and perforating brick. No. 1,221,765; Apr. 3; v. 237; p. 264.

Penney, Harold D., Pelham, N. Y., assignor to H. B. Newhall, Littleton, N. H. Multiple-plunger impact-hammer. No. 1,222,663; Apr. 17; v. 237; p. 656.

Pennsylvania Match Company, The. (See Troup, Calvin H., assignor.)

Pentecost, Arthur, East Orange, N. J., assignor to The Adder Machine Company, Wilkes-Barre, Pa. Calculating-machine. No. 1,223,419; Apr. 24; v. 237; p. 946.

Perkins, Charles J., Manitou, Colo. Silo-roof. No. 1,221,373; Apr. 3; v. 237; p. 131.

Perkins, Frank C., assignor of one-eighth to G. J. Meyer, one-eighth to G. H. Meyer, one-eighth to L. P. Meyer, and one-eighth to E. Meyer, Buffalo, N. Y. Electric water-heater. No. 1,223,729; Apr. 24; v. 237; p. 1057.

Perkins, James D., Atlanta, assignor to The Railway Appliance Mfg. Co., Fulton county, Ga. Railway-switch. No. 1,222,577; Apr. 10; v. 237; p. 585.

Perkins, Samuel F., Boston, Mass. Kite. No. 1,222,791; Apr. 17; v. 237; p. 700.

Perlin, Zodeck, assignor of one-half to The Mattes Plumbing Company, Middletown, Conn. Household heating device. No. 1,222,578; Apr. 10; v. 237; p. 586.

Perna, Alexander, Philadelphia, Pa. Device for use in instructing infants to walk. No. 1,222,664; Apr. 17; v. 237; p. 657.

Perri, Angelo, Groveland, assignor to Reece Shoe Machinery Company, Boston, Mass. Lasting-machine. No. 1,222,125; Apr. 10; v. 237; p. 423.

Perri, Angelo, Groveland, assignor to Reece Shoe Machinery Company, Boston, Mass. Lasting-machine. No. 1,222,126; Apr. 10; v. 237; p. 423.

Perri, Angelo, Groveland, assignor to Reece Shoe Machinery Company, Boston, Mass. Lasting-machine. No. 1,222,127; Apr. 10; v. 237; p. 424.

Perrin, John G., assignor to Motor Patents Company, Detroit, Mich. Mechanism for driving speedometers. No. 1,223,902; Apr. 24; v. 237; p. 1118.

Perry, Grover, Chicago, Ill. Book-marking device. No. 1,222,023; Apr. 10; v. 237; p. 389.

Persons, William F., Lakewood, assignor to The Guide Motor Lamp Manufacturing Company, Cleveland, Ohio. Automobile-lamp. No. 1,221,212; Apr. 3; v. 237; p. 75.

Peter A. Frasse & Co. (See Allingham, Henry W., assignor.)

Peters, Arnold G., Minneapolis, Minn. Pane-fastening. No. 1,223,609; Apr. 24; v. 237; p. 1014.

Peters, Arthur E., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Valve for compressors and pumps. No. 1,222,321; Apr. 10; v. 237; p. 493.

Peters, Charles H., *et al.* (See Secord, Frederick A., assignor.)

Peters, Henry, Sioux Falls, S. D. Hydrocarbon-burner. No. 1,222,792; Apr. 17; v. 237; p. 700.

Peters, John B., assignor to The Electric Auto-Lite Company, Toledo, Ohio. Brush and holder for generators and motors. No. 1,222,982; Apr. 17; v. 237; p. 765.

Peters, Melville E., Denver, Colo. Machine for gumming blanks for covering boxes and for other purposes. No. 1,222,983; Apr. 17; v. 237; p. 765.

Peters, Melville E., G. H. Fath, and A. F. Miller, Denver, Colo. Coöperating blank feeding and gumming mechanism for blank-gumming machines. No. 1,223,516; Apr. 24; v. 237; p. 982.

Peters, Melville E., G. H. Fath, and A. F. Miller, Denver, Colo. Blank and label feeding roller for blank-gumming machines. No. 1,223,517; Apr. 24; v. 237; p. 982.

Petersen, Hans, Warrenton, Va. Work-holder. No. 1,222,888; Apr. 17; v. 237; p. 733.

Petersen, Peter H., Westbrook, Me. Wall-bracket. No. 1,224,016; Apr. 24; v. 237; p. 1156.

Peterson, Bardolph, Sherrard, Ill. Safety appliance for powder-kegs and other containers. No. 1,224,017; Apr. 24; v. 237; p. 1156.

Peterson, Ernest R. (See Wiklund and Peterson.)

Peterson, John A., Alameda, Cal. Holder for lamps or headlights. No. 1,222,458; Apr. 10; v. 237; p. 542.

Petri-Palmedo, David, Bridgeport, Conn., assignor to Electric Compositor Company, New York, N. Y. Matrix-distributing mechanism. No. 1,221,088; Apr. 3; v. 237; p. 30.

Pettie, Adelbert W., Jr., Boston, Mass., assignor of one-half to C. N. Morgan, Troy, N. Y. Furnace dead-plate. No. 1,223,828; Apr. 24; v. 237; p. 1092.

Pettit, Lyman D., St. Joseph, Mich. Lubricating compound. No. 1,222,128; Apr. 10; v. 237; p. 424.

Pewther, Judson C., Oswego, Oreg. Trap. No. 1,222,024; Apr. 10; v. 237; p. 389.

Pharo & Chapman. (See Pharo, Gordon C., assignor.)

Pharo, Gordon C., Marysville, assignor to Pharo & Chapman, San Francisco, Cal. Pressure-operated apparatus. No. 1,222,984; Apr. 17; v. 237; p. 765.

Pharo, Gordon C., Marysville, Cal., assignor to Pharo & Chapman. Pressure-operated apparatus. No. 1,222,985; Apr. 17; v. 237; p. 766.

Phelps, Edwin P. (See Traub, Edward B., assignor.)

Phelps, George W., New York, N. Y. Binder. No. 1,223,103; Apr. 17; v. 237; p. 807.

Phillipple, Webster M., Newbern, N. C. Machine for folding paper. No. 1,222,459; Apr. 10; v. 237; p. 542.

Phillips, Dave T., Celina, Tex. Earth-auger. No. 1,222,460; Apr. 10; v. 237; p. 543.

Phinons, James M., Pamplin, Va., assignor to W. H. Davis, Havaco, W. Va. Switch. No. 1,221,585; Apr. 3; v. 237; p. 205.

Pick, William, New York, N. Y. Circuit-controlling telephone-receiver support. No. 1,222,986; Apr. 17; v. 237; p. 766.

Pickens, Sale A., New York, N. Y. Automobile-door. No. 1,223,903; Apr. 24; v. 237; p. 1118.

Pickering, Edwin G., Montgomery county, near Dayton, Ohio. Identifying mailing-card. No. 1,221,903; Apr. 10; v. 237; p. 347.

Pickering, George, Dover, Del. Wheel. No. 1,223,829; Apr. 24; v. 237; p. 1093.

Pickett, George F., Brooklyn, N. Y. Shaft for paper-rolls. No. 1,223,104; Apr. 17; v. 237; p. 807.

Pierce, Frank M., assignor to Pierce Wrapping Machine Company, Chicago, Ill. Paper-carrier for wrapping-machines. No. 1,221,089; Apr. 3; v. 237; p. 30.

Pierce, Henrietta W. K. (See Wales, Enid S., assignor.)

Pierce, Lincoln, Tucson, Ariz. Diving-boat. No. 1,223,730; Apr. 24; v. 237; p. 1057.

Pierce Wrapping Machine Company. (See Pierce, Frank M., assignor.)

Pierson, Lee H., and H. C. Willitz, Janesville, Wis. Lightning-arrester for telephones. No. 1,222,461; Apr. 10; v. 237; p. 543.

Pigott, William, Santa Barbara, Cal. Dust-pan. No. 1,223,105; Apr. 17; v. 237; p. 807.

Pike, William H., Jr., South Orange, N. J., assignor, by mesne assignments, to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 1,223,329; Apr. 17; v. 237; p. 881.

Pindroh, John, Mulberry, Kans. Latch-lock. No. 1,222,462; Apr. 10; v. 237; p. 544.

Pine, Edward M., Philadelphia, Pa. Non-refillable bottle. No. 1,222,889; Apr. 17; v. 237; p. 734.

Pinnola, Achille, Ravena, N. Y. Bottle-filling apparatus. No. 1,222,463; Apr. 10; v. 237; p. 544.

Pinske, Theodore, Gary, Minn. Half-hitch sling-lock. No. 1,222,025; Apr. 10; v. 237; p. 389.

Pioneer Suspender Company. (See Ferguson, William, assignor.)

Pipes, Charles R., Akron, Ohio. Rail-joint. No. 1,222,665; Apr. 17; v. 237; p. 657.

Pitcher, Elmer C., San Francisco, Cal. Sliding-door structure. No. 1,221,766; Apr. 3; v. 237; p. 265.

Pitman-Moore Company. (See Roberts, George H., assignor.)

Pittaluga, Stefano, assignor of one-fourth to C. P. Gorini, one-fourth to E. J. Kitterman, and one-fourth to F. W. Schultze, Los Angeles, Cal. Can-stamper. No. 1,223,610; Apr. 24; v. 237; p. 1014.

Pitts, Jarriott T., Mont Eagle, Tenn. Adjustable comb-holder for hair-clippers. No. 1,223,200; Apr. 17; v. 237; p. 841.

Pittsburgh Coal Washer Company. (See Sorber, Alexander M., assignor.)

Pittsburgh Lamp, Brass & Glass Company. (See Yokel, Frank, assignor.)

Pittsburgh Plate Glass Company. (See Hitchcock, Halbert K., assignor.)

Pittsburgh Plate Glass Company. (See Johnson, John F., assignor.)

Plante, Levi N., Worcester, Mass. Creasing-board. No. 1,221,213; Apr. 3; v. 237; p. 75.

Plattner, David, and R. H. Yale, assignors to Plattner-Yale Manufacturing Company, Lincoln, Nebr. Bob-sled runner. No. 1,222,322; Apr. 10; v. 237; p. 493.

Plattner-Yale Manufacturing Company. (See Plattner and Yale, assignors.)

Platts, Howard C. (See Overbury and Platts.)

Pleister, Henry W., Westfield, N. J., assignor to H. B. Newhall, Bolt-anchor. No. 1,222,987; Apr. 17; v. 237; p. 766.

Pleister, Henry W., Westfield, N. J., assignor to H. B. Newhall, Bolt-anchor. No. 1,222,988; Apr. 17; v. 237; p. 767.

Plichta, Josef, Uj-Pest, Hungary. Spinning-machine for making paper yarn. No. 1,221,374; Apr. 3; v. 237; p. 131.

Plowright, Bennett. (See Wegner, Loescher, and Plowright.)

Polkowski, John, New York, N. Y. Upholstering-tool. No. 1,222,129; Apr. 10; v. 237; p. 424.

Pollard, Arthur L., Batavia, N. Y. Annealing articles. No. 1,222,793; Apr. 17; v. 237; p. 701.

Pollock, Henry H., Carnegie, Pa. Mail-crane. No. 1,222,026; Apr. 10; v. 237; p. 390.

Pomper, Isak, New York, N. Y. Shopping-bag. No. 1,223,420; Apr. 24; v. 237; p. 947.

Porter, Edgar E., Columbia, S. C. Centrifugal gun. No. 1,223,069; Apr. 17; v. 237; p. 795.

Porter, John G., Bridgeport, Nebr. Steering-coupling for automobiles. No. 1,222,666; Apr. 17; v. 237; p. 657.

Posson, Fay E., Park Ridge, assignor to Safety First Manufacturing Co., Chicago, Ill. Paint-removing compound and making the same. No. 1,223,518; Apr. 24; v. 237; p. 982.

Post, Ernest K., and J. S. Genshelmer, Altoona, Pa. Release-lock for switches. No. 1,223,611; Apr. 24; v. 237; p. 1014.

Potter, Louis, Yarmouth, Nova Scotia, Canada. Trawl-tub. No. 1,221,904; Apr. 10; v. 237; p. 347.

Potter, Horace G., Seattle, Wash. Pump attachment for automobiles. No. 1,222,027; Apr. 10; v. 237; p. 390.

Powell, Arthur W., Taylorville, Ill. Dental-floss holder. No. 1,221,586; Apr. 3; v. 237; p. 205.

Powell, Jefferson D., Searcy, Ark. Tractor. No. 1,222,989; Apr. 17; v. 237; p. 767.

Power, John A., Hampton, N. J. Closure. No. 1,223,106; Apr. 17; v. 237; p. 808.

Powers Accounting Machine Company. (See Goerlitz, Hans, assignor.)

Pratt, Charles M., Towanda, Pa. Stamp-moistener. No. 1,221,587; Apr. 3; v. 237; p. 205.

Pratt, James R., assignor to Lake Erie Manufacturing Co. Inc., Buffalo, N. Y. Pump-valve. No. 1,222,579; Apr. 10; v. 237; p. 586.

Prazinka, John. (See Schramko and Prazinka.)

Preble, Edwin N., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Gage mechanism for sole-pressing machines. No. 1,221,214; Apr. 3; v. 237; p. 76.

Prehall, William F. (See Axelsson, Charli, assignor.)

Pretzel, Herman H., Stillwater, Minn. Grease-gun. No. 1,222,667; Apr. 17; v. 237; p. 658.

Prewitt, John C., and C. Hendricks, Santa Margarita, Cal. Windmill. No. 1,221,090; Apr. 3; v. 237; p. 31.

Price-Campbell Cotton Picker Corporation. (See Calderwood, Benjamin C., assignor.)

Price, William J., Dixon, Ill. Separator for grinding-mills. No. 1,223,612; Apr. 24; v. 237; p. 1015.

Priest, Edward D., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine. No. 1,222,464; Apr. 10; v. 237; p. 544.

Priest, Edward D., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine. No. 1,222,465; Apr. 10; v. 237; p. 545.

Primos Chemical Company. (See Davis, Royal S., assignor.)

Prindle, William E., assignor to Buckeye Drier Company, London, Ohio. Mechanical rotary drier. No. 1,222,244; Apr. 10; v. 237; p. 467.

Printasign Company, The. (See Elmblad, Hjalmar, assignor.)

Printograph Manufacturing Co. (See Duscher, Ernest, assignor.)

Pritchett, William V., Blooming Grove, Tex. Header. No. 1,223,201; Apr. 17; v. 237; p. 841.

Procter and Gamble Company, The. (See Dewar and Liebmann, assignors.)

Proctor, Charles H., Sheboygan, Wis. Folding berry-box. No. 1,223,202; Apr. 17; v. 237; p. 841.

Proctor, John B., Butler, Ind. Gun-cleaner. No. 1,222,028; Apr. 10; v. 237; p. 390.

Proudfit, William S., Grand Rapids, Mich. Loose-leaf binder. No. 1,222,668; Apr. 17; v. 237; p. 658.

Puccini, Aurelio A., Corona, and D. Evangelist, New York, N. Y. Letter-conveyer. No. 1,221,588; Apr. 3; v. 237; p. 205.

Pudlin, David, New York, N. Y. Eye for dolls. No. 1,221,589; Apr. 3; v. 237; p. 206.

Pullara, Giovanni, Pueblo, Colo. Chest and means for locking the same. No. 1,221,215; Apr. 3; v. 237; p. 76.

Purity Baking Company. (See Kelley, Harry R., assignor.)

Purnell, John W., Morristown, Tenn. Electric bath-tub heater. No. 1,222,669; Apr. 17; v. 237; p. 658.

Putnam, William H., Brooklyn, N. Y. Antiskidding device for vehicles. No. 1,223,070; Apr. 17; v. 237; p. 795.

Pyle-National Company, The. (See Miller, Charles E., assignor.)

Pyle-National Electric Headlight Company. (See Young, Otis W., assignor.)

Pyper, George R., Midvale, Utah. Time-controlled switch. No. 1,221,216; Apr. 3; v. 237; p. 77.

Quade, Henry W., Kewaskum, Wis. Belt-drive for curd-mills. No. 1,223,107; Apr. 17; v. 237; p. 808.

Quall, Francis H. (See Knudsen, Jacob B., assignor.) (Reissue.)

Quarles, Charles H., and G. W. Sayin, Charlottesville, Va. Headlight-steering mechanism. No. 1,221,905; Apr. 10; v. 237; p. 348.

Queen City Safety Appliance Company, The. (See King, James D., assignor.)

Quigley, John T., San Francisco, Cal., assignor, by mesne assignments, to Costmeter Company, Boston, Mass. Stamping device. No. 1,222,029; Apr. 10; v. 237; p. 391.

Quinliven, Matthew, and L. Sadler, Miami, Ariz. Food-dispenser. No. 1,221,217; Apr. 3; v. 237; p. 77.
Quinn, John L., Los Angeles, assignor to Standard Oil Company of California, San Francisco, Cal. Orchard-heater. No. 1,222,794; Apr. 17; v. 237; p. 701.
R. Hoe and Co. (See Weber, George F., assignor.)
R. H. Gaylord Company. (See Gaylord, Robert H., assignor.)
Raasch, Herman C. (See Blair and Raasch.)
Rader, Irvin, assignor to Nolde & Horst Company, Reading, Pa. Hosiery-holder for embroidering-machines. No. 1,222,670; Apr. 17; v. 237; p. 659.
Radiant Heating Limited. (See Bone, Wilson, and McCourt, assignors.)
Radio Telephone & Telegraph Company. (See De Forest, Lee, assignor.)
Radiguer, Charles, assignor to Societe Anonyme Des Etablissements Delaunay-Belleville, St.-Denis, France. Belleville-boiler elements with tubes of increasing diameter. No. 1,223,108; Apr. 17; v. 237; p. 808.
Radó, Joseph, Cleveland, Ohio. Indicating electric switch. No. 1,221,590; Apr. 3; v. 237; p. 206.
Raffensperger, Charles J., *et al.* (See Cary, James B., assignor.)
Rabsskopf, Carl, Mill Valley, Cal. Paper-curing machine. No. 1,223,613; Apr. 24; v. 237; p. 1015.
Rail Joint Company, The. (See Boyce, William S., assignor.)
Rail Joint Company, The. (See Wolhaupter and Braine, assignors.)
Railton, Robert, Valley Falls, R. I. Adjustable floating-reamer holder. No. 1,222,466; Apr. 10; v. 237; p. 546.
Railway Appliance Mfg. Co., The. (See Perkins, James D., assignor.)
Railway Utility Company. (See Hynes, Lee P., assignor.)
Raisanen, August and J., Gackle, N. D. Hay-stacker. No. 1,221,375; Apr. 3; v. 237; p. 132.
Raisanen, John. (See Raisanen, August and J.)
Rajewsky, Otto J., Blue Earth, Minn. Rail-fastener. No. 1,223,203; Apr. 17; v. 237; p. 842.
Rall, Max, Paris, France, assignor to Firm of R. Bosch, Stuttgart, Germany. Spark-plug. No. 1,221,906; Apr. 10; v. 237; p. 348.
Ramp, John B., Lexington, Ky. Fluid-engine. No. 1,222,990; Apr. 17; v. 237; p. 768.
Ramsey, Charles D., Sedalia, Tenn. Rat-trap. No. 1,222,795; Apr. 17; v. 237; p. 701.
Randolph, Frank L., Los Angeles, Cal. Receptacle-frame. No. 1,222,991; Apr. 17; v. 237; p. 768.
Raney, Clemma R., assignor of one-half to R. J. Raney, Centerville, Iowa. Shocking-machine. No. 1,222,796; Apr. 17; v. 237; p. 702.
Raney, Clemma R., Chicago, Ill., assignor to International Harvester Company of New Jersey. Shocking-machine attachment. No. 1,222,797; Apr. 17; v. 237; p. 702.
Raney, Clemma R., Chicago, Ill., assignor to International Harvester Company of New Jersey. Grain-shocker. No. 1,222,798; Apr. 17; v. 237; p. 702.
Raney, Clemma R., Chicago, and R. C. Livesay, Moline, Ill., assignors to International Harvester Company of New Jersey. Frame for shocking-machines. No. 1,222,799; Apr. 17; v. 237; p. 703.
Raney, R. J. (See Raney, Clemma R., assignor.)
Rarick, Henry E., Altoona, Pa. Stoving-hammer. No. 1,224,018; Apr. 24; v. 237; p. 1156.
Rasmusen, Lorence S., Rock Island, Ill., and H. B. Carlson, Davenport, Iowa. External metal lap. No. 1,221,472; Apr. 3; v. 237; p. 165.
Rasmussen, Hans, Royal, Iowa. Fuel-filter for carburetors. No. 1,221,376; Apr. 3; v. 237; p. 132.
Ratcliffe, Roscoe, New Britain, assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn. Fuse-box. No. 1,224,118; Apr. 24; v. 237; p. 1190.
Ratekin, Emery J., Rushville, assignor to A. G. Shauck and E. D. McFall, Arlington, Ind. Adjustable clevis for agricultural implements. No. 1,222,580; Apr. 10; v. 237; p. 586.
Raus, Charles. (See Bayliss and Raus.) (Reissue.)
Rausch, John A. (See Andersch and Rausch.)
Ravenshear, George, West Ealing, England. Target. No. 1,223,290; Apr. 17; v. 237; p. 867.
Ravenshear, George, London, England. Target. No. 1,223,291; Apr. 17; v. 237; p. 868.
Ravn, Erik H. C., Marslev, Denmark. Rail-joint for railways. No. 1,223,731; Apr. 24; v. 237; p. 1058.
Rayfield, Charles L., Chicago, Ill. Carbureter. No. 1,222,130; Apr. 10; v. 237; p. 425.
Rayfield, Charles L., Chicago, Ill. Carbureter. No. 1,222,131; Apr. 10; v. 237; p. 425.
Rayfield, Charles L., Chicago, Ill. Float-feed mechanism for carbureters. No. 1,222,561; Apr. 10; v. 237; p. 579.
Rayfield, Charles L., Chicago, Ill. Carbureter-primer. No. 1,222,562; Apr. 10; v. 237; p. 580.
Raymond Brothers Impact Pulverizer Company. (See Crites, Joe, assignor.)
Raymond, George E., Los Angeles, Cal. Air-pump for gasolene-tanks. No. 1,222,030; Apr. 10; v. 237; p. 391.
Raynsford, Arthur, assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,222,323; Apr. 10; v. 237; p. 494.
Read, Fred A., Lynn, assignor to The Reece Button Hole Machine Company, Boston, Mass. Blindstitch sewing-machine. No. 1,222,671; Apr. 17; v. 237; p. 659.
Reagan, Daniel E., Columbus, Ohio. Attachment for brick-machines. No. 1,224,019; Apr. 24; v. 237; p. 1156.
Reagan, James, Philadelphia, Pa. Grate for automatic stokers. No. 1,223,830; Apr. 24; v. 237; p. 1093.
Reams, Joseph A., assignor to W. J. Parrish, Richmond, Va. Kiln. No. 1,223,732; Apr. 24; v. 237; p. 1058.
Recording and Computing Machine Company, The. (See Ohmer, Wilfred I., assignor.)
Redding, Samuel A., Atlanta, Ga. Clamping device for trolley and other purposes. No. 1,222,132; Apr. 10; v. 237; p. 426.
Reece Button Hole Machine Company, The. (See Read, Fred A., assignor.)
Reece Button Hole Machine Company. (See Klewicz, John, assignor.)
Reece Shoe Machinery Company. (See Perri, Angelo, assignor.)
Reece Shoe Machinery Company. (See Schoenky, August R., assignor.)
Reed, Frank C., and E. A. and E. D. Parker, Springfield, Ohio. Target. No. 1,223,519; Apr. 24; v. 237; p. 983.
Reed, Fred W., South Bend, Ind. Embossing attachment for printing-presses. No. 1,223,614; Apr. 24; v. 237; p. 1016.
Reed, Henry J., Townsend, Mont. Ground-leveling machine. No. 1,223,831; Apr. 24; v. 237; p. 1093.
Reed, Joseph S., Winnfield, La. Steel cross-tie and rail-clamp. No. 1,222,133; Apr. 10; v. 237; p. 426.
Reedy, Glenn D. (See Sherwood and Reedy.)
Reeve, Henry E., New York, N. Y. Signaling mechanism. No. 1,221,377; Apr. 3; v. 237; p. 132.
Regan, William F., Brooklyn, N. Y., assignor, by mesne assignments, to Empire Paper Bottle Company. Machine for making fibrous containers. No. 1,222,134; Apr. 10; v. 237; p. 426.
Regan, William F., Brooklyn, N. Y., assignor, by mesne assignments, to Empire Paper Bottle Company. Neck-forming mechanism for paper-bottle machines. No. 1,222,135; Apr. 10; v. 237; p. 427.
Regan, William J., Pittsburgh, assignor to The McConway & Torley Company, Pittsburgh, Pa. Car-coupling-locking mechanism. No. 1,222,992; Apr. 17; v. 237; p. 768.
Regan, William J., assignor to The McConway & Torley Company, Pittsburgh, Pa. Car-coupling-locking mechanism. No. 1,222,993; Apr. 17; v. 237; p. 769.
Reichenbach & Co. (See Lutz, Carl, assignor.)
Reichenbach, Henry M., Rochester, N. Y. Carbureter. No. 1,222,672; Apr. 17; v. 237; p. 659.
Reichenbach, Henry M., Rochester, N. Y. Fuel-supply device for internal-combustion engines. No. 1,223,109; Apr. 17; v. 237; p. 808.
Reichenbach, Henry M., Rochester, N. Y. Atomizing and nebulizing device. No. 1,221,020; Apr. 24; v. 237; p. 1157.
Reichhelm, George L., New Haven, Conn. Game. No. 1,223,520; Apr. 24; v. 237; p. 984.
Reid, Isaiah, Elizabeth City, N. C. Floor-scrubber. No. 1,221,218; Apr. 3; v. 237; p. 77.
Reid, William, Macclesfield, N. C. Ironing-table. No. 1,221,592; Apr. 3; v. 237; p. 207.
Rein, Herman, New York, N. Y., and J. R. Combs, Dinsmore, Fla.; said Combs assignor to said Rein. Door-lock. No. 1,223,110; Apr. 17; v. 237; p. 809.
Reinhold, Hugo F., and A. F. Meyer, Plymouth, Wis. Cheese-press. No. 1,221,219; Apr. 3; v. 237; p. 77.
Relay Automatic Telephone Company, The. (See Aitken, William, assignor.)
Reliance Electric Heating Company. (See Mann, Nelson E., assignor.) (Reissue.)
Remington Arms and Ammunition Company. (See Dygert, Charles B., assignor.)
Remington, Alfred M. (See De Avila and Remington.)
Remington Typewriter Company. (See Smith, Arthur W., assignor.)
Remington Typewriter Company. (See Steele, Herbert H., assignor.)
Remington Typewriter Company. (See Yaw, Clio B., assignor.)
Renaux, Charles, Paris, France. Lock. No. 1,224,021; Apr. 24; v. 237; p. 1157.
Renihan, Ralph C., assignor to Van Zandt, Jacobs & Co., Troy, N. Y. Soft fold-collar. No. 1,223,521; Apr. 24; v. 237; p. 984.
Research Corporation. (See Bradley and Schmidt, assignors.)
Reutter, William C., Manayunk, Pa. Automobile-fender. No. 1,223,904; Apr. 24; v. 237; p. 1118.
Reynolds, Charles B., Sawtelle, Cal. Airless tire-core. No. 1,223,204; Apr. 17; v. 237; p. 842.
Reynolds, Earl. (See Kelly and Reynolds.)
Reynolds, John C., Binghamton, N. Y. Electrically-operated door. No. 1,222,136; Apr. 10; v. 237; p. 427.
Reynolds, Theodore E., assignor of one-half to I. M. Farrington, Detroit, Mich. Automobile-starter. No. 1,223,292; Apr. 17; v. 237; p. 868.
Reynolds, Walter E., Kansas City, Mo. Valve-lifter. No. 1,223,421; Apr. 24; v. 237; p. 947.
Reznicek, Anton, Jersey City, N. J. Belt. No. 1,222,800; Apr. 17; v. 237; p. 703.
Rhoades, Alonzo E., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Feeler mechanism for looms. No. 1,222,994; Apr. 17; v. 237; p. 769.

Rhoades, Fred L., Sault Ste. Marie, Mich. Head-protector. No. 1,222,995; Apr. 17; v. 237; p. 770.
Rhodes, Frank R., Haymakertown, Va. Toy. No. 1,222,996; Apr. 17; v. 237; p. 770.
Rial, John, and W. C. Hodde, Brenham, Tex. Lawn-trimmer. No. 1,222,031; Apr. 10; v. 237; p. 392.
Ricard, Louis, Detroit, Mich., assignor of one-half to T. St. Denis, Windsor, Ontario, Canada. Window-screen. No. 1,222,137; Apr. 10; v. 237; p. 426.
Richard, Jules, Paris, France. Means for regulating the eyepieces of stereoscopes. No. 1,221,091; Apr. 3; v. 237; p. 31.
Richards, Ernst R., assignor to Sears, Roebuck and Company, Chicago, Ill. Making matrices. No. 1,222,138; Apr. 10; v. 237; p. 428.
Richards, Ralph W., Waterville, Me. Pocket surveying instrument. No. 1,223,015; Apr. 24; v. 237; p. 1016.
Richardson, Cecil H., Saskatoon, Saskatchewan, Canada. Pipe-squeezer. No. 1,223,522; Apr. 24; v. 237; p. 984.
Richardson, Henry F., New York, assignor to H. F. Richardson and C. Auth, trustees, Brooklyn, N. Y. Connection-box and plugging-jack. No. 1,223,111; Apr. 17; v. 237; p. 809.
Richardson, Jackson B., Fisk, Mo. Twine-holder. No. 1,221,593; Apr. 3; v. 237; p. 207.
Richardson, William D., assignor to Swift and Company, Chicago, Ill. Kelp-harvester. No. 1,222,324; Apr. 10; v. 237; p. 494.
Richman, William H., Philadelphia, Pa. Machine for cutting plastic materials. No. 1,221,594; Apr. 3; v. 237; p. 207.
Ricketts, James R., Long Beach, Cal. Priming means for internal-combustion engines. No. 1,221,378; Apr. 3; v. 237; p. 132.
Riday, William W., Philadelphia, Pa. Apparatus for treating and finishing sized hats. No. 1,223,733; Apr. 24; v. 237; p. 1058.
Ridgway, Joseph W., Long Island City, N. Y. Counterbalance for motor-shafts. No. 1,223,346; Apr. 17; v. 237; p. 888.
Riecks, Otto A. W., Everett, Mass. Boat and its propeller. No. 1,223,616; Apr. 24; v. 237; p. 1016.
Ries, Fred, Chicago, Ill. Phonographic stylus. No. 1,222,139; Apr. 10; v. 237; p. 429.
Riffe, Leander D. (See Osborne, Thomas J., assignor.)
Rigdon, Edwin S., Berea, Ohio. Shoe-support. No. 1,221,092; Apr. 3; v. 237; p. 31.
Riggs, John C., Berkeley, Cal. Canopy for doors. No. 1,221,595; Apr. 3; v. 237; p. 207.
Riley, Eugene, Woodriver, Ill. Foot-rest. No. 1,221,596; Apr. 3; v. 237; p. 208.
Riley, Harry L., Atlantic City, N. J. Ice-creeper for horseshoes. No. 1,223,832; Apr. 24; v. 237; p. 1094.
Riley, Jull, Jordan, Minn., assignor of forty-nine one-hundredths to S. Abrams, San Francisco, Cal. Bathing-cap. No. 1,221,473; Apr. 3; v. 237; p. 165.
Rinehart, Bentley L., Philadelphia, Pa. Rotary pump. No. 1,223,734; Apr. 24; v. 237; p. 1058.
Risinger, Frank V., assignor to The Block Gas Mantle Co., Youngstown, Ohio. Shock-absorber. No. 1,223,422; Apr. 24; v. 237; p. 947.
Rivers, Charles A., El Paso, Tex. Automatic air device for gas-engines. No. 1,221,597; Apr. 3; v. 237; p. 208.
Rixson, Oscar C., New Rochelle, N. Y. Holder for swinging closures. No. 1,221,474; Apr. 3; v. 237; p. 165.
Rixson, Oscar C., New Rochelle, N. Y. Guide for door-hangers. No. 1,223,112; Apr. 17; v. 237; p. 810.
Rizzo, Joseph, New York, N. Y. Convertible chair. No. 1,222,673; Apr. 17; v. 237; p. 660.
Robbins, Ernest W., Township One, Franklin county, Nebr. Attachment for coupling a pump to a windmill. No. 1,223,833; Apr. 24; v. 237; p. 1094.
Robert N. Bassett Company. (See Bradshaw, Charles E., assignor.)
Roberts, Edgar A., Folsom City, Cal. Almond-huller. No. 1,221,598; Apr. 3; v. 237; p. 208.
Roberts, Eugene, and A. H. Gibson, Lehi, assignors to Sugar Centrifugal Discharger Company, Salt Lake City, Utah. Apparatus for washing sugar. No. 1,224,095; Apr. 24; v. 237; p. 1181.
Roberts, George H., assignor to Pitman-Moore Company, Indianapolis, Ind. Defibrinator. No. 1,224,096; Apr. 24; v. 237; p. 1182.
Roberts, J. W., *et al.* (See Kopp, John P., assignor.)
Robertson Brothers Manufacturing Company. (See Robertson and Hauf, assignors.)
Robertson, Charles H. (See Ryan, Wilbur E., assignor.)
Robertson, James B., Bushnell, Ill. Safety-check. No. 1,221,599; Apr. 3; v. 237; p. 208.
Robertson, John F., Bellevue, Pa. Oil-purifier. No. 1,223,423; Apr. 24; v. 237; p. 948.
Robertson, Robert R., La Grange, and G. F. Hauf, assignors to Robertson Brothers Manufacturing Company, Chicago, Ill. Stove. No. 1,222,325; Apr. 10; v. 237; p. 495.
Robeson Process Company. (See Woddrop, Lemuel H., assignor.)
Robinson, Albert E. (See Herrmann and Robinson.)
Robinson, Edison C., Telluride, Colo. Ore-classifier. No. 1,223,523; Apr. 24; v. 237; p. 984.
Robinson, Edward A. (See Starr, Oliver F., assignor.)
Robinson, George N. (See Brackett, George C., assignor.)
Robinson, Leo S., Alameda, Cal. Segregating units. No. 1,223,113; Apr. 17; v. 237; p. 810.
Robinson, William C., Grinnell, Iowa. Aeroplane-fuselage structure. No. 1,222,140; Apr. 10; v. 237; p. 429.
Robison, Joseph A., assignor of one-half to J. F. Hammett, Little Rock, Ark. Spring attachment device. No. 1,222,032; Apr. 10; v. 237; p. 392.
Rodebaugh, Ernest M., Long Bottom, Ohio. Carbid-feed for acetylene-generators. No. 1,221,475; Apr. 3; v. 237; p. 166.
Rodefer, Bert A., assignor of one-half to J. W. Murphy, Astoria, Oreg. Dirigible automatic headlight. No. 1,222,141; Apr. 10; v. 237; p. 429.
Rodrigue, Antone J., Princeton, Cal. Hay-press. No. 1,221,220; Apr. 3; v. 237; p. 78.
Roe, William H., Govans, Md. Corn-harvester. No. 1,222,890; Apr. 17; v. 237; p. 734.
Roebuck, Alvah C., assignor to Woodstock Typewriter Company, Woodstock, Ill. Type-writer ribbon-vibrator. No. 1,222,326; Apr. 10; v. 237; p. 495.
Roebuck, Alvah C., assignor to Woodstock Typewriter Company, Woodstock, Ill. Ribbon-vibrator. No. 1,222,327; Apr. 10; v. 237; p. 496.
Roebuck, Alvah C., assignor to Woodstock Typewriter Company, Woodstock, Ill. Type-writer margin-release. No. 1,222,328; Apr. 10; v. 237; p. 496.
Roebuck, Alvah C., assignor to Woodstock Typewriter Company, Woodstock, Ill. Type-writer ribbon-vibrator. No. 1,222,329; Apr. 10; v. 237; p. 496.
Roessler & Hasslacher Chemical Co., The. (See Liebknecht, Otto, assignor.)
Roessler & Hassalacher Chemical Company, The. (See Sargent, Ralph N., assignor.)
Roessler & Hasslacher Chemical Co., The. (See Weber, Friedrich W., assignor.)
Rogalski, Frank, Detroit, Mich. Envelop. No. 1,221,907; Apr. 10; v. 237; p. 349.
Rogers, Alfred, Milton, Mass. Faucet-housing. No. 1,221,093; Apr. 3; v. 237; p. 31.
Rogers, Ernest B., Seattle, Wash. Pile-driver-hammer suspension. No. 1,222,891; Apr. 17; v. 237; p. 734.
Rogers, Henry G., Au Sable Forks, N. Y. Machine for converting pulp into sheets. No. 1,223,905; Apr. 24; v. 237; p. 1119.
Rogers, Leo L., Boston, Mass., assignor to E. C. Moore, New York, N. Y. Garter. No. 1,222,467; Apr. 10; v. 237; p. 546.
Rogers, Rochester H. (See Dee, David G., assignor.)
Roller Lock Nut Company. (See Wegener, Arnold H., assignor.) (Reissue.)
Rolls Royce Limited. (See Royce, Frederick H., assignor.)
Rolph, Benjamin M., Dixon, Ill. Tiling curb. No. 1,223,735; Apr. 24; v. 237; p. 1059.
Rolph, Verne M., Magnolia, Minn. Guard for windshields. No. 1,223,205; Apr. 17; v. 237; p. 842.
Roman, Benjamin. (See Holtzman, John, assignor.)
Römer, Adolf, Stuttgart, assignor to Deutsch-Koloniale Gerb- & Farbestoff-Gesellschaft m. b. H., Karlsruhe, Germany. Manufacture of products adapted to precipitate glue or like substances. No. 1,222,033; Apr. 10; v. 237; p. 392.
Roos, Bert, Idaho Falls, Idaho. Sheep-shears holder and controller. No. 1,221,379; Apr. 3; v. 237; p. 133.
Roost, Richard. (See Huebsch and Roost.)
Root, Charles F., Ravenna, assignor of one-fourth to B. O. Conn, Mansfield, Ohio. Combined safety and throw-off mechanism. No. 1,221,476; Apr. 3; v. 237; p. 166.
Rose, Edward E., Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Valve. No. 1,223,736; Apr. 24; v. 237; p. 1059.
Rose Label Machine Company. (See Rosenthal, Arthur, assignor.)
Rose, William, Gainsborough, England. Filling apparatus. No. 1,223,293; Apr. 17; v. 237; p. 868.
Rosen, Louis, Jacksonville, Fla. Sign-holder. No. 1,222,468; Apr. 10; v. 237; p. 546.
Rosenbaum, Rudolph R., Chicago, Ill. Apparatus for dephlegmation. No. 1,222,801; Apr. 17; v. 237; p. 703.
Rosenberg, Emanuel, Altrincham, England, assignor to Westinghouse Electric and Manufacturing Company. Variable-speed electric motor. No. 1,222,469; Apr. 10; v. 237; p. 547.
Rosenberg, Nathan, assignor of one-half to C. Schaefer, Chicago, Ill. Ground-mat. No. 1,222,563; Apr. 10; v. 237; p. 580.
Rosenberg, Ralph H., assignor to The Universal Machine Company, Bowling Green, Ohio. Universal joint. No. 1,223,524; Apr. 24; v. 237; p. 985.
Rosenbluth, Edwin M., Philadelphia, Pa. Acetylene-gas generator. No. 1,223,294; Apr. 17; v. 237; p. 869.
Rosenbluth, Edwin M., Philadelphia, Pa. Lamp-support. No. 1,224,097; Apr. 24; v. 237; p. 1182.
Rosenthal, Arthur, assignor to Rose Label Machine Company, Grand Rapids, Mich. Special-work sewing-machine. No. 1,223,617; Apr. 24; v. 237; p. 1017.
Rosenthal, Raphael. (See Schreiber and Rosenthal.)
Ross, Frederick M., and H. L. Cook, Cincinnati, Ohio. Dirigible lamp and direction-indicator. No. 1,223,737; Apr. 24; v. 237; p. 1059.
Ross, Torey, Chicago, Ill. Workman's time-recorder. No. 1,221,600; Apr. 3; v. 237; p. 209.
Ross, Waldo A., Washington, D. C. Shoe-tree. No. 1,222,470; Apr. 10; v. 237; p. 547.
Rossi, Marcianus F., San Jose, Cal. Projectile. No. 1,222,142; Apr. 10; v. 237; p. 430.

Rossiter, George A., Brooklyn, and J. E. Beattie, assignors to F. G. Carrie, New York, N. Y., executor of the estate of M. E. Carrie. Attachment for gyroscopic compasses. No. 1,221,477; Apr. 3; v. 237; p. 167.

Rotary Power Tool Company. (See Berg, John O., assignor.)

Roth, Albert G., Drake, N. D. Internal-combustion engine. No. 1,221,094; Apr. 3; v. 237; p. 32.

Rothermich, Anton P., St. Louis, Mo. Automobile-signal. No. 1,224,022; Apr. 24; v. 237; p. 1158.

Rothfeld, Max, Philadelphia, Pa. Suction cleaning attachment for player-pianos. No. 1,221,221; Apr. 3; v. 237; p. 78.

Rothschild, John. (See Adams, Sherwood H., assignor.)

Rottmer, Henry E., Washington, D. C. Shackle or connecting-link. No. 1,222,997; Apr. 17; v. 237; p. 770.

Rousso, Jacques. (See Corlett, Robert S., assignor.)

Routin, Joseph L., Paris, France. Means for collectively actuating and controlling alternating-current motors. No. 1,221,095; Apr. 3; v. 237; p. 32.

Rowell, Frank F., Bayside, N. Y., assignor to H. W. Johns-Manville Company. Holding device for fire-extinguishers. No. 1,222,143; Apr. 10; v. 237; p. 430.

Rowland, Glen M., Portland, Oreg. Clamp for mirror and picture frames. No. 1,221,601; Apr. 3; v. 237; p. 209.

Rowley, Horace T., New York, N. Y., and F. Schranz, Camden, N. J., assignors to Standard Compress and Warehouse Corporation, Richmond, Va. Press. No. 1,221,767; Apr. 3; v. 237; p. 205.

Roy, Alphonse M. (See Laveck and Roy.)

Royal Typewriter Company. (See Hess, Edward B., assignor.)

Royce, Frederick H., assignor to Rolls Royce Limited, Derby, England. Gudgeon-pin-locking device. No. 1,222,802; Apr. 17; v. 237; p. 704.

Royce, Frederick H., assignor to Rolls Royce Limited, Derby, England. Aircraft-propeller. No. 1,223,330; Apr. 17; v. 237; p. 881.

Rubenstein, Harry; said Rubenstein assignor to himself, J. E. Seifert, and J. Wagner, Jr., Philadelphia, Pa. Vending apparatus. No. 1,222,471; Apr. 10; v. 237; p. 547.

Ruck, Edwin, Swansea, Wales. Smelting-furnace. No. 1,223,738; Apr. 24; v. 237; p. 1060.

Rudd, Everett C., Mount Vernon, N. Y. Automatic platform for street-cars. No. 1,221,908; Apr. 10; v. 237; p. 349.

Rude, John F., Liberty, Ind. Fertilizer-distributer. No. 1,222,208; Apr. 10; v. 237; p. 453.

Ruff, John F., Port Huron, Mich. Cream-treating device and process. No. 1,222,892; Apr. 17; v. 237; p. 735.

Ruhe, Carleton, Olean, N. Y. Hydroplane. No. 1,222,674; Apr. 17; v. 237; p. 660.

Ruhe, Carleton, Olean, N. Y. Combined fleshing and unhairing machine. No. 1,223,424; Apr. 24; v. 237; p. 948.

Rulison, William, Lorain, Ohio. Spring vehicle-wheel. No. 1,222,998; Apr. 17; v. 237; p. 770.

Runquist, Carl, Chicago, assignor of one-half to O. G. Arfstrom, Berwyn, Ill. Pump. No. 1,221,602; Apr. 3; v. 237; p. 209.

Runyan, Arthur L., Waterloo, Iowa, assignor to Runyan Cushion Wheel Company, Omaha, Nebr. Resilient tire. No. 1,221,380; Apr. 3; v. 237; p. 133.

Runyan, Arthur L., Waterloo, Iowa, assignor to Runyan Cushion Wheel Company, Omaha, Nebr. Resilient tire. No. 1,221,381; Apr. 3; v. 237; p. 133.

Runyan Cushion Wheel Company. (See Runyan, Arthur L., assignor.)

Rupp, Edgar B., Kittanning, Pa. Luggage-carrier. No. 1,221,909; Apr. 10; v. 237; p. 349.

Ruprecht, Charles C., Midway, Fla. Rectifying device. No. 1,222,803; Apr. 17; v. 237; p. 704.

Ruprecht, Charles C., Midway, Fla. Separating apparatus. No. 1,222,804; Apr. 17; v. 237; p. 705.

Ruprecht, Charles C., Midway, Fla. Electrolytic rectifier. No. 1,223,114; Apr. 17; v. 237; p. 810.

Rush, Henry G. (See Knight, Frank H., assignor.)

Rush, Walter S., New York, N. Y. Ship's-order transmitting and receiving apparatus. No. 1,221,222; Apr. 3; v. 237; p. 79.

Rush, Walter S., New York, N. Y. Indicating apparatus for engines. No. 1,221,603; Apr. 3; v. 237; p. 210.

Rushton, Kenneth, assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Screw reverse valve mechanism for locomotives. No. 1,221,604; Apr. 3; v. 237; p. 210.

Russell, Burr C., Winfield, Kans. Grass-scorcher. No. 1,223,115; Apr. 17; v. 237; p. 810.

Russell, Charles H. (See Mathes and Russell.)

Russell, Frank K. (See Edwards and Russell.)

Russell, George F., Hoboken, N. J. Coin-controlled lock mechanism. No. 1,221,605; Apr. 3; v. 237; p. 210.

Russell, George H., Florence, Ala. Flushing-valve. No. 1,221,223; Apr. 3; v. 237; p. 79.

Russell, Oliver A., Windsor, Vt. Trace-fastener. No. 1,224,023; Apr. 24; v. 237; p. 1158.

Russell, Parlee H., Van Buren, Ohio. Vehicle-jack. No. 1,223,618; Apr. 24; v. 237; p. 1017.

Rutherford, Richard A., Brooklyn, N. Y. Telephone-booth door. No. 1,221,910; Apr. 10; v. 237; p. 350.

Ruthrauff, William M., Chicago, Ill. Dentifrice. No. 1,222,144; Apr. 10; v. 231; p. 430.

Rutledge, James E., *et al.* (See Cabanne, Charles G., assignor.)

Ruysdael, Basil, New York, N. Y. Opening device for wrapped boxes. No. 1,221,911; Apr. 10; v. 237; p. 350.

Ryan, Wilbur E., assignor of one-half to C. H. Robertson, Memphis, Tenn. Foot-accelerator for automobiles. No. 1,223,619; Apr. 24; v. 237; p. 1018.

Ryan, William D., Mallseet, New Brunswick, Canada. Hat-hanger. No. 1,222,675; Apr. 17; v. 237; p. 661.

Ryden, Claes, Cranston, R. I., assignor, by mesne assignments, to Universal Winding Company, Boston, Mass. Stopping mechanism for winding-machines. No. 1,223,620; Apr. 24; v. 237; p. 1018.

Ryon, Eppa H. (See Hutchins and Ryon.)

Ryon, Eppa H., Waltham, assignor to Crompton & Knowles Loom Works, Worcester, Mass. Weft-detector for looms. No. 1,221,768; Apr. 3; v. 237; p. 265.

Ryon, Joshua E., Desdemona, Tex. Permutation-padlock. No. 1,222,145; Apr. 10; v. 237; p. 431.

S. Sternau & Co. (See Ball, Henry P., assignor.)

S. R. Smythe Company, The. (See Smythe, Horace E., assignor.)

Sabatino, John, New York, N. Y. Massage apparatus. No. 1,222,472; Apr. 10; v. 237; p. 548.

Sadler, David L., Booneville, Miss. Brush. No. 1,221,606; Apr. 3; v. 237; p. 211.

Sadler, Luther. (See Quinliven and Sadler.)

Safety Car Heating and Lighting Co., The. (See Bijur, Joseph, assignor.)

Safety Car Heating and Lighting Company. (See Crevelling, John L., assignor.)

Safety First Manufacturing Co. (See Posson, Fay E., assignor.)

Safety Lock Company. (See Gross, William, assignor.)

Saltos, George, assignor of one-half to C. Budy, Cleveland, Ohio. Door. No. 1,221,478; Apr. 3; v. 237; p. 167.

Sala, Frank M., *et al.* (See McIntyre, William H., assignor.)

Sale, Archie P. (See Flowers, Malon I., assignor.)

Salisbury, Elizabeth M., Parkers Prairie, Minn. Adjustable pan for washtubs. No. 1,224,024; Apr. 24; v. 237; p. 1158.

Salmson, Emile J. J., assignor to Societe Des Moteurs Salmson (Systeme Canton-Unne), Billancourt, France. Mount for magneto-distributers. No. 1,221,607; Apr. 3; v. 237; p. 211.

Sampson, Robert W., Whitestone, N. Y., assignor of one-half to L. Schwab, East Orange, N. J. Tire-plug. No. 1,221,479; Apr. 3; v. 237; p. 168.

Sampson, Robert W., Whitestone, N. Y., assignor of one-half to L. Schwab, East Orange, N. J. Tire-plug. No. 1,221,912; Apr. 10; v. 237; p. 350.

Samuel Hart & Company. (See Kahn, Jacob J., assignor.)

San Diego Consolidated Gas and Electric Co. (See Jackson, Van Buren, assignor.)

Sand, Martin, Grygla, Minn. Drive-gearing for tractors. No. 1,224,109; Apr. 24; v. 237; p. 1187.

Sandell, Henry K., assignor to H. S. Mills, Chicago, Ill. Commutator-brush. No. 1,222,999; Apr. 17; v. 237; p. 771.

Sandell, Henry K., assignor to H. S. Mills, Chicago, Ill. Means for rectifying alternating current for Edison three-wire distribution system. No. 1,223,000; Apr. 17; v. 237; p. 771.

Sandell, Henry K., assignor to H. S. Mills, Chicago, Ill. Alloy bearing. No. 1,223,001; Apr. 17; v. 237; p. 772.

Sandell, Henry K., assignor to H. S. Mills, Chicago, Ill. Metal composition. No. 1,223,002; Apr. 17; v. 237; p. 772.

Sanders, John T., Rosser, Tex. Sulky-plow. No. 1,224,025; Apr. 24; v. 237; p. 1158.

Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Electric candlestick. No. 1,222,676; Apr. 17; v. 237; p. 661.

Sangamo Electric Company. (See Bard, Jacob W., assignor.)

Sangamo Electric Company. (See White, Otis, assignor.)

Singer, William, Passaic, N. J., assignor, by mesne assignments, to Asbestos Slate Roofing Manufacturing Company, Incorporated. Artificial-stone slab, shingle, and plate and composition for making same. No. 1,223,834; Apr. 24; v. 237; p. 1094.

Sanitary Refrigerator & Heater Company. (See Layman, Florence P., assignor.)

Sanitary Spout Company. (See Miller, Emil C., assignor.)

Santa, Luigi, Turin, Italy. Density-regulator for the atomizing of water under pressure and of steam in lead chambers. No. 1,221,913; Apr. 10; v. 237; p. 351.

Sargent & Company. (See Page, Albert A., assignor.)

Sargent & Company. (See Voight, Henry G., assignor.)

Sargent, Ralph N., Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Company, New York, N. Y. Apparatus for fumigating. No. 1,222,677; Apr. 17; v. 237; p. 661.

Saunders, Whitney W., Evremore, Alberta, Canada. Adjustable currycomb. No. 1,222,473; Apr. 10; v. 237; p. 548.

Saurer, Firm of Adolph. (See Baltensweiler and Egloff, assignors.)

Sauvage, Herbert J., Chicago, Ill. Nutcracker. No. 1,222,330; Apr. 10; v. 237; p. 497.

Savage, Adella P., Sidney, Ohio. Shoe. No. 1,222,678; Apr. 17; v. 237; p. 661.

Savage, Charles P., South Tacoma, Wash. Tie-clasp. No. 1,223,425; Apr. 24; v. 237; p. 948.

Savin, Garnet W. (See Quarles and Savin.)

Saworski, Frederick W., Boston, Mass. Articulatory joint. No. 1,221,770; Apr. 3; v. 237; p. 266.

Sawyer, Louis S., Lynn, Mass. Belt-fastener. No. 1,223,116; Apr. 17; v. 237; p. 811.

Saxe, John L., Waterbury, Conn. Pen and pencil clip. No. 1,224,026; Apr. 24; v. 237; p. 1159.

Scanlan, Joseph F., New York, N. Y. Butter-cutter. No. 1,221,224; Apr. 3; v. 237; p. 79.

Scarborough, Harry Y., Minneapolis, Minn. Tank for the treatment of sewage. No. 1,223,427; Apr. 24; v. 237; p. 949.

Scarborough, Harry Y., Minneapolis, Minn., and J. G. King, Superior, Wis., assignors to Automatic Chemical Closet Company, Minneapolis, Minn. Sanitary closet. No. 1,223,426; Apr. 24; v. 237; p. 949.

Schaefer, Bela, Frankfort-on-the-Main, Bockenheim, assignor to Hartmann & Braun A. G., Frankfort-on-the-Main, Germany. Vapor alternating-current rectifier and similar apparatus. No. 1,223,428; Apr. 24; v. 237; p. 950.

Schaefer, Charles. (See Rosenberg, Nathan, assignor.)

Schaf, Joseph C., Jr., and W. E. Munk, assignors to H. E. Weichel, Indianapolis, Ind. Electrothermostatic controller. No. 1,223,117; Apr. 17; v. 237; p. 811.

Schallman, Harry, Chicago, Ill. Combined garbage-can and rat-trap. No. 1,223,525; Apr. 24; v. 237; p. 985.

Schamber, Rudolf. (See Fischer and Schamber.)

Schaub, Henry A., and F. S. Crawford, Huntington, W. Va. Barrel hoist and rack. No. 1,223,295; Apr. 17; v. 237; p. 869.

Schattermann, Edward, Baltimore, Md., assignor to The Hold Fast Caster Cup Company. Floor-protecting attachment for furniture. No. 1,221,225; Apr. 3; v. 237; p. 80.

Scherenzel, Charles F., San Francisco, Cal. Lifting-jack. No. 1,223,621; Apr. 24; v. 237; p. 1019.

Schermerhorn, Louis G., Paterson, N. J. Automobile-locking device. No. 1,223,906; Apr. 24; v. 237; p. 1119.

Schevitz, Carl, Jacksonville, Fla. Expansible shoe-last. No. 1,223,206; Apr. 17; v. 237; p. 842.

Schiffi, Charles, assignor to New Jersey Patent Company, West Orange, N. J. Controlling device. No. 1,222,034; Apr. 10; v. 237; p. 392.

Schlager, Leon, New York, N. Y. Baker's peel. No. 1,221,914; Apr. 10; v. 237; p. 351.

Schlopman, Anton, Gladstone, N. D. Antiskidding device. No. 1,221,226; Apr. 3; v. 237; p. 80.

Schmaus, Simon, Buffalo, assignor of one-half to C. J. Dudley, North Tonawanda, N. Y. Pipe-cover. No. 1,223,835; Apr. 24; v. 237; p. 1094.

Schmaus, Simon, Buffalo, assignor of one-half to C. J. Dudley, North Tonawanda, N. Y. Pipe-cover. No. 1,223,836; Apr. 24; v. 237; p. 1095.

Schmid, William H., Wabash, Ind. Combined screen and costumer. No. 1,222,805; Apr. 17; v. 237; p. 705.

Schmidt, Otto, Ludwigshafen-on-the-Rhine, K. Hochschwender and T. Eichler, Mannheim, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Producing partially-hydrogenized monocyclic hydrocarbons. No. 1,221,382; Apr. 3; v. 237; p. 131.

Schmidt, Walter A. (See Bradley and Schmidt.)

Schmidt, Wilhelm, Cassel-Wilhelmshöhe, Germany. Device for cooling the piston of an internal combustion engine. No. 1,223,622; Apr. 24; v. 237; p. 1019.

Schmitt, Frederick, Pocatello, Idaho. Boiler-flue-setting device. No. 1,222,806; Apr. 17; v. 237; p. 705.

Schmoller, John, St. Paul, Minn. Measuring-container. No. 1,222,245; Apr. 10; v. 237; p. 467.

Schneider, Leopold C., Philadelphia, Pa. Making flanged pipe. No. 1,222,679; Apr. 17; v. 237; p. 662.

Schneider, Louis, and E. E. J. Duquette, Atlanta, Ga. Rotary plug-lock. No. 1,223,118; Apr. 17; v. 237; p. 812.

Schoenberg, Ralph A. (See Pape, Herman G., assignor.)

Schoenen, Frederick W., Great Falls, Mont. Submarine. No. 1,224,027; Apr. 24; v. 237; p. 1159.

Schoenky, August R., Somerville, assignor to Reece Shoe Machinery Company, Boston, Mass. Stop mechanism. No. 1,222,331; Apr. 10; v. 237; p. 497.

Schoenl, Frank A., and H. Bleder, Cleveland, Ohio. Lubricator for leaf-springs. No. 1,222,807; Apr. 17; v. 237; p. 706.

Schofield, George L., Kansas City, Mo. Rotary valve for hydrocarbon-engines. No. 1,222,680; Apr. 17; v. 237; p. 662.

Schofield, George L., Kansas City, Mo. Rotary valve for internal-combustion engines. No. 1,222,681; Apr. 17; v. 237; p. 662.

Scholl, William M., Chicago, Ill. Arch-support. No. 1,222,808; Apr. 17; v. 237; p. 706.

Schott, Wilfred B., West Salem, Ohio. Tub-cover. No. 1,222,035; Apr. 10; v. 237; p. 393.

Schrama, Andreas, Hamburg, Germany. Belt or garment supporter or holder. No. 1,223,739; Apr. 24; v. 237; p. 1061.

Schramko, Frank, and J. Frazinka, Johnstown, Pa. Metallic tie and rail-fastener. No. 1,221,096; Apr. 3; v. 237; p. 32.

Schranz, Frederick. (See Rowley and Schranz.)

Schreiber, Edward A., assignor to E. H. Gold, Chicago, Ill. Flexible pipe connection. No. 1,222,682; Apr. 17; v. 237; p. 663.

Schreiber, Hugo P. (See Van Daalen and Schreiber.)

Schreiber, Norbert, and R. Rosenthal, Lincoln, Ill. Boiler-skimmer. No. 1,222,564; Apr. 10; v. 237; p. 580.

Schreiber, William L., Philadelphia, Pa. Means for closing jars. No. 1,222,036; Apr. 10; v. 237; p. 393.

Schroeder, Albert, Huron, S. D. Towing and steering device. No. 1,221,608; Apr. 3; v. 237; p. 211.

Schroeder Brothers Manufacturing Company. (See Wadhams, Abner H., assignor.)

Schroeder, Jacob A., assignor to The Municipal Machine Manufacturing Company, Piqua, Ohio. Street-sweeping machine. No. 1,221,480; Apr. 3; v. 237; p. 168.

Schultz, Charles A. (See McManus and Schultz.)

Schultze, F. W., *et al.* (See Pittaluga, Stefano, assignor.)

Schuttze, Theodore C., Grand Rapids, Mich. Vehicle-spring lubricator. No. 1,222,146; Apr. 10; v. 237; p. 431.

Schulz, Otto C., assignor to Bauer & Black, Chicago, Ill. Surgical swab. No. 1,221,227; Apr. 3; v. 237; p. 80.

Schumacher, Frederick H., Jersey City, N. J. Adjustable nursing-bottle holder. No. 1,222,246; Apr. 10; v. 237; p. 468.

Schumacher, Wilhelm, Berlin, Germany, assignor to General Briquetting Company, New York, N. Y. Agglomeration of fine ores and flue-dust. No. 1,222,893; Apr. 17; v. 237; p. 735.

Schumaker, William, Detroit, Mich. Colter. No. 1,221,915; Apr. 10; v. 237; p. 351.

Schümann, Detlef K. H., Hamburg, Germany. Respirator. No. 1,222,683; Apr. 17; v. 237; p. 663.

Schwab, Louis. (See Sampson, Robert W., assignor.)

Schwall, Louis K., Chicago, Ill. Gas-cock. No. 1,221,771; Apr. 3; v. 237; p. 266.

Schwander, Peter W., Houston, Tex. Check-book. No. 1,222,037; Apr. 10; v. 237; p. 393.

Schwartz, Joseph W., New York, N. Y. Cloth-winding machine. No. 1,222,038; Apr. 10; v. 237; p. 393.

Schwarz, Elmer H., New York, N. Y., assignor to General Electric Company. Automatic switch. No. 1,221,609; Apr. 3; v. 237; p. 212.

Schweinert, Maximilian C. (See Kraft and Schweinert.)

Schweitzer, Charles F., Newark, N. J. Mechanical movement. No. 1,221,097; Apr. 3; v. 237; p. 33.

Schweitzer, Edmund O. (See Herz, Alfred, assignor.)

Schweitzer, Edmund O., and N. J. Conrad, Chicago, Ill., assignors to Schweitzer & Conrad. Fuse device. No. 1,223,623; Apr. 24; v. 237; p. 1019.

Schweitzer, Estate of William. (See Labadie and Beers, assignors.)

Schwinn, Ignaz, Chicago, Ill. Motor-cycle-frame construction. No. 1,223,740; Apr. 24; v. 237; p. 1061.

Schwister, John, assignor of one-half to A. S. Anderson, St. Paul, Minn. Hydraulic hoist for dumping-vehicles. No. 1,223,741; Apr. 24; v. 237; p. 1061.

Scobie, Thomas. (See Murray, John D., assignor.)

Scott, George E., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Car-truck column. No. 1,223,526; Apr. 24; v. 237; p. 986.

Scott, George W., Troy, assignor, by mesne assignments, to The Horton Company, Cleveland, Ohio. Vehicle-top. No. 1,223,429; Apr. 24; v. 237; p. 950.

Scott, Granville E., assignor of one-half to W. F. Anderson, Foreman, Ark. Window-shade roller. No. 1,222,474; Apr. 10; v. 237; p. 549.

Scott, Robert W., assignor to Scott & Williams, Inc., Philadelphia, Pa. Cam mechanism for knitting-machines. No. 1,221,610; Apr. 3; v. 237; p. 212.

Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Needle-carrier and needle for knitting-machines. No. 1,221,806; Apr. 3; v. 237; p. 279.

Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, New York, N. Y. Needle mechanism for knitting-machines. No. 1,221,807; Apr. 3; v. 237; p. 280.

Scott & Williams. (See Scott, Robert W., assignor.)

Scribner, Edward W., Friday Harbor, Wash. Pie-crimper. No. 1,222,039; Apr. 10; v. 237; p. 394.

Scruggs, Loyd, assignor to The Copper Clad Malleable Range Company, St. Louis, Mo. Stove-door. No. 1,222,894; Apr. 17; v. 237; p. 735.

Scyplnski, John F., Detroit, Mich. Bottle. No. 1,223,207; Apr. 17; v. 237; p. 842.

Seaman, Arthur G., Bowden, S. Osborne, Manchester, H. A. Cox, Ealing, and A. W. Gattie, London, England. Means for distributing parcels and the like. No. 1,223,624; Apr. 24; v. 237; p. 1020.

Sears, Charles W., Omaha, Nebr. Rotary internal-combustion engine. No. 1,222,475; Apr. 10; v. 237; p. 549.

Sears, Roebuck and Company. (See Richards, Ernst R., assignor.)

Séblle, Léo P., Providence, R. I. Gas-generator. No. 1,222,809; Apr. 17; v. 237; p. 706.

Secord, Frederick A., assignor of one-third to A. P. Paterson and one-third to C. H. Peters, St. John, New Brunswick, Canada. Drying articles and apparatus for accomplishing the same. No. 1,221,383; Apr. 3; v. 237; p. 134.

Security Manufacturing Company. (See Maxwell, George W., assignor.)

Seeberger, Charles D., New York, N. Y. Signal device for elevator systems. No. 1,223,527; Apr. 24; v. 237; p. 986.

Seelau, Franz, Berlin-Wilmersdorf, assignor of one-half to A. M. Newman, Berlin-Wannsee, Germany. Automatic phonographic responding and receiving device. No. 1,222,895; Apr. 17; v. 237; p. 735.

Seeley, Arthur W. (See Hartley and Seeley.)

Seifert, Jacob E., *et al.* (See Rubensteln, Harry, assignor.)

Seivert, Christ, Seivert township, Cavalier county, N. D. Combined harness-hook and line-tightener. No. 1,222,684; Apr. 17; v. 237; p. 664.

Selflck, Robert, Newark, N. J. Stand. No. 1,222,685; Apr. 17; v. 237; p. 664.

Selway, Richard A., Chicago, Ill. Fence-post-brace construction. No. 1,221,481; Apr. 3; v. 237; p. 168.

Servet Specialty Company. (See Good, John, assignor.)

Sessions, Edson O., Chicago, Ill. Locking-switch. No. 1,221,611; Apr. 3; v. 237; p. 212.

Setter, Michael, Chicago, Ill. Horn. No. 1,222,040; Apr. 10; v. 237; p. 391.

Settle, Francis M., Wynnewood, Okla. Road-drag. No. 1,223,625; Apr. 24; v. 237; p. 1020.

Setz, Hans R., St. Louis, Mo. Piston for oil-engines. No. 1,222,147; Apr. 10; v. 237; p. 432.

Sexton, Robert H., assignor to William A. Sexton Company, Incorporated, New York, N. Y. Freezer. No. 1,221,482; Apr. 3; v. 237; p. 168.

Seymour, Charles, Little Rock, Ark. Steam-boiler superheater. No. 1,222,476; Apr. 10; v. 237; p. 549.

Seymour, Charles R. (See Hawkins and Seymour.)

Seymour, Frederick S., Manchester, Iowa. Automatic coal-feeder. No. 1,223,626; Apr. 24; v. 237; p. 1021.

Seymour, James A., Auburn, N. Y. Variable-delivery fuel-pump for internal-combustion engines. No. 1,222,148; Apr. 10; v. 237; p. 432.

Shackelford, Orie, Fairmont, W. Va. Fly-trap. No. 1,221,098; Apr. 3; v. 237; p. 33.

Shafer, Alonzo F., Moore, W. Va. Stapling-machine. No. 1,222,149; Apr. 10; v. 237; p. 433.

Shaffner, Samuel C., Chicago, Ill. Toaster. No. 1,221,228; Apr. 3; v. 237; p. 80.

Shallenberger, Charles S., assignor to Commonwealth Steel Company, St. Louis, Mo. Car dead-block. No. 1,221,229; Apr. 3; v. 237; p. 81.

Shanahan, John W., and F. C. Mason, assignors to Bissell Carpet Sweeper Company, Grand Rapids, Mich. Vacuum-cleaner. No. 1,222,477; Apr. 10; v. 237; p. 549.

Shanor, William W., Bethlehem, Pa. Unloading apparatus. No. 1,222,686; Apr. 17; v. 237; p. 664.

Sharp, Charles S., Auburn, N. Y., assignor to International Harvester Company of New Jersey. Disk harrow. No. 1,221,230; Apr. 3; v. 237; p. 81.

Sharp, Jessie J., Circle, Mont. Sanitary toilet-seat protector. No. 1,223,208; Apr. 17; v. 237; p. 843.

Sharp, William H., assignor to Bauer & Black, Chicago, Ill. Surgical swab. No. 1,221,231; Apr. 3; v. 237; p. 82.

Sharples, David T. and L. P., West Chester, Pa. Milking-machine. No. 1,221,483; Apr. 3; v. 237; p. 169.

Sharples, David T., West Chester, Pa. Belt-shifting mechanism. No. 1,223,430; Apr. 24; v. 237; p. 950.

Sharples, Lawrence P. (See Sharples, David T. and L. P.)

Sharps, John A., Bablin, W. Va. Shade-roller support. No. 1,223,837; Apr. 24; v. 237; p. 1095.

Shauck, Albert G., *et al.* (See Ratcklin, Emery J., assignor.)

Shaw, Arthur L., Chicago, Ill. Conveyer trolley-track and trolley therefor. No. 1,222,041; Apr. 10; v. 237; p. 394.

Shaw, Thomas, Hackensack, N. J., assignor to American Telephone and Telegraph Company. Protective system for composite circuits. No. 1,222,810; Apr. 17; v. 237; p. 707.

Sheaff, Philip A., Philadelphia, Pa. Speculum. No. 1,222,478; Apr. 10; v. 237; p. 550.

Shelton, Howard H., Akron, Ohio. Cotter. No. 1,222,896; Apr. 17; v. 237; p. 736.

Shephard, William A., Waukesha, Wis. Ship-protecting shield. No. 1,223,627; Apr. 24; v. 237; p. 1021.

Sherbondy, William E., Cleveland, Ohio. Spark-plug. No. 1,224,123; Apr. 24; v. 237; p. 1192.

Sherer, Samuel J. (See Sherer, William G. and S. J.)

Sherer, William G. and S. J., Chicago, Ill. Display-counter. No. 1,222,687; Apr. 17; v. 237; p. 665.

Sherman, John A. and J. E., Worcester, Mass. Package for paper drinking-cups. No. 1,222,566; Apr. 10; v. 237; p. 581.

Sherman, John E. (See Sherman, John A. and J. E.)

Sherman, John E., Worcester, Mass. Drinking-cup. No. 1,222,565; Apr. 10; v. 237; p. 581.

Sherman, Joseph M., Seattle, Wash. Automatic cut-out. No. 1,221,232; Apr. 3; v. 237; p. 82.

Sherman, J. W., *et al.* (See Kopp, John P., assignor.)

Shermund, Conrad, assignor of one-fourth to G. W. Cofield, one-fourth to B. B. Sugarman, and one-fourth to A. J. Sugarman, San Francisco, Cal. Vehicle-signal device. No. 1,223,628; Apr. 24; v. 237; p. 1022.

Sherwood, Albert W., and G. D. Reedy, Buffalo, N. Y. Hose-reel. No. 1,221,099; Apr. 3; v. 237; p. 33.

Sherwood, Carey, Lowell, Mass. Adjustable shaft-hanger. No. 1,221,233; Apr. 3; v. 237; p. 82.

Shetokin, George, Portland, Oreg. Camping outfit. No. 1,224,098; Apr. 24; v. 237; p. 1183.

Shipman, Charles H., San Francisco, Cal. Automobile signaling device. No. 1,221,772; Apr. 3; v. 237; p. 267.

Shipman, Ralph, Sunbury, Pa. Carbureter. No. 1,222,688; Apr. 17; v. 237; p. 665.

Shores, George A., assignor to Shores-Mueller Company, Cedar Rapids, Iowa. Hog-oiling device. No. 1,221,484; Apr. 3; v. 237; p. 169.

Shores-Mueller Company. (See Shores, George A., assignor.)

Shortwriter Company. (See Edwards and Russell, assignors.)

Shrauger, Darius E., Atlantic, Iowa. Sheet-metal ventilation-window. No. 1,221,612; Apr. 3; v. 237; p. 213.

Shriver, Albert W. (See Shriver, William B. and A. W.)

Shriver, William B. and A. W., Ashland, Ohio. Wire-fastening device. No. 1,222,332; Apr. 10; v. 237; p. 498.

Shuey, Samuel P., Lakemp, Okla. Folding box. No. 1,222,581; Apr. 10; v. 237; p. 586.

Shuman, Jesse J. (See Swenson, John A., assignor.)

Shurloc Elevator Safety Company. (See Dunford, William T., assignor.)

Siebenmann, Theodore P., Greensboro, N. C. Paper file and binder. No. 1,223,003; Apr. 17; v. 237; p. 772.

Siebert, George C., Chicago, Ill. Metallic piston-ring. No. 1,223,296; Apr. 17; v. 237; p. 870.

Siebert, William, Chicago, Ill. Panel structure. No. 1,223,431; Apr. 24; v. 237; p. 950.

Siemens & Co., Gebrueder. (See Egly, Georg, assignor.)

Siemens & Halske, A. G. (See Ochs, Karl, assignor.)

Siemens Schuckert Werke, Gesellschaft mit beschrankter Haftung. (See Singer, Konrad R., assignor.)

Sieurin, George, Shrewsbury, Mass. Clutch. No. 1,222,897; Apr. 17; v. 237; p. 736.

Simmon, Karl A., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system. No. 1,222,479; Apr. 10; v. 237; p. 550.

Simmons, Byron L., Walla Walla, Wash. Fruit-ladder. No. 1,222,150; Apr. 10; v. 237; p. 433.

Simmons, George B., assignor to American Mining Tool Company, Ottumwa, Iowa. Support for drills. No. 1,223,432; Apr. 24; v. 237; p. 951.

Simmons, Oliver G., Detroit, Mich. Formed milling-cutter. No. 1,221,613; Apr. 3; v. 237; p. 214.

Simmons, Walter B. (See Staley and Simmons.)

Simms Magneto Company, The. (See Hoyt, Francis R., assignor.)

Simonds Manufacturing Company. (See De Avila and Remington, assignors.)

Simoneaux, Edward N., assignor of one-half to J. Vicknair, New Orleans, La. Paper bag. No. 1,221,614; Apr. 3; v. 237; p. 214.

Simons, Theodore J., Haskins, Iowa. Sliding hay-door. No. 1,223,528; Apr. 24; v. 237; p. 986.

Simpson, Fred, Lone Grove, Okla. Plow. No. 1,222,898; Apr. 17; v. 237; p. 736.

Simpson, Frederick G., Seattle, Wash. Transmitting apparatus for wireless-telegraph stations. No. 1,222,567; Apr. 10; v. 237; p. 581.

Simpson, William C., Jr., and J. P. Barbour, Livingston, Mont. Shock-absorber for pneumatic tools. No. 1,221,615; Apr. 3; v. 237; p. 214.

Singer, Konrad R., Nuremberg, Germany, assignor to Siemens Schuckert Werke, Gesellschaft mit beschrankter Haftung. Electric meter. No. 1,222,042; Apr. 10; v. 237; p. 394.

Singer Manufacturing Company, The. (See De Voe, Albert H., assignor.)

Singer Manufacturing Company, The. (See Eichhorn and Becker, assignors.)

Singer Manufacturing Company, The. (See Molyneux, George E., assignor.)

Singer Manufacturing Company, The. (See Stafford, Charles, assignor.)

Sipperley, Alvinza F., deceased, Denver, Colo.; S. Sipperley, administratrix. Pay-telephone electric recorder. No. 1,222,151; Apr. 10; v. 237; p. 433.

Sipperley, Susie, administratrix. (See Sipperley, Alvinza F.)

Sirch, Charles W., Los Angeles, Cal. Aerial locomotion. No. 1,221,234; Apr. 3; v. 237; p. 82.

Sitko, Jan. (See Dubiel, Jurkiewicz, and Sitko.)

Six, Joseph F. (See Fromager and Six.)

Skillin, Edgar E. (See Biddison, Eugene, assignor.)

Slaght, Daniel C., Easton, Pa. Motor-vehicle. No. 1,223,629; Apr. 24; v. 237; p. 1022.

Sleeper, Frank H., assignor to Sleeper & Hartley, Inc., Worcester, Mass. Automatic straightening-machine. No. 1,221,384; Apr. 3; v. 237; p. 134.

Sleeper & Hartley. (See Sleeper, Frank H., assignor.)

Sliwinski, Albin. (See Solman and Sliwinski.)

Slocum, Adelbert. (See Hanna, Charles G., assignor.)

Sloper, Thomas, Devizes, England. Endless band and manufacturing the same. No. 1,223,742; Apr. 24; v. 237; p. 1062.

Sloper, Thomas, Wiltshire, England. Wind-shield for wheels. No. 1,223,743; Apr. 24; v. 237; p. 1062.

Slough, Frank M., Elyria, Ohio, assignor, by mesne assignments, to Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y. Telephone system. No. 1,222,043; Apr. 10; v. 237; p. 395.

Smart, James S., Chicago, Ill. Sash-holder. No. 1,222,689; Apr. 17; v. 237; p. 666.

Smeeton, Richard J., assignor to The Whitehead & Hoag Company, Newark, N. J. Paper-clip. No. 1,223,630; Apr. 24; v. 237; p. 1022.

Smith, Albert W., Washington, D. C. Evaporative cooler. No. 1,221,916; Apr. 10; v. 237; p. 351.

Smith, Arthur B., assignor to Automatic Electric Company, Chicago, Ill. Subscriber's telephone-circuit. No. 1,221,235; Apr. 3; v. 237; p. 83.

Smith, Arthur W., New York, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,221,236; Apr. 3; v. 237; p. 83.

Smith Cannery Machines Company. (See Brierly and Waugh, assignors.)

Smith, Charles A., assignor to Blaisdell Paper Pencil Company, Philadelphia, Pa. Pencil and making the same. No. 1,222,152; Apr. 10; v. 237; p. 434.

Smith, Charles D., assignor of one-half to C. P. Brown, Paris, Ill. Gate-hanger. No. 1,221,237; Apr. 3; v. 237; p. 83.

Smith, Charles F., Brighton, and C. A. White, Somerville, Mass. Envelop for inner tubes. No. 1,221,100; Apr. 3; v. 237; p. 34.

Smith, Charles T. (See Hawley, Elmer A., assignor.)

Smith, Charles Z., South Bethlehem, N. Y. Fire-alarm system. No. 1,222,333; Apr. 10; v. 237; p. 498.

Smith, Cicero G., Palisades, Colo. Vehicle-spring. No. 1,223,631; Apr. 24; v. 237; p. 1022.

Smith, Elda G. (See Bissell and Smith.)

Smith, Frank A., Orange, N. J. Ventilator attachment for wind-shields. No. 1,223,119; Apr. 17; v. 237; p. 812.

Smith, Goodwin B., assignor to The Junoform Company, Philadelphia, Pa. Catamenial sack. No. 1,222,899; Apr. 17; v. 237; p. 737.

Smith, Guy W., Oakland, Cal. Tow-line connector. No. 1,222,480; Apr. 10; v. 237; p. 551.

Smith, Henry J., Minneapolis, assignor to H. J. Smith Tractor Company, Hennepin county, Minn. Gearing. No. 1,222,153; Apr. 10; v. 237; p. 434.

Smith, Henry S., Ulster Park, N. Y. Shipping-package for eggs. No. 1,223,209; Apr. 17; v. 237; p. 843.

Smith, Herman, Maddock, N. D. Wrench. No. 1,221,101; Apr. 3; v. 237; p. 34.

Smith, John M., St. John, New Brunswick, Canada. Fire-signal apparatus. No. 1,224,028; Apr. 24; v. 237; p. 1159.

Smith, John R. (See Thurman, Isaac B., assignor.)

Smith, Joseph F., Heybrook, Wash. Calk-plate. No. 1,224,029; Apr. 24; v. 237; p. 1160.

Smith, Joseph R. S., Placerville, Colo. Steering-gear. No. 1,223,907; Apr. 24; v. 237; p. 1119.

Smith, Karl D., assignor to Union Steam Pump Company, Battle Creek, Mich. Pump. No. 1,222,481; Apr. 10; v. 237; p. 551.

Smith, Louis R., Denver, assignor to The Universal Indexing Company, Colorado Springs, Colo. Book-index. No. 1,222,568; Apr. 10; v. 237; p. 582.

Smith, Peter H., Lougheed, Alberta, Canada. Steering-gear for motor-sleighs. No. 1,223,210; Apr. 17; v. 237; p. 843.

Smith, Ralph W. (See Neale and Smith.)

Smith, Samuel B., Cleveland, Ohio. Hover. No. 1,223,433; Apr. 24; v. 237; p. 951.

Smith, Stanley B., assignor of one-half to L. S. Benjamin, St. John, New Brunswick, Canada. Water-tight lamp-socket. No. 1,224,030; Apr. 24; v. 237; p. 1160.

Smith, Stephen M., Boise, Idaho. Block. No. 1,222,334; Apr. 10; v. 237; p. 498.

Smith, Ulysses J., Reading, Pa. Disinfecting apparatus. No. 1,222,044; Apr. 10; v. 237; p. 395.

Smith, William B., Wesleyville, Pa. Wrench. No. 1,222,482; Apr. 10; v. 237; p. 551.

Smith, William F., Brooklyn, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Manufacture of electric cables. No. 1,223,434; Apr. 24; v. 237; p. 951.

Smith, William J., New York, N. Y. Attachment for guitars. No. 1,223,744; Apr. 24; v. 237; p. 1063.

Smith, William N., Chicago, Ill. Tractor-truck. No. 1,222,335; Apr. 10; v. 237; p. 499.

Smith, William S., Cambridge, Mass. Alternating-current magnet. No. 1,222,900; Apr. 17; v. 237; p. 737.

Smolensky, Michael, Cleveland, Ohio. Check-valve. No. 1,222,154; Apr. 10; v. 237; p. 435.

Smolik, Mathias, Pittsburgh, Pa., assignor to Economy Specialties Company, Line-holder. No. 1,223,908; Apr. 24; v. 237; p. 1119.

Smulski, Edward, Brookline, Mass. Reinforced concrete construction. No. 1,223,529; Apr. 24; v. 237; p. 987.

Smythe, Horace E., assignor to The S. R. Smythe Company, Pittsburgh, Pa. Regenerative furnace. No. 1,222,690; Apr. 17; v. 237; p. 666.

Snyder, Saul S., Columbus, Ohio. Metallic railway-tie. No. 1,222,811; Apr. 17; v. 237; p. 707.

Soane, Charles E., assignor of one-half to Usher-Walker, Limited, London, England. Resilient composition for printers' rollers. No. 1,223,745; Apr. 24; v. 237; p. 1063.

Sobilo, John, Meadville, Pa. Caster. No. 1,222,045; Apr. 10; v. 237; p. 396.

Sobraske, Martin J., Minneapolis, Minn. Tube-testing device. No. 1,222,817; Apr. 17; v. 237; p. 709.

Société anonyme du Carburateur Zenith. (See Heftler, Victor R., assignor.)

Societe Anonyme Des Etablissements Delaunay-Belleville. (See Bourdelles, Emile A. L., assignor.)

Societe Anonyme Des Etablissements Delaunay-Belleville. (See Radiguer, Charles, assignor.)

Societe Des Moteurs Salmson (Systeme Canton-Unne.) (See Salmson, Emile J. J., assignor.)

Société d' Electricité Mors. (See Guichard, Marcel, assignor.)

Society of Chemical Industry in Basle. (See Engi, Straub, and Grob, assignors.)

Sokoloff, Boris N., Ridgefield Park, N. J., assignor to T. A. Gillespie Company. Detonating fuse. No. 1,221,102; Apr. 3; v. 237; p. 34.

Solman, Anton, and A. Sliwinski, Pittsburgh, Pa. Trigger mechanism for automatic firearms and pistol-swords. No. 1,221,616; Apr. 3; v. 237; p. 215.

Sommerville, James B., *et al.* (See Kirby, John, assignor.)

Sorber, Alexander M., Newell, assignor to Pittsburgh Coal Washer Company, Pittsburgh, Pa. Conveyer-chain. No. 1,221,617; Apr. 3; v. 237; p. 215.

Sorensen, John, Brooklyn, N. Y. Vacuum suction device. No. 1,221,103; Apr. 3; v. 237; p. 34.

Sorensen, John, Brooklyn, N. Y. Agitator for driers. No. 1,222,691; Apr. 17; v. 237; p. 667.

South Carolina Cotton Picker Co. (See Nell, Joseph B., assignor.)

Spaleck, Firm of Otto. (See Spaleck, Max, assignor.)

Spaleck, Max, Greiz, assignor to Firm of O. Spaleck, Greiz, Germany. Heddle-frame of looms. No. 1,223,435; Apr. 24; v. 237; p. 952.

Spangler, Charles H., assignor of one-half to C. C. Long, Reading, Pa. Reverse-phase safety-relay for motor-circuits. No. 1,222,692; Apr. 17; v. 237; p. 667.

Spear, Arthur, deceased; M. B. Spear, executrix, Brooklyn, N. Y. Speed changing and controlling device. No. 1,223,436; Apr. 24; v. 237; p. 952.

Spear, Myrtle B., executrix. (See Spear, Arthur.)

Speed, James B., assignor to Western Electric Company, Incorporated, New York, N. Y. Phantom-circuit loading. No. 1,221,238; Apr. 3; v. 237; p. 84.

Speed, James B., West New Brighton, N. Y., assignor, by mesne assignments, to Western Electric Company, Incorporated. Protective system. No. 1,223,437; Apr. 24; v. 237; p. 952.

Speelman, Frank L., Crestline, Ohio. Milk-ticket holder and protector. No. 1,224,031; Apr. 24; v. 237; p. 1160.

Spencer, Christopher M., Hartford, assignor to The New Britain Machine Company, New Britain, Conn. Combined forming and cut-off tool. No. 1,223,438; Apr. 24; v. 237; p. 953.

Spencer, Henry B., *et al.* (See Hudson, Albert E., assignor.)

Spencer Lens Company. (See Ott, Harvey N., assignor.)

Sperbeck, Lorenzo. (See Mapson, Robert L., assignor.)

Sperr, Frederick W., Jr., Oakmont, and R. J. Montgomery, Tarentum, assignors to H. Koppers Company, Pittsburgh, Pa. Cement. No. 1,221,618; Apr. 3; v. 237; p. 215.

Sperry, Arthur B., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,221,773; Apr. 3; v. 237; p. 267.

Sperry, Arthur B., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,221,917; Apr. 10; v. 237; p. 352.

Spinasse, Arthur E., Mount Vernon, Ohio. Glass-drawing apparatus. No. 1,224,032; Apr. 24; v. 237; p. 1160.

Splitdorf Electrical Company. (See Van Deventer, Harry R., assignor.)

Sprague Canning Machinery Company. (See McIntyre, John C., assignor.

Spray Engineering Company. (See Donham, Benjamin C., assignor.)

Squires, Grantley N., Greenport, N. Y. Carbureter. No. 1,222,483; Apr. 10; v. 237; p. 551.

St. Denis, Telesphore. (See Ricard, Louis, assignor.)

St. Louis Tin and Sheet Metal Co. (See Thompson, Edward R., assignor.)

Stafford, Alfred E., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Filling-end-clearing means for looms. No. 1,221,385; Apr. 3; v. 237; p. 135.

Stafford, Charles, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Sewing-machine ruffler. No. 1,223,632; Apr. 24; v. 237; p. 1023.

Stafford, Hal R., Plainfield, N. J., assignor to Economy Devices Corporation, New York, N. Y. Locomotive side rod. No. 1,222,247; Apr. 10; v. 237; p. 468.

Stahl, Charles E., and J. F. Cavanagh, assignors to Connecticut Telephone & Electric Company, Inc., Meriden, Conn. Electrical connector. No. 1,221,239; Apr. 3; v. 237; p. 84.

Stahn, Charles, New Haven, Mo. Dust-collector. No. 1,224,033; Apr. 24; v. 237; p. 1161.

Stalder, Paul, Philadelphia, Pa. Chocolate-cooler. No. 1,221,918; Apr. 10; v. 237; p. 352.

Staley, Harrison L., Martinsville, Ind., and W. B. Simmons, assignors to Wilts Veneer Company, Richmond, Va. Rail-car for palls. No. 1,221,619; Apr. 3; v. 237; p. 216.

Standard Compress and Warehouse Corporation. (See Rowley and Schranz, assignors.)

Standard Die & Specialty Company. (See Helwig, Oscar F., assignor.)

Standard Elevator Interlock Company. (See Muckle and Straley, assignors.)

Standard Oil Company of New York. (See Chamberlain, Horace P., assignor.)

Standard Oil Company of California. (See Quinn, John L., assignor.)
Standard Oil Company of New York, The. (See Hawkins, Charles H., assignor.)
Standard Plunger Elevator Company. (See Dunn, Edward L., assignor.)
Standard Register Company, The. (See Euchenhofer, Adolph F., assignor.)
Standard Roller Bearing Company, The. (See Woodward, Robert S., Jr., assignor.)
Standard Sanitary Manufacturing Company. (See Muckenhirn, Charles H., assignor.)
Stanton, George, and J. D. Walter, Braddock, Pa. Game apparatus. No. 1,222,693; Apr. 17; v. 237; p. 667.
Staples, Elial M., Elizabeth, N. J. Spring-shackle for vehicles. No. 1,222,248; Apr. 10; v. 237; p. 468.
Stark, Edwin, *et al.* (See Chapin, Earl B., assignor.)
Stark, Howard, Pawling, N. Y. Motor-vehicle. No. 1,223,633; Apr. 24; v. 237; p. 1023.
Starks, Christian J., Marco, La. Baling-press. No. 1,223,211; Apr. 17; v. 237; p. 843.
Starr, Oliver F., Utica, assignor of one-half to E. A. Robinson, Mount Vernon, N. Y. Disposal of sewage by micro-organisms. No. 1,223,004; Apr. 17; v. 237; p. 772.
Starr, Perl L., Weed, Cal. Locking means for clutch-levers. No. 1,224,034; Apr. 24; v. 237; p. 1161.
Ste Marie, J. Alphonse, Laprairie, Quebec, Canada. Respirator. No. 1,221,387; Apr. 3; v. 237; p. 135.
Steele, Charles B., New York, N. Y. Gearing. No. 1,222,155; Apr. 10; v. 237; p. 435.
Steele, Herbert H., Marcellus, assignor, by mesne assignments to Remington Typewriter Company, Ilion, N. Y. Combined type-writing and computing machine. No. 1,222,694; Apr. 17; v. 237; p. 667.
Steele, Joseph T., Windsor, Ill. Corn-planter. No. 1,223,838; Apr. 24; v. 237; p. 1095.
Steerup, Petrarch A. G., assignor to The W. K. Jahn Co., Chicago, Ill. Container and pasteurizing the same. No. 1,221,386; Apr. 3; v. 237; p. 135.
Steidle, Lewis, Mauch Chunk, Pa. Air-line-pipe connection. No. 1,221,240; Apr. 3; v. 237; p. 84.
Stein, Abe. (See Lovejoy, John F., assignor.)
Steinbaugh, Ollie. (See Dempsey and Steinbaugh.)
Steinberger, Louis, Brooklyn, N. Y. Disk strain-insulator. No. 1,223,909; Apr. 24; v. 237; p. 1119.
Steininger, Darius A., Laporte, Ind. Primer for internal-combustion engines. No. 1,221,620; Apr. 3; v. 237; p. 216.
Steinmetz, Joseph A., Philadelphia, Pa. Cleaning periscope-glasses. No. 1,222,156; Apr. 10; v. 237; p. 435.
Steinmetz, Joseph A., Philadelphia, Pa. Submarine warfare. No. 1,222,498; Apr. 10; v. 237; p. 556.
Steinmetz, Joseph A., Philadelphia, Pa. Aeromarine torpedo. No. 1,223,212; Apr. 17; v. 237; p. 844.
Steinmetz, Joseph A., Philadelphia, Pa. Projectile. No. 1,223,634; Apr. 24; v. 237; p. 1023.
Stellmacher, Wilhelm A., Arbon, Switzerland. Embroidering-machine. No. 1,223,439; Apr. 24; v. 237; p. 953.
Stephens-Adamson Mfg. Co. (See Stephens, Wiley W., assignor.)
Stephens, Wiley W., Aurora, Ill., assignor to Stephens-Adamson Mfg. Co. Power-transmission device. No. 1,222,336; Apr. 10; v. 237; p. 499.
Stephenson, Charles H., Lynn, Mass. Earth-closet. No. 1,222,157; Apr. 10; v. 237; p. 437.
Stevens, Arthur L., Chicago, Ill. Ceramic kiln. No. 1,223,440; Apr. 24; v. 237; p. 953.
Stevens, Mary A., Stockton, Kans. Brooder. No. 1,222,901; Apr. 17; v. 237; p. 737.
Stevens, William H., Altoona, Pa. Signaling apparatus. No. 1,221,621; Apr. 3; v. 237; p. 216.
Stevenson, George W., Canton, Ohio. Furnace. No. 1,223,213; Apr. 17; v. 237; p. 844.
Stevenson, William, Morristown, N. J. Cleaner for windshields and the like. No. 1,221,485; Apr. 3; v. 237; p. 169.
Stewart, Charles A., Carson City, Nev. Aluminum-soldering compound. No. 1,222,158; Apr. 10; v. 237; p. 436.
Stewart, Charles A., Andover, Mass. Shoe-lining. No. 1,223,297; Apr. 17; v. 237; p. 870.
Stewart, Robert A., Milwaukee, Wis. Rotary engine. No. 1,222,046; Apr. 10; v. 237; p. 396.
Stickell, John H., Williamson, Pa. Draft-equalizer. No. 1,221,622; Apr. 3; v. 237; p. 216.
Stickney, Charles A., Chicago, Ill. Tractor. No. 1,222,812; Apr. 17; v. 237; p. 707.
Stickney, George, Carlton, Oreg. Brake for vehicles. No. 1,221,623; Apr. 3; v. 237; p. 216.
Still, Carl, Recklinghausen, Germany. Disintegrating and lading hard pitch or the like material. No. 1,221,241; Apr. 3; v. 237; p. 84.
Stinemetts, Henry, The Dalles, Oreg. Tire-rim. No. 1,223,635; Apr. 24; v. 237; p. 1024.
Stock Motorpflug Gesellschaft Mit Beschränkter Haftung. (See Gleiche, Carl, assignor.)
Stocker, Albert P., Struthers, Ohio. Wheel. No. 1,221,242; Apr. 3; v. 237; p. 85.
Stoddard, Charles E., Jr., Ridgefield Park, N. J. Printing-press. No. 1,223,347; Apr. 17; v. 237; p. 888.
Stoffel, John P., Los Angeles, Cal. Classifier for flour-mills. No. 1,223,005; Apr. 17; v. 237; p. 773.
Stohn, Arthur G., Jersey City, and F. Lacroix, Hasbrouck Heights, N. J. Liquid-measuring device. No. 1,223,120; Apr. 17; v. 237; p. 813.
Stoll, Henry C. (See Upton and Stoll.)
Stolle, Georg, Berlin-Schöneberg, Germany. Making coatings of fusible substances. No. 1,221,104; Apr. 3; v. 237; p. 35.
Stone, John A., Chicago, Ill., assignor to International Harvester Company of New Jersey. Tongue-truck. No. 1,222,813; Apr. 17; v. 237; p. 708.
Storm, Charles E., Trowbridge, Ill. Lock for differential gears. No. 1,222,902; Apr. 17; v. 237; p. 737.
Storz, Carl, Tuttlingen, Germany. Syringe. No. 1,222,814; Apr. 17; v. 237; p. 708.
Straley, Thomas H. (See Muckle and Straley.)
Strandberg, Harry, Newfolden, Minn. Self-serving dining-table. No. 1,224,035; Apr. 24; v. 237; p. 1162.
Strandt, Gustav, Milwaukee, Wis. Bottle-capping machine. No. 1,221,105; Apr. 3; v. 237; p. 35.
Strange, John, Neenah, Wis. Bucket-closure. No. 1,222,047; Apr. 10; v. 237; p. 396.
Stranszky, Emil, New York, N. Y. Electric water-heater. No. 1,221,106; Apr. 3; v. 237; p. 35.
Strasburger, Lillian A., New York, N. Y. Device for concealing telephone sets. No. 1,221,919; Apr. 10; v. 237; p. 353.
Straub, Fritz. (See Engl, Straub, and Grob.)
Straughn, Charles R., Philadelphia, Pa. Combined rake and tedder. No. 1,222,815; Apr. 17; v. 237; p. 708.
Straus, Alexander L., Baltimore, Md. Making a non-alcoholic beverage. No. 1,223,121; Apr. 17; v. 237; p. 813.
Strauss, Samuel, Los Angeles, Cal. Making shoes. No. 1,221,388; Apr. 3; v. 237; p. 136.
Strecker, Herman W., St. Louis, Mo. Down-drop sight-feed lubricator. No. 1,221,243; Apr. 3; v. 237; p. 85.
Strickler, Morris, Jersey City, N. J. Hat-pin. No. 1,221,624; Apr. 3; v. 237; p. 217.
Strippel, Albert E., New York, N. Y. Stencil. No. 1,221,389; Apr. 3; v. 237; p. 136.
Stromberg-Carlson Telephone Mfg. Co. (See Slough, Frank M., assignor.)
Stromberg Motor Devices Company. (See Goldberg, John S., assignor.)
Strotzman, Louis E., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Pumping-engine. No. 1,222,816; Apr. 17; v. 237; p. 709.
Stuart, Edwards B., Chicago, Ill. Vehicle for waste material. No. 1,222,337; Apr. 10; v. 237; p. 499.
Stuart, Hamilton C., St. Johnsbury, Vt. Fire-box. No. 1,223,441; Apr. 24; v. 237; p. 954.
Stuart, Hamilton C., St. Johnsbury, Vt. Oil-pan. No. 1,223,442; Apr. 24; v. 237; p. 954.
Stuber, Frank L., South Bethlehem, Pa. Photoprinting-machine. No. 1,223,214; Apr. 17; v. 237; p. 844.
Stump, Ira E., Cleveland, Ohio, assignor of one-third to H. Hastings, Rochester, N. Y. Alarm or signal apparatus. No. 1,221,920; Apr. 10; v. 237; p. 353.
Stutler, Abraham H., West Union, W. Va. Churn-operating mechanism. No. 1,223,006; Apr. 17; v. 237; p. 773.
Stutts, Jesse W., Florence, Ala. Circuit-closer. No. 1,221,486; Apr. 3; v. 237; p. 170.
Subers, Lawrence A., East Cleveland, Ohio. Automatically-acting device for coating the yarn elements from which a laminated cohesive interwound fabric band is constructed. No. 1,223,636; Apr. 24; v. 237; p. 1024.
Subry, Frank, Denver, Colo. Pump. No. 1,223,122; Apr. 17; v. 237; p. 813.
Sugar Centrifugal Discharger Company. (See Roberts and Gibson, assignors.)
Sugarman, Abraham J., *et al.* (See Shermund, Conrad, assignor.)
Sugarman, Benjamin B., *et al.* (See Shermund, Conrad, assignor.)
Sugden, J. Fred. (See Drake, Richard, assignor.)
Sullivan, Dudley J., Chicago, Ill. Billiard-cue-tip fastening. No. 1,221,107; Apr. 3; v. 237; p. 36.
Sullivan Machinery Company. (See Mercer, Henry H., assignor.)
Sullwold, Harold H., St. Paul, Minn. Storm-window grapple. No. 1,223,443; Apr. 24; v. 237; p. 954.
Sulphur Syndicate Limited, The. (See Wierum, Howard F., assignor.)
Sulzberger, Nathan, New York, N. Y. Packing catalytically-useful substances. No. 1,223,123; Apr. 17; v. 237; p. 813.
Summerfield, Emanuel P. (See Taylor, Aiken C., assignor.)
Sumner, Benjamin D., Tuscaloosa, Ala. Elevator. No. 1,223,007; Apr. 17; v. 237; p. 773.
Sunday, Samuel W., Topeka, Kans. Dust-separator for street-sweepers. No. 1,223,215; Apr. 17; v. 237; p. 845.
Sunderland, Charles C., Trenton, N. J., assignor to John A. Roebling's Sons Company. Wire-rope sling and the like. No. 1,222,048; Apr. 10; v. 237; p. 397.
Sundh, August, Hastings-upon-Hudson, N. Y., assignor to Otis Elevator Company. Fluid motor or pump. No. 1,221,921; Apr. 10; v. 237; p. 353.
Superior Products Company. (See Lile, Clarence, assignor.)
Suren, Nathan H., Needham, Mass., assignor to Gamwell Fire Alarm Telegraph Company, New York, N. Y. Signaling system for sprinkler systems. No. 1,224,099; Apr. 24; v. 237; p. 1183.

Sutherland, Alexander K., New Britain, Conn., assignor to The Trumbull Electric Manufacturing Company, Plainville, Conn. Safety-switch. No. 1,224,119; Apr. 24; v. 237; p. 1190.
Sutherlin, Joseph W. (See Crisler, Horace, assignor.)
Sutton, Aspinwall & Company. (See Beckwith, Raymond A., assignor.)
Sutton, Emery E., and J. W. Baker, Jr., Sikeston, Mo. Baling-press. No. 1,221,625; Apr. 3; v. 237; p. 217.
Sutton, George V., Keota, Colo. Hinge. No. 1,224,036; Apr. 24; v. 237; p. 1162.
Suwa, Michisuye, Tokyo, Japan. Electric bell. No. 1,222,159; Apr. 10; v. 237; p. 436.
Svenson, Albert, Englewood, N. J. Comb-cleaner. No. 1,222,484; Apr. 10; v. 237; p. 552.
Svenson, John A., assignor of one-half to J. J. Shuman, Pittsburgh, Pa. Charging or measuring device. No. 1,222,160; Apr. 10; v. 237; p. 436.
Swain, Alice C., La Jolla, Cal. Lamp-support. No. 1,223,637; Apr. 24; v. 237; p. 1024.
Swancutt, Spencer E., Stevens Point, Wis. Electric sign. No. 1,224,037; Apr. 24; v. 237; p. 1162.
Swanson, Christina, assignor to J. Kopf, Portland, Oreg. Hat-fastener. No. 1,223,008; Apr. 17; v. 237; p. 774.
Swanson, John A., Minneapolis, Minn. Bottle-holder. No. 1,222,486; Apr. 10; v. 237; p. 552.
Swanson, Wilbur C., San Diego, Cal. Watch-stand. No. 1,223,638; Apr. 24; v. 237; p. 1025.
Swartsel, Durbin A., Cincinnati, Ohio. Gate. No. 1,223,639; Apr. 24; v. 237; p. 1025.
Swartwood, Peter J., Mountaintop, Pa. Game apparatus. No. 1,221,244; Apr. 3; v. 237; p. 86.
Swartwout, Denton K., assignor to The Ohio Blower Company, Cleveland, Ohio. Ventilating system for tunnels and the like. No. 1,222,569; Apr. 10; v. 237; p. 583.
Sweet, Archer D., Scranton, Pa. Shears attachment. No. 1,223,640; Apr. 24; v. 237; p. 1025.
Sweet, Burton W., assignor, by mesne assignments, to The Van Dorn Electric Tool Company, Cleveland, Ohio. Automatic electric controller. No. 1,223,530; Apr. 24; v. 237; p. 987.
Swift and Company. (See Richardson, William D., assignor.)
Swihart, John H., Beaver Falls, Pa. Gas-heater. No. 1,222,487; Apr. 10; v. 237; p. 552.
Swingle, Oscar A., and T. J. Mangan, assignors to The Wilkinson Manufacturing Co., Binghamton, N. Y. Child's vehicle. No. 1,223,009; Apr. 17; v. 237; p. 774.
Switzer, Judson, Portland, Oreg. Gage. No. 1,223,531; Apr. 24; v. 237; p. 987.
Sylvester, Richard, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del. Identification device. No. 1,224,038; Apr. 24; v. 237; p. 1162.
Symons, Edgar B., Winnetka, Ill. Screen. No. 1,222,903; Apr. 17; v. 237; p. 738.
Synohubyk, Semen, Myrnam, Alberta, Canada. Protective mask. No. 1,224,039; Apr. 24; v. 237; p. 1163.
Synthetic Patents Co. (See Zimmerman, Kurt, assignor.)
Sypho-Chemical Sprinkler Corporation. (See Hamilton, John R., assignor.)
Syracuse Chilled Plow Company. (See Lee, William H., assignor.)
T. A. Gillespie Company. (See Sokoloff, Boris N., assignor.)
Tabulo, Louis, London, England. Differential hoisting and lowering apparatus. No. 1,221,390; Apr. 3; v. 237; p. 136.
Tacoma, Johannes. (See Vleeschouwer and Tacoma.)
Tadey, Carl, Wetter, assignor to Deutsche Maschinenfabrik Aktiengesellschaft, Duisburg, Germany. Planet driving-gear. No. 1,221,626; Apr. 3; v. 237; p. 218.
Tadgell, George. (See Murdoch and Tadgell.)
Talley, Randal E., Irwin, Pa., assignor to Westinghouse Electric and Manufacturing Company. Gear. No. 1,223,216; Apr. 17; v. 237; p. 845.
Tallman, Otto E., Englevale, N. D. Refrigerator-scale. No. 1,222,488; Apr. 10; v. 237; p. 553.
Tandy, Thomas L. (See Good and Tandy.)
Tanner, Albert E., Stretford, and E. A. Claremont, High Leigh, England. Joint for electric cables. No. 1,223,444; Apr. 24; v. 237; p. 954.
Tarbox, John P. (See Curtiss and Tarbox.)
Tarbox, John P., Buffalo, N. Y., assignor to Curtiss Aeroplane & Motor Corporation. Spoke-stay. No. 1,223,298; Apr. 17; v. 237; p. 870.
Taylor, Aiken C., Richmond, assignor to E. P. Summerfield, Norfolk, Va. Weather-strip. No. 1,223,445; Apr. 24; v. 237; p. 955.
Taylor, Burt E., Mount Vernon, assignor to Borden's Condensed Milk Company, New York, N. Y. Pipe-strainer. No. 1,223,299; Apr. 17; v. 237; p. 870.
Taylor, Carrie E., Los Angeles, Cal. Device for fastening sheet material together. No. 1,223,641; Apr. 24; v. 237; p. 1026.
Taylor, Charles H., Sawtelle, Cal. Trolley-wheel. No. 1,223,217; Apr. 17; v. 237; p. 845.
Taylor, Eugene H., Boston, Mass. Safety device for box-sending machines. No. 1,222,695; Apr. 17; v. 237; p. 668.
Taylor, Ewing H., assignor of one-half to J. A. Ausbrooks, three-eighths to L. W. Alexander and one-eighth to J. M. Cullum, Fayetteville, Tenn. Well-bucket. No. 1,224,040; Apr. 24; v. 237; p. 1163.
Taylor, Forest R., Lowell, Mich. Valve-reseater. No. 1,223,218; Apr. 17; v. 237; p. 845.
Taylor, John M., Hartford, Conn. Clamp. No. 1,221,774; Apr. 3; v. 237; p. 267.
Taylor, John R., Brackenridge, Pa., assignor to Allegheny Steel Company. Evener-bar or the like. No. 1,223,910; Apr. 24; v. 237; p. 1120.
Taylor, Lawrence H., Wichita, Kans. Domestic press. No. 1,223,642; Apr. 24; v. 237; p. 1026.
Taylor, Merl L., Pontiac, Mich. Locking mechanism for motor-vehicles. No. 1,224,041; Apr. 24; v. 237; p. 1163.
Taylor, Myra J., Sydney, New South Wales, Australia. Waist. No. 1,224,100; Apr. 24; v. 237; p. 1184.
Teagle Company, The. (See Le Pontois, Leon J., assignor.)
Tennant, George P., Frostburg, Md. Rail-brace. No. 1,223,300; Apr. 17; v. 237; p. 871.
Terry, Charles W., *et al.* (See Good and Tandy, assignors.)
Terzaghi, Louis, New York, N. Y. Combination-pliers. No. 1,222,489; Apr. 10; v. 237; p. 553.
Thayer, Garrison C., Bartlesville, Okla. Beet-topping machine. No. 1,221,775; Apr. 3; v. 237; p. 268.
Thayer, Henry W., New York, N. Y. Cushioning device for packing. No. 1,222,769; Apr. 17; v. 237; p. 692.
Theimer, Adolf, New York, N. Y. Envelop-fastener. No. 1,222,490; Apr. 10; v. 237; p. 553.
Thomas, Allonzo O., Rollinsville, Colo. Ore-separator. No. 1,222,491; Apr. 10; v. 237; p. 554.
Thomas, Carl C., Madison, Wis. Fluid-meter. No. 1,222,492; Apr. 10; v. 237; p. 554.
Thomas, George B., assignor to The Bryant Electric Company, Bridgeport, Conn. Face-plate for flush receptacles. No. 1,222,493; Apr. 10; v. 237; p. 555.
Thomas, Horace T., Lansing, Mich. Starter for internal-combustion engines. No. 1,224,042; Apr. 24; v. 237; p. 1164.
Thomas, James F., Clarinda, Iowa. Bust-developer. No. 1,222,494; Apr. 10; v. 237; p. 555.
Thomas, Leslie A. (See Berryhill, Hand, and Thomas.)
Thomas, Samuel A., Seattle, Wash. Friction-clutch. No. 1,223,746; Apr. 24; v. 237; p. 1063.
Thomas, Walter, and A. E. Mainwaring, Nanaimo, British Columbia, Canada. Generating heat. No. 1,221,627; Apr. 3; v. 237; p. 218.
Thomas, William S., assignor of one-half to J. E. Buzzard, Lock Haven, Pa. Spark-plug. No. 1,221,922; Apr. 10; v. 237; p. 354.
Thomas, William S., assignor of one-half to J. E. Buzzard, Lock Haven, Pa. Spark-plug. No. 1,221,923; Apr. 10; v. 237; p. 354.
Thomas, William S., assignor of one-half to J. E. Buzzard, Lock Haven, Pa. Spark-plug. No. 1,221,923; Apr. 10; v. 237; p. 354.
Thomason, John T., Warrington, England. Velvet, cord, and like pile cutting device. No. 1,222,495; Apr. 10; v. 237; p. 555.
Thompson, Albert F., and H. T. Free, Kansas City, Mo. Indicating system for pneumatic conveyers. No. 1,221,924; Apr. 10; v. 237; p. 355.
Thompson, Allison J., Cleveland, Ohio. Lamp-hanger. No. 1,223,532; Apr. 24; v. 237; p. 988.
Thompson, Anton, Pelican Rapids, Minn. Reach structure for vehicles. No. 1,223,446; Apr. 24; v. 237; p. 955.
Thompson, Arthur W., Ottawa, Ontario, Canada. Vaporizer and igniter for internal-combustion engines. No. 1,223,124; Apr. 17; v. 237; p. 814.
Thompson, Edward R., assignor to St. Louis Tin and Sheet Metal Co., St. Louis, Mo. Pouring-spout. No. 1,223,533; Apr. 24; v. 237; p. 988.
Thompson, George W. (See Wilder, Charles, assignor.)
Thompson, John C., Cincinnati, Ohio. Wringer-support. No. 1,222,161; Apr. 10; v. 237; p. 437.
Thompson, Van, Salt Lick, Ky. Poultry-fountain. No. 1,224,043; Apr. 24; v. 237; p. 1164.
Thomsen, Christian, Hartford, Kans. Gig-saddle. No. 1,221,628; Apr. 3; v. 237; p. 218.
Thornton, John E., Rochester, N. Y., assignor to J. O. O'Brien, Manchester, England. Apparatus for producing photographic pictures. No. 1,223,447; Apr. 24; v. 237; p. 955.
Thullen, Louis H., Brooklyn, N. Y. Feeding device. No. 1,221,391; Apr. 3; v. 237; p. 137.
Thurman, Isaac B., Atlanta, assignor to J. R. Smith, McDonough, Ga. Figurehead. No. 1,224,044; Apr. 24; v. 237; p. 1164.
Tichborne, William H., Wheeling, W. Va. Centering mechanism for glass articles. No. 1,223,219; Apr. 17; v. 237; p. 845.
Tidlund, Edwin G., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Bearing-housing. No. 1,221,108; Apr. 3; v. 237; p. 36.
Tighe, Joseph A. (See Donovan and Tighe.)
Tighe, William P., assignor of seventy one-hundredths to (Mrs.) E. Estes, Newark, N. J. Resilient tire. No. 1,222,496; Apr. 10; v. 237; p. 556.
Tillman, Ferdinand J., assignor to Typewriting Calculating Attachment Company, St. Louis, Mo. Calculating-machine. No. 1,223,010; Apr. 17; v. 237; p. 774.
Tillyer, Edgar D., assignor to American Optical Company, Southbridge, Mass. Ophthalmic mounting. No. 1,222,049; Apr. 10; v. 237; p. 397.
Tilton, Abram B., Bayhead, N. J. Revolving toy. No. 1,223,643; Apr. 24; v. 237; p. 1026.

Timberlake, Wilbur B., Jackson, Mich. Egg-tester. No. 1,221,629; Apr. 3; v. 237; p. 218.
Tindall, Frank C. (See Tindall, Harry C., assignor.)
Tindall, Harry C., assignor to F. C. Tindall, Macon, Ga. Attachment for truss-pads. No. 1,222,904; Apr. 17; v. 237; p. 738.
Tingue, Brown & Company. (See Decker, Ammiel F., assignor.)
Tinkham, Francis M., Springfield, Mass. Wire mattress. No. 1,221,392; Apr. 3; v. 237; p. 137.
Tinley, James F., Brooklyn, N. Y. Portable water-filter. No. 1,222,162; Apr. 10; v. 237; p. 437.
Tipple, James D., West Nashville, Tenn. Spring-tire. No. 1,222,905; Apr. 17; v. 237; p. 738.
Titanium Alloy Manufacturing Company, The. (See Barton, Louis E., assignor.)
Titsworth, Richard, assignor of one-third to T. J. Walsh, Fort Bliss, Tex. Gangway. No. 1,224,045; Apr. 24; v. 237; p. 1165.
Titus, Phenno L., Petrolia, Pa. Vehicle-spring. No. 1,221,109; Apr. 3; v. 237; p. 36.
Tobin, John R., Langford, S. D. Rapid-fire toy cannon. No. 1,223,448; Apr. 24; v. 237; p. 956.
Toledo Computing Scale Company. (See Crane, Samuel G., assignor.)
Toledo Rack & Level Company, The. (See Dunbar, Orls K., assignor.)
Toledo Scale Company. (See De Vilbiss, Allen, Jr., assignor.)
Toledo Wheelbarrow Company. (See Troendle, William C., assignor.)
Toman, George V., Boundbrook, N. J. Closet-tank flush-valve. No. 1,223,534; Apr. 24; v. 237; p. 989.
Tomlinson, Charles H., Mansfield, Ohio. Automatic car, air, and electric coupling mechanism. No. 1,223,223; Apr. 17; v. 237; p. 846.
Tomlinson, Charles H., assignor to The Tomlinson Coupler Company, Mansfield, Ohio. Electrical multiple connector. No. 1,223,222; Apr. 17; v. 237; p. 846.
Tomlinson Coupler Company, The. (See Tomlinson, Charles H., assignor.)
Torkington, Alfred W., London, England. Tire. No. 1,222,906; Apr. 17; v. 237; p. 739.
Torrance, Edward A., Evansville, Ind. Automobile-rim protector. No. 1,221,245; Apr. 3; v. 237; p. 86.
Torrence, Charles A., Regina, Saskatchewan, Canada. Grain-separator. No. 1,221,110; Apr. 3; v. 237; p. 37.
Toth, Frank. (See Brand and Toth.)
Tracy, James J., Cleveland, Ohio. Carbureter. No. 1,222,163; Apr. 10; v. 237; p. 438.
Tracy, William H., Holland, Ky. Combined clod-crusher and scrub-cutter. No. 1,222,696; Apr. 17; v. 237; p. 668.
Traub, Edward B., Chicago, assignor of one-half to E. P. Phelps, Wilmette, Ill. Carbon-paper form-book. No. 1,221,111; Apr. 3; v. 237; p. 37.
Traut, Clifford, and H. Higgin, assignors to The Higgin Manufacturing Company, Newport, Ky. Window-screen. No. 1,223,535; Apr. 24; v. 237; p. 989.
Trautman, August G., Brooklyn, N. Y. Condiment-holder. No. 1,221,630; Apr. 3; v. 237; p. 219.
Travelstead, John O., Pendleton, Oreg. Torpedo-shield for vessels. No. 1,223,536; Apr. 24; v. 237; p. 989.
Travers, Carl, Frankenholz, near Mittelbexbach, Germany. Respirator. No. 1,221,246; Apr. 3; v. 237; p. 86.
Traylor, Samuel W., Allentown, Pa. Drilling, reaming, and centering machine. No. 1,221,247; Apr. 3; v. 237; p. 87.
Triffshauser, George H., Batavia, N. Y. Ironing-board attachment. No. 1,221,487; Apr. 3; v. 237; p. 170.
Tripp, Jacob W., New York, N. Y. Rule. No. 1,223,644; Apr. 24; v. 237; p. 1027.
Troendle, William C., assignor to The Toledo Wheelbarrow Company, Toledo, Ohio. Tenoning-machine. No. 1,223,125; Apr. 17; v. 237; p. 814.
Trott, Rolland S., Denver, Colo. Vehicle spring suspension. No. 1,221,248; Apr. 3; v. 237; p. 87.
Trott, Rolland S., Denver, Colo. Control mechanism for motor-vehicles. No. 1,221,925; Apr. 10; v. 237; p. 355.
Troup, Calvin H., assignor to The Pennsylvania Match Company, Inc., Bellefonte, Pa. Attachment for match-boxes. No. 1,221,488; Apr. 3; v. 237; p. 170.
Trout, Silas E., Philadelphia, Pa. Filing device. No. 1,221,631; Apr. 3; v. 237; p. 219.
Troxell, John W., Roby, Ill. Holding device for live stock. No. 1,223,126; Apr. 17; v. 237; p. 815.
Truemper, Charles J., Indianapolis, Ind. Awning. No. 1,222,907; Apr. 17; v. 237; p. 739.
Trumbull Electric Manufacturing Company, The. (See Ratcliffe, Roscoe, assignor.)
Trumbull Electric Manufacturing Company, The. See Sutherland, Alexander K., assignor.)
Trumbull Manufacturing Company, The. (See Lundin, Ragnar O. W., assignor.)
Tubach, Emil F., Bernice, Pa. Mine-car door. No. 1,221,112; Apr. 3; v. 237; p. 37.
Tucker, Benjamin W., South Orange, N. J., assignor to Corona Typewriter Company. Type-writing machine. No. 1,222,497; Apr. 10; v. 237; p. 556.
Tucker, Edwin W., San Francisco, Cal. Fuel-oil burner. No. 1,223,301; Apr. 17; v. 237; p. 871.
Tully, Francis W., Brookline, Mass. Fabric for mats, rugs, &c. No. 1,223,537; Apr. 24; v. 237; p. 990.
Tully, Francis W., Brookline, Mass. Rug, mat, or other covering and making the same. No. 1,223,538; Apr. 24; v. 237; p. 990.
Turbayne, William A., assignor, by mesne assignments, to U. S. Light & Heat Corporation, Niagara Falls, N. Y. Dynamo-electric machine. No. 1,223,449; Apr. 24; v. 237; p. 956.
Turley, Thomas B., Washington, D. C. Apparatus for feeding fire-hose. No. 1,224,046; Apr. 24; v. 237; p. 1165.
Turner, Archibald, Leicester, England. Elastic webbing. No. 1,221,489; Apr. 3; v. 237; p. 171.
Turner, Frank A., assignor of one-half to J. M. Jackson, Boston, and one-fourth to A. E. Kilham, Beverly, Mass. Resilient wheel. No. 1,221,393; Apr. 3; v. 237; p. 137.
Turner, Perry W., Myndus, N. Mex. Drying-kiln. No. 1,221,776; Apr. 3; v. 237; p. 268.
Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Booster-valve for air-brakes. No. 1,221,926; Apr. 10; v. 237; p. 356.
Turner, William D., Tucson, Ariz. Egg-beater. No. 1,223,839; Apr. 24; v. 237; p. 1095.
Turner, William W., Philadelphia, Pa. Wheel-extricator for automobiles. No. 1,222,908; Apr. 17; v. 237; p. 739.
Tuttle, Henry A., Taunton, Mass. Reversing-gearing. No. 1,221,113; Apr. 3; v. 237; p. 38.
Tuttle, Phil S., Johnsonburg, Pa. Sampling device for pulp-digesters. No. 1,222,249; Apr. 10; v. 237; p. 468.
Twaits, Daniel H., Chicago, Ill. Self-closing oil-cup. No. 1,222,909; Apr. 17; v. 237; p. 739.
Twaits, Daniel H., Chicago, Ill. Grease-cup body. No. 1,222,910; Apr. 17; v. 237; p. 740.
Twombly, Willard L., assignor, by mesne assignments, to H. W. Jessup, trustee, New York, N. Y. Internal-combustion engine. No. 1,221,114; Apr. 3; v. 237; p. 38.
Tynan, Henry J., Paterson, N. J. Stripping-stand. No. 1,222,697; Apr. 17; v. 237; p. 669.
Typewriting Calculating Attachment Company. (See Tillman, Ferdinand J., assignor.)
Tysse, Hans C., Manistee, Mich. Intermediate sole for shoes. No. 1,221,632; Apr. 3; v. 237; p. 219.
U. S. Light & Heat Corporation. (See Bliss, William L., assignor.)
U. S. Light & Heat Corporation. (See Turbayne, William A., assignor.)
U. S. Steel Furniture Company. (See Ohnstrand, Enoch, assignor.)
Udall, Frank D., Ironwood, Mich. Sheave or pulley. No. 1,222,818; Apr. 17; v. 237; p. 710.
Ufford, Charles A., Boston, Mass. Adjustable dress-form. No. 1,221,490; Apr. 3; v. 237; p. 171.
Uhlen, Traugott C. (See Lyon, John S., assignor.)
Uhls, Frank A., Cheraw, Colo. Hay-stacker. No. 1,221,491; Apr. 3; v. 237; p. 172.
Umbel, William H., Uniontown, Pa. Railway-tie. No. 1,222,819; Apr. 17; v. 237; p. 710.
Umpleby, Harry C., assignor of one-third to F. E. Bentley and one-third to R. R. Maxsen, Angelica, N. Y. Door-operating mechanism. No. 1,222,820; Apr. 17; v. 237; p. 710.
Underwood Computing Machine Company. (See Hart, Frederick A., assignor.)
Underwood Computing Machine Company. (See Hart, Frederick A., assignor.) (Reissue.)
Underwood Computing Machine Company. (See Kidder, Wellington H., assignor.)
Underwood, John W., Melbourne, Victoria, Australia. Support of motor-cycle side cars. No. 1,224,047; Apr. 24; v. 237; p. 1166.
Underwood Typewriter Company. (See Cook, Frank A., assignor.)
Underwood Typewriter Company. (See Helmond, William F., assignor.)
Uney, August, Oakland, Cal. Combination-tool. No. 1,221,777; Apr. 3; v. 237; p. 269.
Union Carbide Company. (See Helfenstein, Alois, assignor.)
Union Special Machine Company. (See Chalman, John E., assignor.)
Union Special Machine Company. (See Moffatt, James R., assignor.)
Union Steam Pump Company. (See Smith, Karl D., assignor.)
Union Switch & Signal Company, The. (See McCarthy, Daniel J., assignor.)
Union Switch & Signal Company, The. (See Young, Henry S., assignor.)
Unique Specialty Co. (See Enell, Otto E., assignor.)
United Shoe Machinery Company. (See Eaton, Harrison H., assignor.)
United Shoe Machinery Company. (See Furber, Frederick M., assignor.)
United Shoe Machinery Company. (See Heys, John J., assignor.)
United Shoe Machinery Company. (See Latham, Albert, assignor.)
United Shoe Machinery Company. (See Preble, Edwin N., assignor.)
United States Envelope Company. (See Lewis, Russell W., assignor.)
Universal Concrete Products Company. (See Llenesch, Walter H., assignor.)

Universal Indexing Company, The. (See Smith, Louis R., assignor.)
Universal Machine Company, The. (See Rosenberg, Ralph H., assignor.)
Universal Oxygen Company. (See Mueller, Rudolph J. J., assignor.)
Universal Turbine Company, The. (See Anderson, Emil, assignor.)
Universal Valve and Valve Gear Co., The. (See Coan, William C. assignor.)
Universal Winding Company. (See Ryden, Claes, assignor.)
Uplift Corset Company. (See McCormick, Hugh M., assignor.)
Upton, William H., and H. G. Stoll, New York, N. Y. Internal-combustion engine. No. 1,221,633; Apr. 3; v. 237; p. 219.
Usher, Walker. (See Soane, Charles E., assignor.)
Van Allen, George L., Prince Bay, N. Y. Artificial denture. No. 1,223,450; Apr. 24; v. 237; p. 956.
Van der Valk, Christiaan C., The Hague, and F. M. V. Van Eck, Rotterdam, assignors to C. O. Heuvelink, The Hague, Netherlands. Lock-nut. No. 1,223,911; Apr. 24; v. 237; p. 1120.
Van Daalen, Herman B., and H. P. Schreiber, London, England. Apparatus for the electrical transmission of power. No. 1,223,224; Apr. 17; v. 237; p. 847.
Van Deventer, Harry R., Sumter, S. C., assignor to Splitdorf Electrical Company, Newark, N. J. Cigar. No. 1,221,634; Apr. 3; v. 237; p. 220.
Van Dorn Electric Tool Company, The. (See Sweet, Burton W., assignor.)
Van Dorn Iron Works Company, The. (See Van Dorn and Whitehouse, assignors.)
Van Dorn, James H., and J. T. Whitehouse, assignors to The Van Dorn Iron Works Company, Cleveland, Ohio. Lock mechanism for cell-doors. No. 1,222,821; Apr. 17; v. 237; p. 710.
Van Eck, François M. V. (See Van der Valk and Van Eck.)
Van Epps, Theodore C., Los Angeles, Cal. Self-tightening ball-and-socket pipe-joint. No. 1,223,645; Apr. 24; v. 237; p. 1027.
Van Hee, Ernest C. (See De Point and Van Hee.)
Van Stockum, Abraham J., Rijswijk, Netherlands. Submarine vessel. No. 1,223,747; Apr. 24; v. 237; p. 1064.
Van Stockum, Abraham J., Amsterdam, Netherlands. Cooking and food-sterilizing apparatus. No. 1,223,748; Apr. 24; v. 237; p. 1064.
Van Zandt, Jacobs & Co. (See Renthan, Ralph C., assignor.)
Vandal, Marcel, Paris, France. Machine for cutting cinematographic stencils. No. 1,223,539; Apr. 24; v. 237; p. 990.
Vangen, Anton, Vestfossen, Norway. Self-indicating target. No. 1,222,822; Apr. 17; v. 237; p. 711.
Vaught, James C. H., New York, N. Y. Pneumatic drill. No. 1,222,823; Apr. 17; v. 237; p. 711.
Veres, Zigmond, Shelton, Conn. Hat-pin-point protector. No. 1,223,540; Apr. 24; v. 237; p. 991.
Vesta Accumulator Company. (See Morrison, William, assignor.) (Reissue.)
Vicknair, Joseph. (See Simoneaux, Edward N., assignor.)
Victor Talking Machine Company. (See English, John C., assignor.)
Victor Talking Machine Company. (See La Rue, William D., assignor.)
Vincent, Jesse G., and N. White, assignors to Burroughs Adding Machine Company, Detroit, Mich. Calculator. No. 1,221,927; Apr. 10; v. 237; p. 356.
Vleeschouwer, Camille de, and J. Tacoma, Amsterdam, Netherlands. Desk or cabinet for disappearing type-writing machines. No. 1,223,677; Apr. 24; v. 237; p. 1039.
Vogel, Eugene W., Oak Park, assignor to Chicago Railway Signal and Supply Company, Carpentersville, Ill. Device for manipulating railway-rails. No. 1,223,452; Apr. 24; v. 237; p. 957.
Voight, George F., San Francisco, Cal. Door-hanger. No. 1,223,451; Apr. 24; v. 237; p. 956.
Voight, Henry G., New Britain, assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,221,115; Apr. 3; v. 237; p. 38.
Voightmann & Co. (See Iman, Orla H., assignor.)
Volunteer Firemen's Signal Company. (See Meyers, Louis A., assignor.) (Reissue.)
Von Frieling, Henry. (See Von Frieling, John and H.)
Von Frieling, John and H., Gaylord, Kans. Automatic door-locking device. No. 1,221,635; Apr. 3; v. 237; p. 220.
Von Hagen, Arnold C., Kansas City, Mo. Cleaning wheat and other grains. No. 1,221,636; Apr. 3; v. 237; p. 220.
Von Stetten, Julius O., St. Louis, Mo. Garment-former. No. 1,221,394; Apr. 3; v. 237; p. 138.
Von Stetten, Julius O., St. Louis, Mo. Garment-former. No. 1,221,395; Apr. 3; v. 237; p. 138.
Von Todenwarth, Walter W., Rahway, N. J. Controlling-valve for acetylene cutting and welding torches. No. 1,222,164; Apr. 10; v. 237; p. 438.
Vorderwinkler, Wilhelm, Brooklyn, N. Y. Clutch device. No. 1,223,646; Apr. 24; v. 237; p. 1027.
Voss, William H., Davenport, Iowa. Washing-machine. No. 1,222,050; Apr. 10; v. 237; p. 397.
Vulcan Plow Company, The. (See Berryhill, Hand, and Thomas, assignors.)
Vulcan Soot Cleaner Co., of Pittsburg, Pa., The. (See Linaker, Frederick W., assignor.)
W. K. Jahn Co., The. (See Steerup, Petrarch A. G., assignor.)
Wacker, Charles H. (See Wacker, Frederick G., assignor.)
Wacker, Frederick G., assignor to C. H. Wacker, Chicago, Ill. Metallic receptacle and wedding the same. No. 1,222,165; Apr. 10; v. 237; p. 438.
Wadhams, Abner H., Torrington, Conn., assignor to Schroeder Brothers Manufacturing Company. Nose-protector. No. 1,221,778; Apr. 3; v. 237; p. 269.
Wadsworth, Frank L. O., Sewickley, assignor of one-half to H. F. Gilg, Pittsburgh, Pa. Draft-gearing. No. 1,222,582; Apr. 10; v. 237; p. 587.
Wafer, William H., and J. Murrin, Chicago, Ill. Gage or try-cock. No. 1,223,749; Apr. 24; v. 237; p. 1065.
Wagatha, George A., New Orleans, La. Pulverizer. No. 1,223,840; Apr. 24; v. 237; p. 1096.
Wagner, August, Buffalo, Minn. Valve-grinding tool. No. 1,223,225; Apr. 17; v. 237; p. 847.
Wagner, David G., New York, N. Y. Sheet-folder. No. 1,222,338; Apr. 10; v. 237; p. 499.
Wagner, Edward R., Milwaukee, assignor to E. R. Wagner Manufacturing Company, North Milwaukee, Wis. Baby-carriage. No. 1,221,396; Apr. 3; v. 237; p. 139.
Wagner, Forrest L., Buchanan, Iowa. Brake for plows. No. 1,224,101; Apr. 24; v. 237; p. 1184.
Wagner, Joseph, Jr., et al. (See Rubenstein, Harry, assignor.)
Wahl, Eugene J., St. Paul, assignor to The Concrete Stave Silo Company, Minneapolis, Minn. Silo-door hanger. No. 1,221,492; Apr. 3; v. 237; p. 172.
Wahl, John, Alpena, S. D. Grease-retainer. No. 1,223,453; Apr. 24; v. 237; p. 957.
Wahlberg, Eric J., assignor to Atlas Tank Manufacturing Company, Fort Bragg, Cal. Mounting for silo-doors. No. 1,221,779; Apr. 3; v. 237; p. 269.
Waite, Lyman M. (See Hogan and Waite.)
Waits, Charles A., Rouseville, Pa. Air system for forcing liquids. No. 1,221,637; Apr. 3; v. 237; p. 220.
Wakefield, Albert A., assignor, by mesne assignments, to G & W Electric Specialty Co., Chicago, Ill. Cable-box. No. 1,223,750; Apr. 24; v. 237; p. 1065.
Wald, George, U. S. Army. Phototelegraphic machine. No. 1,221,780; Apr. 3; v. 237; p. 270.
Wales, Enid S., assignor of one-half to H. W. K. Pierce, Detroit, Mich. Explosive projectile. No. 1,222,051; Apr. 10; v. 237; p. 398.
Walker, Arthur L., Hoopeston, Ill. Holder for whetstones. No. 1,223,127; Apr. 17; v. 237; p. 815.
Walker, Arthur W., Malden, assignor to Walker and Pratt Manufacturing Company, Boston, Mass. Gas-stove, (manifold.) No. 1,222,824; Apr. 17; v. 237; p. 711.
Walker, Arthur W., Malden, assignor to Walker & Pratt Manufacturing Company, Boston, Mass. Cooking-stove. No. 1,223,647; Apr. 24; v. 237; p. 1028.
Walker, Frederick G., Detroit, Mich. Universal joint. No. 1,221,638; Apr. 3; v. 237; p. 221.
Walker, John B., Birmingham, Ala. Collapsible core for ingot-molds. No. 1,221,116; Apr. 3; v. 237; p. 39.
Walker, John B., Birmingham, Ala. Flask for ingot-molds. No. 1,221,117; Apr. 3; v. 237; p. 39.
Walker, John E. (See Williams, Joseph, assignor.)
Walker, Oakley S., assignor to O. S. Walker Co., Worcester, Mass. Magnetic chuck. No. 1,222,052; Apr. 10; v. 237; p. 398.
Walker and Pratt Manufacturing Company. (See Walker, Arthur W., assignor.)
Wallace, Robert J., Denver, Colo. Longitude and time chart. No. 1,223,128; Apr. 17; v. 237; p. 815.
Walsh, Elinor C., Helena, Mont. Sanitary drinking-cup. No. 1,221,639; Apr. 3; v. 237; p. 221.
Walsh, Frank, et al. (See Kanster, Jacob, assignor.)
Walsh, Thomas J., et al. (See Kanster, Jacob, assignor.)
Walsh, Thomas J. (See Titsworth, Richard, assignor.)
Walter, Harvey W., Peoria, Ill. Tampon or pessary. No. 1,222,825; Apr. 17; v. 237; p. 712.
Walter, John D. (See Stanton and Walter.)
Waltham Watch Company. (See Duncan, Harrie E., assignor.)
Walton, Frank S., Philadelphia, Pa. Treating automobile-tires and the inner tubes thereof. No. 1,223,302; Apr. 17; v. 237; p. 872.
Waltz, John E. (See Conway, Elisha A., assignor.)
Ward Baking Company. (See Kohman, Godfrey, and Ashe, assignors.)
Ward, Walter A., New York, N. Y. Sand picture and making the same. No. 1,221,118; Apr. 3; v. 237; p. 40.
Ware, Jesse D. (See Merry and Ware.)
Ware, John H. (See Brisbois, Odilon, assignor.)
Warren Featherbone Company, The. (See Johnston, James G., assignor.)
Warren, John W. L., Auckland, New Zealand. Milking-machine apparatus. No. 1,222,826; Apr. 17; v. 237; p. 712.
Warren Webster & Company. (See Fitts, James L., assignor.)
Warriner, Robert, assignor to Fore River Shipbuilding Corporation, Quincy, Mass. Gearing. No. 1,223,648; Apr. 24; v. 237; p. 1028.

Washburn Crosby Company. (See Holden, Hiram C., assignor.)
Wasson Engineering and Supply Company. (See Wasson, Frank A., assignor.)
Wasson, Frank A., Milwaukee, Wis., assignor to Wasson Engineering and Supply Company, Santa Rosa, Cal. Trolley. No. 1,221,249; Apr. 3; v. 237; p. 87.
Wasson, Frank A., Milwaukee, Wis., assignor to Wasson Engineering & Supply Company, Santa Rosa, Cal. Trolley-pole. No. 1,221,250; Apr. 3; v. 237; p. 88.
Waterman, Russell R., Pasadena, Cal. Steering and propelling means for dirigible airships. No. 1,222,499; Apr. 10; v. 237; p. 557.
Waterman, William K., New York, N. Y. Body for auto-trucks. No. 1,223,912; Apr. 24; v. 237; p. 1120.
Waters, Harry B., Denver, Colo. Sheet-music and loose-leaf binder. No. 1,222,500; Apr. 10; v. 237; p. 557.
Waters, Joseph R., Princess Anne, Md. Device for holding protectors upon the edges of coats, &c. No. 1,222,250; Apr. 10; v. 237; p. 469.
Waters, William L., Milwaukee, Wis. Signaling apparatus for railways. No. 1,221,928; Apr. 10; v. 237; p. 357.
Watkins, William D., assignor of one-half to H. W. Conkling, San Jose, Cal. Tractor. No. 1,222,911; Apr. 17; v. 237; p. 740.
Watrous, Edward L., Des Moines, Iowa, assignor to E. L. Watrous Galvanizing Company. Method of metal-plating. No. 1,221,397; Apr. 3; v. 237; p. 139.
Watson, Frank W., Cedar Falls, Iowa. Scaffold. No. 1,222,053; Apr. 10; v. 237; p. 398.
Watson, Robert J., and A. E. Ozouf, assignors to The Allbright-Nell Company, Chicago, Ill. Skinning-machine. No. 1,223,129; Apr. 17; v. 237; p. 815.
Watson, Thomas A. (See Forester, William H., assignor.)
Watson, Tyler B., and J. J. Brasington, Cheraw, S. C. Seed-harvester. No. 1,221,119; Apr. 3; v. 237; p. 40.
Waugh, Charles P. (See Harp, William L., assignor.)
Waugh, Edward H. (See Brierly and Waugh.)
Waugh, James M., Chicago, Ill. Journal-spring. No. 1,222,698; Apr. 17; v. 237; p. 669.
Waugh, James M., Chicago, Ill. Spring driving-gear. No. 1,222,699; Apr. 17; v. 237; p. 669.
Weathersby, Walter W. (See Nelson and McDonal, assignors.)
Weaver, Frederick H., Baltimore, Md. Device for handling sewer-pipe sections. No. 1,222,166; Apr. 10; v. 237; p. 439.
Weaver, Scott S., Tampa, Fla. Steering mechanism. No. 1,223,913; Apr. 24; v. 237; p. 1121.
Weber, Friedrich W., Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y. Manufacturing leather. No. 1,221,929; Apr. 10; v. 237; p. 357.
Weber, George F., assignor, by mesne assignments, to R. Hoe and Co., New York, N. Y. Stereotype-plate-finishing machine. No. 1,222,912; Apr. 17; v. 237; p. 740.
Weber, Gustave A. (See Witter, Leon A., assignor.)
Weber, Theodore T., assignor to The Ohio Gas Generator & Manufacturing Company, Columbus, Ohio. Gas-generator. No. 1,222,167; Apr. 10; v. 237; p. 439.
Webster, Edgar P., Bridgeport, Conn. Pencil-sharpening machine. No. 1,223,541; Apr. 24; v. 237; p. 991.
Webster, Thomas. (See Madigan and Webster.)
Webster, William A., assignor of one-half to J. Hulse, Galesburg, Ill. Sack-baler. No. 1,223,542; Apr. 24; v. 237; p. 991.
Webster, William R., assignor to Bridgeport Brass Company, Bridgeport, Conn. Coiling apparatus. No. 1,222,827; Apr. 17; v. 237; p. 712.
Wedge, Albert G., Iron River, Mich. Tray. No. 1,223,543; Apr. 24; v. 237; p. 991.
Weeks, William C., Union Bay, British Columbia, Canada. Shingle-bundle. No. 1,222,054; Apr. 10; v. 237; p. 398.
Wegener, Arnold H., Hoboken, N. J., assignor to Roller Lock Nut Company, Inc. Nut-lock. (Reissue.) No. 14,291; Apr. 24; v. 237; p. 1196.
Wegner, August. (See Eldredge, Hervey H., assignor.)
Wegner, Carl H., G. A. Loescher, and B. Plowright, assignors to Menasha Cooperage Company, Menasha, Wis. Barrel-chime. No. 1,221,120; Apr. 3; v. 237; p. 41.
Weibel, Fredderick W., Harvard, Ill. Lawn-mower attachment. No. 1,221,930; Apr. 10; v. 237; p. 358.
Weidlein, Edward R., Thompson, Nev., assignor to Metals Research Company, New York, N. Y. Hydrometallurgical apparatus for the recovery of copper. No. 1,223,454; Apr. 24; v. 237; p. 958.
Weigel, Arnold A., assignor to E. S. Woods, deceased, Chicago, Ill.; A. G. Welch, executor of E. S. Woods, deceased, assignor to A. G. Welch, trustee. Antifriction-bearing. No. 1,221,781; Apr. 3; v. 237; p. 270.
Weinberg, Charles. (See Weinberg, Hyman and C.)
Weinberg, Hyman and C., Brooklyn, N. Y. Safety device for automobiles. No. 1,222,828; Apr. 17; v. 237; p. 713.
Weingarten, Oscar, New York, N. Y. Corset-lacing. No. 1,222,700; Apr. 17; v. 237; p. 670.
Weinhold, Arthur. Mackranstädt, near Leipzig, Germany. Automatically-working pond-drainer. No. 1,221,251; Apr. 3; v. 237; p. 88.
Weis, John P., Nyack, assignor to L. N. Littauer, Gloversville, N. Y. Trimming mechanism for sewing-machines. No. 1,221,252; Apr. 3; v. 237; p. 88.
Weis, John P., Nyack, assignor to L. N. Littauer, Gloversville, N. Y. Looper mechanism for sewing-machines. No. 1,221,253; Apr. 3; v. 237; p. 89.
Weis, John P., Nyack, assignor to L. N. Littauer, Gloversville, N. Y. Sewing-machine. No. 1,221,254; Apr. 3; v. 237; p. 89.
Weis, John P., Nyack, assignor to L. N. Littauer, Gloversville, N. Y. Sewing-machine. No. 1,222,339; Apr. 10; v. 237; p. 500.
Weiss, Albert T., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y. Latch for furniture-drawers. No. 1,223,455; Apr. 24; v. 237; p. 958.
Weiss, Carl W., Brooklyn, N. Y. Fuel-governor for internal-combustion engines. No. 1,222,055; Apr. 10; Gaz. vol. 237; p. 399.
Weitman, Solomon F., Live Oak, Fla. Weed-cutter. No. 1,222,701; Apr. 17; v. 237; p. 670.
Welch, Albert G., executor and trustee. (See Weigel, Arnold A.)
Welchel, Herbert E. (See Schaf and Munk, assignors.)
Well, Hugo C., New York, N. Y. Internal-combustion engine. No. 1,221,121; Apr. 3; v. 237; p. 41.
Welles, Richard H., assignor to The Badger Brass Mfg. Co., Kenosha, Wis. Connector-socket for electric lamps or the like. No. 1,221,255; Apr. 3; v. 237; p. 90.
Wells, Alvin. (See Clark, Edward W., assignor.)
Wells, Byron B., and L. W. Lapp, Columbus, Ohio; said Lapp assignor to said Wells. Controlling mechanism for automobiles. No. 1,221,122; Apr. 3; v. 237; p. 41.
Wells, Perley D., Milo, Me. Baking-pan. No. 1,223,226; Apr. 17; v. 237; p. 847.
Wells, Sheldon S., New York, N. Y. Mechanical toy or game. No. 1,222,829; Apr. 17; v. 237; p. 713.
Wendell, Carl A., Joliet, Ill. Tar-burner. No. 1,223,011; Apr. 17; v. 237; p. 775.
Wendell, Carl A., Joliet, Ill. Automatic sampling device. No. 1,223,544; Apr. 24; v. 237; p. 992.
Wenzel, Wallace, Holyoke, Mass. Truss. No. 1,223,751; Apr. 24; v. 237; p. 1065.
Werbeck, Walter G., Chicago, Ill. Water-gage protector for steam-boilers. No. 1,223,456; Apr. 24; v. 237; p. 958.
Werner, Ernest E., Indianapolis, Ind. Treating cereals and cereal products. No. 1,222,830; Apr. 17; v. 237; p. 713.
Werts, Le Roy, Milford, Mo. Priming attachment for internal-combustion engines. No. 1,221,782; Apr. 3; v. 237; p. 270.
Wesley, James J., Phoenix, Ariz. Supplemental bottom for cooking utensils. No. 1,222,056; Apr. 10; v. 237; p. 399.
Wessel, Louis, Jr., assignor to American Loose Leaf Manufacturing Company, Chicago, Ill. Order-book and combination page and envelop therefor. No. 1,221,931; Apr. 10; v. 237; p. 358.
Western Electric Company. (See Adams, Arthur H., assignor.)
Western Electric Company. (See Bandfield, Harold G., assignor.)
Western Electric Company. (See Bradbury, Clifford C., assignor.)
Western Electric Company. (See Clausen, Henry P., assignor.)
Western Electric Company. (See Dixon, Amos F., assignor.)
Western Electric Company. (See Dunham, Bert G., assignor.)
Western Electric Company. (See Goodrum, Charles L., assignor.)
Western Electric Company. (See Goodrum and Dunham, assignors.)
Western Electric Company. (See Hill, Ralph N., assignor.)
Western Electric Company. (See Johnson, Lewis H., assignor.)
Western Electric Company. (See Kolossváry, Endre, assignor.)
Western Electric Company. (See Lundell, Alben E., assignor.)
Western Electric Company. (See Raynsford, Arthur, assignor.)
Western Electric Company. (See Smith, William F., assignor.)
Western Electric Company. (See Speed, James B., assignor.)
Western Electric Company. (See Sperry, Arthur B., assignor.)
Western Electric Company. (See Wilbur, Ray S., assignor.)
Western Electric Company. (See Williams, Samuel B., Jr., assignor.)
Western Electric Company. (See Wright, Joseph L., assignor.)
Western Steel & Iron Works. (See Abendroth, Elmer T., assignor.)
Westhaver, Evelyn M., San Diego, Cal. Embroidery-hoop. No. 1,221,123; Apr. 3; v. 237; p. 42.
Westinghouse Air Brake Company, The. (See Brown, Thomas R., assignor.)
Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)
Westinghouse Electric and Manufacturing Company. (See Aalborg, Christian, assignor.)

Westinghouse Electric and Manufacturing Company. (See Auel, Carl B., assignor.)
Westinghouse Electric and Manufacturing Company. (See Bastian, Arthur J., assignor.)
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Westinghouse Electric and Manufacturing Company. (See Harvey, Albert L., assignor.)
Westinghouse Electric & Manufacturing Company. (See Kicklighter, Charles H., assignor.)
Westinghouse Electric and Manufacturing Company. (See Meyer, Friedrich W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Rose, Edward E., assignor.)
Westinghouse Electric and Manufacturing Company. (See Rosenberg, Emanuel, assignor.)
Westinghouse Electric and Manufacturing Company. (See Simmon, Karl A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Talley, Randal E., assignor.)
Westinghouse Electric and Manufacturing Company. (See Tidlund, Edwin G., assignor.)
Westinghouse Machine Company, The. (See Johnson, Josiah F., assignor.)
Westinghouse Machine Company. (See Kandó, Coloman de, assignor.)
Westinghouse Machine Company, The. (See London, William J. A., assignor.)
Westinghouse Machine Company, The. (See O'Neill, James A., assignor.)
Westlake Machine Company, The. (See Kadow, August, assignor.)
Weston, Howard W. (See Neiswender, Aaron, assignor.)
Wettlaufer, William L., Toronto, Ontario, Canada. Brick-press. No. 1,223,457; Apr. 24; v. 237; p. 959.
Wheeler, Frank G., assignor to Bleach Process Company, Appleton, Wis. Evaporating process and apparatus. No. 1,222,340; Apr. 10; v. 237; p. 500.
Wheeler-Schebler Carbureter Co., The. (See Bessom, Earl A., assignor.)
Wheeler-Schebler Carbureter Co., The. (See Funk, James B., assignor.)
Wheeless, William L., Parsons, Kans. Show-case. No. 1,222,702; Apr. 17; v. 237; p. 670.
Wheipley, Frederick W., and F. A. Bicknell, Greenfield, Mass. Screw-thread-gaging device. No. 1,223,012; Apr. 17; v. 237; p. 775.
Whitaere, Robert B. (See Livingston, George D., assignor.)
Whitaker, Norman T., New York, N. Y. Combination game board and pieces. No. 1,221,493; Apr. 3; v. 237; p. 173.
Whitcomb, Charles W., Potlatch, Idaho. Rail-joint. No. 1,223,227; Apr. 17; v. 237; p. 848.
White, Clifford A. (See Smith and White.)
White, Edwin L., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y. Device for suspending light-reflecting bowls. No. 1,223,130; Apr. 17; v. 237; p. 816.
White, Frederick, Brookline, assignor, by mesne assignments, to J. T. Gray, Cambridge, Mass. System and apparatus for treating air. No. 1,223,331; Apr. 17; v. 237; p. 881.
White, Harry B., assignor to The Gilliam Manufacturing Company, Canton, Ohio. Bow rest and clamping device. No. 1,222,057; Apr. 10; v. 237; p. 399.
White, Harry B., assignor to S. S. Kurtz, Canton, Ohio. Filing appliance. No. 1,223,228; Apr. 17; v. 237; p. 848.
White, Jane, Pasadena, Cal. Spool-protector. No. 1,222,703; Apr. 17; v. 237; p. 670.
White, John D., Toronto, Ontario, Canada. Composition for filling joints in metallic bodies. No. 1,223,458; Apr. 24; v. 237; p. 959.
White, John F., Chicago, Ill. Latch. No. 1,221,932; Apr. 10; v. 237; p. 358.
White, John F., Chicago, Ill. Lock. No. 1,221,933; Apr. 10; v. 237; p. 359.
White, Joseph A., assignor to The Moore and White Company, Philadelphia, Pa. Press-roll for paper-making machines. No. 1,222,501; Apr. 10; v. 237; p. 557.
White, Nelson. (See Vincent and White.)
White, Otis, assignor to Sangamo Electric Company, Springfield, Ill. Electricity-meter. No. 1,221,934; Apr. 10; v. 237; p. 359.
White, Robin L., Chicago, Ill. Form for concrete slabs. No. 1,222,704; Apr. 17; v. 237; p. 670.
White, Tilman, Berkeley, assignor of one-half to E. E. Dryden and one-half to T. W. Morgan, Jr., Oakland, Cal. Hose-coupling. No. 1,221,935; Apr. 10; v. 237; p. 359.
White, William B., Des Moines, Iowa. Cigar-case holder. No. 1,221,398; Apr. 3; v. 237; p. 140.
White, William M., Milwaukee, Wis. Regainer for water-power plants. No. 1,223,841; Apr. 24; v. 237; p. 1096.
White, William M., Milwaukee, Wis. Water-wheel-speed increaser. No. 1,223,842; Apr. 24; v. 237; p. 1097.
White, William M., Milwaukee, Wis. Apparatus for utilizing the hydraucone action of water. No. 1,223,843; Apr. 24; v. 237; p. 1097.
Whitehead & Hoag Company, The. (See Smeeton, Richard J., assignor.)
Whitehouse, John T. (See Van Dorn and Whitehouse.)
Whitin Machine Works. (See Crockett, Frank L., assignor.)
Whitlock, Ralph G., Los Angeles, Cal. Loose-leaf book. No. 1,222,058; Apr. 10; v. 237; p. 400.
Whitman, Randolph, Mount Vernon, N. Y. Acoustic device. No. 1,223,545; Apr. 24; v. 237; p. 992.
Whitmore, Edward E., assignor to The Curtain Supply Company, Chicago, Ill. Car-diaphragm. No. 1,221,399; Apr. 3; v. 237; p. 140.
Whitney, Gilbert C., New York, N. Y. Means for producing colored-light effects. No. 1,223,459; Apr. 24; v. 237; p. 959.
Whitney, Robert F., Winchester, Mass. Bladed cylinder. No. 1,221,936; Apr. 10; v. 237; p. 359.
Whitton, William W., Oakland, Cal. Furnace. No. 1,222,251; Apr. 10; v. 237; p. 469.
Wholey, Timothy J., Philadelphia, Pa. Wheel-flange lubricator. No. 1,222,341; Apr. 10; v. 237; p. 501.
Wiard, Louis, assignor to Wiard Plow Company, Batavia, N. Y. Plow. No. 1,221,783; Apr. 3; v. 237; p. 270.
Wiard Plow Company. (See Wiard, Louis, assignor.)
Wiberg, Oscar A., Finspong, Sweden. Radial steam-turbine. No. 1,223,914; Apr. 24; v. 237; p. 1121.
Wiberg, Oscar A., Finspong, Sweden. Elastic-fluid turbine. No. 1,223,915; Apr. 24; v. 237; p. 1122.
Widner, George H., Des Moines, Iowa. Container for water softening or filtering material. No. 1,223,460; Apr. 24; v. 237; p. 960.
Wiegand, Frederick B., Cleveland, assignor to The National Electric Specialty Company, Toledo, Ohio. Lightning-arrester. No. 1,223,916; Apr. 24; v. 237; p. 1122.
Wielaert, Johan, Remuera, Auckland, New Zealand, assignor, by mesne assignments, to E. M. C. McAlpine, Brooklyn, N. Y. Milking-Machine. No. 1,223,334; Apr. 17; v. 237; p. 883.
Wieland, Jozias, Central Lake, Mich. Vehicle-brake. No. 1,221,937; Apr. 10; v. 237; p. 360.
Wierum, Howard F., Upper Montclair, N. J., assignor to The Sulphur Syndicate Limited, London, England. Desulfurizing ores. No. 1,222,252; Apr. 10; v. 237; p. 470.
Wigginton, George P., assignor to Kalamazoo Loose Leaf Binder Co., Kalamazoo, Mich. Temporary binder or loose-sheet holder. No. 1,222,705; Apr. 17; v. 237; p. 671.
Wight, Sedgwick N., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Switch-indicator. No. 1,224,111; Apr. 24; v. 237; p. 1187.
Wigle, Wilson B., Fullerton, Cal. Bull and calf wheel. No. 1,223,303; Apr. 17; v. 237; p. 872.
Wiklund, Carl A., and E. R. Peterson, New York, N. Y. Salt-shaker. No. 1,221,640; Apr. 3; v. 237; p. 221.
Wilbur, Ray S., Jersey City, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y. Telephone-exchange system. No. 1,222,342; Apr. 10; v. 237; p. 501.
Wilcox, Daniel M., Krebs, Okla. Inclinometer. No. 1,222,831; Apr. 17; v. 237; p. 713.
Wilcox, Fredus H., North Bangor, N. Y. Horse-blanket. No. 1,221,256; Apr. 3; v. 237; p. 90.
Wilder, Charles, East San Diego, assignor of one-half to G. W. Thompson, San Diego, Cal. Measuring device. No. 1,222,168; Apr. 10; v. 237; p. 439.
Wiley, Albert F., Humboldt, Kans. Recording attachment for a liquid-dispensing apparatus. No. 1,222,502; Apr. 10; v. 237; p. 557.
Wiley, George M., Los Angeles, Cal. Display apparatus. No. 1,221,494; Apr. 3; v. 237; p. 173.
Wilhelm, Jesse E., and W. W. Bonfield, Cleveland, Ohio, assignors to The Great Lakes Dredge and Dock Company, Chicago, Ill. Gripping device for withdrawing sheet-piling. No. 1,221,400; Apr. 3; v. 237; p. 140.
Wilhelm, Jesse E., and W. W. Bonfield, Cleveland, Ohio, assignors to The Great Lakes Dredge & Dock Company, Chicago, Ill. Pile-sawing device. No. 1,221,401; Apr. 3; v. 237; p. 141.
Wilhelm, John F., Washington, D. C. Closure. No. 1,222,832; Apr. 17; v. 237; p. 714.
Wilkinson Manufacturing Co., The. (See Swingle and Mangan, assignors.)
William A. Berkey Furniture Company. (See Hansen, Nells C., assignor.)
William A. Sexton Company. (See Sexton, Robert H., assignor.)
Williams Boltless Rail Joint Manufacturing Company. (See Williams, Willis D., assignor.)
Williams, Brown & Earle. (See Hoffman, Frederick H., assignor.)
Williams, Charles H., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake-beam-supporting attachment. No. 1,221,938; Apr. 10; v. 237; p. 360.
Williams, Dick B., assignor to Louisiana Nut and Produce Company, New Orleans, La. Automatic weighing apparatus. No. 1,222,913; Apr. 17; v. 237; p. 741.
Williams, French, assignor of one-half to J. Hogan, Little Rock, Ark. Saw-filing machine. No. 1,223,131; Apr. 17; v. 237; p. 816.
Williams, George R., Highland Park, Mich. Bearing for signals for automobiles. No. 1,223,917; Apr. 24; v. 237; p. 1122.
Williams, John F., New York, N. Y. Receiver-holding attachment for telephones. No. 1,221,784; Apr. 3; v. 237; p. 271.

Williams, Joseph, Cherokee, assignor of one-third to J. E. Walker, Pittsburg, Kans. Glass. No. 1,221,641; Apr. 3; v. 237; p. 222.

Williams, Lacey Y., Toledo, Ohio. Dust-guard. No. 1,223,649; Apr. 24; v. 237; p. 1028.

Williams, Lacey Y., Toledo, Ohio. Dust-guard. No. 1,223,650; Apr. 24; v. 237; p. 1029.

Williams, Margaret E. B., Western Port, Md. Combined sewing-machine cabinet and lap-board. No. 1,222,503; Apr. 10; v. 237; p. 558.

Williams, Robert, assignor of one-fourth to C. Mathes, St. Louis, Mo. Trolley-harp. No. 1,221,257; Apr. 3; v. 237; p. 91.

Williams, Robert L., *et al.* (See Armstrong, John J., Sr., assignor.)

Williams, Samuel B., Jr., Brooklyn, assignor to Western Electric Company, Incorporated, New York, N. Y. Machine-switching telephone-exchange system. No. 1,221,124; Apr. 3; v. 237; p. 42.

Williams, Wallace M., Brooklyn, N. Y. Paper box. No. 1,221,785; Apr. 3; v. 237; p. 271.

Williams, William E., Chicago, Ill. Wheel-rim. No. 1,221,402; Apr. 3; v. 237; p. 141.

Williams, William E., Chicago, Ill. Lid for journal-boxes for railway-cars. No. 1,222,570; Apr. 10; v. 237; p. 585.

Williams, William H., Erdington, Birmingham, assignor of one-half to O. Farkasch, Newcastle-upon-Tyne, England. Coupling device for tire side chains. No. 1,223,546; Apr. 24; v. 237; p. 992.

Williams, Willis D., East St. Louis, Ill., assignor to Williams Boltless Rail Joint Manufacturing Company, Prescott, Ariz. Rail-joint. No. 1,223,918; Apr. 24; v. 237; p. 1122.

Williamson, Thomas H., Carne, N. Mex. Windmill. No. 1,224,049; Apr. 24; v. 237; p. 1166.

Willis, John, assignor to American Plate Glass Company, Kane, Pa. Sand-grading apparatus for glass-grinding machinery. No. 1,223,461; Apr. 24; v. 237; p. 960.

Willitz, Herman C. (See Pierson and Willitz.)

Wills, Albert P., New York, N. Y. Roller-bearing. No. 1,222,833; Apr. 17; v. 237; p. 714.

Wilson, Mendal W., assignor of one-third to H. Littig and one-third to Z. Moore, Mount Carmel, Ill. Removing and preventing boiler-scale. No. 1,223,547; Apr. 24; v. 237; p. 993.

Wilson, Charles M., Elmira, N. Y. Combined turning plug and check-valve. No. 1,221,258; Apr. 3; v. 237; p. 91.

Wilson, James W. (See Bone, Wilson, and McCourt.)

Wilson, John H., San Mateo, Cal. Hoisting-bucket. No. 1,222,834; Apr. 17; v. 237; p. 714.

Wilson-Jones Loose Leaf Company. (See Fargo, Charles R., assignor.)

Wilson, Roland F., Denver, Colo. Card-case. No. 1,223,013; Apr. 17; v. 237; p. 776.

Wilson, Walter J., Petersburg, Ind. Rotary pump. No. 1,223,919; Apr. 24; v. 237; p. 1123.

Wilts Veneer Company. (See Staley and Simmons, assignors.)

Winbray, Dave, Hot Springs, Ark. Lace-fastener. No. 1,222,835; Apr. 17; v. 237; p. 714.

Windhausen, Friederick, Dusseldorf, assignor to the Laternen-Vertriebs-Gesellschaft mit beschränkter Haftung, Cologne, Germany. Cycle-lamp. No. 1,222,836; Apr. 17; v. 237; p. 715.

Winkler, Carl, Berne, Switzerland. Color-applying mechanism for printing-machines. No. 1,221,642; Apr. 3; v. 237; p. 222.

Winslow, Elbert R., Kearney, Nebr. Coin-controlled apparatus for inflating tires. No. 1,222,169; Apr. 10; v. 237; p. 440.

Winslow, Elbert R., and C. A. Jones, Kearney, Nebr. Portable electrical device. No. 1,222,837; Apr. 17; v. 237; p. 715.

Winter, Oscar, New York, N. Y. Latch for pneumatic carriers. No. 1,223,651; Apr. 24; v. 237; p. 1029.

Wireless Hinge Manufacturing Company, The. (See Berry, George W., assignor.)

Wires, Pearl J., assignor of one-half to A. B. Gooley, Indianapolis, Ind. Extension telephone-signal. No. 1,222,343; Apr. 10; v. 237; p. 502.

Wirth, John, New York, N. Y. Soap-holder. No. 1,221,939; Apr. 10; v. 237; p. 360.

Wirtz, Luis, Edgbaston, Birmingham, England. Chain. No. 1,223,652; Apr. 24; v. 237; p. 1029.

Wise, Joseph C., assignor to G. J. Fischer, Quincy, Ill. Shoe-finishing machine. No. 1,222,838; Apr. 17; v. 237; p. 715.

Witte, Adolf P., assignor of one-half to M. S. Dick, Chicago, Ill. Garbage-can. No. 1,221,808; Apr. 3; v. 237; p. 280.

Witter, Leon A., assignor of one-half to G. A. Weber, Jackson, Mich. Spark-plug. No. 1,221,940; Apr. 10; v. 237; p. 360.

Witty, William H., F. F. Eby, and W. S. Meader, Pocatello, Idaho. Metallic stud. No. 1,221,941; Apr. 10; v. 237; p. 361.

Woddrop, Lemuel H., Arcola, N. J., assignor to Robeson Process Company, New York, N. Y. Binder. No. 1,221,259; Apr. 3; v. 237; p. 91.

Wolf, Fred W., Chicago, Ill., assignor, by mesne assignments, to Isko, Incorporated, Detroit, Mich. Refrigerating apparatus. No. 1,222,170; Apr. 10; v. 237; p. 440.

Wolf, Louis, New York, N. Y. Hand-bag. No. 1,223,920; Apr. 24; v. 237; p. 1123.

Wolhaupter, Benjamin, New Rochelle, and B. G. Braine, assignors to The Rail Joint Company, New York, N. Y. Insulated rail-joint. No. 1,221,260; Apr. 3; v. 237; p. 91.

Wonder Talking Machine Company. (See Nulty, Harry B., assignor.)

Wood, Garfield A., Detroit, Mich. Truck-body-door latch. No. 1,223,462; Apr. 24; v. 237; p. 961.

Wood, George E., Albany, Ohio. Seed-cleaner. No. 1,223,014; Apr. 17; v. 237; p. 776.

Wood, John H. (See Goelzer, Walter J., assignor.)

Wood, Robert L., Fort Deposit, Ala. Insect-destroyer. No. 1,222,706; Apr. 17; v. 237; p. 671.

Wood, Walter D., assignor to Fuel Saving Company, Allentown, Pa. Firing-chamber for powdered fuel. No. 1,222,344; Apr. 10; v. 237; p. 502.

Wood, Walter J., Atlanta, Ga. Combination dresser and dressing and writing table. No. 1,221,643; Apr. 3; v. 237; p. 222.

Wood, Wilfred R., London, England. Air-supply to mechanical stokers. No. 1,221,125; Apr. 3; v. 237; p. 43.

Woodard, John H. (See Martin, John A., assignor.)

Woodell, Edgar A. (See Woodell, Thomas M., assignor.)

Woodell, Thomas M., Glenwood, assignor of one-half to E. A. Woodell, Greensboro, N. C. Combined level and square. No. 1,222,504; Apr. 10; v. 237; p. 558.

Woodley, Henry, West Berkeley, Cal. Curtain and fabric stretcher. No. 1,223,915; Apr. 17; v. 237; p. 776.

Woodrow, Harry R. (See Murray and Woodrow.)

Woods, Clinton E., assignor to American Graphophone Company, Bridgeport, Conn. Pneumatic hand control for talking-machines. No. 1,221,495; Apr. 3; v. 237; p. 171.

Woods, Edwin S. (See Weigel, Arnold A., assignor.)

Woods, John, Unity, Me. Level. No. 1,221,644; Apr. 3; v. 237; p. 223.

Woodstock Typewriter Company. (See Roebuck, Alvah C., assignor.)

Woodward, Alva W., Bluffton, Ind. Silo-door. No. 1,221,942; Apr. 10; v. 237; p. 361.

Woodward, Robert S., Jr., assignor to The Standard Roller Bearing Company, Philadelphia, Pa. Car-journal roller-bearing. No. 1,223,335; Apr. 17; v. 237; p. 883.

Woodward, William, assignor to Brockton Steel Company, Brockton, Mass. Link mat. No. 1,222,707; Apr. 17; v. 237; p. 671.

Woodworth, Evylen C. (See Payne and Woodworth.)

Worman, William O., Ogden, Utah. Moving-picture-film-rewinding apparatus. No. 1,222,505; Apr. 10; v. 237; p. 559.

Worstall, George G., Toms River, N. J. Automatic lens-drilling attachment. No. 1,222,506; Apr. 10; v. 237; p. 559.

Worth, Carolyn T., Babylon, N. Y. Scraper for crumb-brushes. No. 1,221,261; Apr. 3; v. 237; p. 92.

Worth, John S., assignor to himself and W. P. Worth, Coatesville, Pa. Car construction. No. 1,224,052; Apr. 24; v. 237; p. 1168.

Worth, John S., and C. Brecht, assignors to said John S. and W. P. Worth, Coatesville, Pa. Railway-car. No. 1,224,050; Apr. 24; v. 237; p. 1167.

Worth, John S., and C. Brecht, assignors to said John S. and W. P. Worth, Coatesville, Pa. Car end. No. 1,224,051; Apr. 24; v. 237; p. 1167.

Worth, William P. (See Worth and Brecht, assignors.)

Worth, William P. (See Worth, John S., assignor.)

Worthington Pump and Machinery Corporation. (See Bernhard, Richard, assignor.)

Wray, Charles F., assignor to National Brass Manufacturing Co., Rochester, N. Y. Turning plug. No. 1,222,171; Apr. 10; v. 237; p. 441.

Wray, Charles F., assignor to National Brass Manufacturing Company, Rochester, N. Y. Turning plug. No. 1,222,172; Apr. 10; v. 237; p. 441.

Wright, Charles C., Parkfield, Princes Risborough, England. Brake-applying mechanism. No. 1,222,839; Apr. 17; v. 237; p. 716.

Wright, John E., New York, N. Y. Printing-telegraph. No. 1,223,463; Apr. 24; v. 237; p. 961.

Wright, Joseph L., Cleveland, Ohio, assignor, by mesne assignments, to Western Electric Company, Incorporated. Telephone-exchange system. No. 1,221,262; Apr. 3; v. 237; p. 92.

Wright, Rea P., Washington, D. C., assignor to The American Wringer Company, Woonsocket and Providence, R. I. Reversible finger-guard for clothes-wringers. No. 1,221,943; Apr. 10; v. 237; p. 361.

Wright, Rea P., Washington, D. C., assignor to J. F. Hemenway, New York, N. Y. Automatic pressure-roll release for clothes-wringers. No. 1,224,053; Apr. 24; v. 237; p. 1168.

Wright, Rea P., Washington, D. C., assignor to J. F. Hemenway, New York, N. Y. Combined stripper and pressure-release. No. 1,224,054; Apr. 24; v. 237; p. 1168.

Wright, Rea P., Washington, D. C., assignor to J. F. Hemenway, New York, N. Y. Combined stripper and pressure-release. No. 1,224,055; Apr. 24; v. 237; p. 1169.

Wullyamoz, Frédéric, and G. Meyer, Lausanne, Switzerland. Leak-obturating device for ships. No. 1,221,496; Apr. 3; v. 237; p. 174.

Wunder, Paul, Glen Ullin, N. D. Horseshoe. No. 1,222,708; Apr. 17; v. 237; p. 672.

Wurdack, William, St. Louis, Mo. Junction or outlet box. No. 1,221,944; Apr. 10; v. 237; p. 361.

Wyland, Omar P. (See Bittle, Clarence E., assignor.)

Yaeckel, Ralph E., Nanticoke, Pa. Removing bushings from spindle-bearings. No. 1,222,507; Apr. 10; v. 237; p. 559.

Yale, Rodney H. (See Flattner and Yale.)

Yale & Towne Manufacturing Company, The. (See Gilmartin, Michael W., assignor.)

Yankauer, Louis, *et al.* (See Arden, Thomas R., assignor.)

Yates, John W., New York, N. Y. Fusible link. No. 1,221,497; Apr. 3; v. 237; p. 174.

Yaw, Cllo B., Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,221,126; Apr. 3; v. 237; p. 43.

Yawman & Erbe Manufacturing Company. (See Weiss, Albert T., assignor.)

Yokel, Frank, assignor to Pittsburgh Lamp, Brass & Glass Company, Pittsburgh, Pa. Instantaneous water-heater. No. 1,223,653; Apr. 24; v. 237; p. 1030.

Yonge, Fletcher W., Tampa, Fla. Lawn-sprinkler. No. 1,221,645; Apr. 10; v. 237; p. 362.

Yore, Thomas F. (See Haven, Allison A., assignor.)

Youmans, George P., Galesburg, assignor to Kalamazoo Tank and Silo Co., Kalamazoo, Mich. Joint. No. 1,221,946; Apr. 10; v. 237; p. 362.

Young, Harry B., Cincinnati, Ohio. Sharpener for razor-blades. No. 1,221,263; Apr. 3; v. 237; p. 92.

Young, Henry S., Brooklyn, N. Y., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,222,583; Apr. 10; v. 237; p. 587.

Young, L. A. (See Young, William W., assignor.)

Young, Leland G., Muscatine, Iowa. Vermin-trap. No. 1,223,016; Apr. 17; v. 237; p. 777.

Young, Otis W., assignor to Pyle-National Electric Headlight Company, Chicago, Ill. Locomotive valve-gear. No. 1,221,947; Apr. 10; v. 237; p. 363.

Young, Otis W., assignor to Pyle-National Electric Headlight Company, Chicago, Ill. Piston-valve. No. 1,223,336; Apr. 17; v. 237; p. 883.

Young, Samuel D., assignor to Grand Rapids Show Case Company, Grand Rapids, Mich. Sectional furniture construction. No. 1,221,948; Apr. 10; v. 237; p. 363.

Young, Wayne H., Lowell, Mich. Tobacco-drier. No. 1,221,949; Apr. 10; v. 237; p. 364.

Young, William T., and J. Chapman, Allensville, Ky. Sterilizing soil for tobacco-plant beds, &c. No. 1,222,253; Apr. 10; v. 237; p. 470.

Young, William W., assignor to L. A. Young, Agawam, Mass. Acoustic diaphragm. No. 1,224,102; Apr. 24; v. 237; p. 1184.

Youngquist, Henry W., Manchester, N. H., assignor, by mesne assignments, to Draper Corporation, Hopedale, Mass. Weft-fork mechanism for looms. No. 1,223,548; Apr. 24; v. 237; p. 993.

Younie, Lewis E., Portland, Oreg. Friction-clutch mechanism. No. 1,221,127; Apr. 3; v. 237; p. 43.

Zaar, Ludwig W., Chicago, Ill. Antifriction-bearing. No. 1,222,059; Apr. 10; v. 237; p. 400.

Zahm, Albert F., Buffalo, N. Y. Aileron. No. 1,223,017; Apr. 17; v. 237; p. 777.

Zawada, Mike, Cleveland, Ohio. Life-saving vest. No. 1,222,508; Apr. 10; v. 237; p. 560.

Zawadzki, Anthony K., San Francisco, Cal. Swimming apparatus. No. 1,221,950; Apr. 10; v. 237; p. 364.

Zehr, Christian, Berne, Ind. Coupling for pump-rods. No. 1,221,645; Apr. 3; v. 237; p. 223.

Zeidler, Eduard, Guntramsdorf, Austria. Manufacturing fancy webs having raised designs. No. 1,223,018; Apr. 17; v. 237; p. 777.

Zelsel, Adolph, assignor to Zelsel Electric Co., Bel Air, Md. Lamp-changing device. No. 1,223,921; Apr. 24; v. 237; p. 1123.

Zelsel Electric Co. (See Zelsel, Adolph, assignor.)

Zerk, Oscar, Cleveland, Ohio, assignor, by mesne assignments, to G. W. Bowen, Auburn, N. Y. Grease-cup. No. 1,222,509; Apr. 10; v. 237; p. 560.

Zerk, Oscar, Cleveland, Ohio, assignor, by mesne assignments, to G. W. Bowen, Auburn, N. Y. Grease-cup. No. 1,223,019; Apr. 17; v. 237; p. 777.

Zerse, Otto G., Mount Vernon, Ind. Combination desk and kitchen-cabinet. No. 1,221,498; Apr. 3; v. 237; p. 175.

Zigler, Charles J., and W. P. Holden, Chicago, Ill. Lumber-tester. No. 1,223,132; Apr. 17; v. 237; p. 817.

Zimmer, Paul H., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,221,499; Apr. 3; v. 237; p. 175.

Zimmerman, James G., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Circuit-protecting apparatus. No. 1,223,549; Apr. 24; v. 237; p. 993.

Zimmermann, Kurt, Elberfeld, Germany, assignor to Synthetic Patents Co., Inc., New York, N. Y. Making ethyl triacetylgallate. No. 1,222,345; Apr. 10; v. 237; p. 502.

Zimmermann, William F., assignor to Gould & Eberhardt, Newark, N. J. Gear-generating machine. No. 1,222,709; Apr. 17; v. 237; p. 672.

Zimmermann, William H., Jr., Richmond, Va. Convertible table. No. 1,221,646; Apr. 3; v. 237; p. 223.

Zinsmaster, Andrew F. (See Cope and Zinsmaster.)

Zirkle, Addie L., North Yakima, Wash. Wire clothes-pin. No. 1,222,510; Apr. 10; v. 237; p. 560.

Zschlesche, William H. M., Bartlett, Tex. Corn-popper. No. 1,222,511; Apr. 10; v. 237; p. 560.

Zwarlich, Andrew C., Homestead, Pa. Motor. No. 1,222,710; Apr. 17; v. 237; p. 673.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

Allen, Grosvenor N., Oneida, N. Y. Handle for a spoon or analogous utensil. No. 50,546; Apr. 3; v. 237; p. 286.
Arvidson, Clarence G. (See Ebelhare and Arvidson.)
Bailey, George R., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y. Casket-handle arm and lug. No. 50,598; Apr. 17; v. 237; p. 894.
Bailey, George R., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y. Casket-handle and lugs. No. 50,599; Apr. 17; v. 237; p. 894.
Bailey, George R., assignor to Sterling Casket Hardware Company, Brooklyn, N. Y. Candlestick for altars. No. 50,642; Apr. 24; v. 237; p. 1197.
Baker, Walter J., Chicago, Ill. Cabinet for phonographs. No. 50,641; Apr. 17; v. 237; p. 902.
Ball, George E., Stratford, Conn., assignor to Whiting Manufacturing Company, New York, N. Y. Platter, tray, or similar article. No. 50,547; Apr. 3; v. 237; p. 286.
Ball, George E., Stratford, Conn., assignor to Whiting Manufacturing Company, New York, N. Y. Handle for a spoon, fork, or similar article. No. 50,562; Apr. 10; v. 237; p. 594.
Ball, George E., Stratford, Conn., assignor to Whiting Manufacturing Company, New York, N. Y. Body of a teapot or other article of hollow ware. No. 50,563; Apr. 10; v. 237; p. 594.
Ballin, Maurice, assignor to Neustadter Bros., San Francisco, Cal. Collar. No. 50,643; Apr. 24; v. 237; p. 1198.
Barbiers, Ferd S., assignor to The Hocking Glass Company, Lancaster, Ohio. Light-globe. No. 50,564; Apr. 10; v. 237; p. 594.
Barnholth, Christian A. (See Cline, Jerry D., assignor.)
Barrows, Robert Y., Rutherford, and G. V. Strahan, Newark, N. J., assignors to The Mitchell Vance Company, New York, N. Y. Arm-pan for lighting-fixtures. No. 50,600; Apr. 17; v. 237; p. 894.
Berchtold, John A., Sigel, Ill. Tobacco-pipe. No. 50,601; Apr. 17; v. 237; p. 894.
Berger, Emil, Brooklyn, N. Y., assignor to Boulevard Lace & Embroidery Company, Inc., West New York, N. J. Embroidery. No. 50,548; Apr. 3; v. 237; p. 286.
Bertram, William L. (See Carter and Bertram.)
Blassingham, Loyd F., Barron, Wis. Automobile-body. No. 50,602; Apr. 17; v. 237; p. 894.
Blynt, Herbert S., Binghamton, N. Y. Tread for an automobile-tire. No. 50,644; Apr. 24; v. 237; p. 1198.
Booth, Kraft, assignor to Gillinder & Sons, Inc., Philadelphia, Pa. Illuminating-globe. Nos. 50,603–4; Apr. 17; v. 237; p. 895.
Boulevard Lace & Embroidery Company. (See Berger, Emil, assignor.)
Bowden, Martin L. and M. L., Jr., Brooklyn, N. Y. Ring or similar article. No. 50,549; Apr. 3; v. 237; p. 286.
Brock, Susan E., Cooper, Tex. Cover for cooking-receptacles. No. 50,645; Apr. 24; v. 237; p. 1198.
Broderick, Daniel, New York, N. Y. Combined ash-receiver, cigar-rest, and match-box holder. No. 50,605; Apr. 17; v. 237; p. 895.
Bromley, Irving, Cranston, R. I. Sign. No. 50,606; Apr. 17; v. 237; p. 895.
Bunte Brothers. (See Coolidge, Laura M., assignor.)
Busby, Harley S., Washington, Iowa. Hog-waterer. No. 50,646; Apr. 24; v. 237; p. 1198.
Bushkovski, John, Columbus, Ohio. Placard. No. 50,647; Apr. 24; v. 237; p. 1198.
Carter, George B., and W. L. Bertram, Detroit, Mich., assignors to C. Emrich, Columbus, Ohio. Stove. No. 50,505; Apr. 10; v. 237; p. 594.
Carter, Walter M., New Orleans, La. Catch for spectacle-cases. No. 50,607; Apr. 17; v. 237; p. 895.
Cary, Floyd E., Fairhaven, Mass., assignor to The Fairpoint Corporation. Glass plate or similar article. Nos. 50,550–1; Apr. 3; v. 237; p. 287.
Case, Homer W., assignor to Pittsburgh Toy Vehicle Company, Pittsburgh, Pa. Velocipede for the use of children. No. 50,552; Apr. 3; v. 237; p. 287.
Cerone, Pietro, Syracuse, N. Y. Panel for wood furniture. No. 50,566; Apr. 10; v. 237; p. 595.
Clayton & Lambert Manufacturing Company. (See Lambert, Charles R., assignor.)
Cline, Jerry D., assignor of one-half to C. A. Barnholth, Akron, Ohio. Non-skid tread. No. 50,567; Apr. 10; v. 237; p. 595.
Cochrane, James P., Edinburgh, Scotland. Golf-ball. No. 50,553; Apr. 3; v. 237; p. 287.
Coolidge, Laura M., assignor to Bunte Brothers, Chicago, Ill. Candy-container. No. 50,554; Apr. 3; v. 237; p. 287.
Cowan, Frank V., Chicago, Ill. Automobile-meter. No. 50,568; Apr. 10; v. 237; p. 595.
Cowan, William K., Chicago, Ill. Talking-machine cabinet. Nos. 50,608–13; Apr. 17; v. 237; p. 896.
Curtiss Aeroplane & Motor Corporation. (See Payne and Tarbox, assignors.)
Dake, Charles W. (See Kilker and Dake.)
Day, Nellie S., Springfield, Mass. Doll. No. 50,648; Apr. 24; v. 237; p. 1198.
Day, Nellie S., Springfield, Mass. Effigy. Nos. 50,649–50; Apr. 24; v. 237; p. 1199.
Dumelin, Charles, New York, N. Y. Automobile-body. No. 50,651; Apr. 24; v. 237; p. 1199.
Dwyer, Thomas B., Lewellen, Nebr. Hog-holder. No. 50,614; Apr. 17; v. 237; p. 897.
Ebelhare, William H., and C. G. Arvidson, assignors to The Stenotype Company, Indianapolis, Ind. Writing-machine frame. No. 50,569; Apr. 10; v. 237; p. 595.
Eddy, Robert C., Milwaukee, Wis. Rubber ball. No. 50,652; Apr. 24; v. 237; p. 1199.
Emrich, C. (See Carter and Bertram, assignors.)
Erlebach, Robert, Brooklyn, assignor to The Palm Brothers Company, New York, N. Y. Plate or similar article. Nos. 50,615–16; Apr. 17; v. 237; p. 897.
Erzinger, Henry J. (See Gustus and Erzinger.)
Gaertner, Rudolf, New York, N. Y. Plate or similar article. No. 50,617; Apr. 17; v. 237; p. 897.
Gillinder & Sons. (See Booth, Kraft, assignor.)
Gorham Manufacturing Company. (See Staf, Axel H., assignor.)
Graham, Clarence R., Oakland, Cal. Stove. No. 50,555; Apr. 3; v. 237; p. 288.
Grey Iron Casting Company. (See Sander, Alfred H., assignor.)
Griffin, Robert B., New York, N. Y. Wall-paper. No. 50,570; Apr. 10; v. 237; p. 595.
Guenthermann, Hans, Mount Vernon, N. Y. Plate or similar article. No. 50,618; Apr. 17; v. 237; p. 898.
Gustus, John A., and H. J. Erzinger, Chicago, Ill. Display-stand. No. 50,619; Apr. 17; v. 237; p. 898.
Hamilton, Charles W., Milwaukee, Wis. Lace paper. Nos. 50,571–2; Apr. 10; v. 237; pp. 595–6.
Hanbury, John F., New York, N. Y. Insignia, button, pin, fob, box-top, paper-weight, or similar articles. No. 50,620; Apr. 17; v. 237; p. 898.
Hanson, Eugene L., New Rochelle, assignor to H. R. Mallinson & Co., New York, N. Y. Textile fabric. No. 50,621; Apr. 17; v. 237; p. 898.
Hanson, Eugene L., New Rochelle, assignor to H. R. Mallinson & Co., New York, N. Y. Textile fabric. Nos. 50,653–4; Apr. 24; v. 237; pp. 1199–1200.
Hasel, Leo, Lakeview, Oreg. Reinforcing-plate for shoes. No. 50,573; Apr. 10; v. 237; p. 596.
Herrick, Gerardus P., New York, N. Y. Tread for rubber tires. No. 50,655; Apr. 24; v. 237; p. 1200.
Hersey & Co., A. H. (See Sanford, Andrew J., assignor.)
Hickson, Richard J., New York, N. Y. Garment for ladies. Nos. 50,574–8; Apr. 10; v. 237; pp. 596–7.
Hildebrandt, John H., Salina, Kans. Hammer-head. No. 50,556; Apr. 3; v. 237; p. 288.
Hillhom, Henrik, assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn. Spoon, fork, or similar article. No. 50,579; Apr. 10; v. 237; p. 597.
Hobe, William W., New York, N. Y. Button. No. 50,656; Apr. 24; v. 237; p. 1200.
Hocking Glass Company, The. (See Barbiers, Ferd S., assignor.)
Holley, Bertha H., New York, N. Y. Garment for women. No. 50,622; Apr. 17; v. 237; p. 898.
Horsman, Edward I., Jr., New York, N. Y. Doll. Nos. 50,657–8; Apr. 24; v. 237; p. 1200.
Howarth, Alfred T., Worcester, Mass. Pin or similar article. No. 50,659; Apr. 24; v. 237; p. 1200.
Hunold, Ernest, Providence, R. I. Foot-plate for skates. No. 50,580; Apr. 10; v. 237; p. 597.
International Silver Co. (See Prétat, Frederick E., assignor.)
Jameson, William A., Niagara Falls, N. Y. Handle for a spoon, fork, or similar article. Nos. 50,660–1; Apr. 24; v. 237; p. 1201.
Johnson, Edele M. (See Nordman, Hannah, assignor.)
Kilker, John E., and C. W. Dake, assignors to Pyle National Electric Headlight Company, Chicago, Ill. Headlight-casing. No. 50,623; Apr. 17; v. 237; p. 898.
Klima, Louie, Owatonna, Minn. Ventilator. No. 50,624; Apr. 17; v. 237; p. 899.

Koonz, Fred W., assignor to Rogers, Lunt & Bowlen Company, Greenfield, Mass. Spoon, fork, or similar article. No. 50,581; Apr. 10; v. 237; p. 597.

Lambert, Charles R., assignor to The Clayton & Lambert Manufacturing Company, Detroit, Mich. Blow-torch. No. 50,557; Apr. 3; v. 237; p. 288.

Lancaster Glass Company, The. (See Martin, Lucien B., assignor.)

Lehnberg, William, Philadelphia, Pa. Badge or insignia. No. 50,582; Apr. 10; v. 237; p. 597.

Levi, Samuel J., Birmingham, England. Protector for articles to be worn on the wrist. No. 50,558; Apr. 3; v. 237; p. 288.

Lund, Carl, Port Orchard, Wash. Kettle-spout. No. 50,625; Apr. 17; v. 237; p. 899.

Mallinson & Co., H. R. (See Hanson, Eugene L., assignor.)

Malmquist, William, assignor to Simeon L. and George H. Rogers Co., Wallingford, Conn. Spoon, fork, or similar article. No. 50,626; Apr. 17; v. 237; p. 899.

Manz Engraving Company. (See Voges, Paul, assignor.)

Marcus, Dora G., New York, N. Y. Pillow-slip and pillow. No. 50,583; Apr. 10; v. 237; p. 597.

Martin, Lucien B., assignor to The Lancaster Glass Company, Lancaster, Ohio. Lens for motor-car lamps. No. 50,559; Apr. 3; v. 237; p. 288.

Martin, Roy W., Milwaukee, Wis. Cross-bar for architects' levels. No. 50,584; Apr. 10; v. 237; p. 598.

McKee Glass Company. (See Smith, Maurice A., assignor.)

Mitchell Vance Company, The. (See Barrows and Strahan, assignors.)

Moore, William G., Miami, Fla. Frame for a two-wheeled autovehicle. No. 50,662; Apr. 24; v. 237; p. 1201.

Muslmer, Louis M., New York, N. Y. Article of manufacture. No. 50,663; Apr. 24; v. 237; p. 1201.

Nash, Arthur J., New York, N. Y. Flower-holder. No. 50,664; Apr. 24; v. 237; p. 1201.

National Electric Headlight Company. (See Kilker and Dake, assignors.)

Neustadter Bros. (See Baillin, Maurice, assignor.)

Nordman, Hannah, Seattle, assignor of one-half to E. M. Johnson, King county, Wash. Warming-oven. No. 50,627; Apr. 17; v. 237; p. 899.

Pairpoint Corporation, The. (See Cary, Floyd F., assignor.)

Palm Brothers Company, The. (See Erlebach, Robert, assignor.)

Payne, Samuel T., and J. P. Tarbox, Buffalo, N. Y., assignors to Curtiss Aeroplane & Motor Corporation. Name-plate. No. 50,585; Apr. 10; v. 237; p. 598.

Pittsburgh Toy Vehicle Company. (See Case, Homer W., assignor.)

Ploetz, George R., New York, N. Y. Spoon. No. 50,628; Apr. 17; v. 237; p. 900.

Poehlmann, Andrew T., Caponsville, Md. Knob for signal-bells. No. 50,665; Apr. 24; v. 237; p. 1201.

Posedel, Michael. (See Reamer and Posedel.)

Prétat, Frederick E., Waterbury, assignor to International Silver Co., Meriden, Conn. Spoon, fork, or similar article. No. 50,586; Apr. 10; v. 237; p. 598.

Przeplorka, Stanislaw, Medina, N. Y. Combined pistol and saber. No. 50,629; Apr. 17; v. 237; p. 900.

R. Wallace & Sons Mfg. Co. (See Hillbom, Henrik, assignor.)

Rasmussen, Martin, Racine, Wis. Broom-clamp. No. 50,630; Apr. 17; v. 237; p. 900.

Reamer, James C., and M. Posedel, Seattle, Wash. Child's combination nursery and high chair. No. 50,587; Apr. 10; v. 237; p. 598.

Recker, Adolph C., Oakville, assignor to Waterbury Mfg. Co., Waterbury, Conn. Case for vacuum-bottles. Nos. 50,588–9; Apr. 10; v. 237; p. 598.

Reid, Robert W., Jr., Brooklyn, N. Y. Valve-casing. No. 50,631; Apr. 17; v. 237; p. 900.

Reliance Metal Spinning Company. (See Schwartzman, Benjamin, assignor.)

Rogers, Lunt & Bowlen Company. (See Koonz, Fred W., assignor.)

Ryan, Matthew W., New York, N. Y. Cretonne or other textile fabric. No. 50,632; Apr. 17; v. 237; p. 900.

Sanford, Andrew J., assignor to A. H. Hersey & Co., Newark, Ohio. Nappy. No. 50,666; Apr. 24; v. 237; p. 1202.

Sander, Alfred H., Newark, N. J., assignor to Grey Iron Casting Company, Mount Joy, Pa. Toy cradle-bank. No. 50,667; Apr. 24; v. 237; p. 1202.

Schwahn, Rudolph A., Eau Claire, Wis. Shield-buckle. No. 50,633; Apr. 17; v. 237; p. 900.

Schwartzman, Benjamin, Brooklyn, assignor to Reliance Metal Spinning Company, New York, N. Y. Canopy for gas and electric fixtures. No. 50,634; Apr. 17; v. 237; p. 901.

Siegel, Samuel, New York, N. Y. Toy savings-bank. No. 50,560; Apr. 3; v. 237; p. 289.

Simeon L. and George H. Rogers Co. (See Malmquist, William, assignor.)

Simms, Charles F., Attleboro, Mass. Cut-out border for precious-metal ware. No. 50,635; Apr. 17; v. 237; p. 901.

Smith, Maurice A., assignor to McKee Glass Company, Jeannette, Pa. Glass article. No. 50,590; Apr. 10; v. 237; p. 599.

Smith, Maurice A., assignor to McKee Glass Company, Jeannette, Pa. Glass vessel. No. 50,591; Apr. 10; v. 237; p. 599.

Sonora Phonograph Corporation. (See Wolff, Joseph, assignor.)

Spargo, Jesse J., Alfion, N. Y. Poison-bottle. No. 50,561; Apr. 3; v. 237; p. 289.

Staf, Axel H., assignor to Gorham Manufacturing Company, Providence, R. I. Handle for spoons, forks, or similar articles. No. 50,592; Apr. 10; v. 237; p. 599.

Steiner, Anton F. and E. W., Crane, Mo. Circlet. No. 50,668; Apr. 24; v. 237; p. 1202.

Steiner, Emma W. (See Steiner, Anton F. and E. W.)

Stenotype Company, The. (See Ebelhare and Arvidson, assignors.)

Sterling Casket Hardware Company. (See Bailey, George R., assignor.)

Strahan, George V. (See Barrows and Strahan.)

Tarbox, John P. (See Payne and Tarbox.)

Tepfer, Simon, Brooklyn, assignor to Universal Metal Spinning & Stamping Company, New York, N. Y. Light-fixture. No. 50,636; Apr. 17; v. 237; p. 901.

Tiller, John F., Washington, D. C. Statuette or similar article. No. 50,669; Apr. 24; v. 237; p. 1202.

Twombly, W. Irving, New York, N. Y. Covered vehicle-body. No. 50,637; Apr. 17; v. 237; p. 901.

Universal Metal Spinning & Stamping Company. (See Tepfer, Simon, assignor.)

Vajda, Alex, North Chicago, Ill. Camp-table. No. 50,670; Apr. 24; v. 237; p. 1202.

Van Raalte, Zealie, New York, N. Y. Veiling. No. 50,593; Apr. 10; v. 237; p. 599.

Voges, Paul, assignor to Manz Engraving Company, Chicago, Ill. Display-card or similar article. No. 50,594; Apr. 10; v. 237; p. 599.

Wagner, Bernard P., assignor to The Wagner Manufacturing Company, Sidney, Ohio. Saucepan. No. 50,595; Apr. 10; v. 237; p. 600.

Wagner Manufacturing Company. (See Wagner, Bernard P., assignor.)

Waterbury Mfg. Co. (See Recker, Adolph C., assignor.)

Watson, John W., Wayne, Pa. Radiator for automobiles and other vehicles. No. 50,638; Apr. 17; v. 237; p. 901.

Whiting Manufacturing Company. (See Ball, George E., assignor.)

Will & Baumer Co., The. (See Will, Harold H., assignor.)

Will, Harold H., assignor to The Will & Baumer Co., Syracuse, N. Y. Candle. No. 50,671; Apr. 24; v. 237; p. 1203.

Willson, Herbert O., Twin Falls, Idaho. Collar. No. 50,596; Apr. 10; v. 237; p. 600.

Wolff, Joseph, New York, N. Y., assignor to Sonora Phonograph Corporation. Stylus for phonographs. Nos. 50,639–40; Apr. 17; v. 237; p. 901–2.

Wright, Irene A., Kearney, N. J. Drop-curtain. No. 50,672; Apr. 24; v. 237; p. 1203.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Bourjois & Co., Inc., New York, N. Y. Soap. No. 116,282; Apr. 24; v. 237; p. 1213.

A. Bourjois & Co., Inc., New York, N. Y. Toilet powder. No. 116,283; Apr. 24; v. 237; p. 1213.

A. C. Lawrence Leather Co., Boston, Mass. Leather. No. 116,329; Apr. 24; v. 237; p. 1215.

A. J. Hull Medicine Co., The, Findlay, Ohio. Medicinal compound for certain named diseases. No. 116,323; Apr. 24; v. 237; p. 1214.

Advance Foundry Co., Dayton, Ohio. Iron castings. No. 116,025; Apr. 3; v. 237; p. 305.

Aktiengesellschaft für Autogene Aluminium-Schweissung, Zurich, Switzerland. Fluxes for autogenously welding aluminium and aluminium alloys. No. 116,267; Apr. 24; v. 237; p. 1213.

Alfalfa Products Company, Waukegan, Ill. Certain named foods. No. 116,026; Apr. 3; v. 237; p. 305.

Allen, Charles, St. Louis, Mo. Medicinal remedies for diseases such as indigestion, dyspepsia, and constipation. No. 116,268; Apr. 24; v. 237; p. 1213.

American Moistening Company, Boston, Mass. Humidifiers, atomizers, humidity-controllers for use in ventilating buildings. No. 116,110; Apr. 10; v. 237; p. 617.

American Rubber and Tire Company, The, Akron, Ohio. Elastic vehicle-tires. No. 116,269; Apr. 24; v. 237; p. 1213.

American Wringer Company, The, New York, N. Y. Clothes-wringers and parts thereof. No. 116,027; Apr. 3; v. 237; p. 305.

Anglo-Mexican Petroleum Products Co. Ltd., The, London, England. Blocks and slabs for use in road construction. No. 116,111; Apr. 10; v. 237; p. 617.

Anheuser-Busch Brewing Association, St. Louis, Mo. Non-intoxicating cereal beverage. No. 116,197; Apr. 17; v. 237; p. 913.

Apex Electrical Manufacturing Company, The, Cleveland, Ohio. Electric suction-cleaners. No. 116,198; Apr. 17; v. 237; p. 913.

Apex Manufacturing Co., Providence, R. I. Lubricants. No. 116,028; Apr. 3; v. 237; p. 305.

Artfilm Studios, Cleveland, Ohio. Positive and negative picture-films. No. 116,270; Apr. 24; v. 237; p. 1213.

Aunt Jemima Mills Company, St. Joseph, Mo. Corn-meal. No. 116,271; Apr. 24; v. 237; p. 1213.

B. Cohen & Co., Inc., New York, N. Y. Certain named ladies' clothing. No. 116,120; Apr. 10; v. 237; p. 617.

B. K. Mfg. Co., The, Michigan City, Ind. Ladies' and misses' dresses, bungalow-aprons, middy-blouses, and wash-skirts. No. 116,029; Apr. 3; v. 237; p. 305.

Bain Peanut Co., Inc., The, Wakefield, Va. Peanuts. No. 116,272; Apr. 24; v. 237; p. 1213.

Baltimore Bargain House, Baltimore, Md. Cambrics, nainsooks, and muslins in the piece. No. 116,030; Apr. 3; v. 237; p. 305.

Baptisine Pharmacal Co., The, St. Louis, Mo. Antiseptic lotion. No. 116,112; Apr. 10; v. 237; p. 617.

Barley Foods Co., Morgantown, W. Va. Specially-prepared barley. No. 116,274; Apr. 24; v. 237; p. 1213.

Barley Foods Co., Morgantown, W. Va. Buckwheat-flour. No. 116,275; Apr. 24; v. 237; p. 1213.

Beaver Company, The, Buffalo, N. Y. Folding and combination screens made of wood, fiber, and like materials. No. 116,199; Apr. 17; v. 237; p. 913.

Beaver Company, The, Buffalo, N. Y. Folding and combination screens and racks of wood, fiber, &c. Nos. 116,276–8; Apr. 24; v. 237; p. 1213.

Bee Bee Confection Company, The, Dayton, Ohio. Chewing-gum. No. 116,279; Apr. 24; v. 237; p. 1213.

Bernstein, Charles M., New York, N. Y. Ladies' dresses, cloaks, and suits. No. 116,113; Apr. 10; v. 237; p. 617.

Blatstedt, E. D., Minneapolis, Minn. Pile-ointment. No. 116,031; Apr. 3; v. 237; p. 305.

Blakeslee Manufacturing Co., Duquoin, Ill. Single and duplex steam-pumps, jet and bilge pumps, air-compressors. No. 116,114; Apr. 10; v. 237; p. 617.

Blanke-Wenneker Candy Company, St. Louis, Mo. Candy. No. 116,280; Apr. 24; v. 237; p. 1213.

Blount Lumber Co., The, Lacona, N. Y. Composition roofing. No. 116,032; Apr. 3; v. 237; p. 305.

Bowles Bros. Co., Los Angeles, Cal. Self-rising wheat-flour. No. 116,190; Apr. 10; v. 237; p. 619.

Breechloader Pipe Co. Inc., The, New York, N. Y. Smoking-pipes. No. 116,034; Apr. 3; v. 237; p. 305.

Bridge & Souter Co., Inc., Canastota, N. Y. Domestic onions in their natural state without tops. No. 116,284; Apr. 24; v. 237; p. 1213.

British Film Stock Company Limited, The, London, England. Motion-picture films. No. 116,035; Apr. 3; v. 237; p. 305.

Brizzolara, Charles, Richmond, Va. Medicine for rheumatism and gout. No. 116,115; Apr. 10; v. 237; p. 617.

Bromo Remedy Co., The, Chicago, Ill. Rheumatic remedies. No. 116,036; Apr. 3; v. 237; p. 305.

Brown, J. Wise, Tulsa, Okla. Beverages, non-alcoholic, sold as soft cola drink. No. 116,285; Apr. 24; v. 237; p. 1213.

Buckeye Cotton Oil Company, The, Cincinnati, Ohio. Dairy, stock, cattle, and farm-animal food. No. 116,286; Apr. 24; v. 237; p. 1213.

Burch and Collins, Washington, D. C. Liquid preparation for removing dirt and grease, which is also a polish. No. 116,116; Apr. 10; v. 237; p. 617.

Burke & James, Inc., Chicago, Ill. Photographic negative and paper developing compound. No. 116,202; Apr. 17; v. 237; p. 913.

Campbell, Metzger & Jacobson, New York, N. Y. Embroidery tinsel, floss, silk, cord, and rope. No. 116,287; Apr. 24; v. 237; p. 1213.

Centanni, Antonio, Chicago, Ill. Liniment for the relief of certain named ailments. No. 116,037; Apr. 3; v. 237; p. 305.

Central Gro. Co., Tifton, Ga. Self-rising flour. No. 116,192; Apr. 10; v. 237; p. 619.

Chamberlain Company, The, Pittsburgh, Pa. Chemical compound for cleaning and thawing pipes and for removing rust and stain. No. 116,038; Apr. 3; v. 237; p. 305.

Chas. A. Krause Milling Co., Greenfield, Wis. Stock feed composed wholly or mainly of grains and seeds or mixtures thereof. No. 116,325; Apr. 24; v. 237; p. 1214.

Chas. G. Robin, Inc., New York, N. Y. Certain named electrical specialties and conduit-fittings. No. 116,158; Apr. 10; v. 237; p. 618.

Church, Webb & Close, New York, N. Y. Neckties and neckscarfs. No. 116,203; Apr. 17; v. 237; p. 913.

Cincinnati Iron & Steel Company, The, Cincinnati, Ohio. Certain named metals and metal castings and forgings. No. 116,118; Apr. 10; v. 237; p. 617.

Class Journal Company, The, New York, N. Y. Periodical issued three times yearly. No. 116,119; Apr. 10; v. 237; p. 617.

Clements, Frederick W., Rochester, N. Y. Medicinal tonic, blood and tissue builder. No. 116,039; Apr. 3; v. 237; p. 305.

Clyde Cars Company, The, Clyde, Ohio, and New York, N. Y. Motor-cars. No. 116,288; Apr. 24; v. 237; p. 1213.

Cole, Barzillai L., St. Louis, Mo. Remedy for diseases and disorders of the uterus. No. 116,289; Apr. 24; v. 237; p. 1213.

Colorplate Engraving Company, The, New York, N. Y. Etched and engraved plates. No. 116,290; Apr. 24; v. 237; p. 1213.

Columbia Brewing Co., Tacoma, Wash. Non-alcoholic carbonated beverages. No. 116,121; Apr. 10; v. 237; p. 617.

Commercial Importing Co., Seattle, Wash. Baking-powder. No. 116,291; Apr. 24; v. 237; p. 1213.

Concordia Safety Lamp Co., The, Pittsburgh, Pa. Miners' electric lamps. No. 116,292; Apr. 24; v. 237; p. 1213.

Conradty, Firm of C., Nuremberg, Germany. Electric-light carbons. No. 116,040; Apr. 3; v. 237; p. 305.

Continental Rubber Works, Erie, Pa. Rubber pneumatic tires. No. 116,293; Apr. 24; v. 237; p. 1213.

Cooper, Michael, New York, N. Y. Bath-robes, house-dresses, kimonos, negligées, bathing-suits. No. 116,204; Apr. 17; v. 237; p. 913.

Cribben & Sexton Company, Chicago, Ill. Stoves, ranges, and hot-air furnaces and parts of same. No. 116,122; Apr. 10; v. 237; p. 617.

Culmer Chemical Company, The, Independence, Kans. Preparation to increase the vaporization and intensify hydrocarbon fuels. No. 116,294; Apr. 24; v. 237; p. 1214.

Curtis, Harold P., San Jose, Cal. Fruit—namely, dried fruits such as prunes. No. 116,295; Apr. 24; v. 237; p. 1214.

Cushman & Denison Manufacturing Company, The, New York, N. Y. Mucilage. No. 116,041; Apr. 3; v. 237; p. 305.

Dailey-Udell Company, Incorporated, Brockport, N. Y. Canned fruits and vegetables. No. 116,296; Apr. 24; v. 237; p. 1214.

Davis & Geck, Inc., Brooklyn, N. Y. Certain named pharmaceutical preparations. No. 116,042; Apr. 3; v. 237; p. 305.

De Beyelse, Walter W., Brooklyn, N. Y. Candy. No. 116,205; Apr. 17; v. 237; p. 913.

Dental and Toilet Products Corporation, The, New York, N. Y. Mouth-wash, antiseptic, and astringent. No. 116,123; Apr. 10; v. 237; p. 617.

Devine & Yungel Shoe Mfg. Co., Harrisburg, Pa. Leather shoes. No. 116,124; Apr. 10; v. 237; p. 617.

Devlin, Joseph C., Lynn, Mass. Tooth powder and paste. No. 116,043; Apr. 3; v. 237; p. 305.
Diamond Power Specialty Company, Detroit, Mich. Appliances for cleaning boilers. Nos. 116,044–5; Apr. 3; v. 237; p. 305.
Durel, Charles G., New Orleans, La. Coffee and chicory. No. 116,193; Apr. 10; v. 237; p. 619.
Durkee-Atwood Co., Minneapolis, Minn. Chemical preparation for certain named purposes. No. 116,046; Apr. 3; v. 237; p. 305.
Dye Products Company of the United States, Philadelphia, Pa. Dyes. No. 116,047; Apr. 3; v. 237; p. 305.
Dyer, Margaret, Collinsville, Conn. Cake, potato chips, doughnuts, salted nuts. No. 116,297; Apr. 24; v. 237; p. 1214.
E. Rauh & Sons Fertilizing Company, Indianapolis, Ind. Stock and poultry food. No. 116,359; Apr. 24; v. 237; p. 1215.
E. L. Patch Co., The, Boston, Mass. Preparation for eliminating carbon in gas-engine cylinders. No. 116,084; Apr. 3; v. 237; p. 306.
East St. Louis-New Athens Brewing Co., New Athens, Ill. Cereal beverage. No. 116,298; Apr. 24; v. 237; p. 1214.
Eastman Kodak Co., Rochester, N. Y. Photographic film. Nos. 116,125–9; Apr. 10; v. 237; p. 617.
Eastman Kodak Co., Rochester, N. Y. Cameras. No. 116,130; Apr. 10; v. 237; p. 617.
Efficiency Motor-Device Corporation, Omaha, Nebr. Spark-plugs. No. 116,207; Apr. 17; v. 237; p. 913.
Elseman, Kaiser & Co., Chicago, Ill. Containers for toilet articles. No. 116,131; Apr. 10; v. 237; p. 617.
Electro Metal Products Co., The, Cleveland, Ohio. Precious-metal alloy. No. 116,208; Apr. 17; v. 237; p. 913.
Elsinger, Rudolf, Cincinnati, Ohio, assignor to Mothers Macaroni Company, Minneapolis, Minn. Noodles. No. 116,299; Apr. 24; v. 237; p. 1214.
Enid Milling Company, Enid, Okla. Wheat-flour. Nos. 116,300–1; Apr. 24; v. 237; p. 1214.
Enoch Morgan's Sons Company, New York, N. Y. Detergent preparation for cleaning, scouring, or polishing. No. 116,151; Apr. 10; v. 237; p. 618.
Estes, Robert J., Coalgate, Okla. Liver-tonic for biliousness, constipation, &c. No. 116,302; Apr. 24; v. 237; p. 1214.
Evans, Thomas L., Houston, Tex. Baking-powders. No. 116,048; Apr. 3; v. 237; p. 305.
F. A. Hardy & Company, Chicago, Ill. Lens-testing instruments. No. 116,058; Apr. 3; v. 237; p. 306.
F. R. Blair & Co., Inc., New York, N. Y. Flexible rubber and composition disks for use as a universal-joint member. No. 116,200; Apr. 17; v. 237; p. 913.
Fairchild Bros. & Foster, New York, N. Y. Pharmaceutical preparation for the relief of indigestion. No. 116,049; Apr. 3; v. 237; p. 305.
Faxon & Gallagher Drug Co., Kansas City, Mo. Perfumes, toilet waters, face-creams, face and talcum powders. No. 116,050; Apr. 3; v. 237; p. 305.
Featherston Products Company, Portland, Oreg. Loganberry beverage. No. 116,210; Apr. 17; v. 237; p. 913.
Flash Company, The, Greenville, S. C. Hair and scalp remedy. No. 116,132; Apr. 10; v. 237; p. 617.
Foix, Louis A., Ysleta, Tex. Remedy for indigestion. No. 116,133; Apr. 10; v. 237; p. 617.
Foro River Shipbuilding Corporation, Quincy, Mass. Certain named vehicles, not including engines. No. 116,134; Apr. 10; v. 237; p. 617.
Foster & Mutton, Lynchburg, Va. Liquid medicine for indigestion, &c. No. 116,303; Apr. 24; v. 237; p. 1214.
Frantz, Buchanan & Co., Inc., Camden, N. J. Cleaner, deodorant, germicide, insecticide. No. 116,304; Apr. 24; v. 237; p. 1214.
Frazar & Company, New York, N. Y. Manganese salts. No. 116,211; Apr. 17; v. 237; p. 913.
Friestedt, Arthur A., Chicago, Ill. Apparatus for supplying moisture to the cylinders of gas-engines. No. 116,054; Apr. 3; v. 237; p. 306.
Gardner, Lydia, Joplin, Mo. Lip-reducing lotion. No. 116,305; Apr. 24; v. 237; p. 1214.
Gas Appliance Company, Inc., Philadelphia, Pa. Certain named heating apparatus. No. 116,306; Apr. 24; v. 237; p. 1214.
General Eclipse Company, The, Danielson, Conn. Inkwells. No. 116,212; Apr. 17; v. 237; p. 913.
Geo. Borgfeldt & Co., New York, N. Y. Ornamental figures for use on various articles. No. 116,033; Apr. 3; v. 237; p. 305.
George Borgfeldt & Co., New York, N. Y. Handkerchiefs. No. 116,281; Apr. 24; v. 237; p. 1213.
Geo. E. Keith Company, Brockton, Mass. Rubber heels. No. 116,063; Apr. 3; v. 237; p. 306.
Goldberg, Samuel, Detroit, Mich. Poultry, scratch, littlechick, and pigeon feeds. No. 116,308; Apr. 24; v. 237; p. 1214.
Gordon Tire & Rubber Co., The, Canton, Ohio. Rubber tires. No. 116,309; Apr. 24; v. 237; p. 1214.
Gowan-Lenning-Brown Co., Duluth, Minn. Coffee, tea, flavoring extracts for foods, spices, and rolled oats. No. 116,310; Apr. 24; v. 237; p. 1214.
Grant Brothers Co., Marion, Ind. Dressed poultry. No. 116,311; Apr. 24; v. 237; p. 1214.
Greenhut Company, Inc., New York, N. Y. Coffee. No. 116,194; Apr. 10; v. 237; p. 619.
Grundy & Marten, San Francisco, Cal. Decorative design-forms of felt or fabric for appliqué work. No. 116,056; Apr. 3; v. 237; p. 306.
Gryphon Rubber and Tire Corporation, New York, N. Y. Rubber tires. No. 116,213; Apr. 17; v. 237; p. 913.
Gulfport Grocery Company, Gulfport, Miss. Wheat-flour. No. 116,195; Apr. 10; v. 237; p. 619.
H. Boker & Co. Inc., New York, N. Y. Electric lamps. No. 116,201; Apr. 17; v. 237; p. 913.
Hager, Clark & Co., New York, N. Y. Woolen piece goods. No. 116,312; Apr. 24; v. 237; p. 1214.
Hakes, Hudson W., Millbury, Mass. Self-threading shuttles for looms. No. 116,057; Apr. 3; v. 237; p. 306.
Hale Company, The, San Francisco, Cal. Canned crabs. Nos. 116,313–14; Apr. 24; v. 237; p. 1214.
Hallorau, John H., New York, N. Y. Pastry, cakes, confections, ices, and ice-cream. No. 116,196; Apr. 10; v. 237; p. 619.
Haupt, Peter, New Athens, Ill. Wheat-flour. No. 116,315; Apr. 24; v. 237; p. 1214.
Helliger, William F., San Francisco, Cal. Cigars, cigarettes, tobaccos, tobacco cuttings. No. 116,214; Apr. 17; v. 237; p. 913.
Herolin Medicine Company, The, Atlanta, Ga. Hairdressing. No. 116,316; Apr. 24; v. 237; p. 1214.
Hezel Milling Company, East St. Louis, Ill. Wheat-flour. No. 116,215; Apr. 17; v. 237; p. 913.
Hezel Milling Company, East St. Louis, Ill. Wheat-flour. No. 116,317; Apr. 24; v. 237; p. 1214.
High Grade Manufacturing Company, The, Cleveland, Ohio. Construction materials. No. 116,216; Apr. 17; v. 237; p. 913.
Hikish, Robert, Tuckahoe, N. Y. Certain named attachments for internal-combustion engines. No. 116,059; Apr. 3; v. 237; p. 306.
Horlick, Alexander, Milwaukee, Wis. Beverage-forming food product in the form of readily-soluble powder or tablets. No. 116,321; Apr. 24; v. 237; p. 1214.
Howard Company, L. A., Minneapolis, Minn. Preparations for the treatment of certain named diseases. No. 116,060; Apr. 3; v. 237; p. 306.
Howard-Vaughan Co., The, Niagara Falls, N. Y. Chemical compound for use in gasoline for internal-combustion engines. No. 116,322; Apr. 24; v. 237; p. 1214.
Hyams, David, New York, N. Y. Duplicators—namely, an apparatus for producing facsimiles of manuscripts, typewriting, &c. No. 116,218; Apr. 17; v. 237; p. 913.
Hydragas Corporation, The, New York, N. Y. Liquid fuel for internal-combustion engines. No. 116,137; Apr. 10; v. 237; p. 618.
Ilford, Limited, Ilford, London, England. Photographic dry plates, photographic films, and prepared paper for photographic purposes. Nos. 116,138–9; Apr. 10; v. 237; p. 618.
Imperial Player Roll Co., Chicago, Ill. Music-rolls for automatic musical instruments. No. 116,219; Apr. 17; v. 237; p. 913.
India-Rubber Gutta Percha & Telegraph Works Company Limited, The, London, England. Golf-balls. No. 116,220; Apr. 17; v. 237; p. 913.
International Cork Company, Brooklyn, N. Y. Certain named stoppers. No. 116,140; Apr. 10; v. 237; p. 618.
International Harvester Corporation, Chicago, Ill. Fluid-pressure engines and parts thereof. No. 116,221; Apr. 17; v. 237; p. 913.
International Harvester Company of New Jersey, Chicago, Ill. Cultivators and parts thereof. No. 116,061; Apr. 3; v. 237; p. 306.
International News Service, New York, N. Y. Newspaper-section. No. 116,062; Apr. 3; v. 237; p. 306.
J. Rosenbaum Grain Company, Chicago, Ill. Weekly periodical. No. 116,241; Apr. 17; v. 237; p. 914.
J. Weller Co., The, Oak Harbor, Ohio. Canned sauerkraut. No. 116,184; Apr. 10; v. 237; p. 619.
J. & C. Fischer, New York, N. Y. Regulating devices for player-pianos and piano-players. No. 116,051; Apr. 3; v. 237; p. 305.
J. and J. Baldwin and Partners, Limited, Halifax, England. Yarns of wool, worsted, or hair. No. 116,273; Apr. 24; v. 237; p. 1213.
J. D. Johnson Co., Brooklyn, N. Y., assignor to J. D. Johnson Co. Inc. Water-closets. No. 116,141; Apr. 10; v. 237; p. 618.
J. P. Eustis Manufacturing Company, Boston, Mass. Medicine-cabinets. No. 116,209; Apr. 17; v. 237; p. 913.
J. S. Hoffman Company, Chicago, Ill. Cheese. Nos. 116,318–20; Apr. 24; v. 237; p. 1214.
J. W. Goddard & Sons, Incorporated, New York, N. Y. Cotton piece goods. No. 116,307; Apr. 24; v. 237; p. 1214.
Jesse French and Sons Piano Company, New Castle, Ind. Pianos. Nos. 116,052–3; Apr. 3; v. 237; pp. 305–6.
John Chatillon & Sons, New York, N. Y. Weighing-scales. No. 116,117; Apr. 10; v. 237; p. 617.
John Hoberg Co., The, Green Bay, Wis. Toilet-paper. No. 116,217; Apr. 17; v. 237; p. 913.
John Wanamaker, New York, New York, N. Y. Underwaists for boys and girls. No. 116,183; Apr. 10; v. 237; p. 619.
Joseph Burnett Co., Boston, Mass. Certain named extracts used for flavoring food. No. 116,191; Apr. 10; v. 237; p. 619.

Joseph G. Dill, Inc., Richmond, Va. Chewing-tobacco in plug and other forms, smoking-tobacco. No. 116,206; Apr. 17; v. 237; p. 913.
Kadoolator People, Inc., The, Terre Haute, Ind. Toy cycles. No. 116,324; Apr. 24; v. 237; p. 1214.
Kehl & Co., Charles H., Philadelphia, Pa. Powder for cleaning eyeglasses, goggles, &c. No. 116,142; Apr. 10; v. 237; p. 618.
Keller Mechanical Engraving Company, Brooklyn, N. Y. Steel and brass dies. No. 116,064; Apr. 3; v. 237; p. 306.
Kentucky Corrugated Paper Company, Louisville, Ky. Corrugated-paper table-mats. No. 116,065; Apr. 3; v. 237; p. 306.
Klein, Benjamin F., Cleveland, Ohio. Electric-lighting fixtures and certain named parts for same. No. 116,222; Apr. 17; v. 237; p. 913.
Klever Pictures, Inc., New York, N. Y. Moving-picture films. No. 116,143; Apr. 10; v. 237; p. 618.
Kohler Co., Kohler, Wis. Lavatories. No. 116,066; Apr. 3; v. 237; p. 306.
Kops Bros., New York, N. Y. Apparel-corsets, corsets, corset covers and waists. No. 116,144; Apr. 10; v. 237; p. 618.
L. F. Wanner Co. Inc., New York, N. Y. Knitted fabrics in the piece. No. 116,384; Apr. 24; v. 237; p. 1216.
Lambdin, H. S., Peru, Kans. Ointment for skin eruptions. No. 116,224; Apr. 17; v. 237; p. 914.
Landwehr, H. A., Los Angeles, Cal. Certain named standards, poles, piling, brick, blocks, and tiles. No. 116,320; Apr. 24; v. 237; p. 1214.
Lange Canning Co., Eau Claire, Wis. Canned vegetables and sauer-kraut. No. 116,327; Apr. 24; v. 237; p. 1215.
Larabee Flour Mills Corporation, The, Hutchinson, Kans. Wheat-flour. No. 116,328; Apr. 24; v. 237; p. 1215.
Le Count, Frank A., Springfield, Mass. Polishing-cloth for gold and silver. No. 116,145; Apr. 10; v. 237; p. 618.
Le Falvre, Avila J., Clayton, N. Y. Medicine for asthma and bronchial trouble. No. 116,330; Apr. 24; v. 237; p. 1215.
Lee County Packing Company, Fort Myers, Fla. Citrus fruits. No. 116,067; Apr. 3; v. 237; p. 306.
Legalite Corporation, The, Boston, Mass. Lenses for headlights. No. 116,225; Apr. 17; v. 237; p. 914.
Leist, Jean L., Brooklyn, N. Y. Shoe-dressing. No. 116,331; Apr. 24; v. 237; p. 1215.
Long-Bell Lumber Company, The, Kansas City, Mo. Finished and unfinished lumber. No. 116,332; Apr. 24; v. 237; p. 1215.
Lonsdale Company, Providence, R. I. Cotton piece goods. No. 116,146; Apr. 10; v. 237; p. 618.
Loose-Wiles Biscuit Company, New York, N. Y., and Kansas City, Mo. Cakes. No. 116,147; Apr. 10; v. 237; p. 618.
Loose-Wiles Biscuit Company, Kansas City, Mo. Cakes. No. 116,333; Apr. 24; v. 237; p. 1215.
Lovell & Covel Company, Boston, Mass. Candles. No. 116,068; Apr. 3; v. 237; p. 306.
Luckett, Philip A., Salisbury, Md. Union-suits, undershirts, drawers, and pajamas of textile material. No. 116,069; Apr. 3; v. 237; p. 306.
Lund, Ulrik R. T., North Catasauqua, Pa. Ribbons. No. 116,148; Apr. 10; v. 237; p. 618.
Lundberg Company, New York, N. Y. Certain named toilet preparations. No. 116,334; Apr. 24; v. 237; p. 1215.
M. D. Knowlton Company, Rochester, N. Y. Certain named machinery for handling and treating paper and fiber board. No. 116,223; Apr. 17; v. 237; p. 913.
Magic Mist, Incorporated, New York, N. Y. Atomizing-dispensers for liquid oil for polishing. No. 116,227; Apr. 17; v. 237; p. 914.
Mallekson, Philip S., Philadelphia, Pa. Rubber pneumatic automobile-tires for pleasure-cars. No. 116,228; Apr. 17; v. 237; p. 914.
Mallinson & Co., H. R., New York, N. Y. Woven and knitted silk and crape piece goods. No. 116,073; Apr. 3; v. 237; p. 306.
Mallinson & Co., H. R., New York, N. Y. Silk piece goods. No. 116,149; Apr. 10; v. 237; p. 618.
Mallinson & Co., H. R., New York, N. Y. Parasols. No. 116,336; Apr. 24; v. 237; p. 1215.
Manufacturing Chemists' Agency, Philadelphia, Pa. Shaving-lotion for use after shaving. No. 116,337; Apr. 24; v. 237; p. 1215.
Marion Stock Remedy Company, Ocala, Fla. Blood-modifying preparation. No. 116,074; Apr. 3; v. 237; p. 306.
Markets Publishing Corporation, New York, N. Y. Weekly publication. No. 116,229; Apr. 17; v. 237; p. 914.
Marple Bros., Philadelphia, Pa. Salted nuts. No. 116,338; Apr. 24; v. 237; p. 1215.
Martin Manufacturing Company, Newton, Mass. Lace and drapery curtains. No. 116,075; Apr. 3; v. 237; p. 306.
Mason, Mary M., Chicago, Ill. Certain named toys. No. 116,339; Apr. 24; v. 237; p. 1215.
Matthews & Lively Co., Atlanta, Ga. Razors, knives of base metal other than surgical knives, shears. No. 116,150; Apr. 10; v. 237; p. 618.
McClelland Ward Co., Decatur, Ill. Certain named foods. No. 116,335; Apr. 24; v. 237; p. 1215.
McKenna, John L., New York, N. Y. Antiseptic powder for the treatment of exudations of the skin. No. 116,070; Apr. 3; v. 237; p. 306.
McKenna, John L., New York, N. Y. Treatment for the hair and scalp and for eczema. No. 116,071; Apr. 3; v. 237; p. 306.
McKesson & Robbins, New York, N. Y. Perfumery, talcum and sachet powders, and sachets. No. 116,226; Apr. 17; v. 237; p. 914.
Mergenthaler Linotype Company, New York, N. Y. Matrices. No. 116,340; Apr. 24; v. 237; p. 1215.
Mihalovitch Brothers Company, The, Cincinnati, Ohio. Certain named non-alcoholic beverages. No. 116,341; Apr. 24; v. 237; p. 1215.
Miller Chemicals, Inc., Bloomfield, N. J., and New York, N. Y. Liquid chemical to be added to gasolene to increase combustion and eliminate carbon. No. 116,342; Apr. 24; v. 237; p. 1215.
Moorhouse, William R., Pittsburgh, Pa. Coffee. No. 116,343; Apr. 24; v. 237; p. 1215.
Mothers Macaroni Company. (See Elsinger, Rudolf, assignor.)
Motion Picture News, Inc., New York, N. Y. Semi-annual publication. No. 116,152; Apr. 10; v. 237; p. 618.
Mueller & Co., R. S., Cleveland, Ohio. Electrical test-clips. No. 116,230; Apr. 17; v. 237; p. 914.
Murphy Oil Company, East Whittier, Cal. Oranges, lemons, grape-fruit. No. 116,344; Apr. 24; v. 237; p. 1215.
Murray, John F., New York, N. Y. Periodical issued monthly. No. 116,345; Apr. 24; v. 237; p. 1215.
Myle Mayker Company, Chicago, Ill. Devices for regulating the supply of air to carbureters of automobile-engines. No. 116,076; Apr. 3; v. 237; p. 306.
Nathan, Max, New York, N. Y. Snap-fasteners for feminine apparel. No. 116,346; Apr. 24; v. 237; p. 1215.
National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. No. 116,347; Apr. 24; v. 237; p. 1215.
National Licorice Co., Brooklyn, N. Y. Manufactured licorice. No. 116,153; Apr. 10; v. 237; p. 618.
National Paper Products Company, San Francisco, Cal. Disinfectant. No. 116,348; Apr. 24; v. 237; p. 1215.
National Paper Products Company, San Francisco, Cal. Insecticide. No. 116,349; Apr. 24; v. 237; p. 1215.
National Paper Products Company, San Francisco, Cal. Stock-dip, insecticides, germicides, disinfectants. No. 116,350; Apr. 24; v. 237; p. 1215.
Neuss, Hesslein & Co., New York, N. Y. Woven cotton piece goods. No. 116,231; Apr. 17; v. 237; p. 914.
New Hampton Mills, New York, N. Y. Silk and cotton fabric in the piece. No. 116,232; Apr. 17; v. 237; p. 914.
New Orleans Coffee Co. Ltd., New Orleans, La. Rice. No. 116,352; Apr. 24; v. 237; p. 1215.
New York Shield Company, The, New York, N. Y. Perfumery, toilet waters, face-powders, and pastes. No. 116,077; Apr. 3; v. 237; p. 306.
Nicolai Door Manufacturing Co., Portland, Oreg. Portable houses. No. 116,351; Apr. 24; v. 237; p. 1215.
Nobscot Mountain Spring Co., Boston, Mass. Still and sparkling or carbonated waters, ginger-ale, and tonics and soft drinks. No. 116,078; Apr. 3; v. 237; p. 306.
O'Dell, Lulu, St. Louis, Mo. Preparation used in dressing and growing hair. No. 116,154; Apr. 10; v. 237; p. 618.
Oakley Varnish Co., Los Angeles, Cal. Ready-mixed paints. No. 116,079; Apr. 3; v. 237; p. 306.
Okanogan Growers Union, Okanogan, Wash. Fresh apples in boxes. No. 116,353; Apr. 24; v. 237; p. 1215.
Otis Elevator Company, Jersey City, N. J., and New York, N. Y. Elevators. No. 116,080; Apr. 3; v. 237; p. 306.
Pacific Extract Co., Fresno, Cal. Non-alcoholic carbonated beverage sold as a soft drink and syrup for making same. No. 116,233; Apr. 17; v. 237; p. 914.
Pacific Platinum Works, Los Angeles, Cal. Certain named resistant chemical ware for laboratory use. No. 116,081; Apr. 3; v. 237; p. 306.
Palmer & Co., H. H., New York, N. Y. Dry groceries and canned goods. No. 116,354; Apr. 24; v. 237; p. 1215.
Paper Mills Specialty Co., Inc., Chicago, Ill. Toilet, tissue, and wax or waxed paper, paper towels, napkins, and doilies. No. 116,234; Apr. 17; v. 237; p. 914.
Parke Davis & Co., Detroit, Mich. Peptic coagulant. No. 116,082; Apr. 3; v. 237; p. 306.
Pasteur Laboratories of America, New York, N. Y. Disinfectant, antiseptic, germicide, insecticide, and deodorant. No. 116,083; Apr. 3; v. 237; p. 306.
Paterson, James F., St. Paul, Minn. Antifreezing liquids for automobile-radiators and plumbing-fixtures. No. 116,355; Apr. 24; v. 237; p. 1215.
Patterson Drug Co., Lynchburg, Va. Injection and capsules for the treatment of gonorrhea. No. 116,356; Apr. 24; v. 237; p. 1215.
Patton Paint Company, Milwaukee, Wis. Ready-mixed white liquid paints and enamels. No. 116,085; Apr. 3; v. 237; p. 306.
Philips, Mary E., Indianapolis, Ind. Hair-grower. No. 116,156; Apr. 10; v. 237; p. 618.
Philo Hay Specialties Co., Newark, N. J. Certain named pharmaceutical preparations for toilet purposes. No. 116,136; Apr. 10; v. 237; p. 617.
Phonoharp Company, The, Boston, Mass. Zithers. No. 116,086; Apr. 3; v. 237; p. 307.

Pitino Brothers & Company, Los Angeles, Cal. Medicine for certain named diseases. No. 116,357; Apr. 24; v. 237; p. 1215.
Popel-Giller Co., Warsaw, Ill. Non-alcoholic malt beverage. No 116,235; Apr. 17; v. 237; p. 914.
Prange Milling Company, New Douglas, Ill. Wheat-flour. No. 116,358; Apr. 24; v. 237; p. 1215.
Pratt-Low Preserving Company, Santa Clara, Cal. Certain named canned fruits and vegetables. No. 116,155; Apr. 10; v. 237; p. 618.
R. & H. Manufacturing Corporation, Detroit, Mich. Razor honers and stroppers. No. 116,087; Apr. 3; v. 237; p. 307.
R. & H. Simon Company, Union Hill, N. J., and New York, N. Y. Silk piece goods. No. 116,162; Apr. 10; v. 237; p. 618.
Rauch Cigar Company, Inc., Indianapolis, Ind. Cigars, cigarettes, and smoking-tobacco. No. 116,088; Apr. 3; v. 237; p. 307.
Reade Manufacturing Co., Hoboken, N. J. Medicinal salve for burns, scalds, cuts, bruises, lameness, and wounds. No. 116,236; Apr. 17; v. 237; p. 914.
Reavis, Holland S., Houston, Tex. Periodicals published monthly. No. 116,089; Apr. 3; v. 237; p. 307.
Redmond, Florence, New York, N. Y. Face-creams. No. 116,360; Apr. 24; v. 237; p. 1215.
Reinherz, Philip, New York, N. Y. Phonographs and talking-machines and records for use therewith. No. 116,157; Apr. 10; v. 237; p. 618.
Republic Metalware Co., The, Buffalo, N. Y. Certain named cutlery for household use. No. 116,090; Apr. 3; v. 237; p. 307.
Reynolds Wire Co., Dixon, Ill. Wire screen-cloth. Nos. 116,237–40; Apr. 17; v. 237; p. 914.
Rice-Stix Dry Goods Company, St. Louis, Mo. Middy-blouses and children's dresses. No. 116,091; Apr. 3; v. 237; p. 307.
Richmond Waterproof Products Co., Port Richmond, N. Y. Sweeping compounds. No. 116,361; Apr. 24; v. 237; p. 1215.
Rigo-Tone Chemical Co., Petersburg, Va. Medicinal tonics. No. 116,362; Apr. 24; v. 237; p. 1215.
Rogers, Harry E., Bakersfield, Cal. Motor-lubricating oils and greases. No. 116,159; Apr. 10; v. 237; p. 618.
Rudder Publishing Co., The, New York, N. Y. Magazines issued monthly. No. 116,242; Apr. 17; v. 237; p. 914.
Russell-Miller Milling Co., Minneapolis, Minn. Wheat feed. No. 116,363; Apr. 24; v. 237; p. 1216.
Russell-Miller Milling Co., Minneapolis, Minn. Wheat-flour. Nos. 116,364–5; Apr. 24; v. 237; p. 1216.
S. S. Wenzell Machine Company, The, Philadelphia, Pa. Bottle-washing machines. No. 116,186; Apr. 10; v. 237; p. 619.
Salt's Textile Manufacturing Company, The, Bridgeport, Conn., and New York, N. Y. Velvets and plushes in the piece. No. 116,243; Apr. 17; v. 237; p. 914.
Salt's Textile Manufacturing Company, The, Bridgeport, Conn., and New York, N. Y. Coats, cloaks, wraps, capes, dresses, waists, skirts. No. 116,366; Apr. 24; v. 237; p. 1216.
Saml. Gabriel Sons & Company, New York, N. Y. Dolls. No. 116,135; Apr. 10; v. 237; p. 617.
Samson, Arthur M., New Orleans, La. Remedy for the treatment of ingrowing nails. No. 116,367; Apr. 24; v. 237; p. 1216.
Scheuer & Sons, Herman, New York, N. Y. Letter-cases, wallets, and pocket-books. No. 116,368; Apr. 24; v. 237; p. 1216.
Schmeizer Arms Co., Kansas City, Mo. Certain named games, toys, and sporting goods. No. 116,244; Apr. 17; v. 237; p. 914.
Schmitt, George, Newark, N. J. Non-poisonous balsam for certain named affections and inflammations. No. 116,160; Apr. 10; v. 237; p. 618.
Scholl Manufacturing Company, Inc., Chicago, Ill. Foot-soaps. No. 116,245; Apr. 17; v. 237; p. 914.
Scholl Manufacturing Company, Inc., Chicago, Ill. Arch-supports. Nos. 116,369–70; Apr. 24; v. 237; p. 1216.
Schorer, Eleanor, New York, N. Y. Newspaper and magazine articles, magazine-section published periodically. No. 116,371; Apr. 24; v. 237; p. 1216.
Schuylkill Silk Mills, Reading, Pa. Certain named clothing for adults and babies. No. 116,092; Apr. 3; v. 237; p. 307.
Schuylkill Silk Mills, Reading, Pa. Certain named clothing for adults and babies. No. 116,161; Apr. 10; v. 237; p. 618.
Selig, Simon S., Jr., Atlanta, Ga. Toilet-paper. No. 116,093; Apr. 3; v. 237; p. 307.
Sherman, Charles H., North Attleboro, Mass. Certain named articles made in part of or plated with precious metal. No. 116,094; Apr. 3; v. 237; p. 307.
Shields & Son, Albany, N. Y. Smoking-tobacco. No. 116,372; Apr. 24; v. 237; p. 1216.
Simpson, John T., Newark, N. J. Games and apparatus for playing same. No. 116,163; Apr. 10; v. 237; p. 618.
Southern Hardware & Bicycle Company, Jacksonville, Fla. Rubber tires. No. 116,373; Apr. 24; v. 237; p. 1216.
Spitz, Louis, Paterson, N. J. Ladies' leather shoes. No. 116,246; Apr. 17; v. 237; p. 914.
Standard Tire and Rubber Manufacturing Company, The, Cleveland, Ohio. Rubber and fabric casings or shoes for pneumatic tires. No. 116,095; Apr. 3; v. 237; p. 307.
Star Company, New York, N. Y. Newspaper-sections. Nos. 116,247–9; Apr. 17; v. 237; p. 914.
Stein Brothers, Chicago, Ill. Lemon hoarhound rock and rye, sloe and dry gin. No. 116,164; Apr. 10; v. 237; p. 618.
Stein Brothers, Chicago, Ill. Whisky. No. 116,374; Apr. 24; v. 237; p. 1216.
Strohmeyer & Arpe Company, New York, N. Y. Hair-tonic. No. 116,375; Apr. 24; v. 237; p. 1216.
Suedetex Glove Company, Inc., New York, N. Y. Gloves. No. 116,096; Apr. 3; v. 237; p. 307.
Sumter Brick Works, Sumter, S. C. Building-brick. No. 116,097; Apr. 3; v. 237; p. 307.
Sunset Soap Dye Company, New Rochelle, N. Y. Dyes. No. 116,250; Apr. 17; v. 237; p. 914.
Super Gas Producer Sales Company, The, St. Paul, Minn. Gas-producers. No. 116,098; Apr. 3; v. 237; p. 307.
Superior Manufacturing Co., Knoxville, Tenn. Automobile-polish. No. 116,165; Apr. 10; v. 237; p. 618.
Swan-Myers Co., Indianapolis, Ind. Bacterial vaccins. No. 116,376; Apr. 24; v. 237; p. 1216.
Syme, Eagle & Co., Chicago, Ill. Canned salmon and sardines. No. 116,377; Apr. 24; v. 237; p. 1216.
Taylor, Stewart K., Mobile, Ala. Hardwood and fine timber and lumber. No. 116,166; Apr. 10; v. 237; p. 618.
Tebbetts & Garland Store, The, Chicago, Ill. Brandy, whiskies, cocktails, cordials, rum, gin, vermuth. No. 116,378; Apr. 24; v. 237; p. 1216.
Testa Cigar Co., San Francisco, Cal. Cigars, cigarettes, and smoking-tobacco. No. 116,251; Apr. 17; v. 237; p. 914.
Theobald and Oppenheimer Company, Philadelphia, Pa., and New York, N. Y. Cigars. No. 116,099; Apr. 3; v. 237; p. 307.
Thermogène Co., Limited, The, Haywards Heath, England. Medicated wadding. No. 116,379; Apr. 24; v. 237; p. 1216.
Thomas, Leon, Paris, France. Corsets, corset girdles and covers of both knitted and textile materials. No. 116,252; Apr. 17; v. 237; p. 914.
Threshermen's Review Company, The, St. Joseph, Mich. Farm-paper issued monthly. No. 116,100; Apr. 3; v. 237; p. 307.
Tide Water Oil Co., New York, N. Y. Illuminating-oils. No. 116,167; Apr. 10; v. 237; p. 618.
Tompsitt, Henry T., St. Hilda, near Melbourne, Victoria, Australia. Insect-destroying powder. No. 116,380; Apr. 24; v. 237; p. 1216.
Tinas Company, Detroit, Mich. Remedy for dandruff, eczema, and falling hair. No. 116,101; Apr. 3; v. 237; p. 307.
Triangle Film Corporation, Richmond, Va., and New York, N. Y. Motion-picture films. No. 116,253; Apr. 17; v. 237; p. 914.
Triangle Music Pub. Co., New York, N. Y. Sheet-music. No. 116,102; Apr. 3; v. 237; p. 307.
Trion Toy Company, Inc., Brooklyn, N. Y. Dolls and the heads, bodies, and limbs thereof. No. 116,381; Apr. 24; v. 237; p. 1216.
Tube Brush Co., Boston, Mass. Shoe-polish. No. 116,254; Apr. 17; v. 237; p. 914.
Turner, Forest, Kings Mountain, N. C. Soap. No. 116,168; Apr. 10; v. 237; p. 618.
Tynion, Mae, New York, N. Y. Preparation for the treatment of lumbago, rheumatism, and swollen joints. No. 116,382; Apr. 24; v. 237; p. 1216.
Union Seed & Fertilizer Company, Guttenberg, N. J. Fertilizer consisting of cotton-seed meal. No. 116,169; Apr. 10; v. 237; p. 619.
Union Special Machine Company, Chicago, Ill. Underwear and sweaters. No. 116,255; Apr. 17; v. 237; p. 914.
United States Rubber Company, New York, N. Y. Overcoats. Nos. 116,170–82; Apr. 10; v. 237; p. 619.
Voigt, William L., New York, N. Y. Liquid preparation for removing oils and greases from woolens and other textile fabrics. No. 116,256; Apr. 17; v. 237; p. 914.
Voigt, William L., New York, N. Y. Liquid preparation for removing oils and greases from the skin. No. 116,257; Apr. 17; v. 237; p. 915.
W. B. McVicker Company, New York, N. Y. Pipe-cleaning substance. No. 116,072; Apr. 3; v. 237; p. 306.
Wade & Sons, John, Memphis, Tenn. Stock foods. No. 116,383; Apr. 24; v. 237; p. 1216.
Wadsworth, Howland & Co., Incorporated, Boston, Mass. Certain named paints and painters' materials. No. 116,258; Apr. 17; v. 237; p. 915.
Wadsworth, Howland & Co., Incorporated, Boston, Mass. Flint and enamel paints and coatings in the nature of paints. No. 116,259; Apr. 17; v. 237; p. 915.
Wallace & Smith Company, The, Laporte, Ind. Carriage-robes. No. 116,103; Apr. 3; v. 237; p. 307.
Warner Brothers Company, Bridgeport, Conn. Corsets. No. 116,104; Apr. 3; v. 237; p. 307.
Wedgefuth, Louis C., Yonkers, N. Y. Medicinal soap having in solution a pure soluble iodin. No. 116,260; Apr. 17; v. 237; p. 915.
Wellaphone, Inc., The, New York, N. Y. Devices for telephones. No. 116,261; Apr. 17; v. 237; p. 915.

Welsh, Joseph, Pasadena, Cal. Leader used in angling. No. 116,185; Apr. 10; v. 237; p. 619.
West Disinfecting Company, New York, N. Y. Animal dips and disinfectants. No. 116,105; Apr. 3; v. 237; p. 307.
West, Firm of Britton, and Charles R. Cooper, Chicago, Ill. Insoles. No. 116,385; Apr. 24; v. 237; p. 1216.
West Virginia Pulp & Paper Company, New York, N. Y. Book-papers. No. 116,187; Apr. 10; v. 237; p. 619.
Whiteley, Clyde C., Wichita, Kans. Live poultry, particularly a strain of Rhode Island Reds. No. 116,188; Apr. 10; v. 237; p. 619.
Wickland, Louis P., Genoa, Ohio. Hair-tonic. No. 116,106; Apr. 3; v. 237; p. 307.
Wilbur & Cannon, Syracuse, N. Y. Carbonizing-boxes. No. 116,262; Apr. 17; v. 237; p. 915.
Wilcox, Crittenden & Co. Inc., Middletown, Conn. Certain named vehicles, not including engines. No. 116,263; Apr. 17; v. 237; p. 915.
Willett & Gray, New York, N. Y. Daily sugar-paper. No. 116,107; Apr. 3; v. 237; p. 307.
Willett & Gray, New York, N. Y. Weekly sugar-paper. No. 116,108; Apr. 3; v. 237; p. 307.
William J. Gravert, Inc., Long Island City, N. Y. Cement to be used as a bond for fire-brick structures. No. 116,055; Apr. 3; v. 237; p. 306.
Williams, Thos. L., Chicago, Ill. Preparation for stimulating the growth of eye brows and lashes. No. 116,386; Apr. 24; v. 237; p. 1216.
Wilton Manufacturing Company, Inc., New York, N. Y. Cotton piece goods. No. 116,109; Apr. 3; v. 237; p. 307.
Wise Brothers, Inc., Baltimore, Md., and New York, N. Y. Overshirts, overalls, underwear, and workingmen's garments. No. 116,189; Apr. 10; v. 237; p. 619.
Worthington Ball Company, The, Elyria, Ohio. Golf-balls. No. 116,264; Apr. 17; v. 237; p. 915.
Worumbo Manufacturing Company, Lisbon Falls, Me. Woolen goods in the piece. Nos. 116,265–6; Apr. 17; v. 237; p. 915.
Zarpas, Nickolaos, Monessen, Pa. Preparation for treatment of certain named diseases and affections. No. 116,387; Apr. 24; v. 237; p. 1216.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

B-Nu Manufacturing Company, Memphis, Tenn. "Prest-O-Nu." (For Automobile-Polish.) No. 20,012; Apr. 10; v. 237; p. 620.

C. F. Burgess Laboratories, Madison, Wis. "Burgess Battery." (For Electric Batteries.) Nos. 20,038-9; Apr. 24; v. 237; p. 1217.

Clawson & Wilson Company, Buffalo, N. Y. "Rough & Tumble Play Suits." (For Boys' Cotton Fabric Play-Suits.) No. 20,040; Apr. 24; v. 237; p. 1217.

Darvill, Frederick, South Berwick, Me. "Old English." (For Furniture-Polish.) No. 20,045; Apr. 24; v. 237; p. 1217.

Davis, Roger T., San Antonio, Tex. "Kleen-a-Pipe." (For a Dissolving Cleaning Disinfecting Compound.) No. 20,021; Apr. 17; v. 237; p. 916.

Deehan, M. F., Boston, Mass. "Autotox Tablets." (For Medicinal Preparation.) No. 19,998; Apr. 10; v. 237; p. 620.

Derryvale Linen Company, New York, N. Y. "Derryvale." (For Irish Linen.) No. 20,046; Apr. 24; v. 237; p. 1217.

Detroit Dental Manufacturing Co., Detroit, Mich. "Kerr Ex-O-Dent." (For Chewing-Gum.) No. 20,022; Apr. 17; v. 237; p. 916.

Dwinell-Wright Company, Boston, Mass. "Colonial Girl." (For Coffee.) No. 19,999; Apr. 10; v. 237; p. 620.

Dwinell-Wright Company, Boston, Mass. "Grandma." (For Coffee.) No. 20,000; Apr. 10; v. 237; p. 620.

E. W. Gates & Son Co., Richmond, Va. "Aden." (For Succotash.) No. 20,044; Apr. 24; v. 237; p. 1217.

Evansville Brewing Assn., Evansville, Ind. "Sterling." (For a Non-Intoxicating Beverage.) No. 20,041; Apr. 24; v. 237; p. 1217.

Farley Candy Company, Chicago, Ill. "'Just Out' Baby Bantam Candy Eggs." (For Candies.) No. 20,023; Apr. 17; v. 237; p. 916.

Foulds-Briggs Co., The, Cincinnati, Ohio. "Little Cook On Every Box." (For Macaroni.) No. 20,024; Apr. 17; v. 237; p. 916.

Gleason, John H., New York, N. Y. "Creme de Mon Reve." (For a Cream for Purifying the Skin.) No. 20,001; Apr. 10; v. 237; p. 620.

Gleason, John H., New York, N. Y. "Creme La Reine." (For a Cream for Softening and Whitening the Skin.) No. 20,002; Apr. 10; v. 237; p. 620.

Gleason, John H., New York, N. Y. "Creme Mauveine." (For Cold-Cream.) No. 20,003; Apr. 10; v. 237; p. 620.

Gleason, John H., New York, N. Y. "Creme Fleur de Neiges." (For a Cream for Purifying the Skin.) No. 20,004; Apr. 10; v. 237; p. 620.

Gleason, John H., New York, N. Y. "Mauveine Gleason." (For a Tonic for the Skin.) No. 20,005; Apr. 10; v. 237; p. 620.

Glenn, W. B., New York, N. Y. "A 100% Cigar Par A 100% Cigar." (For Cigars.) No. 20,025; Apr. 17; v. 237; p. 916.

Glover, Irwin N., Bailey, N. C. "Glover's Medicated Salt Cake." (For a Medicated Salt Cake for Stock.) No. 20,026; Apr. 17; v. 237; p. 916.

Golden, David, Chicago, Ill. "Combination Stogies." (For Stogies.) No. 20,006; Apr. 10; v. 237; p. 620.

Gray, L. S., Fort Worth, Tex. "Bald-E-No." (For a Hair-Restorative.) No. 20,042; Apr. 24; v. 237; p. 1217.

Gray, L. S., Fort Worth, Tex. "Yargodine." (For a Dandruff Cure.) No. 20,043; Apr. 24; v. 237; p. 1217.

Hagler, Isidor, Denver, Colo. "The Ranger." (For Cigars.) No. 20,027; Apr. 17; v. 237; p. 916.

Henry Bonn Co., Milwaukee, Wis. "Rex Floor Varnish." (For Floor-Varnish.) No. 20,037; Apr. 24; v. 237; p. 1217.

K & B Co., Philadelphia, Pa. "(Fill Easy) Bin Baler." (For Balers.) No. 20,028; Apr. 17; v. 237; p. 916.

L. E. Waterman Company, New York, N. Y. "Waterman's Ideal Ink." (For Ink.) No. 20,050; Apr. 24; v. 237; p. 1217.

La Kurba Cigar Company, Chicago, Ill. "Big Six." (For Cigars.) No. 20,029; Apr. 17; v. 237; p. 916.

Lieb, Sarah H., New York, N. Y. "Lily Mayonnaise." (For Mayonnaise Dressing.) No. 20,030; Apr. 17; v. 237; p. 916.

Lipton, Thos. J., New York, N. Y., and Chicago, Ill. "Lipton's Tea." (For Tea.) No. 20,011; Apr. 10; v. 237; p. 620.

MacDonell-Chow Corp., New York, N. Y. "Take A Nip Of Nippo." (For Mineral Water.) No. 20,007; Apr. 10; v. 237; p. 620.

Mir-A-Co Company, The, Houston, Tex. "Mir-A-Co Nature's Gift." (For Artificial Mineral Water.) No. 20,008; Apr. 10; v. 237; p. 620.

Montgomery, Mary E., Denver, Colo. "Revivient Liquid Massage and Bleach." (For Toilet Preparations.) No. 20,047; Apr. 24; v. 237; p. 1217.

National Fruit Juice Co., La Fayette, Ind. "'Apella' Nature's Best Beverage." (For Non-Alcoholic Beverages.) No. 20,031; Apr. 17; v. 237; p. 916.

National Peroxide Company, Brooklyn, N. Y. "Medicinal." (For Peroxid.) No. 20,032; Apr. 17; v. 237; p. 916.

National Peroxide Company, Brooklyn, N. Y. "National." (For Peroxid.) No. 20,033; Apr. 17; v. 237; p. 916.

Nesom, J. J., Los Angeles, Cal. "Pyorrhea Remedy." (For Preparation for the Treatment of Pyorrhea.) No. 20,009; Apr. 10; v. 237; p. 620.

Night-Glow Novelty Company, Rockville, Conn. "Auto Head Light Amplifer." (For Auto-Headlight Amplifier.) No. 20,010; Apr. 10; v. 237; p. 620.

Price, Sterling S., Fayette county, near Lexington, Ky. "Price's Pure Pork Sausage & Lard." (For Pork, Sausage, and Lard.) No. 20,013; Apr. 10; v. 237; p. 620.

Roche, John, Albany, N. Y. "Thermolene." (For an Antifreezing Solution.) No. 20,048; Apr. 24; v. 237; p. 1217.

S. Schmidt & Co., New York, N. Y. "Smoked Salmon Paste." (For Canned Salmon Paste.) No. 20,015; Apr. 10; v. 237; p. 620.

S. Schmidt & Co., New York, N. Y. "De Luxe." (For Canned Caviar.) No. 20,016; Apr. 10; v. 237; p. 620.

Schafer Bakery, Inc., Savannah, Ga. "Schafer's The Bread That Nourishes." (For Bread.) No. 20,014; Apr. 10; v. 237; p. 620.

Smith, O. P., Toledo, Ohio. "Onilla Polish." (For a Cleaning and Polishing Compound.) No. 20,017; Apr. 10; v. 237; p. 620.

South Coast Canning Co., Long Beach, Cal. "Avalon." (For Sardines in Oil.) No. 20,034; Apr. 17; v. 237; p. 916.

St. Louis Beverage Company, St. Louis, Mo. "Amber." (For a Non-Intoxicating Cereal Beverage.) No. 20,035; Apr. 17; v. 237; p. 916.

Stephens, William P., Fort Worth, Tex. "'Extra' Duro Colours." (For Colors.) No. 20,020; Apr. 10; v. 237; p. 620.

Tanaka, Tom K., San Francisco, Cal. "Mt. Fuji." (For Beer.) No. 20,036; Apr. 17; v. 237; p. 916.

United Drug Company, Boston, Mass. "Jonteel." (For Cold-Cream.) No. 20,049; Apr. 24; v. 237; p. 1217.

Weideman Co., The, Cleveland, Ohio. "Best Value." (For Cigars.) No. 20,018; Apr. 10; v. 237; p. 620.

Woosley Medicine Company, Commerce, Tex. "Woosley's Liniment." (For Liniment.) No. 20,019; Apr. 10; v. 237; p. 620.

PRINTS.

Carter's Ink Company, The, Boston, Mass. "Carter Inx." (For Carter's Inks and Paste.) No. 4,667; Apr. 17; v. 237; p. 916.

Cham-Pay Products Co., Evansville, Ind. "Cham-Pay." (For a Soft Drink.) No. 4,658; Apr. 10; v. 237; p. 620.

Channell Chemical Company, Chicago, Ill. "The O-Cedar Result." (For O-Cedar Polish.) No. 4,675; Apr. 24; v. 237; p. 1217.

Channell Chemical Company, Chicago, Ill. "Your Dining Room Furniture." (For O-Cedar Polish.) No. 4,676; Apr. 24; v. 237; p. 1217.

Dunlap, S. D., Batavia, N. Y. "Marbleoid Asphalt Roofing." (For Roofing-Paper.) No. 4,659; Apr. 10; v. 237; p. 620.

Fleischl & Son, Emil, New York, N. Y. "UNXLD Butter." (For Butter.) No. 4,660; Apr. 10; v. 237; p. 620.

Gosman Ginger Ale Co., The, Baltimore, Md. "Gosman's Ginger Ale." (For Ginger-Ale.) No. 4,677; Apr. 24; v. 237; p. 1217.

Hexagon Sewing Machine Company, New York, N. Y. "The Hexagon Sewing Machine." (For Sewing-Machines.) Nos. 4,668–9; Apr. 17; v. 237; p. 916.

Jos. Schlitz Brewing Company, Chicago, Ill. "Don't say Beer,—say Schlitz." (For Beer.) No. 4,670; Apr. 17; v. 237; p. 916.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Ask the American Boy Why He Prefers Kellogg's—Those are the flakes that are delicately toasted and thin—the original toasted corn flakes, tender and crisp, with that appetizing 'come to breakfast' flavor you can't mistake or forget." (For a Food, Specifically Toasted Corn Flakes.) No. 4,661; Apr. 10; v. 237; p. 620.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Be Fair to the Little Folks — —. They Are Worth It. In most homes 'nothing is too good for the children' and the little folks enjoy the tender crispness and delicate flavor of Kellogg's—the Original Toasted Corn Flakes. In other homes the motto is 'anything will do for the children'—even the tough, tasteless imitations of Kellogg's." (For Toasted Corn Flakes.) No. 4,671; Apr. 17; v. 237; p. 916.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Every Helping of Kellogg's Proves How Good Corn Flakes Can Be. Over a thousand-million dishes of Kellogg's Toasted Corn Flakes were eaten last year. No wonder people prefer Kellogg's—the Original. These tender golden flakes are crisp and appetizing, thin delicately toasted, with a flavor tempting to the last spoonful. The right package has this signature: W. K. Kellogg." (For Toasted Corn Flakes.) No. 4,672; Apr. 17; v. 237; p. 916.

Kellogg Toasted Corn Flake Co., Battle Creek, Mich. "Always ready for Kellogg's Toasted Corn Flakes. Children tire of drinking milk; but the wise mother smiles and pours the milk plentifully into a big bowlful of Kellogg's. Children are always ready for Kellogg's—the original Toasted Corn Flakes,—thin, crisp and appetizing." (For Toasted Corn Flakes.) No. 4,673; Apr. 17; v. 237; p. 916.

Reuter, Clifford S., New York, N. Y. "Acorn Brand Quality Furniture." (For Furniture.) No. 4,674; Apr. 17; v. 237; p. 916.

S. Sternau & Company, Inc., Brooklyn, N. Y. "Sterno Canned-Heat." (For Canned-Heat and Sterno Kitchenette.) No. 4,678; Apr. 24; v. 237; p. 1217.

Samoset Chocolates Company, The, Boston, Mass. "Samoset." (For Chocolates.) Nos. 4,679–82; Apr. 24; v. 237; p. 1217.

Selter & Kappes Lithographing Company, New York, N. Y. "Look for the Band." (For Cigars.) No. 4,662; Apr. 10; v. 237; p. 620.

Shredded Wheat Company, The, Niagara Falls, N. Y. "For The Home-Maker." (For Cereal Food, and Particularly for Shredded Wheat.) No. 4,663; Apr. 10; v. 237; p. 620.

Shredded Wheat Company, The, Niagara Falls, N. Y. "For Sturdy Boys And Girls." (For Cereal Food, and Particularly for Shredded Wheat.) No. 4,664; Apr. 10; v. 237; p. 620.

Shredded Wheat Company, The, Niagara Falls, N. Y. "For The Workers Of The World." (For Cereal Food, and Particularly for Shredded Wheat.) No. 4,665; Apr. 10; v. 237; p. 620.

Shredded Wheat Company, The, Niagara Falls, N. Y. "For The Desk-Man." (For Cereal Food, and Particularly for Shredded Wheat.) No. 4,666; Apr. 10; v. 237; p. 620.

DISCLAIMERS.

Laas, Edward, Elgin, and H. H. Sponenburg, Wadsworth, Ill.; disclaimer filed by assignee, Otto R. Barnett. Railway-rail stay. No. 703,602; disclaimer filed Apr. 9, 1917; v. 237; p. 920.

Sulman, Henry L., H. F. Kirkpatrick-Picard, and J. Ballot, London, England; disclaimer filed by assignee, Minerals Separation, Limited. Ore concentration. No. 835,120; disclaimer filed Mar. 28, 1916; v. 237; p. 311.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF APRIL, 1917.

[Abbreviations: "Gaz."—Official Gazette.]

Accelerator, Automatic. J. H. Leitch. No. 1,222,874; Apr. 17; v. 237; p. 729.

Accordion. R. Carbonari. No. 1,221,026; Apr. 3; v. 237; p. 8.

Acetylene-generators, Carbid-feed for. E. M. Rodebaugh. No. 1,221,475; Apr. 3; v. 237; p. 166.

Acoustic diaphragm. W. W. Young. No. 1,224,102; Apr. 24; v. 237; p. 1184.

Acoustic device. R. Whitman. No. 1,223,545; Apr. 24; v. 237; p. 992.

Adding and sorting machine. H. Goerlitz. No. 1,223,690; Apr. 24; v. 237; p. 1045.

Adding-machine. R. L. Burd. No. 1,221,829; Apr. 10; v. 237; p. 320.

Adding-machine. W. J. Pasinski. No. 1,222,661; Apr. 17; v. 237; p. 656.

Adding-machine. W. H. Pike, Jr. No. 1,223,329; Apr. 17; v. 237; p. 881.

Adding-machines and type-writers, Attachment for. F. H. Montgomery. No. 1,221,568; Apr. 3; v. 237; p. 199.

Adhesive coatings and applying them to fabrics without the use of solvents, Preparing. J. Meade. No. 1,222,967; Apr. 17; v. 237; p. 760.

Advertising apparatus. E. Kluchansky. No. 1,223,887; Apr. 24; v. 237; p. 1113.

Advertising or signaling apparatus. J. P. Naylor. No. 1,222,658; Apr. 17; v. 237; p. 654.

Aerial locomotion. C. W. Sirch. No. 1,221,234; Apr. 3; v. 237; p. 82.

Aeroplane, Folding-wing. G. H. Curtiss. No. 1,223,317; Apr. 17; v. 237; p. 877.

Aeroplane-fuselage structure. W. C. Robinson. No. 1,222,140; Apr. 10; v. 237; p. 429.

Agricultural implement for plowing, Power-driven. J. M. Malacove. No. 1,222,047; Apr. 17; v. 237; p. 650.

Agricultural machine. L. P. and U. L. Mathes and C. H. Russell. No. 1,223,818; Apr. 24; v. 237; p. 1089.

Aileron. A. F. Zahm. No. 1,223,017; Apr. 17; v. 237; p. 777.

Air-brake attachment. M. I. Flowers. No. 1,223,267; Apr. 17; v. 237; p. 860.

Air-brake for locomotive-cranes. B. Mullin. No. 1,221,079; Apr. 3; v. 237; p. 27.

Air-brakes, Booster-valve for. W. V. Turner. No. 1,221,926; Apr. 10; v. 237; p. 350.

Air-compressor. W. F. Blanchet. No. 1,221,131; Apr. 3; v. 237; p. 45.

Air-coupling. J. G. Coffield. No. 1,221,682; Apr. 3; v. 237; p. 236.

Air-deflector. H. R. Gregory. No. 1,221,533; Apr. 3; v. 237; p. 187.

Air heater and drier. H. B. Hudepohl. No. 1,221,328; Apr. 3; v. 237; p. 115.

Air-line-pipe connection. L. Steidle. No. 1,221,240; Apr. 3; v. 237; p. 84.

Air-treating system and apparatus. F. White. No. 1,223,331; Apr. 17; v. 237; p. 881.

Air washer, Compressed-. B. C. Donham. No. 1,222,541; Apr. 10; v. 237; p. 572.

Aircraft, Landing-gear for. G. H. Curtiss. No. 1,223,315; Apr. 17; v. 237; p. 876.

Aircraft-propeller. F. H. Royce. No. 1,223,330; Apr. 17; v. 237; p. 881.

Aircraft, Stabilization of. C. A. Johansson. No. 1,223,698; Apr. 24; v. 237; p. 1047.

Airship. W. J. De La Mare. No. 1,221,841; Apr. 10; v. 237; p. 325.

Airship. P. L. Eddy. No. 1,222,939; Apr. 17; v. 237; p. 749.

Airship. A. Extrand. No. 1,221,430; Apr. 3; v. 237; p. 151.

Airships, Steering and propelling means for dirigible. R. R. Waterman. No. 1,222,499; Apr. 10; v. 237; p. 557.

Alarm; *See*—
Fire and burglar alarm.

Alarm-glass. H. K. Hitchcock. No. 1,223,583; Apr. 24; v. 237; p. 1004.

Alarm or signal apparatus. I. E. Stump. No. 1,221,920; Apr. 10; v. 237; p. 353.

Alcohols, Manufacture of. B. T. Brooks and H. Essex. No. 1,221,667; Apr. 3; v. 237; p. 230.

Alkylarylamin production. G. T. Morgan. No. 1,221,077; Apr. 3; v. 237; p. 26.

Alloy. H. S. Cooper. No. 1,221,769; Apr. 3; v. 237; p. 266.

Alloys, Making. I. Ladoff. No. 1,221,874; Apr. 10; v. 237; p. 335.

Alloys, Producing. I. Ladoff. No. 1,221,873; Apr. 10; v. 237; p. 335.

Almond-huller. E. A. Roberts. No. 1,221,598; Apr. 3; v. 237; p. 208.

Aluminum carbid, Producing. M. Barnett and L. Burgess. No. 1,222,593; Apr. 17; v. 237; p. 630.

Aluminum salts from silicates, Obtaining. R. H. McKee. No. 1,222,960; Apr. 17; v. 237; p. 758.

Amalgamating apparatus. C. C. Lane. No. 1,221,461; Apr. 3; v. 237; p. 161.

Amalgamator, Gold-saving. E. P. Mayhew. No. 1,221,347; Apr. 3; v. 237; p. 122.

Ambulance-vehicle. R. W. D. Leslie and G. A. Child. No. 1,223,592; Apr. 24; v. 237; p. 1007.

Amusement apparatus. J. Guillano. No. 1,222,622; Apr. 17; v. 237; p. 641.

Anesthetic-administering apparatus. D. Lambert. No. 1,222,421; Apr. 10; v. 237; p. 530.

Angle-defining gage, Adjustable. I. G. Longley. No. 1,222,959; Apr. 17; v. 237; p. 757.

Animal-shears. L. H. Cribbs. No. 1,221,292; Apr. 3; v. 237; p. 103.

Animal-trap. C. E. Bittle. No. 1,222,063; Apr. 10; v. 237; p. 401.

Animal-trap. L. L. Graham. No. 1,221,312; Apr. 3; v. 237; p. 110.

Animal-trap. A. M. Grubbs. No. 1,223,271; Apr. 17; v. 237; p. 861.

Animal-trap. M. Jakab. No. 1,222,406; Apr. 10; v. 237; p. 524.

Annealing articles. A. L. Pollard. No. 1,222,793; Apr. 17; v. 237; p. 701.

Anode, Keep-alive. D. C. Davis. No. 1,222,537; Apr. 10; v. 237; p. 570.

Anticreeper, Rail-. P. H. McFadden. No. 1,221,203; Apr. 3; v. 237; p. 71.

Antiskidding device. A. Schlopman. No. 1,221,226; Apr. 3; v. 237; p. 80.

Antiskidding device for vehicles. W. H. Putnam. No. 1,223,070; Apr. 17; v. 237; p. 795.

Anvil for micrometer and similar gages. F. O. Jaques, Sr. No. 1,223,325; Apr. 17; v. 237; p. 879.

Apparel, Wearing-. W. C. Coleman. No. 1,222,735; Apr. 17; v. 237; p. 681.

Apron-canvas. A. F. Decker. No. 1,223,772; Apr. 24; v. 237; p. 1073.

Arch construction. W. Dyer. No. 1,223,266; Apr. 17; v. 237; p. 859.

Arch-support. J. M. Callahan. No. 1,221,833; Apr. 10; v. 237; p. 321.

Arch-support. W. M. Scholl. No. 1,222,808; Apr. 17; v. 237; p. 706.

Arch-support, Pneumatic. R. S. Carling. No. 1,223,368; Apr. 24; v. 237; p. 927.

Article-holding rack. S. Patrick. No. 1,221,584; Apr. 3; v. 237; p. 204.

Articulatory joint. F. W. Saworski. No. 1,221,770; Apr. 3; v. 237; p. 266.

Artillery-carriage wheel. A. V. Mitchell. No. 1,222,232; Apr. 10; v. 237; p. 462.

Asbestos or other material, Drying apparatus for. J. N. Bourque. No. 1,222,841; Apr. 17; v. 237; p. 716.

Aspirator. A. P. Leonard. No. 1,221,463; Apr. 3; v. 237; p. 162.

Assembling and banding machine. R. W. Lewis. No. 1,221,196; Apr. 3; v. 237; p. 69.

Atomizing and nebulizing device. H. M. Reichenbach. No. 1,224,020; Apr. 24; v. 237; p. 1157.

Auger, Earth-. D. T. Phillips. No. 1,222,460; Apr. 10; v. 237; p. 543.

Auto attachment. L. C. Griffin and P. A. Jones. No. 1,222,860; Apr. 17; v. 237; p. 723.

Auto-truck body. W. K. Waterman. No. 1,223,912; Apr. 24; v. 237; p. 1120.

Autographic register. C. Bristow. No. 1,223,759; Apr. 24; v. 237; p. 1068.

Autographic register. A. F. Euchenhofer. No. 1,221,521; Apr. 3; v. 237; p. 183.
Automatic switch. J. Bijur. No. 1,222,720; Apr. 17; v. 237; p. 676.
Automatic switch. E. H. Schwarz. No. 1,221,609; Apr. 3; v. 237; p. 212.
Automobile and vehicle signaling device. J. L. M. Kelly. No. 1,222,301; Apr. 10; v. 237; p. 486.
Automobile auxiliary seat. J. C. Gurley. No. 1,223,272; Apr. 17; v. 237; p. 862.
Automobile-bumper. T. A. Hoover. No. 1,221,800; Apr. 3; v. 237; p. 277.
Automobile-control lock. S. W. Baldwin and C. A. Peney. No. 1,223,236; Apr. 17; v. 237; p. 850.
Automobile-controlling mechanism. H. B. Wells and L. W. Lapp. No. 1,221,122; Apr. 3; v. 237; p. 41.
Automobile direction-indicator. F. M. Bowen. No. 1,223,250; Apr. 17; v. 237; p. 855.
Automobile-door. S. A. Pickens. No. 1,223,903; Apr. 24; v. 237; p. 1118.
Automobile-fender. W. C. Reutter. No. 1,223,904; Apr. 24; v. 237; p. 1118.
Automobile-heater. J. R. Creighton. No. 1,221,691; Apr. 3; v. 237; p. 239.
Automobile-hood fastener. E. T. Lark. No. 1,222,549; Apr. 10; v. 237; p. 575.
Automobile-jack. A. F. Lutz. No. 1,223,814; Apr. 24; v. 237; p. 1088.
Automobile-lock. M. R. Golz. No. 1,221,044; Apr. 3; v. 237; p. 14.
Automobile-lock. J. R. Jackson. No. 1,223,052; Apr. 17; v. 237; p. 789.
Automobile-lock. F. H. Knight. No. 1,223,888; Apr. 24; v. 237; p. 1113.
Automobile-lock. R. M. McMahan and J. B. Mauger. No. 1,221,882; Apr. 10; v. 237; p. 340.
Automobile-lock. G. H. Peake. No. 1,222,456; Apr. 10; v. 237; p. 541.
Automobile lock mechanism. G. C. Jensen. No. 1,221,993; Apr. 10; v. 237; p. 378.
Automobile lock mechanism. G. C. Jensen. No. 1,221,994; Apr. 10; v. 237; p. 379.
Automobile-locking device. L. C. Schermerhorn. No. 1,223,906; Apr. 24; v. 237; p. 1119.
Automobile, Protector and lubricant-retainer for the joints of the steering mechanism and other parts of an. C. W. Beck. No. 1,221,015; Apr. 3; v. 237; p. 4.
Automobile-rim protector. E. A. Torrance. No. 1,221,245; Apr. 3; v. 237; p. 86.
Automobile safety device. H. and C. Weinberg. No. 1,222,828; Apr. 17; v. 237; p. 713.
Automobile-seating. C. B. Chatfield. No. 1,222,360; Apr. 10; v. 237; p. 508.
Automobile-signal. A. P. Rothermich. No. 1,224,022; Apr. 24; v. 237; p. 1158.
Automobile signaling device. E. C. Cox. No. 1,222,078; Apr. 10; v. 237; p. 406.
Automobile signaling device. A. W. Johnson. No. 1,223,981; Apr. 24; v. 237; p. 1143.
Automobile signaling device. C. H. Shipman. No. 1,221,772; Apr. 3; v. 237; p. 267.
Automobile-starter. P. M. Lincoln. No. 1,222,222; Apr. 10; v. 237; p. 459.
Automobile-starter. T. E. Reynolds. No. 1,223,292; Apr. 17; v. 237; p. 868.
Automobile steering-coupling. J. G. Porter. No. 1,222,666; Apr. 17; v. 237; p. 657.
Automobile steering device. W. J. Laughlin. No. 1,223,988; Apr. 24; v. 237; p. 1145.
Automobile-steering device. Z. Nielsen. No. 1,222,238; Apr. 10; v. 237; p. 465.
Automobile tractor attachment. E. A. Faut. No. 1,222,750; Apr. 17; v. 237; p. 686.
Automobile-wheel. T. L. Good and T. L. Tandy. No. 1,221,529; Apr. 3; v. 237; p. 186.
Automobiles, Accelerator device for. M. S. Baldwin. No. 1,223,235; Apr. 17; v. 237; p. 850.
Automobiles and other conveyances, Inner tube to be used on. E. M. Pearson. No. 1,223,827; Apr. 24; v. 237; p. 1092.
Automobiles and other vehicles, Locking device for. C. A. Pabst. No. 1,223,825; Apr. 24; v. 237; p. 1092.
Automobiles, Bearing for signals for. G. R. Williams. No. 1,223,917; Apr. 24; v. 237; p. 1122.
Automobiles, Electric control for. C. S. Altschul. No. 1,223,925; Apr. 24; v. 237; p. 1125.
Automobiles, Extension seat-back for. H. D. Chandler. No. 1,221,969; Apr. 10; v. 237; p. 370.
Automobiles, Foot-accelerator for. W. E. Ryan. No. 1,223,619; Apr. 24; v. 237; p. 1018.
Automobiles, Fuel-feeding device for. W. H. Muzzy. No. 1,222,235; Apr. 10; v. 237; p. 463.
Automobiles, Pump attachment for. H. G. Potter. No. 1,222,027; Apr. 10; v. 237; p. 390.
Automobiles, Radius-rod for. B. C. Knudsen. No. 1,221,190; Apr. 3; v. 237; p. 67.
Automobiles, Self-locking mechanism for steering-wheel shafts of. S. A. Cowart. No. 1,221,688; Apr. 3; v. 237; p. 238.
Automobiles, Spring-attaching means for. H. Evans. No. 1,222,087; Apr. 10; v. 237; p. 410.
Automobiles, Theft-preventing mechanism for. J. Frykberg. No. 1,221,435; Apr. 3; v. 237; p. 153.
Automobiles, Transmission mechanism for. L. C. Freeman. No. 1,223,333; Apr. 17; v. 237; p. 882.
Automobiles, Wheel-extricator for. W. W. Turner. No. 1,222,908; Apr. 17; v. 237; p. 739.
Awning. C. J. Truemper. No. 1,222,907; Apr. 17; v. 237; p. 739.
Axle bruce, Front-. R. Brittain. No. 1,221,665; Apr. 3; v. 237; p. 230.
Axle construction, Front-. A. P. Brush. No. 1,223,469; Apr. 24; v. 237; p. 963.
Baby-jumper. J. M. Erwin. No. 1,221,850; Apr. 10; v. 237; p. 327.
Baby-walker. J. S. Lyon. No. 1,223,707; Apr. 24; v. 237; p. 1050.
Baffle-plate. B. C. Calderwood. No. 1,222,733; Apr. 17; v. 237; p. 680.
Bag: *See*—
Hand-bag. Shopping-bag.
Paper bag.
Bag-holder. A. D. Back. (Reissue.) No. 14,279; Apr. 3; v. 237; p. 283.
Bag-holder. L. D. Burtch. No. 1,221,671; Apr. 3; v. 237; p. 282.
Bags, Machine for wire-tying. R. R. Miller. No. 1,222,014; Apr. 10; v. 237; p. 385.
Bags or suitcases, Handle for traveling-. B. Markowitz. No. 1,223,504; Apr. 24; v. 237; p. 978.
Ball-ear for palls. H. L. Staley and W. B. Simmons. No. 1,221,619; Apr. 3; v. 237; p. 216.
Baker's peel. L. Schlager. No. 1,221,914; Apr. 10; v. 237; p. 351.
Baking materials, Device for testing the spreading value of. J. P. Bachman. No. 1,222,590; Apr. 17; v. 237; p. 630.
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Detector-bar.
Barrel-chime. C. H. Wegner, G. A. Loescher, and B. Plowright. No. 1,221,120; Apr. 3; v. 237; p. 41.
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Bath-tub heater, Electric. J. W. Purnell. 1,222,669; Apr. 17; v. 237; p. 659.
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Berry-box, Folding. C. H. Proctor. No. 1,223,202; Apr. 17; v. 237; p. 841.
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Connection-box.
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Fire-box.
Folding box.
Fuel-box.
Jewel-box.
Junction or outlet box.
Knockdown box.
Match-box.
Mess and ice box.
Meter-box.
Milk and bread box.
Miter-box.
Mold-box.
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Camera, Moving-picture. C. Kesses. No. 1,223,341; Apr. 17; v. 237; p. 886.
Camera, Photographic. M. Lichtman. No. 1,222,310; Apr. 10; v. 237; p. 489.
Camera, Reflecting-. W. F. Folmer. No. 1,221,304; Apr. 3; v. 237; p. 106.
Camera-shutter operator. R. B. Leavitt. No. 1,223,807; Apr. 24; v. 237; p. 1085.
Camera support, Motion-picture-. W. A. P. Cathcart. No. 1,221,677; Apr. 3; v. 237; p. 234.
Cameras, Autographic attachment for. S. C. Cooper. No. 1,222,531; Apr. 10; v. 237; p. 567.
Cameras, Automatic film-winding mechanism for. H. B. Meredith. No. 1,221,558; Apr. 3; v. 237; p. 196.
Cameras, Film-box for motion-picture. C. E. Akeley. No. 1,223,332; Apr. 17; v. 237; p. 882.
Cameras, Flash-light-ignition system for. C. A. Lare. No. 1,221,063; Apr. 3; v. 237; p. 20.
Camping outfit. G. Shetokin. No. 1,224,098; Apr. 24; v. 237; p. 1183.
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Cigar-can.
Garbage-can.
Milk-can.
Cam attachment. J. W. Bronner. No. 1,221,666; Apr. 3; v. 237; p. 230.

Can ends for hermetic sealing to can-bodies, Preparing. J. A. Gray. No. 1,223,784; Apr. 24; v. 237; p. 1077.
Can-opener. R. H. Emery. No. 1,223,485; Apr. 24; v. 237; p. 970.
Can-opener. L. Kiral. No. 1,221,745; Apr. 3; v. 237; p. 257.
Can opener and holder. J. H. Haack and E. Mietoff. No. 1,221,724; Apr. 3; v. 237; p. 250.
Can-seaming machine. H. H. Hood. No. 1,222,955; Apr. 17; v. 237; p. 755.
Can-stamper. S. Pittaluga. No. 1,223,610; Apr. 24; v. 237; p. 1014.
Cans and similar containers, Ball-bearing handle for milk-. S. Hough. No. 1,223,880; Apr. 24; v. 237; p. 1110.
Candlestick, Electric. A. J. Sanford. No. 1,222,676; Apr. 17; v. 237; p. 661.
Candy-coating machine. W. Fritz. No. 1,223,687; Apr. 24; v. 237; p. 1043.
Candy making and apparatus for same, Stick-. A. E. Dempsey and O. Steinbaugh. No. 1,221,423; Apr. 3; v. 237; p. 148.
Cap, Miner's. L. McClasky. No. 1,223,991; Apr. 24; v. 237; p. 1146.
Cap, Nurse's. H. Cutler. No. 1,223,854; Apr. 24; v. 237; p. 1101.
Car. H. W. Jacobs and E. D. Levy. No. 1,221,740; Apr. 3; v. 237; p. 255.
Car, air, and electric coupling mechanism, Automatic. C. H. Tomlinson. No. 1,223,223; Apr. 17; v. 237; p. 846.
Car and other seats, Advertising-card holder for. J. J. Ferry. No. 1,222,089; Apr. 10; v. 237; p. 410.
Car and similar vehicle, Street-. L. P. Lipps. No. 1,223,186; Apr. 17; v. 237; p. 837.
Car-brake. C. Cron and R. L. Dingle. No. 1,222,935; Apr. 17; v. 237; p. 748.
Car, Coal-. A. Papp and J. Christof. No. 1,224,094; Apr. 24; v. 237; p. 1181.
Car construction. J. S. Worth. No. 1,224,052; Apr. 24; v. 237; p. 1168.
Car-coupling-locking mechanism. W. J. Regan. No. 1,222,992; Apr. 17; v. 237; p. 768.
Car-coupling-locking mechanism. W. J. Regan. No. 1,222,993; Apr. 17; v. 237; p. 769.
Car dead-block. C. S. Shallenberger. No. 1,221,229; Apr. 3; v. 237; p. 81.
Car-diaphragm. E. E. Whitmore. No. 1,221,399; Apr. 3; v. 237; p. 140.
Car-door. A. Copony. No. 1,221,971; Apr. 10; v. 237; p. 371.
Car door, Mine-. E. F. Tubach. No. 1,221,112; Apr. 3; v. 237; p. 37.
Car-door-operating mechanism. J. F. McElroy. No. 1,221,202; Apr. 3; v. 237; p. 71.
Car, Dump-. C. H. Clark. No. 1,223,148; Apr. 17; v. 237; p. 823.
Car end. J. S. Worth and C. Brecht. No. 1,224,051; Apr. 24; v. 237; p. 1167.
Car guard, Coal-. C. K. Frederick. No. 1,221,434; Apr. 3; v. 237; p. 152.
Car hand-brake, Railway-. C. R. Lord. No. 1,223,891; Apr. 24; v. 237; p. 1114.
Car-heater, Electric. W. S. Hammond, Jr. No. 1,223,968; Apr. 24; v. 237; p. 1139.
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Car-loading machine, Box-. G. Manierre. No. 1,223,085; Apr. 17; v. 237; p. 800.
Car or vehicle bodies and preparing the same, Metal covering for. A. Meyer. No. 1,221,561; Apr. 3; v. 237; p. 197.
Car, Railway-. J. S. Worth and C. Brecht. No. 1,224,050; Apr. 24; v. 237; p. 1167.
Car-replacer. J. P. Kopp. No. 1,222,956; Apr. 17; v. 237; p. 756.
Car-replacing frog. J. H. Crites. No. 1,223,037; Apr. 17; v. 237; p. 784.
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Car-roof. C. C. Murphy. No. 1,221,892; Apr. 10; v. 237; p. 343.
Car-roof frames, Carline for. J. A. Costello. (Reissue.) No. 14,281; Apr. 3; v. 237; p. 283.
Car safety device, Railway-. J. D. King. No. 1,222,108; Apr. 10; v. 237; p. 418.
Car-seat. G. B. Kohler. No. 1,221,748; Apr. 3; v. 237; p. 258.
Car side bearing, Railway-. J. F. O'Connor. No. 1,222,977; Apr. 17; v. 237; p. 763.
Car, Tilting side-dump. C. H. Clark. No. 1,223,031; Apr. 17; v. 237; p. 782.
Car underframing. J. R. Mitchell. No. 1,222,970; Apr. 17; v. 237; p. 761.
Cars, Automatic platform for street-. E. C. Rudd. No. 1,221,908; Apr. 10; v. 237; p. 349.
Cars, Current-collector for electric. J. McMillan and C. V. Greenamyer. No. 1,221,762; Apr. 3; v. 237; p. 263.
Cars, Driving means for motor-driven railway-. S. J. Dunkley. No. 1,222,610; Apr. 17; v. 237; p. 637.
Cars, Signal device for electric-railway. J. E. Keppel. No. 1,222,634; Apr. 17; v. 237; p. 646.
Cars, Tare-weight indicator for freight-. F. C. Maegly. No. 1,221,465; Apr. 3; v. 237; p. 163.
Cars, Upper framing for insulated steel railway-. H. F. Bethune and R. J. O'Neill. No. 1,221,960; Apr. 10; v. 237; p. 367.
Cars, Wind-screen for side. A. Atkinson. No. 1,223,551; Apr. 24; v. 237; p. 994.
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Carbureter. R. B. Benjamin. No. 1,221,956; Apr. 10; v. 237; p. 366.
Carbureter. A. C. Bennett. No. 1,223,662; Apr. 24; v. 237; p. 1033.
Carbureter. E. A. Bessom. No. 1,221,502; Apr. 3; v. 237; p. 176.
Carbureter. W. C. Carter. No. 1,222,848; Apr. 17; v. 237; p. 719.
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Carbureter. C. L. Rayfield. No. 1,222,131; Apr. 10; v. 237; p. 425.
Carbureter. H. M. Reichenbach. No. 1,222,672; Apr. 17; v. 237; p. 659.
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Carbureters, Manually-controlled auxiliary air-inlet for. J. J. Collins. No. 1,223,670; Apr. 24; v. 237; p. 1036.
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Carpet-sweepers, Wet-cleaning attachment for. F. Hodschar. No. 1,221,324; Apr. 3; v. 237; p. 114.
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Bicycle-carrier.
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Luggage-carrier.
Safety-carrier.
Carton. M. T. Ash. No. 1,223,232; Apr. 17; v. 237; p. 849.
Cartridges, Primer-retainer for dynamite-. H. Comstock. No. 1,223,035; Apr. 17; v. 237; p. 783.
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Bookcase.
Broom-case.
Card-case.
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Cigarette-case.
Egg-shipping case.
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Cash-receipt and the like register. H. Buchanan. No. 1,221,670; Apr. 3; v. 237; p. 231.
Cash-registers, Money-paying attachment for. S. J. Bachardy and J. Kiss. No. 1,223,354; Apr. 24; v. 237; p. 924.
Cash-registers, Supporting-pedestal for. P. De Chime. No. 1,222,739; Apr. 17; v. 237; p. 682.
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Caster. O. A. Klinsmann. No. 1,222,414; Apr. 10; v. 237; p. 527.
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Casters, Expanston-fastening for. J. W. Hilfrank. No. 1,223,877; Apr. 24; v. 237; p. 1109.
Casting and making the same, Forged. A. W. Morris. No. 1,222,786; Apr. 17; v. 237; p. 698.
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Cement-applying machine. W. F. Lautenschlager. No. 1,223,403; Apr. 24; v. 237; p. 940.
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Centrifugal brake for reproducing mechanisms. H. A. Myers. No. 1,224,091; Apr. 24; v. 237; p. 1180.
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Cereals and cereal products, Treating. E. E. Werner. No. 1,222,830; Apr. 17; v. 237; p. 713.
Chain. L. Wirtz. No. 1,223,652; Apr. 24; v. 237; p. 1029.
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Chain-drive motor. J. B. Allfree. No. 1,222,588; Apr. 17; v. 237; p. 629.
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Change-speed device. J. W. T. Gutt. No. 1,223,966; Apr. 24; v. 237; p. 1139.
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Christmas-tree stand. G. W. Everts. No. 1,222,273; Apr. 10; v. 237; p. 476.
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Cigarette-wrappers and tobacco, Receptacle for. S. H. Adams. No. 1,222,254; Apr. 10; v. 237; p. 470.
Cinematograph for natural-color projections by the three-color process. L. Gaumont. No. 1,223,381; Apr. 24; v. 237; p. 932.
Cinematographic apparatus, Shutter for. A. and L. Chronik. No. 1,223,147; Apr. 17; v. 237; p. 822.
Cinematographic films, Apparatus for treating. P. D. Brewster. No. 1,223,664; Apr. 24; v. 237; p. 1034.
Cinematographic stencils, Machine for cutting. M. Vandal. No. 1,222,539; Apr. 24; v. 237; p. 990.
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Citrate soluble phosphates, Producing. J. G. Lipman. No. 1,222,112; Apr. 10; v. 237; p. 419.
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Mirror and picture frame clamp.
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Comb-cleaner. Silver-cleaner.
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Seed-cleaner. Vacuum-cleaner.
Cleaner and scalder, J. C. McIntyre. No. 1,222,008; Apr. 10; v. 237; p. 383.
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Paper-clip. Resilient holding-clip.
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Earth-closet.
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Clutch-levers, Locking means for. P. L. Starr. N. 1,224,034; Apr. 24; v. 237; p. 1161.
Clutch mechanism, Friction-. L. E. Younle. No. 1,221,127; Apr. 3; v. 237; p. 43.
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Coats, &c., Device for holding protectors upon the edges of. J. R. Waters. No. 1,222,250; Apr. 10; v. 237; p. 469.
Coating the yarn elements from which a laminated cohesive interwound fabric band is constructed, Automatically-acting device for. L. A. Subers. No. 1,223,636; Apr. 24; v. 237; p. 1024.
Coatings of fusible substances, Making. G. Stolle. No 1,221,104; Apr. 3; v. 237; p. 35.
Cock. J. A. Bump. No. 1,222,068; Apr. 10; v. 237; p. 403.
Cock, Gas-. L. K. Schwall. No. 1,221,771; Apr. 3; v. 237; p. 266.
Coil-spring. J. B. Knudsen. (Reissue.) No. 14,287; Apr. 17; v. 237; p. 892.
Coiling apparatus. W. R. Webster. No. 1,222,827; Apr. 17; v. 237; p. 712.
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Fountain-comb.
Comb-cleaner. A. Svenson No. 1,222,484; Apr. 10; v. 237; p. 552.
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Compasses, Attachment for gyroscopic. G. A. Rossiter and J. E. Beattie. No. 1,221,477; Apr. 3; v. 237; p. 167.
Composite bench. S. H. Gartrell. No. 1,223,576; Apr. 24; v. 237; p. 1002.
Compressible-fluid washer. A. W. Lissauer. No. 1,223,082; Apr. 17; v. 237; p. 799.
Compressors and pumps, Regulating mechanism for centrifugal. O. Banner. No. 1,222,352; Apr. 10; v. 237; p. 504.
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Concrete construction, Form for. H. J. Baker. No. 1,222,349; Apr. 10; v. 237; p. 504.
Concrete construction, Reinforced. E. Smulski. No. 1,223,529; Apr. 24; v. 237; p. 987.
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Concrete paving, Joint-filler for. L. R. Ferguson. No. 1,223,045; Apr. 17; v. 237; p. 787.
Concrete-pole machine, Centrifugal. W. H. Llenesch. No. 1,222,958; Apr. 17; v. 237; p. 757.
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Crushing or grinding machine. G. H. Fraser. No. 1,222,382; Apr. 10; v. 237; p. 515.
Crushing or grinding machine. G. H. Fraser. No. 1,222,383; Apr. 10; v. 237; p. 515.
Crushing or grinding machine. G. H. Fraser. No. 1,222,384; Apr. 10; v. 237; p. 516.
Crushing or grinding machine. G. H. Fraser. No. 1,222,385; Apr. 10; v. 237; p. 516.
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Cream-cup.
Drinking-cup.
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Dredge-cutter.
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Weed-cutter.
Cutter-head. E. S. Jesseph. No. 1,222,871; Apr. 17; v. 237; p. 728.
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Detonator. J. Keller. No. 1,221,454; Apr. 3; v. 237; p. 159.
Detonator for ordnance-shells. J. Keller. No. 1,221,453; Apr. 3; v. 237; p. 159.
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Die. E. N. Breitung. No. 1,223,365; Apr. 24; v. 237; p. 927.
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Dining-table, Self-serving. H. Strandberg. No. 1,224,035; Apr. 24; v. 237; p. 1162.
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Exercising device. C. A. Boyd. No. 1,222,924; Apr. 17; v. 237; p. 745.
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Explosive engine. M. C. Kessler. No. 1,221,545; Apr. 3; v. 237; p. 191.
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Cotter-pin extractor. Stopper-extractor.
Eye-protector. G. H. Day. No. 1,221,977; Apr. 10; v. 237; p. 373.
Fabric for mats, rugs, &c. F. W. Tully. No. 1,223,537; Apr. 24; v. 237; p. 990.
Fan, Dust-separating. J. McDaniel. No. 1,222,779; Apr. 17; v. 237; p. 695.
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Fastener, Snap-. W. J. Galt. No. 1,222,096; Apr. 10; v. 237; p. 414.
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Faucet. N. V. Haughton. No. 1,222,865; Apr. 17; v. 237; p. 725.
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Feed-water injectors, Heating attachment for. E. A. Hill. No. 1,221,980; Apr. 10; v. 237; p. 377.
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File, binder, or the like. W. A. Cooke, Jr. No. 1,222,074; Apr. 10; v. 237; p. 405.
File, binder, or the like. W. A. Cooke. No. 1,222,075; Apr. 10; v. 237; p. 405.
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Filter-press cloth. H. H. Hanson. No. 1,222,100; Apr. 10; v. 237; p. 415.
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Cycle-frame. Receptacle-frame.
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Galvanic cell. M. L. Kaplan. No. 1,221,062; Apr. 3; v. 237; p. 20.

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Door-hanger. Screen-hanger.
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Hat-hanger. Shaft-hanger.
Lamp-hanger. Silo-door hanger.
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Harness-hook and line-tightener, Combined. C. Seivert. No. 1,222,684; Apr. 17; v. 237; p. 664.
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Carbonic-acid indicator. Speed-indicator.
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Magneto. A. H. Neuland. No. 1,221,208; Apr. 3; v. 237; p. 74.
Magneto-distributers, Mount for. E. J. J. Salmson. No. 1,221,607; Apr. 3; v. 237; p. 211.
Mail-carrier's case, Rural-. G. Campbell. No. 1,223,474; Apr. 24; v. 237; p. 966.
Mail catching and delivering apparatus. J. B. Cary. No. 1,223,852; Apr. 24; v. 237; p. 1100.
Mail-catching device. H. Crisler. No. 1,221,147; Apr. 3; v. 237; p. 51.
Mail-crane. H. H. Pollock. No. 1,222,026; Apr. 10; v. 237; p. 390.
Mailing-card, Identifying. E. G. Pickering. No. 1,221,903; Apr. 10; v. 237; p. 347.
Mainspring-drives, Equalizer for. F. Gundorph. No. 1,221,986; Apr. 10; v. 237; p. 376.
Mandrel press. W. J. O. Johnson. No. 1,222,631; Apr. 17; v. 237; p. 645.
Marking implement. E. A. Hawthorne. No. 1,222,948; Apr. 17; v. 237; p. 753.
Mask, Base-ball. J. Lajcak. No. 1,222,002; Apr. 10; v. 237; p. 381.
Mask, Physician's. H. A. Hecht. No. 1,221,446; Apr. 3; v. 237; p. 156.
Mask, Protective. S. Synohubyk. No. 1,224,039; Apr. 24; v. 237; p. 1163.
Massage apparatus. J. Sabatino. No. 1,222,472; Apr. 10; v. 237; p. 548.
Massage-apparatus motor. G. F. Nelson. No. 1,224,008; Apr. 24; v. 237; p. 1153.
Mast, Telescopic. M. Guichard. No. 1,221,723; Apr. 3; v. 237; p. 250.
Mat: *See*—
Ground-mat.
Link mat.
Match-box. F. Heesh. No. 1,221,732; Apr. 3; v. 237; p. 253.
Match-box. C. F. Mann. No. 1,223,189; Apr. 17; v. 237; p. 837.
Match-box attachment. C. H. Troup. No. 1,221,488; Apr. 3; v. 237; p. 170.
Match-holder. J. F. O'Malley. No. 1,221,581; Apr. 3; v. 237; p. 204.
Matrices, Making. E. R. Richards. No. 1,222,138; Apr. 10; v. 237; p. 428.
Matrix-distributing mechanism. D. Petri-Palmedo. No. 1,221,088; Apr. 3; v. 237; p. 30.
Mattress-tightener, Mechanical. R. Joy. No. 1,222,297; Apr. 10; v. 237; p. 484.
Mattress, Wire. F. M. Tinkham. No. 1,221,392; Apr. 3; v. 237; p. 137.
Measuring device. C. Wilder. No. 1,222,168; Apr. 10; v. 237; p. 439.
Measuring device, Liquid-. A. G. Stohn and F. Lacroix. No. 1,223,120; Apr. 17; v. 237; p. 813.
Measuring device, Wire-. L. Kramer. No. 1,222,957; Apr. 17; v. 237; p. 756.
Measuring instrument. E. Brunton. No. 1,221,668; Apr. 3; v. 237; p. 231.
Measuring instrument, Electrical. W. Anthony. No. 1,223,306; Apr. 17; v. 237; p. 873.
Measuring instruments, Temperature-compensating device for thermo-electric. W. H. Bristol. (Reissue.) No. 14,280; Apr. 3; v. 237; p. 283.
Meat food products, Pickling, curing, treating, and handling. A. N. Benn. No. 1,221,957; Apr. 10; v. 237; p. 366.
Meat of sea mammals fit for food, Making the. G. A. Holzapfel. No. 1,223,790; Apr. 24; v. 237; p. 1079.
Meat-support. R. Gorham and C. G. Cary. No. 1,222,390; Apr. 10; v. 237; p. 518.
Mechanical movement. M. G. Armstrong. No. 1,222,712; Apr. 17; v. 237; p. 673.
Mechanical movement. W. S. Miller. No. 1,221,471; Apr. 3; v. 237; p. 165.
Mechanical movement. C. F. Schweitzer. No. 1,221,097; Apr. 3; v. 237; p. 33.
Mechanical-movement mechanism. A. F. Miller. No. 1,223,509; Apr. 24; v. 237; p. 979.
Medical apparatus. O. Hammerstein. No. 1,222,945; Apr. 17; v. 237; p. 752.
Medicinal-vapor generating and fumigating apparatus. J. F. Class. No. 1,223,032; Apr. 17; v. 237; p. 782.
Mess and ice box. C. C. Edwards. No. 1,221,711; Apr. 3; v. 237; p. 246.
Metal articles, Pickling. A. F. Hoffman and W. M. Parkin. No. 1,221,735; Apr. 3; v. 237; p. 254.
Metal bodies, Producing. C. L. Gebauer. No. 1,223,322; Apr. 17; v. 237; p. 878.
Metal-coated sheet. W. G. Koch. No. 1,223,399; Apr. 24; v. 237; p. 938.
Metal composition. H. K. Sandell. No. 1,223,002; Apr. 17; v. 237; p. 772.
Metal lap, External. L. S. Rasmussen and H. B. Carlson. No. 1,221,472; Apr. 3; v. 237; p. 165.
Metal manufacture, Expanded-. N. E. Clark. No. 1,224,104; Apr. 24; v. 237; p. 1185.
Metal tie. W. J. McGirr. No. 1,223,061; Apr. 17; v. 237; p. 792.
Metals and preventing them from corroding, Cleaning. J. H. Gravell. No. 1,221,441; Apr. 3; v. 237; p. 155.
Metals and preventing them from corroding, Cleaning. J. H. Gravell. No. 1,221,442; Apr. 3; v. 237; p. 155.
Metals of improved quality, Apparatus and method for producing. H. M. Chance. No. 1,221,139; Apr. 3; v. 237; p. 48.
Metallic insert. F. G. and H. O. McMillan. No. 1,223,595; Apr. 24; v. 237; p. 1009.
Metallic-spoked wheel. F. A. Frommann. No. 1,222,094; Apr. 10; v. 237; p. 413.
Metallic tie and rail-fastener. F. Dubiel, A. Jurklewicz, and J. Stiko. No. 1,222,609; Apr. 17; v. 237; p. 636.
Metallic tie and rail-fastener. S. and P. Laslewicz. No. 1,223,805; Apr. 24; v. 237; p. 1085.
Metallic tie and rail-fastener. F. Schramko and J. Prazinka. No. 1,221,096; Apr. 3; v. 237; p. 32.
Meter: *See*—
Electric meter.
Electricity-meter.
Fluid-meter.
Gas-meter.
Liquid-meter.
Rope-meter.
Meter-box. T. J. Kerfoot. No. 1,222,411; Apr. 10; v. 237; p. 526.
Meter operations, System for recording. C. I. Hall. No. 1,221,443; Apr. 3; v. 237; p. 155.
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Meters, Device for recording the readings of. A. Frisch. No. 1,223,686; Apr. 24; v. 237; p. 1042.
Microscope. H. N. Ott. No. 1,223,197; Apr. 17; v. 237; p. 839.
Microscope adjustment mechanism. H. N. Ott. No. 1,223,198; Apr. 17; v. 237; p. 840.
Milk and bread box. H. W. Jonson. No. 1,223,178; Apr. 17; v. 237; p. 834.
Milk-can. J. W. Fowler. No. 1,222,279; Apr. 10; v. 237; p. 479.
Milk, Treating. C. H. Campbell. No. 1,221,024; Apr. 3; v. 237; p. 7.
Milking-machine. H. W. Bartram and A. Gillies. No. 1,221,654; Apr. 3; v. 237; p. 226.
Milking-machine. D. T. and L. P. Sharples. No. 1,221,483; Apr. 3; v. 237; p. 169.
Milking-machine. J. Wielnert. No. 1,223,334; Apr. 17; v. 237; p. 883.
Milking-machine apparatus. J. W. L. Warren. No. 1,222,826; Apr. 17; v. 237; p. 712.
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Grinding-mill.
Rolling-mill.
Milling-cutter, Formed. O. G. Simmons. No. 1,221,613; Apr. 3; v. 237; p. 214.
Milling-machines and lathes, Spindle for. L. H. Cormier. No. 1,223,934; Apr. 17; v. 237; p. 748.
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Mining-machine drills, Chair-support structure for. F. Funk. No. 1,222,752; Apr. 17; v. 237; p. 686.
Mining system. G. G. Hughes and J. F. McDuffie. No. 1,221,860; Apr. 10; v. 237; p. 331.
Mirror and picture frame clamp. G. M. Rowland. No. 1,221,601; Apr. 3; v. 237; p. 209.
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Concrete-mixer.
Mixing-machine. A. J. Cropp. No. 1,223,314; Apr. 17; v. 237; p. 876.
Molstener, Finger-. F. S. Mather. No. 1,223,996; Apr. 24; v. 237; p. 1148.
Molstener, Stamp-. C. M. Pratt. No. 1,221,587; Apr. 3; v. 237; p. 205.

Mold: *See*—
Bulb-mold.
Concrete-structure mold.
Ingot-mold.
Tire-mold.
Mold-box. S. R. Brygider. No. 1,221,283; Apr. 3; v. 237; p. 109.
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Molding device. L. R. Krug. No. 1,221,459; Apr. 3; v. 237; p. 161.
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Chain-drive motor.
Electric motor.
Fluid-motor.
Massage-apparatus motor.
Pneumatic motor.
Spring-motor.
Wave-motor.
Motor. A. G. Zwarich. No. 1,222,710; Apr. 17; v. 237; p. 673.
Motor and support for display-forms and the like. M. A. Helmann. No. 1,223,876; Apr. 24; v. 237; p. 1109.
Motor-controller. C. T. Henderson. No. 1,222,207; Apr. 10; v. 237; p. 453.
Motor hydrocarbon-supply device. H. L. Patterson. No. 1,222,576; Apr. 10; v. 237; p. 585.
Motor or pump. T. A. Killman. No. 1,221,333; Apr. 3; v. 237; p. 117.
Motor, Running a synchronous. A. R. Bullock. No. 1,223,472; Apr. 24; v. 237; p. 965.
Motor-shafts, Counterbalance for. J. W. Ridgway. No. 1,223,346; Apr. 17; v. 237; p. 888.
Motor system, Electric-. C. de Kand6. No. 1,222,539; Apr. 10; v. 237; p. 571.
Motors, Controller for and method of regulating electric. H. E. Dey. No. 1,222,852; Apr. 17; v. 237; p. 720.
Motors, Means for collectively actuating and controlling alternating-current. J. L. Routin. No. 1,221,095; Apr. 3; v. 237; p. 32.
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Mowing-machines, Dividing-board for. A. A. Dorsey. No. 1,221,980; Apr. 10; v. 237; p. 374.
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Multiplying-machine. J. P. Cluley. No. 1,221,027; Apr. 3; v. 237; p. 8.
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Musical instrument, Pneumatically-operated. J. P. Eustis and A. T. Brown. No. 1,221,162; Apr. 3; v. 237; p. 56.
Musical instrument, Pneumatically-played. G. K. Hennig. No. 1,223,048; Apr. 17; v. 237; p. 788.
Nail-distributer, Portable. R. B. Holland. No. 1,221,736; Apr. 3; v. 237; p. 254.
Nail-making machine. D. H. McClelland. No. 1,221,555; Apr. 3; v. 237; p. 195.
Nails, spikes, and the like, Extractor for pulling headless. E. Hill. No. 1,221,322; Apr. 3; v. 237; p. 114.
Nailing-block. E. B. Cosby. No. 1,223,939; Apr. 24; v. 237; p. 1129.
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Nest for hens, Trap-. J. A. Jones. No. 1,221,540; Apr. 3; v. 237; p. 180.
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Newspaper supplementing or inserting machine. W. J. Kirkpatrick and G. W. Farley. No. 1,223,398; Apr. 24; v. 237; p. 938.
Nippers, Cushioning device for combing-. C. L. Lytton. No. 1,222,880; Apr. 17; v. 237; p. 731.
Nose-protector. A. H. Wadhams. No. 1,221,778; Apr. 3; v. 237; p. 269.
Nozzle. A. W. Lissauer. No. 1,223,081; Apr. 17; v. 237; p. 799.
Numbering mechanism. A. Krauth. No. 1,222,306; Apr. 10; v. 237; p. 487.
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Nut-lock. F. W. Brice. No. 1,222,843; Apr. 17; v. 237; p. 717.
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Nut-lock. A. H. Wegener. (Reissue.) No. 14,291; Apr. 24; v. 237; p. 1196.
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Nuts for bolts, Making. J. W. Murray. No. 1,223,604; Apr. 24; v. 237; p. 1011.
Nutcracker. H. J. Sauvage. No. 1,222,330; Apr. 10; v. 237; p. 497.
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Oil and making the same, L. A. Coleman. No. 1,223,150; Apr. 17; v. 237; p. 824.
Oil-burner. W. H. Boyd. No. 1,223,141; Apr. 17; v. 237; p. 820.
Oil-burner. H. E. Brown. No. 1,223,337; Apr. 17; v. 237; p. 884.
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Oil-burning heater. W. C. Adams. No. 1,222,346; Apr. 10; v. 237; p. 503.
Oil-cup, Self-closing. D. H. Twaits. No. 1,222,909; Apr. 17; v. 237; p. 739.
Oil engine, Crude or heavy. B. Johnson. No. 1,223,793; Apr. 24; v. 237; p. 1081.
Oil-gage for internal-combustion engines, Safety. J. C. McMurray. No. 1,221,812; Apr. 3; v. 237; p. 282.
Oil-pan. H. C. Stuart. No. 1,223,442; Apr. 24; v. 237; p. 954.
Oil-purifier. J. F. Robertson. No. 1,223,423; Apr. 24; v. 237; p. 948.
Oil, Treatment of crude. W. S. Barnickel. No. 1,223,659; Apr. 24; v. 237; p. 1032.
Oils and residues of same, Apparatus for treating natural. W. S. Barnickel. No. 1,223,660; Apr. 24; v. 237; p. 1032.
Oils for increasing the yield of light-gravity oils, Treating mineral. D. T. Day. No. 1,221,698; Apr. 3; v. 237; p. 242.
Oiling device, Hog-. R. W. Carson. No. 1,221,675; Apr. 3; v. 237; p. 233.
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Onion-set topper and cleaner. G. C. Curtis. No. 1,223,941; Apr. 24; v. 237; p. 1130.
Ophthalmic mounting. E. D. Tillyer. No. 1,222,049; Apr. 10; v. 237; p. 397.
Orchard-heater. J. L. Quinn. No. 1,222,794; Apr. 17; v. 237; p. 701.
Ore and metallurgical products, Sintering fine oxid. H. Bittmann. No. 1,221,962; Apr. 10; v. 237; p. 368.
Ore-classifier. E. C. Robinson. No. 1,223,523; Apr. 24; v. 237; p. 984.
Ore-concentrator. J. H. Brittain. No. 1,224,066; Apr. 24; v. 237; p. 1172.
Ore separating or concentrating apparatus. D. Cole. No. 1,223,033; Apr. 17; v. 237; p. 782.
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Ores, Desulfurizing. H. F. Wierum. No. 1,222,252; Apr. 10; v. 237; p. 470.
Ores, Treating vanadium-bearing. R. S. Davis. No. 1,223,567; Apr. 24; v. 237; p. 999.
Ores, Treatment of refractory auriferous. J. H. Niemann. No. 1,222,789; Apr. 17; v. 237; p. 699.
Oscillator. C. D. Herrold. No. 1,222,761; Apr. 17; v. 237; p. 690.
Oscillatory movement, Means for imparting. E. H. Bridenbaugh. No. 1,222,727; Apr. 17; v. 237; p. 678.
Outlet-boxes, Means for attaching electrical appliances to conduit. C. H. Bissell. No. 1,223,467; Apr. 24; v. 237; p. 963.
Outrigger-adjuster. J. Neville. No. 1,223,512; Apr. 24; v. 237; p. 981.
Oxygen and making the same, Compound containing active. O. Liebknecht. No. 1,222,640; Apr. 17; v. 237; p. 648.
Oxygen compounds of nitrogen from ammonia, Production of. N. Busvold. No. 1,222,928; Apr. 17; v. 237; p. 746.
Package and bundle tie. J. L. Pearson. No. 1,222,887; Apr. 17; v. 237; p. 733.
Package-filling machine. K. Gammel. No. 1,222,199; Apr. 10; v. 237; p. 450.
Package-tie. J. D. Johnson. No. 1,221,741; Apr. 3; v. 237; p. 256.
Package-tie. E. A. McSwiney. No. 1,223,596; Apr. 24; v. 237; p. 1009.
Packaging materials, Machine for. G. W. Gwinn. No. 1,221,313; Apr. 3; v. 237; p. 110.
Packing catalytically-useful substances. N. Sulzberger. No. 1,223,123; Apr. 17; v. 237; p. 813.
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Packing expander, Piston-. G. Christenson. No. 1,222,362; Apr. 10; v. 237; p. 508.
Packing expander, Piston-. G. Christenson. No. 1,222,363; Apr. 10; v. 237; p. 509.
Packing for sleeve-valves of engines. C. T. Bangs. No. 1,222,351; Apr. 10; v. 237; p. 504.
Packing, Metallic. V. E. Nelson. No. 1,223,605; Apr. 24; v. 237; p. 1012.
Packing of magnetic objects of oblong shape, Machine for facilitating the. O. Gamper. (Reissue.) No. 14,290; Apr. 24; v. 237; p. 1193.
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Pad: *See*—
Heating-pad.
Padlock, Keyless. J. Karin. No. 1,223,983; Apr. 24; v. 237; p. 1144.
Padlock, Permutation-. E. M. O. Descalles. No. 1,222,082; Apr. 10; v. 237; p. 408.
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Pail, Milk-. W. G. Parmele. No. 1,221,583; Apr. 3; v. 237; p. 204.
Paint or enameling material, Making a. L. Orustein. No. 1,222,980; Apr. 17; v. 237; p. 764.
Paint-removing compound and making the same. F. E. Posson. No. 1,223,518; Apr. 24; v. 237; p. 983.
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Baking-pan. Multiple pan.
Dust-pan. Oil-pan.
Pane-fastening. A. G. Peters. No. 1,223,609; Apr. 24; v. 237; p. 1014.
Panel structure. W. Siebert. No. 1,223,431; Apr. 24; v. 237; p. 950.
Panels made of enameled or vitrified sheet metal designed to be used as covering means for railways, carriages, tramways, automobiles, and the like, Manufacture of. A. Meyer. No. 1,221,562; Apr. 3; v. 237; p. 198.
Paper bag. E. N. Simoneaux. No. 1,221,614; Apr. 3; v. 237; p. 214.
Paper-bending machine. C. W. Mears. No. 1,222,437; Apr. 10; v. 237; p. 535.
Paper-bottle machines, Neck-forming mechanism for. W. F. Regan. No. 1,222,135; Apr. 10; v. 237; p. 427.
Paper box. W. M. Williams. No. 1,221,785; Apr. 3; v. 237; p. 271.
Paper cartons, Manufacture of. R. F. Arnott. No. 1,221,649; Apr. 3; v. 237; p. 224.
Paper-clip. R. J. Smeeton. No. 1,223,630; Apr. 24; v. 237; p. 1022.
Paper-curing machine. C. Rahsskopff. No. 1,223,613; Apr. 24; v. 237; p. 1015.
Paper cut-outs, Machine for making wall-. W. F. Marresford. No. 1,223,893; Apr. 24; v. 237; p. 1115.
Paper-folding machine. W. M. Philipple. No. 1,222,459; Apr. 10; v. 237; p. 542.
Paper-hanger's kit. S. Fazzini. No. 1,223,161; Apr. 17; v. 237; p. 827.
Paper, Machine for making cut-out wall-. R. Diehl. No. 1,223,942; Apr. 24; v. 237; p. 1130.
Paper, Machine for making cut-out wall-. W. F. Marresford. No. 1,223,892; Apr. 24; v. 237; p. 1115.
Paper-machines, Doctor vibrating device for. A. H. Kunzelman. No. 1,221,338; Apr. 3; v. 237; p. 119.
Paper-making machines, Press-roll for. J. A. White. No. 1,222,501; Apr. 10; v. 237; p. 567.
Paper, Mechanism for interleaving. H. P. Brown and C. L. Johnston. No. 1,222,261; Apr. 10; v. 237; p. 472.
Paper pulley. W. D. Hamerstadt. No. 1,223,165; Apr. 17; v. 237; p. 828.
Paper-roll holder, Toilet-. J. Good. No. 1,224,106; Apr. 24; v. 237; p. 1185.
Paper-rolls, Shaft for. G. F. Pickett. No. 1,223,104; Apr. 17; v. 237; p. 807.
Paper, Shaping. A. H. Dremx. No. 1,221,846; Apr. 10; v. 237; p. 326.
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Paper yarn, Spinning-machine for making. J. Plichta. No. 1,221,374; Apr. 3; v. 237; p. 131.
Partition-support. A. H. Moore and E. F. Morton. No. 1,221,205; Apr. 3; v. 237; p. 72.
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Pea-board. A. F. Miller. No. 1,221,470; Apr. 3; v. 237; p. 164.
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Paving-block. E. J. Bartells. No. 1,222,061; Apr. 10; v. 237; p. 401.
Pen, Fountain-. A. P. McArthur. No. 1,222,555; Apr. 10; v. 237; p. 577.
Pens, Fountain attachment for. M. H. and H. Marul. No. 1,221,468; Apr. 3; v. 237; p. 164.
Pencil and making the same. C. A. Smith. No. 1,222,152; Apr. 10; v. 237; p. 434.
Pencil attachment. M. A. Grynik. No. 1,223,579; Apr. 24; v. 237; p. 1003.
Pencil, Glue and mucilage. E. C. Berners. No. 1,223,360; Apr. 24; v. 237; p. 925.
Pencil-sharpening machine. E. P. Webster. No. 1,223,541; Apr. 24; v. 237; p. 991.
Pendulum-escapement. F. Gundorph. No. 1,222,757, Apr. 17; v. 237; p. 688.
Periscope-glasses, Cleaning. J. A. Steinmetz. No. 1,222,156; Apr. 10; v. 237; p. 435.
Pessary, Intra-uterine dilating-. G. D. Marshall. No. 1,223,284; Apr. 17; v. 237; p. 866.
Petroleum by decomposition of component hydrocarbons thereof, Obtaining products from. H. P. Chamberlain. No. 1,221,790; Apr. 3; v. 237; p. 273.
Phonograph driving and speed-regulating mechanism. S. R. MacLane. No. 1,221,074; Apr. 3; v. 237; p. 25.
Phonograph driving and speed-regulating mechanism. S. R. MacLane. No. 1,221,075; Apr. 3; v. 237; p. 25.
Phonographs, Automatic stop mechanism for. A. Nielsen. No. 1,222,974; Apr. 17; v. 237; p. 762.
Phonographs, Repeating device for. W. E. Cleveland. No. 1,223,149; Apr. 17; v. 237; p. 823.
Phonographic responding and receiving device, Automatic. F. Seelan. No. 1,222,895; Apr. 17; v. 237; p. 735.
Phonographic stylus. F. Ries. No. 1,222,139; Apr. 10; v. 237; p. 429.
Photographic apparatus, Light-controlling mechanism for. W. C. Hudner. No. 1,222,766; Apr. 17; v. 237; p. 691.
Photographic developing apparatus. S. A. Mischansky. No. 1,222,654; Apr. 17; v. 237; p. 653.
Photographic film, Sensitive. J. E. Brandenberger. No. 1,221,825; Apr. 10; v. 237; p. 318.
Photographic pictures, Apparatus for producing. J. E. Thornton. No. 1,223,447; Apr. 24; v. 237; p. 955.
Photographing and developing apparatus. G. C. Beidler. No. 1,222,596; Apr. 17; v. 237; p. 632.
Photographing and developing apparatus. G. C. Beidler. No. 1,222,597; Apr. 17; v. 237; p. 632.
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Photoprinting machine. F. L. Stuber. No. 1,223,214; Apr. 17; v. 237; p. 814.
Phototelegraphic machine. G. Wald. No. 1,221,780; Apr. 3; v. 237; p. 270.
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Piano-player, Automatic. G. W. Davenport and L. J. Burkhim. No. 1,222,738; Apr. 17; v. 237; p. 682.
Pianos, Automatic regulator for pneumatic. V. L. Jones. No. 1,223,885; Apr. 24; v. 237; p. 1112.
Pianos, Pneumatic action for player-. J. R. De Noyelles. No. 1,223,265; Apr. 17; v. 237; p. 859.
Pianos, Suction cleaning attachment for player-. M. Rothfeld. No. 1,221,221; Apr. 3; v. 237; p. 78.
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Picture and mirror hanger. J. J. Cook. No. 1,222,530; Apr. 10; v. 237; p. 567.
Picture apparatus, Motion-. J. F. Davidson. No. 1,221,515; Apr. 3; v. 237; p. 181.
Picture-film-rewinding apparatus, Moving-. W. O. Worman. No. 1,222,505; Apr. 10; v. 237; p. 559.
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Picture-operator's automatic signaling device, Moving-. O. B. Day. No. 1,223,771; Apr. 24; v. 237; p. 1072.
Pictures, Apparatus for producing audible moving. H. Hess. No. 1,222,626; Apr. 17; v. 237; p. 642.
Pie-crimper. E. W. Scribner. No. 1,222,039; Apr. 10; v. 237; p. 394.
Piers, Building and placing. D. D. McBean. No. 1,221,068; Apr. 3; v. 237; p. 22.
Pigment and producing same, Composite titanic-oxid. L. E. Barton. (Reissue.) No. 14,289; Apr. 24; v. 237; p. 1192.
Pile-driver-hammer suspension. E. B. Rogers. No. 1,222,891; Apr. 17; v. 237; p. 734.
Pile-sawing device. J. E. Wilhelm and W. W. Bonfield. No. 1,221,401; Apr. 3; v. 237; p. 141.
Piling, Gripping device for withdrawing sheet-. J. E. Wilhelm and W. W. Bonfield. No. 1,221,400; Apr. 3; v. 237; p. 140.
Pillow-sham holder. A. Buth. No. 1,223,580; Apr. 24; v. 237; p. 1003.
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Clothes-pin. Hat-pin.
Pipe: *See*—
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Pipe connection, Flexible. E. A. Schreiber. No. 1,222,682; Apr. 17; v. 237; p. 663.
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Pipe-coupling clamp. A. Kertész. No. 1,223,054; Apr. 17; v. 237; p. 790.
Pipe-cover. S. Schmaus. No. 1,223,835; Apr. 24; v. 237; p. 1094.
Pipe-cover. S. Schmaus. No. 1,223,836; Apr. 24; v. 237; p. 1095.
Pipe-hanger, Adjustable. W. C. Duke. No. 1,221,705; Apr. 3; v. 237; p. 244.
Pipe-joint, Self-tightening ball-and-socket. T. C. Van Epps. No. 1,223,645; Apr. 24; v. 237; p. 1027.
Pipe, Making flanged. L. C. Schneider. No. 1,222,679; Apr. 17; v. 237; p. 662.
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Pipes, cylinders, &c., Machine for the manufacture of. D. S. de Lavaud. No. 1,223,676; Apr. 24; v. 237; p. 1039.
Piston. J. T. King. No. 1,222,413; Apr. 10; v. 237; p. 527.
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Piston-ring-milling machine. G. H. Blettner. No. 1,223,929; Apr. 24; v. 237; p. 1126.
Piston-rings, Making. G. H. Blettner. No. 1,223,930; Apr. 24; v. 237; p. 1127.
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Pots or crucibles, Making clay. H. K. Hitchcock. No. 1,221,450; Apr. 3; v. 237; p. 158.
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Baling-press. Hay-press.
Brick-press. Mandrel-press.
Cheese-press. Printing-press.
Domestic press. Tie-press.
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Pressure-operated apparatus. G. C. Pharo. No. 1,222,985; Apr. 17; v. 237; p. 766.
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Pressure-regulator. W. G. Miller. No. 1,222,653; Apr. 17; v. 237; p. 652.
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Printing apparatus. R. Adams. No. 1,221,815; Apr. 10; v. 237; p. 315.
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Spike-puller.
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Pulp into sheets, Machine for converting. H. G. Rogers No. 1,223,905; Apr. 24; v. 237; p. 1119.
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Pump for locomotive and other boilers, Hot-water feed-. C. Caille. No. 1,223,667; Apr. 24; v. 237; p. 1035.
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Pump indicator, Oil-. G. W. Morris. No. 1,221,078; Apr. 3; v. 237; p. 26.
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Pump or compressor for motor-vehicles and the like. A. H. Fefelle. No. 1,223,682; Apr. 24; v. 237; p. 1041.
Pump-rod coupling. C. Zehr. No. 1,221,645; Apr. 3; v. 237; p. 223.
Pump, Rotary. B. L. Rinehart. No. 1,223,734; Apr. 24; v. 237; p. 1058.
Pump, Rotary. W. J. Wilson. No. 1,223,919; Apr. 24; v. 237; p. 1123.
Pump to a windmill, Attachment for coupling a. E. W. Robbins. No. 1,223,833; Apr. 24; v. 237; p. 1094.
Pump-valve. E. F. Dierks. No. 1,221,843; Apr. 10; v. 237; p. 325.
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Pump, Valveless rotary. E. L. Copsey. No. 1,223,036; Apr. 17; v. 237; p. 783.
Pumping-engine. L. E. Strothman. No. 1,222,816; Apr. 17; v. 237; p. 709.
Pumping fluid, Apparatus for. O. B. Campbell, Jr. No. 1,222,601; Apr. 17; v. 237; p. 634.
Punch. E. Maker. No. 1,222,961; Apr. 17; v. 237; p. 758.
Punch-presses, Stop mechanism for. A. L. Day. No. 1,223,770; Apr. 24; v. 237; p. 1071.
Punching-machines, Mechanism for feeding sheet metal to. H. Lysholm. No. 1,221,881; Apr. 10; v. 237; p. 339.
Puzzle. L. P. D'Autremont. No. 1,221,149; Apr. 3; v. 237; p. 51.
Quilt and mattress. J. R. Millar. No. 1,221,890; Apr. 10; v. 237; p. 343.
Quilting-machine. A. Hildt. No. 1,221,857; Apr. 10; v. 237; p. 330.
Rack: *See*—
Article-holding rack. Poultry-rack.
Broom-rack. Shoe-rack.
Display-rack.
Radiator. Y. De La Poëze. No. 1,221,422; Apr. 3; v. 237; p. 147.
Radiator-cap. N. Du Bois. No. 1,223,156; Apr. 17; v. 237; p. 825.
Rail-anchor. H. G. Gillmor. No. 1,224,113; Apr. 24; v. 237; p. 1188.
Rail-brace. G. P. Tennant. No. 1,223,300; Apr. 17; v. 237; p. 871.
Rail-clamp. P. E. Dutcher. No. 1,222,193; Apr. 10; v. 237; p. 448.
Rail-clamp. R. P. Greenleaf. No. 1,222,621; Apr. 17; v. 237; p. 641.
Rail-clamp. J. T. McConnell. No. 1,223,992; Apr. 24; v. 237; p. 1147.
Rail-drilling machine. W. C. Dyer. No. 1,221,708; Apr. 3; v. 237; p. 245.
Rail-fastener. J. C. Crum. No. 1,224,078; Apr. 24; v. 237; p. 1176.
Rail-fastener. O. J. Rajewsky. No. 1,223,203; Apr. 17; v. 237; p. 842.
Rail-joint. J. B. Baum. No. 1,223,847; Apr. 24; v. 237; p. 1098.
Rail-joint. M. Bogdanović. No. 1,223,139; Apr. 17; v. 237; p. 819.
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Rail-joint. C. B. Hayton. No. 1,221,731; Apr. 3; v. 237; p. 253.
Rail-joint. T. G. Joyce. No. 1,222,407; Apr. 10; v. 237; p. 524.
Rail-joint. L. W. Macer. No. 1,222,313; Apr. 10; v. 237; p. 490.
Rail-joint. A. T. Palmer. No. 1,221,899; Apr. 10; v. 237; p. 346.
Rail-joint. C. B. Pipes. No. 1,222,065; Apr. 17; v. 237; p. 657.
Rail-joint. C. W. Whitcomb. No. 1,223,227; Apr. 17; v. 237; p. 848.
Rail-joint. W. D. Williams. No. 1,223,918; Apr. 24; v. 237; p. 1122.
Rail-joint, Insulated. B. Wolhaupter and B. G. Braine. No. 1,221,260; Apr. 3; v. 237; p. 91.
Rail-supporting device. E. G. Busse. No. 1,221,832; Apr. 10; v. 237; p. 321.
Rail-tie. I. S. Fisher. No. 1,221,714; Apr. 3; v. 237; p. 247.
Railway construction. G. B. Hoffman. No. 1,223,695; Apr. 24; v. 237; p. 1046.
Railway construction. M. P. McNulty. No. 1,222,432; Apr. 10; v. 237; p. 534.
Railway electric signal. C. L. Bopp. No. 1,222,518; Apr. 10; v. 237; p. 563.
Railway-rail joint. E. H. C. Ravn. No. 1,223,731; Apr. 24; v. 237; p. 1058.
Railway-rail-manipulating device. E. W. Vogel. No. 1,223,452; Apr. 24; v. 237; p. 957.
Railway safety device. J. S. Crawford. No. 1,221,690; Apr. 3; v. 237; p. 239.
Railway signaling. H. S. Young. No. 1,222,583; Apr. 10; v. 237; p. 587.
Railway signaling apparatus. W. L. Waters. No. 1,221,928; Apr. 10; v. 237; p. 357.
Railway signaling system. H. Bezer. No. 1,221,017; Apr. 3; v. 237; p. 5.
Railway-stake. W. P. Newkirk. No. 1,222,575; Apr. 10; v. 237; p. 585.
Railway-switch. L. Collis. No. 1,223,151; Apr. 17; v. 237; p. 824.
Railway-switch. F. Evans and D. Dutt. No. 1,223,945; Apr. 24; v. 237; p. 1131.
Railway-switch. J. D. Perkins. No. 1,222,577; Apr. 10; v. 237; p. 585.
Railway system, Gravity-. D. R. Parr. No. 1,221,371; Apr. 3; v. 237; p. 130.

Railway-tie. W. H. Umbel. No. 1,222,819; Apr. 17; v. 237; p. 710.
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Railway-tie, Metallic. S. S. Snyder. No. 1,222,811; Apr. 17; v. 237; p. 707.
Railway-track sand-remover. J. B. Kelly. No. 1,222,213; Apr. 10; v. 237; p. 455.
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Railway-train time-indicator. H. W. Nusbaum. No. 1,221,366; Apr. 3; v. 237; p. 128.
Railways or track construction, Cross-tie for mine. E. Hutton. No. 1,223,171; Apr. 17; v. 237; p. 831.
Railways, Safety apparatus for. C. A. Brooks. No. 1,221,827; Apr. 10; v. 237; p. 319.
Railways, Safety device for. C. A. Brooks. No. 1,221,826; Apr. 10; v. 237; p. 318.
Rain-coat, Ventilated. S. and F. Freedman. No. 1,223,863; Apr. 24; v. 237; p. 1104.
Rake: *See*—
Hay-rake. Stone-rake.
Revolving rake.
Rake and tedder, Combined. C. R. Straughn. No. 1,222,815; Apr. 17; v. 237; p. 708.
Raker-gage. H. Alanson. No. 1,222,587; Apr. 17; v. 237; p. 629.
Rat-trap. J. T. Daniel. No. 1,222,606; Apr. 17; v. 237; p. 636.
Rat-trap. C. D. Ramsey. No. 1,222,795; Apr. 17; v. 237; p. 701.
Rattle and toy, Nursery. H. E. Mathias. No. 1,223,507; Apr. 24; v. 237; p. 979.
Razor, Safety-. H. G. Lutz. No. 1,221,065; Apr. 3; v. 237; p. 21.
Razors, Illuminating attachment for. K. E. Allport. No. 1,223,805; Apr. 17; v. 237; p. 878.
Reamer holder, Adjustable floating-. R. Railton. No. 1,222,406; Apr. 10; v. 237; p. 546.
Receipt, way-bill, and delivery-record book for express companies, Manifold. W. L. Henry. No. 1,221,988; Apr. 10; v. 237; p. 377.
Receptacle and welding the same, Metallic. F. G. Wacker. No. 1,222,165; Apr. 10; v. 237; p. 438.
Receptacle-frame. F. L. Randolph. No. 1,222,991; Apr. 17; v. 237; p. 768.
Reciprocating engine. C. M. Booth. No. 1,222,928; Apr. 17; v. 237; p. 745.
Record-controlling mechanism. H. A. Myers. No. 1,224,092; Apr. 24; v. 237; p. 1180.
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Telephone electric recorder. Time-recorder.
Records for simultaneous reproduction, Apparatus for producing companion auditory and visual. E. H. Amet. No. 1,221,407; Apr. 3; v. 237; p. 143.
Recording-machine. C. Gardner. No. 1,223,379; Apr. 24; v. 237; p. 981.
Rectifying device. C. C. Buprecht. No. 1,222,803; Apr. 17; v. 237; p. 704.
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Fishing-reel. Hose-reel.
Refrigerating apparatus. E. C. Loetscher. No. 1,223,813; Apr. 24; v. 237; p. 1088.
Refrigerating apparatus. F. W. Wolf. No. 1,222,170; Apr. 10; v. 237; p. 440.
Refrigerating apparatus, Multiple. E. C. Loetscher. No. 1,222,642; Apr. 17; v. 237; p. 648.
Refrigerator. O. M. Graves. No. 1,223,964; Apr. 24; v. 237; p. 1138.
Refrigerator. C. A. Ketterer. No. 1,222,635; Apr. 17; v. 237; p. 646.
Refrigerator-shelving. F. P. Layman. No. 1,222,308; Apr. 10; v. 237; p. 488.
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Autographic register.
Cash-receipt and the like register.
Register circuits, Message-. A. E. Lundell. No. 1,222,311; Apr. 10; v. 237; p. 489.
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Density-regulator. Voltage-regulator.
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Relay for motor-circuits, Reverse-phase safety-. C. H. Spangler. No. 1,222,692; Apr. 17; v. 237; p. 667.
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Harness-ring. Piston-ring.
Rivets, Machine to insert needle-latch. J. J. Jenkins. No. 1,223,053; Apr. 17; v. 237; p. 790.
Riveting-tool. W. L. Lindsay. No. 1,223,407; Apr. 24; v. 237; p. 941.
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Curtain-roller. Shade-roller.
Rolling-mill. W. C. Coryell. No. 1,221,029; Apr. 3; v. 237; p. 9.
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Roofing, Machine for printing prepared. M. B. Becker. No. 1,222,594; Apr. 17; v. 237; p. 681.
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Rotary drier, Mechanical. W. E. Prindle. No. 1,222,244; Apr. 10; v. 237; p. 467.
Rotary engine. T. F. I. O'Brien. No. 1,223,721; Apr. 24; v. 237; p. 1054.
Rotary engine. E. F. O'Haver. No. 1,223,100; Apr. 17; v. 237; p. 805.
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Rug, mat, or other covering and making the same. F. W. Tully. No. 1,223,538; Apr. 24; v. 237; p. 990.
Rugs, Drying-chamber for. W. E. Olson. No. 1,222,560; Apr. 10; v. 237; p. 579.
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Saddle construction. J. E. Doyle. No. 1,222,744; Apr. 17; v. 237; p. 684.
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Safety and throw-off mechanism, Combined. C. F. Root. No. 1,221,470; Apr. 3; v. 237; p. 166.
Safety-carrier. C. W. Fischer and R. Schamber. No. 1,224,086; Apr. 24; v. 237; p. 1178.
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Saliva-ejector. A. B. Cosad. No. 1,222,267; Apr. 10; v. 237; p. 475.
Salt-shaker. C. A. Wiklund and E. R. Peterson. No. 1,221,640; Apr. 3; v. 237; p. 221.
Sampling device, Automatic. C. A. Wendell. No. 1,223,544; Apr. 24; v. 237; p. 992.
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Sanitary connection. E. H. Lawrence and R. E. Crane. No. 1,221,064; Apr. 3; v. 237; p. 21.
Sap spile or spout. E. Chesley. No. 1,221,509; Apr. 3; v. 237; p. 179.
Sash-balance. F. Dufresne. No. 1,223,861; Apr. 24; v. 237; p. 1103.

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Sash-lock. J. H. Boye. No. 1,221,824; Apr. 10; v. 237; p. 318.
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Saw-blades, Manufacture of tempered. C. Napier. No. 1,221,576; Apr. 3; v. 237; p. 202.
Saw-blades, Reshar pening. W. M. Fogle. No. 1,222,195; Apr. 10; v. 237; p. 449.
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Saw-filing machine. J. Mackintosh and W. P. Callahan. No. 1,221,343; Apr. 3; v. 237; p. 120.
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Scale, Automatic weighing-. A. W. Barnard. No. 1,222,917; Apr. 17; v. 237; p. 742.
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Scales, Tare-weight compensator for beam-. C. C. Neale and R. W. Smith. No. 1,222,787; Apr. 17; v. 237; p. 699.
Scaling-tool, Pneumatic. E. A. Hawley. No. 1,224,089; Apr. 24; v. 237; p. 1179.
Scraper, Cylinder-. R. L. Meader. No. 1,223,064; Apr. 17; v. 237; p. 793.
Scraper for crumb-brushes. C. T. Worth. No. 1,221,261; Apr. 3; v. 237; p. 92.
Scraper for pans, kettles, &c. J. C. Battige. No. 1,223,238; Apr. 17; v. 237; p. 851.
Scraper, Wheeled. M. V. Liddell. No. 1,222,428; Apr. 10; v. 237; p. 532.
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Grain-pan screen. Well-screen.
Separator-screen. Window-screen.
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Screen and costumer, Combined. W. H. Schmid. No. 1,222,805; Apr. 17; v. 237; p. 705.
Screen-hanger, Adjustable. D. E. Hipolito. No. 1,223,281; Apr. 17; v. 237; p. 865.
Screw-engine. G. H. Chappell. No. 1,221,834; Apr. 10; v. 237; p. 322.
Screw-thread-gaging device. F. W. Whelpley and F. A. Bicknell. No. 1,223,012; Apr. 17; v. 237; p. 775.
Scrubber, Floor-. I. Reid. No. 1,221,218; Apr. 3; v. 237; p. 17.
Scrubbing device. M. Bacon. No. 1,223,658; Apr. 24; v. 237; p. 1032.
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Sealing mechanism, Compartment-. F. J. Matchette. No. 1,222,966; Apr. 17; v. 237; p. 760.
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Sealing machine, Packing case or carton. H. L. Johnson. No. 1,223,176; Apr. 17; v. 237; p. 833.
Seam, Embroidered. R. Loeb. No. 1,222,775; Apr. 17; v. 237; p. 694.
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Automobile auxiliary seat. Toilet-seat.
Car-seat. Valve-seat.
Locomotive-cab spring-seat.
Seat-back, Auxiliary. M. A. Bobrick. No. 1,222,175; Apr. 10; v. 237; p. 442.
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Securing device. S. B. Dunn. No. 1,221,706; Apr. 3; v. 237; p. 244.
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Self-anchoring puller. G. Moe and A. J. Kirstin. No. 1,223,510; Apr. 24; v. 237; p. 980.
Self-leveling table. A. Kurunczi and M. Balint. No. 1,222,420; Apr. 10; v. 237; p. 529.
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Dust-separator. Grinding-mill separator.
Electrostatic separator. Ore-separator.
Grain-separator. Steam-separator.
Separator. J. H. Crowson. No. 1,221,974; Apr. 10; v. 237; p. 372.
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Sewage, Tank for the treatment of. H. Y. Scarborough. No. 1,223,427; Apr. 24; v. 237; p. 949.
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Sewing-machine, Blindstitch. F. A. Read. No. 1,222,671; Apr. 17; v. 237; p. 659.
Sewing-machine cabinet and lap-board, Combined. M. E. B. Williams. No. 1,222,503; Apr. 10; v. 237; p. 558.
Sewing-machine edge-guide attachment. A. W. Dudley. No. 1,223,860; Apr. 24; v. 237; p. 1103.
Sewing-machine feed device. W. Cronenberg. No. 1,221,692; Apr. 3; v. 237; p. 239.
Sewing-machine feeding mechanism. A. H. De Voe. No. 1,223,570; Apr. 24; v. 237; p. 1000.
Sewing-machine folding device. J. E. Chalman. No. 1,222,069; Apr. 10; v. 237; p. 403.
Sewing-machine looper mechanism. J. P. Wels. No. 1,221,253; Apr. 3; v. 237; p. 89.
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Sewing-machine, Ornamental-stitch. J. R. Moffatt. No. 1,223,719; Apr. 24; v. 237; p. 1053.
Sewing-machine ruffler. C. Stafford. No. 1,223,632; Apr. 24; v. 237; p. 1023.
Sewing-machine, Special-work. A. Rosenthal. No. 1,223,617; Apr. 24; v. 237; p. 1017.
Sewing-machine trimming mechanism. J. R. Moffatt. No. 1,223,718; Apr. 24; v. 237; p. 1053.
Sewing-machine trimming mechanism. J. P. Wels. No. 1,221,252; Apr. 3; v. 237; p. 88.
Shackle or connecting-link. H. E. Rottmer. No. 1,222,997; Apr. 17; v. 237; p. 770.
Shade hanger, Window-. W. Kemble. No. 1,222,682; Apr. 17; v. 237; p. 645.
Shade-holder. T. Euphrat. No. 1,222,749; Apr. 17; v. 237; p. 685.
Shade-holder. H. Kienzle. No. 1,221,744; Apr. 3; v. 237; p. 257.
Shade-roller. C. M. Ferguson. No. 1,222,276; Apr. 10; v. 237; p. 478.
Shade-roller support. J. A. Sharps. No. 1,223,837; Apr. 24; v. 237; p. 1095.
Shade roller, Window-. G. E. Scott. No. 1,222,474; Apr. 10; v. 237; p. 549.
Shaft-hanger, Adjustable. C. Sherwood. No. 1,221,233; Apr. 3; v. 237; p. 82.
Shafts, Automatic adjuster for eccentric. G. D. May. No. 1,223,997; Apr. 24; v. 237; p. 1148.
Shampoo-board. L. D. Day. No. 1,223,263; Apr. 17; v. 237; p. 859.
Shapers, Operating mechanism for. F. W. A. Herrmann and A. E. Robinson. No. 1,223,339; Apr. 17; v. 237; p. 885.
Shaping and milling machinery, Combined. R. B. Dow. No. 1,221,844; Apr. 10; v. 237; p. 326.
Sharpener for razor-blades. H. B. Young. No. 1,221,263; Apr. 3; v. 237; p. 92.
Sharpener, Knife-. E. B. Anderson. No. 1,223,753; Apr. 24; v. 237; p. 1066.
Sharpening-machine. W. M. Palmer. No. 1,223,826; Apr. 24; v. 237; p. 1092.
Sharpening machine, Razor-. E. A. Conway. No. 1,223,672; Apr. 24; v. 237; p. 1037.
Shears: *See*—
Animal-shears.
Shears attachment. A. D. Sweet. No. 1,223,640; Apr. 24; v. 237; p. 1025.
Shears holder and controller, Sheep-. B. Roos. No. 1,221,379; Apr. 3; v. 237; p. 133.
Sheave or pulley. F. D. Udall. No. 1,222,818; Apr. 17; v. 237; p. 710.

Sheet-folder. D. G. Wagner. No. 1,222,338; Apr. 10; v. 237; p. 499.
Sheet material together, Device for fastening. C. E. Taylor. No. 1,223,641; Apr. 24; v. 237; p. 1026.
Sheet-metal folding and shearing machine. O. P. Collins No. 1,221,686; Apr. 3; v. 237; p. 237.
Sheet-metal receptacles, Manufacture of lids for pressed. G. W. Berry. No. 1,223,849; Apr. 24; v. 237; p. 1099.
Sheet-metal rod or shaft. T. E. Murray. No. 1,223,089; Apr. 17; v. 237; p. 802.
Sheet-metal rod or shaft. T. E. Murray. No. 1,223,090; Apr. 17; v. 237; p. 802.
Shield or protector. A. E. Coyne. No 1,221,513; Apr. 3; v. 237; p. 180.
Shingle-bundle. W. C. Weeks. No. 1,222,054; Apr. 10; v. 237; p. 398.
Shingle-making machine. W. P. Beck and A. C. Burns. No. 1,221,272; Apr. 3; v. 237; p. 96.
Ship-brake. T. O'Sullivan. No. 1,223,416; Apr. 24; v. 237; p. 945.
Ship-protecting shield. W. A. Shephard. No. 1,223,627; Apr. 24; v. 237; p. 1021.
Ships, Leak-obturating device for. F. Wullyamoz and G. Meyer. No. 1,221,496; Apr. 3; v. 237; p. 174.
Ship's-order transmitting and receiving apparatus. W. S. Rush. No. 1,221,222; Apr. 3; v. 237; p. 79.
Ships unsinkable, Rendering. W. T. Donnelly. No. 1,223,154; Apr. 17; v. 237; p. 825.
Shipping-case. P. N. Gareau. No. 1,222,753; Apr. 17; v. 237; p. 687.
Shipping-tag. C. L. Beeman. No. 1,222,595; Apr. 17; v. 237; p. 631.
Shock-absorber. J. M. López. No. 1,221,877; Apr. 10; v. 237; p. 337.
Shock-absorber. F. V. Risinger. No. 1,223,422; Apr. 24; v. 237; p. 947.
Shock-absorber for pneumatic tools. W. C. Simpson, Jr., and J. F. Barbour. No. 1,221,615; Apr. 3; v. 237; p. 214.
Shock-absorber for vehicles. H. Bratlie. No. 1,223,850; Apr. 24; v. 237; p. 1099.
Shock-absorber for vehicles. A. E. Leymarie. No. 1,223,705; Apr. 24; v. 237; p. 1049.
Shock-absorbing body-brace for automobiles. R. M. Musgrove. No. 1,222,445; Apr. 10; v. 237; p. 538.
Shock-absorbing device. W. C. Baker. No. 1,223,307; Apr. 17; v. 237; p. 873.
Shock-binder. H. C. England. No. 1,222,856; Apr. 17; v. 237; p. 722.
Shock-compressor. D. C. Curren. No. 1,223,565; Apr. 24; v. 237; p 998.
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Shocking-machine. C. R. Raney. No. 1,222,796; Apr. 17; v. 237; p. 702.
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Shocking-machine frame. C. R. Raney and R. C. Livesay. No. 1,222,799; Apr. 17; v. 237; p. 703.
Shoe. C. G. Heeren. No. 1,223,694; Apr. 24; v. 237; p. 1046.
Shoe. A. P. Savage. No. 1,222,678; Apr. 17; v. 237; p. 661.
Shoe and making the same. M. L. Dodge. No. 1,221,154; Apr. 3; v. 237; p. 53.
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Shoe and making the same, Turned. M. L. Dodge. No. 1,221,153; Apr. 3; v. 237; p. 53.
Shoe-attachment. B. C. Mallck. No. 1,223,994; Apr. 24; v. 237; p. 1148.
Shoe-cleaner, Rotary. T. Molinaro. No. 1,223,195; Apr. 17; v. 237; p. 839.
Shoe-counter-finishing machine. T. M. Devanney. No. 1,223,040; Apr. 17; v. 237; p. 785.
Shoe-fastening device. P. W. Fedczyszyn. No. 1,223,574; Apr. 24; v. 237; p. 1001.
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Shoe, Foot-ball. D. J. Golden. No. 1,221,985; Apr. 10; v. 237; p. 376.
Shoe-lining. C. A. Stewart. No. 1,223,297; Apr. 17; v. 237; p. 870.
Shoe-polish, Device for containing and applying. W. D. Lynch. No. 1,221,066; Apr. 3; v. 237; p. 21.
Shoe-rack. G. Brown, Jr. No. 1,222,728; Apr. 17; v. 237; p. 679.
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Shoe-support. E. S. Rigdon. No. 1,221,092; Apr. 3; v. 237; p. 31.
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Shore, Adjustable. G. Brown. No. 1,223,367; Apr. 24; v. 237; p. 927.
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Shovels, spades, and the like, Step for. G. W. Benton. No. 1,223,555; Apr. 24; v. 237; p. 996.
Show-case. W. L. Wheeless. No. 1,222,702; Apr. 17; v. 237; p. 670.
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Shutter, Thermal-controlled. E. Cahill. No. 1,221,415; Apr. 3; v. 237; p. 146.
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Elevator-signal. Train-order signal.
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Soap-dispenser. J. W. Jacobson. No. 1,223,172; Apr. 17; v. 237; p. 831.
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Soles of boots and shoes, Machine for operating on the. H. H. Eaton. No. 1,222,855; Apr. 17; v. 237; p. 721.
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Spark-plug. W. S. Thomas. No. 1,221,923; Apr. 10; v. 237; p. 354.
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Spraying ceramic and other articles, Affording protection to workmen during the operation of. H. D. Lillibridge. No. 1,223,809; Apr. 24; v. 237; p. 1086.
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Sprinkler. G. R. Bolander. No. 1,221,276; Apr. 3; v. 237; p. 98.
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Christmas-tree stand. Shoe-shining stand.
Display-stand. Stripping-stand.
Electric-light stand. Thread-stand.
Picture-machine stand. Watch-stand.
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Stapling-machine. A. F. Shafer. No. 1,222,149; Apr. 10; v. 237; p. 433.
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Sterilizing apparatus. L. Chevalle. No. 1,222,932; Apr. 17; v. 237; p. 747.
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Stove, Combination coal and wood heating-. R. F. Clark. No. 1,223,768; Apr. 24; v. 237; p. 1070.
Stove, Combined cooking and heating. N. Columbro. No. 1,221,146; Apr. 3; v. 237; p. 50.
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Straw, Artificial imbibing-. P. H. Carr. No. 1,223,933; Apr. 24; v. 237; p. 1127.
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Stripper and pressure-release, Combined. R. P. Wright. No. 1,224,054; Apr. 24; v. 237; p. 1168.
Stripper and pressure-release, Combined. R. P. Wright. No. 1,224,055; Apr. 24; v. 237; p. 1169.
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Sugar liquor, Refining. J. A. McCaskell. No. 1,221,554; Apr. 3; v. 237; p. 195.
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Tires, Device for inserting plugs in. H. R. Hirst. No. 1,223,878; Apr. 24; v. 237; p. 1110.
Tires, Device for repairing pneumatic. G. W. Boynton. No. 1,222,259; Apr. 10; v. 237; p. 472.
Tires, Making four-ply lock-cord. R. M. Merriman. No. 1,221,887; Apr. 10; v. 237; p. 341.
Tires, Reinforcement for pneumatic. F. S. Bryant. No. 1,222,729; Apr. 17; v. 237; p. 679.
Titanic-oxid pigment and producing the same, Composite. L. E. Barton. No. 1,223,357; Apr. 24; v. 237; p. 924.
Titanic-oxid product and obtaining same. L. E. Barton. No. 1,223,356; Apr. 24; v. 237; p. 924.
Titanic-sulfate products and pure titanic oxid therefrom, Producing basic. L. E. Barton. No. 1,223,358; Apr. 24; v. 237; p. 925.
Toaster. S. C. Shaffner. No. 1,221,228; Apr. 3; v. 237; p. 80.
Tobacco-bag attachment. J. W. Peden. No. 1,221,372; Apr. 3; v. 237; p. 130.
Tobacco-drier. W. H. Young. No. 1,221,949; Apr. 10; v. 237; p. 364.
Tobacco, match, and paper receptacle, Combined. A. A. Haven. No. 1,223,693; Apr. 24; v. 237; p. 1046.
Tobacco-receptacle. M. H. Page. No. 1,221,896; Apr. 10; v. 237; p. 345.
Toggle. J. D. Coughlin. No. 1,222,850; Apr. 17; v. 237; p. 720.
Toilet novelty. B. R. Kantrowitz. No. 1,223,074; Apr. 17; v. 237; p. 796.
Toilet-seat cover, Hygienic. M. Bloch. No. 1,221,661; Apr. 3; v. 237; p. 228.
Toilet-seat, Portable. M. Meyer. No. 1,223,065; Apr. 17; v. 237; p. 793.
Toilet-seat protector, Sanitary. J. J. Sharp. No. 1,223,208; Apr. 17; v. 237; p. 843.
Toilet use, Device for. F. Grant. No. 1,223,783; Apr. 24; v. 237; p. 1077.
Tone-arm, Universal. P. Becker. No. 1,223,927; Apr. 24; v. 237; p. 1126.
Tongue-holder, Adjustable. F. J. Dultmeier. No. 1,222,192; Apr. 10; v. 237; p. 447.
Tool, Combination-. J. B. Offermann. No. 1,223,722; Apr. 24; v. 237; p. 1054.
Tool, Combination-. A. Urey. No. 1,221,777; Apr. 3; v. 237; p. 269.
Tool, Compound. J. A. Dunagan. No. 1,221,297; Apr. 3; v. 237; p. 104.
Tool, Garden and lawn. H. A. Atkins and T. Fraudsen. No. 1,221,650; Apr. 3; v. 237; p. 224.
Tool-handle. T. S. Benison. No. 1,221,655; Apr. 3; v. 237; p. 226.
Tool-holder. P. F. Holmgren. No. 1,222,102; Apr. 10; v. 237; p. 415.
Tool-holder. L. P. McEachron. No. 1,221,556; Apr. 3; v. 237; p. 195.
Tool-holder. R. Nelson. No. 1,222,448; Apr. 10; v. 237; p. 539.
Tool-holder for automatic machines. B. T. Browand. No. 1,222,178; Apr. 10; v. 237; p. 443.
Tool, Metal-working. F. P. Lovejoy. No. 1,222,643; Apr. 17; v. 237; p. 649.
Tooth, Artificial. R. H. Bowsher. No. 1,223,364; Apr. 24; v. 237; p. 926.
Torch, Gas-. R. J. J. Mueller. No. 1,222,319; Apr. 10; v. 237; p. 492.
Torches, Controlling-valve for acetylene cutting and welding. W. W. Von Todenwarth. No. 1,222,164; Apr. 10; v. 237; p. 438.
Torpedo, Aerial. J. J. Duffy. No. 1,221,426; Apr. 3; v. 237; p. 149.
Torpedo, Aeromarine. J. A. Steinmetz. No. 1,223,212; Apr. 17; v. 237; p. 844.
Torpedo-firing control and signal apparatus for torpedo-boats. E. G. Gallagher. No. 1,222,198; Apr. 10; v. 237; p. 450.
Torpedo-shield for vessels. J. O. Travelstead. No. 1,223,536; Apr. 24; v. 237; p. 989.
Torpedo-steering mechanism, Aerial-. L. J. Husted. No. 1,222,630; Apr. 17; v. 237; p. 645.
Tote-box. R. S. Brown. No. 1,221,789; Apr. 3; v. 237; p. 272.
Tow from flax and similar plants, Manufacturing. J. L. Merrill. No. 1,22,968; Apr. 17; v. 237; p. 760.
Tow-line connector. G. W. Smith. No. 1,222,480; Apr. 10; v. 237; p. 551.
Towel-holder. F. N. Brisley. No. 1,221,279; Apr. 3; v. 237; p. 99.
Towel, napkin, and drapery hanger. J. A. Ostman and B. A. Anderson. No. 1,221,582; Apr. 3; v. 237; p. 204.
Towel-service apparatus, Coin-controlled. R. S. Corlett. No. 1,222,533; Apr. 10; v. 237; p. 568.
Towels, Apparatus for controlling use of. R. S. Corlett. No. 1,222,532; Apr. 10; v. 237; p. 568.
Tower, Extension-. J. V. Grandinetti. No. 1,222,200; Apr. 10; v. 237; p. 451.
Towing and steering device. A. Schroeder. No. 1,221,608; Apr. 3; v. 237; p. 211.
Toy. L. E. Estler. No. 1,222,858; Apr. 17; v. 237; p. 723.
Toy. H. Jablonowsky. No. 1,223,696; Apr. 24; v. 237; p. 1046.
Toy. A. L. Loomis. No. 1,222,005; Apr. 10; v. 237; p. 382.
Toy. W. Meyner. No. 1,223,508; Apr. 24; v. 237; p. 979.
Toy. F. R. Rhodes. No. 1,222,996; Apr. 17; v. 237; p. 770.
Toy cannon, Rapid-fire. J. R. Tobin. No. 1,223,448; Apr. 24; v. 237; p. 956.
Toy, Child's. E. T. Caldicott. No. 1,223,765; Apr. 24; v. 237; p. 1070.
Toy, Electrical. G. S. Elliott. No. 1,223,375; Apr. 24; v. 237; p. 930.
Toy, Figure. W. L. Hadlock. No. 1,221,314; Apr. 3; v. 237; p. 110.
Toy, Figure. O. N. Hildeton. No. 1,223,280; Apr. 17; v. 237; p. 864.
Toy, Figure wheeled. J. V. Di Zerega. No. 1,223,372; Apr. 24; v. 237; p. 929.
Toy, Mechanical. M. M. Delbel. No. 1,221,699; Apr. 3; v. 237; p. 242.
Toy or game, Mechanical. S. S. Wells. No. 1,222,829; Apr. 17; v. 237; p. 713.
Toy, Revolving. A. B. Tilton. No. 1,223,643; Apr. 24; v. 237; p. 1026.
Toy, Wheeled figure. L. Morse. No. 1,223,287; Apr. 17; v. 237; p. 866.
Trace-fastener. O. A. Russell. No. 1,224,023; Apr. 24; v. 237; p. 1158.
Track instrument. C. L. Bopp. No. 1,221,663; Apr. 3; v. 237; p. 229.
Traction-engine. G. Cuff. No. 1,221,975; Apr. 10; v. 237; p. 572.
Tractor. A. Brown. No. 1,222,260; Apr. 10; v. 237; p. 472.
Tractor. M. Hansen. No. 1,221,320; Apr. 3; v. 237; p. 113.
Tractor. A. W. Jacobs. No. 1,221,739; Apr. 3; v. 237; p. 255.
Tractor. C. H. Martin. No. 1,223,505; Apr. 24; v. 237; p. 978.
Tractor. G. McFarland and C. F. Loomis. No. 1,222,557; Apr. 10; v. 237; p. 578.
Tractor. J. D. Powell. No. 1,222,989; Apr. 17; v. 237; p. 767.
Tractor. C. A. Stickney. No. 1,222,812; Apr. 17; v. 237; p. 707.
Tractor. W. D. Watkins. No. 1,222,911; Apr. 17; v. 237; p. 740.
Tractor, Belt-. W. F. Hamilton. No. 1,222,546; Apr. 10; v. 237; p. 573.
Tractor chain tread. G. C. Jett. No. 1,222,295; Apr. 10; v. 237; p. 484.
Tractor driving mechanism. A. R. Ogburn. No. 1,223,099; Apr. 17; v. 237; p. 805.
Tractor-tread. F. Hoffknecht. No. 1,223,050; Apr. 17; v. 237; p. 789.
Tractors, Drive-gearing for. M. Sand. No. 1,224,109; Apr. 24; v. 237; p. 1187.
Train-control system, Automatic. E. W. Gorsuch. No. 1,221,309; Apr. 3; v. 237; p. 108.
Train-control systems, Shoe structure for. E. W. Gorsuch. No. 1,221,310; Apr. 3; v. 237; p. 109.
Train-order signal. E. H. Dodson. No. 1,221,155; Apr. 3; v. 237; p. 54.
Train-signal. A. Caplan. No. 1,221,674; Apr. 3; v. 237; p. 233.
Train-stop. H. B. Colsten. No. 1,222,529; Apr. 10; v. 237; p. 566.
Train-stop, Automatic. E. Chabot. No. 1,223,310; Apr. 17; v. 237; p. 875.
Train-stop, Permissive automatic. A. H. Fox and A. W. Lenderoth. No. 1,223,685; Apr. 24; v. 237; p. 1042.

Train stop system, Automatic. J. Cannon. No. 1,221,968; Apr. 10; v. 237; p. 370.

Train-stopping apparatus. A. L. Guthner. No. 1,222,944; Apr. 17; v. 237; p. 751.

Transmission-lines, Safety repair device for high-voltage. G. S. Neeley. No. 1,221,893; Apr. 10; v. 237; p. 344.

Transmission-lines, Safety repair device for high-voltage. G. S. Neeley. No. 1,221,894; Apr. 10; v. 237; p. 344.

Transmitters, Locking mechanism for impulse-. C. L. Goodrum. No. 1,223,382; Apr. 24; v. 237; p. 932.

Trap: *See*—
- Animal-trap.
- Burglar-trap.
- Crab and terrapin trap.
- Fly-trap.
- Rat-trap.
- Sewer-trap.
- Vermin-trap.

Trap. J. H. Dodson. No. 1,222,191; Apr. 10; v. 237; p. 447.

Trap. J. C. Pewther. No. 1,222,024; Apr. 10; v. 237; p. 389.

Trawl-tub. L. Potier. No. 1,221,904; Apr. 10; v. 237; p. 347.

Tray. G. E. Bilton. No. 1,221,788; Apr. 3; v. 237; p. 272.

Tray. A. G. Wedge. No. 1,223,543; Apr. 24; v. 237; p. 991.

Tree: *See*—
- Shoe-tree.

Trial-frame. A. Moseley. No. 1,222,017; Apr. 10; v. 237; p. 387.

Trimmer: *See*—
- Lawn-trimmer.

Trolley. J. McMillan and C. V. Greenamyer. No. 1,221,763; Apr. 3; v. 237; p. 264.

Trolley. F. A. Wasson. No. 1,221,249; Apr. 3; v. 237; p. 87.

Trolley and other purposes, Clamping device for. S. A. Redding. No. 1,222,132; Apr. 10; v. 237; p. 426.

Trolley-door, Electrically-operated. T. W. Findley. No. 1,222,090; Apr. 10; v. 237; p. 411.

Trolley-harp. R. Williams. No. 1,221,257; Apr. 3; v. 237; p. 91.

Trolley mechanism. E. C. Dietrich and C. W. Bliss. No. 1,222,740; Apr. 17; v. 237; p. 682.

Trolley-pole. F. A. Wasson. No. 1,221,250; Apr. 3; v. 237; p. 88.

Trolley-track and trolley therefor, Conveyer. A. L. Shaw. No. 1,222,041; Apr. 10; v. 237; p. 394.

Trolley-wheel. C. H. Taylor. No. 1,223,217; Apr. 17; v. 237; p. 845.

Trolling-spoon. W. Couper. No. 1,224,074; Apr. 24; v. 237; p. 1175.

Trough: *See*—
- Growing-trough.
- Hog-trough.

Truck. F. G. Koehler. No. 1,221,997; Apr. 10; v. 237; p. 380.

Truck, Auto delivery-. J. F. Laytham and D. A. Arnold. No. 1,223,806; Apr. 24; v. 237; p. 1085.

Truck-bolster. E. A. Laughlin. No. 1,222,552; Apr. 10; v. 237; p. 576.

Truck, Car-. E. G. Chandler. No. 1,222,931; Apr. 17; v. 237; p. 747.

Truck column, Car-. G. E. Scott. No. 1,223,526; Apr. 24; v. 237; p. 986.

Truck, Tongue-. J. A. Stone. No. 1,222,813; Apr. 17; v. 237; p. 708.

Truck, Tractor-. V. A. Boker. No. 1,221,133; Apr. 3; v. 237; p. 45.

Truck, Tractor-. W. N. Smith. No. 1,222,335; Apr. 10; v. 237; p. 499.

Trunk, Wardrobe-. G. H. Juergens. No. 1,223,886; Apr. 24; v. 237; p. 1112.

Truss. W. N. Best. No. 1,221,016; Apr. 3; v. 237; p. 5.

Truss. W. Wenzel. No. 1,223,751; Apr. 24; v. 237; p. 1065.

Truss, Hernial. G. R. House. No. 1,222,763; Apr. 17; v. 237; p. 690.

Truss-pad attachment. H. C. Tindall. No. 1,222,904; Apr. 17; v. 237; p. 738.

Tub: *See*—
- Trawl-tub.

Tub-cover. W. B. Schott. No. 1,222,035; Apr. 10; v. 237; p. 393.

Tube-cleaner. A. F. Froussard. No. 1,221,984; Apr. 10; v. 237; p. 375.

Tube-testing device. M. J. Sobraske. No. 1,222,817; Apr. 17; v. 237; p. 709.

Tubes, Envelop for inner. C. F. Smith and C. A. White. No. 1,221,100; Apr. 3; v. 237; p. 34.

Tubes, Making. W. E. Hughes. No. 1,223,282; Apr. 17; v. 237; p. 865.

Tuning-peg for stringed instruments. F. W. Becker. No. 1,223,554; Apr. 24; v. 237; p. 995.

Tunnel and building same. D. D. McBean. No. 1,221,067; Apr. 3; v. 237; p. 22.

Tunnel-driers, Travelling ceiling-fan for. W. F. Norman. No. 1,221,365; Apr. 3; v. 237; p. 128.

Turbine and like rotors, Construction of. C. A. Parsons, A. G. Carnegie, and S. S. Cook. No. 1,221,087; Apr. 3; v. 237; p. 29.

Turbine, Elastic-fluid. W. J. A. London. No. 1,223,342; Apr. 17; v. 237; p. 886.

Turbine, Elastic-fluid. O. A. Wiberg. No. 1,223,915; Apr. 24; v. 237; p. 1122.

Turbine-engine. E. Anderson. No. 1,221,500; Apr. 3; v. 237; p. 176.

Turbine, Radial steam-. O. A. Wiberg. No. 1,223,914; Apr. 24; v. 237; p. 1121.

Turn-button fastener. F. S. Carr. No. 1,223,146; Apr. 17; v. 237; p. 822.

Turning and fluting machine. F. B. Merry and J. D. Ware. No. 1,223,597; Apr. 24; v. 237; p. 1009.

Twine-holder. J. B. Richardson. No. 1,221,593; Apr. 3; v. 237; p. 207.

Twyer-block. J. A. O'Neill. No. 1,222,452; Apr. 10; v. 237; p. 540.

Type or matrix. D. S. Kennedy. No. 1,221,868; Apr. 10; v. 237; p. 334.

Type-writer margin-release. A. C. Roebuck. No. 1,222,328; Apr. 10; v. 237; p. 496.

Type-writer ribbon-vibrator. A. C. Roebuck. No. 1,222,326; Apr. 10; v. 237; p. 495.

Type-writer ribbon-vibrator. A. C. Roebuck. No. 1,222,329; Apr. 10; v. 237; p. 496.

Type-writers, Gage for setting paper in. E. B. Hess. No. 1,221,854; Apr. 10; v. 237; p. 328.

Type-writing and computing machine, Combined. F. A. Hart. No. 1,223,166; Apr. 17; v. 237; p. 829.

Type-writing and computing machine, Combined. F. A. Hart. No. 1,223,871; Apr. 24; v. 237; p. 1107.

Type-writing and computing machine, Combined. H. H. Steele. No. 1,222,694; Apr. 17; v. 237; p. 667.

Type-writing and printing machine, Combined. T. De Roode. No. 1,224,121; Apr. 24; v. 237; p. 1191.

Type-writing machine. F. A. Cook. No. 1,222,736; Apr. 17; v. 237; p. 681.

Type-writing machine. C. Gabrielson. No. 1,221,720; Apr. 3; v. 237; p. 249.

Type-writing machine. F. A. Hart. (Reissue.) No. 14,283; Apr. 10; v. 237; p. 589.

Type-writing machine. W. F. Helmond. No. 1,223,279; Apr. 17; v. 237; p. 864.

Type-writing machine. E. G. Latta. No. 1,221,875; Apr. 10; v. 237; p. 335.

Type-writing machine. E. G. Latta. No. 1,222,423; Apr. 10; v. 237; p. 530.

Type-writing machine. E. G. Latta. No. 1,222,550; Apr. 10; v. 237; p. 575.

Type-writing machine. E. G. Latta. No. 1,222,551; Apr. 10; v. 237; p. 576.

Type-writing machine. C. P. Mosher. No. 1,222,443; Apr. 10; v. 237; p. 537.

Type-writing machine. A. W. Smith. No. 1,221,236; Apr. 3; v. 237; p. 83.

Type-writing machine. B. W. Tucker. No. 1,222,497; Apr. 10; v. 237; p. 556.

Type-writing machine. C. B. Yaw. No. 1,221,126; Apr. 3; v. 237; p. 43.

Type-writing machines, Desk or cabinet for disappearing. C. de Vleeschouwer and J. Tacoma. No. 1,223,677; Apr. 24; v. 237; p. 1039.

Typographical composing and distributing machine. C. Muehleisen. No. 1,221,360; Apr. 3; v. 237; p. 126.

Typographical composing and distributing machine. C. Muehleisen. No. 1,221,361; Apr. 3; v. 237; p. 127.

Typographical composing-machine, Multiple-magazine. C. Muehleisen. No. 1,222,120; Apr. 10; v. 237; p. 421.

Typographical composing-machines, Distributing mechanism of. C. Muehleisen. No. 1,222,018; Apr. 10; v. 237; p. 387.

Typographical composing-machines, Distributing mechanism of. C. Muehleisen and C. A. Albrecht. No. 1,222,019; Apr. 10; v. 237; p. 387.

Typographical machine. R. M. Bedell. No. 1,221,819; Apr. 10; v. 237; p. 316.

Umbrella, Folding. E. S. Blythe. No. 1,223,138; Apr. 17; v. 237; p. 819.

Undercutter. J. R. Andrus. No. 1,221,128; Apr. 3; v. 237; p. 44.

Underreamer. E. L. Mills. No. 1,221,352; Apr. 3; v. 237; p. 123.

Underreamer. E. L. Mills. No. 1,221,353; Apr. 3; v. 237; p. 123.

Union-suits, Device for use in finishing. E. Axford. No. 1,222,713; Apr. 17; v. 237; p. 673.

Units, Segregating. L. S. Robinson. No. 1,223,113; Apr. 17; v. 237; p. 810.

Universal joint. S. Douglass. No. 1,222,268; Apr. 10; v. 237; p. 475.

Universal joint. R. H. Rosenberg. No. 1,223,524; Apr. 24; v. 237; p. 985.

Universal joint. F. G. Walker. No. 1,221,638; Apr. 3; v. 237; p. 221.

Unloading and distributing materials, Apparatus for. W. A. Lafont. No. 1,222,219; Apr. 10; v. 237; p. 458.

Unloading apparatus. W. W. Shanor. No. 1,222,686; Apr. 17; v. 237; p. 664.

Upholstering-tool. J. Polkowski. No. 1,222,129; Apr. 10; v. 237; p. 424.

Uranium compounds, Purifying of. C. L. Parsons. No. 1,224,014; Apr. 24; v. 237; p. 1155.

Uranium, Preparing oxids of. C. L. Parsons. No. 1,224,013; Apr. 24; v. 237; p. 1155.

Utensil-lifter. F. A. Brundage. No. 1,222,262; Apr. 10; v. 237; p. 473.

Vacuum-cleaner. F. C. Mason. No. 1,222,436; Apr. 10; v. 237; p. 535.

Vacuum-cleaner. J. W. Shanahan and F. C. Mason. No. 1,222,477; Apr. 10; v. 237; p. 549.

Vacuum suction device. J. Sorensen. No. 1,221,103; Apr. 3; v. 237; p. 34.

Vaginal douche. H. Gollomb. No. 1,223,963; Apr. 24; v. 237; p. 1138.

Valve. F. P. Angell. No. 1,223,353; Apr. 24; v. 237; p. 923.

Valve. J. H. Himes. No. 1,221,178; Apr. 3; v. 237; p. 62.

Valve. J. P. Lavigne. No. 1,224,090; Apr. 24; v. 237; p. 1180.

Valve. W. C. Marsh. No. 1,223,326; Apr. 17; v. 237; p. 880.

Valve. W. C. Marsh. No. 1,223,327; Apr. 17; v. 237; p. 880.

Valve. M. J. Payne. No. 1,223,901; Apr. 24; v. 237; p. 1118.

Valve. E. E. Rose. No. 1,223,736; Apr. 24; v. 237; p. 1059.

Valve-actuating mechanism. O. M. Nacker. No. 1,222,194; Apr. 10; v. 237; p. 448.

Valve and the like. W. Matthewman. No. 1,222,316; Apr. 10; v. 237; p. 491.

Valve and valve-gear, Steam-engine. W. C. Coan. No. 1,222,266; Apr. 10; v. 237; p. 474.

Valve, Automatically-locking shut-off. J. R. Hamilton. No. 1,222,397; Apr. 10; v. 237; p. 520.

Valve, Blow-off. A. J. Monfee. No. 1,222,972; Apr. 17; v. 237; p. 761.

Valve, Check-. M. Smolensky. No. 1,222,154; Apr. 10; v. 237; p. 435.

Valve construction. T. Douglas. No. 1,221,702; Apr. 3; v. 237; p. 243.

Valve, Flushing-. G. H. Russell. No. 1,221,223; Apr. 3; v. 237; p. 79.

Valve, Flushing-tank. R. Hodgson. No. 1,223,170; Apr. 17; v. 237; p. 830.

Valve for compressors and pumps. A. E. Peters. No. 1,222,321; Apr. 10; v. 237; p. 493.

Valve for hydrocarbon-engines, Rotary. G. L. Schofield. No. 1,222,680; Apr. 17; v. 237; p. 662.

Valve for internal-combustion engines, Rotary. G. L. Schofield. No. 1,222,681; Apr. 17; v. 237; p. 662.

Valve for percussive tools. L. C. Bayles. No. 1,222,353; Apr. 10; v. 237; p. 505.

Valve for pipes for the conduction of liquid and gaseous fluids. G. C. Hall and A. Bradshaw. No. 1,222,758; Apr. 17; v. 237; p. 689.

Valve for steam-engines, Admission-. W. R. Hupp. No. 1,223,979; Apr. 24; v. 237; p. 1143.

Valve, Gas-regulating. A. W. Bice. No. 1,221,660; Apr. 3; v. 237; p. 228.

Valve-gears, Rock-shaft for. C. E. Miller. No. 1,222,969; Apr. 17; v. 237; p. 760.

Valve-grinding mechanism. E. Casner. No. 1,224,067; Apr. 24; v. 237; p. 1172.

Valve-grinding tool. A. Wagner. No. 1,223,225; Apr. 17; v. 237; p. 847.

Valve-lifter. W. E. Reynolds. No. 1,223,421; Apr. 24; v. 237; p. 947.

Valve, Liquid-. P. Crovo. No. 1,223,038; Apr. 17; v. 237; p. 784.

Valve mechanism, Automatic. J. F. Johnson. No. 1,223,340; Apr. 17; v. 237; p. 885.

Valve mechanism for gate-valves. G. J. Henry, Jr. No. 1,221,052; Apr. 3; v. 237; p. 17.

Valve mechanism for locomotives, Screw reverse. K. Rushton. No. 1,221,604; Apr. 3; v. 237; p. 210.

Valve, Piston-. W. H. McIntyre. No. 1,222,115; Apr. 10; v. 237; p. 420.

Valve, Piston-. O. W. Young. No. 1,223,336; Apr. 17; v. 237; p. 883.

Valve-releasing device. R. L. Mapson. No. 1,222,229; Apr. 10; v. 237; p. 461.

Valve, Relief-. C. F. Fritch. No. 1,221,719; Apr. 3; v. 237; p. 248.

Valve-reseater. F. R. Taylor. No. 1,223,218; Apr. 17; v. 237; p. 845.

Valve, Reversing-. A. G. Hatch. No. 1,222,624; Apr. 17; v. 237; p. 642.

Valve, Safety-. G. H. Clark. No. 1,222,071; Apr. 10; v. 237; p. 404.

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Valve tester and grinder. B. Hewlitt. No. 1,222,289; Apr. 10; v. 237; p. 482.

Valves, Lever mechanism for operating throttle-. M. Linton. No. 1,222,429; Apr. 10; v. 237; p. 532.

Vapor from gas and other fluids, Apparatus for separating. L. C. Frohrleb. No. 1,222,751; Apr. 17; v. 237; p. 686.

Vaporizer, Electrical. J. H. Lepper. No. 1,222,425; Apr. 10; v. 237; p. 531.

Vaporizer, Medicinal. T. A. De Vilbiss. No. 1,221,516; Apr. 3; v. 237; p. 181.

Vault, Portable. G. W. Dyckman. No. 1,223,374; Apr. 24; v. 237; p. 930.

Vegetable-cutter. P. H. Burks. No. 1,223,254; Apr. 17; v. 237; p. 856.

Vehicle-body, Detachable. J. W. Holland. No. 1,222,868; Apr. 17; v. 237; p. 727.

Vehicle-brake. G. Stickney. No. 1,221,623; Apr. 3; v. 237; p. 216.

Vehicle-brake. J. Wieland. No. 1,221,937; Apr. 10; v. 237; p. 360.

Vehicle-brake, Automatic. H. Berget. No. 1,221,273; Apr. 3; v. 237; p. 97.

Vehicle, Child's. O. A. Swingle and T. J. Mangan. No. 1,223,009; Apr. 17; v. 237; p. 774.

Vehicle-control mechanism, Motor-. R. S. Trott. No. 1,221,925; Apr. 10; v. 237; p. 355.

Vehicle for waste material. E. B. Stuart. No. 1,222,337; Apr. 10; v. 237; p. 499.

Vehicle front-wheel control, Motor-. H. H. Eldredge. No. 1,223,573; Apr. 24; v. 237; p. 1001.

Vehicle-indicator. C. R. Krone. No. 1,222,000; Apr. 10; v. 237; p. 381.

Vehicle-jack. P. H. Russell. No. 1,223,618; Apr. 24; v. 237; p. 1017.

Vehicle-locking mechanism, Motor-. M. L. Taylor. No. 1,224,041; Apr. 24; v. 237; p. 1163.

Vehicle, Manually-propelled. J. B. Fellcetti. No. 1,222,613; Apr. 17; v. 237; p. 638.

Vehicle, Motor-. A. Loomis. No. 1,222,006; Apr. 10; v. 237; p. 382.

Vehicle, Motor-. D. C. Slaght. No. 1,223,629; Apr. 24; v. 237; p. 1022.

Vehicle, Motor-. H. Stark. No. 1,223,633; Apr. 24; v. 237; p. 1023.

Vehicle mud-guards, Detachable lining for. T. S. Maxwell. No. 1,222,011; Apr. 10; v. 237; p. 384.

Vehicle, Self-propelled. H. R. Kelley. No. 1,223,495; Apr. 24; v. 237; p. 973.

Vehicle-signal device. C. Shermund. No. 1,223,628; Apr. 24; v. 237; p. 1022.

Vehicle signaling device. C. T. Harned. No. 1,222,862; Apr. 17; v. 237; p. 724.

Vehicle-spring. J. F. Brown and A. Humphreys. No. 1,222,066; Apr. 10; v. 237; p. 402.

Vehicle-spring. W. F. Doherty, Jr. No. 1,223,678; Apr. 24; v. 237; p. 1040.

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Vehicle spring-shackle. E. M. Staples. No. 1,222,248; Apr. 10; v. 237; p. 468.

Vehicle spring suspension. R. S. Trott. No. 1,221,248; Apr. 3; v. 237; p. 87.

Vehicle-stabilizer. H. Hess. No. 1,222,401; Apr. 10; v. 237; p. 522.

Vehicle steering-gear. G. C. Campbell. No. 1,223,766; Apr. 24; v. 237; p. 1070.

Vehicle steering-gear. A. O. Higinbotham. No. 1,222,290; Apr. 10; v. 237; p. 482.

Vehicle-top. G. W. Scott. No. 1,223,429; Apr. 24; v. 237; p. 950.

Vehicle transmission and clutch mechanism, Motor-. R. A. Beckwith. No. 1,222,715; Apr. 17; v. 237; p. 674.

Vehicle-wheel. W. J. Busse. No. 1,222,356; Apr. 10; v. 237; p. 506.

Vehicle-wheel. F. R. de Dampierre and J. Gonzalo. No. 1,222,538; Apr. 10; v. 237; p. 571.

Vehicle-wheel. E. Gasper. No. 1,221,721; Apr. 3; v. 237; p. 249.

Vehicle-wheel. O. J. Hackbarth. No. 1,223,785; Apr. 24; v. 237; p. 1077.

Vehicle-wheel. M. C. Overman. No. 1,223,725; Apr. 24; v. 237; p. 1055.

Vehicle-wheel. A. Owen. No. 1,222,981; Apr. 17; v. 237; p. 764.

Vehicle wheel and tire. F. H. Field. No. 1,222,614; Apr. 17; v. 237; p. 638.

Vehicle-wheel, Resilient. A. A. Bender. No. 1,224,060; Apr. 24; v. 237; p. 1170.

Vehicle-wheel, Resilient. W. R. Hopson. No. 1,221,053; Apr. 3; v. 237; p. 17.

Vehicle-wheel, Spring. W. Rullson. No. 1,222,998; Apr. 17; v. 237; p. 770.

Vehicle-wheel, Metal. T. E. Murray. No. 1,223,088; Apr. 17; v. 237; p. 802.

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Vehicles, Crank-holding attachment for motor-. J. H. Hunt. No. 1,222,104; Apr. 10; v. 237; p. 416.

Vehicles, Direction-indicating apparatus for motor-. E. H. France. No. 1,222,379; Apr. 10; v. 237; p. 514.

Vehicles, Hydraulic hoist for dumping-. J. Schwister. No. 1,223,741; Apr. 24; v. 237; p. 1061.

Vehicles, Lever-locking means for motor-. J. T. Donovan and J. A. Tighe. No. 1,222,085; Apr. 10; v. 237; p. 409.

Vehicles, Portable track device for motor-. J. M. Maher. No. 1,222,781; Apr. 17; v. 237; p. 696.

Vehicles, Power-delivering attachment for motor-. E. R. Armstrong. No. 1,223,465; Apr. 24; v. 237; p. 962.

Vehicles, Reach structure for. A. Thompson. No. 1,223,446; Apr. 24; v. 237; p. 955.

Veil-clasp. S. A. Pearsall. No. 1,223,608; Apr. 24; v. 237; p. 1013.

Velocipede. W. J. Beach. No. 1,222,354; Apr. 10; v. 237; p. 505.

Velvet, cord, and like pile cutting device. J. T. Thomason. No. 1,222,495; Apr. 10; v. 237; p. 555.

Vending apparatus. H. Rubenstein. No. 1,222,471; Apr. 10; v. 237; p. 547.

Vending-machine, Check-controlled. J. Fritsche. No. 1,222,859; Apr. 17; v. 237; p. 723.

Vending-machine for articles of food and the like. S. Madsen. No. 1,222,314; Apr. 10; v. 237; p. 490.

Vending machine, Perfume-. J. F. McNeil. No. 1,222,224; Apr. 10; v. 237; p. 459.

Ventilating attachment. F. A. Dunn. No. 1,223,483; Apr. 24; v. 237; p. 969.
Ventilating system for tunnels and the like. D. K. Swartwout. No. 1,222,589; Apr. 10; v. 237; p. 583.
Ventilation and cleaning device. J. C. Fleming. No. 1,223,684; Apr. 24; v. 237; p. 1041.
Ventilator. L. P. Hynes. No. 1,223,390; Apr. 24; v. 237; p. 935.
Ventilator. H. H. Lind. No. 1,222,554; Apr. 10; v. 237; p. 576.
Ventilator for boots, shoes, and like articles. E. J. Devlin. No. 1,223,042; Apr. 17; v. 237; p. 786.
Ventilator unit. M. G. Hubbard. No. 1,223,978; Apr. 24; v. 237; p. 1142.
Vermin-trap. L. G. Young. No. 1,223,016; Apr. 17; v. 237; p. 777.
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Vessel, Submarine. A. J. Van Stockum. No. 1,223,747; Apr. 24; v. 237; p. 1064.
Vibrations, Means for reproducing. E. H. Amet. No. 1,221,408; Apr. 3; v. 237; p. 144.
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Vibrator, Ribbon-. A. C. Roebuck. No. 1,222,327; Apr. 10; v. 237; p. 496.
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Vise, Pipe-. J. A. De Point and E. C. Van Hee. No. 1,223,568; Apr. 24; v. 237; p. 999.
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Waist. M. J. Taylor. No. 1,224,100; Apr. 24; v. 237; p. 1184.
Wall-bracket. P. H. Petersen. No. 1,224,016; Apr. 24; v. 237; p. 1156.
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Washing-machine. G. E. and E. A. Hawk. No. 1,221,174; Apr. 3; v. 237; p. 61.
Washing-machine. W. H. Voss. No. 1,222,050; Apr. 10; v. 237; p. 397.
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Washing-machine mechanism. H. C. Doman. No. 1,223,774; Apr. 24; v. 237; p. 1074.
Washing-machines, Operating-gearing for. G. More. No. 1,222,785; Apr. 17; v. 237; p. 697.
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Washtubs, Adjustable pan for. E. M. Salisbury. No. 1,224,024; Apr. 24; v. 237; p. 1158.
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Water-heater. R. J. Kahrer. No. 1,222,105; Apr. 10; v. 237; p. 417.
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Well-boring stem. M. E. Layne. No. 1,223,591; Apr. 24; v. 237; p. 1007.
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Wells, Device for recovering pipes, shafts, &c., from. S. P. Colgan and W. Frederick. No. 1,223,634; Apr. 17; v. 237; p. 783.
Wheat and other grains, Cleaning. A. C. Von Hagen. No. 1,221,636; Apr. 3; v. 237; p. 220.
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Window-frame, Metal. H. E. Campbell. No. 1,222,357; Apr. 10; v. 237; p. 506.
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Writing-machine keyboard. A. B. Edwards and F. K. Russell. No. 1,222,748; Apr. 17; v. 237; p. 685.
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ALPHABETICAL LIST OF DESIGNS

Article of manufacture. L. M. Musliner. No. 50,663; Apr. 24; v. 237; p. 1201.
Ash-receiver, cigar-rest, and match-box holder, Combined. D. Broderick. No. 50,605; Apr. 17; v. 237; p. 895.
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Ball, Rubber. R. C. Eddy. No. 50,652; Apr. 24; v. 237; p. 1199.
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Broom-clamp. M. Rasmussen. No. 50,630; Apr. 17; v. 237; p. 900.
Buckle, Shield-. R. A. Schwahn. No. 50,633; Apr. 17; v. 237; p. 900.
Button. W. W. Hobe. No. 50,656; Apr. 24; v. 237; p. 1200.
Candle. H. H. Will. No. 50,671; Apr. 24; v. 237; p. 1203.
Candlestick for altars. G. R. Bailey. No. 50,642; Apr. 24; v. 237; p. 1197.
Candy-container. L. M. Coolidge. No. 50,554; Apr. 3; v. 237; p. 287.
Casket-handle and lugs. G. R. Bailey. No. 50,599; Apr. 17; v. 237; p. 894.
Casket-handle arm and lug. G. R. Bailey. No. 50,598; Apr. 17; v. 237; p. 894.
Chair, Child's combination nursery and high. J. C. Reamer and M. Posedel. No. 50,587; Apr. 10; v. 237; p. 598.
Circlet. A. F. and E. W. Steiner. No. 50,668; Apr. 24; v. 237; p. 1202.
Collar. M. Baillin. No. 50,643; Apr. 24; v. 237; p. 1198.
Collar. H. O. Willson. No. 50,596; Apr. 10; v. 237; p. 600.
Cooking-receptacle cover. S. E. Brock. No. 50,645; Apr. 24; v. 237; p. 1198.
Cretonne or other textile fabric. M. W. Ryan. No. 50,632; Apr. 17; v. 237; p. 900.
Curtain, Drop-. I. A. Wright. No. 50,672; Apr. 24; v. 237; p. 1203.
Display-card or similar article. P. Voges. No. 50,594; Apr. 10; v. 237; p. 599.
Display-stand. J. A. Gustus and H. J. Erzinger. No. 50,619; Apr. 17; v. 237; p. 898.
Doll. N. S. Day. No. 50,648; Apr. 24; v. 237; p. 1198.
Doll. E. I. Horsman, Jr. Nos. 50,657–8; Apr. 24; v. 237; p. 1200.
Effigy. N. S. Day. Nos. 50,649–50; Apr. 24; v. 237; p. 1199.
Embroidery. E. Berger. No. 50,548; Apr. 3; v. 237; p. 286.
Fabric, Textile. E. I. Hanson. No. 50,621; Apr. 17; v. 237; p. 898.
Fabric, Textile. E. I. Hanson. Nos. 50,653–4; Apr. 24; v. 237; pp. 1199–1200.
Flower-holder. A. J. Nash. No. 50,664; Apr. 24; v. 237; p. 1201.
Furniture, Panel for wood. P. Cerone. No. 50,566; Apr. 10; v. 237; p. 595.
Garment for ladies. R. J. Hickson. Nos. 50,574–8; Apr. 10; v. 237; pp. 596–7.
Garment for women. B. H. Holley. No. 50,622; Apr. 17; v. 237; p. 898.
Gas and electric fixtures, Canopy for. B. Schwartzman. No. 50,634; Apr. 17; v. 237; p. 901.
Glass article. M. A. Smith. No. 50,590; Apr. 10; v. 237; p. 599.
Glass plate or similar article. F. F. Cary. Nos. 50,550–1; Apr. 3; v. 237; p. 287.
Glass vessel. M. A. Smith. No. 50,591; Apr. 10; v. 237; p. 599.
Golf-ball. J. P. Cochrane. No. 50,553; Apr. 3; v. 237; p. 287.
Hammer-head. J. H. Hildebrandt. No. 50,556; Apr. 3; v. 237; p. 288.
Headlight-casing. J. E. Kilker and C. W. Dake. No. 50,623; Apr. 17; v. 237; p. 898.
Hog-holder. T. B. Dwyer. No. 50,614; Apr. 17; v. 237; p. 897.
Illuminating-globe. K. Booth. Nos. 50,603–4; Apr. 17; v. 237; p. 895.
Insignia, button, pin, fob, box-top, paper-weight, or similar article. J. F. Hanbury. No. 50,620; Apr. 17; v. 237; p. 898.
Kettle-spout. C. Lund. No. 50,625; Apr. 17; v. 237; p. 899.
Knob for signal-bells. A. T. Poehlmann. No. 50,665; Apr. 24; v. 237; p. 1201.
Lamps, Lens for motor-car. L. B. Martin. No. 50,559; Apr. 3; v. 237; p. 288.
Levels, Cross-bar for architects'. R. W. Martin. No. 50,584; Apr. 10; v. 237; p. 598.
Light-fixture. S. Tepfer. No. 50,636; Apr. 17; v. 237; p. 901.
Light-globe. F. Barbiers. No. 50,564; Apr. 10; v. 237; p. 594.
Lighting-fixture arm-pan. R. Y. Barrows and G. V. Strahan. No. 50,600; Apr. 17; v. 237; p. 894.
Name-plate. S. T. Payne and J. P. Tarbox. No. 50,585; Apr. 10; v. 237; p. 598.
Nappy. A. J. Sanford. No. 50,666; Apr. 24; v. 237; p. 1202.
Oven, Warming-. H. Nordman. No. 50,627; Apr. 17; v. 237; p. 899.
Paper, Lace. C. W. Hamilton. Nos. 50,571–2; Apr. 10; v. 237; pp. 595–6.
Paper, Wall-. R. B. Griffin. No. 50,570; Apr. 10; v. 237; p. 595.
Phonograph-cabinet. W. J. Baker. No. 50,641; Apr. 17; v. 237; p. 902.
Phonographs, Stylus for. J. Wolff. Nos. 50,639–40; Apr. 17; v. 237; pp. 901–2.
Pillow-slip and pillow. D. G. Marcus. No. 50,583; Apr. 10; v. 237; p. 597.
Pin or similar article. A. T. Howarth. No. 50,659; Apr. 24; v. 237; p. 1200.
Pistol and saber, Combined. S. Przepiorka. No. 50,629; Apr. 17; v. 237; p. 900.
Placard. J. Bushkovski. No. 50,647; Apr. 24; v. 237; p. 1198.
Plate or similar article. R. Erlebach. Nos. 50,615–16; Apr. 17; v. 237; p. 897.
Plate or similar article. R. Gaertner. No. 50,617; Apr. 17; v. 237; p. 897.
Plate or similar article. H. Guenthermann. No. 50,618; Apr. 17; v. 237; p. 898.
Platter, tray, or similar article. G. E. Ball. No. 50,547; Apr. 3; v. 237; p. 286.
Precious-metal ware, Cut-out border for. C. F. Simms. No. 50,635; Apr. 17; v. 237; p. 901.
Protector for articles to be worn on the wrist. S. J. Levi. No. 50,558; Apr. 3; v. 237; p. 288.
Radiator for automobiles and other vehicles. J. W. Watson. No. 50,638; Apr. 17; v. 237; p. 901.
Ring or similar article. M. L. and M. L. Bowden, Jr. No. 50,549; Apr. 3; v. 237; p. 286.
Saucepan. B. P. Wagner. No. 50,595; Apr. 10; v. 237; p. 600.
Shoes, Reinforcing-plate for. L. Hasel. No. 50,573; Apr. 10; v. 237; p. 596.
Sign. I. Bromiley. No. 50,606; Apr. 17; v. 237; p. 895.
Skates, Foot-plate for. E. Hunold. No. 50,580; Apr. 10; v. 237; p. 597.
Spectacle-case catch. W. M. Carter. No. 50,607; Apr. 17; v. 237; p. 896.
Spoon. G. R. Ploetz. No. 50,628; Apr. 17; v. 237; p. 900.
Spoon, fork, or similar article. H. Hillbom. No. 50,579; Apr. 10; v. 237; p. 597.
Spoon, fork, or similar article. F. W. Koonz. No. 50,581; Apr. 10; v. 237; p. 597.
Spoon, fork, or similar article. W. Malmquist. No. 50,626; Apr. 17; v. 237; p. 899.
Spoon, fork, or similar article. F. E. Prétat. No. 50,586; Apr. 10; v. 237; p. 598.
Spoon, fork, or similar article, Handle for a. G. E. Ball. No. 50,562; Apr. 10; v. 237; p. 594.
Spoon, fork, or similar article, Handle for a. W. A. Jameson. Nos. 50,660–1; Apr. 24; v. 237; p. 1201.
Spoon or analogous utensil, Handle for a. G. N. Allen. No. 50,546; Apr. 3; v. 237; p. 286.
Spoons, forks, or similar articles, Handle for. A. H. Staf. No. 50,592; Apr. 10; v. 237; p. 599.
Statuette or similar article. J. F. Tiller. No. 50,669; Apr. 24; v. 237; p. 1202.
Stove. G. B. Carter and W. L. Bertram. No. 50,565; Apr. 10; v. 237; p. 594.
Stove. C. R. Graham. No. 50,555; Apr. 3; v. 237; p. 288.
Table, Camp-. A. Vajda. No. 50,670; Apr. 24; v. 237; p. 1202.

Talking-machine cabinet. W. K. Cowan. Nos. 50,608–13; Apr. 17; v. 237; p. 896.
Teapot or other article of hollow ware, Body of a. G. E. Ball. No. 50,563; Apr. 10; v. 237; p. 591.
Tire tread, Automobile-. H. S. Blynt. No. 50,644; Apr. 24; v. 237; p. 1198.
Tire tread, Rubber-. G. P. Herrick. No. 50,655; Apr. 24; v. 237; p. 1200.
Tobacco-pipe. J. A. Berchtold. No. 50,601; Apr. 17; v. 237; p. 891.
Torch, Blow-. C. R. Lambert. No. 50,557; Apr. 3; v. 237; p. 288.
Toy cradle-bank. A. H. Sander. No. 50,667; Apr. 24; v. 237; p. 1202.
Toy savings-bank. S. Siegel. No. 50,560; Apr. 3; v. 237; p. 289.
Tread, Non-skid. J. D. Cline. No. 50,567; Apr. 10; v. 237; p. 595.
Valve-casing. R. W. Reid, Jr. No. 50,631; Apr. 17; v. 237; p. 900.
Vehicle-body, Covered. W. I. Twombly. No. 50,637; Apr. 17; v. 237; p. 901.
Velling. Z. Van Raalte. No. 50,593; Apr. 10; v. 237; p. 599.
Velocipede for the use of children. H. W. Case. No. 50,552; Apr. 3; v. 237; p. 287.
Ventilator. L. Klima. No. 50,624; Apr. 17; v. 237; p. 899.
Waterer, Hog-. H. S. Busby. No. 50,646; Apr. 24; v 237; p. 1198.
Writing-machine frame. W. H. Ebelhare and C. G. Arvidson. No. 50,569; Apr. 10; v. 237; p. 595.

ALPHABETICAL LIST OF TRADE-MARKS.

Angling, Leader used in. J. Welsh. No. 116,185; Apr. 10; v. 237; p. 619.
Animal dips and disinfectants. West Disinfecting Company. No. 116,105; Apr. 3; v. 237; p. 307.
Apples in boxes, Fresh. Okanogan Growers Union. No. 116,353; Apr. 24; v. 237; p. 1215.
Appliqué work, Decorative design-forms for. Grundy & Marten. No. 116,056; Apr. 3; v. 237; p. 306.
Arch-supports. School Manufacturing Company. Nos. 116,369–70; Apr. 24; v. 237; p. 1216.
Articles made in part of or plated with precious metal, Certain named. C. H. Sherman. No. 116,094; Apr. 3; v. 237; p. 307.
Automobile-polish. Superior Manufacturing Co. No. 116,165; Apr. 10; v. 237; p. 618.
Automobile-radiator and plumbing-fixture antifreezing liquid. J. F. Paterson. No. 116,355; Apr. 24; v. 237; p. 1215.
Baking-powder. Commercial Importing Co. No. 116,291; Apr. 24; v. 237; p. 1213.
Baking-powders. T. L. Evans. No. 116,048; Apr. 3; v. 237; p. 305.
Balls, Golf-. The India-Rubber, Gutta Percha & Telegraph Works Company. No. 116,220; Apr. 17; v. 237; p. 913.
Balls, Golf-. The Worthington Ball Company. No. 116,264; Apr. 17; v. 237; p. 915.
Balsam for burns, scalds, cuts, all infected wounds, &c., Non-poisonous. G. Schmitt. No. 116,160; Apr. 10; v. 137; p. 618.
Barley, Specially-prepared. Barley Foods Co. No. 116,274; Apr. 24; v. 237; p. 1213.
Bath-robes, house-dresses, kimonos, negligées, and bathing-suits. M. Cooper. No. 116,204; Apr. 17; v. 237; p. 913.
Beverage and syrup for making the same, Non-alcoholic carbonated. Pacific Extract Co. No. 116,283; Apr. 17; v. 237; p. 914.
Beverage, Cereal. East St. Louis-New Athens Brewing Co. No. 116,298; Apr. 24; v. 237; p. 1214.
Beverage-forming food product. A. Horlick. No. 116,321; Apr. 24; v. 237; p. 1214.
Beverage, Loganberry. Featherston Products Company. No. 116,210; Apr. 17; v. 237; p. 913.
Beverage, Non-alcoholic malt. Popel-Giller Co. No. 116,235; Apr. 17; v. 237; p. 914.
Beverage, Non-intoxicating cereal. Anheuser-Busch Brewing Association. No. 116,197; Apr. 17; v. 237; p. 913.
Beverages, Certain named non-alcoholic. The Mihalovitch Brothers Company. No. 116,341; Apr. 24; v. 237; p. 1215.
Beverages, Non-alcoholic carbonated. Columbia Brewing Co. No. 116,121; Apr. 10; v. 237; p. 617.
Beverages, non-alcoholic, sold as a soft cola drink. J. W. Brown. No. 116,285; Apr. 24; v. 237; p. 1213.
Biscuit. National Biscuit Company. No. 116,347; Apr. 24; v. 237; p. 1215.
Boiler-cleaning appliances. Diamond Power Specialty Company. Nos. 116,044–5; Apr. 3; v. 237; p. 305.
Bottle-washing machines. The S. S. Wenzell Machine Company. No. 116,186; Apr. 10; v. 237; p. 619.
Brandy, whiskies, cocktails, rum, &c. The Tebbetts & Garland Store. No. 116,378; Apr. 24; v. 237; p. 1216.
Brick, Building-. Sumter Brick Works. No. 116,097; Apr. 3; v. 237; p. 307.
Cabinets, Medicine-. J. P. Eustis Manufacturing Company. No. 116,209; Apr. 17; v. 237; p. 913.
Cake, potato chips, doughnuts, salted nuts. M. Dyer. No. 116,297; Apr. 24; v. 237; p. 1214.
Cakes. Loose-Wiles Biscuit Company. No. 116,147; Apr. 10; v. 237; p. 618.
Cakes. Loose-Wiles Biscuit Company. No. 116,333; Apr. 24; v. 237; p. 1215.
Cambrics, nainsooks, and muslins in the piece. Baltimore Bargain House. No. 116,030; Apr. 3; v. 237; p. 305.
Cameras. Eastman Kodak Co. No. 116,130; Apr. 10; v. 237; p. 617.
Candies. Lovell & Covel Company. No. 116,068; Apr. 3; v. 237; p. 306.
Candy. Blanke-Wenneker Candy Company. No. 116,280; Apr. 24; v. 237; p. 1213.
Candy, and particularly confection-bars made of chocolate and peanuts. W. W. De Bevoise. No. 116,205; Apr. 17; v. 237; p. 913.
Canned crabs. The Hale Company. Nos. 116,313–14; Apr. 24; v. 237; p. 1214.
Canned fruits and vegetables. Dailey-Udell Company. No. 116,296; Apr. 24; v. 237; p. 1214.
Canned fruits and vegetables. Pratt-Low Preserving Company. No. 116,155; Apr. 10; v. 237; p. 618.
Canned salmon and sardines. Syme, Eagle & Co. No. 116,377; Apr. 24; v. 237; p. 1216.
Canned sauer-kraut. The J. Weiler Co. No. 116,184; Apr. 10; v. 237; p. 619.
Canned vegetables and sauer-kraut. Lange Canning Co. No. 116,327; Apr. 24; v. 237; p. 1215.
Carbon in gas-engine cylinders, Preparation for eliminating. The E. L. Patch Co. No. 116,084; Apr. 3; v. 237; p. 306.
Carbonizing-boxes. Wilbur & Cannon. No. 116,262; Apr. 17; v. 237; p. 915.
Carbureters of automobile-engines, Devices for regulating the supply of air to. Myle Mayker Company. No. 116,076; Apr. 3; v. 237; p. 306.
Carriage-robes. The Wallace & Smith Company. No. 116,103; Apr. 3; v. 237; p. 307.
Cars, Motor-. The Clyde Cars Company. No. 116,288; Apr. 24; v. 237; p. 1213.
Castings, Iron. The Advance Foundry Co. No. 116,025; Apr. 3; v. 237; p. 305.
Cement to be used as a bond for fire-brick structures. William J. Gravert, Inc. No. 116,055; Apr. 3; v. 237; p. 306.
Cheese. J. S. Hoffman Company. Nos. 116,318–20; Apr. 24; v. 237; p. 1214.
Cigars. Theobald and Oppenheimer Company. No. 116,099; Apr. 3; v. 237; p. 307.
Cigars, cigarettes, and smoking-tobacco. Rauch Cigar Company. No. 116,088; Apr. 3; v. 237; p. 307.
Cigars, cigarettes, smoking-tobacco. Testa Cigar Co. No. 116,251; Apr. 17; v. 237; p. 914.
Cigars, cigarettes, tobaccos, tobacco cuttings. W. F. Heiliger. No. 116,214; Apr. 17; v. 237; p. 913.
Cleaner, deodorant, germicide, and insecticide. Frantz, Buchanan & Co. No. 116,304; Apr. 24; v. 237; p. 1214.
Cleaners, Electric suction. The Apex Electrical Manufacturing Company. No. 116,198; Apr. 17; v. 237; p. 913.
Cleaning, scouring, or polishing preparation, Detergent. Enoch Morgan's Sons Company. No. 116,151; Apr. 10; v. 237; p. 618.
Closets, Water-. J. D. Johnson Co. No. 116,141; Apr. 10; v. 237; p. 618.
Clothes-wringers and parts thereof. The American Wringer Company. No. 116,027; Apr. 3; v. 237; p. 305.
Clothing, Certain named. Schuylkill Silk Mills. No. 116,092; Apr. 3; v. 237; p. 307.
Clothing for adults and babies, Certain named. Schuylkill Silk Mills. No. 116,161; Apr. 10; v. 237; p. 618.
Coats, cloaks, wraps, capes, dresses, waists, and skirts. The Salt's Textile Manufacturing Company. No. 116,366; Apr. 24; v. 237; p. 1216.
Coffee. Greenhut Company. No. 116,194; Apr. 10; v. 237; p. 619.
Coffee. W. R. Moorhouse. No. 116,343; Apr. 24; v. 237; p. 1215.
Coffee and chicory. C. G. Durel. No. 116,193; Apr. 10; v. 237; p. 619.
Coffee, tea, flavoring extracts for foods, spices, rolled oats. Gowan-Lenning-Brown Co. No. 116,310; Apr. 24; v. 237; p. 1214.
Colors in oil and japan, varnishes, paints, &c. Wadsworth, Howland & Co. No. 116,258; Apr. 17; v. 237; p. 915.
Compound for certain named diseases. The A. J. Hull Medicine Co. No. 116,323; Apr. 24; v. 237; p. 1214.
Construction materials. The High Grade Manufacturing Company. No. 116,216; Apr. 17; v. 237; p. 913.
Cornmeal. Aunt Jemima Mills Company. No. 116,271; Apr. 24; v. 237; p. 1213.
Corsets. The Warner Brothers Company. No. 116,104; Apr. 3; v. 237; p. 307.
Corsets, apparel-corsets, corset covers and waists. Kops Bros. No. 116,144; Apr. 10; v. 237; p. 618.
Corsets, corset girdles and covers, Knitted and textile. L. Thomas. No. 116,252; Apr. 17; v. 237; p. 914.
Cotton piece goods. J. W. Goddard & Sons. No. 116,307; Apr. 24; v. 237; p. 1214.
Cotton piece goods. Lonsdale Company. No. 116,146; Apr. 10; v. 237; p. 618.
Cotton piece goods. Wilton Manufacturing Company. No. 116,109; Apr. 3; v. 237; p. 307.
Cotton piece goods, Woven. Neuss, Hesslein & Co. No. 116,231; Apr. 17; v. 237; p. 914.
Creams, Face-. F. Redmond. No. 116,360; Apr. 24; v. 237; p. 1215.
Cultivators and parts thereof. International Harvester Company of New Jersey. No. 116,061; Apr. 3; v. 237; p. 306.
Curtains, Lace and drapery. Martin Manufacturing Company. No. 116,075; Apr. 3; v. 237; p. 306.

Cutlery for household use, Certain named. The Republic Metalware Co. No. 116,090; Apr. 3; v. 237; p. 307.
Disinfectant. National Paper Products Company. No. 116,348; Apr. 24; v. 237; p. 1215.
Disinfectant, antiseptic, germicide, &c. Pasteur Laboratories of America. No. 116,083; Apr. 3; v. 237; p. 306.
Dolls. Saml. Gabriel Sons & Company. No. 116,135; Apr. 10; v. 237; p. 617.
Dresses, bungalow-aprons, middy-blouses, wash-skirts. The B. K. Mfg. Co. No. 116,020; Apr. 3; v. 237; p. 305.
Dolls and the heads, bodies, and limbs thereof. Trion Toy Company. No. 116,381; Apr. 24; v. 237; p. 1216.
Dresses, cloaks, and suits, Ladies'. C. M. Bernstein. No. 116,113; Apr. 10; v. 237; p. 617.
Duplicators—namely, apparatus for producing facsimiles of manuscripts, type-writing, &c. D. Hyams. No. 116,218; Apr. 17; v. 237; p. 913.
Dyes. Dye Products Company of the United States. No. 116,047; Apr. 3; v. 237; p. 305.
Dyes. Sunset Soap Dye Company. No. 116,250; Apr. 17; v. 237; p. 914.
Electric-light carbons. Firm of C. Conradty. No. 116,040; Apr. 3; v. 237; p. 305.
Electric-lighting fixtures and parts thereof. B. F. Klein. No. 116,222; Apr. 17; v. 237; p. 913.
Electrical test-clips. R. S. Mueller & Co. No. 116,230; Apr. 17; v. 237; p. 914.
Electrical specialties and conduit-fittings. Chas. G. Robin, Inc. No. 116,158; Apr. 10; v. 237; p. 618.
Elevators. Otis Elevator Company. No. 116,080; Apr. 3; v. 237; p. 306.
Embroidery tinsel, floss, silk, cord and rope. Campbell, Metzger & Jacobson. No. 116,287; Apr. 24; v. 237; p. 1213.
Engine attachments, Internal-combustion-. R. Hiklish. No. 116,059; Apr. 3, v. 237; p. 306.
Engines and parts thereof, Fluid-pressure. International Harvester Corporation. No. 116,221; Apr. 17; v. 237; p. 913.
Engines, Apparatus for supplying moisture to the cylinders of gas-. A. A. Friestedt. No. 116,054; Apr. 3; v. 237, p. 306.
Fasteners for feminine apparel only, Snap. M. Nathan. No. 116,346; Apr. 24; v. 237; p. 1215.
Feed, Stock. Chas. A. Krause Milling Co. No. 116,325; Apr. 24; v. 237; p. 1214.
Feed, Wheat. Russell-Miller Milling Company. No. 116,363; Apr. 24; v. 237; p. 1216.
Feeds, Poultry, scratch, little-chick, and pigeon. S. Goldberg. No. 116,308; Apr. 24; v. 237; p. 1214.
Fertilizer consisting of cotton-seed meal. Union Seed & Fertilizer Company. No. 116,169; Apr. 10; v. 237; p. 619.
Fishing reels, rods, hooks, and nets, balls, toys, &c. Schmelzer Arms Co. No. 116,244; Apr. 17; v. 237; p. 914.
Flavoring extracts, Certain named. Joseph Burnett Co. No. 116,191; Apr. 10; v. 237; p. 619.
Flour, Buckwheat-. Barley Foods Co. No. 116,275; Apr. 24; v. 237; p. 1213.
Flour, Self-rising wheat-. Bowles Bros. Co. No. 116,190; Apr. 10; v. 237; p. 619.
Flour, Self-rising. Central Gro. Co. No. 116,192; Apr. 10; v. 237; p. 619.
Flour, Wheat-. Enid Milling Company. Nos. 116,300–1; Apr. 24; v. 237; p. 1214.
Flour, wheat-. Gulfport Grocery Company. No. 116,195; Apr. 10; v. 237; p. 619.
Flour, Wheat-. P. Haupt. No. 116,315; Apr. 24; v. 237; p. 1214.
Flour, Wheat-. Hezel Milling Company. No. 116,215; Apr. 17; v. 237; p. 913.
Flour, Wheat-. Hezel Milling Company. No. 116,317; Apr. 24; v. 237; p. 1214.
Flour, Wheat-. The Larabee Flour Mills Corporation. No. 116,328; Apr. 24; v. 237; p. 1215.
Flour, Wheat-. Prange Milling Company. No. 116,358; Apr. 24; v. 237; p. 1215.
Flour, Wheat-. Russell-Miller Milling Co. Nos. 116,364–5; Apr. 24; v. 237; p. 1216.
Fluxes for autogenously welding aluminium and aluminium alloys. Aktiengesellschaft für Autogene Aluminium-Schweissung. No. 116,267; Apr. 24; v. 237; p. 1213.
Food, Dairy, stock, cattle, and farm-animal. The Buckeye Cotton Oil Company. No. 116,286; Apr. 24; v. 237; p. 1213.
Food, Stock and poultry. E. Rauh & Sons Fertilizing Company. No. 116,359; Apr. 24; v. 237; p. 1215.
Foods, Certain named. Alfalfa Products Company. No. 116,026; Apr. 3; v. 237; p. 305.
Foods, Certain named. McClelland Ward Co. No. 116,335; Apr. 24; v. 237; p. 1215.
Foods, Stock. J. Wade & Sons. No. 116,383; Apr. 24; v. 237; p. 1216.
Fruit—namely, dried fruits, such as prunes. H. P. Curtis. No. 116,295; Apr. 24; v. 237; p. 1214.
Fruits, Citrus. Lee County Packing Company. No. 116,067; Apr. 3; v. 237; p. 306.
Fuel for internal-combustion engines, Liquid. The Hydragas Corporation. No. 116,137; Apr. 10; v. 237; p. 618.
Games and apparatus for playing same. J. T. Simpson. No. 116,163; Apr. 10; v. 237; p. 618.
Gas-producers. The Super Gas Producer Sales Company. No. 116,098; Apr. 3; v. 237; p. 307.
Gasolene for internal-combustion engines, Chemical compound for use in. Howard-Vaughan Co. No. 116,322; Apr. 24; v. 237; p. 1214.
Gasolene to increase combustion and eliminate carbon, Chemical to be added to. Miller Chemicals, Inc. No. 116,342; Apr. 24; v. 237; p. 1215.
Gloves. Suedetex Glove Company. No. 116,096; Apr. 3; v. 237; p. 307.
Groceries and canned goods, Dry. H. H. Palmer & Co. No. 116,354; Apr. 24; v. 237; p. 1259.
Gum, Chewing-. The Bee Bee Confection Company. No. 116,279; Apr. 24; v. 237; p. 1213.
Hair and scalp remedy. The Flash Company. No. 116,132; Apr. 10; v. 237; p. 617.
Hair-dressing. The Heroilin Medicine Company. No. 116,316; Apr. 24; v. 237; p. 1214.
Hair dressing and growing preparation. L. O'Dell. No. 116,154; Apr. 10; v. 237; p. 618.
Hair-grower. M. E. Phillips. No. 116,156; Apr. 10; v. 237; p. 618.
Hair-tonic. Strohmeyer & Arpe Company. No. 116,375; Apr. 24; v. 237; p. 1216.
Hair-tonic. L. P. Wickland. No. 116,106; Apr. 3; v. 237; p. 307.
Handkerchiefs. George Borgfeldt & Co. No. 116,281; Apr. 24; v. 237; p. 1213.
Hardwood and fine timber and lumber. S. K. Taylor. No. 116,166; Apr. 10; v. 237; p. 618.
Headlight-lenses. The Legallte Corporation. No. 116,225; Apr. 17; v. 237; p. 914.
Heating apparatus, Certain named. Gas Appliance Company. No. 116,306; Apr. 24; v. 237; p. 1214.
Houses, Portable. Nicolai Door Manufacturing Co. No. 116,351; Apr. 24; v. 237; p. 1259.
Humidifiers, atomizers, humidity-controllers for use in ventilating buildings. American Moistening Company. No. 116,110; Apr. 10; v. 237; p. 617.
Injection and capsules for treatment of gonorrhea. Patterson Drug Co. No. 116,350; Apr. 24; v. 237; p. 1215.
Ink-wells. The General Eclipse Company. No. 116,212; Apr. 17; v. 237; p. 913.
Insect-destroying powder. H. T. Tompsitt. No. 116,380; Apr. 24; v. 237; p. 1216.
Insecticide. National Paper Products Company. No. 116,349; Apr. 24; v. 237; p. 1215.
Insoles. Britton West and Charles R. Cooper, a Firm. No. 116,385; Apr. 24; v. 237; p. 1216.
Knitted fabrics in the piece. L. F. Wanner Co. No. 116,384; Apr. 24; v. 237; p. 1216.
Laboratory-ware, Resistant chemical. Pacific Platinum Works. No. 116,081; Apr. 3; v. 237; p. 306.
Lamps, Electric. H. Boker & Co. No. 116,201; Apr. 17; v. 237; p. 913.
Lamps, Miners' electric. The Concordia Safety Lamp Co. No. 116,292; Apr. 24; v. 237; p. 1213.
Lavatories. Kohler Co. No. 116,066; Apr. 3; v. 237; p. 306.
Leather. A. C. Lawrence Leather Co. No. 116,329; Apr. 24; v. 237; p. 1215.
Lens-testing instruments. F. A. Hardy & Company. No. 116,058; Apr. 3; v. 237; p. 306.
Letter-cases, wallets, and pocket-books. H. Scheuer & Sons. No. 116,368; Apr. 24; v. 237; p. 1216.
Licorice, Manufactured. National Licorice Co. No. 116,153; Apr. 10; v. 237; p. 618.
Lighting-standards, poles, piling, brick blocks, and tiles. H. A. Landwehr. No. 116,326; Apr. 24; v. 237; p. 1214.
Liniment for rheumatism, asthma, colds, &c. A. Centanni. No. 116,027; Apr. 3; v. 237; p. 305.
Lotion, Antiseptic. The Baptisine Pharmacal Co. No. 116,112; Apr. 10; v. 237; p. 617.
Lotion, Lip-reducing. L. Gardner. No. 116,305; Apr. 24; v. 237; p. 1214.
Lotion, Shaving-. Manufacturing Chemists' Agency. No. 116,337; Apr. 24; v. 237; p. 1215.
Lubricants. Apex Manufacturing Co. No. 116,028; Apr. 3; v. 237; p. 305.
Lumber, Finished and unfinished. The Long-Bell Lumber Company. No. 116,332; Apr. 24; v. 237; p. 1215.
Magazines, Monthly. The Rudder Publishing Co. No. 116,242; Apr. 17; v. 237; p. 914.
Manganese salts. Frazar & Company. No. 116,211; Apr. 17; v. 237; p. 913.
Matrices. Mergenthaler Linotype Company. No. 116,340; Apr. 24; v. 237; p. 1215.
Medicine for asthma and bronchial trouble. A. J. Le Faivre. No. 116,330; Apr. 24; v. 237; p. 1215.
Medicine for indigestion, &c., Liquid. Foster & Mutton. No. 116,303; Apr. 24; v. 237; p. 1214.
Medicine for rheumatism and gout. C. Brizzolara. No. 116,115; Apr. 10; v. 237; p. 617.
Medicine for the treatment of certain named diseases. Pitino Brothers & Company. No. 116,357; Apr. 24; v. 237; p. 1215.
Metals and metal castings and forgings, Certain named. The Cincinnati Iron & Steel Company. No. 116,118; Apr. 10; v. 237; p. 617.
Middy-blouses and children's dresses. Rice-Stix Dry Goods Company. No. 116,091; Apr. 3; v. 237; p. 307.
Mouth-wash, antiseptic and astringent. The Dental and Toilet Products Corporation. No. 116,123; Apr. 10; v. 237; p. 617.
Mucilage. The Cushman & Denison Manufacturing Company No. 116,041; Apr. 3; v. 237; p. 305.

Music-rolls for automatic musical instruments. Imperial Player Roll Co. No. 116,219; Apr. 17; v. 237; p. 913.
Music, Sheet-. Triangle Music Pub. Co. No. 116,102; Apr. 3; v. 237; p. 307.
Neckties and neckscarfs. Church, Webb & Close. No. 116,263; Apr. 17; v. 237; p. 913.
Newspaper and magazine articles, magazine-section published periodically. E. Schorer. No. 116,371; Apr. 24; v. 237; p. 1216.
Newspaper-section. International News Service. No. 116,062; Apr. 3; v. 237; p. 306.
Newspaper-sections. Star Company. Nos. 116,247–9; Apr. 17; v. 237; p. 914.
Noodles. R. Elsinger. No. 116,299; Apr. 24; v. 237; p. 1214.
Nuts, Salted. Marple Bros. No. 116,338; Apr. 24; v. 237; p. 1215.
Oil for polishing, Atomizing-dispensers for liquid. Magic Mist, Incorporated. No. 116,227; Apr. 17; v. 237; p. 914.
Oils and greases, Motor-lubricating. H. E. Rogers. No. 116,159; Apr. 10; v. 237; p. 618.
Oils, Illuminating-. Tide Water Oil Co. No. 116,167; Apr. 10; v. 237; p. 618.
Ointment for skin eruptions. H. S. Lambdin. No. 116,224; Apr. 17; v. 237; p. 914.
Ointment, Pile-. E. D. Blaisdell. No. 116,031; Apr. 3; v. 237; p. 305.
Onions, Domestic. Bridge & Souter Co. No. 116,284; Apr. 24; v. 237; p. 1213.
Oranges, lemons, and grape-fruit. Murphy Oil Company. No. 116,344; Apr. 24; v. 237; p. 1215.
Ornamental figures for use on various articles and structures. Geo. Borgfeldt & Co. No. 116,033; Apr. 3; v. 237; p. 305.
Overcoats. United States Rubber Company. Nos. 116,170–82; Apr. 10; v. 237; p. 619.
Overshirts, overalls, underwear, and workingmen's garments. Wise Brothers. No. 116,189; Apr. 10; v. 237; p. 619.
Paints and coatings, Flat and enamel. Wadsworth, Howland & Co. No. 116,259; Apr. 17; v. 237; p. 915.
Paints and enamels, White liquid. Patton Paint Company. No. 116,085; Apr. 3; v. 237; p. 306.
Paints, Ready-mixed. Oakley Varnish Co. No. 116,079; Apr. 3; v. 237; p. 306.
Paper and fiber boards, Machinery for handling and treating. M. D. Knowlton Company. No. 116,223; Apr. 17; v. 237; p. 913.
Paper and paper towels, napkins, and doilies, Toilet, tissue, and waxed. Paper Mills Specialty Co. No. 116,234; Apr. 17; v. 237; p. 914.
Paper, Daily sugar-. Willett & Gray. No. 116,107; Apr. 3; v. 237; p. 307.
Paper issued monthly, Farm-. The Threshermen's Review Company. No. 116,100; Apr. 3; v. 237; p. 307.
Paper table-mats, Corrugated-. Kentucky Corrugated Paper Company. No. 116,085; Apr. 3; v. 237; p. 306.
Paper, Toilet-. The John Hoberg Co. No. 116,217; Apr. 17; v. 237; p. 913.
Paper, Toilet-. S. S. Selig, Jr. No. 116,093; Apr. 3; v. 237; p. 307.
Paper, Weekly sugar-. Willett & Gray. No. 116,108; Apr. 3; v. 237; p. 307.
Papers, Book-. West Virginia Pulp & Paper Company. No. 116,187; Apr. 10; v. 237; p. 619.
Parasols. H. R. Mallinson & Co. No. 116,336; Apr. 24; v. 237; p. 1215.
Pastry, cakes, confections, ices, and ice-cream. J. H. Halloran. No. 116,196; Apr. 10; v. 237; p. 619.
Peanuts. The Bain Peanut Co. No. 116,272; Apr. 24; v. 237; p. 1213.
Peptic coagulant. Parke Davis & Co. No. 116,082; Apr. 3; v. 237; p. 306.
Perfumery, talcum and sachet powders, sachets. McKesson & Robbins. No. 116,226; Apr. 17; v. 237; p. 914.
Perfumery, toilet waters, face-powders, and pastes. The New York Shield Company. No. 116,077; Apr. 3; v. 237; p. 306.
Perfumes, toilet waters, face creams and powders, talcum powders. Faxon & Gallagher Drug Co. No. 116,050; Apr. 3; v. 237; p. 305.
Periodical issued three times yearly. The Class Journal Company. No. 116,119; Apr. 10; v. 237; p. 617.
Periodical, Weekly. J. Rosenbaum Grain Company. No. 116,241; Apr. 17; v. 237; p. 914.
Periodicals issued monthly. J. F. Murray. No. 116,345; Apr. 24; v. 237; p. 1215.
Periodicals, Monthly. H. S. Reavis. No. 116,089; Apr. 3; v. 237; p. 307.
Pharmaceutical preparations, Certain named. Davis & Geck. No. 116,042; Apr. 3; v. 237; p. 305.
Phonographs and talking-machines and records therefor. P. Reinherz. No. 116,157; Apr. 10; v. 237; p. 618.
Photographic dry plates and films and prepared paper for photographic purposes. Ilford Limited. Nos. 116,138–9; Apr. 10; v. 237; p. 618.
Photographic film. Eastman Kodak Co. Nos. 116,125–9; Apr. 10; v. 237; p. 617.
Photographic negative and paper developing compound. Burke & James. No. 116,202; Apr. 17; v. 237; p. 913.
Piano and piano-player regulating devices, Player-. J. & C. Fischer. No. 116,051; Apr. 3; v. 237; p. 305.
Pianos. Jesse French and Sons Piano Company. Nos. 116,052–3; Apr. 3; v. 237; pp. 305–6.
Picture films, Motion-. The British Film Stock Company. No. 116,035; Apr. 3; v. 237; p. 305.
Picture films, Motion-. Triangle Film Corporation. No. 116,253; Apr. 17; v. 237; p. 914.
Picture films, Moving-. Klever Pictures. No. 116,143; Apr. 10; v. 237; p. 618.
Picture-films, Positive and negative. Artfilm Studios. No. 116,270; Apr. 24; v. 237; p. 1213.
Plates, Etched and engraved. The Colorplate Engraving Company. No. 116,290; Apr. 24; v. 237; p. 1213.
Pipe cleaning and thawing compound, Chemical. The Chamberlain Company. No. 116,038; Apr. 3; v. 237; p. 305.
Pipe-cleaning substance. W. B. McVicker Company. No. 116,072; Apr. 3; v. 237; p. 306.
Pipes, Smoking-. The Breechloader Pipe Co. No. 116,034; Apr. 3; v. 237; p. 305.
Polishing-cloth for gold and silver. F. A. Le Count. No. 116,145; Apr. 10; v. 236; p. 618.
Poultry, Dressed. Grant Brothers Co. No. 116,311; Apr. 24; v. 237; p. 1214.
Poultry, particularly a strain of Rhode Island Reds, Live. C. C. Whiteley. No. 116,188; Apr. 10; v. 237; p. 619.
Powder and paste, Tooth. J. C. Devlin. No. 116,043; Apr. 3; v. 237; p. 305.
Powder for cleaning eyeglasses, goggles, &c. C. H. Kehl & Co. No. 116,142; Apr. 10; v. 237; p. 618.
Powder for treatment of exudations of the skin, Antiseptic. J. L. McKenna. No. 116,070; Apr. 3; v. 237; p. 306.
Powder, Toilet. A. Bourjois & Co. No. 116,283; Apr. 24; v. 237; p. 1213.
Precious-metal alloy. The Electro Metal Products Co. No. 116,208; Apr. 17; v. 237; p. 913.
Preparation, Blood-modifying. Marion Stock Remedy Company. No. 116,074; Apr. 3; v. 237; p. 306.
Preparation for removing dirt and grease, which is also a polish, Liquid. Burch and Collins. No. 116,116; Apr. 10; v. 237; p. 617.
Preparation for removing oils and greases from the skin, Liquid. W. L. Voigt. No. 116,257; Apr. 17; v. 237; p. 915.
Preparation for removing oils and greases from woolens and other textile fabrics, Liquid. W. L. Voigt. No. 116,256; Apr. 17; v. 237; p. 914.
Preparation for stimulating the growth of eye brows and lashes. T. L. Williams. No. 116,386; Apr. 24; v. 237; p. 1216.
Preparation for the relief of indigestion, Pharmaceutical. Fairchild Bros. & Foster. No. 116,049; Apr. 3; v. 237; p. 305.
Preparations for the treatment of certain named diseases and affections. N. Zarpas. No. 116,387; Apr. 24; v. 237; p. 1216.
Preparation for the treatment of lumbago, rheumatism, and swollen joints. M. Tynion. No. 116,382; Apr. 24; v. 237; p. 1216.
Preparations for the treatment of rheumatism, catarrh, &c. L. A. Howard Company. No. 116,060; Apr. 3; v. 237; p. 306.
Preparation to increase the vaporization and intensify hydrocarbon fuels. The Culmer Chemical Company. No. 116,294; Apr. 24; v. 237; p. 1214.
Publication, Semi-annual. Motion Picture News. No. 116,152; Apr. 10; v. 237; p. 618.
Publication, Weekly. Markets Publishing Corporation. No. 116,229; Apr. 17; v. 237; p. 914.
Pumps, air-compressors, Single and duplex steam and jet and bilge. Blakeslee Manufacturing Co. No. 116,114; Apr. 10; v. 237; p. 617.
Razor honers and stroppers. R. & H. Manufacturing Corporation. No. 116,087; Apr. 3; v. 237; p. 307.
Razors, knives of base metal other than surgical knives, and shears. Matthews & Lively Co. No. 116,150; Apr. 10; v. 237; p. 618.
Remedies for diseases such as indigestion, dyspepsia, and constipation. C. Allen. No. 116,268; Apr. 24; v. 237; p. 1213.
Remedies, Rheumatic. The Bromo Remedy Co. No. 116,036; Apr. 3; v. 237; p. 305.
Remedy for dandruff, eczema, and falling hair. Tinas Company. No. 116,101; Apr. 3; v. 237; p. 307.
Remedy for diseases and disorders of the uterus. B. L. Cole. No. 116,289; Apr. 24; v. 237; p. 1213.
Remedy for indigestion. L. A. Foix. No. 116,133; Apr. 10; v. 237; p. 617.
Remedy for the treatment of ingrowing nails. A. M. Samson. No. 116,367; Apr. 24; v. 238; p. 1216.
Ribbons. U. R. T. Lund. No. 116,148; Apr. 10; v. 237; p. 618.
Rice. New Orleans Coffee Co. No. 116,352; Apr. 24; v. 237; p. 1259.
Road-construction blocks and slabs. The Anglo-Mexican Petroleum Products Co. No. 116,111; Apr. 10; v. 237; p. 617.
Rock and rye, sloe and dry gins, Lemon hoarhound. Stein Brothers. No. 116,164; Apr. 10; v. 237; p. 618.
Roofing, Composition. The Blount Lumber Co. No. 116,032; Apr. 3; v. 237; p. 305.
Rubber and composition disks for use as a universal-joint member. F. R. Blair & Co. No. 116,200; Apr. 17; v. 237; p. 913.

Rubber heels. Geo. E. Keith Company. No. 116,063; Apr. 3; v. 237; p. 306.

Rust and scale and carbon removers. Prussian blue, &c. Durkee-Atwood Co. No. 116,046; Apr. 3; v. 237; p. 305.

Salve for burns, scalds, cuts, bruises, lameness, and wounds. Reade Manufacturing Co. No. 116,236; Apr. 17; v. 237; p. 914.

Scales, Weighing. John Chatillon & Sons. No. 116,117; Apr. 10; v. 237; p. 617.

Screens and racks, Folding and combination. The Beaver Company. Nos. 116,276–8; Apr. 24; v. 237; p. 1213.

Screens, Folding and combination. The Beaver Company. No. 116,199; Apr. 17; v. 237; p. 913.

Shoe-dressing. J. I. Leist. No. 116,331; Apr. 24; v. 237; p. 1215.

Shoe-polish. Tube Brush Co. No. 116,254; Apr. 17; v. 237; p. 914.

Shoes, Ladies' leather. L. Spitz. No. 116,246; Apr. 17; v. 237; p. 914.

Shoes, Leather. Devine & Yungel Shoe Mfg. Co. No. 116,124; Apr. 10; v. 237; p. 617.

Shuttles for looms, Self-threading. H. W. Hakes. No. 116,057; Apr. 3; v. 237; p. 306.

Silk and cotton fabric in the piece. New Hampton Mills. No. 116,232; Apr. 17; v. 237; p. 914.

Silk and crape piece goods, Woven and knitted. H. R. Mallinson & Co. No. 116,073; Apr. 3; v. 237; p. 306.

Silk negligées and dressing-sacks, silk envelop-chemise, combination-suits, petticoats, &c., Ladies'. B. Cohen & Co. No. 116,120; Apr. 10; v. 237; p. 617.

Silk piece goods. H. R. Mallinson & Co. No. 116,149; Apr. 10; v. 237; p. 618.

Silk piece goods. R. & H. Simon Company. No. 116,162; Apr. 10; v. 237; p. 618.

Soap. A. Bourjois & Co. No. 116,282; Apr. 24; v. 237; p. 1213.

Soap. F. Turner. No. 116,168; Apr. 10; v. 237; p. 618.

Soap having in solution a pure soluble iodin, Medicinal. L. C. Wedgefuth. No. 116,260; Apr. 17; v. 237; p. 915.

Soaps, Foot-. Scholl Manufacturing Company. No. 116,245; Apr. 17; v. 237; p. 914.

Spark-plugs. Efficiency Motor-Device Corporation. No. 116,207; Apr. 17; v. 237; p. 913.

Steel and brass dies. Keller Mechanical Engraving Company. No. 116,064; Apr. 3; v. 237; p. 306.

Stock-dip, Insecticides, germicides, and disinfectants. National Paper Products Company. No. 116,350; Apr. 24; v. 237; p. 1259.

Stoppers and closures made wholly or partly of cork or compositions resembling cork, Certain named. International Cork Company. No. 116,140; Apr. 10; v. 237; p. 618.

Stoves, ranges, and hot-air furnaces and parts of same. Cribben & Sexton Company. No. 116,122; Apr. 10; v. 237; p. 617.

Sweeping compounds. Richmond Waterproof Products Co. No. 116,361; Apr. 24; v. 237; p. 1215.

Talc, nail-polishes, deodorizer, shampoo preparations, &c. Philo Hay Specialties Co. No. 116,136; Apr. 10; v. 237; p. 617.

Telephone devices. The Wellaphone, Inc. No. 116,261; Apr. 17; v. 237; p. 915.

Tires, Elastic vehicle-. The American Rubber and Tire Company. No. 116,269; Apr. 24; v. 237; p. 1213.

Tires for pleasure-cars, Rubber pneumatic automobile-. P. S. Mallckson. No. 116,228; Apr. 17; v. 237; p. 914.

Tires, Rubber. The Gordon Tire & Rubber Co. No. 116,309; Apr. 24; v. 237; p. 1214.

Tires, Rubber. Gryphon Rubber and Tire Corporation. No. 116,213; Apr. 17; v. 237; p. 913.

Tires, Rubber. Southern Hardware & Bicycle Company. No. 116,373; Apr. 24; v. 237; p. 1216.

Tires, Rubber and fabric casings or shoes for pneumatic. The Standard Tire and Rubber Manufacturing Company. No. 116,095; Apr. 3; v. 237; p. 307.

Tires, Rubber pneumatic. Continental Rubber Works. No. 116,293; Apr. 24; v. 237; p. 1213.

Tobacco, Chewing and smoking. Joseph G. Dill, Inc. No. 116,206; Apr. 17; v. 237; p. 913.

Tobacco, Smoking-. Shields & Son. No. 116,372; Apr. 24; v. 237; p. 1216.

Toilet-article containers. Elseman, Kaiser & Co. No. 116,131; Apr. 10; v. 237; p. 617.

Toilet preparations, Certain named. Lundborg Company. No. 116,334; Apr. 24; v. 237; p. 1215.

Tonic, blood and tissue builder, Medicinal. F. W. Clements. No. 116,039; Apr. 3; v. 237; p. 305.

Tonic for the treatment of biliousness, constipation, &c., Liver-. R. J. Estes. No. 116,302; Apr. 24; v. 237; p. 1214.

Tonics, Medicinal. Rigo-Tone Chemical Co. No. 116,362; Apr. 24; v. 237; p. 1215.

Toy cycles. The Kadoolator People, Inc. No. 116,324; Apr. 24; v. 237; p. 1214.

Toys, Certain named. M. M. Mason. No. 116,339; Apr. 24; v. 237; p. 1215.

Treatment for the hair and scalp and for eczema. J. L. McKenna. No. 116,071; Apr. 3; v. 237; p. 306.

Underwaists for boys and girls. John Wanamaker, New York. No. 116,183; Apr. 10; v. 237; p. 619.

Underwear and sweaters. Union Special Machine Company. No. 116,255; Apr. 17; v. 237; p. 914.

Union-suits, underwear, drawers, and pajamas, Textile. T. A. Luckett. No. 116,069; Apr. 3; v. 237; p. 306.

Vaccine, Bacterial. Swan-Myers Co. No. 116,376; Apr. 24; v. 237; p. 1216.

Vehicles, not including engines, and parts thereof, Certain named. Fore River Shipbuilding Corporation. No. 116,134; Apr. 10; v. 237; p. 617.

Vehicles, not including engines, Certain named. Wilcox, Crittenden & Co. No. 116,263; Apr. 17; v. 237; p. 915.

Velvets and plushes in the piece. The Salt's Textile Manufacturing Company. No. 116,243; Apr. 17; v. 237; p. 914.

Wadding, Medicated. The Thermogene Co. No. 116,379; Apr. 24; v. 237; p. 1216.

Waters, ginger-ale, tonics, and soft drinks, Still and sparkling or carbonated. Nobscot Mountain Spring Co. No. 116,078; Apr. 3; v. 237; p. 306.

Whisky. Stein Brothers. No. 116,374; Apr. 24; v. 237; v. 1216.

Wire screen-cloth. Reynolds Wire Co. Nos. 116,237–40; Apr. 17; v. 237; p. 914.

Woolen piece goods. Hager, Clark & Co. No. 116,312; Apr. 24; v. 237; p. 1214.

Woolen goods in the piece. Worumbo Manufacturing Company. Nos. 116,265–6; Apr. 17; v. 237; p. 915.

Yarns of wool, worsted, or hair. J. and J. Baldwin and Partners. No. 116,273; Apr. 24; v. 237; p. 1213.

Zithers. The Phonoharp Company. No. 116,056; Apr. 3; v. 237; p. 307.

ALPHABETICAL LIST OF LABELS.

"A 100% Cigar Par A 100% Cigar." (For Cigars.) W. B. Glenn. No. 20,025; Apr. 17; v. 237; p. 916.

"Aden." (For Succotash.) E. W. Gates & Son Co. No. 20,044; Apr. 24; v. 237; p. 1217.

"Amber." (For a Non-Intoxicating Cereal Beverage.) St. Louis Beverage Company. No. 20,035; Apr. 17; v. 237; p. 916.

"'Apella' Nature's Best Beverage." (For Non-Alcoholic Beverages.) National Fruit Juice Co. No. 20,031. Apr. 17; v. 237; p. 916.

"Auto Head Light Amplifier." (For Auto-Headlight Amplifier.) Night-Glow Novelty Company. No. 20,010; Apr. 10; v. 237; p. 620.

"Autotox Tablets." (For Medicinal Preparation.) M. F. Deehan. No. 19,998; Apr. 10; v. 237; p. 620.

"Avalon." (For Sardines in Oil.) South Coast Canning Co. No. 20,034; Apr. 17; v. 237; p. 916.

"Bald-E-No." (For a Hair-Restorative.) L. S. Gray. No. 20,042; Apr. 24; v. 237; p. 1217.

"Best Value." (For Cigars.) The Weideman Co. No. 20,018; Apr. 10; v. 237; p. 620.

"Big Six." (For Cigars.) La Kurba Cigar Company. No. 20,029; Apr. 17; v. 237; p. 916.

"Burgess Battery." (For Electric Batteries.) C. F. Burgess Laboratories. Nos. 20,038–9; Apr. 24; v. 237; p. 1217.

"Colonial Girl." (For Coffee.) Dwinnell-Wright Company. No. 19,999; Apr. 10; v. 237; p. 620.

"Combination Stogies." (For Stogies.) D. Golden. No. 20,006; Apr. 10; v. 237; p. 620.

"Creme de Mon Reve." (For a Cream for Purifying the Skin.) J. H. Gleason. No. 20,001; Apr. 10; v. 237; p. 620.

"Creme Fleur de Neiges." (For a Cream for Purifying the Skin.) J. H. Gleason. No. 20,004; Apr. 10; v. 237; p. 620.

"Creme La Reine." (For a Cream for Softening and Whitening the Skin.) J. H. Gleason. No. 20,002; Apr. 10; v. 237; p. 620.

"Creme Mauveine." (For Cold-Cream.) J. H. Gleason. No. 20,003; Apr. 10; v. 237; p. 620.

"De Luxe." (For Canned Caviar.) S. Schmidt & Co. No. 20,016; Apr. 10; v. 237; p. 620.

"Derryvale." (For Irish Linen.) Derryvale Linen Company. No. 20,046; Apr. 24; v. 237; p. 1217.

"'Extra' Duro Colours." (For Colors.) W. P. Stephens. No. 20,020; Apr. 10; v. 237; p. 620.

"(Fill Easy) Bin Baler." (For Balers.) K & B Co. No. 20,028; Apr. 17; v. 237; p. 916.

"Glover's Medicated Salt Cake." (For a Medicated Salt Cake for Stock.) I. N. Glover. No. 20,026; Apr. 17; v. 237; p. 916.

"Grandma." (For Coffee.) Dwinell-Wright Company. No. 20,000; Apr. 10; v. 237; p. 620.

"Jonteel." (For Cold-Cream.) United Drug Company. No. 20,049; Apr. 24; v. 237; p. 1217.

"'Just Out' Baby Bantam Candy Eggs." (For Candies.) Farley Candy Company. No. 20,023; Apr. 17; v. 237; p. 916.

"Kerr Ex-O-Dent." (For Chewing-Gum.) Detroit Dental Manufacturing Co. No. 20,022; Apr. 17; v. 237; p. 916.

"Kleen-a-Pipe." (For a Dissolving Cleaning Disinfecting Compound.) R. T. Davis. No. 20,021; Apr. 17; v. 237; p. 916.

"Lily Mayonnaise." (For Mayonnaise Dressing.) S. H. Lieb. No. 20,030; Apr. 17; v. 237; p. 916.

"Lipton's Tea." (For Tea.) T. J. Lipton. No. 20,011; Apr. 10; v. 237; p. 620.

"Little Cook On Every Box." (For Macaroni.) The Foulds-Briggs Co. No. 20,024; Apr. 17; v. 237; p. 916.

"Mauveine Gleason." (For a Tonic for the Skin.) J. H. Gleason. No. 20,005; Apr. 10; v. 237; p. 620.

"Medicinal." (For Peroxid.) National Peroxide Company. No. 20,032; Apr. 17; v. 237; p. 916.

"Mir-A-Co Nature's Gift." (For Artificial Mineral Water.) The Mir-A-Co Company. No. 20,008; Apr. 10; v. 237; p. 620.

"Mt. Fuji." (For Beer.) T. K. Tanaka. No. 20,036; Apr. 17; v. 237; p. 916.

"National." (For Peroxid.) National Peroxide Company. No. 20,033; Apr. 17; v. 237; p. 916.

"Old English." (For Furniture-Polish.) F. Darvill. No. 20,045; Apr. 24; v. 237; p. 1217.

"Onilla Polish." (For a Cleaning and Polishing Compound.) O. F. Smith. No. 20,017; Apr. 10; v. 237; p. 620.

"Prest-O-Nu." (For Automobile-Polish.) B-Nu Manufacturing Company. No. 20,012; Apr. 10; v. 237; p. 620.

"Price's Pure Pork Sausage & Lard." (For Pork, Sausage, and Lard.) S. S. Price. No. 20,013; Apr. 10; v. 237; p. 620.

"Pyorrhea Remedy." (For Preparations for the Treatment of Pyorrhea.) J. J. Nesom. No. 20,009; Apr. 10; v. 237; p. 620.

"Revivient Liquid Massage and Bleach." (For Toilet Preparations.) M. E. Montgomery. No. 20,047; Apr. 24; v. 237; p. 1217.

"Rex Floor Varnish." (For Floor-Varnish.) Henry Bonn Co. No. 20,037; Apr. 24; v. 237; p. 1217.

"Rough & Tumble Play Suits." (For Boys' Cotton Fabric Play-Suits.) Clawson & Wilson Company. No. 20,040; Apr. 24; v. 237; p. 1217.

"Schafer's The Bread That Nourishes." (For Bread.) Schafer Bakery. No. 20,014; Apr. 10; v. 237; p. 620.

"Smoked Salmon Paste." (For Canned Salmon Paste.) S. Schmidt & Co. No. 20,015; Apr. 10; v. 237; p. 620.

"Sterling." (For a Non-Intoxicating Beverage.) Evansville Brewing Assn. No. 20,041; Apr. 24; v. 237; p. 1217.

"Take a Nip of Nippo." (For Mineral Water.) MacDonell-Chow Corp. No. 20,007; Apr. 10; v. 237; p. 620.

"The Ranger." (For Cigars.) I. Hagler. No. 20,027; Apr. 17; v. 237; p. 916.

"Thermolene." (For an Antifreezing Solution.) J. Roche. No. 20,048; Apr. 24; v. 237; p. 1217.

"Waterman's Ideal Ink." (For Ink.) L. E. Waterman Company. No. 20,050; Apr. 24; v. 237; p. 1217.

"Woosley's Liniment." (For Liniment.) Woosley Medicine Company. No. 20,019; Apr. 10; v. 237; p. 620.

"Yargodine." (For a Dandruff Cure.) L. S. Gray. No. 20,043; Apr. 24; v. 237; p. 1217.

PRINTS.

"Acorn Brand Quality Furniture." (For Furniture.) C. S. Reuter. No. 4,674; Apr. 17; v. 237; p. 916.

"Always ready for Kellogg's Toasted Corn Flakes. Children tire of drinking milk; but the wise mother smiles and pours the milk plentifully into a big bowlful of Kellogg's. Children are always ready for Kellogg's—the original Toasted Corn Flakes—thin, crisp and appetizing." (For Toasted Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,673; Apr. 17; v. 237; p. 916.

"Ask the American Boy Why He Prefers Kellogg's—These are the flakes that are delicately toasted and thin—the original toasted corn flakes, tender and crisp, with that appetizing 'come to breakfast' flavor you can't mistake or forget." (For a Food, Specifically Toasted Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,661; Apr. 10; v. 237; p. 620.

"Be Fair to the Little Folks — —, They Are Worth It. In most homes 'nothing is too good for the children' and the little folks enjoy the tender crispness and delicate flavor of Kellogg's—the Original Toasted Corn Flakes. In other homes the motto is 'anything will do for the children'—even the tough, tasteless imitations of Kellogg's." (For Toasted Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,671; Apr. 17; v. 237; p. 916.

"Carter Inx." (For Carter's Inks and Paste.) The Carter's Ink Company. No. 4,667; Apr. 17; v. 237; p. 916.

"Cham-Pay." (For a Soft Drink.) Cham-Pay Products Co. No. 4,658; Apr. 10; v. 237; p. 620.

"Dont say Beer,—say Schlitz." (For Beer.) Jos. Schlitz Brewing Company. No. 4,670; Apr. 17; v. 237; p. 916.

"Every Helping of Kellogg's Proves How Good Corn Flakes Can Be. Over a thousand-million dishes of Kellogg's Toasted Corn Flakes were eaten last year. No wonder people prefer Kellogg's—the Original. These tender golden flakes are crisp and appetizing, thin delicately toasted, with a flavor tempting to the last spoonful. The right package has this signature: W. K. Kellogg." (For Toasted Corn Flakes.) Kellogg Toasted Corn Flake Co. No. 4,672; Apr. 17; v. 237; p. 916.

"For Sturdy Boys And Girls." (For Cereal Food, and Particularly for Shredded Wheat.) The Shredded Wheat Company. No. 4,664; Apr. 10; v. 237; p. 620.

"For The Desk-Man." (For Cereal Food and Particularly for Shredded Wheat.) The Shredded Wheat Company. No. 4,666; Apr. 10; v. 237; p. 620.

"For The Home-Maker." (For Cereal Food, and Particularly for Shredded Wheat.) The Shredded Wheat Company. No. 4,663; Apr. 10; v. 237; p. 620.

"For The Workers Of The World." (For Cereal Food, and Particularly for Shredded Wheat.) The Shredded Wheat Company. No. 4,665; Apr. 10; v. 237; p. 620.

"Gosman's Ginger Ale." (For Ginger-Ale.) The Gosman Ginger Ale Co. No. 4,677; Apr. 24; v. 237; p. 1217.

"Look for the Band." (For Cigars.) Selter & Kappes Lithographing Company. No. 4,662; Apr. 10; v. 237; p. 620.

"Marbelold Asphalt Roofing." (For Roofing-Paper.) S. D. Dunlap. No. 4,659; Apr. 10; v. 237; p. 620.

"Samoset Chocolates." (For Chocolates.) The Samoset Chocolates Company. Nos. 4,679–82; Apr. 24; v. 237; p. 1217.

"Sterno Canned-Heat." (For Canned-Heat and Sterno Kitchenette.) S. Sternau & Company. No. 4,676; Apr. 24; v. 237; p. 1217.

"The Hexagon Sewing Machine." (For Sewing-Machines.) Hexagon Sewing Machine Company. Nos. 4,668–9; Apr. 17; v. 237; p. 916.

"The O-Cedar Result." (For O-Cedar Polish.) Channell Chemical Company. No. 4,675; Apr. 24; v. 237; p. 1217.

"UNXLD Butter." (For Butter.) E. Fleischl & Son. No. 4,660; Apr. 10; v. 237; p. 620.

"Your Dining Room Furniture." (For O-Cedar Polish.) Channell Chemical Company. No. 4,676; Apr. 24; v. 237; p. 1217.

DISCLAIMERS.

Ore concentration. H. L. Sulman, H. F. Kirkpatrick-Picard, and J. Ballot. No. 835,120; date of patent Nov. 6, 1906; disclaimer filed Mar. 28, 1916; v. 237; p. 311.

Railway rail stay. E. Laas and H. H. Sponenburg. No. 703,602; date of patent July 1, 1902; disclaimer filed Apr. 9, 1917; v. 237; p. 920.

CLASSIFICATION OF PATENTS

APRIL, 1917.

Note.—First number—class, second number—subclass, third number—patent number.

1— 3: 1,222,149
6: 1,221,736
1,223,401
47: 1,222,129
1,222,418
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